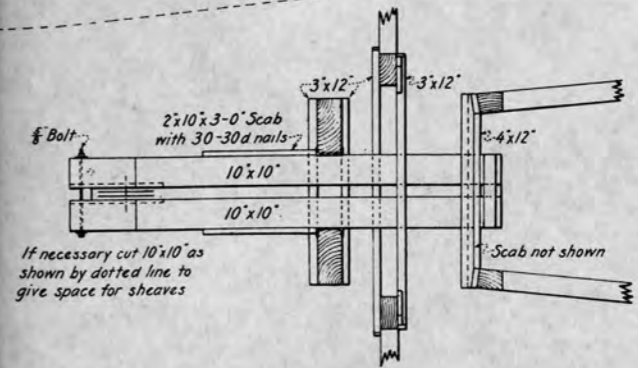
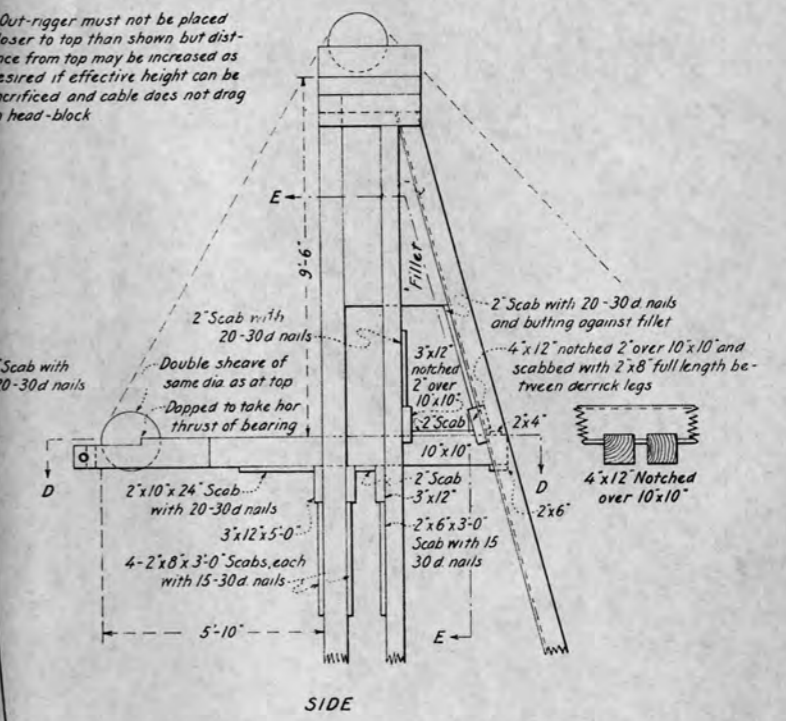
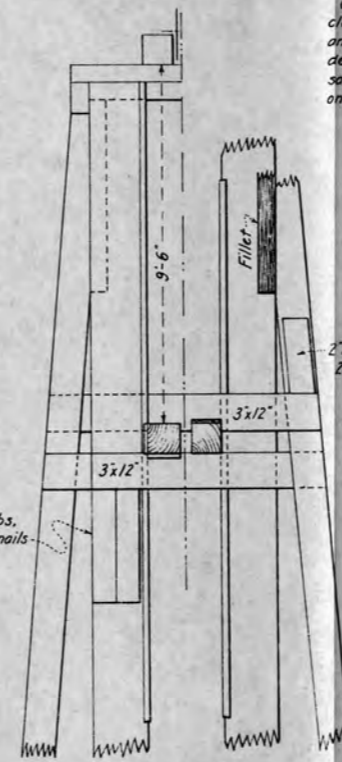


SKIDS FOR DRILL COLUMN

Provide means for maintaining constant position of derrick on barge if friction is not sufficient



Out-rigger must not be placed closer to top than shown but distance from top may be increased as desired if effective height can be sacrificed and cable does not drag on head-block



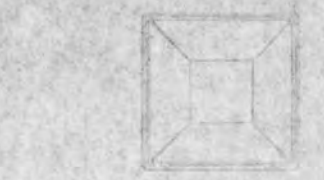
DERRICK OUT-RIGGER

APPROVED FOR ESTIMATING PURPOSES
A. J. Dralter
CHIEF ENGINEER

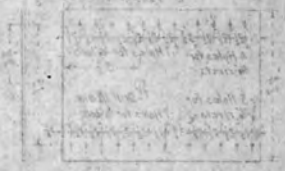
DEPARTMENT OF THE INTERIOR	
BUREAU OF RECLAMATION	
SACRAMENTO VALLEY INVESTIGATIONS	
SALT WATER BARRIER	
DRILL RIG ACCESSORIES	
DRAWN BY N.B.M.	SUBMITTED BY <i>William J. Savage</i>
CHECKED BY <i>A. J. Dralter</i>	RECOMMENDED BY <i>J. L. Savage</i>
SV-3	Berkeley, Calif., July 17, 1924 193-D-121

Plate 3-25
DRILL COLUMN

PLATE 3-25

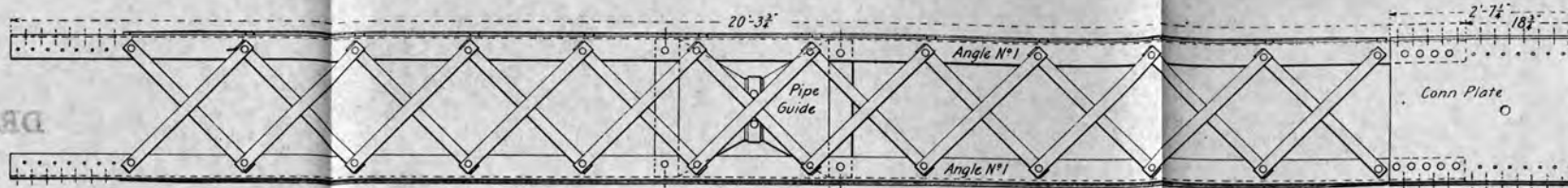


NOTE:
The lattice structure is made of 1/2 inch diameter steel rods. The rods are spaced 1/2 inch apart. The lattice is made of 1/2 inch diameter steel rods. The rods are spaced 1/2 inch apart. The lattice is made of 1/2 inch diameter steel rods. The rods are spaced 1/2 inch apart.

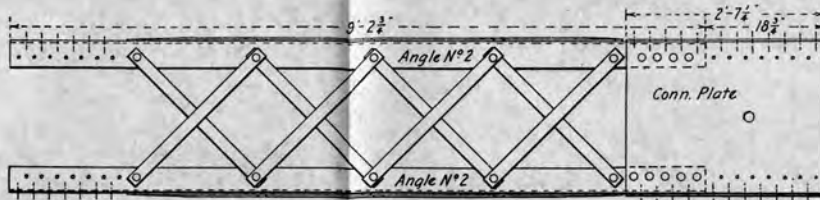


APPROVED FOR ESTIMATING PURPOSES
DATE: 10/1/54
BY: [Signature]
SALT WATER BARRIER
DRILL COLUMN
GENERAL CONTRACTOR
DESIGNATION: [Signature]
DESIGNATION: [Signature]
DESIGNATION: [Signature]

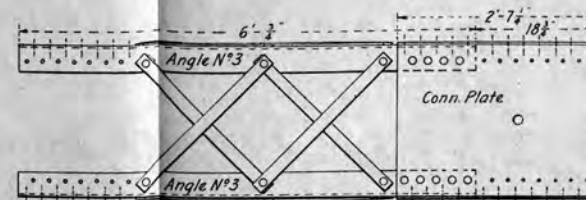




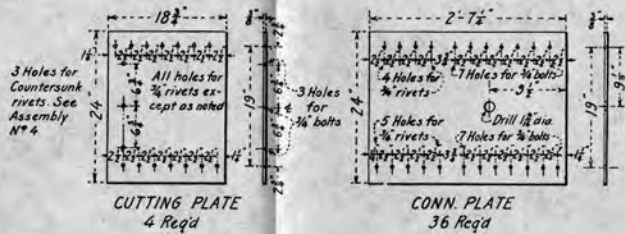
ASSEMBLY N°1
6 Req'd



ASSEMBLY N°2
1 Req'd

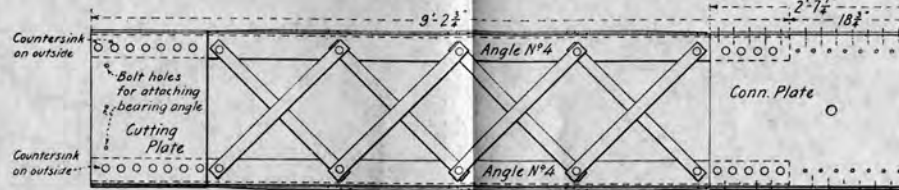


ASSEMBLY N°3
1 Req'd

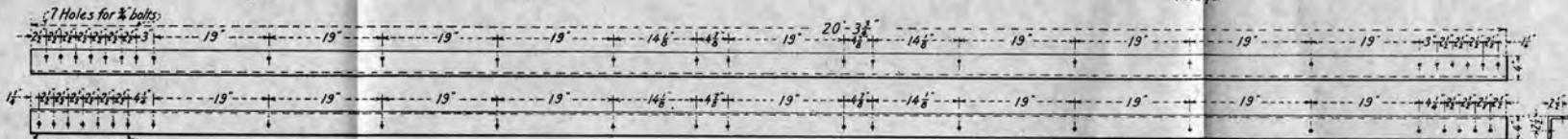


CUTTING PLATE
4 Req'd

CONN. PLATE
36 Req'd

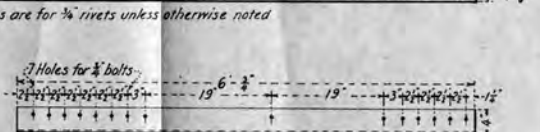


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1 Req'd

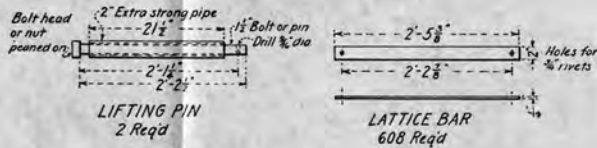


ANGLE N°1
24 Req'd

ANGLE N°2
4 Req'd



ANGLE N°3
4 Req'd

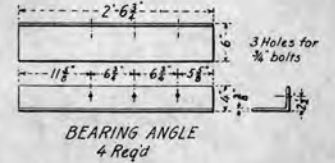
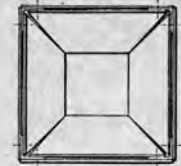


LIFTING PIN
2 Req'd

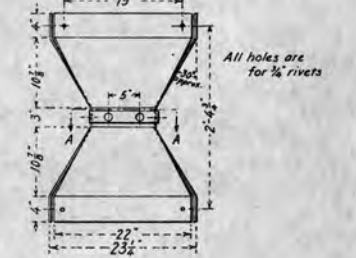
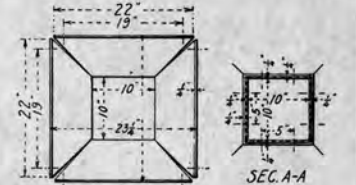
LATTICE BAR
608 Req'd



ANGLE N°4
4 Req'd



NOTES
All rivets and bolts 3/8" dia.
All rivets to be shop-driven.
Angle N°1 may be made 19" shorter than shown to suit stock on hand, in which case duplicate Assembly N°2 to retain approximate total combined length.



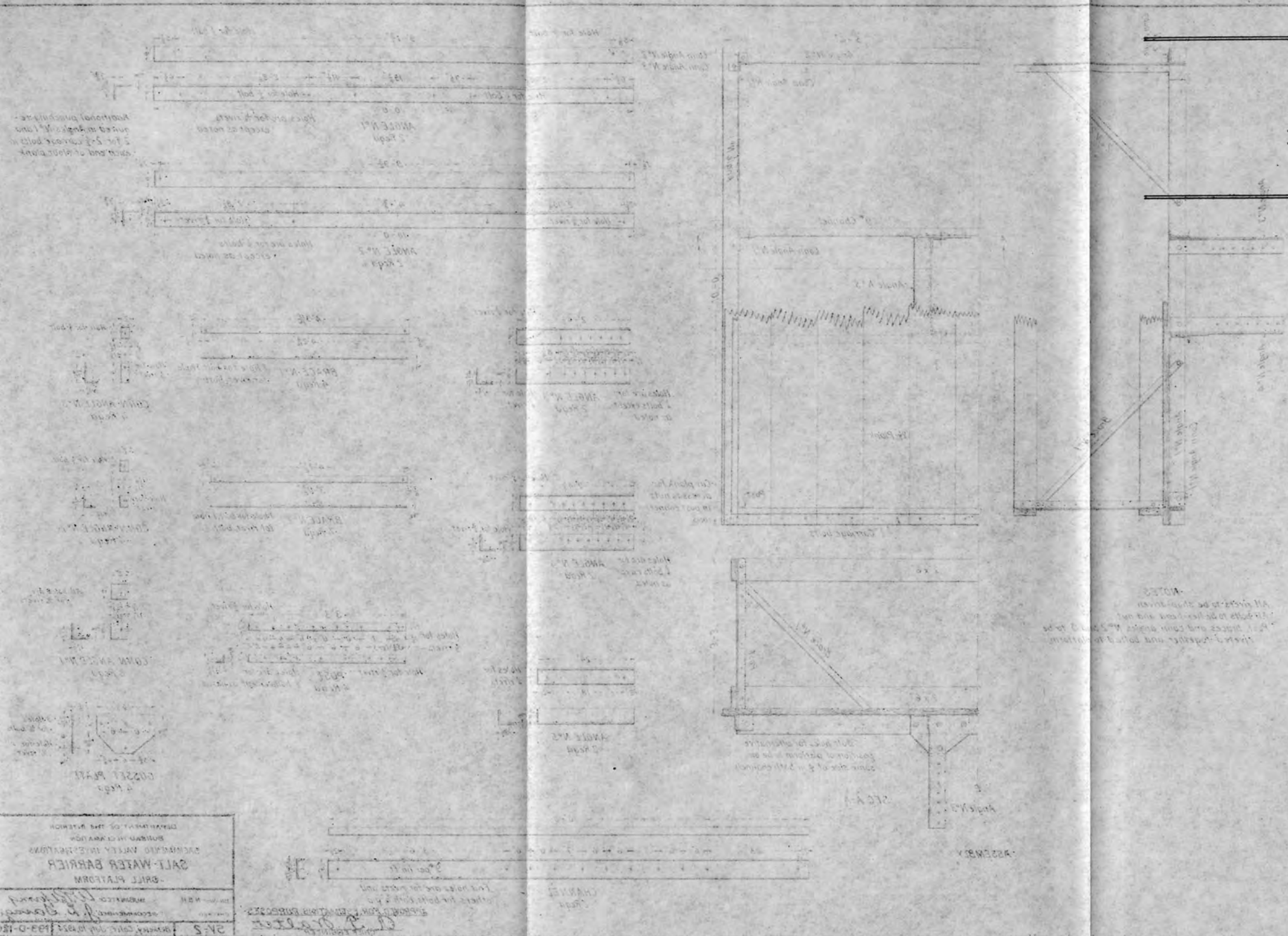
PIPE GUIDE
6 Req'd

APPROVED FOR ESTIMATING PURPOSES
O. P. Walter
CHIEF ENGINEER

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
DRILL COLUMN
DRAWN: N.B.H. SUBMITTED: W.P. King
CHECKED: RECOMMENDED: J. K. Savage
SV-1 Berkeley, Calif., July 5, 1924 193-D-119

Plate 3-26 DRILL PLATFORM

PLATE 3-26



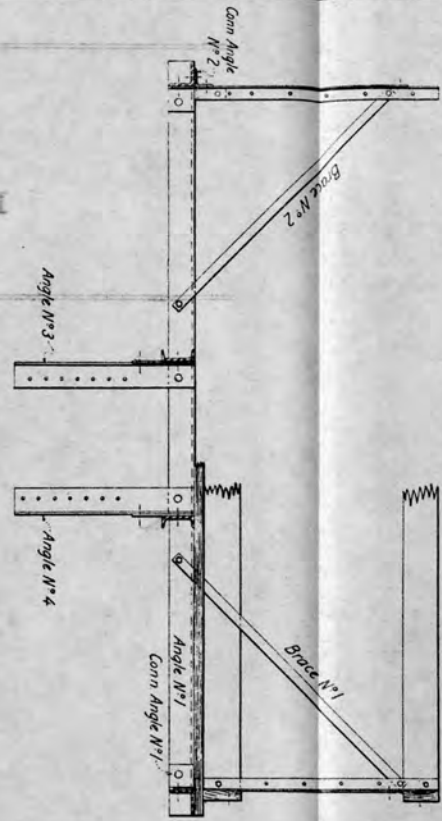
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY DISTRICT
SALT-WATER BARRIER
DRILL PLATFORM

DESIGNED BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

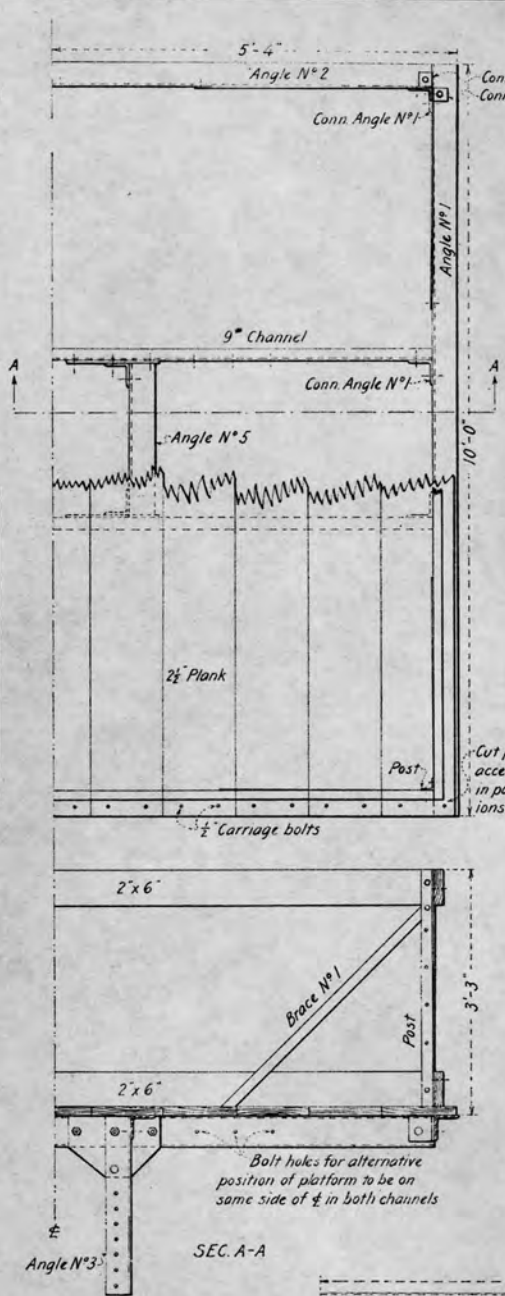
DATE: 1954-10-15

Plate 3-26

DRILL PLATFORM



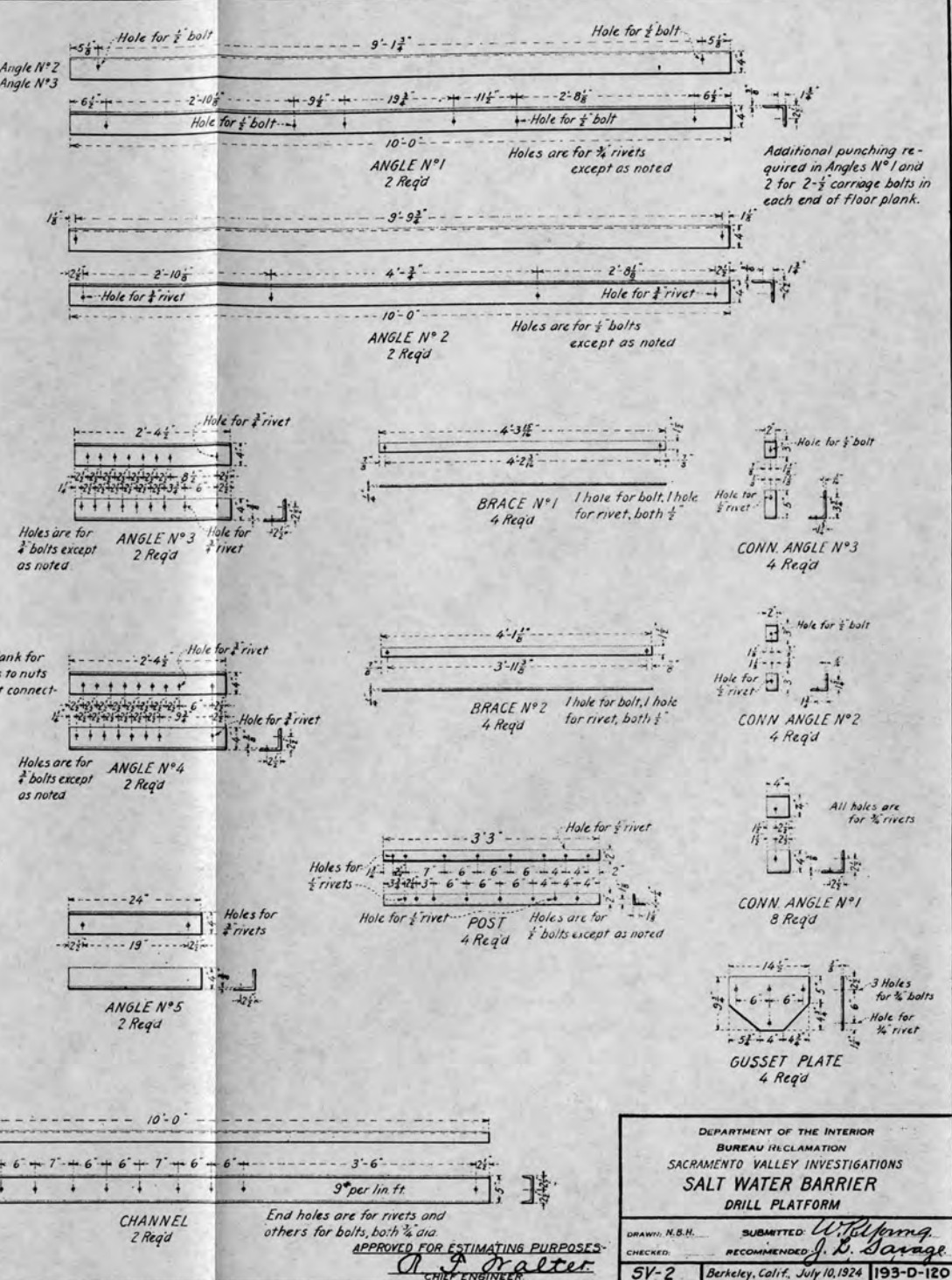
NOTES
 All rivets to be shop-driven
 All bolts to be hex head and nut
 Post, braces and conn angles N° 2 and 3 to be riveted together and bolted to platform.



ASSEMBLY

SEC. A-A

Bolt holes for alternative position of platform to be on same side of $\frac{1}{4}$ in both channels



Additional punching required in Angles N°1 and 2 for 2- $\frac{1}{2}$ carriage bolts in each end of floor plank.

Holes are for $\frac{3}{8}$ bolts except as noted

Holes are for $\frac{3}{8}$ bolts except as noted

Holes for $\frac{1}{2}$ rivets

End holes are for rivets and others for bolts, both $\frac{3}{8}$ dia

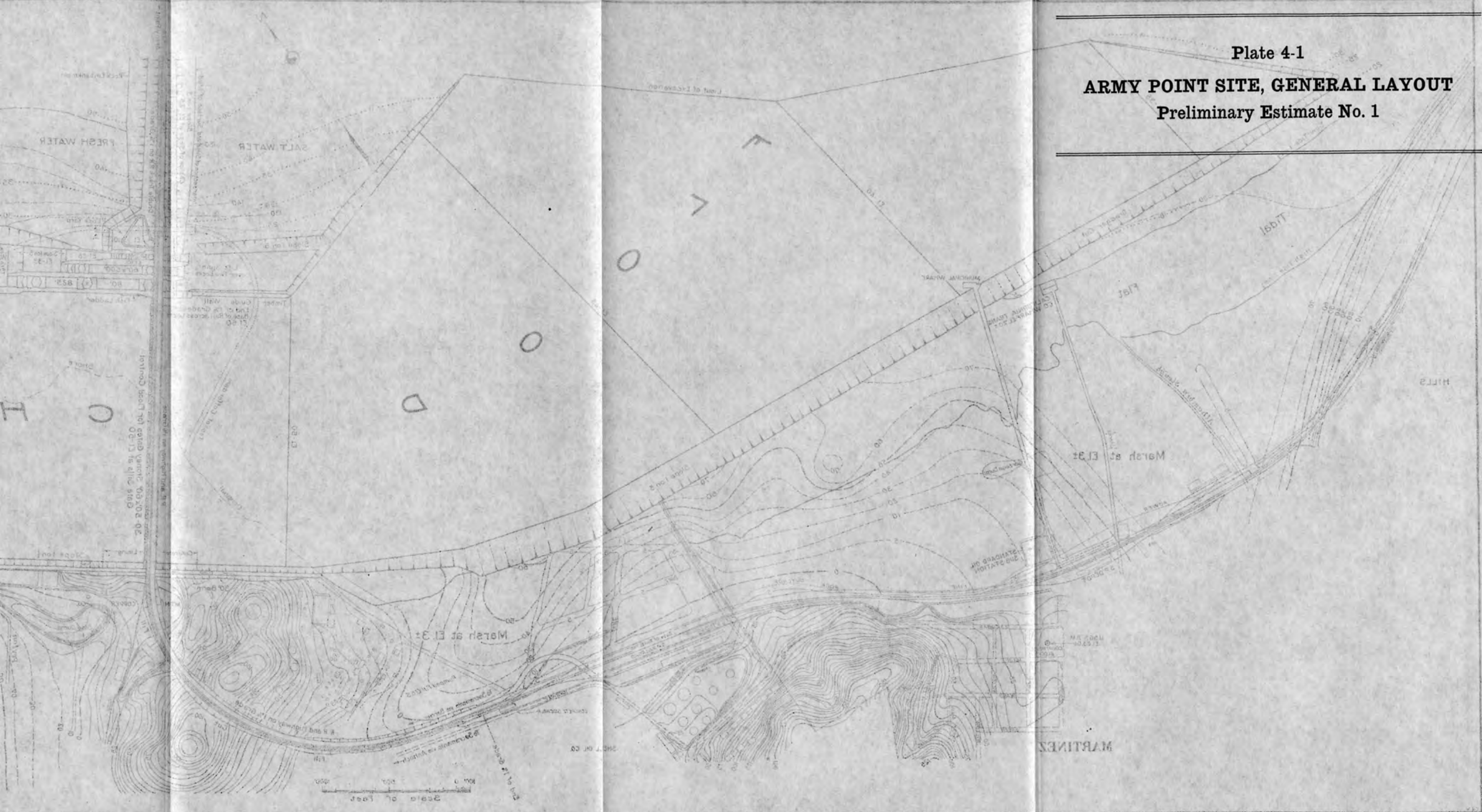
APPROVED FOR ESTIMATING PURPOSES

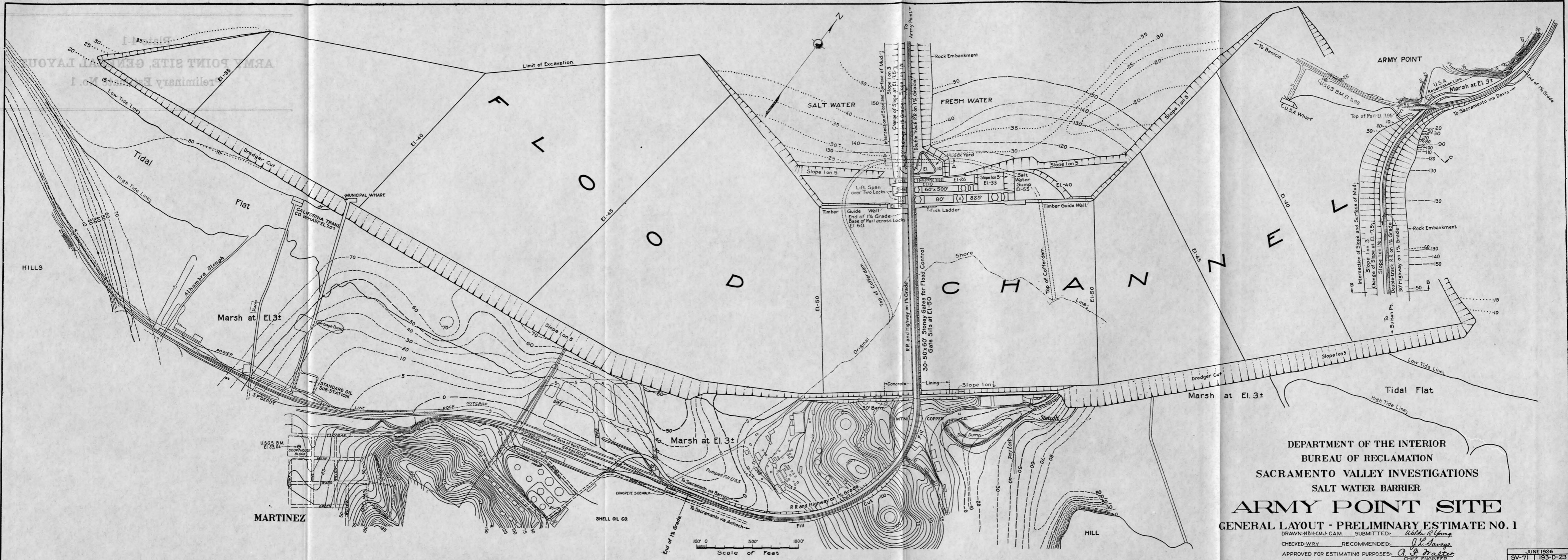
D. J. Walter
 CHIEF ENGINEER

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 DRILL PLATFORM

DRAWN: N.B.H. SUBMITTED: *W. Blomberg*
 CHECKED: RECOMMENDED: *J. D. Savage*
 5V-2 Berkeley, Calif., July 10, 1924 193-D-120

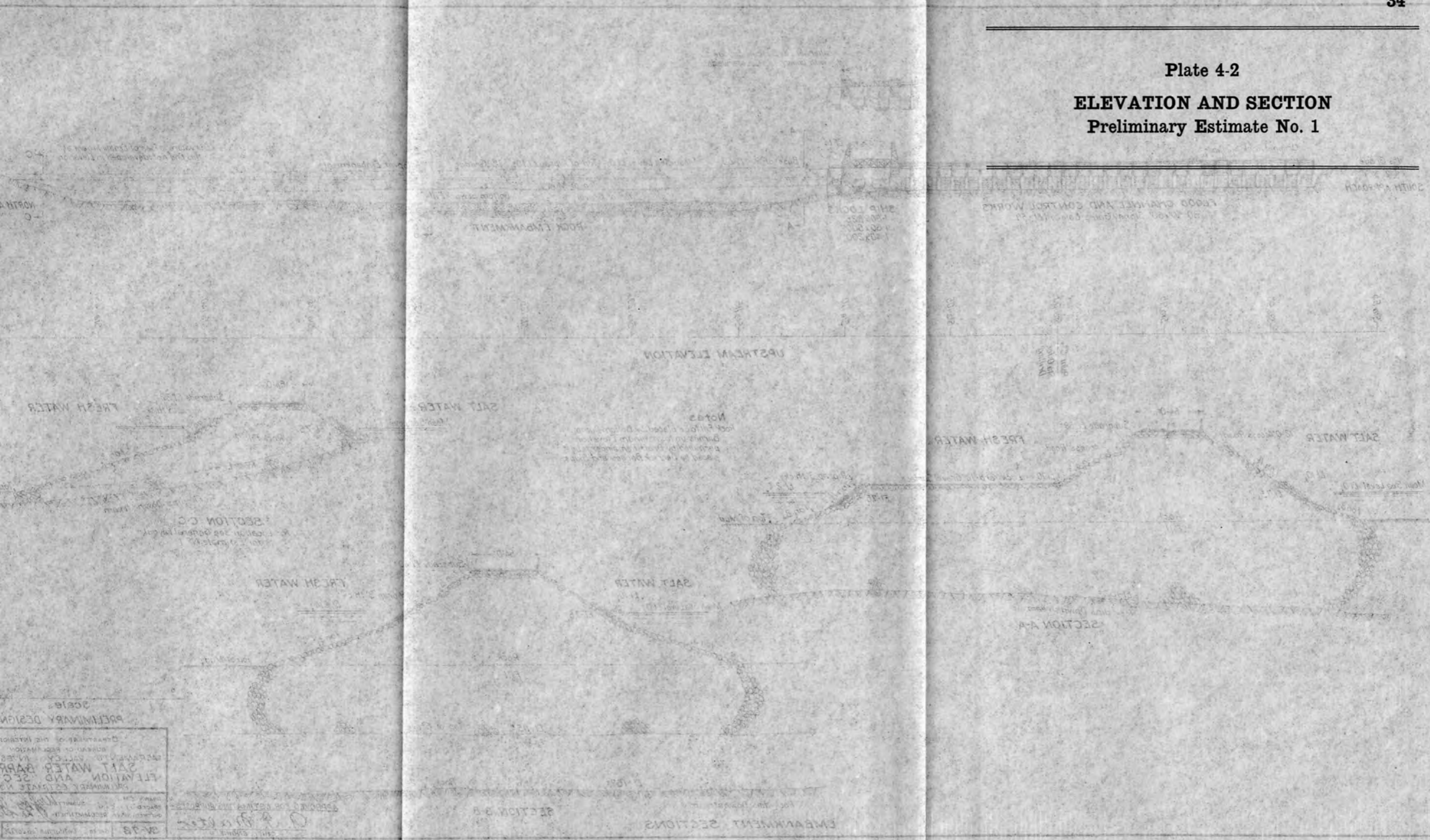
Plate 4-1
ARMY POINT SITE, GENERAL LAYOUT
 Preliminary Estimate No. 1





DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
ARMY POINT SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 1
 DRAWN-NBHC:CMJ-CAM SUBMITTED-*Walter R. Spang*
 CHECKED-WRY RECOMMENDED-*J. K. Savage*
 APPROVED FOR ESTIMATING PURPOSES-*A. J. Walter*
 CHIEF ENGINEER

Plate 4-2
ELEVATION AND SECTION
 Preliminary Estimate No. 1



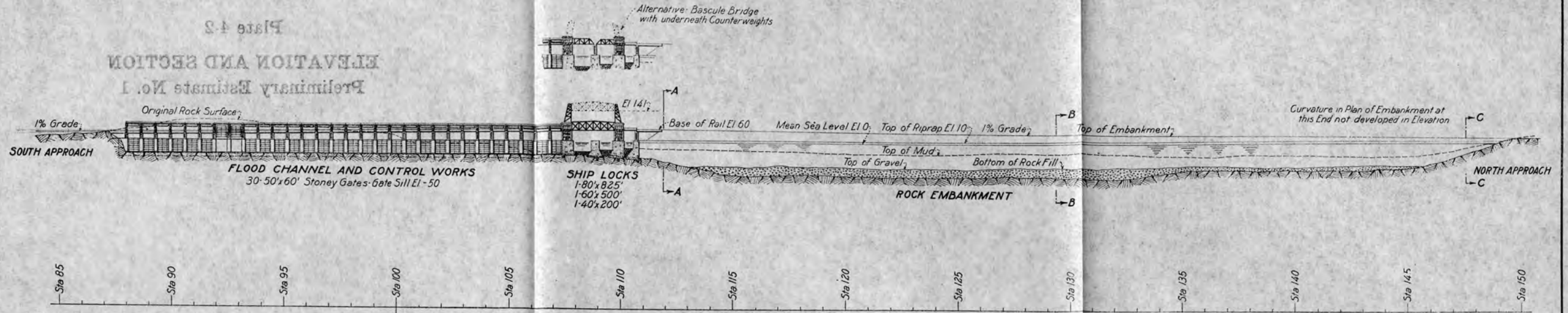
EMBANKMENT SECTIONS

SECTION A-A

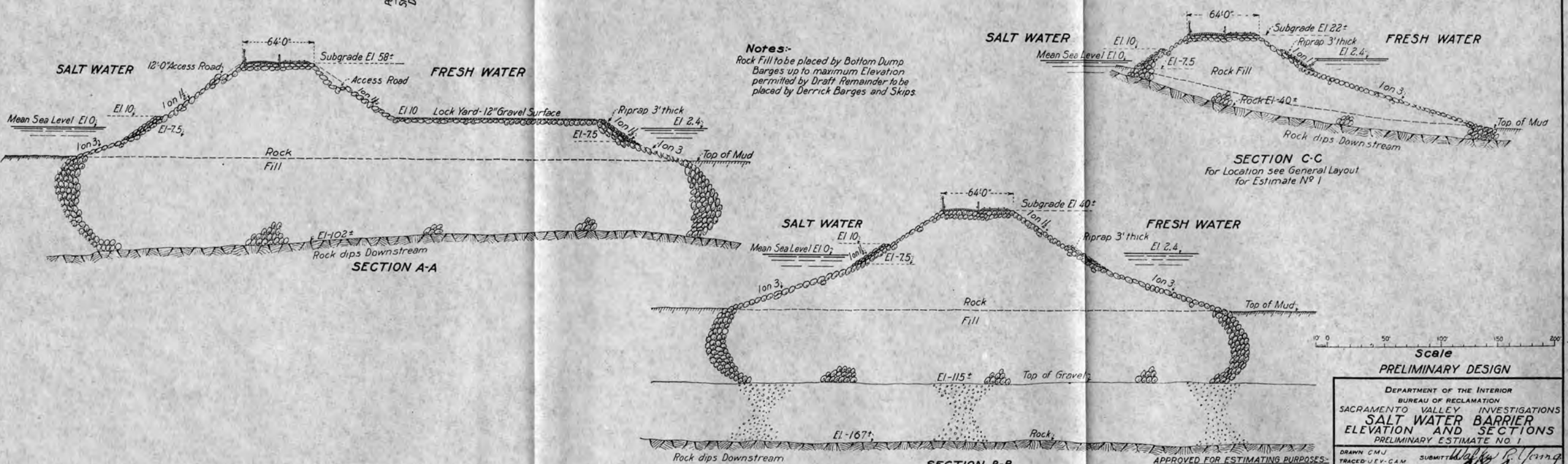
SECTION C-C

PRELIMINARY DESIGN
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY DIVISION
 SALT WATER BARR
 ELEVATION AND SECTION
 PRELIMINARY ESTIMATE NO. 1
 SHEET NO. 34-28

Plate 4-2
ELEVATION AND SECTION
Preliminary Estimate No. 1

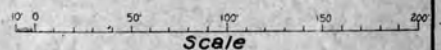


UPSTREAM ELEVATION



Notes:
Rock Fill to be placed by Bottom Dump
Barges up to maximum Elevation
permitted by Draft Remainder to be
placed by Derrick Barges and Skips.

EMBANKMENT SECTIONS



Scale
PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
ELEVATION AND SECTIONS
PRELIMINARY ESTIMATE NO. 1

APPROVED FOR ESTIMATING PURPOSES:
A. J. Dralter
CHIEF ENGINEER

DRAWN C.M.J. SUBMITTED *Walter P. Young*
TRACKED U.E.H. C.A.M. CHECKED N.B.H. RECOMMENDED *J. A. Savage*

SV-72 Berkeley, California Feb. 26, 1926 193-D-24

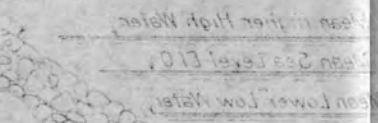
Plate 4-3

ROCK EMBANKMENT, TOP DETAILS

SALT WATER



SALT WATER



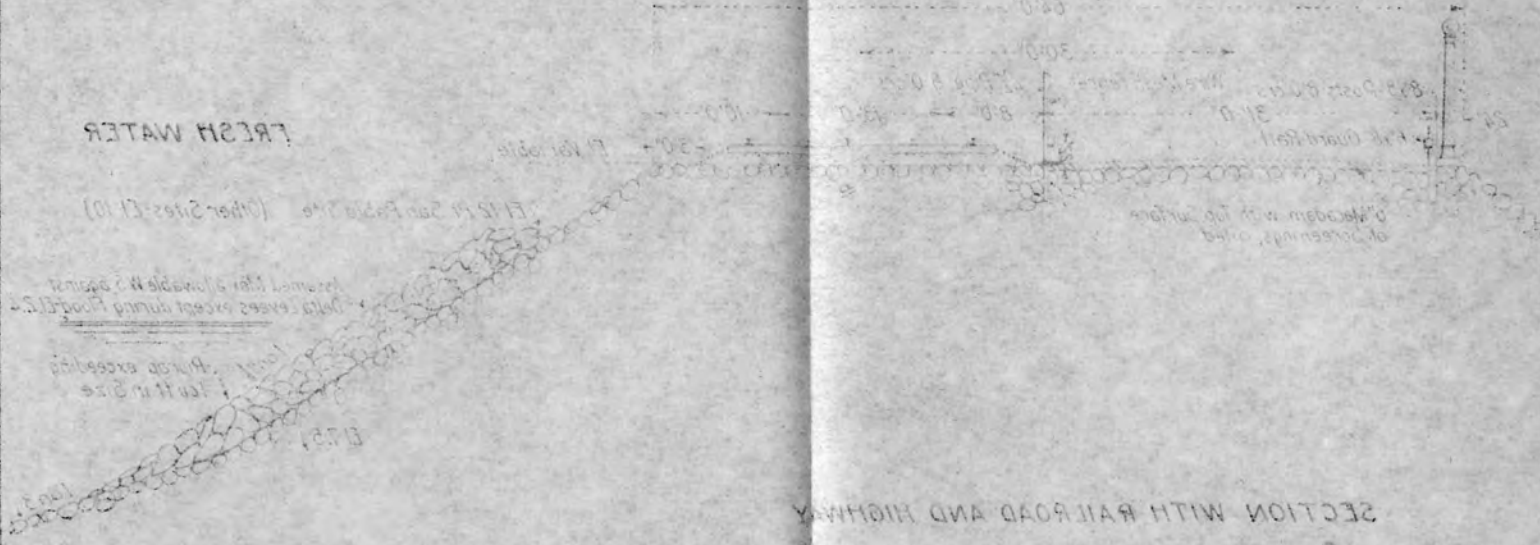
SECTION WITHOUT RAILROAD OR HIGHWAY



FRESH WATER

FRESH WATER

SECTION WITH RAILROAD AND HIGHWAY



Scale
PRELIMINARY DESIGN

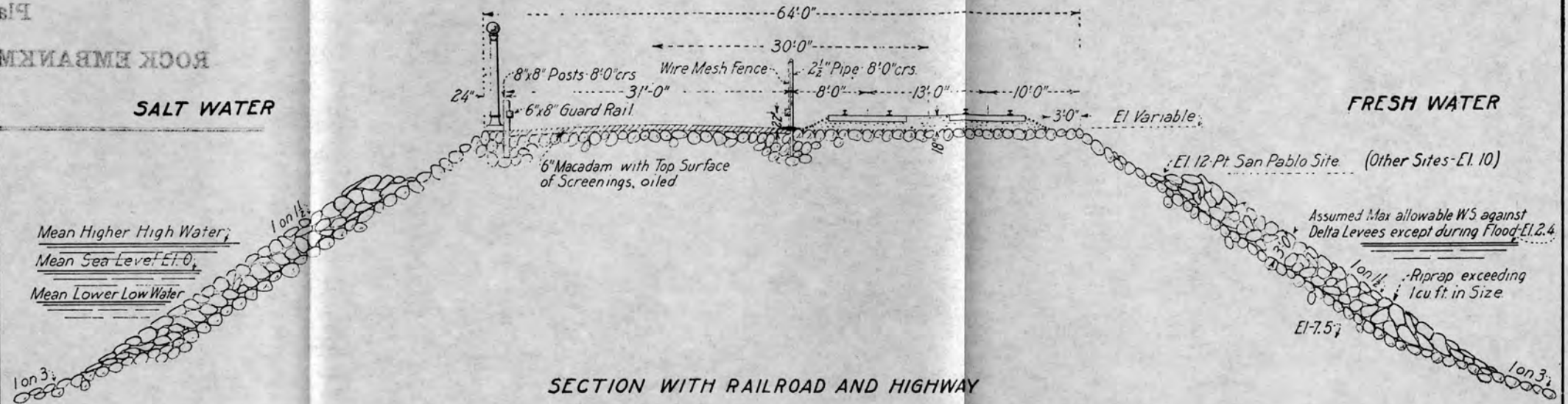
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SALT WATER BARRIER
ROCK EMBANKMENT
TOP DETAILS

APPROVED FOR ESTIMATING PURPOSES

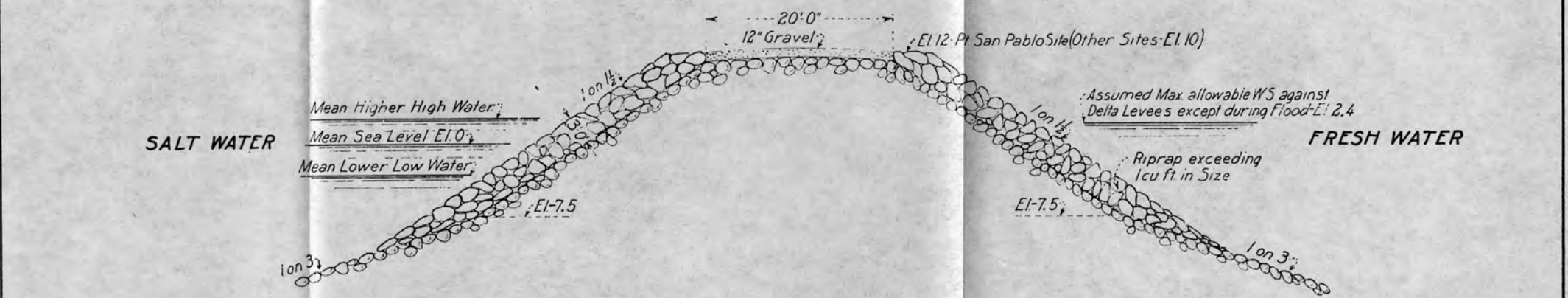
CHIEF ENGINEER
D. J. [Signature]

24-73 24-73 24-73 24-73 24-73

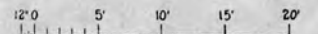
Plate 4-3
ROCK EMBANKMENT, TOP DETAILS



SECTION WITH RAILROAD AND HIGHWAY



SECTION WITHOUT RAILROAD OR HIGHWAY



Scale
PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR.
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
ROCK EMBANKMENT
TOP DETAILS

APPROVED FOR ESTIMATING PURPOSES:

R. F. Walter
CHIEF ENGINEER

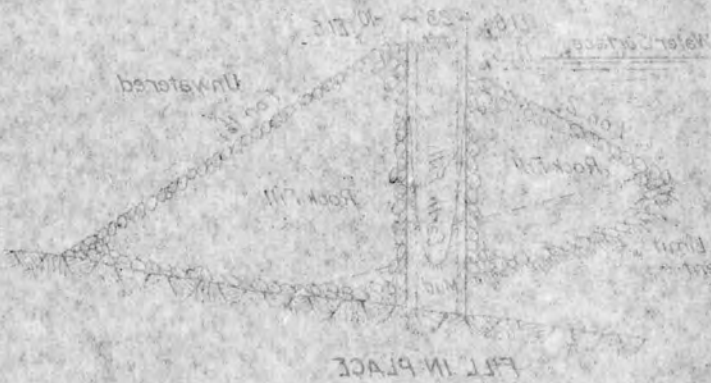
DRAWN: E. M. V. EY. CALIF. SUBMITTED: *W. J. Young*
CHECKED: V. B. H. RECOMMENDED: *J. S. Sanger*

SV-73 Berkeley, Calif. 2-26-'26 193-D-25

Plate 4-4

MAIN COFFERDAM, PLAN AND SECTIONS

Notes:
 Location of coffered and sheet pile
 of sheet piling and cofferdam
 foot fill to minimize lateral displacement
 of the section
 Where mud does not over in rock the type of
 cofferdam is not as described in it.



PLAN SHEET PILING IN PLACE

Scale



SECTIONS

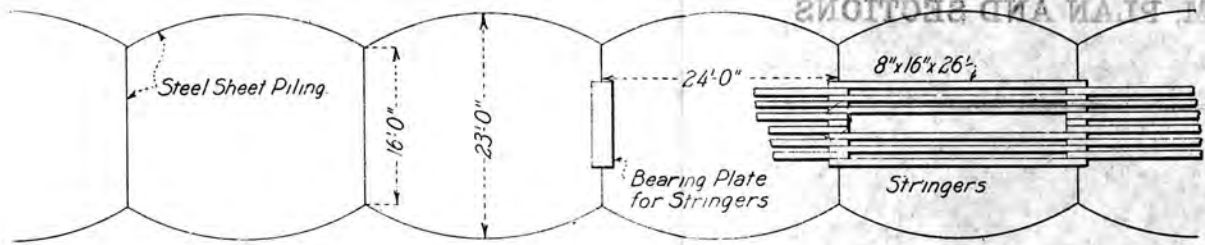
Scale

PRELIMINARY DESIGN
 DEPARTMENT OF THE ARMY
 BUREAU OF RECONSTRUCTION
 DISTRICT OF COLUMBIA
 OFFICE OF THE DISTRICT ENGINEER
 DISTRICT OF COLUMBIA
 DRAWN AND CHECKED BY
 CHECKED BY
 27-7A

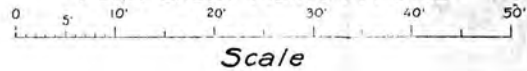
APPROVED FOR ESTIMATING PURPOSES
 [Signature]
 DISTRICT ENGINEER

Plate 4

MAIN COFFERDAM PLAN AND SECTIONS



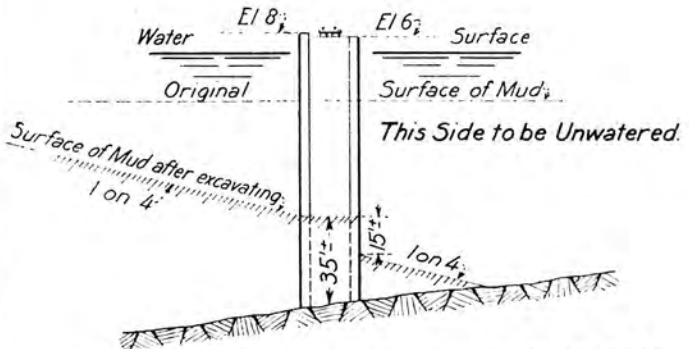
PLAN-SHEET PILING IN PLACE



Notes:-

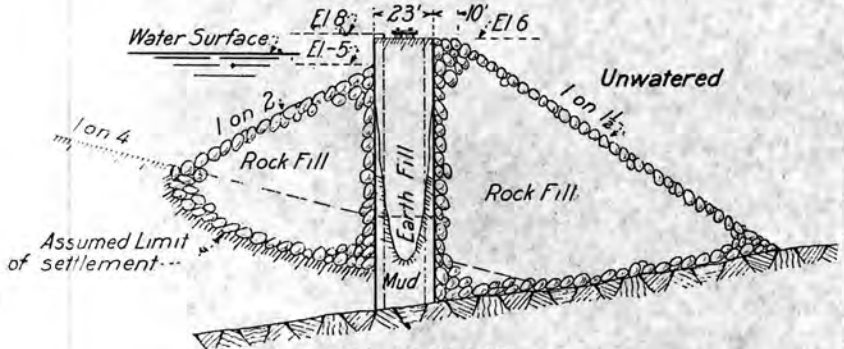
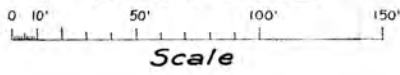
Excavation to proceed along successive Panels of Sheet Piling and be closely followed by Rock Fill to minimize length of unsupported Pile Section

Where Mud does not over lie Rock, the Type of Cofferdam is modified as described in Text



PILING IN PLACE AND EXCAVATION COMPLETED

SECTIONS



FILL IN PLACE

PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
MAIN COFFERDAM
PLAN AND SECTIONS

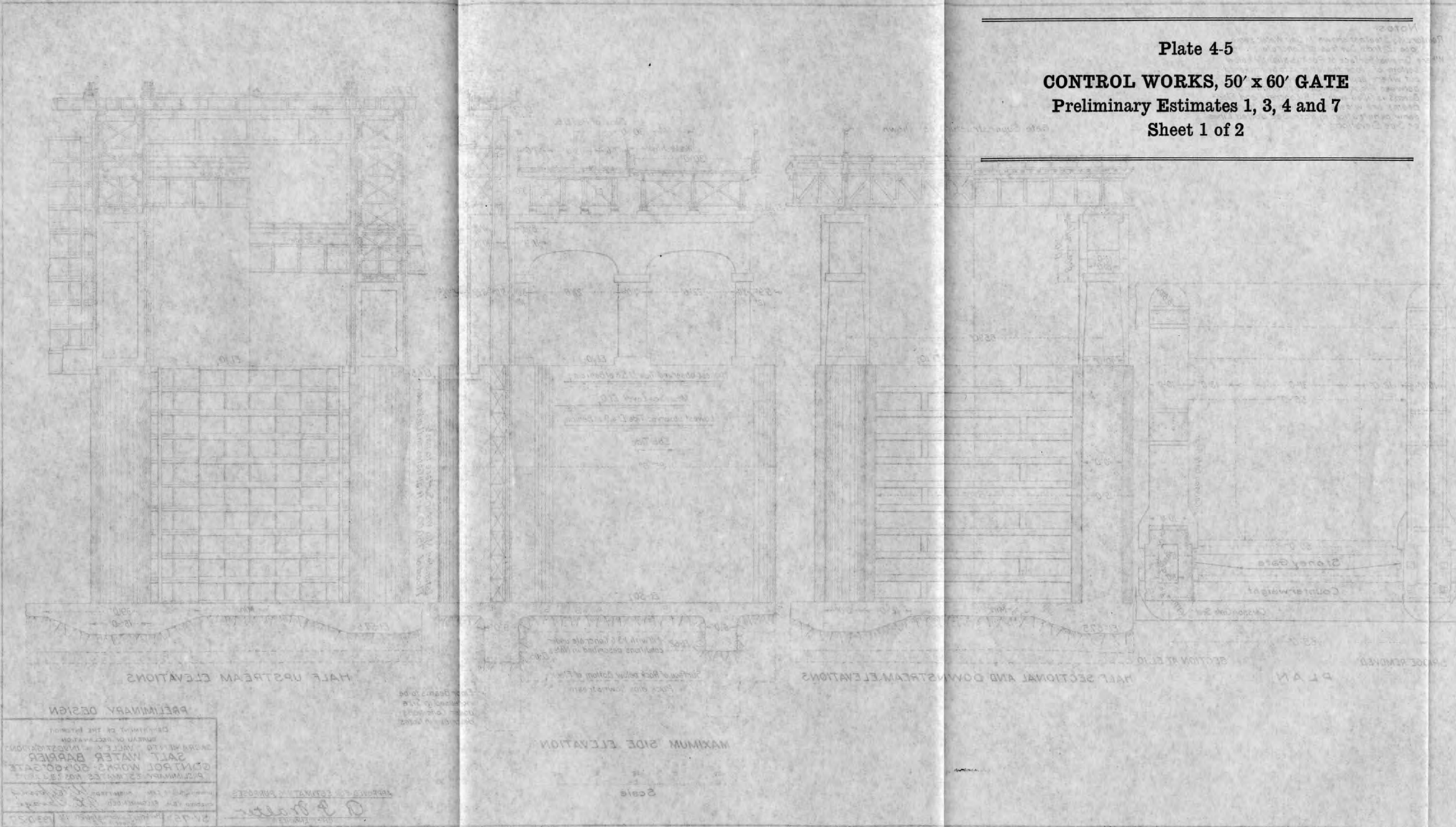
DRAWN: C.M.J. & J.C.S. SUBMITTED: J.P. [Signature]
CHECKED: K.B.H. RECOMMENDED: [Signature]

SV-74 Berkeley, Calif. Mch 4, 1926. 1930-26

APPROVED FOR ESTIMATING PURPOSES:-

O. F. Walter
CHIEF ENGINEER

Plate 4-5
CONTROL WORKS, 50' x 60' GATE
 Preliminary Estimates 1, 3, 4 and 7
 Sheet 1 of 2



APPROVED FOR ESTIMATING PURPOSES
D. P. [Signature]
 PRELIMINARY DESIGN
 CONTROL WORKS, 50' x 60' GATE
 SALT WATER BARRIER
 LAGUNA #1 TO WALLEY - INDIAN OCEAN
 DRAWN BY [Name]
 CHECKED BY [Name]
 DESIGNED BY [Name]

MAXIMUM SIDE ELEVATION
 Scale

HALF UPSTREAM ELEVATIONS

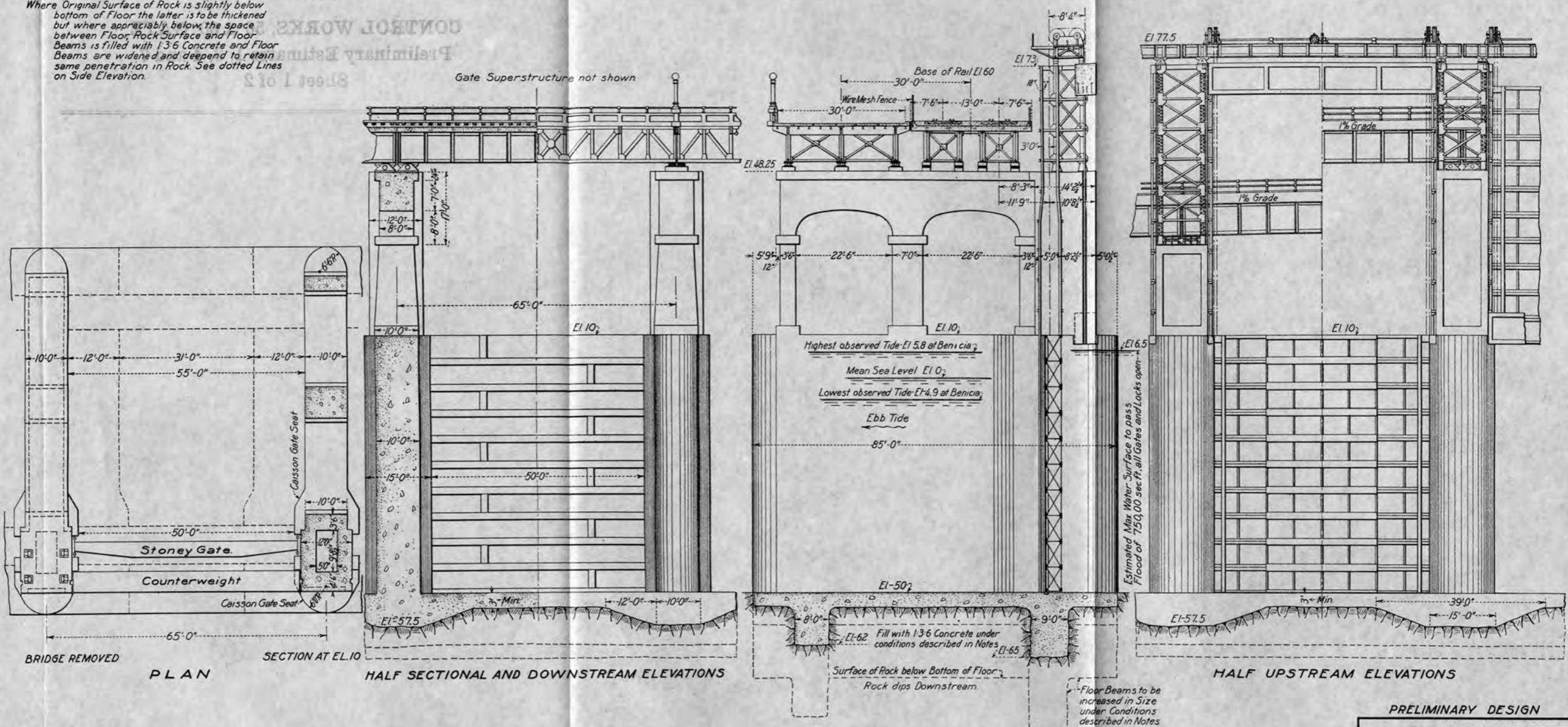
HALF SECTIONAL AND DOWNSTREAM ELEVATIONS

PLAN

CHOOSE REMOVED

Notes:-

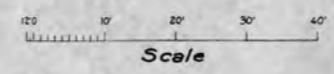
Reinforcing Steel not shown in Salt Water, same to be 12" from Surface of Concrete.
 Where Original Surface of Rock is slightly below bottom of Floor the latter is to be thickened but where appreciably below, the space between Floor, Rock Surface and Floor Beams is filled with 1:3:6 Concrete and Floor Beams are widened and depend to retain same penetration in Rock. See dotted Lines on Side Elevation.



BRIDGE REMOVED
PLAN

SECTION AT EL. 10
HALF SECTIONAL AND DOWNSTREAM ELEVATIONS

MAXIMUM SIDE ELEVATION



HALF UPSTREAM ELEVATIONS

PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 CONTROL WORKS- 50' x 60' GATE
 PRELIMINARY ESTIMATES NOS. 1, 3, 4 AND 7

APPROVED FOR ESTIMATING PURPOSES:
O. J. Dralter
 CHIEF ENGINEER

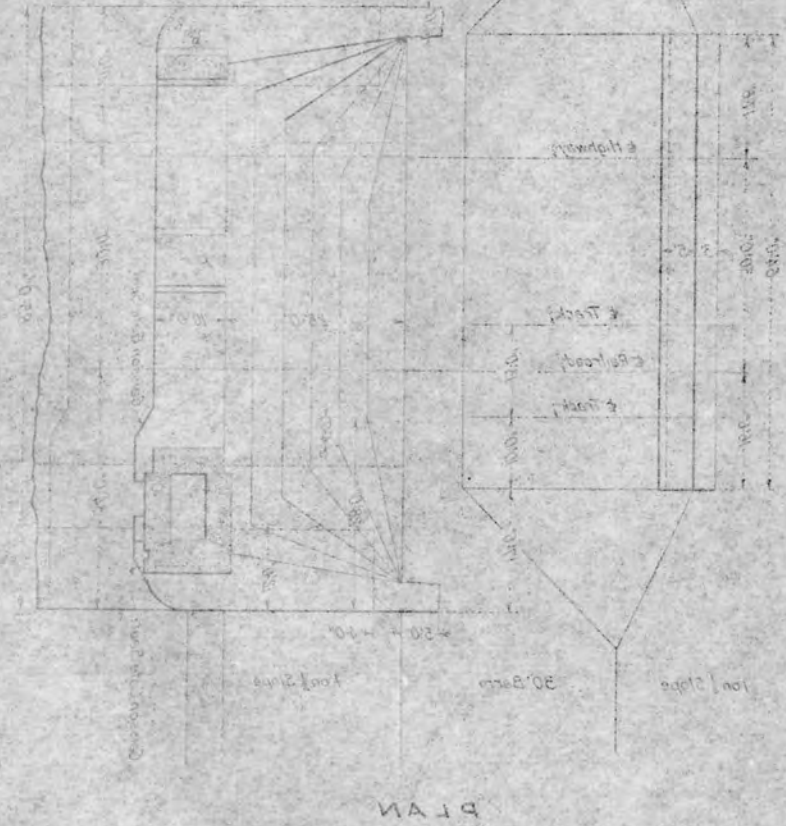
DRAWN BY: L.F. CAM
 CHECKED BY: R.H.
 SUBMITTED BY: *W. J. Young*
 RECOMMENDED BY: *G. H. Savage*
 SV-75 Berkeley, California Feb. 20, 1926
 Sheet 1 of 2 193-D-27

Plate 4-6

CONTROL WORKS, 50' x 60' GATE

Preliminary Estimates 1, 3, 4 and 7

Sheet 2 of 2

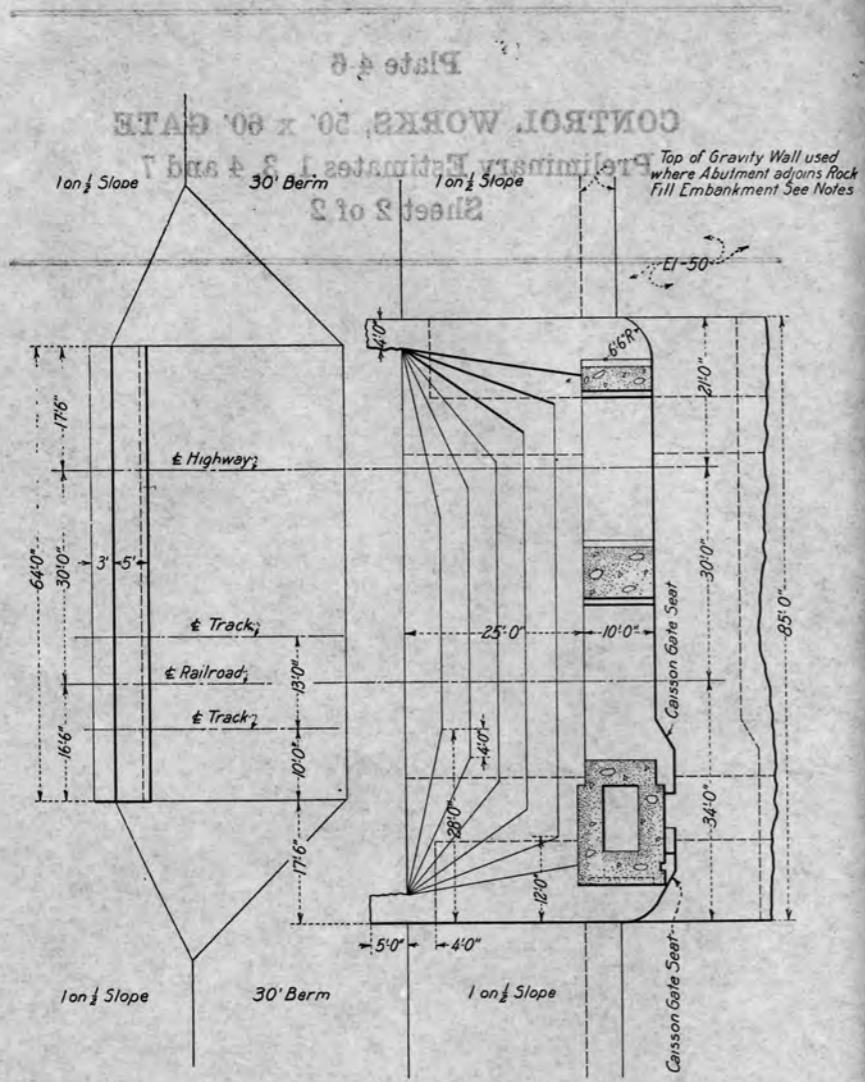


SECTIONAL ELEVATION

UPSTREAM ELEVATION

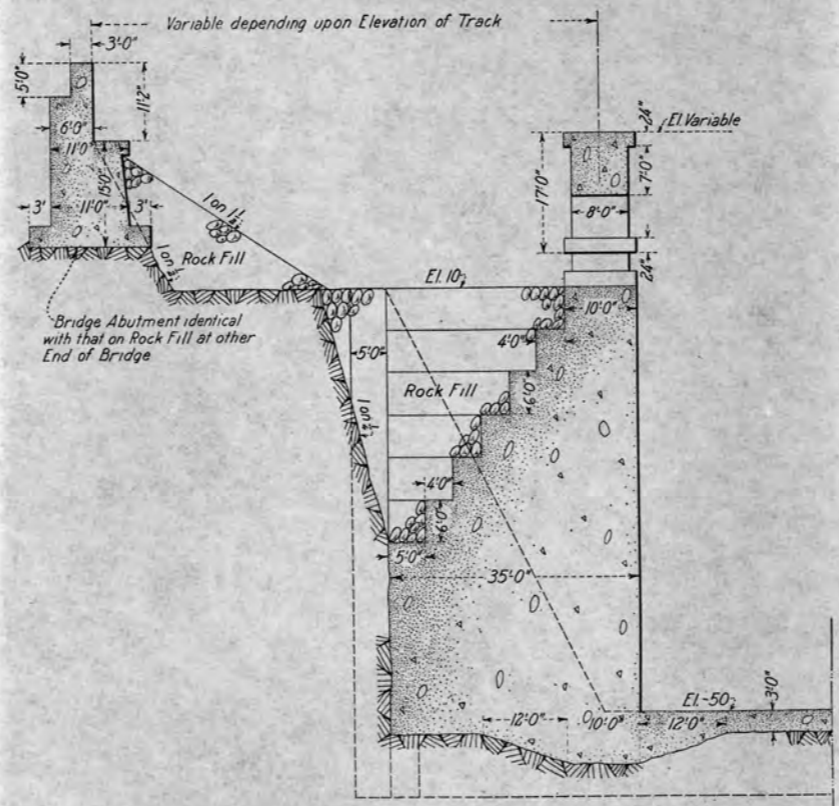
PRELIMINARY
 DIVISION OF
 SALT WATER
 CONTROL WORKS
 SHEET 2 OF 2

APPROVED
 DATE

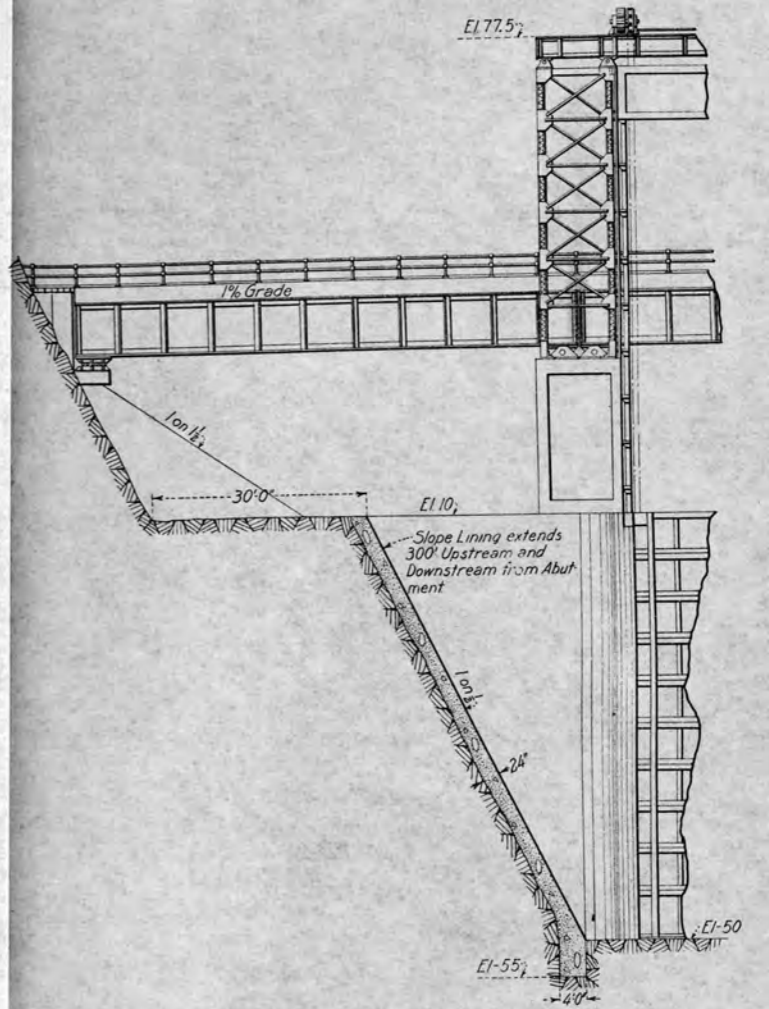


PLAN

Notes:
 Abutment Pier shown on this Drawing is to be used adjacent to Side of Rock Cut for Flood Channel with 50' Stony Gates. The Abutment for 70' Gates is of the same Type.
 In Cases where Rock Fill Embankment adjoins Control Works, Gravity Walls extend Upstream and Downstream from Ends of Abutment shown on this Drawing with Tops flush with Surface of Fill and terminate where Surface of Fill reaches El-50 or El-70. The Slope Lining is then omitted and the Abutment Wings are replaced by Cutoffs.
 Reinforcing Steel not shown. In Salt Water, Same to be 12" from Surface of Concrete.



SECTIONAL ELEVATION



UPSTREAM ELEVATION

Scale
 PRELIMINARY DESIGN

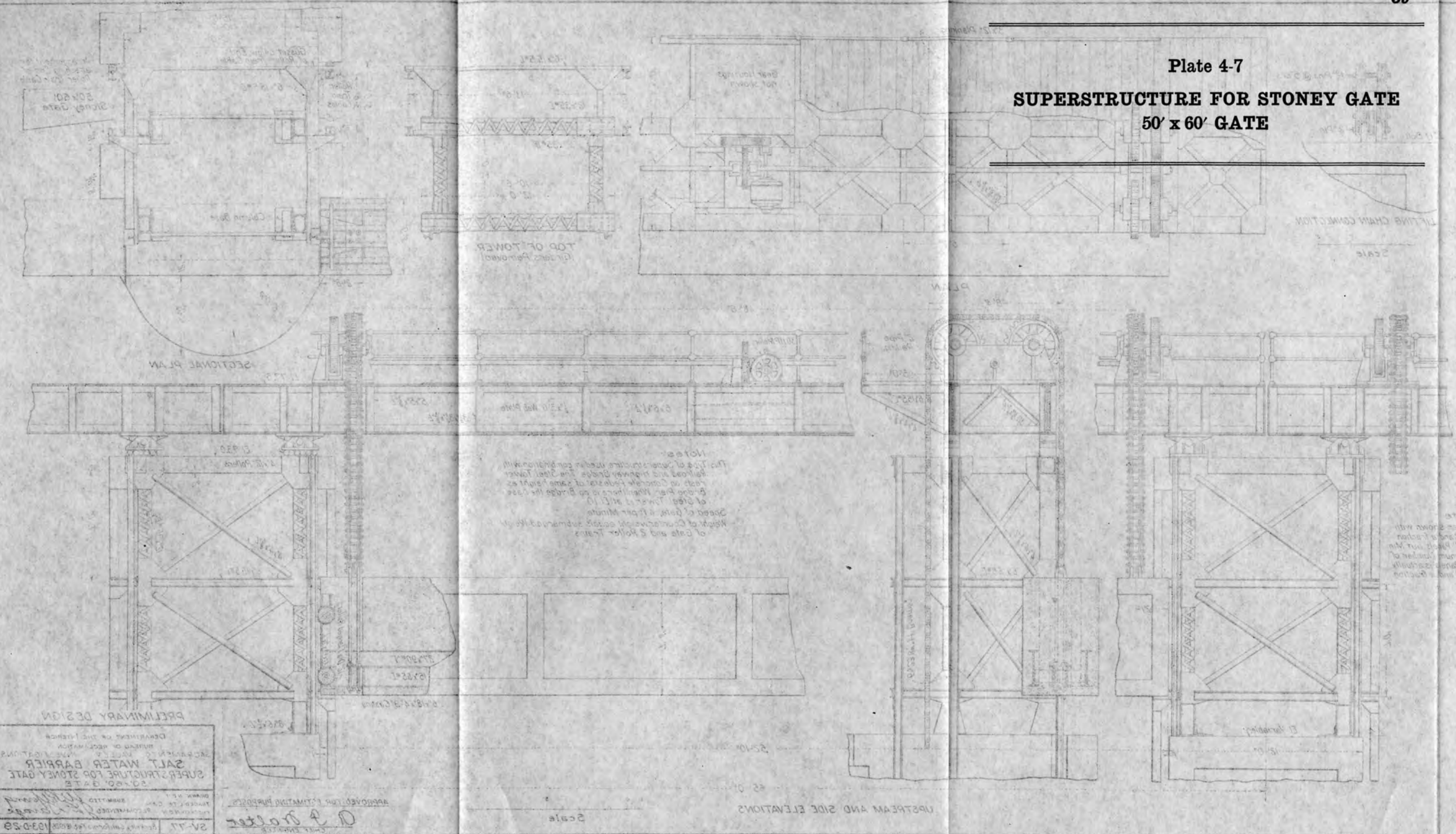
DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
 CONTROL WORKS- 50' x 60' GATE
 PRELIMINARY ESTIMATES NOS. 4, 3, 4 AND 7

DRAWN CMJ-JEK-CAM SUBMITTED *[Signature]*
 CHECKED NBH RECOMMENDED *[Signature]*

SV-76 Berkeley California Feb 26, 1926 Sheet 2 of 2 193-D-28

APPROVED FOR ESTIMATING PURPOSES:
A. J. Walter
 CHIEF ENGINEER

Plate 4-7
SUPERSTRUCTURE FOR STONEY GATE
50' x 60' GATE

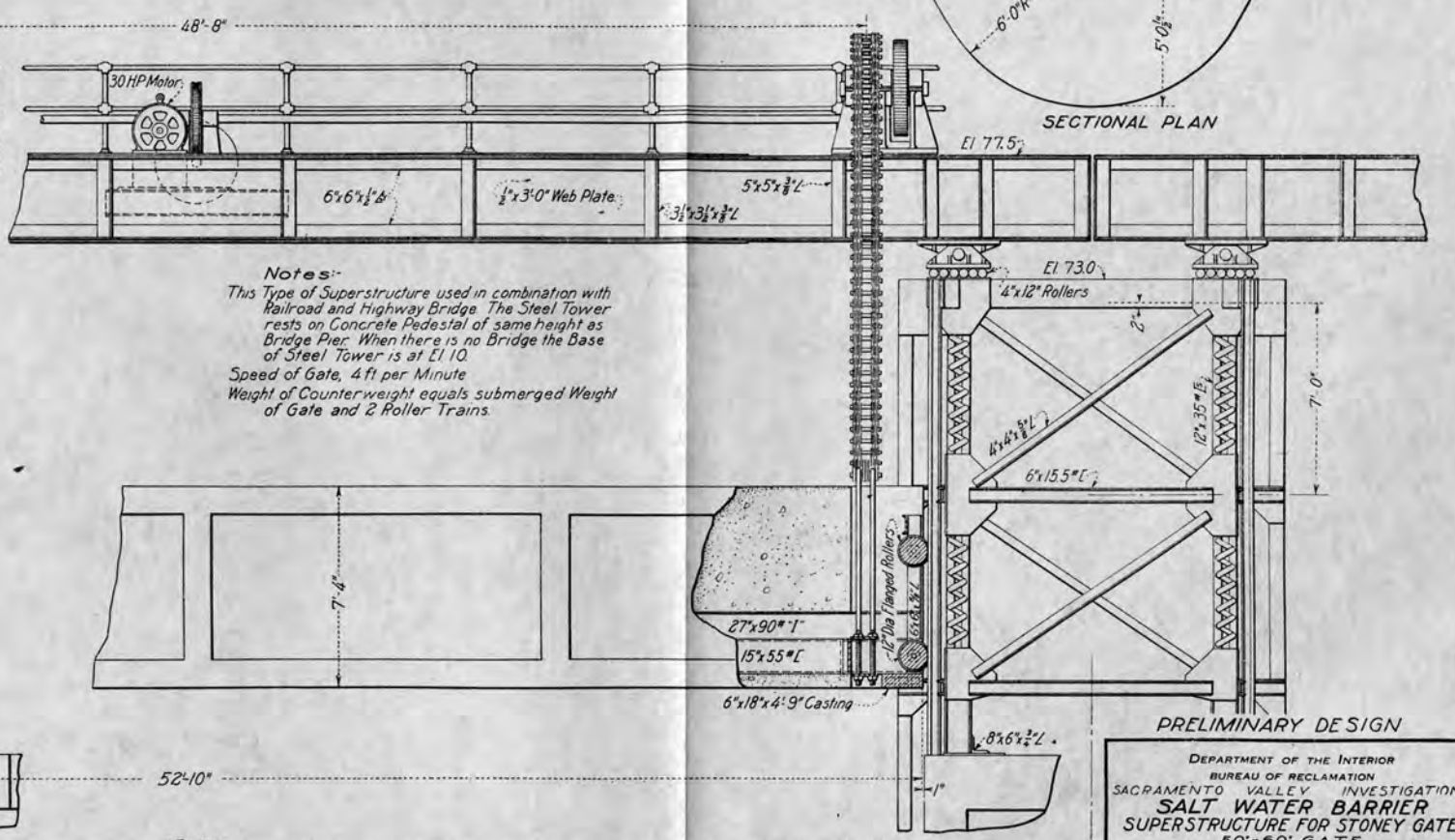
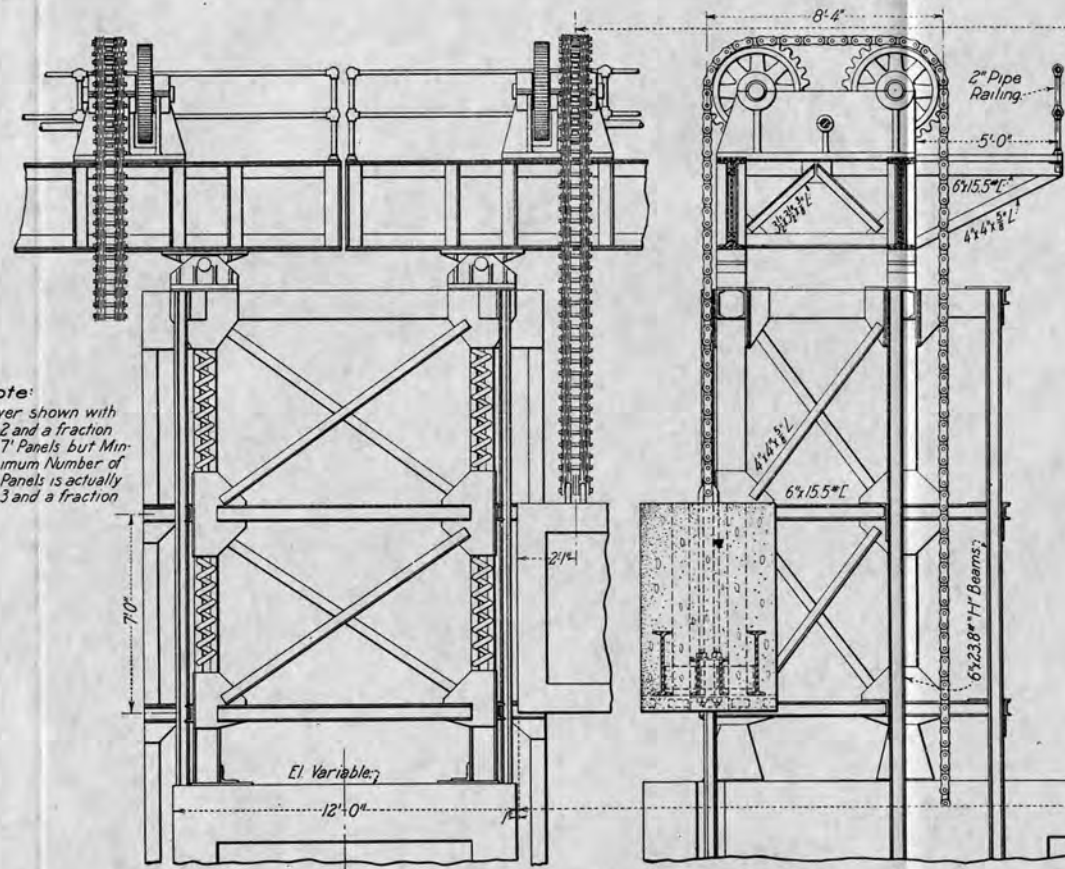
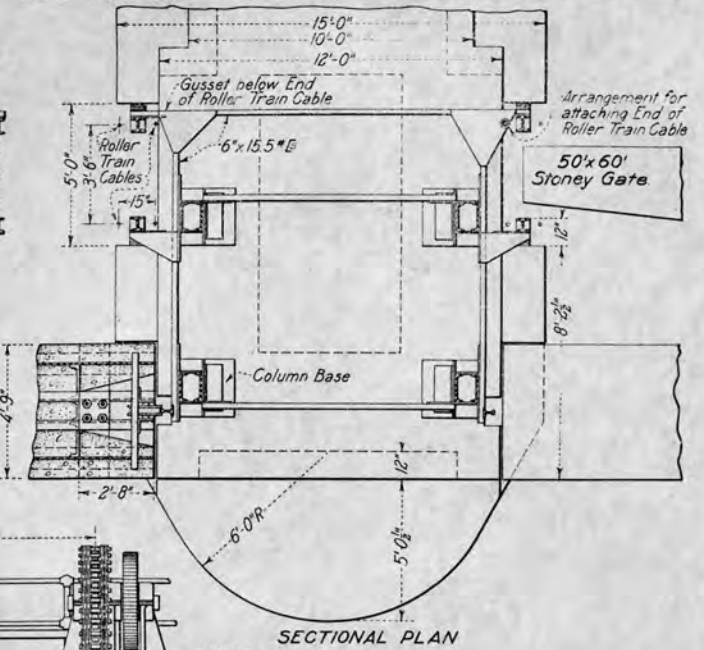
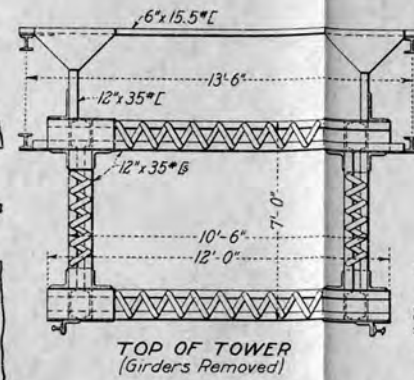
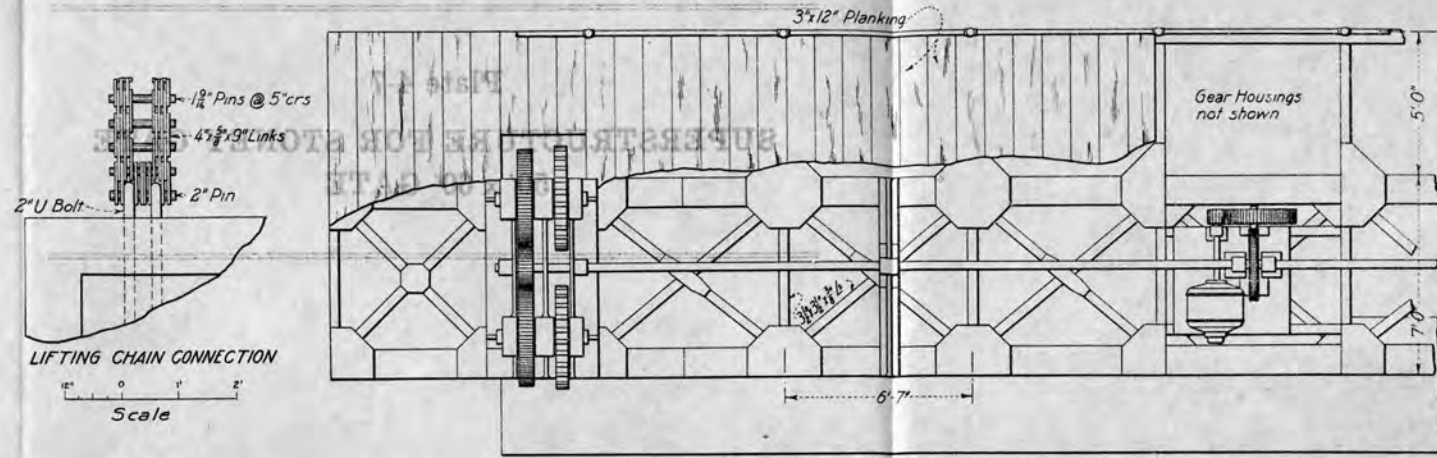


Notes:
 This type of superstructure used in conjunction with
 rollers and highway bridge the steel tower
 rests on concrete foundation at same height as
 bridge pier. Wheel track to bridge the case
 of steel tower will be
 Speed of gate 1 ft per minute
 Weight of counterweight equal to weight of
 of gate and 5 roller-trains

Note:
 Gate shown with
 2 and 1 roller
 7 feet out from
 center of gate
 roller-trains
 1 and 2 roller

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY DIVISION
SALT WATER BARRIER
SUPERSTRUCTURE FOR STONEY GATE
 50' x 60' GATE
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 APPROVED FOR ESTIMATING PURPOSES:
D. J. Walter
 CIVIL ENGINEER
 24-77 50' x 60' GATE
 1933-29

PLATE 4-7



Notes:-
 This Type of Superstructure used in combination with Railroad and highway Bridge. The Steel Tower rests on Concrete Pedestal of same height as Bridge Pier. When there is no Bridge the Base of Steel Tower is at El 10.
 Speed of Gate, 4 ft per Minute
 Weight of Counterweight equals submerged Weight of Gate and 2 Roller Trains.

Note:
 Tower shown with 2 and a fraction Panels but Minimum Number of Panels is actually 3 and a fraction

PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
 SUPERSTRUCTURE FOR STONEY GATE
 50'x60' GATE

APPROVED FOR ESTIMATING PURPOSES:-
 O. A. Dralter
 CHIEF ENGINEER

DRAWN N.B.H.
 TRACED L.T.F.-CAM
 CHECKED N.B.H.

SUBMITTED
 RECOMMENDED
 J. J. Young
 J. J. Storage

SV-77 Berkeley, California Feb 18, 1926 193-D-29

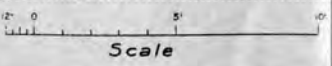
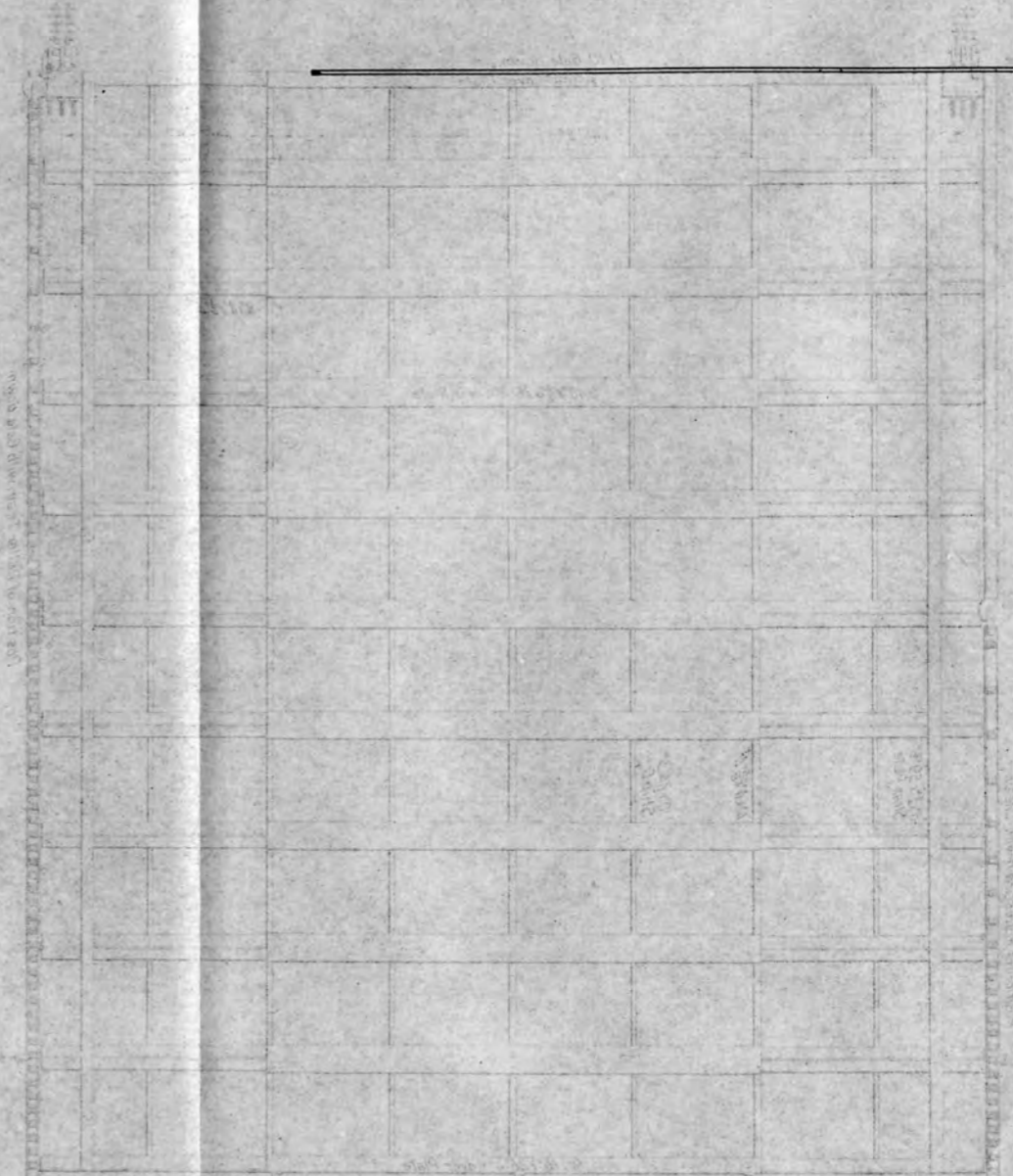
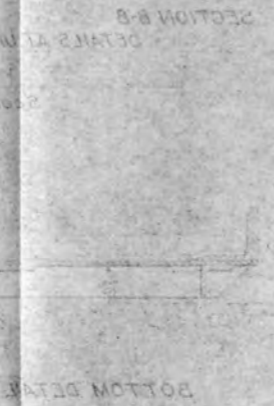
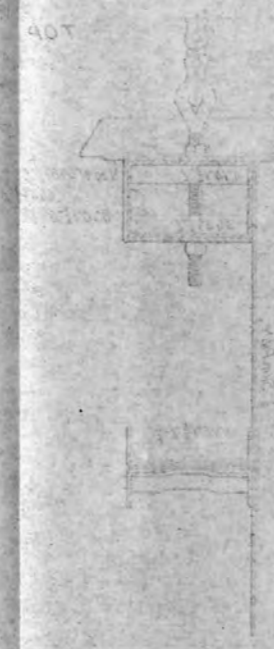
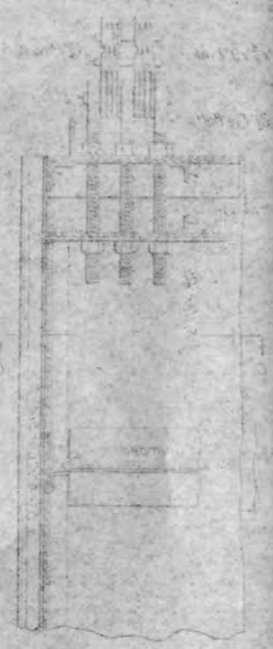
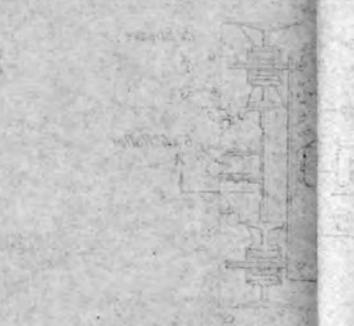
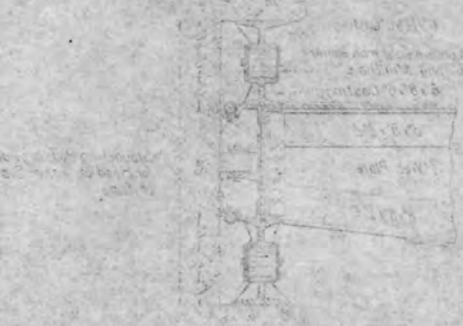


Plate 4-8

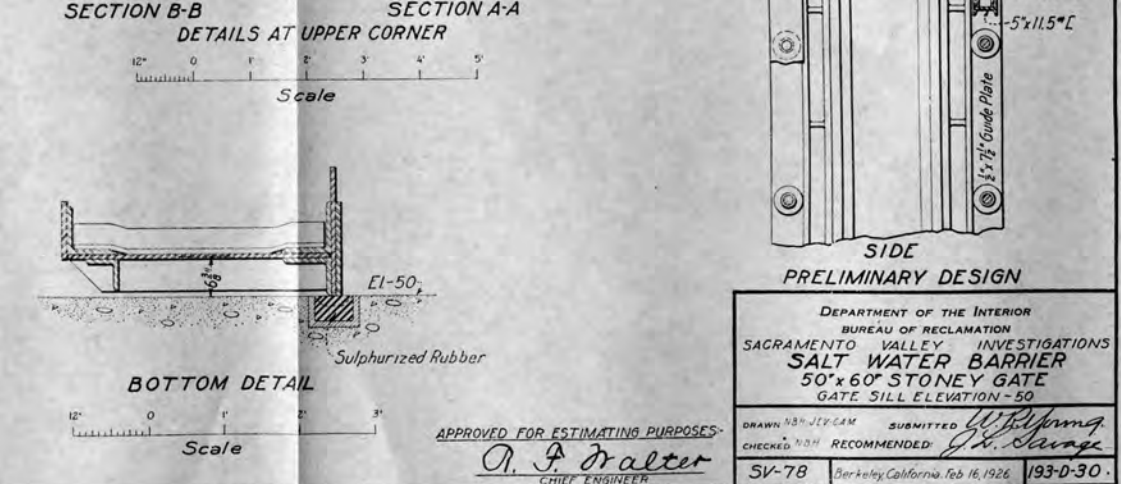
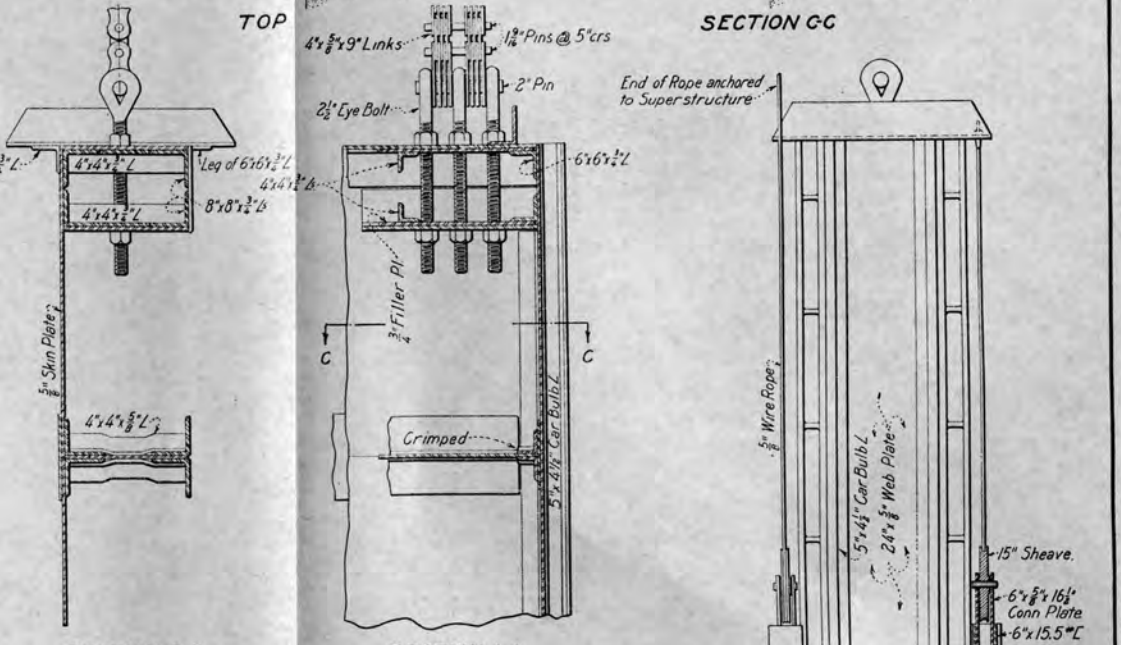
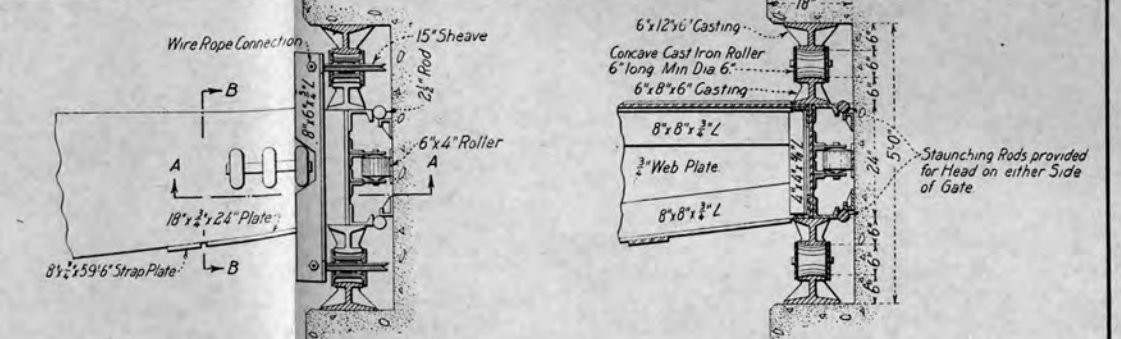
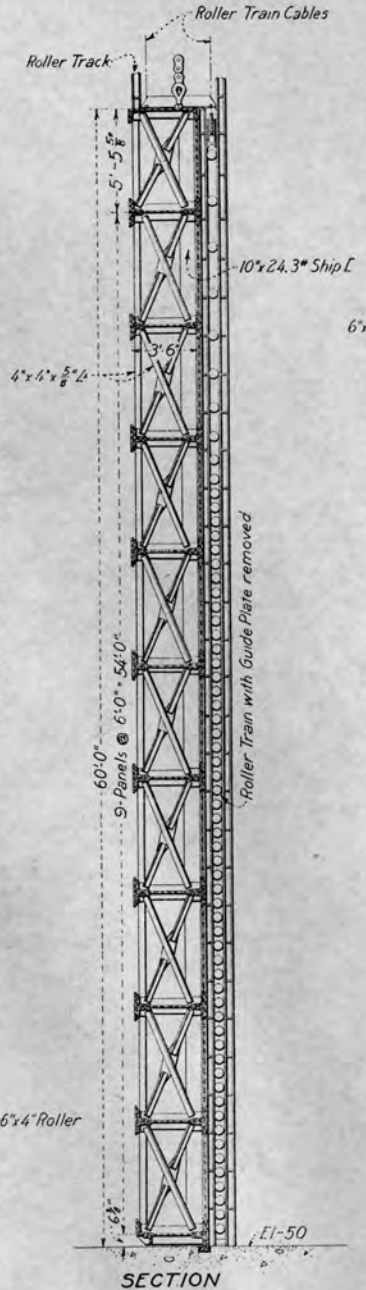
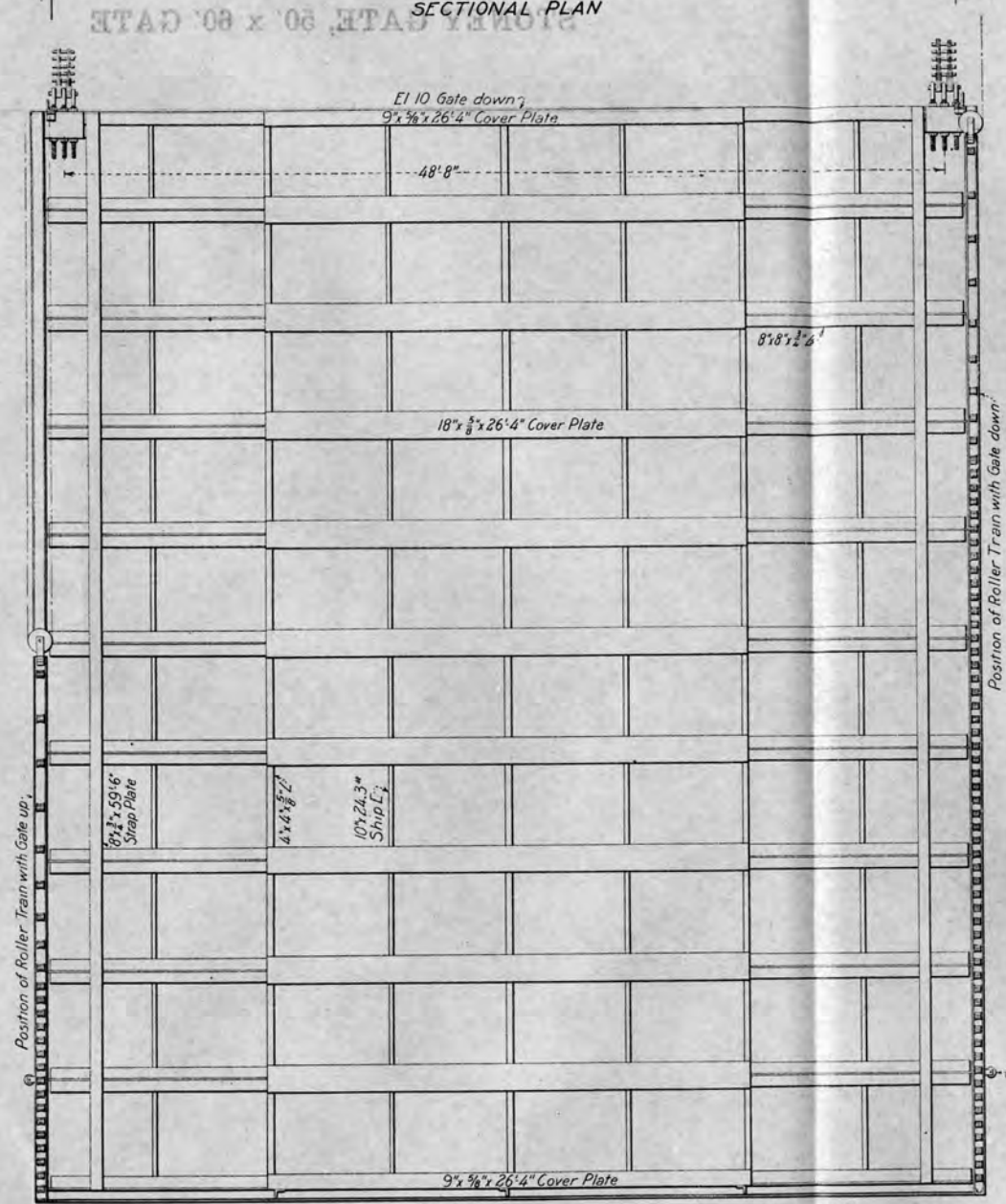
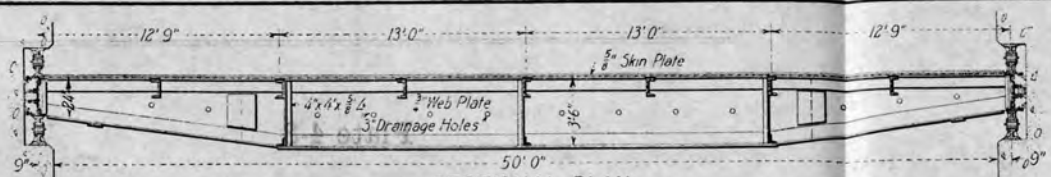
STONEY GATE, 50' x 60' GATE

PLATE



PRELIMINARY DESIGN
 SALT WATER BARRIER
 50' x 60' STONEY GATE
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 1930

Scale



PRELIMINARY DESIGN

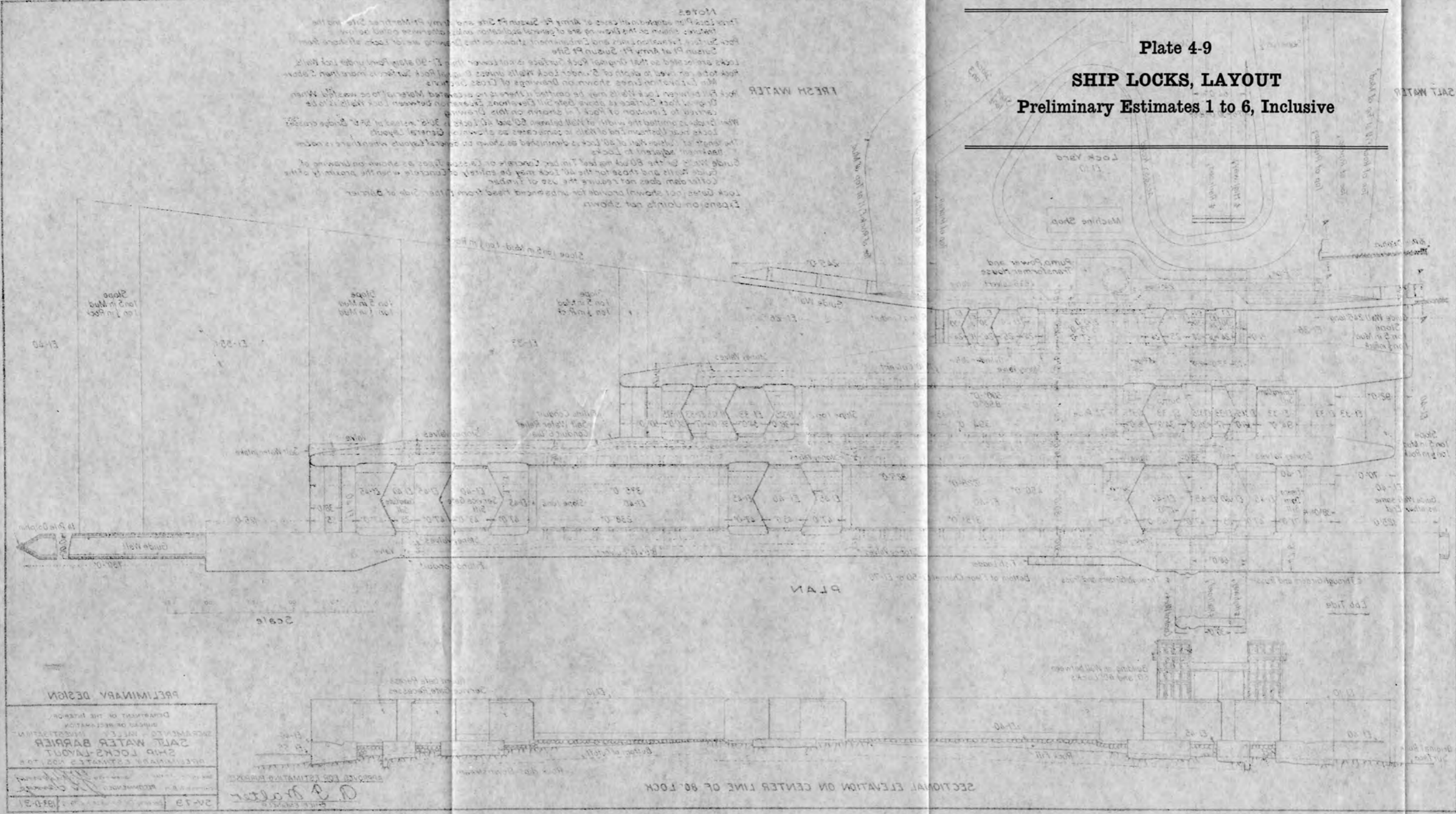
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
50' x 60' STONEY GATE
GATE SILL ELEVATION - 50

APPROVED FOR ESTIMATING PURPOSES:
O. J. Dralter
CHIEF ENGINEER

DRAWN: N.H. JEV. CAM
CHECKED: N.H. RECOMMENDED: *J. J. Savage*

SV-78 Berkeley California, Feb 16, 1926 193-D-30

Plate 4-9 SHIP LOCKS, LAYOUT Preliminary Estimates 1 to 6, Inclusive



Notes

1. This lock is a duplicate of that at Army Ft. Sustain Ft. and Army Ft. Mather. The same general plan of the lock and its various structures and details are shown on the drawings of the lock at Army Ft. Sustain Ft. and Army Ft. Mather. The same general plan of the lock and its various structures and details are shown on the drawings of the lock at Army Ft. Sustain Ft. and Army Ft. Mather.

2. The lock is to be constructed of concrete and masonry. The walls and gates are to be constructed of concrete. The lock is to be constructed of concrete and masonry. The walls and gates are to be constructed of concrete.

3. The lock is to be constructed of concrete and masonry. The walls and gates are to be constructed of concrete. The lock is to be constructed of concrete and masonry. The walls and gates are to be constructed of concrete.

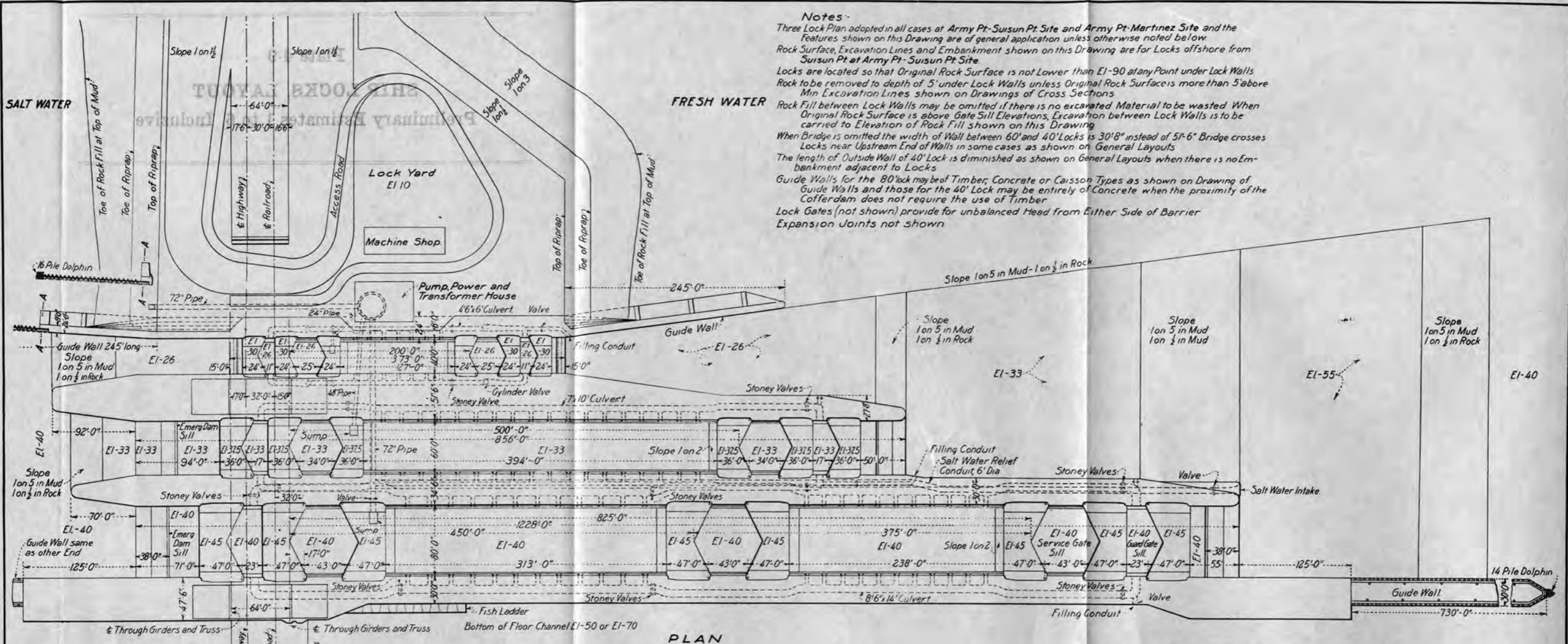
4. The lock is to be constructed of concrete and masonry. The walls and gates are to be constructed of concrete. The lock is to be constructed of concrete and masonry. The walls and gates are to be constructed of concrete.

5. The lock is to be constructed of concrete and masonry. The walls and gates are to be constructed of concrete. The lock is to be constructed of concrete and masonry. The walls and gates are to be constructed of concrete.

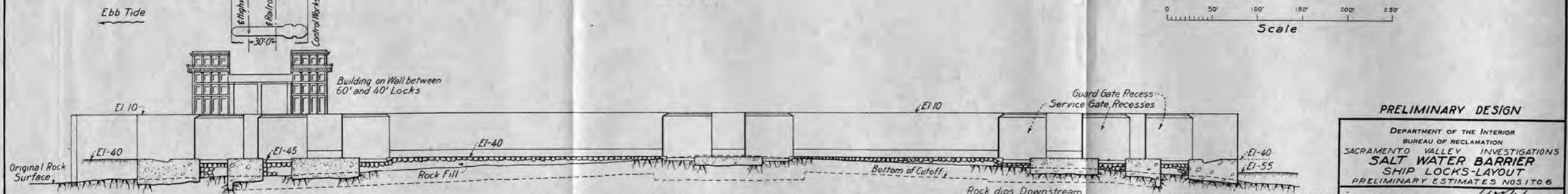
6. The lock is to be constructed of concrete and masonry. The walls and gates are to be constructed of concrete. The lock is to be constructed of concrete and masonry. The walls and gates are to be constructed of concrete.

PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SALT WATER BARRIER
SHIP LOCKS LAYOUT
PRELIMINARY ESTIMATE NO. 1 TO 6
APPROVED FOR ESTIMATING PURPOSES
D. S. Baker
25-75



PLAN



SECTIONAL ELEVATION ON CENTER LINE OF 80' LOCK

Notes:
 Three Lock Plan adopted in all cases at Army Pt-Suisun Pt Site and Army Pt-Martinez Site and the Features shown on this Drawing are of general application unless otherwise noted below
 Rock Surface, Excavation Lines and Embankment shown on this Drawing are for Locks offshore from Suisun Pt at Army Pt-Suisun Pt Site
 Locks are located so that Original Rock Surface is not Lower than EI-90 at any Point under Lock Walls
 Rock to be removed to depth of 5' under Lock Walls unless Original Rock Surface is more than 5' above Min Excavation Lines shown on Drawings of Cross Sections
 Rock Fill between Lock Walls may be omitted if there is no excavated Material to be wasted When Original Rock Surface is above Gate Sill Elevations, Excavation between Lock Walls is to be carried to Elevation of Rock Fill shown on this Drawing
 When Bridge is omitted the width of Wall between 60' and 40' Locks is 30' 8" instead of 51' 6" Bridge crosses Locks near Upstream End of Walls in some cases as shown on General Layouts
 The length of Outside Wall of 40' Lock is diminished as shown on General Layouts when there is no Embankment adjacent to Locks
 Guide Walls for the 80' lock may be of Timber, Concrete or Caisson Types as shown on Drawing of Guide Walls and those for the 40' Lock may be entirely of Concrete when the proximity of the Cofferdam does not require the use of Timber
 Lock Gates (not shown) provide for unbalanced Head from Either Side of Barrier
 Expansion Joints not shown

APPROVED FOR ESTIMATING PURPOSES:

D. A. Walter
 CHIEF ENGINEER

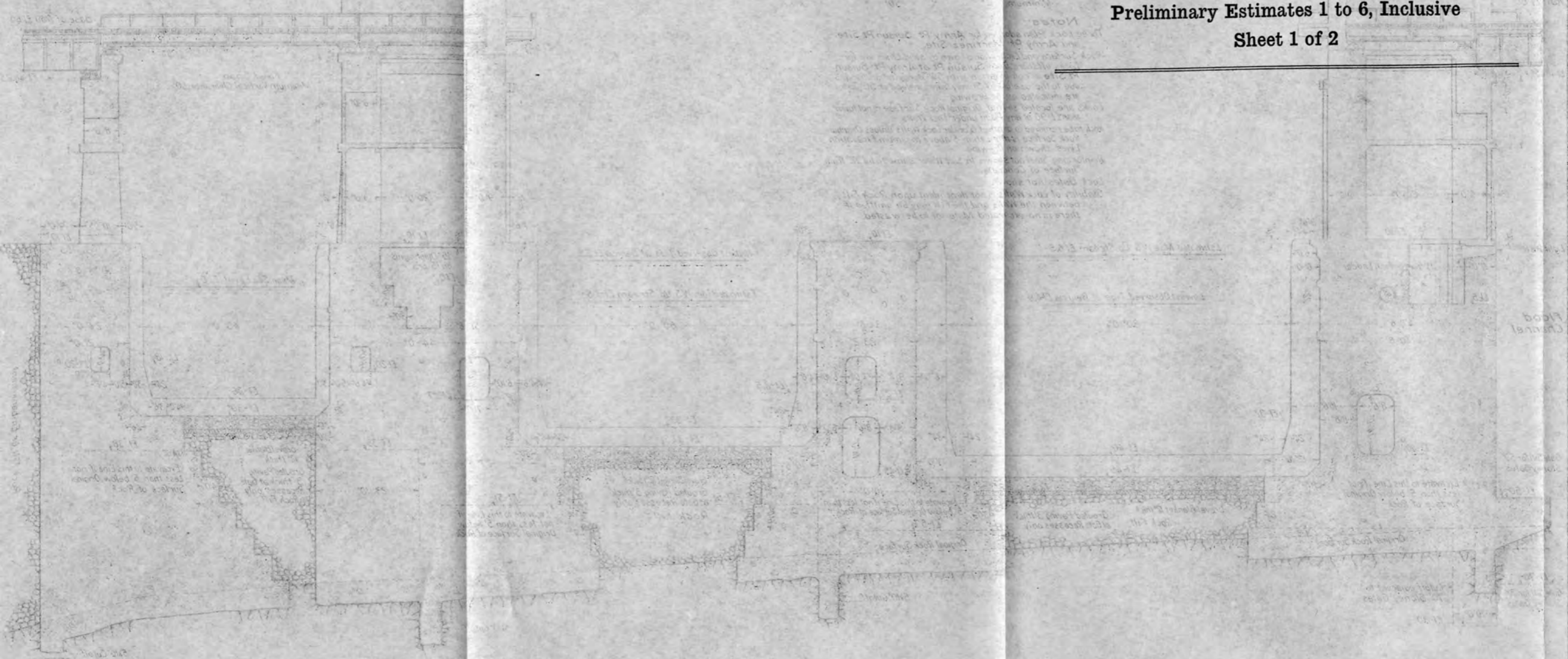
PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
SHIP LOCKS-LAYOUT
 PRELIMINARY ESTIMATES NOS 1 TO 6

DRAWN C.M. 117-CAP SUBMITTED *J. P. Garing*
 CHECKED N.B.M. RECOMMENDED *J. P. Garing*

5V-79 Berkeley, California, March 4, 1926 193-D-31

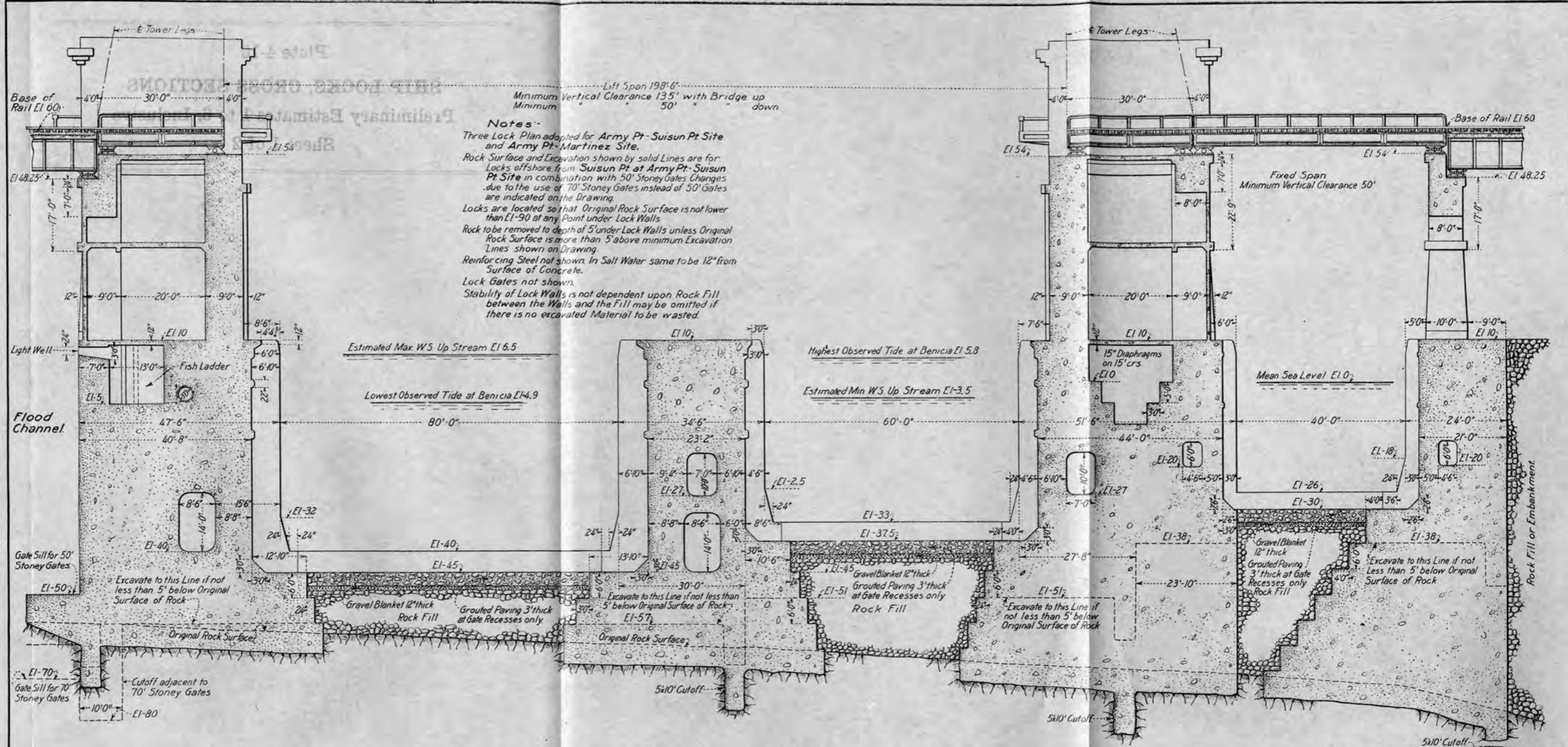
Plate 4-10
SHIP LOCKS, CROSS SECTIONS
 Preliminary Estimates 1 to 6, Inclusive
 Sheet 1 of 2



PRELIMINARY DESIGN
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY IRRIGATION
 SHIP LOCKS - CROSS SECTION
 PRELIMINARY ESTIMATE NO. 11
 SHEET NO. 1 OF 2
 1930

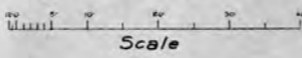
APPROVED FOR THE BUREAU
 J. B. COOPER
 CIVIL ENGINEER

SECTION AT BRIDGE AND GATE REGRESS



Notes:
 Three Lock Plan adopted for Army Pt. Suisun Pt Site and Army Pt. Martinez Site.
 Rock Surface and Excavation shown by solid Lines are for Locks offshore from Suisun Pt at Army Pt. Suisun Pt Site in combination with 50' Stoney Gates Changes due to the use of 70' Stoney Gates instead of 50' Gates are indicated on the Drawing.
 Locks are located so that Original Rock Surface is not lower than El-90 at any Point under Lock Walls
 Rock to be removed to depth of 5' under Lock Walls unless Original Rock Surface is more than 5' above minimum Excavation Lines shown on Drawing.
 Reinforcing Steel not shown. In Salt Water same to be 12" from Surface of Concrete.
 Lock Gates not shown.
 Stability of Lock Walls is not dependent upon Rock Fill between the Walls and the Fill may be omitted if there is no excavated Material to be wasted.

SECTION AT BRIDGE AND GATE RECESSES



PRELIMINARY DESIGN

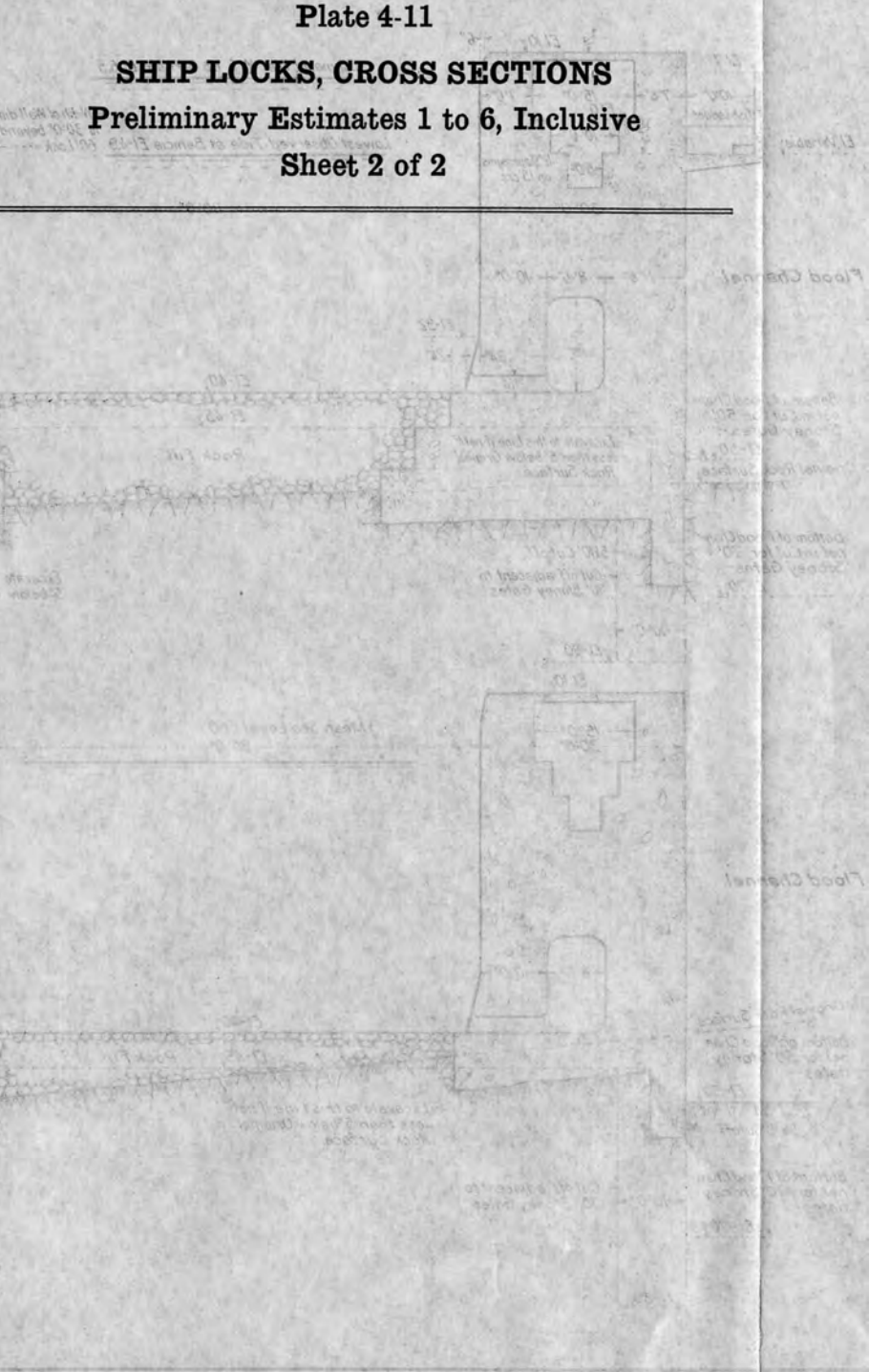
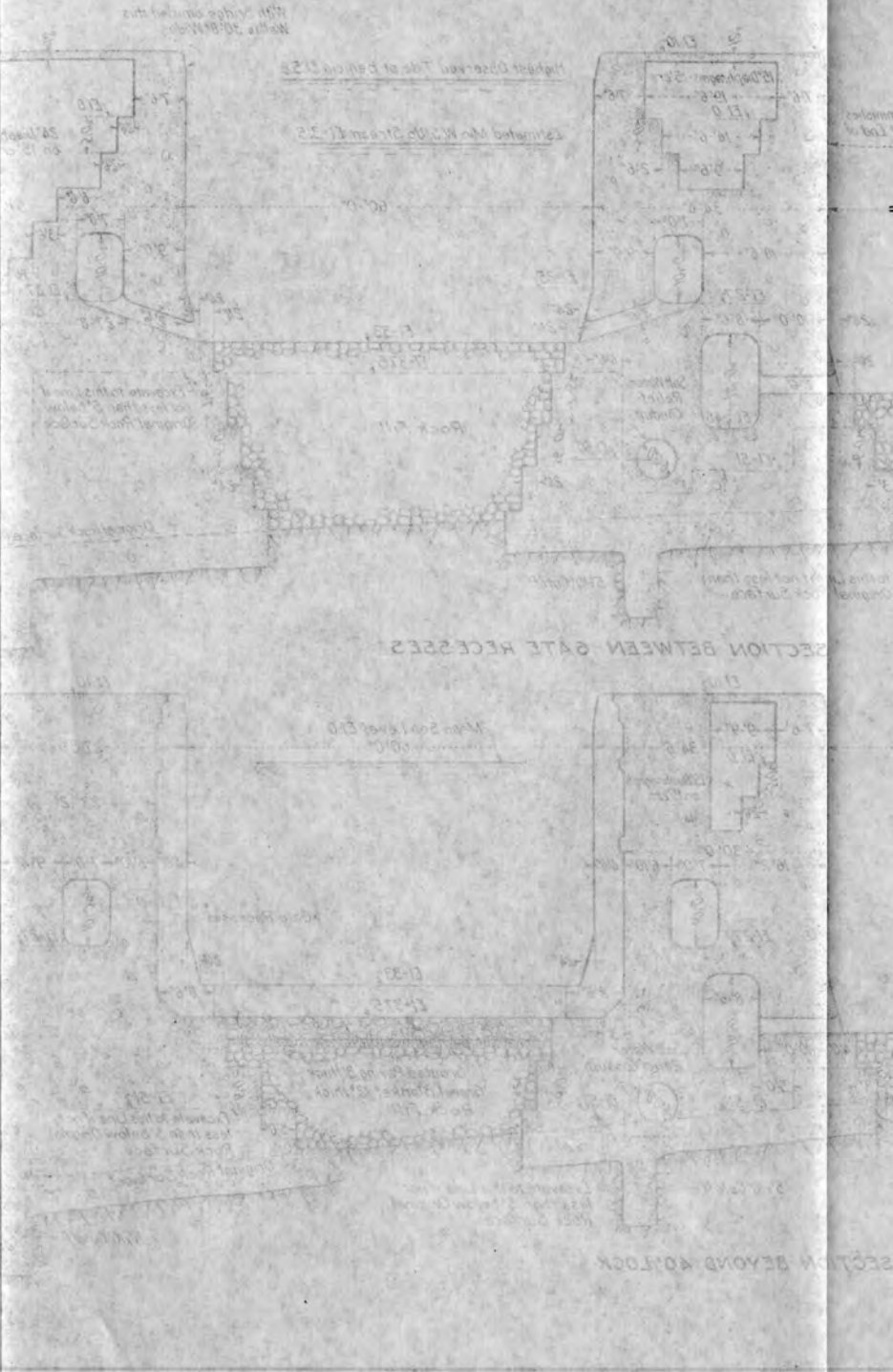
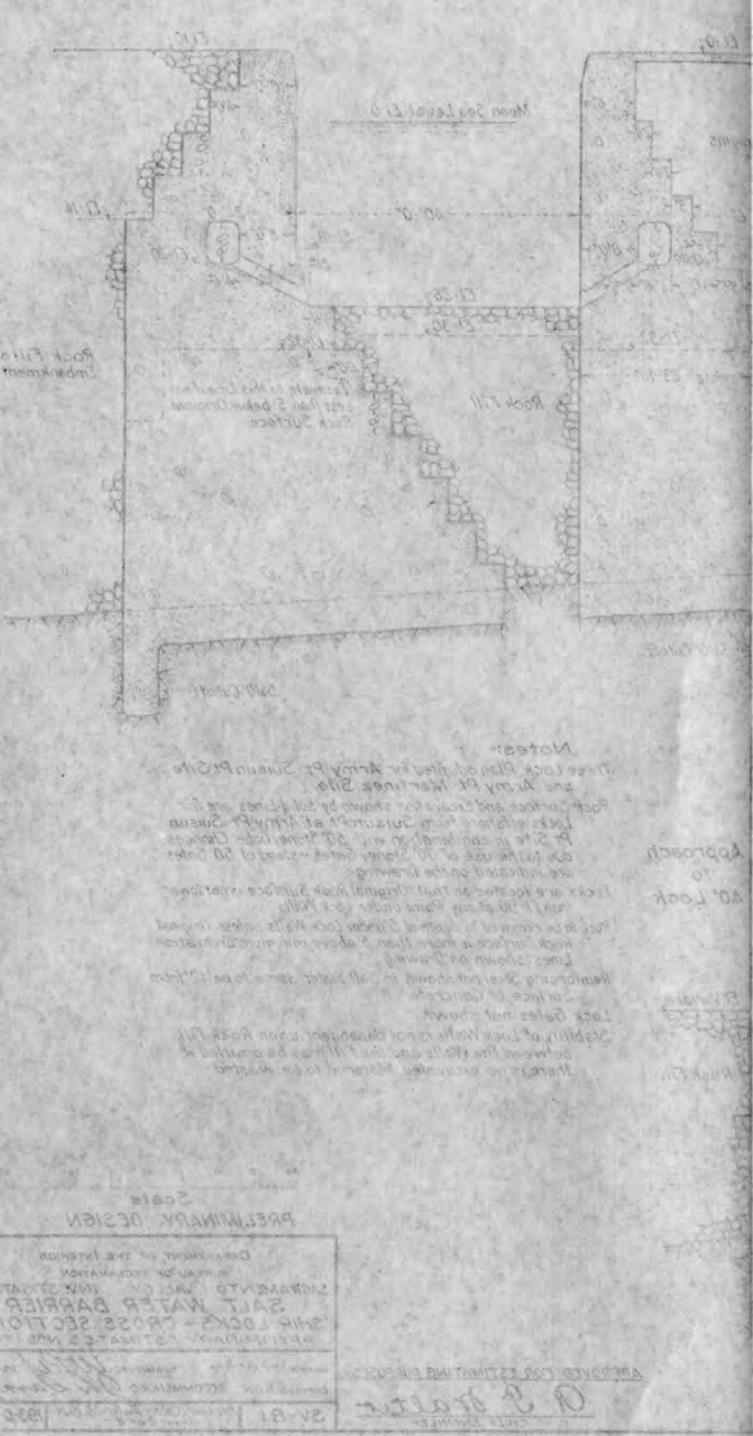
DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 SHIP LOCKS - CROSS SECTIONS
 PRELIMINARY ESTIMATES NOS 1 TO 6

APPROVED FOR ESTIMATING PURPOSES -
A. F. Walter
 CHIEF ENGINEER

DRAWN: C.M.J.-L.F.-C.A.M. SUBMITTED: *J. S. Searge*
 CHECKED: N.B.11 RECOMMENDED: *J. Searge*

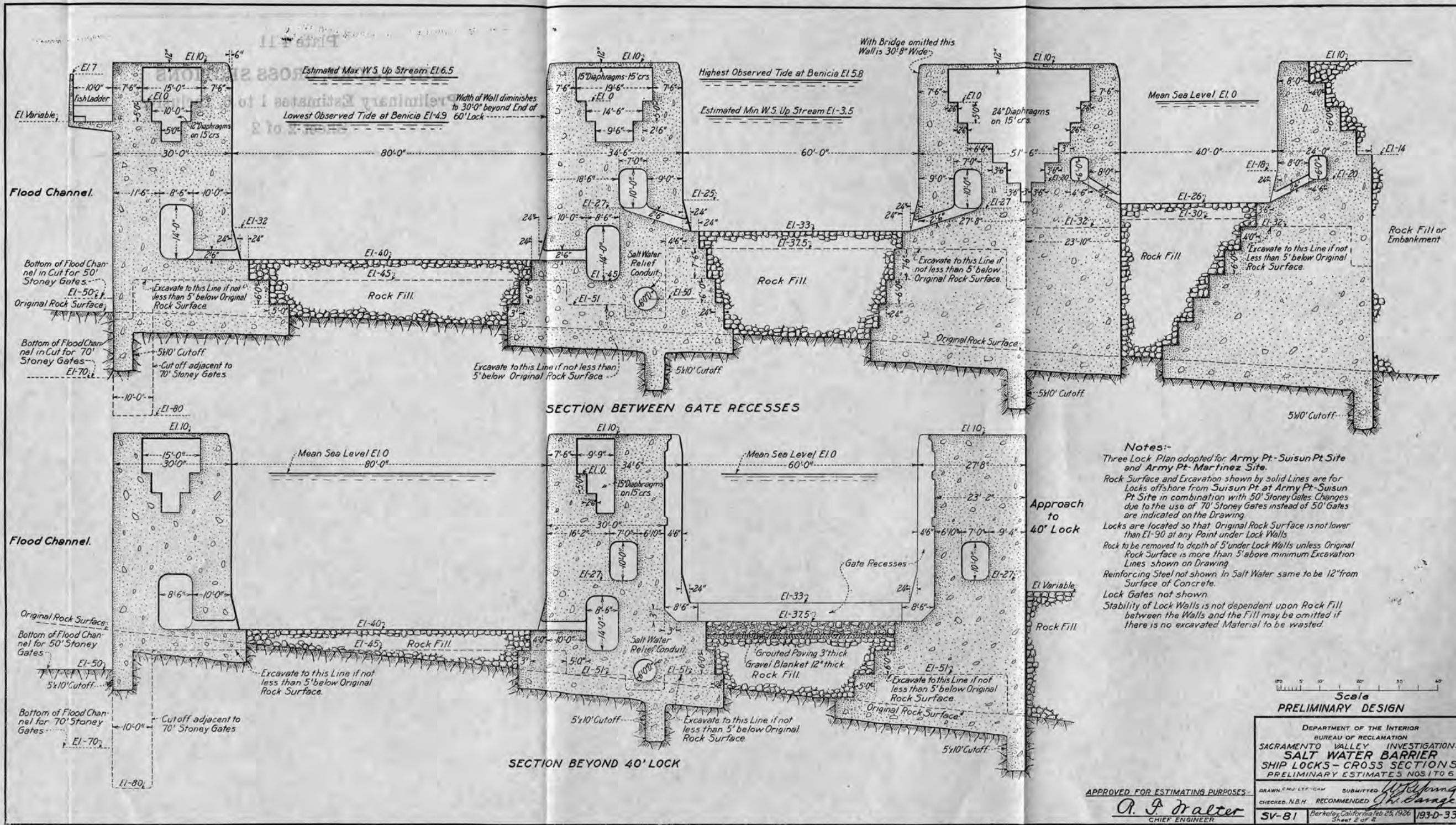
SV-80 Berkeley California Feb 24, 1926. 193-D-32

Plate 4-11
SHIP LOCKS, CROSS SECTIONS
 Preliminary Estimates 1 to 6, Inclusive
 Sheet 2 of 2



Notes:
 Three lock structures are shown in this view for Army Ft. Seward Site
 and Army Ft. MacArthur Site.
 Rock surface and location for shown of all lines are to
 be shown in the cutaway of the lock chamber. The
 lock chamber is shown in the cutaway of the lock chamber.
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 The lock chamber is shown in the cutaway of the lock chamber.

Scale
 PRELIMINARY DESIGN
 Department of the Interior
 Bureau of Reclamation
 WATERWAYS DIVISION
 SALT WATER BARRIER
 SHIP LOCKS - CROSS SECTION
 APPROVED FOR ESTIMATING PURPOSES
 DATE ESTIMATE
 APPROVED FOR ESTIMATING PURPOSES
 DATE ESTIMATE



Notes:-
 Three Lock Plan adopted for Army Pt. - Suisun Pt Site and Army Pt. - Martinez Site.
 Rock Surface and Excavation shown by solid Lines are for Locks offshore from Suisun Pt. at Army Pt. - Suisun Pt Site in combination with 50' Stony Gates. Changes due to the use of 70' Stony Gates instead of 50' Gates are indicated on the Drawing.
 Locks are located so that Original Rock Surface is not lower than El. 90 at any Point under Lock Walls.
 Rock to be removed to depth of 5' under Lock Walls unless Original Rock Surface is more than 5' above minimum Excavation Lines shown on Drawing.
 Reinforcing Steel not shown. In Salt Water same to be 12" from Surface of Concrete.
 Lock Gates not shown.
 Stability of Lock Walls is not dependent upon Rock Fill between the Walls and the Fill may be omitted if there is no excavated Material to be wasted.

Scale
 PRELIMINARY DESIGN

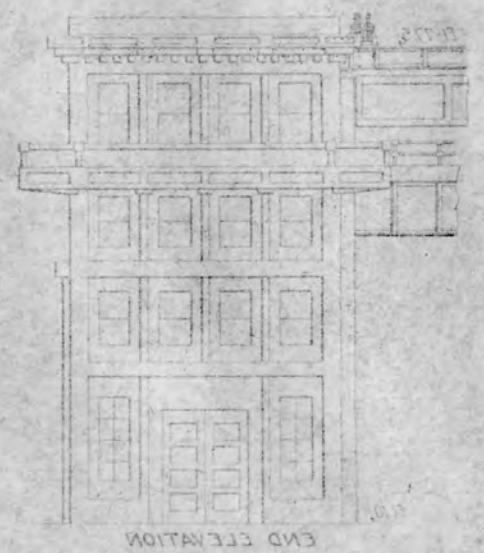
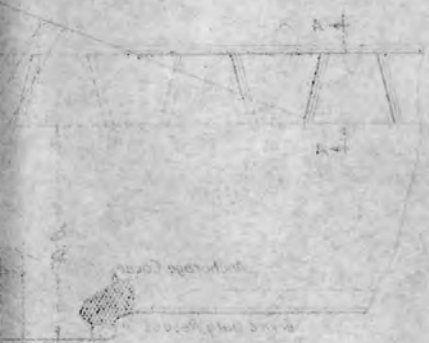
DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION	
SACRAMENTO VALLEY INVESTIGATIONS SALT WATER BARRIER SHIP LOCKS - CROSS SECTIONS PRELIMINARY ESTIMATES NOS. 1 TO 6	
APPROVED FOR ESTIMATING PURPOSES: <i>A. P. Dralter</i> CHIEF ENGINEER	DRAWN: C.M. LYT-CAM SUBMITTED: <i>[Signature]</i> CHECKED: N.B.H. RECOMMENDED: <i>[Signature]</i>
SV-81	Berkeley, California, Feb. 25, 1926 Sheet 2 of 2 193-D-33

Plate 4-12

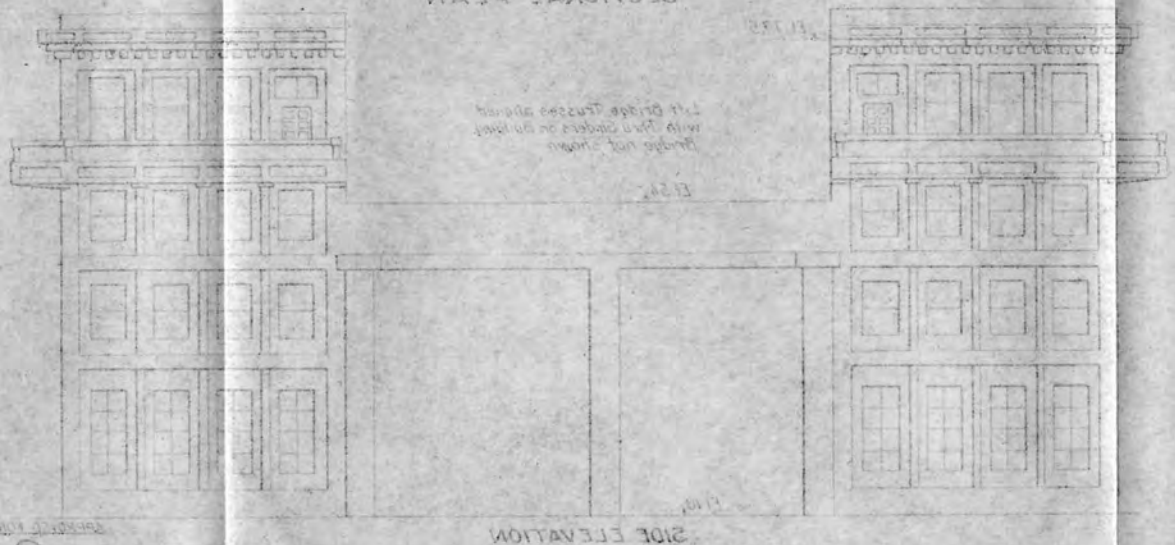
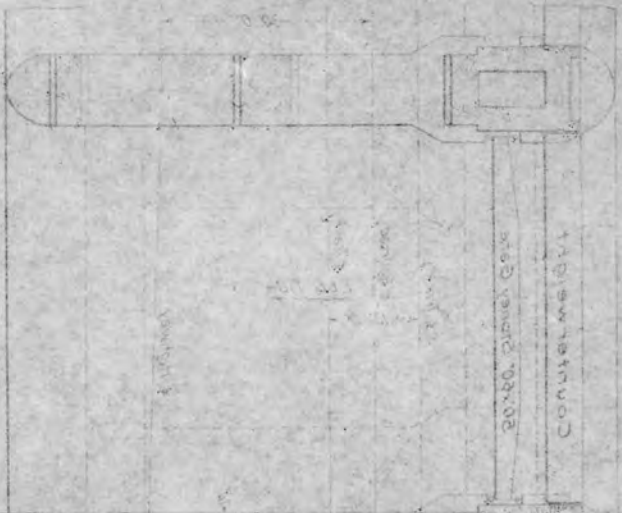
SHIP LOCKS, JUNCTION WITH CONTROL WORKS

Notes:
The drawing is a preliminary design and is subject to change without notice.
The work shown is to be done in accordance with the specifications and drawings of the U.S. Army Corps of Engineers, District of Columbia, and the U.S. Army Corps of Engineers, District of Columbia, and the U.S. Army Corps of Engineers, District of Columbia.

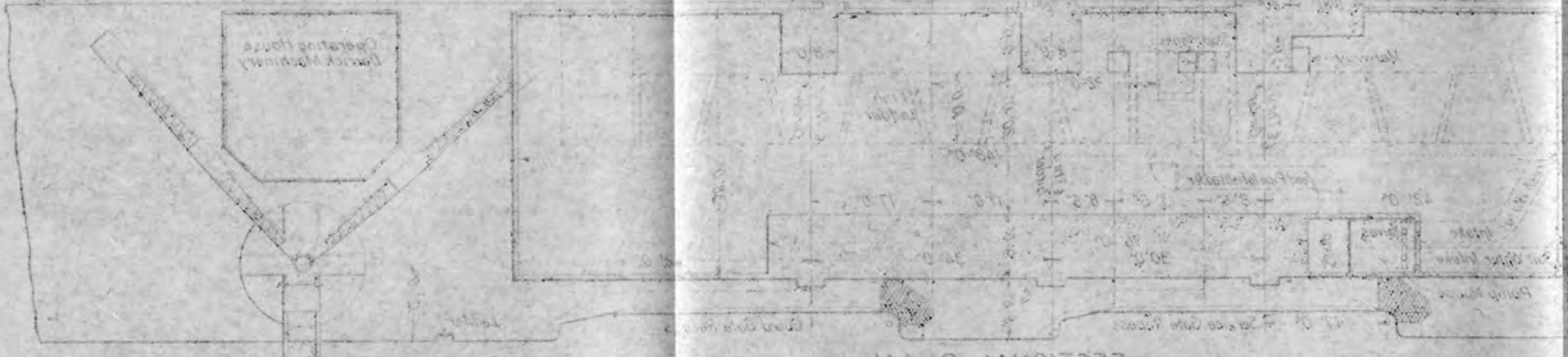
SECTION A-A THROUGH MAIN AND FISH LADDER



END ELEVATION



SIDE ELEVATION



SECTIONAL PLAN

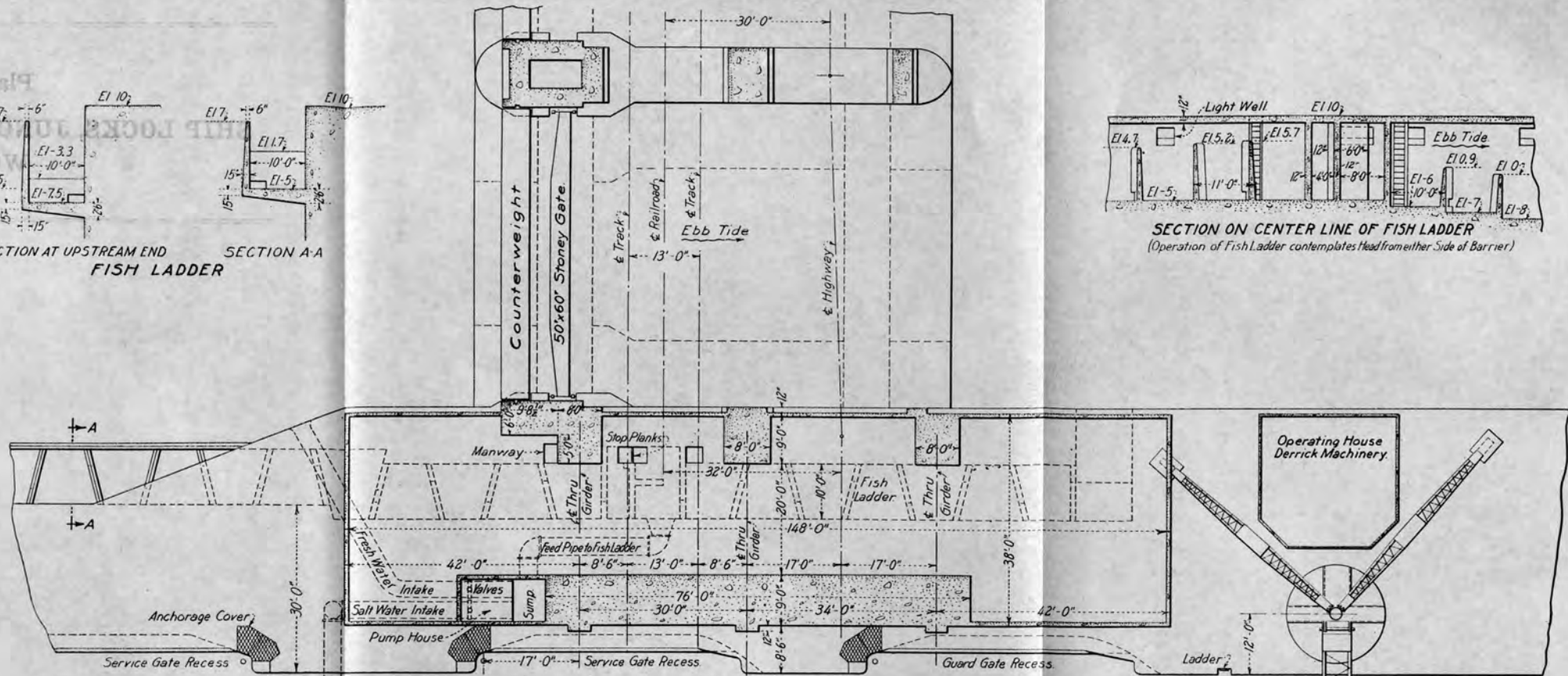
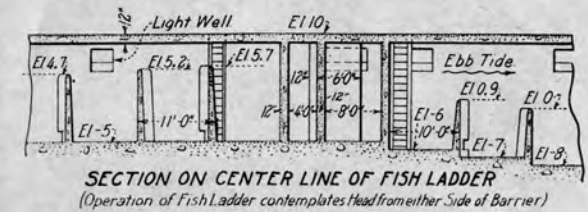
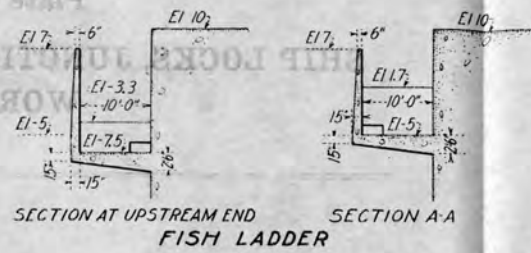


SECTION ON CENTERLINE OF FISH LADDER

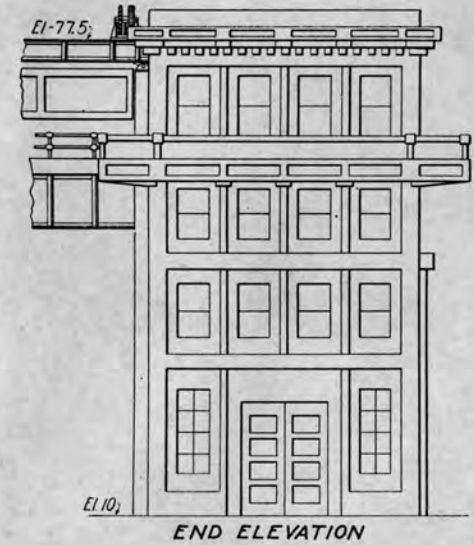
PRELIMINARY DESIGN
Department of the Interior
BUREAU OF RECLAMATION
MACHINERY BUILDING, LOCK STATION
SALT WATER BARRIER
SHIP LOCKS
JUNCTION WITH CONTROL WORKS
27-85
1930-31

Notes:-

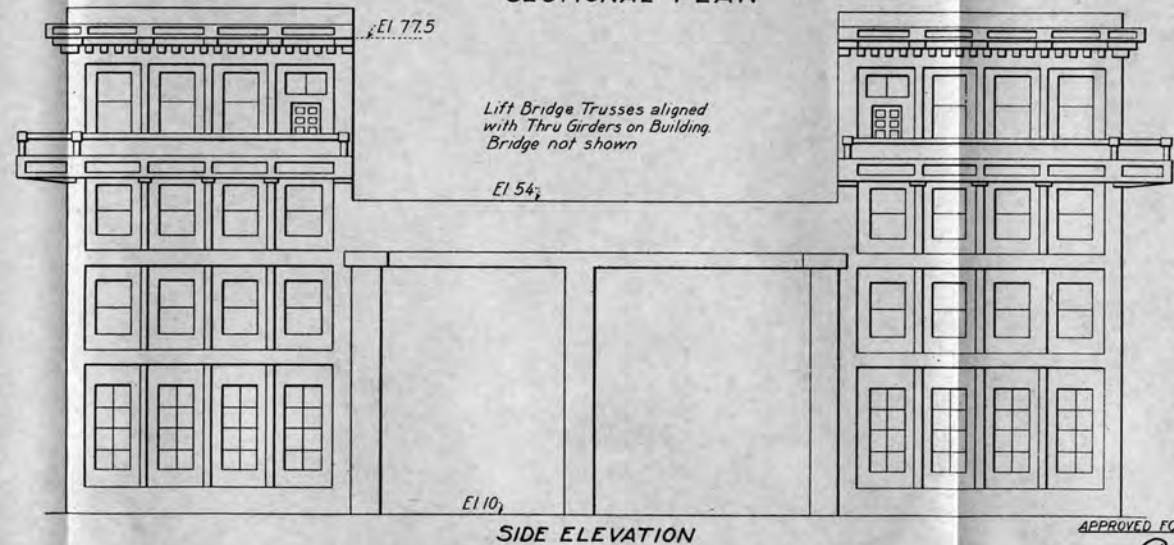
This Drawing shows Junction of Control Works for 50' Stony Gates and 80' Lock when Bridge is near Downstream End of Lock Wall. With Control Works for either 50' or 70' Stony Gates adjoining 80' or 110' Lock and Bridge near either End of Lock Wall, the arrangement is substantially the same. Reinforcing Steel not shown. In Salt Water same to be 12" from Surface of Concrete.



SECTIONAL PLAN

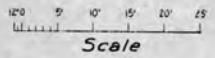
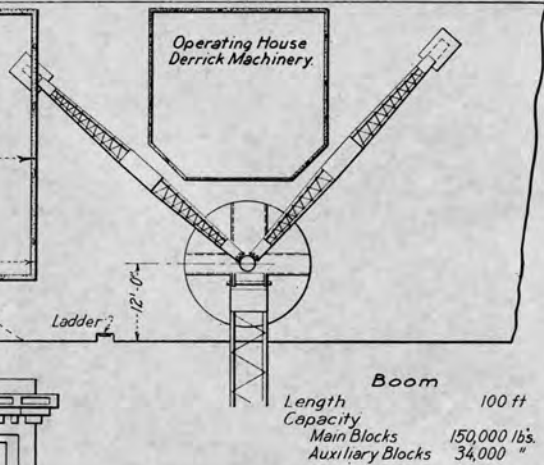


END ELEVATION



SIDE ELEVATION

Lift Bridge Trusses aligned with Thru Girders on Building. Bridge not shown.



PRELIMINARY DESIGN

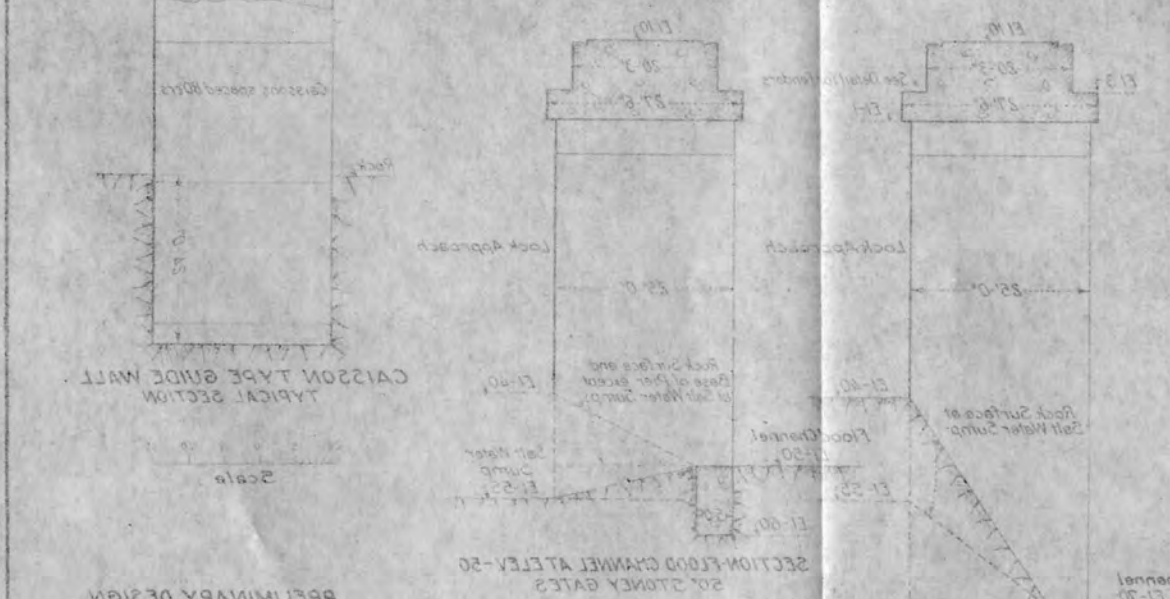
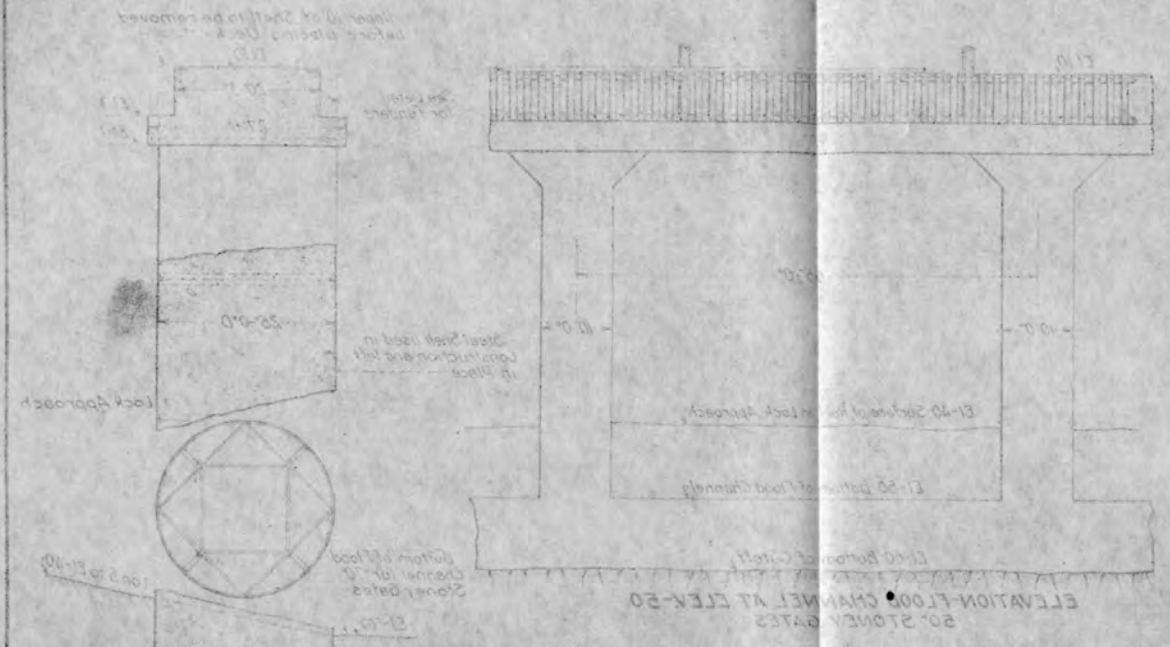
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
SHIP LOCKS
JUNCTION WITH CONTROL WORKS

APPROVED FOR ESTIMATING PURPOSES:
A. J. Dralter
CHIEF ENGINEER

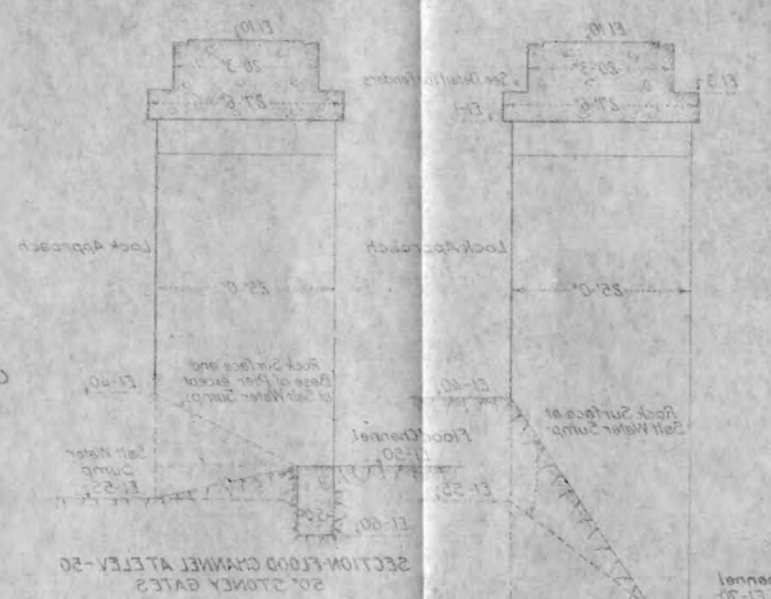
DRAWN N.B.H.-L.T.C.M. SUBMITTED *W. J. Young*
CHECKED N.B.H. RECOMMENDED *J. H. Savage*

SV-82 Berkeley, California Feb. 23, 1926 193-D-34

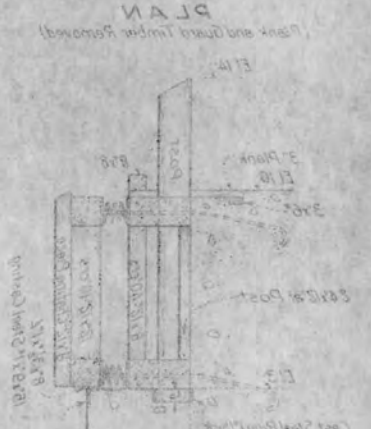
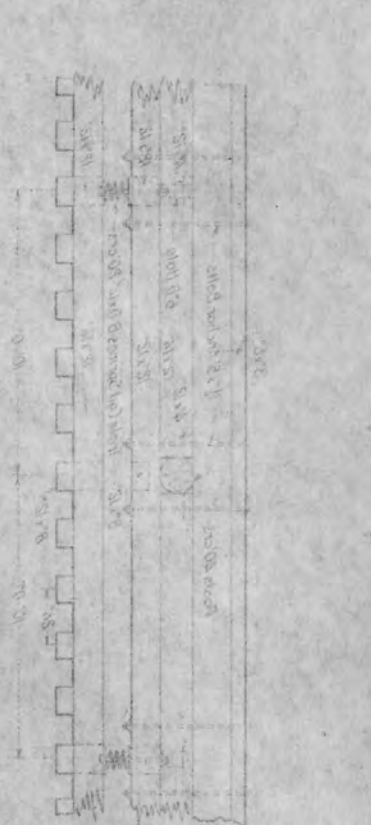
Plate 4-13 SHIP LOCKS, GUIDE WALLS, 80' AND 110' LOCKS



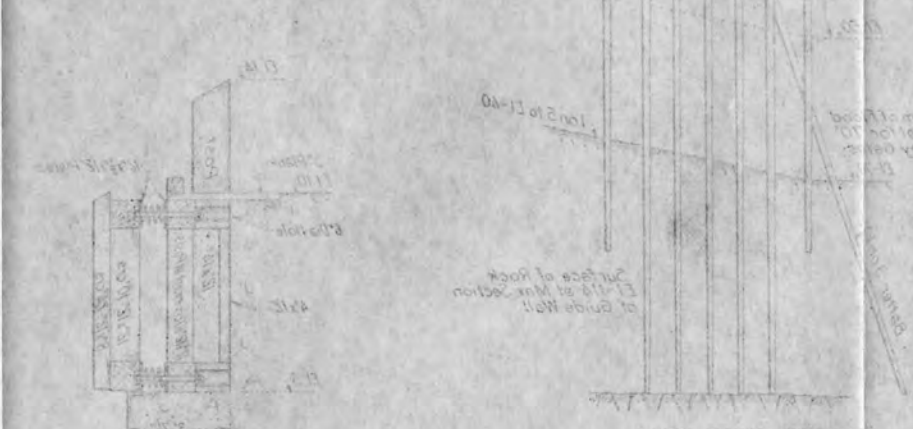
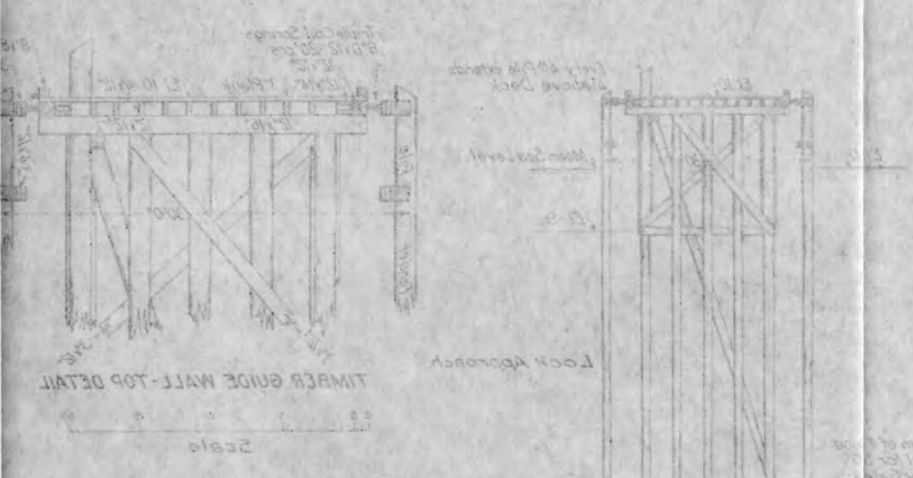
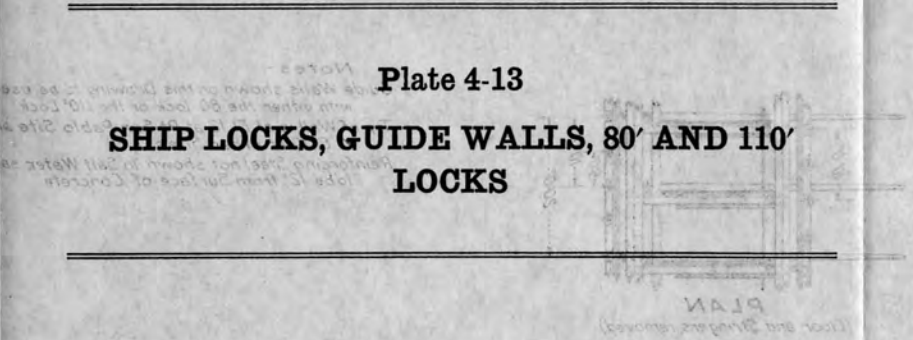
PRELIMINARY DESIGN
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO WATER INVESTIGATOR'S
 SALT WATER BARRIER
 SHIP LOCKS
 GUIDE WALLS 80' AND 110' LOCKS
 2V-83
 RECOMMENDED BY
 1-22-33



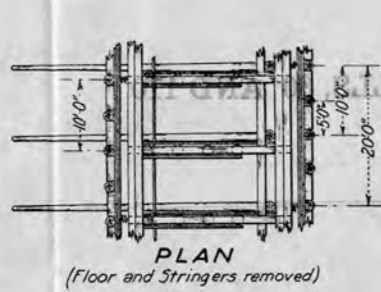
APPROVED FOR ESTIMATING PURPOSES
 O. A. Carter
 CHIEF ENGINEER
 SECTION FLOOD CHANNEL AT ELEV 70
 70' STONEY GATES
 CONCRETE GUIDE WALL
 Scale



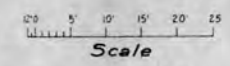
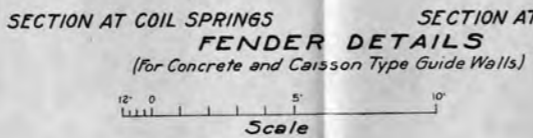
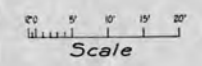
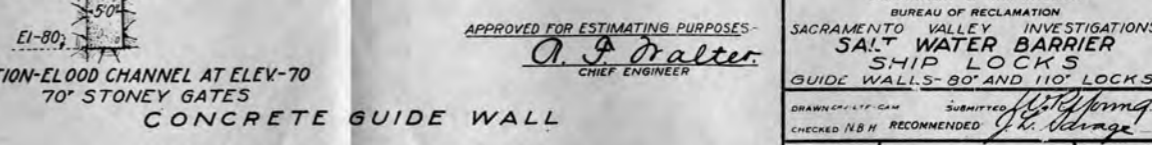
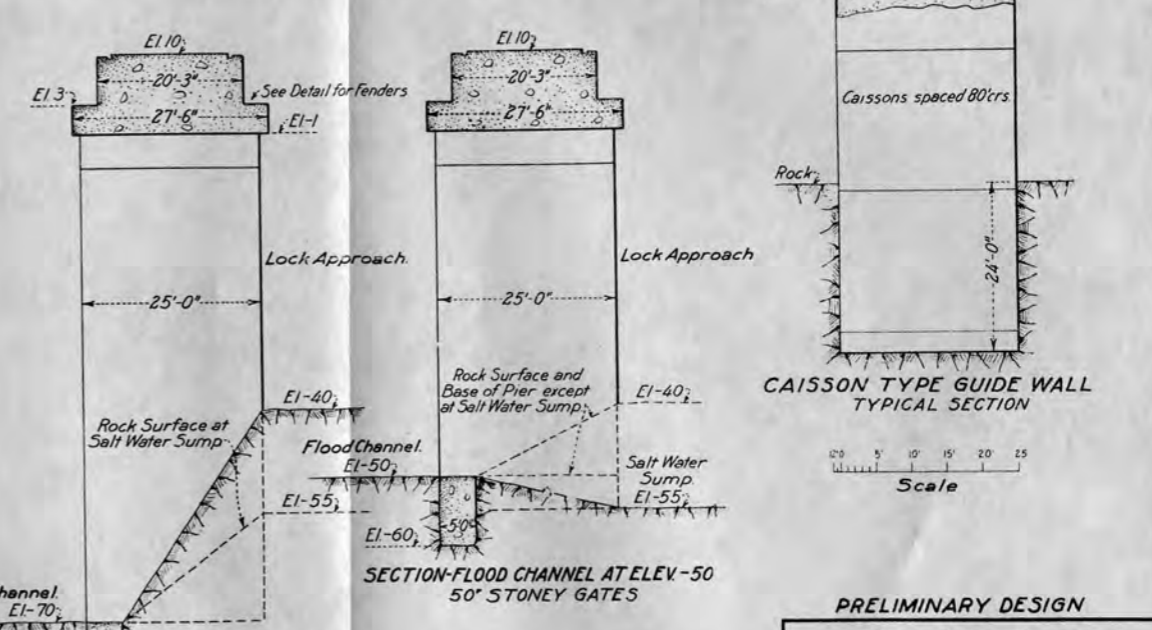
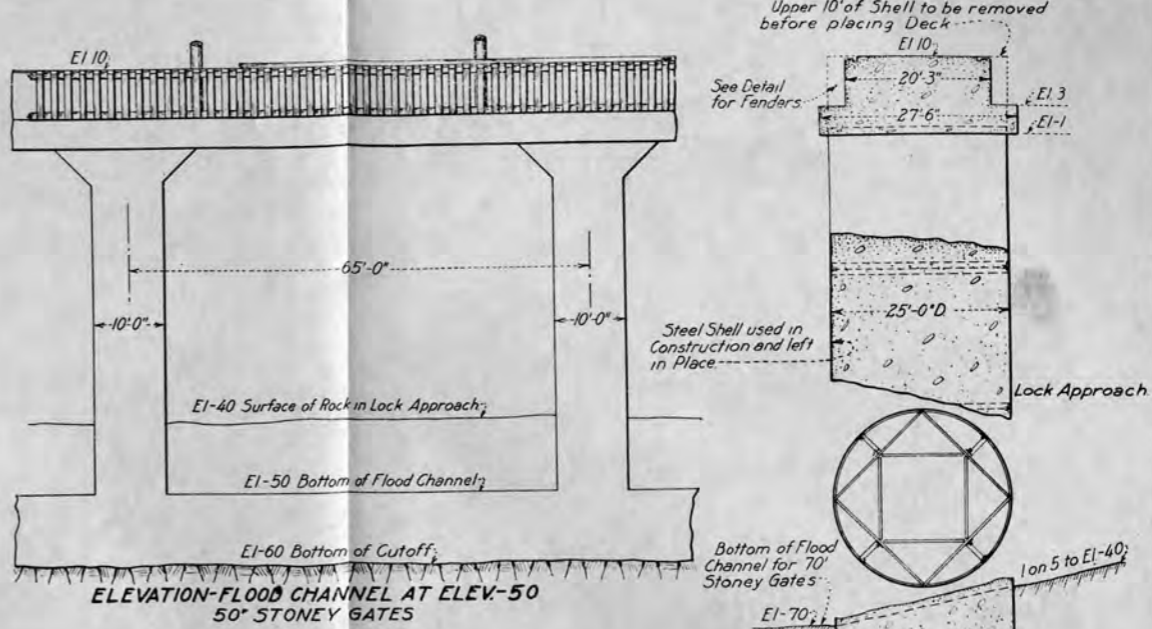
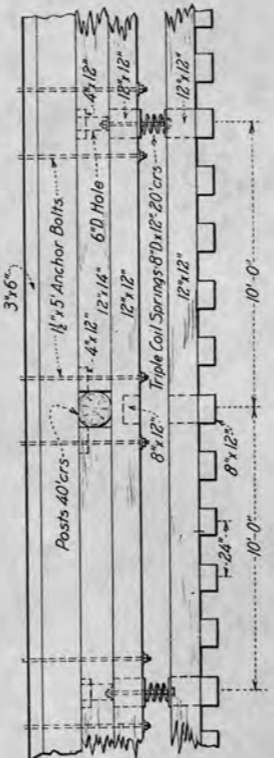
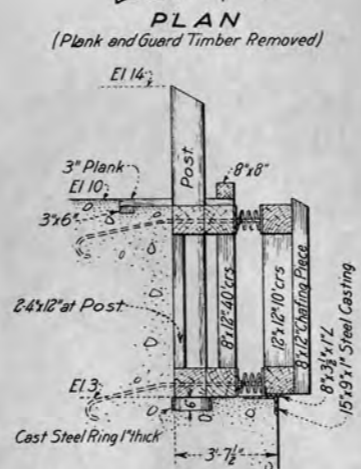
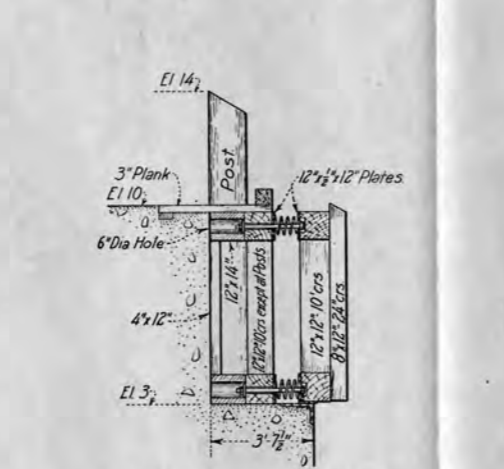
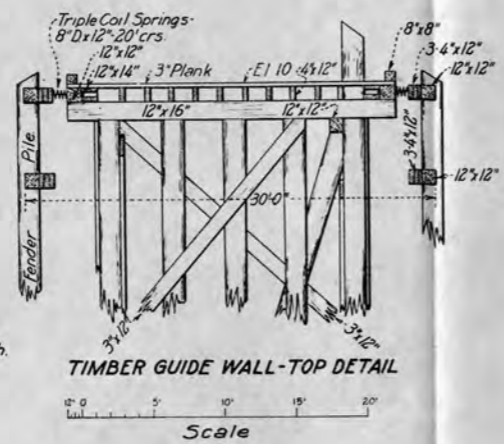
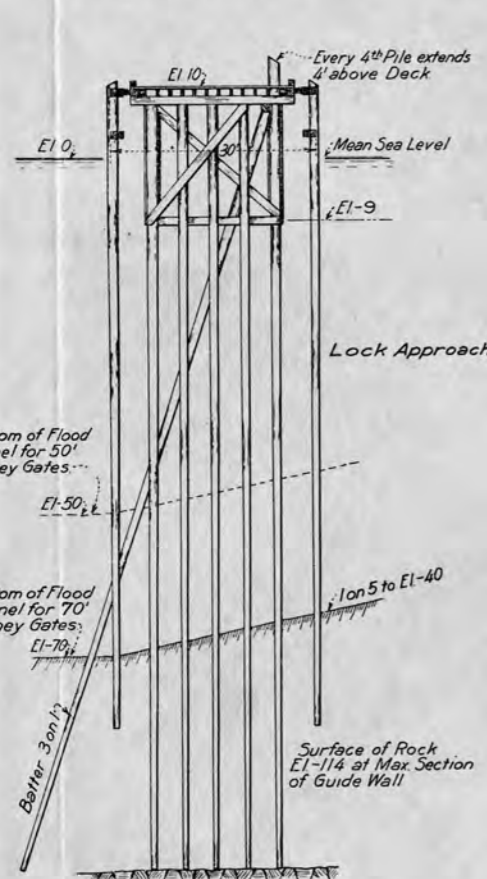
SECTION AT COIL SPRINGS
 FENDER DETAILS
 For Concrete and Caisson Type Guide Walls
 Scale



SECTION AT COIL SPRINGS
 FENDER DETAILS
 For Concrete and Caisson Type Guide Walls
 Scale



Notes-
 Guide Walls shown on this Drawing to be used with either the 80' Lock or the 110' Lock
 Top of Wall is at El. 12 at Pt San Pablo Site and at El. 10 at other Sites.
 Reinforcing Steel not shown. In Salt Water, same to be 12" from Surface of Concrete



PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
SHIP LOCKS
 GUIDE WALLS-80' AND 110' LOCKS

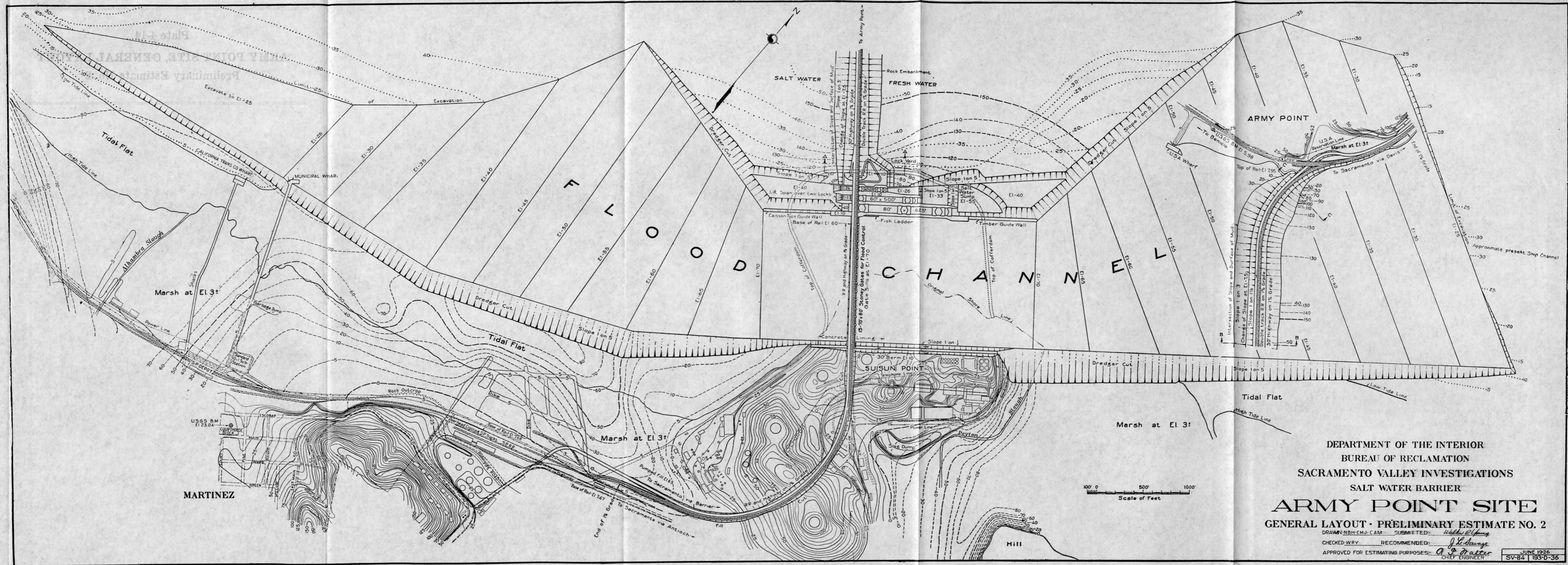
APPROVED FOR ESTIMATING PURPOSES-
O. J. Pralter
 CHIEF ENGINEER

DRAWN BY: C. W. CAN
 CHECKED BY: H. H. RECOMMENDED
 SUBMITTED BY: J. H. Pralter
 J. H. Pralter

SV-83 Berkeley, California Feb 27, 1926 133-D-35

Plate 4-14
ARMY POINT SITE, GENERAL LAYOUT
 Preliminary Estimate No. 2



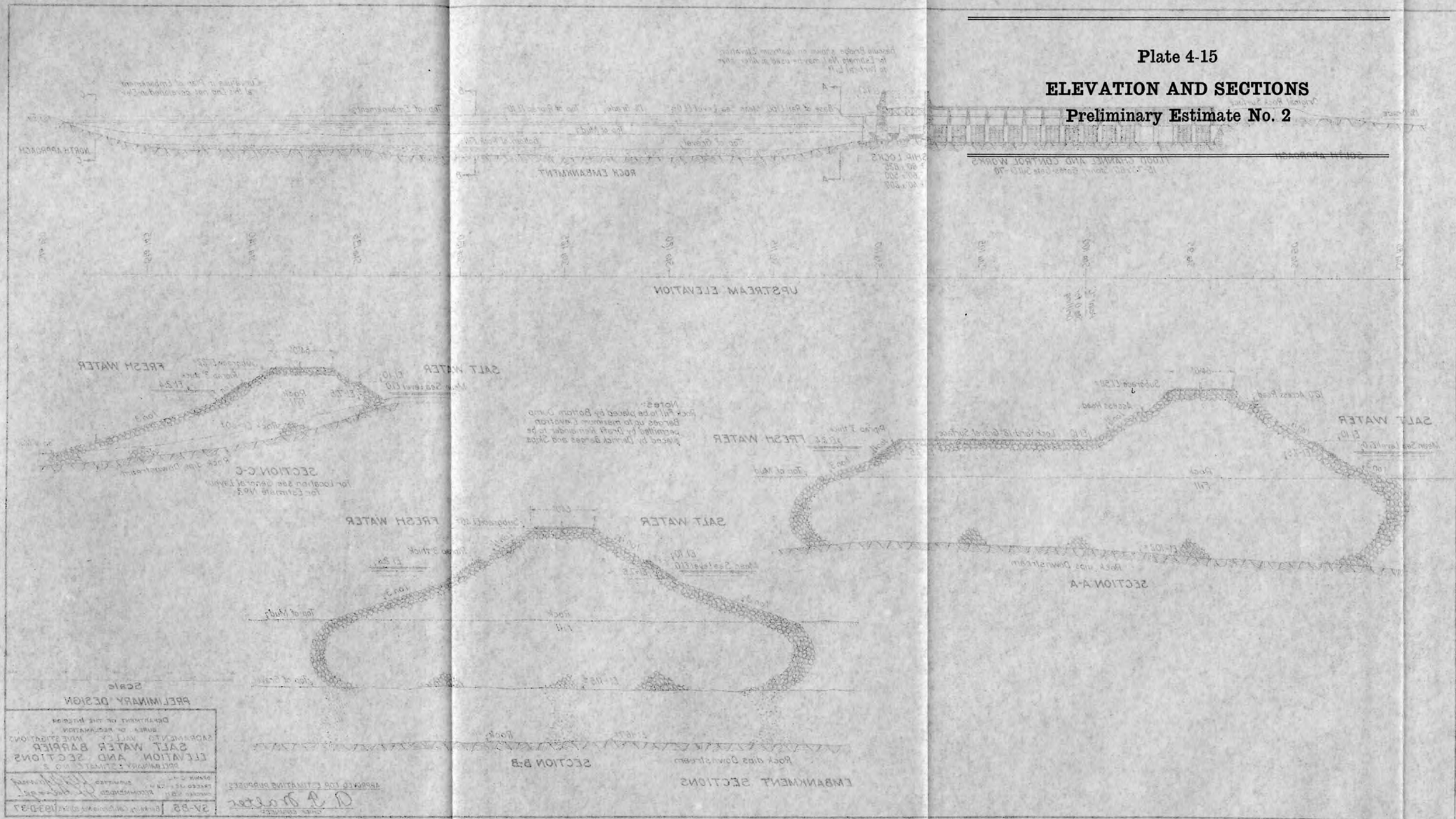


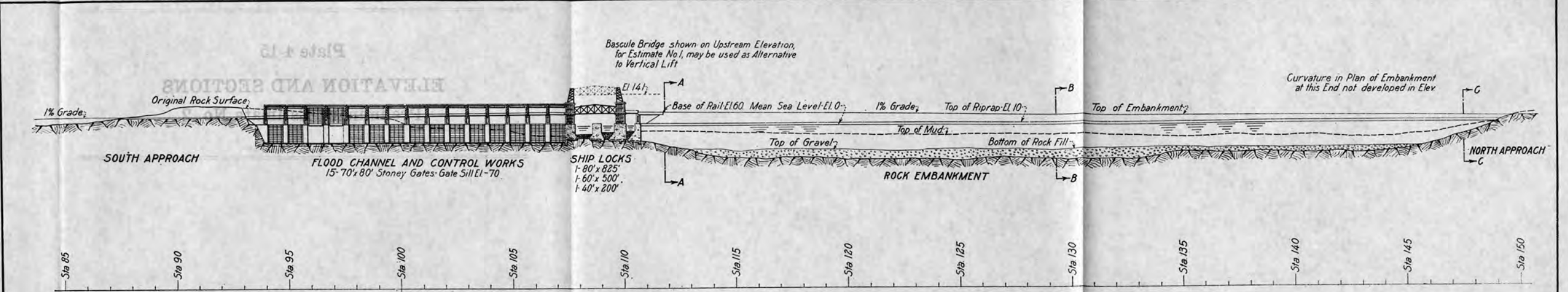
DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
ARMY POINT SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 2

DRAWN: NBH-CMJ-CAM SUBMITTED: *Walter P. Long*
 CHECKED: WRY RECOMMENDED: *J. L. Savage*
 APPROVED FOR ESTIMATING PURPOSES: *A. J. Walter*
 CHIEF ENGINEER

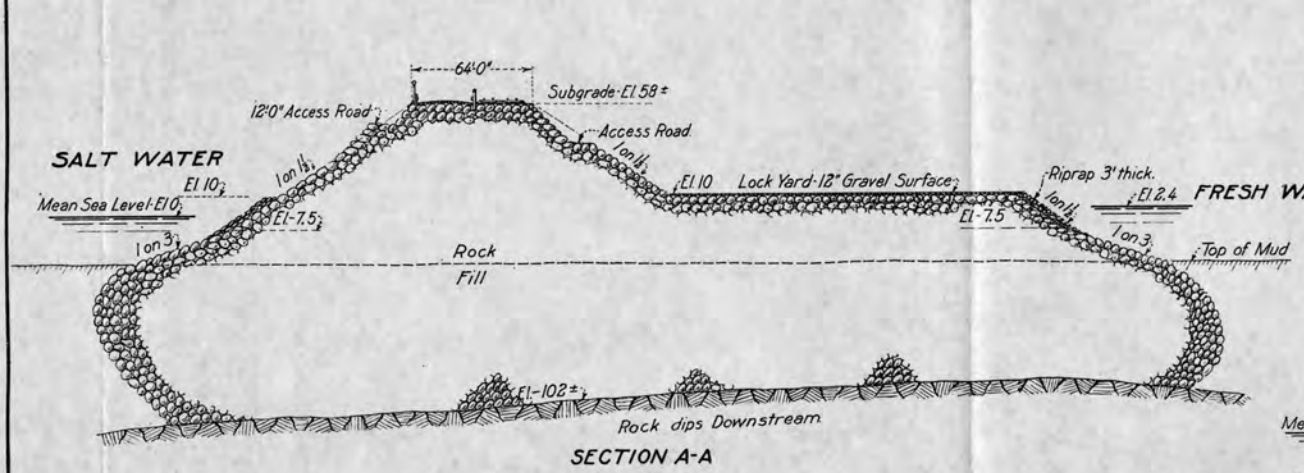
JUNE 1926
 SV-84 193-D-36

Plate 4-15
ELEVATION AND SECTIONS
Preliminary Estimate No. 2

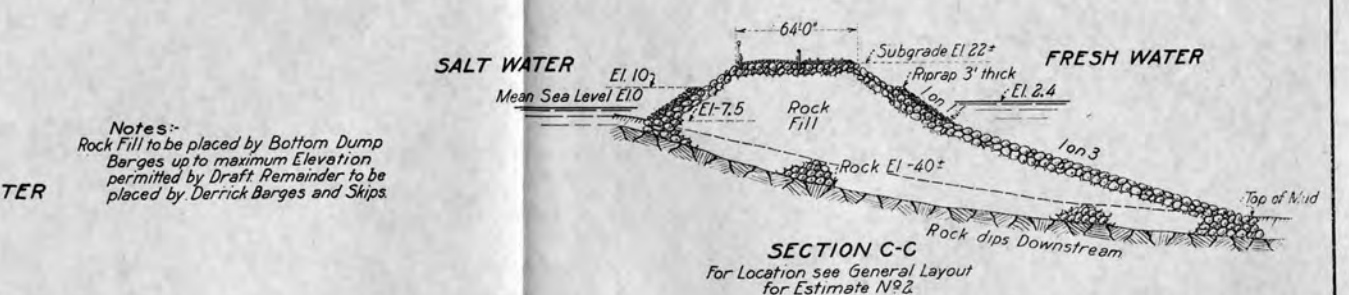




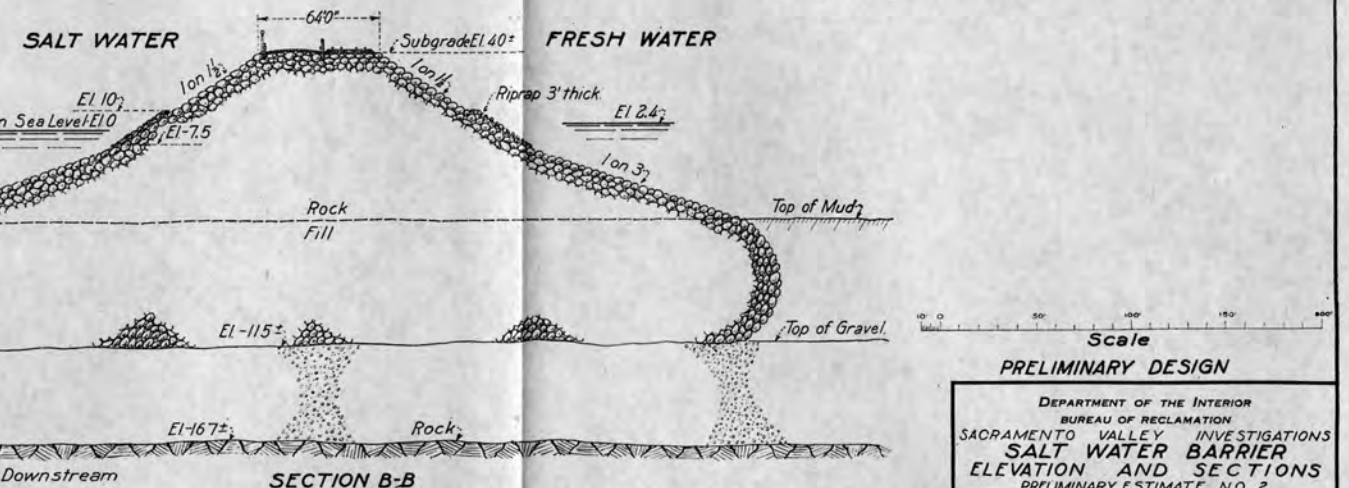
UPSTREAM ELEVATION



SECTION A-A



SECTION C-C
For Location see General Layout for Estimate No. 2



SECTION B-B

EMBANKMENT SECTIONS

Notes:-
Rock Fill to be placed by Bottom Dump Barges up to maximum Elevation permitted by Draft Remainder to be placed by Derrick Barges and Skips

Scale 0 50 100 150 200

PRELIMINARY DESIGN

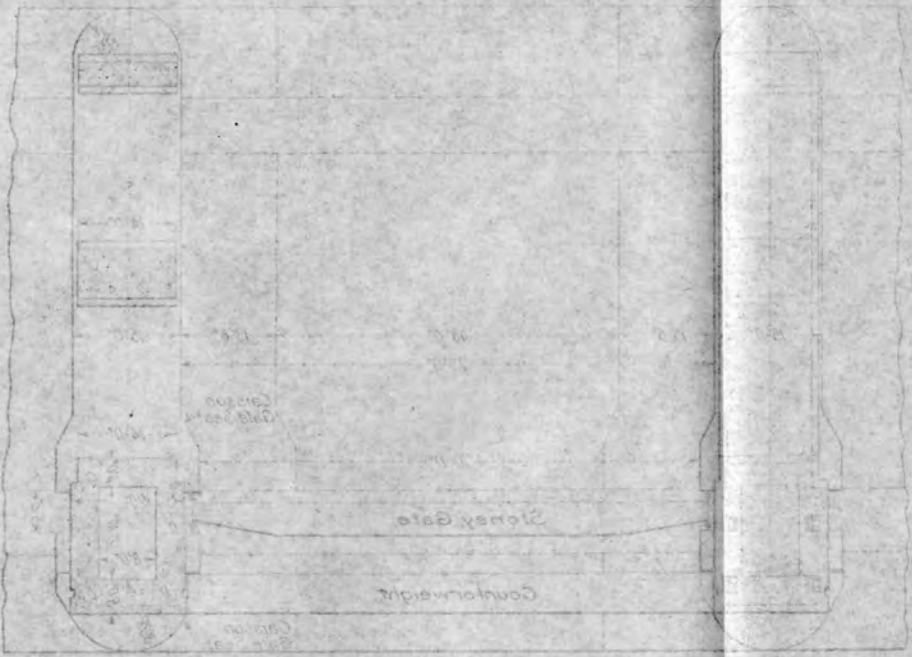
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
ELEVATION AND SECTIONS
PRELIMINARY ESTIMATE NO. 2

APPROVED FOR ESTIMATING PURPOSES:
R. J. Walter
CHIEF ENGINEER

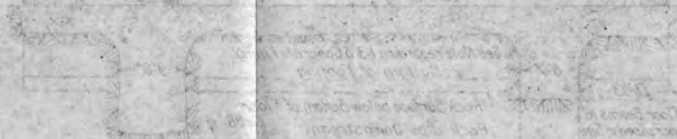
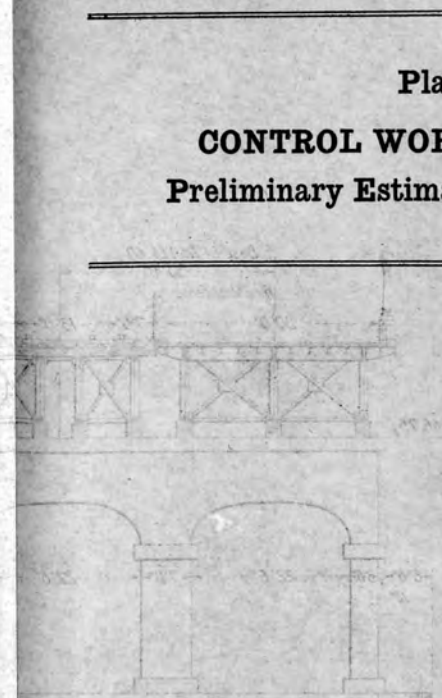
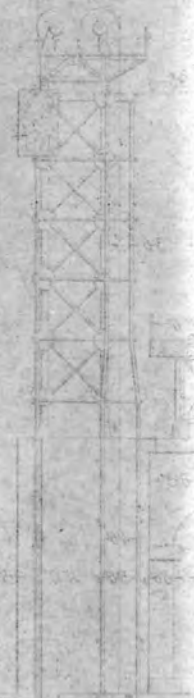
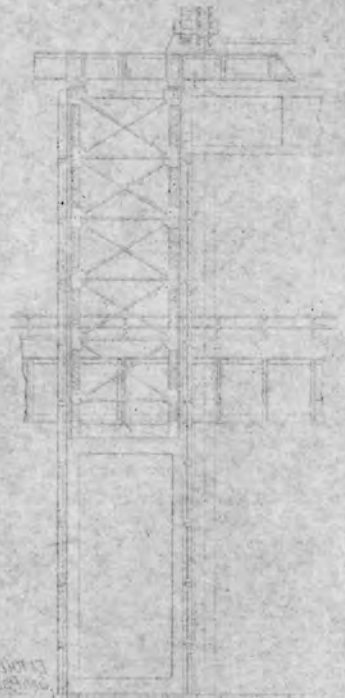
DRAWN G.M.U. SUBMITTED: *H. J. ...*
TRACED J.E.V.-C.A.M. CHECKED N.B.M. RECOMMENDED: *J. ...*

SV-85 Berkeley, California, Mar. 20, 1926 193-D-37

Notes:
 1. The structure is to be constructed of reinforced concrete.
 2. The structure is to be constructed on a foundation of concrete piers.
 3. The structure is to be constructed on a foundation of concrete piers.
 4. The structure is to be constructed on a foundation of concrete piers.
 5. The structure is to be constructed on a foundation of concrete piers.



SECTION AT E110
 PLAN
 BRIDGE REMOVED



UPSTREAM ELEVATION

MAXIMUM SIDE ELEVATION

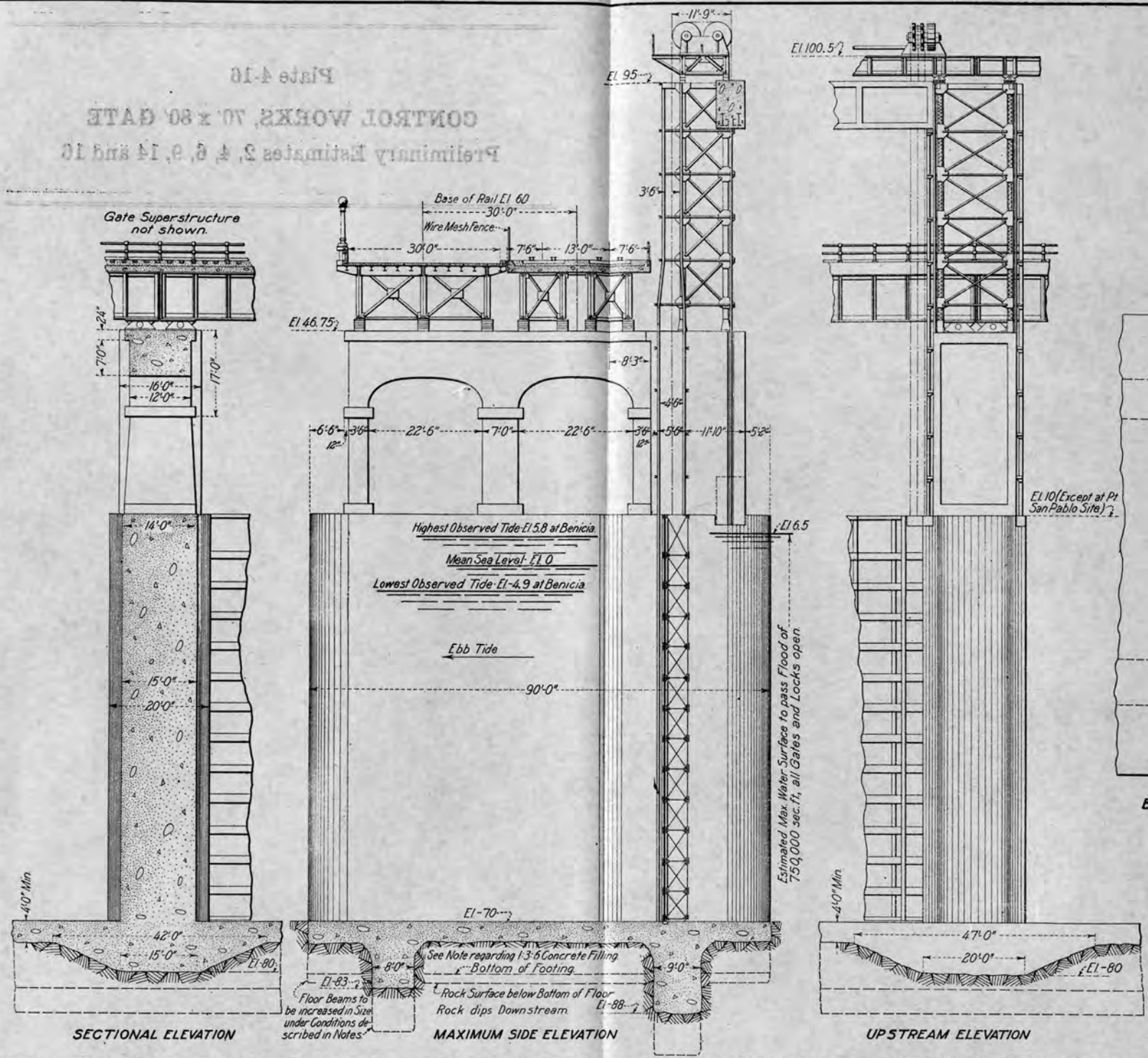
SECTIONAL ELEVATION

Plate 4-16
CONTROL WORKS, 70' x 80' GATE
 Preliminary Estimates 2, 4, 6, 9, 14 and 16

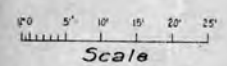
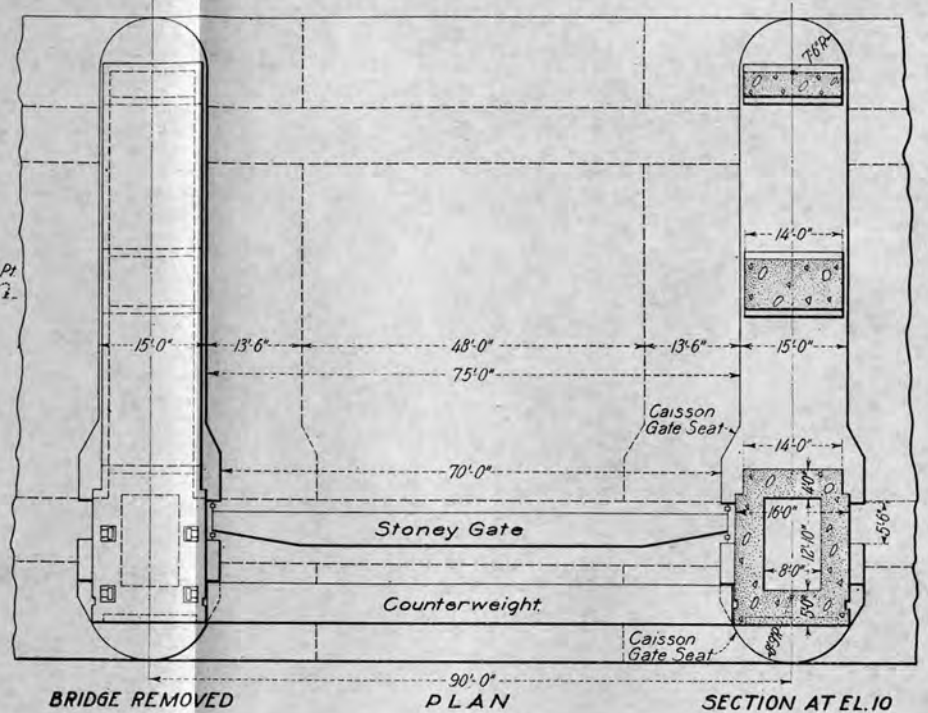
PRELIMINARY DESIGN
 FEDERAL BUREAU OF RECLAMATION
 SALT WATER BARRIER
 CONTROL WORKS FOR 80' GATE
 2V-8C
 1933-34

DESIGNED BY
 ENGINEER
 1933-34

Plate 4-10
 CONTROL WORKS, 70' x 80' GATE
 Preliminary Estimates 2, 4, 6, 9, 14 and 16



Notes:
 At Pt. San Pablo Site the Top of Substructure is at El 12 instead of El 10. Other Elevations do not change.
 When there is no Railroad or Highway Bridge, the Length of Substructure Piers is diminished from 90' to 65'.
 Reinforcing Steel not shown. In Salt Water, Same to be 12" from Surface of Concrete.
 Where Original Surface of Rock is slightly below Bottom of Floor the Latter is to be thickened but where appreciably below, the Space between Floor, Rock Surface and Floor Beams is filled with 1:3:6 Concrete and Floor Beams are widened and deepened to retain same penetration in Rock. See dotted Lines on Side Elevation.
 Superstructure for 70'x80' Stoney Gate is similar to that shown in Detail for 50'x60' Gate.



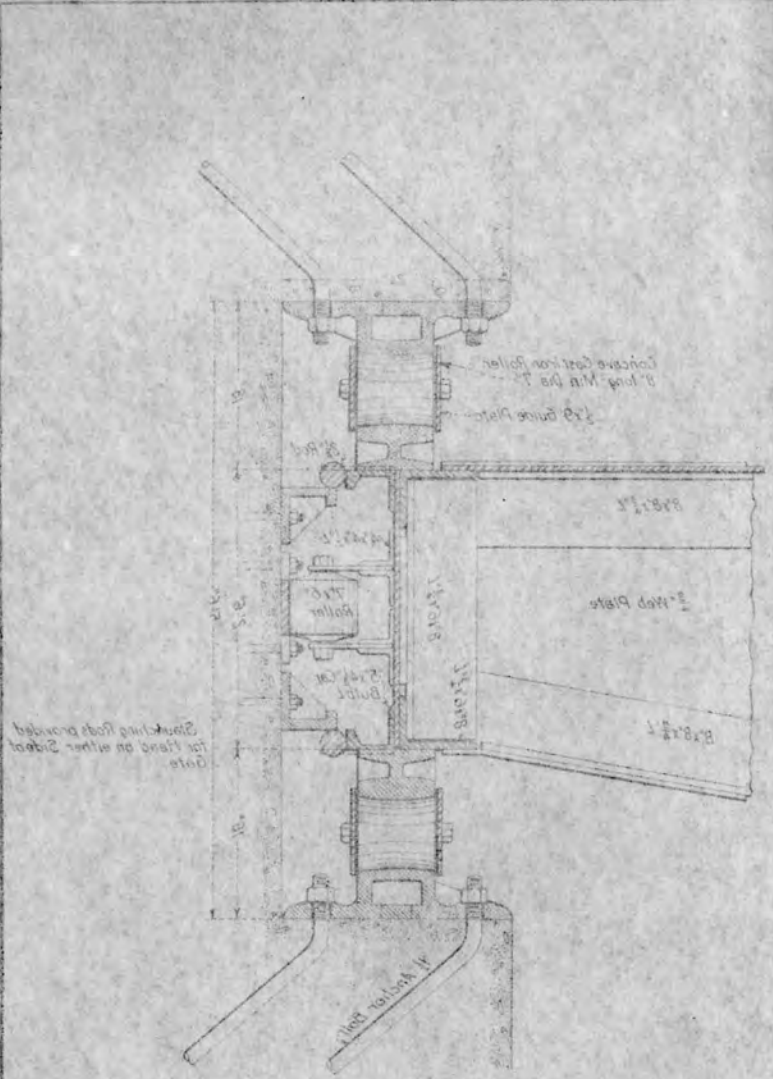
PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
CONTROL WORKS - 70' x 80' GATE
 PRELIMINARY ESTIMATES Nos 2, 4, 6, 9, 14 AND 16

APPROVED FOR ESTIMATING PURPOSES:
A. J. Dralter
 CHIEF ENGINEER

DRAWN: C.M.J. TRACED: J.E.V.-C.A.M. CHECKED: N.B.H. SUBMITTED: *H. J. Young* RECOMMENDED: *H. J. Young*

SV-86 Berkeley, California Mch 18, 1926 193-D-38



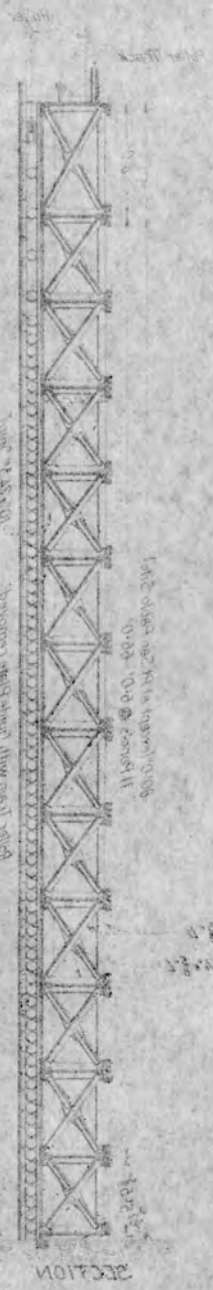
END DETAILS
Scale

PRELIMINARY DESIGN

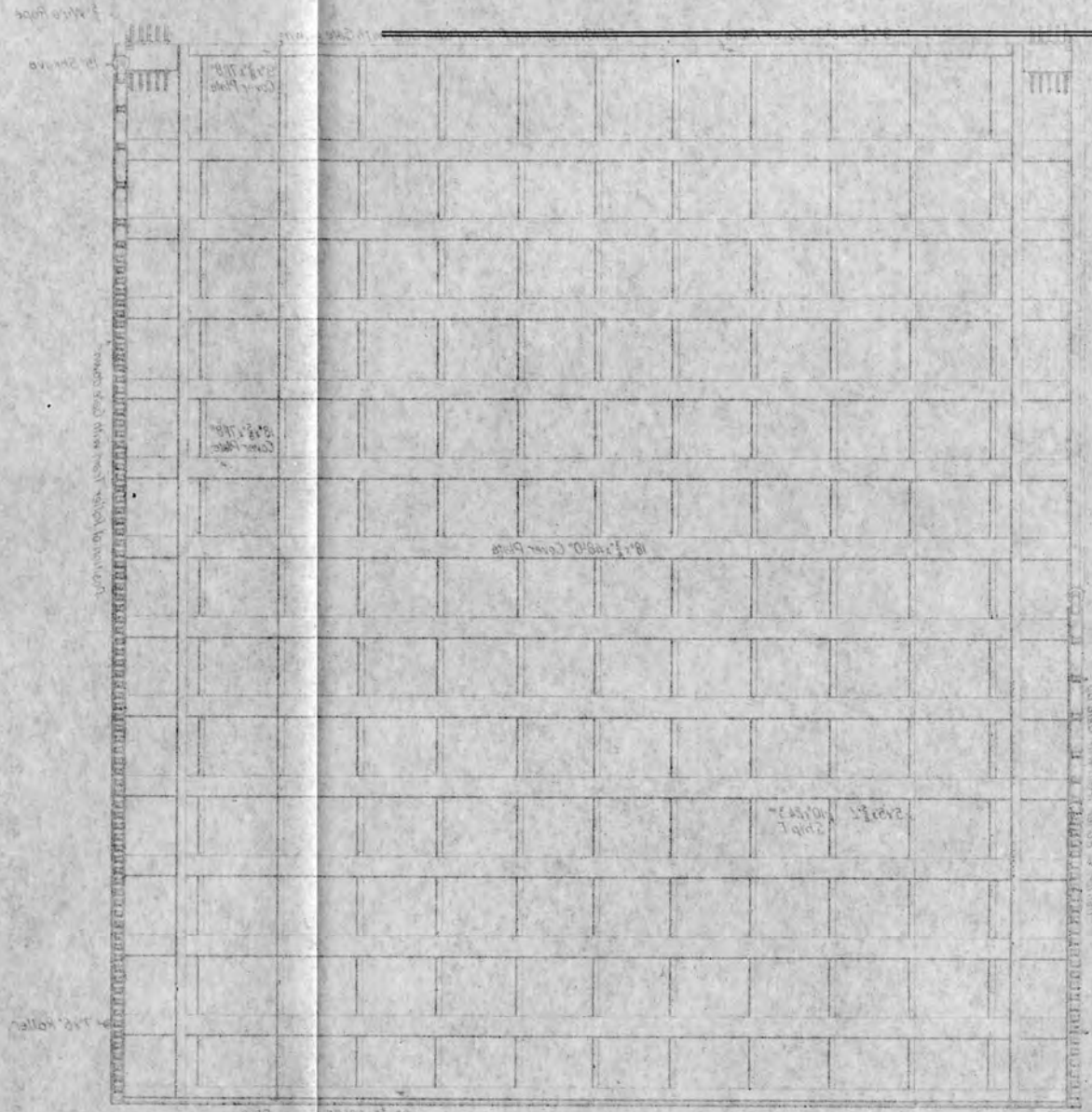
Department of the Interior
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
70' x 80' STONEY GATE
GATE SILL ELEVATION - 20

APPROVED FOR ESTIMATING PURPOSES
CHECKED AND RECOMMENDED
25-87
1937-38

Notes:
1. At 200 P.M. the top of gate when down is at E. 15 Gate
Sill at E. 15 of all three

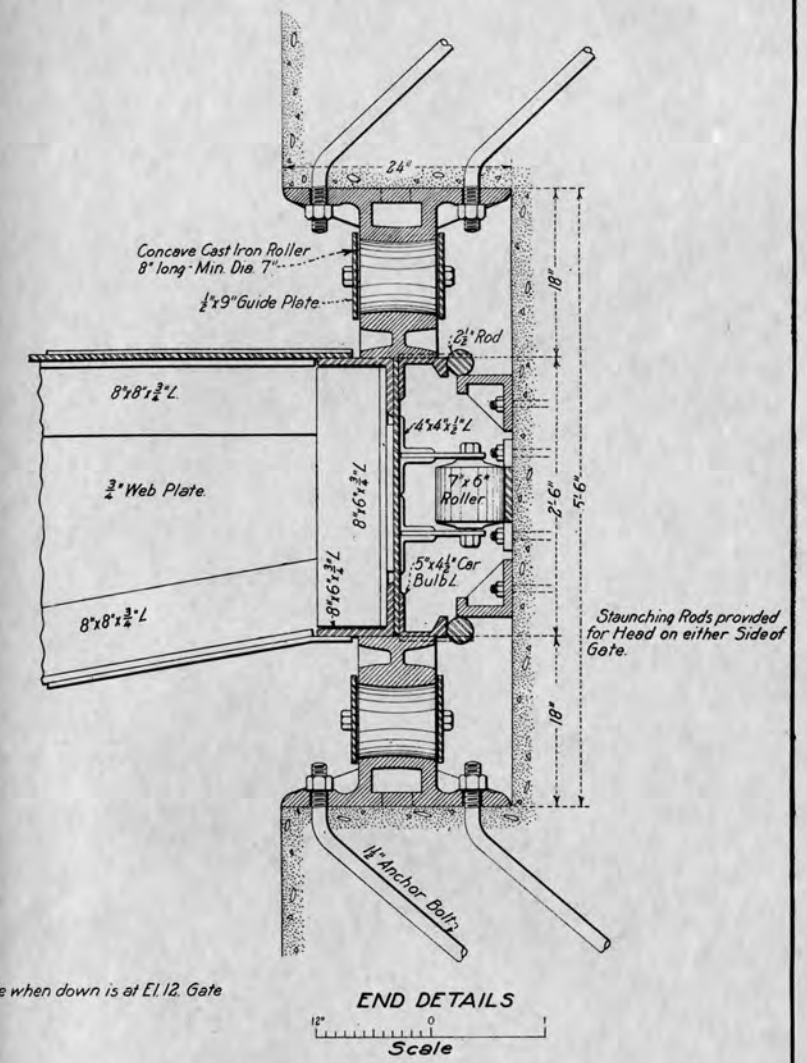
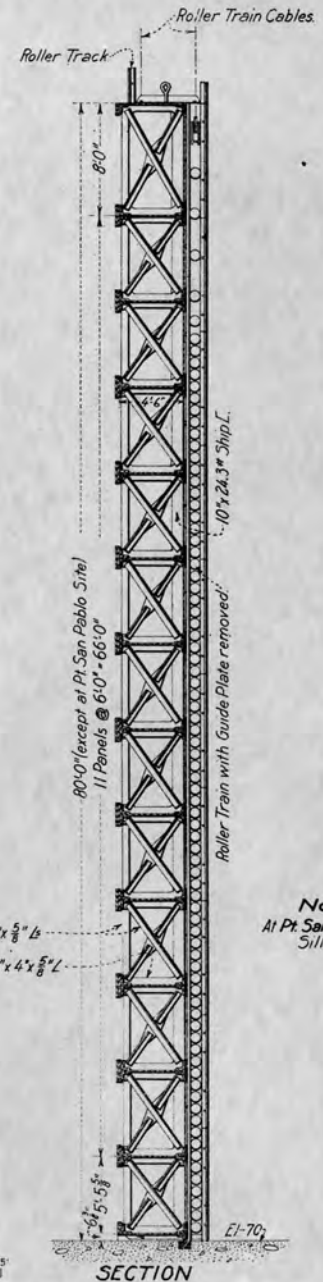
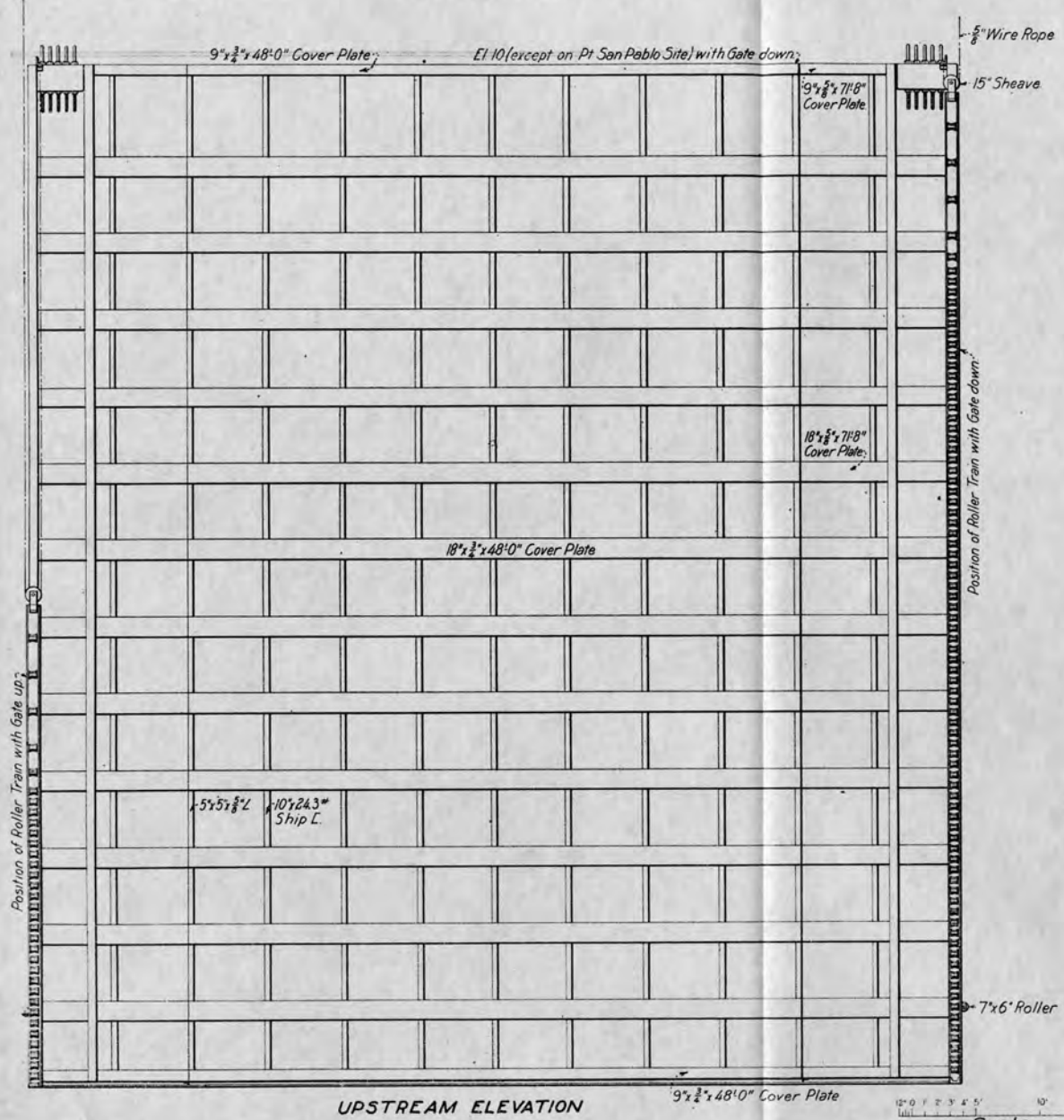


SECTION



UPSTREAM ELEVATION
Scale

Plate 4-17
STONEY GATE, 70' x 80' GATE



Notes:
At Pt San Pablo Site, Top of Gate when down is at El. 12. Gate Sill at El-70 at all Sites.

PRELIMINARY DESIGN

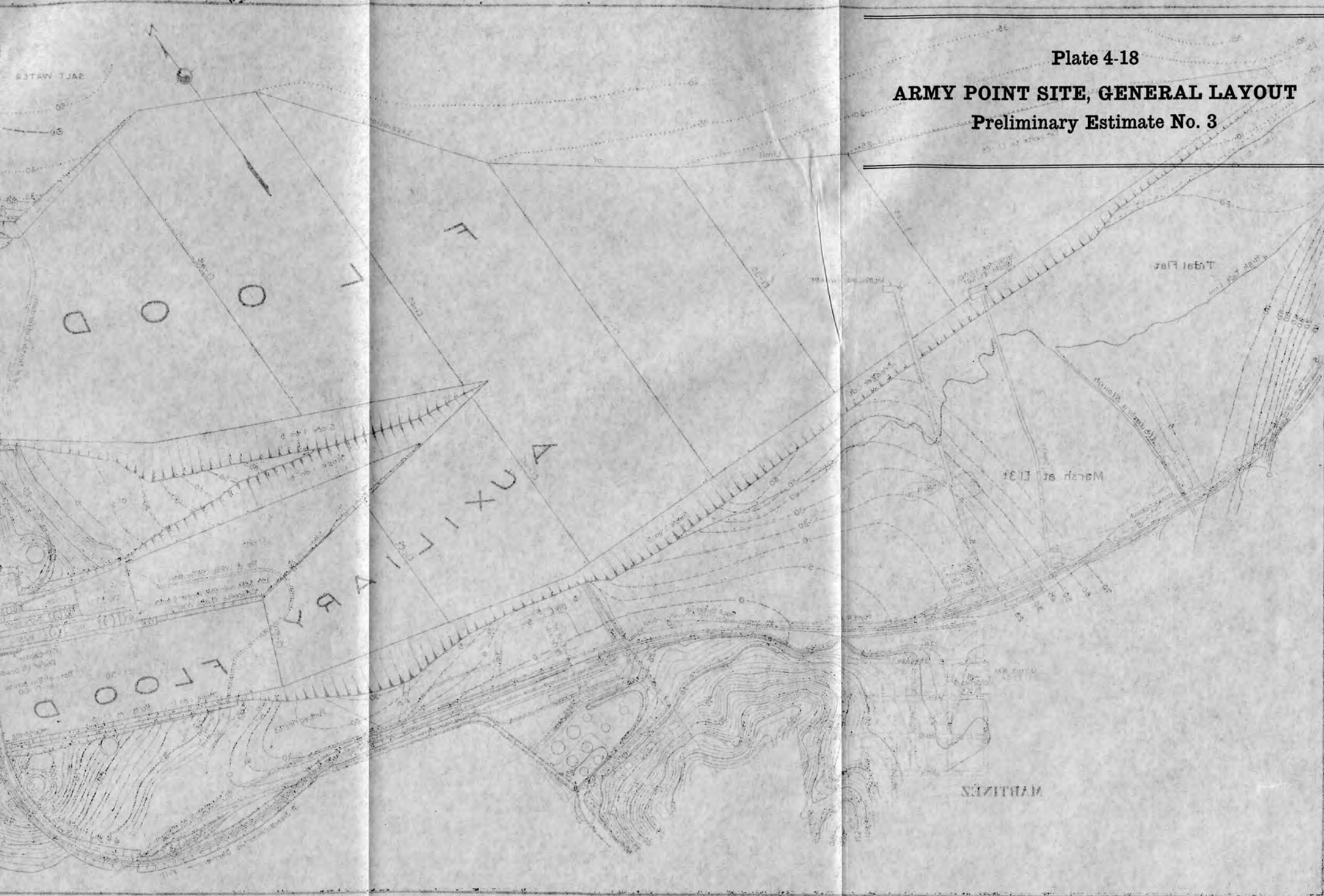
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
70'x80' STONEY GATE
GATE SILL ELEVATION - 70

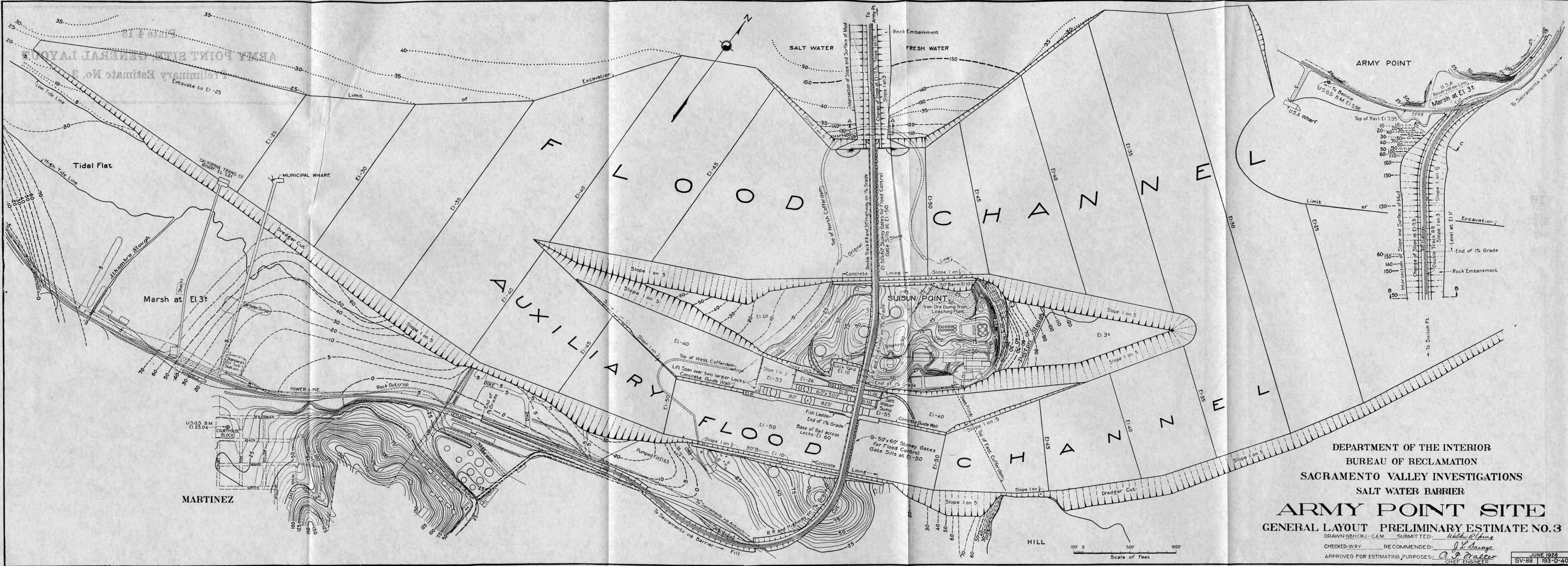
APPROVED FOR ESTIMATING PURPOSES:
O. P. Dralter
CHIEF ENGINEER

DRAWN: C.M.J. JEV-CAM SUBMITTED: *J. P. ...*
CHECKED: N.B.H. RECOMMENDED: *J. P. ...*

SV-87 Berkeley, California, Mch. 13, 1926 1930-39

Plate 4-18
ARMY POINT SITE, GENERAL LAYOUT
 Preliminary Estimate No. 3



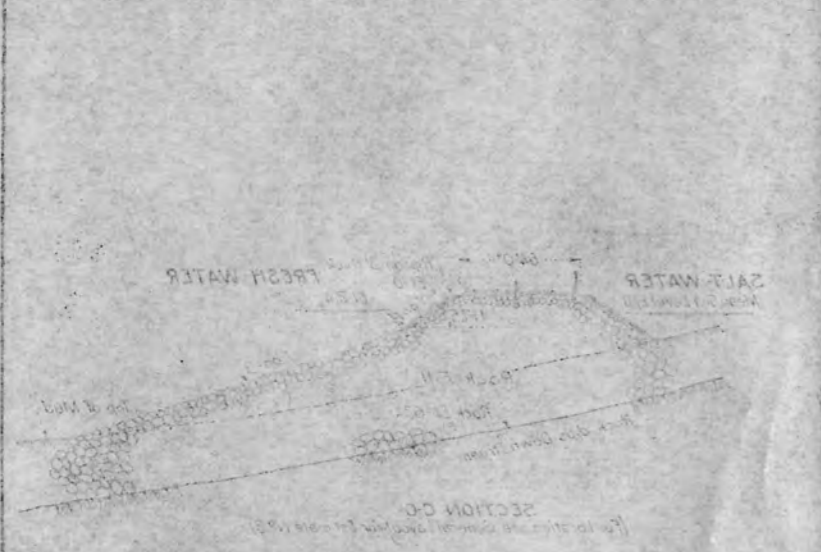
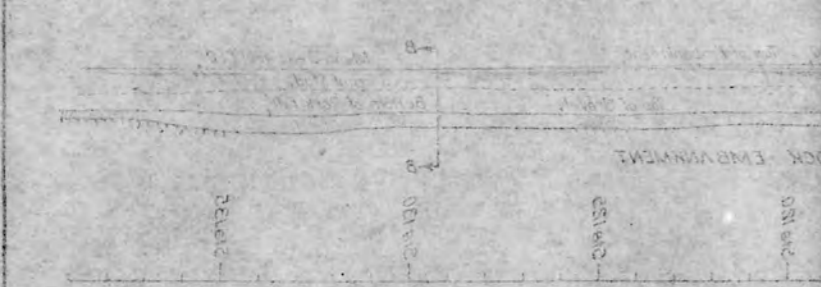
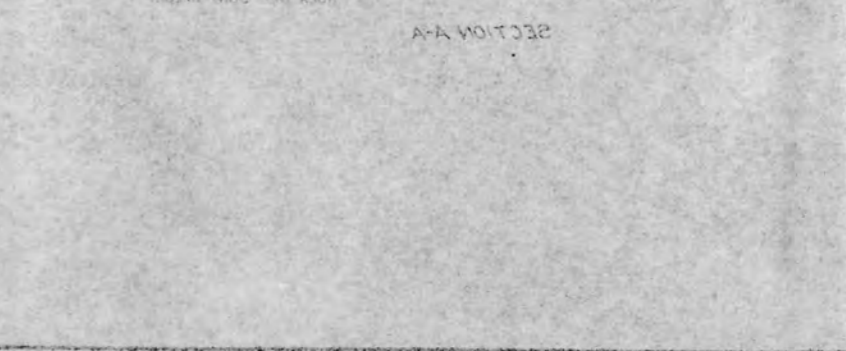
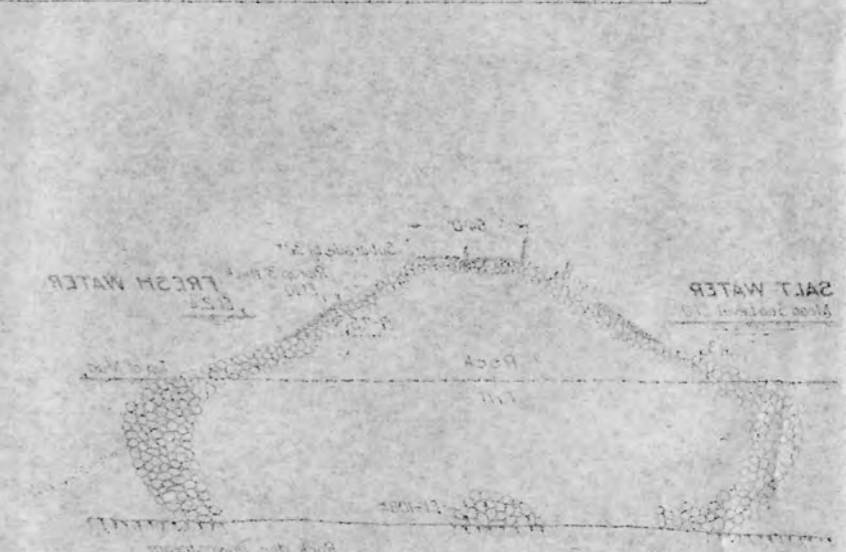


DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
ARMY POINT SITE
 GENERAL LAYOUT PRELIMINARY ESTIMATE NO. 3
 DRAWN-NBHC/MJ-CAM SUBMITTED: *Walter R. Long*
 CHECKED-WRY RECOMMENDED: *J. H. Savage*
 APPROVED FOR ESTIMATING PURPOSES: *A. P. Dralcer*
 CHIEF ENGINEER

JUNE 1926
 SV-88 193-D-40

Plate 4-19
ELEVATION AND SECTIONS
Preliminary Estimate No. 3

Scale: 1" = 100' (Horizontal)
 1" = 10' (Vertical)



PRELIMINARY DESIGN

DESIGNED BY: [Name]
 CHECKED BY: [Name]
 APPROVED FOR ESTIMATING PURPOSES: [Signature]

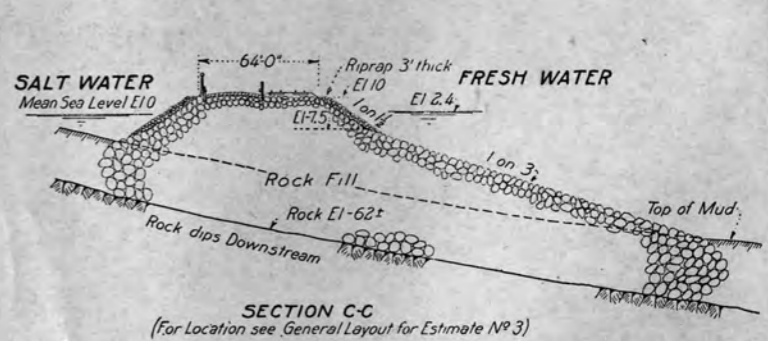
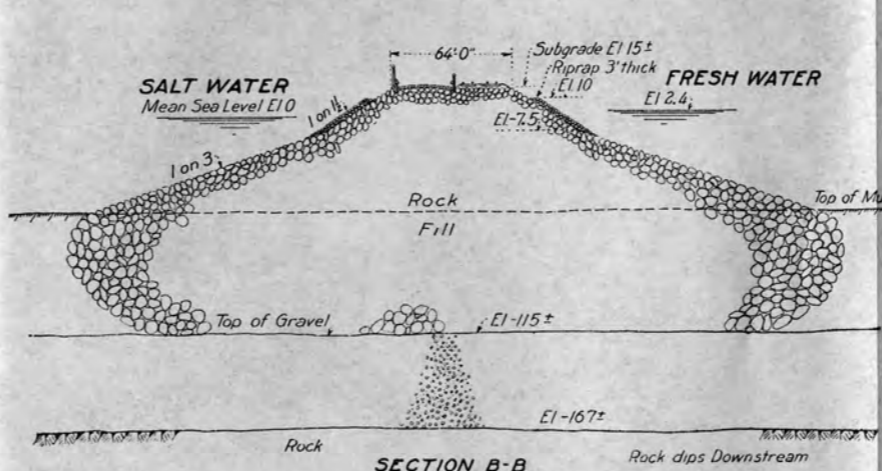
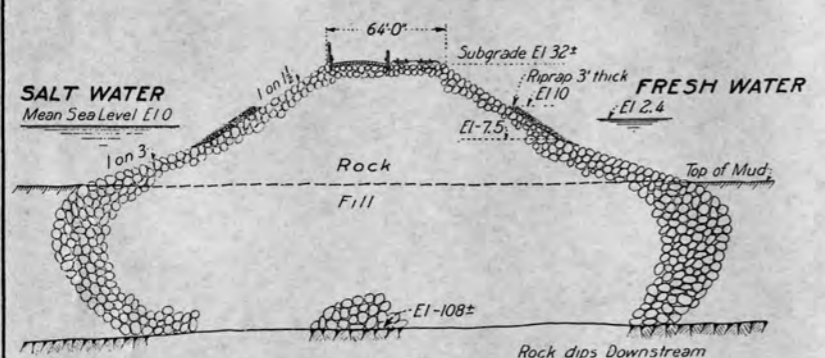
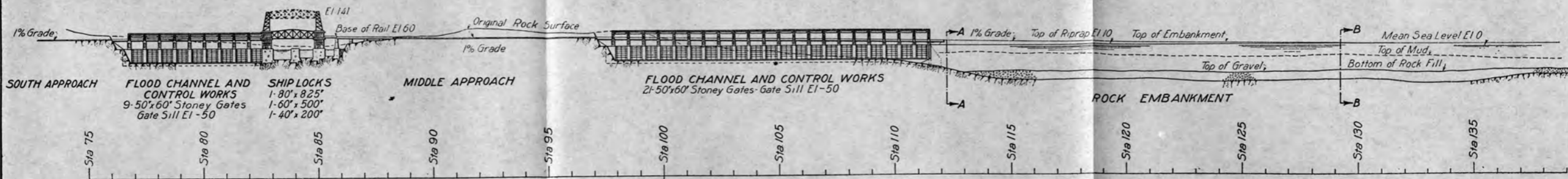
DATE: [Date]

SCALE: 1" = 100' (Horizontal)
 1" = 10' (Vertical)

NOTES:
 1. All elevations are in feet above mean sea level.
 2. The channel bed is to be 1.00' below the top of the embankment.
 3. The rock fill is to be placed in layers not exceeding 3.00' in thickness.
 4. The rock fill is to be placed by bottom layer.

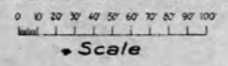
ELEVATION AND SECTIONS
Preliminary Estimate No. 3

Bascule Bridge shown on Upstream Elevation
for Estimate No. 1 may be used as Alternative
to Vertical Lift



Notes:-
Rock Fill to be placed by Bottom Dump Barges up to Maximum Elevation permitted by draft Remainder to be placed by Derrick Barges and Skips

EMBANKMENT SECTIONS

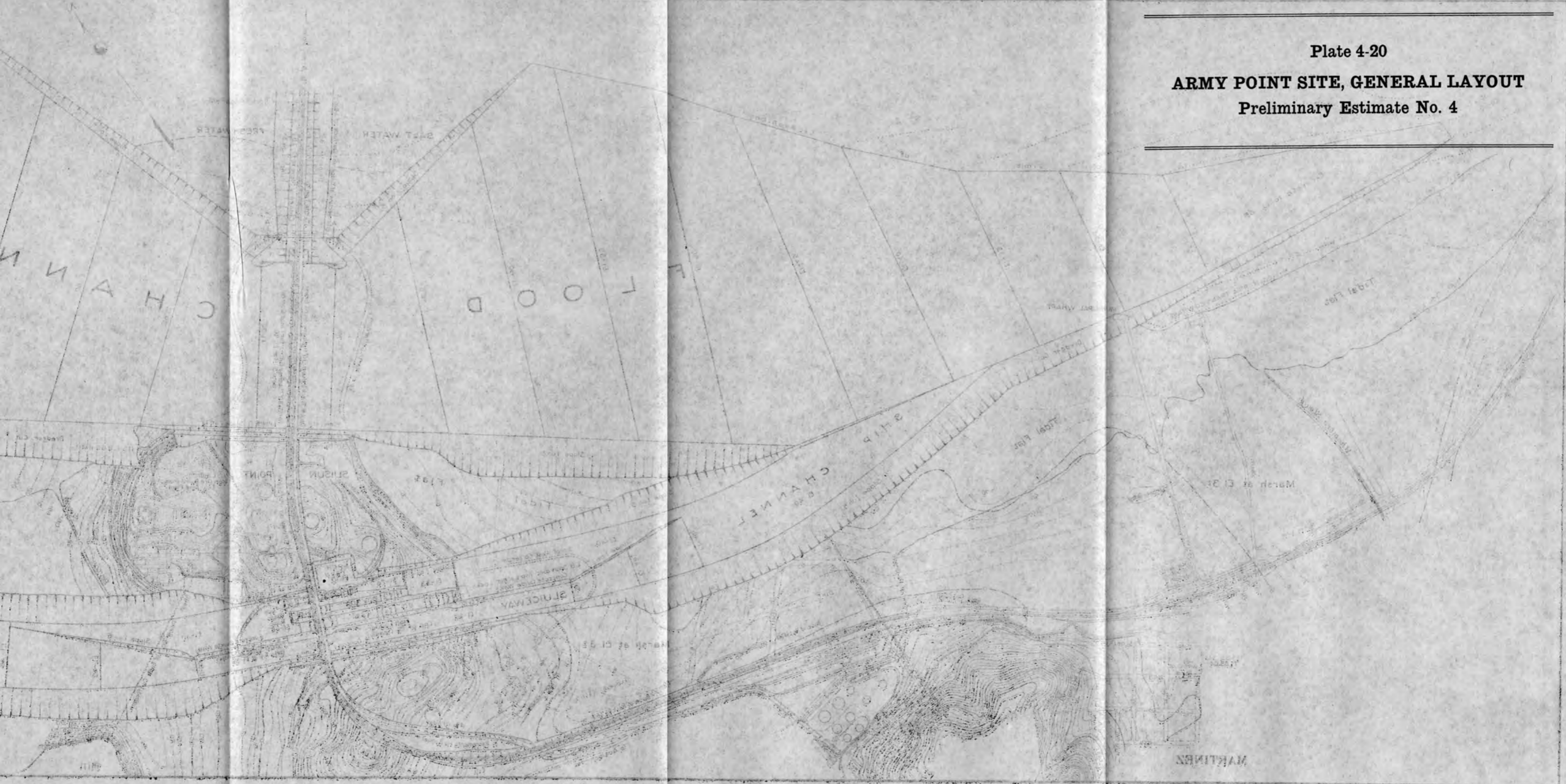


PRELIMINARY DESIGN
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
ELEVATION AND SECTIONS
PRELIMINARY ESTIMATE NO. 3

APPROVED FOR ESTIMATING PURPOSES:
A. J. Walter
CHIEF ENGINEER

DRAWN CHJ:CAW SUBMITTED W. H. Young
CHECKED N.B.H. RECOMMENDED J. L. Savage
SV-89 Ellensburg, Wash June 2, 1926 193-D-41

Plate 4-20
ARMY POINT SITE, GENERAL LAYOUT
Preliminary Estimate No. 4



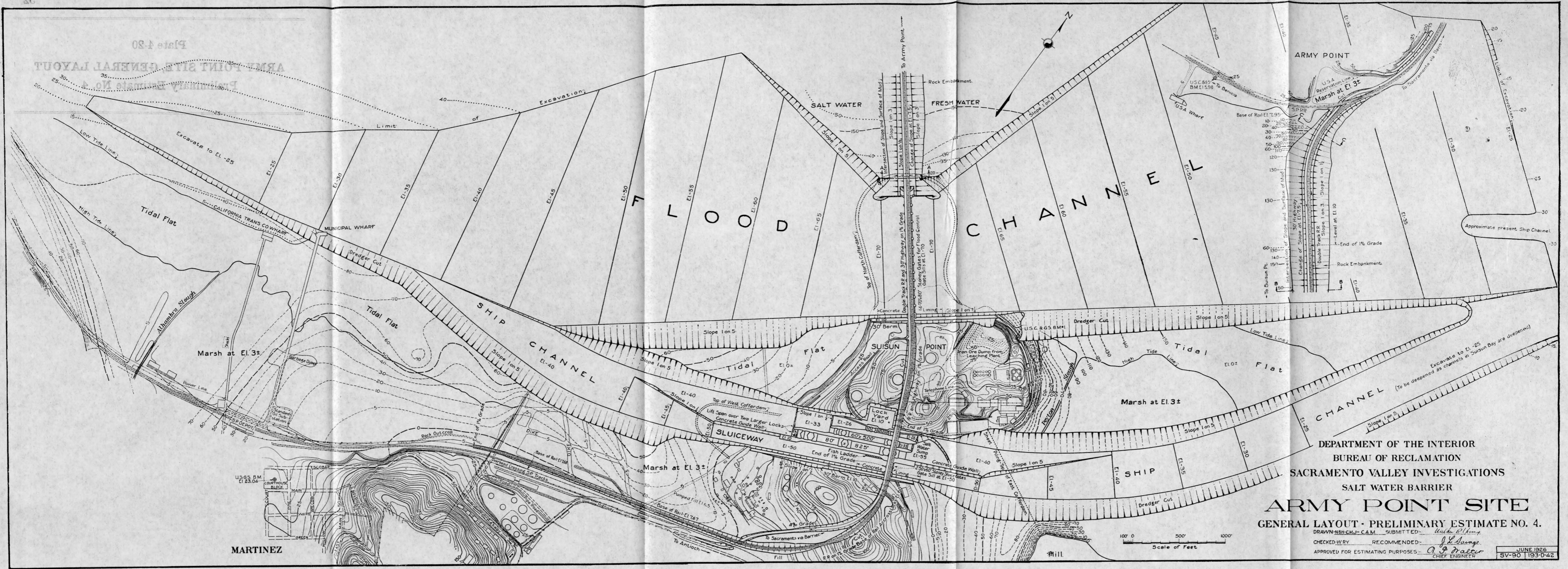
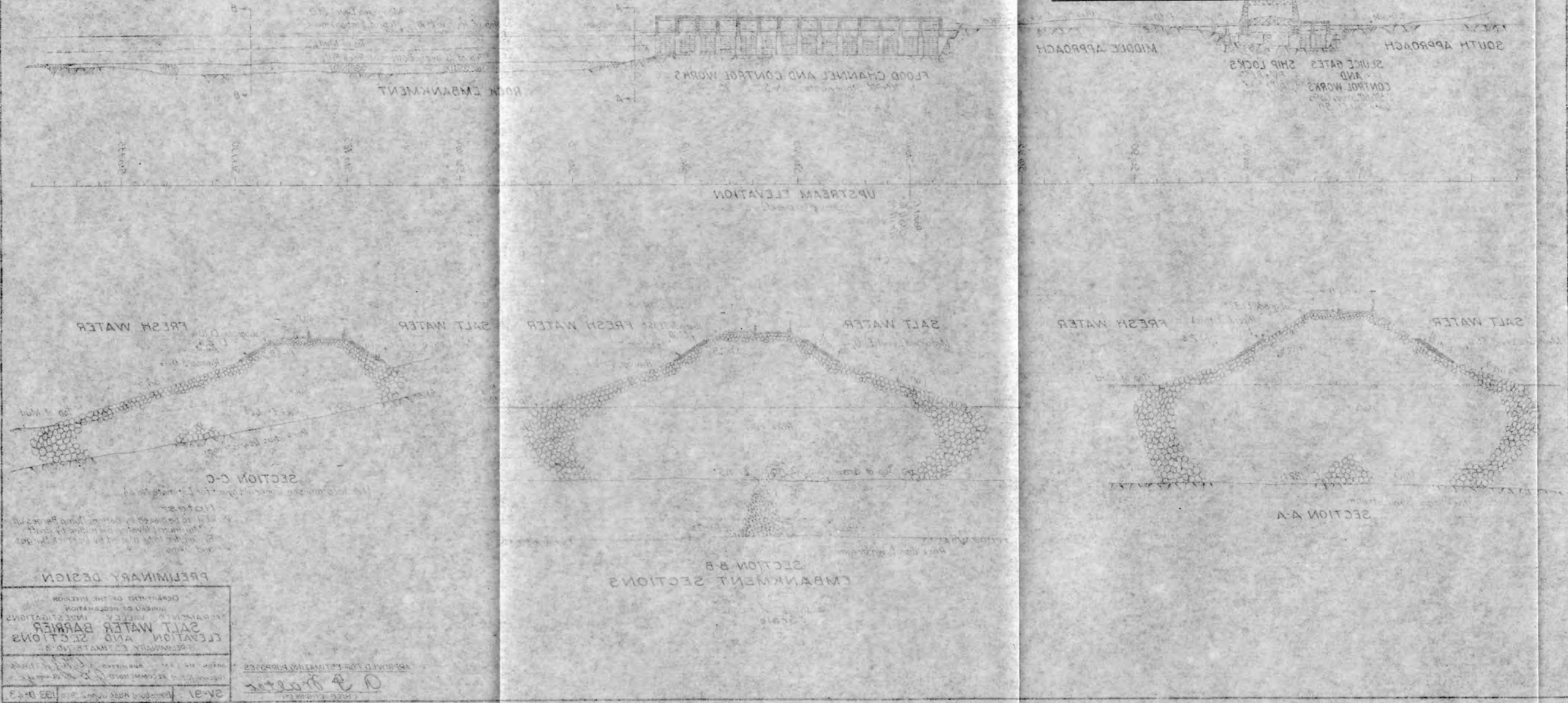


Plate 4-20
 ARMY POINT SITE GENERAL LAYOUT
 Preliminary Estimate No. 4

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
ARMY POINT SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 4.
 DRAWN-NB:CM-J-C.A.M. SUBMITTED: *Walter R. King*
 CHECKED-WRY RECOMMENDED: *J. L. Savage*
 APPROVED FOR ESTIMATING PURPOSES: *A. A. Walter*
 CHIEF ENGINEER

JUNE 1926
 SV-90 193-D-42

Plate 4-21
ELEVATION AND SECTIONS
Preliminary Estimate No. 4



APPROVED FOR ESTIMATING PURPOSES
[Signature]
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SALT WATER BARRIER
 ELEVATION AND SECTIONS
 PRELIMINARY ESTIMATE NO. 4
 SHEET NO. 133 D-43

EMBANKMENT SECTIONS
 SECTION B-B

SECTION A-A

SECTION C-C

SOUTH APPROACH
 SLUICE GATES AND CONTROL WORKS
 SHIP LOCKS
 MIDDLE APPROACH

FLOOD CHANNEL AND CONTROL WORKS

ROCK EMBANKMENT

UPSTREAM ELEVATION

FRESH WATER

SALT WATER

FRESH WATER

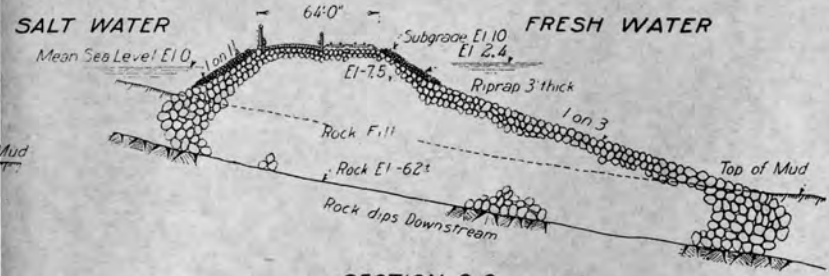
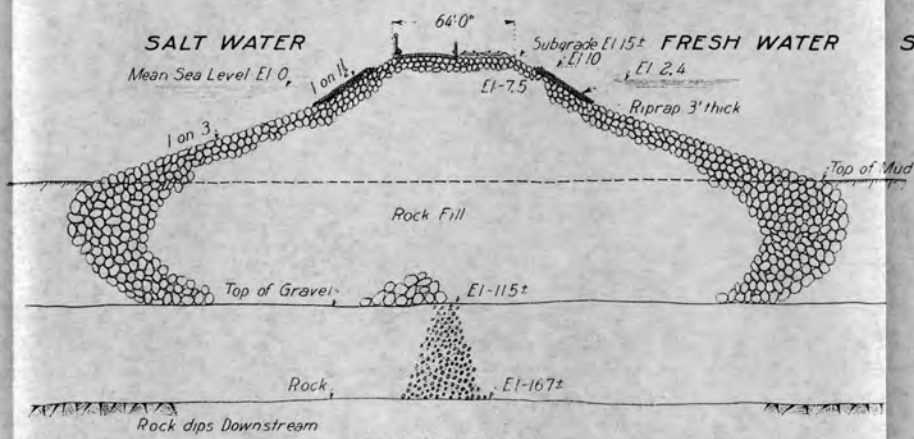
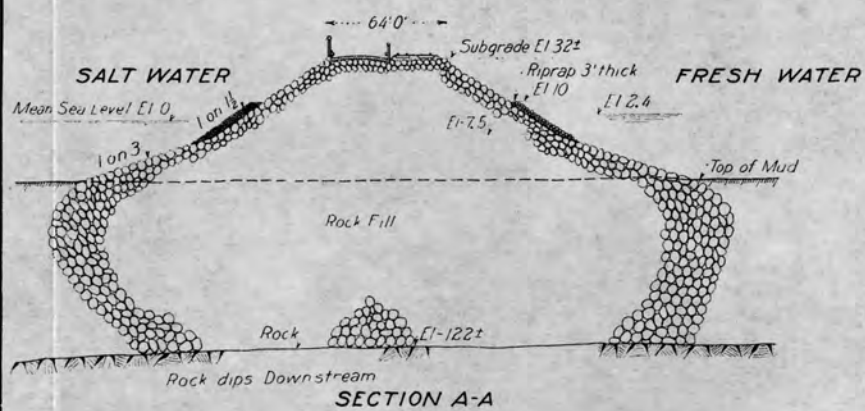
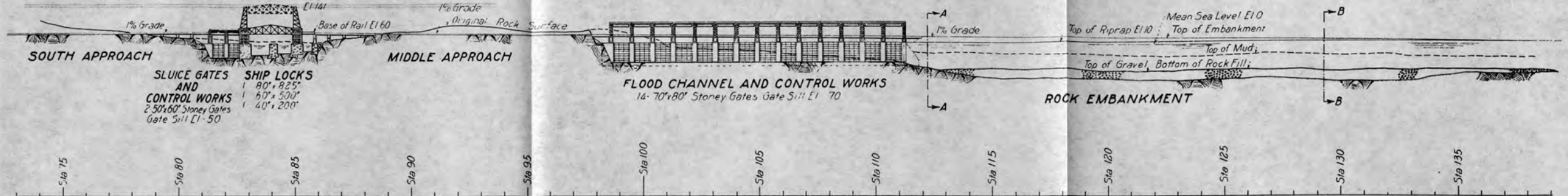
SALT WATER

FRESH WATER

SALT WATER

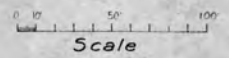
Plate 4-21
ELEVATION AND SECTIONS
Preliminary Estimate No. 4

Bascule Bridge shown on Upstream
Elevation for Estimate No. 1 may
be used as Alternative to Vertical Lift



SECTION C-C
(For location see General Layout for Estimate No. 4)

Notes-
Rock Fill to be placed by Bottom Dump Barges up to Maximum Elevation permitted by draft
Remainder to be placed by Derrick Barges and Skips

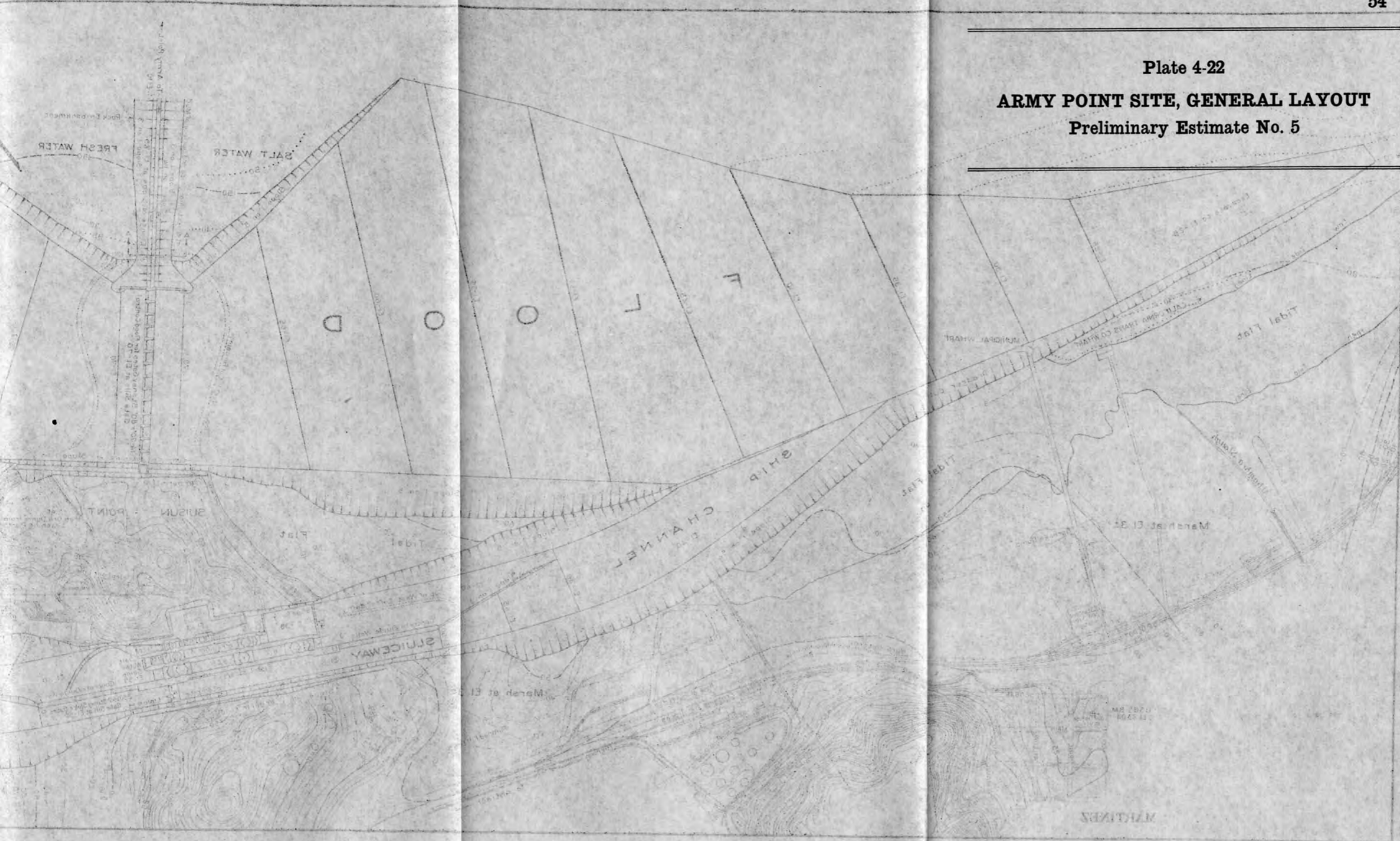


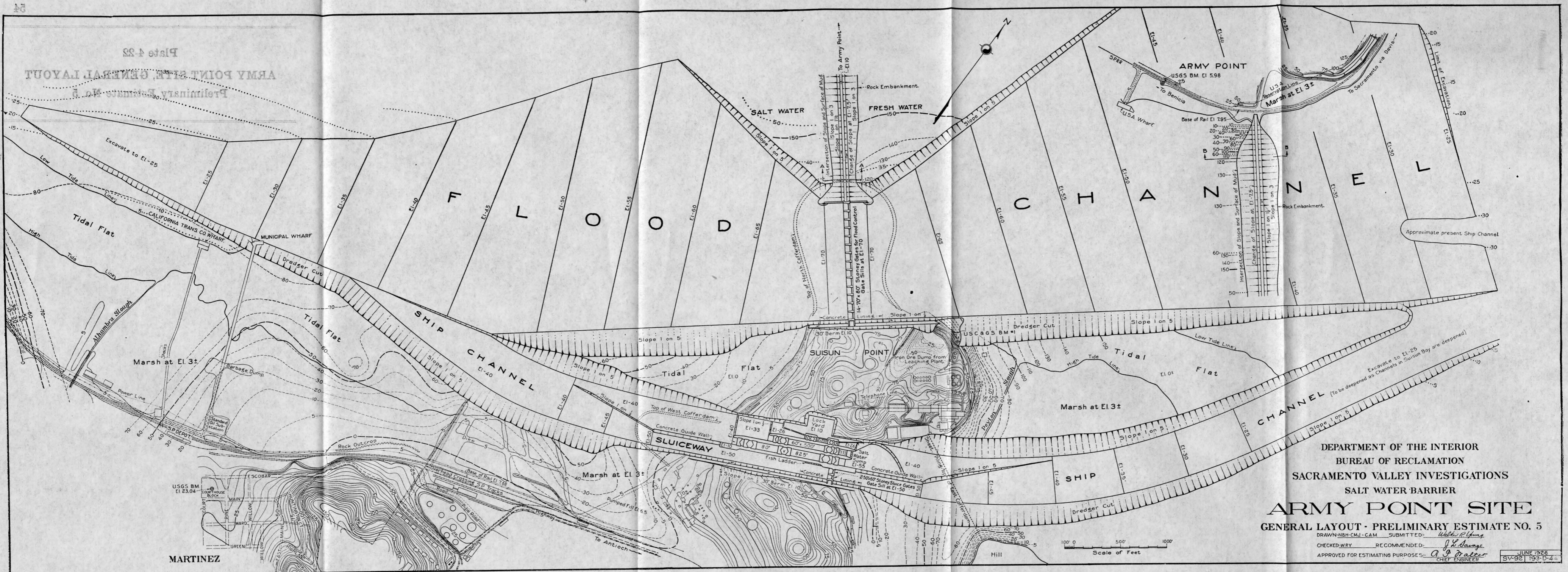
PRELIMINARY DESIGN
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
ELEVATION AND SECTIONS
PRELIMINARY ESTIMATE NO. 4

APPROVED FOR ESTIMATING PURPOSES:
A. J. Dralter
CHIEF ENGINEER

DRAWN C.M.J.-C.A.M. SUBMITTED *W. H. Young*
CHECKED N.B.H. RECOMMENDED *A. D. Savage*
SV-91 Ellensburg, Wash June 2, 1926 193-D-43

Plate 4-22
ARMY POINT SITE, GENERAL LAYOUT
Preliminary Estimate No. 5



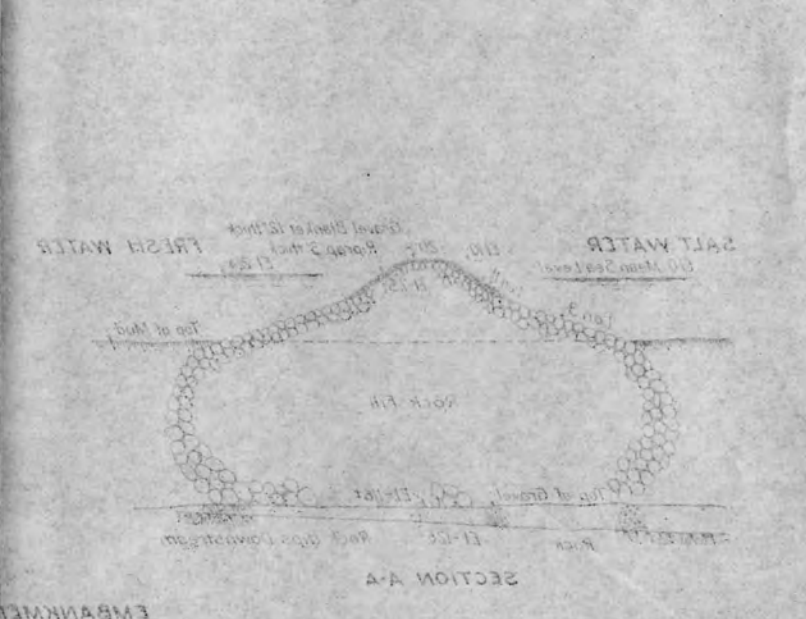
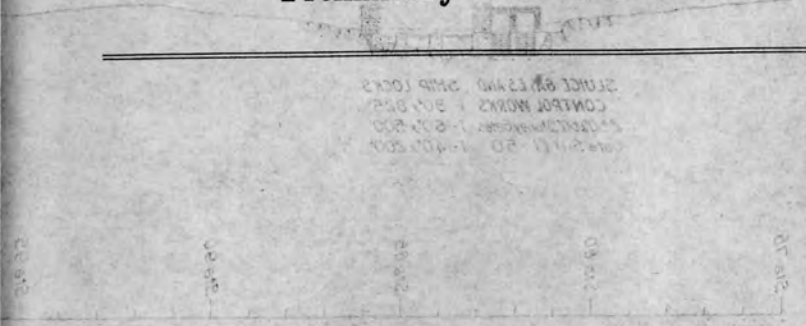


DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
ARMY POINT SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 5
 DRAWN-NBH-CMJ-CAM SUBMITTED: *Walter R. Long*
 CHECKED-WRY RECOMMENDED: *J. L. Savage*
 APPROVED FOR ESTIMATING PURPOSES: *A. P. Walter*
 CHIEF ENGINEER

JUNE 1926
 SV-92 193-D-4

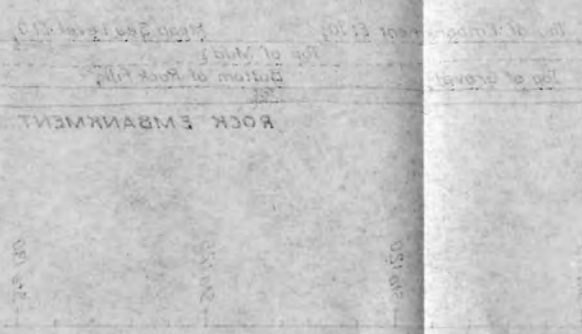
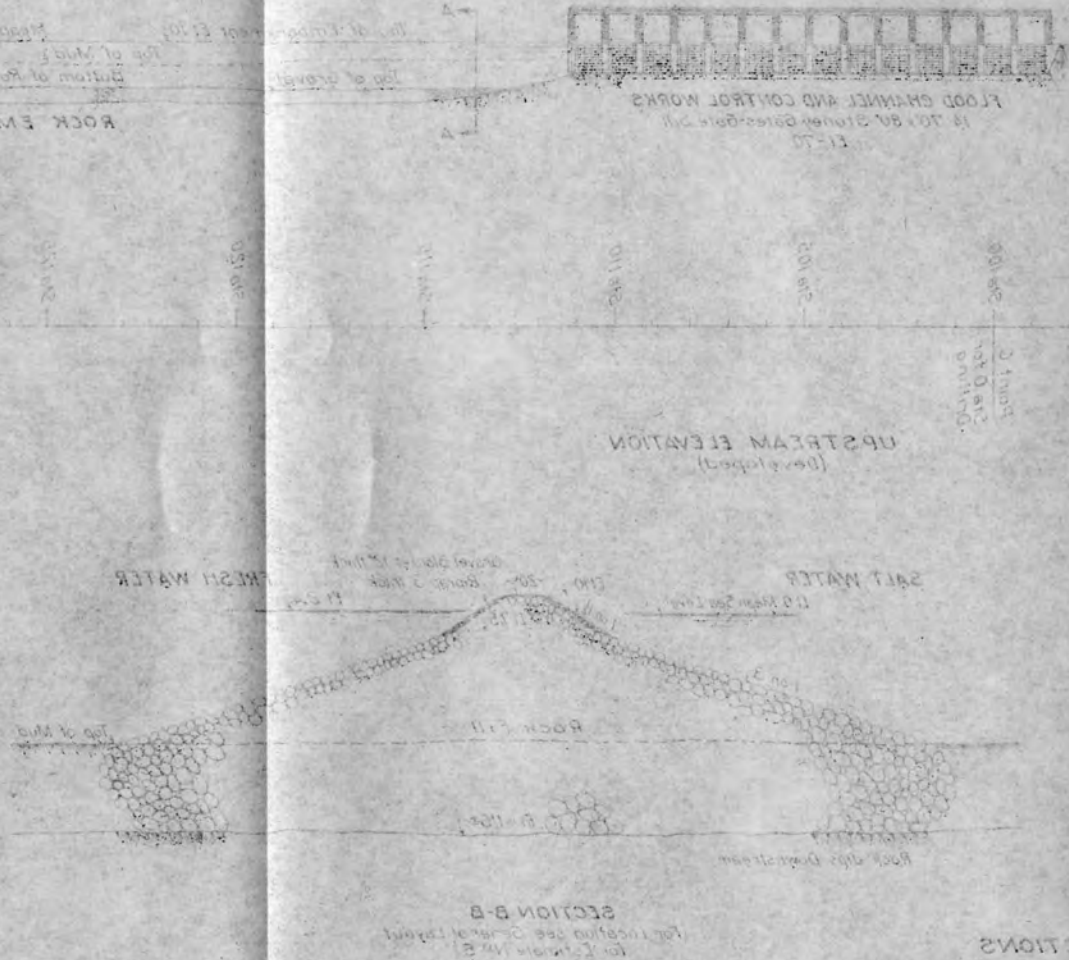
Plate 4-22
 ARMY POINT SITE GENERAL LAYOUT
 Preliminary Estimate No. 5

Plate 4-23
ELEVATION AND SECTIONS
 Preliminary Estimate No. 5



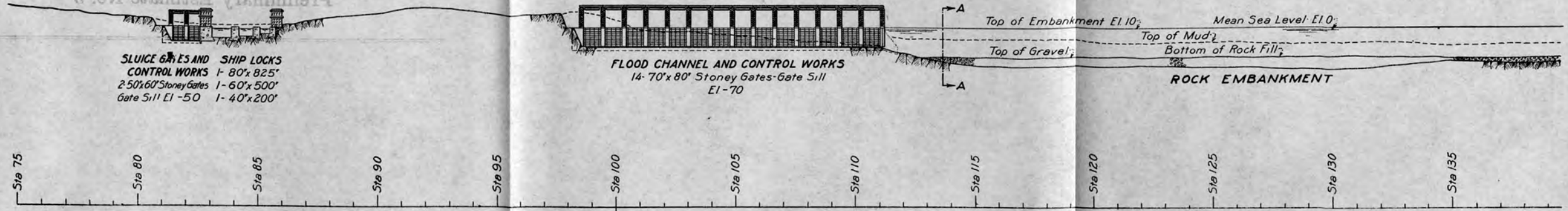
Notes:
 Rock fill placed by bottom dump
 Based on post-quake elevation
 Assumed by old drawings to be
 based by C.T. 1950 and 1951

Scale



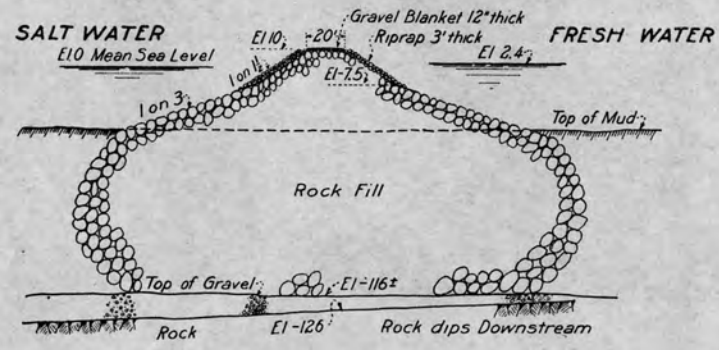
PRELIMINARY OF
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SALT WATER BAR
 ELEVATION AND SECTIONS
 PRELIMINARY ESTIMATE NO. 5
 APPROVED FOR ESTIMATING PURPOSES
 BY: [Signature]
 DATE: 2-2-53

Plate 4-23
ELEVATION AND SECTIONS
Preliminary Estimate No. 5

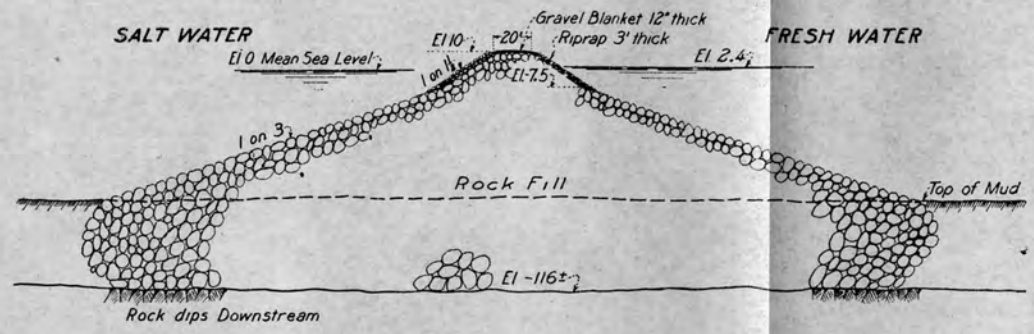


Point C
Sta 0 for
Drilling

UPSTREAM ELEVATION
(Developed)



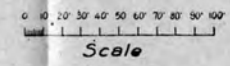
SECTION A-A



SECTION B-B
(For Location see General Layout
for Estimate No 5)

EMBANKMENT SECTIONS

Notes:-
 Rock Fill to be placed by Bottom Dump
 Barges up to Maximum Elevation
 permitted by draft Remainder to be
 placed by Derrick Barges and Skips



PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 ELEVATION AND SECTIONS
 PRELIMINARY ESTIMATE NO 5

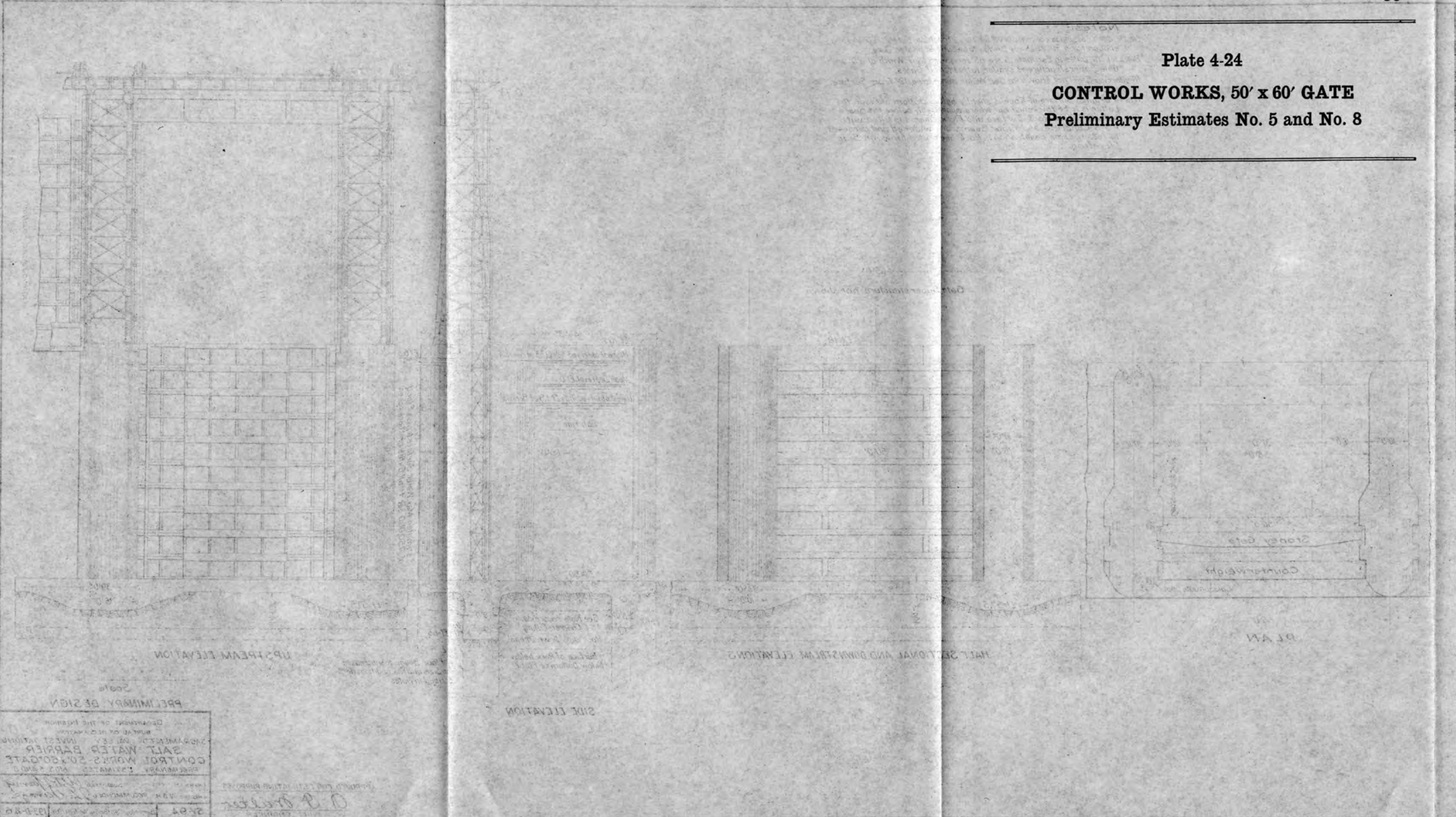
APPROVED FOR ESTIMATING PURPOSES
A. P. Traeter
 CHIEF ENGINEER

DRAWN C.M.J. CAM SUBMITTED *W. R. Young*
 CHECKED N.D.H. RECOMMENDED *J. K. Savage*

SV-93 Ellensburg, Wash. June 13, 1926 193-D-45

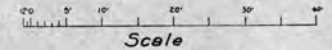
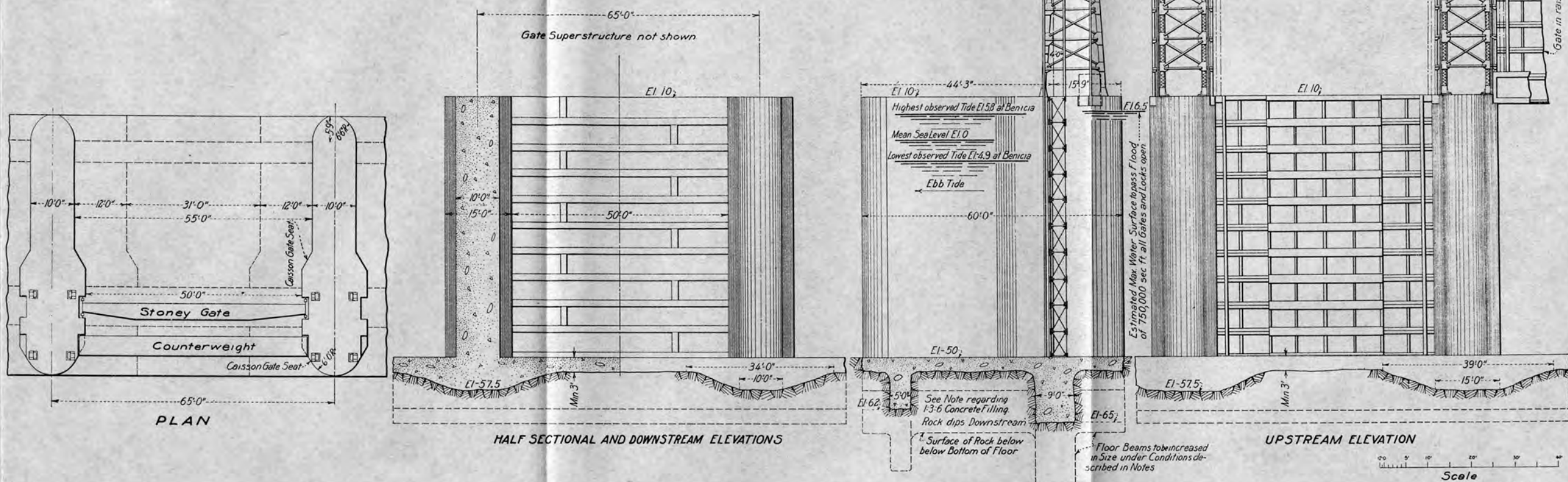
Plate 4-24

CONTROL WORKS, 50' x 60' GATE
Preliminary Estimates No. 5 and No. 8



Notes:-
 No Bridge Crossing is contemplated for this Structure but the Pier is long enough for a 30' Highway Bridge to be built at a later Date.
 Piers for 70' Gates in Estimate 5 are 65' long with Max Width of 20' and Gate Superstructure is similar to that for 50' Gates.
 Reinforcing Steel not shown. In Salt Water same to be 12" from Surface of Concrete.
 Where Original Surface of Rock is slightly below Bottom of Floor the latter is to be thickened but where appreciably below, the Space between Floor Rock Surface and Floor Beams is filled with 1:3:6 Concrete and Floor Beams are widened and deepened to retain same penetration in Rock. See dotted Lines on Side Elevation.

Plate 4-24
 CONTROL WORKS, 50' x 60' GATE
 Preliminary Estimates No. 5 and No. 8



PRELIMINARY DESIGN

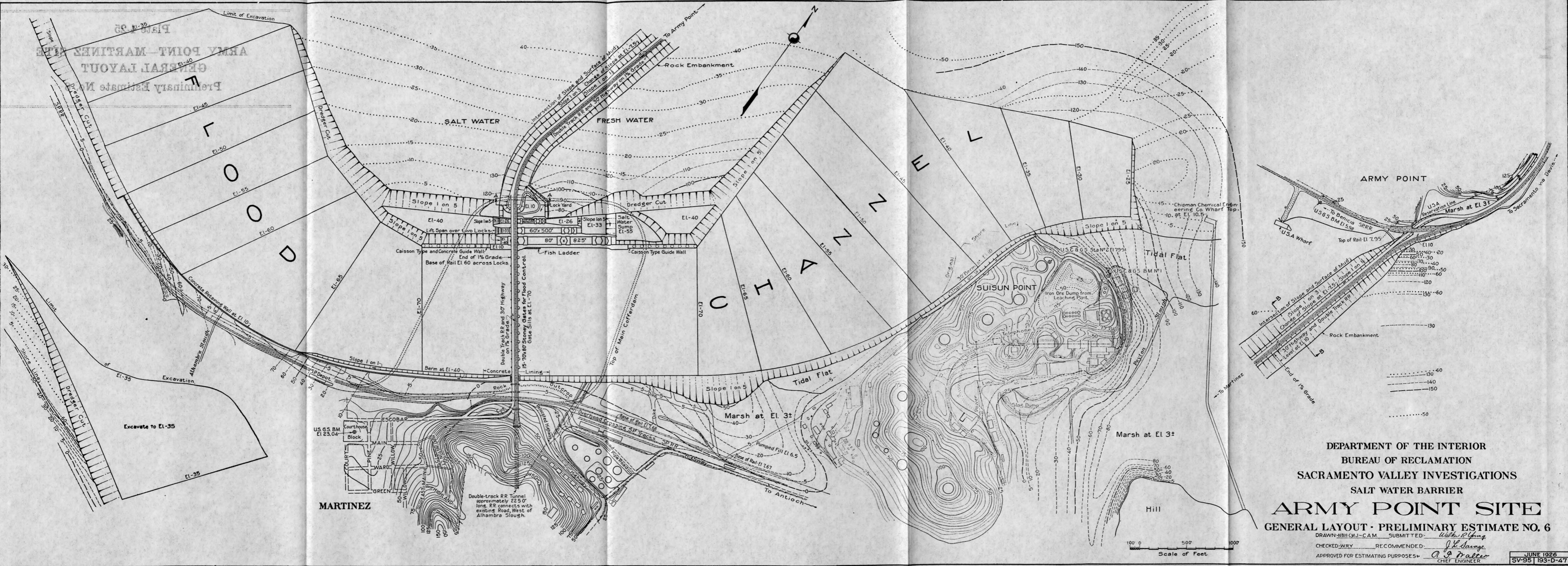
DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 CONTROL WORKS-50'x60'GATE
 PRELIMINARY ESTIMATES NOS. 5 AND 8

APPROVED FOR ESTIMATING PURPOSES-
O. P. Fralter
 CHIEF ENGINEER

DRAWN: CMU:JEC:CAM SUBMITTED: *W. J. Jorgensen*
 CHECKED: N.B.H. RECOMMENDED: *J. J. Savage*
 SV-94 Berkeley, California, March 19, 1926 193-D-46

Plate 4-25
ARMY POINT—MARTINEZ SITE
GENERAL LAYOUT
 Preliminary Estimate No. 6





DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
ARMY POINT SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 6

DRAWN-NBHGJ-C.A.M. SUBMITTED: *Walter R. Gange*
 CHECKED-WRY RECOMMENDED: *J. H. Sange*
 APPROVED FOR ESTIMATING PURPOSES: *A. P. Walter*
 CHIEF ENGINEER

JUNE 1926
 SV-95 193-D-47

Plate 4-26
ELEVATION AND SECTIONS
Preliminary Estimate No. 6

PLATE 4-26

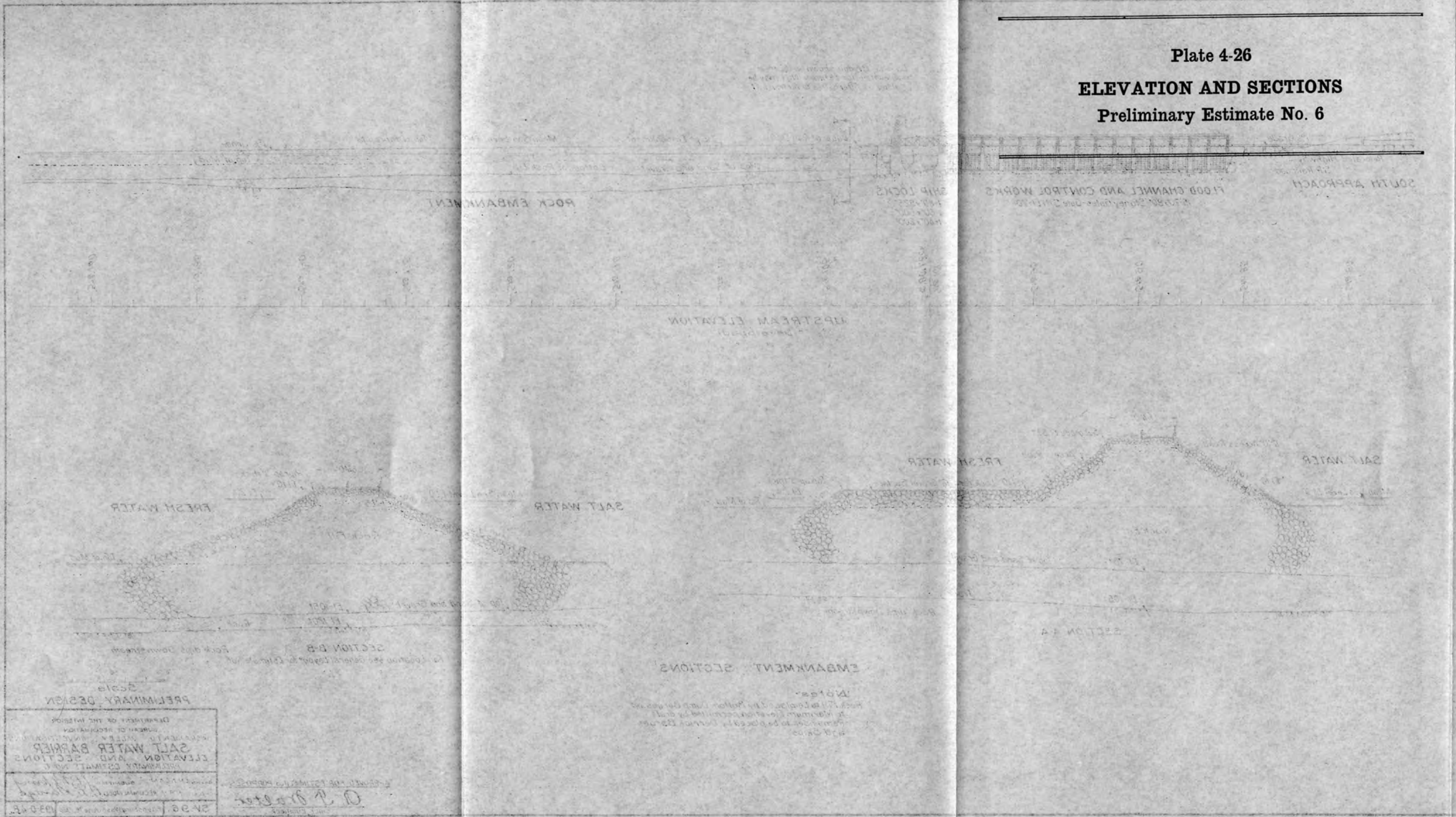
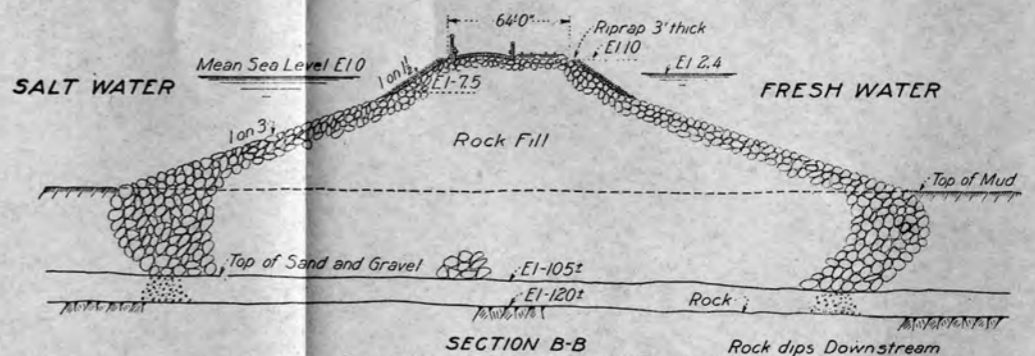
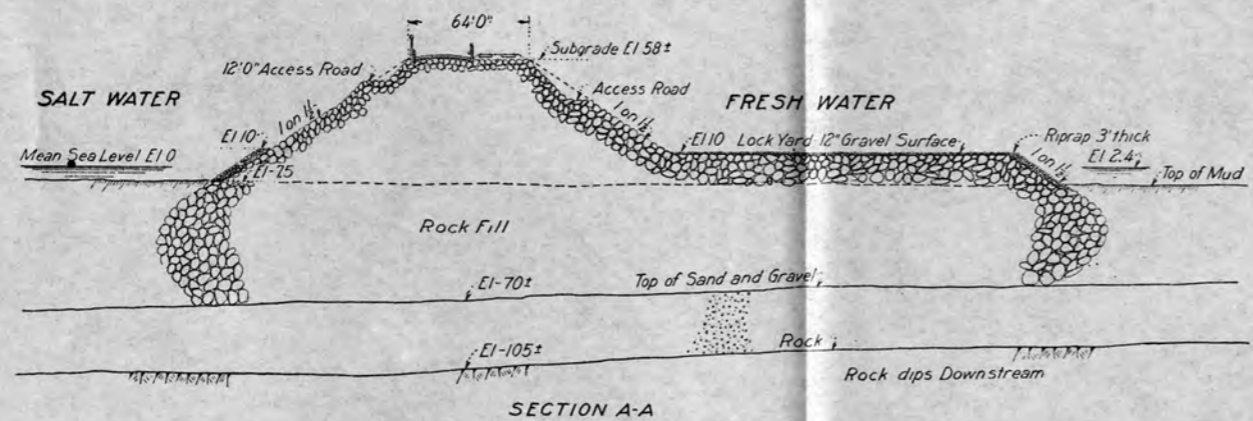
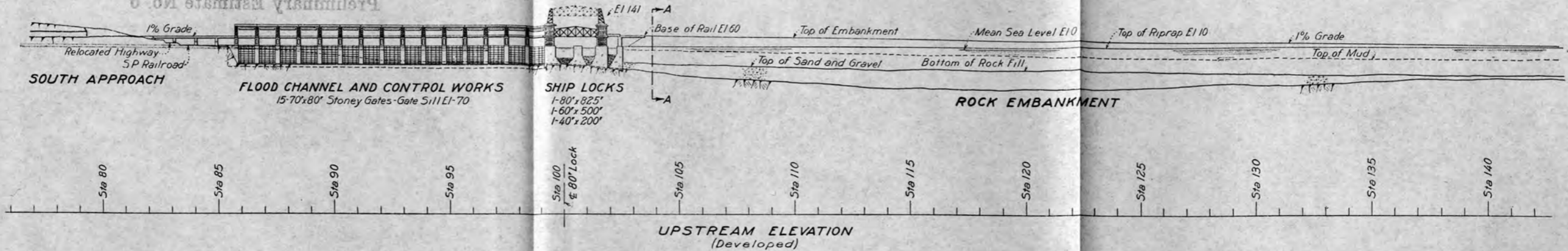


Plate 4-26
ELEVATION AND SECTIONS
Preliminary Estimate No 6

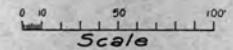
Bascule Bridge shown on Upstream
Elevation for Estimate No 1 may be
used as Alternative to Vertical Lift



EMBANKMENT SECTIONS

Notes:
Rock Fill to be placed by Bottom Dump Barges up
to Maximum Elevation permitted by draft
Remainder to be placed by Derrick Barges
and Skips

SECTION B-B
For Location see General Layout for Estimate No 6



PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
ELEVATION AND SECTIONS
PRELIMINARY ESTIMATE NO 6

APPROVED FOR ESTIMATING PURPOSES:
A. J. Drafter
CHIEF ENGINEER

DRAWN CMJ:CAM SUBMITTED *[Signature]*
CHECKED NBH RECOMMENDED *[Signature]*
SV-96 Ellensburg Wash June 16, 1926 193-D-48

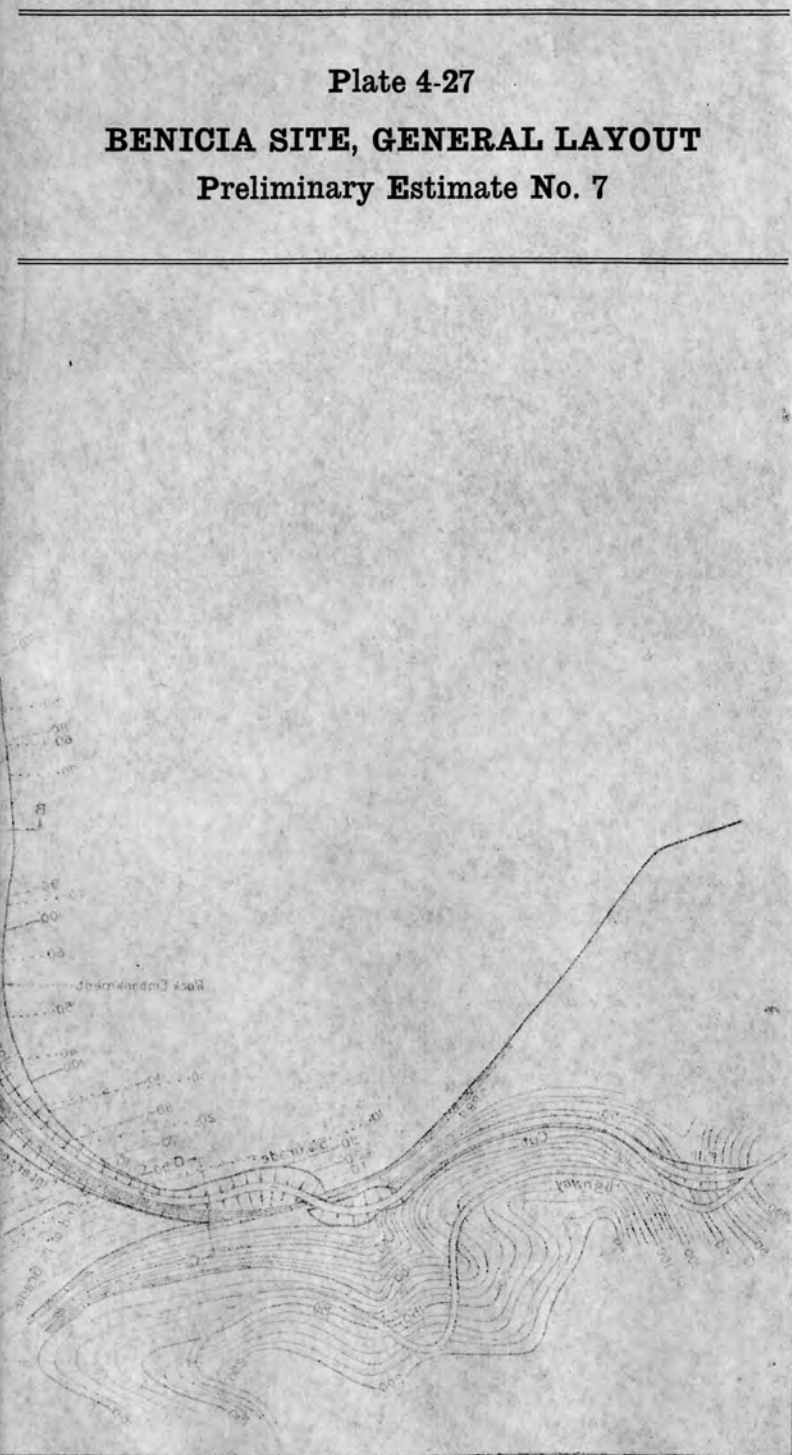
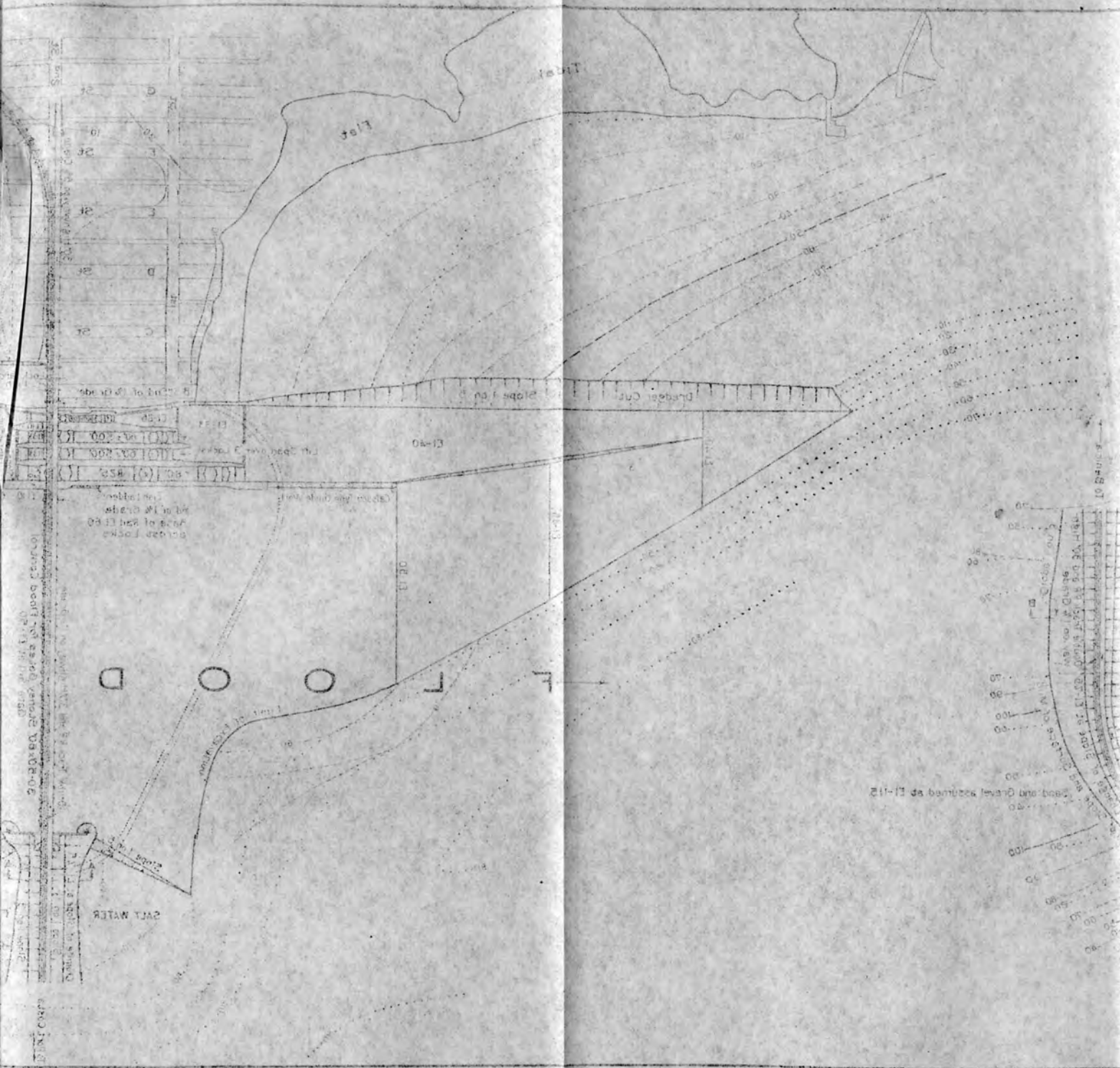
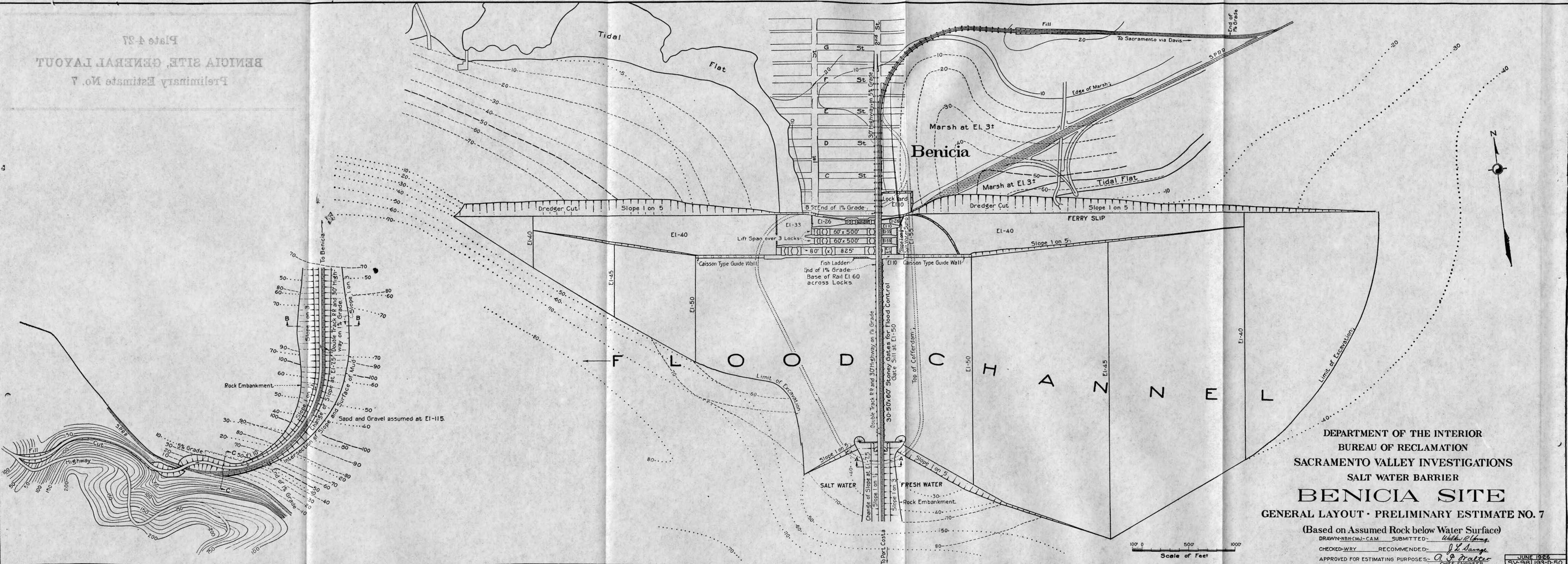


Plate 4-27
BENICIA SITE, GENERAL LAYOUT
 Preliminary Estimate No. 7

BENICIA SITE, GENERAL LAYOUT
Preliminary Estimate No. 7
Plate 4-27



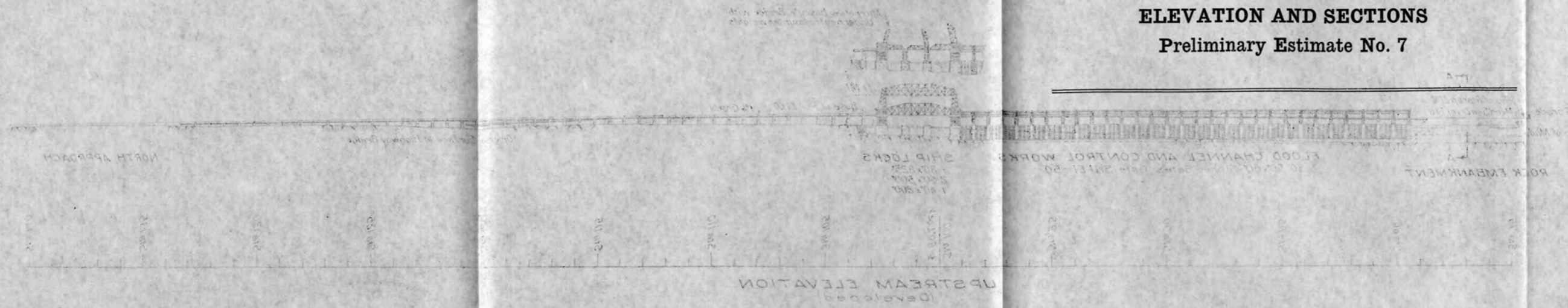
DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
BENICIA SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 7

(Based on Assumed Rock below Water Surface)

DRAWN-NBH:CMJ-CAM SUBMITTED-*Walker R. Young*
 CHECKED-WRY RECOMMENDED-*J. L. Sanger*
 APPROVED FOR ESTIMATING PURPOSES-*A. P. Walter*
 CHIEF ENGINEER

JUNE 1926
SV-98 193-D-50

Plate 4-28
ELEVATION AND SECTIONS
 Preliminary Estimate No. 7



Notes:
 1. The structure shown is based on a preliminary estimate.
 2. The structure is based on a preliminary estimate.
 3. The structure is based on a preliminary estimate.

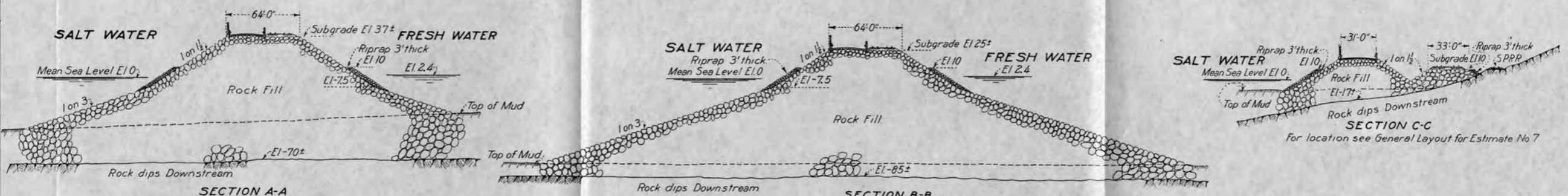
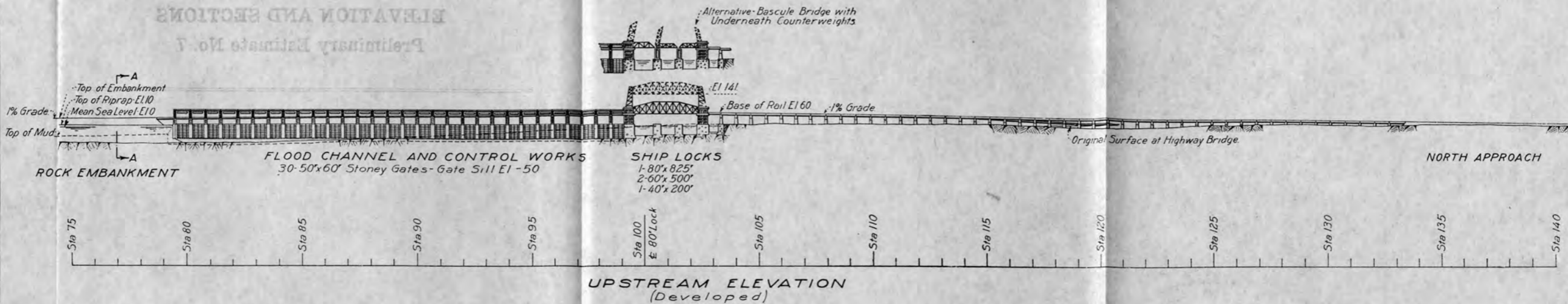
PRELIMINARY DESIGN

SALT WATER BARRIER
 ELEVATION AND SECTIONS
 PRELIMINARY ESTIMATE NO. 7

DESIGNED BY
 O. A. Walter

SCALE
 1" = 20'

Plate 4-28
ELEVATION AND SECTIONS
Preliminary Estimate No. 7



EMBankment SECTIONS
Scale
0 10 20 30 40 50 60 70 80 90 100

Notes:
This Site not drilled.
Rock Fill to be placed by Bottom Dump
Barges up to Maximum Elevation
permitted by Draft Remainder to be
placed by Derrick Barges and Skips.

APPROVED FOR ESTIMATING PURPOSES:
A. J. Dralter
CHIEF ENGINEER

PRELIMINARY DESIGN

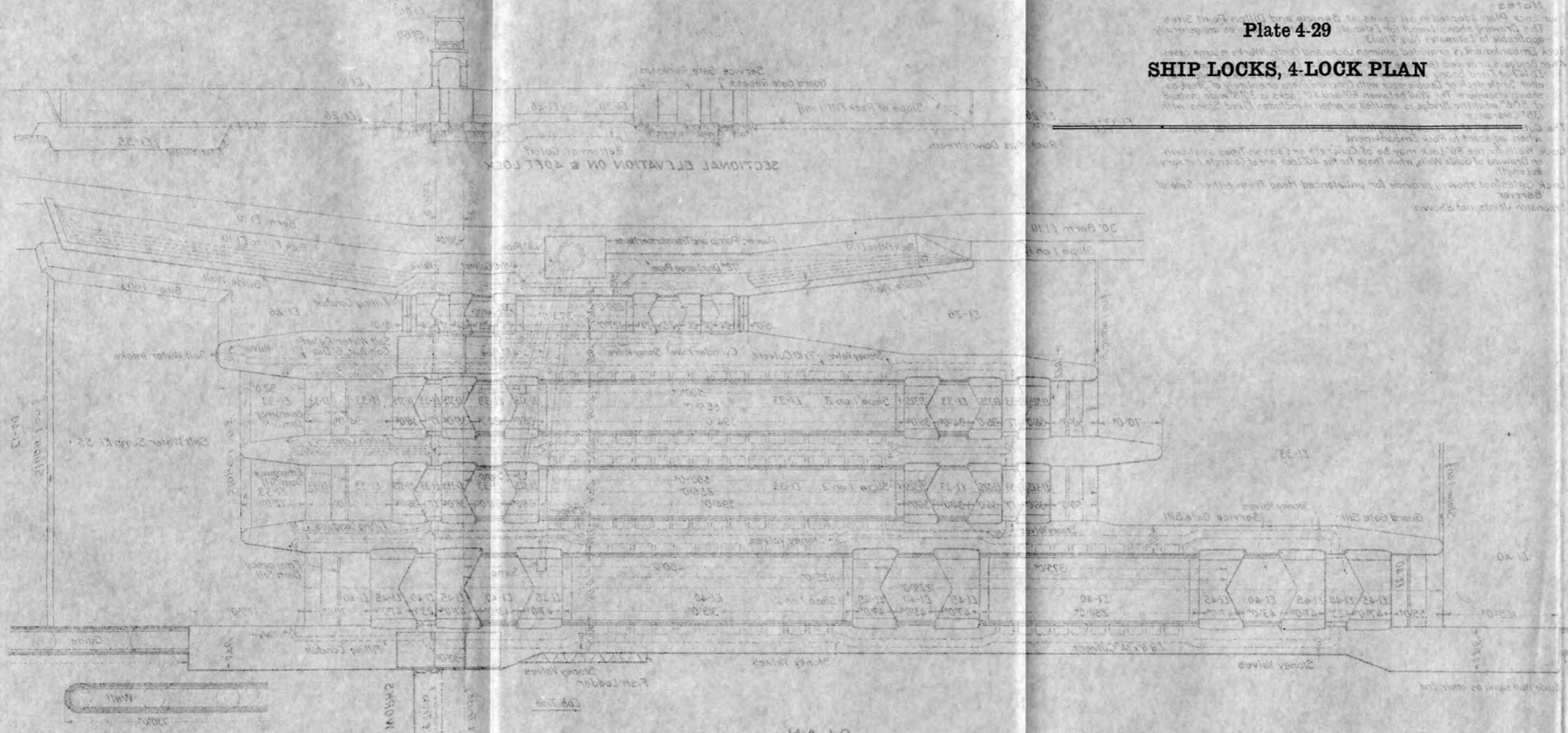
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
ELEVATION AND SECTIONS
PRELIMINARY ESTIMATE NO. 7

DRAWN CMJ-CAM SUBMITTED *W. J. Young*
CHECKED N.B.H. RECOMMENDED *J. L. Savage*

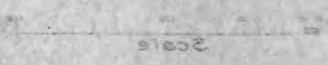
SV-99 Ellensburg Wash. June 23, 1926 193-D-51

SHIP LOCKS, 4-LOCK PLAN

Notes
 The Lock Plan is located at the same place as the other plans in this set.
 The drawing shows the layout for the four locks and the service gate.
 applicable to the locks and the service gate.
 Locks are shown in plan view and the service gate is shown in elevation.
 The drawing shows the layout for the four locks and the service gate.
 applicable to the locks and the service gate.
 Locks are shown in plan view and the service gate is shown in elevation.
 The drawing shows the layout for the four locks and the service gate.
 applicable to the locks and the service gate.
 Locks are shown in plan view and the service gate is shown in elevation.



PLAN



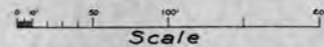
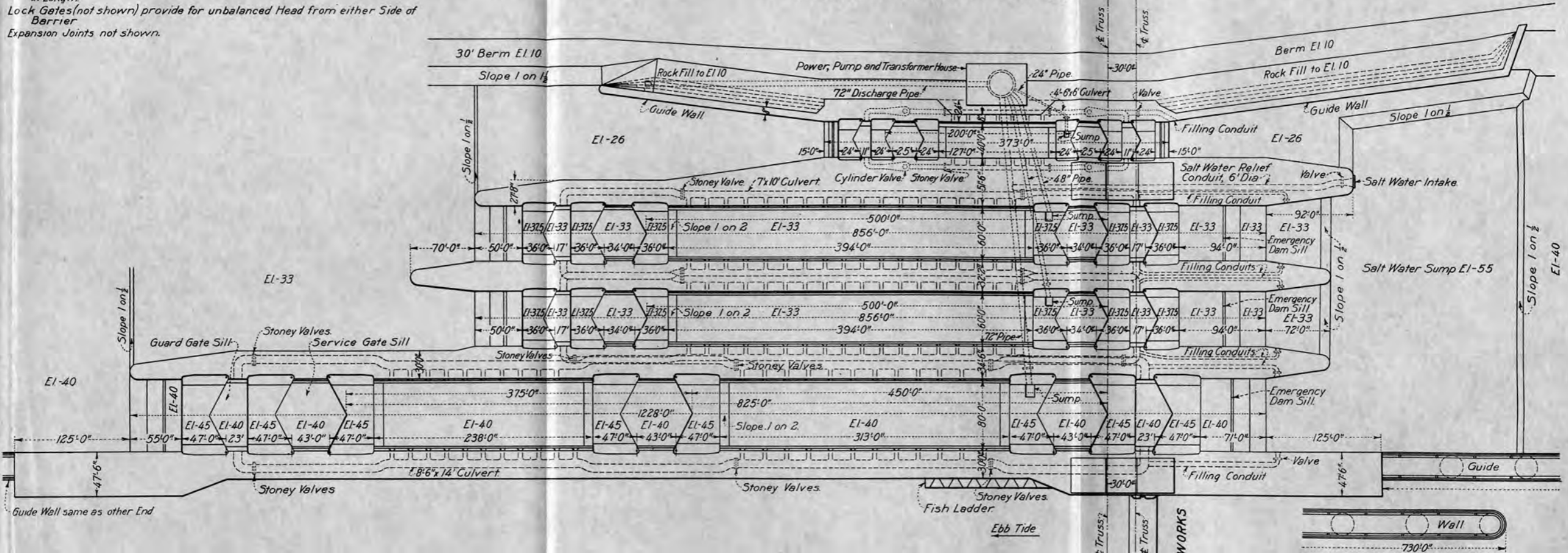
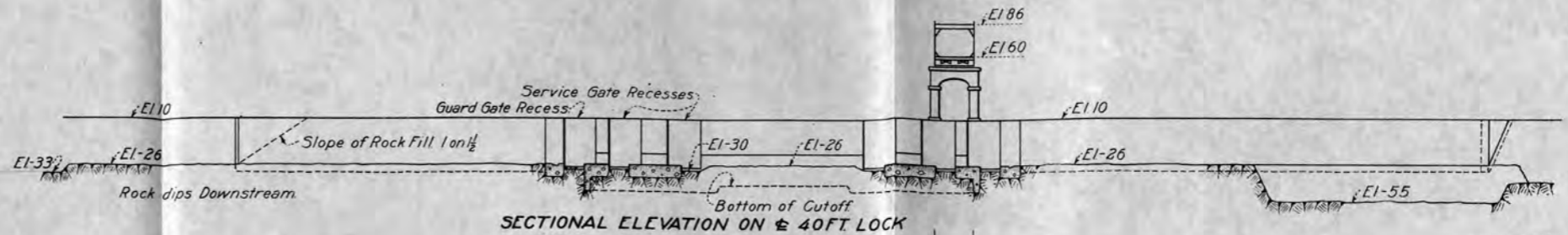
FRESH WATER SALT WATER



PRELIMINARY DESIGN
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO DISTRICT INVESTIGATIONS
 SALT WATER BARRIER
 SHIP LOCKS LAYOUT
 PRELIMINARY ESTIMATES AND TENDERS
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 APPROVED FOR SETTING WORKS
 [Signature]
 CHIEF ENGINEER
 SWICO [Signature]
 CHIEF ESTIMATOR

Notes-

- Four Lock Plan adopted in all cases at Benicia and Dillon Point Sites. This Drawing shows Layout for Estimate No. 11 but its Features are generally applicable to Estimates Nos. 7 to 13.
- Rock Embankment is provided between Locks and Control Works in some cases. When Bridge is provided, the Base of Rail is El. 60 at Lift Spans, when down, and El. 147 at Fixed Spans which have 135° Clearance across Locks. Bridge may be either Single-deck or Double-deck with Concrete Piers or entirely of Steel, as shown elsewhere. The Wall between 60' and 40' Locks is 30' 8" wide instead of 51' 6" when the Bridge is omitted or when it includes Fixed Spans with 135° Clearance.
- The Outside Wall of 40' Lock is lengthened as shown on General Layouts when adjacent to Rock Embankment.
- Guide Walls for the 80' Lock may be of Concrete or Caisson Types as shown on Drawing of Guide Walls, while those for the 40' Lock are of Concrete but vary in Length.
- Lock Gates (not shown) provide for unbalanced Head from either Side of Barrier.
- Expansion Joints not shown.



PRELIMINARY DESIGN

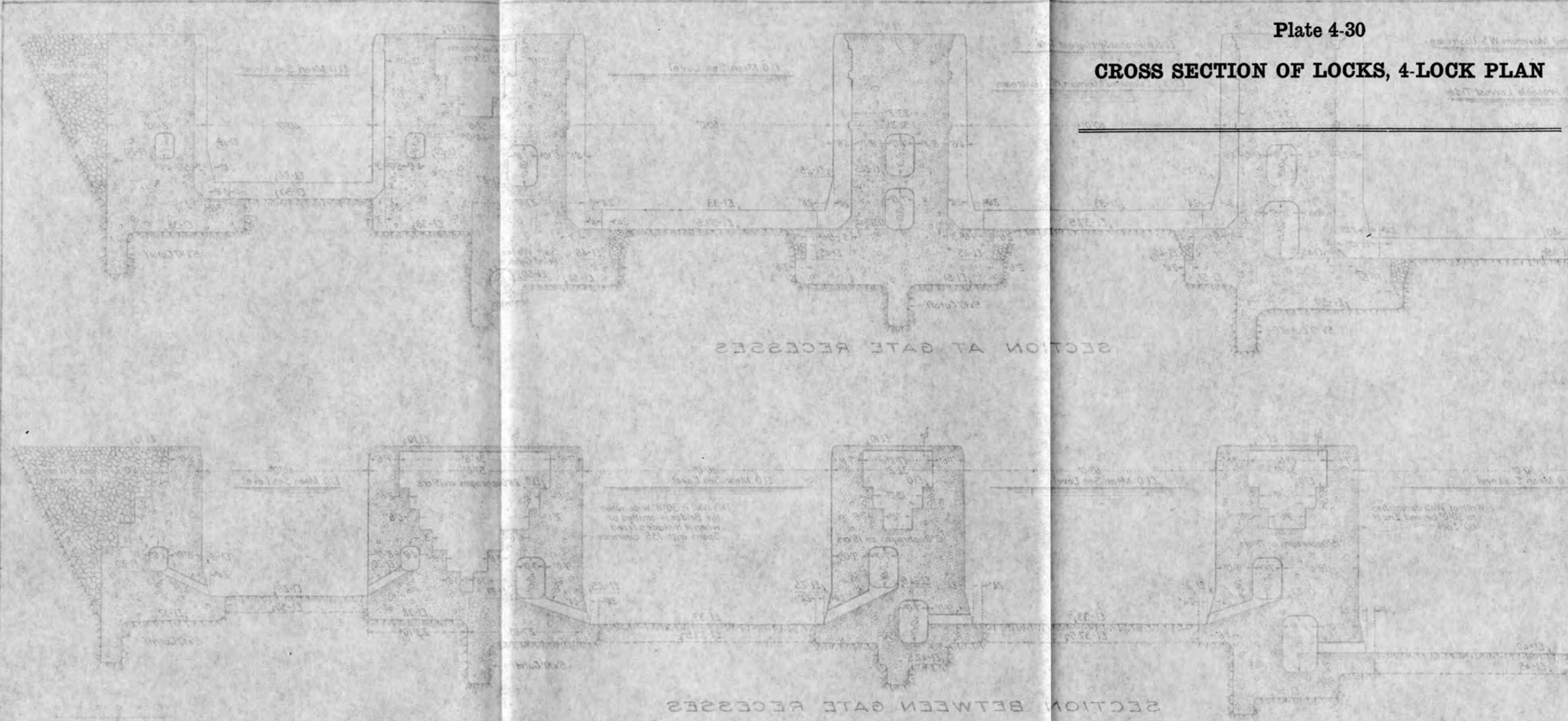
DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 SHIP LOCKS-LAYOUT
 PRELIMINARY ESTIMATES NOS. 7 TO 13

APPROVED FOR ESTIMATING PURPOSES-
O. J. Dralter
 CHIEF ENGINEER

DRAWN C.M.J.-C.A.M. SUBMITTED *W. R. Young*
 CHECKED N.B.H. RECOMMENDED *J. L. Savage*
 SV-100 Ellensburg Wash July 13, 1926 193-D-52

Plate 4-30

CROSS SECTION OF LOCKS, 4-LOCK PLAN

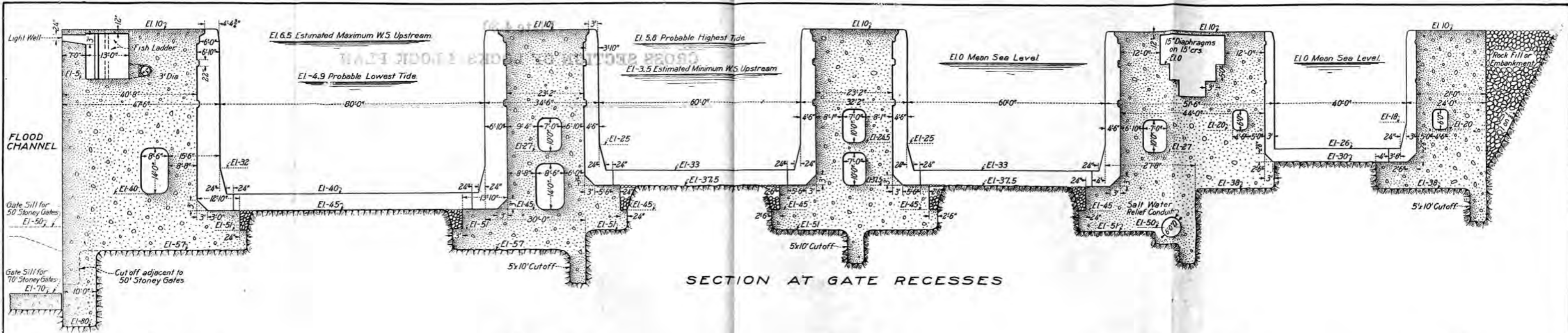


PRELIMINARY DESIGN
 SHIP LOCKS - CROSS SECTIONS
 SALT WATER BARRIER
 PRELIMINARY ESTIMATE, W.S. 2113
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 1/13/53

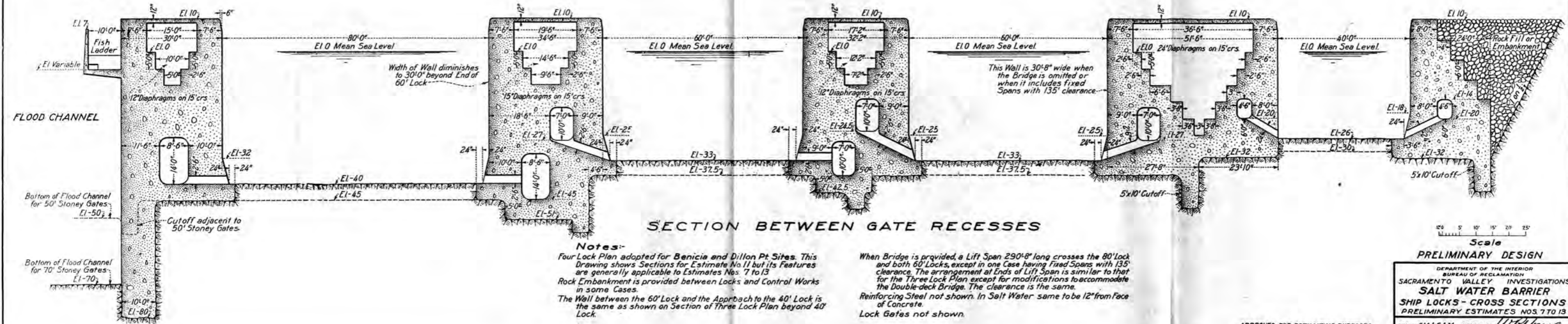
RESERVE FOR ESTIMATING PURPOSES
 D. A. [Signature]

When Bridge is provided a 111' Span 200' T and cross the 80' lock
 and both 60' lock a canal in one case having fixed locks with 135'
 clearance. The arrangement at lock of 110' span is similar to that
 for the Three Lock Plan except for modifications for construction
 the double deck bridge. The clearance is the same.
 Reinforcing Steel not shown in Salt Water same to be from face
 of concrete.
 Lock gates not shown

Notes
 Four Lock Plan adopted for Benicia and Dillon Pt. Sites. This
 drawing shows sections for estimate but its features
 are generally applicable to Estimates No. 7013.
 Four Lock Plan is provided between Locks and Canal Works
 in some cases.
 The Wall between the 60' lock and the approach to the 40' lock is
 the same as shown in section of Three Lock Plan beyond 40'
 lock.



SECTION AT GATE RECESSES



SECTION BETWEEN GATE RECESSES

Notes:-
 Four Lock Plan adopted for Benicia and Dillon Pt Sites. This Drawing shows Sections for Estimate No 11 but its Features are generally applicable to Estimates Nos. 7 to 13
 Rock Embankment is provided between Locks and Control Works in some Cases.
 The Wall between the 60' Lock and the Approach to the 40' Lock is the same as shown on Section of Three Lock Plan beyond 40' Lock.

When Bridge is provided, a Lift Span 290'-8" long crosses the 80' Lock and both 60' Locks, except in one Case having Fixed Spans with 135' clearance. The arrangement at Ends of Lift Span is similar to that for the Three Lock Plan except for modifications to accommodate the Double-deck Bridge. The clearance is the same.
 Reinforcing Steel not shown. In Salt Water same to be 12" from Face of Concrete.
 Lock Gates not shown.

Scale
 1" = 10'

PRELIMINARY DESIGN
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
SHIP LOCKS - CROSS SECTIONS
 PRELIMINARY ESTIMATES NOS. 7 TO 13

APPROVED FOR ESTIMATING PURPOSES:
A. J. Walter
 CHIEF ENGINEER

DRAWN: C.M.C.A.M. SUBMITTED: *W. J. Young*
 CHECKED: N.B.H. RECOMMENDED: *J. L. Savage*
 SV-101 Ellensburg Wash. July 14, 1928 193-D-53

Plate 4-31
BENICIA SITE, GENERAL LAYOUT
Preliminary Estimate No. 8

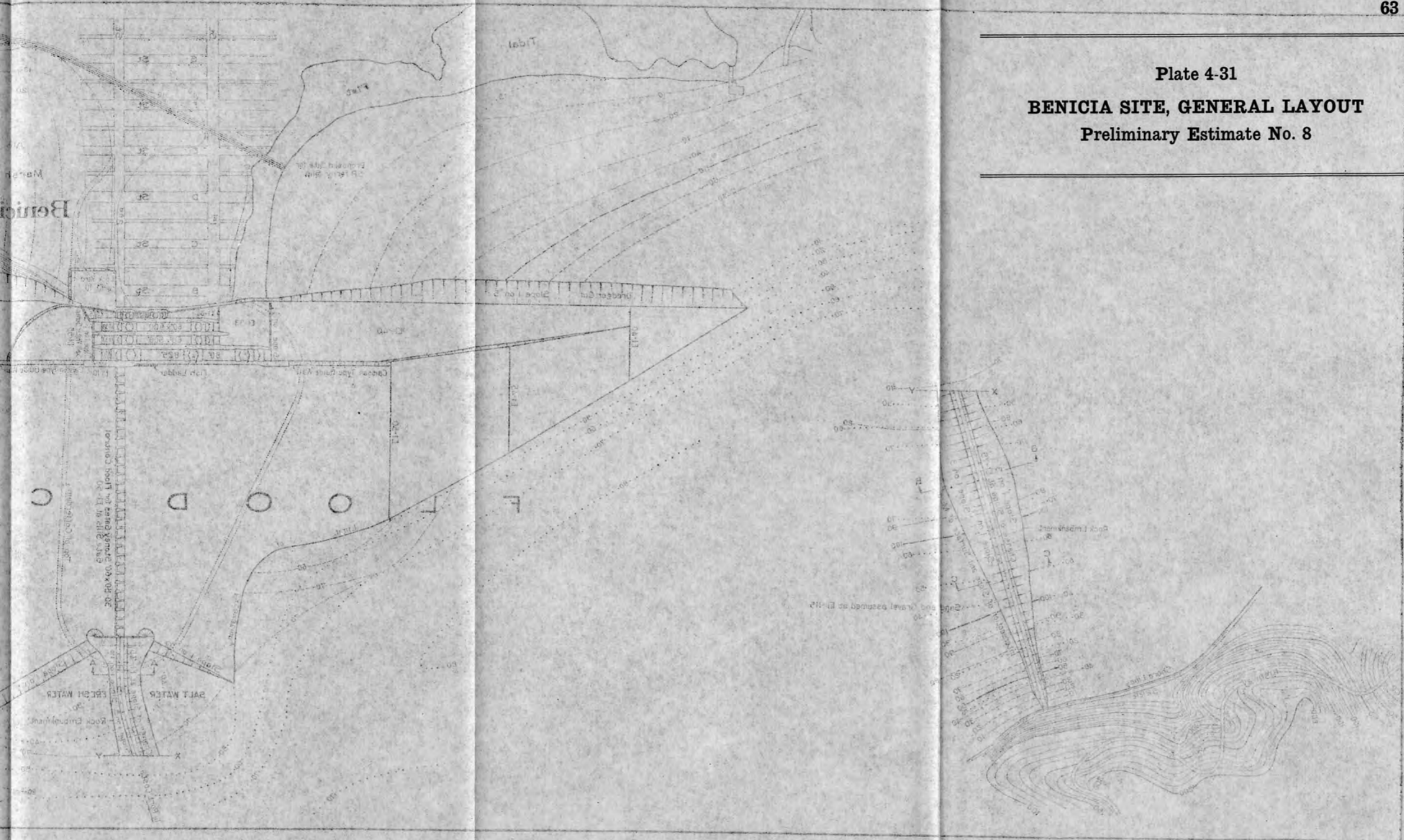
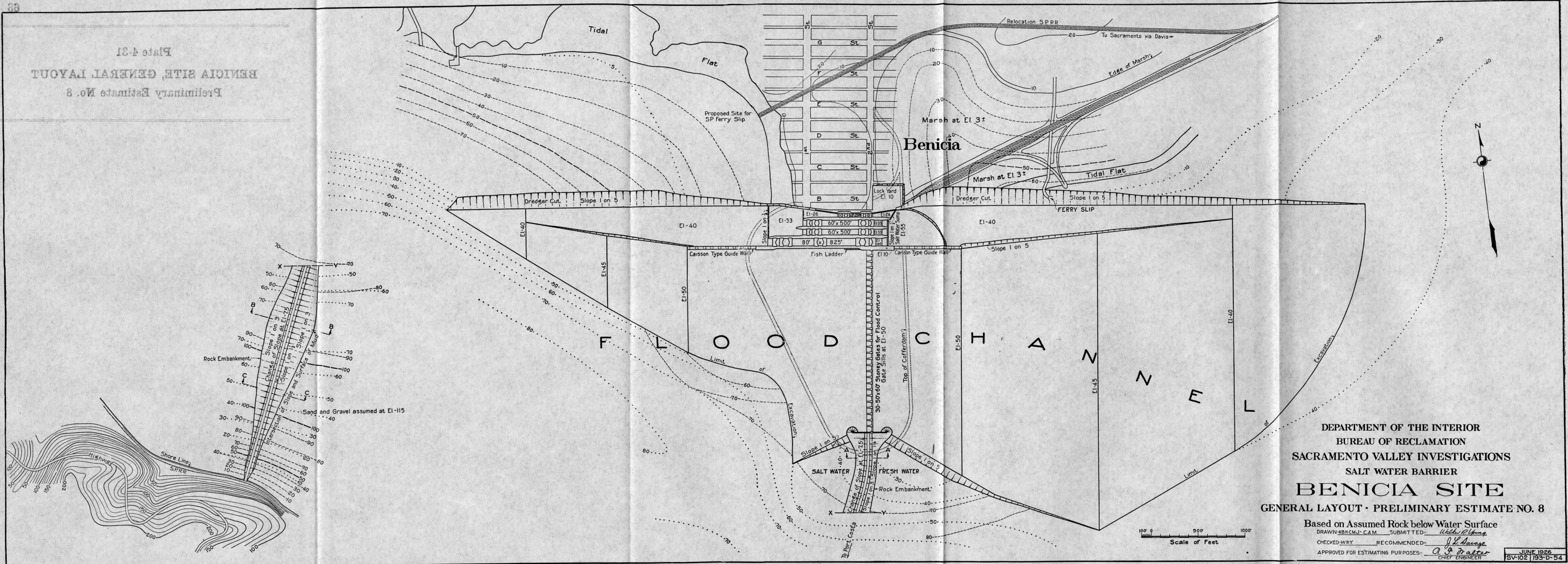


Plate 4-31
BENICIA SITE, GENERAL LAYOUT
Preliminary Estimate No. 8

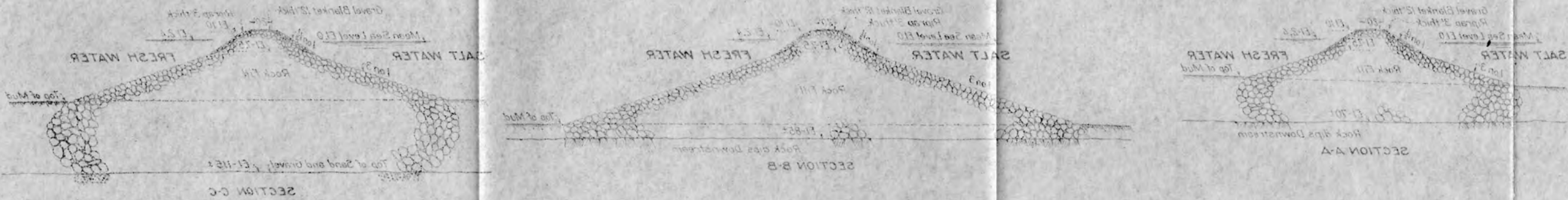
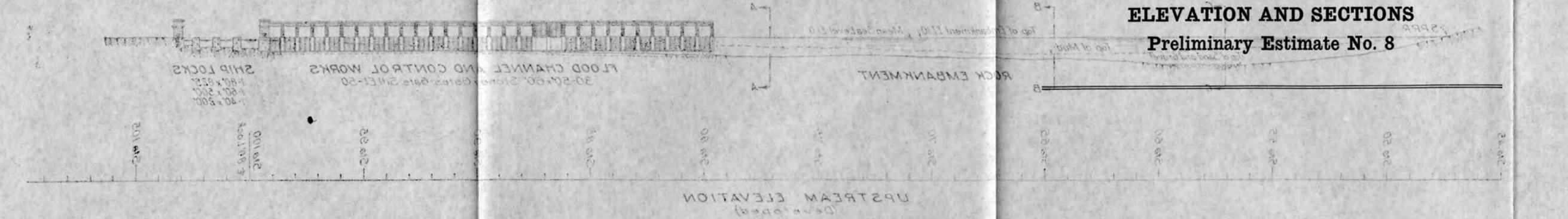


DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
BENICIA SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 8

Based on Assumed Rock below Water Surface
 DRAWN-NBR:CMJ-CAM SUBMITTED: *Walter R. Long*
 CHECKED-WRY RECOMMENDED: *J. L. Savage*
 APPROVED FOR ESTIMATING PURPOSES: *A. A. Walter*
 CHIEF ENGINEER

JUNE 1926
 SV-102 193-D-54

Plate 4-32
ELEVATION AND SECTIONS
 Preliminary Estimate No. 8



Notes:
 This site not drilled.
 Rock fill to be placed by Bottom Dump barges to
 maximum elevation permitted by draw.
 Hammer to be placed by Derrick barges
 and Skips.

APPROVED FOR ESTIMATING PURPOSES
 [Signature]
 CIVIL ENGINEER

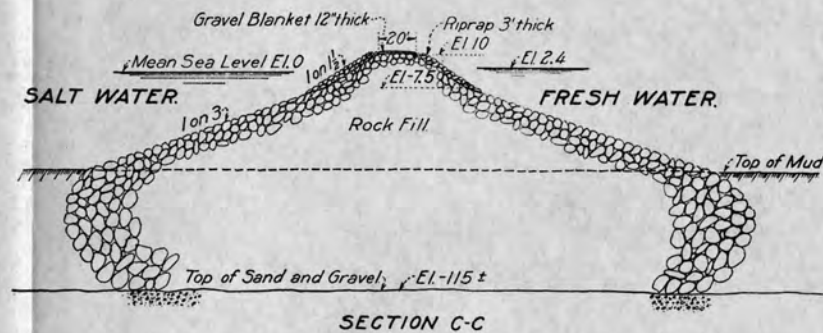
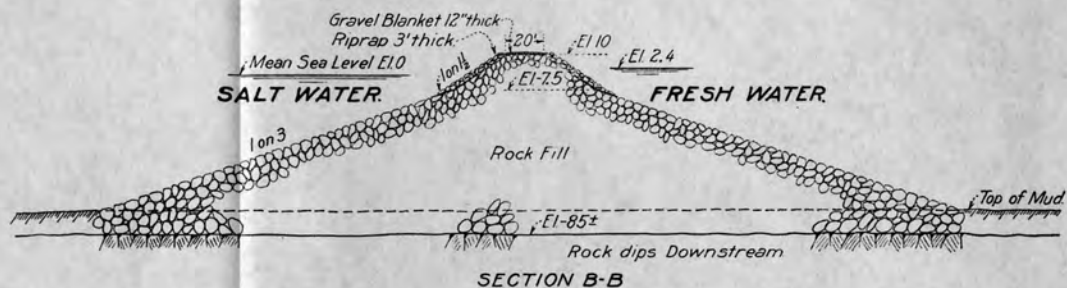
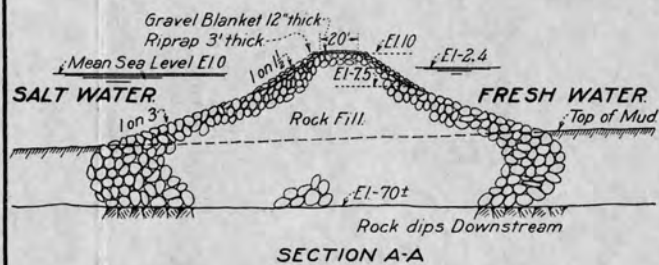
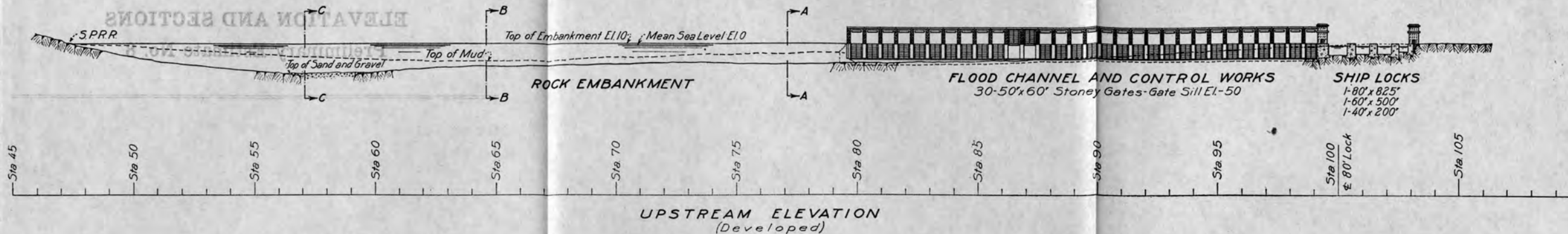
24-103 [Stamp]
 193-D-32 [Stamp]

PRELIMINARY ESTIMATE NO. 8
 ELEVATION AND SECTIONS
 SALT WATER BARRIER
 SACRAMENTO VALLEY LIVE STATIONS
 BUREAU OF RECLAMATION
 DEPARTMENT OF THE INTERIOR

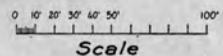
PRELIMINARY DESIGN

Plate 4-32

ELEVATION AND SECTIONS



EMBANKMENT SECTIONS



Notes:
This Site not drilled.
Rock Fill to be placed by Bottom Dump Barges up to Maximum Elevation permitted by draft.
Remainder to be placed by Derrick Barges and Skips.

PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
ELEVATION AND SECTIONS
PRELIMINARY ESTIMATE NO. 8

APPROVED FOR ESTIMATING PURPOSES:

A. J. Draeter
CHIEF ENGINEER

DRAWN CMU-CAM SUBMITTED J. J. Young
CHECKED N.B.H. RECOMMENDED J. S. Savage
SV-103 Ellensburg, Wash June 29, 1926 193-D-55

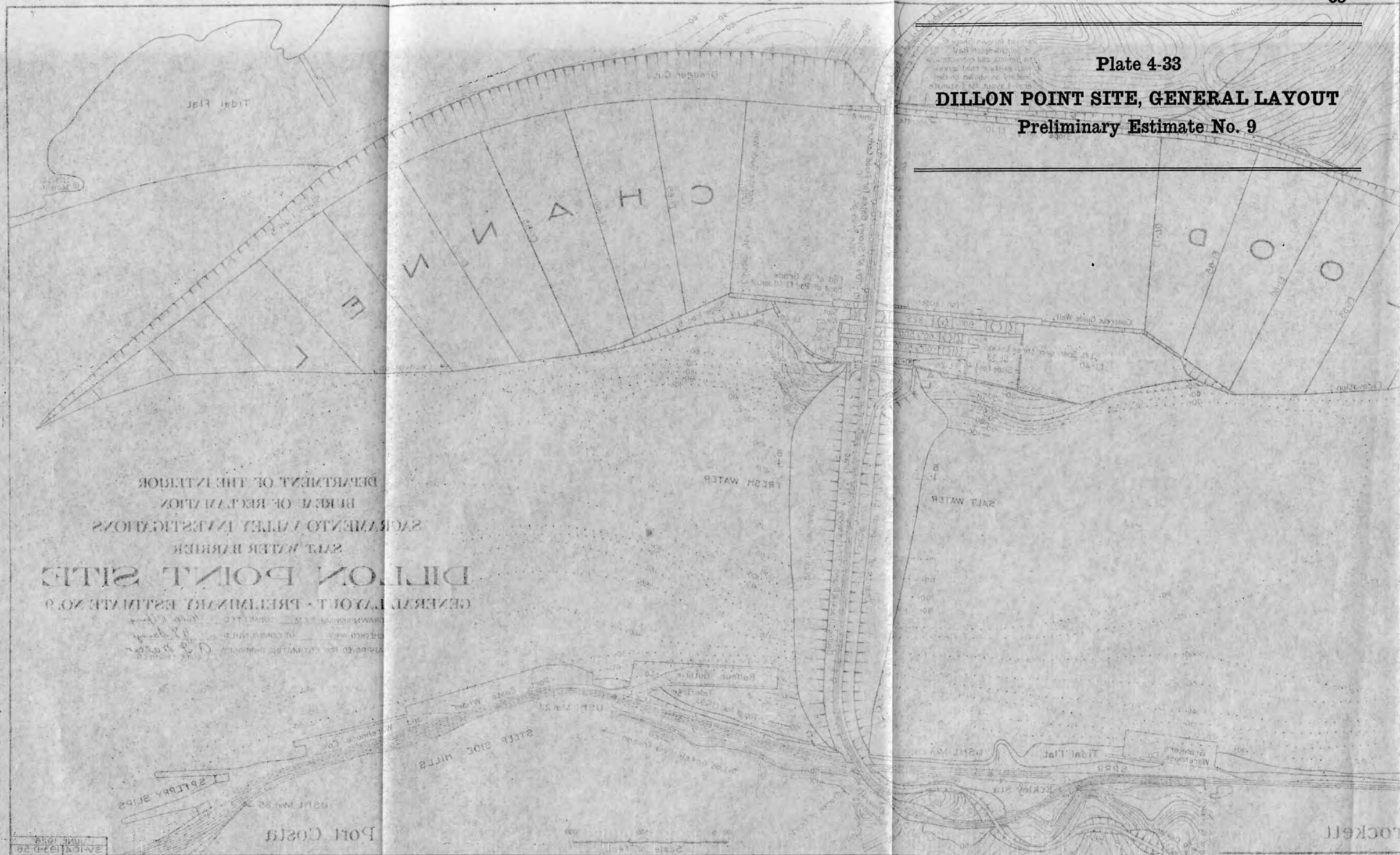


Plate 4-33

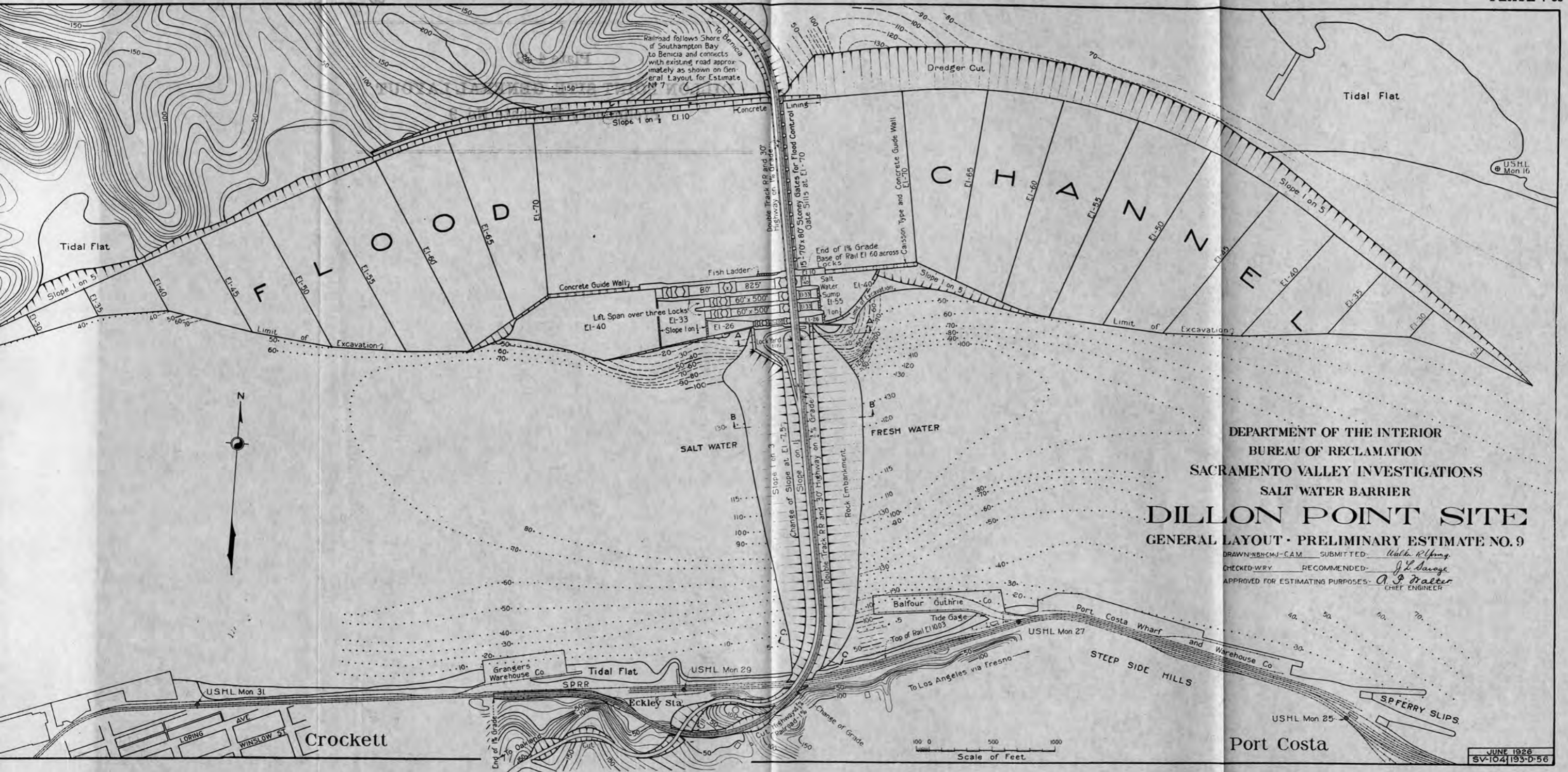
DILLON POINT SITE, GENERAL LAYOUT

Preliminary Estimate No. 9

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
DILLON POINT SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 9

Scale 1" = 100'
 1935
 1935-36

Rockwell

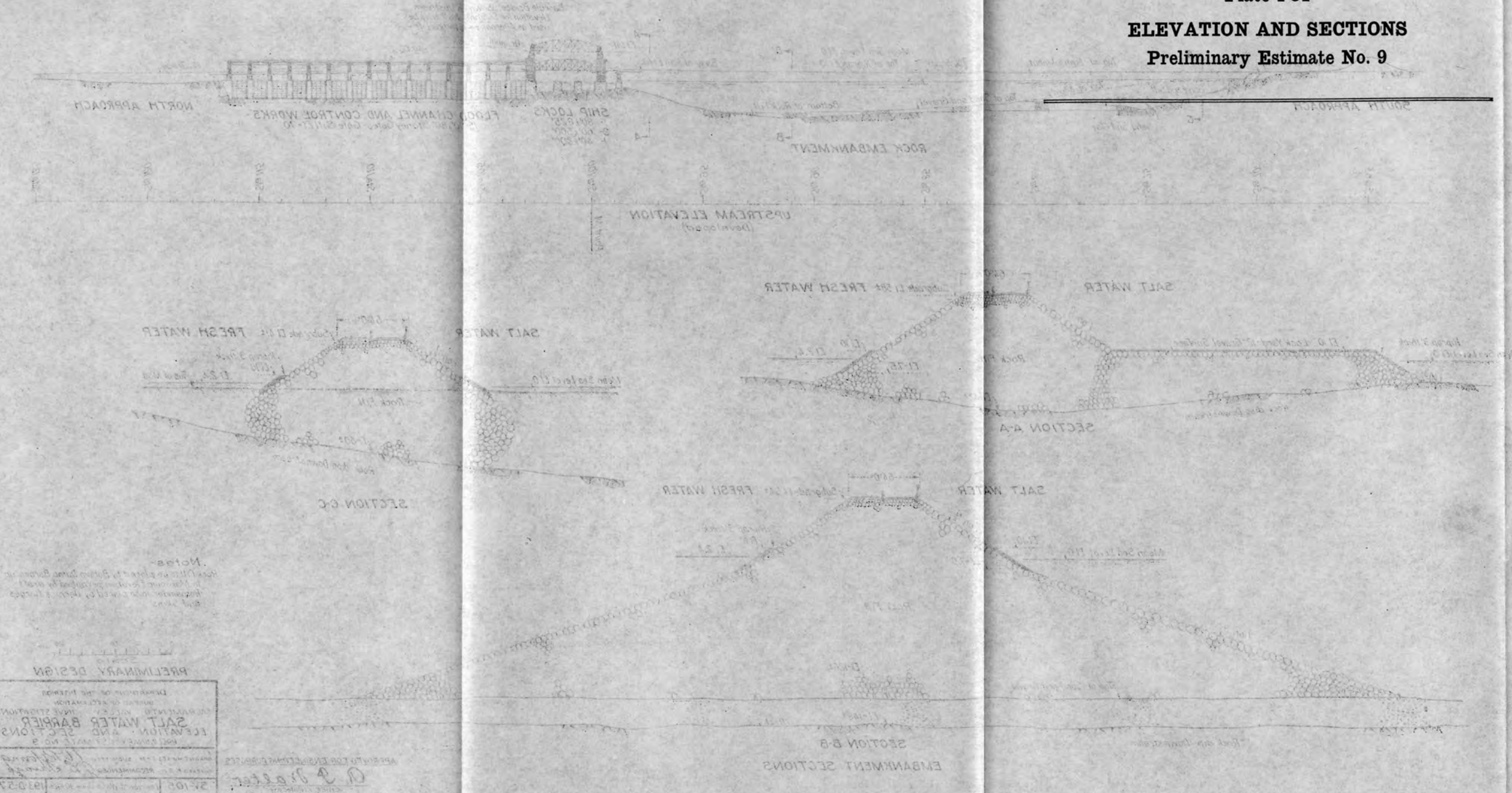


DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
DILLON POINT SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 9

DRAWN: MBH:CMJ-CAM SUBMITTED: *Walter R. Young*
 CHECKED: WRY RECOMMENDED: *J. L. Savage*
 APPROVED FOR ESTIMATING PURPOSES: *A. F. Walter*
 CHIEF ENGINEER

Plate 4-34
ELEVATION AND SECTIONS
Preliminary Estimate No. 9

PLATE 4-34

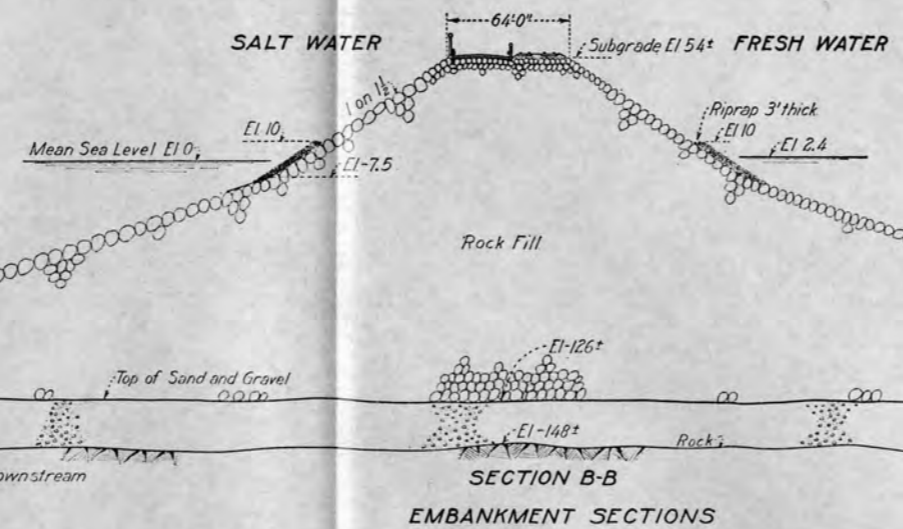
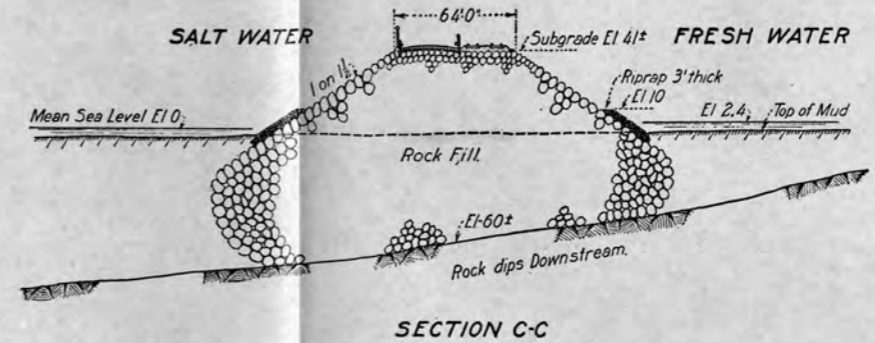
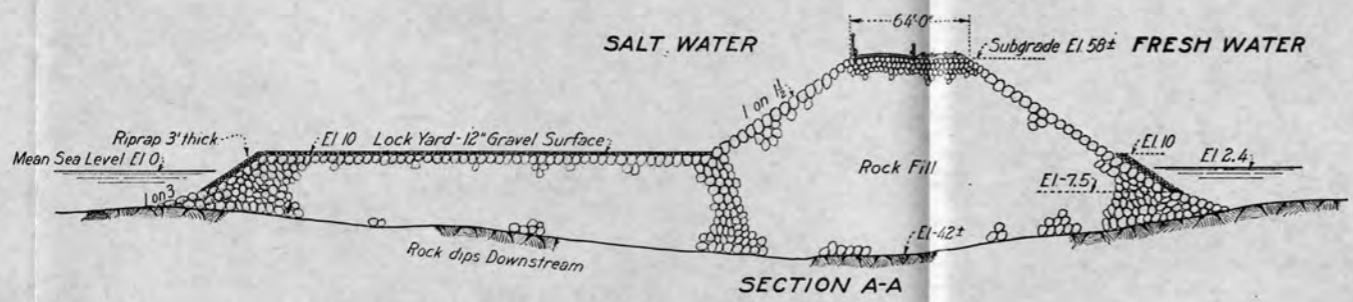
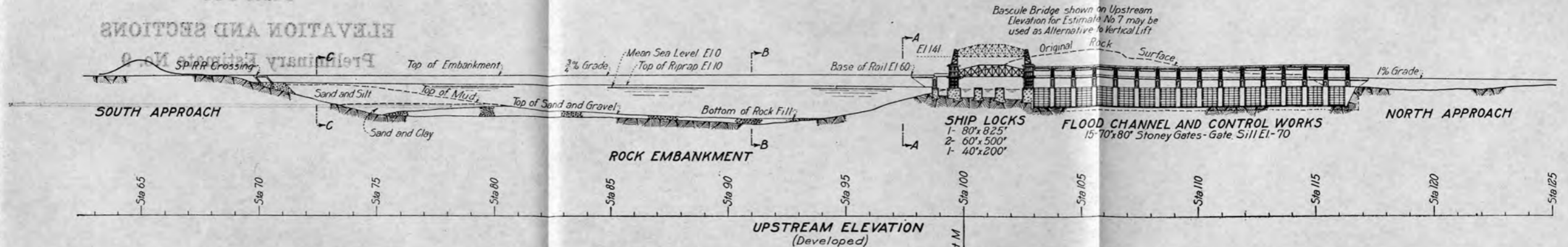


Notes:
 1. The design is based on the data furnished by the client.
 2. The design is preliminary and subject to change.
 3. The design is based on the data furnished by the client.

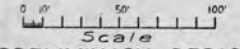
PRELIMINARY DESIGN
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 DIVISION OF DAMS AND CANALS
 SALT WATER BARRIER
 ELEVATION AND SECTIONS
 PROJECT NO. 100-100-100-100
 SHEET NO. 100-100-100-100

APPROVED FOR ENGINEERING REPORT
 A. J. B. B. B.
 27-100-100-100-100

Plate 4-34
ELEVATION AND SECTIONS
Preliminary Estimate No. 9



Notes:-
 Rock Fill to be placed by Bottom Dump Barges up to Maximum Elevation permitted by draft. Remainder to be placed by Derrick Barges and Skips.



PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 ELEVATION AND SECTIONS
 PRELIMINARY ESTIMATE NO. 9

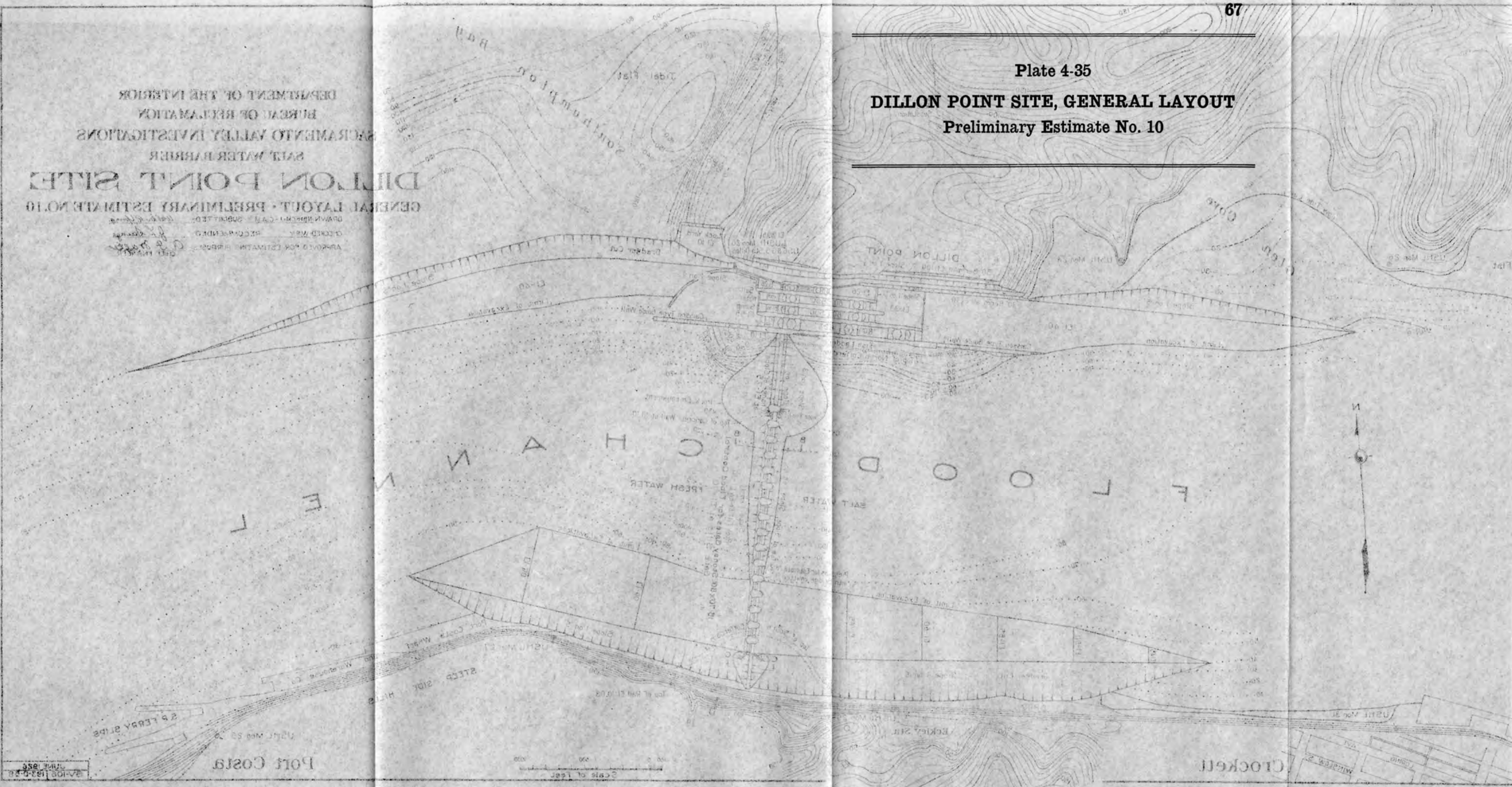
APPROVED FOR ENGINEERING PURPOSES:
O. J. Walter
 CHIEF ENGINEER

DRAWN C.M.J. 885-CAM SUBMITTED *W. J. Young*
 CHECKED N.B.H. RECOMMENDED *J. K. Savage*
 SV-105 Ellensburg, Wash. June 30, 1926 193-D-57

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
DILLON POINT SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 10

APPROVED FOR ESTIMATING PURPOSES
 CHECKED BY: [Signature]
 RECOMMENDED BY: [Signature]
 DRAWN BY: [Signature] SUBMITTED BY: [Signature]

Plate 4-35
DILLON POINT SITE, GENERAL LAYOUT
 Preliminary Estimate No. 10



SCALE 1" = 1000'
 JAN 1952

Port Costa

Scale of Feet

Clockell

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER

DILLON POINT SITE

GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 10

DRAWN: NBH-CMJ-CAM SUBMITTED: *Walter R. Young*

CHECKED: WRY RECOMMENDED: *J. H. Savage*

APPROVED FOR ESTIMATING PURPOSES: *A. P. Walter*
CHIEF ENGINEER

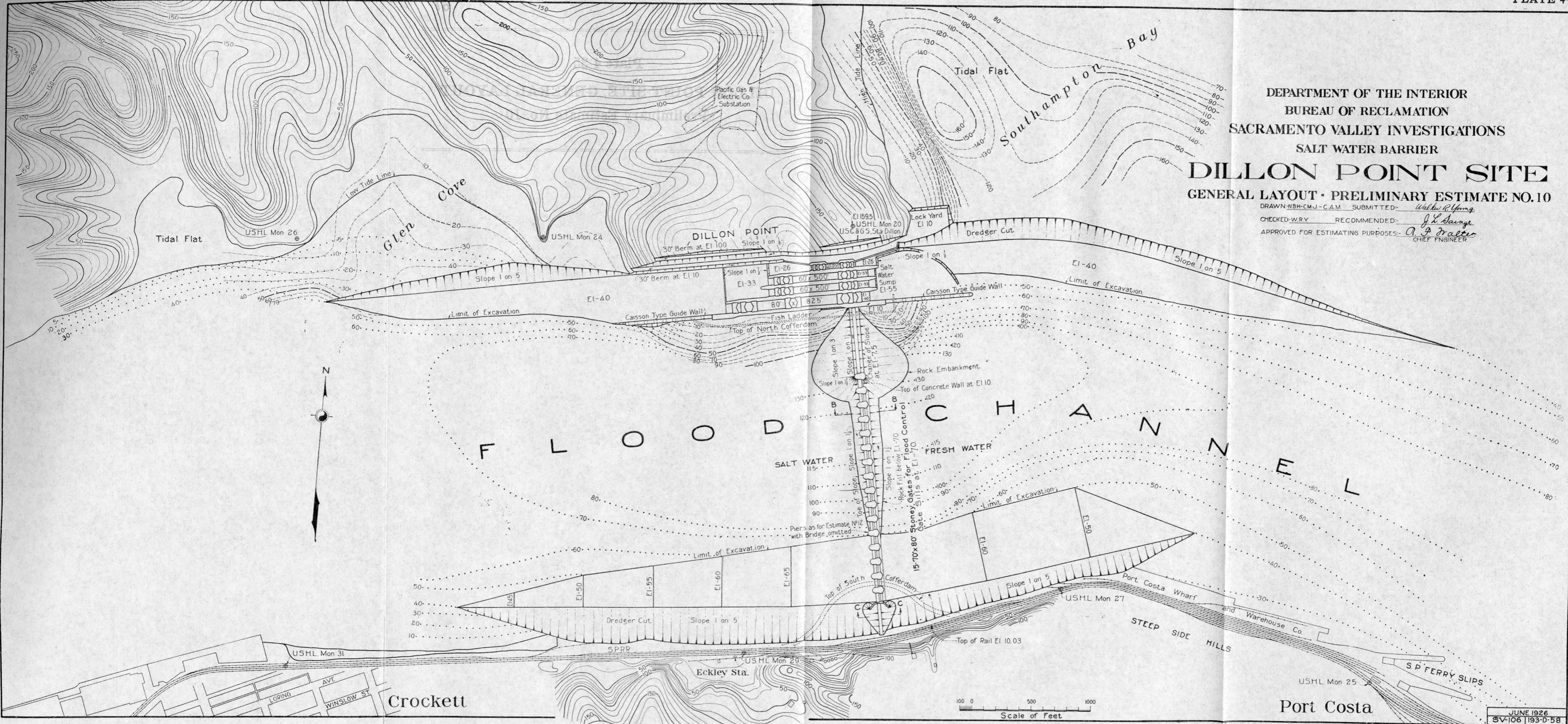
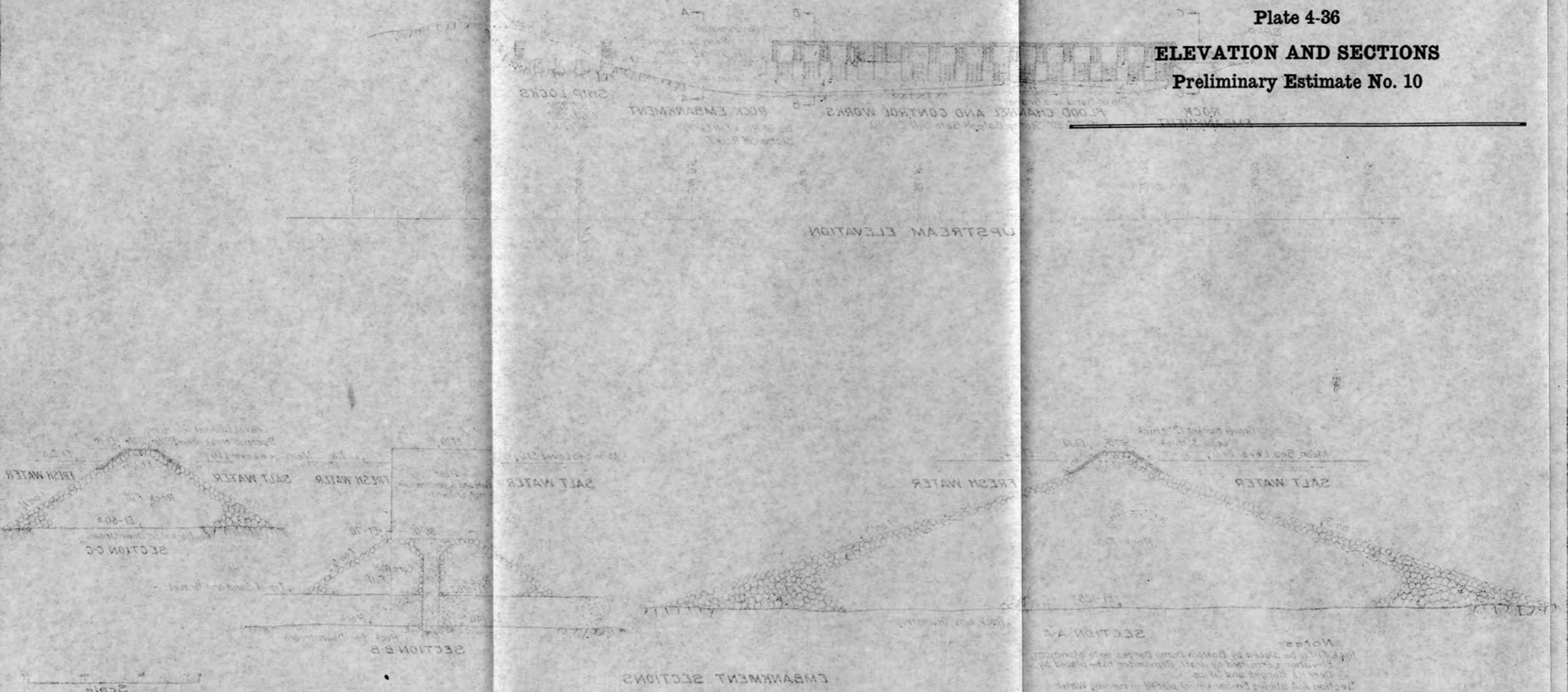


Plate 4-36

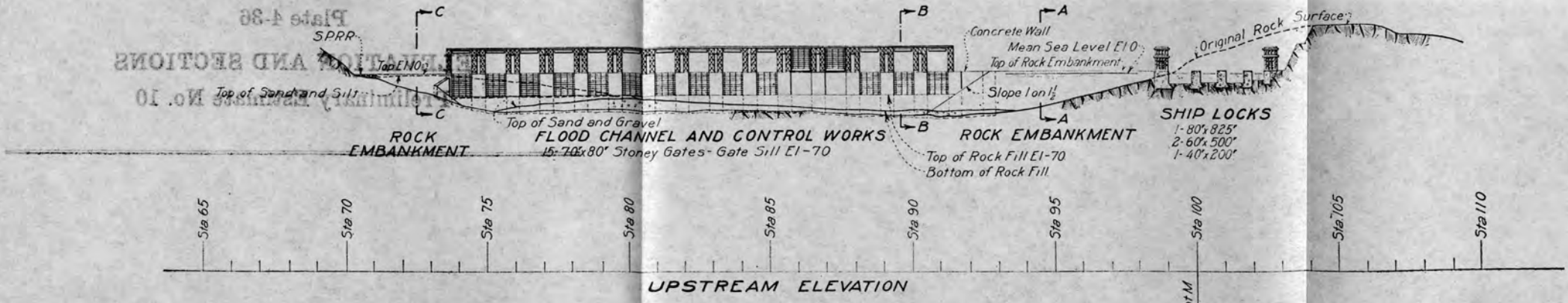
ELEVATION AND SECTIONS
Preliminary Estimate No. 10



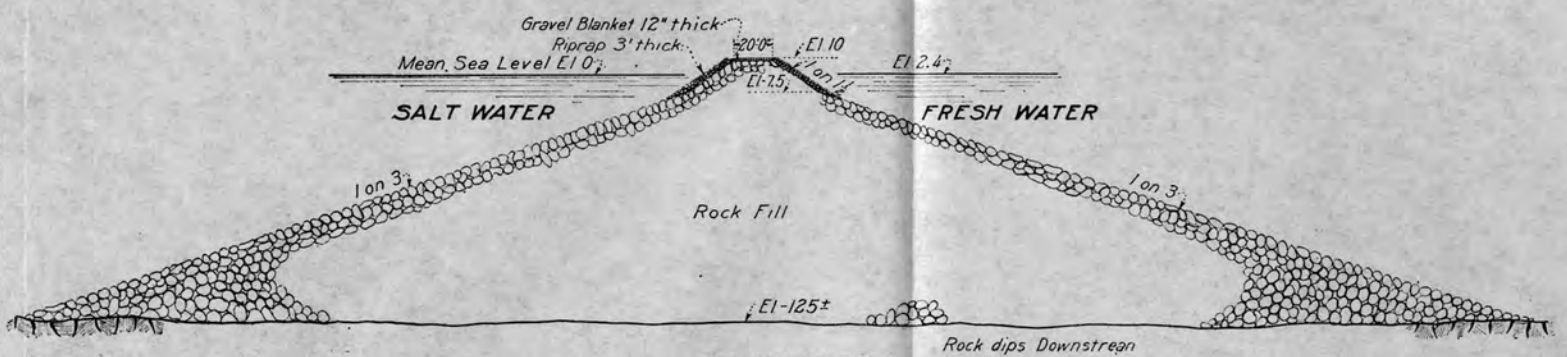
Notes:
 Right side to be closed by bottom turn gates in alignment
 of embankment. Right side of wall, however, the left side of
 embankment and its
 Section A-A shows embankment in plan in channel water.
 Section B shows rock fill embankment in plan. The wall
 shows water embankment in plan. The wall shows
 Section C shows embankment in plan. The wall shows
 Control Works are shown in plan. The estimate
 and bridge omitted.

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 INVESTIGATION
 SALT WATER BARRIER
 ELEVATION AND SECTIONS
 PRELIMINARY ESTIMATE NO. 10
 DRAWING NO. 3107
 SHEET NO. 1 OF 2
 PREPARED FOR ESTIMATING PURPOSES
 BY
 A. J. G. G. G.
 CHIEF ENGINEER

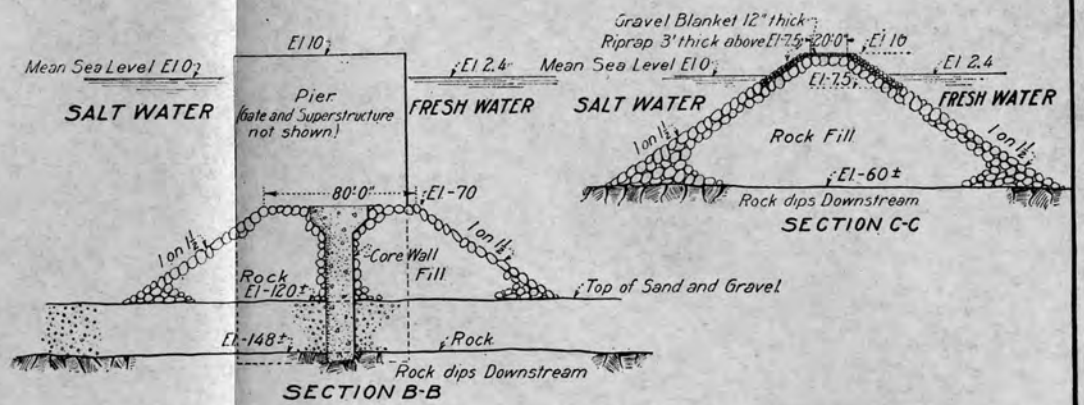
Plate 4-36
ELEVATION AND SECTIONS
PRELIMINARY ESTIMATE NO. 10



UPSTREAM ELEVATION



SECTION A-A



SECTION B-B

SECTION C-C

Notes:
 Rock Fill to be placed by Bottom Dump Barges up to Maximum Elevation permitted by draft Remainder to be placed by Derrick Barges and Skips
 Section A-A shows Embankment placed in running Water
 Section B-B shows Rock Fill deposited around Core Wall under Stoney Gates where action of Current is negligible below E1-70
 Section C-C shows Embankment placed inside South Cofferdam Control Works Piers are similar to Piers for Estimate No 12 with Bridge omitted.

EMBANKMENT SECTIONS

Scale
 PRELIMINARY DESIGN

APPROVED FOR ESTIMATING PURPOSES
 A. J. Dralter
 CHIEF ENGINEER

DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION		
SACRAMENTO VALLEY INVESTIGATIONS		
SALT WATER BARRIER		
ELEVATION AND SECTIONS		
PRELIMINARY ESTIMATE NO. 10		
DRAWN: CMJ-CAM-LCN	SUBMITTED: <i>W. R. Young</i>	
CHECKED: N.B.H.	RECOMMENDED: <i>J. H. Savage</i>	
SV-107	Ellensburg, Wash July 8, 1926	1937-59

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER

DILLON POINT SITE

GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. 12

DRAWN BY: [Signature]
CHECKED BY: [Signature]
APPROVED FOR RECLAMATION PURPOSES: [Signature]
CHIEF ENGINEER

PORT COSTA
USRL No. 25
S PERRY SLIPS

STEEL SIDE HILLS

Scale of Feet
0 100 200

JUNE 1925
EV-1081132-D-80

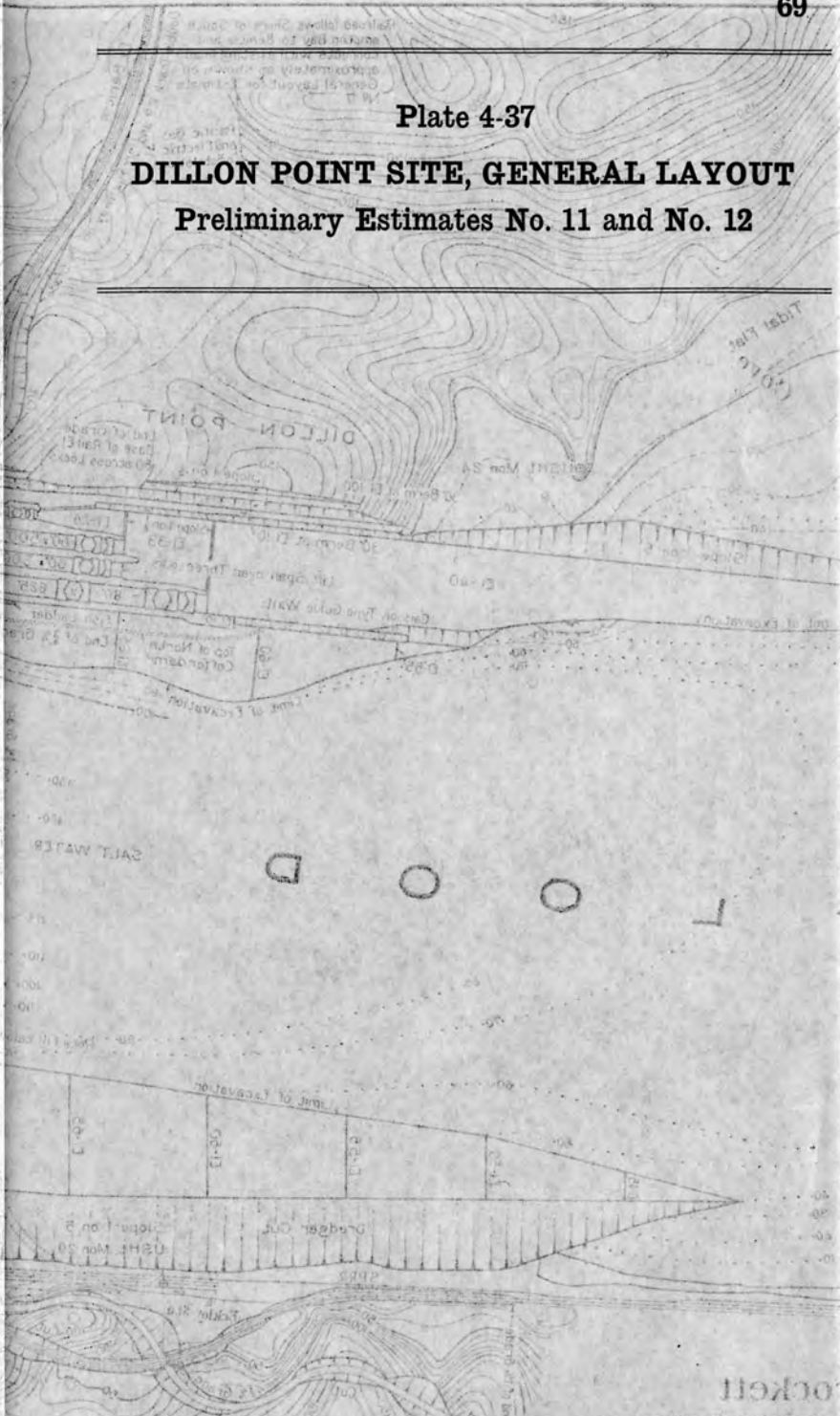
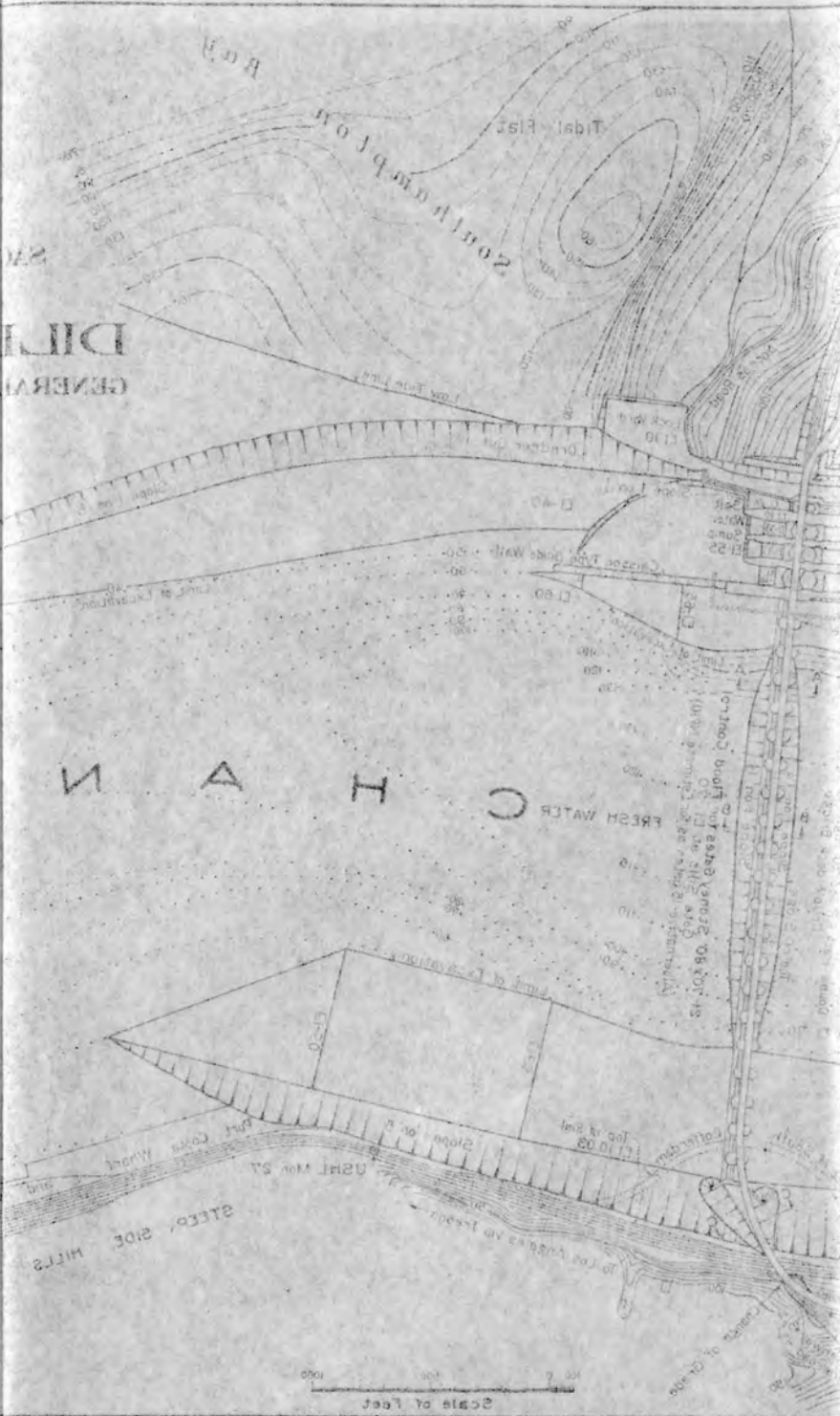


Plate 4-37

DILLON POINT SITE, GENERAL LAYOUT
Preliminary Estimates No. 11 and No. 12

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
DILLON POINT SITE
 GENERAL LAYOUT - PRELIMINARY ESTIMATE NO. II & I2

DRAWN-NBH-CMJ-CAM SUBMITTED-*Walter R. Young*
 CHECKED-WRY RECOMMENDED-*J. L. Savage*
 APPROVED FOR ESTIMATING PURPOSES-*A. J. Walter*
 CHIEF ENGINEER

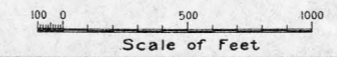
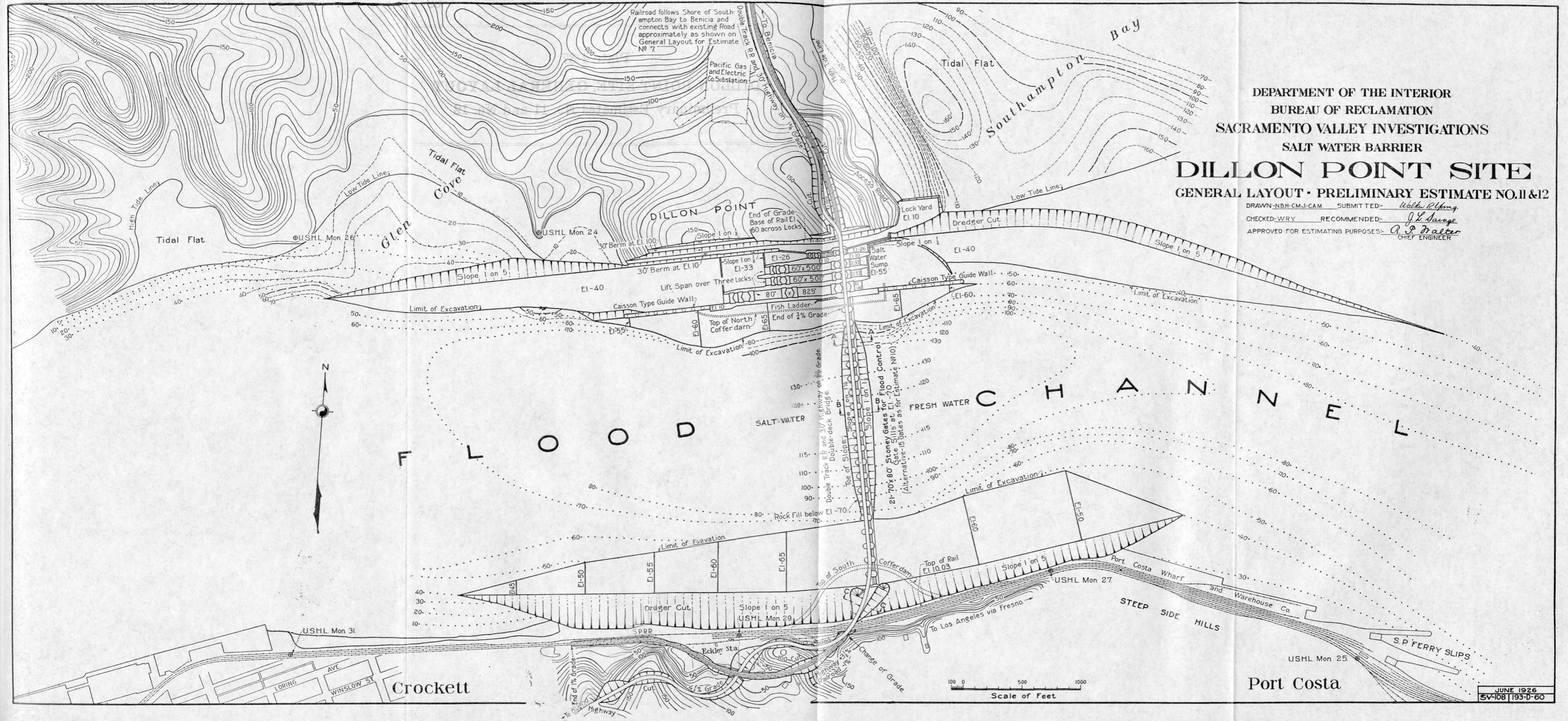
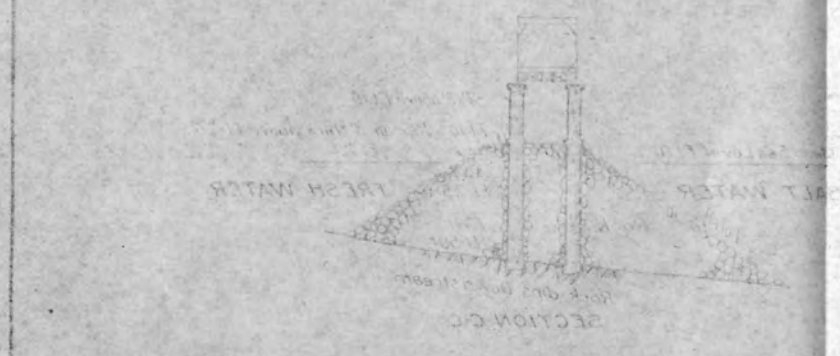
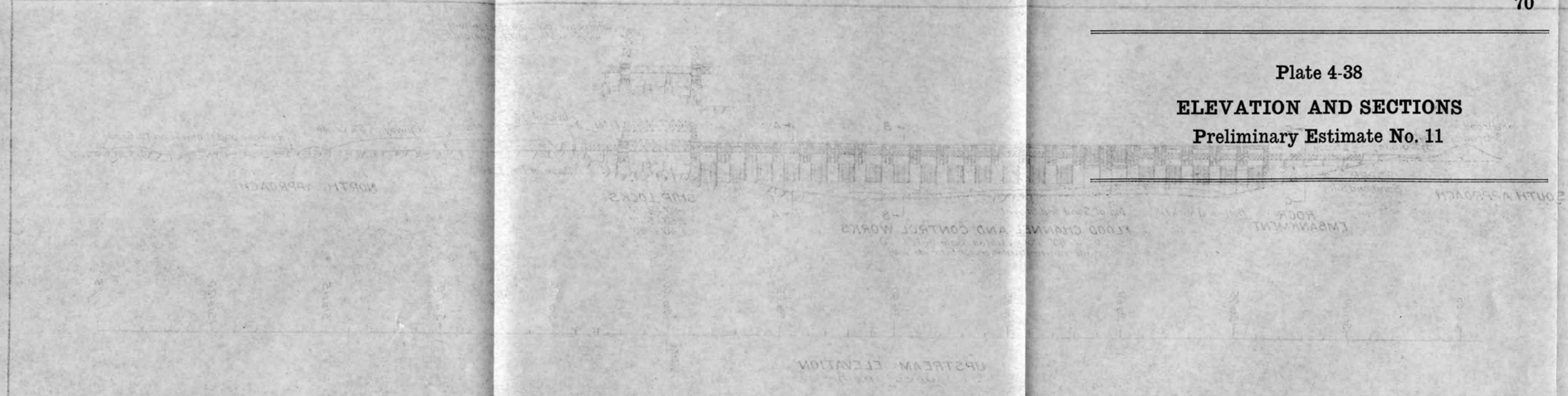


Plate 4-38
ELEVATION AND SECTIONS
Preliminary Estimate No. 11



EMBARMENT SECTIONS

UPSTREAM ELEVATION

Notes:

Section A-A shows the structure in the salt water barrier. The structure is shown in a cross-sectional view, highlighting its vertical profile and the water levels on either side. The water level on the left side is labeled 'FRESH WATER' and on the right side 'SALT WATER'. The structure is supported by a foundation. The diagram shows a vertical structure with a central gate or lock. The structure is supported by a foundation. The water level on the left side is labeled 'FRESH WATER' and on the right side 'SALT WATER'. The structure is shown in a cross-sectional view, highlighting its vertical profile and the water levels on either side.

Scale

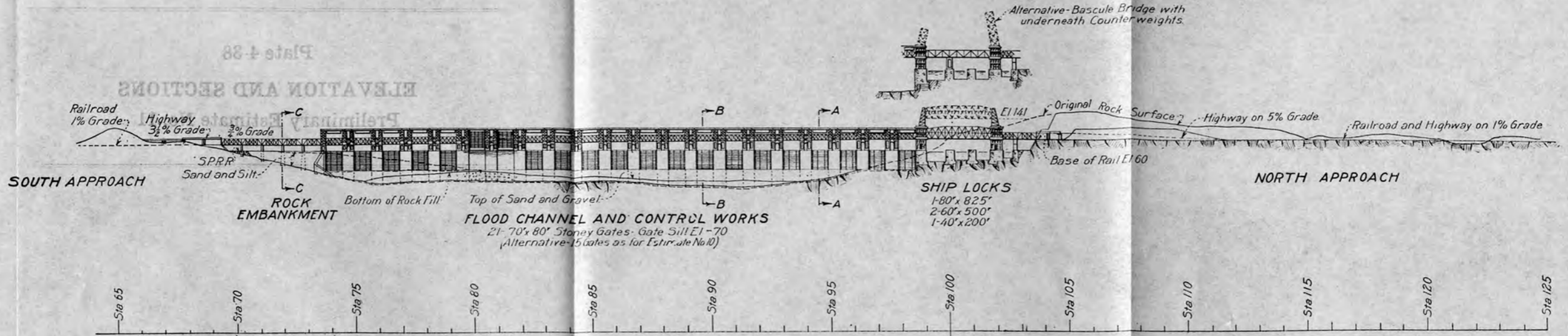
PRELIMINARY DESIGN

Department of the Interior
 Bureau of Reclamation
 Salt Water Barrier
 Elevation and Sections
 Preliminary Estimate No. 11

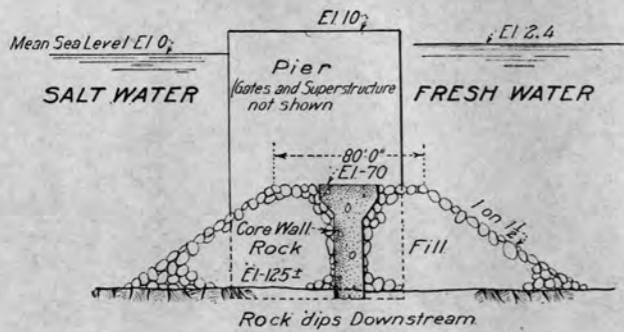
APPROVED FOR ESTIMATING PURPOSES
 [Signature]
 CIVIL ENGINEER

2V-102

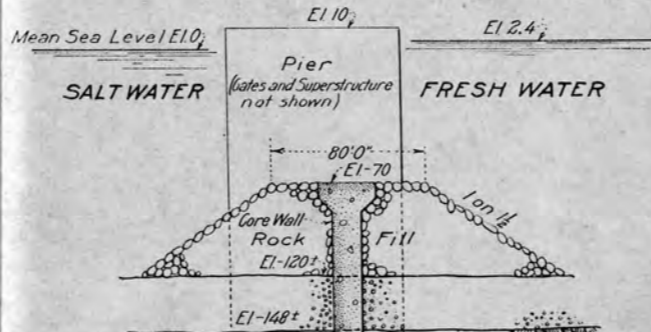
193-0-01



UPSTREAM ELEVATION
(Developed)

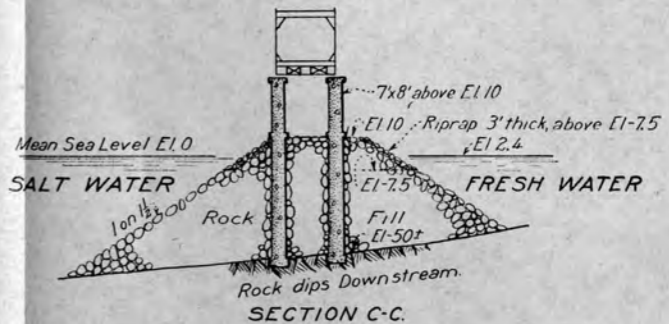


SECTION A-A



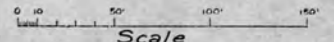
SECTION B-B

EMBANKMENT SECTIONS



SECTION C-C

Notes:-
 Rock Fill to be placed by Bottom Dump Barges up to Maximum Elevation permitted by draft. Remainder to be placed by Derrick Barges and Skips.
 Sections A-A and B-B show Rock Fill deposited around Core Wall under Stoney Gates where action of Current is negligible below El-70.
 Section C-C shows Embankment placed inside South Cofferdam Alternative Estimate No.11 gives cost with only 15 Flood Gates, located as for Estimate No.10.



Scale

PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 ELEVATION AND SECTIONS
 PRELIMINARY ESTIMATE NO. 11

APPROVED FOR ESTIMATING PURPOSES

A. J. Dralter
 CHIEF ENGINEER

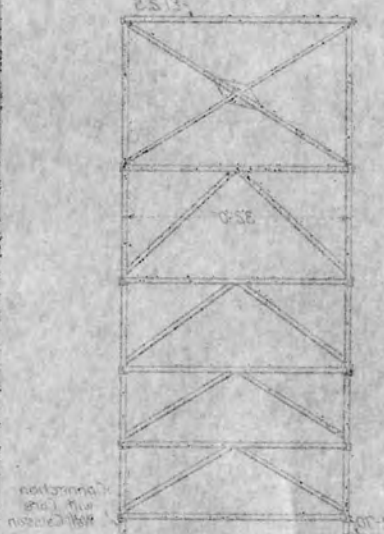
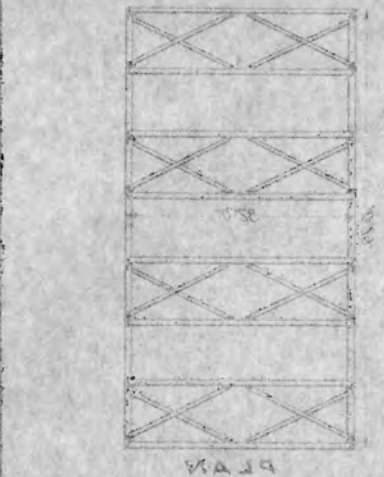
DRAWN: C.M.J. CAMICH SUBMITTED: *[Signature]*
 CHECKED: N.B.H. RECOMMENDED: *[Signature]*

SV-109 Ellensburg, Wash July 12, 1926 193-D-61

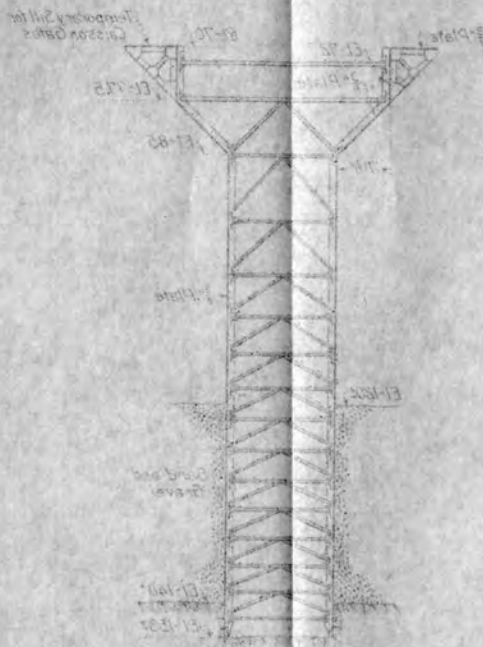
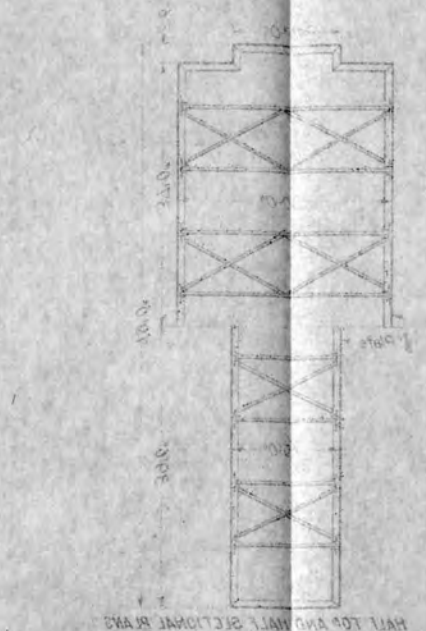
Plate 4-39
CAISSONS AND ACCESSORIES
Preliminary Estimates No. 10 and No. 13

DISTRIBUTION OF WEIGHT IN
 MAXIMUM PIER CAISSON

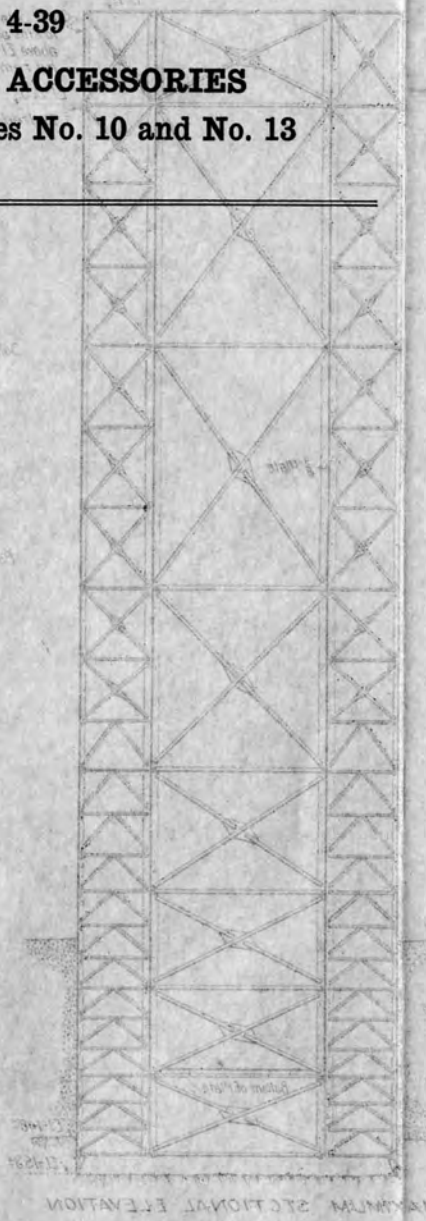
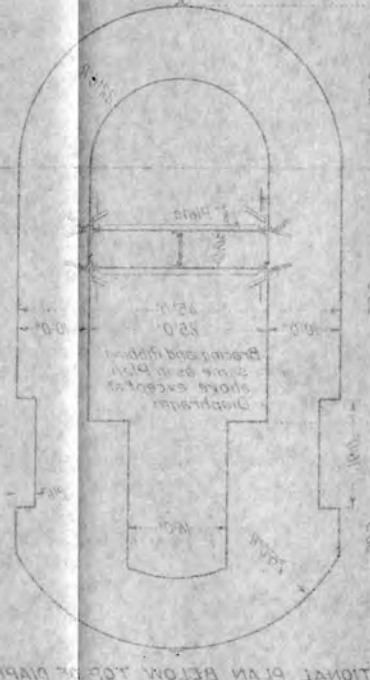
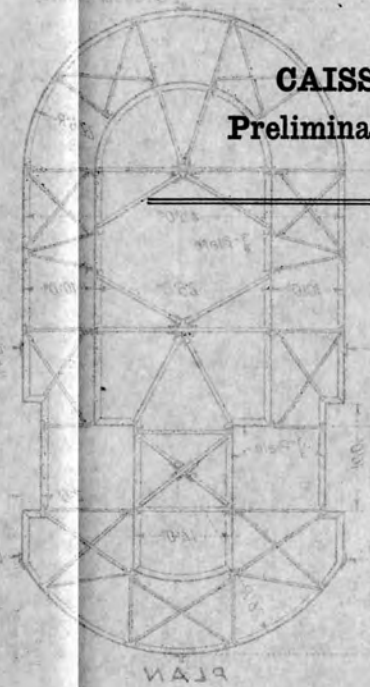
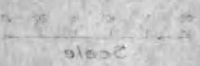
210 tons	210 tons
800	800
88	88
885 tons	885 tons



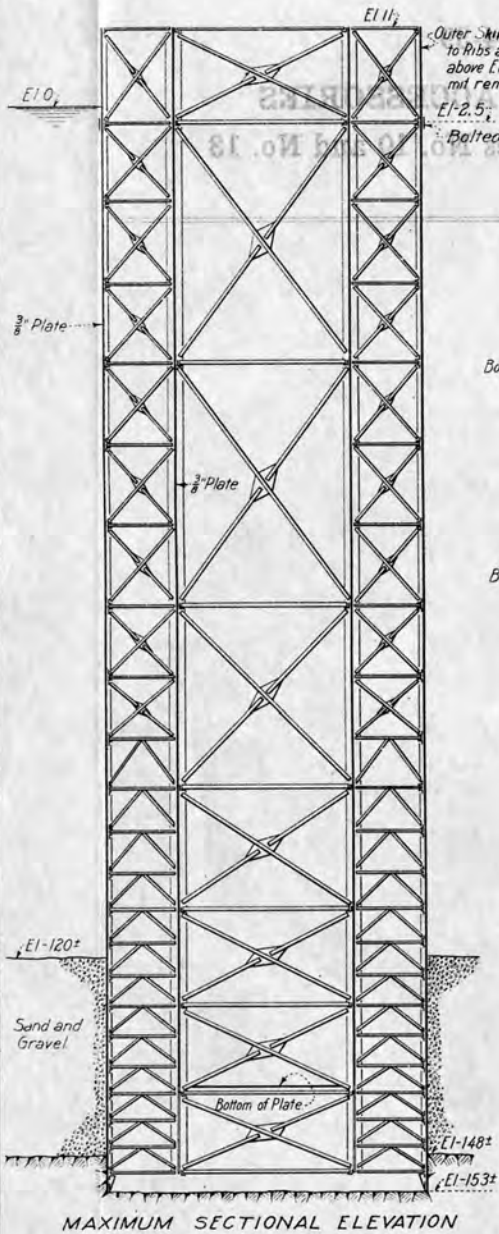
DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY
 SALT WATER BARRIER
 CAISSONS AND ACCESSORIES
 PRELIMINARY ESTIMATES NO. 10 AND NO. 13
 APRIL 1933
 CIVIL ENGINEER
 J. A. MOTT



Notes
 Pier caissons shown slightly in Plan in the various drawings
 estimated from this section requirements for
 Lateral Wall.
 Working stress in steel 24,000 lbs per sq in.
 Height of Maximum Pier Caisson in No. 13 is 100 feet
 which should be supported by tower 100 feet
 height to be constructed and walls provided by unit
 and steel placed in alternate panels of Pier Caisson
 and the 11 Caissons and Caisson Gate Frame
 in size allowance for post-tensioning, intended
 in Caisson shown and done as unnecessary
 Reclamation at this time of design

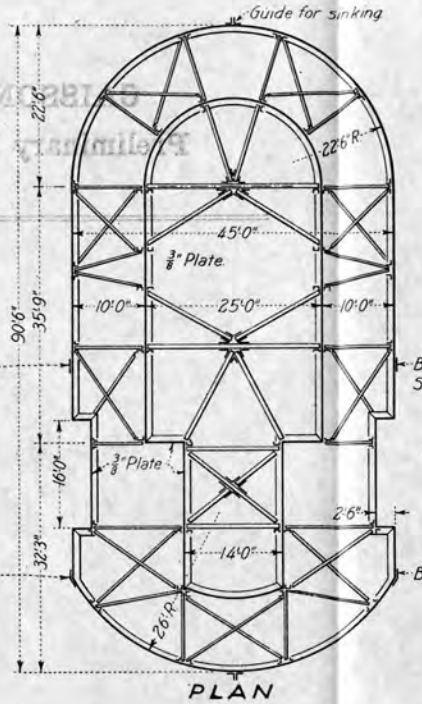


PIER CAISSON

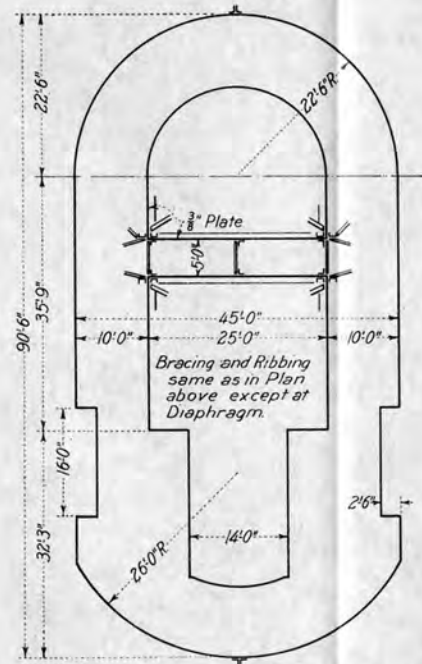


MAXIMUM SECTIONAL ELEVATION

PIER CAISSON



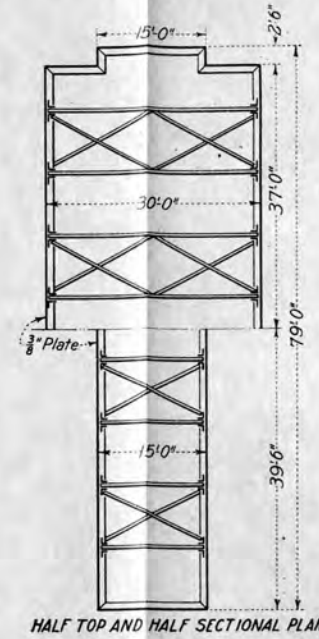
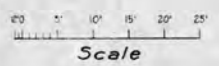
PLAN



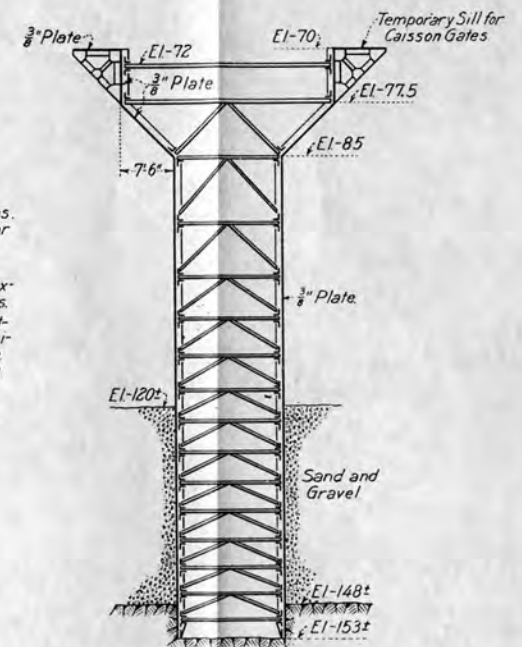
SECTIONAL PLAN BELOW TOP OF DIAPHRAGM

DISTRIBUTION OF WEIGHT IN MAXIMUM PIER CAISSON	
Skin Plates	510 tons
Ribbing	260 "
Bracing	85 "
Total	855 tons

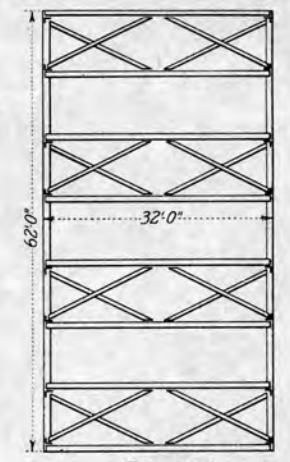
Notes:
 Pier Caissons differ slightly in Plan in the various Schemes estimated. Plans on this Sheet show Requirements for Estimate No. 11.
 Working Stress in Steel - 24,000 lbs per sq in.
 Weight of Maximum Pier Caisson in Air - 855 Tons. Maximum Weight to be supported by Traveler - 700 Tons.
 Dredging to be carried on thru Wells provided by omitting Diagonal Bracing in Alternate Panels of Pier Caissons, Core Wall Caissons and Caisson Gate Frame.
 Over-size allowances for positional Errors, incidental to Caisson sinking, are deemed an unnecessary Refinement at this Stage of Design.



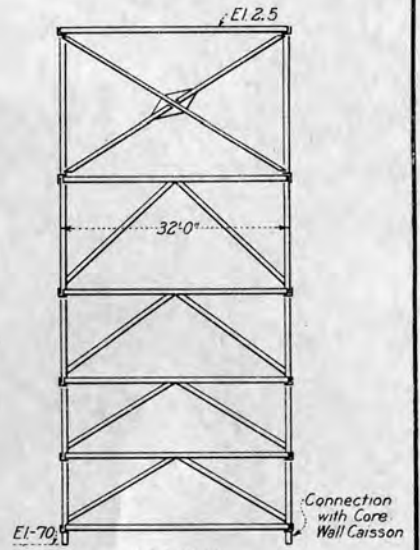
HALF TOP AND HALF SECTIONAL PLANS



MAXIMUM SECTIONAL ELEVATION CORE WALL CAISSON



PLAN



SECTION CAISSON GATE FRAME

PRELIMINARY DESIGN

APPROVED FOR ESTIMATING PURPOSES:

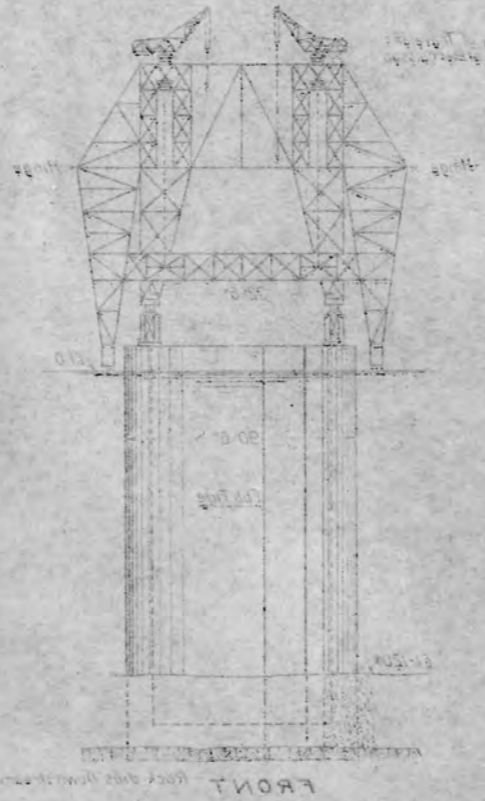
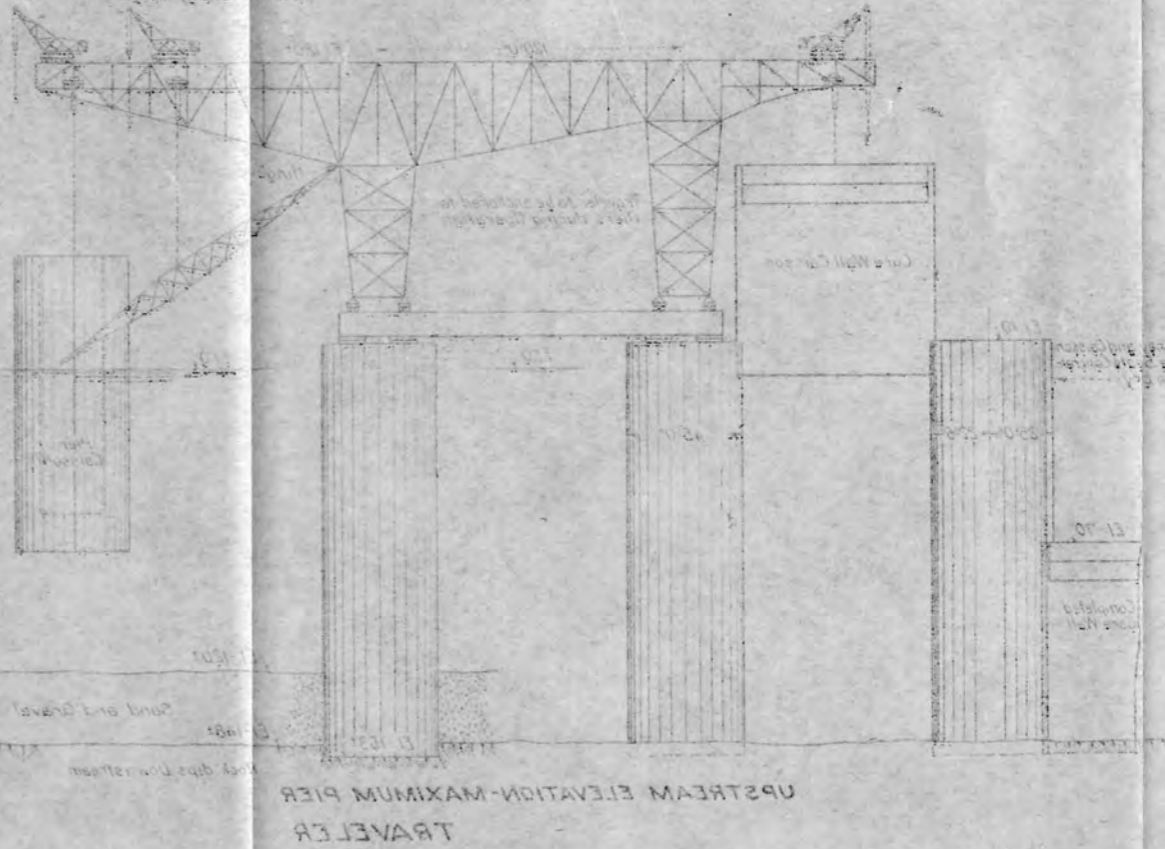
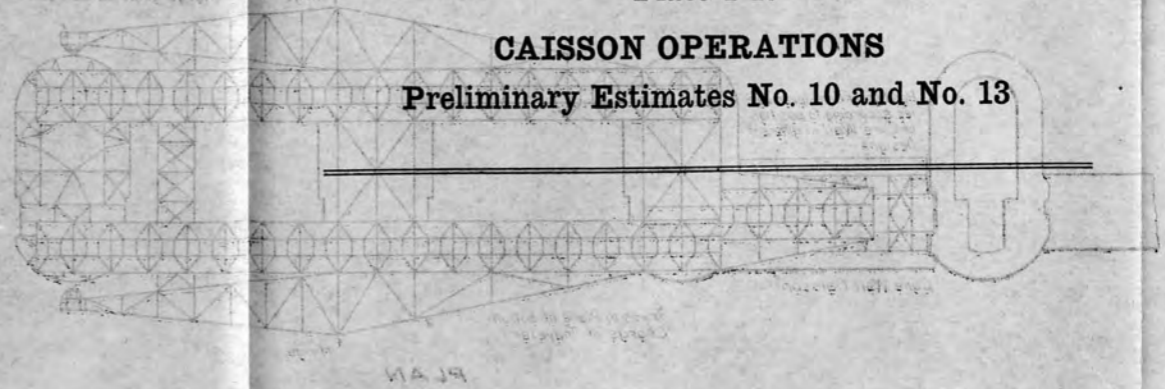
O. A. Walter
 CHIEF ENGINEER

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 CAISSONS AND ACCESSORIES
 PRELIMINARY ESTIMATES NOS 107013.

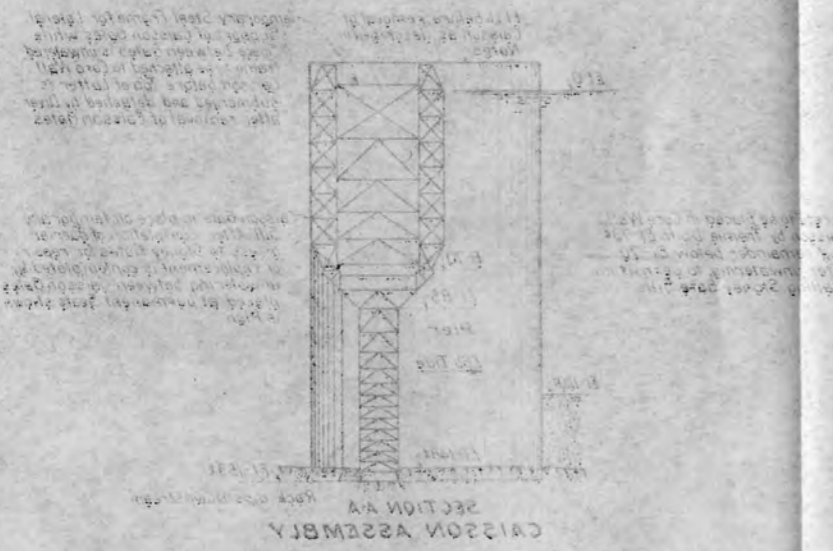
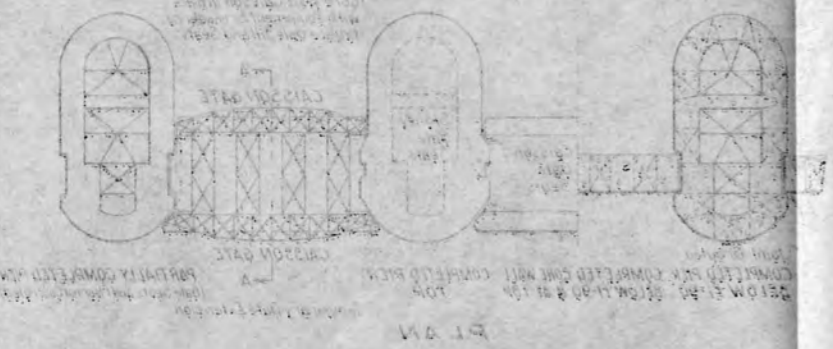
DRAWN C.M.J.-C.A.M. SUBMITTED *W. R. Young*
 CHECKED N.B.H. RECOMMENDED *J. V. Savage*
 SV-110 Ellensburg Wash July 27, 1926 193-D-62

Plate 4-40

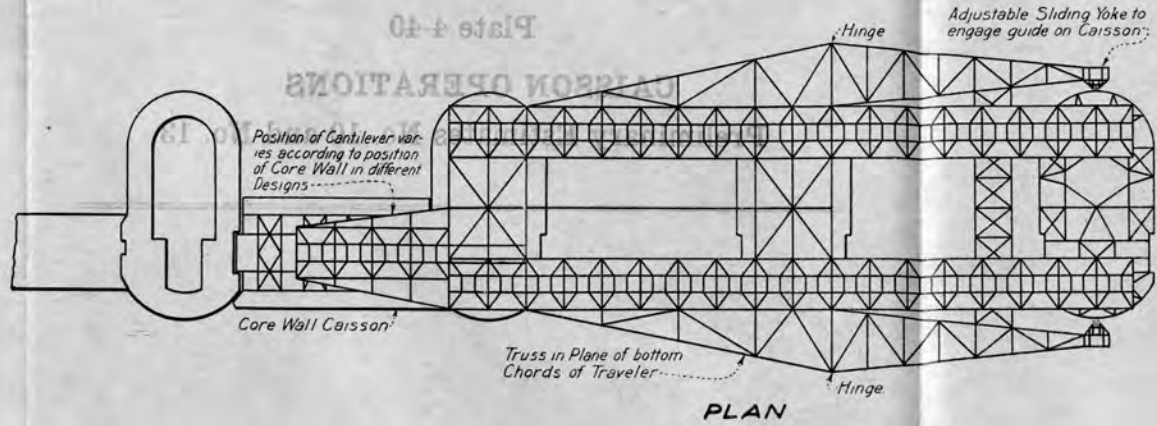
CAISSON OPERATIONS
Preliminary Estimates No. 10 and No. 13



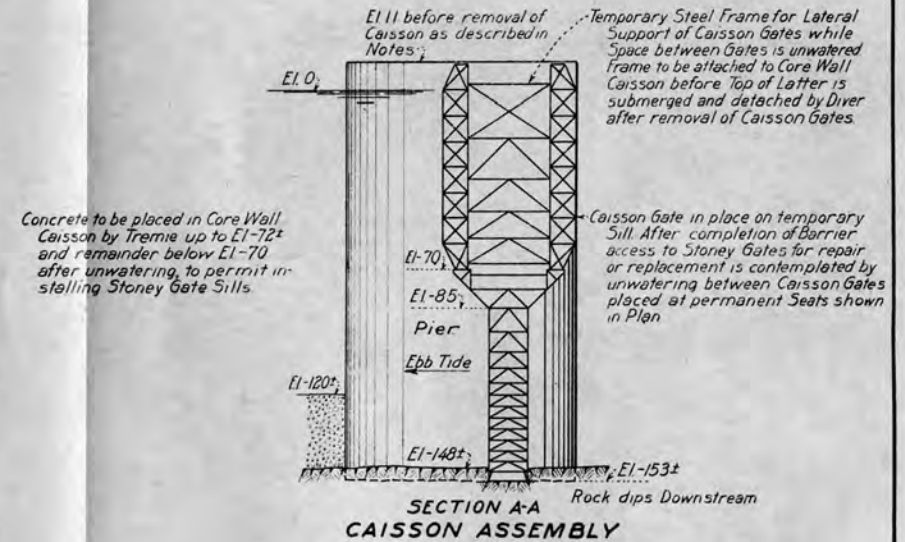
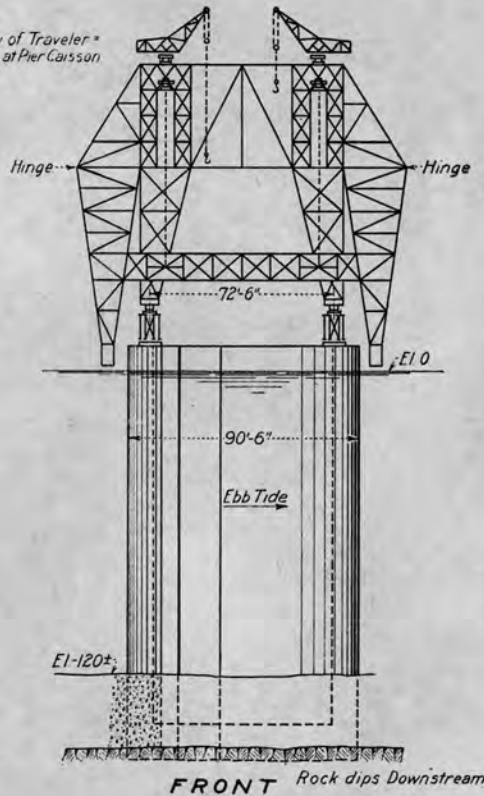
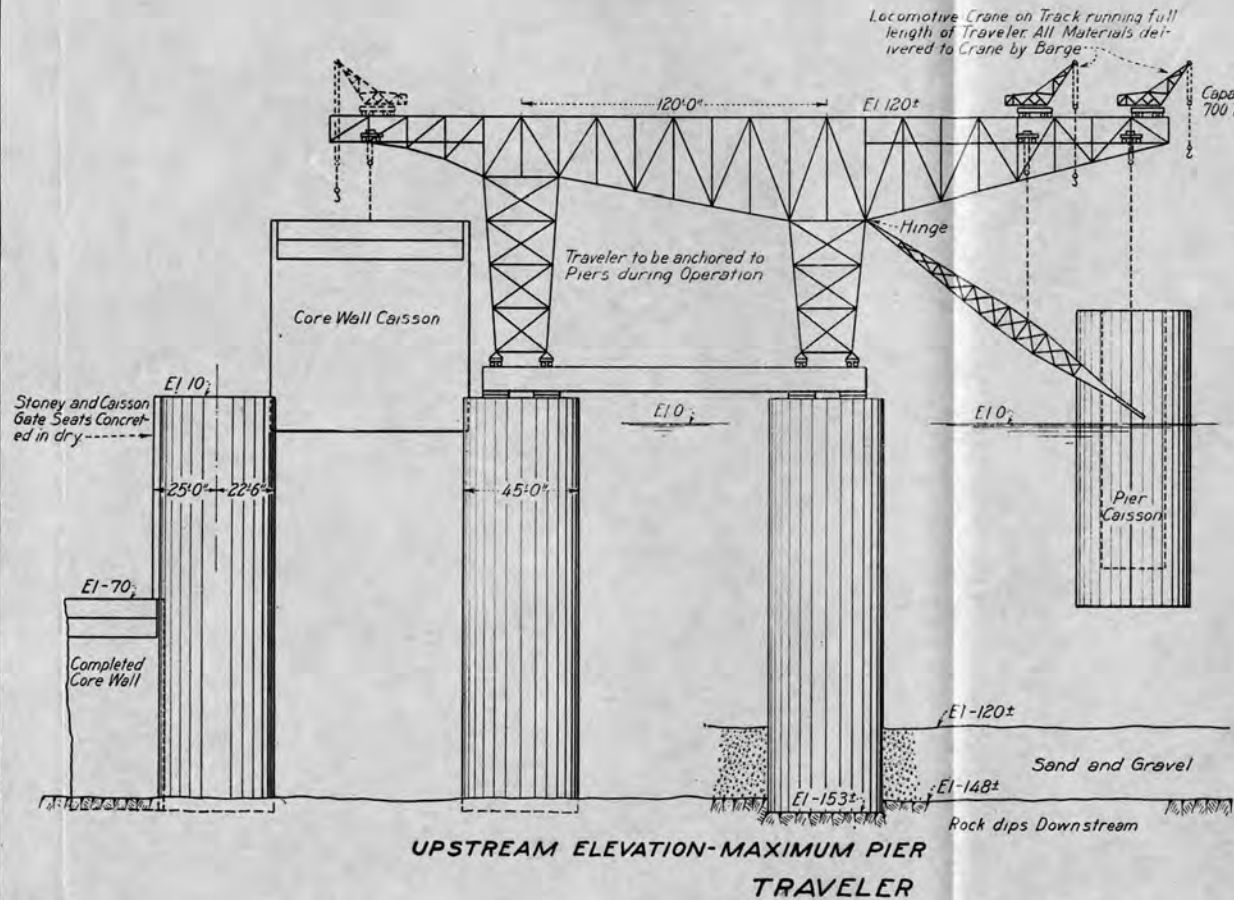
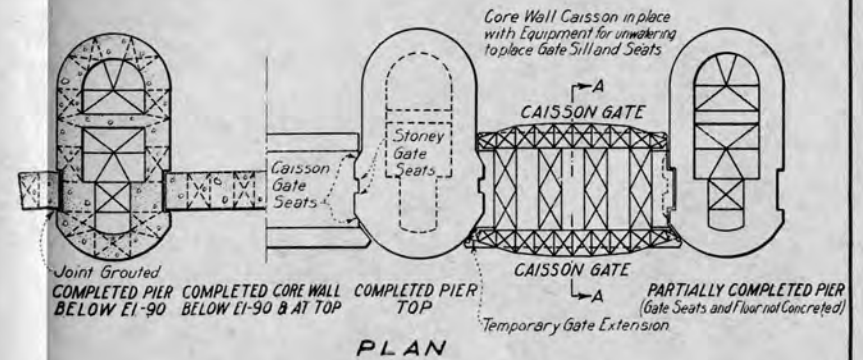
Notes:
 1. The caisson is to be constructed of steel plate and rivets.
 2. The caisson is to be constructed of steel plate and rivets.
 3. The caisson is to be constructed of steel plate and rivets.
 4. The caisson is to be constructed of steel plate and rivets.
 5. The caisson is to be constructed of steel plate and rivets.



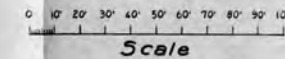
APPROVED FOR ESTIMATING PURPOSES
 O. J. Johnson
 CIVIL ENGINEER
 SACRAMENTO VALLEY INVESTIGATIONS
 BUREAU OF RECLAMATION
 DEPARTMENT OF THE INTERIOR
 PRELIMINARY DESIGN



Notes:
 Piers differ slightly in Plan in the various Schemes estimated, to meet Requirements of Superstructure. Piers on this Sheet adopted for Estimate No. 11.
 Flood Channel excavated to El - 70 before Caissons are sunk. Bottom Sections of Caissons to be towed to Site on Barge and Caissons to be lowered by Traveler as successive Sections are added, until supporting Ground is reached. The movable Tremie Plant (not shown) is to replace the Locomotive Cranes in position above the Caissons during Concrete Operations.
 Caissons assumed not recovered except Portions of Skin Plate of Pier Caissons at unwatered Areas and above El - 2.5 and Horizontal Bracing at El 11.
 At this Stage of Design it is deemed sufficient to assume Caissons are sunk in Theoretical Positions.

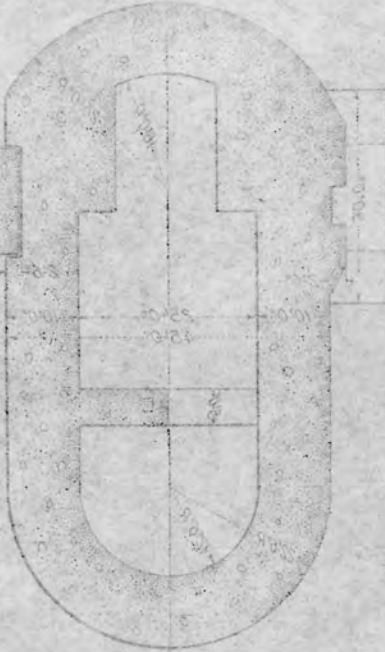


Concrete to be placed in Core Wall Caisson by Tremie up to El - 72± and remainder below El - 70 after unwatering, to permit installing Stoney Gate Sills.



APPROVED FOR ESTIMATING PURPOSES:
O. J. Walter
 CHIEF ENGINEER

PRELIMINARY DESIGN	
DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION	
SACRAMENTO VALLEY INVESTIGATIONS	
SALT WATER BARRIER	
CAISSON OPERATIONS	
PRELIMINARY ESTIMATES NOS. 10 TO 13.	
DRAWN C.M.J.:C.A.M.	SUBMITTED <i>W. R. Young</i>
CHECKED N. B. H. RECOMMENDED <i>J. W. Shrage</i>	
SV-111	Ellensburg Wash July 28, 1926. 193-D-63



HALF SECTIONAL PLANS ABOVE EL - 70 BELOW EL - 90

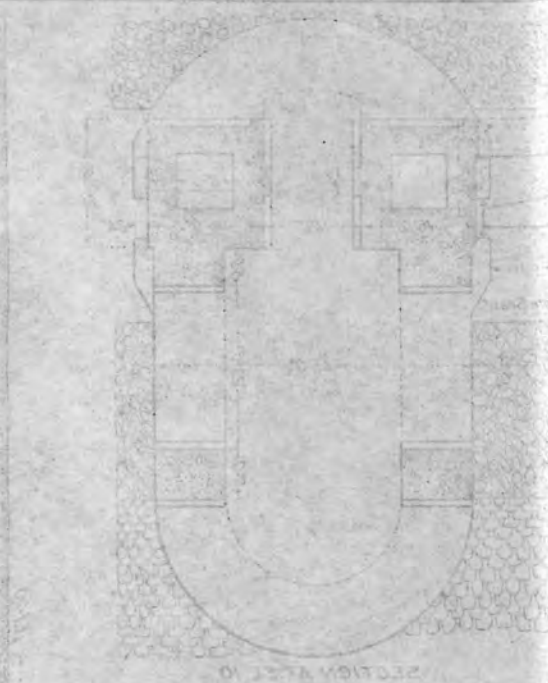
Notes-
 Maximum Elevation of base of Roll and lowest Elevation of Rollers to not actually occur in the same Section. Sides of Gate to be pointed above low water after removal of temporary plates. Girders which are left in place in Sub Station and remaining steel structure not shown.

Scale 1" = 10'

PRELIMINARY DESIGN

Department of the Interior
 Bureau of Reclamation
 Sacramento Valley Divisions
 SALT WATER BARRIER
 CONTROL WORKS - TONGUE GATE
 PRELIMINARY ESTIMATE NO. 11
 1934

WOLTAJAZZ EGIS MUMIXAM



SECTIONAL PLAN

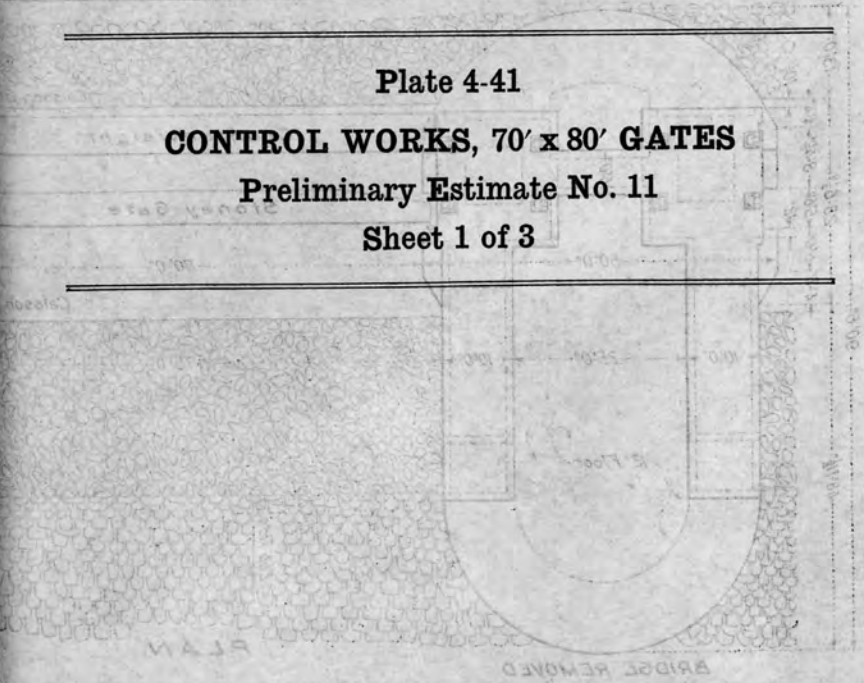
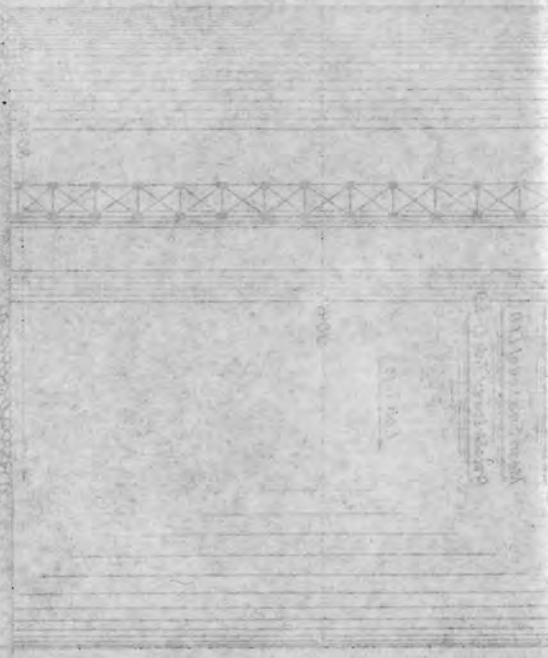
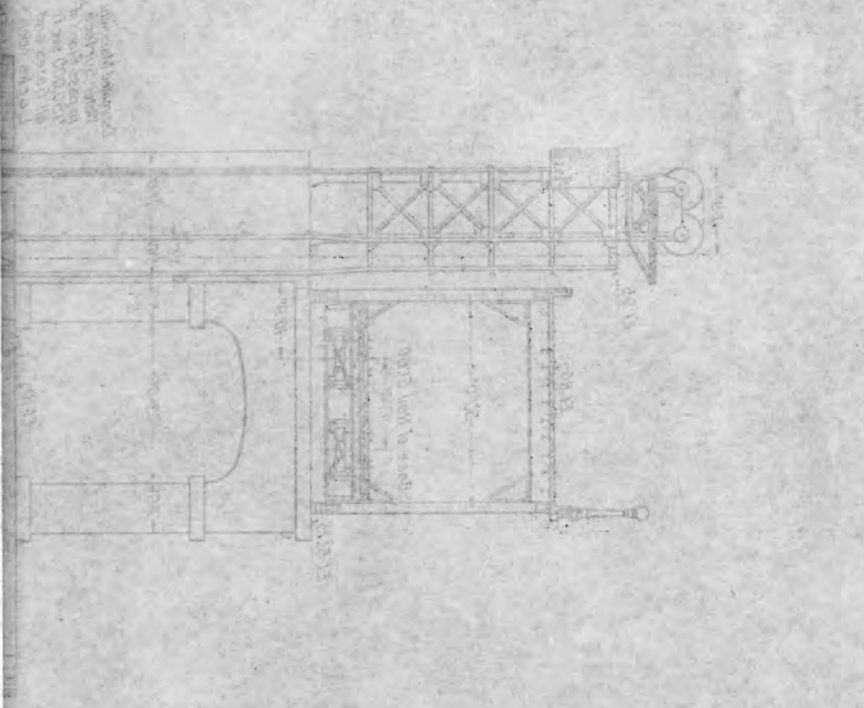
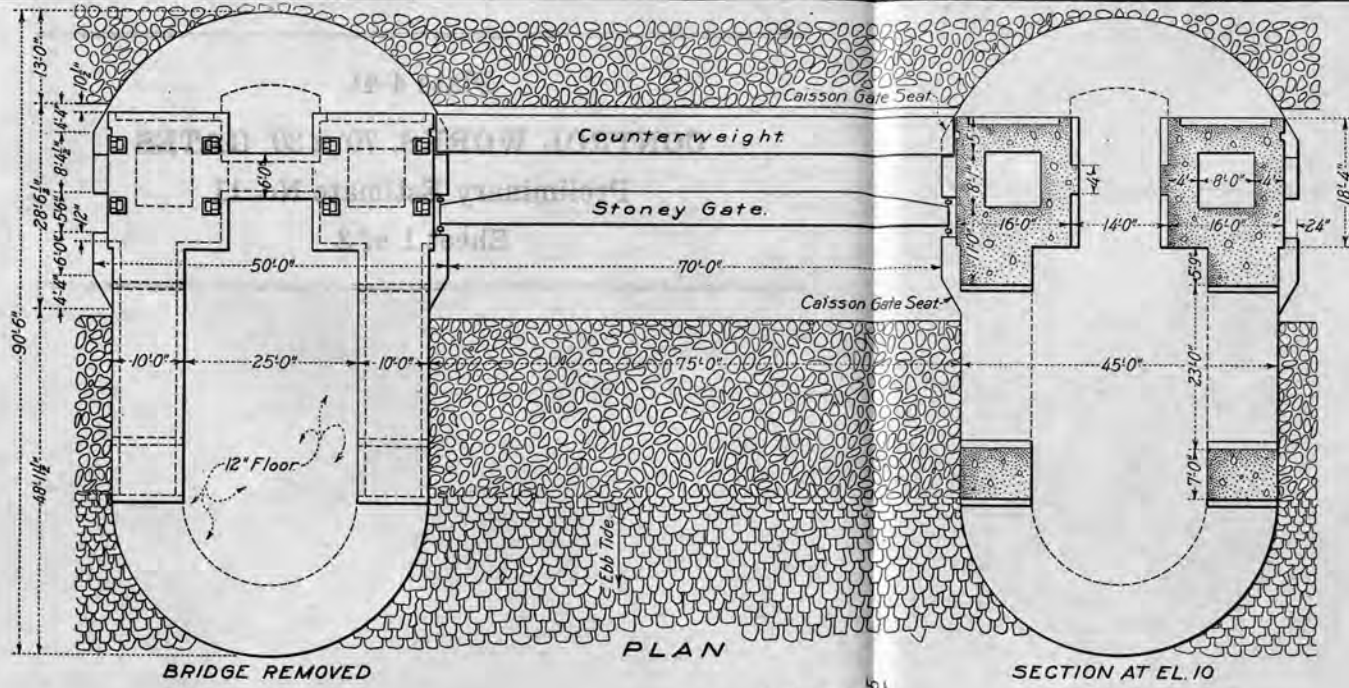


Plate 4-41
CONTROL WORKS, 70' x 80' GATES
Preliminary Estimate No. 11
Sheet 1 of 3



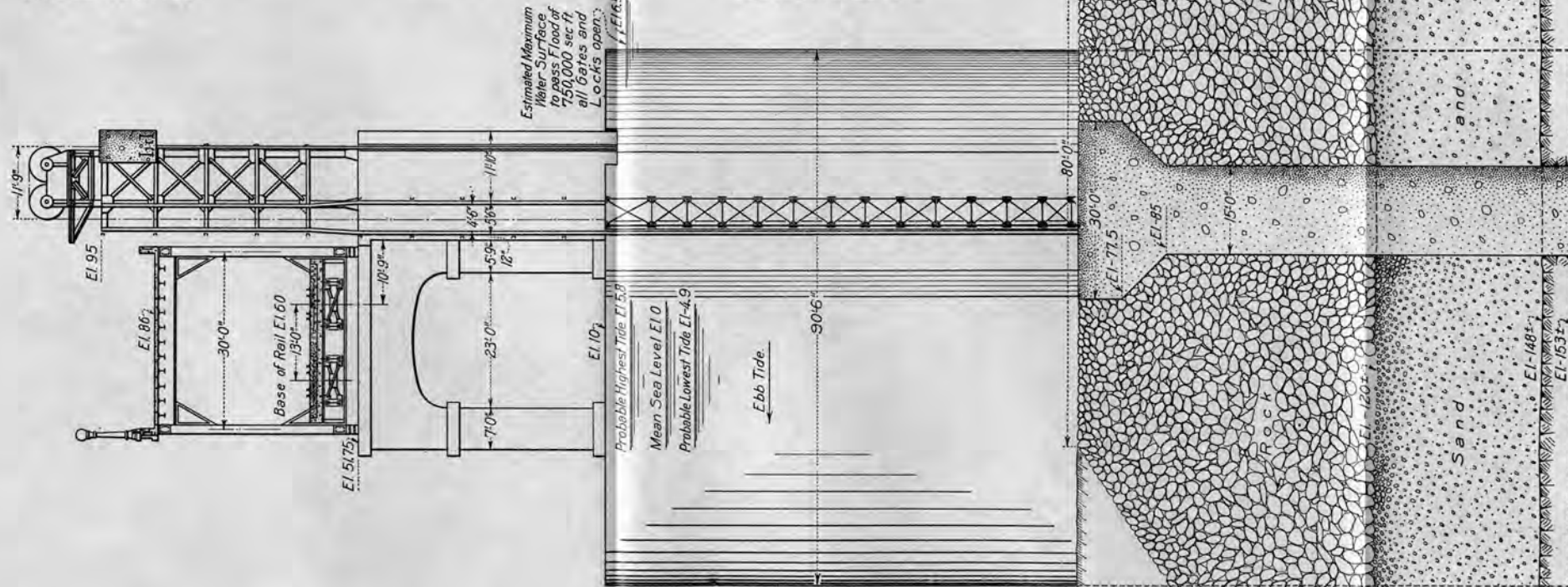
RECORDED FOR ESTIMATING PURPOSES
 J. P. B. [Signature]
 CIVIL ENGINEER



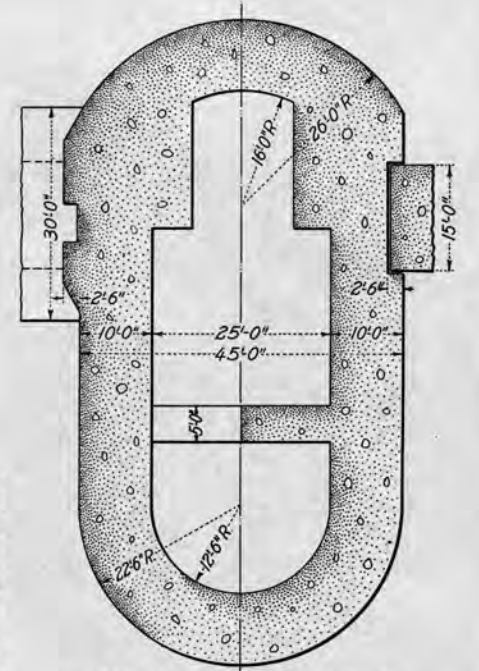
BRIDGE REMOVED

PLAN

SECTION AT EL. 10

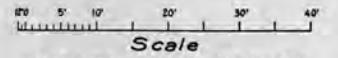


MAXIMUM SIDE ELEVATION



ABOVE EL. 70 BELOW EL. 90
HALF SECTIONAL PLANS

Notes:-
 Maximum Elevation of Base of Rail and lowest Elevation of Bed Rock do not actually occur in the same Section.
 Sides of Piers to be gunited above low water after removal of Caisson Skin Plates.
 Caisson Steel which is left in Place in Substructure and Reinforcing Steel in Bridge not shown.



Scale

PRELIMINARY DESIGN
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
 SALT WATER BARRIER
 CONTROL WORKS- 70'x80' GATE
 PRELIMINARY ESTIMATE NO. 11

APPROVED FOR ESTIMATING PURPOSES:
O. J. Dralter
 CHIEF ENGINEER

DRAWN: G.M.J.: C.A.M. SUBMITTED: *W.P. Young*
 CHECKED: N.B.H. RECOMMENDED: *J.K. Savage*
 SV-112 Ellensburg Wash. July 30, 1926. Sheet 1 of 3 193-D-64

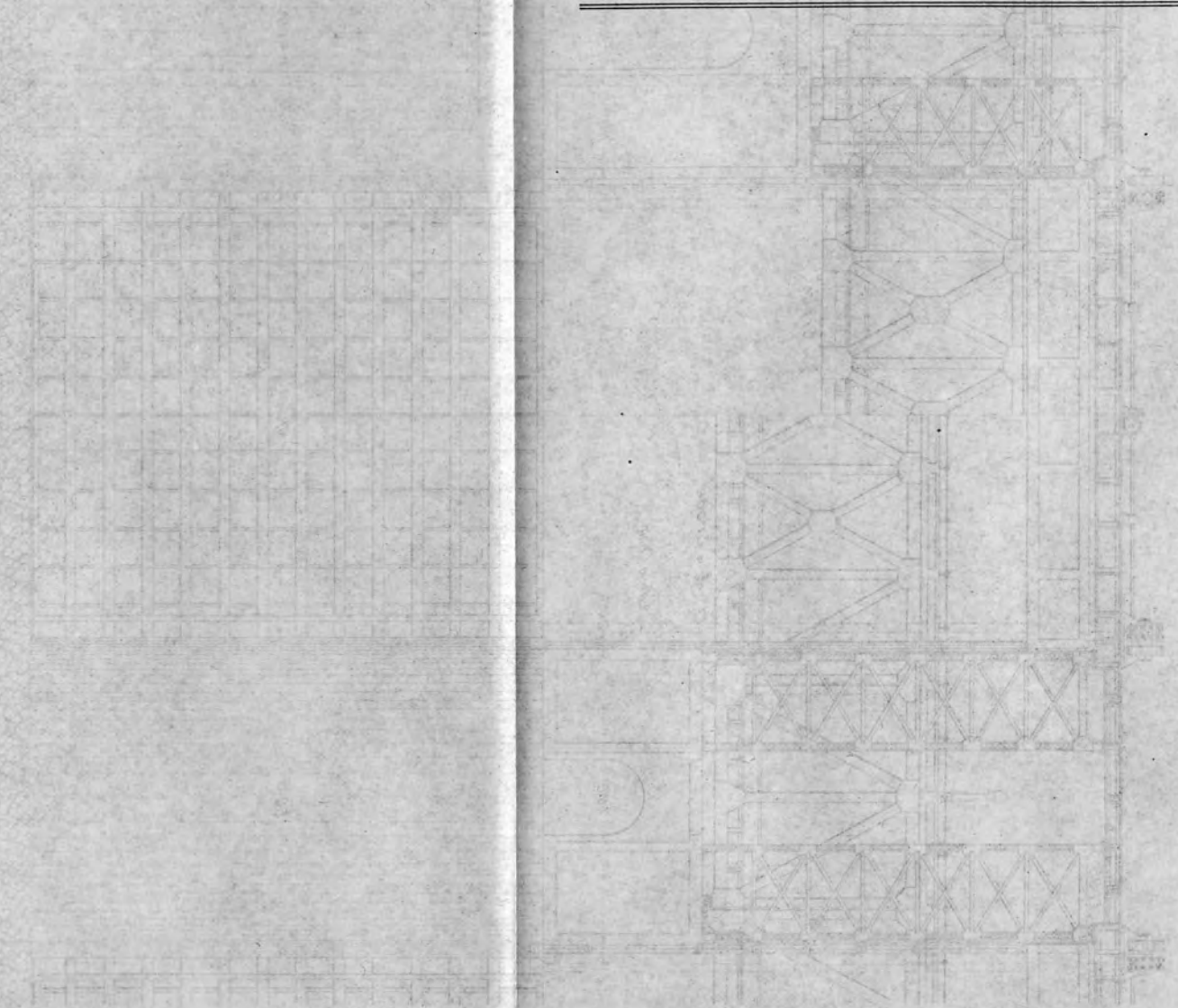
Plate 4-42
CONTROL WORKS, 70' x 80' GATES
 Preliminary Estimate No. 11
 Sheet 2 of 3

VERTICAL CURVATURE

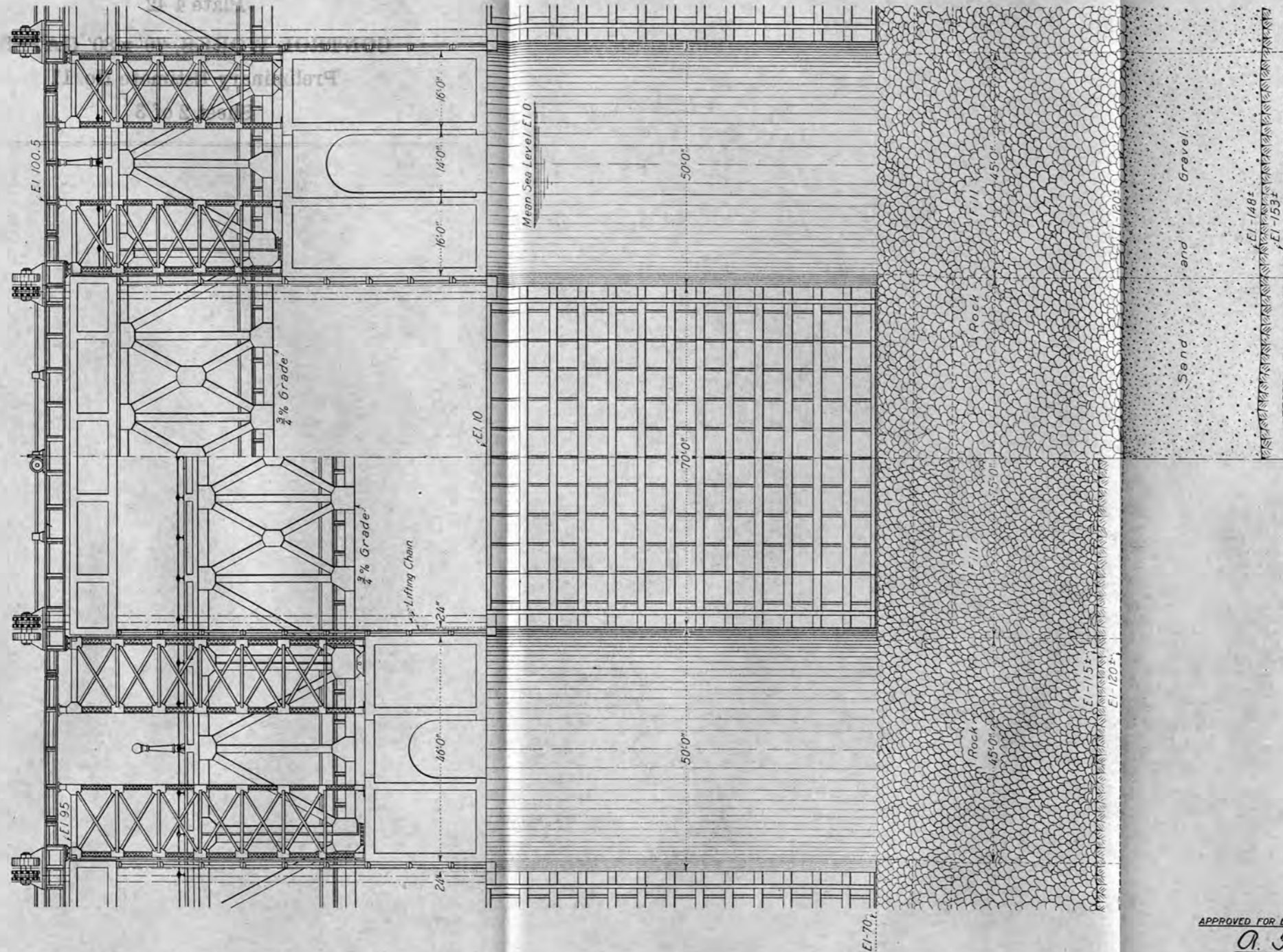
Notes:
 1. Gate to be built above
 water surface and not below
 water.
 2. Gate to be built in place
 and not to be moved.
 3. Gate to be built in place
 and not to be moved.

Scale

PRELIMINARY DESIGN
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY IRRIGATION
 CONTROL WORKS FOR GATE
 PRELIMINARY ESTIMATE NO. 11
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 1933

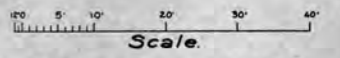


APPROVED FOR ESTIMATE PURPOSES
 [Signature]
 CHIEF ENGINEER



HALF UPSTREAM ELEVATIONS

Notes:
 Sides of Piers to be gunited above low water after removal of Caisson Skin Plates.
 Caisson Steel which is left in place in Substructure not shown.



PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 CONTROL WORKS-70'x80' GATE
 PRELIMINARY ESTIMATE NO.11

APPROVED FOR ESTIMATING PURPOSES-
O. F. Dralter
 CHIEF ENGINEER

DRAWN: C.M.J. C.A.M. SUBMITTED: *W. P. Young*
 CHECKED: N.B.H. RECOMMENDED: *R. Salage*
 5V-113 Ellensburg Wash. July 31, 1926 193-D-65
 Sheet 2 of 3

Plate 4-43
CONTROL WORKS, 70' x 80' GATES
 Preliminary Estimate No. 11
 Sheet 3 of 3

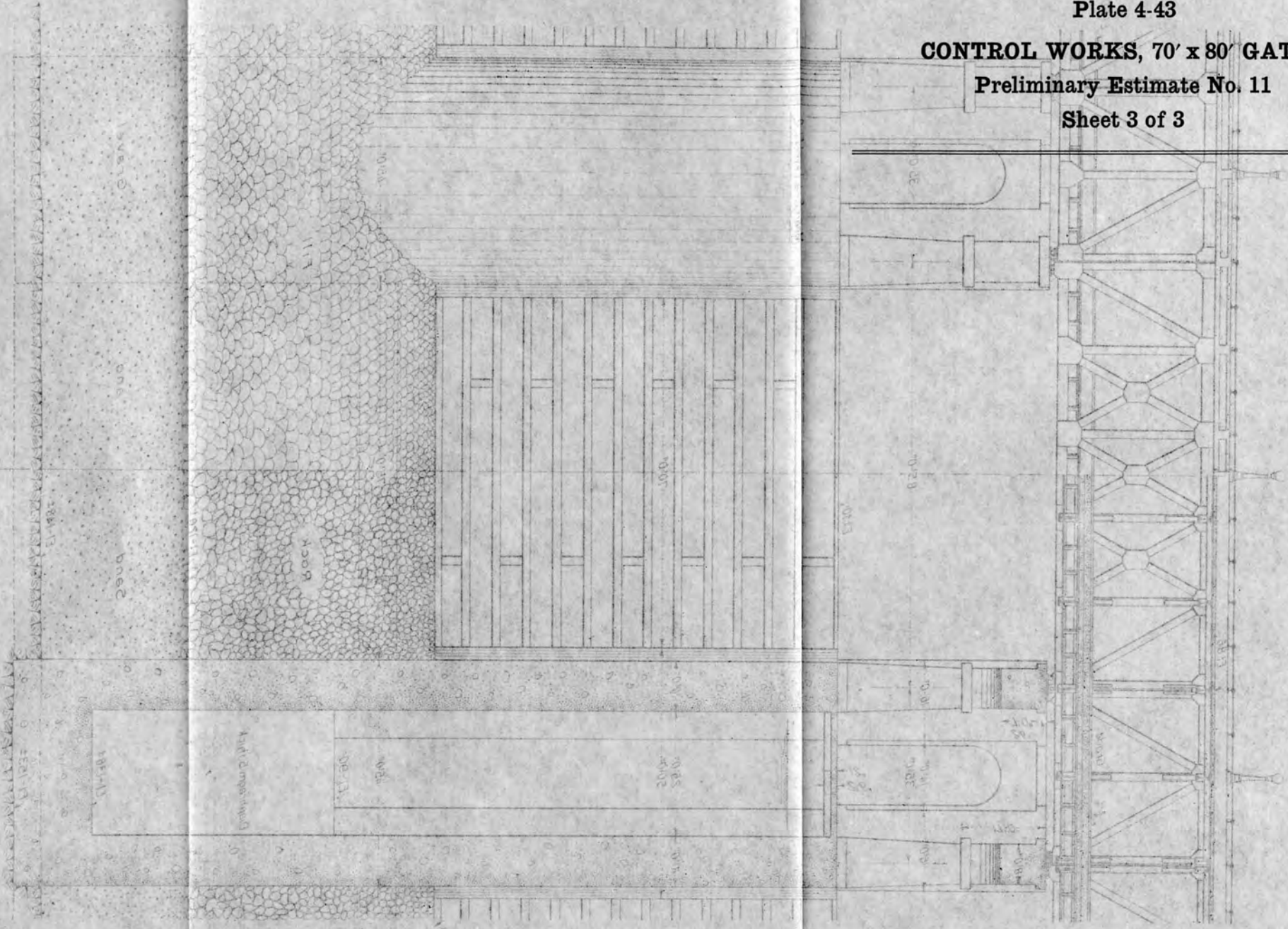
SALT WATER BARRIER CONTROL WORKS

Notes:-
 Maximum Elevation of Base of Rail and
 Lowest Elevation of Top Face do not
 actually occur in the same section
 Sides of Piers to be finished above low
 water after removal of Casson Ship
 Plates
 Casson Steel which is left in place in sub-
 structure and reinforcing steel in
 bridge not shown

Scale
 PRELIMINARY DESIGN

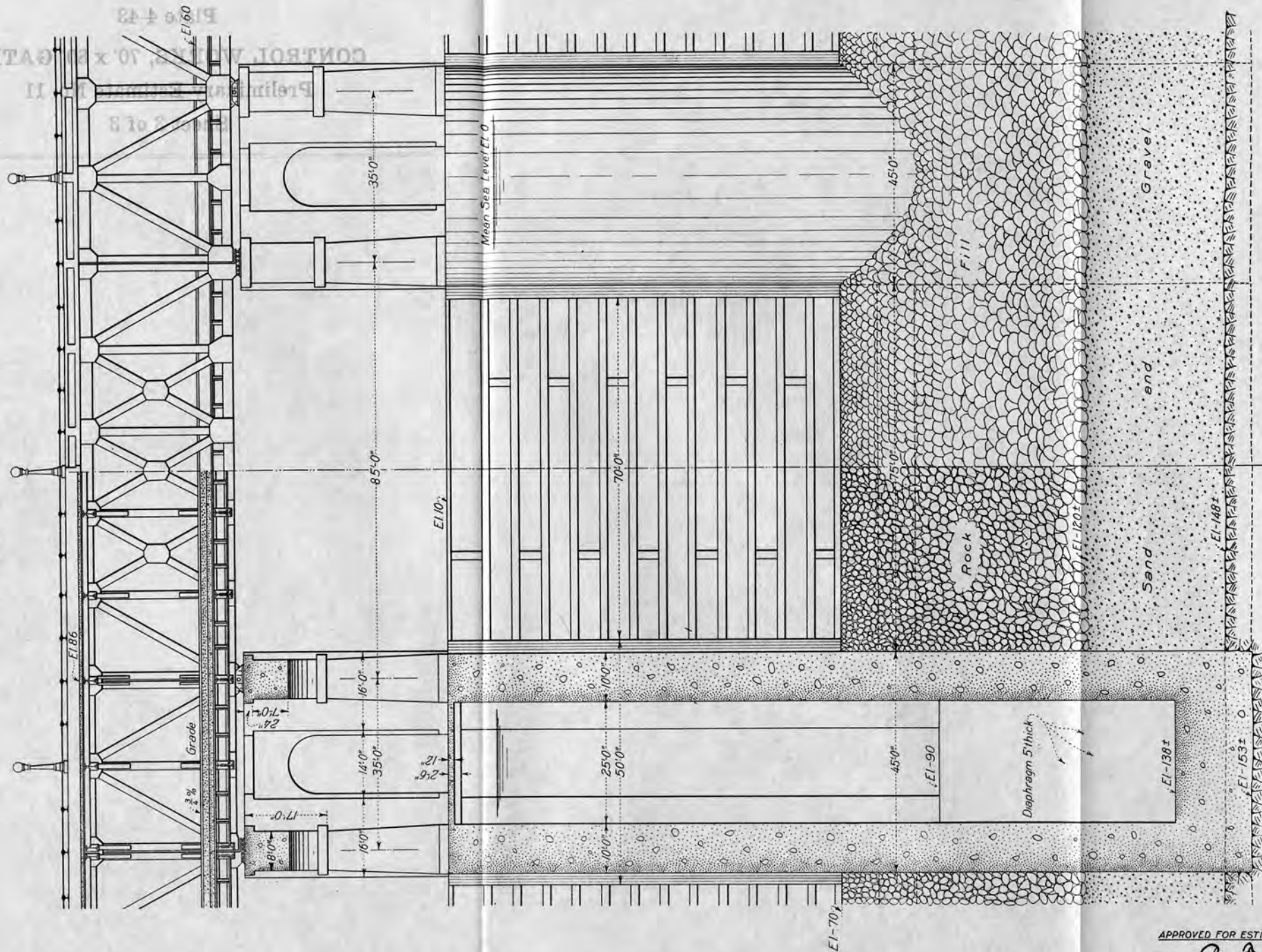
Department of the Interior
 Bureau of Reclamation
 SACRAMENTO WATER INVESTIGATIONS
SALT WATER BARRIER
CONTROL WORKS-70' x 80' GATE
 PRELIMINARY ESTIMATE NO. 11
 Approved: [Signature]
 Checked: [Signature]
 Drawn: [Signature]
 27-114
 1930-66

APPROVED FOR ESTIMATING PURPOSES
 [Signature]
 Chief Estimator



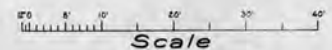
STOW

Note:- Gate Superstructure not shown.



HALF SECTIONAL AND DOWNSTREAM ELEVATIONS

Notes:-
 Maximum Elevation of Base of Rail and lowest Elevation of Bed Rock do not actually occur in the same Section.
 Sides of Piers to be gunited above low Water after removal of Caisson Skin Plates.
 Caisson Steel which is left in place in Sub-structure and Reinforcing Steel in Bridge not shown.



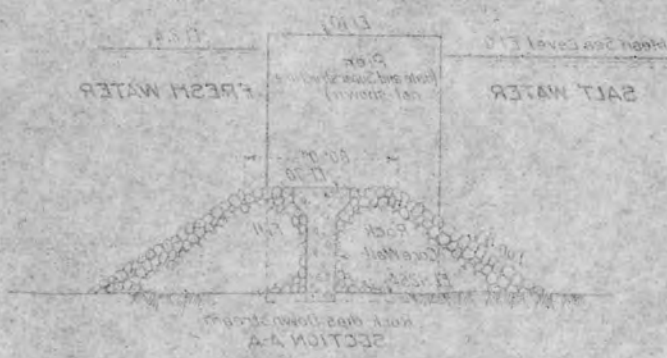
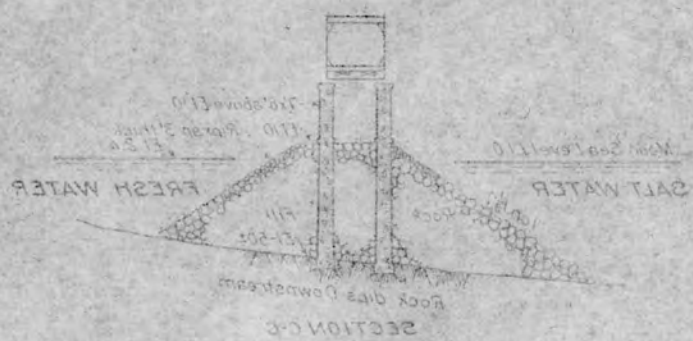
PRELIMINARY DESIGN

DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
 CONTROL WORKS- 70' x 80' GATE
 PRELIMINARY ESTIMATE NO. 11

APPROVED FOR ESTIMATING PURPOSES-
O. J. Walter
 CHIEF ENGINEER

DRAWN: C.M.J. - C.A.M. SUBMITTED: *W. R. Young*
 CHECKED: N.B.H. RECOMMENDED: *J. L. Savage*
 SV-114 Ellensburg, Wash. July 31, 1926
 Sheet 3 of 3 193-D-66

Plate 4-44
ELEVATION AND SECTIONS
Preliminary Estimate No. 12



Notes:
 1. The structure is designed for a maximum water level of 100 feet above mean low water.
 2. The structure is designed for a maximum salt water level of 100 feet above mean low water.
 3. The structure is designed for a maximum fresh water level of 100 feet above mean low water.
 4. The structure is designed for a maximum rock dip of 10 degrees downstream.

Scale
PRELIMINARY DESIGN
 DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION
 SACRAMENTO VALLEY INVESTIGATIONS
SALT WATER BARRIER
ELEVATION AND SECTIONS
 PRELIMINARY ESTIMATE NO. 12
 2V-112
 Approved for Estimating Purpose
 Chief Engineer
 1933-8-27