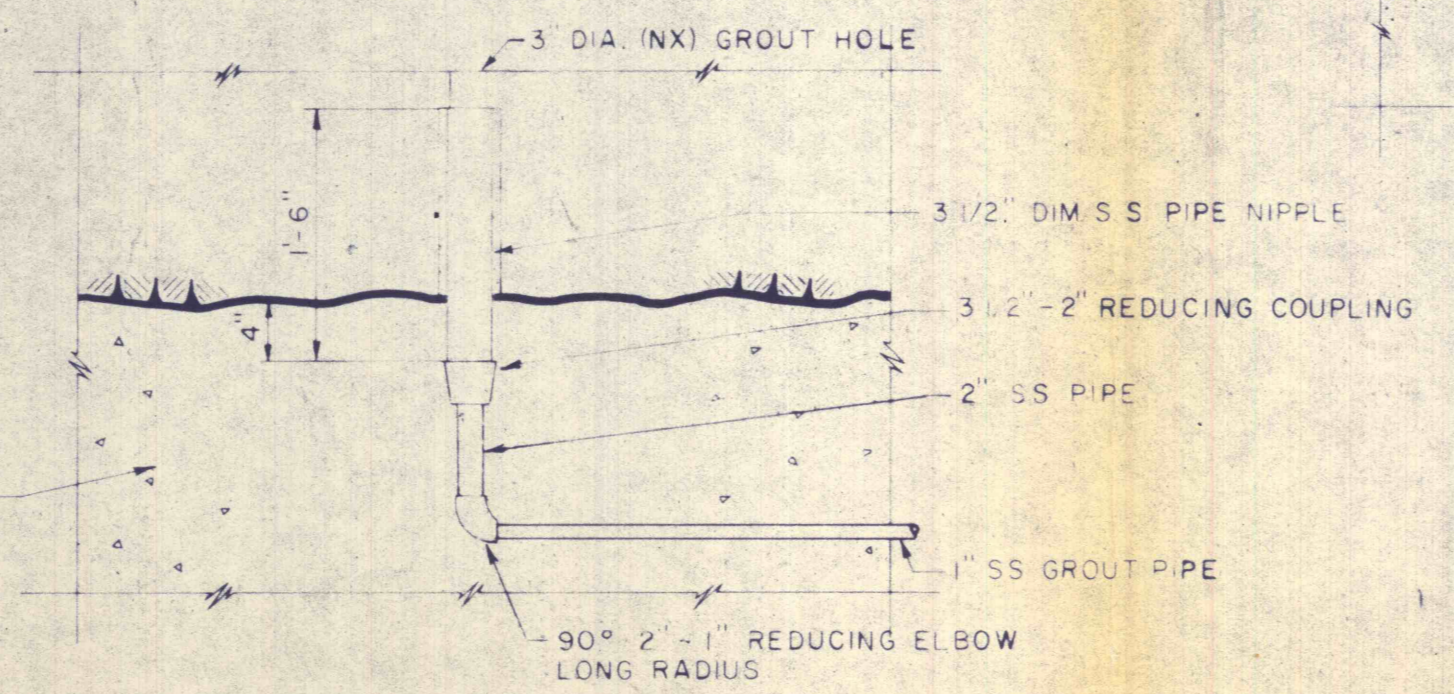
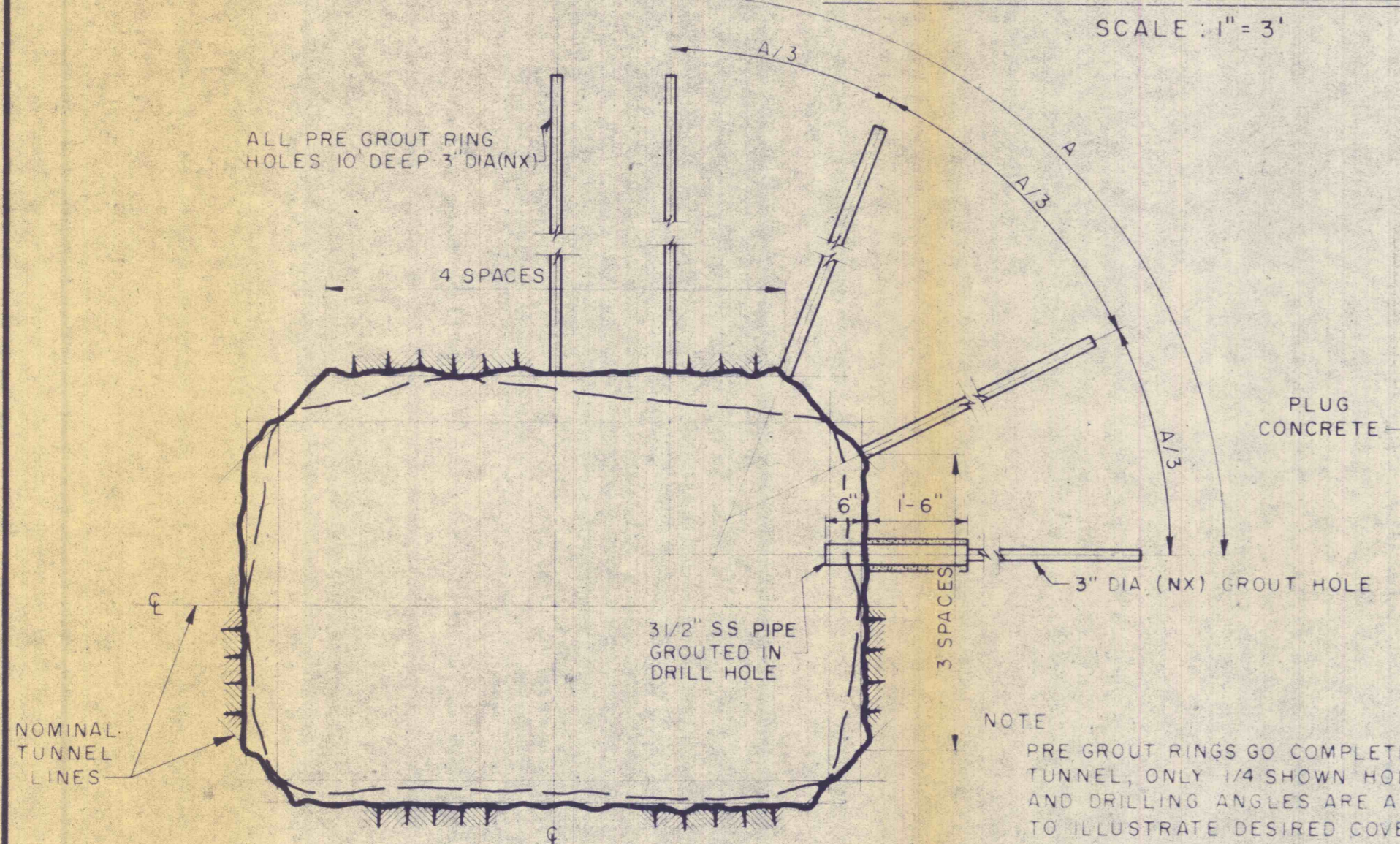
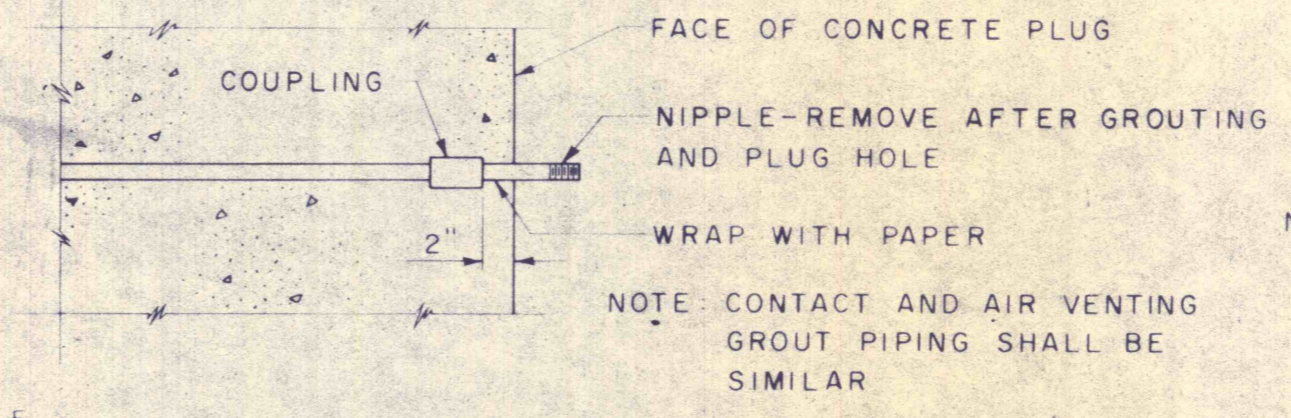


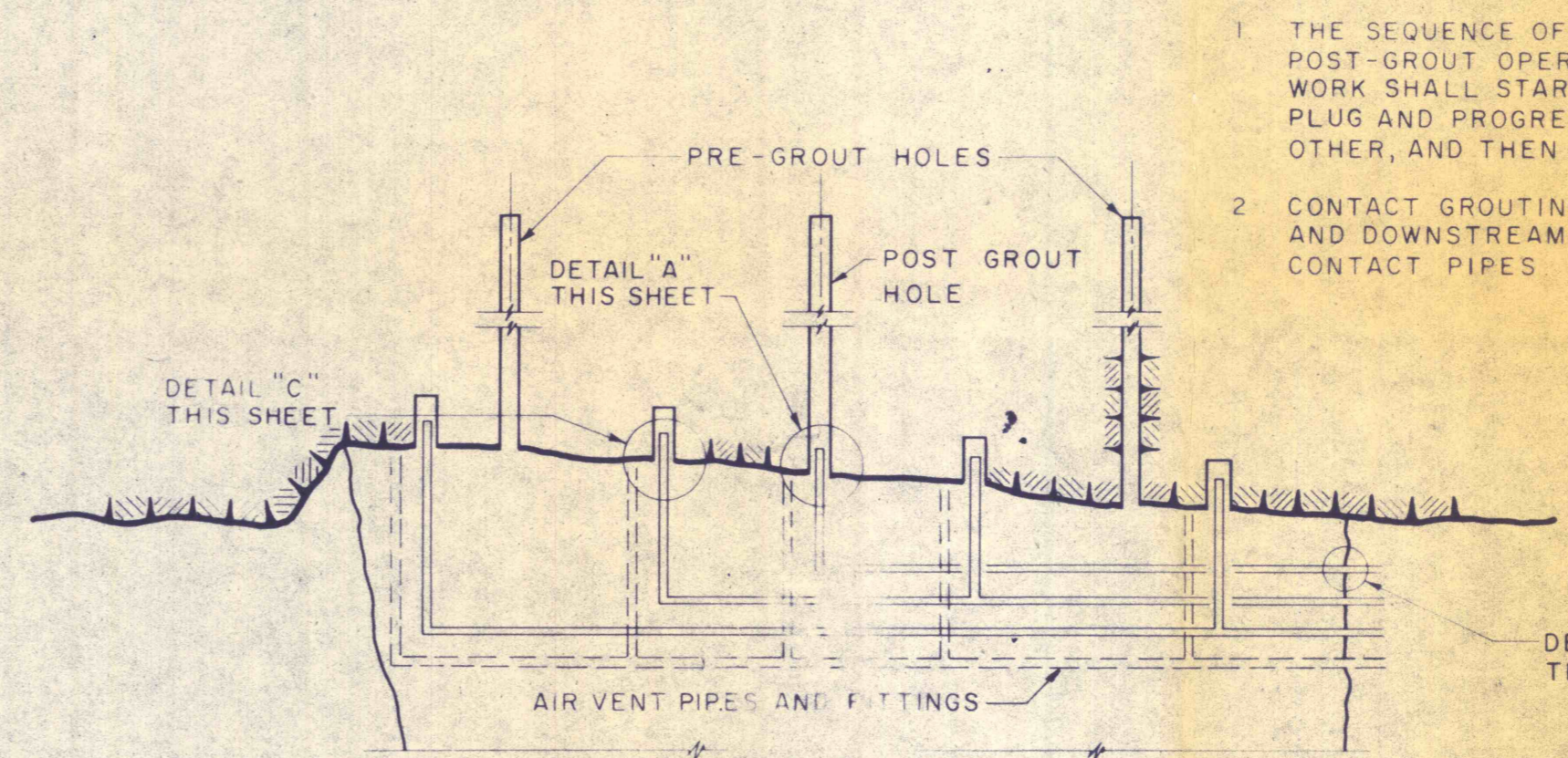
EXCAVATION DETAILS



DETAIL "B"

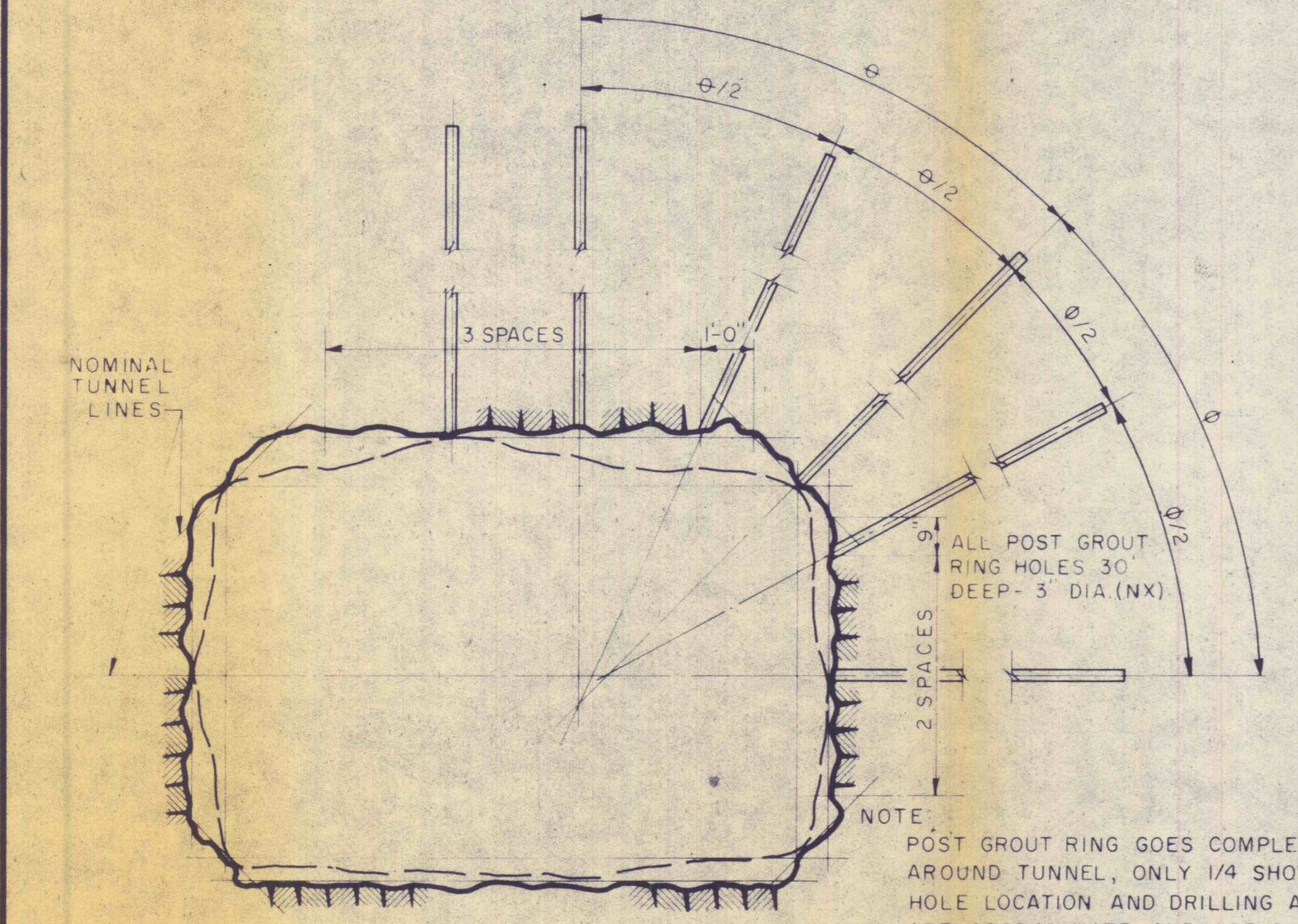


TYPICAL GROUTING LAYOUT-SIDE OF TUNNEL NO. 2



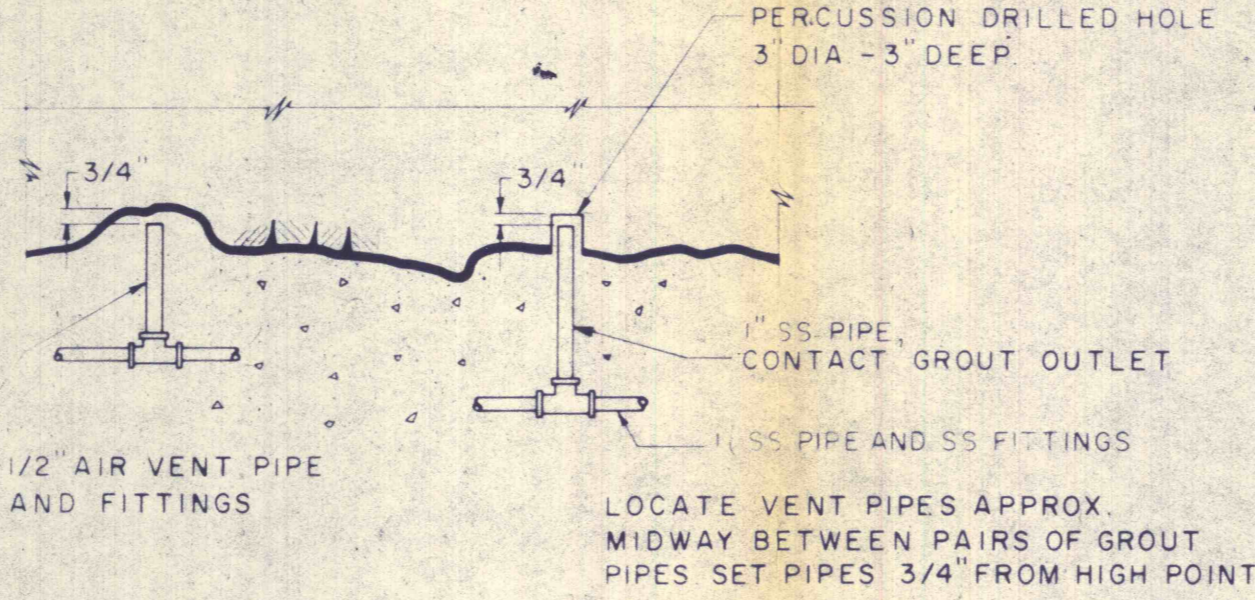
SCHEMATIC-TYPICAL GROUT PIPING LAYOUT

**TWO RINGS REQUIRED
PRE GROUT RING LAYOUT**

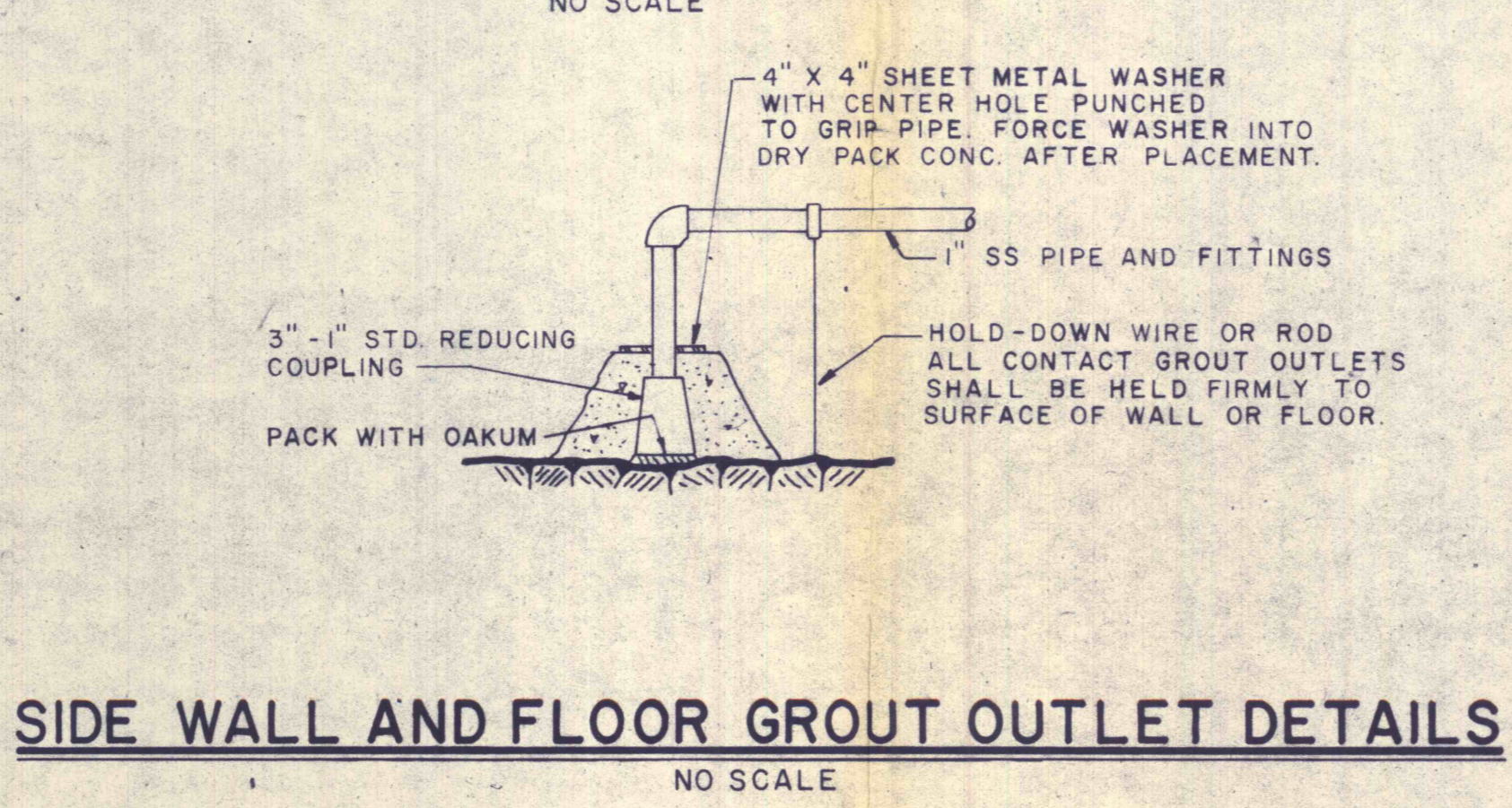


**ONE RING REQUIRED
POST GROUT RING LAYOUT**

DETAIL "A"



**ROOF DETAIL
CONTACT GROUTING AND AIR VENT
PIPE DETAIL "C"**



SIDE WALL AND FLOOR GROUT OUTLET DETAILS

- POST GROUT HOLE PIPE
 - CONTACT GROUT PIPE
 - AIR VENT PIPE
 - AIR VENT PIPE MANIFOLD IN PLUG
- NOTE: CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR INSTALLING AND FASTENING ALL GROUT PIPING. DRAIN PIPE NOT SHOWN.

**SECTION B-B
SCHEMATIC PIPE LAYOUT**

NO	DATE	REVISION	APPR

SUBMITTED: *W. Pickering*
 APPROVED: *Robert A. Ramer*
 CHIEF - DIVISION OF MINE RECLAMATION
 APPROVED: *W. Pickering*
 DIRECTOR - BUREAU OF DESIGN

COMMONWEALTH OF PENNSYLVANIA
 REGISTERED PROFESSIONAL ENGINEER
 CHARLES W. PICKERING
 ENGINEER No. 13334
 PENNSYLVANIA
W. Pickering
 REGISTERED PROFESSIONAL ENGINEER
 11/29/74
 DATE

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL RESOURCES
 OFFICE OF RESOURCES MANAGEMENT
 PROJECT NO. SL 135-3-1B
 MINE DRAINAGE
 POLLUTION ABATEMENT
 CATAWISSA CREEK
 SCHUYLKILL COUNTY

GANNETT FLEMING CORDRY & CARPENTER, INC.
 Consulting Engineers
 P.O. BOX 1963 HARRISBURG, PA.

**GROUTING DETAILS
MISCELLANEOUS DETAILS**

DRAWN BY E.T.H.	DATE	DRAWING NO.
CHECKED BY A.R.B.	SCALE AS SHOWN	3 OF 6