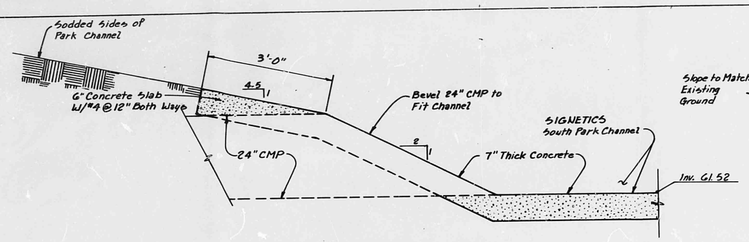
HYDROLOGY

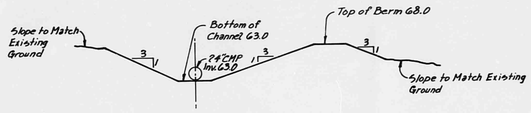
C18/D1
4 PLANS

C18/D2

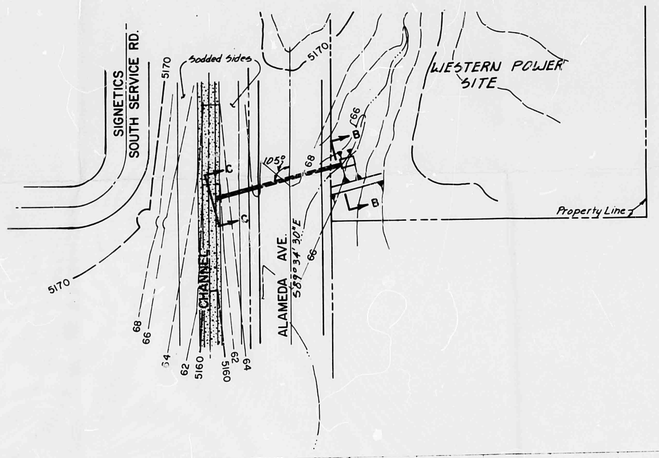
4 Plans

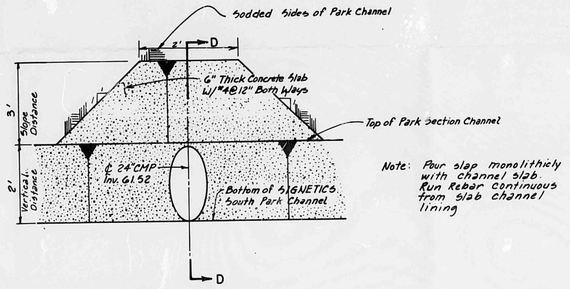



**SECTION D-D**
NO SCALE




**SECTION B-B**




Note: Pour slap monolithicly with channel slab Run Rebar continuous from slab channel lining

**ELEVAVATION C-C**
NO SCALE

NOTE:
1. See Details this Plan Set for South Park Channel.

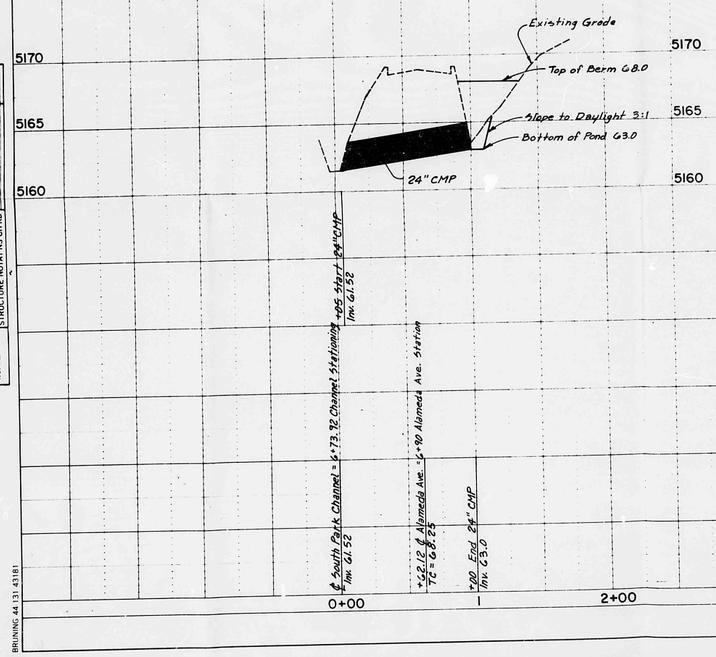



PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO
MADE IN U.S.A.

BRUNING 44 131 43181

| PLAN | | BY | DATE |
|---|---|---|---|
| NOTE BOOK NO. | SURVEYED PLOTTED ALIGNMENT CHECKED R/W MAP CHECKED | | |

| PROFILE | | BY | DATE |
|---|---|---|---|
| NOTE BOOK NO. | SURVEYED PLOTTED GRADES CHECKED R/W MAP STRUCTURE NOTATIONS CHKD | | |

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

APPROVED FOR CONSTRUCTION
CITY ENGINEER DATE

Job No. 10211
PREPARED UNDER THE DIRECTION OF
Mike Lodwick 6-15-81

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

TITLE:
**WESTERN POWER**
**24" CMP CROSSING**

| APPROVALS | ENGINEER | DATE | APPROVALS | ENGINEER | DATE |
|---|---|---|---|---|---|
| | | | | | |

DRAWING NO. C-29-295

**PLATE 4**

BENCH MARKS
TO REACH THE STATION FROM THE INTERCHANGE AT I-25 AND TRAMWAY BLVD. N.E. GO SOUTH ON THE WEST FRONTAGE RD. 1.4 MILES TO RICHFIELD RD. TURN RIGHT, GO WEST 0.35 MILES TO SAN MATEO. TURN RIGHT. THE STATION IS ABOUT 0.45 MILES NORTH OF THIS POINT IN AN ARROYO. THE STATION MARK IS A STANDARD ACS BRASS TABLET STAMPED "I-B15" SET IN TOP OF A CONCRETE POST PROJECTING 1.4 FT. ABOVE GROUND. ELEV. 5150.14

AS-BUILT INFORMATION
CONTRACTOR
WORK STAKED BY
SIGNETICS
ACCEPTANCE BY
FIELD VERIFICATION BY
DRAWINGS CORRECTED BY
DATE

MICRO-FILM INFORMATION
RECORDED BY
DATE
NO.

SURVEY INFORMATION

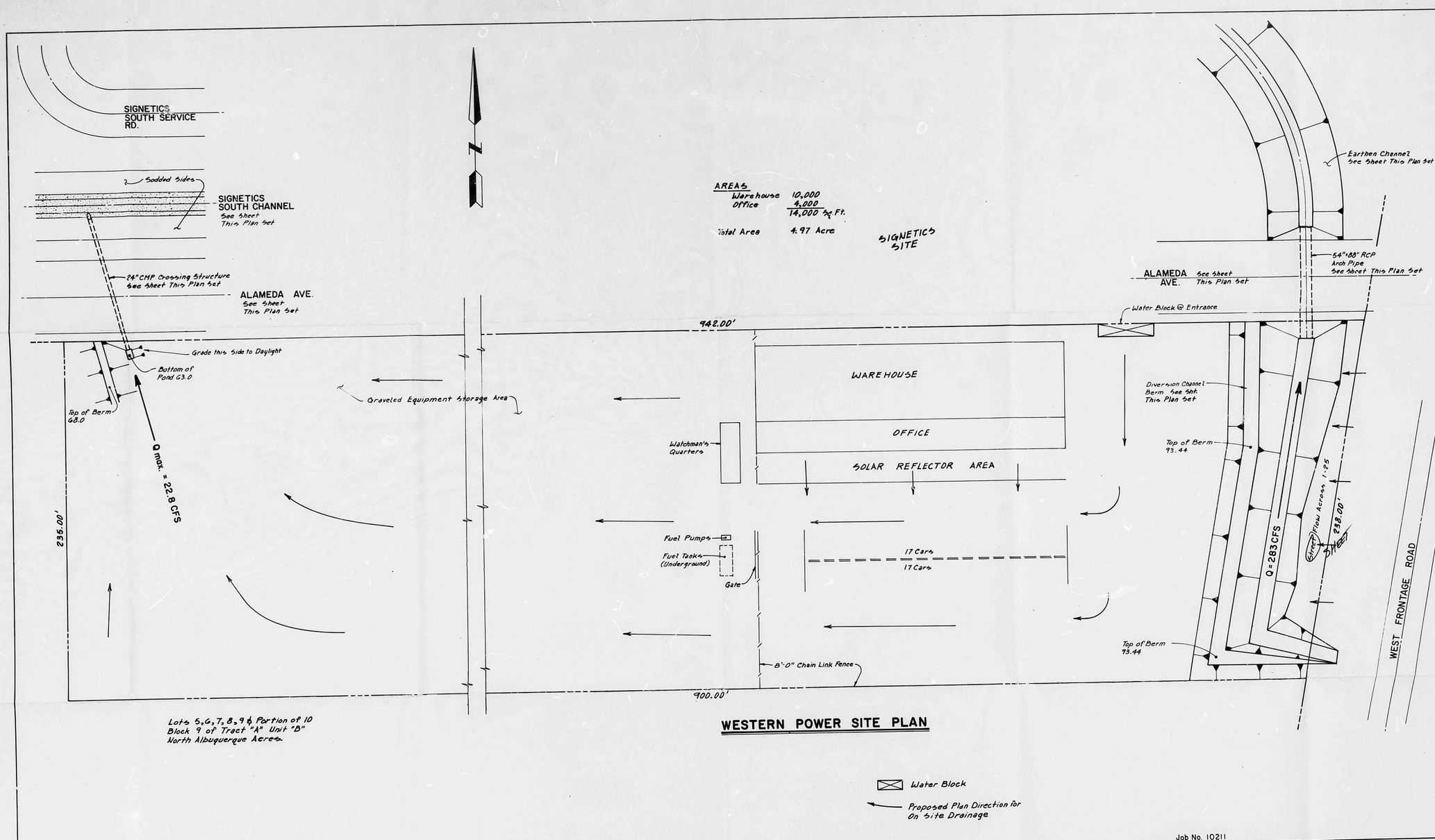
| NO | BY | DATE |
|---|---|---|
| | G. TOMPKINS | 3-80 |

REFERENCES
MAP NO. C-18
EST NO
W.O. NO.

| NO. | DATE | REMARKS | BY |
|---|---|---|---|
| | | | |

REVISIONS

DESIGN
DESIGNED BY RGB DATE 2-81
DRAWN BY JLM DATE 2-81
CHECKED BY RGB DATE 2-81




# WESTERN POWER SITE PLAN

| AS-BUILT INFORMATION | |
|---|---|
| CONTRACTOR | |
| WORK STAKED BY | DATE |
| INSPECTOR ACCEPTANCE BY | DATE |
| FIELD VERIFICATION BY | DATE |
| DRAWINGS CORRECTED BY | DATE |
| MICRO-FILM INFORMATION | |
| RECORDED BY | DATE |
| NO. | |

BENCH MARKS

TO REACH THE STATION FROM THE INTERCHANGE AT I-25 AND TRAMWAY BLVD. N.E. GO SOUTH ON THE WEST FRONTAGE RD. 1.4 MILES TO RICHFELD RD. TURN RIGHT, GO WEST 0.35 MILES TO SAN MATEO. TURN RIGHT, THE STATION IS ABOUT 0.45 MILES NORTH OF THIS POINT IN AN ARROYA. THE STATION MARK IS A STANDARD ACS BRASS TABLET STAMPED "I-816", SET IN TOP OF A CONCRETE POST PROJECT. ING 1.4 FT. ABOVE GROUND. ELEV. 5150.14

| SURVEY INFORMATION | | |
|---|---|---|
| NO. | BY | DATE |
| | G. TOMPKINS | 3-81 |

| REFERENCES | |
|---|---|
| MAP NO. C-18 | W.O. NO. |
| EST. NO. | |

| NO. | DATE | REMARKS | BY |
|---|---|---|---|
| | | REVISIONS | |

| DESIGN | | |
|---|---|---|
| DESIGNED BY | RGB | DATE 2-81 |
| DRAWN BY | J.L.M. | DATE 2-81 |
| CHECKED BY | RGB | DATE 2-81 |

Job No. 10211

PREPARED UNDER THE DIRECTION OF

APPROVED FOR CONSTRUCTION

CITY ENGINEER DATE

SCALE: 1" = 30'

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

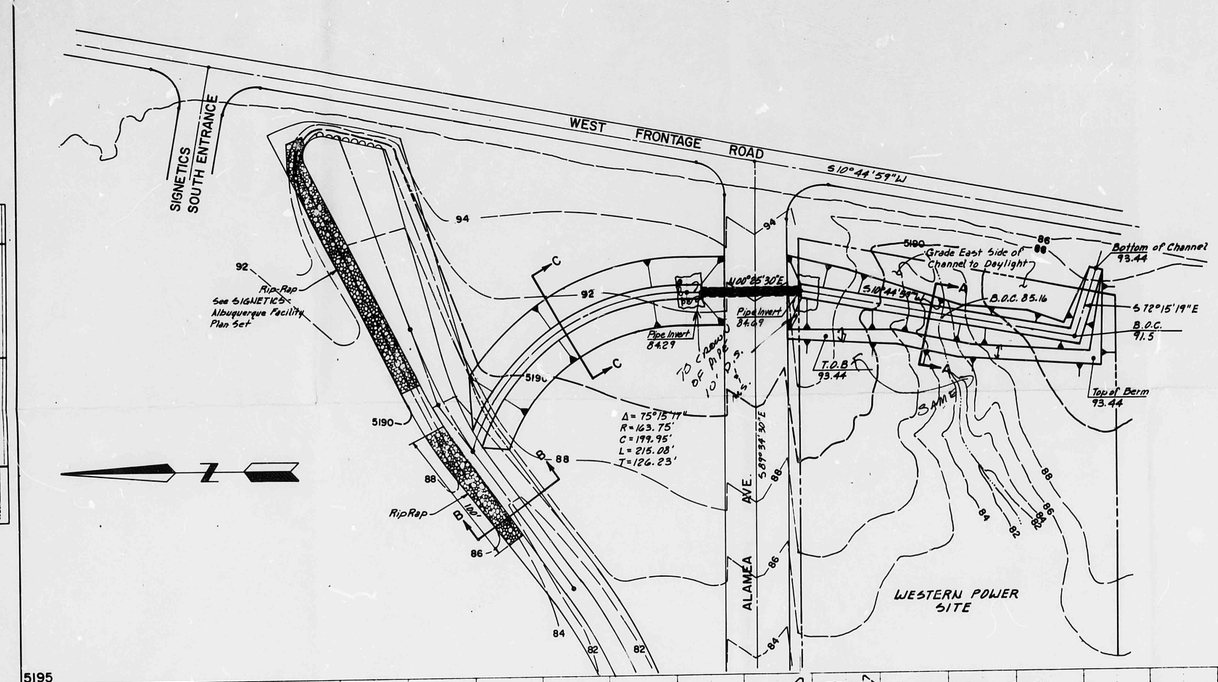
TITLE: **WESTERN POWER**
SITE PLAN

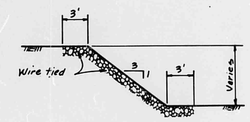
| APPROVALS | ENGINEER | DATE | APPROVALS | ENGINEER | DATE |
|---|---|---|---|---|---|
| | | | | | |

DRAWING NO. C-29-295

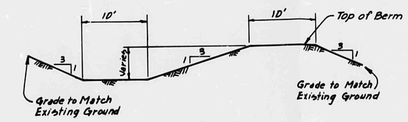
PLATE 2

BRUNING 44.131 43181

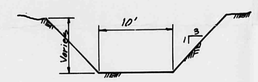



**SECTION B-B**
NO SCALE




**SECTION A-A**
NO SCALE




**SECTION C-C**
NO SCALE

NOTE:
1. See SIGNETICS Albuquerque Facility Plan Set for Alameda Ave. & South Earthen Channel Design

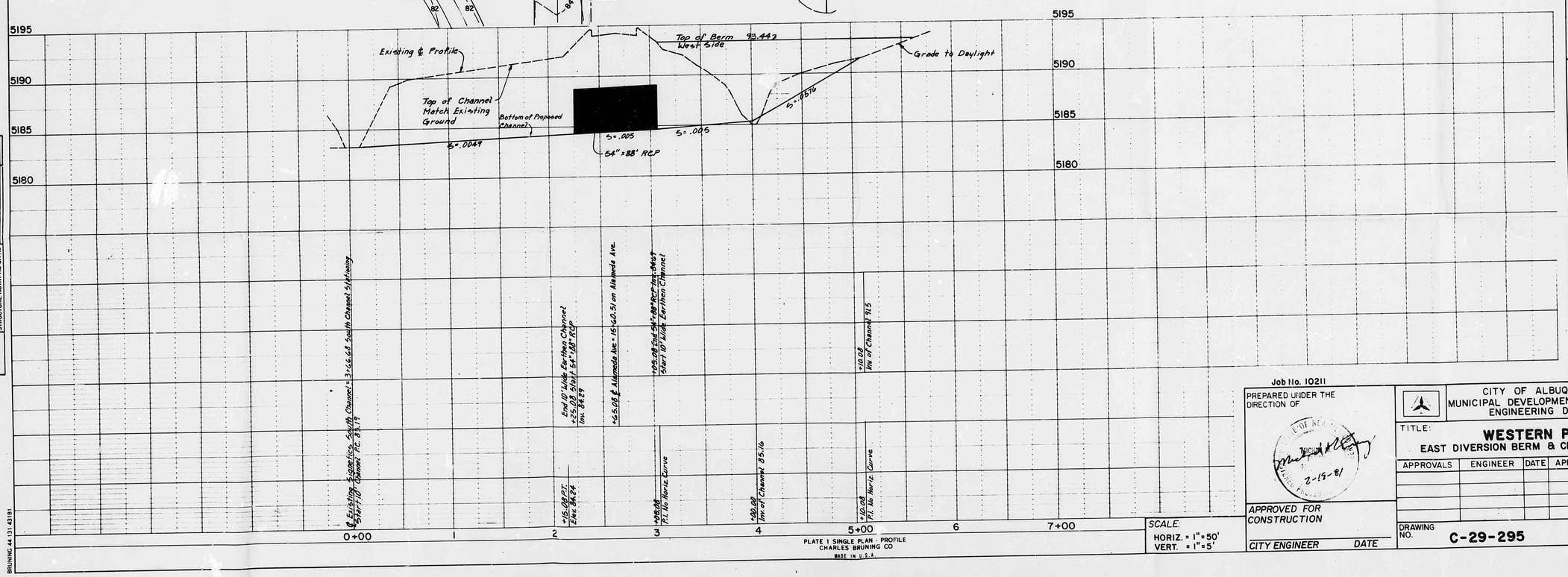



PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO
MADE IN U.S.A.

BRUNING 44 131 43181

| PLAN | BY | DATE |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| RIGHT OF WAY CHECKED | | |
| R/ OF WAY CHECKED | | |
| NOTE BOOK NO. | | |

| PROFILE | BY | DATE |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| GRADES CHECKED | | |
| B.M. NOTE | | |
| STRUCTURE NOTATNS CK'KD | | |

AS-BUILT INFORMATION

| | |
|---|---|
| CONTRACTOR | |
| WORK STAKED BY | DATE |
| INSPECTORS NOTE CHANGE | DATE |
| FIELD VERIFICATION BY | DATE |
| DRAWINGS CORRECTED BY | DATE |
| MICRO-FILM INFORMATION | |
| RECORDED BY | DATE |
| NO. | |

BENCH MARKS

TO REACH THE STATION FROM THE INTERCHANGE AT I-25 AND TRAMWAY BLVD. N.E. GO SOUTH ON THE WEST FRONTAGE RD. 1.4 MILES TO RICHFIELD RD. TURN RIGHT, GO WEST 0.35 MILES TO SAN MATEO. TURN RIGHT. THE STATION IS ABOUT 0.45 MILES NORTH OF THIS POINT IN AN ARROYO. THE STATION MARK IS A STANDARD ACS BRASS TABLET STAMPED "I-B106" SET IN TOP OF A CONCRETE POST PROJECTING 1.4 FT. ABOVE GROUND. ELEV. 5150.14

SURVEY INFORMATION

| NO. | BY | DATE |
|---|---|---|
| | G. TOMPKINS | 2-81 |

REFERENCES

MAP NO. C-1B
EST. NO.
W.O. NO.

| NO. | DATE | REMARKS | BY |
|---|---|---|---|

REVISIONS

DESIGN

DESIGNED BY RGB DATE 2-81
DRAWN BY JLM DATE 2-81
CHECKED BY RGB DATE 2-81

Job No. 10211

PREPARED UNDER THE DIRECTION OF

2-19-81

APPROVED FOR CONSTRUCTION

CITY ENGINEER DATE

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

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

TITLE:
# WESTERN POWER
## EAST DIVERSION BERM & CROSSING STRUCTURE

| APPROVALS | ENGINEER | DATE | APPROVALS | ENGINEER | DATE |
|---|---|---|---|---|---|
| | | | | | |

DRAWING NO. C-29-295

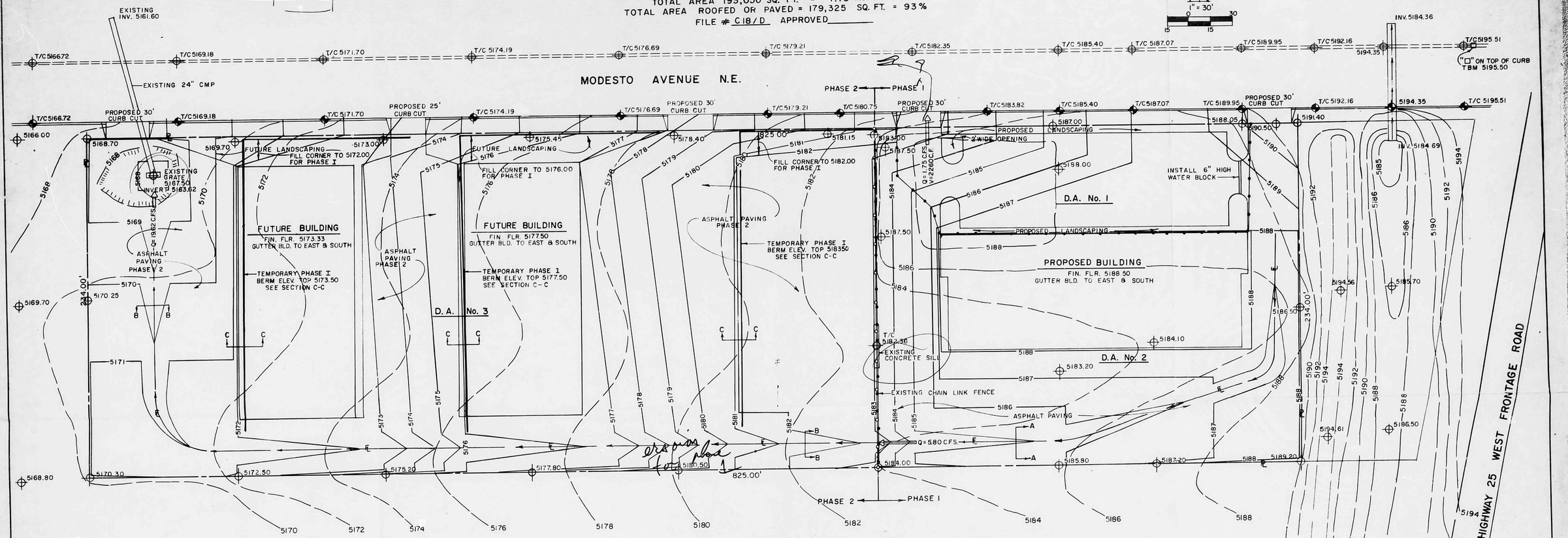
PLATE 3

# DRAINAGE PLAN

LOTS 5-9, BLOCK 9 OF TRACT "A", UNIT B
REPLATTED AS TRACT "1" BLOCK 9, TRACT "A", UNIT B
NORTH ALBUQUERQUE ACRES
BERNALILLO COUNTY, N.M.

FLOOD MAP 10, , BENCHMARK 5-B18, , ELEV. 5201.37 , SOIL TYPE B
TOTAL AREA 193,050 SQ. FT. = 4.43 ACRES
TOTAL AREA ROOFED OR PAVED = 179,325 SQ. FT. = 93%
FILE # C18/D APPROVED _____

RECEIVED JUL 17 1986 HYDROLOGY SECTION




## LEGEND

- PROPERTY LINE
- EXISTING CONTOUR — 5000
- PROPOSED CONTOUR — 5000
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING CURB
- FLOW DIRECTION
- PROPOSED CURB
- EXISTING CHAIN LINK FENCE
- DRAINAGE AREA BOUNDARY

## EROSION CONTROL NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE TO THE FOLLOWING:

1. NO SEDIMENT-BEARING WATER SHALL BE ALLOWED TO DISCHARGE THE SITE DURING CONSTRUCTION.
2. DURING GRADING OPERATIONS AND UNTIL THE PROJECT HAS BEEN COMPLETED, ALL ADJACENT PROPERTY, RIGHTS-OF-WAY, AND EASEMENTS SHALL BE PROTECTED FROM FLOODING.
3. ANY AND ALL SEDIMENTATION ORIGINATING ON THE SITE WHICH IS DEPOSITED WITHIN PUBLIC RIGHTS-OF-WAY SHALL BE PROMPTLY AND COMPLETELY REMOVED BY THE CONTRACTOR.
4. CONTROL OF SEDIMENT-LADEN FLOOD WATERS WILL BE ACCOMPLISHED BY THE USE OF A COMPACTED EARTH BERM AT LEAST 12" HIGH. BERM SHALL BE LOCATED ALONG THE DOWNSTREAM PERIMETERS OF THE PROPERTY. OTHER BERMS ARE TO BE CONSTRUCTED AND LOCATED PER THIS PLAN.

HYDROLOGY:

D.A. #1 100 yr - 6 hr = 2.3" Soil Type B

Landscaped area = 2888 x .25 = 720 sf
Asphalt area = 14864 x .95 = 13968 sf
Total = 16944 14688
C = 0.83 Tc = 10 min
I = 2.3 x 2.3 = 5.29

Q = 0.83 x 0.389 x 5.29 = 1.7cfs to Modesto Ave
V = 1.6/12 x 16944 = 2260 cf

D.A. #2

Roof Area = 16898 x 0.98 = 16561
Asphalt Area = 25294 x 0.95 = 32529
Total = 51384 48810
C = 0.93 Tc = 10min I = 5.29
Q = 0.93 x 5.29 x 1.18 = 5.88cfs
V = 1.6/12 x 51385 = 6851cf

D.A. #3

Phase 1
Total Area (Graded - Undeveloped) = 124722sf = 2.87ac
C = 0.40
Tc = 0.0078 x 875 .77 / 0.016 .385 = 7min
For overland flow (Undeveloped & Flat Areas) multiply by 2.
Tc = 14min I = 2.3 x 2.3 = 4.14

Q = 0.40 x 4.14 x 2.87 = 4.75cfs
Total Q to inlet & 24" pipe = 5.88 - 4.75 = 10.55cfs

Phase 2

Landscape Area = 5368 x 0.25 = 348
Roof Area = 26180 x 0.98 = 25656
Asphalt Area = 93262 x 0.95 = 88599
Total = 124722 113429
C = 0.91 Tc = 10min I = 2.3 x 2.3 = 5.29
Q = 0.91 x 5.29 x 2.87 = 13.82cfs

Total Q to existing 24" pipe = 13.82 + 5.88 = 19.62cfs

HYDRAULICS:

Phase 1
Section A - A
A = 6 P = 15 S min = 0.01 $S^{.5}$ = 0.10
R = 0.40 $R^{.667}$ = 0.54

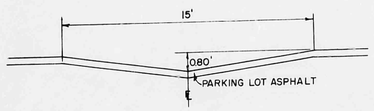
Q = 6 x 1.486 / 0.017 x 0.54 x 0.10 = 28.32cfs

Section B - B
A = 8 P = 30 S min = 0.0096 $S^{.5}$ = 0.098
R = 0.40 $R^{.667}$ = 0.54

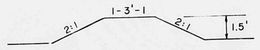
Q = 8 x 1.486 / 0.025 x 0.54 x 0.098 = 25.16cfs OK

Phase 2
Section A - A for Phase 2
Same as for Phase 1 Q = 28.32cfs OK

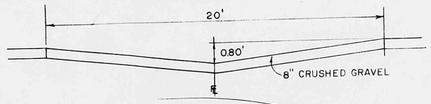
Note: Bohannon - Huston Drainage Plan, Feb. 1981 rates the existing inlet & 24" pipe at 22.8cfs.



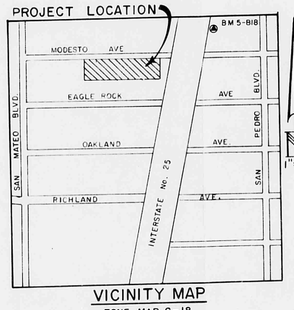

SECTION A-A
PHASE I & PHASE 2
1" = 40'




SECTION C-C
PHASE I TEMPORARY




SECTION B-B
PHASE I TEMPORARY
1" = 40'




VICINITY MAP
ZONE MAP C-18

RECEIVED JUN 30 1986 HYDROLOGY SECTION

LOGAN/GROSS & ASSOCIATES, INC.
CONSULTING CIVIL ENGINEERS
925 6TH ST. N.W. SUITE 3 243-6244
ALBUQUERQUE, NEW MEXICO 87102

| | |
|---|---|
| DRAINAGE PLAN | FILE # H-61 |
| FOR WESTERN POWER SVC. CONST. CO | DATE 6-86 |
| AT MODESTO AVENUE N.E. | DRAWN C.L.B. |
| BERNALILLO COUNTY N.M. | SHEET 1 OF 1 |