

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION SPECIAL MEETING
PUBLIC HEARING
AUGUST 26, 2013
6:30 P.M.
AGENDA**

CALL TO ORDER:

PLEDGE OF ALLEGIANCE:

APPROVAL OF AGENDA:

CALL TO THE PUBLIC:

OPEN PUBLIC HEARING #1... Review of a special use application, impact assessment and site plan for proposed grading within the natural features setback and construction of a new 2,368 square foot office building located on the north side of Grand River Avenue, east of Kellogg Road, Sec. 14, petitioned by Dr. Brad Rondeau.

Planning Commission disposition of petition

- A. Recommendation of Special Use.
- B. Recommendation of Environmental Impact Assessment.
- C. Recommendation of Site Plan.

OPEN PUBLIC HEARING #2... Consideration of the Capital Improvement Plan.

Planning Commission disposition of petition

- A. Recommendation of Capital Improvement Plan.

Administrative Business:

- *Staff report*
- *Approval of August 12, 2013 Planning Commission meeting minutes*
- *Member Discussion*
- *Adjournment*



LSL Planning, Inc.

Community Planning Consultants

August 22, 2013

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
Subject:	Dr. Rondeau Dental Office – Driveway placement
Location:	Grand River Avenue – north side of Grand River, east of Kellogg Road
Zoning:	OSD Office Service District

Dear Commissioners:

At the Township’s request, we have reviewed the supplemental information provided by the applicant. The new material includes a letter from the project architect and attachments related to the proposed driveway.

As you may recall, the proposed driveway was a major point of discussion at the Commission’s August 12th meeting. The primary concerns were related to the deficient spacing between driveways and the potential for a shared driveway with the existing drive to the west (Dr. Bonine’s property).

The Township’s access management standards (Section 15.06) require a minimum spacing of 330 feet between commercial driveways along roadways with speed limits of 50 MPH or above. As proposed, the driveway provides separations of approximately 220 feet from Dr. Bonine’s driveway (to the west) and 140 feet from the Rollerama driveway (to the east).

Given a property width of 281 feet and the placement of existing driveways, there is simply not enough room for compliance with the requirements of the Zoning Ordinance. As such, the Commission directed the applicant to investigate sharing access with Dr. Bonine’s site via the existing driveway to the west, which was to have had a shared access easement placed over it as a condition of the original site plan approval.

As is described in the letter from Lindhout Associates, use of a shared driveway was investigated and discussed with Township staff and the Township Engineer and determined to be unreasonable given a host of circumstances. It is further our understanding that discussions also took place with the Livingston County Road Commission to develop the best possible solution to the concerns presented.

Ultimately, it was determined that the original placement was deemed the best alternative and it is our understanding that staff, the Engineer and Road Commission are satisfied with this approach. Based on the information provided and the support of those with more expertise in this area, we concur with the proposal.

Section 15.06.02(d) provides the Commission with the authority to reduce the spacing requirement where it can be demonstrated that pre-existing conditions are present that prohibit strict compliance. While this section specifically references an “expansion, alteration or redesign of an existing development,” we believe the intent is applicable to this situation.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Sincerely,

LSL PLANNING, INC.

Brian V. Borden, AICP
Senior Planner



August 21, 2013

Genoa Township Planning Commission
2911 Dorr Road
Brighton, MI 48116

Re: Site Plan Approval for Grand River Dental-Dr. Brad Rondeau

Dear Commission Members,

As discussed at the Planning Commission meeting held on August 12, 2013 the connection to the existing drive on the west side of the Dr. Brad Rondeau site has been investigated fully. We have reviewed the impacts of the shared access drive, discussed it with Dr. Frederick Bonine and our client, and met with Genoa Township Planning Staff in our efforts to seek the best possible solution for the project site plan.

We reviewed the Genoa Township Zoning Ordinance, Section 15.06 ACCESS MANAGEMENT, section to gain an understanding of the objectives of the shared access requirements. We agree that in most commercial zoning districts common points of access provide safe, effective site plan solutions. However, we have found that in this particular case, there are enough pre-existing conditions that merit modification of the driveway spacing standards. This is permitted under Section 15.06.02(d).

The pre-existing conditions for this specific site plan are as follows:

1. Existing soils indicate a large amount of fill on the site. A review of the soil boring log shows the better soils are to the east and more fill to the west. Along Grand River, there was 6.5 feet of fill to the west, and 1.5 feet of fill at the east. Along the center of the building area, there was 11.5 feet of fill to the west and 5.5 feet of fill to the east. This existing condition resulted in our decision to move our proposed building to the east. See Soil Boring Log attached for reference.
2. The existing wetlands on the site cause a taper of usable land. The eastern portion of the site is less impacted by the wetlands and far more developable. Please refer to the site plan to see the lesser depth to the west.
3. The existing International Fire Code requires that any driveway longer than 150 feet provide a turnaround at any dead end. Appendix D illustrates the various options available to the site designer to accommodate a fire truck turnaround. A 96 foot diameter cul-de-sac, a 120 foot wide hammerhead, a 60 foot (120+ total) "Y", and a 70 foot alternative hammerhead are shown. Given our existing site dimensions and existing wetlands, there is very little room to build on this site. This tight site would be completely consumed by the fire truck turnaround of either design. Without the turnaround, the only other option is another curb cut on Grand River with a emergency access gate across the drive. This would cause a great deal of traffic concerns as people tried to enter the site before seeing the gate. Appendix D is attached.
4. The existing oral surgery office and the proposed dental office are very low traffic generators. Using the "Bible" of traffic planning, *Trip Generation*, by the Institute of Transportation Engineers, we note that each building's traffic would be quite small. For employees, the week day traffic data starts at either 30 or 10 employees. This is more than either practice typically has on site. The charts for total traffic generation start at 10,000 s.f. buildings. Dr. Bonine is 3,770 s.f. and Dr. Rondeau is 2,368 s.f. The traffic counts generated by the 2 buildings (existing and proposed) will be quite minimal and nowhere near that of an active retail center or similar commercial activity. Pages from the manual are attached.

Our Mission

Integrity

in architecture and design
in client relationships
in employee relationships
in community relationships

advancement

in all these efforts

5. The pre-existing conditions at Dr. Bonine's facility are substantial. Please refer to the attached photographs. There is a handsome sign, a discrete security gate, and a huge amount of mature landscaping that would be destroyed by the potential shared drive. Further, the pre-existing driveway does not meet current County standards and would need to be re-constructed. There is also a detrimental impact on Dr. Bonine's pre-existing practice, as he does not wish to have other area dentist stop referring oral surgery patients to him because it appears he's in business with Dr. Rondeau.

Our site designs included serious attempts at the shared access drive. In each case the result was either a dangerous gated access to Grand River, or a very poorly designed site plan that destroyed one of the prettiest sections along Grand River in the Township. After reviewing these designs with Staff, it was determined that the best solution was to leave the drive location as proposed and to consult with the Township Engineer as to the best design of the curb cut.

We discussed the plan with Gary Markstrom. He visited the site and once again reviewed our plan. His recommendation was to avoid the use of a "porkchop" curb cut detail and to limit the access drive to 2 cars. He suggested a 22 foot wide drive. This is in conflict with the County minimum requirement of 30 ft. that was shown on our plan. The County was contacted to determine if we had any option available to reduce the width. Their response negative so, our original plan has been resubmitted for your review and action.

We are available to discuss this issue in more detail prior to the scheduled meeting on August 26, 2013. Please call me at any time. (810) 599-6082 (cell)

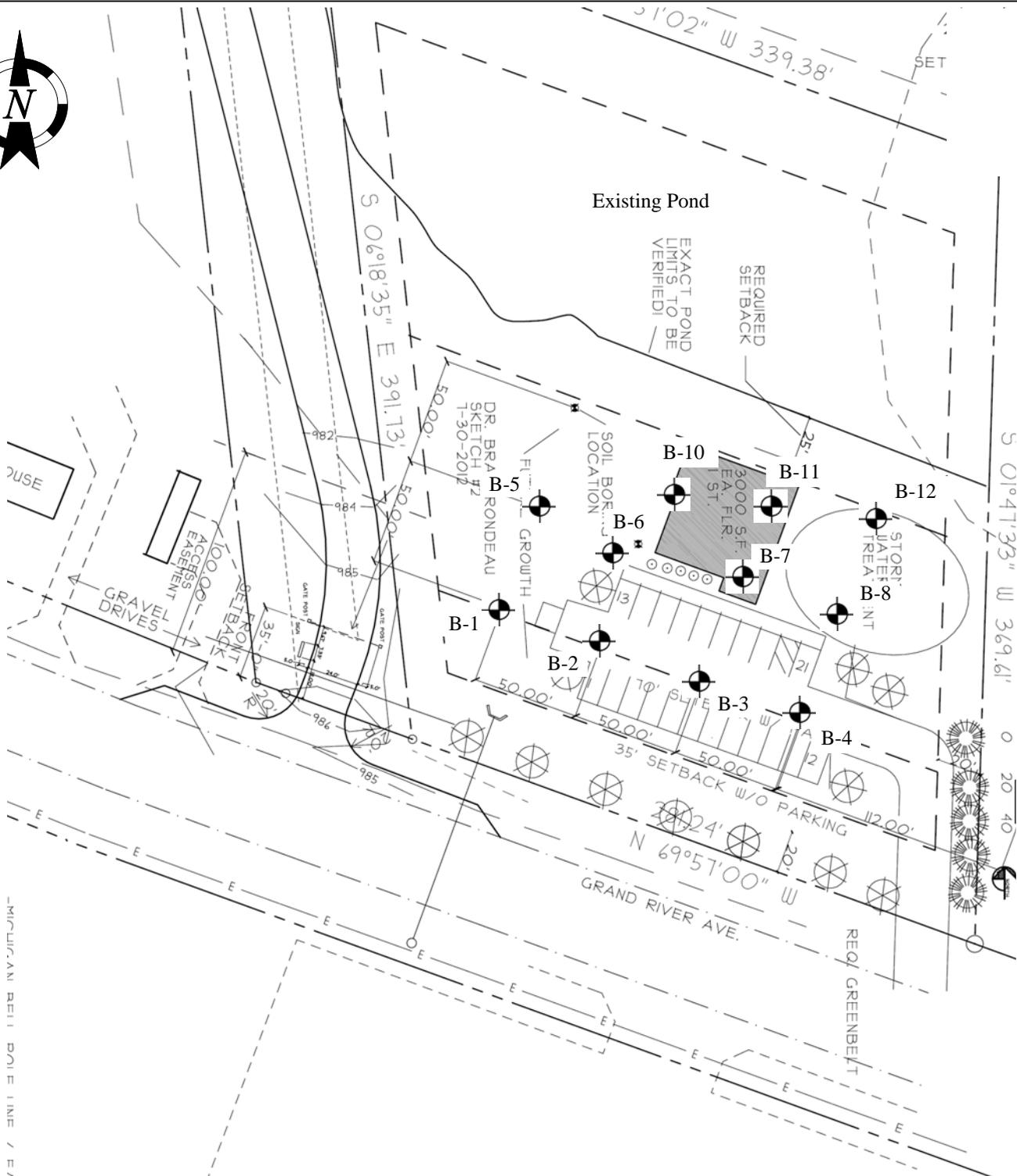
Respectfully submitted,



Piet W. Lindhout, CEO

Cc: Kelly VanMarter
Dr. Brad Rondeau
Dr. Fred Bonine





MICHIGAN BELL DIAL LINE / EAC

Legend


 Borings B-1 through B-8 and B-10 through B-12 were drilled on February 4 and 5, 2013

Boring Location Plan				
Proposed Single Story Building Across from 6893 Grand River Avenue Brighton, Michigan				
 G2 CONSULTING GROUP 1866 Woodlee Street Troy, Michigan 48083	Project No. 130083			
	Drawn by: JMH			
	<table border="1"> <tr> <td>Date: 1/31/13</td> <td>Plate No. 1</td> </tr> <tr> <td>Scale: NTS</td> <td></td> </tr> </table>	Date: 1/31/13	Plate No. 1	Scale: NTS
Date: 1/31/13	Plate No. 1			
Scale: NTS				

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. B-1

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Clayey Sand (8 inches)	0.7						
		Fill: Dark Brown Sandy Clay	1.8		3				
		Fill: Medium Compact Brown and Gray Silty Sand with trace gravel, clay, and concrete debris	3.5	S-1	8 13	21			
5		Fill: Very Loose Brown and Gray Silty Sand with trace gravel	5	S-2	2 1 1	2			
			8.5	S-3	2 1 2	3			
10			10	S-4	3 4 4	8			
15		Loose Brown Clayey Sand with trace silt and gravel	15	S-5	2 2 3	5			
			17.5						
20		Very Loose Brown Silty Sand	20.0	S-6	1/12" 1	---			
		End of Boring @ 20ft							
25			25						
30			30						
35			35						

Total Depth: 20ft
 Drilling Date: February 5, 2013
 Inspector:
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 Groundwater encountered at 17-1/2 feet during drilling; 17 feet upon completion of drilling

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

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

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Figure No. 1

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. B-2

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsail: Silty Sand (10 inches)	0.8						
		Fill: Loose Light Brown Silty Sand with trace gravel	3.5	S-1	4 5 5	10			
5		Stiff Brown Silty Clay with trace sand and gravel	7.0	S-2	2 3 3	6	18.1		2000*
		Medium Compact Brown Sand with trace silt, gravel, and cobbles	13.0	S-3	5 7 12	19			
10			15.0	S-4	14 9 7	16			
		Medium Compact Brown Silty Sand	18.5	S-5	3 6 6	12			
15		Very Stiff Brown Silty Clay with trace sand and gravel	20.0	S-6	4 5 5	10	12.6		7000*
20		End of Boring @ 20ft	25						
25			30						
30			35						

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Total Depth: 20ft
 Drilling Date: February 5, 2013
 Inspector:
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 Groundwater encountered at 17 feet during drilling

Notes:
 Dry cave at 10 feet
 Borehole collapsed at 10 ft after auger removal
 * Calibrated Hand Penetrometer

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

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

Figure No. 2

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. B-3

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Silty Sand (11 inches)	0.9						
		Fill: Loose Light Brown Silty Sand with trace gravel	3.0	S-1	8 4 3	7			
5		Very Stiff Brown Silty Clay with trace sand and gravel	5	S-2	3 5 9	14	15.5		5000*
		Medium Compact Brown Sand with trace silt, gravel, and cobbles	6.5	S-3	3 10 14	24			
10		Medium Compact Brown Silty Sand	10	S-4	7 14 13	27			
		Medium Compact Brown Silty Sand	11.0						
15		Medium Compact Brown Silty Sand	15	S-5	4 7 5	12			
		Medium Compact Brown Sandy Silt with trace gravel	18.5						
20		Medium Compact Brown Sandy Silt with trace gravel	20.0	S-6	5 7 5	12			
		End of Boring @ 20ft							
25			25						
30			30						
35			35						

Total Depth: 20ft
 Drilling Date: February 5, 2013
 Inspector:
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 Groundwater encountered at 18-1/2 feet during drilling

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

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

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Figure No. 3

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. **B-4**



SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Silty Sand (11 inches)	0.9						
		Fill: Sand and Gravel	1.5						
		Sandy Clay	2.0	S-1	3 5 5	10	12.0		4000*
5		Stiff to Very Stiff Brown Sandy Clay with trace gravel and roots	5	S-2	2 4 4	8	14.9		2000*
			6.5	S-3	5 6 12	18			
10		Medium Compact Brown Sand with trace silt, gravel, and cobbles	10	S-4	4 7 9	16			
15			15	S-5	3 7 7	14			
20		Medium Compact Brown Sandy Silt with trace gravel	18.0	S-6	4 7 8	15			
		End of Boring @ 20ft	20.0						
25			25						
30			30						
35			35						

Total Depth: 20ft
 Drilling Date: February 5, 2013
 Inspector:
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 Groundwater encountered at 18 feet during drilling

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

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

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Figure No. 4

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. B-5

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Silty Sand (6 inches)	0.5						
		Fill: Loose Dark Brown Silty Sand with trace gravel		S-1	4 5 4	9			
5		Fill: Very Stiff Dark Brown and Black Sandy Clay with trace gravel and roots (organic matter content = 4.0%)	3.5	S-2	5 5 5	10	15.5		6000*
		Fill: Medium to Stiff Dark Brown and Black Sandy Clay with trace gravel (organic matter content = 2.4% - 6.2%)	6.0	S-3	1 1 1	2	14.5		1000*
10			10	S-4	5 2 1	3	21.2		2000*
		Medium Brown Silty Clay with trace sand and gravel	11.5	S-5	2 3 3	6	20.3		1000*
15			15						
		Very Loose Brown Silty Sand with trace gravel	17.0	S-6	2 1 1	2			
20			20						
		Medium Compact Brown Sandy Silt with trace gravel	21.0	S-7	4 8 9	17			
25			25						
		Medium Compact Gray Sandy Silt with trace gravel	27.0	S-8	4 6 7	13			
30			30						
		End of Boring @ 30ft	30.0						
35			35						

Total Depth: 30ft
 Drilling Date: February 4, 2013
 Inspector:
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 Groundwater encountered at 17 feet during drilling

Notes:
 Dry cave at 11 feet
 Borehole collapsed at 11 ft after auger removal
 * Calibrated Hand Penetrometer

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

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Figure No. 5

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. B-6

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Silty Sand (11 inches)	0.9						
		Fill: Dark Brown Sandy Clay	2.0		13				
		Fill: Medium Compact Light Brown Gravelly Sand with trace silt	3.5	S-1	15	23			
5		Fill: Loose Light Brown Silty Sand with trace gravel	5	S-2	4 3 2	5			
			8.0	S-3	6 4 3	7			
10		Stiff Brown Silty Clay with trace sand and gravel	10	S-4	3 2 3	5	14.7		3000*
			13.5						
15		Medium Compact Brown Silty Sand with trace gravel	15	S-5	3 6 7	13			
			17.0						
20		Loose Gray Gravelly Sand with trace silt	20	S-6	3 4 6	10			
			23.0						
25		Very Stiff Brown Sandy Clay with trace gravel	25	S-7	5 6 6	12	12.5		4000*
			28.0						
30		Loose Brown Silty Sand	30	S-8	3 3 5	8			
		End of Boring @ 30ft	30						
35			35						

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Total Depth: 30ft
 Drilling Date: February 4, 2013
 Inspector:
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 Groundwater encountered at 13-1/2 feet during drilling; 22 feet upon completion of drilling

Notes:
 Wet cave at 22 feet
 Borehole collapsed at 22 ft after auger removal
 * Calibrated Hand Penetrometer

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

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

Figure No. 6

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. **B-7**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Clayey Sand (6 inches)	0.5						
		Fill: Medium Brown Sandy Clay with trace gravel (organic matter content = 1.8%)		S-1	1 3 3	6	15.9		1750*
5		Fill: Very Loose Brown Silty Sand with trace gravel and concrete cobbles (organic matter content = 1.1%)	3.5	S-2	2 1 3	4			
		Stiff Brown Sandy Clay with trace gravel	6.0	S-3	3 3 3	6	15.7		2000*
10		Stiff Brown Silty Clay with trace sand and gravel	9.0	S-4	4 2 6	8	14.3		2500*
		Medium Compact Brown Sand with trace silt and gravel	12.0	S-5	4 7 7	14			
15				S-6	5 6 7	13			
20				S-7	13 4 6	10	11.2		1000*
25		Medium Gray Silty Clay with trace sand and gravel	22.0	S-8	4 2 2	4	11.5		1000*
30		End of Boring @ 30ft	30.0						
35			35						

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Total Depth: 30ft
 Drilling Date: February 4, 2013
 Inspector: J. Clay
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 Groundwater encountered at 18 feet during and upon completion of drilling

Notes:
 Dry cave at 12-1/2 feet
 Borehole collapsed at 12-1/2 ft after auger removal
 * Calibrated Hand Penetrometer

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

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

Figure No. 7

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. B-8

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Silty Sand (6 inches)	0.5						
		Fill: Loose to Medium Compact Brown Sand with trace silt and gravel		S-1	7 6 6	12			
5			5	S-2	8 5 3	8			
		Stiff Brown Silty Clay with trace sand and gravel	5.5						
				S-3	3 5 8	13	20.8		2000*
			8.5						
10				10	S-4	3 5 7	12		
		Medium Compact Brown Silty Sand with trace gravel							
15				15	S-5	9 11 11	22		
20				20	S-6	8 10 10	20		
		Medium Compact Gray Silty Sand with trace gravel	23.0						
25				25	S-7	10 10 13	23		
		Stiff Gray Silty Clay with trace gravel	27.0						
30				30	S-8	6 5 8	13	12.0	2250*
		End of Boring @ 30ft	30.0						
35			35						

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Total Depth: 30ft
 Drilling Date: February 4, 2013
 Inspector: J. Clay
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 No Groundwater encountered during or upon completion of drilling

Notes:
 Dry cave at 12-1/2 feet
 Borehole collapsed at 12-1/2 ft after auger removal
 * Calibrated Hand Penetrometer

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

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

Figure No. 8

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. **B-10**

Consulting Group, LLC

SUBSURFACE PROFILE			SOIL SAMPLE DATA						
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsail: Silty Sand (12 inches)	1.0		3				
		Fill: Loose to Medium Compact Dark Brown Silty Sand with trace gravel and roots (organic matter content = 2.2%)		S-1	4	7			
5			5		3				
		Fill: Medium Compact Black Sand with trace gravel (organic matter content = 5.4 %)			8				
			6.0	S-2	12	26			
					13				
			9.0	S-3	11	13			
10		Very Stiff Brown Silty Clay with trace sand and gravel	10	S-4	5		11.0		6000*
					6				
					4				
15			15	S-5	5	12	12.8		7000*
					7				
			17.0						
20		Medium Compact Brown Silty Sand with trac gravel	20	S-6	3				
					5	13			
					8				
			25	S-7	3				
		Medium Compact Gray Silty Sand			6				
25			25		7	13			
					3				
			26.0						
30		End of Boring @ 30ft	30	S-8	3				
					5	12			
					7				
			30.0						
35			35						

Total Depth: 30ft
 Drilling Date: February 5, 2013
 Inspector:
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 Groundwater encountered at 17 feet during drilling; 23 feet upon completion of drilling

Notes:
 * Calibrated Hand Penetrometer

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

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Figure No. 9

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. **B-11**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Fill: Dark Brown Silty Clay	1.5		11				
		Fill: Medium Compact Black Silty Sand trace gravel (organic matter content = 5.8%)	3.0	S-1	6 7	13			
5		Fill: Very Loose Brown Silty Sand with trace gravel (organic matter content = 1.5%)	5.5	S-2	3 2 2	4			
		Loose Brown Silty Sand with trace roots	8.5	S-3	2 3 3	6			
10		Very Loose to Loose Brown Silty Sand with trace gravel and occasional clay layers	10	S-4	3 4 6	10			
15			15	S-5	1 1 1	2			
20		Medium Compact Gray Silty Sand with trace gravel	20	S-6	3 4 8	12			
25		Medium to Stiff Gray Silty Clay with trace sand and gravel	25	S-7	3 3 5	8	10.0		1500*
30		End of Boring @ 30ft	30	S-8	2 4 6	10	10.5		2000*
35			35						

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Total Depth: 30ft
 Drilling Date: February 4, 2013
 Inspector:
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 Groundwater encountered at 12 feet during drilling

Notes:
 Dry cave at 11 feet
 Borehole collapsed at 11 ft after auger removal
 * Calibrated Hand Penetrometer

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

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

Figure No. 10

Project Name: Proposed Single Story Building
 Project Location: Across from 6893 Grand River Avenue
 Brighton, Michigan
 G2 Project No. 130083
 Latitude: N/A Longitude: N/A



Soil Boring No. **B-12**

Consulting Group, LLC

SUBSURFACE PROFILE			SOIL SAMPLE DATA							
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)	
5		Fill: Medium to Stiff Brown and Black Sandy Clay with trace gravel and asphalt millings (organic matter content = 2.1% - 3.9%)		S-1	2 3 2	5	17.2		3000*	
5			S-2	1 1 3	4	17.9		1000*		
6.0				S-3	1 3 8	11	11.8		2000*	
8.5				S-4	9 17 12	29				
10					S-5	3 3 2	5			
15					S-6	4 7 8	15			
20					S-7	3 6 8	14	10.1		4000*
25					S-8	3 3 3	6			
30		End of Boring @ 30ft								
35										

SOIL / PAVEMENT BORING 130083.GPJ G2_CONS.GDT 2/14/13

Total Depth: 30ft
 Drilling Date: February 4, 2013
 Inspector: J. Clay
 Contractor: Strata Drilling
 Driller: B. Sienkiewicz

Water Level Observation:
 Groundwater encountered at 15-1/2 feet during drilling; 11 feet upon completion of drilling

Notes:
 Wet cave at 11 feet
 Borehole collapsed at 11 ft after auger removal
 * Calibrated Hand Penetrometer

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

Excavation Backfilling Procedure:
 Borehole backfilled with auger trimmings

Figure No. 11

APPENDIX D

FIRE APPARATUS ACCESS ROADS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

SECTION D101 GENERAL

D101.1 Scope. Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the *International Fire Code*.

SECTION D102 REQUIRED ACCESS

D102.1 Access and loading. Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an *approved* fire apparatus access road with an asphalt, concrete or other *approved* driving surface capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds (34 050 kg).

SECTION D103 MINIMUM SPECIFICATIONS

D103.1 Access road width with a hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm), exclusive of shoulders (see Figure D103.1).

D103.2 Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

Exception: Grades steeper than 10 percent as *approved* by the fire chief.

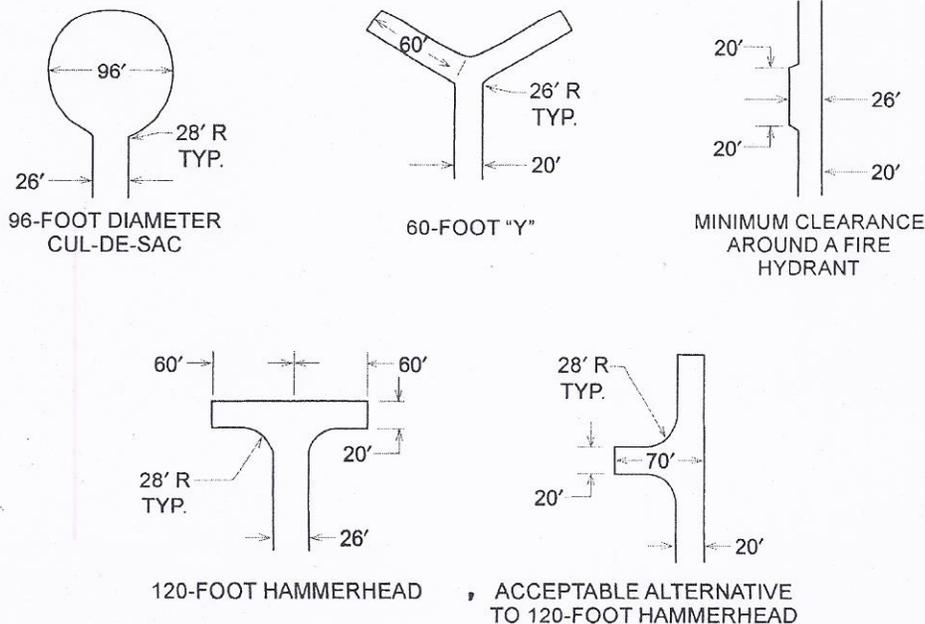
D103.3 Turning radius. The minimum turning radius shall be determined by the *fire code official*.

D103.4 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4.

**TABLE D103.4
REQUIREMENTS FOR DEAD-END
FIRE APPARATUS ACCESS ROADS**

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0-150	20	None required
151-500	20	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1
501-750	26	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1
Over 750	Special approval required	

For SI: 1 foot = 304.8 mm.



For SI: 1 foot = 304.8 mm.

**FIGURE D103.1
DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND**

Medical-Dental Office Building (720)

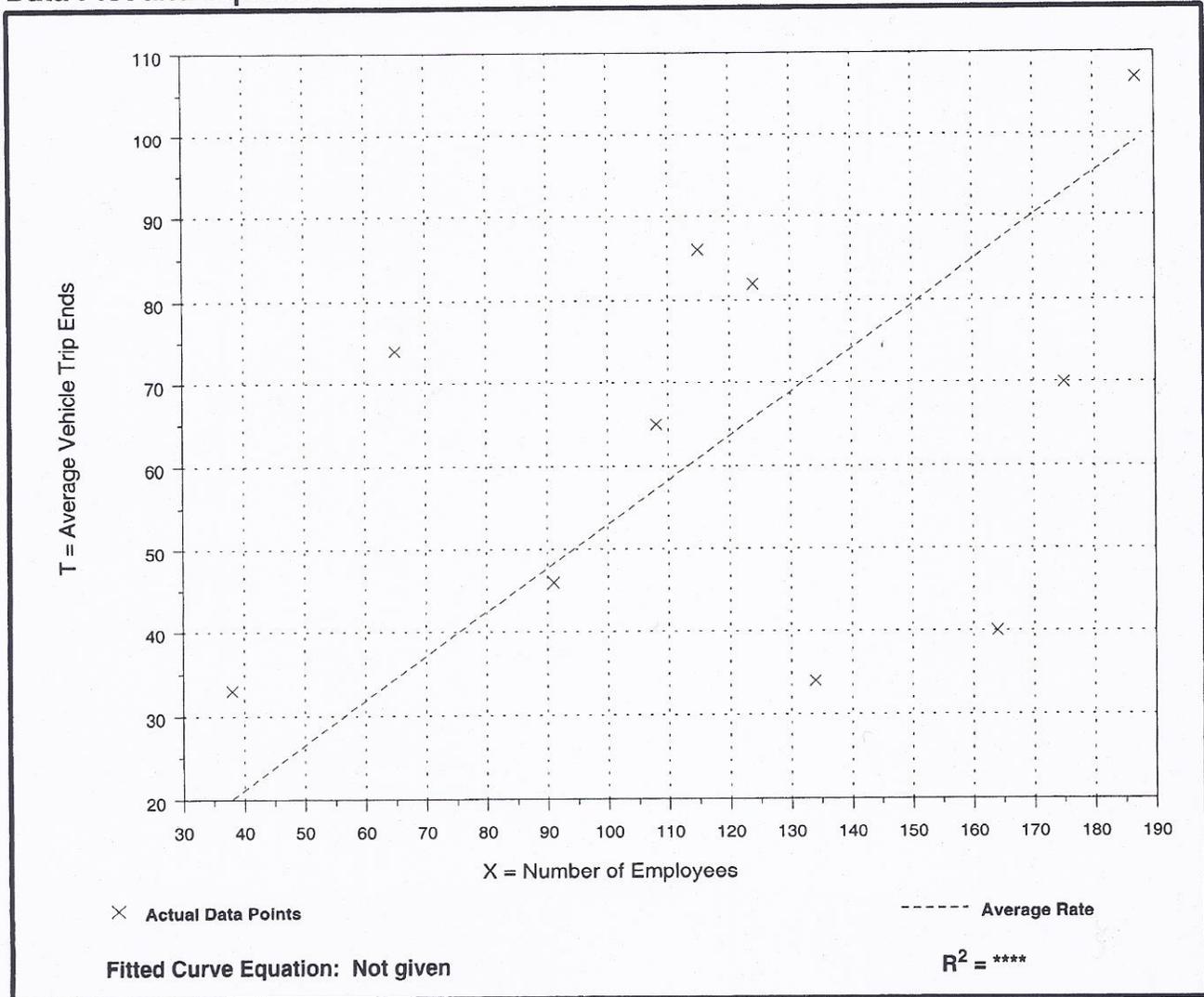
Average Vehicle Trip Ends vs: Employees
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 10
Avg. Number of Employees: 120
Directional Distribution: 79% entering, 21% exiting

Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.53	0.24 - 1.14	0.76

Data Plot and Equation



Medical-Dental Office Building (720)

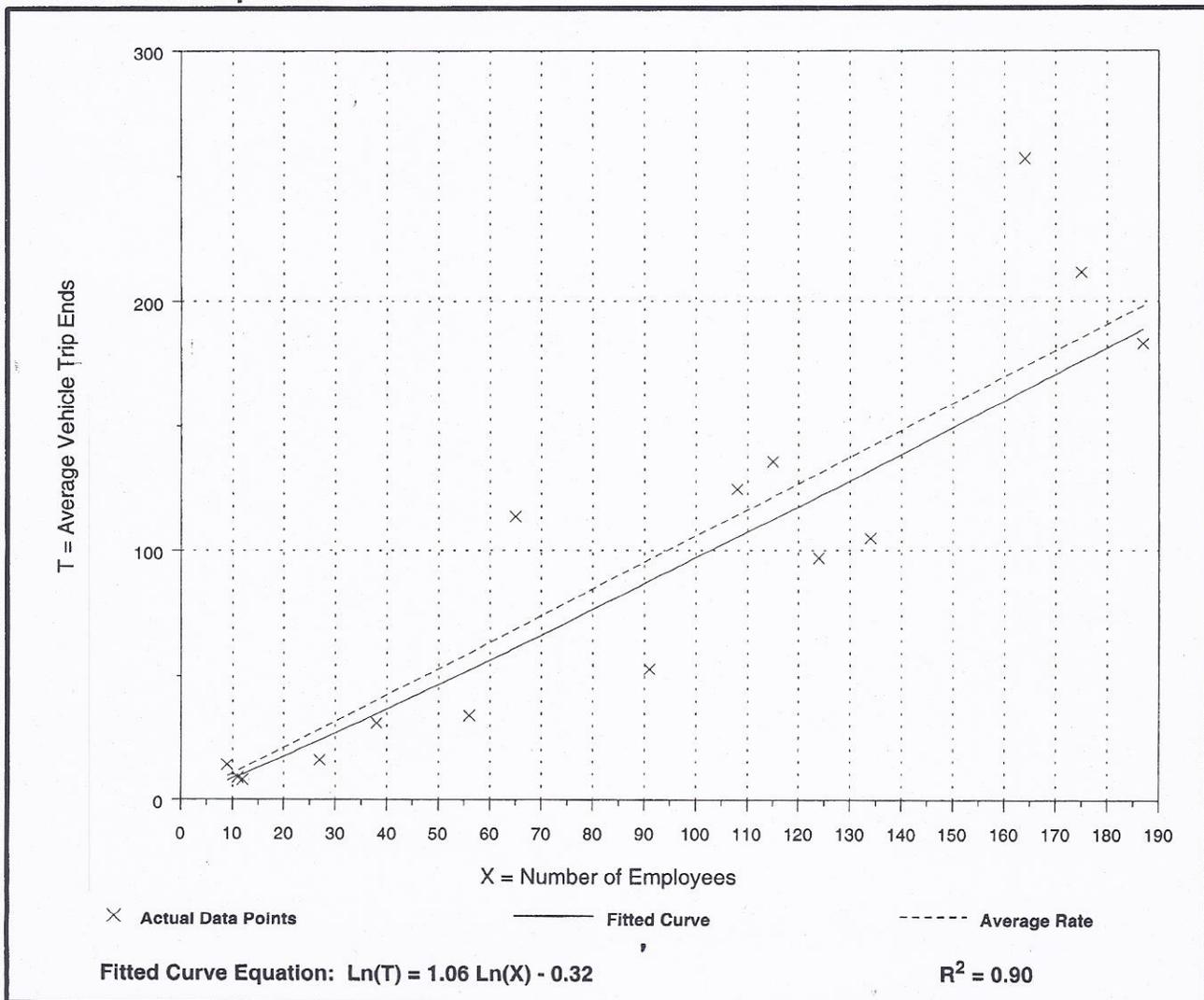
Average Vehicle Trip Ends vs: Employees
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 15
 Avg. Number of Employees: 88
 Directional Distribution: 34% entering, 66% exiting

Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
1.06	0.58 - 1.75	1.08

Data Plot and Equation



Medical-Dental Office Building (720)

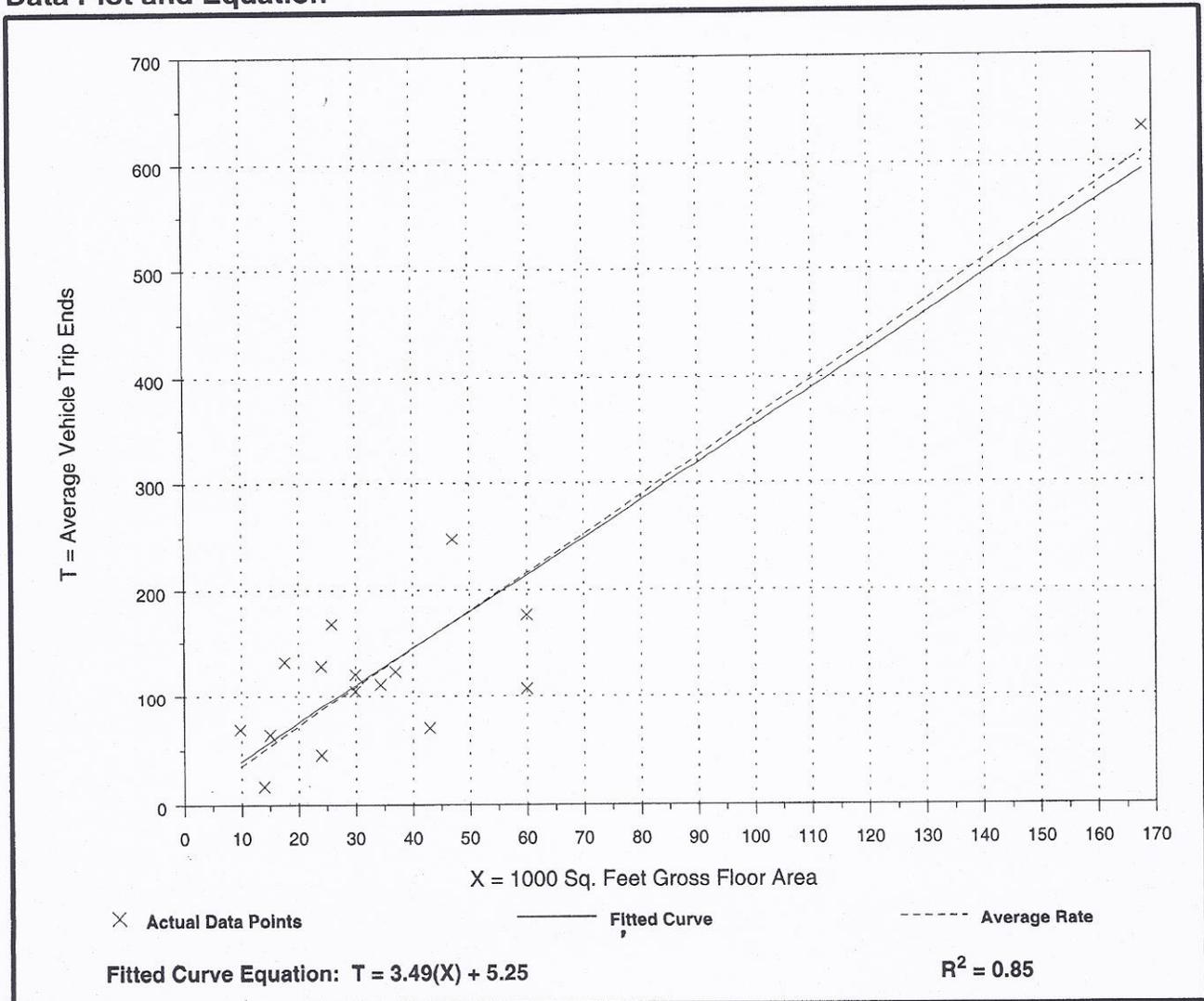
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
A.M. Peak Hour of Generator

Number of Studies: 16
 Average 1000 Sq. Feet GFA: 40
 Directional Distribution: 66% entering, 34% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
3.62	1.21 - 7.49	2.38

Data Plot and Equation





Dr. Boni

Oral & Maxillofacial

6803



Dr. Bonine

MD & Maxillofacial Surgery

6893



GENOA TOWNSHIP

AUG 19 2013



Oral and Maxillofacial Surgery

6893 GRAND RIVER
BRIGHTON, MI 48114

July 16, 2013

Dear friends at the Genoa Township Planning Committee,

I've had the opportunity to review Dr. Rondeau's proposed office in the adjoining land east of my driveway. I appreciated that the sight lines for signage were preserved. I think this addition to our micro-community will be an asset and great utilization of the land.

I have grave concerns about your recommendation for requiring him to use an additional easement through my Grand River access. The construction and development of my site included gating for security reasons because of the large number of controlled substances kept on site. Nineteen years to date, we have not had a break in, for which I consider ourselves to be fortunate, considering the number of businesses on Grand River in our area, which have been violated. Heroin use in the county is escalating at alarming rates, and we will also see crime follow quickly. I have long felt that the presence of the gate creates an environment where we are not easily cased after hours. We have maximized security systems and features at the office but none-the-less do not want to become a target, or repeated target, because of our isolation 700 feet down our driveway. The gate has been a god-send. Requiring Dr. Rondeau to use that access will eliminate the security, which, according to the local sheriff detective, cannot always be provided. It would force him to gate his entrance way, require us to open up our secure system to his employees, and require obsessive compulsive closure at the end of business days to make certain that the gate is locked. We even have protocols for chaining the gates shut in the event of malfunction, and they are also on our emergency generator back-up system. This would present a burden to him and, given his fire department secondary access, would require him to gate that as well to maintain our level of security.

Not withstanding the gate is the issue of delineation of two businesses. Where will present signage be placed in order to get patients in to his office, when I have been branded with the flowerbeds and the secluded driveway for my practice? How will signage direct people to come in Dr. Bonine's entrance way? Additionally, while we are in complimentary fields, having the perception that Dr. Rondeau's office is a part of mine is one that I've tried to avoid. Having the presence of general dentists might give appearance to my referring doctors that we would be in collusion. I see real obstacles in maintaining our individual identity and it is suicide for me to have appearance of collusion with a general dentist.

Assuming that you have been back to my office, you appreciate its unique setting, including the half-mile, nationally recognized poetry walk, on which are found 25 pieces of sculpture, creating our Oaken Transformation Sculpture and Poetry Walk as a give-back to the community. The artists also count on the security of our gate for this.

Our setting also provides for an experiential health care model where patient acceptance is improved because of the emotional experience evoked by coming down our specifically designed S-curved and naturally landscaped areas. I have concerns on how this could be maintained if visual access to his office through a cut-through of my plantings were to be provided.

While welcoming Dr. Rondeau to the immediate neighborhood, I have grave concerns regarding the impact of your request to have him link to our driveway in terms of security, branding, accessibility, and experiential health care modeling. As such, I would request that you please approve his request before you.

Sincerely,

F.L. Bonine D.D.S., M.S.

cc: Piet Lindhout. Brad Rondeau D.D.S.

Diplomate of The American Board of Oral and Maxillofacial Surgery
Fellow of American Association of Oral and Maxillofacial Surgery
Adjunct Clinical Professor, University of Michigan

GENOA TOWNSHIP
APPLICATION FOR SITE PLAN REVIEW

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS*: DR. BRAD RONDEAU, 7600 GRAND RIVER

OWNER'S NAME & ADDRESS: SUITE 295, BRIGHTON MI 48114

SITE ADDRESS: _____ PARCEL #(s): 4711-14-200-021

APPLICANT PHONE: (810) 225-8338 OWNER PHONE: () _____

LOCATION AND BRIEF DESCRIPTION OF SITE:

NORTH SIDE OF GRAND RIVER, JUST EAST OF
KELLOGG ROAD

BRIEF STATEMENT OF PROPOSED USE:

DENTAL OFFICE

THE FOLLOWING BUILDINGS ARE PROPOSED:

2,368 SQUARE FOOT BUILDING WITH FULL BASEMENT

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.

X BY: [Signature]

ADDRESS: 7600 GRAND RIVER SUITE 295, BRIGHTON MI 48114

* If applicant is not the owner, a letter of Authorization from Property Owner is needed.

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

<u>1.) Scott Tausignant</u>	of <u>Boss Engineering</u>	at <u>517-548-1070</u>
Name	Business Affiliation	Fax No

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.

X SIGNATURE: [Signature] DATE: 7/10/13
PRINT NAME: BRAD RONDEAU PHONE: 810-225-8338
ADDRESS: 7600 GRAND RIVER, SUITE 295, BRIGHTON MI 48114

Scott Tausignant@bosseng.com

JUL 16 2013

**APPLICATION FOR SPECIAL LAND USE
GENOA TOWNSHIP**

APPLICANT NAME* & ADDRESS: Dr. Brad Rondeau, 7600 Grand River Ave., Suite 295, Brighton, MI 48114

OWNER NAME* & ADDRESS: Dr. Brad Rondeau, 7600 Grand River Ave., Suite 295, Brighton, MI 48114

SITE ADDRESS: _____ PARCEL #(s): 4711-14-200-021

APPLICANT PHONE: (810) 225-8338 OWNER PHONE: (810) 225-8338

Location and brief description of site and surroundings:
The area of the proposed development is a vacant lot. To the east of the vacant lot is the Rollerama Skating Complex, to the north is a dental office and to the west are retail businesses.

Proposed Use:
Dental office

Describe how your request meets the Zoning Ordinance General Review Standards (section 19.03):

- a. Describe how the use will be compatible and in accordance with the goals, objectives, and policies of the Genoa Township Comprehensive Plan and subarea plans, and will promote the Statement of Purpose of the zoning district in which the use is proposed.

The proposed facility will be providing dental services to the Brighton and Howell areas.

- b. Describe how the use will be designed, constructed, operated, and maintained to be compatible with, and not significantly alter, the existing or intended character of the general vicinity.

The architectural and site design have been created to minimize any impacts on the wetland that is on-site. The proposed facility is surrounded by neighborhood services.

- c. How will the use be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, water and sewage facilities, refuse disposal and schools?

The facility has direct access onto Grand River. A detention basin will be constructed to service the storm water runoff from the drainage area. The building will be served by public water and sewer. The primary use of the facility places little burden on roads, police and fire protection.

- d. Will the use involve any uses, activities, processes, or materials potentially detrimental to the natural environment, public health, safety, or welfare by reason of excessive production of traffic, noise, vibration, smoke, fumes, odors, glare, or other such nuisance? If so, how will the impacts be mitigated?

Minimal traffic impact. No hazardous substances.

e. Does the use have specific criteria as listed in the Zoning Ordinance (sections 3.03.02, 7.02.02, & 8.02.02)?
If so, describe how the criteria are met.

Sec. 3.03.02 - Nothing.

Sec. 7.02.02 - Nothing.

Sec. 8.02.02 - Nothing.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I AGREE TO DESIGN, CONSTRUCT AND OPERATE, AND MAINTAIN THESE PREMISES AND THE BUILDINGS, STRUCTURES, AND FACILITIES WHICH ARE GOVERNED BY THIS PERMIT IN ACCORDANCE WITH THE STATED REQUIREMENTS OF THE GENOA TOWNSHIP ZONING ORDINANCE, AND SUCH ADDITIONAL LIMITS AND SAFEGUARDS AS MAY BE MADE A PART OF THIS PERMIT.

THE UNDERSIGNED Dr. Brad Rondeau STATES THAT THEY ARE THE FREE OWNER* OF THE PROPERTY OF PROPERTIES DESCRIBED ABOVE AND MAKES APPLICATION FOR THIS SPECIAL LAND USE PERMIT.

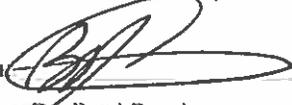
BY: Grand River Dental

ADDRESS: 7600 Grand River Ave., Suite 295 Brighton, MI, 48114

*Submit a letter of Authorization from Property Owner if application is signed by Acting Agent.

Contact Information - Review Letters and Correspondence shall be forwarded to the following:		
<u>1) Scott Tousignant</u>	<u>of Boss Engineering</u>	at <u>(517) 548-1670</u>
Name	Business Affiliation	Fax No.

Note: This application must be accompanied by a site plan review application and the associated site plan review submittal requirements. (The Zoning Administrator may allow a less detailed sketch plan for a change in use.)

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: <u></u>	DATE: <u>7-16-17</u>
PRINT NAME: <u>Dr. Brad Rondeau</u>	PHONE: <u>(810) 225-8338</u>
ADDRESS: <u>7600 Grand River Ave., Suite 295 Brighton, MI, 48114</u>	



LSL Planning, Inc.

Community Planning Consultants

August 5, 2013

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
Subject:	Dr. Rondeau Dental Office – Special Land Use and Site Plan Review #2
Location:	Grand River Avenue – north side of Grand River, east of Kellogg Road
Zoning:	OSD Office Service District

Dear Commissioners:

At the Township’s request, we have reviewed the revised site plan (dated 7/30/13) proposing development of a 2,368 square foot building for use as a dental office. Additionally, the applicant seeks special land use approval for grading activities within the required natural feature setback. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance and Master Plan.

A. Summary

1. Provided the disturbed area is returned to its natural condition upon completion of construction activities, the proposed grading within the natural feature setback is generally consistent with the general special land use standards of Article 19.
2. Any issues raised by the Township Engineer must be addressed.
3. The Planning Commission has approval authority over the building elevations.
4. The amount of parking requires Planning Commission approval.
5. The proposed driveway does not meet the spacing or offset requirements of Section 15.06.02.
6. The site plan does not provide a dedicated loading/unloading space.
7. The submittal indicates that the applicant will seek a variance to permit a projecting wall sign.

B. Proposal/Process

The applicant requests site plan review and approval for development of a 2,368 square foot dental office on the vacant 2.4-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 OSD.

There is a large wetland area immediately north of the proposed building placement and construction will require grading within 25 feet of the wetland. As such, special land use approval is also required by Section 13.02.04.

Following a public hearing on the request, the Planning Commission may forward its recommendation on the project to the Township Board for a final decision.



Aerial view of site and surroundings (looking north)

C. Special Land Use Review

Section 19.03 of the Zoning Ordinance identifies the review criteria for Special Land Use applications as follows:

- 1. Master Plan.** The Master Plan and Future Land Use Map identify the site and adjacent properties to the east and west as Neighborhood Commercial, which is intended to provide “retail and service establishments whose primary market area includes residents and employees from within a two mile radius.” The proposed use is consistent with this description; however, it is not the principal use, but rather the grading activity that requires special land use approval.

As part of its discussion on environmental features, the Master Plan states that “the plan recommends a number of means to accommodate development while protecting the valuable resources that are critical to Genoa Township’s quality of life.” The natural feature setback is one “means” of accomplishing this goal. Since the project entails only grading within the 25-foot setback, we are of the opinion that the project is consistent with the stated goal. This statement is made provided the disturbed area is returned to its natural condition upon completion of construction activities.

- 2. Compatibility.** The site is located on the north side of Grand River and appears to be the only undeveloped site in the immediate area. Surrounding properties include a mix of office, commercial, recreational and industrial uses. The proposed use and grading activity are expected to be compatible with the surrounding properties. Similar to item 1 above, this statement is made provided the disturbed area is returned to its natural condition upon completion of construction activities.
- 3. Public Facilities and Services.** So long as soil erosion protection measures are put in place, the proposed grading activity is not expected to impact public facilities and services. With that being said, the Township should also consider any comments provided by the Township Engineer with respect to this criterion.

4. **Impacts.** Given the project entails only grading within the natural feature setback and does not actually encroach into the wetland area itself, the project is not expected to be harmful to environmental features. Once again, this statement is made provided the disturbed area is returned to its natural condition upon completion of construction activities.
5. **Mitigation.** If any additional concerns arise as part of this review process, the Township may require mitigation necessary to limit or alleviate any potential adverse impacts as a result of the proposed project.

D. Site Plan Review

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

District	Lot Size		Minimum Setbacks (feet)				Max. Height	Lot Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking		
OSD	1	100	70	20	40	20 front 10 side/rear	35'	35% building 60% impervious
Proposal	2.4	281	91.68	42.19 (E) 170 (W)	204.68	20 front 58 side	21'	2.27% building 10.88% impervious

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 as well as material calculations. The predominant material is brick, which is supplemented by split face block and siding. Based upon the calculations provided, the proposed building meets the wall material requirements of the Zoning Ordinance.
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, 12 spaces are required, while 17 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 approximately 42%. In response, the applicant describes the amount of parking in terms of need, noting that 6 spaces will be reserved for employees, 5 will be reserved for operations, and 6 will be reserved for waiting.

The parking spaces, drive aisles and number of barrier free spaces comply with Article 14.

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 a sidewalk between the parking lot and building entrance.
5. **Vehicular Circulation.** The proposed driveway does not meet the minimum spacing requirement from the existing driveways to the east and west. Additionally, the proposed driveway does not meet the offset requirement from the existing driveway on the south side of Grand River to the east.

Given the placement of the existing driveways and the size of the property, full compliance is not possible. As such, the Township may allow the proposed placement so long as necessary driveway permits are obtained. As an alternative, the Township could direct the applicant to look into the possibility of a shared driveway agreement with one of the adjacent property owners.

- 6. Loading.** Given the size of the building, Section 14.08.08 requires 1 loading space, which is to be located in a rear or side yard not directly visible to a public street. The site plan does not identify the required space, which is to contain 500 square feet, unless otherwise approved by the Planning Commission.

In this instance, Sheet C2 includes a note stating that deliveries will be via Fed Ex/UPS sized trucks and that loading/unloading will occur at the walk along the front of the building. The Commission must determine whether this proposal is acceptable or whether to require a dedicated loading space.

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

Location	Requirements	Proposed	Comments
Front yard greenbelt	7 canopy trees 20-foot width	7 canopy trees 20-foot width	Requirement met
Detention pond	7 canopy OR evergreen trees 69 shrubs	7 canopy trees 3 evergreen trees 69 shrubs	Requirement met
Parking lot	2 canopy trees 2' tall hedgerow 200 s.f. of landscaped area	3 canopy trees 2-3' tall hedgerow 635 s.f. of landscaped area	Requirement met

- 8. Waste Receptacle and Enclosure.** The applicant has addressed previous concerns over the placement of a waste receptacle in the front yard by removing the waste receptacle and utilizing curbside waste carts. Sheet C2 illustrates a proposed 5'x6' concrete pad adjacent to the east side door for storage of these carts.
- 9. Exterior Lighting.** Sheet C6 proposes two light poles in the parking lot. Pole height and light intensity readings comply with Section 12.03. A fixture detail has been added to Sheet C9, indicating use of downward directed, cut off fixtures, as required.
- 10. Signs.** Sheet A1 identifies a projecting sign on the building's south elevation, as well as details for a proposed monument sign. Projecting signs are not expressly permitted in the OSD, which the applicant acknowledges via a note stating the proposed signage will require a variance. Meanwhile, the proposed monument sign complies with the height, size and location requirements of Article 16.
- 11. Impact Assessment.** The submittal includes a revised Impact Assessment (dated 7/30/13). In summary, the Assessment notes that the project is not anticipated 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@lslplanning.com.

Sincerely,
LSL PLANNING, INC.



Brian V. Borden, AICP
 Senior Planner



August 5, 2013

Ms. Kelly Van Marter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: Rondeau Dental Office
Site Plan Review #2**

Dear Ms. Van Marter:

We have reviewed the resubmitted site plan documents and the letter from Boss Engineering dated July 30, 2013. The petitioner is planning a 1,607 square foot dental office on a previously undeveloped 2.5 acre parcel located on the north side of Grand River Avenue between Kellogg and Euler Roads. Tetra Tech reviewed the updated documents and offers the following additional comments:

IMPACT ASSESSMENT

1. G. Pre- and post- development flow calculations were submitted in the updated Impact Assessment, however the applicant chose to classify the space as an office building, which resulted in an equivalent user factor of 0.95 REUs. It has been our experience that these uses are typically documented as Doctor's Offices, which would result in an equivalent factor of $(1.0 \text{ to } 0.5 * \# \text{ of exam rooms } (4)) = 3 \text{ REUs}$.

The petitioner should confirm and revise the projected REUs for Part G of the Impact Assessment to the satisfaction of the Township prior to gaining site plan approval.

Please call if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Gary Markstrom'.

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

A handwritten signature in blue ink, appearing to read 'Joseph C. Siwek'.

Joseph C. Siwek, P.E.
Project Engineer

copy: Scott Tousignant, P.E., Boss Engineering



Brighton Area Fire Department

615 W. Grand River

Brighton, Michigan 48116

810-229-6640 Fax: 810-229-1619

August 6, 2013

Kelly VanMarter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Rondeau Dental Office
N. side of Grand River – East of Kellogg Rd.
Revised Site Plan Review

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on August 1, 2013 and the drawings are dated July 30, 2013. The project is based on a new 2,368 square foot building (business use). The building is a single story with a basement level. The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition. Previous comments appear to be addressed by the applicant in the revised submittal.

It is recommended that the Township consider the following comments as this project moves forward.

1. Future project submittals shall include the address and street name of the project in the title block.
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. ***This should be noted on the plans.***
IFC 505.1
3. 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. ***This should be noted on the plans.***
IFC 506.1

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.

August 6, 2013
Rondeau Dental Office
N. side of Grand River – E. of Kellogg Rd.
Revised Site Plan Review
Page 2 of 2

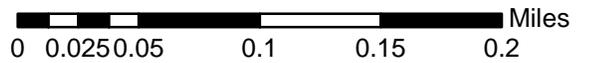
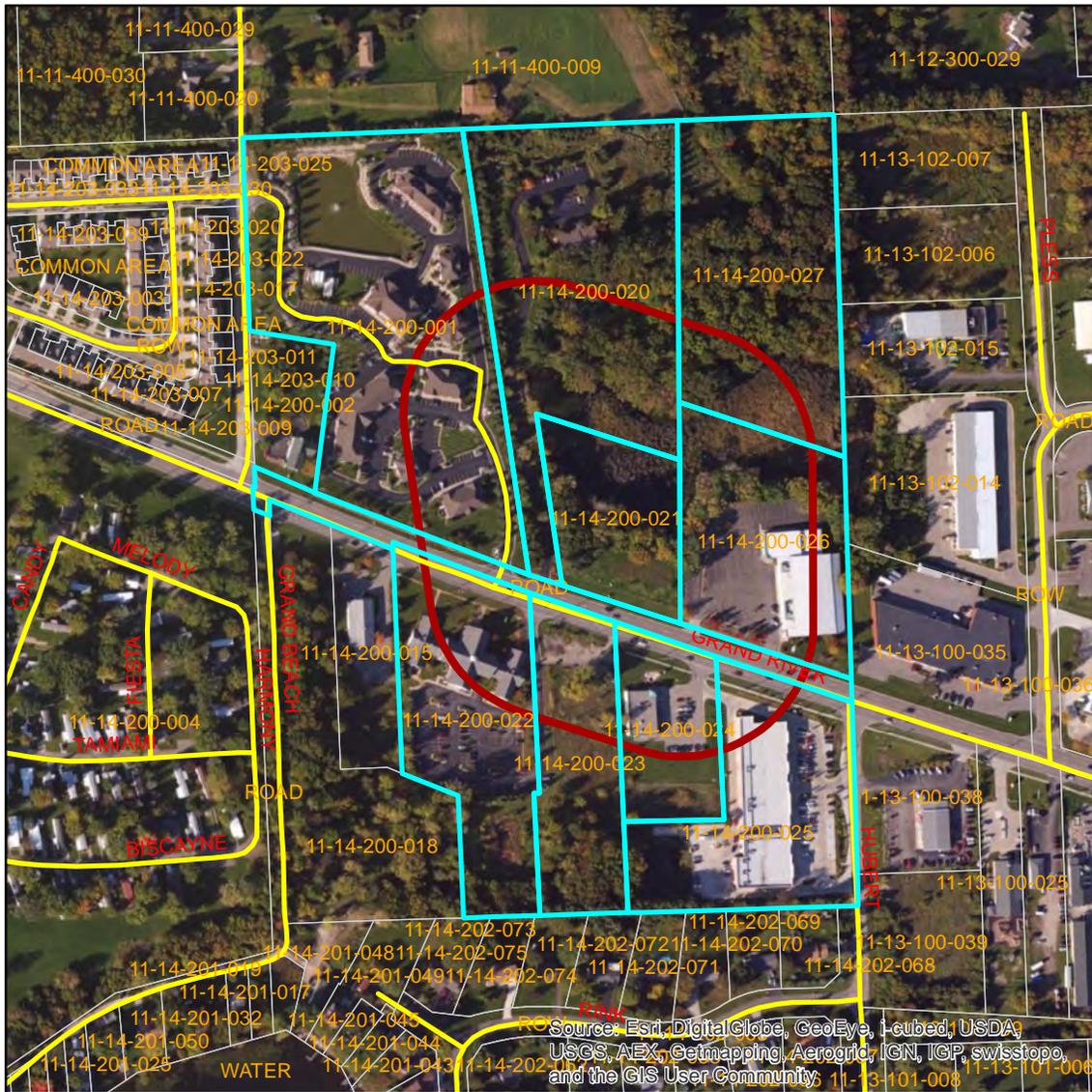
Cordially,

A handwritten signature in black ink, appearing to read "Michael Evans". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael Evans
Deputy Fire Chief

cc: Kathryn Poppy - Kathryn@Genoa.org

300 Ft Buffer for Noticing



Rondeau Dental Office Building

Applicant: Dr. Brad Rondeau

Parcel: 11-14-200-021

Meeting Date: August 12, 2013

July 12, 2013



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

July 26, 2013

To Whom It May Concern:

There will be a hearing for a Special Land Use Permit in your general vicinity on Monday, August 12 at 6:30 p.m. at Genoa Township Hall, located at 2911 Dorr Road, Brighton, Michigan.

The property in question is located on the north side of Grand River Avenue, east of Kellogg Road in Sec. 14. The Special Land Use has been requested for proposed grading within the natural features setback to construct a new 2,368 square foot office building. The request is petitioned by Dr. Brad Rondeau.

Materials relating to this request are available for public inspection at the Genoa Township Hall during regular business hours. If you have any questions or objections in this regard, please be present at the public hearing noted above. Written comments may be addressed to the Planning Commission.

Sincerely,

Kelly VanMarter
Assistant Township Manager / Community Development Director
KKV/kp

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

**IMPACT ASSESSMENT
FOR
SITE PLAN PETITION
“RONDEAU DENTAL OFFICE“
GENOA TOWNSHIP, LIVINGSTON COUNTY
MICHIGAN**

Prepared for:

**LINDHOUT ASSOCIATES ARCHITECTS, AIA, PC
10465 CITATION DRIVE
BRIGHTON, MI 48116
(810) 227-5668**

Prepared by:

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

July 30, 2013

13-026EIA

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 :
LINDHOUT ASSOCIATES ARCHITECTS, AIA, PC
Client
10465 Citation Drive
Brighton, MI 48116
(810) 227-5668

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 north side of Grand River Avenue, approximately 900 feet east of the Kellogg Road intersection. The property has frontage on Grand River at one location. There is 281 feet of Grand River road frontage. Across Grand River there exist properties in the neighborhood service district, and immediately adjacent to the site are office and general commercial uses. To the west and north is Dr. Fredric Bonine. To the east of the property line is Rollerama Skating. The subject property is currently undeveloped, and currently zoned Office Service District (OSD).

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 2.50 acres. There are 1.36 acres of wetlands and 0.10 acres of right-of-way for Grand River Avenue leaving a total of 1.04 acres of upland. With regards to the wetlands, there is one large area on the property. The large area makes up the northern half of the site. The site slopes north towards the large wetland area. Many of the trees on site are west and north of the proposed building and parking lot. Most of the upland area is open. Most of the trees are box elder and American elm. Four(4) trees will need to be removed, all of which are box elders. The USDA Soil Conservation Service soil classification for the site is Miami-Loam 6-12% slopes.

There will be proposed grading taking place within the 25 foot wetland setback but does not encroach into the wetland area itself. The disturbed area is to be returned to its natural condition upon completion of construction activities.

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, 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.

The applicant is planning on constructing a single office building totaling 2,368 square feet in size, with the required parking, pedestrian circulation and storm water management system associated with it.

The applicant is anticipating constructing the development in one phase.

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.

The site is serviced by public water and sanitary sewer. The public water is provided by MHOG. 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. With regards to storm water management, the project would 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.

The pre-development sanitary flow from this site is zero. Post-development flows based on MHOG sewer standards for an office building is equivalent to 0.95 REU's.

Office Building = $0.4 \times (2,368 \text{ s.f.}/1000) = 0.95 \text{ REU}$

An alternative method shows a post development flow of 0.49 REU's. This provides 15 gallons per day employee which accounts for all employee water usage through the course of a typical day. This yields 5 employees x 15 gal/emp. = 75 gallons. Add to that patient usage of 33.6 gallons (16 trips to lavatory at 2.1 gallons/trip). In addition, assuming 1 dishwasher cycle per day at 8 gallons, the total usage is 116.6 gallons, or 0.49 REU's.

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.

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 9 vehicle trips per hour during the AM peak hours, and 10 vehicle 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 10. 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

L. A list of all sources shall be provided.

Genoa Township's *Submittal Requirements For Impact Assessment*

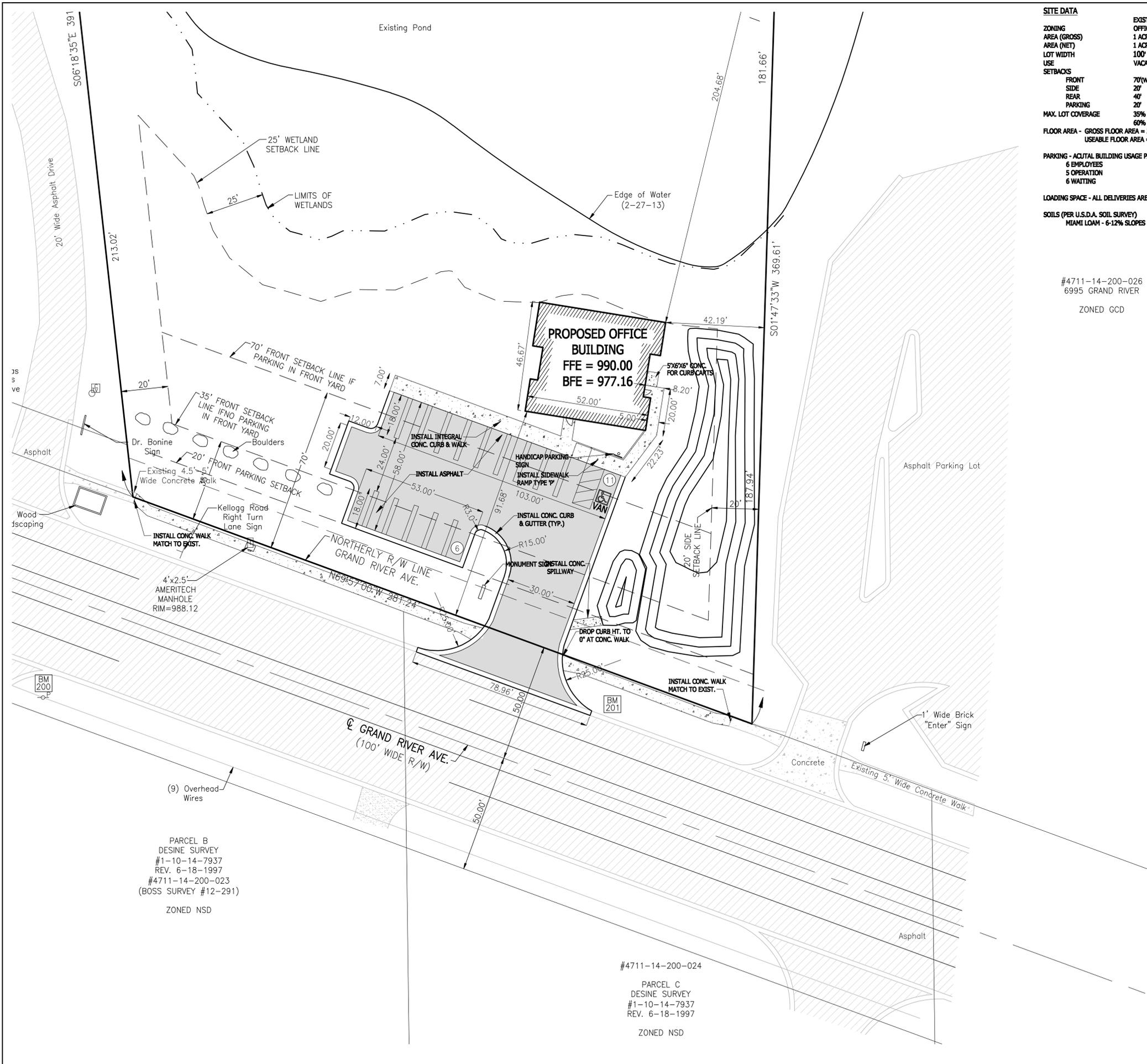
Genoa Township Zoning Ordinances

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, 6th edition, Institute of Transportation Engineers

APPENDIX



SITE DATA

	EXISTING/REQUIRED OFFICE SERVICE (OSD)	PROPOSED OFFICE SERVICE (OSD)
ZONING	1 ACRES	2.5 ACRES
AREA (GROSS)	1 ACRES	2.4 ACRES
AREA (NET)	100'	292.84'
LOT WIDTH	VACANT	DENTAL OFFICE
USE		
SETBACKS		
FRONT	70'(WITH FRONT PARKING LOT)	91.68'
SIDE	20'	42.19'
REAR	40'	204.68'
PARKING	20'	20'
MAX. LOT COVERAGE	35% BLDG.	2.27%
	60% IMPERVIOUS	10.88%
FLOOR AREA - GROSS FLOOR AREA = 2,368 S.F.		
USEABLE FLOOR AREA = 1,645 S.F.		

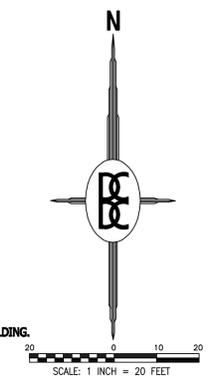
PARKING - ACTUAL BUILDING USAGE PARKING CALCULATIONS

6 EMPLOYEES
5 OPERATION
6 WAITING

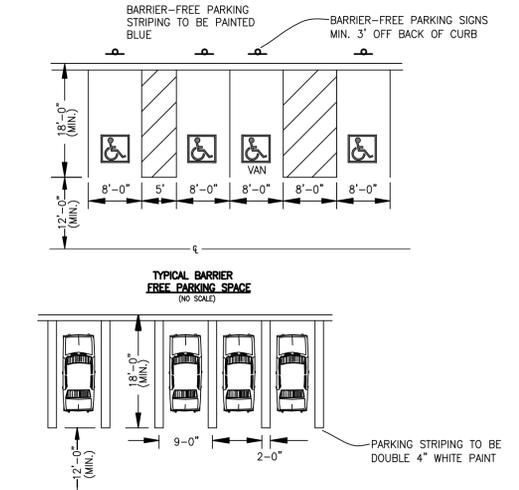
PROVIDED: 17 SPACES (INCLUDES 1 BARRIER-FREE SPACE)

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 - 6-12% SLOPES



#4711-14-200-026
6995 GRAND RIVER
ZONED GCD



TYPICAL PARKING SPACE (NO SCALE)

PROPOSED (PR)	EXISTING (EX)	LEGEND
900	900	CONTOUR
T/C	+922.08	STORM DRAINAGE FLOW
XXX.XX		SPOT ELEVATION
FF	FF	FINISHED FLOOR ELEVATION
T/A	T/A	FINISHED GRADE ELEVATION
T/C	T/C	TOP OF ASPHALT
T/W	T/W	TOP OF CURB / CONCRETE
F/L	F/L	TOP OF WALK
T/P	T/P	FLOW LINE
B/P	B/P	TOP OF PIPE
RIM	RIM	BOTTOM OF PIPE
INV	INV	RIM ELEVATION
MH	MH	INVERT ELEVATION
IN	IN	MANHOLE STRUCTURE
CB	CB	INLET STRUCTURE
RY	RY	CATCHBASIN STRUCTURE
ES	ES	REARWARD STRUCTURE
OV	OV	END-SECTION
UP	UP	GATEVALVE STRUCTURE
SN	SN	HYDRANT
SL	SL	UTILITY POLE
FM	FM	SANITARY SEWER
PS	PS	SANITARY LEAD
ST	ST	FORCE MAIN
WM	WM	PRESSURE SEWER
WL	WL	STORM SEWER
FO	FO	WATER SEWER
OH	OH	WATER MAIN
C	C	WATER LEAD
E	E	FIBER OPTIC
G	G	OVERHEAD WIRE
T	T	CABLE
		GAS
		TELEPHONE
		MANHOLE
		INLET / CATCHBASIN
		FLARED END-SECTION
		GATE VALVE
		HYDRANT
		UTILITY POLE
		FENCE
		SIGN
		NOT FIELD VERIFIED TO BE REMOVED
		WETLAND BOUNDARY

- NOTES:**
- CLEAR VISION REQUIREMENTS WILL BE MET. THE CLEAR VISION AREAS WERE FIGURED FOR A SIGHT DISTANCE OF 600 FT
 - 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.
 - THE LOCATION OF A KEY BOX WILL BE LOCATED ADJACENT TO THE FRONT DOOR OF THE STRUCTURE.
 - SIDEWALK RAMPS AT THE DRIVEWAY APPROACH WILL BE CONSTRUCTED IN COMPLIANCE WITH ADA REQUIREMENTS.
 - DOVE STRIPS WILL NOT BE INSTALLED ON SIDEWALK RAMPS AT DRIVEWAY APPROACH.

THE DRAWING AND ALL INFORMATION THEREON IS THE PROPERTY OF BOSS ENGINEERING PLANNERS ARCHITECTS. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. NO WARRANTIES ARE MADE BY BOSS ENGINEERING PLANNERS ARCHITECTS AS TO THE COMPLETENESS OR ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS WITH THE INFORMATION PROVIDED HEREON PRIOR TO THE COMMENCEMENT OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

BEFORE YOU DIG CALL MISS DIG
1-800-487-3872

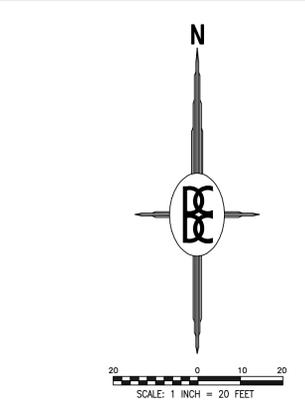
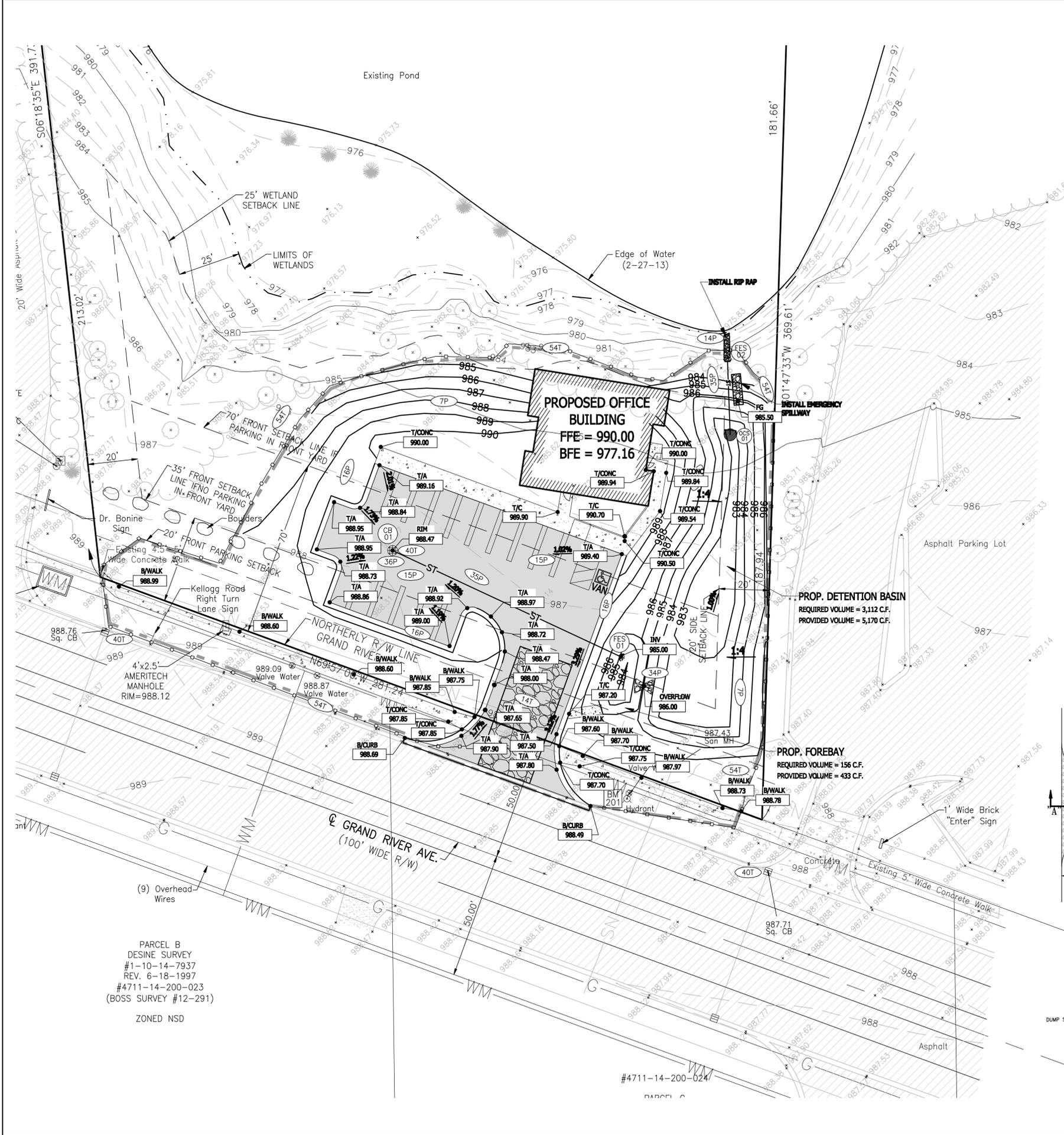
BOSS ENGINEERING
ENGINEERS, SURVEYORS & PLANNERS
LANDSCAPE ARCHITECTS
(E-MAIL: BOSS@BOSSARCHITECTS.COM)
3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 FAX (517) 548-1870

RONDEAU DENTAL OFFICE
PREPARED FOR
LINDHOUT ASSOCIATES ARCHITECTS, AIA, PC
10465 CITATION DRIVE
BRIGHTON, MI 48116
810-227-5668

SITE PLAN

NO	BY	DATE
1	ST	7-30-13
	REVISION PER	

DESIGNED BY: ST
DRAWN BY:
CHECKED BY:
SCALE: 1" = 20'
JOB NO. 13-026
DATE: 7/10/13
SHEET NO. C2

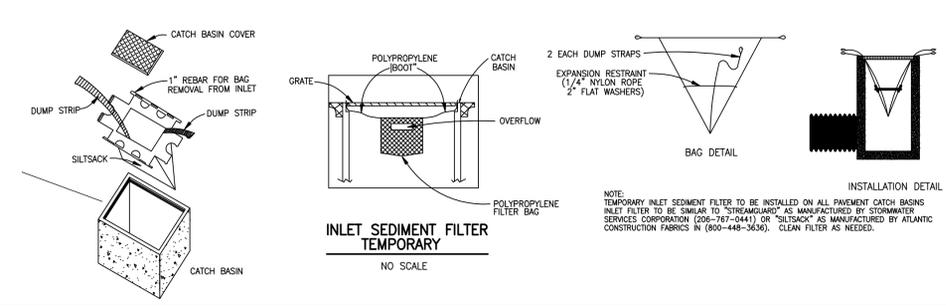
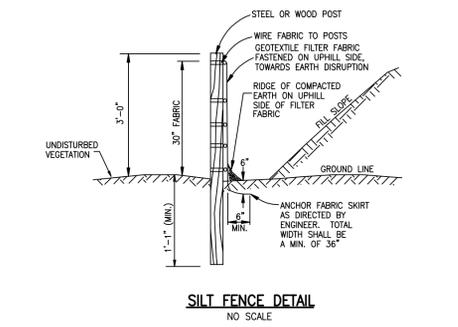
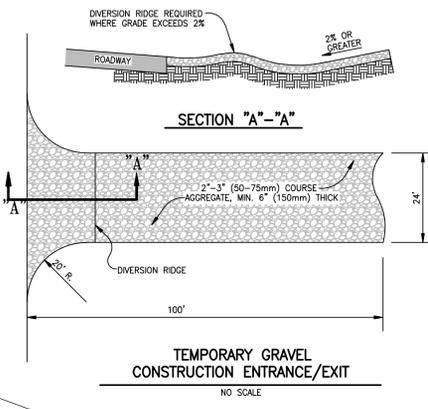


BENCHMARKS:
SITE BENCHMARKS (NGVD29 DATUM):
- BM #200 NAIL/TAG SET N/S P.POLE. ELEV.=990.14
- BM #201 NE BOLT ON 2ND FLANGE OF HYDRANT ELEV.=989.58

LEGEND	
PROPOSED (PR)	EXISTING (EX)
900	900
T/C	FF
XXX.XX	FG
FF	T/A
FG	T/C
T/A	T/W
T/C	RIM
T/W	INV
RIM	MH
INV	CB
MH	HY
CB	SN
HY	SL
SN	FM
SL	PS
FM	ST
PS	WM
ST	WL
WM	FO
WL	OH
FO	C
OH	E
C	G
E	T
G	U
T	S
U	NFV
S	CSB
NFV	SN
CSB	CB
SN	54T
CB	
54T	

SOIL EROSION CONTROL MEASURES	
1	STOPPING & STOCKPILE TOPSOIL TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION. STOCKPILE SHOULD BE TEMPORARILY SEEDED.
7	MULCH SEEDING EFFECTIVE ON LARGE AREAS. MULCH TACKING AGENT USED TO PROVIDE IMMEDIATE PROTECTION UNTIL GRASS IS ROOTED. SHOULD INCLUDE PREPARED TOPSOIL (B).
14	AGGREGATE COVER STABILIZES SOIL SURFACE, REDUCES MINOR 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 RUNOFF VELOCITY. IRREGULAR SURFACE WILL HELP SLOW VELOCITY.
16	CURBS & GUTTERS KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE. COLLECTS AND CONDUCTS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGE.
34	SEDIMENT BASIN TRAPS SEDIMENT. RELEASES RUNOFF AT NON-EROSIVE RATES. CONTROLS RUNOFF AT SYSTEM OUTLETS. CAN BE USED IN ADVERSE WEATHER.
35	SHOULDER CURB SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS. CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF. CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION. USE CAREFUL DESIGN TO COLLECT SEDIMENT.
36	CATCH BASIN INLET COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF. MAY USE FILTER CLOTH OVER INLET.
40	INLET SEDIMENT FILTER EASY TO SHAKE. COLLECTS SEDIMENT. MAY BE CLEANED AND EXPANDED AS NEEDED.
54	SEE DETAIL THIS SHEET USES GEOTEXTILE FABRIC AND POSTS OR PILES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.

P = PERMANENT T = TEMPORARY
TOTAL DISTURBED AREA = 0.66 ACRES



THE DESIGN AND CONSTRUCTION OF THIS PROJECT HAS BEEN REVIEWED BY THE STATE OF MICHIGAN. THE REVIEW IS LIMITED TO THE TECHNICAL ASPECTS OF THE PROJECT AND DOES NOT CONSTITUTE A GUARANTEE OF THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL VERIFY THE EXISTING UTILITIES, DETERMINE THE EXACT LOCATION AND DEPTH OF ANY UTILITIES, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS BEFORE ANY CONSTRUCTION BEGINS. THE CONTRACTOR SHALL VERIFY THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

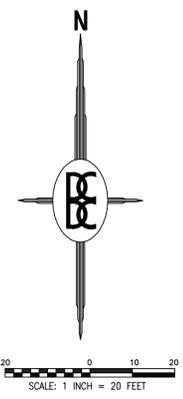
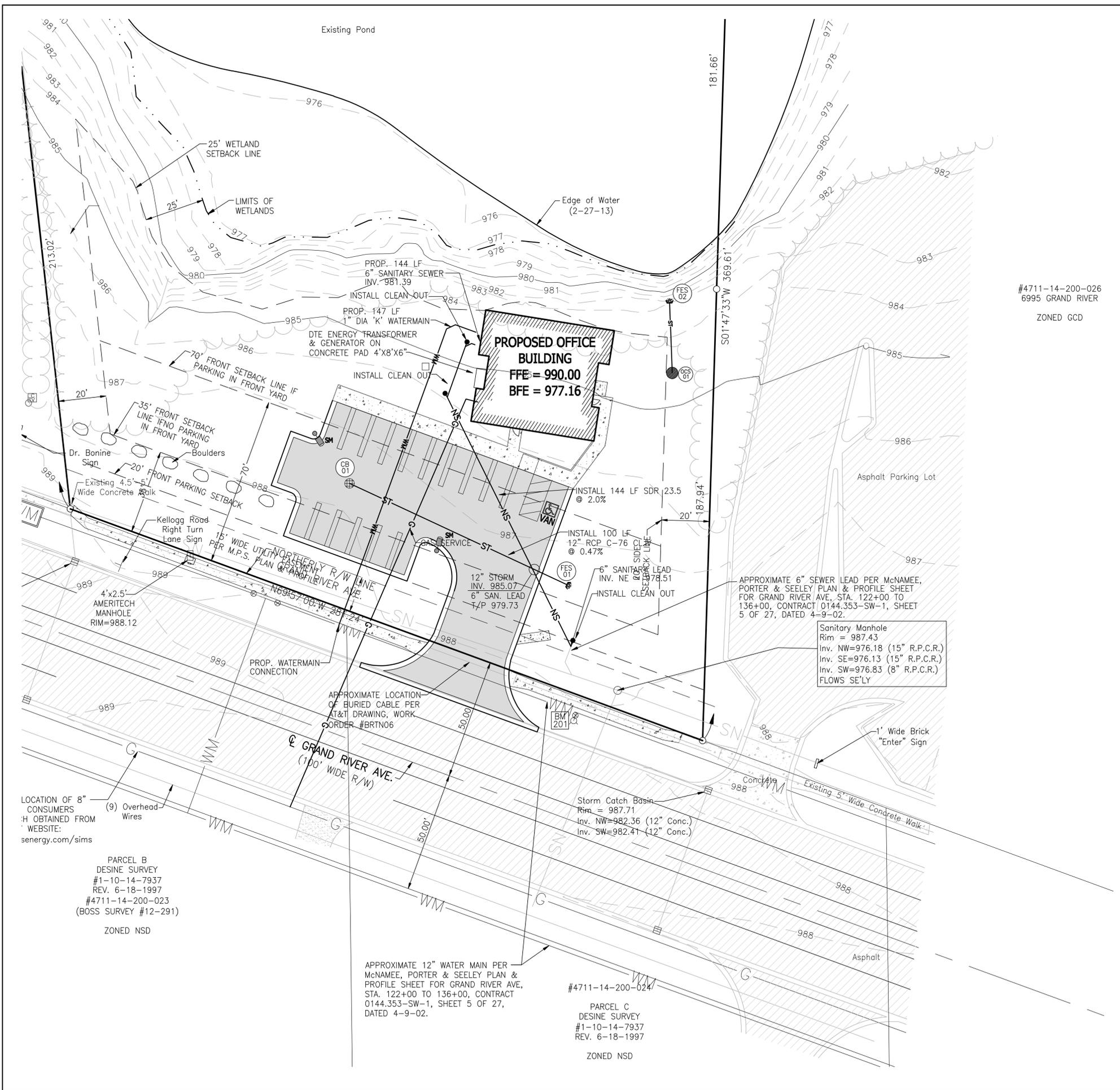
BOSS ENGINEERING
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LANDSCAPE ARCHITECTS
(E-MAIL: BOSS@BOSS-ENG.COM)
HOWELL, MI 48843
3121 E. GRAND RIVER AVE.
(800) 246-6735 FAX (517) 548-1870

PROJECT: **RONDEAU DENTAL OFFICE**
PREPARED FOR: **LINDHOUT ASSOCIATES ARCHITECTS, AIA, PC**
10465 CITATION DRIVE
BRIGHTON, MI 48116
810-227-5668

TITLE: **GRADING, DRAINAGE, & SEC PLAN**

NO	BY	DATE	REVISION PER
1	ST	7-30-13	

DESIGNED BY: ST
DRAWN BY:
CHECKED BY:
SCALE: 1" = 20'
JOB NO. 13-026
DATE: 7/10/13
SHEET NO. **C3**



PROPOSED (PR)	EXISTING (EX)	
900	900	CONTOUR
T/C	+922.08	STORM DRAINAGE FLOW
XXXXXX		SPOT ELEVATION
FF	FF	FINISHED FLOOR ELEVATION
FG	FG	FINISHED GRADE ELEVATION
T/A	T/A	TOP OF ASPHALT
T/C	T/C	TOP OF CURB / CONCRETE
T/W	T/W	TOP OF WALK
RIM	RIM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
ST	ST	PRESSURE SEWER
WM	WM	STORM SEWER
WL	WL	WATER MAIN
FO	FO	WATER LEAD
OH	OH	FIBER OPTIC
C	C	CABLE
E	E	ELECTRIC
T	T	GAS
○	○	TELEPHONE MANHOLE
□	□	INLET / CATCHBASIN
⊕	⊕	FLARED END-SECTION
⊗	⊗	GATE VALVE
⊘	⊘	HYDRANT
⊙	⊙	UTILITY POLE
—	—	FENCE
—	—	SIGN
—	—	NOT FIELD VERIFIED
—	—	TO BE REMOVED
—	—	COMPACTED SAND BACKFILL
—	—	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

#4711-14-200-026
6995 GRAND RIVER
ZONED GCD

NOTE:
PRIOR TO CONSTRUCTION,
SANITARY LEAD INVERT IS
TO BE VERIFIED.

PROP. CATCH BASIN
2' DIA., COVER MDOT 'D'
RIM = 988.47
12" INV. SE.= 985.47
W/2'SUMP

STRUCTURE FRAMES & COVERS					
COVER	TYPE	USE	MANUFACTURER OR EQUIV.		TYPE OF COVER OR GRATE
			EAST JORDAN	NEENAH	
A	MH	ALL	1120	R-1415	SANITARY-SELF SEALING STORM-VENTED
B	CB & INLET	TYPE B2 CURB	7085	R-3038-A	
K	CB & INLET	TYPE C & F CURB	7045	R-3031-B	FLAT GRATE WITH VERT. 4" OPEN THROAT
C	CB & INLET	VALLEY CURB	7065	R-3034-B	
D	CB & INLET	PARKING LOTS	1020-MI	R-2560-D	FLAT GRATE
E	CB & INLET	LAWN AREA OR DITCH	1020-01		BEEHIVE GRATE 4" HIGH

BENCHMARKS:
SITE BENCHMARKS (NGVD29 DATUM):
- BM #200 NAIL/TAG SET N/S P.POLE. ELEV.=990.14
- BM #201 NE BOLT ON 2ND FLANGE OF HYDRANT ELEV.=989.58

THE ENGINEER HAS REVIEWED THE SURVEY INFORMATION FOR THE USE OF THIS DRAWING AND HAS FOUND IT TO BE ACCURATE AND COMPLETE. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY INFORMATION. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CONSTRUCTION APPROPRIATE OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

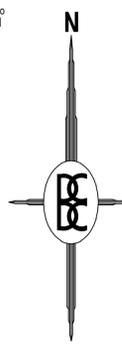
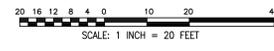
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ENGINEERS, SURVEYORS & PLANNERS
LANDSCAPE ARCHITECTS
(E-MAIL: BOSS@BOSS-ENG.COM)
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(800) 246-6735 FAX (517) 948-1670

RONDEAU DENTAL OFFICE
PREPARED FOR
LANDHOUT ASSOCIATES ARCHITECTS, AIA, PC
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BRIGHTON, MI 48116
810-227-5668

UTILITY PLAN

NO	BY	DATE
1	ST	7-30-13

DESIGNED BY: ST
DRAWN BY:
CHECKED BY:
SCALE: 1" = 20'
JOB NO. 13-026
DATE: 7/10/13
SHEET NO.



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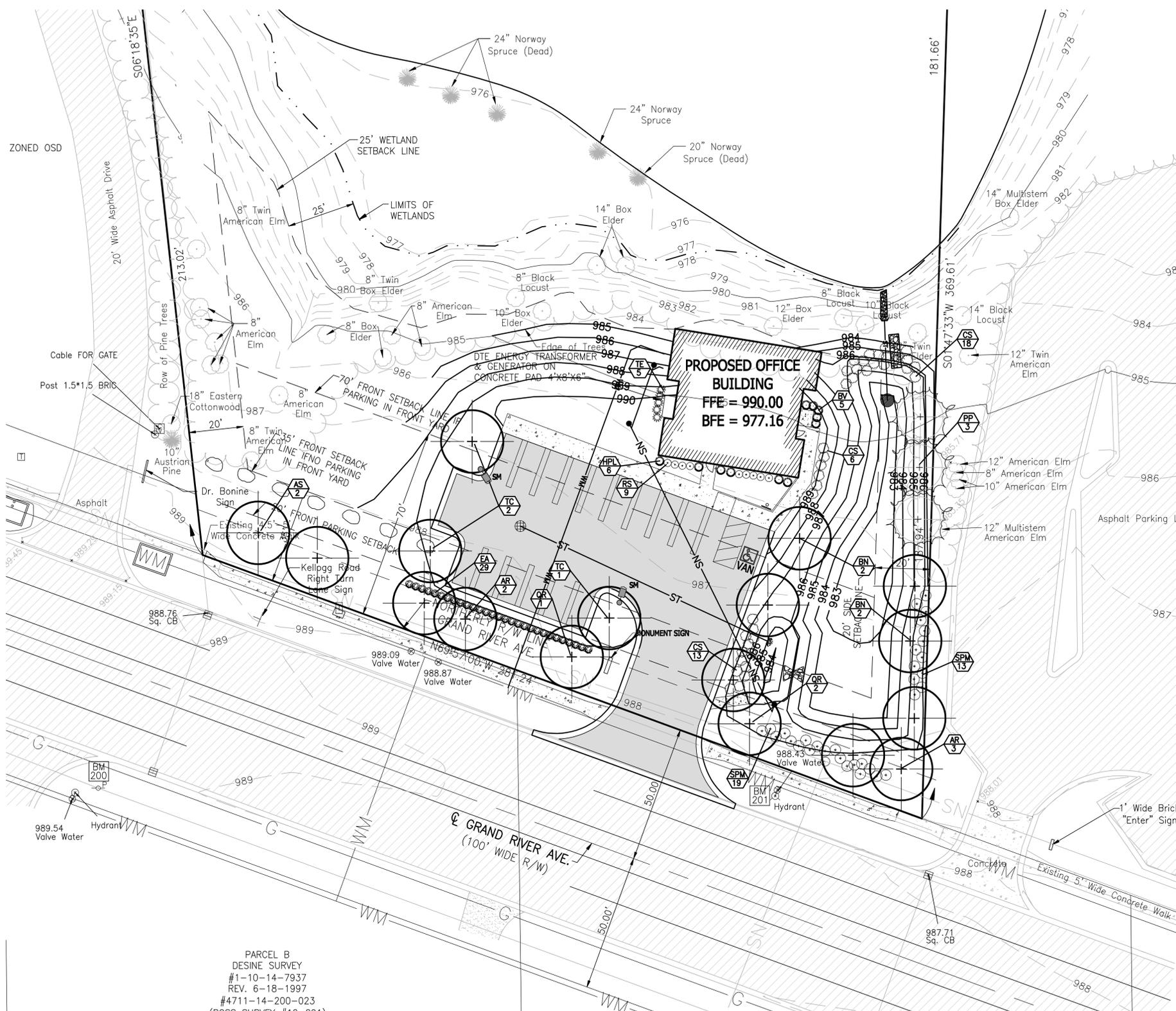
BOSS ENGINEERING
ENGINEERS, SURVEYORS & PLANNERS
LANDSCAPE ARCHITECTS
3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6355 FAX (517) 548-1670

RONDEAU DENTAL OFFICE
PREPARED FOR
LINDHOUT ASSOCIATES ARCHITECTS, AIA, PC
10465 CITATION DRIVE
BRIGHTON, MI 48116
810-227-5668

LANDSCAPE PLAN

NO.	DATE	REVISION PER	BY
1	7-30-13		TD

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LEGEND

PROPOSED (PR)	EXISTING (EX)	
900	900	CONTOUR
T/C	+922.08	STORM DRAINAGE FLOW
XXX.XX		SPOT ELEVATION
FF	FF	FINISHED FLOOR ELEVATION
FG	FG	FINISHED GRADE 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
B/P	B/P	BOTTOM OF PIPE
RIM	RIM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
RY	RY	REARYARD 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
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
GS	GS	GAS
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	FENCE	FENCE
SIGN	SIGN	SIGN
NOT FIELD VERIFIED	NOT FIELD VERIFIED	NOT FIELD VERIFIED
TO BE REMOVED	TO BE REMOVED	TO BE REMOVED
COMPACTED SAND BACKFILL	COMPACTED SAND BACKFILL	COMPACTED SAND BACKFILL
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

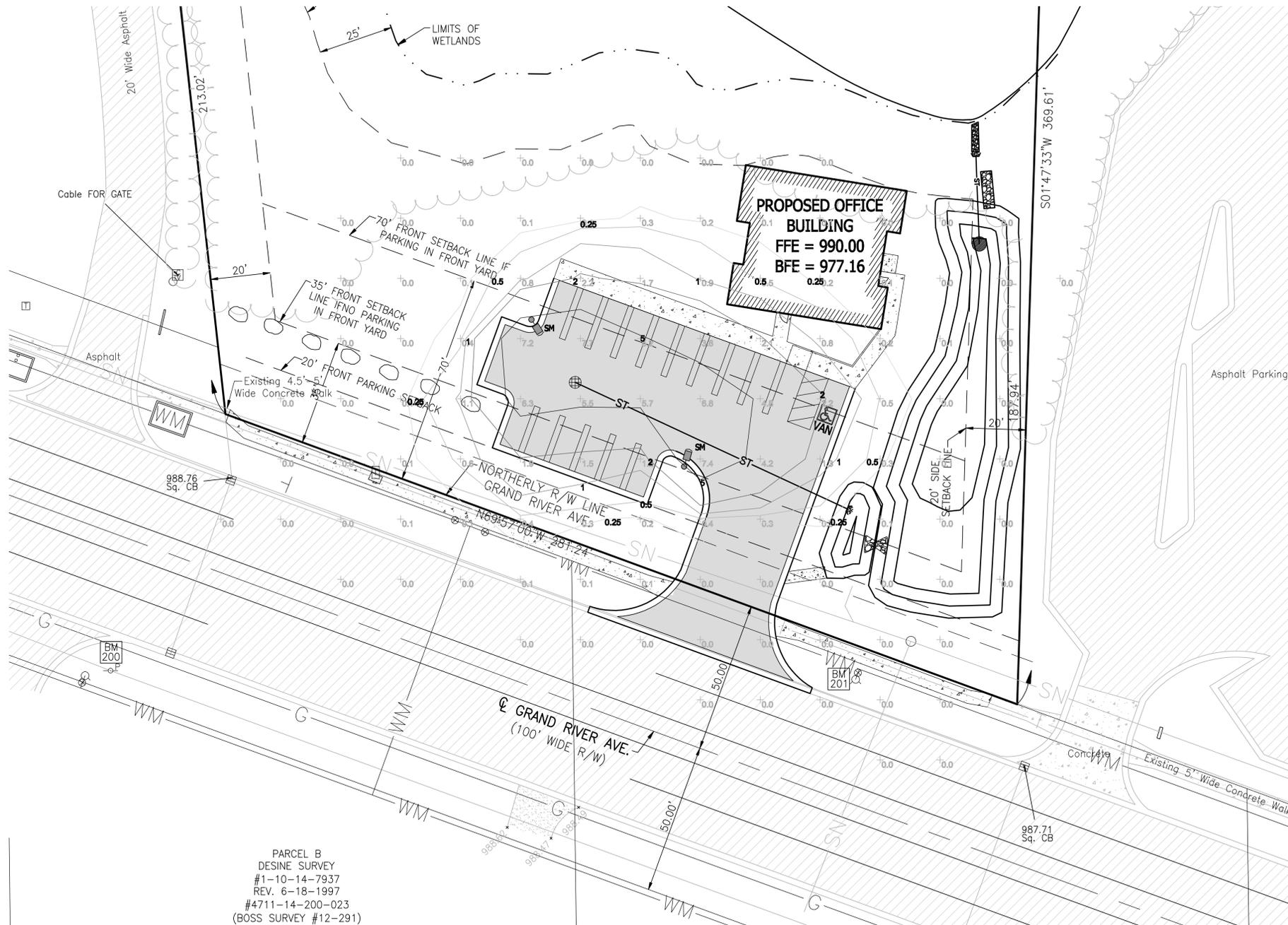
LANDSCAPE REQUIREMENTS

- STREET FRONTAGE**
- REQUIRED - 1 TREE PER 40 L.F. OF FRONTAGE (281 L.F. / 40 = 7 TREES)
- PROVIDED - 7 TREES
- BUFFER ZONES**
- REQUIRED - NO BUFFER REQUIRED BECAUSE SITE IS ZONED OFFICE-SERVICE AND IT IS ADJACENT TO EITHER OFFICE OR COMMERCIAL ZONED DISTRICTS.
- PARKING AREA LANDSCAPING**
- REQUIRED - 1 CANOPY TREE AND 100 S.F. OF LANDSCAPED AREA PER 10 SPACES (17 SPACES / 10 = 2 & 200 S.F.)
- PROVIDED - 3 TREES & 635 S.F.
- DETENTION BASIN LANDSCAPING**
- REQUIRED - 1 TREE AND 10 SHRUBS PER 50 L.F. OF BASIN PERIMETER
DETENTION BASIN - 344 L.F. = 7 TREES & 69 SHRUBS
PROPOSED - 10 TREES & 69 SHRUBS

PLANT LIST

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
TREES					
AS	2	Acer saccharum 'Legacy'	Legacy Sugar Maple	2 1/2" cal.	B-B
AR	5	Acer rubrum 'Red Sunset'	Red Sunset Maple	2 1/2" cal.	B-B
BN	4	Betula nigra	River Birch	2 1/2" cal.	B-B
QR	3	Quercus rubra	Red Oak	2 1/2" cal.	B-B
TC	3	Tilia cordata 'Greenspire'	Greenspire Linden	2 1/2" cal.	B-B
PP	3	Picea pungens var. 'Glauca'	Colorado Blue Spruce	6'-8" ht.	B-B
SHRUBS					
BV	5	Buxus x microphylla 'Green Velvet'	Green Velvet Boxwood	15"-18" ht.	B-B
CS	37	Cornus sericea	Redosier Dogwood	24"-36" ht.	B-B
EA	29	Euonymus alatus var. Compactus	Dwarf Burning Bush	24"-36" ht.	B-B
QR	6	Quercus rubra	Red Oak	24" ht.	Cont.
RS	9	Rosa 'RADIX'	Double Red Knockout		Cont.
SPM	32	Syringa patula 'Miss Kim'	Miss Kim Dwarf Lilac	24"-36" ht.	B-B
TE	5	Thuja occidentalis 'Emerald'	Emerald Arborvitae	24"-36" ht.	B-B

PARCEL B
DESINE SURVEY
#1-10-14-7937
REV. 6-18-1997
#4711-14-200-023
(BOSS SURVEY #12-291)



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WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
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
⊙	⊙	NOT FIELD VERIFIED
⊙	⊙	TO BE REMOVED
⊙	⊙	COMPACTED SAND BACKFILL
CSB	CSB	SANITARY SEWER LABEL
SAN #1	SAN #1	STORM SEWER LABEL
CB 02	CB 02	WATER MAIN LABEL
WM 12	WM 12	SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
54T	54T	SILT FENCE
---	---	LIMITS OF GRADING/CLEARING
---	---	WETLAND BOUNDARY
---	---	CONCRETE
---	---	ASPHALT
---	---	MODIFIED CURB
⊙	⊙	DOUBLE FIXTURE LIGHT POLE
⊙	⊙	SINGLE FIXTURE LIGHT FIXTURE
⊙	⊙	WALL MOUNTED LIGHT FIXTURE
⊙	⊙	GROUND LIGHT FIXTURE
⊙	⊙	FOOT CANDLES ON SITE
⊙	⊙	FOOT CANDLES OFF SITE
⊙	⊙	FOOT CANDLES CONTOURS

SITE LIGHTING SUMMARY
LIGHTING LEVELS ARE SHOWN IN FOOTCANDLES 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.

LUMINAIRE SCHEDULE

SYMBOL	LABEL	QTY.	DESCRIPTION	CATALOG NUMBER	LAMP	FILE	LUMENS	LLF	POLE DESCRIPTION	POLE HEIGHT	BASE HEIGHT	TOTAL HEIGHT
⊙	SM	2	McGRAW-EDISON GALLERIA SQUARE	GSM-AIS-400-MP-277-SL-FG-BZ-F	400 WATT PULSE-START CLEAR ED-28 HORIZONTAL BURN	GSM-XX-400-MP-XX-SL-FG.1 ES	40,000	.75	SSS4A23SF-BZ	23'	2'	25'

ALL IES FILES PROVIDED BY MANUFACTURER FOR CALCULATION OF LIGHTING LEVEL.

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10465 CITATION DRIVE
BRIGHTON, MI 48116
810-227-5668

LIGHTING PLAN

PROJECT: _____
DATE: 7-30-13

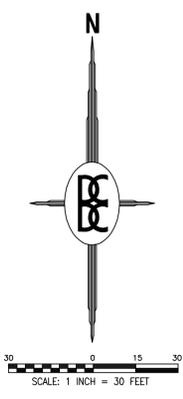
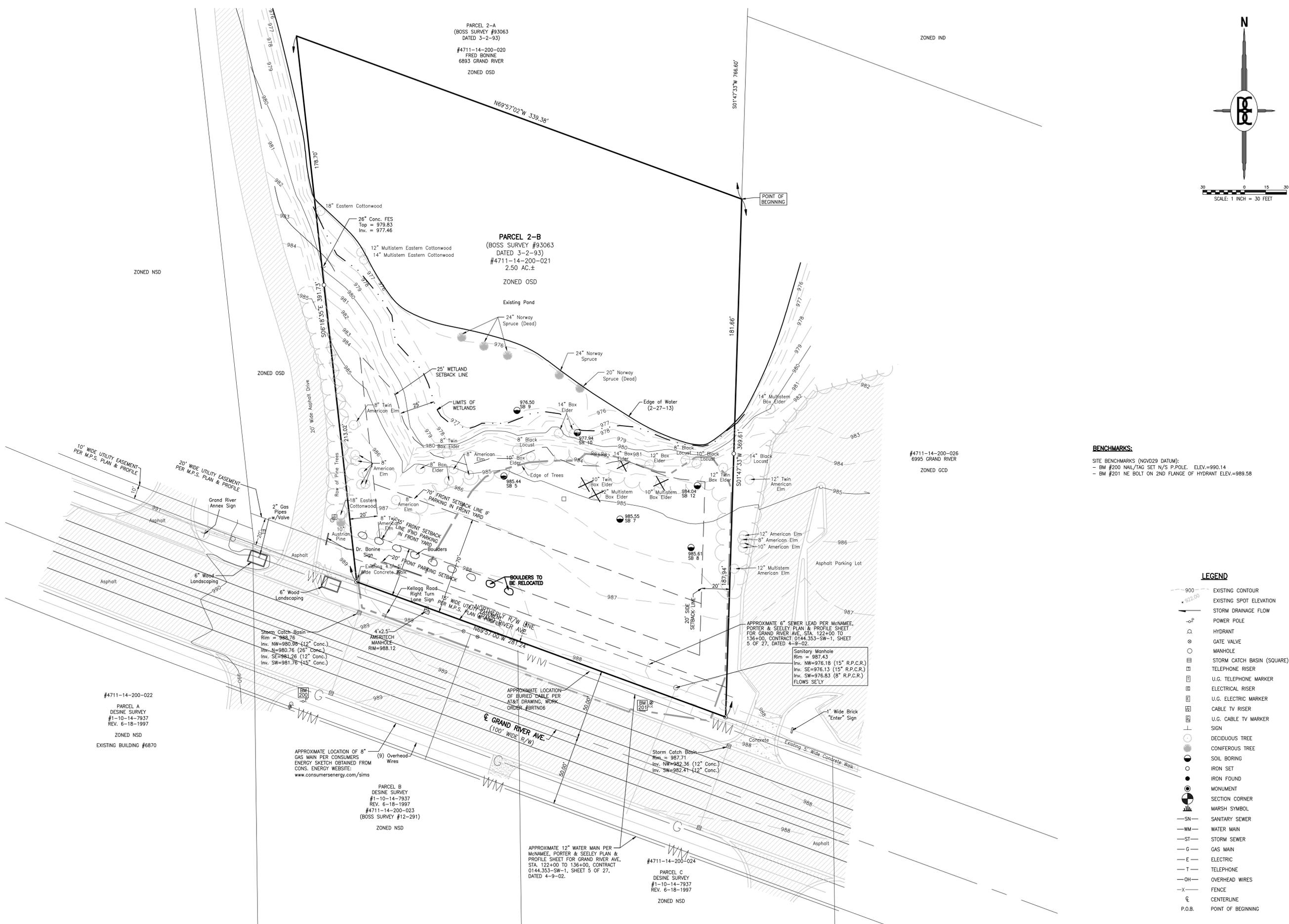
TWP. REVIEW: _____
REVISION PER: _____

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY: _____

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SHEET NO. C6

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BEFORE YOU DIG CALL MISS DIG
1-800-368-5808



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1-800-368-3683

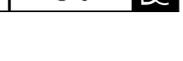
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EXIST. CONDITIONS & DEMO.

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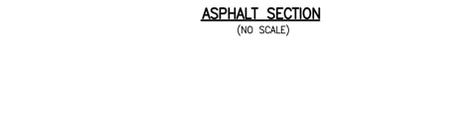
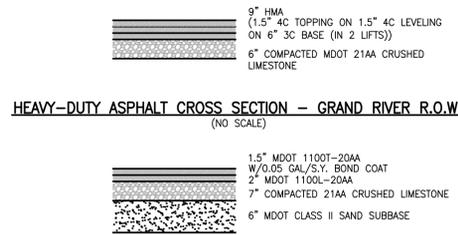
LIVINGSTON COUNTY SOIL EROSION PERMIT TEMPLATE
TEMPORARY CONTROLS AND SEQUENCE

1. NOTIFY LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE 24 HOURS PRIOR TO START OF GRADE WORK.
 2. 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
3. (IMPORTANT NOTICE) RETENTION/DETENTION PONDS SHALL BE EXCAVATED, TOPSOIL 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.
 4. 36" M.D.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.
 5. ALL TEMPORARY EROSION CONTROL DEVICES AS NOTED ON PLANS SHALL BE INSTALLED PRIOR TO THE START OF MASSIVE EARTH DISTRIBUTION.
 6. 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.
 7. RETENTION PONDS
 - 7.1. RETENTION/DETENTION/SEDIMENTATION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
 - 7.2. DETENTION POND OUTLETS SHALL BE OF THE STANDPIPE AND STONE FILTER SYSTEM, WITH TRASH SCREEN. OUTFLOW SHALL NOT EXCEED 0.20 CUBIC FEET OF WATER PER SECOND/PER ACRE. POND DICES SHALL HAVE A MINIMUM OF ONE (1) FOOT OF FREEBOARD. AN EMERGENCY SPILLWAY SHALL BE CONSTRUCTED WITHIN THE FREEBOARD LEVEL.
 - 7.3. THE EMERGENCY SPILLWAY FROM THE DETENTION POND SHALL BE SLOPED AND PEGGED, OR RIP RAPPED, 15 FEET PAST THE TOE OF THE SLOPE OF THE BERM.
 - 7.4. DICES AND BERMS SHALL BE FREE OF ALL ORGANIC MATTER.
 - 7.5. 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.
 - 7.6. ALL UNIMPROVED DISTURBED AREAS SHALL BE STRIPPED OF TOPSOIL WHICH WILL BE STORED ONSITE DURING THE EXCAVATING STAGE. TOPSOIL PILES SHALL BE SEEDDED AND MULCHED, OR MATTED WITH STRAW IN THE NON-GROWING SEASON, IMMEDIATELY AFTER THE STRIPPING PROCESS IS COMPLETED, TO PREVENT WIND AND WATER EROSION.
 - 7.7. SOIL EROSION CONTROLS SHALL BE MONITORED DAILY BY THE ON-SITE ENGINEER, OR CONTRACTOR, WHICHEVER CASE APPLIES.
 8. SLOPES AND DITCHES
 - 8.1. 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.
 - 8.2. 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.
 - 8.3. 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.
 9. STORM DRAINS
 - 9.1. 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.
 - 9.2. 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.
 - 9.3. BURLAP AND PEA STONE FILTERS WILL NEED TO BE CHANGED AFTER EACH RAINFALL.
 - 9.4. COUNTY CODE REQUIRES A MINIMUM PIPE SIZE OF 12" IN DIAMETER. IF SMALLER PIPE IS NEEDED FOR OUTLET PURPOSES THE 12" CAN BE BAFFLED TO THE CORRECT SIZE. ALL PIPE SHALL MEET THE 12"
 - 9.5. ALL STORM DRAIN OUTLETS 15" IN DIAMETER OR LARGER SHALL HAVE ANIMAL GUARDS INSTALLED TO PREVENT ENTRANCE TO THE SYSTEM.

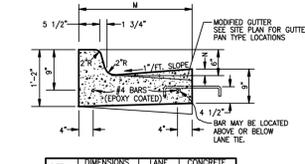
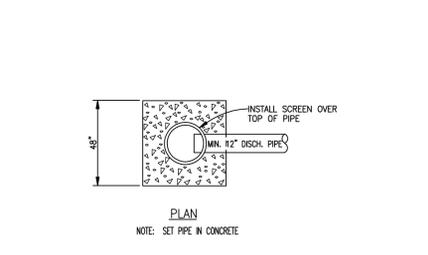
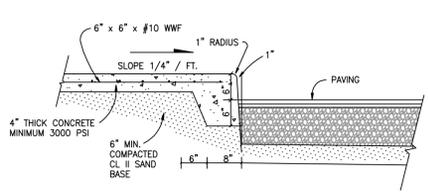
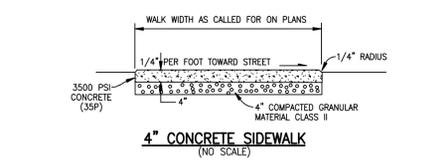
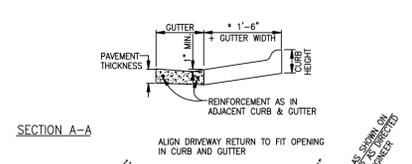
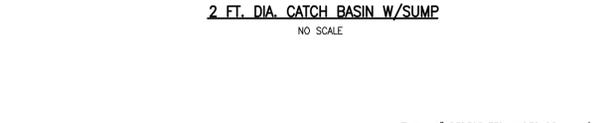
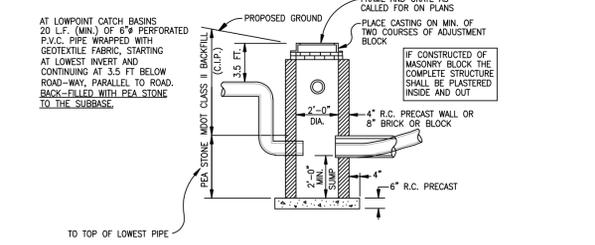
22. ALL STORM DRAINAGE PIPE 30" IN DIAMETER OR LARGER SHALL BE POINTED, AT THE JOINTS ON THE INSIDE WITH MORTAR, AFTER BACKFILLING.
 23. ALL STORM DRAIN OUTLETS THAT DO NOT EMPTY INTO THE RETENTION/DETENTION POND SHALL HAVE A TEMPORARY 5'X10'X3' SUMP INSTALLED AT THE TERMINATION OF THE STORM SEWER. UPON 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.
 24. 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.
 25. 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.
 26. 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 CEMENT SLURRY.
 27. 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.
 28. 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.
 29. 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 BOND OF THE HYDROSEEDING, WHICH WILL AFFECT THE EFFECTIVENESS OF THIS PROCEDURE.
 30. IN THE NON-GROWING SEASON, TEMPORARY STABILIZATION OF MASSIVELY EXPOSED AREAS FOR WINTER STABILIZATION SHALL BE DONE WITH STRAW MATTING.
 31. 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.
 32. 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.
 33. 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.
 34. 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.
 35. PER THE LIVINGSTON COUNTY DRAIN COMMISSIONER THE SEEDING, FERTILIZER AND MULCH MINIMUM QUANTITIES SHALL BE AS FOLLOWS:

TOP-SOIL	3" IN DEPTH
GRASS SEED	218 LBS. PER ACRE
FERTILIZER	150 LBS. PER ACRE
STRAW MULCH	3" IN DEPTH 1.5 TO 2 TONS PER ACRE (ALL MULCHING MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC.)

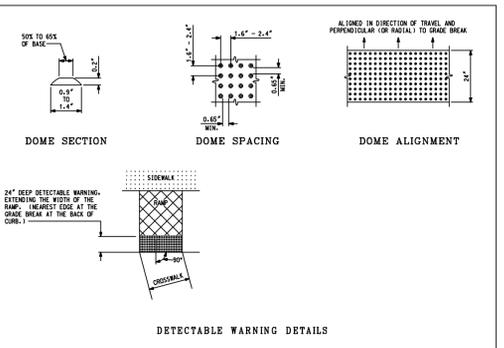
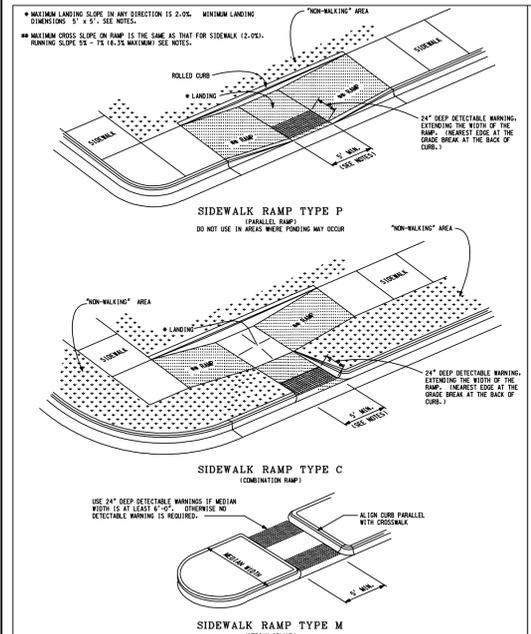
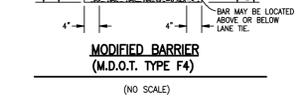
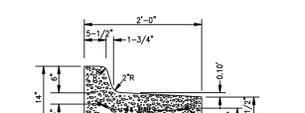
HYDRO-SEEDING HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%, IN SUCH CASES STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER.
- MAINTENANCE SCHEDULE FOR SOIL EROSION CONTROLS**
1. SILT FENCE SHALL BE INSPECTED WEEKLY AND AFTER EACH MAJOR STORM EVENT. MAINTENANCE SHALL INCLUDE REMOVAL OF ACCUMULATED SILT AND REPLACEMENT OF TORN SECTIONS. SILT FENCE SHALL BE REMOVED WHEN ALL CONTRIBUTING AREAS HAVE BEEN STABILIZED.
 2. 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.
 3. 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.
 4. CATCH BASINS SHALL BE INSPECTED ANNUALLY FOR ACCUMULATION OF SEDIMENT. ALL SEDIMENT MUST BE REMOVED AND DISPOSED OF PROPERLY WHEN THE SUMP IS FULL.
 5. COMMON AREAS SHALL BE STABILIZED NO LATER THAN 15 DAYS AFTER GRADE WORK, PURSUANT TO RULE 1709 (5).



INSTALL SUBDRAINS AT ALL CATCH BASINS LOCATED WITHIN ROADWAY



DETAIL	M	N	LANE TIES	CONCRETE CUTOFF/UNPLT.
F1	1'-0"	7/8"	AS SHOWN	0.0484
F2	2'-0"	3/4"	AS SHOWN	0.0510
F3	2'-0"	3/8"	OMITTED	0.0510
F4	2'-0"	1/2"	AS SHOWN	0.0510
F5	2'-0"	1/4"	OMITTED	0.0510



DETECTABLE WARNING DETAILS

NOTES:
 DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, OR SIDEWALKS BY ALL PUBLIC AGENCIES AND BY ALL PRIVATE ORGANIZATIONS CONSTRUCTING FACILITIES FOR PUBLIC USE.

FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2% FOR ALTERATIONS TO EXISTING ROADWAYS, THE CROSS SLOPE MAY BE TRANSFERRED TO MEET AN EXISTING ROADWAY GRADE. THE CROSS SLOPE TRANSITION SHALL BE APPLIED UNIFORMLY OVER THE FULL LENGTH OF THE RAMP.

THE MAXIMUM RUNNING SLOPE OF 0.3% IS RELATIVE TO A FLAT (0%) REFERENCE. HOWEVER, IT SHALL NOT REQUIRE ANY RAMP OR SINGLE RAMP WITH A COMBINATION OF RAMPS TO EXCEED 15 FEET IN LENGTH.

OBSTRUCTION STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. THE LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER THE LOCATION OF THE OBSTRUCTION STRUCTURE. WHERE EXISTING OBSTRUCTION STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A MANUFACTURER'S ADA COMPLIANT GRATE. OPENINGS SHALL NOT BE GREATER THAN 1/2" ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

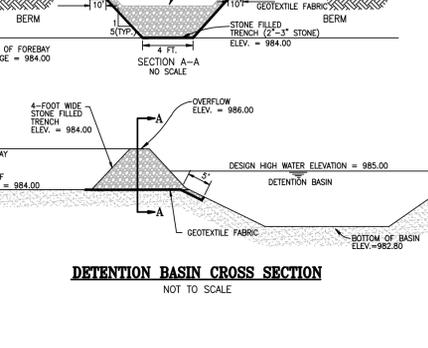
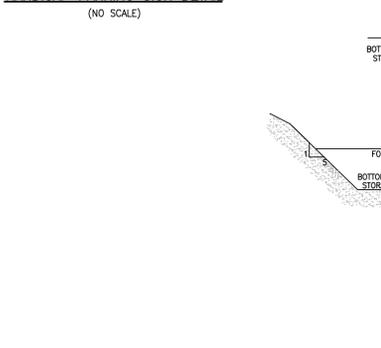
TRANSITION THE GUTTER PAN CROSS SECTION SUCH THAT THE COUNTER SLOPE IN THE DIRECTION OF RAMP TRAVEL IS NOT GREATER THAN 2%. HOWEVER, THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

OBSTRUCTION AND STOP LINE WARNINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP OBSTRUCTIONS. SPECIFIC DETAILS FOR WARNING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

FLARED SIDES WITH A SLOPE OF ONE MAXIMUM, MEASURED ALONG THE CURB LINE, SHALL BE PROVIDED WHERE A CIRCULATION PATH CROSSES THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE EDGES OF A SIDEWALK RAMP ARE PROTECTED BY LANDSCAPING OR OTHER BARRIERS TO TRAVEL BY WHEELCHAIR USERS OR PEDESTRIANS ACROSS THE EDGE OF THE SIDEWALK RAMP.

PROVIDE LANDINGS WHERE PEDESTRIAN TURNING MOVEMENTS ARE REQUIRED.

MINIMUM DIMENSIONS ARE NOT FEASIBLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND LANDING DIMENSION TO NOT LESS THAN 4' x 4'.



BEFORE YOU DIG
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 1-800-427-4668

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PROJECT: **RONDEAU DENTAL OFFICE**
 PREPARED FOR: **LINDHOUT ASSOCIATES ARCHITECTS, AIA, PC**
 10465 CITATION DRIVE
 BRIGHTON, MI 48116
 810-227-5668

TITLE: **CONSTRUCTION NOTES & DETAILS**

NO.	BY	DATE
1	ST	7-30-13
	REVISION PER	

DESIGNED BY: NO SCALE
 DRAWN BY:
 CHECKED BY:
 SCALE: NO SCALE
 JOB NO. 13-026
 DATE: 7/10/13
 SHEET NO. **C8**

LIVINGSTON COUNTY DETENTION BASIN CALCULATIONS

AREA (ACRES)	IMPERVIOUS FACTOR	ACRE IMPERVIOUS
0.26	0.9	0.23
0	0.7	0.00
0.22	0.2	0.04

COMPOUND C: 0.58
TOTAL DRAINAGE AREA: 0.48 ACRES

$K1 = A \times C$ (Design Constant) = 0.278
 $Qa = \text{MAX ALLOW OUTFLOW}$ (2CFS / ACRE) = 0.096 CFS

DURATION MINUTES	DURATION SECONDS	INTENSITY (IN/HR)	INCHES	INFLOW VOLUME IN RUNOFF x A x C	OUTFLOW DURATION x Qa	STORAGE VOLUME INFLOW - OUTFLOW
5	300	9.17	2751	765	29	736
10	600	7.86	4716	1311	58	1253
15	900	6.88	6192	1721	86	1635
20	1200	6.11	7332	2038	115	1923
30	1800	5.00	9000	2502	173	2329
60	3600	3.24	11664	3243	346	2897
90	5400	2.39	12906	3588	518	3069
120	7200	1.90	13680	3803	691	3112
180	10800	1.34	14472	4023	1037	2986

REQUIRED 100 YEAR DETENTION VOLUME = 3112 CF

BANKFULL FLOOD VOLUME
 $V_{BF} = 8160 \times A \times C = 2268 \text{ CF}$

FIRST FLUSH VOLUME
 $V_{FF} = 1815 \times A \times C = 505 \text{ CF}$

STORAGE PROVIDED

ELEV.	AREA (FT ²)	DEPTH (FT)	VOLUME (FT ³)	TOTAL VOLUME (FT ³)	FREEBOARD ELEVATION	DESIGN HIGHWATER ELEVATION
986	4919	1	4,258	9,428		
985	3596	1	3,012	5,170		
984	2427	1	1,686	2,159		
983	945	1	473	473		
982	0	0	0	0		

FIRST FLUSH
 $X_{FF} = 982.47$

BANKFULL
 $X_{BF} = 984.04$

100 YEAR
 $X_{100} = 984.32$

OUTLET CONTROL STRUCTURE

FIRST FLUSH OF RUNOFF
THE AVERAGE ALLOWABLE RELEASE RATE FOR RUNOFF IS 0.5" OVER AREA OF SITE IN 24 HRS.

$Q_{FF} = V_{FF} \times (1/24 \text{ HRS}) \times (1 \text{ HR} / 3600 \text{ SEC}) = 0.006 \text{ CFS}$

PLACE OPENINGS IN STANDPIPE AT BOTTOM OF BASIN = **0.00**

HEAD = $h = X_{100} - \text{BOTTOM BASIN ELEV} = 984.32 \text{ FT}$

$A = Q_{FF} / (0.62 \times (2 \times 32.2 \times h)^{0.5}) = 0.000 \text{ FT}^2$

A **1** INCH DIAMETER ORIFICE HAS AN AREA OF 0.0055 SF

$A / 0.0055 = 0.01$

THEREFORE, USE THE FOLLOWING NUMBER OF 1 HOLES, AT ELEV. 982.00

$Q_{FF \text{ ACTUAL}} = 0.851 \text{ CFS}$

BANKFULL FLOOD
FOR THE ALLOWABLE RELEASE RATE OF 24-40 HOURS, CHECK THE DISCHARGE THROUGH THE FIRST FLUSH ORIFICE TO SEE IF ADDITIONAL HOLES ARE NECESSARY.

HEAD = $h = X_{100} - \text{BOTTOM BASIN ELEV} = 984.32 \text{ FT}$

$Q_{90.0} = 0.62 \times \# \text{HOLES} \times (\text{AREA EACH HOLE} \times (2 \times 32.2 \times h)^{0.5}) = 0.851 \text{ CFS}$

$T_{90.0} = (1 \text{ SEC} / Q_{90.0}) \times V_{BF} \times (1 \text{ HR} / 3600 \text{ SEC}) = 0.74 \text{ HRS}$

SINCE HOLDING TIME IS LESS THAN 40 HRS, ADDITIONAL ORIFICE IN STANDPIPE ARE NOT REQUIRED.

SUMMARY OF REQUIRED STANDPIPE HOLES:

ELEVATION	# OF HOLES	DIAMETER OF HOLES
984.04	0	2 INCHES
982.00	1	1 INCHES

LIVINGSTON COUNTY FOREBAY CALCULATIONS

AREA (ACRES)	IMPERVIOUS FACTOR	ACRE IMPERVIOUS
0.26	0.9	0.23
0	0.7	0.00
0.22	0.2	0.04

COMPOUND C: 0.58
TOTAL DRAINAGE AREA: 0.48 ACRES

$K1 = A \times C$ (Design Constant) = 0.278
 $Qa = \text{MAX ALLOW OUTFLOW}$ (2CFS / ACRE) = 0.096 CFS

DURATION MINUTES	DURATION SECONDS	INTENSITY (IN/HR)	INCHES	INFLOW VOLUME IN RUNOFF x A x C	OUTFLOW DURATION x Qa	STORAGE VOLUME INFLOW - OUTFLOW
5	300	9.17	2751	765	29	736
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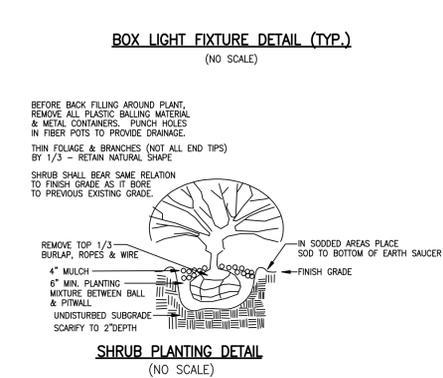
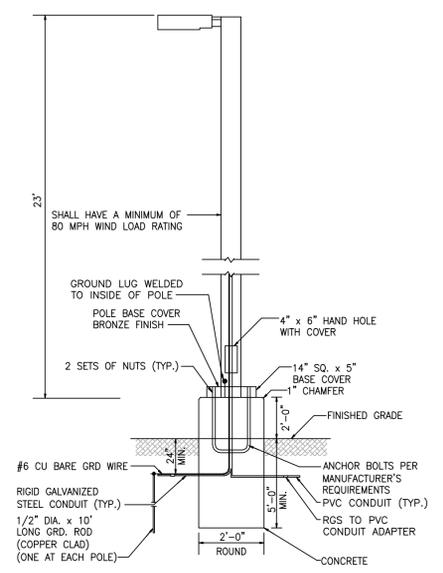
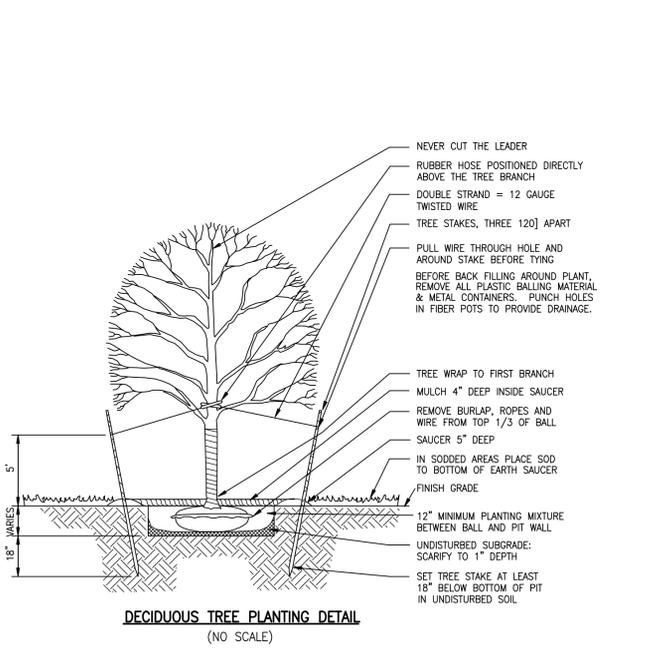
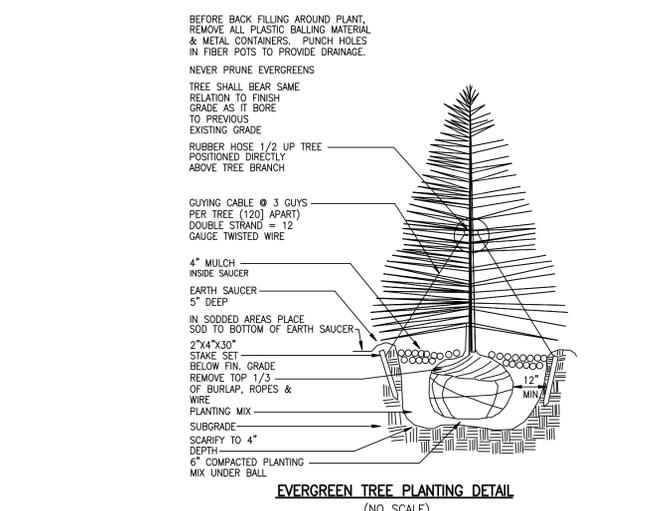
REQUIRED 100 YEAR DETENTION VOLUME = 3112 CF

FOREBAY VOLUME
 $V(F) = 5\% \text{ OF THE } 100\text{-YEAR STORM VOLUME BASED ON THE AREA TRIBUTARY TO THE INLET}$

$V(F) = (0.05 \times V(100)) = 156 \text{ CF}$

STORAGE VOLUME REQUIRED: 156 CF

ELEV.	AREA	VOLUME	CUMULATIVE VOLUME
986	467	330	433
985	192	103	103
984	14	7	
983	0	0	



McGRAW-EDISON

GSS/GSM/GSL GALLERIA SQUARE

70 - 1000W Pulse Start Metal Halide High Pressure Sodium Metal Halide ARCHITECTURAL AREA LUMINAIRE

DARK SKY ECO COMPLIANT

ENERGY DATA

Fixture	A	B	C	D	E	F
GSS	5'-10"	1'-10"	12'-2"	15'-4"	8' or 9'	13'-14"
GSM	28mm	28mm	327mm	387mm	180mm or 228mm	327mm
GSL	11"	3'-12"	19'-5"	21'-5"	8' or 14'	18' or 19'
	278mm	88mm	600mm	500mm	180mm or 228mm	327mm or 400mm
	14'-12"	4'-4"	25'-2"	27'	8' or 14'	18'-2" or 18'-4"
	368mm	109mm	630mm	680mm	180mm or 228mm	420mm or 480mm

WATTAGE TABLE

Fixture	Lens Type	Wattage
GSS (Galileo Grid)	Pulse Start Metal Halide (PSH)	70, 100, 150W
	High Pressure Sodium (HPS)	70, 100, 150W
	Metal Halide (MH)	77W
GSM (Galileo Mesh)	Pulse Start Metal Halide (PSH)	70, 100, 150, 200, 250, 300, 350, 400, 450, 700, 850W
	High Pressure Sodium (HPS)	70, 100, 150, 200, 250, 300, 350, 400, 450, 700, 850W
	Metal Halide (MH)	77, 200, 400, 1000W
GSL (Galileo Lens)	Pulse Start Metal Halide (PSH)	250, 300, 350, 400, 450, 700, 1000W
	High Pressure Sodium (HPS)	250, 400, 700, 1000W
	Metal Halide (MH)	250, 400, 1000W

COOPER Lighting

- 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 ERCTED 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 ERCT 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:
 - NURSERY GROWN;
 - STATE DEPARTMENT OF AGRICULTURE INSPECTED;
 - NO. 1 GRADE WITH STRAIGHT, UNSCARRED TRUNK AND WELL DEVELOPED UNIFORM CROWN (PARK GRADE TREES WILL NOT BE ACCEPTED);
 - STAKED, WRAPPED, WATERED AND MULCHED IN ACCORDANCE WITH STANDARD PLANTING PRACTICES;
 - 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 NURSERYMEN 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 OF 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 COMPRISED 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 BASE WITHIN A PERIOD OF ONE MONTH SHALL BE REPLACED BY THE CONTRACTOR, AT NO COST TO THE OWNER.
- SEED MIXTURE SHALL BE AS FOLLOWS:
- | | |
|--|-----|
| 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 FALLS TO SHOW A UNIFORM GERMINATION SHALL BE RESEEDED AND SUCH RESEEDING SHALL CONTINUE UNTIL A DENSE LAWN IS ESTABLISHED. DAMAGE TO SEEDING 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.

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10465 CITATION DRIVE
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CONSTRUCTION NOTES & DETAILS

NO.	DATE	TWP.	REVISION	PER
1	7-30-13			

DESIGNED BY: NO SCALE
DRAWN BY: JOB NO. 13-026
CHECKED BY: DATE 7/10/13
SHEET NO. C9

FILE LOCATION: H:\905 - Rondeau DDS Clinic\905\905_A1 DATE PLOTTED: 1/29/2013 PLOTTED BY: nsp
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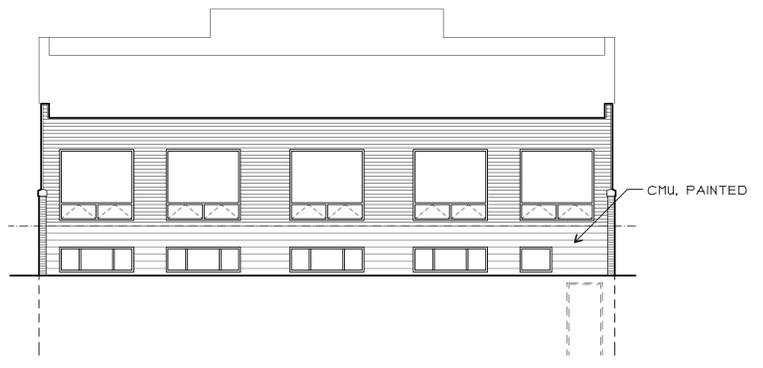
SOUTH ELEVATION

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



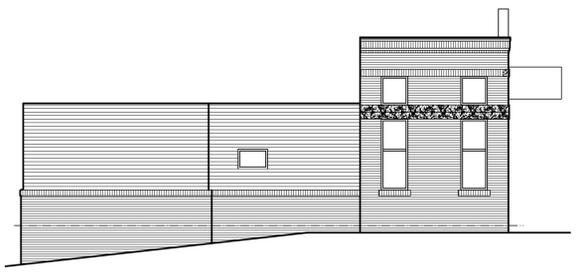
EAST ELEVATION

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



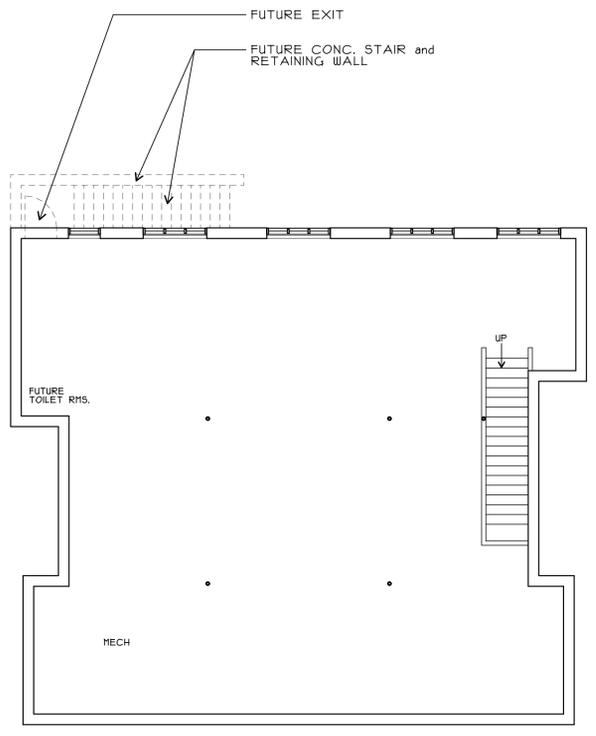
NORTH ELEVATION

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



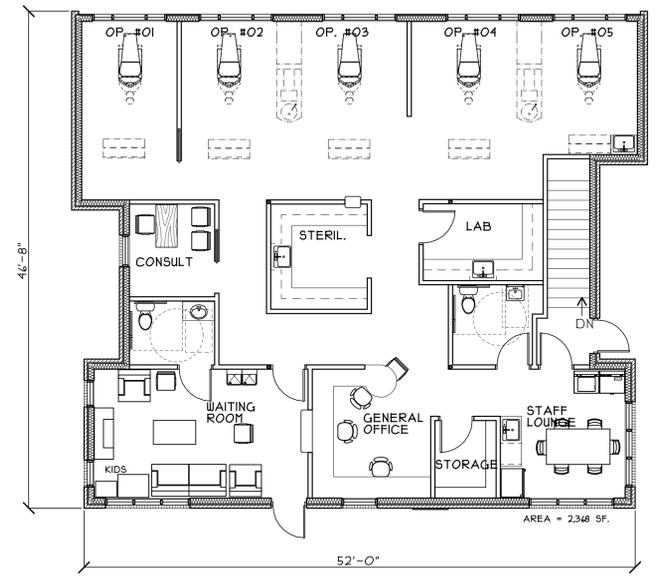
WEST ELEVATION

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



BASEMENT FLOOR PLAN

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



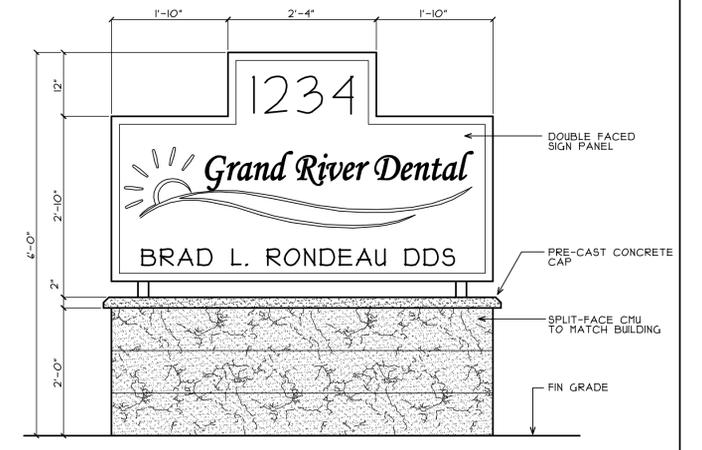
FIRST FLOOR PLAN

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

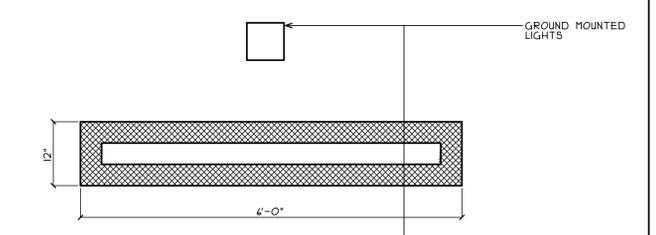
FACADE MATERIALS SUMMARY

EXTERIOR WALLS VISABLE FROM A PUBLIC AREA - EAST, SOUTH, WEST

- BRICK = 1,601 SF 12%
- SPLIT FACE = 10 SF 3%
- SIDING (VINYL OR CEMENT) = 542 SF 25%
- DOORS/WINDOWS = 351 SF (NOT INCLUDED)
- TOTAL AREA = 2,239 SF



ELEVATION

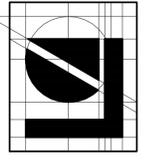


PLAN VIEW

LINE LEGEND	
	NEW CONSTRUCTION
	EXISTING TO REMAIN
	HIDDEN WORK
	EXISTING TO BE REMOVED

GROUND MOUNTED SIGN

SCALE: 3/4" = 1'-0"



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consultant

REVISED FOR SITE PLAN APPROVAL
 SITE PLAN APPROVAL
 OWNER REVIEW
 issued for

1-24-13
 4-28-13
 5-04-13
 date
 dr: mjo
 ck'd: xxx
 app'd: xxx

NEW DENTAL FACILITY for:
DR. BRAD RONDEAU
 GENOA TOWNSHIP, MICHIGAN
PLANS & ELEVATIONS

A1
 1305



2911 Dorr Road
Brighton, MI 48116
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genoa.org

August 22, 2013

Township Planning Commission
Genoa Charter Township
2911 Dorr Road
Brighton, Michigan 48116

Re: Capital Improvement Plan

Dear Honorable-Commissioners,

As you know, the Township has been working on an update to the Capital Improvement Plan (CIP) for the past few months. On June 25th, 2013 the Township hosted a CIP meeting to present the rough draft of the updated plan. The feedback received from this meeting was addressed and a list of projects and their prioritization has been organized. Please focus your efforts on the project prioritization and voice your opinions on any preferred changes to the plan.

At Monday's Planning Commission Meeting you will be asked to consider the Plan and make a recommendation to the Township Board. I look forward to discussing this matter with you at the meeting. Please don't hesitate to contact me prior to the meeting if you have any questions or concerns.

Most sincerely,

Kristina Galinac
Planning Intern

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

GENOA TOWNSHIP
CAPITAL IMPROVEMENTS PLAN
2013-2019



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INTRODUCTION

Capital improvements represent significant policy decisions for local government. Outlined herein is the draft Genoa Charter Township Capital Improvements Program (CIP) for the next six fiscal years. The CIP is a process for budgeting for large-scale public expenditures that are expected to have a relatively long life. There are five primary reasons for doing a CIP:

BETTER PLANNING – A CIP enables a community to plan in the present for future needs. It allows the Township Board, with advice from the Planning Commission, to examine alternatives available in relation to constraints, fiscal and otherwise, that exist. It allows for orderly development and the most efficient use of capital expenditures consistent with expected revenues.

PRIORITY DETERMINATION – The program is an attempt to rank projects in order of importance using the welfare of the entire community as the criterion.

COORDINATION OF CAPITAL AND OPERATING BUDGETS – The systematic comparison of the capital budget with the operating budget affords the opportunity to coordinate the factors of timing and available funds. Also, analyzing all projects at once often reveals interrelationships of project that may be overlooked by isolated department heads.

ECONOMY – No municipality has enough money to fund all the things it would like to do. *The single most important reason for a CIP is to ensure that the available funds are spent wisely.*

PARTICIPATION – The process involves a broad group of participants including the Public, Township Board, Planning Commission and Township Staff.

A successful CIP review process is critical to ensure proper funding to meet Genoa's equipment and infrastructure needs. We would like to thank all Township Staff involved in the preparation of this document especially: Adam VanTassell, Tesha Humphriss, Greg Tatara and Angie Williams.

Respectfully Submitted,

Michael Archinal
Manager

Kelly VanMarter
Assistant Manager

Kristina Galinac
Planning Intern

PROJECT PRIORITIZATION

The projects are placed into the appropriate funding priority group in relation to their necessity and urgency. While many communities have weighted ranking systems, this approach for prioritizing projects appears to be more reasonable for the needs of the Township. The following classification is used to prioritize proposed projects:

Priority A – Essential

Urgent, high-priority projects that should be done if possible. These include projects that are required to complete a major public improvement; projects that would address an emergency, or remedy a condition dangerous to public health, welfare, and safety; projects that would provide facilities for a critically needed community program; projects needed to correct an inequitable distribution of public improvements in the past; and projects vital to the economic stability of the Township. A special effort is made to find sufficient funding for all of the projects in this group.

Priority B – Desirable

High-priority projects that should be done as funding becomes available. These include projects that would benefit the community, and projects whose validity of planning and validity of timing have been established.

Priority C – Acceptable

Worthwhile projects to be considered if funding is available. These are projects that are adequately planned, but not absolutely required, and should be deferred to a subsequent year if budget reductions are necessary.

Priority D – Deferrable

Low-priority projects which are desirable but not essential and can be postponed without detriment to present services.

Prioritized List of Projects

Prioritization	Category	Project	Page
Essential	Services Support	Computer Rotation	25
Essential	Services Support	Server Replacements	29
Essential	Services Support	Computer Software Maintenance	30
Desirable	Land & Major Facilities	TWP Hall Rec & Path Maintenance	13
Desirable	Land & Major Facilities	TWP Hall Playground	15
Desirable	Land & Major Facilities	TWP Driveway and Parking Lot	20
Desirable	Land & Major Facilities	TWP Truck Replacement	22
Desirable	Service Support	Tablet Rotation	26
Desirable	Service Support	Boardroom Visual	27
Desirable	Service Support	Boardroom Audio	28
Desirable	Service Support	Copier Replacement	31
Desirable	Service Support	Printer Replacement	32
Desirable	Service Support	Zoning Ordinance Update	34
Desirable	Roads	Roads	35
Desirable	Sidewalks	Sidewalks	39
Acceptable	Land & Major Facilities	TWP Hall Softball/Baseball Complex	16
Acceptable	Land & Major Facilities	TWP Hall Athletic Field Benches & Bleachers	17
Acceptable	Land & Major Facilities	TWP Hall Carpet Replacement	19
Acceptable	Land & Major Facilities	TWP Hall Master Plan Study	23
Acceptable	Land & Major Facilities	TWP Park Path System	21
Acceptable	Services Support	Pavilion Solar Panels	33
Deferrable	Land & Major Facilities	Park Acquisition	14
Deferrable	Land & Major Facilities	Cemetery Development	18

FINANCIAL SUMMARY INFORMATION

REVENUES

The capital budget is only as good as the plan for financing the proposed projects. Financing of capital improvements can be accomplished in a variety of ways; analysis of available revenue sources strongly relates to how project proposals are ranked and to what projects can be implemented in a prudent manner.

In enterprise financing, funds are accumulated in advance for capital requirements. Priorities are identified and weighted depending on their relative funding levels. This CIP specifies transfers out under the broad heading “General Fund” as well as the specific enterprise funds financed by the General Fund. The following is a list of the recommended means by which the proposed CIP is to be funded:

General Fund #271

As noted above, a number of sources fall under the umbrella of general fund transfers from Township Hall carpet replacement to Township Hall Master Plan Study.

General Fund Road Improvement #101

A varying amount of roughly \$300,000 per year is set aside for Township road improvements. This amount would increase greatly if there is a larger project planned where increased funds would be required. These projects are of a smaller scale than the #261 Road Fund projects. The projects identified in this CIP are a combination of crushed limestone placement, overlays, crack seal and limited paving.

General Fund Road Improvement #261

This revenue source represents money set aside in a separate account for large ticket road development projects. \$200,000 per year has been allocated for a number of years. This CIP contemplates continuing transfers and the expenditure of the account’s fund balance. There are several large projects identified in this plan.

General Fund Road/Lake Reimbursement #264

In recent years, the Township has adopted a policy of matching subdivision road improvement special assessment districts at a rate of 25%. Expenditures from this account can be sporadic and reactive. It has proven useful in making local projects more attractive for our customers. It also allows the Township to partner with residents to achieve much greater impact at a lower cost to the General Fund. This fund has received \$350,000 in 2013 with a proposed revenue of \$500,000 in 2014 and \$300,000 in 2015. This account acts as a rotating fund where the Township funds the entire project and is reimbursed over time, 75% property share for roads and 100% for Lake Chemung weed control, through a special assessment spread over a span of years that is comfortable for both the Township and the property owners. In past years, the share was normally spread over three years - however in more recent years in relation to the economy, this share is spread over 5 to 10 years. This directly relates to the changes in the fund balance where it lags in growth when comparing it to ten years ago.

General Fund Future Development Parks and Recreation #270

Land acquisition for parks and recreation has been on the list of objectives for the Township since 2001. In 2002, the Township completed a Recreation Plan indicating prospective sites for acquisition. Transfers into the fund are generally \$250,000. At times there may be an increase in funds available. This escalation of funds would be a result of planned offers on land and/or recreational development. As of 2008, Genoa Township has been a part of the Howell Area Parks and Recreation Master Plan where also the City of Howell, Oceola Township and Marion Township are partners. This recognition by the Michigan Department of Natural Resources allows us to apply for DNR Trust Fund Grants. This CIP allows for sizable expenditure and assumes a successful grant application. Lastly, this fund now also includes pathways.

Marion Township Road Contribution

Fisk Road, a crushed limestone project, lies on the boundary between Marion and Genoa. As a jurisdictional boundary road, this CIP identifies a \$172,750 contribution from Marion Township. (Fisk – 10,725 ft. @ \$32.20/ft: Total limestone cost \$345,500)

SPECIAL ASSESSMENT DISTRICTS

Capital improvements that benefit particular properties, rather than a community as a whole, may be financed more equitably by special assessment: that, by those who directly benefit. Local improvements often financed by this method include new street improvements and weed control.

Weed Control, Special Assessment Districts

In order to manage weed growth and the lake ecosystem, weed control measures are taken when needed. This form of lake management includes the setting of a herbicide with a weed harvest follow up later in the summer, as the lake reaches its warmest temperatures. Lake Chemung, Pardee Lake and Crooked Lake are part of this weed control program.

Roads, Special Assessment District (SAD)

Actual costs associated with a project would be spread among the benefiting properties. Typically bonds are issued at a favorable municipal rate for a period of 20 years. The affected properties make payments on their taxes until the debt is retired. Depending on constructions cost estimates, it is possible that the Township could finance the project internally and charge the district a reasonable interest rate after consultation with our Bond Counsel. The following are some individual special assessment districts: Glenway and Red Oaks.

FEDERAL AND STATE FUNDS

The federal and state governments make funds available to communities through grants and aid programs. The Township has no direct control over the amount of money received under these programs and some funds are directly tied to specific programs.

DTE Energy Foundation Tree Grant

DTE Energy provides grants to the communities it services in order to bring forth green initiatives, therefore providing grants for tree purchases.

Greenways Grant

The Community Foundation for Southeastern Michigan, through the Greenways Initiative awards grants to help local governments to plan and build greenways that connect people and communities.

Safe Routes to School Grant

Safe Routes to School provides grants to communities where children's safety to and from school could be improved. This grant would be utilized to construct a sidewalk along Crooked Lake Road to the Three Fires Elementary School located on the corner of Crooked Lake and South Latson.

Michigan Passport

This grant is awarded to local units of government in Michigan for the development of public recreational facilities. The program is focused on renovating and improving parks. This grant would be utilized for the improvements to the Township Hall park area.

DNR Trust Fund Recreation Grant

The DNR provides grants from a Recreation Trust Fund in order to help recreational aspects of communities. This grant would help construct more pathways around the Township Hall Park or to acquire recreational property.

Michigan Natural Resources Trust Fund

The Michigan Natural Resources Trust Fund (MNRTF) contributes funds for public recreational projects. This fund would help construct a baseball/softball complex at the Township Hall Park.

EXPENDITURES

Land and Major Facilities

Includes non-utility buildings or infrastructure involving new construction, maintenance and land acquisition as well as park acquisition, Township truck replacement and policy updates.

Services Support

Includes any technical purchases and upgrades, from hardware, programs, solar panels and telephones.

Streets and Sidewalks

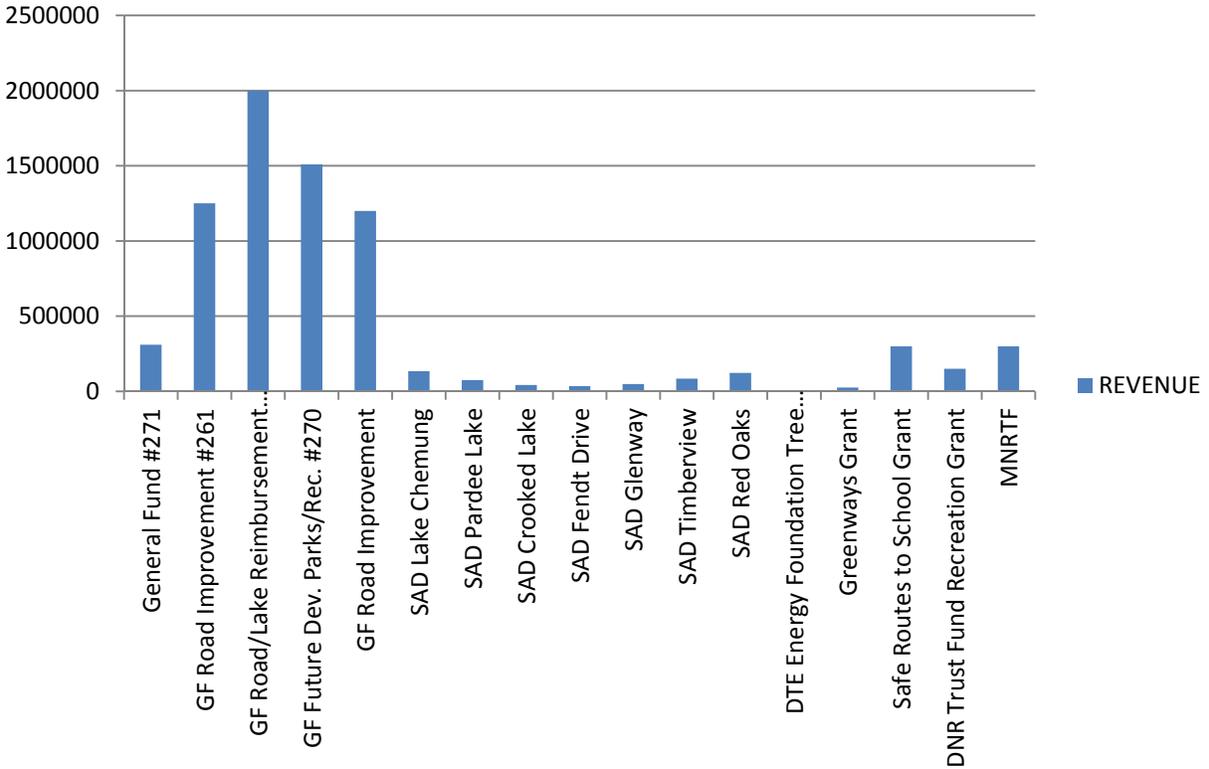
Includes pavement management, new road construction, gravel road construction, sidewalks and bike paths.

BALANCE SHEET

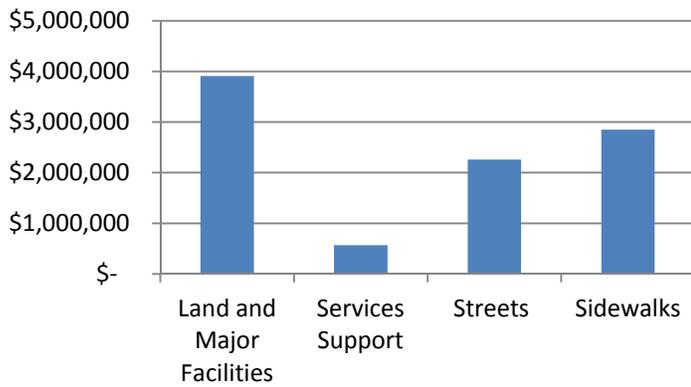
2013-2019 CAPITAL PROJECTS

REVENUE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
General Fund #271	\$ 93,025	\$ 189,900	\$ 144,400	\$ 90,300	\$ 83,200	\$ 101,400	\$ 702,225
GF Road Improvement #261	\$ 100,000						\$ 100,000
GF Future Dev. Parks/Rec. #270	\$ 597,800	\$ 275,000	\$ 730,000	\$ 1,960,000	\$ 835,000	\$ 335,000	\$ 4,732,800
GF Road Improvement	\$ 546,500	\$ 290,000	\$ 313,200	\$ 172,750	\$ 270,000	\$ 304,000	\$ 1,896,450
GF #264 Road/Lake Reimbursement	\$ 109,028	\$ 174,636	\$ 174,636				\$ 458,300
Marion Township Road Contribution - Fisk				\$ 172,750			\$ 172,750
Greenways Grant			\$ 25,000				\$ 25,000
Safe Routes to School Grant		\$ 300,000					\$ 300,000
Passport Grant DNR				\$ 30,000			\$ 30,000
DNR Trust Fund Recreation Grant			\$ 150,000		\$ 150,000		\$ 300,000
MNRTF				\$ 300,000			\$ 300,000
TOTAL REVENUES	\$ 1,446,353	\$ 1,229,536	\$ 1,537,236	\$ 2,725,800	\$ 1,338,200	\$ 740,400	\$ 9,017,525
EXPENDITURES							
Land and Major Facilities	\$ 210,180	\$ 277,200	\$ 392,500	\$ 1,690,000	\$ 710,000	\$ 85,000	\$ 3,364,880
Services Support	\$ 93,025	\$ 79,900	\$ 89,100	\$ 90,300	\$ 83,200	\$ 76,400	\$ 511,925
Streets	\$ 698,148	\$ 367,436	\$ 390,636	\$ 345,500	\$ 270,000	\$ 304,000	\$ 2,375,720
Sidewalks	\$ 445,000	\$ 505,000	\$ 665,000	\$ 600,000	\$ 275,000	\$ 275,000	\$ 2,765,000
TOTAL EXPENDITURES	\$ 1,446,353	\$ 1,229,536	\$ 1,537,236	\$ 2,725,800	\$ 1,338,200	\$ 740,400	\$ 9,017,525
Revenue Over/ (Under) Exp.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

REVENUE



Expenditures



2013-2019 CAPITAL IMPROVEMENTS

LAND AND MAJOR FACILITIES

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
TWP Hall Rec and Path Maintenance	GF #270	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 360,000
Park Acquisition	GF #270					\$ 500,000		\$ 500,000
	DNR Grant					\$ 150,000		\$ 150,000
Playground	GF #270	\$ 92,800						\$ 92,800
Softball/baseball Complex	GF #270				\$ 1,330,000			\$ 1,330,000
	MNRTF				\$ 300,000			\$ 300,000
Athletic Field Benches and Bleachers	GF #270		\$ 10,000					\$ 10,000
Cemetery	GF #271			\$ 40,000				\$ 40,000
Twp Hall Carpet replacement	GF #271			\$ 15,300				\$ 15,300
Seal Coat Twp Hall Parking Lot	GF #271		\$ 10,000					\$ 10,000
Reconstruct Twp Hall Driveway	GF #271		\$ 20,000					\$ 20,000
Intsall New Parking	GF #271		\$ 60,000					\$ 60,000
Twp Park Path System Ext.	GF #270			\$ 5,000				\$ 5,000
	Greenways Grant			\$ 25,000				\$ 25,000
	DNR Grant			\$ 150,000				\$ 150,000
Township Truck Replacement	GF #271						\$ 25,000	\$ 25,000
Twp Hall Master Plan Study	GF #271		\$ 20,000					\$ 20,000
GF #264 SAD Lake Chemung	GF #264	\$ 32,180	\$ 51,000	\$ 51,000				\$ 134,180
GF #264 SAD Pardee Lake	GF #264	\$ 25,200	\$ 25,200	\$ 25,200				\$ 75,600
GF #264 SAD Crooked Lake	GF #264		\$ 21,000	\$ 21,000				\$ 42,000
TOTAL		\$ 210,180	\$ 277,200	\$ 392,500	\$ 1,690,000	\$ 710,000	\$ 85,000	\$ 3,364,880

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Township Hall Recreation and Path Maintenance
Project Type: Land and Major Facilities
Useful Life: 50 years
Resubmittal/New Project: New Project
Priority: Desirable

PROJECT DESCRIPTION

The Township Hall is situated on 45 acres of land. The maintenance of the recreational space is essential to their use. Such area requires maintenance, paths, sled hill, playgrounds and the pavilion. Path maintenance includes moving of the edges and fixing erosion issues. Grounds must be fertilized and mowed.

JUSTIFICATION

Development of land for active recreation was identified in the 2002 Genoa Township Recreation Plan. A plan of similar nature, including Genoa Township, is included in the Howell Parks and Recreation Plan.

SCHEDULE

Pre-season prep and season long maintenance.

IMPACT ON OPERATING EXPENSES

Maintenance of the fields would be the responsibility of either SELCRA or Howell Parks and Recreation while the remainder is the responsibility of the Township.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
TWP Hall Rec and Path Maintenance	GF #270	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 360,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Park Acquisition
Project Type: Land and Major Facilities
Useful Life: Unlimited
Continuing/New Project: Continuing Project
Priority: Deferrable

PROJECT DESCRIPTION

Purchase of property for future Township recreational needs. The 2002 Genoa Township Recreation Plan has identified several large tracts of land that are suitable for a variety of uses. The plan places a priority on property for active recreation. This project will involve a grant from the Michigan Natural Resources Trust Fund. One of the prerequisites for application was completion of a recreation plan.

JUSTIFICATION

The Township Board has identified recreational property acquisition as a goal. A recreation plan has been completed and identifies needs and properties for active and passive recreation.

SCHEDULE

The Township has set aside \$250,000 per year for property acquisition. The Township can let the fund grow by not utilizing it, thus having enough for an acquisition of a reasonable size.

IMPACT ON OPERATING EXPENSES

The initial concept is to acquire the property, develop recreational amenities and then lease it to either SELCRA or Howell Parks and Recreation.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Park Acquisition	GF #270					\$ 500,000		\$ 500,000
	DNR Grant					\$ 150,000		\$ 150,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Township Hall Playground
Project Type: Land and Major Facilities
Useful Life: 20 years
Resubmittal/New Project: New Project
Priority: Desirable

PROJECT DESCRIPTION

Additional playground equipment installation around the Township Hall park.

JUSTIFICATION

To create an outdoor recreational place for children in the Township.

SCHEDULE

Equipment assembly, safety checks and rubber surface installation would take about two weeks dependent on project size and weather.

IMPACT ON OPERATING EXPENSES

Maintenance of the equipment and rubber surface would need routine inspection and care.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Playground	GF #270	\$ 92,800						\$ 92,800

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Township Hall Baseball Complex
Project Type: Land and Major Facilities/Equipment
Useful Life: 20 years
Continuing/New Project: New Project
Priority: Acceptable

PROJECT DESCRIPTION

Baseball field complex and accommodating parking and facilities.

JUSTIFICATION

To create additional Genoa Township recreational facilities and expand current parks amenities. This project coordinates with the first goal of the Genoa Township Parks and Recreation Plan where: “Genoa Township will provide its residents a destination to recreate with friends, family and neighbor that offers a variety of recreation activities to serve the needs and interests of the community.”

SCHEDULE

Field grading, soil preparation and equipment installation could take up to 3 months.

IMPACT ON OPERATING EXPENSES

The expenses will be covered primarily by lease arrangements with HARPA and SELCRA while the remainder is covered by the general fund.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Softball/baseball Complex	GF #270				\$ 1,330,000			\$ 1,330,000
	MNRTF				\$ 300,000			\$ 300,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Township Hall Athletic Field Benches and Bleachers
Project Type: Land and Major Facilities
Useful Life: 25 years
Resubmittal/New Project: New Project
Priority: Acceptable

PROJECT DESCRIPTION

The Township Hall is situated on 45 acres of land. At the adjacent athletic fields, there is a need for benches and bleachers for both players and spectators. Product could be 15 ft or 21 ft long.

JUSTIFICATION

Development and preparation of land for active recreation was identified in the 2002 Genoa Township Recreation Plan. A plan of similar nature including Genoa Township is included in the Howell Parks and Recreation Plan.

SCHEDULE

Installation time required and routine maintenance and inspection.

IMPACT ON OPERATING EXPENSES

This is a one-time expense however; the Township has been approached by individuals looking to give a memorial donation.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Athletic Field Benches and Bleachers	GF #270		\$ 10,000					\$ 10,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Cemetery Development
Project Type: Land and Major Facilities
Useful Life: Unlimited
Resubmittal/New Project: New Project
Priority: Deferrable

PROJECT DESCRIPTION

Designating land for cemetery use.

JUSTIFICATION

Currently, the Township has one cemetery that is near capacity. People often want to be buried in their hometown and the Township can provide this service to the residents.

SCHEDULE

Ideally, the land could be purchased near the later years of the CIP. It would need to be properly landscaped and paths should be set in appropriate places, as well as vehicle parking.

IMPACT ON OPERATING EXPENSES

The initial concept is to prepare the property for the type of cemetery projected to best meet the needs of the Township. The land would then require landscape and any other preparatory work.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Cemetery	GF #271			\$ 40,000				\$ 40,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Township Hall Carpet Replacement
Project Type: Land and Major Facilities/Equipment
Useful Life: 20 years
Continuing/New Project: New Project
Priority: Acceptable

PROJECT DESCRIPTION

Replacement of existing carpet in the Township Administration building. Removal of existing carpet and installation of new carpet outlays \$2.50/ sq. ft.

JUSTIFICATION

The existing carpet is almost 20 years old and expected wear and tear is visible.

SCHEDULE

Preparation, removal and installation should take about one week.

IMPACT ON OPERATING EXPENSES

The administration building would need to be closed for a few days to complete installation.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Twp Hall Carpet replacement	GF #271			\$ 15,300				\$ 15,300

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Seal Coat Parking Lot & Reconstruct Driveway at Township Hall & Install New Parking
Project Type: Land and Major Facilities/Equipment
Useful Life: Unlimited
Continuing/New Project: New Project
Priority: Desirable

PROJECT DESCRIPTION

The parking lot section requires seal coating while the driveway needs to be reconstructed. Additional parking is required with increasing popularity of the athletic complex and Township Park.

JUSTIFICATION

To finalize and seal the drive and parking lot to prevent asphalt deterioration.

SCHEDULE

About 3 weeks of work.

IMPACT ON OPERATING EXPENSES

The expenses will be covered by the general fund.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Seal Coat Twp Hall Parking Lot	GF #271		\$ 10,000					\$ 10,000
Reconstruct Twp Hall Driveway	GF #271		\$ 20,000					\$ 20,000
Intsall New Parking	GF #271		\$ 60,000					\$ 60,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Township Park Path System
Project Type: Land and Major Facilities/Equipment
Useful Life: Unlimited
Continuing/New Project: New Project
Priority: Acceptable

PROJECT DESCRIPTION

Complete a 1/2 mile loop by continuing the park path system around the Township Hall.

JUSTIFICATION

To promote health and provide recreational activities to residents.

SCHEDULE

About 3 weeks of work.

IMPACT ON OPERATING EXPENSES

The expenses will be covered by the general fund.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Twp Park Path System Ext.	GF #270			\$ 5,000				\$ 5,000
	Greenways Grant			\$ 25,000				\$ 25,000
	DNR Grant			\$ 150,000				\$ 150,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Township Truck Replacement
Project Type: Vehicles and Equipment
Useful Life: 10 years
Continuing/New Project: New Project
Priority: Desirable

PROJECT DESCRIPTION

Purchase and regular replacement of the Township pick-up truck. Vehicle should be full size, regular cab, four-wheel drive.

JUSTIFICATION

The Township truck is used primarily by the Code Enforcement Officer and Assessing and during elections to transfer the polling equipment. A pick-up truck is functional especially for removing illegal signs and moving voting machines for elections. Other employees occasionally use the truck for picking up supplies or attending to inspections and field work.

SCHEDULE

The current truck is still in usable condition but should be replaced about every 10 years due to the nature of its use. By using the truck primarily for frequent short trips throughout the Township, issues with the mechanical operations increase to a point where the purchase of a new truck could outweigh the cost of repair.

IMPACT ON OPERATING EXPENSES

Fuel expenses, tire replacement, repairs and maintenance are paid out of the General Fund.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Township Truck Replacement	GF #271						\$ 25,000	\$ 25,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Township Hall Master Plan Study
Project Type: Land and Major Facilities/Equipment
Useful Life: 7 years
Continuing/New Project: New Project
Priority: Acceptable

PROJECT DESCRIPTION

Complete a study for a master development plan of the Township Hall and surrounding facilities and amenities. Examine the intersection of Dorr and Crooked Lake Roads and its use and location with future Township Park and Recreation expansion. To determine the best use of property around the Township Hall.

JUSTIFICATION

To plan for future developments which promote health and provide recreational activities to residents.

SCHEDULE

About 3 months of work.

IMPACT ON OPERATING EXPENSES

The expenses will be covered by the general fund.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Twp Hall Master Plan Study	GF #271		\$ 20,000					\$ 20,000

EXPENDITURE SCHEDULE

2013-2019 CAPITAL IMPROVEMENTS

SERVICES SUPPORT

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Computer Rotation	GF #271			\$ 6,000	\$ 6,000	\$ 6,000		\$ 18,000
Tablet Rotation	GF #271				\$ 3,000	\$ 3,000	\$ 3,000	\$ 9,000
Board Room Visual Upgrades	GF #271		\$ 14,000					\$ 14,000
Board Room Audio Upgrades	GF #271	\$ 6,325						\$ 6,325
Server Replacements	GF #271				\$ 10,000			\$ 10,000
Software								\$ -
<i>ArcGIS Online</i>	GF #271			\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 10,000
<i>City Works (MHOG)</i>	GF #271			\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 160,000
<i>Office 365</i>	GF #271	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 54,000
<i>BSA</i>	GF #271	\$ 8,700	\$ 8,700	\$ 9,400	\$ 9,400	\$ 10,100	\$ 10,100	\$ 56,400
<i>Springbrook</i>	GF #271	\$ 5,800	\$ 6,000	\$ 6,200	\$ 6,400	\$ 6,600	\$ 6,800	\$ 37,800
<i>ArcGIS Map</i>	GF #271	\$ 3,200	\$ 3,200	\$ 4,000	\$ 4,000	\$ 5,000	\$ 5,000	\$ 24,400
Copier Replacement	GF #271	\$ 10,000		\$ 12,000		\$ 1,000		\$ 23,000
Printer Replacement	GF #271		\$ 4,000					\$ 4,000
Pavillion Solar Panels	GF #271		\$ 35,000					\$ 35,000
Zoning Ordinance	GF #271	\$ 50,000						\$ 50,000
TOTAL		\$ 93,025	\$ 79,900	\$ 89,100	\$ 90,300	\$ 83,200	\$ 76,400	\$ 511,925

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Computer Rotation
Project Type: Services Support
Useful Life: 5 Years
Continuing/New Project: Continuing
Project Priority: Essential

PROJECT DESCRIPTION

Standardized program for the replacement of computer workstations. We currently have about 25 computer assets. Staff has devised a schedule to replace machines approximately every three to five years. Not all computers were purchased in the same year; therefore the purchasing schedule for all computers is organized accordingly.

JUSTIFICATION

With continuing upgrades in software, we have found that the useful life of a workstation is approximately three to five years. When the machines start to become obsolete, our worker productivity begins to suffer and costs associated with maintenance begin to increase. By standardizing a replacement schedule, we will spread the capital costs of new equipment and keep employee efficiency high.

IMPACT ON OPERATING EXPENSES

New machines will reduce ongoing maintenance costs. Improved technology reduces the need for increasing staff size.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Computer Rotation	GF #271			\$ 6,000	\$ 6,000	\$ 6,000		\$ 18,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Tablet Rotation
Project Type: Services Support
Useful Life: 10 Years
Continuing/New Project: Continuing
Project Priority: Desirable

PROJECT DESCRIPTION

Standardized program for the replacement of the 19 tablets currently in use by the Township staff, elected and appointed officials. Staff has devised a schedule to replace tablets approximately every three to ten years. Not all tablets were purchased in the same year; therefore the purchasing schedule for all tablets is organized accordingly.

JUSTIFICATION

With continuing upgrades in software and technology, we have found that the useful life of a tablet is approximately three to ten years. When the tablets start to become obsolete, our worker productivity begins to suffer and costs associated with maintenance begin to increase. By standardizing a replacement schedule, we will spread the capital costs of new equipment and keep efficiency high.

IMPACT ON OPERATING EXPENSES

New machines will reduce ongoing maintenance costs. Improved technology reduces the need for increasing staff size.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Tablet Rotation	GF #271				\$ 3,000	\$ 3,000	\$ 3,000	\$ 9,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Boardroom Visual Equipment
 Project Type: Services Support
 Useful Life: 10 Years
 Continuing/New Project: New Project
 Project Priority: Desirable

PROJECT DESCRIPTION

Upgrade and purchase projection equipment and a screen for Township Board room. This system will allow for blueprints to be laid flat on a table and projected onto a screen via a ceiling mounted camera. We will also be able to project different media including video, and computer images such as Power Point presentation and even link the visual equipment to tablets for presentations.

JUSTIFICATION

During Public Hearings, our audience has a difficult time viewing plans for proposed projects. The architect or engineer typically addresses the Board, Planning Commission or ZBA and orientates his or her materials accordingly. With a permanent placement of the projector and screen in the Boardroom, we can expect fewer issues with presentations as the set up, focusing and alignment of equipment will not be required. With many new types of media available today, the equipment should be prepared to handle any task and project it clearly for the audience.

SCHEDULE

Approximately two weeks will be required for installation. We will try to schedule installation during the period of the year when agendas are shortest which is generally January or February.

IMPACT ON OPERATING EXPENSES

Nominal cost increases related to energy and maintenance.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Board Room Visual Upgrades	GF #271		\$ 14,000					\$ 14,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Boardroom Audio Equipment
Project Type: Services Support
Useful Life: 10 Years
Continuing/New Project: New Project
Project Priority: Desirable

PROJECT DESCRIPTION

Upgrade and purchase audio equipment for the Township Boardroom.

JUSTIFICATION

Current system is dated and needs to be replaced for optimal audio abilities.

SCHEDULE

Approximately two weeks will be required for installation. We will try to schedule installation during the period of the year when agendas are shortest which is generally January or February.

IMPACT ON OPERATING EXPENSES

Nominal cost increases related to energy and maintenance.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Board Room Audio Upgrades	GF #271	\$ 6,325						\$ 6,325

GENOA TOWNSHIP 2003-2009 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Server Replacements
Project Type: Services Support
Useful Life: 7 Years
Continuing/New Project: Continuing Project
Project Priority: Essential

PROJECT DESCRIPTION

Maintain Township information systems network.

JUSTIFICATION

Update technology and be in conformance with software and hardware required to maintain full communication with staff and residents.

SCHEDULE

Three days to transfer from old server to new server and to set up the new server in working order.

IMPACT ON OPERATING EXPENSES

Nominal cost increases related to energy and maintenance.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Server Replacements	GF #271				\$ 10,000			\$ 10,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Computer Software Maintenance
 Project Type: Services Support
 Useful Life: Yearly-Various
 Continuing/New Project: Continuing
 Project Priority: Essential

PROJECT DESCRIPTION

Standardized program for the maintenance of computer software.

JUSTIFICATION

With continuing upgrades in software applications, we have found that there are required program upgrades and maintenance often at a yearly expense. When programs start to become outdated, our worker productivity begins to suffer and costs associated with maintenance begin to increase. By standardizing a maintenance schedule, we will spread the capital costs of new and updated programs and keep employee efficiency high.

IMPACT ON OPERATING EXPENSES

Improved technology reduces the need for increasing staff size.

SCHEDULE

Annual maintenance for programs upgrades. Prices often increase from year to year.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Software								\$ -
<i>ArcGIS Online</i>	GF #271			\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 10,000
<i>City Works (MHOG)</i>	GF #271			\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 160,000
<i>Office 365</i>	GF #271	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	\$ 54,000
<i>BSA</i>	GF #271	\$ 8,700	\$ 8,700	\$ 9,400	\$ 9,400	\$ 10,100	\$ 10,100	\$ 56,400
<i>Springbrook</i>	GF #271	\$ 5,800	\$ 6,000	\$ 6,200	\$ 6,400	\$ 6,600	\$ 6,800	\$ 37,800
<i>ArcGIS Map</i>	GF #271	\$ 3,200	\$ 3,200	\$ 4,000	\$ 4,000	\$ 5,000	\$ 5,000	\$ 24,400

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Copier
 Project Type: Services Support
 Useful Life: 5 years
 Continuing/New Project: New Project
 Project Priority: Desirable

PROJECT DESCRIPTION

Purchase of a machine to provide copies and serve as primary network printer in both black and white and color. The plotter is necessary for printing large maps and images.

JUSTIFICATION

Required piece of office equipment. Township Staff generate a large number of copies. Routine replacement is expected to be necessary.

SCHEDULE

The current copiers have been serviced several times and need immediate replacement. The color copier is faring well but will require replacement in less than 3 years. The plotter computer system will needs upgrades or replacement in less than 5 years. This CIP anticipates replacement of the copier every five years.

IMPACT ON OPERATING EXPENSES

Repair and routine maintenance are paid out of the general fund. Keeping the machines current should nominally reduce operating expenses.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Copier Replacement	GF #271	\$ 10,000		\$ 12,000		\$ 1,000		\$ 23,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Printer Replacement
Project Type: Services Support
Useful Life: 5 Years
Continuing/New Project: New Project
Project Priority: Desirable

PROJECT DESCRIPTION

Purchase of machines to provide desktop/department document printing and serve the departments in need.

JUSTIFICATION

A required piece of office equipment. Township Staff generate a large number of prints. Routine replacement is expected to be necessary.

SCHEDULE

Current printers are currently functioning well but will be due for replacements next year. The CIP anticipates replacement printers every five years.

IMPACT ON OPERATING EXPENSES

Repair and routine maintenance are paid out of the general fund. Keeping the machine current will nominally reduce operating expenses.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Printer Replacement	GF #271		\$ 4,000					\$ 4,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Pavilion Solar Panels
Project Type: Services Support
Useful Life: 10 Years
Continuing/New Project: New Project
Project Priority: Acceptable

PROJECT DESCRIPTION

Purchase of solar panels from The Green Panel to provide clean energy to the Township Administrative building.

JUSTIFICATION

This clean energy source is the Township's contribution to sustainability.

SCHEDULE

Installation will take a few days, the system must be hooked up to our energy tracking program

IMPACT ON OPERATING EXPENSES

Repair and routine maintenance are non-costly and covered by The Green Panel company.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Pavillion Solar Panels	GF #271		\$ 35,000					\$ 35,000

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Township Zoning Ordinance Update
Project Type: Services Support
Useful Life: 5-10 years
Continuing/New Project: New Project
Priority: Desirable

PROJECT DESCRIPTION

Replacement of existing Zoning Ordinance. Multiple updates and changes need to be made including new Latson interchange subarea zoning categories need to be included. With more people reading the ordinance on a computer, a web-friendly version should be made publically available.

JUSTIFICATION

The existing ordinance needs a complete overhaul with extensive changes in the Township, these issues need to be addressed in the ordinance to prevent future problems from arising.

SCHEDULE

About 6 months of work would be required from Township staff and the planning consultants.

IMPACT ON OPERATING EXPENSES

The expenses will be covered by the general fund.

EXPENDITURE SCHEDULE

PROJECT	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Zoning Ordinance	GF #271	\$ 50,000						\$ 50,000

CAPITAL IMPROVEMENTS 2013-2019

ROADS

ROAD PROJECTS	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	TOTAL
Brady	GF Road Improv.					\$ 200,000		\$ 200,000
Gray	GF Road Improv					\$ 70,000		\$ 70,000
Hubert	GF Road Improv		\$ 130,000					\$ 130,000
Brighton Rd (Treasure Lake to the Township limit)	GF Road Improv						\$ 160,000	\$ 160,000
Schafer	GF Road Improv						\$ 144,000	\$ 144,000
Bauer North	GF Road Improv			\$ 86,000				\$ 86,000
Euler	GF Road Improv			\$ 227,200				\$ 227,200
Fishbeck	GF Road Improv		\$ 160,000					\$ 160,000
Crooked Lake (Chilson to Fisk)	GF Road Improv	\$ 300,000						\$ 300,000
	GF #261	\$ 100,000						\$ 100,000
Beck (from the tracks to Fisk)	GF Road Improv	\$ 246,500						\$ 246,500
Fisk	GF Road Improv				\$ 172,750			\$ 172,750
	Marion TWP				\$ 172,750			\$ 172,750
GF #264 SAD Fendt Drive	GF #264	\$ 35,462						\$ 35,462
GF #264 SAD Glenway	GF #264	\$ 16,186	\$ 16,186	\$ 16,186				\$ 48,558
GF #264 SAD Red Oaks	GF #264		\$ 61,250	\$ 61,250				\$ 122,500
TOTAL		\$ 698,148	\$ 367,436	\$ 390,636	\$ 345,500	\$ 270,000	\$ 304,000	\$ 2,375,720

**For a more complete description see the HRC Road Master Plan dated August 19, 2013. **



Genoa Township Road Master Plan
Conceptual Cost Projections
August 6, 2013

Const. Year	Location	Scope of Work	Length (ft)	Cost/ft	Construction Cost	Legal, Eng., Admin (20%)	Contingencies (15%)	Total Estimated Project Cost
2014	Crooked Lake Road	Pave existing gravel road	7,500	\$250	\$1,875,000	\$375,000	\$281,250	\$2,531,250
		Crush & shape	900	\$175	\$157,500	\$31,500	\$23,625	\$212,625
2014	Latson Road	Reconstruct exist roadway	1,900	\$450	\$855,000	\$171,000	\$128,250	\$1,154,250
		Traffic signal at Hampton Ridge			lump sum	\$160,000	\$32,000	\$24,000
		Annual Sub-total			\$3,047,500	\$609,500	\$457,125	\$4,114,125
2015	Beck Road	Pave existing gravel road	6,000	\$225	\$1,350,000	\$270,000	\$202,500	\$1,822,500
		RR crossing *			lump sum	\$525,000	\$105,000	\$78,750
2015	Conrad/Challis	Pave existing gravel road **	5,300		\$1,925,000	\$385,000	\$288,750	\$2,598,750
2015	Challis/ Bauer	Add Roundabout *			lump sum	\$1,950,000	\$390,000	\$292,500
		Annual Sub-total			\$5,750,000	\$1,150,000	\$862,500	\$7,762,500
2016	Herbst Road	Crush & shape	3,400	\$175	\$595,000	\$119,000	\$89,250	\$803,250
		Pave existing gravel road	8,400	\$250	\$2,100,000	\$420,000	\$315,000	\$2,835,000
2016	Cunningham Lk & Bauer	Pave existing gravel road	7,900	\$250	\$1,975,000	\$395,000	\$296,250	\$2,666,250
		Crush & shape	1,900	\$175	\$332,500	\$66,500	\$49,875	\$448,875
2016	Bauer Road	Pave existing gravel road	2,800	\$225	\$630,000	\$126,000	\$94,500	\$850,500
2016	Hughes Road	Crush & shape	4,700	\$175	\$822,500	\$164,500	\$123,375	\$1,110,375
		Mill & overlay	8,500	\$175	\$1,487,500	\$297,500	\$223,125	\$2,008,125
		Annual Sub-total			\$7,942,500	\$1,588,500	\$1,191,375	\$10,722,375
		TOTAL			\$16,740,000	\$3,348,000	\$2,511,000	\$22,599,000

GRAND PROJECT TOTAL = \$22,599,000

Roadway cross section	Roadway width	Cost per ft of roadway
LCRC full section w/ sand	3 lanes with accel/decels	\$450
LCRC full section w/ sand	2 lanes	\$250
LCRC section w/o sand	2 lanes	\$225
Crush & shape	2 lanes	\$175
Mill & overlay	2 lanes	\$175

Items not included in the projections noted above:

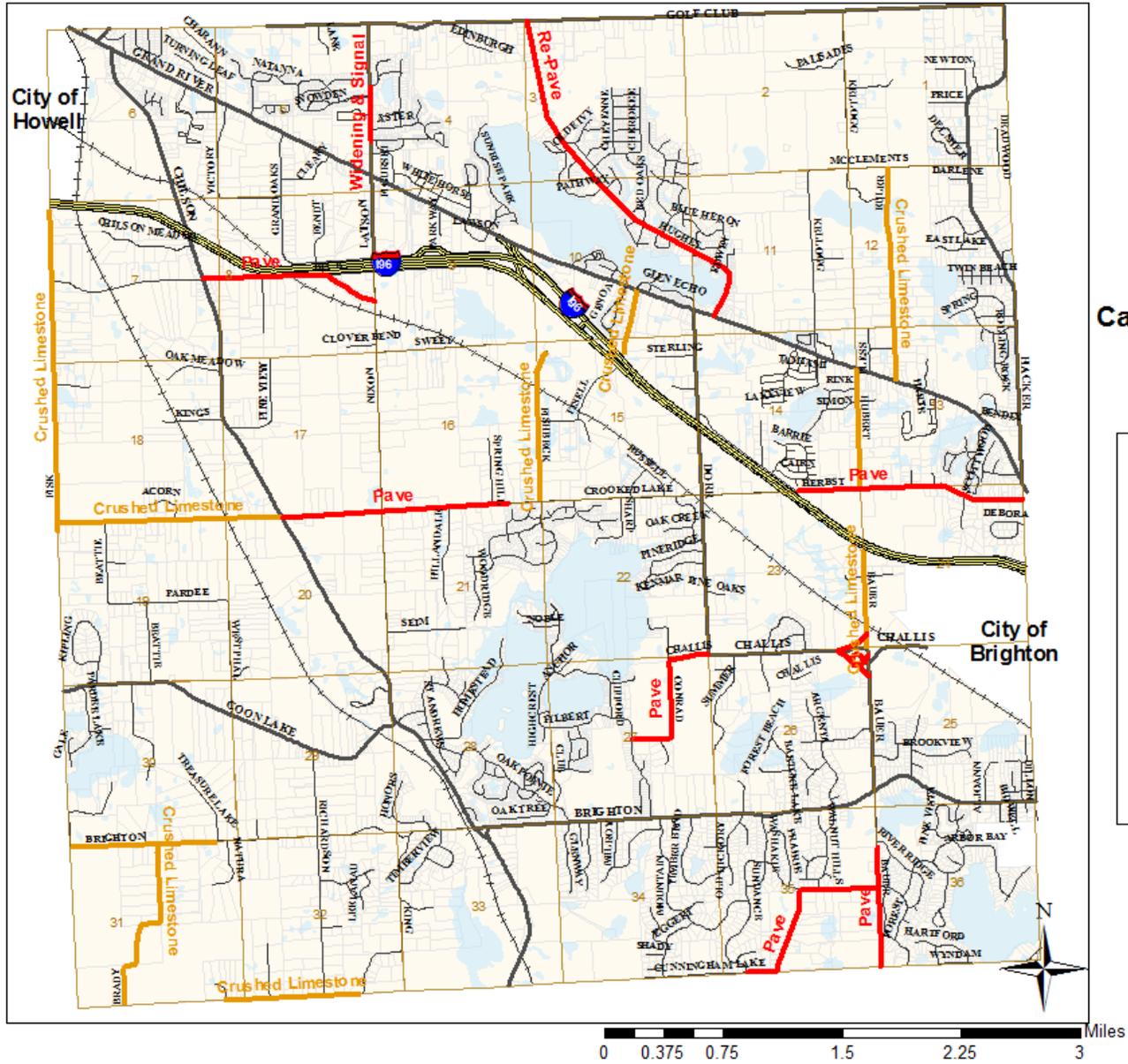
- Easement/ROW document prep, negotiation, acquisition
- On going maint of these projects
- Other maint costs (crack sealing, gravel treatments, etc.)
- Substantial/significant wetland, soils, drainage issues
- Major traffic control improv's except as noted

* - only a conceptual place-holder cost: will need confirmation during design

** - cost derived from a 2007 LCRC Engineers Opinion of Cost and was adjusted for inflation to 2015 \$'s



ADDITIONAL ROADS
COSTS BY HRC ENGINEERING



Capital Improvements Road Projects 2013-2019

August 2013

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Future Road Improvements
Project Type: Streets and Sidewalks
Useful Life: 20
Resubmittal/New Project: Resubmittal
Priority: Desirable

PROJECT DESCRIPTION

Dedication of funds for future road improvements. The Township sets aside \$200,000 per year for large, road related, capital improvements. The fund balance in this account (#261) and the first few years' appropriations are dedicated to the Crooked Lake Road paving project and others affected by the traffic changes due to the new Interchange on Latson Road and I-96. This project sheet describes future undedicated expenditures.

JUSTIFICATION

The Township has set a high priority on participating in large road improvement projects.

SCHEDULE

This project identifies expenditures from FY 13/14 to FY 18/19.

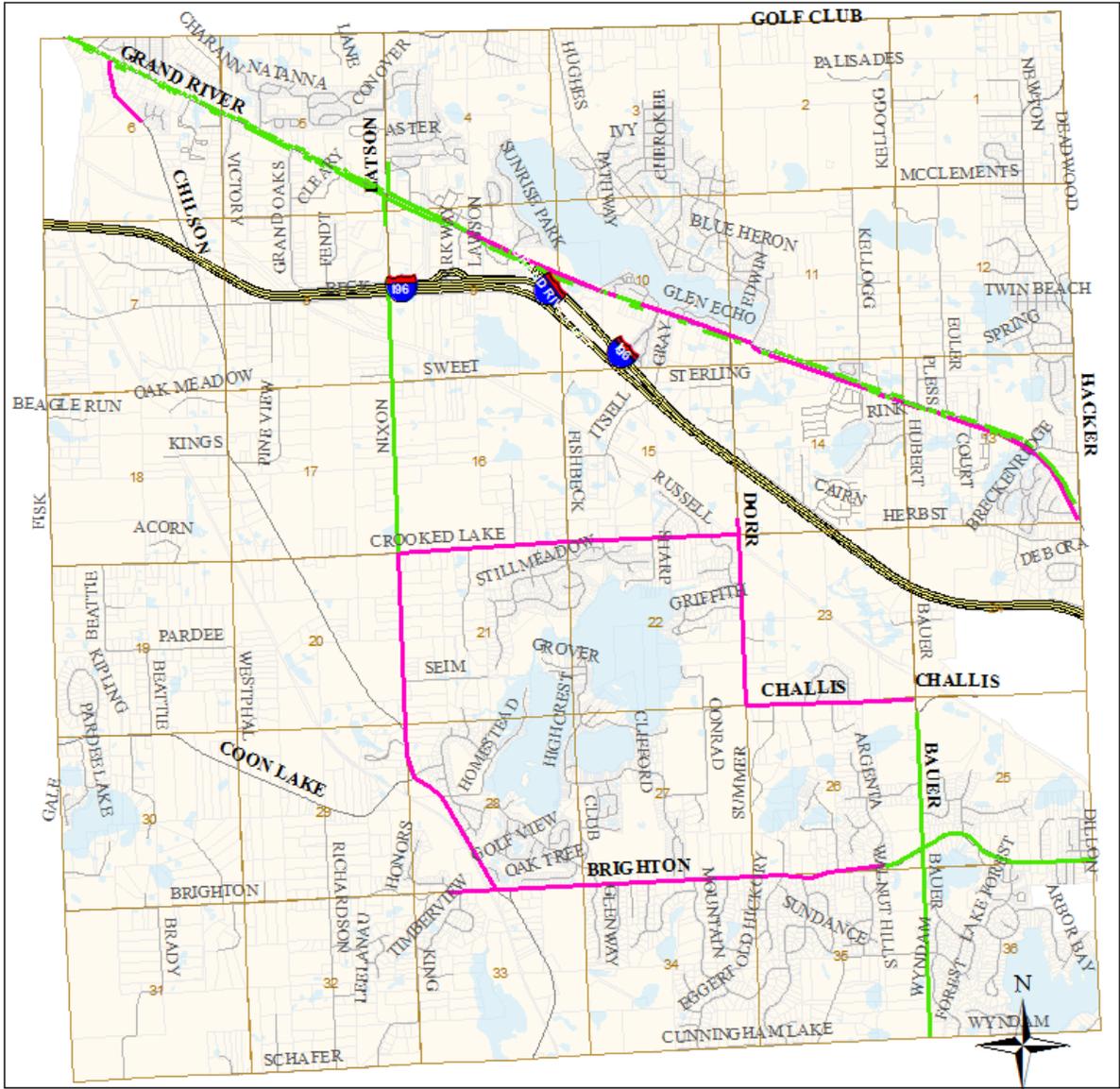
IMPACT ON OPERATING EXPENSES

General Fund appropriation as indicated costs supplied by HRC Consultant Engineers.

CAPITAL IMPROVEMENTS 2013-2019

SIDEWALKS

SIDEWALKS	FUND SOURCE	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FUTURE	TOTAL
Brighton to Honors	GF #270			\$ 540,000					\$ 540,000
Chilson (Brighton to South Latson)	GF #270				\$ 220,000				\$ 220,000
	Pasport Grant				\$ 30,000				\$ 30,000
Grand River	GF #270								\$ -
<i>Latson to Sunrise, North side of GR</i>	GF #270	\$ 75,000							\$ 75,000
<i>Sunrise to Hughes, North Side of GR</i>	GF #270	\$ 150,000							\$ 150,000
<i>Hughes to Hubert, South side of GR</i>	GF #270		\$ 80,000						\$ 80,000
<i>Hubert to Hacker</i>	GF #270						\$ 275,000		\$ 275,000
Hughes	GF #270							\$ 510,000	\$ -
Power Corridor (Golf Club to Grand River)	GF #270							\$ 200,000	\$ -
Challis	GF #270				\$ 350,000				\$ 350,000
Dorr (Twp hall to Challis)	GF #270					\$ 275,000			\$ 275,000
Crooked Lake (South Latson to Dorr)	GF #270		\$ 125,000						\$ 125,000
	Safe Routes to School Grant		\$ 300,000						\$ 300,000
S Latson (Crooked Lake to Chilson)	GF #270	\$ 220,000							\$ 220,000
Chilson (Chilson Hills to Grand River)	GF #270			\$ 125,000					\$ 125,000
TOTAL		\$ 445,000	\$ 505,000	\$ 665,000	\$ 600,000	\$ 275,000	\$ 275,000	\$ 710,000	\$ 2,765,000



Pathways CIP 2013-2019

Legend

- Proposed Pathway CIP'13
- Existing Pathway
- Lakes
- Sections
- Parcels
- Railroad
- Interstate
- Major Rd
- Minor Rd

August 2013

GENOA TOWNSHIP 2013-2019 CAPITAL IMPROVEMENTS PROGRAM

Project Title: Sidewalks and Greenways
Project Type: Streets & Sidewalks
Useful Life: 20 years
Resubmittal/New Project: Continuing Project
Priority: Desirable

PROJECT DESCRIPTION

Construction of pedestrian and bicycle paths throughout the Township. The Township has completed a recreation plan which identifies some areas for installation. This program will be done in conjunction with park acquisition to link residents to recreational opportunities. Future phases will connect and provide loops. Funds will also be allocated for filling in sidewalk gaps along Grand River.

JUSTIFICATION

Provides alternative to vehicular travel and greatly improves quality of life. Also provides a safe area outside of county road travel lanes.

SCHEDULE

Attached spreadsheet describes implementation. Schedule must be flexible to accommodate uncertainties related to grant applications.

IMPACT ON OPERATING EXPENSES

Annual General Fund Expenditure includes a \$250,000 rollover of funds allocated.

APPENDIX

Copier Rotation

Asset ID	Employee	Date Acquired	Description
1	Gestetner Copier/Scanner	7/1/2006	Mail Room
2	Lanier Color Printer	7/1/2008	Utility
3	Cannon Color plotter	7/1/2012	Mail room
4	Xerox	7/1/2013	Copy Room
1	Lanier Plotter	7/1/2008	MHOG

COMPUTER ROTATION

Asset ID	Employee	Date Acquired	Description	Date of Replacement
1	D'holster, Cathy	7/1/2011	Dell Optiplex	7/1/2016
2	Kristen	7/1/2011	Dell Optiplex	7/1/2016
3	Archinal, Michael	7/1/2011	Dell Optiplex	7/1/2016
4	VanTassell, Adam	7/1/2011	Dell Optiplex	7/1/2016
5	Mrocza, Laura	7/1/2011	Dell Optiplex	7/1/2016
6	Rojewski, Deborah	7/1/2011	Dell Optiplex	7/1/2016
7	Van Marter, Kelly	7/1/2011	Dell Optiplex	7/1/2016
8	Ruthig, Amy	7/1/2011	Dell Optiplex	7/1/2016
9	Hunt, Robin	7/1/2011	Dell Optiplex	7/1/2016
10	Saari, Karen	7/1/2011	Dell Optiplex	7/1/2016
11	Williams, Angie	7/1/2011	Dell Optiplex	7/1/2016
12	Lindberg, Tammy	7/1/2011	Dell Optiplex	7/1/2016
13	Galinac, Kristina	4/1/2013	Dell Optiplex 790	4/1/2018
14	Poppy, Kathryn	4/1/2013	Dell Optiplex 790	4/1/2018
15	Murphy, Kathleen	4/1/2013	Dell Optiplex 790	4/1/2018
16	Ron	4/1/2013	Dell Optiplex 790	4/1/2018
17	Sitner, Sue		State supplied computer	
18	Clerk Front Counter	7/1/2013	Unknown	7/1/2018
19	GIS Computer	7/1/2007	Unknown	7/1/2015
20	Tax Front Counter	7/1/2005	Unknown	R
21	Map Room	7/1/2005	Unknown	R
22	Vacant clerk	7/1/2005	Unknown	
23	Vacant assessing	7/1/2005	Unknown	
24	GIS Intern	7/1/2012	Dell Optiplex	7/1/2017
	Skolarus, Polly		SEE LAPTOP	
	McCrie, Gary		SEE LAPTOP	

TABLET ROTATION

Asset ID	Employee	Date Acquired	Description	Date of Replacement
1	Linda Rowell	4/1/2012	iPad2	4/1/2017
2	Chris Grajek	4/1/2012	iPad2	4/1/2017
3	Barb Figurski	4/1/2012	iPad2	4/1/2017
4	Jeff Dhanens	4/1/2012	iPad2	4/1/2017
5	Marianne McCreary	4/1/2012	iPad2	4/1/2017
6	Adam VanTassell	4/1/2012	iPad2	4/1/2017
7	Diana Lowe	4/1/2012	iPad2	4/1/2017
8	Doug Brown	4/1/2012	iPad2	4/1/2017
9	Jim Mortensen	4/1/2012	iPad2	4/1/2017
10	John McManus	4/1/2012	iPad2	4/1/2017
11	Dean Tengel	4/1/2012	iPad2	4/1/2017
12	Kelly Kolakowski	4/1/2012	iPad2	4/1/2017
13	Gary McCririe	4/1/2012	iPad2	4/1/2017
14	Robin Hunt	4/1/2012	iPad2	4/1/2017
15	Polly Skolarus	4/1/2012	iPad2	4/1/2017
16	Todd Smith	4/1/2012	iPad2	4/1/2017
17	Jean Ledford	4/1/2012	iPad2	4/1/2017
18	Michael Archinal	4/1/2012	iPad2	4/1/2017
19	Laura Mroczka	4/1/2012	iPad2	4/1/2017
1	Steve	4/2/2013	Dell Latitude 10 - mhog water 1	4/1/2018
2	Dave	4/2/2013	Dell Latitude 10 - mhog water 2	4/1/2018
3	Aaron	4/2/2013	Dell Latitude 10 - mhog water 3	4/1/2018
4	Jake	4/2/2013	Dell Latitude 10 - mhog water 4	4/1/2018
5	Plant	4/2/2013	Dell Latitude 10 - mhog plant 1	4/1/2018
6		4/2/2013	Dell Latitude 10 - mhog plant 2	4/1/2018

Memorandum

TO: Genoa Township Board

FROM: Adam VanTassell

DATE: April 1, 2013

RE: Proposed Township Board Audio Upgrade

Manager Review: _____

**CONSIDER APPROVAL OF THE PROPOSALS TO IMPROVE THE
TOWNSHIP BOARD AUDIO SYSTEM.**

Due to the outdated audio system in the Township Hall Boardroom, staff is proposing a system upgrade which would vastly improve the clarity of the audio system. The upgrades would include updates to the Board table as well as to the podium and the two consultant/applicant tables.

Staff engaged two audio vendors to meet with the Township Administrative Committee to tailor proposals to address the concerns with the current audio system. The administrative committee and staff recommend approval of the proposal by American Video and request consideration of the following motion:

**MOVE TO APPROVE THE PROPOSAL BY AMERICAN VIDEO
TRANSFER AT A COST NOT TO EXCEED \$ 6,325.00**

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
AUGUST 12, 2013
6:30 P.M.**

MINUTES

CALL TO ORDER: The meeting of the Genoa Charter Township Planning Commission was called to order at 6:31 p.m. Present were Chairman Doug Brown, Barbara Figurski, James Mortensen, Dean Tengel, Diana Lowe, John McManus, and Eric Rauch. Also present were Assistant Township Manager, Kelly VanMarter, and Brian Borden of LSL Planning.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: **Motion** by James Mortensen and support by Barbara Figurski to approve the agenda as proposed. **Motion carried unanimously.**

CALL TO THE PUBLIC: Chairman Brown opened the call to the public at 6:32 p.m. with no response.

OPEN PUBLIC HEARING #1... Review of a special use application, impact assessment and site plan for proposed grading within the natural features setback and construction of a new 2,368 square foot office building located on the north side of Grand River Avenue, east of Kellogg Road, Sec. 14, petitioned by Dr. Brad Rondeau.

Dr. Rondeau appeared before the Planning Commission with Thom Dumond of Boss Engineering and Mike O'Leary of Lindhout Associates. There are 2.5 acres on the parcel with more than 1 acre of property being developable. It's a tricky site. The petitioner would like to allow for future expansion. There is an access drive off of Grand River with detention to the east. The petitioner's interest in theater has driven the design of the building.

The south elevation has a lot of glass. The grade drops on the west side of the building. There is a full basement. The dumpster enclosure will be in the back recess rather than an enclosure built around it.

Dean Tengel inquired as to the materials. It will be an earthy red tone of siding and perhaps some brick – 75% siding and 25% brick. The petitioner did not bring samples of the materials for the Commission to review. They were hoping the 3D computer model presented this evening would suffice. The brick will be partial on the east/west elevations. The petitioner can provide samples to the Township if required. Rooftop screening is not necessary because there is nothing that requires screening. The floor plan was discussed, as well.

Chairman Brown asked for the reason of grading. The corner of the building is at the 25' setback line. In order to fill that, they had to grade that area. The outlet for the detention basin will also be cutting into the setback area, but that area will be restored.

Brian Borden suggested there should be no issues under general special land use standards because the setbacks will be restored. The petitioner proposes to exceed the threshold for parking. This will require approval. He believes that it is excessive by definition only. There are 12 spaces required and they are requesting 17. He believes the requested parking is justified.

Brian Borden discussed the fact that the proposed driveway does not meet the access standards contained in the ordinance. The petitioner cannot meet the technical standards due to space. If the petitioner obtains a county permit, this can be reviewed. The parcel to the west has an easement over the driveway to allow for potential shared access to this site. This information was only provided to the petitioner a few hours ago. The petition has less than the minimum required distance between the proposed drive and those to either side – 133 from the east and 223 feet to the west. Brian Borden suggested it should be over 300 feet. Jim Mortensen and many other Commissioners feel that the petitioner should explore a shared drive with Dr. Bonine. The petitioner has been dealing with severe time constraints and feels that this is a hardship because of this knowledge coming to petitioner at the last minute. The petitioner indicated that the easement was not on any deed or paperwork when he purchased the property. The safety factor is concerning to the Commission due to the location of the entrance to the Rollerama site 133 feet to the east of the proposed driveway.

Eric Rauch asked the petitioner to elaborate on any proposed future expansion. The petitioner is hopeful that at some point a partner will be brought in to assist. This would increase the building and parking toward the west. The petitioner would prefer not to expand into the basement because that would require an elevator be installed. Dean Tengal asked why the petitioner had not realized there would be a problem with the driveway placement. Dean Tengal indicated that he is not comfortable trying to push this through due to the petitioner's time constraints.

Mike Evans from the Brighton Fire Department addressed the Commission. He believes it would be dangerous to back out of this property onto Grand River and that is why the requirement for a turn around with a 150 driveway is in place. Mike Evans indicated that it would be acceptable to set up some sort of turnaround by going through Dr. Bonine's driveway. This would have to be maintained all year. Mike Evans feels that the current plan is close enough to meet the intent of the code. If the driveway is shared with Dr. Bonine, a turnaround would be required. Various alternatives for the placement of the driveway were discussed. Brian Borden explained the effect of having driveways too close to each other along Grand River. It's going to be dangerous for traffic.

There was discussion whether the building could be moved to the west and parking placed to the east. The petitioner was not interested in this alternative. The petitioner is willing to center the driveway between the driveways to the east and west. Dean Tengel is concerned about approving a plan where the driveway does not fit within the ordinance.

Chairman Brown asked why the petitioner dropped from 21 to 17 parking spaces between the two submittals. There are a total of four employees currently. It is hoped that a partner and second hygienist would be added within five years.

REU's were discussed. The petitioner has referred to himself as a medical office and a business office. The petitioner will meet with Township staff to work on this designation and the REU's for the same.

Barbara Figurski asked about the projecting wall sign. Brian Borden indicated it is marquis style and not permitted. The petitioner will be seeking a variance for this. The sign may be considered two sign spaces. Calculations will have to be made. The angle only allows the sign to extend 2' from the building at the farthest point.

Brian Borden discussed the fact that there is no dedicated load space. One isn't needed given the nature of the business.

Kelly VanMarter reminds the petitioner that although he has low windows in the back of the building, he may not manicure that area because of the natural features setback that must be maintained.

Chairman Brown asks if anyone from the public wishes to address the Planning Commission regarding this project. No one responded.

Motion by Jim Mortensen to table this item and reschedule it to a date certain of August 26. Support by Barbara Figurski. **Motion carried unanimously.**

Planning Commission disposition of petition

- A. Recommendation of Special Use.
- B. Recommendation of Environmental Impact Assessment.
- C. Recommendation of Site Plan.

OPEN PUBLIC HEARING #2... Review of a special use application, impact assessment and site plan for proposed outdoor storage and a 22,000 square foot addition of a manufacturing facility located at 1326 Grand Oaks Drive, Howell MI 48843, petitioned by Michigan Rod Products, Inc.

John Asselin from Flint, Michigan is the associate architect on this petition. He gave a brief overview of the proposed plan to the Planning Commission. The proposed addition is 22,000 square feet. There would also necessarily be increased parking. They want to bank a parking area at this time that would be paved in the future if needed to avoid water runoff issues at this point.

Brian Borden reviewed the plan. He feels that the general and specific use standards of the ordinance have been met. The expansion is intended to match the existing building.

Gary Markstrom addressed the Planning Commission. The re-grading of the detention basin and cleaning up of the detention basin area should be addressed by the petitioner. Fire hydrant placements, etc. has been addressed by the Fire Department per Gary Markstrom.

Mike Evans of the Fire Department addressed this petition. There is a pre-existing non-conformance situation with this petitioner. He is trying to work with the petitioner without creating a huge financial burden. The first issue is access. They need access on the west side of the building. Ideally, they'd like the south side as well but it's not feasible. He is hoping the petitioner will extend the drive behind the building for access by the Fire Department. This is a "sprinkle" building, so there is some leniency that can be given. The second issue is the water. They are requesting some more fire hydrants be placed along the property to increase the Fire Department's ability to fight any fire that may occur. The petitioner is open minded to working with the Fire Department.

The petitioner indicated the environmental impact assessment should read .38 to .39 rather than .39 to .39.

Eric Rauch addressed the petitioner as to how the dump truck would access the dumpster with coils in front of it. The petitioner will leave sufficient room for the dump truck.

A new employee entrance is being developed in the building.

The storm pipe on the north side of the building is approximately 5' from the building. This pipe is a 2' diameter pipe. The footing system is spread and it will be 6" outside the building. Manhole 1 should be moved north a few feet possibly.

Chairman Brown made a call to the public with no response.

Planning Commission disposition of petition

- A. Recommendation of Special Use.
- B. Recommendation of Environmental Impact Assessment.
- C. Recommendation of Site Plan.

Motion by Jim Mortensen to recommend that the Township Board approve the special use permit to store coils outside in three areas, the height of which will not exceed 10' and will not be visible from the main road because of the placement existing screening. This recommendation is consistent with the ordinance regarding special use permits and is further subject to the approval of the site plan and environmental impact assessment. Support by Barbara Figurski. **Motion carried unanimously.**

Motion by Barbara Figurski to recommend that the Township Board approve the environmental impact assessment with the addition of dust control management and subject to approval of the special use permit and site plan. Support by James Mortensen. **Motion carried unanimously.**

Motion by Jim Mortensen to recommend to the Township Board approval of the site plan dated 7/30/13 subject to the following:

1. Compliance with the Township engineer's letter dated 8/5/13, as revised;
2. Compliance with Brighton Fire Department letter dated 8/16/13 subject to changes that will occur over further discussions and agreements with Brighton Fire Department;
3. The installation of a gravel road for fire suppression purposes on the west side of the building as approved by the BFD
4. The approval by the Township Board of the environmental impact assessment and special use permit.

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

OPEN PUBLIC HEARING #3... Review of a special use application, impact assessment and site plan for proposed service center expansion, new collision center, and parking lot located at Maxey Ford, 2798 E. Grand River Avenue, Howell MI 48843, petitioned by SRM Associations, LLC.

Thom Dumond and Mike Maxey addressed the Planning Commission. Mr. Maxey gave a brief history of his experience in auto sales. He then gave a brief overview of the reasoning for the project. A photographic rendering was shown to the Planning Commission. Mr. Maxey has contacted the neighbors and has had good relations with them concerning this project.

The proposed plan will increase the service bays by six. Directly behind that area would be the new collision center. No parking spots will be lost. The parking that is reflected on the plan represents the amount of vehicles that Maxey can project to sell.

The screening wall will be 6' tall from the southwest corner of lot along the length of the parking area. There will be evergreens there. This design will bring the retention basin into compliance with the Drain Commission requirements. The front approaches from Grand River will remain "as is."

John from CityScape addressed the Planning Commission. Ford's current prototype image program will be utilized with this building to keep a clean image with the building. The petitioner provided material samples to the Township.

Brian Borden reviewed his concerns with the plan. This would be deemed a major amendment to an existing land use. The applicant is proposing a

6' masonry screen wall to provide a visual and noise barrier. This would be the only issue with the specific and general use standards.

The proposed addition to the service center will require a variance from the ZBA. The petitioner is in the process of obtaining that. They are seeking a variance for the setback, as well. The expansion will meet the current building materials. The new part of the building, the collision center, does not.

Brian Borden discussed parking versus vehicle storage and how each is treated. If one delineates how they are treated, they meet the Township standards.

Brian Borden indicated that essentially the entire site as it exists does not comply with landscape requirements. The applicant has included new plantings around the detention pond.

The proposed waste receptacle is in an allowable area that does require Planning Commission approval. The dumpster will be screened to bring it into compliance with the ordinance.

Signage was discussed. The second wall sign will require approval of the Planning Commission. A traffic impact statement was not provided. The Planning Commission has discretion whether to require this. The petitioner addresses the Planning Commission regarding traffic studies. The petitioner feels there will only be 105 additional "trips" per day with the increase of repair stalls.

The petitioner is encouraged to combine the two lots. This should be discussed at the Township Board meeting.

Gary Markstrom addressed the Commission. The petitioner has complied with most of their comments. It is hopeful that the factory sewer will become public. An 8" water main is being installed for fire suppression. The demands for water should be reviewed since it is a fairly large main. The drainage areas were discussed. The area on the south side should have provisions to capture the water on the site. There should be provisions for the water to go through the wall. The petitioner said this shouldn't be an issue.

Mike Evans addressed the Planning Commission. Item number two has been worked through with the architect. This will be a sprinkler building. The turning radiuses around the buildings caused the Fire Department some concern. To the west of the collision center are some parking spaces that can be moved/deleted to permit proper trip radius. There are approximately eight. The petitioner will meet with Mike Evans regarding that.

Chairman Brown makes a call to the public.

Dean Cocolies addressed the Commission. They will be facing the detention area. Their main concerns are lighting and noise. The woods are going to stay. He is asking what will be torn down exactly. The area that abuts his property will

not be changed. The lighting will not be aimed to the neighborhood and will be away from the residential areas. There will be noises added. The outdoor PA systems have been disconnected in the rear areas.

Allan Almgrin – Chairman of the Trustees of the Howell Elks Lodge addressed the Planning Commission. He asked about storm water runoff. He is hoping there will be some controlling of the runoff. Mr. Almgrin suggested he would speak to the petitioners at some point about working something out. He asked if there would be set construction hours and if they would impede on the Lodge's ability to earn rental income from receptions, etc. Any paint fumes, etc will be a non-issue.

Chairman Brown read various letters into the record: two by Jenny Carrender and one by John & Connie Knauss. All efforts will be made to save the existing trees by the petitioner.

Planning Commission disposition of petition

- A. Recommendation of Special Use.
- B. Recommendation of Environmental Impact Assessment.
- C. Recommendation of Site Plan.

Motion by James Mortensen to recommend to the Township Board approval of the special use permit for the expansion of Bob Maxey Ford to add a body shop and an expansion of the existing service department. This recommendation is made because it is a major amendment to an existing use and consistent with the zoning requirements of the ordinances. This recommendation is conditional upon approval of the site plan and environmental impact assessment by the Township Board. Further, requirements of this special use permit will be that no horns will be blown by dealership personnel attempting to locate vehicles, lighting will be down directed and no outdoor speaker system will be installed. Support by Dean Tengal. **Motion carried unanimously.**

Motion by Barbara Figurski to recommend to the Township Board approval of the environmental impact assessment dated 7/29/13, subject to:

- 1. PIP plan must be submitted prior to the land use permit authorization;
- 2. Expand retention basin statements;
- 3. Requirements of the Township Engineer must be met;
- 4. Approval of the special use permit and site plan.

Support by John McManus. **Motion carried unanimously.**

Motion by James Mortensen to recommend to the Township Board approval of the site plan dated 7/29/13 subject to:

- 1. The six foot masonry wall as depicted is acceptable and will substitute for the normal screening required for the site;
- 2. The proposed building addition will require a variance. The petitioner will seek variances from the Zoning Board of Appeals for the front

- setback requirements and grading the gravel storage area within the rear setback;
3. The Planning Commission recommends approval of the setback for the collision center given the masonry screening wall;
 4. The building elevations and materials reviewed this evening are acceptable and the building material samples will become the property of the Township;
 5. It should be noted that the proposed building addition shall match the existing building in terms of materials;
 6. The Planning Commission accepts the parking requirements as a combination of new vehicle storage and normal vehicle parking;
 7. The waste receptacle location is acceptable and will be screened;
 8. The concrete base shall be extended by three feet;
 9. The signage appears to be beyond the ordinance and will need to be reviewed by the Zoning Board of Appeals;
 10. A note will be added to the site plan that the applicant will work on drainage to the east with the Elks property and Township engineer;
 11. A note will be added to the site plan indicating that any Saturday construction will be coordinated with the Elks Club to the east;
 12. A note will be added to the site plan that every reasonable effort will be made to preserve trees in the installation of the masonry fence;
 13. The requirements of the Township engineer spelled out in his letter of 8/5/13 will be complied with. In addition, water usage with the installation of a water main will be coordinated with the Township engineer and additional drainage information will be provided to the Township engineer;
 14. The requirements of the Brighton Fire Department outlined in their letter of 8/8/13 will be complied with. Some modification may be possible in discussions with the Fire Department regarding turning radiuses;
 15. A note will be added to the site plan that the applicant will work with the Township regarding the possibility of combining the two parcels into one;
 16. Utilities easements will be provided prior to the issuance of the land use permit.

Support by Barbara Figurski. **Motion carried unanimously.**

Administrative Business:

- *Staff report. Kelly VanMarter provided an update.*
- *Approval of July 22, 2013 Planning Commission meeting minutes. **Motion** by Barbara Figurski and support by John McManus to adopt the minutes of the Planning Commission meeting of July 22, 2013. **Motion carried unanimously.***
- *Member Discussion*
- *Adjournment. **Motion** by Diana Lowe and support by Barbara Figurski to adjourn the meeting at 9:35 p.m. **Motion carried unanimously.***