

NOTE: All Storm Sewer Laterals Are 21" Unless Otherwise Noted.

**BOX CULVERT DESIGN**  
 3 BBL 9'x6' C.B.C. w/0.5' Freeboard  
 $Q = \frac{1.486}{0.015} (49.5) \left(\frac{49.5}{20}\right)^{2.5} (0.006)^{1/2}$   
 $Q = 697.1 \text{ cfs. /each BBL.}$   
**TOTAL CAPACITY = 3(697.1) = 2091.3 cfs.**

$Q_{100} @ \text{C.B.C.} = 1882.0 \text{ cfs.}$   
 $T_c = 15 \text{ min.} + 4900 \text{ L.F.} @ 5 \text{ fps.} = 31.3 \text{ min.}$   
 $I_{100} = 6.3$   
 $C = 0.80$  (Area Adjacent To Dooley Rd)  
 $C = 0.35$  (Areas Designated as Park & Airfield)  
 Actual  $C = 0.58$  for Area C-4 from Approx. 144 Ac. Park & Airfield & 143 Ac. Industrial (Avg. Value)

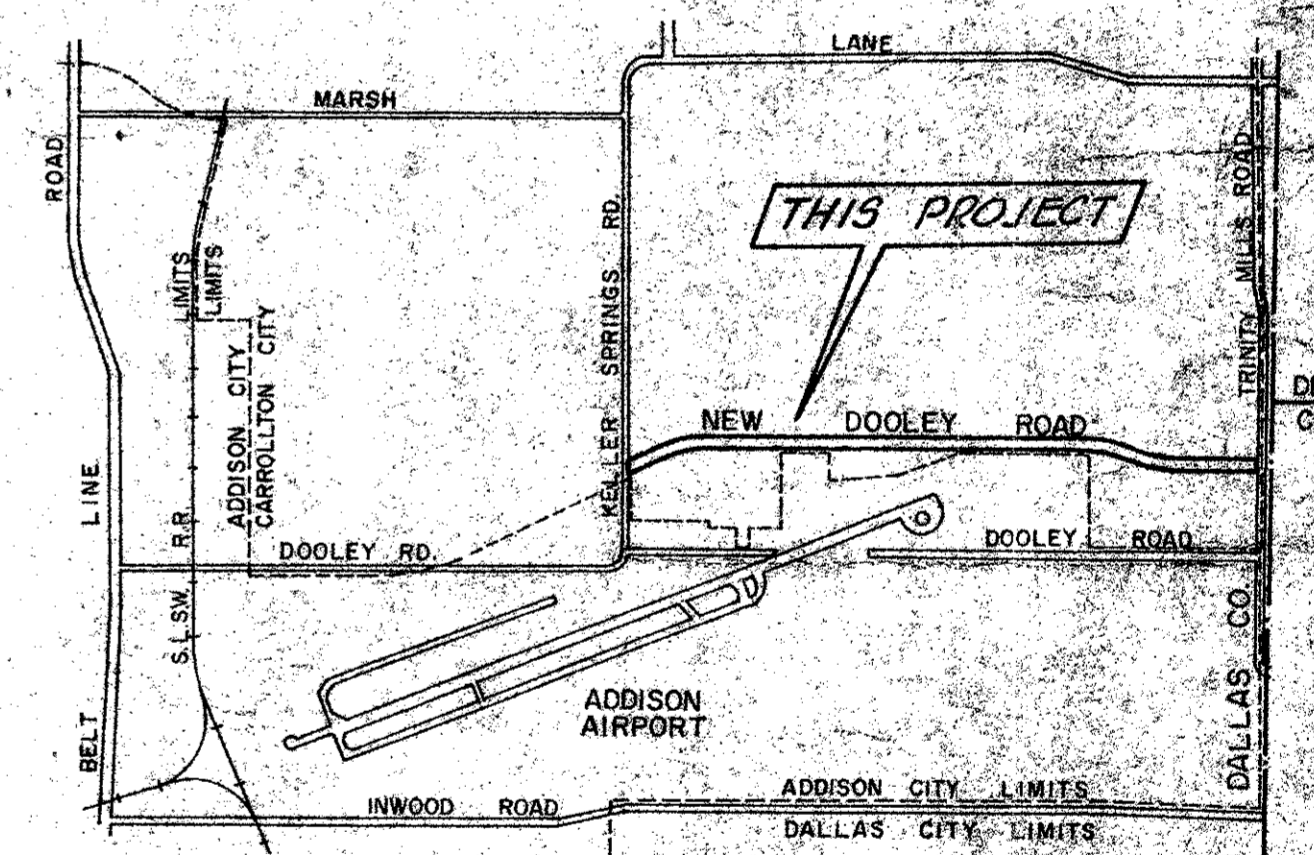
**LEGEND**  
 D.A. NUMBER  
 AREA IN ACRES  
 RUNOFF IN C.F.S.  
 DRAINAGE AREA LIMITS  
 SUB-AREAS  
 PROPOSED INLETS  
 PROPOSED DITCH

**INLET CALCULATIONS**  
 $Q = C I A$   
 $C = 0.80$   
 $T_c = 15 \text{ min.}$   
 $I_{100} = 7.9$   
 $Q = 6.32 (A)$

**DITCH CALCULATIONS**  
 $Q_{100} = C I A$   
 $C = 0.80$   
 $T_c = 15 \text{ mins}$   
 $I_{100} = 7.9$   
 Drainage Quantities Adjusted By Use of Flow Time

MIN. STREET CAPACITY  
 14 cfs @ 0.82% w/ 1 LANE OPEN

**PHASE 2 DRAINAGE CRITERIA**  
 25 Yr. Frequency From Bulletin T.R.-25  
 Time of Concentration (in Phase 2) = 10 Min.  
 $I_{25} = 6.6 \text{ in/hr.}, C = 0.80$   
 Time of Concentration (Airfield & Offsite Industrial) = 31.3 Min.  
 $I_{100} = 7.9 \text{ in/hr.}, C = 0.58$  (Combined)



DRAINAGE VICINITY MAP

**DRAINAGE AREA MAP**  
**BELTWOOD NORTH, PHASE 2**  
 ADDISON, TEXAS

**PAVING & DRAINAGE PLANS**  
**DOOLEY ROAD**  
 CITY OF ADDISON, TEXAS

DATE 4-77	SCALE 1" = 400'	JOB NO.	SHEET 2
DONALD C. MOREAU - CONSULTING ENGINEER			OF 10
2355 STEMMONS FRWY. SUITE 11004 - DALLAS, TEXAS			

As Built 7.20.79