



**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](mailto:Permits@fortbendcountytx.gov)

- ☒ **Right of Way Permit**  
☐ **Commercial Driveway Permit**

Permit No: 2017-15865

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: XXXXXXXXXX Amount: \$6,000.00
- ☐ Cashier's Check      Check No: \_\_\_\_\_ Amount: \_\_\_\_\_

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

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

\_\_\_\_\_  
Date

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

*Charles O. Ay*

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

\_\_\_\_\_  
Date



**PERFORMANCE BOND COVERING ALL CABLE, CONDUIT AND/OR POLE LINE  
ACTIVITY IN, UNDER, ACROSS OR ALONG FORT BEND COUNTY ROAD**

AUTHORIZED

BOND NO.                     

THE STATE OF TEXAS

§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF FORT BEND

§

THAT WE, LG & G Construction, Inc. whose address is 6702 Loma Vista Place Houston, TX 77085 Texas, hereinafter called the Principal, And Insurors Indemnity Company, a Corporation existing under and by virtue of the laws of the state of Texas and authorized to do an indemnifying business in the state of Texas, and whose principal office is located at 225 South 5th Street, Waco, TX 76701, whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought whining said state is Insurors Indemnity Co and Whose address is 225 South 5th Street, Waco, TX 76701, hereinafter called the Surety, and held and firmly bound unto, Robert e. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, in the full sum of Six Thousand Dollars Dollars (\$ 6,000.00 ) current, lawful money of the United States of America, to be paid to said Robert E. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, to which payment well and truly to be made and done, we, the undersigned, bind ourselves and each of us, our heirs, executors, administrators, successors, assigns, and legal representatives, jointly and severally, by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT, WHEREAS, the above bounden principal contemplates laying, constructing, maintaining and/or repairing one or more cables, conduits, and/or pole lines in, under, across and/or along roads, streets and highways, commercial driveway and median openings or modifications in the County of Fort Bend, and the State of Texas, under the jurisdiction of the Commissioners' Court of Fort Bend County, Texas, pursuant to the Commissioners' Court order adopted on the 1st day of December, A.D. 1980, recorded in Volume 13, of the Commissioners' Court Minutes of Fort Bend County, Texas, regulating same, which Commissioners' Court order is hereby referred to and made a part hereof for all purposes as though fully set out herein;

AND WHEREAS, the principal desires to provide Fort Bend County with a performance bond covering all such cable, conduit and/or pole line activity, commercial driveway and median openings or modifications;

NOW, THEREFORE, if the above bounden principal shall faithfully perform all its cable, conduit and/or pole line activity (including, but not limited to the laying, construction, maintenance and/or repair of cables, conduits and/or pole lines) in, under, across and/or along roads, streets and highways, commercial driveway and median openings or modifications in the County of Fort Bend and State of Texas, under the jurisdiction of the Commissioners Court of Fort Bend County, Texas, pursuant to and in accordance with minimum requirements and conditions of the above mentioned Commissioners' Court order set forth and specified to be by said principal done and performed, at the time and in the manner therein specified, and shall pay over and make good and reimburse Fort Bend County, all loss and damages which Fort Bend County may sustain by reason of any failure or default on the part of said principal, then this obligation shall be null and void, otherwise to remain in full force and effect.

This bond is payable at the County Courthouse in the County of Fort Bend and State of Texas.

It is understood that at any time Fort Bend County deems itself insecure under this bond, it may require further and/or additional bonds of the principal.

EXECUTED this 12th day of September, 20 2017.

LG & G Construction, Inc.

PRINCIPAL

[Signature]  
BY

Insurors Indemnity Company

SURETY

[Signature]  
BY



**POWER OF ATTORNEY of INSURORS INDEMNITY COMPANY  
Waco, Texas**

**KNOW ALL PERSONS BY THESE PRESENTS:**

**Number:** [REDACTED]

That INSURORS INDEMNITY COMPANY, Waco, Texas, organized and existing under the laws of the State of Texas, and authorized and licensed to do business in the State of Texas and the United States of America, does hereby make, constitute and appoint

Misty Witt of the City of The Woodlands, State of TX

as Attorney in Fact, with full power and authority hereby conferred upon him to sign, execute, acknowledge and deliver for and on its behalf as Surety and as its act and deed, all of the following classes of document, to-wit:

Indemnity, Surety and Undertakings that may be desired by contract, or may be given in any action or proceeding in any court of law or equity; Indemnity in all cases where indemnity may be lawfully given and with full power and authority to execute consents and waivers to modify or change or extend any bond or document executed for this Company.

**INSURORS INDEMNITY COMPANY**

Attest:

Tammy Tieperman  
Tammy Tieperman, Secretary

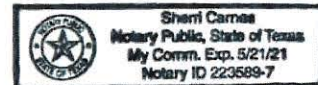
By:

Dave E. Talbert  
Dave E. Talbert, President

State of Texas  
County of McLennan

On the 11<sup>th</sup> day of November, 2014, before me a Notary Public in the State of Texas, personally appeared Dave E. Talbert and Tammy Tieperman, who being by me duly sworn, acknowledged that they executed the above Power of Attorney in their capacities as President, and Corporate Secretary, respectively, of Insurors Indemnity Company, and acknowledged said Power of Attorney to be the voluntary act and deed of the Company.

Sherril Carnes  
Notary Public, State of Texas



Insurors Indemnity Company certifies that this Power of Attorney is granted under and by authority of the following resolutions of the Company adopted by the Board of Directors on November 11, 2014:

RESOLVED, that all bonds, undertakings, contracts or other obligations may be executed in the name of the Company by persons appointed as Attorney in Fact pursuant to a Power of Attorney issued in accordance with these Resolutions. Said Power of Attorney shall be executed in the name and on behalf of the Company either by the Chairman and CEO or the President, under their respective designation. The signature of such officer and the seal of the Company may be affixed by facsimile to any Power of Attorney, and, unless subsequently revoked and subject to any limitation set forth therein, any such Power of Attorney or certificate bearing such facsimile signature and seal shall be valid and binding upon the Company and any such power so executed and certified by facsimile signature and seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is validly attached.

RESOLVED, that Attorneys in Fact shall have the power and authority, subject to the terms and limitations of the Power of Attorney issued to them, to execute and deliver on behalf of the Company and to attach the seal of the Company to any and all bonds and undertakings, and any such instrument executed by such Attorneys in Fact shall be binding upon the Company as if signed by an Executive Officer and sealed and attested to by the Secretary or Assistant Secretary of the Company.

I, Tammy Tieperman, Secretary of Insurors Indemnity Company, do hereby certify that the foregoing is a true excerpt from the Resolutions of the said Company as adopted by its Board of Directors on November 11, 2014, and that this Resolution is in full force and effect. I certify that the foregoing Power of Attorney is in full force and effect and has not been revoked.

In Witness Whereof, I have set my hand and the seal of INSURORS INDEMNITY COMPANY on this 12th day of September, 2017.

Tammy Tieperman  
Tammy Tieperman, Secretary

NOTE: IF YOU HAVE ANY QUESTION REGARDING THE VALIDITY OR WORDING OF THIS POWER OF ATTORNEY, PLEASE CALL 800 933 7444 OR WRITE TO US AT P. O. BOX 2683, WACO, TEXAS 76702-2683 OR EMAIL US AT [CONFIRMATION@INSURORS.COM](mailto:CONFIRMATION@INSURORS.COM).





P&C 877 282 1625  
Bonds 800 933 7444

225 South Fifth Street  
PO Box 2683  
Waco, Texas 76702-2683

## IMPORTANT NOTICE - AVISO IMPORTANTE

To obtain information or make a complaint:

You may call Insurors Indemnity Company's toll-free telephone number for information or to make a complaint at:

1-800-933-7444

You may also write to Insurors Indemnity Company at:

P.O. Box 2683  
Waco, TX 76702-2683  
Or  
225 South Fifth Street  
Waco, TX 76701

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at

1-800-252-3439

You may write the Texas Department of Insurance at:

Consumer Protection (111-1A)  
P.O. Box 149091  
Austin, TX 78714-9091  
Fax: 512-490-1007

Web: <http://www.tdi.texas.gov>

E-mail: [ConsumerProtection@tdi.texas.gov](mailto:ConsumerProtection@tdi.texas.gov)

### PREMIUM OR CLAIM DISPUTES:

Should you have a dispute concerning your premium or about a claim, you should contact the agent or the company first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

### ATTACH THIS NOTICE TO YOUR POLICY:

This notice is for information only and does not become a part or condition of the attached document.

Para obtener informacion o para someter una queja:

Usted puede llamar al numero de telefono gratis de Insurors Indemnity Company's para informacion o para someter una queja al

1-800-933-7444

Usted tambien puede escribir a Insurors Indemnity Company:

P.O. Box 2683  
Waco, TX 76702-2683  
O  
225 South Fifth Street  
Waco, TX 76701

Puede comunicarse con el Departamento de Seguros de Texas para obtener informacion acerca de companias, coberturas, derechos o quejas al

1-800-252-3439

Puede escribir al Departamento de Seguros de Texas:

Consumer Protection (111-1A)  
P.O. Box 149091  
Austin, TX 78714-9091  
Fax: 512-490-1007

Web: <http://www.tdi.texas.gov>

E-mail: [ConsumerProtection@tdi.texas.gov](mailto:ConsumerProtection@tdi.texas.gov)

### DISPUTAS SOBRE PRIMAS O RECLAMOS:

Si tiene una disputa concemiente a su prima o a un reclamo, debe comunicarse con el agente o la compania primero. Si no se resuelve la disputa, puede entonces comunicarse con el departamento (TDI).

### UNA ESTE AVISO A SU POLIZA:

Este aviso es solo para proposito de informacion y no se convierte en parte o condicion del documento adjunto.



**CONSTRUCTION**  
**OF**  
**INTERCONNECT WITH FBCMUD No. 146**  
**FOR**  
**FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT No. 118**  
**FORT BEND COUNTY, TEXAS**

**INDEX OF DRAWINGS**

<u>SHEET No.</u>	<u>TITLE</u>
1. G1	COVER SHEET & INDEX
2. G2	GENERAL NOTES
3. G3	OVERALL LAYOUT & SWPPP
4. C1	BASELINE "A" - STA 0+00 TO 5+00
5. C2	MISCELLANEOUS DETAILS
6. C3	STORM WATER POLLUTION PREVENTION PLAN DETAILS
7. C4	TRAFFIC CONTROL PLAN

**NOTES:**

These plans were prepared to meet or exceed the specifications and requirements of City of Houston and Fort Bend County as currently amended.

Approval by Fort Bend County will be deemed void if construction has not begun within one year of approval date.

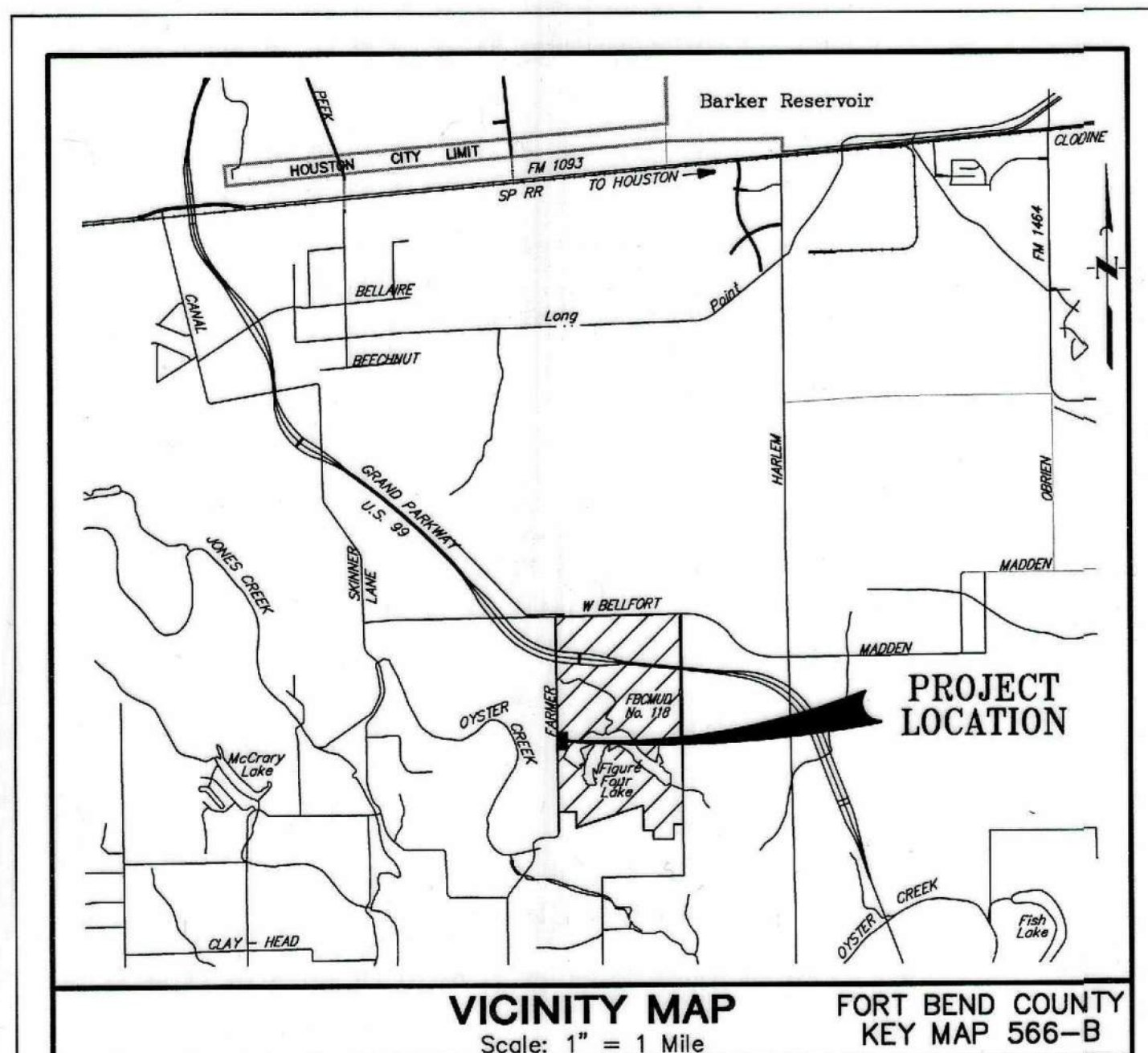
Construction shall not begin before the plat of this section is filed in the Fort Bend County Map Records.

Construction will be monitored under the supervision of a licensed professional engineer of JONES|CARTER, INC.

Contractor shall notify the Fort Bend County Engineering Department at least 48 hours prior to commencement at [construction@fortbendcountytx.gov](mailto:construction@fortbendcountytx.gov).

I, Michael P. Gurka, a Professional Engineer licensed in the State of Texas do hereby certify that these plans were prepared under my supervision to meet or exceed the specifications and requirements of Fort Bend County, Texas.

  
Michael P. Gurka, P.E. 06/27/17  
Date



WATER PLANT SITE ADDRESS: 4508 FARMER ROAD, RICHMOND, TX 77406

Contractor shall notify the City of Houston, Department of Public Works and Engineering (832) 394-9098 48 hours before starting work on this project.

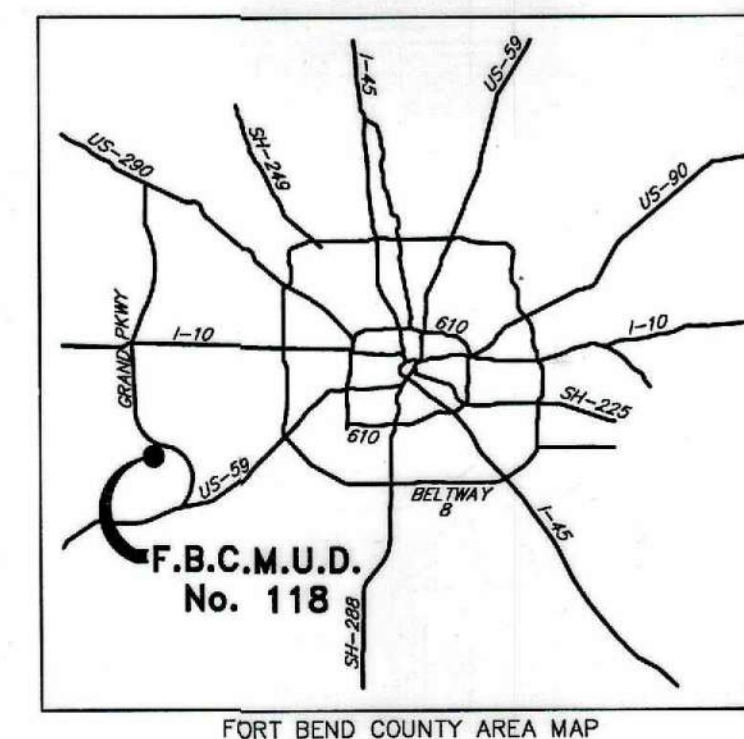
JUNE 2017  
JC JOB No. 14421-0009-00


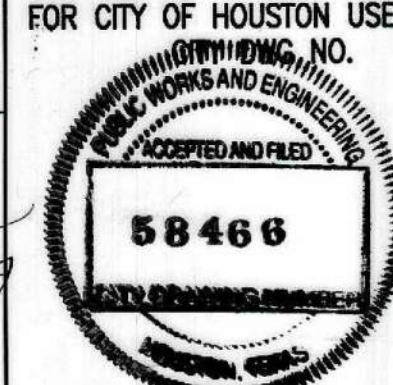
 **JONES|CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

Texas 811 NOTIFICATION SYSTEM  
**CALL BEFORE YOU DIG!!!**  
<http://www.texas811.org/>  
Texas811 or 1-800-DIG-TESS  
1-800-344-8377

<b>FORT BEND COUNTY ENGINEER</b>	
ENGINEER:	<i>Richard W. Stolles, PE, PTOE</i> FOR RICHARD W. STOLLES, PE
DATE:	7/19/17
APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR FROM DATE OF APPROVAL.	
APPROVED:	 F.B.C. DEVELOPMENT COORDINATOR
DATE:	7/19/17

ILMS No. 17006689  
C.O.H. LOG No. 17-0123



 06/27/17 <i>Michael P. Gurka</i>	
SURVEYED BY: _____ FB NO.: _____	
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES	
<b>CITY OF HOUSTON</b> DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
WATER	TRAFFIC & TRANSPORTATION
WASTEWATER	STORM WATER QUALITY
STORM	FACILITIES
STREET & BRIDGE	
CITY ENGINEER	FOR CITY OF HOUSTON USE ONLY
DIRECTOR OF PUBLIC WORKS AND ENGINEERING	 58466
SHEET No: G1	1 OF 7

FBCMUD No. 118 - INTERCONNECT WITH FBCMUD No. 146

JONES|CARTER  
BELLAIRE, TEXAS

SHEET No.  
**G1**  
1 OF 7



## GENERAL CONSTRUCTION NOTES

- WASTEWATER COLLECTION SYSTEMS, WATER, PAVING, TRAFFIC SIGNALS AND DRAINAGE SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING CITY DOCUMENTS. THESE DOCUMENTS ARE "STANDARD CONSTRUCTION SPECIFICATIONS" (MOST RECENT ISSUE 2016) AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING" (MOST RECENT ISSUE 2016) WITH ALL SUBSEQUENT AMENDMENTS ADDED THERETO UNLESS OTHERWISE NOTED AND APPROVED ON THESE PLANS. THE DESIGN MUST AGREE WITH THE MINIMUM STANDARDS ESTABLISHED IN THE LATEST ISSUE OF THE "INFRASTRUCTURE DESIGN MANUAL" (MOST RECENT ISSUE 2016). NOTE THAT PLAN SIGNATURES AND LETTERS OF CAPACITY AVAILABILITY FOR STORM, WASTEWATER AND WATER EXPIRE AFTER ONE YEAR AND GOVERN AS OF THE DATES FOR RESIGNING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT HE/SHE HAS THE MOST RECENT EDITIONS. THESE DOCUMENTS MAY BE OBTAINED FROM THE CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS, 611 WALKER.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING PUBLIC OR PRIVATE UTILITY LINES, INCLUDING BUT NOT LIMITED TO WATER LINES, WASTEWATER COLLECTION SYSTEMS AND STORM SEWERS, DURING CONSTRUCTION. ALL DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING "STANDARD CONSTRUCTION SPECIFICATIONS" WITH LATEST ADDENDA AND AMENDMENTS THERETO, WITH NO COST TO THE PUBLIC OR OWNER.
- THE APPROXIMATE LOCATION OF EXISTING UTILITIES ARE GIVEN FOR REFERENCE ONLY. BEFORE COMMENCING THE WORK ON THIS CONTRACT, THE CONTRACTOR SHALL VERIFY BY FIELD INVESTIGATION THE ACTUAL LOCATIONS OF ALL UTILITY FACILITIES WITHIN AND ADJACENT TO THE LIMITS OF THE WORK THAT MAY BE AFFECTED BY THE WORK. CONFLICTS WHICH RESULT DUE TO NEGLIGENCE BY THE CONTRACTOR TO LOCATE, HORIZONTALLY AND VERTICALLY, EXISTING UTILITIES WHICH ARE SHOWN ON THE CONSTRUCTION DRAWINGS, OR WHICH THE CONTRACTOR HAS BEEN GIVEN NOTICE OR HAS KNOWLEDGE, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF REMEDIAL WORK, REMOVAL OF PORTIONS OF THE WORK OR EXTENSIVE DESIGN CHANGES OCCASIONED BY THE FAILURE OF THE CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UTILITIES AS DESCRIBED ABOVE SHALL BE BORNE BY THE CONTRACTOR.
- CONTRACTOR SHALL OBTAIN ALL APPLICABLE CITY, STATE, COUNTY, AND FEDERAL PERMITS, AND PROVIDE TO ENGINEER.
- CONTRACTOR SHALL COMPLY WITH O.S.H.A. REGULATIONS AND TEXAS STATE LAW CONCERNING TRENCH SAFETY SYSTEMS.
- CONTRACTOR TO FOLLOW CONSTRUCTION DETAILS IF DRAWINGS DEViate FROM CITY OF HOUSTON STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING AND RESTORING ALL EXISTING FACILITIES OR ANY OFF-SITE AREAS AFFECTED BY THIS CONSTRUCTION PROJECT TO EXISTING OR BETTER CONDITION, UNLESS OTHERWISE NOTED, AT NO ADDITIONAL COST TO THE OWNER.
- THIS PROJECT IS WITHIN FORT BEND COUNTY, TEXAS.
- CONTRACTOR SHALL PERFORM WORK IN A MANNER TO LIMIT NOISE FROM CONSTRUCTION TO ACCEPTABLE LEVELS FOR PROPERTIES ADJACENT TO THE CONSTRUCTION AREA.
- CONTRACTOR SHALL KEEP EXISTING STREETS AND ROADS OPEN TO ALL TRAFFIC AND CLEANED DAILY OF MATERIAL DEPOSITED BY CONSTRUCTION VEHICLES.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AND SAFE ACCESS TO DRAINAGE WAYS, SIDEWALKS OR PASSAGE WAYS ADJACENT TO THE CONSTRUCTION AREA.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING RED LINE RECORD DRAWINGS AT THE COMPLETION OF THIS PROJECT AS PER SPECIFICATIONS.
- THE COST OF REMEDIAL WORK, REMOVAL OF PORTIONS OF THE WORK OR EXTENSIVE DESIGN CHANGES OCCASIONED BY FAILURE OF THE CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UTILITIES AS DESCRIBED IN NOTE 3 ABOVE SHALL BE BORNE BY THE CONTRACTOR.
- AUTHORIZATION NOTICE ISSUED BY FORT BEND COUNTY IS REQUIRED PRIOR TO CONSTRUCTION OF UTILITIES WITHIN FORT BEND COUNTY RIGHT-OF-WAY. CONTACT MR. RICHARD STOLLEIS, P.E. (281 633-7500).
- CONTRACTOR SHALL NOTIFY THE OFFICE OF THE CITY ENGINEER, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING IN WRITING PRIOR TO COMMENCING CONSTRUCTION.
- THESE PLANS PREPARED BY JONES & CARTER, INC. DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE JONES & CARTER, INC. REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THESE PLANS. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEM(S).
- CONTRACTOR TO NOTIFY MR. ALBERT LAZCANO, P.E., (JONES & CARTER, INC.) AT (713)-777-5337 EXT. 2467 FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION.

## CONTRACTOR WORK ZONE NOTES

- CONTRACTOR WILL BE REQUIRED TO MAINTAIN TWO LANES OPEN WHEN WORKING IN BOULEVARD SECTIONS. RESIDENTIAL SECTIONS WILL MAINTAIN ONE LANE OPEN WITH ADEQUATE SIGNAGE AND/OR FLAGMEN TO FACILITATE USE OF THE LANE.
- DRIVEWAY ACCESS WILL BE MAINTAINED OPEN AFTER WORKING HOURS. A MINIMUM OF ONE DRIVEWAY ACCESS WILL BE MAINTAINED OPEN AT ALL TIMES TO COMMERCIAL, APARTMENTS, AND/OR NON-RESIDENTIAL DEVELOPMENTS.
- THE LENGTH OF THE WORK ZONE MUST BE MINIMIZED WITHIN THE STREET ROW OR EASEMENTS. THERE SHALL NOT BE MORE THAN 200-FEET OF TRENCH OPEN AT ANY ONE TIME. THE CONSTRUCTION ZONE WILL BE A ROLLING CONSTRUCTION ZONE WITH APPROPRIATE TRANSITIONS ON EACH END.
- SIGNALIZED INTERSECTIONS: LANES WILL NOT BE CLOSED AT A SIGNALIZED INTERSECTION, UNLESS APPROVED BY THE PROGRAM MANAGER. AN APPROPRIATE TRANSITION AS DEFINED IN THE TRAFFIC CONTROL PLAN WILL BE PROVIDED AT SIGNALIZED INTERSECTIONS.
- TEMPORARY PAVEMENT MARKERS: TEMPORARY EPOXY-GLUED BUTTONS OR "CONSTRUCTION GRADE" TAPE PAVEMENT MARKERS SHOULD BE USED ON PERMANENT PAVEMENT TO REMAIN IN-PLACE TO ELIMINATE GRINDING AND SCARRING OF THE SURFACE.
- PEDESTRIAN TRAFFIC: CARE SHALL BE TAKEN TO PROVIDE FOR TEMPORARY PEDESTRIAN TRAFFIC AND CROSSING AT AREAS SUCH AS SCHOOLS, PARKS, AND SHOPPING AREAS.

## WATER LINE CONSTRUCTION NOTES

- CONTRACTOR SHALL CONTACT THE DISTRICT OPERATOR PRIOR TO MAKING ANY CONNECTION TO THE EXISTING WATER LINES OR ANYTIME A VALVE ON AN EXISTING WATER LINE IS TO BE OPENED OR CLOSED.
  - DISTRICT NAME: FORT BEND COUNTY MUD NO. 118  
DISTRICT COMPANY: ENVIRONMENTAL DEVELOPMENT PARTNERS  
OPERATOR CONTACT: TRACY BUTCHER  
CONTACT PHONE NUMBER: (713) 395-3200
- ALL FOUR (4) INCH THROUGH TWELVE (12) WATERLINES TO BE PRESSURE CLASS 235 (DR-18), PVC (AWWA C-900), OR DUCTILE IRON AS SPECIFIED. ASBESTOS CEMENT WATERLINE WILL NOT BE APPROVED FOR THIS PROJECT. USE ONLY NEW PIPE.
- WATERLINES SHALL HAVE A MINIMUM COVER OF 4 FEET (4') EXCEPT WHERE CALLED OUT. THE CONTRACTOR SHALL UNIFORMLY VARY THE ELEVATION OF THE WATERLINE FROM THE DEPTH SHOWN ON THE PLANS TO FACILITATE CONFLICT AVOIDANCE AND MAINTAIN MINIMUM CLEARANCES. MAXIMUM DEFLECTION OF JOINTS SHALL NOT EXCEED THE PIPE MANUFACTURER'S RECOMMENDATIONS.
- WATERLINE FITTINGS SHALL BE CAST OR DUCTILE IRON, UNLESS OTHERWISE NOTED.
- WATERLINES SHALL BE CONSTRUCTED SO THAT ALL CROSSES AND TEES WILL NOT BE LOCATED UNDER PROPOSED OR FUTURE PAVING IN STREET RIGHT-OF-WAY.
- VALVES SHALL BE LOCATED OPPOSITE PROPERTY CORNERS EXCEPT AS SHOWN ON THE PLANS.
- MAINTAIN 18-INCH MINIMUM CLEARANCE BETWEEN ALL WATERLINES, STORM SEWERS, AND CULVERTS UNLESS OTHERWISE NOTED.
- WATERLINES SHALL BE BANK SAND-BEDDED AND BACKFILLED IN ACCORDANCE WITH THE LATEST EDITION OF CITY OF HOUSTON SPECIFICATIONS AND DETAILS.
- SANITARY PRECAUTIONS MUST BE TAKEN DURING WATERLINE CONSTRUCTION, AS CALLED FOR BY AWWA STANDARDS. PRECAUTIONS INCLUDE KEEPING PIPE CLEAN AND CAPPING, OR OTHERWISE EFFECTIVELY COVERING OPEN PIPE ENDS TO EXCLUDE INSECTS, ANIMALS, OR OTHER SOURCES OF CONTAMINATION FROM UNFINISHED PIPE LINES AT TIMES WHEN CONSTRUCTION IS NOT IN PROGRESS.
- ALL NEWLY INSTALLED PIPES, COATINGS, AND RELATED PRODUCTS SHALL CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61-G AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI. PLASTIC PIPE FOR USE IN WATER SYSTEMS MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF PW-G).
- CONTRACTOR SHALL PROVIDE GATE VALVE EXTENSION STEM PER CITY HOUSTON SPECIFICATIONS AND/OR AS DIRECTED BY THE ENGINEER. ALL OFFSITE VALVES SHALL OPEN BY TURNING CLOCKWISE. ALL VALVES WITHIN THE WATER PLANT SITE LIMITS SHALL OPEN BY TURNING COUNTER-CLOCKWISE.
- ALL FLUSH VALVES AND VALVE BOXES SHALL BE ADJUSTED TO FINISH GRADE AFTER FINAL GRADING IS COMPLETE. FLUSH VALVES SHALL BE TURNED TO FACE FUTURE STREET.
- CONTRACTOR TO INSTALL TEMPORARY PIPING AND BLOWOFFS AS REQUIRED FOR HYDROSTATIC TESTING & DISINFECTION AT NO ADDITIONAL COST.
- WATERLINE/SANITARY MANHOLE AND SANITARY SEWER SEPARATION: ALL SANITARY SEWER FACILITIES AND POTABLE WATERLINES MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE FEET OF HORIZONTAL CLEARANCE BETWEEN THEM. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED SEE PLANS FOR SPECIAL NOTES. FOLLOW ENGINEER'S DIRECTIVES, OR FOLLOW THE SPECIAL PROCEDURES AS TABLED IN "PROTECTION REQUIREMENTS AT WATER LINE - SANITARY SEWER CROSSINGS"
- ALL TEES, ELBOWS, BENDS, AND PLUGS SHALL INCLUDE RESTRAINT OF FITTINGS. RESTRAINT MAY BE BY MEANS OF THRUST BLOCKS OR RESTRAINED JOINT PIPE (OF APPROVED MANUFACTURER). IF RESTRAINED JOINT PIPE IS USED, ALL PIPES LESS THAN 12-INCHES (12") IN DIAMETER SHALL INCLUDE A MINIMUM OF TWO (2) JOINTS OF RESTRAINED JOINT PIPE ON EACH SIDE OF THE FITTING. ALL PIPES EQUAL TO OR GREATER THAN 12-INCHES (12") IN DIAMETER SHALL INCLUDE A MINIMUM OF THREE (3) JOINTS OF RESTRAINED JOINT PIPE ON EACH SIDE OF THE FITTING.
- EXCEPT AS NOTED ON PLANS, CONTRACTOR SHALL INSTALL, TEST, AND DISINFECT ALL WATERLINES PRIOR TO MAKING PERMANENT CONNECTIONS TO EXISTING WATERLINES. CONTRACTOR SHALL PROVIDE, INSTALL, AND REMOVE ALL TEMPORARY CONNECTIONS, BLOW-OFFS, AND ALL OTHER APPURTENANCES NECESSARY FOR TESTING AND DISINFECTION OF ALL PROPOSED WATERLINES. NO SEPARATE PAY.
- AFTER DISINFECTING AND FLUSHING WATERLINES, OBTAIN THE SERVICE OF AN APPROVED LABORATORY TO GATHER REPRESENTATIVE SAMPLES AND CONDUCT BACTERIOLOGICAL TESTS IN ACCORDANCE WITH AWWA C651-14 OR LATEST REVISION. TAKE TWO (2) CONSECUTIVE SETS OF SAMPLES, AT LEAST 24 HOURS APART, AT EACH DEAD END LINE (BLOW-OFF) AND FOR EACH 1,000 LINEAR FEET OF DISTRIBUTION MAIN.

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 SUBDIVISIONS" 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 1/2 SACK 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" x 12" REINFORCED CONCRETE CURB SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE 6" REINFORCED CONCRETE CURB.
- AT ALL INTERSECTION LOCATIONS, TYPE 7 RAMPS SHALL BE PLACED IN ACCORDANCE WITH TxDOT 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.
- CURB 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 1-1 STOP SIGNS SHALL BE 30" x 30" WITH DIAMOND GRADE SHEETING. STREET NAME SIGNS SHALL BE UPPER AND LOWER CASE LETTERS WITH DIAMOND GRADE SHEETING.
- A BLUE DOUBLE REFLECTORIZED BUTTON SHALL BE PLACED AT ALL FIRE HYDRANT LOCATIONS. THE BUTTON SHALL BE PLACED 12 INCHES OFF OF THE CENTERLINE OF THE STREET ON THE SAME SIDE OF THE HYDRANT.

NOTE: FORT BEND COUNTY NOTES SUPERSEDE ANY CONFLICTING NOTES.

INSPECTION. THE PROJECT AND ALL PARTS THEREOF SHALL BE SUBJECT TO INSPECTION FROM TIME TO TIME BY INSPECTORS DESIGNATED BY FORT BEND COUNTY. NO SUCH INSPECTIONS SHALL RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS HEREUNDER. NEITHER FAILURE TO INSPECT NOR FAILURE TO DISCOVER OR REJECT 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 RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS HEREUNDER.

PROTECTION REQUIREMENTS AT  
WATER LINE - SANITARY SEWER CROSSINGS

	PROPOSED WATER LINE				PROPOSED SANITARY SEWER			
	EXISTING SS	PROP SS	EXISTING WL	PROP WL	EXISTING WL	PROP WL	EXISTING WL	PROP WL
MINIMUM 2 FEET VERTICAL CLEARANCE	✓	✓	✓	✓	✓	✓	✓	✓
PLACE 1 FULL SECTION (MIN 18 FT) OF WL CENTERED AT SS CROSSING. PROVIDE RESTRAINED JOINTS ON WL SPACED AT LEAST 9 FT HORIZONTALLY FROM CENTERLINE OF SS	✓	✓	✓	✓	✓	✓	✓	✓
PLACE 1 FULL SECTION (MIN 18 FT) OF SS CENTERED AT WL CROSSING. PROVIDE RESTRAINED JOINTS ON SS, SPACED AT LEAST 9 FT HORIZONTALLY FROM CENTERLINE OF WL		✓				✓		✓
REPLACE 1 FULL SECTION OF EXISTING SS WITH PRESSURE-RATED DIP OR PRESSURE RATED PVC PIPE WITH ADAPTERS AND RESTRAINED JOINTS CENTERED AT WL CROSSING	✓	✓	✓	✓	✓	✓	✓	✓
PROVIDE DIP FOR SMALL DIAMETER WL (LESS THAN 24 INCHES). PVC PIPE IS ONLY ALLOWED IF ENCASED PER TAC §290.44, AND USE RESTRAINED JOINTS FOR BOTH DIP AND PVC PIPE.		✓		✓		✓		✓
ENCASE SS WITH CSS FOR THE TOTAL LENGTH OF 1 PIPE SEGMENT PLUS 1 FOOT BEYOND THE JOINTS ON EACH END	✓	✓	✓	✓	✓	✓	✓	✓
PROVIDE 1 FULL SECTION (MIN 18 FT) OF MIN 150 PSI SS CENTERED AT WL CROSSING. PROVIDE RESTRAINED JOINTS ON SS, SPACED AT LEAST 9 FT HORIZONTALLY FROM CENTERLINE OF WL OR ENCASE IN A JOINT OF 150 PSI PRESSURE PIPE (MIN 18 FT) TWO NOMINAL SIZES LARGER WITH SPACERS AT 5 FT INTERVAL				✓	✓			

- MINIMUM CLEARANCE IS 2 FEET FOR NON-PRESSURE RATED SS AND 8 INCHES FOR PRESSURE RATED SS (WITH AT LEAST 150 PSI PRESSURE RATING) OR 1 FOOT FOR PRESSURE RATED SS.
  - REQUIRED IF EXISTING SS IS DISTURBED AND/OR THERE IS EVIDENCE OF LEAKAGE.
  - NOT REQUIRED FOR AUGERED WL UNLESS THERE IS EVIDENCE OF LEAKAGE; COMPLETELY FILL AUGERED HOLE WITH BENTONITE/CLAY MIXTURE.
  - NOT REQUIRED FOR AUGERED SS; COMPLETELY FILL AUGERED HOLE WITH BENTONITE/CLAY MIXTURE.
- NOTE:
- BOTH WATER LINES AND WASTEWATER MAIN OR LATERAL MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS.
  - SANITARY SEWERS (SS) IS APPLICABLE TO BOTH GRAVITY SANITARY SEWERS AND FORCE MAINS.

## CENTERPOINT ENERGY (NOTES):

## CAUTION: UNDERGROUND GAS FACILITIES

LOCATIONS OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY, INTRASTATE PIPELINE, LLC, WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. OUR SIGNATURE ON THESE PLANS ONLY INDICATES THAT OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 1-800-545-6005 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

- WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713) 945-8036 OR (713)-945-8037 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
- WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
- WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.

FOR EMERGENCIES REGARDING GAS LINES CALL (713) 659-3552 OR (713) 207-4200.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

## WARNING: OVERHEAD ELECTRICAL LINES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:

- ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES; AND
- OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.

PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY AT (713) 207-2222.

ACTIVITIES ON OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY. NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEY & RIGHT OF WAY DIVISION AT (713) 207-6348 OR (713) 207-5769.

## AT&amp;T TEXAS/SWB FACILITIES:

- THE LOCATIONS OF AT&T TEXAS/SWB FACILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL CALL 1-800-344-8377 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED.
- WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF AT&T TEXAS/SWB FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE AT&T TEXAS/SWB FACILITIES.
- WHEN AT&T TEXAS/SWB FACILITIES ARE EXPOSED, THE CONTRACTOR WILL PROVIDE SUPPORT TO PREVENT DAMAGE TO THE CONDUIT DUCTS OR CABLES. WHEN EXCAVATING NEAR TELEPHONE POLES THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT.
- THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWB UNDERGROUND CONDUIT FACILITIES OR BURIED CABLE FACILITIES SHOWN ON THESE PLANS DOES NOT MEAN THAT THERE ARE NO DIRECT BURIED CABLES OR OTHER CABLES IN CONDUIT IN THE AREA.
- PLEASE CONTACT THE AT&T TEXAS DAMAGE PREVENTION MANAGER MR. ROOSEVELT LEE JR. AT (713)567-4552 OR E-MAIL HIM AT [RL7259@ATT.COM](mailto:RL7259@ATT.COM). IF THERE ARE QUESTIONS ABOUT BORING OR EXCAVATING NEAR OUR AT&T TEXAS/SWB FACILITIES.

## PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE ONE STAR NOTIFICATION 713-222-4567. TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222.

NOTE: For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground lines can be marked. This verification does not fulfill your obligation to call 811. (This Signature verifies that you have shown CIP Natural Gas lines correctly - not to be used for conflict verification.) Gas service lines are not shown.) Signature valid for six months.

## VERIFICATION OF PRIVATE UTILITY LINES

*Adickens* Date: 6-28-17  
CenterPoint Energy/Natural Gas Facilities Verification ONLY.  
(This Signature verifies that you have shown CIP Natural Gas lines correctly - not to be used for conflict verification.) Gas service lines are not shown.) Signature valid for six months.

*Adickens* Date: 6-28-17  
CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.  
(This Signature verifies existing underground facilities - not to be used for conflict verification.) Signature valid for six months.

*C.M.C.* Date: 6-28-17  
Approved for AT&T Texas/SWB underground conduit facilities only.  
Signature valid for one year.

NO. DATE REVISIONS APP.

FORT BENT COUNTY M.U.D. No. 118  
FORT BEND COUNTY, TEXAS

J.C. JONES & CARTER  
Texas Board of Professional Engineers Registration No. F-439  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

INTERCONNECT WITH FBCMUD No. 146

GENERAL NOTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY  
AFTER DATE OF SIGNATURES

CITY OF HOUSTON  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER TRAFFIC & TRANSPORTATION  
WASTEWATER STORM WATER QUALITY  
STORM FACILITIES  
STREET & BRIDGE

FILE NO.:  
JOB NO: 14421-0009-00

DATE: JUNE 2017  
DGN. BY: MPGURKA  
DWG. BY: JASTRUHAR

SCALE: NO SCALE

G2

SHEET No. 2 OF 7

FOR CITY OF HOUSTON USE ONLY  
CITY DWG NO.

58466

APPROVED: *Michael P. Burka*  
F.B.C. DEVELOPMENT COORDINATOR

DATE: 7/19/17

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR FROM DATE OF APPROVAL.

APPROVED: *Michael P. Burka*  
F.B.C. DEVELOPMENT COORDINATOR

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F.B.C. DEVELOPMENT COORDINATOR



# **BENCH MARK**

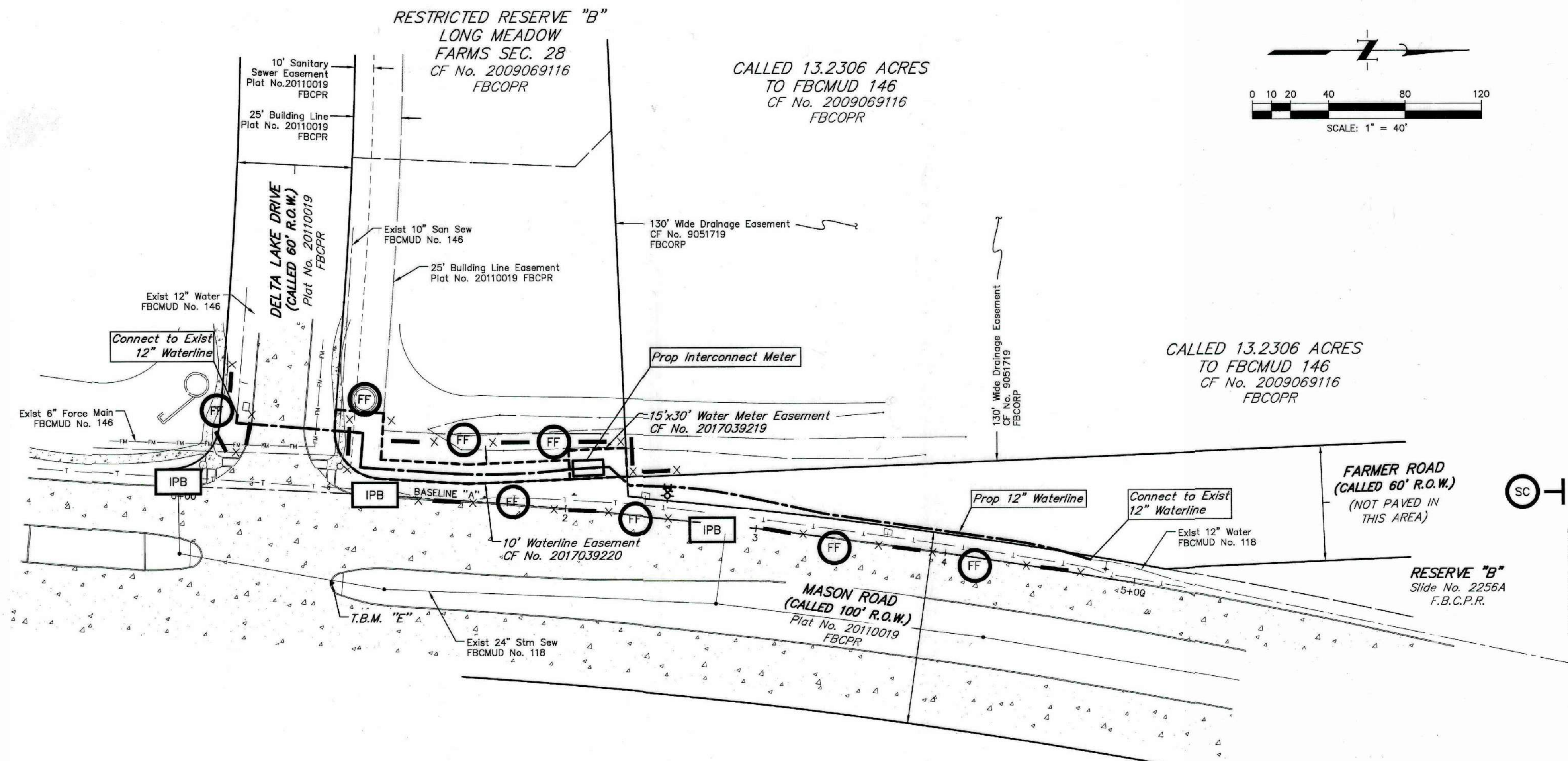
SURVCON, INC. BENCH MARK B-8 ~ A 5/8" IRON ROD SET IN CONCRETE APPROXIMATELY 49.2' EAST-NORTHEAST OF THE FENCE CORNER AT THE FAIRFIELD BOUNDARY ALONG THE SOUTH RIGHT-OF-WAY LINE OF SCHIELDS ROAD, APPROXIMATELY 44.1' SOUTH-SOUTHWEST OF A CROSS-TIE FENCE CORNER W/RR SPIKE AND 11.1' EAST OF A NAIL W/SHINER AT EAST EDGE OF PAVEMENT OF SCHIEL ROAD.

ELEVATION = 83.78' (1978 ADJUSTMENT)

# **T.B.M. "E"**

TEMPORARY BENCHMARK E BEING A SET CUT SQUARE ON A BULLNOSE LOCATED ON THE NORTHSIDE OF THE INTERSECTION OF SOUTH MASON ROAD AND DELTA LAKE DRIVE.

ELEVATION = 88.15 FEET, NAVD 88.



## **LEGEND:**

EXISTING	PROPOSED	
---	---	SANITARY SEWER
---	---	WATERLINE
---	---	STORM SEWER
---	---	WOODEN FENCE
---	---	CHAIN LINK FENCE
---	---	CLERK'S FILE
---	---	C-INLET
---	---	WATER EASEMENT
---	---	TREE
---	---	FORT BEND COUNTY DRAINAGE RECORDS
---	---	FORT BEND COUNTY MAP RECORDS
---	---	FORT BEND COUNTY PLAT RECORDS
---	---	FORT BEND COUNTY OFFICIAL PUBLIC
---	---	RECORDS OF REAL PROPERTY
---	---	FLUSH VALVE

## **LEGEND CONTINUED:**

EXISTING	PROPOSED	
FM	FM	FORCE MAIN
IR	IR	GRATE TOP INLET
LF	LF	GUARD POST
MH	MH	IRON ROD
MP	MP	LINEAR FEET
OHP	OHP	MANHOLE
SSE	SSE	ELECTRIC METER POLE
PP	PP	OVERHEAD POWER
PP/G	PP/G	SANITARY SEWER EASEMENT
TOB	TOB	POWER POLE
TS	TS	PIPELINE MARKER
WM	WM	POWER POLE WITH GUY ANCHOR
---	---	SPRINKLER VALVE
---	---	TOP BANK DITCH
---	---	TELEPHONE CABLE MARKER
---	---	TELEPHONE PEDESTAL
---	---	TOE OF SLOPE
---	---	WATER METER
---	---	WATER VALVE

## **SWPPP LEGEND**

IPB	INLET PROTECTION BARRIERS
FF	FILTER FABRIC FENCE
SC	STABILIZED CONSTRUCTION ACCESS

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR FROM DATE OF APPROVAL.

APPROVED: *[Signature]*  
F.B.C. DEVELOPMENT COORDINATOR

DATE: 7/19/17

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER: *[Signature]* STORM WATER QUALITY: *[Signature]*  
WASTEWATER: *[Signature]* FACILITIES: *[Signature]*

STREET & BRIDGE: *[Signature]*

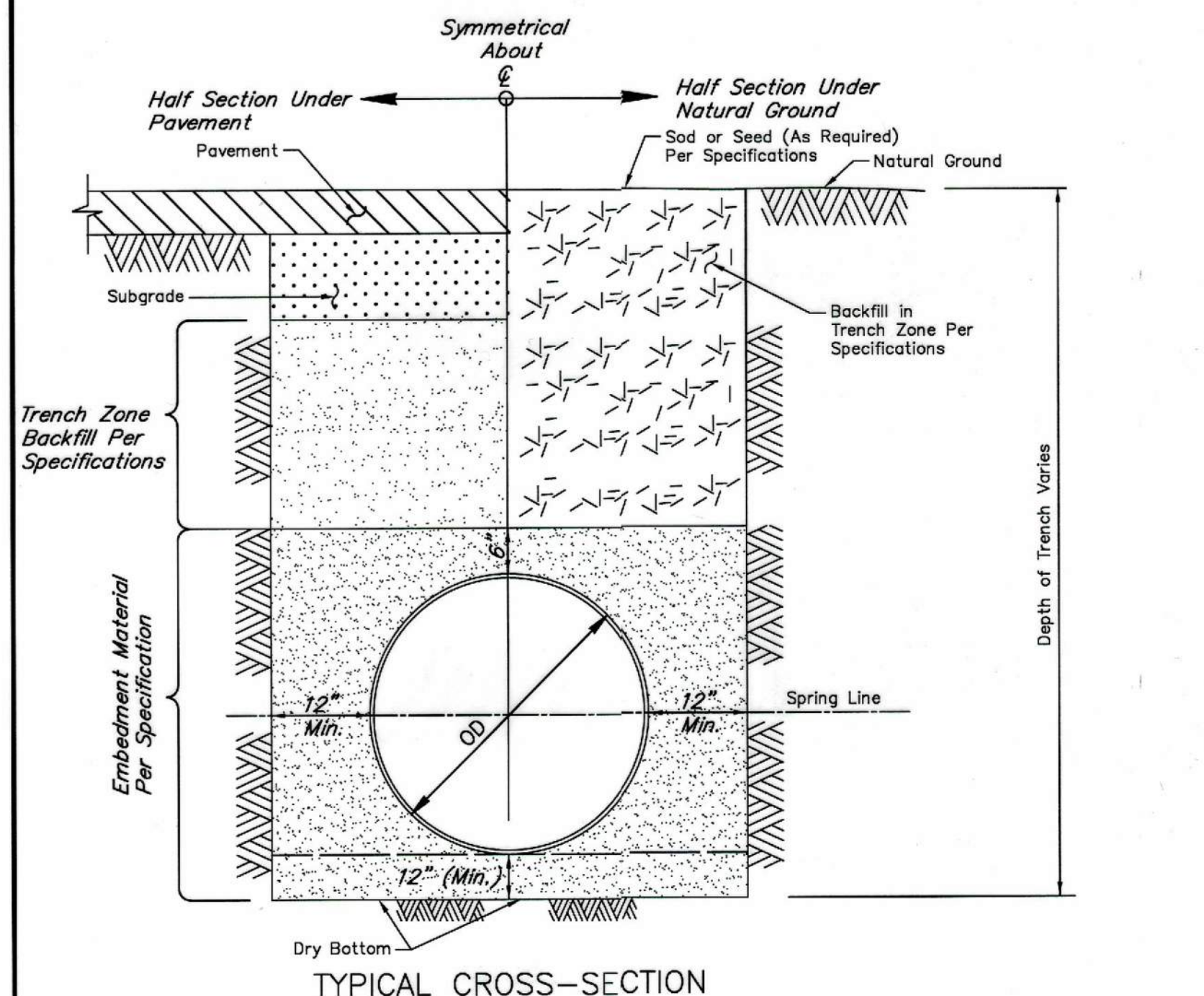
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JOB NO: 14421-0009-00  
DATE: JUNE 2017  
DGN. BY: MPGURKA  
DWC. BY: JASTRUHAR  
SCALE: 1"=40'  
G3  
SHEET No. 3 OF 7



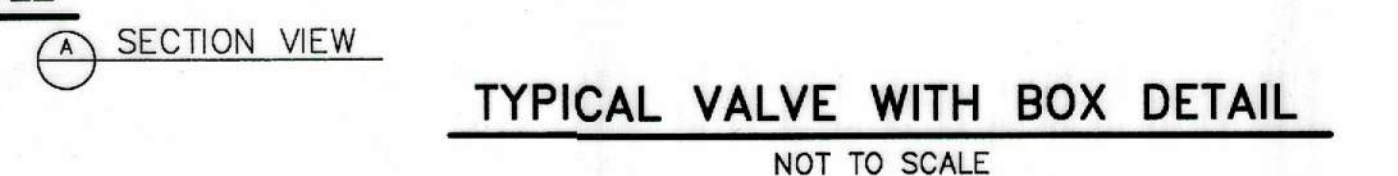








NOT TO SCALE

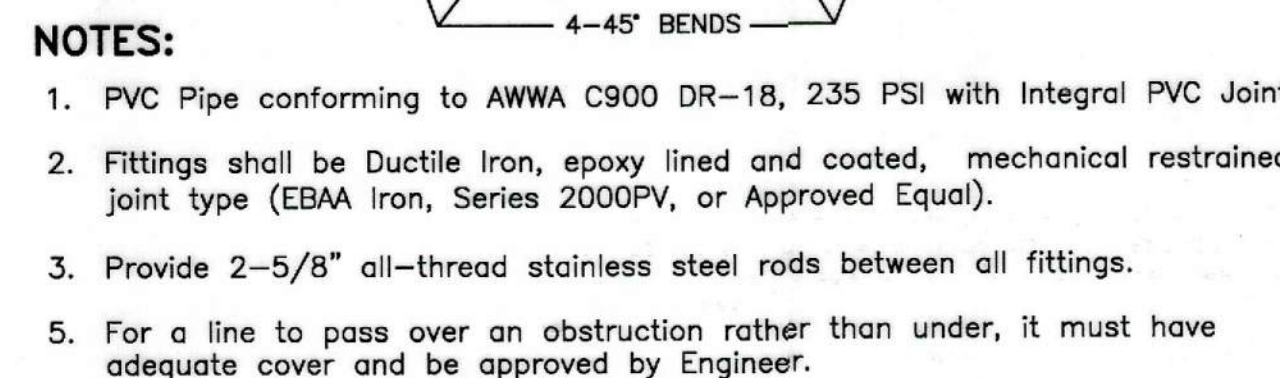
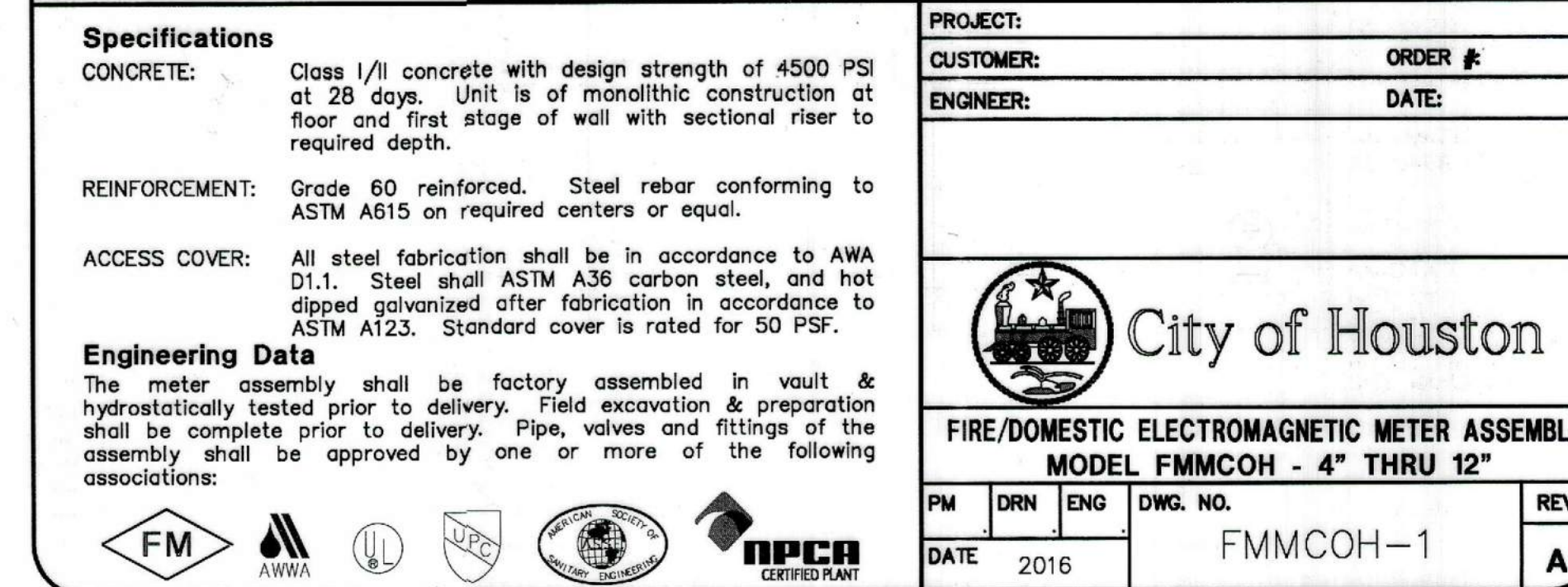


NOT TO SCALE

**NOTES:**

1. Heights of all blocks shall be equal to "A","B","C","D", or "E" dimension as shown.
2. All concrete to be poured against firm, undisturbed soil.
3. Restrained fittings may be used in lieu of thrust blocking.
4. Restrained fittings shall be installed per Project Specifications.
5. Ductile iron restrained fittings shall be TR-Flex, Field Lok, Flex Ring, Lok-Ring, Super Lok, or approved equal.

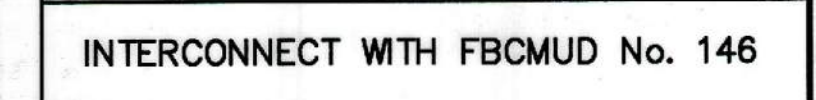
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NOT TO SCALE



FORT BENT COUNTY M.U.D. No. 118  
FORT BEND COUNTY, TEXAS



CITY OF HOUSTON

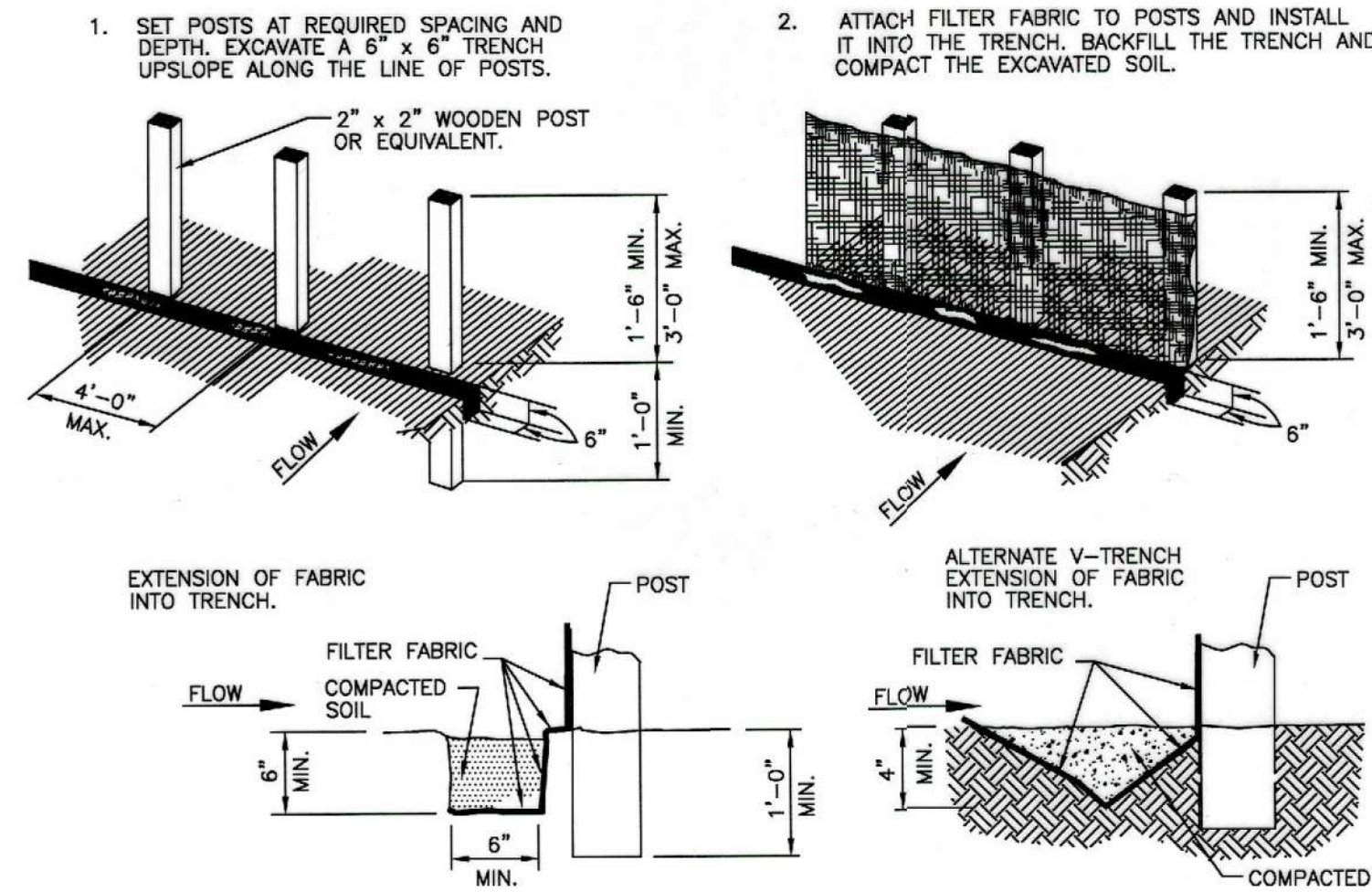
FILE NO: _____	FOR CITY OF HOUSTON USE ONLY
JOB NO: 14421-0009-00	CITY DWG NO. _____

-0123 COH BLK REV. JAN 2006

APPROVED:   
F.B.C. DEVELOPMENT COORDINATOR

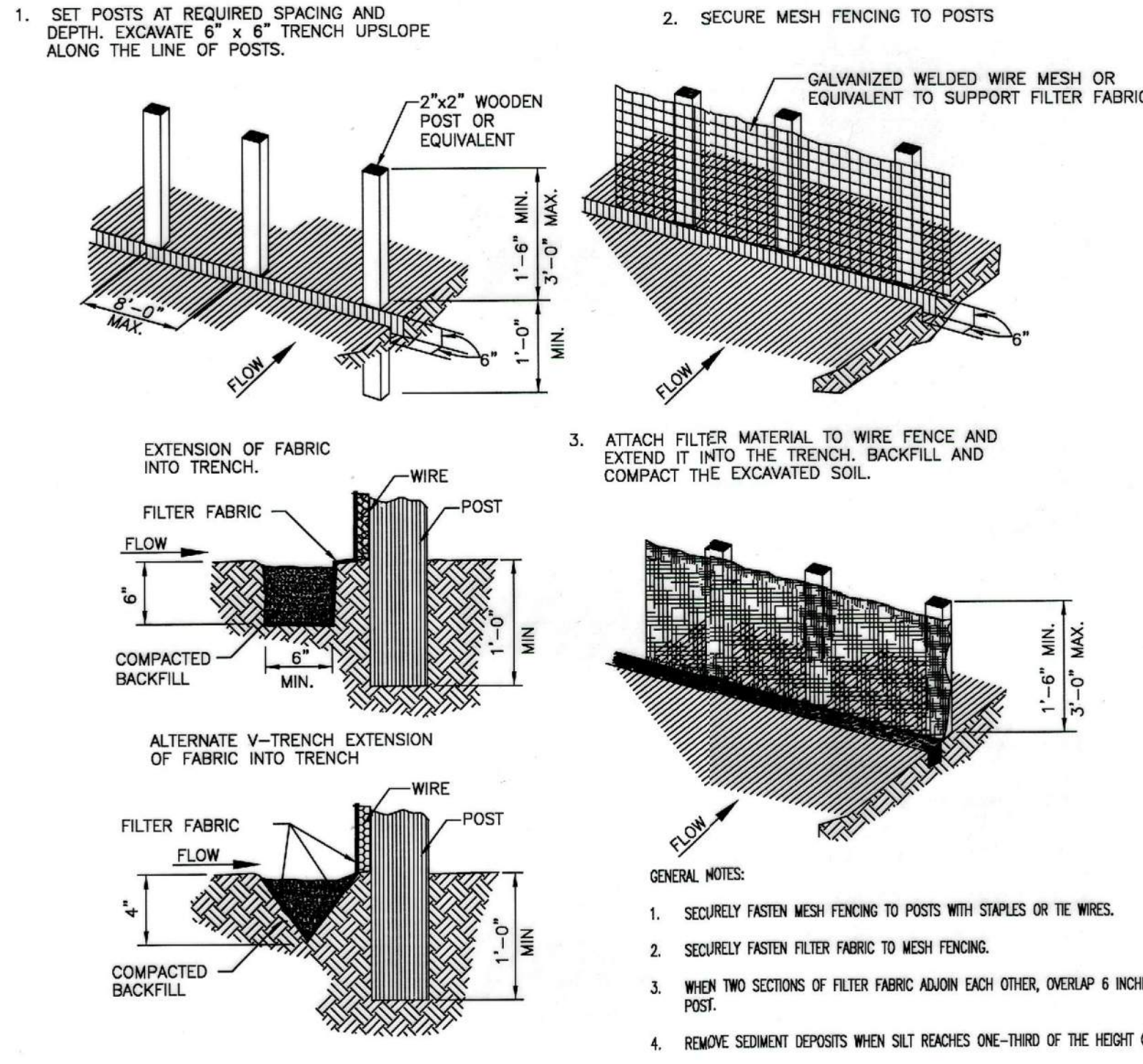
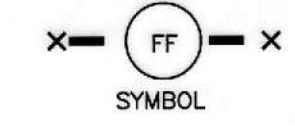
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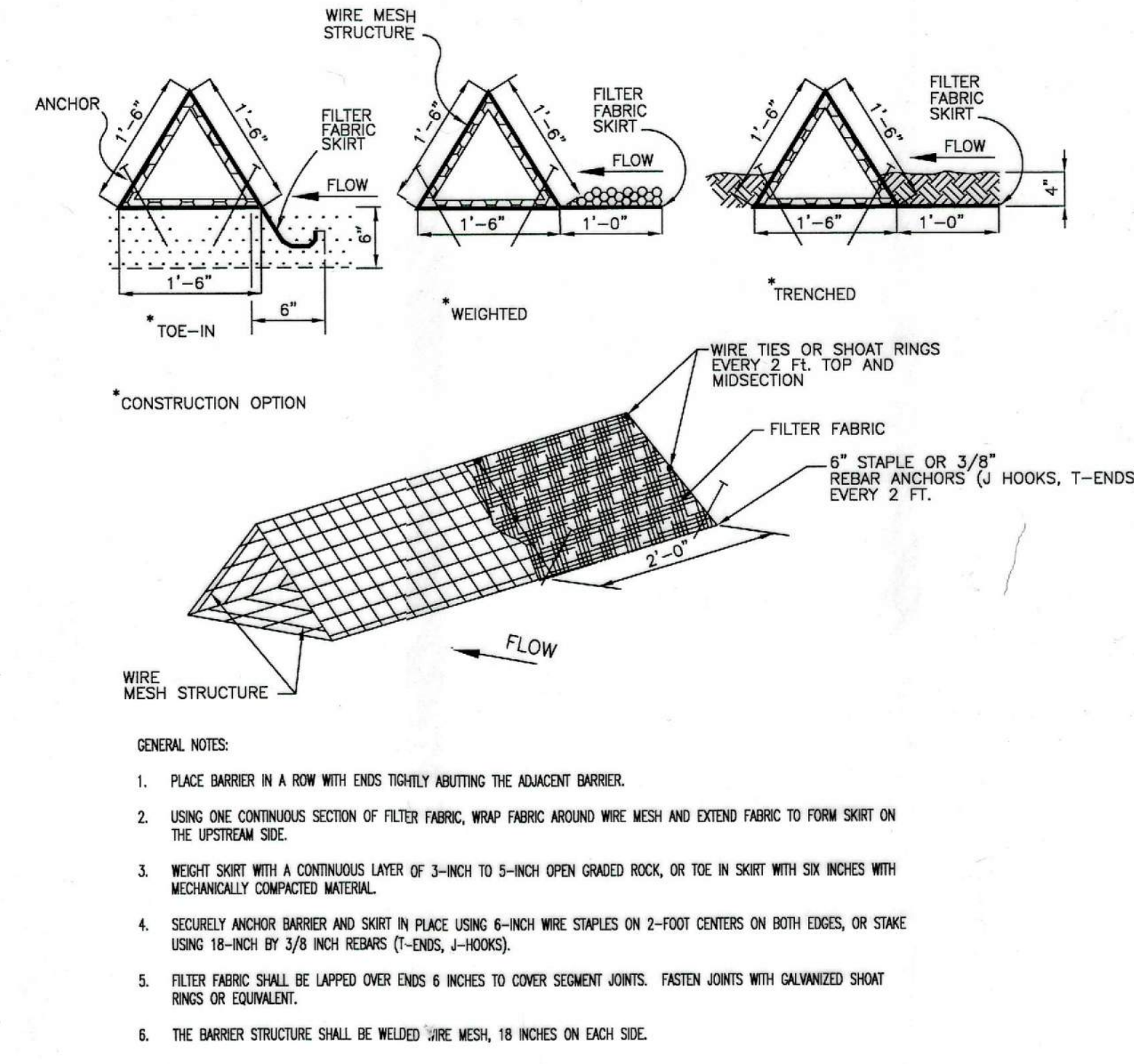
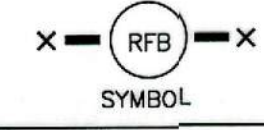
- GENERAL NOTES:
1. SET POSTS AT 4-FOOT MAXIMUM SPACING. IF FACTORY PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAXIMUM.
  2. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT THE POST, FOLD TOGETHER, AND ATTACH TO THE POSTS.
  3. REMOVE SEDIMENT DEPOSITS WHEN SILT DEPTH REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE.

### FILTER FABRIC FENCE



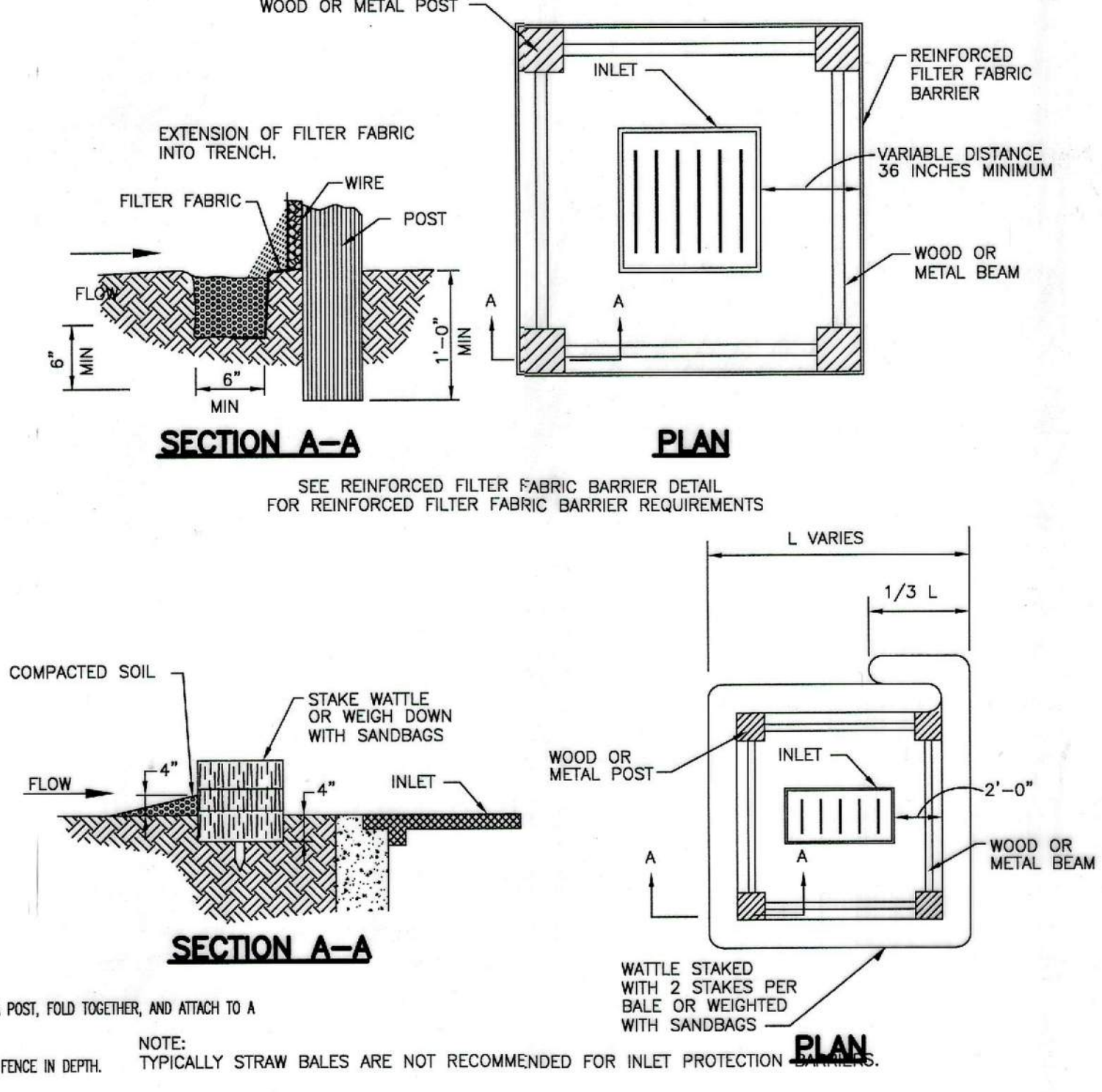
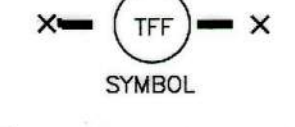
- GENERAL NOTES:
1. SECURELY FASTEN MESH FENCING TO POSTS WITH STAPLES OR TIE WIRES.
  2. SECURELY FASTEN FILTER FABRIC TO MESH FENCING.
  3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT A POST, FOLD TOGETHER, AND ATTACH TO A POST.
  4. REMOVE SEDIMENT DEPOSITS WHEN SILT REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE IN DEPTH.

### REINFORCED FILTER FABRIC BARRIER

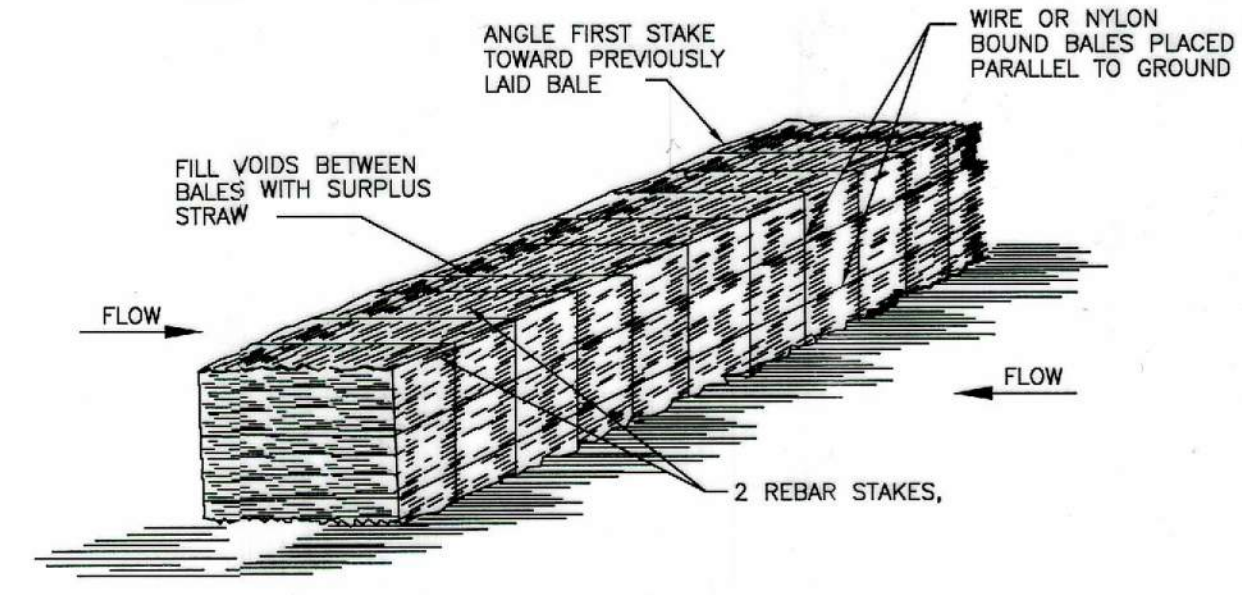
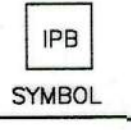


- GENERAL NOTES:
1. PLACE BARRIER IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BARRIER.
  2. USING ONE CONTINUOUS SECTION OF FILTER FABRIC, WRAP FABRIC AROUND WIRE MESH AND EXTEND FABRIC TO FORM SKIRT ON THE UPSTREAM SIDE.
  3. WEIGHT SKIRT WITH A CONTINUOUS LAYER OF 3-INCH TO 5-INCH OPEN GRADED ROCK, OR TOE IN SKIRT WITH SIX INCHES WITH MECHANICALLY COMPACTED MATERIAL.
  4. SECURELY ANCHOR BARRIER AND SKIRT IN PLACE USING 6-INCH WIRE STAPLES ON 2-FOOT CENTERS ON BOTH EDGES, OR STAKE USING 18-INCH BY 3/8 INCH REBARS (T-ENDS, J-HOOKS).
  5. FILTER FABRIC SHALL BE LAPPED OVER ENDS 6 INCHES TO COVER SEGMENT JOINTS. FASTEN JOINTS WITH GALVANIZED SHOOT RINGS OR EQUIVALENT.
  6. THE BARRIER STRUCTURE SHALL BE WELDED WIRE MESH, 18 INCHES ON EACH SIDE.

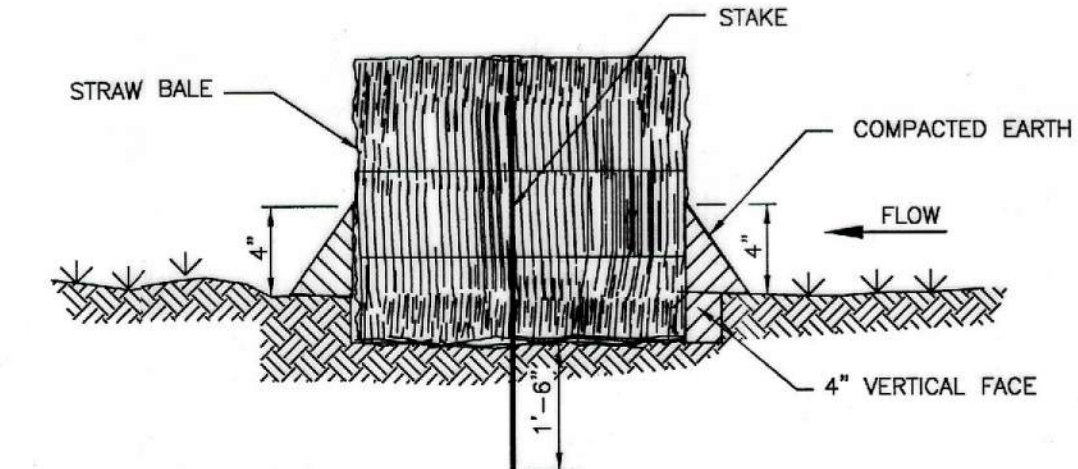
### TRIANGULAR FILTER FABRIC FENCE



### INLET PROTECTION BARRIERS FOR STAGE I INLETS



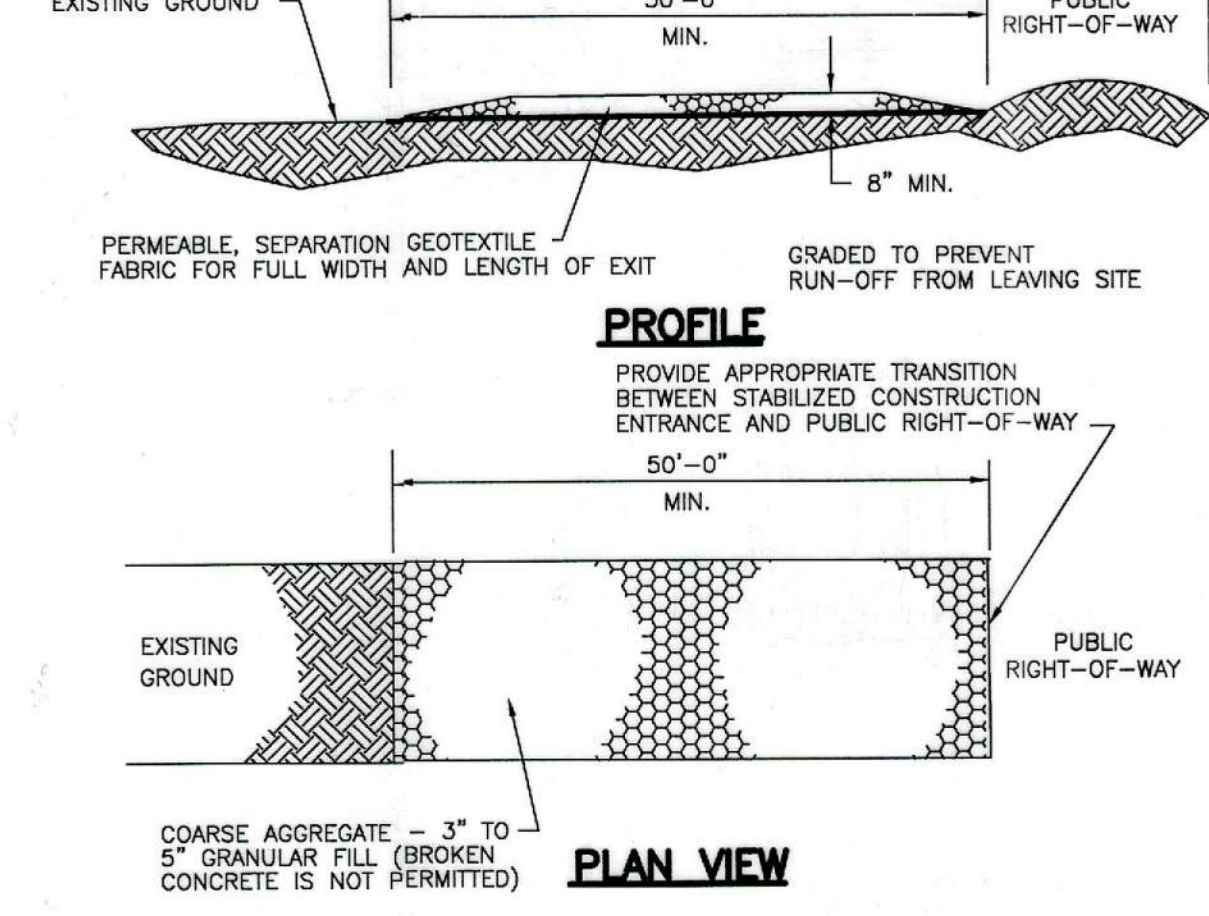
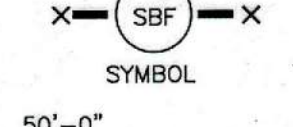
### STRAW BALE FENCE



### SECTION

- GENERAL NOTES:
1. LIMIT USE TO ONSITE SNAILES FOR PURPOSES OF LOW FLOW VELOCITY DISSIPATION FOR EROSION CONTROL. USE STRAW BALE FENCES TO TREAT OVERLAND FLOW ONLY. DO NOT USE STRAW BALE FENCES TO TREAT FLOW IN CHANNELS.
  2. PLACE BALES IN A ROW WITH ENDS TIGHTLY ABUTTING ADJACENT BALES. FILL THE VOIDS BETWEEN BALES WITH SURPLUS STRAW. PLACE BALES WITH BINDING PARALLEL TO GROUND SURFACE.
  3. IMBED EACH BALE AT LEAST 4 INCHES IN THE SOIL.
  4. SECURELY ANCHOR BALES IN PLACE BY REBAR STAKES. DRIVE STAKES THROUGH THE BALES AND AT LEAST 18 INCHES INTO THE GROUND. ANGLE THE STAKE IN EACH BALE TOWARD THE PREVIOUS BALE TO FORCE THE BALES TOGETHER.
  5. BIND BALES WITH WIRE OR NYLON ROPE TIED ACROSS THE STRAW BALES.
  6. REPLACE WITH NEW STRAW BALE FENCE EVERY TWO MONTHS.
  7. WATTLER STAKED INTO THE GROUND ARE A PREFERRED SUBSTITUTE FOR STRAW BALE FENCES.

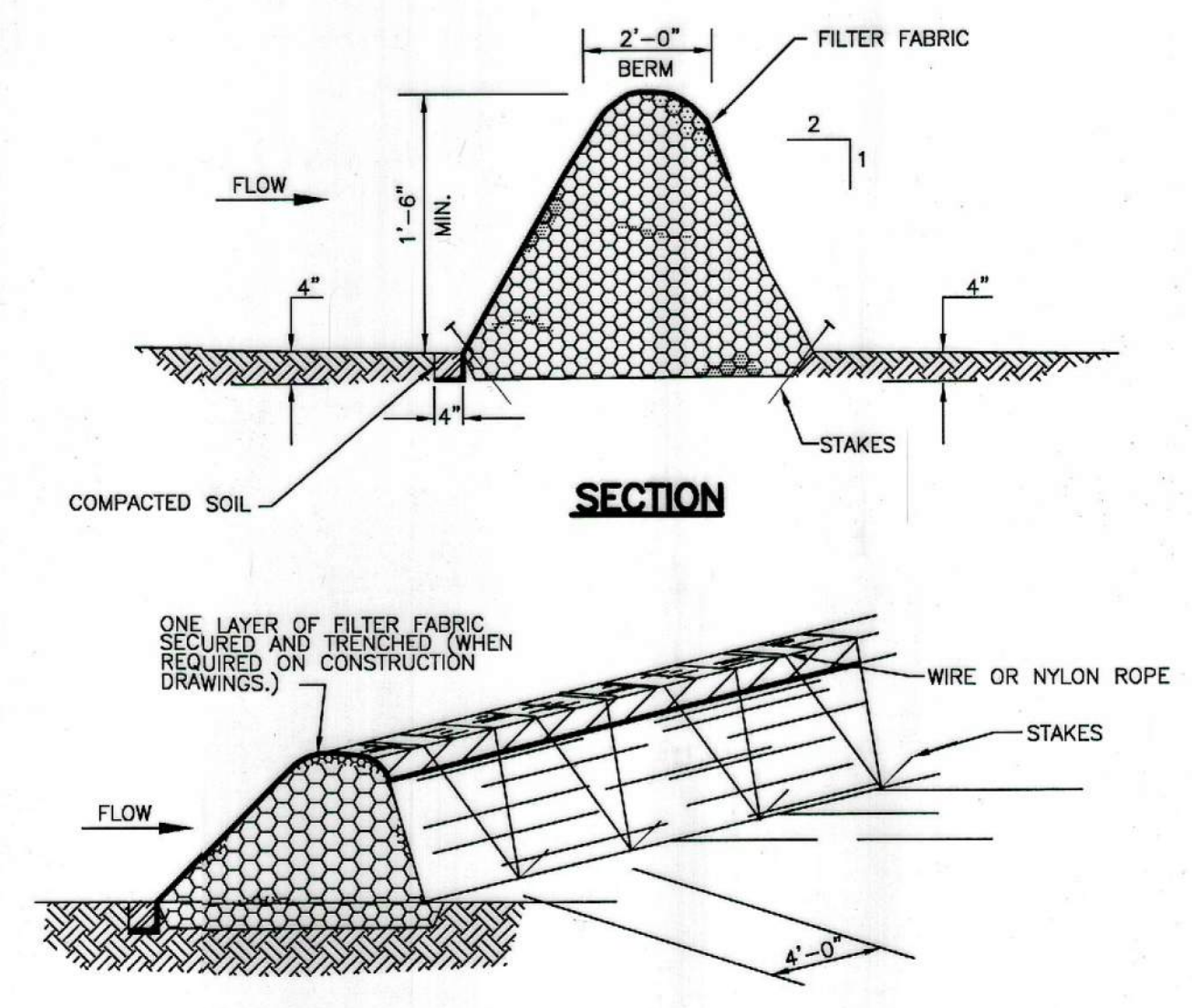
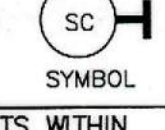
### STRAW BALE FENCE



### PLAN VIEW

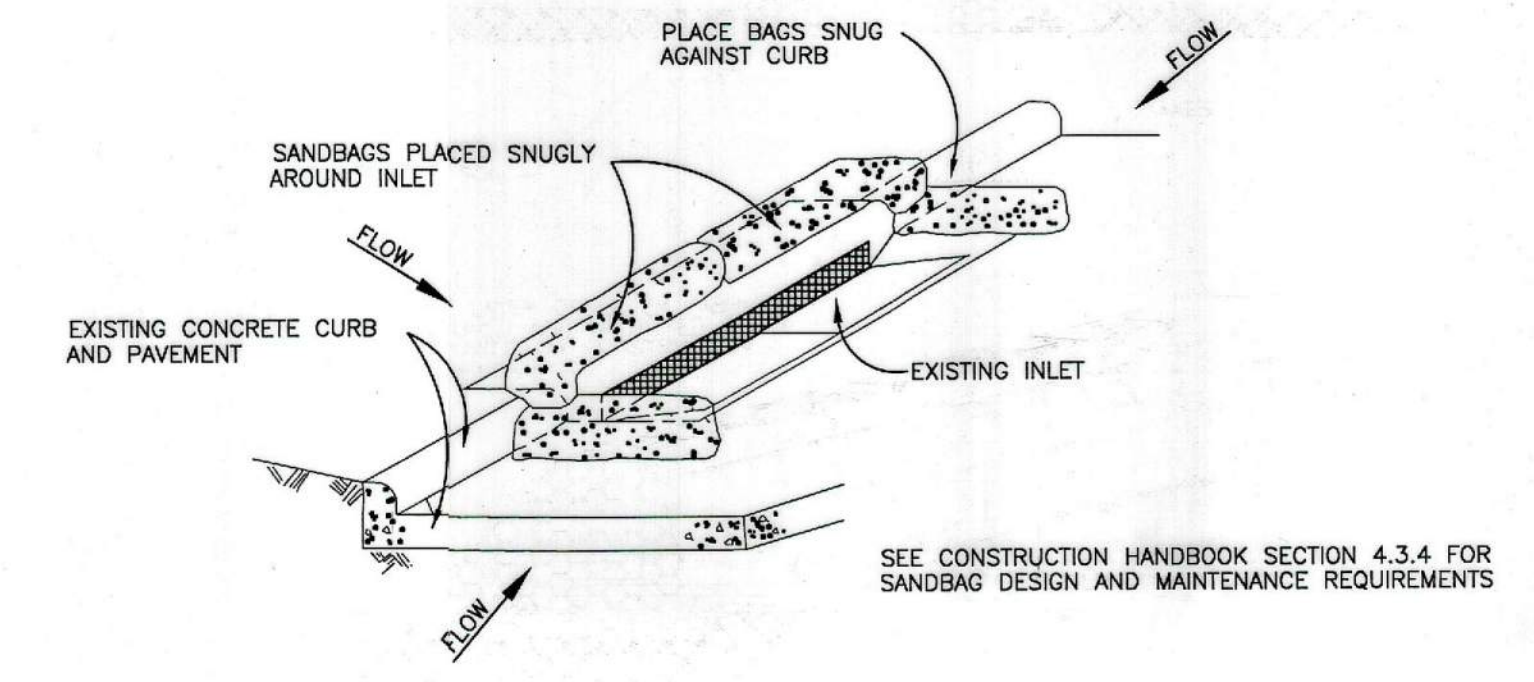
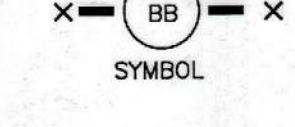
- GENERAL NOTES:
1. MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
  2. CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
  3. UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
  4. WHEN SHOWN ON THE CONSTRUCTION DRAWINGS, WIDEN OR LENGTHEN STABILIZED AREA TO ACCOMMODATE A TRUCK WASHING AREA. PROVIDE OUTLET SEDIMENT TRAP FOR THE TRUCK WASHING AREA.
  5. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
  6. PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
  7. ALTERNATIVE METHODS OF CONSTRUCTION INCLUDE:
    - CEMENT STABILIZED SOIL: COMPACTED CEMENT STABILIZED SOIL, LIMESTONE AGGREGATE, OR OTHER FILL MATERIAL IN AN APPLICATION OF THICKNESS OF 8 INCHES.
    - WOOD MATS: OAK OR OTHER HARDWOOD TIMBERS PLACED EDGE TO EDGE AND ACROSS SUPPORT WOODEN BEAMS WHICH ARE PLACED ON TOP OF EXISTING SOIL IN AN APPLICATION THICKNESS OF 6 INCHES.
    - STEEL MATS: PERFORATED MATS PLACED ACROSS PERPENDICULAR SUPPORT MEMBERS.

### STABILIZED CONSTRUCTION ACCESS



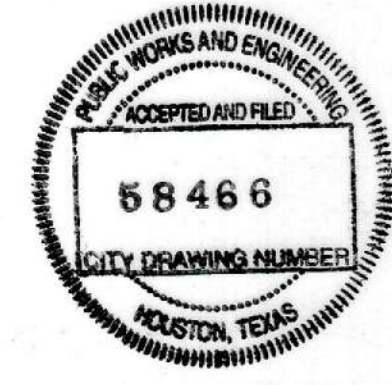
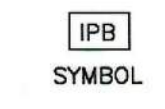
- GENERAL NOTES:
1. LIMIT USE TO ONSITE SNAILES FOR PURPOSES OF LOW FLOW VELOCITY DISSIPATION FOR EROSION CONTROL. USE BRUSH BERMS TO TREAT OVERLAND FLOW ONLY. DO NOT USE BRUSH BERMS TO TREAT FLOW IN CHANNELS.
  2. PLACE WOODY BRUSH AND BRANCHES HAVING A DIAMETER OF LESS THAN 2 INCHES WITH A 6-INCH OVERLAP. AVOID INCORPORATION OF ANNUAL WEEDS AND SOIL INTO BRUSH BERM.
  3. MINIMUM HEIGHT OF THE BRUSH BERM IS 18 INCHES, MEASURED FROM THE TOP OF THE EXISTING GROUND AT THE UPSLOPE TOE TO THE TOP OF THE BERM.
  4. HAND PLACE BRUSH BERMS ALONG CONTOUR LINES. MACHINE PLACEMENT OF BRUSH BERMS IS NOT PERMITTED.
  5. IMBED BRUSH BERM AT LEAST 4 INCHES INTO THE SOIL.
  6. ANCHOR BRUSH BERMS USING WIRE OR NYLON ROPE ACROSS THE BERM WITH A MINIMUM TENSION OF 50 POUNDS.
  7. SECURELY TIE ROPE TO 18-INCH REBAR STAKES DRIVEN INTO THE GROUND ON 4-FOOT CENTERS ON BOTH SIDES OF THE BERM.
  8. PERFORM MAINTENANCE AS NEEDED.

### BRUSH BERM



- GENERAL NOTES:
1. BAGS OR WATTLERS CAN BE USED FOR THIS APPLICATION.
  2. PROVIDE WOVEN OR UNWOVEN GEOTEXTILE FILTER FABRIC FOR BAGS.
  3. PROVIDE COARSE SAND AND AGGREGATE MIX FOR FILL MATERIAL FOR BAGS. USE ONLY PARTICLES CONSISTING OF CLEAN, HARD, DURABLE MATERIALS FREE FROM ADHERENT COATINGS, SALT, ALKALI, DIRT, CLAY, LOAM, SHALE, SOFT OR FLAKY MATERIALS, OR ORGANIC AND INJURIOUS MATTER.
  4. REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE BARRIER.

### INLET PROTECTION BARRIERS FOR STAGE II INLETS



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR FROM DATE OF APPROVAL.

APPROVED: *[Signature]* F.B.C. DEVELOPMENT COORDINATOR

DATE: 7/19/17

**JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

NO.	REVISIONS	DATE	NAME

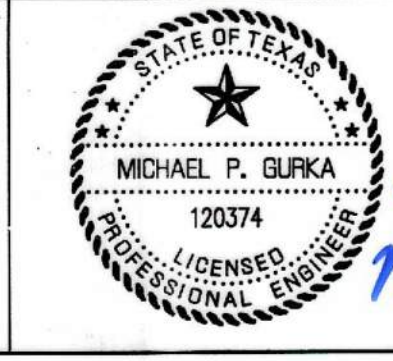
FORT BEND COUNTY  
ENGINEERING DEPARTMENT



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR FROM DATE OF APPROVAL.

APPROVED: \_\_\_\_\_ DEVELOPMENT COORDINATOR

DATE: \_\_\_\_\_



14421-0009-00	JOB NO.
STORM WATER POLLUTION PREVENTION PLAN DETAILS	FILE NAME
JASTRUHAR	FILE NO.
N.T.S.	SCALE
11/29/16	DATE
6 OF 7	SHEET NO.









NOTES:

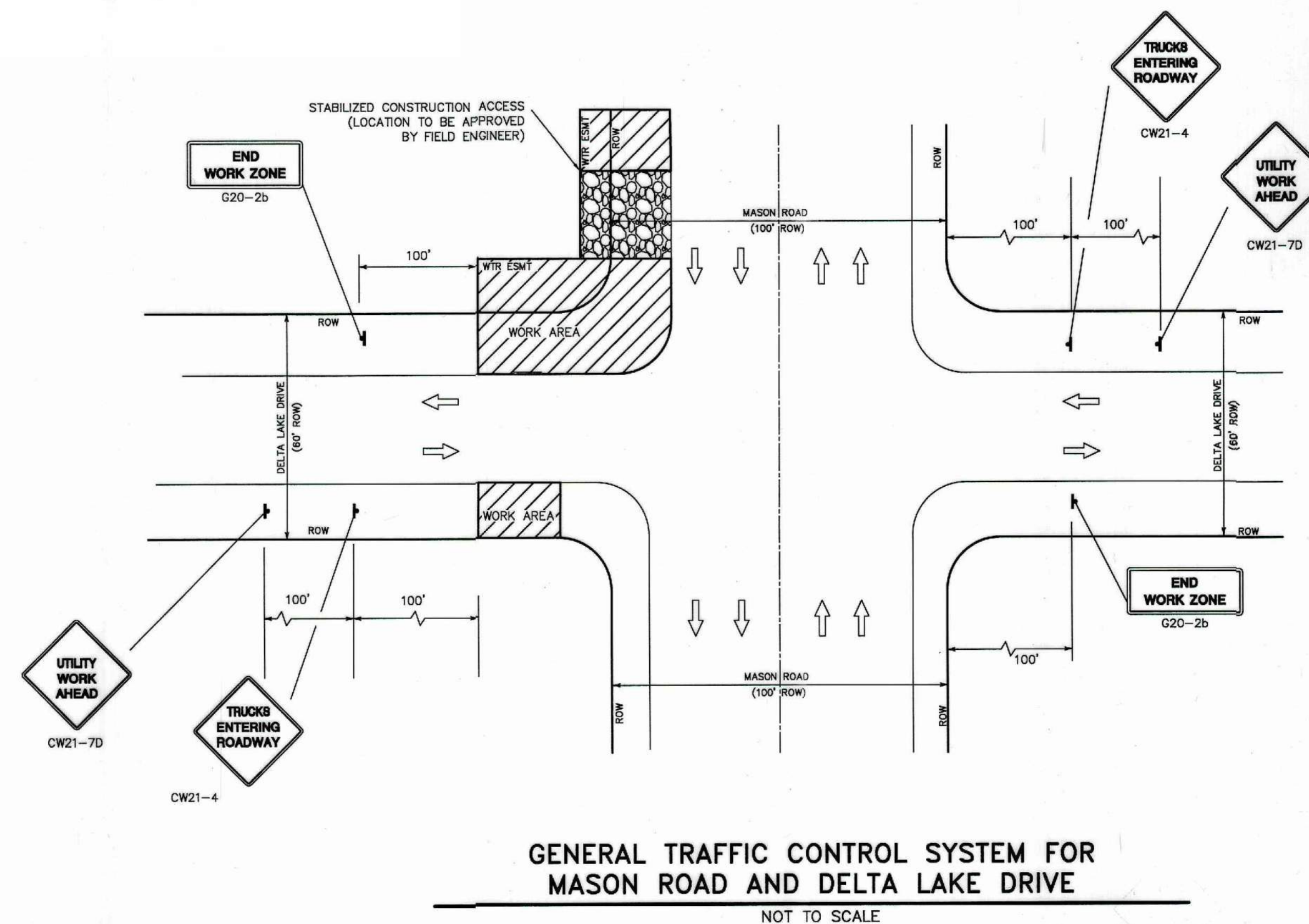
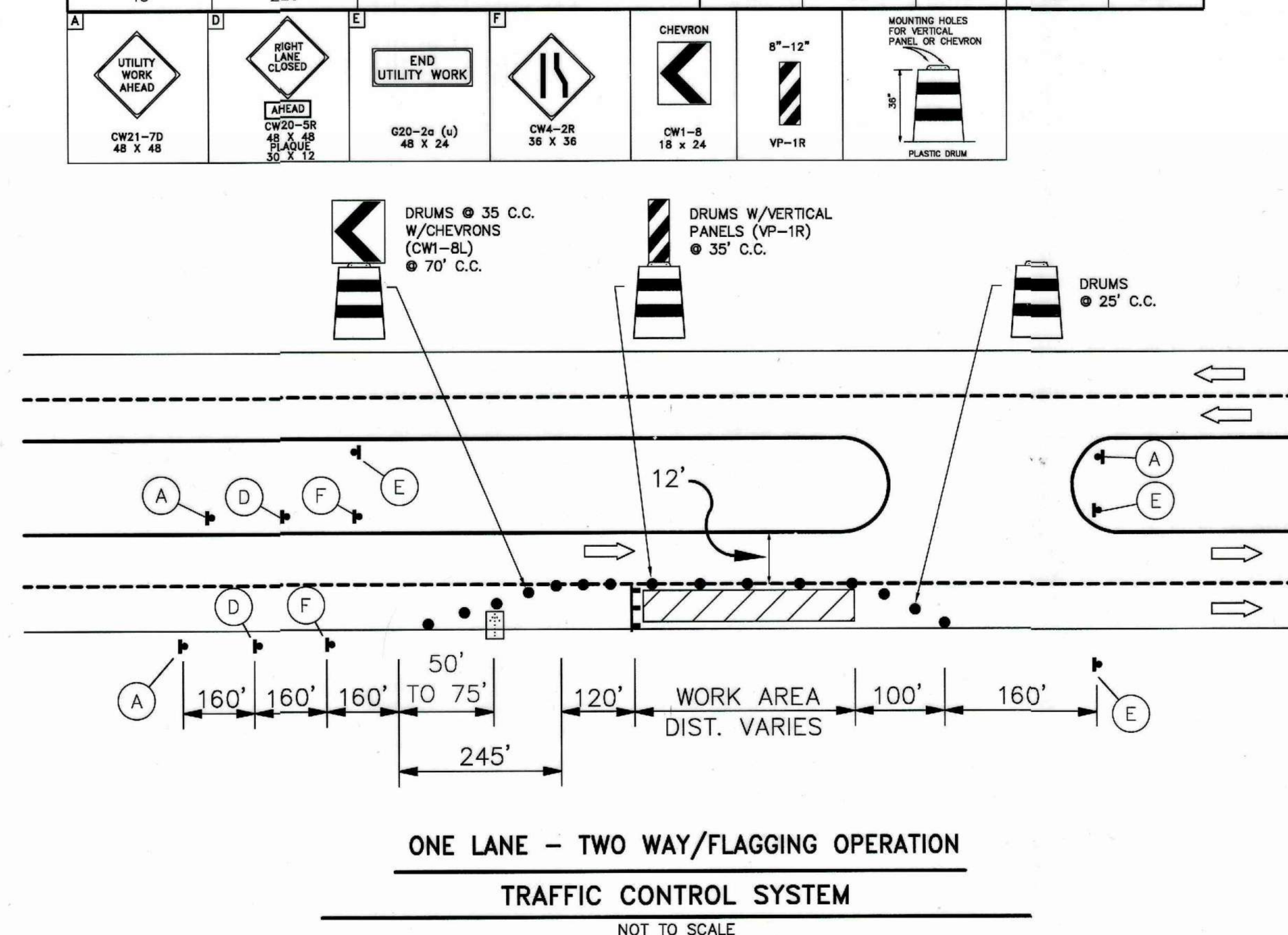
1. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD - LATEST EDITION WITH REVISIONS) DURING CONSTRUCTION.
2. NO LANES SHALL BE BLOCKED FROM 7 A.M. TO 9 A.M. AND 4 P.M. TO 6:30 P.M. MONDAY THRU FRIDAY.
3. OFF DUTY POLICE OFFICERS/FLAGGERS ARE REQUIRED TO DIRECT TRAFFIC WHEN LANES ARE BLOCKED.
4. CONTRACTOR SHALL COVER THE EXCAVATION WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS AND ALLOW NORMAL TRAFFIC FLOW.
5. APPROVED COPIES OF "TRAFFIC CONTROL PLANS" SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES.
6. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD OF TRAFFIC CONTROL DURING THE CONSTRUCTION THAN WHAT IS OUTLINED IN THE CONTRACT DRAWINGS, (S)HE SHALL BE RESPONSIBLE TO PREPARE AND SUBMIT ALTERNATE PLANS TO FORT BEND COUNTY FOR APPROVAL TEN WORKING DAYS PRIOR TO IMPLEMENTATION.

## CONSTRUCTION WARNING SIGN SPACING

Posted Speed or 85% Speed (MPH)	X Min. Distance (feet)
30 or less	120
35	160
40	240
45	320
50	400
55	500
65	700

LENGTH FOR LONGITUDINAL BUFFER		LEGEND (TYPICAL)		TYPICAL SIGN SPACING AND TAPER LENGTHS							
Posted Speed (mph)	Length in Feet (B)		PLASTIC DRUM			Min. Desirable Taper Length "L"					
			OFF-DUTY UNIFORMED POLICE OFFICER OR FLAGGER								
	20	35		TYPE III BARRICADE		STABILIZED CONSTRUCTION ACCESS (TO BE DETERMINED BY FIELD ENGINEER)	Posted Speed (mph)	Sign Spacing "X"	10' Offset	11' Offset	12' Offset
	25	55									
	30	85									
	35	120									
	40	170									
45	220										
			OPEN TO TRAFFIC								
			SIGN WITH POST								

Street Name	Posted Speed (mph)
Mason Road	35
Delta Lake Drive	30

[illegible]