

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
FEBRUARY 9, 2015
6:30 P.M.
AGENDA**

CALL TO ORDER:

PLEDGE OF ALLEGIANCE:

APPROVAL OF AGENDA:

CALL TO THE PUBLIC:

(Note: The Board reserves the right to not begin new business after 10:00 p.m.)

OPEN PUBLIC HEARING #1... Review of site plan and environmental impact assessment for a proposed 4,661 sq. ft. addition for enclosed storage, located at 1275 Grand Oaks Drive, Brighton, Michigan 48116, parcel # 4711-08-101-015. The request is petitioned by DeWitt Radiator.

Planning Commission disposition of petition

- A. Recommendation of Environmental Impact Assessment. (01-09-15)
- B. Disposition of Site Plan. (11-19-14)

OPEN PUBLIC HEARING #2... Review of a site plan, environmental impact, and PUD amendment for a proposed redevelopment of an existing outparcel to demolish the existing Bennigan's Restaurant and construct a new 12,000 sq. ft. multi-tenant building, located at 3950 E. Grand River Avenue, Howell, Michigan 48443, parcel # 4711-05-400-047. The request is petitioned by RG Properties, Inc.

- A. Recommendation regarding PUD Agreement Amendment.
- B. Recommendation of Environmental Impact Assessment. (12-01-14)
- C. Recommendation of Site Plan. (01-22-15)

Administrative Business:

- *Staff report - Annual Report 2014*
- *Approval of January 12, 2015 Planning Commission meeting minutes*
- *Member discussion*
- *Adjournment*



GENOA CHARTER TOWNSHIP
Application for Site Plan Review

GENOA TOWNSHIP

JAN 13 2015

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: DeWitts Radiator
If applicant is not the owner, a letter of Authorization from Property Owner is needed.

OWNER'S NAME & ADDRESS: DeWitts Radiator

SITE ADDRESS: 1275 Grand Oaks Drive PARCEL #(s): 11-08-101-015

APPLICANT PHONE: (517) 548-0600 OWNER PHONE: ()

OWNER EMAIL: tom@dewitts.com

LOCATION AND BRIEF DESCRIPTION OF SITE: 1275 Grand Oaks Dr. - 1/2 mile south of Grand River, 1/2 miles of Latson

BRIEF STATEMENT OF PROPOSED USE: Addition to existing DeWitts Radiator - 4661 SF, one story for enclosed storage

THE FOLLOWING BUILDINGS ARE PROPOSED: Addition to existing DeWitts Radiator

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

BY: John Stewart Architect

ADDRESS: 1645 N. Milford Road Milford MI 48381
(248) 685-0778

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

W. John Stewart or J. Stewart Associates at jstew0978@ad.com
Name Business Affiliation E-mail Address

FEE EXCEEDANCE AGREEMENT

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

SIGNATURE: [Signature] DATE: 1-15-15

PRINT NAME: Thomas DeWitt PHONE: _____

ADDRESS: 1275 Grand Oaks Howell NJ 08843



February 4, 2015

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
Subject:	DeWitt Radiator Addition – Site Plan Review #1
Location:	1275 Grand Oaks Drive – east side of Grand Oaks, south of Grand River Avenue
Zoning:	IND Industrial District

Dear Commissioners:

At the Township’s request, we have reviewed the site plan (cover sheet dated 11/19/14) proposing construction of a 4,661 square foot addition to an existing one-story industrial building. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance.

A. Summary

1. The Planning Commission has approval authority over the building elevations.
2. The applicant must confirm that proposed materials and colors will match the existing building.
3. The existing parking lot is nonconforming for multiple reasons (deficient side setback, deficient drive aisle widths, deficient number of barrier free spaces and an excessive amount of parking). The Commission may wish to require improvements as part of this project. At a minimum, we recommend the applicant provide the 1 additional barrier free space needed for compliance.
4. We recommend the applicant provide front yard landscaping, particularly the required greenbelt trees and a hedgerow along the front of the parking lot.
5. If one does not already exist, we recommend the applicant be required to provide a waste receptacle and enclosure in accordance with Section 12.04.
6. Any new signage proposed must be in accordance with the requirements and procedures of Article 16 (including the need for a permit prior to installation).

B. Proposal/Process

The applicant requests site plan review and approval for construction of a 4,661 square foot addition to an existing 23,348 square foot industrial building on a 3-acre site.

Because this is a permitted use, Planning Commission has review and approval authority over the site plan; however, the Environmental Impact Assessment will be subject to review and approval by the Township Board (following a recommendation by the Planning Commission).

DeWitt Radiator Addition

Site Plan Review #1

Page 2



Aerial view of site and surroundings (looking east)

C. Site Plan Review

1. Dimensional Requirements. The site and project have been reviewed for compliance with the dimensional standards of the IND as follows:

District	Lot Size		Minimum Setbacks (feet)				Max. Height	Max. Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking		
IND	1	150	50	25	40	20 front 10 side/rear	30'	40% building 85% impervious
Proposal	3	330	70	170 (N) 40 (S)	52	70 front 8 side (N) 100 side (S)	21.4'	24.4% building 48.9% impervious

The only dimensional issue is a deficient north side parking lot setback; however, this is an existing nonconformity and does not have any impact on the proposed project.

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 the addition, which identify the use of 12” masonry block. There is no indication of existing materials and colors; however, we are under the impression that the intent will be to match existing. The applicant must confirm whether or not this is the case.

3. Parking. In accordance with Section 14.04, light industrial and manufacturing requires 1.5 parking spaces for each 1,000 square feet of gross floor area plus 1 space per corporate vehicle and warehousing requires 1 parking space per 1,500 square feet of gross floor area plus 1 space per corporate vehicle. Based upon the size of the existing building and proposed addition, 39 spaces are required, while the site provides 61 existing spaces.

Section 14.02.06 requires Planning Commission approval for excessive parking (more than 20% above the minimum requirement); however, the amount of parking provided is an existing condition and the proposed addition will bring the ratio closer to compliance.

The parking spaces meet or exceed the dimensional requirements of Article 14; however, the drive aisles near the front of the property are narrower than required.

Lastly, given the amount of parking provided, 3 barrier free spaces are required, but only 2 are provided.

The Commission may wish to require improvements to these nonconforming conditions as part of this site plan review. At a minimum, we recommend the required number of barrier free parking spaces be provided.

4. **Pedestrian Circulation.** Sidewalks are not proposed nor required along Grand Oaks Drive. The plan does identify an existing sidewalk between the parking lot and front building entrance.
5. **Vehicular Circulation.** No changes are proposed to the existing driveway along Grand Oaks or to internal circulation.
6. **Loading.** Given the size of the proposed addition and existing building, Section 14.08.08 requires 1 loading space. Such spaces are to contain 500 square feet of area and be located in a rear or side yard not directly visible to a public street. There is an existing loading/unloading area that meets requirements in the rear yard.
7. **Landscaping.** Sheet A.3 identifies existing landscaping, but does not propose any new plantings. Based on our review, the site is deficient in terms of plantings for the front yard greenbelt, parking lot and detention ponds.

In our opinion, the site and area would benefit greatly from additional plantings in the front yard. Greenbelt requirements call for 9 canopy trees, while there is only 1 existing tree shown on the plan. Additionally, a hedgerow along the front parking spaces would diminish views of parking cars and keep headlights from shining into the building across Grand Oaks.

8. **Waste Receptacle and Enclosure.** The site plan does not identify an existing or proposed waste receptacle/enclosure. Review of aerial photos show a stand-alone dumpster that is not contained within an enclosure. If this condition is still present, we recommend the applicant be required to install a waste receptacle/enclosure in accordance with the provisions of Section 12.04.
9. **Exterior Lighting.** Sheet A.3 identifies 3 new wall mounted fixtures on the proposed building addition. Details show shielded/downward directed fixtures with compliant light intensities.
10. **Signs.** The submittal identifies an existing monument sign in the front yard. If any new signage is proposed, the applicant must comply with the standards and procedures outlined in Article 16, which includes the need to obtain a sign permit from the Township.
11. **Impact Assessment.** The submittal includes an Impact Assessment (dated 1/9/15), which notes that the proposed project is not expected to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

Genoa Township Planning Commission

DeWitt Radiator Addition

Site Plan Review #1

Page 4

Should you have any questions concerning this matter, please do not hesitate to contact our office. We can be reached by phone at (248) 586-0505, or via e-mail at borden@lslplanning.com and foster@lslplanning.com.

Sincerely,

LSL PLANNING, INC.



Brian V. Borden, AICP
Principal Planner



Michelle Foster
Project Planner



January 30, 2015

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

Re: Dewitt Radiator Addition Site Plan Review

Dear Ms. Van Marter:

We have reviewed the site plan documents for the Dewitt Radiator building addition dated November 11, 2014 and delivered to the Township on January 13, 2015. The site is located at 1275 Grand Oaks Drive, south of Grand River Avenue. The petitioner is planning to construct an approximate 59-foot by 79-foot building addition on the southeast corner of the existing facility. The proposed addition will increase the net impervious area on the site, but the existing on-site detention basins are shown to have adequate capacity. Additional spot elevations near the corner of the building indicating positive drainage towards the existing detention basin should be added to the construction plans.

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Gary Markstrom', written over a light gray rectangular background.

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

A handwritten signature in black ink, appearing to read 'Joseph C. Siwek', written in a cursive style.

Joseph C. Siwek, P.E.
Project Engineer

Copy: John Stewart, Architect, John Stewart Architects

Tetra Tech

401 South Washington Square, Suite 100, Lansing, MI 48933
Tel 517.316.3930 Fax 517.484.8140 www.tetrattech.com



BRIGHTON AREA FIRE AUTHORITY

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

February 5, 2015

Kelly VanMarter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Dewitt Radiator
1275 Grand Oaks Drive
Site Plan Review

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on February 4, 2015 and the drawings are dated February 1, 2015. The project is based on an existing 23,348 square foot building used as Factory and Storage occupancy with rated separations.

Project Description:

The applicant is proposing a 4,661 S. F. addition at the southeast corner of the building for the purpose of product warehouse. In addition, they are providing a 20' gravel access drive along the rear of the building for fire apparatus access. A rapid access lock box is being provided on the north side of the building near the main entrance to the building.

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.

With the following General Comments being corrected, this submittal appears to be in general conformity with the adopted fire prevention code.

1. The proposed access road to the rear of the building shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds. This shall be confirmed through an engineering analysis.

IFC D 103.6

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 current address location is only visible from the north of the building. It needs to be visible from Grand Oaks Dr. at the front of the building.

IFC 505.1



The applicants design team is reminded that the building life safety plan are reviewed by the fire department in conjunction with the Building Department. Additional comments will be given during the building plan review process (specific to the building plans and occupancy). If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

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

Michael Evans, EFO, CFPS
Deputy Fire Chief

January 9, 2015

Genoa Township Planning Commission

IMPACT ASSESSMENT STUDY

A. Name of person responsible for study

*John Stewart Architect
1645 N. Milford Road
Milford, Mi. 48381*

B. Maps and Written description/analysis of the project site

*Existing One Story Industrial Building 23,348 SF
Proposed Addition to match existing building and fill
in the south east corner. 4661 SF
Existing asphalt parking lot to remain unchanged 61 cars existing
Required parking 39 cars
Aerial maps attached
Removal of an existing concrete pad within the proposed building pad*

C. Impact on Natural Features

*Entire site and topography to remain as is.
No additional site disturbance anticipated.
Existing trees, brush, and landscaped beds to remain unchanged
No trees to be removed.
No wetlands are to be disturbed or impacted.*

D. Stormwater Management Requirements.

*Soil erosion plan will be submitted to Livingston Co. Drain Commission.
Soil erosion fencing will be installed surrounding the new addition per
LCDC Requirements. Parking lot catch basins will have erosion control
silt fabric placed at manhole covers.
Stormwater discharge increase due to increase in size of addition vs.
existing hard surface imperviousness is within the existing stormwater
collection basins capacity.
Existing drainage swale along south side between building and property
line will be extended to collect rain water from new addition downspouts*

E. Impact on surrounding land uses

*New addition will have no effect on surrounding land used.
Addition is for inside (enclosed) storage of material used to make
aftermarket radiators. Product is aluminum and steel sheets, including
storage racks for completed products.
No additional sound or air pollution.*

F. Impact on public facilities and services.

*New addition will have no effect or impact on public facilities or services.
Number of employees will not change due to addition.*

G. Impact on Public Utilities.

*New addition will have no impact on Public Utilities.
Additional storm water is within the existing storm water designed
storm waters system collection and flow parameters.
During construction, all erosion control measures to be implemented.
No additional sewer or water requirements*

H. Storage and Handling of Hazardous materials.

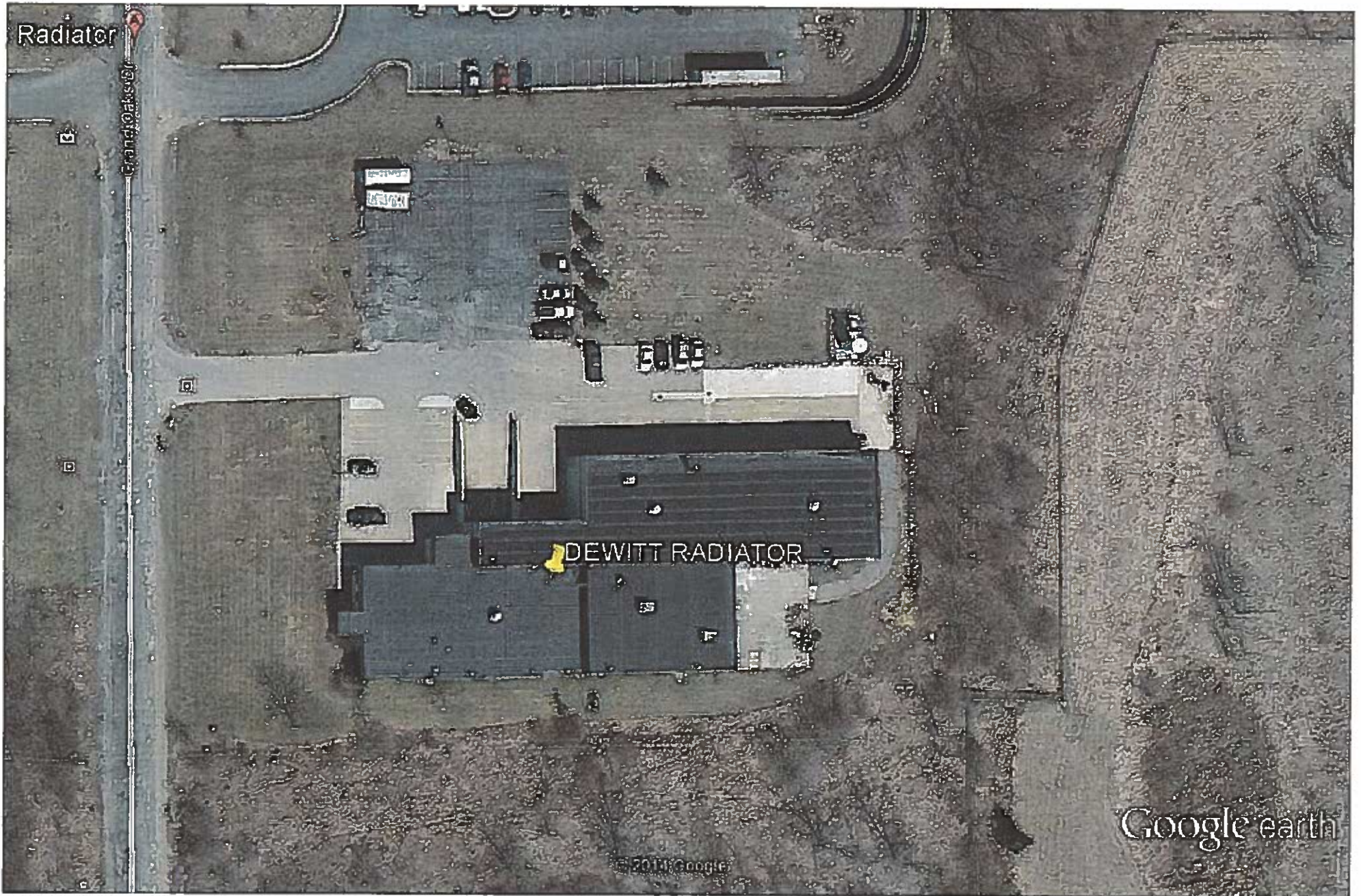
No Hazardous substances will be stored in the new addition.

I. Impact on Traffic and Pedestrians

New addition will not impact traffic or pedestrians

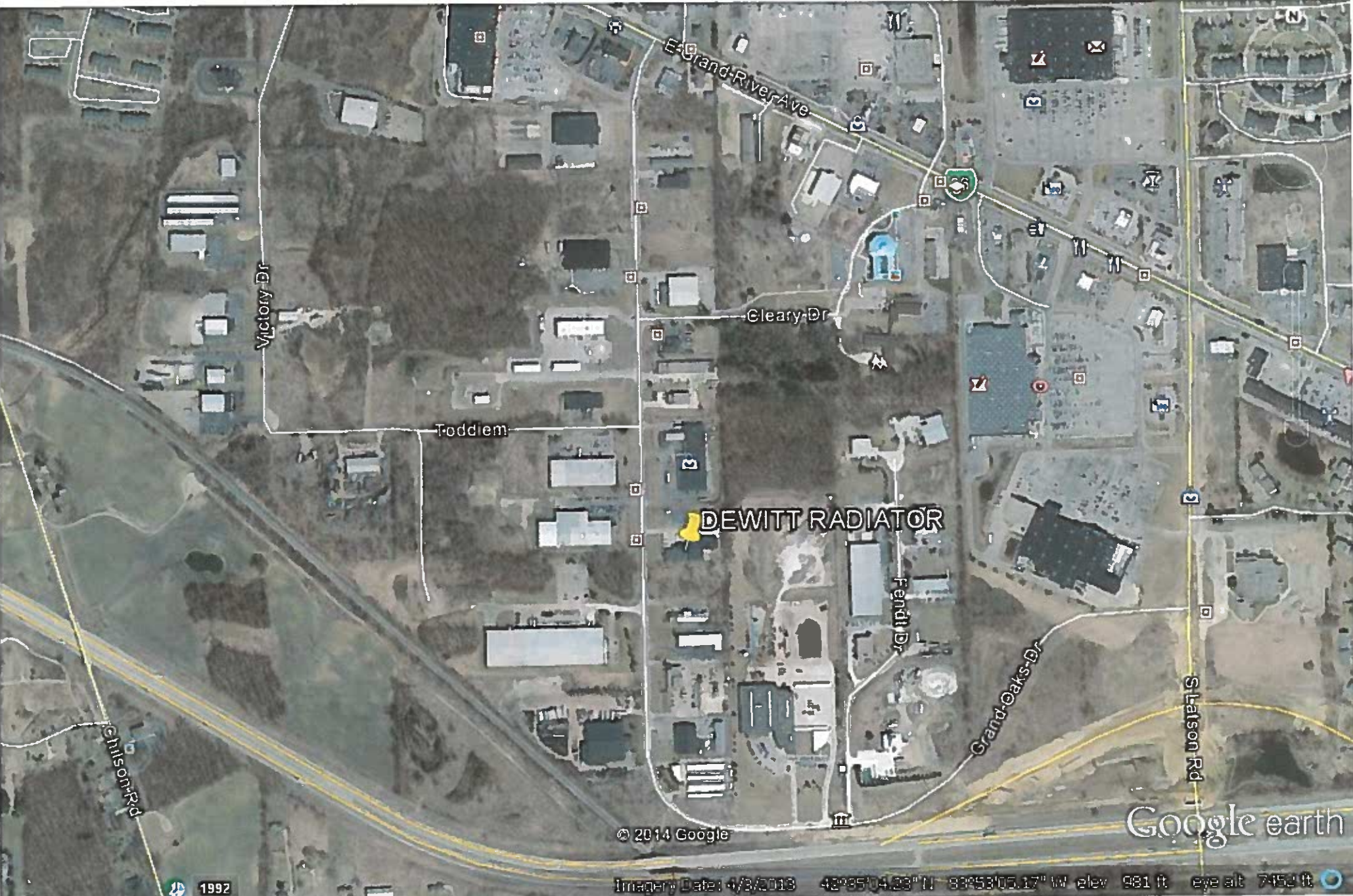
J. Special Provisions.

New addition has no special provisions or requirements



Google earth





Victory Dr

E Grand River Ave

Cleary Dr

Toddlem

DEWITT RADIATOR

Fendi Dr

Grand Oaks Dr

Silatson Rd

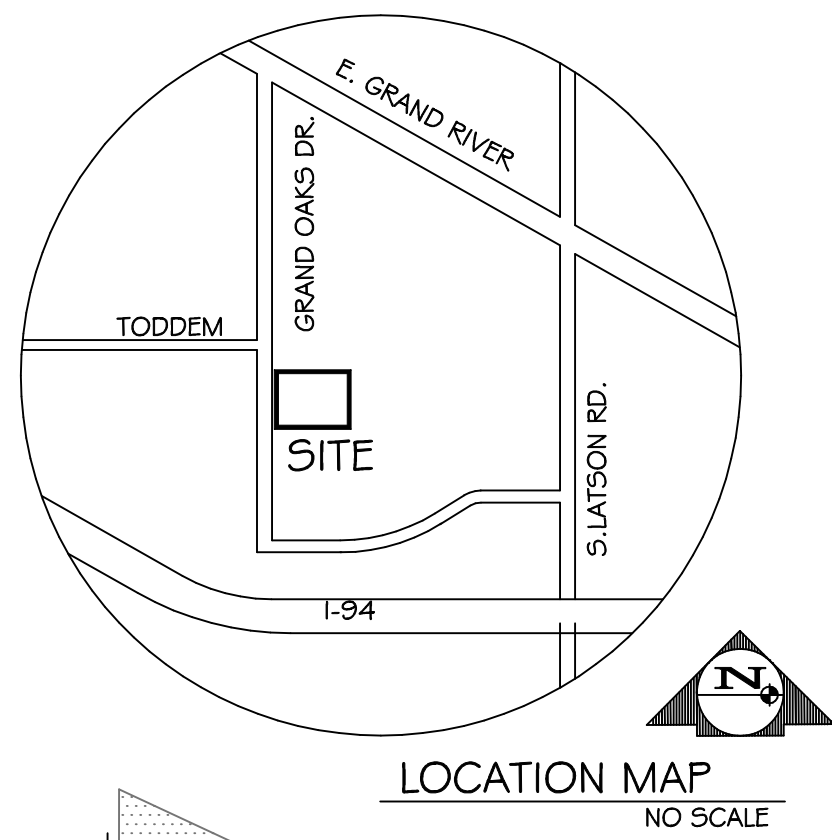
Chilson Rd

© 2014 Google

Google earth

1992

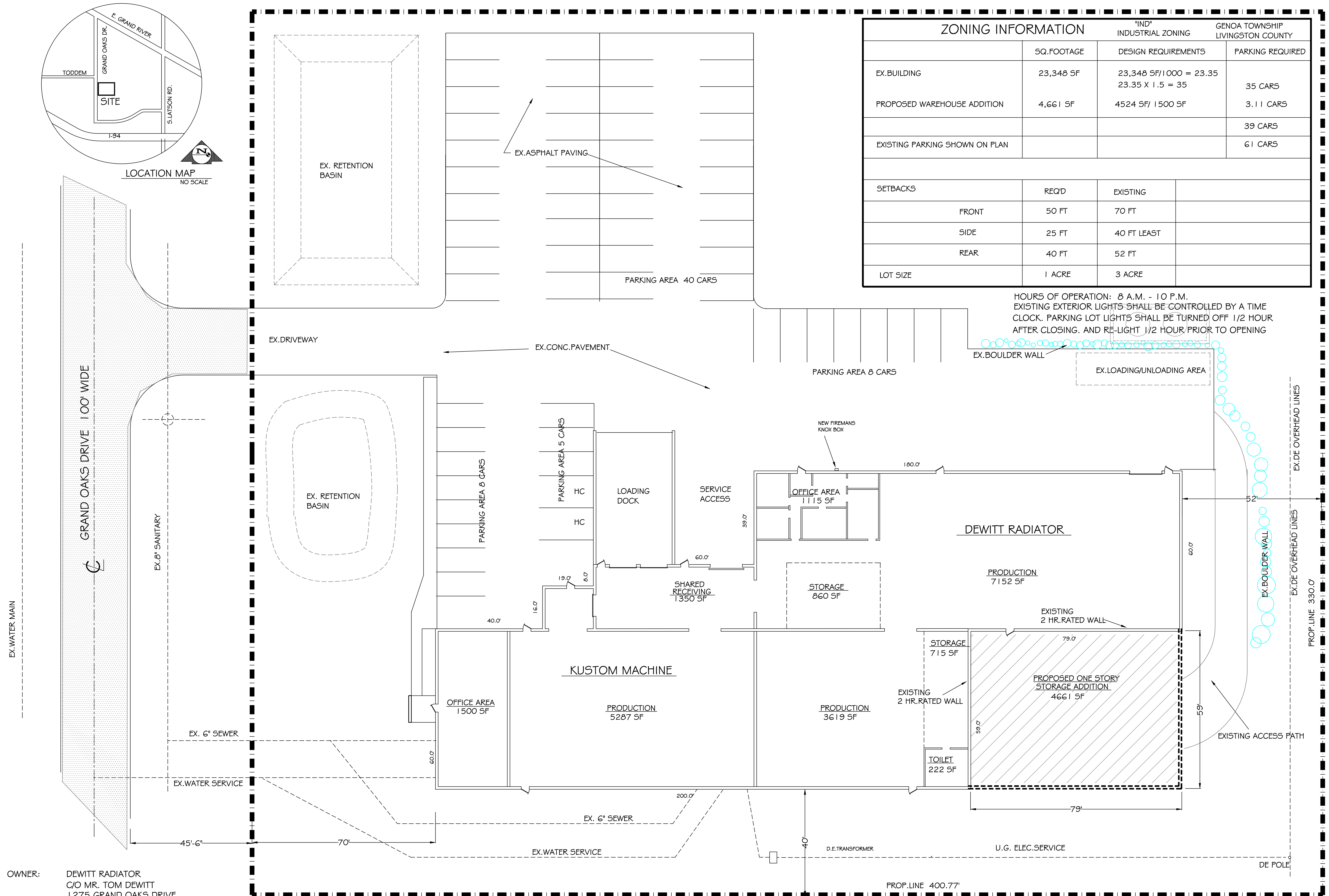
Imagery Date: 4/3/2013 43°35'04.23" N 83°53'05.17" W elev 981 ft eye alt 7453 ft



LOCATION MAP
NO SCALE

ZONING INFORMATION		"IND" INDUSTRIAL ZONING	GENOA TOWNSHIP LIVINGSTON COUNTY
	SQ. FOOTAGE	DESIGN REQUIREMENTS	PARKING REQUIRED
EX. BUILDING	23,348 SF	23,348 SF / 1,000 = 23.35 23.35 X 1.5 = 35	35 CARS
PROPOSED WAREHOUSE ADDITION	4,661 SF	4524 SF / 1500 SF	3.11 CARS
EXISTING PARKING SHOWN ON PLAN			39 CARS
			61 CARS
SETBACKS	REQD	EXISTING	
FRONT	50 FT	70 FT	
SIDE	25 FT	40 FT LEAST	
REAR	40 FT	52 FT	
LOT SIZE	1 ACRE	3 ACRE	

HOURS OF OPERATION: 8 A.M. - 10 P.M.
EXISTING EXTERIOR LIGHTS SHALL BE CONTROLLED BY A TIME CLOCK. PARKING LOT LIGHTS SHALL BE TURNED OFF 1/2 HOUR AFTER CLOSING. AND RE-LIGHT 1/2 HOUR PRIOR TO OPENING



OWNER: DEWITT RADIATOR
C/O MR. TOM DEWITT
1275 GRAND OAKS DRIVE
HOWELL, MICHIGAN 48843

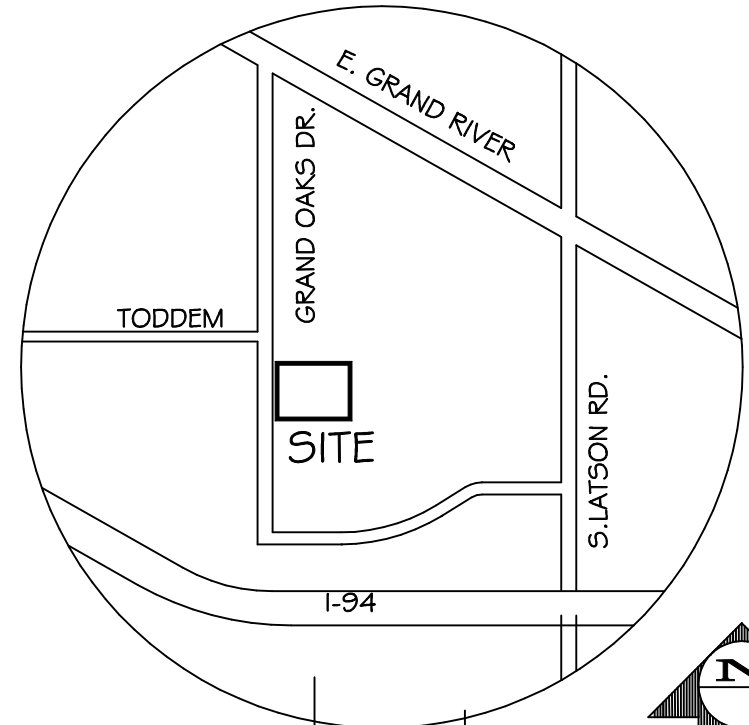
SURVEYOR: ANC ENGINEERING INC.
5111 PONTIAC TRAIL
WIXOM, MICHIGAN 48393



SITE PLAN
SCALE 1/16" = 1'-0"



DATE 11-19-14	ISSUE/REVISIONS	DEWITT RADIATOR REMODELING 1275 GRAND OAKS DRIVE HOWELL, MICHIGAN 48843	248-685-0978
JOB NO.	John Stewart ARCHITECTS		1645 N. MILFORD RD. MILFORD MICH. 48361
SHEET A-1			



LOCATION MAP
NO SCALE

STORM WATER DESIGN

SITE AREA	132,254 SF	3.04 ACRES
BUILDING	23,348 SF	
HARD SURFACE - PAVING	35,600 SF	
EXISTING HARD SURFACED TO BE REMOVED (EXISTING SLAB AND DRIVE)	3,266 SF	
TOTAL BUILDING AND PAVING	62,214 SF	1.43 ACRES
PROPOSED ADDITION	4,661 SF	
EXISTING HARD SURFACED TO BE REMOVED (EXISTING SLAB AND DRIVE)	3,266 SF	
INCREASED IMPERVIOUSNESS	1,395 SF	
TOTAL IMPERVIOUSNESS	63,610 SF	1.46 ACRES
GRASS (Pervious)	68,644 S.F.	1.58 ACRES

"C" (bldg+paving)	1.46 A X .9 = 1.31
"C" (grass)	1.58 A X .25 = 0.40
	3.04 ACRES 1.71
"C _d "	1.71
(COEFFICIENT FOR THE DEVELOPED AREA)	3.04 = .56

Q_a = .15 C.F.S. ALLOWABLE RUNOFF / ACRE
OR
3.04 ACRES X .15 CFS (ALLOWABLE) = .46 CFS FOR THE DEVELOPED SITE

Q _d	Q _a
(RUNOFF FOR THE DEVELOPED AREA)	A X C _d
	3.04 A X .56 = .27

NET INCREASE IN IMPERVIOUSNESS = 1395 SF

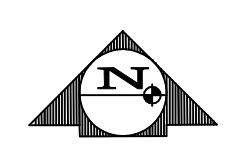
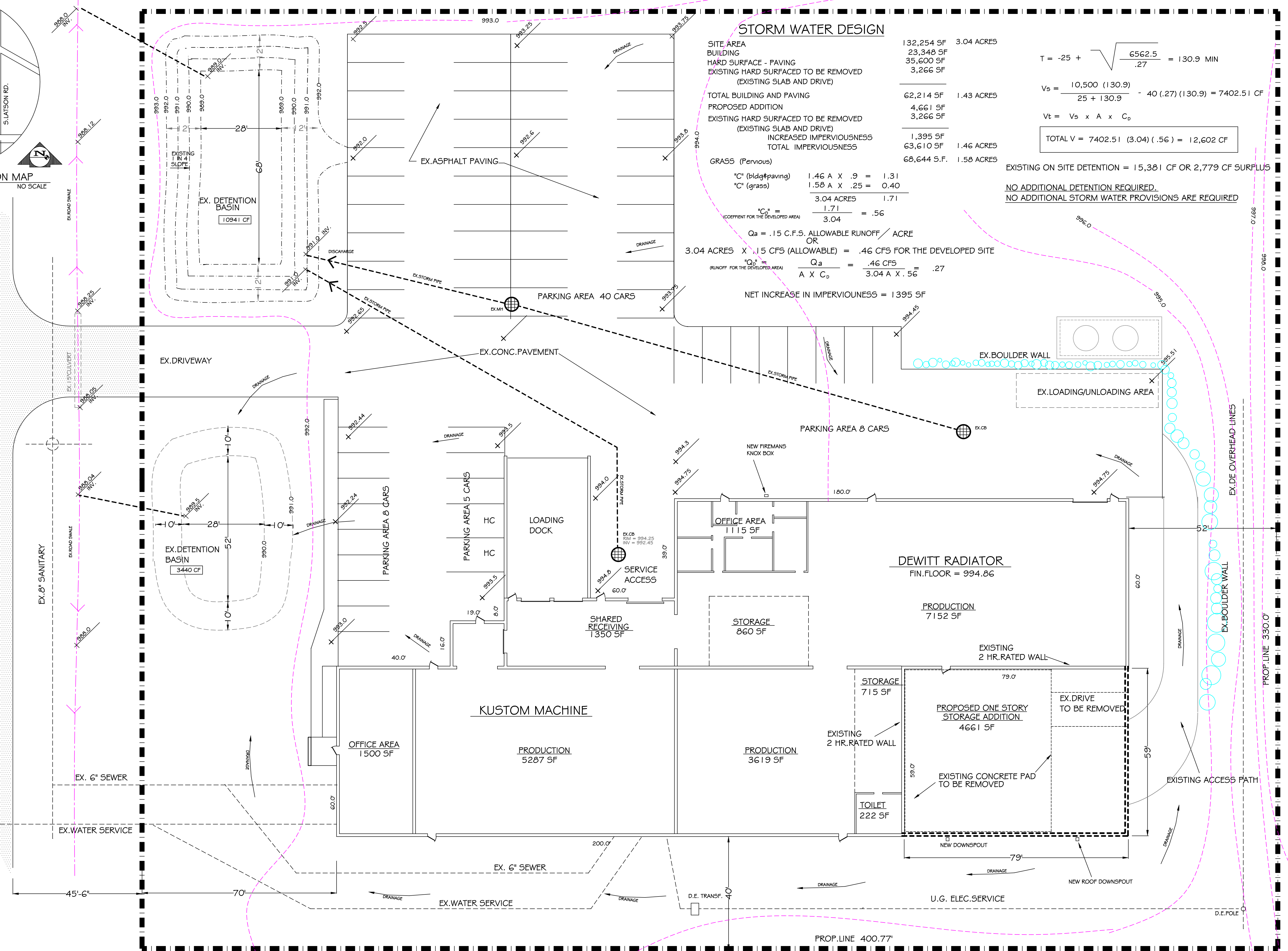
$$T = -25 + \sqrt{\frac{6562.5}{.27}} = 130.9 \text{ MIN}$$

$$V_s = \frac{10,500 (130.9)}{25 + 130.9} - 40 (.27) (130.9) = 7402.51 \text{ CF}$$

$$V_t = V_s \times A \times C_p$$

$$\text{TOTAL V} = 7402.51 (3.04) (.56) = 12,602 \text{ CF}$$

EXISTING ON SITE DETENTION = 15,381 CF OR 2,779 CF SURPLUS
 NO ADDITIONAL DETENTION REQUIRED.
 NO ADDITIONAL STORM WATER PROVISIONS ARE REQUIRED



SITE UTILITIES PLAN

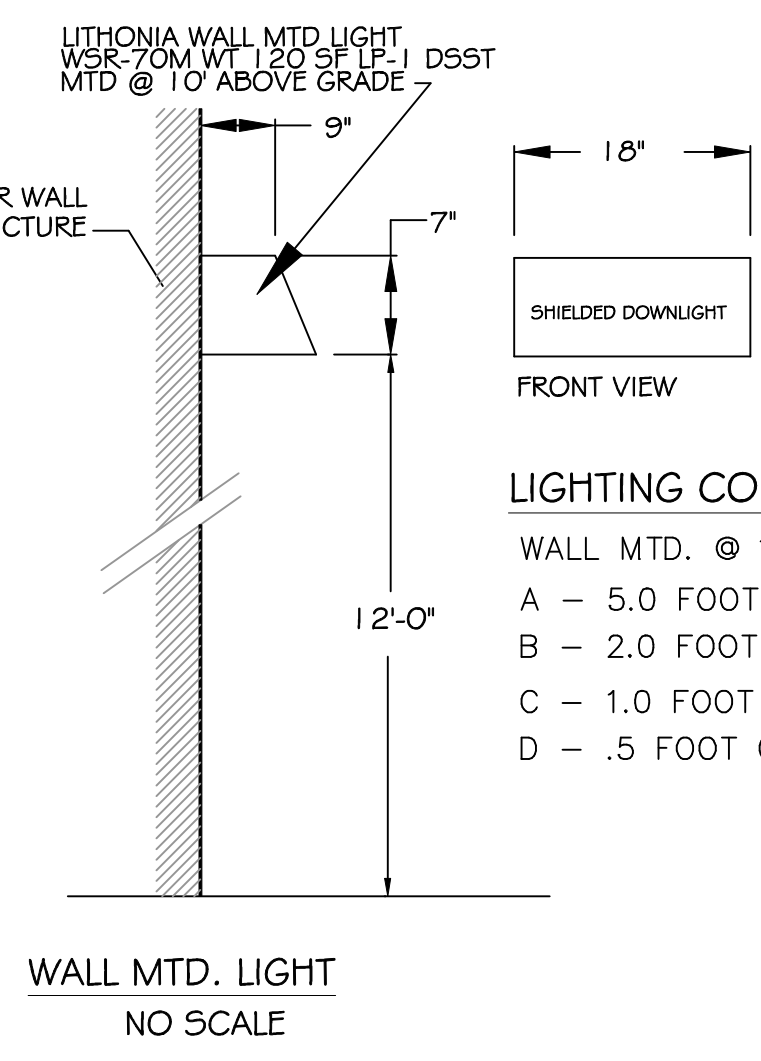
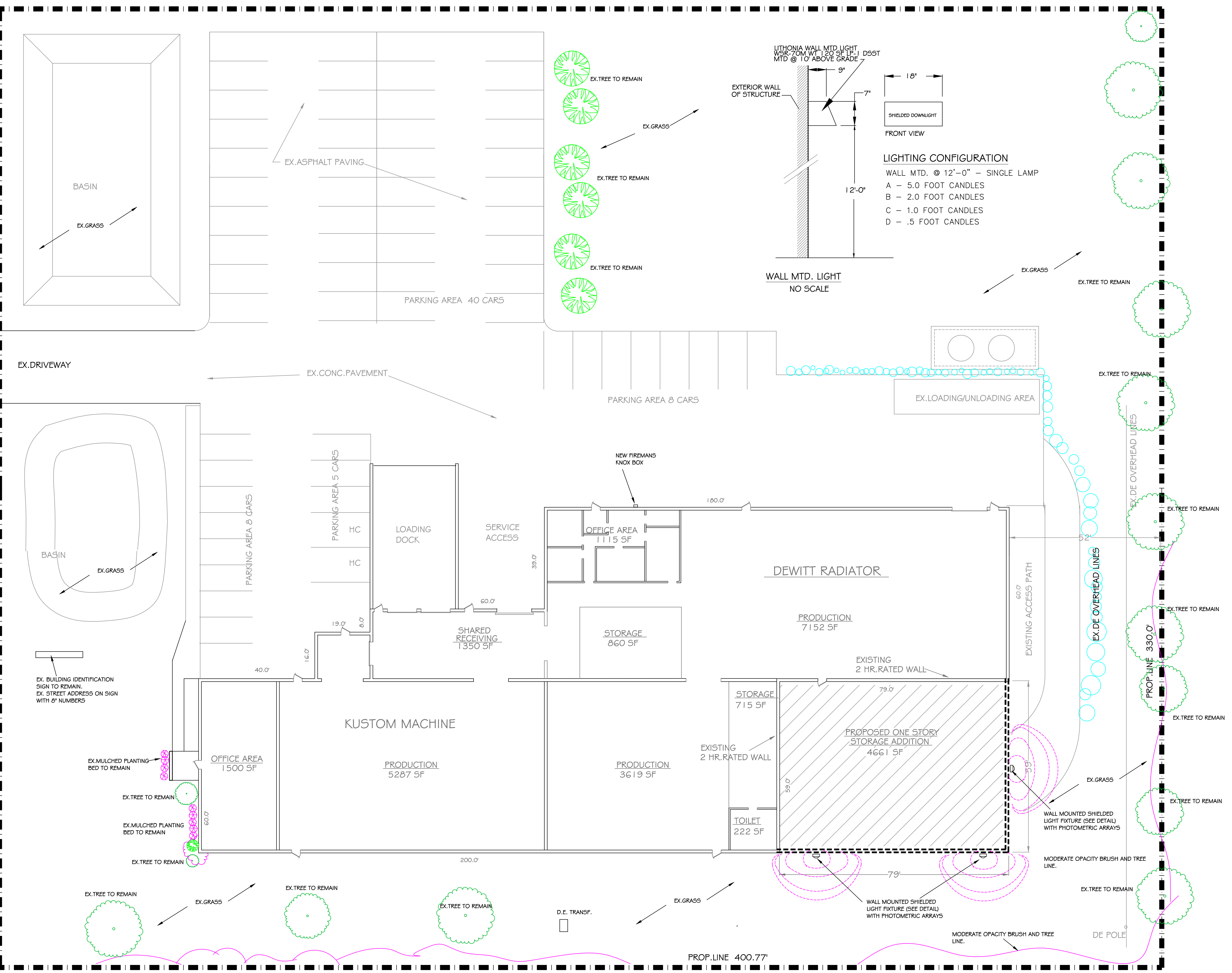
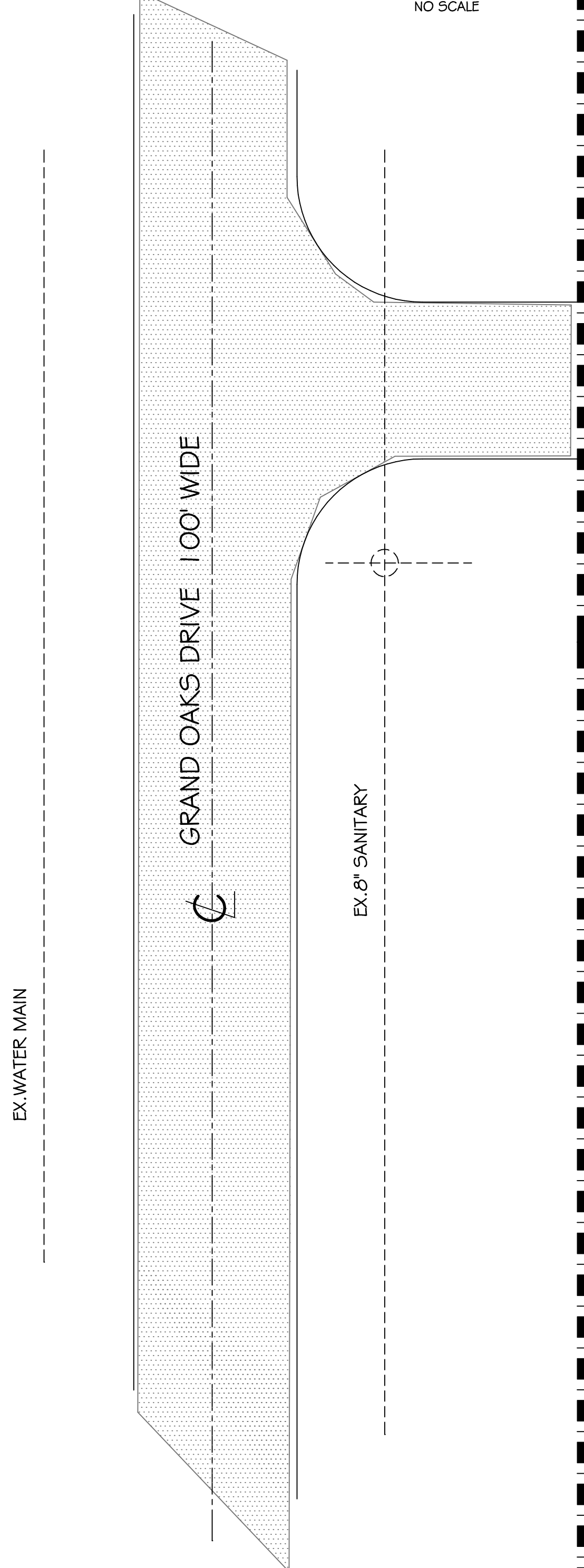
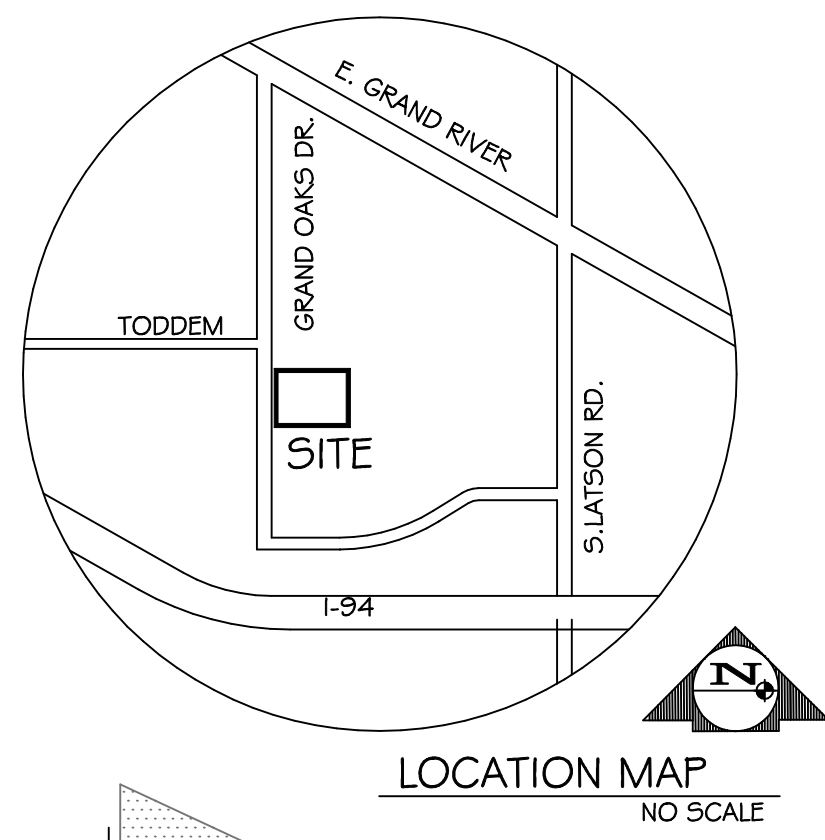
SCALE 1/16" = 1'-0"



SURVEYOR: ANC ENGINEERING INC.
5111 PONTIAC TRAIL
WIXOM, MICHIGAN 48393

OWNER: DEWITT RADIATOR
C/O MR. TOM DEWITT
1275 GRAND OAKS DRIVE
HOWELL, MICHIGAN 48843

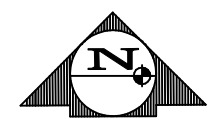
DATE 12-11-14	ISSUE/REVISIONS
JOB NO.	DEWITT RADIATOR REMODELING 1275 GRAND OAKS DRIVE HOWELL, MICHIGAN 48843
SHEET	John Stewart ARCHITECTS 1645 N. MILFORD RD., MILFORD MICH. 48361 248-685-0978
A ₂	



LIGHTING CONFIGURATION
 WALL MTD. @ 12'-0" - SINGLE LAMP
 A - 5.0 FOOT CANDLES
 B - 2.0 FOOT CANDLES
 C - 1.0 FOOT CANDLES
 D - .5 FOOT CANDLES

OWNER: DEWITT RADIATOR
 C/O MR. TOM DEWITT
 1275 GRAND OAKS DRIVE
 HOWELL, MICHIGAN 48843

SURVEYOR: ANC ENGINEERING INC.
 5111 PONTIAC TRAIL
 WIXOM, MICHIGAN 48393



LANDSCAPE/LIGHTING PLAN

SCALE 1/16" = 1'-0"



DATE
12-23-14

ISSUE/REVISIONS

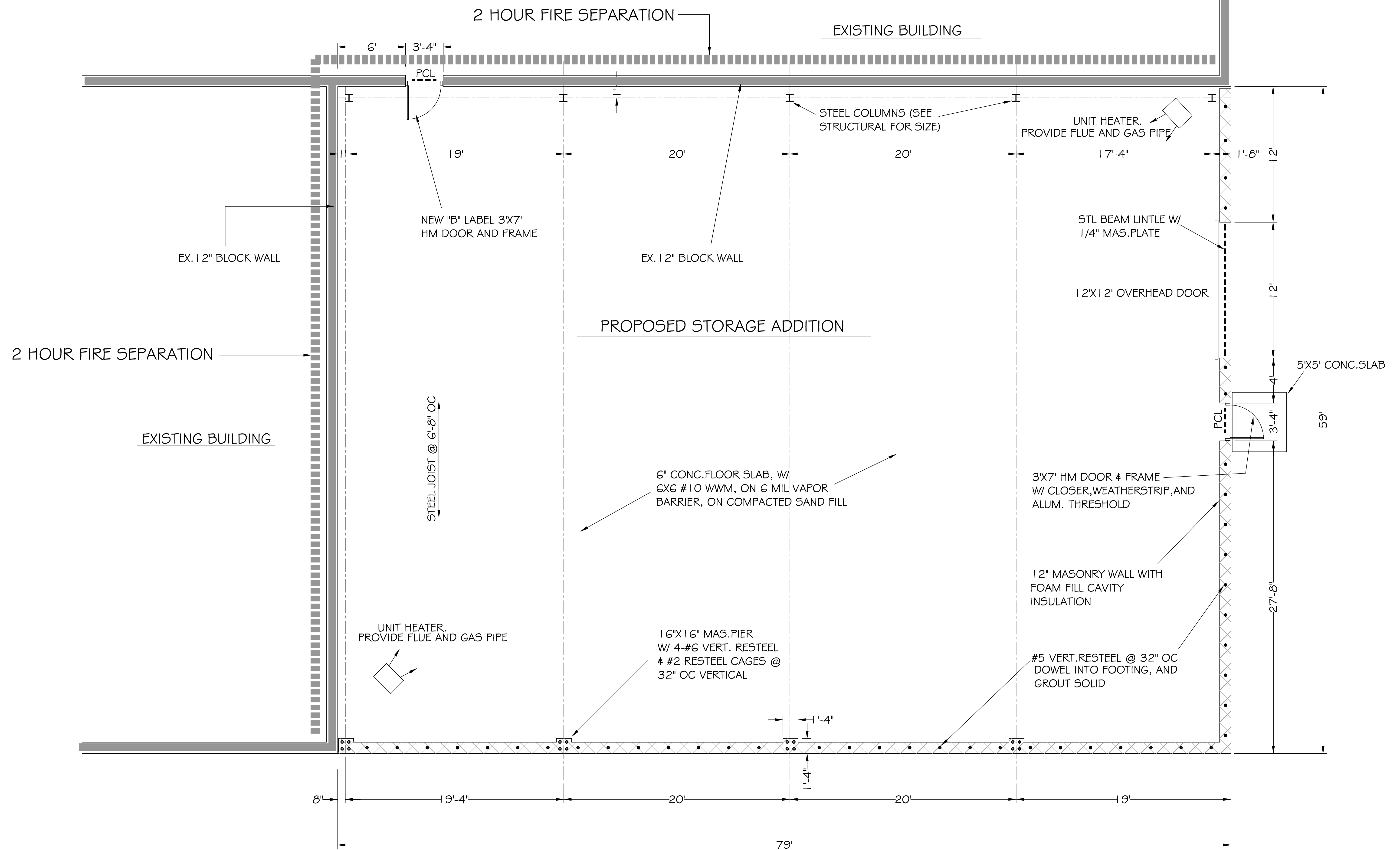
DEWITT RADIATOR REMODELING
 1275 GRAND OAKS DRIVE
 HOWELL, MICHIGAN 48843

248-685-0978

John Stewart
 ARCHITECTS
 1645 N. MILFORD RD., MILFORD MICH. 48361

JOB NO.

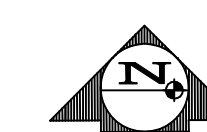
SHEET
A-3



CONSTRUCTION INFORMATION

2012 MICHIGAN BUILDING CODE

BUILDING CLASSIFICATION	F-1	FIRE RESISTANCE RATING REQUIREMENT FOR 2-B	
CONSTRUCTION TYPE	2-B	BEARING WALLS (INTERIOR/EXTERIOR)	0 HR
ALLOWABLE HEIGHT	2 - STORY 55 FT	NON BEARING WALLS	0 HR
PROPOSED HEIGHT	1 - STORY 21 FT	ROOF CONSTRUCTION	0 HR
ALLOWABLE AREA	15,500 SF		
PROPOSED ADDITION AREA	4,661 SF		



FLOOR PLAN

SCALE 1/4" = 1'-0"

DATE
11-19-14

ISSUE/REVISIONS

DEWITT RADIATOR REMODELING

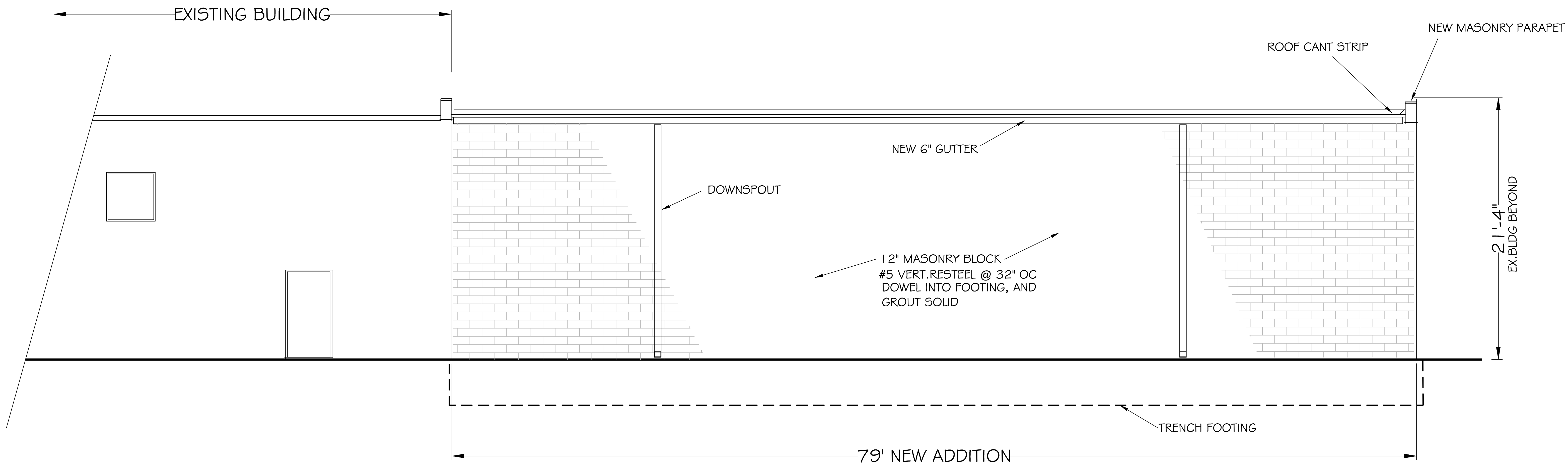
1275 GRAND OAKS DRIVE
HOWELL, MICHIGAN 48843

John Stewart
ARCHITECTS

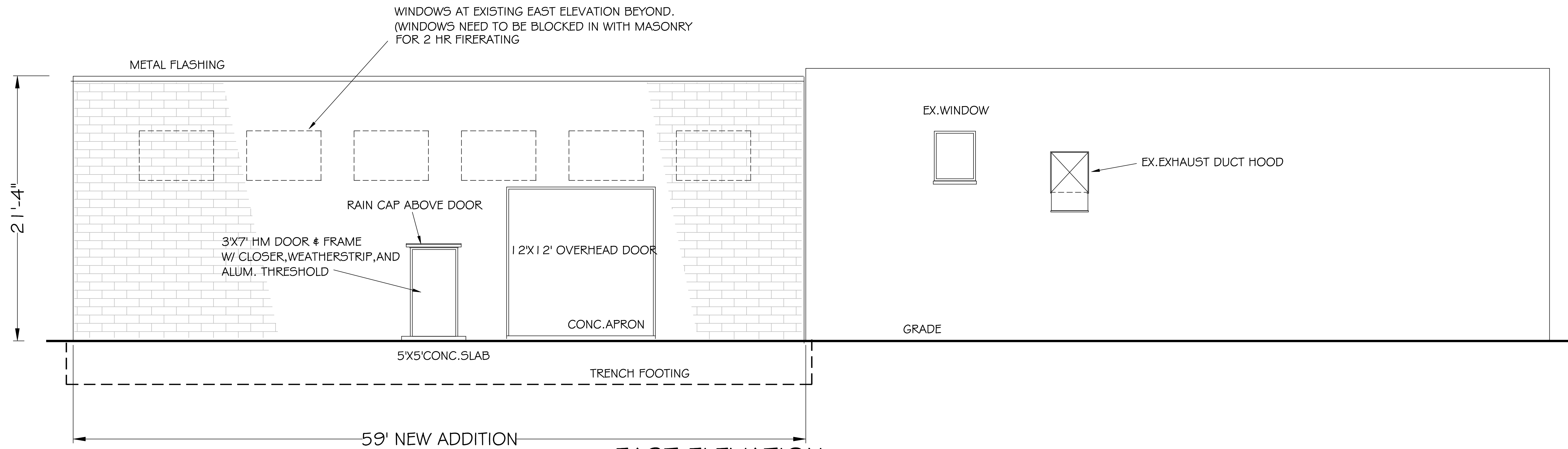
1645 N. MILFORD RD., MILFORD MICH. 48361
248-665-0978

JOB NO.

SHEET **A-4**



SOUTH ELEVATION
SCALE 1/4" = 1'-0"



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

DATE 11-19-14
ISSUE/REVISIONS
DEWITT RADIATOR REMODELING 1275 GRAND OAKS DRIVE HOWELL, MICHIGAN 48843
John Stewart ARCHITECTS 1645 N. MILFORD RD., MILFORD MICH. 48361 248-685-0978
JOB NO.
SHEET A-5



GENOA CHARTER TOWNSHIP
Application for Site Plan Review

GENOA TOWNSHIP
DEC 01 2014

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: Jim Blair, 10050 Innovation Dr., Suite 100, Dayton, OH 45342

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

OWNER'S NAME & ADDRESS: GCG Howell, Ltd., 10050 Innovation Dr., Suite 100, Dayton, OH 45342

SITE ADDRESS: 3950 E Grand River Ave, Howell, MI PARCEL #(s): 11-05-400-047

APPLICANT PHONE: 937-424-3904 OWNER PHONE: 937-434-7218

OWNER EMAIL: jblair@rgproperties.com

LOCATION AND BRIEF DESCRIPTION OF SITE: Lot 4 of the Livingston Commons shopping center

BRIEF STATEMENT OF PROPOSED USE: redevelopment of existing outparcel for a new multi-tenant retail building.

THE FOLLOWING BUILDINGS ARE PROPOSED: 12,000 SF of mutli-tenant retail

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

BY: [Signature]

ADDRESS: 10050 Innovation Dr., Suite 100, Dayton, OH 45342

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

1.) Jim Blair of RG Properties, Inc. at jblair@rgproperties.com
Name Business Affiliation E-mail Address

FEE EXCEEDANCE AGREEMENT

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

SIGNATURE:  DATE: 11/20/14

PRINT NAME: Jim Blair PHONE: 937-424-3904

ADDRESS: 10050 Innovation Dr., Suite 100, Dayton, OH 45342



February 4, 2015

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
Subject:	Redevelopment of Livingston Commons Lot #4 – Site Plan Review #3
Location:	Southwest corner of Grand River Avenue and Latson Road
Zoning:	NR-PUD Non-Residential Planned Unit Development District

Dear Commissioners:

At the Township's request, we have reviewed the revised site plan (dated 1/22/15) proposing a new multi-tenant commercial building, including a drive-through restaurant, for the 2.03-acre site currently occupied by a Bennigan's restaurant.

The site is located at the southwest corner of Grand River Avenue and Latson Road within Phase I of the Livingston Commons PUD, which is zoned NR-PUD. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance.

A. Summary

1. We suggest placement of the Township entranceway feature at the northwest corner of the Latson/Grand Oaks intersection.
2. There are several proposed amendments to the PUD Agreement, including the potential allowance for multiple drive-through restaurants, a double row of parking in the front yard of Lot #4 and a payment to the Township for installation and maintenance of the Township entranceway feature.
3. The applicant requests that side yard parking setbacks be waived per Section 14.06.11.
4. The Planning Commission has approval authority over the building elevations, including materials and colors. In our opinion, the building design has been improved from the previous submittals.
5. There is a minor discrepancy on the landscape plan that must be corrected.
6. Each tenant must obtain a permit prior to installation of any signage.
7. We recommend the Township require details of typical outdoor patio elements at such time as each tenant seeks to use the outdoor dining spaces.
8. We encourage inclusion of the Township identification sign/feature near the Grand River/Latson intersection.

B. Proposal

The applicant requests site plan review/approval for a new 12,000 square foot commercial building with space for up to 5 tenants. The largest tenant space is intended for use as a drive through restaurant.

Drive through restaurants would typically require special land use approval; however, based on the proposed amendments to the PUD Agreement, one drive through restaurant would be permitted on Lot #4 (although others in the future would require special land use approval). Nonetheless, we have reviewed the drive through component of the project for compliance with the use conditions of Section 7.02.02(j).



Aerial view of site and surroundings (looking north)

C. PUD Agreement

The submittal includes proposed amendments to the existing PUD Agreement for Livingston Commons Phase I. Proposed amendments include:

- Inclusion of the “Red Olive” site into the PUD.
- Allowance for 1 drive-through restaurant on Lot #4 with the potential for future drive through restaurants with special land use approval, even if they are within 500 feet of each other.
- Allowance for the “Red Olive” site to maintain access to Grand River with a right-in/right-out limitation.
- Allowance for one double row of parking in front of a multi-tenant building on Lot #4.
- Removal of the applicant’s obligation for an entranceway landmark near the interchange in lieu of a monetary payment for the Township to design, install and maintain an identification sign on Lot A1.

Our comments are as follows:

- The Red Olive project was reviewed separately. The Commission put forth a favorable recommendation for its inclusion in the PUD.
- Retention of the Red Olive driveway/easement was discussed at the previous Commission meeting.
- As was previously discussed, the double row of parking in the front yard prevents the building from being situated closer to the intersection.
- Understanding the constraints presented by the interchange design, some modification from the original concept is likely warranted. However, we suggest the landmark feature be located nearer the intersection of Latson and Grand Oaks. Based on discussion with staff and the Township Engineer, the northwest corner of this intersection seems like a more logical location that can reasonably be accommodated without disruption to the developable area of the site.
- We defer to the Township Attorney for any comment on the payment proposal related to the Township entranceway feature.

D. Use Conditions (Drive-through Restaurant)

Section 7.02.02(j) provides the following conditions for drive-through restaurants:

- 1. Principal and accessory buildings shall be setback fifty (50) feet from any adjacent public right of way line or property line.**

This standard is met.

- 2. The establishment of a new drive-through restaurant shall require the lot be separated a minimum of five hundred (500) feet from any other lot containing a drive-through restaurant.**

This standard is met.

- 3. Only one (1) access shall be provided onto any street.**

Lot #4 does not have direct access to either Grand River Avenue or Latson Road. Vehicular access to this part of the development will be via the existing interior service drive, which provides access to both public roadways.

- 4. Such restaurants constructed adjacent to other commercial developments shall have a direct vehicular access connection where possible.**

The site plan includes internal access points to the remainder of the Livingston Commons development.

E. Site Plan Review

- 1. Dimensional Requirements.** As described in the table below, the proposal complies with the dimensional standards for this PUD:

District	Lot Size		Minimum Setbacks (feet)				Max. Height	Lot Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking		
NR-PUD	1	150	70	15	50	20 front 10 side/rear	35	35% building 75% impervious
Proposal	2.03	270 (Latson)	101.3 (Grand River) 71.3 (Latson)	74.6 (NW) 80.4 (S)	60 (S)	20 front 0 side* 22 rear	28.3	13.6% building 72.1% impervious

* The applicant seeks Planning Commission approval in accordance with Section 14.06.11, which allows modification to side and rear yard parking setbacks where there is shared access.

- 2. Building Materials and Design.** The proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission.

Materials include quick brick, masonry ground face block, wood tile and EIFS, while colors include brown, gray and off-white. We request the applicant present material and color samples to the Commission for their consideration.

As discussed at the previous Commission meeting, the amount of EIFS on the front façade has been greatly reduced. Although calculations are not provided, we estimate the proposed building is compliant with the requirement for at least 80% natural materials (per the PUD Agreement). Additionally, the parapet/cornice has been wrapped around the building, providing a much improved “rear” elevation.

- 3. Parking.** As outlined in the table on Sheet C-2.0, 119 spaces are required for the proposed multi-tenant building. Additionally, given the nature of the uses, 12 RV spaces, 3 waiting spaces and 10 stacking spaces are also required.

There are 78 spaces proposed within the confines of Lot #4, as well as portions of the 12 RV spaces, the 3 waiting spaces and the 10 stacking spaces. An additional 84 spaces are available via shared parking with the reconfigured lots west and south of Lot #4.

The parking spaces and drive aisles meet or exceed the dimensional standards of Section 14.06 and a detail on Sheet C-2.1 identifies the use of looped (double striped) spaces.

- 4. Pedestrian Circulation.** The plan identifies the existing sidewalks along Grand River and Latson with a connection proposed between the public sidewalk and building. Sidewalks are also proposed around the building and along the Lot #4 side of the existing interior service drive.

- 5. Vehicular Circulation.** As previously noted, Lot #4 does not have direct vehicular access to either roadway. Instead, access is provided at 2 points to the existing internal service drive.

The reconfigured waste receptacle in the southeast corner should reduce any potential traffic conflicts at the rear of the building. There is still the chance that refuse removal at either dumpster area could briefly impact circulation; however, the applicant previously stated they will coordinate refuse removal during off peak drive-through times.

- 6. Loading.** The plan identifies the 2 required loading spaces at the rear of the building.

- 7. Landscaping.** We have reviewed the landscape plan as follows:

Location	Requirements	Proposed	Comments
Front yard greenbelt (Grand River & Latson)	17 canopy trees 17 evergreen trees 67 shrubs 20-foot width	18 canopy trees 18 evergreen trees 72 shrubs 20-foot width (minimum)	Requirements met
Parking lot	12 canopy trees 1,210 SF landscaped area Hedgerow	12 canopy trees 4,161 SF landscaped area Hedgerow	Requirements met

Our only additional comment is a discrepancy in the number of Colorado Blue Spruce between the plan (13) and table (23) that must be corrected on Sheet C-5.0.

- 8. Waste Receptacle and Enclosure.** The project includes 2 new waste receptacle areas. Section 12.04 requires a rear yard or non-required side yard location, unless otherwise approved by the Planning Commission. Both of the proposed receptacles comply with this standard.

Details on Sheet C-2.3 identify the required concrete base pad and a masonry enclosure, which will match materials used on the building.

- 9. Exterior Lighting.** The submittal includes a lighting plan (Sheet C-6.0), which proposes the installation of 3 new light poles, 4 new light fixtures on existing poles and 12 wall mounted fixtures. The details and photometric readings on Sheets C-6.0 and C-6.1 are all in accordance with the requirements of Section 12.03.

- 10. Signs.** In total, the submittal includes 2 monument signs (existing structures with new sign faces added) and 10 wall signs (2 for each unit). Two menu boards are also shown on the site plan. The Ordinance allows up to 2 menu boards with a maximum size of 16 square feet per board.

Given the site's presence as a corner lot, 2 wall signs are permitted for each business and the Planning Commission may permit 2 monument signs.

The revised submittal includes a note that tenants in the end units will have the choice for 2 out of 3 potential wall sign locations, as was requested at the previous Commission meeting.

Information on sign sizes is needed to confirm compliance with the dimensional standards of Article 16; however, the applicant previously stated that it will be each tenant's responsibility to obtain approval and a permit prior to sign installation.

11. Impact Assessment. The initial submittal included an Impact Assessment (dated 12/1/14). In summary, the Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

12. Additional Considerations. As was discussed at the previous Planning Commission meeting, each tenant utilizing the outdoor dining patios will be responsible for furnishings. We recommend the Township require that details of typical elements (tables, chairs, umbrellas, trash receptacles, fencing, etc.) be submitted for review/approval prior to installation and/or use of these areas.

Additionally, the Township identification signage near the intersection of Grand River and Latson has been removed from the plans and replaced with a note only for a possible future flagpole. We suggest this feature be retained in the development proposal, as was previously discussed.

Should you have any questions concerning this matter, please do not hesitate to contact our office. We can be reached by phone at (248) 586-0505, or via e-mail at borden@lslplanning.com and foster@lslplanning.com.

Sincerely,

LSL PLANNING, INC.



Brian V. Borden, AICP
Principal Planner



Michelle Foster
Project Planner



February 2, 2015

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

Re: Livingston Commons Lot 4 Redevelopment Site Plan Review # 3

Dear Ms. Van Marter:

We have reviewed the resubmitted site plan documents prepared by Wade Trim for the Livingston Commons Lot 4 Redevelopment dated January 22, 2015. The site is on the southwest corner of the intersection of Grand River Avenue and Latson Road. The petitioner is planning to demolish the existing Bennigan's Restaurant and construct a 12,000 sft multi-tenant retail building.

The revised exhibit B drawing shows the Township identification sign on the adjacent parcel near the existing bank. This doesn't appear to be a logical place for the Township entrance sign. The original concept was to have it at the Latson I-96 interchange however grades do not support this location. Our recommendation is to locate the entrance sign on the northwest corner of Grand Oaks and Latson just beyond the clear vision set aside area. It can be located within the set back of the lot and thereby not impact the developable area of the parcel. The aesthetics of the sign should be reviewed by the Township Planner.

The petitioner corrected the previous site plan issue with the proposed fire hydrant that was shown coming off Latson Road. Provided that the Fire Department is satisfied with the revised site configuration after removal of that proposed hydrant, we have no engineering related objections to approval of the site plan.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Charles Christy', written in a cursive style.

CHARLES CHRISTY

copy: Charles Christy, P.E., Wade Trim

A handwritten signature in blue ink, appearing to read 'Joseph C. Swartz', written in a cursive style.

Tetra Tech

401 South Washington Square, Suite 100, Lansing, MI 48933
Tel 517.316.3930 Fax 517.484.8140 www.tetrattech.com



BRIGHTON AREA FIRE AUTHORITY

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

January 26, 2015

Kelly VanMarter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Livingston Commons Shopping Center
3950 E. Grand River (Lot 4 redevelopment)
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 January 23, 2015 and the drawings are dated January 22, 2015. The project is based on the demolition of an existing Restaurant building and the construction of a new mixed-use building. The building is planned as new 12,000 square foot structure with assembly and mercantile spaces. The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition.

The plans as submitted appear to be in general conformity with the Townships adopted fire prevention code. It is suggested that the applicant consider the following Specific Comment.

1. The utility plan shows the use of the existing 4" fire protection water main feed. The design team should consider consulting with a fire protection designer to confirm that this lead will supply the necessary water supplies to meet the system design. The proposed mercantile (retail) occupancies will have a higher demand than the previous restaurant had.

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). The applicant is reminded that the fire authority must review the fire protection systems submittals (sprinkler & alarm) prior to permit issuance by the Building Department and that the authority will also review the building plans for life safety requirements in conjunction with the Building Department.

If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

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

Michael Evans, EFO, CFPS
Deputy Fire Chief



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

MEMORANDUM

TO: Bo Gunlock

FROM: Kelly VanMarter, Assistant Township Manager/Community Development Director

DATE: January 8, 2015

RE: Lot 4 (Bennigan's) Redevelopment Sewer and Water Tap Fees
 3950 E. Grand River (11-05-400-047)

This memo will describe the connection fees required for a new 12,000 sq. ft. multi-tenant building located at 3950 E. Grand River. The connection fees are based on the proposed uses on the site plan dated 12/1/14 revised 12/23/14 as follows:

4,400 sq. ft. sit down restaurant (no liquor) @ 2.4 REU per 1,000 sq. ft. =	10.56 REU
3,228 sq. ft. retail @ 0.20 REU per 1,000 sq. ft. =	0.65 REU
4,372 sq. ft. drive through restaurant @ 7.5 REU per premise =	7.50 REU
TOTAL REU NEW BUILDING =	18.71 REU
Less previously paid by Bennigan's	-16.60 REU
NEW CONNECTION CHARGE =	2.11 REU

Water	2.11 REU @ \$7,900	\$ 16,669.00
Sewer	2.11 REU @ \$7,200	\$ 15,192.00
		Total Due: \$ 31,861.00

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

Connection Fees must be paid at time of land use permit issuance.

A meter package may also need to be purchased including the appropriate sized meter and a MIU (meter interface unit). Should you have any questions please feel free to contact me at 810-227-5225.

COVER SHEET FOR
AMENDMENT TO PLANNED UNIT DEVELOPMENT AGREEMENT
FOR PHASE I AND PHASE II LAND
BETWEEN
RLG HOWELL LLC AND GCG HOWELL LLC
AND
PKJJ, LLC
AND
TOWNSHIP OF GENOA
DATED _____, 2015

Prepared By and After Recording
Return To:
April Ann Jordan
Hedrick & Jordan Co., LPA
100 E. Third Street, Suite 500
Dayton, Ohio 45402
937-228-3889

**STATE OF MICHIGAN
COUNTY OF LIVINGSTON
TOWNSHIP OF GENOA**

AMENDMENT TO PLANNED UNIT DEVELOPMENT AGREEMENT

This Amendment to Planned Unit Development Agreement is made and entered into this ___ day of _____, 2015, by **RLG HOWELL LLC**, a Michigan limited liability company, and **GCG HOWELL LLC**, a Michigan limited liability company, both of 10050 Innovation Drive, Suite 100, Dayton, Ohio 45342 (collectively, "Owner"); **PKJJ, LLC**, a Michigan limited liability company, of _____ ("PKJJ"); and **GENOA CHARTER TOWNSHIP**, a Michigan municipal corporation, 2911 Dorr Road, Brighton, Michigan 48116 ("Township").

RECITATIONS:

Owner possesses fee title to certain real property located in Genoa Charter Township, Livingston County, State of Michigan, described in that certain Planned Unit Development Agreement dated April 6, 1999, and recorded at Liber 2609, Page 0205 of the records of Livingston County, Michigan (the "Phase I PUD").

Subsequent to the Phase I PUD, Owner and Township entered into that certain Planned Unit Development Agreement for Phase II Land dated August 17, 2009, and recorded at 200R-023916 of the records of Livingston County, Michigan (the "Phase II PUD"). The Phase I PUD applied to Phase I and Phase II land described therein, and the Phase II PUD modified provisions pertaining to Phase II.

In 2011 Owner and Township considered a further Amendment to the Phase I PUD Agreement that contemplated the reconfiguration of Lot #4 into two sub-lots; provided however the amendment was never finalized or executed, and as such is of no force or effect.

Pursuant to Article IV, Internal Road Network, subsection 4.1, the Phase I PUD contemplated that the property formerly owned by the Prairie House Restaurant and now owned by PKJJ (the "Red Olive Parcel") described on Exhibit A attached hereto could benefit from an easement established by Owner over and across the Red Olive Parcel.

Owner and PKJJ have agreed to amend Owner's existing Declaration of Restrictions and Easements for Outlots dated September 2, 1999, recorded September 10, 1999, at Liber 2652, Page 0082 of the records of Livingston County, Michigan (the "Declaration") to provide the Red Olive Parcel with access over the access ways on the adjacent lands of Owner and to subject the Red Olive Parcel to the terms of the Declaration.

Further, Owner and the Township have agreed to amend the provisions of the Phase I PUD and Phase II PUD regarding pylon signage and the construction of a Township identification sign.

In connection therewith, Owner and PKJJ wish to amend the Phase I PUD and the Phase II PUD to subject the Red Olive Parcel thereto; and to modify the signage provisions, all pursuant to the terms contained herein.

NOW, THEREFORE, Owner and PKJJ, in consideration of the mutual promises contained in this Agreement, hereby agree as follows:

1. Article I, General Terms of Agreement of the Phase I PUD, shall be amended to add the following additional subsection:

1.7 The Red Olive Parcel shall be subject to the terms and conditions of the Phase I PUD, subject to the provisions of this Amendment.

2. Article II, Land Use Authorization, subsection 2.1 of the Phase I PUD, shall be amended to delete the sentence reading “Further, only one drive through restaurant facility shall be permitted and such use shall only be permitted on Lot #1.” The following shall be placed in its stead:

One drive through restaurant facility may be allowed on Lot #4. Additional drive through restaurant facilities may be allowed on all parcels within five hundred feet (500’) of each other, subject to Special Land Use approval by the Township, including the Special Use Requirements as outlined in the Special Land Use Regulations as they may exist from time to time. The Township and Owner agree that this use shall be considered upon providing that the stacking or queuing of such drive through restaurant facilities shall be sufficient to accommodate expected peak volumes and to minimize conflict with the internal road network located on the Property, as well as any public roadways. Provided, however, no drive-thru shall be permitted on the Red Olive Parcel.

3. Article IV, Internal Road Network of the Phase I PUD, shall be amended to add the following additional sentence:

Notwithstanding anything contained in the Phase I PUD to the contrary, the Red Olive Parcel shall be allowed to maintain access to the Grand River Avenue existing curb cut, provide such access shall be limited to “right-in, right-out” movement.

4. Article VI, Site Improvements, subsection 6.5(a) shall be amended to add the following additional sentence:

Notwithstanding anything contained herein to the contrary, in the event a multi tenant building is constructed on Lot #4, then one double row of parking may be installed in front of the building (also called the “front yard”) on Lot #4.

5. Article VI, Site Improvements, subsection 6.5(b) of the Phase I PUD, and subsection 6.4(B) of the Phase II PUD, shall each be deleted, it being acknowledged that Owner shall have no obligation to the Township to provide an entranceway landmark pursuant to the Phase I PUD or the Phase II PUD because such location or locations are not available for such signage. The following shall be inserted instead:

The Owner shall pay to the Township the sum of Twenty-Five Thousand and 00/100 Dollars (\$25,000.00) within forty-five (45) days after building permits are issued for the new improvements to be constructed on Lot #4. In consideration of such payment, Owner shall have no obligation to install a Township identification sign and instead the Township shall install and maintain the Township identification sign at the Township's expense. The Township identification sign shall be installed within the twenty foot (20') set back on Owner's Lot A and shall be constructed as depicted on Exhibit B attached hereto. The Township identification sign shall be a maximum of six feet (6') in height and shall be oriented so as to be most visible from Latson Road. Easements for such construction and maintenance of a Township Identification sign shall be granted and accepted at the time that the Twenty-Five Thousand and 00/100 dollars (\$25,000.00) is paid to the Township.

6. Article VII, Design of Building and Signs, subsection 7.2, Signage, shall be amended to delete the fourth sentence regarding the highway signs and the following sentences shall be placed in its stead:

There shall be permitted one (1) pylon sign of a maximum of three hundred (300) square feet, not to exceed 42' in height, advertising users in both Phase I and Phase II. Additionally, the owner of the Red Olive Parcel may install a monument sign abutting Grand River Avenue and other signs as may be permitted under the Declaration.

APPROVED by Owner and PKJJ on this ____ day of _____, 2015.

WITNESSES:

RLG HOWELL LLC, a Michigan limited liability company

By: Randall L. Gunlock, Trustee under the Amended Revocable Trust Agreement
Dated May 30, 2013, Randall L. Gunlock, Grantor, Managing Member

By: Randall L. Gunlock
Its: Trustee

GCG HOWELL LLC, a Michigan limited liability company

By: Glenn C. Gunlock
Its: Managing Member

PKJJ, LLC, a Michigan limited liability company

By: _____
Its: _____

STATE OF)
) SS:
COUNTY OF)

The foregoing instrument was acknowledged before me the ___ day of _____, 2015, by Randall L. Gunlock, Trustee under the Amended Revocable Trust Agreement Dated May 30, 2013, Randall L. Gunlock, Grantor, Managing Member of RLG Howell LLC, a Michigan limited liability company, on behalf of the company.

Notary Public

STATE OF)
) SS:
COUNTY OF)

The foregoing instrument was acknowledged before me the ___ day of _____, 2015, by Glenn C. Gunlock, Managing Member of GCG Howell LLC, a Michigan limited liability company, on behalf of the company.

Notary Public

STATE OF)

COUNTY OF) SS:
)

The foregoing instrument was acknowledged before me the ____ day of _____, 2015, by _____, the _____ of PKJJ, LLC, a Michigan limited liability company, on behalf of the company.

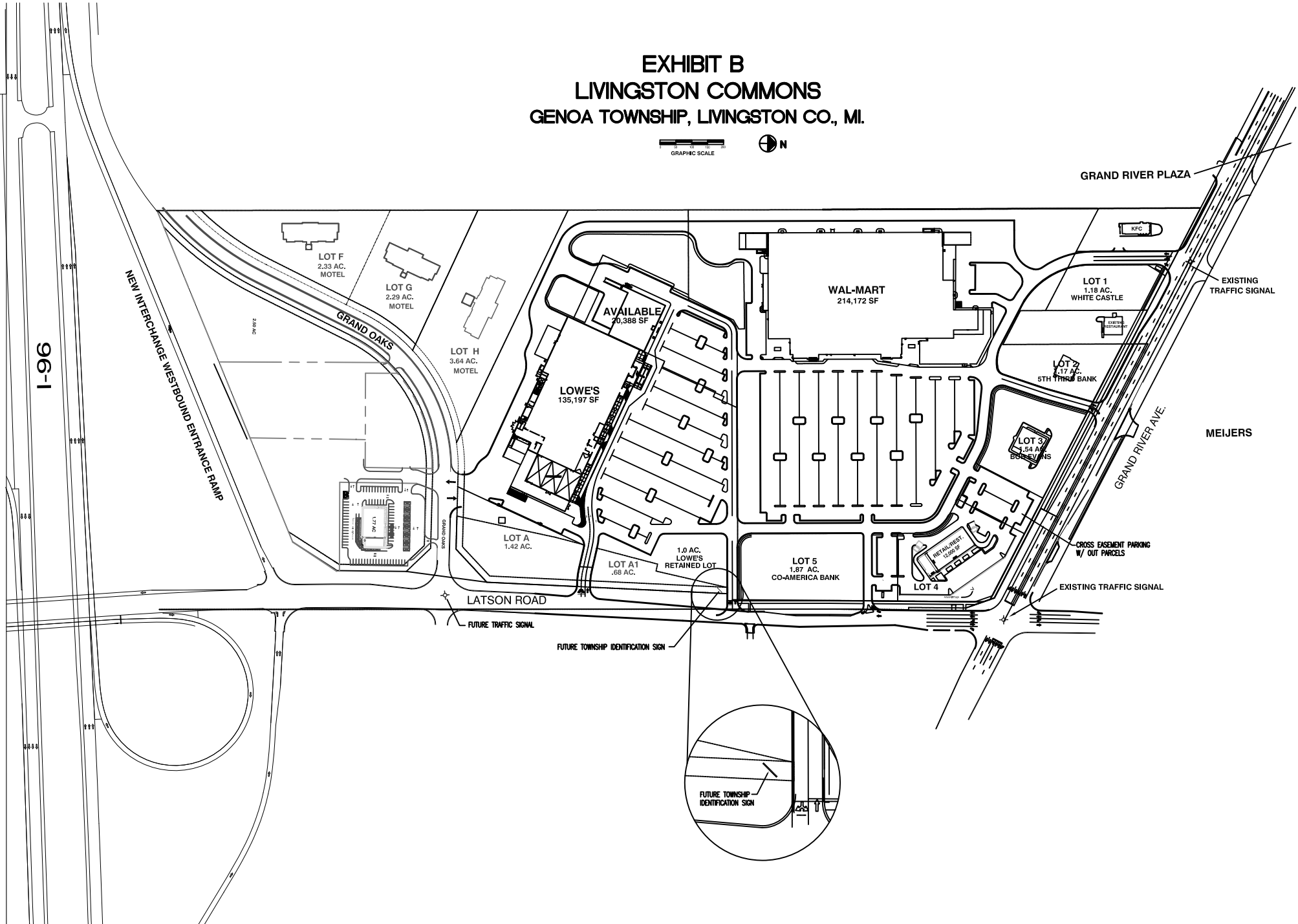
Notary Public

EXHIBIT A

LEGAL DESCRIPTION OF RED OLIVE PARCEL

EXHIBIT B
TOWNSHIP IDENTIFICATION SIGN

EXHIBIT B
LIVINGSTON COMMONS
GENOA TOWNSHIP, LIVINGSTON CO., MI.



Impact Assessment
Redevelopment of Lot 4
Livingston Commons Shopping Center
Genoa Township, Michigan

December 1, 2014

Prepared for:
RG Properties
10050 Innovation Drive, Suite 100
Dayton, OH 45342

Prepared by:
Wade Trim, Inc.
555 South Saginaw Street, Suite 201
Flint, MI 48502
Charles J. Christy, PE MI #39122



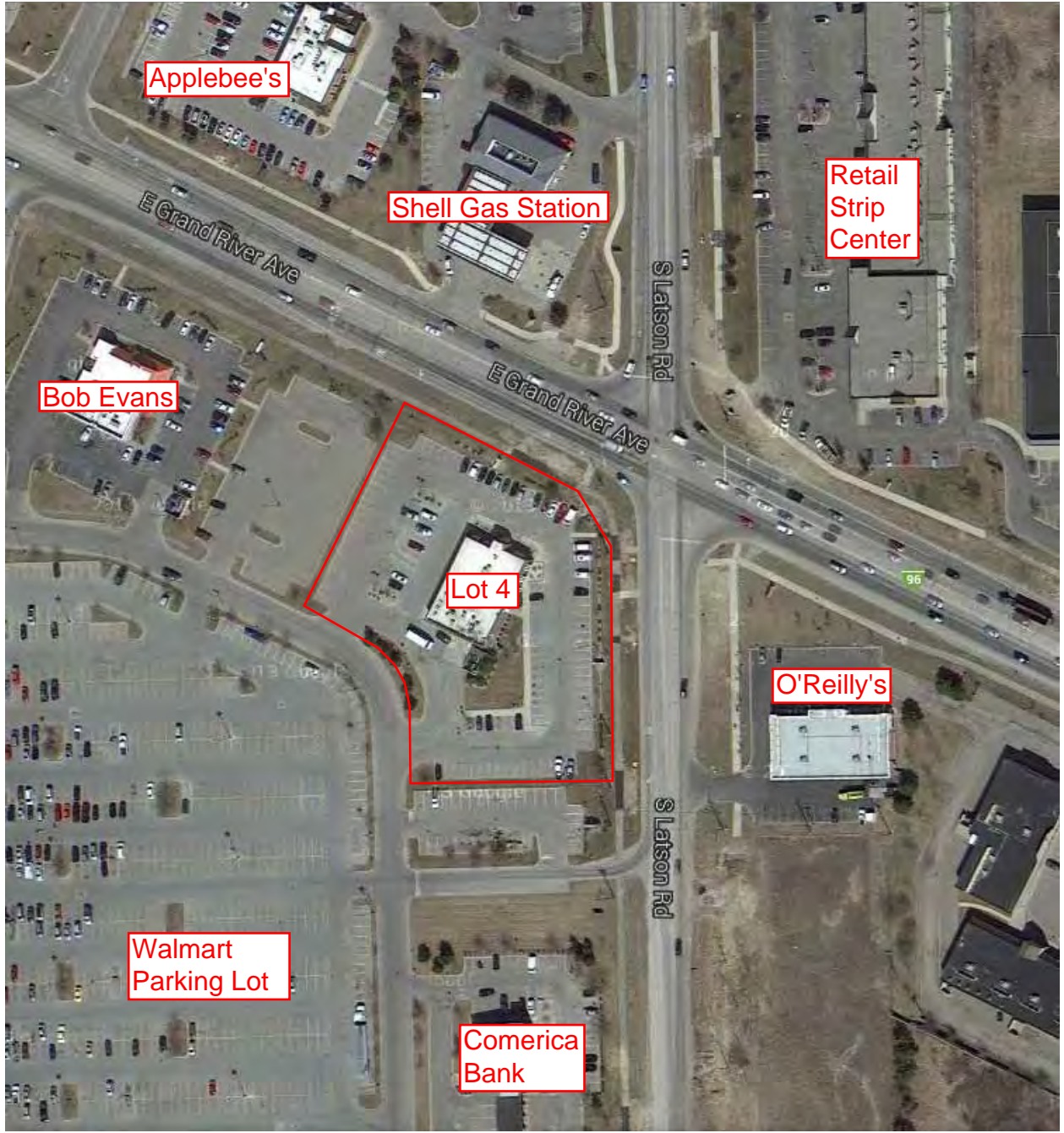
Written Impact Assessment
for
Redevelopment of Lot 4
Livingston Commons

18.07.01 **Preparer** - This impact assessment is prepared and assembled by Charles J. Christy, PE. Mr. Christy has been licensed as a professional engineer in the State of Michigan since 1993. During the past 21 years, his experience has primarily focused on land development with commercial, industrial, and residential projects. Mr. Christy has completed numerous site plans, special use permits, and planned unit developments across the State.

18.07.02 **Location** - The project is located at Livingston Commons Shopping Center, 3950 East Grand River Avenue, Howell, MI. The site is currently developed with a Bennigan's restaurant on approximately 2.03 acres (88,427sft). The site is located at the southwest corner of the intersection of East Grand River Avenue and South Latson Road and is part of a larger overall development which includes WalMart, Lowes, Staples, and other out parcels.

Adjacent properties are occupied by Bob Evans (to the west), O'Reilly Auto Parts (east across Latson), Comerica Bank (to the south), Shell Gas Station (north across E. Grand River), Applebee's (across E Grand River to the west), and a small strip center at the north east quadrant of E Grand River and Latson.

An aerial photograph of the project area is included on the following page.



Applebee's

Shell Gas Station

Retail
Strip
Center

Bob Evans

Lot 4

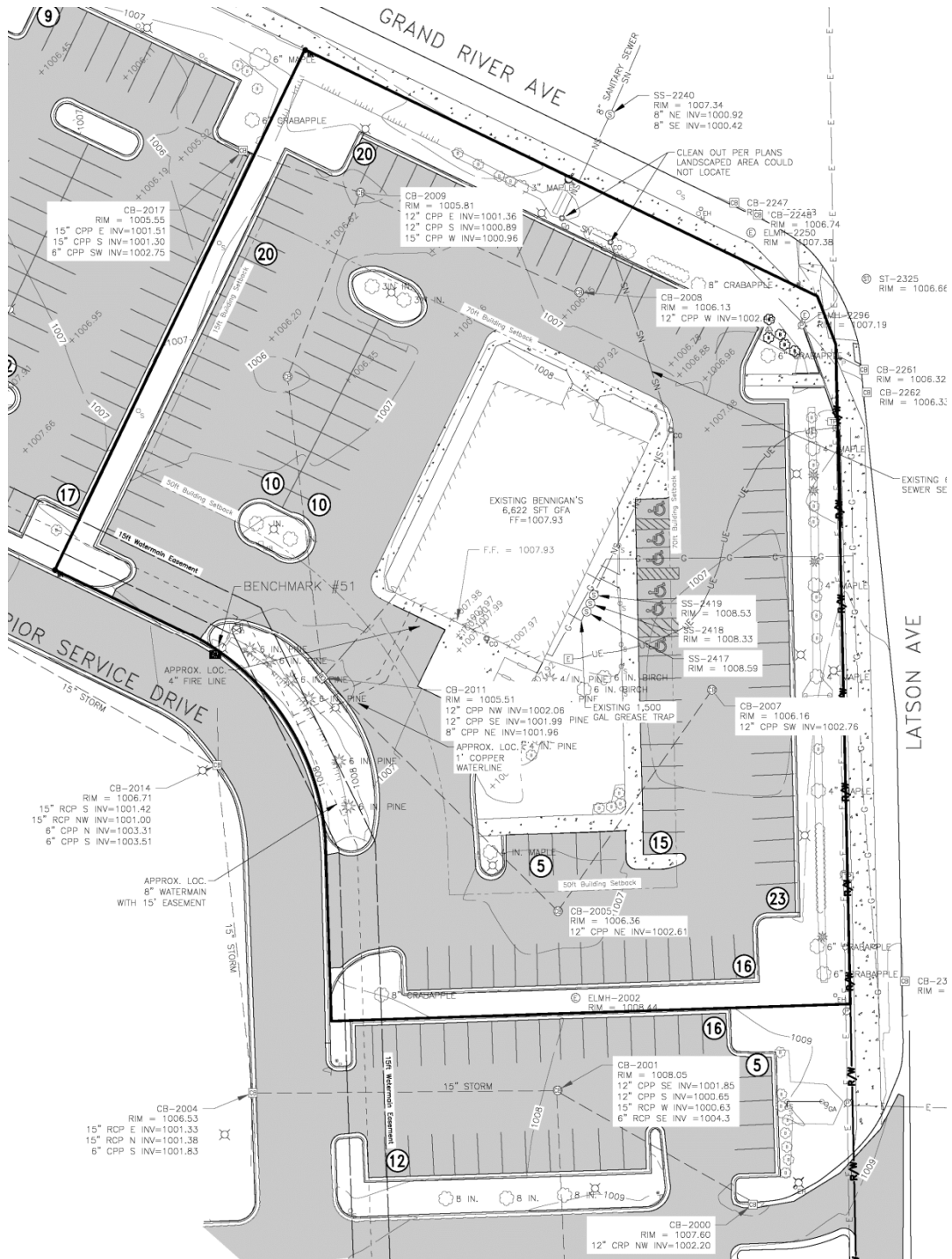
O'Reilly's

Walmart
Parking Lot

Comerica
Bank

18.07.03

Impact on natural Features – The site is currently developed with an approximately 6,622sft restaurant, 119 parking space parking lot, storm sewer collection system, sanitary and potable water services, franchise utility services, and landscaping. Please refer to plan Sheet C-0.1 for the existing conditions survey for greater detail. No wetlands are on or adjacent to the site. See below for a snap shot of the existing conditions.



18.07.04

Impact on Stormwater Management – The site is currently approximately 76% impervious and has a series of catch basins and storm sewer pipes to collect surface water runoff. The storm system leaves the site at the northwest corner of the parcel and enters the larger storm water management system for the overall PUD. The overall development, when constructed, has a regional storm water management system consisting of several basins which were designed to manage storm water from all parcels in the PUD.

The proposed redevelopment will be approximately 72% impervious. A majority of the existing catch basins and storm sewer pipe will be retained and utilized to convey storm water runoff after redevelopment, maintaining the existing discharge point from the site. Since the redeveloped site will contain less impervious surfaces due to an increase in landscaping area, the total volume of storm water runoff will be less and the time of concentration will be greater, resulting in a lower peak discharge rate. This being the case, we have not quantified the decrease in runoff or peak discharge rate. We are not proposing any changes to the regional storm water management system (basins).

The proposed work will entail removing some pavement, demolition of the existing building and utilities, and new landscaping. A majority of the existing pavement will remain, including storm structures and pipes. The existing asphalt that is to remain, will be surface milled and overlaid with a new top course. Grading and earthwork, by design, will be kept to a minimum only as required to maintain/re-establish drainage patterns and to allow for the new landscaping.

Managing soil erosion will be accomplished with silt fences, inlet protection, and construction entrance BMP's. Final restoration will consist of asphalt, concrete, lawn and landscaping. Additional detail on the soil erosion control measures can be found in the plan submittal set, Sheets C-7.0 through C-7.3. A soil erosion and sedimentation control permit will be applied for at the Livingston County Drain Commission office.

18.07.05

Impact on Surrounding Land Uses – The surrounding area is developed into retail uses consisting of restaurants, gas service station, and other commercial retail establishments. Both E. Grand River and S. Latson Road are 4 lane roads with a center turn lane and right turn lanes where appropriate. The intersection of E. Grand River and S. Latson Road is signalized with protected left turn lanes.

The proposed redevelopment is a similar use when compared to the existing Bennigan's and the uses on the surrounding properties. Hours of operation will be similar to the surrounding uses. However, Bennigan's is currently not open for breakfast and the proposed development will be open for breakfast. The existing access to the site will remain as currently configured.

The existing lighting on the site will be reconfigured. Several of the light poles will be removed, several of the existing light fixtures will be replaced with lower wattage, and

several new light poles will be strategically located to provide safety and security. Overall, the redevelopment will result in lower lighting intensities.

Dust control will be utilized during the demolition and construction phase to minimize air pollution.

Due to the nature, use, and size of this project, it is not anticipated that the noise levels generated on this site will be greater than the adjacent traffic on E. Grand River and S. Latson Road. Additionally, since this is a retail development, the project will not generate or cause concern with regards to: smoke, airborne solids, odor, vibration, radioactive materials, fire and safety hazards, UST's, or hazardous materials.

18.07.06 Impact on Public Facilities and Services – The proposed use will be nearly double in size as the existing building. The restaurant uses of the proposed building will be approximately 31% larger than the existing use and approximately 3,300sft of retail use will be added to the site.

The increase in use is a fraction of the total square footage of comparable uses in the immediate area. There are other uses in the immediate area that are larger and more susceptible to police action. Although we have not contacted police, fire, or emergency services regarding this project, we conclude that the respective agencies are prepared to respond to the larger uses adjacent to our site, and therefore, have the ability to respond appropriately to incidents on this site.

18.07.07 Impact on Public Utilities – The site is currently serviced by M.H.O.G. for water and sanitary sewer service. An 8-inch water main and hydrants are located along the existing interior service drive. An 8-inch sanitary sewer lead is extended to the site across E. Grand River. The existing sewer service will be extended to the new building and, due to its size, has the capacity to serve the proposed building (an 8-inch pipe at minimum grade has capacity of over 500,000 GPD or 347gpm. A 6-inch pipe at minimum grade has capacity of approximately 400,000 GPD or 277gpm).

Equivalent User Table for proposed building (to be confirmed at building permit application stage).

User	Unit Factor	Qty	Sub-Total
Restaurants (fast food, including drive thru & primary drink service)	7.5 per premise	1 Ea	7.5
Restaurants (meals w/service & dishes)	2.4 per 1,000sft	2,200sft	5.28
Restaurants (take out)	1.0 per 1,000sft	2,200sft	2.2
Retail Stores	0.20 per 1,000sft	3,228sft	0.65
TOTAL			15.63

Based on a REU equivalent of 218 gallons per day, the proposed building would generate 3,407 gallons of sewage per day (15.63 x 218).

The existing water service consists of a potable water lead and 4-inch fire protection main. The existing 4-inch fire protection main will be extended to the new building, providing fire protection through a fully automatic sprinkler system. A new post indicator valve (PIV) will be installed in the 4-inch service near the existing main and a fire department connection (FDC) will be installed on the building.

The existing potable water service connection will be demolished back to the existing main and five (5) new services to the building are proposed.

- 18.07.08 **Storage and Handling of any hazardous Materials** – The proposed use is retail in nature. No hazardous materials will be generated, used, or disposed of on-site.
- 18.07.09 **Traffic Impact Study** – We have completed a Trip Generation Comparison for the redevelopment for Township review. This comparison is included at the end of this Impact Assessment.
- 18.07.10 **Historic and Cultural Resources** – The existing structure is not more than 50 years old.
- 18.07.11 **Special Provisions** – The Owner of Lot 4 has a REA agreement with the other tenants / Owners of the overall PUD development allowing shared use of the: internal drives, drive access to E. Grand River & S. Latson Road, and storm water management system. A copy of this REA is included at the end of this Impact Assessment.
- 18.07.12 **List of Sources** – Google for image in 18.07.02
- 18.07.13 **Previous Impact Assessments** – An impact assessment was previously completed for the PUD. This impact assessment focuses on the redevelopment of Lot 4.

TECHNICAL MEMORANDUM

Livingston Commons Lot 4 Trip Generation Comparison

PREPARED FOR: Kelly VanMarter, AICP/ Genoa Township

PREPARED BY: Aimée L. Giachero, PE/Wade Trim *ALG*

DATE: November 7, 2014

PROJECT TASK: RGP1001.01F Phase 240 Impact Assessment

FILE LOCATION: P:\Aaa1000\Agiachero\Draft\Projects\Livingston Commons\TechMemo.docx

RG Properties is proposing to redevelop the existing Bennigan's Restaurant in the southwest quadrant of Grand River Avenue and Latson Road in Genoa Township. This area is part of the overall Livingston Commons Shopping Center. The redevelopment would consist of two new multi-tenant buildings in place of the existing Bennigan's Restaurant. The overall scope was to determine the difference in trip generation between the existing restaurant use and the proposed redevelopment project to determine the additional trips that would be generated by the multi-tenant use. This memorandum summarizes the expected difference in trip generation.

Existing Trip Generation

Existing trips generated by the Bennigan's Restaurant were estimated based on the Institute of Transportation Engineer's (ITE) report *Trip Generation, Ninth Edition, 2012*. Trip estimates were developed for the existing 6,622 square foot restaurant based on the High Turnover (Sit-Down) Restaurant use, Land Use Code 932. The weekday afternoon peak hour trip generation estimates are shown in Table 1. This Bennigan's Restaurant was not open during the morning peak hour, thus the existing trip generation during the morning peak hour is zero.

Traffic for a restaurant type use consists of new trips, whose sole purpose is the visit to the site, internal or shared trips, and pass-by trips. New Trips are those that are new to the study area and consist of motorists whose primary destination is the restaurant.

A development that contains multiple uses, such as this one, can be expected to have some internal trip sharing. Since this restaurant is part of the Livingston Commons Shopping Center which includes several banks, restaurants, a Wal-Mart Supercenter, a Lowe's, etc., it is expected that some internal trip sharing occurs between uses. A shared trip is one that visits more than one use on the site and thus lessens the overall impact of a multiple use site on the adjacent street system. An internal trip factor of 20% was applied to the site based on ITE's *Trip Generation Handbook*.

Pass-by trips are typically associated with retail uses, as well as gas stations and restaurants. Pass-by trips are comprised of vehicles already traveling on the adjacent roads, which divert

from their original path of travel to visit the development. The ultimate destination of a pass-by trip is directed elsewhere. Pass-by trips were also applied to the existing restaurant use on the site. The pass-by rates were based on ITE’s *Trip Generation Handbook*. Based on information provided, a pass-by rate of 43 percent was applied to the restaurant. As a result, the existing restaurant is estimated to generate a total of 30 trips during the during the afternoon peak hour.

Table 1 Existing Bennigan’s Weekday PM Peak Hour Trip Generation Estimate

Land Use	In	Out	Total
Bennigan’s Restaurant	39	26	65
<i>Less Internal Capture (20%)</i>	-8	-5	-13
Net Trips	31	21	52
<i>Less Pass-by Trips (43%)</i>	-13	-9	-22
New Trips	18	12	30

Proposed Trip Generation

Trip estimates were then developed for the proposed redevelopment of the property to 11,903 square feet of retail and restaurant uses. The redevelopment project is proposed to consist of a 4,300 square foot bread/donut/bagel restaurant with a drive-thru facility, two 2,200 square foot fast-food restaurants without drive-through facilities, and 3,203 square feet of specialty retail uses such as an apparel store, real estate office, cell phone store, florist, mattress store, etc.

Trip estimates were developed for the proposed uses based upon information provided in ITE’s *Trip Generation* and *Trip Generation Handbook*. Trips generated for the specialty retail were based on the Specialty Retail land use, Land Use Code 826. The trip generation potential for the bread/donut/bagel restaurant was developed based on the Bread/Donut/Bagel Shop with Drive Through, Land Use Code 940. Trip generation estimates were developed for the two fast-food restaurants based on Land Use Code 933, Fast-Food Restaurant without Drive-Through. None of the proposed uses are expected to be open during the morning peak hour except for the bread/donut/bagel restaurant.

Traffic for the proposed redevelopment will consist of both new trips, whose sole purpose is the visit to the site, internal or shared trips, and pass-by trips. New trips are those that are new to the study area and consist of motorists whose primary destination is the proposed project.

An area that contains multiple uses, such as this one, can be expected to have some internal trip sharing. A shared trip is one that visits more than one use on the site and thus lessens the overall impact of a multiple use site on the adjacent street system. Since this development is part of the Livingston Commons Shopping Center which includes banks, restaurants, a Wal-Mart Supercenter, a Lowe’s, etc., it is expected that some internal trip sharing will occur between uses. It is expected that the number of trips generated by these uses will be reduced due to their interaction between the other uses in the development. An internal trip factor of 20% was applied to the site based on ITE’s *Trip Generation Handbook*. This is the same factor that was applied to

the existing Bennigan’s restaurant. This factor was only applied to the afternoon peak hour trip estimates, and not the morning peak hour estimates for the bread/donut/bagel restaurant.

Pass-by trips involve motorists who are diverted off of the adjacent street system to visit this development. A portion of the trips generated by the redevelopment were assumed to be pass-by trips. These trips divert from existing travel paths to stop at the site and then resume the original trip path. Thus additional trips are not added to the area road system by these pass-by trips. Surveys conducted by ITE have shown that many trips made to grocery stores, restaurants, and shopping areas are diverted from the existing traffic on the roadway system. This is particularly true during the weekday morning and evening peak hours when traffic is diverted from the home-to-work and work-to-home trips. Pass-by rates were based on information provided in ITE’s *Trip Generation Handbook*. A pass-by rate of 43% was used for the fast-food restaurants and a rate of 49% was used for the bread/donut/bagel shop restaurant during both the morning and afternoon peak hours. No pass-by was considered for the specialty retail portion of the redevelopment.

The weekday morning peak hour trip generation estimates are shown in Table 2 and the weekday afternoon peak hour trip generation estimates are provided in Table 3.

Table 2 Proposed Weekday AM Peak Hour Trip Generation Estimate

Land Use	In	Out	Total
Bread/Donut/Bagel Restaurant	83	83	166
<i>Less Pass-by Trips (49%)</i>	<i>-41</i>	<i>-41</i>	<i>-82</i>
New Trips	42	42	84

Table 3 Proposed Weekday PM Peak Hour Trip Generation Estimates

Land Use	LUC	Size (SF)	Total Trips		Internal Trips		Net Trips		Pass-by Trips		New Trips	
			In	Out	In	Out	In	Out	In	Out	In	Out
Bread/Donut/Bagel Restaurant w/Drive-Thru	940	4,300	40	42	8	8	32	34	16	16	16	18
Fast-Food Restaurant (No Drive-Thru)	933	2,200	30	28	6	6	24	22	10	10	14	12
Fast-Food Restaurant (No Drive-Thru)	933	2,200	30	28	6	6	24	22	10	10	14	12
Spec. Retail	826	3,203	13	16	3	3	10	13	0	0	10	13
Total			113	114	23	23	90	91	36	36	54	55

No access changes to the overall shopping center are proposed with the redevelopment of the restaurant lot. The existing accesses for the Livingston Commons Shopping Center are to be used to access these new land uses. There are currently two accesses to Grand River Avenue, one of which is signalized, and three accesses to Latson Road, two full movement accesses and one right in/right out only access.

Table 4 shows the difference in overall trips estimated between the existing restaurant and the proposed redevelopment project based on detailed land uses.

Table 4 Trip Generation Difference

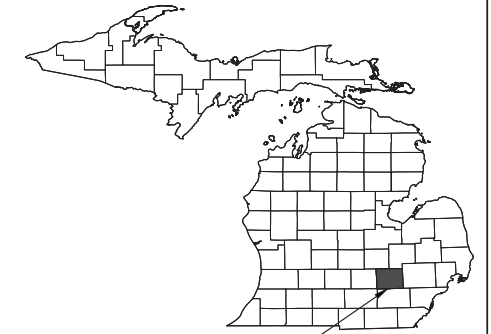
Scenario	AM PEAK HOUR						PM PEAK HOUR					
	Net Trips		Pass-by Trips		New Trips		Net Trips		Pass-by Trips		New Trips	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Existing Restaurant	0	0	0	0	0	0	31	21	13	9	18	12
Proposed Redevelopment	83	83	41	41	42	42	90	91	36	36	54	55
Difference	+83	+83	+41	+41	+42	+42	+59	+70	+23	+27	+36	+43

As expected, the proposed development will generate more trips than the existing restaurant use during both the morning and afternoon peak hours. However, the net trip difference is less than 100 directional trips under both peak hours and the actual new trip difference is less than 50 directional trips under both peak hours.

The largest difference in trips between the two occurs during the morning peak hour. This is due to the existing Bennigan’s restaurant not being open for breakfast. However, the existing restaurant use approved for this site likely doesn’t restrict a restaurant from being open during the morning peak hour. In fact, if it was open, this same size restaurant would generate 72 net trips and 31 new trips, after pass-by traffic is accounted, for with 17 inbound and 14 outbound trips, thus lessening the morning peak hour trip difference. In addition, morning peak hour traffic volumes for this shopping center are lighter than during the weekday afternoon peak hour. Both the Lowe’s and Wal-Mart Supercenter generate fewer trips during the morning peak hour than during the afternoon peak hour. In addition, the fast-food restaurants and banks that are part of this shopping center are not open during the morning peak hour. Therefore, it is expected that the additional trips generated by the bread/donut/bagel restaurant during the morning peak hour can be accommodated by the existing driveways for the shopping center as there are less overall trips from the shopping center during this same time period.

Please feel free to contact us at any time if you have questions regarding the information provided in this memorandum or if you need any additional information.

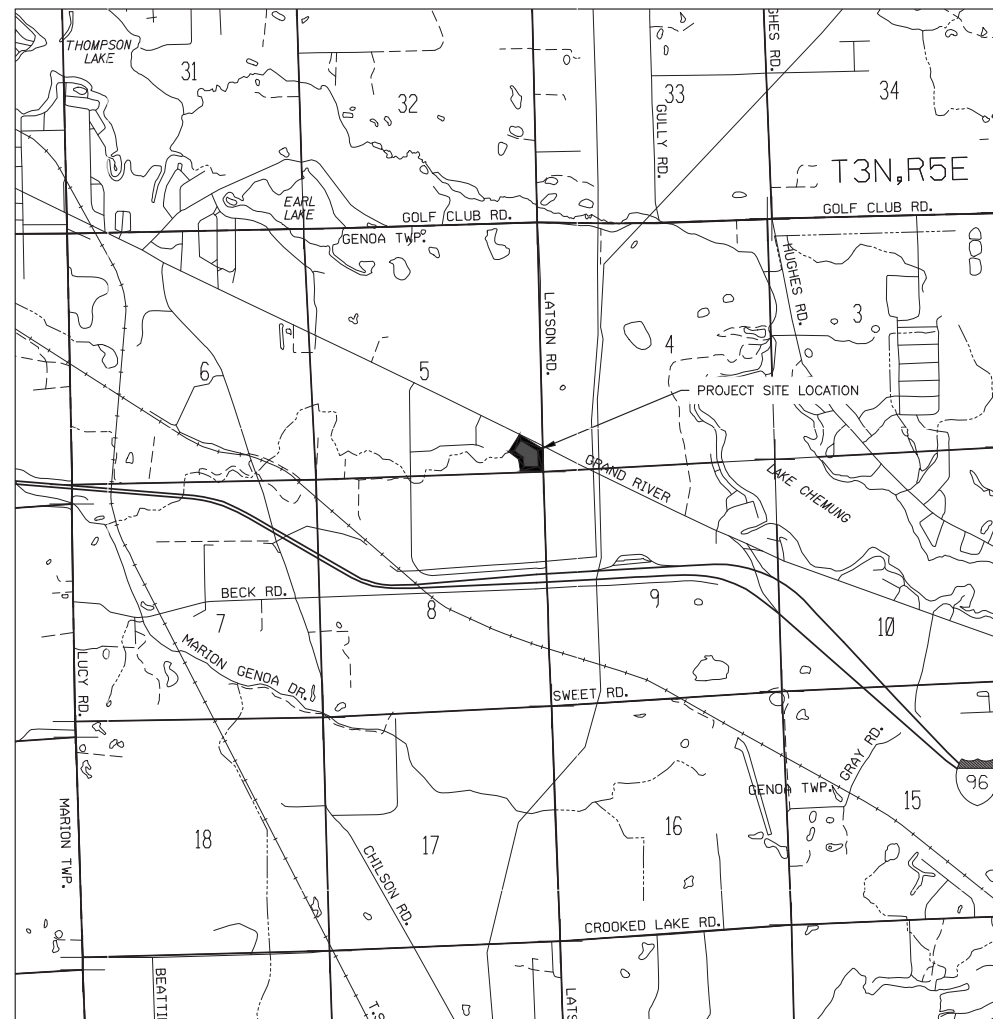
SITE PLANS FOR LIVINGSTON COMMONS, LOT 4 GENOA TOWNSHIP LIVINGSTON COUNTY, MICHIGAN



PROJECT LOCATION:
LIVINGSTON COUNTY, MI

KEY MAP
NOT TO SCALE

UTILITY CONTACTS	
GAS	CONSUMER'S ENERGY 101 S. WASHINGTON SQUARE HOWELL, MI 48843 (517) 545-8722
TELEPHONE	AT&T (800) 464-7929
ELECTRIC	DETROIT EDISON 101 S. WASHINGTON SQUARE LANSING, MI 48933 (517) 485-1939
TRANSPORTATION	MDOT MARK SWEENEY 10321 E. GRAND RIVER, SUITE 500 BRIGHTON, MI 48116 (810) 227-4681
TRANSPORTATION (LATSON RD.)	LIVINGSTON COUNTY ROAD COMMISSION 3535 GRAND OAKS DRIVE HOWELL, MI 48843 (517) 546-4250
WATER SERVICE	M.H.O.G WATER AUTHORITY GREG TATARA 2911 DORR ROAD BRIGHTON, MI 48116 (810) 227-5225
SANITARY SEWER	M.H.O.G WATER AUTHORITY GREG TATARA 2911 DORR ROAD BRIGHTON, MI 48116 (810) 227-5225
STORM SEWER	LIVINGSTON COUNTY DRAIN COMMISSIONER 2300 E GRAND RIVER AVE, SUITE 105 HOWELL, MI 48843 (517) 546-0040
SOIL EROSION	LIVINGSTON COUNTY DRAIN COMMISSIONER 2300 E GRAND RIVER AVE, SUITE 105 HOWELL, MI 48843 (517) 546-0040
PLANNING & ZONING	GENOA TOWNSHIP 2911 DORR ROAD BRIGHTON, MI 48116 (810) 227-5225



SHEET INDEX	
GENERAL SHEETS	SHEET NO.
COVER SHEET	C-0.0
EXISTING CONDITIONS SURVEY	C-0.1
DEMOLITION PLAN	C-1.0
SITE PLAN	C-2.0
SITE DETAILS	C-2.1
SITE DETAILS	C-2.2
SITE DETAILS	C-2.3
UTILITY PLAN	C-3.0
WATER DETAILS	C-3.1
SANITARY DETAILS	C-3.2
SANITARY DETAILS	C-3.3
STORM & MISCELLANEOUS UTILITY DETAILS	C-3.4
GRADING PLAN	C-4.0
DRAINAGE MAP	C-4.1
LANDSCAPE PLAN	C-5.0
LANDSCAPE DETAILS	C-5.1
SITE LIGHTING PLAN	C-6.0
SITE LIGHTING DETAILS	C-6.1
SESC & SWPPP NOTES	C-7.0
SESC & SWPP PLAN - PHASE I	C-7.1
SESC & SWPP PLAN - PHASE II	C-7.2
SESC & SWPPP DETAILS	C-7.3
PLANS PREPARED BY OTHERS	SHEET NO.
PROPOSED RETAIL BUILDING	A3

LEGAL DESCRIPTION: (ALSO SEE SHEET C-0.1)

LOT 4
4711-05-400-047

PARCEL OR LAND SITUATED IN THE TOWNSHIP OF GENOA, COUNTY OF LIVINGSTON, STATE OF MICHIGAN DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SECTION 5, TOWN 2 NORTH, RANGE 5 EAST; THENCE SOUTH 87 DEGREES 37 MINUTES 12 SECONDS WEST ALONG THE SOUTH LINE OF SAID SECTION, 60.02 FEET TO THE WESTERLY RIGHT OF WAY LINE OF LATSON ROAD; THENCE NORTH 00 DEGREES 54 MINUTES 40 SECONDS WEST, ALONG SAID RIGHT OF WAY LINE, 214.95 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 88 DEGREES 27 MINUTES 00 SECONDS WEST, 215.08 FEET; THENCE NORTH 01 DEGREES 33 MINUTES 24 SECONDS WEST, 71.01 FEET TO A TANGENTIAL CURVE TO THE LEFT; THENCE NORTHWESTERLY ALONG SAID CURVE, R= 102.00, DELTA = 62 DEGREES 27 MINUTES 31 SECONDS, A DISTANCE OF 111.19 FEET; THENCE NORTH 64 DEGREES 00 MINUTES 14 SECONDS WEST, 59.21 FEET; THENCE NORTH 25 DEGREES 59 MINUTES 46 SECONDS EAST, 236.98 FEET TO A POINT ON THE SOUTHERLY RIGHT OF WAY LINE OF GRAND RIVER ROAD; THENCE SOUTH 63 DEGREES 57 MINUTES 17 SECONDS EAST, ALONG SAID RIGHT OF WAY, 233.50 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY LINE OF LATSON ROAD; THENCE SOUTH 20 DEGREES 31 MINUTES 52 SECONDS EAST, ALONG SAID RIGHT OF WAY LINE, 21.17 FEET; THENCE SOUTH 00 DEGREES 54 MINUTES 40 SECONDS EAST, ALONG SAID RIGHT OF WAY LINE, 270.75 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 2.03 ACRES, MORE OR LESS.

THE ABOVE LEGAL DESCRIPTION DOES NOT CONSIDER LAND DEEDED TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) IN 2012, DEED DOCUMENT #2012R-030745

MDOT STANDARD PLANS

WHERE INDICATED ON THE PLANS, ITEMS ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARDS REFERENCED, UNLESS OTHER NOTED. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE MDOT STANDARD PLANS.

GENOA TOWNSHIP STANDARD PLANS

WHERE INDICATED ON THE PLANS, ITEMS ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARDS REFERENCED, UNLESS OTHER NOTED. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE GENOA TOWNSHIP STANDARD PLANS.

LIVINGSTON COUNTY STANDARD PLANS

WHERE INDICATED ON THE PLANS, ITEMS ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARDS REFERENCED, UNLESS OTHER NOTED. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE LIVINGSTON COUNTY STANDARD PLANS.

VICINITY MAP

1"=2000'
HOWELL, T3N, R5E, SECTION 5

PROJECT SITE ADDRESS

3950 E GRAND RIVER AVE.
HOWELL, MICHIGAN 48843

GENOA TOWNSHIP ZONING DISTRICT

NON-RESIDENTIAL PLANNED UNIT DEVELOPMENT

SITE DEVELOPER

JIM BLAIR
RG PROPERTIES, INC.
10050 INNOVATION DR, SUITE 100
DAYTON, OH 45342
(937) 424-3904
jblair@rgproperties.com

ARCHITECT

STANFORD R. JOSEPH, AIA
9900 CARVER ROAD
CINCINNATI, OH 45242
(513) 984-6000
mamajo100@aol.com

SITE ENGINEER-SURVEYOR

WADE TRIM
CHARLES J. CHRISTY, PE
555 S. SAGINAW STREET, SUITE 201
FLINT, MI 48502
(810) 235-2555
christy@wadetrim.com

CONTRACTOR

NOT KNOWN AT THIS TIME

NOT VALID FOR CONSTRUCTION
UNLESS SIGNED AND DATED: PC: JANUARY 22, 2014

JOB NO. RGP1001.01F SHEET C-0.0



555 South Saginaw Street, Suite 201
Flint, MI 48502
810.235.2555/800.841.0342
FAX: 810.235.4975
www.wadetrim.com

Building relationships on a foundation of excellence

PREPARED UNDER THE SUPERVISION OF:



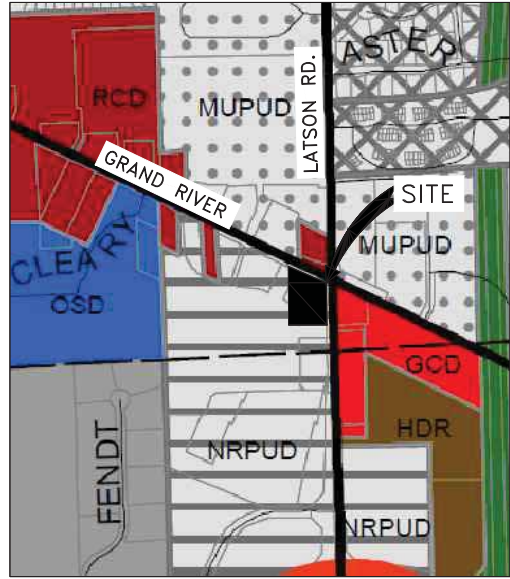
PROJECT MANAGER: C:\PW\WORK\CHRISTY\00564861\GCS-PLTS-COVERSHEET.DWG - C-0.0 - PLOTTED 1/21/2015 3:41 PM BY CHRISTY, CHARLES



Know what's below.
Call before you dig.

© Wade Trim Group, Inc. LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

ZONING & LAND USE MAP
NO SCALE



LEGAL DESCRIPTION:

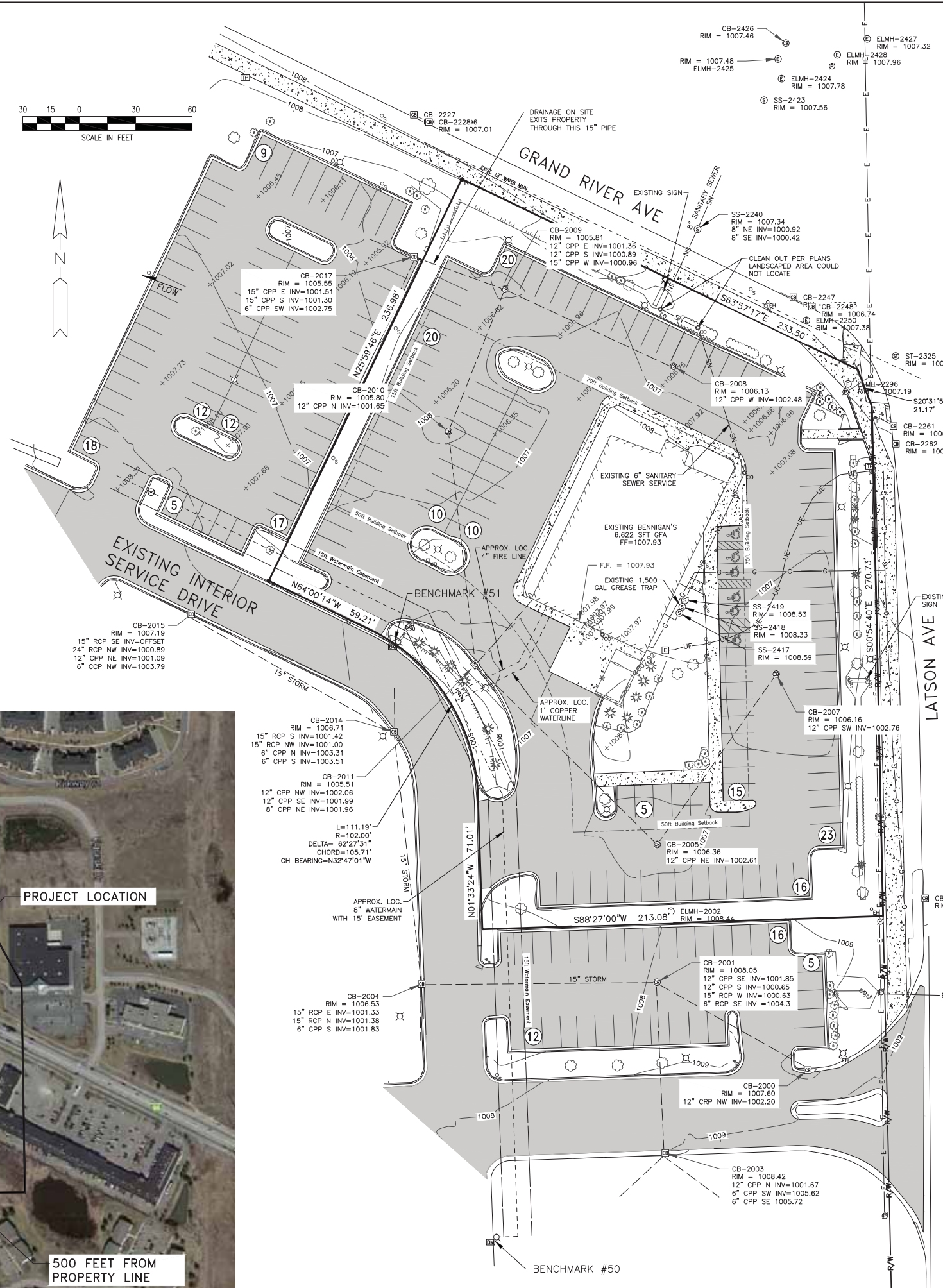
LOT 4
11-05-400-047
SAID PARCEL CONTAIN 2.03 ACRES, MORE OR LESS
(88,427 SFT)
REFER TO PREVIOUS TOPOGRAPHICAL SURVEY COMPLETED FOR
BENNIGAN'S RESTAURANT BY BARTOW & KING ENGINEERS, DATED
JUNE 2003

SETBACKS:

FRONT 70'
SIDE 15'
REAR 50'

FOR SOILS INFORMATION, REFER TO SHEET C-7.0

AERIAL MAP
NO SCALE



LEGEND

BENCHMARK	⊕
LIGHT POLE	⊗
UTILITY POLE	⊙
GUY ANCHOR	⊕
ELECTRIC HANDHOLE	⊕
ELECTRIC OUTLET	⊕
ELECTRIC MANHOLE	⊕
ELECTRIC TRANSFORMER BOX	⊕
ELECTRIC METER	⊕
TELEPHONE PEDESTAL	⊕
MAILBOX	⊕
SIGN	⊕
POST	⊕
GATE VALVE	⊕
HYDRANT	⊕
STORM MANHOLE	⊕
CATCH BASIN	⊕
SANITARY MANHOLE	⊕
CLEAN OUT	⊕
DECIDUOUS TREE	⊕
DECIDUOUS BUSH	⊕
CONIFEROUS TREE	⊕
UNDERGROUND MARKER	⊕
OVERHEAD ELECTRIC	—E—
BUILDING LINE	—
FENCE	—X—
WALL	—
PARKING STRIPE	—
BACK OF CURB	—
EDGE OF PAVEMENT	—
GUTTER	—
TOP OF BANK	—
EDGE OF LANDSCAPE	—
STORM LINE	—SN—
SANITARY SEWER LINE	—SN—
MINOR CONTOUR	—158—
GAS LINE	—G—
CONCRETE	—
ASPHALT	—

BENCHMARKS:

BM #50 - 1010.89
ARROW ON TOP OF HYDRANT LOCATED ON THE SOUTHWEST QUADRANT OF THE WAL-MART DRIVE AND ENTRANCE DRIVE 450' SOUTH OF THE INTERSECTION OF GRAND RIVER AVE AND LATSON AVE, ±270 WESTERLY OF LATSON AVE.
BM #51 - 1010.77
ARROW ON TOP OF HYDRANT LOCATED AT THE EASTERLY SIDE OF THE WAL-MART SERVICE DRIVE

SURVEY NOTES

1. BEARING ARE BASED ON ALTA SURVEY BY BARTOW & KING ENGINEERS DATED JUNE 2003.
2. HORIZONTAL - NAD83 (2011) MICHIGAN STATE PLANE COORDINATES SOUTH ZONE (2113)
VERTICAL - NAVD88 (CORS) GPS DERIVED

UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

CERTIFICATION

WE, WADE-TRIM, INC., CERTIFY THAT WE PERFORMED THIS SURVEY ON OCTOBER 20, 2014 AND THAT THE DRAWING IS A TRUE AND ACCURATE REPRESENTATION THEREOF.

Kristine N. Saia, PS#58654

REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
D	12/23/14	1ST TOWNSHIP REVIEW COMMENTS

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND DATED.

1100 S. State Street, Suite 201
Farmington Hills, MI 48332
810.285.2580/810.413442
www.wadetrtrim.com

LIVINGSTON COMMONS, LOT 4
3950 E. GRAND RIVER
HOWELL, MICHIGAN 48843

EXISTING CONDITIONS SURVEY

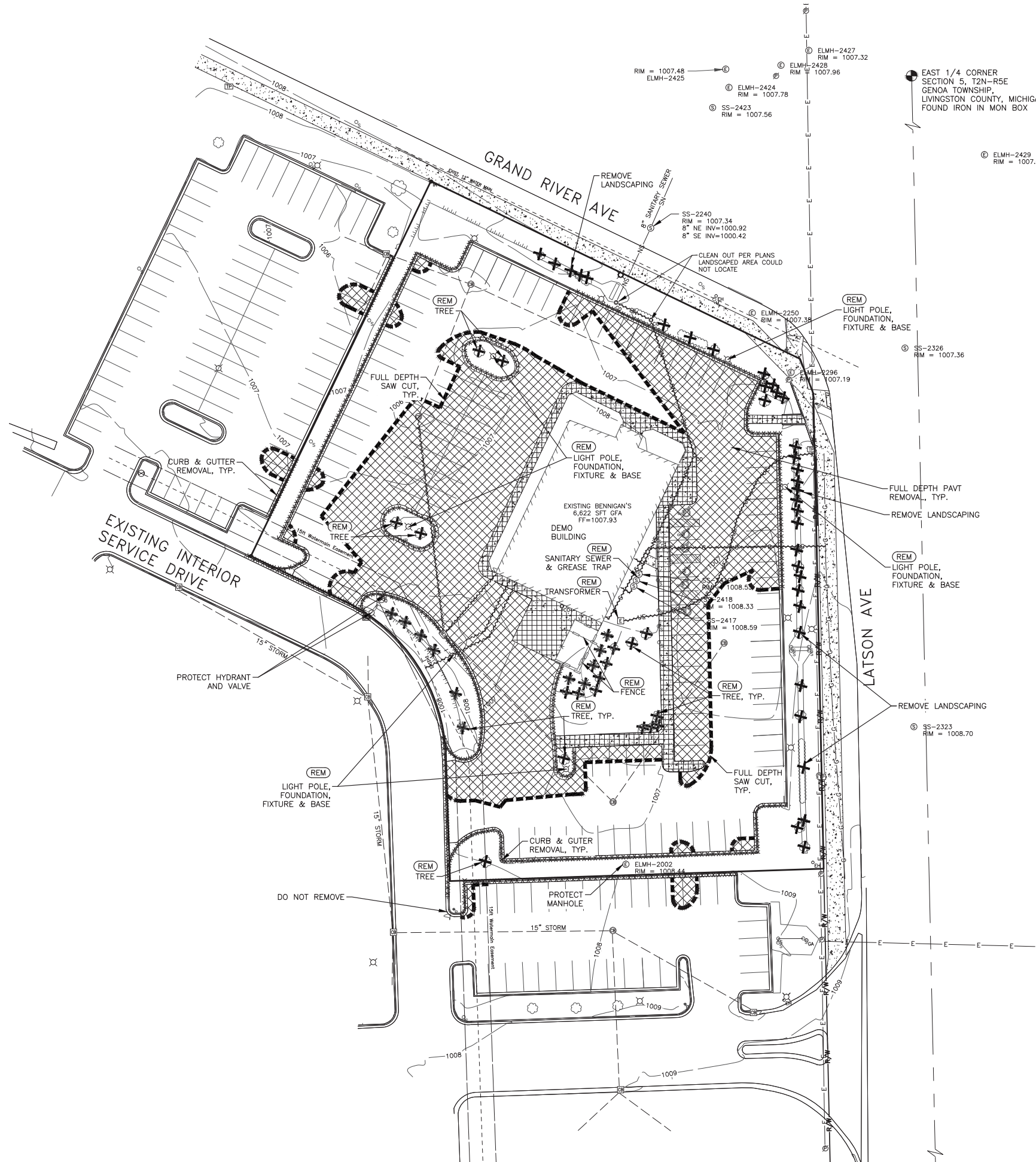
LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

ISSUED FOR: DATE: BY:
PC 12/1/14 CJC

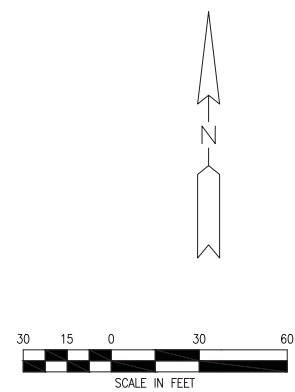
JOB NO. RGP1001.01F
SHEET C-0.1

PROJECT MANAGER: CHARLES J. CHRISTY, PE
C:\P\WORK\CHRISTY\0564861\159-BASE-HOWELL-102414.DWG - C-0.1 - PLOTTED 1/21/2015 4:25 PM BY CHRISTY, CHARLES

PROJECT MANAGER: CHARLES J. CHRISTY, PE
 C:\PW\WORK\CHRISTY\0564861\PL1-VSP-DEMOLITION PLANNING - C-1.0 - PLOTTED 1/21/2015 4:23 PM BY CHRISTY, CHARLES



EAST 1/4 CORNER
 SECTION 5, T2N-R5E
 GENOA TOWNSHIP,
 LIVINGSTON COUNTY, MICHIGAN
 FOUND IRON IN MON BOX



LEGEND

CURB AND GUTTER REMOVAL	-XXXXXXXXXX-
SAW CUT, FULL DEPTH	-----
FULL-DEPTH ASPHALT REMOVAL	XXXXXX
CONCRETE REMOVAL	XXXXXX
REMOVE ITEM	(REM)
TREE REMOVAL	+
UTILITY REMOVAL	~~~~~

- NOTES:**
1. CONTRACTOR TO GRIND OFF & REMOVE ALL REMAINING PVMT STRIPING THAT IS NOT PART OF FINAL PLAN
 2. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR COMPLETENESS OR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES TO OBTAIN ONSITE LOCATIONS OF EXISTING UTILITIES
 3. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK. UTILITIES DETERMINED TO BE ABANDONED AND LEFT IN PLACE SHALL BE GROUTED IF UNDER A BUILDING
 4. CONTRACTOR TO COORDINATE DEMO & REMOVAL OF ELECTRIC SERVICE, ELECTRIC TRANSFORMER, COMMUNICATION LINES TO BUILDING, GAS METER & SERVICE, & WATER SERVICES
 5. CONTRACTOR SHALL PROTECT IMPROVEMENTS TO REMAIN
 6. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
 7. ALL MATERIAL TO BE DISPOSED OF OFF SITE IN ACCORDANCE W/ STATE & FEDERAL REGULATIONS
 8. ALL DEMOLISHED MATERIALS ARE PROPERTY OF THE CONTRACTOR
 9. EXISTING 1 INCH WATER SERVICE TO EXISTING BUILDING SHALL BE DEMOLISHED AND REMOVED BACK TO THE EXISTING 8 INCH WATER MAIN. TERMINATE CONNECTION IN ACCORDANCE WITH TOWNSHIP AND MHOOG REQUIREMENTS.

REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
D	12/23/14	1ST TOWNSHIP REVIEW COMMENTS
C/C		
C/C		
BT		

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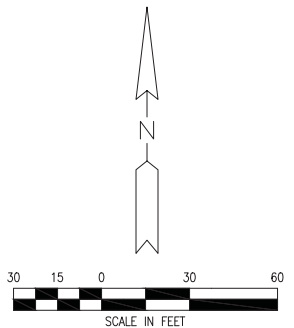
DEMOLITION PLAN

ISSUED FOR: DATE: BY:
 PC 12/1/14 CJC

JOB NO.
RGP1001.01F

SHEET
C-1.0

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN
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PARKING REQUIREMENTS		
TYPE	CALCULATION	NO. OF SPACES
REQUIRED		
SIT-DOWN RESTAURANT W/OUT LIQUOR 1 SPACE PER 100 SQ. FT. + UP TO 5 LONG SPACES	2 BUILDINGS AT 2,200 SFT GFA EACH 4,400 GFA SFT/1000 SFT = 44 SPACES	44 SPACES 10 LONG SPACES
SHOPPING CENTER WITH MULTIPLE TENANTS 1 SPACE PER 250 SQ. FT.	3,228 SFT GFA/250 SFT = 12.9 = 13 SPACES	13 SPACES
DRIVE THROUGH RESTAURANT 1 SPACE PER 70 SQ. FT. + 3 WAITING SPACES + 10 STACKING SPACES + 2 LONG SPACES	4,300 SFT GFA/ 40 SFT = 61.4 = 62 SPACES + 3 WAITING SPACES + 10 STACKING SPACES + 2 LONG SPACES	62 SPACES 2 LONG SPACES 10 STACKING 3 WAITING
TOTAL REQUIRED PARKING	44+13+62 = 119 SPACES + 3 WAITING SPACES + 10 STACKING SPACES + 12 LONG SPACES	119 PARKING 12 LONG 13 WAITING/STACKING
* SECOND 2,200 SFT SPACE CALCULATED AS SIT DOWN, BUT MAY BE CARRY OUT.		
PROVIDED **SEE BELOW		
ON-SITE SPACES AVAILABLE		78
LONG SPACES		12
STACKING SPACES		10
WAITING SPACES		3
A.D.A. SPACES		
REQUIRED		
101 TO 150 TOTAL PARKING IN LOT (PER A.D.A. ACCESSIBILITY GUIDELINES)		5
PROVIDED		
ON SITE		5

SITE DATA TABLE	
NOTE: INFORMATION BELOW IS PROVIDED FOR THE PROPERTY BOUNDARY AS INDICATED ON THIS PLAN SHEET.	
EXISTING ZONING	NRPUD (NON-RESIDENTIAL PLANNED UNIT DEVELOPMENT)
EXISTING USE	SIT-DOWN RESTAURANT
PROPOSED USE	RESTAURANT & RETAIL
BUILDING AREA	12,000 SFT. GFA/GLA/USABLE
LOT AREA	88,465 SFT
BUILDING COVERAGE	13.6 %
PROPOSED IMPERVIOUS COVERAGE	63,765 SFT, 72.1%

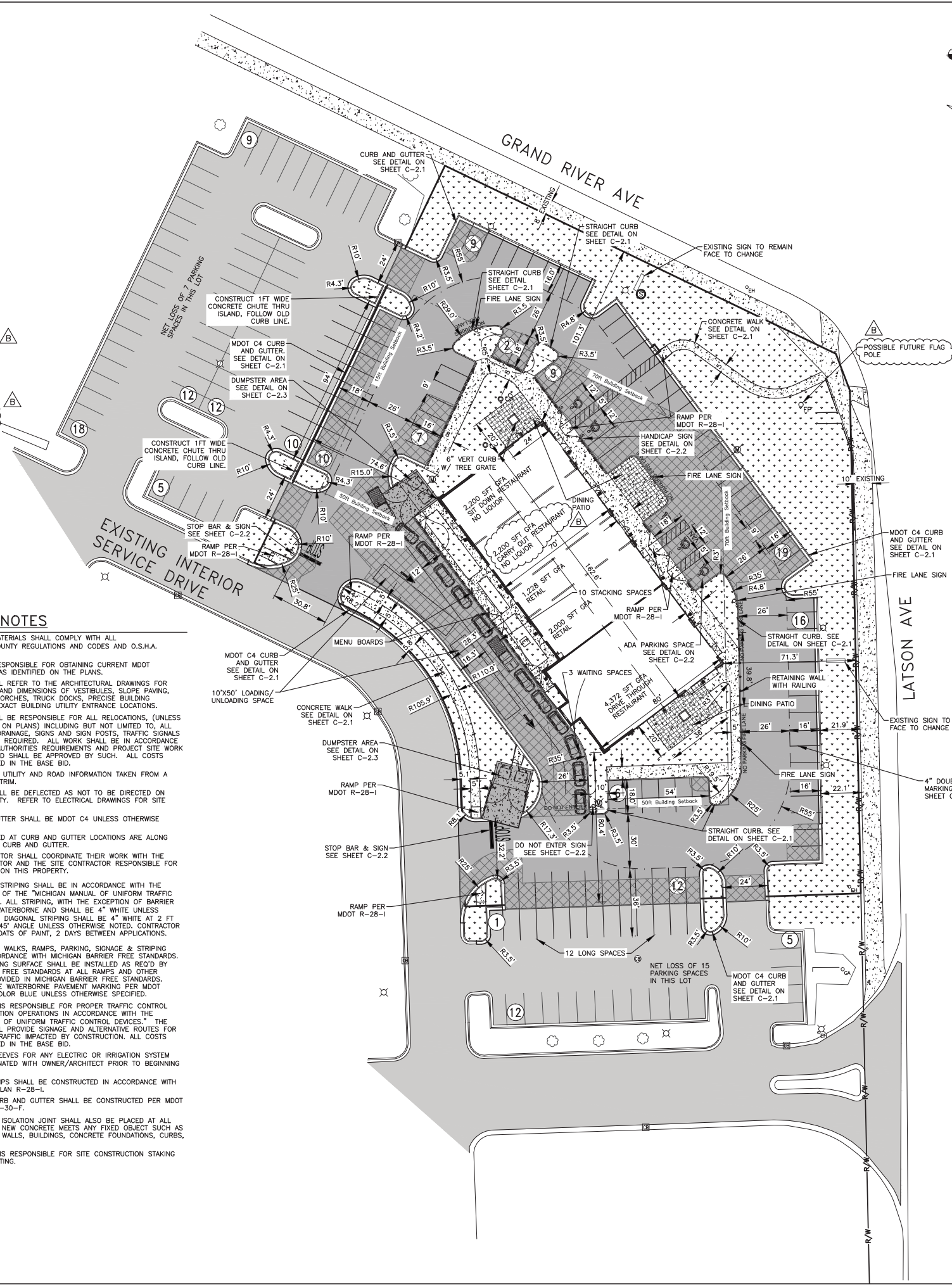
** PER WAL-MART/HOME DEPOT PLANS:

WAL-MART REQUIRED PARKING 1,071+27=	1,098
HOME DEPOT REQUIRED PARKING 535+33=	568
20,000 SFT OFFICE STORE=	100
TOTAL REQ'D PARKING=	1,766
PARKING PROVIDED FOR WM/HD/OFFICE STORE=	1,796
NET LOSS DUE TO PILOT RECONFIGURATION=	22
REVISED PARKING PROVIDED FOR HD/WM/OFFICE STORE	1,774
EXCESS PARKING=	8

NOTE: OWNER MAY SHARE PARKING BETWEEN USES/LOTS, REFER TO R.E.A.

SITE PLAN NOTES

- ALL WORK AND MATERIALS SHALL COMPLY WITH ALL TOWNSHIP/CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING CURRENT MDOT STANDARD PLANS AS IDENTIFIED ON THE PLANS.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS AND SIGN POSTS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES REQUIREMENTS AND PROJECT SITE WORK SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COSTS SHALL BE INCLUDED IN THE BASE BID.
- SITE TOPOGRAPHY, UTILITY AND ROAD INFORMATION TAKEN FROM A SURVEY BY WADE TRIM.
- SITE LIGHTING SHALL BE DEFLECTED AS NOT TO BE DIRECTED ON ADJACENT PROPERTY. REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING.
- ALL CURB AND GUTTER SHALL BE MDOT C4 UNLESS OTHERWISE NOTED.
- ALL RADI SPECIFIED AT CURB AND GUTTER LOCATIONS ARE ALONG THE FACE OF THE CURB AND GUTTER.
- THE SITE CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE BUILDING CONTRACTOR AND THE SITE CONTRACTOR RESPONSIBLE FOR ALL OTHER WORK ON THIS PROPERTY.
- ALL PARKING LOT STRIPING SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". ALL STRIPING, WITH THE EXCEPTION OF BARRIER FREE, SHALL BE WATERBORNE AND SHALL BE 4" WHITE UNLESS OTHERWISE NOTED. DIAGONAL STRIPING SHALL BE 4" WHITE AT 2 FT ON CENTER AT A 45° ANGLE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL APPLY 2 COATS OF PAINT, 2 DAYS BETWEEN APPLICATIONS.
- ALL BARRIER FREE WALKS, RAMPS, PARKING, SIGNAGE & STRIPING SHALL BE IN ACCORDANCE WITH MICHIGAN BARRIER FREE STANDARDS. DETECTABLE WARNING SURFACE SHALL BE INSTALLED AS REQ'D BY MICHIGAN BARRIER FREE STANDARDS AT ALL RAMPS AND OTHER LOCATIONS AS PROVIDED IN MICHIGAN BARRIER FREE STANDARDS. STRIPING SHALL BE WATERBORNE PAVEMENT MARKING PER MDOT SPECIFICATIONS, COLOR BLUE UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPER TRAFFIC CONTROL DURING CONSTRUCTION OPERATIONS IN ACCORDANCE WITH THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES." THE CONTRACTOR SHALL PROVIDE SIGNAGE AND ALTERNATIVE ROUTES FOR ALL PEDESTRIAN TRAFFIC IMPACTED BY CONSTRUCTION. ALL COSTS SHALL BE INCLUDED IN THE BASE BID.
- PLACEMENT OF SLEEVES FOR ANY ELECTRIC OR IRRIGATION SYSTEM SHALL BE COORDINATED WITH OWNER/ARCHITECT PRIOR TO BEGINNING CONSTRUCTION.
- ALL SIDEWALK RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MDOT STANDARD PLAN R-28-1.
- ALL CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED PER MDOT STANDARD PLAN R-30-F.
- A 1" THICK (MIN.) ISOLATION JOINT SHALL ALSO BE PLACED AT ALL LOCATIONS WHERE NEW CONCRETE MEETS ANY FIXED OBJECT SUCH AS CONCRETE WALKS, WALLS, BUILDINGS, CONCRETE FOUNDATIONS, CURBS, AND ETC.
- THE CONTRACTOR IS RESPONSIBLE FOR SITE CONSTRUCTION STAKING AND MATERIAL TESTING.



LEGEND

- PARKING COUNT
- TRAFFIC FLOW ARROW (PAINTED ONLY WHERE INDICATED)
- SIGN AND SIGN POST
- ACCESSIBLE SYMBOL, REFER TO SHEET C-3.2
- CANOPY LIMITS
- CURB AND GUTTER
- BUILDING SETBACK
- RAILING
- THICKENED EDGE CONCRETE SEE DETAIL ON SHEET C-2.1
- 1.5" MILL & FILL ASPHALT SURFACE. SEE DETAIL ON SHEET C-2.1
- FULL DEPTH STANDARD DUTY ASPHALT. SEE DETAIL ON SHEET C-2.1
- 4-INCH CONCRETE SEE DETAIL ON SHEET C-2.1
- 7" HEAVY DUTY CONCRETE. SEE DETAIL ON SHEET C-2.1
- LANDSCAPED AREA
- EXISTING ASPHALT SURFACE
- 4" CONCRETE, SCORED 2" O.C.

CHANGES MADE ON THIS SHEET AS PART OF REVISION A.

- ADDED TOWNSHIP ENTRANCE SIGN AND FLAG POLE.
- ROTATED DUMPSTER AT SOUTH EAST CORNER OF SITE.
- ADDED FIRE LANE SIGNS.
- ADJUSTED DEPTH OF PARKING STALLS TO ACCOMMODATE 26 FOOT FIRE LANE.
- INDICATED 55 FOOT OUTSIDE RADIUS OF FIRE LANE.
- ADD FIRE LANE PAVEMENT MARKINGS TO PLAN.

EAST 1/4 CORNER SECTION 5, T2N-R5E GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN FOUND IRON IN MON BOX

SOUTHEAST CORNER SECTION 5, T2N-R5E GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN FOUND IRON IN MON BOX

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C		
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HOWELL, MICHIGAN 48843

SITE PLAN

ISSUED FOR:	DATE:	BY:
PC	12/1/14	CJC
JOB NO.	RGP1001.01F	
SHEET	C-2.0	

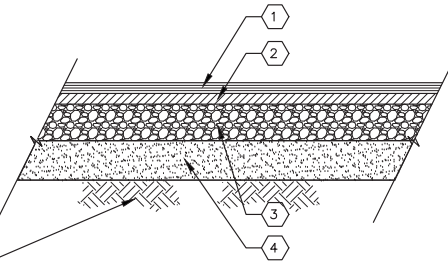
PROJECT MANAGER: CHARLES J. CHRISTY, PE
 CIVIL WORK: CHRISTY00564861\PL1-CSP-SITE PLANNING - C-2.0 - PLOTTED 1/21/2015 4:04 PM BY: CHRISTY, CHARLES



LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

SPECIFICATIONS		
PAVEMENT SECTION		
ITEM	THICKNESS	MATERIAL
1	2"	MDOT 4C
2	2"	MDOT 3C
3	8"	MDOT 21AA AGGREGATE
4	12"	MDOT CLASS II GRANULAR MATERIAL

PREPARATION, COMPACTION & TESTING OF SUBBASE, BASE, AND HMA SHALL BE PER MDOT SPECIFICATIONS.



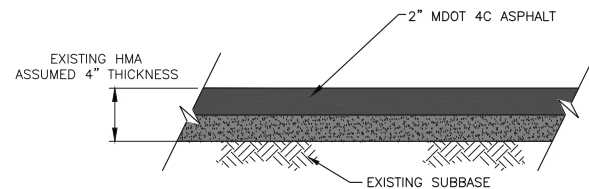
REMOVE ALL TOPSOIL AND UNSUITABLE MATERIAL. SHAPE, COMPACT, AND PROOF ROLL SUBGRADE PRIOR TO PLACEMENT OF GRANULAR SUBBASE & AGGREGATE BASE.

HOT MIX ASPHALT (HMA) APPLICATION TABLE				
ITEM	DEPTH (IN)	RATE (LB/SYD)	PERFORMANCE GRADE	REMARKS
HMA, MDOT 4C	2	220	64-28	PLACED AND ROLLED TO MEET MDOT STANDARDS. SHALL BE INSPECTED AND TESTED PER MDOT STANDARDS
HMA, MDOT 3C	2	220	64-28	PLACED AND ROLLED TO MEET MDOT STANDARDS. SHALL BE INSPECTED AND TESTED PER MDOT STANDARDS

HMA BOND COAT SS-1H, 0.05 TO 0.15 GAL/SYD BETWEEN PROPOSED HMA LIFTS. THE AGGREGATE WEAR INDEX FOR ALL TOP COURSES SHALL BE AWI = 260 MINIMUM.

FULL DEPTH ASPHALT PAVEMENT SECTION FOR PARKING LOT

NO SCALE



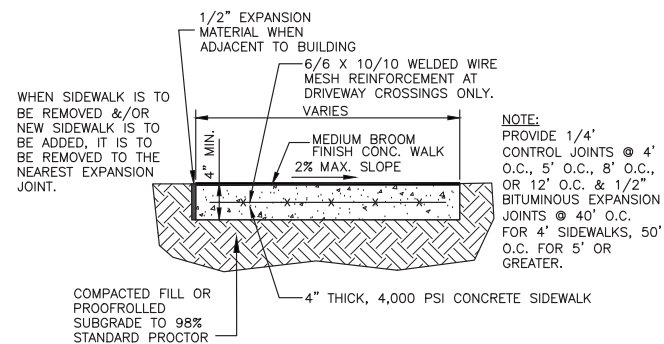
MILL & FILL ASPHALT SECTION

NO SCALE

- PAVEMENT SHALL BE MILLED TO THE LINES AND GRADES AS SHOWN ON THE PLANS.
- IMMEDIATELY AFTER MILLING, CONTRACTOR SHALL CLEAN THE MILLED SURFACE.
- CONTRACTOR IS RESPONSIBLE TO DISPOSE OF RESULTING DEBRIS/MILLINGS

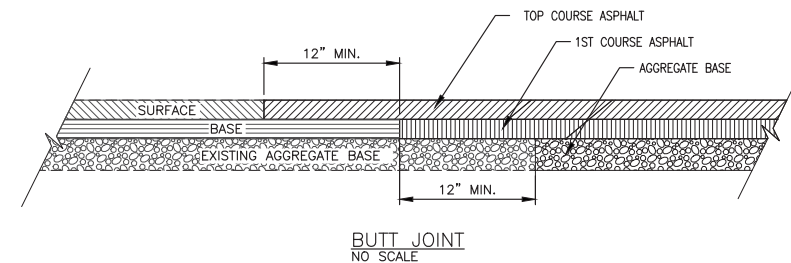
BITUMINOUS MIXTURE SPECIFIED ON THE PLANS, WHEN TESTED AT OPTIMUM ASPHALT CONTENT (DETERMINED IN ACCORDANCE WITH MDOT PROCEDURES MANUAL FOR MIX DESIGN PROCESSING), SHALL MEET THE REQUIREMENTS FOR STABILITY, FLOW, VOIDS IN MINERAL AGGREGATE (VMA), AIR VOIDS, FINES/BINDER RATIO, FINE AGGREGATE ANGULARITY, L.A. ABRASION LOSS, AND SOFT PARTICLES AS SPECIFIED IN MDOT SPECIAL PROVISION FOR MARSHALL HOT MIX ASPHALT MIXTURE (DOCUMENT 12SP501(F))

AGGREGATE MIXTURES FAILING TO MEET THE REQUIREMENTS SPECIFIED IN MDOT SPECIAL PROVISION FOR MARSHALL HOT MIX ASPHALT MIXTURE (DOCUMENT 12SP501(F)) WILL BE REJECTED AND THE CONTRACTOR WILL BE REQUIRED TO SUBMIT ADDITIONAL SAMPLES OF BITUMINOUS MIXTURES UNTIL A COMBINATION OF MATERIAL IS FOUND WHICH WILL PRODUCE A MIXTURE MEETING THE REQUIREMENTS OF MDOT SPECIAL PROVISION FOR MARSHALL HOT MIX ASPHALT MIXTURE (DOCUMENT 12SP501(F))



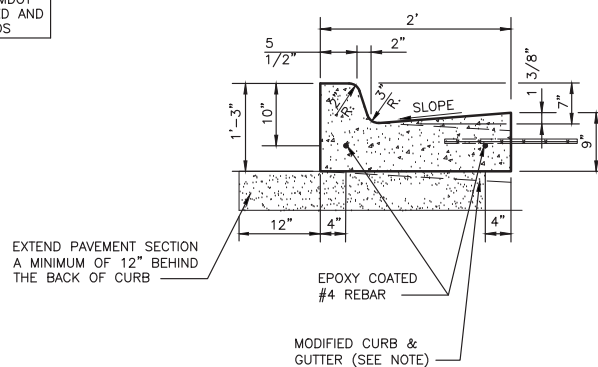
STANDARD SIDEWALK DETAIL

NO SCALE



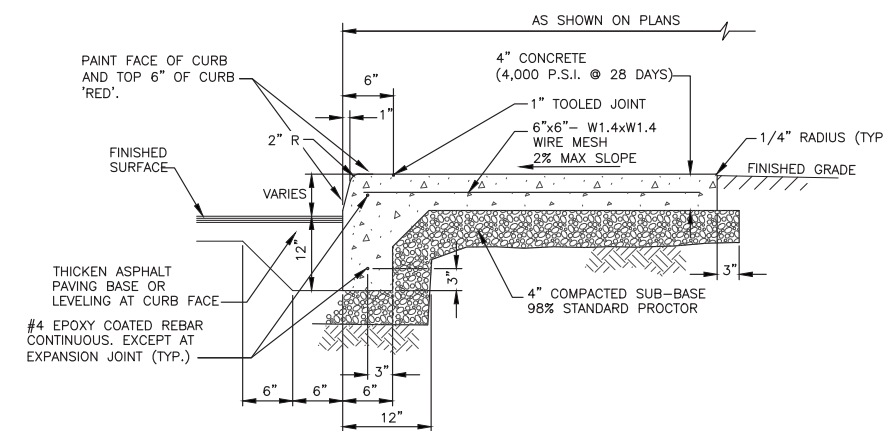
BUTT JOINT

NO SCALE



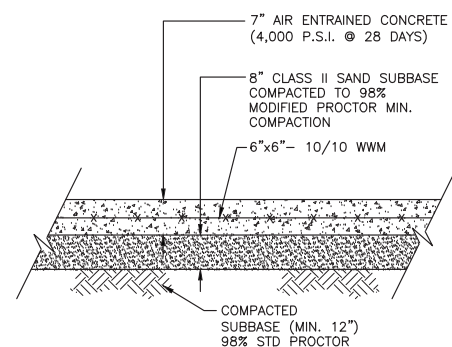
M.D.O.T. C-4 CURB & GUTTER DETAIL

NO SCALE



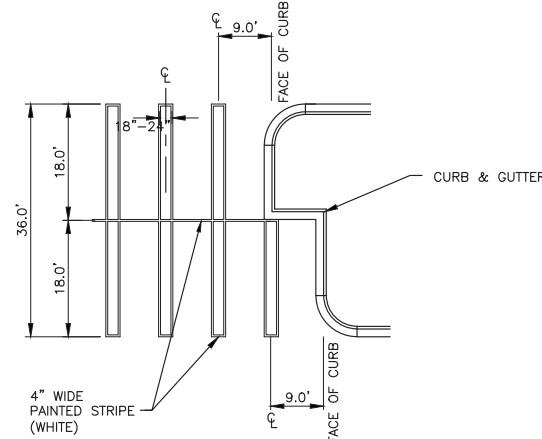
CONCRETE WALK W/THICKENED EDGE

NO SCALE



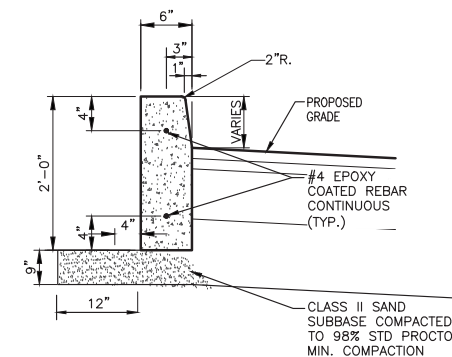
7" - HEAVY DUTY CONCRETE SURFACE @ DUMPSTERS

NO SCALE



90° PARKING STRIPING DETAIL

NO SCALE



STRAIGHT CURB DETAIL

NO SCALE

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 HOWELL, MICHIGAN 48843

SITE DETAILS

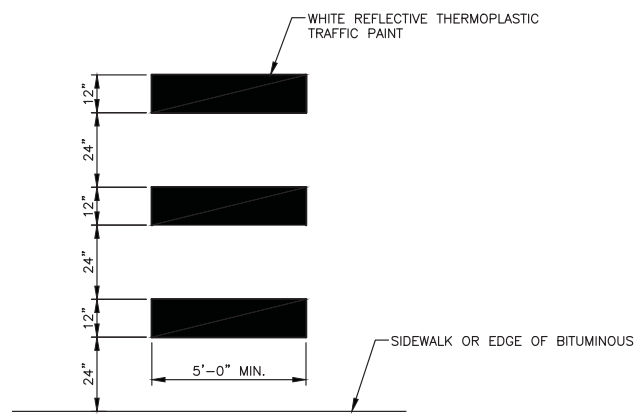
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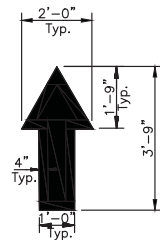
SHEET C-2.1

PROJECT MANAGER: CHARLES J. CHRISTY, PE
 CIVIL WORK: CHRISTY00564861VPL-CSP-SITE PLAN/DWG - C-2.1 - PLOTTED 1/21/2015 4:02 PM BY: CHRISTY, CHARLES

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

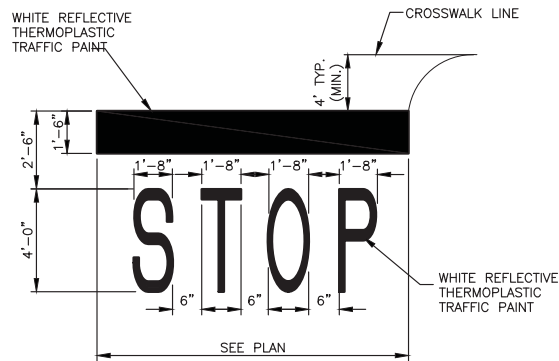


CROSSWALK DETAIL
NO SCALE

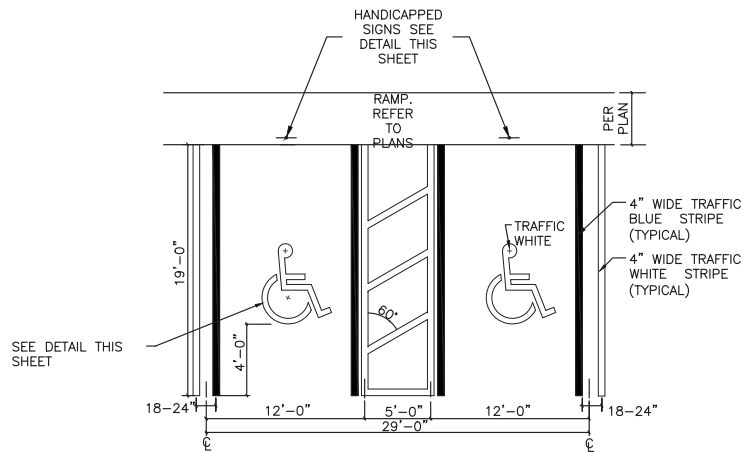


NOTE: ALL TRAFFIC FLOW
ARROWS TO BE REFLECTIVE WHITE
PAINT PER MDOT SPECS.

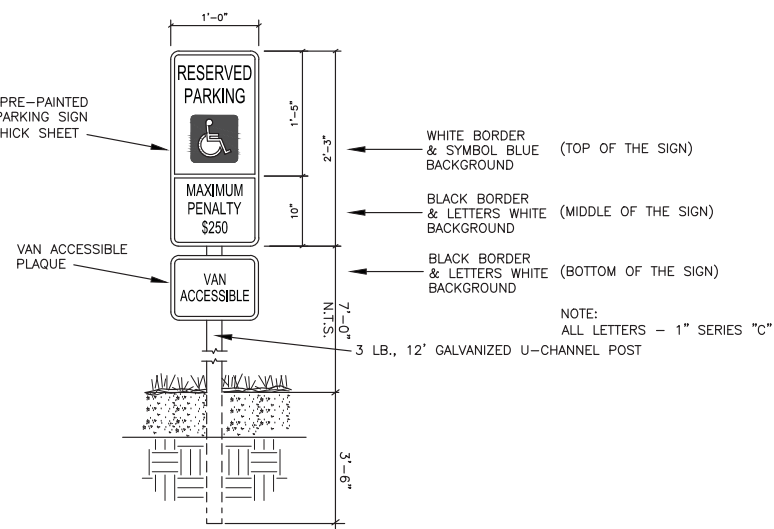
TRAFFIC FLOW ARROW
NO SCALE



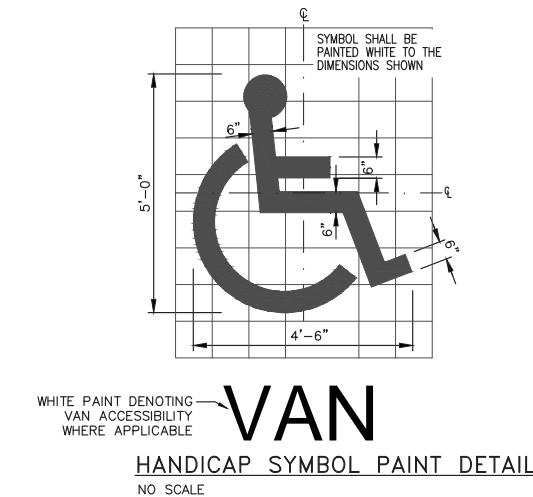
STOP & STOP BAR PAINTING DETAIL
NO SCALE



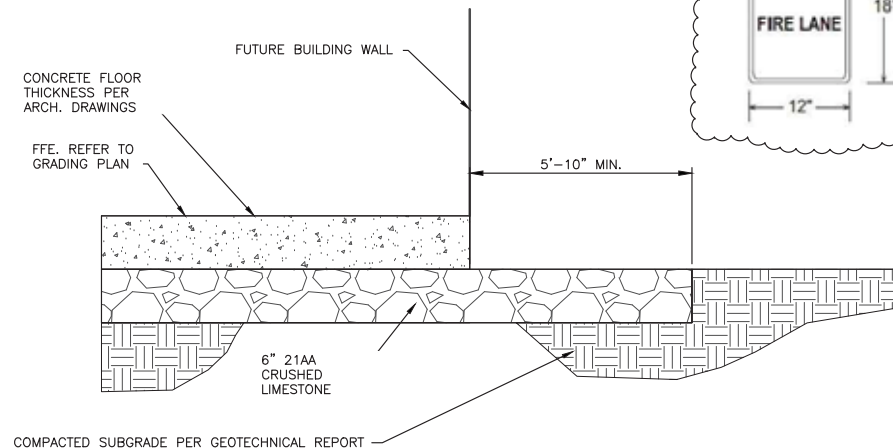
TYPICAL DOUBLE HANDICAPPED STALL
NO SCALE



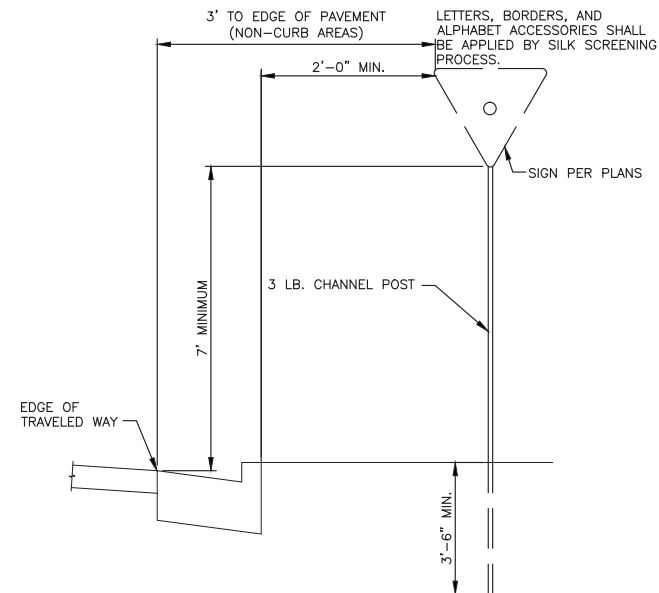
TYPICAL HANDICAPPED
USIGN DETAIL
NO SCALE



HANDICAP SYMBOL PAINT DETAIL
NO SCALE



BUILDING PAD PREPARATION DETAIL
NO SCALE



TYPICAL CURB & GUTTER SECTION SIGN DETAIL
NO SCALE

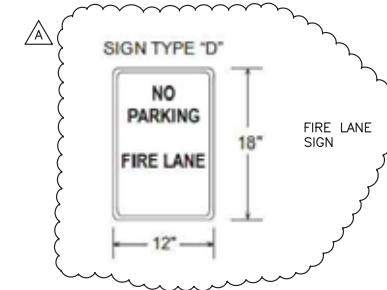
SIGN LEGEND



R5-1 - "DO
NOT ENTER" SIGN
30"x30"



R1-1 -
"STOP" SIGN
36"x36"

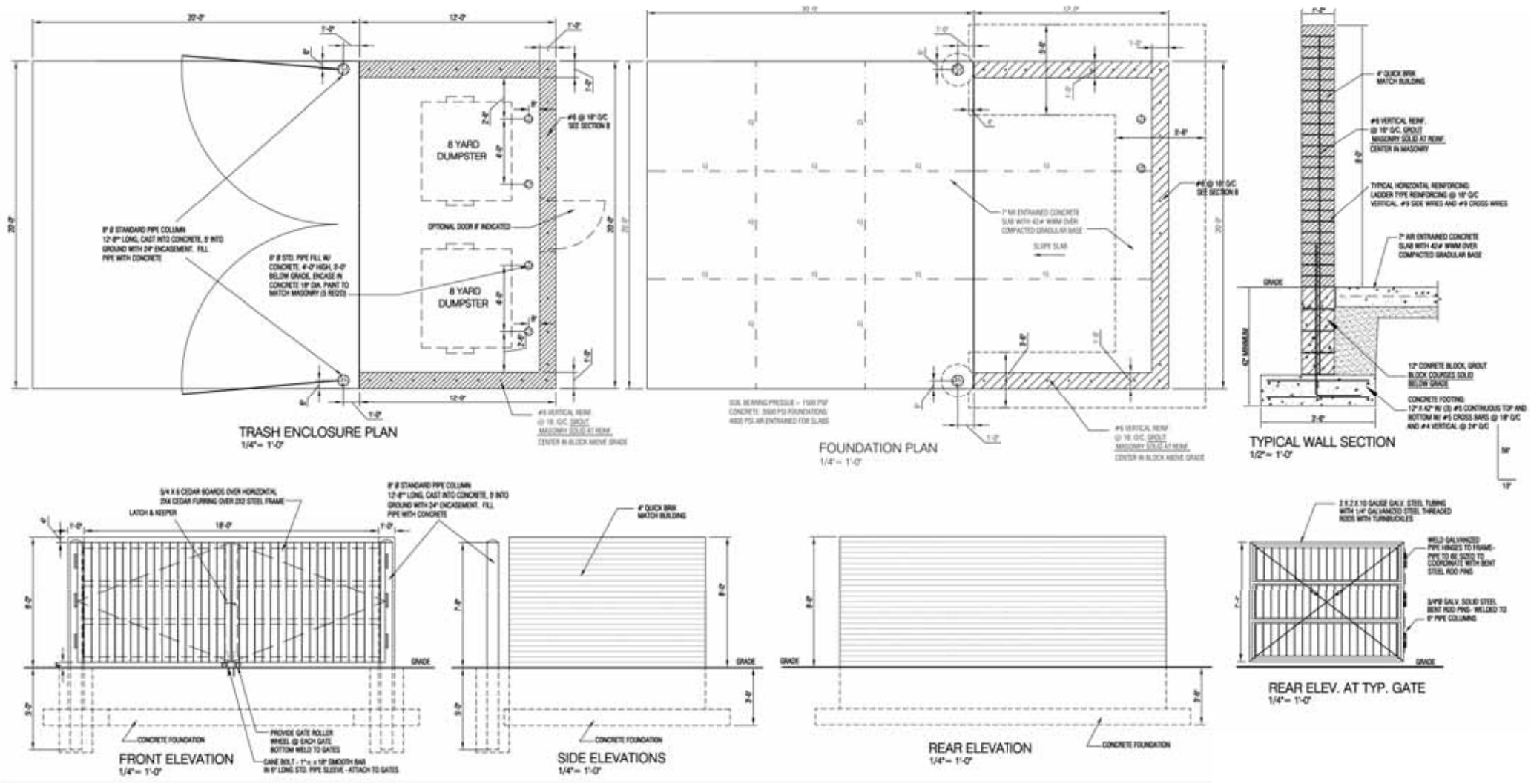


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C-2.2
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PROJECT MANAGER: CHARLES J. CHRISTY, PE
 CIVIL WORK: CHRISTY00564861\PL1-CSP-SITE PLANNING - C-2.3 - PLOTTED 1/21/2015 4:03 PM BY: CHRISTY, CHARLES



DUMPSTER ENCLOSURE DETAILS
 NO SCALE

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SHEET
C-2.3

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SANITARY SEWER					
	TYPE	LENGTH	BEGIN INV.	END INV.	SLOPE
SSWR #1	6" PVC SCH 40	96	1000.91	1001.91	1.04%
SSWR #2	6" PVC SCH 40	80	1002.21	1003.04	1.04%

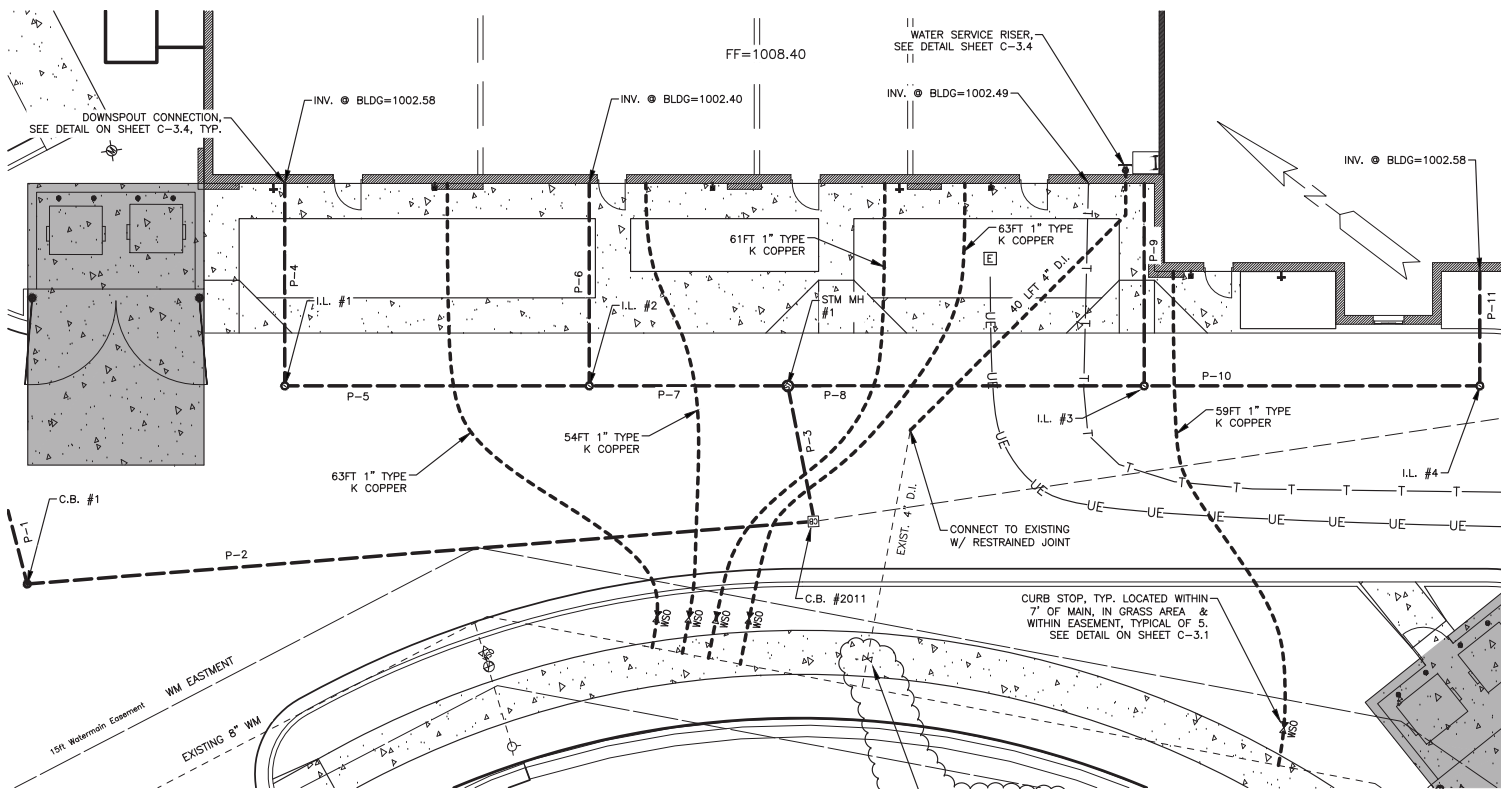
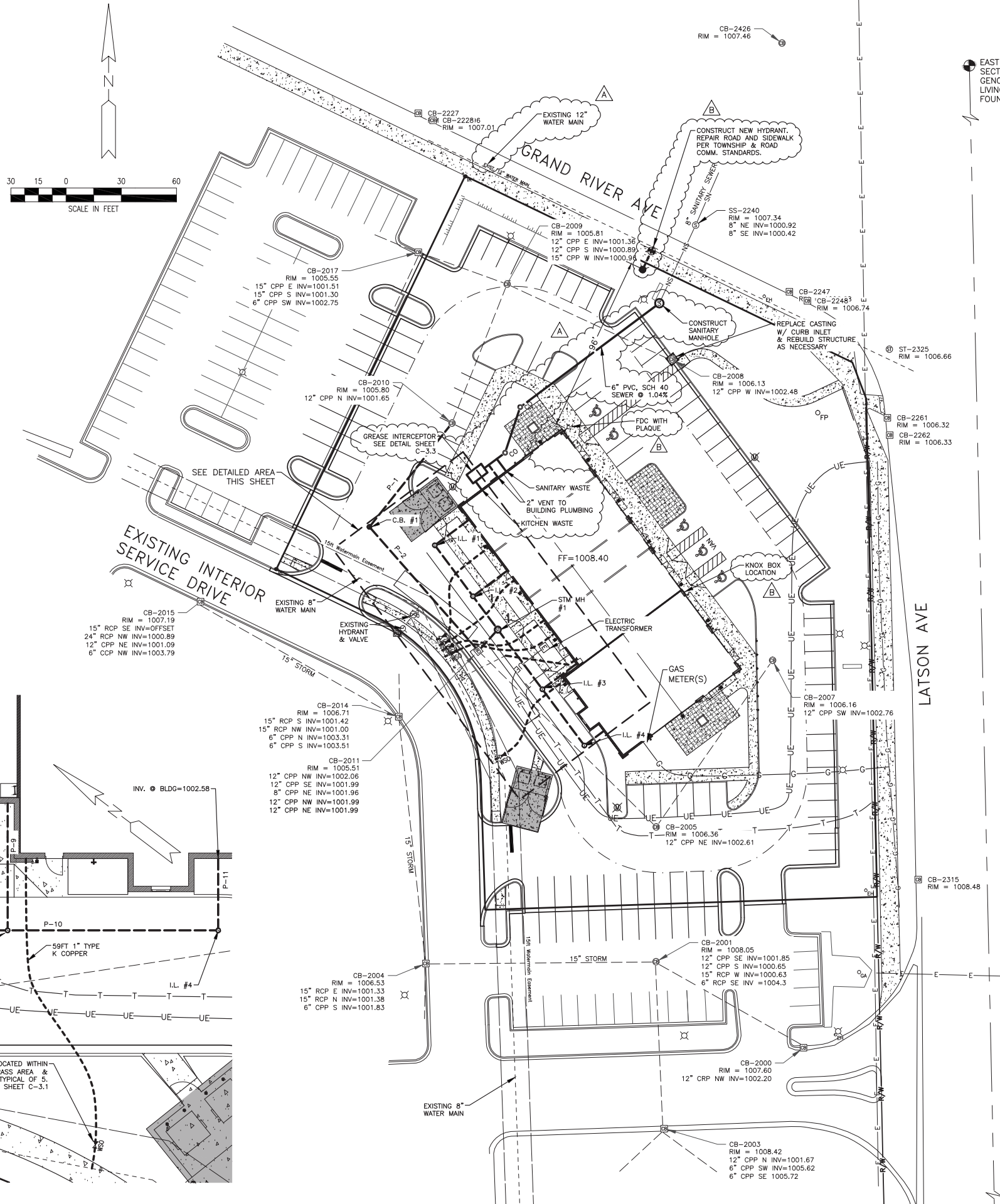
STORM SEWER				
	RIM ELEV.	INV	COVER	
CB #1	1007.27	1001.80	FLAT, RADIAL GRATE, EJW #1040 Z / 1040 M3	
STM #1	1006.43	1002.07	FLAT, RADIAL GRATE, EJW #1040 Z / 1040 M3	
IL #1	1008.18	1002.36	SOLID, TRAFFIC RATED	
IL #2	10067.31	1002.18	SOLID, TRAFFIC RATED	
IL #3	1006.64	1002.27	SOLID, TRAFFIC RATED	
IL #4	1007.39	1002.46	SOLID, TRAFFIC RATED	

STORM PIPING						
PIPE	FROM	TO	LENGTH	SLOPE	MATERIAL	SIZE
P-1	CB-2010	CB #1	72	0.21%	ADS-N12	12"
P-2	CB #1	CB-2011	90	0.21%	ADS-N12	12"
P-3	CB-2011	STM MH #1	16	0.50%	ADS-N12	12"
P-4	I.L. #1	BLDG	22	1.00%	PVC	10"
P-5	I.L. #2	I.L. #1	35	0.50%	PVC	12"
P-6	I.L. #2	BLDG	22	1.00%	PVC	10"
P-7	STM MH #1	I.L. #2	22	0.50%	PVC	12"
P-8	STM MH #1	I.L. #3	40	0.50%	PVC	12"
P-9	I.L. #3	BLDG	22	1.00%	PVC	10"
P-10	I.L. #3	I.L. #4	38	0.50%	PVC	12"
P-11	I.L. #4	BLDG	12	1.00%	PVC	10"

LEGEND

- STORM SEWER
- CATCH BASIN
- STORM SEWER MANHOLE
- NYLOPLAST JUNCTION SEE SHEET C-3.4
- SANITARY SEWER
- SANITARY CLEAN OUT
- UNDERGROUND ELECTRIC
- TELEPHONE LINE
- GAS LINE
- WATER LINE
- FIRE DEPARTMENT CONNECTION
- POST INDICATOR VALVE
- SHUT OFF VALVE
- EXISTING WATER MAIN
- EXISTING HYDRANT
- EXISTING SHUT OFF VALVE
- EXISTING GATE VALVE & BOX
- EXISTING SANITARY CLEAN OUT
- EXISTING SANITARY SEWER
- EXISTING GAS

1. CHECK VALVE SHALL BE INSTALLED ON 1" AND 4" WATER LINES INSIDE BUILDING.
2. CONTRACTOR SHALL LOCATE EXISTING 4" GATE VALVE ON EXISTING 4" FIRE LINE AND RAISE TO GRADE. IF 4" GATE VALVE CANNOT BE LOCATED OR IS NOT PRESENT, CONTRACTOR SHALL INSTALL 4" GATE VALVE ON EXISTING 4" FIRE LINE WITHIN THE EXISTING WATER MAIN EASEMENT.
3. NEW 4" FIRE LINE SHALL BE D.I., CL 52 AND WRAPPED WITH POLYETHYLENE.
4. WATER SERVICES ADJUSTED FOR THIS REVISION, ADJUSTED LOCATION OF SHUTOFFS.



DETAILED VIEW
SCALE: 1"=10'

PROJECT MANAGER: CHARLES J. CHRISTY, PE
C:\PW\WORK\CHRISTY\0504861\PL-UTILITY PLAN.DWG - C-3.0 - PLOTTED 1/21/2015 4:07 PM BY: CHRISTY, CHARLES

REV#	DATE	DESCRIPTION
B	12/23/14	1ST TOWNSHIP REVIEW COMMENTS
B	1/22/15	TWP REVIEW & FINAL PC

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LIVINGSTON COMMONS, LOT 4
3950 E. GRAND RIVER
HOWELL, MICHIGAN 48843

UTILITY PLAN

ISSUED FOR: DATE: BY:
PC 12/1/14 CJC

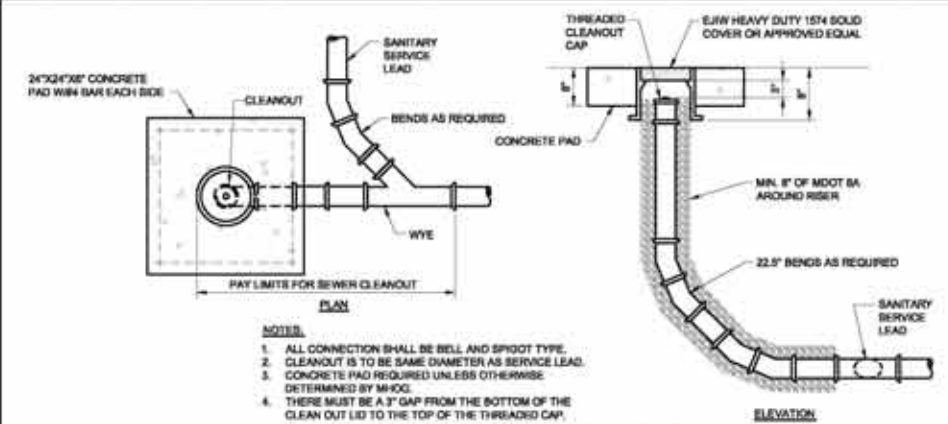
JOB NO. RGP1001.01F
SHEET C-3.0

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN
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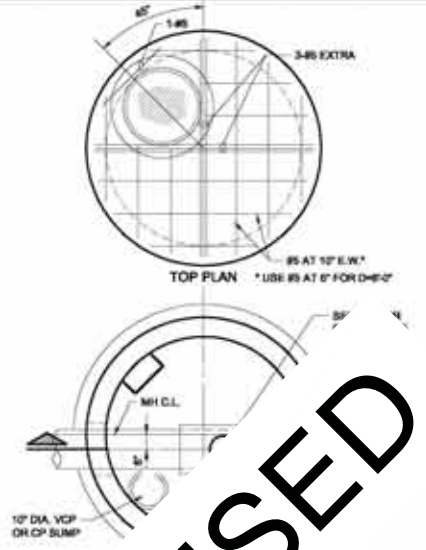
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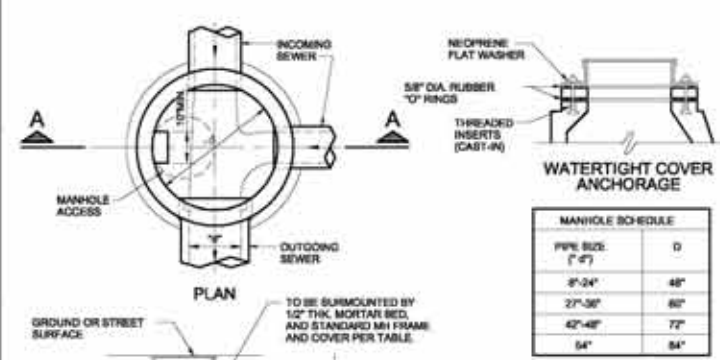
SANITARY SEWER LATERAL



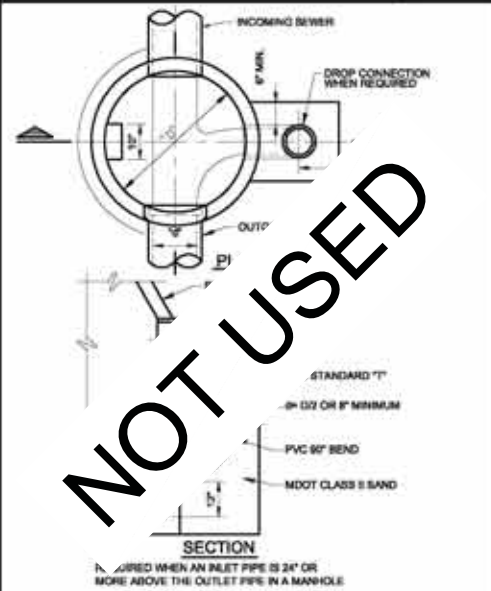
SEWER CLEANOUT DETAIL



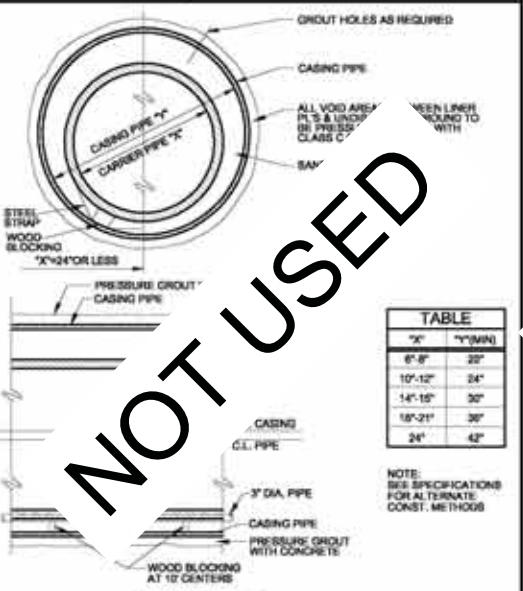
AIR RELIEF STRUCTURE



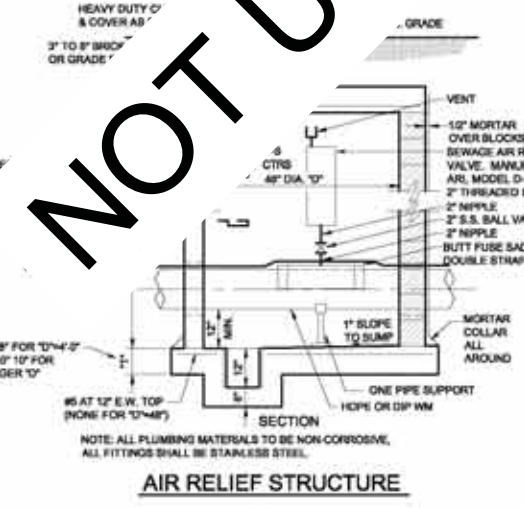
WATERTIGHT COVER ANCHORAGE



DROP CONNECTION

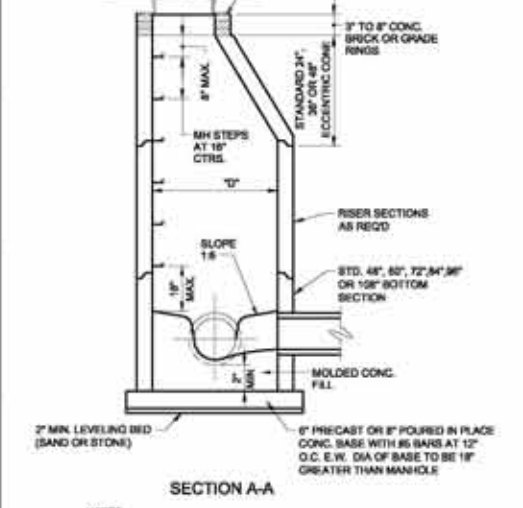


CASING PIPE



NOT USED

SEWER LATERAL DROP CONNECTION

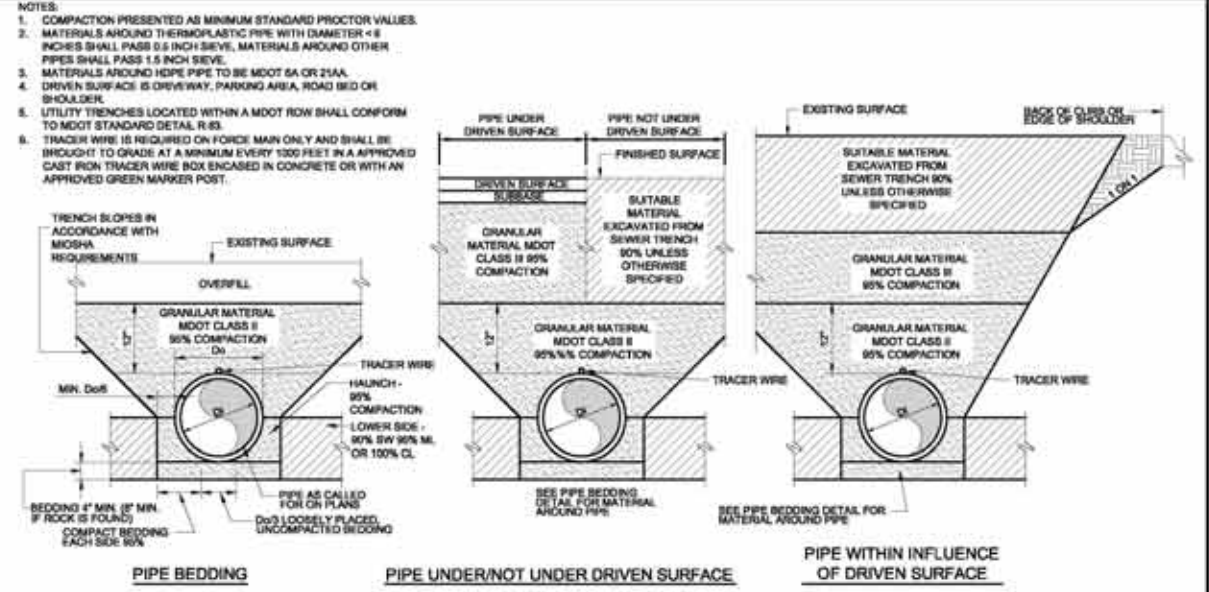


SECTION A-A

- NOTES:
- ALL SANITARY MANHOLES TO BE PRECAST REINFORCED CONCRETE WITH PREMIUM JOINTS. SEE SPECIFICATIONS FOR BASE SLAB AND PIPE OPENINGS AND CONNECTIONS.
 - MANHOLE COVERS SHALL BE THE ECCENTRIC TYPE.
 - PROVIDE 8\" OF COMPACTED GRANULAR MATERIAL UNDER ALL PRECAST CONCRETE BASE SLABS.
 - FORCE MAINS CONNECT DIRECTLY TO A MANHOLE SHALL BE INSTALLED SO THAT THE ELEVATION OF THE PIPE CROWNS MATCH. THE FORCE MAIN SHALL BE DIRECTED DOWNWARD INTO THE FLOW CHANNEL.
 - FOR SANITARY SEWERS ALL PIPES SHALL ENTER MANHOLE THROUGH RUBBER BOOTED CONNECTION.

TYPE	TYPE OF COVER	MANUFACTURER OR EQUAL	
		EAST JORDAN	NEENAH
MH	SANITARY - SOLID SELF-SEALING	1040.0000	R-1842
MH	SANITARY - SOLID WATERTIGHT	1040-APT	R-1916-F
CD	SOLID	1574A	R-1973-A

STANDARD MANHOLE



PIPE BEDDING

PIPE UNDER/NOT UNDER DRIVEN SURFACE TRENCH EXCAVATION & PIPE BEDDING

PIPE WITHIN INFLUENCE OF DRIVEN SURFACE



GENOA OCEOLA
Sewer and Water Authority

Scale: NONE
Revised Date: JANUARY - 2014

SANITARY SEWER STANDARD DETAILS

LIVINGSTON COMMONS, LOT 4
3950 E. GRAND RIVER
HOWELL, MICHIGAN 48843

ISSUED FOR: DATE: BY:
PC 12/1/14 CJC

JOB NO. RGP1001.01F

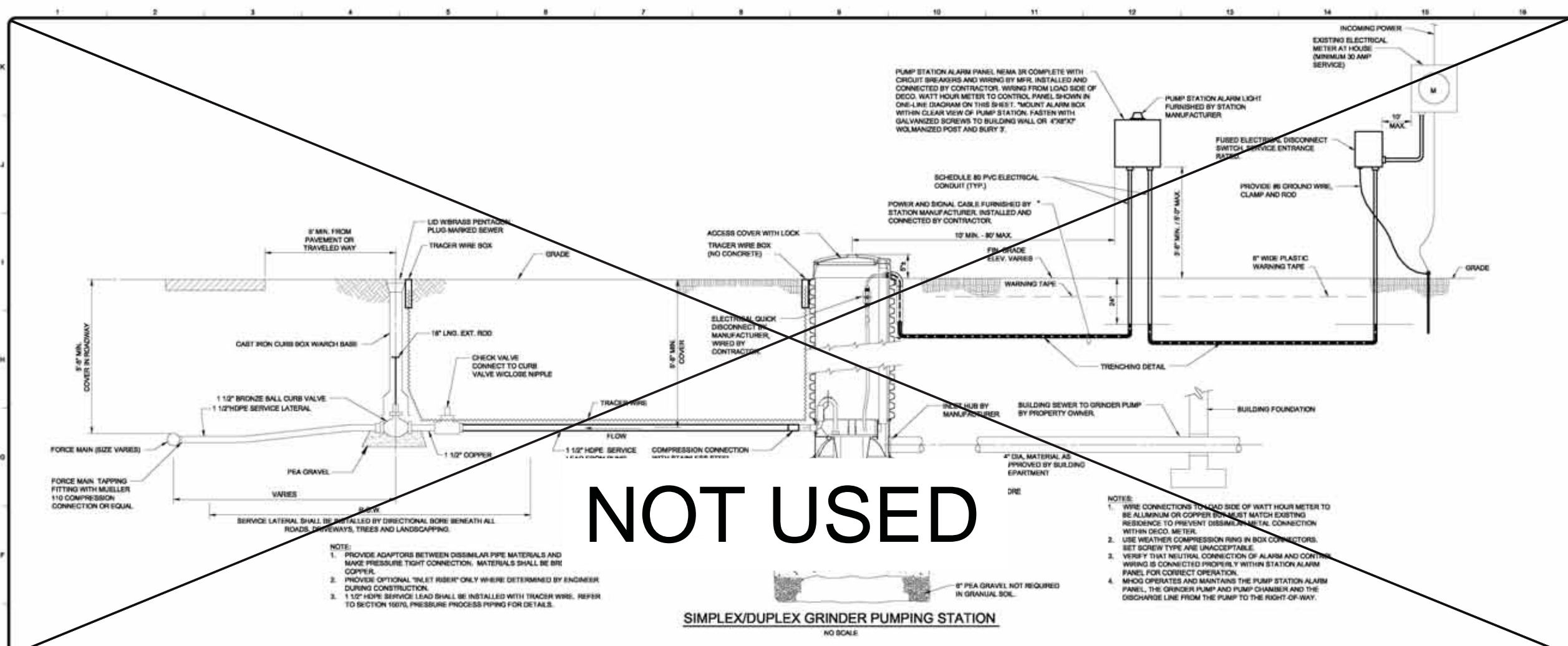
SHEET C-3.2

REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
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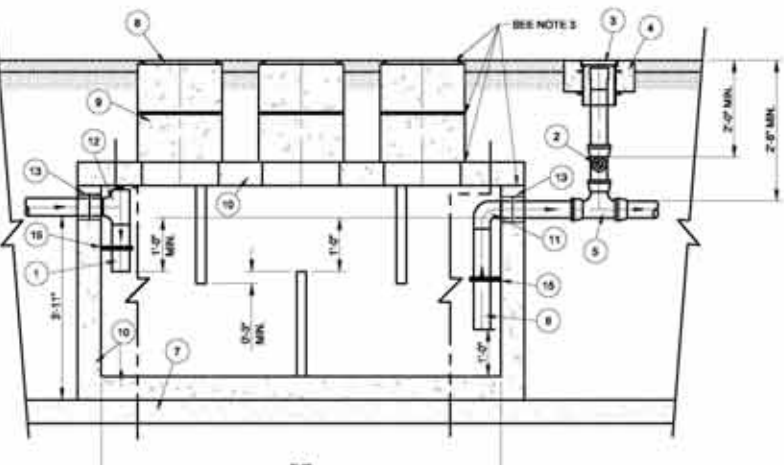
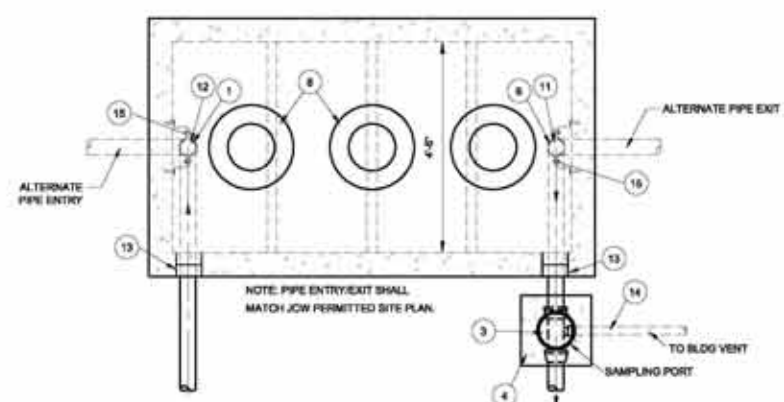
SANITARY DETAILS

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN



NOT USED

SIMPLEX/DUPLEX GRINDER PUMPING STATION
NO SCALE



GREASE INTERCEPTOR 1000 GALLON
NO SCALE

ITEM	DESCRIPTION
1	4" ABS INLET PIPE**
2	4"x4" TEE WITH 2" PIPE TO BUILDING VENT**
3	THREADED C/O CAP JOSAM MMS OR APP EQUAL**
4	CONCRETE PAD
5	4"x4" TWO WAY CLEANOUT TEE*
6	4" ABS OUTLET**
7	4" - 8" GRAVEL BEDDING
8	HEAVY-DUTY CAST IRON FRAME AND COVER ***
9	CONCRETE ADJUSTMENT RINGS
10	REINFORCE AS REQUIRED FOR SERVICE CONDITIONS
11	4" ABS 90° ELBOW*
12	4" ABS TEE*
13	A LOK OR PRESS SEAL PSX PIPE/WALL CONNECTOR
14	2" VENT PIPE (IDENTIFY PIPE TYPE, CLASS & JOINT AS REQUIRED FOR PROJECT)
15	STAINLESS STEEL PIPE SUPPORT CLAMP****

** 8" PIPE MAY BE SUBSTITUTED TO MATCH UPSTREAM PIPE DIAMETER.
 *** REFER TO CLEAN OUT DETAILS ON STANDARD DETAILS SHEET.
 **** CLAY & BAILEY 2008 SV OR EQUAL. FROST PROOF COVERS OPTIONAL.
 ***** 1/2" M STAINLESS FASTENERS #63 OR EQUAL. 1/2"x2-1/2" SS BRACKET W/ 1/2"x1-1/2" FULLY THREADED SS HEX BOLT WITH 1/2" SS WASHER AND 1/2"x1-3/4" SS ANCHORS. CLAMP TO BE FACTORY INSTALLED.

- NOTES:
- THREE COVERS AND RISERS SHOWN. TWO COVERS AND RISERS CENTERED OVER UPPER TWO BAFFLES ARE OPTIONAL.
 - INTERCEPTOR SIZE - 1000 GAL MINIMUM (REVISE THE SIZE DIMENSIONS, AS NEEDED, FOR LARGER CAPACITY INTERCEPTORS)
 - ALL JOINTS AT THE FRAME & COVER*, CONCRETE ADJUSTMENT RINGS AND THE LID OF THE INTERCEPTOR SHALL BE SEALED WITH A MINIMUM OF TWO (2) ROWS OF 3/4" TO 1 INCH PREFORMED BUTYL JOINT SEALER AND A 6" BUTYL JOINT WRAP AROUND SLEEVE (S2 WRAP). THE ENDS OF THE 6" S2 WRAP SHALL OVERLAP BY 12".
 - PIPING ON THE INTERIOR OF THE INTERCEPTOR SHALL BE ABS WITH SOLVENT-CEMENTED JOINTS.
 - GREASE INTERCEPTOR INCLUDING ADJUSTMENT RINGS AND CASTINGS SHALL BE VACUUM TESTED FOR WATER TIGHTNESS AFTER THE BACKFILL OPERATIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH JOW TECHNICAL SPECIFICATIONS. A VACUUM OF 10 INCHES OF MERCURY SHALL BE DRAWN AND WITH THE VACUUM PUMP SHUT OFF THE MERCURY SHALL NOT DROP BELOW 3 INCHES WITHIN 1 MINUTE OR BELOW 5 INCHES WITHIN 5 MINUTES.



GENOA OCEOLA
Sewer and Water Authority

SANITARY SEWER STANDARD DETAILS

Scale: NONE
 Issue Date: JANUARY - 2014

LIVINGSTON COMMONS, LOT 4
 3950 E. GRAND RIVER
 HOWELL, MICHIGAN 48843

ISSUED FOR: DATE: BY:
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JOB NO. RGP1001.01F
 SHEET C-3.3

REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
D	12/23/14	1ST TOWNSHIP REVIEW COMMENTS

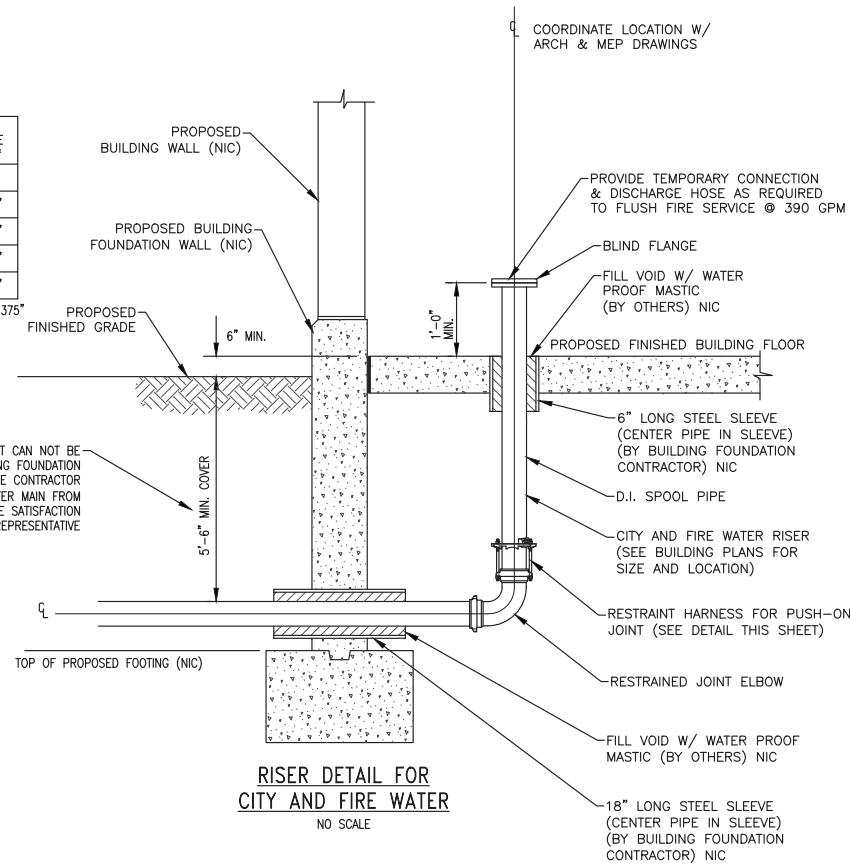
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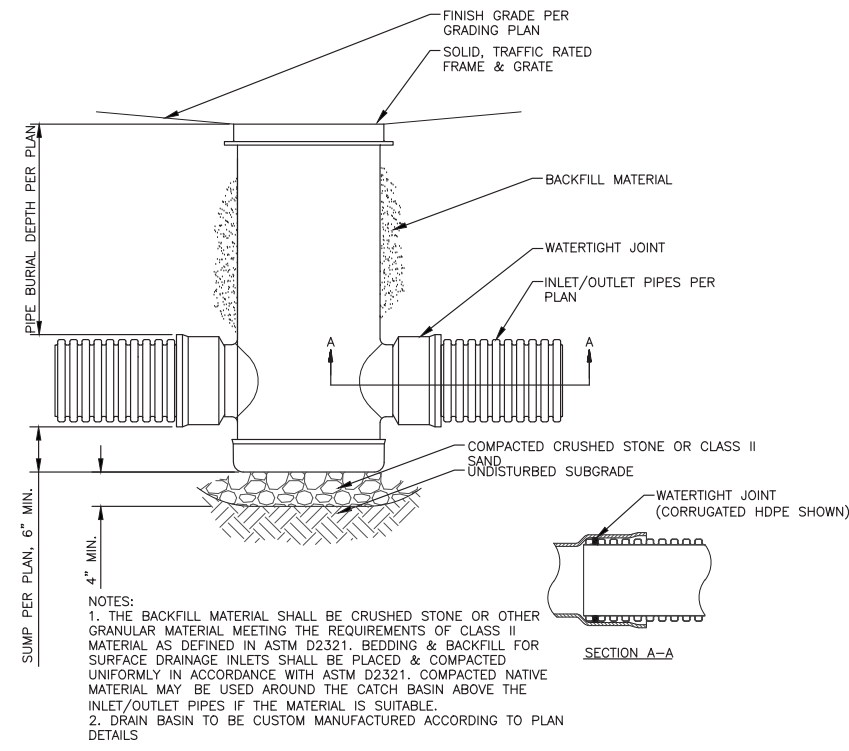
D.I. PIPE (DIA.)	STEEL SLEEVE (DIA.)*
4"	8"
6"	10"
8"	12"
10"	14"
12"	16"

* WALL THICKNESS 0.375"

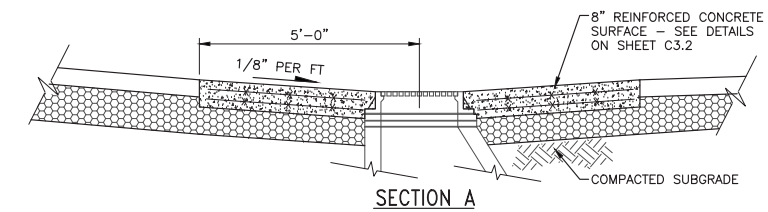
IF THE MINIMUM COVER OF 5.5 FT CAN NOT BE ATTAINED DUE TO THE BUILDING FOUNDATION DESIGN CONSTRAINTS, THEN THE CONTRACTOR SHALL PROTECT/INSULATE THE WATER MAIN FROM FREEZING. THIS SHALL BE TO THE SATISFACTION OF THE OWNERS CONSTRUCTION REPRESENTATIVE



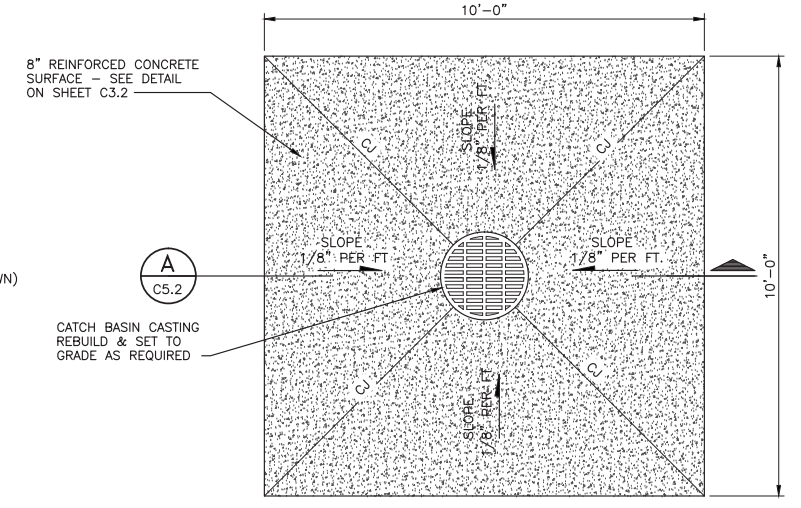
RISER DETAIL FOR CITY AND FIRE WATER
NO SCALE



18"-24" NYLOPLAST JUNCTION, I.L #1-#4
NO SCALE



SECTION A

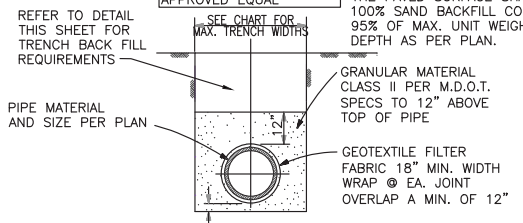


CONCRETE COLLAR DETAIL
NO SCALE

TRENCH WIDTHS	
MAX WIDTH OF TRENCH 12" ABOVE TOP OF PIPE	
6" THRU 12" PIPE - 30" WIDE	
15" THRU 36" PIPE - O.D. + 16"	
42" THRU 60" PIPE - O.D. + 20"	
OVER 60" PIPE - O.D. + 24"	

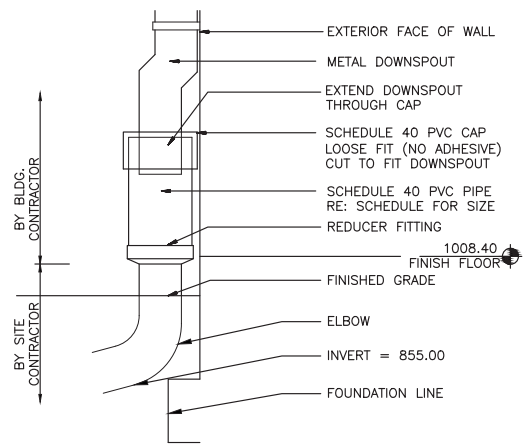
NOTE: GEOTEXTILE FILTER FABRIC TO BE MIRAFI "140N" OR APPROVED EQUAL

NOTE: ALL PIPE THAT RUNS BENEATH THE PAVED SURFACE SHALL RECEIVE 100% SAND BACKFILL COMPACTED TO 95% OF MAX. UNIT WEIGHT TO A DEPTH AS PER PLAN.

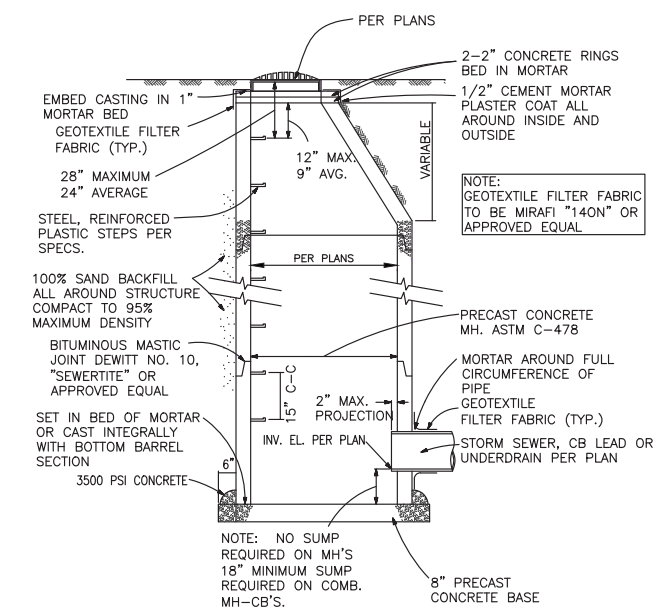
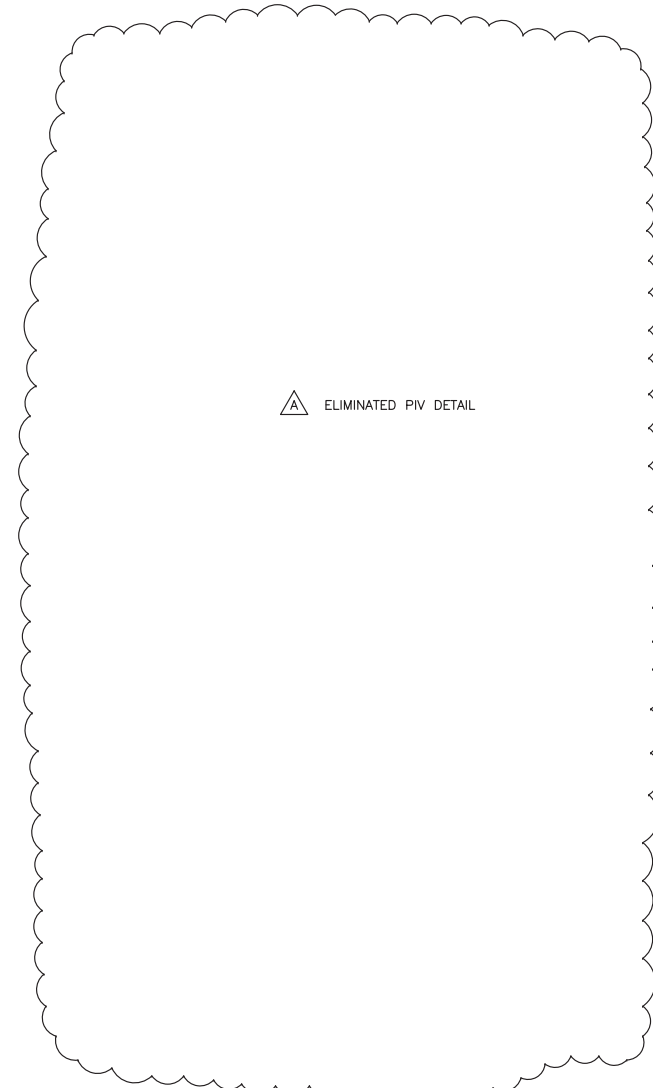


STORM SEWER BEDDING DETAIL
NO SCALE

SCHEDULE	
DOWNSPOUT	PVC PIPE WITH BELL FITTING
4"x4" or 6"	12" DIA.
5"x5"	12" DIA.
8"x8"	12" DIA.
9"x9"	15" DIA.
10"x10"	15" DIA.



DOWNSPOUT CONNECTION DETAIL
NO SCALE



STORM MANHOLE AND MANHOLE-CATCHBASIN COMBINATION DETAIL
NO SCALE

PROJECT MANAGER: CHARLES J. CHRISTY, PE
C:\PW\WORK\CHRISTY\0504466\PL1-CJP-UTILITY PLAN.DWG - C-3.4 - PLOTTED 1/21/2015 4:09 PM BY CHRISTY, CHARLES

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STORM & MISCELLANEOUS DETAILS

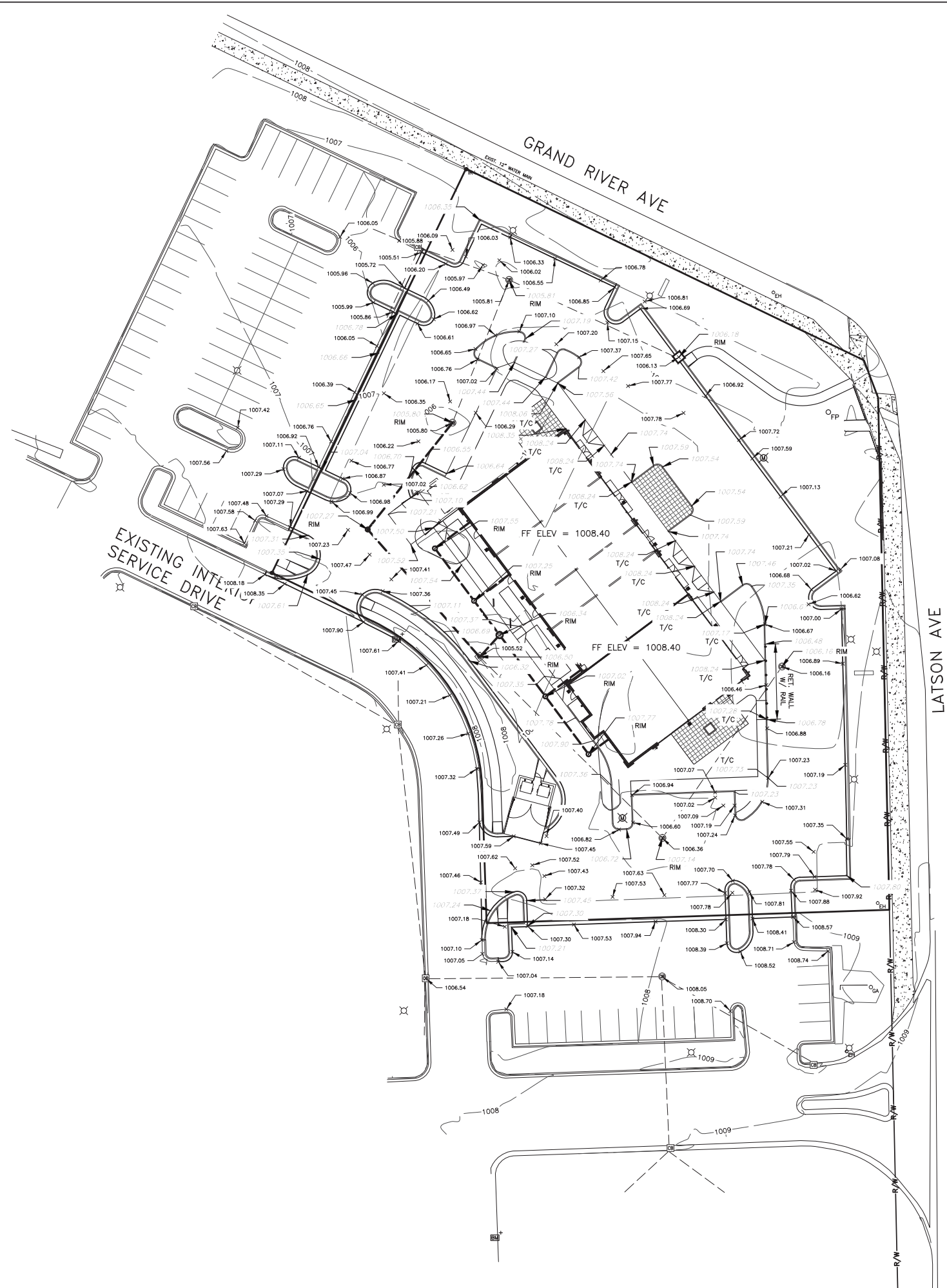
LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

ISSUED FOR: DATE: BY:
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JOB NO. RGP1001.01F

SHEET C-3.4

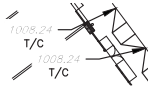



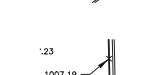

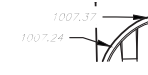

PROJECT MANAGER: CHARLES J. CHRISTY, PE
 CIVIL WORK: CHRISTY0564861\PL1-CGP-GRADING PLANDWG - C-4.0 - PLOTTED 1/21/2015 3:57 PM BY CHRISTY, CHARLES



EAST 1/4 CORNER
 SECTION 5, T2N-R5E
 GENOA TOWNSHIP,
 LIVINGSTON COUNTY, MICHIGAN
 FOUND IRON IN MON BOX

SOUTHEAST CORNER
 SECTION 5, T2N-R5E
 GENOA TOWNSHIP,
 LIVINGSTON COUNTY, MICHIGAN
 FOUND IRON IN MON BOX

LEGEND

-  TOP OF CURB ELEVATION
-  PROPOSED TOP OF ASPHALT ELEVATION ADJACENT TO NEW VERTICAL CURB
-  NEW OR EXISTING DRAINAGE STRUCTURE, ADJUST RIM TO ELEVATION SHOWN.
-  EXISTING PAVEMENT SPOT ELEVATION, CONSTRUCT CURB GUTTER PAN FLUSH WITH FINAL PAVEMENT SURFACE.
-  EXISTING PAVEMENT SPOT ELEVATION, CONSTRUCT VERTICAL CURB SO TOP OF CURB IS 6-INCHES ABOVE FINAL PAVEMENT SURFACE.
-  EXISTING PAVEMENT SPOT ELEVATION AT GUTTER PAN OF EXISTING CURB.
-  PROPOSED PAVEMENT SPOT ELEVATION ADJACENT TO THICKENED EDGE SIDEWALK, CONSTRUCT SIDEWALK WITH 6-INCH REVEAL.
-  PROPOSED PAVEMENT SPOT ELEVATION ADJACENT TO PROPOSED CURB AND GUTTER, ELEVATION IS EDGE OF PAVEMENT AT GUTTER PAN EDGE.

REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
D	12/23/14	1ST TOWNSHIP REVIEW COMMENTS
CJC		
CJC		
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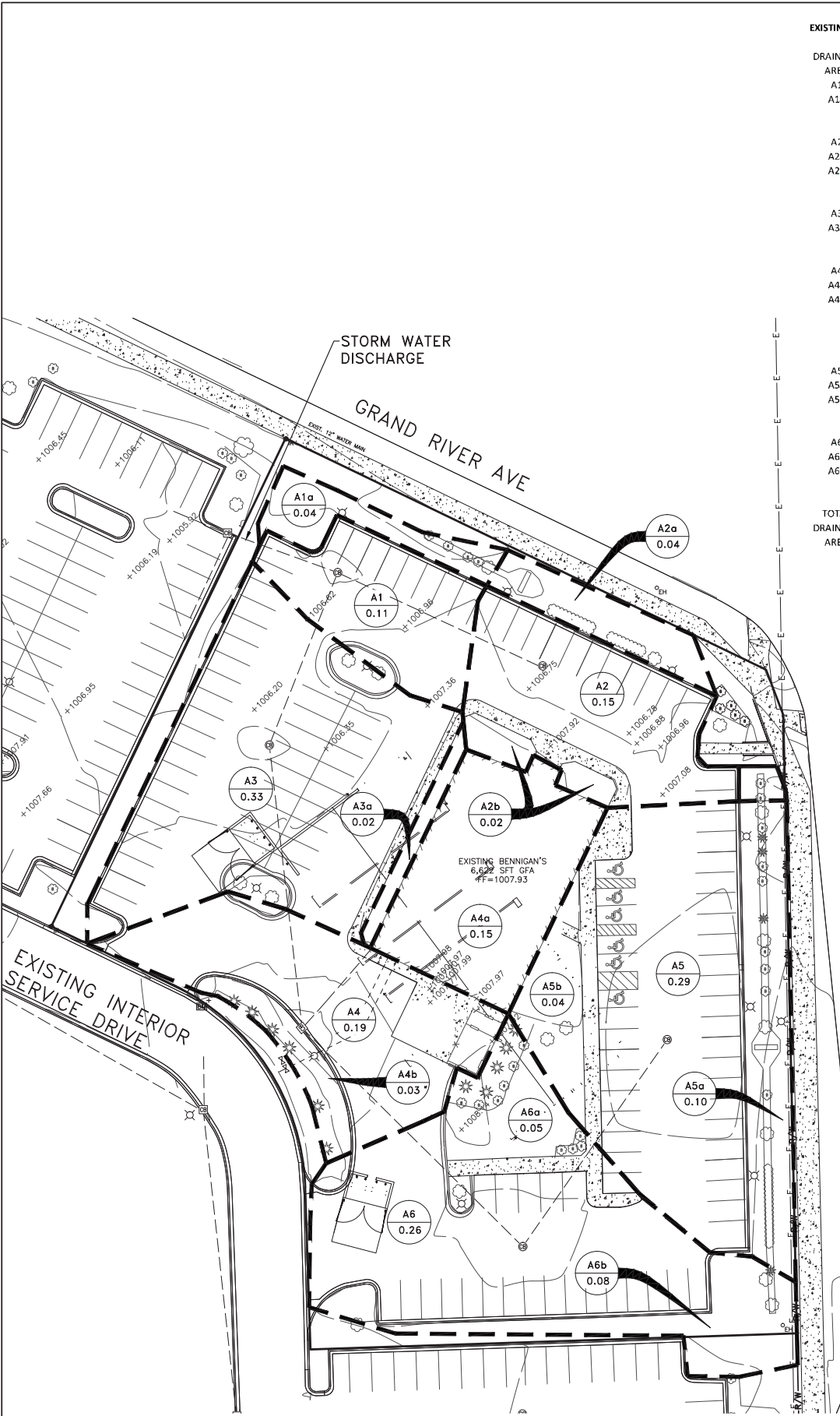
LIVINGSTON COMMONS, LOT 4
3950 E. GRAND RIVER
HOWELL, MICHIGAN 48843

GRADING PLAN

ISSUED FOR: PC	DATE: 12/1/14	BY: CJC
JOB NO. RGP1001.01F	SHEET C-4.0	

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

PROJECT MANAGER: CHARLES J. CHRISTY, PE
 CIVIL WORK: CHRISTY00564861\PLT-CGP-GRADING PLANNING - C-4.1 - PLOTTED 1/21/2015 3:58 PM BY CHRISTY, CHARLES

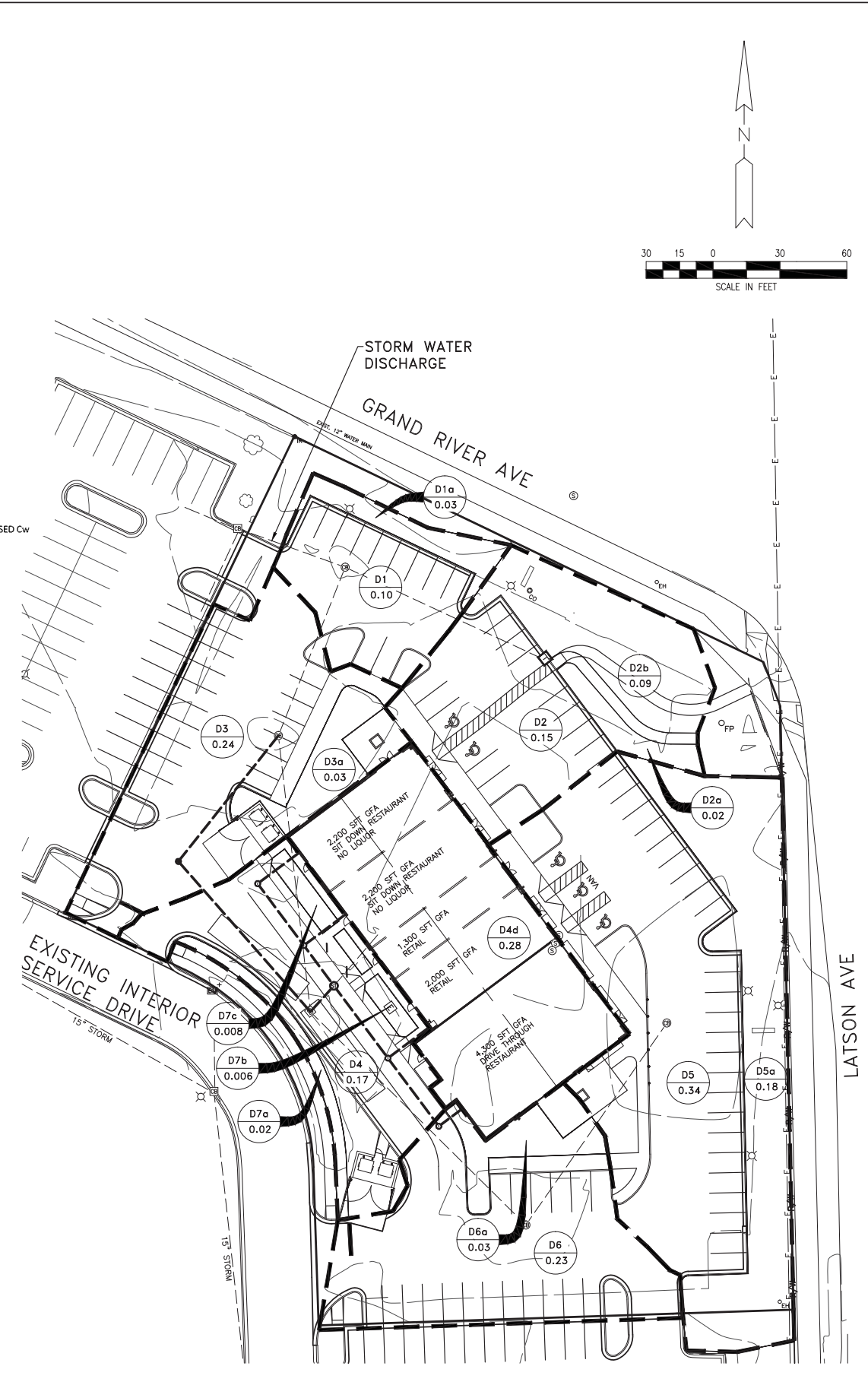
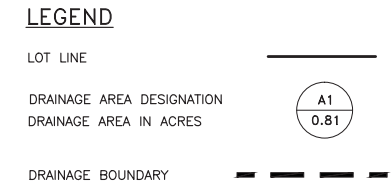


EXISTING SITE	
DRAINAGE AREA	81,457.2 SFT (1.87 AC)
PERVIOUS AREA	16,989.0 SFT (0.39 AC)
IMPERVIOUS AREA	64,468.2 SFT (1.48 AC)
BUILDING COVERAGE	6,622 SFT (7.5%)

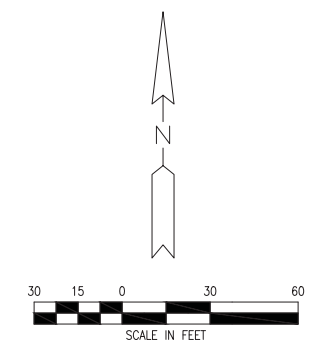
EXISTING DRAINAGE Cw COMPUTATION			
DRAINAGE AREA	AREA (Ac.)	C	Cw
A1	0.11	0.9	
A1a	0.04	0.2	
	0.15		0.71
A2	0.15	0.9	
A2a	0.04	0.2	
A2b	0.02	0.2	
	0.21		0.70
A3	0.33	0.9	
A3a	0.02	0.2	
	0.35		0.86
A4	0.19	0.9	
A4a	0.15	0.9	
A4b	0.03	0.2	
	0.37		0.84
A5	0.29	0.9	
A5a	0.1	0.2	
A5b	0.04	0.2	
	0.43		0.67
A6	0.26	0.9	
A6a	0.05	0.2	
A6b	0.05	0.2	
	0.36		0.71
TOTAL DRAINAGE AREA	1.87		0.75 EXISTING Cw

PROPOSED DRAINAGE Cw COMPUTATION			
DRAINAGE AREA	AREA (Ac.)	C	Cw
D1	0.1	0.9	
D1a	0.03	0.2	
	0.13		0.74
D2	0.15	0.9	
D2a	0.02	0.2	
D2b	0.09	0.2	
	0.26		0.60
D3	0.24	0.9	
D3a	0.03	0.2	
	0.27		0.82
D4	0.17	0.9	
D4a	0.15	0.2	
D4b	0.006	0.2	
D4c	0.008	0.2	
D4d	0.2	0.9	
	0.534		0.69
D5	0.34	0.9	
D5a	0.18	0.2	
	0.52		0.66
D6	0.23	0.9	
D6a	0.03	0.2	
	0.26		0.82
TOTAL DRAINAGE AREA	1.974		0.71 PROPOSED Cw

- NOTES:
- SEE SHEET C-1.0 & C-3.0 FOR EXISTING & PROPOSED STORM SEWER PIPE SIZES.
 - STORM WATER DISCHARGE LOCATION WILL NOT CHANGE FROM THE CURRENT LOCATION.
 - A REGIONAL STORM WATER QUALITY & QUANTITY FACILITY HAS BEEN CONSTRUCTED, IN USE & OPERATION FOR THE PARCEL AND PARCELS IN THIS P.U.D.. THE ORIGINAL DESIGN OF THE STORM WATER MANAGEMENT FACILITY WILL NOT CHANGE AS A RESULT OF THE REDEVELOPMENT OF LOT 4.
 - THE REDEVELOPMENT OF LOT 4 WILL CREATE ADDITIONAL PERVIOUS SURFACES, DECREASING THE VOLUME OF RUNOFF AND INCREASING THE TIME OF CONCENTRATION. AS A RESULT NO CALCULATIONS HAVE BEEN PERFORMED.



PROPOSED SITE	
DRAINAGE AREA	85,987.4 SFT (1.974 AC)
PERVIOUS AREA	23696.6 SFT (0.544 AC)
IMPERVIOUS AREA	62,290.8 SFT (1.43 AC)
BUILDING COVERAGE	12,000 SFT (13.6%)



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DRAINAGE MAP

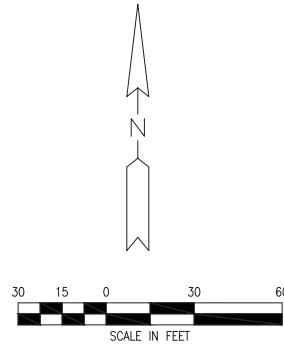
LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

ISSUED FOR: PC DATE: 12/1/14 BY: CJC

JOB NO. RGP1001.01F

SHEET C-4.1

REV#	DATE	TWP REVIEW & FINAL PC	DESCRIPTION
B	1/22/15		
B	12/23/14		1ST TOWNSHIP REVIEW COMMENTS



LANDSCAPE REQUIREMENTS

FRONTAGE GREENBELT BUFFER:

REQUIREMENTS -
 20 FOOT WIDE, TYPE B PER P.U.D. ARTICLE VI, SECTION 6.2
 TYPE B BUFFER, PER 30 FOOT OF FRONTAGE:
 1 - CANOPY TREE
 1 - EVERGREEN TREE
 4 - SHRUBS

PROVIDED -
 503 FEET OF FRONTAGE, 20 FEET WIDE
 18 - CANOPY TREES
 18 - EVERGREEN TREES
 72 - SHRUBS

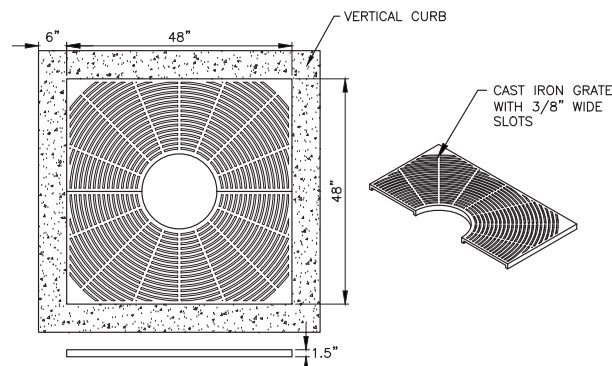
PARKING AREA LANDSCAPING

REQUIREMENTS -
 101-200 PARKING SPACES
 1 - CANOPY TREE & 100sft OF LANDSCAPED AREA PER 12 SPACES
 (Required parking is 145 spaces, 145/12 = 12 Canopy Trees & 1,210sft of landscape area)
 1/3rd OF THE TREES PLANTED ON THE INTERIOR OF THE PARKING AREA
 PARKING IN FRONT YARD
 HEDGE ROW, 2ft TALL, 2-1/2 FEET ON CENTER, EVERGREEN OR DECIDUOUS SHRUBS

PROVIDED -
 9 - CANOPY TREES INTERIOR
 3 - CANOPY TREES PERIMETER
 4,161sft LANDSCAPE AREA INTERIOR, AROUND BUILDING
 CONTINUOUS HEDGE ROW ALONG FRONT YARD PARKING
 DUMPSTER ENCLOSURE SCREENING

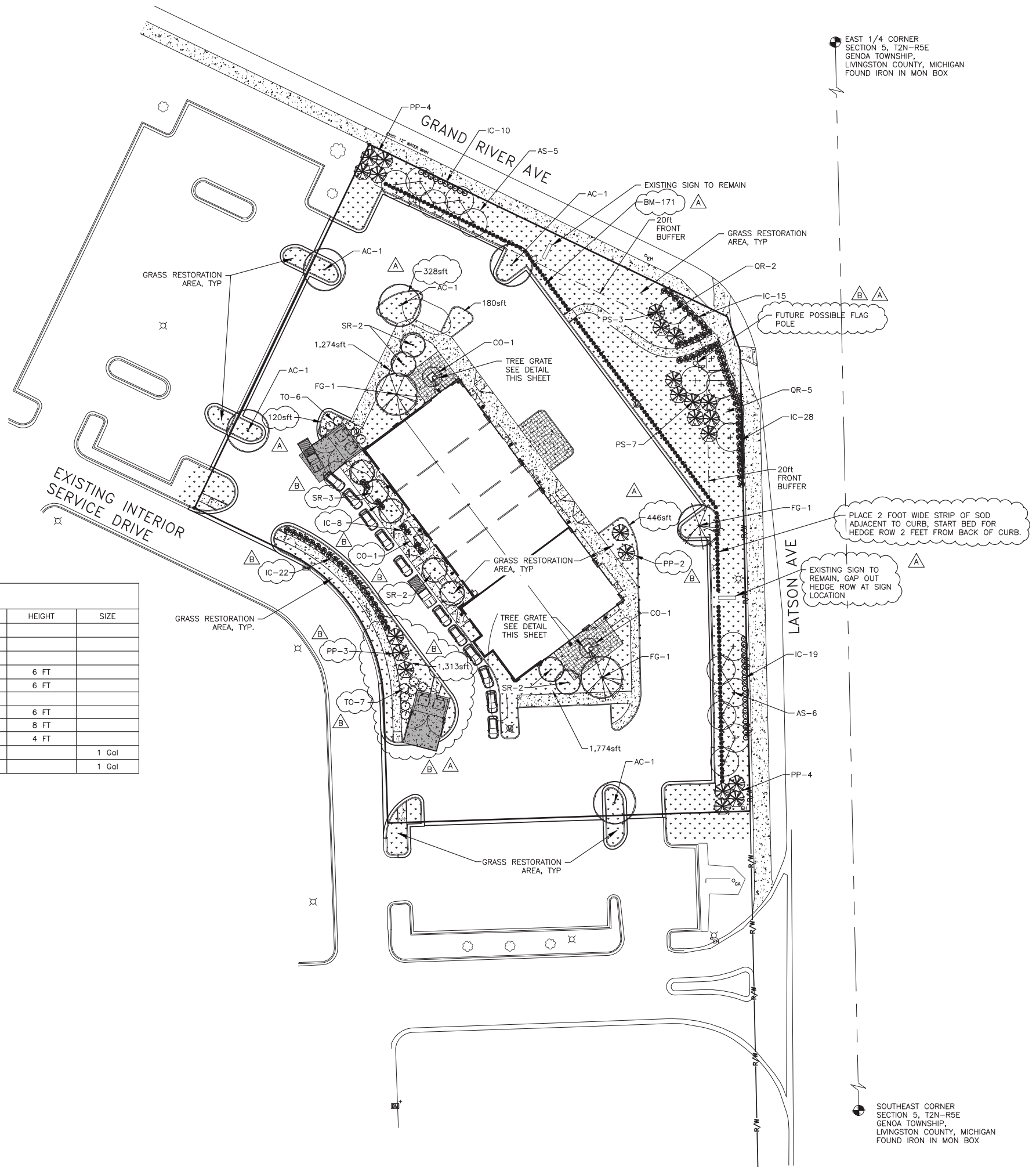
PLANT LIST

QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	SIZE
11	AS	<i>Acer saccharum</i>	SUGAR MAPLE	2-1/2"		
7	QR	<i>Quercus rubra</i>	NORTHERN RED OAK	2-1/2"		
5	AC	<i>Acer saccharinum</i>	SILVER MAPLE	2-1/2"		
23	PP	<i>Picea pungens glauca</i>	COLORADO BLUE SPRUCE		6 FT	
10	PS	<i>Pinus Strobus</i>	EASTERN WHITE PINE		6 FT	
3	FG	<i>Fagus grandifolia</i>	AMERICAN BEECH	2-1/2"		
9	SR	<i>Syringa reticulata</i>	JAPANESE TREE LILAC		6 FT	
3	CO	<i>Celtis occidentalis</i>	HACKBERRY		8 FT	
13	TO	<i>Thuja occidentalis 'Smaragd'</i>	EMERALD GREEN ARBOVITAE		4 FT	
171	BM	<i>Buxus microphylla var. 'Eseles'</i>	BOXWOOD - WEDDING RING			1 Gal
102	IC	<i>Ilex x 'Castle Wall'</i>	HOLLY - CASTLE WALL			1 Gal



TREE GRATE DETAIL

NO SCALE



EAST 1/4 CORNER SECTION 5, T2N-R5E GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN FOUND IRON IN MON BOX

SOUTHEAST CORNER SECTION 5, T2N-R5E GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN FOUND IRON IN MON BOX

PROJECT MANAGER: CHARLES J. CHRISTY, PE FIELD BOOK INFORMATION: C-5.0 - PLOTTED 1/21/2015 4:13 PM BY CHRISTY, CHARLES

REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
B	12/23/14	1ST TOWNSHIP REVIEW COMMENTS

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LIVINGSTON COMMONS, LOT 4
 3950 E. GRAND RIVER
 HOWELL, MICHIGAN 48843

LANDSCAPE PLAN

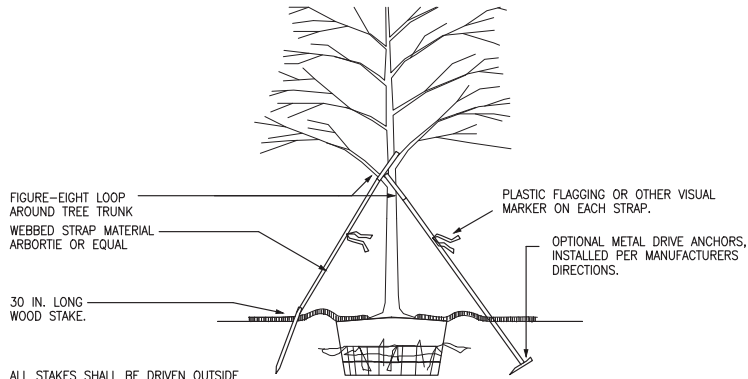
ISSUED FOR: DATE: BY: PC 12/1/14 CJC

JOB NO. RGP1001.01F

SHEET C-5.0

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

TIGHTEN WEBBED STRAP MATERIAL ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. INSTALL THREE STRAPS PER TREE, SPACED EVENLY AROUND THE TRUNK. INSTALL AS LOW ON TRUNK AS POSSIBLE.



ALL STAKES SHALL BE DRIVEN OUTSIDE THE EDGE OF THE ROOT BALL.

REMOVE ALL STAKING AS SOON AS THE TREE HAS GROWN SUFFICIENT ROOTS TO OVERCOME THE PROBLEM THAT REQUIRED THE TREE TO BE STAKED. STAKES SHALL BE REMOVED NO LATER THE END OF THE FIRST GROWING SEASON AFTER PLANTING.

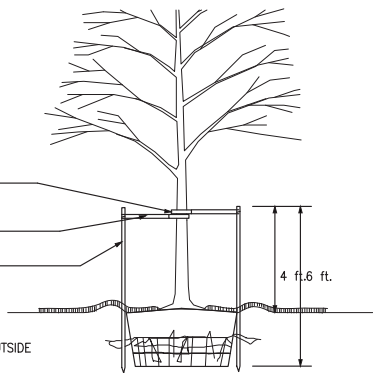
TREES NORMALLY DO NOT NEED TO BE STAKED AND STAKING CAN BE HARMFUL TO THE TREE. STAKING SHOULD BE DONE ONLY WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT IF IT IS EXPECTED THAT THE TREE WILL NOT BE ABLE TO SUPPORT ITSELF. THE FOLLOWING ARE REASONS WHY TREES DO NOT REMAIN STRAIGHT:

- o TREES WITH POOR-QUALITY ROOT BALLS OR ROOT BALLS THAT HAVE BEEN CRACKED OR DAMAGED. REJECT RATHER THAN STAKE.
- o TREES THAT HAVE GROWN TOO CLOSE TOGETHER IN THE NURSERY, RESULTING IN WEAK TRUNKS. REJECT RATHER THAN STAKE.
- o PLANTING PROCEDURES THAT DO NOT ADEQUATELY TAMP SOILS AROUND THE ROOT BALL. CORRECT THE PLANTING PROCEDURE.
- o ROOT BALLS PLACED ON SOFT SOIL. TAMP SOILS UNDER ROOT BALL PRIOR TO PLANTING.
- o ROOT BALLS WITH VERY SANDY SOIL OR VERY WET CLAY SOIL. STAKING ADVISABLE.
- o TREES LOCATED IN A PLACE OF EXTREMELY WINDY CONDITIONS. STAKING ADVISABLE.

TREE STAKING DETAIL - 1.75 IN. CALIPER OR LARGER

NOT TO SCALE

TIGHTEN WEBBED STRAP MATERIAL ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT.



ALL STAKES SHALL BE DRIVEN OUTSIDE THE EDGE OF THE ROOT BALL.

REMOVE ALL STAKING AS SOON AS THE TREE HAS GROWN SUFFICIENT ROOTS TO OVERCOME THE PROBLEM THAT REQUIRED THE TREE TO BE STAKED. STAKES SHALL BE REMOVED NO LATER THE END OF THE FIRST GROWING SEASON AFTER PLANTING.

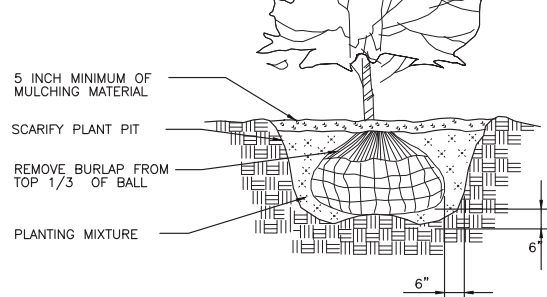
TREES NORMALLY DO NOT NEED TO BE STAKED AND STAKING CAN BE HARMFUL TO THE TREE. STAKING SHOULD BE DONE ONLY WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT IF IT IS EXPECTED THAT THE TREE WILL NOT BE ABLE TO SUPPORT ITSELF. THE FOLLOWING ARE REASONS WHY TREES DO NOT REMAIN STRAIGHT:

- o TREES WITH POOR - QUALITY ROOT BALLS OR ROOT BALLS THAT HAVE BEEN CRACKED OR DAMAGED. REJECT RATHER THAN STAKE.
- o TREES THAT HAVE GROWN TOO CLOSE TOGETHER IN THE NURSERY, RESULTING IN WEAK TRUNKS. REJECT RATHER THAN STAKE.
- o PLANTING PROCEDURES THAT DO NOT ADEQUATELY TAMP SOILS AROUND THE ROOT BALL. CORRECT THE PLANTING PROCEDURE.
- o ROOT BALLS PLACED ON SOFT SOIL. TAMP SOILS UNDER ROOT BALL PRIOR TO PLANTING.
- o ROOT BALLS WITH VERY SANDY SOIL OR VERY WET CLAY SOIL. STAKING ADVISABLE.
- o TREES LOCATED IN A PLACE OF EXTREMELY WINDY CONDITIONS. STAKING ADVISABLE.

TREE STAKING DETAIL - 1.5 IN. CALIPER OR LESS

NOT TO SCALE

NOTE: SHRUB SHALL BEAR SAME RELATION TO FINISH GRADE AS TO PREVIOUS EXISTING GRADE



SHRUB PLANTING DETAIL

NOT TO SCALE

NOTES:

PURCHASE TREE WITH ONE CENTRAL LEADER. DO NOT PRUNE TREE AT PLANTING EXCEPT AS DIRECTED BY LANDSCAPE ARCHITECT.

SET TREE PLUMB WITH VERTICAL TRUNK.

STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT SEE SPECIFICATIONS.

WRAP TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.

3 INCHES MULCH. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK.

BEFORE PLANTING, ADD 3" TO 4" OF WELL COMPOSTED LEAVES OR RECYCLED YARD WASTE TO BED AND TILL INTO TOP 6" OF LOOSENEED SOIL.

AMEND EXISTING SOIL PER SOIL PREPARATION PLAN

1:1 SLOPE

DIG WIDE, SHALLOW HOLE WITH TAPERED SIDES

NOTES:

1. FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OR THE CONTAINER.
2. AFTER DIGGING HOLE, FILL WITH WATER TO CONFIRM THAT WATER DRAINS OUT OF THE SOIL. IF HOLE DOES NOT PERC, DO NOT PLANT TREE. NOTIFY LANDSCAPE ARCHITECT FOR DIRECTION.
3. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL IMMEDIATELY AFTER PLANTING.
4. THE PLANTING PROCESS IS SIMILAR FOR DECIDUOUS AND EVERGREEN TREES.

TREE PLANTING DETAIL AND TREE STAKING DETAILS

NOT TO SCALE

NOTE: STAKE ALL EVERGREEN TREES

RUBBER HOSE

TREE 4 INCH CALIPER AND LESS USE NO. 11 GALVANIZED WIRE
TREE OVER 4 INCH CALIPER USE NO. 9 GALVANIZED WIRE

2 INCH x 2 INCH STAKE

5 INCH MINIMUM OF MULCHING MATERIAL

MOUND TO FORM EARTH SAUCER

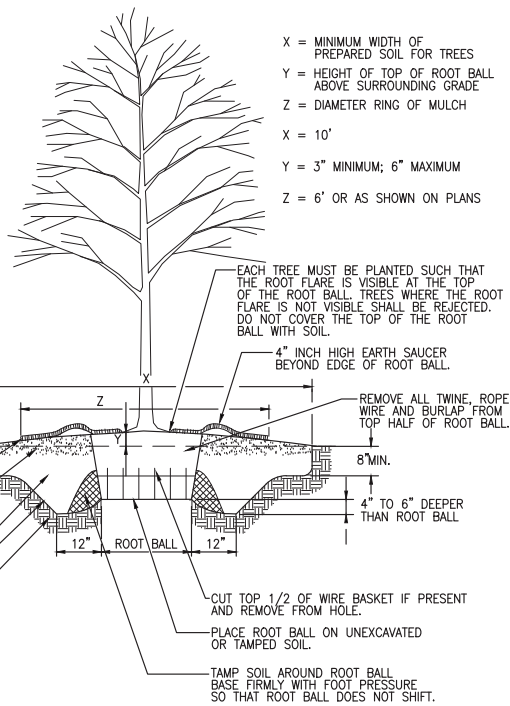
PLANTING MIXTURE

REMOVE BURLAP FROM TOP 1/3 OF BALL

STAKE TO BE 12 INCHES BELOW TREE PIT INTO UNDISTURBED EARTH

PLANTING DETAIL - EVERGREEN

NOT TO SCALE



SOIL PREPARATION, PLANTING, MAINTENANCE AND LANDSCAPE WARRANTY NOTES:

1. Have both sub-grade soils in planting areas and stripped topsoil tested. Determine fertilizer and lime rates from soil test results.
2. Soil Preparation:
 - A. Tree Planting: Prepare soil per "Tree Planting Detail" for individual trees.
 - B. Planting Areas for Trees/Shrubs/Ornamental Grasses:
 - Loosen subgrade to depth of 6 inches with a chisel plow, subsoiler, or other suitable device. Spread triple superphosphate over loosened subgrade at rate of 2 lbs. /1000 SF.
 - Spread existing stockpiled topsoil over loosened subgrade with a minimum depth of 4 inches; 6 inches if sufficient topsoil is available.
 - Spread 4 inches of Grade A quality compost (horticultural grade milled pine bark or commercially-produced compost mixture) and fertilizer, lime and other amendments as indicated by soil test over topsoil. Rototill entire mixture to a depth of 6 inches.
3. All disturbed areas not otherwise planted shall be seeded per sheet C-5.0 at rates recommended by the seed supplier/manufacturer.
4. All plants to be installed in accordance with American Association of Nurserymen landscape standards.
5. Spacing of plant materials shall be as shown on drawing or on plant list. The engineer shall review the placement of plant material prior to and after installation, and reserve the right to adjust layout to accommodate site conditions and design intent.
6. All plant materials shall conform to plant schedules. Sizes shall be the minimum stated on the plant list or larger. All measurements shall be in accordance with the latest edition of the "A.A.N. Standards for Nursery Stock."
7. Planting should not proceed until approximate finish grade has been achieved. Such grades should be reviewed and approved by engineer prior to planting. Final finish grades in immediate proximity around plantings should be hand-shaped to minimize soil compaction and damage to plants.
8. Final plant locations shall be marked by contractor three working days prior to planting for engineer review.
9. Relationship of tree root flare to finish grade:
 - A. Trees shall be set on flat-tamped or unexcavated pads at the same relationship to finished grade as they were to the ground from which they were dug, except as noted below. Plants must be set plumb and braced in position until topsoil or planting mix has been placed and tamped around the base of the root ball. Improper compaction of the soil around the root ball may result in the tree settling or leaning. Plants shall be set so that they will be at the same depth and so that the root ball does not shift or move laterally one year later. Determine the elevation of the root flare and ensure that it is planted at the specified height. This may require that the tree be set higher than the grade in the nursery.
 - If the root flare is less than 2 inches below the soil level of the root ball, plant the tree at the appropriate level above the grade to set the flare even with the grade. If the flare is more than 2 inches below the soil level at the center of the root ball, the tree shall be rejected.
 - In poorly drained soil conditions, set the root flare 2-3 inches above grade, or as indicated by drawings or as directed by engineer.
 - B. Cut ropes or strings from the top of shrub root balls and trees smaller than 3 inches caliper after plant has been set. Remove burlap or cloth wrapping and any wire baskets from around top half of balls. Do not turn under and bury portions of burlap or wire basket.
 - C. Completely remove any waterproof or water repellent strings or wrappings from the root ball and trunk before backfilling.
 - D. In areas of slowly draining soils, set top of shrub root balls 2-3 inches higher than proposed finish grades and top of root flare of trees 3-6 inches higher than proposed finish grades. Provide sufficient, tamped backfill so that soil does not settle and expose root ball.
 - E. If for any reason any balled and burlapped (B&B) plant materials need to be stored on site longer than a 24-hour period, their root balls shall be shaded, protected from wind and kept well watered. B&B material shall not be stored on site longer than 3 days. Containerized plants may be stored on site for a maximum of two (2) weeks, or 14 days. Any plants allowed to dry out as determined by the engineer will be rejected.
 - F. No container grown stock will be accepted if it is root bound.
10. Topsoil shall consist of friable, shredded, and screened soil reasonably free of grass, roots, weeds, sticks, stones or other foreign materials. The topsoil material shall be approved by the engineer prior to placement.
11. Form saucers around trees per "Tree Planting Detail" and around all small trees and large evergreens. Do not place saucers around shrubs.
12. Contractor shall apply engineer approved pre-emergent herbicide to shrub and ground cover planting areas at the time of planting (if spring planted) or the following spring. Contractor shall ensure the plant materials are resistant to the herbicides properties. Herbicide shall be applied according to manufacturers specifications and in accordance with sound horticultural practices.
13. Thoroughly water all plants immediately after planting.
14. Stake or guy a tree only when necessary for the specific conditions encountered and with the approval of the engineer. Stakes and guys shall be removed at the end of the first full growing season. Any tree that is not stable at the end of this time shall be rejected. Locate stakes and guys within mulched planting areas.
15. Mulch all planting areas with 3 inches of shredded pine bark. Where plant beds meet pavements, lawn or steel edging, cut the grade to allow for mulch and 3-inch drop from adjoining finish grade.
16. Maintenance procedures such as control of invasive weeds, fertilization, animal damage, mulching, restocking, and watering shall be implemented to the extent needed to ensure plant survival for the warranty period.
17. Applications of fertilizer beyond the initial topsoil and seeding shall be based on soil test results and specific plants being fertilized.
18. Performance Standards:
 - A. The contractor shall guarantee all plant material to be in healthy and flourishing condition for a period of one year from the date of final completion.
 - B. When the work is accepted in parts, the guarantee periods extend from each of the partial acceptances to the terminal date of the guarantee of the last acceptance. Thus, all guarantee periods terminate at one time.
 - C. The contractor shall replace, without cost, as soon as weather conditions permit, and within a specified planting period, all plants determined by the engineer to be dead or in an unacceptable condition during and at the end of the guarantee period. To be considered acceptable, plants shall:
 - Be free of dead or dying branches and branch tips.
 - Be full, even and well-formed.
 - Bear foliage of normal density, size and color.
 - Demonstrate progressive and normal root and top growth.
 - Demonstrate progressive tolerance to typical environmental stresses commensurate with length of establishment.
 - Show no evidence of significant pests or diseases that would have been present prior to the end of the contractor's maintenance period or that could be a secondary result of such pests or diseases.
 - D. Replacements shall closely match adjacent specimens of the same species. Replacements shall be subject to all requirements stated in this specification.
 - E. At the end of the guarantee, the contractor shall reset grades that have settled below the proposed grades on the drawings.
19. Maintenance of Exterior Plants:
 - A. Maintenance of exterior plants shall begin immediately after each plant is planted and continue until its acceptance has been confirmed by the engineer.
 - B. Maintenance shall consist of pruning, watering, cultivating, weeding, mulching, tightening and repairing guys and stakes, resetting plants to proper grades or upright position, restoring of the planting saucer, and furnishing and applying such sprays or other materials as necessary to keep plantings free of insects and diseases and in vigorous condition.
 - C. Planting areas and plants shall be protected at all times against trespassing and damage of all kinds for the duration of the maintenance period. If a plant becomes damaged or injured, it shall be treated or replaced as directed by the engineer at no additional cost.
 - D. Watering: Contractor shall irrigate as required to maintain vigorous and healthy growth. Overwatering or flooding shall not be allowed. The contractor shall furnish material, equipment, and water to ensure adequate irrigation. Root balls of all trees and large shrubs shall be spot watered using handheld hoses during the first four months after planting, as required to ensure adequate water both within the root ball and within a zone extending 2 ft. beyond the root ball.
 - E. During periods of restricted water usage all governmental regulations (permanent and temporary) shall be followed. The contractor may have to transport water from ponds or other sources, at no additional expense to the owner when irrigation systems are unavailable.
 - F. Maintenance Period: Until Final Acceptance has been achieved.

REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
D	12/23/14	1ST TOWNSHIP REVIEW COMMENTS
CJC		
CJC		
BT		

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LIVINGSTON COMMONS, LOT 4
3950 E. GRAND RIVER
HOWELL, MICHIGAN 48843

LANDSCAPE DETAILS

ISSUED FOR:	DATE:	BY:
PC	12/1/14	CJC

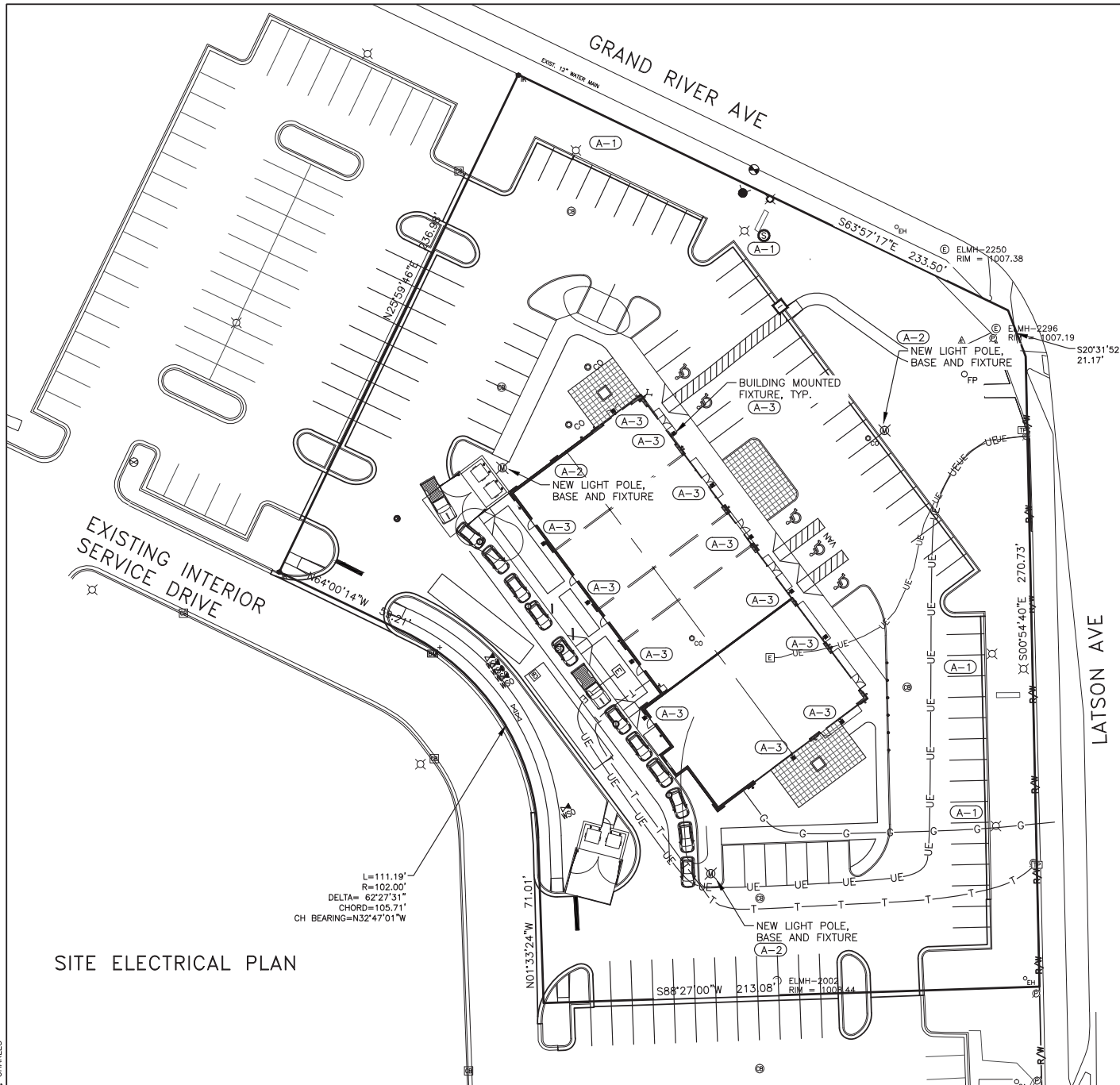
JOB NO. **RGP1001.01F**

SHEET **C-5.1**

PROJECT MANAGER: CHARLES J. CHRISTY, PE FIELD BOOK INFORMATION: C-5.1 - PLOTTED 1/21/2015 4:14 PM BY: CHRISTY, CHARLES

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

PROJECT MANAGER: CHARLES J. CHRISTY, PE
 CLAW: WORK: CHRISTY0504461VPL1-ELP-SITE LIGHTING.DWG - C-6.0 - PLOTTED: 1/21/2015 4:11 PM BY: CHRISTY, CHARLES

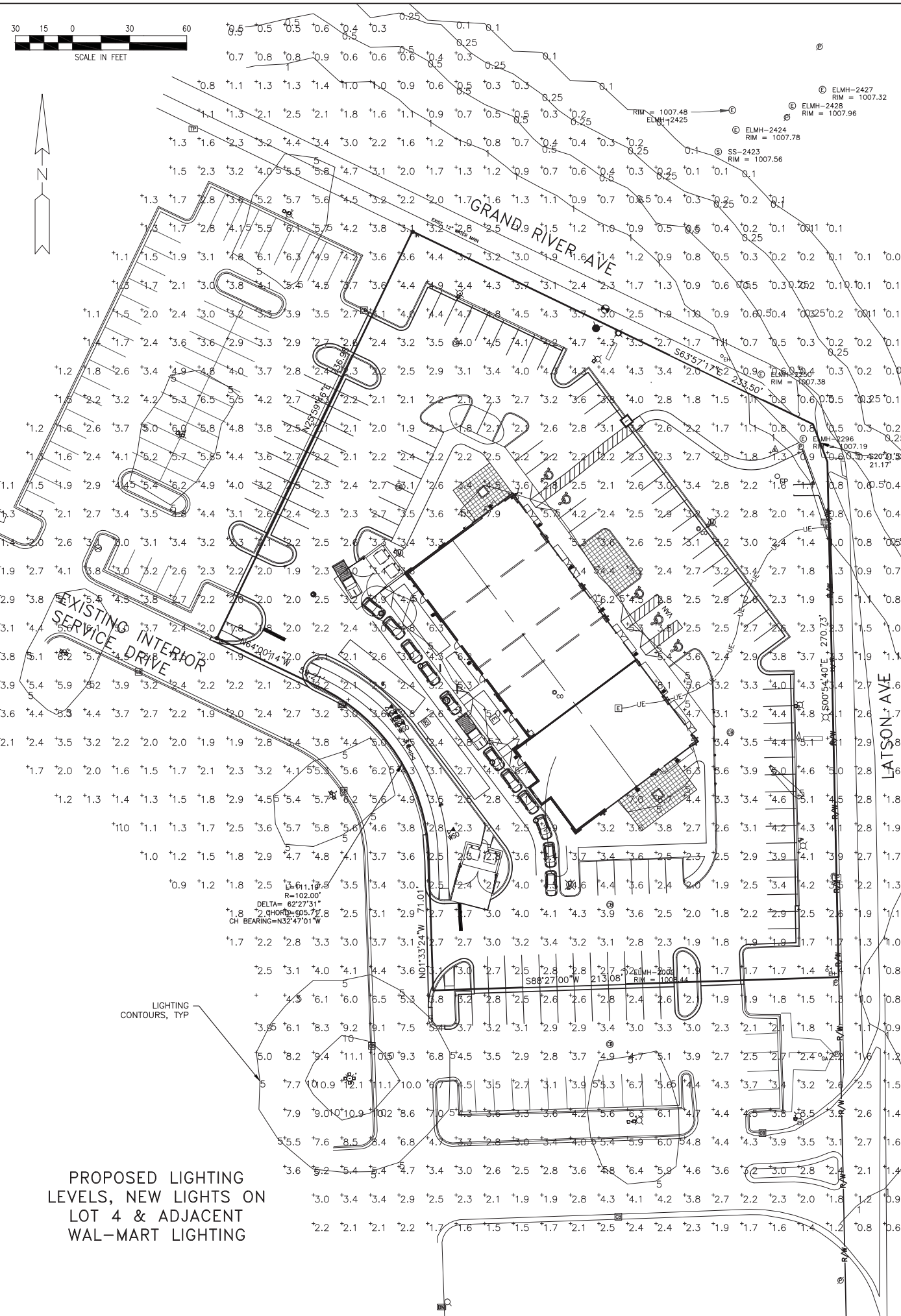


SITE ELECTRICAL PLAN

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	MANUFACTURER	Description	Comment
	4	A-1	SINGLE	GARDCO LIGHTING	EH-19-1-VS-450PSMH-480-BLP	Replace existing fixture, use existing 25' pole
	3	A-2	SINGLE	GARDCO LIGHTING	EH-19-1-VS-450PSMH-480-BLP	25ft Pole, Square, painted black
	12	A-3	SINGLE	GARDCO LIGHTING	EH-14-1-VS-150MH-480-BLP	Building Mounted 10ft Above Grade

SITE LIGHTING NOTES:

- ALL LIGHTING SHALL BE METAL HALIDE.
- CONTRACTOR SHALL PROTECT AND REUSE CIRCUITS TO THE EXTENT PRACTICAL, SEE ELECTRICAL ENGINEERS DRAWINGS.
- BUILDING MOUNTED FIXTURES ARE SUBJECT TO CHANGE LOCATION, TYPE, AND MANUFACTURER. THE SUBSTITUTION SHALL NOT INCREASE THE LIGHTING LEVELS AND INTENSITIES INDICATED ON THIS PLAN.



PROPOSED LIGHTING LEVELS, NEW LIGHTS ON LOT 4 & ADJACENT WAL-MART LIGHTING

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WADETRIM
 855 South State Street, Suite 201
 Farmington Hills, MI 48334
 810.285.5589 (ext. 1042)
 www.wadetrtrim.com

LIVINGSTON COMMONS, LOT 4
 3950 E. GRAND RIVER
 HOWELL, MICHIGAN 48843

SITE LIGHTING PLAN

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

REV#	DATE	TWP REVIEW & FINAL PC	REVIEW COMMENTS	DESCRIPTION
B	1/22/15			
A	12/23/14			

ISSUED FOR: PC DATE: 12/1/14 BY: CJC

JOB NO. RGP1001.01F

SHEET C-6.0

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ORDERING

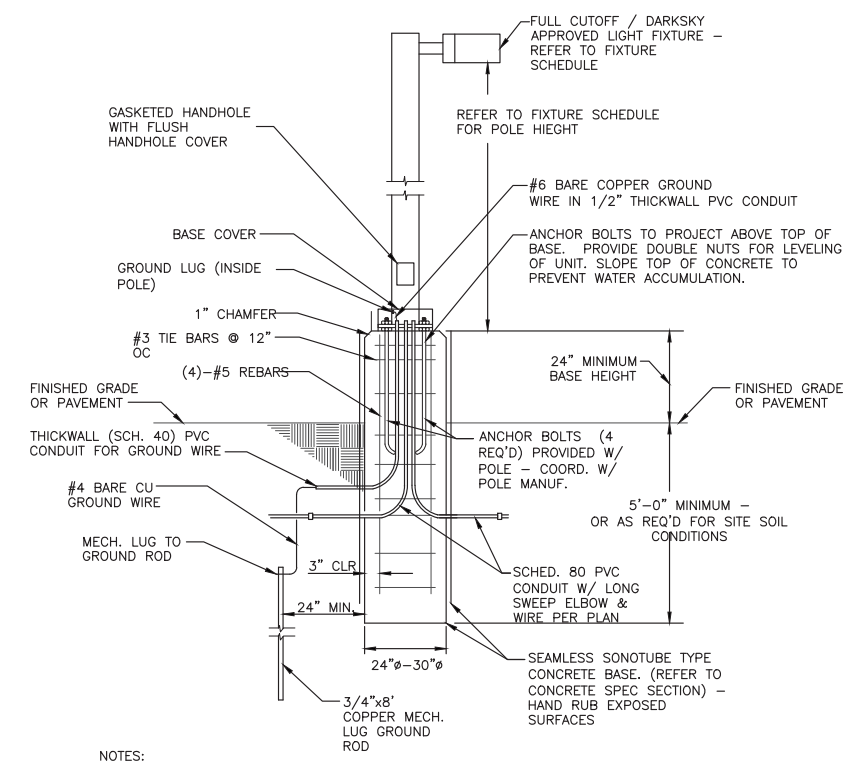
PREFIX	SIZE	CONFIGURATION	PHOTOMETRIC DISTRIBUTION	WIRING	VOLTAGE	FINISH	OPTIONS
FT	14"	1	1	See Table Below	120	SLA	F W1
FT	14"	2	2		240	SLA	L8 W2
FT	14"	3	3		277	OC	PCB W3
FT	14"	4	4		480	SLP	PCB W4
FT	14"	5	5		480	SLP	US W5
FT	14"	6	6		480	SLP	PT14 W6

NOTES:

- FT and HT luminaires, when not used as specified on the plan are limited to a maximum of 100' for 120V and 200' for 240V.
- 240V and 277V luminaires require the correct transformer for the voltage.
- 240V and 277V luminaires require the correct transformer for the voltage.
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- 240V and 277V luminaires require the correct transformer for the voltage.

DIMENSIONS

Size	Height	Width	Depth	Weight
14"	14"	14"	14"	11.23 lbs
14"	14"	14"	14"	11.23 lbs
14"	14"	14"	14"	11.23 lbs



NOTES:

- ANCHOR BOLTS AND TEMPLATES FURNISHED BY ELECTRICAL CONTRACTOR. UNLESS NOTED OTHERWISE, CONCRETE BASE AND ANCHOR BOLTS INSTALLED BY ELECTRICAL CONTRACTOR.
- CONCRETE BASE SHALL BE PER CONCRETE SPECIFICATION SECTION AND/OR 4000 PSI CONCRETE IF NOT SPECIFIED.
- LIGHT POLE THICKNESS SHALL BE AS REQUIRED TO WITHSTAND WIND LOADS OF 100 MPH MINIMUM.

SITE LIGHTING POLE DETAIL
 NO SCALE

REV#	DATE	DESCRIPTION
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SITE LIGHTING DETAILS

ISSUED FOR: DATE: BY:
 PC 12/1/14 CJC

JOB NO. RGP1001.01F
 SHEET C-6.1

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN
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SEQUENCE OF CONSTRUCTION

UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN AREA, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.

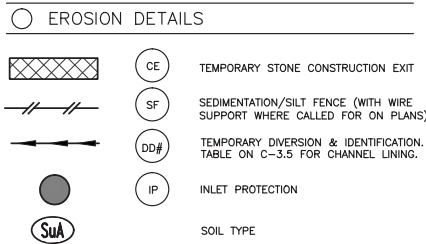
- PHASE I - TO BE COMPLETED PRIOR TO EARTH DISTURBANCE ACTIVITIES IN RESPECTIVE DRAINAGE AREA**
1. INSTALL **STABILIZED CONSTRUCTION EXIT(S)** AND SWPPP ENTRANCE SIGN.
 2. INSTALL **SILT FENCES(S) AND INLET PROTECTION** ON THE SITE (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE AND INLET PROTECTION).
 3. PREPARE TEMPORARY PARKING AND STORAGE AREA.

HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMPs. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

- PHASE II**
1. DISCONNECT ALL EXISTING UTILITY SERVICES
 2. BEGIN BUILDING DEMOLITION
 3. BEGIN TREE REMOVAL
 4. BEGIN STUMP REMOVAL, GRUBBING, AND TOPSOIL STRIPPING.
 5. BEGIN GRADING THE SITE, TRANSITION TO PERMANENT PONDS AS WORK PROGRESS.
 6. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES
 7. **TEMPORARILY SEED**, THROUGHOUT CONSTRUCTION, DENuded AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE.
 8. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
 9. INSTALL **INLET PROTECTION** AT ALL STORM SEWER STRUCTURES AS EACH INLET STRUCTURE IS INSTALLED.
 10. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
 11. PREPARE SITE FOR PAVING.
 12. PAVE SITE.
 13. INSTALL APPROPRIATE **INLET PROTECTION** DEVICES FOR PAVED AREAS AS WORK PROGRESSES.
 14. COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS.
 15. CALL ENGINEER AFTER THE SITE APPEARS TO BE FULLY STABILIZED AND READY FOR AN INSPECTION.
 16. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER APPROVAL OF THE ENGINEER AND STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF THE BMP.
 17. CONTINUE DAILY INSPECTION REPORTS UNTIL THE FINAL DAILY INSPECTION IS SIGNED OFF BY THE CONSTRUCTION MANAGER THAT THE SITE IS FULLY STABILIZED AND THE PERMIT MAY BE TERMINATED.

NOTE: THE GENERAL CONTRACTOR MAY COMPLETE CONSTRUCTION-RELATED ACTIVITIES CONCURRENTLY ONLY IF ALL PRECEDING BMP'S HAVE BEEN COMPLETELY INSTALLED. BMP-RELATED STEPS IN THE ABOVE SEQUENCE ARE ITALICIZED FOR CLARITY.

NOTE: SEE SITE PLAN FOR EXISTING LEGEND SYMBOLS



NOTES:

PHASE I EROSION PLAN SHALL BE CONSTRUCTED PRIOR TO EARTHWORK ACTIVITIES, REFER TO SEQUENCE OF CONSTRUCTION.

I CERTIFY, UNDER PENALTY OF LAW, THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT FOR KNOWING VIOLATIONS.

JIM BLAIR - RG PROPERTIES, INC.

JIM BLAIR, RG PROPERTIES, INC.
10050 INNOVATION DR.
SUITE 100
DAYTON, OH 45342
(937) 424-3904

SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

NOTE: SEE SHEET C-7.3 FOR EROSION DETAILS.

ACREAGE SUMMARY (IN ACRES)	
TOTAL PROJECT AREA	2.03
ON-SITE DISTURBED AREA	1.78
OFF-SITE DISTURBED AREA	0.30
TOTAL DISTURBED AREA (HARD MATCH LINE)	2.08
IMPERVIOUS AREA AT COMPLETION	72.1%
PERVIOUS/ SEEDED AREA AT COMPLETION	27.9%

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE												
NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE												
CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS												
TEMPORARY CONTROL MEASURES												
SEDIMENT CONTROL BASINS												
STRIP & STOCKPILE TOPSOIL												
ROUGH GRADE												
STORM FACILITIES												
SITE CONSTRUCTION												
PERMANENT CONTROL STRUCTURES												
FOUNDATION / BUILDING CONSTRUCTION												
FINISH GRADING												
LANDSCAPING/SEED/FINAL STABILIZATION												

MAINTENANCE

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHOEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
7. REFER TO THE MICHIGAN NON POINT SOURCE BMP MANUAL FOR ADDITIONAL REQUIREMENTS.

GENERAL EROSION NOTES

1. THE STORM WATER POLLUTION PREVENTION PLAN IS COMPRISED OF THESE DRAWINGS ("SITE MAPS"), THE STANDARD DETAILS, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
2. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
3. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION IF DEEMED NECESSARY RESULTANT FROM THE CONTRACTORS OPERATIONS, METHODS, OR SEQUENCE OF CONSTRUCTION.
4. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
5. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS, PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
6. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
7. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
10. DUST ON THE SITE SHALL BE CONTROLLED THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
12. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
13. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS OF LAST LAND DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 14 DAYS OF LAST LAND DISTURBING ACTIVITY.
14. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE WASH WATER BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.
15. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
16. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
17. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
18. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
19. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE.
20. NO WORK TO BE PERFORMED IF RAINING OR THREATENING RAIN, UNLESS INSPECTOR IS ON SITE. CONTRACTOR TO HAVE RAINFALL GAUGE ON-SITE DURING CONSTRUCTION.
21. CONTRACTOR TO HAVE NATIVE GROUND COVER ACQUIRED/READY/STOCKPILED AND TO BE INSTALLED WITHIN 21 CALENDAR DAYS OF FINAL GRADING.
22. DAILY INSPECTIONS OF THE INSTALLATION OF SOIL EROSION CONTROLS ARE REQUIRED BY THE SITE CONTRACTOR UNTIL ESTABLISHED AND AFTER EVERY SIGNIFICANT RAINFALL EVENT.
23. ALL EXISTING PERIMETER FENCE TO BE REMOVED AFTER SLOPES AND SITE ARE STABILIZED.
24. MASS SITE GRADING CANNOT BEGIN UNTIL #1 AND #2 CONSTRUCTION SEQUENCES HAVE BEEN COMPLETED, AND SESC/SWPPP APPROVED SOIL EROSION PLAN CONTROLS ARE INSTALLED AND INSPECTED.
25. DURING DEVELOPMENT OF THE SITE, THE PERSON RESPONSIBLE FOR THE LAND DISTURBING ACTIVITY SHALL INSTALL AND MAINTAIN ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY THE APPROVED PLAN OR BY ANY PROVISION OF PART 91 SESC ACT AND APPLICABLE COUNTY ORDINANCES. ADDITIONAL DEVICES WILL BE REQUIRED IF NECESSARY.
26. IF FILL MATERIALS ARE BEING BROUGHT ONTO THIS PROPERTY OR IF WASTE MATERIALS ARE TAKEN FROM THIS PROJECT, THIS INFORMATION MUST BE DISCLOSED AND SHOWN ON THE EROSION CONTROL AND GRADING PLAN. BORROW AREAS AND DUMP SITES ARE CONSIDERED TO BE PART OF THIS PROJECT. CONTRACTOR SHALL SUBMIT SPECIFIC SESC PLANS FOR WASTE/BORROW OFFSITE.
27. IN AN EFFORT TO MINIMIZE EROSION AND EXPOSURE TIME, EASEMENT AREAS SHALL NOT BE GRUBBED OR GRADED UNTIL UTILITIES ARE READY TO BE INSTALLED. THE IMMEDIATE SEEDING OF DISTURBED EASEMENT AREAS AFTER UTILITIES ARE INSTALLED WILL ALSO ELIMINATE MANY PROBLEMS.
28. NO LAND DISTURBING ACTIVITY SHALL BE PERMITTED IN PROXIMITY TO A LAKE OR NATURAL WATERCOURSE UNLESS A BUFFER ZONE IS PROVIDED ALONG THE MARGIN OF THE WATER BODY OF SUFFICIENT WIDTH TO CONFINE VISIBLE SILTATION WITHIN THE 25% OF THE BUFFER ZONE NEAREST THE LAND DISTURBING ACTIVITY.
29. SIDE DITCHES 2% OR STEEPER SHALL BE RIP-RAPPED; OR SEEDED AND STABILIZED WITH EXCELSIOR MATTING (OR OTHER APPROVED MATERIAL); OR STABILIZED BY ANY OTHER METHOD APPROVED BY THE COUNTY SOIL EROSION CONTROL INSPECTOR.
30. IF A PERMANENT POND IS USED AS A SEDIMENT CONTROL DEVICE, OR DESIGNATED AS A PERMANENT WATER QUALITY POND, IT MUST BE CLEANED OF SEDIMENT WHEN HALF FULL. IT MUST ALSO BE CLEANED OUT TO DESIGN VOLUME; ENGINEERING CERTIFICATION OF COMPLETION SUBMITTED, AND FINAL INSPECTION PERFORMED BY COUNTY STAFF BEFORE THE GRADING PERMIT IS FINALIZED.
31. CONSTRUCTION ACTIVITIES DISTURBING ONE OR MORE ACRES WILL BE ISSUED A NPDES STORM WATER DISCHARGE PERMIT AS REQUIRED BY THE FEDERAL CLEAN WATER ACT, SECTION B OF THIS PERMIT REQUIRES THE PERMITTEE TO PERIODICALLY INSPECT ALL SEDIMENT & EROSION CONTROL DEVICES, AND TO KEEP A RECORD OF THESE INSPECTIONS.
32. THE ANGLE FOR GRADED SLOPES SHALL BE NO GREATER THAN THE ANGLE THAT CAN RETAIN VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUNDCOVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.
33. THE OWNER(S) IS RESPONSIBLE FOR THE LONG TERM MAINTENANCE OF GROUNDCOVER ON THE PROPERTY. GROUNDCOVER MUST BE MAINTAINED TO A DEGREE THAT PREVENTS SOIL EROSION AND SEDIMENTATION AT ALL TIMES.
34. ACCEPTANCE AND APPROVAL OF THIS PLAN IS CONDITIONED UPON THE PROPERTY OWNER(S) COMPLIANCE WITH FEDERAL AND STATE WATER QUALITY LAWS, REGULATIONS, AND RULES. IN ADDITION, LOCAL TOWN OR COUNTY ORDINANCES OR RULES MAY ALSO APPLY TO THIS LAND DISTURBING ACTIVITY. THIS APPROVAL DOES NOT SUPERSEDE ANY OTHER PERMIT OR APPROVAL.

TEMPORARY SEEDING SPECIFICATIONS

DEFINITION

SEEDING DISTURBED AREAS WITH ANNUAL GRASSES OR LEGUMES TO PROVIDE A TEMPORARY GROUND COVER TO LESSEN SOIL EROSION.

PURPOSE

TO TEMPORARILY STABILIZE GRADED CUT AND FILL SLOPES THAT CANNOT BE SEEDED WITH PERMANENT VEGETATION WITHIN THIRTY DAYS AFTER COMPLETION.

CONDITIONS WHERE PRACTICE APPLIES

WHERE BARE SOIL HAS BEEN EXPOSED BY GRADING, AND VEGETATIVE COVER IS NEEDED FOR ONE YEAR OR LESS. MAY INCLUDE SUCH AREAS AS TEMPORARY SEDIMENT POND, DIVERSIONS, SOIL STOCKPILES, BUILDING PADS, ROUGH-GRADED ROAD BANKS, ETC. IT IS ALSO USED TO PROVIDE A TEMPORARY PERIMETER BUFFER.

PREPARATION

PREPARE SEEDBED BY RIPPING, CHISELING, HARROWING, OR PLOWING TO DEPTH OF AT LEAST SIX INCHES SO AS TO PRODUCE A LOOSE FRABLE SURFACE. INCORPORATE 750-1,000 POUNDS 10-10-10 FERTILIZER AND UP TO TWO TONS OF DOLOMITIC LIME PER ACRE. (NOTE: LIME MAY NOT BE NEEDED IF A SOIL TEST INDICATES A PH OF 6.5 OR HIGHER). MULCHING IS REQUIRED ACCORDING TO THE SAME SPECIFICATIONS AS FOR PERMANENT SEEDING UNLESS WAVED BY SOIL SCIENTIST. SELECT SEEDING MIXTURE AND BEST PLANTING DATES FROM TABLE 12.

TABLE 12 - TEMPORARY SEEDINGS

PLANTS & MIXTURE	PLANTING RATES/ACRE	PLANTING DATES
OATS, BARLEY	3 BU	APRIL 15 - AUG. 1
SUNDONGRASS	30 - 40 LBS	JUNE - JULY
RYE (GRAIN)	2 - 3 BU	AUG. 15 - DEC. 30
WHEAT	2 - 3 BU	AUG. 1 - OCT. 10
MULCH ALL AREAS AFTER SEEDING AT A RATE OF 2 TONS PER ACRE		

PERMANENT SEEDING SPECIFICATIONS

DEFINITION

SEEDING DISTURBED AREAS WITH PERENNIAL GRASSES AND/OR LEGUMES TO PROVIDE A PERMANENT VEGETATIVE COVER TO LESSEN RUNOFF AND SOIL EROSION.

PURPOSE

TO LESSEN SOIL EROSION AND PERMANENTLY STABILIZE DISTURBED AREAS CREATED BY GRADING OF CONSTRUCTION SITES.

CONDITIONS WHERE PRACTICE APPLIES

ALL BARE SOIL AREAS ON CONSTRUCTION SITES WHICH ARE NOT COVERED BY STRUCTURES OR OTHER EROSION CONTROL DEVICES.

PREPARATION

PREPARE SEEDBED BY RIPPING, CHISELING, HARROWING, OR PLOWING TO DEPTH OF SIX INCHES SO AS TO PRODUCE A LOOSE, FRABLE SURFACE. REMOVE ALL STONES, BOULDERS, STUMPS, OR DEBRIS FROM THE SURFACE WHICH WOULD PROHIBIT GERMINATION OF PLANT GROWTH.

INCORPORATE INTO THE SOIL 800 TO 1,000 POUNDS OF 10-10-10 FERTILIZER PLUS 500 POUNDS OF 20% SUPERPHOSPHATE PER ACRE & TWO TONS OF DOLOMITIC LIME PER ACRE UNLESS SOIL TESTS INDICATE THAT A LOWER RATE OF LIME CAN BE USED.

MULCH AFTER SEEDING WITH 1.5 TONS OF GRAIN STRAW PER ACRE AND EITHER CRIMP STRAW INTO SOIL OR TACK WITH LIQUID ASPHALT AT 400 GALLONS PER ACRE OR EMULSIFIED ASPHALT AT 300 GALLONS PER ACRE. SELECT SEEDING MIXTURE AND BEST PLANTING DATES FROM TABLE BELOW.

SEE LANDSCAPE PLAN FOR SEED MIXTURES AND PLANTING NOTES

STABILIZATION TIMEFRAMES		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES

REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
D	12/23/14	1ST TOWNSHIP REVIEW COMMENTS

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WADETRIM

800 South State Street, Suite 201
Farmington, Michigan 48324
810.282.0580/841.0342
www.wadetrtrim.com

LIVINGSTON COMMONS, LOT 4
3950 E. GRAND RIVER
HOWELL, MICHIGAN 48843

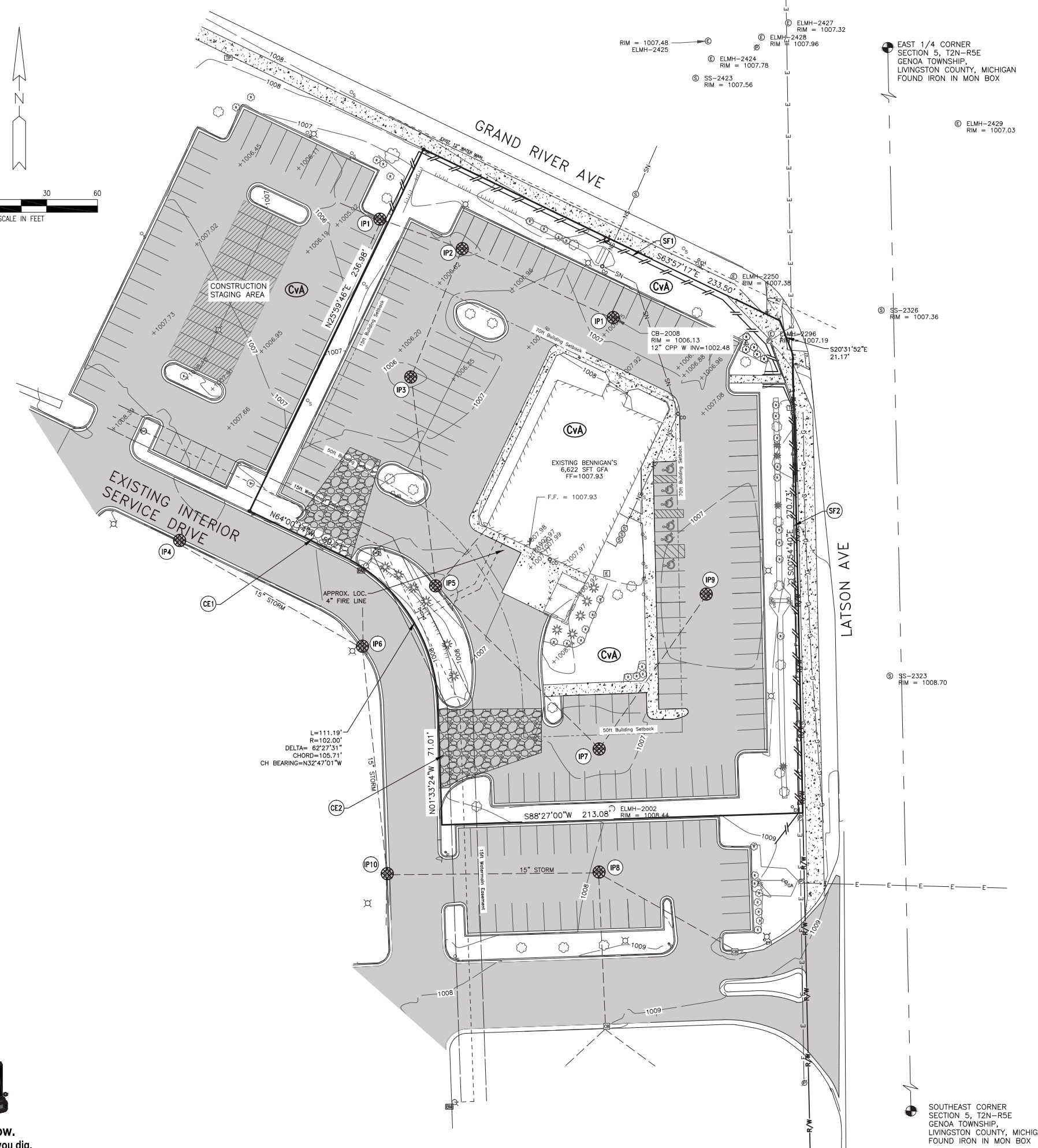
SESC and SWPPP NOTES

ISSUED FOR: DATE: BY:
PC 12/1/14 CJC

JOB NO. RGP1001.01F

SHEET C-7.0

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN



LEGEND

- TEMPORARY SILT FENCE
- TEMPORARY INLET PROTECTION
- STAGING AREA
- LIMITS OF DISTURBANCE/PROJECT LIMITS
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING DRAINAGE STRUCTURE
- EXISTING STORM SEWER
- SILT FENCE IDENTIFICATION
- INLET PROTECTION IDENTIFICATION
- CONSTRUCTION ENTRANCE
- SOIL TYPE

SOIL TYPES

CvA= CONOVER LOAM, 0-2% SLOPE

REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
A	12/23/14	1ST TOWNSHIP REVIEW COMMENTS

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LIVINGSTON COMMONS, LOT 4
3950 E. GRAND RIVER
HOWELL, MICHIGAN 48843
 SSSC and SWPP PLAN - PHASE I

ISSUED FOR: PC	DATE: 12/1/14	BY: CJC
JOB NO. RGP1001.01F	SHEET C-7.1	

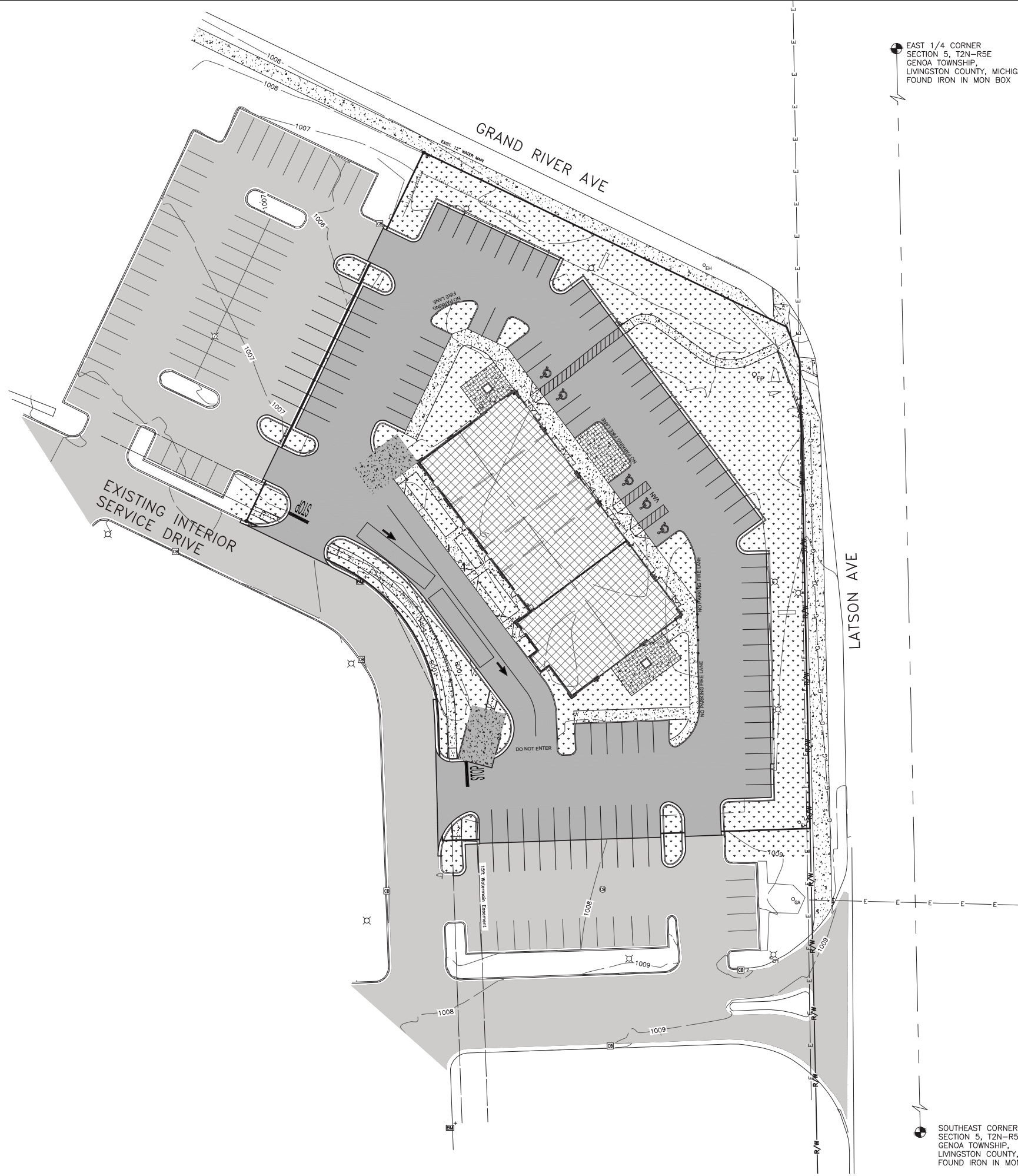
PROJECT MANAGER: CHARLES J. CHRISTY, PE
 CIVIL WORK: CHRISTY 00564861\PL1-SWPPP-PHASE I.DWG - C-7.1 - PLOTTED: 1/21/2015 4:19 PM BY: CHRISTY, CHARLES



Know what's below.
 Call before you dig.

LIVINGSTON COMMONS, LOT 4, GENOA TOWNSHIP, HOWELL, MICHIGAN

PROJECT MANAGER: CHARLES J. CHRISTY, PE
 C:\P\WORK\CHRISTY\0564861\PLT-SWPPP-PHASE II.DWG - C-7.2 - PLOTTED 1/21/2015 4:21 PM BY CHRISTY, CHARLES

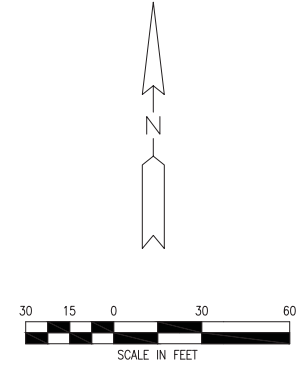


EAST 1/4 CORNER
 SECTION 5, T2N-R5E
 GENOA TOWNSHIP,
 LIVINGSTON COUNTY, MICHIGAN
 FOUND IRON IN MON BOX

SOUTHEAST CORNER
 SECTION 5, T2N-R5E
 GENOA TOWNSHIP,
 LIVINGSTON COUNTY, MICHIGAN
 FOUND IRON IN MON BOX

LEGEND

- PROPOSED ASPHALT
- EXISTING ASPHALT
- GRASS/LANDSCAPING
- BUILDING
- CONCRETE



REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
D	12/23/14	1ST TOWNSHIP REVIEW COMMENTS
CUC		
CUC		
BT		

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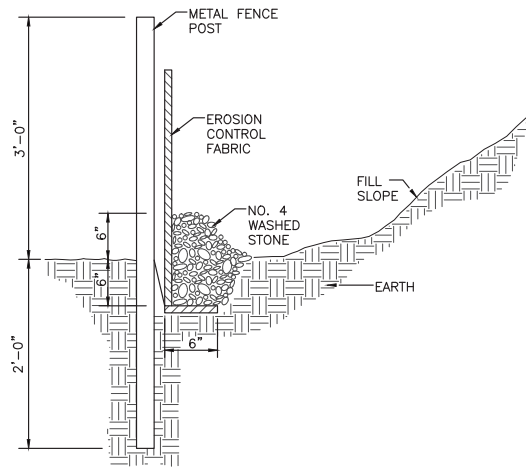
SESC and SWPP PLAN - PHASE II

ISSUED FOR: DATE: BY:
 PC 12/1/14 C.J.C.

JOB NO.
RGP1001.01F

SHEET
C-7.2

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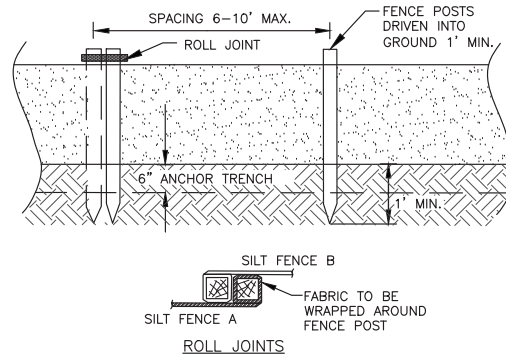
MAXIMUM PLACEMENT OF POST USING HOG WIRE WITH APPROVED EROSION CONTROL FABRICS TO BE 10 FEET.

POST - METAL T-POST 5 FEET OR 6 FEET IN HEIGHT DEPENDING ON FILL SLOPE.

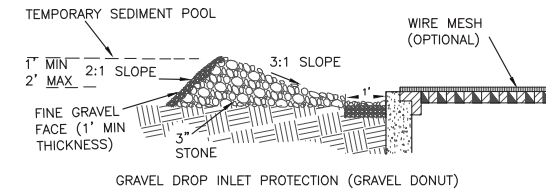
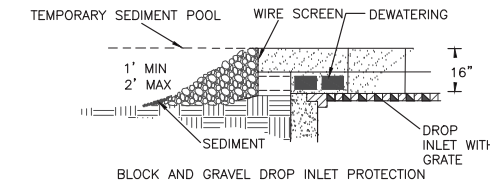
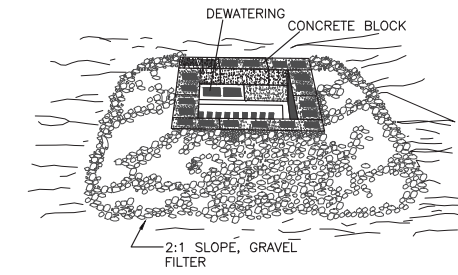
FABRIC - 36 INCHES IN WIDTH (MUST MEET ENGINEERS' SPECIFICATIONS FOR EROSION CONTROL).

STONE - NO. 4 WASHED STONE TO BE PLACED 12 INCHES DEEP AT SILT FENCE.

SILT FENCE DETAIL
NO SCALE



SILT FENCE
NO SCALE



CONSTRUCTION SPECIFICATIONS

- LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SITE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2 X 4 WOOD STUDS THROUGH BLOCK OPENINGS.
- CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
- USE CLEAN GRAVEL, 3/4- TO 1/2-INCH DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT ON AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.
- IF ONLY STONE AND GRAVEL ARE USED, KEEP THE SLOPE TOWARD THE INLET NO STEEPER THAN 3:1. LEAVE A MINIMUM 1-FT WIDE LEVEL STONE AREA BETWEEN THE STRUCTURE AND AROUND THE INLET TO PREVENT GRAVEL FROM ENTERING INLET. ON THE SLOPE AWAY FROM THE INLET USE 1/2-3/4-INCH GRAVEL (NCDOT #57 WASHED STONE) AT A MINIMUM THICKNESS OF 1 FT.

MAINTENANCE

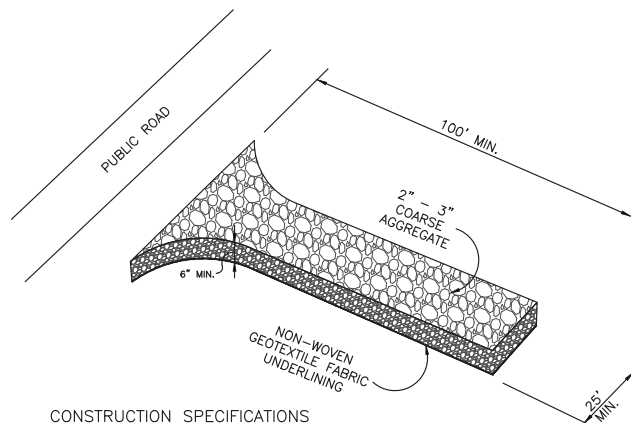
INSPECT THE BARRIER AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED.

REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.

WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

NOTE: CONTRACTOR SHALL UTILIZE BLOCK AND GRAVEL INLET PROTECTION OR GRAVEL DROP INLET PROTECTION DURING CONSTRUCTION. WHEN A DRAINAGE AREA HAS BEEN GRAVELED, PAVED, CONCRETED, TOPSOIL & SEEDDED, OR SODDED, THE CONTRACTOR SHALL INSTALL SILT SACKS PER DETAIL ON SHEET C-4.4 (OR APPROVED EQUAL/SIMILAR) AND MAINTAINED UNTIL PROJECT ACCEPTANCE.

BLOCK AND GRAVEL INLET PROTECTION
NO SCALE



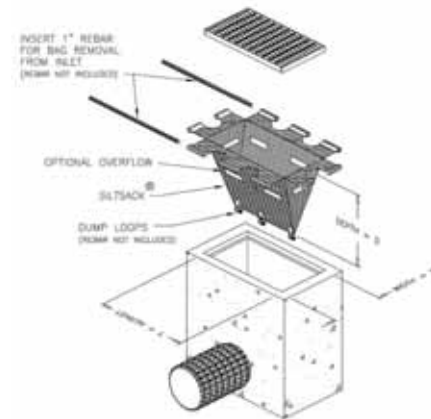
CONSTRUCTION SPECIFICATIONS

- CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
- PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
- PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
- USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

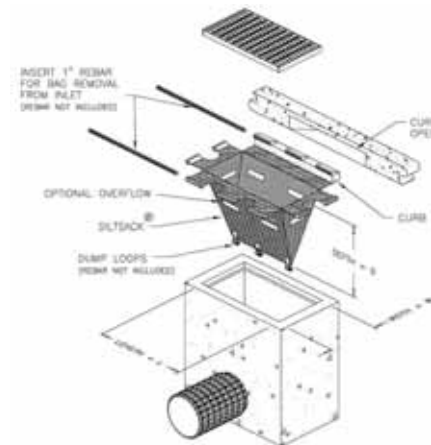
MAINTENANCE

MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT AND STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
NO SCALE



DETAIL OF INLET SEDIMENT CONTROL DEVICE
NO SCALE



DETAIL OF INLET SEDIMENT CONTROL DEVICE WITHIN A CURB LINE
NO SCALE

SILTSACK® TYPE A SPECIFICATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

REGULAR FLOW SILTSACK

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4832	LBS	315 x 300
Grab Tensile Elongation	ASTM D 4832	%	15 x 15
Puncture Strength	ASTM D 4833	LBS	125
Mullen Burst Strength	ASTM D 3786	PSI	650
Trapezoid Tear Strength	ASTM D 4533	LBS	120 x 150
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	US SIEVE	40
Flow Rate	ASTM D 4491	Gal/Min/FT²	40
Permittivity	ASTM D 4491	Sec-1	0.55

HI-FLOW SILTSACK

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4832	LBS	255 x 275
Grab Tensile Elongation	ASTM D 4832	%	20 x 15
Puncture Strength	ASTM D 4833	LBS	135
Mullen Burst Strength	ASTM D 3786	PSI	420
Trapezoid Tear Strength	ASTM D 4533	LBS	40 x 50
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	US SIEVE	40
Flow Rate	ASTM D 4491	Gal/Min/FT²	200
Permittivity	ASTM D 4491	Sec-1	1.5

SILTSACK® TYPE B SPECIFICATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

REGULAR FLOW SILTSACK

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4832	LBS	315 x 300
Grab Tensile Elongation	ASTM D 4832	%	15 x 15
Puncture Strength	ASTM D 4833	LBS	125
Mullen Burst Strength	ASTM D 3786	PSI	650
Trapezoid Tear Strength	ASTM D 4533	LBS	120 x 150
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	US SIEVE	40
Flow Rate	ASTM D 4491	Gal/Min/FT²	40
Permittivity	ASTM D 4491	Sec-1	0.55

HI-FLOW SILTSACK

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4832	LBS	255 x 275
Grab Tensile Elongation	ASTM D 4832	%	20 x 15
Puncture Strength	ASTM D 4833	LBS	135
Mullen Burst Strength	ASTM D 3786	PSI	420
Trapezoid Tear Strength	ASTM D 4533	LBS	40 x 50
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	US SIEVE	40
Flow Rate	ASTM D 4491	Gal/Min/FT²	200
Permittivity	ASTM D 4491	Sec-1	1.5

REV#	DATE	DESCRIPTION
B	1/22/15	TWP REVIEW & FINAL PC
D	12/23/14	1ST TOWNSHIP REVIEW COMMENTS

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND DATED.

WADETRIM

1000 S. State Street, Suite 201
Farmington, Michigan 48320
810.282.0500/810.413.0442
www.wadetrtrim.com

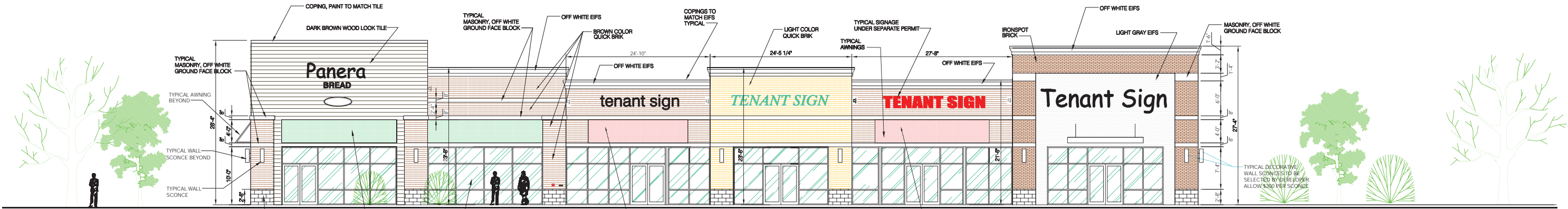
LIVINGSTON COMMONS, LOT 4
3950 E. GRAND RIVER
HOWELL, MICHIGAN 48843

SESC and SWPPP DETAILS

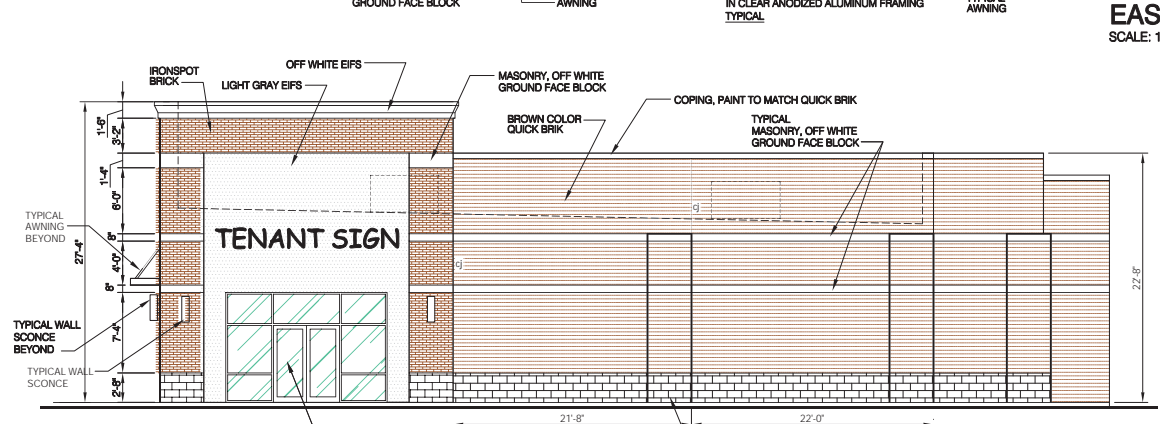
ISSUED FOR:	DATE:	BY:
PC	12/1/14	CJC

JOB NO. RGP1001.01F

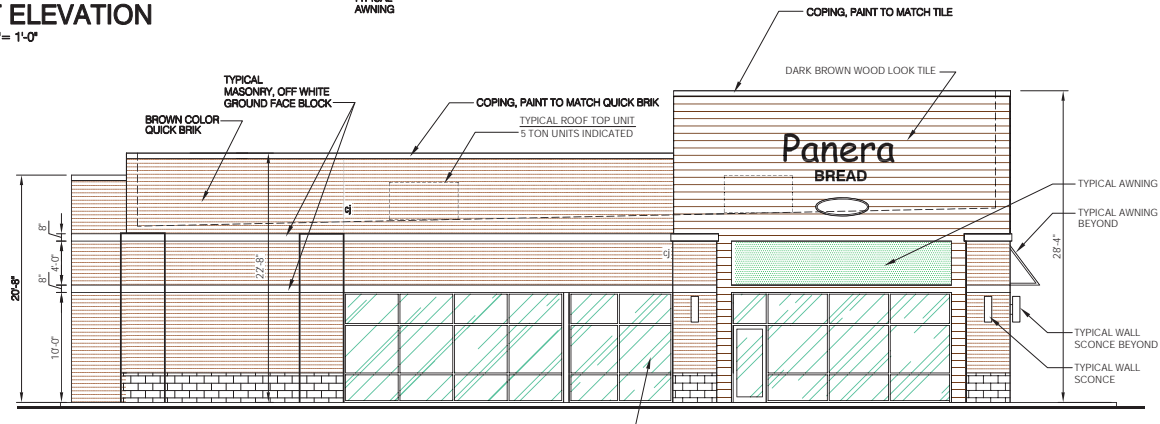
SHEET C-7.3



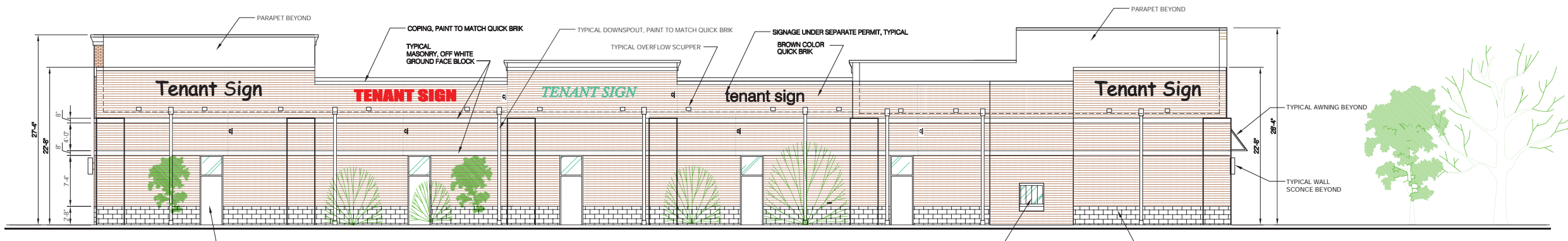
EAST ELEVATION
SCALE: 1/8" = 1'-0"



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



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

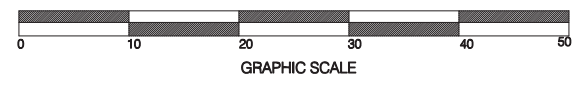


WEST ELEVATION
SCALE: 1/8" = 1'-0"

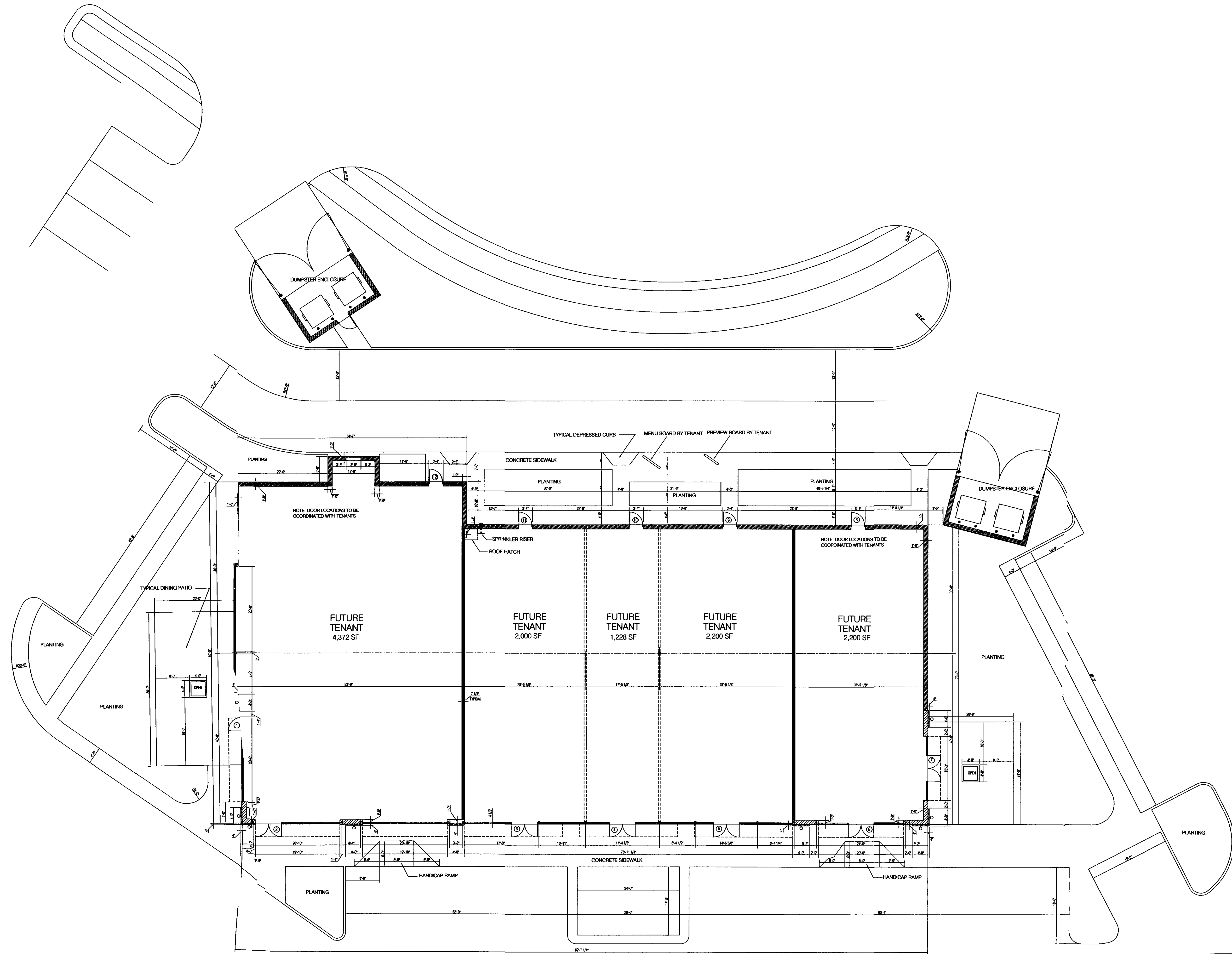
RG Properties
10050 INNOVATION DRIVE
SUITE 100
DAYTON, OHIO 45342
TEL 937/434-7218
FAX 937/434-0824
WEB SITE: WWW.RGPROPERTIES.COM
E-MAIL: LEASING@RGPROPERTIES.COM

LIVINGSTON COMMONS LOT 4
PROPOSED RETAIL BUILDING
GENOA TOWNSHIP, LIVINGSTON CO., MI.

1/21/15



NOTE: END CAP TENANTS TO ELECT 2 OF 3 SIGNAGE LOCATIONS



FLOOR PLAN CALLED NORTH
SCALE 3/32" = 1'-0"



RG Properties
 10950 INNOVATION DRIVE
 SUITE 100
 DAYTON, OHIO 45342
 TEL. 937/434-7218
 FAX 937/434-0824
 WEB SITE: WWW.RGPROPERTIES.COM
 E-MAIL: LEASING@RGPROPERTIES.COM

REVISIONS	

LIVINGSTON COMMONS LOT 4
 PROPOSED RETAIL BUILDING
 GENOA TOWNSHIP, LIVINGSTON CO., MI.

STANFORD R. JOSEPH, AIA ARCHITECT
 9800 CARYER ROAD CINCINNATI, OH 45242
 (513) 964-6000 FAX (513) 964-8002

DATE 11/25/14

SHEET NO.

A2

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
JANUARY 12, 2015
6:30 P.M.
MINUTES**

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

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: Ms. Figurski moved to approve the agenda. The motion was supported by Mr. Mortensen. **Motion carried unanimously.**

ELECTION OF OFFICERS: Chairman Brown asked whether the election of officers should be postponed with the absence of Mr. McManus. It was decided that Ms. VanMarter would call for a motion. Ms. VanMarter made a call for a motion for a chair, vice chair, and secretary. Mr. Mortensen made a motion that the incumbents be elected as officers: Doug Brown as Chair, Diana Lowe as Vice Chair and Barbara Figurski as Secretary. Diana Lowe seconded. **Motion carried unanimously.**

CALL TO THE PUBLIC: A call to the public was made with no response.

OPEN PUBLIC HEARING #1... Review of sketch plan for a proposed 12,439 sq. ft. church and coffee shop to occupy space within the multi-tenant building located at the northwest corner of Grand River Avenue and Genoa Business Park Drive (2394 Genoa Business Park Drive), Brighton, Michigan 48114, parcel # 4711-13-103-001. The request is petitioned by The Well c/o Lindhout Associates.

Ms. Holly Osterhout of Lindhout Associates addressed the Planning Commission on behalf of the petitioner. The Well currently resides at 7191 Grand River Ave. In line for ownership of the retail center at 2394 Genoa Business Park Drive, they are looking to relocate to this building with current tenants remaining. The church is interested in the empty portion of the building. The Grand River Grill and The Well church will need shared use of the parking area on Sundays which was the impetus for the sketch plan review. Currently, a mortgage company and dental office are also housed at the location. The floor plan was reviewed.

There is a parking agreement under development with the neighboring Cross Pointe office building, which currently contains eight tenants, one tenant is open on Sundays, an urgent care. Therefore a large area of parking is available on Sunday. Staff members are to park in designated parking in the back of the church building. Chairman Brown asked about worshippers who arrive late on Sundays, potentially parking in the restaurant spaces. Is there parking available at PDQ parking? People will park where

they feel like parking. Ms. Osterhout indicated that the congregation is aware of the parking needs and the worshippers will park in good faith.

Mr. Mortensen indicated that the parking calculation appears to include existing uses plus the worship service. The church is now the restaurant's landlord and will not want an unhappy tenant. Mr. Grajek indicated that the biggest issue might be that once parking spots fill up, there may be traffic flow issues.

Ms. Osterhout indicated that the engineer review requested a copy of an impact assessment; however, Ms. VanMarter indicated to her that an impact assessment is not usually required for a sketch plan. The utilities REU square footage calculation is less for a church than it would be for retail. Regarding ADA compliance, the sidewalk is in a private easement and is not required to be a barrier free sidewalk. The site is required to have six barrier free spaces and that is already provided. The church does not want to encourage wheel chair worshippers to cross the parking lot. The parking lot could be re-stripped if additional wheel chair access is needed.

Mr. Rauch asked how many barrier free parking spaces are required on the Cross Pointe property? Ms. Osterhout indicated that their total includes the Cross Pointe parking area.

Chairman Brown indicated that previous environmental impact assessments should be available through the Township which would help to complete that project if needed. Mr. Markstrom indicated that pedestrian flow was the concern in the review. Some designation of a crosswalk there would be helpful to alert drivers of increased pedestrian flow. Mr. Markstrom encouraged white striping on the pavement.

Mr. Borden indicated that the ordinance does permit shared parking and that to satisfy the ordinance there is a requirement for a signed document between property owners. Also additional details should be spelled out demonstrating to the Commission that the shared parking will actually work; for instance, how shared usage by both property sites might occur during weekday hours.

Chairman Brown asked about additional metrics. How many parishioners are there and what other uses might the church have during the week? Ms. VanMarter asked about weddings and funerals.

Pastor Jeff Waterman was present to address the Commission. Sunday mornings have approximately 200 people who attend across two services. During the week there is a Wednesday night service and a Thursday night group which meets. Youth and college age student groups meet and these events include about 25 attendees. There is also a fitness class. Regarding weddings and funerals, these activities are generally outsourced to other facilities that are better equipped to handle them. An Agreement exists with Cornerstone Presbyterian.

Mr. Rauch asked about a parking team. Pastor Waterman indicated that there is an active team. Coning is done. Also, early morning band members are encouraged to park in more inconvenient spaces. The church envisions that this will be a temporary location and that expansion is planned into a different facility at some future date. The building is a gift from someone and use is planned for a few years. With no plan to expand use at this location, the footprint is expected to remain the same.

Ms. VanMarter asked about the ADA standards and how someone in a wheelchair who is at Cross Pointe might make it over to the restaurant. Ms. Osterhout indicated that the intention is to not encourage wheelchair use through the parking lot area. It would be encouraged that someone would get in their car at Cross Pointe and then park again nearer the restaurant. Ms. VanMarter indicated that good weather might encourage folks to attempt to cross the parking lot and asked about existing ramps and whether or not a ramp might be installed. Ms. Osterhout stated that the current proposal is in compliance with the ADA, meeting barrier-free code and building code. Mr. Markstrom indicated that ramps eliminate a trip hazard and cost a few hundred dollars more. Ms. Osterhout indicated the church is on a strict budget for the build-out.

Pastor Waterman indicated that the church would do whatever the commission and the architectural firm believes is right. Ms. Osterhout indicated that a ramp may reduce the parking lot by one space. Pastor Waterman reiterated that the code is being met.

Chairman Brown indicated that the fire department is interested in 6" high letters and the lockbox. Ms. Osterhout indicated that this would be complied with. Chairman Brown asked if the petitioner was fully aware of the connection fees. The Pastor indicated that the connection fees have been noted.

A call was made to the public with no response.

Planning Commission disposition of petition

A. Disposition of Sketch Plan. (12-18-14)

Mr. Mortensen moved to approve the sketch plan dated December 18, 2014 for a church and coffee shop at 2394 Business Park Drive, subject to the following:

1. The applicant will provide a shared parking agreement for 68 spaces in a form satisfactory to Township staff prior to the granting of the land use permit.
2. Should the use of this facility change or expand beyond the existing parking limitations, a site plan review may be required by the Planning Commission and possibly the Township Board.
3. Because of the parking limitations, the church will appoint a parking team from the congregation to facilitate parking in the safest manner possible.
4. Appropriate markings will be applied to the southern end of the crosswalk to the neighboring property such as white striping to improve safety of pedestrians.
5. The requirements of the Township engineer will be complied with and in addition a copy of the environmental impact assessment prepared originally for the site will be reviewed jointly by the applicant and Township staff to ensure its' applicability.
6. The requirements of the Brighton Area Fire Authority spelled out in their letter dated December 29, 2014 will be complied with.
7. Signage will be in accordance with the Township sign ordinance and will require Township staff approval.
8. Township staff will review existing landscaping, dumpsters, and lighting to ensure that they are in compliance with existing standards.

Supported by Ms. Lowe. **Motion carried unanimously.**

OPEN PUBLIC HEARING #2... Review of a site plan, environmental impact, and PUD amendment for a proposed redevelopment of an existing outparcel to demolish the existing Bennigan's Restaurant and construct a new 12,000 sq. ft. multi-tenant building, located at 3950 E. Grand River Avenue, Howell, Michigan 48443, parcel # 4711-05-400-047. The request is petitioned by RG Properties, Inc.

Mr. Jim Blair of RG Properties addressed the Planning Commission on behalf of the petitioner. Bennigan's is closing its doors and as a result RG Properties will be getting the property back, which leads to this evening's proposal. This brings changes to the Phase 1 PUD, including incorporating the new Red Olive restaurant building. RG Properties will also become the sub-lessee of the adjacent Walmart owned parking area, which permits improvements to be made to that area as well.

The proposed building is primarily brick and masonry with some EIFS, which includes wood-grain tile on the front façade to provide for the corporate branding of a Panera Bread Restaurant. Two rows of parking in the front are also part of the PUD amendment. Another change includes an entry feature which acknowledges the Township. RG Properties has worked exhaustively with Township staff to find a location for this feature. MDOT and the Livingston County Road Commission indicate they will not allow the sign within the right of way.

Ms. VanMarter stated that the original PUD called for Latson Road to be shifted to the West. This permitted a gateway entry sign. Then when the Phase 2 PUD came in, the sign was proposed to be included near the I-96 ramp. However, the final grading is much lower than anticipated and the sign could be put there but would be too low to be visible.

Mr. Mortensen indicated that another proposal of equal value might be required of the petitioner. Mr. Blair indicated that no cost estimates were assumed previously.

Mr. Grajek indicated that the Commission is interested in seeing a gateway sign. Ms. VanMarter explained the original proposal in Phase 1 was that the sign would exist on Lot A. Lot A is currently owned by RG Properties. The original Phase 1 rendering of the sign was shown.

Chairman Brown asked about the amount of land the original sign might have required. Mr. Blair indicated that due to the lack of scale, an estimate is difficult. Ms. VanMarter indicated that RG Properties was to build the sign. Genoa Township was to maintain it. Phase 2 moved the sign nearer the ramp. In Phase 1, the sign was in the Lot-A vicinity. Mr. Blair indicated the recently proposed sign could be dressed up with endcaps and landscaping with uplighting to illuminate it in the evenings as shown in the original Phase 1 rendering.

Chairman Brown indicated that it was his belief that both signs would be provided. Mr. Blair indicated that RG Properties is obligated to provide one.

Referring to the building façade, Mr. Borden indicated that the wood grain tiles are a bit unusual and there is a lot of EIFS. The requirement is 80 percent natural materials. The front of the building does not meet 80 percent though the entire building does appear to

meet it. The rear façade will be highly visible. Perhaps wrapping the façade around the building is a possibility. The front of the building should be upgraded to increase appeal.

Mr. Blair indicated that the cornice could be brought to the back of the building to the parapet height. Some shadow lines, a transom window effect could also be included. The building currently meets the natural materials requirement. The overall building exceeds the 80 percent outlined in the agreement.

Mr. Mortensen indicated that at issue is the artistic part of the building. Mr. Blair indicated that material samples were not available for tonight's meeting. Mr. Rauch indicated that the EIFS might mainly be covered by signage and asked about the drive thru. Mr. Blair indicated that the drive thru has been moved to the back of the building to maintain the proper stacking for the drive thru. Mr. Rauch asked whether roof-top units would be hidden. Mr. Blair indicated roof top units would not be visible except one. The one could be concealed. Mr. Rauch indicated that the back of the building is an issue. Mr. Blair indicated that the middle of the parapet in the back could be raised. Mr. Rauch asked if there was consideration for metal canopies instead of cloth. Mr. Grajek indicated that the aesthetic needs of the façade are not satisfied. The parapets certainly help. More architectural character is desirable.

Mr. Borden stated he would like to see both signs, if possible. The Genoa sign feature at the corner of Latson and Grand River would enhance the corridor. There is also a question about proposed drive thru use.

Mr. Mortensen indicated that the amendment for Phase 2 did allow a drive thru as a special use. Isn't that a change in the language for the rest of the PUD? The concern with a drive thru at the neighboring Red Olive location is safe access to Grand River.

Mr. Borden asked whether it is necessary to retain the Grand River curb cut at the Red Olive site. A drive thru might be provided if internal access was provided.

Chairman Brown indicated that the space is not available for a drive thru. It's too close to other driveways. Other Red Olive Restaurants do not have this feature. Why is this right-in, right-out desired?

Mr. Jim Barnwell of Desine, Inc. addressed the Commission on behalf of Red Olive. The original intent was to use the Grand River access point as the main access to the property. The drive way is 50 feet in length. There are mature trees present on the property. Most customer traffic will be coming from Grand River. Mr. Mortensen asked who owns the drive. The driveway is part of an easement on the bank's property which predates the bank ownership. The bank does not utilize the driveway. Chairman Brown indicated that the curb cut may be dangerous.

An aerial of the property was presented and the trees were identified.

Mr. Carl Volmer of the Pucci & Volmer architectural firm addressed the commission on behalf of Red Olive, stating that one of the reasons for the purchase of the property was the curb cut.

Mr. Borden indicated that additional considerations for the Bennigan's Lot 4 re-development include the double row parking at the front of the building. Mr. Blair

indicated that inconvenient parking will turn customers away. People do not want to walk far. They just won't go. Half of one row is patio area for a potential restaurant owner. Chairman Brown asked what happens in off season. Mr. Blair stated that it would be a raised concrete patio. Ms. Figurski asked if Panera Bread was requesting a drive thru. Mr. Blair indicated that Panera Bread is making that request.

Mr. Rauch asked if consideration was given to making the building L-shaped. Mr. Blair indicated that the building was considered and it didn't layout well at that site.

Mr. Borden indicated that there are parking setbacks in the ordinance. However, the ordinance does permit the Commission to waive the setback. It will need authorization by the Commission. Also, the three wall signs being requested for tenants are not permitted by the ordinance. We need to be clear that the Township is not granting a third sign. Further, there are three outdoor patios proposed. This requires additional features such as tables, trash cans, umbrellas, chairs, which might benefit from administrative approval in the future. Ms. VanMarter indicated that this is a requirement in the ordinance.

Mr. Borden cautioned that some consideration might be given for product advertising which could be placed on outdoor umbrellas in the future. Mr. Rauch asked about what flags would fly on the proposed Genoa gateway feature. Mr. Blair indicated that the American flag is flying at all other RG Properties locations and it will be good to add this one.

Discussion took place regarding the Red Olive site. Ms. VanMarter indicated that the original PUD prohibits the use of Grand River access if internal access to the PUD takes place. Chairman Brown asked if there is an economic reason to have the driveway available to Grand River. Mr. Barnwell indicated that the Grand River curb cut is a convenience issue for customers. The Ann Arbor Red Olive access is internal and it is one of the slower selling stores.

Mr. Mortensen asked about the driveway easement for Red Olive. Ms. VanMarter indicated that driveway exists on an exclusive easement on property owned by the bank. An attorney would need to weigh in but it is the property of the bank. Mr. Barnwell indicated that the applicant was originally planning a standalone parcel not an annexation into the PUD.

Mr. Mortensen acknowledged that the Lot 4 multi-tenant building site is an important corner in the Township. And it might be important that building materials match the existing buildings in the PUD.

A call was made to the public with no response.

Planning Commission disposition of petition

- A. Recommendation regarding PUD Agreement Amendment.
- B. Recommendation of Environmental Impact Assessment. (12-01-14)
- C. Recommendation of Site Plan. (12-23-14)

Mr. Mortensen moved to table the site plan dated December 23, 2014 and the environmental impact assessment dated December 1, 2014, for a redevelopment of the

existing Bennigan's Restaurant to construct a new 12,000 sq. ft. multi-tenant building, located at 3950 E. Grand River Avenue, based on the following:

1. Requests by Commission of upgrade of materials and to the building.
2. Revisions to the submitted PUD Agreements to address issues regarding the lack of entrance sign to the Township in the vicinity of the Latson Road interchange crossing
3. Concerns in the PUD Agreement regarding continuation of the access to Grand River for the Red Olive property.
4. Improve the look of the building on this marquee corner and dress up the back of the building.

Supported by Ms. Figurski. **Motion carried unanimously.**

Mr. Grajek indicated that as a marquee location in our community, there are many ways that this corner could be featured. The back of the building is something that could benefit from negotiation. The front façade is a big concern. Mr. Mortensen indicated that a staff meeting might take place with three members of the Planning Commission present.

OPEN PUBLIC HEARING #3... Review of a rezoning, PUD amendment, site plan, and environmental impact assessment for a proposed 3,848 sq. ft. Red Olive Restaurant, located at 3838 E. Grand River Avenue, Howell, # 4711-05-400-025. The request is petitioned by PKJJ, LLC.

Mr. Jim Barnwell of Desine, Inc. addressed the Planning Commission on behalf of the petitioner. The existing building was built in the middle of a farm field in the 1990s. Current conditions were caused by others and not the property owners. The current owner's intent behind the recent purchase was to not become part of the PUD. The petitioner recognizes the desire of the Township and RG Properties to incorporate the parcel into the PUD. The petitioner would like to keep a right-in right-out access to Grand River and join the PUD. The existing building will be removed. The petitioner would like to preserve the existing landscaping as much as possible. The proposed building is approx. 1,000 sq. ft. larger than the existing building, predominantly brick and stone. There is no drive-thru proposed. The petitioner is asking for a sign in the front and in the rear. The engineer and fire department concerns are readily complied with. Proposed parking provides what is required. Larger vehicles are not expected at this sit-down restaurant. Vegetation is grown and substantial on both sides. The intent of the ordinance is met though the landscaping requirement is not quite met.

Mr. Borden indicated that point number one in his letter can be stricken regarding use calculations. Also, there are some parallel parking spaces in the parking lot. Parallel parking is difficult for most people and is somewhat unusual. The southerly space would be difficult to use. Mr. Barnwell indicated that employees would be parking in the parallel spaces. The possibility of angled parking was discussed. Snow storage would be in the corners of the lot.

Mr. Borden indicated that becoming part of the PUD will permit shared parking within the PUD. There are some deficiencies in the landscaping plan but the applicant's intent is to preserve what is there which helps accommodate those deficiencies. New

plantings are proposed within the easement areas with authorization needed by the owner of the easement, unless the easement already provides for this. The proposed waste receptacle requires authorization of the Commission due to side yard encroachment. There are two signs being requested.

Mr. Markstrom indicated that the petitioner has addressed a number of items already on the site plan. One issue with a fire hydrant is being addressed.

Mr. Grajek commended the petitioner for creating a workable and acceptable plan in a tough spot. Mr. Mortensen indicated that language should be added to the effect that there would be no drive thru on this site. Ms. VanMarter indicated that the PUD can be approved to indicate that items apply to Red Olive only.

A call was made to the public with no response.

Planning Commission disposition of petition

- A. Recommendation regarding Rezoning from RCD to NR-PUD.
- B. Recommendation of PUD Agreement Amendment.
- C. Recommendation of Environmental Impact Assessment. (04-25-14)
- D. Recommendation of Site Plan. (12-17-14)

Mr. Mortensen moved to approve the rezoning, site plan dated December 17, 2014, and environmental impact assessment dated April 25, 2014 for a 3,848 sq. ft. Red Olive Restaurant, located at 3838 E. Grand River Avenue, formerly Prairie House, from RCD to NR-PUD for the following reasons:

1. The Commission finds this rezoning is compatible with the PUD zoning of the neighboring properties and is an improvement of the site.
2. The request is consistent with requirements in Article 10.

Supported by Ms. Figurski. **Motion carried unanimously.**

Mr. Mortensen moved to approve those paragraphs within the PUD Amendment which specifically apply to the Prairie House location with the addition of a restriction that this particular site will not be eligible for a drive thru. Seconded by Diana Lowe. **Motion carried unanimously.**

Ms. Figurski moved to recommend the environmental impact assessment dated April 25, 2014. Seconded by Ms. Lowe. **Motion carried unanimously.**

Mr. Mortensen moved to recommend to the Township Board approval of the site plan based on the following:

1. The off street parallel parking spaces will be marked "Employee Only."
2. Discrepancies in the landscape plan will be fixed.
3. The applicant will supply the Township with written proof regarding planting trees on the property to the east.
4. Plans will be modified to clarify where the ornamental lighting will be installed.
5. The requirements of the Township engineer dated January 6, 2014, regarding the proposed hydrant and the water main easements will be complied with.

6. Brighton Area Fire Authority has concluded their requirements have been complied with in their letter dated December 29, 2014.
7. The signage as requested on the site plan are recommended for approval by this Commission.

Seconded by Mr. Rauch. **Motion carried unanimously.**

OPEN PUBLIC HEARING #4... Request to table site plan, special use, and environmental impact assessment for a proposed new 22,600 sq. ft. industrial building used to sort, warehouse, and distribute batteries, located at 5900 Brighton Pines Court, Howell, Michigan 48443, parcel # 4711-15-200-031. The request is petitioned by Brivar Construction Company.

Planning Commission disposition of petition

- A. Table request to February 9, 2015 meeting.

Ms. Figurski moved to table this public hearing at the request of the applicant.

Supported by Mr. Grajek. **Motion carried unanimously.**

Administrative Business:

- *Staff report: Battery Solutions is proposing an addition and Chestnut Properties is proposing an office complex. These are currently planned for the February meeting agenda.*
- *Approval of December 8, 2014 Planning Commission meeting minutes. Motion by Ms. Figurski to approve the minutes as amended. Support by Ms. Lowe. **Motion carried unanimously.***
- *Member discussion*
- *Adjournment: The meeting adjourned at 9:26 p.m.*



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

To: Township Board
Cc: Planning Commission
From: Kelly VanMarter, Assistant Township Manager/
Community Development Director
Date: January 14, 2015
Re: Planning Commission Annual Report for 2014

Manager Review:

In accordance with P.A. 33 of 2008, as amended, MCL 125.3801 et seq Michigan Planning Act, please find the attached annual report regarding Planning Commission activities for 2014. Please feel free to contact me if you have any questions. The report is provided as follows:

Special Use Permits: The Planning Commission recommended approval of 4 special use requests.

Sketch Plans: The Planning Commission approved 7 sketch plans.

Site Plans: The Planning Commission approved 5 site plans.

PUD Agreements: The Planning Commission recommended approval of 1 new and 2 amended PUD agreements.

Rezoning: The Planning Commission recommended approval of 1 rezoning.

Zoning Ordinance: The Planning Commission recommended approval of zoning ordinance text amendments regarding tent sales and temporary events.

Sincerely,

Kelly VanMarter
Assistant Township Manager/Community Development Director

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

2014 Planning Commission Annual Report

Meeting Date	Case #	Project Name	Review Type	Action
Jan 13	--	MEETING CANCELLED	--	--
Feb 10	--	MEETING CANCELLED	--	--
March 10	14-01	Latson Elementary Rezoning	Rezoning, PUD	Recommended Approval
April 14	14-02	Zoning Ordinance Amendment: Tent Sales & Temp Events	Zoning Amendment	Recommended Approval
	14-03	NorthRidge Church Façade Improvements	Sketch Plan	Approved
May 12	--	MEETING CANCELLED	--	--
June 9	14-06	Lipkin Medical Building	Site Plan	Approved
	14-07	Champion Chevrolet Addition	Sketch Plan	Approved
July 14	14-05	Buffalo Wild Wings Addition	Site Plan	Approved
	14-08	USA2GO Building	Site Plan & Special Use	Recommended Approval
	14-09	Wellbridge Parking Expansion	Site Plan	Approved
	14-10	Joseph Auto Renovation	Sketch Plan & Spec Use	Recommended Approval
	14-11	Grace & Porta Addition	Sketch Plan	Withdrawn by Petitioner
August 11	14-12	Timber Green Site Condo PUD Amendment	PUD Amendment	Tabled
Sept 8	14-12	Timber Green Site Condo PUD 2 nd Amendment	PUD Amendment	Recommended Approval
	14-13	Northridge Church Backstage Addition	Sketch Plan	Approved
Oct 14	14-14	ChemTrend Façade Improvements	Sketch Plan	Approved
Oct 27 SPECIAL MEETING	14-15	Cleary University Student Housing	Site Plan & Spec Use	Recommended Approval

Nov 10	14-04	Red Olive Restaurant Building	Site Plan, PUD Amendment, Rezoning	Tabled
	14-17	Batter Up Baseball Facility	Sketch Plan & Spec Use	Recommended Approval
Dec 8	14-04	Red Olive Restaurant Building	Site Plan, PUD Amendment, Rezoning	Tabled
	14-12	Timber Green Site Condo PUD 3 rd Amendment	PUD Amendment	Recommended Approval
	14-16	Brighton Water Tower Collocation	Sketch Plan	Approved

Updated 01/14/15