

GENERAL NOTES - SANITARY SEWER

- SPECIAL BACKFILL - SEE ADDENDUM SEWER SPECIFICATION E-14-62, CITY OF HOUSTON SEWER SPECIFICATIONS FOR CEMENT STABILIZED BACKFILL OF SANITARY AND TRENCHES UNDER OR WITHIN (1) FT. OF PROPOSED OR EXISTING PAVEMENT.
- WYE BRANCHES, STACKS AND TEES FOR HOUSE SERVICE CONNECTION SHALL BE CENTERED BETWEEN SIDE LOT LINES UNLESS OTHERWISE SHOWN. CONTRACTOR SHALL PROVIDE ENGINEER WITH DRAWINGS OF ACTUAL FIELD TIES OF THE WYES, STACKS AND TEES LOCATING THEM FROM THE NEAREST DOWNSTREAM MANHOLE.
- LOCATION OF UTILITIES WITHIN 10-FT and 16-FT WIDE UTILITY EASEMENTS SHALL BE GOVERNED BY THE "UTILITY COORDINATING COMMITTEE" FOR THE METROPOLITAN AREA.
- SANITARY SEWERS SHALL HAVE CLASS AA<sup>1/2</sup> BEDDING WHERE CEMENT STABILIZED SAND BACKFILL IS USED OR WHEN DEPTH IS GREATER THAN TEN (10) FEET.
- ALL MANHOLE RIMS LOCATED OUTSIDE OF THE PROPOSED PAVING WILL BE SET 3" ABOVE TOP OF CURB ELEVATION WHEN WITHIN STREET RIGHT-OF-WAY OR 3" TO 6" ABOVE SURROUNDING LEVEL OF FINISHED GRADE ELSEWHERE WITH SLOPED FILL ADDED FOR STORM WATER DRAINAGE AWAY FROM THE MANHOLE RIM.
- ALL SANITARY SEWER MATERIALS, CONSTRUCTION, AND TESTING WILL BE IN ACCORDANCE WITH CITY OF HOUSTON E-14-62 (1977 PRINTING AND ALL SUBSEQUENT AMENDMENTS THERETO).
- ALL SANITARY SEWERS LOCATED IN SIDELOT EASEMENT WILL HAVE CLASS "AA" BEDDING AND BANK SAND BACKFILL (B.S.B.F.).
- ALL EASEMENTS CONTAINING SANITARY SEWERS ARE 16' U.E.S. UNLESS OTHERWISE SHOWN ON CONSTRUCTION DRAWINGS.
- 6" A.B.S. WILL NOT BE ALLOWED UNDER PAVEMENT.
- CONTRACTOR TO OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY THE "REGULATIONS OF HARRIS COUNTY, TEXAS FOR FLOOD PLAIN MANAGEMENT".
- FOR USE IN WET SAND CONSTRUCTION AREAS, USE C/H SPEC. SEC. NO. 5, DMG NO. 485-5 (E-14-62) (1977 PRINTING AND ALL SUBSEQUENT AMENDMENTS THERETO)
- THE CONTRACTOR MAY USE A BACKHOE FOR TRENCH EXCAVATION IN LIEU OF A TRENCHING MACHINE.

GENERAL NOTES - WATER

- ALL WATER LINES TO HAVE A MINIMUM OF FOUR (4) FEET OF COVER TO TOP OF CURB.
- WATER MAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF HOUSTON SPECIFICATIONS WD-3 AND WD-5 & 6 AS CURRENTLY AMENDED.
- ALL FLUSHING VALVES SHALL BE SET THREE (3) FEET BEHIND BACK OF CURB.
- STEEL WATER SECTION TO EXTEND FIVE (5) FEET MINIMUM BEYOND 45° BENDS.
- THE CONTRACTOR MAY USE A BACKHOE FOR TRENCH EXCAVATION IN LIEU OF A TRENCHING MACHINE.
- WHENEVER SANITARY SEWERS CROSS OVER WATER MAINS, ONE 18' JOINT OF DUCTILE PIPE SHALL BE INSTALLED IN THE SEWER LINE AND CENTERED AT THE WATER LINE CROSSING, 6" MINIMUM CLEARANCE.
- DUCTILE IRON PIPE SHALL BE MINIMUM THICKNESS CLASS 50. THE PRESSURE RATING FOR BOTH THE PIPE AND THE JOINTS SHALL BE 150 PSI OR GREATER.
- WHENEVER SANITARY SEWERS CROSS UNDER WATER MAINS, AND THE OUT-TO-OUT PIPE CLEARANCE IS LESS THAN 24", A CENTERED 18' JOINT OF DUCTILE IRON PIPE SHALL BE USED.
- WHENEVER SANITARY SEWER CROSS UNDER WATER MAINS, AND THE MINIMUM PIPE CLEARANCE IS 24" OR GREATER, A CENTERED 20' SECTION OF CEMENT STABILIZED SAND (2 SACKS OF CEMENT PER CUBIC YARD) SHALL BE INSTALLED FROM THE LOWER 1/4 POINT OF THE SEWER PIPE TO A LEVEL OF 1 PIPE DIAMETER ABOVE THE SEWER PIPE, BUT IN NO CASE SHALL THE DEPTH OF SAND ABOVE THE SEWER PIPE BE LESS THAN 12".
- ALL P.V.C. WATER MAINS SHALL BE ANHA C-900, DR 18, CLASS 150.
- ALL WATER METERS MUST HAVE INDIVIDUAL SERVICE LEADS AS PER CITY OF HOUSTON STANDARDS W.D.-6 (EFFECTIVE 6-29-87)
- ALL EXCAVATIONS WITHIN THE PROPOSED F.M. 1960 ROAD BASE FOR REMOVAL AND SALVAGE OF EXISTING FITTINGS, VALVES, OR FLUSH VALVES SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND AS DIRECTED BY THE ENGINEER.
- TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN SIX FEET OF ENERGIZED OVERHEAD POWER LINES, AND FEDERAL REGULATIONS, TITLE 29, PART 1910.180(1) AND PART 1926.550(A)(15) REQUIRE A MINIMUM CLEARANCE OF TEN FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES, WITH CONTRACTORS AND OWNERS BEING LEGALLY RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THE LAWS. IF YOU OR YOUR COMPANY MUST WORK NEAR OVERHEAD POWER LINES, CALL (713) 228-7400 FOR THE LINES TO BE DE-ENERGIZED AND/OR MOVED AT YOUR EXPENSE.

GENERAL NOTES - PAVING

- PAVING SHALL BE IN ACCORDANCE WITH HARRIS COUNTY "RULES, REGULATIONS AND REQUIREMENTS RELATING TO THE APPROVAL AND ACCEPTANCE OF IMPROVEMENTS IN SUBDIVISIONS OR RE-SUBDIVISIONS" AND THE LATEST REVISIONS AND/OR AMENDMENTS OF SAME.
- GUIDELINES SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES SHALL BE OBSERVED.
- ALL RADIUS AT CURB RETURNS TO BE 25.0' TO BACK OF CURB UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTIFY HARRIS COUNTY ENGINEERING DEPARTMENT 24 HOURS IN ADVANCE OF COMMENCING CONSTRUCTION.
- STOP SIGN (R1 - 1A ) TO BE PLACED AT ALL INTERSECTIONS.
- OWNER TO OBTAIN ALL PERMITS REQUIRED BY HARRIS COUNTY FOR CONSTRUCTION OF UTILITIES AND/OR CULVERTS WITHIN COUNTY ROAD R.O.W.

GENERAL NOTES - STORM SEWERS

- STORM SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF HOUSTON E-14-62 AS CURRENTLY AMENDED.
- REINFORCED CONCRETE PIPE (C-76 CLASS III) STORM SEWER SHALL BE INSTALLED BEDDED AND BACKFILLED IN ACCORDANCE WITH CITY OF HOUSTON DRAWINGS 529-S-1, 530-S-1 and 530-S-2 AS APPLICABLE.
- ALL SEWERS UNDER OR WITHIN ONE (1) FT. OF PROPOSED OR FUTURE PAVEMENT SHALL BE BACKFILLED WITH 1/2 SACK CEMENT STABILIZED SAND TO WITHIN ONE (1) FT. OF SUBGRADE.
- ALL STORM SEWERS CONSTRUCTED IN SIDELOT EASEMENTS SHALL BE R.C.P. (C-76 CLASS III) AND SHALL BE BEDDED IN ACCORDANCE WITH CITY OF HOUSTON DRAWINGS 529-S-1, 530-S-1 and 530-S-2 AS APPLICABLE. TWENTY (20) FT WIDE, EASEMENT SHALL BE PROVIDED.
- ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES OR INLETS ARE TO BE PLUGGED WITH 8" BRICK WALLS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTIFY HARRIS COUNTY ENGINEERING DEPARTMENT 24 HOURS IN ADVANCE OF COMMENCING CONSTRUCTION. 221-7024.
- CONTRACTOR TO OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY THE "REGULATIONS OF HARRIS COUNTY, TEXAS FOR FLOOD PLAIN MANAGEMENT."
- ALL MANHOLE RIMS LOCATED OUTSIDE OF THE PROPOSED PAVING WILL BE SET 3" ABOVE TOP OF CURB ELEVATION WHEN WITHIN STREET RIGHT-OF-WAY OR 3" TO 6" ABOVE SURROUNDING LEVEL OF FINISHED GRADE ELSEWHERE WITH SLOPED FILL ADDED FOR STORM WATER DRAINAGE AWAY FROM THE MANHOLE RIM.
- BEFORE UTILITY CONSTRUCTION BEGINS, ADEQUATE DRAINAGE MUST BE PROVIDED SO THAT NO SHEET FLOW FLOODING OF ROADWAY OR ADJOINING PROPERTIES OCCURS.
- THE CONTRACTOR MAY USE A BACKHOE FOR TRENCH EXCAVATION IN LIEU OF A TRENCHING MACHINE.

STANDARD H.C.F.C.D. NOTES FOR PLANS

- Harris County Flood Control District, Inspection Division, shall be notified at least 48 hours prior to construction (713/684-4040).
- Engineer shall submit letter to Harris County Flood Control District requesting inspection and acceptance of items constructed in Harris County Flood Control District Right-of-Way. Prior to requesting inspection, the drainage right-of-way and/or easements shall be staked and flagged.
- Contractor shall be responsible for protecting, maintaining and restoring backslope drainage systems.
- All disturbed areas within the Harris County Flood Control District right-of-way, except the channel bottom, shall be hydro-mulch seeded as per Harris County Flood Control specification entitled "Hydro-Mulch Seeding" or approved equal.
- Backfill to be compacted in no greater than 1 foot lifts to the density of the undisturbed adjacent soil.
- Contractor shall be responsible for excavation channel flowline to design elevation as shown on plans and downstream as necessary to insure no water in storm sewer during "dry" conditions.
- Contractor shall be responsible for maintaining flow in channel during construction and restoring channel to original condition.
- All excavated material is to be removed from the HCFCO right-of-way. No fill is to be placed within a designated flood plain area without first obtaining a fill permit.
- Engineer shall be responsible for obtaining all applicable City, County, State, and Federal permits.

PRIVATE UTILITY LINES SHOWN	
<i>of Woodland 10-16-87</i>	<i>Elmer Karpis</i>
ENTEX, INC.	
<i>M. Nava 10-27-87</i>	
SOUTHWESTERN BELL TELEPHONE CO.	
Valid for One Year Only	
<i>Chisler 11-20-87</i>	
HOUSTON LIGHTING & POWER CO.	
Approval Only for Crossing Underground	
Ductlines Unless Noted. Valid for One Year Only	

APPROVED FOR CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS:	
<i>Water Design</i>	<i>12-2-87</i>
<i>Water Quality</i>	<i>12-2-87</i>
<i>Assistant Director - Water Div.</i>	<i>Sanitary Sewer</i>
<i>Bridge Division</i>	
<i>Assistant Director</i>	<i>Director</i>
Date:	
OTHER DEPT'S	
<i>Traffic &amp; Transp. Dept.</i>	<i>City Planning Dept.</i>

Rev.	Date	Description	App.
RELOCATION OF 12" WATER LINE ON F.M. 1960			
HARRIS COUNTY M.U.D. No. 191			
GENERAL NOTES			
Design By:	Job No: 85001	Sheet	2
Drawn By:	Scale: NONE	of	5
Checked By:	Date: OCT, 1987		
 <b>LANDEV ENGINEERS, INC.</b> 1708 SEAMIST DRIVE Houston, Texas 77008			

*David R. Corbin*  
*1-30-87*  
*M. J. B...*  
*11/19/87*