

GENOA CHARTER TOWNSHIP BOARD
Regular Meeting and Public Hearing
October 16, 2017
6:30 p.m.

AGENDA

Call to Order:

Pledge of Allegiance:

Call to the Public (Public comment will be limited to two minutes per person)*:

Approval of Consent Agenda:

1. Payment of Bills.
2. Request to Approve Minutes: October 2, 2017

Approval of Regular Agenda:

3. Second public hearing on the East and West Crooked Lake Aquatic Weed Control Special Assessment District.
 - A. Call to the property owners and the public.
 - B. Request for approval Resolution No. 5 [confirming the special assessment roll] for the East and West Crooked Lake Aquatic Weed Control Special Assessment District Summer 2018.
4. Request for approval of the environmental impact assessment and site plan for a proposed 123-bed student housing apartment building, located on the south side of Grand River Avenue and east side of Grand Oaks Drive, at 3750 Cleary Drive, Howell. The property is located in the Cleary University Planned Unit Development. The request is petitioned by Cleary University.
 - A. Disposition of Environmental Impact Assessment (10-11-17)
 - B. Disposition of Site Plan (10-11-17)
5. Request for approval of resolution authorizing Genoa Township Utility Department to provide Operational Assistance to Howell Township.
6. Request for approval for an agreement with the Livingston County Road Commission for the Township to pay 50 percent of the cost of construction and maintenance of a proposed traffic signal at Latson Road/Hampton Ridge Boulevard/Meier at a cost not to exceed \$52,775.
7. Discussion of newsletter articles to be included in the December 2017 tax mailing.

Correspondence

Member Discussion

Adjournment

*Citizen's Comments- In addition to providing the public with an opportunity to address the Township Board at the beginning of the meeting, opportunity to comment on individual agenda items may be offered by the Chairman as they are presented.

CHECK REGISTERS FOR TOWNSHIP BOARD MEETING

DATE: October 16, 2017

TOWNSHIP GENERAL EXPENSES: Thru October 16, 2017	\$118,448.03
October 6, 2017 Bi Weekly Payroll	\$88,923.85
OPERATING EXPENSES: Thru October 16, 2017	\$174,704.93
TOTAL:	<u>\$382,076.81</u>

Check Date	Bank	Check	Vendor	Vendor Name	Amount
Bank FNBCK CHECKING ACCOUNT					
09/26/2017	FNBCK	33942	ARCHINAL	MICHAEL ARCHINAL	23.08
09/27/2017	FNBCK	33943	GUARDIAN I	GUARDIAN	2,307.51
09/27/2017	FNBCK	33944	ARCHINAL	MICHAEL ARCHINAL	500.00
09/27/2017	FNBCK	33945	UNUM	UNUM PROVIDENT	3,082.20
10/02/2017	FNBCK	33946	BUS IMAG	BUSINESS IMAGING GROUP	105.47
10/02/2017	FNBCK	33947	LEPIORS	MARY LEPIORS	544.00
10/02/2017	FNBCK	33948	NORTHERN	NORTHERN PLUMBING, INC.	1,378.00
10/02/2017	FNBCK	33949	PERFECT	PERFECT MAINTENANCE CLEANING	565.00
10/02/2017	FNBCK	33950	PRINTING	PRINTING SYSTEMS	180.87
10/02/2017	FNBCK	33951	BROWNT	TARA BROWN	155.38
10/03/2017	FNBCK	33952	LOWED	DIANA LOWE	344.60
10/03/2017	FNBCK	33953	DTE ENE	DTE ENERGY	1,078.61
10/03/2017	FNBCK	33954	SAPIENZA	KRISTEN RENEE SAPIENZA	102.72
10/03/2017	FNBCK	33955	ARCHINAL	MICHAEL ARCHINAL	440.05
10/03/2017	FNBCK	33956	STONE	SHARON STONE	320.04
10/03/2017	FNBCK	33957	LIND	TAMMY LINDBERG	183.51
10/03/2017	FNBCK	33958	TERRY CROF	TERRY CROFT	343.07
10/03/2017	FNBCK	33959	WELLNESS I	WELLNESS IQ	160.00
10/03/2017	FNBCK	33960	WELLNESS I	WELLNESS IQ	160.00
10/03/2017	FNBCK	33961	GFL ENVIRO	GFL ENVIRONMENTAL USA INC.	79,354.29
10/03/2017	FNBCK	33962	WEX	WEX BANK	47.05
10/04/2017	FNBCK	33963	DTE ENE	DTE ENERGY	21.68
10/04/2017	FNBCK	33964	NETWORK	NETWORK SERVICES GROUP, L.L.C.	50.00
10/04/2017	FNBCK	33965			0.00 V
10/04/2017	FNBCK	33966	CONSUME	CONSUMERS ENERGY	2,548.00
10/10/2017	FNBCK	33967	COMCAST	COMCAST	326.78
10/10/2017	FNBCK	33968	CONTINEN	CONTINENTAL LINEN SERVICE	113.43
10/10/2017	FNBCK	33969	DTE EN	DTE ENERGY	147.19
10/10/2017	FNBCK	33970	DTE ENE	DTE ENERGY	127.70
10/10/2017	FNBCK	33971	ETHAN MURP	ETHAN MURPHY	50.00
10/10/2017	FNBCK	33972	MEI	MINNESOTA ELEVATOR, INC	115.00
10/10/2017	FNBCK	33973	PFM	PUBLIC FINANCIAL MANAGEMENT, INC	1,100.00
10/10/2017	FNBCK	33974	BROWN	DOUGLAS BROWN	472.80
10/10/2017	FNBCK	33975	ECONOMIC	ECON DEV. COUNCIL OF LIVINGSTON CO	22,000.00

FNBCK TOTALS:

Total of 34 Checks:	118,448.03
Less 1 Void Checks:	0.00
Total of 33 Disbursements:	<u>118,448.03</u>

Check Register Report For Genoa Charter Township
For Check Dates 10/06/2017 to 10/06/2017

Check Date	Bank	Check Number	Name	Check Gross	Physical Check Amount	Direct Deposit	Status
10/06/2017	FNBC	EFT152	FLEX SPENDING (TASC)	1,159.13	1,159.13	0.00	Open
10/06/2017	FNBC	EFT153	INTERNAL REVENUE SERVICE	21,936.40	21,936.40	0.00	Open
10/06/2017	FNBC	EFT154	PRINCIPAL FINANCIAL	2,125.00	2,125.00	0.00	Open
10/06/2017	FNBC	EFT155	PRINCIPAL FINANCIAL	1,245.99	1,245.99	0.00	Open
Totals:				Number of Checks: 004	26,466.52	26,466.52	0.00
Total Physical Checks:						Dir. Dep.	
Total Check Stubs:				4		62,457.33	

62,457.33
\$88,923.85

10/11/2017 10:45 AM
 User: Tara
 DB: Genoa Township

CHECK REGISTER FOR GENOA TOWNSHIP
 CHECK NUMBERS 3258 - 3300

Page: 1/1

Check Date	Bank	Check	Vendor	Vendor Name	Amount
Bank 593FN LAKE EDGEWOOD OPERATING FUND #593					
09/27/2017	593FN	3258	BRIGHTON	BRIGHTON ANALYTICAL , L.L.C.	67.00
09/27/2017	593FN	3259	HARTLAN	HARTLAND SEPTIC SERVICE, INC.	4,050.00
10/03/2017	593FN	3260	BRIGHTON	BRIGHTON ANALYTICAL , L.L.C.	67.00
10/03/2017	593FN	3261	CITY B	CITY OF BRIGHTON	18,631.34
10/03/2017	593FN	3262	CITY B	CITY OF BRIGHTON	10,555.26
10/04/2017	593FN	3263	DTE ENE	DTE ENERGY	853.83
10/10/2017	593FN	3264	BRIGHTON	BRIGHTON ANALYTICAL , L.L.C.	67.00
10/10/2017	593FN	3265	CHARTERT	CHARTER TOWNSHIP OF BRIGHTON	932.50
10/10/2017	593FN	3266	DTE ENE	DTE ENERGY	3,575.82

593FN TOTALS:
 Total of 9 Checks: 38,799.75
 Less 0 Void Checks: 0.00
 Total of 9 Disbursements: 38,799.75

10/08/2017 10:12 AM
 User: Angie
 DB: Genoa Township

CHECK REGISTER FOR GENOA TOWNSHIP
 CHECK NUMBERS 2192 - 2200

Page: 1/1

Check Date	Check	Vendor Name	Amount
Bank 595FN PINE CREEK OPERATING FUND #595			
10/03/2017	2192	CITY OF BRIGHTON	123,466.41

595FN TOTALS:
 Total of 1 Checks: 123,466.41
 Less 0 Void Checks: 0.00
 Total of 1 Disbursements: 123,466.41

10/11/2017 10:50 AM
 User: Tara
 DB: Genoa Township

CHECK REGISTER FOR GENOA TOWNSHIP
 CHECK NUMBERS 4130 - 4200

Page: 1/1

Check Date	Bank	Check	Vendor	Vendor Name	Amount
Bank 503FN DPW-UTILITIES #503					
09/27/2017	503FN	4130	BLACKBU	BLACKBURN MFG. CO.	291.91
09/27/2017	503FN	4131	JACK DO	JACK DOHENY SUPPLIES, INC.	135.00
09/27/2017	503FN	4132	MASTER M	MASTER MEDIA SUPPLY	80.38
09/27/2017	503FN	4133	ROYS AU	ROYS AUTOWORKS CORP	1,784.85
09/27/2017	503FN	4134	USA BLUE	USA BLUEBOOK	486.59
10/03/2017	503FN	4135	WEX	WEX BANK	2,710.14
10/10/2017	503FN	4136	GORDON	GORDON FOOD SERVICE	164.17
10/10/2017	503FN	4137	PORT CI	PORT CITY COMMUNICATIONS, INC.	210.80
10/10/2017	503FN	4138	TRACTOR	TRACTOR SUPPLY CO.	341.86

503FN TOTALS:
 Total of 9 Checks: 6,205.70
 Less 0 Void Checks: 0.00
 Total of 9 Disbursements: 6,205.70

0/11/2017 10:46 AM
ser: Tara
B: Genoa Township

CHECK REGISTER FOR GENOA TOWNSHIP
CHECK NUMBERS 4077 - 4100

check Date	Bank	Check	Vendor	Vendor Name	Amount
Bank 592FN OAK POINTE OPERATING FUND #592					
9/27/2017	592FN	4077	ALEX CHE	ALEXANDER CHEMICAL CORPORATION	1,742.40
9/27/2017	592FN	4078	BRIGHTON	BRIGHTON ANALYTICAL , L.L.C.	54.00
0/04/2017	592FN	4079	CONSUMER	CONSUMERS ENERGY	49.00
0/04/2017	592FN	4080	DTE ENE	DTE ENERGY	3,878.75
0/04/2017	592FN	4081	DTE ENE	DTE ENERGY	419.61
0/10/2017	592FN	4082	AT&TLONG	AT&T LONG DISTANCE	55.56
0/10/2017	592FN	4083	DTE ENE	DTE ENERGY	33.75

592FN TOTALS:

Total of 7 Checks:					6,233.07
Less 0 Void Checks:					0.00
Total of 7 Disbursements:					<u>6,233.07</u>

GENOA CHARTER TOWNSHIP BOARD
Regular Meeting and Public Hearing
October 2, 2017

MINUTES

Supervisor Rogers called the regular meeting of the Genoa Charter Township Board to order at 6:30 p.m., with the Pledge of Allegiance. The following members were present constituting a quorum for the transaction of business: Bill Rogers, Paulette Skolarus, Robin Hunt, Terry Croft, Diana Lowe and Jean Ledford. Absent – Jim Mortensen. Also present were Township Manager, Michael Archinal; Township Attorney, Joe Seward; and approximately 40 persons in the audience.

A Call to the Public was made with no response.

Approval of Consent Agenda:

Moved by Lowe and supported by Croft to approve all items listed under the consent agenda as requested. The motion carried unanimously.

1. **Payment of Bills.**
2. **Request to Approve Minutes: September 18, 2017**

Approval of Regular Agenda:

Moved by Ledford and supported by Croft to approve for action all items listed under the regular agenda as requested. The motion carried unanimously.

3. **Presentation of the Township financial statements by auditor Ken Palka related to all Township funds and request to receive the annual audit for the Fiscal Year beginning April 1, 2016 through March 31, 2017.**

Palka thanked the board for their continued support and offered his “unqualified opinion” that the financial records of the township are fairly and appropriately presented as a result of the audit. The township is in very good financial condition with all fund balances being in a good position. Moved by Skolarus and supported by Hunt to receive the annual audit as submitted. The motion carried unanimously.

4. **Request for approval of Resolution No. 5A [amending the special assessment roll] for the Grand Oaks Road Improvement Project Reimbursement Special Assessment District previously approved for summer 2016.**

Moved by Lowe and supported by Skolarus to approve Resolution No. 5A for the Grand Oaks Road Improvement Project as requested. The motion carried by roll call vote as follows: Ledford, Croft, Hunt, Lowe, Skolarus and Rogers. Nays – None. Absent – Mortensen.

5. **First public hearing on the East and West Crooked Lake Aquatic Weed Control Project.**

- A. **Call to the Public and Property Owners**

A call to property owners and the public was made with the following response: Craig Lesley – The aquatic weed control project is working well. He thanked the board for their continued support.

B. Request for approval of Resolution No. 3 [approving the project, cost estimates, special assessment district and causing the special assessment roll to be prepared] for the East and West Crooked Lake Aquatic Weed Control Project Summer 2018.

Moved by Lowe and supported by Skolarus to approve Resolution No. 3 for the East and West Crooked Lake Aquatic Weed Control Project as requested. The motion carried by roll call vote as follows: Croft, Hunt, Lowe, Skolarus and Rogers. Absent – Mortensen. Abstain – Ledford.

C. Request for approval of Resolution No. 4 [acknowledging the filing of the special assessment roll, scheduling the second hearing, and directing the issuance of statutory notices] for the East and West Crooked Lake Aquatic Weed Control Project Summer 2018.

Moved by Hunt and supported by Skolarus to approve Resolution No. 4 for the East and West Crooked Lake Aquatic Weed Control Project as requested. The motion carried by roll call vote as follows: Ledford, Croft, Hunt, Lowe, Skolarus and Rogers. Nays – None. Absent – Mortensen.

6. Second public hearing on the Hillandale Road Improvement Project.

Skolarus advised the board of the following: The petitioner (Nicole Waligora) brought two petitions to her neighbors for consideration. The first petition proposed was to add gravel to the entire road, but was deemed too expensive by the homeowners. The second petition, the one used to petition the board, was to add four inches of gravel to the worst part of the road, grade the remaining sections, fill pot holes, crown the road and chloride the final product. Two letters of objection were received with 74% of the residents signing the petition.

A. Call to Property Owners and the Public.

A call to the public and property owners was made with the following response: Allen Pruchs – We are north of the hill and request that our property be removed from the district. Our road is fine in front of our home and we should only be charged for chloride. Nicole Waligora – Most neighbors are excited to get the work done. Our neighborhood fixes small portions of the road once or twice a year. There is still a benefit as property value will be increased. Sue Ringuette – I did not realize what was going on with this road. The first five houses on Hillandale are getting no benefit. It was not explained to the neighbors that gravel was only going to be added to the center. There were no competitive bids taken.

B. Request for approval of Resolution No. 5 [confirming the special assessment roll] for the Hillandale Road Improvement Project Summer 2018.

Moved by Skolarus and supported by Croft to approve Resolution No. 5 for the Hillandale Road Improvement project as requested. The motion carried by roll call vote

as follows: Ledford, Croft, Hunt, Lowe, Skolarus and Rogers. Nays – None. Absent – Mortensen.

7. Request for approval of 2018 meeting and holiday schedule.

It was the consensus of the board to approve the schedules adding a second meeting on Dec. 17, 2018.

The regular meeting and public hearing of the board was adjourned at 7:05 p.m.



**Paulette A. Skolarus, Clerk
Genoa Charter Township Board**

Resolution No. 5 – East and West Crooked Lakes Aquatic Weed Control Project
Special Assessment Project (Summer 2018)

GENOA CHARTER TOWNSHIP

At a regular meeting of the Township Board of the Genoa Charter Township, Livingston County, Michigan, (the “Township”) held at the Township Hall on October 16, 2017, at 6:30 p.m., there were

PRESENT:

ABSENT:

The following preamble and resolution were offered by _____ and seconded by _____.

Resolution Confirming Special Assessment Roll

WHEREAS, the Board of Trustees of the Township has determined to proceed with the East and West Crooked Lake Aquatic Weed Control Improvement Project within the Township as described in Exhibit A (the “Project”) and in accordance with Act No. 188, Michigan Public Acts of 1954, as amended;

WHEREAS, the Board of Trustees of the Township has determined to advance the costs of the Project from Township funds and to use special assessments to raise the money necessary to reimburse the Township for the advance of such funds;

WHEREAS, the Township Supervisor has prepared the Special Assessment Roll entitled Special Assessment Roll for East and West Crooked Aquatic Weed Control Improvement Project (Summer 2018) (the “Proposed Roll”) and has filed the Proposed Roll with the Township Clerk;

WHEREAS, the Township Board has scheduled a public hearing on the Proposed Roll and notice of the hearing has been properly provided;

WHEREAS, the Township Board conducted the public hearing on the Proposed Roll on October 16, 2017.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. Roll Confirmed. In accordance with Act No. 188, Michigan Public Acts of 1954, as amended, and the laws of the State of Michigan, the Township Board hereby confirms the Special Assessment Roll for the East and West Crooked Aquatic Weed Control Improvement Project (Summer 2018) (the “Roll”).

2. Future Installments - Principal. The Township Board determines that each special assessment may be paid in five installments. The first installment shall be due July 1, 2018.

3. Future Installments - Interest. All unpaid installments shall not bear interest.

4. Warrant. The Township Clerk is hereby directed to attach a warrant (in the form of Exhibit B to this resolution) to the Roll and to deliver such warrant and the Roll to the Township Treasurer, who shall thereupon collect the special assessments in accordance with the terms of this resolution, the Clerk's warrant and the statutes of the State of Michigan.

5. Inconsistent Prior Resolutions. All previously adopted resolutions that are in conflict with this resolution are repealed to the extent of such conflict.

A vote on the foregoing resolution was taken and was as follows:

YES:

NO:

ABSENT:

CLERK'S CERTIFICATE

The undersigned, being the duly qualified and acting Clerk of the Township, hereby certifies that (1) the foregoing is a true and complete copy of a resolution duly adopted by the Township Board at a meeting of the Township Board, at which meeting a quorum was present and remained throughout; (2) the original thereof is on file in the records in my office; (3) the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with the Open Meetings Act (Act No. 267, Public Acts of Michigan, 1976, as amended); and (4) minutes of such meeting were kept and will be or have been made available as required thereby.

Paulette A. Skolarus
Genoa Charter Township Clerk
October 16, 2017

EXHIBIT A

DESCRIPTION OF PROJECT
A FIVE YEAR SPECIAL ASSESSMENT DISTRICT
WITH PROJECTED COSTS AS FOLLOWS:

The unit cost per acre for the project will consist of:

Description	Total
2,4-D	\$380.00
Renovate OTF	\$450.00
Reward	\$215.00
Aquathol K/Hydrothol 191	\$205.00
Algaecides	\$40.00
Starry Stpmewprt	\$65.00
Survey (Both Lakes)	\$750.00

Suggested budget for 2018 Fluridone treatments 6ppb: \$35,016.00 to \$42,796.00

Additional requirements by DEQ \$10,500.00 to \$10,500.00

Estimated total cost for initial treatments \$45,516.00 to \$53,296.00

The five year estimated cost from 2018 until 2022 is projected to be \$100,000.00 (including publications and mailings for the establishment of the special assessment district). **The estimate cost to each parcel is expected to be \$45.00 annually beginning in the summer of 2018. NOTE: Costs remain the same as the previous five-year district**

Exhibit B

Warrant

WARRANT

TO: Treasurer
Genoa Township
Livingston County, Michigan

I certify that attached to this Warrant is a true copy of the special assessment roll for the Genoa Township East and West Crooked Lake Aquatic Weed Control Road Improvement Project (2018) (the "Roll") confirmed by the Township Board on October 16, 2017 (the "Confirming Resolution"). You are hereby directed to proceed to collect the amounts due on such Roll in accordance with this Warrant, the Confirming Resolution and the statutes of the State of Michigan.

Paulette A. Skolarus
Genoa Charter Township Clerk
October 16, 2017

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-21-201-007	091817, East West Cro	223.00	SUSALLA, JAMES & ANN MARIE P O BOX 701
4711-21-201-008	091817, East West Cro	223.00	DAHM, WINFRIED & SUZANNE 3255 LAKEWOOD SHORES DR
4711-21-201-009	091817, East West Cro	223.00	MYKOLS, DAVID T. & JENNIFER 3267 LAKEWOOD SHORES DR
4711-21-201-010	091817, East West Cro	223.00	BOWMAN BARRIE TRUST 3279 LAKEWOOD SHORES DR
4711-21-201-011	091817, East West Cro	223.00	BARKMEIER JOE & TICE ANN 3291 LAKEWOOD SHORES DR
4711-21-201-055	091817, East West Cro	223.00	MAYDAY BRIAN & RENEE 3309 LAKEWOOD SHORES DR
4711-21-201-056	091817, East West Cro	223.00	LEE, ROBERT & SUSAN 3345 LAKEWOOD SHORES DR
4711-21-201-057	091817, East West Cro	223.00	DUFF GREGORY, LORI & 3363 LAKEWOOD SHORES DR
4711-21-201-058	091817, East West Cro	223.00	NASH DAVID A 3381 LAKEWOOD SHORES DR
4711-21-201-059	091817, East West Cro	223.00	NANKERVIS DONALD & LYNN 3399 LAKEWOOD SHORES DR
4711-21-201-060	091817, East West Cro	223.00	MASROPIAN, VAUGHN & NOREEN 3417 LAKEWOOD SHORES DR
4711-21-201-061	091817, East West Cro	223.00	ACEVEDO DULCE G TRUST 3435 LAKEWOOD SHORES DR
4711-21-201-062	091817, East West Cro	223.00	WARNER, ANDREW & MARY 3453 LAKEWOOD SHORES DR
4711-21-201-063	091817, East West Cro	223.00	CARPENTER, STANLEY & ROSE 3489 LAKEWOOD SHORES DR
4711-21-201-064	091817, East West Cro	223.00	RUSSELL JEFFREY F TRUST 3507 LAKEWOOD SHORES DR
4711-21-201-065	091817, East West Cro	223.00	RICHARDSON, WM. & DAWN 3525 LAKEWOOD SHORES DR
4711-21-201-066	091817, East West Cro	223.00	LAWRENCE, JAMES R. & DIETLIND 3553 LAKEWOOD SHORES DR
4711-21-201-067	091817, East West Cro	223.00	JACKSON JULEE 3561 LAKEWOOD SHORES DR
4711-21-201-068	091817, East West Cro	223.00	MULLIGAN SEAN & LAURA 3579 LAKEWOOD SHORES DR
4711-21-201-069	091817, East West Cro	223.00	BAUT GERALD M & DARLENE 3597 LAKEWOOD SHORES DR
4711-21-201-070	091817, East West Cro	223.00	BATE MARK & MEDAWAR CATHERINE 3615 LAKEWOOD SHORES DR
4711-21-201-071	091817, East West Cro	223.00	SECK JOHN F III & MERDITH K TRUST 3633 LAKEWOOD SHORES DR
4711-21-201-072	091817, East West Cro	223.00	ZACK DAVID PAUL & LAURA 3651 LAKEWOOD SHORES DR
4711-21-201-073	091817, East West Cro	223.00	LITERSKI, EDWIN & CATHY 3669 LAKEWOOD SHORES DR
4711-21-201-074	091817, East West Cro	223.00	SUFFREDINI ROLANDO & VIOLET LTS 9.3 3687 LAKEWOOD SHORES DR
4711-21-201-075	091817, East West Cro	223.00	CLISE TIMOTHY B & WENDY E 3705 LAKEWOOD SHORES DR
4711-21-201-076	091817, East West Cro	223.00	SCHULTE CHARLES 3723 LAKEWOOD SHORES DR

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-21-300-014	091817, East West Cro	223.00	CANAL ESTATE, LLC 2482 S. LATSON RD
4711-21-301-001	091817, East West Cro	223.00	LEONARD CHRISTOPHER W & JEANNE M 4029 BROADMOOR CT
4711-21-301-009	091817, East West Cro	223.00	MCCREARY, WILLIAM & MARIANNE 3979 BROADMOOR CT
4711-21-301-010	091817, East West Cro	223.00	LIECKFIELD JOINT LIVING TRUST 4015 BROADMOOR CT
4711-21-400-005	091817, East West Cro	223.00	MORGAN PETER J. 5001 GROVER DR
4711-21-400-006	091817, East West Cro	223.00	GRAHAM, KEITH/KAREN 4965 GROVER DR
4711-21-400-011	091817, East West Cro	223.00	EXLINE JANINE 4800 GROVER DR
4711-21-400-012	091817, East West Cro	223.00	LARSON, GERALD 101 TIMBER TRAIL
4711-21-400-013	091817, East West Cro	223.00	LARSON, GERALD 101 TIMBER TRAIL
4711-21-400-014	091817, East West Cro	223.00	GILLIGAN JR JAMES 4801 GROVER DR
4711-21-400-020	091817, East West Cro	223.00	EATON ADAM & KATIE 4828 GROVER DR
4711-21-400-021	091817, East West Cro	223.00	KERR, DONALD D. & CAROLYN J. 4540 SEIM
4711-21-401-001	091817, East West Cro	223.00	LEEK, J. BRIAN & DEBORAH K. 3997 HOMESTEAD
4711-21-401-002	091817, East West Cro	223.00	PERRI ROSEMARY 3985 HOMESTEAD
4711-21-401-004	091817, East West Cro	223.00	GADBAW SHANE & KINI 3961 HOMESTEAD DR
4711-21-401-006	091817, East West Cro	223.00	GADBAW, SHANE P. & KINI J. 3961 HOMESTEAD
4711-21-401-008	091817, East West Cro	223.00	ANDREWS LAND TITLE STANDARD 9.3 3949 HOMESTEAD
4711-21-401-012	091817, East West Cro	223.00	BRICHTA JOSEPH & ROSEMARIE 22831 ESTACADO
4711-21-401-015	091817, East West Cro	223.00	MCLEAN BRIAN & GAIL 3919 HOMESTEAD
4711-21-401-021	091817, East West Cro	223.00	ECKHOLD BARRY J 7132 POINT OF ROCKS CIR
4711-21-401-023	091817, East West Cro	223.00	PEREIRA DENNIS S & PATRICIA C 11411 KATHERINE
4711-21-401-024	091817, East West Cro	223.00	PEIMONDO DONALD & KAREN 3943 HOMESTEAD
4711-21-401-026	091817, East West Cro	223.00	PEAL, MICHAEL & MARY ANN TRUST 3883 HOMESTEAD
4711-21-401-027	091817, East West Cro	223.00	DAVIS DONALD & JULIA 3907 HOMESTEAD
4711-22-100-010	091817, East West Cro	223.00	TERNS DONALD & JUDITH 5440 SHARP DR
4711-22-100-012	091817, East West Cro	223.00	HAGEN MICHAEL S 5450 SHARP DR
4711-22-100-013	091817, East West Cro	223.00	HATCHER, ORA & CAROL P O BOX 2364

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-22-100-014	091817, East West Cro	223.00	MAGGIO JAMES & ELAINE LTS 9.3 5470 SHARP DR
4711-22-100-015	091817, East West Cro	223.00	BOZYK ALAN TRUST 5480 SHARP DR
4711-22-100-016	091817, East West Cro	223.00	BOZYK ALAN TRUST 5480 SHARP DR.
4711-22-100-017	091817, East West Cro	223.00	DAVIS TRUST 5290 SHARP DR
4711-22-100-018	091817, East West Cro	223.00	HOWELL STEVEN D LIVING TRUST 5350 SHARP DR
4711-22-100-021	091817, East West Cro	223.00	SIWIK MICHAEL J & PATRICIA 5300 SHARP DR
4711-22-100-022	091817, East West Cro	223.00	BOUTROS HENRY & STARLING STACEY 111 S 4TH AVENUE STE 3
4711-22-100-023	091817, East West Cro	223.00	KOZA KENNETH M 5400 SHARP DR.
4711-22-100-024	091817, East West Cro	223.00	KOZA KENNETH M 5400 SHARP DR
4711-22-102-133	091817, East West Cro	223.00	HAZEN RALPH & SHARON 5260 EDGEWOOD SHORES DR
4711-22-102-134	091817, East West Cro	223.00	RADTKE-GERKIN SANDRA 5268 EDGEWOOD SHORES DR
4711-22-102-135	091817, East West Cro	223.00	MOONEY TIMOTHY P & NADINE A 5276 EDGEWOOD SHORES DR
4711-22-102-136	091817, East West Cro	223.00	PHILLIPS JOHN R & STACEY E 5284 EDGEWOOD SHORES DR
4711-22-102-137	091817, East West Cro	223.00	LYNN, BRIAN K. & JENNIFER J. 5292 EDGEWOOD SHORES DR
4711-22-102-138	091817, East West Cro	223.00	PETERSON BRADLEY R & JOYCE D 3150 ASPEN RIDGE COURT
4711-22-102-139	091817, East West Cro	223.00	BERTONCIN DAVID & CHERI 3158 ASPEN RIDGE COURT
4711-22-102-140	091817, East West Cro	223.00	BAKER WILLIAM & MARY LIFE ESTATE 3166 ASPEN RIDGE COURT
4711-22-200-010	091817, East West Cro	223.00	KUCZEK, WM. & VAN GORDON, MARY 5492 SHARP DR
4711-22-200-012	091817, East West Cro	223.00	LEDFORD TRUST 5733 PINERIDGE LANE
4711-22-200-017	091817, East West Cro	223.00	BEAUNE KAREN REVOCABLE LIVING TRUST 5780 OAK CREEK LANE
4711-22-200-026	091817, East West Cro	223.00	FISHER ROBERT T & CYNTHIA L 3371 MERROW LANE
4711-22-200-028	091817, East West Cro	223.00	NASTWOLD, DAVID J. & ASHLEY W. 3311 MERROW LANE
4711-22-200-029	091817, East West Cro	223.00	LANGHORST TRUST 3360 MERROW LANE
4711-22-201-001	091817, East West Cro	223.00	SCHMIDA LAWRENCE F LIVING TRUST 3385 PINERIDGE LANE
4711-22-201-002	091817, East West Cro	223.00	ANTON BRIAN & SHERRY 5630 GRIFFITH DR
4711-22-201-003	091817, East West Cro	223.00	LESLEY REVOCABLE JOINT TRUST 5680 GRIFFITH DR
4711-22-201-004	091817, East West Cro	223.00	JACKSON, DENNIS & CHERYL 5730 GRIFFITH DR

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-22-201-011	091817, East West Cro	223.00	K & V PROPERTIES LLC 33278 W. 11 MILE RD
4711-22-201-012	091817, East West Cro	223.00	KERESZTES-FISCHER, FRANK 5859 GRIFFITH DR
4711-22-201-019	091817, East West Cro	223.00	REDMOND STEVEN & PATRICIA TRUST 5755 GRIFFITH DR
4711-22-201-020	091817, East West Cro	223.00	WALTER, MATTHEW D. & EMILY A. 5735 GRIFFITH DR
4711-22-201-022	091817, East West Cro	223.00	FREDRICKSON, JILL L. 5655 GRIFFITH DR
4711-22-201-025	091817, East West Cro	223.00	BLONDY ELIZABETH 5625 GRIFFITH DR
4711-22-201-026	091817, East West Cro	223.00	SUREL MARK & JENNIFER 3333 PINERIDGE LANE
4711-22-201-027	091817, East West Cro	223.00	DUBY MICHAEL & CYNTHIA TRUST 5600 PINERIDGE LANE
4711-22-201-031	091817, East West Cro	223.00	ANDRUS MARK S & LISA E 5920 PINERIDGE LANE
4711-22-201-032	091817, East West Cro	223.00	WORKMAN TONY L & JUDITH A 5730 PINERIDGE LANE
4711-22-201-033	091817, East West Cro	223.00	PRIEST DONALD 5601 PINERIDGE LANE
4711-22-201-034	091817, East West Cro	223.00	RASOR, JOHN & MICHELLE 5655 PINERIDGE LANE
4711-22-201-036	091817, East West Cro	223.00	HICKS GEORGE & PAMELA 5944 GRIFFITH DR
4711-22-201-038	091817, East West Cro	223.00	HEBREW-WESTRAN BENNI L 5801 GRIFFITH DR
4711-22-201-039	091817, East West Cro	223.00	HARMAN, MICHAEL & DARCEE 5656 PINERIDGE LANE
4711-22-201-041	091817, East West Cro	223.00	LESLEY EDWIN & MARSHA 5680 GRIFFITH
4711-22-201-042	091817, East West Cro	223.00	MC GILL, ANTHONY D. & TRACY L. 5830 GRIFFITH DR
4711-22-201-045	091817, East West Cro	223.00	BISKUP MARY SUSAN TRUST 3466 DORR RD
4711-22-201-046	091817, East West Cro	223.00	RASOR, JOHN & MICHELE 5655 PINERIDGE LANE
4711-22-201-048	091817, East West Cro	223.00	MC GILL, ANTHONY D. & TRACY L. 5830 GRIFFITH DR.
4711-22-201-049	091817, East West Cro	223.00	BALAZOVICH, KENNETH J. & DARLENE M. 5844 GRIFFITH DR
4711-22-201-052	091817, East West Cro	223.00	HATT RALPH & DEBORAH 5704 PINERIDGE LANE
4711-22-201-055	091817, East West Cro	223.00	HEUVELMAN JACK & JUDITH TRUST 5778 PINERIDGE LANE
4711-22-201-056	091817, East West Cro	223.00	HARRIS JON W. 5835 GRIFFITH DR
4711-22-202-001	091817, East West Cro	223.00	WILSON, MARGUERITE E. 4465 FILBERT DR
4711-22-202-003	091817, East West Cro	223.00	THURSTON, DALE 3580 PINERIDGE LANE
4711-22-202-004	091817, East West Cro	223.00	MARTZ, KENNETH & CAROLE 3566 PINERIDGE LANE

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-22-202-006	091817, East West Cro	223.00	PETTENGILL, PRISCILLA A-TRUSTE 608 W MAIN ST
4711-22-202-008	091817, East West Cro	223.00	BAKUN, RONALD A. 3530 PINERIDGE LANE
4711-22-202-009	091817, East West Cro	223.00	POYNTER TREASURE 3520 PINERIDGE LANE
4711-22-202-010	091817, East West Cro	223.00	MUSCH, ROBERT & DIANE 3500 PINERIDGE LANE
4711-22-202-011	091817, East West Cro	223.00	MUSCH ROBERT & DIANE 3500 PINERIDGE LANE
4711-22-202-013	091817, East West Cro	223.00	SIVAK THOMAS TRUSTEE 3480 PINERIDGE LANE
4711-22-202-014	091817, East West Cro	223.00	SLIDER RALPH & MARY 7230 CUESTA WAY DR NE
4711-22-202-016	091817, East West Cro	223.00	BALAGNA, MICHAEL & YVONNE 3450 PINERIDGE LANE
4711-22-202-017	091817, East West Cro	223.00	BETTES BEASELY DONNIE RLT 3430 PINERIDGE LANE
4711-22-202-018	091817, East West Cro	223.00	BROWN DOUGLAS C TRUST 3420 PINERIDGE LANE
4711-22-202-020	091817, East West Cro	223.00	LOCKLEAR TROY & REGINA 3406 PINERIDGE LANE
4711-22-202-021	091817, East West Cro	223.00	MARSHALL GARRY & DENISE 3390 PINERIDGE LANE
4711-22-202-023	091817, East West Cro	223.00	BENDER LIVING TRUST 3370 PINERIDGE LANE
4711-22-202-025	091817, East West Cro	223.00	HAYES JAMES & JOAN 3350 PINERIDGE LANE
4711-22-202-026	091817, East West Cro	223.00	NEMETH, MARY T. 3340 PINERIDGE LANE
4711-22-202-030	091817, East West Cro	223.00	KILLEWALD TOINI & DAVID 3320 PINERIDGE LANE
4711-22-202-031	091817, East West Cro	223.00	SCHELM STEVEN & MISUMI-SCHELM REIKO 40446 COVE CT
4711-22-300-004	091817, East West Cro	223.00	GOBLE ROGER W 3859 HIGHCREST
4711-22-300-005	091817, East West Cro	223.00	MACKOOL DAVID & MARILYN 3911 HIGHCREST
4711-22-300-006	091817, East West Cro	223.00	MICHALIK TIMOTHY & JILL 3915 HIGHCREST
4711-22-301-001	091817, East West Cro	223.00	MALOY FAMILY TRUST 3773 HIGHCREST
4711-22-301-002	091817, East West Cro	223.00	FISCHER, RICHARD JR. 3751 HIGHCREST
4711-22-301-004	091817, East West Cro	223.00	SCHWANITZ-SMITH FAMILY TRUST 1990 WILDING LANE
4711-22-301-007	091817, East West Cro	223.00	BOZYK GARY REVOCABLE TRUST 3719 HIGHCREST
4711-22-301-009	091817, East West Cro	223.00	CRANE HAROLD & SHARON REV. LIV. TR. 716 SPENCER
4711-22-301-010	091817, East West Cro	223.00	KIEFER MAUREEN M TRUST 3695 HIGHCREST
4711-22-301-015	091817, East West Cro	223.00	KARWOWSKI BRIAN 3673 HIGHCREST

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-22-301-017	091817, East West Cro	223.00	SHARP ALBERT W & MARIA ELIZABETH P O BOX 797
4711-22-301-043	091817, East West Cro	223.00	LONG RONALD LEE & OLGE 3723 HIGHCREST
4711-22-301-046	091817, East West Cro	223.00	EDWARDS LIVING TRUST 296 LAWTHORN
4711-22-302-001	091817, East West Cro	223.00	KELLER, DAVID & CHRISTINE 3766 NOBLE
4711-22-302-002	091817, East West Cro	223.00	MAIN JORDAN 3830 HIGHCREST
4711-22-302-003	091817, East West Cro	223.00	CEDAR, MICHAEL & NINA 3836 HIGHCREST
4711-22-302-004	091817, East West Cro	223.00	KREAGER, STEPHEN A. & SUSAN M. 996 GLENHILL DR
4711-22-302-008	091817, East West Cro	223.00	PHILLIPS, RICHARD F. & SANDRA A. 3855 HIGHCREST
4711-22-302-009	091817, East West Cro	223.00	MACZUGA, WILLIAM & JOSEPHINE 3847 HIGHCREST
4711-22-302-010	091817, East West Cro	223.00	GREEN LISA 3841 HIGHCREST
4711-22-302-011	091817, East West Cro	223.00	DROTOS JOHN LTS 9.3 3835 HIGHCREST
4711-22-302-012	091817, East West Cro	223.00	SHELTERS, BRIAN/LYNN P O BOX 155
4711-22-302-013	091817, East West Cro	223.00	SWEDER, THOMAS & KATHLEEN 30709 MAYVILLE
4711-22-302-014	091817, East West Cro	223.00	TANIS, JEFFREY & WANDA 3817 HIGHCREST
4711-22-302-015	091817, East West Cro	223.00	KEEFER SCOTT & JACQUELYN 3811 HIGHCREST
4711-22-302-016	091817, East West Cro	223.00	ROBERTS JOHN & MARICEL LIFE EST 3805 HIGHCREST
4711-22-302-017	091817, East West Cro	223.00	BEDERKA SCOTT 3783 HIGHCREST
4711-22-302-018	091817, East West Cro	223.00	PAGE, MICHAEL 3793 HIGHCREST
4711-22-302-036	091817, East West Cro	223.00	WILK COTTAGE LLC 22915 WATT DR.
4711-22-302-037	091817, East West Cro	223.00	MC DIARMID, DONALD & MARY 3738 NOBLE
4711-22-302-038	091817, East West Cro	223.00	PFEIFER, HENRY 3742 NOBLE
4711-22-302-039	091817, East West Cro	223.00	WERNETTE, WILLIAM P. 3746 NOBLE
4711-22-302-040	091817, East West Cro	223.00	CLARK JR PEYTON C 3750 NOBLE
4711-22-302-041	091817, East West Cro	223.00	KIRKWOOD PATRICK & SARAH 13109 BORGMAN AVE
4711-22-302-042	091817, East West Cro	223.00	BAILEY KEITH & TERRY 3758 NOBLE
4711-22-302-043	091817, East West Cro	223.00	GOEGLEIN CHRIS L & DEBRA J 4601 N WASHINGTON RD
4711-22-302-044	091817, East West Cro	223.00	KELLER, DAVE & CHRIS 3766 NOBLE

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-22-302-045	091817, East West Cro	223.00	KELLER, DAVID & CHRISTINE 3766 NOBLE
4711-22-302-052	091817, East West Cro	223.00	PATON DANIEL 3888 HIGHCREST
4711-22-302-053	091817, East West Cro	223.00	GREEN RODNEY P & GAIL J 3894 HIGHCREST
4711-22-302-054	091817, East West Cro	223.00	DRAGUN STELLA LTS 9.3 3900 HIGHCREST
4711-22-302-056	091817, East West Cro	223.00	ZBELL JOSEPH A 3910 HIGHCREST
4711-22-302-057	091817, East West Cro	223.00	BARTOLOMUCCI, JOANN 3914 HIGHCREST
4711-22-302-058	091817, East West Cro	223.00	LINDSEY LEIGH 3920 HIGHCREST
4711-22-302-059	091817, East West Cro	223.00	COOK, ERIC & JODI 3924 HIGHCREST
4711-22-302-060	091817, East West Cro	223.00	COOK, GEORGE & BARBARA 3930 HIGHCREST
4711-22-302-061	091817, East West Cro	223.00	BLAIR JACQUELINE 3934 HIGHCREST
4711-22-302-062	091817, East West Cro	223.00	MESSING TRUST 3940 HIGHCREST
4711-22-302-063	091817, East West Cro	223.00	PERKOWSKI, ADAM J. II 3944 HIGHCREST
4711-22-302-064	091817, East West Cro	223.00	SOCIA LIVING TRUST 3950 HIGHCREST
4711-22-302-065	091817, East West Cro	223.00	CROWLEY, FLOYD J. 3956 HIGHCREST
4711-22-302-066	091817, East West Cro	223.00	PERRI JOSEPH JR. & MARIA D 3962 HIGHCREST
4711-22-302-067	091817, East West Cro	223.00	KERR, DONALD D. & CAROLYN J. 4540 SEIM RD.
4711-22-302-068	091817, East West Cro	223.00	KRUSE WILLIAM 3710 NOBLE
4711-22-302-069	091817, East West Cro	223.00	BREAZEALE PAMELA, BREAZEALE JOEL, 3714 NOBLE
4711-22-302-073	091817, East West Cro	223.00	BARTOLOMUCCI NICOLE 3968 HIGHCREST
4711-22-302-074	091817, East West Cro	223.00	DAVIDGE, MICHAEL & TIFFANEY 3974 HIGHCREST
4711-22-302-075	091817, East West Cro	223.00	BAKER WILLIAM & MARY 3166 ASPEN RIDGE CT
4711-22-302-076	091817, East West Cro	223.00	BOLAND MICHAEL A TRUST 3986 HIGHCREST
4711-22-302-077	091817, East West Cro	223.00	RICE REGINA & DEBRA 3994 HIGHCREST
4711-22-302-079	091817, East West Cro	223.00	BERNAS THERESE TRUST 4010 HIGHCREST
4711-22-302-080	091817, East West Cro	223.00	BOCHENEK, RICHARD J. 5082 WILLOW GROVE
4711-22-302-081	091817, East West Cro	223.00	KOSOSKI, JOHN 27358 KENNEDY DR
4711-22-302-082	091817, East West Cro	223.00	MACKAY GORDON 6130 N. CHIPMAN RD

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-22-302-083	091817, East West Cro	223.00	RACINE JAMES T & DAWN L 4050 HIGHCREST
4711-22-302-086	091817, East West Cro	223.00	LIMNIC, LLC 4093 HOMESTEAD DR.
4711-22-302-156	091817, East West Cro	223.00	NAGY EDNA & GRUBER DAVID 10742 S REED RD
4711-22-302-157	091817, East West Cro	223.00	WILSON RONALD A & LINDA K TRUST 4465 FILBERT DR.
4711-22-302-158	091817, East West Cro	223.00	STOTLER JOANNA C TRUST 4078 HIGHCREST
4711-22-302-159	091817, East West Cro	223.00	ELLIOTT, MICHAEL L. 4086 HIGHCREST
4711-22-302-160	091817, East West Cro	223.00	HUPP, WILLARD & LOIS - TRUST 4094 HIGHCREST
4711-22-302-161	091817, East West Cro	223.00	SHAPOSKA, THOMAS 4100 HIGHCREST
4711-22-302-163	091817, East West Cro	223.00	LINNE GREG/ LAURA & TURNBLOM NANCY 4114 HIGHCREST
4711-22-302-164	091817, East West Cro	223.00	LINNE HENRY TRUST 4118 HIGHCREST
4711-22-302-165	091817, East West Cro	223.00	MC CUSKER JUDY 4122 HIGHCREST
4711-22-302-166	091817, East West Cro	223.00	CHICK BARBARA A LIVING TRUST 4130 HIGHCREST
4711-22-302-167	091817, East West Cro	223.00	GRUBER CURTIS 7202 LOBDELL RD
4711-22-302-168	091817, East West Cro	223.00	SCHMITT TRUST 4142 HIGHCREST
4711-22-302-169	091817, East West Cro	223.00	SCHRAUDT, BOB 4150 HIGHCREST
4711-22-302-170	091817, East West Cro	223.00	WYATT JOHNATHAN 4158 HIGHCREST
4711-22-302-172	091817, East West Cro	223.00	EVANS ROD & TAMARA LIVING TRUST 4174 HIGHCREST
4711-22-302-173	091817, East West Cro	223.00	PERRI ANDREW 4684 CLIFFORD RD
4711-22-302-174	091817, East West Cro	223.00	LINARD ANDREW & BRITTANY 4190 HIGHCREST
4711-22-302-175	091817, East West Cro	223.00	CLARK, JOHN & ROSEANNA 4200 HIGHCREST
4711-22-302-176	091817, East West Cro	223.00	TENGEL, LAWRENCE & SYLVIA 4206 HIGHCREST
4711-22-302-177	091817, East West Cro	223.00	MANCINI DAVID & KATHY 4212 HIGHCREST
4711-22-302-178	091817, East West Cro	223.00	UNRUH, JON & BONNIE 4220 HIGHCREST
4711-22-302-179	091817, East West Cro	223.00	MILOSTAN LIFE ESTATE 4228 HIGHCREST
4711-22-302-180	091817, East West Cro	223.00	PB DEVELOPMENT LLC 46100 GRAND RIVER AVE.
4711-22-302-181	091817, East West Cro	223.00	RAFFERTY THOMAS 4244 HIGHCREST
4711-22-302-184	091817, East West Cro	223.00	BOOKER JOHN & CONNIE LIVING TRUST 4268 HIGHCREST

Population: Special Assessment District (091817)

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-22-302-185	091817, East West Cro	223.00	GRISCOM JANET E. 4276 HIGHCREST
4711-22-302-186	091817, East West Cro	223.00	PARLOVE VINCENT A & AMY E 10408 OVERHILL DRIVE
4711-22-302-187	091817, East West Cro	223.00	BERGIN PEPPER REVOCABLE LIV. TRUST 4292 HIGHCREST
4711-22-302-188	091817, East West Cro	223.00	OLLEARIS LAWRENCE 4300 HIGHCREST
4711-22-302-189	091817, East West Cro	223.00	KANGAS RICK J & NOELLE A 4620 HUNTINGTON DR
4711-22-302-190	091817, East West Cro	223.00	VONBUSKIRK DONALD REV TRUST 4312 HIGHCREST
4711-22-302-191	091817, East West Cro	223.00	BODNAR FRED & LAUREN 4074 ANCHOR LN
4711-22-302-192	091817, East West Cro	223.00	KANGAS RICKY J & NOELLE A 4620 HUNTINGTON DR
4711-22-302-193	091817, East West Cro	223.00	BURNETT MELISA & ROGER 4330 HIGHCREST
4711-22-302-194	091817, East West Cro	223.00	MATTHEW JAMES L & KELLI B 4336 HIGHCREST
4711-22-302-195	091817, East West Cro	223.00	ZIMINSKY, RICHARD 4342 HIGHCREST
4711-22-302-196	091817, East West Cro	223.00	SAMPSON JEFFREY & JENNIFER 4348 HIGHCREST
4711-22-302-197	091817, East West Cro	223.00	GANGNIER JEFFREY & GINA LIV TRUST 4354 HIGHCREST
4711-22-302-202	091817, East West Cro	223.00	BOZYK JAMES D & KIMBERLY L 3850 HIGHCREST
4711-22-302-204	091817, East West Cro	223.00	CORNELIUSSEN PAUL A & JOY V 3880 HIGHCREST
4711-22-302-206	091817, East West Cro	223.00	BROCKWAY PATRICIA TRUST 175 SOLANO PRADO
4711-22-302-209	091817, East West Cro	223.00	BOWMAN BLAIR M REV LIVING TRUST 4252 HIGHCREST
4711-22-303-001	091817, East West Cro	223.00	DOANE THOMAS & PATTI MARSHALL- 3701 CRESTHILL DR
4711-22-303-002	091817, East West Cro	223.00	HEATHCOTE, DAVID & SUZETTE 49744 PARKSIDE DRIVE
4711-22-303-003	091817, East West Cro	223.00	BERRY RICHARD & LOGAN LIZBETH 3677 CRESTHILL DR
4711-22-303-005	091817, East West Cro	223.00	SIUPIK, PAUL & KATHLEEN 3671 CRESTHILL DR
4711-22-303-011	091817, East West Cro	223.00	BOZYK JOSEPH & PATRICIA 3665 CRESTHILL DR
4711-22-303-012	091817, East West Cro	223.00	SIDDALL STEPHEN & STACIA 5011 GROVER DR
4711-22-303-013	091817, East West Cro	223.00	SASTRY A & LASTOSKIE C 202 ORCHARD HILLS DR
4711-22-400-002	091817, East West Cro	223.00	SROCK GARY K 3335 DIANNE
4711-22-400-003	091817, East West Cro	223.00	BOURDAS, H. & INGRAM, L. 44313 FAIR OAKS DR
4711-22-400-004	091817, East West Cro	223.00	CAMERON GREGREY D & MICHELE L 37731 W MEADOWHILL DR

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-22-400-005	091817, East West Cro	223.00	CAMERON GREGORY & MICHELE 37731 WEST MEADOWHILLS DR
4711-22-400-007	091817, East West Cro	223.00	CAMERON, JEFFREY & SARAH 2432 FREEMAN DR
4711-22-400-008	091817, East West Cro	223.00	LATHAM RONALD C & ALLEN RONDA S 3672 CONRAD RD
4711-22-400-009	091817, East West Cro	223.00	BECKNER ALLEN D & ALICE W 3679 CONRAD RD
4711-22-400-010	091817, East West Cro	223.00	STONE JODIE & JEFFREY 3830 CONRAD RD
4711-22-400-015	091817, East West Cro	223.00	WILSON BRADLEY K 5640 KENMAR DR
4711-22-400-016	091817, East West Cro	223.00	BLANEY, MARK D. & KRISTIN L. PO BOX 1896
4711-22-400-017	091817, East West Cro	223.00	SOSNOWSKI MATTHEW & SHERI 3485 PINERIDGE LANE
4711-22-400-018	091817, East West Cro	223.00	ROUTT, MICHAEL & ROBERTA 5750 KENMAR DR
4711-22-400-026	091817, East West Cro	223.00	PENNER, MICHAEL & ANDREA 3747 CONRAD RD
4711-22-400-027	091817, East West Cro	223.00	SELMY DONALD LIFE ESTATE 3718 CONRAD RD
4711-22-400-028	091817, East West Cro	223.00	SELMY DONALD LIFE ESTATE 3718 CONRAD RD
4711-22-400-029	091817, East West Cro	223.00	PENNER, KEITH & BARBARA 3732 CONRAD RD
4711-22-400-030	091817, East West Cro	223.00	PITZER JAN & ANNE 3680 DORR RD
4711-22-400-031	091817, East West Cro	223.00	FOX KATHRYN REVOCABLE TRUST 3640 DORR RD
4711-27-100-001	091817, East West Cro	223.00	BAKER EVAN 3937 HIGHCREST
4711-27-100-002	091817, East West Cro	223.00	HOLMES, THOMAS J. & SANDRA M. 3945 HIGHCREST
4711-27-100-003	091817, East West Cro	223.00	PAQUETTE JAMES & KATHERINE 3953 HIGHCREST
4711-27-100-004	091817, East West Cro	223.00	STANEK, JOHN 3975 HIGHCREST
4711-27-100-009	091817, East West Cro	223.00	BIERMANN CAREN 4263 CLIFFORD RD
4711-27-100-011	091817, East West Cro	223.00	BRADLEY, DEBRA MARIE 4271 CLIFFORD RD
4711-27-100-012	091817, East West Cro	223.00	CRANE PATRICIA & CYR RONALD 4283 CLIFFORD RD
4711-27-100-013	091817, East West Cro	223.00	BASSETT STEPHEN M & KELLY A 4295 CLIFFORD RD
4711-27-100-014	091817, East West Cro	223.00	POSZYWAK KEITH E 4301 CLIFFORD RD
4711-27-100-015	091817, East West Cro	223.00	NORMAND MARCEL & MARY 4137 CLIFFORD RD
4711-27-100-016	091817, East West Cro	223.00	GALENS DANIEL K & AMY E 4350 CLIFFORD RD
4711-27-100-030	091817, East West Cro	223.00	BIERMANN, CAREN M. 4263 CLIFFORD RD

Population: Special Assessment District (091817)

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-27-100-034	091817, East West Cro	223.00	MERCIER, MARC F. & SHERYL C. 5054 WILLOW GROVE LANE
4711-27-100-035	091817, East West Cro	223.00	THAGARD JAMES & WENDY 5082 WILLOW GROVE LANE
4711-27-100-036	091817, East West Cro	223.00	PLUMMER KEITH & LINDSAY 5110 WILLOW GROVE LANE
4711-27-100-037	091817, East West Cro	223.00	DAVIS CHARLES & MARY LOU 5140 WILLOW GROVE LANE
4711-27-100-044	091817, East West Cro	223.00	HAVILAND CAROL K 6851 STOW RD
4711-27-100-045	091817, East West Cro	223.00	PELCHER JR, ROBERT C & LISA C 4127 CLIFFORD RD
4711-27-101-021	091817, East West Cro	223.00	LOT OWNERS 4103 ANCHOR LANE
4711-27-101-022	091817, East West Cro	223.00	WOODHAMS, THOMAS & DIANE 4030 ANCHOR LANE
4711-27-101-023	091817, East West Cro	223.00	BODNAR LAUREN & FRED 4074 ANCHOR LANE
4711-27-101-024	091817, East West Cro	223.00	VANHEES JARED & KAITLYN 4077 ANCHOR LANE
4711-27-101-025	091817, East West Cro	223.00	ZOPPA ROBERT J & STARLENE A 4103 ANCHOR LANE
4711-27-101-026	091817, East West Cro	223.00	BROZO ADAM & CYNTHIA 4102 ANCHOR LANE
4711-27-101-027	091817, East West Cro	223.00	RATKE RICHARD & MARTHA 4017 ANCHOR LANE
4711-27-101-028	091817, East West Cro	223.00	VASILOFF KEVIN & RACHEL 4041 ANCHOR LANE
4711-27-101-029	091817, East West Cro	223.00	GAUCI JONATHON A & MARNI A 4055 ANCHOR LANE
4711-27-101-030	091817, East West Cro	223.00	YANOCHKO DAVID & LINDA LIVING TRUST 4054 ANCHOR LANE
4711-27-101-031	091817, East West Cro	223.00	JACOBS, WILLIAM & JUDY TRUST 4121 ANCHOR LANE
4711-27-101-032	091817, East West Cro	223.00	JACOBS, WILLIAM & JUDY TRUST 4121 ANCHOR LANE
4711-27-103-001	091817, East West Cro	223.00	MC CAIG FAMILY TRUST 4394 SKUSA
4711-27-103-005	091817, East West Cro	223.00	BAKER, SUSAN L. 4382 SKUSA
4711-27-103-006	091817, East West Cro	223.00	WIESZCZYK FAMILY TRUST 4374 SKUSA
4711-27-103-010	091817, East West Cro	223.00	COOK LORI REVOCABLE TRUST #7 OAK POINT LANDING
4711-27-103-011	091817, East West Cro	223.00	COOK LORI REVOCABLE TRUST #7 OAK POINT LANDING
4711-27-103-015	091817, East West Cro	223.00	BRADSTREET, BRUCE & BARBARA 4340 SKUSA
4711-27-103-020	091817, East West Cro	223.00	ISMET, GARY W. & JOY 4314 SKUSA
4711-27-103-048	091817, East West Cro	223.00	BREIL GEORGE REVOCABLE TRUST PO BOX 21147
4711-27-103-055	091817, East West Cro	223.00	THUIS, THEODORE V. & JACKIE F. 4350 SKUSA

Population: Special Assessment District (091817)

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PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-27-103-060	091817, East West Cro	223.00	MCMAHON DARRYL & SARAH 4326 SKUSA
4711-27-103-063	091817, East West Cro	223.00	SPENSLEY, ROBERT L. & MARY 4390 SKUSA
4711-27-103-064	091817, East West Cro	223.00	LYDERS-PETERSEN GAIL L 1244 LONG LAKE CT
4711-27-200-005	091817, East West Cro	223.00	CODDINGTON, JOHN E. & CHRISTINE C. 5981 CHALLIS RD
4711-28-100-014	091817, East West Cro	223.00	WHITE LARRY H & CHRISTA L 4489 OAK POINTE DR
4711-28-100-015	091817, East West Cro	223.00	CLUB CORP. P O BOX 790830
4711-28-100-023	091817, East West Cro	223.00	LIBLER JEFFREY & MARY S 4151 ROSECREEK LANE
4711-28-100-024	091817, East West Cro	223.00	ROSE CREEK LANE LLC 1135 MELBROOK DRIVE
4711-28-100-025	091817, East West Cro	223.00	LANCASTER BLAKE N & SAUNDRA 4891 SPLIT RAIL LANE
4711-28-100-026	091817, East West Cro	223.00	BROOKS MICHAEL & BERNA STREET- 4067 ROSECREEK LANE
4711-28-101-047	091817, East West Cro	223.00	RUHMAN JOHN 4047 BROADMOOR CT
4711-28-101-070	091817, East West Cro	223.00	RODRIGUEZ JUAN & GARCIA DANIELA 4211 COLONIAL CT
4711-28-101-071	091817, East West Cro	223.00	SWAIN RANDY TRUST 4203 COLONIAL CT
4711-28-101-072	091817, East West Cro	223.00	LAW FRANK F. IV & KAREN 4195 COLONIAL CT
4711-28-101-073	091817, East West Cro	223.00	SIEGEL ERIC & JENNIFER 4200 COLONIAL CT
4711-28-101-074	091817, East West Cro	223.00	DENNIS, WILLIAM & HENDRICKS PAULA 4208 COLONIAL CT
4711-28-200-001	091817, East West Cro	223.00	PERRI JOSEPH & MARIA 3962 HIGHCREST DR.
4711-28-200-002	091817, East West Cro	223.00	WILSON SCOTT, JERALD JR & GARRICK PO BOX 2190
4711-28-200-003	091817, East West Cro	223.00	WILSON RONALD A & LINDA K TRUST 4465 FILBERT DR.
4711-28-201-001	091817, East West Cro	223.00	BROWN, ANGELA & CURT 4001 HOMESTEAD
4711-28-201-002	091817, East West Cro	223.00	OSWALT, GEOFFREY 4003 HOMESTEAD
4711-28-201-003	091817, East West Cro	223.00	KONYE JOHN D & ALYSA 4007 HOMESTEAD
4711-28-201-004	091817, East West Cro	223.00	HARTLEY WILLIAM & JEFFREY 3901 HONORS TRACE
4711-28-201-005	091817, East West Cro	223.00	JAMES M RACINE TRUST 5 ROBINDALE CT
4711-28-201-006	091817, East West Cro	223.00	WOOD PETER DENISE & DANIELLE 202 S. 7TH STREET
4711-28-201-007	091817, East West Cro	223.00	ST. GERMAIN MARK LIVING TRUST 4027 HOMESTEAD
4711-28-201-008	091817, East West Cro	223.00	ST. GERMAIN MARK LIVING TRUST 4027 HCESTEAD

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-28-201-011	091817, East West Cro	223.00	TUCZAK, FRANK D. & LORI 4045 HOMESTEAD
4711-28-201-012	091817, East West Cro	223.00	FLEMING THOMAS & DIANA 4049 HOMESTEAD
4711-28-201-013	091817, East West Cro	223.00	LANZON, OLIVER 4053 HOMESTEAD
4711-28-201-014	091817, East West Cro	223.00	MANCINI KAREN & LEO LTS 9.3 4057 HOMESTEAD
4711-28-201-017	091817, East West Cro	223.00	SIRLS LARRY & LISA LIFE ESTATE 4686 BRIGHTMORE RD.
4711-28-201-018	091817, East West Cro	223.00	JELNICKI REVOCABLE TRUST 3664 OLD CREEK
4711-28-201-019	091817, East West Cro	223.00	ELLERHOLZ PATRICK 4083 HOMESTEAD
4711-28-201-020	091817, East West Cro	223.00	SECHRIST THOMAS H & ROSEMARY J 4089 HOMESTEAD
4711-28-201-021	091817, East West Cro	223.00	BRUDER PETER H TRUST 4093 HOMESTEAD
4711-28-201-022	091817, East West Cro	223.00	GRACE DANIEL & LORRAINE 22670 AUTUMN PARK BLVD
4711-28-201-023	091817, East West Cro	223.00	HERRON DOUGLAS & POH KIM 4105 HOMESTEAD
4711-28-201-026	091817, East West Cro	223.00	CASOLI DANIEL J & CHRISTINE K 4121 HOMESTEAD
4711-28-201-027	091817, East West Cro	223.00	SCHROCK, EDWARD & JUSTINA 328 IVERNESS
4711-28-201-028	091817, East West Cro	223.00	KORENCHUK, DENNIS - TRUST 4141 HOMESTEAD
4711-28-201-029	091817, East West Cro	223.00	ROJOWSKI, STANLEY 4151 HOMESTEAD
4711-28-201-031	091817, East West Cro	223.00	SAVEDES MARIE 4159 HOMESTEAD
4711-28-201-032	091817, East West Cro	223.00	HEIDER THOMAS L 4165 HOMESTEAD
4711-28-201-033	091817, East West Cro	223.00	ZAMMIT, VICTOR & PATRICIA 4177 HOMESTEAD
4711-28-201-035	091817, East West Cro	223.00	WLODARCZAK JON & DANIELLE 4183 HOMESTEAD
4711-28-201-038	091817, East West Cro	223.00	WACLAWEK, MURIEL MCGRATH 4203 HOMESTEAD
4711-28-201-042	091817, East West Cro	223.00	O'BRIEN MARC & MELINDA 4225 HOMESTEAD
4711-28-201-044	091817, East West Cro	223.00	KOZAR PATRICIA & DAVE 4237 HOMESTEAD
4711-28-201-045	091817, East West Cro	223.00	LEWIS, JACK 4243 HOMESTEAD
4711-28-201-046	091817, East West Cro	223.00	WILSON SCOTT, JERALD JR & GARRICK PO BOX 2190
4711-28-201-047	091817, East West Cro	223.00	MC DONALD, KURT & NANCY 4261 HOMESTEAD
4711-28-201-050	091817, East West Cro	223.00	WHITE CRAIG R. 4277 HOMESTEAD
4711-28-201-052	091817, East West Cro	223.00	CLEMENTS, SCOTT & CYNTHIA 4291 HOMESTEAD

Population: Special Assessment District (091817)

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-28-201-053	091817, East West Cro	223.00	CLARK, PAYTON III & KIM 4111 HOMESTEAD
4711-28-201-054	091817, East West Cro	223.00	WEATHERLY RICHARD TRUST 4195 HOMESTEAD
4711-28-201-055	091817, East West Cro	223.00	MCCORD MATTHEW M & KIMBERLY L 4065 HOMESTEAD
4711-28-201-056	091817, East West Cro	223.00	WILLIAMS JACKIE & LYNDA LIFE EST 4219 HOMESTEAD
4711-28-201-057	091817, East West Cro	223.00	VARNEY, BENJAMIN & KATHRYN 4700 HUNT ST
4711-28-202-001	091817, East West Cro	223.00	BROWN CURT & ANGELA 4001 HOMESTEAD DRIVE
4711-28-202-002	091817, East West Cro	223.00	KONYE JOHN D & ALYSA 4007 HOMESTEAD
4711-28-202-003	091817, East West Cro	223.00	RACINE JAMES M TRUST 5 ROBINDALE CT
4711-28-202-004	091817, East West Cro	223.00	RACINE JAMES M TRUST 5 ROBINDALE CT
4711-28-202-005	091817, East West Cro	223.00	GOODLING, CHESTER & LOUISE 26431 LA MUERA
4711-28-202-007	091817, East West Cro	223.00	KIRCHOFF, ALAN 4026 HOMESTEAD
4711-28-202-009	091817, East West Cro	223.00	VARNEY, BENJAMIN & KATHRYN 4700 HUNT ST
4711-28-202-010	091817, East West Cro	223.00	VARNEY, BENJAMIN & KATHRYN 4700 HUNT ST
4711-28-202-011	091817, East West Cro	223.00	FLEMING THOMAS J 4049 HOMESTEAD DR
4711-28-202-012	091817, East West Cro	223.00	FLEMING THOMAS J 4049 HOMESTEAD DR
4711-28-202-013	091817, East West Cro	223.00	MCCORD MATTHEW & KIMBERLY 4065 HOMESTEAD
4711-28-202-014	091817, East West Cro	223.00	MCCORD MATTHEW & KIMBERLY 4065 HOMESTEAD
4711-28-202-015	091817, East West Cro	223.00	SIRLS LISA J TRUST 4686 BRIGHTMORE RD.
4711-28-202-016	091817, East West Cro	223.00	HARMAN THORIN B 4084 HOMESTEAD
4711-28-202-017	091817, East West Cro	223.00	ELLERHOLZ PATRICK 4083 HOMESTEAD
4711-28-202-021	091817, East West Cro	223.00	MCGRATH JULIE ANN 4104 HOMESTEAD
4711-28-202-023	091817, East West Cro	223.00	DUNN, JOHN & KAREN 4120 HOMESTEAD
4711-28-202-025	091817, East West Cro	223.00	DUNN, JOHN & KAREN 4120 HOMESTEAD
4711-28-202-031	091817, East West Cro	223.00	SCHROCK, EDWARD & JUSTINA 328 IVERNESS
4711-28-202-032	091817, East West Cro	223.00	SAVEDES MARIE 10430 CURRY PALM
4711-28-202-033	091817, East West Cro	223.00	BITMAS RONALD 4120 HOMESTEAD
4711-28-202-034	091817, East West Cro	223.00	GRACE DANIEL & LORRAINE 22670 AUTUMN PARK BLVD

Population: Special Assessment District (091817)

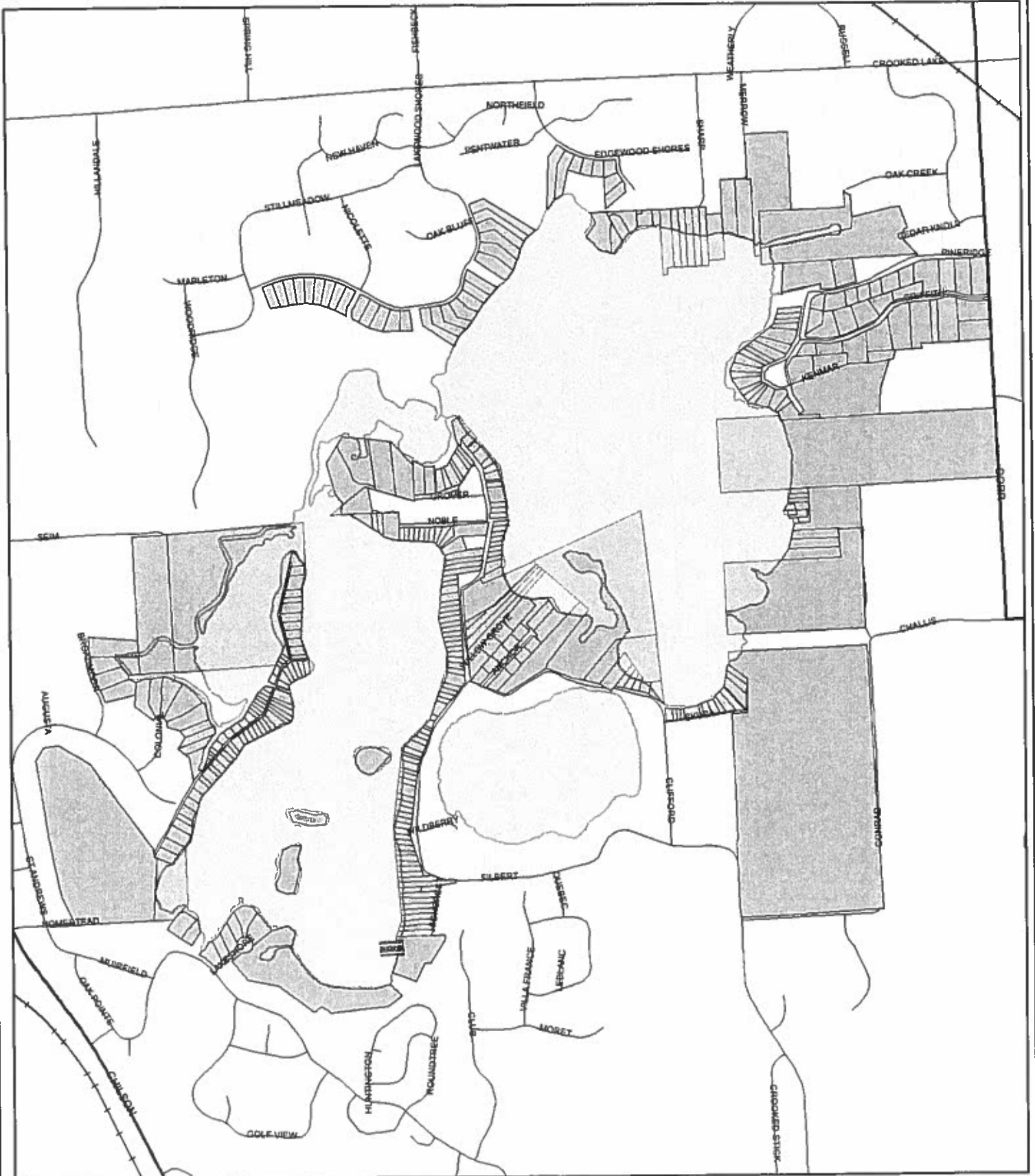
PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-28-202-035	091817, East West Cro	223.00	SHANLIAN LESLIE M 4140 HOMESTEAD
4711-28-400-002	091817, East West Cro	223.00	WHITE LARRY H & CHRISTA 4489 OAK POINTE DR.
4711-28-400-003	091817, East West Cro	223.00	FORCIER FAMILY REVOCABLE TRUST 4495 OAK POINTE DR.
4711-28-400-013	091817, East West Cro	223.00	CLUB CORP. P O BOX 790830
4711-28-400-017	091817, East West Cro	223.00	OAK POINTE COMMUNITY ASSOC 1100 VICTOR WAY STE 50
4711-28-404-009	091817, East West Cro	223.00	AHMEDANI BRIAN & DANA 4526 LAKESHORE CT
4711-28-404-010	091817, East West Cro	223.00	RACHNER, RICHARD J. & KAREN 4514 LAKESHORE CT
4711-28-404-011	091817, East West Cro	223.00	HENDERSON, PAUL E. & CECILE R 4502 LAKESHORE CT
4711-28-404-012	091817, East West Cro	223.00	DAUBENMIER, MICHAEL & JUDITH 4490 LAKESHORE CT
4711-28-404-013	091817, East West Cro	223.00	AKHAVAN-TAFTI HASHEM REVOCABLE TRUS PO BOX 3910
4711-28-404-014	091817, East West Cro	223.00	GRIFFIN CURTIS D FAMILY TRUST 4466 LAKESHORE CT
4711-28-406-001	091817, East West Cro	223.00	LEYDA MARK & DIANE 4642 HUNTINGTON DR.
4711-28-406-002	091817, East West Cro	223.00	KRAMER ERIK & HEATHER 4364 OAK POINTE DR
4711-28-406-003	091817, East West Cro	223.00	NICHOLAS DAENA K TRUST 4569 OAK POINTE DR.
4711-28-406-004	091817, East West Cro	223.00	PATE WILLIAM D 4549 GOLF VIEW DR
4711-28-406-005	091817, East West Cro	223.00	GOMEZ ANGEL & TRACY 3811 HONORS WAY
4711-28-406-006	091817, East West Cro	223.00	LINARD, HOMER & LAURIE 4553 OAK POINTE DR
4711-28-406-007	091817, East West Cro	223.00	TERRY CHRISTOPHER & BOBBIE 3759 HONORS WAY
4711-28-406-008	091817, East West Cro	223.00	SCOTT JUDSON J & AMY L 4324 OAK POINTE DRIVE
4711-28-406-009	091817, East West Cro	223.00	BECK, DANIEL W. & STEPHANIE L. 4586 GLEN EAGLES DR
4711-28-406-010	091817, East West Cro	223.00	BECK, DANIEL W. & STEPHANIE L. 4586 GLEN EAGLES DR
4711-28-406-011	091817, East West Cro	223.00	SULLIVAN KEVIN 3690 HONORS WAY
4711-28-406-012	091817, East West Cro	223.00	ZERVOS STEPHEN M 5219 MORET CT.
4711-28-406-013	091817, East West Cro	223.00	TYLER SHARON LIVING TRUST 4892 CROOKED STICK CT
4711-28-406-014	091817, East West Cro	223.00	TERRY CHRISTOPHER & BOBBIE 3759 HONORS WAY
4711-28-406-015	091817, East West Cro	223.00	FOWLER, BETSY A. 4464 OAK POINTE DR
4711-28-406-016	091817, East West Cro	223.00	SPENSLEY CHRISTOPHER 4090 ST ANDREWS

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-28-406-017	091817, East West Cro	223.00	CARPENTER CARTER & LISA TRUST 4138 ST. ANDREWS
4711-28-406-018	091817, East West Cro	223.00	FOWLER JAMESB & BETSY A 4464 OAK POINTE DR.
4711-28-406-020	091817, East West Cro	223.00	DALLAFIOR KENNETH R & KAREN 4529 OAK POINTE DR.
4711-28-406-021	091817, East West Cro	223.00	DESAI, BIPIN & PAMELA P O BOX 518
4711-28-406-022	091817, East West Cro	223.00	FRATARCANGELI ALAN 4636 CLIFFORD
4711-28-406-023	091817, East West Cro	223.00	VILLAS OF OAK POINTE ASSOC. 1100 VICTORS WAY STE 50
4711-28-406-024	091817, East West Cro	223.00	VILLAS OF OAK POINTE ASSOC. 1100 VICTORS WAY STE 50
4711-28-406-025	091817, East West Cro	223.00	VILLAS OF OAK POINTE ASSOC. 1100 VICTORS WAY STE 50
4711-28-406-026	091817, East West Cro	223.00	VILLAS OF OAK POINTE ASSOC. 1100 VICTORS WAY STE 50
4711-28-406-027	091817, East West Cro	223.00	DIXON FAMILY AGREEMENT OF TRUST 4085 ST. ANDREWS
4711-28-406-028	091817, East West Cro	223.00	WELTON MARY JANE 4668 HUNTINGTON DR
4711-28-406-029	091817, East West Cro	223.00	NICHOLSON JEFFREY J & KAREN W 3673 HONORS WAY
4711-28-406-030	091817, East West Cro	223.00	DINGMAN JACQUELINE 8130 SOUTHSORE DR
4711-28-406-031	091817, East West Cro	223.00	VERESPUT FAMILY TURST 4436 GULF VIEW DRIVE
4711-28-406-032	091817, East West Cro	223.00	MCCARTHY DENNIS & FEDERICO AMY 4633 OAK POINTE DR
4711-28-406-033	091817, East West Cro	223.00	CIOLEK TRUST 4233 AUGUSTA CT
4711-28-406-034	091817, East West Cro	223.00	KARN SHAUN 3923 HONORS BLUFF
4711-28-406-035	091817, East West Cro	223.00	FINGERLE MARK M & TRACY LEE 3771 HONORS WAY
4711-28-406-036	091817, East West Cro	223.00	WILKINS TRUST 4404 BRAEBURN CT
4711-28-406-037	091817, East West Cro	223.00	WALKER TODD & LYNDA 4811 CROOKED STICK
4711-28-406-038	091817, East West Cro	223.00	THIELS JOERG & THIELS MAUD 4131 ST ANDREWS
4711-28-406-039	091817, East West Cro	223.00	ANDERSON RONALD G & LISA A TRUST 42352 CRESTVIEW CIRCLE
4711-28-406-040	091817, East West Cro	223.00	MARTIN THOMAS & JUDY 4748 PINE EAGLES DR
4711-28-406-041	091817, East West Cro	223.00	KOWALENKO TERRY & JUDITH 4619 OAK POINTE DR.
4711-28-406-042	091817, East West Cro	223.00	MORGAN FREDERICK & MARYANNE 4628 HUNTINGTON DR.
4711-28-406-043	091817, East West Cro	223.00	GILDERSLEEVE CAROLE & FENTON JOY 4508 GOLF VIEW DRIVE
4711-28-406-044	091817, East West Cro	223.00	PECK, DAVID W. 4227 ST ANDREWS

Population: Special Assessment District (091817)

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-28-406-045	091817, East West Cro	223.00	MAGNUS, ROBERT & NANCY 4435 OAK POINTE DR
4711-28-406-046	091817, East West Cro	223.00	WITTBRODT MATTHEW 4688 MC DONALD CT
4711-28-406-047	091817, East West Cro	223.00	HARMON FAMILY TRUST 4433 GOLF VIEW DR.
4711-28-406-048	091817, East West Cro	223.00	MC LEAN JANNIFER 4683 ROUNDTREE
4711-28-406-049	091817, East West Cro	223.00	FOSSUM MICHAEL & NICOLE 4420 BRAEBURN CT.
4711-28-406-050	091817, East West Cro	223.00	GOLDSWORTHY, LINDA D. 4519 GOLF VIEW CT.
4711-28-406-051	091817, East West Cro	223.00	GILDERSLEEVE CAROLE J. TRUST 4508 GOLF VIEW
4711-28-406-052	091817, East West Cro	223.00	EDWARDS, J.A. JR. & CORINNE 4545 OAK POINTE
4711-28-406-053	091817, East West Cro	223.00	JOSEPH, JERROLD & JANET 4000 BROADMOOR CT
4711-28-406-054	091817, East West Cro	223.00	JOSEPH JERROLD & JANET 4000 BROADMOOR CT.
4711-28-406-055	091817, East West Cro	223.00	GUMINIK RONALD & ANNE 4725 HUNTINGTON DR
4711-28-406-056	091817, East West Cro	223.00	MILLER JEANETTE 4355 OAK POINTE DR.
4711-28-406-057	091817, East West Cro	223.00	GREENWOLD MATTHEW 4780 CROOKED STICK CT
4711-28-406-058	091817, East West Cro	223.00	SEMENOK KYLE W & WAYNE A 4774 PINE EAGLES DR
4711-28-406-059	091817, East West Cro	223.00	MUHN CRAIG W & TERI E 4388 BRAEBURN COURT
4711-28-406-060	091817, East West Cro	223.00	WARPINSKI MATT 3863 HONORS WAY
4711-28-406-061	091817, East West Cro	223.00	HILL THOMAS & PATRICIA 4736 HUNTINGTON DR
4711-28-406-062	091817, East West Cro	223.00	MASON DARRELL W & DANA D 4073 BROADMOOR
# OF PARCELS: 450	TOTALS:	100,350.00	

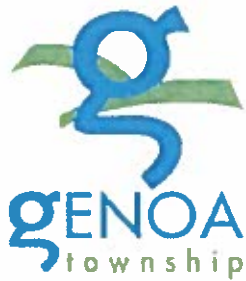
East and West Crooked Lake Aquatic Weed Control Proposed SAD



Legend

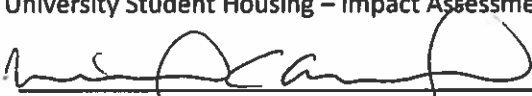
-  Lake
-  SAD Parcels 3-22-11





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

MEMORANDUM

TO: Honorable Board of Trustees
FROM: Kelly VanMarter, Assistant Township Manager/Community Development Director
DATE: October 12, 2017
RE: Cleary University Student Housing – Impact Assessment & Site Plan Approval
MANAGER’S REVIEW: 

Attached please find the project file for the proposed 123 bed student housing building located on the campus of Cleary University at 3750 Cleary Drive. The property is located within the Cleary University Planned Unit Development (PUD) on parcel #11-05-400-068. The request is petitioned by University Housing Solutions and Cleary University.

Procedurally, projects within a PUD require the Planning Commission to make a recommendation to the Township Board for both the site plan and the Environmental Impact Assessment. The proposed building will be the second student housing building on campus and is designed to match the first building.

At the October 10, 2017 meeting the Planning Commission recommended approval of the Site Plan and Impact Assessment. A revised Site Plan and Impact Assessment were received from the applicant on October 11, 2017 which incorporated the Planning Commission comments. Based on the action of the Planning Commission and in response to the revised materials I suggest Board consideration of the following action:

Moved by _____, Supported by _____ to approval the Environmental Impact Assessment dated October 11, 2017 as submitted.

Moved by _____, Supported by _____ to approve the Site Plan dated October 11, 2017 with the following conditions:

1. The requirements outlined in the Brighton Area Fire Authority’s letter of September 28, 2017 shall be met.

SUPERVISOR

Bill Rogers

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

TRUSTEES

Jean W. Ledford
H. James Mortensen
Terry Croft
Diana Lowe

MANAGER

Michael C. Archinal

2. The applicant shall work with the MHOG Authority regarding construction plan review and permits for the proposed water main.
3. A water main easement shall be provided prior to the issuance of a Certificate of Occupancy.

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

Sincerely,

OPEN PUBLIC HEARING #2... Review of a site plan application, environmental impact assessment and site plan for proposed 123-bed student housing apartment building located on the south side of Grand River Avenue and the east side of Grand Oaks Drive, at 38750 Cleary Drive, Howell. The property is located in the Cleary University Planned Unit Development. The request is petitioned by Cleary University.

Planning Commission Recommendation of Petition:

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

Commissioner Grajek stated that his daughter works indirectly for Cleary University. She is an athletic trainer for a vendor contracted by the university. He does not have a fiduciary interest in Cleary University.

Brent LaVanway of Boss Engineering; Dave Howard, the Facility Director for Cleary University; and Alan Price of University Housing Solutions were present.

Mr. LaVanway stated they would like approval to put in the Student Housing Building #2. They received approval for the first housing building a few years ago and they are in need of a second one. It will include a parking lot and a loop road, which will meet the Fire Department's requirement for access. They will be extending the water main loop for fire suppression purposes. It is in compliance with the Cleary University PUD Agreement. They are in concurrence with the recommendations of the consultants.

Mr. Price presented building samples. They will be using the same materials as the existing building. The footprint is a mirror image of Building #1. It will have double-occupancy units sharing one common area, a bathroom, and a kitchen. Building #1 has 86 beds and this building will have 123 beds.

Ms. VanMarter reviewed Mr. Borden's letter dated October 5, 2017.

This building, similar to the last building, exceeds the maximum allowed for block and EFIS. They are recommending upgrades to the building materials or improvements to the landscape buffer. There are minor inconsistencies between the landscape plan and the plant list and these must be corrected.

Mr. Markstrom reviewed his letter of September 28, 2017. The applicant has addressed all of his previous concerns. He noted he is currently reviewing plans for an athletic field for Cleary University. Because of this, he would like to see a stormwater drainage master plan. The athletic field will have no effect on the plan being discussed this evening, but he would like to see it as part of the submittal for the athletic field.

Chairman Brown noted that that letter from the Brighton Area Fire Authority dated September 28, 2017 states the applicant has met all of the requirements from their last review letter.

Commissioner Figurski noted that throughout the Impact Assessment the number of beds is shown as 129 so it should be changed to 123. She would like the following

added to Item #C: "The Project is not anticipated to adversely impact the natural features".

Commissioner Rauch is concerned that the trees in the heavily wooded area that is being used for runoff are being negatively affected. Mr. LeVanway stated that the Drain Commissioner has noted that the water flowing into this area is gone within 48 hours after a typical storm. This is the natural flow of the water on this site. They are not anticipating adverse affects on the existing vegetation.

Commissioner Rickard asked if a wetland study was done on this site. Mr. LeVanway stated they have evaluated it and it is not regulated, and it is not contiguous to other wetlands.

Commissioner Rickard noted that there is no curbing shown on the parking lot. Mr. LeVanway stated they did not want to install the curb in the case they will be extending the parking and then it would have to be taken out. She would like to see it curbed. Commission Rauch agrees.

Call to the public was made at 8:52 pm with no response.

Moved by Figurski, seconded by Grajek, to recommend to the Township Board approval of the Environmental Impact Assessment for a 123-bed student housing apartment building petitioned by Cleary University with the following conditions:

- Page 3, Item C shall include "The Project is not anticipated to adversely impact the natural features".
- The total number of beds should state 123 and not 129.
- There shall be a maintenance scheduled and plan for the storm water pretreatment unit #CDS100.

The motion carried unanimously.

Moved by McManus, seconded by Rauch, to recommend to the Township Board approval of the Site Plan dated September 18, 2017 for a 123-bed student housing apartment building petitioned by Cleary University with the following conditions:

- The landscape requirements outlined in the LSL letter dated October 5, 2017 shall be met.
- The building materials are acceptable to the Planning Commission and are identical to that of Building #1, which was previously approved.
- Approval of the Impact Assessment by the Township Board.
- The applicant shall comply with the Brighton Area Fire Authority's letter dated September 28, 2017.
- The sample building materials shall become the property of the Township.
- Curbing shall be installed to the drive aisle of the parking lot.

The motion carried unanimously.



GENOA CHARTER TOWNSHIP
Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

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

OWNER'S NAME & ADDRESS: CLEARY UNIVERSITY, 3750 CLEARY DR, HOWELL, MI, 48843

SITE ADDRESS: 3750 CLEARY DRIVE, HOWELL, MI 48843 PARCEL #(s): 4711-05-400-062

APPLICANT PHONE: (800) 686-1883 OWNER PHONE: (800) 686-1883

OWNER EMAIL: jboyers@cleary.edu

LOCATION AND BRIEF DESCRIPTION OF SITE: CLEARY UNIVERSITY-LIVINGSTON CAMPUS IS LOCATED ON SOUTH SIDE OF GRAND RIVER IN HOWELL. SITE IS CURRENTLY USED FOR UNIVERSITY CLASSES AND STUDENT HOUSING.

BRIEF STATEMENT OF PROPOSED USE: PROPOSED STUDENT HOUSING BUILDING WITH 123 BEDS AT SOUTHEAST CORNER OF SITE. SOUTH OF CURRENT STUDENT HOUSING BUILDING.

THE FOLLOWING BUILDINGS ARE PROPOSED: PROPOSED 3-STORY, 123 BED STUDENT HOUSING BUILDING.

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: Jayson M. Boyers

ADDRESS: 3750 Cleary Dr, Howell MI 48843

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

1.) BRENT LAVANWAY, PE of BOSS ENGINEERING at brentl@bosseng.com
 Name Business Affiliation E-mail Address

FEE EXCEEDANCE AGREEMENT

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

SIGNATURE: [Signature] DATE: 8-29-17
 PRINT NAME: Jayson Rogers President PHONE: 800-686-1883 x1011
 ADDRESS: 3750 Cleary Dr Howell NJ 08843

October 5, 2017

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Planning Director and Assistant Township Manager
Subject:	Cleary University student housing – PUD Site Plan Review #2
Location:	3750 Cleary Drive – south side of Grand River, between Grand Oaks and Latson Road
Zoning:	MUPUD Mixed Use Planned Unit Development

Dear Commissioners:

At the Township’s request, we have reviewed the revised PUD site plan (dated 9/18/17) proposing a new student housing apartment building for Cleary University.

The 29.6-acre site is currently developed with Cleary’s Livingston Campus, which was approved as a MUPUD in 2015. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance and the PUD Agreement for this property.

A. Summary

1. The proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission.
2. The proposed building materials do not comply with the standards of Section 12.01.03.
3. In accordance with the decision to approve the first student housing building, we recommend the applicant be required to either:
 - a) Utilize building materials that comply with Section 12.01.03; or
 - b) Increase the landscape screening buffer for the property to the south.
4. There are minor inconsistencies between the landscape plan and plant list that must be corrected.

B. Proposal/Process

The applicant requests site plan review/approval for a new student housing apartment building. The 3-story building has a footprint of 12,786 square feet and will provide for 129 beds. The project is the second such building to be constructed on campus and mirrors the first building in the southeast corner of the site.

Exhibit C of the PUD Agreement lists “dormitories or student apartments accessory to a college” as a permitted use within this MUPUD.

Procedurally, the Planning Commission is to make a recommendation to the Township Board. The Township Board has the final review/approval authority over the proposal.



Aerial view of site and surroundings (looking north)

C. Site Plan Review

1. **Dimensional Requirements.** The dimensions provided on the proposed site plan are consistent with both the approved PUD concept plan and PUD Agreement, including setbacks, building height and lot coverage ratios.
2. **Building Materials and Design.** The proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission. The revised submittal includes a color rendering of the building for the Commission’s consideration. The applicant should also be prepared to present a material sample board to the Commission at their upcoming meeting.

The revised building elevation drawings note the use of split face block veneer (72.7% of entire building) and EIFS (27.3%). Based on the total building coverage, the amount of both split face block and EIFS exceed the maximum percentage allowed by Section 12.01.03 (25% each).

Section 12.01.04 gives the Planning Commission discretion to allow the building materials as proposed based on the character of the surrounding area. In this instance, the materials match those used on the first student housing apartment building.

With that being said, the Planning Commission’s meeting minutes from approval of the first building state that “in the event the second building is brought forward, the applicant should be aware that higher level building materials may be required and/or additional screening for the property to the south may be required.”

We recommend the applicant either utilize higher quality materials (brick and stone) per the Ordinance or add significant landscape screening to the landscape plan south of the building.

3. **Parking.** Section 14.04 requires 65 parking spaces for the proposed student housing apartment building, while 68 are provided. This includes the 3 required barrier-free spaces.

Additionally, the design and dimensions of parking spaces and drive aisles meet or exceed the dimensional requirements of the Zoning Ordinance.

4. **Pedestrian Circulation.** The site plan includes sidewalks around the proposed building and along the parking lot with connections to existing walkways.
5. **Vehicular Circulation.** The project includes a driveway extension that will connect the southeast corner of the property to Cleary Drive, providing a full vehicular loop around this portion of campus.
6. **Landscaping.** The landscape plan (Sheet 8) includes plantings within the parking lot, as well as around the building and within the courtyard created by the two buildings. The plan includes 18 deciduous trees, 5 evergreen trees, 64 coniferous shrubs, 202 deciduous shrubs and a mix of perennials and ornamental grasses.

Our only comments are tied to minor inconsistencies between the landscape plan and plant list, which must be corrected. Specifically, the quantities do not match for the Redosier Dogwood (CS), Koreanspice Viburnum (VC), Densiform Spreading Yew (TM), Knock Out Sunny Shrubs Rose (RKO), Miss Kim Lilac (SP), Blue Mammoth Hosta (HBM) and Pardon Me Daylily (HPM).

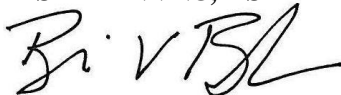
7. **Waste Receptacle and Enclosure.** The first student housing apartment building included a compliant waste receptacle and enclosure area. This area was designed to accommodate both the existing and proposed student housing buildings.
8. **Exterior Lighting.** The lighting plan (Sheet 9) proposes 7 light poles throughout the parking lot, as well as 4 wall mounted fixtures at building entrances.

The light poles have a maximum height of 22 feet, the maximum on-site intensity is 9.7 foot-candles and the proposed fixtures are downward directed and cut-off, all of which comply with Ordinance standards.

9. **Impact Assessment.** The submittal includes a revised Impact Assessment (dated 9/18/17). In summary, the Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

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

Respectfully,
LSL PLANNING, A SAFE BUILT COMPANY



Brian V. Borden, AICP
Planning Manager

September 28, 2017

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

Re: Clearly Student Housing Phase 2 Site Plan Review #2

Dear Ms. Van Marter:

Tetra Tech conducted a site plan review of the revised Cleary Student Housing Phase 2 plans submitted by Boss Engineering. The plans are dated September 18, 2017, and the applicant is proposing a 3-story, 123 bed student housing building on the existing Cleary University Property.

Tetra Tech's initial review resulted in one comment pertaining to the stormwater drainage course downstream of the proposed detention pond outlet. After review, Boss Engineering has rerouted the stormwater drainage to a different, well defined, drainage course adjacent to the property and within an established drainage easement. With this revision we have no engineering related objections to approval of the site plan.

Sincerely,

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

Marguerite K. Davenport
Project Engineer

copy: Brent LaVanway, P.E., Boss Engineering, Inc.



BRIGHTON AREA FIRE AUTHORITY

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

September 28, 2017

Kelly VanMarter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Cleary Residence Hall - Phase 2
3750 Cleary Drive
Genoa Twp., MI

Dear Kelly,

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on September 27, 2017 and the drawings are dated August 30, 2017 with latest revisions dated September 18, 2017. The project is based on a new proposed (R-2) student housing building that will accommodate 123 residents. The square footage is not listed with the submittal, however, the building will be three-stories in height. The plan review is based on the requirements of the International Fire Code (IFC) 2015 edition.

1. Include the new building address on future submittals. **(Noted to be included once assigned)**
2. The building shall be provided with an automatic sprinkler system in accordance with NFPA 13, *Standard for the Installation of Automatic Sprinkler Systems*, or 13R, *Standard for the Installation of Automatic Sprinkler Systems in Residential Occupancies Up to and Including Four-Stories in Height*. **(Noted as required to be installed)**

IFC 903

 - A. The proposed FDC location is sufficient as submitted, but will require coordination with the fire suppression contractor.
3. Future project submittals shall include the address and street name of the project in the title block. **(Current address noted, actual address will be included once assigned)**

IFC 105.4.2
4. The building address shall be a **minimum of 6"** high letters of contrasting colors and be clearly visible from the street. The location and size shall be verified prior to installation. **(Noted to be installed, location and size will be determined prior to final occupancy)**

IFC 505.1
5. The south-side of the structure must be provided with fire lane signage on both sides of the drive. **(Signage and detail are now shown on sheet 4)**
6. The location of a key box (Knox Box) shall be indicated on future submittals. The Knox box will be located adjacent to the main entrance door of the structure. **(Knox box is shown on sheet 4)**

IFC 506.1
7. During the construction process the building will be evaluated for approved emergency responder radio coverage. If coverage is found to be inadequate, the contractor building



September 28, 2017

Page 2

Cleary Residence Hall - Phase 2

3750 Cleary Dr.

Site Plan Review

owner will be required to provide an approved system in the building. **(Noted that the building will require evaluation during construction)**

IFC 510

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 'R. Boisvert'.

Rick Boisvert
Fire Marshal

**IMPACT ASSESSMENT
FOR
“CLEARY UNIVERSITY STUDENT HOUSING APARTMENT #2”
GENOA TOWNSHIP
LIVINGSTON COUNTY, MI**

Prepared for:

**UNIVERSITY HOUSING SOLUTIONS, LLC
c/o Mr. Alan Price
90 Hidden Ravines Drive
Powell, OH 43065**

Prepared by:

**BOSS ENGINEERING COMPANY
3121 E. GRAND RIVER
HOWELL, MICHIGAN 48843
517-546-4836
BE Project No. 17-348**

August 30, 2017
Revised 9-18-2017
Revised 10-11-2017

INTRODUCTION

The purpose of this Impact Assessment (IA) report is to show the effect that this proposed development has on various factors in the general vicinity of the project. The format used for presentation of this report conforms to the *Submittal Requirements For Impact Assessment/Impact Statement* guidelines in accordance with Section 13.05 of the published Zoning Ordinance for Genoa Township, Livingston County, Michigan.

DISCUSSION ITEMS

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

Prepared By :
BOSS ENGINEERING COMPANY
3121 E. Grand River
Howell, Michigan 48843
Phone: 517-546-4836

Prepared For:
Mr. Alan Price
University Housing Solutions, LLC
90 Hidden Ravines Drive
Powell, OH 43065

B. Description of the site, including existing structures, man made facilities, and natural features, all-inclusive to within 10' of the property boundary.

The subject site is located on the south side of Grand River Avenue, southeast of Cleary Drive and east of Grand Oaks Drive. The site improvement is located ON property owned by Cleary University. The acreage of the property affected is 29.60 acres. The property is located in the Northwest ¼ of Section 5, T2N-R5E, Genoa Township, Livingston County, Michigan. Current zoning of the site is MUPUD (Mixed Use Planned Unit Development).

The site is gently rolling with areas of steeper slopes and generally slopes from the Southeast to Northwest. Elevations vary between 1010.0± and 999.0±, respectively. Storm water management for the site includes storm sewer into an existing detention pond that was constructed as a part of the first student housing apartment. From the detention basin, the storm water is discharged at a controlled rate per Livingston County Drain Commissioner standards into an existing storm sewer that discharges to the wooded area in the southwest quadrant of the site.

Existing on-site utilities include overhead wires, a gravity sanitary sewer system, gas and electric services. An 8" watermain was stubbed at the southern end of the first student housing apartment for future connection.

An existing student housing building has been constructed in 2015/2016 and sits just north of the proposed second student housing building.

Adjacent properties include:

- South – GenTech Industrial Park (zoned IND)
- North – Belle Tire, Aco Hardware, Wendy's, McDonalds, KFC (zoned RCD)
- East – Walmart (zoned NRPUD)
- West – Industrial Buildings (zoned IND)

C. Impact on natural features: A written description of the environmental characteristics of the site prior to development, i.e., topography, soils, vegetative cover, drainage, streams, creeks or ponds.

As previously mentioned, subject site is gently rolling with areas of steeper slopes and generally slopes from the Southeast to the Northwest. Site elevations vary between 1010.0± and 999.0±. The USDA Soil Conservation Service "Soil Survey of Livingston County, Michigan", indicates native site soils consist of:

1. MIAMI LOAM (MoB), 2% to 6% slopes. Surface runoff is slow, permeability is moderate, and erosion hazard is slight.
2. MIAMI LOAM (MoE), 18% to 25% slopes. Surface runoff is rapid, permeability is moderate, and erosion hazard is severe.

Vegetative cover for the site includes lawn, low brush cover, and moderate canopy cover with a mixture of evergreen and deciduous trees. The project is not anticipated to adversely impact the site's natural features.

The National Wetland Inventory Plan prepared by the United States Department of the Interior, Fish and Wildlife Service indicates that there are no wetlands located on the site.

Site drainage from the proposed site will utilize both swales and storm sewer. The existing detention basin that was constructed as a part of the first student housing apartment project will be filled and a new basin constructed in the southwest quadrant of the site. The outlet of the proposed detention basin will release storm water at a controlled rate and discharge into the natural drainage course at the southwest corner of the subject property.

D. Impact on storm water management: description of soil erosion control measures during construction.

Surface runoff during periods of construction will be controlled by proper methods set forth by the Livingston County Drain Commissioner. These methods shall include silt fence, silt sacks, and seeding with mulch and/or matting.

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

E. Impact on surrounding land use: Description of proposed usage and other man-made facilities; how it conforms to existing and potential development patterns. Effects of added lighting, noise or air pollution which could negatively impact adjacent properties.

The applicant is proposing to construct a new 123 bed student housing apartment and parking lot. The property on which site development is located is MUPUD (Mixed Use Planned Unit Development). The proposed building conforms to the existing and potential land development patterns in the area.

Proposed improvements will enhance current site conditions. The proposed project will have an access drive that finishes a loop for much improved site circulation as well as improved circulation of emergency vehicles. Additionally, the watermain is proposed to follow said access drive and connect to an existing watermain thereby completing a watermain loop. Loops in watermain enhance water circulation and reliability. There is a significant amount of trees/brush south of the existing parking lot that will need to be cleared. There are no significant natural features on site. Site improvements planned with the residence hall and parking lot, include the establishment of an open lawn space and landscaped areas. The landscaping meets the Genoa Township standards.

The layout was prepared taking into account the topography in order to balance the amount of earthwork required for proposed use. Site drainage will be controlled via swales and storm sewers

and will be restricted to Livingston County Drain Commission standard outlet rates. The proposed basin will accommodate the site improvements from the first student housing apartment as well as this new development as the previous detention basin is to be filled and a new one constructed. The storm water management plan utilizes the existing topographical features of the site by constructing a berm on the down gradient portion of a large natural drainage swale to create storm water storage. This method will allow nearly all trees to remain in the footprint of the basin other than those required for removal for the construction of said berm. The final outlet of the site storm water is a county drain.

Cleary Drive presently experiences a medium volume of traffic along with associated noise level generated from commercial vehicles. It is anticipated the proposed student housing apartment will cause no significant increase in traffic volume. The proposed residence hall is expected to accommodate some of the growth of the student enrollment as well as some of the existing students whom commute. The classrooms and other university facilities are centrally located and within close proximity which will reduce the use of vehicles by the residences.

Additional lighting is proposed on site and is to be directed away from adjacent properties to limit adverse affects of lighting. Existing and proposed landscaping along the property boundary will help serve as a visual buffer and as a noise buffer. Additional noise created by the residence will be minimal and due to the nature of the adjacent properties, rear of Walmart building to the east and Industrial facilities to the south, there will be no impact. There will be no increase in the amount of odor emanating from the site.

F. Impact on public facilities and services: Description of number of residents, employees, patrons, and impact on general services, i.e., schools, police, fire.

The student housing apartment is proposed to consist of 123 beds. This is an immediate increase of the number of people on site, other than typical university class hours. Normal police and fire protection services are anticipated.

G. Impact on public utilities: Description of public utilities serving the project, i.e., water, sanitary sewer, and storm drainage system. Expected flows projected in residential units.

There are new water and storm sewer drainage services proposed for the student housing apartment. A storm water system is proposed throughout the proposed parking lot and release into a proposed basin to the west of the student housing apartment. Watermain is proposed to connect to a stub that was constructed as a part of the first student housing building and travel westerly and then northerly where it will connect to an existing 16" watermain. An alternative for watermain looping exists by connection the watermain to the existing watermain on the adjacent Wal-Mart property to the east. The adjacent property owner would not allow an easement for connection previously. There is an existing gravity sanitary sewer system that was constructed as a part of the first student housing project. A lead for the proposed building has been installed and must only be extended to the proposed building.

The proposed project will utilize a mechanical pretreatment structure as a method of storm water treatment prior to release into the detention basin. The mechanical pretreatment structure shall be inspected semi-annually(every 6 months) for accumulated sediment and debris in its chamber. The structure should be cleaned out on an as needed basis determined by the semi-annual maintenance schedule inspections.

H. Storage or handling of any hazardous materials: Description of any hazardous materials used, stored, or disposed of on-site.

Cleary University will not be storing or handling any hazardous materials in this building.

I. Impact on traffic and pedestrians: Description of traffic volumes to be generated and their seffect on the area.

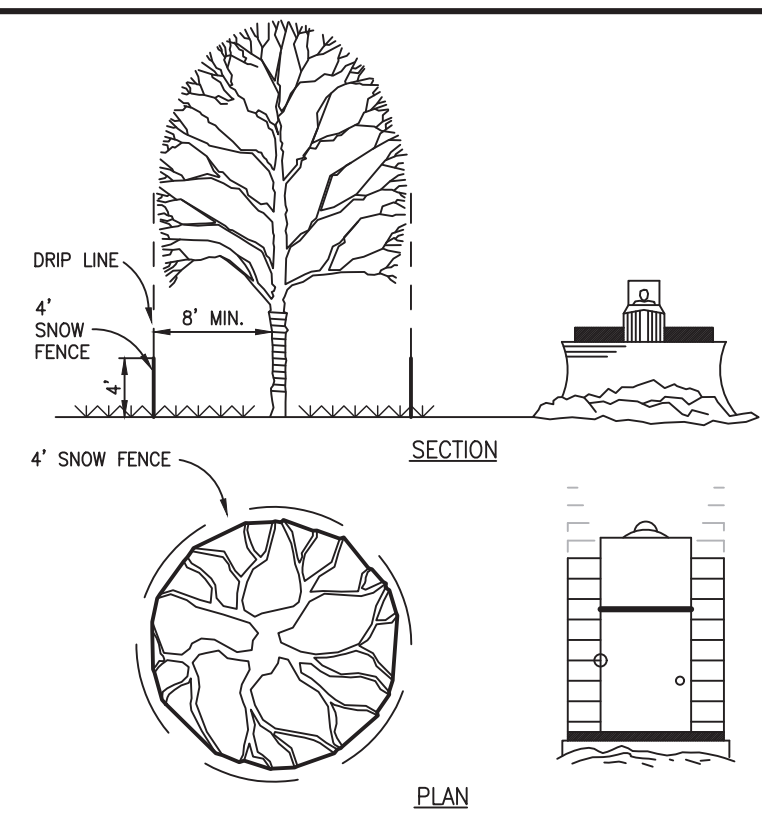
The proposed student housing apartment will house students who currently live in apartment complexes in the surrounding community. The proposed student housing apartment will be dedicated to housing these local commuter students first. This will reduce the trips generated to and from campus. Based on the Institute of Transportation Engineers, Trip Generation 6th edition, an average student on weekdays generates 2.38 trip ends. The housing apartments are proposed to have 123 beds therefore creating a site reduction of 293 trips (123 students x 2.38 trips/student). The reduction will be on Grand River Avenue. Students will have pedestrian access to Wal-Mart and nearby restaurants. Site circulation will be improved due to the connection of the proposed parking lot to the Cleary Drive intersection that is central to the site.

J. Special provisions: Deed restrictions, protective covenants, etc.

There are no special provisions for this development.

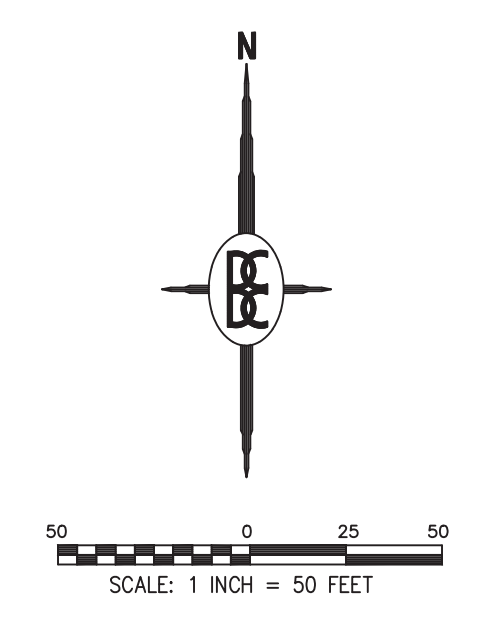
K. Description of all sources:

- Genoa Township Zoning Ordinance
- "Soil Survey of Livingston County, Michigan" Soil Conservation Services, U.S.D.A.
- National Wetlands Inventory, U.S. Department of Interior, Fish and Wildlife Service
- Cleary University Topographic Surveys (BE #04148 - April 2004) (BE #14-175 – July 2014)
- ITE, Trip Generation Manual, 6th edition



SOILS INFORMATION:
 MIAMI LOAM (MoB), 2% TO 6% SLOPES
 -ACCOUNTS FOR MOST OF SITE
 MIAMI LOAM (MoE), 18% TO 25% SLOPES
 -SLOPES LEADING TO STORM PIPE
 FLOWING UNDER BUILDING

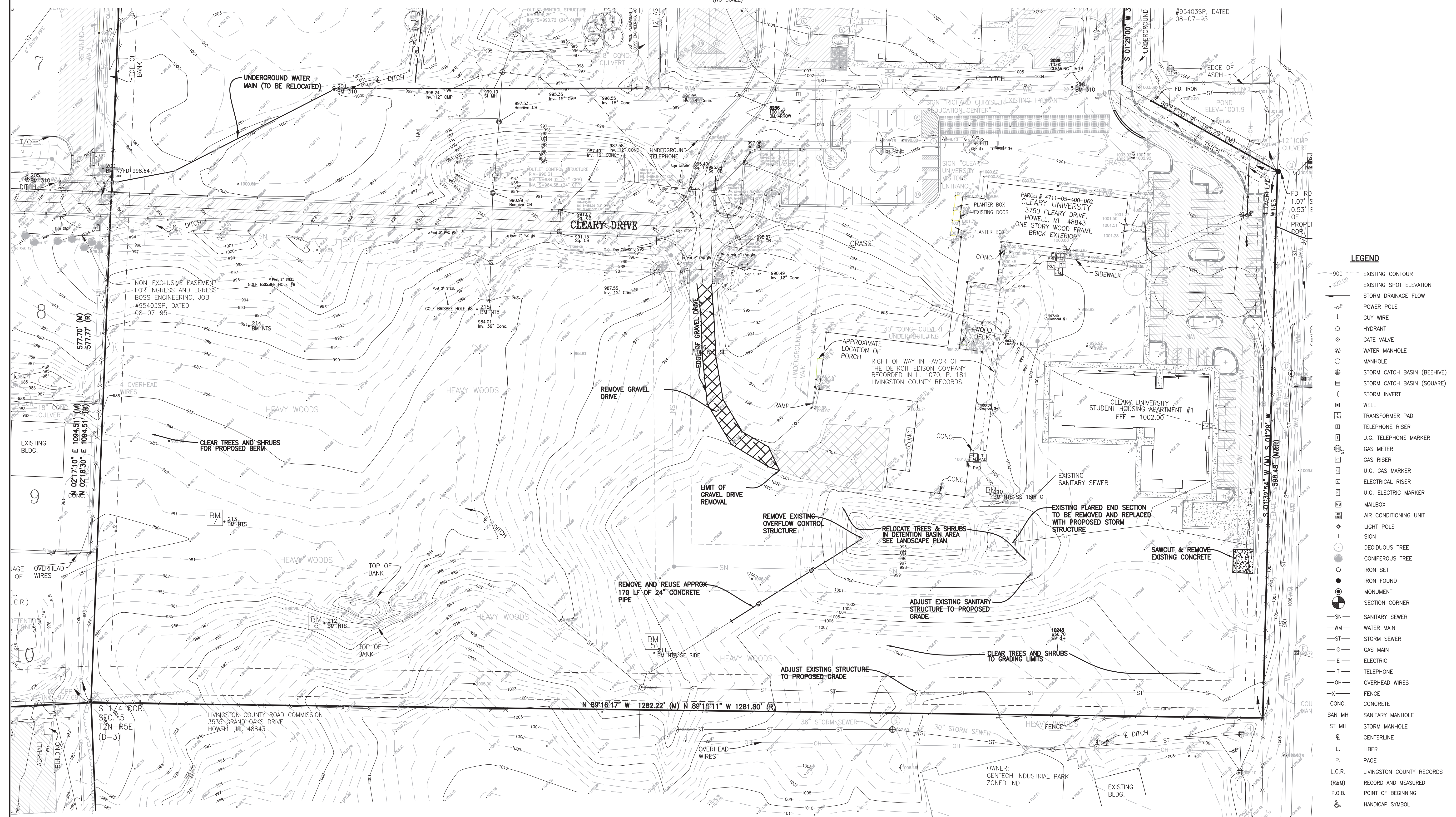
- GENERAL SURVEY NOTES:**
1. BEARINGS WERE ESTABLISHED FROM A PREVIOUS SURVEY BY BOSS ENGINEERING, JOB NO. 04148, DATED 4-23-04.
 2. SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
 3. EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
 4. ELEVATIONS WERE ESTABLISHED RELATIVE TO BENCHMARK INFORMATION AS SHOWN ON PREVIOUS SURVEYS BY BOSS ENGINEERING, JOB NO. 04148, DATED 4-23-04 & JOB NO. 04141-1, DATED 4-5-04. (NGVD29 DATUM)
 5. CONTOURS ARE SHOWN AT 1 FOOT INTERVALS.
 6. ALL ELEVATIONS ARE SHOWN TO THE NEAREST 0.01 FOOT; HOWEVER SOFT-SURFACE ELEVATIONS CAN ONLY BE PRESUMED ACCURATE TO THE NEAREST 0.1 FOOT.
 7. ALL WORK SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, THE COUNTY, AND THE STATE OF MICHIGAN.
 8. ALLOW THREE WORKING DAYS BEFORE YOU DIG, CALL MISS DIG TOLL FREE 1-800-482-7171.



- BENCHMARKS**
- BM 1 SET NAIL/TAG IN S/S 18" OAK ±30' EAST OF SE CORNER MAIN BLDG. ELEV.: 1003.19
 - BM 5 SET NAIL/TAG IN S/S 12" OAK IN NORTH LINE OF EASEMENT ±50' EAST OF ROCK DITCH. ELEV.: 999.18
 - BM 6 SET NAIL/TAG IN SW/S 9" POPLAR ±30' NORTH OF EASEMENT ±250' EAST OF PROPERTY LINE. ELEV.: 987.19
 - BM 7 SET NAIL/TAG IN NW/S 8" PINE ON LINE FROM 24-25. ELEV.: 980.39

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OF THESE UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE FOUND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND EASEMENTS IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

MISS DIG
 1-800-482-7171
 BEFORE YOU DIG
 CALL MISS DIG



- LEGEND**
- 900 - EXISTING CONTOUR
 - 922.00 - EXISTING SPOT ELEVATION
 - P- - STORM DRAINAGE FLOW
 - P— - POWER POLE
 - G— - GUY WIRE
 - H— - HYDRANT
 - V— - GATE VALVE
 - M— - WATER MANHOLE
 - O— - MANHOLE
 - B— - STORM CATCH BASIN (BEEHIVE)
 - S— - STORM CATCH BASIN (SQUARE)
 - I— - STORM INVERT
 - W— - WELL
 - T— - TRANSFORMER PAD
 - R— - TELEPHONE RISER
 - U— - U.G. TELEPHONE MARKER
 - G— - GAS METER
 - R— - GAS RISER
 - U— - U.G. GAS MARKER
 - E— - ELECTRICAL RISER
 - U— - U.G. ELECTRIC MARKER
 - M— - MAILBOX
 - A— - AIR CONDITIONING UNIT
 - L— - LIGHT POLE
 - S— - SIGN
 - D— - DECIDUOUS TREE
 - C— - CONIFEROUS TREE
 - S— - IRON SET
 - O— - IRON FOUND
 - M— - MONUMENT
 - C— - SECTION CORNER
 - SN— - SANITARY SEWER
 - WM— - WATER MAIN
 - ST— - STORM SEWER
 - C— - GAS MAIN
 - E— - ELECTRIC
 - T— - TELEPHONE
 - OH— - OVERHEAD WIRES
 - X— - FENCE
 - CONC— - CONCRETE
 - SAN MH— - SANITARY MANHOLE
 - ST MH— - STORM MANHOLE
 - C— - CENTERLINE
 - L— - LIBER
 - P— - PAGE
 - L.C.R.— - LIVINGSTON COUNTY RECORDS
 - (R&M)— - RECORD AND MEASURED
 - P.O.B.— - POINT OF BEGINNING
 - H— - HANDICAP SYMBOL

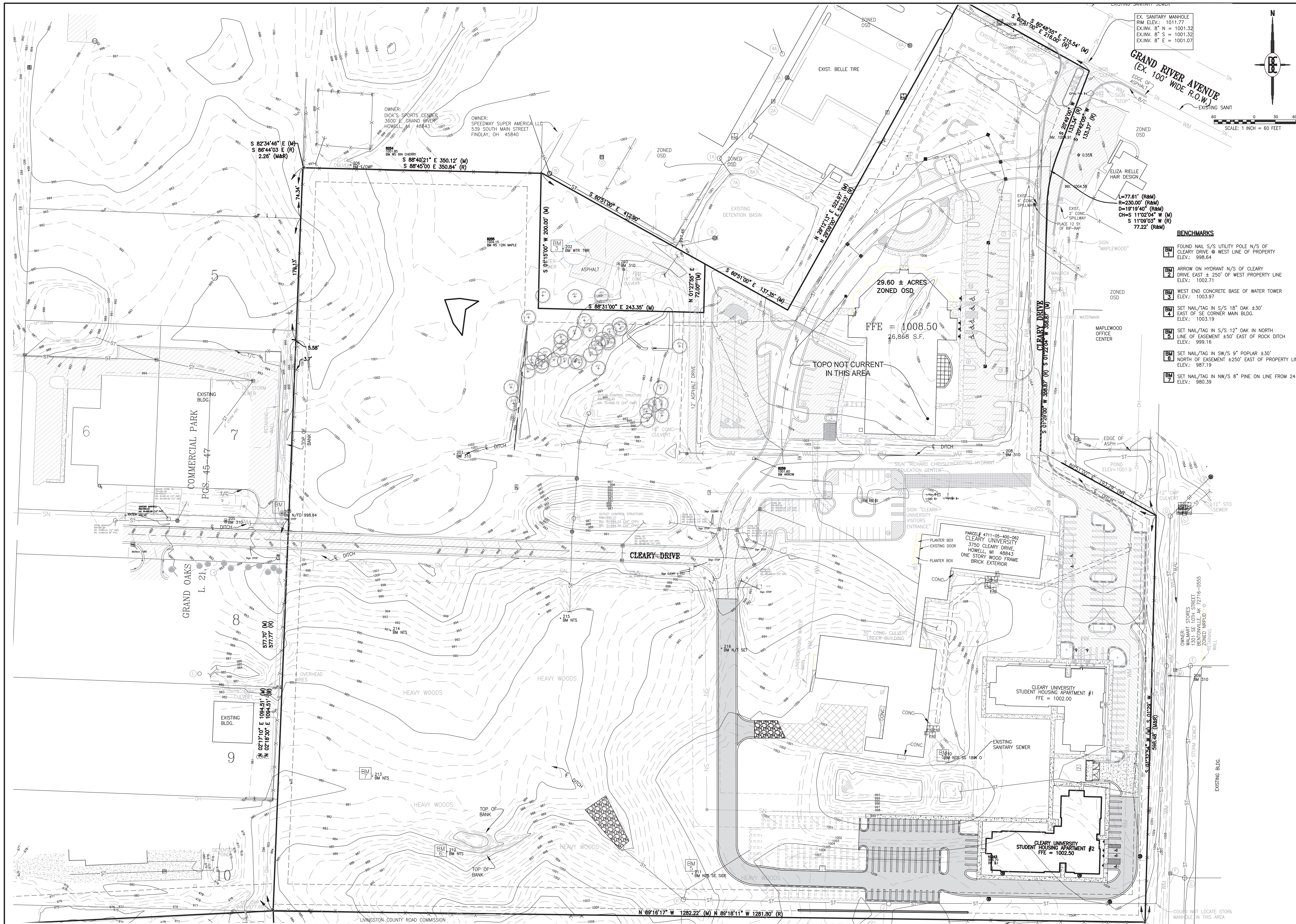
BOSS Engineering
 Planners Landscape Architects
 Engineers Surveyors
 3121 E. GRAND RIVER AVE.
 HOWELL, MI. 48843
 800.246.6735 FAX 517.548.1670

PROJECT
 CLEAR UNIVERSITY STUDENT HOUSING APARTMENT #2
UNIVERSITY HOUSING SOLUTIONS, LLC
 90 HIDDEN RAVINES DRIVE
 POWELL, OH 43065
 (666) 711-7786

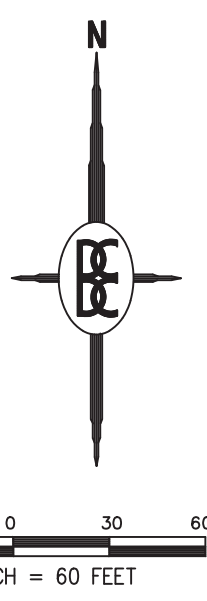
TITLE
 EXISTING CONDITIONS & DEMOLITION PLAN

NO	BY	DATE
1	ST	10-11-17
2	ST	9-18-17

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY:
 SCALE: 1" = 50'
 JOB NO. 17-348
 DATE 8/30/17
 SHEET NO. 2



EX. SANITARY MANHOLE
RIM ELEV.: 1011.77
EX. INV. 8" N = 1001.32
EX. INV. 8" S = 1001.32
EX. INV. 8" E = 1001.07



BENCHMARKS

- BM 1** FOUND NAIL S/S UTILITY POLE N/S OF CLEARY DRIVE @ WEST LINE OF PROPERTY ELEV.: 998.64
- BM 2** ARROW ON HYDRANT N/S OF CLEARY DRIVE EAST ± 250' OF WEST PROPERTY LINE ELEV.: 1002.71
- BM 3** WEST END CONCRETE BASE OF WATER TOWER ELEV.: 1003.97
- BM 4** SET NAIL/TAG IN S/S 18" OAK ± 30' EAST OF SE CORNER MAIN BLDG. ELEV.: 1003.19
- BM 5** SET NAIL/TAG IN S/S 12" OAK IN NORTH LINE OF EASEMENT ± 50' EAST OF ROCK DITCH ELEV.: 999.16
- BM 6** SET NAIL/TAG IN SW/S 9" POPLAR ± 30' NORTH OF EASEMENT ± 250' EAST OF PROPERTY LINE ELEV.: 987.19
- BM 7** SET NAIL/TAG IN NW/S 8" PINE ON LINE FROM 24" CLEARY DRIVE ± 250' EAST OF PROPERTY LINE ELEV.: 980.39

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE UTILITIES. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE FOUND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE FOUND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE FOUND.

DEBOSS Engineering
Engineers Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
800.246.6735 FAX 517.548.1670

PROJECT CLEARY UNIVERSITY STUDENT HOUSING APARTMENT #2
PREPARED FOR UNIVERSITY HOUSING SOLUTIONS, LLC
90 HIDDEN RAVINES DRIVE
POWELL, OH 43065
(866) 711-7786

TITLE OVERALL SITE PLAN

NO	BY	DATE
2	ST	10-11-17
1	ST	9-18-17

DESIGNED BY: ST
DRAWN BY: ST
CHECKED BY:
SCALE: 1" = 60'
JOB NO.: 17-348
DATE: 8/30/17
SHEET NO.: 3

PIPE	FROM	TO	DRAIN AREA	AREA IMPERV	AREA PERV	RUNOFF COEFF	EQUIV AREA A+C	INTEN-SITY	TIME OF CONC Tc	ADDF. RUNOFF Q	PIPE LENGTH (L)	PIPE DIA (IN)	VELOCITY FLOWING FULL (FPS)	HYDRAULIC GRADIENT SLOPE %	ACTUAL SLOPE USED	MANNING FLOW CAPACITY	MANNING VELOCITY (FT/SEC)	TIME (MIN)	HG ELEV UPPER END	HG ELEV LOWER END	RM ELEV UPPER END	RM ELEV LOWER END	INVERT UPPER END	INVERT LOWER END	RM-INV	RM-HG	PIPE COVER	FLOW THRU COVER
EXISTING	9	8	9	0.43	0.39	0.0397	0.84	0.3605	4.38	15.00	1.58	61	12	2.01	0.19%	0.32%	2.02	2.57	0.40	996.70	996.51	995.50	995.71	3.60	2.80	2.60	1.58	
EXISTING	8	7	8	0.41	0.28	0.1257	0.58	0.2768	4.33	15.40	1.57	4.35	55	18	2.46	0.17%	0.20%	4.71	2.67	0.34	996.51	996.40	995.50	995.20	4.19	2.99	2.69	1.20
EXISTING	7	6	7	0.19	0.00	0.1926	0.20	0.0395	4.30	15.74	4.51	108	18	2.55	0.18%	0.19%	4.71	2.67	0.18	996.40	996.18	995.80	995.20	3.60	2.40	2.10	0.17	
EXISTING	6	5	6	0.33	0.20	0.1339	0.62	0.2037	4.23	16.41	5.37	124	21	2.23	0.11%	0.16%	6.36	2.64	0.78	996.18	996.00	995.75	994.58	4.97	3.57	3.22	0.86	
EXISTING	5	4	5	-	-	-	-	-	4.15	17.20	1.33	6.70	111	21	2.79	0.18%	0.16%	6.36	2.64	0.70	996.00	995.81	1000.88	994.58	6.30	4.88	4.55	0.00
EXISTING	4	103	4	0.10	0.04	0.0575	0.19	0.0475	4.08	17.80	1.16	8.05	148	24	2.56	0.13%	0.14%	8.49	2.70	0.91	995.81	995.60	1000.50	994.21	6.29	4.69	4.29	0.19
PROPOSED	103	102	103	0.12	0.04	0.1231	0.22	0.2824	3.98	18.81	9.18	129	24	2.92	0.10%	0.60%	17.57	5.59	0.38	995.44	994.67	999.50	993.84	5.66	4.08	3.50	1.13	
PROPOSED	102	101	102	0.55	0.43	0.1124	0.76	0.4134	3.96	19.19	1.77	12.59	119	24	4.01	0.31%	1.00%	22.68	7.22	0.27	994.67	993.48	999.40	993.07	6.33	4.73	4.33	1.84
PROPOSED	101	100	101	0.49	0.43	0.0583	0.82	0.4026	3.94	19.47	14.17	108	24	4.51	0.39%	1.00%	22.68	7.22	0.25	993.48	992.40	999.40	991.88	7.52	5.92	5.52	1.58	
EXISTING	100	1	-	-	-	-	-	-	3.91	19.72	14.17	110	24	4.51	0.39%	1.00%	22.68	7.22	0.25	992.40	991.30	1001.50	990.80	10.70	9.10	8.70	0.00	
EXISTING	1	EX	-	-	-	-	-	-	3.89	19.97	14.17	14	24	4.51	0.39%	1.00%	22.68	7.22	0.03	991.30	991.16	996.50	989.70	6.80	5.20	4.80	0.00	
EXISTING	10	8	10	0.77	0.29	0.471	0.47	0.3592	4.38	15.00	1.57	140	12	2.00	0.19%	1.00%	3.57	4.55	0.51	997.91	996.51	1001.25	997.11	995.71	4.14	3.34	3.14	1.57
EXISTING	11	5	11	0.63	0.25	0.378	0.48	0.3036	4.38	15.00	1.33	61	12	1.69	0.14%	1.00%	3.57	4.55	0.22	996.59	995.98	999.75	995.79	3.96	3.16	2.96	1.33	
EXISTING	ROOF 1	4	ROOF 1	0.29	0.29	0	0.90	0.2942	4.38	15.00	1.16	166	8	3.31	0.91%	1.00%	1.21	3.47	0.80	997.19	995.60	1001.75	996.06	995.00	5.09	4.56	4.42	1.16
PROPOSED	ROOF 2	104	ROOF 2	0.29	0.29	0	0.90	0.2942	4.38	15.00	1.16	295	8	3.31	0.91%	1.75%	1.60	4.59	1.07	1000.90	995.74	1002.25	1000.37	995.21	1.88	1.35	1.21	1.16
PROPOSED	104	102	104	0.29	0.13	0.1613	0.51	0.1448	4.26	16.07	1.77	107	12	2.26	0.25%	1.00%	3.57	4.55	0.39	995.74	994.67	1000.00	994.94	993.87	5.06	4.26	4.06	0.82
PROPOSED	107	106	107	0.09	0.09	0	0.90	0.0808	4.38	15.00	0.35	30	18	0.20	0.00%	1.00%	10.53	5.96	0.08	992.80	992.50	997.06	991.60	991.30	6.06	4.86	4.56	0.35
PROPOSED	106	105	106	0.09	0.09	0	0.90	0.0808	4.37	15.08	0.71	80	18	0.40	0.00%	1.00%	10.53	5.96	0.22	992.50	991.70	997.06	991.30	990.50	6.36	5.16	4.86	0.35
PROPOSED	110	109	-	-	-	-	-	-	4.38	15.00	3.34	135	36	0.47	0.00%	1.00%	66.88	9.46	0.24	982.40	981.05	984.00	980.00	4.00	1.60	1.00	0.00	
PROPOSED	109	108	-	-	-	-	-	-	4.35	15.24	3.34	18	36	0.47	0.00%	1.00%	66.88	9.46	0.03	981.05	980.87	985.00	978.65	978.47	6.35	3.95	3.35	0.00

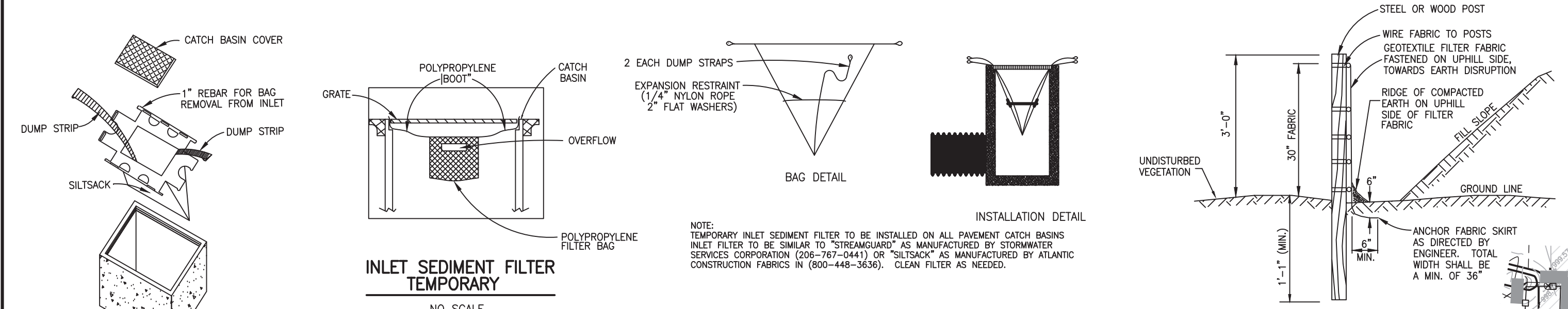
SOIL EROSION CONTROL MEASURES

1	STRIPPING & STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION STOCKPILE SHOULD BE TEMPORARILY SEEDED	34	SEDIMENT BASIN	TRAP'S SEDIMENT REDUCES RUNOFF AT NON-EROSIVE RATES CONTROLS RUNOFF AT SYSTEM OUTLETS CAN BE USED IN PAVED AREAS
6	SEEDING WITH WOOD MULCH OR MATING	FACILITATES ESTABLISHMENT OF "VEGETATIVE COVER" EFFECTIVE FOR DRAINAGES WITH LOW VELOCITY (EASILY PLACED IN SMALL QUANTITIES BY INEXPERIENCED PERSONNEL SHOULD INCLUDE ENHANCED TOPSOIL (10%)	35	GRAVEL SWALE	SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF CONDUITS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION USE CARE TO AVOID TO COLLECT SEDIMENT
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, THIS MINIMIZES EROSION REMOVS CONSTRUCTION TRUCKS & HEAVY MACHINERY MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS	36	DRY SWALE DRAIN PILE	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET
15	FENCING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES EROSION RISK	40	INLET SEDIMENT FILTER	EASY TO SWIVE COLLECTS SEDIMENT MAY BE CLEANED AND EXPANDED AS NEEDED
16	CURE & ENTER	KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE COLLECTS AND CONVEYS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGEWAY	54	INLET SEDIMENT FILTER	USES GEOTEXTILE FABRIC AND POST OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY. (SEE DETAIL THIS SHEET)

P=PERMANENT T=TEMPORARY
TOTAL DISTURBED AREA = 5.28 AC

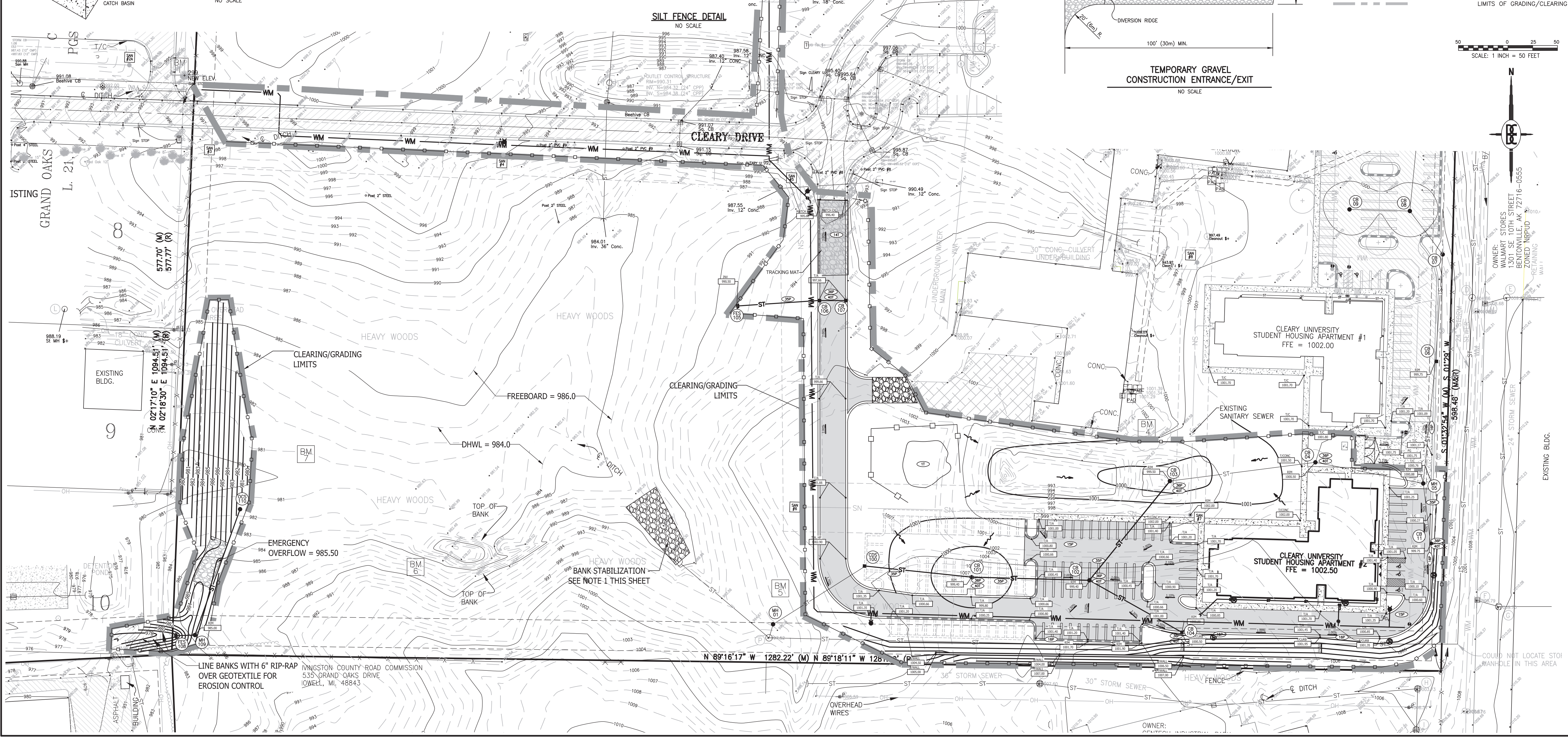
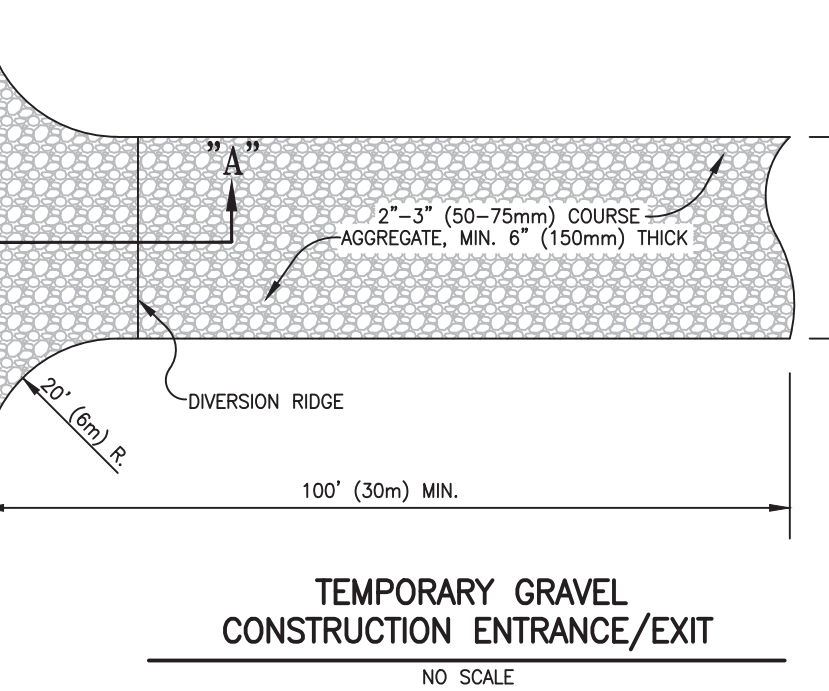
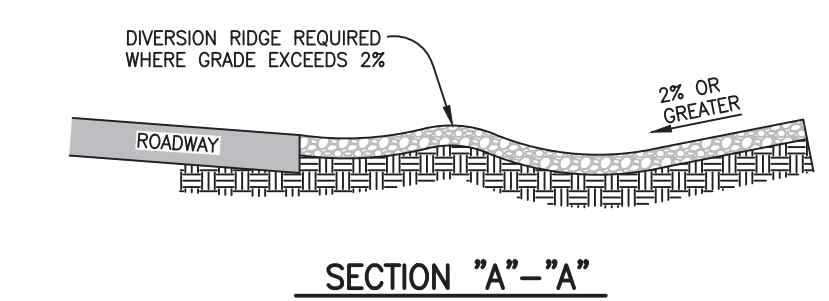
LEGEND

PROPOSED (PR)	EXISTING (EX)	DESCRIPTION
900	900	CONTOUR
T/C	T/C	STORM DRAINAGE FLOW
XXX.XX	XXX.XX	SPOT ELEVATION
FF	FF	FINISHED FLOOR ELEVATION
T/A	T/A	FINISHED GRADE ELEVATION
T/C	T/C	TOP OF ASPHALT
T/W	T/W	TOP OF WALK / CONCRETE
RM	RM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
CH	CH	OVERHEAD WIRE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
○	○	MANHOLE
○	○	INLET / CATCHBASIN
○	○	FLARED END-SECTION
○	○	GATE VALVE
○	○	HYDRANT
○	○	UTILITY POLE
○	○	FENCE
○	○	SIGN
○	○	SANITARY SEWER LABEL
○	○	STORM SEWER LABEL
○	○	WATER MAIN LABEL
○	○	SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
○	○	LIMITS OF GRADING/CLEARING



BANK STABILIZATION NOTES

- THE 36" DIAMETER OUTLET PIPE FROM THE WAL-MART PROPERTY IS EXPERIENCING BANK EROSION AT THE END SECTION ON THE CLEARY UNIVERSITY PROPERTY. THE SWALE SHALL BE REGRADED AS NECESSARY FOR PROPER STABILIZATION. STABILIZATION SHALL INCLUDE THE LAYING OF A WOVEN GEOTEXTILE FABRIC UNDERNEATH A LAYER OF GROUTED RIP-RAP, MINIMUM 6" IN SIZE. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER ON THE LIMITS OF THE EROSION AND STABILIZATION DURING CONSTRUCTION. THE CONSTRUCTION METHODS USED IN THE STABILIZATION SHALL CONSIST OF THOSE WHICH HAVE MINIMAL DISTURBANCE TO THE NATURAL AREA.



BEFORE YOU DIG
CALL 811

DEBOSS Engineering
Engineers Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
800.246.6735 FAX 517.546.1670

PROJECT: CLEARY UNIVERSITY STUDENT HOUSING APARTMENT #2
UNIVERSITY HOUSING SOLUTIONS, LLC
PREPARED FOR: UNIVERSITY HOUSING SOLUTIONS, LLC
90 HIDDEN RAVINES DRIVE
POWELL, OH 43065
(866) 711-7786

TITLE: GRADING & SOIL EROSION CONTROL PLAN

DESIGNED BY:	ST
DRAWN BY:	ST
CHECKED BY:	
SCALE:	1" = 50'
JOB NO.:	17-348
DATE:	8/30/17
SHEET NO.:	5

BOSS Engineering

LIVINGSTON COUNTY DETENTION BASIN CALCULATIONS

AREA (ACRES)	IMPERVIOUS FACTOR	ACRE IMPERVIOUS
4.08	0.9	3.67
0.00	0.7	0.00
12.62	0.2	2.52

COMPOUND C: 0.37
TOTAL DRAINAGE AREA: 16.70 ACRES

K1 = AxC (Design Constant) = 6.179
Qa = MAX ALLOW FLOW (0.20 CFS / ACRE) = 3.340 CFS

DURATION MINUTES	DURATION SECONDS	INTENSITY (IN/HR)	INCHES	INFLOW VOLUME IN 15 MIN	OUTFLOW DURATION (HR)	STORAGE VOLUME INFLUX - OUTFLOW
5	300	0.17	2.750	1692	1000	1590
10	600	0.34	5.500	3384	2004	2716
15	900	0.51	8.250	5076	3006	3527
20	1200	0.68	11.000	6768	4008	4135
30	1800	1.02	16.500	10152	6012	4999
60	3600	2.04	33.000	20304	12024	5943
90	5400	3.06	50.250	30456	18036	6174
120	7200	4.08	67.500	40608	24048	6327
180	10800	6.12	101.250	60912	36072	6348

REQUIRED 100 YEAR DETENTION VOLUME = 6174 CF

FOREBAY VOLUME
V(F) = 5% OF THE 100-YEAR STORM VOLUME BASED ON THE AREA TRIBUTARY TO THE INLET
V(F) = (0.05)(100) = 5.00 CF

MECHANICAL PRETREATMENT TO TAKE PLACE OF FOREBAY
V(P) = 3088 CF

BANKFULL FLOOD VOLUME
V(F) = 5190 x A x C = 31884 CF

FIRST FLUSH VOLUME
V(F) = 1815 x A x C = 11216 CF

BASIN STORAGE PROVIDED

ELEV. (FT)	AREA (FT ²)	DEPTH (FT)	VOLUME (FT ³)	TOTAL VOLUME (FT ³)	FREEBOARD ELEVATION
986	100856	1	90,268	254,799	986.0
985	79690	1	68,249	184,531	985.0
984	58517	1	47,372	96,222	984.0
983	37327	1	29,547	46,910	983.0
982	21167	1	14,443	19,383	982.0
981	11719	0.5	3,388	4,600	981.0
980.5	5631	0.5	1,533	1,533	980.5
980	300	0	0	0	980.0

BOTTOM OF BASIN = 980.00

FIRST FLUSH X₁₀₀ = 981.44

BANKFULL X₁₀₀ = 982.42

100 YEAR X₁₀₀ = 983.27

OUTLET CONTROL STRUCTURE

FIRST FLUSH OF RUNOFF
THE AVERAGE ALLOWABLE RELEASE RATE FOR RUNOFF IS 0.5" OVER AREA OF SITE IN 24 HRS.
Q₁₀₀ = V₁₀₀ x (1/24 HRS) x (1/3600 SEC) = 0.130 CFS

PLACE OPENINGS IN STANDPIPE AT BOTTOM OF BASIN = 980.00

HEAD = h₁₀₀ = X₁₀₀ - BOTTOM BASIN ELEV = 1.44 FT

A = Q₁₀₀ / (0.62 x (2 x 32.2 x h₁₀₀^{1.5})) = 0.022 FT²

A = 0.0055 = 3.99

THEREFORE, USE THE FOLLOWING NUMBER OF 1 INCH DIAMETER HOLES = 980.00

Q₁₀₀ MAX = 0.147 CFS

BANKFULL FLOOD
FOR THE ALLOWABLE RELEASE RATE OF 24.40 HOURS, CHECK THE DISCHARGE THROUGH THE FIRST FLUSH ORIFICE TO SEE IF ADDITIONAL HOLES ARE NECESSARY.

HEAD = h = X₁₀₀ - BOTTOM OF BASIN = 2.42 FT

Q₁₀₀ = 0.62 x #HOLES x (AREA EACH HOLE) x (2 x 32.2 x h^{1.5}) = 0.127 CFS

T₁₀₀ = (1 SEC / Q₁₀₀) x V₁₀₀ x (1 HR / 3600 SEC) = 69.88 HRS

BECAUSE THE HOLDING TIME EXCEEDS 40 HRS, ADDITIONAL ORIFICES IN THE STANDPIPE ARE REQUIRED.

VOLUME THROUGH V = 0.024 HRS x 3600 SEC x 3 = 259.20 HRS x CFS = 10951 CF

REMAINING VOL. = 20933 CF

Q₁₀₀ = REMAINING VOLUME x (1 / 24 HRS) x (1 / 3600 SEC) = 0.242 CFS

PLACE OPENINGS AT FIRST FLUSH ELEVATION = 981.44

HEAD = h₁₀₀ = X₁₀₀ - F₁₀₀ = 0.99 FT

A = Q₁₀₀ / (0.62 x (2 x 32.2 x h₁₀₀^{1.5})) = 0.049 SF

A = 0.0055 = 8.88

THEREFORE, USE THE FOLLOWING NUMBER OF 1 INCH DIAMETER HOLES AT ELEV. = 981.44

100 YEAR FLOOD
Q₁₀₀ = ALLOWABLE RELEASE RATE x AREA SITE IN ACRES = 3.340 CFS

Q₁₀₀ IS A PEAK OR MAXIMUM FLOW. CALCULATE THE MAXIMUM FLOW PASSING THROUGH FIRST FLUSH AND BANKFULL ORIFICES, USING THE TOTAL HEAD AND SUBTRACT FROM Q₁₀₀ TO DETERMINE THE ORIFICE SIZE TO RELEASE THE 100 YEAR STORM VOLUME.

Q₁₀₀ MAX + Q₁₀₀ MAX = 0.44 CFS

Q₁₀₀ - (Q₁₀₀ MAX + Q₁₀₀ MAX) = 2.90 CFS

A = Q₁₀₀ / (0.62 x (2 x 32.2 x h₁₀₀^{1.5})) = 0.633 SF

A = 0.034 = 18.67

THEREFORE, USE THE FOLLOWING NUMBER OF 1.5 INCH DIAMETER HOLES: 19 HOLES AT ELEV. = 982.42

Q₁₀₀ = 2.966 CFS

Q₁₀₀ = Q₁₀₀ + Q₁₀₀ MAX + Q₁₀₀ MAX = 3.408 CFS

SUMMARY OF REQUIRED STANDPIPE HOLES:

ELEVATION	# OF HOLES	DIAMETER OF HOLES
982.42	19	1.5 INCHES
981.44	8	1 INCHES
980.00	3	1 INCHES

DRAINAGE AREAS

NAME	AREA (ACRES)	PERVIOUS AREA (ACRES)	IMPERVIOUS AREA (ACRES)	COMPOSITE C VALUE
BASIN	7.32	7.32	0.00	0.20
CHRYSLER BLDG	3.01	2.24	0.77	0.38
CB 4	0.10	0.06	0.04	0.49
CB 6	0.33	0.13	0.20	0.62
CB 7	0.19	0.19	0.00	0.20
CB 8	0.41	0.13	0.28	0.68
CB 9	0.43	0.04	0.39	0.84
CB 10	0.77	0.47	0.29	0.47
CB 11	0.63	0.38	0.25	0.48
CDS	100.00	0.00	0.00	0.00
CB 101	0.64	0.15	0.49	0.74
CB 102	0.55	0.11	0.43	0.76
CB 103	1.27	1.23	0.04	0.22
CB 104	0.29	0.16	0.13	0.51
CB 106	0.09	0.00	0.09	0.90
CB 107	0.09	0.00	0.09	0.90
ROOF 2	0.29	0.00	0.29	0.90
ROOF 1	0.29	0.00	0.29	0.90
TOTAL	16.70	12.62	4.08	0.37

STORM WATER NARRATIVE

EXISTING CONDITIONS:
THERE IS AN EXISTING DETENTION BASIN IN THE SOUTHWEST PORTION OF THE SITE THAT WAS CONSTRUCTED AS A PART OF THE STUDENT HOUSING APARTMENTS PROJECT IN 2015. THE BASIN WAS DESIGNED WITH A VOLUME OF APPROXIMATELY 23,900 CFT. THIS BASIN COLLECTS THE STORMWATER FROM THE FIRST STUDENT HOUSING APARTMENT BUILDING AS WELL AS ALL OF THE GREEN SPACE TO THE SOUTH WHERE THE PROPOSED SECOND STUDENT HOUSING APARTMENT WILL BE LOCATED. FROM THE DETENTION BASIN, THE STORM WATER IS OUTLET INTO AN EXISTING STORM SEWER THAT RUNS PARALLEL TO THE SOUTHERN PROPERTY LINE WHERE IT DISCHARGES INTO THE WOODS IN THE SOUTHWEST QUADRANT OF THE SITE. THE STORM WATER CONTINUES IN A DITCH THROUGH THE WOODS TO THE SOUTHWEST PROPERTY CORNER WHERE IT CONTINUES OFF-SITE.

PROPOSED CONDITIONS:
THE EXISTING DETENTION BASIN IS TO BE FILLED IN AND A NEW 'NATURAL' BASIN IS TO BE UTILIZED IN THE WOODED PORTION OF THE SITE IN THE SOUTHWEST CORNER. THERE IS A LARGE NATURAL SWALE THAT CONVEYS STORMWATER TO THE SOUTHWEST PROPERTY CORNER WHERE IT IS DISCHARGING OFF-SITE. A BERM IS PROPOSED TO BE CONSTRUCTED WITHIN THE PROPERTY NEAR THE OFF-SITE DISCHARGE POINT IN ORDER TO CREATE A DETENTION STORAGE WITHIN THE WOODED AREA. THIS DESIGN WILL HAVE MINIMAL IMPACT ON THE NATURAL FEATURES OF THE SITE COMPARED TO CLEAR CUTTING TO MAKE ROOM FOR A CONVENTIONAL GRADED DETENTION BASIN. AN OUTLET CONTROL STRUCTURE WILL BE UTILIZED TO CONTROL THE RATE OF DISCHARGE FROM THE BASIN TO THE DISCHARGE POINT. ADDITIONALLY, A MECHANICAL PRETREATMENT UNIT WILL BE UTILIZED ON THE PROPOSED DEVELOPMENT FOR PRETREATMENT TO ELIMINATE THE NEED FOR A FOREBAY AND TO FURTHER REDUCE THE IMPACT AND LIMITS OF DISTURBANCE. THE NEW 'NATURAL' BASIN WILL ACCEPT STORMWATER FROM THE FIRST STUDENT HOUSING AREAS AS WELL AS THE SECOND STUDENT HOUSING BUILDING AREA. ADDITIONALLY, IT WILL COLLECT STORMWATER FROM THE ENTIRE AREA WHERE THE CHRYSLER BUILDING IS LOCATED AS WELL AS THE WOODED PORTION OF THE SITE THAT THE BASIN WILL BE. IN ALL, THE NEW 'NATURAL' BASIN WILL HAVE A TRIBUTARY AREA OF 16.70 ACRES, OF WHICH MOST IS UNDEVELOPED (PERVIOUS). THE BASIN IS REQUIRED TO HAVE A VOLUME OF 61,717 CFT PER LIVINGSTON COUNTY DRAIN COMMISSIONER STANDARDS. THE 'NATURAL' BASIN IS PROPOSED TO HAVE A VOLUME 94,750 CFT WITH A FREEBOARD VOLUME OF 253,266 CFT. THE EXCESS STORAGE MAY BE UTILIZED FOR FUTURE DEVELOPMENT OF THE CAMPUS WITHOUT THE NEED TO CONTINUOUSLY IMPROVE THE BASIN. THE BERM THAT IS TO BE CONSTRUCTED TO CREATE THE 'NATURAL' BASIN WILL CONTAIN AN EMERGENCY OVERFLOW SPILLWAY AT AN ELEVATION OF 985.50. THIS EMERGENCY OVERFLOW WILL DISCHARGE INTO THE DITCH WHERE IT CURRENTLY DRAINS.

LEGEND

PROPOSED (PR) EXISTING (EX)

900 900

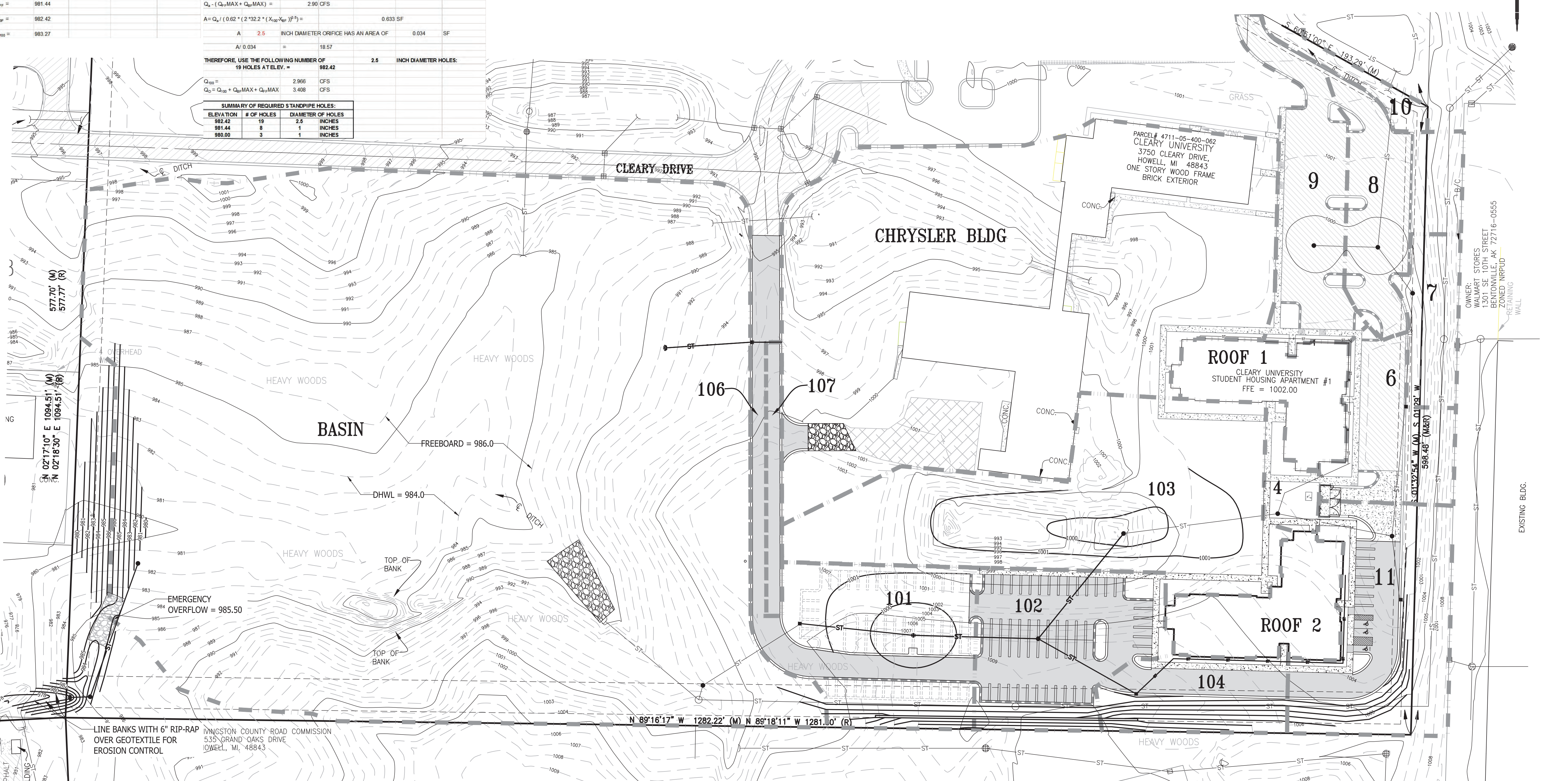
T/C XXXXX

FF FG T/A T/C T/W RM INV MH IN CB CV HY UP SN ST WM X

FF FG T/A T/C T/W RM INV MH IN CB CV HY UP SN ST WM X

CONTOUR
STORM DRAINAGE FLOW
SPOT ELEVATION
FINISHED FLOOR ELEVATION
TOP OF ASPHALT
TOP OF CURB / CONCRETE
TOP OF WALK
RM ELEVATION
INVERT ELEVATION
MANHOLE STRUCTURE
INLET STRUCTURE
CATCHBASIN STRUCTURE
GATEVALVE STRUCTURE
HYDRANT
UTILITY POLE
SANITARY SEWER
STORM SEWER
WATER MAIN
FENCE
MANHOLE
INLET / CATCHBASIN
FLARED END-SECTION
STORM SEWER LABEL
LIMITS OF DRAINAGE

SCALE: 1" = 50 FEET



BEFORE YOU DIG
CALL 811
1-800-4-A-DIG
OR VISIT WWW.CALL811.MI.GOV

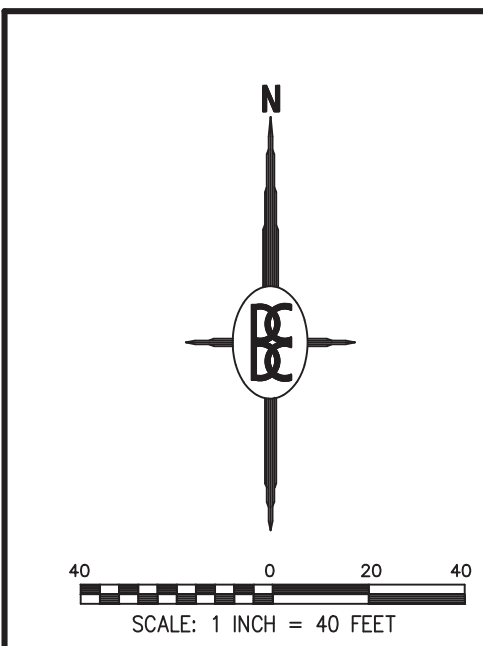
DEBOSS Engineering
Engineers Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
800.246.6735 FAX 517.546.1670

PROJECT: CLEARY UNIVERSITY STUDENT HOUSING APARTMENT #2
PREPARED FOR: UNIVERSITY HOUSING SOLUTIONS, LLC
90 HIDDEN RAVINES DRIVE
POWELL, OH 43065
(866) 711-7786

TITLE: DRAINAGE PLAN

NO	BY	REVISION	PER	DATE
2	ST	PER PLANNING COMMISSION		10-11-17
1	ST	PER TWP REVIEW		9-18-17

DESIGNED BY: ST
DRAWN BY: ST
CHECKED BY:
SCALE: 1" = 50'
JOB NO. 17-348
DATE: 8/30/17
SHEET NO. 6



LEGEND

PROPOSED (PR)	EXISTING (EX)	
T/P	T/P	TOP OF PIPE
B/P	B/P	BOTTOM OF PIPE
RIM	RIM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
RY	RY	REARYARD STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
OH	OH	OVERHEAD WIRE
T	T	TELEPHONE
		MANHOLE
		INLET / CATCHBASIN
		FLARED END-SECTION
		GATE VALVE
		HYDRANT
		UTILITY POLE
		FENCE
		SIGN
		SANITARY SEWER LABEL
		STORM SEWER LABEL
		WATER MAIN LABEL

WATERMAIN NOTE:

- APPLICANT WAS UNABLE TO OBTAIN AN EASEMENT FROM THE WAL-MART PARCEL TO LOOP THE WATERMAIN PREVIOUSLY. THE WATERMAIN SHALL BE LOOPED WITHIN THE APPLICANT'S PROPERTY.
- WATERMAIN TO BE WITHIN EASEMENT TO PROVIDE ACCESS FOR FUTURE MAINTENANCE AND REPAIR OF THE DEDICATED PUBLIC UTILITY.

STORM NOTE

- THE PROPOSED STORMWATER MANAGEMENT SYSTEM SHALL BE PRIVATELY OWNED AND PROPERLY MAINTAINED BY THE PROPERTY OWNER.

STORM STRUCTURE SCHEDULE

(A) SQUARE CATCH BASIN FLOW LINE = 991.29 INV. 12" W CONC. = 987.32	(G) STORM MANHOLE RIM ELEV. = 1009.70 INV. 12" N PLASTIC = 1003.73 INV. 12" NW PLASTIC = 1003.83	(M) SQUARE CATCH BASIN RIM ELEV. = 1008.68 INV. 12" NE PLASTIC = 1004.24
(B) OUTLET CONTROL STRUCTURE RIM ELEV. = 999.95 INV. 6" NE PLASTIC = 997.55 INV. 12" SW CMP = 997.53	(H) BEEHIVE CATCH BASIN RIM ELEV. = 1003.73 INV. 24" S PLASTIC = 999.93 INV. 24" W PLASTIC = 999.93	(N) STORM MANHOLE RIM ELEV. = 1003.60 INV. 12" NW CMP = 998.64 INV. 12" E CMP = 998.50
(C) SQUARE CATCH BASIN FLOW LINE = 1007.82 INV. 12" NE PLASTIC = 1002.64	(I) OUTLET CONTROL STRUCTURE RIM ELEV. = 1005.10 INV. 24" N PLASTIC = 1001.80	(O) SQUARE CATCH BASIN FLOW LINE = 1002.40 INV. 12" E CONC. = 1000.40
(D) STORM MANHOLE RIM ELEV. = 1004.86 INV. 24" N PLASTIC = 998.45 INV. 24" S PLASTIC = 998.48	(J) STORM MANHOLE RIM ELEV. = 1009.52 INV. 36" E CMP = 993.40 INV. 36" W CMP = 993.10	(P) STORM MANHOLE RIM ELEV. = 997.52 INV. 36" E CMP = 989.80 INV. 36" NW CMP = 989.12
(E) STORM MANHOLE RIM ELEV. = 1009.63 INV. 12" SW PLASTIC = 1004.3 INV. 12" S PLASTIC = 1003.87 INV. 12" E PLASTIC = 1004.10	(K) BEEHIVE CATCH BASIN RIM ELEV. = 1007.60 INV. 30" E PLASTIC = 998.27 INV. 36" W PLASTIC = 997.94	(Q) STORM MANHOLE RIM ELEV. = 1005.94 INV. 12" E CONC. = 1000.40
(F) SQUARE CATCH BASIN FLOW LINE = 1004.59 INV. 12" SE PLASTIC = 1004.59	(L) STORM MANHOLE RIM ELEV. = 988.19	(R) BEEHIVE CATCH BASIN RIM ELEV. = 1005.04

EXISTING STRUCTURE SCHEDULE

EXISTING MH #1	CB104
4' DIA CATH. BASIN COVER 'K'	4' DIA CATH. BASIN COVER 'K'
RIM 995.60	RIM 1000.00
EX. INV. SW 24" 989.70	INV. NW 12" 994.94
EX. INV. NE 24" 989.70	INV. NE 8" 995.21
NO SUMP	Z SUMP

CDS 100

6" DIA CDS STRUCTURE COVER 'K'	FLARED END SECTION, W/ ANIMAL GRATE
RIM 1001.50	INV. E 18" 990.50
EX. INV. SW 24" 990.80	
EX. INV. NE 24" 990.80	
Z SUMP	

CB101

4' DIA CATCH BASIN COVER 'D'	RIM 997.66
RIM 999.40	INV. W 18" 991.30
INV. W 24" 991.88	INV. E 18" 991.30
INV. E 24" 991.88	Z SUMP

CB102

4' DIA CATCH BASIN COVER 'D'	RIM 999.40
RIM 999.40	INV. W 18" 991.60
INV. W 24" 993.07	INV. E 18" 991.60
INV. NE 24" 993.07	Z SUMP
INV. SE 12" 993.87	

FES105

FLARED END SECTION, W/ ANIMAL GRATE	INV. E 36" 978.47
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CB106

4' DIA CATCH BASIN COVER 'K'	RIM 997.66
RIM 997.66	INV. W 18" 991.30
INV. W 24" 991.88	INV. E 18" 991.30
INV. E 24" 991.88	Z SUMP

CB107

4' DIA MANHOLE COVER 'K'	RIM 997.66
RIM 997.66	INV. W 18" 991.60
INV. W 24" 993.07	INV. E 18" 991.60
INV. NE 24" 993.07	Z SUMP
INV. SE 12" 993.87	

FES108

FLARED END SECTION, W/ ANIMAL GRATE	INV. E 36" 978.47
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MH 109

RIM 984.00	INV. W 36" 978.65
INV. W 36" 978.65	INV. NE 36" 978.65
NO SUMP	

CB103

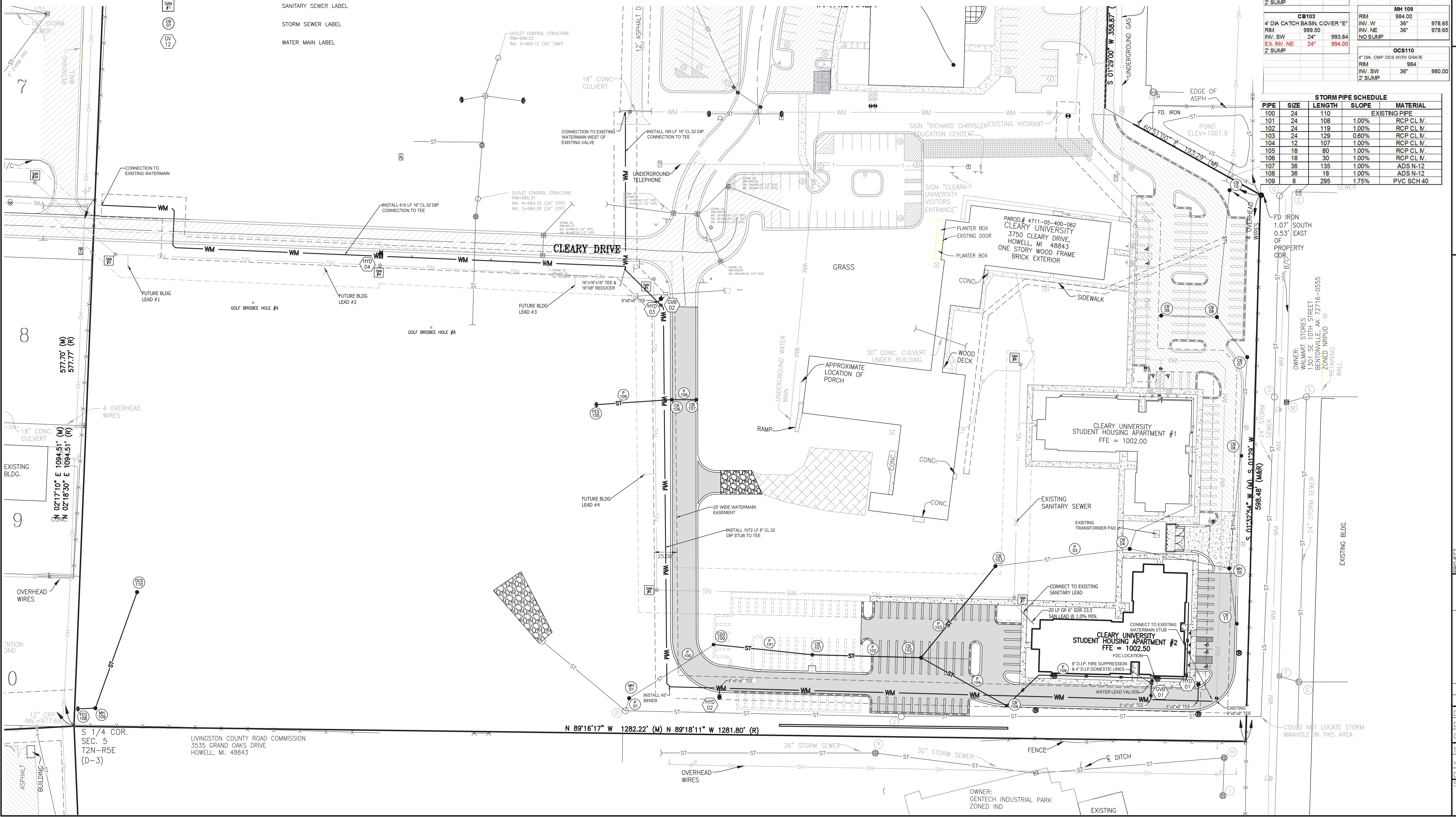
4' DIA CATCH BASIN COVER 'E'	RIM 999.50
RIM 999.50	INV. SW 24" 993.84
EX. INV. NE 24" 994.00	NO SUMP

OCS110

4" DIA. CMP OCS WITH GRATE	RIM 984
RIM 984	INV. SW 36" 980.00
INV. SW 36" 980.00	Z SUMP

STORM PIPE SCHEDULE

PIPE SIZE	LENGTH	SLOPE	MATERIAL
100 24	110		EXISTING PIPE
101 24	108	1.00%	RCP CLM
102 24	119	1.00%	RCP CLM
103 24	129	0.60%	RCP CLM
104 12	107	1.00%	RCP CLM
105 18	80	1.00%	RCP CLM
106 18	30	1.00%	RCP CLM
107 36	135	1.00%	ADS N-12
108 36	18	1.00%	ADS N-12
109 8	295	1.75%	PVC SCH 40



DEBOSS Engineering
 Engineers Planners Landscape Architects
 3121 E. HOWELL RIVER AVE.
 HOWELL, MI. 48843
 800.246.6735 FAX 517.548.1670

UTILITY PLAN

PROJECT: CLEARY UNIVERSITY STUDENT HOUSING APARTMENT #2
 PREPARED FOR: UNIVERSITY HOUSING SOLUTIONS, LLC
 90 HIDDEN RAVINES DRIVE
 POWELL, OH 43065
 (866) 711-7786

NO	BY	REVISION PER	DATE
1	ST	PER PLANING COMMISSION	10-11-17
2	ST	PER TWP REVIEW	9-18-17
3	ST	PER TWP REVIEW	9-18-17
4	ST	PER TWP REVIEW	9-18-17

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY:
 SCALE: 1" = 40'
 JOB NO. 17-348
 DATE 8/30/17
 SHEET NO. 7

GENERAL LANDSCAPE SPECIFICATIONS:

- ALL PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING MUNICIPALITY. ALL STOCK SHALL BE NURSERY GROWN, CONFORMING TO ANSO Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK", AND IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. STOCK SHALL EXHIBIT NORMAL GROWTH HABIT AND BE FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT. ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIALS SHALL BE BALLED AND BURLAPPED OR CONTAINER STOCK. NO BARE ROOT STOCK IS PERMITTED. ALL PLANT BALLS SHALL BE FIRM, INTACT, AND SECURELY WRAPPED AND BOUND.
- ALL PLANT BED MATERIALS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS, OTHER EXTRANEIOUS OBJECTS, AND POOR SOILS TO A MINIMUM DEPTH OF 12-INCHES AND BACKFILLED TO GRADE WITH SPECIFIED PLANTING MIX (SEE BELOW).
- PLANTING MIXTURE SHALL CONSIST OF 5 PARTS TOPSOIL FROM ON-SITE (AS APPROVED), 4 PARTS COARSE SAND, 1 PART SPHAGNUM PEAT MOSS (OR APPROVED COMPOST), AND 5 LBS OF SUPERPHOSPHATE FERTILIZER PER CU. YD. OF MIX. INGREDIENTS SHALL BE THOROUGHLY BLENDED FOR UNIFORM CONSISTENCY.
- ALL PLANT BEDS AND INDIVIDUAL PLANTS, NOT OTHERWISE NOTED SHALL BE MULCHED WITH A 4-INCH LAYER OF SHREDDED BARK MULCH. EDGE OF MULCH BEDS AS SHOWN. TREES IN LAWN AREAS SHALL RECEIVE A 5-FT DIAMETER CIRCLE OF MULCH UNLESS OTHERWISE NOTED.
- LANDSCAPE STONE SHALL BE INSTALLED WHERE NOTED OR INDICATED (HATCHED). STONE SHALL MATCH EXISTING ADJACENT LANDSCAPE STONE ON SITE AND SHALL BE INSTALLED IN A MINIMUM DEPTH OF 3-INCHES.
- ALL LANDSCAPE BEDS, UNLESS OTHERWISE NOTED SHALL BE INSTALLED OVER WEED BARRIER FABRIC - WATER PERMEABLE FILTRATION FABRIC OF NON-WOVEN POLYPROPYLENE OR POLYESTER FABRIC. FABRIC SHALL BE OF SUITABLE THICKNESS FOR APPLICATION.
- ALL PLANTS AND PLANT BEDS SHALL BE THOROUGHLY WATERED UPON COMPLETION OF PLANTING AND STAKING OPERATIONS.
- THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF 1 YEAR FROM THE DATE THE WORK IS ACCEPTED, IN WRITING, BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, WITHIN A SPECIFIED PERIOD OF TIME, ALL DEAD PLANTS, AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE LANDSCAPE ARCHITECT, DURING AND AT THE END OF THE GUARANTEE PERIOD. REPLACEMENT STOCK SHALL CONFORM TO THE ORIGINAL SPECIFICATIONS.
- EDGING SHALL BE PROVIDED FOR ALL LANDSCAPE BEDS NOT ADJACENT TO CONCRETE PAVEMENT. EDGING SHALL BE BLACK ALUMINUM EDGING, 3/16-INCH X 4-INCH. INSTALL PER MANUFACTURER'S INSTRUCTIONS. ALL EDGING SHALL BE INSTALLED IN STRAIGHT LINES OR SMOOTH CURVES WITHOUT IRREGULARITIES.

- SOD SHALL BE DENSE, WELL ROOTED TURF, FREE OF WEEDS. IT SHALL BE COMPRISED OF A BLEND OF AT LEAST TWO KENTUCKY BLUE GRASSES AND ONE FESCUE. IT SHALL HAVE A UNIFORM THICKNESS OF 3/4-INCH AT TIME OF PLANTING, AND CUT IN UNIFORM STRIPS NOT LESS THAN 10-INCHES BY 18-INCHES. SOD SHALL BE KEPT MOIST AND LAID WITHIN 36-HOURS AFTER CUTTING.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ALL SODDED AREAS THAT BROWN-OUT OR HAVE NOT FIRMLY KNITTED TO THE SOIL BASE WITHIN A PERIOD OF 1 MONTH SHALL BE REPLACED BY THE CONTRACTOR, AT NO COST TO THE OWNER.
- ALL AREAS OF THE SITE THAT BECOME DISTURBED DURING CONSTRUCTION AND ARE NOT TO BE PAVED, STONED, LANDSCAPED, OR SODDED SHALL BE SEEDED AND MULCHED.

SEE MIXTURE SHALL BE AS FOLLOWS:
 KENTUCKY BLUEGRASS (CHOOSE 3 VARIETIES -
 ADELPHI, RUGBY, GLADE, OR PARADE) 30%
 RUBY RED OR DAWSON RED FINE FESCUE 30%
 ATLANTA RED FESCUE 20%
 PENNINE PERENNIAL RYE 20%

THE ABOVE SEED MIXTURE SHALL BE SOWN AT A RATE OF 250 LBS PER ACRE. PRIOR TO SEEDING, THE TOPSOIL SHALL BE FERTILIZED WITH A COMMERCIAL FERTILIZER WITH A 10-0-10 ANALYSIS:

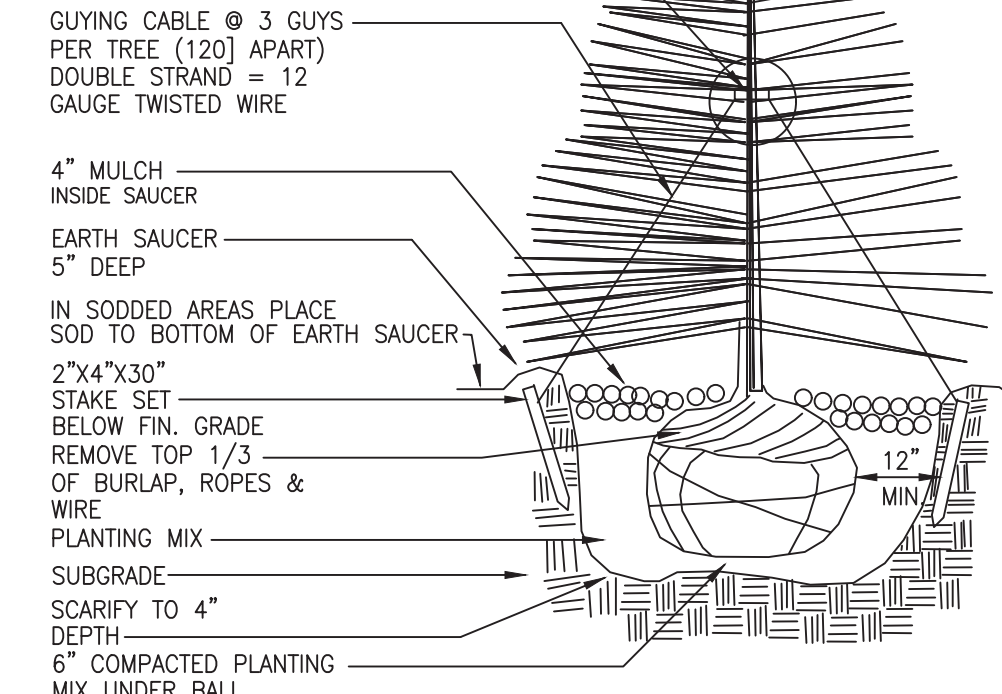
10% NITROGEN - MIN 25% FROM A UREA FORMALDEHYDE SOURCE
 0% PHOSPHATE
 10% POTASH - SOURCE POTASSIUM SULFATE OR POTASSIUM NITRATE

THE FIRST FERTILIZER APPLICATION SHALL BE AT A RATE OF 10 LBS PER 1000 SQ FT OF BULK FERTILIZER.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ANY PART OF THE AREA THAT FAILS TO SHOW A UNIFORM GERMINATION SHALL BE RE-SEEDING AND SUCH RE-SEEDING SHALL CONTINUE UNTIL A DENSE LAWN IS ESTABLISHED. DAMAGE TO SEEDING AREAS RESULTING FROM EROSION SHALL BE REPAIRED BY THE CONTRACTOR.

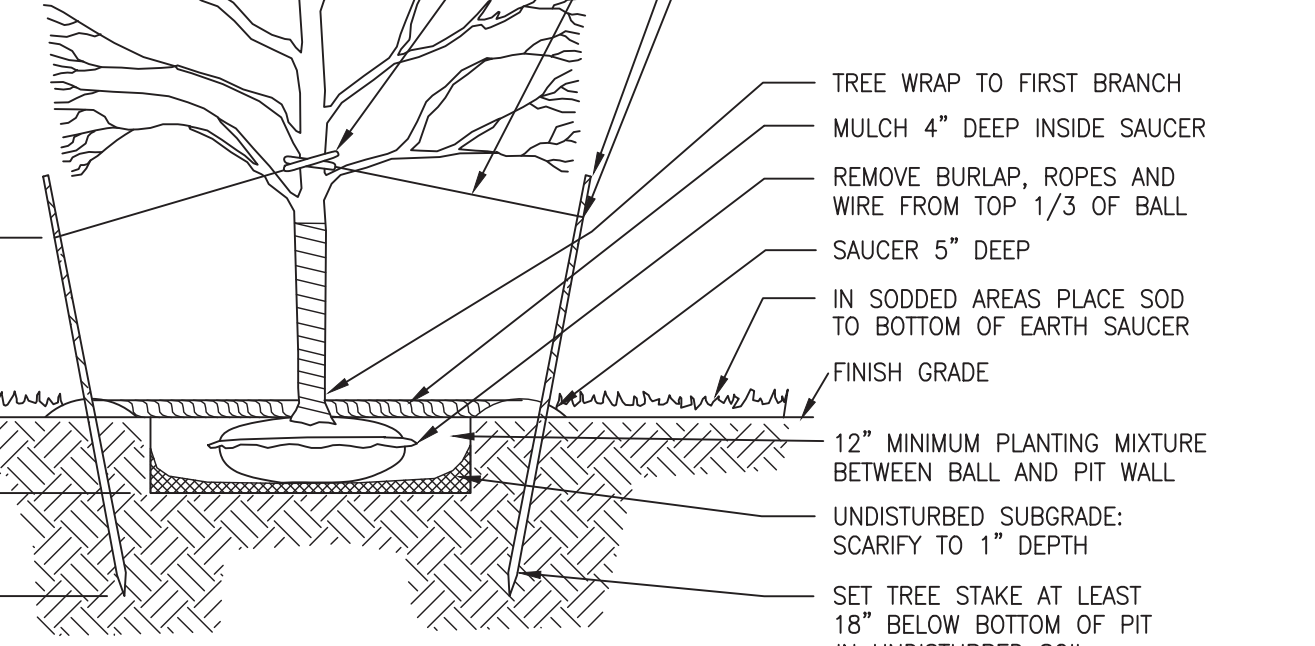
- ALL AREAS OF THE SITE SCHEDULED FOR SEEDING OR SODDING SHALL FIRST RECEIVE A 6-INCH LAYER OF CLEAN, FRIABLE TOPSOIL. THE SOIL SHALL BE DISCED AND SHALL BE GRADED IN CONFORMANCE WITH THE GRADING PLAN.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES AND TO INFORM THE LANDSCAPE ARCHITECT OF ANY CONFLICTS PRIOR TO COMMENCING LANDSCAPING.
- ALL LANDSCAPED AREAS WITHIN PROJECT AREA SHALL BE PROVIDED WITH AN UNDERGROUND AUTOMATIC SPRINKLER SYSTEM.

BEFORE BACK FILLING AROUND PLANT, REMOVE ALL PLASTIC BALLING MATERIAL & METAL CONTAINERS. PUNCH HOLES IN FIBER POTS TO PROVIDE DRAINAGE.
 NEVER PRUNE EVERGREENS
 TREE SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE TO PREVIOUS EXISTING GRADE
 RUBBER HOSE 1/2 UP TREE POSITIONED DIRECTLY ABOVE TREE BRANCH



EVERGREEN TREE PLANTING DETAIL
(NO SCALE)

NEVER CUT THE LEADER
 RUBBER HOSE POSITIONED DIRECTLY ABOVE THE TREE BRANCH
 DOUBLE STRAND = 12 GAUGE TWISTED WIRE
 TREE STAKES, THREE 120" APART
 PULL WIRE THROUGH HOLE AND AROUND STAKE BEFORE TYING
 BEFORE BACK FILLING AROUND PLANT, REMOVE ALL PLASTIC BALLING MATERIAL & METAL CONTAINERS. PUNCH HOLES IN FIBER POTS TO PROVIDE DRAINAGE.

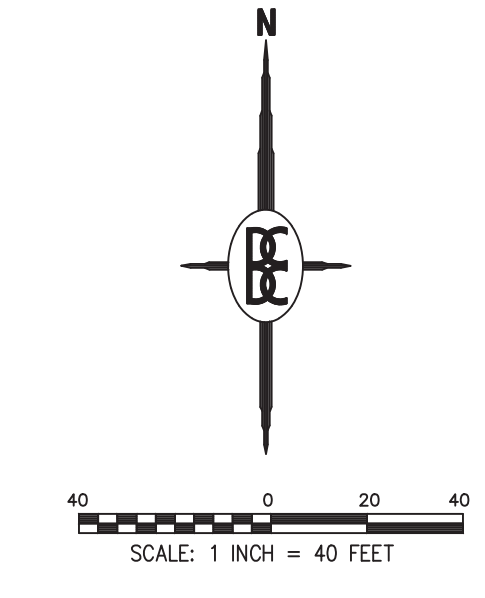


DECIDUOUS TREE PLANTING DETAIL
(NO SCALE)

BEFORE BACK FILLING AROUND PLANT, REMOVE ALL PLASTIC BALLING MATERIAL & METAL CONTAINERS. PUNCH HOLES IN FIBER POTS TO PROVIDE DRAINAGE.
 THIN FOLIAGE & BRANCHES (NOT ALL END TIPS) BY 1/3 - RETAIN NATURAL SHAPE
 SHRUB SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE TO PREVIOUS EXISTING GRADE



SHRUB PLANTING DETAIL
(NO SCALE)



LANDSCAPE LEGEND

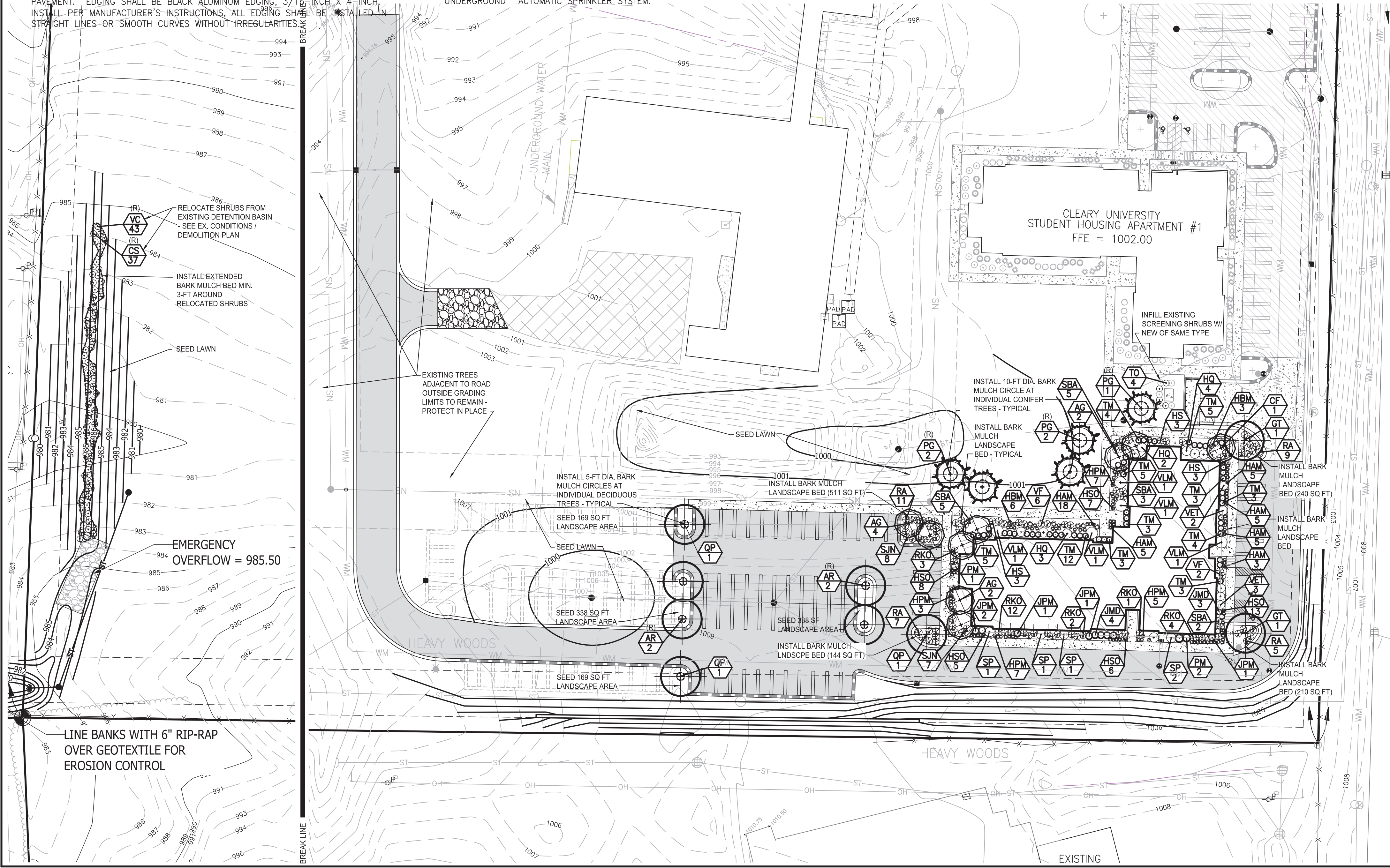
- EXISTING DECIDUOUS TREE
- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFER TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED CONIFER SHRUB
- PROPOSED DECIDUOUS SHRUB
- PROPOSED PERENNIAL FORB

LANDSCAPE REQUIREMENTS

- ZONING: OFFICE SERVICE DISTRICT
- PARKING LOT - 63 SPACES REQUIRED, 66 PROVIDED
 REQUIRED: 1 CANOPY TREE & 100 SQ FT LANDSCAPED AREA / 10 PARKING SPACES
 = 7 CANOPY TREES & 700 SQ FT LANDSCAPED AREA
 PROPOSED:
 RELOCATING 4 (AR) CANOPY TREES FROM EX. DETENTION BASIN + 3 (QP) & 1 (GT) CANOPY TREES & TOTAL OF 2119 SQ FT LANDSCAPED AREAS - INCL LAWN OR SHRUBS (RA)
 DETENTION BASIN
 REQUIRED: 1 DECIDUOUS OR EVERGREEN TREE + 10 SHRUBS / 50 LF OF BASIN PERIMETER
 PROPOSED: EXISTING LOW AREA WITH DENSE TREE COVER TO BE UTILIZED FOR PROPOSED DETENTION BASIN.
 PROPOSED BASIN END BERM TO BE PLANTED WITH 80 RELOCATED SHRUBS FROM EXISTING BASIN. REMAINDER TO UTILIZE EXISTING TREE COVER

PLANT LIST

KEY QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
DECIDUOUS TREES				
AR (R) 4	Acer rubrum 'Red Sunset'	Red Sunset Maple	Existing	EX.
AG 8	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2" cal.	B-B
CF 1	Cornus florida 'Cherokee Chief'	Cherokee Chief Flowering Dogwood	2" cal.	B-B
GT 2	Gleditsia triacanthos var inermis 'Skyline'	Skyline Honeylocust	2-1/2" cal.	B-B
QP 3	Quercus palustris	Pin Oak	2-1/2" cal.	B-B
CONIFER TREES				
PG (R) 5	Picea glauca	White Spruce	Existing	EX.
CONIFER SHRUBS				
JMD 7	Juniperus x media 'Daub's Frosted'	Daub's Frosted Juniper	36" ht./#5	Cont.
JPM 5	Juniperus x pfitzeriana Monsan	Sea Of Gold Juniper	36" ht./#5	Cont.
PM 3	Pinus mugo var Pumilio	Dwarf Mugo Pine	36" ht./#5	B-B
TM 50	Taxus x media 'Densiflora'	Densiform Spreading Yew	30" ht./#3	Cont.
TO 4	Thuja occidentalis 'Techny'	Mission Arborvitae	48" ht.	B-B
DECIDUOUS SHRUBS				
CS (R) 37	Cornus Sericea	Redosier Dogwood	Existing	EX.
HQ 9	Hydrangea Quercifolia 'Brenhill'	Gatsby Gal Oakleaf Hydrangea	36" ht./#5	Cont.
HS 9	Hydrangea Serrata 'mak20' Ppof	Mountain Tuff Stuff Hydrangea	36" ht./#5	Cont.
RA 32	Ribes alpinum 'Green Mound'	Green Mound Currant	24" ht./#3	Cont.
RKO 22	Rosa x Knock Out Sunny	Knock Out Sunny Shrub Rose	18" ht./#3	Cont.
SBA 15	Spiraea x burdala 'Anthony Waterer'	Anthony Waterer Spiraea	24" ht./#3	Cont.
SJN 15	Spiraea japonica 'Neon Flash'	Neon Flash Spiraea	24" ht./#3	Cont.
SP 5	Syringa Patula 'Miss Kim'	Miss Kim Lilac	56" ht./#5	Cont.
VC (R) 43	Viburnum carlesii 'Compactum'	Comp. Koreanspice Viburnum	Existing	EX.
VF 8	Viburnum farreri nanum	Fragrant Dwarf Viburnum	24" ht./#3	Cont.
VET 5	Viburnum x Emerald Triumph	Emerald Triumph Viburnum	36" ht./#5	Cont.
VLM 5	Viburnum lantana 'Mohican'	Mohican Wayfaring Viburnum	36" ht./#5	Cont.
PERENNIALS				
HAM 41	Hosta undulata 'Albo Marginata'	Albo Marginata Hosta	No.3	Cont.
HBM 9	Hosta 'Blue Mammoth'	Blue Mammoth Hosta	No.3	Cont.
HPM 22	Hemerocallis 'Pardon Me'	Pardon Me Daylily	No.1	Cont.
HSO 39	Hemerocallis 'Stella De Oro'	Stella De Oro Daylily	No.1	Cont.



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 (666) 711-7786

LANDSCAPE PLAN

DESIGNED BY:	PC
DRAWN BY:	PC
CHECKED BY:	PC
SCALE:	1" = 40'
JOB NO.:	17-348
DATE:	8/30/17
SHEET NO.:	8

**LIVINGSTON COUNTY SOIL EROSION PERMIT TEMPLATE
TEMPORARY CONTROLS AND SEQUENCE**

- NOTIFY LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE 24 HOURS PRIOR TO START OF GRADE WORK.
 - IN ACCORDANCE WITH PUBLIC ACT NO. 53, OF 1974 THE PERMIT HOLDER SHALL CALL MISS DIG FOR STAKING AND LOCATING OF UTILITIES, AT LEAST 72 HOURS IN ADVANCE OF THE START OF ANY WORK.
- PERMITTING STANDARDS**
- (IMPORTANT NOTICE) RETENTION/DETENTION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. INGRESS/EGRESS MUST HAVE LARGE CRUSHED ROCK TO REDUCE THE TRACKING OF SOIL ONTO THE PUBLIC TRAFFIC AREAS. SEE DETAIL ITEMS BELT.
 - 36" M.D.O.T SPECIFICATION TYPE SILT FABRIC FENCE AS SHOWN ON PLANS SHALL BE PLACED AND MAINTAINED ALONG PERIMETER ON ALL LOW LYING AREAS OF THE CONSTRUCTION SITE TO FILTER RUNOFF BEFORE LEAVING PROJECT SITE.
 - ALL TEMPORARY EROSION CONTROL DEVICES AS NOTED ON PLANS SHALL BE INSTALLED PRIOR TO THE START OF MASSIVE EARTH DISTRIBUTION.
 - PLAN DOES DENOTE A DETAILED EROSION CONTROL DEVICE TO RESTRICT TRACKING OF MATERIAL ONTO THE HIGHWAY. STONE DIAPERS SHALL BE INSTALLED AT ALL INGRESS/EGRESS AREAS OF THE SITE PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. DIAPERS SHALL BE OF CRUSHED STONE AND SHALL HAVE A MINIMUM LENGTH OF 100' LINEAL FEET.

- RETENTION PONDS**
- RETENTION/DETENTION/SEDIMENTATION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
 - DETENTION POND OUTLETS SHALL BE OF THE STANDPIPE AND STONE FILTER SYSTEM, WITH TRASH SCREEN. OUTLET FLOW SHALL NOT EXCEED 0.20 CUBIC FEET OF WATER PER SECOND/PER ACRE. POND DIKES SHALL HAVE A MINIMUM OF ONE (1) FOOT OF FREEBOARD. AN EMERGENCY SPILLWAY SHALL BE CONSTRUCTED WITHIN THE FREEBOARD LEVEL.
 - THE EMERGENCY SPILLWAY FROM THE DETENTION POND SHALL BE SODDED AND PEGGED, OR RIP RAPPED, 15 FEET PAST THE TOE OF THE SLOPE OF THE BERM.
 - DIKES AND BERMS SHALL BE FREE OF ALL ORGANIC MATTER.
 - RETENTION/DETENTION PONDS SHALL BE FENCED WITH A 4' CHAIN LINK FENCE, INCLUDING A 12' ACCESS GATE FOR MAINTENANCE UNLESS MINIMUM 5 FT. HORIZONTAL TO 1 FT. VERTICAL SLOPE ARE PROVIDED. THE FENCE SHALL BE INSTALLED AT THE OUTER PORTION OF THE BERM, TO ALLOW FOR MAINTENANCE WORK TO BE DONE INSIDE THE FENCE.
 - ALL UNIMPROVED DISTURBED AREAS SHALL BE STRIPPED OF TOPSOIL WHICH WILL BE STORED ONSITE DURING THE EXCAVATING STAGE. TOPSOIL PILES SHALL BE SEEDED AND MULCHED, OR MATTED WITH STRAW IN THE NON-GROWING SEASON, IMMEDIATELY AFTER THE STRIPPING PROCESS IS COMPLETED, TO PREVENT WIND AND WATER EROSION.
 - SOIL EROSION CONTROLS SHALL BE MONITORED DAILY BY THE ON-SITE ENGINEER, OR CONTRACTOR, WHICHEVER CASE APPLIES.

- SLOPES AND DITCHES**
- ON SITE DITCHES SHALL BE OF THE FLAT BOTTOM TYPE MINIMUM WIDTH OF 2' WITH A MINIMUM OF 3 HORIZONTAL TO 1 VERTICAL SIDE SLOPES, 3:1.
 - DITCHES WITH STEEP SLOPES WILL NEED FLOW CHECKS TO PREVENT SCOURING OF THE DITCH BOTTOM. THESE SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR INSPECTOR.
 - SLOPES IN EXCESS OF 3 HORIZONTAL TO 1 VERTICAL SHALL NOT BE USED EXCEPT WITH A MECHANICAL DEVICE SUCH AS A RETAINING WALL, TERRACING, OR OTHER PRIOR APPROVED DEVICE.
 - STORM DRAINS
 - ALL STORM WATER STRUCTURES, CATCH BASINS AND/OR MANHOLES, IF BLOCK, SHALL BE PLASTERED ON BOTH THE INSIDE AND OUTSIDE OF THE STRUCTURES. GROUTING AND POINTING WILL BE NECESSARY AT THE CASTING AND STRUCTURE JOINT TO PREVENT LEAKAGE AND THE RESULTING SOIL MOVEMENT, AROUND THE STRUCTURE.
 - STORM WATER INLETS SHALL HAVE AS A TEMPORARY CONTROL A STRAW BALE BARRIER AND STONE FILTER. INSTALLED AROUND THE INLET DURING CONSTRUCTION. AS AN ALTERNATIVE TO THE STRAW BALE BARRIER, A BURLAP AND PEA STONE FILTER MAY BE USED. THREE LAYERS OF BURLAP FIBER AND A FILTER OF PEA STONE MINIMUM 1 FT. IN DEPTH CAN BE USED. DUE TO THE POROSITY OF THE BURLAP FILTER THE MINIMUM OF 1 FT. OF STONE IS VERY IMPORTANT. THE CONTROL SHALL BE INSTALLED AS SOON AS THE STRUCTURE IS BUILT AND INSPECTED DAILY.
 - BURLAP AND PEA STONE FILTERS WILL NEED TO BE CHANGED AFTER EACH RAINFALL.
 - COUNTY CODE REQUIRES A MINIMUM PIPE SIZE OF 12" IN DIAMETER. IF SMALLER PIPE IS NEEDED FOR OUTLET PURPOSES THE 12" CAN BE BAFFLED TO THE CORRECT SIZE. ALL PIPE SHALL MEET THE 12" DIAMETER CODE SIZE.
 - ALL STORM DRAIN OUTLETS 15" IN DIAMETER OR LARGER SHALL HAVE ANIMAL GUARDS INSTALLED TO PREVENT ENTRANCE TO THE SYSTEM.
 - ALL STORM DRAINAGE PIPE 30" IN DIAMETER OR LARGER SHALL BE POINTED, AT THE JOINTS ON THE INSIDE WITH MORTAR, AFTER BACKFILLING.
 - ALL STORM DRAIN OUTLETS THAT DO NOT EMPTY INTO THE RETENTION/DETENTION POND SHALL HAVE A TEMPORARY 5'X10'X3' SUMP INSTALLED AT THE TERMINATION OF THE STORM SEWER. UPON COMPLETION OF THE STABILIZATION WORK THE SUMP AREA SHALL BE FILLED AND RIP RAPPED WITH COBBLE STONE. SILT TRAPS SHALL BE INSPECTED AFTER EACH STORM.
 - STORM WATER OUTLETS DO DENOTE RIP RAP. ALL OUTLETS SHALL BE RIP RAPPED OVER KEVED FILTER FABRIC WITH A MINIMUM OF 15 SQ. YARDS OF 6" OR LARGER COBBLE STONE.
 - RIP RAP AS NOTED ON THE PLAN SHALL BE OF A FUNNEL SHAPE CONSTRUCTION, WIDTH SHALL INCREASE AS DISTANCE FROM THE OUTLET POINT INCREASES AT A 3:1 RATIO.
 - RIP RAP SHALL BE OF COBBLE STONE, 6" IN DIAMETER OR LARGER. GROUTING MAY BE NECESSARY, AND SHALL BE A MINIMUM OF 6" IN DEPTH WITH THE COBBLE SET IN THE CEMENT SLURRY.
 - STORM WATER OUTLET IS IN NEED OF A SPLASH BLOCK WHICH IS NOT NOTED ON THE PLAN. INSTALL SPLASH BLOCK IF SLOPE OF THE PIPE IS 4% OR GREATER.
 - IT WILL BE NECESSARY FOR THE DEVELOPER TO HAVE THE STORM DRAINAGE LINES CLEANED PRIOR TO FINAL INSPECTION BY THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE. IF REQUIRED, THIS WORK SHALL BE DONE BY A PROFESSIONAL SEWER CLEANING FIRM AND CERTIFIED IN WRITING BY THE PROJECT ENGINEER. ALL SUMPS AND TEMPORARY SILT TRAPS SHALL ALSO BE CLEANED AT THIS TIME.

- STABILIZATION**
- ALL UNIMPROVED DISTURBED AREAS SHALL BE RE-TOP SOILED, WITH A MINIMUM OF 3" OF MATERIAL, SEEDED, MULCHED AND TACKED WITHIN 15 DAYS OF THE COMPLETION OF THE MASSIVE EARTH DISRUPTION. IN THE NON-GROWING SEASON STRAW MATTING WILL SUFFICE. HYDROSEEDING WILL BE AN ACCEPTABLE ALTERNATE FOR MULCHING. EXTREME CARE SHOULD BE EXERCISED IN SPRING AND FALL PERIODS AS A FROST WILL BREAK THE BIND OF THE HYDROSEEDING, WHICH WILL AFFECT THE EFFECTIVENESS OF THIS PROCEDURE.
 - IN THE NON-GROWING SEASON, TEMPORARY STABILIZATION OF MASSIVELY EXPOSED AREAS FOR WINTER STABILIZATION SHALL BE DONE WITH STRAW MATTING.
 - PERIODIC INSPECTIONS WILL BE MADE THROUGHOUT THE COURSE OF THE PROJECT. IT WILL BE THE RESPONSIBILITY OF THE MANAGERS OF THE PROJECT TO CONTACT THIS OFFICE FOR THE FINAL INSPECTION AT THE END OF THE PROJECT.
 - THIS COMMERCIAL PERMIT IS VALID FOR THE MASS EARTH MOVEMENT, THE INSTALLATION OF ROADS, DRAINS, AND UTILITIES AND IS NOT FOR ANY SINGLE FAMILY RESIDENCE. ALL RESIDENTIAL BUILDERS WILL NEED TO CONTACT WAVERS AND OR PERMITS AS NECESSARY FOR EACH LOT IN THIS DEVELOPMENT AT THE TIME APPLICATION FOR SINGLE FAMILY RESIDENCE IS MADE.
 - THE ISSUING BUILDING DEPARTMENT SHALL NOT ISSUE THE CERTIFICATE OF OCCUPANCY UNTIL THE FINAL INSPECTION LETTER FROM THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE HAS BEEN OBTAINED.

- PER THE LIVINGSTON COUNTY DRAIN COMMISSIONER THE SEEDING, FERTILIZER AND MULCH MINIMUM QUANTITIES SHALL BE AS FOLLOWS:
TOP-SOIL 3" IN DEPTH
GRASS SEED 218 LBS. PER ACRE
FERTILIZER 150 LBS. PER ACRE
STRAW MULCH 3" IN DEPTH 1.5 TO 2 TONS PER ACRE (ALL MULCHING MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC.)
- HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%, IN SUCH CASES STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER.

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

CONSTRUCTION SEQUENCE

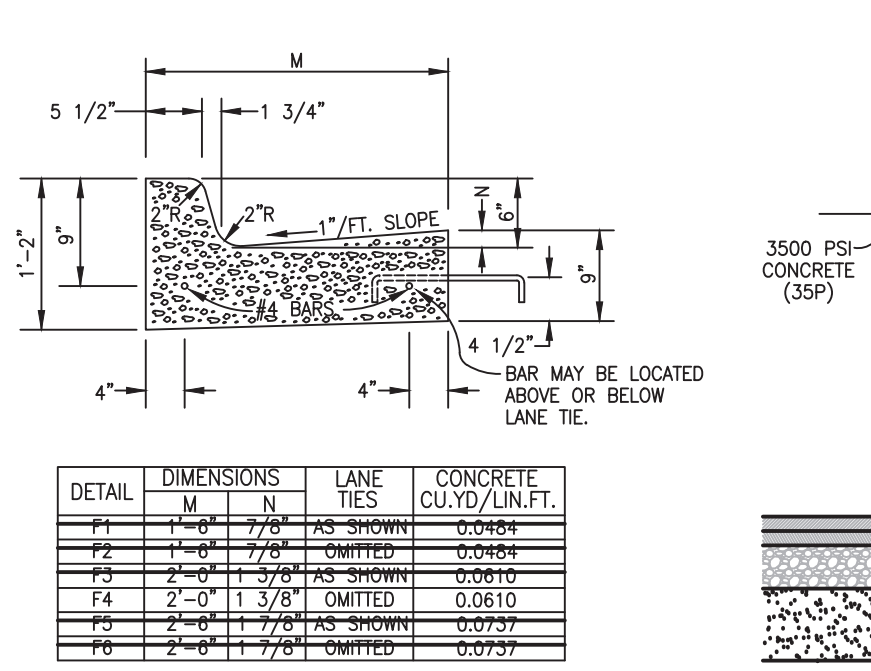
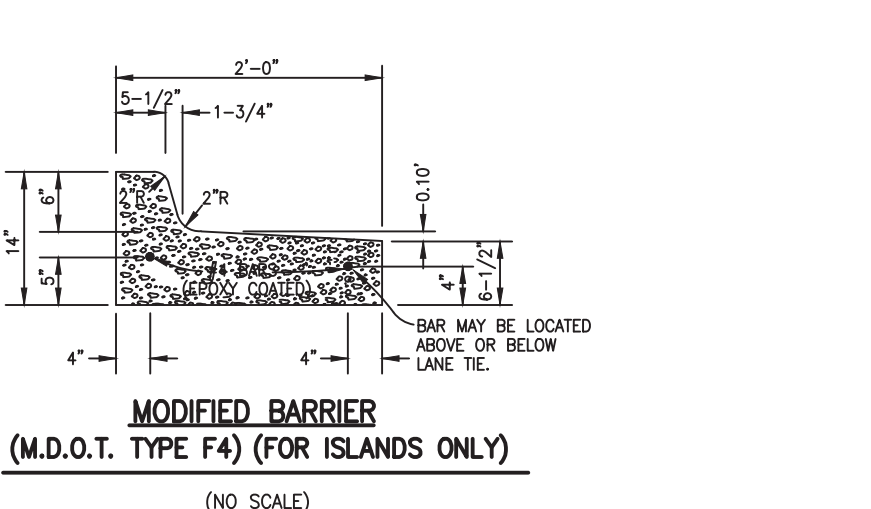
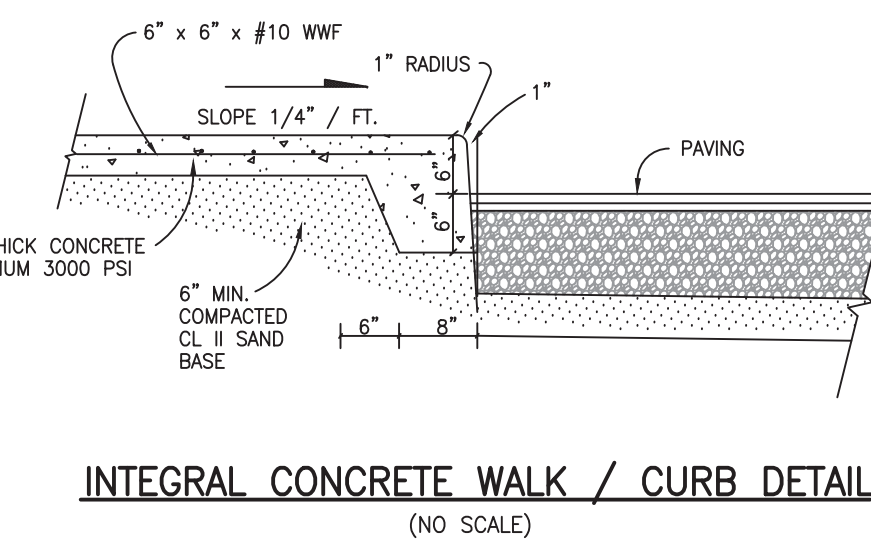
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.
- | | |
|---------|---|
| 14 DAYS | 1. TREE AND SHRUB CLEARING TO CLEARING LIMITS |
| 1 DAY | 2. INSTALL SILT FENCE AS SHOWN ON PLANS |
| 5 DAYS | 3. SITE DEMO |
| 28 DAYS | 4. ROUGH GRADE AND INSTALL STORM DRAINAGE AND UTILITIES. |
| 1 DAY | 5. INSTALL INLET PROTECTION ON STORM INLETS. |
| 180 DAY | 6. START BLDG. CONSTRUCTION |
| 14 DAYS | 7. INSTALL PAVEMENT, CURB & GUTTER, AND SIDEWALK |
| 4 DAYS | 8. FINE GRADE AROUND BUILDING, SPREAD TOPSOIL, SEED OR SOD AS APPLICABLE. |
| 1 DAY | 9. REMOVE ALL EROSION CONTROL STRUCTURES. |
| 1 DAY | 10. REMOVE ACCUMULATED SILT FROM ALL EXISTING DRAINAGE. |

**CONTROLS & MEASURES
POST CONSTRUCTION SEQUENCE**

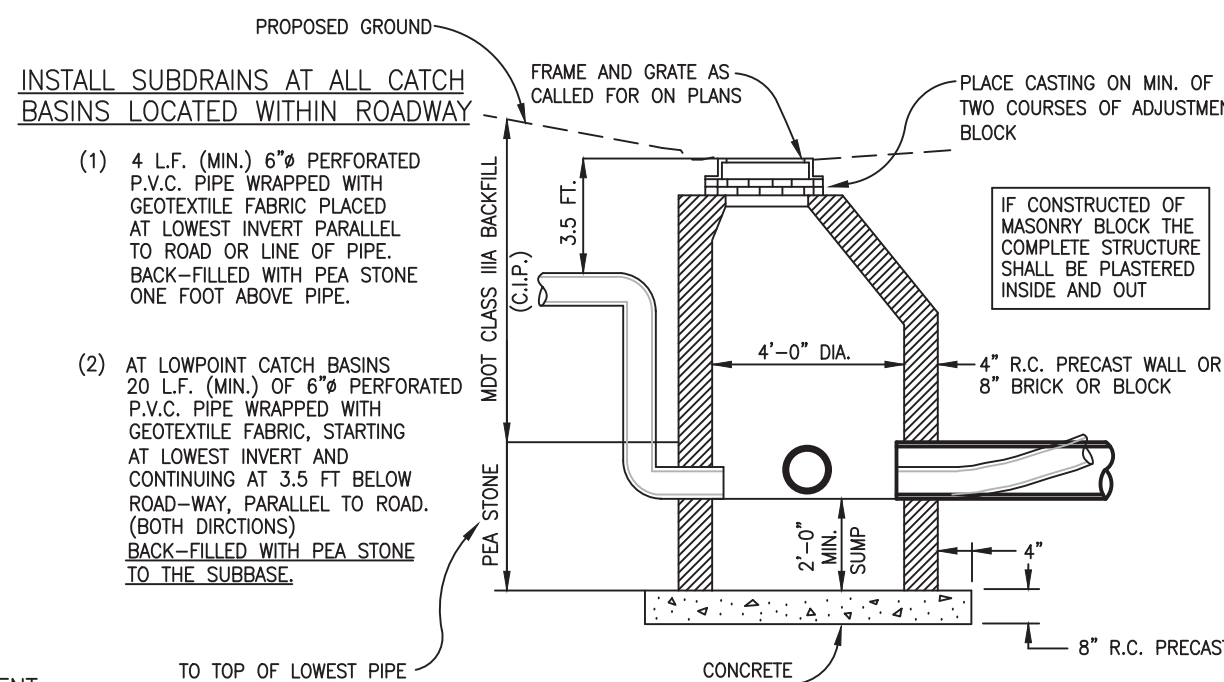
ACTIVITY	WEEKLY	MONTHLY	AS REQUIRED
MAINTAIN LANDSCAPING, REPLACE MULCH	X	X	X
CLEAN INLETS		X	X
COLLECT LITTER	X	X	X
SWEEP PARKING LOT		X	X

CONTROLS & MEASURES NARRATIVE

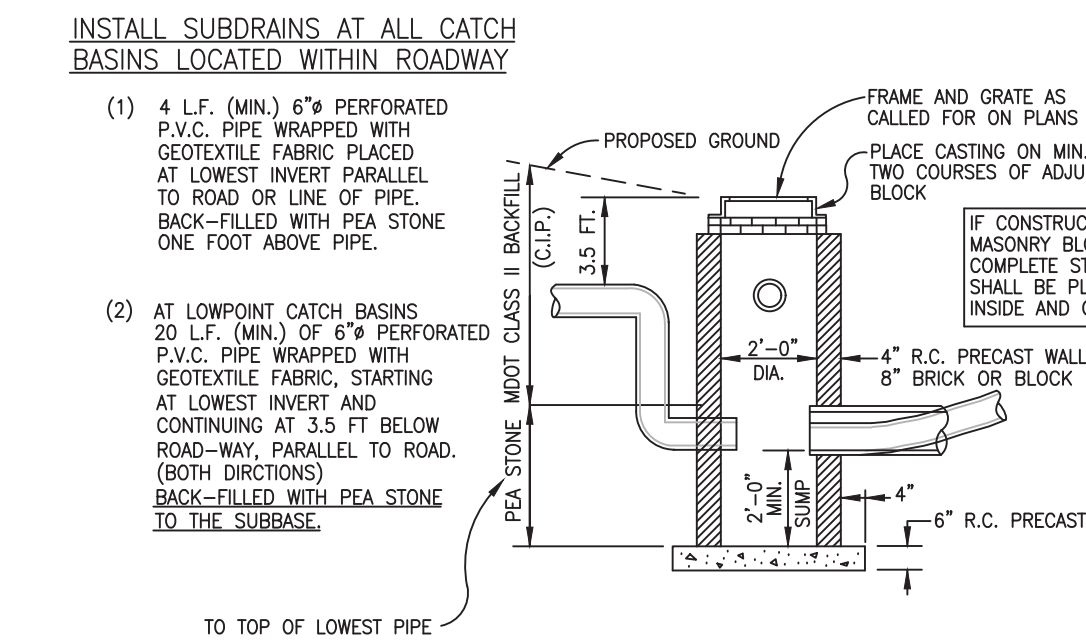
ACTIVITY	DESCRIPTION
MAINTAIN LANDSCAPING, REPLACE MULCH	COLLECT GRASS, TREE, AND SHRUB CLIPPINGS. DISPOSE IN APPROVED CONTAINER. REPLACE DEAD SOD, TREES AND SHRUBS.
CLEAN INLETS	REMOVE LITTER, SEDIMENT, AND DEBRIS. DISPOSE OF IN APPROVED LANDFILL.
COLLECT LITTER	DISPOSE OF WITH INLET DEBRIS.
SWEEP PARKING LOT	REMOVE MUD, DIRT, GREASE AND OIL WITH PERIODIC SWEEPING
DUST CONTROL	SPRINKLE WATER AS NEEDED



DETAIL	DIMENSIONS	LANE	CONCRETE CLASS	CONCRETE CLASS/INLET
F1	1'-0"	2'-0"	AS SHOWN	0.0610
F2	1'-0"	2'-0"	OMITTED	0.0610
F3	2'-0"	1'-0"	OMITTED	0.0610
F4	2'-0"	1'-0"	OMITTED	0.0610
F5	2'-0"	1'-0"	AS SHOWN	0.0737
F6	2'-0"	1'-0"	OMITTED	0.0737



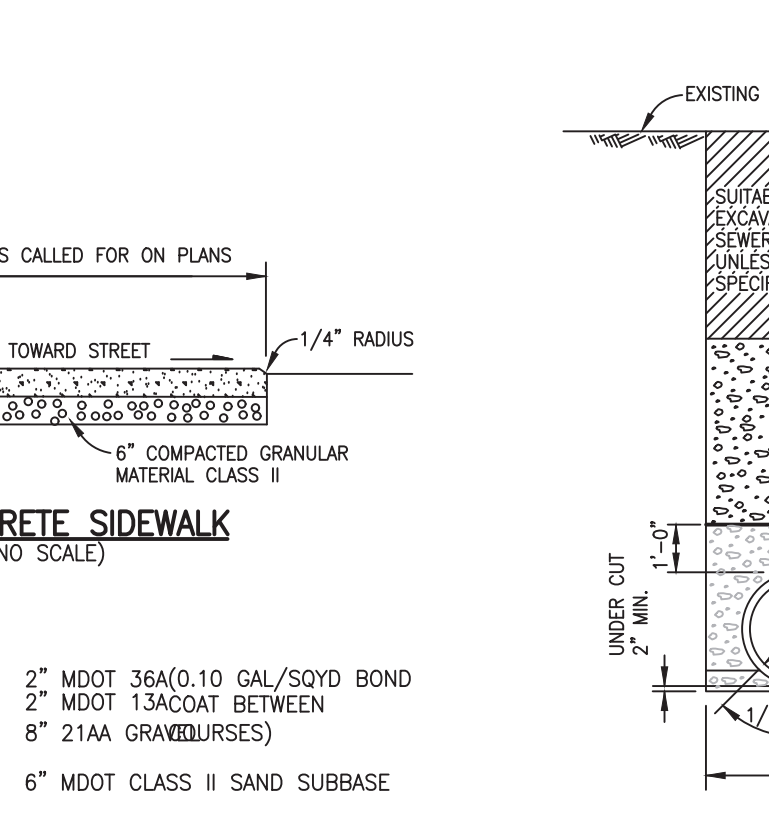
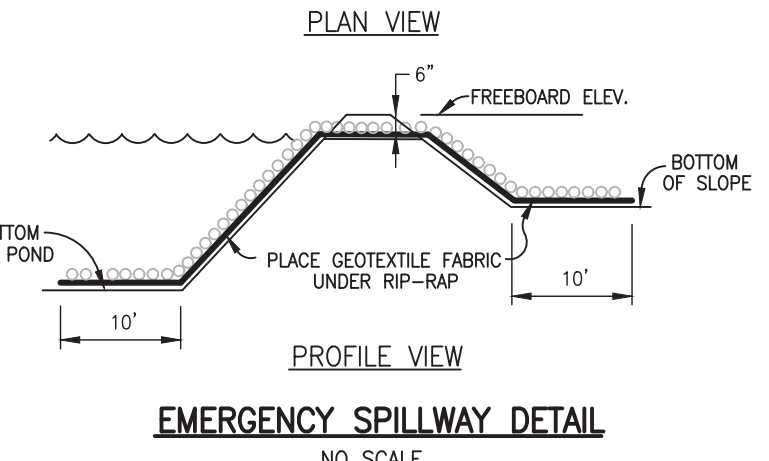
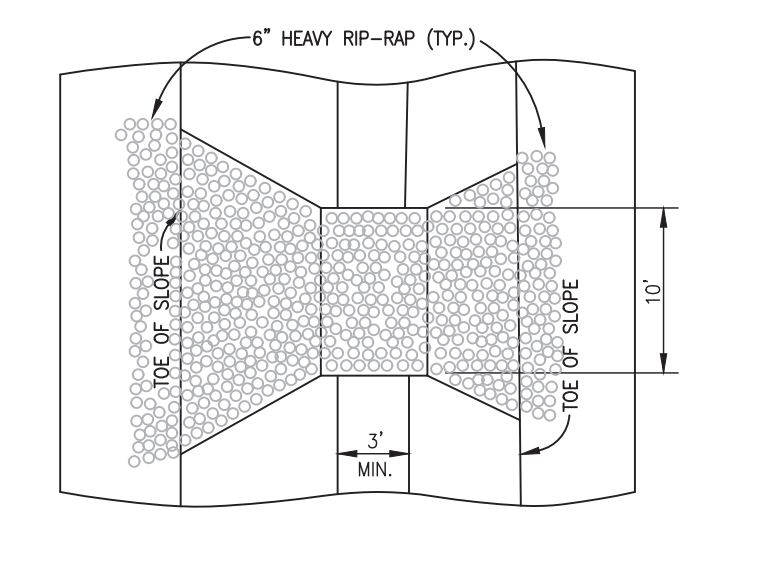
**4 FT. DIA. CATCH BASIN W/SUMP
NO SCALE**



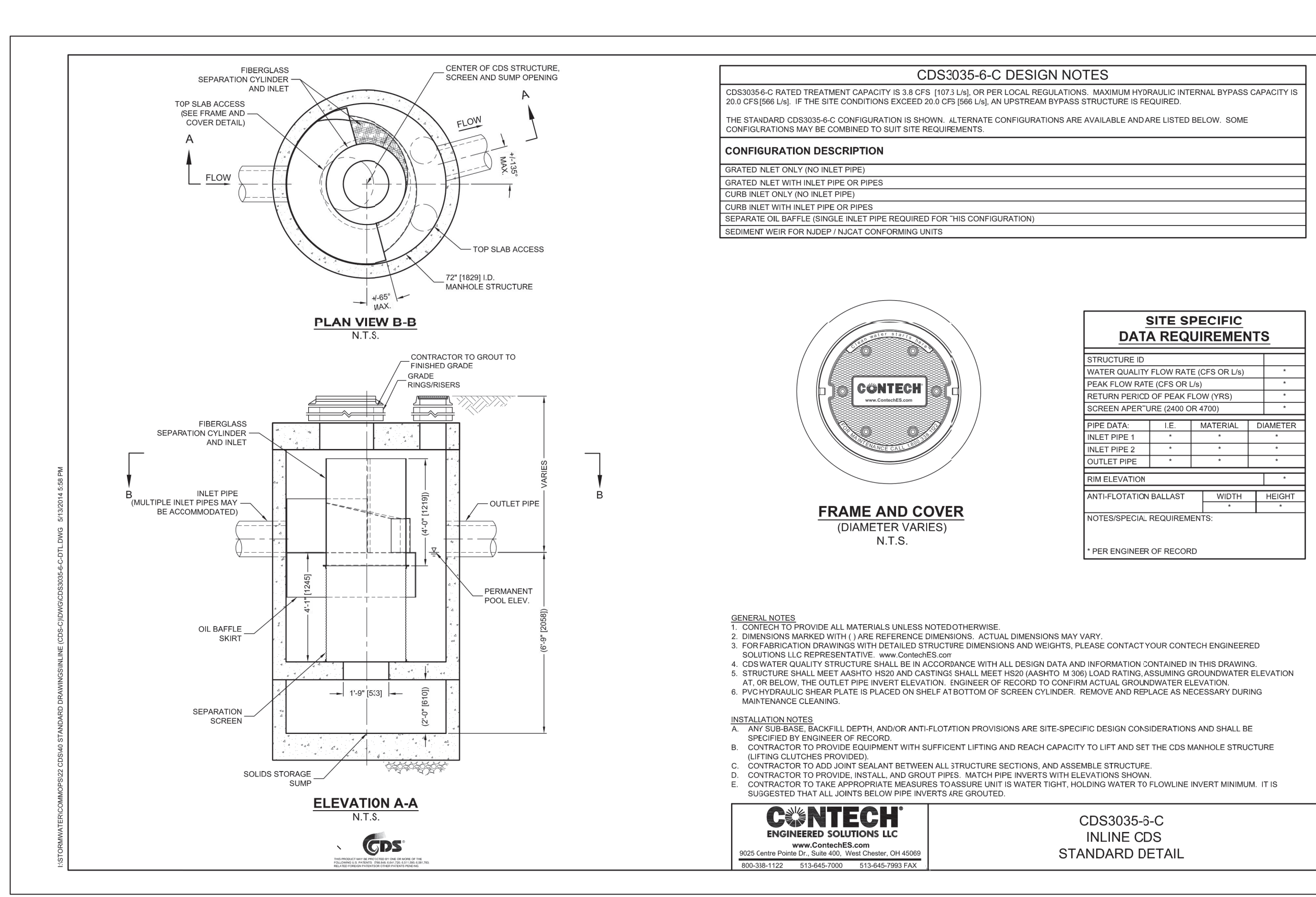
**2 FT. DIA. CATCH BASIN W/SUMP
NO SCALE**

STRUCTURE FRAMES & COVERS

COVER	TYPE	USE	MANUFACTURER OR EQUIV.		TYPE OF COVER OR GRATE
			EAST JORDAN	NENMHI	
A	MH	ALL	1120	R-1415	SANITARY-SELF SEALING STORM-VENTED
B	CB & INLET	TYPE B2 CURB	7066	R-3030-A	
K	CB & INLET	TYPE C & F CURB	7045	R-3031-B	FLAT GRATE WITH VERT. 4" OPEN THROAT
C	CB & INLET	VALLEY BARR	7066	R-3034-B	
D	CB & INLET	PARKING LOTS	1020-MI	R-2560-D	FLAT GRATE
E	CB & INLET	LANE AREA OR DITCH	1020-01		BEEHIVE GRATE 4" HIGH



**SEWER UNDER ROADBED OR WITHIN
INFLUENCE OF ROADBED
(NO SCALE)**



CDS3035-6-C DESIGN NOTES

CDS3035-6-C RATED THROUGH CAPACITY IS 3.8 CFS (TOTAL) OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY IS 20.0 CFS (66 GAL) IF THE SITE CONDITIONS EXCEED 20.0 CFS (66 GAL) AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

THE STANDARD CDS3035-6-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

(GRATED INLET ONLY (NO INLET PIPE))
 (GRATED INLET WITH INLET PIPE OR PIPES)
 (CURB INLET ONLY (NO INLET PIPE))
 (CURB INLET WITH INLET PIPE OR PIPES)
 (SEPARATE OIL BAFFLE SHOULDER INLET PIPE REQUIRED FOR THIS CONFIGURATION)
 (SEDIMENT WEIR FOR NDEP IN A/CAT CONFORMING UNITS)

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WATER QUALITY FLOW RATE (CFS OR L/S)	PEAK FLOW RATE (CFS OR L/S)	RETURN PERIOD OF PEAK FLOW (YRS)	SCREEN APERTURE (2400 OR 4700)

NOTES/SPECIAL REQUIREMENTS:
 * PER ENGINEER OF RECORD

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH (V) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contech.com
- FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contech.com
- CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET MANHOLE HIGH AND CASTINGS SHALL MEET HIGH (AS NOTED) AND MATCHING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
- FOR HYDRAULIC SHEAR RATE PLATE IS PLACED ON SHEAR BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

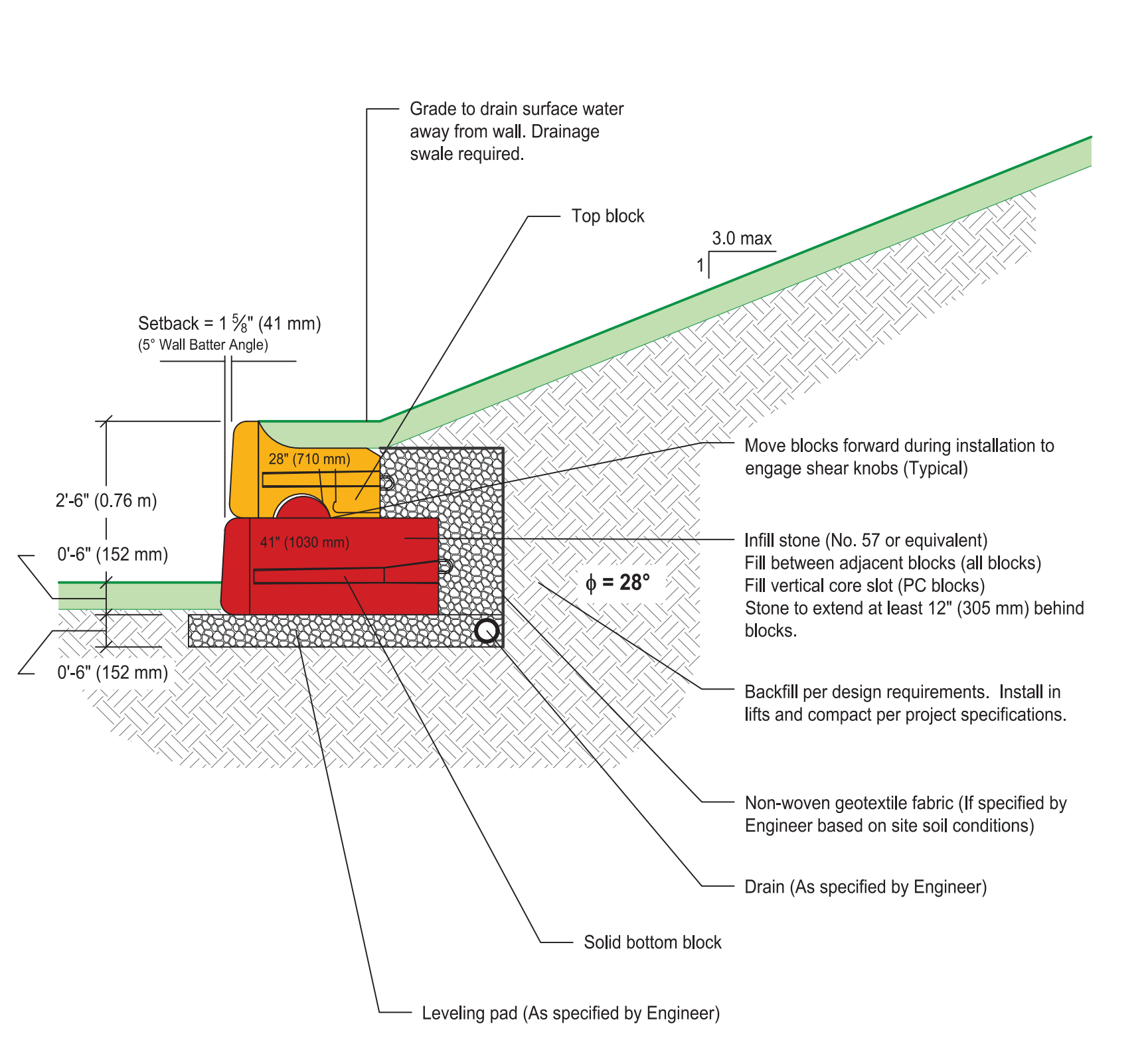
INSTALLATION NOTES

- ANY FIBERGLASS BACKFILL DEPTH AND/OR ANTI-FLOTATION PROVISIONS ARE SITE SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLY MATERIALS.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUP PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO AVOID OVERWATER TIGHT HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

φ = 28° | SILTY SAND OR CLAYEY SAND
LOAD CONDITION C | 1:2.5 BACK SLOPE, NO LIVE LOAD SURCHARGE, NO TOE SLOPE

2 BLOCK HIGH SECTION
 (1) 28" (710 mm) Block
 (1) 41" (1030 mm) Block

PRELIMINARY
 Professional Engineering Design
 Required for Construction

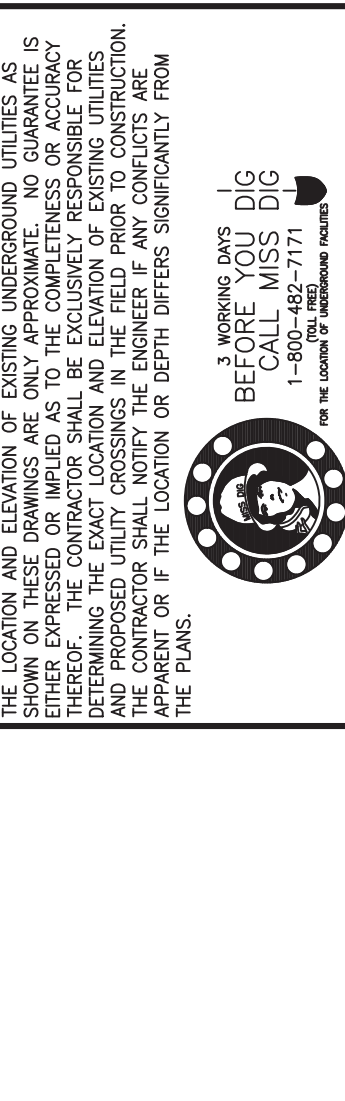


This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site. Final wall design must address both internal and external drainage and all modes of wall stability.

DESIGNED BY: C. Kruger
 APPROVED BY: J. Johnson
 DATE: June 10, 2015
 SHEET: 1 of 1

TITLE:
Preliminary Wall Section
 Silty Sand or Clayey Sand, φ = 28°
 1 : 2.5 Back Slope, No Live Load Surcharge, No Toe Slope
 FILE: C_28_B_41_36_cad.dwg

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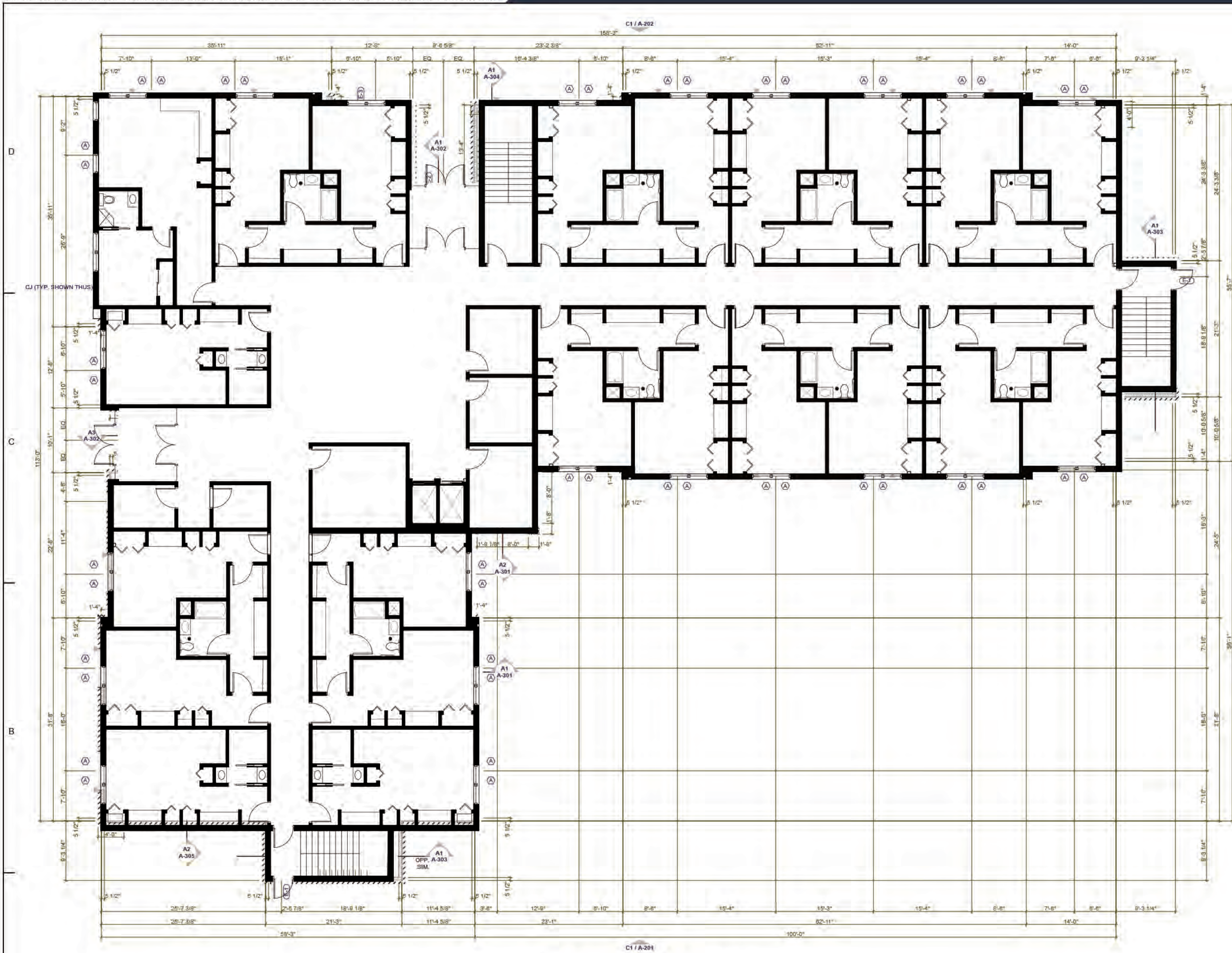
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 POWELL, OH 43065
 (666) 711-7766

CONSTRUCTION DETAILS

NO	BY	REVISION PER	DATE
1	ST	PER PLAN REVIEW	10-11-17
2	ST	PER PLAN REVIEW	9-18-17

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY:
 SCALE: NTS
 JOB NO. 17-348
 DATE: 8/30/17
 SHEET NO. 10



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

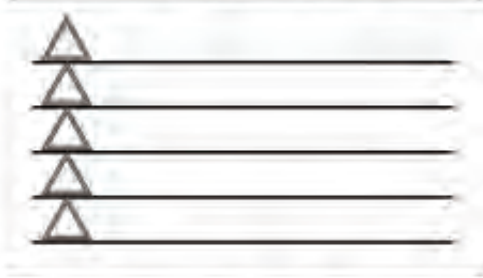


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SUBMITTED: 09/19/2017

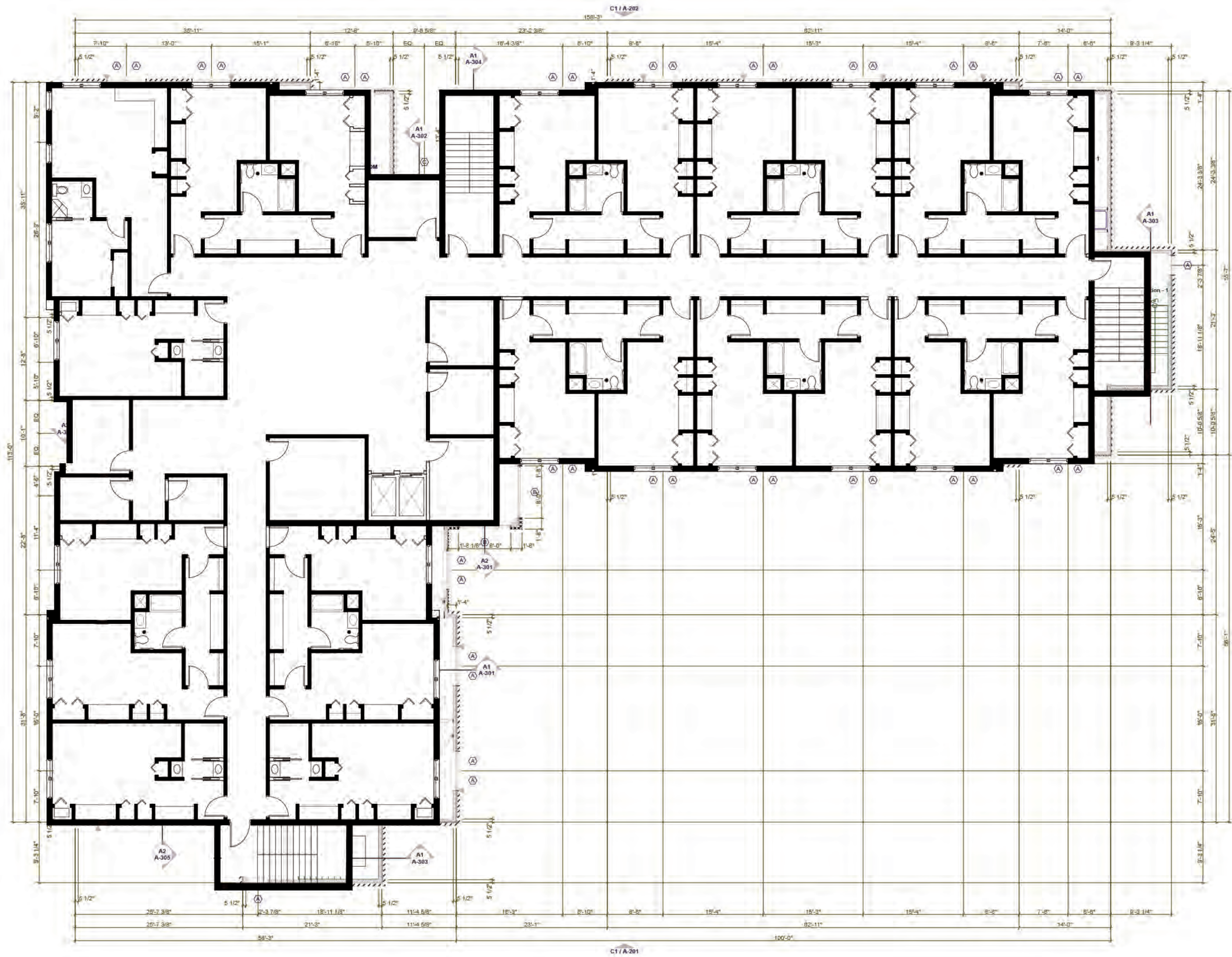


A-001

First Floor Plan

MKC JOB #: 17-055

9/19/2017 4:21 PM



SECOND & THIRD FLOOR PLAN
SCALE: 1/8" = 1'-0"



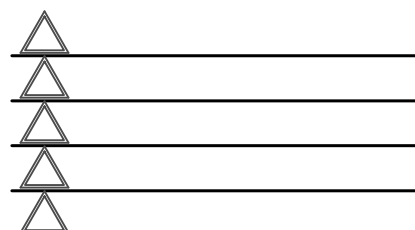
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CONSULTANTS

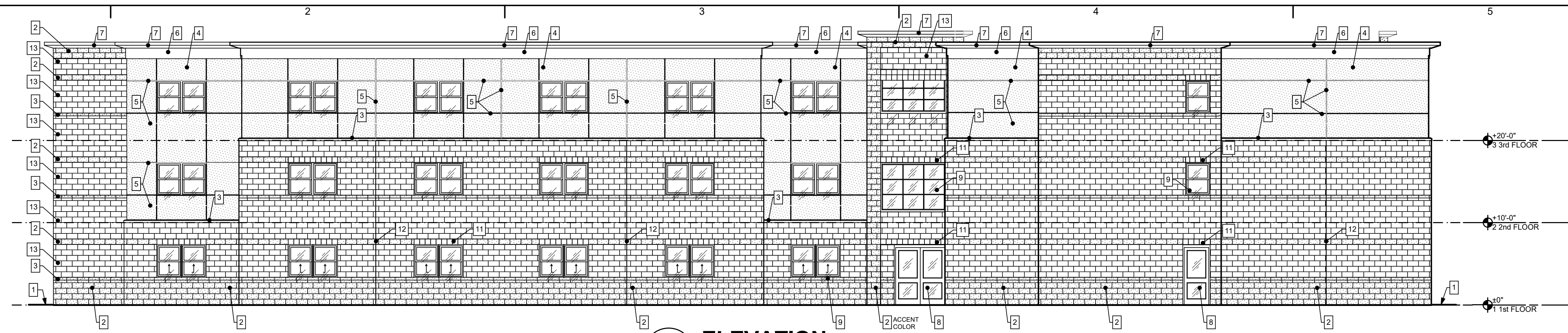
NEW RESIDENTIAL BUILDING AT
CLEARY UNIVERSITY
FOR
**UNIVERSITY HOUSING
SOLUTIONS**
HOWELL, MICHIGAN

SUBMITTED: 09/19/2017

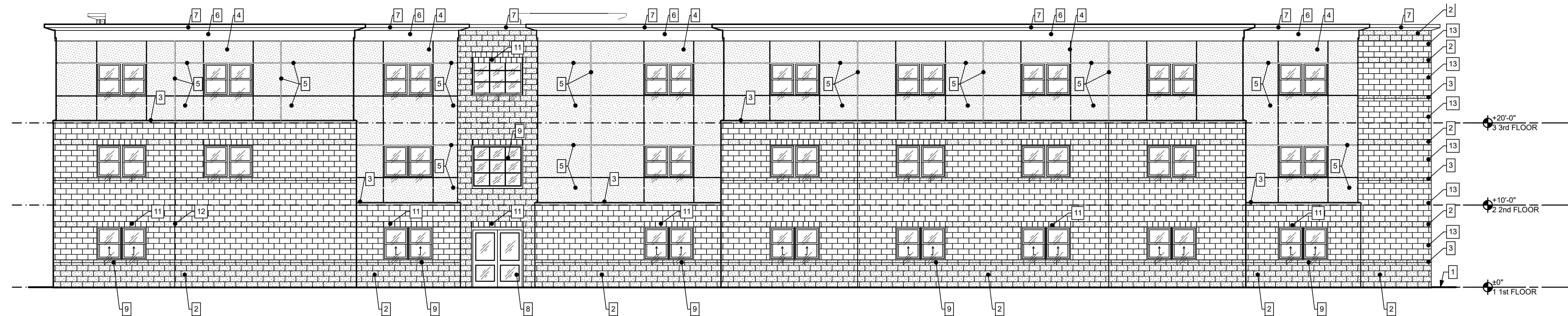


A-002

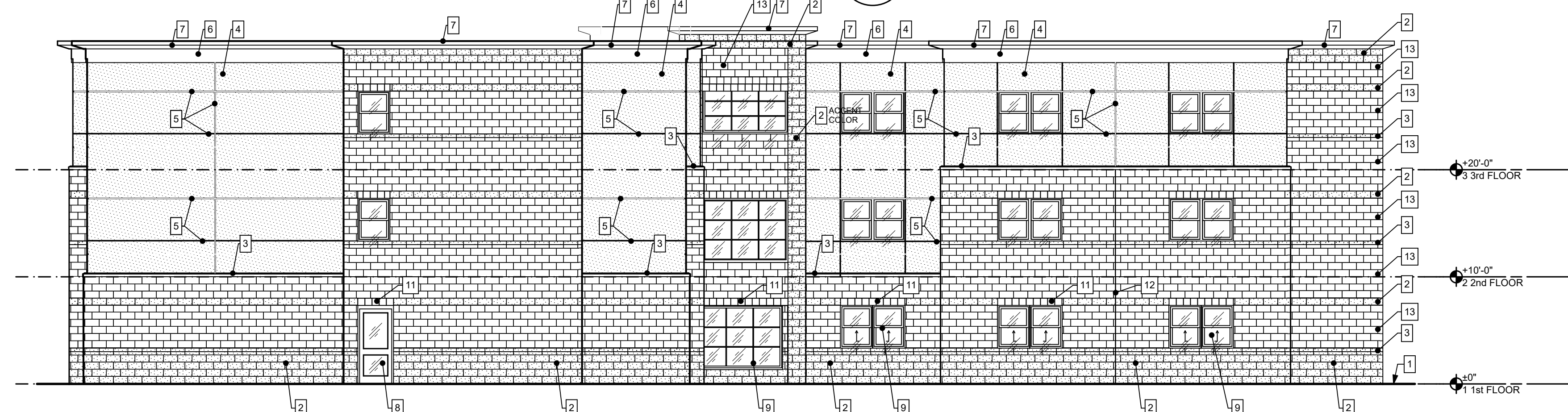
SECOND & THIRD FLOOR
PLANS
MKC JOB #: 17-055



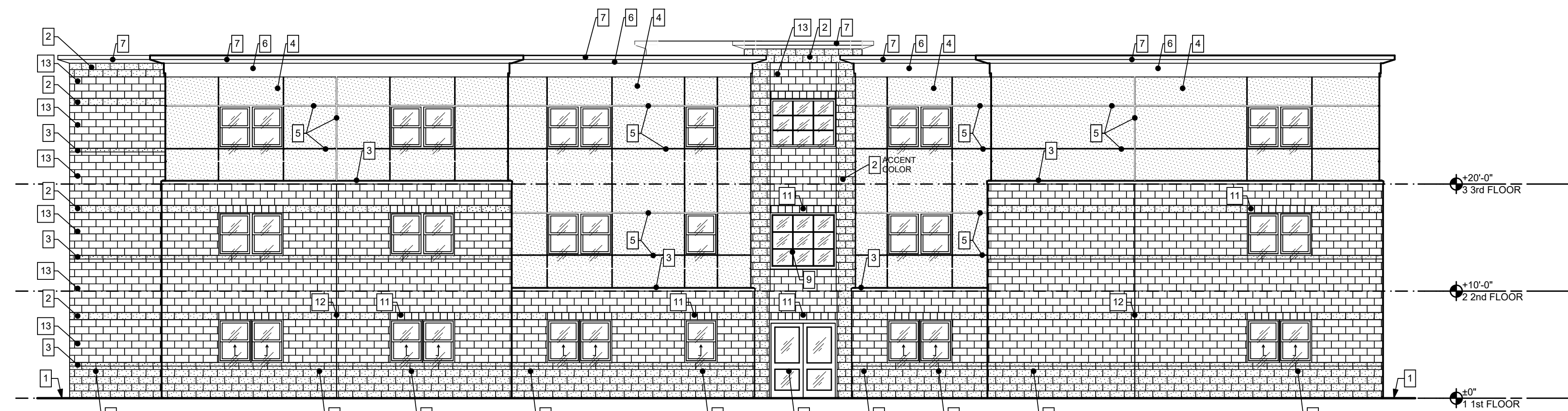
D1 ELEVATION
A-201 SCALE: 1/8" = 1'-0"



C1 ELEVATION
A-201 SCALE: 1/8" = 1'-0"



B1 ELEVATION
A-201 SCALE: 1/8" = 1'-0"



A1 ELEVATION
A-201 SCALE: 1/8" = 1'-0"

ELEVATIONS KEYNOTES:

1. FINISH GRADE
2. SPLIT FACE CONCRETE MASONRY UNITS
3. 4" H SPLIT FACE CMU SILL (ACCENT COLOR)
4. 1 1/2" EIFS SYSTEM ON DRAINAGE BOARD
5. 3/4" V GROOVE
6. METAL CLAD FRIEZE BOARD
7. METAL CLAD COPING
8. HOLLOW METAL DOOR AND FRAME
9. VINYL WINDOW
10. METAL DOWNSPOUT
11. SMOOTH FACE CONCRETE MASONRY HEADER
12. MASONRY CONTROL JOINT
13. "GRAND BLANC" GROUND FACED ARCHITECTURAL BURNISHED MASONRY

EXTERIOR ENVELOPE MATERIALS:

EIFS: 4,500 SF
SPLIT FACE BLOCK VENEER: 12,000 SF

BRIGHTON AREA FIRE DEPARTMENT COMMENTS:

- Building will be provided with an automatic sprinkler system in accordance with NFPA 13, or NFPA 13R. Plans will be submitted separately.
- The building address will be a minimum of 6" high letters of contrasting color which will be clearly visible from the street. Location will be submitted for approval.
- show knox box location next to door facing west parking lot. (south side of building)

DESIGN INTENT:

The building design is to mirror the existing building on the site. The footprint of the building will be the same but mirrored. The Owner wants the exterior building to match the existing building on the site. Existing building was designed as a compliment to the Johnson Center.

PRELIMINARY - NOT FOR CONSTRUCTION

ARCHITECT OF RECORD
BRIAN BAUER
EXPIRATION ###/##/##

MKC | ARCHITECTS

A: 90 Hidden Ravines Drive
Powell, OH 43065
P: 866(675)7584
www.mkcinc.com

CONSULTANTS

NEW RESIDENTIAL BUILDING AT CLEARY UNIVERSITY FOR UNIVERSITY HOUSING SOLUTIONS

HOWELL MICHIGAN

SUBMITTED: 10/01/2014

REVISIONS		
MARK	DATE	DESCRIPTION
△		
△		
△		

DRAWN BY: _____ PROJ. MGR: _____

SHEET CONTENT

Elevations

JOB NO. 14-095	SHEET A-201
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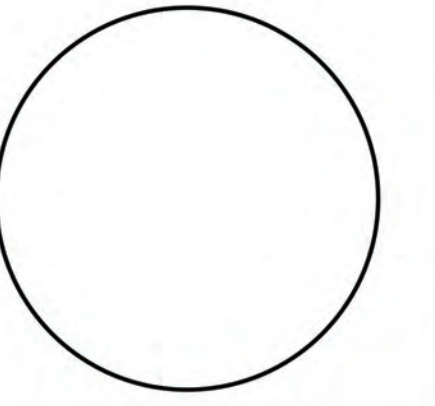


PROPOSED NORTH ELEVATION



PROPOSED SOUTH ELEVATION

PRELIMINARY - NOT FOR CONSTRUCTION



MKC | ARCHITECTS



A: 90 Hidden Ravines Drive
Powell, OH 43065
P: 866|675|7584
www.mkcinc.com

CONSULTANTS

**NEW RESIDENTIAL
BUILDING AT
CLEARY UNIVERSITY
FOR
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HOUSING
SOLUTIONS
HOWELL
MICHIGAN**

SUBMITTED: 10/01/2014

REVISIONS		
MARK	DATE	DESCRIPTION
△		
△		
△		
△		

DRAWN BY: _____ PROJ. MGR: _____

SHEET CONTENT


Renderings

JOB NO. 14-095 SHEET A-202



MEMO

TO: Honorable Members of the Genoa Charter Township Board
FROM: Greg Tatara, Utility Director
DATE: October 11th, 2017
RE: Resolution approving Utility Department offering Operational Assistance to Howell Township.

MANAGER REVIEW:  _____

.....

For consideration at tonight's Board Meeting is a resolution offering Genoa Charter Township's approval of the Utility Department providing assistance and advisement to Howell Township regarding operation of their sanitary sewer system. Over the past several months, we have been requested by Howell Township to help with lead location, plan interpretation, and to offer advice on recommendations made by their Operators. In mid-September we shared with all of the Boards the possibility of formalizing a working relationship with Howell Township for providing assistance. Therefore, based on feedback received and understanding the identified needs of Howell Township, we have developed an engagement letter with a defined scope of work, which if approved would allow the Utility Department to charge for assistance offered to Howell Township. By approving the attached resolution, Genoa Charter Township is remaining in compliance with the terms of the existing joint system operations agreement and authorizing our Department to present Howell Township with the attached engagement letter. I will be present at the October 16th Board Meeting to answer any questions Board Members may have.

GENOA CHARTER TOWNSHIP

At a meeting of the GENOA CHARTER TOWNSHIP BOARD OF TRUSTEES (the "Township") held in Genoa Township, Michigan, on October 16, 2017 at 6:30 p.m. local time, there were:

PRESENT: _____

ABSENT: _____

The following preamble and resolution were offered by _____ and seconded by _____:

Resolution Approving Sanitary Sewer Operations Assistance and Consultation to Howell Township

WHEREAS, the Township adopted and entered into an Amended and Restated Utility Services Agreement with the MHOG Sewer and Water Authority and the Genoa-Oceola Sewer and Water Authority on February 16, 2016 (Agreement); and,

WHEREAS, Howell Township has Requested the Township Utility Department to Provide Limited Consulting and Oversight Services for their Wastewater System and Operations Firm; and,

WHEREAS, Section 5.7.3 of the Agreement States that prior to providing such utility services to the requesting third party, "the governing board of each system will need to approve by resolution the services that will be performed, the costs that will be charged to such third party and the manner in which the staff and legal costs associated with providing utility services to such third party will be paid"; and,

WHEREAS, in accordance with the attached engagement letter it is anticipated that less than 200 hours of staff time will be allocated the Howell Township Wastewater System under the attached scope, therefore the Township Utility Department is capable of performing the Scope of Services without additional staff; and,

WHEREAS, revenue from Howell Township will off-set costs per the current allocation percentage to each of the participating sewer and or water systems.

NOW, THEREFORE, BE IT RESOLVED BY THE AUTHORITY AS FOLLOWS:

1. Offering Howell Township the Engagement Letter Presented in Schedule A is approved.
2. All actions taken to date by the Township's Officers in the name of and on behalf of the Authority in connection with the foregoing resolution, are authorized, approved, ratified and confirmed in all respects.

A vote on the foregoing resolution was taken and was as follows:

Yes: _____
No: _____
Abstain: _____

Clerk's Certificate

The undersigned, being the duly qualified and acting Clerk of Genoa Charter Township, hereby certifies that (1) the foregoing is a true and complete copy of a resolution duly adopted by the Board of Genoa Township at a meeting at which a quorum was present and remained throughout, (2) the original thereof is on file in the records of Genoa Charter Township, (3) the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with the Open Meetings Act (Act No. 267, Public Acts of Michigan 1976, as amended) and (4) minutes of such meeting were kept and will be or have been made available as required thereby.

Clerk, Genoa Charter Township

Dated: October 16, 2017

Exhibit A
Engagement Letter



MHOG Utility Department

2911 Dorr Road
Brighton, MI 48116
810-227-5225
www.mhog.org

October 18, 2017

Mr. Jonathan Hohenstein
Treasurer, Howell Township
3525 Byron Road
Howell, MI 48843

Subject: Engagement Letter for Sanitary Sewer System Advisory Services

Dear Mr. Hohenstein,

After Howell Township reached out to the MHOG Utility Department to discuss Howell Township's present operational activities, we discuss the manner in which the MHOG Utility Department performs its sanitary sewer system maintenance and operations. We were asked if our department could assess Howell Township's current operations and if there was areas that could be improved on. I have met with our staff as well the governing boards of the MHOG Utility Department. As a result of these discussions, please find accept this correspondence as the MHOG (aka Genoa) Utility Departments engagement letter to provide sanitary sewer system advisory services to Howell Township. A general summary of our scope of services is provided below. In offering this engagement letter, we are acknowledging that resolutions were adopted by Genoa Charter Township, the MHOG Sewer and Water Authority, and the Genoa-Oceola Sewer and Water Authority approving of this Scope of Services. Any deviation from this scope or increase in services will require approval of the above listed governmental units.

Scope of Services:

Task 1 – Severn Trent Contract Review

- Review the Severn Trent contract and provide Howell Township with a list of all scope items they should be providing. Of key importance will be reviewing specifically how they are supposed to take care of the collection system, designated cleaning, MISS DIG staking, etc. By having a thorough listing of the items they are to provide for operations and maintenance, we can better advise Howell Township on services and activities that should be completed as part of their existing contract or whether certain services and activities are outside their scope that should be handled by another party.

Task 2 – Collection System Recommendations

- Inspect the collection system and using historical knowledge, make recommendations for collection system maintenance within the scope of the Severn Trent contract. These recommendations would include cleaning of pump stations and gravity sewer and testing of alarm systems. We have already made some recommendations of areas requiring cleaning, however, we would evaluate further areas for cleaning and maintenance.

Task 3 – GIS Data

- A key requirement for proper MISS DIG mapping, collection system maintenance, work order generation and tracking, and overall system operation is developing a system map that shows all manholes, force mains, pump stations, structures, outfalls, and connections. We understand there may be some digital data available through Livingston County or Spicer. We will prepare a Request for Proposal for firms to provide GIS assistance to Howell Township to take and digitize all plans, link plans electronically, and create a GIS spatial database of the collection system components, such as manholes, gravity mains, and pump stations. As part of creating the database, we will work with the GIS consulting firm to develop the schema for each system component, and work with Howell Township to identify what attributes, such as pipe sizes, material and installation dates, should be populated.

Task 4 – NPDES Permit Review

- We understand in June of 2016 Howell Township applied for a new NPDES permit and that this permit application is in the pre-public comment period. We will review the draft NPDES permit when it becomes available in public comment period and assist the township in responding to the MDEQ requirements in the permit before it becomes finalized.

Task 5 – Operational Meeting Assistance

- The fifth task we propose is to assist Howell Township in answering questions and reviewing operator recommendations for plant and collection system operation during the Township’s monthly operations meetings and as requested by Howell Township. We also may attend Board Meetings to address board questions on an as needed basis.

Compensation:

We have developed the following hourly rates which are inclusive of current employee salaries, benefits, and administrative costs. These rates are valid through 3/31/18.

Utility Director: \$80.50/hr.

Deputy Director: \$61.75/hr.

Engineer: \$53.50/hr.

Lead Operator: \$50.00/hr.

Operator: \$40.00/hr.

For the above tasks will complete the tasks on a time and material basis. However for the purpose of estimating the level of effort, the budgetary numbers can be used for completion of the scope:

Task 1 - \$500

Task 2 - \$2,500 – \$3,500

Task 3 - \$2,500

Task 4 - \$500

Task 5 – T&M at above listed rates.

Termination of Agreement:

This agreement may be terminated by either party with 30 days' notice. If the termination occurs mid task completion, Howell Township agrees to pay for services rendered up to the point of termination notice.

Valediction:

Should you have any questions or require additional information, please contact me at your earliest convenience.

Respectfully Submitted,

Greg Tatara
Utility Director

Accepted:

Howell Township Representative

Date: _____

Livingston County Road Commission (LCRC)
COST AGREEMENT FOR TRAFFIC SIGNAL CONTROL

This agreement is terminable on thirty days notice by any party

Location: Latson Road / Hampton Ridge Blvd / Meijer
 Township: Genoa

Plan: n/a
 Job No.: n/a

The undersigned hereby agree to participate in the cost of construction and maintenance of the proposed traffic signal control at the location described above. Details of installation are shown on attached plans prepared by OHM and dated 9/28/2017. Participation shall be based on the percentage of costs shown below. Maintenance costs relate to any replacement parts and/or repairs that are necessary for proper operation, including but not limited to vandalism and crash-related damage. Title to equipment shall remain with the Livingston County Road Commission, and the proper credit of salvaged value shall be issued to all parties upon removal of the equipment, in proportion to their share of original cost.

Participation for Traffic Signal Control

AGENCY	Construction		Maintenance	
	<u>Percent</u>	<u>Est. Cost</u>	<u>Percent</u>	<u>Est. Cost/Yr</u>
LCRC	50%	\$ 52,775	50%	\$ 500
Hampton Ridge	0%	\$ 0	25%	\$ 250
Meijer, Inc.	0%	\$ 0	25%	\$ 250
Genoa Township	50%	\$ 52,775	0%	\$ 0
Total	100%	\$105,550	100%	\$ 1,000

It is further agreed that the agency responsible for power consumption costs shall be:

- Livingston County Road Commission

Approved Hampton Ridge Condominium Association By: _____ Date: _____ (Signature) _____ (Name and title, typed)	Approved Meijer, Inc. By: _____ Date: _____ (Signature) _____ (Name and title, typed)
Approved Genoa Township By: _____ Date: _____ (Signature) _____ (Name and title, typed)	Approved Livingston County Road Commission By: _____ Date: _____ (Signature) _____ (Name and title, typed)

Hampton Ridge/Meijer Traffic Signal Cost Update

Project Details and Costs		LCRC	Genoa Twp.	Meijer/Hampton Ridge
Design		100%	0%	0%
Admin/Testing/Inspection		100%	0%	0%
Maintenance		50%	0%	50% (25% each)
Hampton Road	\$ 101,442.50	0%	100%	0%
Hampton Signal	\$ 105,550.00	50%	50%	0%
Figurski	Deferred	Deferred	Deferred	Deferred
Contingency	\$ 13,560.13	0%	100%	0%
Total Costs	\$ 220,552.63	Design/Admin + \$52,775.00	167,777.63	Maintenance + sprinkler removal

From the desk of Polly Skolarus, Clerk

Petitions

Every now and then you may be approached by someone asking you to sign a petition. It may be to place a question on a ballot or approve a candidate for office. This action is allowed by law and is encouraged with the creation of special assessment districts. Before you sign, please be sure to read the complete petition and assure yourself that it is something that you believe in. Once your signature is on a petition it may not be removed.

The township recently received petitions from residents of one of our lake districts asking for an aquatic weed control project. More than 60% of the residents who lived on the lake signed the petition. When the first public hearing was scheduled 19 families asked to rescind or remove their signature from the petition. Our Township attorney advised the board that under a Supreme Court decision from 1959, a person may not rescind after their signature is added to a petition.

Another Invasive Species Arrives in Michigan

The red swamp crayfish is bright red with raised bumps on the back and claws. They build deep burrows into our lakes and streams and cause shoreline erosion. The only good thing about them is that they are delicious and you can cook them up just as you would lobster.

The red swamp crayfish compete with native crayfish and prey on small fish and fish eggs. Most recent sightings occurred in a small retention pond in Novi where traps collected 699 crayfish between July 17th and July 26th 2017. Crayfish were then found in Farmington Hills and Livonia. The red swamp crayfish spread quickly and lay as many as 600 eggs. These very aggressive invaders are difficult to eradicate because they burrow down so deep in the ground.

DNR officials are trying to control the population. So if you see what looks like a tiny lobster, maybe at a lake, or just trying to cross the road, take a picture, trap it, so it doesn't spread to new water bodies (but be careful: like most crayfish, they do pinch.) If you do trap one the DNR recommends putting them in your freezer. Yes, you may consume them, but it is important to emphasize that it is not legal to possess live red swamp crayfish. The DNR doesn't want people to catch them live and potentially expand their range by taking them to another lake or stream. For more information, check out the DNR site at http://www.michigan.gov/documents/dnr/InvasiveSpeciesAlert-RedSwampCrayfish_494188_7.pdf.



▼ Red Swamp Crayfish



Needlecast disease

•



Phomopsis fungus disease

A New Infestation Hits Michigan

Over the last 60 years we have seen the decline of Michigan's trees. Just observe the trees along our roadways that are dead or dying. Elm and chestnut trees have disappeared. Beech bark disease may wipe out our beech trees. Half the oak trees have disappeared from 45,000 acre study done the by University of Michigan. All this is a result of acid rain according to experts.

Today Michigan's pine and spruce trees are on the decline. Perhaps you have noticed that your spruce and pine trees are no longer looking healthy. The culprit is more than likely "needle-cast" which may cause the inner needles to die off, leaving only green tips on branches. The brown needles will have tiny black dots, which are evidence of the fungus. You can spray with a fungicide in early spring just as the needles are emerging and again several weeks later to prevent infection. This disease is usually worse where air circulation is poor. Opening up for better airflow may also help reduce this disease. The second fungus called Phomopsis has been around for a long time and infected small seedlings but not more mature trees. Now it has its eye on larger trees. It starts out with dead branches on lower limbs and then moves on up the trunk finally killing the entire tree.

Blue, white and Norway spruce are not native to Michigan and are susceptible to the disease and scientists are trying to determine why this is happening but do not have any answers. Homeowners need to be aware that Michigan's spruce and pine trees are dying. Michigan State Extension says a couple of things can be done:

- If you are planting new spruce trees, don't group them together as this allows easy contamination from one to another.
- If you have a tree that is infected near a healthy tree, remove the infected tree so that the disease is not transmitted to the healthy tree.
- If you spot dead branches, you should prune them ... and get rid of lower limbs to help with air circulation.
- If you're not sure what's going on with your tree call an expert. Not all spruce trees are diseased. Some may be dying of natural causes.

References: Michigan State University Extension
Karleen Shafer, Arborist

From the desk of Robin Hunt, Treasurer

Did you know?

- Plastic grocery bags or black bags should not be used to collect your recyclables
- The township provides one free sticker each year so that residents may dispose of dishwashers, refrigerators, old televisions, mattresses, etc.
- Call the township if Green for Life is not picking up your refuse or recyclables

Summer Tax bills information:

- Mailed June 30th
- Due between July 1st and September 14th
- 1% interest fee if paid after September 14th
Additional 1% will be applied the first of each month till paid.
- Payable to Genoa Twp. Till February 28th.
- March 1st tax bill are payable at the Livingston County Treasurer
- County will charge 1% interest per month and 4% administration fee

Winter Tax Bills information:

- Mailed November 30th
- Due between December 1st and February 28th
- Payable to Genoa Twp. Till February 28th
- March 1st tax bill are payable at the Livingston County Treasurer
- County will charge 1% interest per month and 4% administration fee

Things to remember:

- Partial payments can be made at Genoa Twp. until February 28th on Summer or Winter taxes. Payments can be made as often as you like and in any dollar amount.
- Tax payments can be made at the Township office by **cash or check**, Mon-Fri. 9:00am to 5:00pm
 - A. By check mailed to: Genoa Township 2911 Dorr Rd., Brighton, MI 48116
*** POSTMARKS ARE NOT ACCEPTED.**
 - B. By check placed in the drop box located at the Township Hall.
 - C. **Credit card and electronic check payments can ONLY BE MADE ONLINE at www.genoa.org**
 - * 3% convenience fee for credit card payments
 - * \$3.00 fee for electronic check payments
- If you have any questions about your taxes, please contact the township Treasurer's office at 810-227-5225
- Genoa Charter Township has a wonderful website full of information www.genoa.org
- For more detailed information see the back of your tax bill.

Addresses and phone numbers to remember:

Genoa Charter Township
2911 Dorr Rd.
Brighton, MI 48116
810-227-5225

Livingston County Treasurer
200 E. Grand River
Howell, MI 48843
517-546-7010