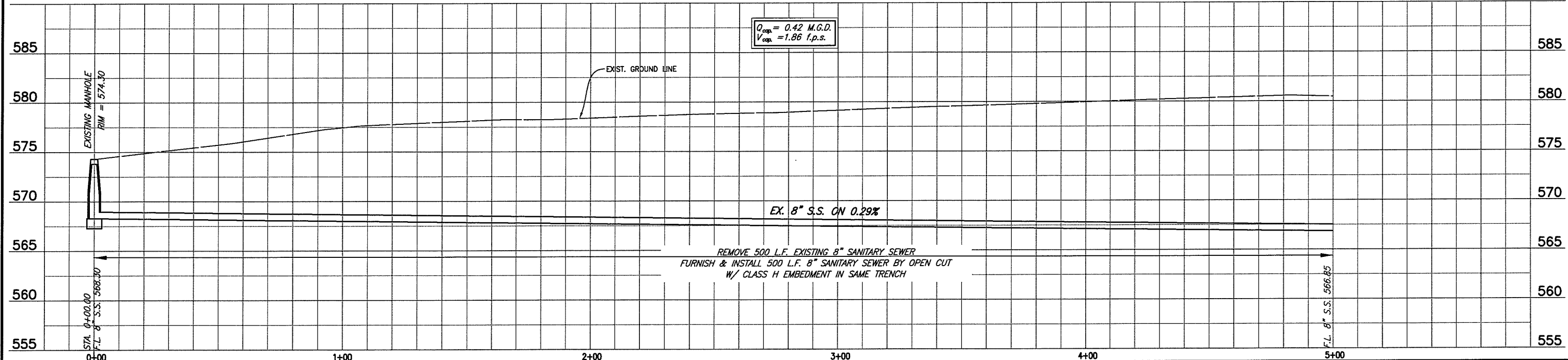
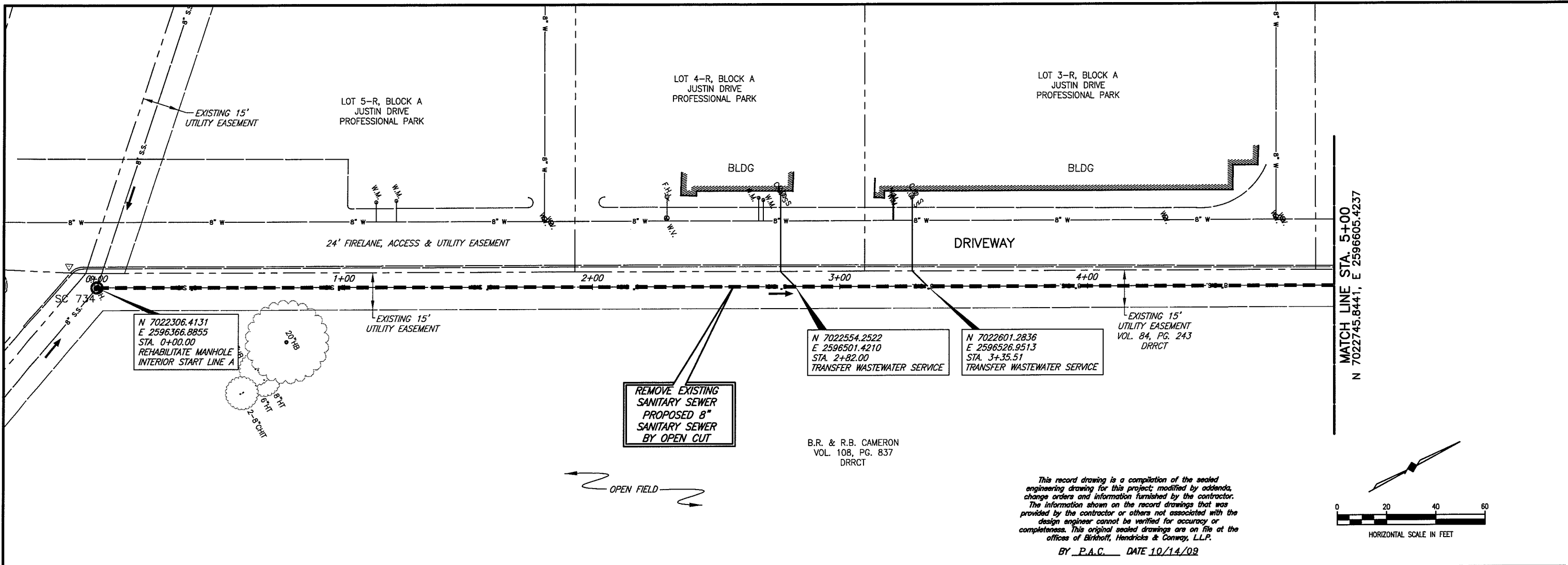
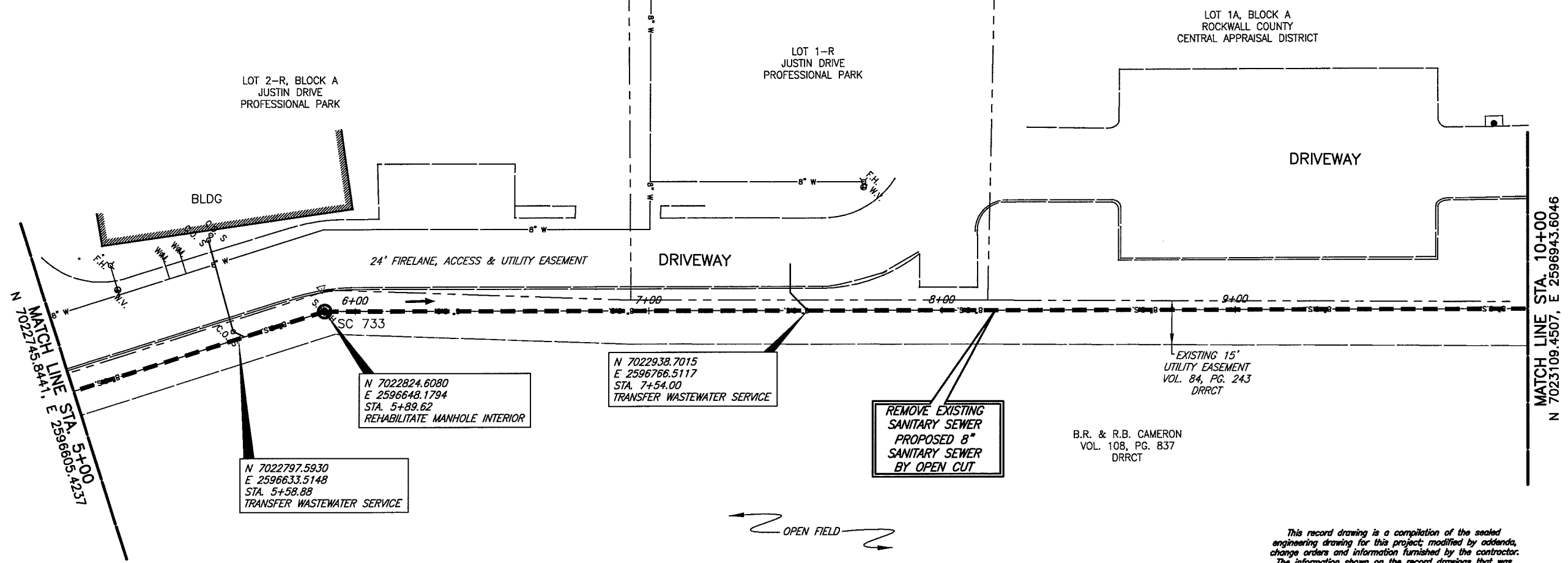


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<b>BIRKHOFF, HENDRICKS &amp; CONWAY, L.L.P.</b> CONSULTING ENGINEERS 11910 Greenville Ave., Suite 600 Dallas, Texas (214) 361-7900			<b>CITY OF ROCKWALL, TEXAS</b> SQUABBLE CREEK INTERCEPTOR, PHASE II REHABILITATION	BHC PROJECT NO. 2008-130	SHEET NO. <b>3</b>
			<b>SQUABBLE CREEK SANITARY SEWER LINE          PLAN AND PROFILE          STA. 0+00 TO STA. 5+00 (LINE A)</b>	February, 2009	

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MATCH LINE STA. 10+00  
N 7023109.4507, E 2596943.6046

MATCH LINE STA. 5+00  
N 7022745.8441, E 2596605.4237

N 7022797.5930  
E 2596633.5148  
STA. 5+58.88  
TRANSFER WASTEWATER SERVICE

N 7022824.6080  
E 2596648.1794  
STA. 5+89.62  
REHABILITATE MANHOLE INTERIOR

N 7022938.7015  
E 2596766.5117  
STA. 7+54.00  
TRANSFER WASTEWATER SERVICE

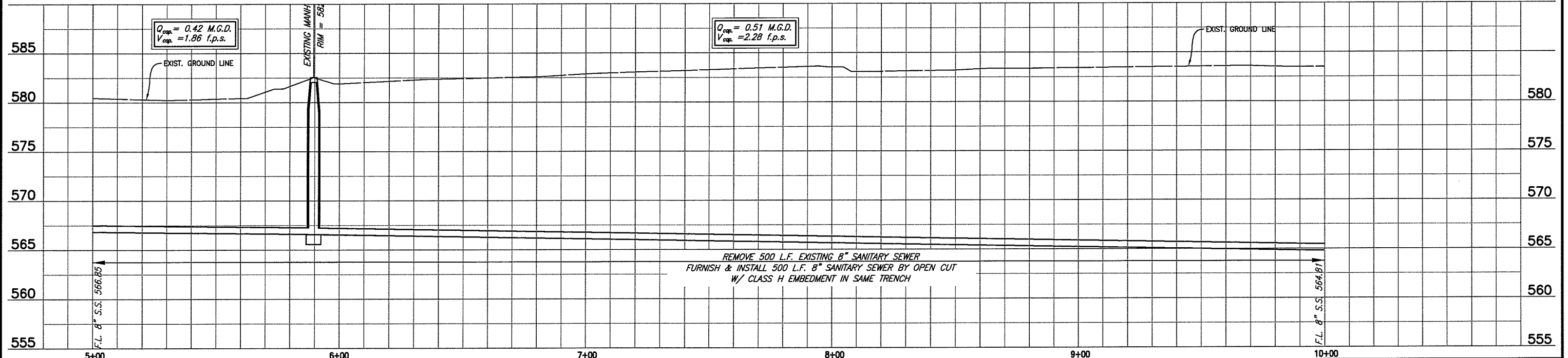
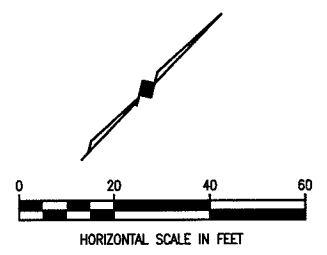
REMOVE EXISTING  
SANITARY SEWER  
PROPOSED 8"  
SANITARY SEWER  
BY OPEN CUT

B.R. & R.B. CAMERON  
VOL. 108, PG. 837  
DRRCT

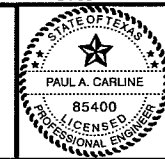
EXISTING 15"  
UTILITY EASEMENT  
VOL. 84, PG. 243  
DRRCT

OPEN FIELD

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BY P.A.C. DATE 10/14/09



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CONSULTING ENGINEERS  
11910 Greenville Ave., Suite 600  
Dallas, Texas  
(214) 361-7900



*[Signature]*  
10/23/09

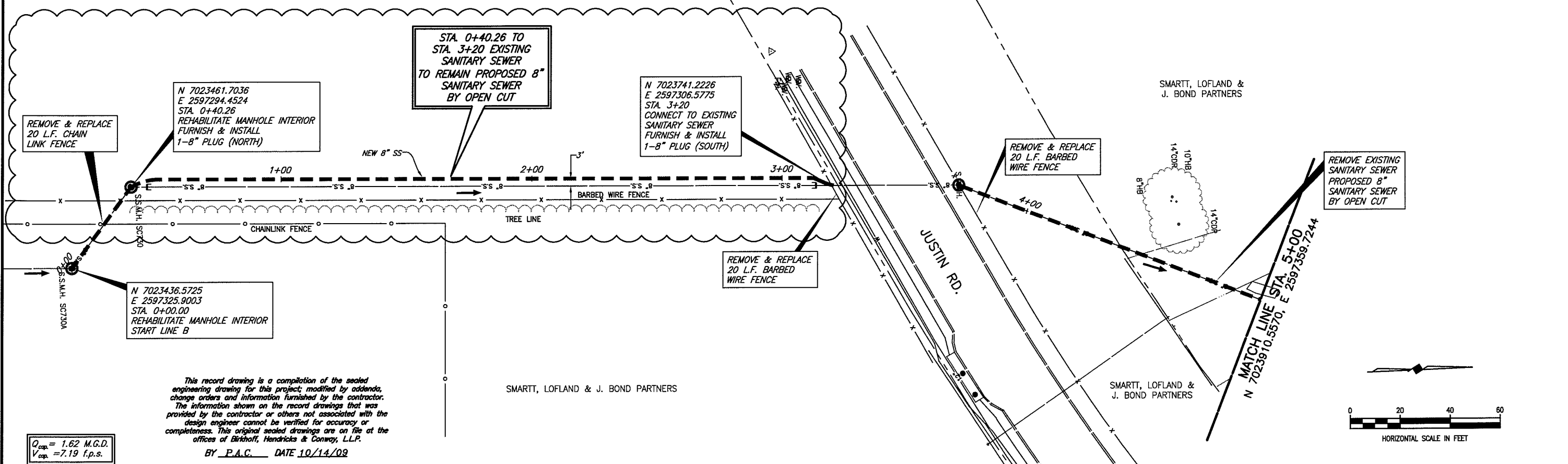
**CITY OF ROCKWALL, TEXAS**  
SQUABBLE CREEK INTERCEPTOR, PHASE II REHABILITATION  
SQUABBLE CREEK SANITARY SEWER LINE  
PLAN AND PROFILE  
STA. 5+00 TO STA. 10+00 (LINE A)

BHC  
PROJECT NO.  
2008-130  
February, 2009

SHEET NO.  
**4**



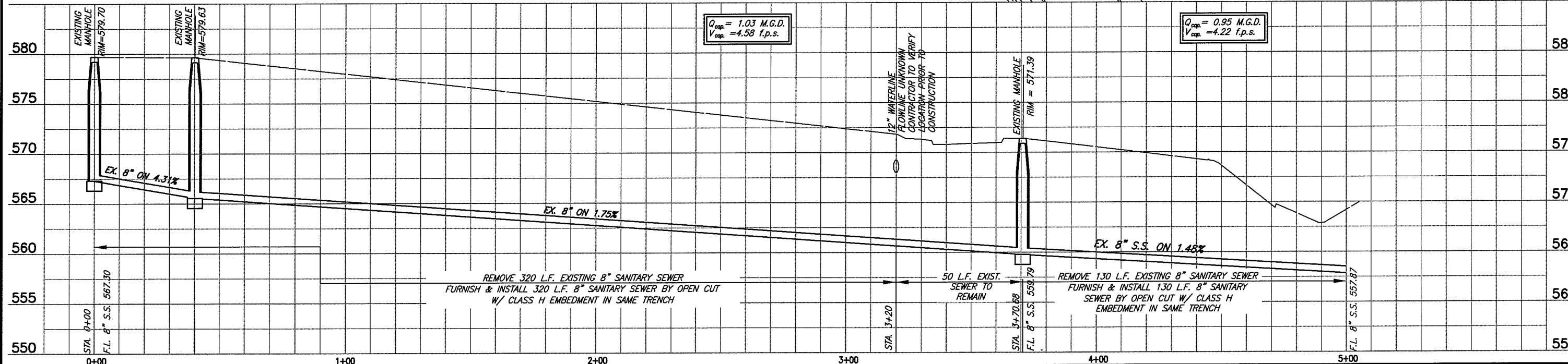
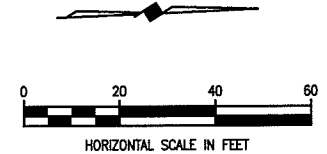
SMARTT, LOFLAND & J. BOND PARTNERS



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BY P.A.C. DATE 10/14/09

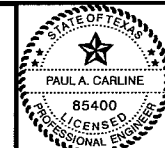
$Q_{cap} = 1.62$  M.G.D.  
 $V_{cap} = 7.19$  f.p.s.



$Q_{cap} = 1.03$  M.G.D.  
 $V_{cap} = 4.58$  f.p.s.

$Q_{cap} = 0.95$  M.G.D.  
 $V_{cap} = 4.22$  f.p.s.

**BIRKHOFF, HENDRICKS & CONWAY, L.L.P.**  
CONSULTING ENGINEERS  
11910 Greenville Ave., Suite 600  
Dallas, Texas  
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2/23/09

**CITY OF ROCKWALL, TEXAS**  
SQUABBLE CREEK INTERCEPTOR, PHASE II REHABILITATION  
SQUABBLE CREEK SANITARY SEWER LINE  
PLAN AND PROFILE  
STA. 0+00 TO STA. 5+00 (LINE B)

BHC  
PROJECT NO.  
2008-130

SHEET NO.

6

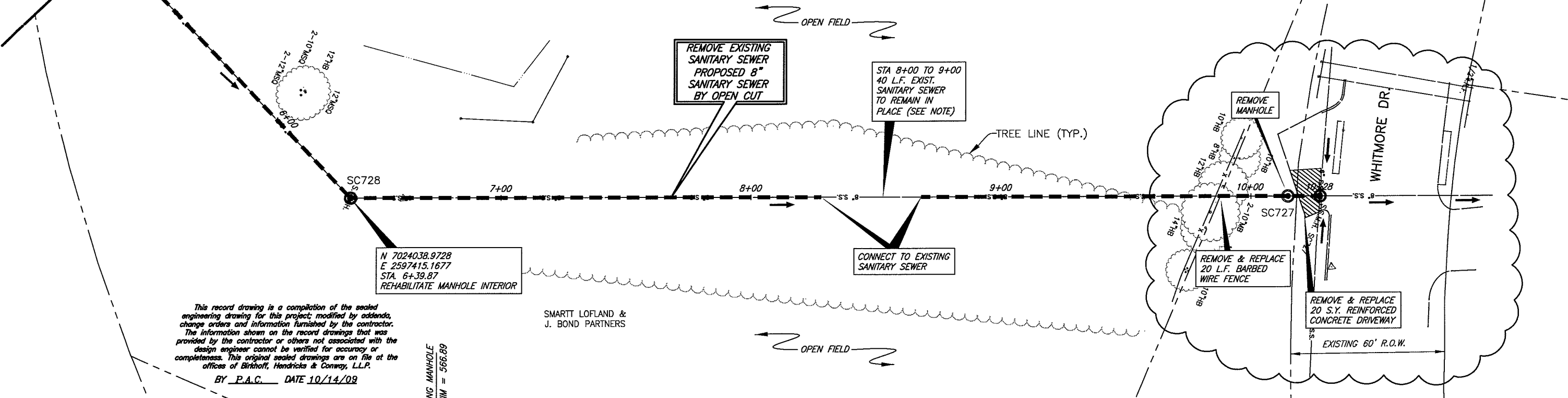
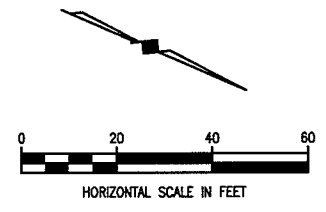
February, 2009

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N 7023910.5570, E 2597359.7244  
MATCH LINE STA. 5+00

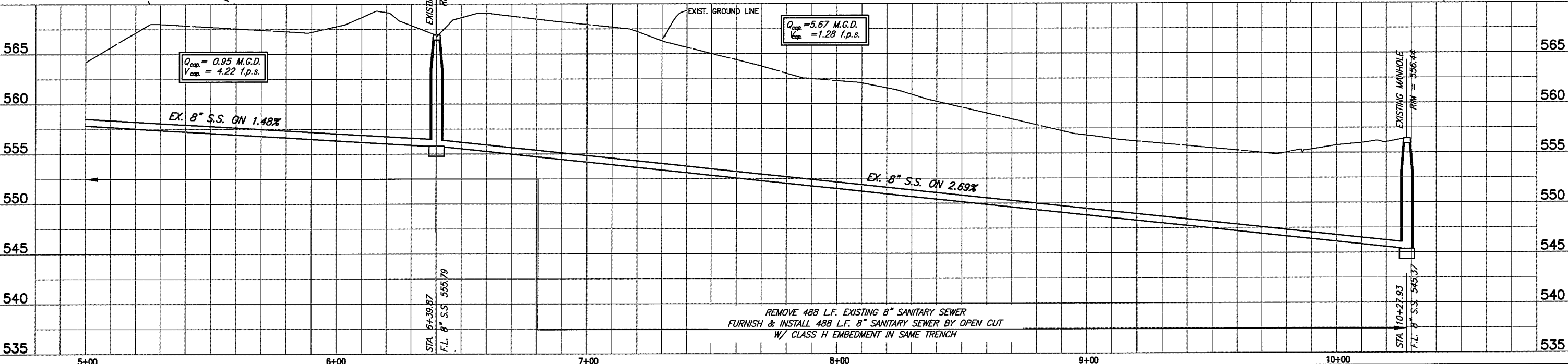
**NOTE:**  
APPROXIMATELY 40 L.F. OF NEW SANITARY SEWER WAS  
INSTALLED SOMEWHERE IN THE AREA BETWEEN STA. 8+00 &  
9+00 IN 2007. THIS SANITARY SEWER SHALL REMAIN  
IN PLACE. CONTRACTOR SHALL VERIFY LOCATION PRIOR  
TO CONSTRUCTION.

SMARTT LOFLAND &  
J. BOND PARTNERS



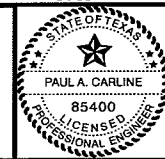
This record drawing is a compilation of the sealed  
engineering drawing for this project; modified by addenda,  
change orders and information furnished by the contractor.  
The information shown on the record drawings that was  
provided by the contractor or others not associated with the  
design engineer cannot be verified for accuracy or  
completeness. This original sealed drawings are on file at the  
offices of Birkhoff, Hendricks & Conway, L.L.P.  
BY P.A.C. DATE 10/14/09

SMARTT LOFLAND &  
J. BOND PARTNERS



REMOVE 488 L.F. EXISTING 8" SANITARY SEWER  
FURNISH & INSTALL 488 L.F. 8" SANITARY SEWER BY OPEN CUT  
W/ CLASS H EMBEDMENT IN SAME TRENCH

**BIRKHOFF, HENDRICKS & CONWAY, L.L.P.**  
CONSULTING ENGINEERS  
11910 Greenville Ave., Suite 600  
Dallas, Texas  
(214) 361-7900



*[Signature]*  
2/23/09

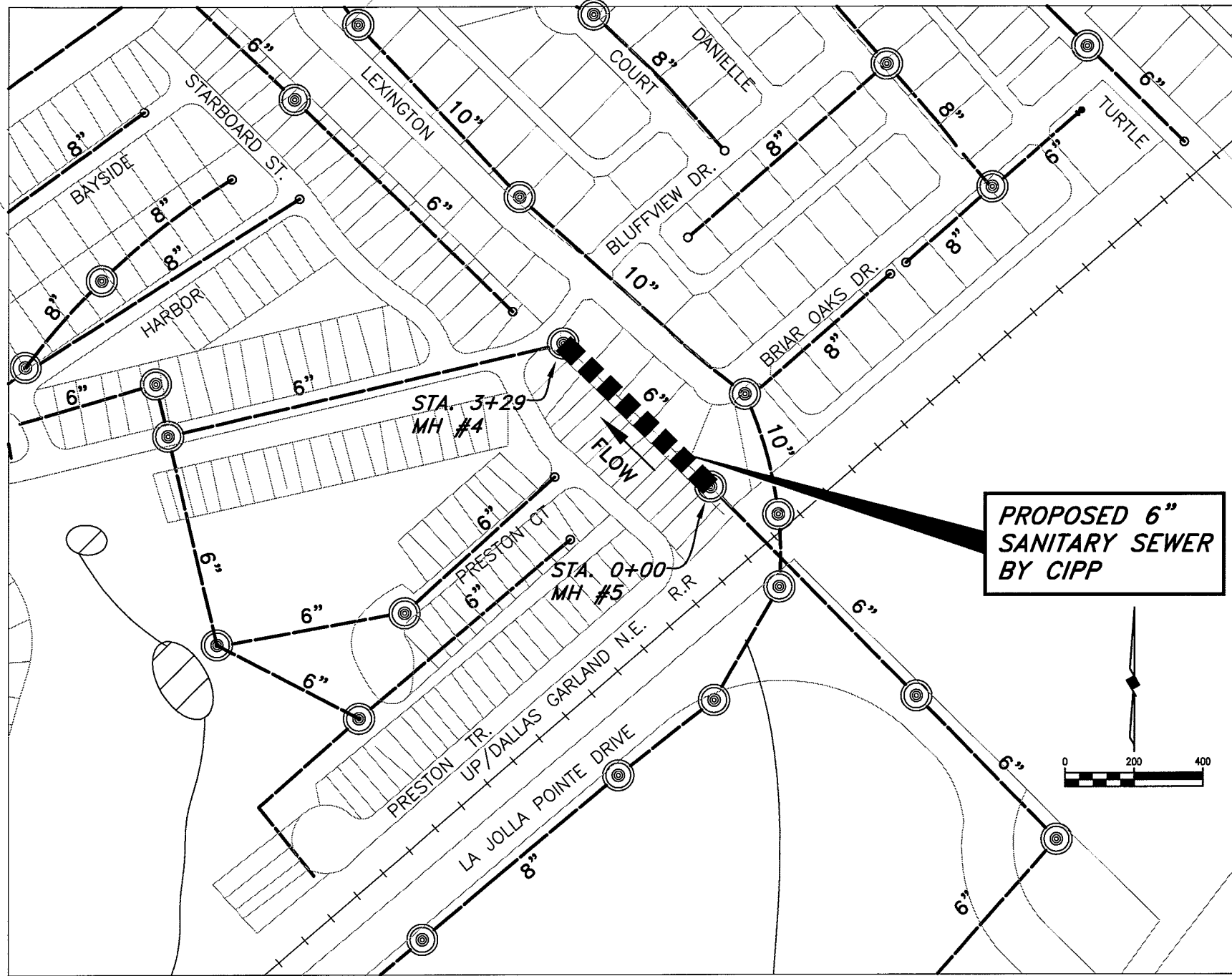
**CITY OF ROCKWALL, TEXAS**  
SQUABBLE CREEK INTERCEPTOR, PHASE II REHABILITATION  
SQUABBLE CREEK SANITARY SEWER LINE  
PLAN AND PROFILE  
STA. 10+00 TO STA. 10+28 (LINE B)

BHC  
PROJECT NO.  
2008-130  
February, 2009

SHEET NO.  
**7**

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**PLAN**

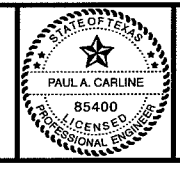
**Internal Television Inspection Operator Logs**

<b>From Manhole:</b> 5	<b>Date:</b> 9/11/2008	<b>Weather:</b> DRY
<b>Comments:</b>	<b>Basin ID:</b> Buffalo Creek	
<b>To Manhole:</b> 4	<b>Pipe Size (in):</b> 6	<b>Pipe Type:</b> VCP
<b>Line Length (ft):</b> 328.5	<b>From MH Depth (ft):</b> 0	<b>To MH Depth (ft):</b> 0.0
<b>Filed Against Flow:</b> No		
Distance Reading (ft)	Description	Clock Position
0	BEGIN AT MH 5	N/A
29.3	FACTORY TAP	10
51	FACTORY TAP	9
75.6	MATERIAL CHANGE TO PVC	N/A
80.9	FACTORY TAP	10
82.1	MATERIAL CHANGE TO CLAY	N/A
102.4	FACTORY TAP	9
128.2	FACTORY TAP	9
141	LONGITUDINAL CRACK	3
144.6	LONGITUDINAL CRACK	1
154.1	FACTORY TAP	10
178.4	MEDIUM ROOTS	12
179.8	FACTORY TAP	10
205.1	FACTORY TAP	10
225.6	MULTIPLE CRACKS	12
230.9	FACTORY TAP	9
256.7	FACTORY TAP	9
260.8	LIGHT ROOTS	2
282.0	FACTORY TAP, CIRCUMFRENTIAL FRACTURE	12
286.5	CIRCUMFRENTIAL CRACK	9
307.7	FACTORY TAP	9
328.5	END AT MH 4	N/A

**NOTE:**  
~~FIRST 5 L.F. OF ALL SERVICES SHALL BE LINED WITH CIPP USING TOPHAT METHOD. DISTANCE SHALL BE MEASURED FROM 6" SANITARY SEWER.~~  
**NOT CONSTRUCTED**

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 BY P.A.C. DATE 10/14/09

**BIRKHOFF, HENDRICKS & CONWAY, L.L.P.**  
 PROFESSIONAL ENGINEERS  
 Texas Firm F526  
 11910 Greenville Ave., Suite 600  
 Dallas, Texas 75243 (214)  
 361-7900



*[Signature]*  
 10/14/09

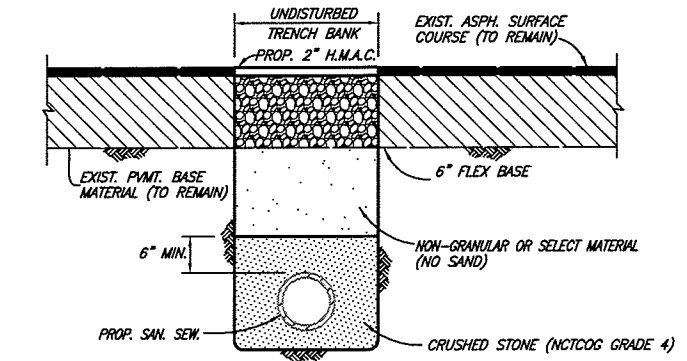
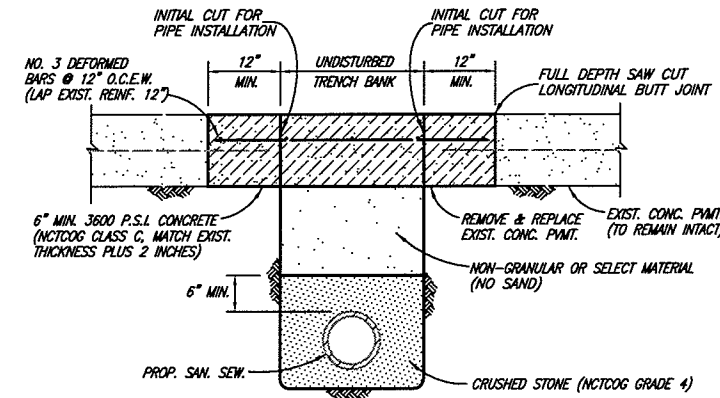
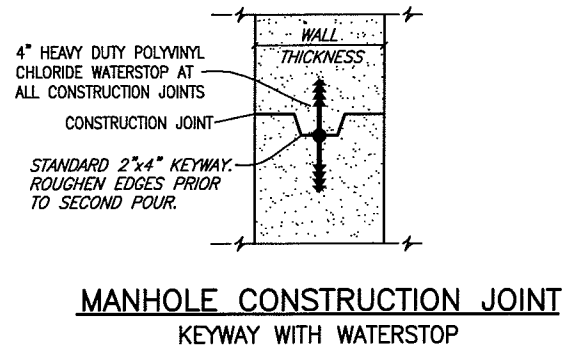
**CITY OF ROCKWALL, TEXAS**  
 LAKESIDE VILLAGE SANITARY SEWER REHABILITATION  
 LAKESIDE VILLAGE SANITARY SEWER LINE  
 PLAN  
 STA. 0+00 TO STA. 3+29 (LINE "C")

BHC PROJECT NO. 2008-130  
 October, 2009  
 SHEET NO. **8**



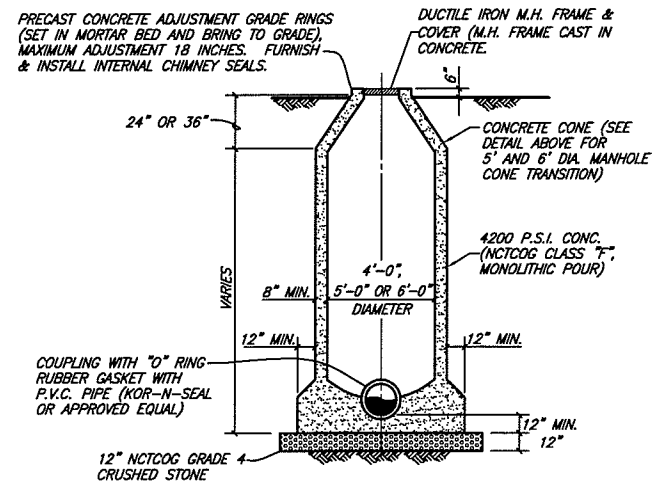
**STANDARD SEWER NOTES**

- SEWER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT CITY OF ROCKWALL, SPECIFICATIONS AND CODES.
- FOR OPEN CUT SEWER REPLACEMENT, CONTRACTOR SHALL FURNISH & INSTALL GREEN SEWER E.M.T. MARKER PADS AT ALL MANHOLES, CLEANOUTS, SERVICES, CHANGES IN DIRECTION AND 250- FEET ALONG THE LENGTH OF THE SEWER LINE, PAYMENT FOR FURNISHING THE E.M.T. MARKER PADS SHALL BE SUBSIDIARY TO SEWER LINE INSTALLATION.
- STANDARD MANHOLE FRAMES AND 24" DIAMETER COVER SHALL BE PAMREX 24" AS MANUFACTURED BY CERTAINTEE CORPORATION. TYPE "S" MANHOLE FRAME AND 24" COVER SHALL BE PAMTIGHT 24" AS MANUFACTURED BY CERTAINTEE CORPORATION.
- 4200 P.S.I. CONCRETE SHALL BE USED FOR ALL MANHOLES.
- USE ONLY A NON-SHEAR COUPLING FOR PIPE CONNECTIONS.
- WHEN THE TRENCH SAFETY EXCEEDS 5 FEET IN DEPTH, THE CONTRACTOR SHALL MEET OR EXCEED THE O.S.H.A. STANDARDS FOR TRENCH SAFETY.
- EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION PROVIDED BY UTILITY COMPANIES AND FIELD SURVEYS. THE UTILITIES SHOWN MAY NOT REPRESENT ALL UTILITIES PRESENT. THE ENGINEER AND CITY OF ROCKWALL DO NOT ACCEPT RESPONSIBILITY FOR THE UTILITY LOCATIONS SHOWN. THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ALL UTILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UTILITIES FROM DAMAGE AND SHALL REPAIR ANY UTILITIES DAMAGED BY THEIR OPERATIONS AT THEIR EXPENSE. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS WITH UTILITIES.
- ALL SANITARY SEWER PIPE INSTALLED BY OPEN CUT SHALL BE SDR 35 PVC UNLESS SHOWN OTHERWISE.
- WHERE SPECIFIED, MANHOLES SHALL BE REHABILITATED AND MADE WATER TIGHT USING A COATING SYSTEM MANUFACTURED BY STRONG, QUAD-EX OR RAVEN.

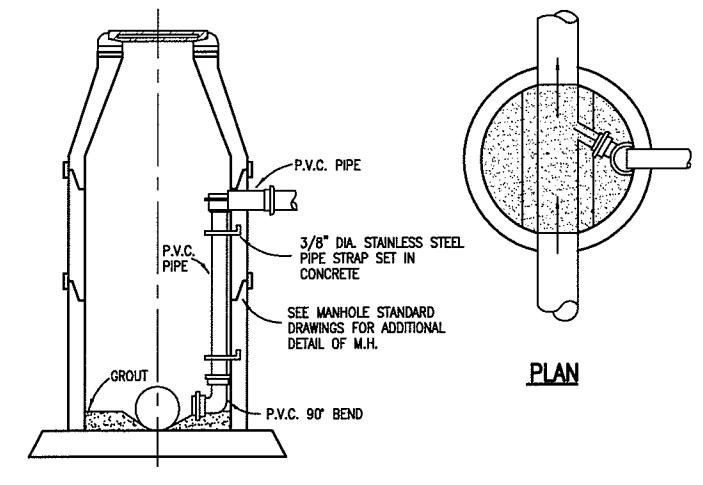


**CONCRETE STREET OR DRIVEWAY REPAIR**

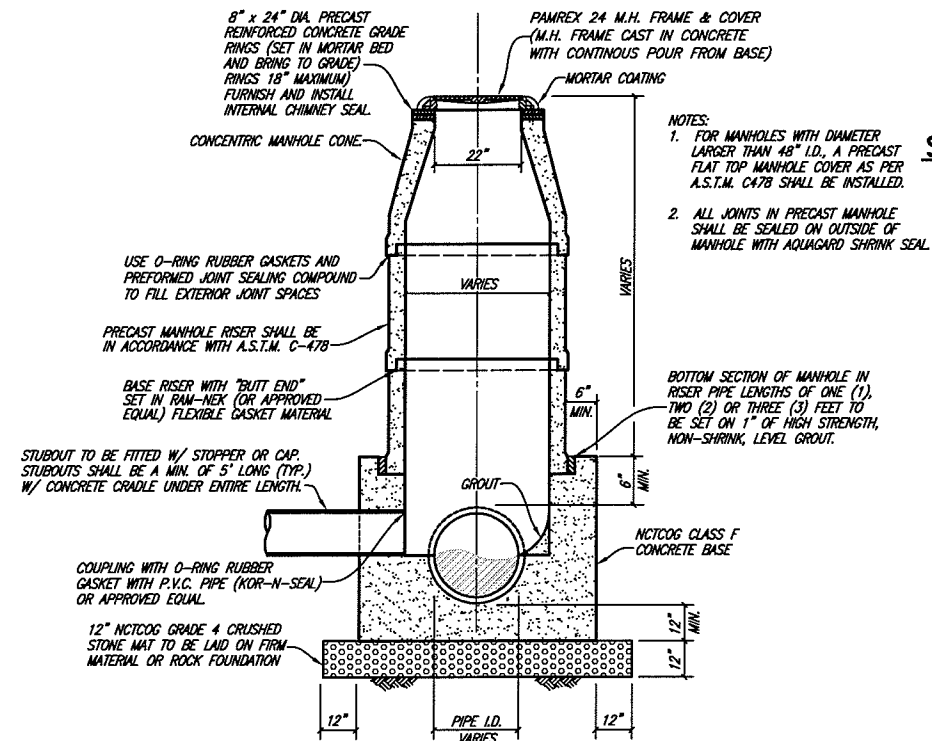
**ASPHALT STREET OR DRIVEWAY REPAIR**



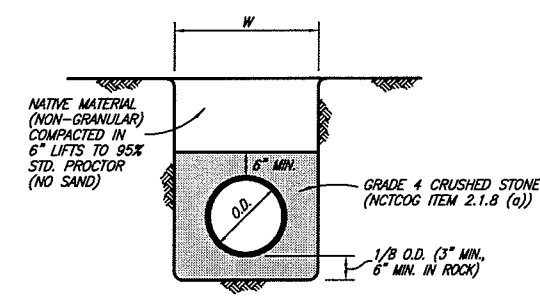
**STANDARD MANHOLE ELEVATION  
4', 5' & 6' DIAMETER MANHOLES  
SANITARY SEWER MANHOLE (CAST IN PLACE)**



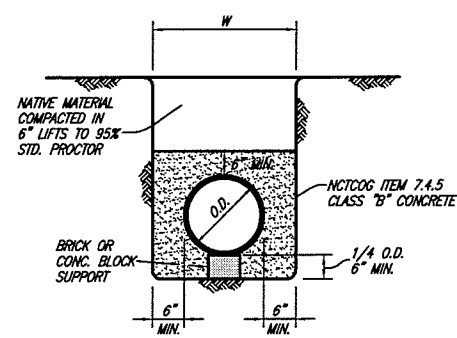
**DROP MANHOLE (INSIDE DROP)  
N.C.T.C.O.G. ITEM 6.7.2.(i)**



**PRECAST CONCRETE MANHOLE  
NO SCALE**



**CLASS H EMBEDMENT**

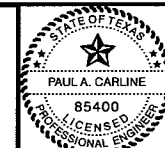


**CLASS G EMBEDMENT**

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BY P.A.C. DATE 10/14/09

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**BIRKHOFF, HENDRICKS & CONWAY, L.L.P.**  
CONSULTING ENGINEERS  
11910 Greenville Ave., Suite 600  
Dallas, Texas  
(214) 361-7900



*Handwritten signature and date: 2/23/09*

**CITY OF ROCKWALL, TEXAS**  
SQUABBLE CREEK INTERCEPTOR, PHASE II REHABILITATION  
SEWER NOTES & DETAILS

BHC  
PROJECT NO.  
2008-130  
February, 2009  
SHEET NO.  
**9**