

**REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT**

On this 08 day of APRIL, 2014, Commissioners Court  
came on to be heard and reviewed the accompanying notice  
of P2MG, LLC/ CITY OF HOUSTON

Job Location SIMMS BAYOU LATERAL VIII-B

Dated 03/20/14 Bond No. PB11358600021, Permit No. 84538  
to make use of certain Fort Bend County property subject to, "A Revised 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, date the 3<sup>rd</sup> day of August, 1987, recorded in  
Volume \_\_\_\_\_ of the Minutes of the Commissioners Court of Fort Bend County,  
Texas, to the extent that such order is not inconsistent with Article 1436a, Vernon's  
Texas Civil Statutes. Upon Motion of Commissioner Meyers, seconded  
by Commissioner Patterson, duly put and carried, it is ORDERED,  
ADJUGED 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.

**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

Mail notices to: Permit Administrator  
Fort Bend County Engineering  
301 JACKSON STREET  
RICHMOND, Texas 77469  
281-633-7500

3. This permit expires one (1) year from date of permit if construction has not  
commenced.

By Neil J. Stangle  
for County Engineer  
  
By Mal Vela  
Drainage District Engineer/Manager

Presented to Commissioners Court  
and approved.  
Recorded in Volume 4-8-14  
Minutes of Commissioners Court.

Clerk of Commissioners Court  
By Sherry Fisk  
Deputy

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

**AUTHORIZED**

BOND NO PB11358600021

THE STATE OF TEXAS           §

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF FORT BEND       §

THAT WE, P2MG, LLC whose address is 5450 NW Central Drive, Suite 330, Houston, TX 77092, Texas, hereinafter called the Principal, and Philadelphia Indemnity Insurance Company, a Corporation existing under and by virtue of the laws of the State of Pennsylvania and authorized to do an indemnifying business in the State of Texas, and whose principal office is located at 3939 Belt Line Road, Suite 650 Addison, TX 75001, whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought within said State is Thomas West and whose address is 3939 Belt Line Road, Suite 650 Addison, TX 75001, 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 Five Thousand and no/100 Dollars (\$5,000.00--) 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 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;

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 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.

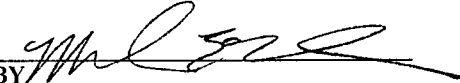
It is understood that at any time Fort Bend County deems itself insecure under this bond, it may require further and/or additional bonds of the principal.

EXECUTED this 7th day of March, 2014.



P2MG, LLC

PRINCIPAL

BY 

Philadelphia Indemnity Insurance Company

SURETY

BY  Kelly J. Brooks, Attorney In Fact

**PHILADELPHIA INDEMNITY INSURANCE COMPANY**

231 St. Asaph's Rd., Suite 100  
Bala Cynwyd, PA 19004-0950

**Power of Attorney**

KNOW ALL PERSONS BY THESE PRESENTS: that **PHILADELPHIA INDEMNITY INSURANCE COMPANY** (the Company), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, does hereby constitute and appoint: **Kenneth Meyer and Kelly J. Brooks with Southern American Insurance Agency, Inc. of Houston, Texas.**

Its true and lawful Attorney(s) in fact with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an amount not to exceed **\$25,000,000.00.**

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PHILADELPHIA INDEMNITY INSURANCE COMPANY at a meeting duly called the 1<sup>st</sup> day of July, 2011.

**RESOLVED:** That the Board of Directors hereby authorizes the President or any Vice President of the Company to: (1) Appoint Attorney(s) in Fact and authorize the Attorney(s) in Fact to execute on behalf of the Company bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and to attach the seal of the Company thereto; and (2) to remove, at any time, any such Attorney-in-Fact and revoke the authority given. And, be it

**FURTHER RESOLVED:** That the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with the respect to any bond or undertaking to which it is attached.

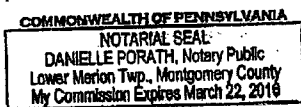
IN TESTIMONY WHEREOF, PHILADELPHIA INDEMNITY INSURANCE COMPANY HAS CAUSED THIS INSTRUMENT TO BE SIGNED AND ITS CORPORATE SEAL TO BE AFFIXED BY ITS AUTHORIZED OFFICE THIS 7<sup>TH</sup> DAY OF FEBRUARY 2013.



(Seal)

Robert D. O'Leary Jr., President & CEO  
Philadelphia Indemnity Insurance Company

On this 7<sup>th</sup> day of February 2013, before me came the individual who executed the preceding instrument, to me personally known, and being by me duly sworn said that he is the therein described and authorized officer of the **PHILADELPHIA INDEMNITY INSURANCE COMPANY**; that the seal affixed to said instrument is the Corporate seal of said Company; that the said Corporate Seal and his signature were duly affixed.



Notary Public:

residing at:

Bala Cynwyd, PA

(Notary Seal)

My commission expires:

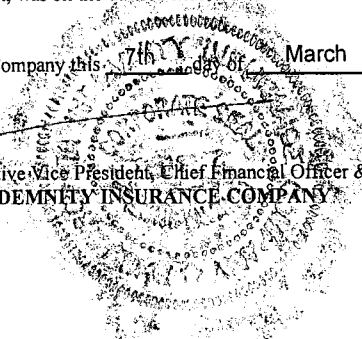
March 22, 2016

I, Craig P. Keller, Executive Vice President, Chief Financial Officer and Secretary of PHILADELPHIA INDEMNITY INSURANCE COMPANY, do hereby certify that the foregoing resolution of the Board of Directors and this Power of Attorney issued pursuant thereto are true and correct and are still in full force and effect. I do further certify that Robert D. O'Leary Jr., who executed the Power of Attorney as President, was on the date of execution of the attached Power of Attorney the duly elected President of PHILADELPHIA INDEMNITY INSURANCE COMPANY,

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 7<sup>th</sup> day of February, 20 14.



Craig P. Keller, Executive Vice President, Chief Financial Officer & Secretary  
**PHILADELPHIA INDEMNITY INSURANCE COMPANY**



### IMPORTANT NOTICE

To obtain information or make a complaint: You may call the Surety's toll free telephone number for information or to make a complaint at:

**1-877-438-7459**

You may also write Philadelphia Indemnity Insurance Company at:

**One Bala Plaza, Suite 100  
Bala Cynwyd, PA 19004  
Attention: Senior Vice President and  
Director of Surety**

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

**1-800-252-3439**

You may write the Texas Department of Insurance at:

**P.O. Box 149104  
Austin, TX 78714-9104  
Fax# 512-475-1771  
Web: <http://www.tdi.state.tx.us>  
Email: [ConsumerProtection@tdi.state.tx.us](mailto:ConsumerProtection@tdi.state.tx.us)**

**PREMIUM OR CLAIM DISPUTES:** Should you have a dispute concerning your premium or about a claim, you should contact the Surety first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

**ATTACH THIS NOTICE TO YOUR BOND:** This notice is for information only and does not become a part or condition of the attached document.

### ADVISO IMPORTANTE

Para obtener informacion o para someter una queja: Usted puede llamar al numero de telefono gratis de para informacion o para someter una queja al:

**1-877-438-7459**

Usted tambien puede escribir a Philadelphia Indemnity Insurance Company:

**One Bala Plaza, Suite 100  
Bala Cynwyd, PA 19004  
Attention: Senior Vice President and  
Director of Surety**

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:

**P.O. Box 149104  
Austin, TX 78714-9104  
Fax# 512-475-1771  
Web: <http://www.tdi.state.tx.us>  
Email: [ConsumerProtection@tdi.state.tx.us](mailto:ConsumerProtection@tdi.state.tx.us)**

**DISPUTAS SOBRE PRIMAS O RECLAMOS:** Si tiene una disputa concerniente a su prima o a un reclamo, debe comunicarse con el Surety primero. Si no se resuelve la disputa, puede entonces comunicarse con el departamento (TDI).

**UNA ESTE AVISO A SU FIANZA DE GARANTIA:** Este aviso es solo para proposito de informacion y no se convierte en parte o condicion del documento adjunto.

# COUNTY OF FORT BEND

## Engineering Department

301 JACKSON STREET  
RICHMOND, Texas 77469

Johnny Ortega  
Permit Administrator

1124 Blume Road  
Phone: (281) 633-7500

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

PERMIT NO. 001538

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.

- X   (1) Complete Application Form.
- X   a. Name of road, street, and/or drainage ditch affected.
- X   b. Vicinity map showing course of direction.
- X   c. Plans and specifications.
- X   (2) Bond:
- District Attorney, approval when applicable.
- Perpetual bond currently posted.
- No. \_\_\_\_\_
- Amount \_\_\_\_\_
- X   Performance bond submitted.
- No. PB11358600021
- Amount \$5,000.00
- Cashier's Check.
- No. \_\_\_\_\_
- Amount \_\_\_\_\_
- \_\_\_\_\_ (3) Verbal permission given for emergencies, to start construction before approved in Commissioner's Court.
- Precinct Engineer Acknowledgment \_\_\_\_\_ Date \_\_\_\_\_
- Precinct Commissioner Acknowledgment \_\_\_\_\_ Date \_\_\_\_\_
- \_\_\_\_\_ (4) Adam Wright
- Drainage District Approval when applicable

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

Johnny Ortega  
Johnny Ortega CFM/ Permit Administrator  
(REVISED 5/30/08)

03/18/2014  
Date

NOTICE OF PROPOSED CABLE, CONDUIT AND/OR POLE LINE ACTIVITY  
IN, UNDER, ACROSS OR ALONG ROADS, STREETS, HIGHWAYS AND DRAINAGE DITCHES  
IN FORT BEND COUNTY

APPLICANT'S JOB NO.

PERMIT No. 84538 PCT. No. 2

BOND No. PB11358600021

Formal notice is hereby given that City of Houston  
proposes to lay, construct, maintain and/or repair cable, conduit and/or pole line, in, under, across,  
or along roads, streets, highways and drainage ditches in Fort Bend County, as follows:

In, Under, or Across Roads and/or Drainage Ditches

Road or Ditch Name	Distance & Direction From Nearest Intersection	Length of Crossing	Type of Construction			
			Bored:	Jacked:	Driven:	Cased

Along Roads and/or Drainage Ditches

Road or Ditch Name	Distance & Direction From Nearest Intersection	To	Distance

General Description

Construct approx 60' of 48" CGMP and approx 60' of 72" CGMP  
Storm Sewers in FBC 150' ESMT adjacent to 6499 West Ridge creek Drive

The Location and description of the proposed installation and appurtenances is more fully shown on the attached detail drawings. The laying, construction, maintenance and/or repair of the proposed installation shall be subject to "A Revised Order Regulating the Laying, Construction, Maintenance and/or Repair of Cables, Conduits, and/or 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 Commissioners Court of Fort Bend County, Texas, dated the 3rd. day of August, 1987, recorded in Volume 639 of the Minutes of the Commissioners Court of Fort Bend County, Texas.

Written notices are required: 1) 48 hours in advance of start of construction and  
2) when construction is complete and ready for final inspection.

Mail to: Permit Administrator/Fort Bend County Engineering  
P.O. Box 1449, Rosenberg, TX 77471.

Violation of requirements shall constitute grounds for job shut down.

COMPANY NAME: P2MG  
AGENT and/or OWNER  
[Signature]  
(Signature)

NAME & TITLE: Robert Smiley, Project Manager  
(Please Print)

DATE: 3/7/14

ADDRESS: 5456 NW ~~Central~~ Central Drive  
(Street/P.O. Box)

Houston ) TX 77092  
City State Zip

TELEPHONE NO: 713-686-7264  
(accessible 24 hrs/day, 7 days/week)

## DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

# STREET AND DRAINAGE DIVISION

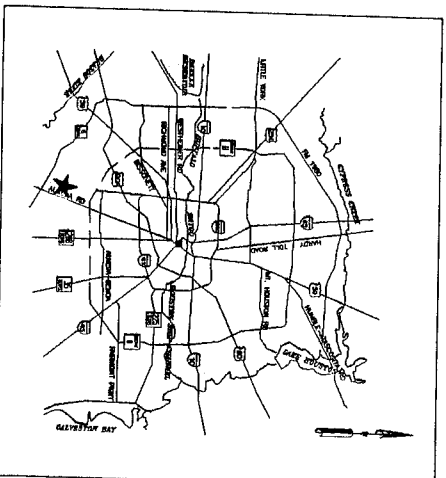
# STORM WATER MAINTENANCE BRANCH

# LOCAL DRAINAGE PROJECT PROGRAM

## ROUTINE REPAIR

**WBS NO.: M-000126-LD13 -> Design WO No. 15**

**6499 West Ridgecreek Drive**



LOCATION MAP

## Key Map: 571X

## Council District: K

**Date: 04-09-2013**

thumbs up



for progress

# REBUILD HOUSTON

GENERAL NOTES

1. CONTRACTOR SHALL NOTIFY THE "UNDERGROUND UTILITY COORDINATING COMMITTEE" (TELEPHONE NO. 713-223-4567) AND CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING, CIVIL CONSTRUCTION (TELEPHONE 713-863-1450) 48 HOURS BEFORE STARTING WORK IN STREET RIGHT-OF-WAY OR EASEMENTS.
2. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING PUBLIC OR PRIVATE UTILITIES, PAVING AND APPURTENANCES, INCLUDING BUT NOT LIMITED TO WATER, SANITARY, DRAINAGE, AND TRAFFIC CONTROL SYSTEMS. ALL DAMAGE SHALL BE REPAIRED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARDS AT NO COST TO THE PUBLIC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

1. THIS PROJECT IS SUBJECT TO ENVIRONMENTAL PROTECTION AGENCY (EPA) NATIONAL POLLUTION DISCHARGE REGULATIONS AND REQUIREMENTS. THE CONTRACTOR WILL BE REQUIRED TO EXECUTE A NOTICE OF INTENT AND IMPLEMENT THE POLLUTION PREVENTION PLANS INCLUDED IN THE CONTRACT DOCUMENTS AND COMPLY WITH ALL REPORTING AND INSPECTION REQUIREMENTS SET FORTH IN THE NPDES REGULATIONS.
2. ALL SILT FENCE AND INLET PROTECTION PROVIDED DURING CONSTRUCTION OF THIS PROJECT, SHALL BE REMOVED AS APPROPRIATE UPON CONSTRUCTION COMPLETION (SEE SPECS AND DETAILS).
3. PRIOR TO REMOVAL OF EROSION CONTROL DEVICES, ALL DISTURBED AREAS ARE TO BE PROPERLY STABILIZED USING HYDRO-MULCH SEED, OR SOLID SOD AS APPLICABLE.

STANDARD HARRIS COUNTY FLOOD CONTROL DISTRICT CONSTRUCTION NOTES (H.C.F.C.D.)

1. OBTAIN AND COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL PERMITS AND APPROVALS, WITH ASSISTANCE FROM ENGINEER, IF NECESSARY. OBTAIN PERMIT (CERTIFICATION) FROM HARRIS COUNTY ENGINEERING TO ENTER HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY.
2. NOTIFY THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S PROPERTY MANAGEMENT DEPARTMENT IN WRITING, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. SUBMIT THE HCCFD 48 HOUR PRE-CONSTRUCTION NOTIFICATION FORM, A COPY OF THE APPROVED CONSTRUCTION DRAWINGS, AND A COPY OF THE CORPS OF ENGINEERS' INDIVIDUAL SECTION 404 PERMIT, IF APPLICABLE, TO HCCFD, 9900 NORTHWEST FREEWAY, HOUSTON, TEXAS 77002. ATTN: PROPERTY MANAGEMENT DEPT. BY HAND DELIVERY, OR FAX TO 713-684-4329 (FAX NUMBER)
3. ENGINEER SHALL SUBMIT CERTIFICATION LETTER AND RECORD DRAWINGS TO THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S PROPERTY MANAGEMENT DEPARTMENT REQUESTING INSPECTIONS OF ITEMS CONSTRUCTED IN HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY. PRIOR TO REQUESTING INSPECTION, THE DRAINAGE RIGHT-OF-WAY AND/OR EASEMENT SHALL BE STAKED AND FLAGGED.

4. PROTECT, MAINTAIN, AND RESTORE EXISTING BACKSLOPE DRAINAGE SYSTEMS.
5. BACKSLOPE SWALE AND INTERCEPTOR STRUCTURE ELEVATION AND LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. FINAL ELEVATIONS AND LOCATION SHALL BE FIELD VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
6. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL, OR DETENTION RIGHT-OF-WAY, EXCEPT THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED. MINIMUM ACCEPTANCE CRITERIA ARE 75% COVERAGE OF LIVE BERMUDA GRASS AND NO EROSION OR RILLS DEEPER THAN 4"
7. BACKFILL IN ACCORDANCE WITH THE HARRIS COUNTY FLOOD CONTROL DISTRICT STANDARD SPECIFICATION, SECTION 02315 - EXCAVATING AND BACKFILLING, OR EQUIVALENT.
8. EXCAVATE CHANNEL FLOWLINE TO DESIGN ELEVATION AS SHOWN ON PLANS AND DOWNSTEAM, AS NECESSARY, TO ENSURE NO WATER REMAINS IN THE FACILITY (STORM SEWER, LATERAL CHANNEL, OR DRY BOTTOM DETENTION BASIN) DURING NORMAL WATER SURFACE CONDITIONS IN THE CHANNEL, SO THE FACILITY WILL FUNCTION AS INTENDED. FOR WET BOTTOM DETENTION BASINS, ENSURE NO WATER IS ABOVE THE DESIGN LEVEL IN THE WET BOTTOM DURING NORMAL WATER SURFACE CONDITIONS IN THE CHANNEL.
9. MAINTAIN FLOW IN CHANNEL DURING CONSTRUCTION AND RESTORE CHANNEL TO ORIGINAL CONDITIONS.
10. REMOVE ALL EXCAVATED MATERIAL FROM THE HARRIS COUNTY FLOOD CONTROL DISTRICT OR DRAINAGE RIGHT-OF-WAY. NO FILLS TO BE PLACED WITHIN A DESIGNATED FLOOD PLAIN AREA WITHOUT FIRST OBTAINING A FILL PERMIT FROM THE APPROPRIATE JURISDICTIONAL AUTHORITY.

CENTERPOINT ENERGY (GAS) GENERAL 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 (713) 223-4567 OR 1-800-669-8344 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) 967-8037 (7:00 AM TO 4:30 PM) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.

CENTERPOINT ENERGY (GAS) GENERAL NOTES (CONT.)

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

CENTERPOINT ENERGY (ELECTRIC) GENERAL NOTES

**WARNING: OVERHEAD ELECTRICAL FACILITIES**  
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, GROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713) 207-6248 OR (713) 207-5769.

AT&T TEXAS/SWB/T FACILITIES

1. THE LOCATIONS OF AT&T TEXAS/SWB/T 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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
2. THE CONTRACTOR SHALL CALL 1-800-344-8377 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED.
3. WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF AT&T TEXAS/SWB/T FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE AT&T TEXAS/SWB/T FACILITIES.
4. WHEN AT&T TEXAS/SWB/T 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.
5. THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWB/T UNDERGROUND CONDUIT FACILITIES OR BURIED CABLE CABLES SHOWN ON THESE PLANS DOES NOT MEAN THAT THERE ARE NO DIRECT BURIED CABLES OR OTHER CABLES IN CONDUIT IN THE AREA.
6. PLEASE CONTACT THE AT&T TEXAS DAMAGE PREVENTION MANAGER MR. ROOSEVELT LEE JR. AT (713) 657-4552 OR EMAIL HIM AT RL2529@ATT.COM, IF THERE ARE QUESTIONS ABOUT BORING OR EXCAVATING NEAR OUR AT&T TEXAS/SWB/T FACILITIES.

CITY OF HOUSTON CONSTRUCTION CONTACT INFORMATION

- CRAIG SMITH, COH INSPECTOR**
- \* EMAIL: CRAIG.SMITH@HOUSTONTX.GOV
  - \* CELL PHONE NUMBER: (713) 447-8922
- MIKE BEETZLEY, COH SENIOR INSPECTOR**
- \* EMAIL: MIKE.BEETZLEY@HOUSTONTX.GOV
  - \* CELL PHONE NUMBER: (281) 217-3446
- A.J. KESSINGER, COH CONSTRUCTION PROJECT MANAGER**
- \* EMAIL: ANDREW.KESSINGER@HOUSTONTX.GOV
  - \* OFFICE PHONE NUMBER: (832) 395-2395
- JOANNE KAMMAN, COH MANAGING ENGINEER FOR CONSTRUCTION BRANCH**
- \* EMAIL: JOANNE.KAMMAN@HOUSTONTX.GOV
  - \* OFFICE PHONE NUMBER: (832) 395-2394

ABBREVIATIONS

AEP	ANNUAL EXCEEDENCE PROBABILITY
APPROX	APPROXIMATELY
BFE	BASE FLOOD ELEVATION
BM	BENCH MARK
CATV	CABLE TV
CH LINK FNC.	CHAIN LINKED FENCE
C&P	CORROGATED METAL PIPE
CONC	CONCRETE
COH	CITY OF HOUSTON
DIP	DUCTILE IRON PIPE
D/W	DRIVE WAY
EL	ELEVATION
EXIST.	EXISTING
EL	ELEVATION
FNC. COR.	FENCE CORNER
F.H.	FIRE HYDRANT
FL	FLOW LINE
FMD	FLOODPLAIN MANAGEMENT OFFICE
FND.	FOUND
GM	GAS METER
GV	GAS VALVE
HCCFD	HARD COUNT FLOOD CONTROL DISTRICT
HGL	HYDRAULIC GRADIENT LINE
HP GM	HIGH PRESSURE GAS MAIN
IP	IRON PIPE
IR	IRON ROD
IRR	IRRIGATION LINE
IRR	IRRIGATION LINE
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
N/A	NOT APPLICABLE
NAV	NORTH AMERICAN VERTICAL DATUM
N.G.	NATURAL GROUND
NGS	NATIONAL GEOLOGICAL SURVEY
MTS	NOT TO SCALE
PP	POWER POLE
PROP.	PROPOSED
PVMT	PAVEMENT
PVT.	PRIVATE
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
RR	RAILROAD
SAN SWR	SANITARY SEWER
SH	SPRINKLER HEAD
SP	SERVICE POLE
STM SWR	STORM SEWER
STM S.E.	STORM SEWER EASEMENT
STA.	STATION
TMB	TEMPORARY BENCHMARK
TBD	TO BE DETERMINE
TYP.	TYPICAL
WL	WATER LINE
WSEL	WATER SURFACE ELEVATION
WV	WATER VALVE



**CITY OF HOUSTON, FLOODPLAIN MANAGEMENT OFFICE NOTE:**  
ACCORDING TO MAP 48201C10051 OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAPS FOR HARRIS COUNTY, TEXAS DATED JUNE 18, 2007, THE SUBJECT PROJECT AREA IS SITUATED WITHIN: ZONE X.



☒ Effective Floodplains

Zone

☐ 500 yrs

☐ A

☐ AE

☐ AO

☐ VE

☐ X

PROP OUTFALL NO. 1

48201C10051L

571X

FORT BEND COUNTY  
150' DRAINAGE EASEMENT

PROP OUTFALL NO. 2

Corral Rd

**Legend**

**STORM**

Manhole

Inlet

Trunk

**WATER**

Transmission Main

Hydrant Lead

Fire Line

P Fire Hydrant

**SANITARY**

Manhole

Collector

PRIVATE UTILITY LINES SHOWN  
ON THIS MAP ARE BASED ON RECORD DRAWINGS  
ON FILE IN THE CITY ENGINEERING DEPARTMENT.  
THESE LINES ARE NOT TO BE USED FOR  
CONSTRUCTION OR OTHER PURPOSES WITHOUT  
THE WRITTEN PERMISSION OF THE CITY ENGINEERING DEPARTMENT.

**FMO**

PLAN

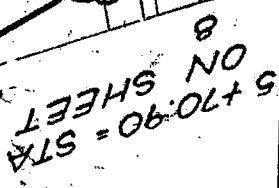
CITY OF HOUSTON  
CITY ENGINEERING DEPARTMENT

DRAWING SCALE

CITY OF HOUSTON

SHEET NO.

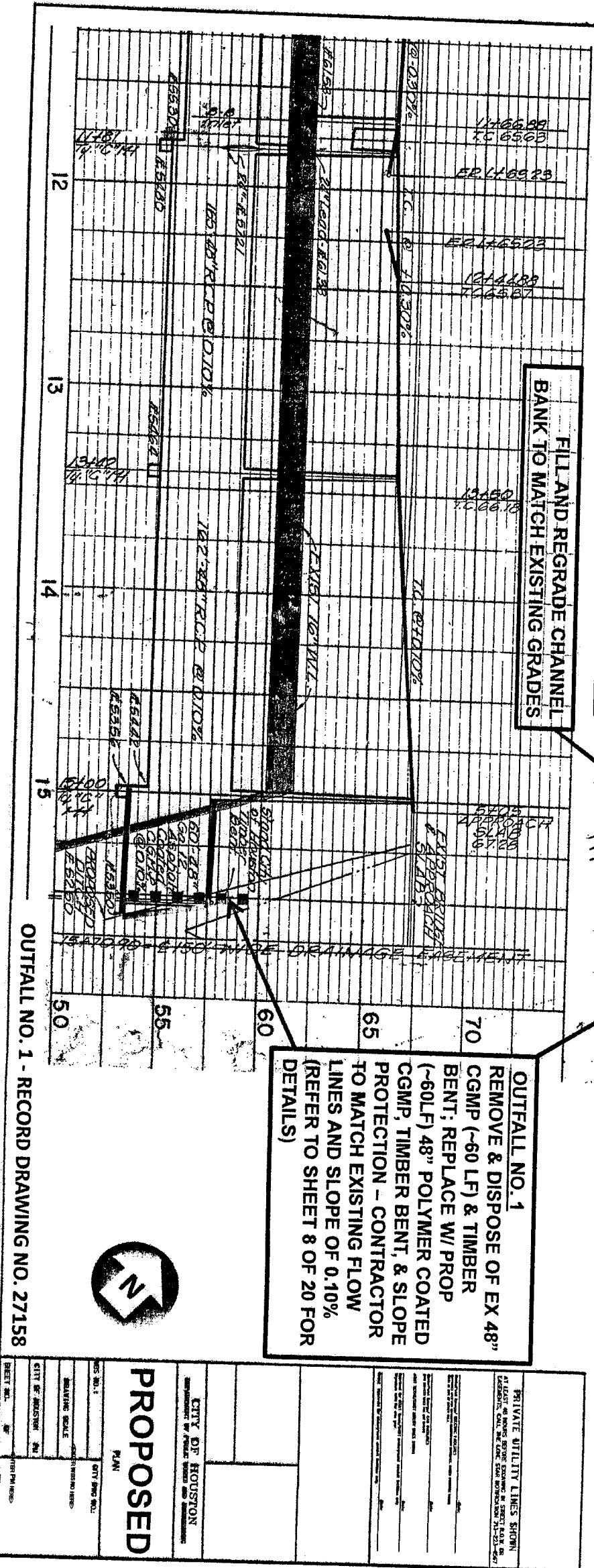
- FOR REDUCED PLANS  
original scale in inches



**FILL AND REGRADE CHANNEL  
BANK TO MATCH EXISTING GRADES**

OUTFALL NO. 1  
REMOVE & DISPOSE OF EX 48"  
CGMP (~60 LF) & TIMBER  
BENT; REPLACE W/ PROP  
(~60LF) 48" POLYMER COATED  
CGMP, TIMBER BENT, & SLOPE  
PROTECTION - CONTRACTOR  
TO MATCH EXISTING FLOW  
LINES AND SLOPE OF 0.10%  
(REFER TO SHEET 8 OF 20 FOR  
DETAILS)

- Legend**
- STORM**
- ; Manhole
- [ Inlet
- Trunk
- WATER**
- Transmission Main
- Hydrant Lead
- Fire Line
- P Fire Hydrant



- NOTES:**
1. OUTFALL PIPE SHALL BE CUT TO THE SLOPE OF THE CHANNEL.
  2. ALL DISTURBED AREAS AS A RESULT OF CONSTRUCTION SHALL BE SEEDED WITH BERMUDAGRASS.
  3. CONTRACTOR TO FILL SINKHOLE IN ACCORDANCE WITH FBC DETAIL FIGURE 3-7 BEDDING AND BACKFILL ON SHEET 8 OF 20.
  4. PRIOR TO CONSTRUCTION, CONTRACTOR IS TO COORDINATE WITH STORM WATER ENGINEERING REGARDING PROPOSED WORK FLOW LINES.

FOR REDUCED PLANS  
original scale in inches

CURVE DATA  
d=7'-58.18"  
R=8220'  
T=139.36'  
L=278.27'

STATION 10+00  
STATION 10+00

NOTE: SEE SHEET  
8 FOR UTILITIES  
WEST OF 150'  
DITCH EASTMENT

FILL AND REGRADE CHANNEL BANK  
TO MATCH EXISTING GRADES

**OUTFALL NO. 2**  
REMOVE & DISPOSE OF EX 72"  
CGMP (~60 LF) & TIMBER BENT;  
REPLACE W/ PROP (~60 LF) 72"  
POLYMER COATED CGMP, TIMBER  
BENT, & SLOPE PROTECTION -  
CONTRACTOR TO MATCH EXISTING  
FLOW LINES AND SLOPE OF 0.08%  
(REFER TO SHEET 8 OF 20 FOR  
DETAILS)

**Legend**

- STORM**
- Manhole
  - Inlet
  - Trunk
- WATER**
- Transmission Main
  - Hydrant Lead
  - Fire Line
  - Fire Hydrant

**PROPOSED**

PLAN

CITY OF HOUSTON

ENGINEERING & ARCHITECTURE

DESIGN NO. 1

STATION 10+00

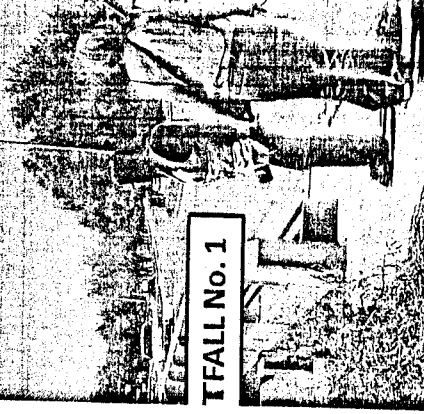
STATION 10+00

STATION 10+00

STATION 10+00

OUTFALL NO. 2 - RECORD DRAWING NO. 27158

TYPE "E" INLET  
MANHOLE CONNECTED  
TO OUTFALL No. 1



OUTFALL No. 1

OUTFALL No. 2

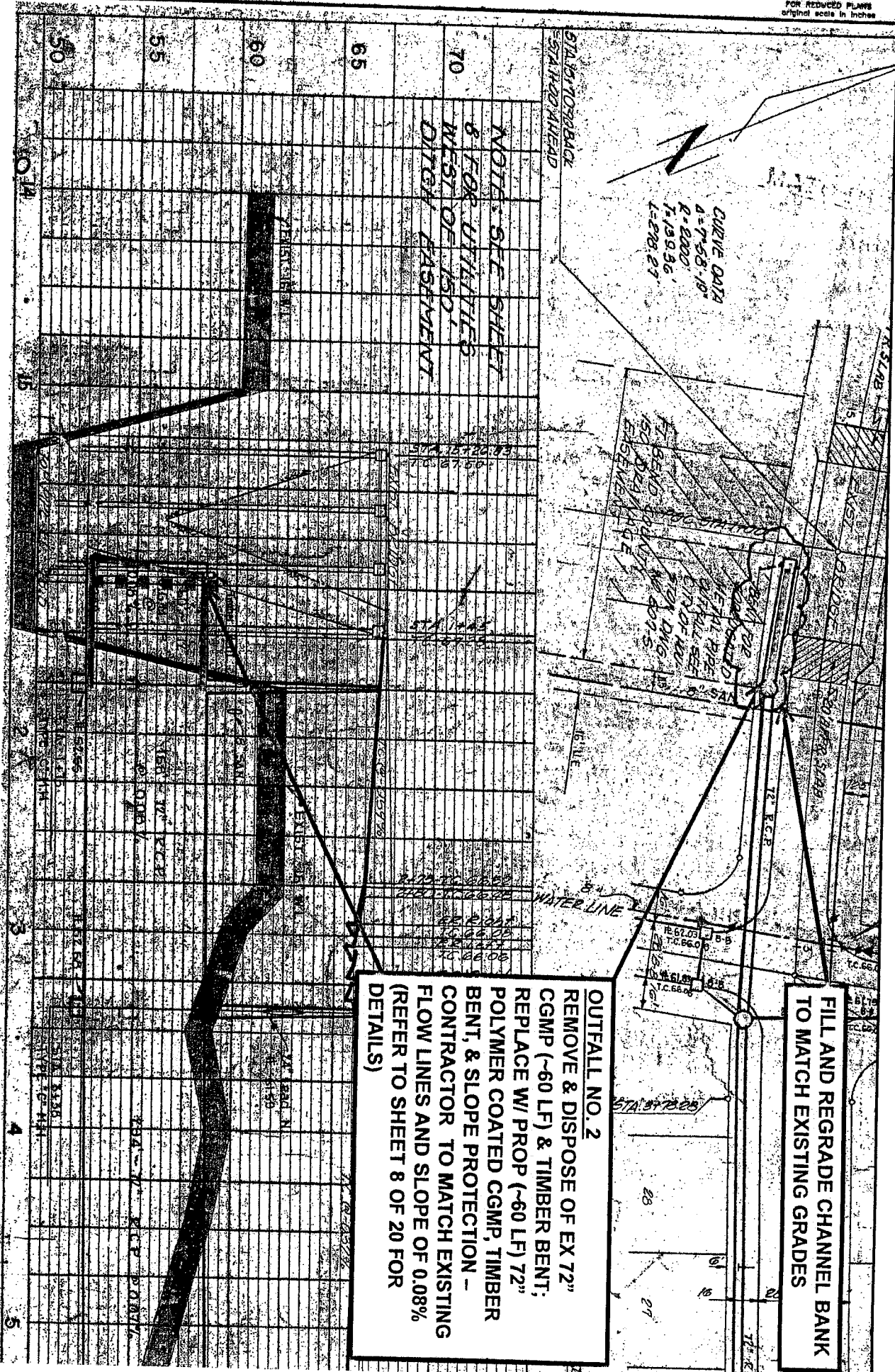


TYPE "C" MANHOLE  
CONNECTED TO  
OUTFALL No. 2



- NOTES:**
1. OUTFALL PIPE SHALL BE CUT TO THE SLOPE OF THE CHANNEL.
  2. ALL DISTURBED AREAS AS A RESULT OF CONSTRUCTION SHALL BE SEEDED WITH BERMUDAGRASS.
  3. CONTRACTOR TO FILL SINKHOLE IN ACCORDANCE WITH FBC DETAIL FIGURE 3-7 BEDDING AND BACKFILL ON SHEET 8 OF 20.
  4. PRIOR TO CONSTRUCTION, CONTRACTOR IS TO COORDINATE WITH STORM WATER ENGINEERING REGARDING PROPOSED WORK FLOW LINES.

FOR REDUCED PLANS  
original scale in inches



**OUTFALL NO. 2**  
**REMOVE & DISPOSE OF EX 72"**  
**CGMP (~60 LF) & TIMBER BENT;**  
**REPLACE W/ PROP (~60 LF) 72"**  
**POLYMER COATED CGMP, TIMBER**  
**BENT, & SLOPE PROTECTION -**  
**CONTRACTOR TO MATCH EXISTING**  
**FLOW LINES AND SLOPE OF 0.08%**  
**(REFER TO SHEET 8 OF 20 FOR**  
**DETAILS)**

**FILL AND REGRADE CHANNEL BANK  
TO MATCH EXISTING GRADES**

**OUTFALL NO. 2 - RECORD DRAWING NO. 27158**

# Legend

**STORM**

\_\_\_\_\_ ; Manhole

\_\_\_\_\_ [ Inlet

\_\_\_\_\_ Trunk

**WATER**

\_\_\_\_\_ Transmission Main

\_\_\_\_\_ Hydrant Lead

\_\_\_\_\_ Fire Line

P Fire Hydrant

**PRIVATE UTILITY LINES SHOWN**

AT LEAST 48 HOURS BEFORE CITY ENGINEERS AND INSPECTORS WILL BE ON SITE TO INSPECT AND VERIFY THE LOCATION OF ALL PRIVATE UTILITY LINES. THE CITY ENGINEERS WILL BE ON SITE TO INSPECT AND VERIFY THE LOCATION OF ALL PRIVATE UTILITY LINES. THE CITY ENGINEERS WILL BE ON SITE TO INSPECT AND VERIFY THE LOCATION OF ALL PRIVATE UTILITY LINES.

**CITY OF HOUSTON**

**PROPOSED**

**PLAN**

**PROJECT NO. 1**

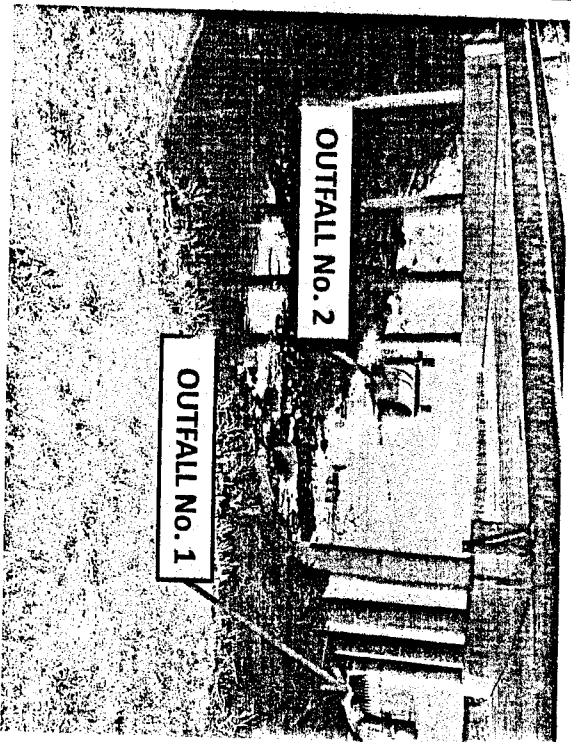
**CITY ENGINEER**

**DATE**

**PROJECT NO. 1**

**CITY ENGINEER**

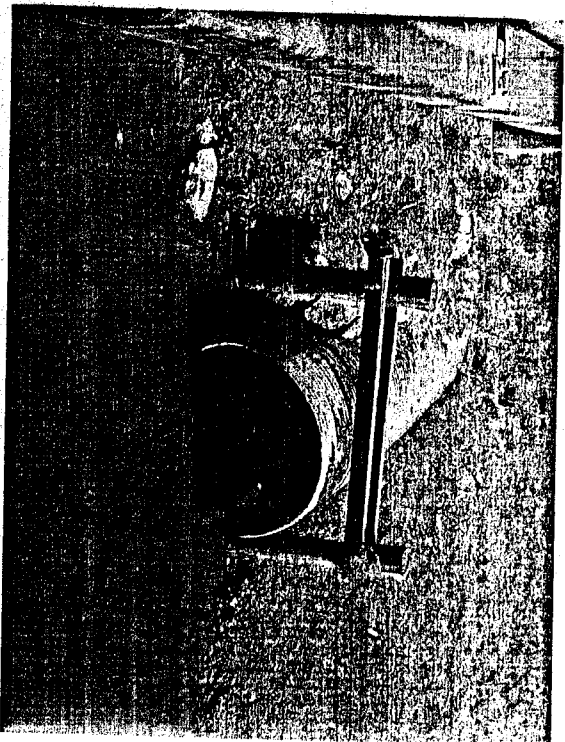
**DATE**



CHANNEL LOOKING UPSTREAM  
PHOTO #1 - 03.27.13



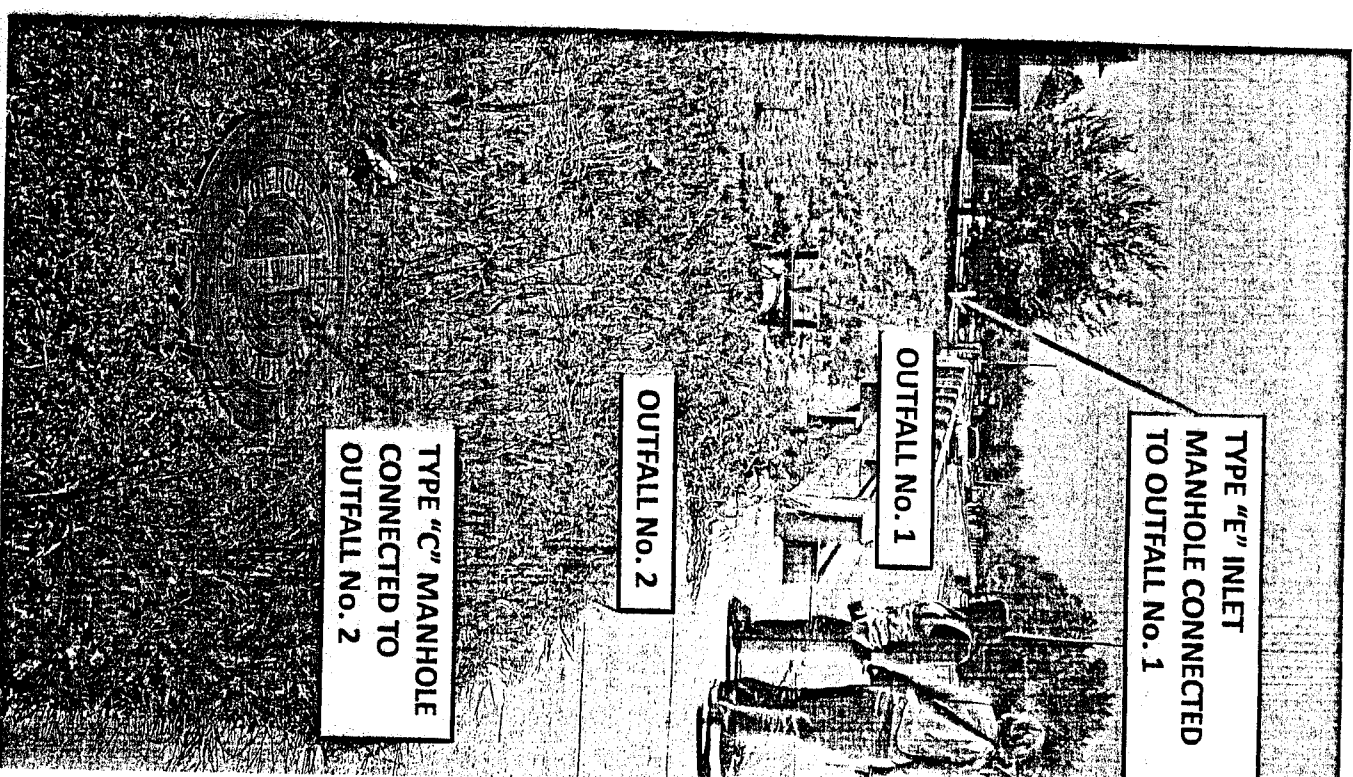
TYPE "E" INLET MANHOLE  
PHOTO #2 - 03.27.13



OUTFALL No. 2 PHOTO #3 - 03.27.13



OUTFALL No. 1 PHOTO #4 - 03.27.13



TYPE "E" INLET  
MANHOLE CONNECTED  
TO OUTFALL No. 1

OUTFALL No. 1

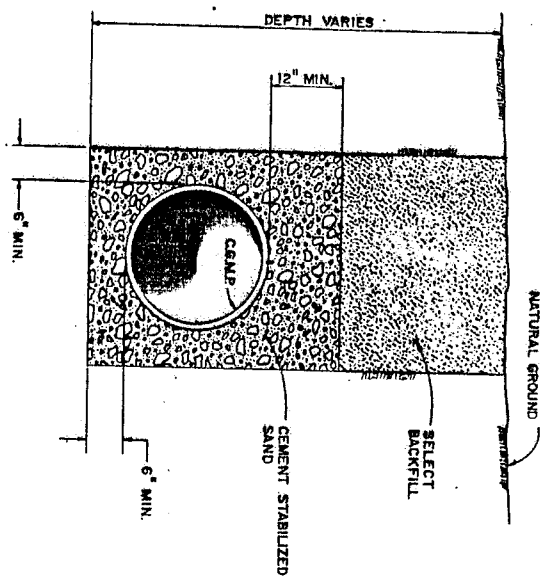
OUTFALL No. 2

TYPE "C" MANHOLE  
CONNECTED TO  
OUTFALL No. 2

NORTH BOUND VIEW PHOTO #5 - 03.27.13

## **DETAILS:**

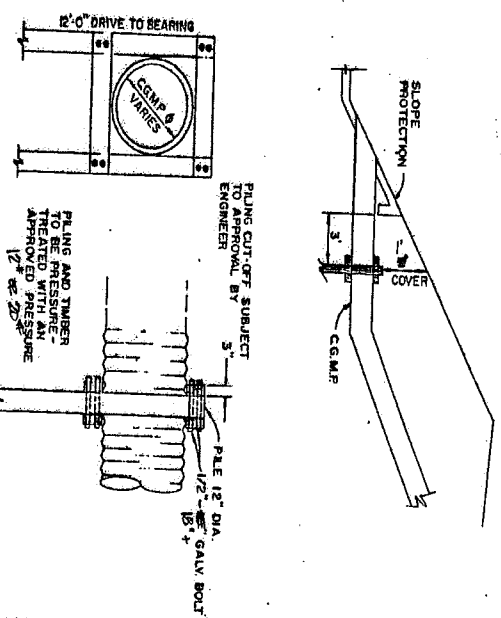
- Fort Bend County Drainage District



BEDDING AND BACKFILL DETAIL

TYPICAL BEDDING AND BACKFILL DETAIL FOR CAMP OUTFALL FOR FORT BEND COUNTY, TEXAS

August 1986 sheet 3-7



BENT FOR CORRUGATED METAL PIPE OUTFALL

4.8-INCH AND LARGER

TYPICAL BENT DETAIL FOR CAMP OUTFALL FOR FORT BEND COUNTY, TEXAS

August 1986 sheet 3-6

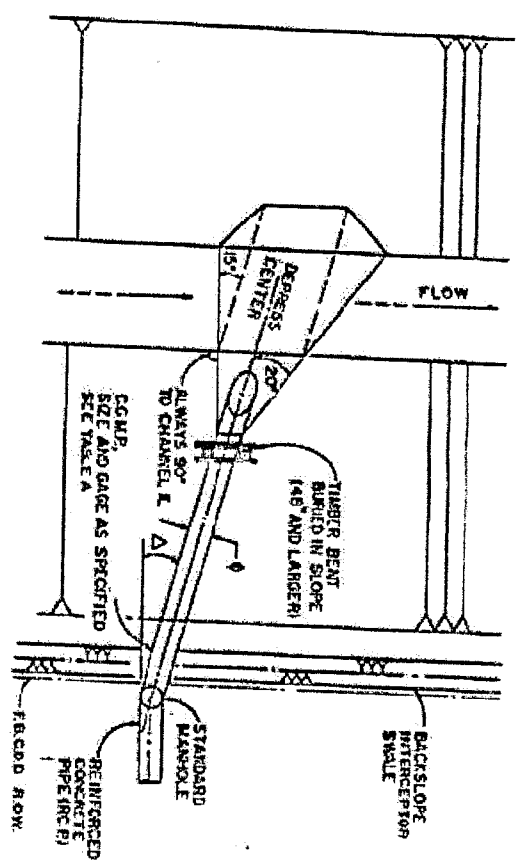


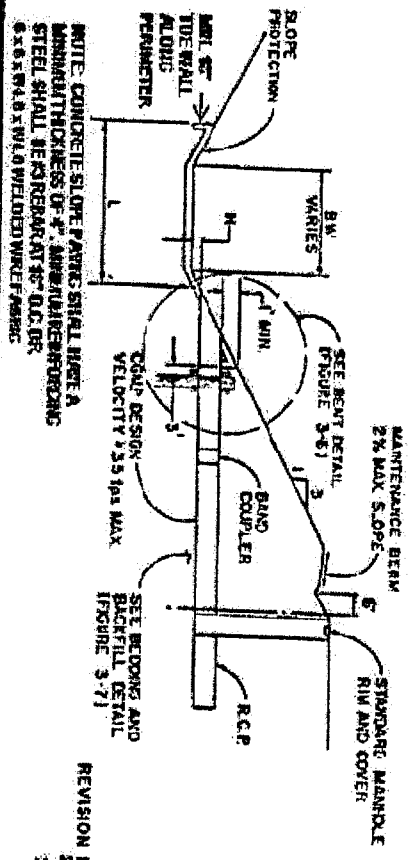
TABLE 4

SIZE	PIPE	AND	SIZE	PIPE	AND
2 1/2' X 1 1/2' CORRUGATED	PIPE	COUPLER	PIPE	COUPLER	PIPE
24"	12	12	12	12	12
30"	12	12	12	12	12
36"	12	12	12	12	12
42"	12	12	12	12	12
48"	12	12	12	12	12
54"	12	12	12	12	12
60"	12	12	12	12	12
66"	12	12	12	12	12
72"	12	12	12	12	12
78"	12	12	12	12	12
84"	12	12	12	12	12

N: FOR PIPE SIZES 24" TO 42"  
N=3 MAX AND 1 MIN  
FOR PIPE SIZES 48" AND LARGER  
N=1 MAX AND MIN

L: BW ≤ 7'-6" → L WILL EXTEND ONE  
FEET 6 ABOVE E.O.V.  
OPPOSITE BANK (MIN)  
PIPE ≥ 7'-6" → L=8.0 OR MIN 7'-6"  
INTO BW, WHICHEVER  
IS GREATER

Δ: PROP 24" TO 42" Δ=15°  
PROP 48" AND LARGER Δ=30°



REVISION 1-7-13-81

2.5-20-87  
3-12-01-50

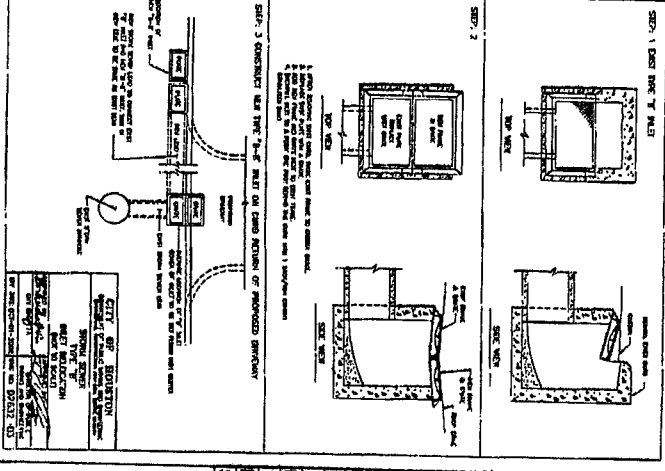
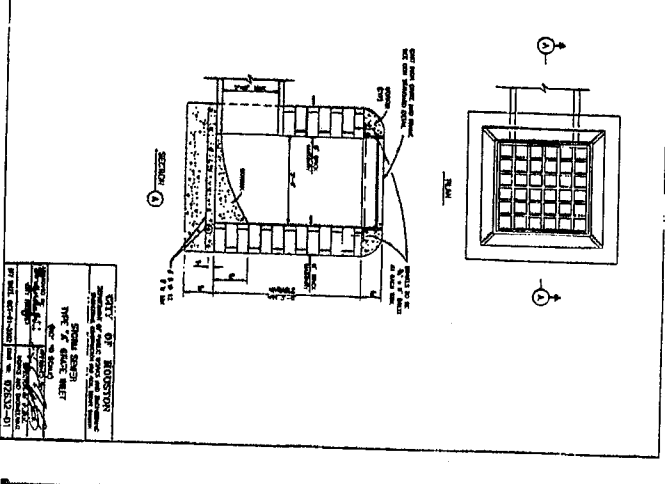
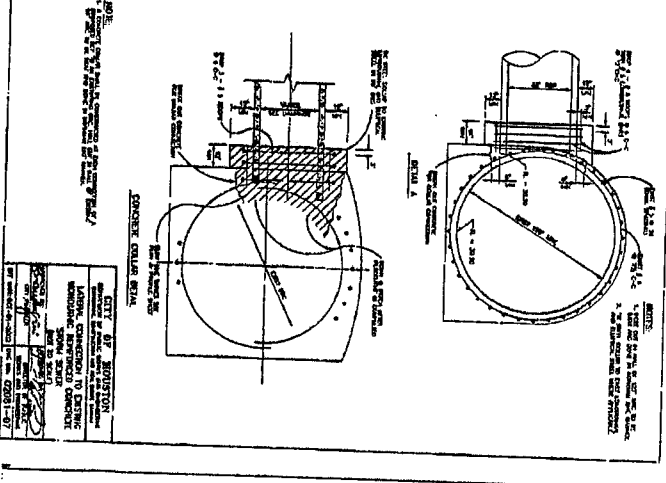
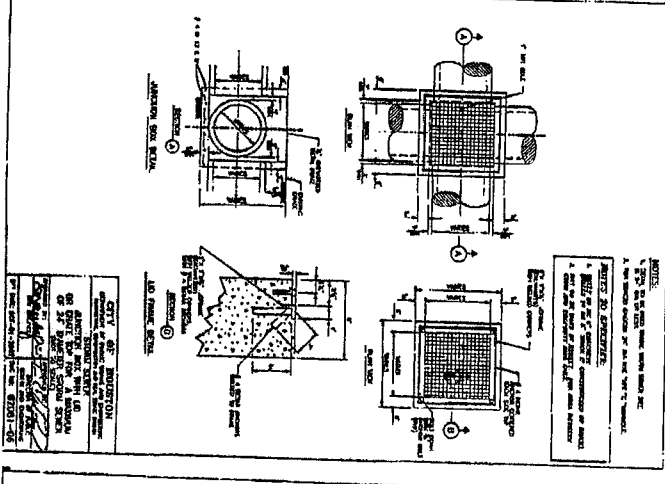
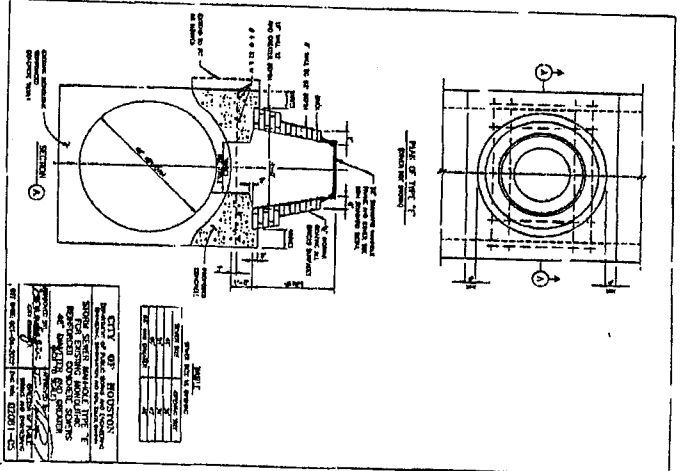
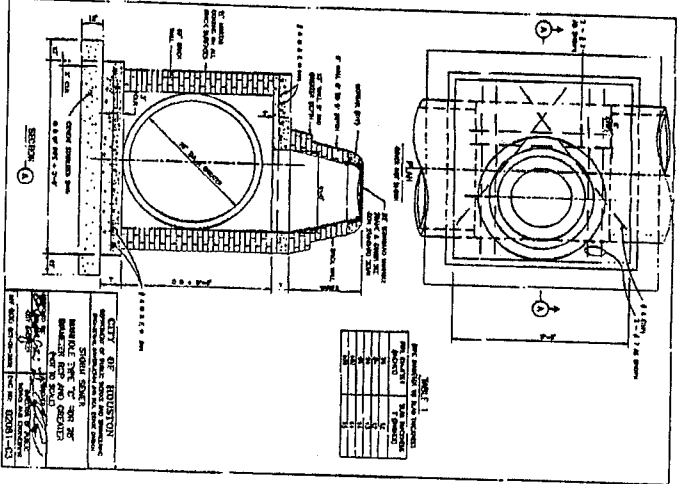
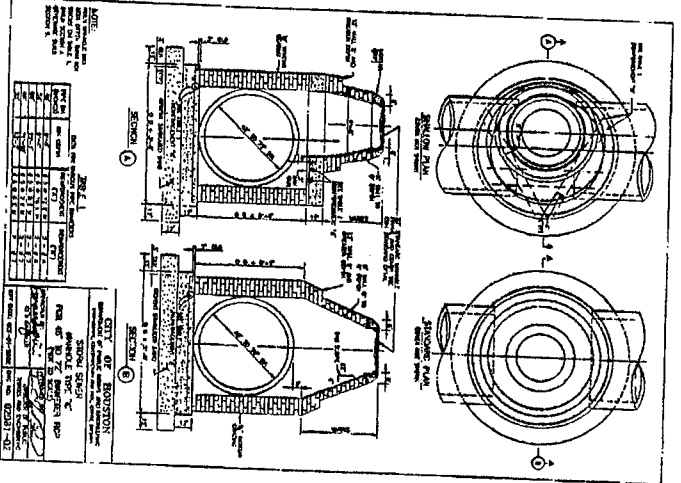
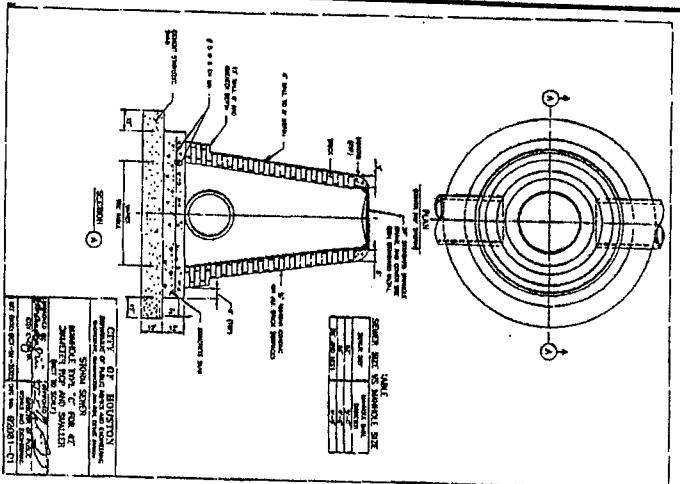
TYPICAL STORM SEWER OUTFALL DETAIL FOR FORT BEND COUNTY, TEXAS

August 1986 sheet 3-9



# DETAILS:

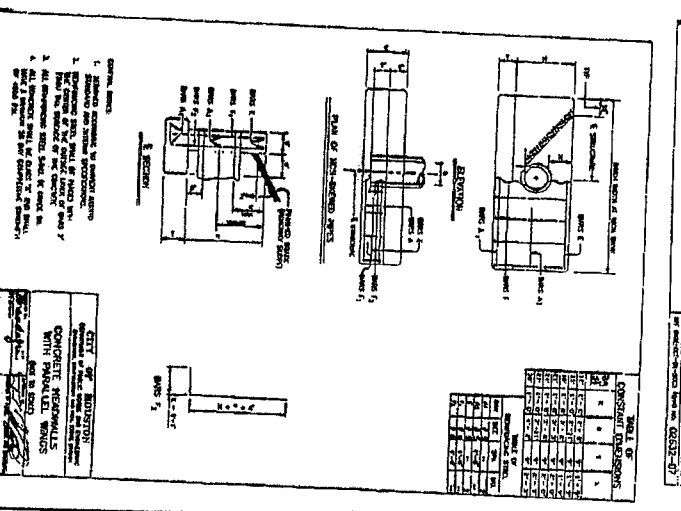
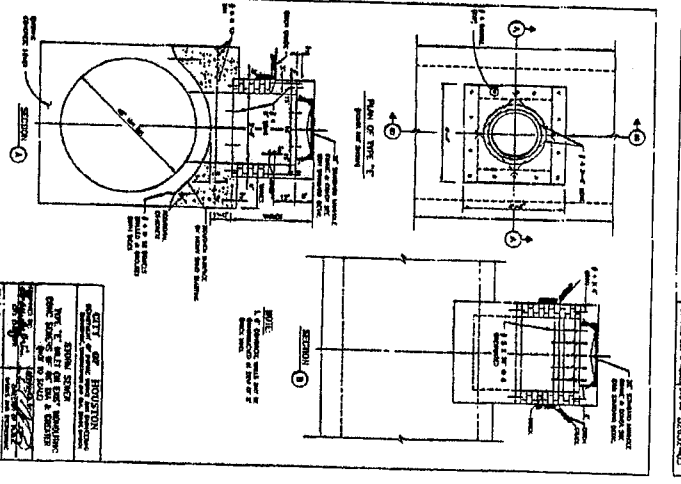
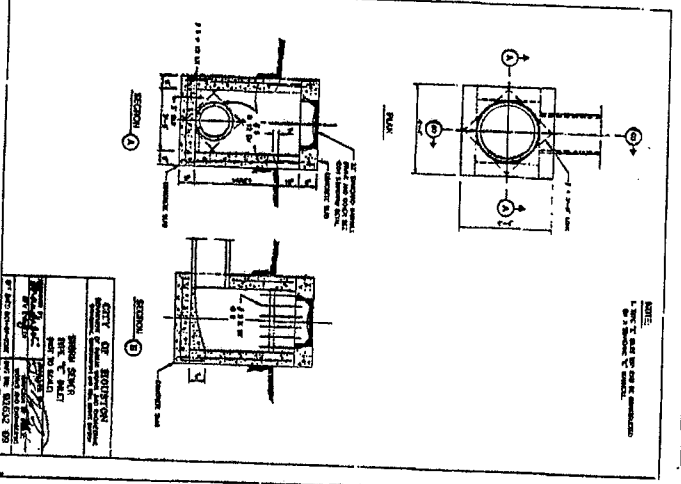
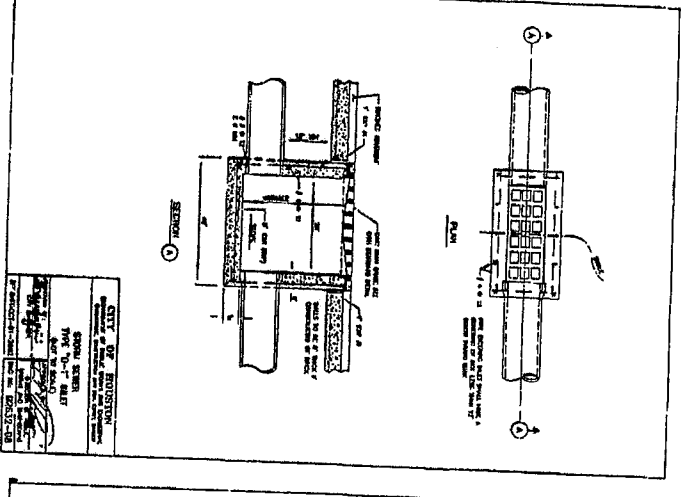
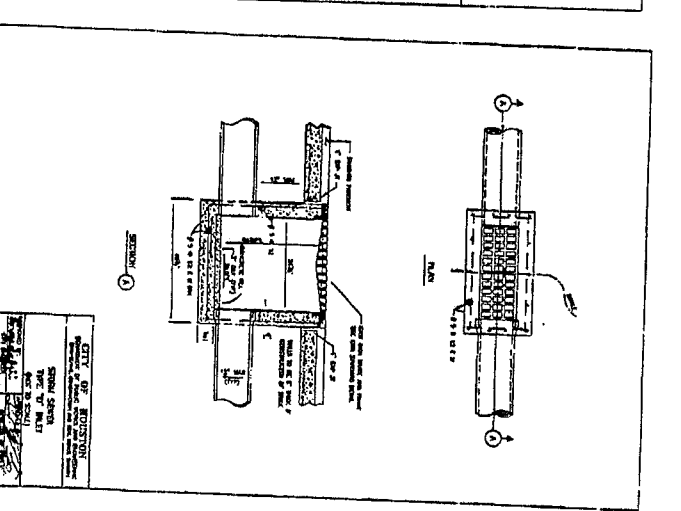
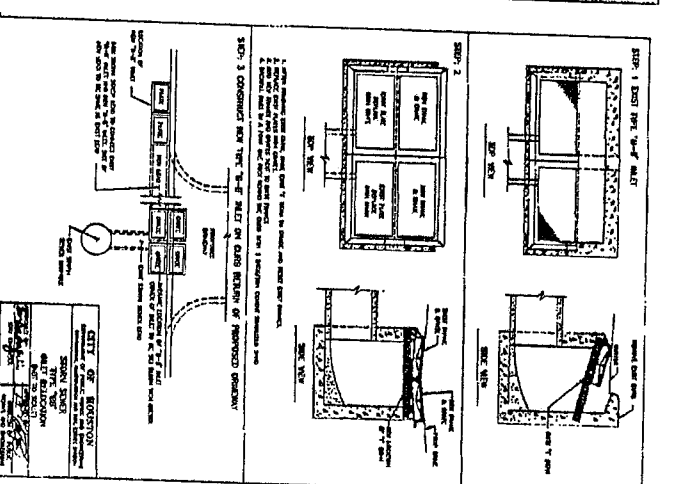
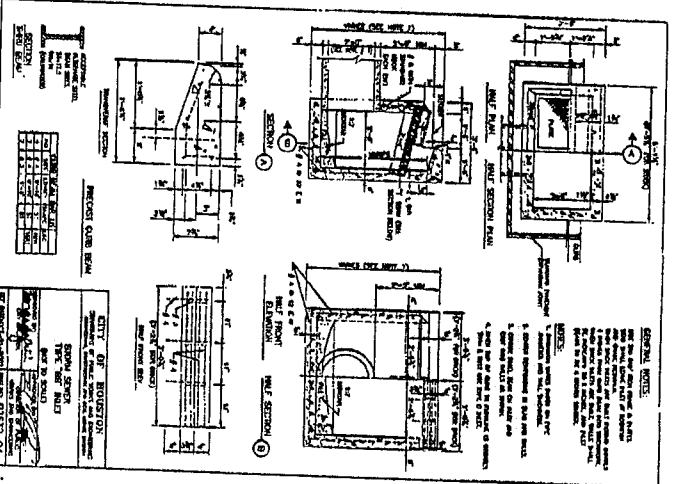
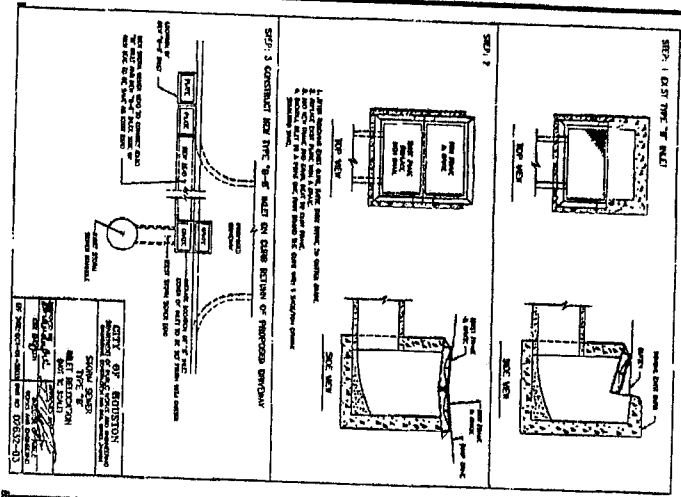
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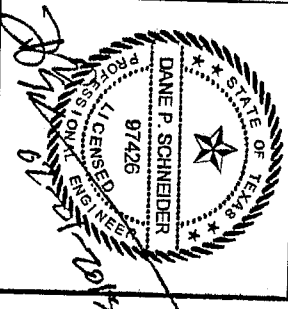
CITY OF HOUSTON  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
**STORM DETAILS**  
**SHEET 1 OF 7**

PROJECT NO. M-000126-XXXX-4  
 DRAWING SCALE: NOT TO SCALE  
 CITY OF HOUSTON P.W.  
 DANE P. SCHNEIDER, P.E.  
 SHEET # OF

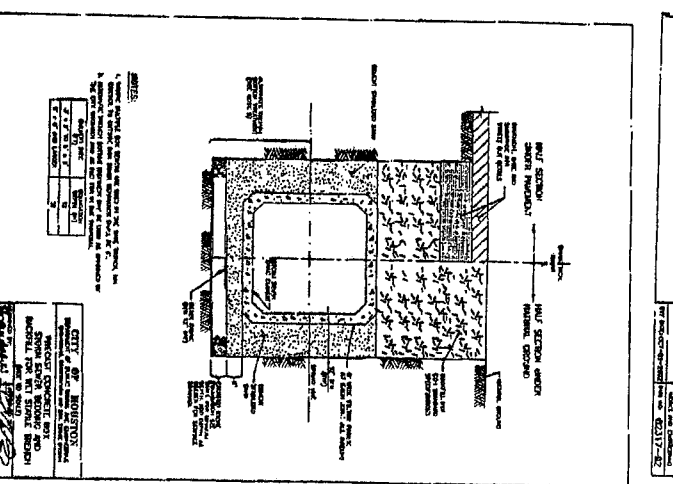
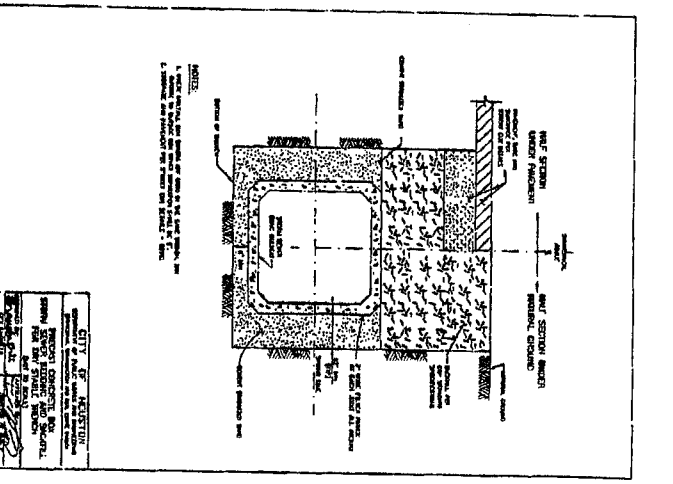
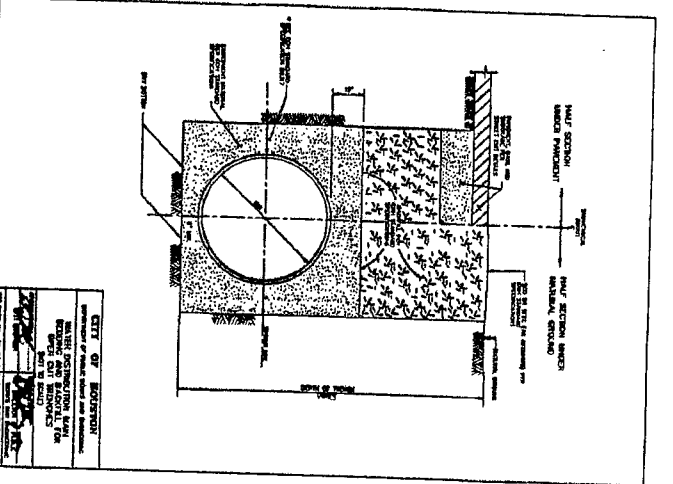
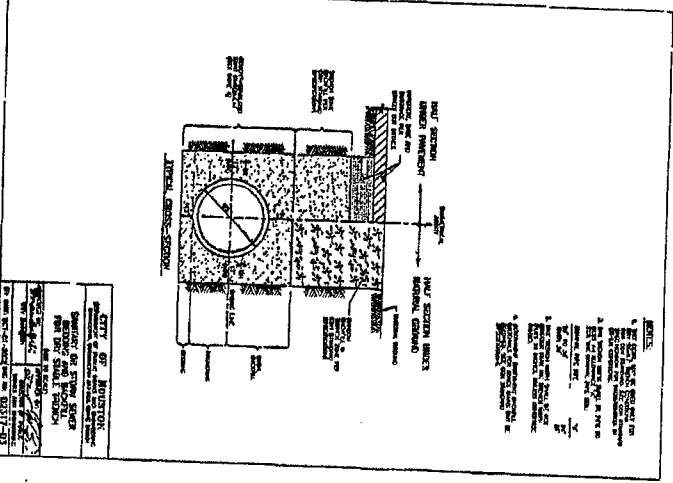
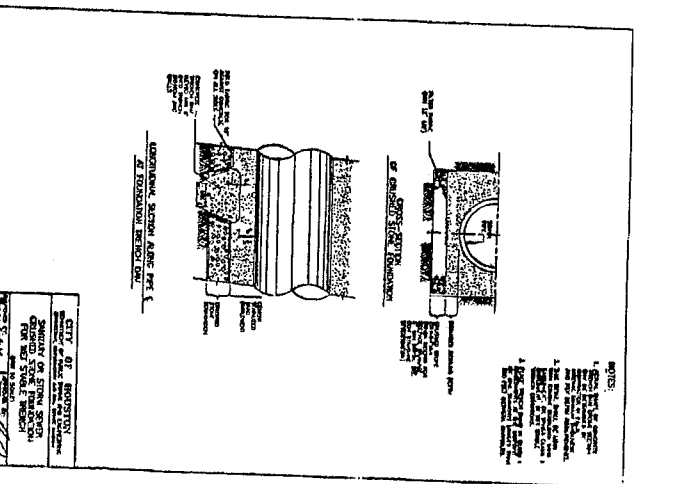
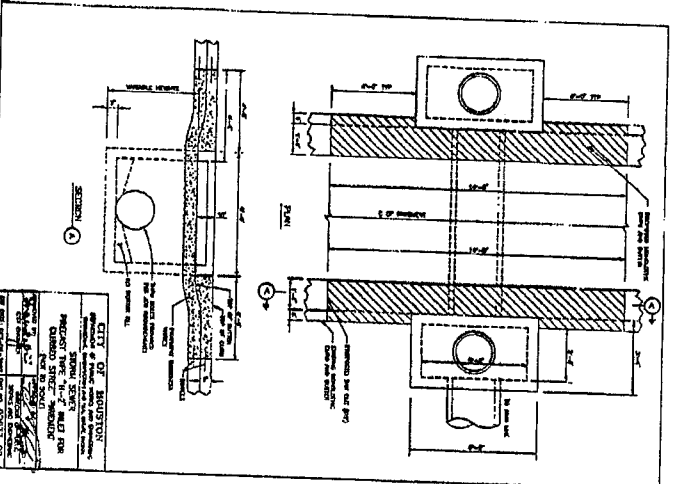
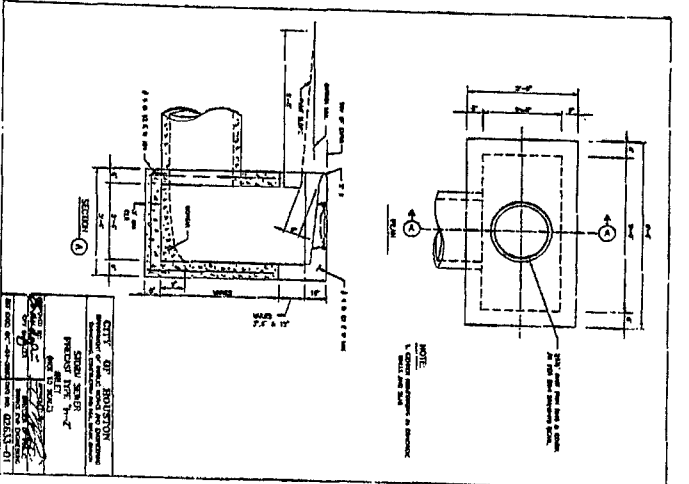
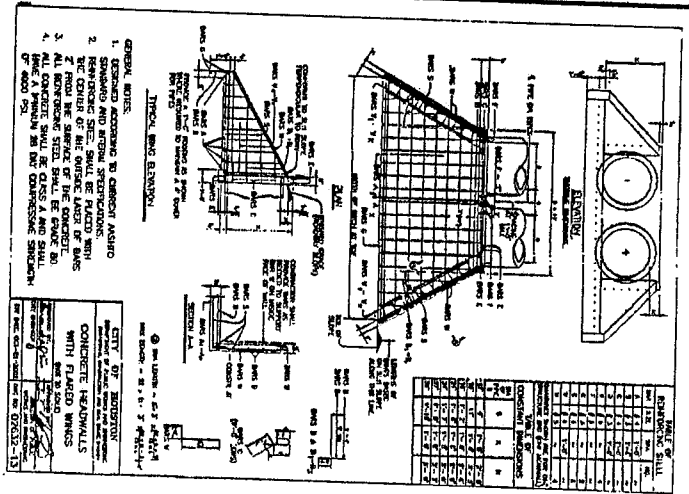
02/01/13	STANDARD DETAILS	OPS
No.	Date	Revisions
		App.



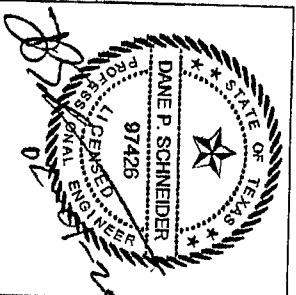
DPS	Revisions	Date	No.
App.			



**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
**STORM DETAILS**  
 SHEET 2 OF 7  
 PROJECT WBS NO.  
 M-000126-XXXX-4  
 DRAWING SCALE:  
 NOT TO SCALE  
 CITY OF HOUSTON, PM:  
 DANE P. SCHNEIDER, PE  
 SHEET # OF



No.	Date	Revisions	DPS	App.
02/01/13		STANDARD DETAILS		



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

**STORM DETAILS**  
**SHEET 3 OF 7**

PROJECT WBS. NO.: M-000126-XXXX-4  
 DRAWING SCALE: NOT TO SCALE  
 CITY OF HOUSTON, PM: DANE P. SCHNEIDER, PE  
 SHEET # OF

# **TRAFFIC CONTROL PLAN**

**Please refer to COH Templates**

**DWG No.: 01512-01 to 01512-12**

**Effective Date: July-01-2012**

[http://documents.publicworks.houstontx.gov/document-center/cat\\_view/88-engineering-and-construction/96-drawings/212-standard-details/327-traffic-details.html](http://documents.publicworks.houstontx.gov/document-center/cat_view/88-engineering-and-construction/96-drawings/212-standard-details/327-traffic-details.html)

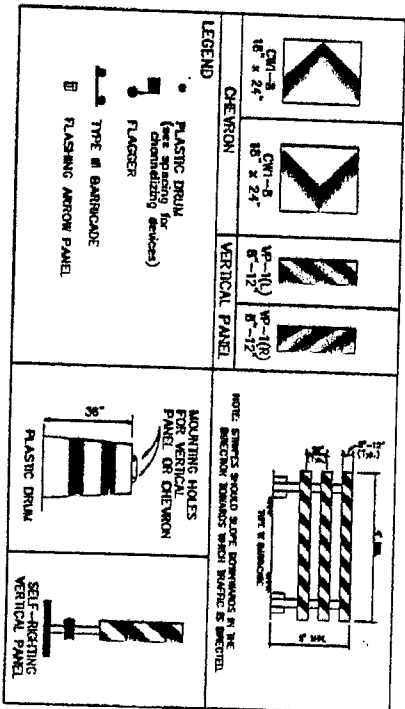
# GENERAL NOTES

- The 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 the entire construction period).
- All signs and traffic control devices shall conform to the latest version of the TMUTCD.
- No work shall be performed during the hours of 7:00 AM to 5:00 PM to 8:00 PM Monday thru Friday without approval of the City Traffic Engineer.
- No work shall be performed in residential areas from 7:00 PM to 7:30 AM.
- Contractor shall maintain approved number of flow lanes of traffic in each direction during construction working hours. Traffic control plans shall include one-way and/or detour plans.
- Contractor shall maintain traffic lanes and detours according to traffic control plans during working hours.
- Contractor shall never open pavement excavations for safety work with unexcused steel plates during non-working hours, and open lanes for normal traffic flow when feasible.
- If the Contractor chooses to use a different method of "Traffic Control Plan" during the construction than what is outlined in the contract drawings, the Contractor shall be responsible to prepare and submit an alternate set of traffic control plans to the City of Houston Project Manager for approval and submit an alternate set of traffic control plans to scale on reproducible mylar and shall be sealed by a Licensed Engineer in the State of Texas. Traffic Operations Division representative approval is required to accept the proposed design.
- Contractor shall secure temporary detours from Traffic Operations Division (Public Safety Section at <http://www.houston.gov/traffic-operations>) before implementing the traffic control plan. The application must be submitted at least ten business days prior to the implementation of the traffic control plan and/or beginning construction work. The contractor shall provide traffic control plans, construction sequence, and schedule with the application.
- Contractor shall have approved traffic control plan and permit at the job site for inspection at all times.
- During pavement surface restoration projects the Contractor shall not open closed lanes until the pavement surface has cured enough to allow vehicular traffic according to City of Houston Standard Specifications.
- The Contractor is responsible for scheduling and coordinating all construction activities with scale holders in the vicinity including emergency response agencies such as: Houston Police Department, Houston Fire Department, and Metropolitan Transit Authority.
- Contractor shall be responsible for funding all work devices to all sub-contractors, utility companies, and all other entities performing construction work associated with the project.
- Working in three miles or more shall require the Contractor of the responsibility for job site conditions during the course of construction of the project including safety of all modes of transportation, persons, and property, and that the requirement shall apply continuously and not be limited to working hours.
- The Traffic Operations Division (Public Safety Section) has the right to demand the installation of additional traffic control devices or modifications to those plans and notes, as deemed necessary to provide the safe and orderly flow of traffic and pedestrian through the construction work zone. The Contractor shall comply with these additional requests or modifications with due diligence.
- All working traffic control signs and pavement markings shall be maintained in visible locations during construction unless prior written approval is obtained from City of Houston Project Manager. The Contractor shall restore or replace for the related pavement markings (PMTs) and other road markings.
- When entering or leaving roadway carrying public traffic, the Contractor's equipment, whether empty or loaded shall in all cases yield to public traffic with vehicles by Contractor provided certified flaggers/patrol officers.
- Access to driveways adjacent to the construction work zone shall be maintained at all times as much as possible. A minimum of one travel lane shall be maintained across the driveway, unless prior written approval is obtained from City of Houston Project Manager.
- Signage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor.
- The Contractor shall submit an application for temporary public easements if there are public waters located at the proposed line closure from Public Management Division (833-363-4000) at least ten business days before implementation of line closure. In addition, temporary no parking signs shall be posted 24 hours prior to commencement of work.
- Additional off duty police officers/flaggers may be requested to direct traffic when lanes are blocked at the discretion of the City Project Manager even if they are not specifically identified on the project plans.
- The Contractor shall replace within 72 hours, all traffic signal lamp detectors damaged during construction.
- In general, a water pressure and/or high-pressure water shall be applied on all major thoroughfare line closures. Exceptions to flushing sewer lines and/or high-pressure water on residential line closures shall be approved by the City Traffic Engineer.
- Approved traffic control plan shall be in place before starting any excavation.

## SPACING FOR CHANNELIZING DEVICES

- Plastic drums on emergency taper @ 30' C-C with down stream sign @ 60' C-C and warning lights for emergency closure.
  - Plastic drums on downstream taper @ 30' C-C (green taper and barricade are optional)
  - Plastic drums on road @ 30' C-C.
  - Plastic drums on taper @ 30' C-C.
  - Back @ 70' C-C (for emergency closure).
  - Plastic drums in front of construction zone @ 30' C-C with vertical panel @ 40' C-C and approved warning light @ 40' C-C (for emergency closure).
  - Concrete Traffic Barrier (CTB) or Low Profile Concrete Traffic Barrier (LPCTB) with approved reflective vertical panel spacing.
  - Self-erecting vertical panel spacing.
  - 4 lanes to 2 lanes unidirectional temporary action @ 30' C-C.
  - 4 lanes divided roadway to one way temporary roadway @ 30' C-C.
  - Left lane and right lane storage bays @ 15' C-C.
- Spacing shown on traffic control plan shall supersede the above spacing.
- Spacing may be adjusted to provide driveway, intersections and/or median openings.

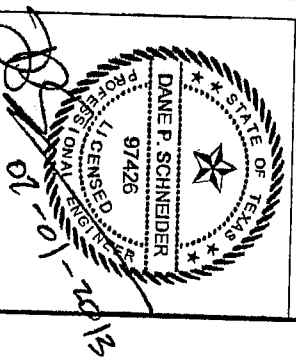
## CHANNELIZATION AND BARRICADES



TYPICAL SIGN SPACING, TAPER LENGTHS, AND SUGGESTED SPACING OF CHANNELIZATION DEVICES				
Posted Speed (mph)	Sign Spacing (ft)	Min. Downstream Taper Length (ft)	Spacing of Downstream Taper (ft)	On a Taper (ft)
30	120'	150'	185'	30'
35	140'	180'	225'	35'
40	160'	210'	265'	40'
45	180'	240'	305'	45'
50	200'	270'	345'	50'
55	220'	300'	385'	55'

Length for Buffer	
Posted Speed (mph)	Length in Feet (ft)
30	40
35	50
40	60
45	70
50	80
55	90

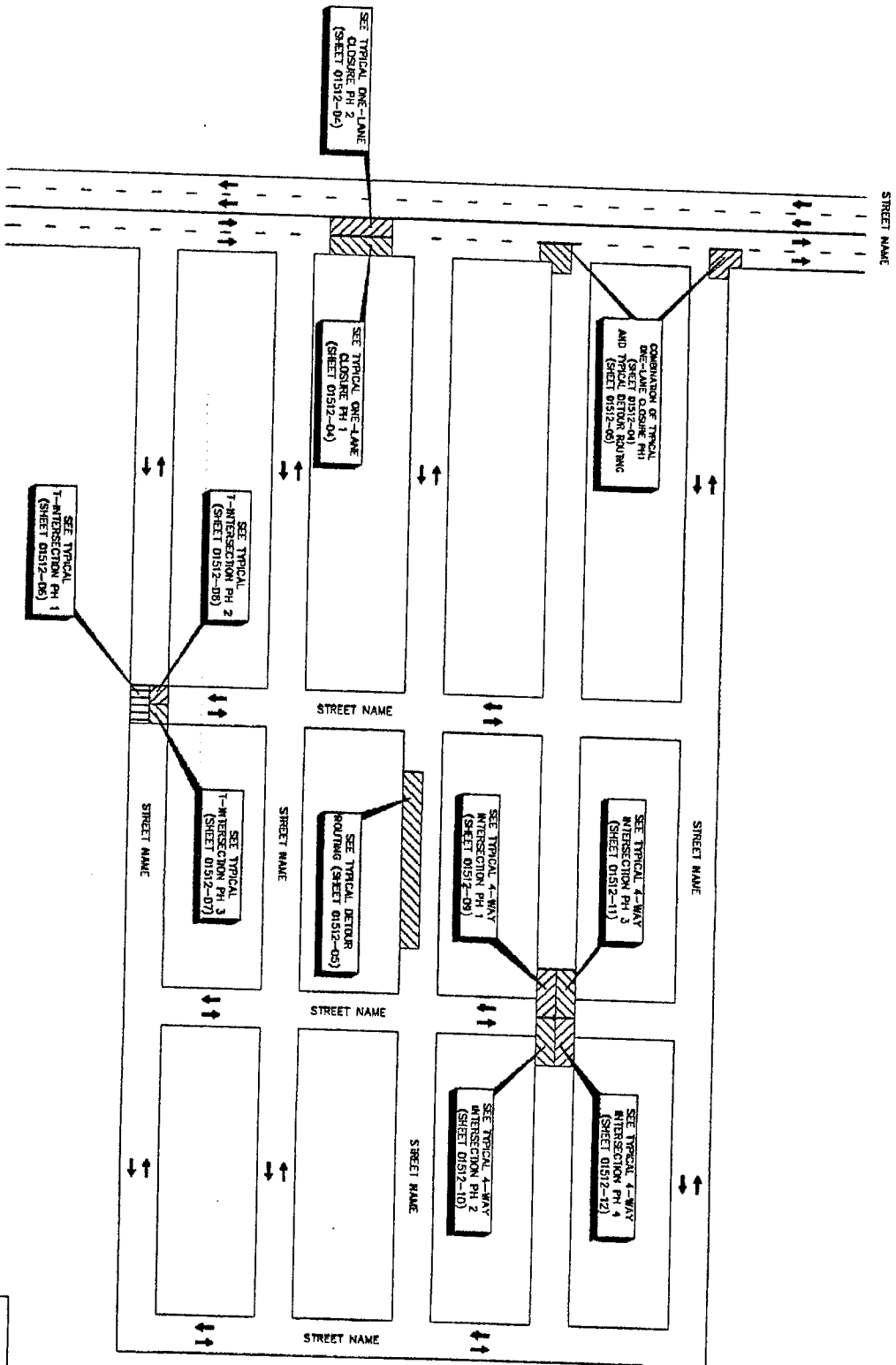
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 CITY ENGINEER  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 TOP NOTES  
 CHANNELIZING DEVICES  
 AND BARRICADES  
 (NOT TO SCALE)  
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING  
 EFF. DATE: JULY 01-2012  
 DWG NO.: 01512-01



**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
**TRAFFIC CONTROL PLAN**  
 SHEET 1 OF 12

PROJECT WBS. NO.: M-000126-XXXX-4  
 DRAWING SCALE: NOT TO SCALE  
 CITY OF HOUSTON, PM: DANE P. SCHNEIDER, PE  
 SHEET # OF

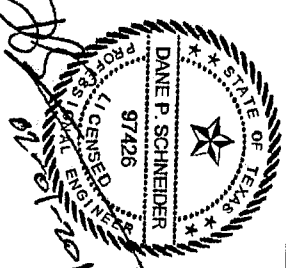
02/01/13 STANDARD DETAILS		DPS
No.	Date	Revisions



DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
TCP OVERALL	
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APPROVED BY:	DATE: JUL-01-2012
CITY ENGINEER	DWG NO: 01512-02
WORKS AND ENGINEERING	

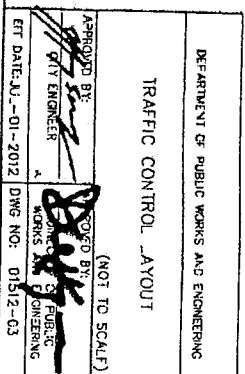
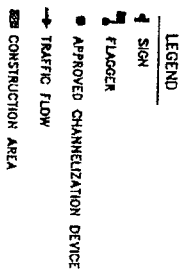
TRAFFIC CONTROL PLAN  
SHEET 2 OF 12


CITY OF HOUSTON  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING



PROJECT WBS. NO.: M-000126-XXXX-4  
DRAWING SCALE: NOT TO SCALE  
CITY OF HOUSTON, PM: DANIE P. SCHNEIDER, PE  
SHEET # OF

02/01/13	STANDARD DETAILS	DPS
No.	Date	Revisions
		App.

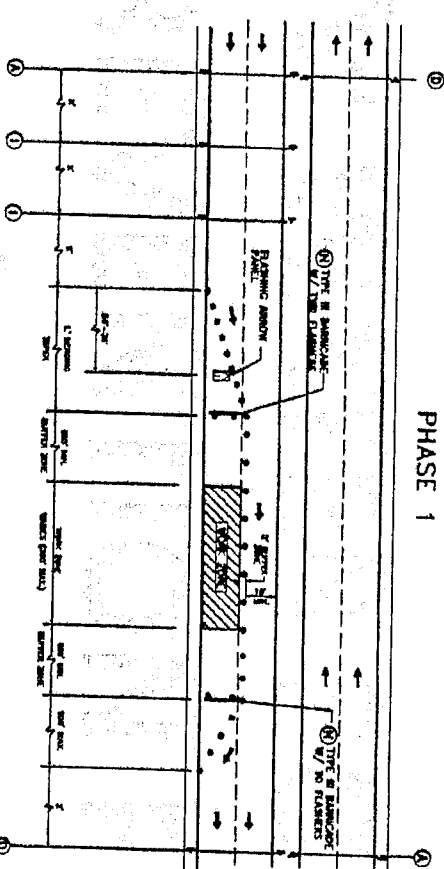


  
 CITY OF HOUSTON  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 TRAFFIC CONTROL PLAN  
 SHEET 3 OF 12  
 PROJECT WBS. NO.:  
 M--000126--XXXX--4  
 DRAWING SCALE:  
 NOT TO SCALE  
 CITY OF HOUSTON, PM:  
 DANE P. SCHNEIDER, PE  
 SHEET # OF



1	2	3
NO. 1 ROAD WORK	NO. 2 ROAD WORK	NO. 3 ROAD WORK
NO. 4 ROAD WORK	NO. 5 ROAD WORK	NO. 6 ROAD WORK
NO. 7 ROAD WORK	NO. 8 ROAD WORK	NO. 9 ROAD WORK
NO. 10 ROAD WORK	NO. 11 ROAD WORK	NO. 12 ROAD WORK

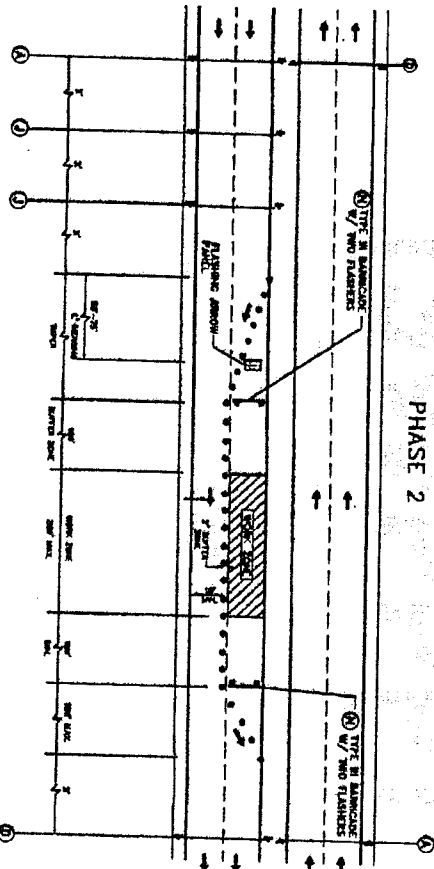
# PHASE 1



STREET NAME

- LEGEND**
- 1 SIGN
  - 2 FLAGGER
  - 3 APPROVED CHANNELIZATION DEVICE
  - 4 TRAFFIC FLOW
  - 5 CONSTRUCTION AREA

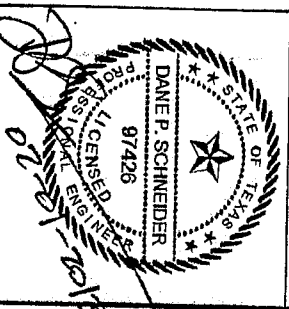
# PHASE 2



STREET NAME

- NOTE:**
1. ALL LANE CLOSURES AND CONSTRUCTION AREAS SHALL BE IN A SINGLE SECTION.
  2. WITH SIGNALS, SIGNALS SHALL BE USED ONLY ON HIGHWAYS.
  3. FOR DIMENSIONS REFER TO SHEET 01512-01.

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
TOP ONE LANE CLOSURE PHASE 1 & 2
(NOT TO SCALE)
APPROVED BY: [Signature] CITY ENGINEER
WORKS AND ENGINEERING
EFF DATE: 01-01-2012 DWG NO: 01512-04



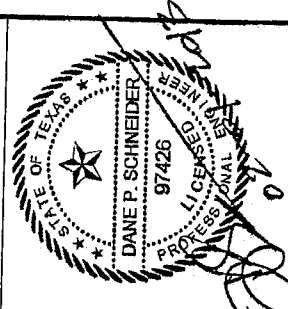
**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
**TRAFFIC CONTROL PLAN**  
SHEET 4 OF 12

PROJECT WBS. NO.:  
M-000126-XXXX-4  
DRAWING SCALE:  
NOT TO SCALE  
CITY OF HOUSTON, P.M.  
DANE P. SCHNEIDER, P.E.  
SHEET # OF

02/01/13	STANDARD DETAILS	DPS
No.	Date	Revisions
		App.

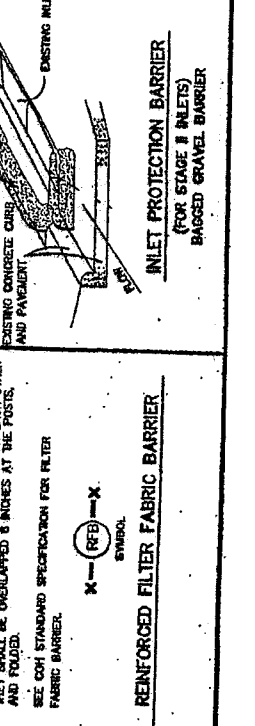
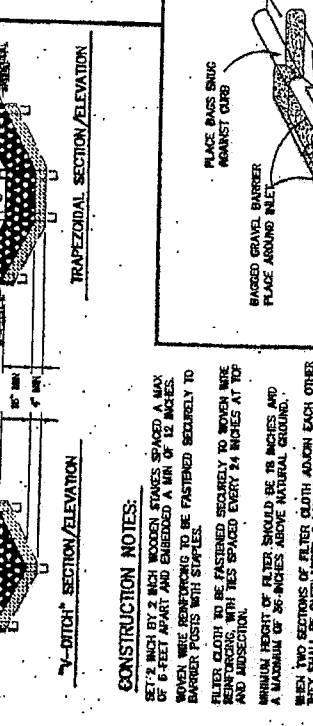
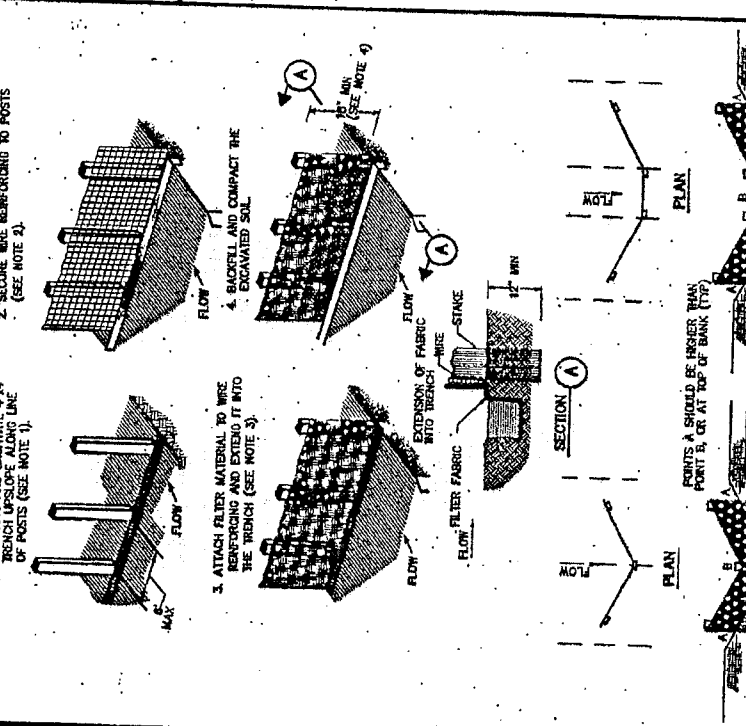
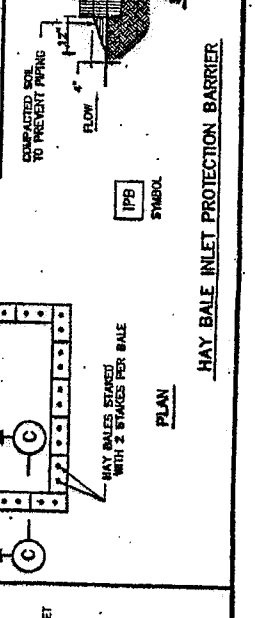
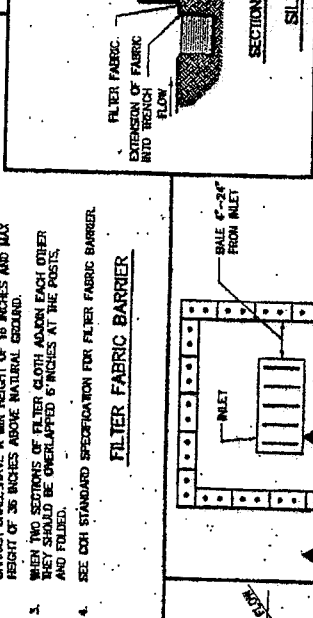
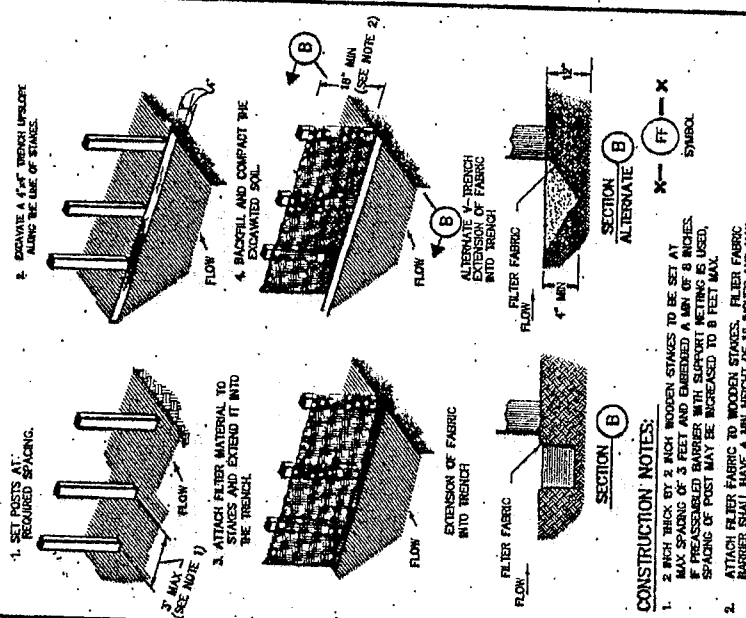
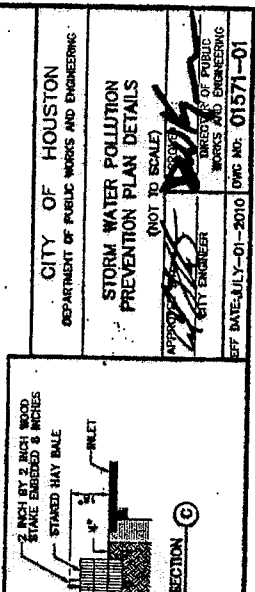
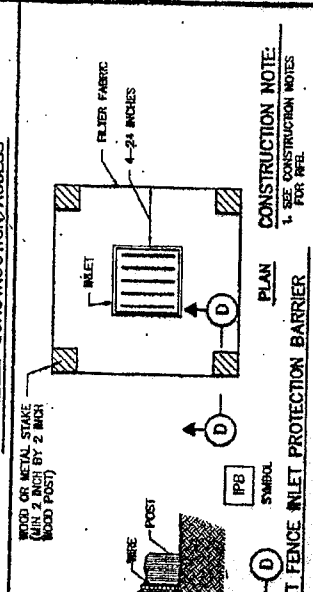
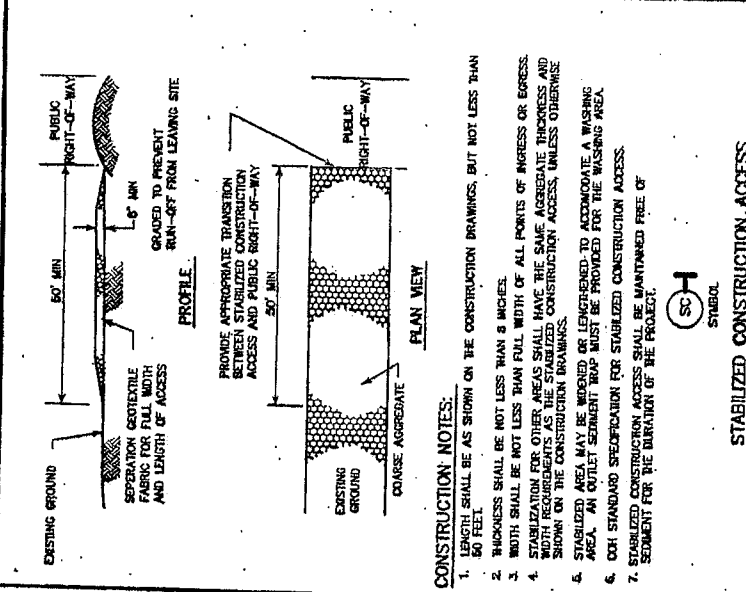
# **STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**

App.	Revisions	No.	Date
DPs	STANDARD DETAILS	02/01/13	



**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
**STORM WATER POLLUTION PREVENTION PLAN DETAILS**

PROJECT WBS NO: M-000126-XXXX-4  
DRAWING SCALE: NOT TO SCALE  
CITY OF HOUSTON, TX  
DANE P. SCHNEIDER, PE  
SHEET # OF



**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
**STORM WATER POLLUTION PREVENTION PLAN DETAILS**  
(NOT TO SCALE)  
APPROVED: [Signature]  
CITY ENGINEER  
THIRD CLASS OF PUBLIC WORKS AND ENGINEERING  
EFFECT DATE: JULY-01-2010 DWG NO: 01571-01

