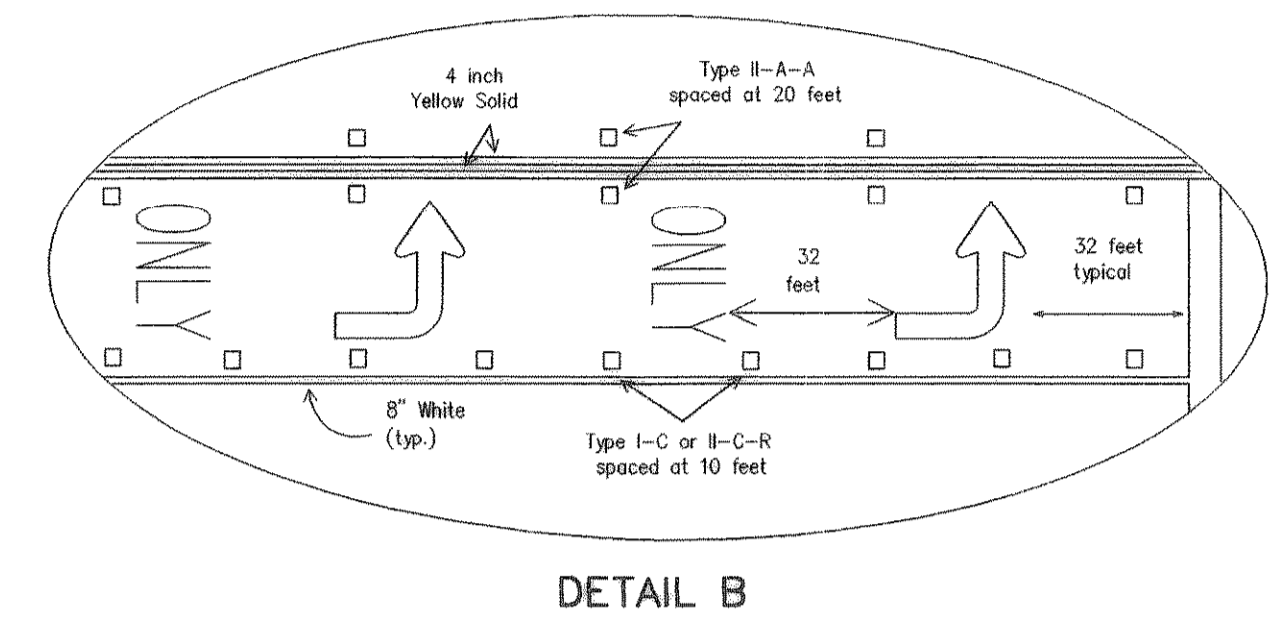
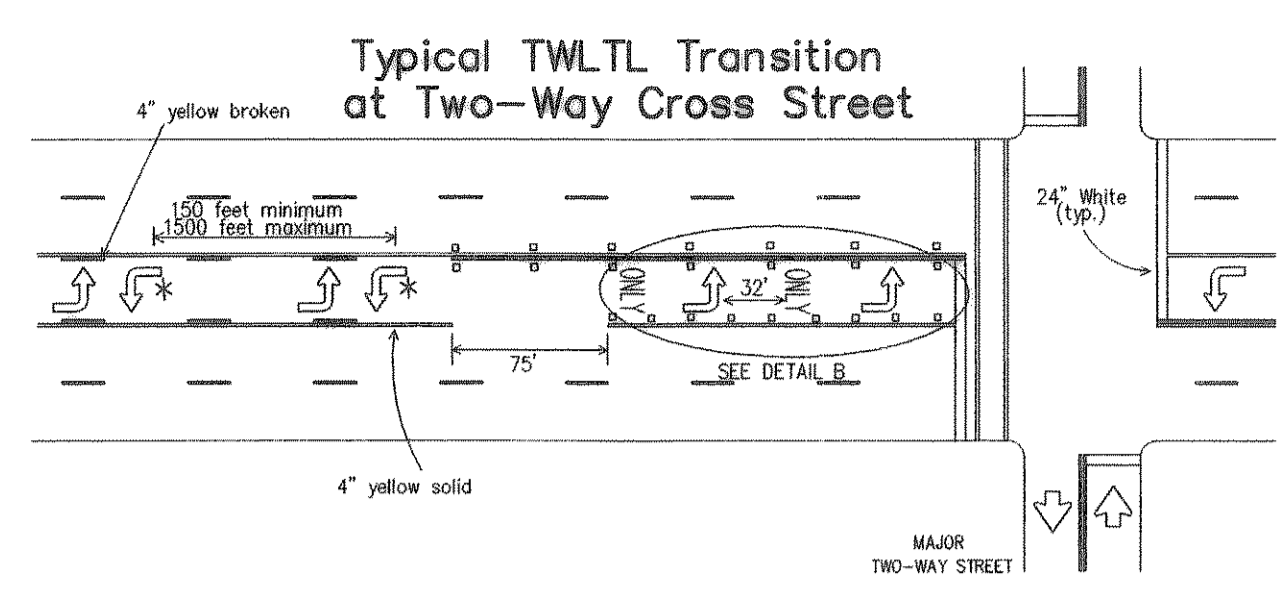
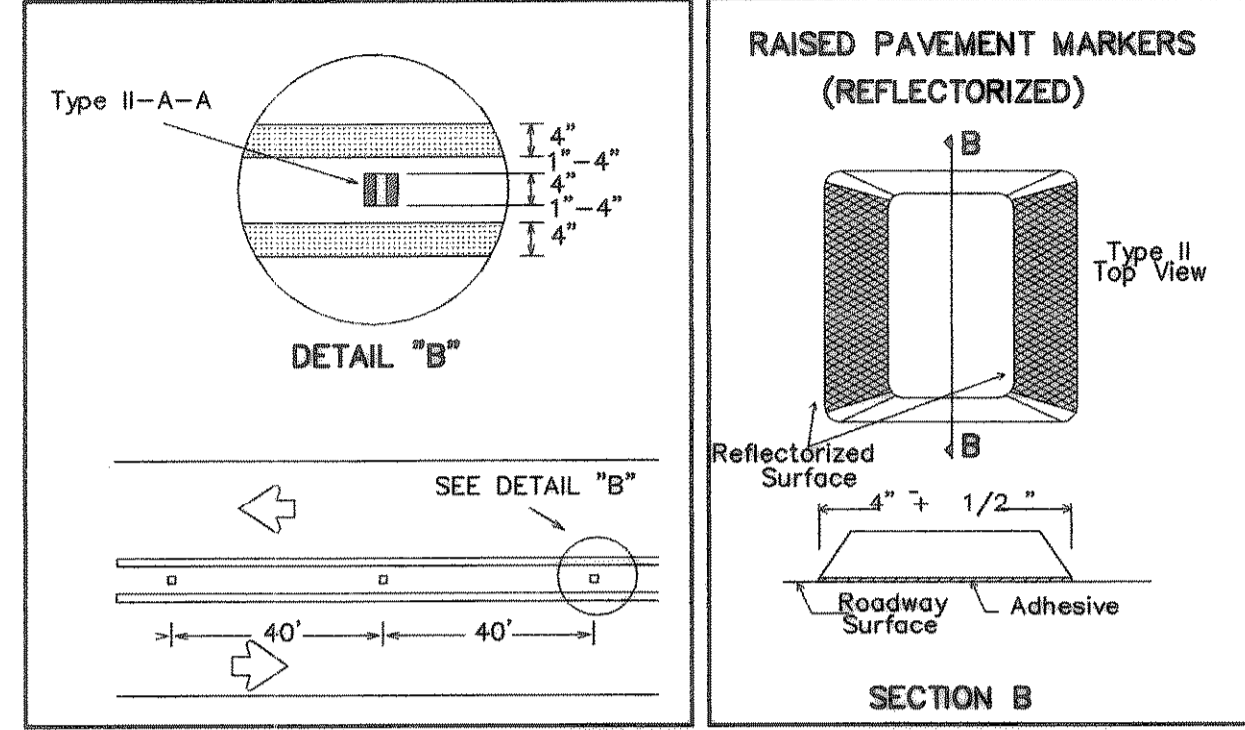


**NOTE:**  
 INSTALL PAVEMENT MARKERS TYPE II-A-A. AS PER DETAIL SHOWN ON THIS SHEET  
 1. AT THE CENTER OF FM 1141 FROM STA. 0+17.51 TO STA 29+59.09  
 2. ON THE STRIPES

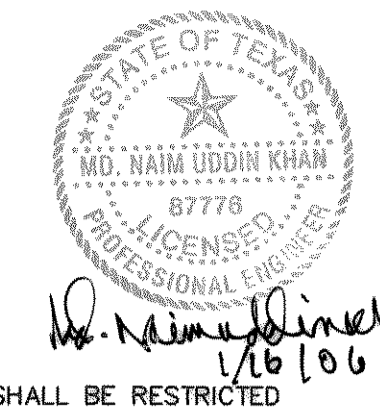


**NTMWD NOTE-1**  
 FRANCHISED UTILITIES ARE NOT PERMITTED IN NTMWD EASEMENT EXCEPT FOR CROSSINGS.

- NTMWD NOTE-2**
- A. NORTH TEXAS MUNICIPAL WATER DISTRICT (NTMWD) 30-INCH WATER TRANSMISSION PIPELINE IS LOCATED WITHIN LIMITS OF CONSTRUCTION.
  - B. OPERATION OF HEAVY EARTH MOVING EQUIPMENT, COMPACTION EQUIPMENT OR HEAVY CONSTRUCTION EQUIPMENT, SUCH AS CONCRETE TRUCKS, SHALL BE RESTRICTED TO SPECIFIC CROSSING POINTS ACROSS NTMWD EASEMENTS, AS APPROVED BY THE NTMWD. THE CROSSINGS SHALL BE DESIGNATED AND VERIFIED TO PROVIDE A MINIMUM OF FIVE-FOOT OF COVER.
  - C. TO ASSURE THAT PLACING OF SIGNIFICANT LOADS OVER THE NTMWD PIPELINE DOES NOT DAMAGE THE EXISTING PIPELINE, NO MATERIALS SHALL BE STOCKPILED ON THE NTMWD EASEMENT, WITHOUT AUTHORIZATION FROM THE NTMWD. IF THE CONTRACTOR DESIRES TO USE THE NTMWD'S EASEMENT FOR STOCKPILE OF MATERIALS, CONTACT NTMWD ENGINEERING AT (972) 442-5405 SO YOUR PLANS FOR USE OF NTMWD'S EASEMENT CAN BE REVIEWED.
  - D. A MINIMUM OF THREE FEET SEPARATION BETWEEN THE BOTTOM OF THE PAVEMENT AND TOP OF THE PIPELINE IS REQUIRED. IN ADDITION, IF SEPARATION BETWEEN THE BOTTOM OF THE PAVEMENT AND THE TOP OF THE PIPELINE IS LESS THAN 3.5 FEET, A THICKENED PAVEMENT SECTION IS REQUIRED.
  - E. CROSSING OF THE NTMWD EASEMENT WITH OTHER UTILITIES, SUCH AS TV CABLE, PHONE, GAS AND ELECTRIC, SHALL BE COORDINATED WITH THE NTMWD TO AVOID DAMAGE TO THE NTMWD FACILITIES.
  - F. OUTDOOR LIGHTING, LANDSCAPING, SCREENING WALLS OR OTHER FACILITIES SHALL NOT BE INSTALLED IN NTMWD EASEMENTS WITHOUT WRITTEN APPROVAL OF THE NTMWD.
  - G. UNLESS OTHERWISE SHOWN OR REQUIRED A MINIMUM OF ONE-FOOT CLEARANCE SHALL BE PROVIDED FOR ALL UTILITIES CROSSING THE NTMWD PIPELINES.
  - H. "THE CONTRACTOR SHALL CONTACT NTMWD ENGINEERING AT (972) 442-5405 AT LEAST 48 HOURS PRIOR TO PERFORMING ANY WORK IN THE VICINITY OF THE NTMWD FACILITIES."

**NTMWD NOTE-3**  
 EXCAVATION ADJACENT TO NTMWD PIPELINE AND APPURTENANCES TO INSTALL THE PROPOSED IMPROVEMENTS SHALL BE PERFORMED SO THAT THE PIPELINE OR APPURTENANCES ARE NOT DISPLACED OR DAMAGED. ANY DAMAGE TO THE PIPELINE OR APPURTENANCES SHALL BE REPAIRED TO THE SATISFACTION OF THE NTMWD. FURTHER, ANY COST FOR REPAIR OF DAMAGE TO THE PIPELINE OR APPURTENANCES RESULTING FROM CONSTRUCTION BY THE DEVELOPER OR CONTRACTOR WILL BE THE RESPONSIBILITY OF THE DEVELOPER.

**NTMWD NOTE-4**  
 THE TRENCH WIDTH TO BE CUT SHALL BE LIMITED TO FOUR-FOOT VERTICAL WALLS, NO SLOPING BANK WITH THE APPROPRIATE TRENCH SAFETY. THE ENTIRE EXCAVATION WITHIN TEN FEET EITHER SIDE OF CENTERLINE OF PIPELINE SHALL BE BACKFILLED WITH GRAVEL TO ONE-FOOT ABOVE TOP OF NTMWD PIPELINE. ONE-FOOT MINIMUM VERTICAL CLEARANCE IS REQUIRED BETWEEN NTMWD PIPELINE AND PROPOSED UTILITIES.



APPROV.	
REVISION	
DATE	12/30/04
NO.	1

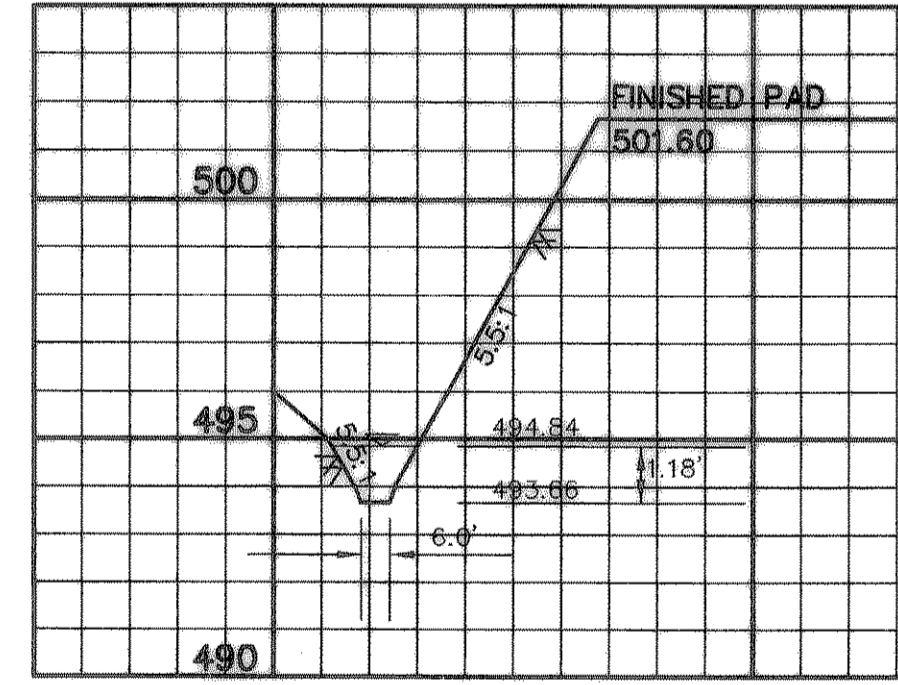
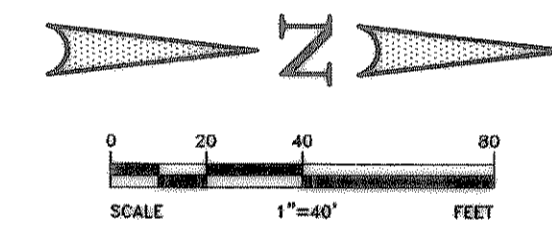
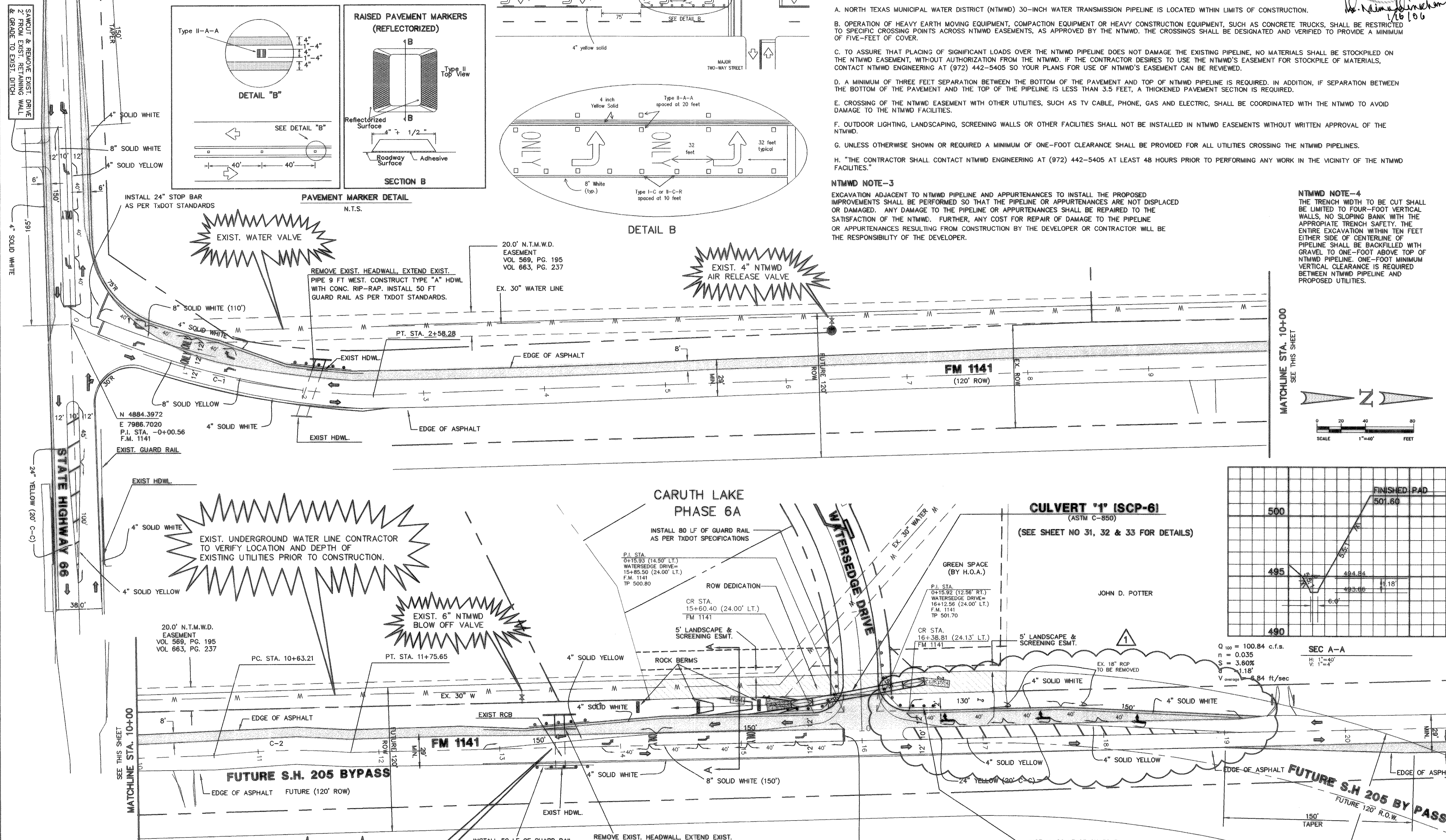
**Winkelmann & Associates, Inc.**  
 CONSULTING CIVIL ENGINEERS & SURVEYORS  
 6505 WILHELM FRIEDRICH BLVD. SUITE 100  
 DALLAS, TEXAS 75240  
 (972) 465-7000 FAX

THESE CONSTRUCTION PLANS WERE PREPARED UNDER THE RESPONSIBLE SUPERVISION OF M.D. NAIM UDDIN KHAN, REGISTERED PROFESSIONAL ENGINEER NO. 87778  
 M.D. NAIM UDDIN KHAN, # 87778  
 M.B. JONES SURVEY, ABSTRACT NO. 122  
 CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS  
 LUMBERMAN'S INVESTMENT CORPORATION  
 5405 BELLEVUE ROAD #225  
 DALLAS, TEXAS 75240

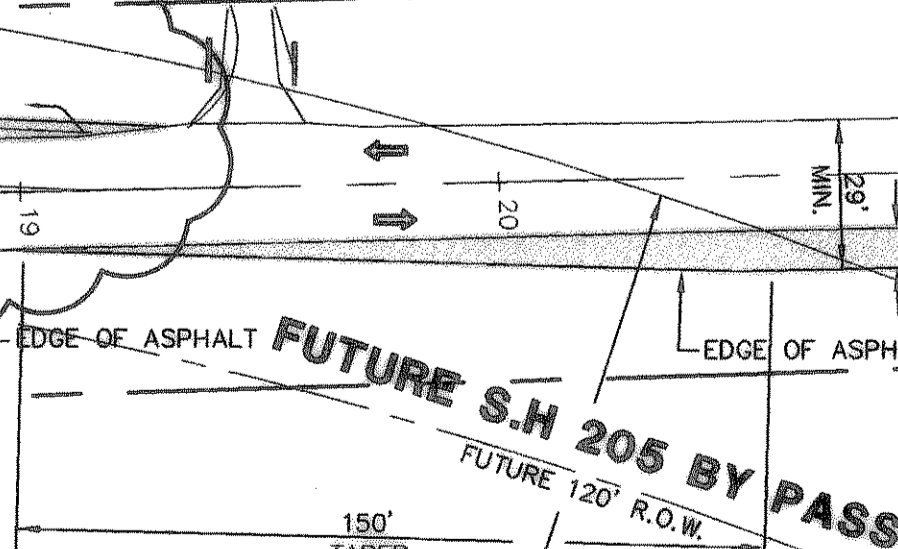
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY M.D. NAIM UDDIN KHAN, # 87778  
 M.B. JONES SURVEY, ABSTRACT NO. 122  
 CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS  
 LUMBERMAN'S INVESTMENT CORPORATION  
 5405 BELLEVUE ROAD #225  
 DALLAS, TEXAS 75240

**PHASE 6A** Date: 3/3/2005  
 Scale: 1"=40'  
 Designed By: MS  
 Drawn By: MS  
 Checked By: NK  
 File: 146546ANP3.dwg View:  
 Project No.: 14654-01

**SHEET 16 OF 57**



Q<sub>100</sub> = 100.84 c.f.s.  
 n = 0.035  
 S = 3.60%  
 U = 1.18'  
 V<sub>average</sub> = 6.84 ft/sec



**CURVE TABLE**

CURVE	RADIUS	DELTA	TANGENT LENGTH	CHORD	BEARING
C-1	595.85'	24°50'10"	131.20'	258.28'	N13°18'22"E
C-2	528.44'	12°18'01"	56.94'	113.23'	N01°12'47"W

**BENCHMARK:**  
 "X" CHISELED IN C OF ALLEY EAST OF MORNINGSTAR DRIVE WITHIN 3RD LOT NORTH OF MIDNIGHT PASS. ELEV. 513.26

**BENCHMARK:**  
 PK NAIL IN C OF CARUTH LANE & ALLEY INTER-SECTION 150' ± EAST OF MORNINGSTAR DRIVE. ELEV. 491.68

CONTRACTOR TO FIELD VERIFY SIZE OF EXIST. PIPE & FLOW LINE OF EXIST. HDWL.

**NOTE:**  
 MINIMUM 3:1 SLOPE MUST BE MAINTAINED ON ALL CHANNEL WORKS UNLESS GUARD RAILS ARE INSTALLED

**NOTE:**  
 ROCK BERM TO BE INSTALLED AS PER NTCOG DETAILS