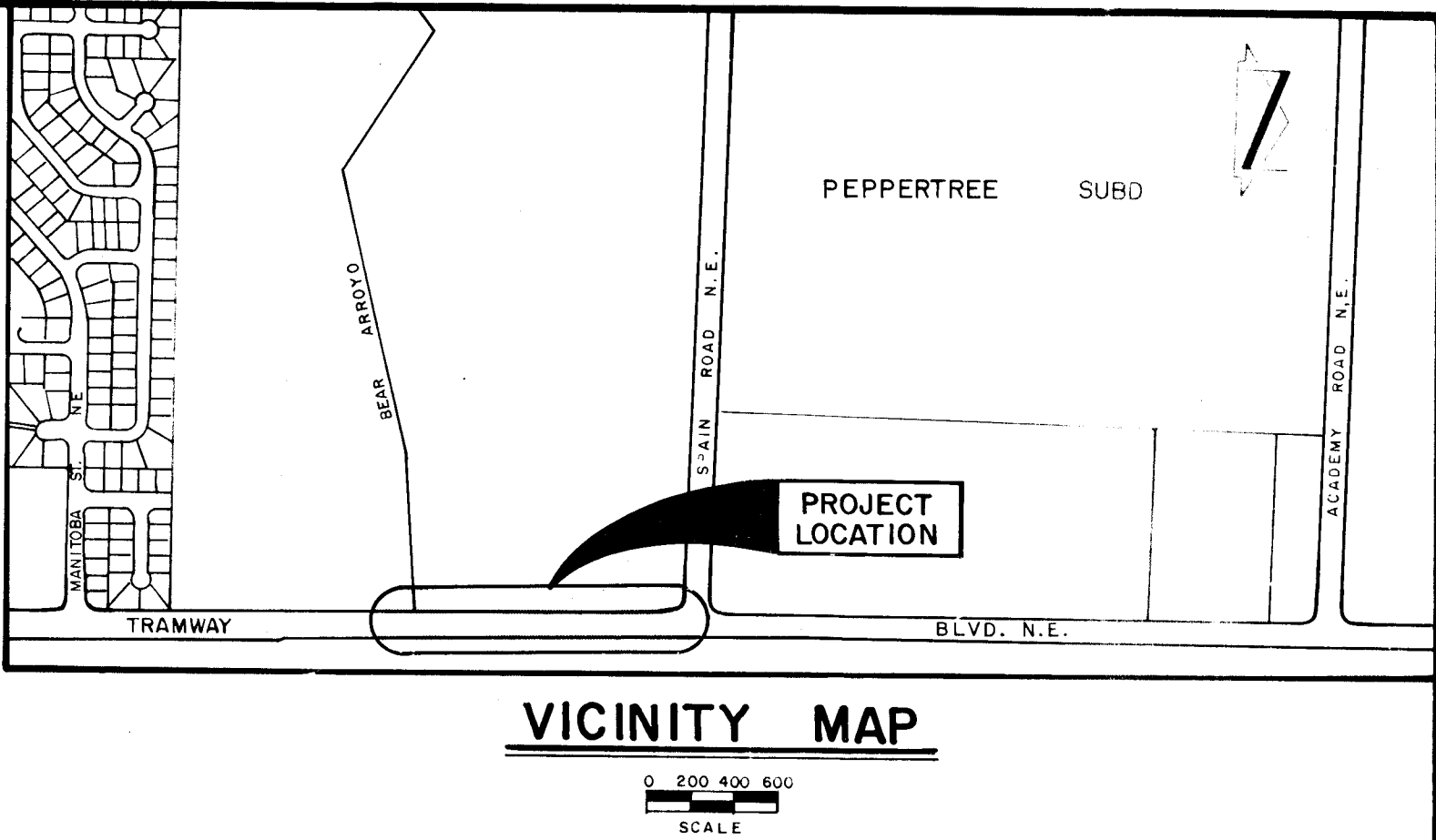


TRAMWAY CHANNEL DROP STRUCTURE at BEAR ARROYO

INDEX OF SHEETS

- 1. TITLE SHEET
- 2. PLAN & PROFILE
- 3. DROP STRUCTURE GEOMETRY
- 4. PLAN VIEW REINFORCING
- 5-6. REINFORCING DETAILS
- 7. MISC. CONCRETE DETAILS
- 8-10. CROSS SECTIONS



GENERAL NOTES

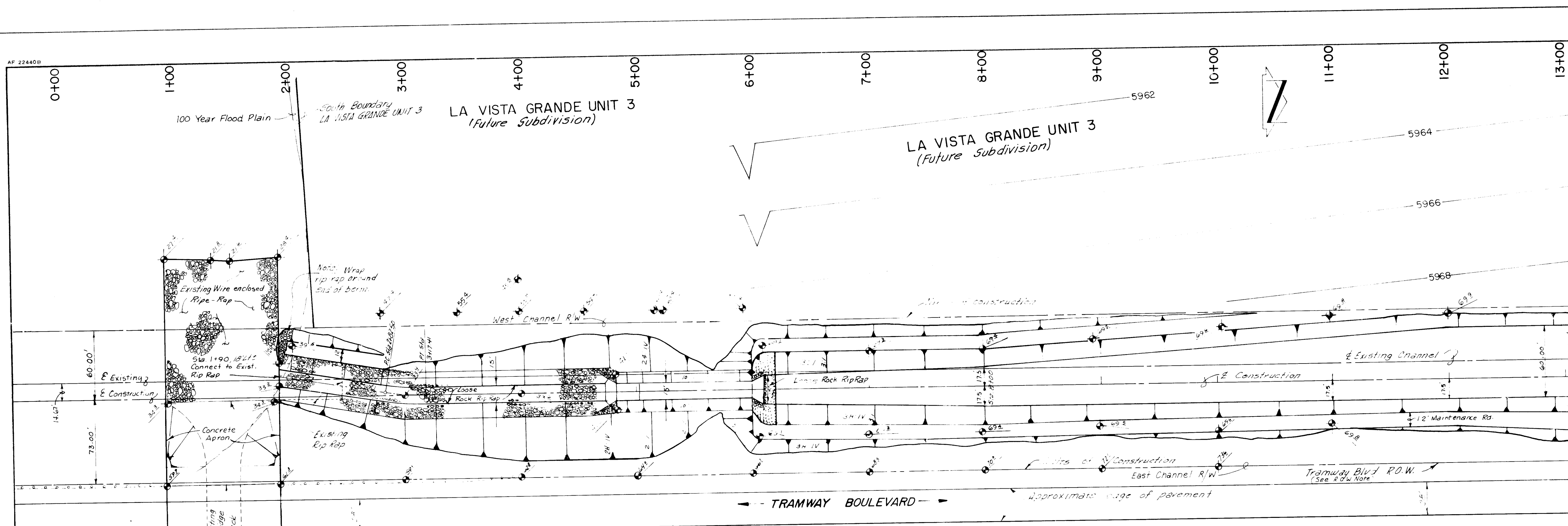
- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT AND SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1979 EDITION (REFERRED TO HEREIN AS THE STANDARD SPECIFICATIONS) AND THE CONTRACT DOCUMENTS FOR Albuquerque Public Works Contract No. 84-2.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATION SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXAMINE 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 MINIMUM AMOUNT OF DELAY.

1 2 3 4 5 6 7 8 9 10 11 12
26 22600184

APPROVED BY A.M.A.F.C.A.
Richard E. Leonard 9/19/84
EXECUTIVE ENGINEER DATE

REV.	SHEETS	CITY	ENGR.	DATE	USER	DEPT.	DATE	USER	DEPT.	DATE
APPROVAL OF REVISIONS										
<i>Scott G. Greier</i>						SCANLON ASSOCIATES		APPROVED FOR CONSTRUCTION		
								C.E.		
DRAWING NO. 2260						MAP NO. E-22		SHEET 1 OF 10		

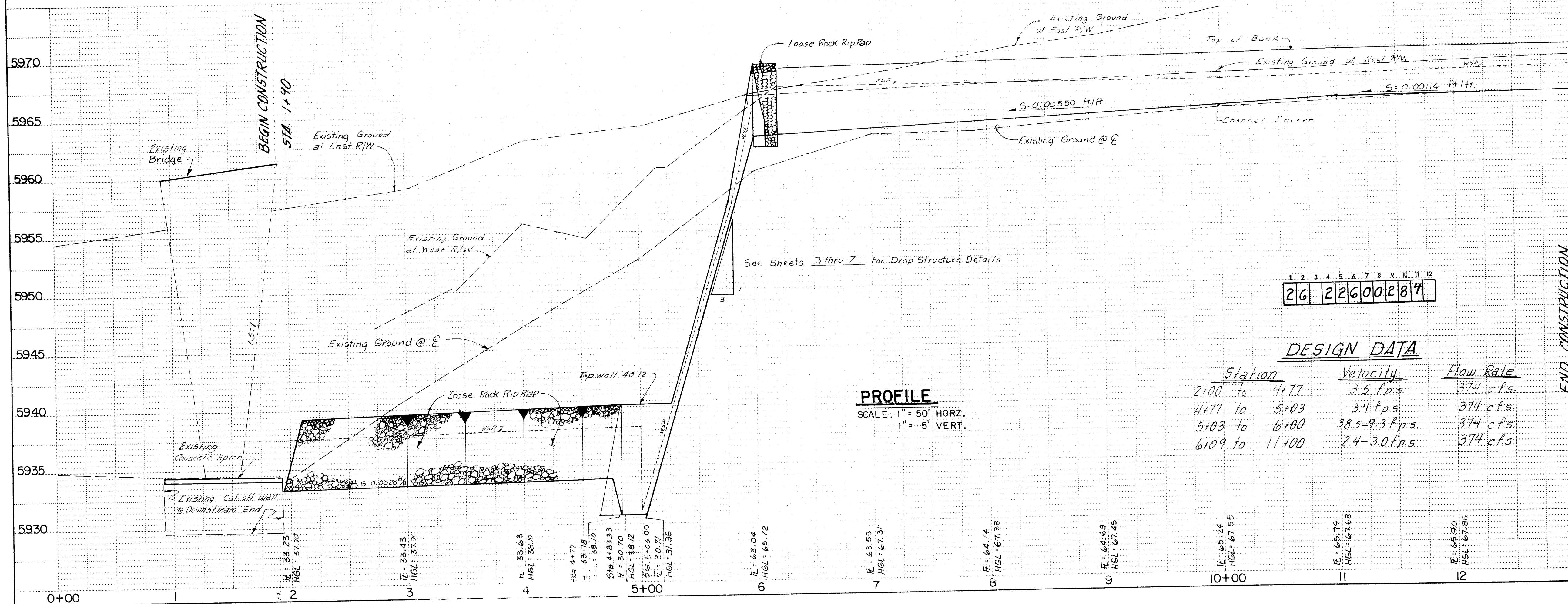
AF 22400B



New Channel Curve Data
R=200.00'
Δ=10°00'00"
T=17.50'
L=34.91'
PC=2+82.50
PI=3+00
PT=3+17.41

NOTE
Existing wire enclosed Rip Rap from Sta. 1+90 to Sta. 2+45 to be removed & replaced with loose rock riprap. Place new filter bedding material under replaced Rip Rap.

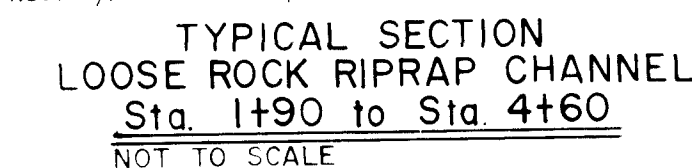
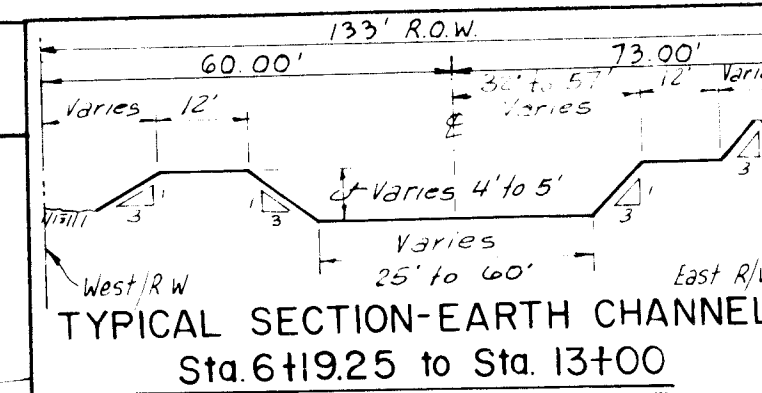
PLAN
SCALE: 1" = 50'



PROFILE
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

DESIGN DATA

Station	Velocity	Flow Rate
2+00 to 4+77	3.5 f.p.s.	374 c.f.s.
4+77 to 5+03	3.4 f.p.s.	374 c.f.s.
5+03 to 6+00	38.5-9.3 f.p.s.	374 c.f.s.
6+09 to 11+00	2.4-3.0 f.p.s.	374 c.f.s.



RIGHT OF WAY NOTES

1. Taken from Summary Plat of a portion of the Elena Gallagor Grant C19-183 and quitclaim deed for Panorama (Tramway) Boulevard Dist. Book D 831 pages 321 to 926.

GROUTED & LOOSE RIPRAP GRADATION

SIZE	% PASS
12"	100
4"	30-100
2"	10-50
1"	0-10

FILTER BEDDING GRADATION

SIZE	% PASS
2"	100
1.5"	85-95
1"	10-85
3/4"	60-80
1/2"	30-75
3/8"	10-60
1/4"	5-50
#4 (-16)	0-30

Nothing smaller than #16 (-100)

LEGEND

GROUTED RIP RAP	
LOOSE ROCK RIP RAP	
EXISTING CONTOURS	
NEW CONTOURS	
EMBANKMENT SLOPE	
SPOT ELEVATION	
EXISTING GUARD RAIL	
NEW GUARD RAIL	

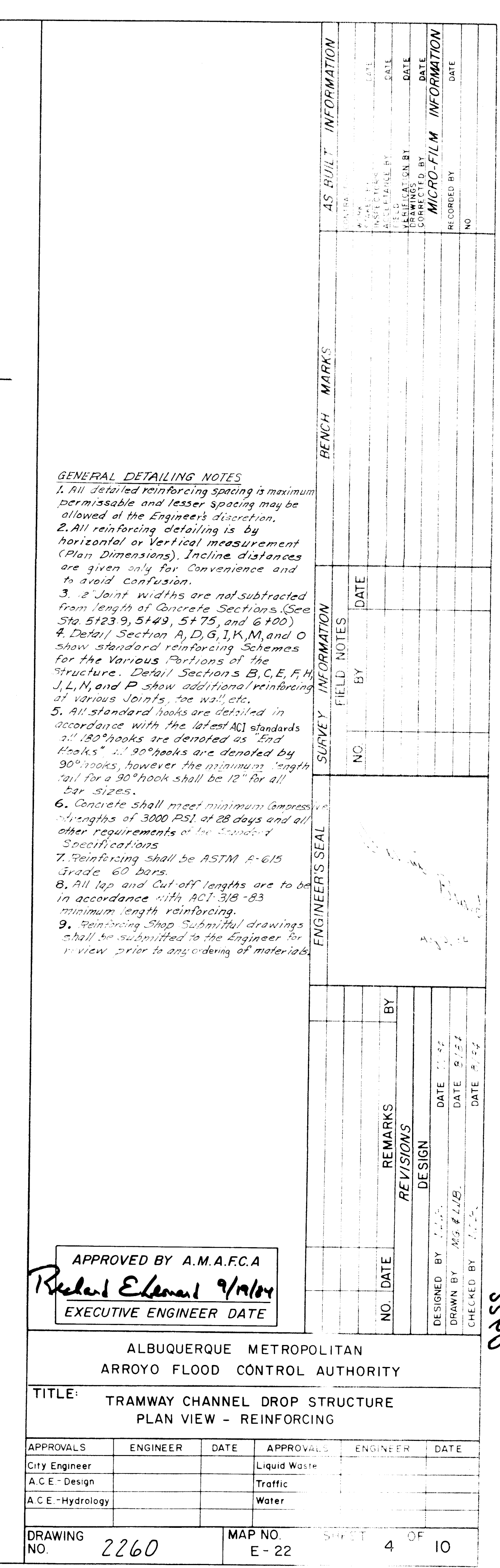
APPROVED BY A.M.A.E.C.A.
Richard E. Leonard 9/19/84
EXECUTIVE ENGINEER DATE

ALBUQUERQUE METROPOLITAN
ARROYO FLOOD CONTROL AUTHORITY

TITLE: TRAMWAY CHANNEL DROP STRUCTURE
PLAN & PROFILE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer			Liquid Waste		
A.C.E. - Design			Traffic		
A.C.E. - Hydrology			Water		

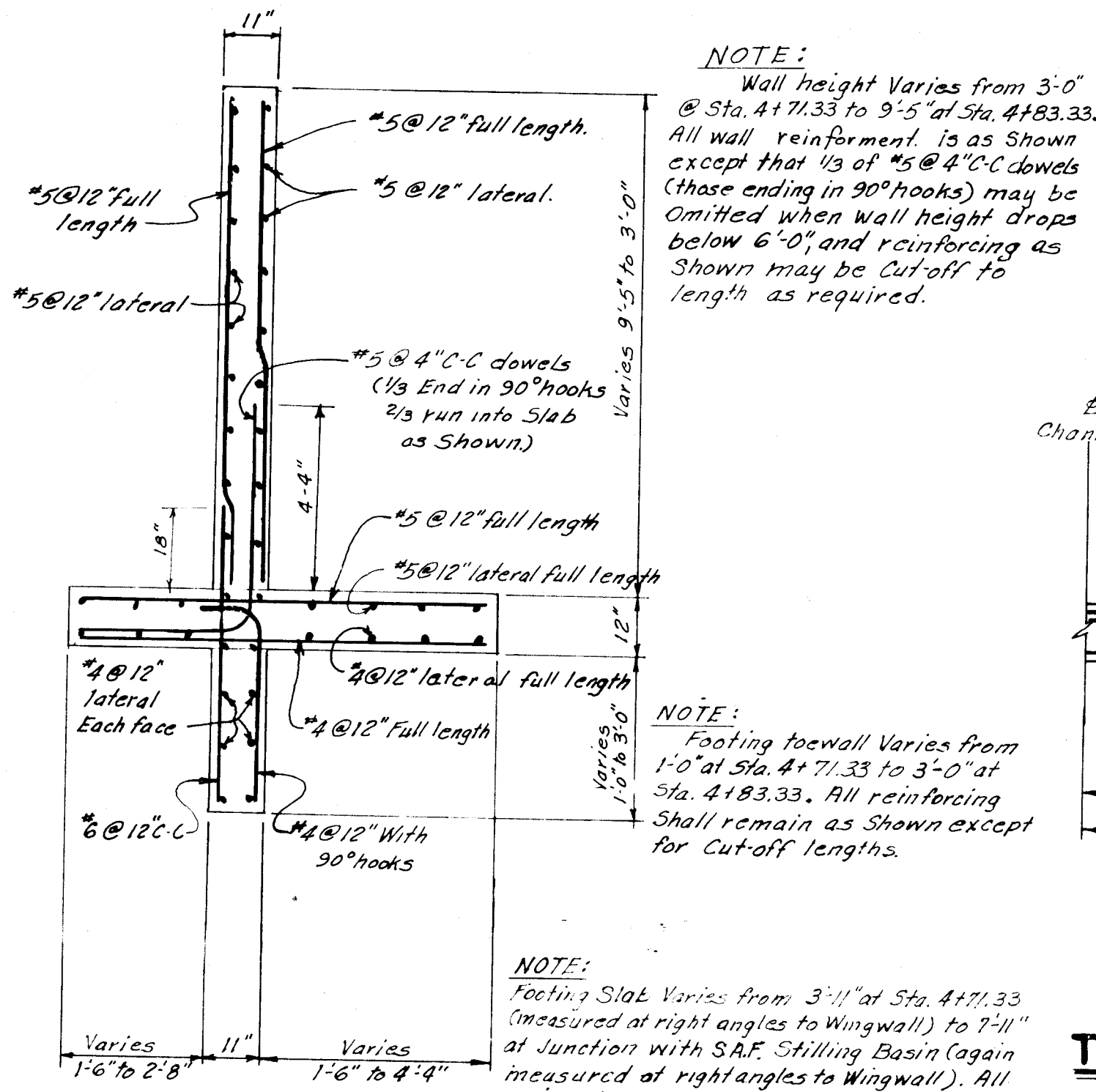
DRAWING NO. 2260 MAP NO. E SHEET 2 OF 10



SCALE 1/4" = 1' - 0"

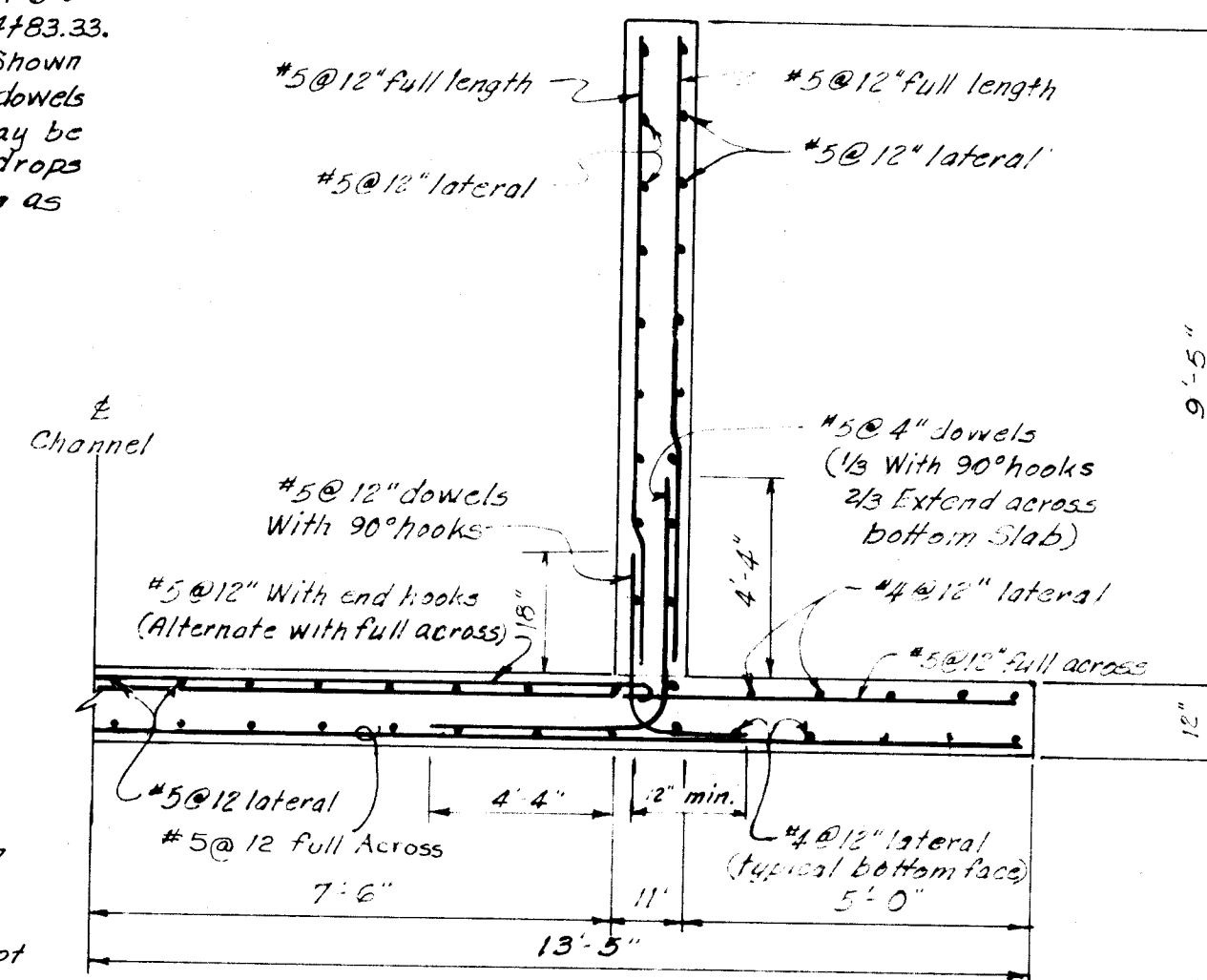
1	2	3	4	5	6	7	8	9	10	11
2	6		2	2	6	0	0	4	8	4

RECORD DRAWING



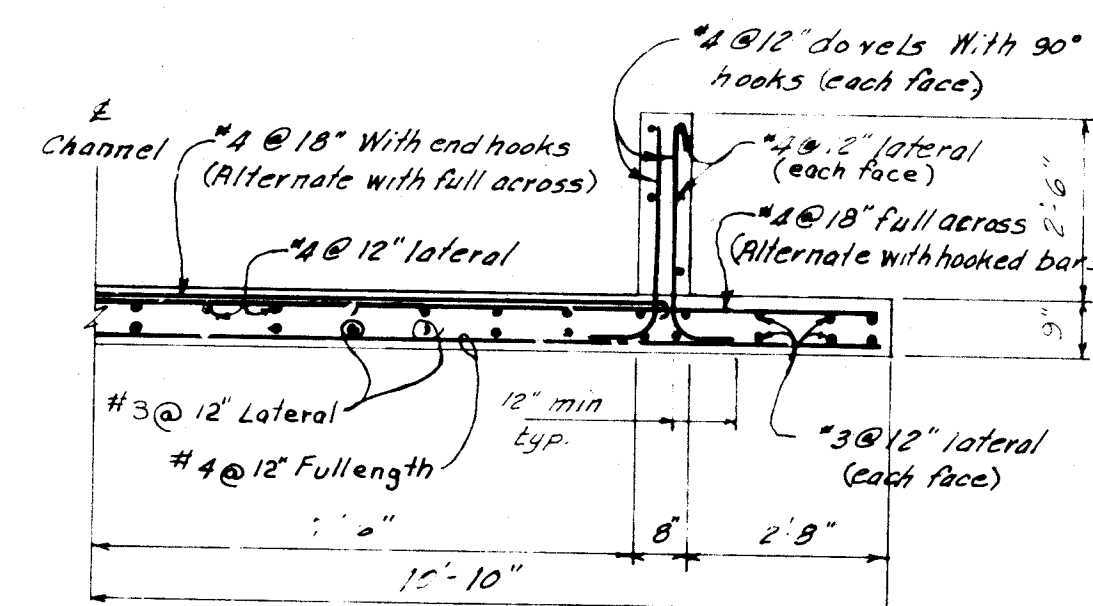
SECTION **A**
4/5

END WINGWALL - FULL SECTION
STA. 4+71.33 TO STA. 4+83.33
SCALE 3/8" = 1'-0"



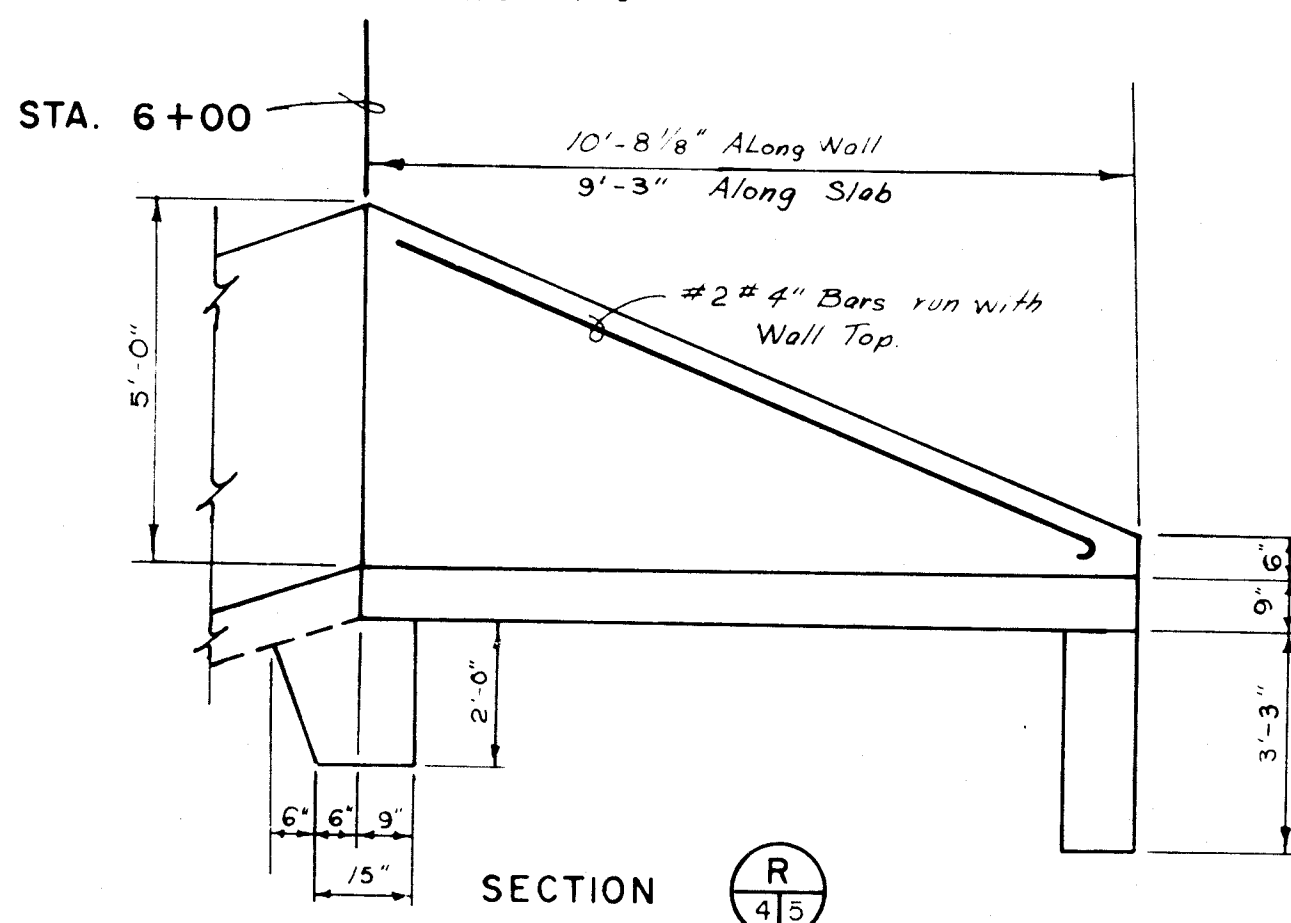
SECTION **G**
4/5

TYPICAL HALF SECTION - S.A.F. TRANSITION
STA. 5+03 TO STA. 5+23.9
SCALE 3/8" = 1'-0"



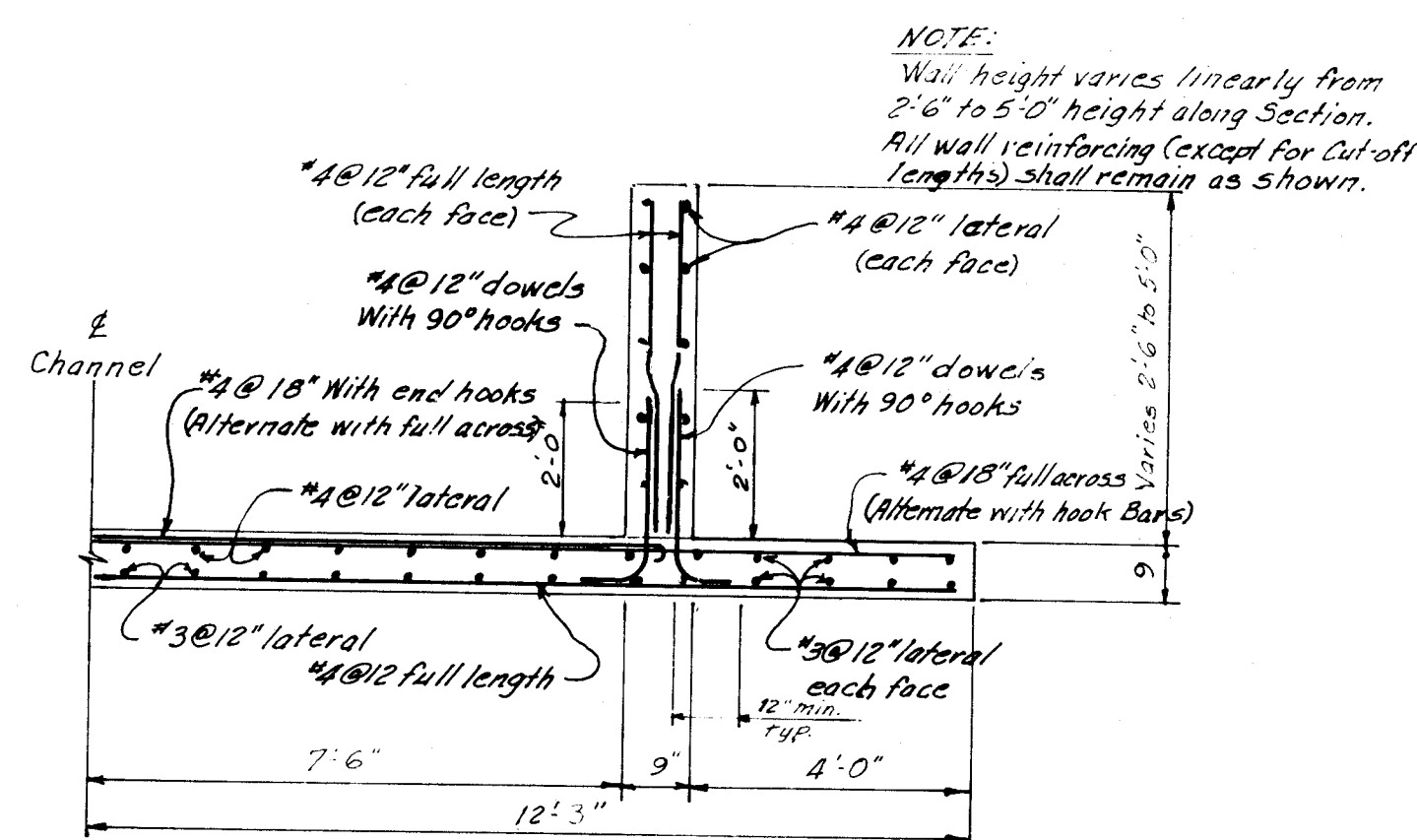
SECTION **I**
4/5

TYPICAL HALF SECTION - CHUTE SECTION
STA. 5+23.9 TO STA. 5+75
SCALE 3/8" = 1'-0"



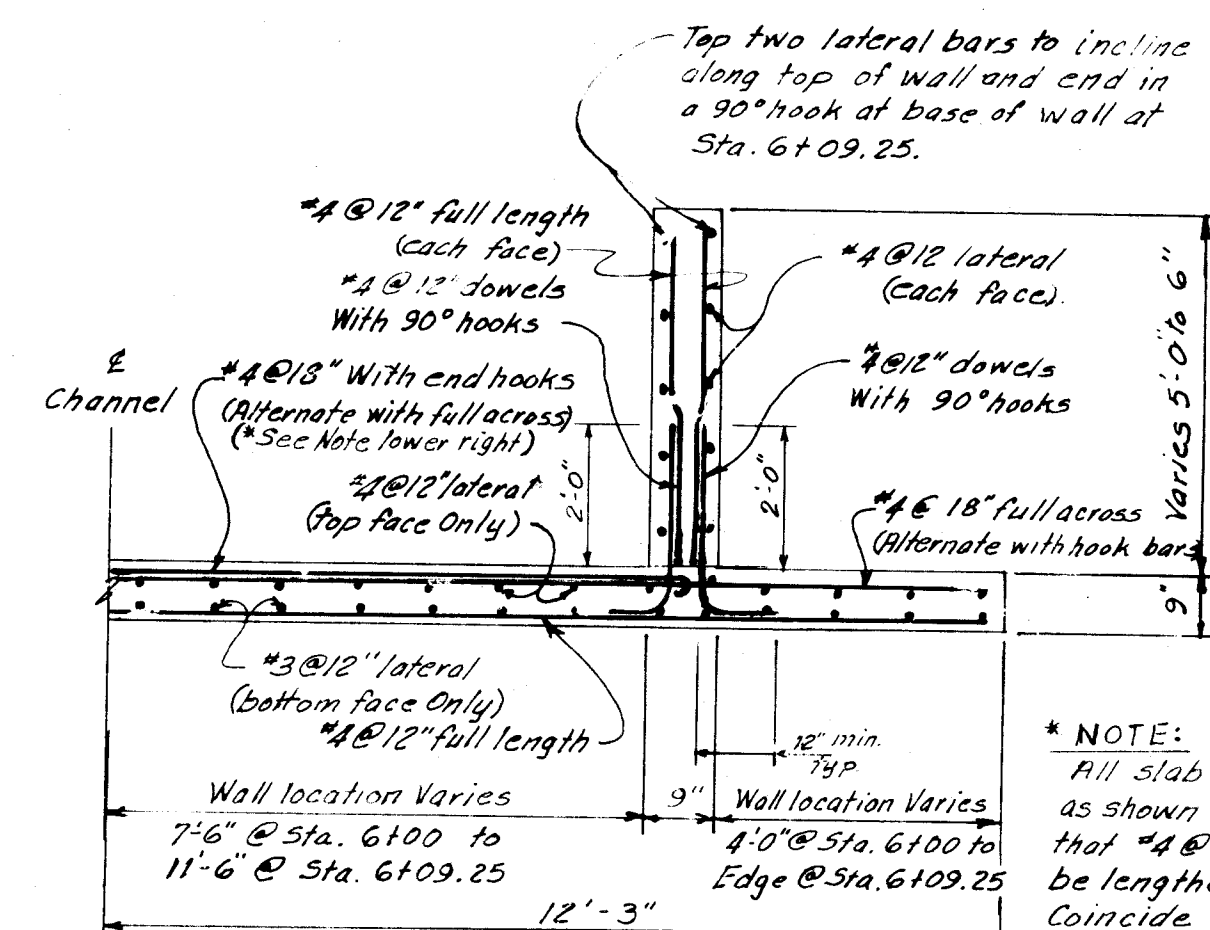
SECTION **R**
4/5

ENTRANCE SECTION * SEE ALSO SECTION O
SCALE 3/8" = 1'-0"



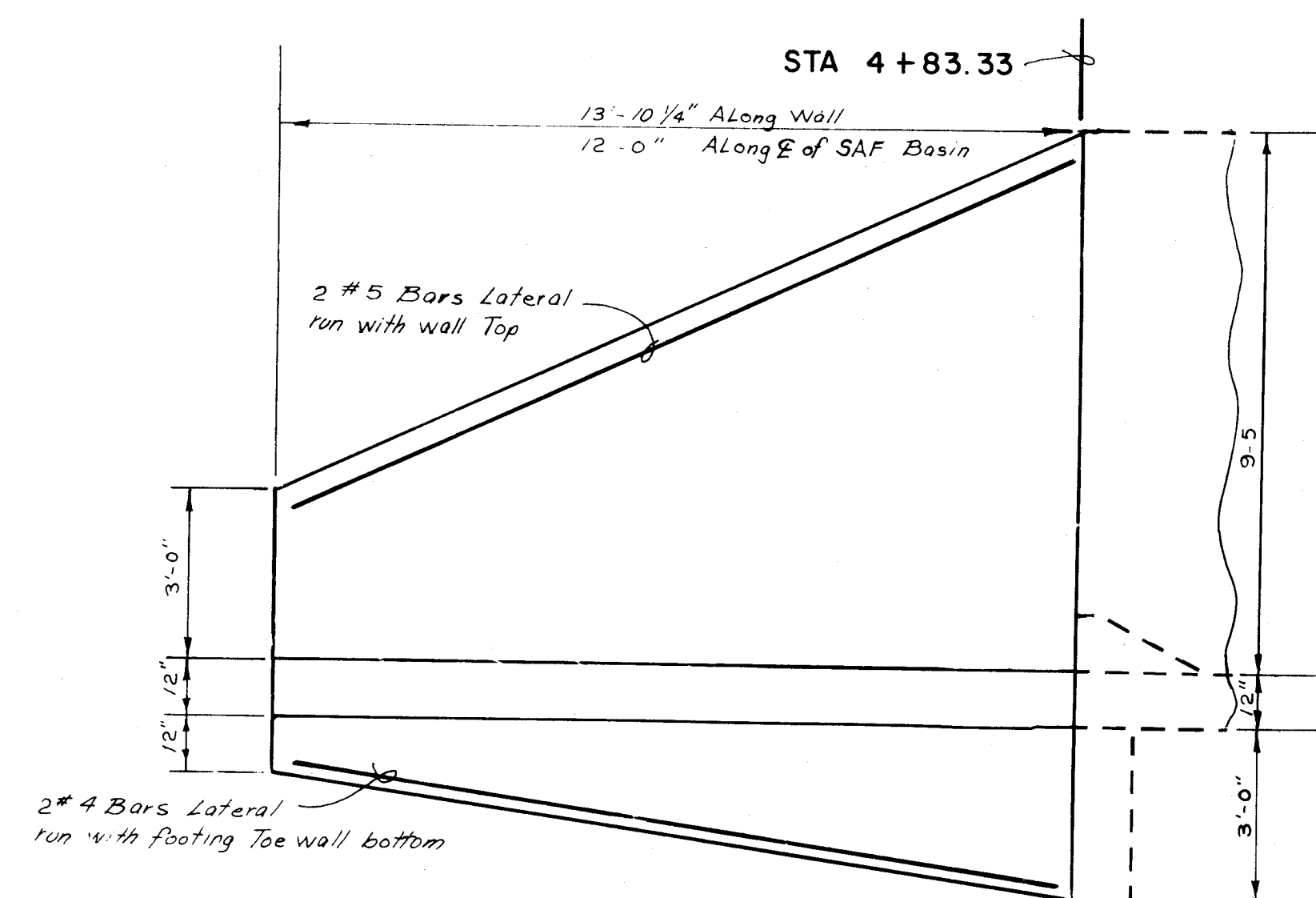
SECTION **M**
4/5

TYPICAL HALF SECTION - TRANSITION CHUTE
STA. 5+75 TO STA. 6+00
SCALE 3/8" = 1'-0"



SECTION **O**
4/5

TYPICAL HALF SECTION - ENTRANCE SECTION
STA. 6+00 TO STA. 6+09.25
SCALE 3/8" = 1'-0"



SECTION **Q**
4/5

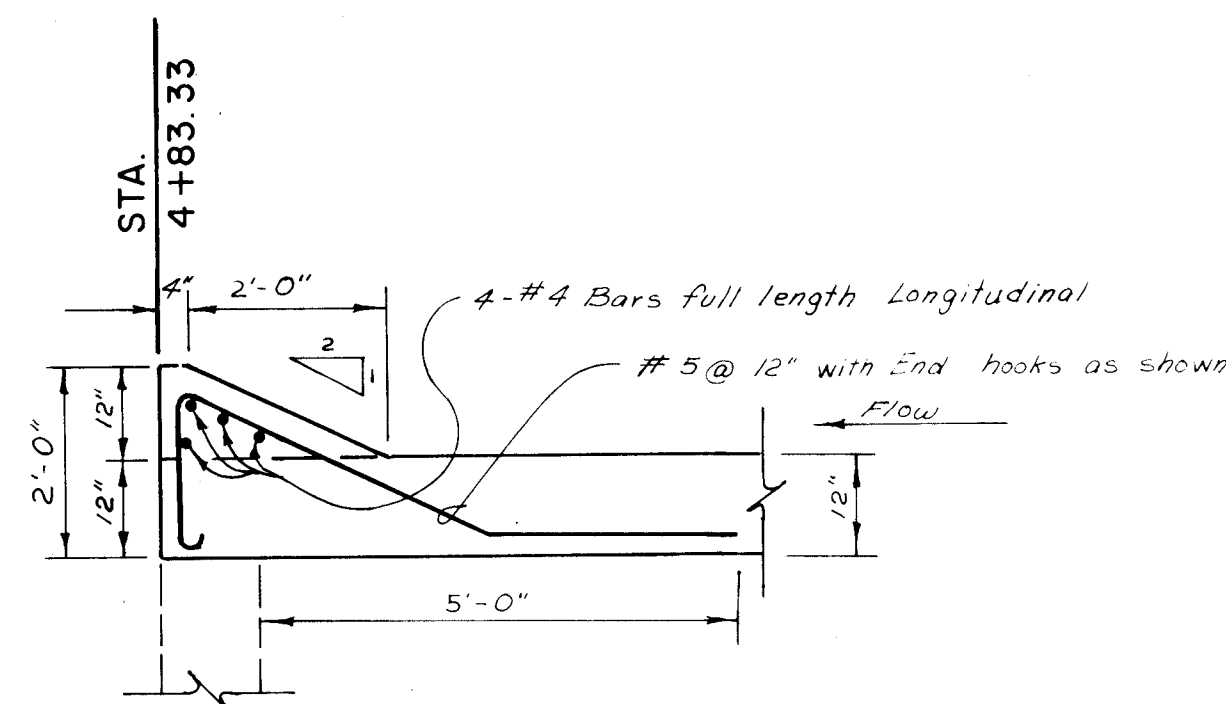
END WINGWALL SECTION * SEE ALSO SECTION A
SCALE 3/8" = 1'-0"

1 2 3 4 5 6 7 8 9 10 11 12
26 22600584

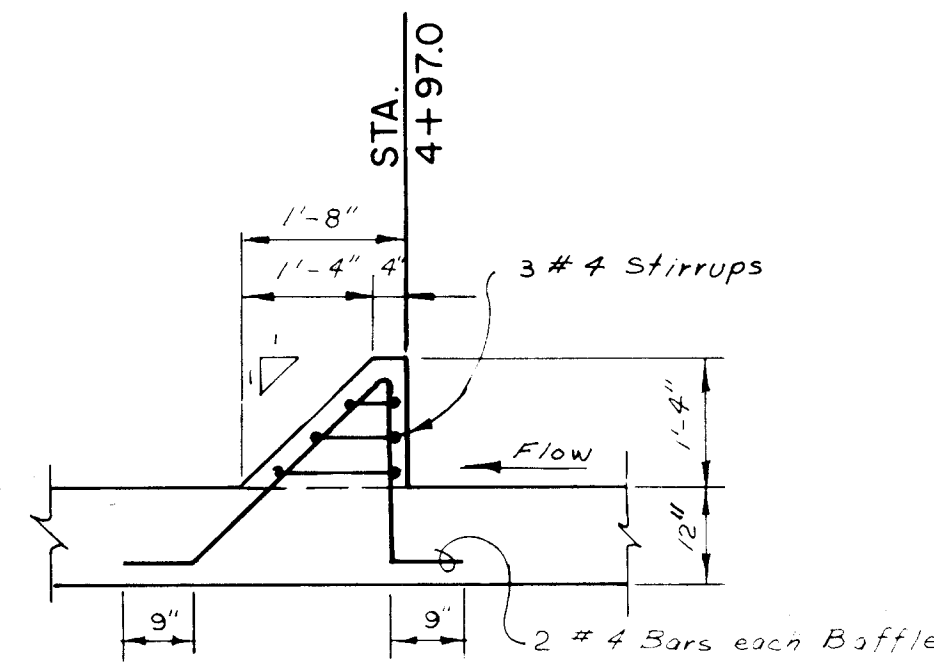
APPROVED BY A.M.A.F.C.A.
Richard E. Gerard 9/10/84
EXECUTIVE ENGINEER DATE

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY					
TITLE: TRAMWAY CHANNEL DROP STRUCTURE REINFORCING DETAILS					
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer			Liquid Waste		
A.C.E. - Design			Traffic		
A.C.E. - Hydrology			Water		
DRAWING NO.	2260	MAP NO.	E-22	SHEET	5 OF 10

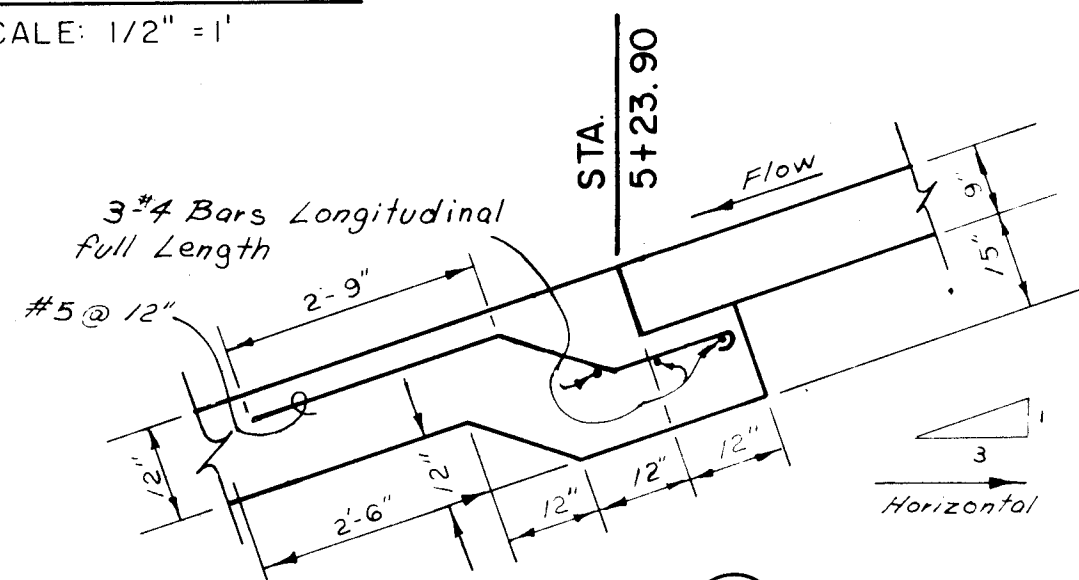
RECORD DRAWING

SECTION **B**
4/6**TYPICAL SECTION THRU END SILL - STA. 4+83.33**

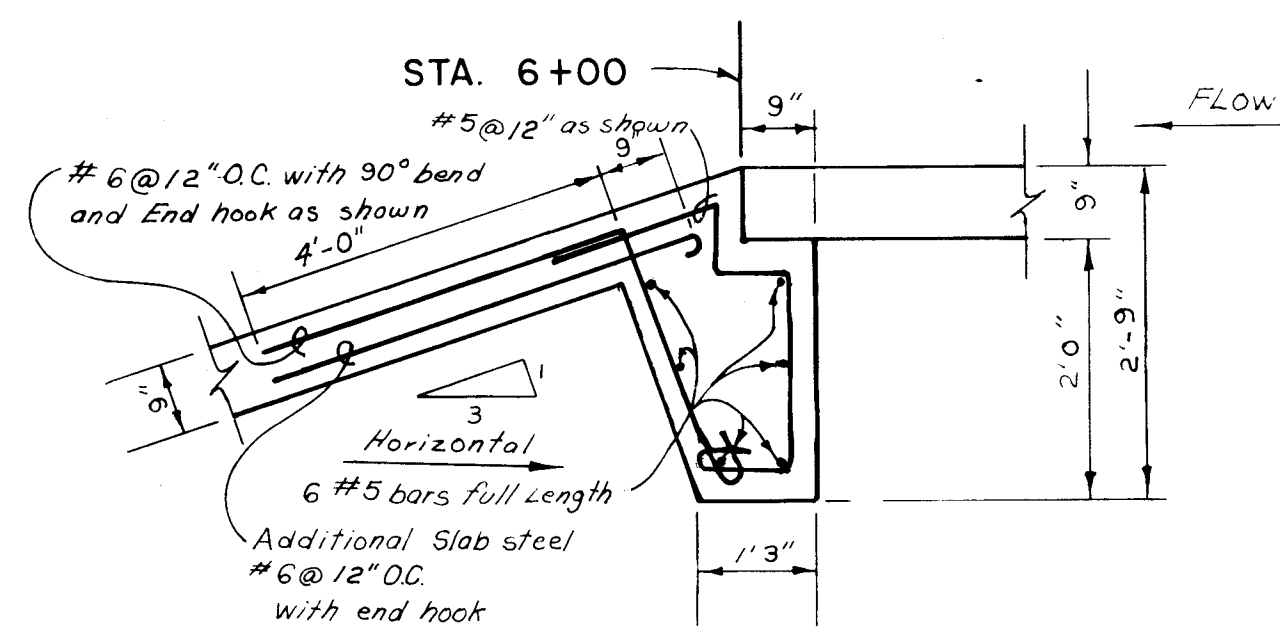
SCALE: 1/2" = 1'

SECTION **E**
4/6**TYPICAL SECTION THRU BAFFLE PIERS - STA. 4+97.0**

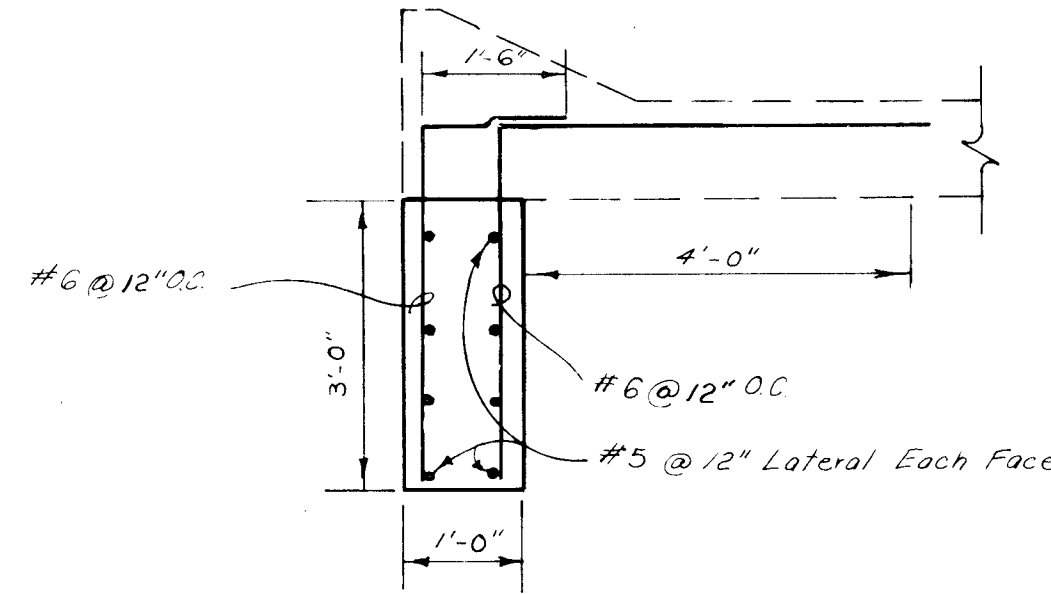
SCALE: 1/2" = 1'

SECTION **H**
4/6**TYPICAL SECTION THRU JOINT - STA. 5+23.9**

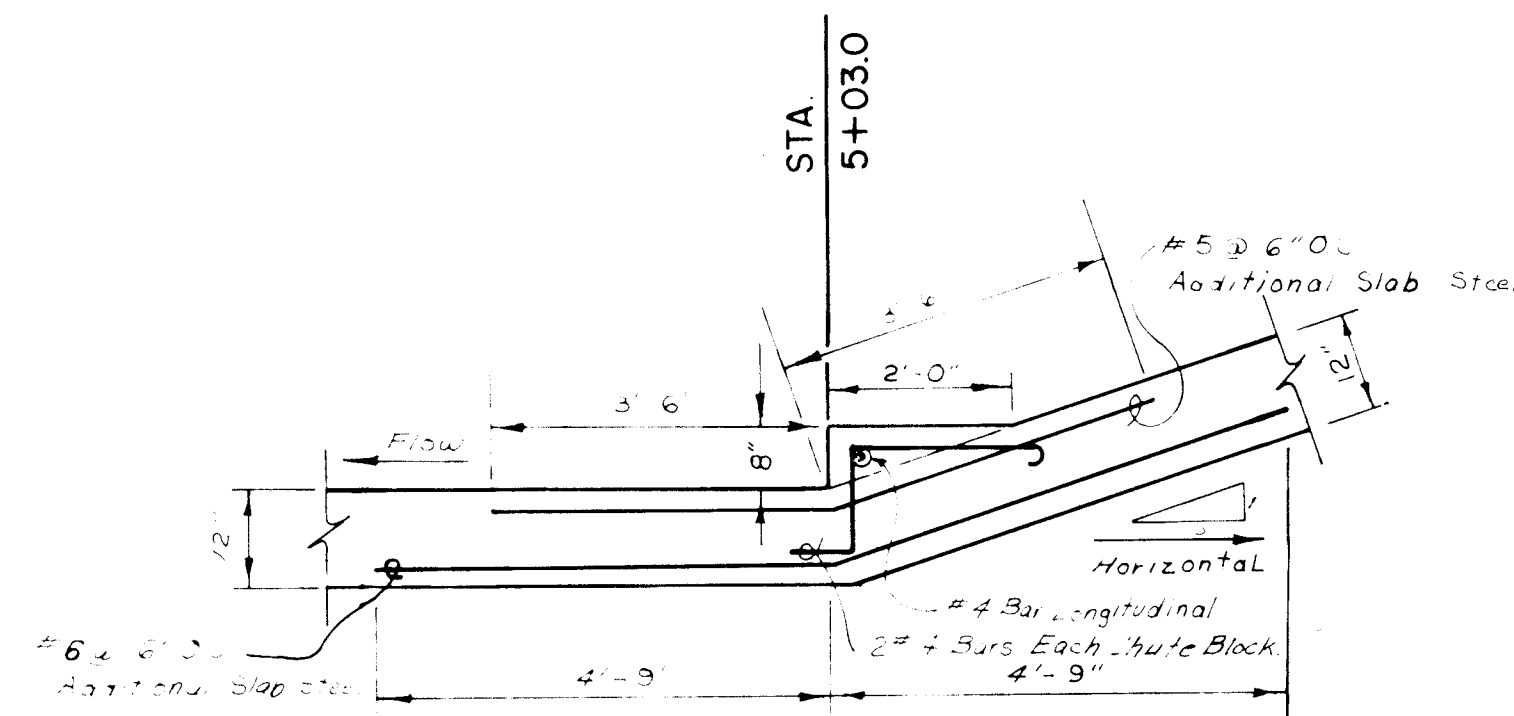
SCALE: 1/2" = 1'

SECTION **N**
4/6**TYPICAL SECTION THRU JOINT - STA. 6+00**

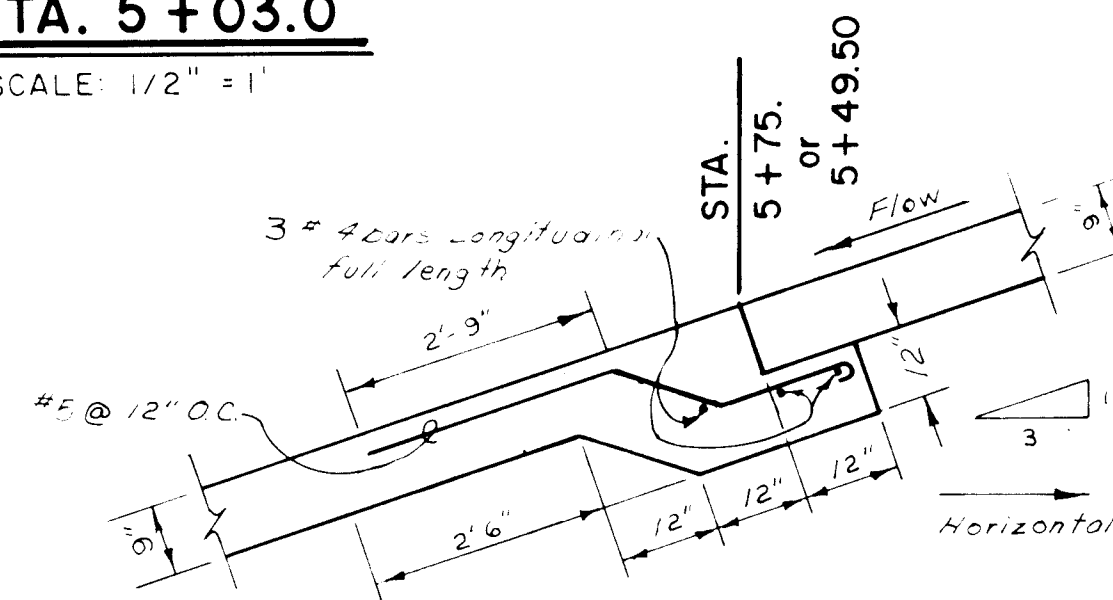
SCALE: 1/2" = 1'

SECTION **C**
4/6**TYPICAL SECTION THRU TOE WALL - STA. 4+83.33**

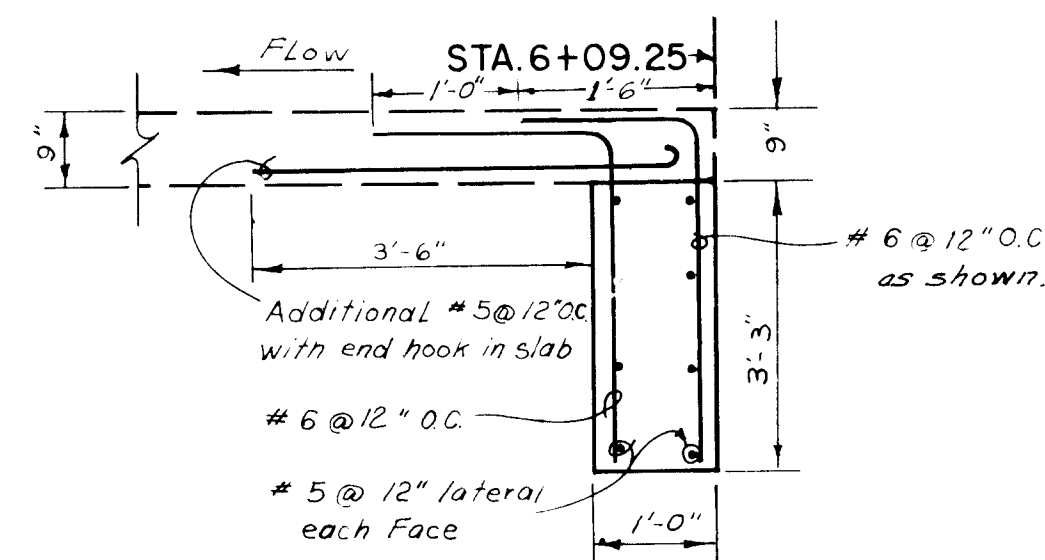
SCALE: 1/2" = 1'

SECTION **F**
4/6**TYPICAL SECTION THRU SAF BASIN BREAK POINT - STA. 5+03.0**

SCALE: 1/2" = 1'

SECTION **J** & **L**
4/6 4/6**TYPICAL SECTION THRU JOINTS - STA. 5+49.5 and 5+75.0**

SCALE: 1/2" = 1'

SECTION **P**
4/6**TYPICAL SECTION THRU TOEWALL - STA. 6+09.25**

SCALE: 1/2" = 1'

STRUCTURAL DESIGN NOTES**1. DESIGN-GENERAL**

DESIGN IN ACCORDANCE WITH: UNIFORM BUILDING CODE, 1982 EDITION; AISC SPECIFICATIONS FOR DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, 1980 EDITION; ACI-318-83 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE - APPENDIX B (WORKING STRESS DESIGN); ACI-350-93 SANITARY ENGINEERING STRUCTURES COMMITTEE REPORT;

2. MATERIALS OF CONSTRUCTION

CAST-IN-PLACE CONCRETE $f'_c=3000$ psi AT 28 DAYS
REINFORCING STEEL $f_y=60,000$ psi (ASTM A-615, GRADE 60)
STRUCTURAL STEEL $f_y=36,000$ psi (ASTM A-36)

3. DESIGN LOADINGS

a. DEAD LOADS:
REINFORCED CONCRETE: 150 lb/CF
STRUCTURAL STEEL: 490 lb/CF
WATER: 62.4 lb/CF
EARTH SATURATED: 135 lb/CF
EARTH DRY: 120 lb/CF

b. LIVE LOADS

LATERAL EARTH PRESSURES COEFFICIENTS

K ACTIVE (MAXIMUM) = 0.6, (MINIMUM) = 0.20
K PASSIVE (MAXIMUM) = 5.0, (MINIMUM) = 1.67
(LOADING EQUALS K x WEIGHT)

4. CONSTRUCTION

a. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI-301, LATEST EDITION, AND AS MODIFIED BY THE SPECIFICATIONS INCLUDED IN THESE CONTRACT DOCUMENTS. REINFORCEMENT PLACEMENT & DETAILING SHALL FOLLOW THE REQUIREMENTS OF THE LATEST EDITION OF THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING, UNLESS OTHERWISE NOTED. REINFORCING STEEL FOR SLABS SHALL BE SUPPORTED ON CHAIRS. REINFORCING STEEL FOR FOOTING MAY BE SUPPORTED BY PRECAST CONCRETE BRICKS, BUT ONLY TO THE EXTENT AND SPACING ALLOWED BY THE ENGINEER. IN NO CASE SHALL REINFORCING STEEL BE SUPPORTED BY BARS DRIVEN INTO THE SUBGRADE.

CONCRETE COVER FOR REINFORCING SHALL BE AS REQUIRED BY ACI-318-83. THE PRINCIPAL REINFORCEMENT IN BASE SLABS AND FOOTINGS SHALL BE THE OUTSIDE LAYER OF STEEL. THE PRINCIPAL REINFORCEMENT IN WALLS AND TOP SLABS (WALKWAYS, BRIDGES ETC.) SHALL BE ENCLOSED WITHIN LATERAL (SHRINKAGE AND TEMPERATURE) REINFORCEMENT, BUT EXTREME CARE SHALL BE TAKEN TO ENSURE THAT THIS THE PRINCIPAL REINFORCEMENT IS CENTERED AT A MAXIMUM OF 2 1/2 INCHES FROM THE ADJACENT FACE OF WALL (OR AT A LESSER DISTANCE IN THE CASE OF PRINCIPAL REINFORCING FOR SUPPORTED MEMBERS ENCLOSED ONLY BY TIES OR STIRRUPS).

ACI 318-83 STATES THAT MIN. COVER FOR #3, #4, AND #5 BARS FOR WALLS AND SLABS ARE 1-1/2". #6 AND LARGER BARS REQUIRE 2" COVER. ALL BARS PLACED IN THE BOTTOM LAYER OF FOOTING SLABS CAST AGAINST EARTH REQUIRE 3" MINIMUM COVER.

APPROVED BY A.M.A.F.C.A.
Richard E. Leland 9/11/87
EXECUTIVE ENGINEER DATE

ALBUQUERQUE METROPOLITAN
ARROYO FLOOD CONTROL AUTHORITY

TITLE: TRAMWAY CHANNEL DROP STRUCTURE
REINFORCING DETAILS

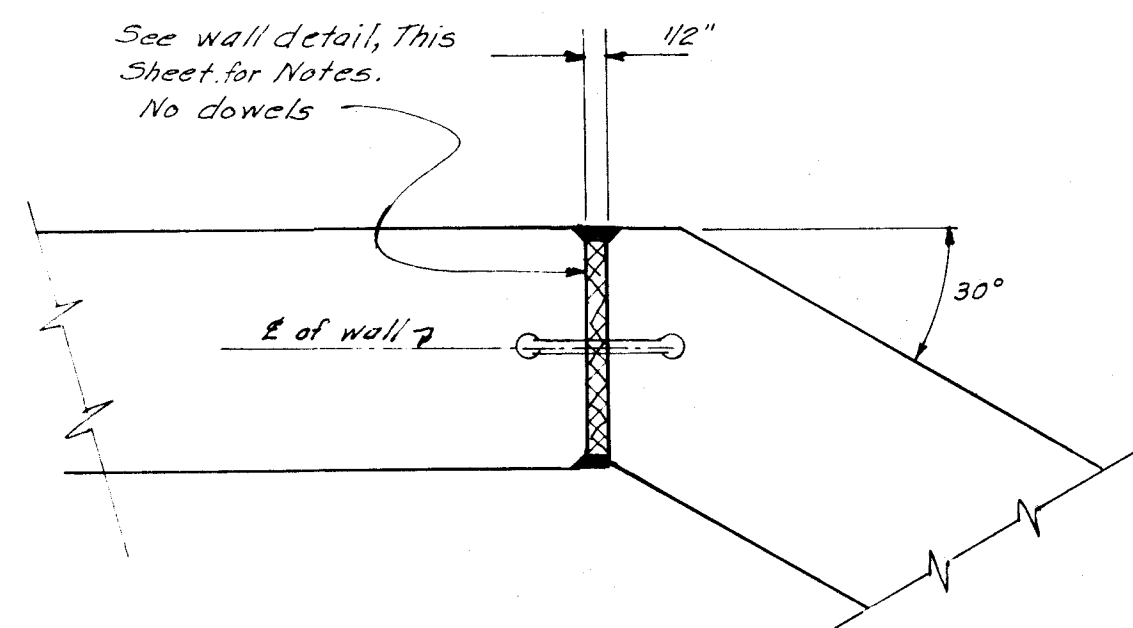
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer			Liquid Waste		
A.C.E. - Design			Traffic		
A.C.E. - Hydrology			Water		

DRAWING NO.	2260	MAP NO.	E-22	SHEET OF	6 OF 10
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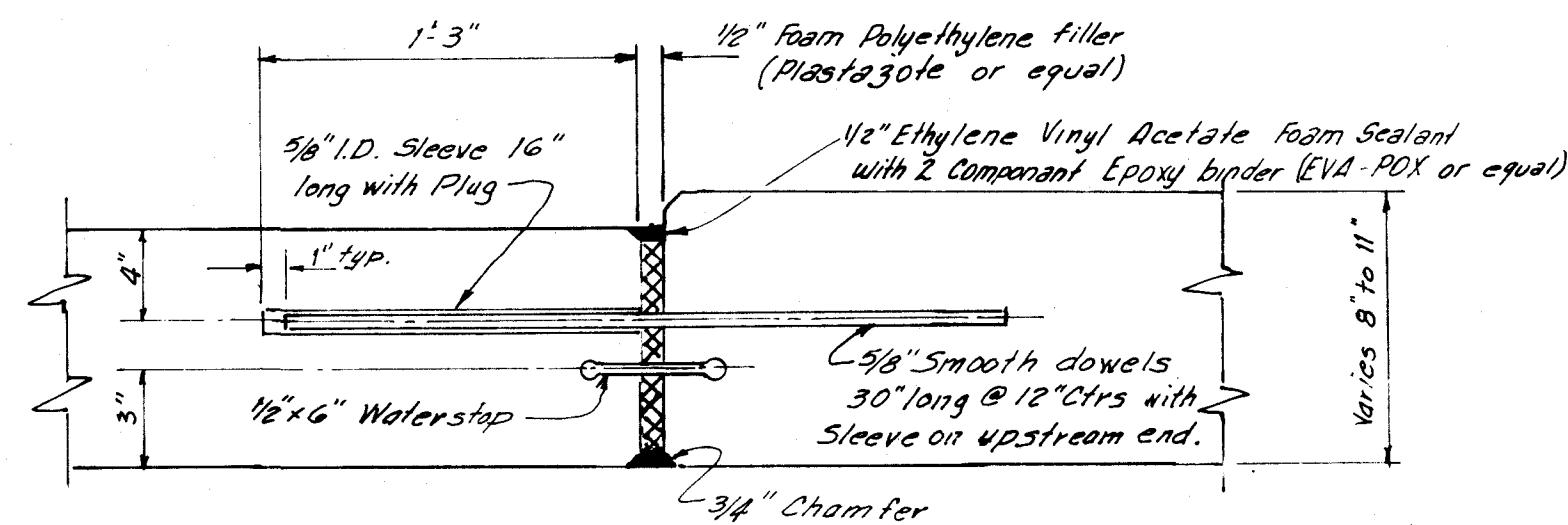
RECORD DRAWING

1 2 3 4 5 6 7 8 9 10 11 12
26 22600684

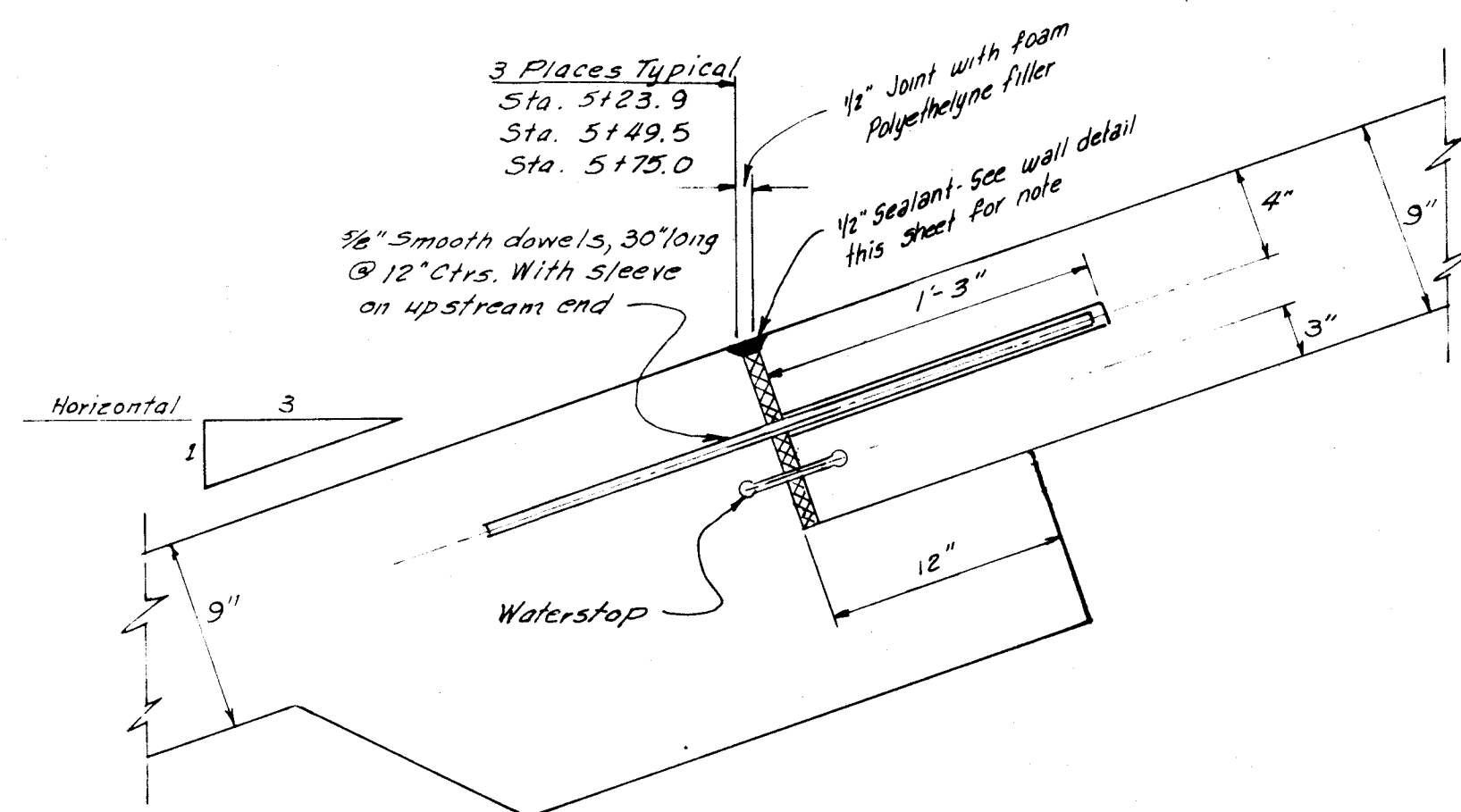
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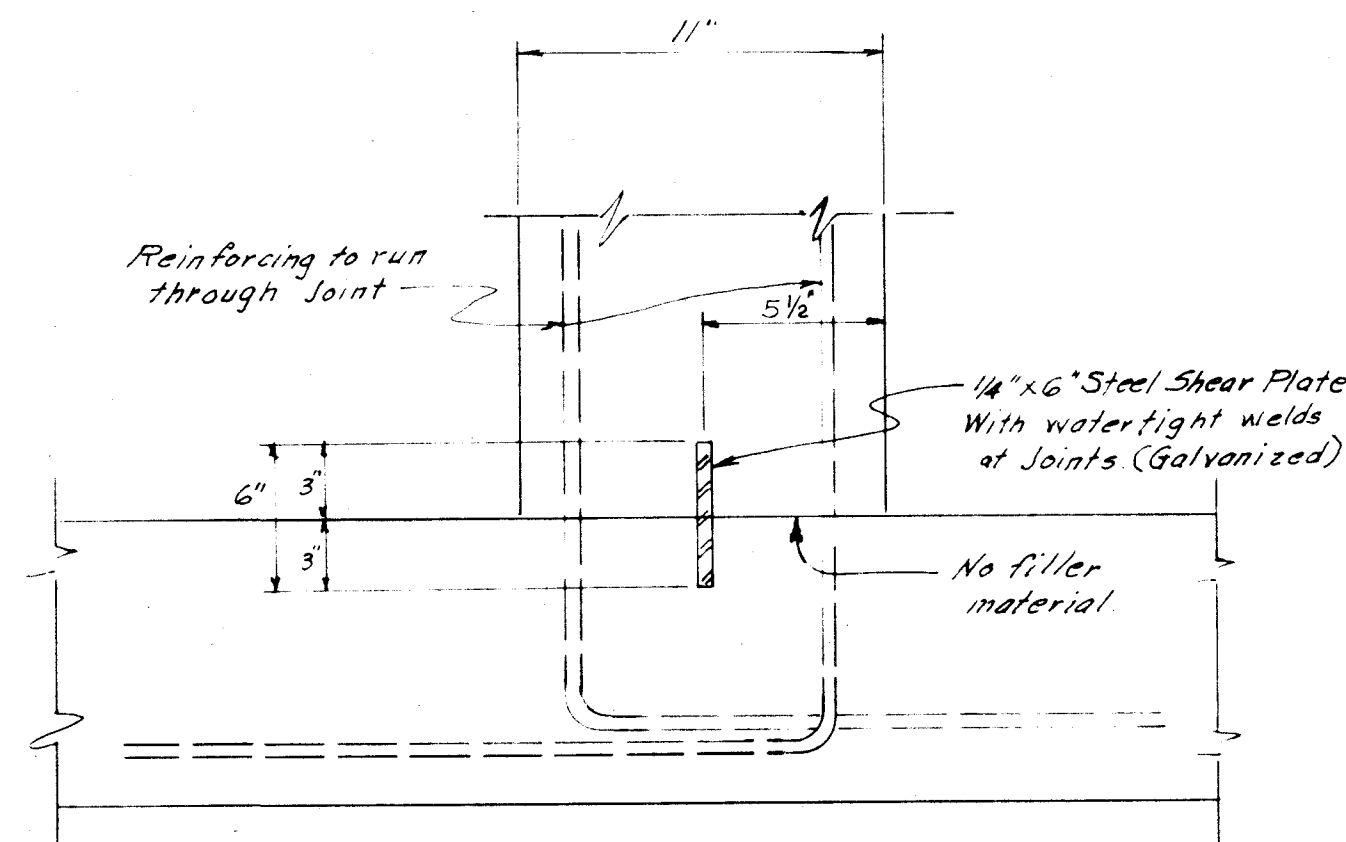
TYPICAL ARTICULATED JOINTS FOR WINGWALLS
STA. 4+83.33 AND STA. 6+00
NOT TO SCALE



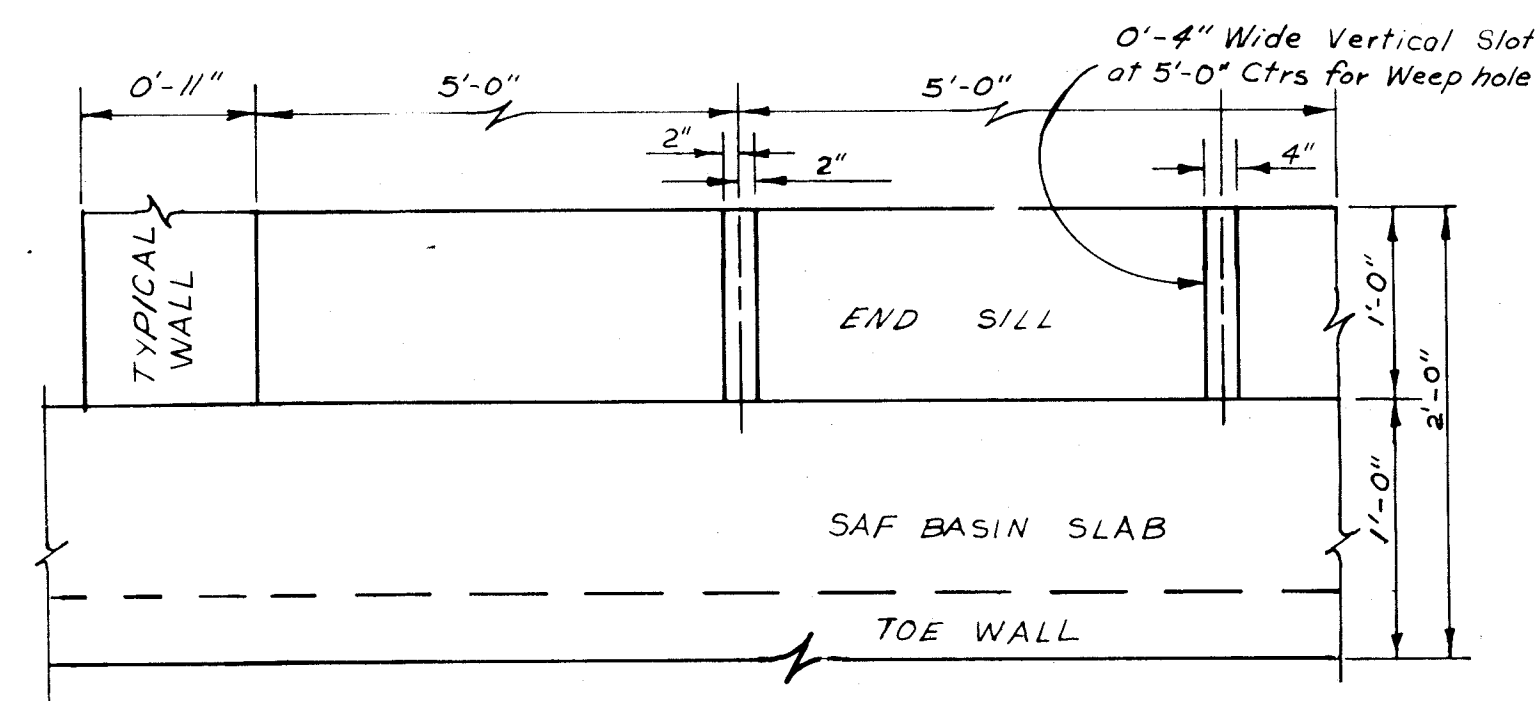
TYPICAL WALL JOINT DETAIL
ALL LOCATIONS EXCEPT ARTICULATED JOINTS
NOT TO SCALE



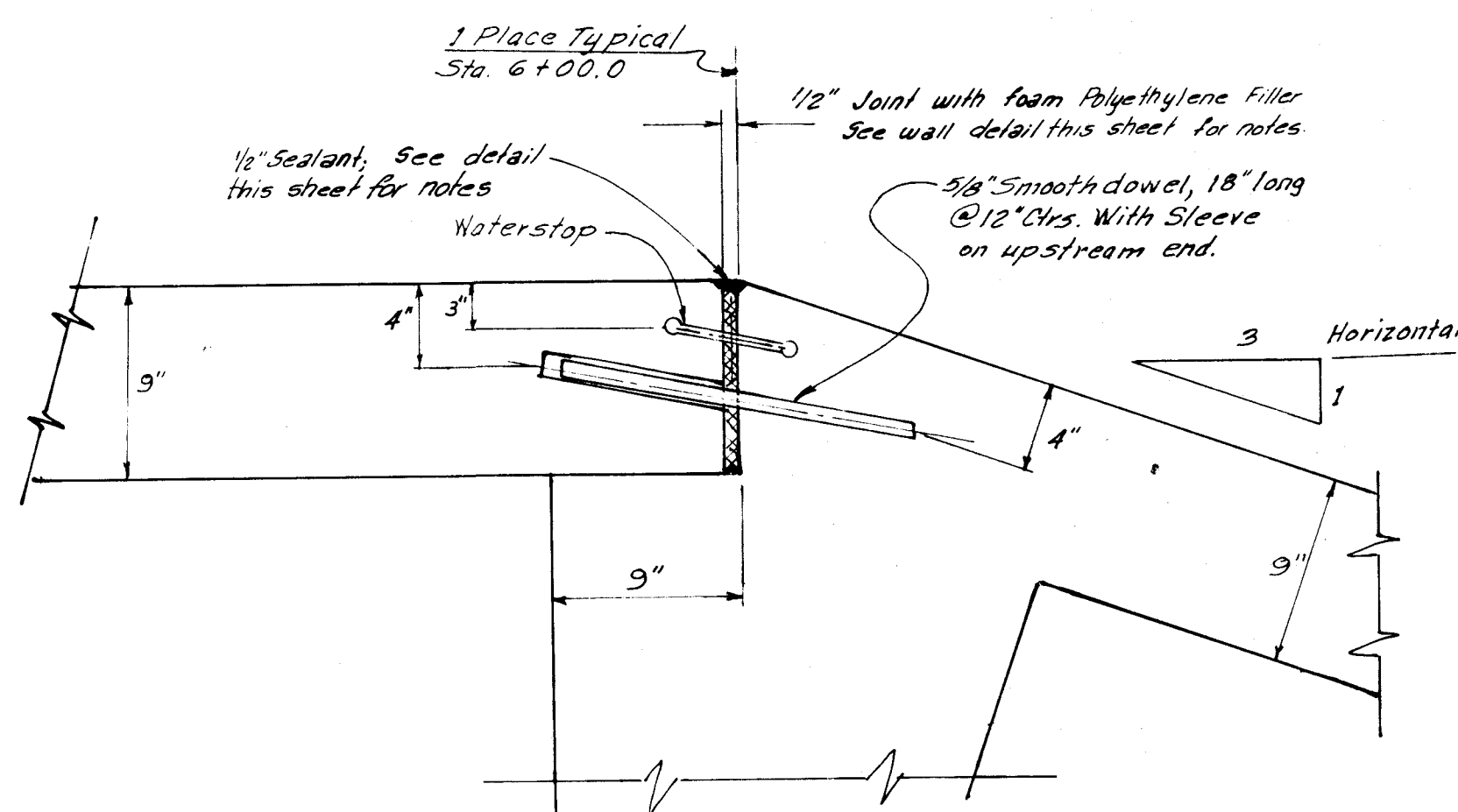
TYPICAL SLAB JOINT DETAIL
STA. 5+23.9, STA. 5+49.5 AND STA. 5+75.0
SCALE 1 1/2" = 1'-0"



TYPICAL CONSTRUCTION JOINT DETAIL
WALL TO SLAB CONNECTION
(FOR S.A.F. STILLING BASIN ONLY)
NOT TO SCALE



WEEPHOLE SLOT DETAIL
STA 4+83.33
SCALE 1" = 1'-0"



TYPICAL SLAB JOINT DETAIL
STA. 6+00
SCALE 1 1/2" = 1'-0"

1 2 3 4 5 6 7 8 9 10 11 12
26 22600784

APPROVED BY A.M.A.F.C.A.
Richard E. Kennedy 9/1/84
EXECUTIVE ENGINEER DATE

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY					
TITLE: TRAMWAY CHANNEL DROP STRUCTURE MISC. CONCRETE DETAILS					
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer			Liquid Waste		
A.C.E. - Design			Traffic		
A.C.E. - Hydrology			Water		
DRAWING NO. 2260			MAP NO. E-22 SHEET 7 OF 10		

RECORD DRAWING

ORIGINAL	SURVEYED _____ BY _____ DATE _____
SURVEY	PLOTTED _____
NOTE BOOK	TEMPLATE _____
NO.	AREAS _____
	AREAS CHECKED _____



Estimated Earthwork Quantities

EMBANKMENT = 513.6 C.Y.

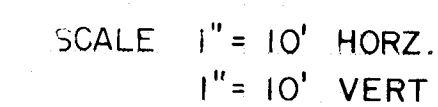
EXCAVATION = 903.8 C.Y.

5560

DRAWING NO.	2260	MAP NO.	E - 22	SHEET	8	OF	10
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RECORD DRAWING

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		

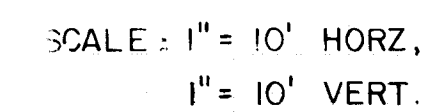


LEGEND										AS BUILT		INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS		DESIGN		APPROVED			
EXISTING GROUND										CONTRACTOR		NO.		FIELD NOTES		NO.		ENGINEER'S SEAL		NO.		DESIGN		APPROVED			
NEW CHANNEL										WORK ORDER BY		DATE		BY		NO.		ENGINEER'S SEAL		REMARKS		DESIGN		APPROVED			
										INSPECTOR'S																	
										ACCEPTANCE BY																	
										FIELD BY																	
										DRAWINGS																	
										CORRECTED BY																	
										MICRO-FILM																	
										RECORDED BY																	
										NO.																	
Estimated Earthwork Quantities EMBANKMENT = 3828.3 C.Y. EXCAVATION = 9382.8 C.Y.										CONTRACTOR Manitoba St., 100 ft. west of Tramway Blvd.		DATE 1-22-54		BY post projecting 0.3 ft. above ground.		NO. Elevation = 5057.02'		ENGINEER'S SEAL Richard E. Leonard		REVISIONS DESIGN		DESIGNED BY KGF DATE 4/84		DRAWN BY GSH DATE 4/84		CHECKED BY DATE	
APPROVED BY R. E. Leonard EXECUTIVE ENGINEER										NO. DATE		REMARKS		BY		DESIGNED BY KGF DATE 4/84		DRAWN BY GSH DATE 4/84		CHECKED BY DATE							
ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY																											
TITLE: TRAMWAY CHANNEL DROP STRUCTURE CROSS SECTIONS																											
APPROVALS		ENGINEER		DATE		DRAWINGS		ENGINEER		DATE		APPROVED		DATE		DESIGNED		DATE		DRAWN		DATE		CHECKED		DATE	
City Engineer						Liaison						APPROVED				DESIGNED				DRAWN				CHECKED			
A.C.E. Design						Traffic						APPROVED				DESIGNED				DRAWN				CHECKED			
A.C.E. Hydrology						Water						APPROVED				DESIGNED				DRAWN				CHECKED			
DRAWING NO.		2260		MAP NO.		E-22		SHEET		9		OF		10		DESIGNED				DRAWN				CHECKED			

RECORD DRAWING

0655

ORIGINAL			
SURVEY	SURVED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
NO	AREAS CHECKED		



Estimated Earthwork Quantities

EMBANKMENT = 2298.9 CY

EXCAVATION = 14.4 CY

Total Cut	10301	cy
Total Fill	6841	cy
15% Shrink	7867	cy
Excess	2434	

Note Numbers shown For earthwork
 Volumes are for information only
 Contractor shall verify earth work
 quantities and base his bid on his own
 figures.

A RUSSIAN METROPOLITAN
 YOUNG CONTROL AUTHORITY
 TRAMWAY CHAIRMAN'S STRUCTURE
 CROSS SECTIONS

DRAWING NO.	SHEET 10	OF 10
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RECORD DRAWING

		ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
				FIELD NOTES					
				NO.	BY	DATE			
								CONTRACTOR	
								WORK DONE BY INSPECTORS	
								ACCEPTANCE BY DATE	
								FIELD LOCATION BY DATE	
								DRAWINGS CORRECTED BY DATE	
				<i>MICRO-FILM INFORMATION</i>					
								RECORDED BY DATE	
								NO	

This station is located on the north side of
Manitoba St., 100 Ft. west of Tramway Blvd.

The station is a standard ACS brass tablet,
stamped "I-Fe2", set in top of a concrete
post projecting 0.3 ft. above ground.

Elevation: 5957.02'

DESIGNED BY KSF DATE 4/84
DRAWN BY SGH DATE 2/84