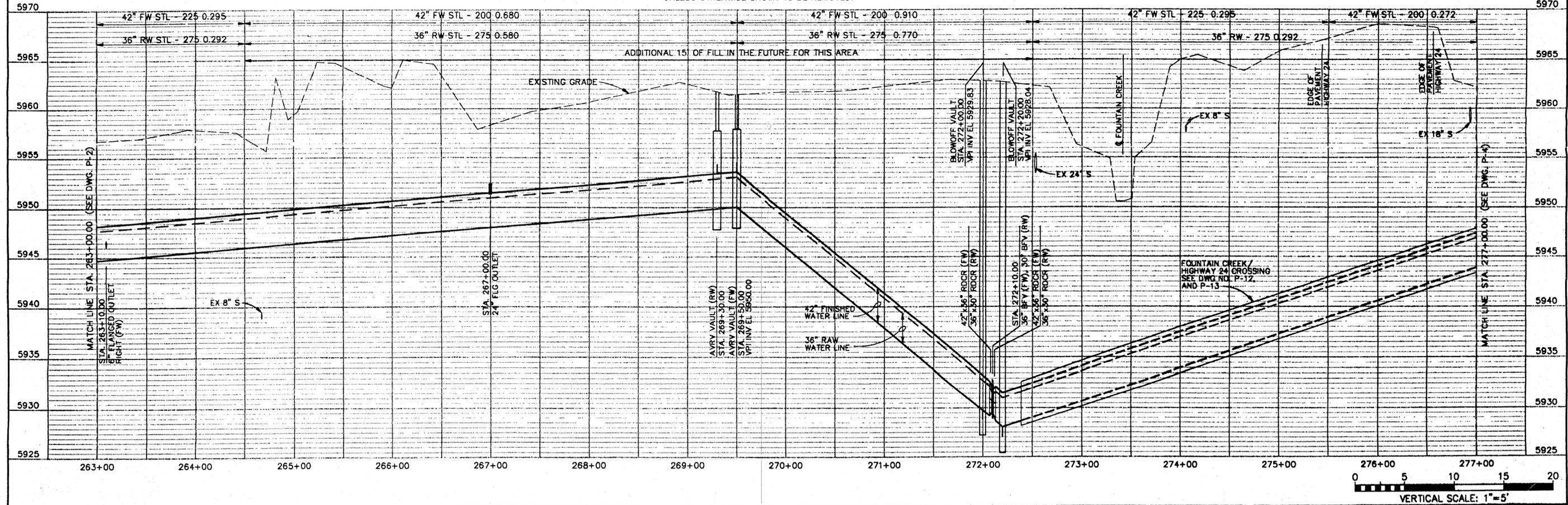
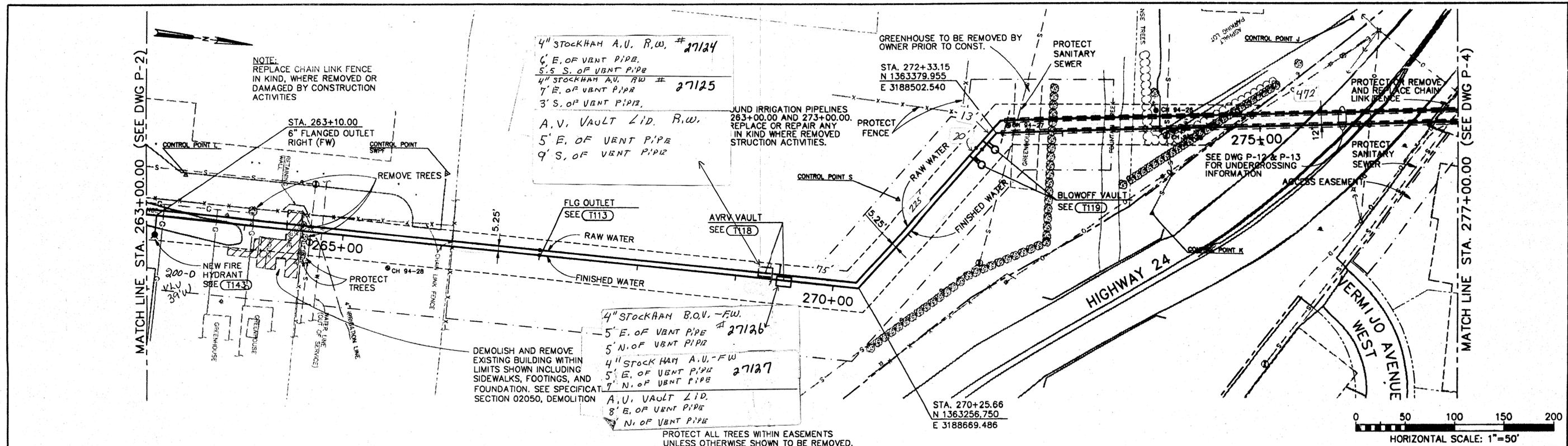


	DSGN	R. DUPREE	<b>BARNARD CONST CO</b> START 7-31-95 FINISH 6-28-96		CONTRACT 2 OF THE SOUTHWEST WATER PROJECT SEGMENT 2 - UINTAH SOUTH	PIPELINES PLAN AND PROFILE STATION 249+75.22 TO 263+00	SHEET	
	DR	R. DUPREE					DWG	P-2
	CHK	S. EBE					DATE	APR 1995
	APVD	D. DECHANT					PROJ	NO. RMW37757.FD
1=50.0	NO.	DATE	REVISION	BY	APVD			

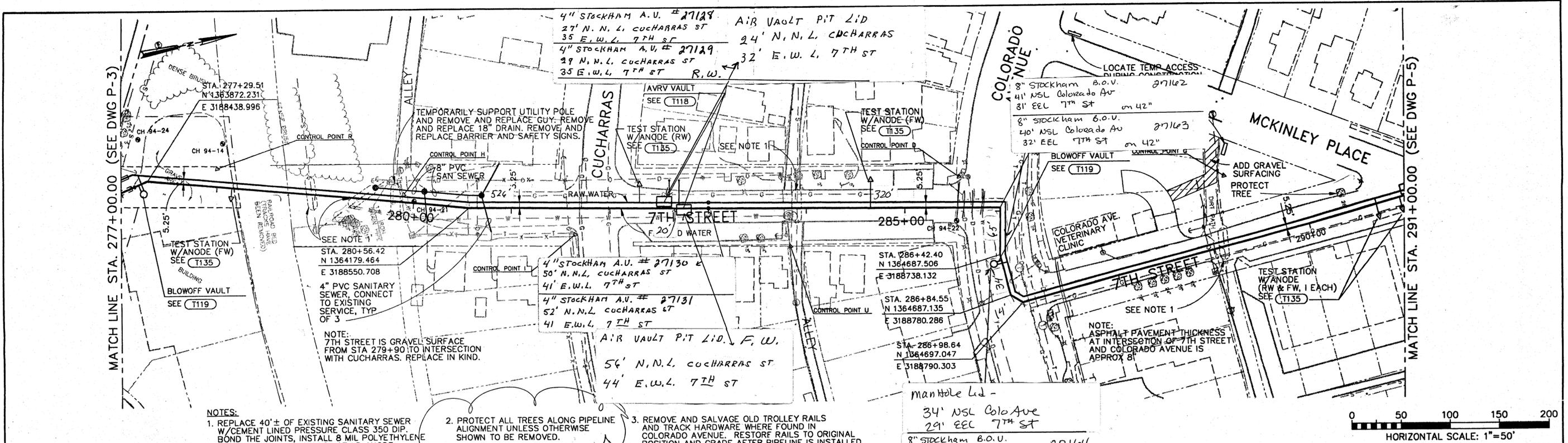
20-APR-95 7757P001.DWG



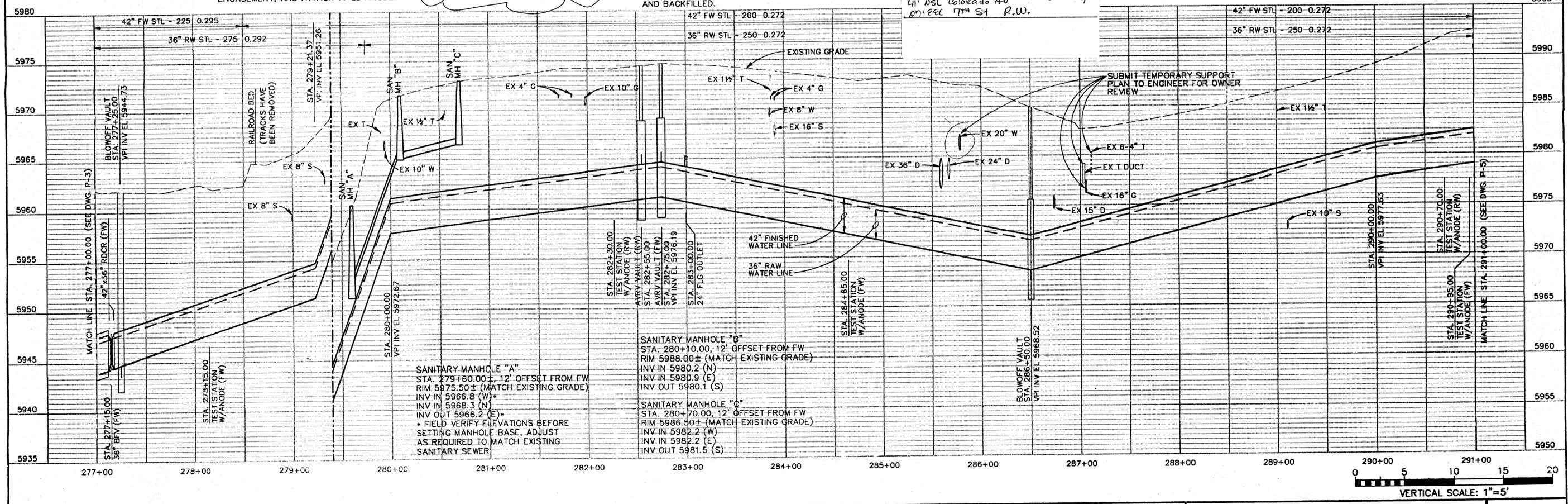
	DSGN R. DUPREE	NO.	DATE	REVISION	BY	APVD	 COLORADO SPRINGS UTILITIES	VERIFY SCALES	CONTRACT 2 OF THE SOUTHWEST WATER PROJECT SEGMENT 2 - UINTAH SOUTH	PIPELINES PLAN AND PROFILE STATION 263+00 TO 277+00	SHEET
	OR R. DUPREE							DWG NO.			
	CHK S. EBE							DATE APR 1995			
	APVD D. DECHANT							PROJ NO. RMW37257.FD			

1"=50.0

20-APR-95 7757P002.DWG

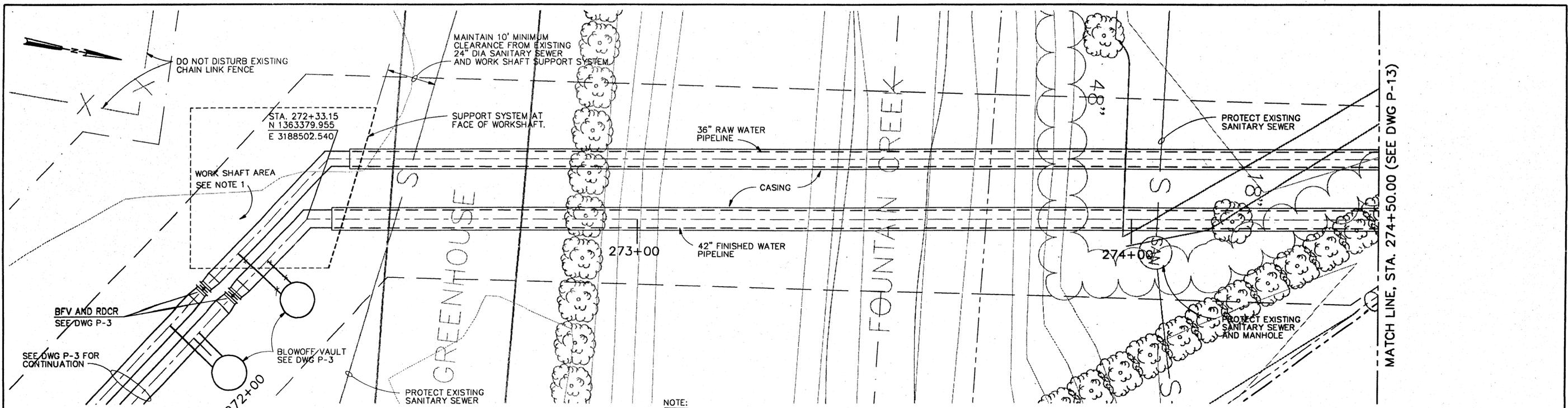


- NOTES:
1. REPLACE 40'+ OF EXISTING SANITARY SEWER W/CEMENT LINED PRESSURE CLASS 350 DIP. BOND THE JOINTS, INSTALL 8 MIL POLYETHYLENE ENCASUREMENT, AND ATTACH 17 LB ANODE.
  2. PROTECT ALL TREES ALONG PIPELINE ALIGNMENT UNLESS OTHERWISE SHOWN TO BE REMOVED.
  3. REMOVE AND SALVAGE OLD TROLLEY RAILS AND TRACK HARDWARE WHERE FOUND IN COLORADO AVENUE. RESTORE RAILS TO ORIGINAL POSITION AND GRADE AFTER PIPELINE IS INSTALLED AND BACKFILLED.

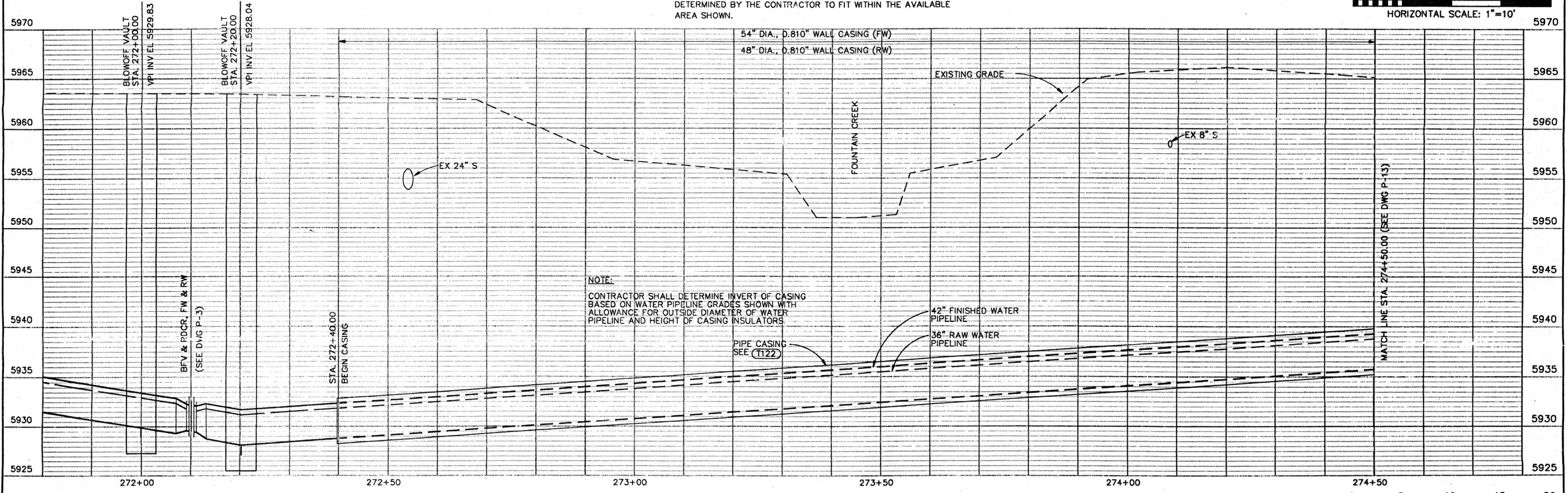
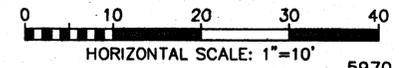


	DSGN	R. DUPREE		VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CONTRACT 2 OF THE SOUTHWEST WATER PROJECT SEGMENT 2 - UINTAH SOUTH	PIPELINES PLAN AND PROFILE STATION 277+00 TO 291+00	SHEET	
	DR	R. DUPREE					DWG	P-4
	CHK	S. EBE					DATE	APR 1995
	APVD	D. DECHANT					PROJ	NO. RMW37757.FD
1"=50.0	NO.	DATE	REVISION	BY	APVD			

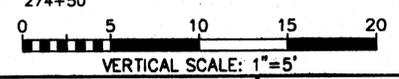
17-APR-95 7757P003.DWG



NOTE:  
 1. THE SHAPE AND DIMENSIONS OF THE WORK SHAFT SHALL BE DETERMINED BY THE CONTRACTOR TO FIT WITHIN THE AVAILABLE AREA SHOWN.



NOTE:  
 CONTRACTOR SHALL DETERMINE INVERT OF CASING BASED ON WATER PIPELINE GRADES SHOWN WITH ALLOWANCE FOR OUTSIDE DIAMETER OF WATER PIPELINE AND HEIGHT OF CASING INSULATORS.



<b>CH2M HILL</b>	DSGN	R.DUPREE
	DR	R.DUPREE
	CHK	S.EBE
	APVD	D.DECHANT

NO.	DATE	REVISION	BY	APVD



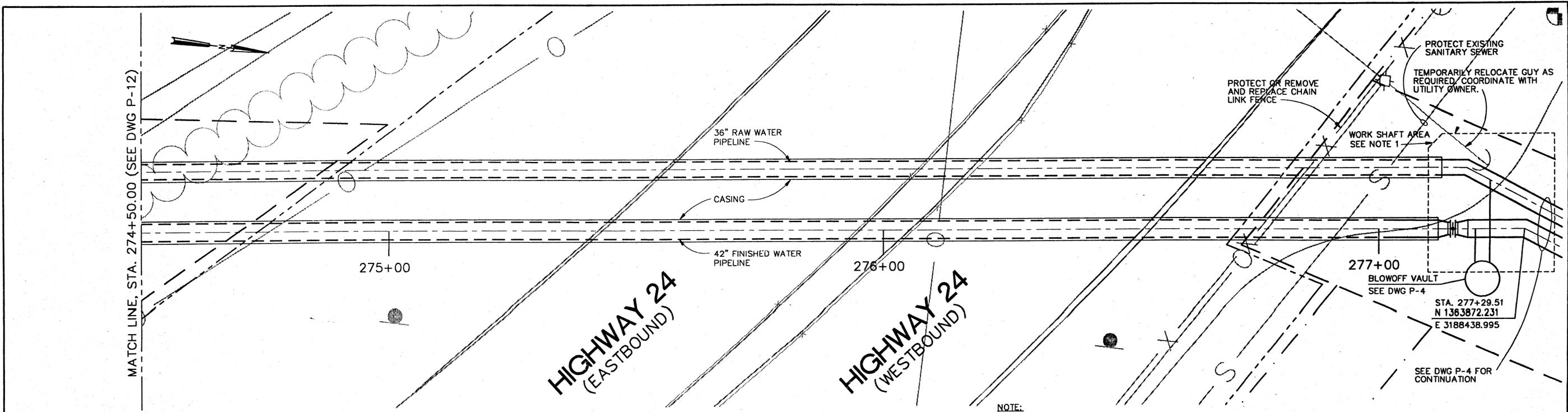
VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONTRACT 2  
 OF THE  
 SOUTHWEST WATER PROJECT  
 SEGMENT 2 - UINAH SOUTH

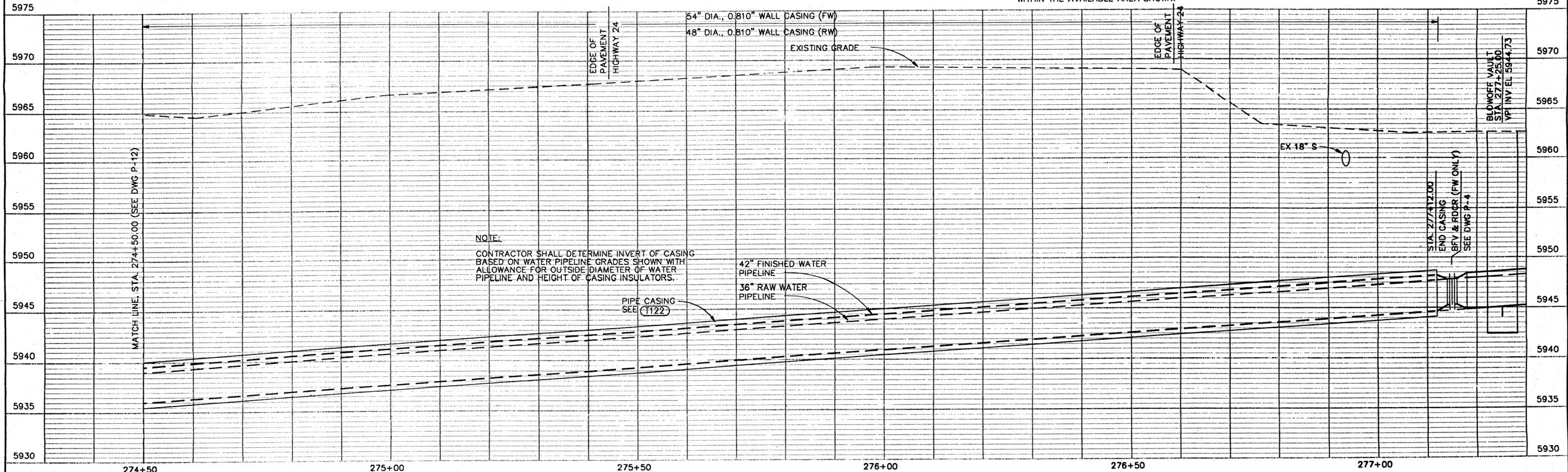
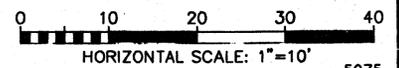
FOUNTAIN CREEK AND  
 HIGHWAY 24 CROSSING  
 PLAN AND PROFILE

SHEET	P-12
DWG NO.	P-12
DATE	APR 1995
PROJ NO.	RMW37757.FD

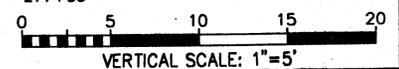
20-APR-95 7757P011.DWG



NOTE:  
 1. THE SHAPE AND DIMENSIONS OF THE WORK SHAFT SHALL BE DETERMINED BY THE CONTRACTOR TO FIT WITHIN THE AVAILABLE AREA SHOWN.



NOTE:  
 CONTRACTOR SHALL DETERMINE INVERT OF CASING BASED ON WATER PIPELINE GRADES SHOWN WITH ALLOWANCE FOR OUTSIDE DIAMETER OF WATER PIPELINE AND HEIGHT OF CASING INSULATORS.




 DSGN R.DUPREE  
 DR R.DUPREE  
 CHK S.EBE  
 APVD D.DECHANT

NO.	DATE	REVISION	BY	APVD
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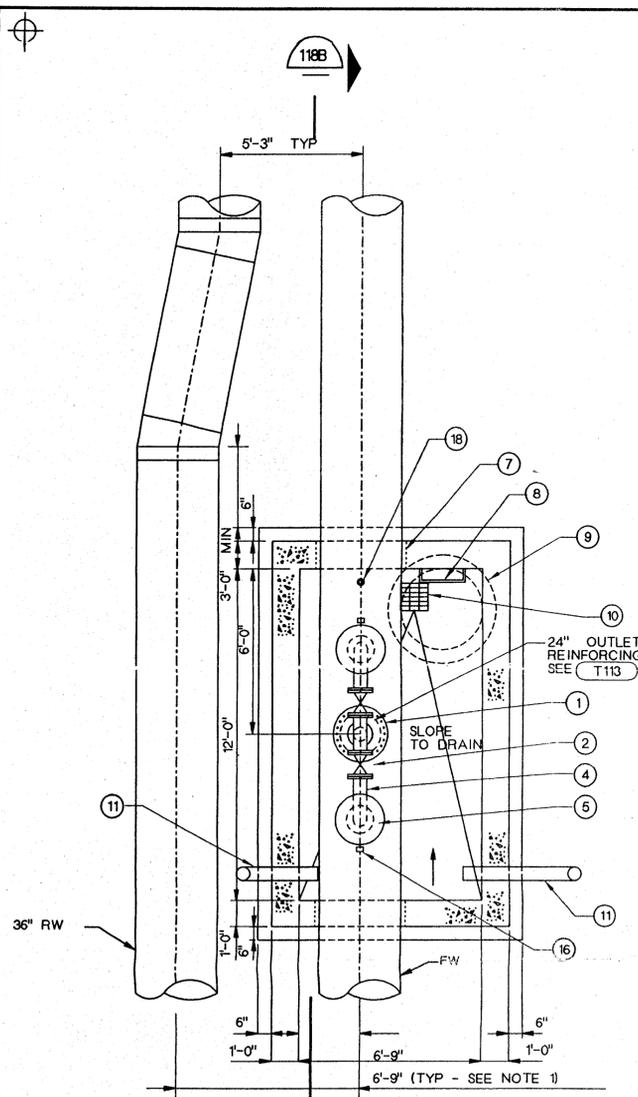
VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONTRACT 2  
 OF THE  
 SOUTHWEST WATER PROJECT  
 SEGMENT 2 - UINTAH SOUTH

FOUNTAIN CREEK AND  
 HIGHWAY 24 CROSSING  
 PLAN AND PROFILE

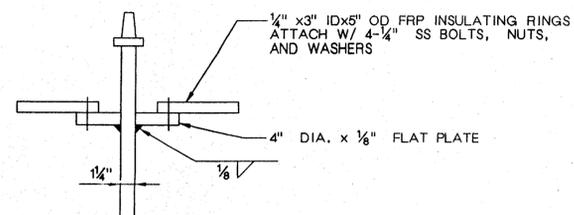
SHEET	P-13
DWG NO.	
DATE	APR 1995
PROJ NO.	RMW3757.FD

20-APR-95 7757P012.DWG

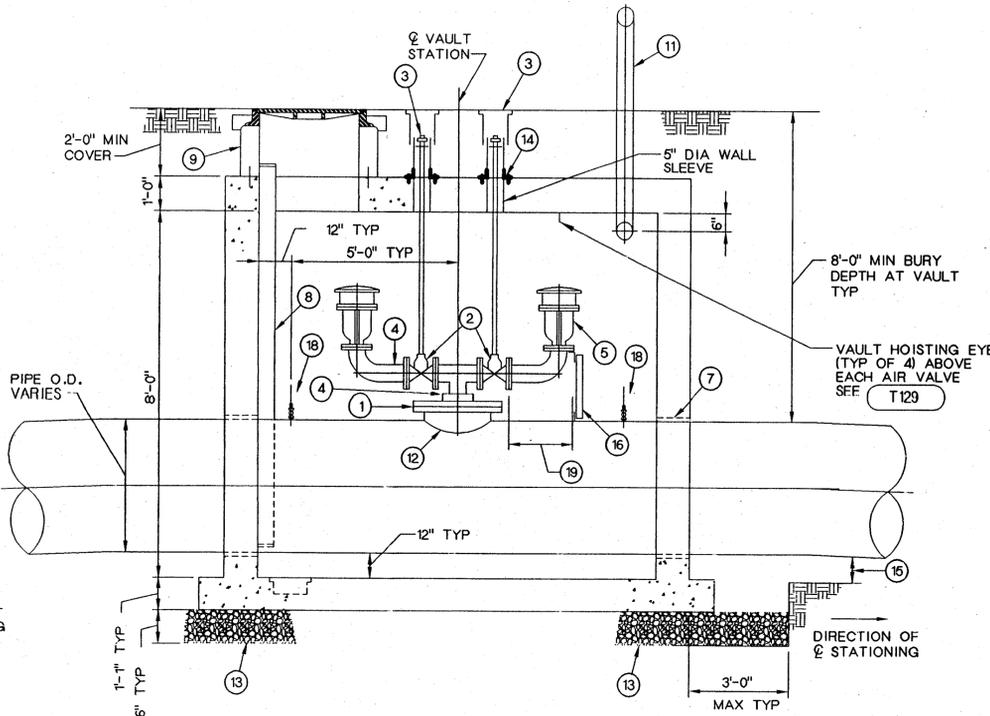


- NOTES:
1. DEFLECT RW FROM 5'-3" O.C. TO 6'-9" O.C. FROM FW. MAX DEFLECTION EQUAL TO 1 1/4" TYPICAL OF BOTH SIDES OF VAULT.
  2. PROVIDE REDUCING PIPE TAP TO MATCH AIR PIPE SIZE.
  3. 6" DIAMETER VENT PIPE SEE NOTE 11.

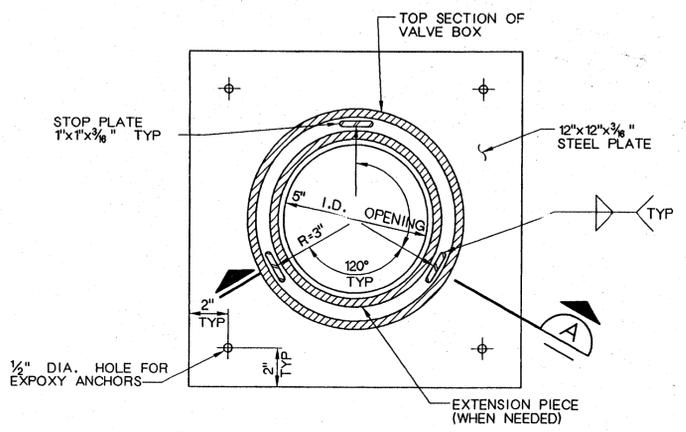
**AIR/VACUUM RELEASE VALVE VAULT** T118A  
SCALE: 1/4" = 1'-0"



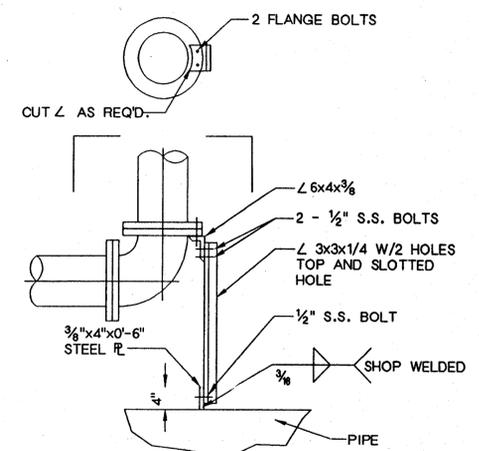
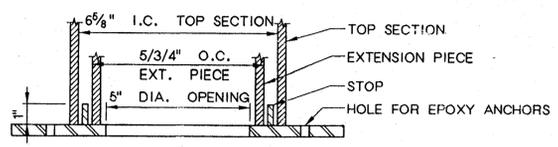
**AV/AR VAULT CENTERING RING** T118C  
SCALE: NONE



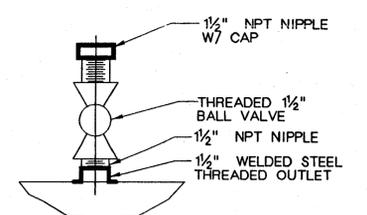
**TYPICAL SECTIONS B-B**  
**AIR/VACUUM RELEASE VALVE VAULT** T118B  
SCALE: NONE



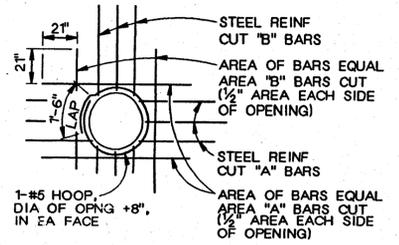
**VALVE BOX SUPPORT PLATE** T118D  
SCALE: NONE



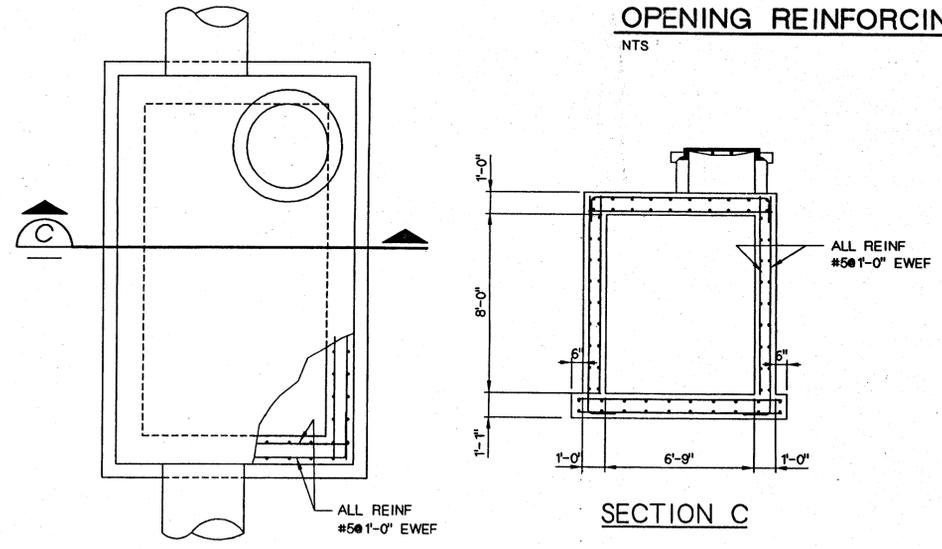
**AIR VALVE SUPPORT** T118E  
SCALE: NONE



**CHLORINE INJECTION** T118F  
SCALE: NONE



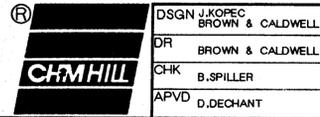
**OPENING REINFORCING** T118G  
NTS



**VALVE VAULT REINFORCING** T118H  
NTS

- NOTES:
1. 24" DIAMETER COMPANION FLANGE, SEE DETAIL T112 WITH REDUCING PIPE TAP TO MATCH AIR PIPE SIZE, SEE (4).
  2. ISOLATION GATE VALVE, SIZE PER AIR VALVE SIZE.
  3. ISOLATION VALVE OPERATOR BOX. SEE T132 AND T118C.
  4. AIR VALVE SUPPLY PIPE, STEEL, SIZE PER VALVE SIZE.
  5. COMBINATION 4" AIR RELEASE AND VACUUM VALVE (CARV). NOT USED.
  6. WALL PENETRATION, SEE DETAIL T130.
  7. LADDER, SEE DETAIL T126.
  8. 36" DIAMETER ACCESS MANHOLE, FRAME AND EXTENSION GRADE RINGS. SEE DETAIL T127.
  9. 12" x 12" x 4" DEEP SUMP WITH REMOVABLE ALUMINUM GRATING. SEE DETAIL P117.
  10. 6" DIAMETER VENT PIPE, SEE DETAIL T142. VENT LOCATION "A" OR "B" AND DIMENSION "L" SHALL BE AS SHOWN ON THE PLAN AND PROFILE DRAWINGS. COORDINATE FINAL VENT LOCATION IN THE FIELD WITH THE ENGINEER.
  11. SEE OUTLET/REINFORCING DETAIL T112.
  12. STRUCTURAL FILL PER SPEC.
  13. VALVE BOX SUPPORT PLATE PER DETAIL T118D THIS SHEET.
  14. PIPE BEDDING PER DETAIL T107.
  15. AIR VALVE SUPPORT SYSTEM TYPICAL BOTH AIR VALVES, SEE DETAIL T118E.
  16. NOT USED.
  17. CHLORINE INJECTION PIPE TAP AND VALVE ASSEMBLY, DETAIL T118F FOR FINISHED WATER PIPE ONLY.
  18. COORDINATE LOCATION OF PIPE SUPPORT W/PIPE MANUFACTURER.

- NOTES:
1. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS UNLESS INDICATED OTHERWISE ON PLANS.
  2. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.



DSGN J.KOPEC  
BROWN & CALDWELL  
DR BROWN & CALDWELL  
CHK B.SPILLER  
APVD D.DECHANT

NO.	DATE	REVISION	BY	APVD

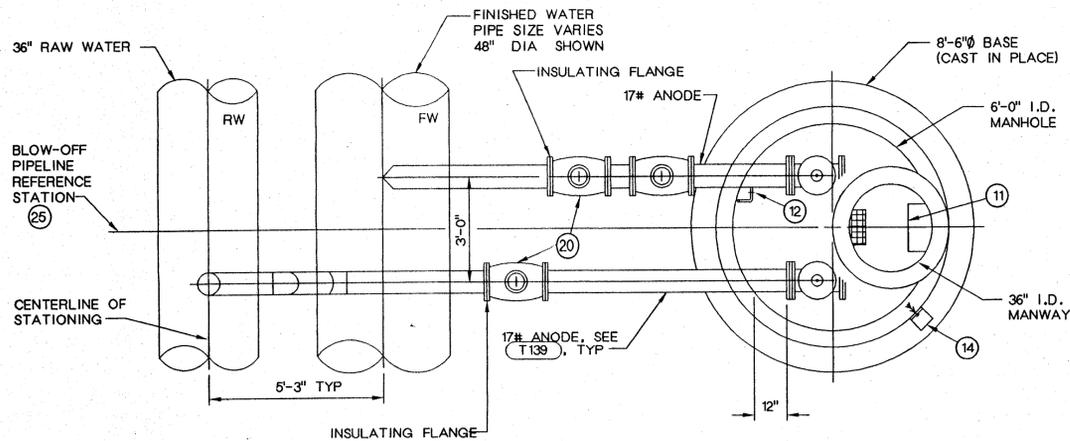


VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1'  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONTRACT 2  
OF THE  
SOUTHWEST WATER PROJECT  
SEGMENT 2 - UINTAH SOUTH

DETAILS

SHEET	
DWG NO.	P-18
DATE	APR 1995
PROJ NO.	RMW37757.FD

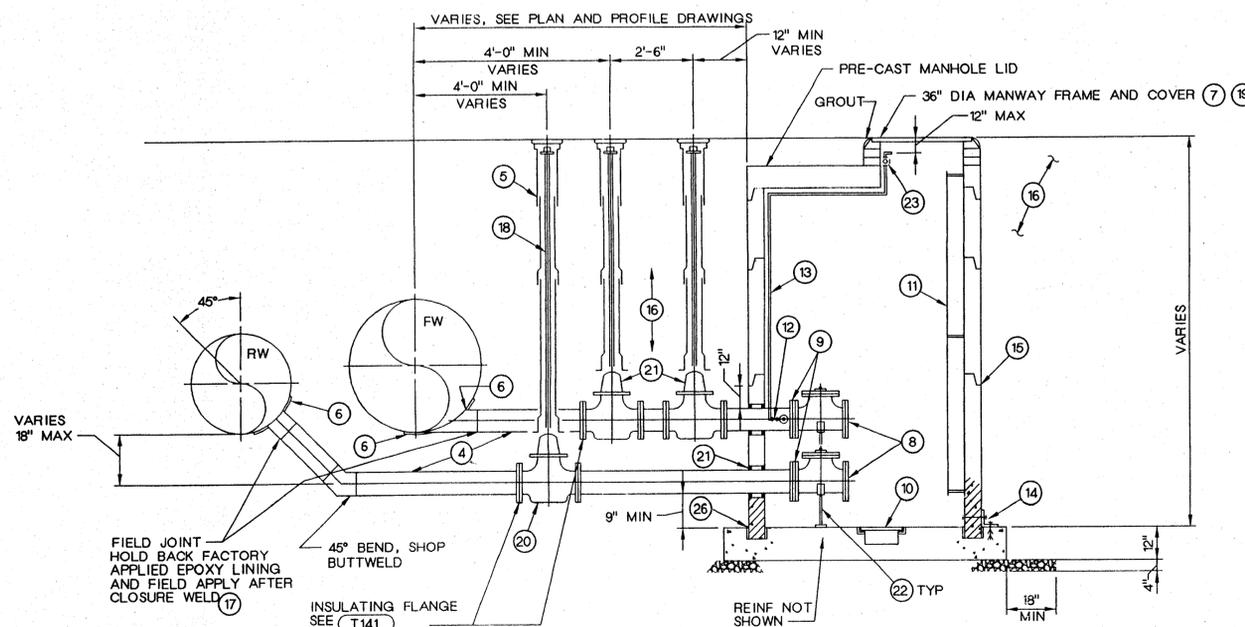


**BLOW-OFF AND MANHOLE - PLAN** T119A  
SCALE: NONE

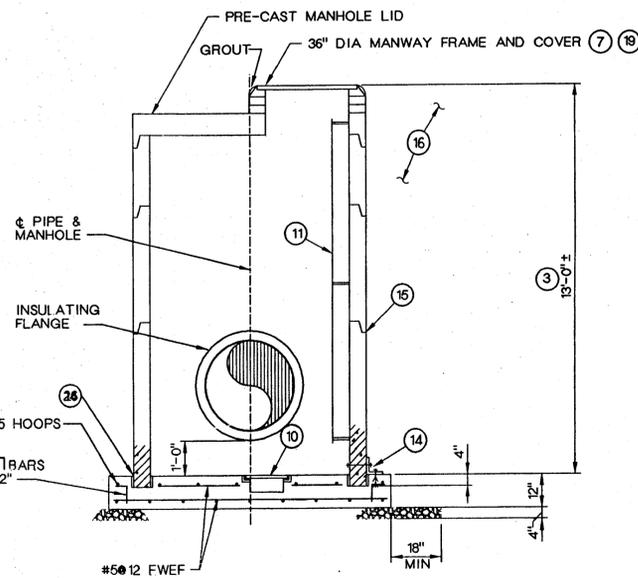
- NOTES:
- SEE PLAN AND PROFILE FOR LOCATIONS OF BLOW-OFF AND VAULT.
  - LOCATE BLOW-OFF MANHOLE AS SHOWN ON THE PLAN AND PROFILE DRAWINGS.
  - CONFIRM THE DEPTH OF BLOW-OFF MANHOLE AND MANHOLE IN THE FIELD AND PROVIDE GRADE RINGS AS NEEDED FOR FINAL GRADING.
  - BLOW-OFF PIPE SIZE SHALL BE 8 INCHES. THE PIPE MATERIAL SHALL BE STEEL PIPE, EPOXY LINED AND TAPE COATED.
  - FLANGE BOTTOM VALVE BOX, SEE DETAIL (T132).
  - BLOW-OFF PIPE CONNECTION SHALL BE STANDARD OUTLET OR TANGENT TYPE OUTLET AS SHOWN, SEE OUTLET REINFORCING DETAIL (T113).
  - MANHOLE FRAMES AND COVERS IN SIDEWALKS AND ROADWAYS SHALL BE HEAVY DUTY. SEE DETAIL (T127).
  - FLANGED TEE WITH BLIND FLANGES SIZED SAME AS BLOW-OFF SIZE. TOP FLANGE SHALL BE TAPPED AND DRILLED WITH 3/4" PLUG.
  - STEEL ORIFICE PLATE PER SECTION 15095. SIZED AS SHOWN IN THE TABLE.
  - 12" x 12" x 6" DEEP SUMP WITH REMOVABLE ALUMINUM GRATING AND FRAME. SEE DETAIL (T151) AND (T152).
  - LADDER, SEE DETAIL (T126).
  - DECHLORINATION CHEMICAL INJECTOR, SEE DETAIL (T118F).
  - 1-1/2" STEEL, CHEMICAL INJECTOR SUPPLY PIPE ROUTED THROUGH MANWAY, CLAMP TO CONCRETE, SEE SPEC SECTION 15095.
  - STAINLESS STEEL HARNESS ASSEMBLIES AT MANHOLE BASE AND RISER SECTIONS AT HIGH GROUNDWATER LOCATIONS TYP.
  - ALL MANHOLE JOINTS SHALL BE SEALED WITH RAMNEK.
  - ALL BACKFILL AROUND MANHOLE SHALL BE COMPACTED AS SPECIFIED IN SECTION 02200.
  - WELDED BLOW-OFF CONNECTION.
  - ADJUSTABLE VALVE BOX AND VALVE EXTENSION STEM WHERE APPLICABLE, SEE DETAIL (T132).
  - SET MANHOLE LID FLUSH WITH GROUND OR PAVEMENT IN IMPROVED AREAS. RAISE LID 6" ABOVE GROUND IN OPEN SPACES.
  - GATE VALVE, SEE SPEC 15095, DETAIL (T116) AND TABLE THIS SHEET.
  - WALL PENETRATION, SEE DETAIL (T130).
  - ADJUSTABLE PIPE SUPPORT, SEE DETAIL (T136).
  - 1-1/2" STEEL THREADED BALL VALVE AND 1-1/2" NPT NIPPLE ANCHORED TO GRADE RINGS.
  - MANHOLE BEDDING SHALL BE DRAINROCK, PER SECTION 02200.
  - FOR SINGLE PIPE BLOWOFF REFERENCE STATION SHALL BE TANGENTIAL OUTLET. BLOWOFF PIPE SHALL ENTER MANHOLE AT MANHOLE CENTERLINE. VALVE STRINGS SHALL BE AS SHOWN FOR EITHER FW OR RW.
  - FILL ANNULAR SPACE WITH ELASTOMERIC SEALANT.

SCHEDULE OF BLOW-OFF ASSEMBLIES

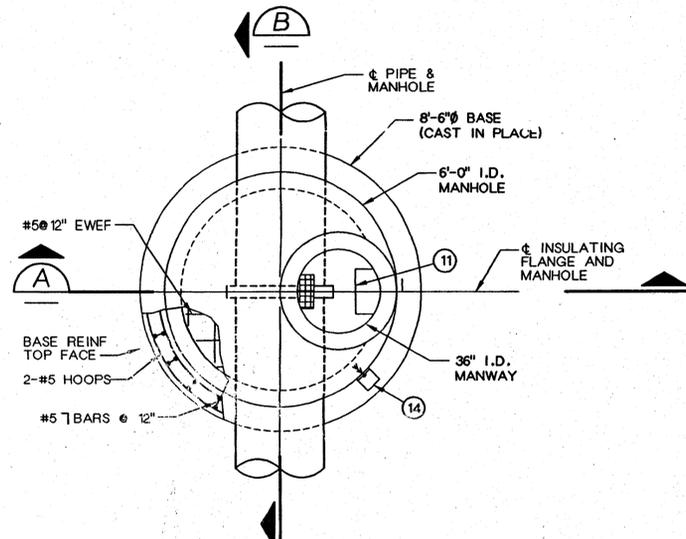
SURVEY STATION	FW DESIGN PRESSURE	RW DESIGN PRESSURE	ORIFICE PLATE SIZE FW (in.)	ORIFICE PLATE SIZE RW (in.)
261+25.00	225	275	3.0	2.5
272+00.00	225	275	3.0	2.5
272+20.00	225	275	3.0	2.5
277+25.00	200	275	3.0	2.5
286+50.00	200	250	3.0	2.5
303+50.00	200	275	3.0	2.5
326+60.00	200	275	3.0	2.5



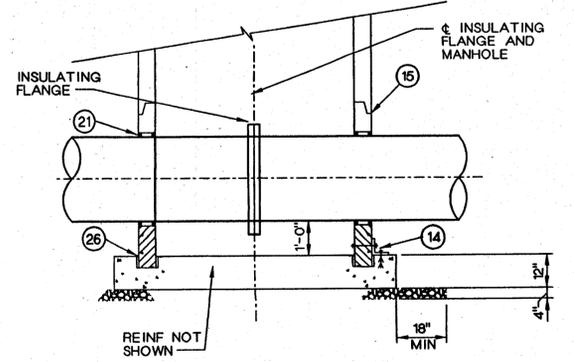
**BLOW-OFF AND MANHOLE - SECTION** T119B  
SCALE: NONE



**MANHOLE - SECTION A-A** T120B  
SCALE: NONE



**MANHOLE - PLAN** T120A  
SCALE: NONE



**MANHOLE - SECTION B-B** T120C  
SCALE: NONE

DSGN J.KOPEC  
 BROWN & CALDWELL  
 DR BROWN & CALDWELL  
 CHK B.SPILLER  
 APVD D.DECHANT

NO.	DATE	REVISION	BY	APVD

COLORADO SPRINGS UTILITIES

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0" 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CONTRACT 2  
 OF THE  
 SOUTHWEST WATER PROJECT  
 SEGMENT 2 - UINTAH SOUTH

SHEET  
 DWG NO. P-19  
 DATE APR 1995  
 PROJ NO. RMW37757.FD

DETAILS