

**REVIEW BY FORT BEND COUNTY**  
**COMMISSIONERS COURT**

**Fort Bend County**  
**Engineering Department**  
301 Jackson Suite 401  
Richmond, Texas 77469  
281.633.7500  
Permits@fortbendcountytexas.gov



Right of Way Permit



Commercial Driveway Permit

Permit No: 2018-21133

**Applicant:** RAC INDUSTRIES, LLC

**Job Location Site:** FM 2759/Crabb River Road, Richmond, TX 77469

**Bond No.** Not Required      **Date of Bond:** \_\_\_\_\_ **Amount:** \_\_\_\_\_

The above applicant came to make use of certain Fort Bend County property subject to, "The Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas, of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Chapter 181, Vernon's Texas Statutes and Codes Annotated.

**Notes:**

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
  - a. 48 hours in advance of construction start up, and
  - b. When construction is completed and ready for final inspection, submit notification to Permit Administrator thru MyGovernmentOnline.org portal.
3. This permit expires one (1) year from date of permit if construction has not commenced.

On this 12th day of June, 2018, Upon Motion of Commissioner Muyers, seconded by Commissioner Mokales, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

**Signature**

Presented to Commissioners Court and approved.

By: \_\_\_\_\_

County Engineer

Date Recorded 6/12/2018 Comm. Court No. 9B

N/A

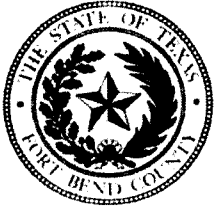
By: \_\_\_\_\_

Drainage District Engineer/Manager

Clerk of Commissioners Court

By: \_\_\_\_\_

Deputy



**PERMIT APPLICATION REVIEW FORM FOR  
CABLE, CONDUIT, AND POLE LINE ACTIVITY  
IN FORT BEND COUNTY**

**Fort Bend County  
Engineering Department**  
301 Jackson Suite 401  
Richmond, Texas 77469  
281.633.7500  
Permits@fortbendcountytx.gov

- ☒ Right of Way Permit  
☐ Commercial Driveway Permit

Permit No: 2018-21133

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

**(1) COMPLETE APPLICATION FORM:**

- ☒ a. Name of road, street, and/or drainage ditch affected.  
☒ b. Vicinity map showing course of directions  
☒ c. Plans and specifications

**(2) BOND:**

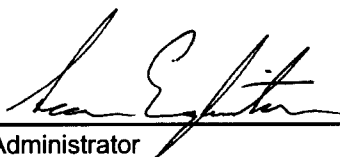
- ☐ County Attorney, approval when applicable.
- ☐ Perpetual bond currently posted. Bond No: \_\_\_\_\_ Amount: \_\_\_\_\_
- ☐ Performance bond submitted. Bond No: Not Required Amount: \_\_\_\_\_
- ☐ Cashier's Check

**(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):**

\_\_\_\_\_  
Drainage District Approval

\_\_\_\_\_  
Date

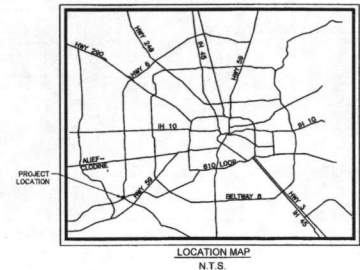
**We have reviewed this project and agree it meets minimum requirements.**

  
\_\_\_\_\_  
Permit Administrator

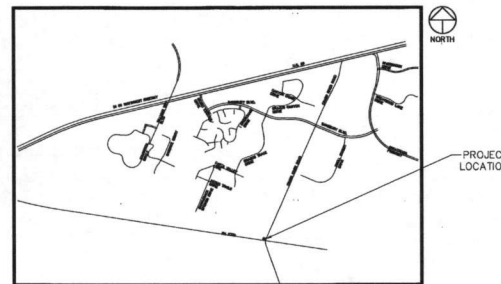
6/5/2018

\_\_\_\_\_  
Date

# CONSTRUCTION PLANS FOR PROPOSED FORT BEND COUNTY M.U.D. No. 116 FORT BEND COUNTY, TEXAS PLANS FOR CONSTRUCTION OF CRABB RIVER ROAD AT F.M. 2759 WATERLINE RELOCATION



No.	TITLE
1	COVER
2	GENERAL NOTES
3	SITE PLAN
4	PLAN & PROFILE
5	CITY OF RICHMOND AND FORT BEND COUNTY DETAILS SHT. 1 OF 2
6	CITY OF RICHMOND AND FORT BEND COUNTY DETAILS SHT. 2 OF 2
7	TRAFFIC CONTROL PLAN (SEE TDDOT PERMIT)
8	TDDOT PED-12 SHT. 1 OF 4
9	TDDOT PED-12 SHT. 2 OF 4
10	TDDOT PED-12 SHT. 3 OF 4
11	TDDOT PED-12 SHT. 4 OF 4



KEY MAP: 606Q

FT. BEND COUNTY, TEXAS  
VICINITY MAP  
NOT TO SCALE

ZIP CODE: 77469

## NOTE:

ALL ONSITE UNDERGROUND PIPING TO BE INSPECTED BY THE MUD OPERATOR PRIOR TO BACKFILLING. CONTACT MARY HAVACK WITH SI ENVIRONMENTAL, LLC FOR INSPECTIONS VIA THE BUILDER'S SERVICES DEPARTMENT AT (832) 490-1610.

## CAUTION!!

EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

**STOP!**  
**CALL BEFORE YOU DIG**  
TEXAS ONE CALL SYSTEM  
1-800-245-4545  
(at least 72 hours prior to digging)

FORT BEND COUNTY ENGINEER	
ENGINEER: <i>Richard W. Stoltz, P.E.</i>	DATE: <i>6/4/18</i>
THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN (1) YEAR FROM DATE OF APPROVAL.	
APPROVED: <i>[Signature]</i>	DATE: <i>6/4/18</i>
DEVELOPMENT COORDINATOR	

Fort Bend County Engineering  
FORT BEND COUNTY, TEXAS

Richard W. Stoltz, P.E.  
County Engineer

Fort Bend County  
Construction - General Notes

- Fort Bend County must be invited to the Pre-Construction Meeting.
- Contractor shall notify Fort Bend County Engineering Department 48 hours prior to commencing construction and 48 hour notice to any construction activity within the limits of the paving at [Construction@fortbendcountytx.gov](mailto:Construction@fortbendcountytx.gov).
- Contractor is responsible for obtaining all permits required from Fort Bend County prior to commencing construction of any improvements within County road right of ways.
- All Paving Improvements shall be constructed in accordance with Fort Bend County "Rules, Regulations and Requirements relating to the Approval and Acceptance of Improvements" in addition to as currently amended.
- All road widths, curb radii and curb alignment shown indicates back of curb.
- A continuous longitudinal reinforcing bar shall be used in the curbs.
- All concrete pavement shall be 5.5 inch cement with a minimum compressive strength of 3500 psi at 28 days. Transverse expansion joints shall be installed at each curb return and at a maximum spacing of 60 feet.
- All weather access to all existing streets and driveways shall be maintained at all times.
- 4"x12" reinforced concrete curb shall be placed in 2000 of single, double turn only. All other areas shall be 6" reinforced concrete curb.
- At all intersection locations, Type 7 ramps shall be placed in accordance with TDDOT Ped-12a standard detail sheet.
- A.D.A. - Handicap Ramps shall be installed with street paving at all intersections and comply with current A.D.A. regulations.
- Curbs headers are required at curb connections to Handicap Ramps, with no construction joint within 5' of ramps.
- All intersections utilizing Traffic Control measures shall have A.D.A. wheel chair ramps installed.
- Guidelines are set forth in the Texas "Manual on Uniform Traffic Control Devices", as currently amended, shall be observed. The Contractor shall be responsible for providing adequate flagmen, signing, striping and warning devices, etc., during construction - both day and night.
- All R1-1 stop signs shall be 30"x30" with diamond grade sheeting per Texas manual on uniform traffic control devices.
- Street name signage shall be on a 9" high sign face blade reflective green background. Street names shall be upper and lowercase lettering with uppercase letters of 6" minimum and lowercase letters of 4.5" minimum. The letters shall be reflective white. Street name signs shall be mounted on stop sign post.
- A blue double deflected bottom shall be placed at all fire hydrant locations. The bottom shall be placed 12 inches off of the centerline of the street on the same side as the hydrant.

NOTE: Fort Bend County notes supersede any conflicting notes.

DISCLAIMER: The Project and all parts thereof shall be subject to inspection from time to time by inspectors designated by Fort Bend County. No such inspectors shall release the Contractor of any of its obligations hereunder. Neither failure to inspect nor failure to discover or report any of the work as not in accordance with the drawings and specifications, requirements and specifications of Fort Bend County or any provision of this Project shall be construed to imply an acceptance of such work or to release the Contractor of any of its obligations hereunder.

301 Jackson St., Suite 402, Richmond, TX 77469  
Phone 281-633-7500

\\fs01\projects\fortbend\116\Construction\_Series\MOCA\_RV0501-11-18.dwg

**ENGINEER**  
**BLACKLINE**  
ENGINEERING  
1616 S. Voss, Suite 850  
HOUSTON, TEXAS 77057  
TEL 832.431.5959  
CONTACT: ASIM TUFAIL, P.E.

**BLACKLINE**  
ENGINEERING

1616 S. Voss, Suite 850  
Houston, TX 77057  
(832) 431-5959  
Fax No. 1-800-1461  
WWW.BLACKLINE-ENG.COM



SURVEYED BY:  
FB NO.

APPROVED  
CITY OF RICHMOND

*[Signature]*  
TERRI VELA, CITY MANAGER

*[Signature]*  
DATE

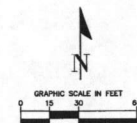
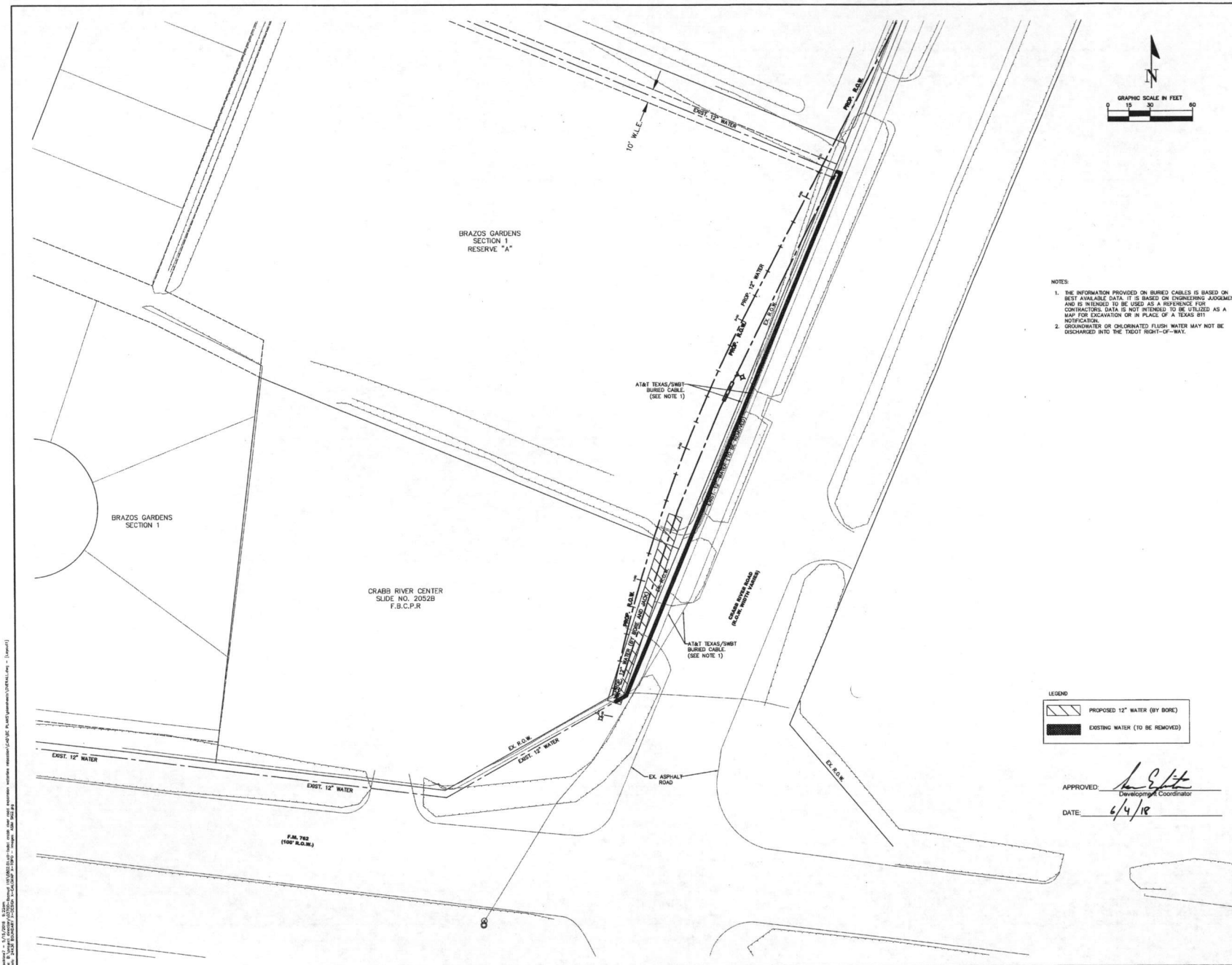
*[Signature]*  
KELLY P. KALUZA, CITY ENGINEER

*[Signature]*  
5/24/18  
DATE

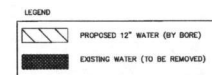
SHEET NO 1 OF 11 SHEETS

No.	Date	Revisions	App.





- NOTES:
1. THE INFORMATION PROVIDED ON BURIED CABLES IS BASED ON BEST AVAILABLE DATA. IT IS BASED ON ENGINEERING JUDGMENT AND IS INTENDED TO BE USED AS A REFERENCE FOR CONTRACTORS. DATA IS NOT INTENDED TO BE UTILIZED AS A MAP FOR EXCAVATION OR IN PLACE OF A TEXAS 811 NOTIFICATION.
  2. GROUNDWATER OR CHLORINATED FLUSH WATER MAY NOT BE DISCHARGED INTO THE TRIGHT RIGHT-OF-WAY.



APPROVED: *[Signature]*  
 DATE: 6/4/18

NOTES:  
 ALL COORDINATES AREA BASED ON THE NGS TRIMBLE  
 NGS 811 GPS NETWORK RELATIVE TO THE TEXAS  
 COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204)  
 NORTH AMERICAN DATUM OF 1983 (NAD 83) CORRS 2011,  
 EPOCH 2015.00  
 ALL COORDINATES AND DISTANCES SHOWN HEREON HAVE  
 BEEN CONVERTED TO SURFACE AND MAY BE CONVERTED  
 TO GRID BY APPLYING A COMBINED FACTOR OF 1.00073  
 ALL ELEVATIONS HEREON ARE BASED ON THE NGS  
 (NAVD 88), GRID 12A.

**BLACKLINE**  
 ENGINEERING  
 1616 S. Vine, Suite 100  
 Houston, TX 77057  
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 Fax: (832) 431-9991  
 www.blackline-eng.com



CRABB RIVER ROAD AT  
 FM 2759  
 WATERLINE RELOCATION

SITE PLAN

REVISION BLOCK			
No.	DATE	DESCRIPTION	APP'D

DRAWING SCALE: 1" = 30'

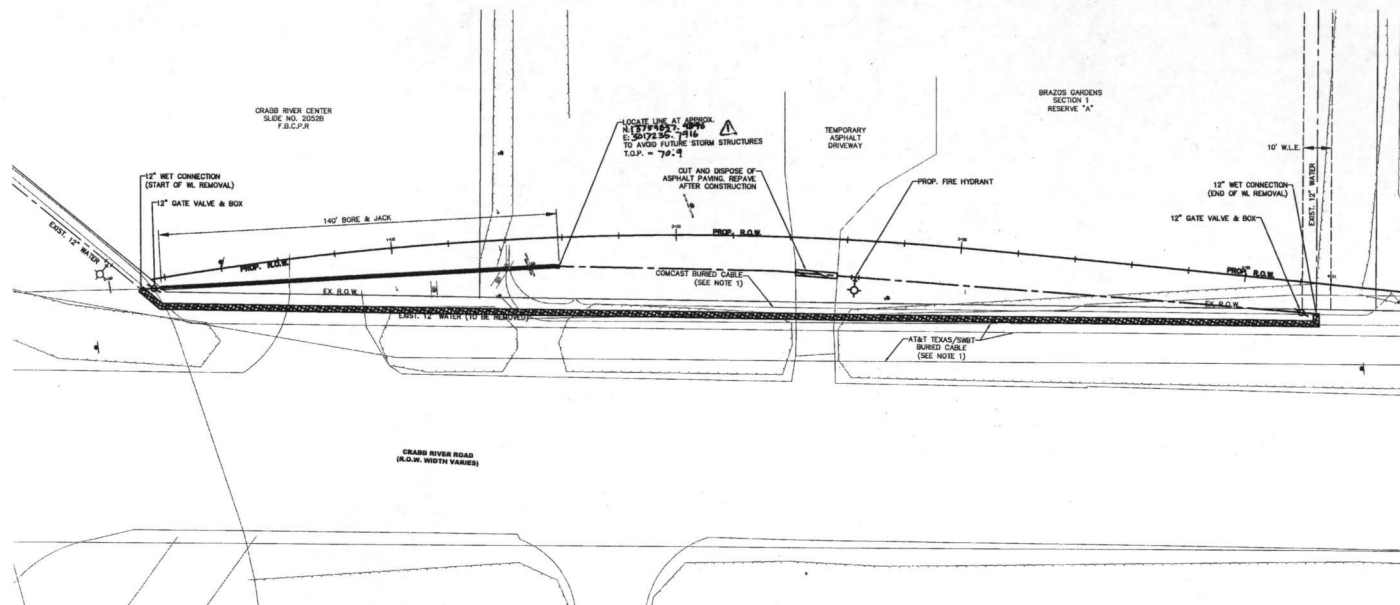
HORZ:  
 VERT:

SHEET 3 OF 9

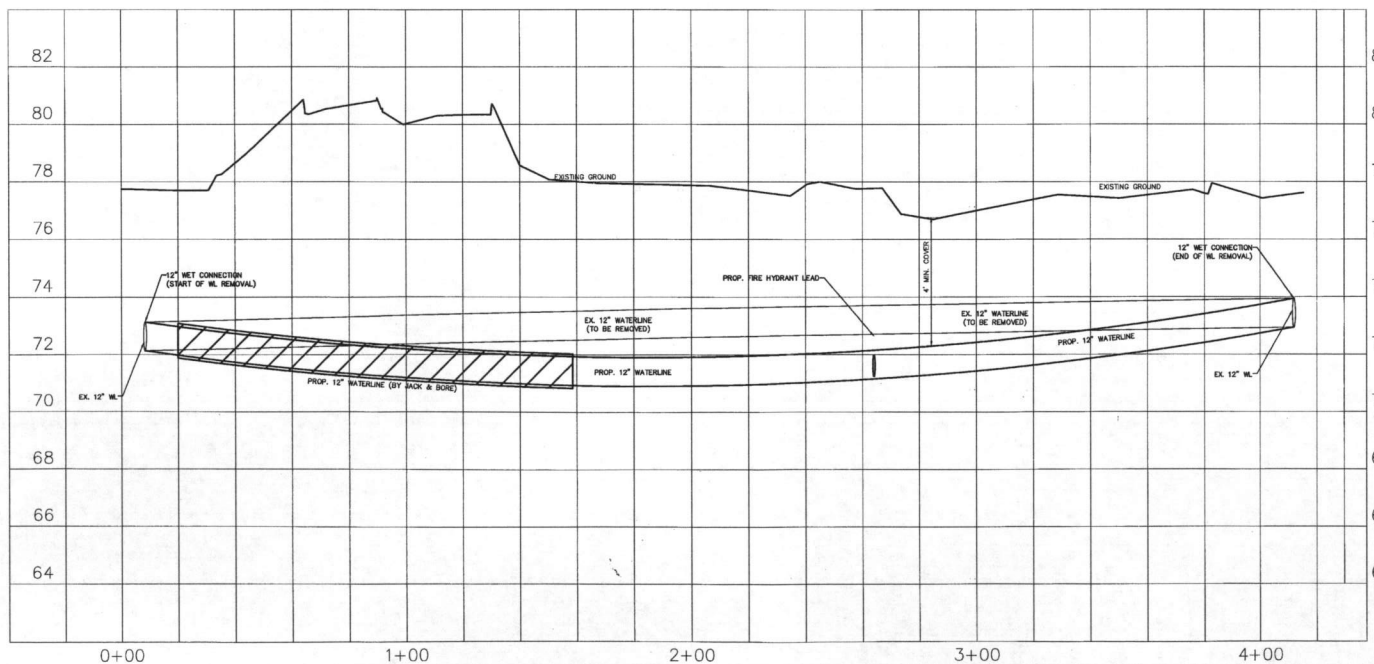
SUBMITTED: May 18  
 SURVEY BY: 0000000000  
 DESIGNED BY: JH  
 DRAWN BY: JS

Drawn by: J. S. Turner, P.E., No. 92860, State of Texas  
 Date: 6/4/18  
 Project: CRABB RIVER ROAD AT FM 2759 WATERLINE RELOCATION  
 Sheet: 3 of 9





- NOTES:
1. THE INFORMATION PROVIDED ON BURIED CABLES IS BASED ON BEST AVAILABLE DATA. IT IS BASED ON ENGINEERING JUDGEMENT AND IS INTENDED TO BE USED AS A REFERENCE FOR CONTRACTORS. DATA IS NOT INTENDED TO BE UTILIZED AS A MAP FOR EXCAVATION OR IN PLACE OF A TEXAS 811 NOTIFICATION.
  2. GROUNDWATER OR CHLORINATED FLUSH WATER MAY NOT BE DISCHARGED INTO THE TRIGHT-OF-WAY.



APPROVED: LSH  
 DATE: 6/4/18  
 Development Coordinator

**BLACKLINE**  
 ENGINEERING  
 1616 S. Voss, Suite 100  
 Houston, TX 77057  
 (832) 431-9959  
 Fax: (832) 431-9960  
 WWW.BLACKLINE-ENG.COM



CRABB RIVER ROAD AT  
 FM 2759  
 WATERLINE RELOCATION

PLAN & PROFILE

REVISION BLOCK				APP'D
No.	DATE	DESCRIPTION		
1	6/4/18	REVISION N.E.T.O.P.		

DRAWING SCALE: 1" = 20'

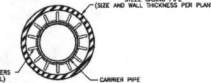
HORIZ: 1" = 20'

VERT: 1" = 2'

SHEET 4 OF 9

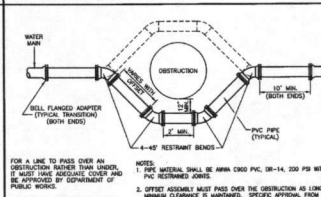
SUBMITTED: May 18  
 SURVEY BY: XXXXXXXXXX  
 DESIGNED BY: JJ  
 DRAWN BY: JJ

DATE: 6/4/18



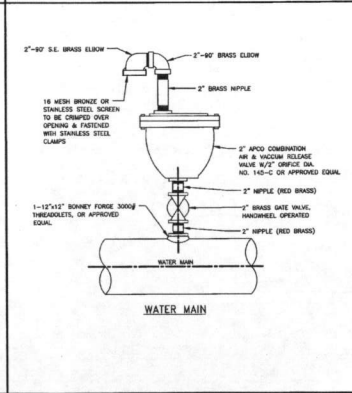
- NOTES:
1. PROVIDE OPERATING NUT EXTENSION, AS NEEDED, TO APPROXIMATELY THREE (3) FEET BELOW FINISHED GRADE.
  2. VALVE BOX SHALL NOT TRANSMIT ANY LOAD DIRECTLY TO THE VALVE OR PIPE.
  3. GATE VALVES SHALL BE COUNTER-CLOCKWISE OPEN.
  4. TAPPING VALVES SHALL NOT ALLOWED WHEN TAP IS SAME SIZE AS THE EXISTING MAIN EXCEPT WHEN APPROVED BY PUBLIC WORKS.
  5. FOR CUT IN VALVES OR FITTINGS, PROVIDE CAST IRON SLEEVE WITH M X M ON ALL SIDES OF VALVE/FITTING BLOCK UP, INSTALLED FITTING WITH CONSTRUCTION BRACKET.

### 3. GATE VALVE AND BOX



- 

7. WATER LINE CASING	
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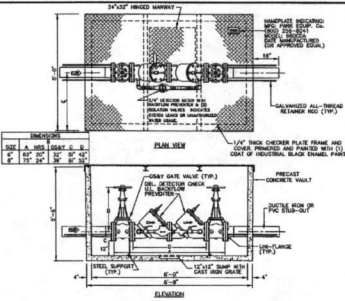


## 10. AIR RELEASE VALVE

DR15 C900/C905 PVC PIPE	OD	BELL OD	STEEL CASING DIAMETER	RAC SPAC MODEL
4"	4.80"	6.30"	10"	2F 41"
6"	6.90"	8.88"	12"	2F, 10"
8"	8.95"	11.38"	14"	3F, 10"
10"	11.10"	13.97"	16"	4F 41"
12"	13.20"	16.34"	20"	5F 60"
14"	15.30"	18.23"	22"	6F 60"
16"	17.40"	20.58"	24"	7F 60"
20"	21.60"	26.85"	30"	9M 90"

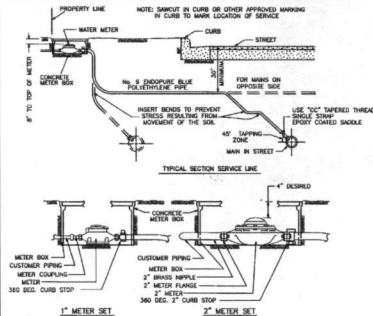
DESIGNED BY: JM

APPROVED: *[Signature]*  
DEVELOPMENT COORDINATOR  
DATE: 4/4/18

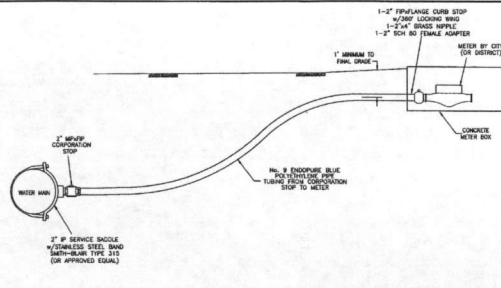


**Specifications**  
Concrete: Class 3 concrete with design strength of 4500 psi at 28 days. Unit is of monolithic construction of floor and base slabs of wall and foundation floor to finished depth. Grout empty weight of approximately 1500 pounds.  
Reinforcement: Grade 60 reinforcement. Reinforcing bars conforming to ASTM A618 or equivalent standard or steel.  
Steel Cover: 1/2" steel reinforcement bar plate welded to 2" angle frame with (2) 7/8"-12" x 1/2" bars supports.  
Notes:  
1. Reinforcing bars shall be factory assembled in wall & hydraulically tested prior to delivery. Field erection & protection shall be complete prior to delivery. Plan, valves and fittings of the assembly shall be approved by the city.  
2. Assembly shall be installed in wall with minimum 2" clearance from wall. (2) notes of current per lot of wall.

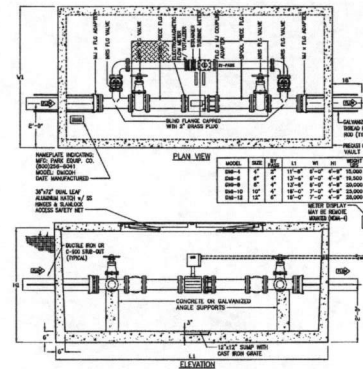
#### 1. DOUBLE CHECK DETECTOR ASSEMBLY



#### 4. RESIDENTIAL WATER METER AND SERVICE LINE

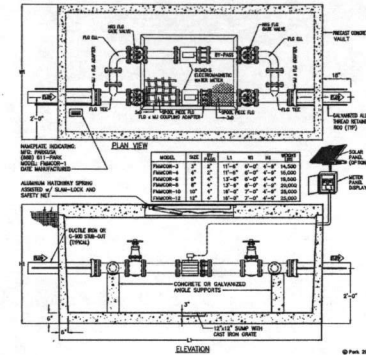


#### 5. 2" WATER SERVICE CONNECTION



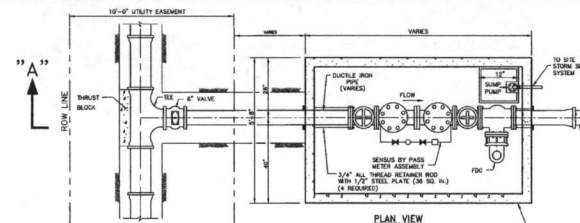
**Specifications**  
Concrete: Class 3 concrete with design strength of 4500 psi at 28 days. Unit is of monolithic construction of floor and base slabs of wall with foundation floor to finished depth.  
Reinforcement: Grade 60 reinforcement. Reinforcing bars conforming to ASTM A618 or equivalent standard or steel.  
Hollowbar: 1/2" aluminum diamond plate cover with extruded aluminum frame. Hatch to be furnished with 316 stainless steel snap lock & brace hinges.  
Engineering note:  
The meter assembly shall be factory assembled in wall & hydraulically tested prior to delivery. Field erection & protection shall be complete prior to delivery. Plan, valves and fittings of the assembly shall be approved by the city.  
All assembly shall be installed in wall with minimum 2" clearance from wall. (2) notes of current per lot of wall.

#### 2. ELECTROMAGNETIC WATER METER WITH METERED BY-PASS



**Specifications**  
Concrete: Class 3 concrete with design strength of 4500 psi at 28 days. Unit is of monolithic construction of floor and base slabs of wall with foundation floor to finished depth.  
Reinforcement: Grade 60 reinforcement. Reinforcing bars conforming to ASTM A618 or equivalent standard or steel.  
Hollowbar: 1/2" aluminum (200 psi) diamond plate, with 1/2" extruded aluminum frame. Hatch to be furnished with 316 stainless steel snap lock & brace hinges.  
Engineering note:  
The meter assembly shall be factory assembled in wall & hydraulically tested prior to delivery. Field erection & protection shall be complete prior to delivery. Plan, valves and fittings of the assembly shall be approved by the city.  
All assembly shall be installed in wall with minimum 2" clearance from wall. (2) notes of current per lot of wall.

#### 3. FIRE/DOMESTIC WATER METER ASSEMBLY 3" THRU 12"



**NOTES:**  
1. FIRE DEPARTMENT REQUIRED WITHIN 50' LINEAR FEET OF THE FIRE DEPARTMENT CONNECTION.  
2. FIRE VALVE MAY BE SUBSTITUTED FOR GATE VALVE ON THE CUSTOMER SIDE. SUPPLIED BY FIRE DEPARTMENT COMPANY, OR APPROVED EQUAL.  
3. ALL FIRE DEPARTMENT VALVES SHALL BE EQUIPPED WITH A SLUMP PUMP CAPABLE OF SANITIZING WATER LINES BELOW THE CENTER LINE OF THE CHECK VALVES. OUTLET SHALL BE CONNECTED TO SITE STORM SEWER SYSTEM.  
4. SLUMP PUMP MAY BE ELIMINATED IF BOX CAN BE DRAINED VIA GRAVITY TO SITE STORM SEWER SYSTEM.  
5. ALL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY STANDARDS FOR THE INSTALLATION OF FIRE SERVICE METERS.  
6. REFER TO GENERAL NOTES, WATER LINE AND STORM SEWER NOTES.

#### 6. TYPICAL FIRE SERVICE METER

NO.	DATE	REVISIONS	APP.

CITY OF RICHMOND  
STANDARD CONSTRUCTION DETAILS  
WATER-2

SCALE  
HORIZONTAL: 1" = 10'  
VERTICAL: 1" = 10'

DESIGNED BY: LIT  
DRAWN BY: AIS  
CHECKED BY: KKK  
DATE: 7/24/17  
JOB NO:  
DWG. NO:  
R-3-17

**BLACKLINE**  
ENGINEERING  
1414 S. Vail, Suite 100  
Houston, TX 77057  
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FAX: (281) 431-9999  
WWW.BLACKLINE-ENG.COM



CRABB RIVER ROAD AT  
FM 2759  
WATERLINE RELOCATION

CITY OF RICHMOND AND  
FORT BEND COUNTY  
DETAILS 2 OF 2

NO.	DATE	DESCRIPTION	APP.

DRAWING SCALE:

HORIZ: N/A  
VERT: N.T.S.

SHEET 6 OF 9

SUBMITTED: May 18  
SUBMIT: 01/00/000000

DESIGNED BY: AM  
DRAWN BY: JS



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Houston, TX 77057  
(832) 431-5959  
Firm No. 14051  
[WWW.BLACKLINE-ENG.COM](http://WWW.BLACKLINE-ENG.COM)



TRAFFIC CONTROL PLAN

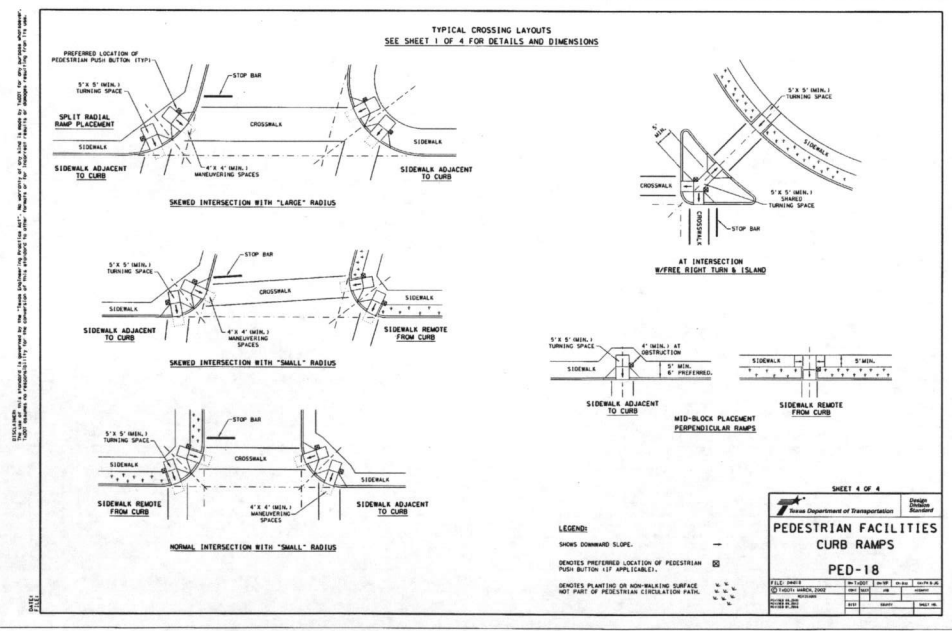
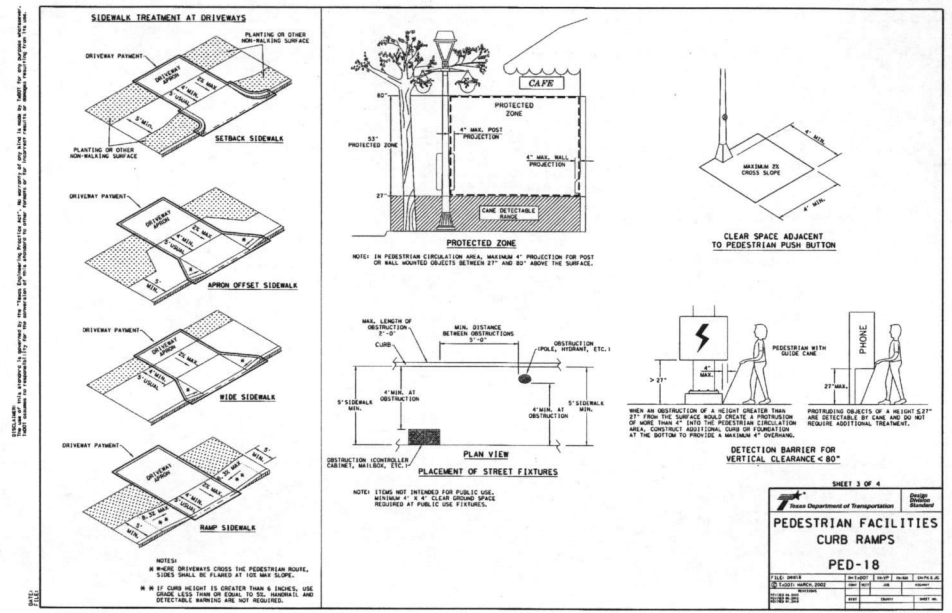
REVISION BLOCK			
No.	DATE	DESCRIPTION	APP.

HORZ:	N/A
VERT:	N.T.S

SUBMITTED: May 18  
SURVEY BY:XXXXXXXXXX

DESIGNED BY: JM  
DRAWN BY: JS





**BLACKLINE ENGINEERING**  
1616 E. Van, Suite 100  
Houston, TX 77057  
(832) 421-5959  
FAX: 832-421-5959  
WWW.BLACKLINE-ENG.COM



**CRABB RIVER ROAD AT FM 2759 WATERLINE RELOCATION**

**TXDOT PED-18 DETAILS 2 OF 2**

REVISION BLOCK			
No.	DATE	DESCRIPTION	APPROVED

**DRAWING SCALE:**

**HORIZ:** N/A

**VERT:** N.T.S.

**SHEET 9 OF 9**

**SUBMITTED:** May 18  
**SURVEY BY:** XXXXXXXXX

**DESIGNED BY:** JH  
**DRAWN BY:** JS

**APPROVED:** *[Signature]*  
**DATE:** 6/4/18

**DEVELOPMENT COORDINATOR**

Reviewed by: JH/JDS/05/18/18  
Date: 05/18/18  
Title: CRABB RIVER ROAD AT FM 2759 WATERLINE RELOCATION  
Project: CRABB RIVER ROAD AT FM 2759 WATERLINE RELOCATION  
Sheet: 9 OF 9