

CONSTRUCTION OF WATER AND SANITARY SEWER EXTENSIONS ALONG DOTSON ROAD

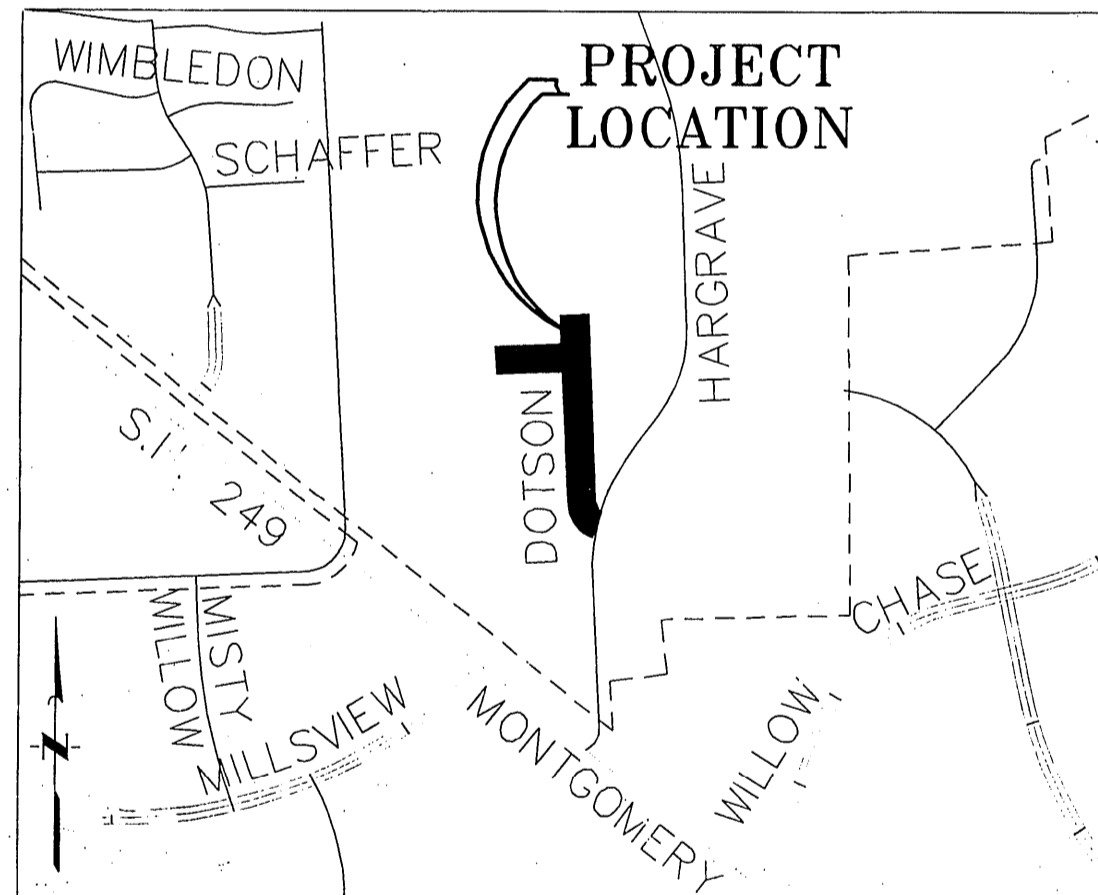
FOR
HAMMETT INVESTMENTS, L.P.
IN

HARRIS COUNTY MUNICIPAL UTILITY DISTRICT No. 191

HARRIS COUNTY, TEXAS

INDEX OF DRAWINGS

<u>SHEET No.</u>	<u>TITLE</u>
1.	COVER
2.	CONSTRUCTION NOTES
3.	WATER & SANITARY SEWER GENERAL LAYOUTS
<u>PLAN & PROFILE</u>	
4.	BASELINE "A" DOTSON ROAD STA 0+00 TO STA 3+00
5.	BASELINE "A" DOTSON ROAD STA 5+00 TO STA 8+00
6.	BASELINE "B" STA 7+00 TO STA 11+00
7.	BASELINE "B" STA 11+00 TO STA 12+50
<u>DETAILS</u>	
8.	STORM WATER POLLUTION PREVENTION PLAN
9.	H.C. S.W.P.P. STANDARD DETAILS
10.	TRAFFIC CONTROL PLAN
11.	WATER & SANITARY SEWER STANDARD DETAILS
12.	BARRICADE STANDARDS
13.	EXPRESS REVIEW SHEET



AREA MAP

"Prior to the construction of these facilities within or by the District, the District or its Engineer will give written notice by the Registered or Certified Mail to the Director of Public Works and Engineering stating the date such construction will be commenced."

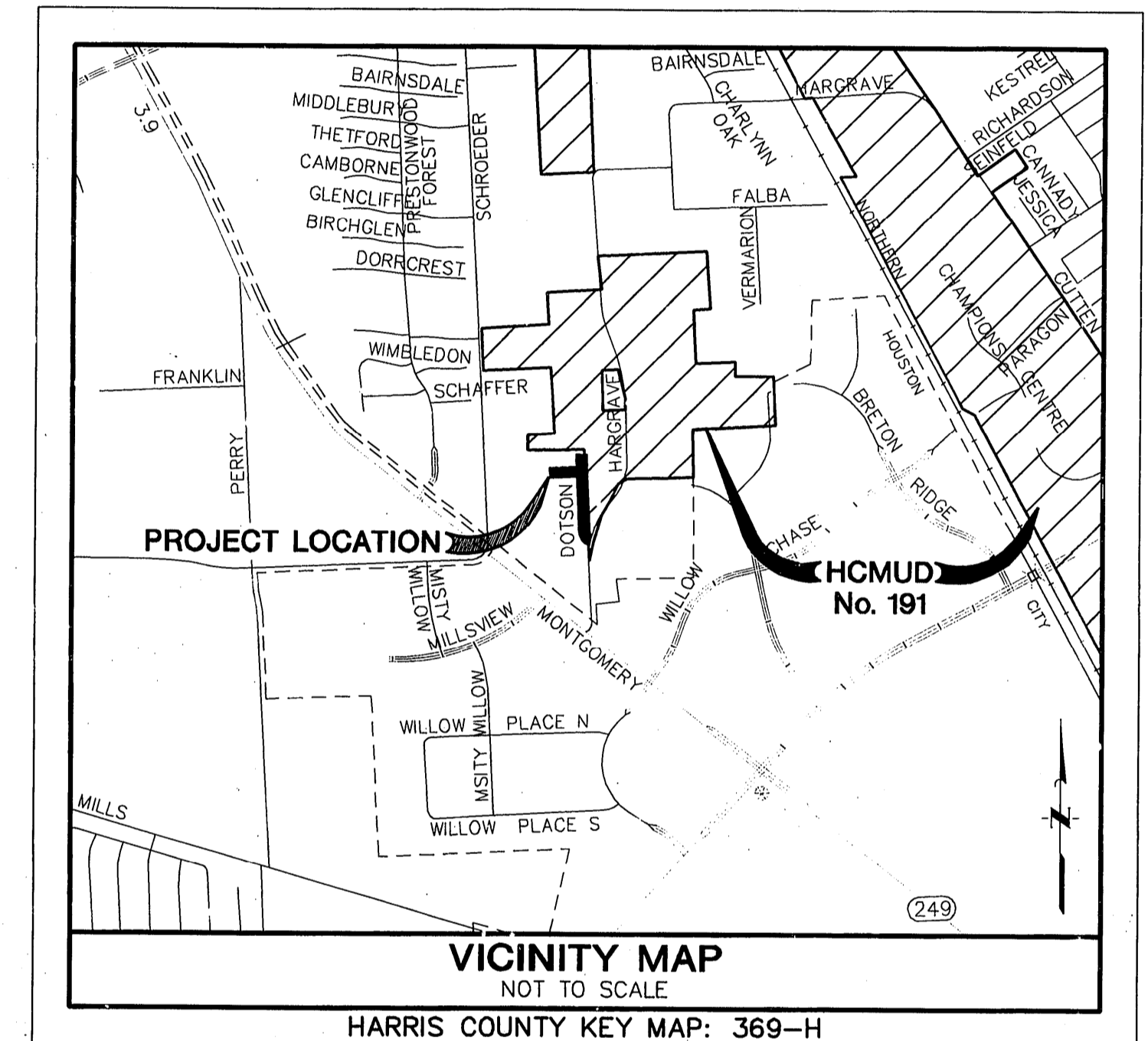
APRIL 2007

JC JONES & CARTER, INC.
ENGINEERS • PLANNERS • SURVEYORS

6335 Gullfion Dr., Suite 100 Houston, Texas 77081 (713) 777-5337

**RECORD
DRAWING**

ILMS No. 07013900
C.O.H. LOG No. 07-0193



VICINITY MAP
NOT TO SCALE

HARRIS COUNTY KEY MAP: 369-H
FEMA MAP No. 48201C0435L

SURVEYED BY: _____ FB NO.: _____	
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES	
CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
WATER 4/11/07	TRAFFIC & TRANSPORTATION
WASTEWATER 4/12/07	STORM WATER QUALITY
STORM	FACILITIES
STREET & BRIDGE	
CITY ENGINEER	
FOR CITY OF HOUSTON USE ONLY	
SHEET No. 1 OF 13	

WATER AND SANITARY SEWER EXTENSIONS ALONG DOTSON ROAD FOR HAMMETT INVESTMENTS, L.P.
IN HARRIS COUNTY MUNICIPAL UTILITY DISTRICT No. 191

JC JONES & CARTER, INC.
ENGINEERS • PLANNERS • SURVEYORS
Houston, Texas

GENERAL CONSTRUCTION NOTES

- 1. 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 NOVEMBER 2005) AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING" (MOST RECENT ISSUE NOVEMBER 2005) 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 FEBRUARY 2005). NOTE THAT PLAN SIGNATURES AND LETTERS OF CAPACITY AVAILABILITY FOR STORM, WASTEWATER AND WATER EXPIRE AFTER ONE YEAR AND THE LATEST EDITIONS OF DESIGN RULES, SPECIFICATIONS, STANDARD DETAILS AND MANUALS SHALL 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...

WATERLINE CONSTRUCTION NOTES

- 1. ALL FOUR (4) INCH THROUGH TWELVE (12) WATERLINES TO BE CLASS 150 (DR-18), PVC (AWWA C-900), OR DUCTILE IRON AS SPECIFIED. ASBESTOS CEMENT WATERLINE WILL NOT BE APPROVED FOR THIS PROJECT.
- 2. TWELVE (12) INCH OR SMALLER WATERLINES SHALL HAVE A MINIMUM COVER OF FOUR (4) FEET BELOW TOP OF CURB. 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.
- 3. WATERLINE FITTINGS SHALL BE RESTRAINED JOINTS IN CAST OR DUCTILE IRON UNLESS OTHERWISE NOTED.
- 4. WATERLINES SHALL BE CONSTRUCTED SO THAT ALL CROSSES AND TEES WILL NOT BE LOCATED UNDER PROPOSED OR FUTURE PAVING.
- 5. VALVES SHALL BE LOCATED OPPOSITE PROPERTY CORNERS EXCEPT AS SHOWN ON THE PLANS.
- 6. MAINTAIN 12-INCH MINIMUM CLEARANCE BETWEEN ALL WATERLINES, STORM SEWERS, AND CULVERTS UNLESS OTHERWISE NOTED.
- 7. FOR SPECIAL WATERLINE / SANITARY SEWER CLEARANCES, SEE SANITARY SEWER CONSTRUCTION NOTES.
- 8. WATERLINES SHALL BE BANK SAND-BEDDED AND BACKFILLED IN ACCORDANCE WITH THE LATEST EDITION OF CITY OF HOUSTON SPECIFICATIONS AND DETAILS.
- 9. 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.
- 10. ALL NEWLY INSTALLED PIPES, COATINGS, AND RELATED PRODUCTS SHALL CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE / NATIONAL SANITATION FOUNDATION (ANSI / NSF) STANDARDS AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.
- 11. DO NOT INCLUDE SERVICE CONNECTIONS IN THIS CONTRACT. HOWEVER, WHEN CONSTRUCTED, THEY WILL BE IN ACCORDANCE WITH THE LATEST EDITION OF CITY OF HOUSTON SPECIFICATIONS.
- 12. ALL FLUSHING VALVES AND VALVE BOXES SHALL BE ADJUSTED TO FINISH GRADE AFTER PAVING IS COMPLETE. FLUSHING VALVES SHALL BE TURNED TO FACE STREET.
- 13. PROVIDE GATE VALVE EXTENSION STEM PER CITY OF HOUSTON AND/OR AS DIRECTED BY THE ENGINEER.
- 14. 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.

SANITARY SEWER CONSTRUCTION NOTES

- 1. ALL PROPOSED 8-INCH TO 12-INCH GRAVITY SANITARY SEWER LINES WILL BE DUCTILE IRON OR SDR 26 PVC PIPE ASTM D-3034, UNLESS OTHERWISE NOTED ON PLANS. 15 INCH GRAVITY LINES WILL BE SDR-35PVC, ASTM D-3034, AND 18-INCH TO 27 INCH GRAVITY LINES WILL BE SDR-35 PVC, ASTM F-679, UNLESS OTHERWISE NOTED ON PLANS. NON-PRESSURE PVC MAY NOT BE SUBSTITUTED FOR DIP OR C-900 PVC, (DR 18 ONLY).
- 2. ALL TYPES OF SANITARY SEWER PIPE SHALL BE CEMENT SAND BEDDED AND BACKFILLED AS NOTED ON CITY OF HOUSTON DWG. 02317-03 FOR DRY STABLE TRENCH (NO SEPARATE PAY).
- 3. MAINTAIN 12-INCH MINIMUM CLEARANCE BETWEEN ALL SANITARY SEWERS, STORM SEWERS AND CULVERTS UNLESS OTHERWISE NOTED.
- 4. SEWER TRENCHES UNDER OR WITHIN ONE (1) FOOT OF PROPOSED OR FUTURE PAVEMENT TO BE BACKFILLED WITH CEMENT-SAND BACKFILL AS SPECIFIED, TO WITHIN ONE (1) FOOT OF SUBGRADE. INCLUDE COST OF BACKFILL IN UNIT PRICE BID PER LINEAR FOOT OF PIPE.
- 5. ALL SEWER LINES SHALL BE AIR-TESTED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
- 6. FOR ALL PVC PIPE, USE MANHOLE WATERSTOP GASKET AND CLAMP ASSEMBLY AT MANHOLE CONNECTIONS (NO SEPARATE PAY).
- 7. SANITARY SEWER MANHOLES SHALL BE STANDARD CITY OF HOUSTON, UNLESS OTHERWISE NOTED. ALL SANITARY MANHOLES WITHIN THE 100-YEAR FLOOD HAVE THE TOP SET AT LEAST TWELVE (12) INCHES ABOVE THE BASE FLOOD ELEVATION OR SEALED AND VENTED.
- 8. ALL MANHOLES SHALL BE SET SO THAT THE TOP OF THE CONE IS NO HIGHER THAN THE ADJACENT TOP OF CURB ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER. THE FINISH RIM ELEVATION SHALL BE MET WITH PRE-CAST RINGS.
- 9. ALL FAR SIDE LEADS SHALL BE SIX (6) INCHES OR EIGHT (8) INCHES AT 0.70% MINIMUM SLOPE AND SHALL BE PVC, DR 26, 160 PSI PRESSURE PIPE CONFORMING TO ASTM D-2241. STUBS AND FAR-SIDE LEADS WILL BE AWWA C-900, DR 18, WHERE THERE IS LESS THAN THREE (3) FOOT COVER TO TOP OF CURBS.
- 10. LEADS SERVING TWO LOTS SHALL HAVE A SERVICE "WYE" WITH PLUGS (NO SEPARATE PAY). THE "WYE" SHALL BE LOCATED WITHIN THE STREET RIGHT-OF-WAY OR ADJOINING UTILITY EASEMENT.
- 11. ALL DUCTILE IRON PIPE SHALL BE 150 PSI WITH EIGHT (8) MIL, BLACK VIRGIN POLYETHYLENE WRAP AS SPECIFIED IN ANSI/AWWA C105/A21.5.
- 12. ALL D.I.P. SHALL BE LINED WITH VIRGIN POLYETHYLENE CONFORMING TO ASTM D-1248; 40 MIL THICKNESS (NOMINAL), 35 MILS (MINIMUM). LINNER TO BE POLYOZIE, POLYBOND, OR EQUAL. AT ANY POINT WHERE D.I.P. CAN NOT BE WRAPPED IN POLYETHYLENE TUBING, COAT THE EXTERIOR WITH POLYBOND OR APPROVED EQUAL.
- 13. MANHOLE RIMS ARE TO BE SET AT THE ELEVATIONS SHOWN ON THE PLANS INITIALLY. AFTER PAVING AND GRADING IS COMPLETED, RIMS ARE TO BE ADJUSTED TO THREE (3) TO SIX (6) INCHES ABOVE FINAL GRADE AND BACK-DRESSED WITH DIRT TO PROVIDE DRAINAGE AWAY FROM THE MANHOLE.
- 14. ALL PVC PIPE (ALL TYPES AND SDR/DR WALL THICKNESS TO BE USED) SHALL HAVE RUBBER GASKET EQUIPPED BELL AND SPIGOT JOINTS CONFORMING TO ASTM D-3212. THE GASKET MATERIAL SHALL CONFORM TO ASTM F-477. SOLVENT WELDED JOINTS SHALL NOT BE APPROVED FOR THIS PROJECT.
- 15. IF WET SAND IS ENCOUNTERED IN THE FIELD, USE SPECIAL BEDDING PER CITY OF HOUSTON DWG 02317-01, 02317-02 AND AS DIRECTED BY THE ENGINEER.
- 16. 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, FOLLOW THESE SPECIAL PROCEDURES:

PROTECTION REQUIREMENTS AT WATER LINE - SANITARY SEWER CROSSINGS

Table with columns: PRIMARY CONDITION, PROPOSED WATER - EXISTING SANITARY, PROPOSED WATER - PROPOSED SANITARY OR EXISTING WATER - PROPOSED SANITARY, SECONDARY CONDITIONS, WATER OVER SANITARY, WATER UNDER SANITARY, WATER OVER SANITARY, WATER UNDER SANITARY, IF THE CLEARANCE IS, LESS THAN 2 FT, GREATER THAN OR EQUAL TO 2 FT BUT LESS THAN 9 FT, LESS THAN 2 FT, GREATER THAN OR EQUAL TO 2 FT BUT LESS THAN 9 FT, LESS THAN 2 FT, GREATER THAN OR EQUAL TO 2 FT BUT LESS THAN 9 FT, PROTECTION REQUIREMENT, 1, 2, 3, 2, 6, 4, 1, 3, 5, 2, 1, 3, 5, 5

PROTECTION REQUIREMENTS FOR SANITARY SEWER CROSSINGS (UNLESS VARIANCE IS GRANTED BY THE TCEQ) (ALL CLEARANCES SHALL BE MEASURED FROM OUTSIDE WALL TO OUTSIDE WALL)

- 1. PLACE ONE FULL SECTION OF APPROVED JOINT WATER LINE CENTERED AT SANITARY SEWER. NOT APPLICABLE FOR EXISTING WATER.
- 2. IF NO EVIDENCE OF SANITARY SEWER LEAKAGE, PLACE ONE FULL SECTION OF WATER LINE CENTERED OVER SANITARY SEWER; IF THERE IS EVIDENCE OF LEAKAGE, USE NOTE 4 BELOW.
- 3. ONE FOOT MINIMUM CLEARANCE.
- 4. AUGER 9 FEET MINIMUM EACH SIDE OF SANITARY SEWER. PLACE ONE FULL SECTION OF WATER LINE, CENTERED UNDER SANITARY SEWER, FILL AUGURED HOLE WITH WITH BENTONITE/CLAY MIXTURE. IF SEWER LINE IS LEAKING, SEWER LINE SHALL BE REPLACED WITH 150 PSI LINED DUCTILE IRON OR PVC PIPE WITH APPROPRIATE ADAPTERS ON ALL PORTIONS OF THE SANITARY SEWER WITHIN 9 FEET OF THE WATER LINE. PROVIDE RESTRAINED JOINTS FOR BOTH WATER AND SANITARY SEWER LINES AT EACH END OF PROPOSED PIPE SECTION. WATER LINE MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN CITY'S STANDARD SPECIFICATIONS. SEWER LINE SHALL PASS AN INFILTRATION EX-FILTRATION LOW PRESSURE AIR TEST OR LEAKAGE TEST AS SPECIFIED IN TCEQ CHAPTER 317-2 DESIGN CRITERIA FOR SEWER SYSTEMS.
- 5. PLACE MINIMUM ONE FULL SECTION OF SANITARY SEWER, 150 PSI LINED DUCTILE IRON OR PVC PIPE CENTERED AT THE WATER LINE AND PROVIDE RESTRAINED JOINTS FOR BOTH WATER AND SANITARY SEWER LINES AT EACH END OF PROPOSED PIPE SECTION. USE CEMENT-STABILIZED SAND BACKFILL FOR ALL PORTIONS OF THE SANITARY SEWER WITHIN 9 FEET OF THE WATER LINE, AS MEASURED PERPENDICULARLY FROM ANY POINT ON THE WATER LINE TO THE SANITARY SEWER (MINIMUM 2.5 SACKS CEMENT PER CUBIC YARD OF SAND). THE CEMENT STABILIZED SAND BEDDING SHALL START AT A POINT 6 INCHES BELOW THE BOTTOM OF SANITARY SEWER TO 6 INCHES ABOVE THE TOP OF SANITARY SEWER AND ONE QUARTER OF THE PIPE DIAMETER OR 6 INCHES, WHICHEVER IS GREATER, ON THE SIDE OF THE SANITARY SEWER.
- 6. NOT ALLOWED.

SPECIAL NOTES: LOCATION OF SANITARY SEWER FACILITIES

- 1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING RED LINE RECORD DRAWINGS (INCLUDING MEASUREMENTS FROM TWO FIXED OBJECTS TO ENDS OF SANITARY SEWER SERVICES) AT THE COMPLETION OF THIS JOB.

UTILITY NOTES

- 1. "CENTER POINT" ENERGY (ELECTRICAL FACILITIES) OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH AND SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) 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 "CENTER POINT" ENERGY AT 713-207-7777
- 2. PUBLIC UTILITY SERVICE LINES (WATER, SPRINKLER SYSTEMS, SANITARY, STORM, AND ALL TYPES OF DRY UTILITIES) ARE NOT SHOWN ON THE DRAWINGS. ANTICIPATE THAT SUCH SERVICE LINES EXIST AND REPAIR THEM IF DAMAGED DURING CONSTRUCTION. NO SEPARATE PAY WILL BE MADE FOR REPAIRS; COST SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

CAUTION: UNDERGROUND GAS FACILITIES

LOCATIONS OF CENTERPOINT ENERGY GAS FACILITY MAIN LINES (TO INCLUDE UNIT GAS TRANSMISSION AND/OR GAS SUPPLY CORPORATION WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. OUR SIGNATURE ON THESE PLANS ONLY INDICATE 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 GAS FACILITY 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.

-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 THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

CAUTION: UNDERGROUND ELECTRICAL FACILITIES

UNDERGROUND ELECTRICAL FACILITIES EXIST IN THE AREA OF THIS PROJECT. DO NOT BEGIN CONSTRUCTION UNTIL THESE FACILITIES HAVE BEEN LOCATED AND STAKED. TO HAVE THESE UNDERGROUND FACILITIES STAKED, CALL THE UTILITY COORDINATING COMMITTEE AT (713) 223-4567, OR TOLL FREE AT 1-800-669-8344, AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION.

SBC FACILITIES

THE LOCATIONS OF SBC 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 SBC FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE SBC FACILITIES.

WHEN SBC 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.

TIME WARNER CABLE FACILITIES

THE LOCATIONS OF TIME WARNER CABLE FACILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. CONTRACTOR 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 TEXAS ONE AT 1-800-245-4545 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 TIME WARNER CABLE FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPANIED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE TIME WARNER CABLE FACILITIES.

WHEN TIME WARNER CABLE 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.

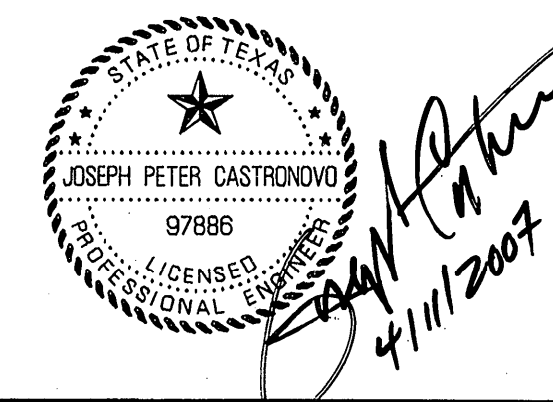
THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

CONTRACTOR WORK ZONE NOTES

- 1. 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. SCHOOL DRIVEWAYS WILL BE MAINTAINED OPEN WHERE PRACTICAL WHEN THE SCHOOL IS IN SESSION.
- 2. THE LENGTH OF THE WORK ZONE MUST BE MINIMIZED WITHIN THE HARRIS COUNTY 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.

WATER LINE CONSTRUCTION NOTES

- 1. 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.



PRIVATE UTILITY LINES SHOWN AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567. Includes signature of Joseph Peter Castorino, dated 4/18/07, and a table with columns for DATE, UPDATED NOTES, REVISIONS, JPC, APP.

HARRIS COUNTY M.U.D. No. 191 HARRIS COUNTY, TEXAS

JC JONES & CARTER, INC. ENGINEERS • PLANNERS • SURVEYORS 6335 Gullfion Dr., Suite 100 Houston, Texas 77081 (713) 777-5337

HAMMETT PROPERTY

CONSTRUCTION NOTES

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

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

MAIL: 4/18/07 TRAFFIC & TRANSPORTATION WASTEWATER: 4/12/07 STORM WATER QUALITY STORM: FACILITIES

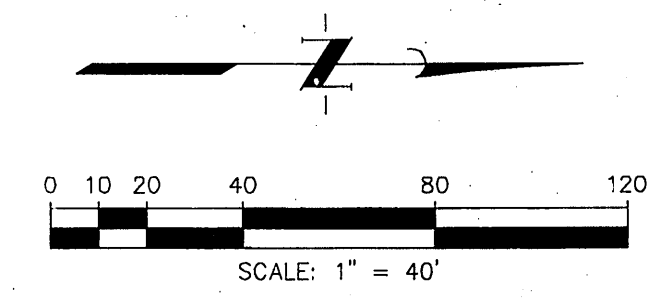
FILE NO: JOB NO: 05386-001 DATE: APRIL 2007 DGN. BY: AS DWG. BY: AHS/APJ SCALE: NTS SHEET No. 2 OF 13 FOR CITY OF HOUSTON USE ONLY CITY DRAWING NUMBER 43241 HOUSTON, TEXAS

RECORD DRAWING

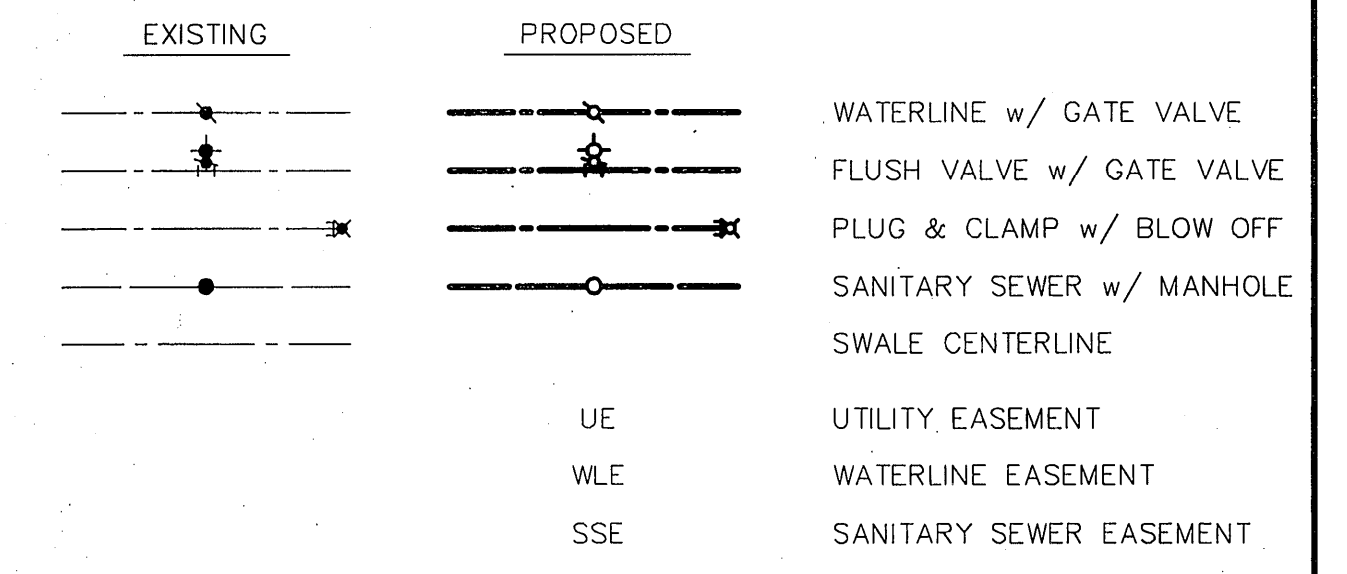
BENCH MARK
Elevations shown hereon are based on Tropical Storm Allison Recovery Project Harris County Floodplain Reference Mark No. 150770 located 100 feet north of the intersection of Farm to Market Road (FM) 1960 and Breton Ridge Street with a published elevation of 120.92, NAVD 88, 2001 adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark A being a 100D Nail in power pole along the east right-of-way of Dotson Road located +/- 350 feet north of the intersection of Hargrave Drive and Dotson Road.
Elevation = 123.59 NAVD 88, 2001 Adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark B being a railroad spike in power pole along the east right-of-way of Dotson Road located +/- 530 feet north of the intersection of Hargrave Drive and Dotson Road.
Elevation = 123.60, NAVD 88, 2001 Adjustment.



LEGEND



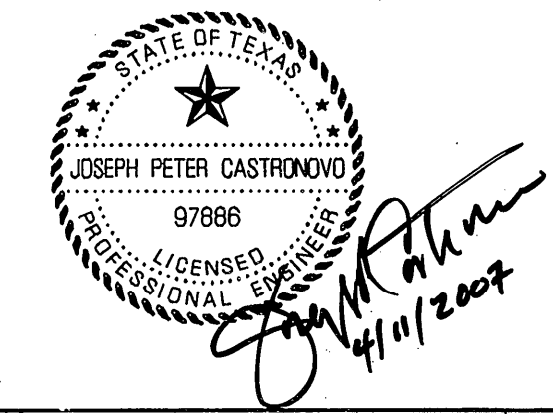
PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

[Signature] Date: 4/18/07
CenterPoint Energy/Electric/Facilities
(Approved only for crossing underground ductlines, unless otherwise noted.)
Valid at time of review only.

[Signature] Date: 9-2-07
SBC Approved for underground conduit facilities only.
Signature valid for one year.

[Signature] Date: 4/18/07
CenterPoint Energy/Gas Facilities
(Gas service lines are not shown)

NOTE: ALL SANITARY SEWER MANHOLES IN THIS PROJECT ARE DESIGNED TO BE TWELVE INCHES (12") ABOVE THE 100-YEAR FLOOD PLAIN



RECORD DRAWING

NO.	DATE	REVISIONS	APP.
1	4/11/07	SHEET REPLACED	JPC

HARRIS COUNTY M.U.D. No. 191
HARRIS COUNTY, TEXAS

JC JONES & CARTER, INC.
ENGINEERS • PLANNERS • SURVEYORS
6335 Gullfom Dr., Suite 100 Houston, Texas 77081 (713) 777-5337

HAMMETT PROPERTY

WATER & SANITARY SEWER GENERAL LAYOUT

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

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER	4/11/07	TRAFFIC & TRANSPORTATION
WASTEWATER	4/11/07	STORM WATER QUALITY
STORM		FACILITIES

STREET & BRIDGE

FILE NO:	FOR CITY OF HOUSTON USE ONLY
JOB NO: D5386-001	CITY DWG. NO.
DATE: APRIL 2007	
DGN. BY: AS	
DWG. BY: AHS	
SCALE: AS SHOWN	

SHEET No. 3 OF 13

43241
CITY DRAWING NUMBER

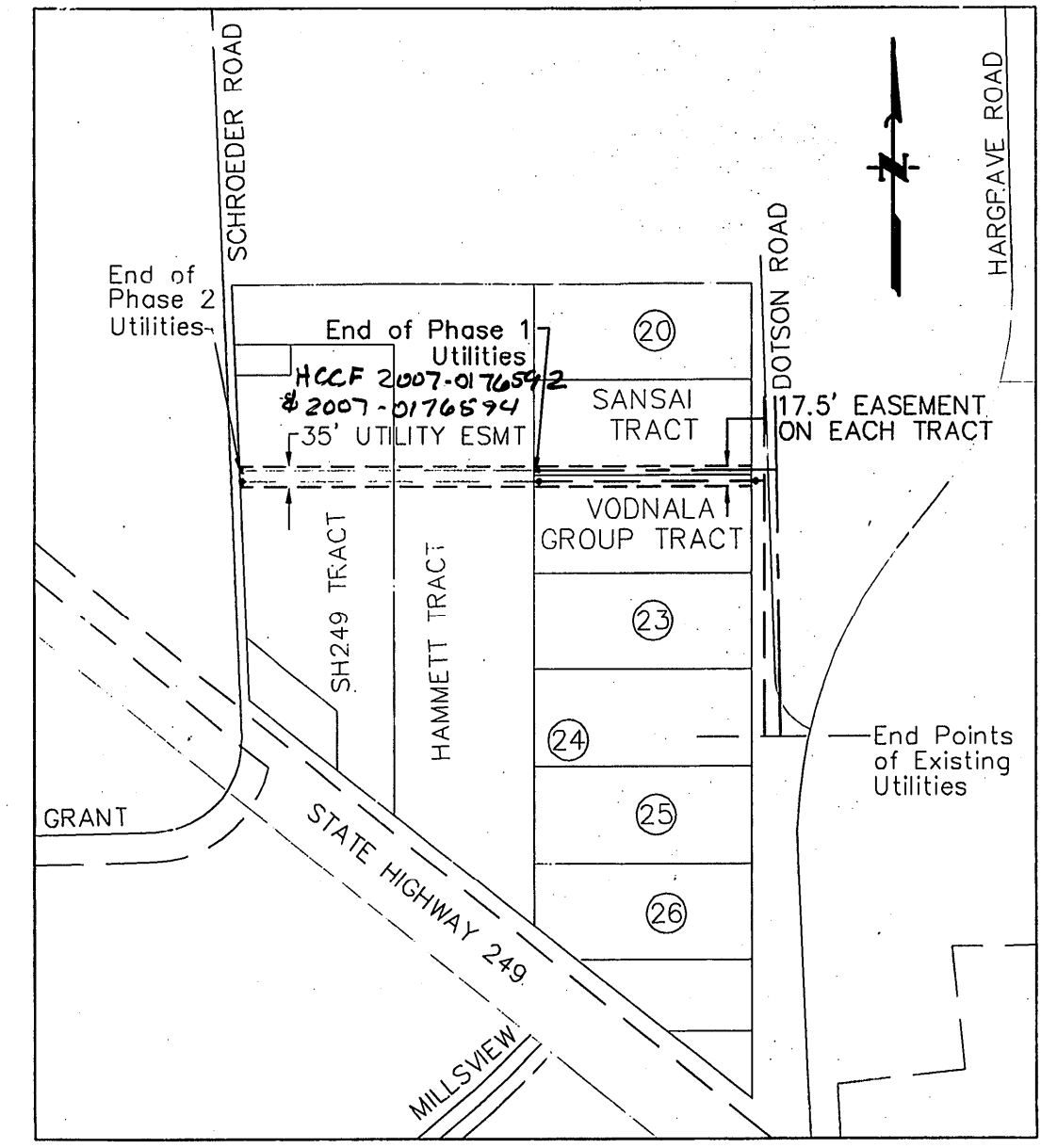
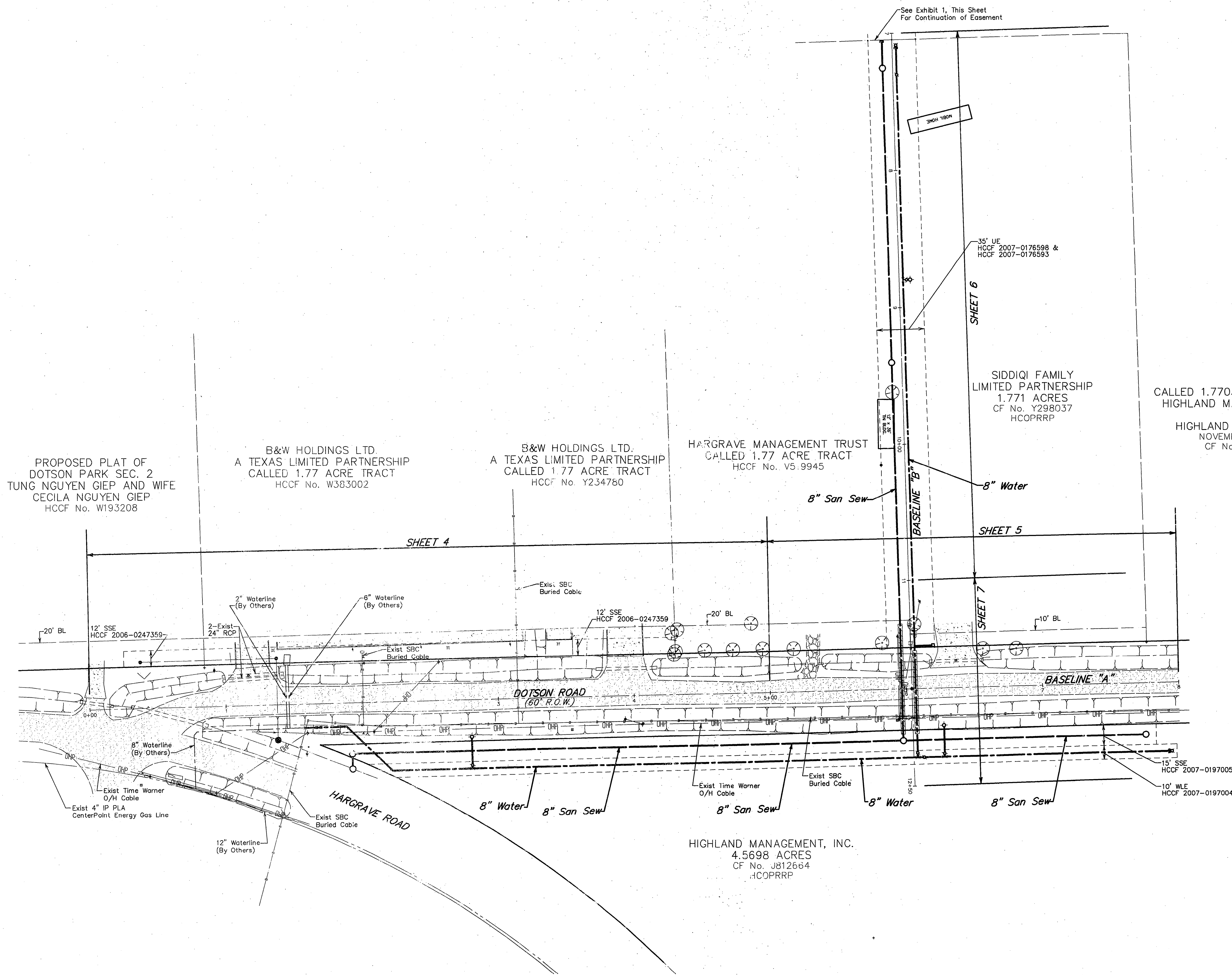


EXHIBIT No. 1
SCALE: 1"=300'



PROPOSED PLAT OF DOTSON PARK SEC. 2
TUNG NGUYEN GIEP AND WIFE
CECILA NGUYEN GIEP
HCCF No. W193208

B&W HOLDINGS LTD.
A TEXAS LIMITED PARTNERSHIP
CALLED 1.77 ACRE TRACT
HCCF No. W383002

B&W HOLDINGS LTD.
A TEXAS LIMITED PARTNERSHIP
CALLED 1.77 ACRE TRACT
HCCF No. Y234780

HARGRAVE MANAGEMENT TRUST
CALLED 1.77 ACRE TRACT
HCCF No. V5.9945

SIDDIQI FAMILY LIMITED PARTNERSHIP
1.771 ACRES
CF No. Y298037
HCOPRRP

CALLED 1.7703 ACRES TRACT V
HIGHLAND MANAGEMENT, INC.
TO
HIGHLAND TIMBERS, LTD.
NOVEMBER 1, 1999
CF No. U054466

HIGHLAND MANAGEMENT, INC.
4.5698 ACRES
CF No. J812664
HCOPRRP

PROPOSED PLAT OF
DOTSON PARK SEC. 2
TUNG NGUYEN GIEP AND WIFE
CECILA NGUYEN GIEP
HCCF No. W193208

B&W HOLDINGS LTD.
A TEXAS LIMITED PARTNERSHIP
CALLED 1.77 ACRE TRACT
HCCF No. Y234780

B&W HOLDINGS LTD.
A TEXAS LIMITED PARTNERSHIP
CALLED 1.77 ACRE TRACT
HCCF No. W383002

HARGRAVE MANAGEMENT TRUST
CALLED 1.77 ACRE TRACT
HCCF No. V519945

HIGHLAND MANAGEMENT, INC.
4.5698 ACRES
CF No. J812664
HCOPRRP

PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

CenterPoint Energy Electric Facilities
(Approved for clearing underground ductlines, unless otherwise noted.)
Valid only for time of review only.
Date: 4/18/07

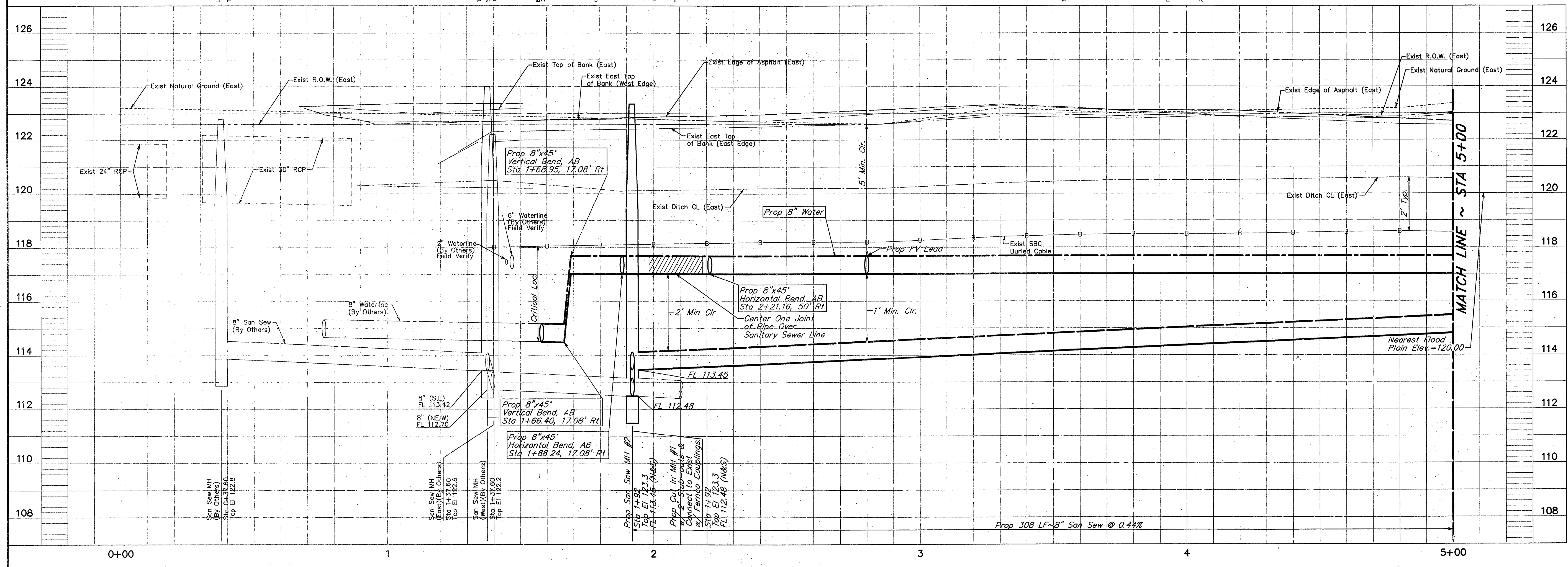
SBC Approved for underground conduit facilities only.
Signature valid for one year.
Date: 8-2-07

CenterPoint Energy Gas Facilities
(Gas service lines are not shown)
Date: 4/18/07

- NOTES:**
- Contractor Shall Verify Elevation of Blow-Off Valve Prior to Removal. Upon Removal, Contractor Shall Verify Field Connection of Proposed 8" Waterline & Connect Proposed 8"x22.5" Bend.
 - Contractor Shall Verify Flowlines of Exist 8" Sanitary Sewer Line Prior to Connecting to the Manhole. Proposed Sanitary Sewer Shall Connect 6" Above FL of the Existing Manhole.
 - All Trees Outside the Right of Way Shall be Protected During Construction Activities. (Unless Otherwise Noted)
 - Power Poles Shall be Protected & Supported During Construction Activities.
 - Contractor Shall Restore Roadside Swales to Existing Condition or Better.
 - Deflection in Proposed Waterline not to Exceed Manufacturer's Maximum Deflection or 5", whichever is Smaller. All Sections with Deflection Joints shall be Restrained.
 - Contractor Shall Verify Elevations of Exist 8" Sanitary Sewer Prior to Cutting in New Manhole. Proposed 8" Sanitary Sewer Shall be Graded to Fall from MH #2 to MH #1. See Detail 10, Sheet 11.
 - Contractor Shall Protect the Proposed Waterline. Also, One Joint of Waterline Pipe shall be Centered over the Proposed Sanitary Sewer Line.

**RECORD
DRAWING**

BASELINE "A" - DOTSON ROAD



REVISIONS

NO.	DATE	REVISIONS	APP.
1	4/11/07	SHEET REPLACED	JPC

HARRIS COUNTY M.U.D. No 191
HARRIS COUNTY, TEXAS

JC JONES & CARTER, INC.
ENGINEERS • PLANNERS • SURVEYORS
6335 Gullfong Dr., Suite 100 Houston, Texas 77061 (713) 777-5337

HAMMETT PROPERTY

**BASELINE "A"
DOTSON ROAD
STA 0+00 TO STA 5+00**

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

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER	4/11/07	TRAFFIC & TRANSPORTATION
WASTEWATER	4/11/07	STORM WATER QUALITY
STORM		FACILITIES
STREET & BRIDGE		

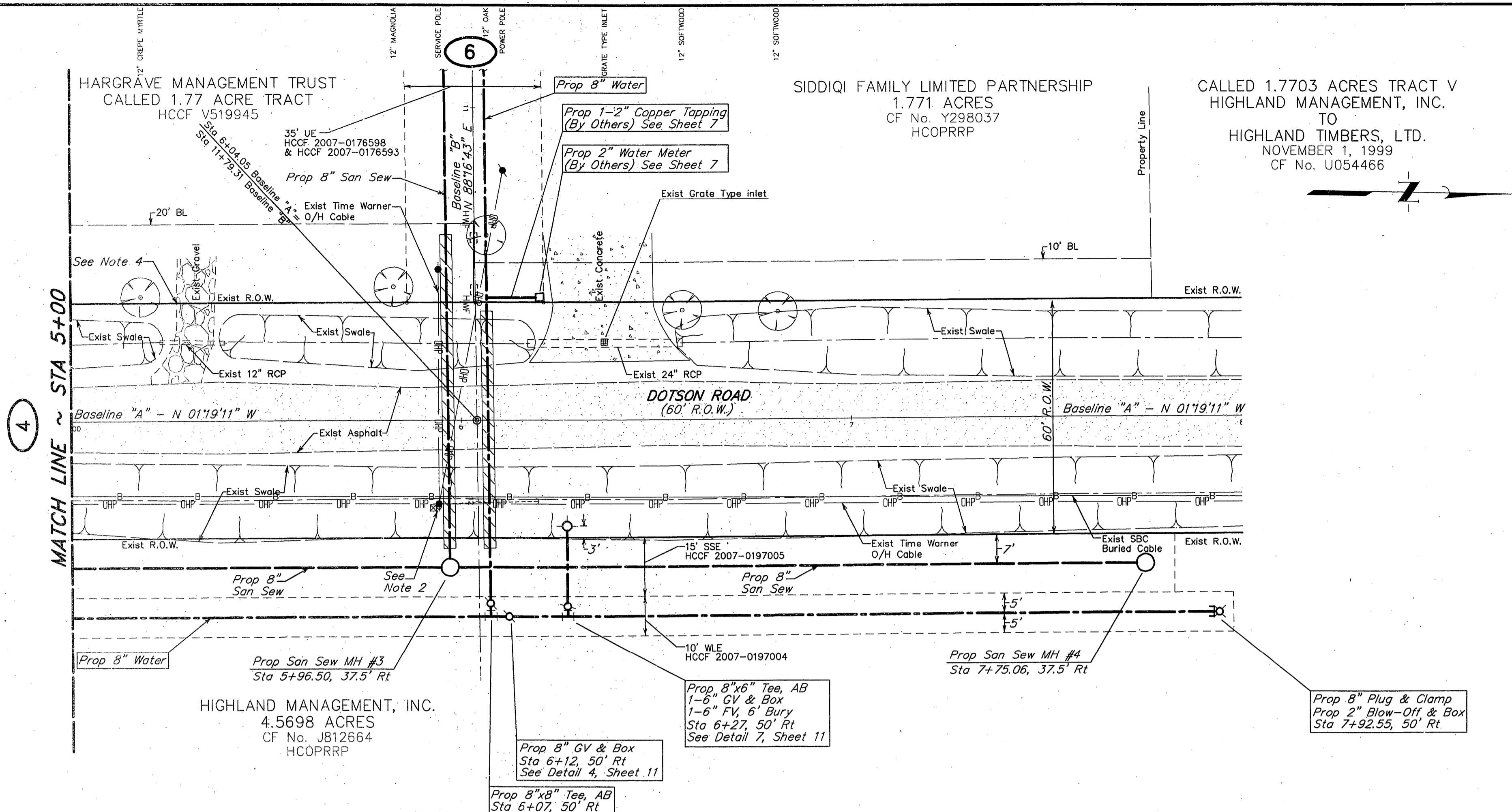
FILE NO: _____
JOB NO: 05386-001-00

DATE: APRIL 2007
DGN. BY: AS
DWG. BY: AHS

SCALE: 1"=20' Horiz.
1"=2' Vert.

SHEET NO. 4 OF 12

FOR CITY OF HOUSTON USE ONLY
CITY ENGINEER
43841
CITY OF HOUSTON
HOUSTON, TEXAS



BENCH MARK
Elevations shown hereon are based on Tropical Storm Allison Recovery Project Harris County Floodplain Reference Mark No. 150770 located 100 feet north of the intersection of Farm to Market Road (FM) 1960 and Breton Ridge Street with a published elevation of 120.92, NAVD 88, 2001 adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark A being a 100D Nail in power pole along the east right-of-way of Dotson Road located +/- 350 feet north of the intersection of Hargrave Drive and Dotson Road.
Elevation = 123.59, NAVD 88, 2001 Adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark B being a railroad spike in power pole along the east right-of-way of Dotson Road located +/- 530 feet north of the intersection of Hargrave Drive and Dotson Road.
Elevation = 123.60, NAVD 88, 2001 Adjustment.

PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE ONE STAR NOTIFICATION 713-223-4567.

[Signature] Date: 4/18/07
CenterPoint Energy/Electric Facilities
(Approval only for crossing underground ductlines, unless otherwise noted.)
Valid at time of review only.

[Signature] Date: 9-2-07
SBC Approved for underground conduit facilities only.
Signature valid for one year.

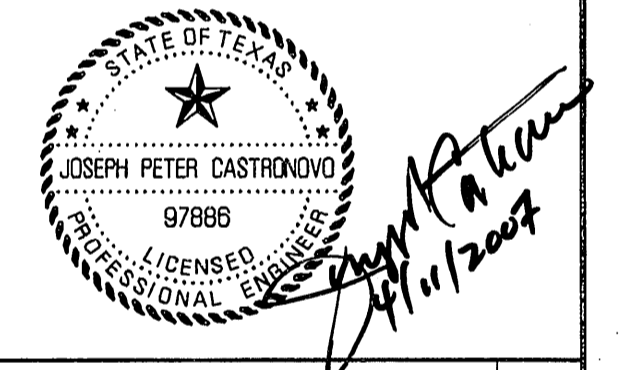
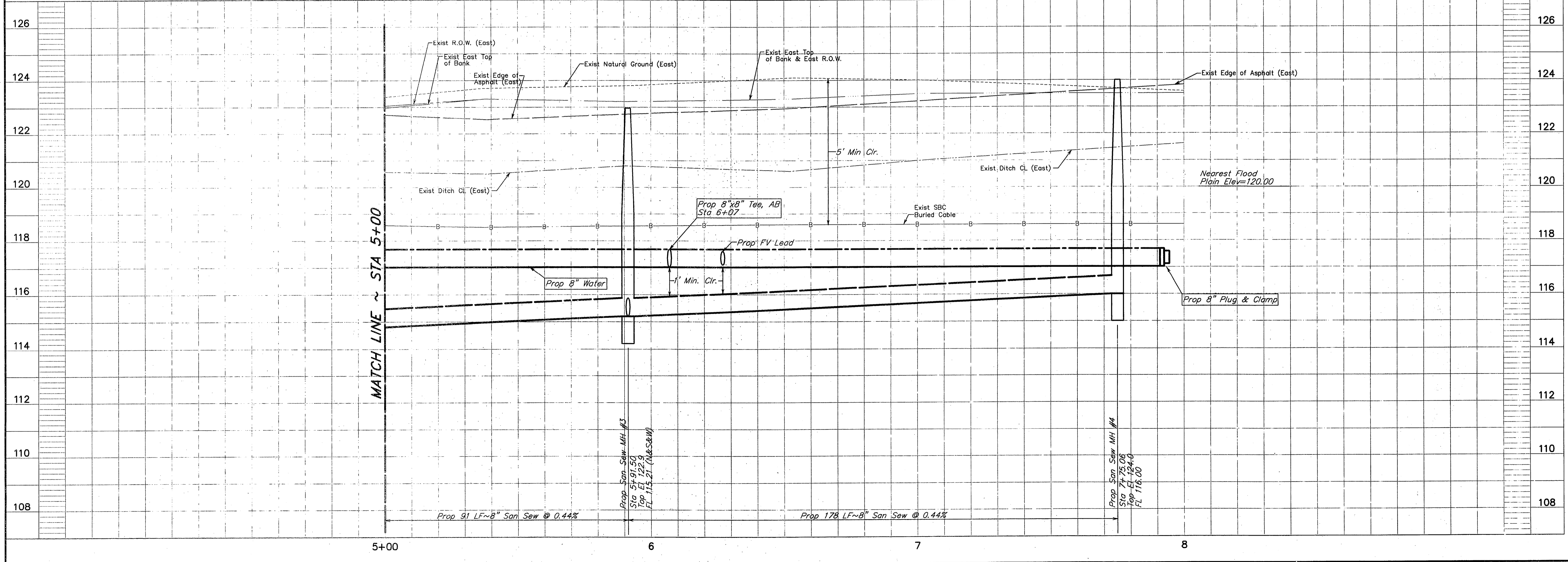
[Signature] Date: 4/18/07
CenterPoint Energy/Gas Facilities
(Gas service lines are not shown)

- NOTES:**
- All Trees Outside the Right of Way & Outside the 35' Utility Easement Shall be Protected During Construction Activities.
 - Power Poles Shall be Protected During Construction Activities.
 - Contractor Shall Restore Roadside Swales to Existing Condition or Better.
 - Contractor Shall Remove & Restore Gravel Driveway to Existing Condition or Better. Construction Shall be During Non-Peak Hours in Order to Allow for Access.
 - Deflection in Proposed Waterline not to Exceed Manufacturer's Maximum Deflection or 5", whichever is smaller. All Sections with Deflection Joints shall be Restrained.



**RECORD
DRAWING**

BASELINE "A" - DOTSON ROAD



NO.	DATE	REVISIONS	APP.
1	4/11/07	SHEET REPLACED	JPC

HARRIS COUNTY M.U.D. No 191
HARRIS COUNTY, TEXAS

JC JONES & CARTER, INC.
ENGINEERS • PLANNERS • SURVEYORS
6335 Guffon Dr., Suite 100 Houston, Texas 77081 (713) 777-5337

HAMMETT PROPERTY
BASELINE "A"
DOTSON ROAD
STA 5+00 TO STA 8+00

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

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER	4/11/07	TRAFFIC & TRANSPORTATION
WASTEWATER	4-12-07	STORM WATER QUALITY
STORM		FACILITIES
STREET & BRIDGE		

FILE NO:	FOR CITY OF HOUSTON USE ONLY
JOB NO: 05386-001-00	
DATE: APRIL 2007	
DCN. BY: AS	
DWG. BY: AHS	
SCALE: 1"=20' Horiz. 1"=2' Vert.	
SHEET No. 5 OF 13	

BENCH MARK
Elevations shown hereon are based on Tropical Storm Allison Recovery Project Harris County Floodplain Reference Mark No. 150770 located 100 feet north of the intersection of Farm to Market Road (FM) 1960 and Breton Ridge Street with a published elevation of 120.92, NAVD 88, 2001 adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark A being a 100D Nail in power pole along the east right-of-way of Dotson Road located +/- 350 feet north of the intersection of Hargrave Drive and Dotson Road.
Elevation = 123.59 NAVD 88, 2001 Adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark B being a railroad spike in power pole along the east right-of-way of Dotson Road located +/- 530 feet north of the intersection of Hargrave Drive and Dotson Road.
Elevation = 123.60, NAVD 88, 2001 Adjustment.

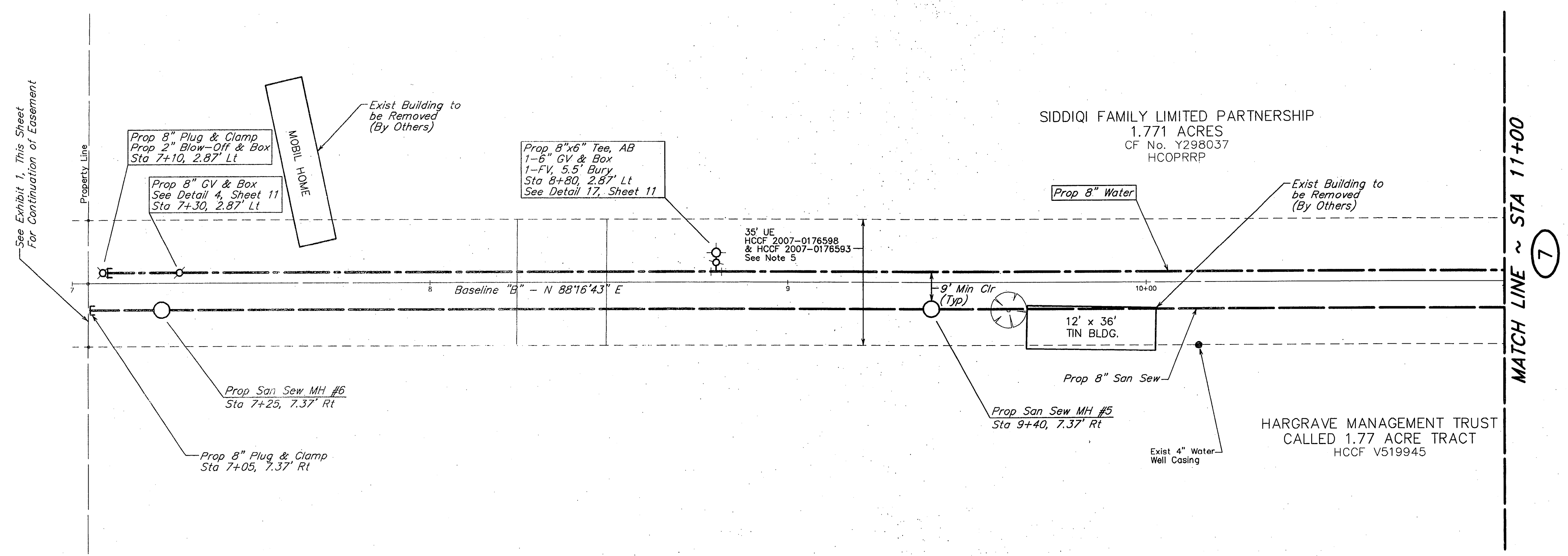
PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

CenterPoint Energy/Electric Facilities
(Approved only for crossing underground ductlines, unless otherwise noted.)
Valid at time of review only.
Date: 4/18/07

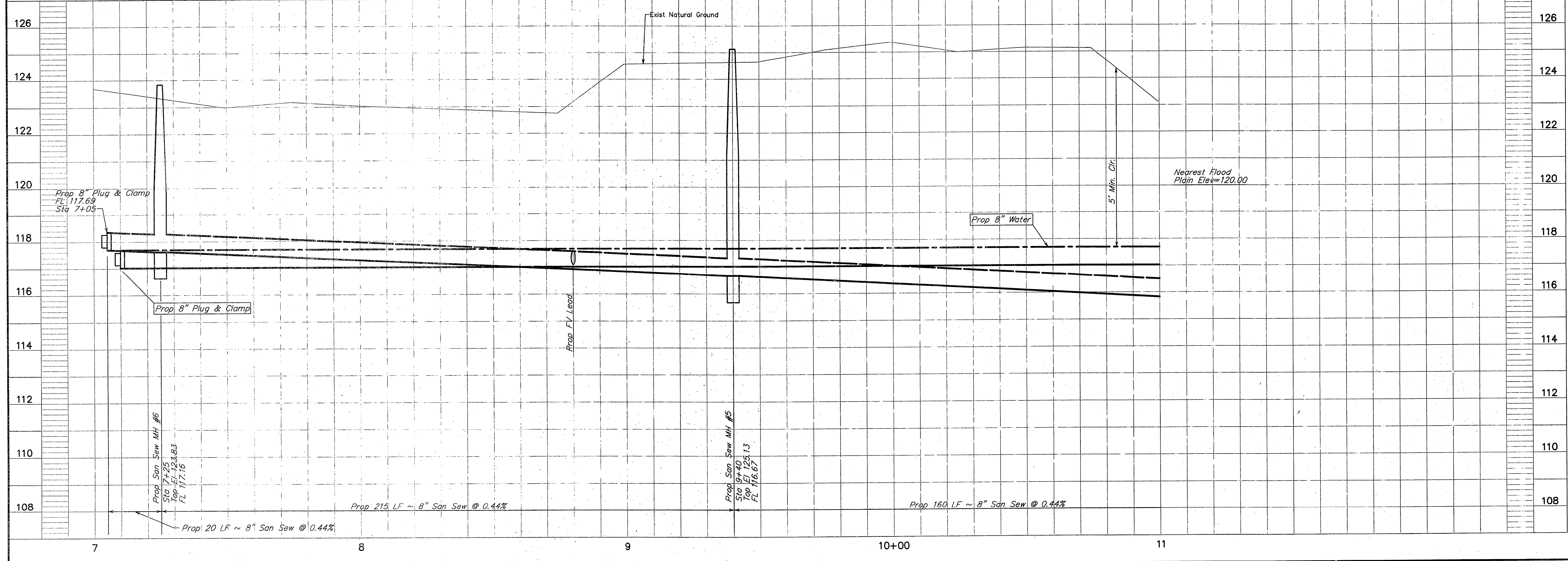
SBC Approved for underground conduit facilities only.
Signature valid for one year.
Date: 9-2-07

CenterPoint Energy/Gas Facilities
(Gas service lines are not shown.)
Date: 4/18/07

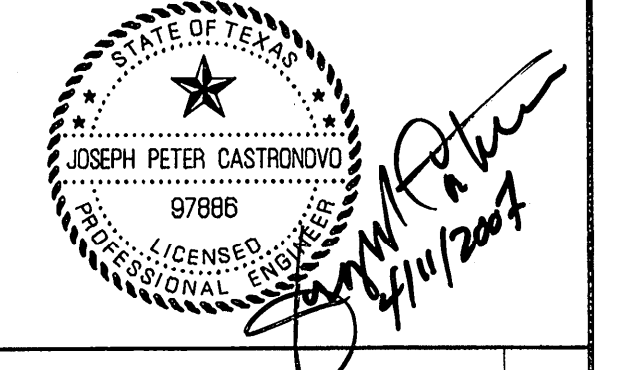
- NOTES:**
- All Trees Outside the Right of Way & Outside 35' Utility Easement Shall be Protected During Construction Activities.
 - Power Poles Shall be Protected During Construction Activities.
 - Contractor Shall Restore Roadside Swales to Existing Condition or Better.
 - Deflection in Proposed Waterline not to Exceed Manufacturer's Maximum Deflection or 5", whichever is Smaller. All Sections with Deflection Joints shall be Restrained.
 - Remove All Trees Inside the 35' Utility Easement.



BASELINE "B"



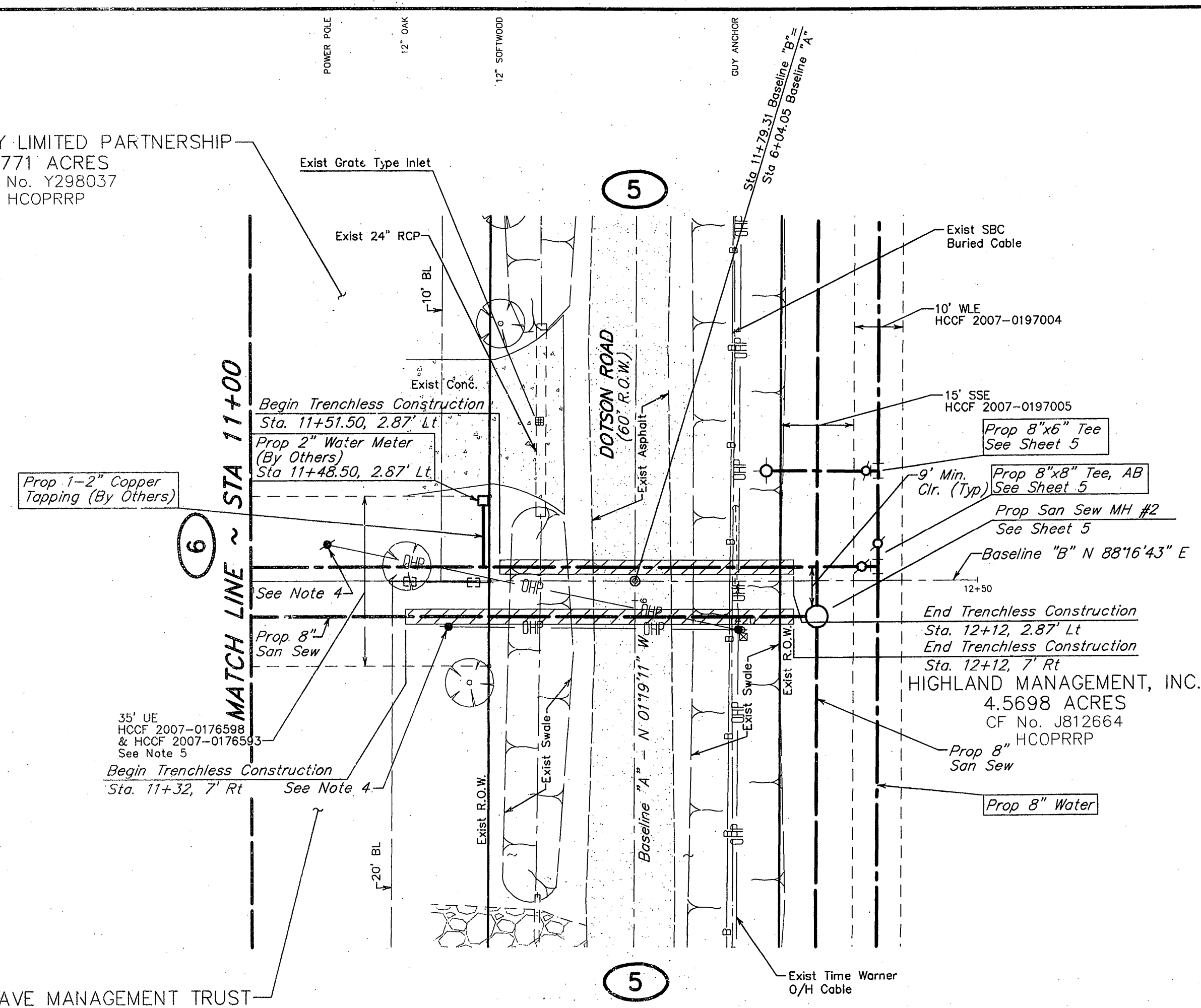
RECORD DRAWING



4/11/07 SHEET REPLACED	JPC
NO. DATE	REVISIONS APP.
HARRIS COUNTY M.U.D. No 191 HARRIS COUNTY, TEXAS	
JC JONES & CARTER, INC. ENGINEERS • PLANNERS • SURVEYORS 6335 Gullforn Dr., Suite 100 Houston, Texas 77081 (713) 777-5337	
HAMMETT PROPERTY	
BASELINE "B" STA 7+00 TO STA 11+00	
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:	FOR CITY OF HOUSTON USE ONLY
JOB NO: 05386-001-00	CITY ENGINEERING
DATE: APRIL 2007	ACCEPTED AND FILED
DGN. BY: AS	43241
DWG. BY: AHS	CITY DRAWING NUMBER
SCALE: 1"=20' Horiz.	HOUSTON, TEXAS
1"=2' Vert.	
SHEET No. 6	OF 13

SIDDIQI FAMILY LIMITED PARTNERSHIP
1.771 ACRES
CF No. Y298037
HCOPRRP

HARGRAVE MANAGEMENT TRUST
CALLED 1.77 ACRE TRACT
HCCF V519945



BENCH MARK
Elevations shown hereon are based on Tropical Storm Allison Recovery Project Harris County Floodplain Reference Mark No. 150770 located 100 feet north of the intersection of Farm to Market Road (FM) 1960 and Breton Ridge Street with a published elevation of 120.92, NAVD 88, 2001 adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark A being a 1000 Nail in power pole along the east right-of-way of Dotson Road located +/- 350 feet north of the intersection of Hargrave Drive and Dotson Road.
Elevation = 123.59 NAVD 88, 2001 Adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark B being a railroad spike in power pole along the east right-of-way of Dotson Road located +/- 530 feet north of the intersection of Hargrave Drive and Dotson Road.
Elevation = 123.60, NAVD 88, 2001 Adjustment.

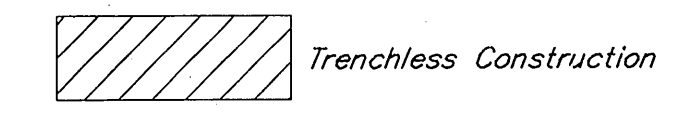
PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

CenterPoint Energy/Electric Facilities
(Approvals only for crossing underground ductlines, unless otherwise noted.)
Valid as time of review only.
Date: 4/18/07

SBC Approved for underground conduit facilities only.
Signature valid for one year.
Date: 5-2-07

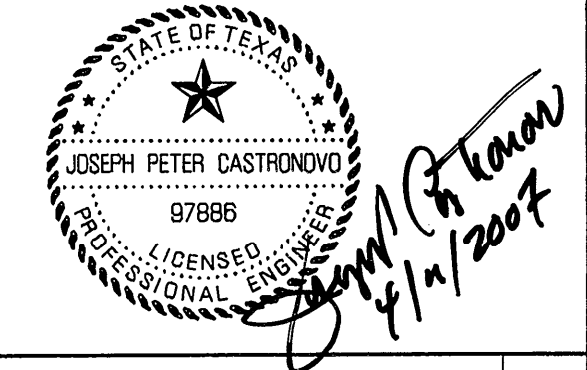
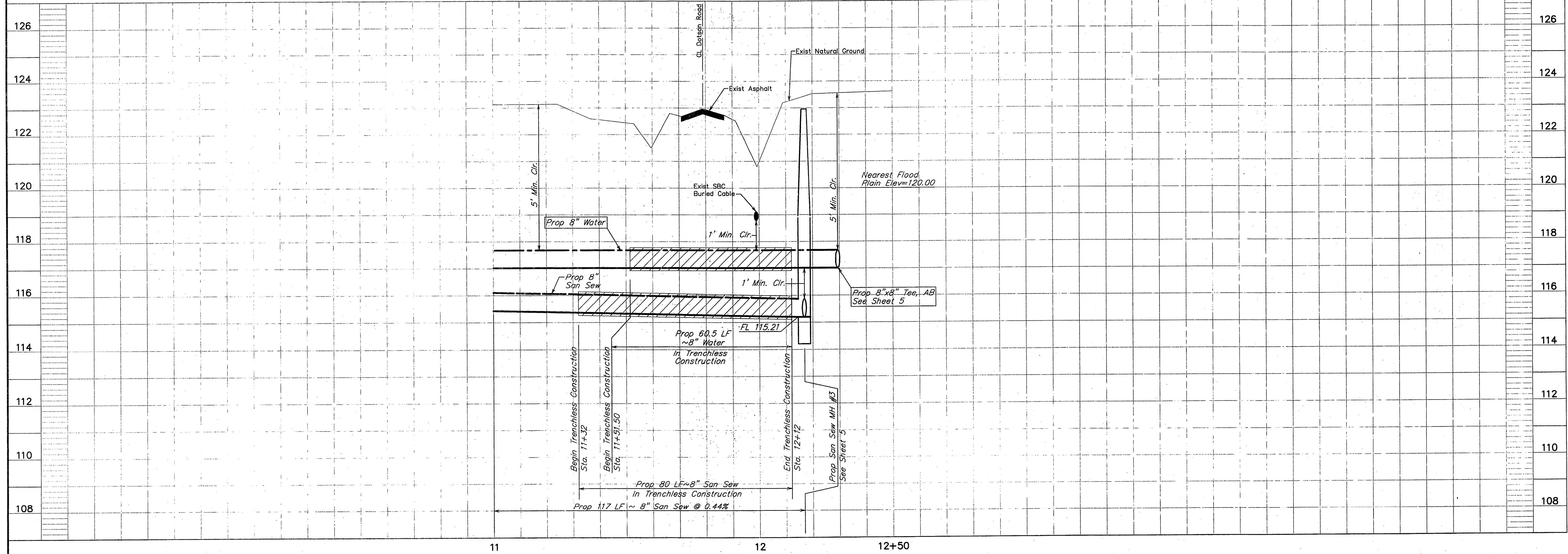
CenterPoint Energy/Gas Facilities
(Gas service-lines are not shown)
Date: 4/18/07

- NOTES:**
- All Trees Outside the Right of Way & Outside 35' Utility Easement Shall be Protected During Construction Activities.
 - Power Poles Shall be Protected During Construction Activities.
 - Contractor Shall Restore Roadside Swales to Existing Condition or Better.
 - Deflection in Proposed Waterline not to Exceed Manufacturer's Maximum Deflection or 5', whichever is Smaller. All Sections with Deflection Joints shall be Restrained.
 - Remove All Trees Inside the 35' Utility Easement.



RECORD DRAWING

BASELINE "B"



NO.	DATE	REVISIONS	APP.
1	4/11/07	SHEET REPLACED	JPC

HARRIS COUNTY M.U.D. No 191
HARRIS COUNTY, TEXAS

JC JONES & CARTER, INC.
ENGINEERS • PLANNERS • SURVEYORS
6335 Gulfport Dr., Suite 100 Houston, Texas 77081 (713) 777-5337

HAMMETT PROPERTY
BASELINE "B"
STA 11+00 TO STA 12+50

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.: 05386-001-00

DATE: APRIL 2007
DGN. BY: AS
DWG. BY: AHS

SCALE: 1"=20' Horiz.
1"=2' Vert.

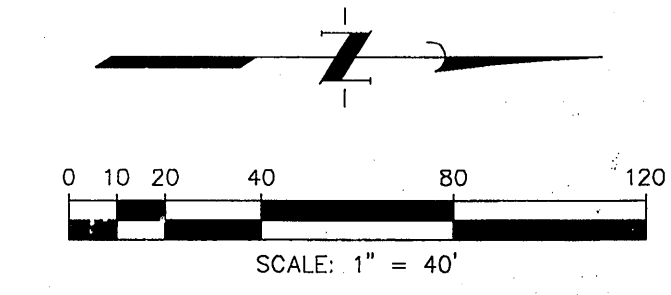
SHEET No. 7 OF 13

FOR CITY OF HOUSTON USE ONLY
CITY ENGINEER'S NO. 43241
ACCEPTED AND FILED
CITY DRAWING NUMBER
HOUSTON, TEXAS

BENCH MARK
Elevations shown herein are based on Tropical Storm Allison Recovery Project Harris County Floodplain Reference Mark No. 150770 located 100 feet north of the intersection of Farm to Market Road (FM) 1960 and Breton Ridge Street with a published elevation of 120.92, NAVD 88, 2001 adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark A being a 1000 Nail in power pole along the east right-of-way of Dotson Road located +/- 350 feet north of the intersection of Hargrove Drive and Dotson Road.
Elevation = 123.59 NAVD 88, 2001 Adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark B being a railroad spike in power pole along the east right-of-way of Dotson Road located +/- 530 feet north of the intersection of Hargrove Drive and Dotson Road.
Elevation = 123.60, NAVD 88, 2001 Adjustment.



LEGEND

X — (RFB) — X	REINFORCED FILTER FABRIC BARRIER
(SC) —	STABILIZED CONSTRUCTION ACCESS

PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

CenterPoint Energy Gas Facilities (Approved for crossing underground ductlines, unless otherwise noted.) Valid at time of review only.	Date: 4/18/07
Signature: <i>Debra Elum</i>	Date: 5-2-07
SBC Approved for underground conduit facilities only. Signature valid for one year.	Date: 4/18/07
CenterPoint Energy Gas Facilities (Gas service lines are not shown)	

- INSTALLATION SEQUENCE**
- UTILITY CONTRACTOR:
1. Install (SC) at start of construction.
 2. Install (RFB) at designated locations.
 3. Maintain existing facilities.
 4. Hydro-Mulch Seeding
- Utility and Paving Contractor to follow all protection requirements and complete all forms as listed in bound SWPPP.

CALLLED 1.7703 ACRES TRACT V
HIGHLAND MANAGEMENT, INC.
TO
HIGHLAND TIMBERS, LTD.
NOVEMBER 1, 1999
CF No. U054466

**RECORD
DRAWING**

EROSION AND SEDIMENTATION CONTROL NOTES

1. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS AT LOCATION SHOWN ON PLANS.
2. CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENTATION CONTROL SYSTEMS SPECIFIED HEREIN, AT A MINIMUM OF ONCE EVERY CALENDAR DAY.
3. CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EROSION AND SEDIMENTATION CONTROL SYSTEM THROUGHOUT THE DURATION OF THE CONTRACT. (NO SEPARATE PAY).
4. CONTRACTOR SHALL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
5. CONTRACTOR SHALL LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. CONTRACTOR SHALL USE SILT FENCING, HAY BALES, OR BERMIS AROUND FUEL STORAGE AREAS. (NO SEPARATE PAY).
6. CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY, AND IN WRITING, OF ANY FUEL OR TOXIC MATERIAL SPILLS ONTO THE PROJECT/CONSTRUCTION AREA AND THE ACTION TAKEN TO REMEDY THE PROBLEM.
7. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF HIS FUELS, MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER. (NO SEPARATE PAY).
8. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE ENVIRONMENTAL LAWS.
9. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATELY MAINTAINED SANITARY FACILITIES.
10. AT COMPLETION OF THE CONTRACT, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL EXAMINE EROSION AND SEDIMENTATION CONTROL SYSTEM BEFORE RELIEVING CONTRACTOR OF HIS MAINTENANCE RESPONSIBILITIES.
11. IF EROSION AND SEDIMENTATION CONTROL SYSTEM IS EXISTING FROM PRIOR CONTRACTS, OWNER AND/OR OWNER'S REPRESENTATIVES WITH THE CONTRACTOR SHALL EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEM FOR DAMAGE PRIOR TO CONTRACTOR STARTING CONSTRUCTION OF THE CONTRACT. ANY DAMAGE NOTED AT THIS TIME SHALL BE REPAIRED AT OWNER'S EXPENSE.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR STREET CLEANING, ON A DAILY BASIS, ALL MUD AND DIRT DEPOSITED ON THE EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY.
13. IF PAVING CONTRACTOR REMOVES OR PUNCTURES TIMBER GRATE TO ESTABLISH DRAINAGE, INLET MUST BE SURROUNDED BY FILTER FABRIC FENCE AS SHOWN IN DETAIL ON THIS SHEET.

MANHOLE/INLET PROTECTION NOTES

1. INLETS AND MANHOLES THAT ARE NOT COMPLETE AND/OR ARE SUBJECT TO CONVEYING STORM WATER FLOWS ARE TO BE PROTECTED TO PREVENT SEDIMENT FROM ENTERING THE PROPOSED OR EXISTING STORM SEWER SYSTEM.
2. PROTECTION SHALL CONSIST OF ONE LAYER OF 3x12-INCH OAK TIMBERS, ONE (1) INCH APART, COVERED WITH ONE LAYER OF WOVEN POLYPROPYLENE OR POLYESTER FILTER FABRIC (EXXON GTF 100s, PHILLIPS SUPAC 4WS(UV) OR APPROVED EQUAL) HELD IN PLACE WITH 1/2" STAPLES. TIMBERS SHALL BE HELD IN PLACE WITH TWO (2) 2x4's NAILED SECURELY TO EACH TIMBER OVER THE FILTER FABRIC. THE FILTER FABRIC SHALL EXTEND BEYOND THE PERIMETER OF THE OAK TIMBERS AS TO ENSURE ONE (1) FOOT OF BURY BETWEEN THE MANHOLE OR INLET AND THE SURROUNDING SOIL AS SHOWN.
3. FILTER FABRIC TO BE CLEANED OR REPLACED WHEN IT CEASES TO FUNCTION PROPERLY OR AS DIRECTED BY THE ENGINEER.
4. CONTRACTOR MAY SUBMIT PLANS FOR ALTERNATE METHODS OF PROTECTION. THESE ALTERNATE METHODS MUST BE APPROVED PRIOR TO USE IN THE FIELD.
5. NO SEPARATE PAYMENT SHALL BE MADE FOR INLET AND MANHOLE PROTECTION. INCLUDE THE COST IN THE UNIT PRICE FOR THE INLETS AND MANHOLES.



NO.	DATE	REVISIONS	APP.
4/11/07		SHEET REPLACED	JPC

HARRIS COUNTY M.U.D. No. 191
HARRIS COUNTY, TEXAS

JC JONES & CARTER, INC.
ENGINEERS • PLANNERS • SURVEYORS
6335 Gulton Dr., Suite 100 Houston, Texas 77061 (713) 777-5337

HAMMETT PROPERTY
STORM WATER POLLUTION PREVENTION PLAN

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: 05386-001

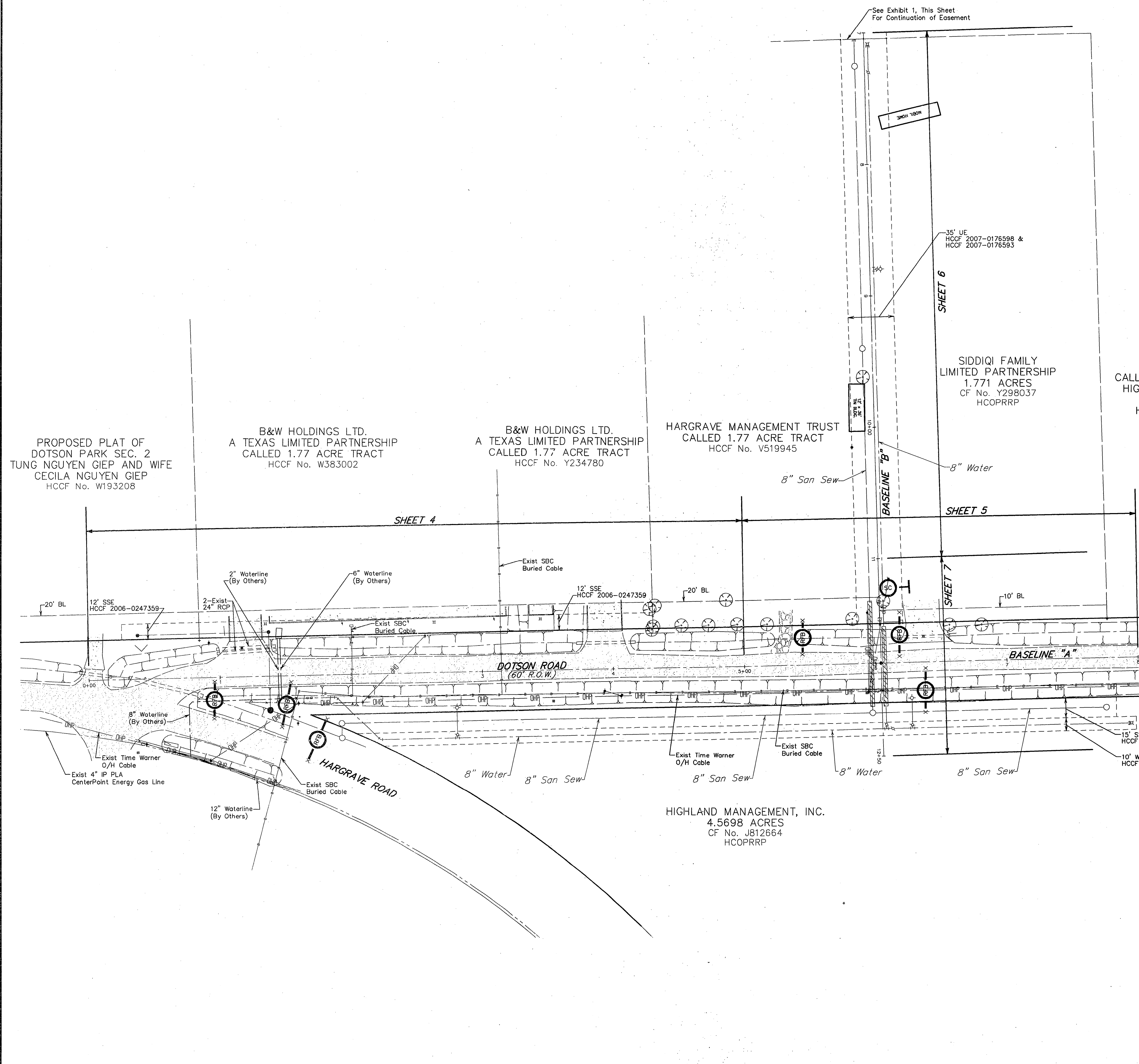
DATE: APRIL 2007
DGN. BY: AS
DWG. BY: AHS

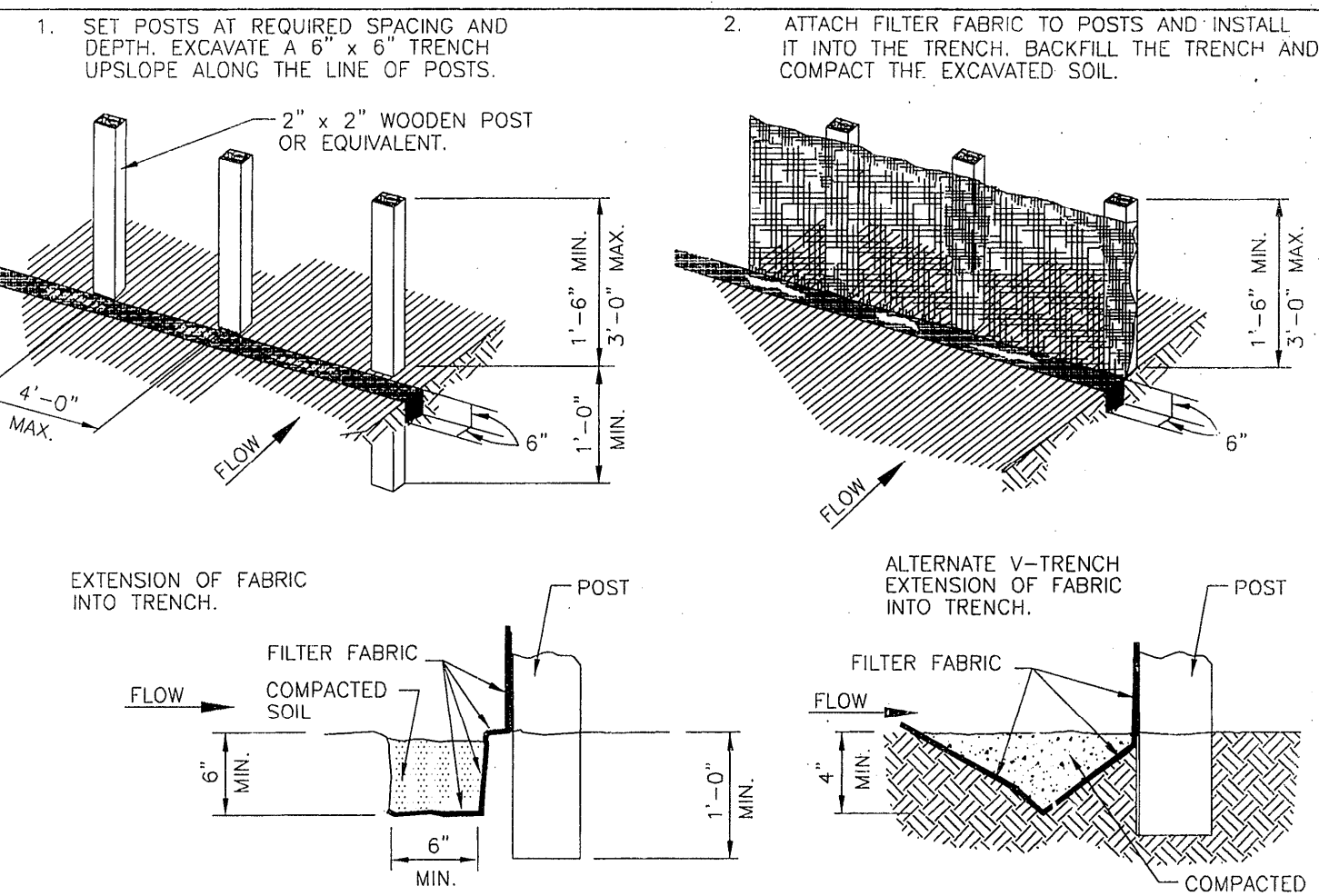
SCALE: AS SHOWN

SHEET No. 8 OF 13

FOR CITY OF HOUSTON USE ONLY
CITY DWG NO. _____

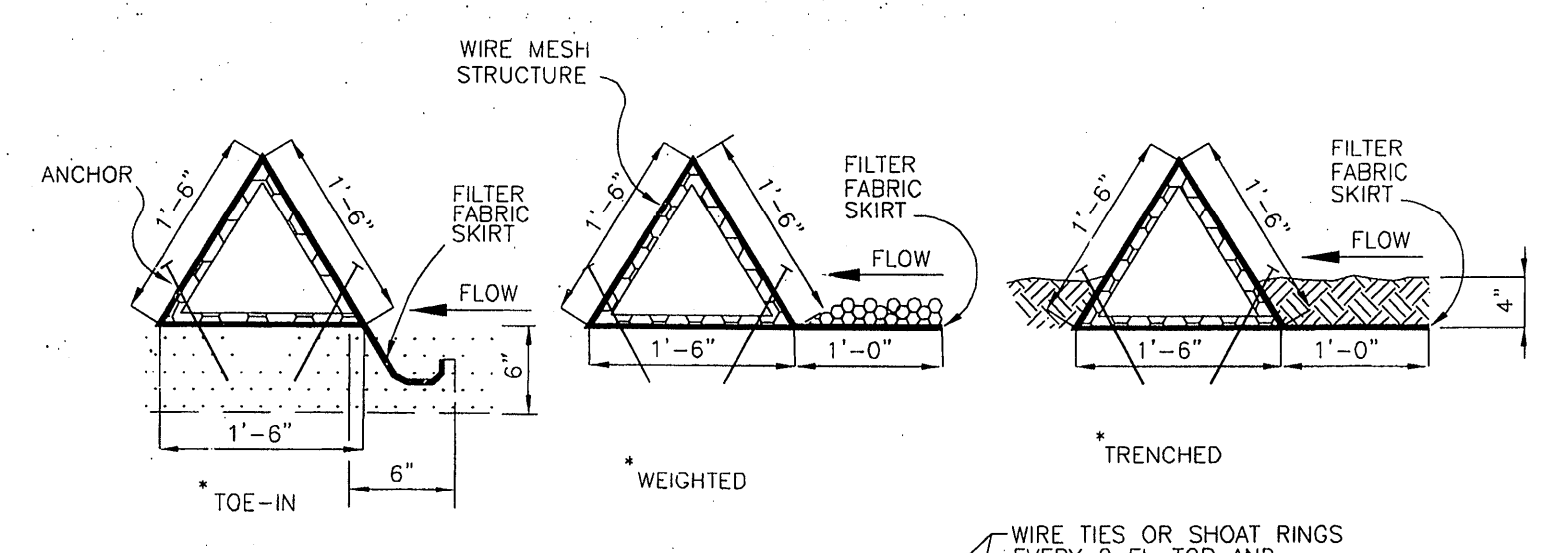
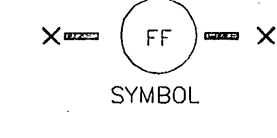
ACCEPTED AND FILED
43241
CITY DRAWING NUMBER
HOUSTON, TEXAS





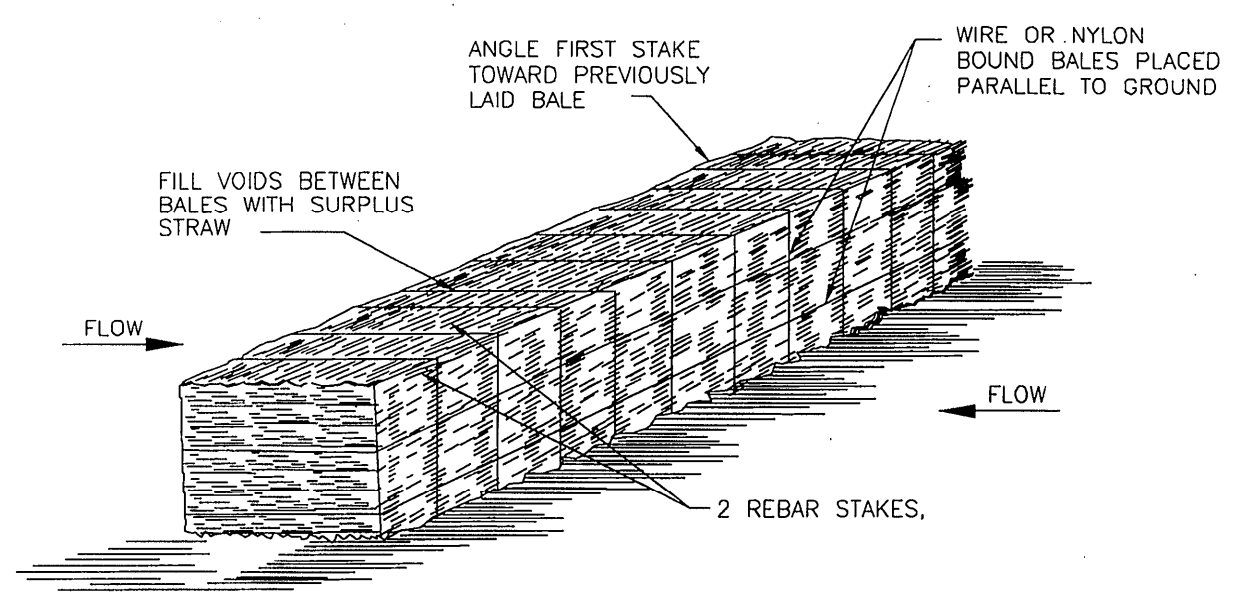
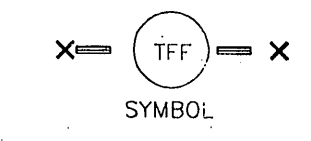
- GENERAL NOTES:**
- SET POSTS AT 4- FEET MAXIMUM SPACING. IF FACTORY PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAXIMUM.
 - WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT THE POST, FOLD TOGETHER, AND ATTACH TO THE POSTS.
 -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

FILTER FABRIC FENCE



- GENERAL NOTES:**
- PLACE BARRIER IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BARRIER.
 - USING ONE CONTINUOUS SECTION OF FILTER FABRIC, WRAP FABRIC AROUND WIRE MESH AND EXTEND FABRIC TO FORM SKIRT ON THE UPSTREAM SIDE.
 - 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.
 - 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 REBAR (T-ENDS, J-HOOKS).
 - FILTER FABRIC SHALL BE LAPPED OVER ENDS 6 INCHES TO COVER SEGMENT JOINTS. FASTEN JOINTS WITH GALVANIZED SHOOT RINGS OR EQUIVALENT.
 - THE BARRIER STRUCTURE SHALL BE WELDED WIRE MESH, 18 INCHES ON EACH SIDE.

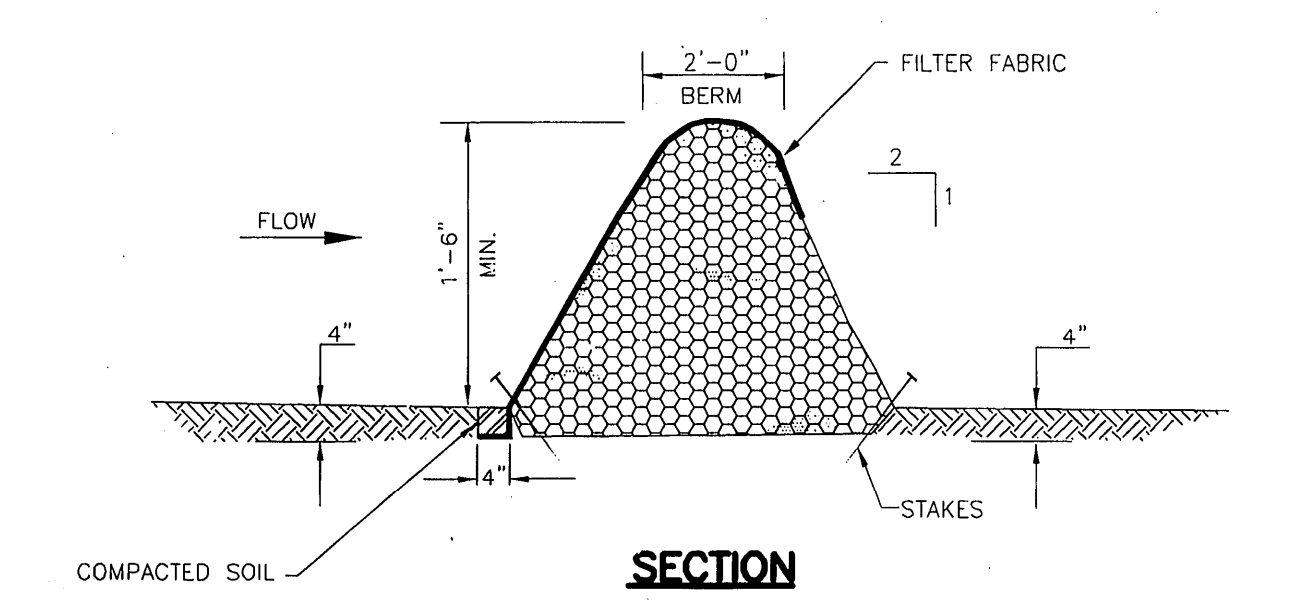
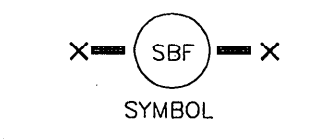
TRIANGULAR FILTER FABRIC FENCE



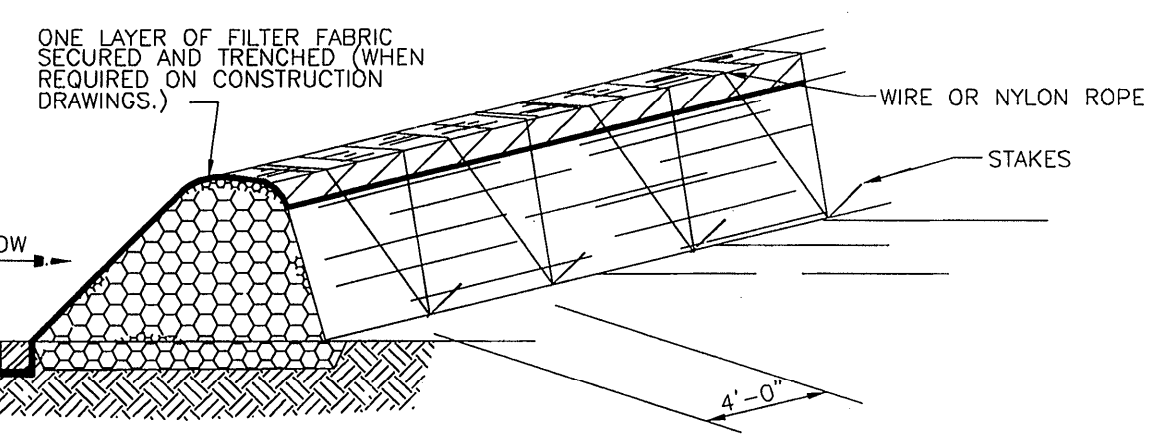
STRAW BALE FENCE

- GENERAL NOTES:**
- LIMIT USE TO ONSITE SWALES 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.
 - 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.
 - IMBED EACH BALE AT LEAST 4 INCHES IN THE SOIL.
 - 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.
 - BIND BALES WITH WIRE OR NYLON ROPE TIED ACROSS THE STRAW BALES.
 - REPLACE WITH NEW STRAW BALE FENCE EVERY TWO MONTHS.
 - WATTLES STAKED INTO THE GROUND ARE A PREFERRED SUBSTITUTE FOR STRAW BALE FENCES.

STRAW BALE FENCE

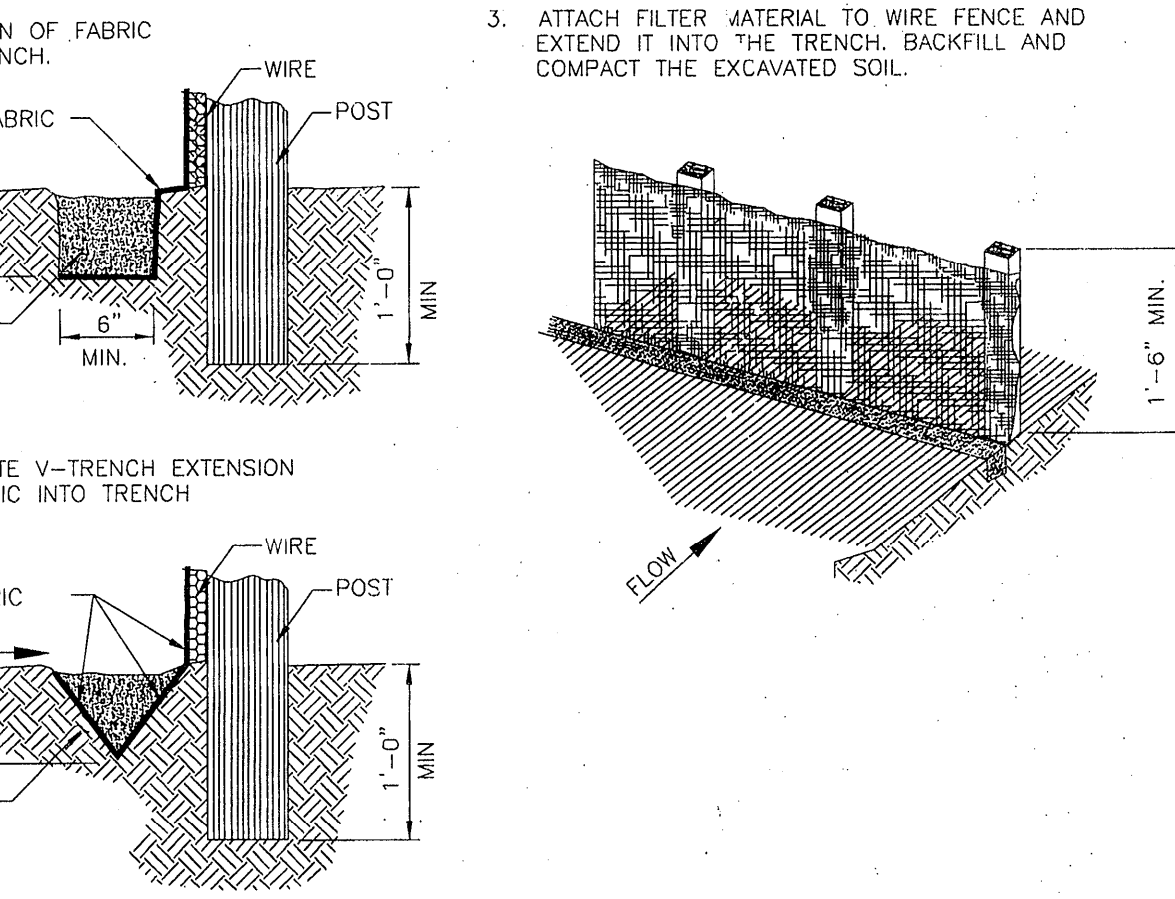
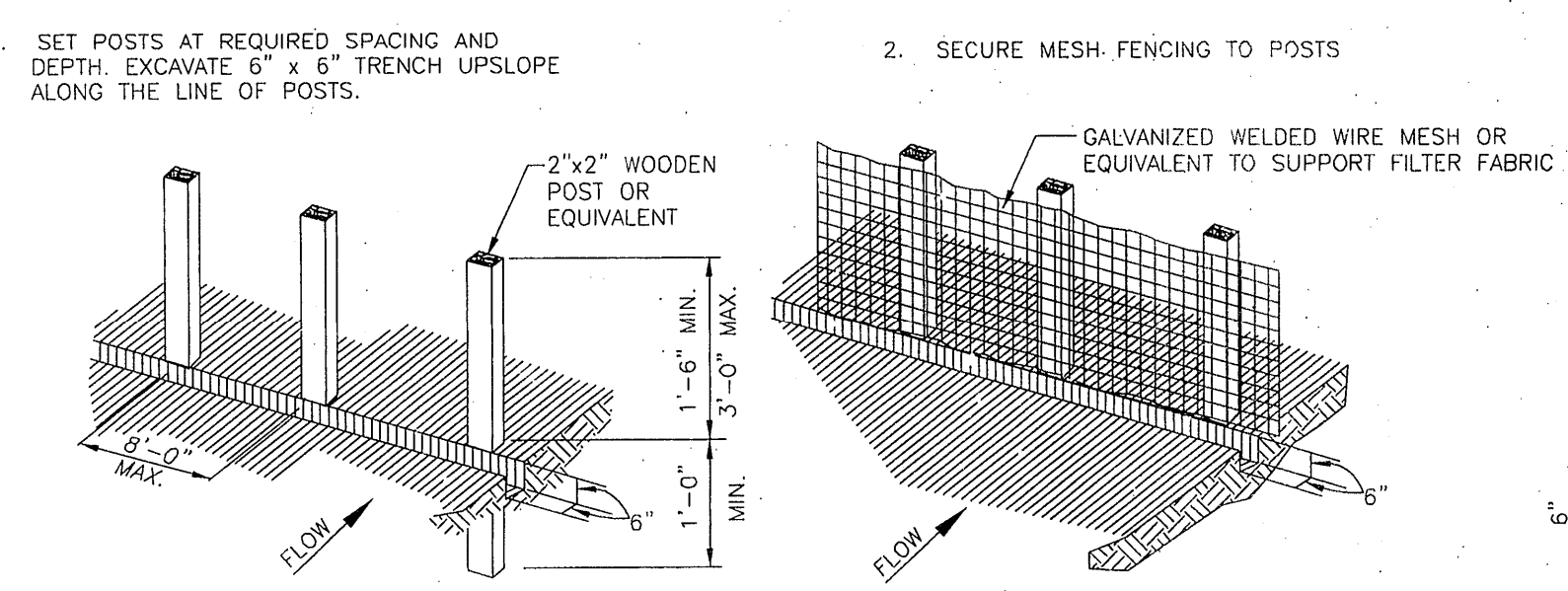
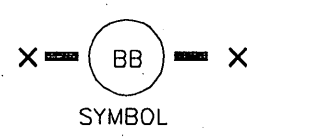


SECTION



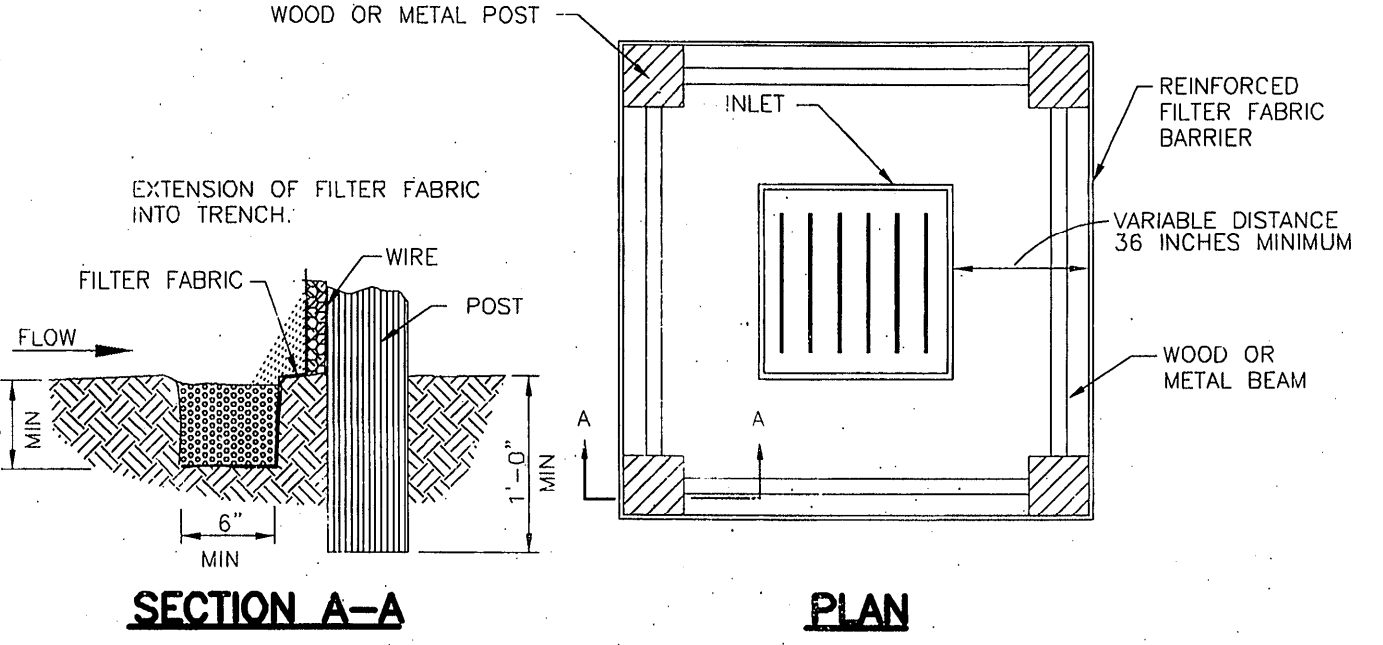
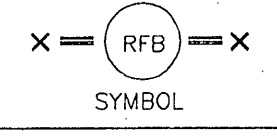
- GENERAL NOTES:**
- LIMIT USE TO ONSITE SWALES FOR PURPOSES OF LOW FLOW VELOCITY DISSIPATION FOR EROSION CONTROL. USE BRUSH BERMS TO TREAT OVERLAND FLOW ONLY. DO NOT USE BRUSH BERMS TO TREAT FLOW IN CHANNELS.
 - PLACE WOODY BRUSH AND BRANCHES HAVING A DIAMETER OF LESS THAN 2 INCHES WITH A 6-INCH OVERLAP.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

BRUSH BERM



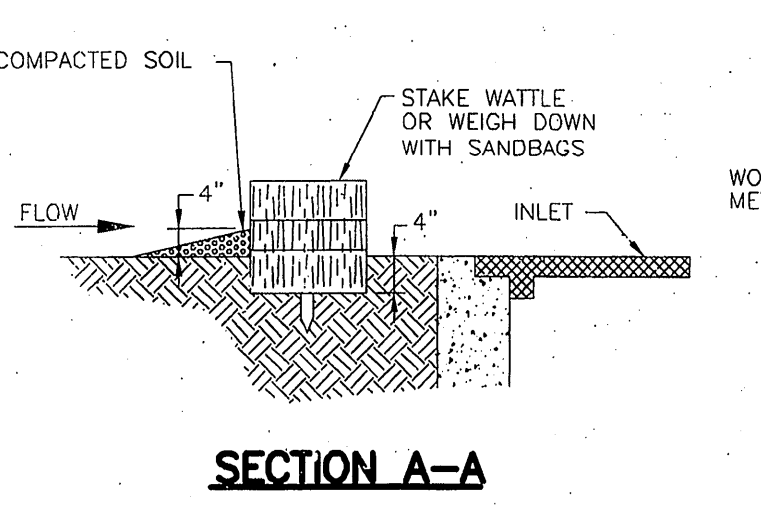
- GENERAL NOTES:**
- SECURELY FASTEN MESH FENCING TO POSTS WITH STAPLES OR TIE WIRES.
 - SECURELY FASTEN FILTER FABRIC TO MESH FENCING.
 - WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT A POST, FOLD TOGETHER, AND ATTACH TO A POST.
 - REMOVE SEDIMENT DEPOSITS WHEN SILT REACHES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

REINFORCED FILTER FABRIC BARRIER

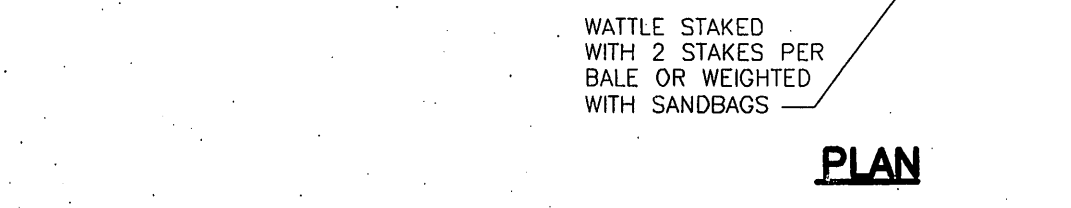


SECTION A-A PLAN

SEE REINFORCED FILTER FABRIC BARRIER DETAIL FOR REINFORCED FILTER FABRIC BARRIER REQUIREMENTS.



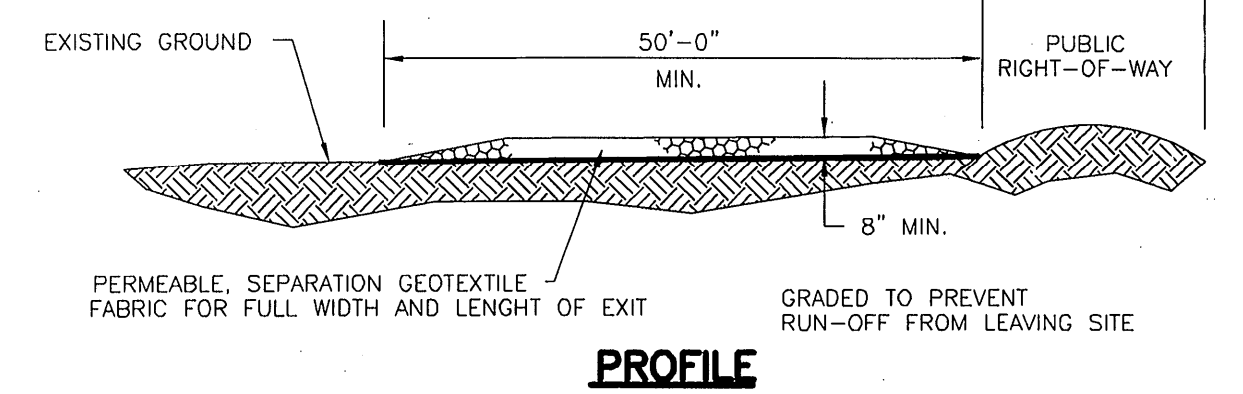
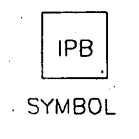
SECTION A-A



PLAN

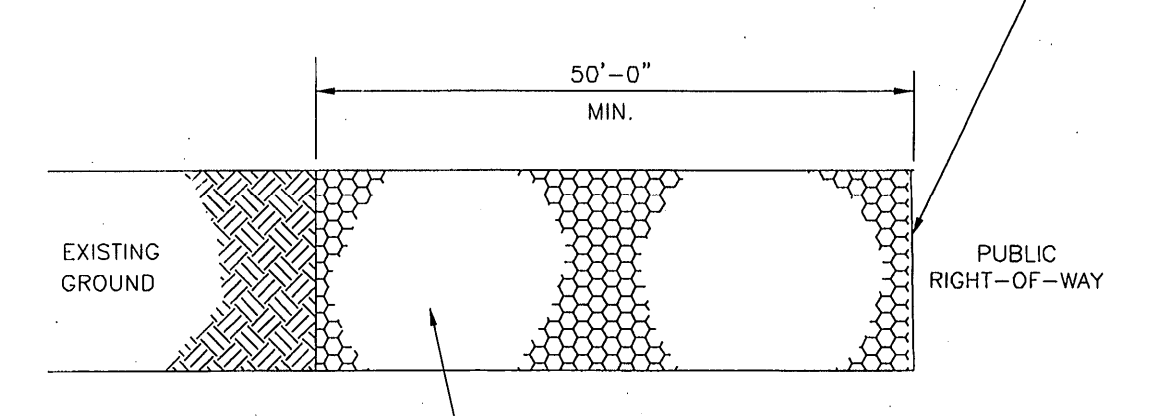
NOTE: TYPICALLY STRAW BALES ARE NOT RECOMMENDED FOR INLET PROTECTION BARRIERS.

INLET PROTECTION BARRIERS FOR STAGE I-INLETS



PROFILE

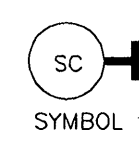
PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY.



PLAN VIEW

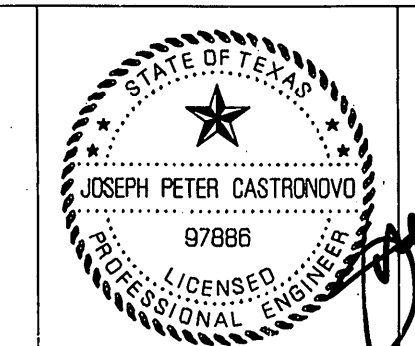
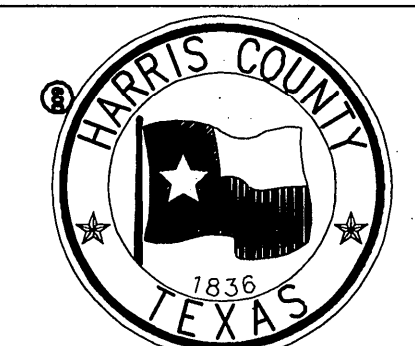
- GENERAL NOTES:**
- MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
 - CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
 - UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
 - 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.
 - PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
 - PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
 - 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



NO.	REVISIONS	DATE	NAME

HARRIS COUNTY ENGINEERING DEPARTMENT



Joseph Peter Castrovino
4/5/2007

PROJECT TITLE: **STORM WATER POLLUTION PREVENTION PLAN**
 DRAWING NO.: **DETAILS**
 DATE: **APRIL 2007**
 SCALE: **N.T.S.**
 CITY DRAWING NUMBER: **43241**
 REGION: **TEXAS**
 APPROVED BY: _____
 SHEET NO.: **9/13**

RECORD DRAWING

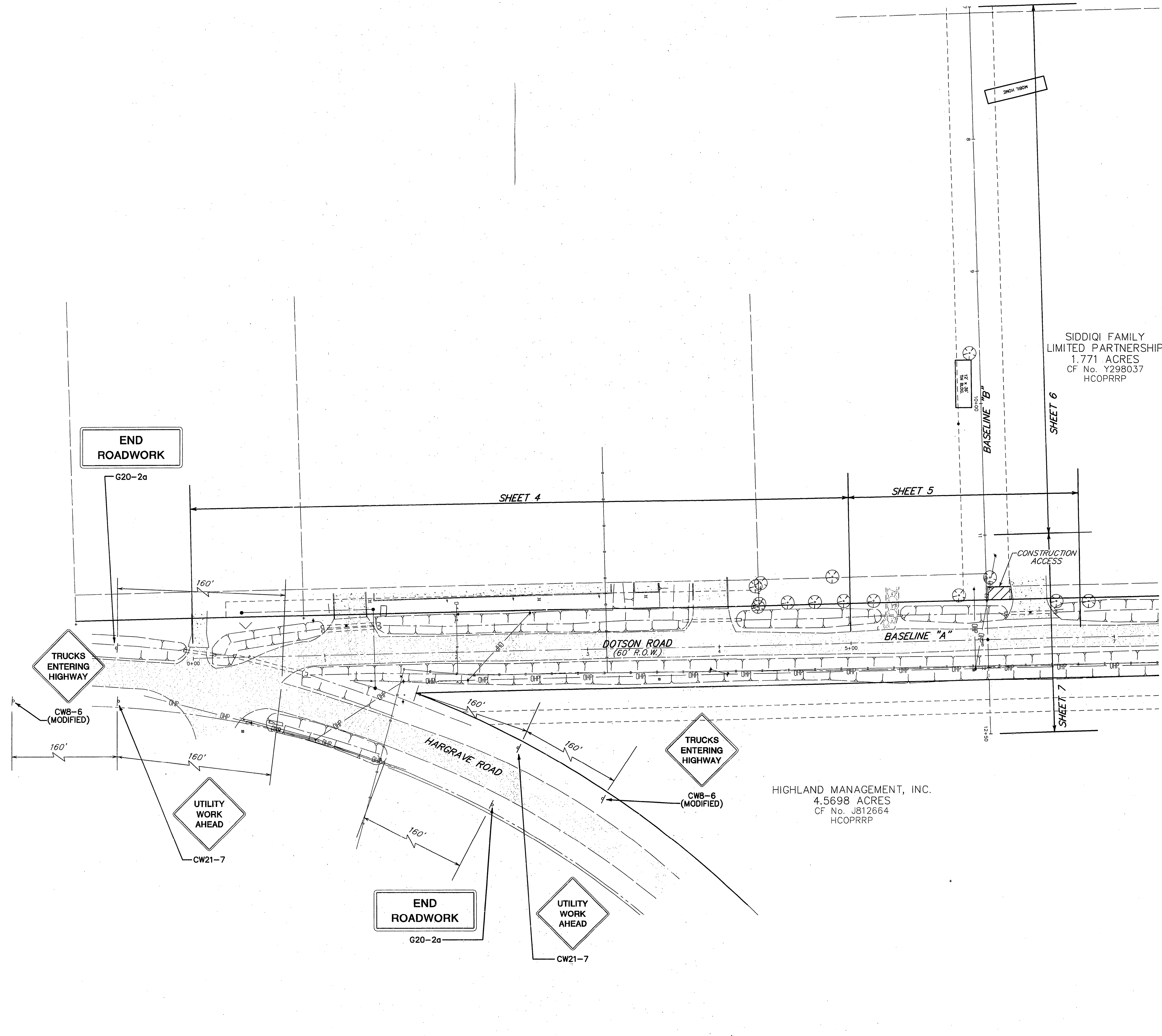
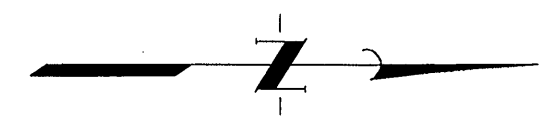


CONSTRUCTION HANDBOOK - STORM WATER MANAGEMENT HANDBOOK FOR CONSTRUCTION ACTIVITIES PREPARED BY CITY OF HOUSTON, HARRIS COUNTY, AND HARRIS COUNTY FLOOD CONTROL DISTRICT, 2001 EDITION.

BENCH MARK
Elevations shown herein are based on Tropical Storm Allison Recovery Project Harris County Floodplain Reference Mark No. 150770 located 100 feet north of the intersection of Farm to Market Road (FM) 1960 and Breton Ridge Street with a published elevation of 120.92, NAVD 88, 2001 adjustment.

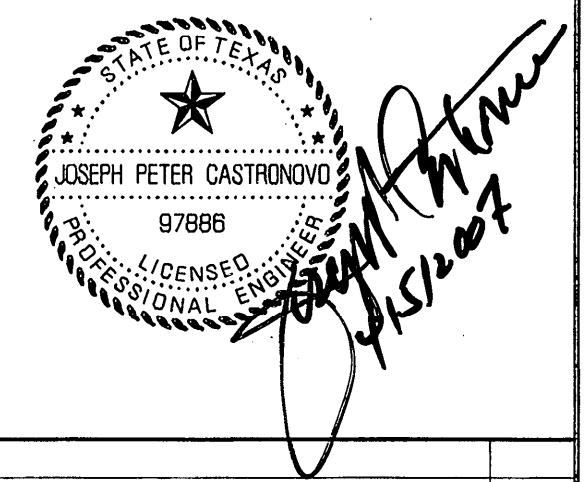
TEMPORARY BENCH MARK
Temporary Benchmark A being a 1000 Nail in power pole along the east right-of-way of Dotson Road located +/- 350 feet north of the intersection of Hargrave Drive and Dotson Road.
Elevation = 123.59 NAVD 88, 2001 Adjustment.

TEMPORARY BENCH MARK
Temporary Benchmark B being a railroad spike in power pole along the east right-of-way of Dotson Road located +/- 530 feet north of the intersection of Hargrave Drive and Dotson Road.
Elevation = 123.60, NAVD 88, 2001 Adjustment.



LEGEND

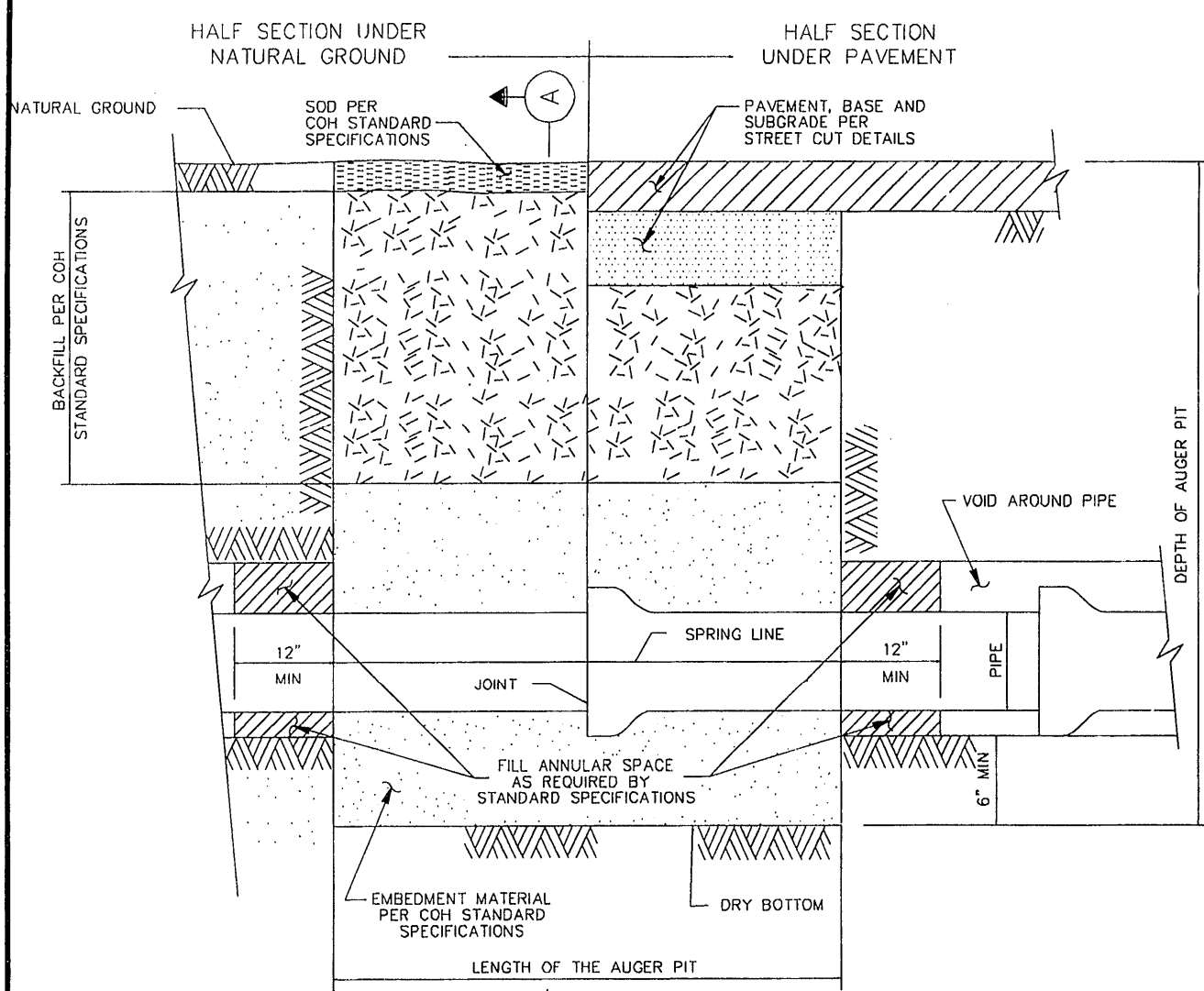
- STABILIZED CONSTRUCTION ACCESS (TO BE DETERMINED BY FIELD ENGINEER)
- OPEN TO TRAFFIC
- SIGN WITH POST



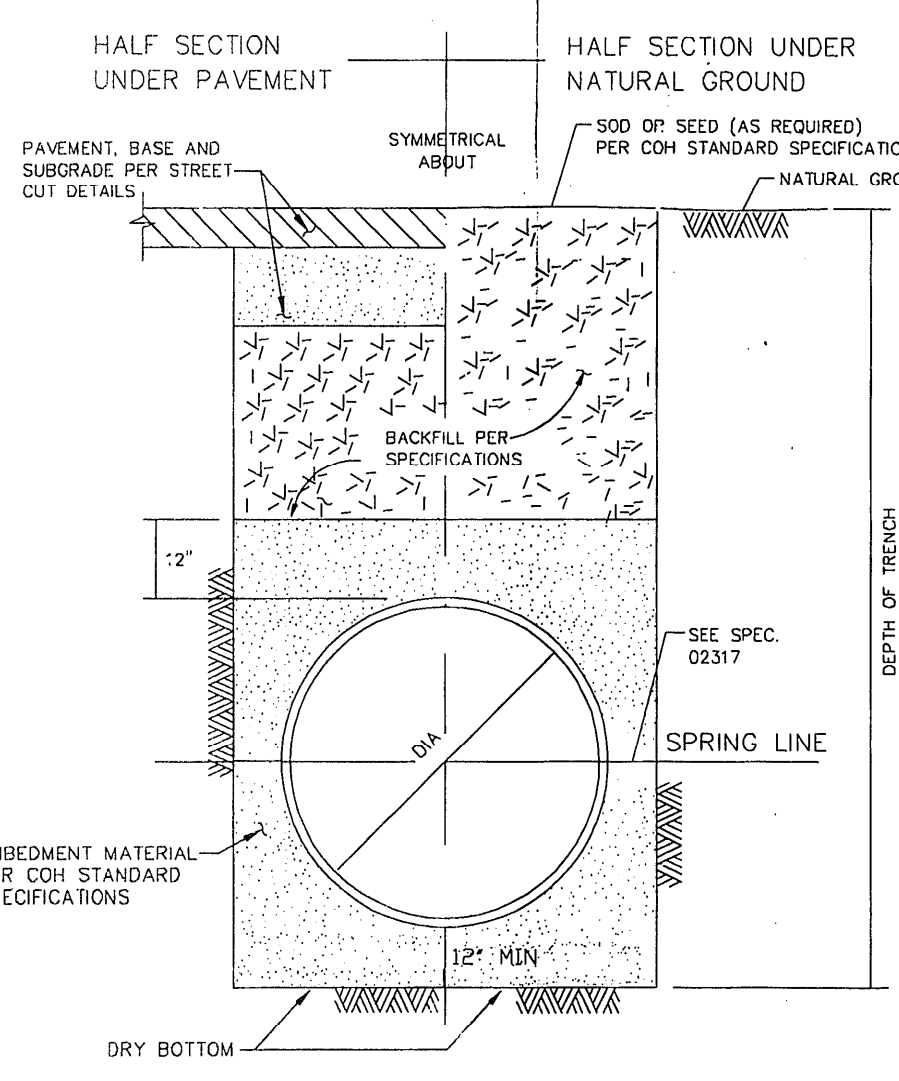
**RECORD
DRAWING**

- NOTES:
- 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.
 - 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.
 - OFF DUTY POLICE OFFICERS/FLAGGERS ARE REQUIRED TO DIRECT TRAFFIC WHEN LANES ARE BLOCKED.
 - CONTRACTOR SHALL COVER THE EXCAVATION WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS AND ALLOW NORMAL TRAFFIC FLOW.
 - APPROVED COPIES OF "TRAFFIC CONTROL PLANS" SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES.
 - IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD OF TRAFFIC CONTROL PLAN DURING THE CONSTRUCTION THAN WHAT IS OUTLINED IN THE CONTRACT DRAWINGS, (S)HE SHALL BE RESPONSIBLE TO PREPARE AND SUBMIT ALTERNATE PLANS TO TRAFFIC SECTION OF HAPID FOR APPROVAL TEN WORKING DAYS PRIOR TO IMPLEMENTATION.
 - IF THE PROJECT IS WITHIN 400 FEET FROM A SIGNALIZED INTERSECTION, THE CONTRACTOR SHALL CONTACT HARRIS COUNTY PUBLIC INFRASTRUCTURE DEPARTMENT, SIGNAL DIVISION AT 713-881-3210 FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

NO.	DATE	REVISIONS	APP.
HARRIS COUNTY M.U.D. No. 191 HARRIS COUNTY, TEXAS			
JC JONES & CARTER, INC. ENGINEERS - PLANNERS - SURVEYORS 6335 Gullfion Dr., Suite 100 Houston, Texas 77081 (713) 777-6337			
HAMMETT PROPERTY			
TRAFFIC CONTROL PLAN			
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES.			
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING			
WATER	SP 8/12/07	TRAFFIC & TRANSPORTATION	
WASTEWATER	Hughes 6/12/07	STORM WATER QUALITY	
STORM		FACILITIES	
STREET & BRIDGE			
FILE NO:	FOR CITY OF HOUSTON USE ONLY		
JOB NO: 05386-001	CITY DRAWING NO.		
DATE: APRIL 2007	ACCEPTED AND FILED		
DWG. BY: AS	43241		
DWG. BY: AHS	CITY DRAWING NUMBER		
SCALE: 1"=40'	HOUSTON, TEXAS		
SHEET No. 10 OF 13			

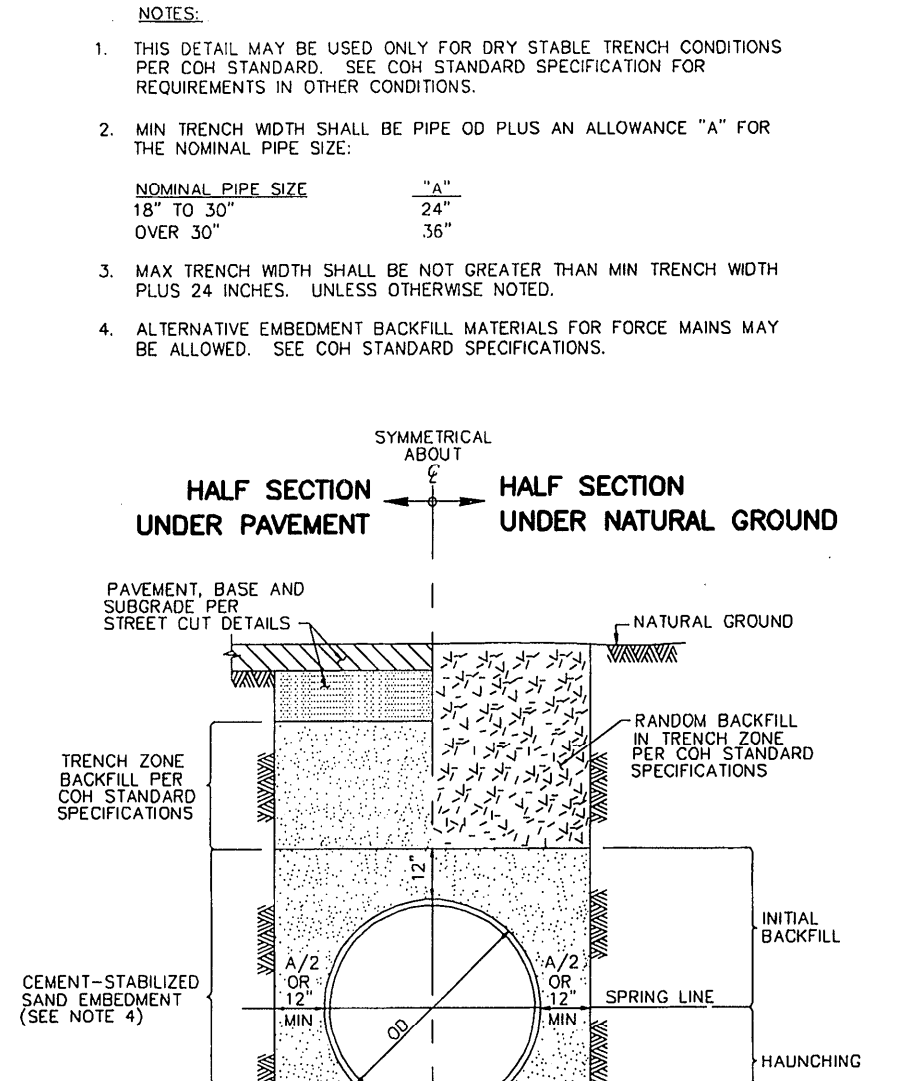


1 BEDDING AND BACKFILL AUGER PIT AND AUGER HOLE (NOT TO SCALE)



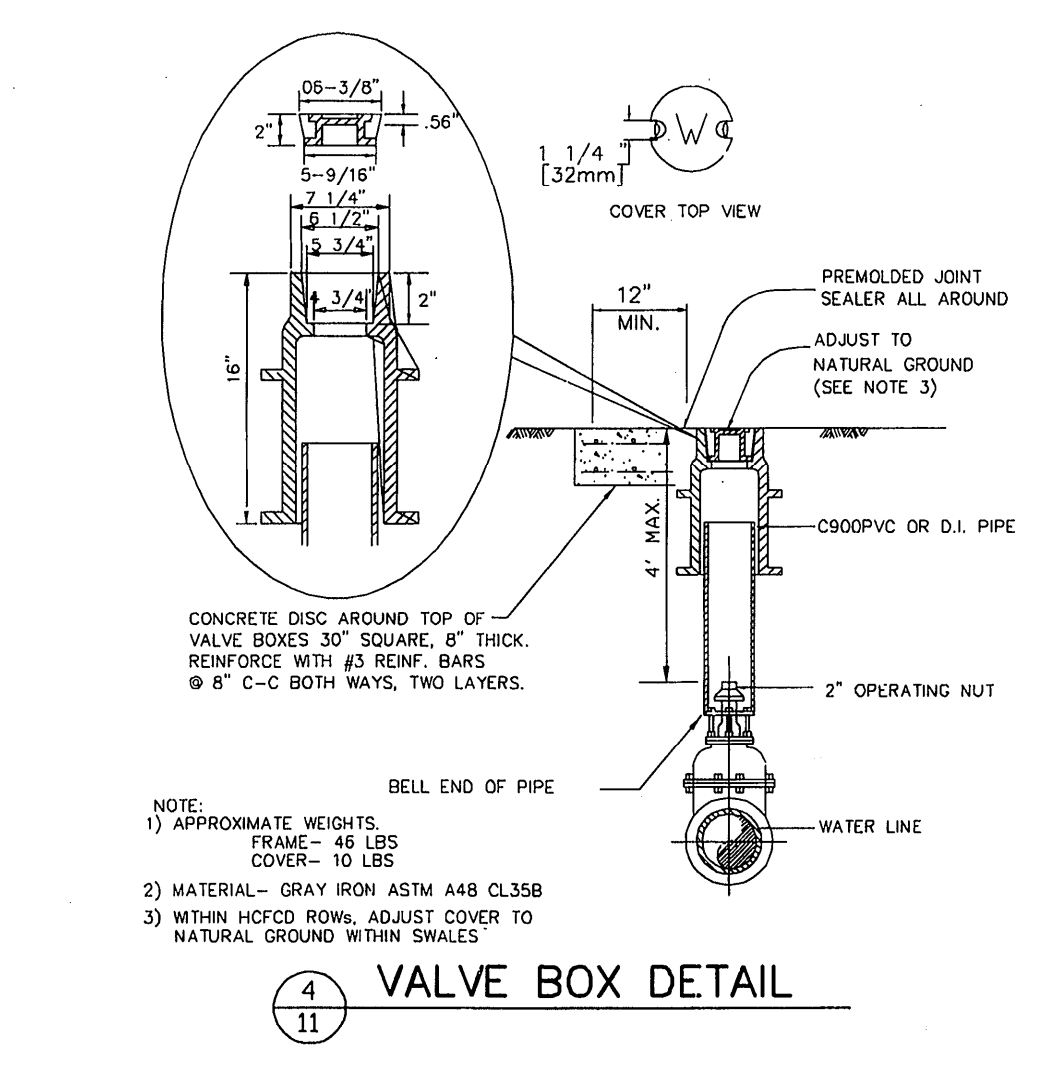
2 WATER DISTRIBUTION MAIN BEDDING AND BACKFILL FOR OPEN CUT TRENCHES (NOT TO SCALE)

- NOTES:
- SEE TRENCH SAFETY SYSTEM SPECIFICATIONS FOR MAXIMUM SLOPES.
 - FOR WET BOTTOM EXCAVATION LIMITS OF CRUSHED STONE, EXTEND AS SHOWN.
 - KEY CONCRETE TRINCH DAM MINIMUM OF 6 - INCHES INTO TRENCH BOTTOM AND WALLS.
 - TRENCH DAM MAY BE FORMED OR UNFORMED. ACTUAL SHAPE OF CONCRETE TRENCH DAM CROSS SECTION MAY BE DETERMINED BY CONTRACTOR IN FIELD, MEETING 6-INCH MINIMUM THICKNESS AND 6-INCH KEY DEPTH REQUIREMENTS.
 - TRENCH DAM SHALL BE PLACED AT LEAST 5 FT. AWAY FROM ANY PIPELINE STRUCTURE (EACH SIDE). SEE SECTION 0217 FOR OTHER REQUIREMENTS.
 - USE POLYETHYLENE WRAP AS A BOND BREAKER BETWEEN CEMENT STABILIZED SAND AND PIPE.
 - WHEN CROSSING UNDER AN EXISTING STORM SEWER USING OPEN CUT METHODS, THE WATER LINE TRENCH ZONE SHALL BE BACK FILLED FOR 3 TO 5 FEET EITHER SIDE OF THE STORM SEWER WITH CEMENT STABILIZED SAND TO THE SPRING STORM SEWER.
 - USE FILTER FABRIC AS A BOND BREAKER BETWEEN CEMENT STABILIZED SAND AND THE PIPE.



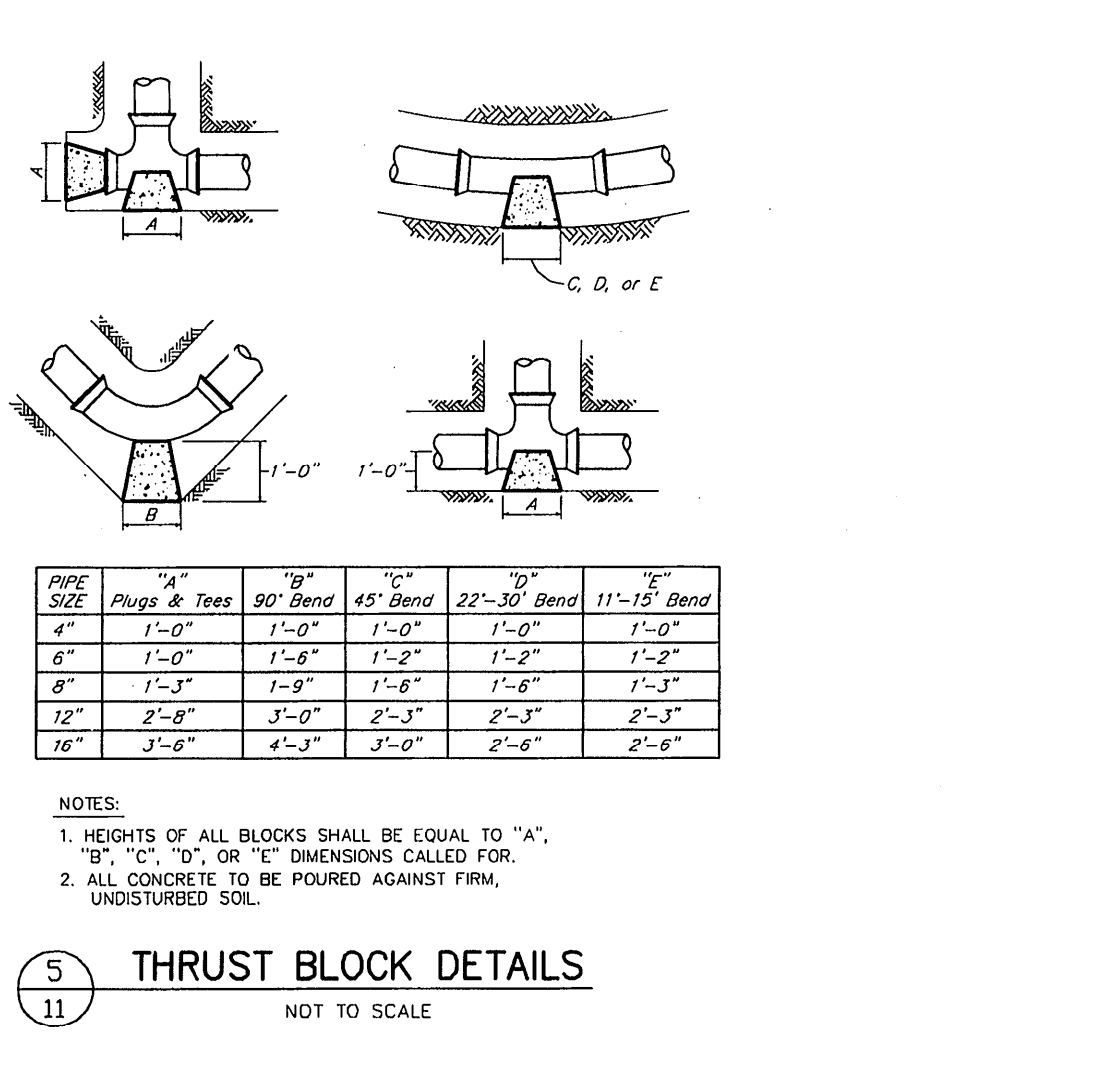
3 SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH (NOT TO SCALE)

- NOTES:
- THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS PER COH STANDARD SPECIFICATION FOR REQUIREMENTS IN OTHER CONDITIONS.
 - MIN TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE.
 - NOMINAL PIPE SIZE: "A" = 16" to 30" OVER 30" = 34"
 - MAX TRENCH WIDTH SHALL BE NOT GREATER THAN MIN TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
 - ALTERNATIVE EMBEDMENT BACKFILL MATERIALS FOR FORCE MAINS MAY BE ALLOWED. SEE COH STANDARD SPECIFICATIONS.



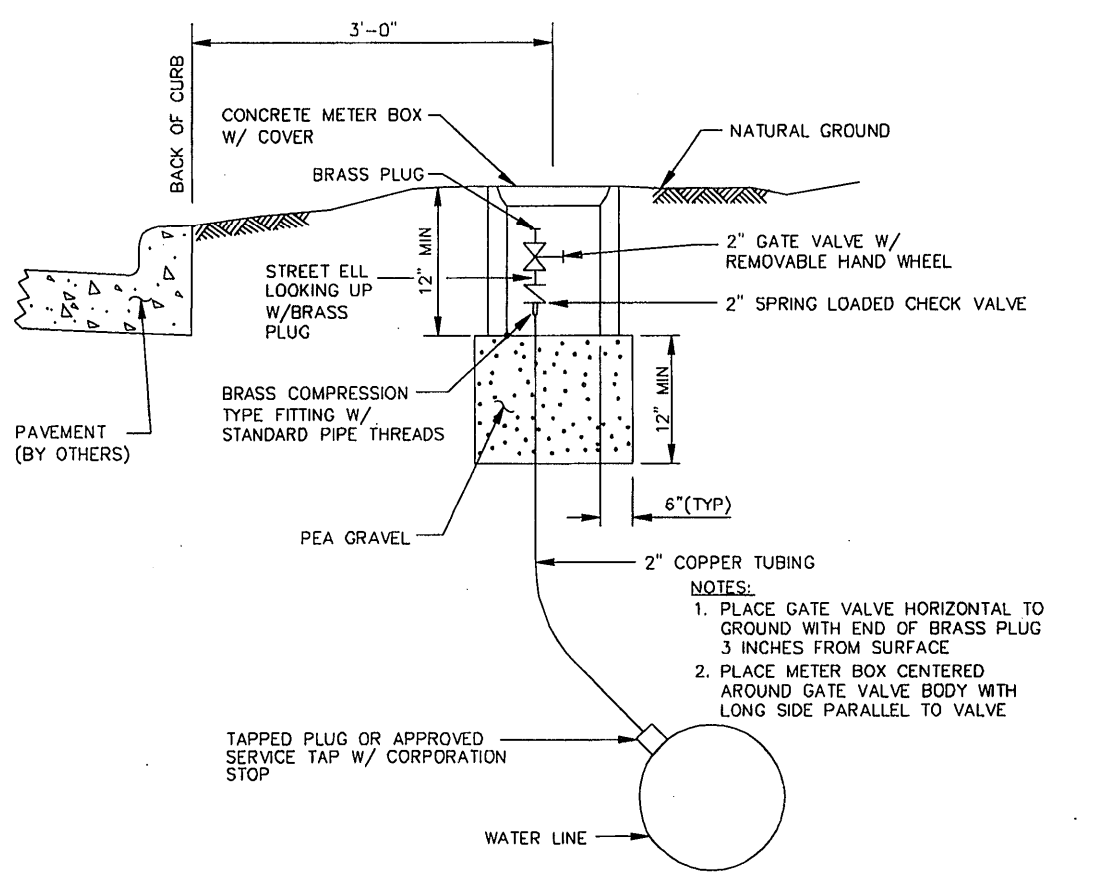
4 VALVE BOX DETAIL

- NOTES:
- APPROXIMATE WEIGHTS: FRAME - 40 LBS COVER - 10 LBS
 - MATERIAL - GRAY IRON ASTM A48 CL35B
 - WITHIN HOLED ROW, ADJUST COVER TO NATURAL GROUND WITHIN SNALES



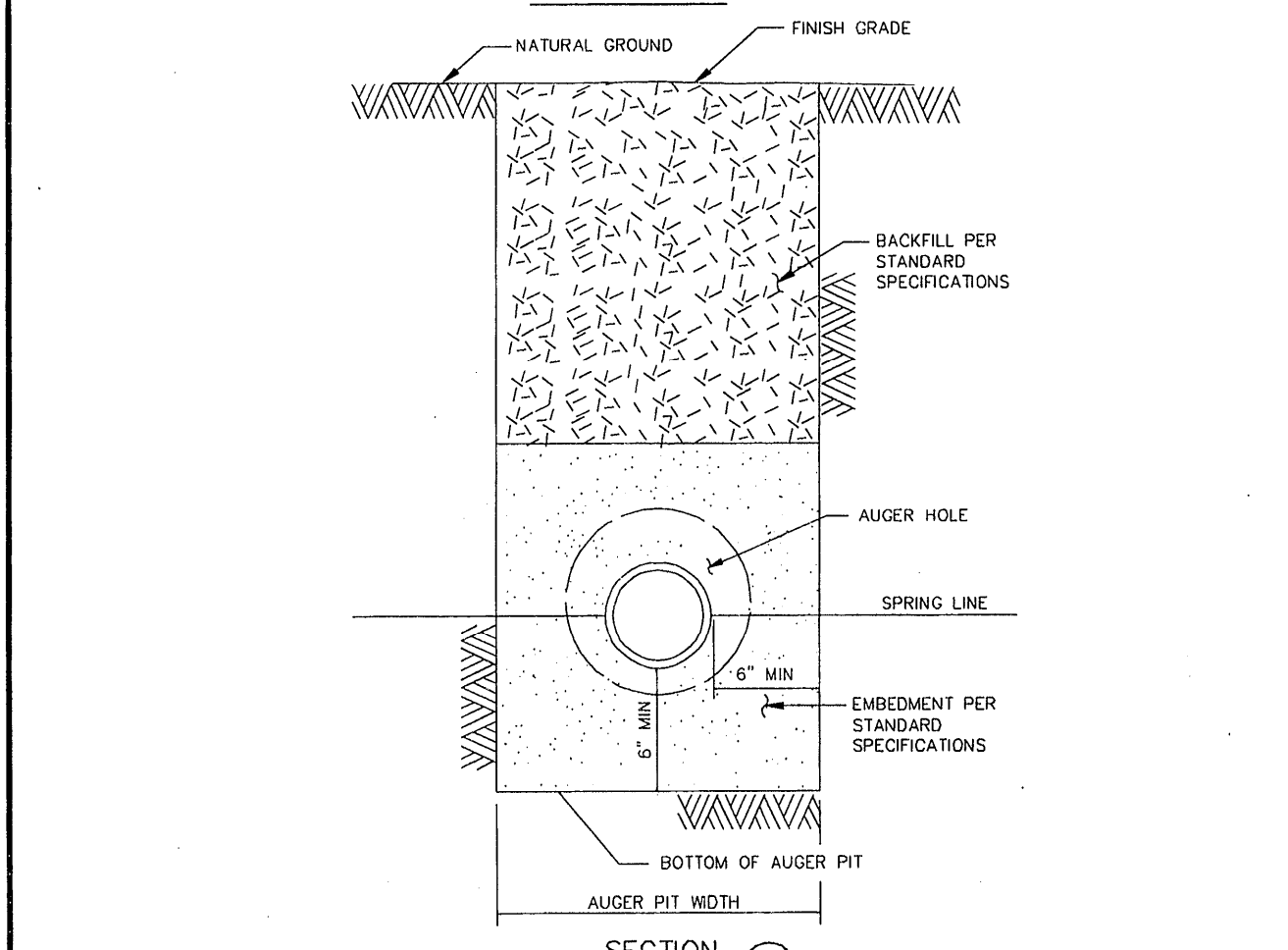
5 THRUST BLOCK DETAILS (NOT TO SCALE)

- NOTES:
- HEIGHTS OF ALL BLOCKS SHALL BE EQUAL TO "A".
 - "C", "D", OR "E" DIMENSIONS CALLED FOR.
 - ALL CONCRETE TO BE POURED AGAINST FIRM, UNDISTURBED SOIL.



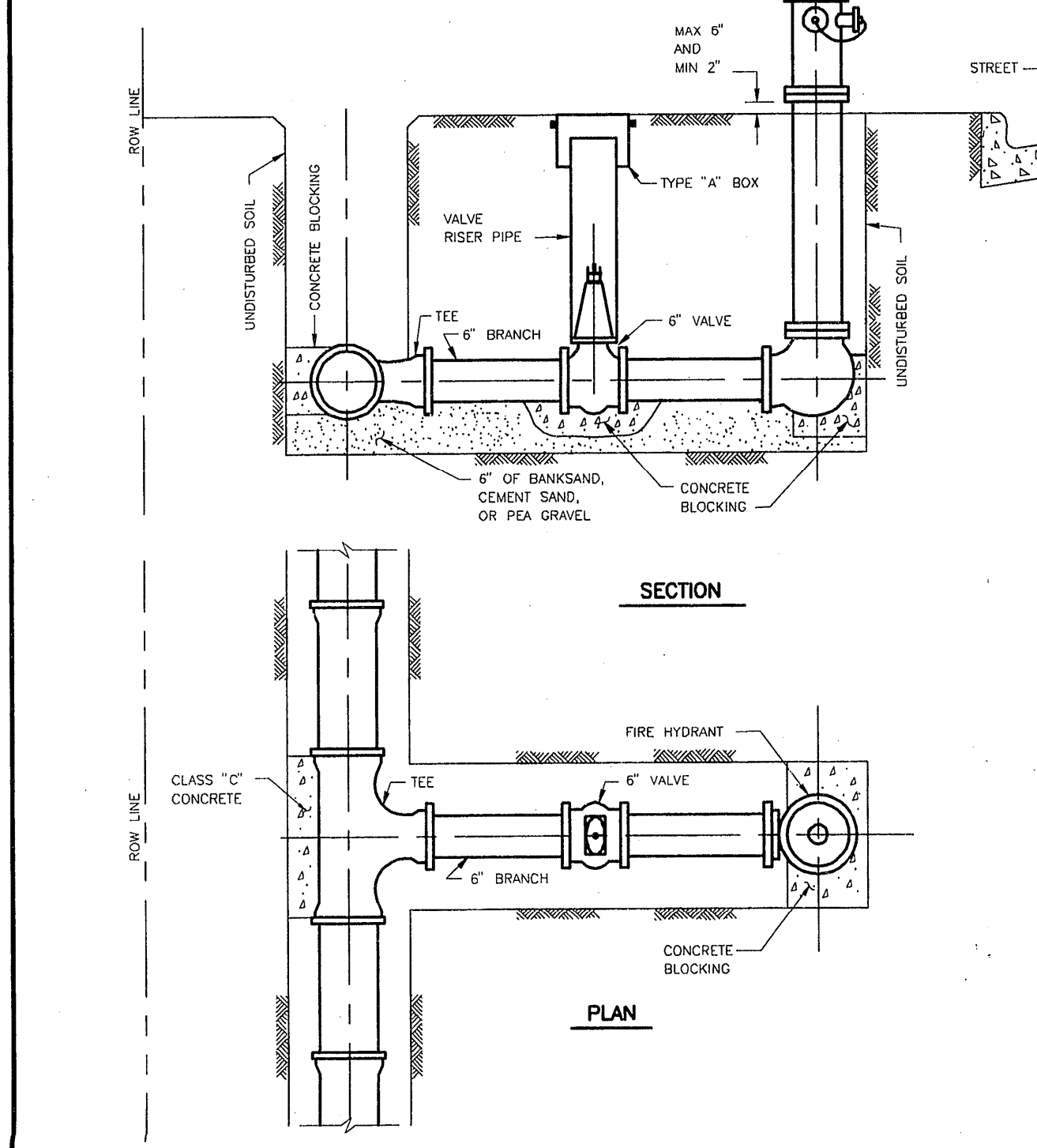
6 PERMANENT BLOW-OFF DETAIL (NOT TO SCALE)

- NOTES:
- PLACE GATE VALVE HORIZONTAL TO GROUND WITH END OF BRASS PLUG 3 INCHES FROM SURFACE
 - PLACE METER BOX CENTERED AROUND GATE VALVE BODY WITH LONG SIDE PARALLEL TO VALVE



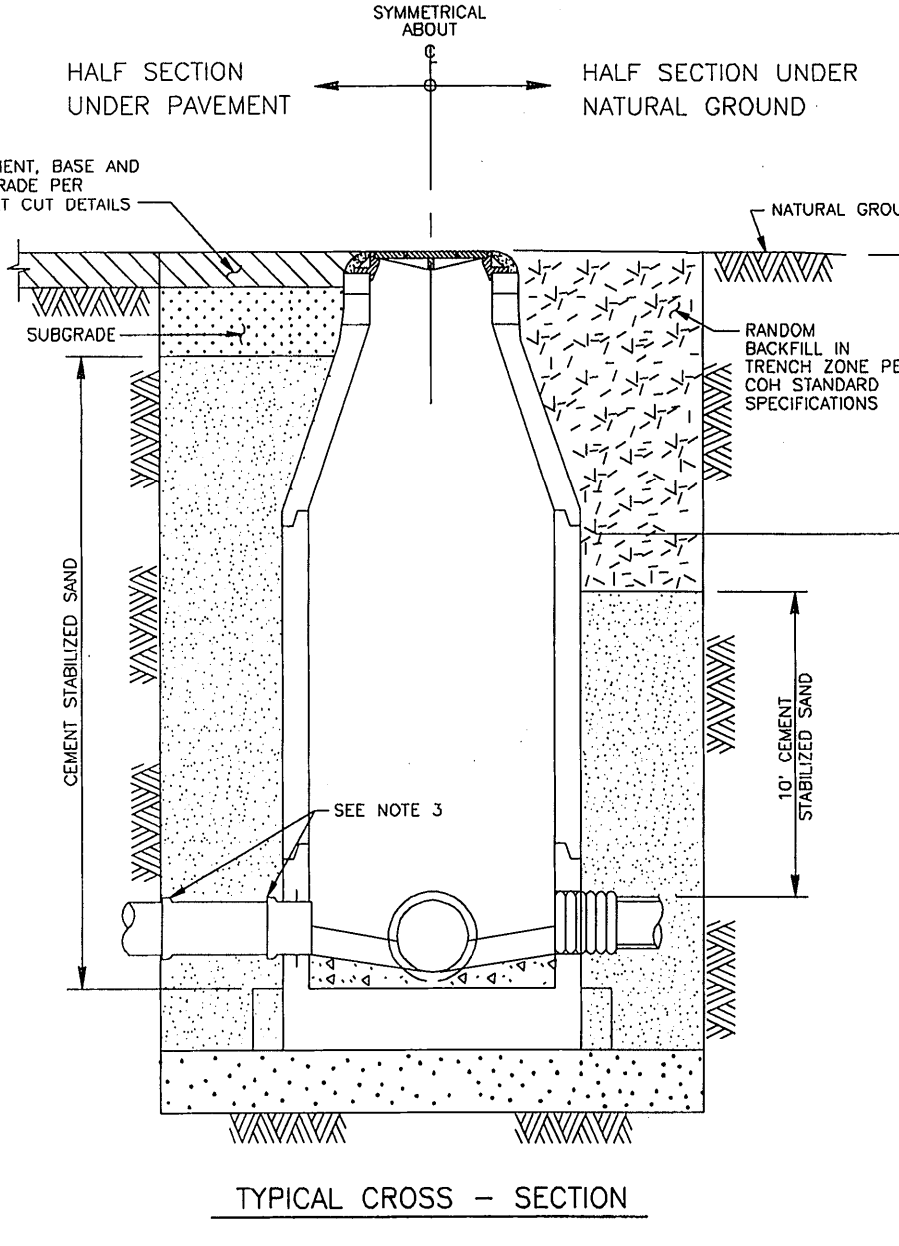
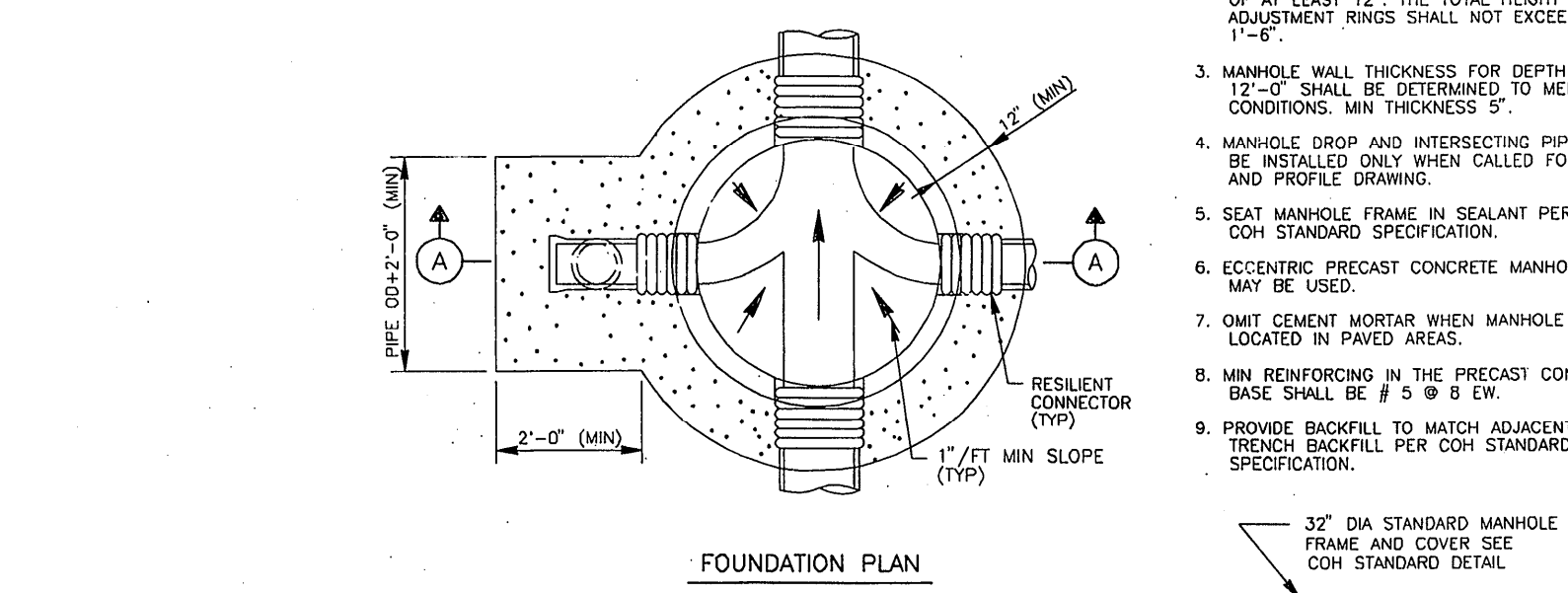
7 STANDARD FIRE HYDRANT DETAIL (NOT TO SCALE)

- NOTES:
- LOCATE FIRE HYDRANTS AT P.C. OF THE INTERSECTION CURB RADIUS, 3 FEET BEHIND CURB OR PROJECTED FUTURE CURB.
 - ON OPEN-DITCH ROADWAYS, SET THE FIRE HYDRANTS WITHIN 3 FEET OF RIGHTS-OF-WAY LINES.
 - THE FIRE HYDRANT STEAMER NOZZLE SHALL FACE THE STREET.
 - LOCATE HYDRANT VALVE IMMEDIATELY ADJACENT TO WATER LINE.



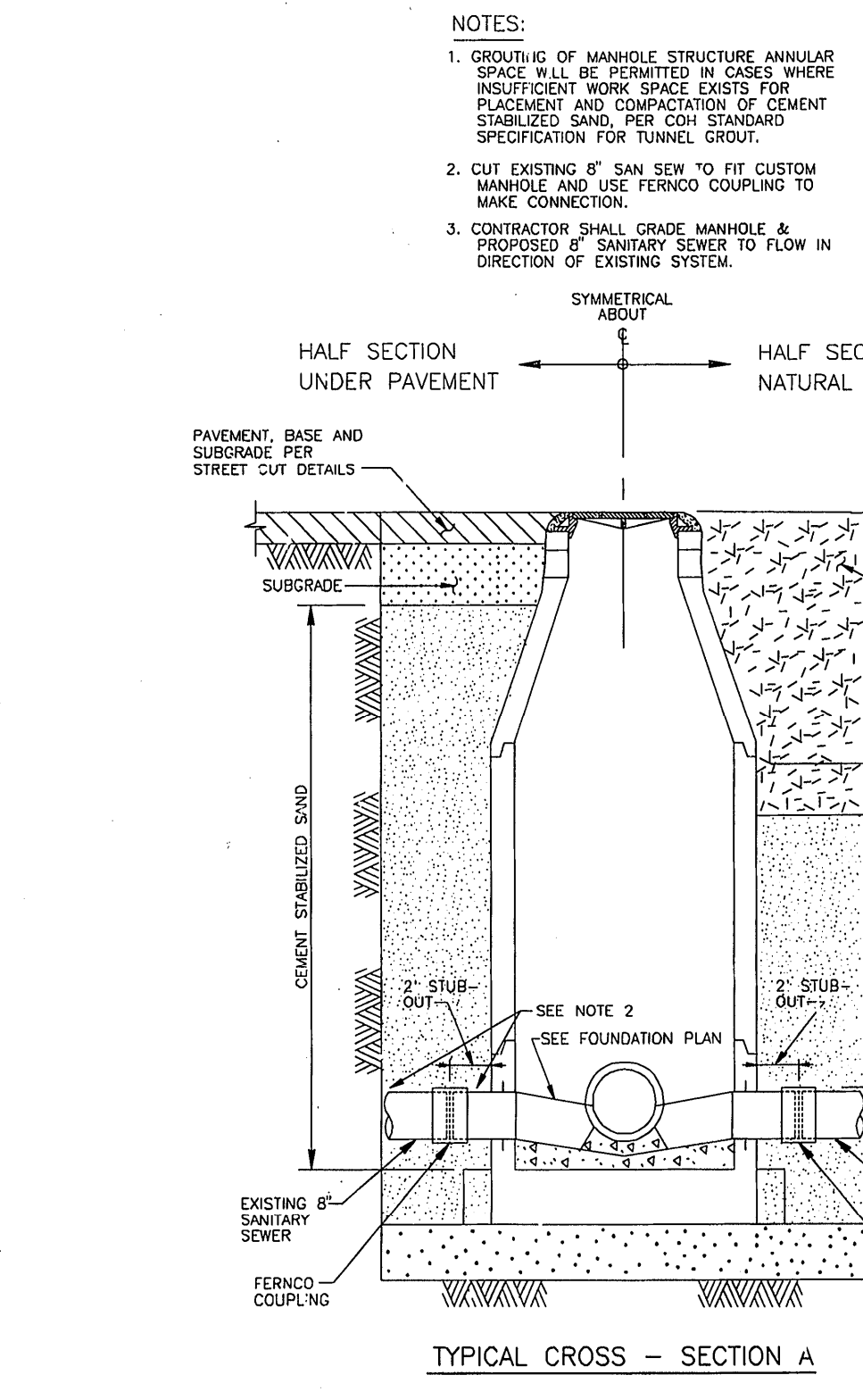
8 SANITARY SEWER 4'-0" DIAMETER PRECAST CONCRETE MANHOLE (NOT TO SCALE)

- NOTES:
- DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
 - PRECAST CONCRETE OR HOPE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 14".
 - MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12" SHALL BE DETERMINED TO MEET LOADING CONDITIONS. MIN THICKNESS 5".
 - MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR IN PLAN AND PROFILE DRAWING.
 - SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
 - ECCENTRIC PRECAST CONCRETE MANHOLE MAY BE USED.
 - OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
 - MIN REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE # 5 @ 12" CV.
 - PROVIDE BACKFILL TO MATCH ADJACENT PIPE TRENCH BACKFILL PER COH STANDARD SPECIFICATION.



9 SANITARY SEWER BACKFILL OF MANHOLE SHAFTS (NOT TO SCALE)

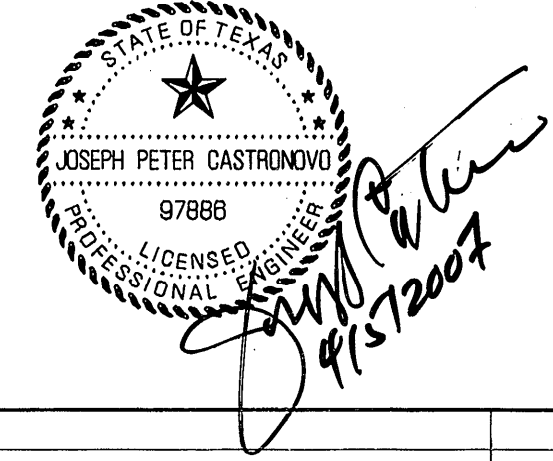
- NOTES:
- GROUTING OF MANHOLE STRUCTURE ANNUAL SPACE WILL BE PERMITTED IN CASES WHERE INSUFFICIENT WORK SPACE EXISTS FOR PLACEMENT AND COMPACTATION OF CEMENT STABILIZED SAND PER COH STANDARD SPECIFICATION FOR TUNNEL GROUT.
 - THIS DETAIL ALSO APPLIES TO BACKFILL OF SHAFTS WITHOUT STRUCTURES.
 - ARRANGE PIPE JOINTS AS SHOWN WHEN USING RIGID CONNECTION TO CAST IN PLACE MANHOLE BASE.



10 CUT-IN MANHOLE FOR EXIST SANITARY SEWER CONNECTION (NOT TO SCALE)

- NOTES:
- GROUTING OF MANHOLE STRUCTURE ANNUAL SPACE WILL BE PERMITTED IN CASES WHERE INSUFFICIENT WORK SPACE EXISTS FOR PLACEMENT AND COMPACTATION OF CEMENT STABILIZED SAND PER COH STANDARD SPECIFICATION FOR TUNNEL GROUT.
 - CUT EXISTING 6" SAN SEW TO FIT CUSTOM MANHOLE AND USE FERROCOUPLING TO MAKE CONNECTION.
 - CONTRACTOR SHALL GRADE MANHOLE & PROPOSED 6" SANITARY SEWER TO FLOW IN DIRECTION OF EXISTING SYSTEM.

RECORD DRAWING



NO.	DATE	REVISIONS	APP.

HARRIS COUNTY M.U.D. No. 191
HARRIS COUNTY, TEXAS

JONES & CARTER, INC.
Consulting Engineers
6333 Gulton Dr., Suite 200 Houston, Texas 77001 (713) 777-5337

HAMMETT PROPERTY

WATER & SANITARY DETAILS

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

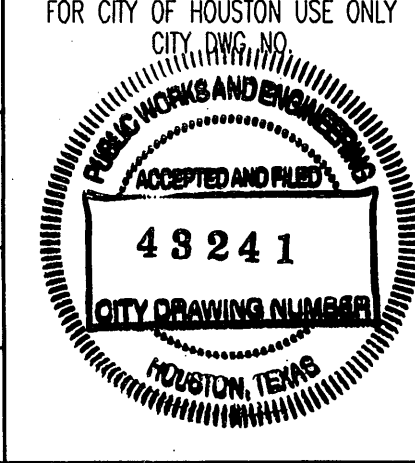
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

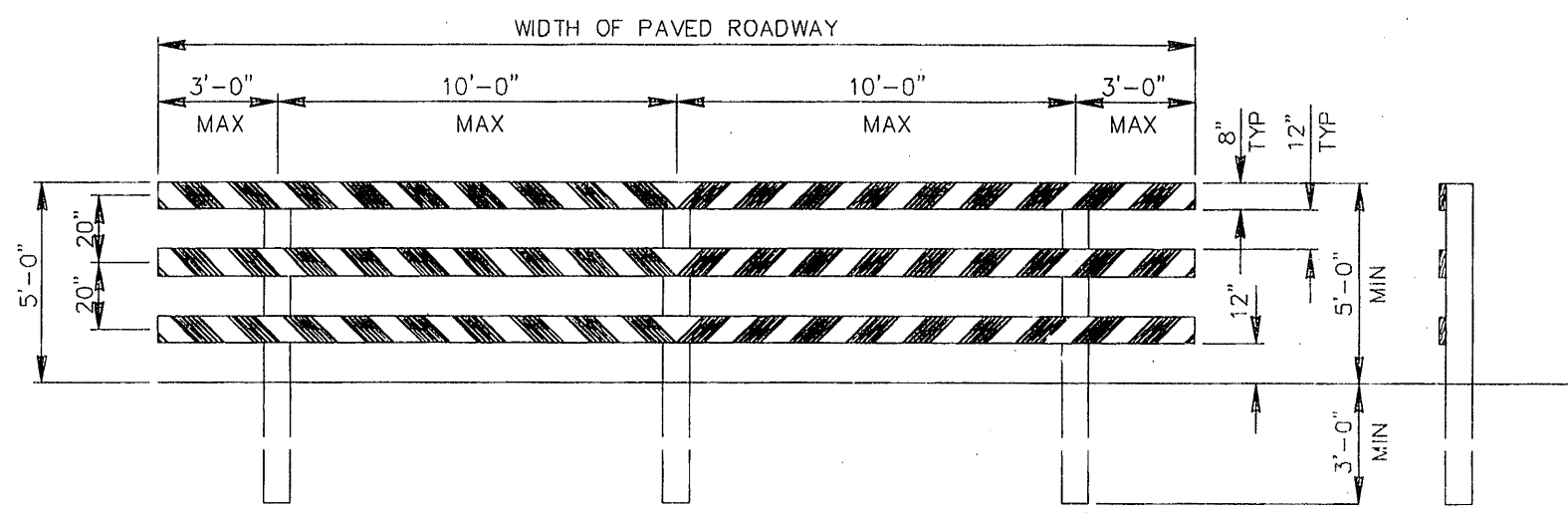
WATER	ST 461-107	TRAFFIC & TRANSPORTATION
WASTEWATER	Wagner 461-107	STORM WATER QUALITY
STORM		FACILITIES

FILE NO. _____
JOB NO. 05386-001

DATE: APRIL 2007
DGN. BY: AS
DWG. BY: AHS

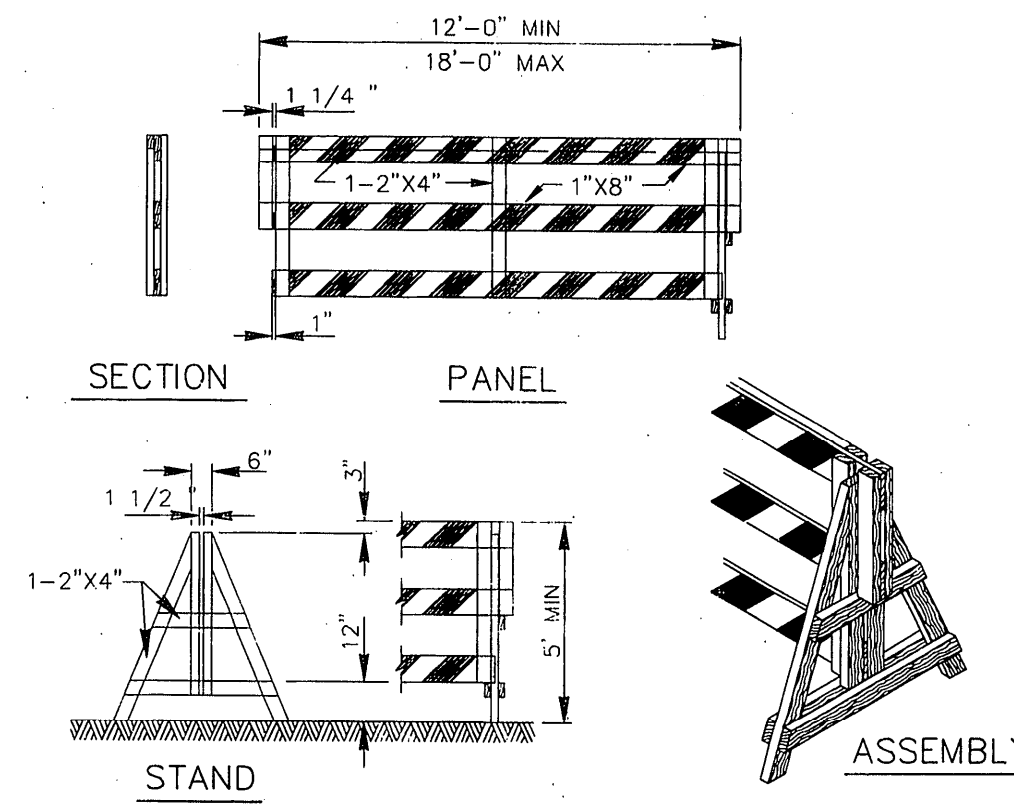
SCALE: NTS
SHEET No. 11 OF 13





TYPE III BARRICADE FOR END OF ROAD

FOR TYPE III BARRICADE FOR END OF ROAD, THE THREE (3) RAILS SHALL BE REFLECTIVE RED AND REFLECTIVE WHITE STRIPES ON SIDE FACING TRAFFIC



DEMOUNTABLE TYPE III BARRICADE

BARRICADE NOTES

THE MOST RECENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND ITS REVISIONS, SHALL GOVERN THE CONSTRUCTION AND USE OF ALL ITEMS HEREIN DESCRIBED.

CHANNELIZATION DEVICES OTHER THAN BARRICADES SHOULD NORMALLY BE USED FOR CHANNELIZATION PURPOSES.

BARRICADES SHOULD NORMALLY BE PLACED PERPENDICULAR TO THE TRAFFIC FLOW. OTHER CHANNELIZING DEVICES, SUCH AS DRUMS, VERTICAL PANELS OR PORTABLE BARRIERS, SHOULD BE USED WHERE NEEDED TO SEPARATE TRAFFIC FROM THE WORK AREA. IN ALL CASES, THE BARRICADES SHOULD BE SO LOCATED AS TO MOST ADVANTAGEOUSLY WARN AND DIRECT TRAFFIC.

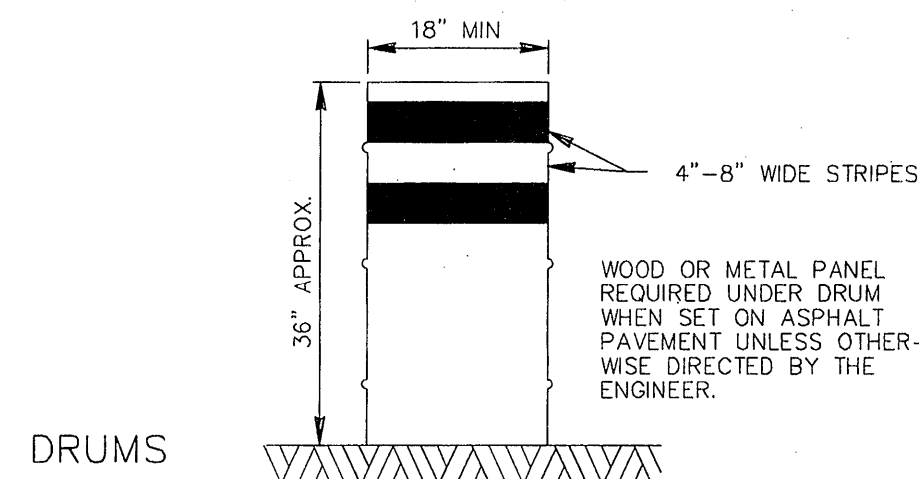
BARRICADES MAY BE DESIGNED AND CONSTRUCTED FROM WOOD OR ANY OTHER SUITABLE MATERIAL IN A MANNER APPROVED BY THE DEPARTMENT OF TRAFFIC AND TRANSPORTATION. THE CONSTRUCTION DETAILS SHOWN HEREON ARE TYPICAL AND ARE SUGGESTED DETAILS FOR WOOD SUPPORT SYSTEMS FOR BARRICADES. THE DETAILS OF RAIL WIDTH AND STRIPING, NUMBER AND SPACING OF RAILS, MINIMUM LENGTH AND HEIGHT (ABOVE PAVEMENT) OF RAILS MUST BE ADHERED TO WHEN ALTERNATE DESIGNS ARE USED.

BARRICADES ARE TO BE CONSTRUCTED OF CLEAN SOUND MATERIAL. ALL SURFACES ABOVE GROUND, WHICH ARE NOT STRIPED, SHALL BE WHITE EXCEPT THE UNPAINTED GALVANIZED METAL OR ALUMINUM COMPONENTS MAY BE USED. COMPONENTS MADE OF LUMBER SHALL BE PAINTED WITH A MINIMUM OF TWO COATS OF AN APPROVED BRAND OF WHITE PAINT TO SECURE THOROUGH COVERAGE AND A UNIFORM WHITE COLOR.

THE REFLECTORIZED WHITE AND REFLECTORIZED ORANGE (REFLECTORIZED RED) STRIPES FOR BARRICADES, DRUMS AND VERTICAL PANELS SHALL BE CONSTRUCTED OF "HIGH INTENSITY SHEETING" AND SHALL BE MAINTAINED TO MEET THE APPEARANCE, COLOR AND REFLECTIVITY REQUIREMENTS SET BY DOT.

THE CONTRACTOR SHALL MAINTAIN EACH BARRICADE IN A CLEAN AND GOOD CONDITION.

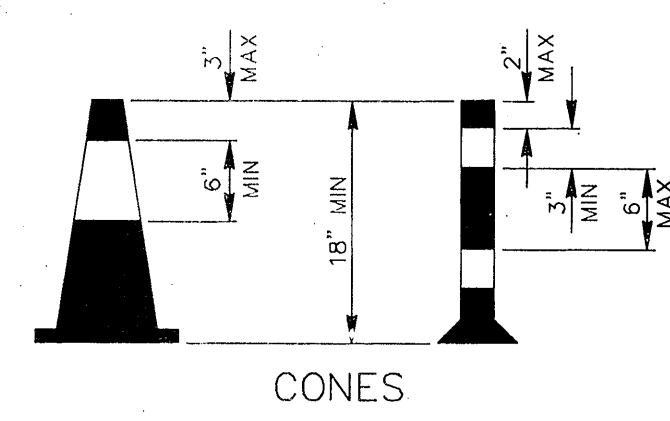
BARRICADES SHALL BE REMOVED UPON COMPLETION OF THE WORK AND/OR THE ELIMINATION OF THE HAZARD ON ANY SECTION.



DRUMS

DRUMS, SET ON END, AND USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE APPROX 36" IN HEIGHT AND A MIN OF 18" IN DIAMETER. THE CONTRACTOR, AT HIS OPTION, MAY USE DRUMS MADE FROM STEEL BARRELS OR BLACK POLYETHYLENE PLASTIC DRUM LINERS WEIGHING APPROX EIGHT POUNDS EACH. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, CIRCUMFERENTIAL, REFLECTORIZED ORANGE AND REFLECTORIZED WHITE STRIPES, 4 TO 8 INCHES WIDE. THE FIRST REFLECTORIZED STRIPE SHOULD START WITHIN TWO (2) INCHES OF THE TOP OF THE DRUM. THERE SHALL BE AT LEAST TWO ORANGE AND TWO WHITE STRIPES ON EACH DRUM. IF THERE ARE NON-REFLECTORIZED SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, THEY SHALL BE NO MORE THAN 2 INCHES WIDE. METAL DRUMS SHALL BE PAINTED BLACK OR ORANGE BEFORE REFLECTORIZED STRIPES ARE ADDED. ALL DRUMS ON PROJECT WILL BE THE SAME COLOR. WHEN DRUMS ARE PLACED IN THE ROADWAY, APPROPRIATE WARNING SIGNS SHOULD BE USED. DURING HOURS OF DARKNESS, A FLASHING WARNING LIGHT SHOULD BE PLACED ON DRUMS USED SINGLY AS A WARNING DEVICE. STEADY BURN ELECTRIC LIGHTS OR DELINEATORS SHOULD BE PLACED ON DRUMS USED IN SERIES FOR TRAFFIC CHANNELIZATION. DRUMS SHALL BE WEIGHED WITH SAND TO THE EXTENT INDICATED IN THE PLANS.

CW-8 CHEVRON SIGNS, CW-6A ARROW SIGNS OR VP-1 VERTICAL PANELS MOUNTED ABOVE DRUMS MAY BE USED AS SUPPLEMENTS TO DRUM DELINEATION.

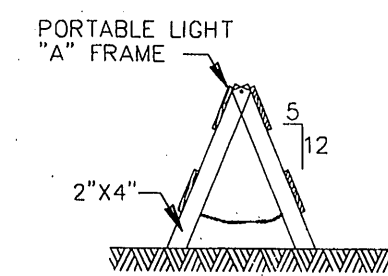


CONES

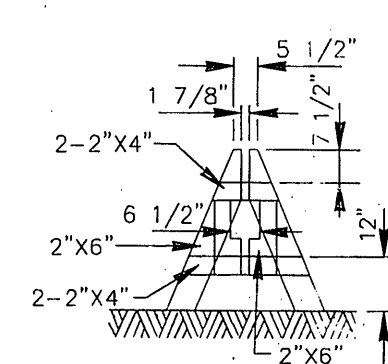
TRAFFIC CONES AND TUBULAR MARKERS SHALL BE A MIN OF 18" IN HEIGHT WITH A BROADENED BASE AND MAY BE MADE OF VARIOUS MATERIALS TO WITHSTAND IMPACT WITHOUT DAMAGE TO THEMSELVES OR TO VEHICLES. LARGER SIZES SHOULD BE USED ON FREEWAYS AND OTHER ROADWAYS WHERE SPEED ARE RELATIVELY HIGH OR WHERE EVER MORE CONSPICUOUS GUIDANCE IS NEEDED. ORANGE SHALL BE THE PREDOMINANT COLOR ON CONES AND TUBULAR MARKERS. THEY SHOULD BE KEPT CLEAN AND BRIGHT FOR MAX TARGET VALUE. FOR NIGHTTIME USE THEY SHALL BE REFLECTORIZED OR EQUIPPED WITH LIGHTING DEVICES FOR MAX VISIBILITY. REFLECTORIZED MATERIAL SHALL HAVE A SMOOTH, SEALED OUTER SURFACE WHICH WILL DISPLAY THE SAME APPROX COLOR DAY AND NIGHT.

REFLECTORIZATION OF TUBULAR MARKERS SHALL BE A MIN OF TWO THREE-INCH BANDS PLACED A MAX OF 2" FROM THE TOP WITH A MAX OF 6" BETWEEN THE BANDS. REFLECTORIZATION OF CONES SHALL BE PROVIDED BY A MIN 6" BAND PLACED A MAX OF 3" FROM THE TOP.

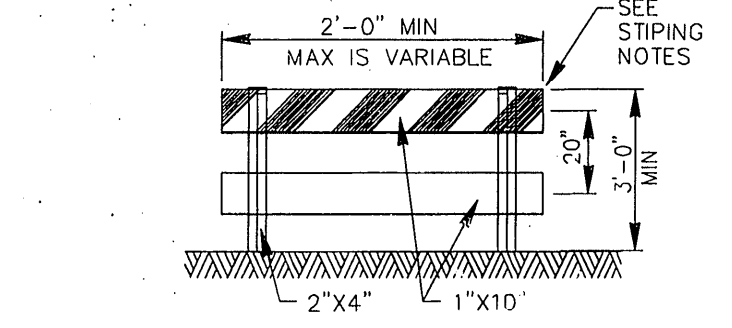
CONES OR TUBULAR MARKERS ARE GENERALLY ONLY SUITABLE FOR TEMPORARY USAGE (UP TO 8 HOURS) WITH OTHER CHANNELIZATION DEVICES SUCH AS VERTICAL PANELS OR BARRICADES PREFERRED FOR LONGER TERM USAGE. CARE SHOULD BE TAKEN TO INSURE THAT THEY REMAIN IN THEIR PROPER LOCATION AND IN AN UPRIGHT POSITION.



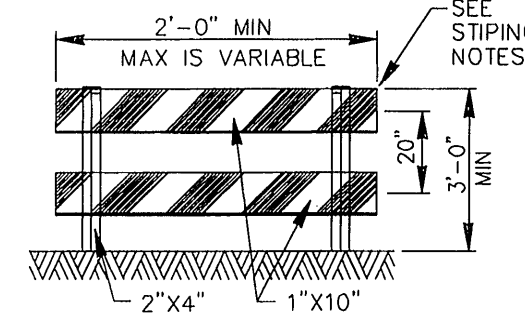
"A" FRAME



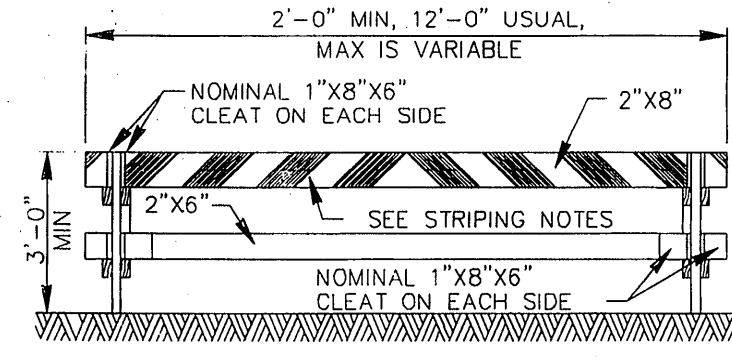
DEMOUNTABLE



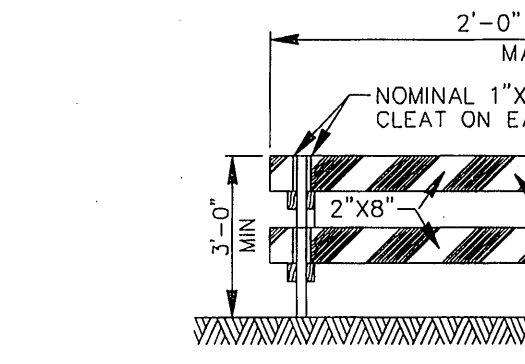
TYPE I



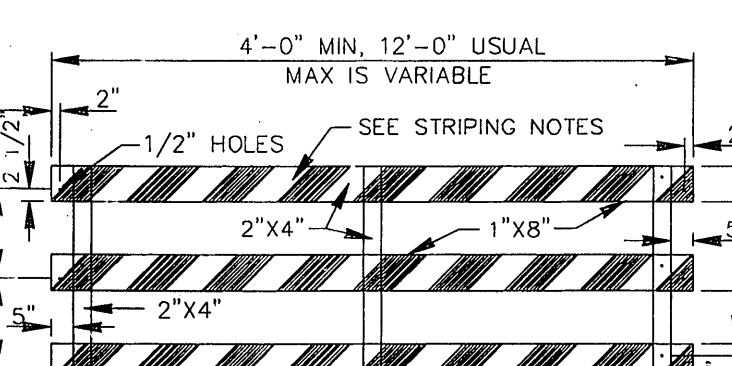
TYPE II



TYPE I

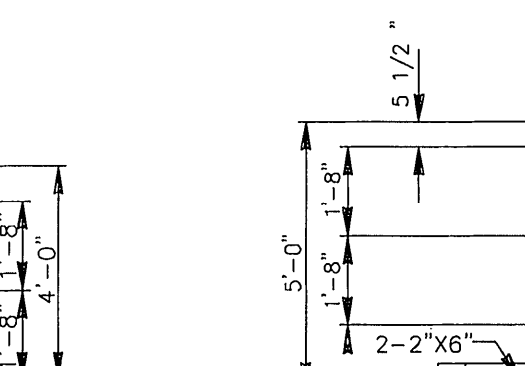


TYPE II



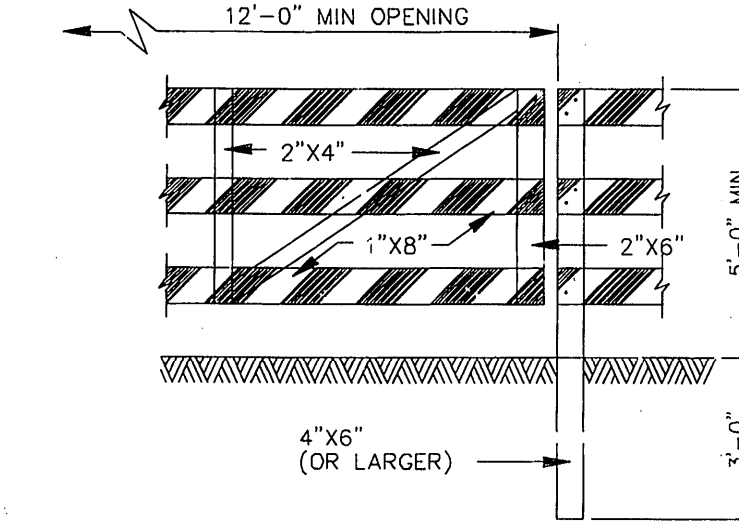
PANEL FOR TYPE III BARRICADE

USE 1/2" X 3" MACHINE BOLTS, WITH TWO WASHERS EACH

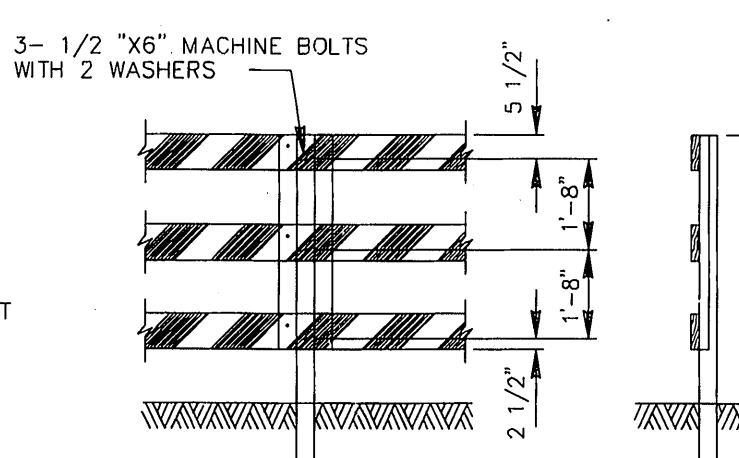


STAND FOR TYPE III BARRICADE

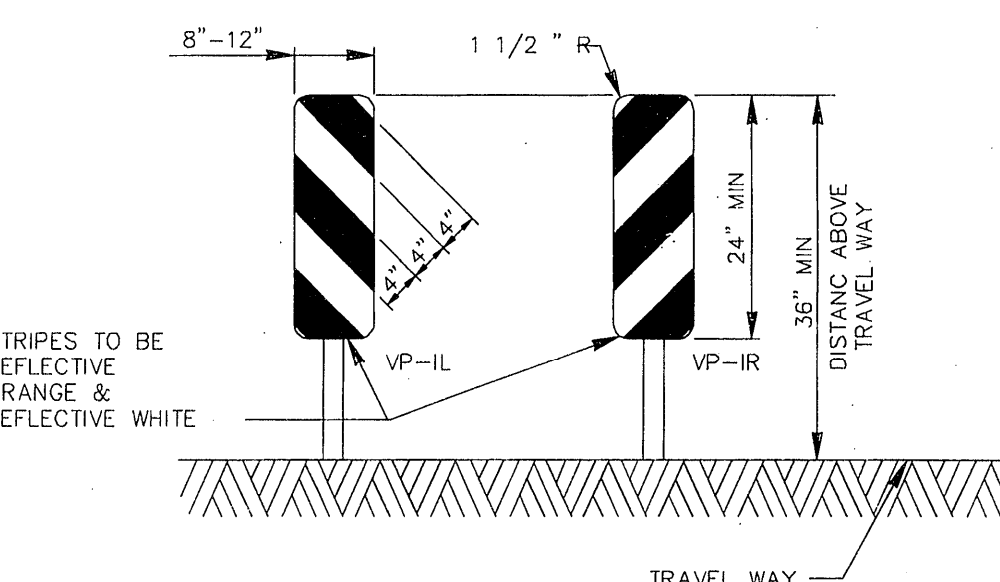
6 1/2" X8" MACHINE BOLTS WITH 2 WASHERS



GATE FOR TYPE III BARRICADE

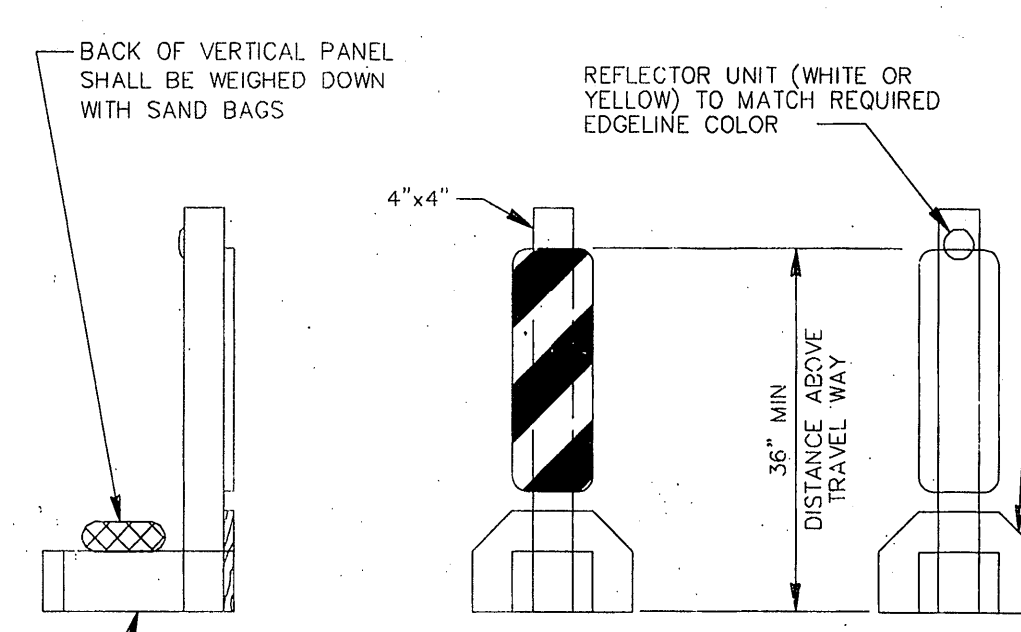


POST FOR TYPE III BARRICADE



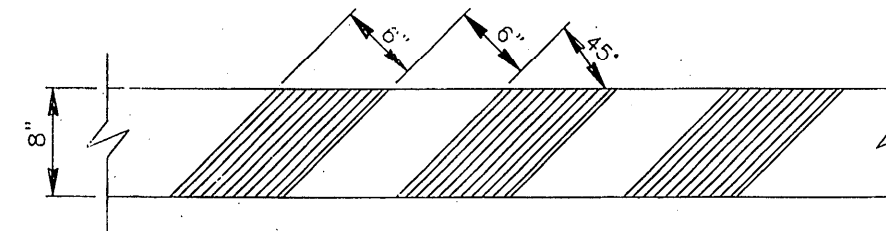
VERTICAL PANELS (VP)

VERTICAL PANELS ARE NORMALLY USED AS CHANNELIZING DEVICES TO INDICATE TANGENT OR NEARLY TANGENT ROADWAY ALIGNMENT WHERE GOOD TARGET VALUE OF A DEVICE IS NEEDED IN DAYTIME AS WELL AS THE NIGHTTIME. IN ADDITION, VERTICAL PANELS SHOULD BE USED AT THE EDGE OF SHOULDER DROP-OFFS AND OTHER SUCH AREAS AS LANE TRANSITIONS WHERE POSITIVE DAY AND NIGHT DELINEATION MAY BE REQUIRED. VERTICAL PANELS SHOULD BE MOUNTED BACK TO BACK IF USED AT THE EDGE OF CUTS ADJACENT TO TWO-WAY TWO LANE ROADWAYS. STRIPES SHOULD ALWAYS SLOPE DOWNWARD TOWARD THE TRAVELED WAY.



TYPICAL PORTABLE VERTICAL PANEL OR DELINEATOR

OTHER SIMILAR SUPPORTS MAY BE USED WHEN APPROVED OR DIRECTED BY THE COH DEPT OF TRAFFIC AND TRANSPORTATION



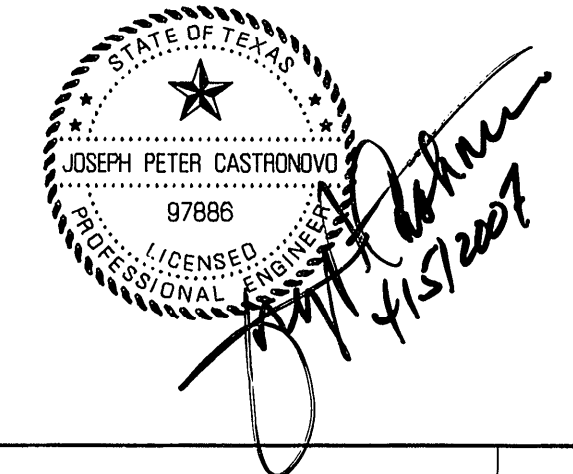
STRIPING FOR BARRICADE

FOR ALL TYPES OF BARRICADES WITH RAILS LESS THAN 3'-0" LONG, STRIPES 4" WIDE SHALL BE USED. IDENTIFICATION MARKINGS MAY BE SHOWN ONLY ON BACK SIDE OF BARRICADE RAILS.

STRIPING SHOULD COVER THE FULL WIDTH OF THE RAIL. STRIPING OF RAILS, PANELS, ETC, SHOULD SLOPE DOWNWARD AT AN ANGLE OF 45 DEGREES IN DIRECTIONS TRAFFIC IS TO PASS.

WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, IT IS DESIRABLE THAT THE STRIPES SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN IN DETOURING. WHEN BOTH RIGHT AND LEFT TURNS ARE PROVIDED FOR, THE CHEVRON STRIPING MAY SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE.

RECORD DRAWING



NO.	DATE	REVISIONS	APP.

HARRIS COUNTY M.U.D. No. 191
HARRIS COUNTY, TEXAS

JC JONES & CARTER, INC.
ENGINEERS • PLANNERS • SURVEYORS
6335 Gullforn Dr., Suite 100 Houston, Texas 77081 (713) 777-5337

BARRICADE STANDARDS

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

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

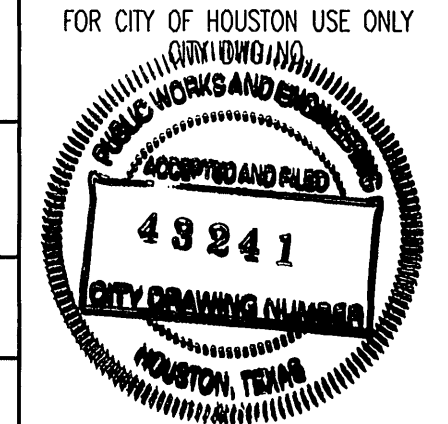
WATER	TRAFFIC & TRANSPORTATION
WASTEWATER	STORM WATER QUALITY
STORM	FACILITIES
STREET & BRIDGE	

FILE NO: _____
JOB NO: 05386-001-00

DATE: APRIL 2007
DGN. BY: AS
DWG. BY: AHS

SCALE: NTS

SHEET No. 12 OF 13



1. PAVING

- I. DESIGN THICKNESS OF PAVING
II. STABILIZED SUBGRADE TO A DEPTH OF
III. DESIGN STRENGTH OF CONCRETE
IV. TYPE AND PLACEMENT OF STEEL

NOTES: I - II TO BE COMPLETED ONLY IF PAVING IS TO BE ACCEPTED BY HARRIS COUNTY

DRIVEWAYS

- I. NUMBER OF DRIVEWAY APPROACHES PROPOSED
II. HARRIS COUNTY STANDARD DRIVEWAY DETAIL APPEARS ON SHEET

NOTES: I - II TO BE COMPLETED ONLY IF PROJECT ENTAILS CONSTRUCTION OF DRIVEWAYS AT TIME OF DEVELOPMENT

FIRE APPARATUS ACCESS ROAD

- REQUIRED AND SHOWN ON SHEET(S)
NOT REQUIRED DUE TO

CURBING

- I. ISLANDS AND MEDIANS REQUIRE STANDARD 6" CURBING
II. STANDARD 6" CURBING PROPOSED
4" x 12" CURBING PROPOSED
6" OR 4" x 12" ALLOWED EXCEPT AT MEDIANS AND ISLANDS

TRAFFIC CONSIDERATIONS

- I. MEDIAN CUTS
NO MEDIAN CUT OR RELOCATION IS PROPOSED
MEDIAN MODIFICATIONS ARE SHOWN ON SHEET

- II. LEFT HAND TURN
NO LEFT TURN LANE IS PROPOSED
LEFT TURN LANE IS SHOWN ON SHEET

- III. TRAFFIC CONTROL PLAN
NO WORK IN THE RIGHT OF WAY IS PROPOSED THAT WOULD INTERFERE WITH TRAFFIC FLOW
TRAFFIC CONTROL SHOWN ON SHEET

- IV. EXISTING TRAFFIC CONTROL
DEVICES SHOWN ON PLANS (T.C. BOXES AND LOOPS)

NOTES: I - III TO BE COMPLETED FOR ALL PROJECTS

6. STORM WATER QUALITY

- I. CONSTRUCTION PROTECTIVE MEASURES
SWPPP SITE PLAN AND DETAILS ON SHEET(S) 8

- II. APPLICABILITY FOR PERMANENT FEATURES
EXEMPT NEW DEVELOPMENT OF LESS THAN 5 ACRE PARCEL
EXEMPT REDEVELOPMENT OF A 5 ACRE OR LARGER PARCEL WHERE TOTAL IMPERVIOUS SURFACE (EXISTING PLUS PROPOSED) IS LESS THAN 1 ACRE
EXEMPT "GRAND FATHERED" BY AN EXISTING STORM SEWER LINE
"STORM WATER QUALITY MANAGEMENT PLAN" HAS BEEN/WILL BE INCLUDED IN A SEPARATE SUBMITTAL ENTITLED
"STORM WATER QUALITY MANAGEMENT PLAN" INCLUDED. SWQMP SITE PLAN ON SHEET(S)

- III. STORM WATER QUALITY FEATURES
VEGETATIVE CONTROLS USED: (FILTER STRIP, GRASSY SWALE, URBAN FORESTRY) DETAILS AND CALCULATIONS APPEAR ON SHEET(S)
POND STRUCTURE USED (WET, DRY, WETLANDS) DETAILS AND CALCULATIONS APPEAR ON SHEET(S)
HYDRODYNAMIC TYPE SEPERATOR MODEL:
OTHER(S): REINFORCED FILTER FABRIC FENCE

NOTES: I - II REQUIRED ON ALL PROJECTS, III IF NOT EXEMPT OR "GRANDFATHERED"

9. WHEEL CHAIR RAMPS / SIDEWALK

- WHEEL CHAIR RAMPS PROPOSED YES NO
SIDEWALKS PROPOSED YES NO

NOTE: IF A MAJOR CATEGORY ON THIS SHEET IS NOT REQUIRED FOR THE PROJECT, "X" THROUGH THAT ENTIRE SECTION. CATEGORY (6) MUST BE COMPLETED.

2. SUBDIVISION DRAINAGE

- I. DRAINAGE SYSTEM TYPE
STORM SEWER
ROADSIDE DITCH

- II. DESIGN METHOD USED
CITY OF HOUSTON FREQUENCY
OTHER

- III. DRAINAGE SYSTEM OUTFALL
TO DETENTION POND
DETENTION POND MAINTAINED BY
TO HCPCD DRAINAGE DITCH UNIT NO.
TO HARRIS COUNTY ROADSIDE DITCH
ROAD NAME:

- STATIC W.S.E. @ OUTFALL IS
PROPOSED STORM SEWER IS SUBMERGED.

- IV. STORM WATER OUTFALL
CAPACITY ALLOCATED TO TRACT FROM D. A. MAP: (CFS)
FROM DRAINAGE AREA MAP DATED:
PREPARED BY:
ACTUAL OUTFALL RATE: (CFS)

- OTHER:

- V. DRAINAGE SYSTEM FLOW RATE
FLOW PRIOR TO DETENTION: CFS
FLOW AFTER DETENTION (IF REQUIRED): CFS

NOTES: I - IV REQUIRED ON ALL SUBDIVISION TYPE PROJECTS INCLUDING MANUFACTURED HOME PARKS.

3. SITE DRAINAGE

- I. PROPOSED DRAINAGE AREA
NEW DEVELOPMENT AREA: 0.1 ACRES
RE-DEVELOPMENT AREA (AMOUNT INCREASED IMPERVIOUS AREA):

- II. DETENTION VOLUME (DRY BASIN)
NEW AREA X 0.65 = ACRE-FEET
DETENTION REQUIRED
PROPOSED VOLUME = ACRE FEET

- III. OUTFALL
OUTFALL TO ROADSIDE DITCH
STORM SEWER
OTHER
STATIC W.S.E. @ OUTFALL IS
ROADSIDE DITCH OUTFALL:
ROAD FRONTAGE X 0.0088 = (CFS) ALLOWABLE OUTFALL
PROPOSED OUTFALL RATE:
STORM SEWER OUTFALL
CAPACITY ALLOCATED TO TRACT FROM D. A. MAP: (CFS)
FROM DRAINAGE AREA MAP DATED:
PREPARED BY:
ACTUAL OUTFALL RATE: (CFS)

- IV. PUMPED DETENTION FACILITIES
VOLUME THAT GRAVITY FLOWS: ACRE FEET
VOLUME THAT IS PUMPED: ACRE FEET
ENTRANCE VELOCITY INTO ROADSIDE DITCH OR STORM SEWER:
PUMP SPECIFICATIONS AND OPERATING PLAN APPEAR ON SHEET

- V. FLOW RESTRICTOR SIZE
OUTFALL PIPE SIZE:
RESTRICTOR PIPE SIZE:

- VI. PROPOSED STORM SEWER IS SUBMERGED.

NOTES: I. REQUIRED FOR ALL PROJECTS OTHER THAN SUBDIVISION TYPE PROJECTS. DEVELOPMENT AREA INCLUDES ALL AREA WHERE BUILDING, PAVING OR GRADING WILL OCCUR. AREAS NOT INCLUDED BUT WITHIN THE PROPERTY'S BOUNDARIES MUST BE DELINEATED AS A "NO WORK" AREA ON THE DRAWINGS. II - V. REQUIRED WHEN PROPOSED FACILITY WILL INCREASE THE AMOUNT OF RUNOFF INTO A COUNTY DRAINAGE DITCH, ROADSIDE DITCH OR STORM SEWER. IF ANALYZED AND THE RECEIVING DRAINAGE STRUCTURE HAS CAPACITY IN THE FULLY DEVELOPED CONDITION OF THE AREA IT SERVES, NO DETENTION IS REQUIRED.

4. WATER AND WASTEWATER

- I. TYPE OF SERVICE PROPOSED
MUNICIPALITY:
MUNICIPAL UTILITY DISTRICT: H.C.M.U.D. No. 191
OTHER DISTRICT:
PRIVATE WATER AND WASTEWATER SYSTEMS
PRIVATE WATER SYSTEM AND INDIVIDUAL OSSF
INDIVIDUAL WATER WELL AND OSSF
OTHER:
NO UTILITIES ARE PROPOSED

- II. PROOF OF CAPACITY
LETTER FROM DISTRICT AUTHORIZING SERVICE AND CONNECTION
TCEQ APPROVAL FOR WATER SYSTEM AND PERMIT FOR WASTEWATER SYSTEM.
TCEQ APPROVAL FOR WATER SYSTEM AND OSSF FEASIBILITY REPORT
OSSF FEASIBILITY REPORT WHICH CONSIDERS INDIVIDUAL WELLS

- III. AMOUNT OF FLOW
RESIDENTIAL: LOTS OR UNITS
COMMERCIAL: AVERAGE DAILY FLOW
OTHER:

NOTES: I. COMPLETE FOR ALL PROJECTS
II. COMPLETE FOR ALL PROJECTS.
III. COMPLETE ONLY IF TCEQ DISCHARGE PERMIT IS PROPOSED

5. DESCRIPTION OF PROPERTY

I. LEGAL DESCRIPTION / PLAT NAME (PROPOSED OR RECORDED): WATER AND SANITARY EXTENSIONS ALONG DOTSON ROAD WITH RECORDED EASEMENTS (HCFC 2007-0197004 2007-0197005, 2007-0176598, 8 2007-0176593 PROP. PLAT: HAMMETT ACRES SUBDIVISION (BY OTHERS)

II. ADJACENT ROADS DOTSON ROAD AND HARGRAVE ROAD

III. JURISDICTIONS
CITY OF HOUSTON
CITY OF
ETJ, CITY OF HOUSTON
UTILITY DISTRICT: HCMUD No. 191
OTHER:

IV. HCAD ACCOUNT NOS. (ALL)
043-046-000-0052; 043-046-000-0053; 043-046-000-0055

NOTES: I. COMPLETE FOR ALL PROJECTS
II. COMPLETE ONLY IF PROJECT IS LOCATED ADJACENT TO A PUBLIC OR PRIVATE ROAD.

7. FLOOD CONTROL DISTRICT CRITERIA

Table with 7 columns: RAINFALL EVENT PROBABILITY, PRE-DEVELOPED PEAK RUNOFF (CFS), POST-DEVELOPED PEAK RUNOFF (CFS), DETENTION BASIN PEAK OUTFALL (CFS), MAXIMUM WATER SURFACE ELEVATION, PEAK STORAGE VOLUME (AC-FT), STORAGE RATE (AC-FT PER AC)

ADDITIONAL CRITERIA FOR PUMPED DETENTION BASINS:
VOLUME OF PUMPED 1% EXCEEDANCE STORAGE VOLUME = AC-FT
MAXIMUM DESIGN OUTFLOW VELOCITY INTO HCFCD CHANNEL = CFS
DRAIN TIME FOR BASIN = HOURS BASED ON HEAD CONDITIONS.

STORMWATER DRAINAGE DESIGN REPORT
REPORT TITLE
REPORT DATE
DATE OF ACKNOWLEDGEMENT BY HCFCD OR FLOODPLAIN ADMINISTRATOR

STORMWATER DETENTION FOR THE PROPOSED WORK CONTAINED IN THESE PLANS IS PROVIDED BY OTHER PLANS:
PLAN TITLE
ENGINEERING FIRM
DATE SIGNED BY HCFCD

II. HCFCD STANDARD NOTES: SEE SHEET OF THESE PLANS.

III. HCFCD STANDARD DETAILS: SEE SHEET OF THESE PLANS.

IV. REFER TO PLAN SHEETS FOR EXISTING AND PROPOSED RIGHT OF WAY DELINEATION AND COMPLETE RECORDING INFORMATION TO INCLUDE CLERK'S FILE NUMBERS, TYPE OF ESTATE (e.g., DRAINAGE EASEMENT, FEE STRIP, ETC.) AND GRANTEE (e.g., COH, HCFCD, PUBLIC, TXDOT, ETC.)

NOTES: I. COMPLETE ONLY IF HCFCD OR HARRIS COUNTY IS REQUIRING DETENTION. II. COMPLETE ONLY IF PROJECT HAS WITHIN IT OR IS IMMEDIATELY ADJACENT TO AN EXISTING OR PROPOSED HCFCD MAINTAINED CHANNEL OR DETENTION BASIN. III. COMPLETE ONLY IF PROJECT INCLUDES NEW OUTFALL, BACKSLOPE INTERCEPTOR OR OTHER RELATED WORK WITHIN AN EXISTING OR PROPOSED HCFCD MAINTAINED CHANNEL OR DETENTION BASIN. IV. COMPLETE ONLY IF PROJECT HAS WITHIN OR IMMEDIATELY ADJACENT TO IT AN EXISTING OR PROPOSED PUBLIC DRAINAGE CHANNEL OR DETENTION BASIN.

8. FLOOD PLAIN STATUS

I. GENERAL INFORMATION
FIRM PANEL(S) FOR PROPERTY: 48201C0435L
FIRM PANEL(S) DATE: REVISED PRELIMINARY JUNE 9, 2006

- STATUS OF PROPERTY ON MAP
LOCATED IN UNSHADED ZONE "X"
ENTIRELY LOCATED IN SHADED AND UNSHADED ZONE "X"
LOCATED PARTIALLY IN ZONE "AE" DELINEATE ON CONSTRUCTION DRAWINGS (DRAINAGE LAYOUT)
LOCATED ENTIRELY IN ZONE "AE" (INDICATE BASE FLOOD LEVEL ON CONSTRUCTION DRAWINGS)
OTHER
SITE REMOVED FROM FLOODPLAIN BY LOMA OR LOMR-F CASE NO.

- FLOOD HAZARD RECOVERY DATA
FLOOD HAZARD RECOVERY DATA AVAILABLE AND UTILIZED (PROVIDED INFORMATION BASED ON 1973 AND 2001 ADJUSTMENTS).
FLOOD HAZARD RECOVERY DATA NOT AVAILABLE.

- ELEVATION INFORMATION
BENCHMARK USED
FEMA RM benchmark
HARRIS-GALVESTON COASTAL SUBSIDENCE DISTRICT BENCHMARK (FOR COASTAL AREAS)
OTHER TSARP RM No. 150770

DESCRIPTION OF BENCHMARK INCLUDING ELEVATION, DATUM AND YEAR OF ADJUSTMENT
LOCATED 100 FEET NORTH OF INTERSECTION OF F.M. 1960 AND BRETON RIDGE STREET. ELEV. 120.92; NAVD 88, 2001 ADJ.

- II. FLOOD PLAIN DETERMINATION BASED ON GROUND ELEVATION
PROPERTY LIES ENTIRELY ABOVE THE BASE FLOOD LEVEL AND IN ZONE "X" (SHADED OR UNSHADED)
PROPERTY LIES PARTIALLY BELOW THE BASE FLOOD LEVEL (MUST BE DELINEATED ON TOPOGRAPHIC SURVEY)

- III. FLOODPLAIN STORAGE SUMMARY (APPLIES ONLY TO PORTION OF LAND LOCATED WITHIN FLOODPLAIN AS DELINEATED BY FIRM PANELS)
A. TOTAL VOLUME OF MATERIAL PROPOSED TO BE PLACED WITHIN THE FIRM DELINEATED FLOODPLAIN (FILL, BASE, CONCRETE, ASPHALT, ETC.): i.e., BELOW ELEVATION (19 ADJ.) CUBIC YARDS
B. TOTAL VOLUME OF MATERIAL PROPOSED TO BE REMOVED FROM THE FIRM DELINEATED FLOODPLAIN: i.e., BELOW ELEVATION (19 ADJ.) CUBIC YARDS

NOTES: I. COMPLETE FOR ALL PROJECTS
II. COMPLETE ONLY IF PROJECT IS ADJACENT TO 100-YEAR FLOOD PLAIN

- IV. LOMR REQUIRED

VERIFIED BY: [Signature]

HCPID SIGNATURE BLOCK

PROJECT KNOWN AS: WATER AND SANITARY SEWER EXTENSIONS ALONG DOTSON ROAD

WAS ACCEPTED BY THE FOLLOWING GROUPS FOR THE PURPOSES LISTED BELOW:

ENGINEERING DIVISION
BY: INTERPOSE NO OBJECTION DATE
AS TO PAVING AND/OR DRAINAGE ONLY DATE
AS TO LOCATION OF ITEMS IN COUNTY RIGHT OF WAY DATE
AS TO STORM WATER QUALITY DATE

HARRIS COUNTY FLOOD CONTROL DISTRICT
INTERPOSE NO OBJECTION
BY: No Review Required - WCB DATE 4-20-07
FOR ITEMS LOCATED OUTSIDE OF HCFCD RIGHT-OF-WAY

APPROVED:
FOR ITEMS LOCATED WITHIN EXISTING HCFCD RIGHT-OF-WAY DATE
APPROVED:
FOR ITEMS LOCATED WITHIN PROPOSED HCFCD RIGHT-OF-WAY DATE

ADDITIONAL COMMENTS:

THE PROJECT WAS REVIEWED, HOWEVER, THIS DOES NOT MEAN THE ENTIRE PROJECT, INCLUDING ALL SUPPORTING DATA AND CALCULATIONS HAVE BEEN COMPLETELY CHECKED AND VERIFIED. THESE DRAWINGS ARE SIGNED, DATED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS, WHICH THEREFORE CONVEYS THE ENGINEER'S RESPONSIBILITY AND ACCOUNTABILITY. THIS DOES NOT RELIEVE ANY PARTY FROM COMPLYING WITH ANY OTHER LEGALLY ADOPTED REGULATION OR ORDINANCE RELATED TO LAND DEVELOPMENT. IF THE CITY SIGNATURES ARE REQUIRED BY ORDINANCE, COUNTY PERMITS WILL NOT BE ISSUED UNTIL SUCH SIGNATURES ARE OBTAINED. THESE SIGNATURES ARE VALID FOR A MAXIMUM OF TWO YEARS.

ENGINEER'S CERTIFICATION

I, JOSEPH PETER CASTRONOVO, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THE INFORMATION PRESENTED ON THIS SHEET IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. THE COMPLETED PROJECT CONSISTS OF DRAWING SHEETS 1 THRU 13

REVISIONS

Table with 4 columns: DATE, SHEET NO., DESCRIPTION, ACKNOWLEDGMENT

REQUEST NO. 1008577 APPLICANT NO. SHEET NUMBER 13 OF 13

HARRIS COUNTY PUBLIC INFRASTRUCTURE DEPARTMENT EXPRESS REVIEW SHEET

