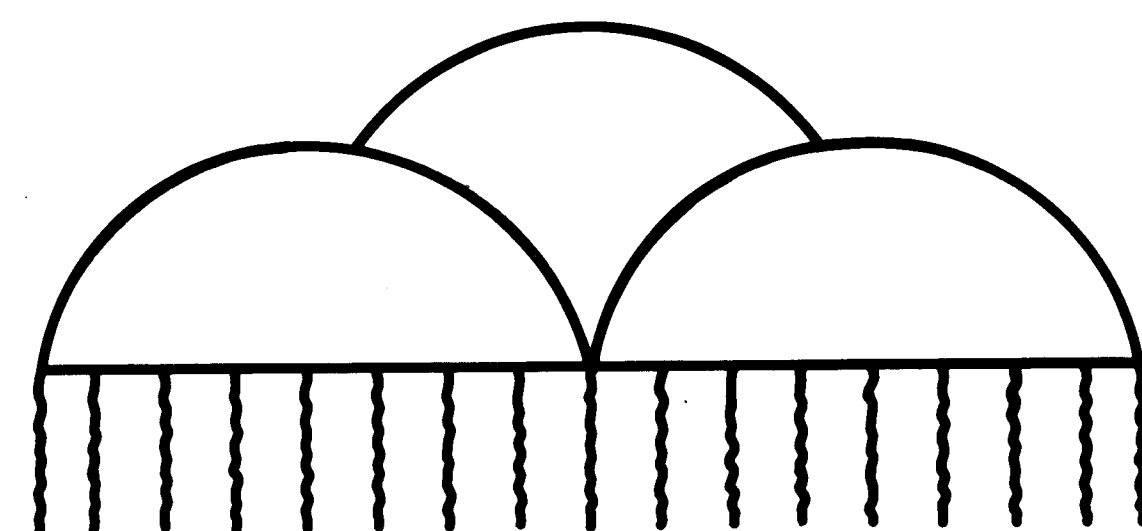


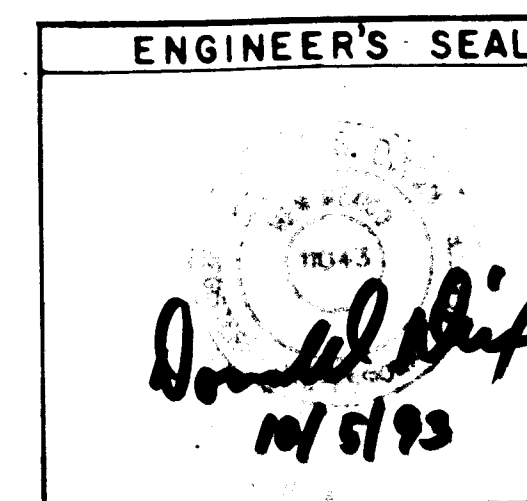
Albuquerque Metropolitan Arroyo Flood Control Authority



Plans for Construction of Lower North Domingo Baca Arroyo Detention Dam Outfall Pipe

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
216-14765-190 0196

I, Donald S. Dixon (N.M. P.E. 11043),
Certify that the drawing of the
"As-Built" Dimensions was done
under my supervision.
Donald S. Dixon 4/21/94



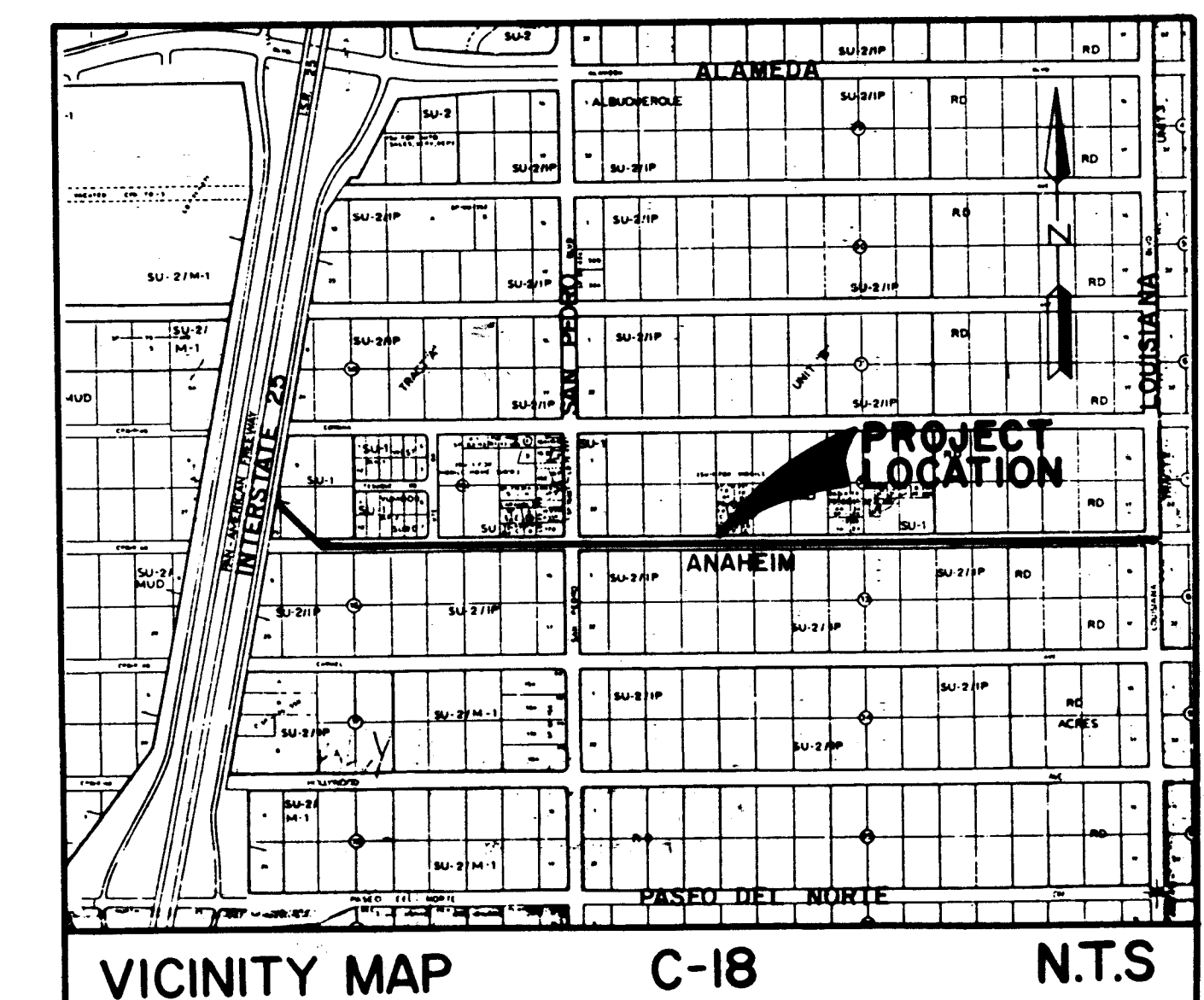
APPROVED FOR CONSTRUCTION

Larry A. Blair 15 October 1993
Date
LARRY A. BLAIR
EXECUTIVE ENGINEER
ALBUQUERQUE METROPOLITAN
FLOOD CONTROL AUTHORITY

SCANNED BY
BY LABON

SHEET INDEX

SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	GENERAL NOTES AND SUMMARY OF QUANTITIES
3	OUTFALL PIPE-STA. 9+53 to STA. 23+00 PLAN AND PROFILE
4	OUTFALL PIPE-STA. 23+00 to STA. 37+00 PLAN AND PROFILE
5	OUTFALL PIPE-STA. 37+00 to STA. 50+25 PLAN AND PROFILE
6	WATERLINE RELOCATION PLAN AND PROFILE
7	TRANSITION STRUCTURE LOCATION AND GRADING PLAN
8	MISCELLANEOUS DETAILS
9	TRANSITION STRUCTURE BAR SCHEDULE
10	TRAFFIC CONTROL PLAN
11	TRAFFIC CONTROL PLAN
12	TRENCHING AND PAVING DETAILS
13	NMSHTD SERIAL - BCE-001-01



APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
HYDROLOGY			WASTE WATER		
PROJECT NO.	4765.90	MAP NO. C-18	SHEET 1 OF 13		

ALBUQUERQUE METROPOLITAN ARROYO
FLOOD CONTROL AUTHORITY

PROJECT NO.:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE:
SHEET 1 OF 13



SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	9+70.99 to 12+75		12+75 to 24+00		24+00 to 50+81															
			ESTIMATE	FINAL	ESTIMATE	FINAL	ESTIMATE	FINAL	ESTIMATE	FINAL	ESTIMATE	FINAL	ESTIMATE	FINAL	ESTIMATE	FINAL	ESTIMATE	FINAL	ESTIMATE	FINAL	ESTIMATE	FINAL
202001	REMOVAL OF STRUCTURES & OBSTRUCTIONS	LS	1	1																		
212000	SEEDING	ACRE	2	2																		
505000	REINFORCING BARS, GR60	LB	3990	4137																		
509050	STRUCTURAL CONC., CLASS "A"	CY	32	32																		
509075	STRUCTURAL CONC., CLASS "B"	CY	20	26																		
625000	PROTECT FROM WATER	LS	1	1																		
664000	MH FRAME & COVER	EA	1	1																		
006.05	MOBILIZATION	LS	1	1																		
019.01	CONST. TRAFFIC CONT.	LS	1	1																		
207.01	LEAN FILL	CY	16	5	434	259	2084	572														
301.02	SUBGRADE PREP, ART. 12"	SY	20	-0-	2233	1918	2745	3737														
336.09	AC BS 2 1/2" 1800, M	SY			2233	1766	2745	3087														
336.17	AC SFC 1 1/2" 1800, M	SY			1226	1097	178	100														
343.01	AC PVMT, REM & DISP, NS	SY			1905	1620	2567	3551														
343.04	AC PVMT, (4" SAW & DISP)	SY			240	173	178	187														
701.20	TRCH, BF & COMP, >36", <8'	LF	300	297	515	586	650	342														
701.21	TRCH, BF & COMP, >36", 8'-12'	LF			610	395	1650	1393														
701.22	TRCH, BF & COMP, >36", 12'-16'	LF				145	381	945														
801.03	WL 8" PVC, C-900	LF			382	420																
801.55	EXIST WL W/FIT, REM	LF			400	40																
801.60	FIT INSERT, 4-14", CI/DI	LB			185	185																
801.65	CI/DI FIT, MJ, 4-14", WL	LB			550	550																
801.82	GATE VALVE, 8"	EA			1	1																
801.105	VLV BOX A	EA			1	1																
801.121	FH, RECON	EA			1	1																
910.09	24" RCP CL III	LF			48	40	48	48														
910.21	48" RCP CL III	LF			662	660	2150	2150														
910.22	48" RCP CL IV	LF					531	530														
920.23	54" RCP CL III	LF	300	297	463	466																
920.14	MH 6' DIA., C 6'-10' D	EA	1	1			3	3														
920.15	MH 6' DIA., C 10'-14' D	EA			1	1	1	1														
920.60	MH 8' DIA., C 6'-10' D	EA			3	3	1	1														
920.61	MH 8' DIA., C 10'-14' D	EA			1	1																
920.62	MH 8' DIA., C 14'-18' D	EA					1	1														
701.10	TRCH, BF & COMP, <8', 18"-36"	LF			48	40	48	48														
560.00	EXTRA DOWELS & SEALANT	LS	1	1																		
	TYPE III BARRICADES	EA			2	2																

GENERAL NOTES

1. An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.

2. All utility and storm drain work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with City of Albuquerque Standard Specifications for Public Works Construction, 1986 Edition as amended with update #4.

3. Two working days prior to any excavation, contractor must contact New Mexico One Call, 260-1990, for location of existing utilities.

4. Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay. All utility locations shown are approximate.

5. Backfill compaction shall be according to Arterial street use.

6. Existing waterline to remain in service until all service connections are made.

7. Contractor must maintain one traffic lane open at all time. See sheets 10 and 11 for Traffic Control details.

8. It is the responsibility of the Contractor to maintain safe trenching conditions within the Right-of-Way. This may require the use of a trench shield, shoring or other approved methods. Maximum side slope without trench support above the 5' vertical slope allowed is 1 1/2 H to 1 V.

9. Lean fill construction shall be required from station 12+55 to 50+81. See sheet 12 for details. Refer to COA Std. Spec. #207 for additional requirements.

10. When it is necessary for the Contractor to leave the open trench area unattended (night, and weekends), the work area will be secured with portable concrete traffic barriers on the roadway side. The shall extend a minimum of 50-feet beyond the limits of the open trench in each direction.

11. Maintenance of all utility service connections to individual lots shall be incidental to storm drain installation.

12. Paving removed within the Louisiana and San Pedro R/W's shall be replaced in kind as determined by the Engineer. For bid purposes, this was estimated to be 2 1/2" asphaltic concrete binder course plus 1 1/2" asphaltic surface course. All pavement removal in these areas shall be saw cut.

13. AMAFCA shall set TBM's and flag found property corners as required to establish project control. The contractor shall be required to maintain these markers and provide construction staking required for establishing correct line and grades shown on the plans. No direct payment will be provided for this work and it will be considered incidental to other pay-items.

I, Donald S. Dixon (N.M. P.E. 11043),
Certify that the drawing of the
"As-Built" Dimensions was done
under my supervision.

Donald S. Dixon
4/11/94

10/5/93

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	N/A	10-15-93	WATER	N/A	10-15-93
TRANSPORT.	N/A	10-24-93	WASTE WATER	N/A	10-15-93
HYDROLOGY	CAH	10-18-93			

PROJECT NO.	MAP NO.	SHEET OF
4765.90	C-18	2 13



ALBUQUERQUE METROPOLITAN ARROYO
FLOOD CONTROL AUTHORITY

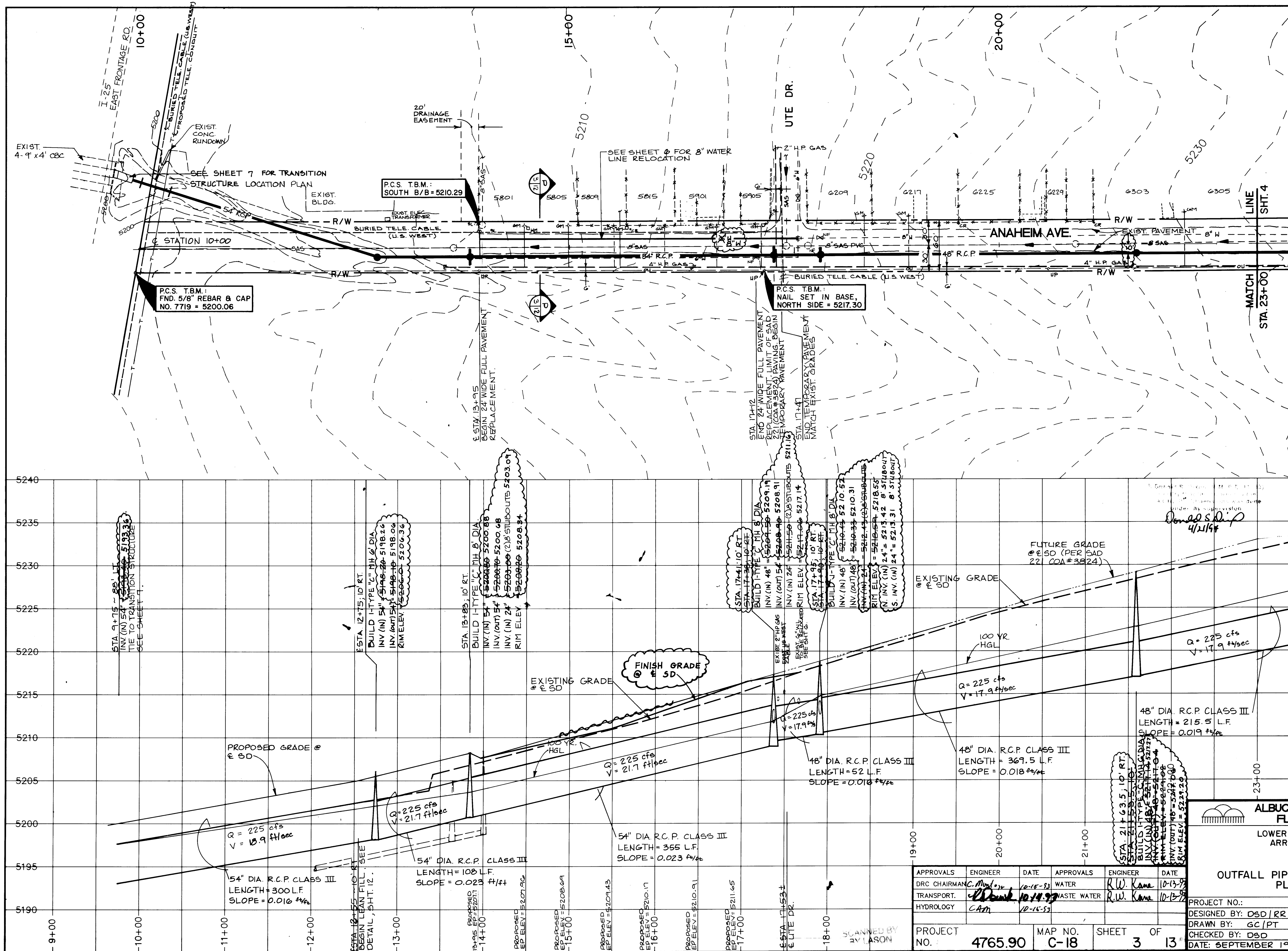
LOWER NORTH DOMINGO BACA
ARROYO DETENTION DAM
OUTFALL PIPE

GENERAL NOTES AND
SUMMARY OF QUANTITIES

PROJECT NO.:
DESIGNED BY: DSD
DRAWN BY: PT
CHECKED BY: OSD
DATE: SEPTEMBER 1993

Resource Technology, Inc.
ENGINEERS & ENVIRONMENTAL SCIENTISTS
SHEET 2 OF 13

26-4765.90 0296



1. All stubouts to be plugged per detail, Sht. 12.
2. Contractor must maintain access to all driveways and side streets at all times.
3. See sheet 7 for transition structure location plan.
4. See sheet 8 for anti-sweep collar details.
5. Contractor to notify and work with PNM to protect all power poles.
6. Contractor responsible for locating and supporting all utilities exposed by construction.

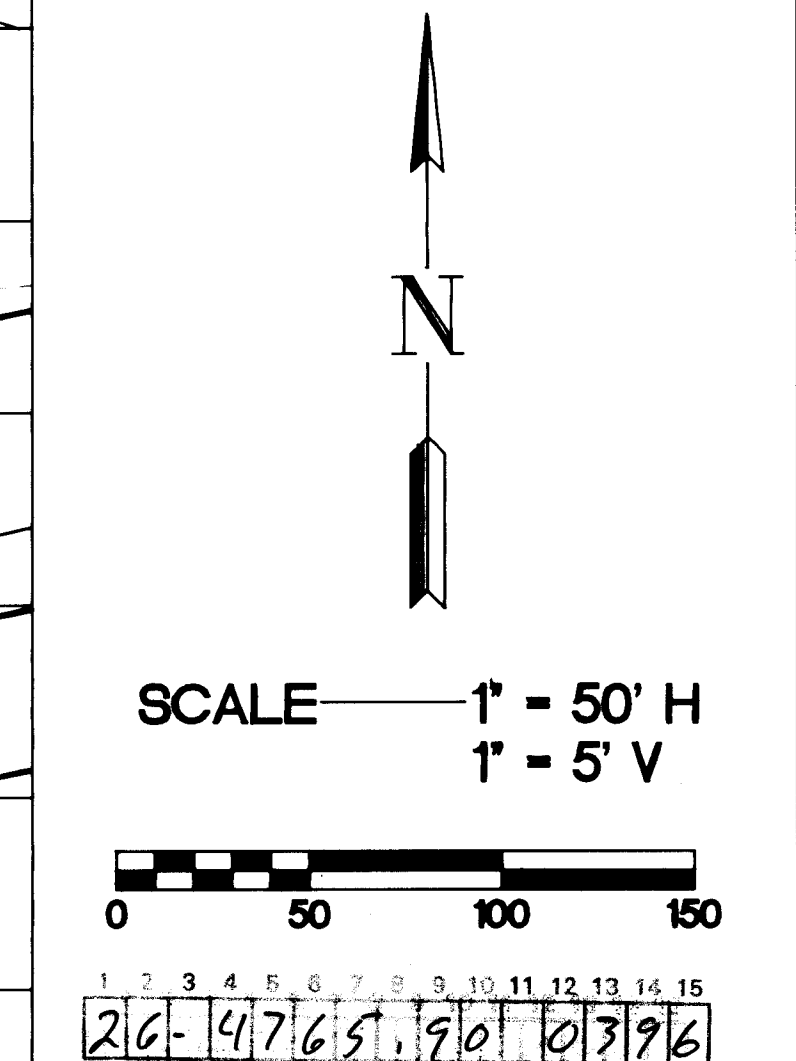
BENCHMARKS

STA. "1-C19" ELEV 5318.195'

Located 7.8 mi. N.E. of downtown Albuquerque, about 50' N. of the NW corner of a chainlink fence around the FAA Air Traffic Control Center Station is a std. ACS brass tablet stamped "1-C19 N.A.A. LOT 32 BLK 10", set in top of a concrete post flush with the ground.

ENGINEER'S SEAL

Donald S. Ship
10/5/93



REVISIONS			
NO.	DATE	REMARKS	BY
1	10-14-93	REVISED	
2	10-15-93	REVISED	
3	10-15-93	REVISED	
4	10-15-93	REVISED	
5	10-15-93	REVISED	
6	10-15-93	REVISED	
7	10-15-93	REVISED	
8	10-15-93	REVISED	
9	10-15-93	REVISED	
10	10-15-93	REVISED	
11	10-15-93	REVISED	
12	10-15-93	REVISED	
13	10-15-93	REVISED	
14	10-15-93	REVISED	
15	10-15-93	REVISED	

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY

LOWER NORTH DOMINGO BACA ARROYO DETENTION DAM OUTFALL PIPE

OUTFALL PIPE - STA. 9+75 to STA. 23+00

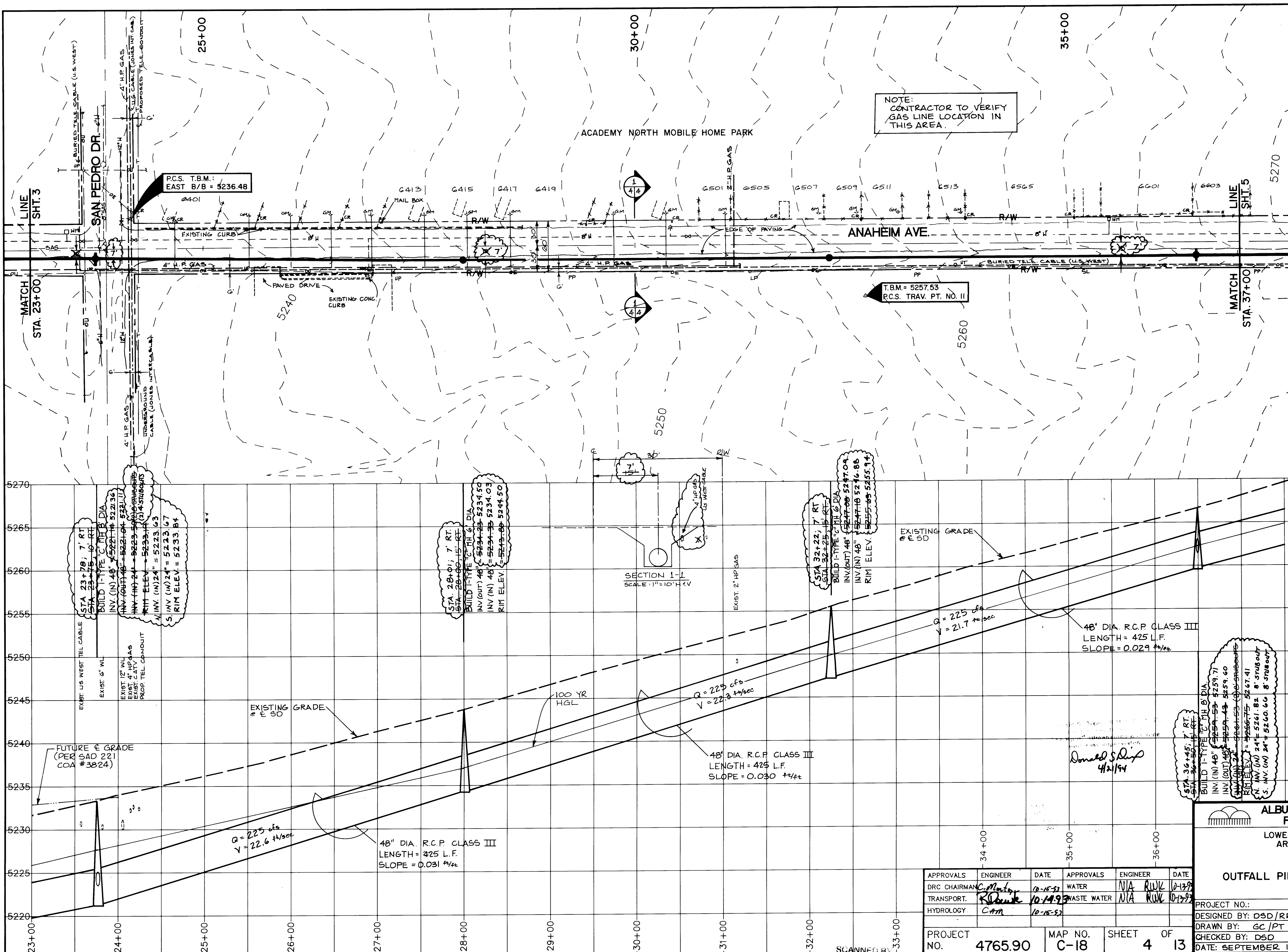
PLAN & PROFILE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	C. M. ...	10-15-93	WATER	R.W. Kane	10-13-93
TRANSPORT.	...	10-14-93	WASTE WATER	R.W. Kane	10-13-93
HYDROLOGY	...	10-15-93			

PROJECT NO. 4765.90 MAP NO. C-18 SHEET 3 OF 13

DESIGNED BY: DSD/RR
DRAWN BY: GC/PT
CHECKED BY: DSD
DATE: SEPTEMBER 1993

Resource Technology, Inc.
ENGINEERS & ENVIRONMENTAL SCIENTISTS
2500 CHASE NE - SUITE 200, ALBUQUERQUE, NEW MEXICO 87110
TELEPHONE: (505) 348-1111



1. All stubouts to be plugged per detail, Sht. 12.

2. Contractor must maintain access to all driveways and side streets at all times.

3. Contractor to notify and work with PNM to protect all power poles.

4. Contractor responsible for locating and supporting all utilities exposed by construction.

BENCHMARKS

STA. "I-C19" ELEV. 5318.195'

Located 7.8 mi. N.E. of downtown Albuquerque, about 50' N. of the NW corner of a chainlink fence around the FAA Air Traffic Control Center. Station is a std. ACS brass tablet stamped "I-C19 N.A.A. LOT 32 BLK. 10", set in top of a concrete post flush with the ground.

ENGINEER'S SEAL

Donald Ship
10/6/93

SCALE 1" = 50' H
1" = 5' V

0 50 100 150

11 22 33 44 55 66 77 88 99 10 11 12 13 14 15

26 47 65 90 104 190

REVISIONS

NO.	DATE	REMARKS	BY

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY

LOWER NORTH DOMINGO BACA ARROYO DETENTION DAM
OUTFALL PIPE

**OUTFALL PIPE - STA. 23+00 to STA. 37+00
PLAN & PROFILE**

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	<i>C. Mat...</i>	12-15-93	WATER	N/A	12-15-93
TRANSPORT.	<i>R. B...</i>	10-14-93	WASTE WATER	N/A	10-14-93
HYDROLOGY	<i>CAM</i>	12-15-93			

PROJECT NO. 4765.90 MAP NO. C-18 SHEET 4 OF 13

PROJECT NO.:
DESIGNED BY: DSD/RR
DRAWN BY: GC/PT
CHECKED BY: DSD
DATE: SEPTEMBER 1993

PROFESSIONAL SEAL
ENGINEER & ENVIRONMENTAL SCIENTIST
STATE OF NEW MEXICO
EXPIRATION - (SEE) 300 - 310

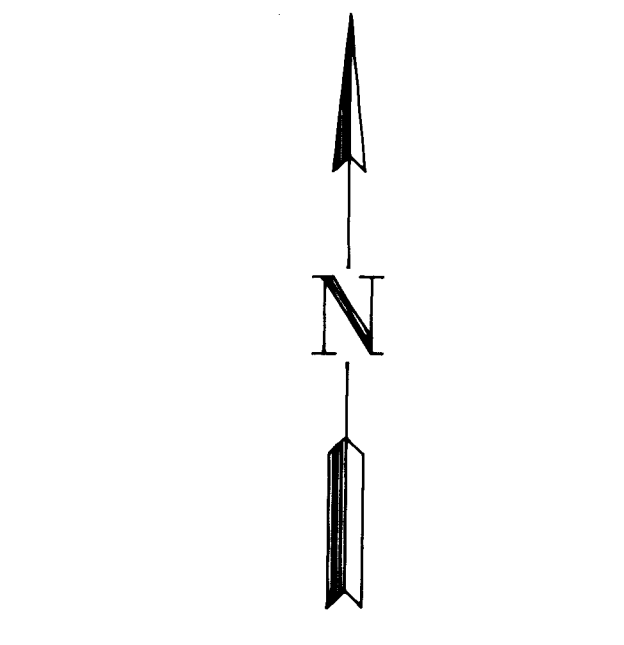
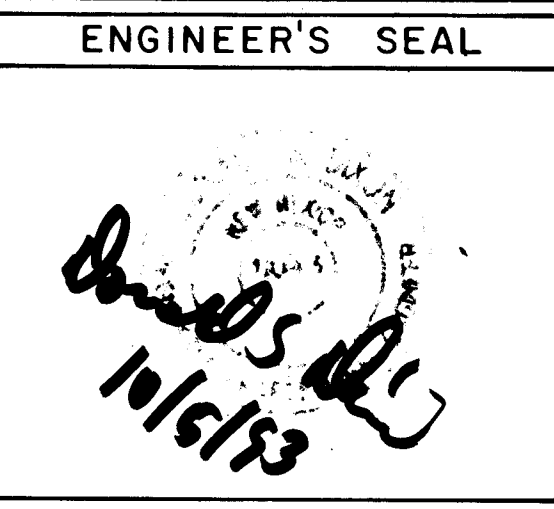
SCANNED BY
BY LASON

NOTE:
CONTRACTOR TO VERIFY
GAS LINE LOCATION IN
THIS AREA.

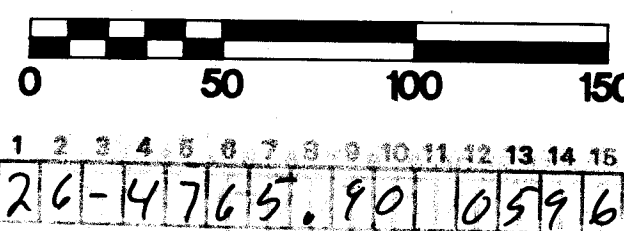
P.G.S. T.B.M.:
SOUTH B/B = 5285.08

1. All stubouts to be plugged per detail, Sht. 12.
2. Contractor to notify and work with PNM to protect power poles.
3. Contractor responsible for locating and supporting all utilities exposed by construction.

BENCHMARKS
STA "1-C19" ELEV. 5318.195'
Located 7.8 mi. NE. of downtown Albuquerque, about 50' N. of the NW corner of a chainlink fence around the FAA Air Traffic Control Center Station is a std. ACS brass tablet stamped "1-C19 N.A.A. LOT 32 B/LK 10", set in top of a concrete post flush with the ground.



SCALE 1" = 50' H
1" = 5' V



REVISIONS		
NO.	DATE	REMARKS
1	10/17/93	10/17/93
2	10/17/93	10/17/93
3	10/17/93	10/17/93
4	10/17/93	10/17/93
5	10/17/93	10/17/93
6	10/17/93	10/17/93
7	10/17/93	10/17/93
8	10/17/93	10/17/93
9	10/17/93	10/17/93
10	10/17/93	10/17/93
11	10/17/93	10/17/93
12	10/17/93	10/17/93
13	10/17/93	10/17/93
14	10/17/93	10/17/93
15	10/17/93	10/17/93

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY
LOWER NORTH DOMINGO BACA ARROYO DETENTION DAM
OUTFALL PIPE

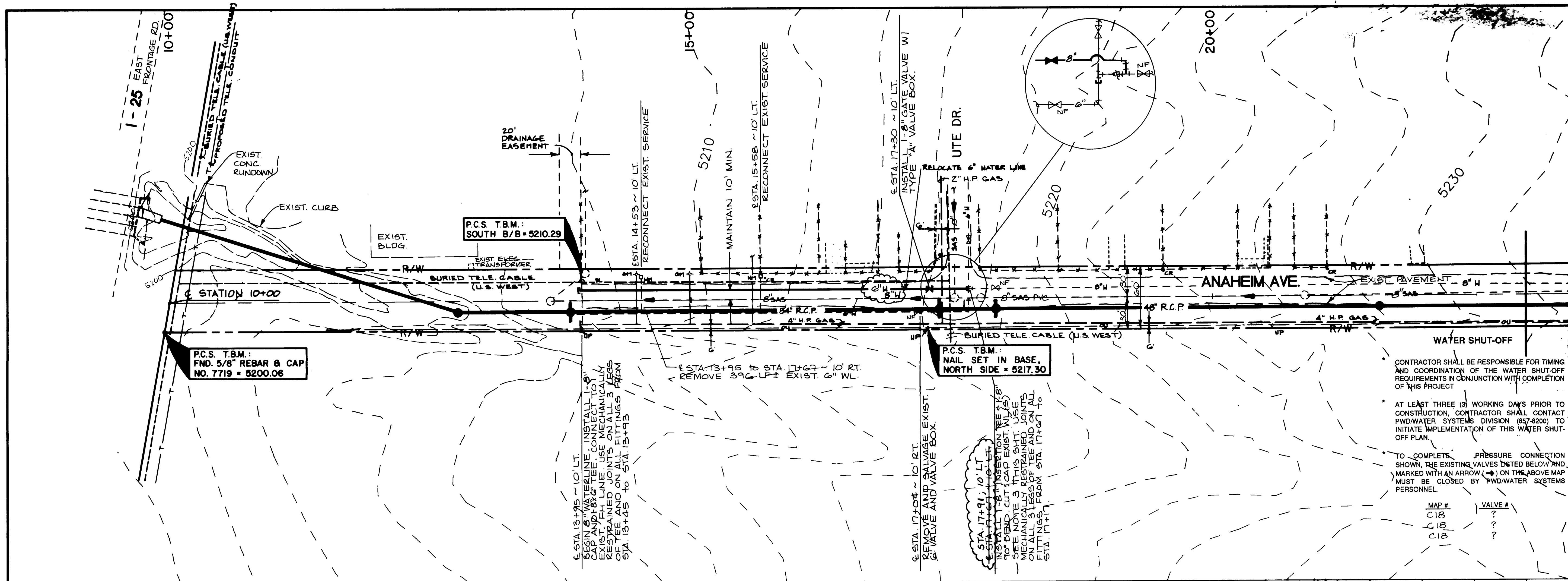
**OUTFALL PIPE - STA. 37+00 to STA. 50+25
PLAN & PROFILE**

PROJECT NO.:
DESIGNED BY: DSD/RR
DRAWN BY: GC/PT
CHECKED BY: DSD
DATE: SEPTEMBER 1993

Resource Technology, Inc.
ENGINEERS & ENVIRONMENTAL SCIENTISTS
2500 GORDON RD. - SUITE 200, ALBUQUERQUE, NEW MEXICO 87113
TELEPHONE: (505) 263-1000 FAX: (505) 263-1001

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	C. Montoya	10-15-93	WATER	N/A	RWL 10-13-93
TRANSPORT.	R. Dowe	10-14-93	WASTE WATER	N/A	RWL 10-13-93
HYDROLOGY	C.A.M.	10-15-93			
PROJECT NO.		4765.90	MAP NO.		C-18
			SHEET		5
			OF		13

SCANNED BY
BY LASON

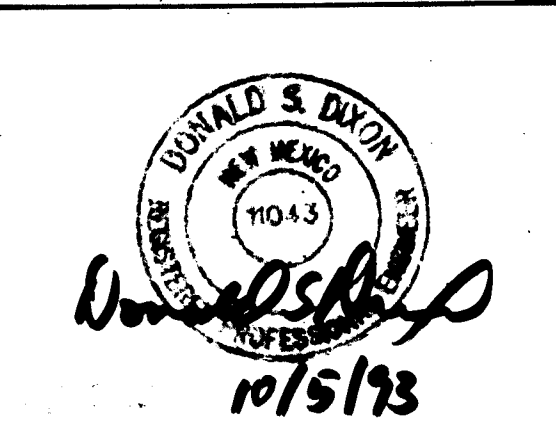


- Two working days prior to any excavation, contractor must contact New Mexico One Call, 260-1990, for location of existing utilities.
- Prior to construction, the contractor shall excavate and verify the horizontal and vertical locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay. All utility locations shown are approximate.
- Existing waterline to remain in service until all service connections are made.
- Contractor must maintain one traffic lane open at all times.
- All utility construction shall comply with COA Std. Spec. for Public Works, 1986, Update #4.

BENCHMARKS

STA. "1-C19" ELEV. 5318.195'
 Located 7.8 mi. N.E. of downtown Albuquerque, about 50' N. of the NW corner of a chainlink fence around the FAA Air Traffic Control Center. Station is a std. ACS brass tablet stamped "1-C19 N.A.A. LOT 32 BLK. 10" set in top of a concrete post flush with the ground.

ENGINEER'S SEAL

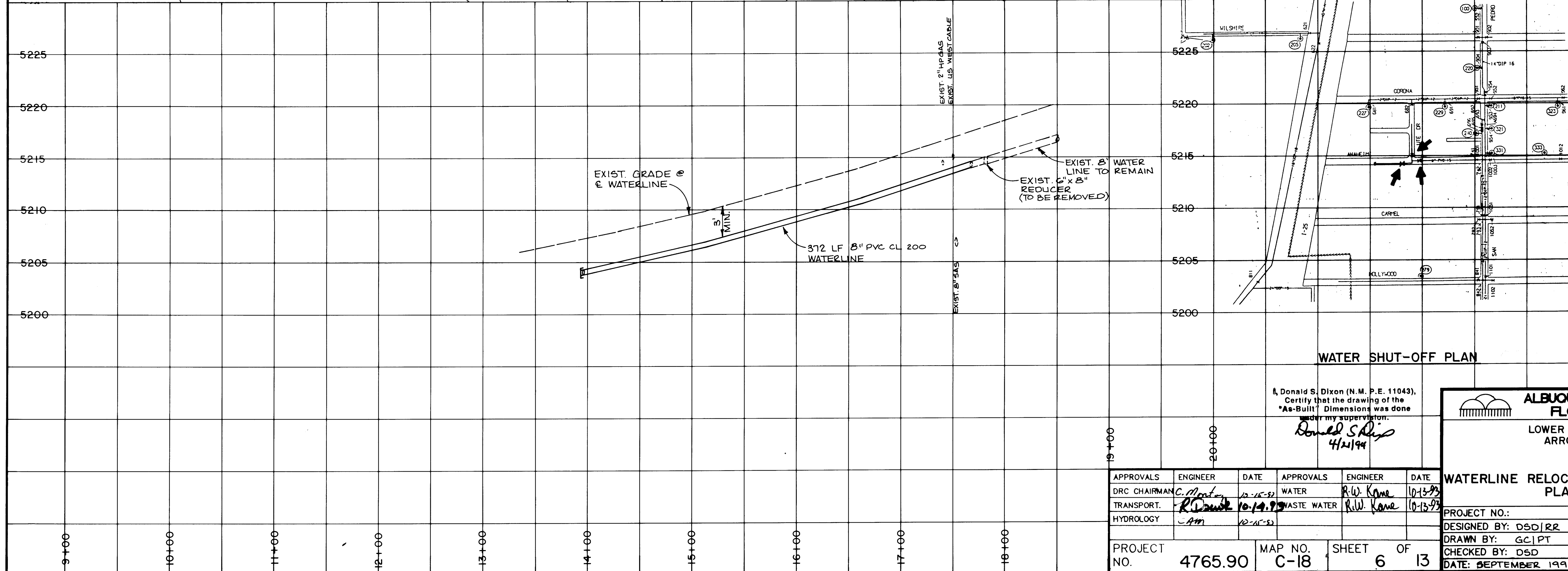


CONTRACTOR SHALL BE RESPONSIBLE FOR TIMING AND COORDINATION OF THE WATER SHUT-OFF REQUIREMENTS IN CONJUNCTION WITH COMPLETION OF THIS PROJECT.

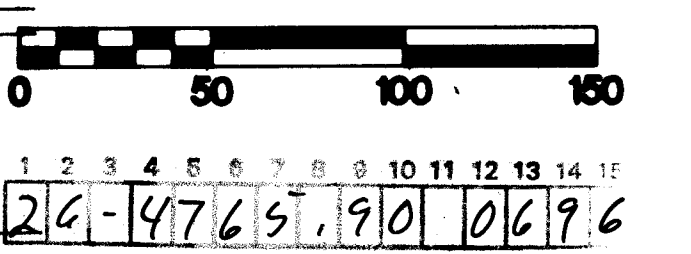
AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CONTACT PWD/WATER SYSTEMS DIVISION (857-8200) TO INITIATE IMPLEMENTATION OF THIS WATER SHUT-OFF PLAN.

TO COMPLETE PRESSURE CONNECTION SHOWN, THE EXISTING VALVES INDICATED BELOW AND MARKED WITH AN ARROW (→) ON THE ABOVE MAP MUST BE CLOSED BY PWD/WATER SYSTEMS PERSONNEL.

MAP # VALVE #
 C-18 ?
 C-18 ?
 C-18 ?



SCALE 1" = 50' H
 1" = 5' V



24-14765.90 0696

REVISIONS

NO.	DATE	REMARKS	BY

I, Donald S. Dixon (N.M. P.E. 11043),
 Certify that the drawing of the
 "As-Built" Dimensions was done
 under my supervision.
 Donald S. Dixon
 4/21/94

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	C. Montoya	10-15-93	WATER	R.W. Kane	10-15-93
TRANSPORT.	R. Davis	10-14-93	WASTE WATER	R.W. Kane	10-15-93
HYDROLOGY	Am	10-14-93			

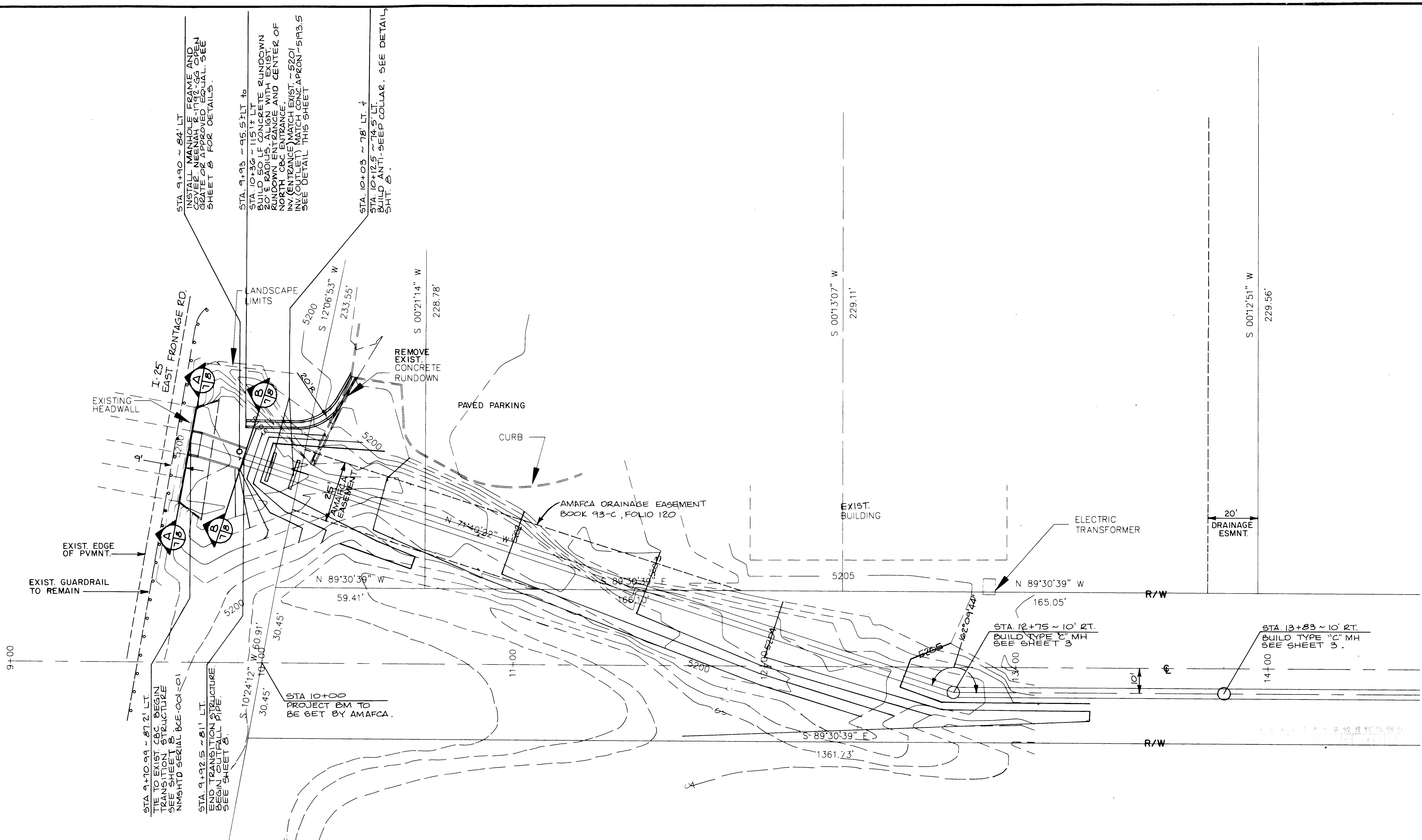
ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY

LOWER NORTH DOMINGO BACA ARROYO DETENTION DAM OUTFALL PIPE

WATERLINE RELOCATION - STA.13+95 to STA.17+67
 PLAN & PROFILE

PROJECT NO.:
 DESIGNED BY: DSD/RR
 DRAWN BY: GC/PT
 CHECKED BY: DSD
 DATE: SEPTEMBER 1993

SHEET 6 OF 13



1. CBC extension, transition structure, anti-seep collars and rundown, shall be paid for as structural concrete, CL A.
2. All disturbed areas shall be re-seeded.
3. Pipe cover and site grading shall be incidental to other pay items.
4. Earthwork and any imported fill required to meet finished grades shown on this sheet, is incidental to the transition structure.

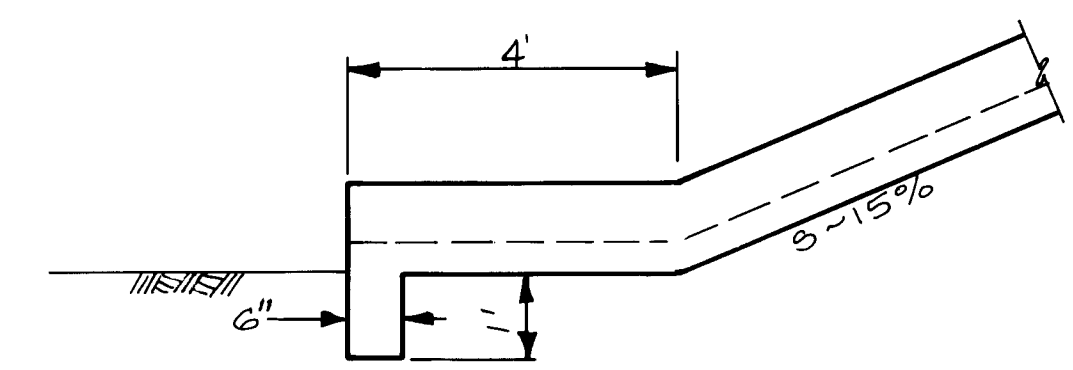
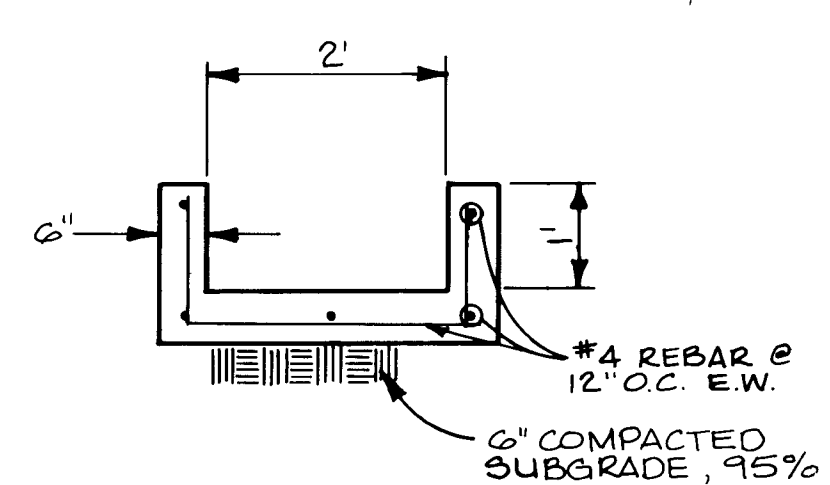
A. DeLong, P.E. 10039,
Certified Professional Engineer
"As-Built" Construction was done
under my supervision.
Donald S. Ship 4/2/94

BENCHMARKS
STA. "1-C19" ELEV. 5318.195'
Located 7.8 mi. N.E. of downtown
Albuquerque, about 50' N. of the NW
corner of a chainlink fence around the
FAA Air Traffic Control Center. Station
is a std. ACS brass tablet stamped
"1-C19, N.A.A. LOT 32 BLK 10", set in
top of a concrete post flush with the
ground.

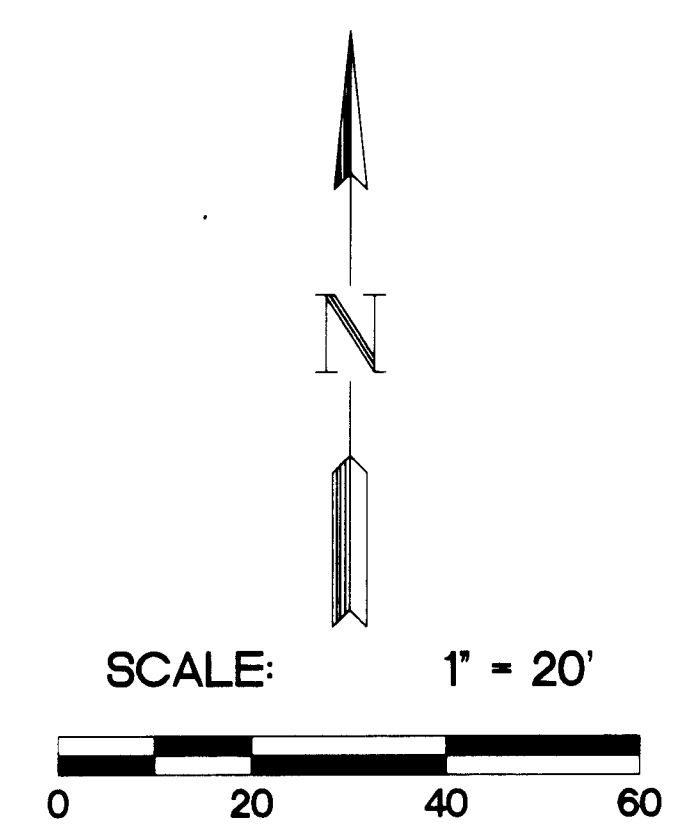
ENGINEER'S SEAL
DONALD S. SHIP
NEW MEXICO
1043
10/5/93

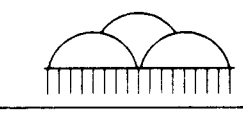
REVISIONS		
NO.	DATE	REMARKS

26-4765.90 0796



APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	C. M. Ship	10-15-93	WATER	N/A RWK	10-15-93
TRANSPORT.	R. DeLong	10-14-93	WASTE WATER	N/A RWK	10-15-93
HYDROLOGY	CAM	10-15-93			
PROJECT NO.	4765.90	MAP NO.	C-18	SHEET	7 OF 13





ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY
LOWER NORTH DOMINGO BACA
ARROYO DETENTION DAM
OUTFALL PIPE

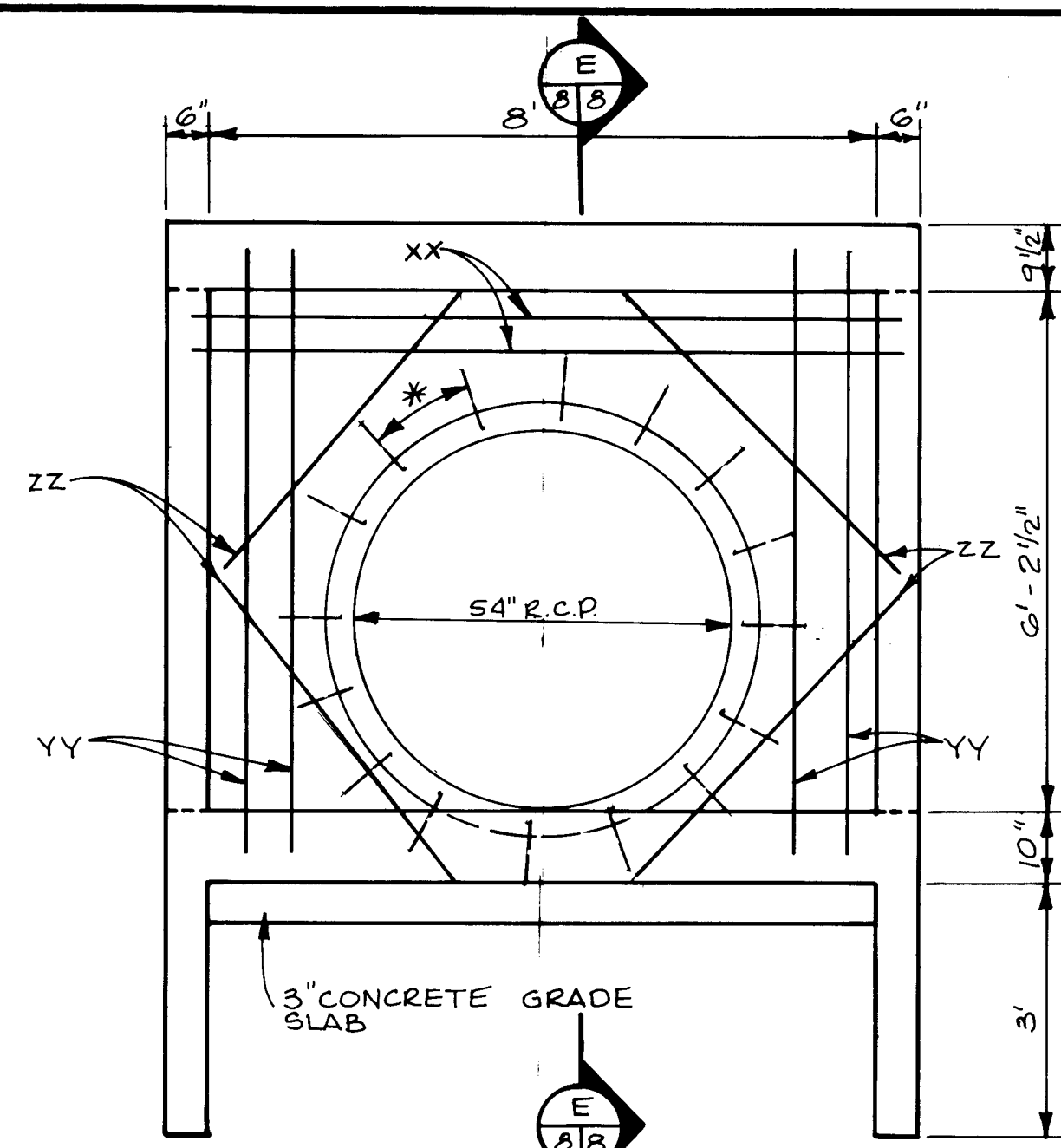
TRANSITION STRUCTURE LOCATION AND GRADING PLAN

PROJECT NO.:	DESIGNED BY: DSD
DRAWN BY: GC/PT	CHECKED BY: DSD
DATE: SEPTEMBER 1993	SHEET 7 OF 13



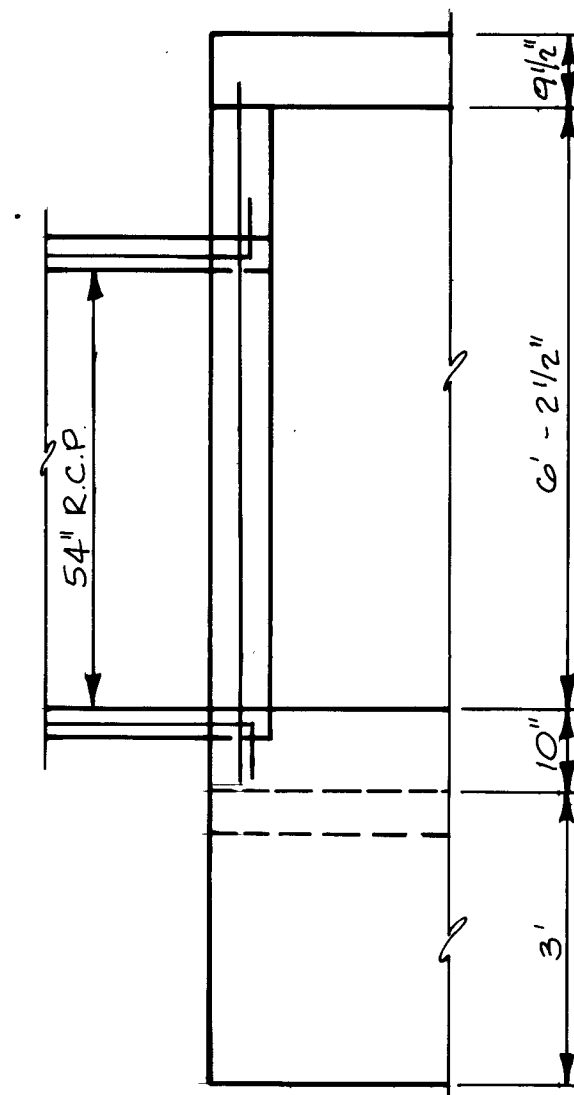
Resource Technology, Inc.
ENGINEERS & ENVIRONMENTAL SCIENTISTS
2710 OSUNA AVE., SUITE 200, ALBUQUERQUE, NEW MEXICO 87113
TELEPHONE: (505) 246-3718

26-4765.90 0796



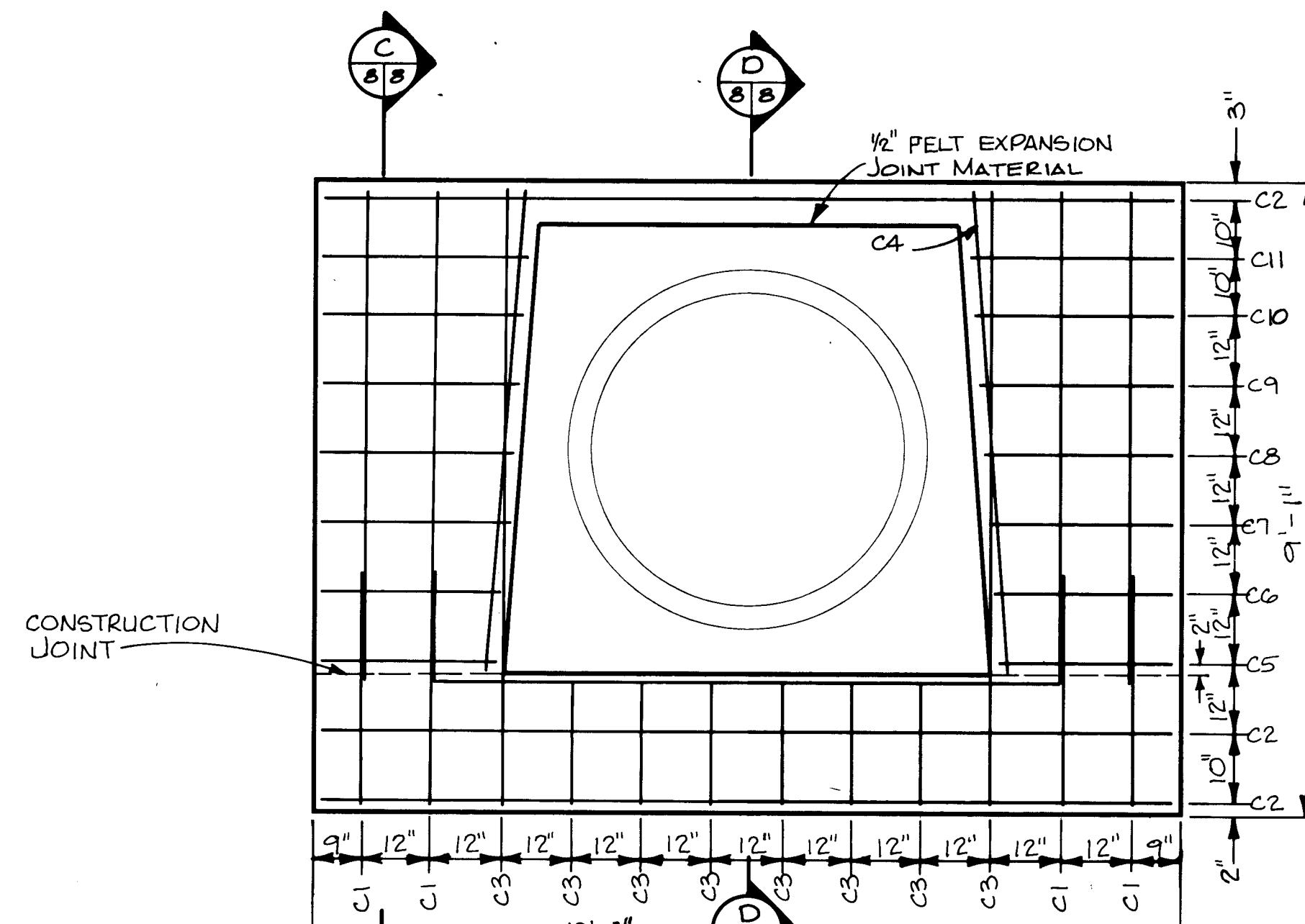
TRANSITION STRUCTURE
REAR WALL

NOT TO SCALE
* NOTE: REMOVE SPIGOT END FROM FIRST PIPE JOINT. EXPOSE 10\"/>



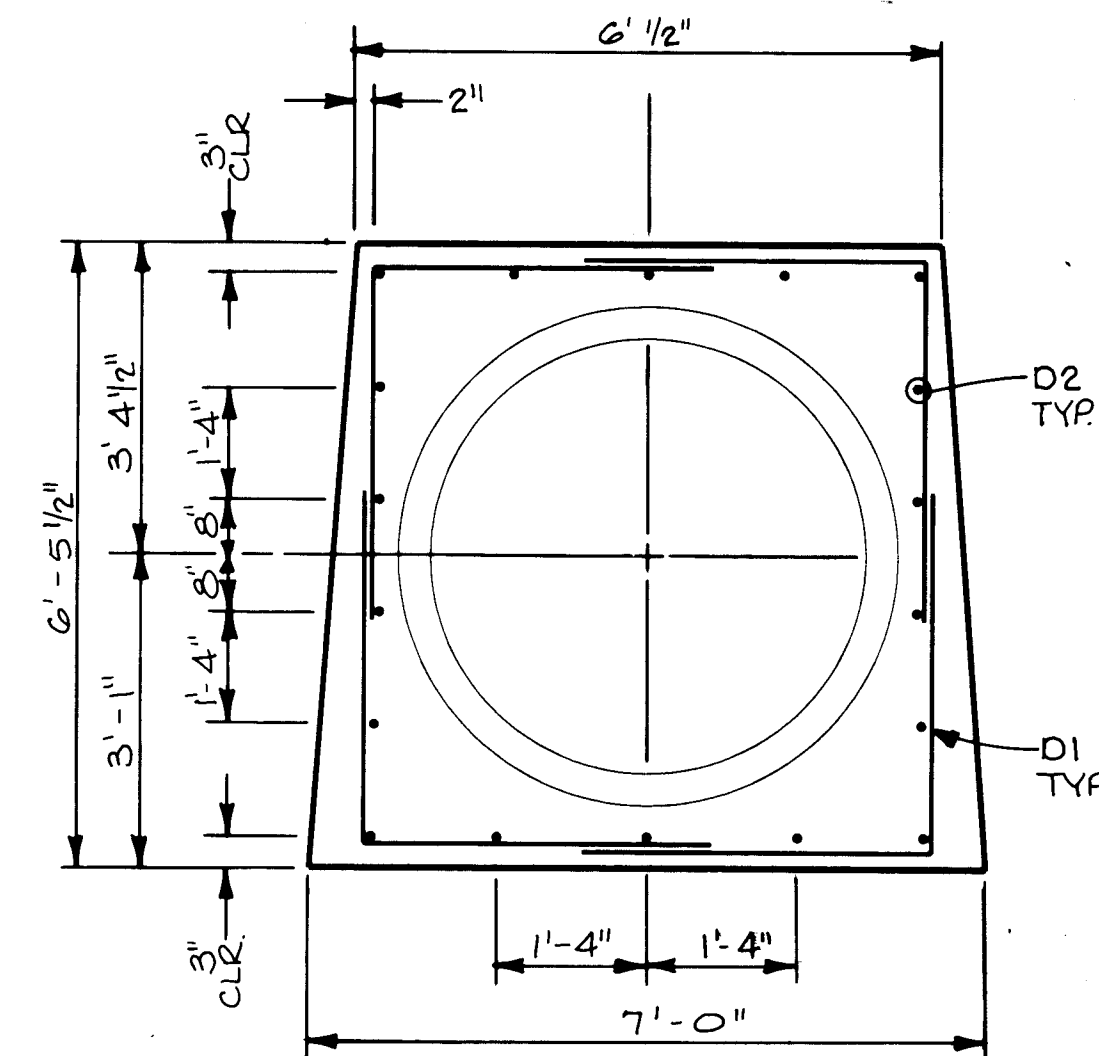
TRANSITION STRUCTURE
SECTION E-E

NOT TO SCALE



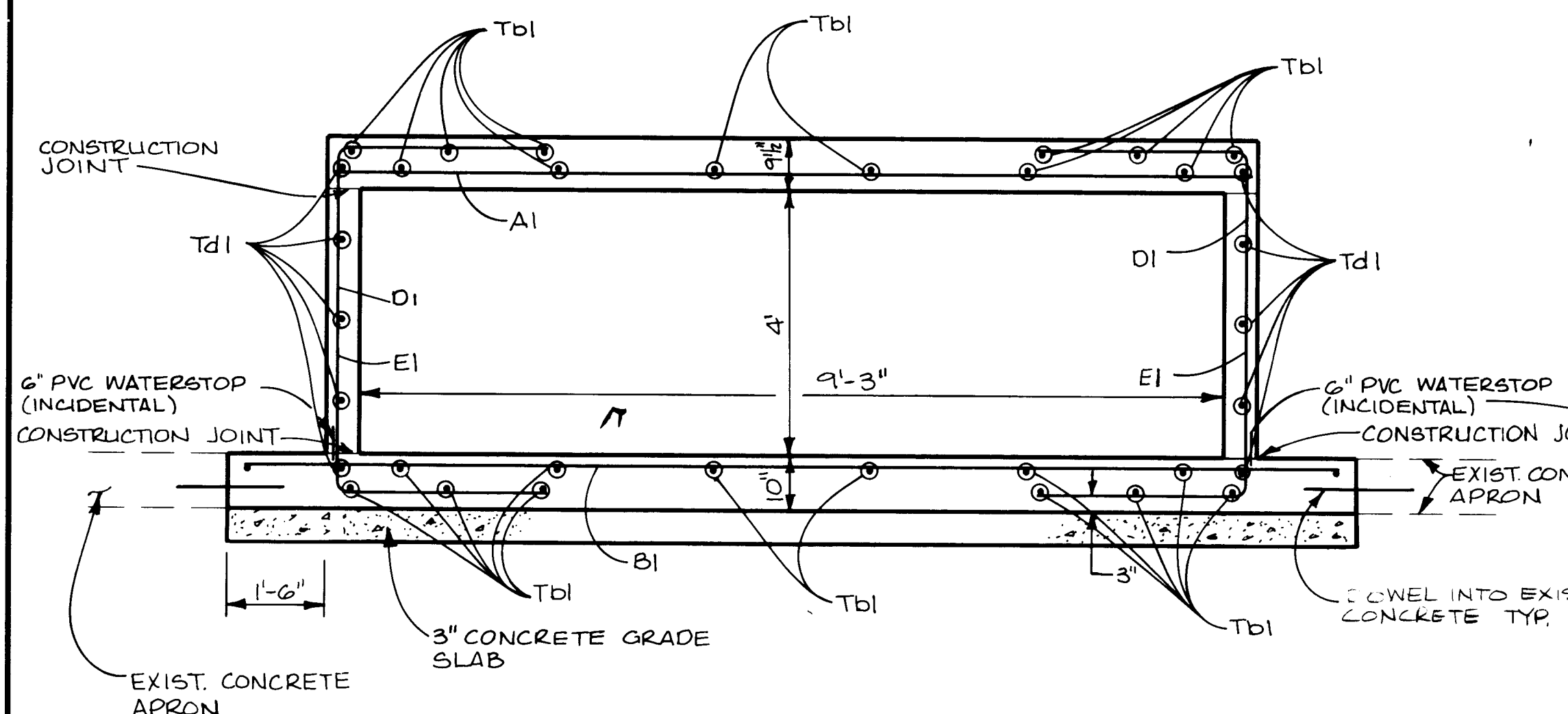
ANTI-SEEP COLLAR DETAIL

NOT TO SCALE



ANTI-SEEP COLLAR YOKE DETAIL

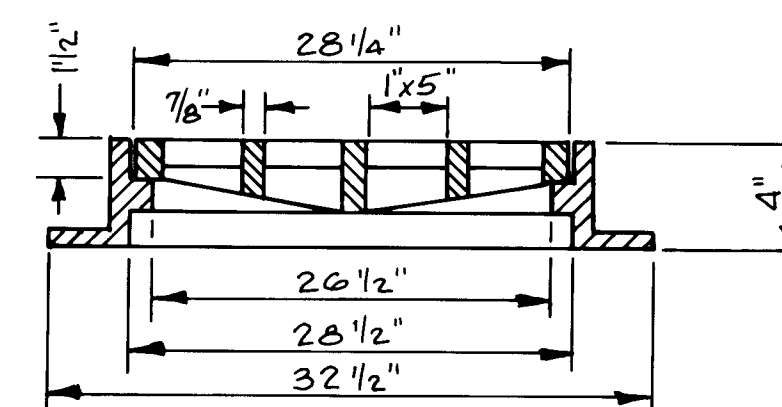
NOT TO SCALE



TRANSITION STRUCTURE
SECTION A-A

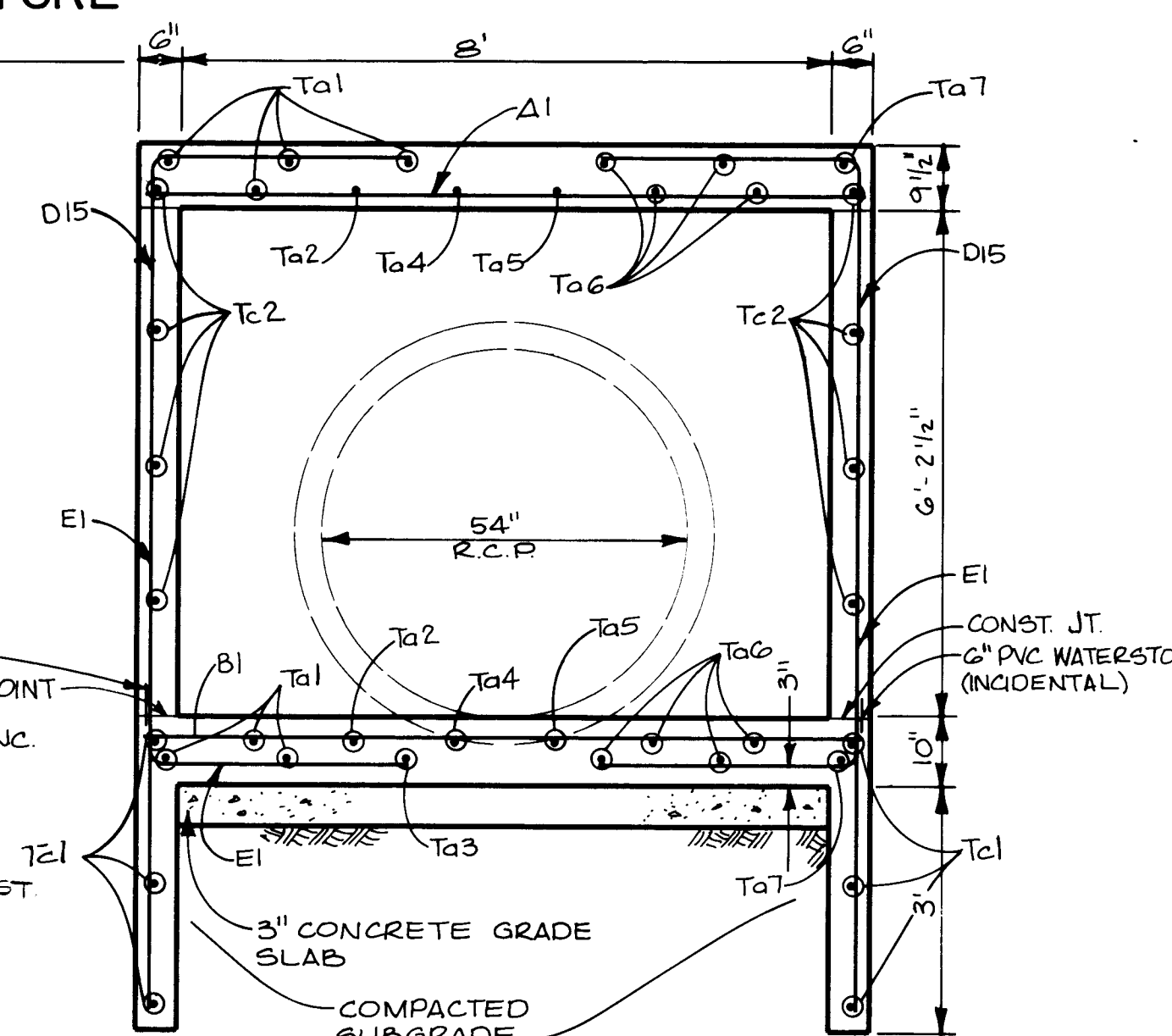
NOT TO SCALE
SEE SHEET 9 FOR BAR SCHEDULE AND SPACING.

Sawcut existing concrete apron to the dimensions shown. Existing steel reinforcement shall be cut so that a minimum of 12\"/>



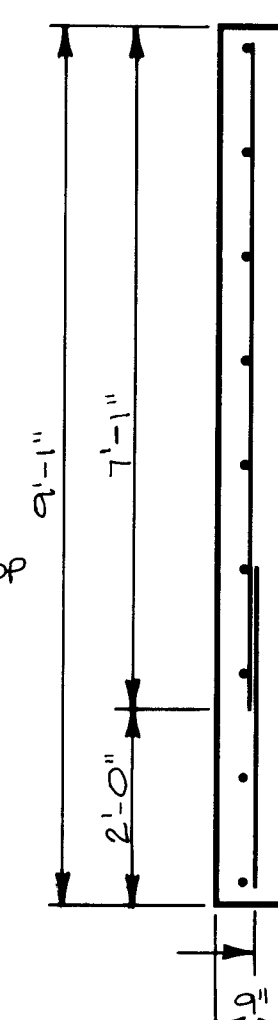
MANHOLE FRAME AND COVER

NOT TO SCALE
STA. 9+90 ~ 84' LT.
INSTALL NEENAH R-1792-68 OPEN GRATE MANHOLE FRAME AND COVER OR APPROVED EQUAL



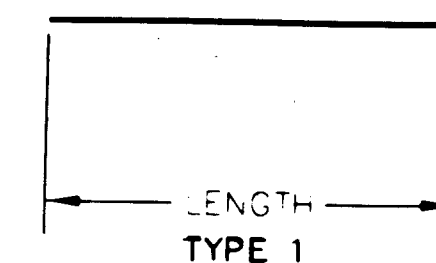
TRANSITION STRUCTURE
SECTION B-B

NOT TO SCALE
SEE SHEET 9 FOR BAR SCHEDULE AND SPACING



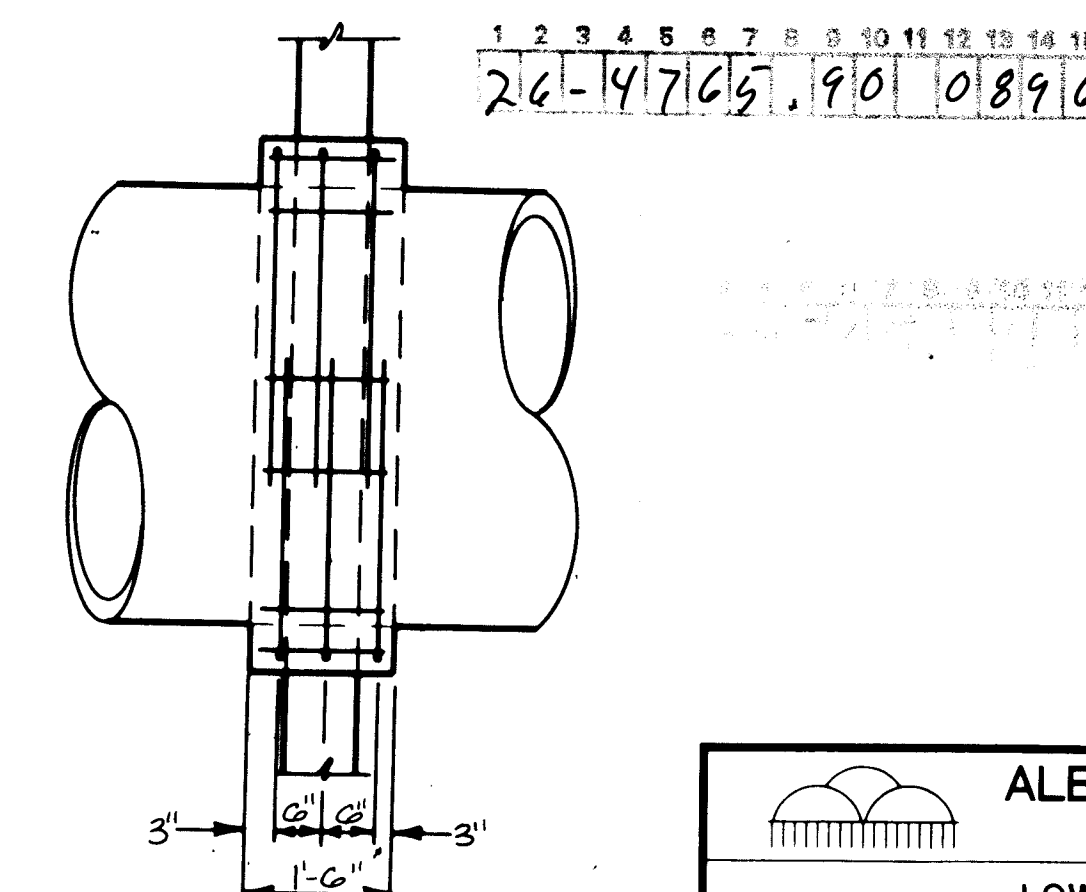
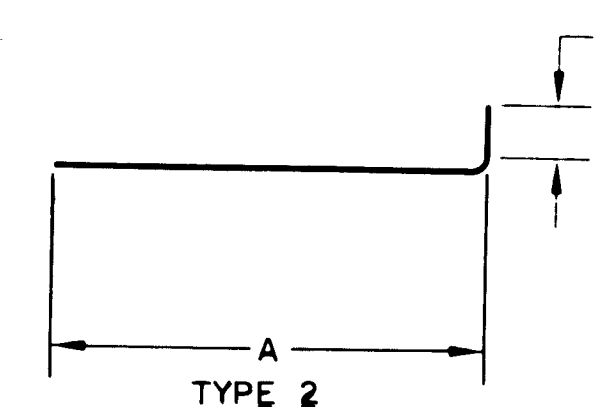
ANTI-SEEP COLLAR
SECTION C-C

NOT TO SCALE



ANTI-SEEP COLLAR
BAR TYPES

NOT TO SCALE



ANTI-SEEP COLLAR
SECTION D-D

NOT TO SCALE

ANTI-SEEP COLLAR						
No. of BARS	LABEL	LENGTH	SIZE	TYPE	A	B
4	C1	3'-4"	#4	1		
4	C2	12'-2"	#4	1		
6	C3	1'-8"	#4	1		
4	C4	6'-11"	#4	1		
2	C5	2'-5"	#4	1		
2	C6	2'-6"	#4	1		
2	C7	2'-7"	#4	1		
2	C8	2'-8"	#4	1		
2	C9	2'-9"	#4	1		
2	C10	2'-10"	#4	1		
2	C11	2'-11"	#4	1		

ANTI-SEEP COLLAR YOKE						
No. of BARS	LABEL	LENGTH	SIZE	TYPE	3'-11"	3'-11"
12	D1	7'-10"	#4	2		
18	D2	1'-2"	#4	1		

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair	C. Montoya	10-15-93	WATER	N/A RWK	10-13-93
TRANS. DEV.	N/A RHD	10-14-97	WASTE WATER	N/A RWK	10-13-93
HYDROLOGY	CBM	12-18-93	TRAF. OPER.		
OTHER			OTHER		

ALBUQUERQUE METROPOLITAN ARROYO
FLOOD CONTROL AUTHORITY
LOWER NORTH DOMINGO BACA
ARROYO DETENTION DAM
OUTFALL PIPE

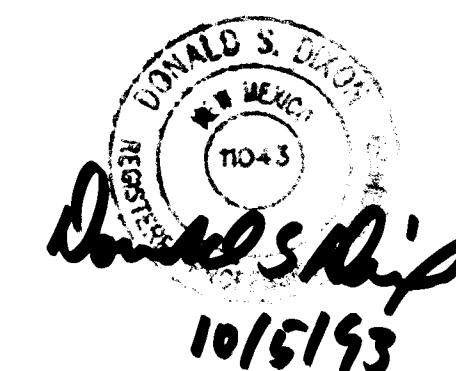
MISCELLANEOUS DETAILS

PROJECT NO.:	DESIGNED BY: GC/DSB	CHECKED BY: DSD	DATE: SEPTEMBER 1993
DRAWN BY: GC/PT			

1. Transition structure and anti-seep collars will be paid for to the dimensions shown and cast in place as structural concrete, by the cubic yard
2. Steel reinforcement will be paid for to the dimensions shown by the pound.
3. Minimum cover for all steel reinforcement shall be 2 1/2"
4. Saw cutting and dowel placement shall be considered incidental to other pay items.

BENCH MARKS

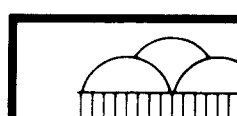
ENGINEERS SEAL



I, Donald S. Davis (N.E.E. 11043),
Certify that the drawing of the
"As-Built" Dimensions was done
under my supervision.

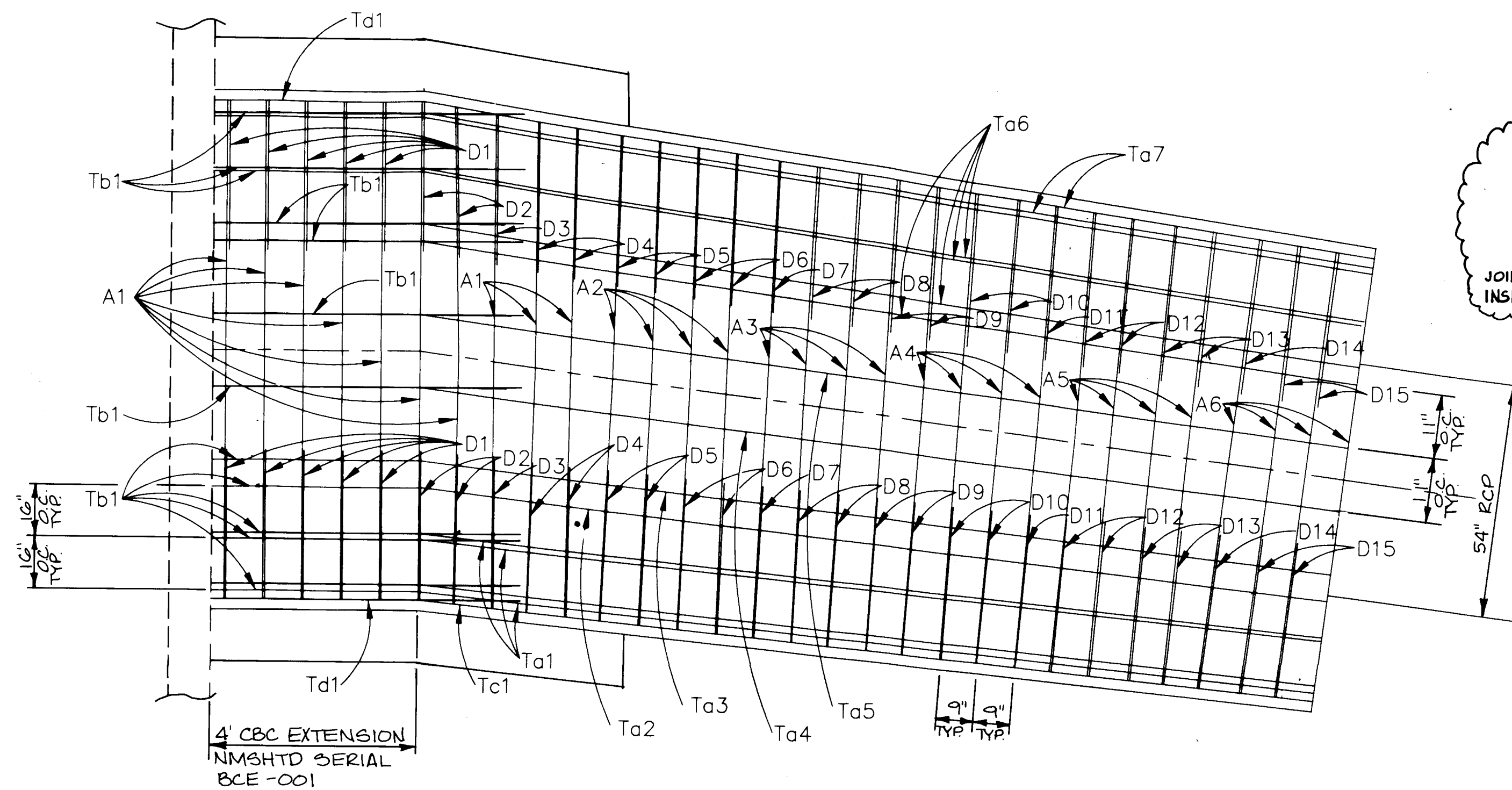
REVISIONS

NO.	DATE	REMARKS	BY



Resource Technology, Inc.
ENGINEERS & ENVIRONMENTAL SCIENTISTS
209 OLIVE ST. - SUITE 200, ALBUQUERQUE, NEW MEXICO 87101
TELEPHONE - (505) 348-3115

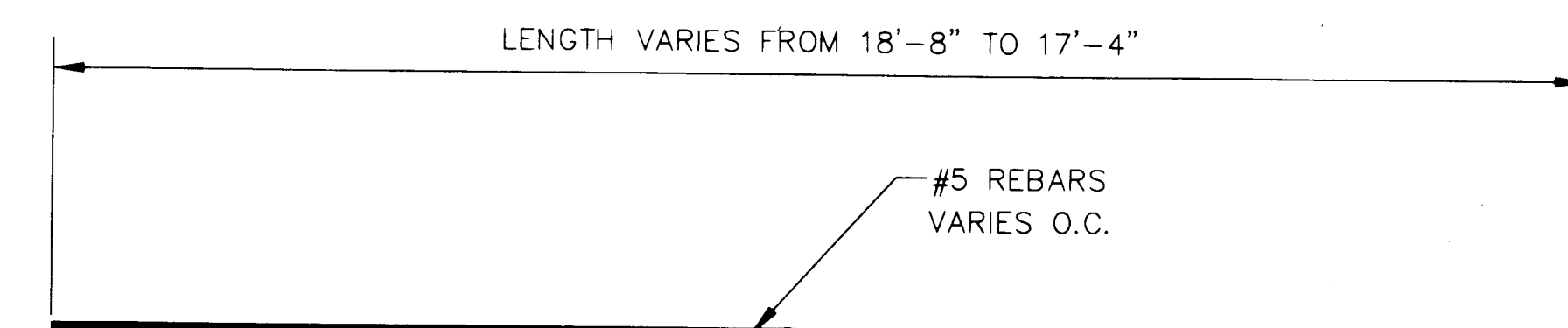
PROJECT NO. 4765.90	MAP NO. C-18	SHEET 8 OF 13
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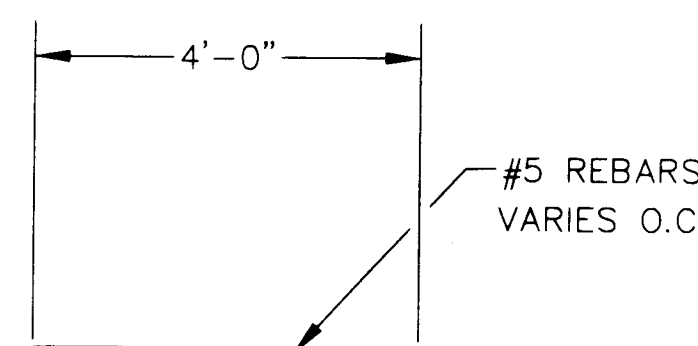
TOP AND BOTTOM MAT REINFORCEMENT

SCALE: 1" = 2'
 Note: Top mat reinforcement to be bent around MH frame & cover. Location to be set by Project Engineer.

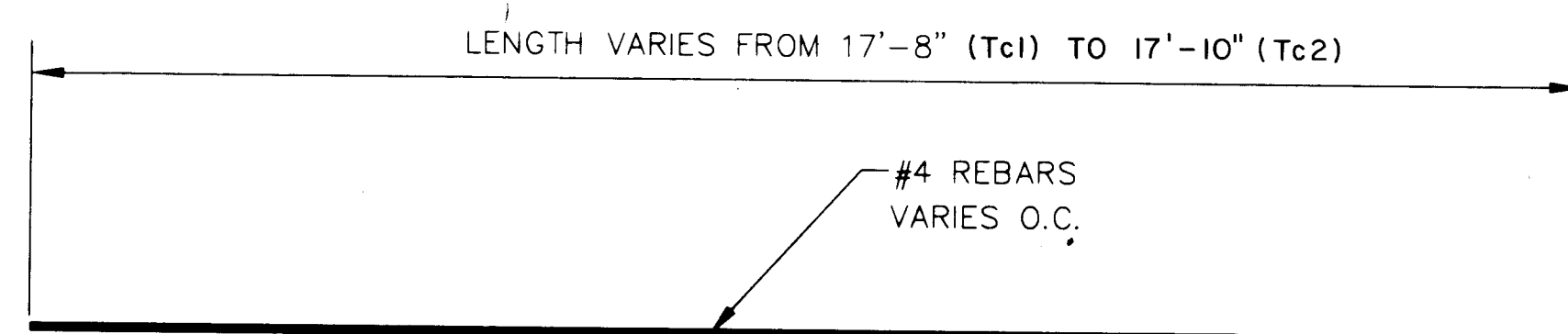
SCALE IN FEET
 0 2 4 6



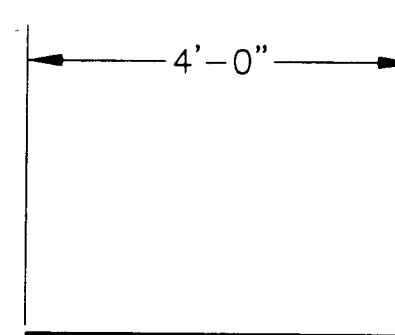
Ta-BARS



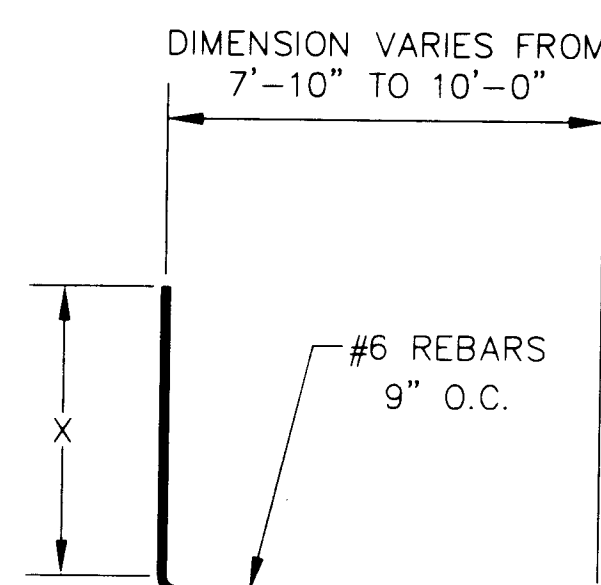
Tb-BARS



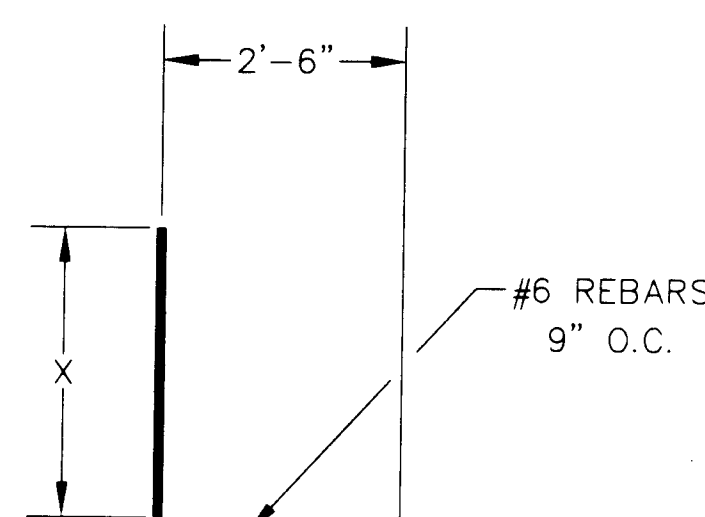
Tc-BARS



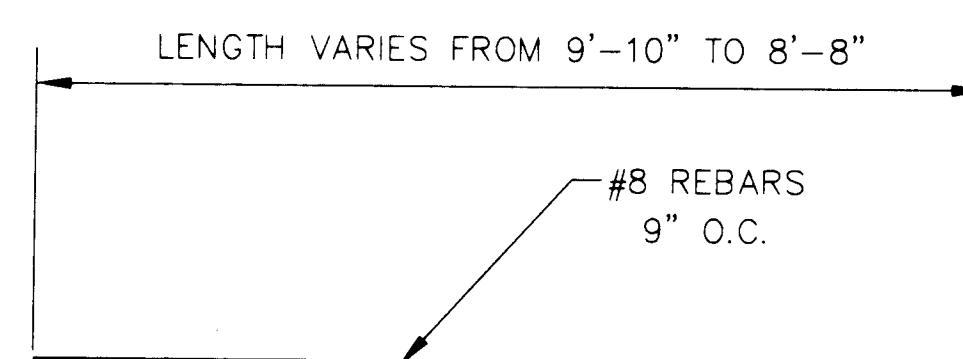
Td-BARS



D-BARS



E-BARS



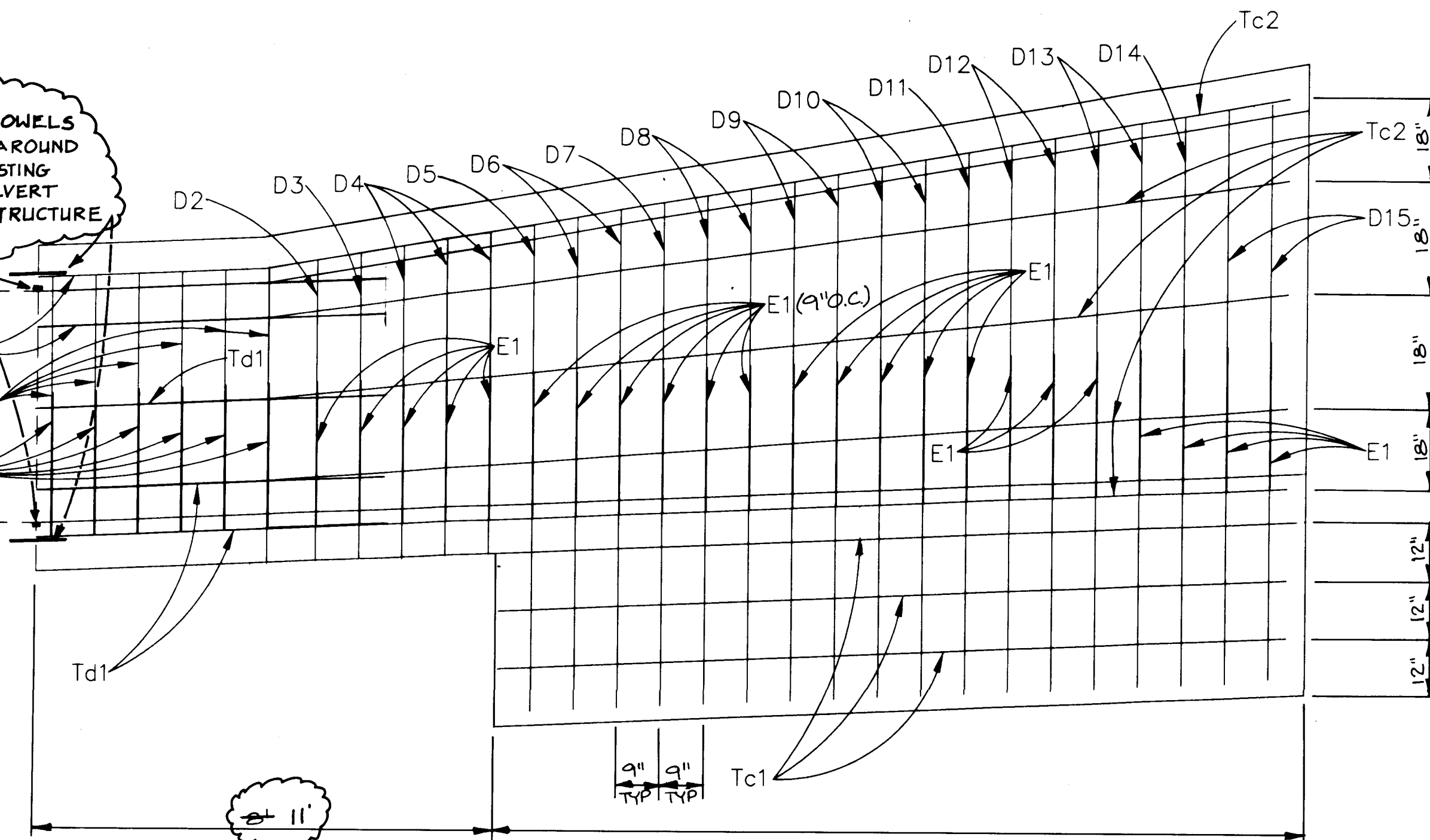
A-BARS AND B-BARS

BAR TYPES

5/8 x 18" SMOOTH DOWELS PLACED 16" O.C. AROUND PERIMETER OF EXISTING CONCRETE BOX CULVERT AND TRANSITION STRUCTURE

JOINT SEALANT MTL. INSIDE PERIMETER

EXIST. CBC



SIDE MAT REINFORCEMENT

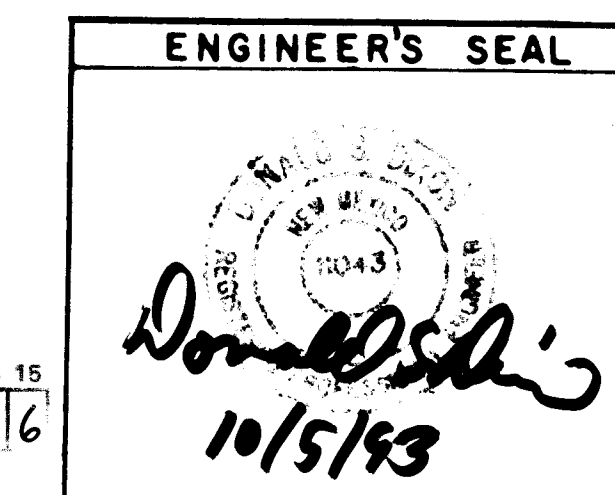
SCALE: 1" = 2'

BAR SCHEDULE

	A-BARS				QUANTITIES	
	No. of BARS	LABEL	LENGTH	SIZE	LBS.	STEEL
TOP MAT	10	A1	9'-6"	#8		
	4	A2	9'-4"	#8		
	4	A3	9'-2"	#8		
	4	A4	9'-0"	#8		
	4	A5	8'-10"	#8		
	4	A6	8'-8"	#8		
BOTTOM MAT	No. of BARS	LABEL	LENGTH	SIZE		
	10	B1	9'-6"	#8		
	4	B2	9'-4"	#8		
	4	B3	9'-2"	#8		
	4	B4	9'-0"	#8		
	4	B5	8'-10"	#8		
TOP AND BOTTOM MAT	No. of BARS	LABEL	LENGTH	SIZE		
	6	Ta1	17'-6"	#5		
	2	Ta2	17'-8"	#5		
	2	Ta3	17'-10"	#5		
	2	Ta4	18'-0"	#5		
	2	Ta5	18'-2"	#5		
LEFT AND RIGHT SIDE MAT	No. of BARS	LABEL	LENGTH	SIZE		
	24	Tb1	6'-0"	#5		
	6	Tc1	17'-8"	#4		
	10	Tc2	17'-10"	#4		
	10	Td1	6'-0"	#4		
	No. of BARS	LABEL	LENGTH	X	SIZE	
	12	D1	7'-6"	3'-0"	#6	
	2	D2	7'-7"	3'-0"	#6	
	2	D3	7'-8"	3'-0"	#6	
	6	D4	7'-10"	3'-0"	#6	
	2	D5	11'-4"	3'-0"	#6	
	No. of BARS	LABEL	LENGTH	X	SIZE	
	4	D6	11'-6"	3'-0"	#6	
	2	D7	11'-8"	3'-0"	#6	
	4	D8	11'-10"	3'-0"	#6	
	4	D9	12'-0"	3'-0"	#6	
	4	D10	12'-2"	3'-0"	#6	
	No. of BARS	LABEL	LENGTH	X	SIZE	
	2	D11	12'-4"	3'-0"	#6	
	4	D12	12'-6"	3'-0"	#6	
	4	D13	12'-8"	3'-0"	#6	
	2	D14	12'-10"	3'-0"	#6	
	4	D15	13'-0"	3'-0"	#6	
	No. of BARS	LABEL	LENGTH	X	SIZE	
	60	E1	5'-6"	3'-0"	#6	

NO. of BARS	LABEL	LENGTH	SIZE		
2	XX	8'-6"	#4		
4	YY	8'-8 1/2"	#4		
4	ZZ	3'-0"	#4		

Donnell S. Lip
 4/21/94



REVISIONS

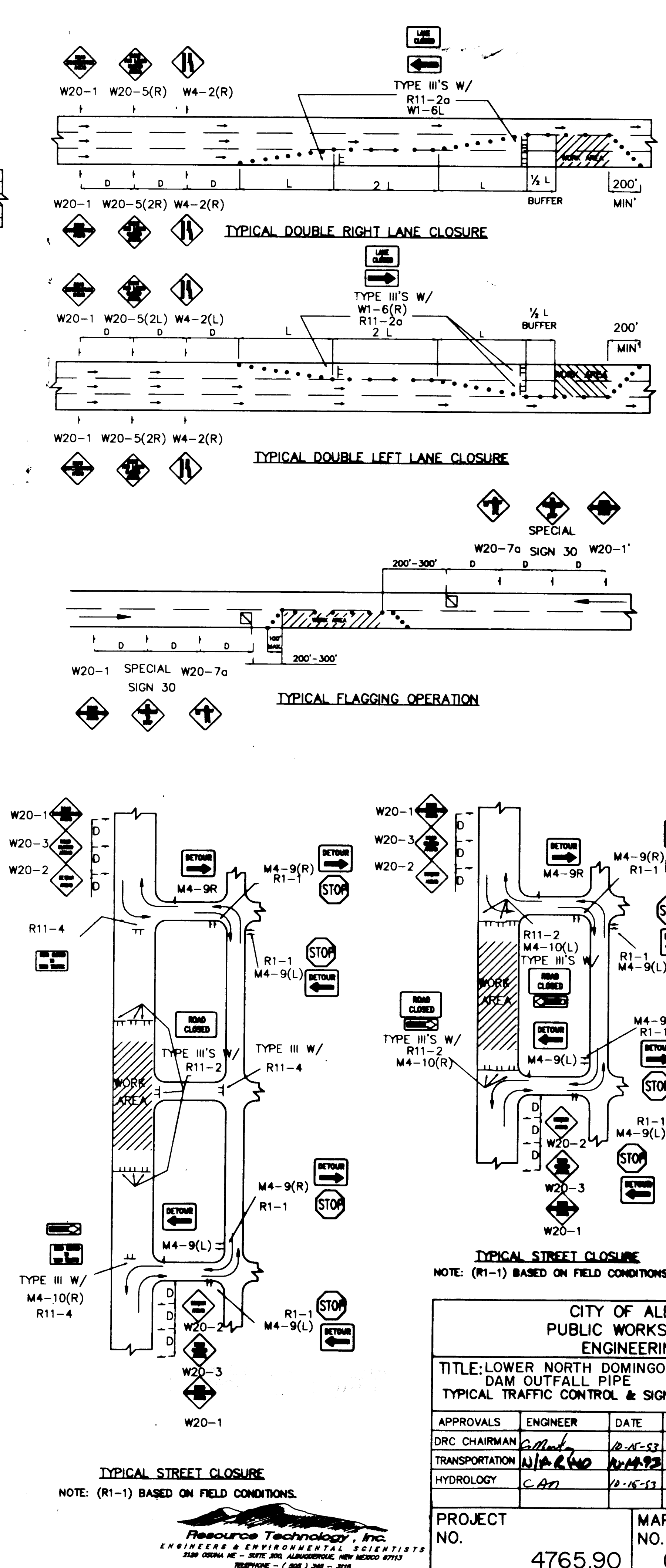
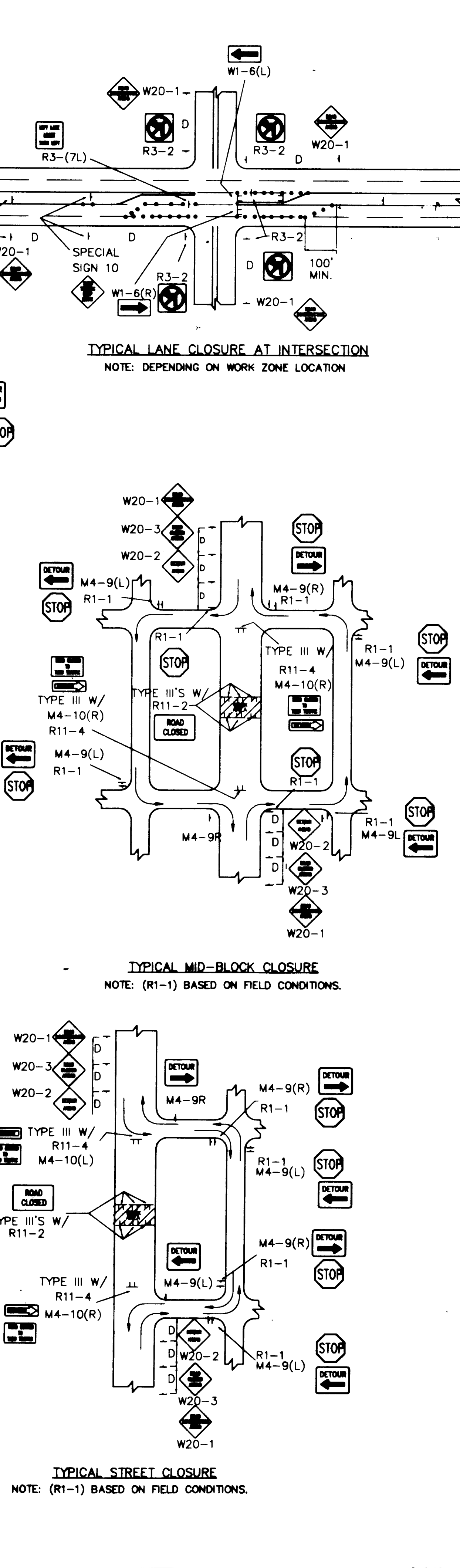
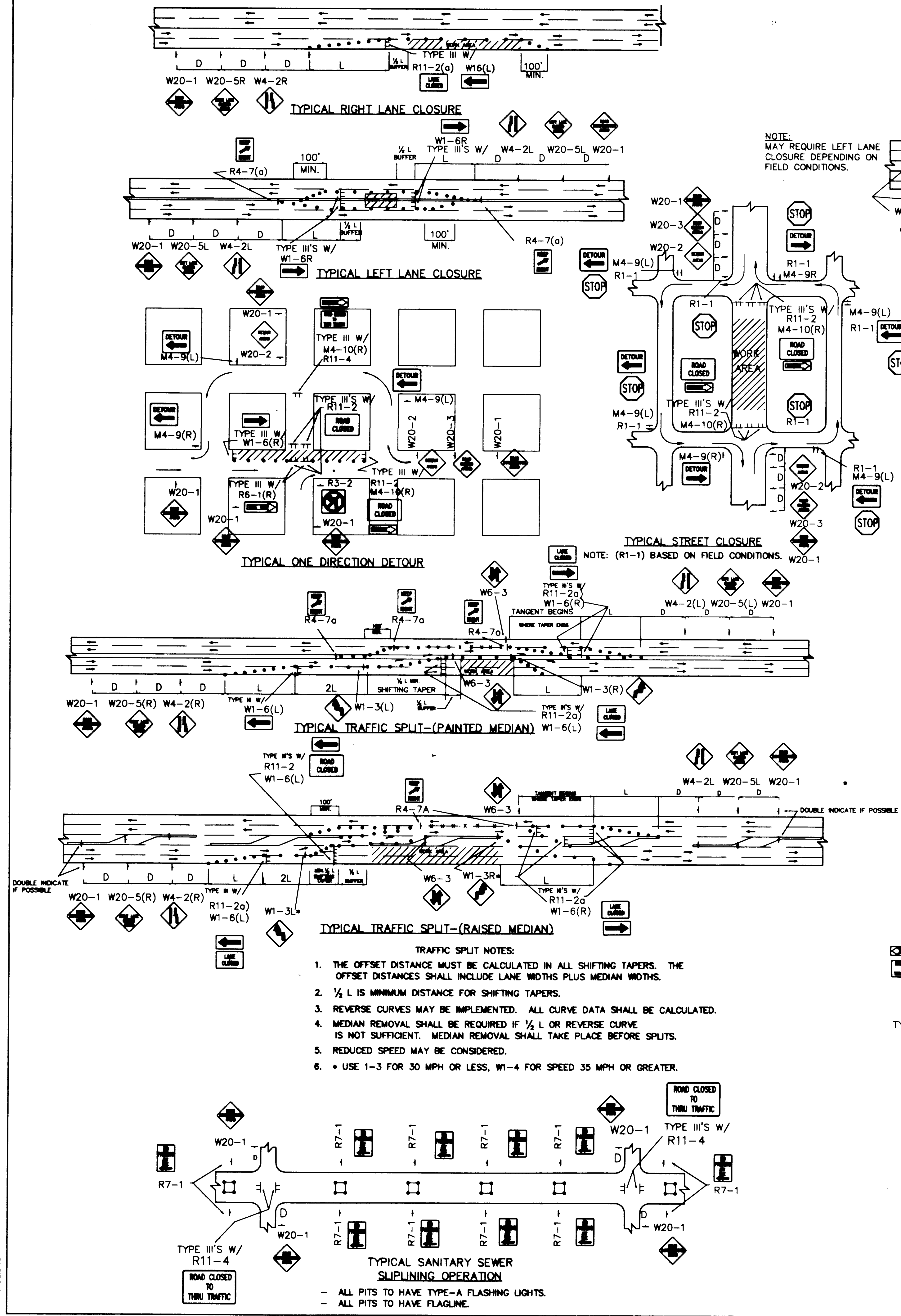
NO.	DATE	REMARKS	BY

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY
 LOWER NORTH DOMINGO BACA ARROYO DETENTION DAM OUTFALL PIPE
 TRANSITION STRUCTURE BAR SCHEDULE

PROJECT NO.:
 DESIGNED BY: GC/DSD
 DRAWN BY: GC/JPT
 CHECKED BY: DSD
 DATE: SEPTEMBER 1993

SCANNED BY: BY LASON

PROJECT NO. 4765.90
 MAP NO. C-18
 SHEET 9 OF 13



Resource Technology, Inc.
ENGINEERS & ENVIRONMENTAL SCIENTISTS
3000 COLUMBIA AVE - SUITE 200, ALBUQUERQUE, NEW MEXICO 87113
TELEPHONE: (505) 261-5778

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP				
TITLE: LOWER NORTH DOMINGO BACA ARROYO DETENTION DAM OUTFALL PIPE TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES (REF. M.U.T.C.D.)				
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER
DRC CHAIRMAN	<i>[Signature]</i>	12-15-93	WATER	N/A R.W.K. 10-13-93
TRANSPORTATION	N/A R.W.K.	12-15-93	WASTE WATER	N/A R.W.K. 10-13-93
HYDROLOGY	C.A.N.	12-15-93		
PROJECT NO.	4765.90	MAP NO.	C-18	SHEET OF 10 13

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
 <i>Ricardo Roibal</i>		FIELD NOTES					
		NO.	BY	DATE			

08-13-92
CTC3202.DWG

SCANNED BY
BY LASON

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
202-47765192 11096

CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES

1. CONTRACTOR MUST OBTAIN FROM CONSTRUCTION COORDINATION AN EXCAVATION/BARRICADING PERMIT BEFORE ENGAGING IN ANY CONSTRUCTION, MAINTENANCE OR REPAIR WORK IN ANY OF THE CITY OF ALBUQUERQUE'S RIGHTS-OF-WAY. EMERGENCY WORK THAT WOULD PRESERVE LIFE OR PROPERTY IS EXCLUDED WITH THE UNDERSTANDING, THAT A PERMIT SHALL BE OBTAINED WITHIN 24 TO 48 HOURS.

2. CONTRACTOR SHALL AT THE TIME OF PERMIT REQUEST, SUBMIT FOR APPROVAL BY CONSTRUCTION COORDINATION, A TRAFFIC CONTROL PLAN DETAILING ALL EXISTING TOPOGRAPHY SUCH AS LANE WIDTHS, DRIVEWAYS, AND BUSINESS/RESIDENTIAL ACCESSES. THE TRAFFIC CONTROL PLAN SHALL INCLUDE ALL PHASES OF WORK AND SCHEDULES INVOLVED IN THE CONSTRUCTION PROJECT. ANY SEPARATE PHASES OF A CONSTRUCTION PROJECT SHALL BE GIVEN AN INDIVIDUAL PERMIT EACH. BLANKET PERMITS WILL NOT BE ISSUED.

3. THESE TYPICAL TRAFFIC CONTROL PLANS DO NOT REFLECT THE EXISTING TOPOGRAPHY SUCH AS DRIVEWAYS, LANE WIDTHS, AND BUSINESS/RESIDENTIAL ACCESSES. EVERY LOCATION THAT REQUIRES CONSTRUCTION TRAFFIC CONTROL SHALL HAVE A DETAILED TRAFFIC CONTROL PLAN SHOWING ALL EXISTING TOPOGRAPHY.

4. CONSTRUCTION SHALL NOT BEGIN UNLESS A TRAFFIC CONTROL PLAN HAS BEEN APPROVED AND VERIFIED BY CONSTRUCTION COORDINATION.

5. CONSTRUCTION COORDINATION SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY TRAFFIC CONTROL CHANGES NEEDED BY CONTRACTOR, THAT WERE NOT PREVIOUSLY APPROVED. THESE TRAFFIC CONTROL CHANGES SHALL BE REQUESTED IN WRITING ACCOMPANIED WITH A TRAFFIC CONTROL PLAN REFLECTING SUCH CHANGES.

6. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL COMPLY TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL, SERVICE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL DEVICES SHALL NOT BE REMOVED OR ALTERED IN ANY WAY WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION, PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

7. THE CONSTRUCTION TRAFFIC CONTROL INITIAL SET-UP SHALL BE BY AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED WORKSITE TRAFFIC SUPERVISOR. THE MAINTENANCE AND SERVICING SHALL ALSO BE DONE BY AN ATSSA CERTIFIED WORKSITE TRAFFIC SUPERVISOR OR EQUIVALENT.

8. CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND SERVICE ALL TRAFFIC CONTROL DEVICES 24 HOURS A DAY, 7 DAYS A WEEK THROUGHOUT LENGTH OF PROJECT. CONTRACTOR IS RESPONSIBLE THAT ALL TRAFFIC CONTROL DEVICES COMPLY WITH THE MUTCD, LATEST EDITION.

9. ALL ADVANCE WARNING SIGNS SHALL BE DOUBLE INDICATED WHENEVER THERE ARE MULTI-LANE TRAFFIC IN ANY ONE GIVEN DIRECTION AND THERE IS SUFFICIENT MEDIAN SPACE.

10. ALL BARRICADES IN ALL TAPERS AND TANGENTS SHALL BE PLACED APART, A DISTANCE MEASURED IN FEET, EQUAL TO THAT OF THE POSTED SPEED LIMIT. NO EXCEPTIONS UNLESS APPROVED BY CONSTRUCTION COORDINATION PER MUTCD SECTION 6A-4.

11. CONTRACTOR SHALL NOT BEGIN WORK BEFORE 8:30 A.M. OR END WORK AFTER 4:00 P.M. WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.

12. CONTRACTOR IS RESPONSIBLE TO PROVIDE CONSTRUCTION COORDINATION, A WEEKLY LOG OF DAILY INSPECTIONS OF BARRICADE AND MAINTENANCE SCHEDULES ON PROJECTS THAT ARE OVER ONE WEEK DURATION.

13. EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELLED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.

14. CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELIZING PEDESTRIAN TRAFFIC AROUND AND THROUGH THE CONSTRUCTION AREA.

15. CONTRACTOR IS RESPONSIBLE FOR OBLITERATION OF ANY CONFLICTING STRIPING AND RESPONSIBLE FOR ALL TEMPORARY STRIPING.

16. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES, BUSINESSES AND/OR RESIDENTS AT ALL TIMES.

17. CONTRACTOR SHALL PROVIDE ACCESS SIGNS FOR BUSINESSES LOCATED WITHIN THE CONSTRUCTION AREA UNDER THE SUPERVISION OF CONSTRUCTION COORDINATION. EACH ACCESS SIGN SHALL HAVE 5 INCH, WHITE OPAQUE LETTERING ON BLUE REFLECTORIZED BACKGROUND. ACCESS SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE BID AND NOT PART OF THE CONTRACT UNLESS OTHERWISE STATED. NO MORE THAN 3 BUSINESSES SHALL BE LISTED ON A ACCESS SIGN. SHOPPING CENTERS AND MALLS SHALL BE LISTED AS SUCH.

18. ALL ADVANCE WARNING SIGNS SHALL MEET THE MINIMUM REFLECTIVE INTENSITY REQUIREMENTS SET FORTH BY THE CITY OF ALBUQUERQUE. CONSTRUCTION COORDINATION SHALL DETERMINE ALL REQUIREMENTS AND APPROVE OR DISAPPROVE ANY ADVANCE WARNING SIGN PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

19. 24 HOURS PRIOR TO OCCUPYING OR CLOSING OF A RIGHT-OF-WAY, CONTRACTOR SHALL NOTIFY: POLICE, FIRE DEPARTMENT, SCHOOLS, HOSPITALS, TRANSIT AUTHORITY, BUSINESSES AND/OR RESIDENTS THAT WILL BE AFFECTED BY THE CONSTRUCTION.

20. ANY FIELD ADJUSTMENTS SHALL BE APPROVED BY CONSTRUCTION COORDINATION.

21. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS.

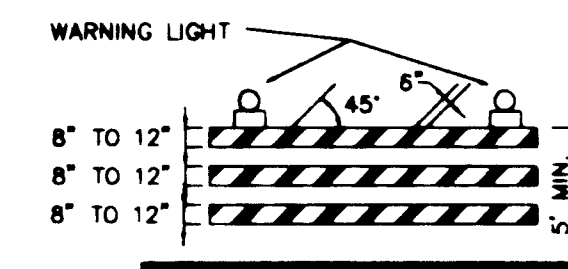
22. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE FOLLOWING:
1. STANDARDS AND REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
2. THE CITY OF ALBUQUERQUE TRAFFIC CODE, LATEST EDITION.
3. SECTION 19 OF THE CITY OF ALBUQUERQUE'S STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION, AS WELL AS OTHER SECTIONS.

23. FAILURE TO COMPLY WITH ANY OF THE ABOVE MENTIONED, WILL BE ADEQUATE CAUSE TO CEASE ALL WORK ON ANY CONSTRUCTION PROJECT. WORK WILL NOT RESUME UNTIL ALL REQUIREMENTS ARE ADDRESSED AND APPROVED BY CONSTRUCTION COORDINATION.

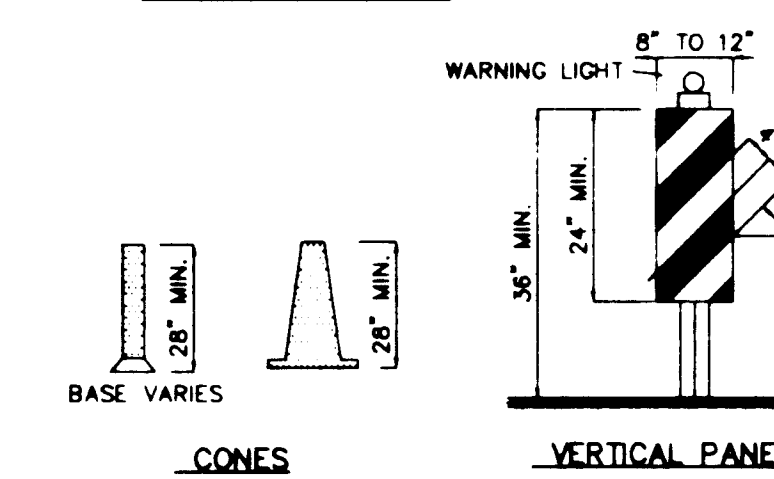
24. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN NEW-CLEAN CONDITION. WASHING OF EQUIPMENT IS INCIDENTAL TO ITS PLACEMENT AND MAINTENANCE.

25. TRAFFIC CONTROL STANDARDS APPLY ONLY WHERE THE CONSTRUCTION TRAFFIC CONTROL PLANS ARE NOT SPECIFIC.

PROJECT CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES

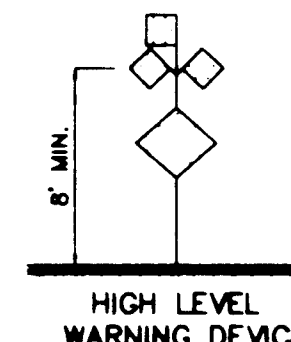


TYPE III BARRICADE

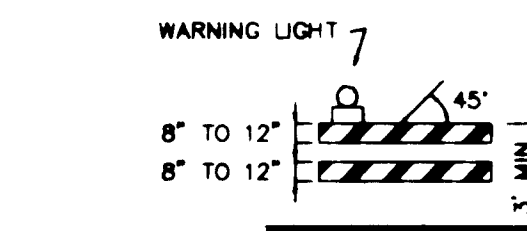


CONES

VERTICAL PANEL

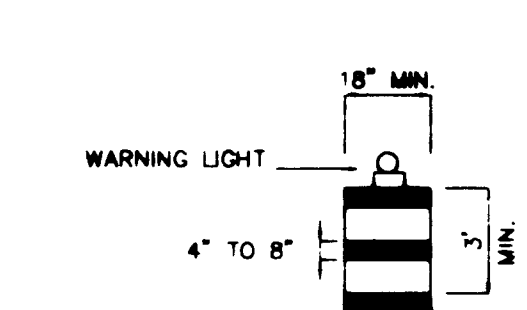


HIGH LEVEL WARNING DEVICE



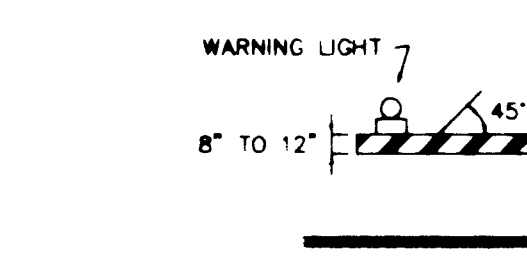
TYPE I BARRICADE

COLLAPSIBLE



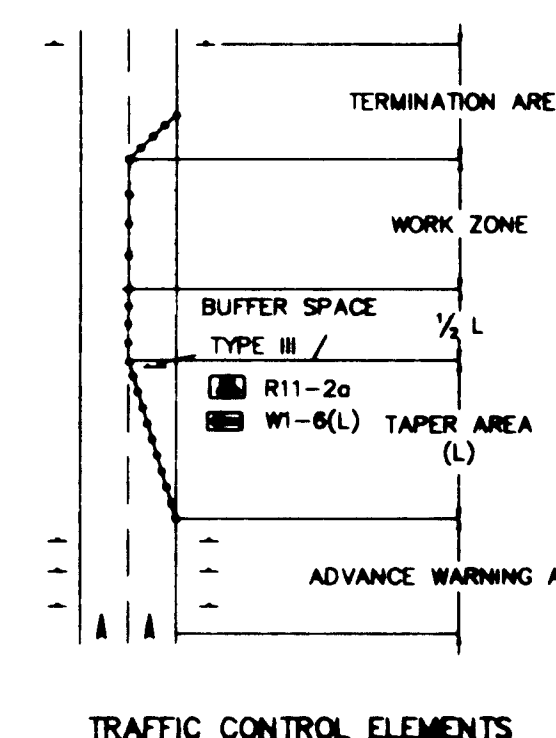
TYPE II BARRICADE

COLLAPSIBLE



TYPE I BARRICADE

COLLAPSIBLE



TRAFFIC CONTROL ELEMENTS

LEGEND

- WORK AREA
- BARRICADE - TYPE I, TYPE II, OR BARREL
- BARRICADE - TYPE III
- VERTICAL PANEL
- WARNING SIGN
- DISTANCE BETWEEN SIGNS - A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF TEN TIMES THE SPEED LIMIT OF THE STREET
- FLAGMAN POSITION
- SPACING BETWEEN BARRICADES- A DISTANCE MEASURED IN FEET EQUAL TO THE SPEED LIMIT OF THE STREET
- TAPER LENGTH - SEE CHART BELOW

THE TANGENT LENGTH IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET.

TAPER REQUIREMENTS

SPEED LIMIT (MPH)	TAPER LENGTH (FEET)			MINIMUM NUMBER OF DEVICES FOR TAPER	MAXIMUM DEVICE SPACING IN FEET	
	10' LANE	11' LANE	12' LANE		BEFORE TAPER	AFTER TAPER
20	70	75	80	5	20	20
25	105	115	125	6	25	25
30	150	165	180	7	30	30
35	205	225	245	8	35	35
40	270	295	320	9	40	40
45	450	495	540	13	45	45
50	500	550	600	13	50	50
55	550	605	660	13	55	55

RECOMMENDED SIGN SPACING FOR ADVANCE WARNING SIGN SERIES

SPEED LIMIT (MPH)	MINIMUM DISTANCE IN FEET	
	BEFORE TAPER	FROM LAST SIGN TO TAPER
0-20	10 X SPEED LIMIT	10 X SPEED LIMIT
25-30	10 X SPEED LIMIT	10 X SPEED LIMIT
30-35	10 X SPEED LIMIT	10 X SPEED LIMIT
40-45	10 X SPEED LIMIT	10 X SPEED LIMIT
50-60	10 X SPEED LIMIT	10 X SPEED LIMIT

TAPER CRITERIA

TYPE OF TAPER	TAPER LENGTH
---------------	--------------

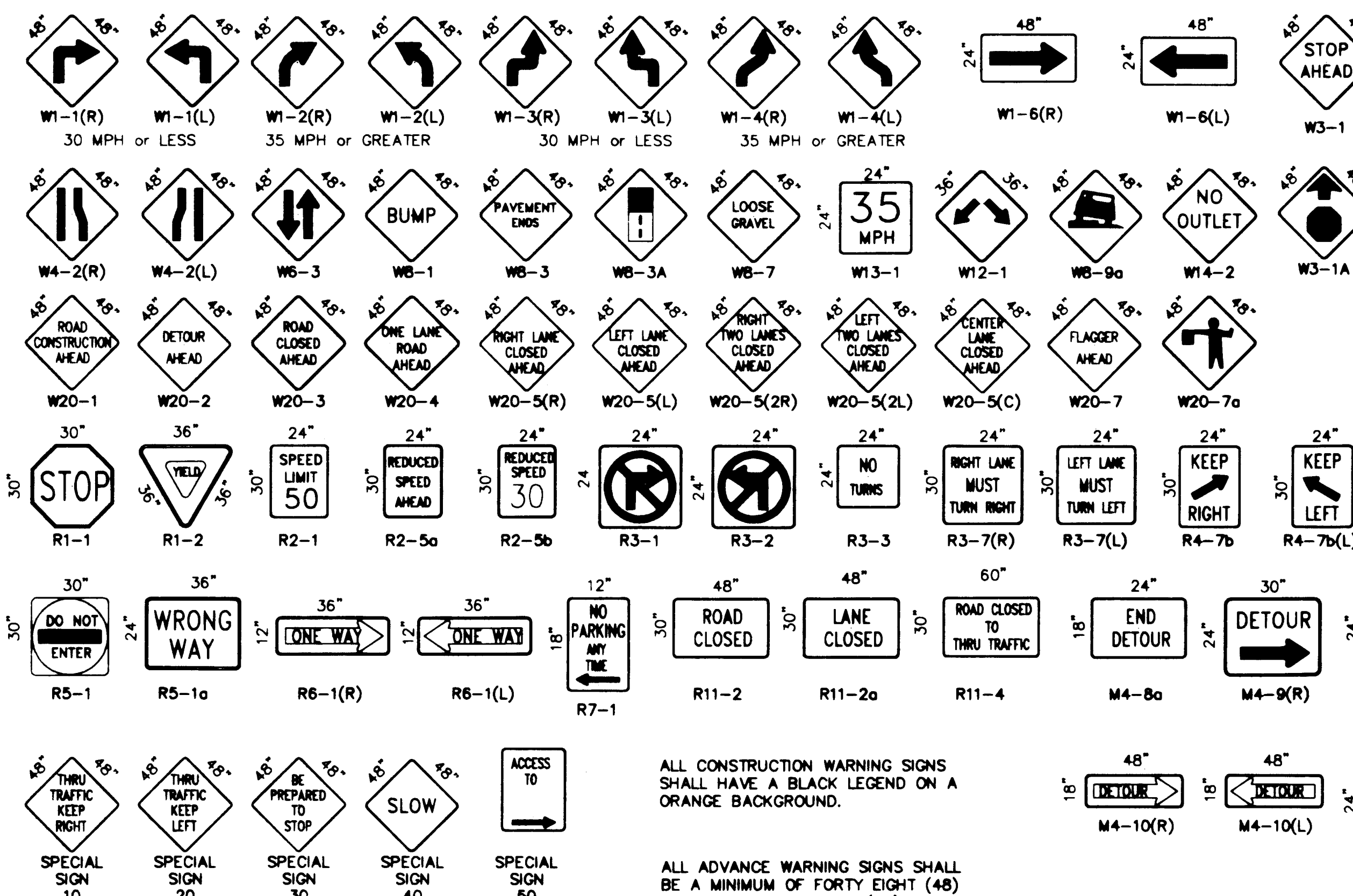
UPSTREAM TAPER:
MERGING TAPER: L MINIMUM
SHIFTER TAPER: 1/2 L MINIMUM
SHOULDER TAPER: 1/2 L MINIMUM
TWO-WAY TRAFFIC TAPER: 100 FEET MAXIMUM
DOWNSTREAM TAPERS: 100 FEET PER LANE

TAPER LENGTH COMPUTATION

SPEED LIMIT	L =
40 MPH OR LESS	$L = \frac{W^2}{S}$
45 MPH OR GREATER	$L = W \times S$

L = TAPER LENGTH
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED OR OFF-PEAK 85-PERCENTILE SPEED IN MPH

SIGN FACE DETAILS

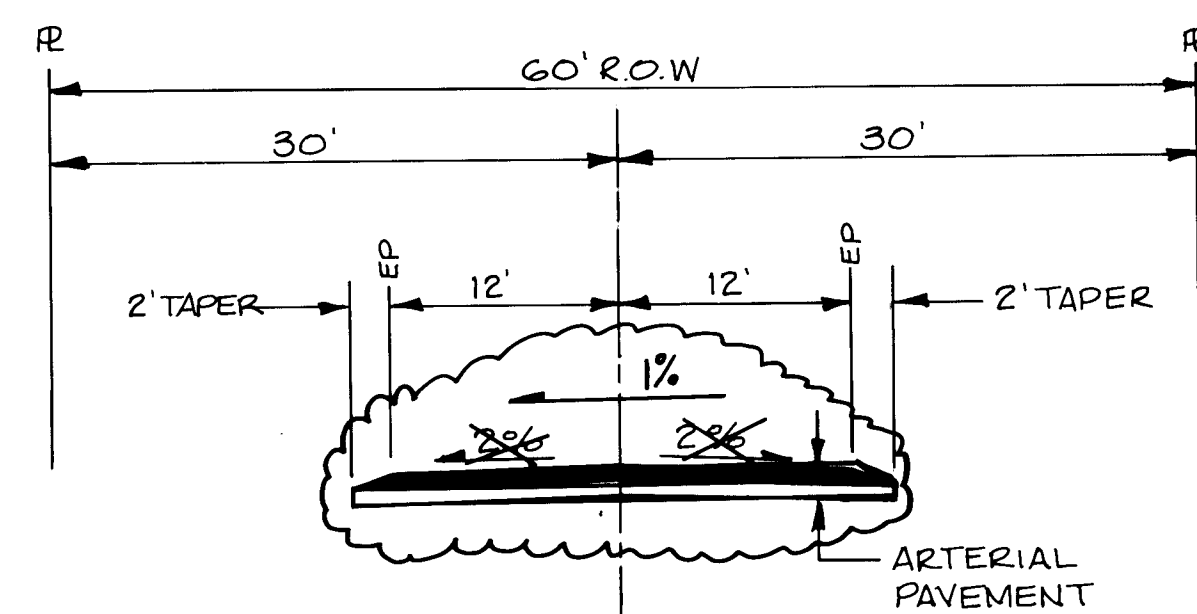


ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A ORANGE BACKGROUND.

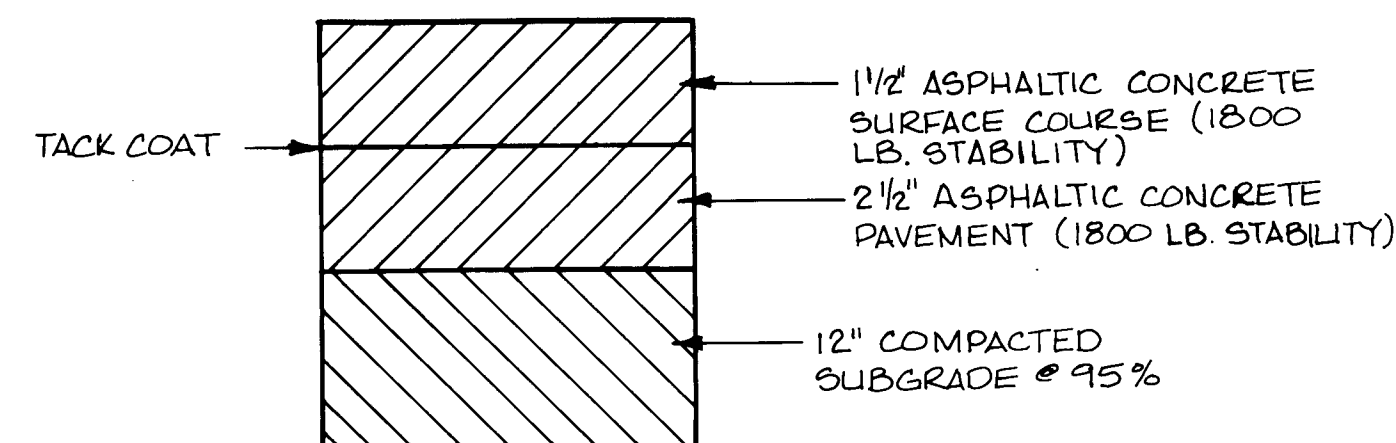
ALL ADVANCE WARNING SIGNS SHALL BE A MINIMUM OF FORTY EIGHT (48) INCHES BY FORTY EIGHT (48) INCHES IN SIZE AND SHALL HAVE ONE WARNING LIGHT.

Resource Technology, Inc.
ENGINEERS & ENVIRONMENTAL SCIENTISTS
3100 GRAND AVENUE - SUITE 100, ALBUQUERQUE, NEW MEXICO 87110
TELEPHONE - (505) 266-3116

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING GROUP					
TITLE: LOWER NORTH DOMINGO BACA ARROYO DETENTION DAM OUTFALL PIPE SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS					
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	C. P. [Signature]	10-10-92	WATER	N/A	RWK 10-13-92
TRANSPORTATION	N/A	10-14-92	WASTE WATER	N/A	RWK 10-13-92
HYDROLOGY	CAM	10-15-92			
PROJECT NO.		MAP NO.		SHEET OF	
4765.90		C-18		11 13	



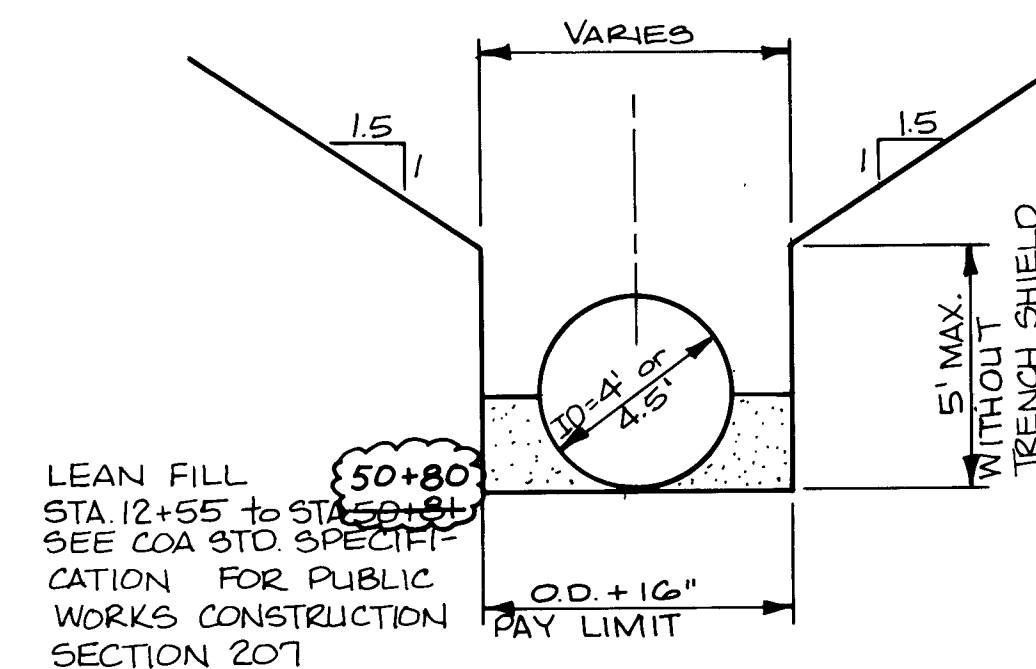
**TYPICAL SECTION
ANAHEIM AVE.**
SECTION P-P
STA. 13+95 to STA. 17+12



ARTERIAL PAVING DETAIL

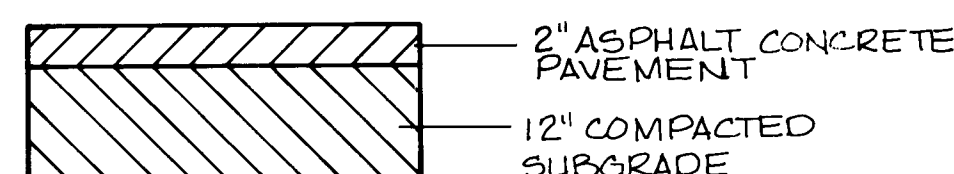
STA. 13+95 to STA. 17+12
STA. 23+60 to STA. 24+20
STA. 50+00 to STA. 50+40

Note: Paving detail per SAD 221(COA#3824)



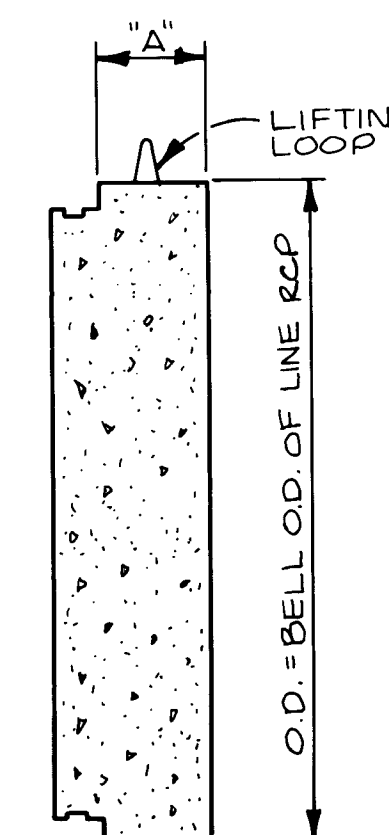
NOTE: FOR DEPTHS GREATER THAN 12' TRENCH SHIELD, SHORING OR OTHER APPROVED TRENCH SUPPORT SYSTEM SHALL BE REQUIRED TO KEEP WORK WITHIN THE STREET RIGHT-OF-WAY.

STORM DRAIN TRENCHING DETAIL



**TEMPORARY PAVING
DETAIL**

STA. 17+12 to STA. 23+60
STA. 24+20 to STA. 50+40



RCP END PLUG

PRECAST ONLY
(INCIDENTAL TO 24" DIA.
8' LENGTH STUBOUTS
AND TO 48" DIA. CL. IV PIPE)

RCP I.D.	"A"
24" & SMALLER	3"
30" - 42"	6"
48" - 72"	8"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
26-4765.90 1296

1. Arterial paving to be used for pavement replacement in Louisiana and San Pedro.

BENCH MARKS

ENGINEER'S SEAL

Donald S. Rip
10/5/93

Donald S. Rip
4/21/94

REVISIONS

NO.	DATE	REMARKS	BY

ALBUQUERQUE METROPOLITAN ARROYO
FLOOD CONTROL AUTHORITY
LOWER NORTH DOMINGO BACA
ARROYO DETENTION DAM
OUTFALL PIPE

TRENCHING AND PAVING DETAILS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair	C.M. [Signature]	10-15-93	WATER	N/A [Signature]	10-13-93
TRANS. DEV.	N/A [Signature]	10-14-93	WASTE WATER	N/A [Signature]	10-13-93
HYDROLOGY	C.M.	10-15-93	TRAF. OPER.		
OTHER			OTHER		
PROJECT NO.	4765.90	MAP NO.	C-18	SHEET 12 OF 13	

PROJECT NO.:
DESIGNED BY: DSD
DRAWN BY: PT
CHECKED BY: DSD
DATE: SEPTEMBER 1993

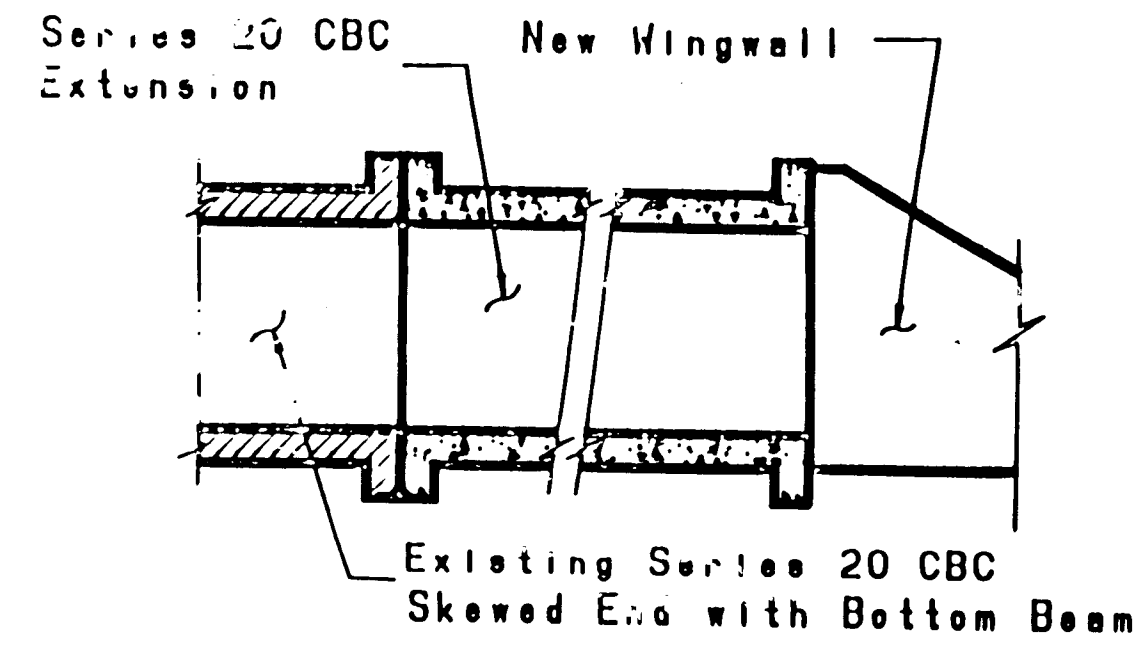
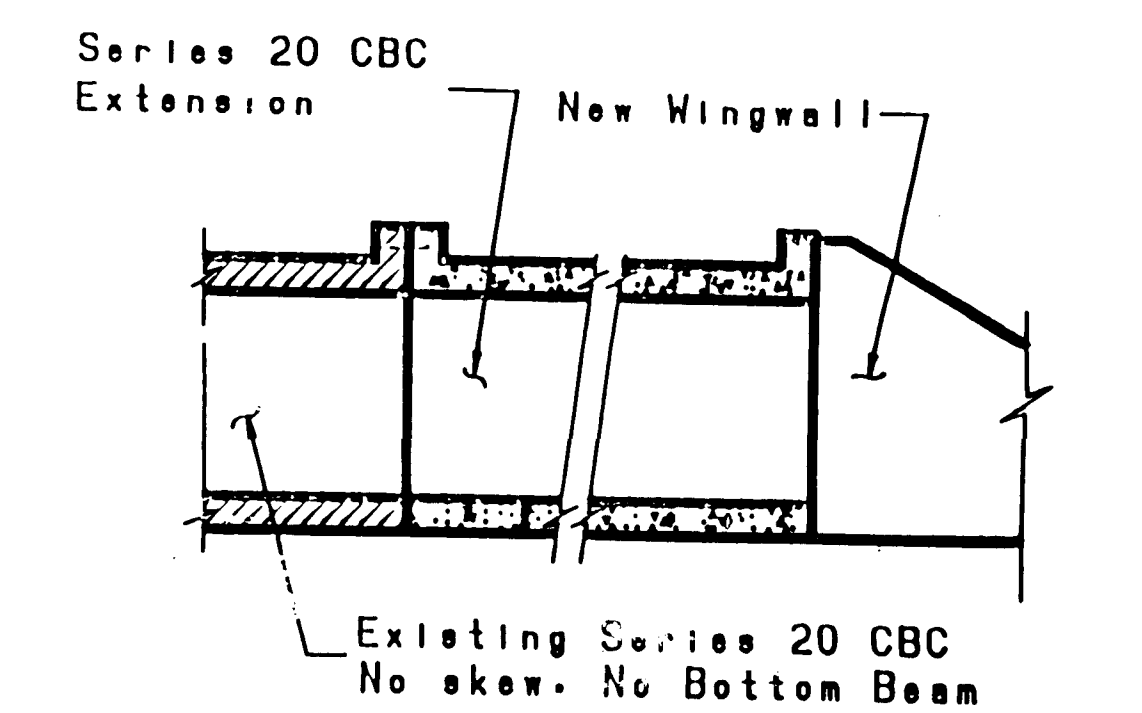
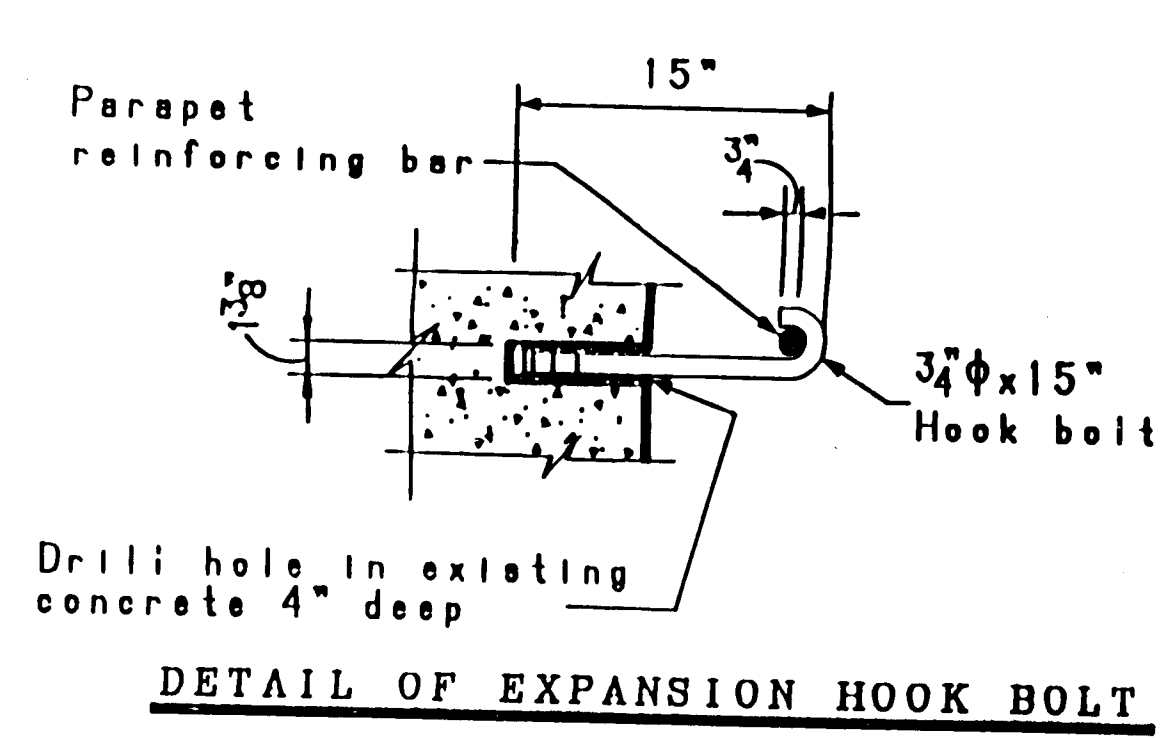
Resource Technology, Inc.
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2700 ORAN AVE., SUITE 200, ALBUQUERQUE, NEW MEXICO 87113
TELEPHONE - (505) 345-3115

SHEET 12 OF 13

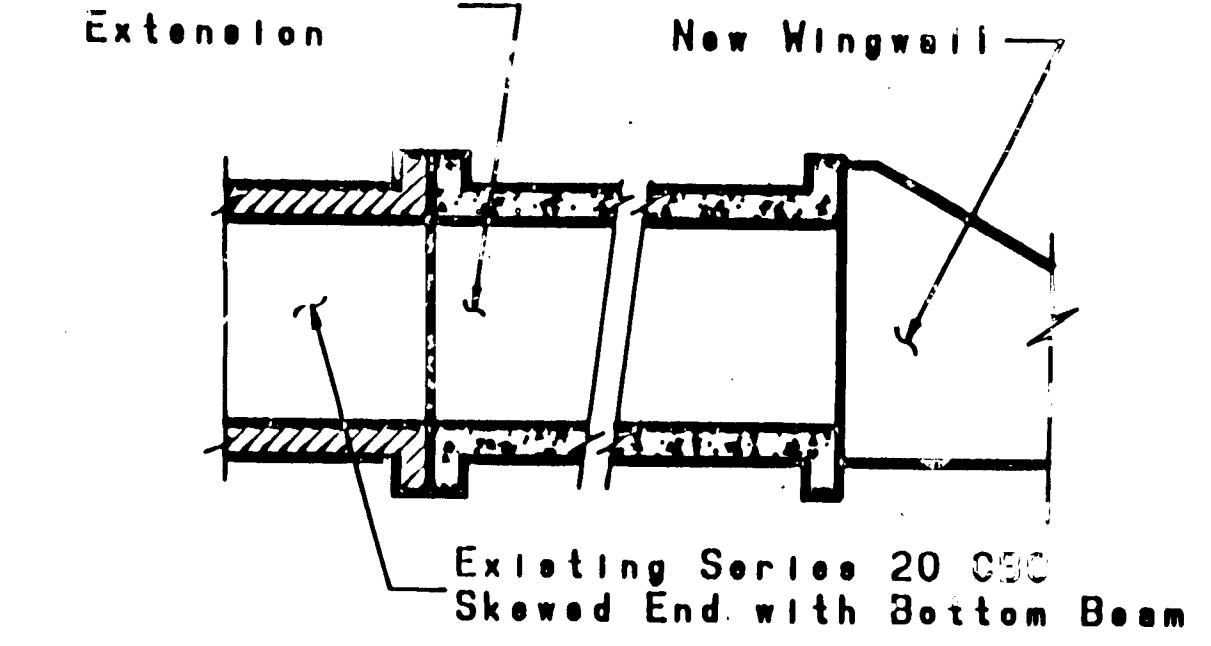
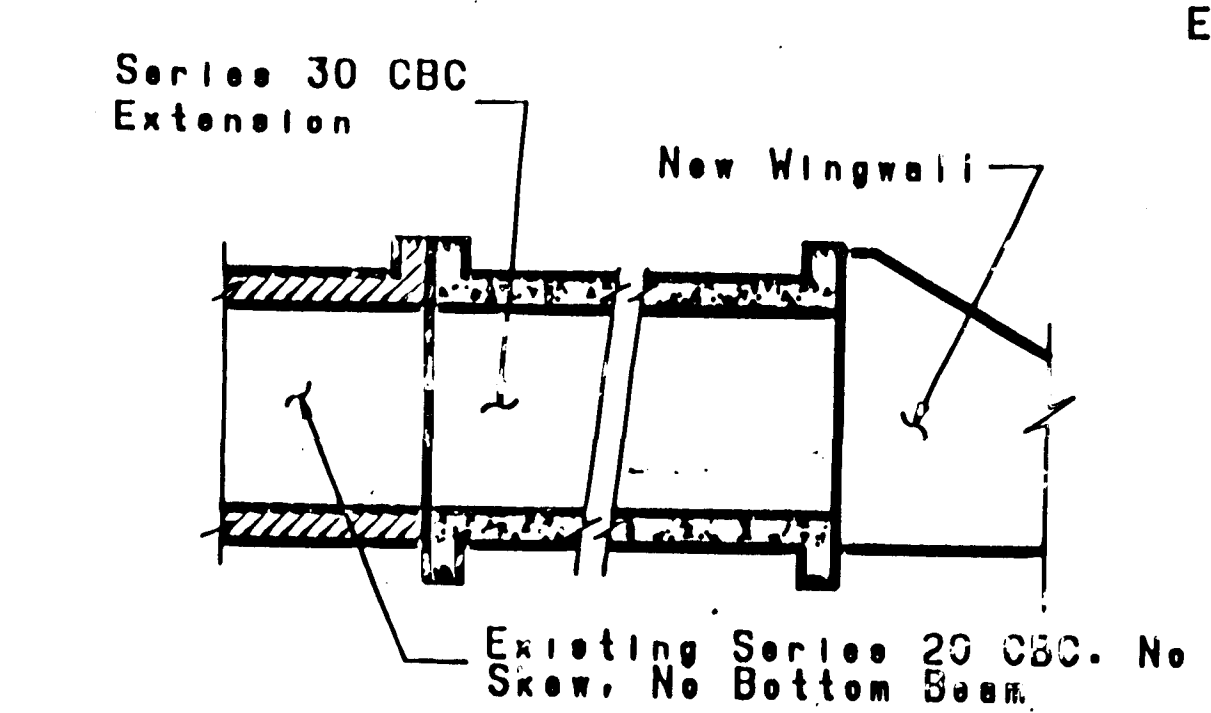
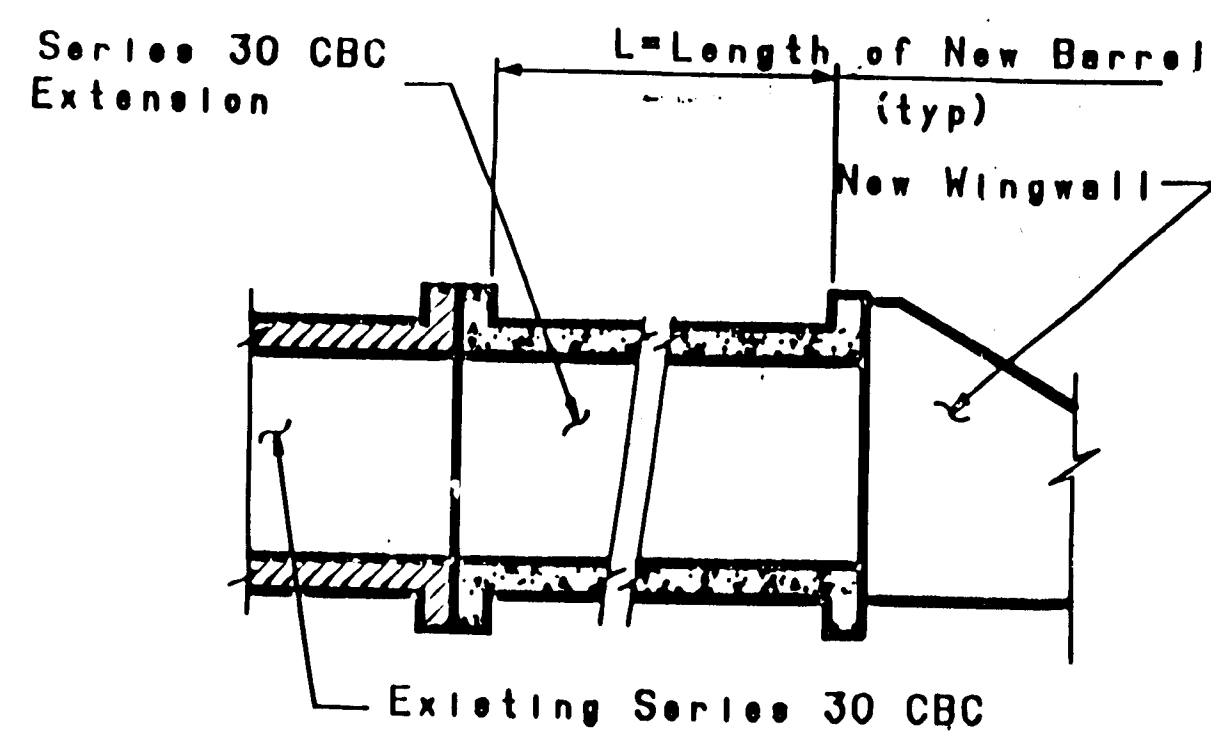
SCANNED BY
BY LASON

GENERAL NOTES

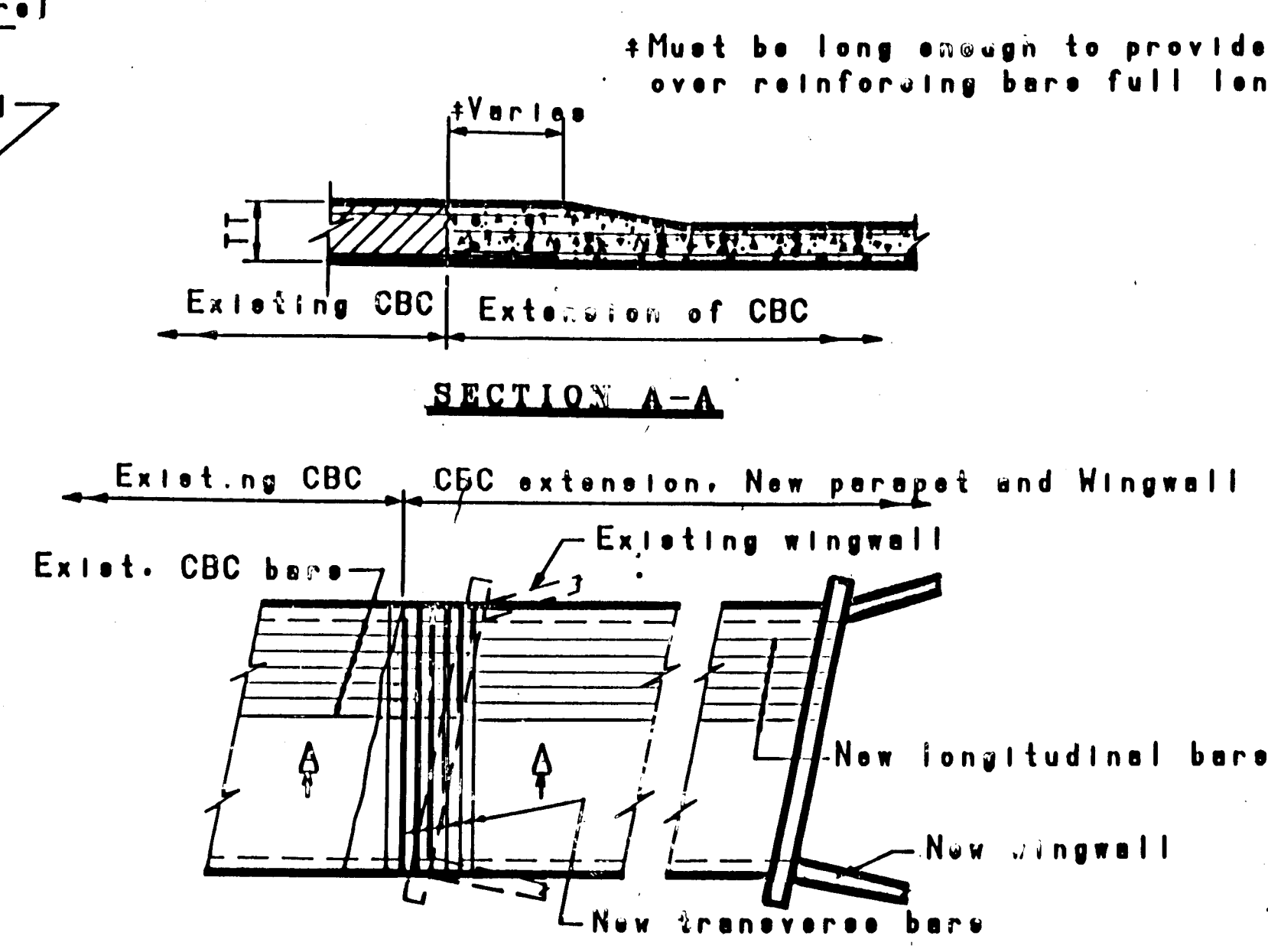
- FOR TYPE I CBC EXTENSION, USE SERIES 20 WHEN THE SPAN AND RISE OF THE EXISTING SERIES 20 CBC DOES NOT MATCH ANY SERIES 30 CBC SHOWN IN THE STANDARDS.
- REMOVE WINGS AND APRONS (WHERE PRESENT) FROM THE EXISTING CBC. LONGITUDINAL BARS EXPOSED BY REMOVAL OF EXISTING CONCRETE ARE TO BE CLEANED AND STRAIGHTENED AND BONDED INTO CBC EXTENSION.
- FOR TYPE I CBC EXTENSIONS, HOOK BOLTS SHALL BE INSTALLED ONLY IN THE EXISTING PARAPET (NOT IN VERTICAL WALLS OR BOTTOM SLAB) AND SPACED AT 1'-0" CENTERS.
- FOR TYPE II CBC EXTENSION REMOVE ENOUGH OF EXISTING CBC CONCRETE TO EXPOSE THE LARGER OF 2'-0" OF LONGITUDINAL STEEL OR A MINIMUM LENGTH OF TRANSVERSE REINFORCING NEAR MID-SPAN EQUAL TO THE FOLLOWINGS:
#4 BARS - 12"
#5 BARS - 14"
#6 BARS - 19"
#7 BARS - 26"
#8 BARS - 33"
#9 BARS - 41"
- THERE WILL NOT BE A PARAPET OR A CUTOFF WALL AT THE CONNECTION OF THE EXISTING AND THE EXTENDED TYPE II CBC. THE REINFORCING FOR A PARAPET AND CUTOFF WALL CAN BE OMITTED AT THE CONNECTION END OF THE CBC. FOR ESTIMATED QUANTITIES THE EXTENDED BARREL LENGTH WILL BE BASED ON REMOVING A MINIMUM 2'-0" OF EXISTING CBC. PAY QUANTITIES WILL BE BASED ON THE ACTUAL REMOVAL.
- COST OF FURNISHING AND PLACING EXPANSION BOLTS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO DIRECT PAYMENT WILL BE MADE THEREFOR.
- WATERPROOFING MEMBRANE SHALL BE USED ON THE TOP SLAB, PARAPETS, EXTERIOR SIDE WALLS ON ALL CBC EXTENSIONS, AND AT THE LONGITUDINAL JOINT BETWEEN MULTIPLE UNIT BOXES. COST OF FURNISHING AND PLACING THE MEMBRANE SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO DIRECT PAYMENT WILL BE MADE THEREFOR.



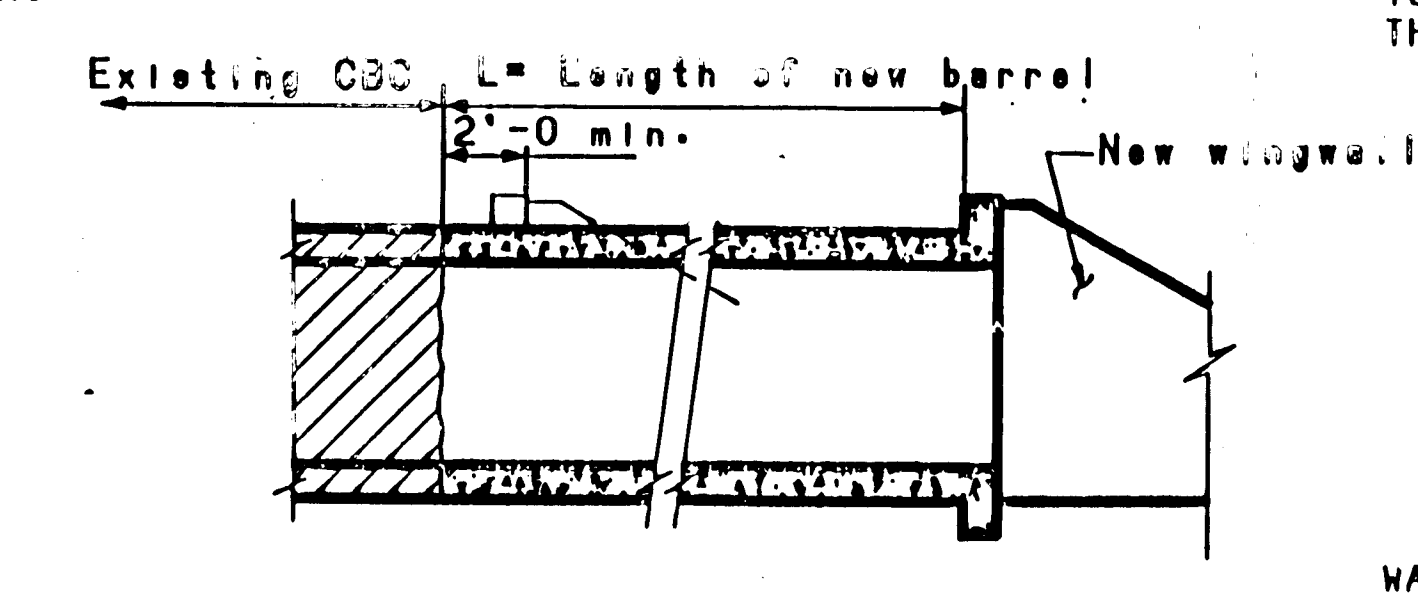
TYPE I CBC EXTENSIONS



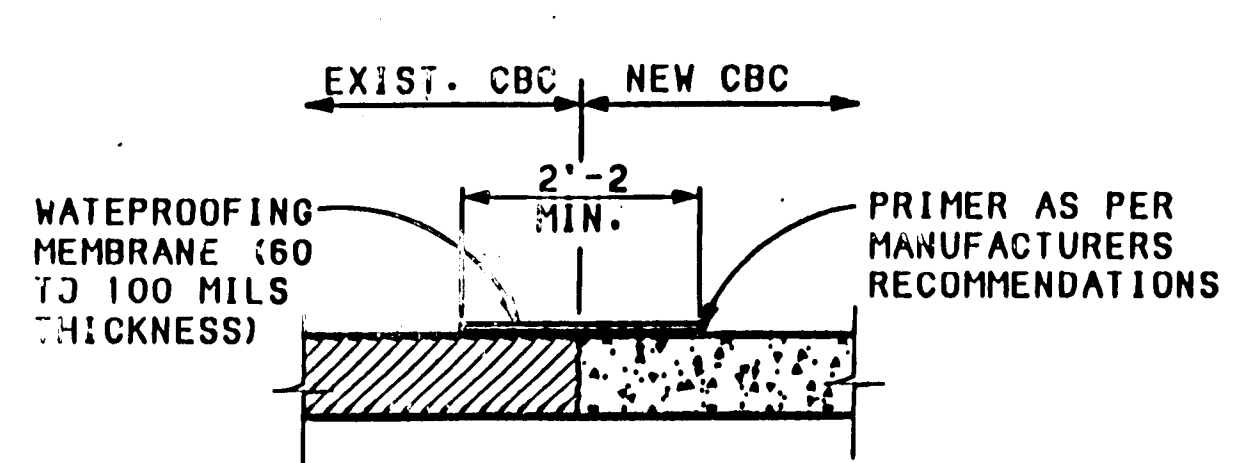
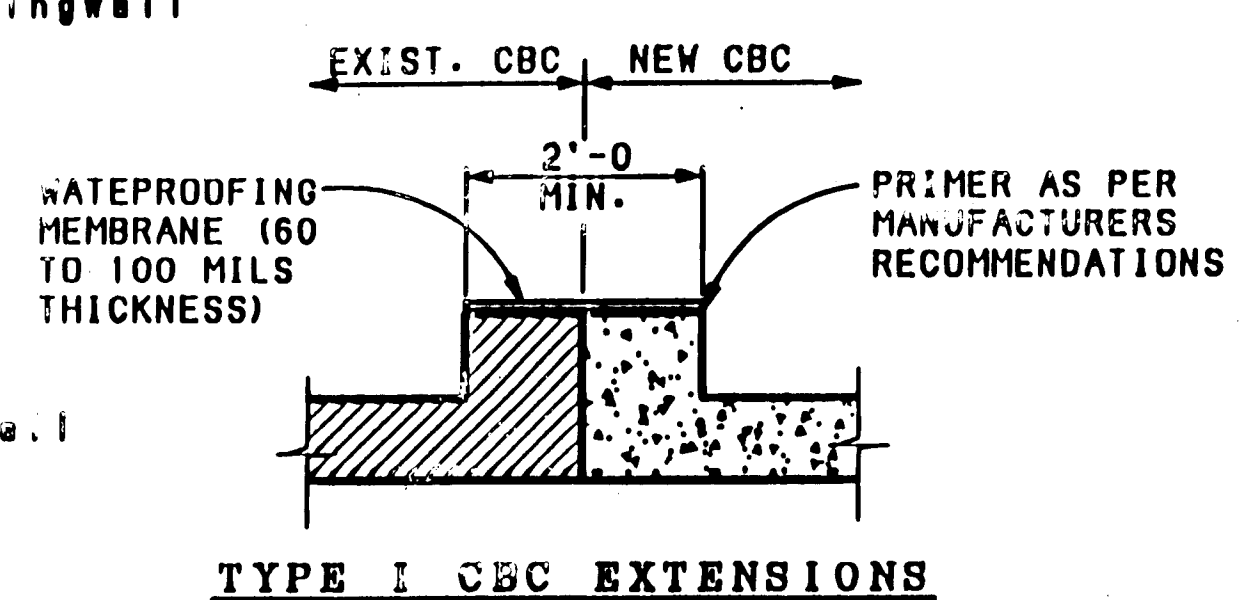
TYPE II CBC EXTENSIONS



PLAN



PROFILE



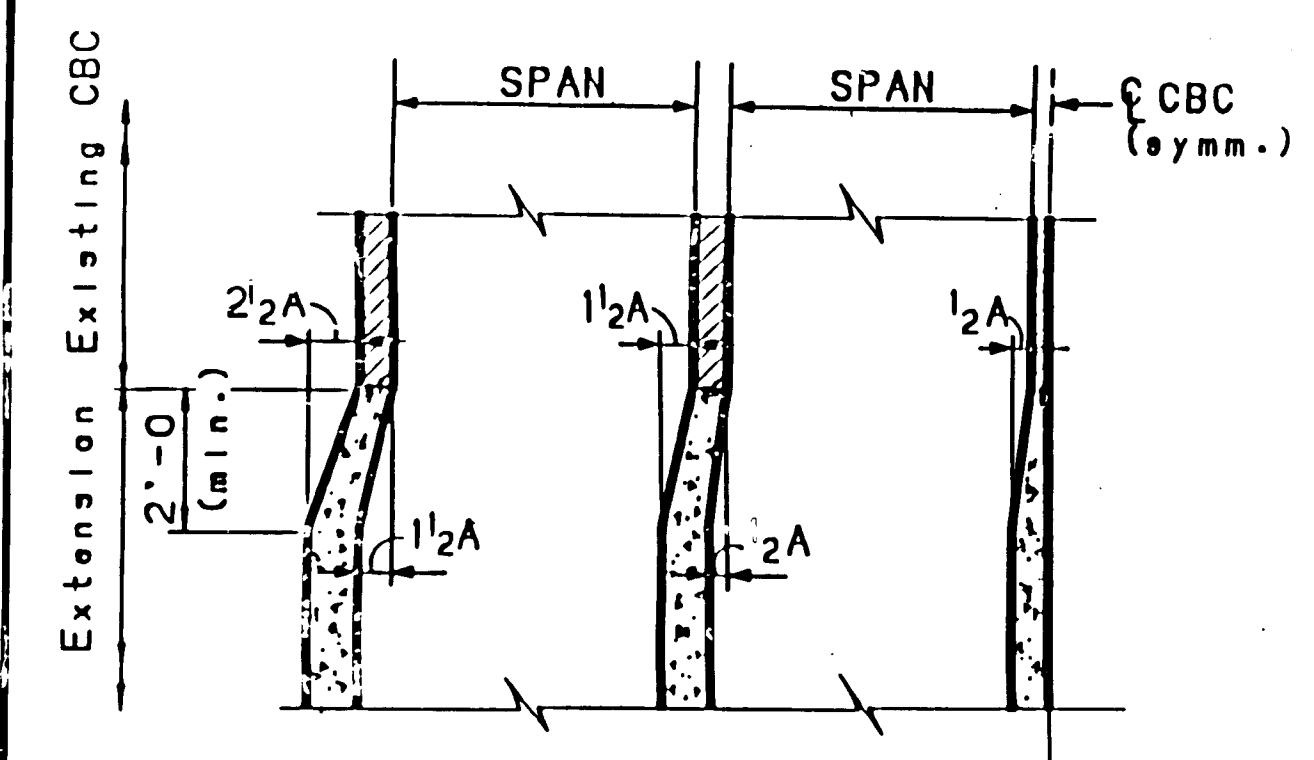
TYPE II CBC EXTENSIONS

ACCEPTABLE WATERPROOFING MEMBRANE MATERIALS ARE:

MEL-ROL SHEET AS MANUFACTURED BY W.R. MEADOWS, INC.

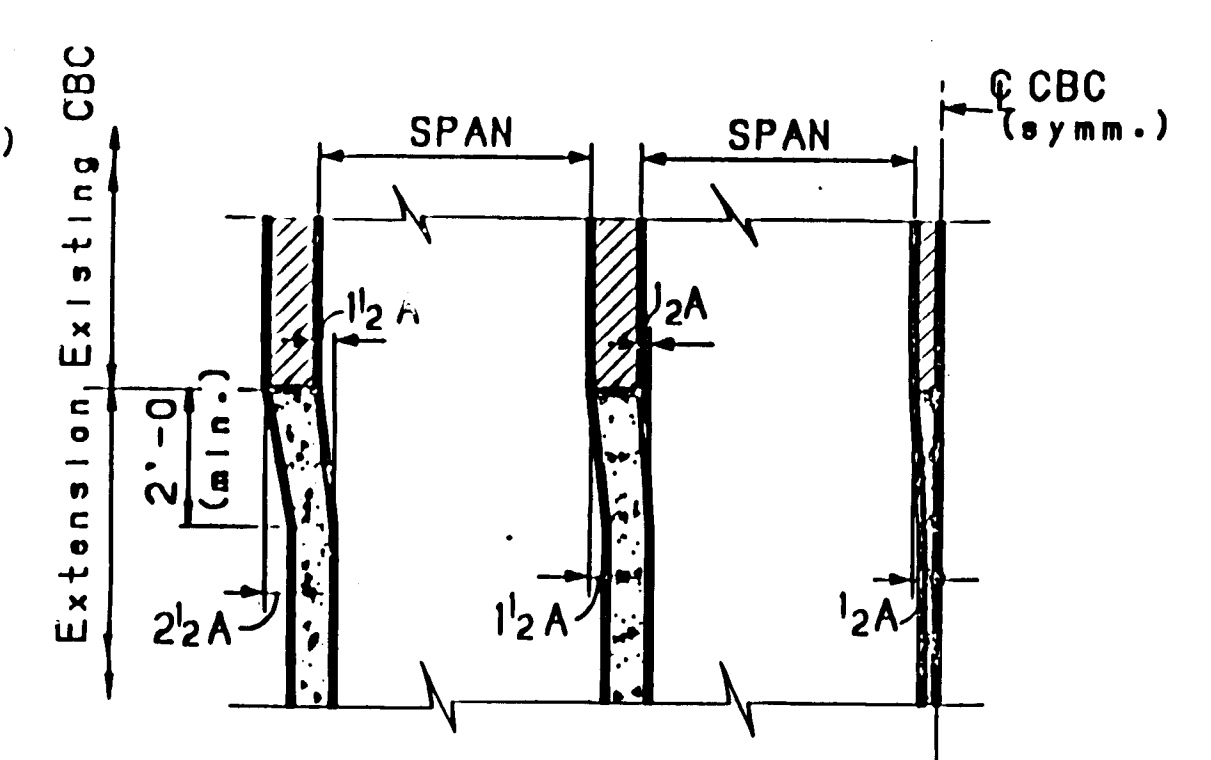
CONWRAP BARRIER CS-212 AS MANUFACTURED BY CONCRETE SEALANT.

WATERPROOFING MEMBRANE DETAILS



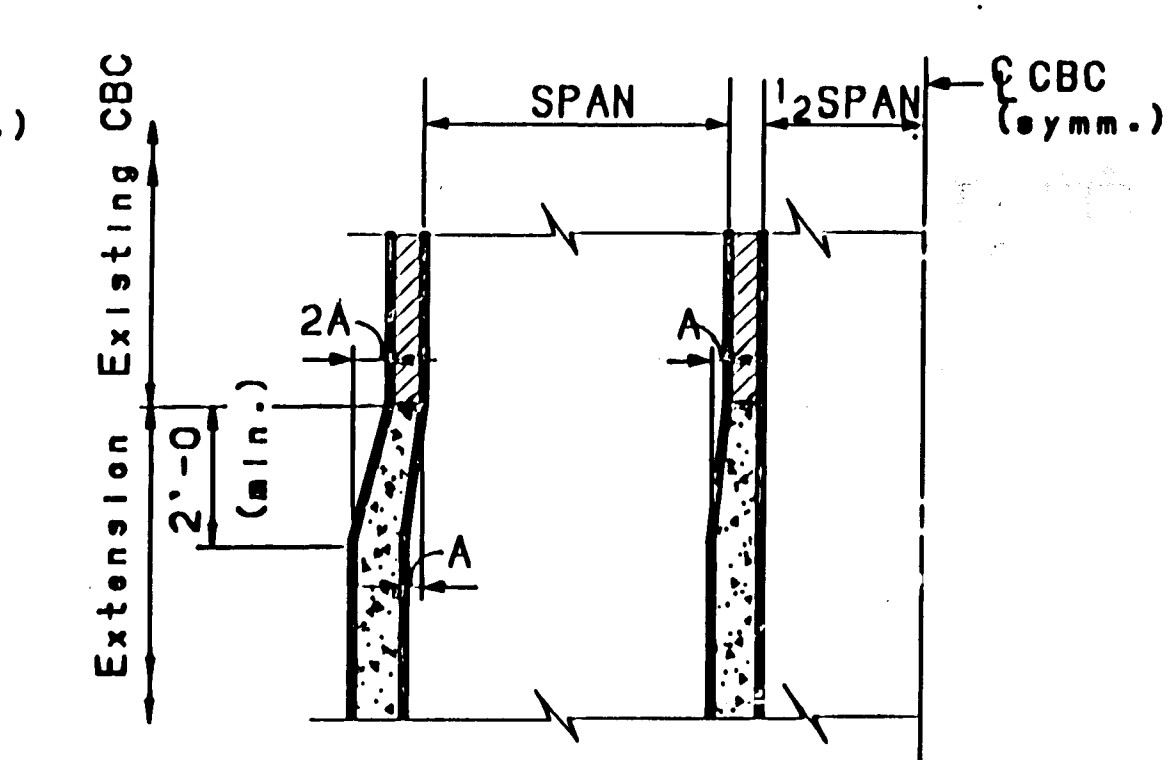
EXTENSION WALLS THICKER THAN EXISTING WALLS

CBC WITH EVEN NUMBER OF OPENINGS



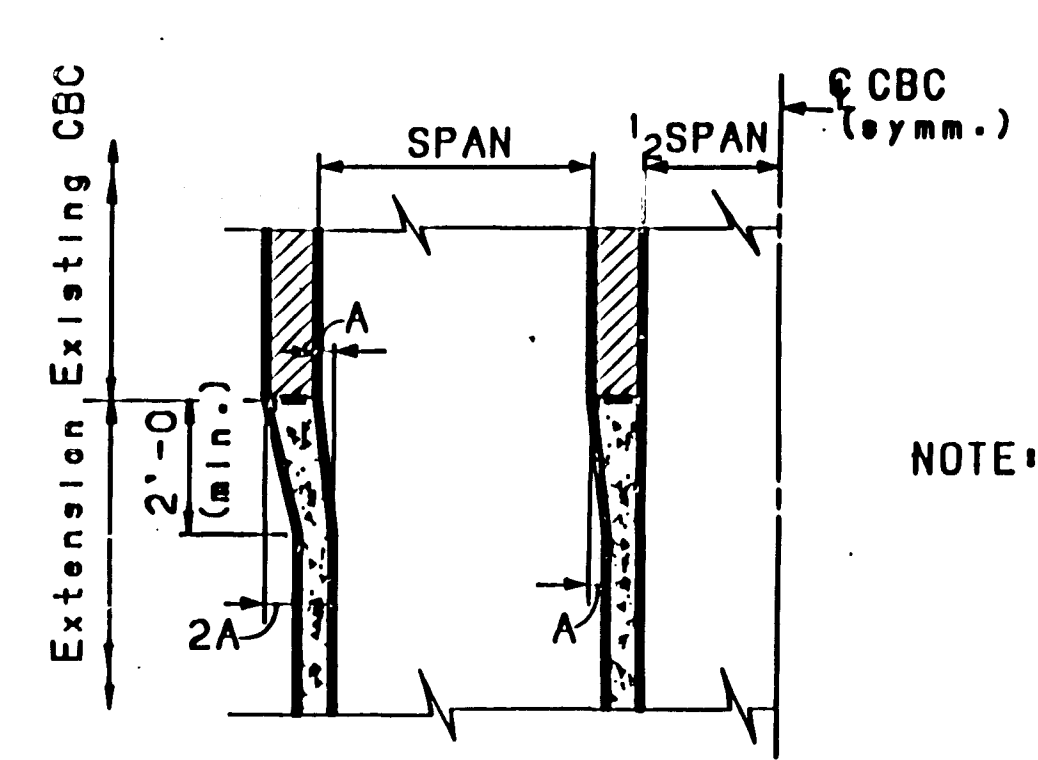
EXTENSION WALLS THINNER THAN EXISTING WALLS

WALL TRANSITION DETAILS



EXTENSION WALLS THICKER THAN EXISTING WALLS

CBC WITH ODD NUMBER OF OPENINGS



EXTENSION WALLS THINNER THAN EXISTING WALLS

NOTE: "A" = THE DIFFERENCE IN WALL THICKNESS BETWEEN THE EXISTING STRUCTURE AND THE CBC EXTENSION.

20-47615-90 1/13/90

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TELEPHONE - (505) 345-3118

6			
5			
4			
3			
2			
1			
NO.	DESCRIPTION	DATE	BY
REVISIONS (OR CHANGE NOTICES)			
NEW MEXICO STATE HIGHWAY DEPARTMENT			
CONCRETE BOX CULVERT EXTENSION			
LAYOUT BY J.D.O.	APPROVAL	DATE	
DRAWN BY J.A.K.	REVIEWED	DATE	
CHECKED BY E.R.D.	APPROVED	DATE	
SERIAL BCE-001			