

**GENOA CHARTER TOWNSHIP
BOARD OF TRUSTEES
REGULAR MEETING
APRIL 16, 2012
6:30 p.m.**

AGENDA

Call to Order:

Pledge of Allegiance:

Call to the Public:

Approval of Consent Agenda:

1. Payment of Bills.
2. Request to approve minutes: April 2, 2012

Approval of Regular Agenda:

3. Review of special use application, impact assessment, and site plan for a proposed 4,894 sq. ft. oil change facility located at 2798 E. Grand River, Howell, Sec. 6., petitioned by M. Krug Investments.
 - A. Approval of Special Use Application
 - B. Approval of Environmental Impact Assessment
 - C. Approval of Site Plan
4. Review of impact assessment for a proposed 2,659.5 sq. ft. addition to the existing Amerigas Propane building located at 2400 Dorr Road, Howell, Sec. 15, petitioned by American Excavating, L.L.C.
 - A. Approval of Environmental Impact Assessment
6. Introduction of proposed amendment to the Township Litter Ordinance and request to set public hearing to consider adoption for the May 7, 2012 regular meeting.

Correspondence
Member Discussion
Adjournment

CHECK REGISTERS FOR TOWNSHIP BOARD MEETING

DATE : April 16, 2012

TOWNSHIP GENERAL EXPENSES: Thru April 16, 2012	\$112,162.23
April 13, 2012 Bi Weekly Payroll	\$67,679.91
OPERATING EXPENSES: Thru April 16, 2012	\$344,810.21
TOTAL:	<u>\$524,652.35</u>

<u>Check Number</u>	<u>Vendor No</u>	<u>Vendor Name</u>	<u>Check Date</u>	<u>Check Amount</u>
28405	Clearwat	Clearwater Systems	03/29/2012	56.00
28406	ETNA SUP	Etna Supply Company	03/29/2012	115.00
28407	LANGWOR	Langworthy Strader Leblanc	03/29/2012	3,615.48
28408	MICHAS	Michigan Assoc. of Planning	03/29/2012	305.00
28409	PETTYCAS	Petty Cash	03/29/2012	191.07
28410	PITNEYBO	Pitney Bowes, Inc.	03/29/2012	225.75
28411	SIGNWRKS	Sign Works	03/29/2012	525.00
28412	BHIM	BHIM, INC	04/02/2012	14,930.83
28413	LivCTrea	Livingston County Treasurer	04/02/2012	5,308.90
28414	Dillard	Dave Dillard	04/04/2012	216.00
28415	CONTINEN	Continental Linen Service	04/04/2012	81.54
28416	DTE LAKE	DTE Energy	04/04/2012	1,058.67
28417	Duncan	Duncan Disposal Systems	04/04/2012	76,964.40
28418	GANNETT	Livingston Press & Argus	04/04/2012	277.60
28419	LivCTrea	Livingston County Treasurer	04/04/2012	1,265.52
28420	Perfect	Perfect Maintenance Cleaning	04/04/2012	1,093.75
28421	Administ	Total Administrative Services	04/13/2012	930.72
28422	Equitabl	Equivest Unit Annuity Lock Box	04/13/2012	905.00
28423	AMER IMA	Applied Imaging	04/11/2012	1,009.49
28424	AmerAqua	American Aqua	04/11/2012	101.25
28425	Clearwat	Clearwater Systems	04/11/2012	42.00
28426	COOPERST	Cooper's Turf Management LLC	04/11/2012	445.00
28427	ETNA SUP	Etna Supply Company	04/11/2012	96.94
28428	MASTER M	Master Media Supply	04/11/2012	399.27
28429	Net serv	Network Services Group, L.L.C.	04/11/2012	369.00
28430	ProPet	ProPet Distributors, Inc.	04/11/2012	172.90
28431	Simmons	Bill Simmons	04/11/2012	624.00
28432	STMIB&LA	STATE OF MICHIGAN	04/11/2012	180.00
28433	CARDM	Chase Card Services	04/11/2012	656.15

Report Total: 112,162.23

Accounts Payable
Computer Check Register

Genoa Township

2911 Dorr Road
Brighton, MI 48116

(810) 227-5225

User: diane

Printed: 04/05/2012 - 12:46

Bank Account: 101CH

Check	Vendor No	Vendor Name	Date	Invoice No	Amount
28421	Administ	Total Administrative Services	04/13/2012		930.72
			Check 28421 Total:		930.72
10263	AETNA LI	Aetna Life Insurance & Annuity	04/13/2012		25.00
			Check 10263 Total:		25.00
10264	EFT-FED	EFT- Federal Payroll Tax	04/13/2012		6,948.28 2,683.63 3,961.51 926.48 926.48
			Check 10264 Total:		15,446.38
10265	EFT-PENS	EFT- Payroll Pens Ln Pyts	04/13/2012		1,424.25
			Check 10265 Total:		1,424.25
28422	Equitabl	Equivest Unit Annuity Lock Box	04/13/2012		905.00
			Check 28422 Total:		905.00
10266	FIRST NA	First National Bank	04/13/2012		300.00 2,725.00 45,923.56

Check 10266 Total:

48,948.56

Report Total:

67,679.91

**First National
Direct Deposit
APRIL 13, 2012
Bi-Weekly Payroll**

<u>Employee Name</u>	<u>Debit Amount</u>	<u>Credit Amount</u>
Genoa Township	\$48,948.56	
Aaron Korpela		\$1,009.43
Adam Van Tassell		\$1,127.86
Alex Chimpouras		\$1,913.47
Amy Ruthig		\$1,009.12
Angela Williams		\$449.53
Caitlin Nims		\$1,102.34
Carol Hanus		\$1,216.50
Craig Bunkoske		\$1,601.97
Daniel Schlack		\$1,203.63
Dave Estrada		\$1,575.65
David Miller		\$1,906.53
Deborah Rojewski		\$1,612.06
Diane Zerby		\$686.73
Duane Chatterson		\$1,671.42
Greg Tatara		\$2,531.26
Jacob Mitchell		\$805.14
James Aulette		\$1,708.65
Jeffrey Meyers		\$1,200.95
Jenifer Kern		\$574.84
Joe Szabelski		\$0.00
Jonathan Morton		\$888.12
Judith Smith		\$1,218.57
Karen J. Saari		\$994.64
Kelly VanMarter		\$2,085.96
Kimberly MacLeod		\$918.19
Kristen Sapienza		\$293.66
Kyle Mitchell		\$928.36
Laura Mroczka		\$1,714.50
Martin Reich		\$1,683.29
Michael Archinal		\$2,973.79
Renee Gray		\$1,061.11
Richard Bigham		\$1,725.05
Robin Hunt		\$1,373.06
Scott Lowe		\$1,224.34
Steven Anderson		\$1,700.54
Susan Sitner		\$334.82
Tammy Lindberg		\$1,003.65
Tesha Humphriss		\$1,919.83
Total Deposit		\$48,948.56

#595 PINE CREEK W/S FUND
Payment of Bills
March 23 through April 13, 2012

Type	Date	Num	Name	Memo	Amount
Check	04/09/2012	2091	City of Brighton	Acct 003054-000 Jan - March 2012	-33,457.51
TOTAL					-33,457.51

#593 LAKE EDGEWOOD W/S FUND
Payment of Bills
March 23 through April 13, 2012

Type	Date	Num	Name	Memo	Amount
Check	03/28/2012	2140	Brighton Analytical L.L.C.	Inv #'s 0312-76295 & 0312-76276	-371.00
Check	03/28/2012	2141	Cole-Parmer	Inv 8043905	-82.04
Check	04/04/2012	2142	DTE Energy	Service from Feb 28 - March 29, 12	-7,786.93
Check	04/09/2012	2143	Charter Township of Brighton	Davita Dialysis Center Jan - March, 2012	-802.50
Check	04/09/2012	2144	City Of Brighton	Northstar #1 & 2/Lake Edge 1/1 - 3/31/12	-17,143.62
Check	04/12/2012	2145	Brighton Analytical L.L.C.	Inv #'s 0312-76391 & 76482	-154.00
Check	04/12/2012	2146	PVS NOLWOOD CHEMICALS, INC	Inv 364860	-1,172.00
TOTAL					-27,512.09

592 OAK POINTE WATER/SEWER FUND
Payment of Bills
March 23 through April 13, 2012

Type	Date	Num	Name	Memo	Amount
Check	03/28/2012	2344	BRIGHTON ANALYTICAL, LLC	Inv 0312-76275	-134.00
Check	03/28/2012	2345	Genoa Township G/O New User Fund	Re-pay loan - audit 2011-2012 K. Palka	-250,000.00
Check	03/28/2012	2346	HACH Company	Inv 7663144	-184.05
Check	03/28/2012	2347	HOWELL RENTAL	Inv 19-577353	-168.00
Check	03/28/2012	2348	STANDARD ELECTRIC	Invoice #'s 1724293-00, 1724235-01	-42.56
Check	03/28/2012	2349	USA Bluebook	Inv # 906363	-441.53
Check	04/04/2012	2350	Livingston County Treasurer	chargebacks - 2011 tax foreclosure sale	-508.36
Check	04/04/2012	2351	DTE ENERGY	Service from Feb 29 - March 29, 2012	-1,531.93
Check	04/09/2012	2352	CONSUMERS ENERGY	Billing from 2/28/12 - 3/29/12	-372.24
Check	04/09/2012	2353	DTE ENERGY	Service from Feb 29 - March 30, 2012	-6,730.97
Check	04/12/2012	2354	BRIGHTON ANALYTICAL, LLC	Numerous invoices from March 2012	-268.00
Check	04/12/2012	2355	GRUNDY ACE OF HOWELL	Inv # 72087	-11.94
Check	04/12/2012	2356	HACH Company	Inv 7678725	-335.15
Check	04/12/2012	2357	USA Bluebook	Inv #'s 631743, 633907, 633652	-1,557.78
TOTAL					-262,286.51

#504 DPW RESERVE FUND
Payment of Bills
March 23 through April 13, 2012

Type	Date	Num	Name	Memo	Amount
no checks issued					

#503 DPW UTILITY FUND
Payment of Bills
March 23 through April 13, 2012

Type	Date	Num	Name	Memo	Amount
Check	03/28/2012	2048	Applied Imaging	Inv 158206-1	-7.22
Check	03/28/2012	2049	TESHA HUMPHRISS	April 2012 monthly car allowance	-500.00
Check	03/28/2012	2050	Kyle Mitchell	Mileage reimbursement	-32.19
Check	03/28/2012	2051	NETWORK SERVICES	Inv 12467	-1,075.00
Check	03/28/2012	2052	Shell Fleet Plus	March 2012 statement	-3,448.88
Check	03/28/2012	2053	Verizon Wireless	Inv # 2714224340	-244.24
Check	03/28/2012	2054	Clearwater Systems	Inv 911129	-21.00
Check	03/28/2012	2055	EJ USA, Inc.	Inv 3453456	-1,467.05
Check	03/28/2012	2056	Victory Lane Quick Oil Change	Inv 18855	-37.48
Check	03/28/2012	2057	HACH	Inv 7676820	-7,185.00
Check	04/02/2012	2058	Greg Tatara	April 2012 monthly car allowance	-500.00
Check	04/09/2012	2059	Applied Imaging	Inv # 387635	-25.88
Check	04/09/2012	2060	PAETEC	Acct 2119355 March 2012	-29.49
Check	04/09/2012	2061	Port City Communications, Inc.	Inv 444404012012	-181.91
Check	04/11/2012	2062	Chase Card Services	Statement from 3/8-4/7/12	-4,263.29
Check	04/11/2012	2063	Grainger	Inv 862003803	-218.41
Check	04/11/2012	2064	LOWE'S	Statement dated 4/2/2012	-1,170.54
Check	04/11/2012	2065	Staples Credit Plan	Acct 6035 5178 6145 0400	-648.62
Check	04/11/2012	2066	Tractor Supply Co.	Acct 6035 3012 0324 0252	-497.90
TOTAL					-21,554.10

GENOA CHARTER TOWNSHIP BOARD
Regular Meeting
April 2, 2012

MINUTES

Supervisor McCririe called the regular meeting of the Genoa Charter Township Board to order at 6:30 p.m. The Pledge of Allegiance was then said. The following persons were present constituting a quorum for the transaction of business: Gary McCririe, Paulette Skolarus, Robin Hunt, Steve Wildman, Jim Mortensen, Todd Smith and Jean Ledford. Also present were Township Manager Michael Archinal and four persons in the audience.

A Call to the Public was made with the following response: Tom Plane – There is a property next to my home where an R.V. is being stored. It is not supposed to be occupied but someone is occasionally living there. McCririe – We will send our Ordinance Enforcement Officer out there and take it back to court if necessary.

Approval of Consent Agenda:

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

1. Payment of Bills.

2. Request to approve minutes: March 19, 2012

Approval of Regular Agenda:

Moved by Smith and supported by Ledford to approve for action all items listed under the regular agenda with the addition of item 5 to adjourn to closed session. The motion carried unanimously.

3. Request for approval of Resolution #120402 regarding Master Plan Amendment.

Moved by Smith and supported by Skolarus to approve resolution 120402 as requested. The motion carried by roll call vote as follows: Ayes – Ledford, Smith, Hunt, Wildman, Mortensen, Skolarus and McCririe. Nay – None.

4. Discussion regarding SEMCOG 2040 Forecast.

The need for senior recreation was discussed with no formal action being taken by the board.

5. Request for approval to adjourn to a closed session of the board to discuss the purchase of real estate with no purchase agreement in place.

Moved by Skolarus and supported by Smith to move to closed session at 6:48 p.m. The motion carried by roll call vote as follows: Ayes – Ledford, Smith, Hunt, Wildman, Mortensen, Skolarus and McCririe. Nay – None.

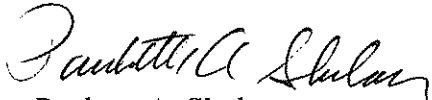
The regular meeting of the board was reopened at 7:15 p.m.

Correspondence:

The spring yard waste cleanup is scheduled for Saturday, April 21st from 9:00 until noon. Residents may drop off the yard waste and pick up trees saplings at no cost.

The Easter marshmallow drop will be held at 7:30 p.m. on Thursday, April 5th. Registration may be made at www.howellrecreation.org or by calling Howell Area Parks and Recreation at (517) 546-0693 before April 3rd.

The regular meeting of the Genoa Charter Township Board was adjourned at 7:20 p.m.



Paulette A. Skolarus
Genoa Township Clerk



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

MEMORANDUM

TO: Honorable Board of Trustees

FROM: Kelly VanMarter, Planning Director

DATE: April 13, 2012

RE: Krug Quick Lane – Site Plan/Special Land Use

I have reviewed the revised site plan (dated 4/4/12), Environmental Impact Assessment (dated 4/4/12), and Spill Prevention Control and Countermeasure Plan (dated 3/16/12) proposing development of a new Krug Quick Lane automotive service facility located at 2798 E. Grand River, Howell. My review of the revised submittal was focused on compliance with the outstanding items discussed at the March 12, 2012 Planning Commission meeting at which this item was recommended for approval.

The PC required that the applicant meet with the adjacent homeowners association (Chilson Hills) to address the concerns of their letter dated March 12, 2012. I spoke with the secretary of the Association and she indicated that the meeting did occur and Krug has taken the following action:

- Two lights have been directed away from the homes;
- An announcement speaker impacting the residential has been removed.

The only outstanding item of concern for the homeowners is the establishment of a landscaped buffer along the shared property line. The PC requested that the applicant work with the Township to create a buffering plan along the south side of the site. The applicant has not contacted me regarding this requirement therefore I would like to make the following recommendation to the Township Board:

SUPERVISOR

Gary T. McCririe

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

MANAGER

Michael C. Archinal

TRUSTEES

H. James Mortensen
 Jean W. Ledford
 Todd W. Smith
 Steven Wildman

Ordinance Requirement	Existing		Staff Recommendation
	East Side	West Side	
<ul style="list-style-type: none"> • 50' Buffer Zone • 6' wall or 4' berm • 53 Canopy Trees • 106 Evergreen Trees • 212 Shrubs 	<ul style="list-style-type: none"> • 0' Buffer • 6' Fence • No trees or shrubs 	<ul style="list-style-type: none"> • 250+' Buffer • No wall or berm • Existing landscaping includes multiple canopy trees and scrub shrubs 	<p>Year 1 (2012) - Install 20' buffer along the east side of the south property line adjacent to the existing fence.</p> <p>Years 2+ - Install 4 evergreen trees per year along the south property line moving from east to west until the Ordinance requirement for evergreen trees are met.</p>

In consideration of the aforementioned, I recommend the following action in this regard:

Recommendation of Special Use Permit: I recommend approval of the Special Land Use Permit with the following conditions:

- 1.) Parcels 4711-06-200-058 and 4711-06-200-103 will be combined into one parcel.
- 2.) The petitioner shall work with the Township Planning Director to develop a buffering plan along the south side of the combined parcels.
 - As stated above, I recommend the Board consider the following course of action in regard to this requirement:
 - o This plan shall include the establishment of a 20 feet wide (20') greenbelt in the first year (2012) with the addition of 4 evergreen trees per year beginning in year 2013. The evergreen trees shall be planted with 2 trees per each 20 linear feet along the property line placed from east to west. Tree plantings shall continue until the ordinance requirement for evergreen trees along the south line is met.
- 3.) This Special Land Use is approved because it has been found to comply with the requirements of Sections 19.03 and 7.02.02(k) of the Township Zoning Ordinance.

Recommendation of Impact assessment (dated 04-04-12): I recommend approval of the impact assessment with the following conditions:

- 1.) The Spill Prevention Control and Countermeasure Plan is included in the approval.
- 2.) The petitioner shall document the retrofits to the existing light fixtures as stated in Item E so that the Township can verify this item is complied with.

Recommendation of Site Plan (dated 04-04-12): I recommend approval of the site plan with the following conditions:

- 1.) The Buffering Plan as required by condition of Special Land Use approval shall be submitted prior to issuance of the Land Use Permit.
- 2.) The proposed lighting shall meet the Township Ordinance. Additional lighting shall not be installed on the building if the location exceeds current ordinance footcandle standards.
- 3.) Additional detail shall be provided on the plans regarding the banked dumpster location to ensure fit and function.
- 4.) The petitioner shall satisfy the requirements of the Township Engineer prior to issuance of a Land Use Permit. This will include providing a Storm Water Easement in recordable form prior to issuance of a Land Use Permit.

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

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
MARCH 12, 2012
6:30 P.M.**

MINUTES

CALL TO ORDER: The meeting of the Genoa Charter Township planning Commission was called to order at 6:31 p.m. Present constituting a quorum were Barbara Figurski, Chairman Doug Brown, John McManus, Lauren Brookins, and Diana Lowe. Also present were Township Planner Kelly VanMarter and Brian Borden of LSL.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: Upon motion by Barbara Figurski and support by John McManus, the agenda was approved as submitted. **Motion carried unanimously.**

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

OPEN PUBLIC HEARING # 1... Review of special use application, impact assessment and site plan for a proposed 4,894 sq.ft. oil change facility located at 2798 E. Grand River, Howell. Sec. 6., petitioned by M. Krug Investments.

Dan Retherford of Krug Ford, Andy Klein of Rand Construction, and Brent LaVanway of Boss Engineering addressed the Planning Commission regarding the petition.

Mr. Klein presented the proposed building materials to the Planning Commission and gave a rough overview of the proposed building's exterior.

Brian Borden of LSL reviewed his letter dated March 6, 2012. The property in question is actually two contiguous parcels. The zoning ordinance and use requirements have a minimum frontage requirement for this type of use. This parcel does not meet that requirement alone, but when joined with the other parcel it does. Mr. Borden suggested that the applicant is willing to join those two parcels.

The zoning and buffer requirement for this parcel has a substantial setback. The vegetation there is mature and mostly deciduous. The applicant is seeking that the existing vegetation be retained. The petitioner admits there is no buffer

3-12-12 APPROVED PC minutes.

between the fence and where the cars are parked. Some of these are new vehicle, some used, and some employee vehicles.

Chairman Brown discussed the letter received from Chilson Hills Homeowners Association today. The petitioner agreed to review the letter and whether they would be willing to install a buffer zone to assist with noise control. The petitioner indicated that the berm was knocked down because of lot theft. The petitioner asked if the buffer would alleviate the issue with lighting and exhaust fumes. Chairman Brown indicated that he felt it may. The petitioner also indicated a willingness to meet with some representatives of Chilson Hills Homeowners Association to work out a mutually agreeable plan. Ms. Murphy from the Association was present and indicated that if Mr. Retherford met with their Board, it would be helpful.

The petitioner responded to some of the other issues listed in the Chilson Hills letter of March 12, 2012. He feels that the issues regarding parking and the Quick Lane oil change aren't realistic. The oil change cars would not be left overnight. Noise control and pollution would not be increased because the vehicles would not be near the back of the lot.

Brian Borden indicated that the building is encroaching onto the setback. The applicant has acknowledged this and plans to address it before the ZBA. He also addressed the parking and how it encroaches into the required setback. The petitioner will provide the documentation in the impact statement.

Brian Borden addressed the proposed materials for the building. The parking lot is on three sides of the building pursuant to the drawings. The material requirements are met on the front side of the building. The west side and rear of the building do not meet the material restrictions. The ordinance requires architectural detail and/or design features. Chairman Brown and the Planning Commission did not voice any objections to the plan as submitted as it relates to the building materials proposed.

The proposed loading zone was discussed. It is deficient in size by approximately three feet. The Planning Commission has the authority to modify that requirement. The petitioner indicated that the overhead wires were taken into account when determining the size. The Planning Commission is willing to allow the current size to remain.

The greenbelt plantings are insufficient due to parking and the sidewalk on the north side. There is room to do a hedgerow and the petitioner is proposing to install one. This must be cleared with MDOT prior to installing it. Brent LaVanway from Boss Engineering indicated that the shrubs are the only reason for contacting MDOT and therefore, he does not believe this needs to be done. He was concerned that MDOT will require more changes to be made to parking, etc. The Planning Commission suggests that the petitioner contact MDOT.

3-12-12 APPROVED PC minutes.

Waste receptacles were addressed. No proposed enclosure is on the plan. The applicant claims it is shared with existing receptacles on the dealership portion of the property. These are currently located at the southeast corner of the property.

Lighting was discussed by Brian Borden. The petitioner is willing to install lower wattage bulbs as the current bulbs burn out in an effort to lessen the light that is created on this site. The petitioner will explore this prior to meeting with the Chilson Hills Board. The petitioner will look into which light is shining into a home and will take steps to correct that.

The second wall sign request was addressed. This is discretionary. The petitioner believes that the view from the west is not clear and therefore, they would request an additional sign on that side. This is standard signage from Ford. The total square footage is less than what is permitted for the first sign. They will add this to the environmental impact statement.

Tesha Humphriss reviewed the February 28, 2012 letter from Tetra Tech. As it relates to storm water, a full site plan approval could be done or nothing could be done. The argument to review the entire site is that this is a substantial change to the site and they are changing the impervious area and changing the pipes. Alternately, the argument to do nothing is that they are decreasing the impervious area and there is no evidence of flooding. She believes the petitioner should do the existing calculations for the pond and bring it to current standards. She feels this is a compromise that both sides could live with. She addressed the proposed outlet of the storm sewage and water pipe. The water needs to be dissipated and slowed down. A sedimentation basin or something to slow the water should be installed at the pond. The petitioner agreed to do that. The proposed sanitary sewage system lead was discussed. The petitioner indicated the specifics of that would be provided during construction plan reviews.

Brent LaVanway from Boss Engineering agreed to provide the calculations for the basin that Tesha Humphriss needs. The petitioner will provide documentation of what they plan to do for storm water drainage. They will add it to the construction detail plans. The petitioner has not provided the profile views regarding utilities to the Township yet. They will do so within the construction details. The Township Engineer would prefer to see all of these on the site plan.

The Brighton Fire Department letter of March 2, 2012 indicates that their concerns have all been addressed.

The impact assessment was reviewed. Most of the concerns of the Planning Commission were addressed earlier this evening. The petitioner should delete the portion of E that discusses Genoa Township's site plan review process controlling fumes, vibration and smoke.

3-12-12 APPROVED PC minutes.

The PIP should be changed to reflect Livingston County Sheriff Department and Brighton Fire Department.

The self certification will be signed and submitted to the Township.

Ms. Murphy of Chilson Hills addressed the Planning Commission. She expressed hopes that the issues of noises, lighting and fumes are seriously considered and addressed by the Planning Commission.

Planning Commission disposition of petition

- A. Recommendation of Special Use Application.
- B. Recommendation of Impact Assessment dated 2-21-12.
- C. Recommendation of Site Plan dated 2-21-12.

Motion by Diana Lowe to recommend the approval of the special use application subject to:

- 1. Approval of the impact assessment and site plan;
- 2. Compliance with the Brighton Area Fire Department letters of 11/29/2011 and 3/2/2012;
- 3. ZBA approval of the front setback variance;
- 4. The petitioner combines the two existing lots;
- 5. Compliance with article 19.03.

Support by Barbara Figurski. Motion carried unanimously.

Motion by Barbara Figurski to recommend approval of the impact assessment, subject to:

- 1. The PIP plan dated 3/1/12 is to be attached with the corrections as noted;
- 2. Approval of the special use application.

Support by Diana Lowe. Motion carried unanimously.

Motion by Diana Lowe to recommend approval of the site plan, subject to:

- 1. Approval of the special use application and impact assessment;
- 2. The petitioner is going to work with the Township to develop a buffering plan on the south side of the site;
- 3. Modification of the loading area;
- 4. Additional sign due to visibility;
- 5. Applicant will work with MDOT at their discretion regarding the shrubbery row;
- 6. The lighting for the Quick Lane facility will meet the zoning ordinance;

3-12-12 APPROVED PC minutes.

7. Agreement by the petitioner to “bank” property that may be used in the future for a dumpster;
8. The petitioner will work with the homeowners association to reduce current candle power of current site as the bulbs need to be replaced;
9. The petitioner will adjust the lighting that is shining directly into a residential home;
10. The petitioner obtains a variance from the ZBA;
11. That construction details are put on the site plan;
12. That the petitioner comply with the Tetra Tech letter. Under drainage and grading #1, petitioner to complete calculations to determine the necessary land to restrict for future storm water detention and conveyance in the form of a recordable easement. Under #2, they will provide a method for dissipation of water. Under #4, they will provide a swale to direct water away from the existing shed; and
13. The petitioner adheres to 24.10 regarding parking.

Support by Barbara Figurski. Motion carried unanimously.

Administrative Business:

- *Staff report. Kelly VanMarter updated the Planning Commission as to possible agenda items for the April meeting.*
- *Approval of February 13, 2012 Planning Commission meeting minutes. Barbara Figurski. Support by John McManus. Motion carried unanimously.*
- *Member Discussion*

Adjournment. Motion by John McManus to adjourn the meeting. Support by Barbara Figurski. Motion carried unanimously. Motion adjourned at 8:35 p.m.

Kristi Cox

**APPLICATION FOR SPECIAL LAND USE
GENOA TOWNSHIP**

APPLICANT NAME* & ADDRESS: M. Krug Investments L.L.C.

OWNER NAME* & ADDRESS: 2798 E. Grand River Ave., Howell

SITE ADDRESS: Same PARCEL #(s): 4711-06-200-103

APPLICANT PHONE: (517) 546-0244 OWNER PHONE: ()

Location and brief description of site and surroundings:
The area of the proposed development is a automobile dealership vehicle display area. To the east is the existing dealership showroom and vehicle maintenance facility and to the west is a commercial strip center.

Proposed Use:
Minor vehicle maintenance.

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

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

Because the site is currently vehicle sales and service related, with the minor vehicle maintenance taking place in the existing facility, the new facility will fit into the current use.

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

The architectural and site design have been created to tie into the existing facility.

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

The facility has access onto Grand River. The site once constructed will reduce the amount of impervious surface on the property. Because of the use the facility will have little impact on the public utilities.

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

The storage and disposal of vehicle fluids will be in compliance with local, state and federal requirements.

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

Sec. 3.03.02 - Nothing. Sec. 7.02.02 - All work will take place within the building in accordance with local, state and federal requirements. Sec. 8.02.02 - Nothing.

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

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

BY: Krug Ford - Lincoln

ADDRESS: 2798 E. Grand River Ave., Howell

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

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

1.) Mike Krug of Krug Ford - Lincoln at (517) 546-5642
Name Business Affiliation Fax No.

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

FEE EXCEEDANCE AGREEMENT

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

SIGNATURE: [Signature] DATE: 11/10/2011

PRINT NAME: Dan Retherford PHONE: 517-546-0244

ADDRESS: 2798 E. Grand River Ave., Howell

GENOA TOWNSHIP
APPLICATION FOR SITE PLAN REVIEW

NOV 18 2011
 RECEIVED

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS*: M. Krug Investments L.L.C.

OWNER'S NAME & ADDRESS: 2798 E. Grand River Ave., Howell

SITE ADDRESS: Same PARCEL #(s): 4711-06-200-103

APPLICANT PHONE: (517) 546-0244 OWNER PHONE: ()

LOCATION AND BRIEF DESCRIPTION OF SITE: Existing Ford, Lincoln Mercury Dealership on Grand River Ave. in Howell

BRIEF STATEMENT OF PROPOSED USE: Service Center for vehicle maintenance including oil changes, fluid level and filter check and replacements.

THE FOLLOWING BUILDINGS ARE PROPOSED: Oil Change facility with six service bays and a customer waiting area.

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: Krug Ford-Lincoln

ADDRESS: 2798 E. Grand River Ave., Howell

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

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

1.) Thom Dumond of Boss Engineering at (517) 548-1670
 Name Business Affiliation Fax No.

FEE EXCEEDANCE AGREEMENT

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

SIGNATURE: [Signature] DATE: 11/10/2011
 PRINT NAME: Dan Retherford PHONE: 517-546-0244
 ADDRESS: 2798 E. Grand River Ave., Howell

Cheryl A. Williams
Chilson Hills Homeowners Association
c/o Pinnacle Condominium Management
2320 Washtenaw Ave., Suite 200
Ann Arbor, MI 48104
March 12, 2012

Kelly Van Marter
Planning Director
Genoa Charter Township
2911 Dorr Rd
Brighton, MI 48116

Planning Commission:

I am writing on behalf of the board and residents of the Chilson Hills Homeowners Association regarding the Special Land Use Permit being requested by M. Krug Investments, LLC. A number of our residents have expressed concerns to the board of the homeowners association about the proposed oil change facility, and I would like to present these here on behalf of the neighborhood.

Three of the streets in our neighborhood abut the Krug property (Springwell, Chalmers, and Ventnor), and residents at the ends of these streets already deal with light pollution, noise, and exhaust fumes. We are concerned about the impact of an additional facility with a potential 660 additional vehicles per day (see section I of the Impact Assessment dated 02/12/12). The following are areas of particular concern:

Noise control

There is very little in the way of a noise barrier between the proposed facility and the Chilson Hills neighborhood. Although there is a field located along the southwestern portion of the property that originally provided a small buffer for some of the homes when the neighborhood was built 15 years ago, this field was clear-cut in 2010 and 2011 and whatever noise barrier the trees and brush provided has been significantly reduced. In addition, this does not span the width of the property. In talking to homeowners in the neighborhood, we heard complaints about noise from the existing facility (such as employees using the panic button to locate cars parked at the rear of the property, leaving the phone/loudspeaker on after business hours), so we are greatly concerned about additional noise creating a livability concern for our neighborhood.

We would like to request that Krug erect and maintain some sort of screening/landscaping to separate the Chilson Hills neighborhood from the new building. One way to do this would be for Krug to plant and maintain a row of deciduous trees (pines, spruces, etc.) along the south side of the property, along the pavement indicated in the site plan, to help buffer noise from the houses located on Springwell, Chalmers, and Ventnor. Homeowners in the western portion of our subdivision have also requested that the field be allowed to return to its natural state to provide additional separation from the proposed building.

We also would like to request that Krug be required to keep the service bay doors shut during work to help mitigate additional noise.

Lighting

Section E of the Impact Assessment notes that:

Much of the site will be illuminated by the existing light fixtures on the site. Several of the existing fixtures will be removed or relocated to make room for the new facility. Wall mounted fixtures will be added to the building to supplement the existing lighting.

Kelly Van Marter
March 12, 2012
Page 2

The existing lighting on the site is problematic for homes in our neighborhood. We appreciate the need to maintain a safe, well-lit environment; however, at least one of the fixtures is currently mis-aimed so that it illuminates horizontally, directly into a house on Chalmers. Given the current lighting situation, we would like to request that special attention be paid when lighting the new facility to minimize light intrusion into the homes in our neighborhood while maintaining a secure environment for the dealership / oil change facility. This may require working with the adjoining homeowners to determine the best lighting configuration.

Exhaust fumes

The impact assessment acknowledges that one impact of this proposed facility is exhaust emissions from an increased number of vehicles. Homeowners of neighboring homes have remarked that from time to time, exhaust fumes have been noticeable from the current body shop. Given the current situation and that the proposal seeks to increase traffic by ~660 vehicles/day, we would like to register a particular interest in how “nuisances such as fumes, vibration, and smoke” will be “controlled through Genoa Township’s site plan review process” and are specifically interested in why it was stated further that “[n]one of these concerns will be associated with the proposed facility” (Section E, Impact Assessment).

We’d like to be as good neighbors as possible to the Krug dealership, and we would like Krug to return the favor and help us maintain a quiet, livable neighborhood without adversely affecting our quality of life or property values.

We appreciate the Planning Commission taking our concerns into consideration as you consider the Special Land Use Request for the new building.

Sincerely,

Cheryl A. Williams
secretary@chilsonhillsHOA.org
2012 Secretary, Chilson Hills Homeowners Association

**Tenpenny Furniture
2700 E. Grand River Ave.
Howell, MI 48843**

March 12, 2012

Genoa Township Planning Commission
2911 Dorr Road
Brighton, MI 48116

RE: Krug Quick Lane, Genoa Township, Livingston County

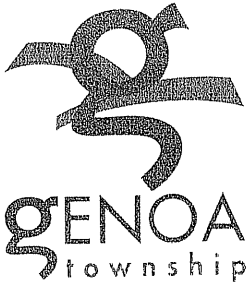
Dear Planning Commission members,

This letter is in response to the proposed Krug Quick Lane facility located adjacent to my property on Grand River Avenue. After reviewing the plans and building elevations, I approve of and endorse the project. I believe the design of the building will enhance the area and provide a needed service for the community.

Sincerely,

A handwritten signature in black ink, appearing to read "John Tenpenny", written in a cursive style.

Mr. John Tenpenny



MEMORANDUM

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

TO: Andy Klein, Rand Construction
FROM: Kelly VanMarter, Planning Director
DATE: October 11, 2011
RE: Krug Oil Change – 4711-06-200-103 (vacant Grand River)

In regards to the above mentioned, the tap fees will be as follows:

Assuming a 4,600 sq. ft. oil change facility with 6 service bays:

1 REU per premise plus 0.15 per stall: 2 REUs

New Connection Charge

Water	2 REU @ \$5,000	\$10,000
Sewer	2 REU @ \$5,500	\$11,000

Total Amount Due: \$21,000

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

A meter package will also need to be purchased including the appropriate sized meter and a MIU (meter interface unit) prior to land use permit issuance. I trust this satisfies your request. Should you have any questions please feel free to contact me at 227-5225.

SUPERVISOR
Gary T. McCririe

CLERK
Paulette A. Skolarus

TREASURER
Robin L. Hunt

TRUSTEES
H. James Mortensen
Jean W. Ledford
Todd W. Smith
Steven Wildman

MANAGER
Michael C. Archinal



LSL Planning, Inc.

Community Planning Consultants

March 6, 2012

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Planning Director
Subject:	Krug Quick Lane – Special Use and Site Plan Review #2
Location:	2798 E. Grand River – south side of Grand River, east of Chilson Road
Zoning:	GCD General Commercial District
Applicant:	M. Krug Investments LLC 2798 E. Grand River Avenue Howell, MI

Dear Commissioners:

At the Township’s request, we have reviewed the revised site plan (dated 2/21/12) proposing development of a new minor auto repair establishment within the Krug Ford/Lincoln-Mercury site. The site is located on the south side of E. Grand River and is zoned GCD General Commercial District. The request has been reviewed in accordance with the Genoa Township Master Plan and Zoning Ordinance.

A. Summary

1. We recommend the Township include a condition requiring the applicant to combine the two parcels related to this request.
2. The Commission may require a berm or screen fencing to protect the adjacent residential properties to the south, or could deem the existing setback and vegetation sufficient to protect these residences.
3. The proposed building placement requires a front yard setback variance.
4. The applicant must demonstrate that the requirements of Section 24.10 are met with respect to the front yard parking encroachment.
5. The Planning Commission has approval authority over building elevations. In our opinion, the proposed elevations do not comply with the material and design requirements of Section 12.01.
6. The proposed loading area is slightly deficient in terms of its size; however, the Commission may modify the requirement.
7. The landscape plan is deficient in terms of greenbelt plantings; however, there is insufficient are to plant the required trees and the Commission may modify the requirement. MDOT approval is likely needed for any plantings within the right-of-way.
8. We recommend the applicant provide details of the existing dumpster to confirm compliance. If current standards are not met, we recommend the Township require improvements.
9. We recommend the Township require improvements to site lighting, such that it is more, if not fully compliant.
10. Planning Commission approval is required for the second wall sign.

B. Proposal

The applicant requests special use and site plan approval for development of a new “service center for vehicle maintenance including oil changes, fluid level and filter check and replacements” within the Krug dealership complex. This includes a new 4,894 square foot, 1-story building.

By definition, the proposed use is a minor auto repair establishment, which is allowed as a special land use in the GCD. The use is also subject to the specific requirements of Section 7.02.02(k). It is important to note that a request for a new special land use on a developed property provides the Township with an opportunity to require improvements to non-compliant site conditions.

C. Special Use Review

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

- 1. Master Plan.** The Master Plan and Future Land Use Map identify the site and adjacent properties along Grand River Avenue as General Commercial. The properties to the south are planned for Medium Density Residential (5 units per acre).

The General Commercial classification includes “businesses which serve the requirements of the community at large including Genoa Township, Howell, Brighton, and pass-by traffic along Grand River Avenue.”

The site is already developed with an automobile related use and the addition of a maintenance and minor repair facility is expected to complement the established use and planned character of the area.

- 2. Compatibility.** As noted above, the proposed use will be part of a larger automobile dealership complex and is expected to complement the established use, as well as the commercial character along Grand River Avenue.

Our only potential concern under this standard would be any impacts upon the residential properties south of site. The Zoning Ordinance requires screening between commercial and residential uses; however, the proposed layout provides a 355-foot setback and there is existing dense vegetation between the properties. Despite the separation and vegetation between these uses, the excessive light intensity (described in Section E of this letter) could also have an impact upon these residences.

- 3. Public Facilities and Services.** The site is located on Grand River Avenue amongst already developed properties. As such, it is expected that necessary facilities and services are in place to properly serve the proposed development. With that being said, the applicant must address any issues identified by the Township Engineer.
- 4. Impacts.** As a site that is currently paved and used for automobile storage, impacts upon the environment and natural features are not anticipated by its general development. Additionally, given the nature of the proposed use, the applicant has provided a Pollution Incidence Prevention (PIP) Plan as required by Section 7.02.02(k).
- 5. Mitigation.** The Township may require mitigation necessary to limit or alleviate any potential adverse impacts as a result of the proposed activities.

D. Review of Use Requirements

Section 7.02.02(k) of the Zoning Ordinance identifies the following use requirements for minor auto repair establishments. As a side note, we have only applied those requirements applicable to this request. (Standards 2, 8, 9, 10, 12 and 13 are specific to gasoline service stations.)

- 1. There shall be a minimum lot area of one (1) acre and minimum lot frontage of two hundred fifty (250) feet.**

The Krug Dealership complex is currently situated on two separate parcels. On its own, Parcel 2 (subject site) does not meet the frontage requirement; however, on the cover sheet, the applicant states that the two parcels will be combined.

The resulting property will contain 11.27 acres and approximately 670 feet of frontage along Grand River. Since the combination is necessary for compliance, we recommend the Township include this item as a condition of approval.

- 3. Access driveways shall meet the standards of Article 15; turning movements may be restricted in consideration of traffic conditions. Only one driveway shall be permitted from each street unless the Planning Commission determines additional driveways will be consistent with the purpose of Article 15.**

The full dealership property maintains three existing drives, one of which is shared with the adjacent property to the west. The site plan notes there is a recorded easement for the shared drive and no new curb cuts are proposed. Provided the Township Engineer concurs, we are of the opinion this criterion is met without the need for further restrictions given the size and layout of the dealership property.

- 4. Where adjoining residentially zoned or used property, a solid fence or wall six (6) feet in height shall be erected along any common lot line. Such fence or wall shall be continuously maintained in good condition. The Planning Commission may approve a landscaped berm as an alternative.**

The site is adjacent to residential property along its southerly lot line (rear). However, the proposed building provides a 355-foot rear yard setback and the pavement ends approximately 250-plus feet from the rear lot line. Additionally, there is existing dense vegetation screening the residential land uses and the applicant states that this “buffer” area will be preserved.

The Commission may require the fence or berm noted, or could deem existing conditions (setback and landscaping) sufficient in terms of protecting the residential properties from adverse impacts. Although there is no waiver/modification listed for this criterion, the Commission generally has some amount of discretion over landscaping and screening requirements, especially given the presence of existing vegetation.

- 5. All repair work shall be conducted completely within an enclosed building. Garage doors shall not face any public roadway except as approved by the Planning Commission under the following circumstances:**
 - a. For through garages where doors are provided on the front and rear of the building;**
 - b. Garages located on corner or through lots; and,**
 - c. Where the Planning Commission determines that a rear garage would have a negative impact on an abutting residential district.**

Under these circumstances the Planning Commission may require additional landscape screening above and beyond what is required for street frontage landscaping.

The applicant has included a note on Sheet 3 stating that all work will be conducted inside the building. Additionally, all overhead doors are on the east side of the building, which does not face the roadway.

- 6. There shall be no outdoor storage or display of vehicle components and parts, supplies, or equipment or other merchandise, except within an area defined on the site plan approved by the Planning Commission and which extends no more than ten (10) feet beyond the building.**

The applicant has included a note on Sheet 3 stating that no outdoor storage is proposed.

- 7. Storage of wrecked, partially dismantled, or other derelict vehicles is prohibited, unless such storage is required under police or court order. Vehicles shall not be stored outdoors for more than seven (7) days in any thirty (30) day period.**

The applicant has included a note on Sheet 3 stating that no such vehicles will be stored on site.

11. The applicant shall submit a Pollution Incidence Protection Plan (PIPP) as part of the Impact Assessment. The PIPP shall describe measures to prevent groundwater contamination caused by accidental gasoline spills or leakage, such as: special check valves, drain back catch basins and automatic shut off valves.

The revised submittal includes the required PIP Plan (dated 3/1/12). The PIP Plan and a note on Sheet 3 of the site plan indicate that all fluids (new and waste) will be stored inside and that storage and disposal of these fluids will meet all local, state and federal requirements. The Commission should consider any comments provided on the PIP Plan by the Fire Department. Our only minor comment is that Section 2.2 should be revised to note that the site is in Genoa Township, as opposed to the City of Howell.

E. Site Plan Review

1. Dimensional Requirements. As shown in the table below, the site plan has been reviewed for compliance with the dimensional standards of the GCD:

District	Lot Size		Minimum Setbacks (feet)				Max. Height (feet)	Lot Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking		
GCD	1	150	70	15	50	20 front 10 side/rear	35	35% building 75% impervious
Proposed	11.27	Approx 670	44.97	30 (E) 27 (W)	355	<i>Front encroaches into r-o-w</i> 285 rear	19.3	1% building 7% impervious

The dimensional deficiencies relate to the front yard setbacks – both building and parking. In response, the applicant states that they will seek a variance for the building setback and notes that the parking encroachment is an existing condition. The applicant must demonstrate that the standards of Section 24.10 are met as it relates to the front yard parking encroachment. If met, this may be considered a nonconforming condition that does not require a variance.

2. Building Materials and Design. The elevation drawings propose a combination of brick, block and glass as the primary building materials. Table 12.01.03 identifies the maximum percentages allowed for certain materials on building façades facing a street or parking lot. The front façade (facing Grand River) is comprised of brick and glass, which complies with requirements. The west and south façades are constructed almost entirely of block, which exceeds the maximum percentage allowed as these elevations face parking lots.

Additionally, Section 12.01.06 requires buildings to provide architectural features that are not present on this flat roof building. As such, we recommend the applicant upgrade the building materials and design in accordance with Section 12.01 of the Township Zoning Ordinance. Ultimately, the proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission.

3. Parking. Section 14.04 requires 2 parking spaces per service bay plus 1 space for each employee. Based upon the information provided, the project requires a total of 20 parking spaces, while 25 are provided. The plan includes 1 barrier free space, which complies with the requirements of Section 14.05.

4. Loading. Given the size of the building, Section 14.08.08 requires 1 loading space, which is to be located in a rear or side yard not directly visible to a public street. The site plan identifies the required space along the rear of the building; however, it is slightly smaller than required – 10 x 46, as opposed to 10 x 50. The Commission may modify the 500 square foot requirement if the use will involve smaller delivery trucks – the applicant states that the largest delivery truck will be 45 feet long.

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

Location	Requirements	Proposed	Comments
Front yard greenbelt (N)	4 canopy trees 20-foot width 2-foot tall hedgerow OR 3-foot tall masonry wall	0 canopy trees 3-foot width inside sidewalk 2-foot tall hedgerow (47 shrubs)	The current front yard parking encroaches into the r-o-w, although it is unclear how this occurred. Given the proposed layout, there is not sufficient room to plant the required canopy trees. Authorization is likely needed from MDOT for plantings in the r-o-w.
Buffer zone "C" (W)	17 canopy trees OR 17 evergreens OR 68 shrubs 10-foot width	7 canopy trees 40 shrubs 10-20-foot width	In compliance.
Parking	3 trees 250 s.f. of landscaped area	10 trees 20 shrubs 250+ s.f. of landscaped area	In compliance.

On Sheet 6, there are 11 plantings towards the front of the property noted as "BV" that are likely the "CB" noted in the table. While this is a rather minor discrepancy, it needs to be corrected.

- 6. Waste Receptacle and Enclosure.** The site plan includes a note that the proposed use will share an existing dumpster with the auto dealership; however, the submittal does not show its location or design. As such, we cannot confirm compliance. We recommend the applicant provide details of the existing receptacle and enclosure to confirm compliance. If current standards are not met, we recommend improvements be required.
- 7. Pedestrian and Vehicular Circulation.** The plan includes a 7-foot wide concrete sidewalk along the front of the proposed building and also shows the existing 8-foot wide concrete sidewalk along Grand Rive Avenue. Our only concern is that the side entrance has doors very near the travel lane. In response, the applicant notes that bollards will be provided so as to avoid vehicular/pedestrian conflicts at this entry/exit point.

With respect to vehicular circulation, all drive aisles meet or exceed minimum dimensional standards.

- 8. Exterior Lighting.** The lighting plan includes a mixture of existing and proposed light fixtures. This portion of the site provides 3 existing light poles, 1 relocated light pole and 11 new wall mounted fixtures. It should be noted that the existing poles are nonconforming due to their height – 27'-6" where only 20' is allowed because the site is adjacent to residential property. However, the new fixtures are full cutoff and downward directed fixtures, per requirements.

The photometric plan provides a substantial number of readings that are well in excess of the maximum intensity allowed by Ordinance. What is difficult is determining how much of a factor the existing lighting plays in some of these readings.

For example, there are readings along the building that exceed the 10-footcandle maximum. If this is due entirely to the proposed fixtures, then they are not permitted. However, if these readings are elevated because of the existing nonconforming lighting, then the Commission may allow their continuance.

Our main concern is the fact that many of the readings are double and even triple the maximum allowed, which is why we recommend the applicant improve site lighting such that it is more, if not fully compliant. The focus of this recommendation is on the oil change portion of the site and not necessarily for the entire dealership property (although that would be a substantial improvement). In response to our first review, the applicant stated concerns over the costs related to improving site lighting. As such, this topic will likely warrant further discussion with the Commission.

9. **Signs.** The elevation drawings identify two wall signs – one each on the north and east sides of the building. The business is limited to no more than one wall sign, unless the Planning Commission authorizes a second sign in accordance with footnote (2) of Table 16.1. In order to allow the second sign, the Commission would need to make a finding that the building requires additional visibility due to obstructed views or building orientation.

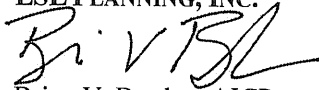
In terms of their size, we estimate the total sign area to be 75 square feet – 48 square feet on the north side and 27 square feet on the east. While these numbers are only an estimate (the submittal does not provide calculations), the total is within the maximum area allowed by Article 16.

10. **Impact Assessment.** A revised Impact Assessment (2/21/12) is included with the submittal. In summary, the revised Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic. Additionally, the project is not expected to generate sufficient traffic to warrant a traffic impact study.

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

Sincerely,

LSL PLANNING, INC.



Brian V. Borden, AICP
Senior Planner



TETRA TECH

February 28, 2012

Ms. Tesha Humphriss, P.E.
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: Krug Quick Lane
Site Plan Review – February 22, 2012 Response Boss Engineering**

Dear Ms. Humphriss:

We have reviewed the revised site plan documents and the letter from Boss Engineering dated February 22, 2012 which was provided in response to the site plan review letter completed by Tetra Tech November 30, 2011 and offer the following additional comments. Only responses requiring further comment are included, all other responses were found to be acceptable by the reviewer.

GENERAL

- 1. The petitioner is showing a temporary grading easement for the adjacent property to the west of the site. If the intent is for any construction to take place outside of the owner's property, an easement agreement should be provided with the plan.*

Boss: A recorded easement will be provided to the Township prior to issuance of a land use permit.

TT comment: The petitioner did not respond to the concern about providing some type of grading solution to the drainage concern along the existing building. We recognize that it is not a large tributary area, but the storm water will run down the new slope and be trapped adjacent to the existing building. A swale needs to be constructed directing this runoff to the south away from the existing structure.

DRAINAGE AND GRADING

- 1. There is an existing retention basin located on the southwest corner of the property, which should be clearly shown on the drawings, along with the existing elevations, volume, and any details of existing structures. The petitioner states that the amount of impervious surface is reduced by approximately 2,600 square feet, so no additional storm water retention will be added as part of this project, if possible provide documentation from the original basin sizing calculations to verify that enough storage is provided.*

Boss: The existing retention basin has been added to the new overall site plan sheet. The retention basin was constructed a number of years ago with the construction of the original Krug Ford Facility. Since this initial phase the retention requirements from the Drain Commission have changed. To bring this project into compliance would require the removal of many of the large trees and underbrush around the existing basin. This would

Tetra Tech

123 Brighton Lake Road, Suite 203, Brighton, MI 48116
Tel 810.220.2112 Fax 810.220.0094 www.tetrattech.com

reduce the natural vegetative buffer which slows and filters the storm water flowing across the property.

TT comment: We recognize that the LCDC standards have changed since the original site plan was implemented. However, there are items in the new standards that should be implemented into this plan to improve the storm water management. Drainage calculations comparing the proposed design with the existing basin should be prepared, and then the extent of improvements can be better assessed. At a minimum the site would be enhanced by adding a sedimentation basin near the existing pavement. This could be sized to work in conjunction with the existing basin and being positioned near the existing pavement, not impact existing vegetation. It is possible that the combined size would meet the former standards while improving the quality of the storm water runoff. We suggest the petitioner review this approach and provide the requested calculations to support the design.

- 2. The plans show a small amount of rip rap at the proposed storm sewer end section. The impact assessment states that the current runoff gets to the basin by sheet flow and that existing vegetation filters out the sediment, will there be any sedimentation control measures taken at the end of the proposed piping?*

Boss: A rip rap detail has been added to the plans.

TT comment: Rip rap alone will provide some energy dissipation, however the concentration of that sheet flow to a point source outfall will likely result in erosion between the proposed outfall and the retention basin. The petitioner should account for some type of extended energy dissipation features, such as a sedimentation basin, or shallow pool to spread out the eventual discharge. Again this sedimentation basin may provide the necessary retention volume needed to bring the site into current compliance with drainage standards.

- 4. There is an area of steep grading proposed along the west property line, in the area where the temporary grading easement is called out. The existing steep slope will be increased as a result of the proposed grading. The petitioner needs to have an agreement from the owner of the adjacent property to permanently modify the existing grade. All proposed grading shall result in positive drainage in the direction of the existing drainage course, and not impact any existing structures. The petitioner should look into constructing a retaining wall in that area considering the existing slope is greater than recommended. Any slopes greater than 1:4 require additional soil erosion control measures such as slope stabilization.*

Boss: As noted on the plans, slope stabilization must be installed over this area.

TT comment: The petitioner did not provide a response to the concern about directing future runoff away from the existing structure at the bottom of the slope they plan to modify/increase. The grading at the toe of the slope needs to be revised to provide a route for the storm water to flow away from the structure.

- 5. Profiles of all proposed utilities should be provided, showing existing and proposed surface grades and all existing and proposed utilities to be crossed.*

Boss: Profiles will be provided as part of the construction submittal plan submittal.

TT comment: This is acceptable so long as all utility conflicts have been reviewed to ensure there will be no major changes to the site plan utility plan.

UTILITIES

1. *The petitioner shows a 502' long 6" sanitary sewer lead. We recommend installing the approximately 343 foot long portion of sanitary lead from the connection to the existing sewer by others to the 90-degree bend at the property line as an 8" sewer main to be owned, operated and maintained by the Sewer and Water Authority. The sewer lead should connect to the main using a wye connection installed just before the manhole. A long sanitary service lead poses maintenance issues.*

Boss: A meeting was held with township officials regarding sewer. At the meeting it was agreed the Township would extend the sanitary sewer to this property. From that point, Krug would extend a sanitary sewer lead to the new facility.

TT comment: The recommendation to extend the sanitary sewer closer to the development would be ideal (but not required), as sanitary service laterals of that length can become maintenance problems.

2. *Sewer profiles must be provided with elevations for both the existing and proposed sanitary sewer must be shown, including the location where the storm sewer crosses. An access and maintenance easement based on the main line sewer depth, shall be granted to the Sewer and Water Authority. This may impact the alignment along the adjacent property line.*

Boss: Profiles will be provided as part of the construction plan submittal.

TT comment: This comment was originally provided due to the lack of information provided on the sanitary sewer. Spot elevations should be provided at the minimum at the upstream and downstream ends of all proposed sewers along with existing information to ensure that adequate elevation is available for the proposed construction. The current plan includes no information showing that a gravity sanitary sewer lead can physically be constructed at the required 1% grade, or that there will be adequate distance from other existing or proposed utilities, or acceptable depth of cover.


We have listed areas where additional information is needed for us to recommend approval of the site plan. The Township should consider these issues in your action on the plan.

Please call if you have any questions.

Sincerely,



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



Joseph C. Siwek, P.E.
Project Engineer

200-12736-12003

Copy: Brent W. LaVanway, P.E., Boss Engineering



Brighton Area Fire Department

615 W. Grand River

Brighton, Michigan 48116

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

March 2, 2012

Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Krug Ford Quick Lane
2798 E. Grand River
Site Plan Review

Dear Amy:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on March 1, 2012 and the drawings are dated November 14, 2011 with latest revisions dated February 21, 2012. The project is based on a new building (service center). The plan review is based on the requirements of the International Fire Code (IFC) 2009 edition. Previous comments appear to be addressed by the applicant in the revised submittal.

Previous comments in our review letter dated November 29, 2011 numbers 1-7 appear to have been addressed by the applicants in the revised submittal dated February 21, 2012.

Specifications and measurements of addressed comments will be field verified on or about the final certificate of occupancy inspection.

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 "J. Corcoran".

Jim Corcoran
Captain / Inspector



3121 E. Grand River Ave. Howell, MI 48843
 (517) 546-4836 Fax: (517) 548-1670 E-mail: be@bosseng.com

LETTER OF TRANSMITTAL

DATE 4/5/12	JOB NO. 11-190
ATTENTION Kelly VanMarter	
RE: Krug Quick Lane, Genoa Township, Livingston County	
Boss delivery	

TO
 Genoa Township Hall

GENOA TOWNSHIP

APR 05 2012

RECEIVED

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
2			Site Plan / Construction Plans (24" x 36")
2			Environmental Impact Assessment
2			Spill Prevention Control and Countermeasures Plan

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ corrected prints
 For review and comment _____
 FOR BIDS DUE _____ 20 _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS

We have updated the Spill Prevention Plan and it is now signed and dated. We have incorporated the sanitary sewer profiles into the set. We have added a forebay type basin to the outlet of the new storm sewer system. A basin design has been added to the overall plan to show what is needed to meet the current County Drain Commission requirements. Also, an easement has been added around the entire basin area per the engineering's request. Drain is now directed around the small building at the base of the slope a long the west side of Krug.

COPY TO _____

SIGNED:

Thomas H. Dumond, R.L.A.



Aerial Photograph



Future Oil Change Facility

North
↓

Buffer along south property line

Existing basin

**IMPACT ASSESSMENT
FOR
“KRUG QUICK LANE“**

**GENOA TOWNSHIP, LIVINGSTON COUNTY
MICHIGAN**

Prepared for:

**M. Krug Investments, L.L.C.
2798 E. Grand River
Howell, Michigan 48843
517.546.0244**

Prepared by:

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

April 4, 2012

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 *Written Impact Assessment Requirements* guidelines in accordance with Section 18.07 of the published Zoning Ordinance for Genoa Township, Livingston County, Michigan.

DISCUSSION ITEMS

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

Prepared By :
BOSS ENGINEERING COMPANY
3121 E. Grand River
Howell, Michigan 48843

Prepared For:
M. Krug Investments, LLC
2798 E. Grand River
Howell, Michigan 48843

B. Description of the site, including existing structures, man made facilities, and natural features, all-inclusive to within 100' of the property boundary.

The proposed Krug Quick Lane is located on 11.27 acres on the south side of Grand River Avenue just west of Krug Ford Lincoln Mercury. Approximately 6.75 acres of the property is currently being used by the automobile dealership. The remainder of the site (4.52 acres) has been left in its natural state and undeveloped except for a retention basin in the southwest corner of the property.

The property is higher along Grand River Avenue and slopes south and west to the existing retention basin area. The total elevation change across the property is approximately 32 feet. The undeveloped portion of the property is covered with scattered trees, brush and native grasses.

Existing utilities on-site and abutting the site include a 12" watermain along the south side of Grand River Ave., and a 8" watermain along the east side of the proposed building running through the center of the property. The sanitary sewer is located near the southwest corner of the property. The owner is working with Genoa Township to extend the sewer to the property. The storm sewer system is self contained on site.

Grand River Avenue is a five (5) lane roadway under the jurisdiction of the Michigan Department of Transportation (M.D.O.T.) with curb and gutter, and a center left turn lane.

Currently, an overhead utility service cuts across the southern half of the proposed site. Because of the utility, Krug has had to reduce the size of the building recommended by Ford Motor Company, and move the building forward into the front setback. The applicant has applied for a variance for a reduction in the front setback.

Also, a small portion of the existing parking lot currently extends into the Grand River Avenue right-of-way by 4 feet. Section 24.10 of the Genoa Township Ordinance states "Where a non-conforming front setback, parking lot setback or green belt is created as a result of additional road right-of-way width being acquired by a road agency, the building or parking lot may be improved or expanded without the need to obtain a variance from the ZBA, providing the following conditions are met:"

1. Conformed Prior to Right-of Way Widening – Even though Boss Engineering has been working on the Krug site since 1998, we do not have any record of the original site plan and how it related to the Grand River right-of-way. The asphalt was installed prior to Mike Krug purchasing the dealership which was in 1996.
2. Will Not Decrease Conformity – Our plan is to leave the front area untouched. Therefore, not decreasing the conformity.
3. Other Requirements Met – We are seeking a variance for the building setback due to an overhead utility service cutting through the property.

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, the subject site slopes gradually from Grand River towards the southwest. The U.S.D.A. Soil Conservation Service "Soil Survey of Livingston County" indicates the soils to be as follows:

Percent of Site	Name	Percent Slopes
100%	Miami Loam	2-6%

The site contains no streams, creeks, lakes or wetlands per the National Wetland Inventory Plan prepared by the United States Department of the Interior, and site visit.

The undeveloped portion of the site contains a mix of trees, brush and grasses.

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

The existing storm drainage runoff is captured in a retention basin located at the southwest corner of the property. The area where the proposed oil change will be located is currently paved and part of the automobile dealership. The addition of the auto maintenance facility will reduce the amount of impervious surface by approximately 2,600 square feet. Therefore, no additional storm water retention or detention is proposed. An area has been set a side adjacent to the existing retention basin for expansion of the basin, if additional storage volume is needed at a later date. A forebay has been designed to collect and slow drainage from the proposed facility.

The Livingston County Drain Commissioner must issue a Soil Erosion Control permit to ensure proper soil erosion control measures are used during construction. All requirements will be met including temporary drainage control, temporary dust control and runoff control. The following methods will be used as required. Diversion berms, geotextile sediment control fences, diversion ditching, slope stabilization. Stone filters will be installed on catch basins, inlets and pipe inlets. Finish grades, redistribution of top soil and lawn with shrubbery will be installed upon building and paving construction completion. Pavements, swales, basins, etc will be cleaned after construction and properly maintained by Krug Ford.

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 and working near adjacent buildings only during daytime hours.

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 4,900 square foot building to be used for oil changes and other minor automobile maintenance. There will be a total of 6 service bays accessed on the east side of the building. Customers will be required to park their vehicles in the spaces provided out front of the facility along Grand River. Employees will then drive the vehicles into the service bays for servicing.

The service hours for the facility are as follows:

Monday-Friday: 7:00 a.m. – 7:00 p.m.

Saturday: 8:00 a.m. – 5:00 p.m.

Much of the site will be illuminated by the existing light fixtures on the property. Several of the existing fixtures will be removed or relocated to make room for the new facility. Krug Ford has agreed, where possible, to replace light bulbs in the existing fixture in the parking lot with lower watt bulbs once the existing bulbs have burned out. Krug Ford's electrical contractor will have to determine if lower wattage bulbs will work in the existing fixtures. Wall mounted fixtures will be added to the building to supplement the existing lighting.

Two wall signs are proposed for the building, one on the front and the other on the east side. Because of limited visibility for east bound traffic on Grand River Avenue due to the adjacent building to the west, an additional sign is need to identify the business. The size and location of the two wall signs will be in compliance with the current Genoa Township Ordinance. A monument sign is not proposed at this time.

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 development will be served by public water and sewer systems adjacent to the site. The vehicle maintenance facility will employ eight (8) people on it's maximum shift. Because the use is based on quick servicing of vehicles, the users of the facility will be on site for a very limited period of time. Therefore, the impact on the general services will be minimal.

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.

The site is located within the Genoa-Oceola Sanitary Sewer District. The applicant will work with Township staff to determine the number of Residential Equivalent Units (R.E.U.) for the proposed use.

Because the storm sewer system is located entirely on the site, limited impact is anticipated from storm events. Much of the existing and proposed site sheet flows towards the existing retention basin. Therefore, the existing vegetation between the development and the basin filters out much of the sediments in the storm water.

All other utilities, including gas, electric, and telephone are available at the site and are not expected to increase in size or capacity. All proposed dry utilities will be underground.

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

The automobile fluids (new and used) kept on site will be stored or disposed of in accordance with current local, state and federal requirements.

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

Based on the Institute of Transportation Engineers Publication TRIP GENERATION manual for quick lubrication vehicle shop, the number of trips in an average weekday is 660, with the peak being between 4:00 PM and 6:00 PM.

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

None

K. Description of all sources:

- Genoa Township's Submittal Requirements For Impact Assessment/Impact Statement
- Genoa Township Zoning Ordinances
- Soil Survey of Livingston County, Michigan, U.S.D.A. Soil Conservation Service
- Trip Generation 6th Edition, Institute of Transportation Engineers

Spill Prevention Control and Countermeasures Plan

Krug Quick Lane
2798 E. Grand River
Howell, Michigan 48643

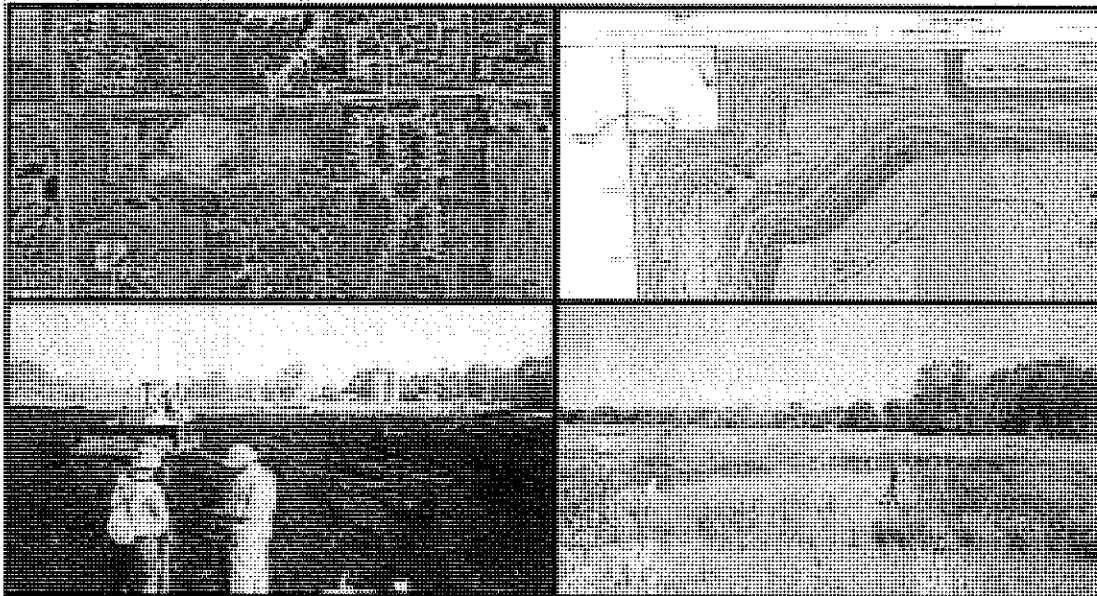
March 1, 2012

GENOA TOWNSHIP

APR 05 2012

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ASTi
ENVIRONMENTAL

Krug Quick Lane

Spill Prevention Control and Countermeasure Plan

March 1, 2012

Revised March 16, 2012

Report Prepared For:

Rand Construction
1270 Rickett Road
Brighton, MI 48116

M. Krug Investments, LLC
2798 E. Grand River
Howell, MI 48118

Report Prepared By:

Applied Science & Technology, Inc.
10448 Citation Drive
Brighton, Michigan 48116
1-800-395-ASTI

ASTI Project 7879

Report Prepared by:

Report Reviewed by:

Lisa Sullivan
Environmental Compliance Leader

Peter Collins
Director of Environmental Planning



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Appendix I - Spill Procedures

1.0 INTRODUCTION

The purpose of this Spill Prevention, Control, and Countermeasure (SPCC) Plan is to describe measures implemented by Krug Quick Lane to reduce the potential of environmental releases of oil products and to mitigate potential impacts if an environmental release occurs.

This Plan has been prepared prior to the construction of the facility and may require an update if the conceptual plans are changed or modified. This Plan meets the requirements of 40 CFR, Part 112 as of February 2012.

1.1 Substantial Harm Determination

Krug Quick Lane does not meet the criteria to be considered a risk of substantial harm under 40 CFR, Part 112 (Appendix A). Krug Quick Lane does not transfer oil over water to or from vessels. Krug Quick Lane has a total oil storage capacity significantly less than one million gallons.

1.2 Summary of Expectations

Krug Quick Lane will complete monthly site inspections that meet the requirements of this Plan. Krug Quick Lane will perform preventive maintenance on equipment, secondary containment, and discharge prevention systems as described in this Plan or under the guide of the respective equipment manufacturer. Krug Quick Lane will conduct annual employee training on the topics required by this Plan and provide documentation of such (Appendix B).

Krug Quick Lane will contact the parties listed in Section 9.1 and submit a copy of the SPCC to the EPA if either of the following occurs:

- an environmental release that exceeds one thousand gallons of oil with a potential of reaching navigable waters, or
- two environmental releases of quantities greater than forty-two gallons occur within a twelve month period.

Krug Quick Lane will review this Plan at least once every five years. Krug Quick Lane will amend this Plan within six months of a change in facility design, construction, operation, or maintenance that significantly affects the facility's spill potential. Krug Quick Lane will continue to evaluate effective prevention and control technology and will implement such technology if it is feasible and cost effective.

2.0 MANAGEMENT SUPPORT AND FACILITY INFORMATION

2.1 Facility, Owner, and Operator Information

Facility: Krug Quick Lane
2798 E. Grand River Avenue
Howell, Michigan 48116
Telephone: Not available at time of publication

Owner: M. Krug Investments, LLC
2798 E. Grand River Avenue
Howell, Michigan 48116

Operator: Same as Facility

2.2 Location of Facility

The site is located on the south side of E. Grand River Avenue, east of E. Michigan Avenue and west of S. Latson Road in Genoa Township, Livingston County, Michigan.

2.3 Designated Person Responsible for Oil & Polluting Material Spill Prevention

The person responsible for implementation and management of the SPCC is Dan Retherford. An alternate will be named at a later date. The alternate will be a General Manager, Supervisor, or other senior position.

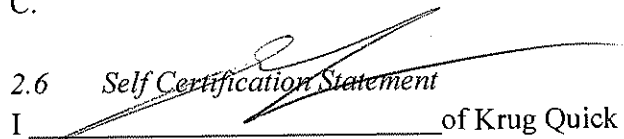
2.4 Internal Emergency Notification Procedures

In the event of an environmental release, immediately contact the person responsible for the SPCC (listed above). If the person responsible for the SPCC is not available contact the alternate. Evacuate all non-essential employees from the immediate area.

2.5 Management Approval

This plan has full approval of Krug Quick Lane at a level of authority to commit the necessary resources to make this a successful program. The Letter of Commitment is located in Appendix C.

2.6 Self Certification Statement

I  of Krug Quick Lane certify that, to the best of my knowledge, the following statements are true and that Krug Quick Lane is in full compliance with the SPCC requirements as stated in 40 CFR Part 112.

As the certifier, I am familiar with the applicable SPCC requirements as stated in 40 CFR Part 112. I have conducted a site inspection and have examined the Krug Quick Lane facility. To the best of my knowledge, this Plan was prepared in accordance with accepted and sound industry practices and standards, and fit the requirements of 40 CFR Part 112. Krug Quick Lane has put into place, procedures that meet the requirements for inspections. The contents of the SPCC will be fully implemented by Krug Quick Lane under my supervision.

I certify that Krug Quick Lane has an aggregate aboveground oil storage capacity of 10,000 U.S. gallons or less.

I certify that Krug Quick Lane has not had a single discharge (defined in §112.1 (b)) exceeding 1,000 U.S. gallons or two discharges (defined in §112.1 (b)) each exceeding 42 U.S. gallons within any twelve month period in the three years prior to the SPCC self-certification date.

To the best of my knowledge, this Plan does not deviate from the requirements of 40 CFR 112 as allowed by §112.7(a)(2) and 112.7(d), or include an exemption or measures pursuant to §112.9(c)(6) for produced water containers and any associated piping and appurtenances downstream from the container, except as provided in §112.6(b)(3).

I certify that this Plan and the individual(s) responsible for implementation of this Plan have the full approval of management and I have committed the necessary resources to fully implement this Plan.

I understand it is my obligation to report any oil discharge to navigable waters or adjoining shorelines to the appropriate authorities. The notification requirements are detailed in Section 9.1 of this Plan. I also understand it is my obligation to have this Plan reviewed and amended whenever there is a material change at the facility that affects the potential for an oil discharge, and at least once every five years. Reviews and amendments are recorded in an attached log (Refer to Appendix D).

I understand that other obligations relating to the storage of oil may apply to our facility. I understand that a contingency plan may be used in lieu of secondary containment for qualified oil-filled operational equipment, in accordance with the requirements under §112.7 (k); and must include an established and documented inspection or monitoring program, follow the provisions of 40CFR Part 109, and include a written commitment of manpower, equipment, and materials to expeditiously remove any quantity of oil discharged that may be harmful. If applicable, a copy of the contingency plan and any additional documentation will be attached to this Plan as an attachment.

I certify that Krug Quick Lane is not an oil production facility; therefore, the requirements regarding flowlines and intra-facility gathering lines does not apply.

I certify that I have satisfied the requirement to prepare and implement a Plan under §112.3 and all of the requirements under §112.6 (a). I certify that the information contained in this Plan is true.

Signature

Name


Dan Retherford

Title

Date

Service Director
4/5/12

2.7 Document Cross Reference

Appendix E contains the Cross Reference Matrix for Non-production Facilities. This Plan does not follow the exact order of the Cross Reference Matrix. The rules referred to can be found on the EPA web site.

3.0 REPORT ON SPILLS

The facility has not had any reportable spill events since beginning operations in 2012.

4.0 IMPACT ANALYSIS

4.1 *Type of Facility*

The proposed Krug Quick Lane conceptual plan consists of a 4,894 square foot building with paved driveway and parking areas. The facility would be used for automobile maintenance, oil change, and diagnostics.

4.2 *Direction of Flow*

All oil containing materials will be stored inside the building. The facility will not have open floor drains in areas where oil containing materials are stored. The building floor will be sloped inward. The outdoor topography will be graded away from the building and drain to the south-southwest. Conceptual Drawings are provided as Appendix F.

4.3 *Quantity of Oil*

The site will contain eight ASTs ranging in size from 275 gallons to 400 gallons. It is estimated that two 55-gallon drums will also be kept at the facility. Total oil capacity is estimated at 2,960 gallons. Oil containing equipment including compressors will also be located on the facility. A complete list will not be available until construction is complete.

5.0 SPILL CONTAINMENT PROVISIONS & STRUCTURAL CONTROLS

5.1 Description of Oil Storage

Table 1
Oil Containing Materials Storage Containers

Quantity	Total Capacity (gallons)	Contents	Threshold Reporting Quantity
2	400	5w20 Motor Oil	50 pounds to soil Sheen on water
1	400	15w40 Diesel Motor Oil	50 pounds to soil Sheen on water
1	275	Mercon 5 Transmission Fluid	50 pounds to soil Sheen on water
1	300	Washer Solvent	50 pounds to soil Sheen on water
1	55	Brake Cleaner	50 pounds to soil Sheen on water
1	55	Mercon LV Transmission Fluid	50 pounds to soil Sheen on water
1	275	5w30 Motor Oil	50 pounds to soil Sheen on water
2	400	Waste Oil	50 pounds to soil Sheen on water

5.2 Description of Oil Containment Structures

All storage containers for oil containing materials listed in Table 1 are stored within the building. The bulk of the oil will be stored in the Compressor/Bulk Oil Room. The building will have sealed concrete floors with no floor drains (except for inside bathrooms) and the building is expected to contain any oil containing material released. The floors will be inwardly sloped to fully contain 110% of the largest container or 10% of total volume (whichever is larger). Spill kits will be stored in this area in the event of a spill.

5.2.1 Drainage

The floor inside the building will be sloped to the center of the room/building and any spills are therefore expected to remain inside the building.

5.2.2 Facility Transfer Operations

Prior to removal from the truck, drums are inspected for signs of leakage or damage. Krug Quick Lane will not accept leaking or damaged drums. Drums are transported via hand cart from the truck to the Compressor/Bulk Oil Room. Once unloaded from the hand cart, the drums are inspected for signs of damage that may have occurred during transport.

The waste oil ASTs are emptied via a vacuum truck. Only certified waste haulers are used. The truck tires are chocked and the vehicle is disengaged during the transfer. All connections are checked prior to engaging the vacuum. An employee is in attendance during the entire transfer to observe for leaks, spills, or improper procedures. After an AST is emptied, the vacuum is shut off and the lines are disconnected while monitoring for any residual oil that may be remaining in the line.

All ASTs are fitted with overfill protection. An employee is present to observe the AST during filling operations. The methods for filling the ASTs are unknown and will be described in detail once available.

5.2.3 Inspections, Testing and Recordkeeping

Visual inspections are conducted monthly on the ASTs, dispensers, and drums. All surfaces are inspected for signs of leakage and impaired container integrity (i.e. corrosion, dents, etc.). Gaskets and valves are inspected. All records of inspection and testing are kept for a minimum of five years. An inspection checklist is provided in Appendix G.

Table 2
Potential Spill Predictions, Volumes, Rates, and Control

Type of Container	Volume (gal)	Estimated Rate of Spill (gal/min)	Direction of Flow	Secondary Containment
New Oil AST	400	30*	Floor sloped inward	Building
Transmission Fluid AST	275	20*	Floor sloped inward	Building
Washer Solvent AST	300	22.5*	Floor sloped inward	Building
Drum	55	55	Floor sloped inward	Building
New Oil AST	275	20*	Floor sloped inward	Building
Waste Oil AST	400	25*	Floor sloped inward	Building

* based on small hole, tear, or seam separation

6.0 INFEASIBILITY ANALYSIS

Installation of secondary containment is considered feasible for Krug Quick Lane; therefore, an infeasibility analysis is not necessary for this Plan.

7.0 SECURITY

The facility is approximately 4.32 acres, is located in an area of high traffic volume and has restricted access. The parking area and building is adequately lit. All oil-containing materials are stored indoors. Public access to the inside of the building is restricted to the reception area. The building is locked and secured during non-operational hours.

8.0 NON-STRUCTURAL CONTROLS

8.1 *Employee Training Program*

Employee training programs are necessary to inform personnel at all levels of responsibility about the components of the SPCC Plan. Each employee receives job-specific training at his/her hire date. An annual briefing about discharge prevention is held in accordance to SPCC requirements. Employee training addresses the following:

- Proper maintenance of equipment to prevent oil discharges.
- Procedures for filling tanks, including:
 - Checking reserve prior to filling.
 - Be in continuous attendance while filling.
 - Following filling, secure valves and verify that disconnects have not resulted in a spill.
 - Make sure pumps are only accessible to authorized personnel.
 - Do not top off vehicles.
- Monthly inspections for spills or leaks of oils and significant materials.
- Materials Handling and Storage
 - Train employees which materials are hazardous and where those materials are stored.
 - Point out container labels and how to interpret them.
 - Instruct employee to use the oldest materials first.
 - Demonstrate how valves are tightly closed and how drums should be sealed.
 - Demonstrate Material Safety Data Sheets (MSDSs) location and interpretation.
- Proper disposition of waste materials (i.e., do not dispose of materials down the sewer).
- Particular features of the facility and its operations, which are designed to minimize a release of any polluting materials.
- Monthly inspection for integrity of tanks, appurtenances and containment structures.
 - Personnel are trained on how to conduct monthly inspections in all areas included in this Plan.
 - Procedures for using inspection checklists (Appendix G) will also be reviewed.
- Spill Control
 - In the event of a spill, implement emergency spill procedures outlined in Section 9.0. These procedures will be reviewed during training.
 - Identify spill areas and drainage routes.
 - Explain cause and prevention of any past spill events.
 - Drill on spill cleanup procedures.
 - Review locations of spill control equipment and the person responsible for operating equipment.

- General Housekeeping
 - Review and demonstrate basic cleanup procedures.
 - Clearly indicate proper disposal locations.
 - Inform employees about locations of spill control equipment.

All records of training and attendance are maintained in the facility files for at least five years (Appendix B).

8.2 *Spill Control Equipment*

Available spill control equipment includes pads, floor dry, and absorbent socks. Spill control equipment is located in an easily accessible location in the vicinity of oil storage and usage.

8.3 *Housekeeping*

Good housekeeping practices are designed to maintain a clean and orderly work environment. Housekeeping procedures are implemented at the site to minimize potential pollution from discharging off-site with the storm water run-off.

- Vehicle parking areas are inspected and maintained.
- Maintenance includes the use of absorbent materials and/or the removal of oils from drips and leaks.
- Interior floors are maintained and kept intact.
- Debris is routinely picked up around the site.
- Paved areas and floors are routinely swept.

8.4 *Comprehensive Inspections*

Areas of oil storage are inspected monthly. These inspections are documented and records are retained. The inspection report indicates areas of non-compliance with oil storage requirements and contains a certification that Krug Quick Lane is in compliance with the SPCC Plan. A copy of the SPCC Plan Inspection Report is included in Appendix G.

9.0 SPILL NOTIFICATION PROCEDURES

9.1 *Spills of Oil*

In the event of a spill of oil, which has reached or has the potential to reach any body of water, surface water, groundwater, or storm drain, the following notifications must be made.

1. Call the National Response Center (NRC) immediately at (800) 424-8801.
2. Call the Pollution Emergency Alerting System (PEAS) at (800) 292-4706.
3. Call the Local Emergency Planning Committee (LEPC) at (517) 546-4620.
4. Submit a written report to the SERC within 14 days and the EPA Regional Administrator within 60 days.

State Emergency Response Commission
P.O. Box 30457
Lansing, MI 48909-7957

U.S. EPA
1 North Wacker Drive
Chicago, IL 60606

5. Within 10 days after the release, Krug Quick Lane will file a written report with the chief of the DEQ waste management division outlining the cause of the release, discovery of the release, and the response measures taken or a schedule for completion of measures to be taken, or both, to prevent recurrence of similar releases.

9.2 *Other Emergency Notifications and Procedures*

9.2.1 Notification Numbers

Brighton Fire Department	(810) 225-6204	911 - Emergency
Michigan State Police Department	(810) 227-1051	
Livingston County Sheriff	(517) 546-2440	
Applied Science & Technology, Inc.	(810) 225-2800	
Safety Kleen	(248) 851-7349	

The MDEQ Spill Report is available in Appendix H.

9.2.2 Spill Control & Cleanup Procedures

Spill control equipment and supplies consist of pads, floor dry, and absorbent socks. Spill control equipment is located in an easily accessible location in the vicinity of oil storage and usage..

If a spill occurs, it will be mitigated on a case-by-case basis as determined by Dan Retherford, the person responsible for the SPCC. A basic guide is provided in Appendix I.

Spill material will be characterized before disposal as required in 40 CFR 261.10 and be properly disposed in accordance to federal, state, and local regulations.

10.0 REVIEW OF PLAN

The SPCC Plan regulation (40 CFR 112.5) states that a facility must review its SPCC Plan in accordance with the following three principles:

1. Conduct a review of the SPCC Plan at least every five (5) years,
2. Complete any amendments within 6 months, if required, and
3. Include more effective prevention or control technology if:
Technology will significantly reduce the likelihood of a spill event,
Technology has been field-proven at review time.

In compliance with 40 CFR 112.5, the plan will be amended within six months if "there is a change in facility design, construction, operation, or maintenance which materially affects the facility's potential for discharge of oil into or upon the navigable waters of the United States or adjoining shoreline."

In the event of an oil or oil product discharge (40 CFR 110) in excess of 1,000 gallons in a single spill event, or if two discharges occur in excess of 42-gallons within any twelve-month period, the details of the discharge, contingency measures, and updated preventative measures and a copy of this plan must be submitted to the EPA.

Appendix A

Certification of the Applicability of Substantial Harm Criteria

Facility Name Krug Quick Lane

Facility Address _____

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes _____ No ✓

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?

Yes _____ No ✓

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes _____ No ✓

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake?

Yes _____ No ✓

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable spill in an amount greater than or equal to 10,000 gallons within the last five years.

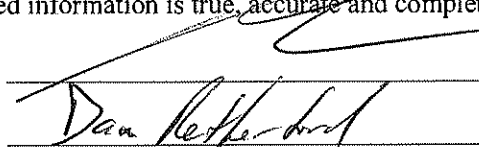
Yes _____ No ✓

If a facility answers "Yes" to any of the above questions, the facility must prepare a "Facility Response Plan" (FRP) according to 40 CFR 112.20.

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate and complete.

Signature



Title

Service Director

Name (print or type)

Dan Hetherington

Date

4/5/2012

Appendix B

Appendix C

MANAGEMENT APPROVAL

I, the undersigned, having the necessary authority to commit Krug Quick Lane personnel to the implementation of this plan, hereby certify that this Spill Prevention, Control and Countermeasure Plan will be implemented as herein described. A copy of this plan shall be kept at the facility and will be made available to the United States Environmental Protection agency and/or State of Michigan government officials if requested.

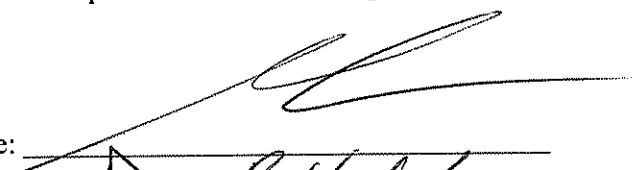
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Facility Representative Signature: _____

Printed Name: _____

Title: _____

Date: _____



Dan Retherford
Service Director

4/5/2012

Appendix D

SPCC Review and Amendments

Date	Amendments

Appendix E

CROSS REFERENCE MATRIX FOR NON-PRODUCTION FACILITIES

Regulation	Description	Page #
§112.3(b)(1) or (c)	SPCC Plan prepared prior to facility becoming operational (effective 11/10/2010)	
§112.3(d)	Professional Engineer (PE) certification with five elements	
§112.5(a)	Amendment of SPCC Plan	
§112.5(b)	Review of Plan at least every 5 years with documentation (i.e. a log)	
§112.6	Qualified Facilities: meets qualification criteria	
§112.6(a) or (b)	Tier I or Tier II Self Certification with 8 elements	
§112.6(a)(2)	Technical amendments self-certified	
§112.6(a)(3)(i)	Template has failure analysis	
§112.6(a)(3)(ii)	Template has adequate secondary containment	
§112.6(a)(3)(iii)	Template has overfill protection	
§112.6(b)(2) / (i)	Technical amendment Self-Certified or PE certification for deviations from Plan requirements	
§112.6(c)(3)(i)	Environmental Equivalence certified by PE	
§112.6(c)(3)(ii)	Impracticability determination certified by PE	
§112.6(c)(4)	PE certification with three elements	
§112.7	General requirements for SPCC Plans for all facilities & all oil types	
§112.7	Management approval of Plan	
§112.7	Discussion of facilities, procedures, methods or equipment not yet fully operational with details of installation and operational start-up	
§112.7(a)(1)	General requirements; discussion of facility's conformance with rule requirements	
§112.7(a)(2)	Deviations from Plan requirements	
§112.7(a)(3)	Facility description and diagram, type of oil and capacity of each container, transfer stations and piping, buried containers on diagram	
§112.7(a)(3)(ii)	Discharge prevention measures	
§112.7(a)(3)(iii)	Discharge drainage controls	
§112.7(a)(3)(iv)	Countermeasures for discharge discovery, response and cleanup	
§112.7(a)(3)(v)	Methods of disposal of recovered materials in accordance with legal requirements	
§112.7(a)(3)(vi)	Contact list and phone numbers for facility response coordinator, National Response Center, cleanup contractors, all Federal, State, and local agencies who must be contacted in case of a discharge	
§112.7(a)(4)	Spill reporting information	
§112.7(a)(5)	Discharge procedures	
§112.7(b)	Failure prediction (sources, quantities, rates, and directions)	
§112.7(c)	Secondary containment for all areas from which a discharge of oil could occur (i.e. mobile refuelers, loading/unloading areas, transformers, oil filled operational equipment, etc.) other than bulk containers	
§112.7(d)	Explanation of impracticability of secondary containment	
§112.7(d)(1)	Oil spill contingency plan per part 109	
§112.7(d)(2)	Commitment of manpower, equipment & materials to remove a discharge	
§112.7(e)	Written procedures for inspections and tests	
§112.7(e)	Records of inspections and tests signed and kept 3 years	
§112.7(f)(1)	Employee training	
§112.7(f)(2)	Designated individual accountable for discharge prevention	

CROSS REFERENCE MATRIX FOR NON-PRODUCTION FACILITIES

Regulation	Description	Page #
§112.7(f)(3)	Discharge prevention briefings scheduled and conducted annually	
§112.7(g)	Security: How oil handling, processing and storage areas are secured and access is controlled	
§112.7(g)	Security: How master flow and drain valves of containers are secured	
§112.7(g)	Security: How unauthorized access to starter controls on oil pumps is prevented	
§112.7(g)	Security: How out-of-service and loading/unloading connections of oil pipelines are secured	
§112.7(g)(5)	Security: Appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges is addressed	
§112.7(h)	Loading/unloading rack (excluding offshore facilities)	
§112.7(h)(1)	Containment for contents of largest compartment	
§112.7(h)(2)	Warning light/sign, barrier system, wheel chocks, or break interlock system to prevent departure with connected lines	
§112.7(h)(3)	Inspect drains and outlets of vehicles	
§112.7(i)	Brittle fracture or catastrophic failure evaluation requirements	
§112.7(j)	Conformance with State requirements	
§112.3(k)(1)	Qualified Oil-Filled Operational Equipment: meets criteria	
§112.7(k)(2)(i)	Inspection procedures or monitoring program	
§112.7(k)(2)(ii)(A)	Oil spill contingency plan per part 109	
§112.7(k)(2)(ii)(B)	Written commitment of resources	
§112.8, §112.12	Requirements for Onshore Facilities (excluding production)	
§112.8(a), §112.12(a)	Meet general and specific requirements	
§112.8(b)(1), §112.12(b)(1)	Facility drainage: Restrain drainage from diked areas; inspect accumulation	
§112.8(b)(2), §112.12(b)(2)	Facility drainage: Manual valves to drain diked areas, inspect before discharging into watercourse	
§112.8(b)(3), §112.12(b)(3)	Facility drainage: Undiked drainage with a potential for a discharge designed to flow to ponds, lagoons, or catchment basins	
§112.8(b)(4), §112.12(b)(4)	Facility drainage: Final discharge of ditch drainage controlled	
§112.8(b)(5), §112.12(b)(5)	Facility drainage: Where pump transfer is needed, two lift pumps installed with one installed permanently	
§112.8(c), §112.12(c)	Bulk storage containers:	
§112.8(c)(1), §112.12(c)(1)	Containers compatible with material and conditions of storage	
§112.8(c)(2), §112.12(c)(2)	Secondary containment for capacity of largest container & sufficient freeboard for precipitation	
§112.8(c)(3), §112.12(c)(3)	Not allow drainage of rainwater from diked areas unless inspected, records kept of drainage events	
§112.8(c)(4), §112.12(c)(4)	Completely buried metallic containers corrosion protected, leak testing conducted	
§112.8(c)(5), §112.12(c)(5)	Partially buried containers corrosion protected	

CROSS REFERENCE MATRIX FOR NON-PRODUCTION FACILITIES

Regulation	Description	Page #
§112.8(c)(6), §112.12(c)(6)	Integrity testing, visual plus non-destructive shell testing, comparison records kept	
§112.8(c)(7), §112.12(c)(7)	Internal heating coils monitored	
§112.8(c)(7), §112.12(c)(7)	Internal heating coils monitored	
§112.8(c)(8), §112.12(c)(8)	Containers engineered to prevent discharges	
§112.8(c)(8)(v), §112.12(c)(8)(v)	Liquid level sensing devices tested to ensure proper operation	
§112.8(c)(9), §112.12(c)(9)	Observe effluent treatment facilities to detect system upsets	
§112.8(c)(10), §112.12(c)(10)	Correct visible leaks and remove accumulations of oil	
§112.8(c)(11), §112.12(c)(11)	Secondary containment for mobile/portable containers with capacity of largest container & sufficient freeboard for precipitation	
§112.8(d), §112.12(d)	Facility transfer operations, pumping and facility process:	
§112.8(d)(1), §112.12(d)(1)	Buried piping installed or replaced after 8/16/02 corrosion protected	
§112.8(d)(2), §112.12(d)(2)	Terminal connections capped/blank flanged when not in service or in standby service for an extended time	
§112.8(d)(3), §112.12(d)(3)	Pipe supports properly designed	
§112.8(d)(4), §112.12(d)(4)	Inspect aboveground piping, integrity and leak test buried piping	
§112.8(d)(5), §112.12(d)(5)	Warn vehicles of aboveground piping	
§112.20(e)	Completed and signed certification of substantial harm form (Appendix C)	

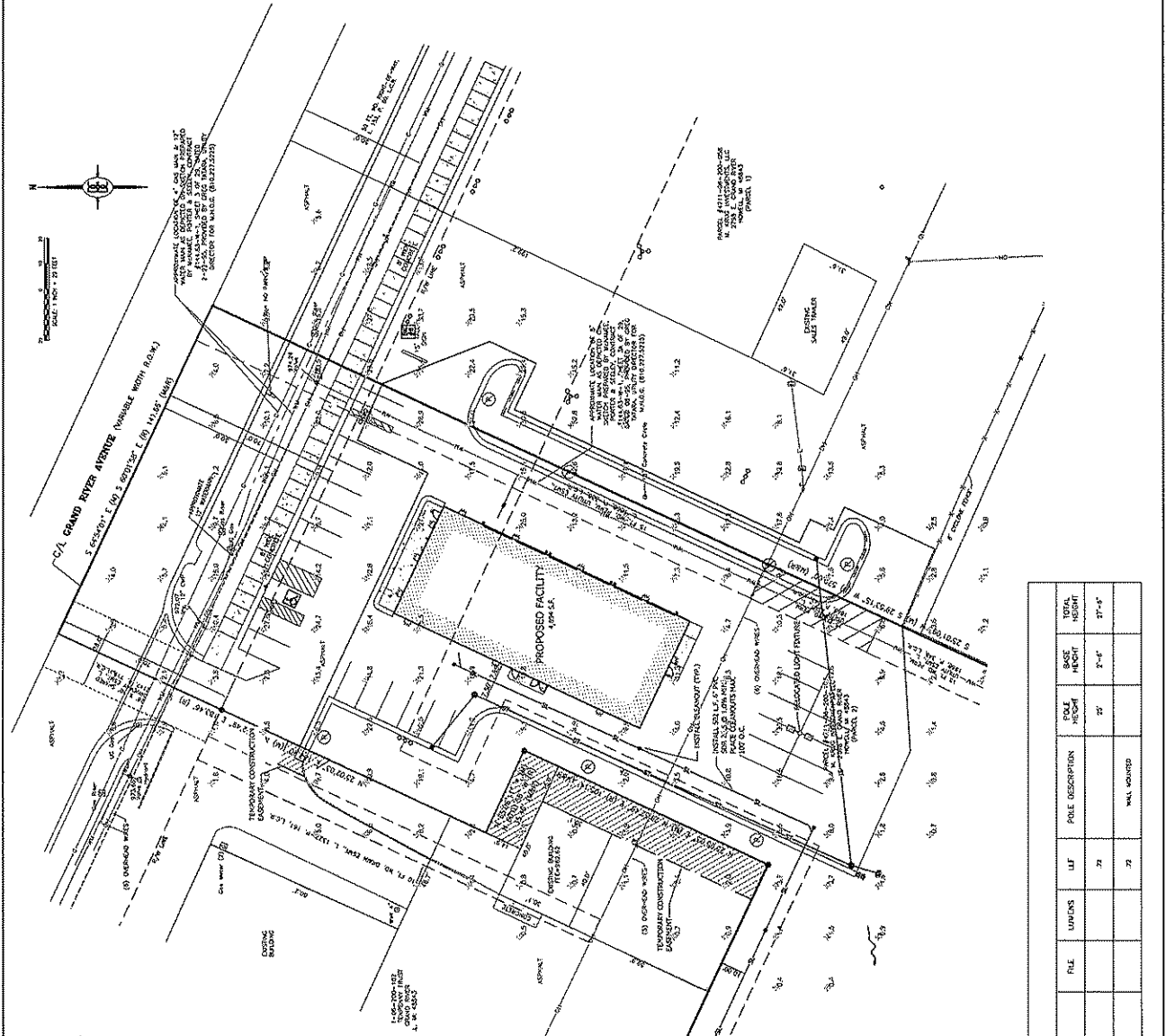
Appendix F

BOSS ENGINEERING
LANDSCAPE ARCHITECTS
 1001 2nd Street, Suite 100
 San Francisco, CA 94107
 (415) 774-1100

BOSS ENGINEERING
ENGINEERS & SURVEYORS & PLANNERS
 1001 2nd Street, Suite 100
 San Francisco, CA 94107
 (415) 774-1100

PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
 1270 BOWEN ST. #4116
 SAN FRANCISCO, CA 94116
 (415) 227-7011

DATE:	11-14-11		
SHEET NO.:	7		
LAB. NO.:	11-180		
SCALE:	1" = 20'		
CHECKED BY:			
DRAWN BY:	TD		
DATE:	11-14-11		
REVISION:			
NO.	DATE	BY	DESCRIPTION
1	11-14-11	TD	ISSUED FOR PERMIT
2	11-14-11	TD	ISSUED FOR PERMIT
3	11-14-11	TD	ISSUED FOR PERMIT
4	11-14-11	TD	ISSUED FOR PERMIT
5	11-14-11	TD	ISSUED FOR PERMIT
6	11-14-11	TD	ISSUED FOR PERMIT
7	11-14-11	TD	ISSUED FOR PERMIT



GENERAL LIGHTING NOTES

- THE LUMINAIRE BEAM SPREADERS, ILLUMINATION LEVELS, AND SPACING SHALL BE CALCULATED FROM ILLUMINANCE DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY (IES) RECOMMENDATIONS. THE PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY FROM THE DATA PROVIDED IN THE IES RECOMMENDATIONS. THE CONTRACTOR SHALL VERIFY THE PERFORMANCE OF ALL LUMINAIRES IN THE FIELD.
- ALL POLES ARE TO BE MOUNTED ON CONCRETE PRECASTS (C/P) WITH AN ANCHOR BOLT IN THE BACK OF THE CURB OR EDGE OF SIDEWALK.
- ALL POLES LOCATED OUTSIDE OF THE PARKING AREA SHALL BE LOCATED 3 FEET FROM THE BACK OF CURB OR EDGE OF SIDEWALK.
- SHOP DRAWINGS FOR THE ELECTRICAL WORK OF THE LUMINAIRES SHALL BE SUBMITTED FOR REVIEW AND APPROVAL OF THE ARCHITECT AND ENGINEER PRIOR TO CONSTRUCTION.

LEGEND

PROPOSED (P)	EXISTING (E)
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42. 1" = 20'	42. 1" = 20'
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48. 1" = 20'	48. 1" = 20'
49. 1" = 20'	49. 1" = 20'
50. 1" = 20'	50. 1" = 20'

STREETWORKS

1. ALL STREETWORKS SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED.

2. ALL STREETWORKS SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED.

WHIP WALL PANEL

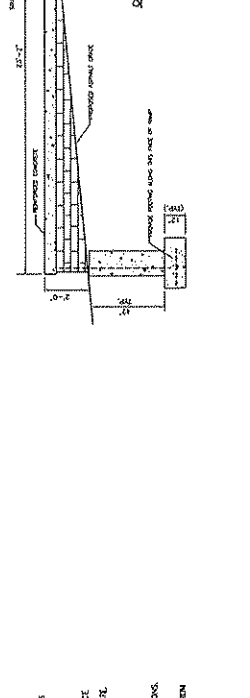
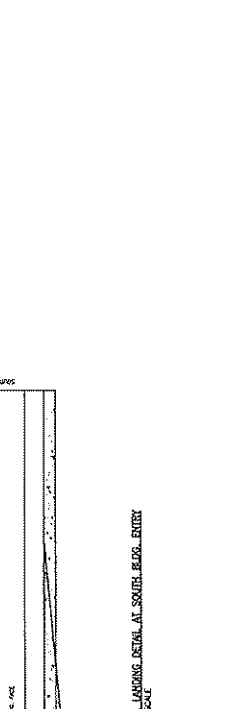
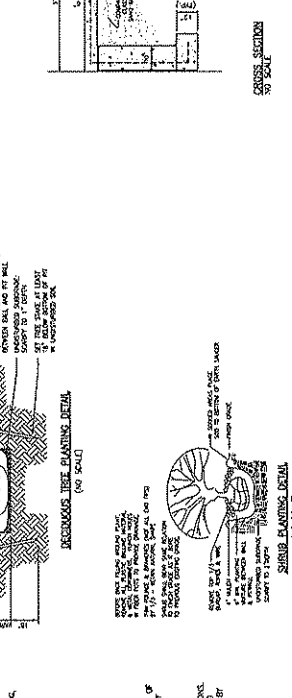
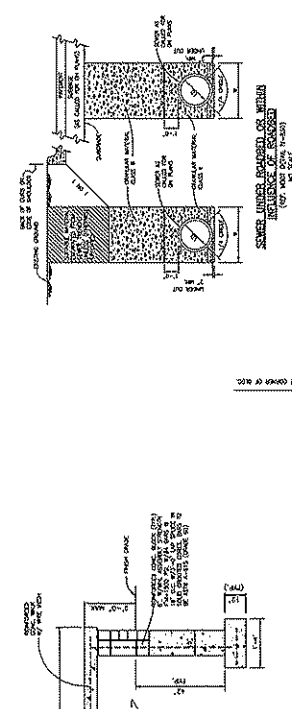
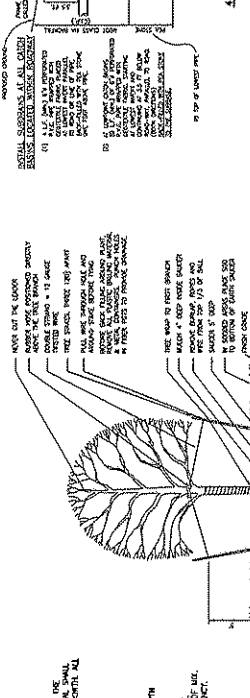
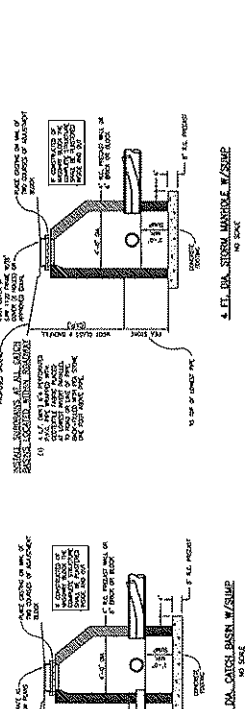
1. ALL WHIP WALL PANELS SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED.

2. ALL WHIP WALL PANELS SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS, EDITION 2008, AS AMENDED.

LUMINAIRE SCHEDULE

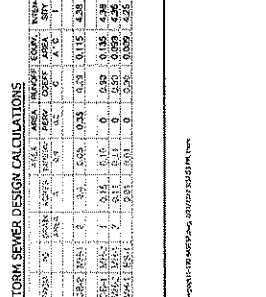
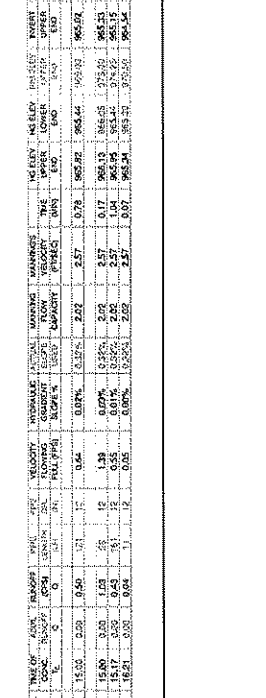
SYMBOL	LABEL	QTY.	DESCRIPTION	CATALOG NUMBER	LAMP	FILE	LUMENS	ULF	PILE DESCRIPTION	POLE HEIGHT	WALL HEIGHT	WALL WIDTH
1	REGULATED DOUBLE ENDITE	1	REGULATED DOUBLE ENDITE		LAMP			72		27'-6"	27'-6"	
2	CONCRETE PRECAST	11	CONCRETE PRECAST	HPF 25. P * FE WH 2. L	200 WATT 8W			72				WALL MOUNTED

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

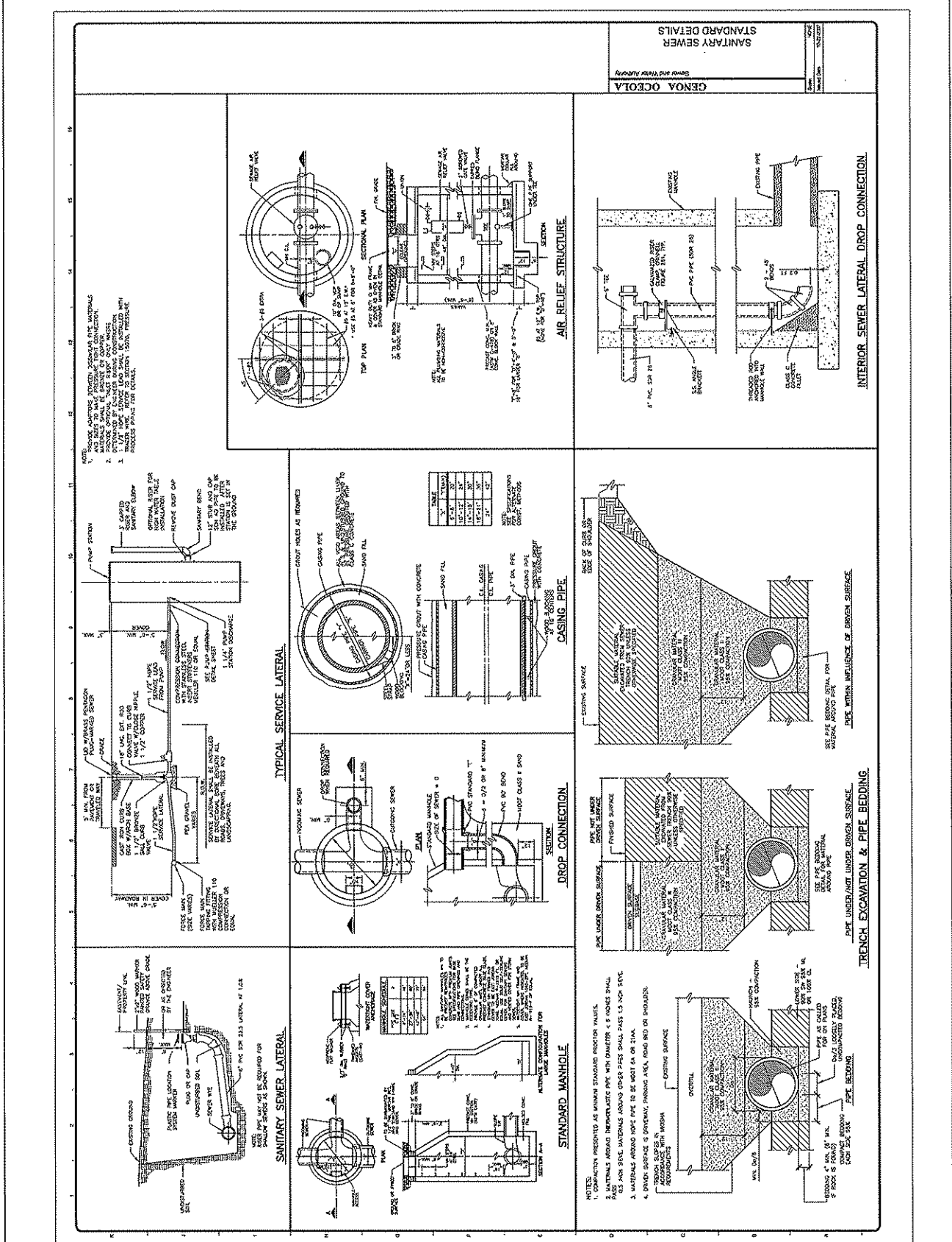


STORM SEWER DESIGN CALCULATIONS

NO.	MANHOLE	INLET	OUTLET	LENGTH	PIPE	DIAMETER	VELOCITY	TIME	DEPTH	AREA	VOLUME	TIME	DEPTH	AREA	VOLUME
1	1	2	3	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
2	2	3	4	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
3	3	4	5	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
4	4	5	6	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
5	5	6	7	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
6	6	7	8	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
7	7	8	9	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
8	8	9	10	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
9	9	10	11	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
10	10	11	12	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
11	11	12	13	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
12	12	13	14	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
13	13	14	15	100	12"	1.48	1.48	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001



- GENERAL LANDSCAPE NOTES:**
1. ALL MATERIALS SHALL COMPLY WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE CONTRACT DOCUMENTS AND SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ARCHITECT. ALL MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT.
 2. ALL PLANT MATERIALS SHALL BE BUILT AND DELIVERED TO THE SITE IN A HEALTHY AND VIGOROUS STATE. ALL PLANT MATERIALS SHALL BE OF A SPECIES AND VARIETY THAT IS SUITABLE FOR THE CLIMATE AND SOIL CONDITIONS OF THE PROJECT. ALL PLANT MATERIALS SHALL BE OF A SIZE AND AGE THAT WILL BE SUITABLE FOR THE PROJECT. ALL PLANT MATERIALS SHALL BE OF A QUALITY THAT WILL BE SUITABLE FOR THE PROJECT.
 3. ALL PLANT BEDS SHALL BE BUILT AND DELIVERED TO THE SITE IN A HEALTHY AND VIGOROUS STATE. ALL PLANT BEDS SHALL BE OF A SPECIES AND VARIETY THAT IS SUITABLE FOR THE CLIMATE AND SOIL CONDITIONS OF THE PROJECT. ALL PLANT BEDS SHALL BE OF A SIZE AND AGE THAT WILL BE SUITABLE FOR THE PROJECT. ALL PLANT BEDS SHALL BE OF A QUALITY THAT WILL BE SUITABLE FOR THE PROJECT.
 4. PLANTING MATERIALS SHALL BE OF A SPECIES AND VARIETY THAT IS SUITABLE FOR THE CLIMATE AND SOIL CONDITIONS OF THE PROJECT. ALL PLANTING MATERIALS SHALL BE OF A SIZE AND AGE THAT WILL BE SUITABLE FOR THE PROJECT. ALL PLANTING MATERIALS SHALL BE OF A QUALITY THAT WILL BE SUITABLE FOR THE PROJECT.
 5. ALL PLANT BEDS AND INDIVIDUAL PLANTS SHALL BE BUILT WITH A CONCRETE CURB AND A CONCRETE BASE. ALL PLANT BEDS AND INDIVIDUAL PLANTS SHALL BE BUILT WITH A CONCRETE CURB AND A CONCRETE BASE.
 6. ALL PLANT BEDS AND INDIVIDUAL PLANTS SHALL BE BUILT WITH A CONCRETE CURB AND A CONCRETE BASE. ALL PLANT BEDS AND INDIVIDUAL PLANTS SHALL BE BUILT WITH A CONCRETE CURB AND A CONCRETE BASE.
 7. THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF PLANTING. ALL PLANT MATERIALS SHALL BE BUILT AND DELIVERED TO THE SITE IN A HEALTHY AND VIGOROUS STATE. ALL PLANT MATERIALS SHALL BE OF A SPECIES AND VARIETY THAT IS SUITABLE FOR THE CLIMATE AND SOIL CONDITIONS OF THE PROJECT. ALL PLANT MATERIALS SHALL BE OF A SIZE AND AGE THAT WILL BE SUITABLE FOR THE PROJECT. ALL PLANT MATERIALS SHALL BE OF A QUALITY THAT WILL BE SUITABLE FOR THE PROJECT.
 8. EDGING WORK SHALL BE BUILT AND DELIVERED TO THE SITE IN A HEALTHY AND VIGOROUS STATE. ALL EDGING WORK SHALL BE OF A SPECIES AND VARIETY THAT IS SUITABLE FOR THE CLIMATE AND SOIL CONDITIONS OF THE PROJECT. ALL EDGING WORK SHALL BE OF A SIZE AND AGE THAT WILL BE SUITABLE FOR THE PROJECT. ALL EDGING WORK SHALL BE OF A QUALITY THAT WILL BE SUITABLE FOR THE PROJECT.
 9. SOIL SHALL BE BUILT AND DELIVERED TO THE SITE IN A HEALTHY AND VIGOROUS STATE. ALL SOIL SHALL BE OF A SPECIES AND VARIETY THAT IS SUITABLE FOR THE CLIMATE AND SOIL CONDITIONS OF THE PROJECT. ALL SOIL SHALL BE OF A SIZE AND AGE THAT WILL BE SUITABLE FOR THE PROJECT. ALL SOIL SHALL BE OF A QUALITY THAT WILL BE SUITABLE FOR THE PROJECT.
 10. ALL AREAS OF THE SITE THAT RECEIVE WATER SHALL BE BUILT AND DELIVERED TO THE SITE IN A HEALTHY AND VIGOROUS STATE. ALL AREAS OF THE SITE THAT RECEIVE WATER SHALL BE OF A SPECIES AND VARIETY THAT IS SUITABLE FOR THE CLIMATE AND SOIL CONDITIONS OF THE PROJECT. ALL AREAS OF THE SITE THAT RECEIVE WATER SHALL BE OF A SIZE AND AGE THAT WILL BE SUITABLE FOR THE PROJECT. ALL AREAS OF THE SITE THAT RECEIVE WATER SHALL BE OF A QUALITY THAT WILL BE SUITABLE FOR THE PROJECT.
 11. ALL AREAS OF THE SITE SCHEDULED FOR STORM SEWER INSTALLATION SHALL BE BUILT AND DELIVERED TO THE SITE IN A HEALTHY AND VIGOROUS STATE. ALL AREAS OF THE SITE SCHEDULED FOR STORM SEWER INSTALLATION SHALL BE OF A SPECIES AND VARIETY THAT IS SUITABLE FOR THE CLIMATE AND SOIL CONDITIONS OF THE PROJECT. ALL AREAS OF THE SITE SCHEDULED FOR STORM SEWER INSTALLATION SHALL BE OF A SIZE AND AGE THAT WILL BE SUITABLE FOR THE PROJECT. ALL AREAS OF THE SITE SCHEDULED FOR STORM SEWER INSTALLATION SHALL BE OF A QUALITY THAT WILL BE SUITABLE FOR THE PROJECT.
 12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTING CONDITIONS OF THE SITE AND TO PROVIDE A DETAILED REPORT TO THE ARCHITECT OF ANY DISCREPANCIES OR CHANGES TO THE EXISTING CONDITIONS.
 13. ALL PLANT MATERIALS SHALL BE FREE OF WEEDS, INSECTS AND DISEASES.



Appendix G

**Krug Quick Lane
Oil Storage Areas Monthly Inspection Checklist
Howell, Michigan**

Date: _____ Time: _____ am/pm Inspector: _____

	YES	NO*
<u>400-gallon 5w20 Motor Oil AST #1</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
<u>400-gallon 5w20 Motor Oil AST #2</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
<u>400-gallon 15w40 Diesel Motor Oil AST</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
<u>275-gallon Mercon 5 Transmission Fluid AST</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
<u>300-gallon Washer Solvent AST</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____

**Krug Quick Lane
Oil Storage Areas Monthly Inspection Checklist Continued
Howell, Michigan**

Date: _____ Time: _____ am/pm Inspector: _____

	YES	NO
<u>275-gallon 5w30 Motor Oil AST</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
 <u>400-gallon Waste Oil AST #1</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
 <u>400-gallon 5w20 Motor Oil AST #2</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
 55-gallon drums		
Drums are free of visible signs of leakage or damage	_____	_____
Floor is free from signs of leakage.	_____	_____
Drums are properly closed	_____	_____
Drums are free of rust or corrosion	_____	_____
 Piping and Dispensers		
Piping is free from visible signs of leakage or damage	_____	_____
Ground is free from staining and odor	_____	_____
Dispensers are working properly with no signs of leakage	_____	_____
 Other		
1. Routine Maintenance is being performed on a regular basis	_____	_____
2. Good Housekeeping procedures are followed	_____	_____
3. The facility is in compliance with the SPCC Plan	_____	_____
4. Spill Kits are maintained and are easily accessible	_____	_____

If NO was initialed, **immediately notify the General Manager**, and begin spill response.

Note:

- 1 - Time the spill was discovered
- 2 - Action taken in response to the spill
- 3 - Explain spill response

Name _____

Date _____

Appendix H



SPILL OR RELEASE REPORT

Issued by authority of the Michigan Department of Environmental Quality.

NOTE: Some regulations require a specific form to use and procedures to follow when reporting a release. Those forms and procedures **MUST** be used and followed if reporting under those regulations. This report form is to aid persons reporting releases under regulations that do not require a specific form. This report form is not required to be used. **To report a release, some regulations require a facility to call the PEAS Hotline at 800-292-4706 (or the DEQ District Office that oversees the county where it occurred) and other agencies and provide information that is included in this form. A written follow-up report might be required. This form may be used for the written follow-up report and to document the initial report. If you prefer to submit this report electronically by FAX or e-mail, contact the regulating agency for the correct telephone number or e-mail address. Go to www.michigan.gov/chemrelease for more information.**

Please print or type all information.

Name and Title of Person Submitting Written Report		Telephone Number (provide area code) ()	
Name of Business		RELEASE LOCATION (Provide address if different than business, if known, and give directions to the spill location. Include nearest highway, town, road intersection, etc.)	
Street Address			
City, State, ZIP			
Business Telephone Number (provide area code) ()			
SITE IDENTIFICATION NUMBER AND OTHER IDENTIFYING NUMBERS (if applicable)		County	Township
Tier/Range/Section (if known)			

RELEASE DATA: Complete all applicable categories. Check all the boxes that apply to the release. Provide the best available information regarding the release and its impacts. Attach additional pages if necessary.

DATE & TIME OF RELEASE (if known) ____/____/____ am/pm	DATE & TIME OF DISCOVERY ____/____/____ am/pm	DURATION OF RELEASE (if known) ____ days ____ hours ____ minutes	TYPE OF INCIDENT <input type="checkbox"/> Explosion <input type="checkbox"/> Fire <input type="checkbox"/> Leaking container <input type="checkbox"/> Other _____	<input type="checkbox"/> Loading/unloading release <input type="checkbox"/> Pipe/valve leak or rupture <input type="checkbox"/> Vehicle accident
MATERIAL RELEASED (chemical or trade name) <input type="checkbox"/> CHECK HERE IF ADDITIONAL MATERIALS LISTED ON ATTACHED PAGE.	CAS NUMBER OR HAZARDOUS WASTE CODE	ESTIMATED QUANTITY RELEASED (indicate unit e.g. lbs, gals, cu ft or yds)	PHYSICAL STATE RELEASED (indicate if solid, liquid, or gas)	

FACTORS CONTRIBUTING TO RELEASE <input type="checkbox"/> Equipment failure <input type="checkbox"/> Operator error <input type="checkbox"/> Faulty process design	<input type="checkbox"/> Training deficiencies <input type="checkbox"/> Unusual weather conditions <input type="checkbox"/> Other _____	SOURCE OF LOSS <input type="checkbox"/> Container <input type="checkbox"/> Railroad car <input type="checkbox"/> Pipeline	<input type="checkbox"/> Ship <input type="checkbox"/> Tank <input type="checkbox"/> Other _____	<input type="checkbox"/> Tanker <input type="checkbox"/> Truck
--	---	--	--	---

TYPE OF MATERIAL RELEASED <input type="checkbox"/> Agricultural: manure, pesticide, fertilizer <input type="checkbox"/> Chemicals <input type="checkbox"/> Flammable or combustible liquid <input type="checkbox"/> Hazardous waste <input type="checkbox"/> Liquid industrial waste <input type="checkbox"/> Oil/petroleum products or waste <input type="checkbox"/> Salt <input type="checkbox"/> Sewage <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown	MATERIAL LISTED ON OR DEFINED BY <input type="checkbox"/> CAA Section 112(r) list (40 CFR Part 68) <input type="checkbox"/> CERCLA Table 302.4 (40 CFR Part 302) <input type="checkbox"/> EPCRA Extremely Hazardous Substance (40 CFR Part 355) <input type="checkbox"/> NREPA Part 31, Part 5 Rules polluting material <input type="checkbox"/> NREPA Part 111 or RCRA hazardous waste <input type="checkbox"/> NREPA Part 121 liquid industrial waste <input type="checkbox"/> Other list _____ <input type="checkbox"/> Unknown	IMMEDIATE ACTIONS TAKEN <input type="checkbox"/> Containment <input type="checkbox"/> Dilution <input type="checkbox"/> Evacuation <input type="checkbox"/> Hazard removal <input type="checkbox"/> Neutralization <input type="checkbox"/> System shut down <input type="checkbox"/> Other _____	<input type="checkbox"/> Diversion of release to treatment <input type="checkbox"/> Decontamination of persons or equipment <input type="checkbox"/> Monitoring
---	--	--	---

RELEASE REACHED <input type="checkbox"/> Surface waters (include name of river, lake, drain involved) _____ <input type="checkbox"/> Drain connected to sanitary sewer (include name of wastewater treatment plant and/or street drain, if known) _____ <input type="checkbox"/> Drain connected to storm sewer (include name of drain or water body it discharges into, if known) _____ <input type="checkbox"/> Groundwater (indicate if it is a known or suspected drinking water source and include name of aquifer, if known) _____ <input type="checkbox"/> Soils (include type e.g. clay, sand, loam, etc.) _____ <input type="checkbox"/> Ambient Air <input type="checkbox"/> Spill contained on impervious surface	Distance from spill location to surface water, in feet _____
---	--

EXTENT OF INJURIES (if any)	WAS ANYONE HOSPITALIZED? <input type="checkbox"/> Yes Number Hospitalized: _____ <input type="checkbox"/> No	NUMBER OF INJURIES TREATED ON SITE _____
-----------------------------	--	--

Describe the incident, the type of equipment involved in the release, how the volume of loss was determined, along with any resulting environmental damage caused by the release. Identify who immediately responded to the incident (own employees or contractor — include cleanup company name, contact person, and telephone number). Also identify who did further cleanup activities if performed or known when report submitted.

CHECK HERE IF DESCRIPTION OR ADDITIONAL COMMENTS ARE INCLUDED ON ATTACHED PAGE

Estimated quantity of any recovered materials and a description of how those materials were managed (include disposal method if applicable)

CHECK HERE IF DESCRIPTION OR ADDITIONAL COMMENTS ARE INCLUDED ON ATTACHED PAGE

Assessment of actual or potential hazards to human health (include known acute or immediate and chronic or delayed effects, and where appropriate, advice regarding medical attention necessary for exposed individuals.)

CHECK HERE IF DESCRIPTION OR ADDITIONAL COMMENTS ARE INCLUDED ON ATTACHED PAGE

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY NOTIFIED:

INITIAL CONTACT BY: Telephone FAX Email Other

DATE/TIME INITIAL CONTACT: _____

PEAS: 800-292-4706 Log Number Assigned _____

DEQ District or Field Office Divisions or Offices Contacted:

<input type="checkbox"/> Bay City	<input type="checkbox"/> Gwinn	<input type="checkbox"/> Air Quality
<input type="checkbox"/> Cadillac	<input type="checkbox"/> Jackson	<input type="checkbox"/> Remediation
<input type="checkbox"/> Calumet	<input type="checkbox"/> Kalamazoo	<input type="checkbox"/> Office Geological Survey
<input type="checkbox"/> Crystal Falls	<input type="checkbox"/> Lansing	<input type="checkbox"/> Water Resources
<input type="checkbox"/> Detroit	<input type="checkbox"/> Newberry	<input type="checkbox"/> Resource Management
<input type="checkbox"/> Gaylord	<input type="checkbox"/> Warren	
<input type="checkbox"/> Grand Rapids		

NOTE: DEQ Office locations are subject to change

NAME AND TITLE OF PERSON MAKING INITIAL REPORT:

DEQ STAFF CONTACTED & TELEPHONE NUMBER:

OTHER ENTITIES NOTIFIED:

	Date:	Time:
<input type="checkbox"/> National Response Center (NRC): 800-424-8802	_____	_____
<input type="checkbox"/> US Coast Guard Office:	_____	_____
<input type="checkbox"/> Detroit <input type="checkbox"/> Grand Haven <input type="checkbox"/> Sault Ste. Marie		
<input type="checkbox"/> US Department of Transportation	_____	_____
<input type="checkbox"/> US Environmental Protection Agency	_____	_____
<input type="checkbox"/> 911 (or primary public safety answering point)	_____	_____
<input type="checkbox"/> Local Fire Department	_____	_____
<input type="checkbox"/> Local Police/State Police/Sheriff Dept	_____	_____
<input type="checkbox"/> Local Emergency Planning Committee	_____	_____
<input type="checkbox"/> State Emergency Response Commission	_____	_____
via MI SARA Title III Program		
<input type="checkbox"/> Wastewater Treatment Plant Authority	_____	_____
<input type="checkbox"/> Hazmat Team	_____	_____
<input type="checkbox"/> Local Health Department	_____	_____
<input type="checkbox"/> MIOSHA	_____	_____
<input type="checkbox"/> Bureau of Fire Services Fire Marshal Division	_____	_____
<input type="checkbox"/> MI Dept of Agriculture & Rural Dev: 800-405-0101	_____	_____
<input type="checkbox"/> Other _____	_____	_____

PERSON CONTACTED & TELEPHONE NUMBER:

DATE WRITTEN REPORT SUBMITTED	SIGNATURE OF PERSON SUBMITTING WRITTEN REPORT
-------------------------------	---

Appendix I

POTENTIAL HAZARDS

FIRE OR EXPLOSION

- **HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames.
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.
- Substance may be transported hot.
- If molten aluminum is involved, refer to GUIDE 169.

HEALTH

- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.
- Runoff from fire control or dilution water may cause pollution.

PUBLIC SAFETY

- **CALL Emergency Response Telephone Number on Shipping Paper first, if Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

EVACUATION

Large Spill

- Consider initial downwind evacuation for at least 300 meters (1000 feet).

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

EMERGENCY RESPONSE

FIRE

CAUTION: All these products have a very low flash point; Use of water spray when fighting fire may be inefficient.

CAUTION: For mixtures containing alcohol or polar solvent, alcohol-resistant foam may be more effective.

Small Fire

- Dry chemical, CO₂, water spray or regular foam.

Large Fire

- Water spray, fog or regular foam.
- Use water spray or fog; do not use straight streams.
- Move containers from fire area if you can do it without risk.

Fire Involving Tanks or Car/Trailer Loads

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK

- **ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material. • Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. • Use clean non-sparking tools to collect absorbed material.

Large Spill

- Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

FIRST AID

- Move victim to fresh air. • Call 911 or emergency medical service.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin. • Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SITE / CONSTRUCTION PLANS FOR KRUG QUICK LANE

PART OF NE 1/4 SEC. 6, T.2N., R.6E. GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

PROPERTY DESCRIPTION:

(Per Metropolitan Title Company, Commitment No. NU-412578, effective date March 28, 2002 at 8:00 A.M.); Revision E, May 13, 2002

Land in the Township of Genoa, Livingston County, Michigan, described as follows:
Parcel 1: A part of the Northeast fractional 1/4 of Section 6, Town 2 North, Range 5 East, described as follows: Commencing at the East 1/4 corner of said Section 6; thence N 87°31'15" W 804.54 feet; thence N 1°34'30" E 1022.16 feet; thence N 60°06'45" W 616.07 feet along the centerline of Grand River Avenue to the point of beginning of the land to be described; running thence N 60°06'45" W 531.00 feet along the centerline of Grand River Avenue; thence S 29°53'15" W 570.00 feet; thence S 60°06'45" E 531.00 feet; thence N 29°53'15" E 570.00 feet to the point of beginning. Parcel 2: Part of the Northeast 1/4 of Section 6, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, described as follows: Commencing at the East 1/4 corner of said Section 6; thence N 87°24'40" W 1616.81 feet along the East-West 1/4 line to a found iron rod; thence N 01°33'53" E 796.77 feet to a found concrete monument; thence N 60°06'45" W 531.00 feet to a found concrete monument and to the point of beginning of the land to be described; running thence N 70°11'20" W 525.21 feet (recorded as N 70°16'30" W 525.00 feet) to a found 1/2 inch iron rod; thence N 30°12'43" E 166.40 feet (recorded as N 29°41'36" E 166.45 feet) to a found 1/2 inch iron rod; thence S 78°31'03" E 114.50 feet (recorded as S 78°38'13" E 114.55 feet) to a found 1/2 inch iron rod; thence N 21°31'08" E 173.16 feet (recorded as N 21°26'18" E 173.06 feet) to a found 1/2 inch iron rod; thence S 60°01'58" E 326.49 feet (recorded as S 60°06'45" E) to a set 1/2 inch iron rod; thence N 29°52'49" E 105.14 feet to a set 1/2 inch iron rod; thence N 60°01'58" W 35.46 feet to a set 1/2 inch iron rod; thence N 29°52'49" E 183.46 feet and passing through the centerline of a curb cut to the centerline of Grand River Avenue; thence S 60°01'58" E 141.66 feet (recorded as S 60°06'45" E) along the centerline of Grand River Avenue; thence S 29°52'49" W 570.00 feet (recorded as S 29°53'15" W 570.00 feet) to the point of beginning.

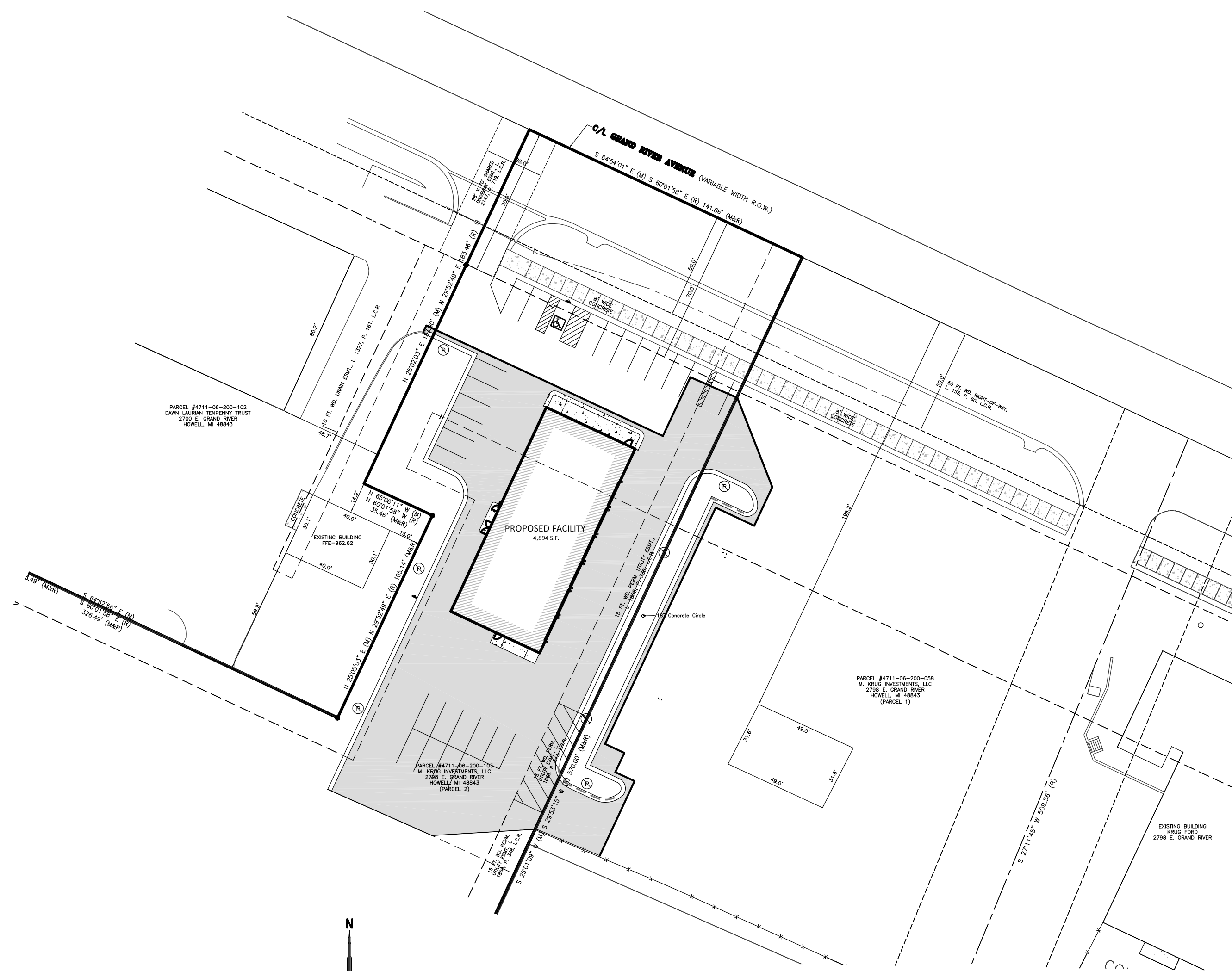
Easement Parcel:
Easement for Common Driveway as created, limited and defined in the document entitled Grant of Common Driveway Easement dated January, 15, 1997, recorded in Liber 2147, page 719, Livingston County Records.

Tax Item No. 11-06-200-058-201-47070, as to Parcel 1
Tax Item No. 11-06-200-103-201-47070, as to Parcel 2

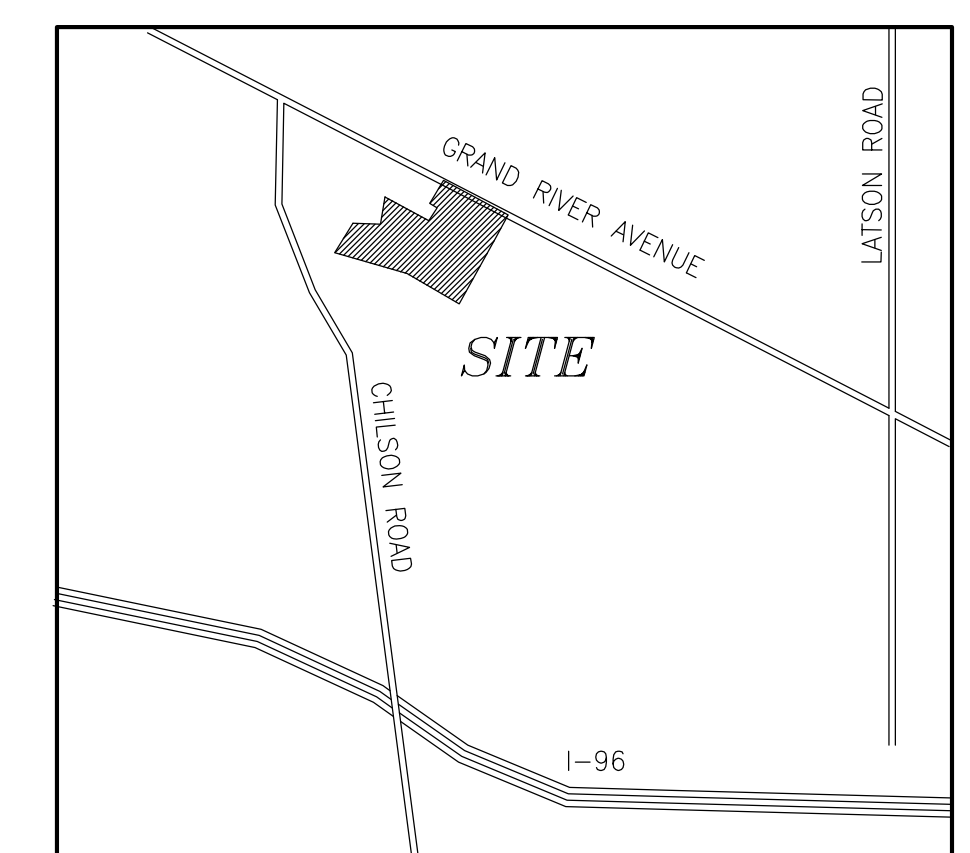
(AFTER SITE PLAN APPROVAL AND PRIOR TO ISSUANCE OF THE LAND USE PERMIT, A PARCEL COMBINATION WILL BE COMPLETED)

CONSTRUCTION NOTES

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



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SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS & DEMOLITION PLAN
3	SITE PLAN
4	GRADING, DRAINAGE & SOIL EROSION CONTROL PLAN
5	UTILITY PLAN
6	LANDSCAPE PLAN
7	LIGHTING PLAN
8	CONSTRUCTION NOTES & DETAILS
9	CONSTRUCTION NOTES & DETAILS
10	MHOG SANITARY SEWER DETAILS
11	MHOG WATER SERVICE DETAILS
12	OVERALL SITE PLAN
13	STORM SEWER PLAN & PROFILE
14	SANITARY SEWER PLAN & PROFILE
DRAWINGS PREPARED BY ARCHITECT	
A1.01	FLOOR PLAN
A2.01	EXTERIOR ELEVATIONS

KRUG QUICK LANE

OWNER:
M. KRUG INVESTMENTS, LLC
2798 E. GRAND RIVER
HOWELL, MICHIGAN 48843
CONTACT: MR. MIKE KRUG
PHONE: 517-546-0244

CONSTRUCTION MANAGER:
RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MICHIGAN 48116
CONTACT: MR. ANDY KLEIN
PHONE: 810-227-7011

ARCHITECT:
AJ DESIGN
2803 GREENLAWN
COMMERCE, MI 48382
PHONE: 248-672-7866

PREPARED BY:
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LANDSCAPE ARCHITECTS
(E-MAIL: boe@bosseng.com)
3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 (MI FAX) 517-546-1670

INDEMNIFICATION STATEMENT

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

3	TD	TOWNSHIP REVIEW	4-4-12	1	
2	TD	TOWNSHIP REVIEW	2-21-12		
1	TD	TOWNSHIP REVIEW	1-12-12		
NO	BY	CK	REVISION PER		DATE

THE USER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES.

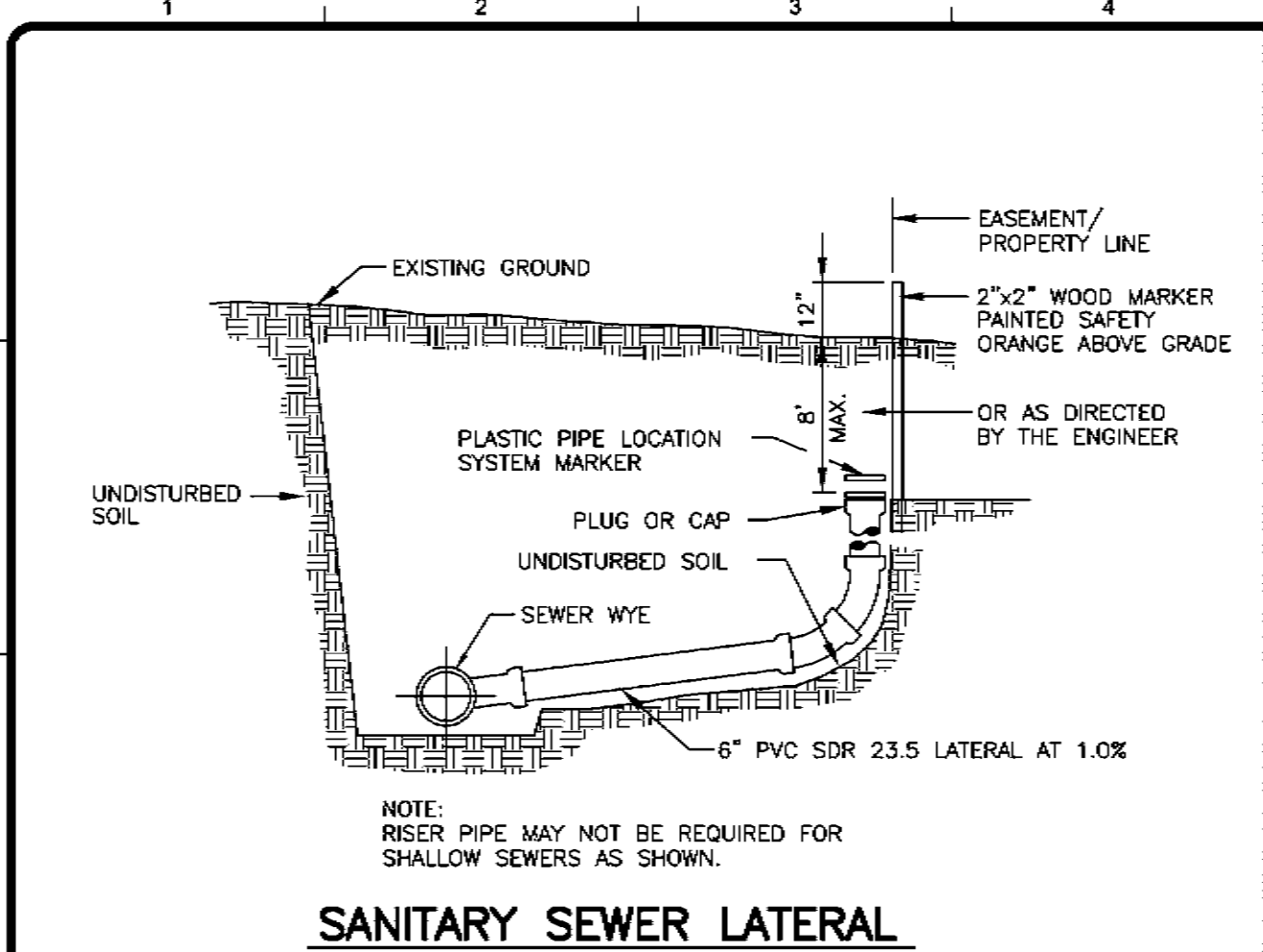
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CALL MISS DIG
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3121 E. GRAND RIVER AVE.
HONOLULU, HI 96843
(808) 246-6725 FAX (817) 548-1670

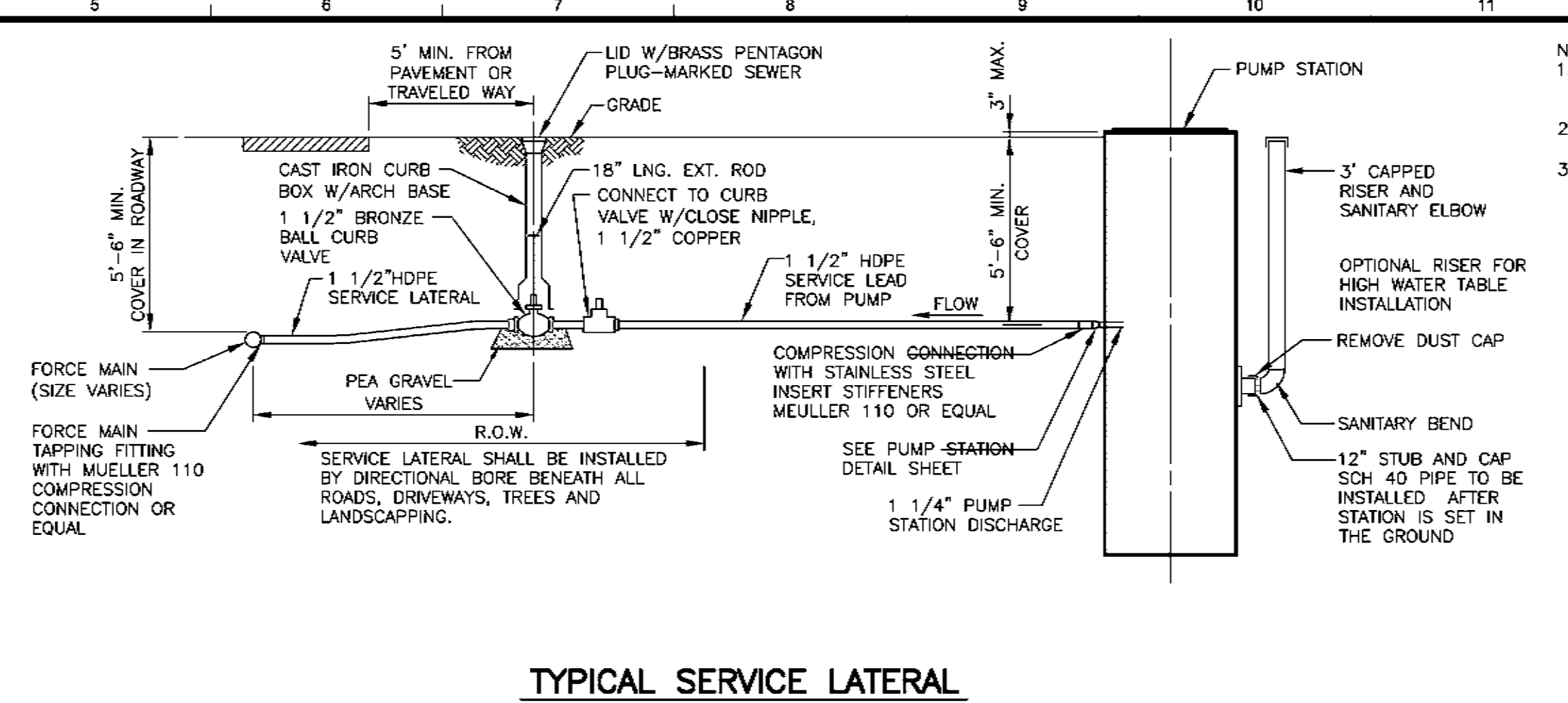
KRUG QUICK LANE
RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

PROJECT: **MHOQ SANITARY SEWER DETAILS**
PREPARED FOR: **GENOA OCEOLA**
DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE: NONE
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 10

Wednesday, July 16, 2008 11:30:05 AM DRAWING: L:\CallLib\HOC\Hogstad.DWG

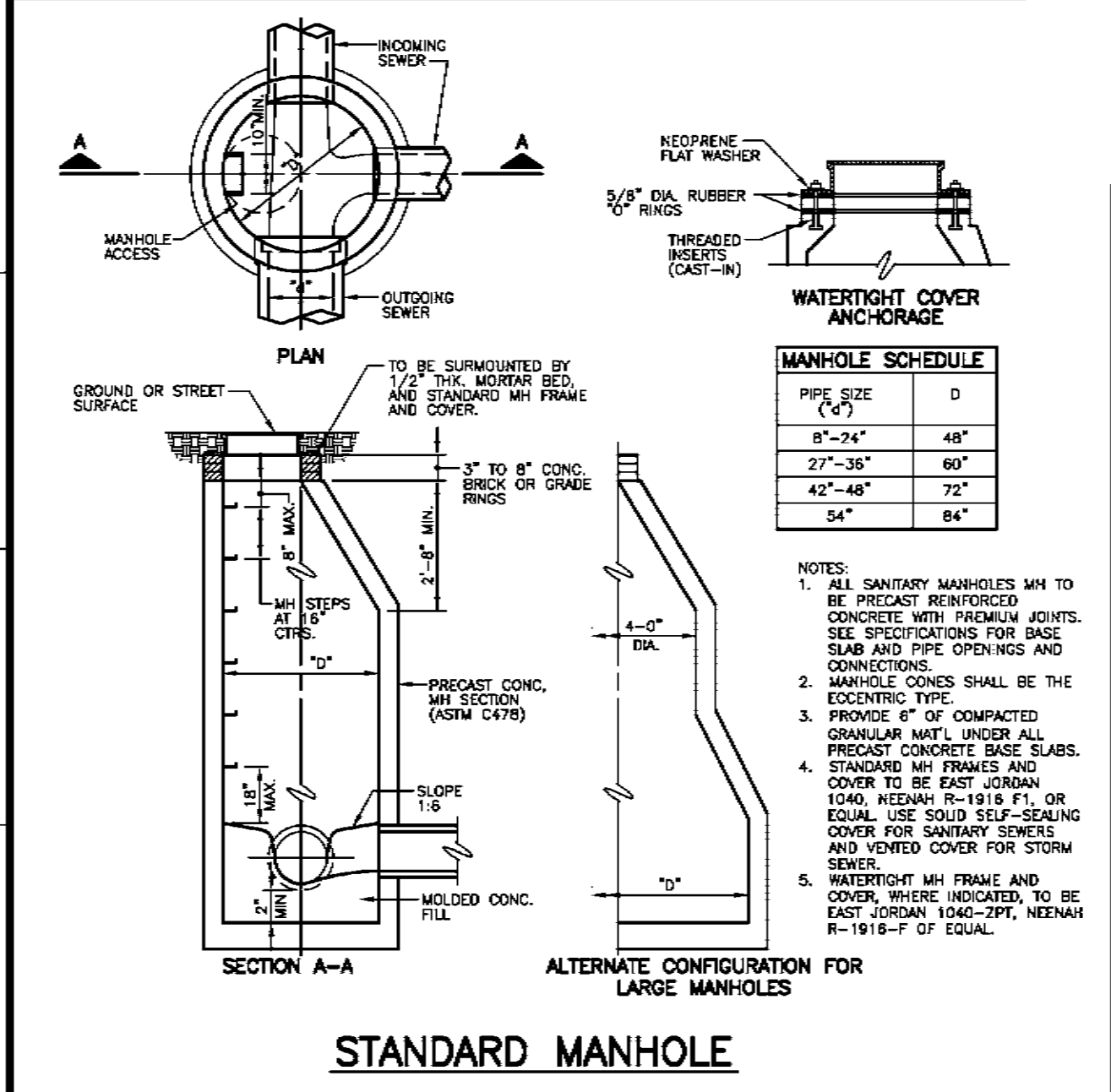


SANITARY SEWER LATERAL

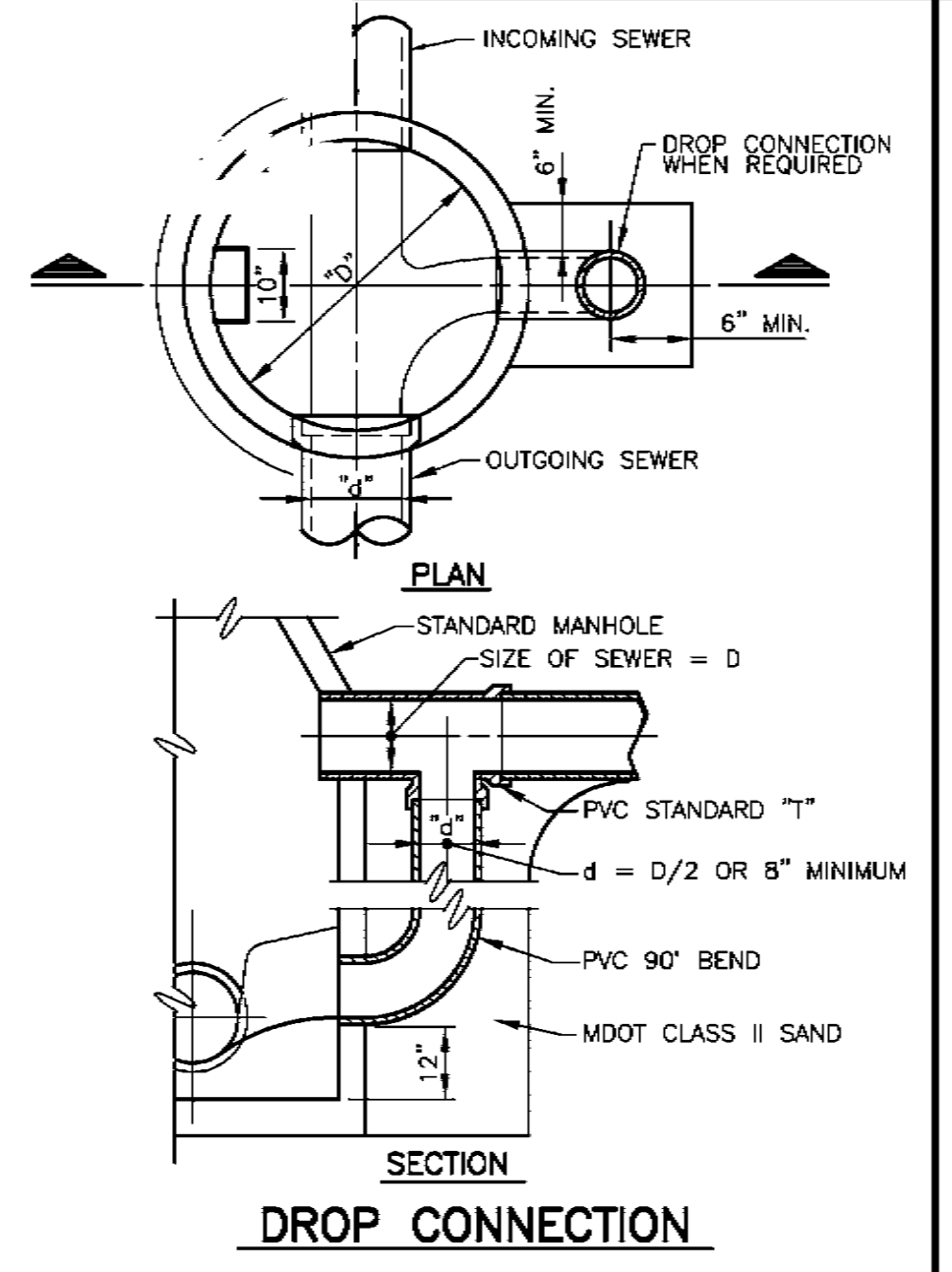


TYPICAL SERVICE LATERAL

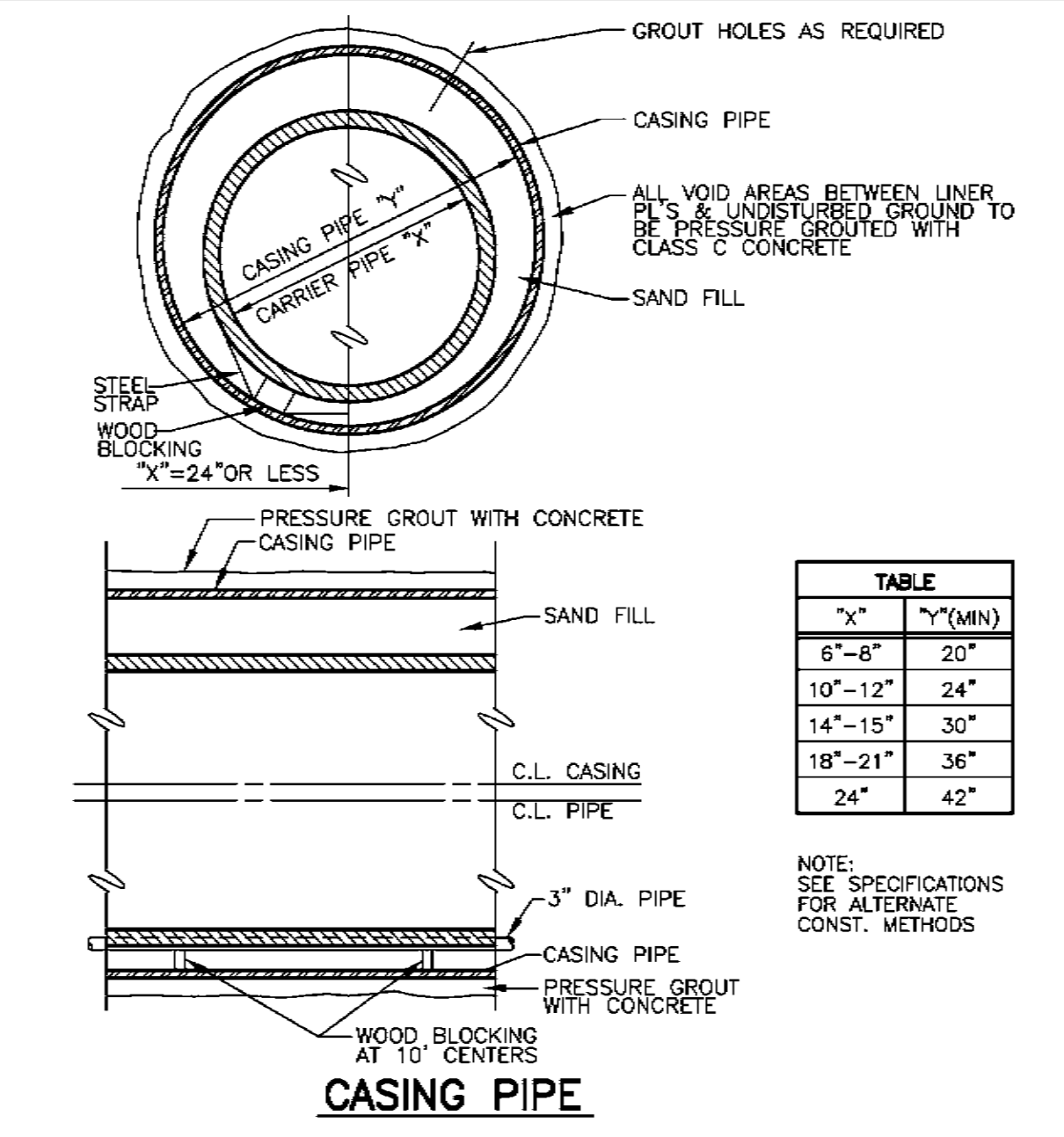
- NOTE:
1. PROVIDE ADAPTORS BETWEEN DISSIMILAR PIPE MATERIALS AND SIZES TO MAKE PRESSURE TIGHT CONNECTION. MATERIALS SHALL BE BRONZE OR COPPER.
2. PROVIDE OPTIONAL "INLET RISER" ONLY WHERE DETERMINED BY ENGINEER DURING CONSTRUCTION.
3. 1 1/2" HDPE SERVICE LEAD SHALL BE INSTALLED WITH TRACER WIRE. REFER TO SECTION 15070, PRESSURE PROCESS PIPING FOR DETAILS.



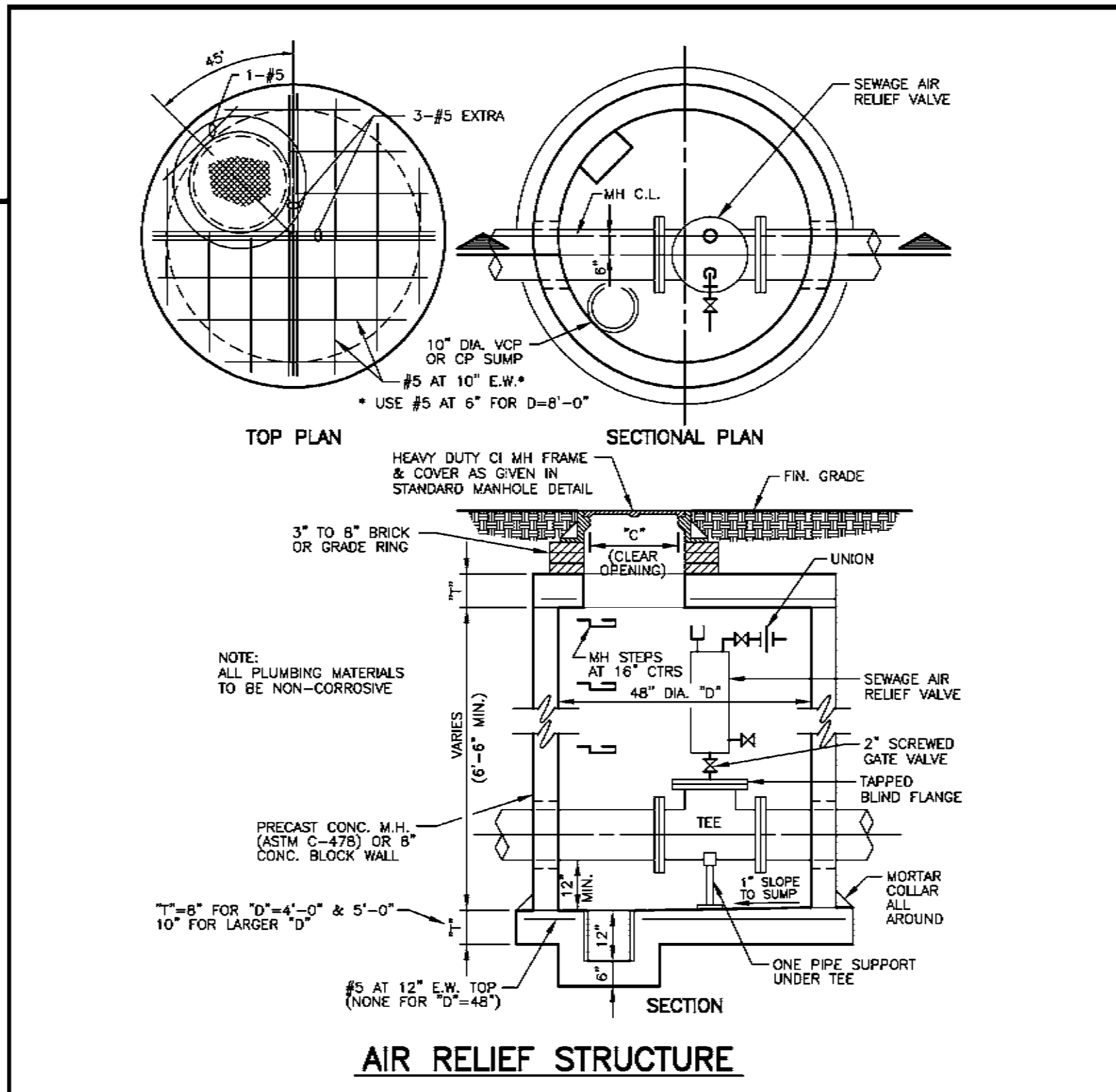
STANDARD MANHOLE



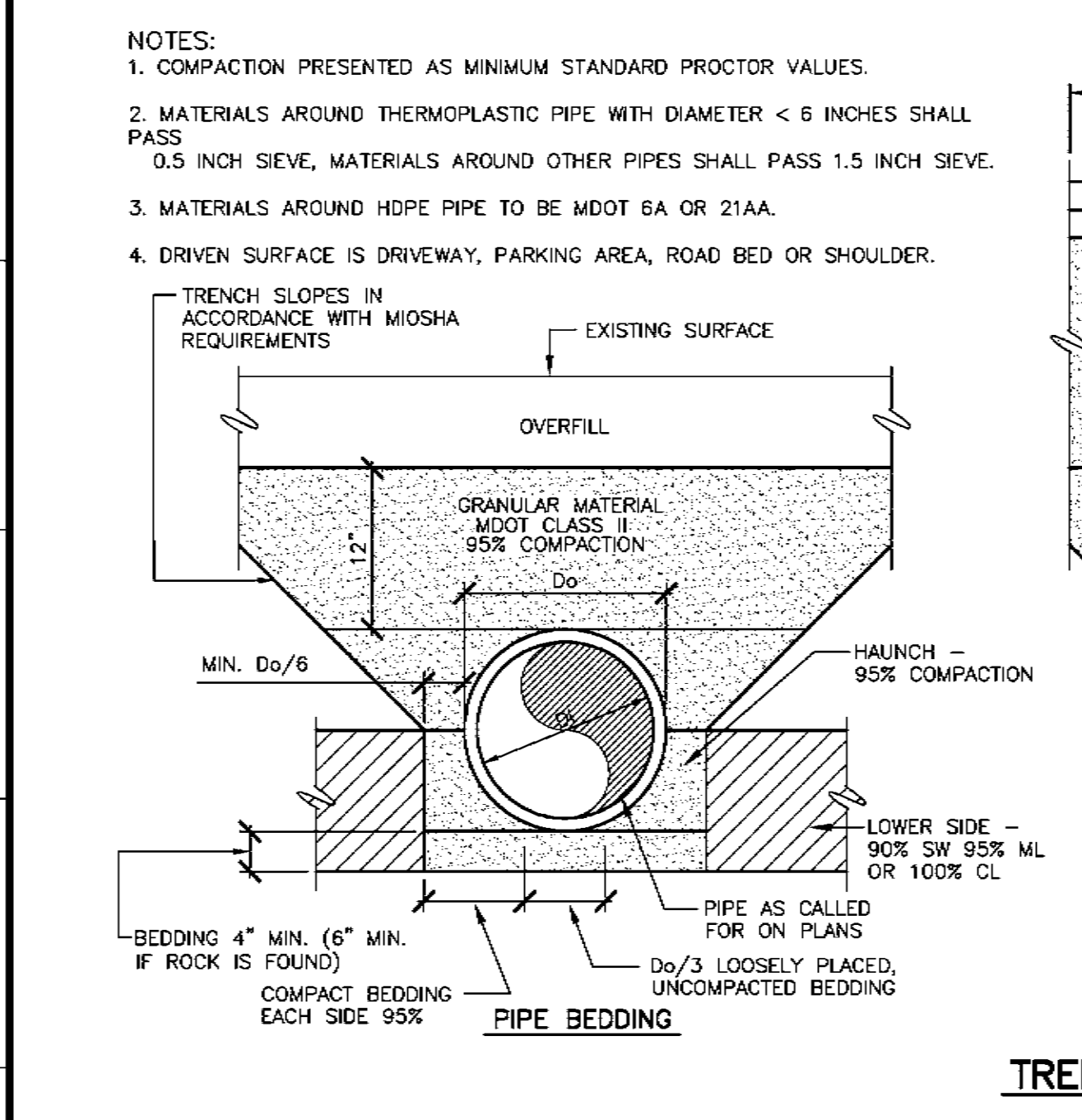
DROP CONNECTION



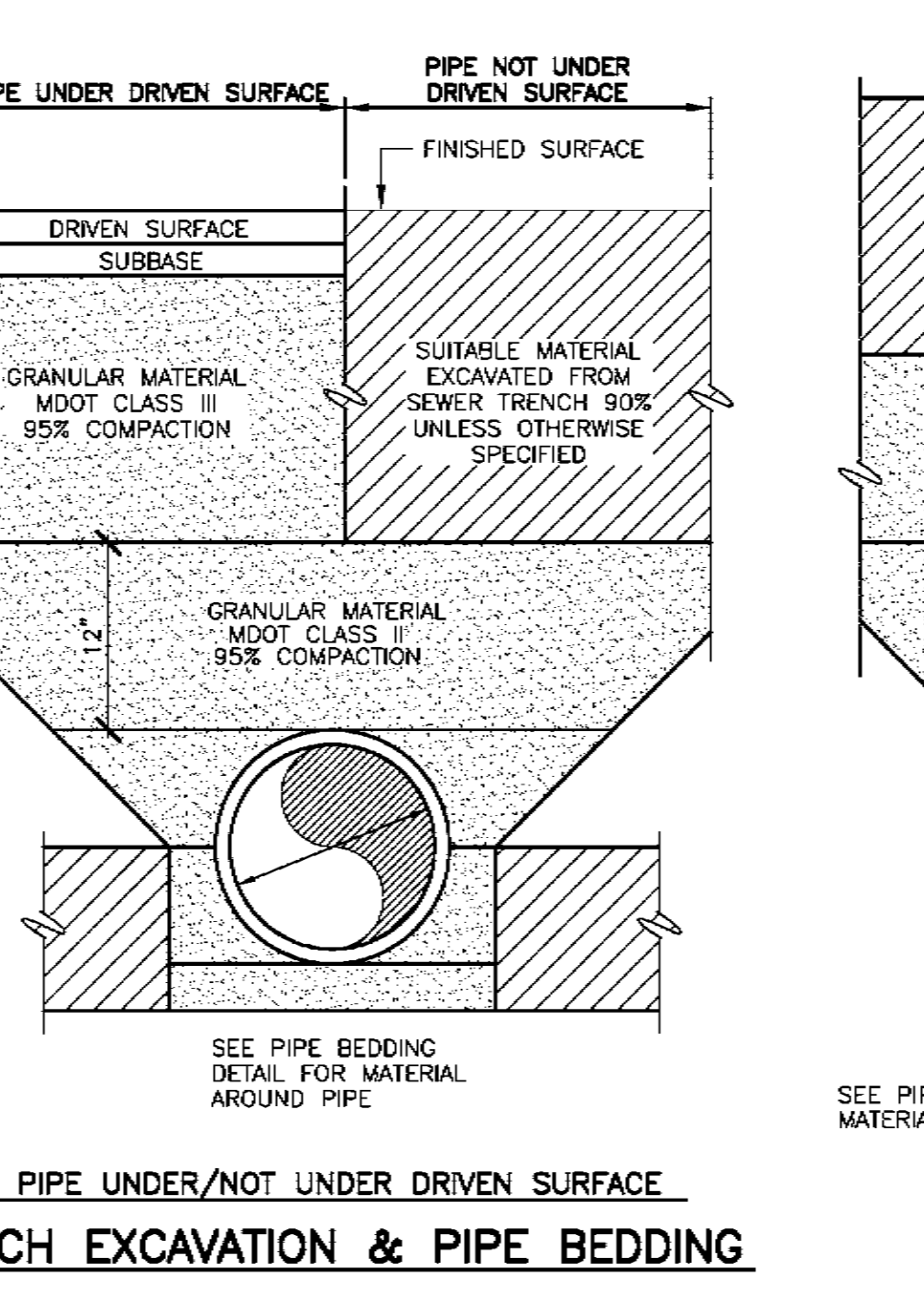
CASING PIPE



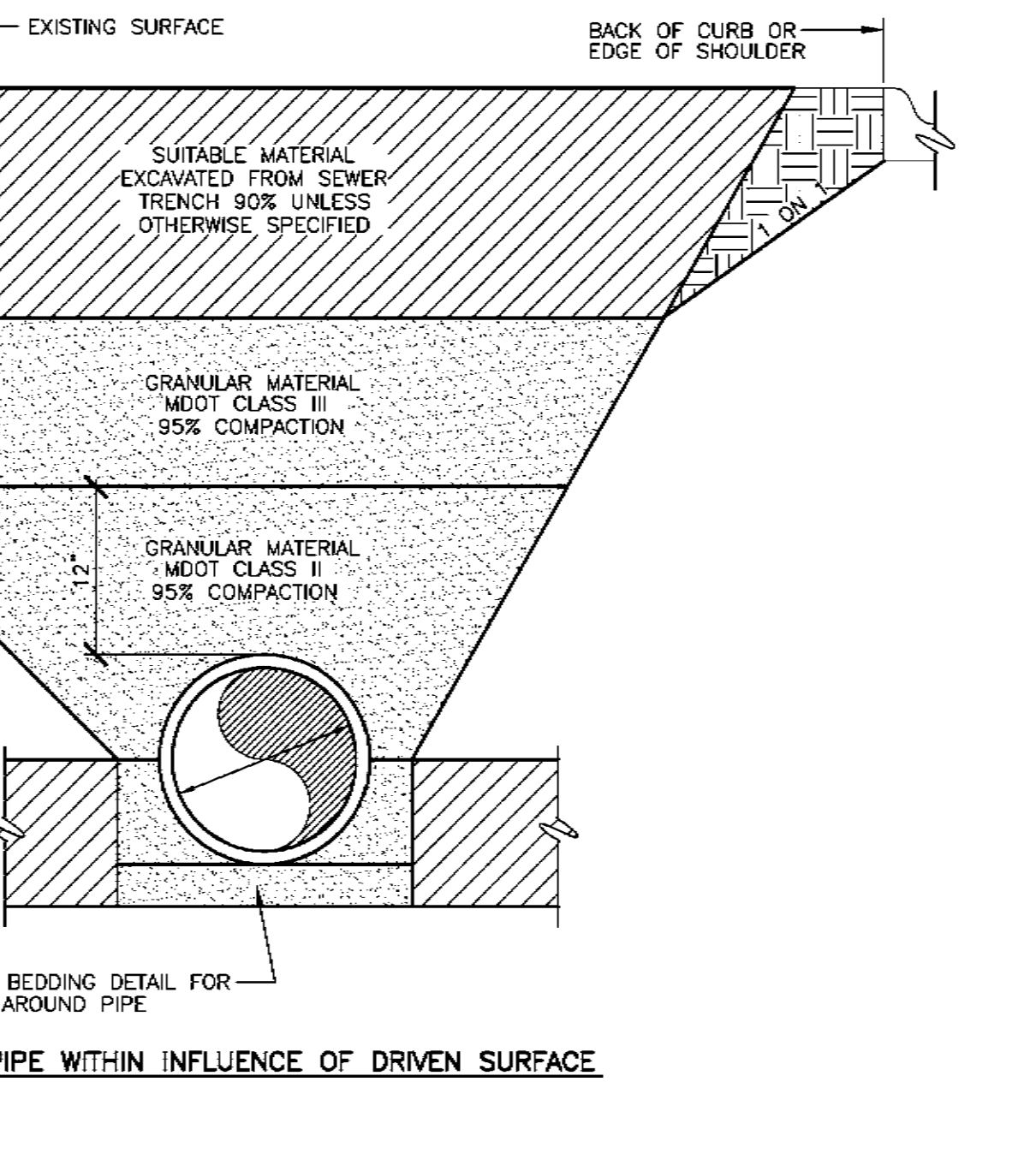
AIR RELIEF STRUCTURE



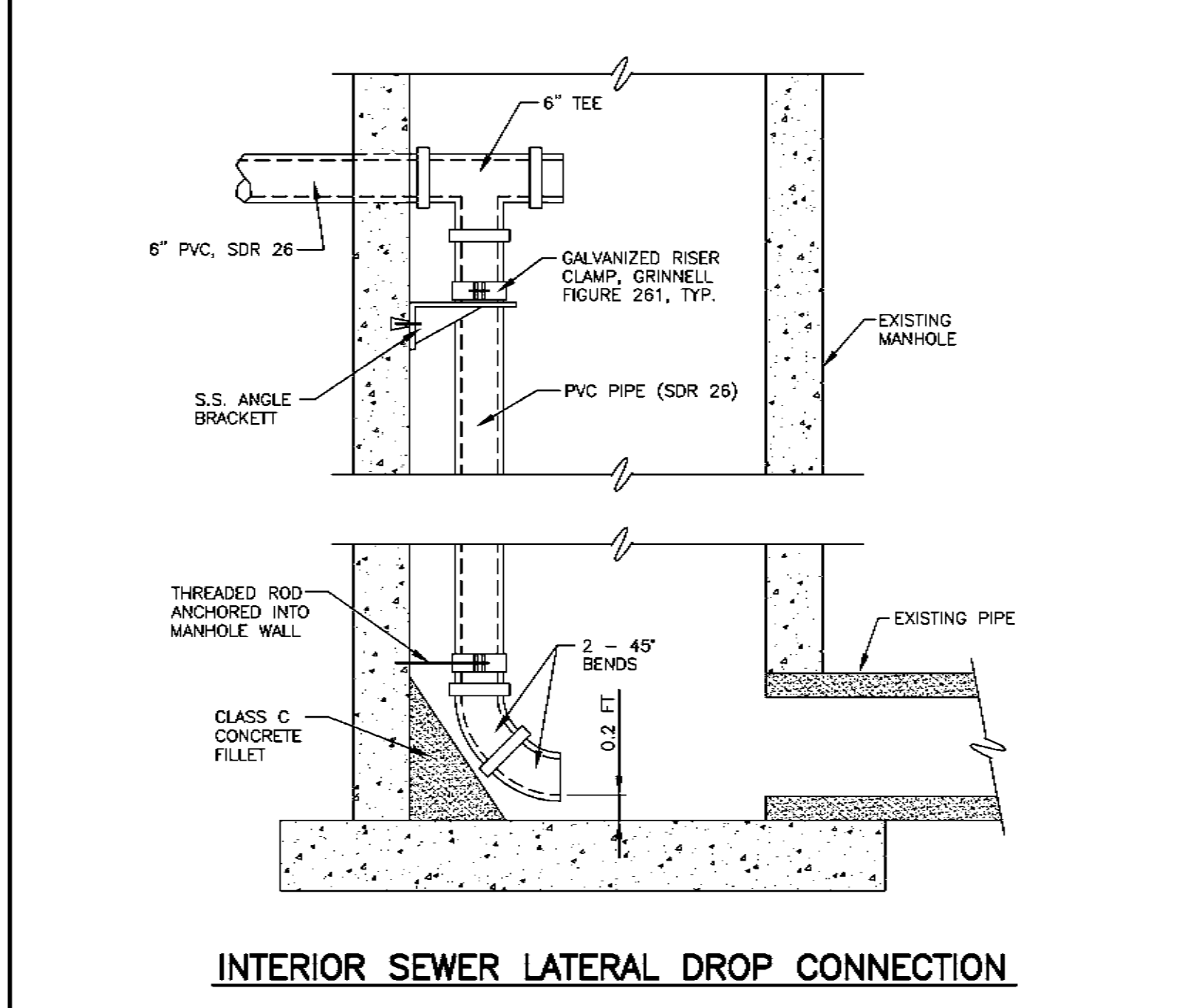
TRENCH EXCAVATION & PIPE BEDDING



PIPE UNDER/NOT UNDER DRIVEN SURFACE



PIPE WITHIN INFLUENCE OF DRIVEN SURFACE



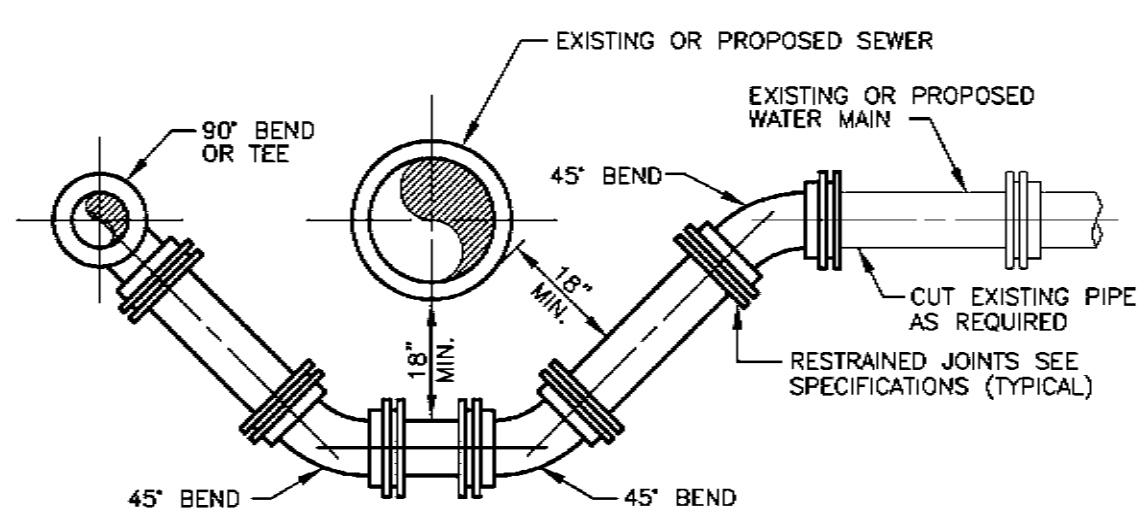
INTERIOR SEWER LATERAL DROP CONNECTION

GENOA OCEOLA
Sewer and Water Authority
SANITARY SEWER STANDARD DETAILS
Scale: NONE
Issued Date: 10-22-2007

PIPE RESTRAINT SCHEDULE
GROUND BURIED PRESSURE PIPE - POLYETHYLENE ENCASED DUCTILE IRON PIPE

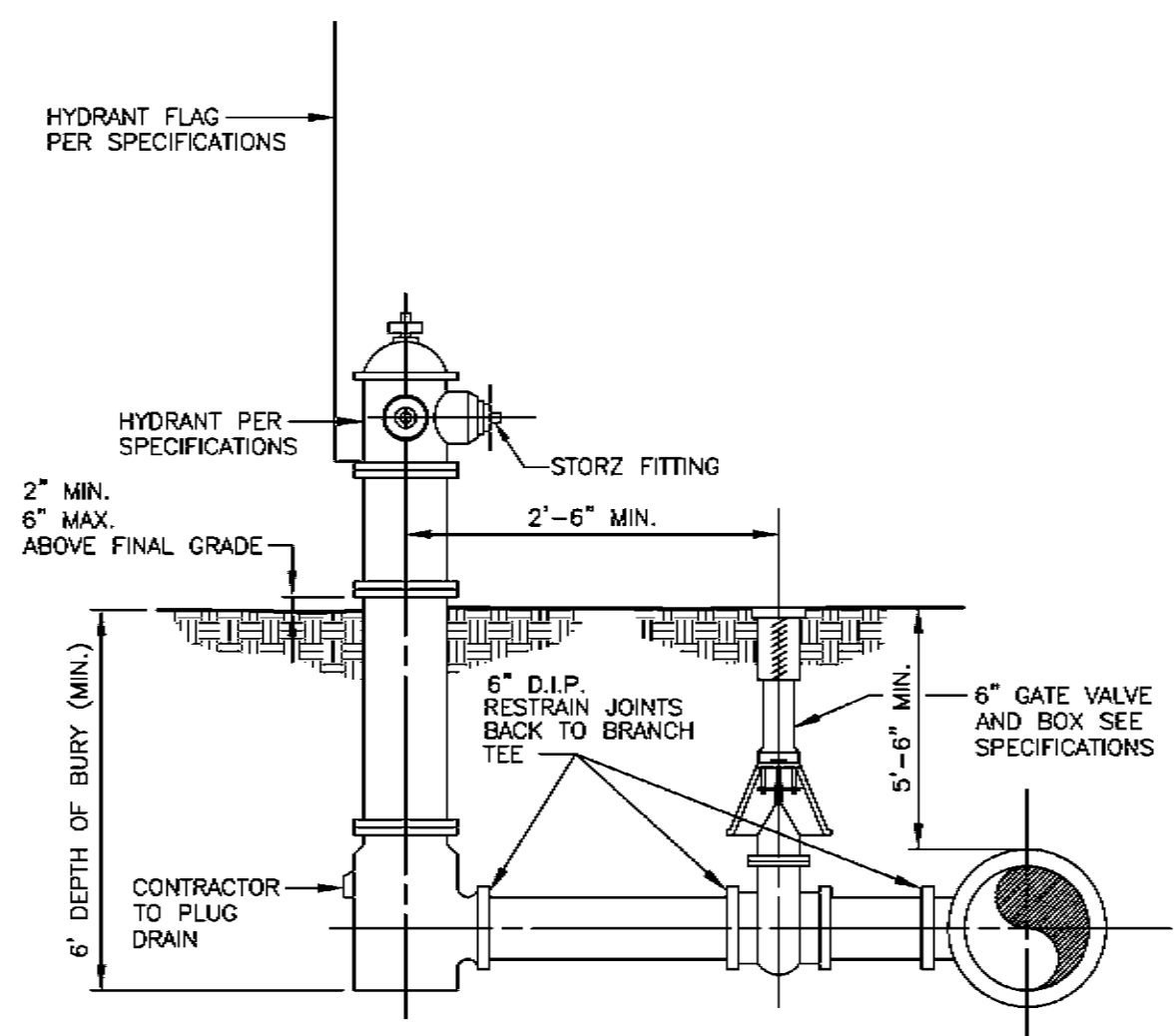
PIPE DIAMETER	TEES, 90° BENDS	45° BENDS	22-1/2° BENDS	11-1/4° BENDS	DEAD ENDS	REDUCERS (ONE SIZE REDUCTION)*	REDUCERS (TWO SIZE REDUCTION)*
4	13	5	3	1	40	---	---
6	19	8	4	2	58	31	---
8	24	10	5	2	75	30	70
12	34	14	7	3	107	57	116
16	43	18	9	4	139	59	137
20	52	22	10	5	169	59	134
24	61	25	12	6	199	60	132
30	73	30	15	7	242	65	168
36	84	35	17	8	281	84	188

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

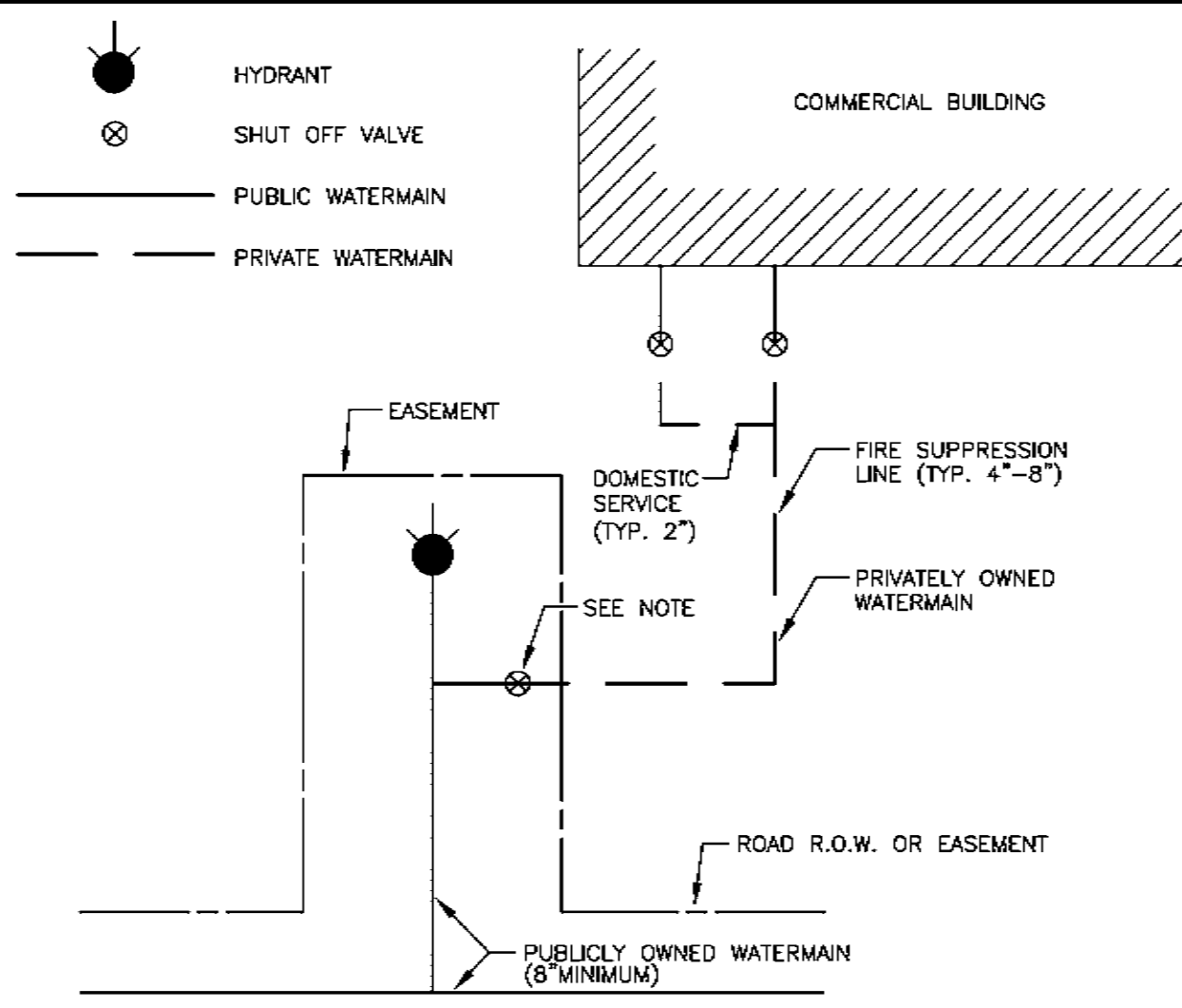


WATER MAIN RELOCATION

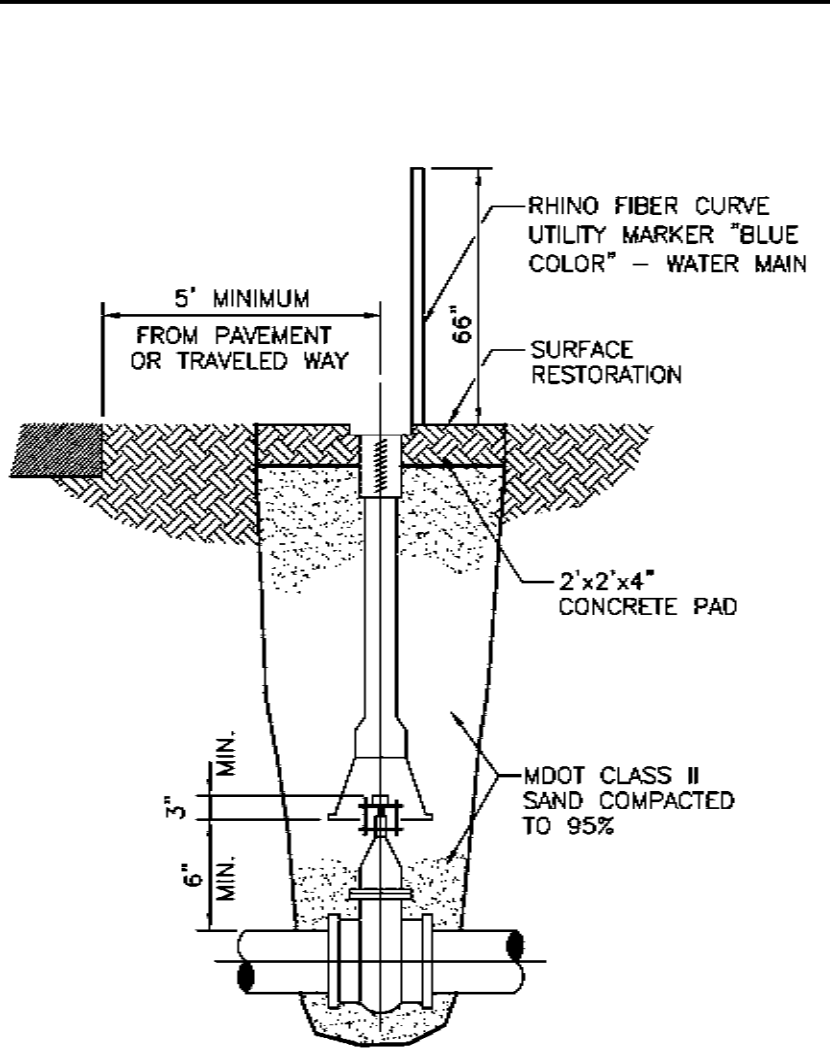
PRIOR TO CURB BOX INSTALLATION, CONTACT GENOA TOWNSHIP DPW FOR CURB BOX INSTALLATION REQUIREMENTS.



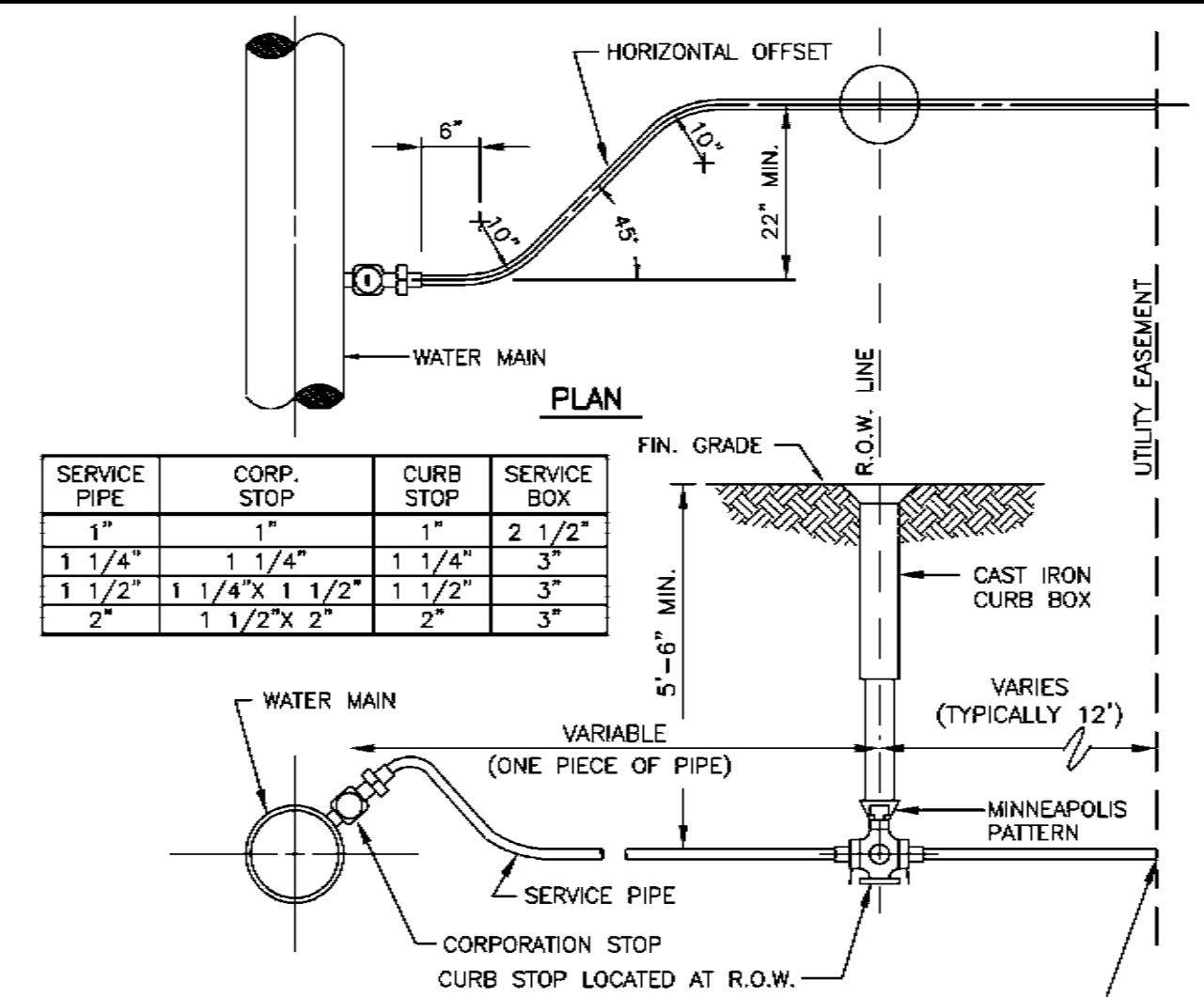
FIRE HYDRANT ASSEMBLY



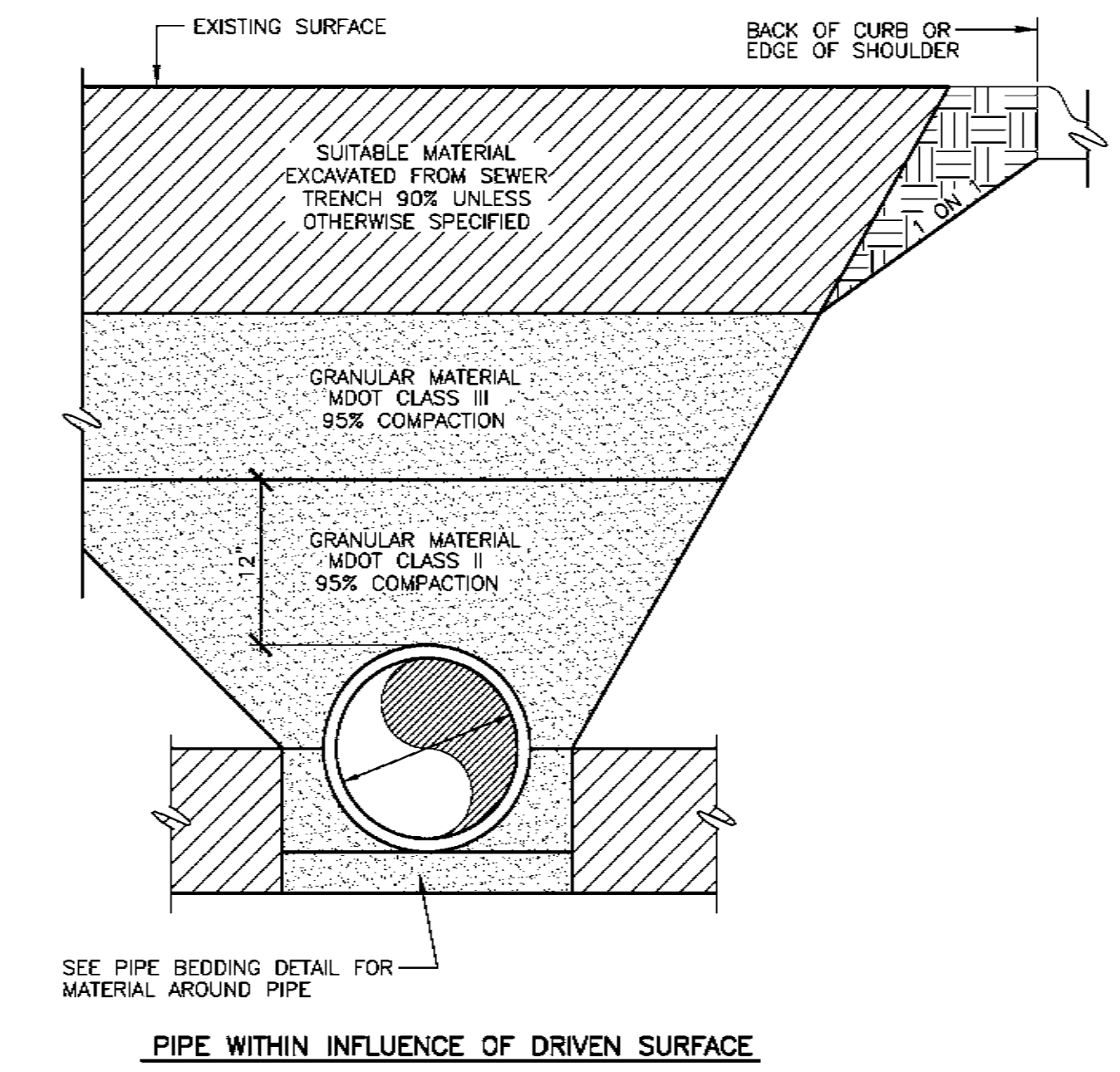
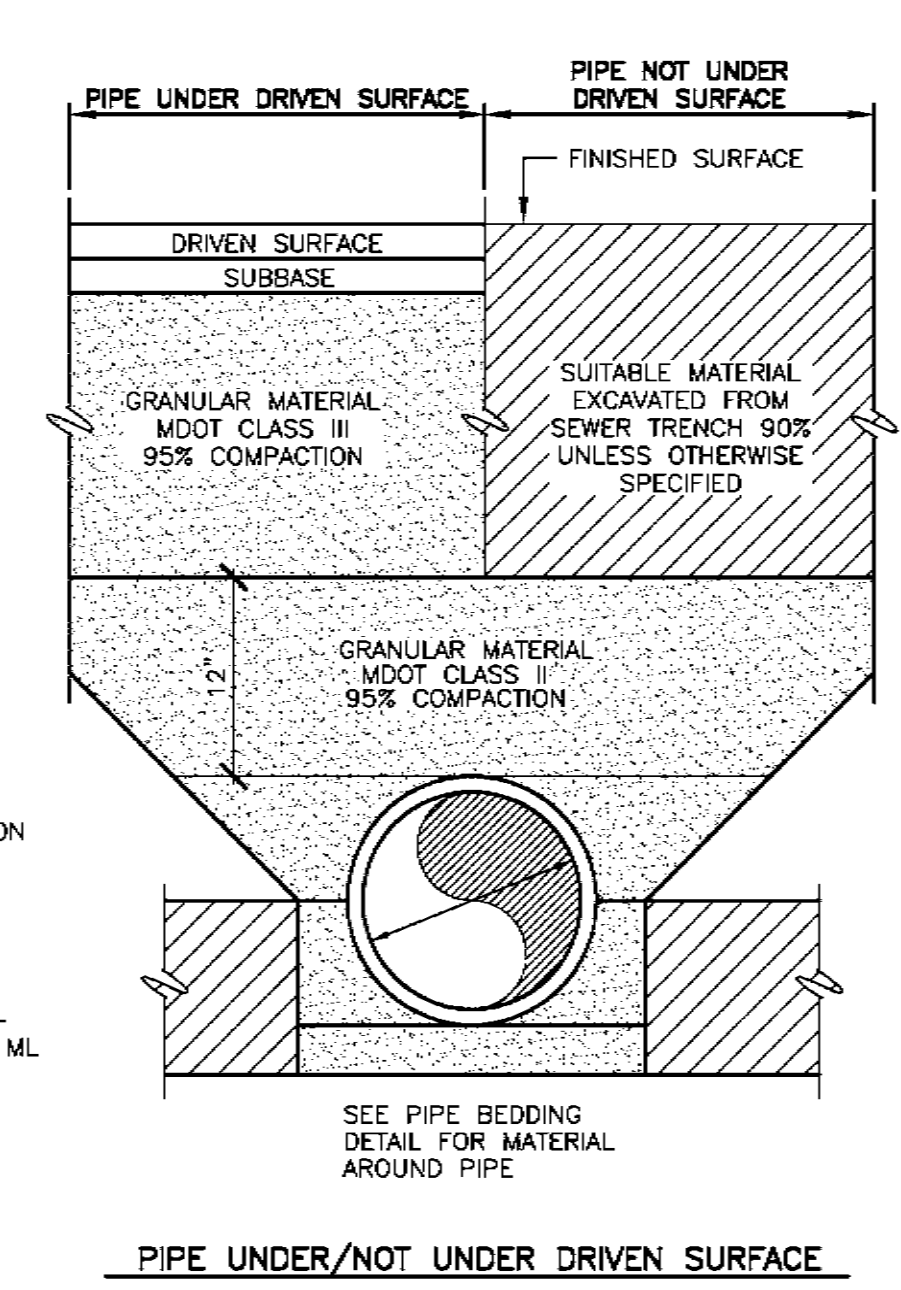
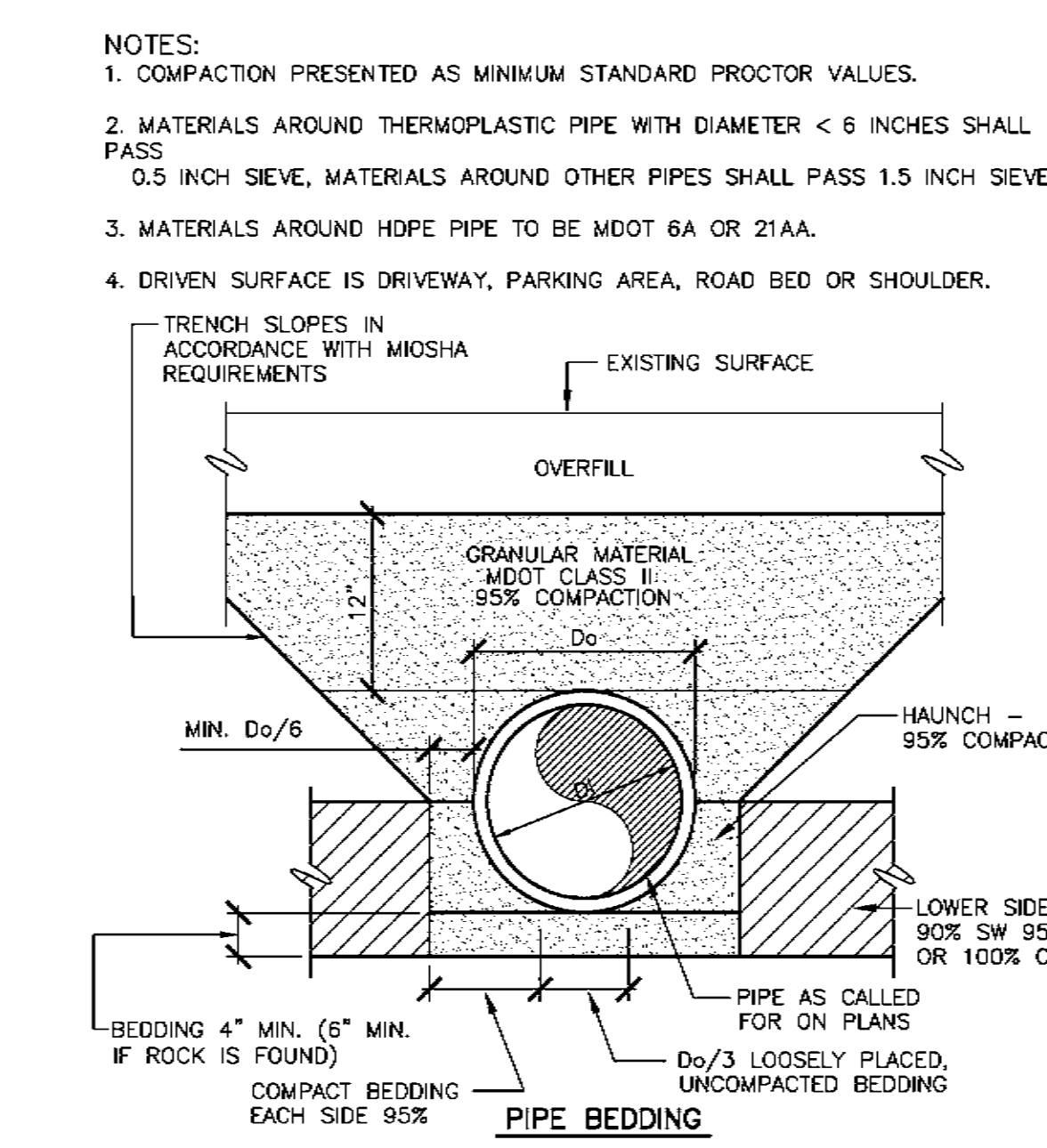
COMMERCIAL BUILDING WATER SERVICE LAYOUT



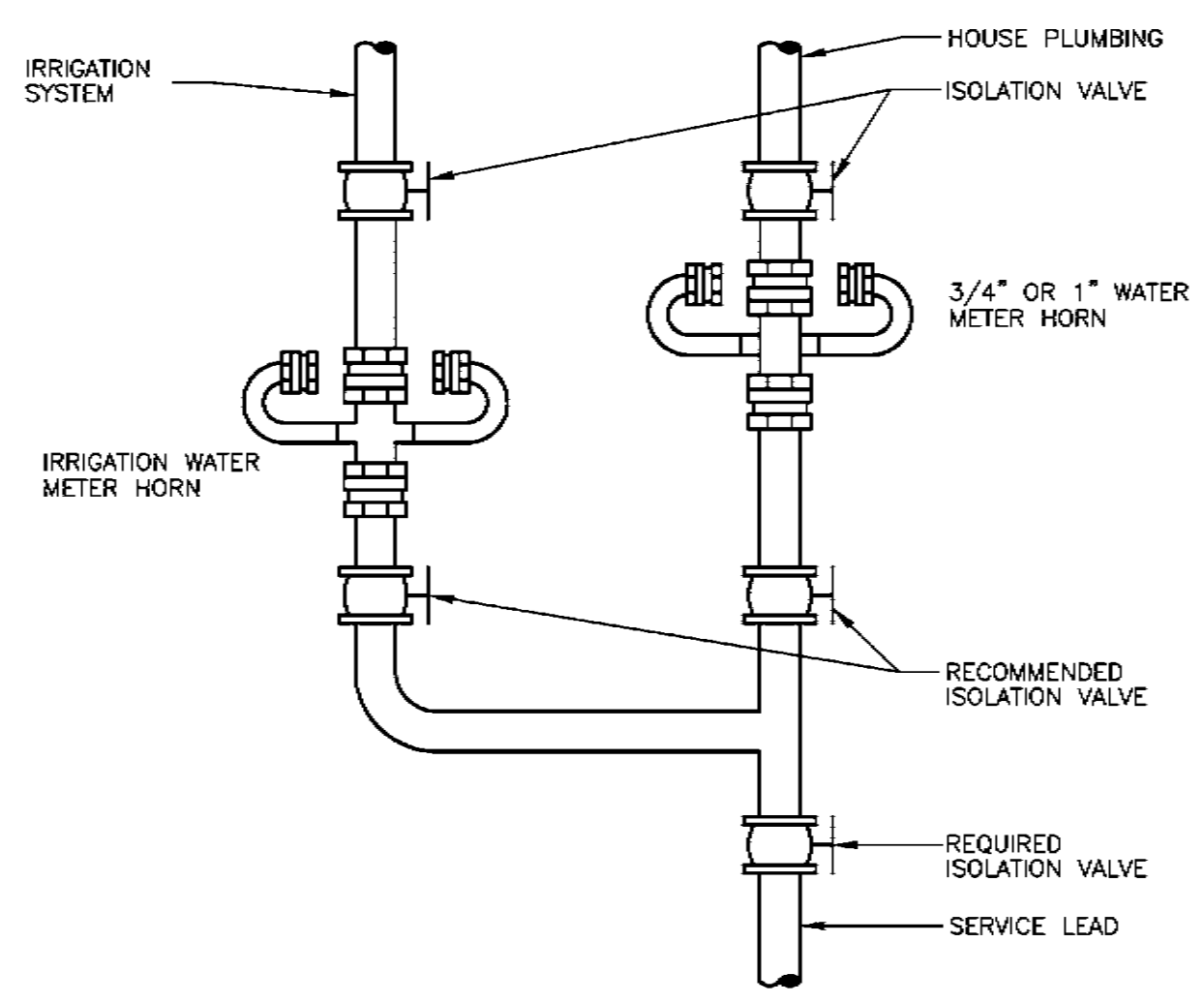
GATE VALVE AND BOX



WATER SERVICE LATERAL



TRENCH EXCAVATION & PIPE BEDDING



NOTE:
ALL METERS ARE TO BE INSTALLED HORIZONTALLY IN A DRY, CLEAN, SANITARY LOCATION THAT IS READILY ACCESSIBLE. THIS DRAWING IS NOT TO SCALE & IS ONLY A REPRESENTATION OF HOW THE METERS SHOULD BE INSTALLED. THE SECOND METER IS OPTIONAL FOR IRRIGATION USAGE. METERS SHOULD NOT BE INSTALLED IN LINE (ONE RIGHT AFTER THE OTHER).

TYPICAL METER HORN INSTALLATION

MARION HOWELL GENOA OCEOLA
Sewer and Water Authority
WATER MAIN STANDARD DETAILS

Scale: NONE
Issued Date: 10-22-2007

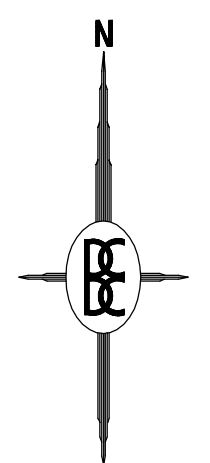
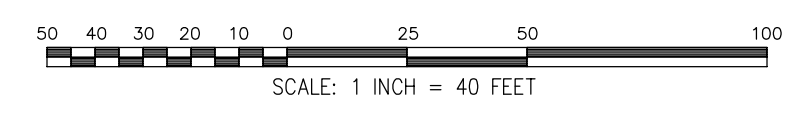
PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011
TITLE: MHOG WATER SERVICE DETAILS

NO	BY	DATE	REVISION PER
1	TD	4-4-12	
2	TD	2-21-12	
3	TD	1-12-12	

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 11

THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL UTILITIES AS SHOWN ON THESE DRAWINGS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.

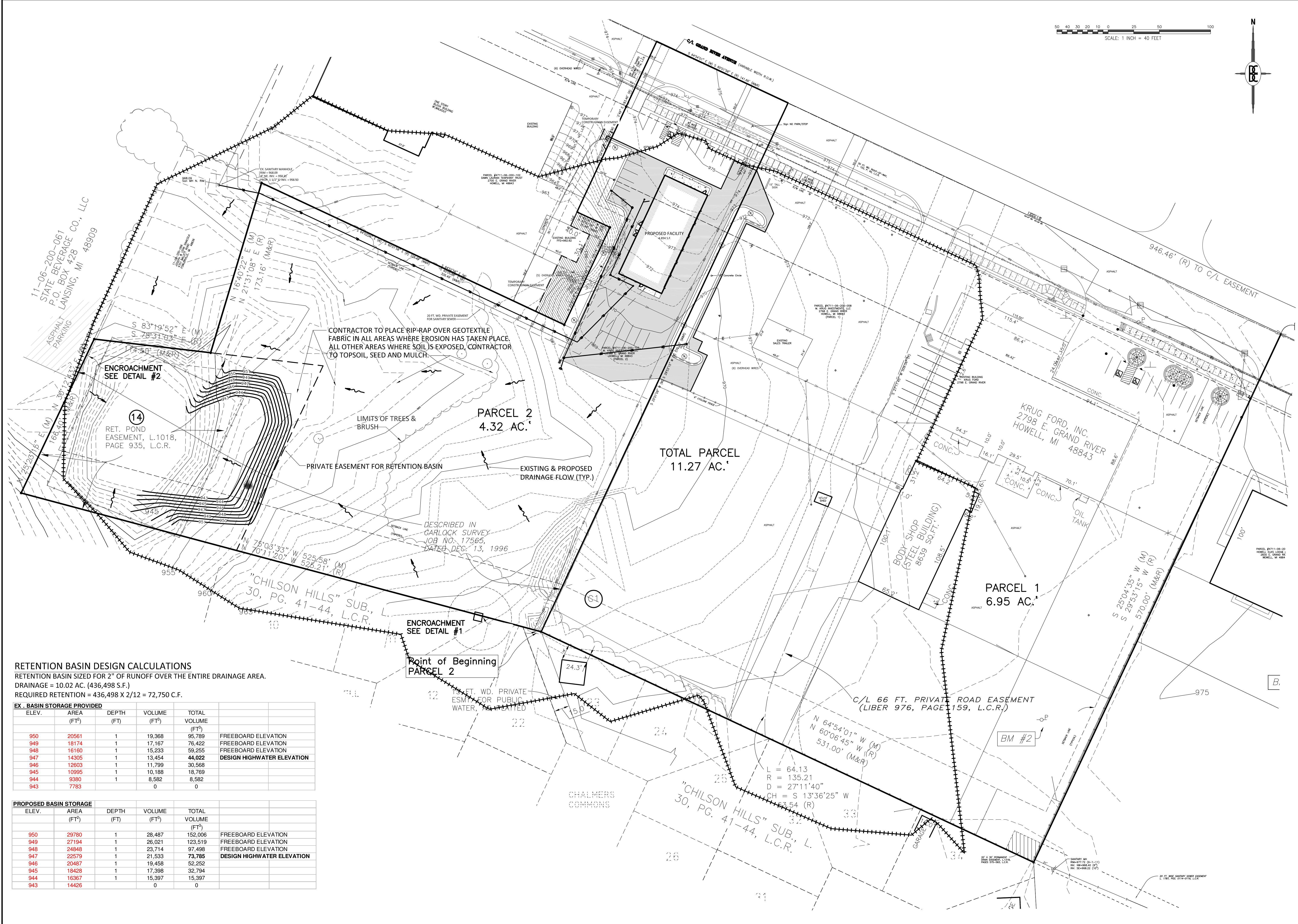
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HOWELL, MI 48843
(800) 246-6735 FAX (517) 548-1670

PROJECT: **KRUG QUICK LANE**
PREPARED FOR: **RAND CONSTRUCTION**
DESIGNED BY: **TD**
DRAWN BY: **TD**
CHECKED BY:
SCALE: **1" = 40'**
JOB NO.: **11-190**
DATE: **11-14-11**
SHEET NO.: **12**



RETENTION BASIN DESIGN CALCULATIONS
RETENTION BASIN SIZED FOR 2" OF RUNOFF OVER THE ENTIRE DRAINAGE AREA.
DRAINAGE = 10.02 AC. (436,498 S.F.)
REQUIRED RETENTION = 436,498 X 2/12 = 72,750 C.F.

EX. BASIN STORAGE PROVIDED

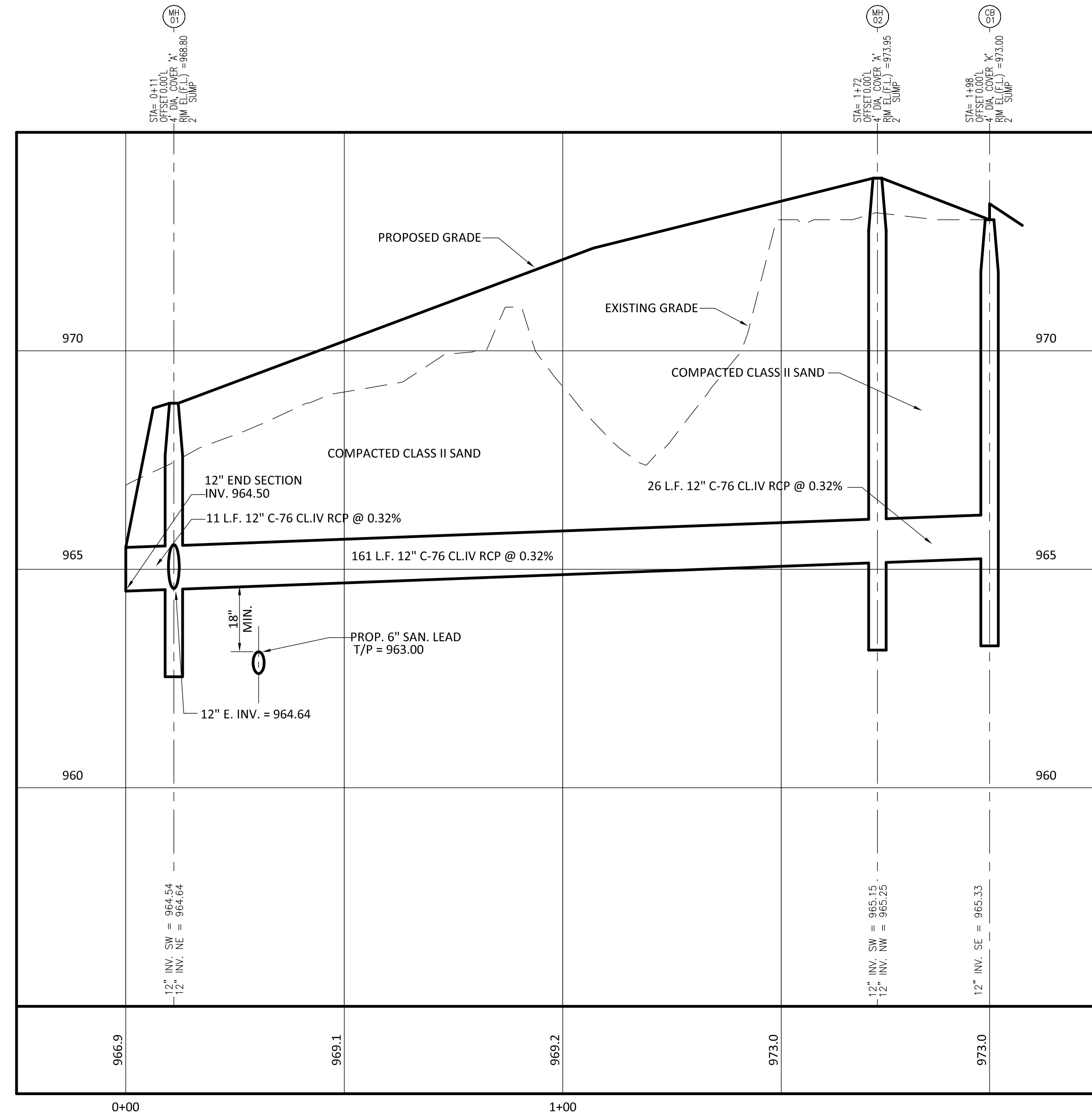
ELEV.	AREA (FT ²)	DEPTH (FT)	VOLUME (FT ³)	TOTAL VOLUME (FT ³)	
950	20561	1	19,368	95,789	FREEBOARD ELEVATION
949	18174	1	17,167	76,422	FREEBOARD ELEVATION
948	16160	1	15,233	59,255	FREEBOARD ELEVATION
947	14305	1	13,454	44,022	DESIGN HIGHWATER ELEVATION
946	12603	1	11,799	30,568	
945	10995	1	10,188	18,769	
944	9380	1	8,582	8,582	
943	7783	0	0	0	

PROPOSED BASIN STORAGE

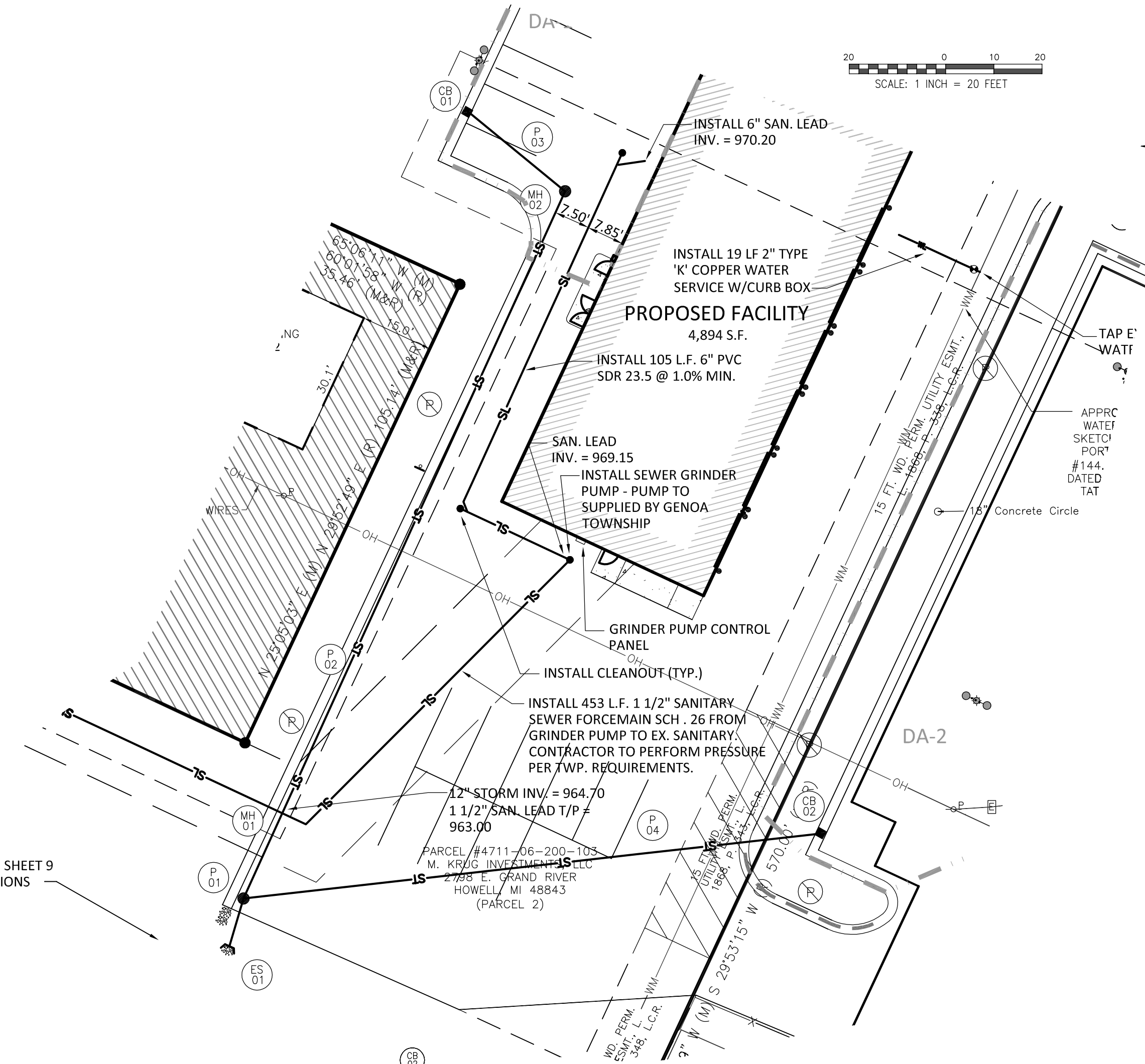
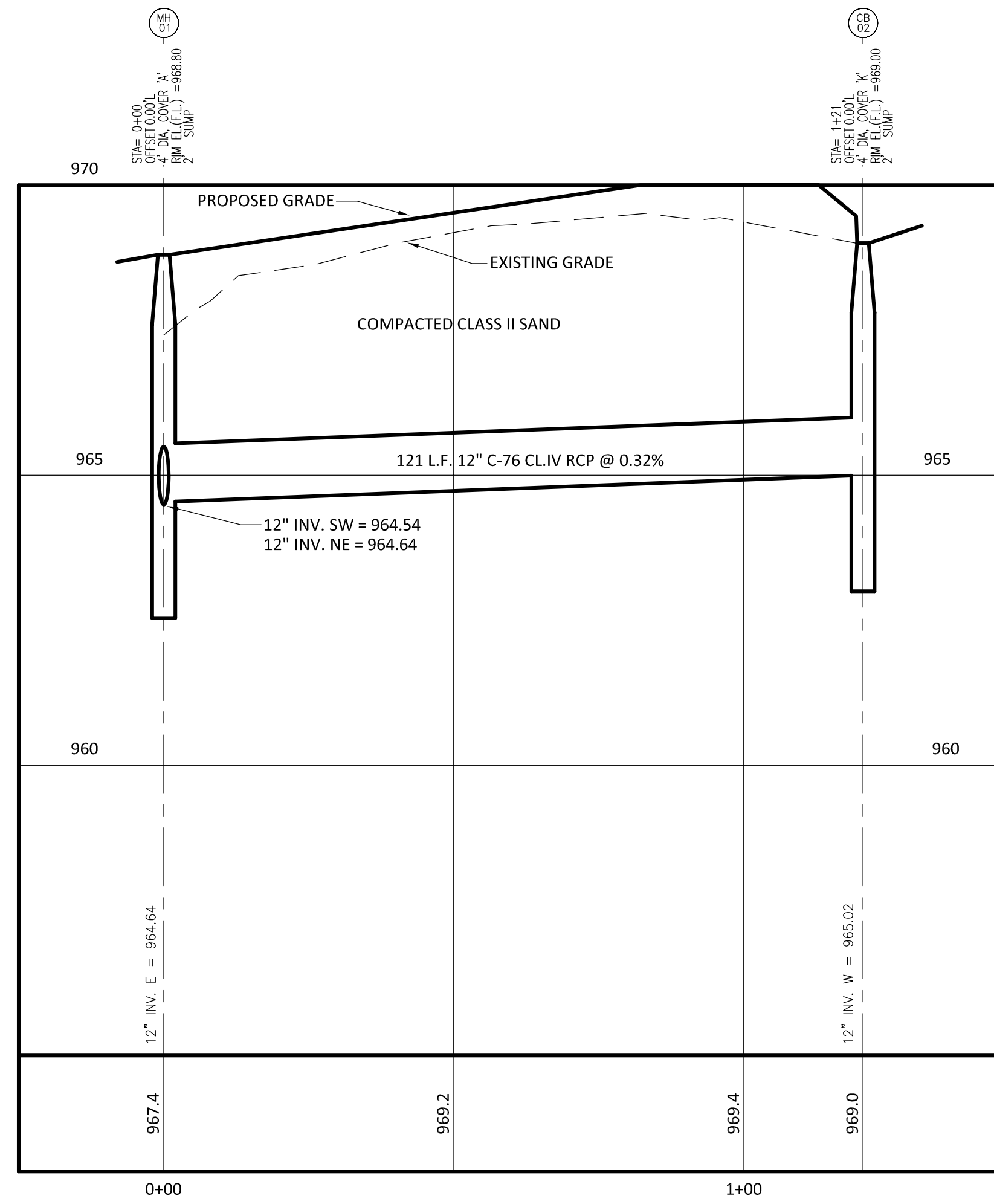
ELEV.	AREA (FT ²)	DEPTH (FT)	VOLUME (FT ³)	TOTAL VOLUME (FT ³)	
950	29780	1	28,487	152,006	FREEBOARD ELEVATION
949	27194	1	26,021	123,519	FREEBOARD ELEVATION
948	24848	1	23,714	97,498	FREEBOARD ELEVATION
947	22579	1	21,533	73,785	DESIGN HIGHWATER ELEVATION
946	20487	1	19,458	52,252	
945	18428	1	17,398	32,794	
944	16367	1	15,397	15,397	
943	14426	0	0	0	

STORM SEWER NOTES

1. ALL PIPE LENGTHS SHOWN ARE FROM C/L TO C/L OF STRUCTURE OR FROM C/L OF STRUCTURE TO DISCHARGE END OF FLARED END SECTION.
2. ALL STORM SEWER PIPE SHALL BE C-76, CL. IV REINFORCED CONCRETE PIPE WITH WATERTIGHT PREMIUM JOINTS, UNLESS OTHERWISE NOTED ON PLAN.
3. ALL STORM SEWER & CULVERT PIPE NOTED AS "CSP" ON PLAN SHALL BE CORRUGATED STEEL, GALVANIZED CLASS "B" PIPE WITH REFORMED ENDS. SLEEVE GASKETS AND EXTRA WIDE, MECHANICALLY TIGHTENED CORRUGATED BAND CONNECTION JOINTS, UNLESS OTHERWISE SPECIFIED ON PLAN.
4. ALL OPEN INLET OR OUTLET END OF STORM SEWER AND CULVERTS SHALL INCLUDE PREFAB FLARED END SECTION AND MINIMUM 10 SQ. YD. OF PLAIN COBBLESTONE RIP-RAP (6" INCH MIN. SIZE), UNLESS OTHERWISE SPECIFIED.
5. ALL CATCH BASINS WITHIN ROADWAY SHALL INCLUDE INSTALLATION OF 6" DIA. PERFORATED PIPE SUBDRAIN AS SHOWN ON PLANS.
6. APPROPRIATE SOIL EROSION CONTROL MEASURES SHALL BE ESTABLISHED PRIOR TO BEGINNING CONSTRUCTION AND CONTINUOUSLY MAINTAINED BY CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.



STORM SEWER PROFILES
SCALE: HORIZ. 1" = 20', VERT. 1" = 2'



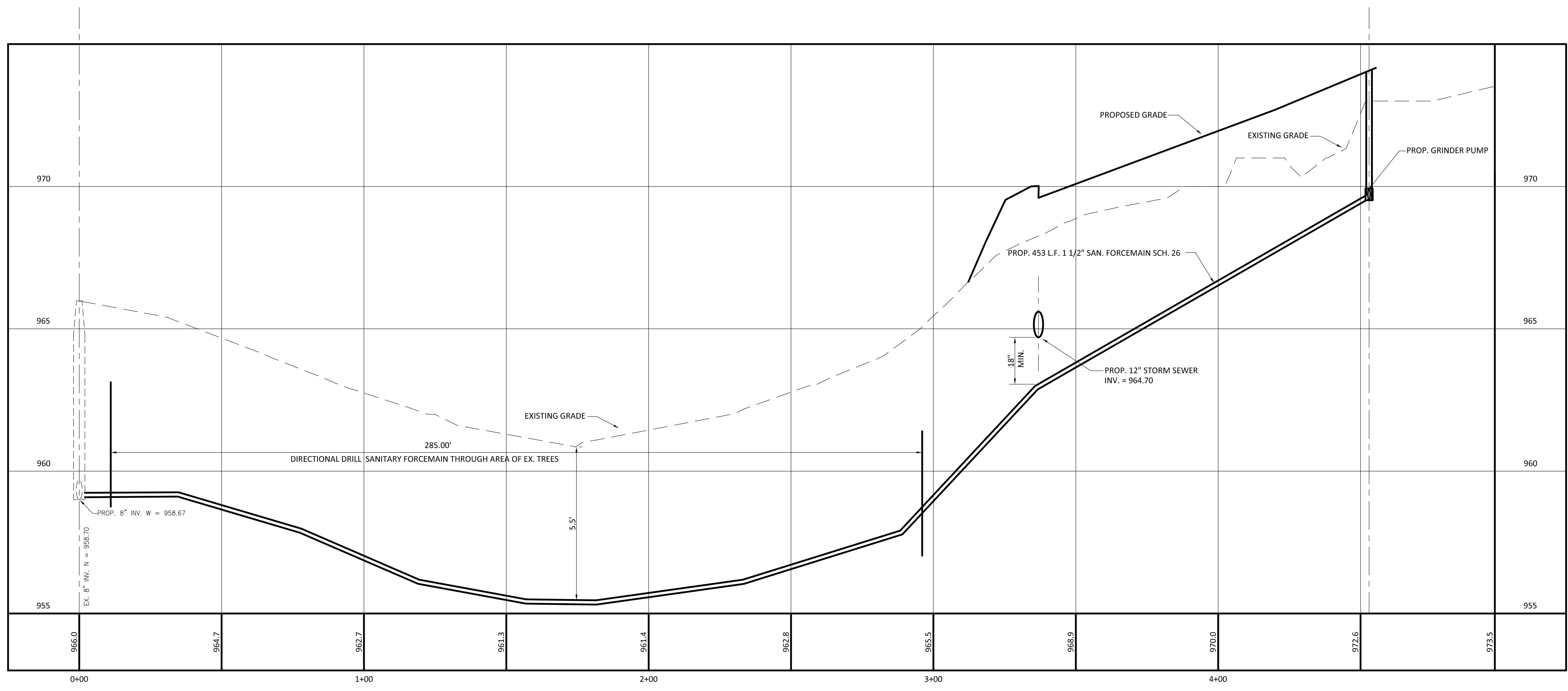
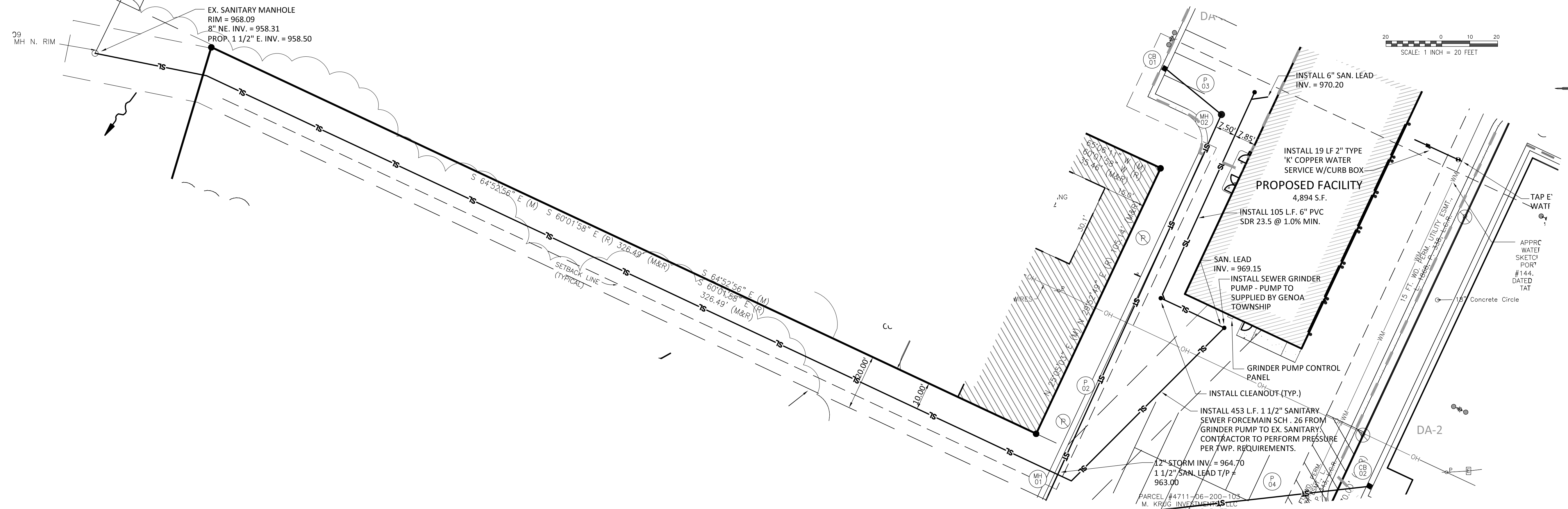
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HOWELL, MI 48843
(800) 246-6735 FAX (517) 548-4670

PROJECT: **KRUG QUICK LANE**
PREPARED FOR: **RAND CONSTRUCTION**
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011
TITLE: **STORM SEWER PROFILES**

NO	BY	DATE	REVISION PER
3	TD	4-4-12	TWP. REV.
2	TD	2-21-12	TWP. REV.
1	TD	1-12-12	TWP. REVIEW

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE: 1" = 20'
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 13



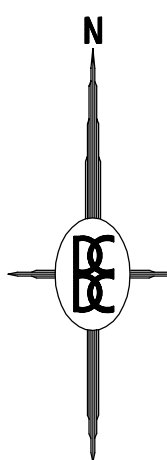
SANITARY LEAD PROFILE
SCALE: HORIZ. 1" = 20', VERT. 1" = 2'

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BEFORE YOU DIG
CALL MISS DIG
800-485-3111

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(E-Mail: bossengr.com)
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BRIGHTON, MI 48843
(800) 246-6735 FAX (517) 548-1670

PROJECT:	KRUG QUICK LANE
PREPARED FOR:	RAND CONSTRUCTION 1270 RICKETT ROAD BRIGHTON, MI 48116 810.227.7011
TITLE:	SANITARY LEAD PROFILE
DESIGNED BY:	TD
DRAWN BY:	TD
CHECKED BY:	TD
SCALE:	1" = 20'
JOB NO.:	11-190
DATE:	11-14-11
SHEET NO.:	14



SCALE: 1 INCH = 20 FEET

LEGEND

- 900 EXISTING CONTOUR
- 922.00 EXISTING SPOT ELEVATION
- P POWER POLE
- ⊥ GUY WIRE
- ⊕ HYDRANT
- ⊗ GATE VALVE
- WELL
- MANHOLE
- () STORM INVERT
- ⊞ U.G. ELECTRIC MARKER
- ⊞ TELEPHONE RISER
- ⊞ GAS METER
- ⊞ GAS RISER
- ⊞ U.G. GAS MARKER
- ⊞ LIGHT POLE
- ⊞ SIGN
- IRON SET
- IRON FOUND
- MONUMENT
- ⊞ SECTION CORNER
- SN— SANITARY SEWER
- WM— WATER MAIN
- ST— STORM SEWER
- G— GAS MAIN
- E— ELECTRIC
- T— TELEPHONE
- OH— OVERHEAD WIRES
- X— FENCE

GENERAL SURVEY NOTES:

1. CURRENT ZONING: GCD (GENERAL COMMERCIAL)
2. MINIMUM SETBACK REQUIREMENTS:
FRONT = 70' (30' IF NO PARKING IN FRONT YARD)
SIDES = 15'
REAR = 50'
PARKING LOT = 20' (10' SIDE & REAR)
3. BEARINGS WERE ESTABLISHED FROM A PREVIOUS SURVEY BY BOSS ENGINEERING, JOB NO. 96500, AS RECORDED IN LIBER 2131, PAGE 176, LIVINGSTON COUNTY RECORDS.
4. SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
5. EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
6. ELEVATIONS WERE ESTABLISHED RELATIVE TO BENCHMARK INFORMATION BY BOSS ENGINEERING AS SHOWN ON JOB NO. 00621, DATED 1/29/2001. (NGVD29 DATUM)
7. CONTOURS ARE SHOWN AT 1 FOOT INTERVALS.
8. 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.

EX. SANITARY MANHOLE
RIM = 968.09
8" NE. INV. = 958.31
PROP. 1 1/2" E. INV. = 958.50

PARCEL #4711-06-200-102
DAWN LAURIAN TENPENNY TRUST
2700 E. GRAND RIVER
HOWELL, MI 48843

PARCEL #4711-06-200-103
M. KRUG INVESTMENTS, LLC
2708 E. GRAND RIVER
HOWELL, MI 48843
(PARCEL 2)



APPROXIMATE LOCATION OF 4" GAS MAIN & 12" WATER MAIN AS DEPICTED ON SKETCH PREPARED BY McNAMEE, PORTER & SEELEY, CONTRACT #144.63-W-1, SHEET 3 OF 29, DATED 2-22-95, PROVIDED BY GREG TATARIA, UTILITY DIRECTOR FOR M.H.O.G. (810.227.5225)

APPROXIMATE LOCATION OF 8" WATER MAIN AS DEPICTED ON SKETCH PREPARED BY McNAMEE, PORTER & SEELEY, CONTRACT #144.63-W-1, SHEET 3A OF 29, DATED 08-95, PROVIDED BY GREG TATARIA, UTILITY DIRECTOR FOR M.H.O.G. (810.227.5225)

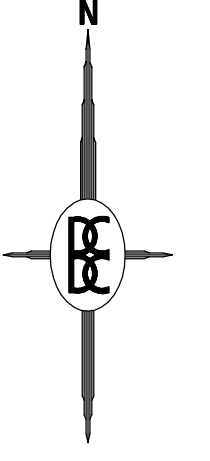
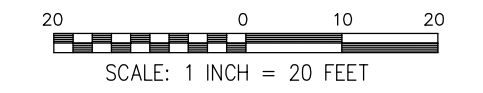
BENCHMARK CHART
BM #3
BOSS NAIL & TAG SET AT W/SIDE OF POWER POLE, 37" WEST OF SW CORNER OF KRUG FORD BUILDING.
ELEV. = 976.38 (NGVD29 DATUM)
BM #6
NORTH SIDE OF TOP OF CONCRETE BASE TO L. POLE, 4TH POLE EAST OF THE WESTERLY ENTRANCE TO KRUG FORD.
ELEV. = 974.82 (NGVD29 DATUM)

THE DRAWING AND ALL PARTS OF THE DRAWING, INCLUDING ANY UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. COMPLETELY RESPONSIBLE FOR THE ACCURACY OF THE DRAWING. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR OBTAINING THE EXACT UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OR DEPTH OF UTILITIES SHOWN FROM THE FIELD.

BOSS ENGINEERING
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LANDSCAPE ARCHITECTS
(E-MAIL: bossengr.com)
3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 FAX (517) 548-4670

PROJECT: KRUG QUICK LANE	
PREPARED FOR: RAND CONSTRUCTION	
1270 RICKETT ROAD BRIGHTON, MI 48116 810.227.7011	
TITLE: EXISTING CONDITIONS & DEMOLITION PLAN	
NO	DATE
3	TWP. REV. 4-4-12
2	TWP. REV. 2-21-12
1	TWP. REV. 1-12-12
NO	BY
DESIGNED BY:	TD
DRAWN BY:	TD
CHECKED BY:	
SCALE	1" = 20'
JOB NO.	11-190
DATE	11-14-11
SHEET NO.	2

PROPOSED (PR)	EXISTING (EX)	
FF	FF	FINISHED FLOOR ELEVATION
FG	FG	FINISHED GRADE ELEVATION
T/A	T/A	TOP OF ASPHALT
T/C	T/C	TOP OF CURB / CONCRETE
T/W	T/W	TOP OF WALK
F/L	F/L	FLOW LINE
T/P	T/P	TOP OF PIPE
B/P	B/P	BOTTOM OF PIPE
RM	RM	RM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
RY	RY	REARYARD STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
M	M	MANHOLE
I	I	INLET / CATCHBASIN
F	F	FLARED END-SECTION
V	V	GATE VALVE
U	U	HYDRANT
P	P	UTILITY POLE
F	F	FENCE
S	S	SIGN
NP	NP	NO PARKING SIGNS



- GENERAL SURVEY NOTES:**
- CURRENT ZONING: GCD (GENERAL COMMERCIAL)
 - MINIMUM SETBACK REQUIREMENTS:
FRONT = 70' (30' IF NO PARKING IN FRONT YARD)
PROPOSED = 44.97' (VARIANCE REQUIRED)
SIDES = 15'
PROPOSED = 27'
REAR = 50'
PROPOSED = 35.5'
PARKING LOT = 20' (10' SIDE & REAR)
PROPOSED = 10' SIDE
 - EXISTING USE: NEW & PRE-OWNED AUTO SALES & SERVICE
 - PROPOSED USE: NEW & PRE-OWNED AUTO SALES & SERVICE, AND OIL CHANGE CENTER
 - PARKING CALCULATIONS
REQUIRED: 2 SPACES PER SERVICE BAY PLUS 1 SPACE PER EMPLOYEE ON MAX. SHIFT.
6 SERVICE BAYS X 2 PLUS 8 EMPLOYEES = 20 SPACES
PROVIDED: 25 SPACES.
 - SEE ARCHITECTURAL PLANS FOR ALL NEW SIGNAGE - NO NEW FREE STANDING SIGNAGE PROPOSED.
 - FACILITY TO SHARE EX. DUMPSTER WITH AUTO DEALERSHIP.
 - ALL VEHICLE MAINTENANCE WILL BE CONDUCTED INSIDE THE FACILITY.
 - NO OUTDOOR STORAGE IS PROPOSED.
 - NO WRECKED VEHICLES WILL BE STORED ON SITE.
 - ALL WASTE FLUIDS ARE TO BE STORED INSIDE THE FACILITY. THE STORAGE AND DISPOSAL OF ALL WASTE FLUIDS TO MET ALL CURRENT LOCAL, STATE AND FEDERAL REQUIREMENTS.
 - ACCORDING TO THE NATIONAL WETLAND INVENTORY MAP, NO WETLANDS EXISTING ON THIS PROPERTY.

THE DESIGNER HAS REVIEWED THE RECORD SURVEY AND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. COMPLETION OF THIS PROJECT SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE PUBLIC UTILITIES AND OTHER AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE PUBLIC UTILITIES AND OTHER AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE PUBLIC UTILITIES AND OTHER AGENCIES.

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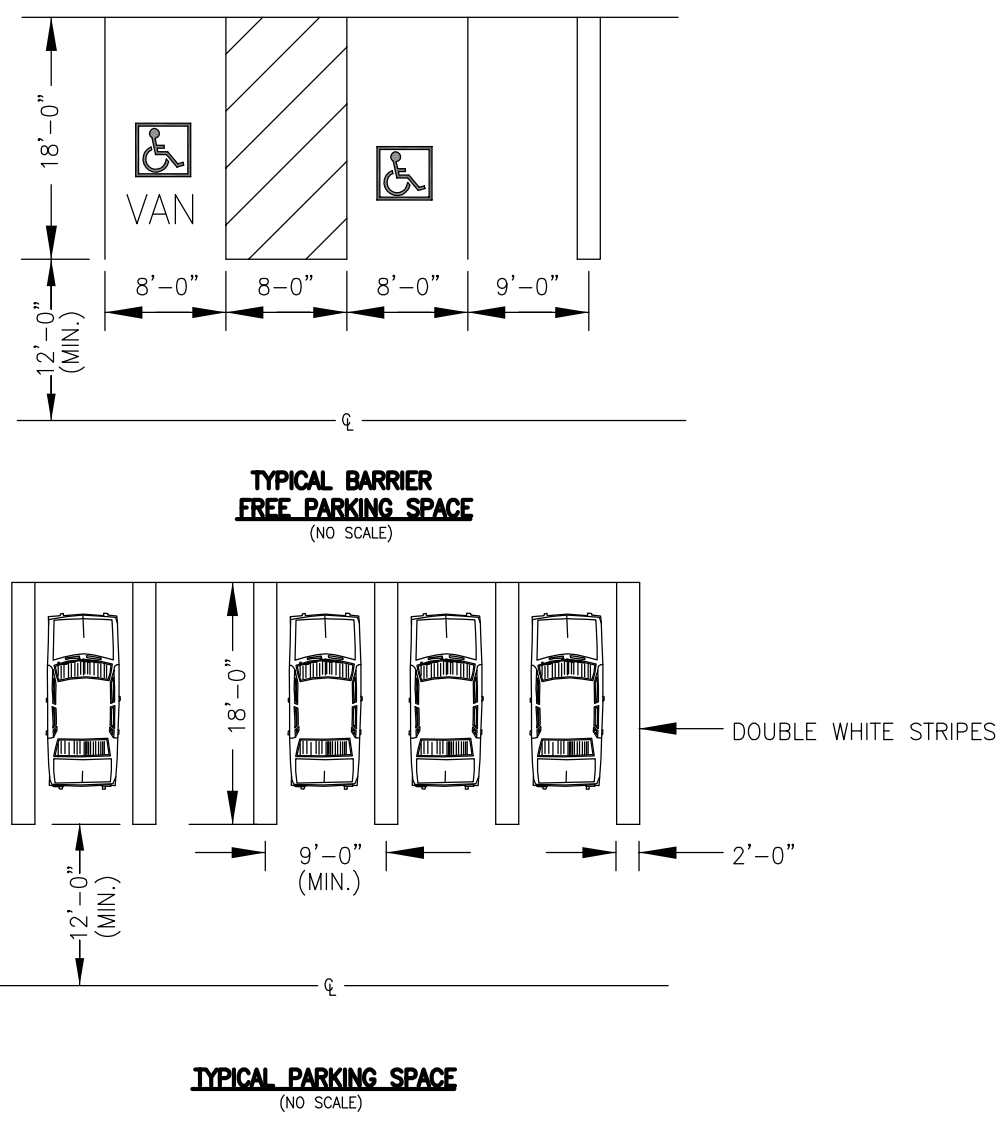
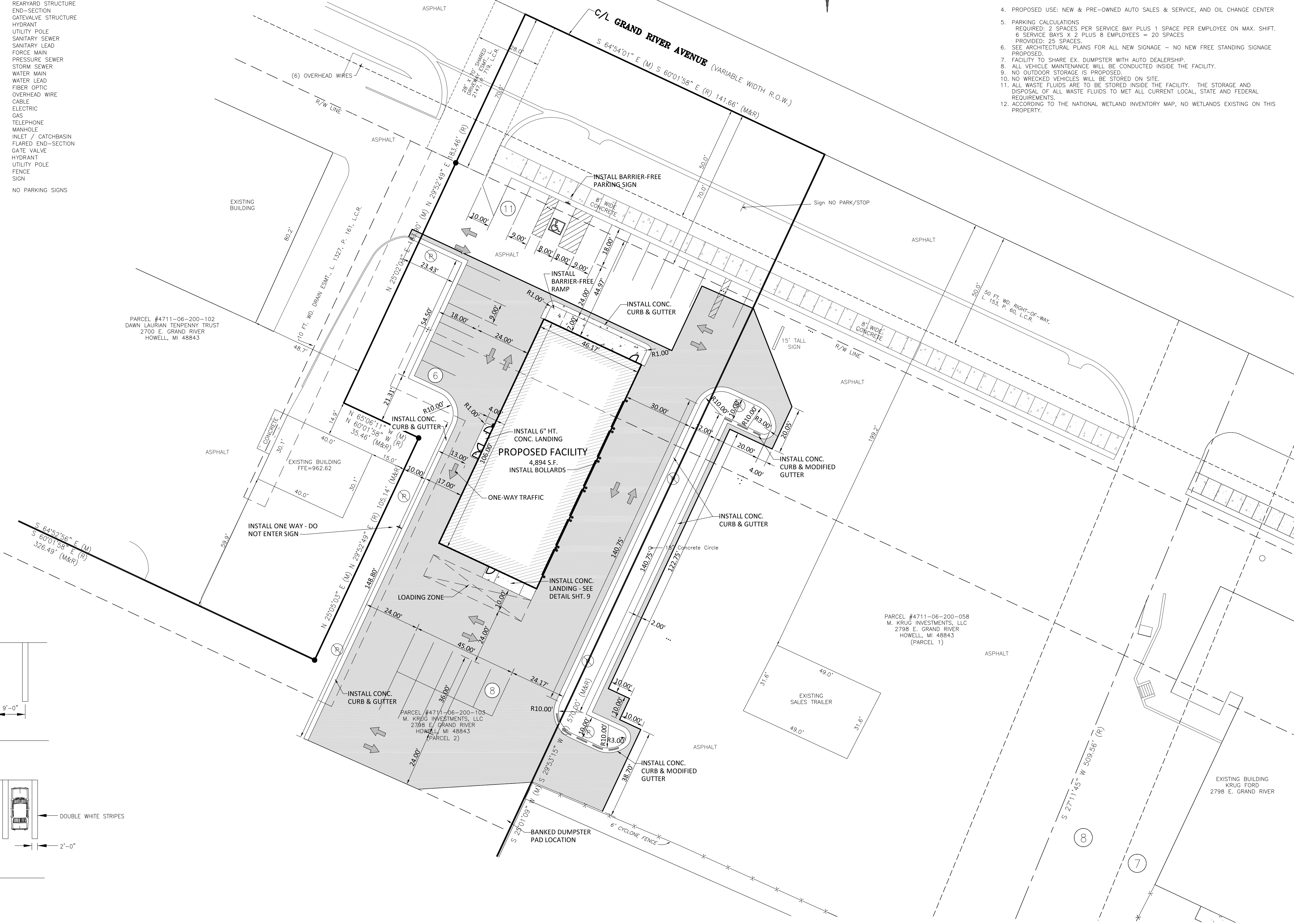
PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

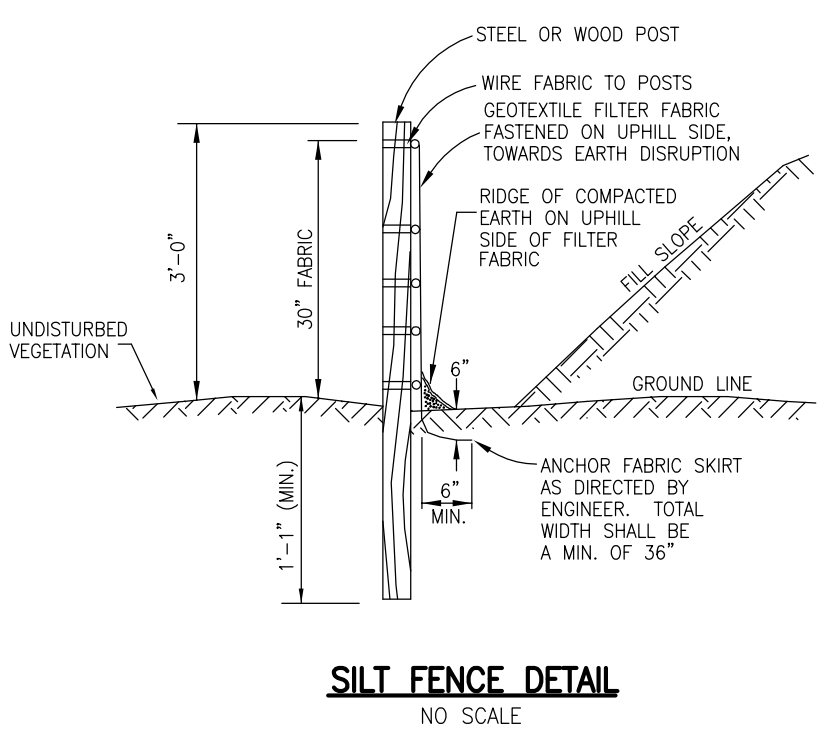
TITLE: SITE PLAN

NO	BY	DATE	REVISION PER
3	TD	4-4-12	
2	TD	2-21-12	
1	TD	1-12-12	
NO	BY	DATE	REVISION PER

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:

SCALE: 1" = 20'
JOB NO.: 11-190
DATE: 11-14-11
SHEET NO.: 3





SILT FENCE DETAIL
NO SCALE

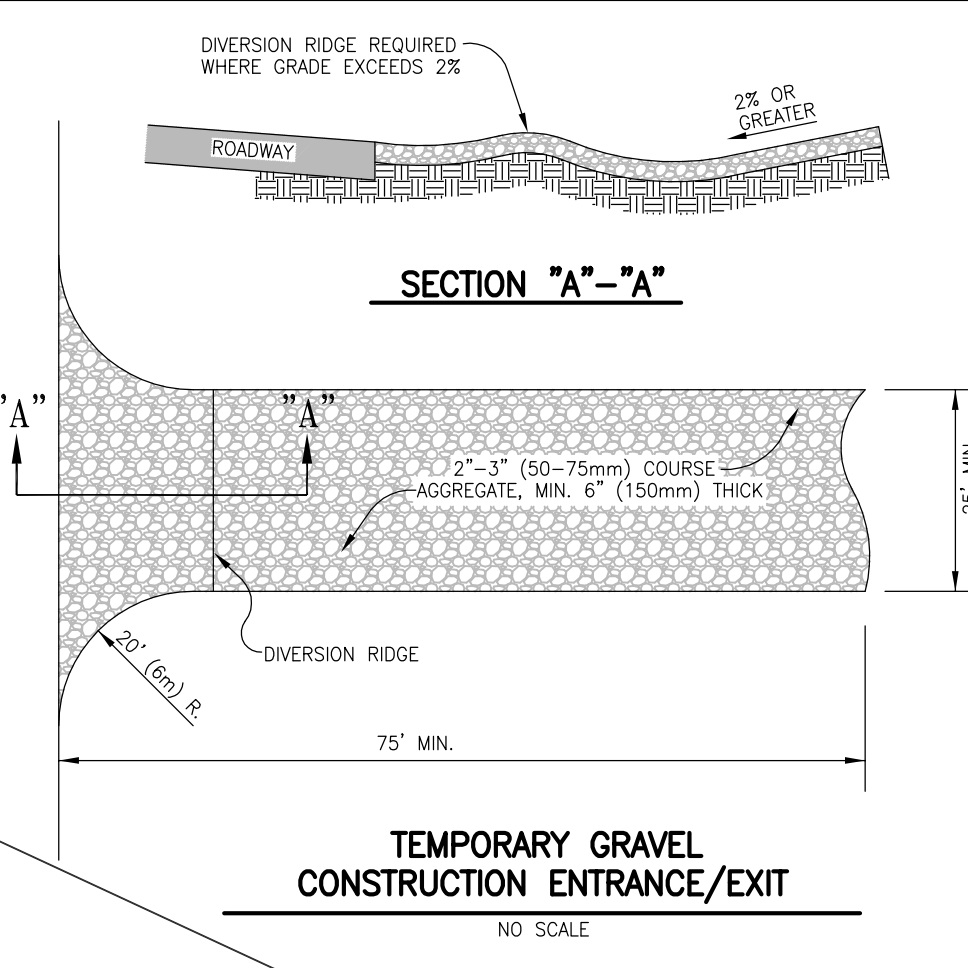
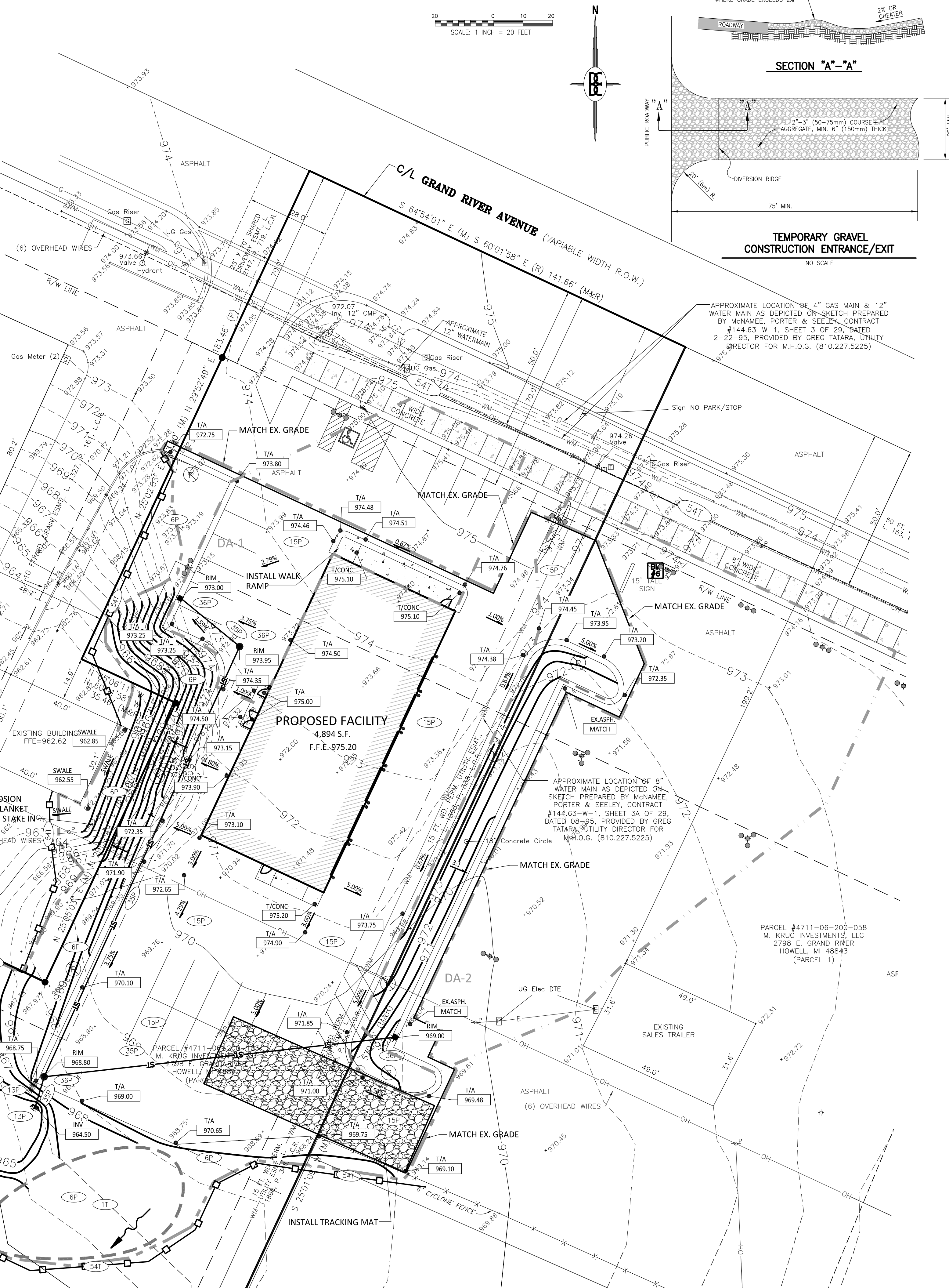
LEGEND

PROPOSED (PR)	EXISTING (EX)	
FF	FF	FINISHED FLOOR ELEVATION
T/A	T/A	FINISHED GRADE ELEVATION
T/C	T/C	TOP OF ASPHALT
T/W	T/W	TOP OF CURB / CONCRETE
F/L	F/L	TOP OF WALK
T/P	T/P	FLOW LINE
B/P	B/P	TOP OF PIPE
RIM	RIM	BOTTOM OF PIPE
INV	INV	RIM ELEVATION
MH	MH	INVERT ELEVATION
IN	IN	MANHOLE STRUCTURE
CB	CB	INLET STRUCTURE
RY	RY	CATCHBASIN STRUCTURE
ES	ES	REARYARD STRUCTURE
GV	GV	END-SECTION
HY	HY	GATEVALVE STRUCTURE
UP	UP	HYDRANT
SN	SN	UTILITY POLE
SL	SL	SANITARY SEWER
FM	FM	SANITARY LEAD
PS	PS	FORCE MAIN
ST	ST	PRESSURE SEWER
WM	WM	STORM SEWER
WL	WL	WATER MAIN
FO	FO	WATER LEAD
OH	OH	FIBER OPTIC
C	C	OVERHEAD WIRE
E	E	CABLE
G	G	ELECTRIC
T	T	GAS
○	○	TELEPHONE
●	●	MANHOLE
□	□	INLET / CATCHBASIN
○	○	FLARED END-SECTION
○	○	GATE VALVE
○	○	HYDRANT
○	○	UTILITY POLE
○	○	FENCE
○	○	SION
○	○	NOT FIELD VERIFIED TO BE REMOVED
○	○	COMPACTED SAND BACKFILL
TBR		SANITARY SEWER LABEL
○		STORM SEWER LABEL
○		WATER MAIN LABEL
○		SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
○		SILT FENCE
○		LIMITS OF GRADING/CLEARING
○		LIMITS OF DRAINAGE

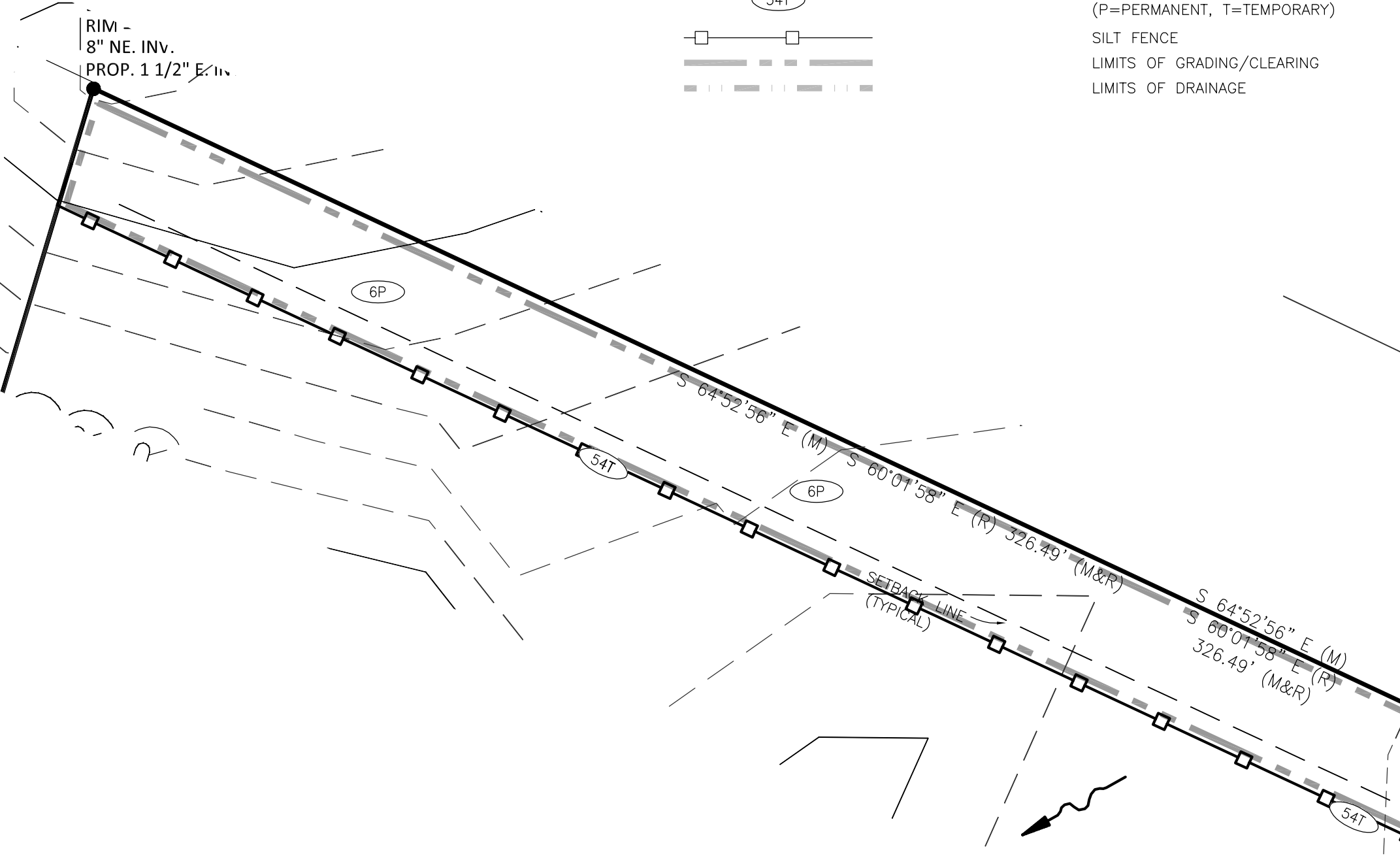
BENCHMARK CHART

BM #3
BOSS NAIL & TAG SET AT W/SIDE OF POWER POLE, 37" WEST OF SW CORNER OF KRUG FORD BUILDING.
ELEV. = 976.38 (NGVD29 DATUM)

BM #6
NORTH SIDE OF TOP OF CONCRETE BASE TO L. POLE, 4TH POLE EAST OF THE WESTERLY ENTRANCE TO KRUG FORD.
ELEV. = 974.82 (NGVD29 DATUM)



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT
NO SCALE



SOIL EROSION CONTROL MEASURES

1	STRIPPING & STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION STOCKPILE SHOULD BE TEMPORARILY SEED
6	SEEDING WITH MULCH AND/OR MATING	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR DRAINWAYS WITH LOW VELOCITY. EROSION PROTECTED BY IMPROVED PERSONNEL SHOULD INCLUDE PREPARED TOPSOIL BED.
13	RIP-RAP, RUBBLE, COBBLES	USED WHERE VEGETATION IS NOT EASILY ESTABLISHED EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS FORMS RUNOFF TO INERTIAL SOIL. DISPERSES ENERGY FLUM AT SYSTEM OUTLETS.
15	FRANGING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VELOCITY. IRREGULAR SURFACE WILL HELP SLOW VELOCITY.
35	CONCRETE SPILLWAY	SYSTEM REMAINS COLLECTED RUNOFF FROM SITE. PARTICULARLY FROM PAVED AREAS CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION (SEE PARTIAL BARS TO COLLECT SEWAGE).
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET.
54	POST DEVELOPMENT RUNOFF (CFS) FROM ENTIRE SITE = 35.0	USES GEOTEXTILE FABRIC AND POST OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY. (SEE DETAIL THIS SHEET)

T = TEMPORARY P = PERMANENT
TOTAL AREA DISTURBED = 37,497 S.F. (0.86 AC)

THIS PROJECT REDUCES THE IMPERVIOUS AREA BY 2,225 S.F. OVER THE EXISTING CONDITIONS.

THE INFORMATION CONTAINED ON THESE DRAWINGS WAS PREPARED BY THE ENGINEER OR SURVEYOR AND IS NOT TO BE USED FOR ANY OTHER PURPOSES. THE ENGINEER OR SURVEYOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION. THE APPROVED OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE INFORMATION SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.

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1121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 FAX (517) 548-4670

PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

TITLE: GRADING, DRAINAGE & SOIL EROSION CONTROL

NO	BY	DATE	REVISION PER
1	TD	4-4-12	
2	TD	2-21-12	
3	TD	1-12-12	

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

SCALE: 1" = 20'
JOB NO.: 11-190
DATE: 11-14-11
SHEET NO.: 4

STORM SEWER NOTES

- ALL PIPE LENGTHS SHOWN ARE FROM C/L TO C/L OF STRUCTURE OR FROM C/L OF STRUCTURE TO DISCHARGE END OF FLARED END SECTION.
- ALL STORM SEWER PIPE SHALL BE C-76, CL. IV REINFORCED CONCRETE PIPE WITH WATERTIGHT PREMIUM JOINTS, UNLESS OTHERWISE NOTED ON PLAN.
- ALL STORM SEWER & CULVERT PIPE NOTED AS "CSP" ON PLAN SHALL BE CORRUGATED STEEL, GALVANIZED CLASS "B" PIPE WITH REFORMED ENDS. SLEEVE GASKETS AND EXTRA WIDE, MECHANICALLY TIGHTENED CORRUGATED BAND CONNECTION JOINTS, UNLESS OTHERWISE SPECIFIED ON PLAN.
- ALL OPEN INLET OR OUTLET END OF STORM SEWER AND CULVERTS SHALL INCLUDE PREFAB FLARED END SECTION AND MINIMUM 10 SQ. YD. OF PLAIN COBBLESTONE RIP-RAP (6" INCH MIN. SIZE), UNLESS OTHERWISE SPECIFIED.
- ALL CATCH BASINS WITHIN ROADWAY SHALL INCLUDE INSTALLATION OF 6" DIA. PERFORATED PIPE SUBDRAIN AS SHOWN ON PLANS.
- APPROPRIATE SOIL EROSION CONTROL MEASURES SHALL BE ESTABLISHED PRIOR TO BEGINNING CONSTRUCTION AND CONTINUOUSLY MAINTAINED BY CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.

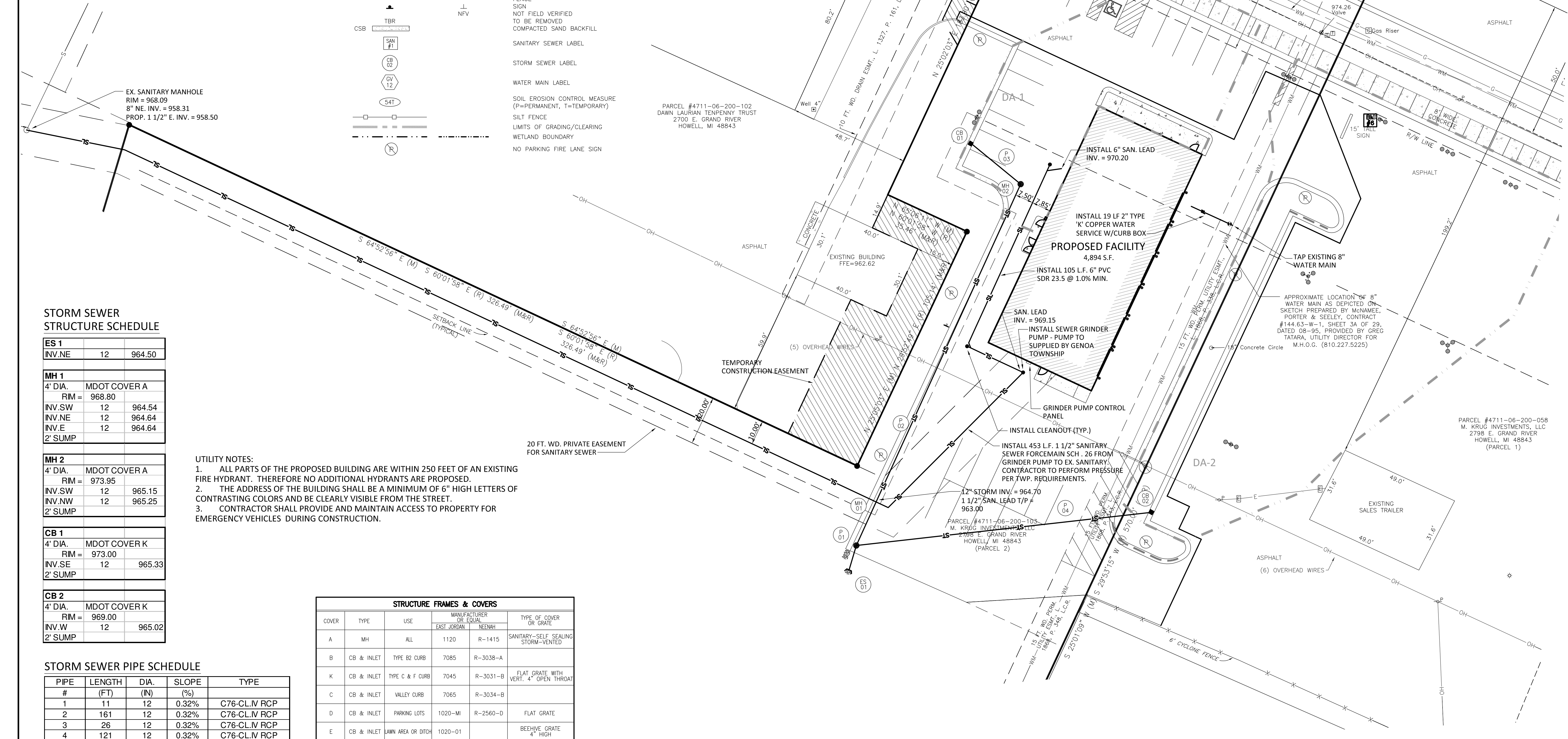
LEGEND

PROPOSED (PR)	EXISTING (EX)
900	900
FF	FF
T/A	T/A
T/C	T/C
T/W	T/W
F/L	F/L
T/P	T/P
B/P	B/P
RIM	RIM
INV	INV
MH	MH
IN	IN
CB	CB
RY	RY
ES	ES
GV	GV
HY	HY
UP	UP
SN	SN
SL	SL
FM	FM
PS	PS
ST	ST
WM	WM
WL	WL
FO	FO
OH	OH
C	C
E	E
G	G
T	T
U	U
L	L
NFV	NFV
TBR	
SAN #1	
CB 02	
GV 12	
54T	
CSB	

BENCHMARK CHART

BM #3
BOSS NAIL & TAG SET AT W/SIDE OF POWER POLE, 37"
WEST OF SW CORNER OF KRUG FORD BUILDING.
ELEV. = 976.38 (NGVD29 DATUM)

BM #6
NORTH SIDE OF TOP OF CONCRETE BASE TO L. POLE, 4TH
POLE EAST OF THE WESTERLY ENTRANCE TO KRUG FORD.
ELEV. = 974.82 (NGVD29 DATUM)



UTILITY NOTES:

- ALL PARTS OF THE PROPOSED BUILDING ARE WITHIN 250 FEET OF AN EXISTING FIRE HYDRANT. THEREFORE NO ADDITIONAL HYDRANTS ARE PROPOSED.
- THE ADDRESS OF THE BUILDING SHALL BE A MINIMUM OF 6" HIGH LETTERS OF CONTRASTING COLORS AND BE CLEARLY VISIBLE FROM THE STREET.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN ACCESS TO PROPERTY FOR EMERGENCY VEHICLES DURING CONSTRUCTION.

STORM SEWER STRUCTURE SCHEDULE

ES 1		
INV.NE	12	964.50

MH 1		
4' DIA. MDOT COVER A		
RIM =	968.80	
INV.SW	12	964.54
INV.NE	12	964.64
INV.E	12	964.64
2' SUMP		

MH 2		
4' DIA. MDOT COVER A		
RIM =	973.95	
INV.SW	12	965.15
INV.NW	12	965.25
2' SUMP		

CB 1		
4' DIA. MDOT COVER K		
RIM =	973.00	
INV.SE	12	965.33
2' SUMP		

CB 2		
4' DIA. MDOT COVER K		
RIM =	969.00	
INV.W	12	965.02
2' SUMP		

STORM SEWER PIPE SCHEDULE

PIPE #	LENGTH (FT)	DIA. (IN)	SLOPE (%)	TYPE
1	11	12	0.32%	C76-CL.IV RCP
2	161	12	0.32%	C76-CL.IV RCP
3	26	12	0.32%	C76-CL.IV RCP
4	121	12	0.32%	C76-CL.IV RCP

STRUCTURE FRAMES & COVERS

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

THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROPRIATE UTILITIES AS SHOWN ON THESE DRAWINGS. THE USER APPROXIMATE, UNLESS OTHERWISE NOTED, SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROPRIATE UTILITIES AS SHOWN ON THESE DRAWINGS. THE USER APPROXIMATE, UNLESS OTHERWISE NOTED, SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROPRIATE UTILITIES AS SHOWN ON THESE DRAWINGS. THE USER APPROXIMATE, UNLESS OTHERWISE NOTED, SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROPRIATE UTILITIES AS SHOWN ON THESE DRAWINGS.

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PROJECT: KRUG QUICK LANE
FOR: RAND CONSTRUCTION

1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

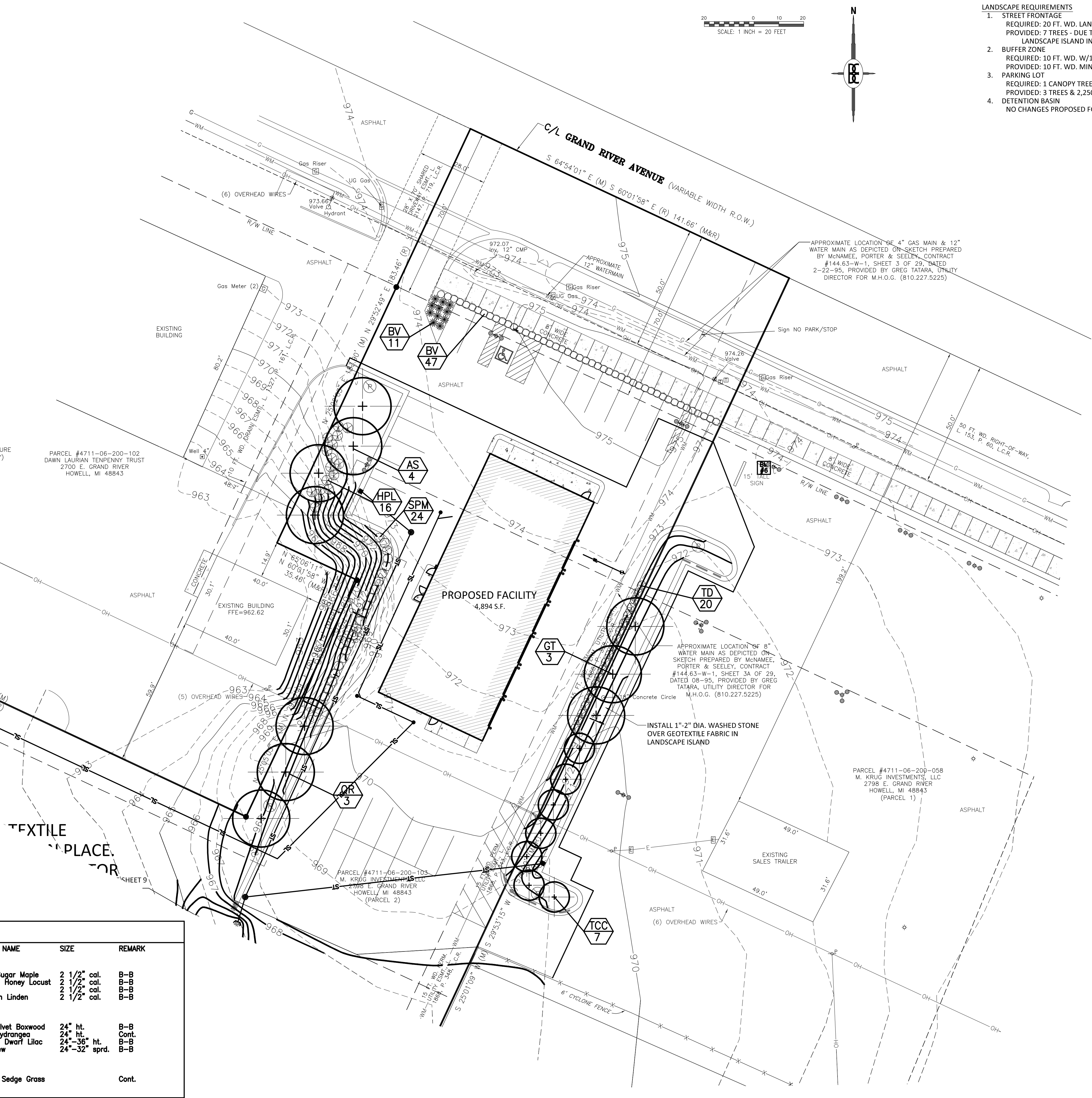
TITLE: UTILITY PLAN

NO	BY	DATE	REVISION PER
1	TD	4-4-12	
2	TD	2-21-12	
3	TD	1-12-12	

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

SCALE: 1" = 20'
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 5

PROPOSED (PR)	EXISTING (EX)	LEGEND
900	900	CONTOUR
		STORM DRAINAGE FLOW
		SPOT ELEVATION
FF	FF	FINISHED FLOOR ELEVATION
FG	FG	FINISHED GRADE ELEVATION
T/A	T/A	TOP OF ASPHALT
T/C	T/C	TOP OF CURB / CONCRETE
T/W	T/W	TOP OF WALK
F/L	F/L	FLOW LINE
T/P	T/P	TOP OF PIPE
B/P	B/P	BOTTOM OF PIPE
RM	RM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
RY	RY	REARWARD STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
○	○	MANHOLE
□	□	INLET / CATCHBASIN
⊥	⊥	FLARED END-SECTION
⊥	⊥	GATE VALVE
⊥	⊥	HYDRANT
⊥	⊥	UTILITY POLE
⊥	⊥	FENCE
⊥	⊥	SIGN
⊥	⊥	NOT FIELD VERIFIED
⊥	⊥	TO BE REMOVED
⊥	⊥	COMPACTED SAND BACKFILL
CSB		SANITARY SEWER LABEL
		STORM SEWER LABEL
		WATER MAIN LABEL
		SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
		SILT FENCE
		LIMITS OF GRADING/CLEARING
		WETLAND BOUNDARY



KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
TREES					
AS	4	<i>Acer saccharum</i> 'Legacy'	Legacy Sugar Maple	2 1/2" cal.	B-B
GT	3	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honey Locust	2 1/2" cal.	B-B
QR	3	<i>Quercus rubra</i>	Red Oak	2 1/2" cal.	B-B
TCC	7	<i>Tilia cordata</i> 'Corinthian'	Corinthian Linden	2 1/2" cal.	B-B
SHRUBS					
BV	47	<i>Buxus x microphylla</i> 'Green Velvet'	Green Velvet Boxwood	24" ht.	B-B
HPL	16	<i>Hydrangea paniculata</i> 'LimeLight'	LimeLight Hydrangea	24" ht.	Cont.
SPM	24	<i>Syringa patula</i> 'Miss Kim'	Miss Kim Dwarf Lilac	24"-36" ht.	B-B
TD	20	<i>Taxus x media</i> 'densiformis'	Dense Yew	24"-32" sprd.	B-B
PERENNIALS					
CB	11	<i>Carex buchananii</i>	Fox Red Sedge Grass		Cont.

- LANDSCAPE REQUIREMENTS**
- STREET FRONTAGE**
REQUIRED: 20 FT. WD. LANDSCAPE STRIP W/1 TREE PER 40 L.F. & 2 FT. HT. HEDGE ROW PROVIDED: 7 TREES - DUE TO EX. CONDITIONS REQUIRED TREES MOVED TO NEW LARGE LANDSCAPE ISLAND IN PARKING LOT. HEDGE ROW PROVIDED.
 - BUFFER ZONE**
REQUIRED: 10 FT. WD. W/1 TREE OR 4 SHRUBS PER 20 L.F. (214/20=11 TREES)
PROVIDED: 10 FT. WD. MIN., 7 TREES & 40 SHRUBS
 - PARKING LOT**
REQUIRED: 1 CANOPY TREE & 100 S.F. PER 10 SPACES (25 SPACES/10 = 3 TREES & 300 S.F.)
PROVIDED: 3 TREES & 2,250 S.F.
 - DETENTION BASIN**
NO CHANGES PROPOSED FOR DETENTION AREA.

THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL INFORMATION UTILIZED IN THESE DRAWINGS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

BOSS ENGINEERING
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS

BOSS ENGINEERING, P.C.
3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 FAX (517) 548-1670

PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

TITLE: LANDSCAPE PLAN

NO.	BY	DATE	REVISION PER
1	TD	4-4-12	
2	TD	2-21-12	
3	TD	1-12-12	

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

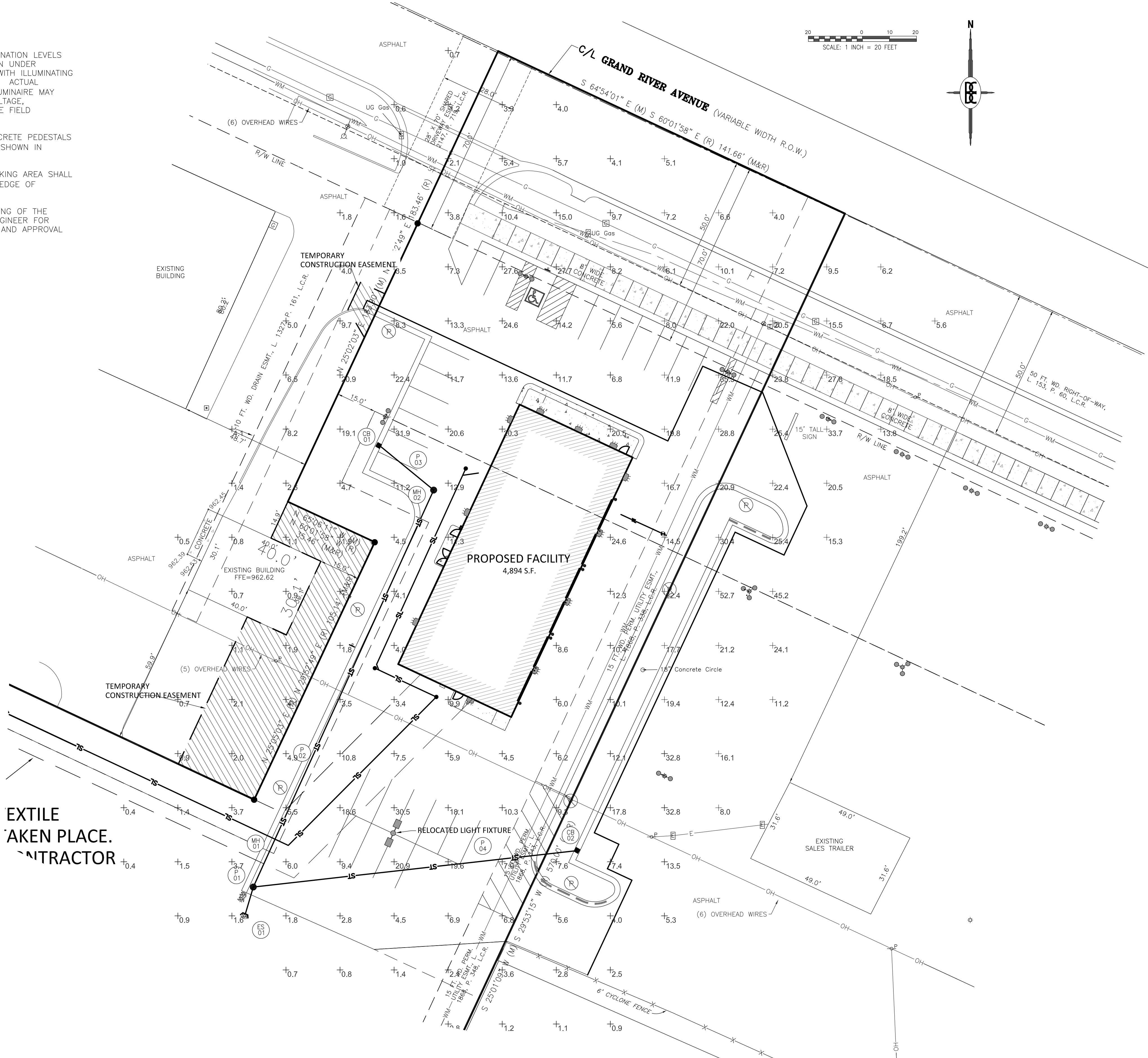
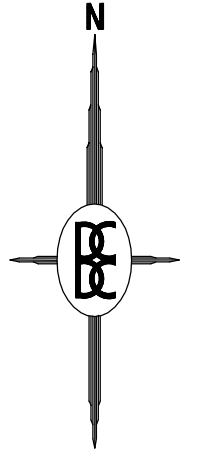
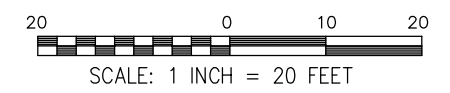
SCALE: 1" = 20'
JOB NO.: 11-190
DATE: 11-14-11
SHEET NO.: 6

PROPOSED (PR)	EXISTING (EX)	
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
M	M	MANHOLE
I	I	INLET / CATCHBASIN
VS	VS	VALVE
CV	CV	CATCH VALVE
HY	HY	HYDRANT
UL	UL	UTILITY POLE
F	F	FENCE
S	S	SIGN

SYMBOL	DESCRIPTION
San #1	SANITARY SEWER LABEL
CS 02	STORM SEWER LABEL
CV 12	WATER MAIN LABEL
Double circle	DOUBLE FIXTURE LIGHT POLE
Single circle	SINGLE FIXTURE LIGHT FIXTURE
Wall mount	WALL MOUNTED LIGHT FIXTURE
Ground light	GROUND LIGHT FIXTURE
Foot candle	FOOT CANDLES ON SITE

GENERAL LIGHTING NOTES

1. THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
2. ALL POLES ARE TO BE MOUNTED ON CONCRETE PEDESTALS 2'-6" ABOVE GRADE IN PARKING LOTS AS SHOWN IN DETAIL.
3. ALL POLES LOCATED OUTSIDE OF THE PARKING AREA SHALL BE LOCATED 3' FROM BACK OF CURB OR EDGE OF SIDEWALKS.
4. SHOP DRAWINGS FOR THE ELECTRICAL WIRING OF THE POLES NEED TO BE SUBMITTED TO THE ENGINEER FOR COORDINATION OF UNDERGROUND CONDUIT AND APPROVAL OF LAYOUT.



DESCRIPTION

The Streetworks Wal-Pak Series of wall luminaires provides traditional architectural style with high performance energy efficient illumination. Rugged die-cast aluminum construction, stainless steel hardware along with a sealed and gasketed optical compartment make the Wal-Pak virtually impervious to contaminants. IP65 Rated, UL and CUL wet location listed. The Wal-Pak wall luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways and loading docks.

STREETWORKS™	
Catalog #	Type
Project	Date
Comments	
Prepared by	

SPECIFICATION FEATURES

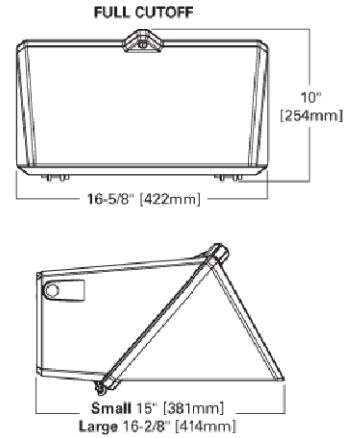
- Housing**
Rugged one-piece die-cast aluminum housing and hinged, removable die-cast aluminum door. One-piece silicone gasket seals the optical chamber. UL 1558 wet location listed and IP65 ingress protection rated.
- Electrical**
Ballasts, LED driver and related electrical components are hand mounted to the die-cast housing for optimal heat sinking and operating efficiency. Wiring is extended through a silicone gasket at the back of the housing. Three 1/2" threaded conduit entry points allow for triu-branch wiring. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from LED source. Integral LED electronic driver incorporates internal fusing designed to withstand a 3kV surge test and is Class 2 rated for 120-277V with an operating temperature of -30° to 60°C. Wal-
- Door Assembly**
Single point, captive stainless steel hardware secures the removable hinged door allowing for ease of installation and maintenance. Door assembly is hinged at the bottom for easy removal, installation and re-lamping.
- Finish**
Housing and door are protected with Estage TIG dark bronze polyester powder coat paint. Premium TIG power coat finishes withstand extreme climate changes while providing optimal color and gloss retention. Optional premium colors are available.



WPK WAL-PAK
2400 - 4000 Lumens LED
39 - 400W
High Pressure Sodium
Pulse Start Metal Halide
Metal Halide
WALL MOUNT LUMINAIRE



DIMENSIONS



TECHNICAL DATA
UL and CUL Wet Location Listed
IP65 Rated
90°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
15A @ 120V, 15A @ 277V
Compliant

ENERGY DATA
Reactor Ballast Input Watts
50W HPS NPF (80 Watts)
100W HPS NPF (80 Watts)
150W HPS NPF (110 Watts)
200W HPS NPF (110 Watts)
High Resonance Ballast Input Watts
20W MP HPF (84 Watts)
100W MP HPF (110 Watts)
150W MP HPF (110 Watts)
200W MP HPF (110 Watts)
CWA Ballast Input Watts
200W HPS HPF (220 Watts)
300W HPS HPF (220 Watts)
500W HPS HPF (280 Watts)
330W MP HPF (380 Watts)
330W MP HPF (480 Watts)
600W HPS HPF (480 Watts)
600W MP HPF (480 Watts)

SHIPPING DATA
Approximate Net Weight
23.42 lbs. (10.6 kg.)
2010-01-19 11:14:01

EXTILE TAKEN PLACE.
CONTRACTOR

LUMINAIRE SCHEDULE

SYMBOL	LABEL	QTY.	DESCRIPTION	CATALOG NUMBER	LAMP	FILE	LUMENS	LLF	POLE DESCRIPTION	POLE HEIGHT	BASE HEIGHT	TOTAL HEIGHT
Double circle		1	RELOCATED DOUBLE FIXTURE					.72		25'	2'-6"	27'-6"
Wall mount		11	COOPER LIGHTING STREETWORKS WPK WAL-PAK - FULL CUTOFF	WPK 15 P P 4 FC WH 2 L	150 WATT MH			.72	WALL MOUNTED			

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

THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL UTILITIES AS SHOWN ON THESE DRAWINGS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF ALL UTILITIES AND FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF ALL UTILITIES AND FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF ALL UTILITIES AND FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.

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PROJECT: KRUG QUICK LANE
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1270 RICKETT ROAD
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TITLE: LIGHTING PLAN

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3	TD	4-4-12	
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SHEET NO. 7

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

- NOTIFY LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE 24 HOURS PRIOR TO START OF GRADE WORK.
- IN ACCORDANCE WITH PUBLIC ACT NO. 53, OF 1974 THE PERMIT HOLDER SHALL CALL MISS DIG FOR STAKING AND LOCATING OF UTILITIES, AT LEAST 72 HOURS IN ADVANCE OF THE START OF ANY WORK.

PERMITTING STANDARDS

- (IMPORTANT NOTICE) RETENTION/DETENTION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. INGRESS/EGRESS MUST HAVE LARGE CRUSHED ROCK TO REDUCE THE TRACKING OF SOIL ONTO THE PUBLIC TRAFFIC AREAS. SEE DETAIL ITEMS BELOW.
- 36" M.D.O.T SPECIFICATION TYPE SILT FABRIC FENCE AS SHOWN ON PLANS SHALL BE PLACED AND MAINTAINED ALONG PERIMETER ON ALL LOW LYING AREAS OF THE CONSTRUCTION SITE TO FILTER RUNOFF BEFORE LEAVING PROJECT SITE.
- ALL TEMPORARY EROSION CONTROL DEVICES AS NOTED ON PLANS SHALL BE INSTALLED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
- PLAN DOES DENOTE A DETAILED EROSION CONTROL DEVICE TO RESTRICT TRACKING OF MATERIAL ONTO THE HIGHWAY. STONE DIAPERS SHALL BE INSTALLED AT ALL INGRESS/EGRESS AREAS OF THE SITE PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. DIAPERS SHALL BE OF CRUSHED STONE AND SHALL HAVE A MINIMUM LENGTH OF 100' LINEAL FEET.

RETENTION PONDS

- RETENTION/DETENTION/SEDIMENTATION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
- DETENTION POND OUTLETS SHALL BE OF THE STANDPIPE AND STONE FILTER SYSTEM, WITH TRASH SCREEN. OUTLET FLOW SHALL NOT EXCEED 0.20 CUBIC FEET OF WATER PER SECOND/PER ACRE. POND DIMS 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 SLOTTED 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 SIDE SLOPES ARE PROVIDED. THE FENCE SHALL BE INSTALLED AT THE OUTER PORTION OF THE BERM, TO ALLOW FOR MAINTENANCE WORK TO BE DONE INSIDE THE FENCE.
- ALL UNIMPROVED DISTURBED AREAS SHALL BE STRIPPED OF TOPSOIL WHICH WILL BE STORED ONSITE DURING THE EXCAVATING STAGE. TOPSOIL PILES SHALL BE SEEDED AND MULCHED, OR MATED 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 BARTLED 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 KEYS 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 LATER OF A SPLASH BLOCK WHICH IS NOT NOTED ON THE PLAN. INSTALL SPLASH BLOCK IF SLOPE OF THE PIPE IS 4% OR GREATER.
- IT WILL BE NECESSARY FOR THE DEVELOPER TO HAVE THE STORM DRAINAGE LINES CLEANED PRIOR TO FINAL INSPECTION BY THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE. IF REQUIRED, THIS WORK SHALL BE DONE BY A PROFESSIONAL SEWER CLEANING FIRM AND CERTIFIED IN WRITING BY THE PROJECT ENGINEER. ALL SUMPS AND TEMPORARY SILT TRAPS SHALL ALSO BE CLEANED AT THIS TIME.

STABILIZATION

- ALL UNIMPROVED DISTURBED AREAS SHALL BE RE-TOP SOILED, WITH A MINIMUM OF 3" OF MATERIAL, SEEDED, MULCHED AND TACKED WITHIN 15 DAYS OF THE COMPLETION OF THE MASSIVE EARTH DISRUPTION. IN THE NON-GROWING SEASON STRAW MATTING WILL SUFFICE. HYDROSEEDING WILL BE AN ACCEPTABLE ALTERNATE FOR MULCHING. EXTREME CARE SHOULD BE EXERCISED IN SPRING AND FALL PERIODS AS A FROST WILL BREAK THE BIND OF THE HYDROSEEDING, WHICH WILL AFFECT THE EFFECTIVENESS OF THIS PROCEDURE.
- IN THE NON-GROWING SEASON, TEMPORARY STABILIZATION OF MASSIVELY EXPOSED AREAS FOR WINTER STABILIZATION SHALL BE DONE WITH STRAW MATTING.
- PERMIT FEES DURING THE WINTER PERIOD OF NON-CONSTRUCTION, (DECEMBER 1 THROUGH MARCH 31), SHALL NOT BE IMPOSED IF THE PERMIT HOLDER TEMPORARILY STABILIZES THE EXPOSED AREAS WITH STRAW MATTING, AND OTHER APPROVED CONTROLS, AND OBTAINS A WINTER STABILIZATION CERTIFICATE FROM THIS OFFICE.
- PERIODIC INSPECTIONS WILL BE MADE THROUGHOUT THE COURSE OF THE PROJECT. IT WILL BE THE RESPONSIBILITY OF THE MANAGERS OF THE PROJECT TO CONTACT THIS OFFICE FOR THE FINAL INSPECTION AT THE END OF THE PROJECT.
- THIS COMMERCIAL PERMIT IS VALID FOR THE MASS EARTH MOVEMENT, THE INSTALLATION OF ROADS, DRAINS, AND UTILITIES AND IS NOT FOR ANY SINGLE FAMILY RESIDENCE. ALL RESIDENTIAL BUILDERS WILL NEED TO SECURE MANAGERS 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:

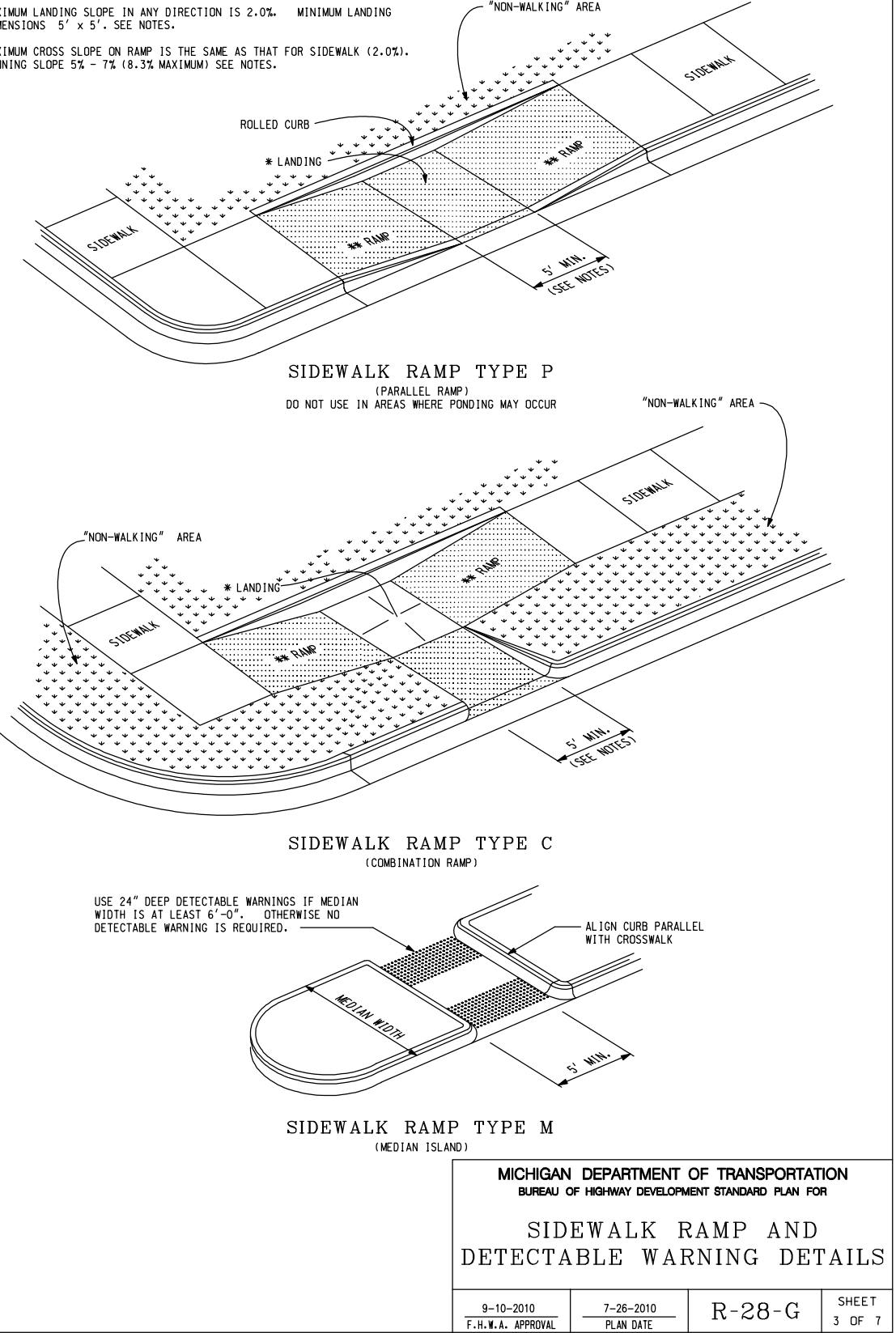
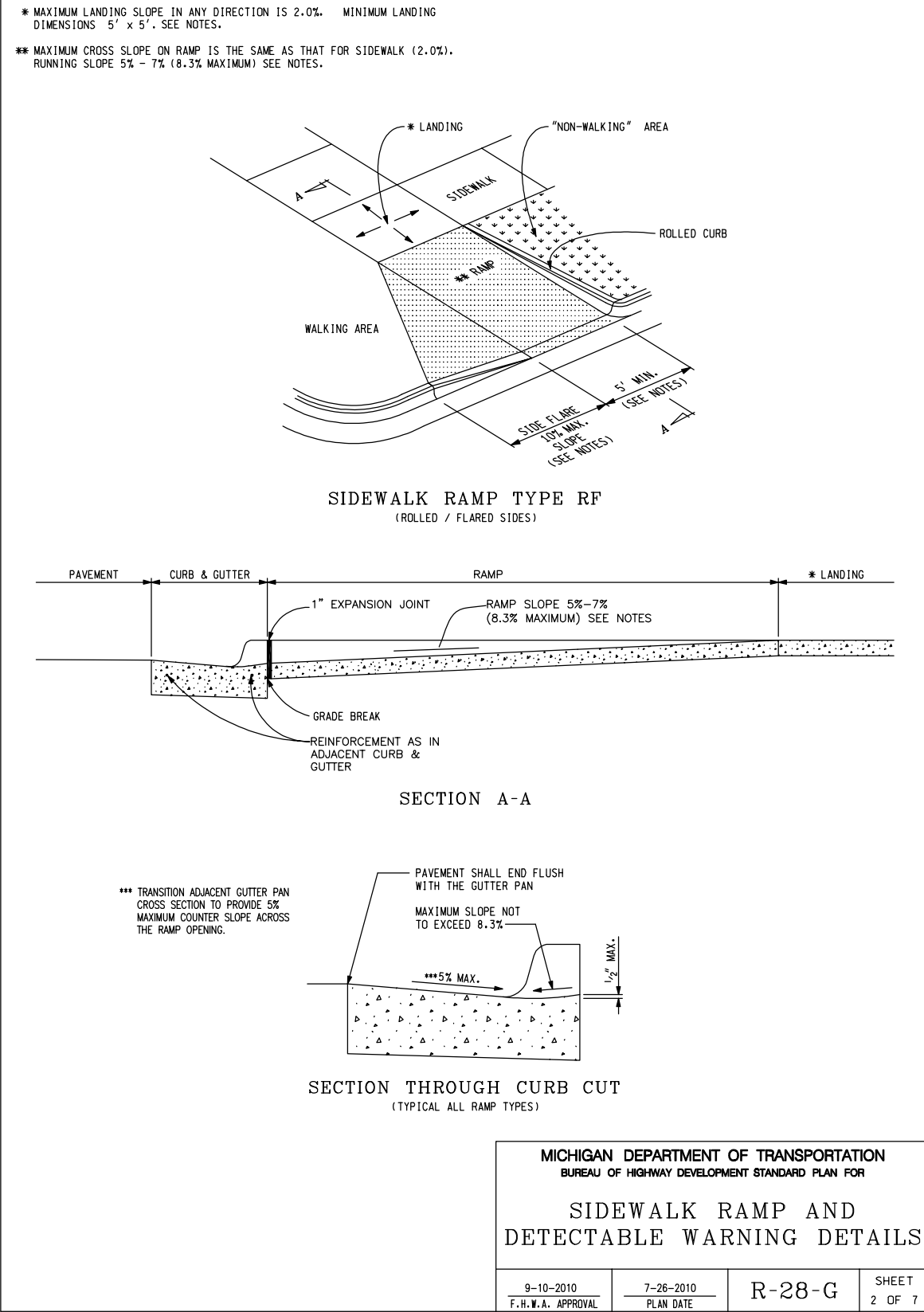
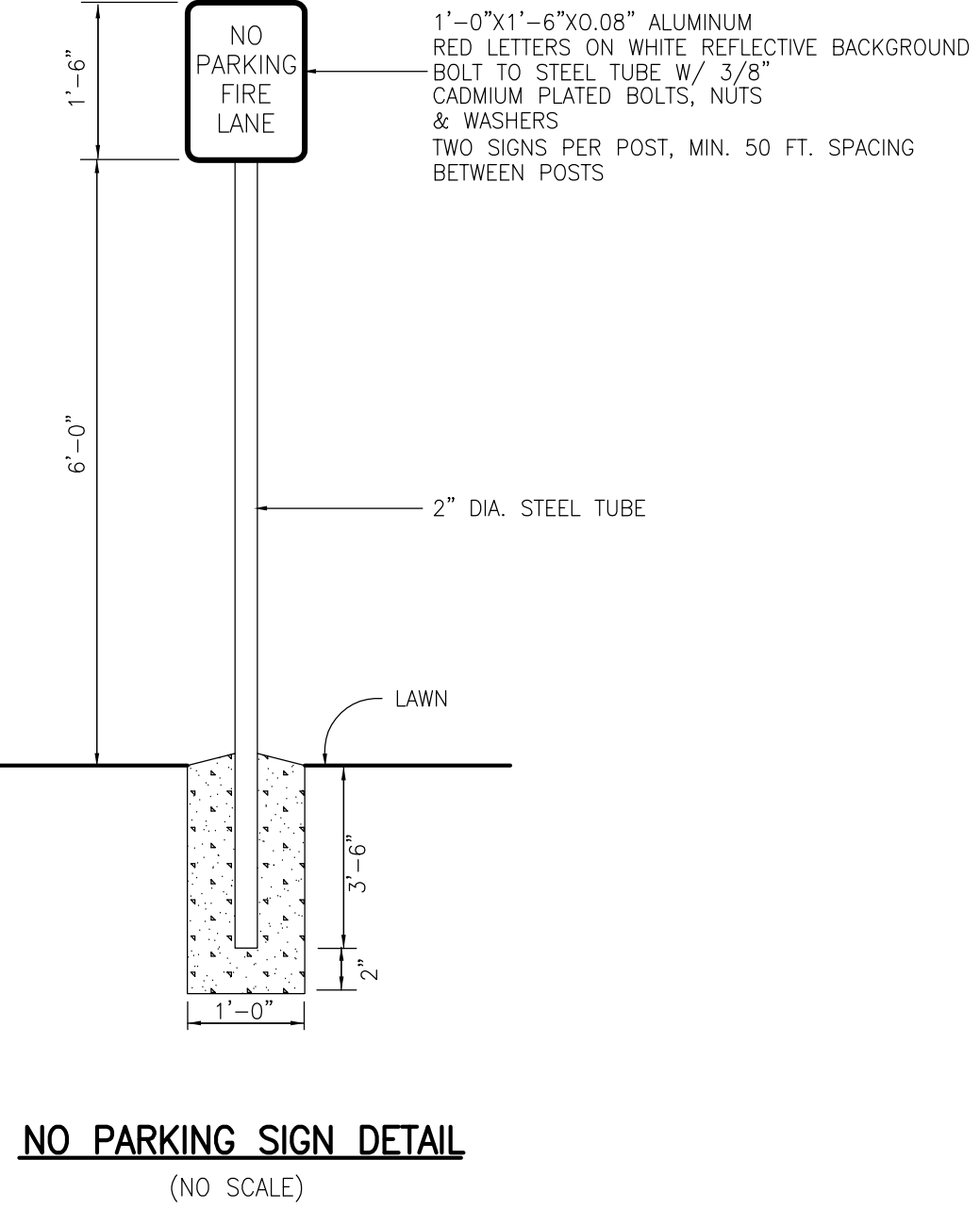
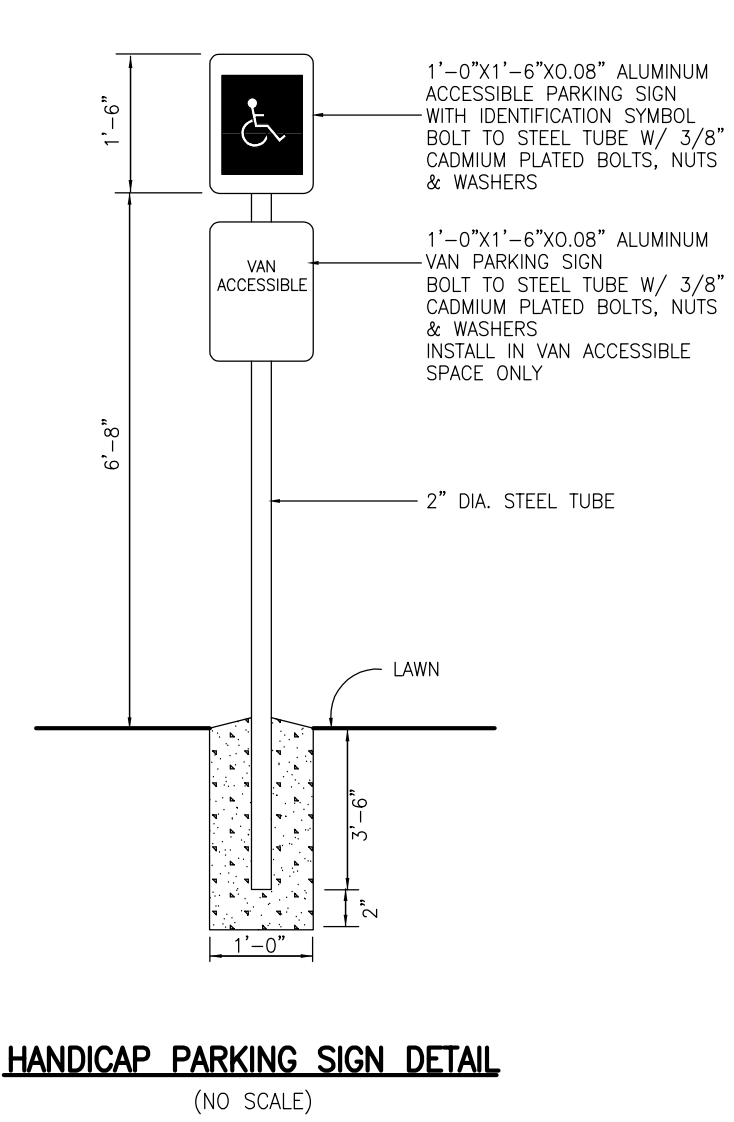
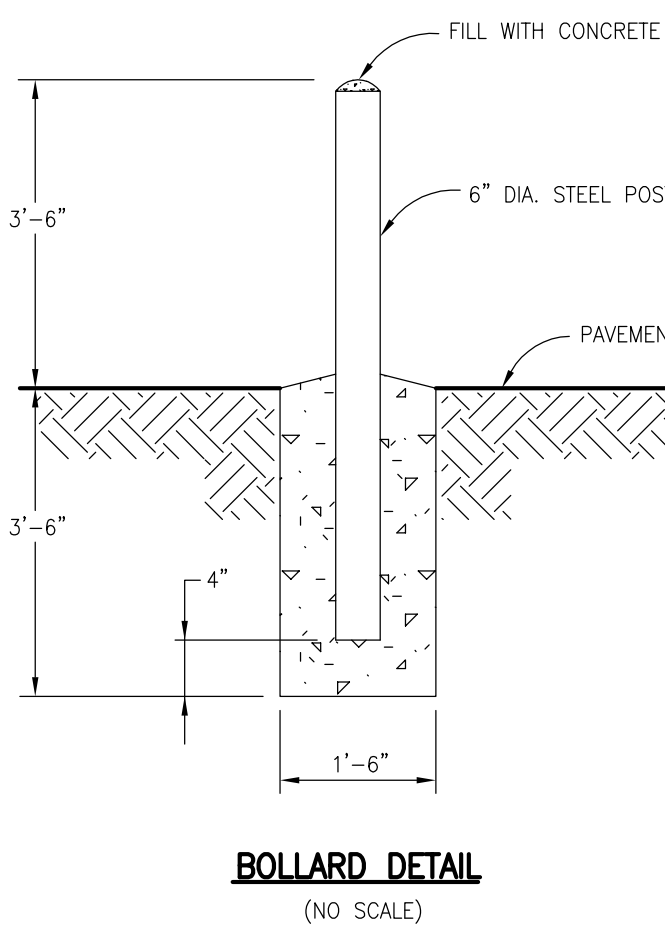
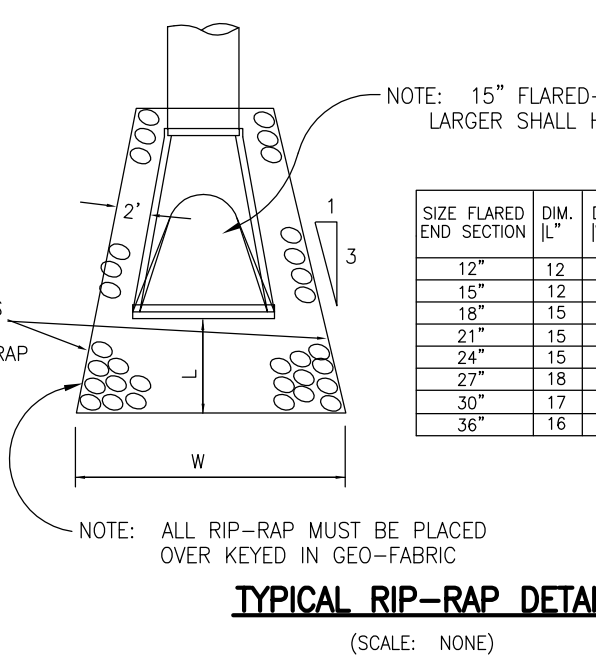
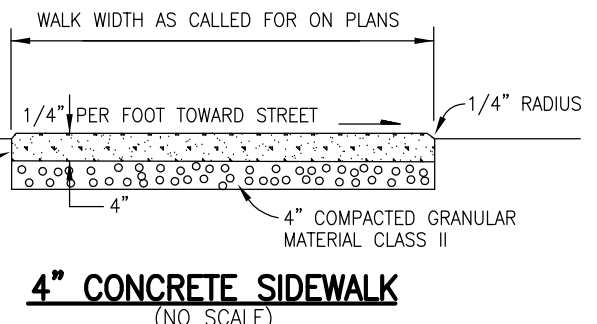
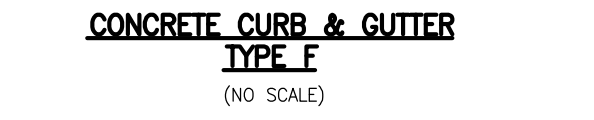
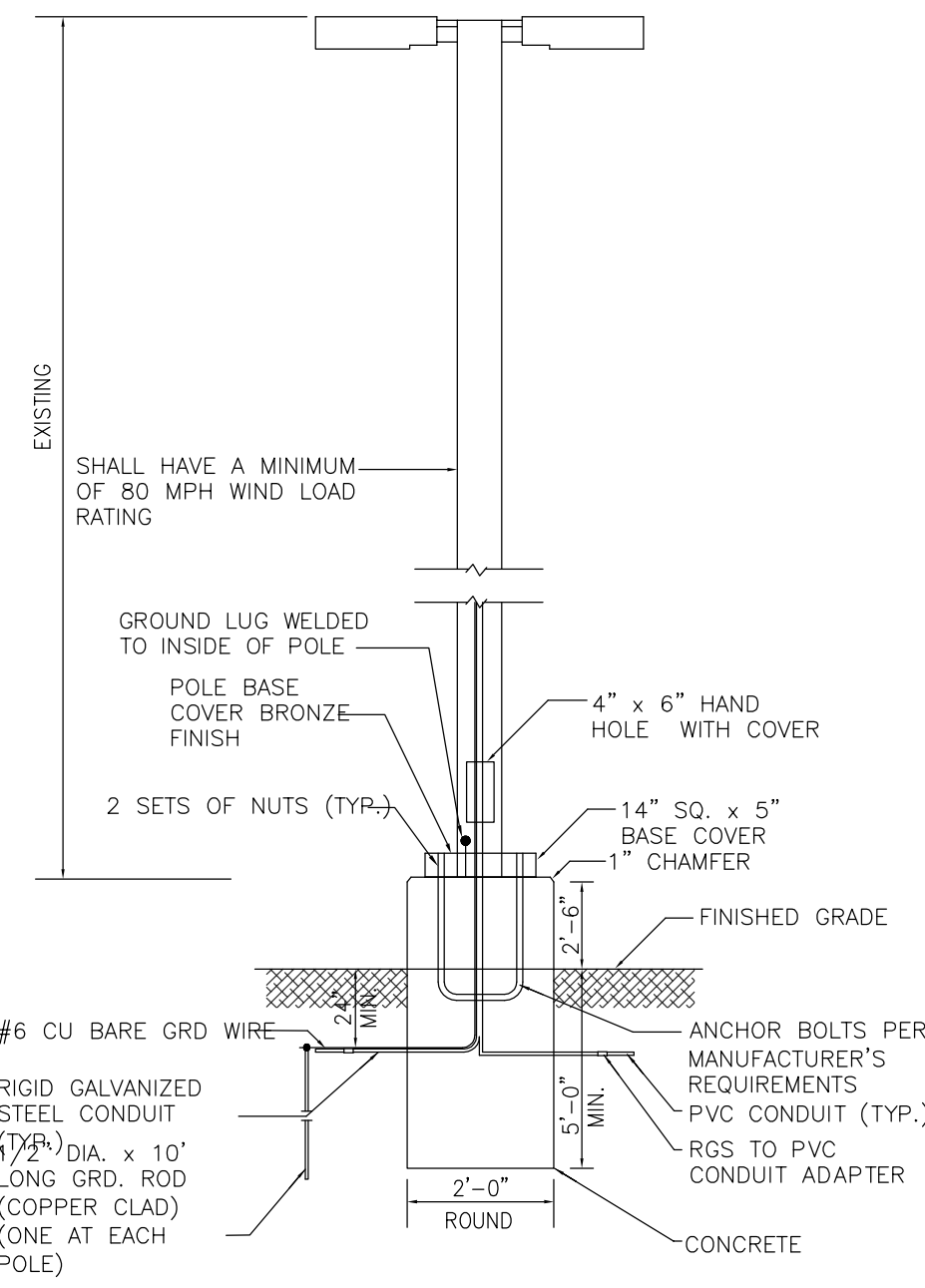
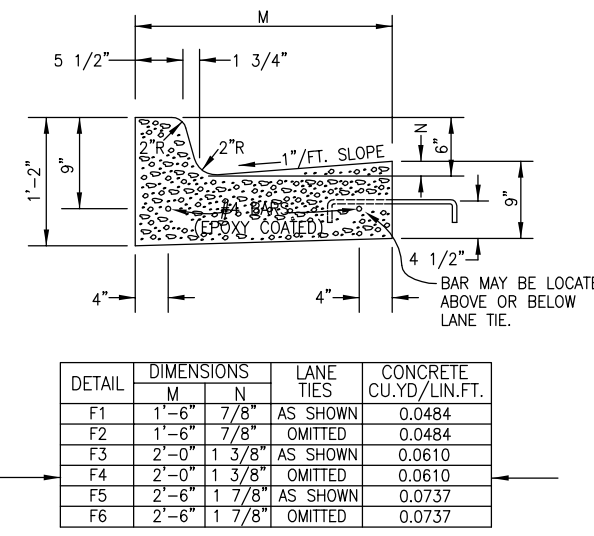
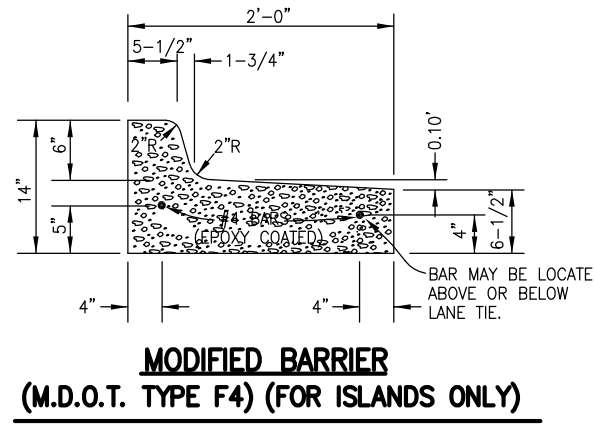
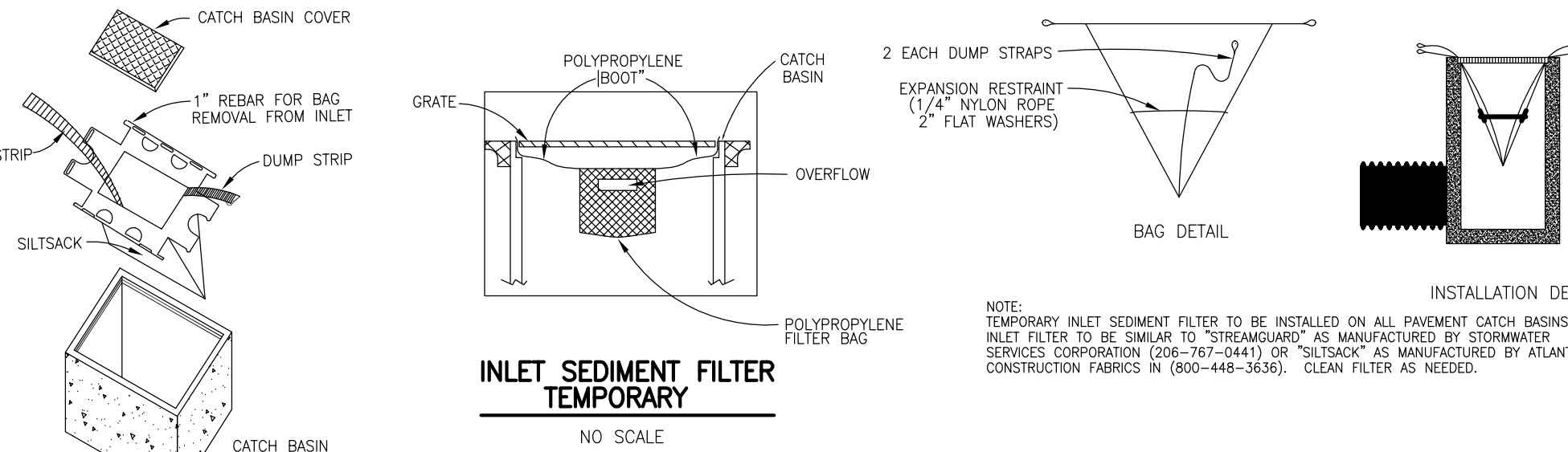
TOP-SOIL	3" IN DEPTH
GRASS SEED	218 LBS. PER ACRE
FERTILIZER	150 LBS. PER ACRE
STRAW MULCH	3" IN DEPTH 1.5 TO 2 TONS PER ACRE (ALL MULCHING MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC.)
- HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%, IN SUCH CASES STABILIZATION SHALL BE DONE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

SANITARY SEWERS

- SANITARY SEWER TAP TO THE _____ SANITARY COUNTY DRAIN, SHALL ONLY BE MADE AFTER SECURING IN WRITING CLEARANCE FROM THE _____ TOWNSHIP AND A SEWER TAP PERMIT FROM THE LIVINGSTON COUNTY DEPARTMENT OF BUILDING & SAFETY.
- A TAP PERMIT WILL BE NEEDED BY THE OWNER/DEVELOPER OF THIS PROJECT TO TAP TO THE LEGALLY ESTABLISHED COUNTY STORM DRAIN. THE OWNER/DEVELOPER SHALL MAKE A WRITTEN REQUEST TO THE DRAIN COMMISSIONER TO REQUEST THE TAP TO THE STORM SEWER. THE FEES FOR SUCH TAP ARE AS FOLLOWS:
 A. NON REFUNDABLE ADMINISTRATIVE FEE OF \$50.00, TO BE PAID AT THE TIME OF APPLICATION.
 B. INSPECTION FEES ARE BASED ON TIME AND MATERIAL BASIS FROM PORT TO PORT FOR THE ON-SITE INSPECTOR. INSPECTORS RATE, VEHICLE MILEAGE, AND 0.5 HOURS OF REPORT PREPARATION TIME WILL BE CHARGED, AS WELL AS ANY NECESSARY MATERIALS. TIME AND MATERIAL FEES ARE PAID AT THE COMPLETION OF THE TAP INSTALLATION.

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).



MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
8-10-2010 F.R.E.K. APPROX. 3-26-2010 P.L.M. SIZE R-28-G SHEET 2 OF 7

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
8-10-2010 F.R.E.K. APPROX. 3-26-2010 P.L.M. SIZE R-28-G SHEET 3 OF 7

CONSTRUCTION SEQUENCE

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

- | | |
|--------|---|
| 1 DAY | 1. INSTALL SILT FENCE AS SHOWN ON PLANS. |
| 1 DAY | 2. ROUGH GRADE AND INSTALL STORM DRAINAGE. |
| 80 DAY | 3. INSTALL INLET PROTECTION ON STORM INLETS. |
| 4 DAYS | 4. START BLOCK CONSTRUCTION. |
| 4 DAYS | 5. INSTALL PAVEMENT. |
| 4 DAYS | 6. FINE GRADE AROUND BUILDING, SPREAD TOPSOIL, SEED OR SOD AS APPLICABLE. |
| 1 DAY | 7. REMOVE ALL EROSION CONTROL STRUCTURES. |
| 1 DAY | 8. 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
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



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ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
(E-Mail: boss@bosseng.com)
1121 E. GRAND RIVER AVE.
BRIGHTON, MI 48843
(800) 246-6735 FAX (517) 548-1670

KRUG QUICK LANE
RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

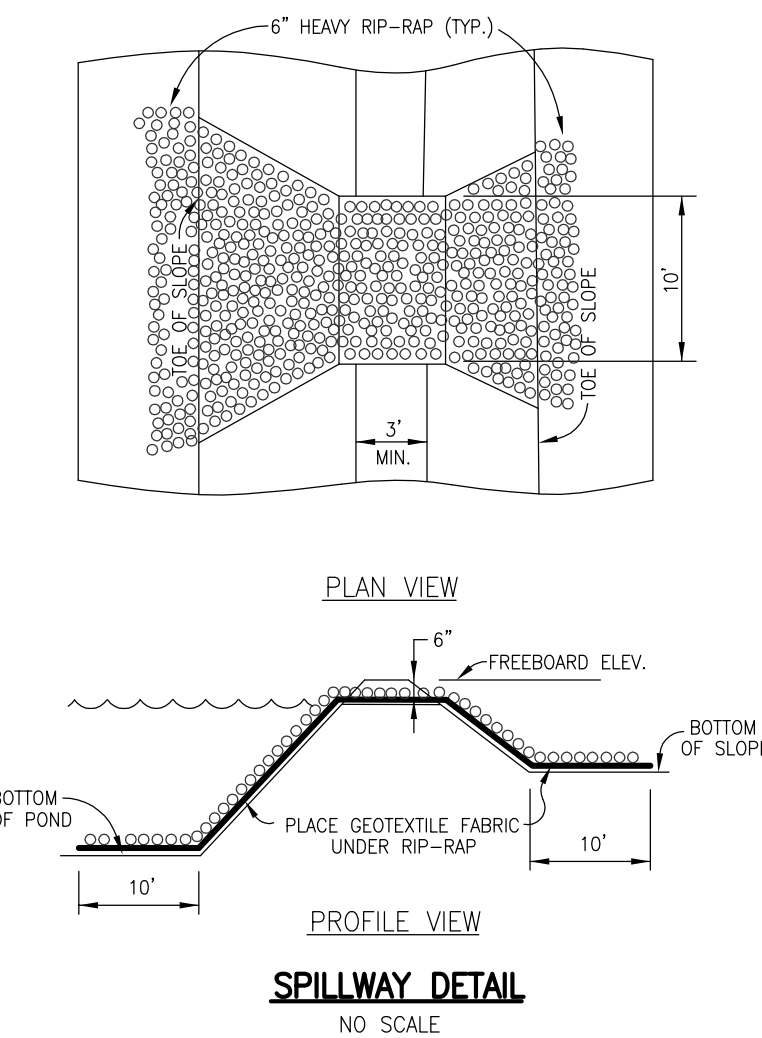
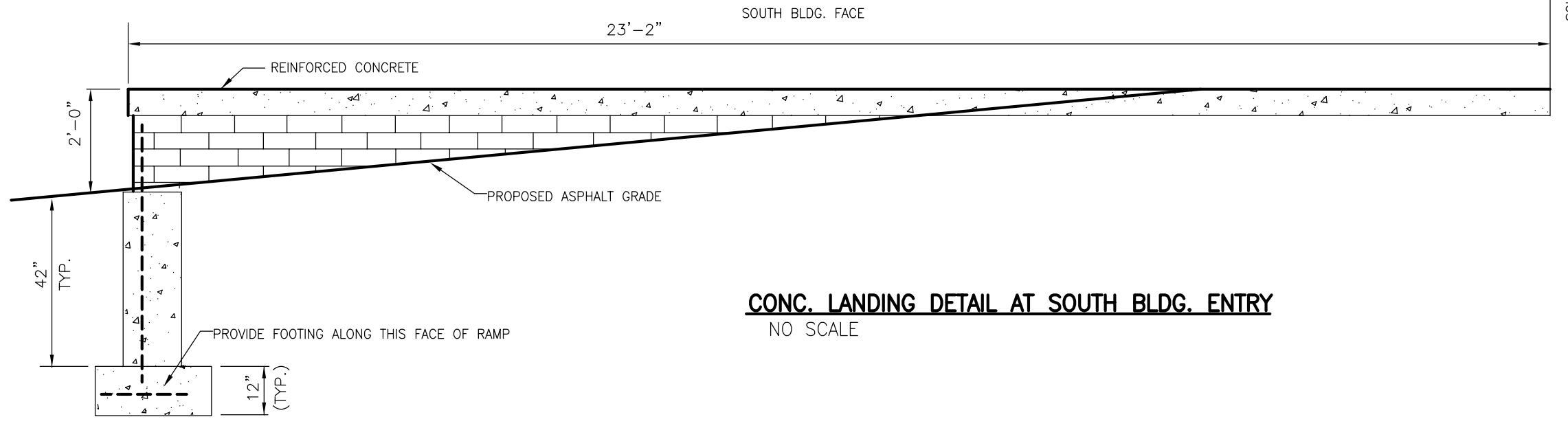
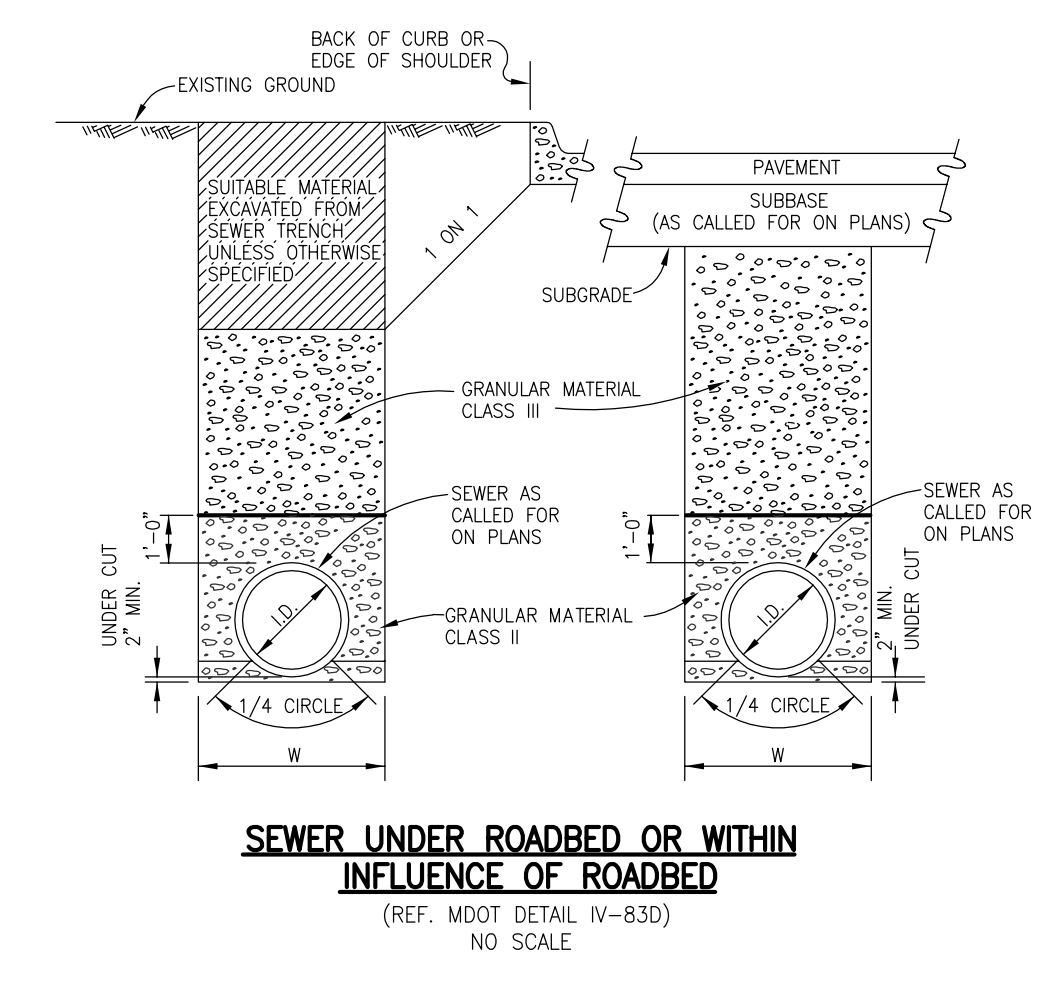
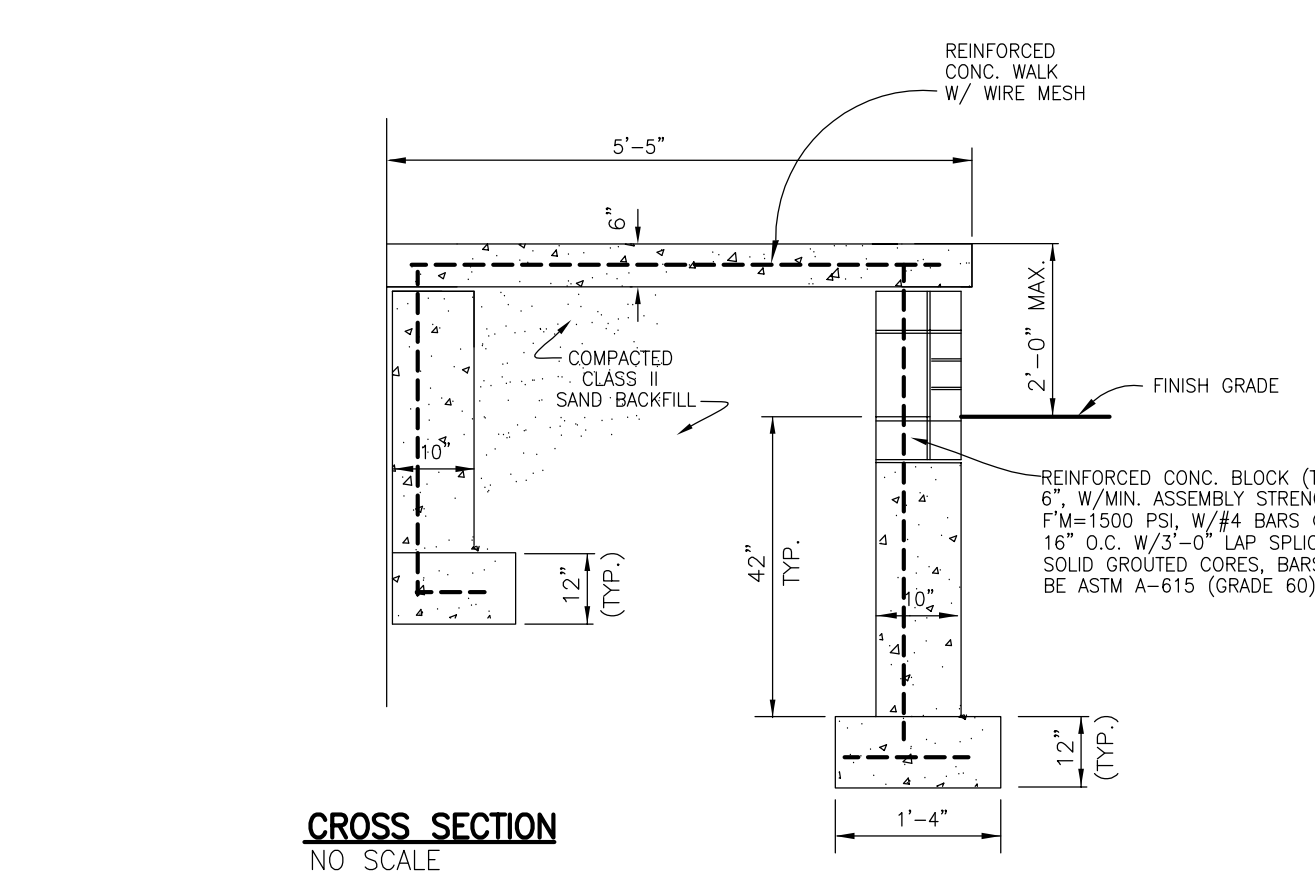
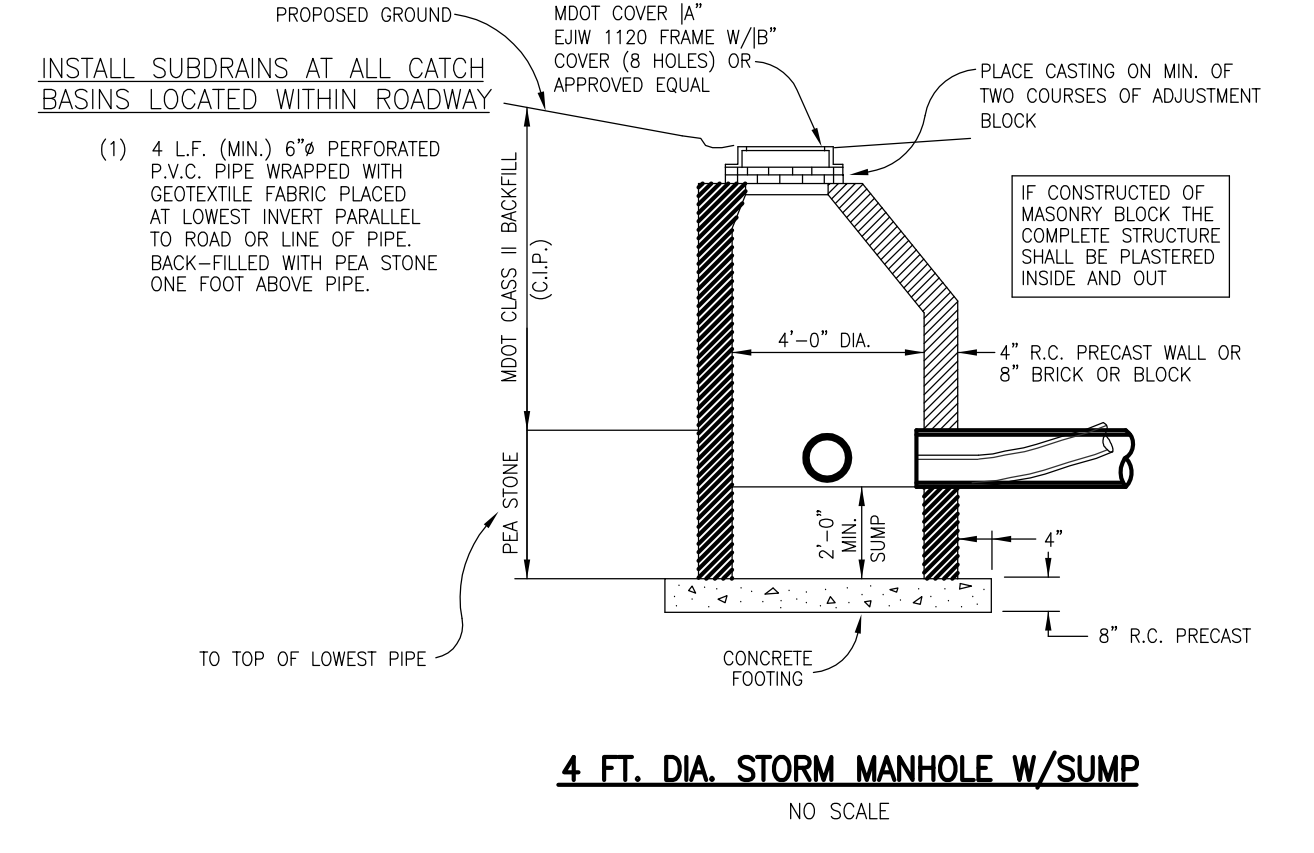
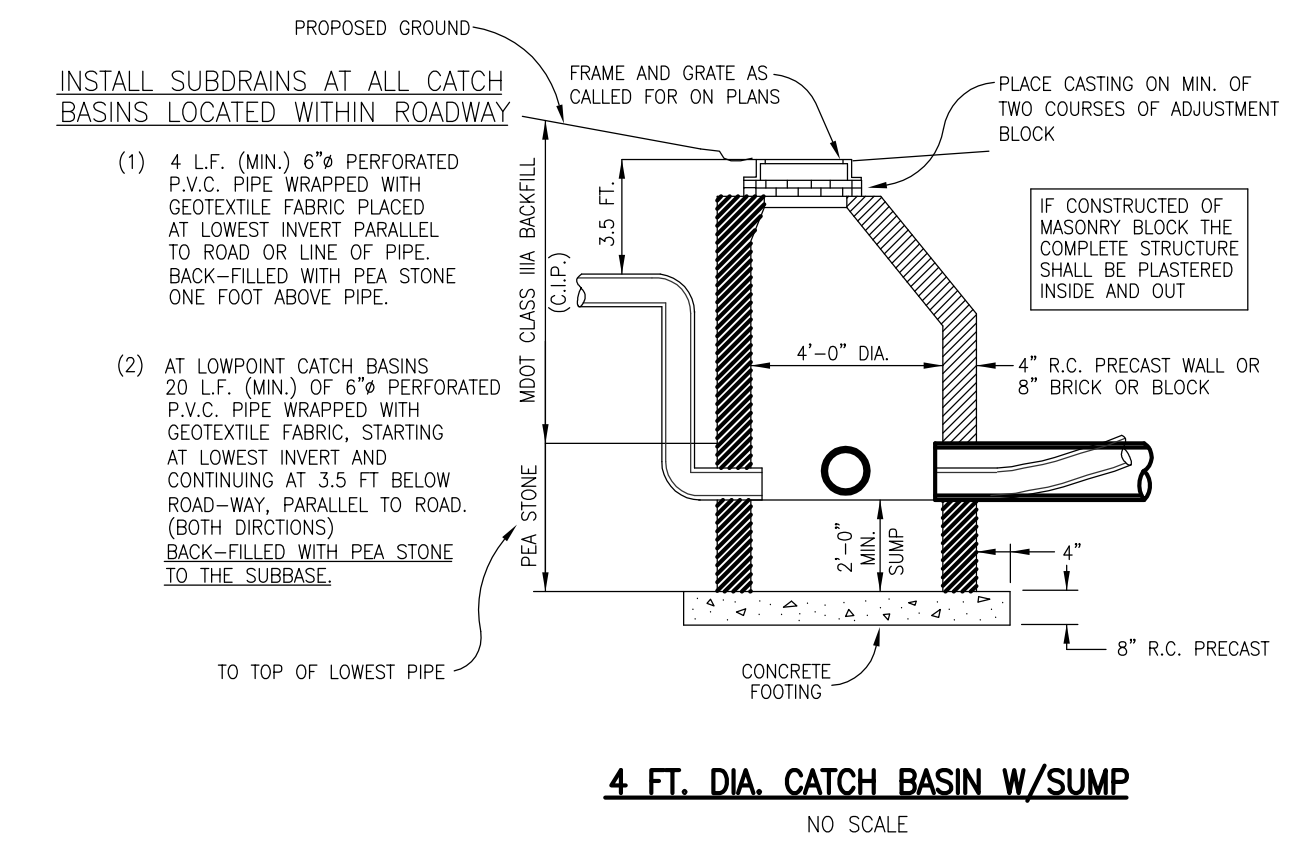
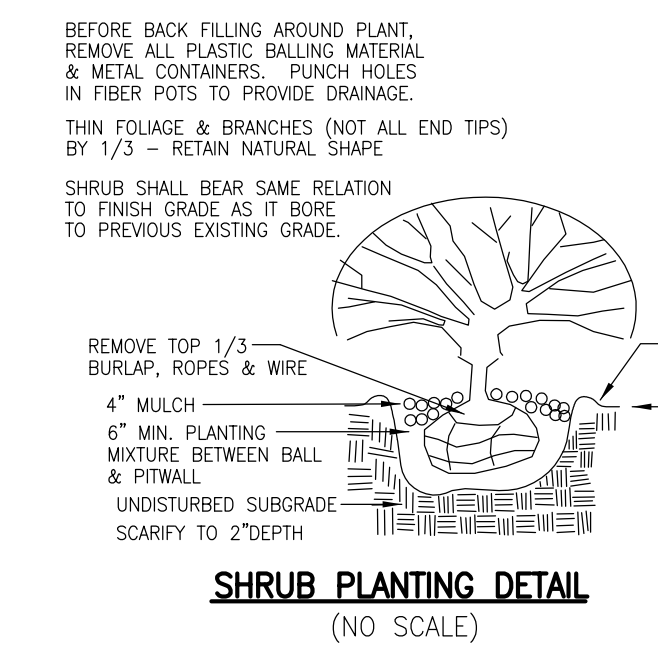
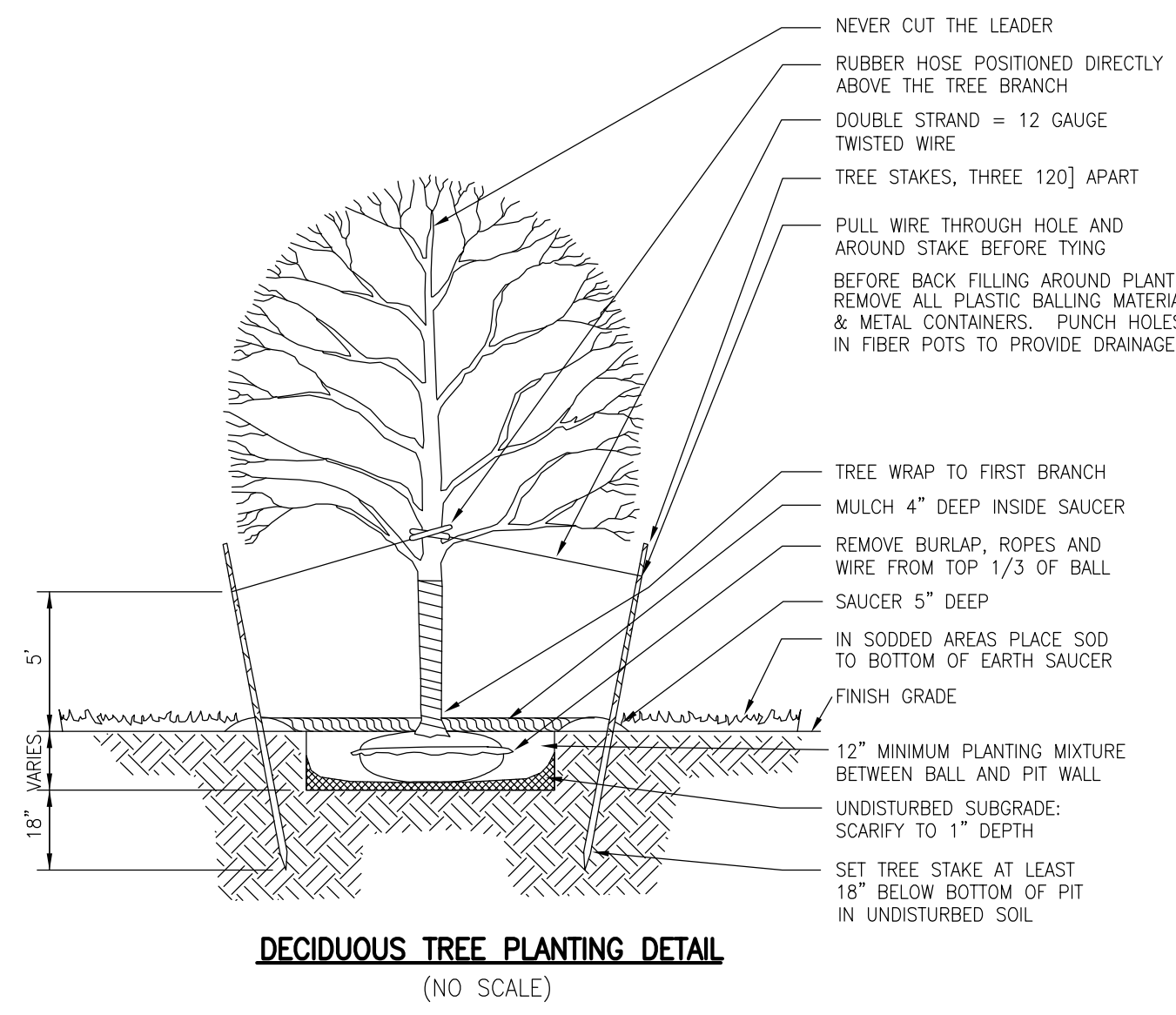
PROJECT: _____
PREPARED FOR: _____
TITLE: _____

NO	BY	REVISION PER	DATE
1	TD		4-4-12
2	TD		2-21-12
3	TD		1-12-12

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY: _____
SCALE 1" = 20'
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 8

GENERAL LANDSCAPE NOTES:

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



FOREBAY DESIGN CALCULATIONS

AREA (ACRES)	IMPERVIOUS FACTOR	ACRE IMPERVIOUS	
0.92	0.9	0.83	
0.00	0.7	0.00	
0.05	0.2	0.01	
COMPOUND C:		0.86	
TOTAL DRAINAGE AREA:		0.97 ACRES	
K1 = Ax C (Design Constant)		0.8342	
Qa = MAX ALLOW OUTFLOW (0.10 CFS / ACRE)		0.097 CFS	
FOREBAY VOLUME			
V(F) = 5% OF THE 100-YEAR STORM VOLUME BASED ON THE AREA TRIBUTARY TO THE INLET			
V(F) = (.05)(V100)		552 CF	
FOREBAY STORAGE VOLUME REQUIRED:		552 CF	
FOREBAY STORAGE VOLUME PROVIDED:			
ELEV	AREA	VOLUME	CUMMULATIVE
968	0	0	593
967	0	0	593
966	614	498	593
965	381	95	95
964.5	0		
STORAGE VOLUME			

STORM SEWER DESIGN CALCULATIONS

FROM	TO	DRAIN AREA	ACRES	AREA IMPERV	AREA PERV	RUNOFF COEFF C	EQUIV. AREA A * C	INTEN-SITY I	TIME OF CONC. Tc	ADDL. RUNOFF Q	RUNOFF (CFS) Q	PIPE LENGTH (LF)	PIPE DIA. (IN)	VELOCITY FLOWING FULL (FPS)	HYDRAULIC GRADIENT SLOPE %	ACTUAL SLOPE USED	MANNING FLOW CAPACITY	MANNING'S VELOCITY (FT/SEC)	TIME (MIN)	HG ELEV UPPER END	HG ELEV LOWER END	RIM ELEV UPPER END	INVERT UPPER END	INVERT LOWER END
CB-2	MH-1	2	0.4	0.05	0.35	0.29	0.115	4.38	15.00	0.00	0.50	121	12	0.64	0.02%	0.32%	2.02	2.57	0.78	965.82	965.44	969.00	965.02	964.64
CB-1	MH-2	1	0.15	0.15	0	0.90	0.135	4.38	15.00	0.00	1.09	26	12	1.39	0.09%	0.32%	2.02	2.57	0.17	966.13	966.05	973.00	965.33	965.25
MH-2	MH-1	3	0.11	0.11	0	0.90	0.099	4.36	15.17	0.00	0.43	161	12	0.55	0.01%	0.32%	2.02	2.57	1.04	965.95	965.44	974.25	965.15	964.64
MH-1	ES-1		0.01	0.01	0	0.90	0.009	4.25	16.21	0.00	0.04	11	12	0.05	0.00%	0.32%	2.02	2.57	0.07	965.34	965.30	970.50	964.54	964.50

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES.

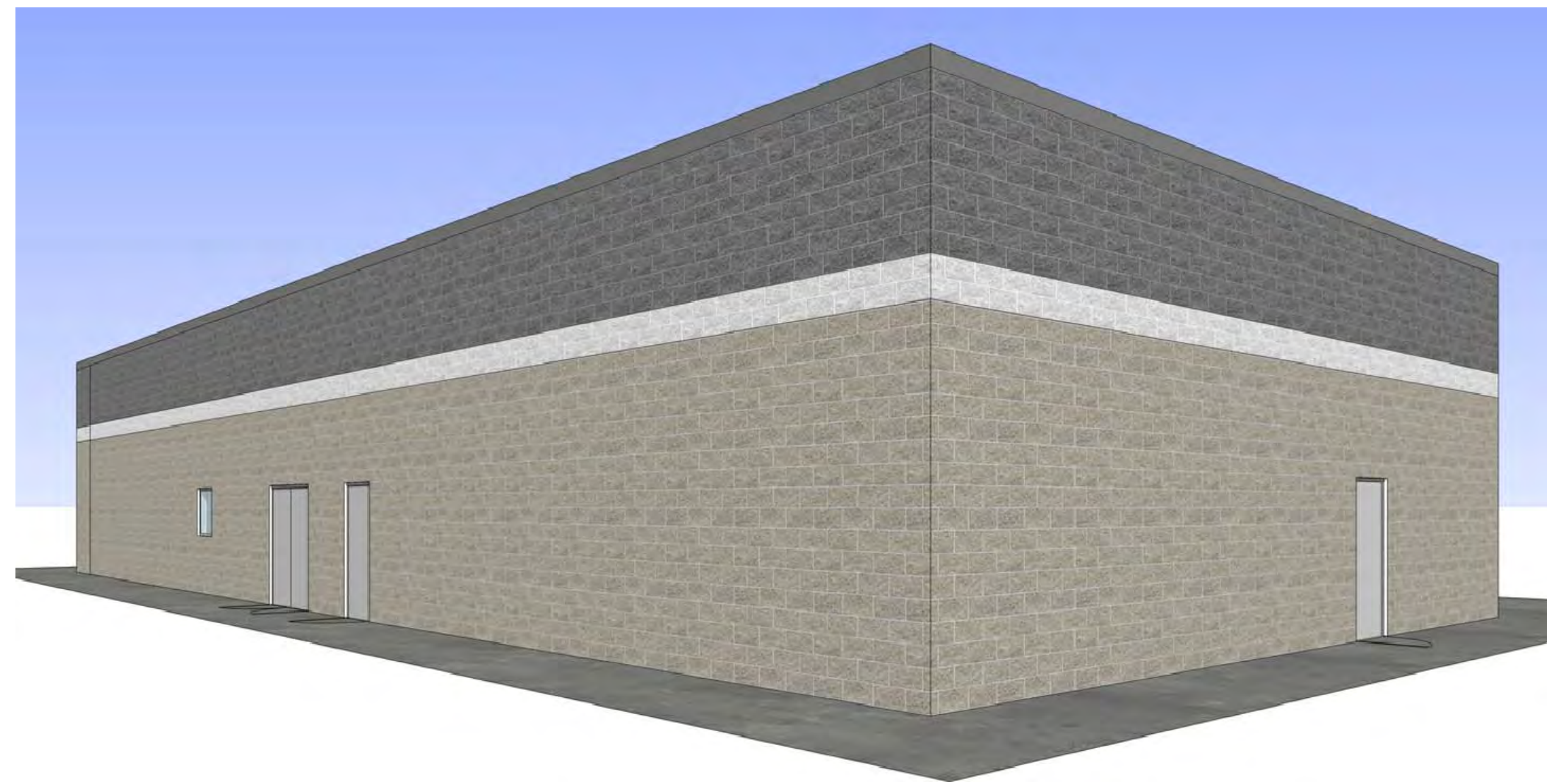
BOSS ENGINEERING
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
(E-MAIL: bossengr@aol.com)
3121 E. GRAND RIVER AVE.
BRIGHTON, MI 48843
(800) 246-6735 FAX (517) 548-1670

PROJECT: **KRUG QUICK LANE**
PREPARED FOR: **RAND CONSTRUCTION**
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

TITLE: **CONSTRUCTION NOTES & DETAILS**

NO	BY	DATE	REVISION PER
1	TD	4-4-12	
2	TD	2-21-12	
3	TD	1-12-12	

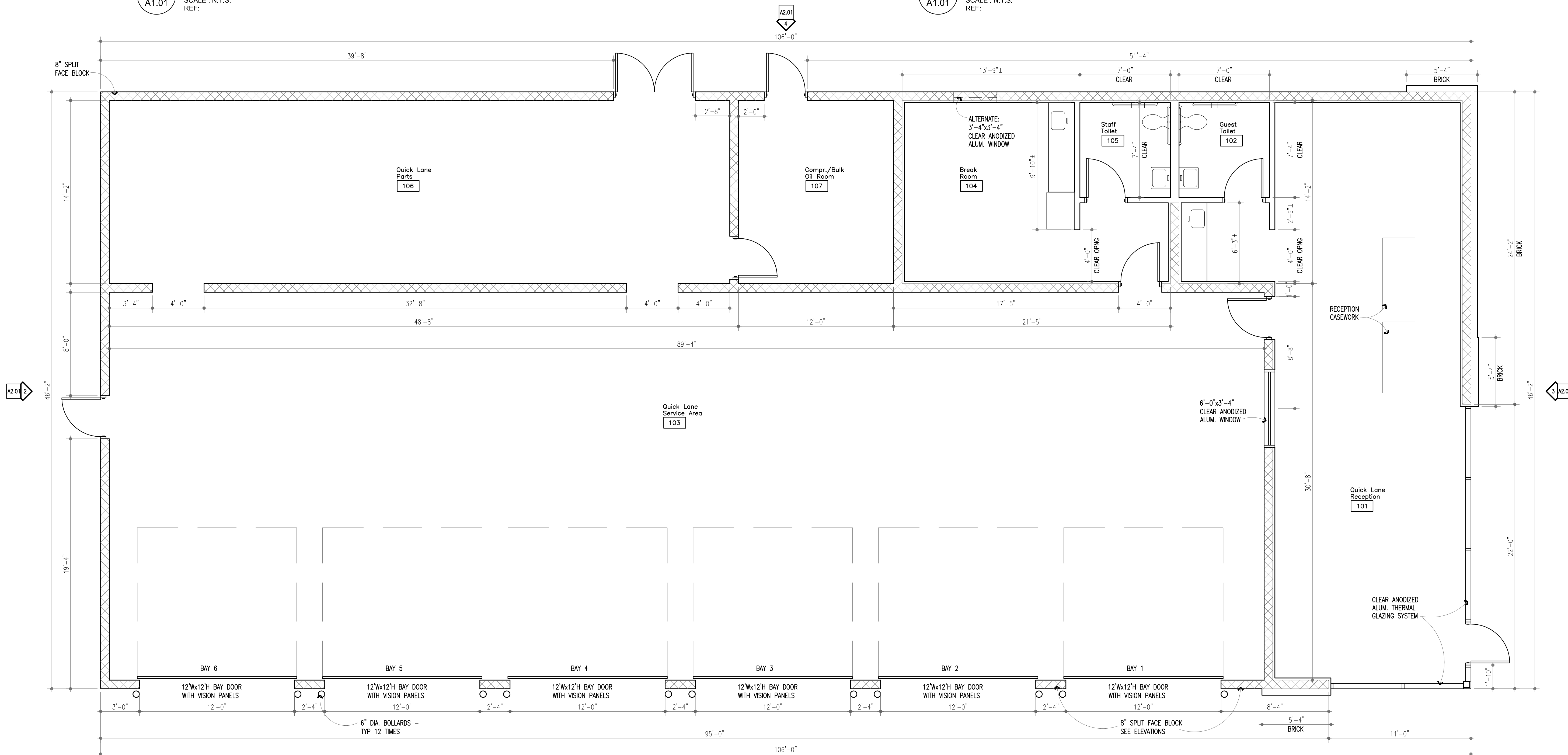
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CHECKED BY:
SCALE: 1" = 20'
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 9



3 South - West Perspective
 A1.01 SCALE: N.T.S.
 REF:



2 North - East Perspective
 A1.01 SCALE: N.T.S.
 REF:



1 Floor Plan
 A1.01 SCALE: 1/4" = 1'-0"
 REF:

AJDESIGN
 ARCHITECTS
 2803 Greenlawn
 Commerce, MI 48382
 248.672.7866 ph
 248.232.0073 fx
 ajdarchitects.com

Construction Manager
Rand Construction
 1270 Rickett Road
 Brighton, Michigan 48116
 PH: 810-227-7011 FX: 810-227-7088

Consultant

Seal

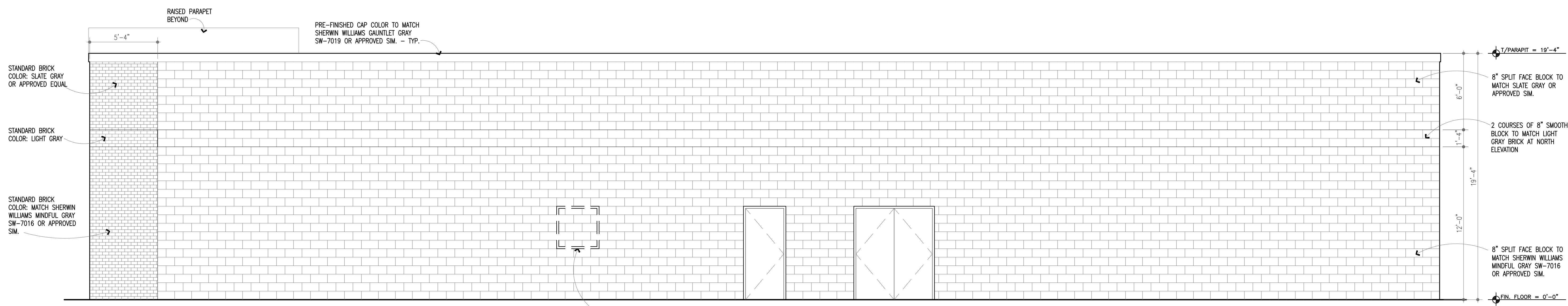
Project
KRUG HILLTOP
FORD / LINCOLN MERCURY
QUICK LANE FACILITY
 2798 East Grand River
 Howell, Michigan 48843

Description	Date
S.P.A. - Revision 2	02.22.12
S.P.A. - Revision 1	01.03.12
Owner Review	12.20.11
Site Plan Approval	11.14.11

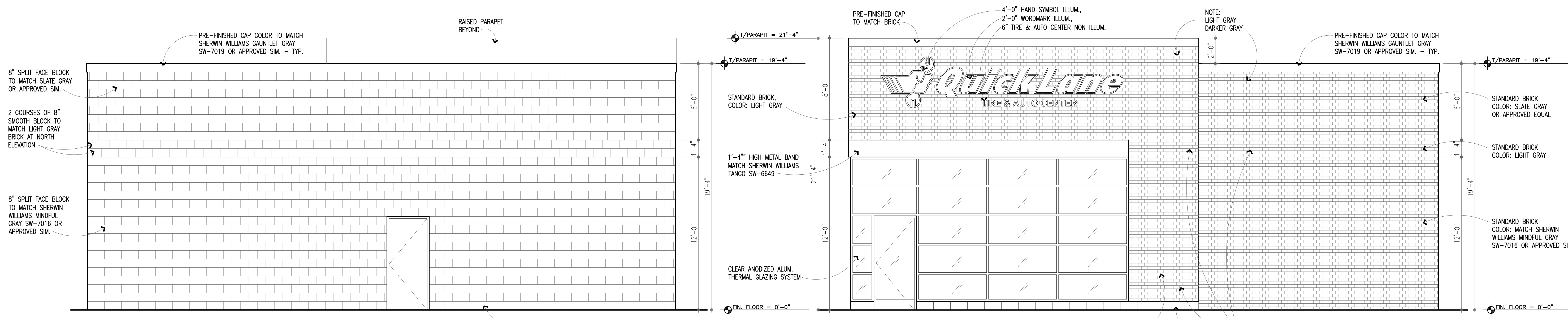
Sheet Title
Floor Plan
 Scale 1/4" = 1'-0" Project Number 2011.024
 Sheet Number
A1.01

Project

S.P.A. - Revision 2	02.22.12
S.P.A. - Revision 1	01.03.12
Site Plan Approval	11.14.11
Description	Date

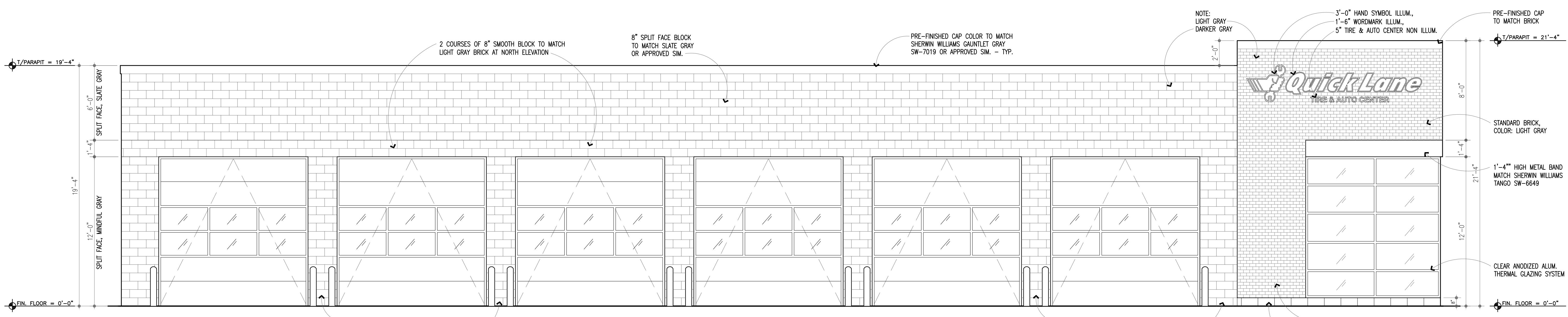


4 West Elevation
A2.01 SCALE: 1/4" = 1'-0"
REF:



2 South Elevation
A2.01 SCALE: 1/4" = 1'-0"
REF:

3 North Elevation
A2.01 SCALE: 1/4" = 1'-0"
REF:



1 East Elevation
A2.01 SCALE: 1/4" = 1'-0"
REF:



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

MEMORANDUM

TO: Honorable Board of Trustees
FROM: Kelly VanMarter, Planning Director
DATE: April 13, 2012
RE: Amerigas Propane – Impact Assessment Approval

I have reviewed the revised site plan (dated 4/11/12) and Environmental Impact Assessment (dated 4/11/12) for the proposed 2659.5 sq. ft. addition to the Amerigas Propane facility located at 2400 Dorr Road, Howell. My review of the revised submittal was focused on compliance with the outstanding items discussed at the March 9, 2012 Planning Commission meeting at which this item was recommended for approval.

Prior to my recommendation I would like the Board to know that this applicant has been extremely cooperative and showed a genuine desire to make upgrades to their property to comply with Township Ordinances. Over the course of two consultant reviews and at the request of the Planning Commission they have satisfied every item required or suggested in conjunction with the proposed addition. In consideration of the aforementioned, I am happy to recommend **APPROVAL** of the Impact Assessment (dated 4-11-12).

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

SUPERVISOR

Gary T. McCririe

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

MANAGER

Michael C. Archinal

TRUSTEES

H. James Mortensen
Jean W. Ledford
Todd W. Smith
Steven Wildman

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
APRIL 9, 2012
6:30 P.M.**

AGENDA

CALL TO ORDER: The meeting of the Genoa Charter Township Planning Commission was called to order at 6:30 p.m. Present constituting a quorum were Barbara Figurski, James Mortensen, Lauren Brookins, Chairman Brown and Diana Lowe. Also present were Township Planner Kelly VanMarter and Brian Borden of LSL.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: Upon motion by Barbara Figurski and support by James Mortensen, the agenda was approved as submitted. **Motion carried unanimously.**

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

OPEN PUBLIC HEARING # 1... Review of site plan application, impact assessment and site plan for a proposed 2659.5 sq.ft. addition to the existing Amerigas Propane building located at 2400 Dorr Road, Howell. Sec. 15, petitioned by American Excavating L.L.C.

Jim Barnwell of Desine Engineering, Bill Prevost of American Excavating, and Karl Ballmer, architect addressed the Planning Commission.

The petitioner is seeking an expansion of the existing building. The applicant is hoping to improve the building's security and appearance. There will be on change to the operations.

Chairman Brown indicated there had been a change to the petitioner's submittal last week. The original comments by Township Staff are not available for this meeting. Kelly VanMarter indicated that the plans that have been provided to the Planning Commission are current. The reviews by the consultants are based on the prior submittal. Kelly VanMarter indicated the engineers' concerns have all been addressed.

Brian Borden addressed his letter dated March 30, 2012. The existing building is vinyl sided. This does not comply with the standards as they currently exist. The Planning Commission can authorize going outside of the ordinance standards.

Brian Borden indicated the ordinance does not permit waste receptacles in a side yard unless permitted otherwise. The petitioner would like to continue storing waste in the current location. There is a landscaped berm to provide screening for this area.

Brian Borden indicated the ordinance requires that the petitioner have one loading space. There is one located on the south side of the building. He asks if it will be accessible if needed. The petitioner indicated that it will. The garage door on the west side is for vehicle repair, maintenance and cleaning. Brian Borden indicated this is acceptable.

Brian Borden addressed item four in his letter. The petitioner is proposing both drives from Dorr Road at 20 feet, rather than the 24 required by ordinance. Brian Borden suggests that each drive be designated one-way. The petitioner indicated that the drives are currently 20 feet and they have not been configured for 24 feet wide. The petitioner has no objection to each drive being designated one-way. The petitioner has expanded from 18 to 20 feet to accommodate fire department requirements. The applicant will adjust the drives to be 24' wide each.

Brian Borden addressed paragraph J of the impact assessment. The rear yard storage area should be paved pursuant to ordinance. However the propane pigs will sink into the pavement, so it cannot be paved.

The covered area at the northwest corner of the building will house a picnic table, but is basically to continue the roof line.

The Fire Department letter of April 4, 2012 was addressed.

The petitioner indicated that in the future, he would be willing to consider changing one drive to access the property by Brighton Pines Court.

Planning Commission disposition of petition

A. Recommendation of Impact Assessment dated 4-4-12.

B. Disposition of Site Plan dated 4-4-12.

Motion by Barbara Figurski to recommend to the Township Board approval of the impact assessment dated April 4, 2012, subject to the petitioner revising items C and J as discussed.

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

Motion by James Mortensen to approve the site plan dated April 4, 2012, subject to:

1. The materials for the expansion matching the existing building are acceptable;
2. The Planning Commission agrees that the waste receptacle may exist in the side yard because of the importance to the petitioner of not mixing waste haulage with access to the propane tanks;
3. The paved in and out driveways, access to Dorr Road will be widened to 24' each;
4. Any engineering/fire department requirements occurring during the construction plan review will be complied with.

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

Administrative Business:

- *Staff report. Kelly VanMarter updated the Planning Commission regarding various petitions.*
- *Approval of March 12, 2012 Planning Commission meeting minutes. Upon motion by Barbara Figurski and support by Diana Lowe, the minutes of March 12, 2012 were approved. **Motion carried unanimously.***
- *Member Discussion*

Adjournment. Upon motion of Barbara Figurski and support by Diana Lowe, the meeting was adjourned at 7:18 a.m. **Motion carried unanimously.**

MAR 07 2012

GENOA TOWNSHIP
APPLICATION FOR SITE PLAN REVIEW RECEIVED

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD: 12838 Gavel
APPLICANT NAME & ADDRESS*: American Excavating LLC Detroit MI 48227
OWNER'S NAME & ADDRESS: Americas 6654 Cotter Ave Sterling Heights MI 48314
SITE ADDRESS: 2400 Dorr Rd PARCEL #(s): 4711-15-200-034
APPLICANT PHONE: (313) 491-4200 OWNER PHONE: (586) 254-3513

LOCATION AND BRIEF DESCRIPTION OF SITE:
West side of Dorr Rd North of Herbst / South of Grand River.

BRIEF STATEMENT OF PROPOSED USE:
Existing use is a wholesale propane filling site.

THE FOLLOWING BUILDINGS ARE PROPOSED:
Addition to existing 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: [Signature] William J. Prevest
ADDRESS: 7255 Brophy Rd Howell MI 48855

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

Contact Information - Review Letters and Correspondence shall be forwarded to the following:
1.) Jim Barnwell of Desine Inc at (810) 227-9460
Name Business Affiliation Fax No.

FEE EXCEEDANCE AGREEMENT
As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.
SIGNATURE: [Signature] DATE: 3/7/12
PRINT NAME: William Prevest PHONE: 313-491-4200
ADDRESS: 7255 Brophy Rd Howell MI 48855



LSL Planning, Inc.

Community Planning Consultants

March 30, 2012

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Planning Director
Subject:	Amerigas Propane – Site Plan Review #2
Location:	2400 Dorr Road – southwest corner of Dorr Road and Brighton Pines Court
Zoning:	IND Industrial District

Dear Commissioners:

Per your request, we have reviewed the revised site plan (dated 3/23/12) proposing building additions and exterior site improvements for the Amerigas Propane site. The property is located on the west side of Dorr Road and is zoned IND Industrial District.

The proposed project has been reviewed in accordance with the Genoa Township Zoning Ordinance.

A. Summary

1. The Planning Commission has approval authority over building elevations and may allow materials and design to match the existing building.
2. We request the applicant clarify access to the proposed loading space.
3. The Planning Commission may authorize the waste receptacle placement in a required side yard.
4. We request the applicant clarify the intended vehicular circulation pattern.
5. We request the applicant clarify the statement in the Impact Assessment regarding a waiver from the paving requirement.

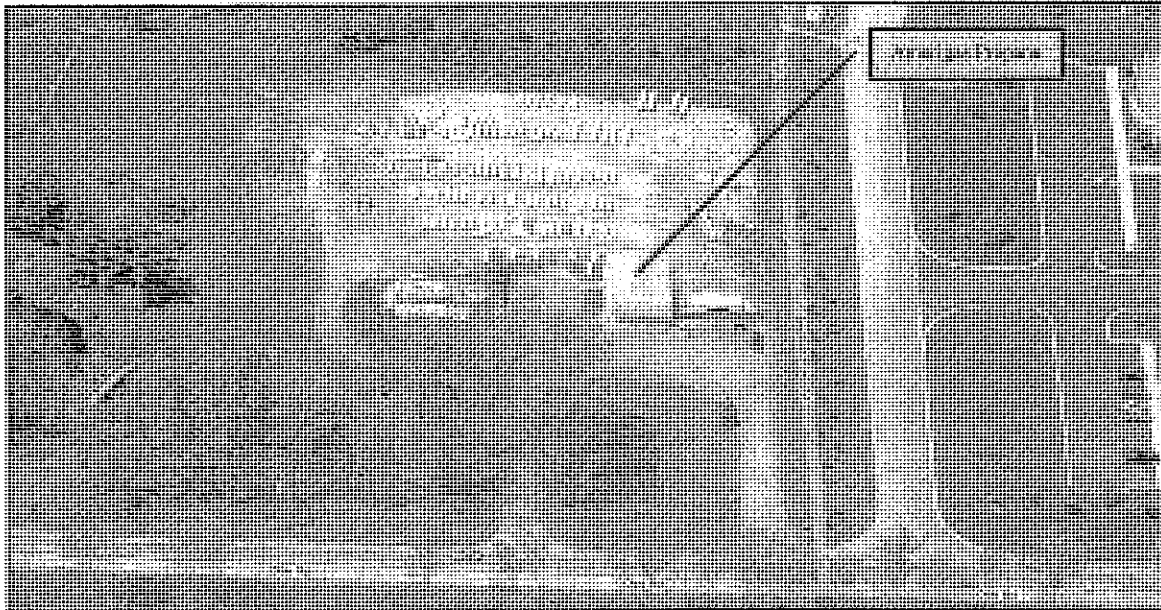
B. Proposal/Process

The applicant requests site plan approval for expansion of the existing 1,213 square foot building used by Amerigas Propane as part of their propane filling, wholesale and tank storage operation. The project includes additions to the north (604 square feet) and west (520 square feet) sides of the building.

Proposed site improvements include new landscaping, fencing, and a waste receptacle and enclosure, as well as resurfacing of the parking and outdoor storage areas.

The established use of the property includes a combination of permitted and special land uses. In this instance, the expansion is associated only with the building component, which contains the portion of the business that is permitted by right – office space and limited indoor storage.

As such, the only review and approval needed relates to the site plan, with no impact upon established special land uses.



Aerial view of site and surroundings (looking west)

C. Site Plan Review

1. Dimensional Requirements. As shown in the table below, the proposed project complies with the dimensional standards of the IND Industrial District:

District	Lot Size		Minimum Setbacks (feet)				Max. Height (feet)	Lot Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking		
IND	1	150	85	25	40	20 front 10 side/rear	30	40% building 85% impervious
Proposed	2.25	245	160.5	31.3 (N) 165 (S)	178.5	70 front 25 side (N)	15	2.6% building 57.5% impervious

2. Building Materials and Design. The proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission. The elevation drawings propose the use of vinyl siding and a metal roof, both of which are consistent with the existing building. Although use of 100% vinyl siding is not allowed for new buildings in the Industrial District, Section 12.01.08 allows the Planning Commission to permit building expansions where the design and materials match the existing building.

3. Parking. Given the combination of uses previously noted, we have applied two parking standards from Section 14.04 – one for the general office portion and the other for the light industrial component. Based upon the size of the building and employee information provided by the applicant, the project requires 10 spaces, while 12 are provided. The total includes the required barrier free parking space.

4. Loading. Given the size of the building, Section 14.08.08 requires 1 loading space, which is to be located in a rear or side yard not directly visible to a public street. The revised plan identifies the required space behind the large propane tanks south of the building. We believe access to this area requires entrance through a gate. As such, the applicant must either confirm that the gate will be open during deliveries or relocate the space outside the gated area.

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

Location	Requirements	Proposed	Comments
Front yard greenbelt	7 canopy trees 20-foot width 2-foot tall hedgerow OR 3-foot tall masonry wall	3 new evergreen trees 14 existing trees 70-foot width 14 shrubs	Requirements met
Parking area landscaping	2 canopy trees 120 s.f. of landscaped area	3 existing canopy trees Approx. 250+ s.f. landscaped area	Requirements met

6. **Waste Receptacle and Enclosure.** The project includes a new waste receptacle and enclosure in the side yard along the northerly lot line. The applicant proposes a concrete base pad, as well as a scored block enclosure. Section 12.04 requires a rear yard or non-required side yard location, unless otherwise approved by the Planning Commission. Given its proposed placement along the side lot line, this location requires Commission approval.

7. **Pedestrian Circulation.** Section 12.05 requires sidewalks and pathways along certain road frontages, including an 8-foot wide bike path “along county primary roads where designated on the pathways plan contained in the Township Master Plan.” The Pathways Plan identifies Dorr Road as one such roadway. Accordingly, the revised plan identifies the required 8-foot wide concrete bike path.

8. **Vehicular Circulation.** The plan proposes to relocate the northerly drive such that it is entirely on the applicant’s property and to pave the drives and parking areas east and south of the building. In our opinion these are substantial improvements and we commend the applicant for bringing their site into compliance as part of this project.

Our only additional comment under this standard is that the new drives are slightly narrower than required for two-way travel. More specifically, a 24-foot drive aisle is required for two-way traffic, while the plan shows two 20-foot drives. The site could function with two one-way drives, although it is unclear whether that is proposed. We request the applicant clarify the intended circulation pattern given the proposed driveway widths.

9. **Exterior Lighting.** The site plan identifies an existing light pole south of the building, while no new site lighting is proposed. This is confirmed in the Impact Assessment.

10. **Signs.** The submittal identifies an existing ground sign in the front yard and does not propose any new signage.

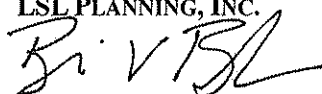
11. **Impact Assessment.** As required, the submittal includes a revised Impact Assessment (dated 3/26/12). In summary, the Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

Our only comment relates to paragraph J, which states the applicant seeks a waiver from the paving requirements. This is likely in reference to the outdoor storage area; however, we request the applicant clarify this statement given the proposal to pave the parking area and drives.

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

Sincerely,

LSL PLANNING, INC.



Brian V. Borden, AICP
 Senior Planner



TETRA TECH

March 14, 2012

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

**Re: Amerigas Propane LP
Site Plan Review**

Dear Ms. Van Marter:

As requested, we have performed a review of the above-referenced site plan as prepared by Desine Inc. dated March 7, 2012. This site is located on the west side of Dorr Road, just north of I-96. The petitioner is proposing to build a 1,125 square foot addition to their existing office building. The petitioner is also proposing several site improvements to enhance the security and function of the business. We offer the following comments for your consideration.

GENERAL

1. The site plan shows the existing northern drive encroaching on the property to the north of the site. The parcel is part of the landscape buffer between this site and Brighton Pines Court. There is no indication on the site plan for an easement for this drive. The petitioner should either obtain the easement or relocate the drive to be solely on their property.
2. The site is served by gravel drives, parking, and storage areas. The petitioner is proposing to enhance the gravel by placing asphalt millings over the existing surface. The majority of this work is already completed on the site. Typically, when a site is being changed, and the change is of sufficient complexity to warrant a site plan review, there is discussion with the petitioner in regards to bringing the site in compliance with current standards. This includes hard surfacing the drives and parking areas. The planner should be consulted as to the applicability of this requirement for this site.

DRAINAGE AND GRADING

1. There is an existing retention/natural basin located on the southeast corner of the property. The proposed building and site improvements are increasing the impervious area by just over 1,000 square feet on the 2.25 acre parcel. This is a minor addition to the impervious area. The site plan indicates a proposed bio swale along the southern property line. This enhancement to the site storm water management system will

Tetra Tech

123 Brighton Lake Road, Suite 203, Brighton, MI 48116
Tel 810.220.2112 Fax 810.220.0094 www.tetrattech.com

Ms. Kelly Van Marter
Genoa Township
Amerigas Propane LP SPR
March 14, 2012
Page 2

increase the quality of the storm water as well as provide a measure of retention that more than offsets the minor increase in impervious area.

UTILITIES

1. The petitioner proposes to connect to the municipal water and sanitary sewer systems through the existing service leads on the northern side of the property. Any applicable connection fees will need to be paid to the Authorities prior to these connections.

TRAFFIC

1. We have reviewed the Impact Assessment Study for the effect on traffic and do not have any issues with the assumptions, analysis, or conclusions presented in the study.


NON-ACTION ITEMS

1. The petitioner must notify the Utilities department prior to connecting to the publicly owned water and sanitary sewer.
2. A permit must be obtained from the Livingston County Building Department for the installation of the sanitary sewer and water leads.

Please consider the above comments in your deliberation on the proposed site plan. The encroachment issue and the applicability of bringing the site to current standards need to be addressed as part of the site plan approval.

If you have any questions regarding our review, please call.

Sincerely,



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

200-12736-12005

Copy: James Barnwell, P.E., Desine Inc.



Brighton Area Fire Department

615 W. Grand River

Brighton, Michigan 48116

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

April 4, 2012

Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Amerigas Propane - addition
2400 Dorr Rd.
Site Plan Review

Dear Amy:

The Brighton Area Fire Department has reviewed the above mentioned revised site plan. The revised plans were received for review on March 28, 2012 and the drawings are dated March 26, 2012 with last revision date of March 23, 2012. The project is based on an 1,125 square foot addition to existing building. The plan review is based on the requirements of the International Fire Code (IFC) 2009 edition.

All items from our March 8, 2012 review letter have been addressed and we have no further comments at this time.

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

Cordially,

A handwritten signature in black ink, appearing to read "J. Corcoran".

Jim Corcoran
Captain / Fire Inspector



April 11, 2012

Township Board for Genoa Township
c/o Kelly Van Marter
2980 Dorr Road
Brighton, Michigan 48116

Re: Amerigas Propane
2400 Dorr Road
Section 15, Genoa Township, Livingston County

Dear Board Members,

Please find enclosed the revised Site Plan and Impact Statement for the referenced site.
The revisions to the site plan are:

- The drives are now 24 feet wide. To accommodate the additional width the culvert under the south drive has been extended, minor grading changes were made and the parking width for the easterly bank of parking was reduced from ten feet to 9.5 feet. The width of the parking was reduced to accommodate the drive while preserving the pine trees to the south.

The revisions to the Impact statement consists of:

- In the 1st paragraph of Section C the last sentence clarifies that **“The west half of the site consists of an aggregate surfaced area for the storage of propane tanks...”**.
- In Section J, first sentence, the requested waiver from the paving requirements is clarified as follows, **“The applicant is seeking a waiver from the paving requirements for the storage area as depicted on the site plan.”**

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

Respectfully submitted;

DESINE INC.

A handwritten signature in black ink that reads "James M. Barnwell". The signature is written in a cursive, flowing style with a large initial "J" and "B".

James M. Barnwell, P.E.
encl.

**IMPACT ASSESSMENT
for
AMERIGAS PROPANE**

Owner:

Amerigas Propane LP
P. O. Box 798
Valley Forge, Pa. 19482-9908

Prepared by:

DESINE INC.
2183 Pless Drive
Brighton, Michigan 48114

March 26, 2012
Rev: April 4, 2012
Rev: April 11, 2012



A. INTRODUCTION

This impact assessment has been prepared pursuant to Article 18 -- SITE PLAN REVIEW of the Zoning Ordinance for the Township of Genoa, Livingston County. This assessment addresses the impact of the proposed development of 2.25 acres on the natural features, economic condition, and social environment of the Township. The subject parcel is currently zoned IND (Industrial) within the Official Township Zoning Map.

The existing facilities include a 1294 sq. ft. one-story building and two propane filling tanks to the south of the building. A small parking area to the east of the building and storage area for residential propane tanks to the west.

The submitted Plan presents the applicant's intended expansion of the existing building and upgrade to the existing site. The existing one-story building will be enlarged with additions to the north and west of the existing structure. The additions total 1326 square feet. The total building area with the addition is 2620 square feet. In addition, the current fencing along the east side of the storage area will be extended such that the entire storage area is enclosed. The surface of the storage area will be improved with asphalt millings. Landscaping will be added to the site. Drainage from the storage area will be directed to a bio swale along the south side of the site.

This impact assessment has been prepared under the direction of and by:

James M. Barnwell, P.E.
DESINE INC.
2183 Pless Drive
Brighton, Michigan 48114
(810) 227-9533

The civil engineering / surveying firm of DESINE INC. has been in practice since 1989. Mr. Barnwell is a licensed Civil Engineer with experience in private and municipal developments including a number of projects within Genoa Township and Livingston County.

B. SITE LOCATION / DESCRIPTION

The site consists of approximately 2.25 acres, which is currently zoned Industrial. The property is located along the West side of Dorr Road, South of Grand River Avenue and North of I-96. The subject parcel currently has a 1,294 sq. ft. building with associated parking as presented on the Site Plan.

C. IMPACT ON NATURAL FEATURES

The existing topography of the site is generally flat, with a slight grade from north to

south. A small pond exists near the southeast corner of the site. This pond extends into the property to the south and serves for stormwater management for the site(s). The site exhibits elevation differences from 974 +/- at the pond in the southeast corner and 982 +/- at the North property line. Surface drainage is generally north to south. The subject property consists of aggregate parking/lawn on the East portion. The west half of the site consists of an aggregate surfaced area for the storage of propane tanks/natural lawn and vegetation.

The soils on the property are of the Miami Loam Series. The site is predominantly mild slopes of 2 to 6 percent. These soils are generally well drained, moderately permeable, loamy sands. The United States Department of Agriculture, Soil Conservation Service, prepared the soil classification as are presented in the "Soil Survey of Livingston County."

The subject parcel is currently supplied with on-site sanitary and water. The applicant will be connecting to the public sanitary sewer and water service that exists in Brighton Pines Court to the north. Service connections are already provided.

The applicant is proposing to continue using the building and site features for office/storage and minor repairs related to their business (Amerigas Propane). The improvements to the site include additional aggregate surfacing within the storage areas, paving the parking area, fencing and screening and additional landscaping throughout the site.

A minor change to the subject parcels impervious areas is proposed. A significant portion of the existing gravel parking lot and storage area will be improved with the addition of asphalt millings. The asphalt millings will stabilize the surface and results in a significant reduction in dust generated. The access drives and parking area to the east of the building will be paved. The impervious and semi-pervious surfaces drain from north to south into the existing pond which is partially on the applicants site and the site to the south. Drainage from the pond drains easterly across Dorr Road then north and east thru wetlands to Grand River and Lake Chemung. The storm water management system will be enhanced with the bio swale along the southerly property line. This swale will increase the storage on site.

No impact to local aquifer characteristics or groundwater recharge capacity is anticipated. Surface water runoff from the site currently percolates through the soils or flows into the Dorr Road Right-of-way.

A minimum variety of wildlife habitats exist on the property. Wildlife supported in these areas is generally smaller woodland creatures, field animals, birds and geese. Larger animals, such as deer, may traverse the site. The current uses of the adjacent properties and the existence of Dorr Road and Grand River Avenue limits the quality of the upland habitats available.

A majority of the existing vegetation on the site will be preserved or improved. A bio

swale and wetland vegetation is proposed along the south property line. Additional landscaping improvements are proposed east of the building. The natural vegetation and buffer along the west side will remain. The overall quality and quantity of vegetation and ground cover will be improved.

D. IMPACT ON STORM WATER MANAGEMENT

Minor changes to the subject parcels impervious areas are proposed that will not result in any significant change in the site run-off. A significant portion of the existing gravel storage area is being overlain with asphalt millings. This area which flows south and into the existing pond will be improved with a bio swale to help filter and improve the stormwater quality. The Eastern half of the site will continue to sheet drain into the ditch along the West side of Dorr Road and to the south into the pond. The existing vegetation filters the stormwater runoff prior to being detained in the existing pond.

Soil erosion and sedimentation are controlled by the provisions of the Natural Resources and Environmental Protection Act, No. 451 of the Public Acts of 1994, as amended and is administered by the Livingston County Drain Commissioner. The Contractor will be required to comply with all regulations including control during and after construction. Required silt fence locations are depicted on sheet UT.

The Contractor shall be responsible for initiating and maintaining adequate dust control measures during and after construction. Dust control measures used during construction may consist of site watering, mulching of completed areas, installation of windbreak fencing, and application of chemical dust control materials.

Implementing soil erosion control methods will minimize any impact to adjoining properties due to the updates proposed for the site. Impacts to adjacent properties due to surface water runoff will be minimized by the Soil Erosion and Sedimentation Controls proposed and the preservation of much of the existing site.

E. IMPACT ON SURROUNDING LAND USES

The properties to the North, South and West of the subject parcel are zoned Industrial District (IND). To the South is the Livingston County Humane Society. Directly west is the stormwater pond for the surrounding Industrial development. To the north the property is developed consistent with the Industrial Zoning. East across Dorr Road is Rural Residentially zoned property. The property is wooded with large areas of wetlands.

The subject property is zoned Industrial (IND). No change in use is proposed. The expansion of the existing building and improvements to the site is consistent with the industrial uses in the area. The additional landscaping, fencing and additional aggregate improvements will upgrade the functionality of the property. All areas disturbed by construction will require restoration as outlined in the project plans and required by the permitting agencies.

F. IMPACT ON PUBLIC FACILITIES AND SERVICES

The Livingston County Sheriff and Michigan State Police will provide Police protection. Additional services required to accommodate this development are anticipated to be minor.

The Brighton Area Fire Department as a part of an existing governmental agreement will provide fire protection service. A fire hydrant exists on the property within the water main easement located along the North property boundary. No additional fire protection is required to service this facility. The existing entrances for the property will provide access for fire trucks and emergency vehicles.

The upgrade of this facility will not create any direct adverse impact on the schools.

G. IMPACT ON PUBLIC UTILITIES

The property is presently in municipal sewer and water districts. The existing building is currently not connected to the municipal sewer or water systems. The site is served by on-site septic and by an on-site well.

Connection to the water main and sanitary sewer is possible through the existing leads located north of the existing building.

The site is serviced by electric, gas, phone and cable systems located along Dorr Road. These utilities currently service the building and the utility companies have indicated they have the ability to provide the necessary utilities to operate the proposed facility.

H. STORAGE AND HANDLING OF ANY HAZARDOUS MATERIALS

The office uses within the existing buildings will not use, store, generate and/or discharge potentially polluting materials. All solid wastes will be properly disposed of through licensed disposal firm on a regular basis. A dumpster is proposed on the site to the north of the building.

Hazardous materials that may be stored on site would include motor vehicle oil/fluids, paint and cleaning supplies. These materials would be in extremely small quantities. The above mentioned materials shall not be stored in the utility room or any rooms or closets that have floor drains.

Propane gas is stored in the two large containers to the south of the building. These containers and their delivery system to the supply trucks are regulated and approved by the State of Michigan, Fire Marshall. The facility is periodically inspected by the Brighton Fire Department. Empty containers are stored to the west of the building. This existing gravel area will be fenced and receive asphalt milling surface improvements.

I. IMPACT ON TRAFFIC AND PEDESTRIANS

Access to the parcel is provided from existing drive off Dorr Road. The existing aggregate parking area and access drives will be paved as designated on the Site Plan. Utilization of parking areas is limited to corporate fleet vehicles and employees. The facility is a wholesaler of propane gas.

The proposed use is generally consistent with the "Single Use Light Industrial Building" category (Code 110) found within the Trip Generation Manual. The building area consists of 2620 +/- total square feet. The weekday experiences an average rate of 6.97 trips per day and 0.98 trips per peak hour for each 1,000 square feet of gross floor area. The anticipated trip generation during the weekday for the single use on the subject parcel is 18.3 trips per day and 2.6 trips during the peak hour. Saturday rates are anticipated to be the same due to the specific nature of the proposed use with no Sunday traffic.

The amount of parking being provided meets the Township Ordinance. Service vehicles and residential bulk trucks will be parked in the secured fence area during off hours.

The Township Master Plan indicates an eight foot wide bike path along this portion of Dorr Road. The applicant is proposing a sidewalk in compliance with the Plan.

No change in the operations is being proposed. No adverse impacts on vehicular or pedestrian traffic are anticipated.

J. SPECIAL PROVISIONS

The applicant is seeking a waiver from the paving requirements for the storage area as depicted on the site plan. The site has been in operation for many years. Traffic serving and on site is limited. The propane tanks weigh approx 1000 lbs with metal feet, which would quickly damage an asphaltic surface. The aggregate surface is ideal for the temporary storage of the empty tanks. No other special provisions or requirements are currently proposed for this facility.

K. SITE LIGHTING

The existing site lighting consist of two lights, one approx 15 feet south of the southwest corner of the existing building and one east of the large propane tanks. No new site lighting is being proposed.

L. HOURS OF OPERATION

Hours of operation will generally be between 5:00 a.m. to 6:00 p.m. Monday through Saturday.

AMERIGAS PROPANE

2400 DORR ROAD

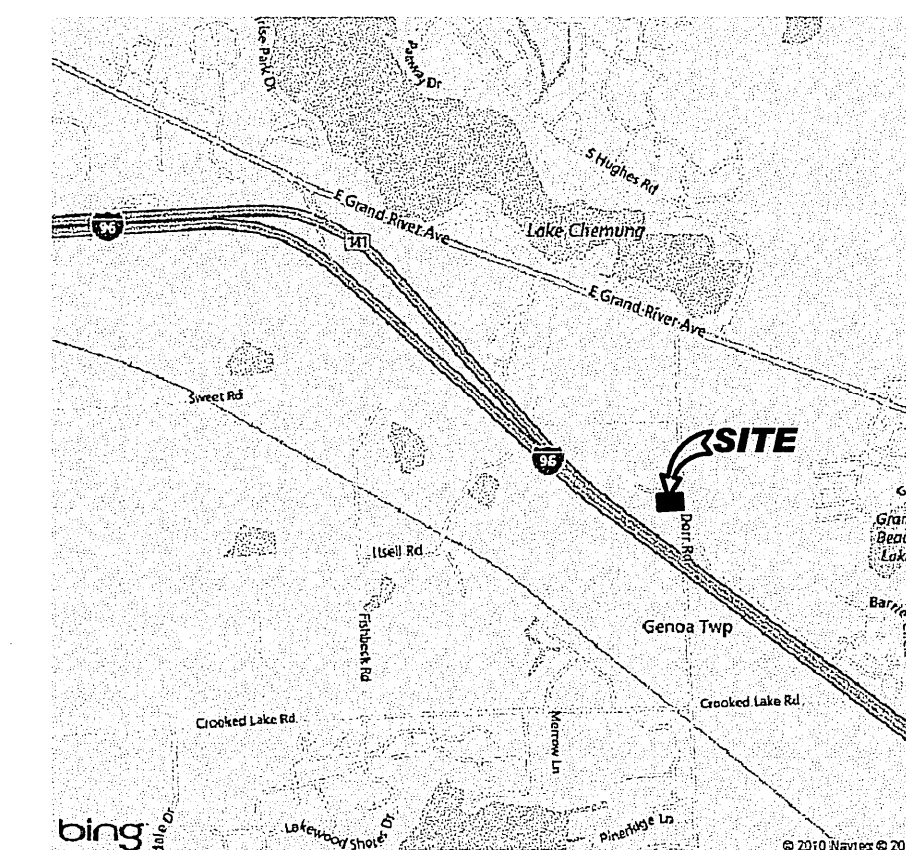
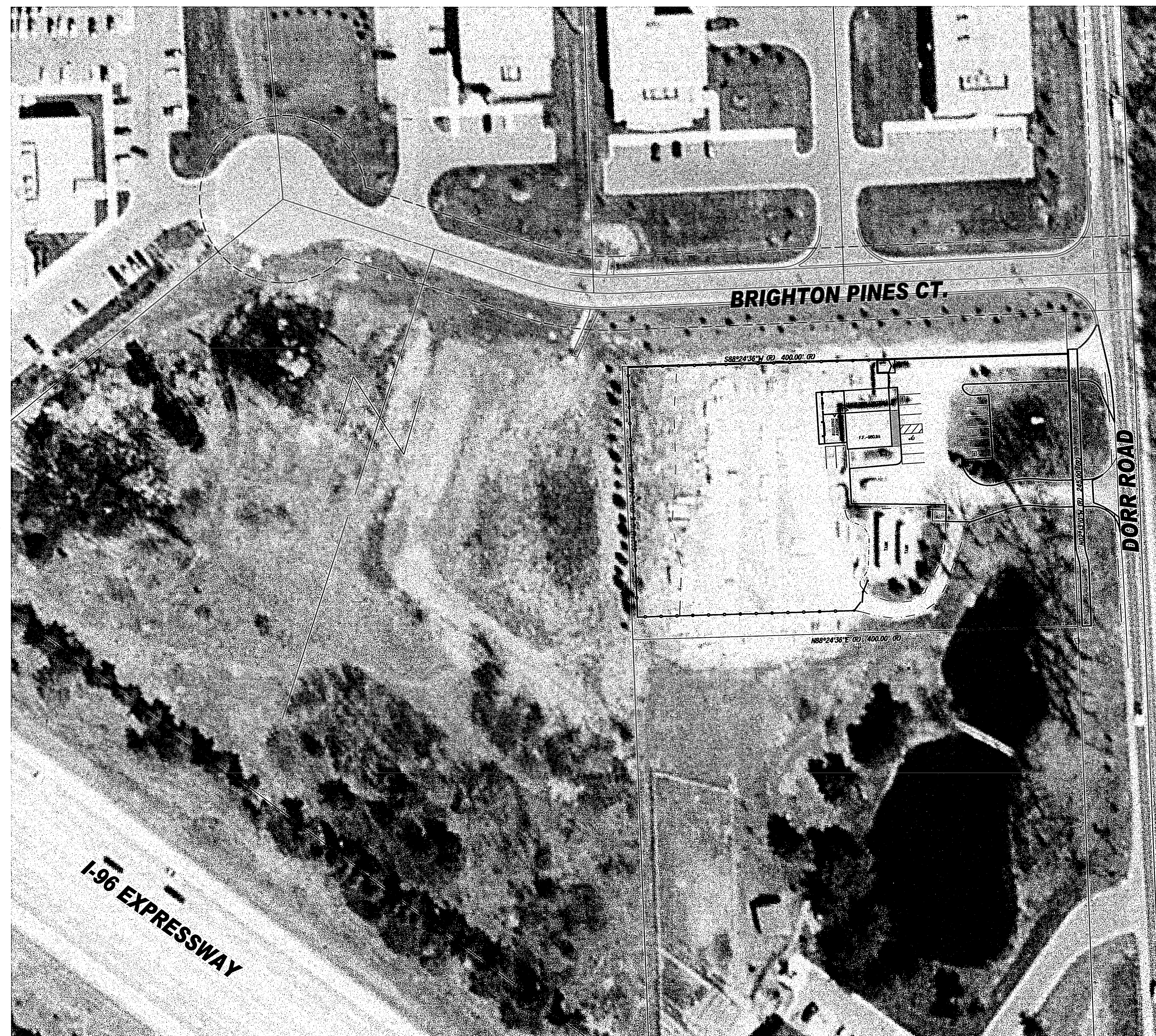
A PART OF NORTHEAST 1/4 OF SECTION 15, T.2N.-R.5E.
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

LEGAL DESCRIPTION

Reference: Deed as recorded in Liber 1922, Page 583, Livingston County Records.

Part of the Southeast 1/4 of the Northeast 1/4 of Section 15, Town 2 North, Range 5 East, Michigan, described as:
BEGINNING at a point on the West Right-of-Way line of Dorr Road, distant $S88^{\circ}24'36''W$, along the East-West 1/4 line of Section 15, 60.0 feet and $N02^{\circ}13'10''W$ 590.0 feet from the East 1/4 Corner of said Section 15; thence $N02^{\circ}13'10''W$, along said West Right-of-Way line of Dorr Road, 245.0 feet; thence $S88^{\circ}24'36''W$ 400.0 feet; thence $S02^{\circ}13'10''E$ 245.0 feet; thence $N88^{\circ}24'36''E$ 400.0 feet to the Point of Beginning.

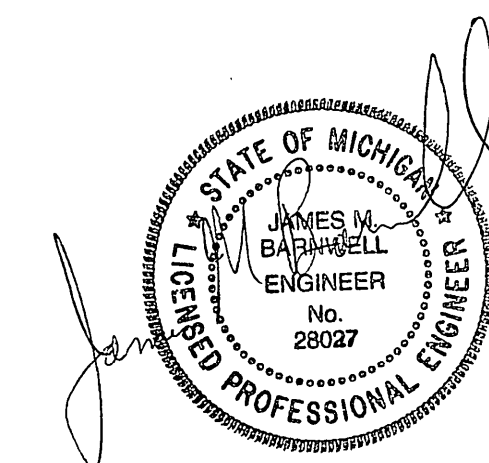
Refer to the current policy for title insurance for proof of ownership and all encumbrances affecting title to the described above parcel.



LOCATION MAP
NOT TO SCALE

SHEET INDEX

- SP SITE PLAN
- UT UTILITY & GRADING PLAN
- DT1 SITE DEVELOPMENT NOTES & DETAILS
- DT2 SITE DEVELOPMENT NOTES & DETAILS
- A1 FLOOR PLAN
- A2 EXTERIOR ELEVATIONS



DESINE INC.
(810) 227-9533
CIVIL ENGINEERS
LAND SURVEYORS
2183 PLESS DRIVE
BRIGHTON, MICHIGAN 48114

OWNER
AMERIGAS PROPANE LP
P.O. BOX 798
VALLEY FORGE, PA. 19482-9908

CIVIL ENGINEER/LAND SURVEYOR
DESINE INC.
2183 PLESS DRIVE
BRIGHTON, MI. 48114
(810) 227-9533

REVISED	SCALE: N/A
3-23-12	PROJECT No.: 9121942
4-04-12	DWG NAME: 1942-COV
4-11-12	PRINT: APR 11 2012

WESTMORELAND DEV. CO.
6139 NOTTINGHAM POINTE
BRIGHTON, MI. 48116
4711-15-200-035
ZONED: INDUSTRIAL

MACKLIN DEVELOPMENT
5977 BRIGHTON PINES CT.
HOWELL, MI. 48843
4711-15-200-022
ZONED: INDUSTRIAL

BENCHMARKS

BENCHMARK #1:
ARROW ON HYDRANT, LOCATED ON SOUTH SIDE OF BRIGHTON
PINE COURT, 56± FEET N.E. OF #2400 DORR RD N.W.
PROPERTY CORNER.
ELEVATION = 982.11 (NAVD88)

BENCHMARK #2:
ARROW ON HYDRANT, LOCATED ON NORTH SIDE OF BRIGHTON
PINE COURT #5977, 105± FEET N.W. OF #2400 DORR RD N.E.
PROPERTY CORNER.
ELEVATION = 984.17 (NAVD88)

LEGEND

- EXISTING BRUSH/TREE LINE
- EXISTING TREE
- EXISTING OVERHEAD WIRES
- EXISTING POLE AND GUY
- EXISTING POWER POLE
- EXISTING AMERITECH RISER
- EXISTING LIGHT POLE
- EXISTING SIGNS
- EXISTING CONTOURS
- EXISTING EDGE OF WETLAND
- EXISTING EDGE OF WATER
- EXISTING CURB AND GUTTER
- EXISTING FENCE LINE
- EXISTING GAS LINE
- EXISTING STORM SEWER
- EXISTING STORM STRUCTURES
- EXISTING SANITARY SEWER
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- EXISTING WATER MAIN
- EXISTING WATER MAIN STRUCTURES
- EXISTING SPOT ELEVATION
- EXISTING CONCRETE PAVEMENT
- EXISTING GRAVEL/ASPHALT MILLINGS
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY CLEANOUT
- PROPOSED WATER MAIN
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED GRAVEL/ASPHALT MILLINGS

SITE DATA:

PROJECT AREA:	2.25 ac. (98,000 S.F.)
CURRENT ZONING:	INDUSTRIAL
PROPOSED USE:	PROPANE DISTRIBUTION AND TANK STORAGE
	PROPOSED ALLOWED
BUILDING HEIGHT:	SEE ARCH. PLANS 30 FEET
LOT COVERAGE:	2.8% 55%
SETBACKS:	FRONT 160.5' 85 FT.
	SIDE 26.3' 25 FT.
	REAR 178.5' 40 FT.
GROUND FLOOR AREA:	2,740 sq. ft. (2.8%)
GRAVEL/PAVEMENT AREA:	56,598 sq. ft. (57.8%)

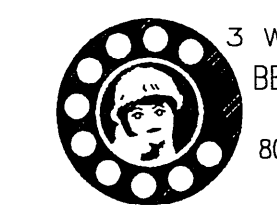
NOTES:

- THE BUILDING SHALL INCLUDE THE BUILDING ADDRESS ON THE BUILDING. THE NUMBERS SHALL BE A MINIMUM OF 6" HIGH OF CONTRASTING COLORS AND BE CLEARLY VISIBLE FROM THE STREET. THE LOCATION AND SIZE SHALL BE VERIFIED PRIOR TO INSTALLATION.
- A "KNOX BOX" KEY BOX SHALL BE LOCATED ADJACENT TO THE FRONT DOOR OF THE STRUCTURE, AND SHALL INCLUDE KEYS TO THE BUILDING AS WELL AS ALL GATES. OBTAIN LOCKS FROM BRIGHTON AREA FIRE DEPARTMENT.
- "NO PARKING-FIRE LANE" SIGNS SHALL BE LOCATED ALONG BOTH DRIVES AND SHALL BE SPACED AS DIRECTED BY THE FIRE MARSHALL.
- ALL WORK WITHIN THE DORR ROAD R.O.W. SHALL REQUIRE A PERMIT FROM THE LIVINGSTON COUNTY ROAD COMMISSION AND SHALL MEET ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
- NO ADDITIONAL SITE LIGHTING IS PROPOSED.

Parking Requirement: Required

1) Light Industrial, manufacturing, testing labs, research and development centers	1.5 spaces per 1000 sq. ft., or 1.2 spaces per employee at peak shift, whichever is greater, plus 1 space for each corporate vehicle	
2,620 Sq. ft. X 1.5 space/1000 sq. ft.		4
or 8 peak employees X 1.2 space/employee		10
TOTAL REQUIRED		10
SPACES PROVIDED		11
HANDICAP SPACE		1
TOTAL		12

Corporate vehicles consist of 2 Service Vehicles and 5 bulk trucks for home delivery. These are parked in the secured fenced area during off hours.

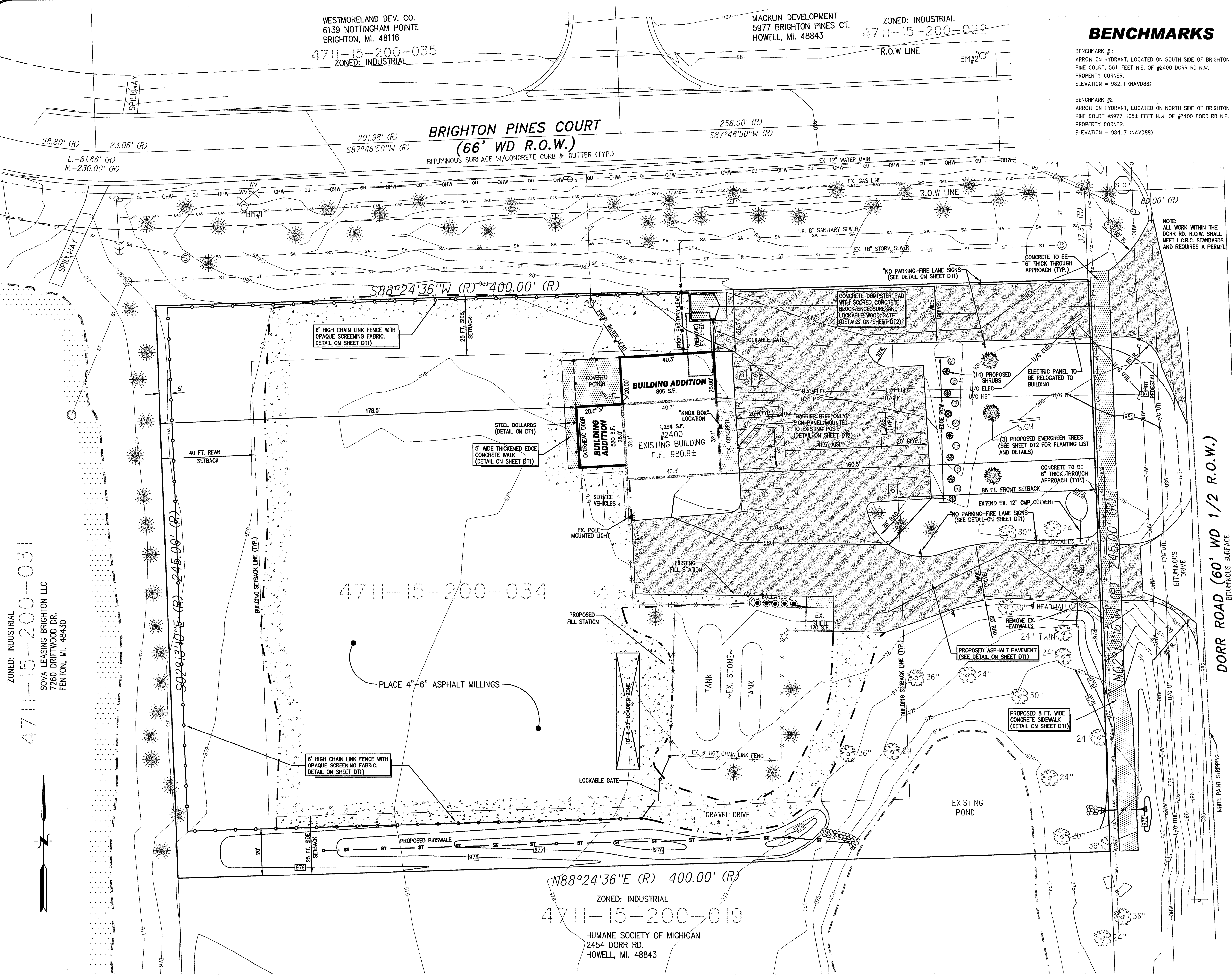


NOTE: UTILITY INFORMATION ON THIS DRAWING MAY BE FROM INFORMATION DISCLOSED TO THIS FIRM BY THE UTILITY COMPANIES, CITY/COUNTY AGENCIES AND OTHER VARIOUS SOURCES. NO GUARANTEE IS GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF.
PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD.
CALL MISS DIG.



ZONED: INDUSTRIAL
4711-15-200-031
SOVA LEASING BRIGHTON LLC
7260 DRIFTWOOD DR.
FENTON, MI. 48430

DORR ROAD (60' WD 1/2 R.O.W.)
BITUMINOUS SURFACE
ZONED: RURAL RESIDENTIAL
4711-14-100-010
PARKER, ALBERT & HELEN
5661 CROOKED LAKE RD.
HOWELL, MI. 48843



DESIGN: JMB
DRAFT: L.F.
CHECK: JMB

DATE	REVISION-DESCRIPTION	DATE	REVISION-DESCRIPTION
3-23-12	REVISED PER REVIEW COMMENTS		
4-04-12	REVISED BUILDING PER CLIENT REQUEST		
4-11-12	REVISED DRIVE WIDTHS PER TOWNSHIP PLANNING COMMISSION		

AMERIGAS SITE

SITE PLAN

OWNER:	SCALE: 1IN.=20FT.
AMERIGAS PROPANE LP	PROJECT No.: 9121942
P.O. BOX 798	DWG NAME: 1942-SP
VALLEY FORGE, PA. 19482-9908	PRINT:

SP

TIMELINE OF SOIL EROSION CONTROL AND CONSTRUCTION SEQUENCE					
CONSTRUCTION & WORK CATEGORIES*	2012				
	MAY	JUNE	JULY	AUG.	SEPT.
1 - OBTAIN PERMITS					
2 - SESC MEASURES					
3 - INSPECT / MAINTAIN					
4 - DEMOLITION WORK					
5 - EARTH WORK					
6 - UTILITIES					
7 - BUILDING					
8 - GRAVEL SURFACE					
9 - IRRIGATION					
10 - TOP SOIL/VEGETATION					
11 - LANDSCAPING					
12 - RESTORATION					
13 - PERMIT CLOSURE					

*REFER TO THE MAJOR WORK ITEMS OUTLINED IN THE SOIL EROSION CONTROL AND CONSTRUCTION SEQUENCE NOTES.

BENCHMARKS

BENCHMARK #1:
ARROW ON HYDRANT, LOCATED ON SOUTH SIDE OF BRIGHTON PINE COURT, 564 FEET N.E. OF #2400 DORR RD N.W. PROPERTY CORNER.
ELEVATION = 982.11 (NAVD88)

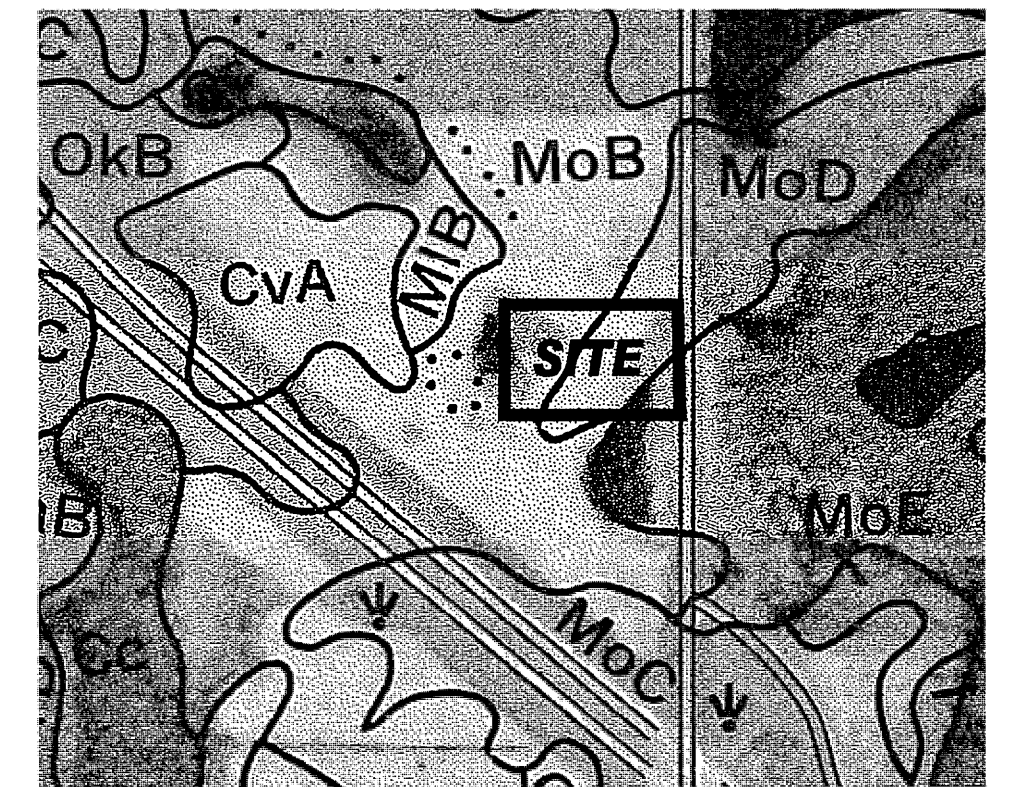
BENCHMARK #2:
ARROW ON HYDRANT, LOCATED ON NORTH SIDE OF BRIGHTON PINE COURT #5977, 1054 FEET N.W. OF #2400 DORR RD N.E. PROPERTY CORNER.
ELEVATION = 984.17 (NAVD88)

LEGEND

- EXISTING BRUSH/TREE LINE
- EXISTING TREE
- EXISTING OVERHEAD WIRES
- EXISTING POLE AND GUY
- EXISTING POWER POLE
- EXISTING AMERITECH RISER
- EXISTING LIGHT POLE
- EXISTING SIGNS
- EXISTING CONTOURS
- EXISTING EDGE OF WETLAND
- EXISTING EDGE OF WATER
- EXISTING CURB AND GUTTER
- EXISTING FENCE LINE
- EXISTING GAS LINE
- EXISTING STORM SEWER
- EXISTING STORM STRUCTURES
- EXISTING SANITARY SEWER
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- EXISTING WATER MAIN
- EXISTING WATER MAIN STRUCTURES
- EXISTING SPOT ELEVATION
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY CLEANOUT
- PROPOSED WATER MAIN
- DRAINAGE FLOW ARROW
- PROPOSED SPOT GRADE

SOIL EROSION LEGEND

- 6 SEEDING WITH MULCH AND/OR MATING FACILITATES ESTABLISHMENT OF VEGETATION COVER. EROSION FOR DRAINAGES WITH LOW VELOCITY. EVERY PLACE IN SMALL QUANTITIES BY EXPERIENCED PERSONNEL. SHOULD INCLUDE PROPOSED TOPSOIL BED.
 - 55 CONCRETE SILT FENCE. USES GEOTEXTILE AND POSTS OR POLES. MAY BE CONSTRUCTED OR PREPARED EASY TO CONSTRUCT AND LOCATE AS NECESSARY.
- T = TEMPORARY P = PERMANENT
- = 36" SILT FENCE



SOILS MAP

NOT TO SCALE

- | SYMBOL | NAME |
|--------|-------------------------------------|
| MoB | Miami Loom, 2 to 6 percent slopes |
| MoD | Miami loam, 12 to 18 percent slopes |
| MoE | Miami Loom, 18 to 25 percent slopes |

NOTE:
SEE SHEET DT1 FOR SOIL EROSION NOTES AND DETAILS

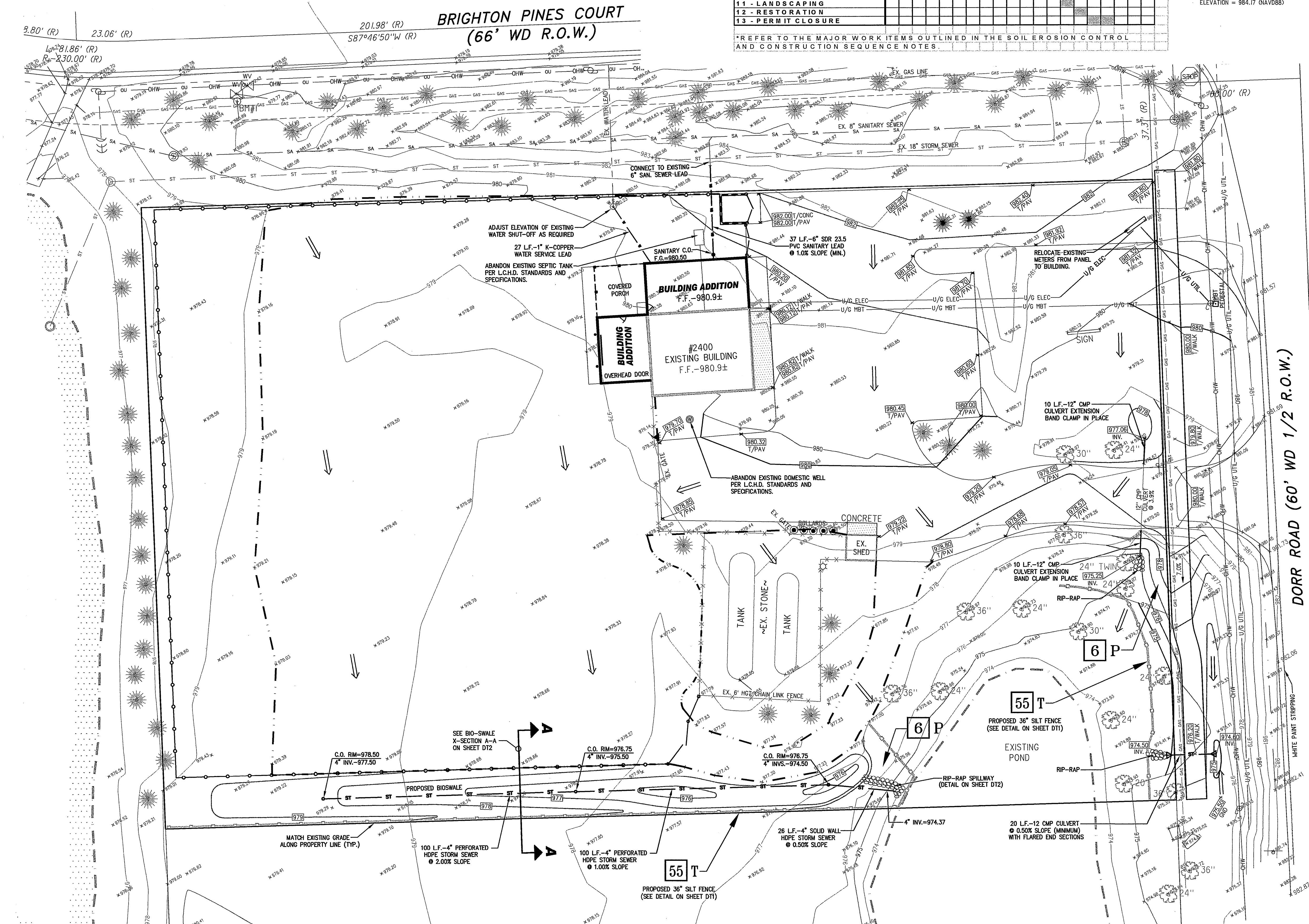
AREA OF DISTURBANCE 0.20 AC.



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PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD.

CALL MISS DIG.



DATE	REVISION-DESCRIPTION	DATE	REVISION-DESCRIPTION
3-23-12	REVISED PEWR REVIEW COMMENTS		
4-04-12	REVISED BUILDING PER CLIENT REQUEST		
4-11-12	REVISED DRIVE WIDTHS PER TOWNSHIP PLANNING COMMISSION		

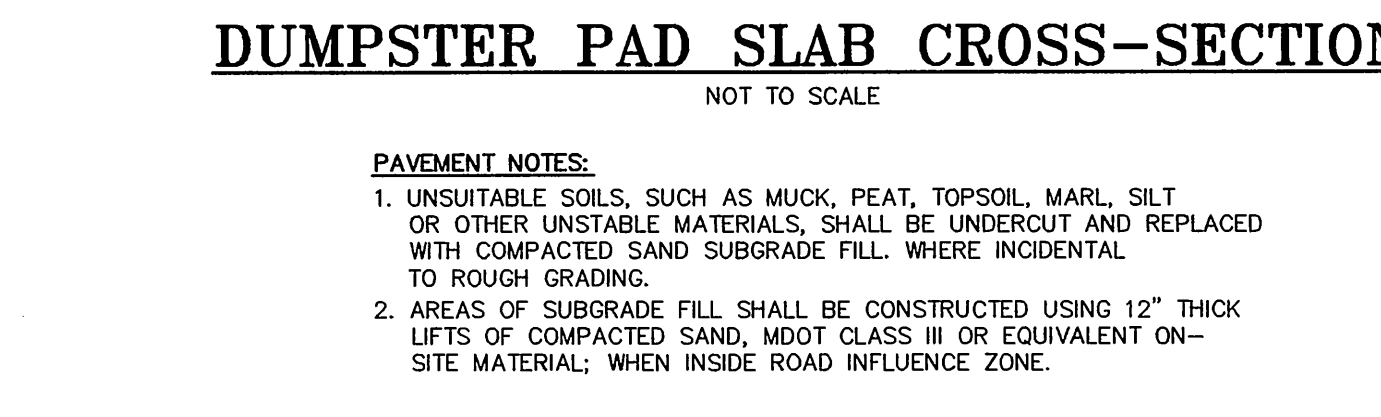
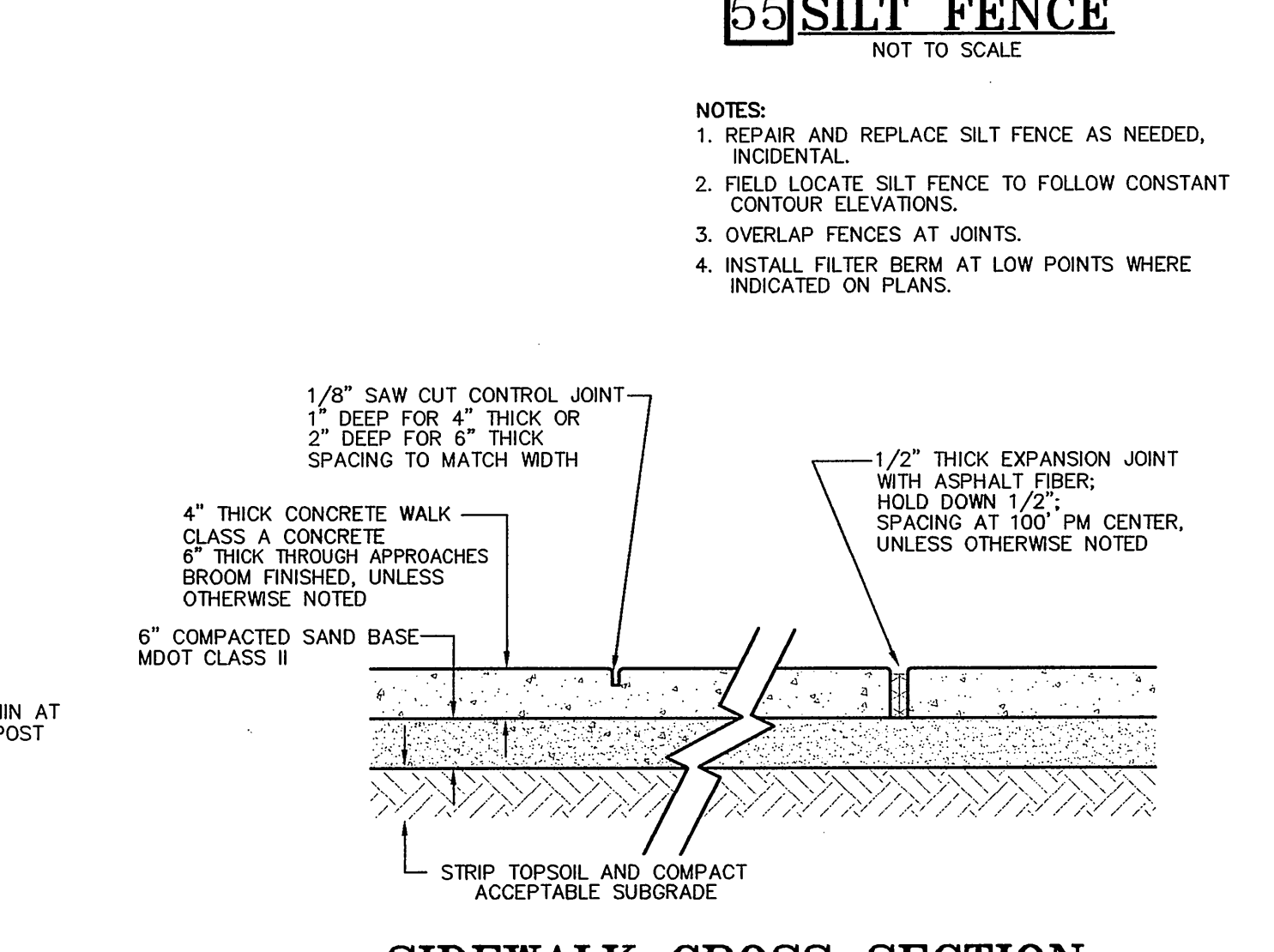
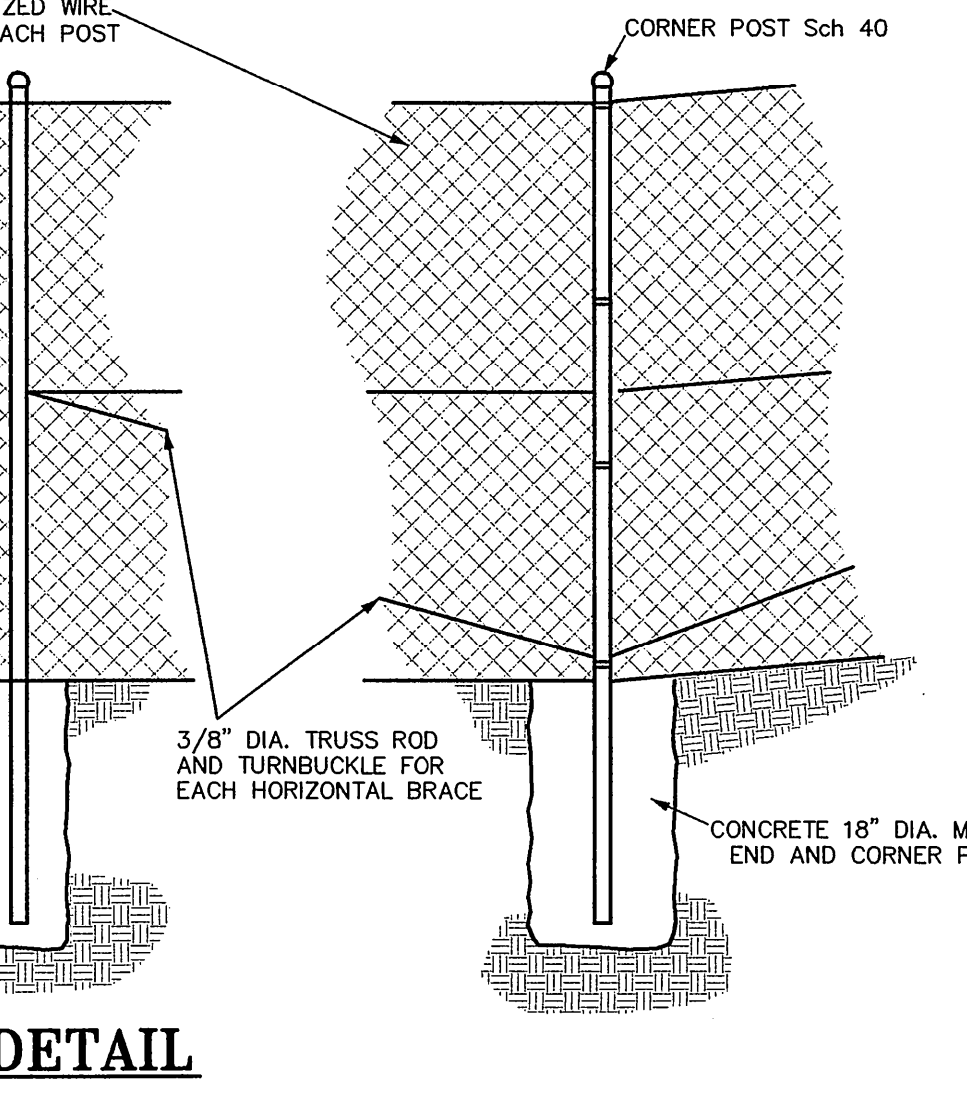
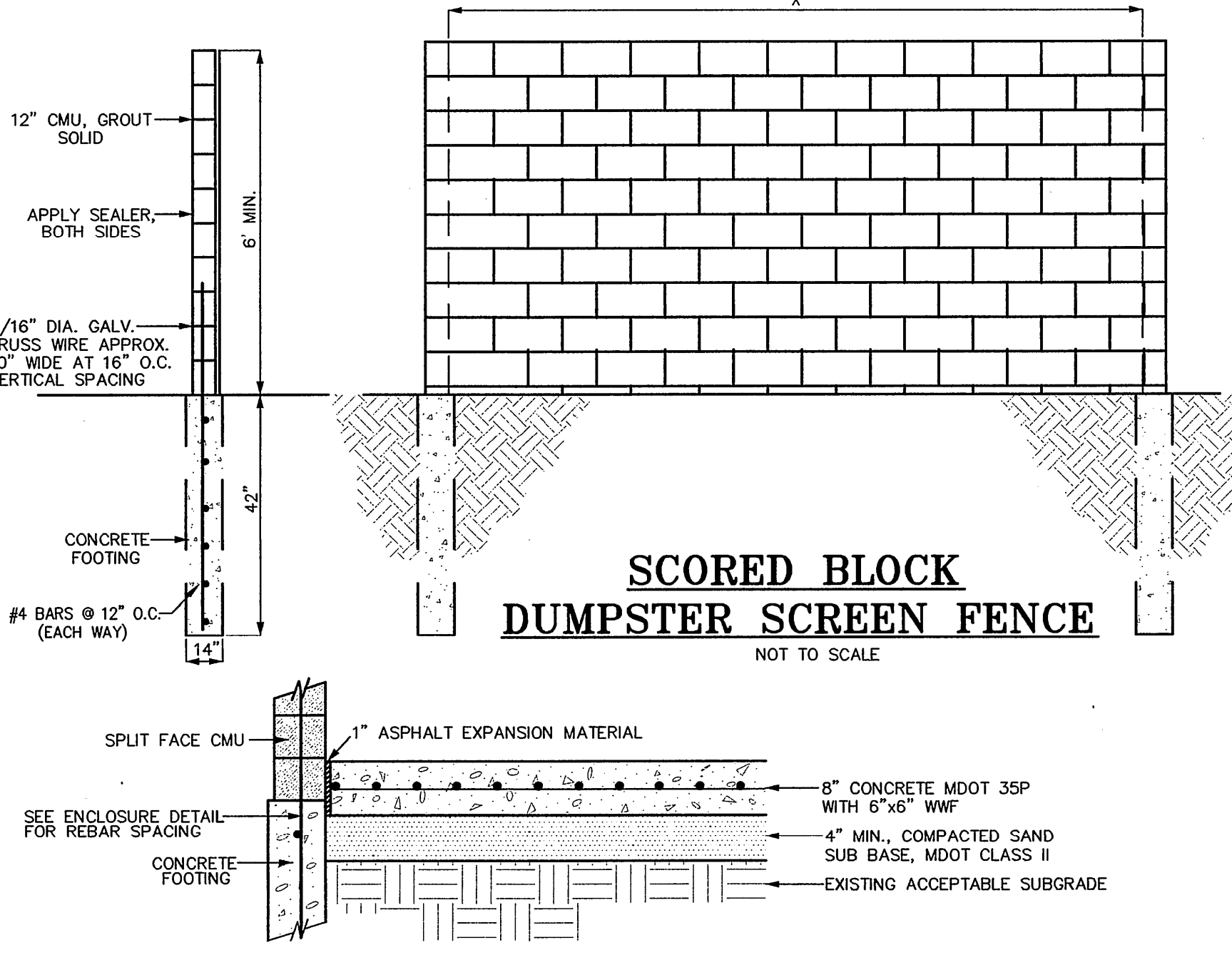
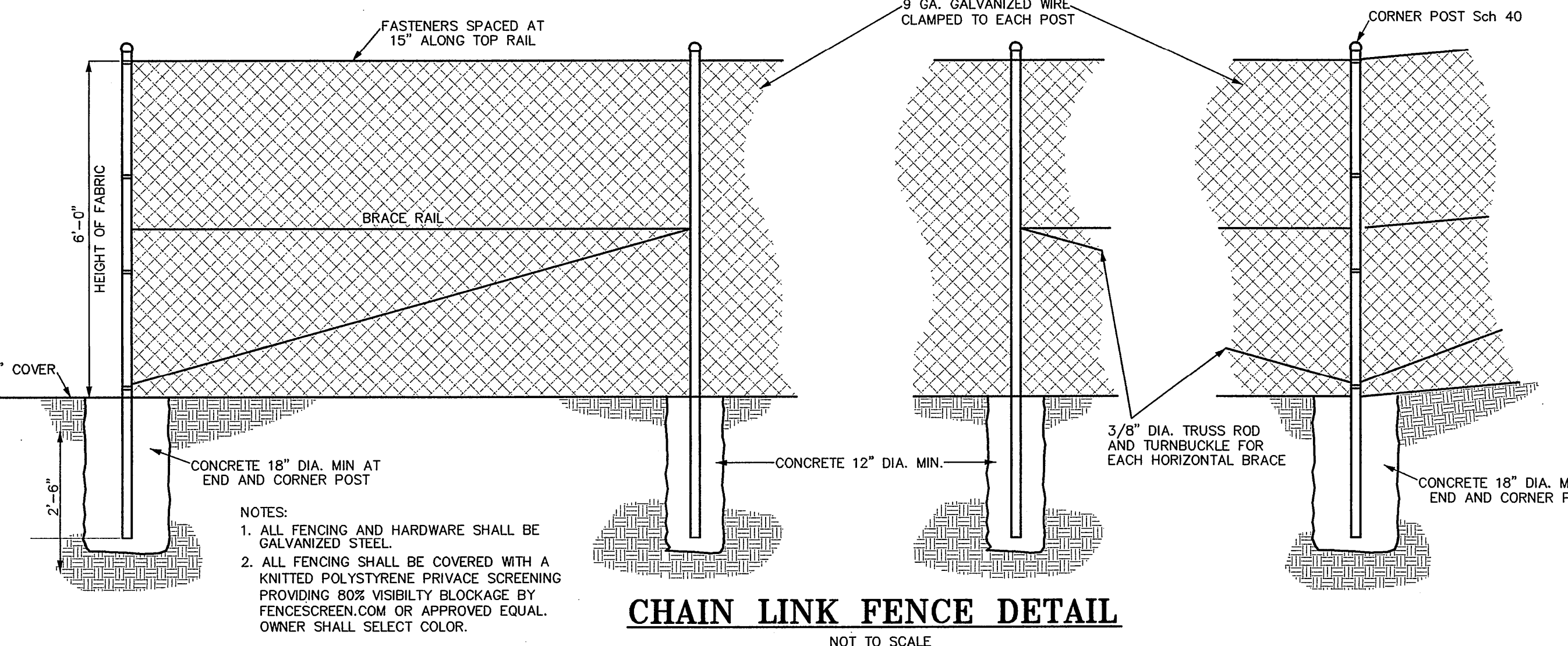
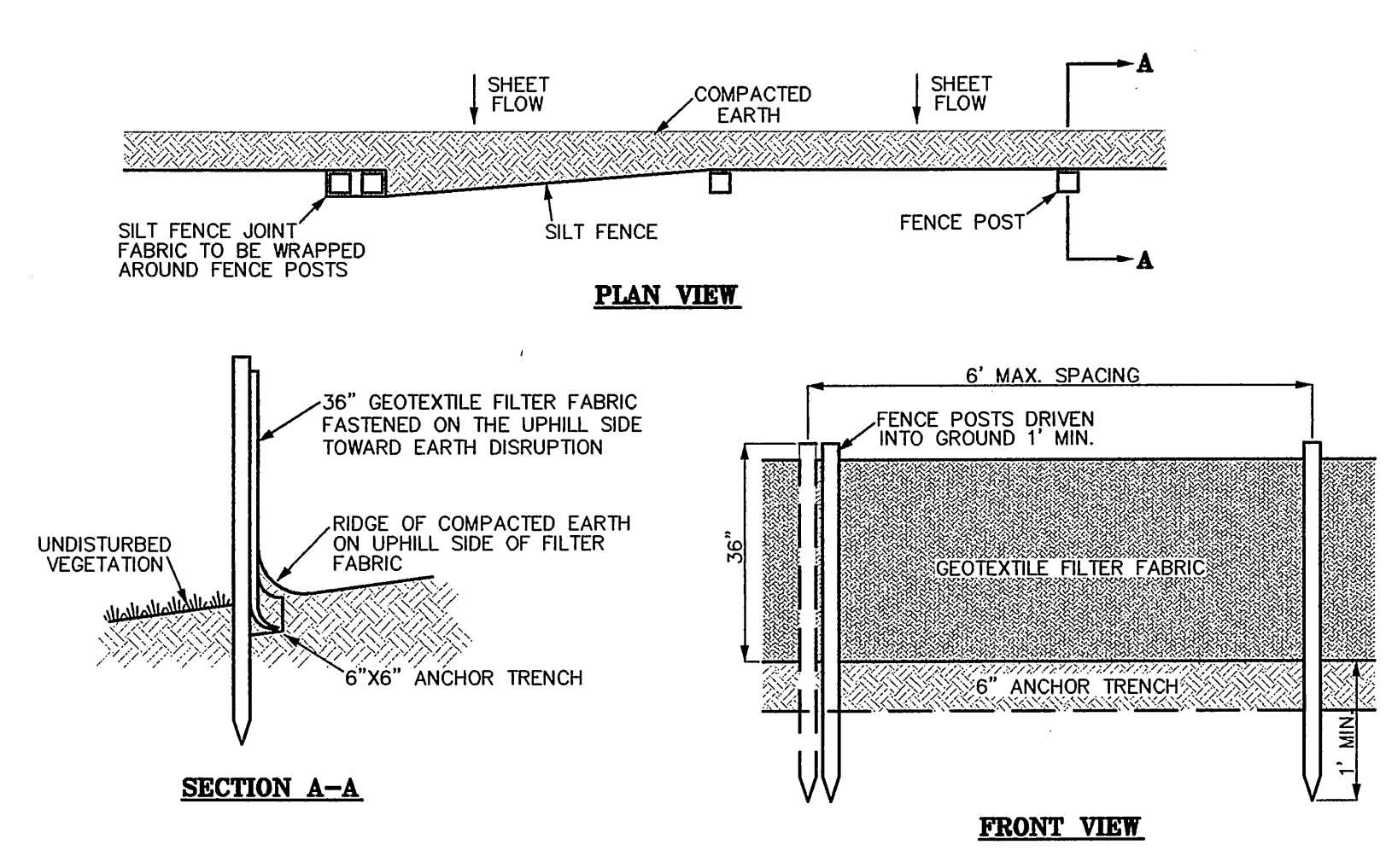
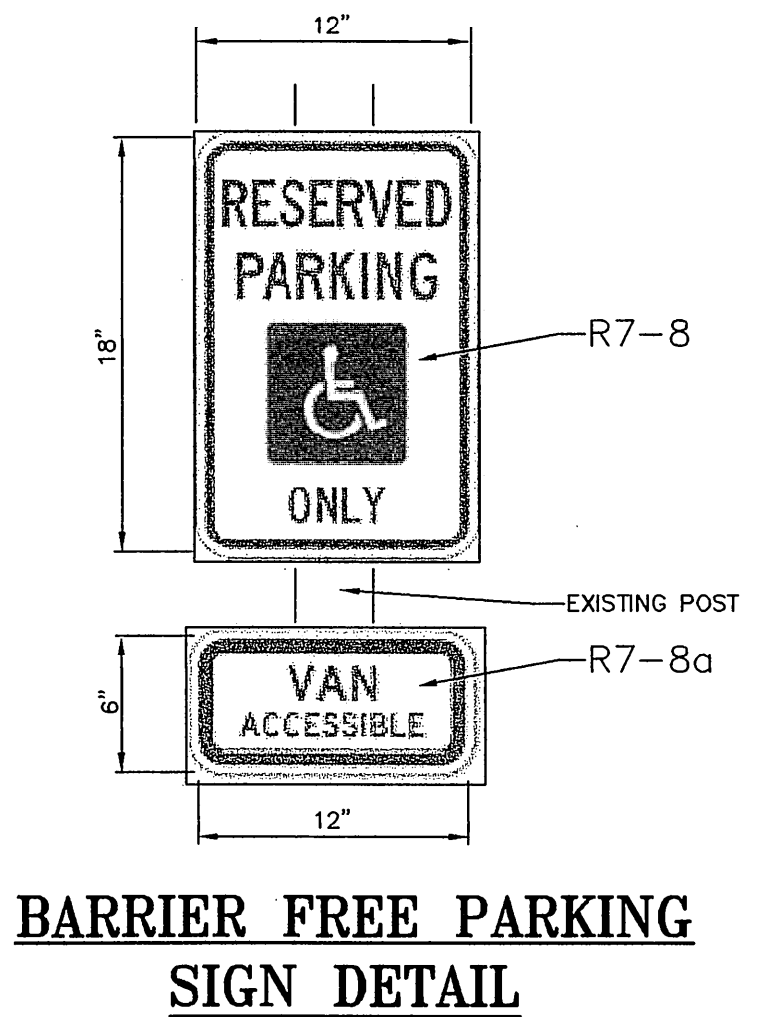
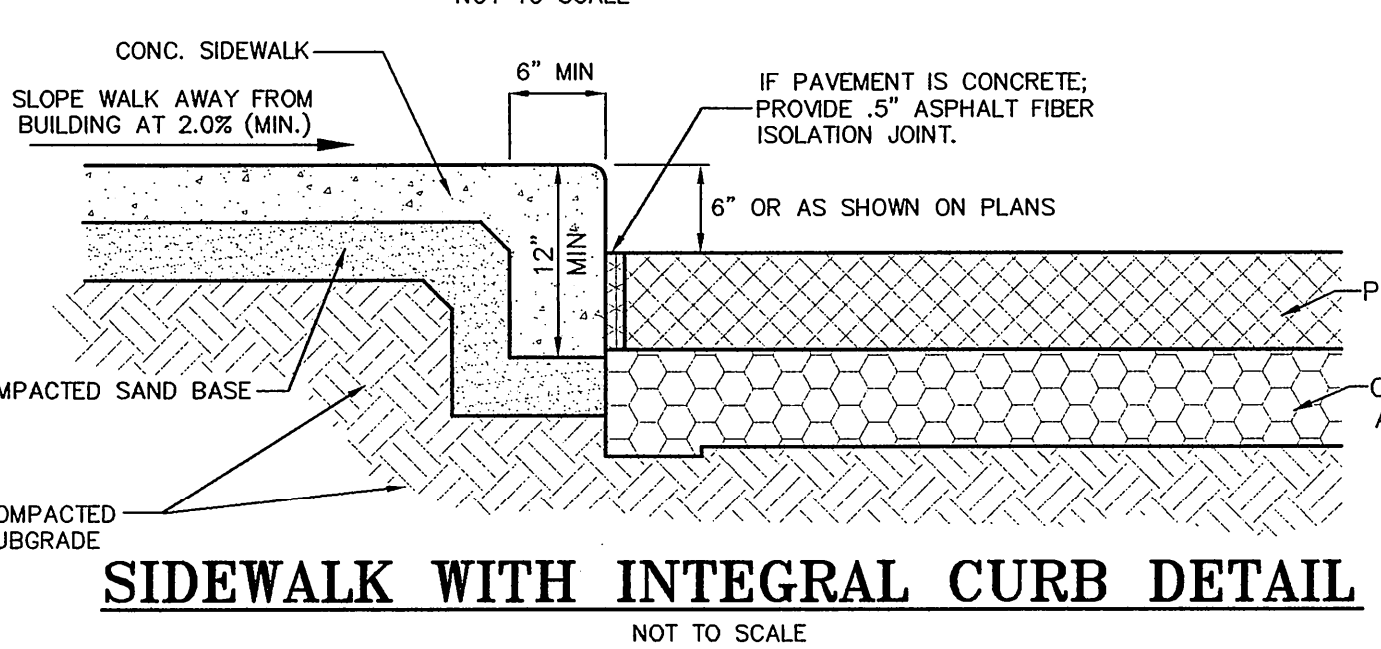
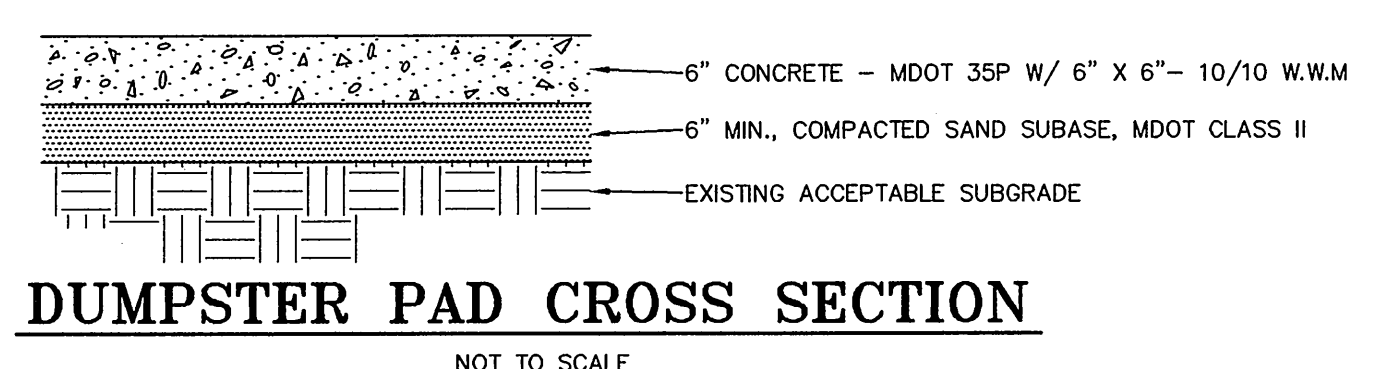
AMERIGAS SITE

UTILITY & GRADING PLAN

OWNER:
AMERIGAS PROPANE LP
P.O. BOX 798
VALLEY FORGE, PA. 19482-9908

SCALE: 1"=20FT.
PROJECT No.: 9121942
DWG NAME: 1942-UT
PRINT:

UT



BITUMINOUS PAVEMENT NOTES:

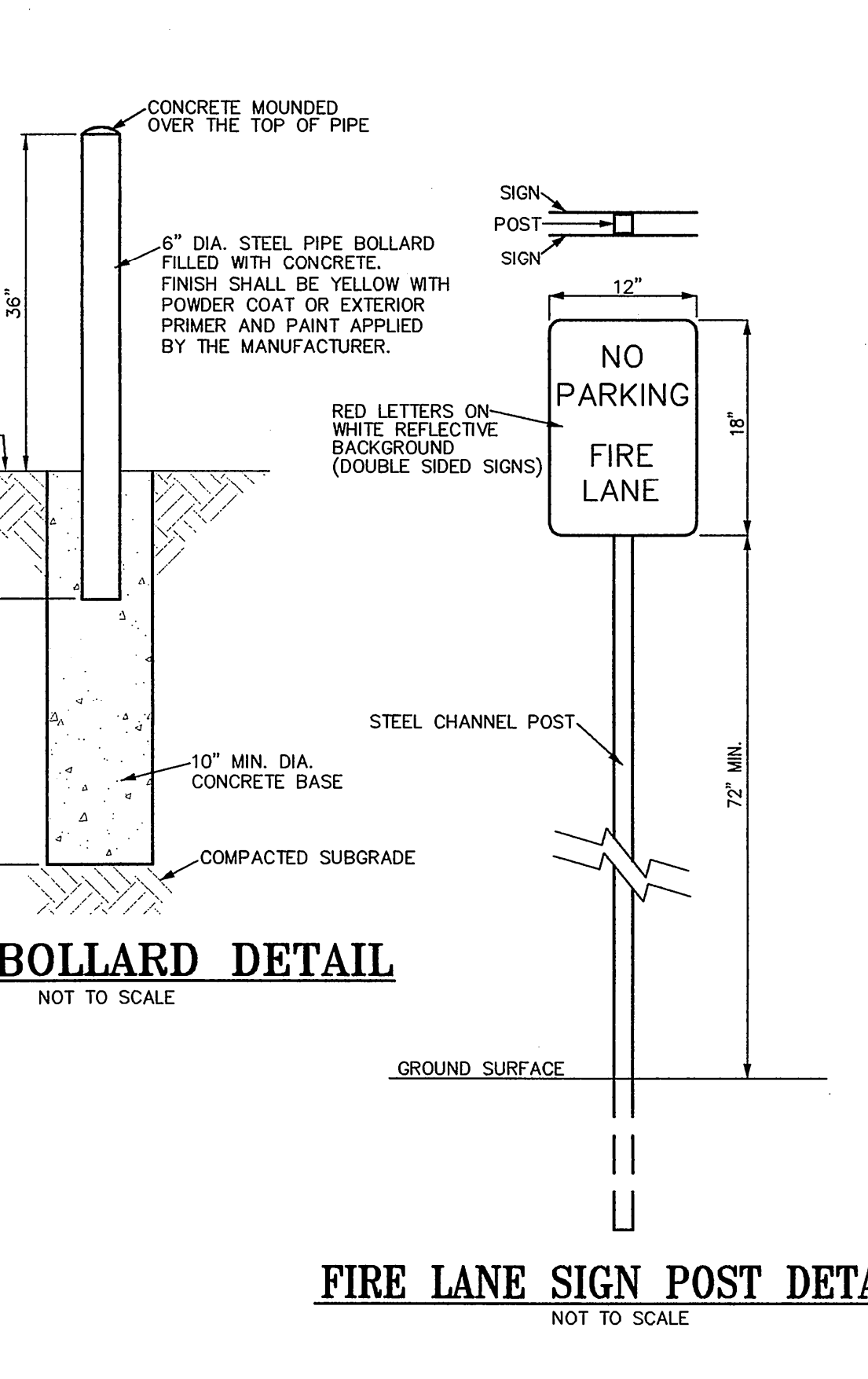
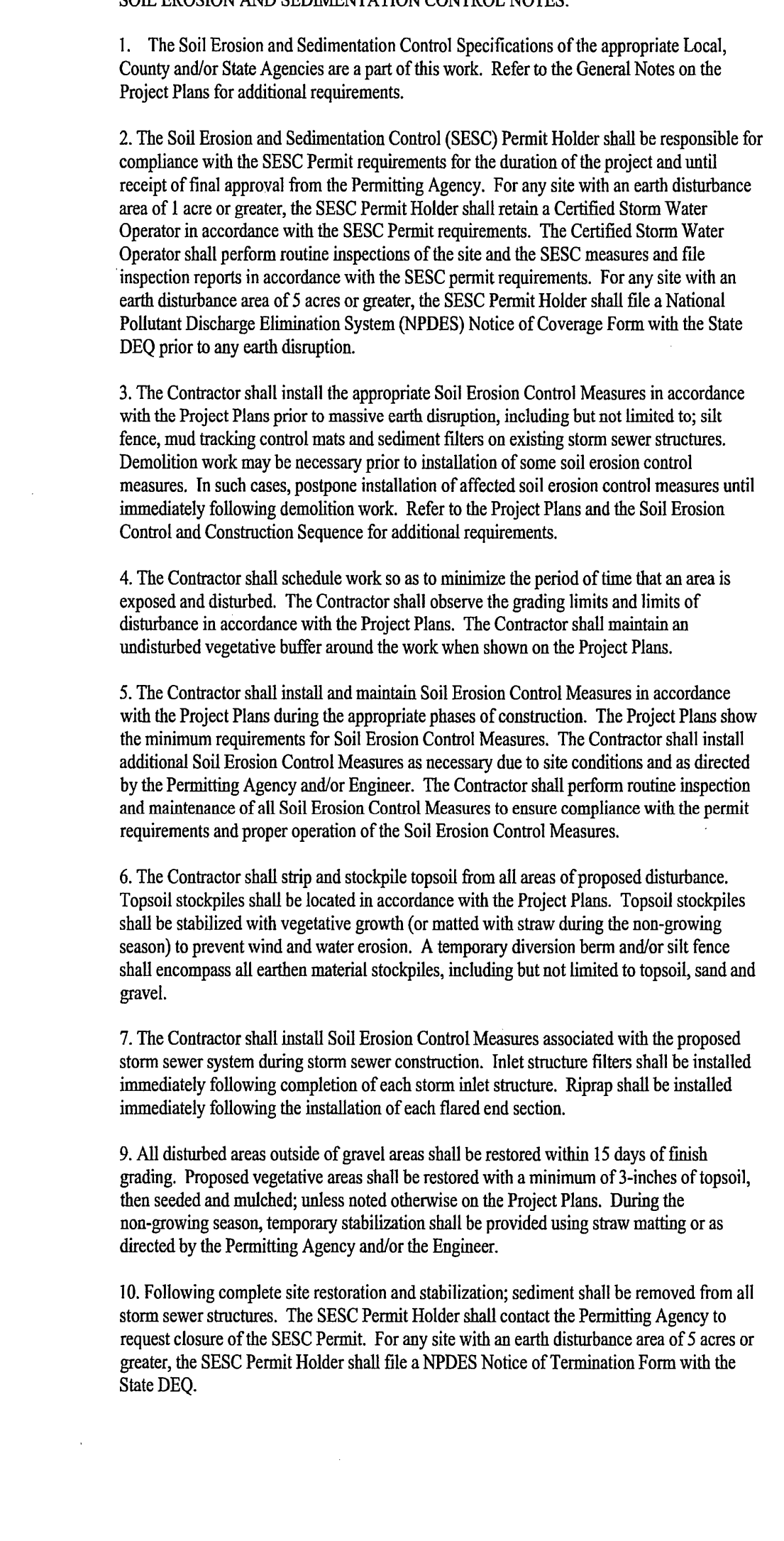
- The construction specifications of the appropriate Local Municipality are a part of this work. Refer to the General Notes, Road and/or Parking Lot Construction Notes and Typical Road and/or Pavement Cross Section details on the project plans for additional requirements.
- Unsuitable soils found within the 1 on 1 influence zone of the pavement, such as muck, peat, topsoil, marl, silt or other unstable materials shall be excavated and replaced up to the proposed subgrade elevation with MDOT Class III granular material compacted to 95% maximum unit weight, modified proctor.
- Contractor shall proof roll prepared subgrade as directed by Engineer. Unacceptable areas of subgrade shall be undercut and replaced as directed by Engineer.
- Owner/Developer may delay placement of the bituminous wearing course outside of the public road right of way. Repair of the bituminous leveling course may be necessary due to any delay in placement of the bituminous leveling course. Substantial repair to the bituminous leveling course may be necessary if placement of the bituminous wearing course is delayed for more than 12 months after placement of the bituminous leveling course. The bituminous leveling course shall be repaired as directed by Engineer prior to placement of the bituminous wearing course.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

- The Soil Erosion and Sedimentation Control Specifications of the appropriate Local, County and/or State Agencies are a part of this work. Refer to the General Notes on the Project Plans for additional requirements.
- The Soil Erosion and Sedimentation Control (SESC) Permit Holder shall be responsible for compliance with the SESC Permit requirements for the duration of the project and until receipt of final approval from the Permitting Agency. For any site with an earth disturbance area of 1 acre or greater, the SESC Permit Holder shall retain a Certified Storm Water Operator in accordance with the SESC Permit requirements. The Certified Storm Water Operator shall perform routine inspections of the site and the SESC measures and file inspection reports in accordance with the SESC permit requirements. For any site with an earth disturbance area of 5 acres or greater, the SESC Permit Holder shall file a National Pollutant Discharge Elimination System (NPDES) Notice of Coverage Form with the State DEQ prior to any earth disruption.
- The Contractor shall install the appropriate Soil Erosion Control Measures in accordance with the Project Plans prior to massive earth disruption, including but not limited to; silt fence, mud tracking control mats and sediment filters on existing storm sewer structures. Demolition work may be necessary prior to installation of some soil erosion control measures. In such cases, postpone installation of affected soil erosion control measures until immediately following demolition work. Refer to the Project Plans and the Soil Erosion Control and Construction Sequence for additional requirements.
- The Contractor shall schedule work so as to minimize the period of time that an area is exposed and disturbed. The Contractor shall observe the grading limits and limits of disturbance in accordance with the Project Plans. The Contractor shall maintain an undisturbed vegetative buffer around the work when shown on the Project Plans.
- The Contractor shall install and maintain Soil Erosion Control Measures in accordance with the Project Plans during the appropriate phases of construction. The Project Plans show the minimum requirements for Soil Erosion Control Measures. The Contractor shall install additional Soil Erosion Control Measures as necessary due to site conditions and as directed by the Permitting Agency and/or Engineer. The Contractor shall perform routine inspection and maintenance of all Soil Erosion Control Measures to ensure compliance with the permit requirements and proper operation of the Soil Erosion Control Measures.
- The Contractor shall strip and stockpile topsoil from all areas of proposed disturbance. Topsoil stockpiles shall be located in accordance with the Project Plans. Topsoil stockpiles shall be stabilized with vegetative growth (or matted with straw during the non-growing season) to prevent wind and water erosion. A temporary diversion berm and/or silt fence shall encompass all earthen material stockpiles, including but not limited to topsoil, sand and gravel.
- The Contractor shall install Soil Erosion Control Measures associated with the proposed storm sewer system during storm sewer construction. Inlet structure filters shall be installed immediately following completion of each storm inlet structure. Riprap shall be installed immediately following the installation of each flared end section.
- All disturbed areas outside of gravel areas shall be restored within 15 days of finish grading. Proposed vegetative areas shall be restored with a minimum of 3 inches of topsoil, then seeded and mulched; unless noted otherwise on the Project Plans. During the non-growing season, temporary stabilization shall be provided using straw matting or as directed by the Permitting Agency and/or the Engineer.
- Following complete site restoration and stabilization; sediment shall be removed from all storm sewer structures. The SESC Permit Holder shall contact the Permitting Agency to request closure of the SESC Permit. For any site with an earth disturbance area of 5 acres or greater, the SESC Permit Holder shall file a NPDES Notice of Termination Form with the State DEQ.

GENERAL NOTES:

- Contractor shall perform the work in accordance with the requirements of the appropriate Local, County and State Agencies and all other Government and Regulatory Agencies with jurisdiction over the project. Contractor shall notify the appropriate Agencies in advance of each stage of work in accordance with each Agency's requirements.
- Contractor shall comply with all permit, insurance, licensing and inspection requirements associated with the work. Prior to construction, Contractor and Owner/Developer shall determine who is responsible for obtaining each required permit. Contractor shall verify that the each required permit has been obtained prior to commencement of the stage of work associated with the required permit(s).
- Contractor shall furnish liability insurance and property damage insurance to save harmless the Owner, Developer, Architect, Engineer, Surveyor and Government Agencies for any accident occurring during the construction period. Refer to the appropriate Local, County and State Agencies for additional requirements. Copies of insurance certifications shall be made available to the Owner/Developer.
- Contractor shall conduct and perform work in a safe and competent manner. Contractor shall perform all necessary measures to provide for traffic and pedestrian safety from the start of work and through substantial completion. Contractor shall determine procedures and provide safety equipment such as traffic controls, warning devices, temporary pavement markings and signs as needed. Contractor shall comply with the safety standards of the State Department of Labor, the occupational health standards of the State Department of Health and safety regulations of the appropriate Local, County, State and Federal Agencies. Refer to the safety specifications of the appropriate Regulatory Agencies. The Contractor shall designate a qualified employee with complete job site authority over the work and safety precautions; said designated employee shall be on site at all times during the work.
- Contractor shall coordinate scheduling of all work in the proper sequence, including work by Subcontractors. Additional costs due to improper planning by Contractor or work done out of sequence as determined by standard acceptable construction practices, shall be Contractor's responsibility.
- Contractor shall contact the MISS DIG locating system, DIGGERS HOTLINE or other appropriate local underground utility locating Agency, a minimum of three (3) working days prior to construction. Existing utility information on the project plans may be from information disclosed to this firm by the Utility Companies, Local, County or State Agencies, and/or various other sources. No guarantee is given as to the completeness or accuracy thereof. Prior to construction, locations and depths of all existing utilities (in possible conflict with the proposed improvements) shall be verified in the field.
- Contractor shall coordinate scheduling a Pre-Construction Meeting with Engineer prior to commencement of work.
- The Local Municipality, County and/or State in which the project is located may require an Engineer's Certification of construction of the proposed site improvements. Contractor shall verify the certification requirements with Engineer prior to commencement of work. Contractor shall coordinate construction staking, testing, documentation submittal and observation with the appropriate Agency, Surveyor and/or Engineer as required for Engineer's Certification and Government Agency Acceptance. All materials used and work done shall meet or exceed the requirements of certification and acceptance, the contract documents and the material specifications noted on the project plans. Any materials used or work done that does not meet said requirements, contract documents and/or specifications shall be replaced and/or redone at Contractor's expense. The Owner/Developer may wait for test results, certifications and/or Agency reviews prior to accepting work.
- Engineer may provide subsurface soil evaluation results, if available, to Contractor upon request. Subsurface soil evaluation results, soils maps and/or any other documentation does NOT guarantee existing soil conditions or that sufficient, acceptable on-site granular material is available for use as structural fill, pipe bedding, pipe backfill, road subbase or use as any other granular material specified on the project plans. On-site granular material that meets or exceeds the material specifications noted on the project plans may be used as structural fill, pipe bedding, pipe backfill and/or road subbase material. On-site granular material shall be stockpiled and tested as acceptable to the appropriate Agency and/or Engineer prior to use.
- During the performance of their work, Contractor shall be solely responsible for determining soil conditions and appropriate construction methods based on the actual field conditions. Contractor shall furnish, install and maintain shoring, bracing and/or other tools and equipment and/or construction techniques as needed for the safety and protection of the workers, pedestrians and vehicular traffic and for protection of adjacent structures and site improvements.
- Contractor shall install temporary and permanent soil erosion and sedimentation control devices at the appropriate stages of construction in accordance with the appropriate regulatory Agencies. Refer to Soil Erosion and Sedimentation Control Plans and Notes on the project plans.
- Structural fill shall be placed as specified on the project plans and within the 1 on 1 influence zone of all structures, paved areas and other areas subject to vehicular traffic. Structural fill shall be placed using the controlled density method (12" maximum lifts, compacted to 95% maximum unit weight, modified proctor). Fill material shall meet or exceed the specifications noted on the project plans or as directed by Engineer when not specified on the project plans.
- All existing monuments, property corners, ground control and benchmarks shall be protected and preserved; and if disturbed by Contractor, shall be restored at Contractor's expense. Contractor shall notify Surveyor of any conflicts between existing monuments, property corners, ground control and/or benchmarks and the proposed site improvements.
- Contractor shall notify Owner/Developer and Engineer immediately upon encountering any field conditions, which are inconsistent with the project plans and/or specifications.
- When noted on the project plans for demolition and/or removal, Contractor shall remove existing structures, building and debris and recycle and/or dispose of in accordance with Local, County, State and Federal regulations.
- Contractor shall remove excess construction materials and debris from site and perform restoration in accordance with the project plans and specifications. Disposing of excess materials and debris shall be performed in accordance with Local, County, State and Federal regulations.
- Construction access to the site shall be located as acceptable to the Owner/Developer and to the appropriate Local, County and/or State Agency with jurisdiction over the road(s) providing access to the site. Construction access shall be maintained and cleaned in accordance with the appropriate Local, County and/or State Agencies and as directed by Owner/Developer and/or Engineer.
- Contractor shall take necessary precautions to protect all site improvements from heavy equipment and construction procedures. Damage resulting from Contractor actions shall be repaired at Contractor's expense.



DESIGN: JMB
DRAFT: L.F.
CHECK: JMB

DATE	REVISION-DESCRIPTION	DATE	REVISION-DESCRIPTION
3-23-12	REVISED PEWR REVIEW COMMENTS		

AMERIGAS
SITE

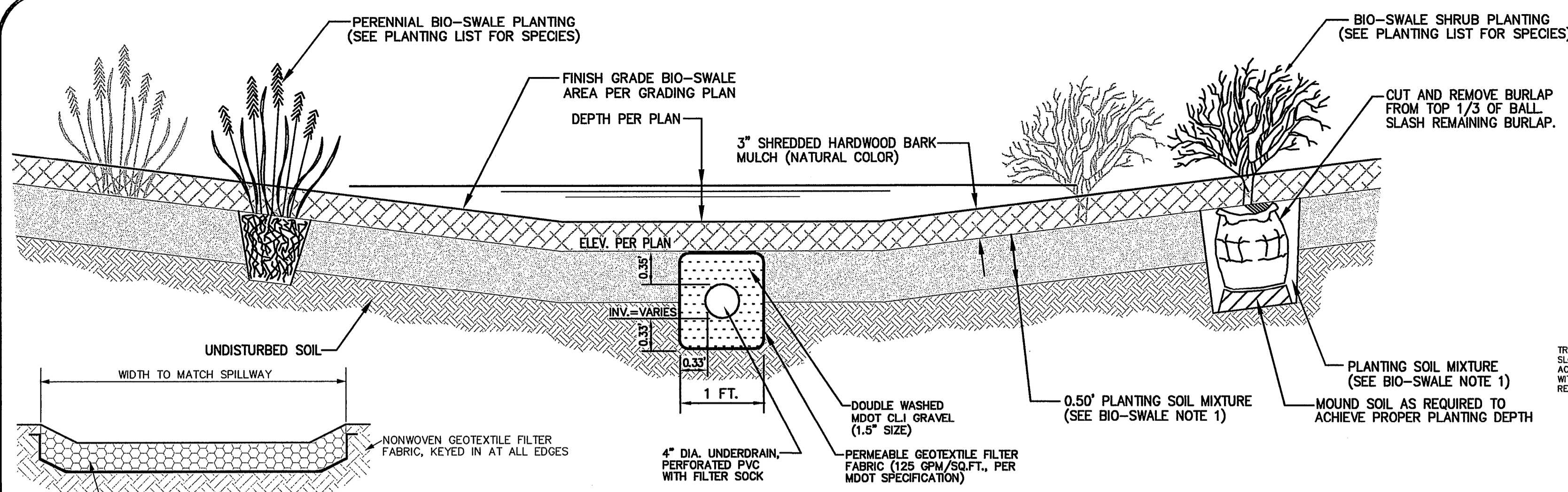
SITE DEVELOPMENT
NOTES & DETAILS

OWNER:
AMERIGAS PROPANE LP
P.O. BOX 798
VALLEY FORGE, PA. 19482-9908

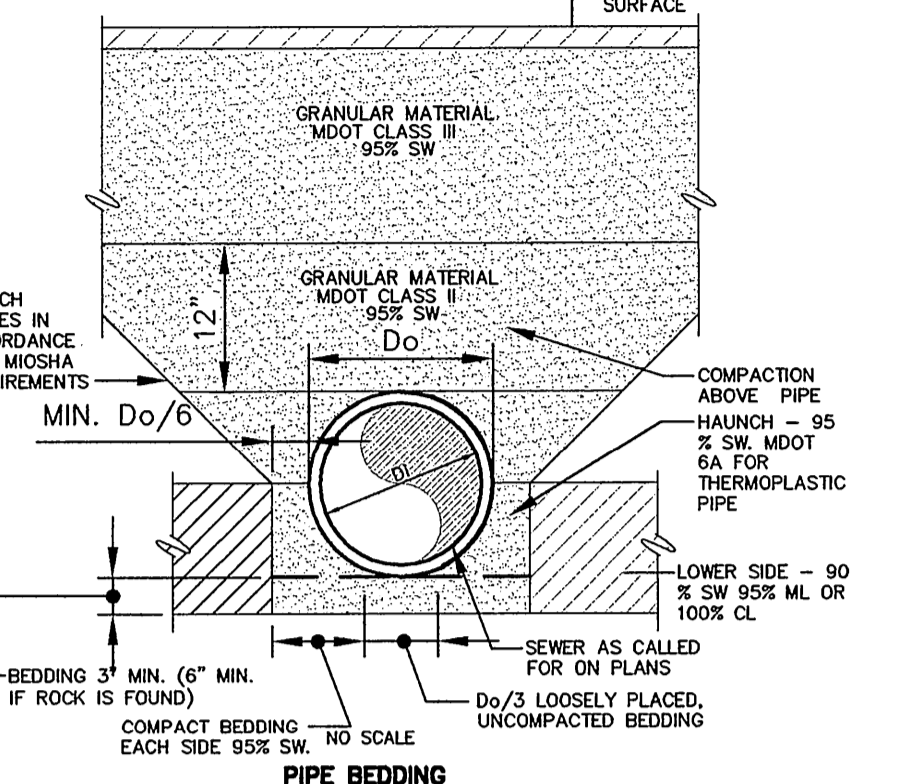
SCALE: N/A
PROJECT No.: 9121942
DWG NAME: 1942-UT
PRINT: MAR 26 2012

DT1





- NOTES:**
1. COMPACTION PRESENTED AS STANDARD PROCTOR VALUES.
 2. SOIL TYPES ASTHO DESIG:
GRAVEL SANDY (SW) A1, A3
SANDY SILTY (ML) A2, A4
SILTY CLAY (CL) A5, A6, A7
 3. SOIL IN HAUNCH AND LOWER SIDE ZONES OUTSIDE OF DO/8 FROM SPRING LINE SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS THE SOIL IN THE OVERFILL ZONE.



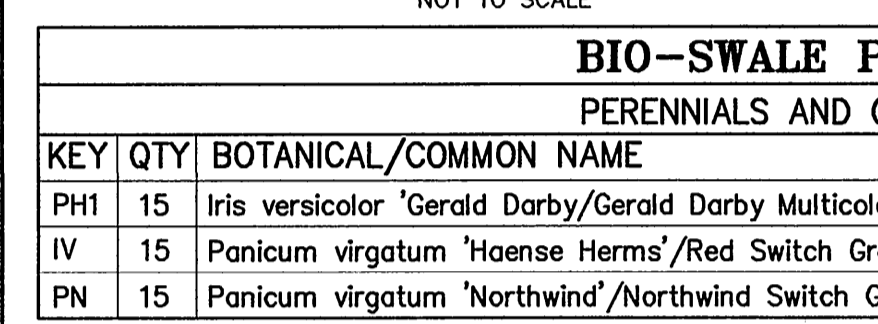
DEMOLITION NOTES:

1. The demolition specifications of the Local Municipality are a part of this work. Refer to the General Notes on the project plans for additional requirements.
2. Contractor shall contact the MISS DIG locating system, DIGGERS HOTLINE or other appropriate local underground utility locating Agency, a minimum of three (3) working days prior to performing demolition work. Existing utility information on the project plans may be from information disclosed to this firm by the Utility Companies, Local, County or State Agencies, and/or various other sources. No guarantee is given as to the completeness or accuracy thereof. Prior to construction, locations and depths of all existing utilities (in possible conflict with the proposed improvements) shall be verified in the field.
3. Contractor shall contact the appropriate Agencies to coordinate disconnect of the electric, gas, phone, cable and other public utilities as necessary prior to performing demolition work.
4. Contractor shall contact the appropriate Agencies to coordinate removal and/or relocation of any underground and/or overhead public utility lines as necessary prior to performing demolition work.
5. Contractor shall recycle and/or dispose of all demolition debris in accordance with the appropriate Local, County, State and Federal regulations.
6. All bituminous and concrete pavement to be removed shall be saw cut at the limits of removal to provide for a clean straight edge for future abutment.
7. All existing irrigation lines to be removed shall be terminated at the limits of demolition or as necessary to allow for construction of the proposed site improvements. Ends of pipe shall be capped and the location of marked for future connection.
8. All existing water main and sanitary sewer to be removed shall be terminated at the limits of demolition or as indicated on the project plans. Temporary plugs shall be installed in the ends of pipe in accordance with the appropriate Agency and the locations of marked for future connection. Permanent plugs shall be installed in the ends of pipe in accordance with the appropriate Agency. The Contractor shall record the location of all permanent plugs and provide the location information to the appropriate Agency.
9. All existing storm sewer to be removed shall be terminated at the limits of demolition or as indicated on the project plans. Temporary plugs shall be installed in the ends of pipe in accordance with the appropriate Agency and the locations of marked for future connection. Permanent bulkheads shall be installed in the ends of pipe and/or openings in terminating structures in accordance with the appropriate Agency. The Contractor shall record the location of all permanent bulkheads and provide the location information to the appropriate Agency.
10. All existing light sources to be removed shall have their power cables removed up to the power source or properly terminated for future connection at the limits of demolition or as necessary to allow for construction of the proposed site improvements. Removal and termination of power cables shall be performed in accordance with local electric codes.
11. All existing utility meters to be removed shall be properly removed to allow for reuse. Any existing utility meters that are not to be reused as a part of this project shall be returned to the appropriate Agency.
12. All trenches and/or excavations resulting from the demolition of underground utilities, building foundations, etc. that are located within the 1 on 1 influence zone of proposed structures, paved areas and/or other areas subject to vehicular traffic shall be backfilled with MDT Class III granular material (or better) to the proposed subgrade elevation. Backfill shall be placed using the controlled density method (12\"/>

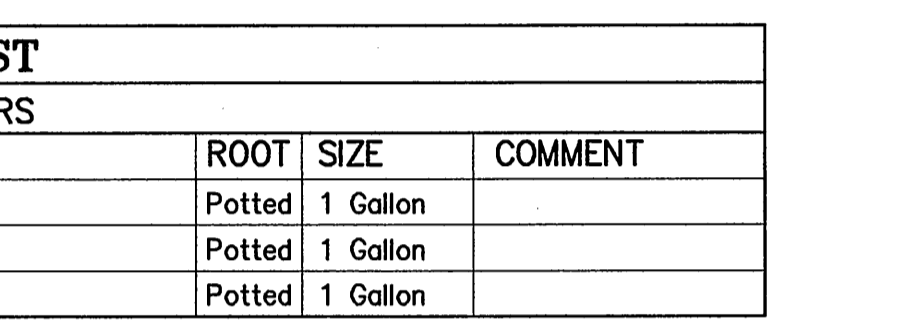
GENERAL NOTES:

1. Contractor shall perform the work in accordance with the requirements of the appropriate Local, County and State Agencies and all other Government and Regulatory Agencies with jurisdiction over the project. Contractor shall notify the appropriate Agencies in advance of each stage of work in accordance with each Agency's requirements.
2. Contractor shall comply with all permit, insurance, licensing and inspection requirements associated with the work. Prior to construction, Contractor and Owner/Developer shall determine who is responsible for obtaining each required permit. Contractor shall verify that each required permit has been obtained prior to commencement of the stage of work associated with the required permit(s).
3. Contractor shall furnish liability insurance and property damage insurance to save harmless the Owner, Developer, Architect, Engineer, Surveyor and Government Agencies for any accident occurring during the construction period. Refer to the appropriate Local, County and State Agencies for additional requirements. Copies of insurance certifications shall be made available to the Owner/Developer.
4. Contractor shall conduct and perform work in a safe and competent manner. Contractor shall perform all necessary measures to provide for traffic and pedestrian safety from the start of work and through substantial completion. Contractor shall determine procedures and provide safety equipment such as traffic control, warning devices, temporary pavement markings and signs as needed. Contractor shall comply with the safety standards of the State Department of Labor, the occupational health standards of the State Department of Health and safety regulations of the appropriate Local, County, State and Federal Agencies. Refer to the safety specifications of the appropriate Regulatory Agencies. The Contractor shall designate a qualified employee with complete job site authority over the work and safety precautions; said designated employee shall be on site at all times during the work.
5. Contractor shall coordinate scheduling of all work in the proper sequence, including work by Subcontractors. Additional costs due to improper planning by Contractor or work done out of sequence as determined by standard acceptable construction practices, shall be Contractor's responsibility.
6. Contractor shall contact the MISS DIG locating system, DIGGERS HOTLINE or other appropriate local underground utility locating Agency, a minimum of three (3) working days prior to construction. Existing utility information on the project plans may be from information disclosed to this firm by the Utility Companies, Local, County or State Agencies, and/or various other sources. No guarantee is given as to the completeness or accuracy thereof. Prior to construction, locations and depths of all existing utilities (in possible conflict with the proposed improvements) shall be verified in the field.
7. Contractor shall coordinate scheduling a Pre-Construction Meeting with Engineer prior to commencement of work.
8. The Local Municipality, County and/or State in which the project is located may require an Engineer's Certification of construction of the proposed site improvements. Contractor shall verify the certification requirements with Engineer prior to commencement of work. Contractor shall coordinate construction staking, testing, documentation and observation with the appropriate Agency, Surveyor and/or Engineer as required for Engineer's Certification and Government Agency Acceptance. All materials used and work done shall meet or exceed the requirements of certification and acceptance, the contract documents and the material specifications noted on the project plans. Any materials used or work done that does not meet said requirements, contract documents and/or specifications shall be replaced and/or redone at Contractor's expense. The Owner/Developer may wait for test results, certifications and/or Agency reviews prior to accepting work.
9. Engineer may provide subsurface soil evaluation results, if available, to Contractor upon request. Subsurface soil evaluation results, soils maps and/or any other documentation does NOT guarantee existing soil conditions or that sufficient, acceptable on-site granular material is available for use as structural fill, pipe bedding, pipe backfill, road subbase or use as any other granular material specified on the project plans. On-site granular material that meets or exceeds the material specifications noted on the project plans may be used as structural fill, pipe bedding, pipe backfill and/or road subbase material. On-site granular material shall be stockpiled and tested as acceptable to the appropriate Agency and/or Engineer prior to use.
10. During the performance of their work, Contractor shall be solely responsible for determining soil conditions and appropriate construction methods based on the actual field conditions. Contractor shall install and maintain sheeting, shoring, bracing and/or other tools and equipment and/or construction techniques as needed for the safety and protection of the workers, pedestrians and/or vehicular traffic and for protection of adjacent structures and site improvements.
11. Contractor shall install temporary and permanent soil erosion and sedimentation control devices at the appropriate stages of construction in accordance with the appropriate regulatory Agencies. Refer to Soil Erosion and Sedimentation Control Plans and Notes on the project plans.
12. Structural fill shall be placed as specified on the project plans and within the 1 on 1 influence zone of all structures, paved areas and/or other areas subject to vehicular traffic. Structural fill shall be placed using the controlled density method (12\"/>

RIP-RAP CROSS-SECTION
NOT TO SCALE



BIO-SWALE CROSS-SECTION
NOT TO SCALE



BIO-SWALE NOTES:

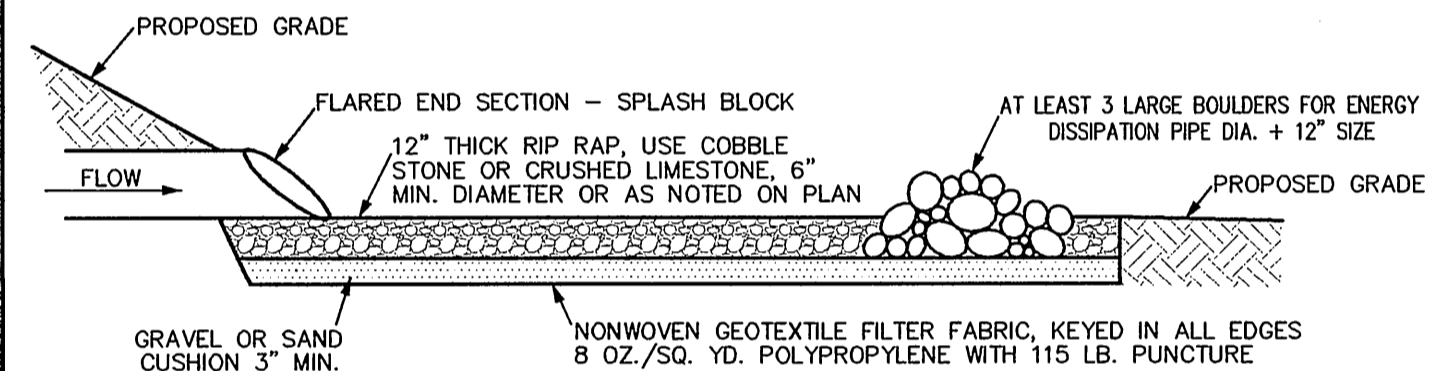
1. The planting soil must be a mixture that includes sand (2.0-0.50 mm) (50-60%), topsoil (sandy/clay loam) (20-25%), and leaf compost (20-25%). The maximum clay content of the mixture must be equal to or less than 5%. The planting soil mixture shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches, excluding mulch. The soil must have an infiltration rate of at least 0.5\"/>

BIO-SWALE PLANT LIST

PERENNIALS AND GROUNDCOVERS

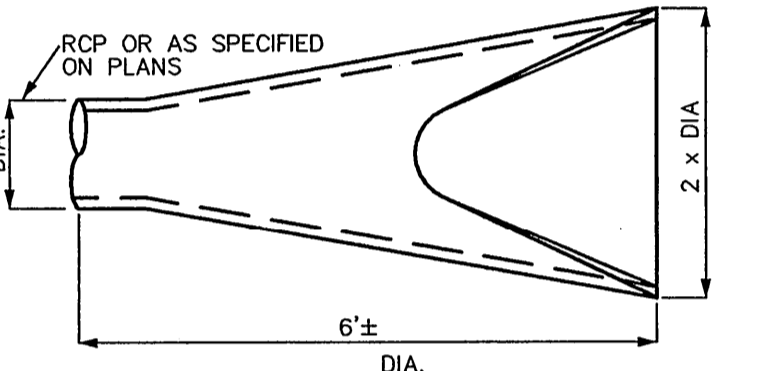
KEY	QTY	BOTANICAL/COMMON NAME	ROOT	SIZE	COMMENT
PHI	15	Iris versicolor 'Gerald Darby/Gerald Darby Multicolored Iris	Potted	1 Gallon	
IV	15	Panicum virgatum 'Hoense Herms'/Red Switch Grass	Potted	1 Gallon	
PN	15	Panicum virgatum 'Northwind'/Northwind Switch Grass	Potted	1 Gallon	

NOTE: RANDOMLY PLACE PLANTINGS WITHIN BIO-SWALE



13 RIP RAP CROSS SECTION
NOT TO SCALE

- NOTES:
1. GROUT RIP RAP WITH A 6\"/>

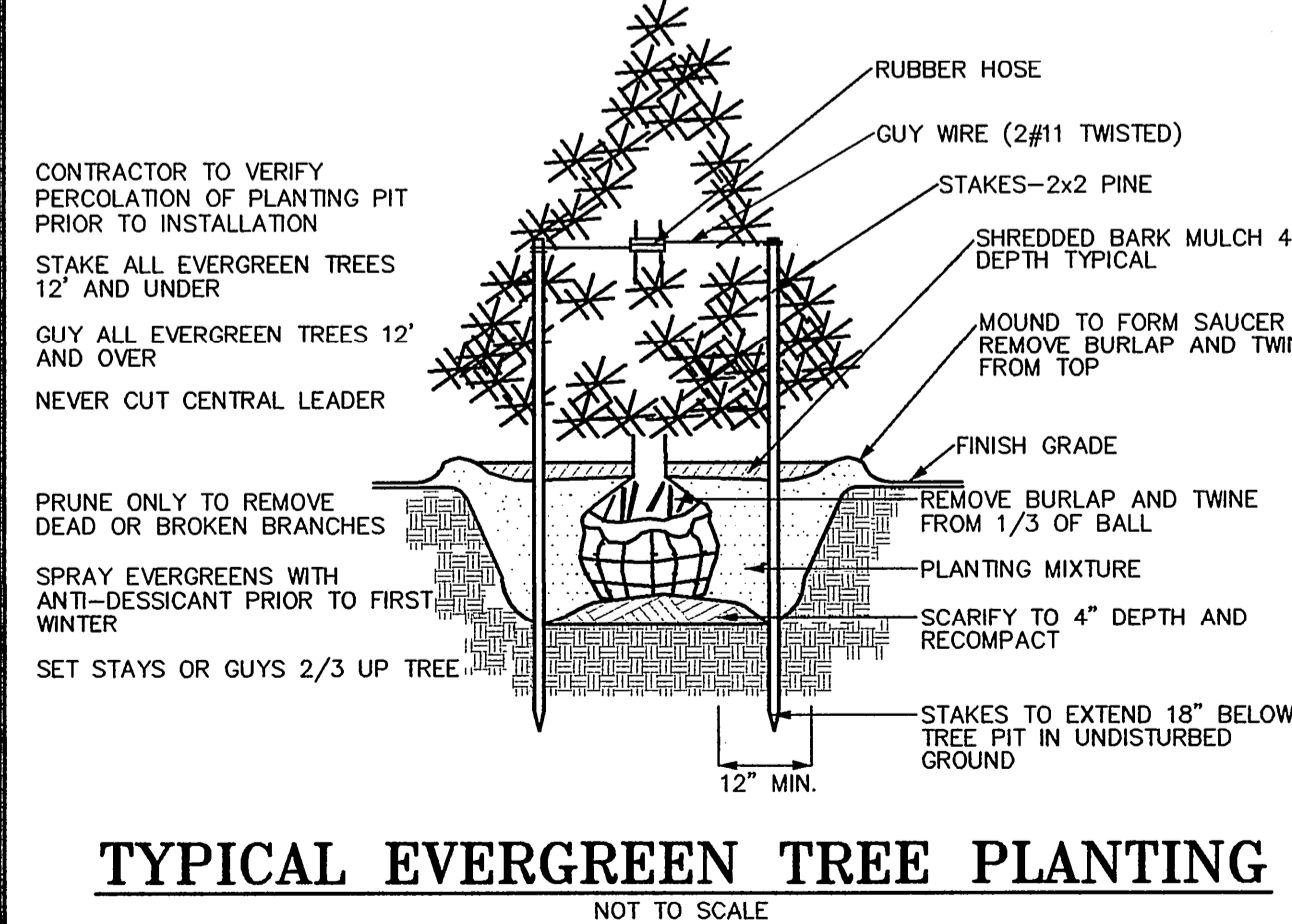


FLARED END SECTION
NOT TO SCALE

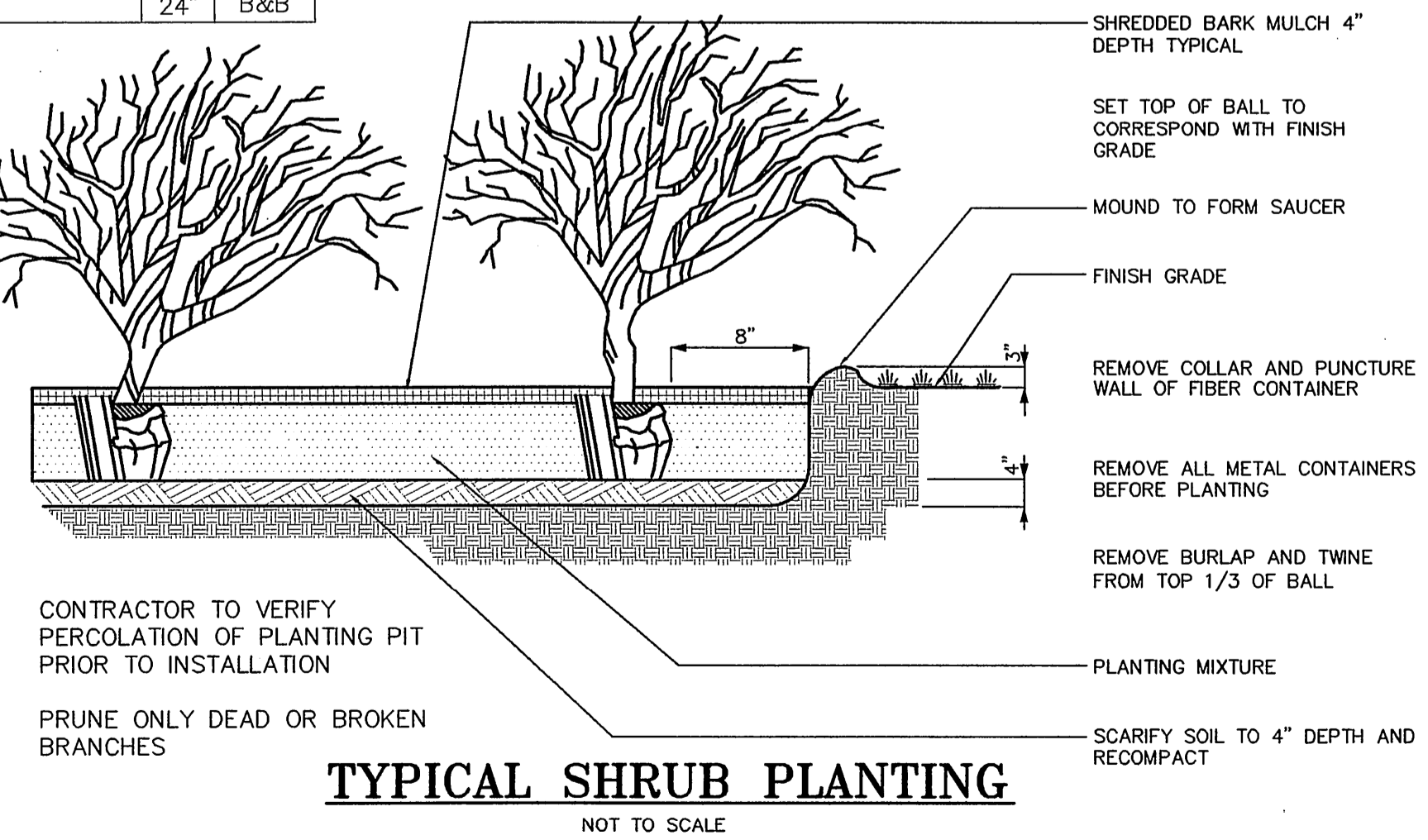
- NOTES:
1. RCP FLARED END SECTION SHOWN, PROVIDE SIMILAR FLARED END SECTION FOR CMP, SLCPP OR HDPE PIPE.
 2. PROVIDE RIP-RAP PER RIP-RAP DETAILS FOR ALL OUTLET FLARED END SECTIONS.
 3. INSTALL FLARED END SECTION WITH INVERT ELEVATION AS VIEWED FROM END.

TREE PLANTING LIST

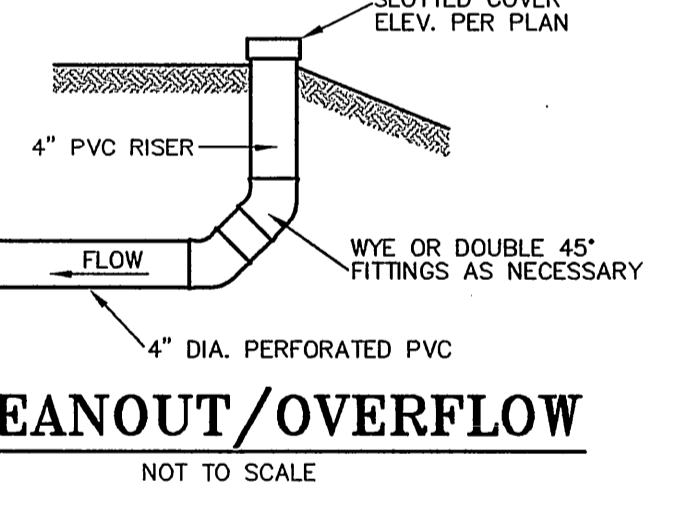
SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
EVERGREEN TREES					
[Symbol]	3	Picea glauca	White Spruce	6' MIN.	B&B
		Picea abies	Norway Spruce	6' MIN.	B&B
SHRUBS					
[Symbol]	14	Euonymus	Burning Bush	24"	B&B
		Exochorda	Pearl Bush	24"	B&B
		Buxus microphylla 'Wintergreen'	Wintergreen Boxwood	24"	B&B



TYPICAL EVERGREEN TREE PLANTING
NOT TO SCALE



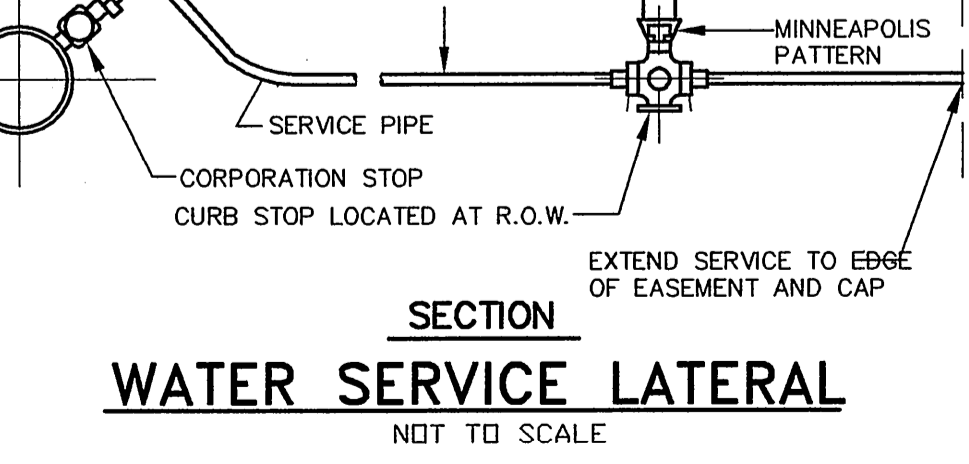
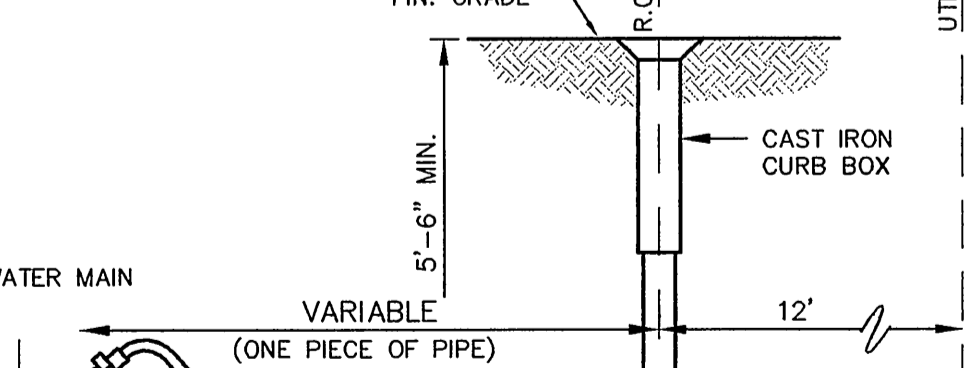
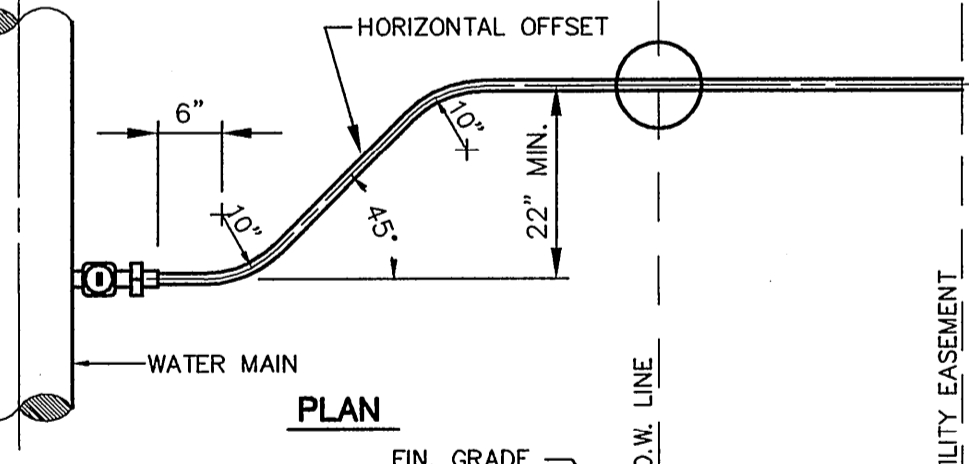
TYPICAL SHRUB PLANTING
NOT TO SCALE



CLEANOUT/OVERFLOW
NOT TO SCALE

SANITARY SEWER LATERAL
NOT TO SCALE

SERVICE PIPE	CORP. STOP	CURB STOP	SERVICE BOX
3/4"	3/4"	3/4"	2 1/2"
1"	1"	1"	2 1/2"
1 1/4"	1 1/4"	1 1/4"	3"
1 1/2"	1 1/4" X 1 1/2"	1 1/2"	3"
2"	1 1/2" X 2"	2"	3"



WATER SERVICE LATERAL
NOT TO SCALE

GRAVITY SANITARY SEWER LEAD NOTES:

1. The Local Plumbing Code and sanitary sewer specifications of the Local Municipality with authority over the sanitary sewer are a part of this work. Refer to the General Notes and Gravity Sanitary Sewer Notes on the project plans for additional requirements.
2. Sanitary Sewer Leads shall be PVC pipe conforming to ASTM D3034, maximum SDR of 26. Pipe joints shall be push on bell-and-spigot type joints conforming to ASTM D3212 with factory installed flexible elastomeric gaskets conforming to ASTM F477. Solvent cemented joints shall only be used when noted on the project plans for specific applications and shall conform to ASTM D2855. Provide pipe diameter and slope per project plans. When proposed lead information is not noted on the project plans, provide 4\"/>

DESIGN: JMB
DRAFT: L.F.
CHECK: JMB

DATE	REVISION-DESCRIPTION	DATE	REVISION-DESCRIPTION
3-23-12	REVISED PER REVIEW COMMENTS		

AMERIGAS SITE

SITE DEVELOPMENT NOTES & DETAILS

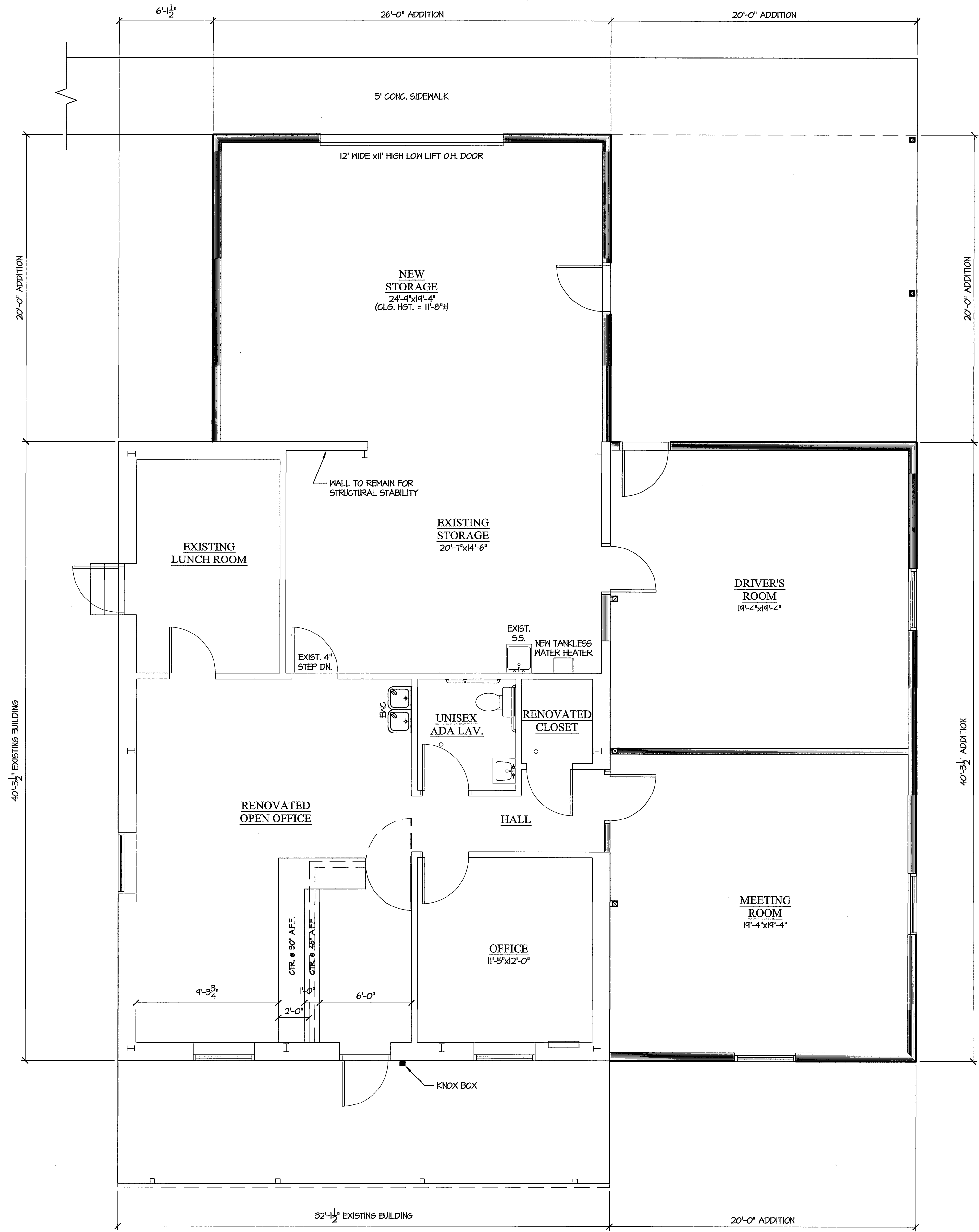
OWNER:
AMERIGAS PROPANE LP
P.O. BOX 798
VALLEY FORGE, PA. 19482-9908

SCALE: N/A
PROJECT No.: 9121942
DWG NAME: 1942-UT
PRINT: MAR 26 2012

DT2



P:\3-19\1942\Engineering\Drawings\1942_1_Triming_3/23/12\1942_1.dwg, 3/23/12, 6:46:16 AM, LFF, PLOTTER: PLOT

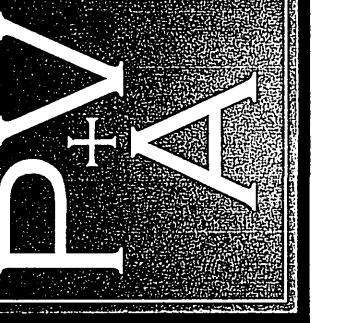


OCCUPANT LOAD:
 STORAGE = 813 NSF / 300 = 3 OCC.
 OFFICES = 1630 NSF / 100 = 17 OCC.
 TOTAL OCCUPANTS = 20 OCC.

FLOOR PLAN
 SCALE: 1/4" = 1'-0"

AREAS:
 EXISTING BUILDING = 1244 GSF
 ADDITIONS = 1326 GSF
 TOTAL = 2620 GSF

PUCCI + VOLLMAR
ARCHITECTS, PC
 ARCHITECTURE + DESIGN + PLANNING
 508 E. GRAND RIVER AVE., SUITE 100B, BRIGHTON, MI 48116-1566
 PHONE (810) 225-2930 + FAX (810) 225-2930 + www.pv-architects.com



AMERIGAS ADDITION
 2400 DORR ROAD
 GENOA TOWNSHIP, MICHIGAN

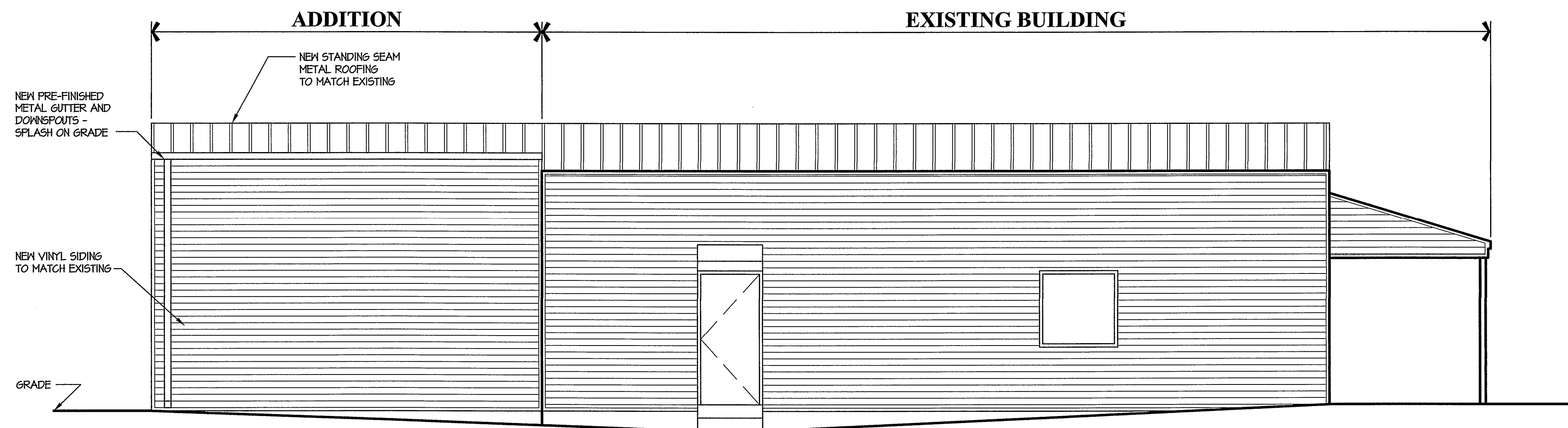
FLOOR PLAN

NO.	DATE	BY	NOTES
2	4-4-2012	KV	REVISED PER OWNER
1	3-16-2012	KV	REVISED PER TOWNSHIP REVIEW

DO NOT SCALE THIS PRINT,
 USE DIMENSIONS SHOWN ONLY

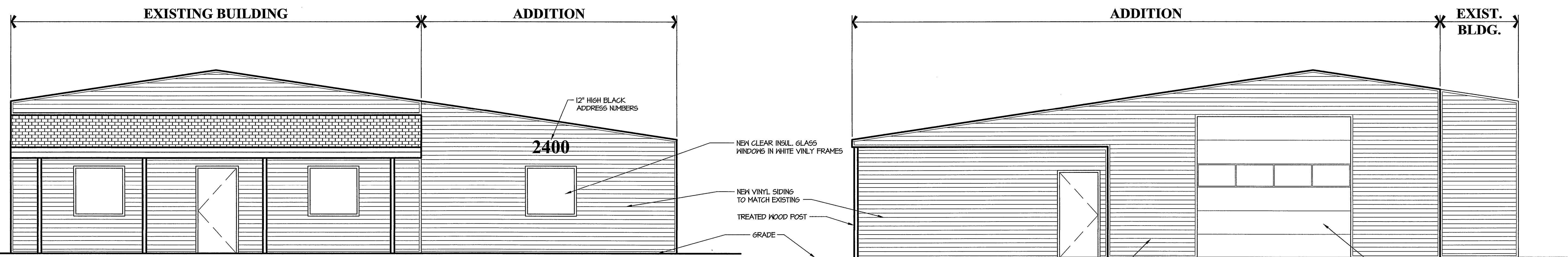
DRAWN BY: KV
 CHECKED: KV
 APPROVED: KV
 DATE: MARCH 1, 2012
 PROJECT: 1204

SHEET:
A1



SOUTH ELEVATION

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

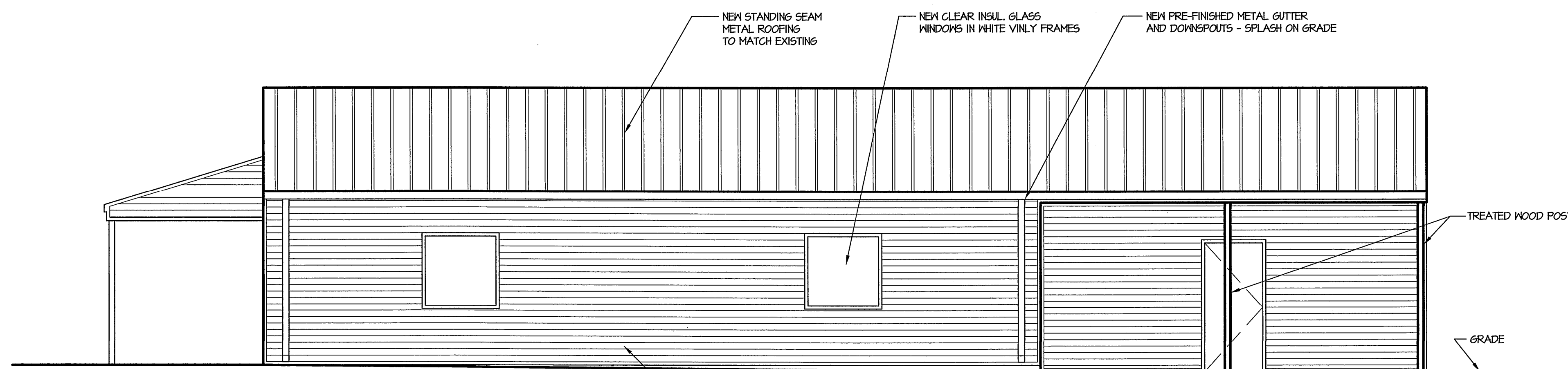


EAST (FRONT) ELEVATION

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

WEST (REAR) ELEVATION

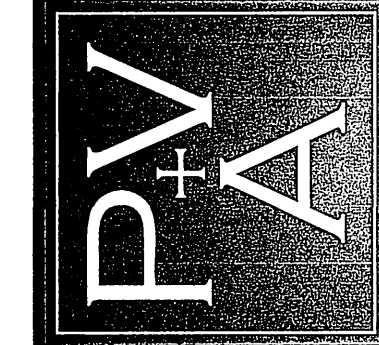
SCALE: 1/4" = 1'-0"



NORTH ELEVATION

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

PUCCI + VOLLMAR ARCHITECTS, PC
 ARCHITECTURE + DESIGN + PLANNING
 508 E. GRAND RIVER AVE., SUITE 100B, BRIGHTON, MI 48116-1566
 PHONE (810) 225-2930 + FAX (810) 225-2930 + www.pv-architects.com



AMERIGAS ADDITION
 2400 DORR ROAD
 GENOA TOWNSHIP, MICHIGAN

ELEVATIONS

NO.	DATE	BY	NOTES
2	4-4-2012	KV	REVISED PER OWNER
1	3-16-2012	KV	REVISED PER TOWNSHIP REVIEW

DO NOT SCALE THIS PRINT, USE DIMENSIONS SHOWN ONLY

DRAWN BY: KV
 CHECKED: KV
 APPROVED: KV
 DATE: MARCH 1, 2012
 PROJECT: 1204

SHEET:
A2

ORDINANCE 120416
GENOA CHARTER TOWNSHIP
LITTER ORDINANCE

AN ORDINANCE TO PROVIDE FOR THE REGULATION, CONTROL AND PROHIBITION OF LITTERING OF OR ON PROPERTY OR WATERS OF AND IN GENOA TOWNSHIP; AND TO PROVIDE PENALTIES FOR VIOLATION OF SAID ORDINANCE.

THE TOWNSHIP OF GENOA, LIVINGSTON COUNTY, MICHIGAN ORDAINS:

SECTION 1. DEFINITIONS

The term "litter" shall include, without limitation, all rubbish, refuse, water material, garbage, including but not limited to the following; waste composed of animal, fish, fowl fruit or vegetable matter, dead animals, putrescible and non-putrescible solid waste (except body wastes), ashes, glass, cans bottles, discarded or abandoned machinery or parts thereof, discarded or abandoned motor vehicles or parts thereof, parts of broken furniture, stoves or other appliances and industrial wastes.

The term "person" shall include all natural persons, firms, co-partnerships, corporations, and all associations of natural persons, incorporated or unincorporated, whether acting by themselves, or by agent or employee. All persons who violate any provision of this ordinance, whether as owner, occupant, lessee, agent or employee shall be equally liable as any principal.

The term "public and private property" includes, but is not limited to, any and all streets, right of way of any street, road or highway, sidewalk, boulevard, alley or other public way and any and all public park, square, open space, conservation or recreation area playground or building; and residential or farm properties or timberlands.

The term "vehicle" means every motor vehicle required to be registered under the provisions of Act. No. 300 of Public Act of 1949 of the State of Michigan, the Michigan Vehicle Code, as amended, (MCL 257.1, et seq) to operate on a public road.

The term "vessel" means every description of watercraft other than a seaplane on the water, used or capable of being used as a means of transportation on water.

The term "waters" means any body of water or watercourses, or the shore or beach thereof, including the ice above the water.

SECTION 2. LITTERING; PUBLIC AND PRIVATE PROPERTY

It shall be unlawful for any person knowingly, without consent of the township or the owner of private property in this township, to dump, deposit, place, throw or leave, or cause or permit the dumping, depositing, placing, throwing or leaving, of litter in or upon

any public or private property or any waters within the township other than property designated and set aside for such purposes, or except in public receptacles and private receptacles for collection.

SECTION 3. LITTER THROWN BY PERSONS IN VEHICLES

It shall be unlawful for any person while a driver or passenger in a vehicle or vessel to throw or deposit litter upon any street, roadway or waters or other public or private property within the township.

SECTION 4. PLACEMENT OF LITTER IN RECEPTACLES SO AS TO PREVENT SCATTERING

Persons placing litter in public or private receptacles designed for such purposes shall do so in such a manner as to prevent it from being carried or deposited by the elements or by animals upon any street, sidewalk or other public or private lands or place.

SECTION 5. TRUCK LOADS CAUSING LITTER

No person shall drive or move any motor vehicle or trailer within the township unless such vehicle or trailer is so constructed or loaded as to prevent any load, contents or litter from being blown or deposited upon any street, alley or public or private lands or place.

SECTION 6. PRESUMPTIONS RE VEHICLES OR VESSELS

- (1) In a proceeding for a violation of this ordinance involving litter from a motor vehicle or vessel, proof that the particular vehicle or vessel described in the citation, complaint or warrant was used in the violation, together with proof that the defendant named in the citation, complaint or warrant was the registered owner of the vehicle or vessel at the time of the violation, constitutes in evidence a presumption that the registered owner of the vehicle or vessel was the driver of the vehicle or vessel at the time of the violation.
- (2) The driver of a vehicle or vessel is presumed to be responsible for litter which is thrown, dropped, dumped, deposited, placed or left from the vehicle or vessel on public or private property or waters.
- (3) In a proceeding for a violation of this act involving litter from a leased vehicle or leased vessel, proof that the particular vehicle or vessel described in the citation, complaint or warrant was used in the violation, together with proof that the defendant named in the citation, complaint or warrant was the lessee of the vehicle or vessel at the time of the violation, constitutes in evidence a presumption that the lessee of the vehicle or vessel was the driver of the vehicle or vessel at the time of the violation.

SECTION 7. VIOLATION; PUNISHMENT

Any violation of this ordinance by any person shall be deemed a misdemeanor and shall be punishable by a fine not to exceed Five Hundred Dollars (\$500.00) plus costs of prosecution, or by imprisonment in the county jail not to exceed ninety (90) days, or by such fine and imprisonment plus costs of prosecution. The court in lieu of any sentence imposed, may direct a substitution of litter gathering labor, including, but not limited to, the litter connected with the particular violation, and proper disposal of said litter, under the supervision of the court. Each day that a violation continues shall be deemed to be a separate violation. This ordinance shall not prevent the township from using other methods or means available under Michigan law pertaining to litter problems or violations.

SECTION 8. CONFLICTING PROVISIONS REPEALED

Ordinances or parts of ordinances in conflict or inconsistent herewith are hereby repealed.

SECTION 9. SEVERABILITY

This ordinance and various parts, sections and clauses thereof are hereby declared severable. If any part, section, paragraph or clause is adjudged invalid, it is hereby provided that the remainder of the ordinance shall not be affected thereby.

This ordinance shall take effect on the 20th day of May, 2012.

State of Michigan)
) ss.
County of Livingston)

I hereby certify that the foregoing ordinance is a true copy of the ordinance enacted by the township board on the 16th day of April, 2012, and that the necessary legal provisions have been observed.

Polly Skolarus, Township Clerk

I, Polly Skolarus, Clerk of the Township of Genoa, hereby certify that the foregoing ordinance was published within ten days after adoption by printing the same in the Livingston County Press on the 20th day of April, 2012.

Polly Skolarus, Township Clerk

LITTER ORDINANCE

AN ORDINANCE TO PROVIDE FOR THE REGULATION, CONTROL AND PROHIBITION OF THE LITTERING OF OR ON PUBLIC AND PRIVATE PROPERTY OR AND WATERS OF AND IN GENOA TOWNSHIP; AND TO PROVIDE PRESCRIBE PENALTIES FOR VIOLATION OF SAID ORDINANCE.

THE PEOPLE OF THE TOWNSHIP OF GENOA, LIVINGSTON COUNTY, MICHIGAN ORDAINS:

SECTION 1. DEFINITIONS

The term "litter" shall include, without limitation, is all rubbish, refuse, water material, garbage, including but not limited to the following; waste composed or animal, fish, fowl fruit or vegetable matter, dead animals, putrescible and non-putrescible solid waste (except body wastes), ashes, glass, cans bottles, discarded or abandoned machinery or parts thereof, discarded or abandoned motor vehicles or parts thereof, parts of broken furniture, stoves or other appliances and industrial wastes.

The term "person" shall include all natural persons, firms, co-partnerships, corporations, and all associations of natural persons, incorporated or unincorporated, whether acting by themselves, or by agent or employee. All persons who violate any provision of this ordinance, whether as owner, occupant, lessee, agent or employee shall be equally liable as any principal. is any individual or legal entity.

The term "public and private property premises" includes, but is not limited to, are any and all streets, right of way of any street, road or highway, sidewalk, boulevard, alley or other public way and any and all public park, square, open space, conservation or recreation area playground or building; and residential or farm properties or timberlands.

The term "Motor vehicle" means every motor vehicle required to be registered under the provisions of Act. No. 300 of Public Act of 1949 of the State of Michigan, the Michigan Vehicle Code, as amended, (MCL 257.1, et seq) to operate on a public road.

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property designated and set aside for such purposes, or except in public receptacles and private receptacles for collection.

SECTION 3. LITTER THROWN BY PERSONS IN VEHICLES

It ~~shall be~~ is unlawful for any person while a driver or passenger in a vehicle or vessel to throw or deposit litter upon any street, roadway or waters or other public place or private ~~property premises~~ within the township.

SECTION 4. PLACEMENT OF LITTER IN RECEPTACLES SO AS TO PREVENT SCATTERING

Persons placing litter in public or private receptacles designed for such purposes shall do so in such a manner as to prevent it from being carried or deposited by the elements or by animals upon any street, sidewalk or other public or private lands or place.

SECTION 5. TRUCK LOADS CAUSING LITTER

No person shall drive or move any motor vehicle or trailer within the township unless such vehicle or trailer is so constructed or loaded as to prevent any load, contents or litter from being blown or deposited upon any street, alley or public or private lands or place.

~~SECTION 6. OWNER TO MAINTAIN PREMISES FREE OF LITTER; NOTICE TO REMOVE~~

~~(1) It is unlawful for the owner or person in control of any private property to fail to maintain his premises free of litter after due notification by the township manager or supervisor that said premises is a danger to the public health, safety and welfare of the township.~~

~~(2) The township manager or the supervisor is hereby authorized and empowered to personally, or by registered mail return receipt requested, notify the owner of any property within the township, that said property is dangerous to public health, safety and welfare.~~

~~(3) Upon failure, neglect or refusal of any owner or agent so notified, to properly dispose of litter dangerous to the public health, safety or welfare within thirty days after receipt of notice as provided in subsection (2) above, the township manager or supervisor shall make a full and complete report thereof to the township board, which may then cause the township constable to take necessary steps to procure a complaint and warrant against the offending individual or individuals.~~

SECTION 6. PRESUMPTIONS RE VEHICLES OR VESSELS

(1) In a proceeding for a violation of this ordinance act involving litter from a motor vehicle or vessel, proof that the particular vehicle or vessel described in the citation, complaint or warrant was used in the violation, together with proof that the defendant

named in the citation, complaint or warrant was the registered owner of the vehicle or vessel at the time of the violation, constitutes in evidence a presumption that the registered owner of the vehicle or vessel was the driver of the vehicle or vessel at the time of the violation.

(2) The driver of a vehicle or vessel is presumed to be responsible for litter which is thrown, dropped, dumped, deposited, placed or left from the vehicle or vessel on public or private property or waters.

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SECTION 7. VIOLATION; PUNISHMENT

Any violation of this ordinance by any person violating any provision of this ordinance shall be deemed a misdemeanor and shall be punishable by a fine not to exceed fined an amount not in excess of Five Hundred Dollars (\$500.00) plus costs of prosecution, or by imprisonment in the county jail not to exceed ninety (90) days, or by both such fine and imprisonment and plus costs of prosecution. The court in lieu of any sentence imposed, may direct a substitution of litter gathering labor, including, but not limited to, the litter connected with the particular violation, and proper disposal of said litter, particular violation under the supervision of the court. Each day that a violation continues shall be deemed to be a separate violation. This ordinance shall not prevent the township from using other methods or means available under Michigan law pertaining to litter problems or violations.

SECTION 8. CONFLICTING PROVISIONS REPEALED

Ordinances or parts of ordinances in conflict or inconsistent herewith are hereby repealed.

SECTION 9. SEVERABILITY

This ordinance and various parts, sections and clauses thereof are hereby declared severable. If any part, section, paragraph or clause is adjudged invalid, it is hereby provided that the remainder of the ordinance shall not be affected thereby.

This ordinance shall take effect on the

day of ,2012.

State of Michigan)

) ss.

County of Livingston)

I hereby certify that the foregoing ordinance is a true copy of the ordinance enacted by the township board on the day of , 2012, and that the necessary legal provisions have been observed.

Polly Skolarus, Township Clerk

I, Polly Skolarus, Clerk of the Township of Genoa, hereby certify that the foregoing ordinance was published within ten days after adoption by printing the same in the Livingston County Press on the day of , 2012.

Polly Skolarus, Township Clerk

NOTICE
Genoa Charter Township Residents
Amendment to the Township Litter Ordinance

Ordinance No. 120416

On April 16, 2012 the Genoa Charter Township Board adopted an amendment to the Township Litter Ordinance originally adopted on the 15th day of September 1975. This amendment may be viewed in its entirety at www.genoa.org. This amendment shall take effect on the 20th day of May 2012.

Signed: Paulette A. Skolarus
Genoa Township Clerk

(press/argus April 19, 2012)

April 10, 2012

To: The Genoa charter Township Board

From: Polly Skolarus, Clerk

The April 16th agenda will include an amendment to the Township Litter Ordinance originally adopted in 1975. Frank Mancuso has determined that this ordinance is not in agreement with the Township Zoning Ordinance. The amendment will take effect 30 days after publication.

AMENDMENT NOTICE
for
GENOA CHARTER TOWNSHIP
Litter Ordinance

A regular meeting of the board scheduled for April 16, 2012 will review an amendment to the Township Litter Ordinance adopted the 24th day of October 1975. This amendment may be viewed in its entirety at www.genoa.org.

Signed: Paulette A. Skolarus
Genoa Township Clerk

(press/argus 04/13/2012)

Livingston County Department of Building & Safety Engineering

4/2/2012

11:15:15AM

New Permits Issued 3/1/2012 - 3/31/2012

Permit Type: BLD

Jurisdiction: Genoa Township

Permit #	Work Nature: Bld Use:	Site Address Project Description	Parcel #	Permit Fee	Square Feet:	Valuation:
BLD2009-10914	ALT ACC	4617 GOLF VIEW DR BRIGHTON 48116 DEMO EXISTING DECK AND REBUILD A NEW 14' X 34' WOOD DECK	11-28-403-072	\$60.00	476	\$18,854.36
Received	10/15/2009					
Issued	3/22/2012					
OWN	TEIBER JOHN F & SHARON TRUST	4617 GOLF VIEW DR	BRIGHTON MI 48116			
CON	OWNER					
BLD2010-00925	ADD CHU	7191 W GRAND RIVER AVE BRIGHTON 48114 Adding an additional 6100 suite to an existing church suite	11-13-100-036	\$150.00		
Received	8/11/2010					
Issued	3/12/2012					
OWN	WILLIAM & CAROL JOHNS	49560 GOULETTE PTE.	NEW BALTIMORE MI 48047			
CON	DAVID HAZEN	715 N COURT	HOWELL MI 48843			
BLD2011-11372	NEW RES	2408 E COON LAKE TRL HOWELL 48843 One Story Single Family Dwelling with Attached Three Car Garage. ICF Foundation & Main Floor Walls. R-48 in Ceilings. Covered Front Porch, lakeside Deck, and Unfinished Bonus Room above Garage	11-30-100-040	\$2,748.00	3,293	\$433,073.62
Received	9/20/2011					
Issued	3/21/2012					
OWN	DAVID & MARY KUZNER	PO BOX 1635	BRIGHTON MI 48116			
CON	OWNER					
BLD2012-00142	ALT RES	3440 WOODRIDGE DR. HOWELL 48843 Finishing partial Basement in a Single Family Dwelling. Approx. 1000 sq. ft. of Finished area with Living area, Bath and Exercise Room. No Bedrooms	11-21-203-026	\$248.00		\$39,060.00
Received	2/9/2012					
Issued	3/1/2012					
OWN	MICHAEL & JUDITH SUMERACKI	3440 WOODRIDGE DR	HOWELL MI 48843			
CON	OWNER					
BLD2012-00163	ADD ACC	3934 HIGHCREST BRIGHTON 48116 Adding approx. 460 Sq Ft to an Existing Detached Residential Accessory Structure. Two existing walls will be removed and new beams and a girder truss will be installed for bearing. Plans show 42" footings. New footings will match existing, possibly 24" ratwall	11-22-302-061	\$120.00		\$17,967.60
Received	2/15/2012					
Issued	3/21/2012					
OWN	CRANE FAMILY TRUST	3934 HIGHCREST	BRIGHTON MI 48116			
CON	ITALY AMERICAN CONSTRUCTION CO.	8401 N. TELEGRAPH, STE 101	DEARBORN HEIGHTS MI 48127			
BLD2012-00173	ALT COM	4092 GRAND RIVER HOWELL 48843 Demoing existing partitions for New tenant buildout. Great Clips Mechanical, Electrical and Plumbing permits are required.	11-04-300-010	\$375.00		
Received	2/16/2012					
Issued	3/7/2012					
OWN	COUNTRY CORNERS SHOPPING CENT	P O BOX 637	GARDEN CITY MI 48136			
CON	G O SERVICE INC	1920 MARIE CIR	BLOOMFIELD HILLS MI 48302			
BLD2012-00233	ALT RES	706 SUNRISE PARK HOWELL 48843 Removing existing Roof Structure (Log Rafters) and Replacing with New Truss Roof. New Soffits and overhangs. May need additional inspections for Footings	11-09-201-106	\$120.00		
Received	3/6/2012					
Issued	3/20/2012					
OWN	THOMAS PRENTICE	4669 JEWELL RD.	HOWELL MI 48843			
CON	S N S HAULING & CONSTRUCTION	102 ALPENA ST	NEW HUDSON MI 48165			

Livingston County Department of Building & Safety Engineering
New Permits Issued 3/1/2012 - 3/31/2012
Permit Type: BLD
Jurisdiction: Genoa Township

4/2/2012
11:15:15AM

Permit #	Work Nature: Bld Use:	Site Address Project Description	Parcel #	Permit Fee	
BLD2012-00235	ALT RES	3148 BECK HOWELL 48843	11-08-300-023	\$90.00	
Received 3/7/2012		Converting portion of Garage into Living Space. Laundry and		Square Feet:	
Issued 3/15/2012		Mudroom		Valuation:	\$7,968.24
CON OWNER					
OWN LAURA MCDONALD		3148 BECK			HOWELL MI 48843
BLD2012-00239	ALT COM	7000 GRAND RIVER RD BRIGHTON 48114	11-14-200-025	\$150.00	
Received 3/7/2012		Remove non-bearing demising wall to expand warehouse. Misc.		Square Feet:	
Issued 3/23/2012		interior finish. Electrical and Mechanical permits required		Valuation:	
		SALAVATION ARMY STORE			
OWN JWS PROPERTIES LLC		44700 GROESBECK			CLINTON TWP MI 48036
CON WILLIAM R JOHNS		49560 GOULETTE PTE			NEW BALTIMORE MI 48047
BLD2012-00266	ALT RES	4617 GOLF VIEW DR BRIGHTON 48116	11-28-403-072	\$90.00	
Received 3/13/2012		Installing 2 Replacement Windows. Master Bedroom and Office		Square Feet:	
Issued 3/26/2012				Valuation:	
OWN TEIBER JOHN F & SHARON TRUST		4617 GOLF VIEW DR			BRIGHTON MI 48116
CON MAJIC WINDOW CO		30580 BECK RD			WIXOM MI 48393
BLD2012-00271	ALT RES	3860 SNOWDEN LANE HOWELL 48843	11-05-201-007	\$50.00	
Received 3/13/2012		Tear off and Re Shingle single family dwelling		Square Feet:	
Issued 3/13/2012				Valuation:	
OWN BRAD W. & CHRISTINA WRIGHT		3860 SNOWDEN LANE			HOWELL MI 48843
CON OWNER					
BLD2012-00282	ADD ACC	5001 GROVER DR BRIGHTON 48116	11-21-400-005	\$90.00	
Received 3/16/2012		Adding Two Wood Decks to a single family dwelling. Plans show 2" x		Square Feet:	
Issued 3/22/2012		10" joist & 2" x 12" Beams for both decks and no stairs. #1 Deck is 8' x		Valuation:	
		24', # 2 Deck is 8' x 12'			
OWN JOSEPH & PATRICIA BOZYK JR		5001 GROVER DR			BRIGHTON MI 48116
CON OWNER					
BLD2012-00286	ALT COM	2280 E GRAND RIVER HOWELL 48843	11-06-100-039	\$90.00	
Received 3/19/2012		Remodel of small area of an existing suite to use for a Pharmacy.		Square Feet:	
Issued 3/23/2012		Seperate electrical, suppression, plumbing and heating permits are		Valuation:	
		required as applicable			
OWN BRAVO FAMILY L.L.C.		28059 CENTER OAKS COURT			WIXOM MI 48393-3347
CON DANIEL A MAYHEW BUILDER LLC		687 FOWLerville			FOWLerville MI 48836
BLD2012-00288	ALT RES	3520 GOLF CLUB RD HOWELL 48843	11-05-100-001	\$90.00	
Received 3/19/2012		Installing 2 Replacement windows. Living Room and Office		Square Feet:	
Issued 3/26/2012				Valuation:	
OWN JEFFREY & TARA PINE		3520 GOLF CLUB RD			HOWELL MI 48843
CON PRO BROS WINDOW & SUNROOM		7305 GRAND RIVER STE 700			BRIGHTON MI 48114

Livingston County Department of Building & Safety Engineering

4/2/2012
11:15:15AM

New Permits Issued 3/1/2012 - 3/31/2012

Permit Type: BLD

Jurisdiction: Genoa Township

Permit #	Work Nature: Bld Use:	Site Address Project Description	Parcel #	Permit Fee	
BLD2012-00295	ALT COM	2300 E GRAND RIVER HOWELL 48843 Misc. Ceiling and Water Damage Repair to County Building	11-06-100-039	\$30.00	
Received	3/20/2012			Square Feet:	
Issued	3/20/2012			Valuation:	
OWN	LIVINGSTON COUNTY CLERK'S OFFI	200 E GRAND RIVER		HOWELL MI 48843	
CON	SPENSE BROS INC	2094 PLESS DR		BRIGHTON MI 48114	
BLD2012-00296	HMH MOP	6534 CAIRN BRIGHTON 48116 26' x 57' Mobile Home in a Park. 1986 Eaton Park Serial # 1122 M 2677 Mobile Home Ttitle# 272 B 0790147T. Home will be set on existing piers & Adding 4 New Piers. Using Xi2 Concrete System- Tie Down Engineering	11-14-400-007	\$100.00	
Received	3/21/2012			Square Feet:	
Issued	3/26/2012			Valuation:	
OWN	MARK LEIGHTON	10627 MCMASTER CT		FENTON MI 48430	
CON	T S MOBILE HOME SERVICE	6800 E GRAND RIVER		LAINGSBURG MI 48848	
BLD2012-00323	ADD ACC	4159 HIGHCREST BRIGHTON 48116 Attaching a 14' x 30' Wood Deck with Stairs to a Single Family Dwelling	11-22-302-141	\$90.00	
Received	3/23/2012			Square Feet:	
Issued	3/27/2012			Valuation:	\$16,405.20
OWN	ELIZABETH CARLSON	515 FAIRVIEW DR		YPSILANTI MI 48197	
CON	OWNER				
BLD2012-00335	ALT RES	6203 BLUE HERON DR. HOWELL 48843 Tear off and Re Shingle House and Garage	11-11-101-020	\$50.00	
Received	3/26/2012			Square Feet:	
Issued	3/26/2012			Valuation:	
OWN	JEFFREY MEADORS	6203 BLUE HERON DR		HOWELL MI 48843	
CON	OWNER				
Subtotals:	Total Number of BLD Permits issued for:	Genoa Township	18	Permit Fee	\$4,741.00

Livingston County Department of Building & Safety Engineering
 Certificate of Occupancies Issued 3/1/2012 - 3/31/2012
 Permit Type: BLD

4/2/2012
 11:14:44AM

Jurisdiction: Genoa Township

Permit #	Work Nature:	Site Address Project Description	Parcel #	Permit Fee	Square Feet:	Valuation:
BLD2010-00057	CON	4093 HOMESTEAD HOWELL 48843 FINISHING THE 10' X 28' ADDITION TO AN EXISTING SINGLE FAMILY DWELLING & 2ND FLOOR, 10' x 24' WOOD DECK (EXISTING DEMO & PRE-ROUGH DONE UNDER PERMIT#2009-10519 - 8" BLOCK CRAWLSPACE, NO GARAGE)	11-28-201-021	\$366.00	2,222	
Received 2/12/2010 Issued 3/19/2012						
Status: CMP						
OWN	PHILLIP BLASZCZAK	15022 WOODSIDE DR.				LIVONIA MI 48154
CON	OWNER					
BLD2010-00828	NEW	7208 W GRAND RIVER BRIGHTON 48114 8000 Sq Ft Storage Building fo Conley Car Rental, An Engineer in Soil Report was submitted and A Fire Hydrant installed approved by Fire Dept.	11-13-100-058	\$3,003.00	8,000	\$402,000.00
Received 7/16/2010 Issued 3/9/2012						
Status: CO						
OWN	JOHN CONELY	3890 STARSHINE TRAIL				BRIGHTON MI 48116
CON	BARUZZINI CONSTRUCTION CO	1281 S OLD US-23				BRIGHTON MI 48114
BLD2011-10685	ALT	5490 LAKE RIDGE DR BRIGHTON 48116 TEAR OFF AND REROOF EXISTING HOME	11-36-101-055	\$50.00		
Received 6/2/2011 Issued 3/20/2012						
Status: CMP						
OWN	DESMOND P. & LISA M. RAFFERTY	5490 LAKE RIDGE DR				BRIGHTON MI 48116
CON	BEATY BROTHERS INC	19305 ELWELL RD				BELLEVILLE MI 48111
BLD2011-10694	ADD	979 DEL SHER DR BRIGHTON 48114 Sunroom on Existing Residential Structure. The Sunroom sits on a Deck structure built on posts	11-01-401-047	\$120.00		\$9,413.46
Received 6/6/2011 Issued 3/1/2012						
Status: CO						
OWN	BRIAN & LAURA WOHLKE	979 DEL SHER DR				BRIGHTON MI 48114
CON	OWNER					
BLD2011-10811	ALT	3746 NOBLE BRIGHTON 48116 TEAR OFF AND RESHINGLE EXISTING HOME	11-22-302-039	\$50.00		
Received 6/23/2011 Issued 3/9/2012						
Status: CMP						
OWN	WILLIAM P. WERNETTE	3746 NOBLE				BRIGHTON MI 48116
CON	FEHLIG CONSTRUCTION INC.	48441 TERRITORIAL RD				PLYMOUTH MI 48170
BLD2011-11327	ALT	895 MENOMINEE DR. HOWELL 48843 Tear off and Reshingle existing home	11-10-302-006	\$50.00		
Received 9/12/2011 Issued 3/2/2012						
Status: CMP						
OWN	CHARLES F. & JANET REUTER	895 MENOINEE DR				HOWELL MI 48843
CON	HOME DEPOT AT HOME SERVICES (CRONK)	23688 RESEARCH DR, STE 100				FARMINGTON HILLS MI

Livingston County Department of Building & Safety Engineering
Certificate of Occupancies Issued 3/1/2012 - 3/31/2012
 Permit Type: BLD

4/2/2012
11:14:44AM

Jurisdiction:

Genoa Township

Permit #	Work Nature:	Site Address Project Description	Parcel #	Permit Fee	Square Feet:	Valuation:
BLD2011-11353	ALT	1020 CHILSON RD BRIGHTON 48116	11-07-100-031	\$50.00		
Received 9/16/2011		Tear off and Re-Roof, Partial barn Roof				
Issued 3/2/2012						
Status: CMP						
OWN LOMREE INC.		P.O. BOX 20			BRIGHTON MI 48116	
CON LOCKHART ROOFING		3388 TORREY RD			FLINT MI 48507	
BLD2011-11354	ALT	3658 STRATTON LANE HOWELL 48843	11-05-201-042	\$50.00		
Received 9/16/2011		Tear off and Re Roof				
Issued 3/1/2012						
Status: CMP						
OWN ROBERT & KAREN KERR		3658 STRATTON LANE			HOWELL MI 48843	
CON LOCKHART ROOFING		3388 TORREY RD			FLINT MI 48507	
BLD2011-11355	ALT	3634 STRATTON LANE HOWELL 48843	11-05-201-044	\$50.00		
Received 9/16/2011		Tear off and Re Roof				
Issued 3/1/2012						
Status: CMP						
OWN DRAPER VALERIE K & THOMAS A		3634 STRATTON LANE			HOWELL MI 48843	
CON LOCKHART ROOFING		3388 TORREY RD			FLINT MI 48507	
BLD2011-11420	ALT	4533 E GRAND RIVER HOWELL 48843	11-09-200-014	\$710.00		
Received 9/27/2011		Remove Storage section on rear (North side) of existing Building				
Issued 3/9/2012						
Status: CMP						
OWN BMH REALTY LLC		775 N SECOND STREET			BRIGHTON MI 48116	
CON CORRIGAN CONSTRUCTION INC		775 N SECOND ST			BRIGHTON MI 48116	
BLD2011-11451	ALT	6220 SHADETREE CT. HOWELL 48843	11-11-101-010	\$50.00		
Received 10/3/2011		Tear off and reshingle house and garage				
Issued 3/7/2012						
Status: CMP						
OWN GALLMEYER JOHN & LORI ANN		6220 SHADETREE CT.			HOWELL MI 48843	
CON PREMIUM ROOFING LLC		1137 WILLOW LN			HOWELL MI 48843	
BLD2011-11586	ALT	5043 PINWOOD DR. BRIGHTON 48116	11-34-104-001	\$50.00		
Received 10/26/2011		Tear Off and Re Shingle House				
Issued 3/30/2012						
Status: CMP						
OWN LARRY & HOLLY MORRIS		5043 PINWOOD DR.			BRIGHTON MI 48116	
CON PRO BUILT CUSTOM BUILDING		1610 GLENGARY RD			COMMERCE TWP MI 483	

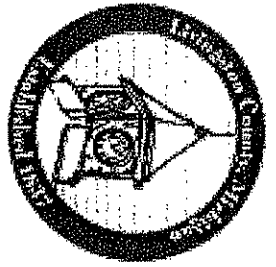
Livingston County Department of Building & Safety Engineering
Certificate of Occupancies Issued 3/1/2012 - 3/31/2012
 Permit Type: BLD

4/2/2012
11:14:44AM

Jurisdiction:

Genoa Township

Permit #	Work Nature:	Site Address Project Description	Parcel #	Permit Fee	Square Feet:	Valuation:
BLD2011-11612	ALT	3644 SNOWDEN LANE HOWELL 48843	11-05-201-025	\$50.00		
Received 11/1/2011		Tear off and re-roof.				
Issued 3/1/2012						
Status: CMP						
OWN PAUL & ERIN MALINOWSKI		3644 SNOWDEN LANE				HOWELL MI 48843
CON LOCKHART ROOFING		3388 TORREY RD				FLINT MI 48507
BLD2011-11613	ALT	5864 OAK CREEK LANE BRIGHTON 48116	11-22-203-024	\$50.00		
Received 11/1/2011		Tear off existing roof on house, garage, and carport and replace with new shingles.				
Issued 3/6/2012						
Status: CMP						
OWN MC GUIRE KAREN L & VALENTOVIC JEFFR		5864 OAK CREEK LANE				BRIGHTON MI 48116
CON OWNER						
BLD2012-00072	ADD	6442 FOREST BEACH DR BRIGHTON 48116	11-26-301-045	\$60.00		
Received 1/19/2012		New Roof and Walls to Enclose Existing Deck				
Issued 3/20/2012						
Status: CMP						
OWN PETER M. & FRIEDA A. YOUNG		6442 FOREST BEACH DR				BRIGHTON MI 48116
CON PETER YOUNG		6442 FOREST BEACH DR				BRIGHTON MI 48116
BLD2012-00141	ALT	2931 SPRING HILL DR HOWELL 48843	11-16-400-031	\$90.00		
Received 2/9/2012		Installing 11 replacement windows. No structural changes. Permit is for a Duplex				
Issued 3/7/2012						
Status: CMP						
OWN L & D HOMES LLC		11798 CLYDE RD				FENTON MI 48430
CON SCOTT TSCHIRRET		719 W GRAND RIVER				HOWELL MI 48843
BLD2012-00188	ALT	5230 MYSTIC LAKE DR BRIGHTON 48116	11-34-201-003	\$50.00		
Received 2/22/2012		STRIP & RE-ROOF HOME & GARAGE				
Issued 3/20/2012						
Status: CMP						
OWN PAUL HAAS		5230 MYSTIC LAKE DR				BRIGHTON MI 48116
CON HANSONS WINDOWS AND SIDING OF LANSI		2214 S CEDAR ST				HOLT MI 48842
BLD2012-00208	ALT	6119 BLUE HERON DR HOWELL 48843	11-11-101-023	\$50.00		
Received 2/29/2012		Tear off and Re Shingle house				
Issued 3/23/2012						
Status: CMP						
OWN MEINERT TRUST		6119 BLUE HERON DR				HOWELL MI 48843
CON MR ROOF ANN ARBOR LLC		3511 E ELLSWORTH DR				ANN ARBOR MI 48108
Subtotals:		Total # of COs Issued for: Genoa Township	18	Permit Fee	\$4,949.00	Valuation: \$411,413.46



Livingston County Building & Safety Engineering Department
2300 E. Grand River Ave.
Howell, MI 48843-7580
517.546.3240 * 517.546.3000 * 517.546.3290
517.546.7461 FAX

CERTIFICATE OF COMPLETION

This certificate is issued pursuant to the requirements under the Michigan State Construction code:

Permit numbers over 103213 and
All Permit numbers over 2001-00000:

Michigan Building Code 2000
Michigan Residential Code 2000
Michigan Building Code 2003
Michigan Residential Code 2003
Michigan Building Code 2006
Michigan Residential Code 2006

and other applicable codes and ordinances certifying that at the time of issuance is in compliance with the above mentioned codes and ordinances. It is specifically understood that this certificate becomes null & void when changes in construction, occupancy or use are made without department approval.

Use Class: **CON RES** Bldg. Permit No: **BLD2010-00057**
Use Group: **R3** Type Construction: **5B**

Desc. of Work: **FINISHING THE 10' X 28' ADDITION TO AN EXISTING SINGLE FAMILY DWELLING & 2ND FLOOR, 10' X 24' WOOD DECK (EXISTING DEMO & PRE-ROUGH DONE UNDER PERMIT#2009-10519 - 8" BLOCK CRAWLSPACE, NO GARAGE)**

Owner: **PHILLIP BLASZCZAK**
15022 WOODSIDE DR.
LIVONIA, MI 48154

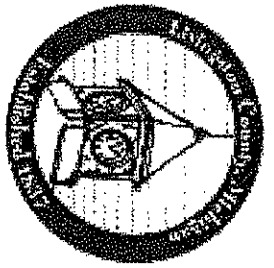
Contractor: **OWNER**

Parcel Number: **11-28-201-021**

Building Address: **4093 HOMESTEAD HOWELL 48843**

Building Official:

Date: 3/19/2012



Livingston County Building & Safety Engineering Department
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Howell, MI 48843-7580
517.546.3240 * 517.546.3000 * 517.546.3290
517.546.7461 FAX

CERTIFICATE OF OCCUPANCY

This certificate is issued pursuant to the requirements under the Michigan State Construction code:

Permit numbers over 103213 and
All Permit numbers over 2001-00000:

Michigan Building Code 2000
Michigan Residential Code 2000
Michigan Building Code 2003
Michigan Residential Code 2003
Michigan Building Code 2006
Michigan Residential Code 2006

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Use Class: **NEW COM**
Use Group: **S1**

Bldg. Permit No: **BLD2010-00828**
Type Construction: **5B**

Occupancy Load:

Automatic Sprinkler System:

Desc. of Work: **8000 Sq Ft Storage Building for Conley Car Rental, An Engineer in Soil Report was submitted and A Fire Hydrant Installed approved by Fire Dept.**

Owner: **JOHN CONELY**
3890 STARSHINE TRAIL
BRIGHTON, MI 48116

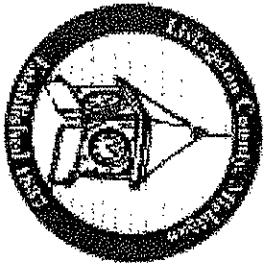
Contractor: **BARUZZINI CONSTRUCTION CO**
1281 S OLD US-23
BRIGHTON, MI 48114

Parcel Number: **11-13-100-058**

Building Address: **7208 W GRAND RIVER BRIGHTON 48114**

Building Official:

Date: 3/9/2012



Livingston County Building & Safety Engineering Department
2300 E. Grand River Ave.
Howell, MI 48843-7580
517.546.3240 * 517.546.3000 * 517.546.3290
517.546.7461 FAX

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Permit numbers over 103213 and
All Permit numbers over 2001-00000:

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Michigan Residential Code 2000
Michigan Building Code 2003
Michigan Residential Code 2003
Michigan Building Code 2006
Michigan Residential Code 2006

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Use Class: **ALT RES** Bldg. Permit No: **BLD2011-10685**
Use Group: Type Construction: **5B**
Desc. of Work: **TEAR OFF AND REROOF EXISTING HOME**

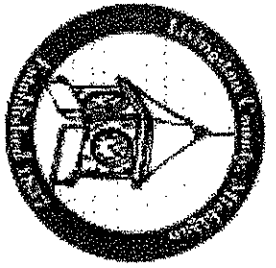
Owner: **DESMOND P. & LISA M. RAFFERTY**
5490 LAKE RIDGE DR
BRIGHTON, MI 48116

Contractor: **BEATY BROTHERS INC**
19305 ELWELL RD
BELLEVILLE, MI 48114

Parcel Number: **11-36-101-055**
Building Address: **5490 LAKE RIDGE DR BRIGHTON 48116**

Building Official:

Date: 3/20/2012



Livingston County Building & Safety Engineering Department
2300 E. Grand River Ave.
Howell, MI 48843-7580
517.546.3240 * 517.546.3000 *517.546.3290
517.546.7461 FAX

CERTIFICATE OF OCCUPANCY

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Permit numbers over 103213 and
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Michigan Building Code 2000
Michigan Residential Code 2000
Michigan Building Code 2003
Michigan Residential Code 2003
Michigan Building Code 2006
Michigan Residential Code 2006

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Use Class: **ADD ACC**

Bldg. Permit No: **BLD2011-10694**

Use Group: **U**

Type Construction: **5B**

Occupancy Load:

Automatic Sprinkler System:

Desc. of Work: **Sunroom on Existing Residential Structure. The Sunroom sits on a Deck structure built on posts**

Owner: **BRIAN & LAURA WOEHILKE**
979 DEL SHER DR
BRIGHTON, MI 48114

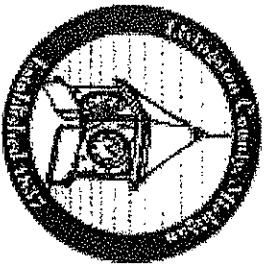
Contractor: **OWNER**

Parcel Number: **11-01-401-047**

Building Address: **979 DEL SHER DR BRIGHTON 48114**

Building Official:

Date: 3/1/2012



Livingston County Building & Safety Engineering Department

2300 E. Grand River Ave.

Howell, MI 48843-7580

517.546.3240 * 517.546.3000 * 517.546.3290

517.546.7461 FAX

CERTIFICATE OF COMPLETION

This certificate is issued pursuant to the requirements under the Michigan State Construction code:

Permit numbers over 103213 and

All Permit numbers over 2001-00000:

Michigan Building Code 2000

Michigan Residential Code 2000

Michigan Building Code 2003

Michigan Residential Code 2003

Michigan Building Code 2006

Michigan Residential Code 2006

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Use Class: **ALT RES**
Use Group: **R3**

Bldg. Permit No: **BLD2011-10811**
Type Construction: **5B**

Desc. of Work: **TEAR OFF AND RESHINGLE EXISTING HOME**

Owner: **WILLIAM P. WERNETTE**
3746 NOBLE
BRIGHTON, MI 48116

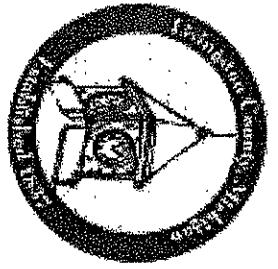
Contractor: **FEHLIG CONSTRUCTION INC.**
48441 TERRITORIAL RD
PLYMOUTH, MI 48170

Parcel Number: **11-22-302-039**

Building Address: **3746 NOBLE BRIGHTON 48116**

Building Official:

Date: 3/9/2012



Livingston County Building & Safety Engineering Department

2300 E. Grand River Ave.
Howell, MI 48843-7580

517.546.3240 * 517.546.3000 *517.546.3290
517.546.7461 FAX

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Permit numbers over 103213 and
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Michigan Residential Code 2003

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Michigan Residential Code 2006

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Use Class: **ALT RES**

Bldg. Permit No: **BLD2011-11327**

Use Group:

Type Construction:

Desc. of Work: **Tear off and Reshingle existing home**

Owner: **CHARLES F. & JANET REUTER**
895 MENOMINEE DR
HOWELL, MI 48843

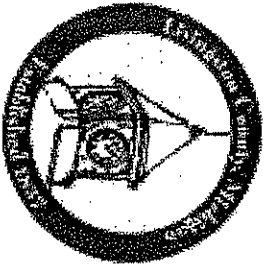
Contractor: **HOME DEPOT AT HOME SERVICES (CRONK**
23688 RESEARCH DR, STE 100
FARMINGTON HILLS, MI 48335

Parcel Number: **11-10-302-006**

Building Address: **895 MENOMINEE DR, HOWELL 48843**

Building Official:

Date: 3/2/2012



Livingston County Building & Safety Engineering Department

2300 E. Grand River Ave.
Howell, MI 48843-7580
517.546.3240 * 517.546.3000 *517.546.3290
517.546.7461 FAX

CERTIFICATE OF COMPLETION

This certificate is issued pursuant to the requirements under the Michigan State Construction code:

Permit numbers over 103213 and
All Permit numbers over 2001-00000:

Michigan Building Code 2000
Michigan Residential Code 2000
Michigan Building Code 2003
Michigan Residential Code 2003
Michigan Building Code 2006
Michigan Residential Code 2006

and other applicable codes and ordinances certifying that at the time of issuance is in compliance with the above mentioned codes and ordinances. It is specifically understood that this certificate becomes null & void when changes in construction, occupancy or use are made without department approval.

Use Class: **ALT ACC** Bidg. Permit No: **BLD2011-11353**
Use Group: Type Construction: **5B**

Desc. of Work: **Tear off and Re-Roof, Partial barn Roof**

Owner: **LOMREE INC.**
P.O. BOX 20
BRIGHTON, MI 48116

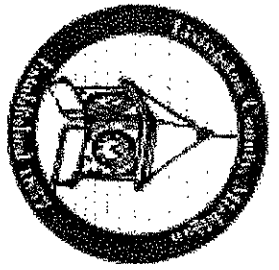
Contractor: **LOCKHART ROOFING**
3388 TORREY RD
FLINT, MI 48507

Parcel Number: **11-07-100-031**

Building Address: **1020 CHILSON RD BRIGHTON 48116**

Building Official:

Date: 3/2/2012



Livingston County Building & Safety Engineering Department

2300 E. Grand River Ave.
Howell, MI 48843-7580
517.546.3240 * 517.546.3000 * 517.546.3290
517.546.7461 FAX

CERTIFICATE OF COMPLETION

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Permit numbers over 103213 and
All Permit numbers over 2001-00000:

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Michigan Residential Code 2000
Michigan Building Code 2003
Michigan Residential Code 2003

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Michigan Residential Code 2006

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Use Class: **ALT RES**

Bldg. Permit No: **BLD2011-11354**

Use Group:

Type Construction:

Desc. of Work: **Tear off and Re Roof**

Owner: **ROBERT & KAREN KERR
3658 STRATTON LANE
HOWELL, MI 48843**

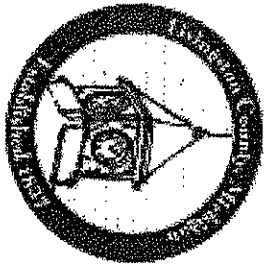
Contractor: **LOCKHART ROOFING
3388 TORREY RD
FLINT, MI 48507**

Parcel Number: **11-05-201-042**

Building Address: **3658 STRATTON LANE HOWELL 48843**

Building Official:

Date: 3/1/2012



Livingston County Building & Safety Engineering Department

2300 E. Grand River Ave.

Howell, MI 48843-7580

517.546.3240 * 517.546.3000 * 517.546.3290

517.546.7461 FAX

CERTIFICATE OF COMPLETION

This certificate is issued pursuant to the requirements under the Michigan State Construction code:

Permit numbers over 103213 and

All Permit numbers over 2001-00000:

Michigan Building Code 2000

Michigan Residential Code 2000

Michigan Building Code 2003

Michigan Residential Code 2003

Michigan Building Code 2006

Michigan Residential Code 2006

and other applicable codes and ordinances certifying that at the time of issuance is in compliance with the above mentioned codes and ordinances. It is specifically understood that this certificate becomes null & void when changes in construction, occupancy or use are made without department approval.

Use Class: **ALT RES**

Bldg. Permit No: **BLD2011-11355**

Use Group:

Type Construction:

Desc. of Work: **Tear off and Re Roof**

Owner: **DRAPER VALERIE K & THOMAS A**
3634 STRATTON LANE
HOWELL, MI 48843

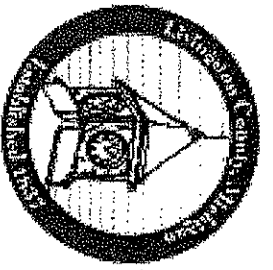
Contractor: **LOCKHART ROOFING**
3388 TORREY RD
FLINT, MI 48507

Parcel Number: **11-05-201-044**

Building Address: **3634 STRATTON LANE HOWELL 48843**

Building Official:

Date: 3/1/2012



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Michigan Residential Code 2003

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Michigan Residential Code 2006

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Use Class: **ALT COM**
Use Group:

Bldg. Permit No: **BLD2011-11420**
Type Construction:

Desc. of Work: **Remove Storage section on rear (North side) of existing Building**

Owner: **BMH REALTY LLC**
775 N SECOND STREET
BRIGHTON, MI 48116

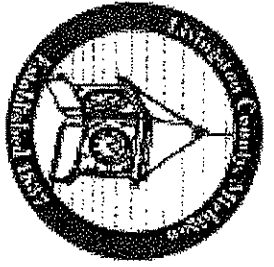
Contractor: **CORRIGAN CONSTRUCTION INC**
775 N SECOND ST
BRIGHTON, MI 48116

Parcel Number: **11-09-200-014**

Building Address: **4533 E GRAND RIVER HOWELL 48843**

Building Official:

Date: 3/9/2012



Livingston County Building & Safety Engineering Department
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517.546.3240 * 517.546.3000 * 517.546.3290
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Michigan Residential Code 2006

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Use Class: **ALT RES** Bldg. Permit No: **BLD2011-11451**
Use Group: Type Construction:

Desc. of Work: **Tear off and reshingle house and garage**

Owner: **GALLMEYER JOHN & LORI ANN**
6220 SHADETREE CT.
HOWELL, MI 48843

Contractor: **PREMIUM ROOFING LLC**
1137 WILLOW LN
HOWELL, MI 48843

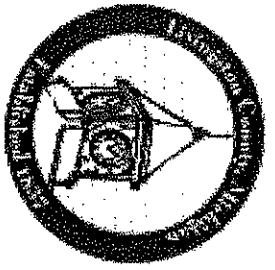
Parcel Number: **11-11-101-010**

Building Address: **6220 SHADETREE CT. HOWELL 48843**

Building Official:

A handwritten signature in black ink, appearing to be "M. J. F.", written over a horizontal line.

Date: 3/7/2012



Livingston County Building & Safety Engineering Department
2300 E. Grand River Ave.
Howell, MI 48843-7580
517.546.3240 * 517.546.3000 *517.546.3290
517.546.7461 FAX

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Michigan Residential Code 2003
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Use Class: **ALT RES** Bldg. Permit No: **BLD2011-11612**
Use Group: Type Construction:

Desc. of Work: **Tear off and re-roof.**

Owner: **PAUL & ERIN MALINOWSKI**
3644 SNOWDEN LANE
HOWELL, MI 48843

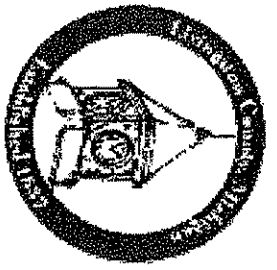
Contractor: **LOCKHART ROOFING**
3388 TORREY RD
FLINT, MI 48507

Parcel Number: **11-05-201-025**

Building Address: **3644 SNOWDEN LANE HOWELL 48843**

Building Official:

Date: 3/1/2012



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Howell, MI 48843-7580
517.546.3240 * 517.546.3000 * 517.546.3290
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Michigan Residential Code 2003

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Michigan Residential Code 2006

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Use Class: **ALT RES** Bldg. Permit No: **BLD2011-11613**
Use Group: Type Construction:

Desc. of Work: **Tear off existing roof on house, garage, and carport and replace with new shingles.**

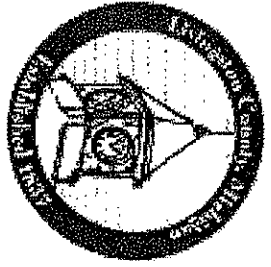
Owner: **MC GUIRE KAREN L & VALENTOVIC JEFFI** Contractor: **OWNER**
5864 OAK CREEK LANE
BRIGHTON, MI 48116

Parcel Number: **11-22-203-024**

Building Address: **5864 OAK CREEK LANE BRIGHTON 48116**

Building Official:

Date: 3/6/2012



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Howell, MI 48843-7580
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Use Class: **ADD ACC**
Use Group: **R3**

Bldg. Permit No: **BLD2012-00072**
Type Construction: **5B**

Desc. of Work: **New Roof and Walls to Enclose Existing Deck**

Owner: **PETER M. & FRIEDA A. YOUNG**
6442 FOREST BEACH DR
BRIGHTON, MI 48116

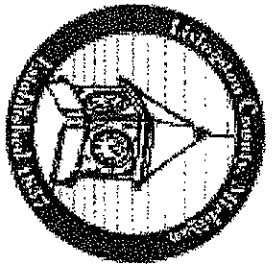
Contractor: **PETER M. YOUNG**
6442 FOREST BEACH DR
BRIGHTON, MI 48116

Parcel Number: **11-26-301-045**

Building Address: **6442 FOREST BEACH DR BRIGHTON 48116**

Building Official:

Date: 3/20/2012



Livingston County Building & Safety Engineering Department
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Howell, MI 48843-7580
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Use Class: **ALT RES** Bldg. Permit No: **BLD2012-00141**
Use Group: Type Construction:
Desc. of Work: **Installing 11 replacement windows. No structural changes. Permit is for a Duplex**

Owner: **L & D HOMES LLC**
11798 CLYDE RD
FENTON, MI 48430

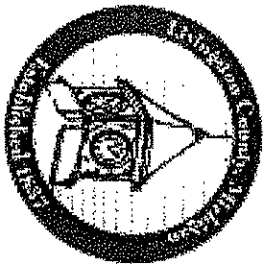
Contractor: **SCOTT TSCHIRRET**
719 W GRAND RIVER
HOWELL, MI 48843

Parcel Number: **11-16-400-031**

Building Address: **2931 SPRING HILL DR HOWELL 48843**

Building Official:

Date: 3/7/2012



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517.546.3240 * 517.546.3000 * 517.546.3290
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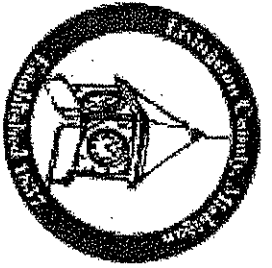
Use Class: **ALT RES** Bldg. Permit No: **BLD2012-00188**
Use Group: Type Construction:

Desc. of Work: **STRIP & RE-ROOF HOME & GARAGE**

Owner: **PAUL R. HAAS** Contractor: **HANSONS WINDOWS AND SIDING OF LANS**
5230 MYSTIC LAKE DR **2214 S CEDAR ST**
BRIGHTON, MI 48116 **HOLT, MI 48842**

Parcel Number: **11-34-201-003**
Building Address: **5230 MYSTIC LAKE DR BRIGHTON 48116**

Building Official:  Date: 3/20/2012



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Use Class: **ALT RES** Bidg. Permit No: **BLD2012-00208**
Use Group: Type Construction:

Desc. of Work: **Tear off and Re Shingle house**

Owner: **MEINERT TRUST** Contractor: **MIR ROOF ANN ARBOR LLC**
6119 BLUE HERON DR
HOWELL, MI 48843 **3511 E ELLSWORTH RD**
ANN ARBOR, MI 48108

Parcel Number: **11-11-101-023**

Building Address: **6119 BLUE HERON DR HOWELL 48843**

Building Official: 
Date: 3/23/2012

Polly

From: SEMCOG News Release <communications@semcog.org>
Sent: Wednesday, April 11, 2012 12:21 PM
To: Polly
Subject: New housing permits up 25 percent according to recently-released SEMCOG Quick Facts report

Problem viewing this email? [Click here](#) for our online version



April 11, 2012
Contact: [Janet Mocadlo](#) (313-324-3434) or [Sue Stetler](#) (313-324-3428)

New housing permits up 25 percent according to recently released SEMCOG Quick Facts report

The Southeast Michigan region finished 2011 with a total of 4,209 new residential building permits issued — a 25 percent increase over 2010 — according to a report recently released by SEMCOG, the Southeast Michigan Council of Governments. The report, titled *Quick Facts: Residential Construction in Southeast Michigan, 2011*, noted that a total of 3,353 demolition permits were also issued in 2011, resulting in a net gain of 856 units in 2011. The region had experienced net losses of residential units the past three years.

Three communities accounted for 78 percent of the demolitions for the region — the cities of Detroit, Highland Park, and Pontiac. These communities all received Neighborhood Stabilization Program grants from HUD to fund many of the demolitions.

Oakland County communities authorized the most permits with 1,220, followed closely by Macomb County with 1,145. The City of Detroit was tops in the region in total residential construction permits issued with 488.

Macomb Township claimed the top spot for single-family home permits with 360 issued in 2011. The median reported construction value for single-family homes in 2011 was \$226,135.

While new housing starts are improving in the region, the recovery will be slow but steady. It is possible multi-family construction could be the catalyst for quicker revival of the market, but numbers are not expected to reach pre-recession levels for quite some time.

SEMCOG collects residential building permit data monthly from all 233 communities in the region and retains permit data back to 1969. Permit data searchable by year and by county or community can be accessed on the SEMCOG Web site at www.semco.org/Data/Apps/permits.cfm.

Click the link below to read the SEMCOG report.

[Quick Facts: Residential Construction in Southeast Michigan, 2011](#) (PDF)

SEMCOG is the only organization in Southeast Michigan that brings together all governments to solve regional challenges and enhance the quality of life for the seven-county region's 4.7 million people.



Amy Ruthig

From: Polly
Sent: Thursday, April 05, 2012 11:15 AM
To: Amy Ruthig
Subject: RE: Brighton Senior Center

Amy, We should probably include that message in the next board packets. Thanks, Polly

From: Amy Ruthig
Sent: Wednesday, April 04, 2012 3:49 PM
To: Gary McCririe; Polly; Robin Hunt; jledford3@peoplepc.com; Jim Mortensen (hjm2@sbcglobal.net); Steve Wildman; Todd Smith (todd@michigangolfshow.com)
Subject: FW: Brighton Senior Center

Good Afternoon,

I have been requested to forward this on to our Board.

Thank You,

Amy Ruthig
Planning/Zoning



Genoa Charter Township
2911 Dorr Road, Brighton, Michigan 48116
Direct: (810) 224-5822, **Fax:** (810) 227-3420
E-mail: amy@genoa.org, **Url:** www.genoa.org

From: Marcy Hosking [<mailto:hoskinm@brightonk12.com>]
Sent: Tuesday, April 03, 2012 12:15 PM
To: Amy Ruthig
Cc: Mike Archinal; Reed Kittredge
Subject: Brighton Senior Center

Hi Amy,

Could you please forward the following to Genoa Township Board of Trustees?

Thank you,
Marcy Hosking

Dear Genoa Township Board of Trustees:
Gary McCririe, Chairman
Polly Skolarus, Clerk
Robin Hunt, Treasurer

Jean Ledford
Jim Mortensen
Todd Smith
Steve Wildman

Let me start by introducing myself, my name is Marcy Hosking and I am the Supervisor of the Brighton Senior Center. On WHMI's website today, April 3, 2012 there was an article titled "Genoa Township Board Talks Future Needs Of Senior Citizens". In that article it states that "Some board members expressed that the Howell and Hartland senior centers are well used and offer wonderful programs to a wide range of area seniors but felt the Brighton center lacked variety."

I am writing today to inform you of the many activities, programs and services that the Brighton Senior Center has to offer. We are open to individuals 50 years +. We offer assistance, enrichment, socialization, education, information, transportation, travel, volunteer opportunities and much more. Our membership is open to all regardless of what city, township or county one resides in. Membership is \$20 per person per year and individuals that reside in the same household receive a \$5 discount. Membership is free to those over the age of 90. Drop-in fees or additional fees may apply to certain classes and activities. You do not need to be a member of the center to take advantage of our services, activities and classes, however we do ask for a 50 cent contribution per visit.

We currently have 419 registered members, 78 of those being from Genoa Township. Last year, there were 2,937 people that participated in a Brighton Senior Center program, class or trip and additional 50 seniors attended each day for socialization.

Some of the activities we offer are:

- Acrylic Landscape Painting Classes
- Advanced Hearing
- Aerobic Classes
- Bingo
- Birthday Celebrations
- Blood Pressure Checks
- Bridge
- Bunco
- Chair Exercise
- Coffee Club
- Computer Lab
- Crafts
- Daily Lunch
- Educational Seminars
- Euchre
- Foot Care & Massage
- Informal Art Group
- Knitting Group
- Mexican Train Dominoes
- Music Men
- Newsletter
- One-Stroke Painting Classes
- Pinochle
- Pool Table
- Potluck

- Resource Advocate
- Social Events
- Transportation
- Travel Opportunities
- Veteran's Coffee
- Walking Group
- Wii
- Yoga

We are very proud of the services, programs and activities that we offer at the Brighton Senior Center. I welcome you to stop by to see for yourself.

If you have any questions or would like more information about the Brighton Senior Center, I can be reached at (810) 299-3822 or hoskinm@brightonk12.com

Sincerely,
Marcy Hosking

cc: Reed Kittredge, Operations Manager, WHMI

--
Marcy Hosking, Supervisor
Brighton Senior Center
hoskinm@brightonk12.com
(810) 299-3822
(810) 299-4148 Fax
www.brightoncommunityed.com

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