

PROJECT DIRECTORY

OWNER

CVS REALTY, CO.
1165 N CLARK ST SUITE 305
CHICAGO, IL 60610
(312) 953-6322
CONTACT: MR. RICHARD E. SMART

DEVELOPER

VELMEIR COMPANIES
5757 W. MAPLE, SUITE 800
WEST BLOOMFIELD, MI 48322
(248) 794-9768
CONTACT: MR. JIM COLLIER

ARCHITECT

NORR, LLC
719 GRISWOLD STREET
DETROIT, MI 48226
(313) 324-3100
CONTACT: MR. SCOTT ROBACH

CIVIL ENGINEER

PREMIER CIVIL ENGINEERING, LLC
308 TCW COURT
LAKE SAINT LOUIS, MO 63367
(314) 925-7452
CONTACT: MR. MATT FOGARTY

SURVEYOR

SAVOY COMPANY, P.A.
433 S. HYDRAULIC
WICHITA, KS 67211
(316) 265-0005
CONTACT: MR. MARK SAVOY

MUNICIPALITY

CITY OF WICHITA, KS

GEOTECHNICAL/ENVIRONMENTAL ENGINEER

TERRACON CONSULTANTS
1815 S. EISENHOWER
WICHITA, KS 67209
(316) 262 0717
CONTACT: GEORGE A. EL TANNOURY, P.E.

CITY OF WICHITA TRAFFIC ENGINEER

CONTACT: PAUL GUNZELMAN, P.E.
455 N. MAIN ST. 7TH FLOOR
WICHITA, KS 67202
316-268-4393

PRIVATE PROJECT STORMWATER PLAN TO SERVE
CVS/pharmacy[®]
CITY OF WICHITA PROJECT NO. 121 PPD (607861)

UTILITY PROVIDERS

WESTAR ENERGY
(316) 261-6734
CONTACT: MRS. MARSHA JESSE

KANSAS GAS SERVICE

(316) 832-3126
CONTACT: MR. JIM COE

AT&T

(314) 957-3789
CONTACT: MR. MARK ADAMS

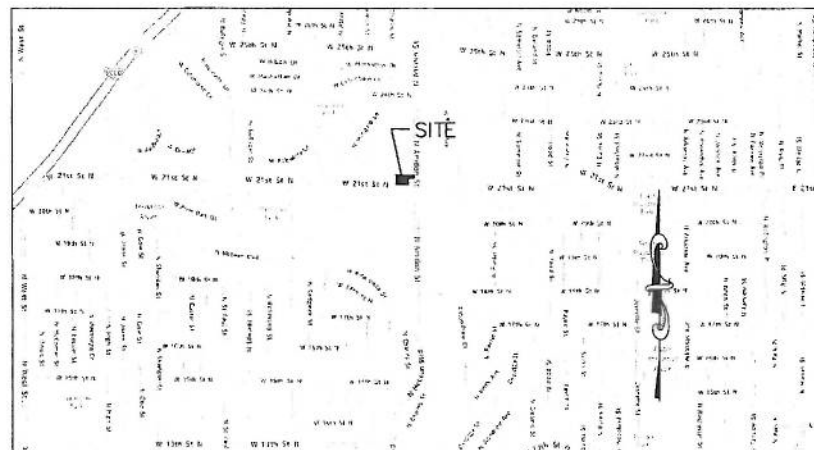
**PUBLIC WORKS & UTILITIES
STORMWATER MANAGEMENT DIVISION**

CITY HALL, 8TH FLOOR
455 N. MAIN
WICHITA, KANSAS 67202
(316) 268-4498
CONTACT: SCOTT LINDEBAK

CITY OF WICHITA WATER UTILITIES

CITY HALL, 8TH FLOOR
455 N. MAIN
WICHITA, KANSAS 67202
(316) 268-4555
CONTACT: GREG LOLLEY

CS#64720 STORE#10159 NWC 21ST AND AMIDON AVE.
WICHITA, KS
PART OF LOT I, BLOCK A, SWEETBRIAR ADDITION
ZONED: LC LIMITED COMMERCIAL
TAX ID#123060340102500, 123060340102600



VICINITY MAP
NOT TO SCALE

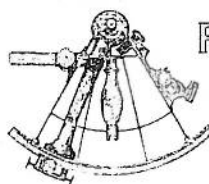
SITE DISTURBED AREA=1.52 ACRES

On Site Benchmarks:

B.M. #1: Square Cut Top Curb 78W. & 18'S. of the S.E. Corner of Lot 1, Block A, Sweetbriar Addition, Elevation = 1315.25 (NAVD88)

B.M. #2: Square Cut on Top of the Light Pole Base 90'E. & 34'N. of the N.W. Corner of Subject Property, Elevation = 1318.54 (NAVD88)

PREPARED BY:



**PREMIER CIVIL
ENGINEERING**



308 TCW Court
Lake Saint Louis, MO 63367
Phone: (314) 925-7444 Fax: (314) 925-7457

DATE: 09-06-12

PCE PROJECT NUMBER: 113301

**AS BUILT PLANS
CONTRACTOR: CK CONTRACTING
INSPECTOR: DAKOTA ZIMMERMAN
RUGGLES & BOHM, P.A.
.pdf MADE BY: DGZ 8/2/13**

SHEET INDEX

- C-3C STORM SEWER COVER SHEET
- C-3D STORM SEWER PLAN SHEET
- C-6 POROUS PAVEMENT SECTIONS
- C-9.2 STORM SEWER PROFILES & DETAILS

**EXIST. UTILITY SYMBOL
LEGEND**

- G = GAS MAIN
- W = WATER MAIN
- SS = SANITARY SEWER
- SWS = STORM WATER SEWER
- UGT = UNDER GROUND ELECTRIC
- UGT = UNDER GROUND TELEPHONE
- B.M. = BENCH MARK
- TELE PED = TELEPHONE PEDESTAL
- CATV = CABLE TELEVISION PEDESTAL
- E.B. = ELECTRIC BOX
- F.H. = FIRE HYDRANT
- GUY ANCHOR
- H.L.P. = HIGH LINE POLE
- ICV = IRRIGATION CONTROL VALVE
- L.P. = LIGHT POLE
- P.P. = POWER POLE
- 4 = SIGN
- T.S. = TRAFFIC SIGNAL
- T.S.C.B. = TRAFFIC SIGNAL CONTROL BOX
- W.M. = WATER METER
- W.V. = WATER VALVE
- ETR = ELECTRIC TRANSFORMER
- K.G.E.M.H. = KANSAS GAS ELECTRIC MANHOLE
- S.S.M.H. = SANITARY SEWER MANHOLE
- SWS M.H. = STORM WATER SEWER MANHOLE
- B.H.X. = BORE HOLE

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

NOTE TO CONTRACTORS

Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the

Julianne Kallman 11-30-12

SHEET NUMBER: C-3C

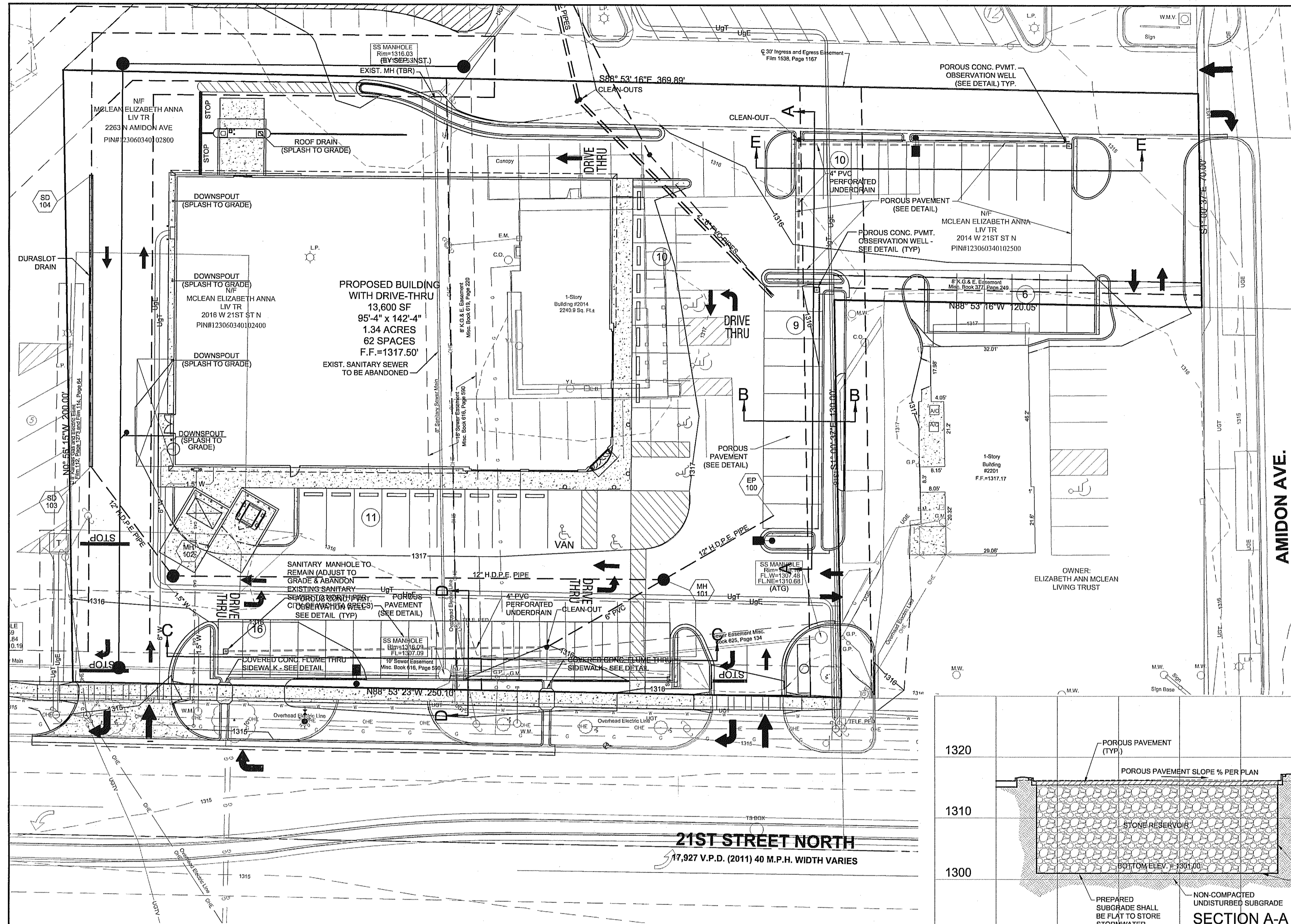
TITLE: STORM SEWER COVER SHEET

REVISIONS:

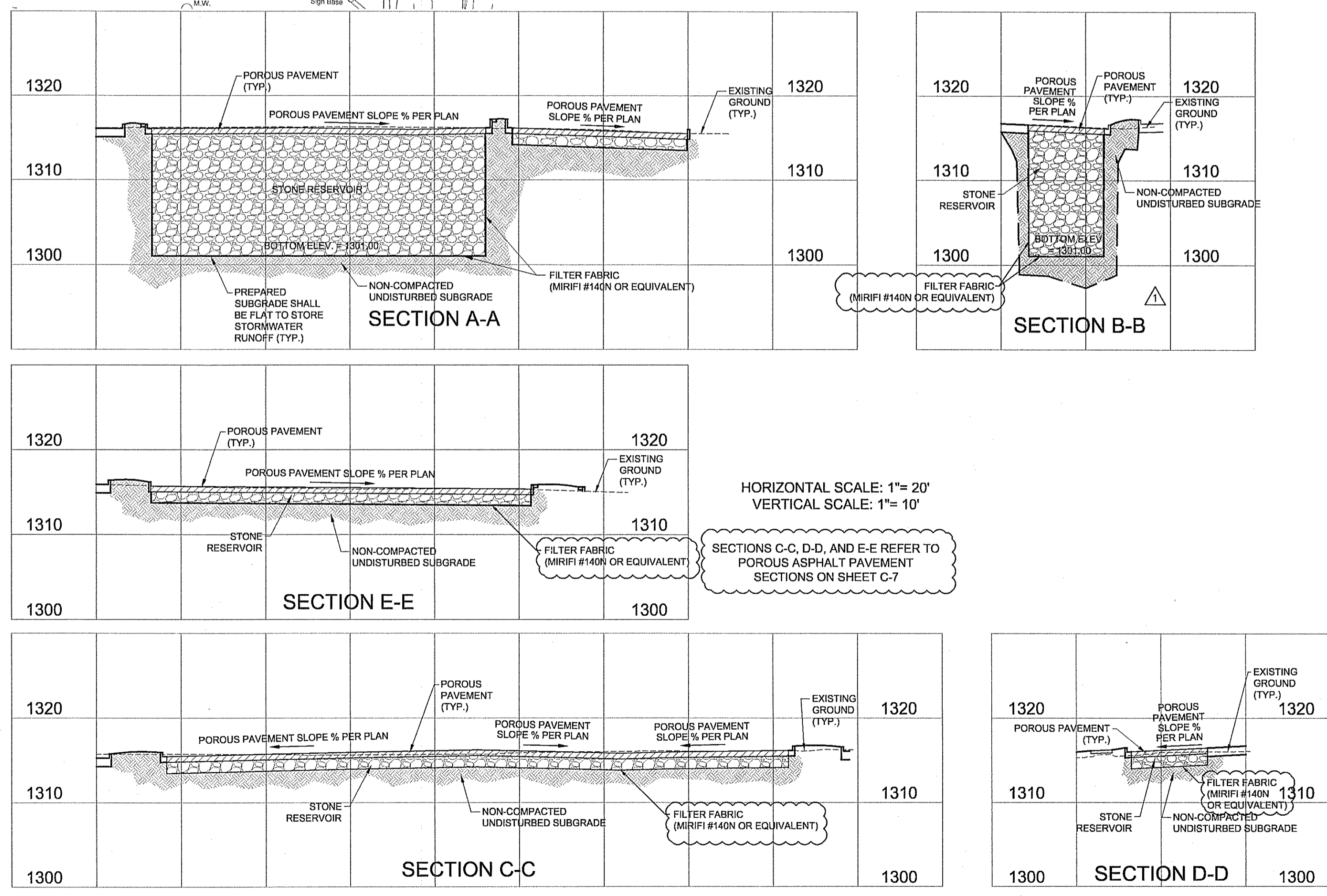
NO.	DESCRIPTION:	INITIALS:	DATE:
1	REVISED SHEET C-3C	JG	09-25-12
2	REVISED SHEET C-3D	JG	11-25-12

NOTE
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

ELECTRONIC DRAWING NOTE:
ELECTRONIC MEDIA OR DIGITAL DRAWINGS ARE INSTRUMENT OF PROFESSIONAL SERVICES. OWNERSHIP OF SUCH WILL BE RETAINED BY THE CIVIL ENGINEER AND MAY NOT BE RELEASED TO CONTRACTORS. CONTRACTORS ARE ADVISED TO CREATE BIDS BASED ON THE USE OF PAPER COPIES OF THE PLANS.



AS BUILT PLANS
 CONTRACTOR: CK CONTRACTING
 INSPECTOR: DAKOTA ZIMMERMAN
 RUGGLES & BOHM, P.A.
 .pdf BY: DGZ 8/2/13



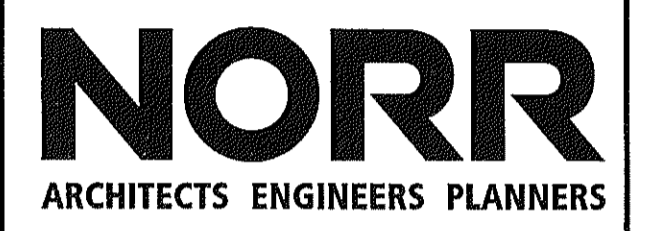
PREPARED SUBGRADE SECTIONS FOR POROUS PAVEMENT

1"=20' HORIZONTAL
 1"=10' VERTICAL



NORTHERN 13,600 LEFT SIDE DRIVE-THRU
 STORE NUMBER: 10159
 NWC 21ST ST AND AMIDON AVE WICHITA, KS
 PROJECT TYPE: NEW CONSTRUCTION
 DEAL TYPE: Fee for Service/GL/Type B
 CS PROJECT NUMBER: 064720

ARCHITECT OF RECORD



CONSULTANT:
 PREMIER CIVIL ENGINEERING
 308 TCW Court
 Lake Saint Louis, MO 63367
 Phone: (314) 925-7444 Fax: (314) 925-7457



ENGINEERS AUTHENTICATION
 The responsibility for professional engineering liability on this project is hereby limited to the set of plans authorized for the seal, signature, and date hereon attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically for any conditions after this date unless recommended.
 STEVE MARION P.E.
 ENGINEER
 PE29059195

REVISIONS:
 09-20-12 CORRECTED DEPTH OF STONE RES.
 10-10-12 ADDED FILTER FABRIC TO ALL SECTIONS

DRAWING BY: J.WURM
 DATE: 09-06-12
 JOB NUMBER: 113301
 TITLE: POROUS PAVEMENT SECTIONS
 SHEET NUMBER: SHEET C-6

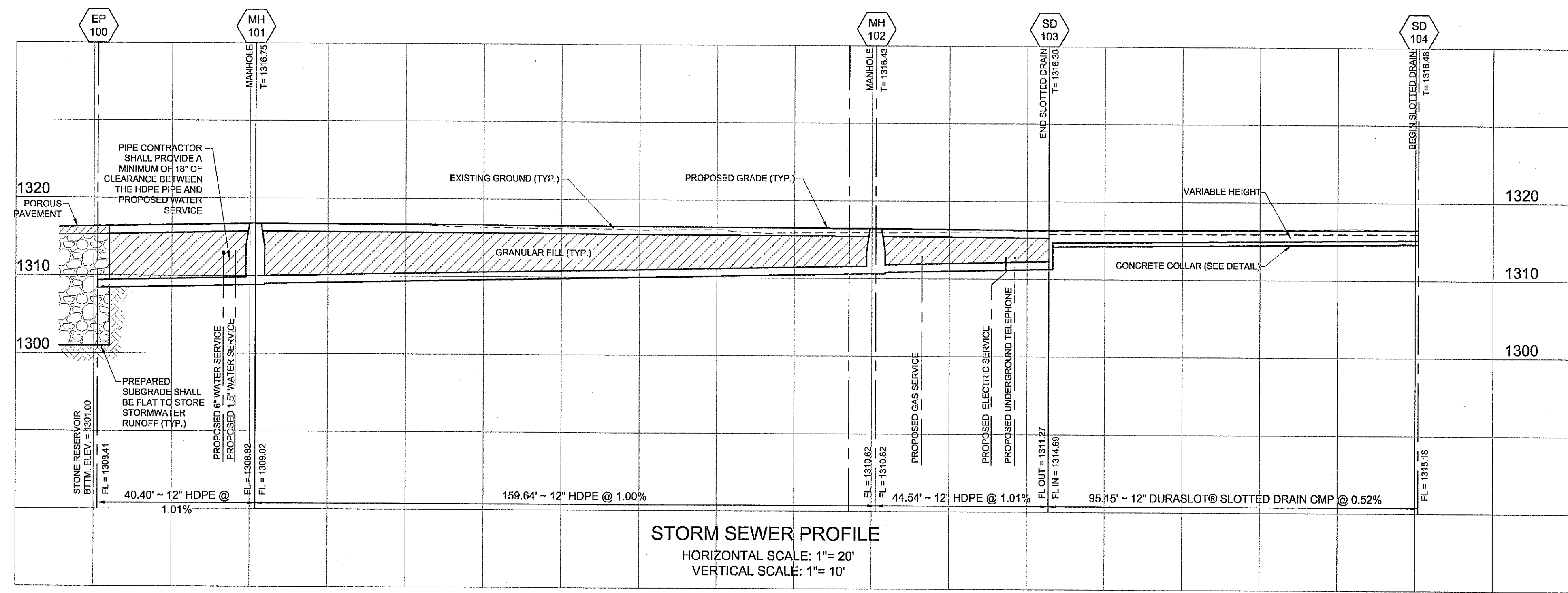
COMMENTS:
 NOT APPROVED FOR CONSTRUCTION

STORM SEWER PROFILE NOTES

- 1. AI DENOTES AREA INLET (OPEN 4 SIDES UNLESS NOTED OTHERWISE)
- DAI DENOTES DOUBLE AREA INLET (OPEN 6 SIDES UNLESS NOTED OTHERWISE.)
- MH DENOTES MANHOLE
- SD SLOTTED DRAIN
- 2GI DENOTES 2 GRATE INLET
- 4GI DENOTES 4 GRATE INLET
2GI W/SIDE NOTES 2 GRATE INLET WITH SIDE INTAKE. (ELEVATION OF INLET TOP IS TO THE TOP OF GRATE, ADD 0.50' FOR TOP OF SIDE INTAKE.)
- EP DENOTES END OF PIPE
- FE DENOTES FLARED END SECTION
- IMH DENOTES INTERCEPTOR MANHOLE
- TD DENOTES TRENCH DRAIN
- DSD DENOTES DOWNSTREAM DEFENDER

2. ALL DIMENSIONS ARE TO THE CENTERLINE OF STRUCTURE, TO THE END OF FLARED END SECTION OR TO THE END OF PIPE AT EPS.

THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF HIS/HER BIDS TO CONFIRM THAT THE SITE CONDITIONS ARE AS SHOWN ON THESE PLANS. ANY CONDITION THAT IS DIFFERENT THAN WHAT IS SHOWN ON THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO SUBMITTAL OF BIDS.



RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	25"
10"	27"
12"	29"
15"	34"
18"	39"
24"	48"
30"	58"
36"	68"
42"	78"
48"	89"
54"	99"
60"	109"

MINIMUM RECOMMENDED COVER BASED ON SURFACE LIVE LOADING CONDITION

PIPE DIAM.	H-20	HEAVY CONSTRUCTION
12" - 48"	24"	48"
36" - 48"	24"	60"

MINIMUM RECOMMENDED COVER BASED ON NORMAL ROADWAY LOADING CONDITION

PIPE DIAM.	COVER
UP TO 24"	18"
30" - 36"	20"
42" - 60"	48"

NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D3212. STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS. LATEST EDITION.
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- FOUNDATION, WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL ENGRAVE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER. THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 7' FROM THE GROUND SURFACE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO GRANULAR, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4" - 24" (100mm-600mm) Ø (150mm) FOR 30" - 60" (750mm-1500mm).
- INSTALL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS II, B OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 7' FROM THE GROUND SURFACE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO GRANULAR, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4" - 24" (100mm-600mm) Ø (150mm) FOR 30" - 60" (750mm-1500mm).
- MINIMUM COVER: MINIMUM COVER, IN NEW TRAFFIC APPLICATIONS (ROADS OR LANDSCAPE AREAS) IS 18" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOODING. FOR EXISTING APPLICATIONS, MINIMUM COVER IS 18" TO 24" FROM THE TOP OF PIPE AND 24" OF COVER FOR 36" - 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PACKING OR TO TOP OF RIGID PREVENTER.

12" DURASLOT® WITH 2 1/2" SLOT

PIPE SIZE	PART NO
12"	1220-DS

CROSS SECTION

PLAN VIEW

ELEVATION

HCPs DWG #PI-6

HALL CONSTRUCTION PRODUCTS AND SERVICES
P. O. Box 1392, South Glens Falls, NY 12803
(518) 747-7047

DURASLOT® Drains - Shipping & Handling

Most DURASLOT orders ship LTL from the HCPs plant in Hudson Falls, NY, zip: 12803. The majority of these orders consist of only one size of pipe. For this type of order HCPs will bundle ten foot lengths into groups of 2-5 pieces, weighing from 65# - 155# (5 pcs. of 4" - 3 pcs. of 12"). Pipe of 15" diameter or larger is shipped individually. These orders generally arrive in a box trailer and are best unloaded by hand - two men can easily handle all bundles.

The bundles are held together by the wire which is sandwiched between two layers of duct tape to protect the plastic pipe. The customer should be aware that the tape will not tear; the wire needs to be cut. When pipe is cut LTL, the fittings and hardware are generally sent UPS. These will usually arrive a day or two before the pipe. The UPS package(s) will have all the paperwork (packing list, copy of the bill of lading, order copy, assembly details, and installation notes) except the original bill of lading which comes with the pipe.

For orders with more than one pipe size (example - dealer stock), when possible, HCPs will nest smaller pipe in larger pipe. As this starts to get heavy, we will build a pallet or skid which allows the customer to unload by forklift. Some fittings may be included on the pallet, but generally fittings and hardware will still go UPS. The paperwork will be in the UPS box; the customer should be reminded to keep the order copy to check against the material on the pallet(s) or skid(s) when it arrives.

For Truckload Delivery: When an order for a truckload of DURASLOT is loaded, all fittings and hardware goes with that truck. The fittings are generally strapped to the upper level of a step-deck trailer, and the hardware is boxed separately. The pipe will be stacked in four piles, ten feet long on 4" x 4" cross pieces. These allow nylon slings to be slid under the stack and wrapped around it. The whole 10-foot pile can be unloaded by a crane or any machine that can use the nylon slings to lift the pile off the truck. Metal chains or any other material which could damage the pipe are not recommended for lifting DURASLOT off any truck. We also do not recommend using a forklift for unloading DURASLOT off the truck. We also do not recommend using a forklift for DURASLOT that is not on a pallet or skid. DURASLOT should never be pushed off the side of the truck - it is not flexible like regular HDPE pipe!

Approximate Truckload Quantities		
Dia.	2 1/2" Slot	6" Slot
4"	10,000	X
6"	4,000	3,600
8"	3,200	2,900
12"	1,200	1,200
15"	X	1,000
18"	X	760
24"	X	440
30"	X	360
36"	X	280

(X = not a standard size - check with HCPs)

HALL CONSTRUCTION PRODUCTS AND SERVICES
P. O. Box 1392, South Glens Falls, NY 12803
(518) 747-7047

DURASLOT® Installation Practices

DURASLOT surface drains are made from a flexible conduit, which is designed to attain its structural strength utilizing ring compression derived from soil pressure. For this to occur, a minimum height of cover is required. Since this is not possible, the drain must be backfilled with concrete to allow it to accept vehicular traffic. This is true of any pipe with an inlet mounted on top to form this type of surface drain. The pipe cannot function in the manner for which it was designed when it is installed close to the surface. The concrete-filled trench provides the actual structure for this type of design.

Following are some of the most often utilized installation details for DURASLOT surface drains.

(A) Heavy Traffic - completely surrounded by concrete for critical loading applications.

(B) Moderate Traffic - surrounded by concrete to below the center of the pipe. This type of installation has been used when traffic loads are not as heavy (i.e., retail parking lots, airport curbs, etc.). The soil below the pipe and concrete must be high-quality and well compacted.

HALL CONSTRUCTION PRODUCTS AND SERVICES
P. O. Box 1392, South Glens Falls, NY 12803
(518) 747-7047

DURASLOT® Drains - Installation Notes - 1.0

DURASLOT must first be set and secured in place - some methods that have been used:

- Hang from cross members on grade.
- Set in a cradle made of rebar or wood.
- Nest in the bottom of the trench (not for H-20 loading).

Before concrete is poured or asphalt is laid down, the slot opening should be covered to prevent it from being clogged. If you hang the DURASLOT a good way to do this is to put 2" duct tape over the slot opening (1). If the pipe is sitting in a cradle or the trench bottom, a 2" x 4" can be set on the 2" edge on top of the grating (2).

HALL CONSTRUCTION PRODUCTS AND SERVICES
P. O. Box 1392, South Glens Falls, NY 12803
(518) 747-7047

DURASLOT® Drains - Installation Notes - 2.0

When pouring concrete around DURASLOT, especially when the pipe is sitting in a cradle, pour down on the spot where the pipe meets the slot (X) (taking care to keep the slot upright). This type of pour will provide some downward force (D) that will serve to keep the pipe from floating due to upward force (F) as the concrete fills the trench.

The top of the DURASLOT at the slot opening should always be set 1/8" to 1/4" below finished grade. This allows surface runoff to enter the inlet efficiently and protects the grate and flanges from snowplows and the like. A mason's tool can be used to knurl the edge after the tape or 2" x 4" has been removed.

It is important that all fittings and hardware are used when DURASLOT is installed. The product is designed as a system; all grate connectors and anchors must be used to keep the grate in tension, and to tie the ends of the grate into the concrete or asphalt. At the end of each run an end cap or adapter should always be utilized (these include the anchor). Only DURASLOT Couplers should be used to join sections of DURASLOT. See the Assembly Details or call HCPs at (518) 747-7047 with any questions.

CVS pharmacy®

NORTHERN 13,600 LEFT SIDE DRIVE-THRU

STORE NUMBER: 10159

NWC 21ST ST AND AMIDON AVE
WICHITA, KS

PROJECT TYPE: NEW CONSTRUCTION
DEAL TYPE: Fee for Service/GL/Type B

CS PROJECT NUMBER: 064720

ARCHITECT OF RECORD

NORR

ARCHITECTS ENGINEERS PLANNERS

CONSULTANT:

PREMIER CIVIL ENGINEERING

308 TCW Court
Lake Saint Louis, MO 63367
Phone: (314) 925-7444 Fax: (314) 925-7457

DEVELOPER:

VELMEIR COMPANIES

ENGINEERS AUTHENTICATION

The responsibility for professional engineering liability on this project is hereby limited to the set of plans, specifications, and data hereunder attached. Plans and specifications are prepared for all other engineering items included in this project and specifically exclude sections after this date unless reauthorized.

REVISIONS:

10-10-12 MODIFIED DURASLOT DETAIL

DRAWING BY: J.WURM

DATE: 09-06-12

JOB NUMBER: 113301

TITLE: STORM SEWER PROFILES & DETAILS

SHEET NUMBER: SHEET C-9.2

COMMENTS: NOT APPROVED FOR CONSTRUCTION