

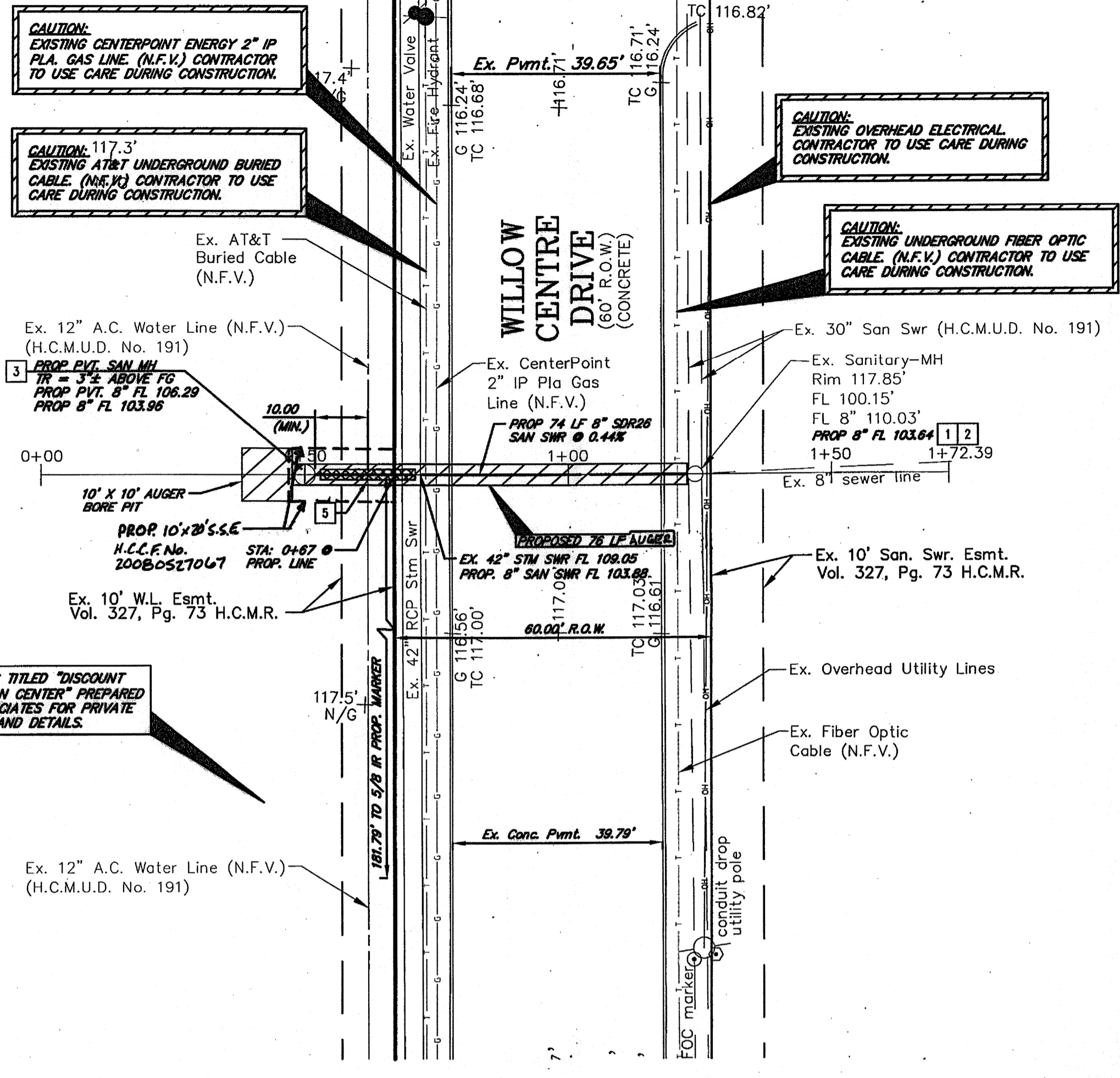
ALL WATER METERS AND WATER TAPS IN RIGHT OF WAY SHALL BE CONSTRUCTED BY MUD DISTRICT OPERATOR. CONTRACTOR SHALL COORDINATE WITH DISTRICT. CONTRACTOR SHALL NOTIFY THE DISTRICTS OPERATOR MR. GUS GUSTAFSON OF SOUTHWEST WATER COMPANY, AT 832-209-5073 AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.

THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING PUBLIC AND PRIVATE UTILITIES THAT HAVE OR MAY HAVE ANY EFFECT ON THE PROPOSED IMPROVEMENTS BEFORE ANY WORK COMMENCES. THE INSTALLATION OF ALL GRAVITY FLOW PIPES SHALL BEGIN AT THE OUTFALL OR CONNECTION TO THE EXISTING SYSTEM AND PROCEED UPSTREAM. IF ANY DISCREPANCY FROM THE PLAN IS FOUND, THE CONTRACTOR IS TO NOTIFY TERRA ASSOCIATES, INC. BEFORE PROCEEDING FURTHER.

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON RECORDS OF THE VARIOUS UTILITY COMPANIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY EXISTING SITE CONDITIONS AND TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

ALL MATERIALS AND METHODS SHALL MEET HARRIS COUNTY AND HARRIS COUNTY MUNICIPAL UTILITY DISTRICT NO. 191 STANDARDS.

THIS APPROVAL IS FOR CONSTRUCTION UTILIZING AUGER/BORE AND JACK METHOD ONLY. FOR ANY REASON, IF OPEN CUT METHOD IS REQUIRED, APPROPRIATE PAVEMENT RESTORATION TYPICAL SHEET SHALL BE SUBMITTED FOR REVIEW AT LEAST 48 HOURS IN ADVANCE BEFORE STARTING CONSTRUCTION. THESE RESTORATIONS TYPICAL SHALL BE DRAWN ON MYLAR, SEALED, SIGNED, AND DATED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS.



CAUTION: EXISTING OVERHEAD ELECTRICAL. CONTRACTOR TO USE CARE DURING CONSTRUCTION.

CAUTION: EXISTING UNDERGROUND FIBER OPTIC CABLE (N.F.V.) CONTRACTOR TO USE CARE DURING CONSTRUCTION.

CAUTION: EXISTING CENTERPOINT ENERGY 2\"/>

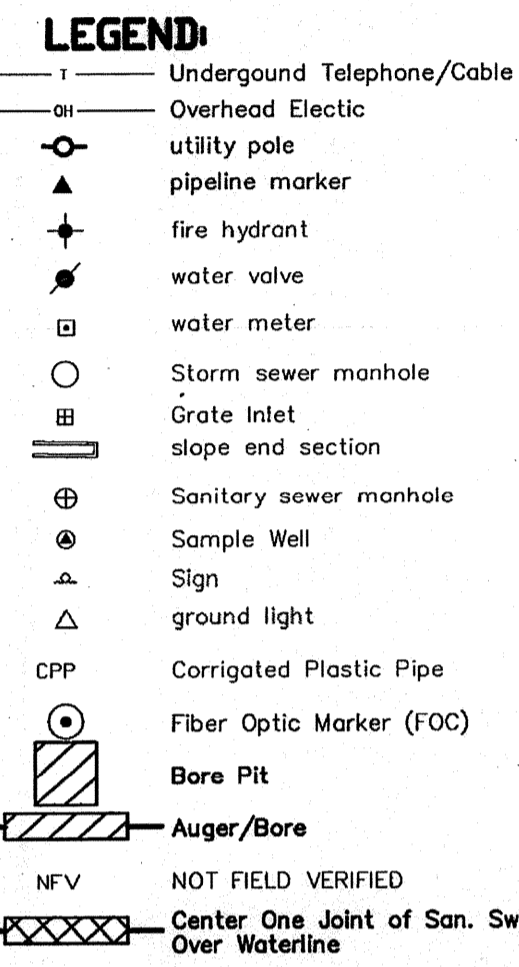
CAUTION: 117.3' EXISTING AT&T UNDERGROUND BURIED CABLE (N.F.V.) CONTRACTOR TO USE CARE DURING CONSTRUCTION.

SPECIAL NOTE: IF ENCROACHMENT TO STREET IS NECESSARY, A TRAFFIC CONTROL PLAN WILL BE REQUIRED PRIOR TO CONSTRUCTION.

NOTE: SANITARY SEWER PIPE AND MANHOLE TO BE BACKFILLED WITH CEMENT STABILIZED SAND AS SHOWN IN CITY OF HOUSTON STANDARD DETAILS AND SPECIFICATIONS.

**SANITARY SEWER NOTES:**

- CONTRACTOR TO COORDINATE WITH THE DISTRICT'S OPERATOR FOR CONNECTION TO EXISTING MANHOLE. CONTRACTOR TO VERIFY LOCATION AND FLOWLINE ELEVATION PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER. PROPOSED 8" FLOWLINE TO BE 1-FOOT ABOVE CROWN OF EXISTING 30" SAN SWR. (PROP. 8" FL 103.64) (EX. 30" FL 100.15±)
- CONTRACTOR TO USE CARE IN MAKING OPENING IN WALL OF EXISTING SANITARY SEWER MANHOLE. OPENING SHALL NOT BE LARGER THAN 3" NOR LESS THAN 1" GREATER IN DIAMETER THAN THE OUTSIDE DIAMETER OF THE PROPOSED PIPE. FILL ENTIRE VOID AROUND THE PIPE CONNECTION WITH NON-SHRINK WATERPROOF GROUT. BACKFILL EXCAVATION AROUND EXISTING MANHOLE WITH CEMENT SAND.
- CONTRACTOR TO INSTALL 4" DIAMETER PRECAST CONCRETE MANHOLE PER CITY OF HOUSTON DETAIL 02082-02, 02082N-02, AND 02084-01. WHEN ORDERING MANHOLE, CONTRACTOR TO COORDINATE DEPTH W/ SUPPLIER FOR PROPER WALL THICKNESS (6" MINIMUM). CONTRACTOR TO FOLLOW ALL OSHA REGULATIONS FOR PROPER SHORING.
- CONTRACTOR TO VERIFY DEPTHS OF EXISTING UTILITIES BEFORE START OF CONSTRUCTION. CONTRACTOR TO BRACE EXISTING UTILITIES AS NECESSARY.
- CONTRACTOR TO CENTER ONE FULL JOINT (MIN. 18") OF SAN. SWR. BENEATH EX.12" WATER LINE.

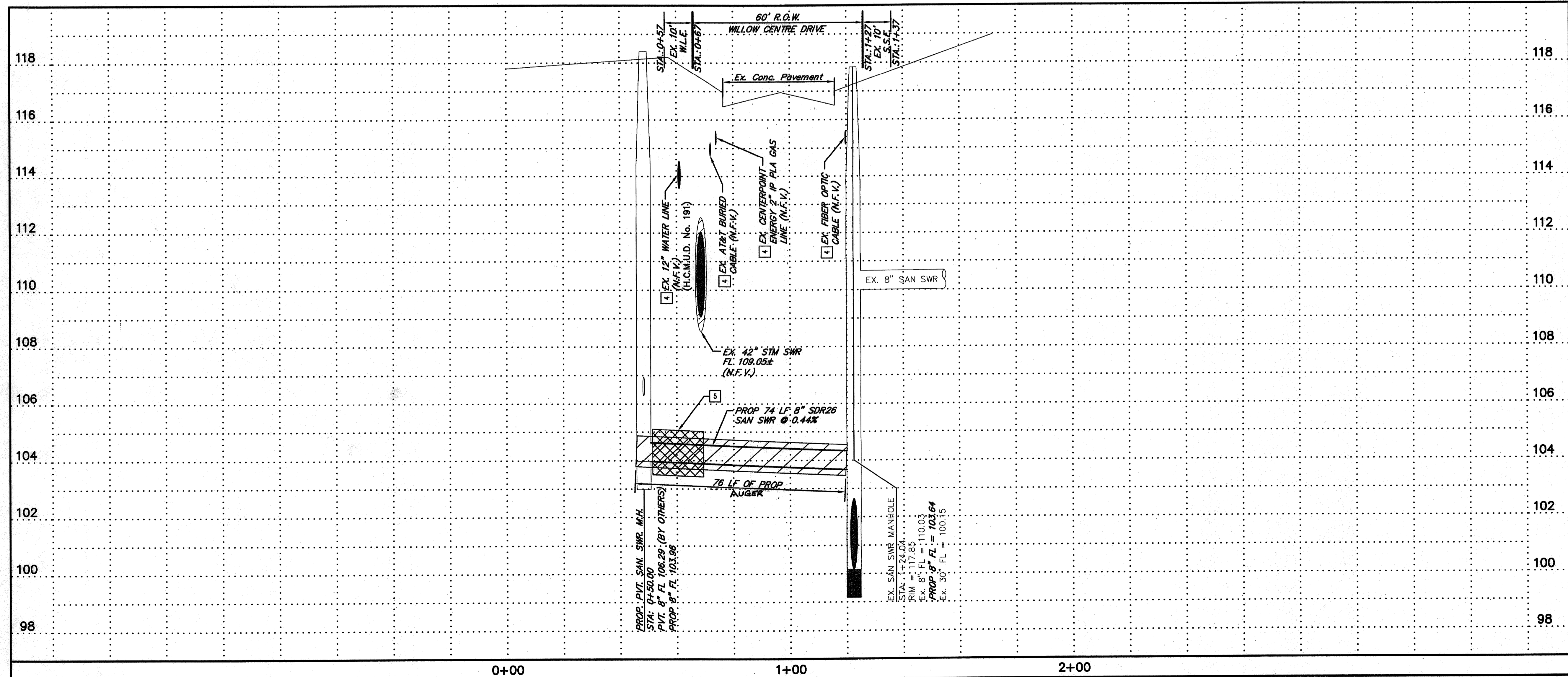


**FLOODPLAIN INFORMATION:**  
 ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP No. 48201C0435 L, LAST REVISED JUNE 18, 2007, THE SUBJECT TRACT LIES WITHIN AN AREA DESIGNATED AS ZONE X (UNSHADED); DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AND ZONE X (SHADED); DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN ONE FOOT OR WITH DRAINAGE AREAS LESS THAN ONE SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

**BENCHMARK NOTE:**  
 PROJECT BENCHMARK: FEMA RM 150770 LOCATED ON BRETON RIDGE DRIVE +/- 100' NORTH OF FM 1960. ELEV.=120.92' (NAVD88, 2001 ADJ.)  
 TBM A: A "+-" ON TOP OF BB-INLET ON WEST SIDE OF WILLOW CENTRE DR. +/- 875' SOUTH OF FM 1960. ELEV.=118.37' ELEVATIONS BASED ON TSARP RM 150770 (NAVD88, 2001 ADJ.)

**LEGAL DESCRIPTION**  
 A SUBDIVISION CONTAINING 7.0021 ACRES (305,011 S.F.) BEING ALL OF RESTRICTED RESERVE "D", OUT OF WILLOW CENTRE SUBDIVISION RESTRICTED RESERVE "D", SECTION ONE REPLAT, AS RECORDED IN FILM CODE NO. 36084 OF THE H.C.M.R., LOCATED IN THE C.W. CHILDRESS SURVEY, ABSTRACT NO. 217, IN HARRIS COUNTY, TEXAS.

**WILLOW CENTRE DRIVE (60' R.O.W.) 8" SANITARY SEWER CROSSING**



**NOTICE:**  
 AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE ONE STAR NOTIFICATION 713-223-4567.

**PRIVATE UTILITY LINES SHOWN**

CenterPoint Energy/Electric Facilities (Approved only for crossing underground facilities, unless otherwise noted) Valid at time of review only.  
 Date: 10/7/08

SBC UTILITY LINES SHOWN  
 J.C. Miller  
 Date: 10/7/08

Approved for SBC underground conduit facilities only.  
 Center One Joint of San. Swr. Over Waterline  
 Date: 10/7/08

REVNO.	DESCRIPTION	DATE	APP.

**Kevin Polasek, P.E.**  
 STATE OF TEXAS  
 KEVIN POLASEK  
 98632  
 LICENSED PROFESSIONAL ENGINEER  
 ON 9-10-2008

**TERRA ASSOCIATES, INC.**  
 3000 WILCREST - SUITE 200  
 HOUSTON, TEXAS ZIP 77042  
 PHONE: 713-983-0333  
 FAX: 713-983-0743

**8" SANITARY SEWER CROSSING AT WILLOW CENTRE DRIVE & COCKRUM ROAD TO SERVE DISCOUNT TIRE DISTRIBUTION CENTER**

**8" SANITARY SEWER CROSSING PROJECT**

DRAWN BY: DAB  
 CHECKED BY: KBP  
 DATE: AUGUST, 2008

PROJECT No. 0280-0706  
 FILE NAME: 04-SANITARY P&P.DWG  
 PLOT SCALE: 1:1

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

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

WATER: [Signature] 9/11/08  
 WASTEWATER: [Signature] 10/2/08  
 STORM: [Signature] 10/2/08

FILE NO: [Blank]  
 DRAWING SCALE: [Blank]  
 HORZ: 1"=20'  
 VERT: 1"=2'  
 SHEET No: 4 of 6

FOR CITY OF HOUSTON USE ONLY  
 ACCEPTED BY [Signature]  
 45295  
 HOUSTON, TEXAS