

**CONCRETE NOTES**

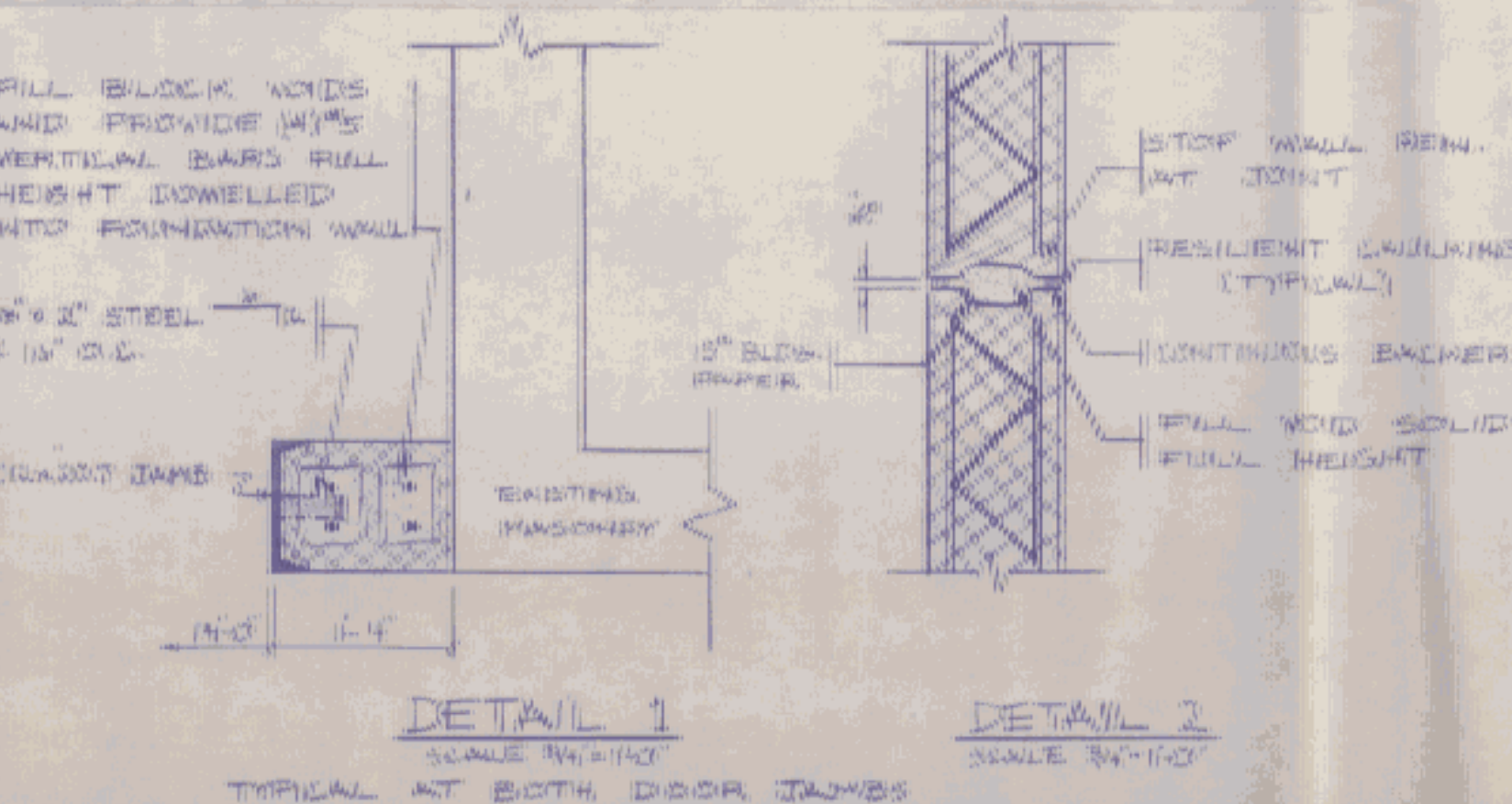
- ALL CONCRETE WORK SHALL COMPLY WITH THE LATEST RECOMMENDATIONS AND SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE LOCAL BUILDING CODES.
- ALL CONCRETE SHALL BE NORMAL WEIGHT (HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI) AT 28 DAYS WITH THE FOLLOWING REQUIREMENTS:  
 PORTLAND CEMENT - ASTM C150, TYPE II, MINIMUM 54 BAGS PER CUBIC YARD.  
 AGGREGATE - ASTM C33, 1/2" MAXIMUM SIZE.  
 WATER - PRACTICE WITH A MAXIMUM WATER/CEMENT RATIO OF 0.55.  
 SLUMP - 3" TO 3 1/2"  
 ADMIXTURES - USE AIR ENTRAINING AGENT CONFORMING TO ASTM C494 WITH 4-6% TYPICAL AIR. USE WATER REDUCING AGENT CONFORMING TO ASTM C494 IN ALL CONCRETE. CALCIUM CHLORIDE SHALL NOT BE USED.  
 DESIGN MIX - SUBMIT A CURRENT (MAXIMUM 18 MONTHS OLD) DESIGN MIX OF THE EXACT SAME MIX TO BE USED ON THE PROJECT, WITH 28 DAY COMPRESSIVE STRENGTH TESTS, TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING CONSTRUCTION.
- ALL REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 60 EXCEPT STIRRUPS AND PIES TO BE GRADE 40. WELDED WIRE FABRIC TO CONFORM TO ASTM A615. LAP ALL BARS 30 DIAMETERS MINIMUM AT SPALLS UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- FOOTINGS SHALL REST ON SUFFICIENT UNDISTURBED SOIL OR COMPACTED GRANULAR FILL HAVING A MINIMUM BEARING CAPACITY OF 3000 PSF. ELEVATIONS OF BOTTOM OF FOOTINGS ARE SHOWN ON PLANS, BUT ARE SUBJECT TO REVISION WHEN SOIL CONDITIONS ARE DETERMINED BY EXCAVATION. THE ENGINEER SHALL BE NOTIFIED PROMPTLY OF ANY SOIL STRATA, WATER CONDITIONS OR OTHER POOR BEARING CONDITIONS.
- CONCRETE TEMPERATURE DURING THE FIRST SEVEN DAYS SHALL BE MAINTAINED BETWEEN 50°F AND 90°F. RAPID CURING MUST BE PREVENTED.
- CURING:  
 A) HORIZONTAL SURFACES SHALL BE KEPT CONTINUOUSLY MOIST FOR A MINIMUM OF SEVEN DAYS.  
 B) VERTICAL SURFACES SHALL RECEIVE 2 COATS (ONE AT TIME OF STRIPPING AND ANOTHER 3 DAYS LATER) OF AN APPROVED NON-TOXIC CURING COMPOUND.
- ALL FOUNDATION WALLS SHALL BE PROPERLY BRACED TO WITHSTAND EARTH AND CONSTRUCTION LOAD PRESSURES. WALLS MUST BE AT LEAST SEVEN DAYS OLD BEFORE BACKFILLING.
- BACKFILLING NEAREST FOUNDATION WALLS SHALL BE DONE BY PLACING SIMULTANEOUS LEVEL LAYERS ON BOTH SIDES OF THE WALL SUCH THAT THE DIFFERENCE BETWEEN ONE SIDE AND THE OTHER DOES NOT EXCEED 24 INCHES.
- SUBJECT BACKFILL OUTSIDE OF FOUNDATION WALLS:  
 A) AN APPROVED MATERIAL FREE OF Boulders LARGER THAN 6", ORGANIC MATERIAL, TOPSOIL AND ROCKS.  
 B) PLACE IN MAXIMUM 6" LEVEL LIFTS AND COMPACT TO 95% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DEFINED BY ASTM D-1557.
- SHOP DRAWINGS (ONE REPRODUCIBLE PRINT AND TWO BLUE PRINTS) PREPARED IN ACCORDANCE WITH A.C.I. STANDARDS WILL BE REQUIRED FROM THE CONTRACTOR FOR REINFORCING STEEL TO CONSTRUCTION.

**MASONRY CONSTRUCTION NOTES**

- CONCRETE MASONRY SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION, PORTLAND CEMENT ASSOCIATION AND AMERICAN CONCRETE INSTITUTE CODES.
- CONCRETE MASONRY UNITS SHALL BE LIGHT WEIGHT HOLLOW LOAD-BEARING, ASTM C90, GRADE N, TYPE II, WITH A MINIMUM COMPRESSIVE STRENGTH ON THE NET AREA OF 3000 PSI, TWO CELLS WITH MINIMUM 900 SOLIDS.
- MORTAR SHALL CONFORM TO ASTM C270 TYPE S WITH A MINIMUM COMPRESSIVE STRENGTH 8 28 DAYS OF 3500 PSI.
- HORIZONTAL WALL REINFORCEMENT TO BE UNADJUTED TRUSS OR LAMIN TYPE WITH NO. 3 GAUGE UNADJUTED WIRE CONFORMING TO ASTM A618, AS MANUFACTURED BY DUE-TO-WALL, INC. OR APPROVED EQUAL. REINFORCING IS TO BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS INDICATED OTHERWISE ON THE PLANS.
- NORMAL MASONRY CONSTRUCTION (WEATHER CONDITIONS, WINDS, TEMPERATURE TO BE BETWEEN 40 AND 90 DEGREES FARENHEIT WITH MINIMAL WIND AND RAIN, PLUS AVERAGE RELATIVE HUMIDITY). IF CONDITIONS OTHER THAN THESE OCCUR, THE CONTRACTOR MUST MODIFY CONSTRUCTION PROCEDURES IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICES AND THE ABOVE NOTED CODES.
- EXTERIOR WALLS SHALL BE CONSTRUCTED IN A WEATHERTIGHT MANNER WITH ALL NECESSARY FLASHINGS AND KEEPS. THEY SHALL RECEIVE TWO COATS OF AN APPROVED, GOOD QUALITY WATER PROOFING AGENT. RECORD AS REQUIRED TO MAINTAIN A PERMANENT WATERPROOF SURFACE.

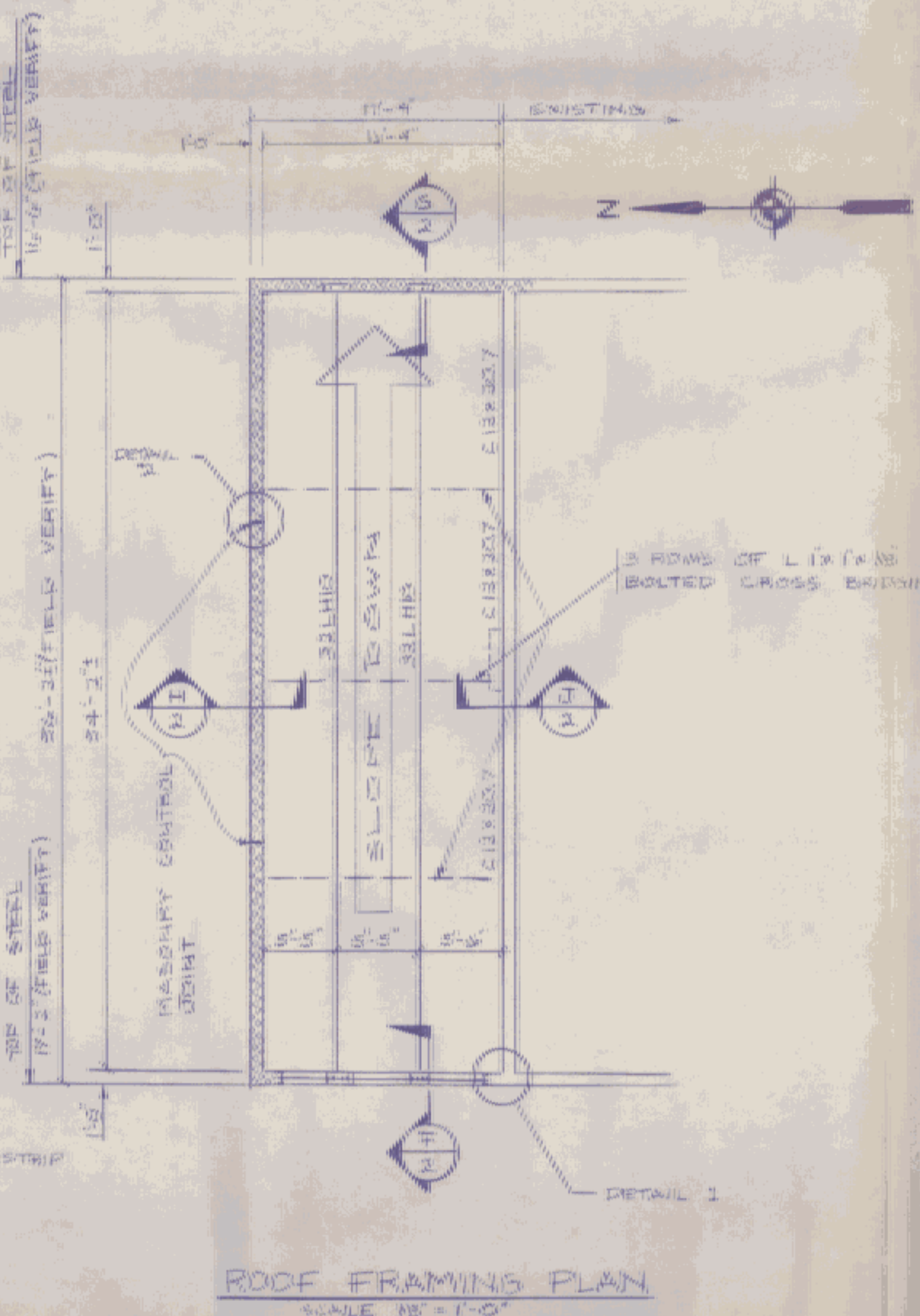
**GRANULAR FILL UNDER SLABS & FOOTINGS**

- PRIOR TO PLACING GRANULAR FILL ALL ORGANIC MATERIAL, TOPSOIL, DEBRIS AND ANY OTHER DELETTERIAL MATERIAL SHALL BE REMOVED.
  - GRANULAR FILL SHALL BE AN APPROVED, WELL GRAINED SAND, FILL OR CRUSHED RUN GRAVEL MEETING THE REQUIREMENTS OF THE FOLLOWING TABLE:
- | SLOPE DESIGNATION | 5' PASSING |
|-------------------|------------|
| 1:1               | 800        |
| 1 1/2:1           | 40-70      |
| 2:1               | 5-20       |
| 3:1               | 4-8        |
- THE MATERIAL SHALL BE PLACED IN MAXIMUM 6" LIFTS AND COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D-1557, MODIFIED PROCTOR.
  - THE OWNER WILL TAKE DENSITY TESTS ON THE COMPACTED FILL. IF THE MATERIAL TESTS LESS THAN 95%, CORRECTIVE ACTION AND ADDITIONAL TESTING WILL BE REQUIRED. THE ADDITIONAL TESTING AND CORRECTIVE ACTION WILL BE PAID FOR BY THE CONTRACTOR.

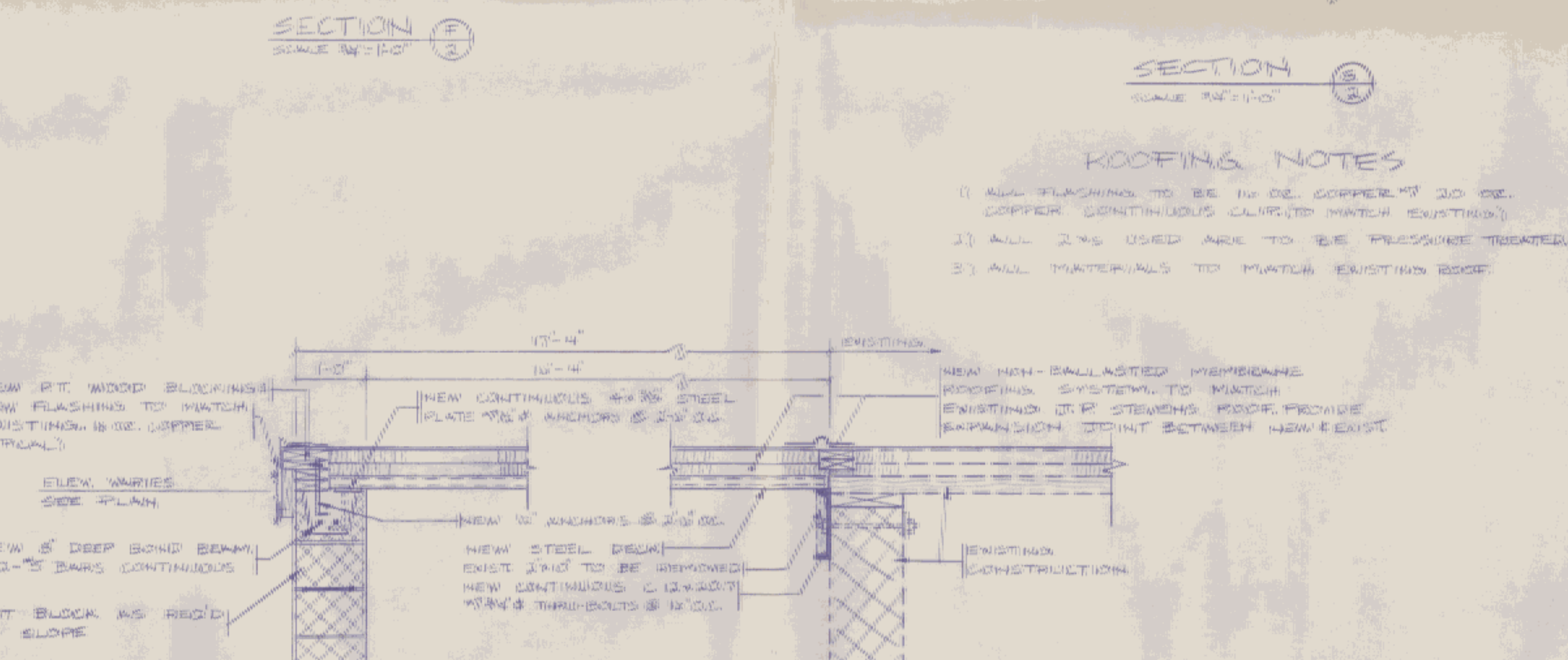
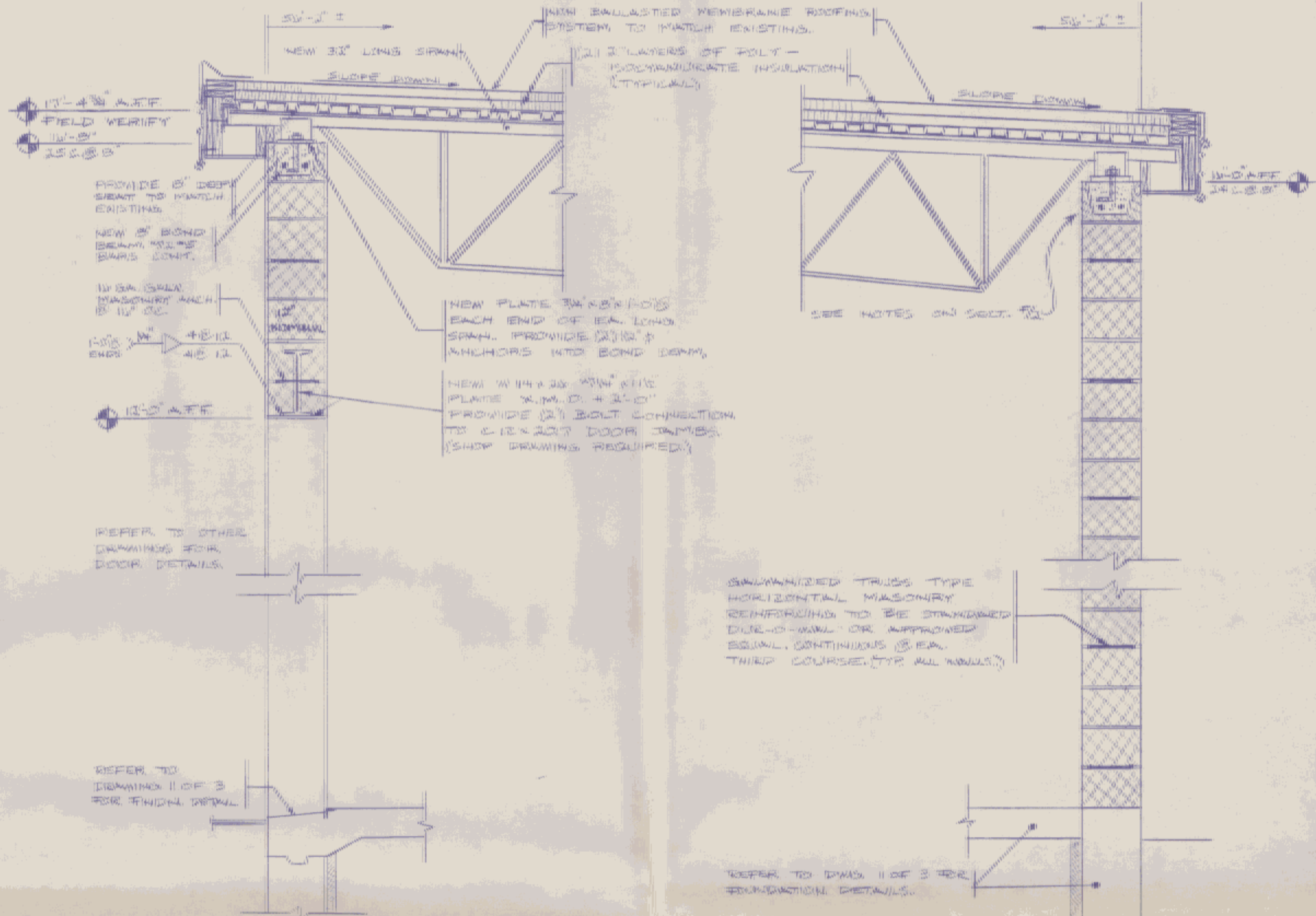


**STEEL NOTES**

- ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE "SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" OF THE A.I.S.I., AND TO THE REQUIREMENTS OF THE LOCAL BUILDING CODES. ALL WELDING SHALL CONFORM TO THE "STRUCTURAL WELDING CODE - WELDING D1.1" OF THE AMERICAN WELDING SOCIETY.
- STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING:  
 STRUCTURAL SHAPES - ASTM A36, F<sub>y</sub> = 36,000 PSI  
 BOLTS - ASTM A325  
 WELDS - E70
- ALL SHOP CONNECTIONS SHALL BE BOLTED OR WELDED. ALL FIELD CONNECTIONS SHALL BE BOLTED EXCEPT WHERE WELDING IS SPECIFICALLY CALLED FOR. BOLTS SHALL BE 3/4" MINIMUM WITH OPEN HOLES (LARGER).
- ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED (MINIMUM 2 MILS DRY FILM THICKNESS) WITH AN APPROVED RUST INHIBITIVE PRIME PAINT. STEEL SHALL BE THOROUGHLY CLEANED PRIOR TO PAINTING. (FIELD TOUCH UP WITH THE SAME PAINT WILL BE REQUIRED).
- THE STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE ALL NECESSARY GIRDERS AND BRACING REQUIRED TO ERECT AND HOLD THE STEEL FRAME PLUMB AND SQUARE UNTIL THE ROOF DECK AND WALLS ARE INSTALLED.
- THERE SHALL BE NO FIELD BURNING, CUTTING OR OTHER ALTERATIONS OF PRIMARY STRUCTURAL STEEL OR LONGSPAN JOISTS WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.
- LONGSPAN STEEL JOISTS DESIGN, FABRICATION AND ERECTION SHALL CONFORM TO THE LATEST REVISIONS OF THE STEEL JOIST INSTITUTE AND THE A.I.S.I.C.
- STEEL JOISTS ARE NORMALLY DESIGNED TO SUPPORT UNIFORM LOADS. THE MAGNITUDE AND LOCATION OF CONCENTRATED LOADS MUST BE REVIEWED WITH THE ENGINEER PRIOR TO FABRICATION.
- ALL ROOF DECKING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, FACTORY INITIAL REQUIREMENTS AND THE STEEL DECK INSTITUTE (S.D.I.) UNLESS OTHERWISE NOTED. ALL EDGES OF THE DECKING SHALL BE PROPERLY SUPPORTED. OPENINGS IN THE DECK SHALL BE 10" OR SMALLER THAN 10" IN DIAMETER OR 6" SQUARE SHALL HAVE A 2" SQUARE X 1/4" THICK PLATE WELDED OR SCREWED TO THE TOP OF THE DECK TO SUPPORT THE OPENING. FOR OPENINGS LARGER THAN THE ABOVE, AN L-ORANGE FRAME (BRACING ON STRUCTURAL SUPPORTS) SHALL BE USED UNLESS OTHERWISE NOTED ON PLANS.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (ONE REPRODUCIBLE PRINT AND TWO BLUE PRINTS) TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION FOR THE FOLLOWING ITEMS:  
 STRUCTURAL STEEL (DOORS, JAMBS AND HENKEL)  
 LONGSPAN JOISTS  
 ROOF DECKING



- ELEVATION TOP OF STEEL NOTED ON PLAN THUS (---)
- ROOF DECK TO BE 22 GA. 1 1/2\"/>



- ROOFING NOTES**
- ALL FLASHING TO BE 1/2\"/>

STATE OF VERMONT  
 DEPARTMENT OF STATE BUILDINGS  
 AGENCY OF ADMINISTRATION  
 MONTPELIER, VERMONT

PROPOSED ADDITION FOR  
 A.O.T.  
 RUTLAND HIGHWAY GARAGE  
 RUTLAND, VERMONT

DATE 2-14-87	SCALE AS NOTED	REVISIONS	DWG NO. 1 OF 3
DRAWN BY F. RETREWANT	APPROVED BY F. RETREWANT		