

CITY OF GRAND LEDGE

Zoning Administrator

Ph: (517) 627-2149

Fax: (517) 627-9796

Established 1893

319 Taylor St.

Grand Ledge, MI 48837

sstachowiak@grand-ledge.com

NOTICE

The Grand Ledge Planning Commission will conduct its regular meeting on **Thursday, December 6, 2012 at 7:00 p.m.** The meeting will be held at Grand Ledge City Hall, 200 E. Jefferson St., Grand Ledge, MI.

AGENDA

1. Call to Order
2. Pledge of Allegiance
3. Approval of the Agenda
4. Approval of minutes of regular meeting held October 4, 2012
5. Notice of Agenda Item Conflicts
6. Business from the Floor

New Business

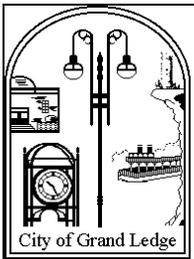
7. Site Plan Review – Vision Collision, 5607 E. Saginaw Highway
8. Storm Water Control Ordinance

Old Business

9. Todd Gute – Update on Greenwood School Renovations
10. Zoning Ordinance Amendments – Waste Receptacles
11. Zoning Ordinance Amendments – Recreational Vehicles
12. Zoning Ordinance Amendments – Exterior Lighting

Other Business

13. Joint Planning Committee Report
14. Review of Violation Report



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15. Zoning Administrator's Report
16. Zoning Board of Appeals Representative's Report
17. Council Representative's Report
18. Mayor's Comments
19. Comments from Commissioners
20. Chairman's Report

City of Grand Ledge
Planning Commission Meeting
Minutes from Meeting Held on
Thursday, October 4, 2012

Chairman Mike Stevens called the meeting to order at 7:00 p.m.

Attendance: Mike Stevens, Bob Doty, Ann Lawrence, Jamie Malecki, Steve Baribeau, Bill Kane and Ron Graber. Absent: Steve Willobee, Todd Gute, and City Council Representative Jon Bonofiglio. Also present: Zoning Administrator Sue Stachowiak.

Pledge of Allegiance – Steve Baribeau led those present in the pledge of allegiance.

Approval of the Agenda

Mr. Doty made a motion, seconded by Mr. Kane to approve the agenda as written. Motion carried 9 - 0.

Approval of the Minutes

Mr. Doty made a motion, seconded by Ms. Lawrence to approve the minutes from the regular meeting held on September 6, 2012 with the correction to page one, “Approval of the Agenda”, which should have Mr. Doty having made the motion to approve and Mr. Kane supporting the motion. Motion carried 9 - 0.

Notice of Agenda Items Conflicts - None

Business from the Floor

Boat Launch Project Update

Jim Foster, City Engineer, distributed a preliminary plan for the boat launch project. He stated that the survey and the preliminary plans are complete. The driveway width is being increased to 24 feet and 4 parking spaces are being added. Mr. Foster said that the new launch area includes concrete planks to the river, a removable dock and a decorative stone retaining wall. He also said that the pathway being installed on Jefferson Street will connect to the riverwalk and there will be a walk-on kayak approach.

Mr. Kane asked about the pine trees shown on the plan.

Mr. Doty said that there are memorial trees that have been planted in the area.

Mr. Foster stated that some of the pine trees are not replantable but they will try to relocate as many as possible. He said that the final documents should be finished by the end of November and the project will be bid out in the Spring of 2013.

Mr. Stevens thanked Mr. Foster for the update on this project and asked that the Commission continue to be kept informed.

Planning Commission Minutes

OLD BUSINESS

5607 E. Saginaw Highway, Rezoning from B-1, Highway Service to "I-1" Light Industrial District (conditional zoning for an auto body shop)

Ms. Stachowiak stated the subject property is located at the northeast corner of Saginaw and Charlevoix Drive and is currently zoned "B-1" Highway Service district. She said that the City's zoning ordinance contains two classifications of automobile repair. The first is Automobile Repair, General: Includes engine rebuilding, rebuilding or reconditioning of motor vehicles; collision service, such as body, frame or fender straightening and repair, overall painting and undercoating of automobiles. The second is Automobile Repair, Light: Includes repair or replacement of automotive components for maintenance purposes; such as tires, mufflers, glass, etc., not including any activity listed under the definition of "general automotive repair." "Automobile repair, light" is a use permitted by right in the "B-1" Highway Service district. The applicant is proposing to construct a new auto body facility (Vision Collision) on the subject property which fits under the category of "Automobile repair, general". Such use is only permitted in the "I-1" Light Industrial and "I-2" Heavy Industrial districts.

Ms. Stachowiak stated that this is a "conditional zoning" request and staff is recommending approval with the following conditions which shall run with the land and be binding upon the successor owners of the land:

1. The land shall only be used for an "automobile repair, general" business.
2. All vehicles that are in need of body or repair services must be stored inside of an enclosed building or within a screened outdoor storage area.
3. The outdoor storage area shall be completely screened from the view of the street(s) and all adjoining properties by an 8 foot high, opaque wood or vinyl fence or decorative masonry wall.
4. The outdoors storage area shall not extend beyond the south or west walls of the building.
5. All work shall be conducted within a completely enclosed building.
6. The use of load speakers is prohibited.
7. The "automobile repair, general" business shall be established and all building and site improvements shall be installed in accordance with the required conditions within two (2) years from the date of approval of the rezoning by the City Council.

Ms. Stachowiak stated that if this were not a conditional rezoning request, staff would not be able to recommend that it be approved. She said that there are only 2 alternatives to the conditional zoning. One is to just zone the subject property for light industrial use which would allow for a number of uses that would be completely objectionable at this location. The other is to deny the rezoning outright. She said that neither of these alternatives are in the best interest of the community. Conditional zoning gives the city more control over the rezoning process as it allows the city to restrict the land uses and impose other conditions that ensure compatibility of the use with the surrounding area. Furthermore, the conditions are absolute because they are conditions of approval. If the conditions are not met, the approval is null and void and the property automatically reverts back to its former zoning designation.

Ms. Stachowiak stated that she did not include a restriction on the hours of operation because with the other conditions in place, the business will not be disruptive regardless of what time of the day it is in operation.

Mr. Stevens stated that the storage area should be softened by a berm and landscaping along the north and west property lines of the site.

Tom Dible - 904 Woodbury Drive, stated that he intended to create/retain a natural buffer around the site to north so that future development of that property and the surrounding properties will not be negatively affected in any way.

Mr. Doty stated that condition 6 should state that the use of “exterior:” loud speakers are prohibited.

The Commissioners agreed that one of the conditions should be that the design of the building is consistent with the preliminary plans that have been shown to the Commission and also to the design of the Dewitt location.

Mr. Graber asked Ms. Stachowiak about how the conditional rezoning will affect future owner of the property.

Ms. Stachowiak stated that ownership has no effect in zoning. Also, she said that the motion includes language that “the conditions shall run with the land and be binding upon the successor owners of the land.”

Mr. Doty made a motion, seconded by Mr. Kane to recommend that the City Council approved the request to rezone the property located at 5607 E. Saginaw Highway from B-1, Highway Service district to the I-1, Light Industrial District with the following conditions which shall run with the land and be binding upon the successor owners of the land:

1. **The land shall only be used for an “automobile repair, general” business;**
2. **All vehicles that are in need of body or repair services must be stored inside of an enclosed building or within a screened outdoor storage area;**
3. **The outdoor storage area shall be completely screened from the view of the street(s) and all adjoining properties by an 8 foot high, opaque wood or vinyl fence or decorative masonry wall and the north shall be further obscured from along the north and west property lines by berms and landscaping**
4. **The outdoors storage area shall not extend beyond the south or west walls of the building**
5. **All work shall be conducted within a completely enclosed building**
6. **The use of exterior load speakers is prohibited; and**

7. **The “automobile repair, general” business shall be established and all building and site improvements shall be installed in accordance with the required conditions within two (2) years from the date of approval of the rezoning by the City Council.**
8. **The building elevations shall be similar in design and materials to those at the Dewitt Vision Collision located at 13393 Old US 27 and in keeping with the preliminary elevation plans submitted as part of this application.**

On a roll call vote, the motion carried unanimously.

Zoning Ordinance Amendments – Exterior Lighting

Mr. Stevens stated that there has been a great deal of information provided and he would like to obtain input from the 2 Commissioners who are absent this evening. He said that the Commission will continue its discussion on this matter at the next meeting.

Zoning Ordinance Amendments – Recreational Vehicles

Ms. Stachowiak stated that there still seems to be some mixed opinions on this matter as to whether the ordinance is too restrictive or too permissive. She said that she provided the regulations from some other communities in the area, most of which have very restrictive regulations on recreational vehicles in residential neighborhoods.

Several Commissioners stated that the 8 foot high/width and 20 foot length regulation may be too small.

Ms. Stachowiak stated that the way the ordinance is written, a vehicle of these dimensions or smaller can be parked anywhere in a driveway at any time. However, if a recreational vehicle exceeds these dimensions, it can only be parked in a driveway if it is further back than the front wall of the house. That way it does not block the neighbor’s views.

The Commission agreed that the ordinance should state that it cannot project into the required 25 foot front yard setback, rather than the front wall of the house.

Mr. Doty stated that 10% of a rear yard could be a very large area on some lots.

Mr. Stevens stated that the ordinance needs to be consistent in its mention of recreational “vehicle” and “equipment”.

Ms. Malecki said that she thinks the ordinance is still too restrictive.

Ms. Stachowiak stated that she will conduct additional research and bring it back to the Commission for further review at the next meeting.

OTHER BUSINESS

Mr. Doty stated that Commission does not need to contribute any money to the cost of obtaining a study to determine the cost of the items on the project list that the Commission discussed last month.

Review of Violation Report

Mr. Graber stated that the business continues to operate on E. Lincoln Street. He also said that there is a fence issue on DeGroff Street that needs to be addressed.

Mr. Doty stated that his next door neighbor still has not removed the dead tree.

Zoning Administrator's Report - None

Zoning Board of Appeals Representative's Report - None

Council Representative's Report - None

Mayor's Comments - None

Comments from Commissioners

Mr. Doty said that the new traffic lights at the Bridge/Jefferson intersection are not what MDOT described that they were going to be installing.

Mr. Kane stated that he provided comments on the proposed Delta Township master plan. He said that the primary issue that affects Grand Ledge is a bridge at Nixon Road.

Mr. Graber stated that while he still has concerns about conditional zoning, he thinks that the conditions that were placed on the 5607 E. Saginaw case will make for a good project.

Chairman's Report

Mr. Stevens commented on the widewalk and street reconstruction project.

Adjournment

Ms. Lawrence made a motion, seconded by Mr. Doty to adjourn the meeting at 8:45 p.m.

Submitted By:

Susan Stachowiak
Zoning Administrator

Ann Lawrence, Secretary
Planning Commissioner

STAFF REPORT

TO: Planning Commission
City of Grand Ledge

FROM: Susan Stachowiak
Zoning Administrator

DATE: November 29, 2012

RE: Site Plan Review – Auto Body Repair Building & Related Site Improvements
5607 E. Saginaw Highway – Vision Collision

This attached site plan prepared by Kebs, Inc., dated November 15, 2012, is for the construction of a single story, 9,750 square foot, auto body shop building with related site improvements at 5607 E. Saginaw Highway.

Attached is a copy of the proposed site plan, landscape plan, building elevations, floor plan and the department head and agency reviews that have been received thus far.

APPLICANT: Genex Investments, LLC
2520 S. Pennsylvania Avenue
Lansing, MI 48910

PARCEL SIZE& SHAPE: 198' x 280.22' = 55,483.5 square feet – Does not include 50 feet of Saginaw Highway Right-of-Way
Approximately 1.27 acres - Rectangular Shape

SURROUNDING LAND USES: N: Vacant
S: Commercial
E: Office
W: Office

SURROUNDING ZONING: N: “R-HD” Multiple Family Residential District
S: Township Zoning
E: Township Zoning
W: “B-1” Highway Service District

ZONING: The subject parcel is zoned I-1, Light Industrial, with the following conditions:

1. The land shall only be used for an “automobile repair, general” business;
2. All vehicles that are in need of body or repair services must be stored inside of an enclosed building or within a screened outdoor storage area;
3. The outdoor storage area shall be completely screened from the view of the street(s) and all adjoining properties by an 8 foot high, opaque wood or vinyl fence or decorative masonry wall and the north shall be further obscured from along the north and west property lines by berms and landscaping;
4. The outdoors storage area shall not extend beyond the south or west walls of the building;
5. All work shall be conducted within a completely enclosed building;
6. The use of exterior load speakers is prohibited;
7. The “automobile repair, general” business shall be established and all building and site improvements shall be installed in accordance with the required conditions within two (2) years from the date of approval of the rezoning by the City Council; and
8. The building elevations shall be similar in design and materials to those at the Dewitt Vision Collision located at 13393 Old US 27 and in keeping with the preliminary elevation plans submitted as part of this application.

The site plan and supporting documents demonstrate compliance with the applicable items listed above.

SITE DEVELOPMENT STANDARDS:

Article XVI of the Zoning Ordinance mandates the applicable site development requirements for the I-1, Light Industrial District. The proposed building and site improvements comply with all of the area, height and setback regulations.

LANDSCAPING

A landscape plan is included as part of the site plan. The following planting plan specification requirements of the Zoning Ordinance have or have not been provided on the plan:

- I. Minimum scale of 1"=50'yes
- II. Existing and proposed contours not to exceed 2'yes
- III. Proposed landscape materials.....yes
- IV. Berm cross section.....no
- V. Construction details.....yes
- VI. Planting/Stacking details.....yes
- VII. Tree Survey.....yes

The buffer strip along Charlevoix Drive does not contain any landscaping. The landscaping along the Saginaw Highway buffer strip should be continued up to the south line of the proposed private driveway.

The shrubs within the 25 foot corner clearance at the southwest corner of the site should be of a type that will not grow above a height of 24”.

STREETS AND ACCESS

The site will be accessed via one curb cut on the future private drive that will be designed to provide access to the subject property as well as future development of the property to the north. Section 220-74 of the Zoning Ordinance requires a minimum distance of 125 feet between the new private drive and the existing driveway for Bye Insurance. Although the site plan shows a distance of approximately 70 feet, the proposed private drive will be located in the most appropriate and only logical location on the site. Therefore, it is recommended that the Commission approve the location of the driveways as shown on the site plan.

PARKING

Numerical Parking Space Requirements

Based on the requirements of Section 220-57(L) of the Zoning Ordinance, 24 parking spaces are required. 27 parking spaces are shown on the site plan. 12 unobstructed parking spaces and an additional 22 obstructed parking spaces are located in the storage area. The proposed number of spaces is necessary for the essential function of the business.

Parking Lot Dimensional Requirements

The proposed parking lot complies with all dimensional requirements contained in Section 220-58 of the Zoning Ordinance.

Parking Area Lighting

A photometric plan demonstrating compliance with all requirements of Section 220-70 of the Zoning Ordinance is attached. No free-standing light poles are proposed. All exterior lighting will be mounted on the building.

WASTE RECEPTACLES

Section 220-76 of the Zoning Ordinance mandates the requirements for waste receptacles. The proposed waste receptacle location complies with the requirements of this Section, however, the details of the enclosure must be provided.

UTILITIES

Please refer to the review from the City Engineer, Jim Foster dated November 27, 2012 and Public Services Director, Larry LaHaie dated _____, 2012.

LOADING & UNLOADING

While the site plan does not provide for a designated loading/unloading space, there is plenty of room north of the building in the “storage area” for loading and unloading. Staff recommends approval of this plan.

MISCELLANEOUS

- A 5’ wide sidewalk is required along the E. Saginaw Highway and Charlevoix Drive road frontages.
- Signs will require separate permits. Ground signs shall not be more than 10 feet in height and shall be set back 10 feet from the right-of-way line. Such signs may be multi-faced but shall not exceed 64 square feet in surface display area per face. In addition, each use shall be permitted one wall sign one each building facade with road frontage. Such signs shall be limited to an area equal to not more than five percent of the area of the wall of the establishment upon which the sign is placed.

STAFF RECOMMENDATION

The following motion is offered for the Commission’s consideration:

“I move that the City of Grand Ledge Planning Commission approve the site plan prepared by Kebs, Inc., dated November 15, 2012, is for the construction of a single story, 9,750 square foot, auto body shop building with related site improvements at 5607 E. Saginaw Highway, subject to compliance with the applicable items contained in this staff report and the following:

Site Plan Review –5607 E. Saginaw Highway

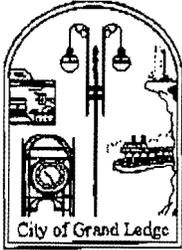
November 29, 2012

Page 5

1. Compliance with the applicable items contained in the City Engineer's letter dated November 27, 2012 and the Public Service Director's letter dated _____, 2012; and
2. Compliance with the items contained in the Grand Ledge Area Fire Department's letter dated _____, 2012.

Respectfully Submitted,

Susan Stachowiak
Zoning Administrator



CITY OF GRAND LEDGE

Established 1893

Zoning Administrator

319 Taylor St.
Grand Ledge, MI 48837

Ph: (517) 627-6469

Fax: (517) 627-6788

sstachowiak@grand-ledge.com

Site Plan Review Application

For Office Use Only

Fee Paid _____

Date Received: _____

Applicant(s) Vision Collision Centers LLC

Address 2520 S. Pennsylvania Ave
Lansing, MI 48910

Daytime Phone 517-374-7033

Evening Phone 517-712-0972

Interest in Property (check one)

Owner

Represent Owner

Other _____

Option to buy

Lessee

Complete address of property requested to be reviewed 5607 E. Saginaw
Highway, Grand Ledge, MI 48837

Owner Name(s) The Dible Family Trust No. 1

Address 426 S. Clinton St. P.O. Box 455
Grand Ledge, MI 48837

Daytime Phone 517-627-7219

Evening Phone 517-230-6261

Legal Description (indicate attached if needed): Attached

Lot size: Width 198'5, 213'N Length 330.21' Area 1.55 Acres

Current zoning: _____

Proposed use of property Auto Collision repair facility

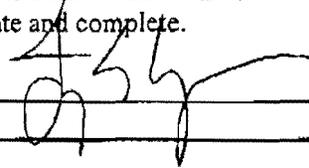
Estimate the following:

- General traffic volume 30 vehicles per week
- Total population increase 0
- Population per acre 7.5
- Hours of operation M-F 8:00am - 6:00pm
- Total number of employees 10
- Total building area proposed 9750 ft²
- Parking spaces 28

Petition must include photographs of the property, copies of any other required permits and a site plan, as follows:

- Drawn to a scale of at least 1"=100'
- Existing and proposed structures (buildings, trash receptacles, landscaping, etc.)
- Existing and proposed parking areas and driveways
- Existing and proposed roads, easements and other access points
- Flood plain elevations, if applicable
- Zoning classifications of all abutting land within 300 feet

I stipulate and understand the site plan review, if approved by the City of Grand Ledge, does not guarantee I may proceed with the proposed development. I understand there may be additional permits required to meet trade codes and other governmental requirements, and I understand the City of Grand Ledge does not have any power or authority over these additional permits. I certify the statements made and the information provided in this site plan review application are true, accurate and complete.

Signature  Date 11/1/2012

Required Reviews

	Approve Petition	Deny Petition	Initials
<input checked="" type="checkbox"/> Zoning Administrator	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> Planning Commission	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> Building Official	<input type="checkbox"/>	<input type="checkbox"/>	_____

91037LANS

Exhibit "A"

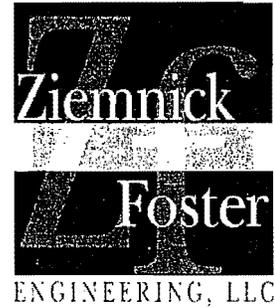
Part of the Southeast 1/4 of Section 12, Town 4 North, Range 4 West, Oneida Township, Eaton County, Michigan, being more particularly described as follows: Commencing at the South 1/4 corner of Section 12; thence North 89°53'56" East 328.38 feet (previously described as 327.83 feet) along the South line of Section 12 to the point of beginning of the following described parcel; thence North 00°12'10" East 330.21 feet (previously described as 330.00 feet); thence North 89°53'56" East 198.00 feet; thence South 00°12'10" West, 330.21 feet; thence South 89°53'56" West 198.00 feet along the South line of Section 12 to the point of beginning.

ZIEMNICK FOSTER ENGINEERING, LLC
12350 Oneida Road
Grand Ledge, MI 48837
517.930.0438
www.zfengineering.com

11/27/2012

Re: Vision Collision SPR
Project No: 12013

Ms. Susan Stachowiak
Zoning Administrator
City of Grand Ledge
200 E. Jefferson Street
Grand Ledge, MI 48837



Dear Susan:

As requested, Ziemnick Foster Engineering, LLC (ZFE) has performed a site plan review for the above referenced project. Our review was of plans submitted by KEBS Inc. dated November 15, 2012.

The proposed project consists of construction of a new vehicle collision body shop located at the northeast corner of Charlevoix Drive and Saginaw Highway. The proposed building is 9,750 square feet located on the 1.5 acre parcel. We offer the following comments:

LAYOUT

1. The proposed building is being served from a proposed private driveway off Charlevoix Drive. This proposed driveway will traverse a triangular wedge of property owned by Dible Family Trust #1, which is located at 1093 Charlevoix Drive, prior to reaching the subject parcel. A proposed 66-foot private easement is shown on the plans along the proposed private driveway. The prepared easement should document an agreement for means for public ingress and egress across the 1093 Charlevoix Drive property. A copy of this easement should be held by the City and recorded at Eaton County Registrar of Deeds prior to the project's final approval.
2. The proposed driveway to the subject parcel is located approximately 70 feet southeast of the existing driveway to 1093 Charlevoix Drive. Per the Zoning Ordinance, a minimum driveway spacing of 125 feet is required for roadways at 30 MPH or less. To reduce left-turn conflicts, the petitioner may consider a new driveway for the 1093 Charlevoix Drive parcel from the proposed private drive and close the existing driveway for 1093 Charlevoix Drive. Plans indicate future roadway extension to the north to service parcel(s).

3. No sidewalk is indicated along Charlevoix Drive nor Saginaw Highway. Per the Zoning Ordinance sidewalk should be included on the plans.
4. Petitioner should review and update the plans for required clear-vision zones at street intersections and the driveway intersection at Charlevoix Drive. 25 feet is required at Charlevoix Drive and Saginaw Highway and 15 feet is required at the proposed driveway.
5. Parking layout indicates 90 degree angle parking. Parking calculations require 24 parking spaces. 15 spaces are provided (included is 2 barrier free spaces) in the public access / parking area. 12 additional spaces are located behind the containment fence to generate the required parking count. Geometry and spaces provided meet the Off-Street Parking Requirements.
6. A curbed turn around or cul-de-sac should be planned at the northerly end of the private drive to discourage off-road access until such time as the roadway is extended.

UTILITIES

1. Petitioner has not included storm sewer calculations for review. The petitioner should contact the Eaton County Drain Commissioner's office for requirements on restricted discharge to the Waldo Drain and submit calculations.
2. All storm water is being sheet drained off pavement to lawn areas. Petitioner needs to clarify with additional grades, flow arrows, ditch lines, or swale sections how the storm water will be drained to the storm water basins. Storm water shall not be sheet drained to neighboring parcels or right-of-ways.
3. Extend the roadway pavement a minimum of 10 feet beyond the sanitary manhole to provide adequate access to the sewer main manhole.
4. Petitioner has indicated PVC SDR 35 sanitary sewer pipe. Pipe material should be changed to PVC SDR 26 per City Standards.
5. One (1) 6-inch line is indicated for water service. Clarification as to why the water service is required to be a 6-inch diameter is required. This diameter seems oversized for a commercial water service. Please provide information pertaining to fire suppression water line installation if applicable. Additionally, there is an existing 12-inch water main located in the north right-of-way of Saginaw Highway. This 12-inch water main may afford a more cost effective tapping location for the water service than the proposed west side of Charlevoix Drive location provides.
6. No future water system is indicated for the parcels north of the subject property. Should water service be extended from the subject parcel north to the additional parcels, the tap and main should be a minimum diameter of 8-inch.

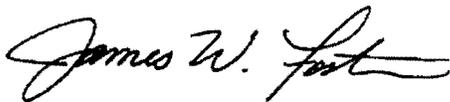
7. Easements over water and sewer lines will need to be drafted and dedicated to the City for access, operation, and maintenance. Said easements shall be recorded at the Eaton County Registrar of Deeds.
8. No site lighting has been indicated on the plans. A site lighting and photometric plan should be submitted for review and approval.
9. No polyethylene wrap is required around the Grand Ledge standard Class 52 Ductile Iron water main.
10. Ductile Iron water main shall have a bury depth of 5.5 feet above the crown of the pipe.
11. Water main and sanitary sewers shall be bedded in compacted MDOT CL II Sand at a minimum of 4-inches below the pipe and 12-inches above the pipe.

ADDITIONAL COMMENTS

1. No ground mounted sign was indicated on the drawings. No building elevations were included within our review packet.
2. Plan indicates three dumpsters located on the parcel within the storage area. The plan does not indicate a concrete pad under the dumpsters nor any decorative block screening measures as required by the zoning ordinance.
3. The planting plan should include the existing and proposed contours with contour intervals not exceeding two feet.
4. Please provide ZFE with an electronic set (AutoCAD and PDF's) of the final site plan drawings for records and utility system updates.

If you have any questions, please contact our office. Thank you.

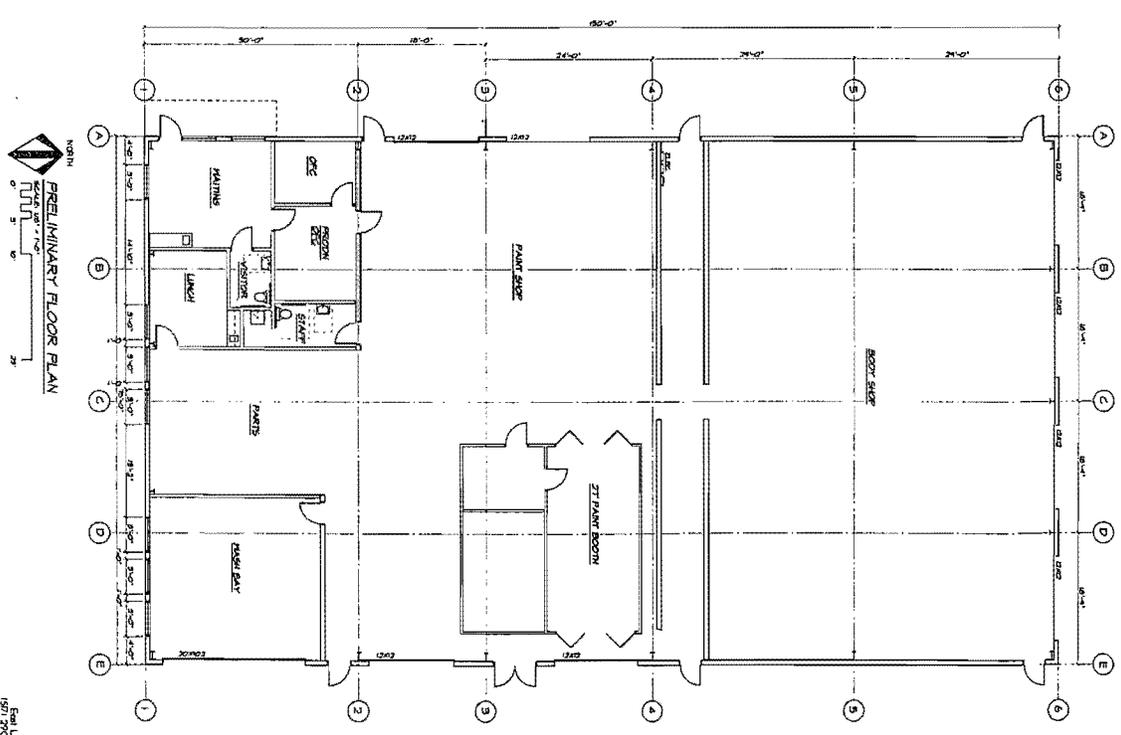
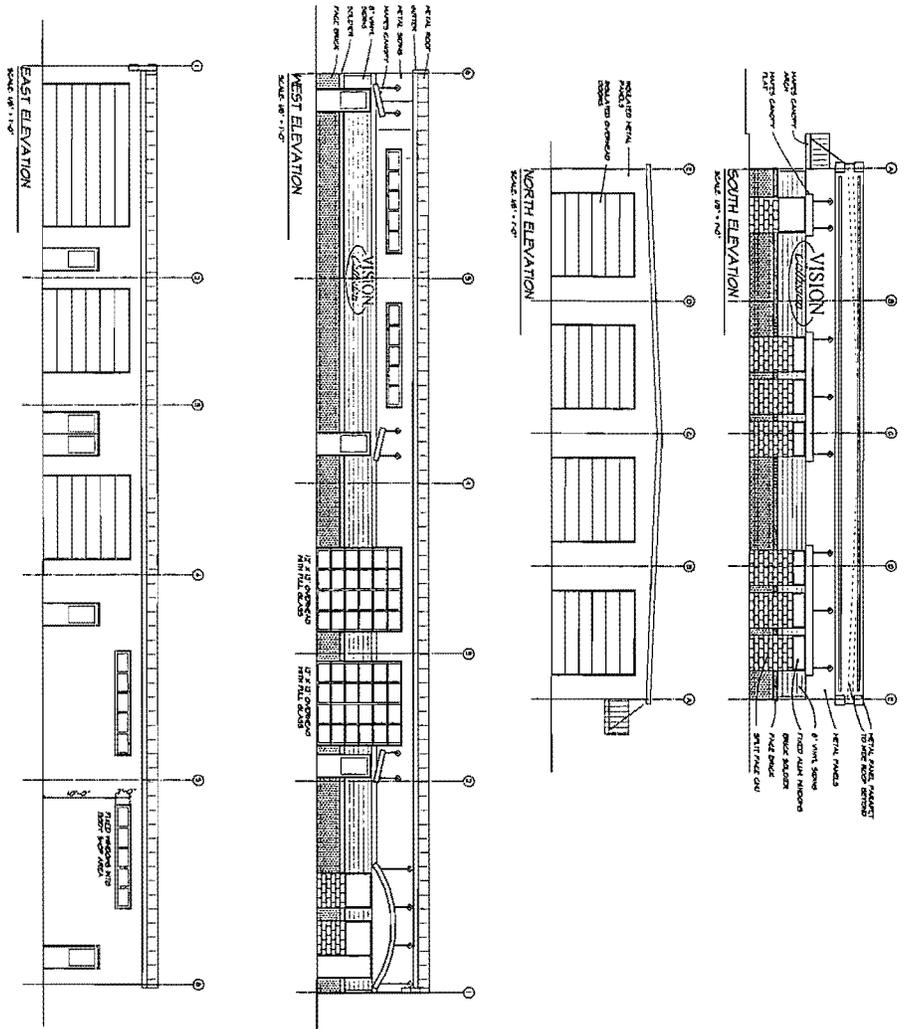
Sincerely,
ZIEMNICK FOSTER ENGINEERING, LLC



James W. Foster, P.E.

cc: Mr. Larry LaHaie – City of Grand Ledge
Mr. Casey Godlewski – Grand Ledge Area Emergency Services Authority
Mr. Dick Brown – Eaton County Drain Commissioner's Office

Delivered by: via Email (PDF)



PRELIMINARY FLOOR PLAN
 NORTH
 SCALE: 1/8" = 1'-0"
 0' 10' 20'

PROJECT NUMBER	12-33	SHEET NO.	A-1
LATEST DATE	12/28/2017	DESIGNER	ROCKWOLD DESIGN
PROJECT NAME	VISION COLLISION	ARCHITECT	PETER R. HOLTZ ARCHITECT

ROCKWOLD DESIGN
 2715 SUTTON DRIVE
 ANN ARBOR, MI 48106
 (734) 769-0700
 peter@rockwold.com



SCHEMATICS FOR
Vision Collision
 SAGINAW HIGHWAY
 GRAND LEDGE, MICHIGAN

DRAWN BY: PH
 VERSION: 04.01.18
 PLOT DATE:
 © 2018 ROCKWOLD DESIGN, P.C. ALL RIGHTS RESERVED. NO PART OF THESE DRAWINGS, INCLUDING DETAILS, SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF AND PROPER COORDINATION TO THE ARCHITECT.

E8 PERMANENT SEEDING SPECIFICATIONS

When

- To finalize stabilization of temporary seeding areas or when an area needs permanent stabilization following completion of construction. Also used when vegetative establishment can correct existing soil erosion or sedimentation problem.
- Within 5 days of final grade.

Why

- To stabilize soil and prevent or reduce soil erosion/sedimentation problems from developing.

Where

- Used on construction and earth change sites which require permanent vegetative stabilization.

How

1. Review SESC plan and construction phasing to identify areas in need of permanent vegetative stabilization.
2. Select perennial grass and ground cover for permanent cover.
3. Seed mixes vary. However, they should contain native species.
4. Seed mixes should be selected through consultation with a certified seed provider and with consideration of soil type, light, moisture, use applications, and native species content.
5. Soil tests should be performed to determine the nutrient and pH levels in the soil. The pH may need to be adjusted to between 6.5 and 7.0.
6. Prepare a 3-5" deep seedbed, with the top 3-4" consisting of topsoil.
7. Slopes steeper than 1:3 should be roughened.
8. Apply seed as soon as possible after seedbed preparation. Seed may be broadcast by hand, hydroseeding, or by using mechanical drills.
9. Mulch immediately after seeding.
10. Dormant seed mixes are for use after the growing season, using seed which lies dormant in the winter and begins growing as soon as site conditions become favorable.

E8 PERMANENT SEEDING SPECIFICATIONS

How (cont.)

11. Protect seeded areas from pedestrian or vehicular traffic.
12. Divert concentrated flows away from the seeded area until vegetation is established.

Maintenance

- Inspect weekly and within 24 hours following each rain event in the first few months following installation to be sure seed has germinated and permanent vegetative cover is being established.
- Add supplemental seed as necessary.

Limitations

- Seeds need adequate time to establish.
- May not be appropriate in areas with frequent traffic.
- Seeded areas may require irrigation during dry periods.
- Seeding success is site specific, consider mulching or sodding when necessary.

PERMANENT SEEDING SPECIFICATION
SEED ALL DISTURBED AREAS WITH THE FOLLOWING SEED MIXTURE OR APPROVED EQUAL.
MICHIGAN GREEN - 15% BLUEGRASS, 40% FESCUE, 45% RYEGRASS
APPLY AT A RATE OF 5 LBS./1000 SF.

E8 PERMANENT SEEDING

Planting Zones:	Lower Peninsula (South of T20N) Zone 1	Lower Peninsula (North of T20N) Zone 2	Upper Peninsula Zone 3
Seeding Window Permanent Seeding	4/15 - 10/10	5/1 - 10/1	5/1 - 9/20
Seeding Window Dormant Seeding*	11/15 - Freeze	11/01 - Freeze	11/01 - Freeze

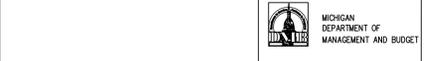
Source: Adapted from MDOT Interim 2003 Standard Specifications for Construction

	Zone 1 Lower Peninsula (South of U.S. 10)	Zone 2 Lower Peninsula (North of U.S. 10)	Zone 3 Upper Peninsula
Seeding Dates (with Irrigation or Mutch)	4/1 - 8/1	5/1 - 9/20	5/1 - 9/10
Seeding Dates (w/o Irrigation or Mutch)	4/1 - 5/20 or 8/10 - 10/1	5/1 - 6/10 or 8/1 - 9/20	5/1 - 6/15 or 8/1 - 9/20
Dormant Seeding Dates	11/1 - Freeze	10/25 - Freeze	10/25 - Freeze

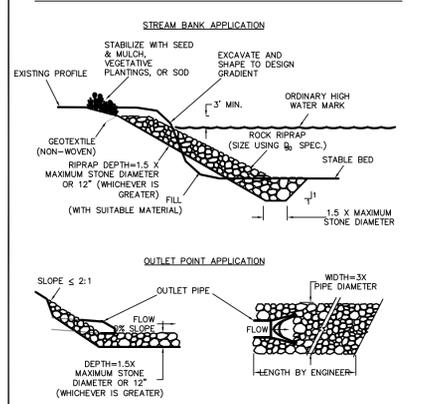
Source: Adapted from USDA NRCS Technical Guide #342 (1999)

* Dormant seeding is for use in the late fall after the soil temperature remains consistently below 50°F, prior to the ground freezing. This practice is appropriate if construction on a site is completed in the fall but the seed was not planted prior to recommended seeding dates. No seed germination will take place until spring. A cool season annual grass may be added in an attempt to have some fall growth.

- Mulch must be used with dormant seed.
- Do not seed when the ground is frozen or snow covered.
- Do not use a dormant seed mix on grassed waterways.



E12 RIPRAP



E12 RIPRAP SPECIFICATIONS

When

- When concentrated water flows have the potential to create scour, down-cutting, or lateral cutting.

Why

- To prevent loss of land or damage to utilities or structures. In aquatic applications, riprap is used to control channel meander and maintain capacity, protect against wave attack, and reduce sediment load.

Where

- In natural or constructed channels with areas susceptible to erosion from the action of water, ice, or debris, or to damage by livestock or vehicular traffic.
- In shoreline areas where the erosion problem may be solved through simple structural measures.
- On slopes with profiles measuring 1:1.5 or less.

How

1. Review subject site to identify areas subject to concentrated flows or wave/current attack.
2. The appropriateness and extent of riprap placement is site specific and should be determined in the field.
3. The area under review for riprap placement must be shaped and contoured appropriately by grading prior to material placement.
4. Non-woven geotextile fabric should be installed prior to riprap placement, with upper end and toe end of fabric buried or anchored to prevent movement.
5. Riprap placement should be started at a stabilized location and ended at a stabilized or contoured point.
6. Material selected for riprap should be hard, angular, and resistant to weathering. Appropriate material size depends on expected water energy and intended function of the material.



E12 RIPRAP SPECIFICATIONS

How (cont.)

7. Riprap mixture should be an even mixture of stone sizes based on the average, or D₅₀. This means 50% of the stone, by size, will be larger than the diameter specified, and 50% will be smaller than the size specified. The diameter of the largest stone should not be more than 1.5 times the D₅₀ stone size.
8. See table on the following page for typical riprap stone sizes.
9. Rock shall be placed so that larger rocks are uniformly distributed and in contact with one another. Smaller rocks should fill the voids.
10. When in contact with moving water, riprap will tie into a stable bank at the downstream end and will be keyed into the bank at the upstream end. Riprap should extend 3 ft. above the ordinary high water mark or to the top of the bank on short slopes. Extend riprap a minimum 10 ft. beyond active erosion area.

Maintenance

- All installations should be inspected immediately after the first rainfall to confirm the stability of the placed material. Follow-up inspections should occur regularly and provisions made for prompt repair if needed.

Limitations

- Area is cleared prior to the addition of riprap, therefore no areas are preserved with native vegetation.

SIZE OF TYPICAL RIPRAP STONES			
Weight (lbs.)	Average Spherical Diameter (in.)	Typical Rectangular Length/Width/Height (in.)	(in.)
100	1.5	1.5	1.5
150	1.75	1.75	1.75
200	2.0	2.0	2.0
300	2.25	2.25	2.25
500	2.5	2.5	2.5
750	2.75	2.75	2.75
1000	3.0	3.0	3.0
1500	3.25	3.25	3.25
2000	3.5	3.5	3.5
3000	3.75	3.75	3.75
4000	4.0	4.0	4.0
6000	4.25	4.25	4.25
8000	4.5	4.5	4.5
10000	4.75	4.75	4.75

Source: Adapted from USDA NRCS



S51 SILT FENCE SPECIFICATIONS

When

- A temporary measure for preventing sediment movement.

Why

- Used to prevent sediment suspended in runoff from leaving an earth change area.

Where

- Use adjacent to critical areas, wetlands, base of slopes, and watercourses.

How

1. Install parallel to a contour.
2. The silt fence should be made of woven geotextile fabric.
3. Silt fence should accommodate no more than 1/2 to 1 acre of drainage per 100' of fence and on slopes less than 1:2 (v:h).
4. Dig a 6" trench along the area where the fence is to be installed.
5. Place 6" of the silt fence bottom flap into the trench.
6. Backfill the trench with soil and compact the soil on both sides. Create a small ridge on the up-slope side of the fence.
7. Install wooden stakes 6 - 10' apart and drive into the ground a minimum of 12".
8. Staple the geotextile fabric to the wooden stakes.
9. Join sections of silt fence by wrapping ends together (See drawing).

Maintenance

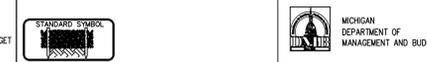
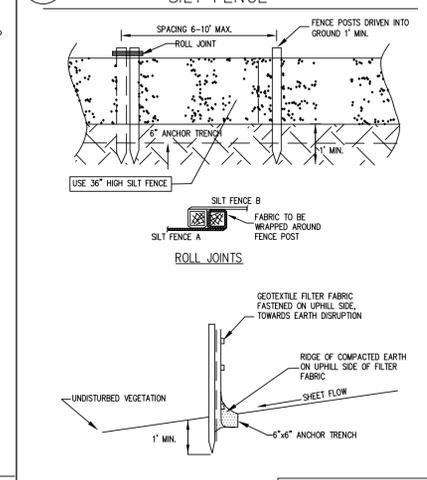
- Inspect frequently and immediately after each storm event. Check several times during prolonged storm events. If necessary, repair immediately.
- If the sediment has reached 1/3 the height of the fence, the soil should be removed and disposed of in a stable upland site.
- The fence should be re-installed if water is seeping underneath it or if the fence has become ineffective.
- Silt fence should be removed once vegetation is established and up-slope area has stabilized.

S51 SILT FENCE SPECIFICATIONS

Limitations

- Silt fence may cause temporary ponding and could fail if too much water flows through the area.
- Do not use in areas with concentrated flows.
- Chance of failure increases if fence is installed incorrectly or if sediment accumulation is not removed.

S51 SILT FENCE



S53 STABILIZED CONSTRUCTION ACCESS SPECIFICATIONS

When

- Construction traffic is expected to leave a construction site.
- Stabilization of interior construction roads is desired.

Why

- To minimize tracking of sediment onto public roadways and to minimize disturbance of vegetation.

Where

- Stabilized construction entrances shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must be routed over the rock ingress/egress corridor.

How

1. Stabilized construction access road should be established at the onset of the construction activities and maintained in place for the duration of the construction project.
2. Installation of this practice should be the responsibility of the site clearing or excavating contractor.
3. Access location should be cleared of woody vegetation.
4. Non-woven geotextile fabric shall be placed over the existing ground prior to placing stone.
5. Access size should be a minimum of 50'. (30' for single residence lot).
6. Access width should be 12' minimum, flared at the existing road to provide a turning radius.
7. Crushed aggregate (2" to 3"), or reclaimed or recycled concrete equivalent, shall be placed at least 8" deep over the length and width of the ingress/egress corridor.

Maintenance

- Periodic inspection and needed maintenance shall be provided after each rain event.
- Stabilized entrances shall be repaired and rock added as necessary.



S53 STABILIZED CONSTRUCTION ACCESS SPECIFICATIONS

Maintenance (cont.)

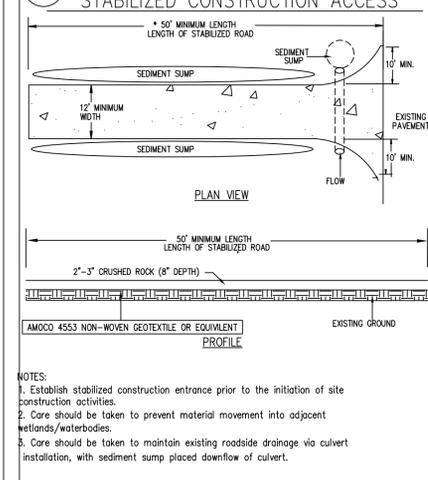
- Sediment deposited on public rights-of-way shall be removed immediately and returned to the construction site.
- If soils are such that washing of tires is required, it shall be done in a wash rack area, stabilized with stone, immediately prior to the construction access stabilized corridor.

Limitations

- Effectiveness limited, sediment may be tracked onto roads requiring additional action.



S53 STABILIZED CONSTRUCTION ACCESS



S58 INLET PROTECTION - FABRIC DROP SPECIFICATIONS

When

- When sediment laden stormwater requires treatment before entering a stormwater drainage system.

Why

- To prevent sediment from entering stormwater systems.

Where

- Use in or at stormwater inlets, especially at construction sites or in streets.

How

1. A filter fabric bag is hung inside the inlet, beneath the grate.
2. Replace grate, which will hold bag in place.
3. Anchor filter bag with 1" rebar for removal from inlet.
4. Flaps of bag that extend beyond the bag can be buried in soil in earth areas.

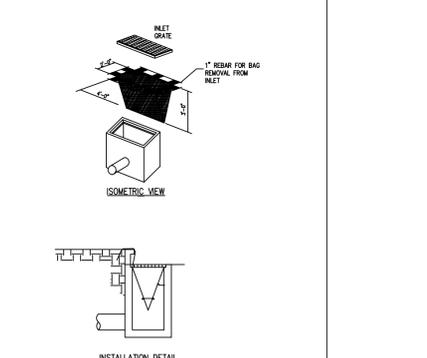
Maintenance

- Drop inlet filters should be inspected routinely and after each major rain event.
- Damaged filter bags should be replaced.
- Clean and/or replace filter bag when 1/2 full.
- Replace clogged fabric immediately.
- If needed, initiate repairs immediately upon inspection.
- Remove entire protective mechanism when upgradient areas are stabilized and streets have been swept.

Limitations

- Can only accommodate small flow quantities.
- Requires frequent maintenance.
- Ponds **USE "SILT SACKS" OR EQUIVALENT PRODUCT.**

S58 INLET PROTECTION - FABRIC DROP

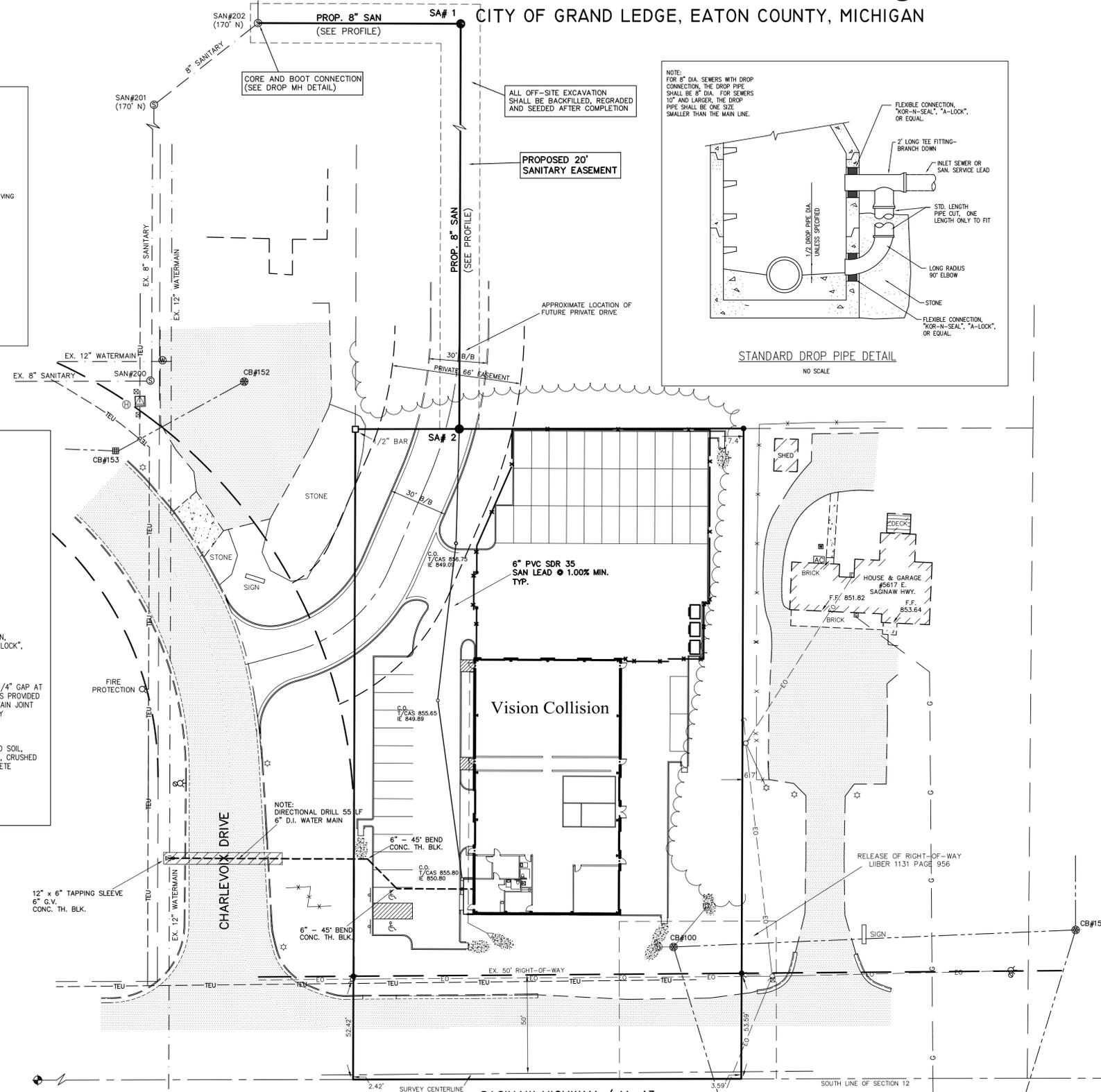
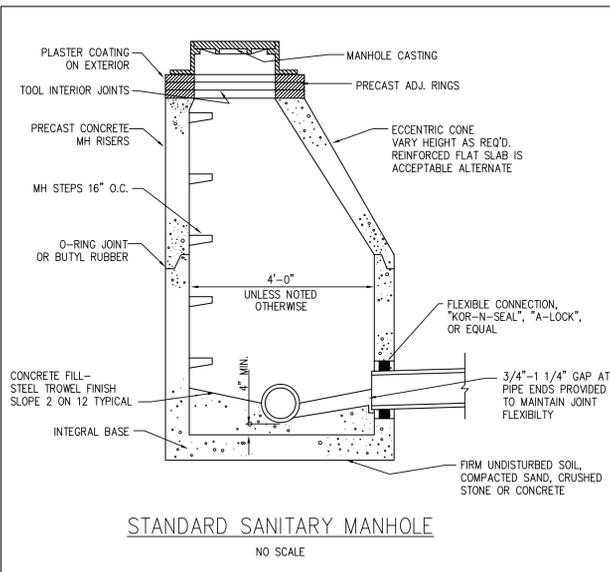
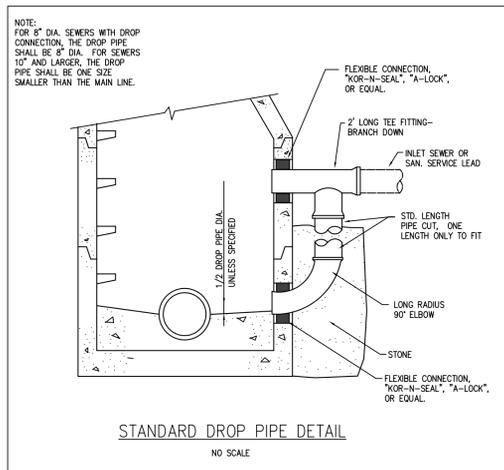
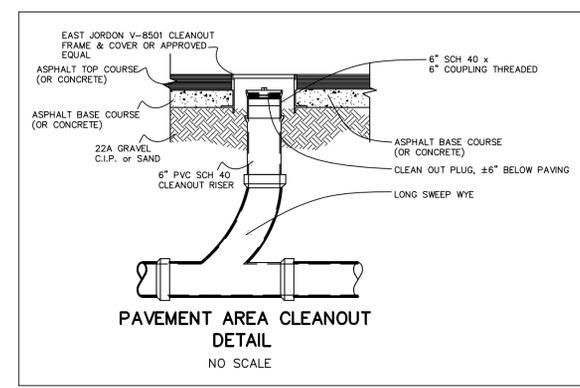
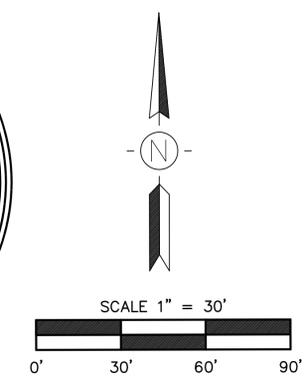
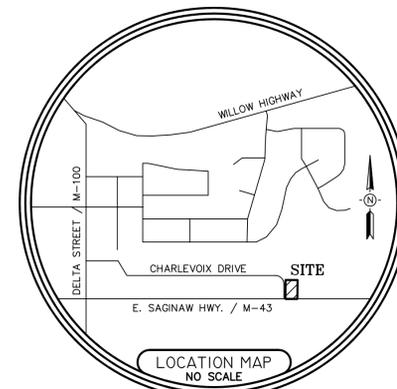


E-85944-SESC DETAIL E-85944

REVISIONS		KEBS, INC. KYES ENGINEERING BRYAN LAND SURVEYS 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047 Marshall Office Ph. 269-781-9800	
11-15-12	SUBMITTAL	DESIGNER:	APPROVED BY:
		GAP	GAP
		PROJECT MGR. GAP	SHEET 6 OF 6
		AUTHORIZED BY: WILL RANDLE	JOB #:
		VISION COLLISION	85944

Vision Collision-Grand Ledge

CITY OF GRAND LEDGE, EATON COUNTY, MICHIGAN



- EX. LEGEND**
- = SET 1/2" BAR WITH CAP
 - = FOUND IRON AS NOTED
 - = DEED LINE
 - = DISTANCE NOT TO SCALE
 - = FENCE
 - = ASPHALT
 - = CONCRETE
 - = GRAVEL
 - +850 = EXISTING SPOT ELEVATION
 - +850 = EXISTING CONTOUR ELEVATION
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 - = STORM SEWER
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 - = GAS LINE
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 - ▲ 1/8" 800.00 = PROPOSED TOP OF WALK ELEV.
 - ⊙ = DENOTES S.E.S.C. KEYING SYSTEM

NOTE: WATER SHALL HAVE 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.

BENCHMARKS:
 BM#1 - BIG ARM OF 1ST FIRE HYDRANT NORTH OF SAGINAW HIGHWAY ON WEST SIDE OF CHARLEVOIX DRIVE ELEVATION - 858.34
 BM#2 - 80D NAIL IN NORTH SIDE OF 1ST POWER POLE EAST OF CHARLEVOIX DRIVE ON NORTH SIDE OF SAGINAW HIGHWAY ELEVATION - 857.97

BENCHMARK DATUM IS FROM WALDO & BRANCH DRAIN PLANS DATED 11-99 FROM FTC&H PER LEDY SURVEY GROUP PROJECT NO. 05.2521



EX. SEWER INVENTORIES:

SANITARY MANHOLE #200	TOC	855.10
8" WEST	841.56	
8" NORTH	841.47	
SANITARY MANHOLE #201	TOC	853.66
8" NE	840.30	
8" SOUTH	840.40	
SANITARY MANHOLE #202	TOC	854.26
8" NORTH	836.62	
8" SW	839.64	
STORM MANHOLE #151	TOC	854.11
30" NORTH	842.29	
30" SW	843.34	

SAGINAW HIGHWAY / M-43

STORM MANHOLE #160	CATCH BASIN #152
TOC	INLET EL.
36" NE	854.74
30" SOUTH	852.19
STORM MANHOLE #161	CATCH BASIN #153
TOC	INLET EL.
48" NNW	854.82
12" QNW	850.82
12" QNW	850.31
CATCH BASIN #100	
INLET EL.	851.75 (RAISE CASTING TO 854.25)
24" EAST	844.66 (CORE DRILL & BOOT 6" I.E. W 850.42)
48" SE	845.73 (CORE DRILL & BOOT 6" I.E. NE 846.49)
CATCH BASIN #150	
INLET EL.	846.27
36" NORTH	837.19
24" WEST	842.49
36" SW	838.45

- SPECIFICATIONS**
- SANITARY SEWERS**
- All sanitary sewer construction shall comply with the Construction Standards of the City of Grand Ledge and shall be subject to the inspection and approval of the City.
 - All sanitary sewer pipe shall be PVC SDR 35
 - All pipe to be laid with the aid of laser equipment.
 - Trench width shall be maintained to a point at least 12" above the top of the pipe to ensure bedding conditions.
 - All sanitary leads shall be 6" PVC SDR 35 installed at minimum slope of 1

- STORM SEWER**
- All storm sewer construction shall comply with the requirements of the City of Grand Ledge and shall be subject to their inspection and approval.
 - All storm sewer 10" and smaller shall be PVC SCH 40, OR PVC SDR 35
 - All storm sewer pipe 12" and larger shall be C-76, Class III reinforced concrete pipe.
 - All pipe to be laid with the aid of laser equipment.
 - All storm sewer manholes and catch basins shall be in accordance with the City of Grand Ledge.
 - All catch basins and yard drains shall have a three foot deep sump.

- WATER SYSTEM**
- All water system construction shall comply with the Construction Standards of the City of Grand Ledge.
 - All domestic services shall be type "K" copper.
 - All water mains shall have a vertical clearance of 18" from all sewers.

- GENERAL**
- Any unstable soil (such as peat, muck, marl, soft blue clay, topsoil, etc.) which is encountered beneath proposed utilities, parking lots and structures, drives and buildings shall be removed down to sound subsoil and backfilled with sand and gravel as needed to reach finished grade. Such fill shall be compacted in 6" layers to 95% of max. density. The decision on material for bedding and backfill shall be determined by the Engineer.
 - Information on depth, size, etc., of all other underground utilities shown herein is plan information only, obtained from the utility company involved. Prior to any final designing or construction. It is recommended that all utility companies, agencies, departments, etc., involved be contacted for verification of such locations.
 - The locations, size and elevation of sewers and related structures shown herein, were obtained through a survey completed by KEBS, Inc. KEBS, Inc. is not responsible for information on any other sewers, drains or related structures not found and not shown hereon, that may cross, parallel, lie contiguous to or service this site.
 - For protection of underground utilities, the contractor shall dial 800-482-7171 a minimum of 72 hours prior to excavating in the vicinity of utility lines. All "MISS DIG" participating members will thus be routinely notified. This does not relieve the contractor of the responsibility of notifying utility owners who may not be a part of the "MISS DIG" alert system.
 - All existing roads, driveways and yards disturbed during construction shall be restored by the contractor to its original condition.
 - All sewer pipe shall be bedded with CL III granular material. Class III material shall be used in backfilling all sewer trenches to 1" above the sewer pipe.
 - All compaction of trenches within the roadways shall be to 95% density. Equipment such as a small dozer in the trenches and a hoe-pack around the structures will be required, or equipment capable of reaching 95% density.
 - Contractor shall be responsible for obtaining all permits required for construction.
 - Contractor shall be responsible for maintaining As-Built drawings of all lot lead locations and drawings shall be available to the Engineer upon request.

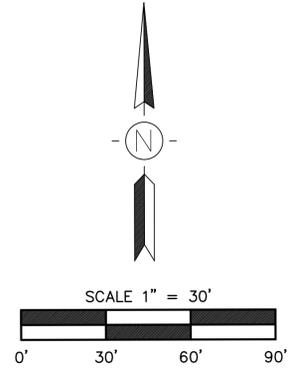
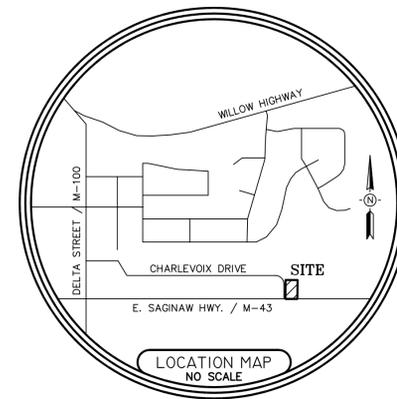
TAX ID# 400-012-400-060-00
 ADDRESS: 5607 E. SAGINAW HWY., GRAND LEDGE, MICHIGAN

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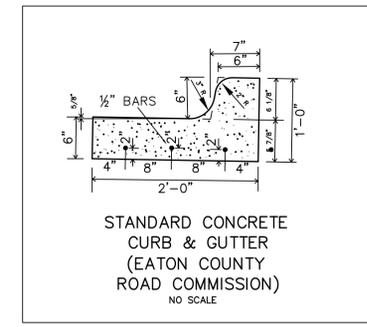
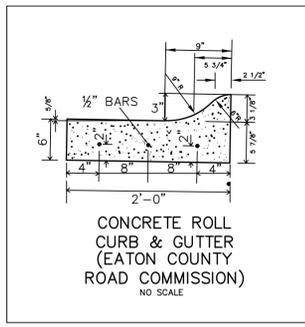
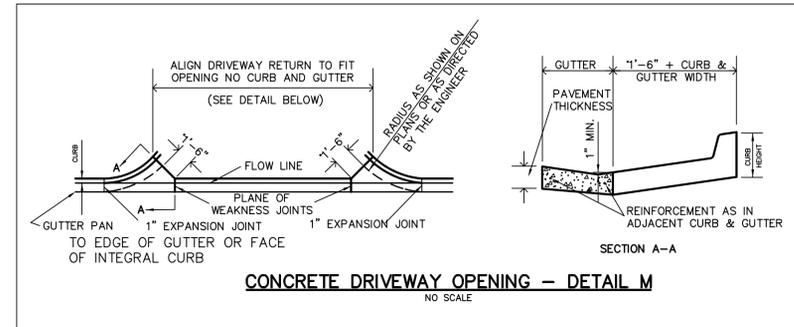
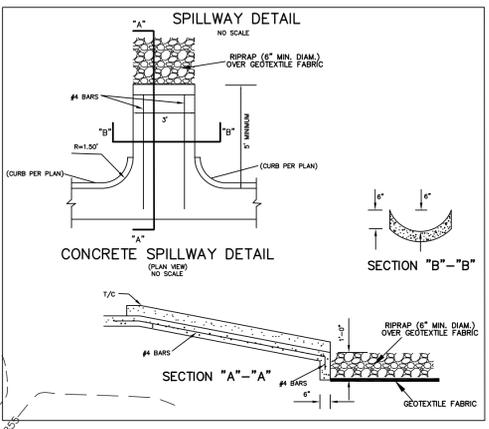
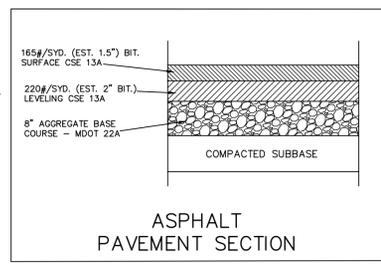
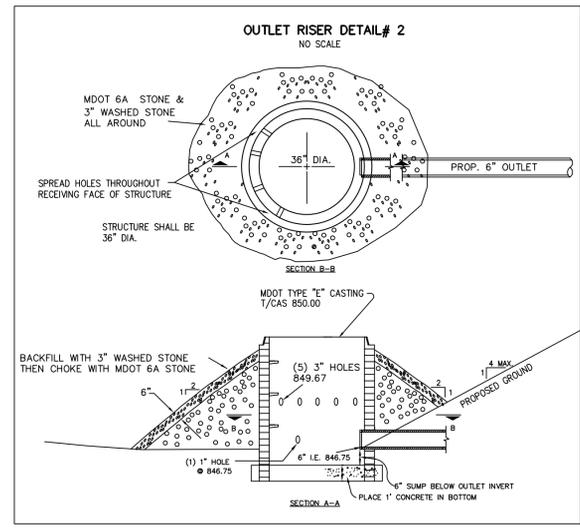
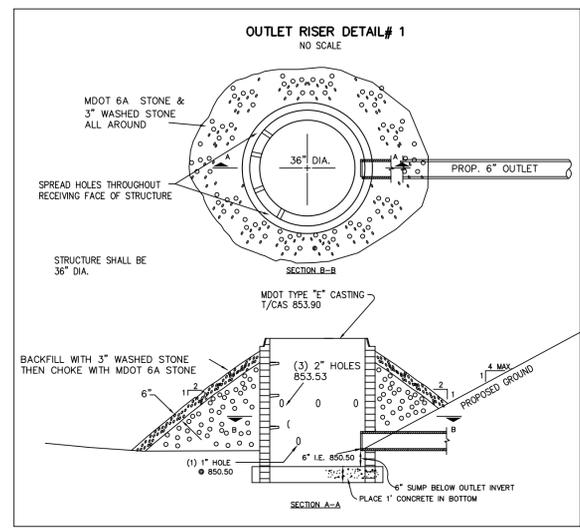
REVISIONS			KEYES ENGINEERING BRYAN LAND SURVEYS
9-25-12	SUBMITTAL		
11-15-12	SUBMITTAL	2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047	
		Marshall Office Ph. 269-781-9800	
Vision Collision-Grand Ledge			
SITE & UTILITY PLAN			
SCALE: 1" = 30'	DESIGNER: G.A.P.	APPROVED BY: SHEET 2 OF 6	
DATE: 9-17-12	PROJECT MGR. G.A.P.		
AUTHORIZED BY: VISION COLLISION	JOB #: 85944		

Vision Collision-Grand Ledge

CITY OF GRAND LEDGE, EATON COUNTY, MICHIGAN



NOTE: ALL GRADES SHOWN ARE FOR FINAL CONSTRUCTED CONDITIONS AND CONTRACTOR IS RESPONSIBLE FOR HOLDING DOWN GRADES AS THEY OR THE DEVELOPER DEEMS NECESSARY FOR BASEMENT SPOILS, TOPSOILS ETC...



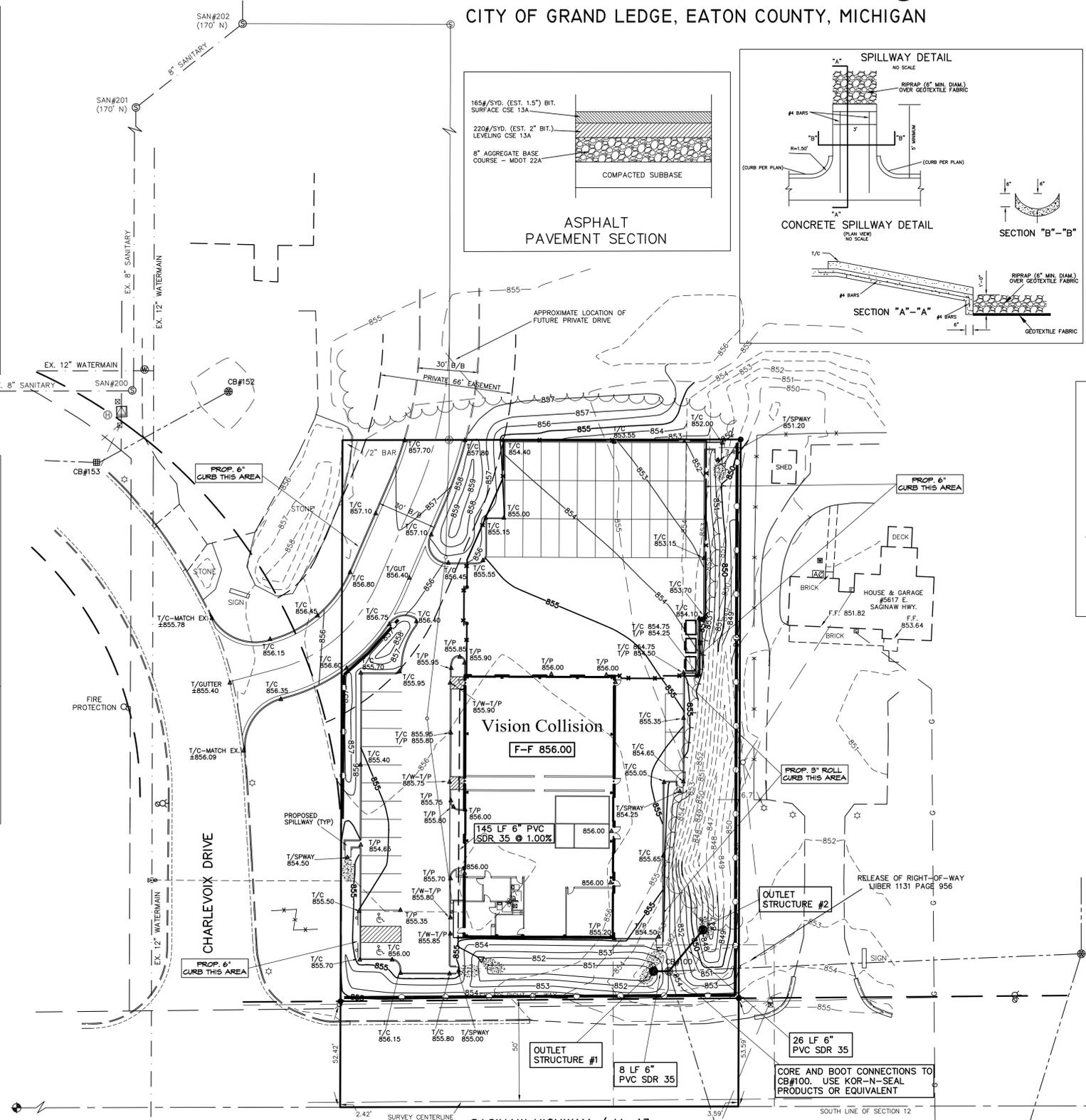
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BENCHMARKS:
 BM#1 - BIG ARM OF 1ST FIRE HYDRANT NORTH OF SAGINAW HIGHWAY ON WEST SIDE OF CHARLEVOIX DRIVE ELEVATION - 858.34
 BM#2 - 800 NAIL IN NORTH SIDE OF 1ST POWER POLE EAST OF CHARLEVOIX DRIVE ON NORTH SIDE OF SAGINAW HIGHWAY ELEVATION - 857.97
 BENCHMARK DATUM IS FROM WALDO & BRANCH DRAIN PLANS DATED 11-1-99 FROM FTC&P PER LEDY SURVEY GROUP PROJECT NO. 05-2521



EX. SEWER INVENTORIES:

SANITARY MANHOLE #200	TOC 855.10	8" WEST 841.56	8" NORTH 841.47
SANITARY MANHOLE #201	TOC 853.66	8" NE 840.30	8" SOUTH 840.40
SANITARY MANHOLE #202	TOC 854.26	8" NORTH 836.62	8" SW 839.64
STORM MANHOLE #151	TOC 854.11	30" NORTH 842.29	30" SW 843.34

SAGINAW HIGHWAY / M-43

STORM MANHOLE #160	TOC 853.59	36" NE 839.97	30" SOUTH 841.36
STORM MANHOLE #161	TOC 854.60	48" NNW 848.92	12" ONW CAN'T ACCESS
CATCH BASIN #100	INLET EL. 851.75 (RAISE CASTING TO 854.25)	24" EAST 844.86	48" SE 845.73 (CORE DRILL & BOOT 6" I.E. NE 846.49)
CATCH BASIN #150	INLET EL. 846.27	36" NORTH 837.19	24" WEST 842.49

CATCH BASIN #152	INLET EL. 854.74	8" SW 852.19
CATCH BASIN #153	INLET EL. 854.82	8" NE 850.82
CATCH BASIN #154	INLET EL. 850.31	12" WEST 850.31

TAX ID# 400-012-400-060-00
 ADDRESS: 5607 E. SAGINAW HWY., GRAND LEDGE, MICHIGAN

REVISIONS 9-25-12 SUBMITTAL 11-15-12 SUBMITTAL		KEBS, INC. KYES ENGINEERING BRYAN LAND SURVEYS 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047 Marshall Office Ph. 269-781-9800	
Vision Collision-Grand Ledge GRADING AND STORM SEWER PLAN		APPROVED BY: SHEET 3 OF 6	
SCALE: 1" = 30' DATE: 9-17-12 AUTHORIZED BY: VISION COLLISION	DESIGNER: PROJECT MGR. G.A.P.	APPROVED BY: SHEET 3 OF 6 JOB #: 85944	

E-85944.dwg
 85944.TOP

Vision Collision-Grand Ledge

CITY OF GRAND LEDGE, EATON COUNTY, MICHIGAN

SOIL EROSION CONTROL NOTES:

- ALL SOIL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE EATON COUNTY DRAIN COMMISSION REQUIREMENTS AND PROJECT SPECIFICATIONS.
- ANY EROSION OR SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, OR IN WATERWAYS; WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
- CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED AND AS DIRECTED ON THESE PLANS. HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER EARTH CHANGES HAVE BEEN ESTABLISHED.
- A MINIMUM 50' BY 20' WIDE, 8" DEEP CLEAN STONE EXIT SHALL BE PROVIDED AT ALL CONSTRUCTION ENTRANCES. SHOULD THE STONE BECOME LESS EFFICIENT IT SHALL BE REPLACED. ALL CONSTRUCTION TRAFFIC WILL USE THE CLEAN STONE EXITS.
- DUST CONTROL WILL BE EXERCISED AT ALL TIMES WITHIN THE PROJECT BY THE CONTRACTORS. SPRINKLING TANK TRUCKS SHALL BE AVAILABLE AT ALL TIMES TO BE USED ON HAUL ROUTES OR OTHER PLACES WHERE DUST BECOMES A PROBLEM.
- SEDIMENT @ C.B.'s SHALL BE REMOVED AFTER EVERY STORM. SEEDING OF EXPOSED AREAS SHALL BE COMPLETED WITHIN 9 DAYS OF FINAL GRADING.
- ALL DISTURBED AREAS WILL RECEIVE PERMANENT EROSION CONTROL WITHIN 5 DAYS OF FINAL GRADING. AREAS NOT STABILIZED SHALL BE DIVERTED TOWARD RETENTION/SEDIMENT BASINS.
- ANY CONSTRUCTION ACCESS ROAD WILL BE PROTECTED WITH CRUSHED STONE OR CRUSHED CONCRETE, AGGREGATE SIZE 2"-3".
- WEATHER AND UNFORESEEN DELAYS MAY RESULT IN EXTENSION OF CONSTRUCTION SCHEDULE.
- SITE DEVELOPMENT CONTRACTOR SHALL INSPECT SOIL EROSION CONTROL MEASURES ON A DAILY BASIS, MORE OFTEN IF NECESSARY. ANY NEEDED REPAIRS SHALL BE PROMPTLY MADE.
- SITE DEVELOPMENT CONTRACTOR SHALL MEET WITH SOIL EROSION ENFORCEMENT OFFICER PRIOR TO START OF WORK.
- EACH DISTURBANCE ADJACENT TO WETLANDS, INLAND STREAMS & LAKES, OR ADJACENT TO SLOPES GREATER THAN 8% SHALL BE TOPSOILED, SEEDED, AND EROSION CONTROL MATTING APPROPRIATE FOR THE SLOPE CONDITIONS INSTALLED, WITHIN 3 DAYS OF FINAL GRADING OR FINAL ACTIVITY OF THOSE AREAS.

SEQUENCE OF CONSTRUCTION

- INSTALL ALL TEMPORARY SILT FENCE PER PLAN AND AS SHOWN ON DETAIL.
- USE EXISTING ENTRANCE PER PLAN FOR CONSTRUCTION ENTRANCE/EXIT.
- INSTALL INLET PROTECTION FABRIC DROPS BETWEEN THE FRAME AND COVER OF ALL EXISTING YARD BASINS OR INLETS WHICH MAY BE SUSCEPTIBLE TO SEDIMENT EROSION FROM THE PROPOSED CONSTRUCTION AS SHOWN IN THESE PLANS.
- WHILE MAINTAINING A VEGETATIVE BUFFER WHENEVER POSSIBLE STRIP AND STOCKPILE TOPSOIL ABOVE AREAS OF PROPOSED EXCAVATION OR GRADING FOR LATER USE ON SITE. PLACE STOCKPILED TOPSOIL IN AREAS WHICH ARE NEITHER SUBJECT TO HIGH RUNOFF NOR ALONG STEEP SLOPES. SEED AND MULCH STOCKPILES IMMEDIATELY TO PREVENT WIND BLOWN SEDIMENT POLLUTION AND EXCESSIVE DUST.
- EXCAVATE FOR PROPOSED ROAD AND UTILITY CONSTRUCTION AS NECESSARY. DO NOT EXPOSE AREAS FAR IN ADVANCE OF THE PROPOSED CONSTRUCTION FOR THAT AREA. ROUGHEN AND SCARIFY EXPOSED SURFACES TO REDUCE RUNOFF VELOCITY AND SEDIMENTATION. MAINTAIN VEGETATION WHENEVER POSSIBLE TO PROVIDE A NATURAL BUFFER.
- AFTER COMPLETION OF THE PROPOSED UTILITIES, INSTALL INLET PROTECTION FABRIC DROPS IN ALL INLETS.
- INSTALL TEMPORARY STONE FILTER BERMS PERPENDICULAR TO EXPOSED STEEP SLOPES AS NECESSARY ALONG THE PROPOSED STREETS TO REDUCE RUNOFF VELOCITY AND SEDIMENTATION. USE TEMPORARY STONE CHECK DAMS TO SLOW DOWN AND/OR DIVERT HEAVY RUNOFF WHERE NECESSARY.
- TOPSOIL, SEED, FERTILIZE AND MULCH ALL EXPOSED AREAS WITHIN 5 DAYS OF FINAL GRADING TO PROTECT AND RESTORE PERMANENT VEGETATION.
- WATER EXPOSED GROUND REGULARLY TO CONTROL AIRBORNE PARTICULATE MATTER.
- THE CONTRACTOR SHALL MAINTAIN ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS AND UNTIL PERMANENT VEGETATION IS REESTABLISHED IN ALL EXPOSED AREAS. HE SHALL ALSO REMOVE ACCUMULATED SEDIMENT FROM ALL STRUCTURES.
- THE PERMITTEE SHALL MAINTAIN ALL PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AFTER THE INITIAL CONSTRUCTION PROCESS AND UNTIL PERMANENT VEGETATION IS REESTABLISHED IN ALL EXPOSED AREAS. HE SHALL ALSO REMOVE ACCUMULATED SEDIMENT FROM ALL STRUCTURES.
- THE SITE WILL BE PERIODICALLY INSPECTED BY THE EATON COUNTY DRAIN OFFICE. THE CONTRACTOR AND PERMITTEE SHALL BECOME FAMILIAR WITH THE RULES AND REGULATIONS OF THAT OFFICE.
- UPON FINAL APPROVED INSPECTION OF THE COMPLETED CONSTRUCTION BY ALL REVIEWING AGENCIES, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES.

NOTE: CONTRACTOR WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE TEMPORARY SOIL EROSION CONTROL MEASURES. OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE PERMANENT SOIL EROSION CONTROL MEASURES.

NOTE: STORM WATER RUNOFF FROM THIS SITE WILL NOT ADVERSELY AFFECT ADJACENT PROPERTIES.

NOTE: ANY STOCKPILING OF SOIL SHALL BE SURROUNDED BY SILT FENCE. SEEDED IF LEFT OVER 30 DAYS.

EX. LEGEND

- = SET 1/2" BAR WITH CAP
- = FOUND IRON AS NOTED
- = DEED LINE
- = DISTANCE NOT TO SCALE
- = FENCE
- = ASPHALT
- = CONCRETE
- = GRAVEL
- = EXISTING SPOT ELEVATION
- = EXISTING CONTOUR ELEVATION
- = SANITARY SEWER
- = STORM SEWER
- = WATER LINE
- = GAS LINE
- = UNDERGROUND TELEPHONE
- = UNDERGROUND TELEVISION
- = UNDERGROUND ELECTRIC
- = OVERHEAD WIRES
- = EDGE OF WOODS
- ⊙ = SANITARY MANHOLE
- ⊕ = DRAINAGE MANHOLE
- ⊖ = ELECTRIC MANHOLE
- ⊗ = TELEPHONE MANHOLE
- ⊘ = CATCHBASIN
- ⊙ = SANITARY CLEANOUT
- ⊕ = FIRE HYDRANT
- ⊖ = VALVE
- ⊗ = UTILITY POLE
- ⊘ = LIGHT POLE
- ⊙ = GUY POLE
- ⊕ = GUY WIRE
- ⊖ = UTILITY PEDESTAL
- ⊗ = TRANSFORMER
- ⊘ = ELECTRIC METER
- ⊙ = GAS METER
- ⊕ = WATER METER
- ⊖ = SIGN
- ⊗ = POST

SS3 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

BENCHMARK #1
BENCHMARK #2

NOTE: WATER SHALL HAVE 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.

BENCHMARKS:
 BM#1 - BIG ARM OF 1ST FIRE HYDRANT NORTH OF SAGINAW HIGHWAY ON WEST SIDE OF CHARLEVOIX DRIVE ELEVATION - 858.34
 BM#2 - 80D NAIL IN NORTH SIDE OF 1ST POWER POLE EAST OF CHARLEVOIX DRIVE ON NORTH SIDE OF SAGINAW HIGHWAY ELEVATION - 857.97
 BENCHMARK DATUM IS FROM WALDO & BRANCH DRAIN PLANS DATED 11-1-99 FROM FTC&P PER LEDY SURVEY GROUP PROJECT NO. 05.2521



LIMITS OF EARTH DISTURBANCE (TYP.)

ALL OFF-SITE EXCAVATION SHALL BE BACKFILLED, REGRADED AND SEEDED AFTER COMPLETION

APPROXIMATE LOCATION OF FUTURE PRIVATE DRIVE

±1.50 ACRES

Vision Collision

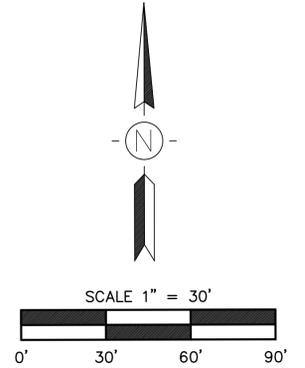
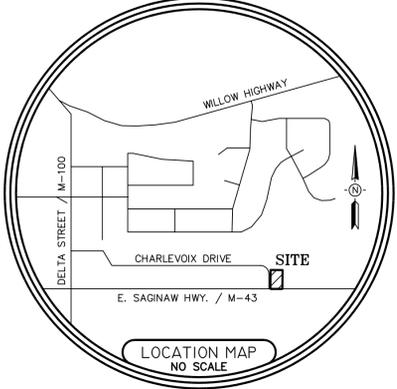
SILT FENCE

STREET SWEEPING NOTES:

CHARLEVOIX DR. SHALL BE KEPT CLEAN AND FREE OF TRACKED SEDIMENT. A STREET SWEEPER OR A BOBCAT WITH A BROOM ATTACHMENT SHOULD BE KEPT ON SITE TO DEAL WITH ANY OFF-SITE TRACKING AS IT OCCURS.

DENOTES EXISTING DRAINAGE FLOW →
 DENOTES PROPOSED DRAINAGE FLOW →
 TOTAL ACRES = ±1.50 ACRE
 AREA DISTURBED = ±1.73 ACRES
 —●— SILT FENCE (TYP.)
 - - - - - LIMITS OF EARTH DISTURBANCE (TYP.)

SEE DETAIL SHEET FOR PERMANENT AND TEMPORARY SEEDING DATES AND S.E.S.C. NOTES.



LEGAL DESCRIPTION:

(As provided in Transition Title Agency of Michigan Commitment No. 91037LANS dated July 05, 2012): Part of the Southeast 1/4 of Section 12, Town 4 North, Range 4 West, Onseta Township, Eaton County, Michigan, being more particularly described as follows: Commencing at the South 1/4 corner of Section 12; thence North 89°53'56" East 328.38 feet (previously described as 327.83 feet) along the South line of Section 12 to the point of beginning of the following described parcel; thence North 00°12'10" East 330.21 feet (previously described as 330.00 feet); thence North 89°53'56" East 198.00 feet; thence South 00°12'10" West 330.21 feet; thence South 89°53'56" West 198.00 feet along the South line of Section 12 to the point of beginning.



MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET S-E-S-C KEYING SYSTEM

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
EROSION CONTROLS			
E8	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained).
E12	RIPRAP		Use along shorelines, waterways, or where concentrated flows occur. Slows velocity, reduces sediment load, and reduces erosion.
SEDIMENTATION CONTROLS			
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.
S53	STABILIZED CONSTRUCTION ACCESS		Used at every point where construction traffic enters or leaves a construction site.
S58	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites.

CONSTRUCTION SCHEDULE & SEQUENCING:	2012		2013		NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
	NOVEMBER	DECEMBER	JANUARY	FEBRUARY												
PLACE AND MAINTAIN TEMPORARY EROSION CONTROLS																
TOPSOIL STRIPPING & STOCKPILING																
SITE GRADING & EARTHWORK																
CONSTRUCT UTILITIES																
PARKING LOT CONSTRUCTION																
BUILDING CONSTRUCTION																
TOPSOIL SPREADING & PERMANENT SEEDING																
FINAL INSPECTIONS & REMOVE TEMPORARY EROSION CONTROLS																

TAX ID# 400-012-400-060-00
ADDRESS: 5607 E. SAGINAW HWY., GRAND LEDGE, MICHIGAN

E-85944.dwg
85944.TOP

LEGEND

- = PROPOSED WATER MAIN
- = PROPOSED SANITARY SEWER
- = PROPOSED STORM SEWER
- = PROPOSED HYDRANT
- = PROPOSED GATE VALVE
- = PROPOSED SAN. M.H.
- = PROPOSED STORM M.H.
- = PROPOSED C.B.
- = PROPOSED GRADES
- = PROPOSED FIRST FLOOR ELEV.
- = PROPOSED TOP OF CURB ELEV.
- = PROPOSED TOP OF GROUND ELEV.
- = PROPOSED TOP OF PAVT ELEV.
- = PROPOSED TOP OF WALK ELEV.
- = DENOTES S.E.S.C. KEYING SYSTEM

EX. SEWER INVENTORIES:

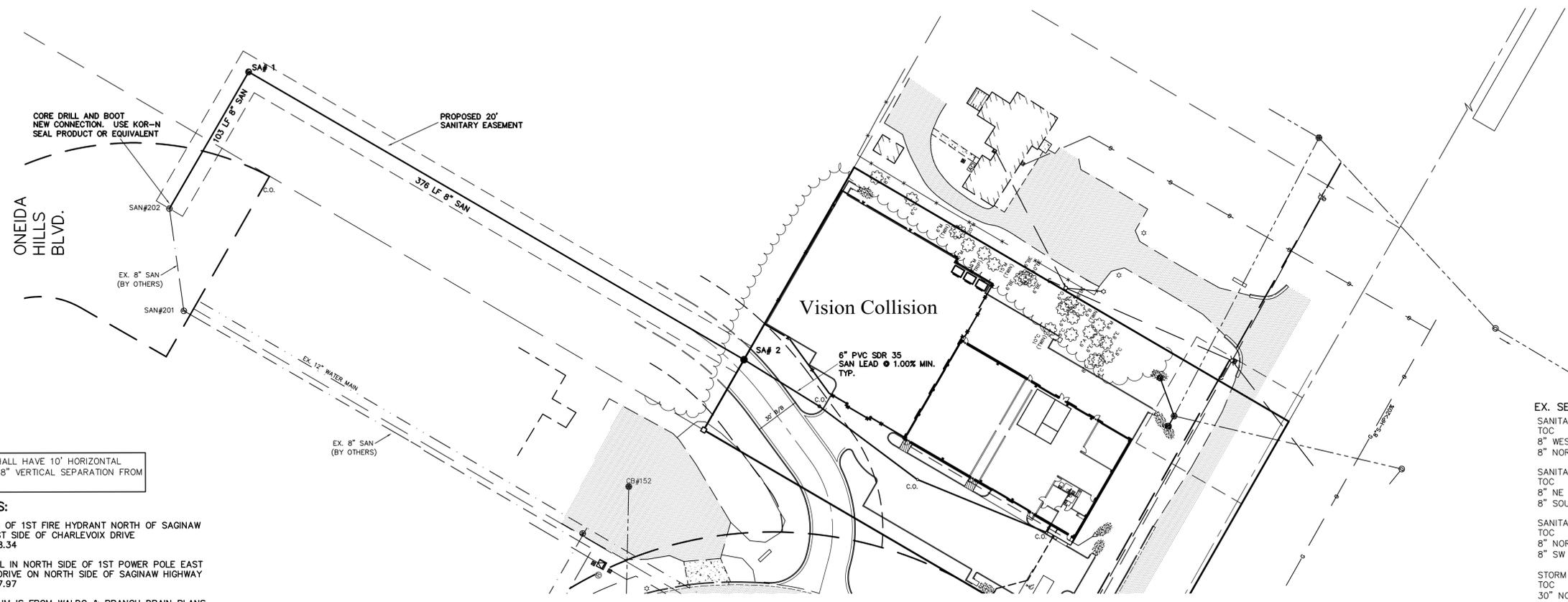
- SANITARY MANHOLE #200
 TOC 855.10
 8" WEST 841.56
 8" NORTH 841.47
- SANITARY MANHOLE #201
 TOC 853.66
 8" NE 840.30
 8" SOUTH 840.40
- SANITARY MANHOLE #202
 TOC 854.26
 8" NORTH 836.62
 8" SW 839.64
- STORM MANHOLE #151
 TOC 842.29
 30" NORTH 842.29
 30" SW 843.34

SAGINAW HIGHWAY / M-43

- STORM MANHOLE #160
 TOC 853.59
 36" NE 839.97
 30" SOUTH 841.36
- STORM MANHOLE #161
 TOC 854.60
 48" NNW 848.92
 12" NNW CAN'T ACCESS
- CATCH BASIN #152
 INLET EL. 854.74
 8" SW 852.19
- CATCH BASIN #153
 INLET EL. 854.82
 8" NE 850.82
 12" WEST 850.31
- CATCH BASIN #100
 INLET EL. 851.75 (RAISE CASTING TO 854.25)
 24" EAST 844.86 (CORE DRILL & BOOT 6" I.E. W 850.42)
 48" SE 845.73 (CORE DRILL & BOOT 6" I.E. NE 846.49)
- CATCH BASIN #150
 INLET EL. 846.27
 36" NORTH 837.19
 24" WEST 842.49
 36" SW 838.45

SOIL TYPE:
 MaB-MARLETTE LOAM 2-6% SLOPES
 Pr-PACKHILL LOAM

KEBS, INC. KYES ENGINEERING
 BRYAN LAND SURVEYS
 2116 HASLETT ROAD, HASLETT, MI 48840
 PH. 517-339-1014 FAX. 517-339-8047
 Marshall Office
 Ph. 269-781-9800
Vision Collision-Grand Ledge
 SOIL EROSION CONTROL PLAN
 SCALE: 1" = 30'
 DATE: 9-17-12
 AUTHORIZED BY: VISION COLLISION
 DESIGNER: GAP
 PROJECT MGR: GAP
 APPROVED BY: GAP
 SHEET 4 OF 6
 JOB #: 85944

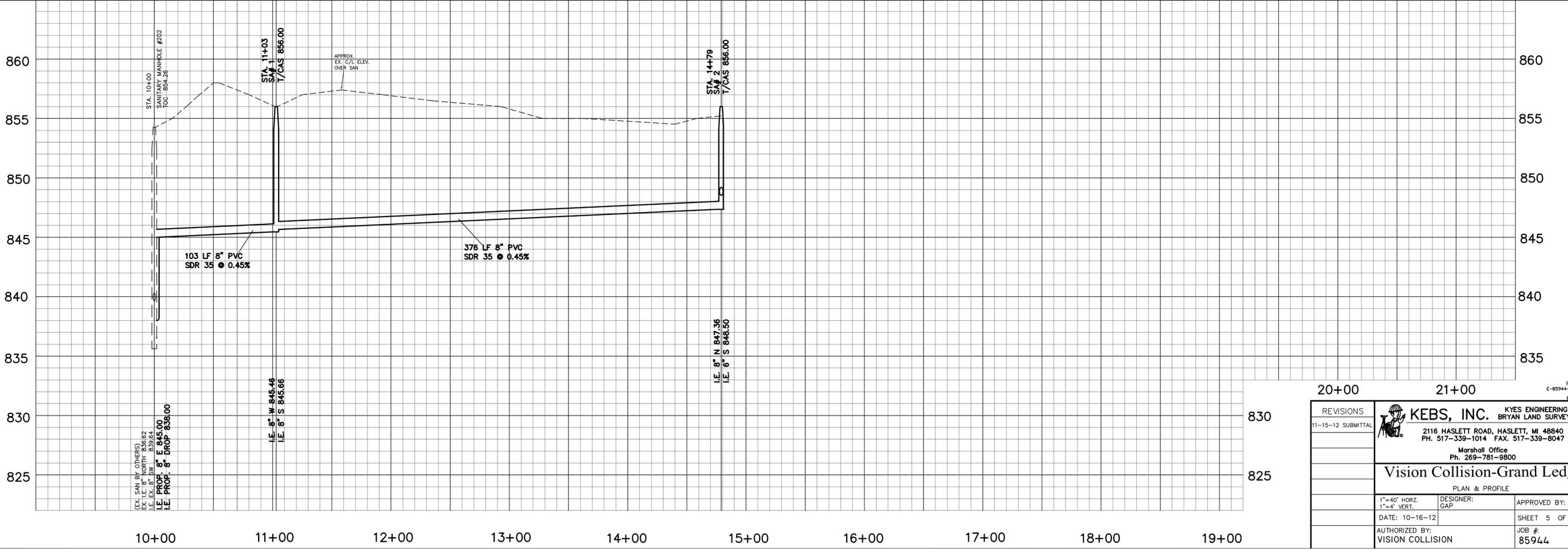


NOTE: WATER SHALL HAVE 10' HORIZONTAL SEPARATION & 18" VERTICAL SEPARATION FROM ALL SEWERS.

BENCHMARKS:
 BM#1 - BIG ARM OF 1ST FIRE HYDRANT NORTH OF SAGINAW HIGHWAY ON WEST SIDE OF CHARLEVOIX DRIVE ELEVATION - 858.34
 BM#2 - 60D NAIL IN NORTH SIDE OF 1ST POWER POLE EAST OF CHARLEVOIX DRIVE ON NORTH SIDE OF SAGINAW HIGHWAY ELEVATION - 857.97
 BENCHMARK DATUM IS FROM WALDO & BRANCH DRAIN PLANS DATED 11-1-99, FROM FTC&H PER LEDY SURVEY GROUP PROJECT NO. 05.2521

EX. SEWER INVENTORIES:

SANITARY MANHOLE #200	TOC	855.10	8" WEST	841.56	8" NORTH	841.47
SANITARY MANHOLE #201	TOC	853.66	8" NE	840.30	8" SOUTH	840.40
SANITARY MANHOLE #202	TOC	854.26	8" NORTH	836.62	8" SW	839.64
STORM MANHOLE #151	TOC	854.11	30" NORTH	842.29	30" SW	843.3±
STORM MANHOLE #160	TOC	853.59	36" NE	839.97	30" SOUTH	841.36
STORM MANHOLE #161	TOC	854.60	48" NNW	848.92	12" WNW	CAN'T ACCESS
CATCH BASIN #100	INLET EL.	851.75	24" EAST	844.68	48" SE	845.73
CATCH BASIN #150	INLET EL.	846.27	36" NORTH	837.19	24" WEST	842.49
36" SW						838.45
CATCH BASIN #152	INLET EL.	854.74	8" SW	852.19		
CATCH BASIN #153	INLET EL.	854.82	8" NE	850.82	12" WEST	850.31



REVISIONS	KEBS, INC. KYES ENGINEERING BRYAN LAND SURVEYS 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-339-1014 FAX. 517-339-8047 Marshall Office Ph. 269-781-9800	
11-15-12 SUBMITTAL	Vision Collision-Grand Ledge PLAN & PROFILE	
1"=40' HORZ.	DESIGNER:	APPROVED BY: GAP
1"=4' VERT.	GAP	
DATE: 10-16-12		SHEET 5 OF 6
AUTHORIZED BY:	VISION COLLISION	JOB #: 85944

PRO-1A
 E-85944-PRO1.dwg
 E-85944
 85944.TOP

§ 220-76. Waste receptacles.

A space for the location of waste receptacles shall be provided for each business, office, multiple-family or industrial use. A space for waste receptacles shall be provided whether or not their use is intended and shall be located on-site, unless the property owner has legal access to a waste receptacle that is located in the same block, in reasonably close proximity to the subject property. Waste receptacles and enclosures may be permitted as an accessory use to any use except one AND TWO family residential. ~~Notwithstanding the provisions of Article XX of this chapter, which are hereby declared inapplicable to waste receptacles, including those that existed prior to the effective date of this chapter,~~ All waste receptacles, shall comply with the provisions of § 220-64, Accessory buildings, structures and uses, and the following ~~conditions shall apply:~~

- A. Waste receptacles must be clearly accessible to servicing vehicles.
- B. A concrete pad, at least two feet greater than the dimension of the waste receptacle on all sides, shall be provided.
- C. Waste receptacles shall be screened on all sides. Such screening shall be constructed of an earth mound, brick or decorative concrete block material with a minimum height of six feet or one foot above the height of the enclosed dumpster, whichever is greater. Access gates must provide screening and may be of wood construction.
- D. WASTE RECEPTACLE ENCLOSURES MAY HAVE A MAZE STYLE PEDESTRIAN ENTRANCE OR A PEDESTRIAN ENTRANCE WITH AN OPAQUE ACCESS GATE.
- ~~D~~ E. Waste receptacles and their screening enclosures shall be located as far from single-family residential districts as practical.
- F. WASTE RECEPTACLES AND THEIR SCREENING ENCLOSURES SHALL BE LOCATED IN SUCH A MANNER AS TO MINIMIZE IMPACTS ON ADJACENT PROPERTIES BY NOT OBSTRUCTING OR IMPEDING VIEWS FROM WINDOWS, DOORWAYS, OR OUTDOOR GATHERING AREAS.
- ~~E~~ G. The location of waste receptacles shall be indicated on the site plans and the location and screening shall be subject to approval of the Zoning Administrator, or of the Planning Commission when the Planning Commission reviews the site plan.
- ~~F~~ H. Detail drawings or a note shall be provided on the plan to assure that the above requirements are met.
- I. **THIS SECTION SHALL NOT APPLY TO PORTABLE TRASH CONTAINERS INTENDED FOR CURBSIDE PICK-UP.**

Section 220-4. Definitions.

RECREATIONAL EQUIPMENT: Travel trailers, pickup campers or coaches, motorized dwellings, folding tent trailers, boats, and boat trailers, snowmobiles, horse trailers, utility trailers, dune buggies, and other similar equipment.

Amend Section 220-63, Storage of recreational equipment, ~~trailers or vehicles~~, as follows:

The storage of ~~any~~ recreational equipment, ~~trailers or vehicles~~ in any residential district shall be subject to the following:

- A. Such recreational equipment, ~~trailers or vehicles~~ must be owned by the resident of the dwelling.
- B. All recreational ~~vehicles~~ EQUIPMENT parked or stored in a residential area shall not be connected to sanitary facilities, shall not be occupied, and shall be locked at all times.
- C. ~~The parking of one boat in residential driveways from May 1 to October 1 is permitted.~~ THE PARKING OR STORAGE OF ONE ITEM OF RECREATIONAL EQUIPMENT, NOT EXCEEDING 10 FEET IN HEIGHT, 10 FEET IN WIDTH AND/OR 25 FEET IN LENGHT IS PERMITTED IN A RESIDENTIAL DRIVEWAY. RECREATIONAL EQUIPMENT THAT EXCEEDS THESE DIMENSIONS MAY BE PARKED IN A RESIDENTIAL DRIVEWAY AS LONG AS IT DOES NOT PROJECT INTO THE REQUIRED 25 FOOT FRONT YARD SETBACK.
- D. No more than two ~~vehicles or units~~ ITEMS OF RECREATIONAL EQUIPOMENT shall be stored on a zoning lot except that in no instance shall storage of such RECREATIONAL EQUIPMENT occupy more than 10% of a rear yard.
- E. Storage OF RECREATIONAL EQUIPMENT may be permitted in a SIDE OR rear yard only and ~~subject further to the applicable provisions of § 220-64, Accessory buildings, structures and uses~~ SHALL BE SETBACK AT LEAST 3 FEET FROM ALL PROPERTY LINES.
- F. RECREATIONAL EQUIPMENT MAY BE PARKED IN ANY FRONT, SIDE OR REAR YARD WHERE ON-SITE PARKING IS PERMITTED FOR UP TO 72 HOURS WITHIN A 7 DAY TIME PERIOD FOR THE PURPOSE OF LOADING AND UNLOADING OR FOR NORMAL MAINTENANCE AND CLEANING.

EXISTING ORDINANCE:

Section 220-70. Exterior lighting.

- ~~A. All outdoor lighting in all use districts used to illuminate the general area of a specific site shall be shielded to reduce glare and shall be so arranged as to reflect lights away from all adjacent residential districts or adjacent residences.~~
- ~~B. All outdoor lighting in all use districts shall be directed toward and confined to the ground area of lawns or parking lots.~~
- ~~C. All lighting of nonresidential uses for the external illumination of buildings, so as to feature said buildings, shall be placed and shielded so as not to interfere with the vision of persons on adjacent highways or adjacent property.~~
- ~~D. All illumination of signs and any other outdoor features shall not be of a flashing, moving, or intermittent type. Artificial light shall be maintained stationary and constant in intensity and color at all times when in use.~~
- ~~E. Parking lot lighting shall not exceed an intensity of five footcandles, nor shall it be less than 1.5 footcandles.~~
- ~~F. Exterior lighting shall in no way imitate directional or traffic lighting.~~

PROPOSED ORDINANCE:

Section 220-70. Exterior lighting.

- A. Lighting definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Canopy structure: Any overhead protective structure which is constructed in such a manner as to allow pedestrians/vehicles to pass under.

Flood or spot light: Any light fixture or lamp that incorporates a reflector or refractor to concentrate the light output into a directed beam in a particular direction.

Glare: Direct light emitted by a lamp, luminous tube lighting or other light source.

Lamp: The component of the luminaire that produces the actual light including luminous tube lighting.

Light fixture: The assembly that holds a lamp and may include an assembly housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and a refractor or lens. A light fixture also includes the assembly for luminous tube and fluorescent lighting.

Light pollution: Artificial light which causes a detrimental effect on the environment, enjoyment of the night sky or causes undesirable glare or unnecessary illumination of adjacent properties.

Light trespass: The shining of light produced by a luminaire beyond the boundaries of the property on which it is located.

Luminaire: The complete lighting system including the lamp and light fixture.

Luminous tube lighting: Gas filled tubing which, when subjected to high voltage, becomes luminescent in a color characteristic of the particular gas used, e.g., neon, argon, etc.

Outdoor light fixtures: Outdoor artificial illuminating devices, outdoor fixtures, lamps and other similar devices, permanently installed or portable, used for flood lighting, general illumination or advertisement.

Shielded fixture: Outdoor light fixtures shielded or constructed so that light rays emitted by the fixture are projected below the horizontal plane passing through the lowest point on the fixture from which light is emitted, e.g. "shoebox-type" fixtures. A luminaire mounted in a recessed fashion under a canopy or other structure such that the surrounding structure effectively shields the light in the same manner is also considered fully shielded for the purposes of this article.

B. Lighting standards.

Unless otherwise exempted by this Section, all lighting must comply with the following standards:

1. *Freestanding pole lighting.*

- a. Exterior lighting shall be fully shielded and directed downward to prevent off-site glare. Fixed (not adjustable), downward-directed, metal halide shoebox fixtures shall be used in an effort to maintain a unified lighting standard throughout the city and prevent "sky glow."
- b. The intensity of light shall not exceed 5 footcandles within any site. For sites abutting a residential district or use, the intensity of light cannot exceed 0.5 footcandles at the property line. A maximum of 10 footcandles is permitted within a site for gasoline stations and automobile dealerships as long as the light intensity does not exceed the allowable intensities at the property line.
- c. The Planning Commission may approve decorative light fixtures as an alternative to shielded fixtures when it can be proven that there will be no off-site glare and the proposed fixtures are necessary to preserve the intended character of the site.

- d. The maximum height of parking lot light fixtures shall be 20 feet, except that the Planning Commission may permit a maximum height of 30 feet within commercial, industrial, and office zoning districts and for institutional uses in residential districts when the poles are no closer than 150 feet to a residential district or use.

2. *Building-mounted lighting.*

- a. Building-mounted lighting shall be fully shielded and directed downward to prevent off-site glare. Fixed (not adjustable), downward-directed, metal halide fixtures shall be used in an effort to maintain a unified lighting standard throughout the city and prevent "sky glow."
- b. The intensity of light shall not exceed 5 footcandles within any site. For sites abutting a residential district or use, the intensity of light cannot exceed 0.5 footcandles at the property line. A maximum of 10 footcandles is permitted within a site for gasoline stations and automobile dealerships as long as the light intensity does not exceed the allowable intensities at the property line.
- c. The Planning Commission may approve decorative light fixtures as an alternative to shielded fixtures when it can be proven that there will be no off-site glare and the proposed fixtures will improve the appearance of the site.
- d. Luminous-tube and exposed-bulb fluorescent lighting is prohibited as an architectural detail on all buildings, e.g. along the roof line and eaves, around windows, etc. The planning commission may approve internally illuminated architectural bands when it can be shown that the treatment will enhance the appearance of the building or is necessary for security purposes.

3. *Window lighting.*

- a. Any light fixtures visible through a window must be shielded to prevent glare at the property line.
- b. Luminous tube and exposed bulb fluorescent lighting (visible from the property line) is prohibited unless it is part of a sign that meets the requirements of Section 220-78, Signs.

C. Exemptions.

The following are exempt from the lighting requirements of this article, except that the Building Official/Zoning Administrator may take steps to eliminate the impact of the exempted items when deemed necessary to protect the health, safety and welfare of the public:

1. Sports field lighting, in use no later than 10:00 p.m., provided they are located at least 1,000 feet away from any existing residential zone or use. Other sports field

lighting may be approved by the Planning Commission after a determination that compliance with the standards in this Section have been met to the greatest extent possible, and that all efforts possible were made to minimize any negative impacts to surrounding uses.

2. Swimming pools.
3. Holiday decorations.
4. Window displays without glare.
5. Shielded pedestrian walkway lighting.
6. Residential lighting with no off-site glare.
7. Street lights.