HYDROLOGY D17/D12 4 PLANS

D17/D12

4 PLANS

SP-11-25-077

Zone Atlas D-17-Z & E-17-Z

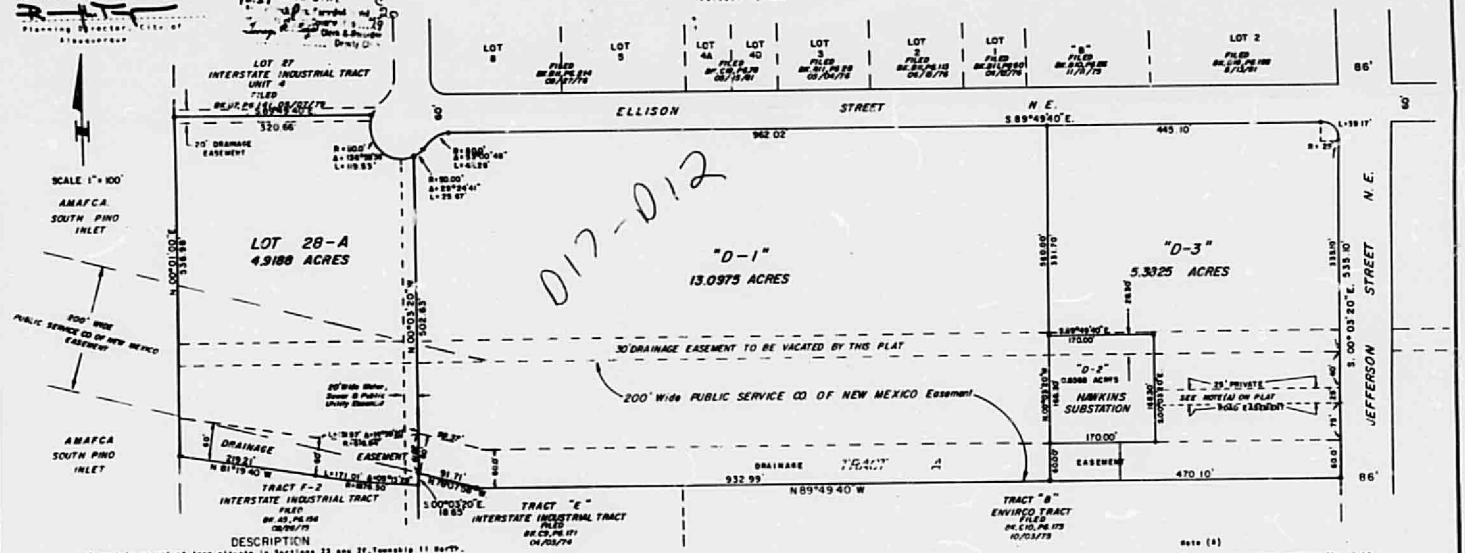
Plat No. SP 82-274

Approved 27 Oct 82

Planning Director, City of Albuquerque

82 56438

REPLAT OF
TRACT B, UNIT 3 - LOT 28, UNIT 4 - TRACT F-1&2 UNPLATTED PORTION OF
INTERSTATE INDUSTRIAL TRACT
&
TRACT A, ENVIRCO TRACT
NOW COMPRISING TRACTS D-1,D-2,D-3 & 28-A
INTERSTATE INDUSTRIAL TRACT
ALBUQUERQUE, NEW MEXICO
OCTOBER 1, 1982



DESCRIPTION

A certain parcel of land situate in Sections 23 and 26, Township 11 North, Range 3 East, New Mexico Principal Meridian, identified as Tract B of Interstate Industrial Tract, Tracts A,B,C and D, Unit 3, filed in the office of the County Clerk in Bernalillo County, New Mexico in Plat Book 81P, page 158 on November 11, 1975, also identified as Lot 28 of Interstate Industrial Tract, Lots 1-32, Unit 4, filed in the office of the County Clerk in Bernalillo County in Plat Book 90, page 119 on May 7, 1979, also identified as Replat of Tract F of Interstate Industrial Tract, Tracts F-1 and F-2, filed in the office of the County Clerk in Bernalillo County in Plat Book 49, page 196 on August 26, 1975, also identified as Unplatted Portion Interstate Industrial Tract filed in the office of the County Clerk in Bernalillo County in Plat Book C7, page 1 on March 28, 1968, also being identified as Tract A of Envirco Tract, Tracts A and B, filed in the office of the County Clerk in Bernalillo County in Plat Book C10, page 175 on October 3, 1975.

DEDICATION

The subdivision of the land hereon shown is with free consent and in accordance with the desires of the undersigned owners and/or proprietors thereof, and owners and/or proprietors do hereby dedicate the public rights-of-way shown hereon, together with all easements shown on this plat. Drainage, power and communication easements are reserved where shown or dashed lines as noted, including the right of ingress and egress and the right to trim interfering trees.

JACK M. CLIFFORD AND COMPANY

By Jack M. Clifford
JACK M. CLIFFORD
President

LOOP DEVELOPMENT COMPANY

Jack M. Clifford
JACK M. CLIFFORD
President

STATE OF NEW MEXICO
COUNTY OF BERNALILLO } SS

On this 8th day of October, 1982 the foregoing instrument was acknowledged before me.

My commission expires 6-16-84

Patricia A. Bates
Notary Public

6-16-84

D. Val Valdez 10-27-82
PROPERTY MANAGEMENT DATE

10/5/82
CITY SURVEYOR DATE

10-27-82
CITY ENGINEER DATE

10-27-82
FOR AMAFCA DATE

10-19-82
TRAFFIC ENGINEER DATE

10-19-82
WATER RESOURCES DATE

10-19-82
PARKS & REC. DATE

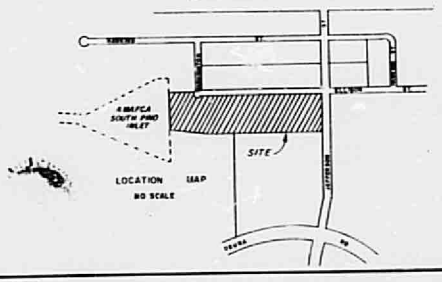
I, Leo D. Archuleta, a New Mexico Registered Land Surveyor, do hereby certify that the plat shown hereon was prepared by me or under my direct supervision and meets the Minimum requirements of the Albuquerque Subdivision Ordinance, shows all easements of record and is true and correct to the best of my knowledge and belief.

Leo D. Archuleta
LEO D. ARCHULETA, N.M.L.S. No. 4298

Note (A)
The property owners reserve the right to alter the location of the 25.0 foot private road easement to conform to their future development plans.

Note 1
Basis of bearing as shown on Plat of Interstate Industrial Tract, Unit 3 filed in the office of the County Clerk in Plat Book 81P, page 158 on November 11, 1975.

○ Set capped rebar ● Found rebar



CONSENT

THIS CONSENT is executed this 5th day of October, 1982, by Public Service Company of New Mexico, a New Mexico corporation ("PNM") for the benefit of the City of Albuquerque, a New Mexico municipal corporation (the "City").

WHEREAS PNM is the grantee and holder of a certain easement (the "Transmission Easement") acquired pursuant to Grant of Right-of-Way dated August 8, 1956, and recorded on August 10, 1956, with the records of Bernalillo County, New Mexico, in Volume D359, Folio 275; and

WHEREAS the City expects to acquire from Loop Development Company ("Loop") a drainage easement or right-of-way (the "Drainage Easement") covering the southerly sixty feet of the Transmission Easement,

NOW THEREFORE, in consideration of the premises, PNM hereby consents to the grant of the Drainage Easement by Loop to the City, provided that (1) the Drainage Easement shall contain only such terms and provisions as are reasonable, customary and appropriate to an easement or right-of-way for drainage purposes, (2) only such use shall be made of the Drainage Easement as is compatible with PNM's use of the Transmission Easement, and (3) all plans for use, alteration or improvement of the Drainage Easement shall first be submitted to and must be approved by PNM, which shall not withhold such approval unreasonably.

IN WITNESS WHEREOF, this instrument has been executed the day and year first above written.

PUBLIC SERVICE COMPANY OF
NEW MEXICO, a New Mexico
Corporation

By: _____

Title: _____

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

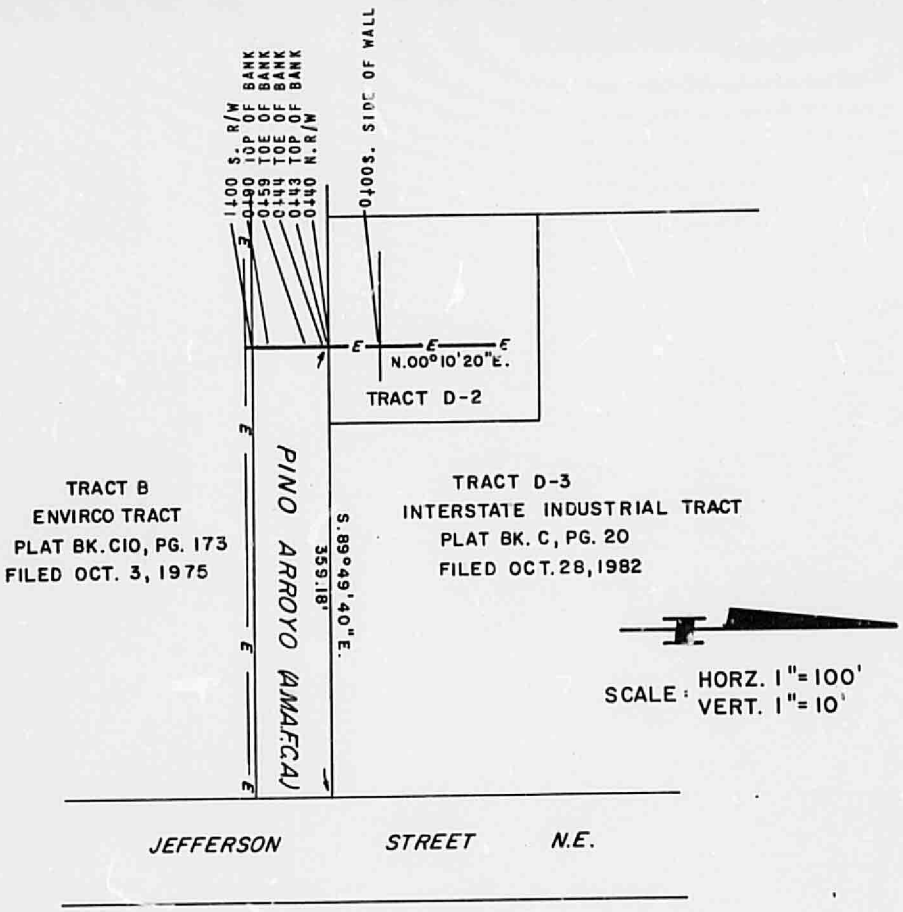
The foregoing instrument was acknowledged before me this 5th day of October, 1982, by J.L. Wilkins, Group Vice President of Public Service Company of New Mexico, a New Mexico corporation, on behalf of said corporation.

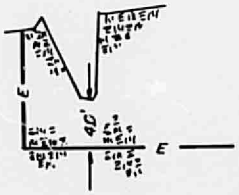
Theodor E. Kircher III
Notary Public

My commission expires:

July 22, 1985

OFFICIAL SEAL
Theodor E. Kircher III
NOTARY PUBLIC - NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires July 22, 1985





UNDERGROUND LINE XING
WITHIN PINO ARROYO

WITHIN SECTION 26, T. 11N., R. 3E., N.M.P.M.
BERNALILLO COUNTY, NEW MEXICO
PUBLIC SERVICE CO. OF NEW MEXICO
ALBUQUERQUE, NEW MEXICO

DWN BY : L.G.M. DATE : 02/21/83
OKD BY : SCALE SHOWN
APP BY :

A-2919-E

GRADING, DRAINAGE, AND CONSTRUCTION REPORT
REQUIREMENTS CHECKLIST FOR PNM UNIT
SUBSTATION CONSTRUCTION

PROJECT TITLE Ellison Substation

DATE January 25, 1982 ZONE ATLAS PAGE NO. D-17-2

REVIEWER

LEGAL ADDRESS Tract D, Unit III, Interstate Industrial Tract

PUBLIC SERVICE COMPANY OF NEW MEXICO CONTACT Robert L. Perlichek

ADDRESS Alvarado Square, Albuquerque PHONE 848-4807

SURVEYOR Leo Archuleta CONTACT Same

PHONE 848-4447

GENERAL

Yes	No	NA	See Comments	
X				1. Professional's Stamp with signature and date:
				A. Engineer who prepared the Grading & Drainage Plan.
X				2. North Arrow indicated.
X				3. Vicinity map with Zone Atlas Page No.
X				4. Location and Description of the Albuquerque Control Survey Vertical Datum.
X				5. Location and Description of the Temporary Bench Mark on site.
X				6. Legend indicating symbols and abbreviations used.
	X		X	7. Certification of compliance upon completion of project.
				A. Drainage & Grading Plan by Engineer.

TOPOGRAPHY:

Yes	No	NA	See Comments	
X				8. Proposed and existing contours (per Subdivision Ordinance A-21A5el and AMAFCA 80-15 Sec. 7A and spot elevations adequately showing conditions on-site and any other significant spot elevations off-site which would increase clarity. Note: Contours and spot elevations should be extended a minimum of 15' beyond property line. Some sites may require more off-site topographic information.
X				9. Existing or proposed (City approved) top-of-curb and flowline elevations along streets adjacent to the site with mean sea level designation. (This also applies to alleys.)
X				10. Pertinent elevation(s) of existing structures and drainage facilities located on-site or on adjacent property with required spot elevations for the standard City drivepad.
	X		X	11. Flood Hazard - Delineation of site on pertinent Flood Hazard Boundary Map (A-21B; B-7B).
X				12. Watershed Area - Delineation of off-site contributing watersheds on City of Albuquerque Ortho-Topo Area Maps at scale 1" = 200 or 1" = 500' (A-6B15; B-7B$_z$).
X				13. Swales defined by arrows, spot elevations, and cross-sections.

CONSTRUCTION DETAIL:

Yes	No	NA	See Comments	
	X		X	14. Elevation at property line at least 4" above top of curb. Can BE CHECKED "NO" WITH appropriate explanation.
X				15. Pond volume calculations.
X				16. Identification of all existing drainage facilities located on-site or on adjacent property.
X				17. Notes defining property line, asphalt sidewalks, planting areas, ponding areas, and all other areas where definition would increase clarity.

CONSTRUCTION DETAIL (continued):

Yes	No	NA	See Comments	
X				18. Indication of all easements and rights-of-way on, or adjacent to, the site with dimensions and purpose shown.
X				19. Indication of all proposed easements and rights-of-way on or adjacent to the site with dimensions and purpose shown.
X				20. Retaining wall required when a vertical grade change greater than 18" is indicated.
X				21. Details of ponds, swales, rundowns, curb cuts, water blocks, emergency spillways, retaining walls, pond outlets, safety fences, slopes, and all other significant drainage structures with contours, cross-sections and spot elevations when appropriate. ALL CROSS-SECTIONS MUST BE DRAWN TO STANDARD ENGINEERING SCALE OR ADEQUATELY DIMENSIONED.
X				22. Flow lines defined by arrows and spot elevations with mean sea level designation.
X				23. Proposed construction within City right-of-way per City Engineer's Special Order No. 19.
X				24. Indication of all existing structures on or adjacent (15' minimum) to the site, such as: retaining walls, buildings, pavement, ponds, etc.
X				25. Indication of street name(s) adjacent to the site.
	X		X	26. Storm runoff routed through the drivepad or a City approved curb cut.
X				27. Slopes (cut or fill) with height of less than 18" not steeper than 2:1. Slopes with height greater than 18", not steeper than 3:1.
X				28. Pond(s)' 10 yr./10 day water and oil surface elevation.

COMMENTS:

7. This certification will be prepared upon completion of the project.

11. A flood hazard map was not included since a study of the area is currently underway by Bohannan & Huston, Inc., for the Federal Insurance Administration. A draft of Bohannan & Huston Panel 16 was used as a reference.

14. The east property line lies approximately 320 feet to the west of the Jefferson Street curb line. The natural slope of the terrain toward the west of Jefferson Street dictates that the east property line elevation is 7.91 feet lower than the Jefferson Street curb line elevation.

26. Runoff not ponded on the site will flow onto unimproved land toward the north and west.

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE February 8, 1982 REF. NO. _____

TO: Rich Leonard, AMAFCA

FROM: Fred J. Aguirre, Civil Engineer/Hydrology FJA

SUBJECT: Proposed Ellison Substation PNM (File No. D17-D12)

Submitted herewith is a copy of the construction plans for the proposed PNM substation you requested.

If you have any questions or comments, please contact me at 766-7644.

FJA/ei

cc: Drainage File
Reading File

COPY FOR Mr. F. Aguirre

PUBLIC SERVICE COMPANY OF NEW MEXICO
POST OFFICE BOX 2267
ALBUQUERQUE, NEW MEXICO 87103

March 15, 1982

City of Albuquerque
Post Office Box 1293
Albuquerque, NM 87103

Attention: Mr. Charles M. Easterling
Princ. Asst. City Engr./Hydrology

Gentlemen:

Subject: Ellison Substation
Case No. EP-82-1

From a telephone conversation with Mr. Fred Aguirre on March 12, 1982, I understand that the City Engineer's Office has presented a copy of the 1977 Agreement regarding the South Pino Arroyo Easement to the City Attorney's Office for their review.

As you know, PNM is presently in the process of appealing the findings of the February 18, 1982 EPC decision on the basis of an apparent conflict between the findings and the 1977 Agreement.

Due to the importance of the Ellison Substation on the PNM system for the projected 1982 summer peak load, PNM must start construction as soon as possible. In this regard, I ask that you notify me immediately if the City Attorney's Office advises that the findings and conditional approval of the Ellison Substation Project, with regard to drainage related issues, should be changed or dropped entirely.

I feel that both the City and PNM would benefit if the appeal process before the City Council could be avoided.

Sincerely yours,

Robert L. Perlichek
Substation Engineer

RLP:lmm
cc: Mr. F. Aguirre
Mr. D. E. Hines
Mr. G. C. Holden
Mr. B. O'Rourke
Ms. V. Parker
Mr. C. J. Thompson

File: Hawkins Substation; Stations; General

PNM PUBLIC SERVICE COMPANY OF NEW MEXICO
ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158

April 2, 1982

City of Albuquerque
Post Office Box 1293
Albuquerque, NM 87103

Attention: Mr. Fred Aguirre
Asst. City Engr./Hydrology

Gentlemen:

Subject: Ellison Substation
Case No. EP-82-1

Per our telephone conversation of April 2, 1982, enclosed please find one copy of each of the four (4) drawings referred to as "Exhibit A" in The City of Albuquerque - PNM, 1977 Agreement.

I appreciate your concern over the fact that this matter has been in the hands of the City Attorneys Office for the length of time which it has with no apparent resolution to date.

I would appreciate any efforts on your part to expedite a decision from the City Attorneys Office concerning the Ellison Substation project.

Please call me if you need any further assistance in this matter.

Sincerely yours,

Robert L. Perlichek
Substation Engineer

RLP:jm

Enclosures

cc: Mr. D. E. Hines
Mr. G. C. Holden
Mr. B. J. O'Rourke

PNM PUBLIC SERVICE COMPANY OF NEW MEXICO
ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158

April 28, 1982

City of Albuquerque
Post Office Box 1293
Albuquerque, NM 87103

Attention: Mr. Fred Aguirre
Asst. City Engr./Hydrology

Gentlemen:

Subject: Ellison Substation
Case No. EP-82-1

As you requested during our meeting Friday, April 16, 1982, I have discussed the South Pino Arroyo 100 year storm projected flow rate with Bohannan Huston, Inc. I have also discussed the 100 year flood fringe elevation in the vicinity of the Ellison Substation site with Bohannan Huston.

The following information was obtained as a result of these discussions:

1. The flood insurance study (preliminary) done by Bohannan Huston, Inc., for the Federal Emergency Management Agency (F.E.M.A.), indicates that the flow rate in the South Pino Arroyo downstream of the confluence of the Beta Channel should reach 1300 cfs during 100 year flood conditions.

2. The flood fringe elevation is not defined to exceed the existing channel bank described as the "constructed channel" on the flood boundary and floodway map (preliminary) prepared for F.E.M.A. by Bohannan Huston, Inc.

This information indicates that the only possible flood damage that could occur to the Ellison Substation site, under present conditions, would be the result of one or the other of the following conditions:

1. Erosion of the existing channel bank as a result of the projected 1300 cfs or lesser water flow in the South Pino Arroyo. This erosion could result in the deterioration of the existing channel bank or undermining of the existing channel bank.

2. An overflow of the South Pino Arroyo upstream of the box culvert under Jefferson Street, 300 feet east of the site. This overflow could occur if the box culvert could not effectively handle the projected 1300 cfs water flow rate. A sheet flow flood condition might be expected to enter the Ellison Substation site under this condition.

As you know, Finding No. 3 of the Environmental Planning Commission hearing decision dated February 25, 1982 states that: "Before construction, PNM will supply analysis and construction details demonstrating that temporary flood protection measures required until permanent facilities are in place are adequate and appropriate."

In order to satisfy this Finding, I ask that the City Engineer's Office/ Hydrology accept for its consideration the following temporary flood protection measures for the Ellison Substation site.

1. As a temporary protection measure against damage to the Substation site from erosion or undermining of the South Pino Arroyo Bank, PNM proposes to monitor the erosion rate of the channel on a yearly basis. PNM agrees to restore the channel bank by earth fill if the erosion extends to within twenty feet of the Substation wall.

2. As a temporary protection measure against damage to the Substation site from an overflow condition originating at the Jefferson Street box culvert, PNM proposes to raise the design finish grade of the entire Substation wall enclosed area by six inches and to raise the east grill support footing and mandoor footing from elevation 5137.83 to 5138.58. Revision No. 1 to the Ellison Substation Project Drainage Plan reflects the proposed finish grade elevations corresponding to these changes.

Attached for your consideration is a copy of the revised Ellison Substation Project Drainage Plan.

I hope that you will consider PNM's proposal regarding temporary flood protection measures to the Ellison Substation site to be adequate and appropriate.

Sincerely yours,

Robert L. Perlichek
Substation Engineer

RLP:lmm

Enclosure

cc: Mr. D. E. Hines Mr. B. J. O'Rourke
Mr. G. G. Holden Ms. V. S. Parker

Mr. Easterling

RICHARD E. LEONARD
EXECUTIVE ENGINEER

B. H. SWINBURNE, CHAIRMAN
R. WARD HUNNICUTT, VICE-CHAIRMAN
FRANCES McCOY, SECRETARY-TREASURER
VERNON DOAK, DIRECTOR
KLESTON LAWS, DIRECTOR

Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority

2600 PROSPECT AVE., N.E.
P. O. BOX 25851 - ALBUQUERQUE, N. M. 87125
TELEPHONE 884-2215

RECEIVED
JUL 21 1982
CITY ENGINEER

July 21, 1982

MEMO FOR: Anita Miller, Assistant City Attorney

FROM: Rich Leonard, AMAFCA Rich Leonard

SUBJECT: Hold Harmless Statement - PNM, AMAFCA, and City of Albuquerque

Reference your June 30 Memo, same subject.

I apologize for procrastinating.

We have serious reservations about signing the hold harmless statement because it appears to imply approval for constructing the substation along the South Pino Arroyo. Before granting such approval we (the City, PNM, Jack Clifford, AMAFCA, perhaps others) need to resolve the following issues:

a. In 1975 Gordon Herkenhoff & Associates, Inc. submitted for Mr. Clifford the "Drainage Report for Academy Park - Unit 4 and Beta Tract." This report was approved by the City Hydrologist and AMAFCA Designee. The report calls for a soft-lined channel with the remainder of the PNM easement excavated to provide additional capacity for large discharges. Clearly, the drainage report must be revised before permitting the substation to be built -- or any more land to be subdivided.

b. It appears that the proposed substation would occupy an existing 30 ft. wide drainage easement along the north side of the PNM easement. This easement probably could be vacated, provided that satisfactory easements are dedicated along the south side of the PNM easement. Included should be an encroachment easement from PNM.

Mr. Easterling

c. In addition to conflict with the drainage report and inadequate easements, we are also concerned about responsibility and timing for channel improvements. We are aware and supportive of the City Engineer's efforts in this regard. However, before permitting more construction or subdivisions, we should obtain unambiguous commitments from all concerned.

I regret sounding negative; we truly want to participate in a comprehensive solution to these knotty problems.

ic
cc: C. Rodolph
V. Hagen
R. Heller
C. Easterling ✓
J. Clifford
J. Wilkins

PNM PUBLIC SERVICE COMPANY OF NEW MEXICO
ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158

August 17, 1982

D17-D12

Loop Development Company
2201 San Pedro Drive, NE
Building 2, Suite 201
Albuquerque, NM 87110

Attention: Mr. Robert C. Wharton

Dear Mr. Wharton:

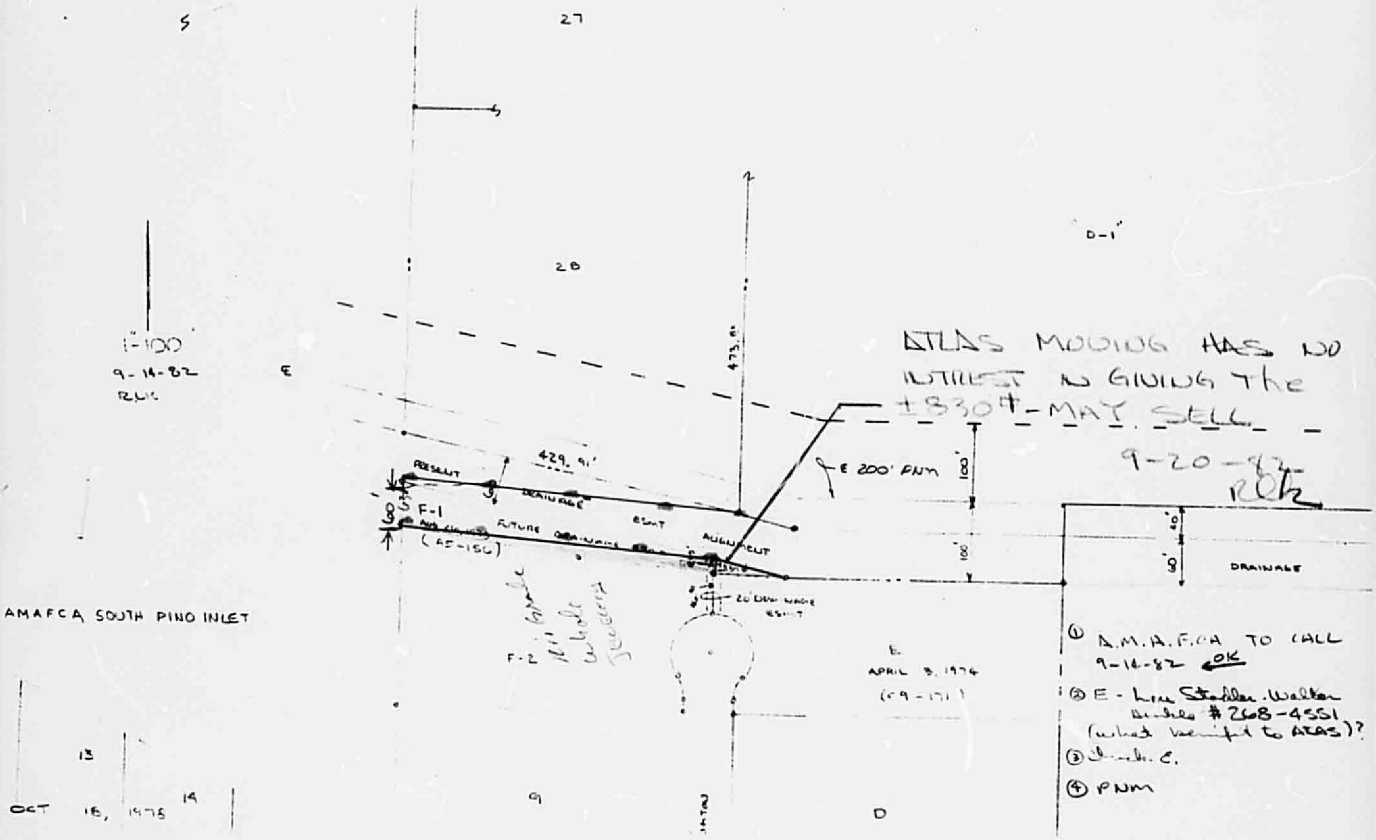
As discussed in recent meetings, this letter will confirm that Public Service Company of New Mexico ("PNM") will not object to the grant by Loop Development Company to the City of Albuquerque (the "City") of a drainage easement along all or part of the southerly sixty feet, between the AMAFCA Inlet and Interstate 25, of the land covered by the easement acquired by PNM pursuant to Grant of Right-of-Way dated August 8, 1956, and recorded on August 10, 1956, with the records of Bernalillo County, New Mexico, in Volume D359, Folio 275. Should such an easement be granted, PNM will execute an appropriate encroachment agreement with the City for the purpose of allowing the City to maintain the flood control channel within the easement.

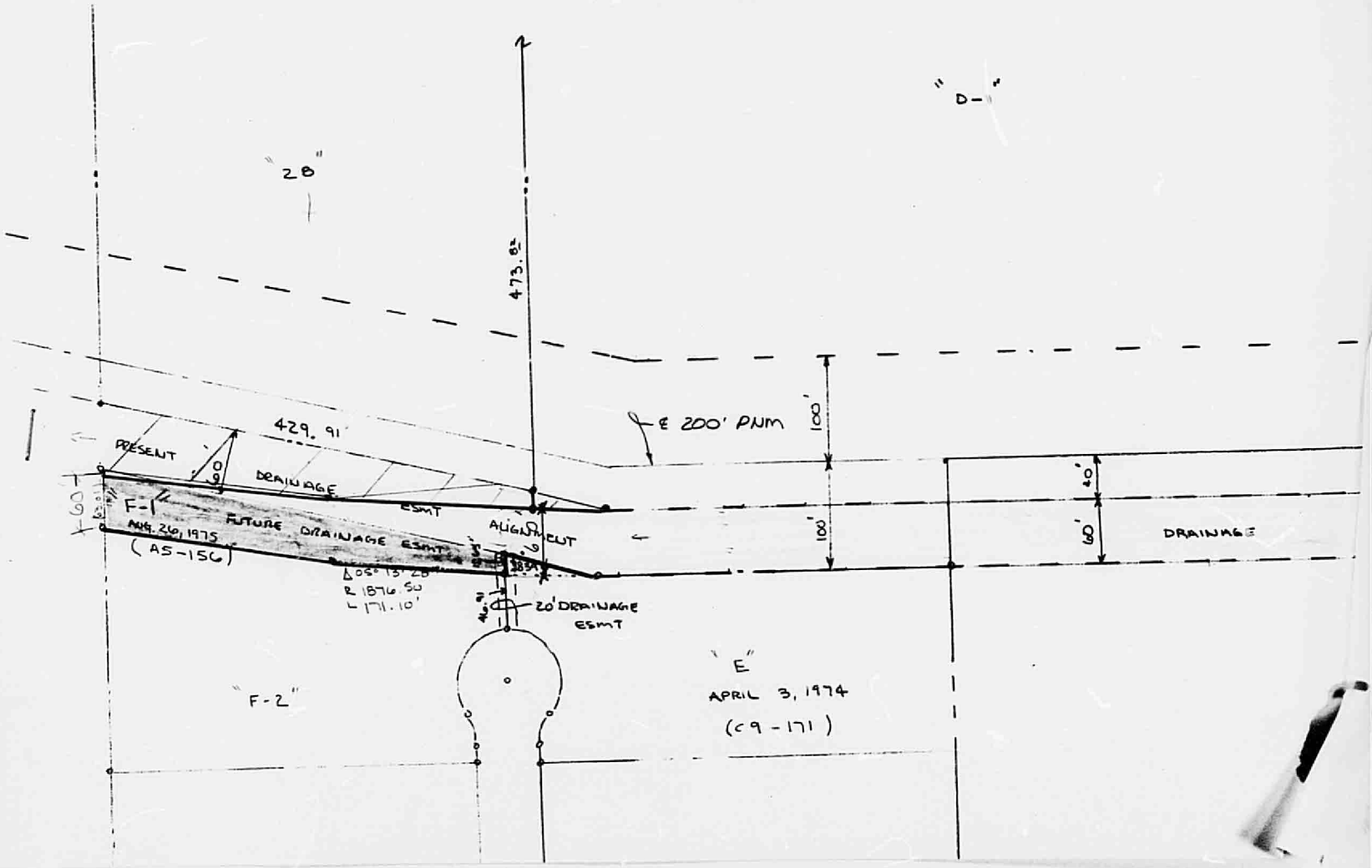
Very truly yours,

Ralph P. Maxon
Director, Right of Way Services

RPM:blt

cc: C. Easterling,
City of Albuquerque


1"=100'
9-14-82
RWK
AMAFCA SOUTH PINO INLET
OCT 16, 1975
429.91'
473.91'
F-1
(AF-156)
F-2
DRAINAGE
ESMT
AUGMENT
E 200' PNM
D-1
DRAINAGE
APRIL 8, 1974
ATLAS MOVING HAS NO INTEREST IN GIVING THE ±330' - MAY SELL
9-20-82
RWK
① A.M.A.F.C.A TO CALL 9-14-82 OK
② E - Lynn Stoddard Walker Bus. # 268-4551 (what wanted to ATLAS)?
③
④ PNM

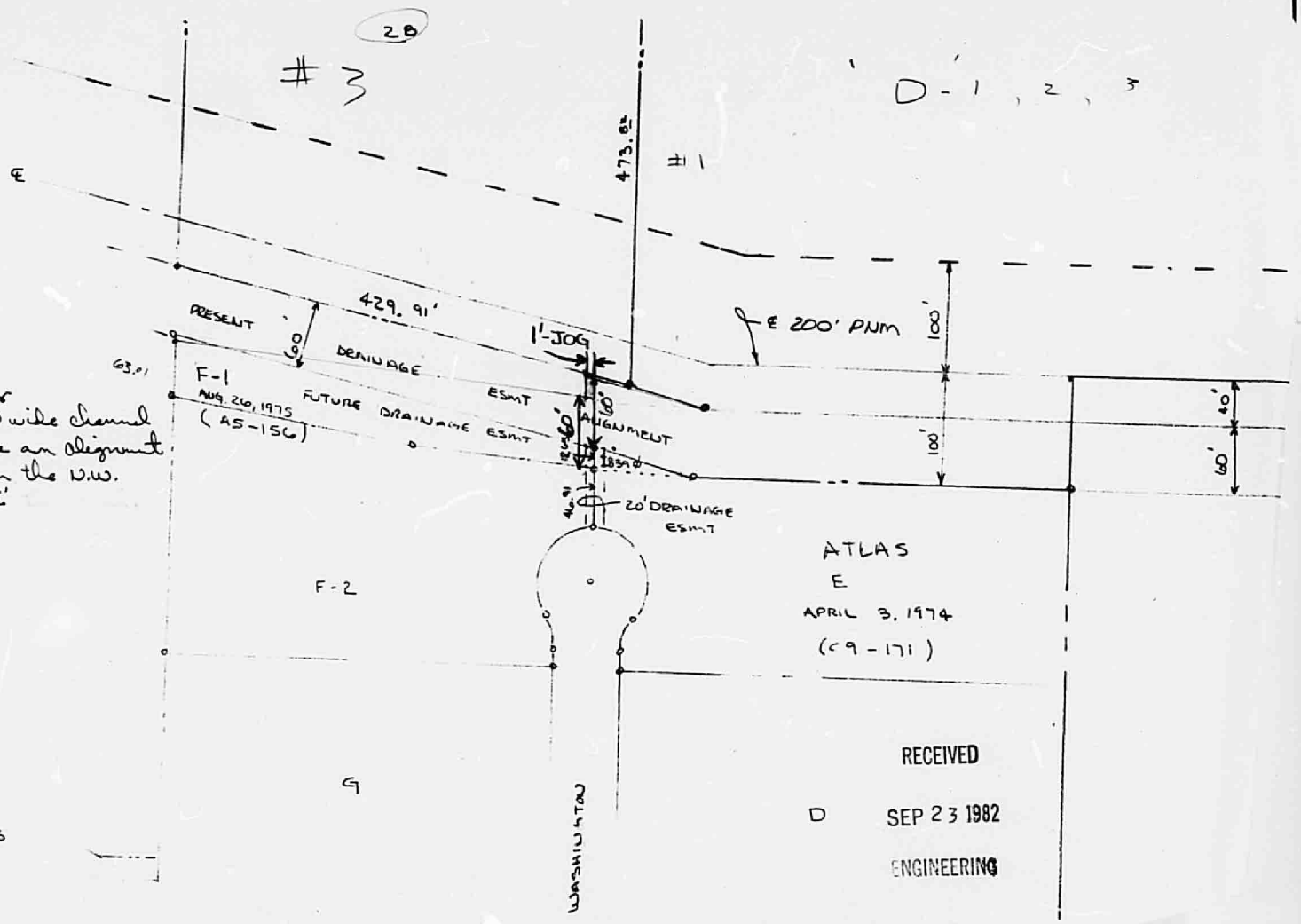

"D-"
"2B"
473.82'
429.91'
PRESENT
DRAINAGE
ESMT
F-1
FUTURE DRAINAGE ESMT
AUG. 26, 1975
(AS-156)
ALIGNMENT
Δ 05° 13' 28"
R 1876.50
L 171.10'
20' DRAINAGE ESMT
℄ 200' PNM
100'
100'
40'
60'
DRAINAGE
"E"
APRIL 3, 1974
(C9-171)
"F-2"

ROBERT L. KASTNING

JACK M. CLIFFORD & CO.
(505) 884-5573

2301 SAN PEDRO N.E.
TWO SAN PEDRO PARK, SUITE 201
ALBUQUERQUE, NEW MEXICO 87110

1"-100'
9-14-82
RLK



Chuck Easterling
to maintain a 60 wide channel
esmt. We propose an alignment
with a 1' JOG from the N.W.
corner of lot 'E'

OUTH PINO INLET

RECEIVED
SEP 23 1982
ENGINEERING

PNM PUBLIC SERVICE COMPANY OF NEW MEXICO
ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158

October 15, 1982

City of Albuquerque
Post Office Box 1293
Albuquerque, NM 87103

Attention: Mr. Charles Easterling
Principal Assistant
City Engineer/Hydrology

RECEIVED
OCT 28 1982

Gentlemen:

Subject: Hawkins Substation Project
Development Review Board
Agenda Item 82-101

Public Service Company of New Mexico (PNM) agrees to provide the following additional temporary flood protection measure to the Hawkins Substation site if deemed necessary by a drainage study which will be provided by PNM.

A temporary earth berm will be provided within the confines of PNM's transmission line easement between Jefferson Street and the Hawkins Substation east wall. This temporary berm will be provided as a means to divert off-site drainage flows which might result from an overflow of the Arroyo Del Pino at the Jefferson Street crossing. The earth berm will be constructed to divert the drainage flow back into the Arroyo Del Pino.

PNM agrees to use the currently projected 100 year storm flow rate, as determined by Bohannan Huston Inc. for the Federal Emergency Management Agency (FEMA), as a basis for calculations relative to flow rates in the Arroyo Del Pino.

PNM agrees to provide the necessary study data and agrees to provide the earth berm, if warranted by the study, within six weeks from the start of construction of the Hawkins Substation.

Sincerely,

Robert L. Perlichek
Substation Engineer

RLP:mjm

cc: Mr. Edward W. Halpin
Mr. Dennis E. Hines
Mr. Gordon G. Holden
Mr. Chuck S. Thompson
Mr. Fred Aguirre, Asst. City Engineer/Hydrology

We have read the foregoing letter and hereby consent to PNM's construction of a temporary earth berm on Loop Development Property, within the PNM transmission easement, if a drainage study deems it necessary.

For the Loop Development Company _____

PNM PUBLIC SERVICE COMPANY OF NEW MEXICO
ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158

March 1, 1983

RECEIVED
MAR 01 1983
AMAFCA

Albuquerque Metropolitan Arroyo Flood
Control Authority
Post Office Box 2585
Albuquerque, NM 87125

Attention: Mr. Roger Flegel

Dear Mr. Flegel:

Public Service Company of New Mexico (PNM) has recently constructed a new substation ("Hawkins") on Tract D-2 of Interstate Industrial Tract. As is shown on the enclosed copy of the Plat, Tract D-2 is adjacent to the north boundary of the Pino Arroyo. In order for this substation to be put to use it is necessary for PNM to build feeder lines from the substation to an existing powerline on the south side of the Pino Arroyo.

PNM is requesting A.M.A.F.C.A.'s permission to construct a six way duct bank and install the powerline under the Pino Arroyo. Enclosed is a zone atlas page showing the general area along with a Plan and Profile, PNM drawing #A-2919-E showing in greater detail the exact location of the crossing. Should everything meet with your approval, I would appreciate your taking the necessary steps in securing the requested permission.

Thank you for your assistance, and should you have any questions concerning this matter please do not hesitate to contact me at 848-4936.

Sincerely,

Ted Kircher

Ted Kircher
Right of Way Agent

TK:pat

D17-D12

Agreement / Commitment
HYDRO FIELD
PNM / LOOP INDUSTRIAL

CONSENT

THIS CONSENT is executed this 5th day of October, 1982, by Public Service Company of New Mexico, a New Mexico corporation ("PNM") for the benefit of the City of Albuquerque, a New Mexico municipal corporation (the "City").

WHEREAS PNM is the grantee and holder of a certain easement (the "Transmission Easement") acquired pursuant to Grant of Right-of-Way dated August 8, 1956, and recorded on August 10, 1956, with the records of Bernalillo County, New Mexico, in Volume D359, Folio 275; and

WHEREAS the City expects to acquire from Loop Development Company ("Loop") a drainage right-of-Way (the "Drainage Right-of-Way") covering the southerly sixty feet of the Transmission Easement,

NOW THEREFORE, in consideration of the premises, PNM hereby consents to the grant of the Drainage Right-of-Way by Loop to the City, provided that (1) the Drainage Right-of-Way shall contain only such terms and provisions as are reasonable, customary and appropriate to a right-of-way for drainage purposes, (2) only such use shall be made of the Drainage Right-of-Way as is compatible with PNM's use of the Transmission Easement, and (3) all plans for use, alteration or improvement of the Drainage Right-of-Way shall first be submitted to and must be approved by PNM, which shall not withhold such approval unreasonably.

IN WITNESS WHEREOF, this instrument has been executed the day and year first above written.

PUBLIC SERVICE COMPANY OF
NEW MEXICO, a New Mexico
Corporation

By: _____

Title: _____

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 5th day of October, 1982, by J.L. Wilkins, Group Vice President of Public Service Company of New Mexico, a New Mexico corporation, on behalf of said corporation.

Theodor E. Kircher III
Notary Public

My commission expires:

July 22, 1985

OFFICIAL SEAL
Theodor E. Kircher III
Notary Public - New Mexico
Filed in the Office of the Secretary of State
My Commission Expires July 22, 1985

Hawkins Substation
DR
012-012

APPLICATION FOR SUBDIVISION

INSTRUCTIONS: PRINT OR TYPE IN BLACK INK ONLY. All attachments must be submitted with the application and, after folding, shall not exceed 8 1/2 x 14 inches.

1. Applicant's Name: PUBLIC SERVICE COMPANY OF NEW MEXICO requests:

____ Sketch Plat ____ Preliminary Plat XXX Final Plat

____ Date Submitted ____ Date Submitted 10/6 Date Submitted

approval of the proposed Tracts D-1, D-2, D-3 and 28-A Interstate Industrial Tract Subdivision of

Lot(s): 28, Unit 4-Tract D, Unit 3, Tract f-1 and portion of Interstate Industrial Tract and Tract A, Envirco Tract Block(s): ____

in Subdivision/Addition/MRGCD Map Number: Interstate Industrial Park

Located generally: on east by Jefferson Street, on west by A.M.A.F.C.A. South Pino Inlet, on north by Ellison Street and on south approximately 550 feet south of Ellison Street.

2. Description of the Request:

Number of lots proposed: 4 Total gross acres covered by request: 24.0556

Proposed Use	Zoning	Total Net Acreage of Use
a. Tract D-1	M-1	12.7623
b. Tract D-2(Electrical Substation)	M-1	0.6568
c. Tract D-3	M-1	5.3825
d. Lot 28-A	M-1	5.2540

Other information: ____

Application for Subdivision
Page 1 of 2

DRB-82-101
Case #

10/12/82

2-12

① See comment on D.R.B. Sept 7, 82
(Roger Hagel - discussed with)

② Recommend deferral, pending [illegible]

What is nature of "Road Easement"? Who has what rights & for how long? How about northern alignment? Proposed Channel? Why Easement alignment killed? Lot 4 PNM Easm - Calls needed first to answer.

3. APPLICANT INFORMATION:

Applicant's Mailing Address: Alvarado Square, Albuquerque Zip Code: 87158

Phone: 848-4936

Agent (if any): _____ Phone: _____

Mailing Address: _____ Zip Code: _____

Ownership Interest in Property: Proposed Purchaser

4. REQUIRED ATTACHMENTS IN ACCORDANCE WITH SUBDIVISION ORDINANCE REQUIREMENTS
See Appropriate Checklist(s)

5. Signature of Applicant: Theodor E. Kircher Date: 10-6-82

If agent is used, attach applicant's authorization to act on the applicant's behalf regarding this request.

****

PLANNING DIVISION INTERNAL USE ONLY

Application Received by: _____ Date: _____

Fee Paid: _____ Method of Payment: _____

Cross References: _____

1 copy each to:
Applicant
Secretary
Graphics

Meeting Date: _____

Case # S- SC- SCS-

Map Number _____

PNM PUBLIC SERVICE COMPANY OF NEW MEXICO
ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158

September 7, 1982

Municipal Development Department
Planning Division
400 Marquette NW
Albuquerque, NM 87103

Attention: Mr. Randy Trainor
Planning Department

Gentlemen:

Subject: Hawkins (Formerly Ellison)
Substation Project
Case No. EP-82-1

In conformance with your request of October 6, 1982, the following is a summary of the steps taken by Public Service Company of New Mexico (PNM) to satisfy the attached EPC findings dated February 18, 1982 for the above mentioned project.

FINDING 1: States that the request is in conformance with the facilities plan; Electrical service - No action necessary.

FINDING 2: On May 5, 1982, PNM informed the City of Albuquerque Municipal Development Department that the landscaping for the Hawkins Substation project would be in conformance with the standards outlined in the facilities plan; Electrical service.

FINDING 3: On April 28, 1982, PNM proposed to the City Engineer's office/Hydrology that the erosion rate of the Arroyo Del Pino Channel Bank would be monitored and that the channel bank would be restored to its original condition, at PNM expense, if scouring of the bank did occur. On April 28, 1982, PNM also proposed raising the finished grade elevation of the entire substation by six inches and raising the east grillwork support footing elevation by nine inches to prevent the possibility of off-site drainage flows from entering the substation if an overflow did occur upstream of the substation. These proposals were incorporated into the Hawkins Substation site plan as revisions and submitted to the City Engineer's office/Hydrology on April 29, 1982. PNM was told at that time that the proposals were acceptable if the "Hold Harmless Statement" required as Finding No. 4 was executed by PNM. Only one further matter requires investigation by PNM to fully satisfy Finding No. 3. This matter deals with investigating the possible necessity of an earth berm installation on the east side of the property to prevent the substation from diverting

off-site drainage flow to the north. This matter is currently under study by PNM and is expected to be resolved during construction.

FINDING 4: On June 14, 1982, PNM submitted a statement to the City of Albuquerque and to AMAFCA stating that no claims would be asserted against the City or AMAFCA for flood damage suffered by the Hawkins Substation prior to construction of the permanent flood control facilities.

FINDING 5: PNM has entered into an agreement with the Loop Development Company (Jack M. Clifford and Associates) to pay a pro rata share of the costs associated with the permanent improvement of the Arroyo Del Pino.

Very truly yours,

Robert L. Perlichek
Substation Engineer

RLP:mjm
Enclosure
cc: Mr. Dennis E. Hines
Mr. Gordon G. Holden
Mr. Ted Kircher
Ms. Valinda Parker
Mr. Chuck Thompson

OFFICIAL NOTICE

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
PLANNING DIVISION
P.O. Box 1293, Albuquerque, New Mexico 87103

Valinda Parker
Public Service Company of New Mexico
Alvarado Square
Albuquerque, NM 87158

DATE: February 25, 1982

NOTIFICATION OF DECISION

File: EP-82-1
Location: Site Development Plan Approval for a Substation for a Portion of Tract A, Envirco Tract, and a Portion of Tract D, Unit III, Interstate Industrial Tract.

On February 18, 1982, the Environmental Planning Commission approved the above-mentioned request, subject to and based on the following Findings:

1. The request is in conformance with the Facilities Plan: Electrical Service.
2. No landscaping plan was submitted with this application. Staff suggests using the landscape criteria recommended in the amended Facilities Plan: Electrical Service.
3. Before construction, PNM will supply analysis and construction. Details demonstrating that temporary flood protection measures required until permanent facilities are in place are adequate and appropriate.
4. PNM must hold the City/AMAFCA harmless from liability arising due to flood damages received at the Ellison Sub-Station until permanent facilities are in place.
5. PNM must agree to participate to a fair and equitable share of the construction costs for permanent facilities as required by current City or AMAFCA policy at the time of construction, if any.

If you wish to appeal this decision, you must do so by 3-5-82 in the manner described below. A non-refundable filing fee of $40 is required at the time the appeal is filed.

Appeal to the City Council. Any person aggrieved with any determination of the Environmental Planning Commission acting under this ordinance may file an appeal to the City Council by submitting written application on the Planning Division form to the Planning Division within 15 days of the Planning Commission's decision. The date the determination in question is issued is not included in the 15-day period for filing an appeal, and if the fifteenth day falls on a Saturday, Sunday or holiday as listed in the Merit System Ordinance, the next working day is considered as the deadline for filing the appeal. The City Council may decline to hear the appeal if it finds that all City plans, policies and ordinances have been properly followed. If it decides that all City plans, policies and ordinances have not been properly followed, it shall hear the appeal. Such appeal, if heard, shall be heard within 60 days of its filing.

You will receive notice if any other person files an appeal. If there is no appeal you can receive building permits any time after the appeal deadline quoted above provided all conditions imposed at the time of approval have been met. Successful applicants are reminded that other regulations of the City must be complied with, even after approval of the referenced application(s).

IF YOU RECEIVE APPROVAL FOR ANY REQUEST WHICH REQUIRES A SITE DEVELOPMENT PLAN, SEE ATTACHED SHEET FOR FURTHER INFORMATION.

Sincerely,

Elizabeth Marquez

Elizabeth Marquez,
Board Secretary

Letter of Advice

cc: City Engineer
Traffic Engineer

~~DAN — PAT IT NOW~~

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
David Rusk

MAY 03 1979
AMAFCA

May 2, 1979

RCL
Asst. Engr.
✓ Engineer DK
Admin. Asst.
Rel. Engr.
Secretary
Foreman
Return to
File #
Hold Till

Mr. John Andrews
Andrews, Asbury & Robert, Inc.
401 San Pedro N.E.
Albuquerque, New Mexico 87108

Re: PINO ARROYO IMPROVEMENTS

Dear John:

In discussions with AMAFCA on the projected flows that can be expected in the Pino Arroyo, the following shall be used as your criteria for design.

1)	At Louisiana Blvd.	1300 cfs
2)	At I-25	1300 cfs
	a) design the I-25 crossing for	1450 cfs
3)	At Jefferson Street	
	a) including the Beta Channel	2200 cfs

RECEIVED
FEB 16 1982
CITY ENGINEER

Please continue your design based on the above. Should you have any questions, feel free to call me.

Very truly yours,

Richard S. Heller

Richard S. Heller
City Engineer

RSH/fs

cc - Rich Leonard, AMAFCA
H. R. Orr, Jr., Deputy Dir. of MDD
Bruno Conegliano, Assist. City Engineer-Hydrology

AGREEMENT

This Agreement is made this 1 day of Dec., 1977, by and between PUBLIC SERVICE COMPANY OF NEW MEXICO, a New Mexico corporation (hereinafter called "PNM"), and the CITY OF ALBUQUERQUE, a municipal corporation (hereinafter called "City").

WHEREAS, PNM has a certain 200' wide easement and right-of-way for electrical transmission lines and related facilities; and

WHEREAS, said easement and right-of-way is across certain lands presently owned by City; and

WHEREAS, City has a plan to use a portion of said easement and right-of-way for a permanent drainage channel and related facilities; and

WHEREAS, City has requested that PNM grant it the right to use a portion of said easement and right-of-way in the manner set forth in its proposed plan; and

WHEREAS, PNM has agreed to permit City to use a portion of said easement and right-of-way for a drainage channel and related facilities as set forth in its plan only upon certain terms and conditions being met; and

WHEREAS, PNM and City want to enter into an agreement defining the terms and conditions under which City may encroach upon PNM's easement and right-of-way to construct and maintain the drainage channel and related facilities;

NOW, THEREFORE, in consideration of the mutual promises, covenants, conditions and agreements herein set forth, PNM and City have agreed as follows:

1. That City is presently the owner of certain real estate located in the County of Bernalillo, State of New Mexico,

across which PNM has an easement and right-of-way 200' wide for electrical transmission lines and related facilities by reason of a certain Grant of Right-of-Way dated August 8, 1956, and recorded on August 10, 1956, in Volume D359, Folio 275 of the Records of Bernalillo County, New Mexico, which easement and right-of-way is more particularly described as follows:

> Beginning at a point common to Sections 23 and 26 and the Westerly right-of-way of State Road 422, and running thence N.89°49'W., 3267.5 feet along the North line of Section 26; running thence N.28°52'W, 2467.1 feet; running thence N.0°03'W., 640.0 feet; running thence N.89°43'W., 200.0 feet along the Southerly boundary line of the Public Service Company of New Mexico North Plant Site; running thence S.0°03'E., 692.57 feet; running thence S.28°52'E., 2636.08 feet; running thence S.89°49'E., 3348.78 feet to the Westerly right-of-way line of State Road 422; running thence along said right-of-way line N.10°29'E., 203.28 feet to the place of beginning, containing 29.963 acres more or less.

2. That PNM hereby consents to the use of a portion of said easement and right-of-way by City for a permanent drainage channel and related facilities as shown on the plan attached hereto as Exhibit "A".

3. That City is granted the right to use a portion of PNM's easement and right-of-way solely for the purpose of a permanent drainage channel and related facilities as specifically shown on the plan attached hereto as Exhibit "A" and is not granted the right to construct or erect any other structures thereon or use any portion of the easement and right-of-way for any other purpose.

4. That City, in consideration of PNM's consent to use the easement and right-of-way as shown on the plan attached hereto as Exhibit "A" agrees that it will, at its expense, modify its use of the easement and right-of-way should the use by City conflict in any manner with PNM's utilization of the easement and

right-of-way for electrical transmission line purposes. City acknowledges that PNM may construct additional transmission lines upon the easement and right-of-way and may relocate the existing transmission lines and facilities and that said construction or relocation may require the placement of poles, wires or other structures upon and underneath the easement which could require the temporary removal and relocation of all or a portion of the drainage channel and related facilities shown on the plan attached hereto as Exhibit "A".

5. That City does not agree to bear any of PNM's additional costs incurred in the construction, relocation or maintenance of its electrical transmission lines caused by City's use of a portion of the easement and right-of-way as aforesaid; however, the cost of repairing, replacing, relocating and modifying the drainage channel and related facilities caused by PNM's construction, relocation or maintenance of its electrical transmission lines shall be borne entirely by City.

6. That PNM hereby grants to City the right of reasonable ingress and egress across its easement and right-of-way for the purpose of constructing and maintaining the proposed drainage channel and related facilities.

7. That City, in consideration of PNM granting it permission to use a portion of its easement and right-of-way as aforesaid, subject to the rights of PNM, hereby agrees to indemnify and hold PNM harmless from any and all claims for personal injuries or damage to property when such injuries or damages directly or indirectly arise out of the existence, construction, maintenance, repair, condition, use or presence of the drainage channel and related facilities upon said easement and right-of-way.

8. That City, in consideration of PNM granting it per-

mission to use a portion of its easement and right-of-way as aforesaid, subject to the rights of PNM, hereby agrees to pay and/or reimburse PNM for any damages to its electrical transmission lines and related facilities caused by City's construction, maintenance, repair and/or removal of the drainage channel and related facilities.

9. That this agreement shall be binding upon and inure to the benefit of the parties hereto, their successors and assigns.

IN WITNESS WHEREOF, the undersigned have caused this agreement to be executed effective the day and year first above written.

PUBLIC SERVICE COMPANY OF NEW MEXICO

ATTEST:

B. O. Lopez
Its ASSISTANT SECRETARY

By [illegible]
Its [illegible]

CITY OF ALBUQUERQUE

ATTEST:

Mary Lou Cooper
Its City Clerk/Recorder

By [illegible]
Its Director, Finance & Mgmt. Dept.

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing Agreement was acknowledged before me this 9 day of Dec, 1977, by Wayne A. Gerdsgard Vice President of PUBLIC SERVICE COMPANY OF NEW MEXICO, a New Mexico corporation, on behalf of said corporation.

[illegible]
NOTARY PUBLIC

My commission expires:
February 14, 1981

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing Agreement was acknowledged before me this 1st day of March, 1978, by Arthur A. Blumenfeld, Dir., Finance&Mgmt. Dept. of the CITY OF ALBUQUERQUE, a municipal corporation, on behalf of said corporation.

Orlando O. Valdez
NOTARY PUBLIC

My commission expires:
Jan 10, 1982

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE July 26, 1982 REF. NO.

TO: Randy Traynor, Planning Division
Fred Aguirre, Design Engineering, Hydrology
Howell G. Ervien, Property Management Division

FROM: Anita P. Miller, Assistant City Attorney

SUBJECT: PNM Hawkins (Ellison Power Station)

A meeting was held on July 21, 1982, with the following people in attendance:

Bob Helpin, PNM
Bob Castin, Representing Jack Clifford
Bob Perlecheck, PNM
Valinda Parker, PNM
Bryan O'Rourke, Keleher & McLeod, Representing PNM
Roger Flegle, Representing AMAFCA
Fred Aguirre, City of Albuquerque
Randy Traynor, City of Albuquerque
Anita P. Miller, City of Albuquerque

The following responsibilities were distributed, in order to put the machinery into motion to settle this matter:

1. PNM, under the direction of Bob Helpin, will prepare a plat of the area from I-25 to the AMAFCA diversion channel, showing a 60 foot easement to the south, which easement encroaches upon the 200 foot PNM easement. The plat will contain a dedication of this easement by Jack Clifford to the City.

2. The plat will also show that the 30 foot easement to the north of the PNM 200 foot easement, from I-25 to the diversion channel, is vacated.

3. The plat will be in the form of an amendment to 1967 plat S-1512, which evidently was an amendment of a prior plat.

4. The City will vacate the 30 foot easement on the north of the PNM easement by a vacating document. Bud Ervien will research whether or not, in fact, that easement actually exists, and will also determine all property owners along the easement to whom the vacated property will revert. Even if the

easement has never been formally dedicated, a vacating document will be prepared, since the easement does turn up on some of the Zoning Atlas Maps, as well as on some plats and plans currently on file. The entire 30 foot easement from I-25 to the AMAFCA diversion channel will only be vacated after determination from Roger Flegle of AMAFCA and Fred Aguirre that no part of it is required by the City or AMAFCA for future drainage plans.

5. Jack Clifford, PNM, the City, and AMAFCA will all send representatives to the Development Review Board meeting at which the new plat is considered; and at that time, once the plat is approved, all parties will sign off on it.

6. Once Jack Clifford has dedicated the 60 foot easement, AMAFCA will sign off on the Hold Harmless Agreement, transmitted to it by the City and PNM on June 30, 1982.

7. Once all parties have signed off on the plat, PNM will prepare an encroachment agreement, to be signed by the City, pertaining to the joint use of the drainage easement and 200 foot PNM easement by the City and PNM.

8. Bob Perlecheck of PNM, and Fred Aguirre and Randy Traynor will cooperate to obtain an approved drainage study for the Hawkins Substation.

9. After the new plat is recorded, PNM and the City will cancel or amend the December 9, 1977 "agreement" concerning City encroachment upon PNM's easement. It is believed that the new plat and the encroachment agreement to be signed concerning the joint use of the 60 foot easement will supersede the 1978 agreement.

10. Bob Helpin will determine whether the Jack Clifford would be willing to dedicate the 60 feet to the City in fee, rather than as an easement.

All of the above should be accomplished within 30 days.

APM:ms

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

MAYOR
Harry E. Kinney

CHIEF
ADMINISTRATIVE OFFICER
Frank A. Kleinhenz

April 28, 1982

RECEIVED
APR 29 1982
CITY ENGINEER

Ms. Valinda Parker
Land Planner/Economist
Public Service Co. of N.M.
Alvarado Square
Albuquerque, N.M. 87158

Dear Ms. Parker:

This letter is to confirm our telephone conversation of Wednesday, April 28th, regarding your April 21, 1982 letter, in which you enclosed a proposed amendment to the Agreement of December 9, 1977, and stated that it was PNM's understanding that the City would take appropriate steps to vacate the 30 foot easement shown on Plat No. 5-1512, entitled "Interstate Industrial Tract", filed on March 25, 1968. As I stated to you in our conversation this morning, at our meeting of April 16, 1982, in addition to the understanding that the City would take appropriate steps to vacate its 30 foot easement, it was stated that a 60 foot easement along the PNM easement would be required. Mr. Roger Flegle, of AMAFCA, stated that Jack Clifford would have to dedicate to the City a 60 foot easement, and PNM would have to recognize a "joint use" by the City and PNM of 60 feet of the PNM easement, by way of an Encroachment Agreement.

Rather than amending the 1977 Agreement, it is my suggestion that PNM, the City, AMAFCA, Jack Clifford and other relevant property owners draft an entirely new Agreement which clearly sets forth the obligations of all parties concerning the entire Pino Arroyo Drainage Project, from I-25 to the AMAFCA inlet, as it relates to the PNM easement. That Agreement would supersede the 1977 Agreement and, unlike the 1977 Agreement, would be recorded.

Please contact me at your earliest convenience concerning this proposal. Thank you for your continued cooperation.

Very truly yours,

Anita P. Miller

Anita P. Miller
Assistant City Attorney

APM:ms
cc: Bryan J. O'Rourke, Esq.
Keleher & McLeod, P.A.

Roger Flegle
Real Estate Officer
AMAFCA

Fred Aguirre
Design Engineering, Hydrology

Randy Trainer
Planning

Public Service Company of New Mexico

Post Office Box 2267
Albuquerque, New Mexico 87103

October 16, 1973

AMAFCA
P. O. Box 2585
Albuquerque, New Mexico 87125

Attention: Mr. John B. Robert, Executive Engineer

Re: Joint Use on Easement Between I-25 and North Diversion Channel

Gentlemen:

Some months ago you requested that we explore the possibility of the joint use of our easement in the above referenced area. Our easement in the area is approximately 200 feet wide and you requested use of the southerly 50 feet for a drainage channel. After a meeting with all parties involved we agreed to let AMAFCA use the southerly 50 feet provided we could enter into an agreement similar to the one now existing between PNM and AMAFCA.

Since then Mr. Robert requested ten additional feet for a total width of 60 feet. This additional ten feet has posed some problems for us as we had planned on securing a site under this line to locate a substation. The very minimum size for our substation site is 150' x 175'. We approached a relator in the area to purchase a site and he indicated he did not wish to sell any land outside the confines of our easement. When I relayed this information to Mr. Robert he indicated that AMAFCA had available property on the western end of the area in question and that we could work out a purchase agreement. Since the one barrier to the execution of the joint use agreement is PNM's location of a substation site I enclose a copy of an agreement between PNM and AMAFCA covering joint use of the easement. After execution by AMAFCA would you please return to this office and we will complete and return an executed copy for your file.

Very truly yours,

John P. Bundrant

John P. Bundrant
Division Vice President

JPB:jkf
Attachments
cc: Mr. R. B. Rountree
Mr. W. B. Keleher
Mr. Bill Statton
Mr. Ralph Stone

Approved, no agreement
was ever consummated
RCL

Hawkins Substation
Arroyo del Pino
File 817 - 912

PNM PUBLIC SERVICE COMPANY OF NEW MEXICO
ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158

December 17, 1982

City of Albuquerque
Post Office Box 1293
Albuquerque, NM 87103

Attention: Mr. Fred Aguirre,
Asst. City Engineer/
Hydrology

Gentlemen:

Subject: Hawkins Substation Project
City Engineers Office/Hydrology
File No. D17-D12

PNM has expanded the topographical data concerning the Hawkins Substation site to include an area of approximately 5.4 acres. The topo map which is attached for your study is an extension of Public Service Company of New Mexico's (PNM) original substation site plan. The extension includes information on existing land contours for a distance of 200 feet south of the Arroyo del Pino and 500 feet west of Jefferson Street's west right of way line.

Attachments to the topo map are sections taken across the entire area in a north-south orientation and normal to the Arroyo del Pino's flow direction.

Also attached are calculations which project the overflow rate which might be expected to occur during a 100 year storm flood (1300 cfs channel flow rate) at the Jefferson Street crossing structure over the Arroyo del Pino. The overflow volume calculations address two separate conditions regarding blockage of the box structure culvert.

Case 1 - Culvert not blocked (445 cfs overflow)
Case 2 - Culvert partially blocked with 2.5 ft. of silt (this condition was observed on May 10, 1982), 868 cfs overflow.

Section 'A-A' (taken at the Jefferson Street west right-of-way line) clearly demonstrates that the overflow must reach elevation 5144.80 before an earth berm would be required to prevent the water from flowing in the direction of the substation property. The calculations associated with Section 'A-A' demonstrate, by use of the Manning equations for open channel flow, that the area to the south and below elevation 5144.80 (including the Arroyo del Pino) will handle a flow rate of 7086 cfs.

Section 'B-B' expands this rationale further by demonstration of the area to the south and below elevation 5144.5. This cross section should handle 12,702 cfs.

Jefferson Street's east curb line profile is shown as Section 'A_o-A_o' for your consideration. By horizontal projection of elevation 5144.80 (from section 'A-A') upon the cross section 'A_o-A_o'. An effective spillway cross sectional area of 166 ft^2 is obtained above the Jefferson Street east curb line. This spillway cross section should effectively handle a flow rate of 1733 cfs. Any overflows of less than 1733 cfs should either flow back into the Arroyo del Pino after crossing Jefferson Street or should flow in a south-westerly direction away from the substation and eventually back into the Arroyo del Pino over the south channel bank.

Sections 'G-G' and 'H-H' (at the substation) are included for your information. These will demonstrate that a natural drainage swale exists, partly on PNM property, directly to the north of the Hawkins Substation site. The natural contour of this small arroyo was not disturbed by the PNM construction.

As was outlined in the Hawkins Substation drainage plan, any off-site drainage flows originating between the substation east property line and the west right-of-way line of Jefferson Street will either follow their natural course through the drainage swale north of the PNM property or will be handled by the drainage system of the Hawkins Project, i.e. ponding behind the west curb and gradual release as sheet flow.

If you concur with the information presented, I ask that your office transmit your concurrance that an earth berm is not required at the Hawkins Substation.

Sincerely,

Robert L. Perlichek
Substation Engineer

RLP:mjm
Enclosure

cc: Mr. Leo Archuleta, w/o enclosure
Mr. Dennis E. Hines, " "
Mr. Gordon Holden, " "
Mr. Ted Kircher, " "
Ms. Valinda Parker, " "

PUBLIC SERVICE COMPANY OF NEW MEXICO
SYSTEM ENGINEERING

PROJECT: HAWKINS SUBSTATION	FILE	SHEET 1 OF 1
COMPONENT: SOUTH PINO ARROYO BOX CULVERT CROSSING	BY: H.L.P.	DATE: 5-11-82
JEFFERSON ST. OVERFLOW CALCULATIONS	CHECKED BY: ATW	DATE: 5-11-82

CASE (1) CULVERT NOT BLOCKED.
HW = WATER DEPTH AT UPSTREAM END ~ THIS DEPTH LIMIT CONSIDERED TO BE DETERMINED BY THE JEFFERSON ST. E. CURB LINE AT ELEV. 5143.83 ~ SEE ATTACHED FIG. 11 FOR GRAPHICAL ANALYSIS
WINGWALL FLARE α = 18.4° ⇒ USE SCALE #2 ON FIG 11
BOX STRUCTURE RECTANGULAR DIMENSIONS: 6'x18'
H = 6 HW = WATER DEPTH = 5143.83 - 5136.81 = 7.02'
W = 18

HW/D = 7.02/6 = 1.17'
RATIO OF DISCHARGE TO WIDTH IN cfs PER foot = Q/W
Q/W = 47.5 cfs/ft
SINCE CULVERT IS 18' WIDE ⇒ DISCHARGE WILL BE (18)(47.5) = 855 cfs
100 YEAR STORM FLOW RATE PROJECTED AT 1300 cfs.
∴ OVERFLOW (CASE 1) = 1300 - 855 = 445 cfs.

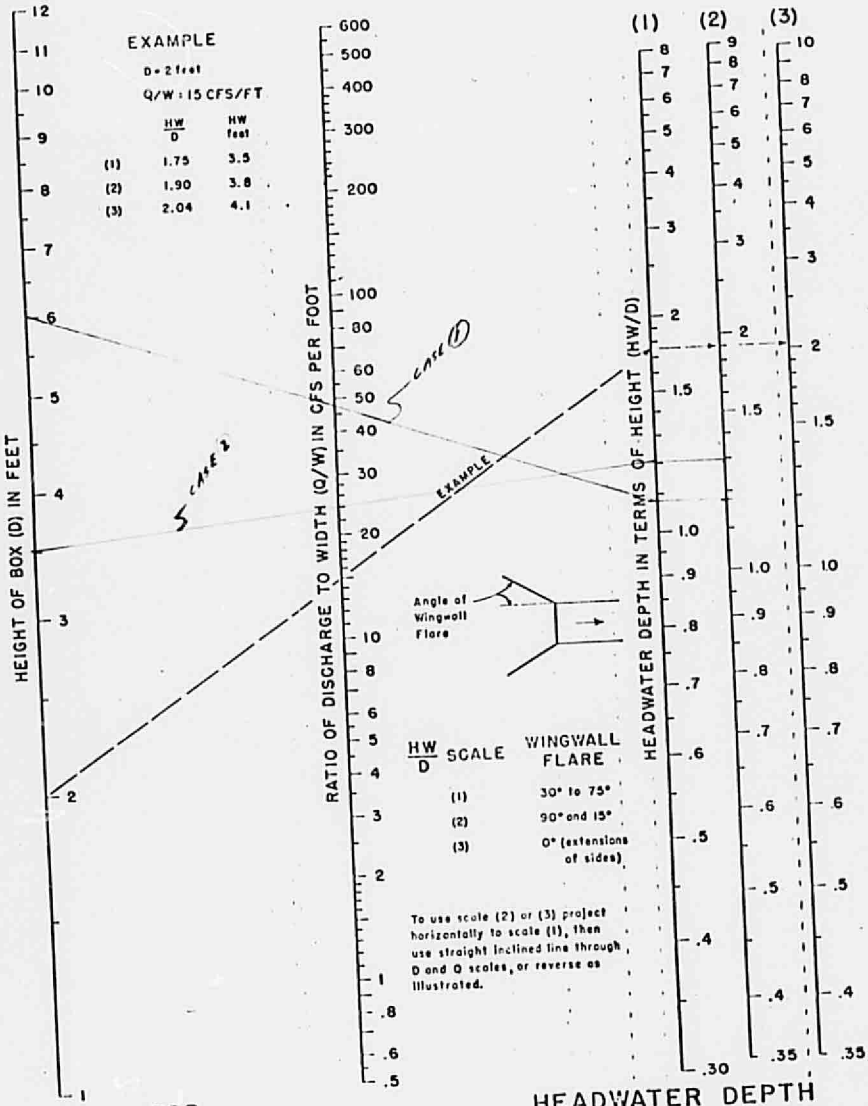
CASE (2) CULVERT BLOCKED WITH 2.5' OF SILT (PRESENT CONDITION [illegible])

⇒ H = (6 - 2.5) = 3.5' HW = WATER DEPTH = 5143.83 - 5139.31 = 4.52'
W = 18'

HW/D = 4.52/3.5 = 1.29'

RATIO OF DISCHARGE TO WIDTH IN cfs PER FOOT = Q/W
Q/W = 24 cfs./ft.
SINCE CULVERT IS 18' WIDE ⇒ DISCHARGE WILL BE (18)(24) = 432 cfs.
100 YEAR STORM FLOW RATE PROJECTED AT 1300 cfs
∴ OVERFLOW (CASE 2) = 1300 - 432 = 868 cfs.

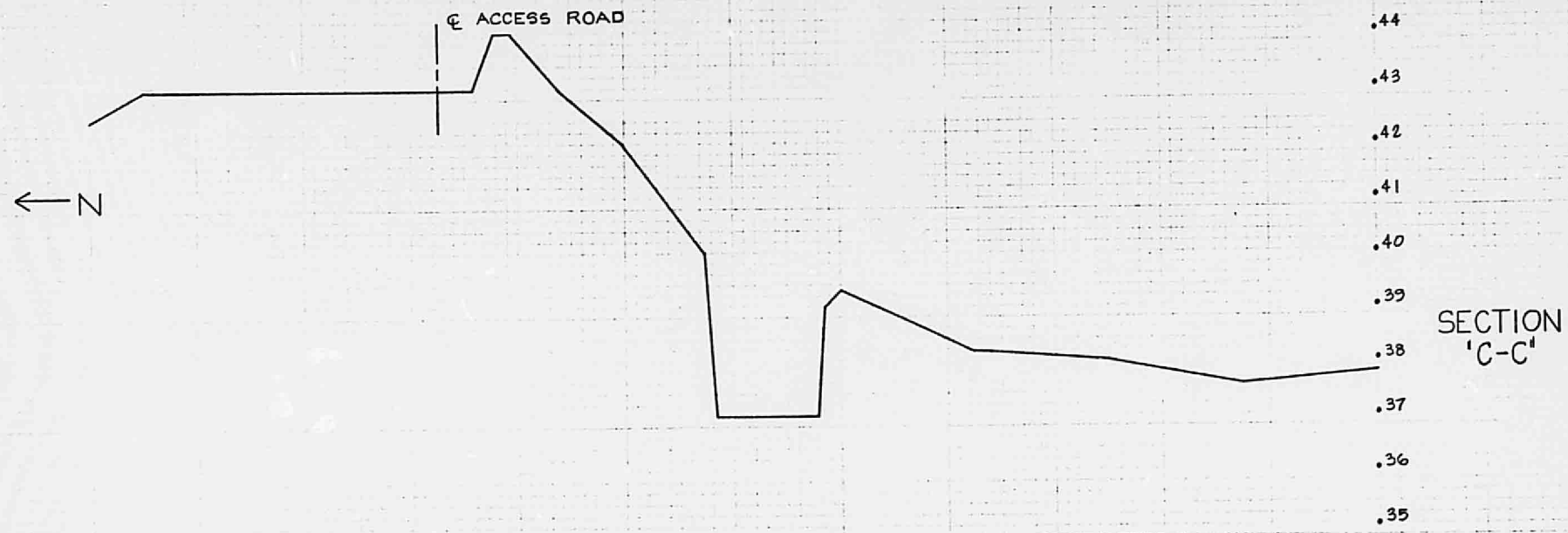
PNM 992 7/80

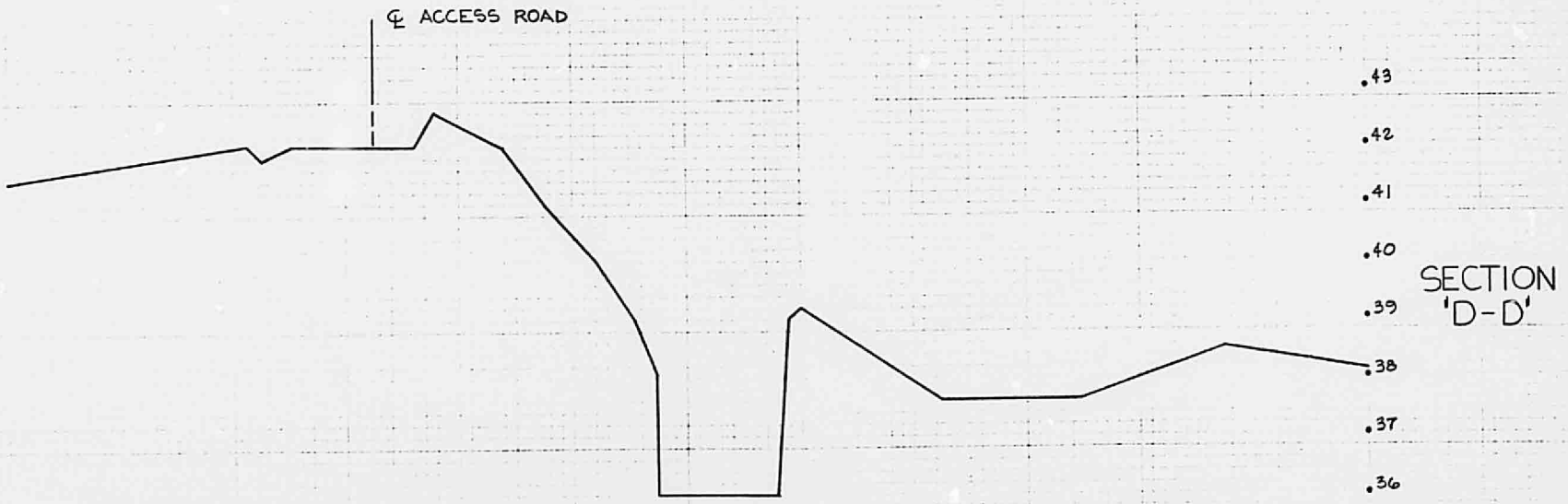


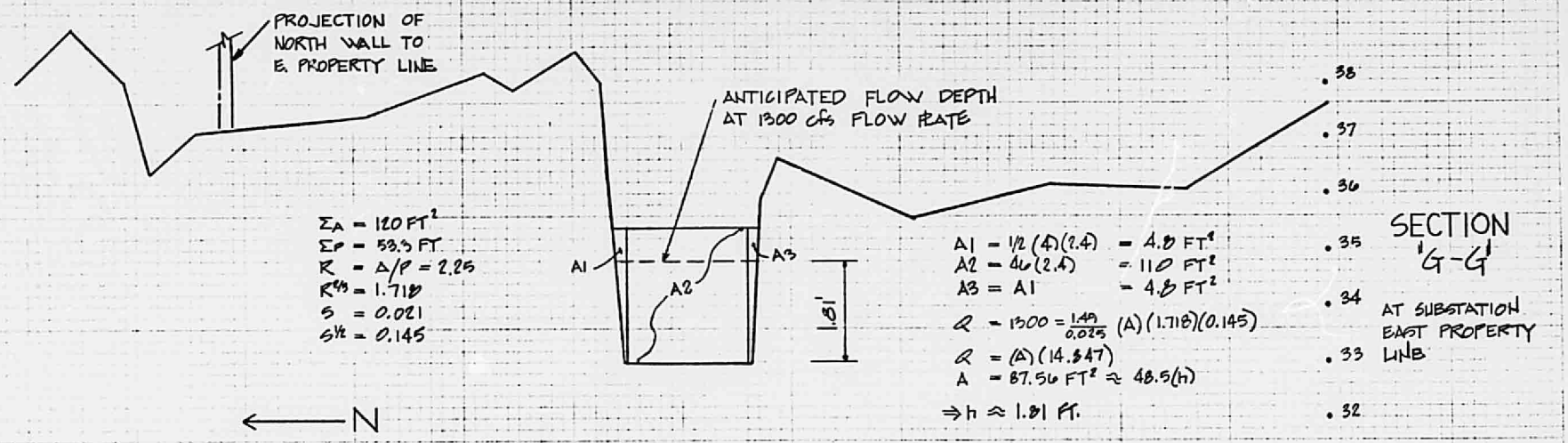
B.P.R.

HEADWATER DEPTH FOR BOX CULVERTS WITH INLET CONTROL

Figure 11


℄ ACCESS ROAD
← N
.44
.43
.42
.41
.40
.39
.38
.37
.36
.35
SECTION 'C-C'


℄ ACCESS ROAD
.43
.42
.41
.40
.39
.38
.37
.36
SECTION 'D-D'



$\Sigma A = 120\ FT^2$
$\Sigma P = 53.3\ FT$
$R = A/P = 2.25$
$R^{2/3} = 1.718$
$S = 0.021$
$S^{1/2} = 0.145$

$A1 = 1/2\,(4)(2.4) = 4.8\ FT^2$
$A2 = 46\,(2.4) = 110\ FT^2$
$A3 = A1 = 4.8\ FT^2$

$Q = 1300 = \frac{1.49}{0.025}\,(A)(1.718)(0.145)$

$Q = (A)(14.847)$

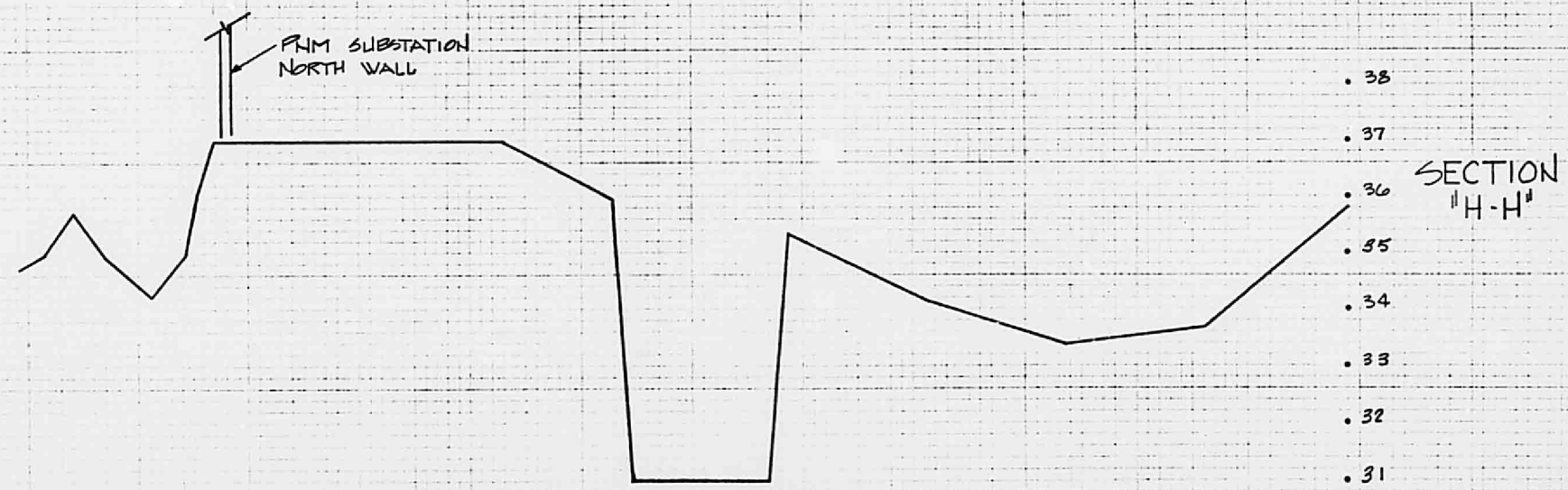
$A = 87.56\ FT^2 \approx 48.5(h)$

$\Rightarrow h \approx 1.81\ FT.$

← N

SECTION "G-G"

AT SUBSTATION EAST PROPERTY LINE



SECTION "H-H"

SECTION 'A. - A.'

PROFILE OF EAST CURB LINE - JEFFERSON STREET

SCALE:
HORIZ.: 1" = 40'-0"
VERT.: 1" = 0.4'

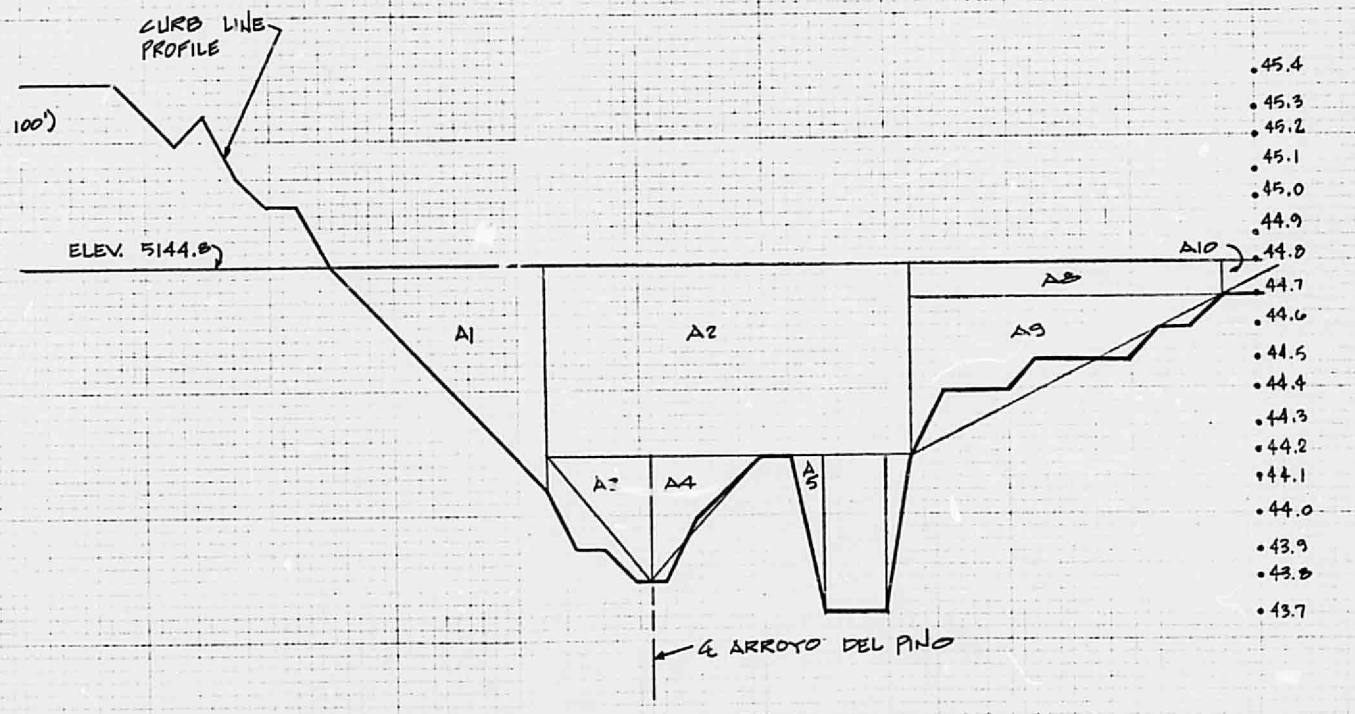
A1 = ½ (0.7) 70 = 24.5 FT²
A2 = (0.6) 120 = 72.0 FT²
A3 = ½ (0.5) 35 = 8.8 FT²
A4 = A3 = 8.8 FT²
A5 = ½ (0.5) 10 = 2.5 FT²
A6 = (0.5) 19 = 9.5 FT²
A7 = A5 = 2.5 FT²
A8 = (0.1) 103 = 10.3 FT²
A9 = ½ (0.5) 103 = 25.8 FT²
A10 = ½ (0.1) 22 = 1.1 FT²

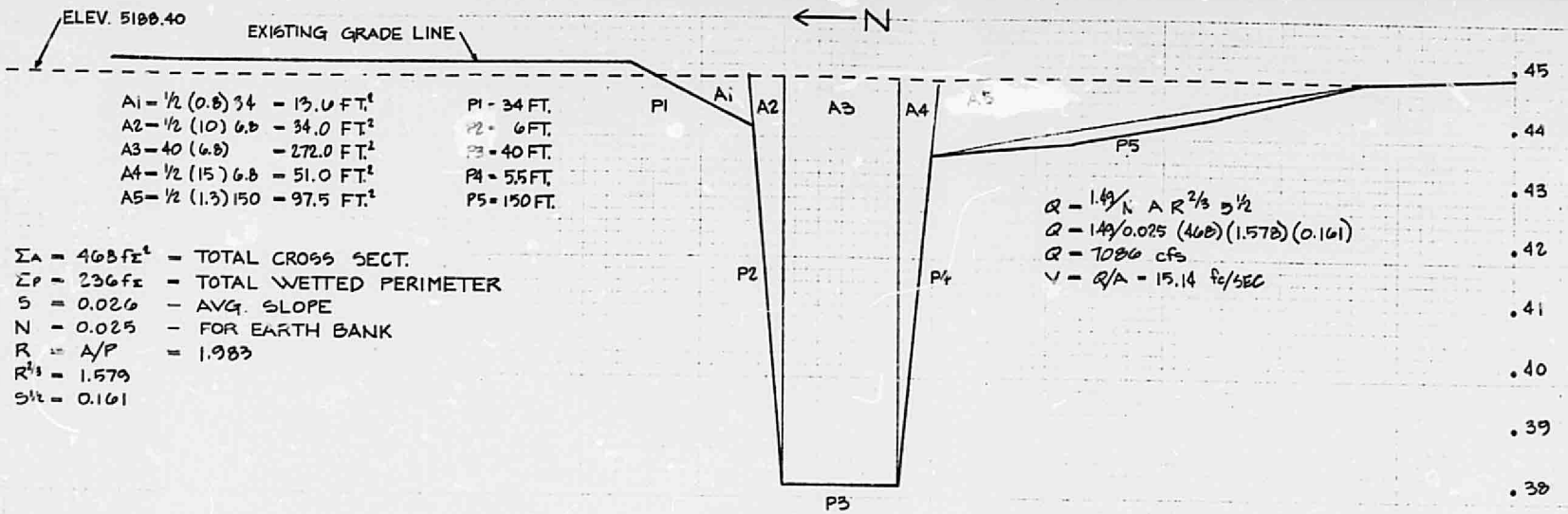
ΣA = 166 FT²
P = 314 FT.
R = A/P = 0.529
$R^{2/3}$ = 0.654
S = 0.0224 (MEASURED UPSTREAM OVER 100')
$S^{1/2}$ = 0.150
N = 0.014 - UNFINISHED CONCRETE

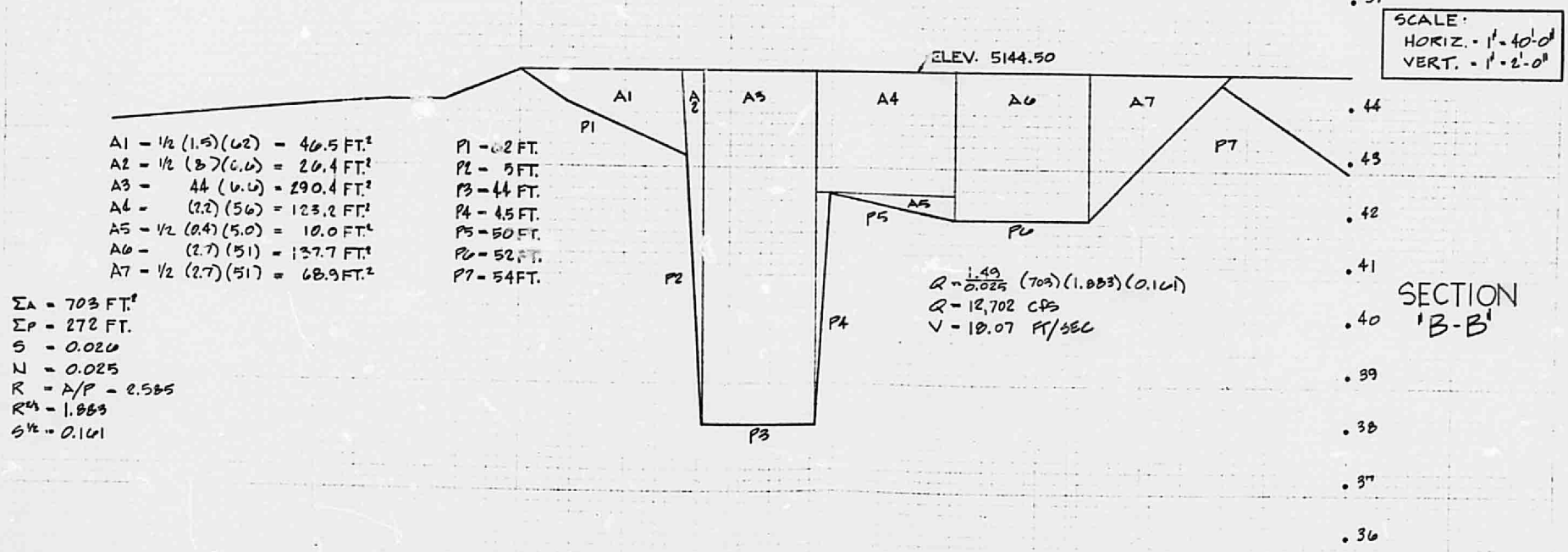
$Q = \frac{1.49}{N} A R^{2/3} S^{1/2}$

$Q = \frac{1.49}{0.014} (0.654)(0.150)(166)$

Q = 1733 cfs




ELEV. 5188.40
EXISTING GRADE LINE
← N
A1 = 1/2 (0.8) 34 = 13.6 FT.²
A2 = 1/2 (10) 6.8 = 34.0 FT.²
A3 = 40 (6.8) = 272.0 FT.²
A4 = 1/2 (15) 6.8 = 51.0 FT.²
A5 = 1/2 (1.3) 150 = 97.5 FT.²
P1 = 34 FT.
P2 = 6 FT.
P3 = 40 FT.
P4 = 5.5 FT.
P5 = 150 FT.
ΣA = 468 FT² = TOTAL CROSS SECT.
ΣP = 236 FT = TOTAL WETTED PERIMETER
S = 0.026 = AVG. SLOPE
N = 0.025 = FOR EARTH BANK
R = A/P = 1.983
R^2/3 = 1.579
S^1/2 = 0.161
Q = 1.49/N A R^2/3 S^1/2
Q = 149/0.025 (468) (1.578) (0.161)
Q = 7086 cfs
V = Q/A = 15.14 ft/SEC
SECTION 'A-A'
AT W. R.O.W. LINE JEFFERSON ST.
45
44
43
42
41
40
39
38
37


ELEV. 5144.50
A1 = 1/2 (1.5)(62) = 46.5 FT.²
A2 = 1/2 (8.7)(6.0) = 26.4 FT.²
A3 = 44 (6.6) = 290.4 FT.²
A4 = (2.2) (56) = 123.2 FT.²
A5 = 1/2 (0.4) (5.0) = 10.0 FT.²
A6 = (2.7) (51) = 137.7 FT.²
A7 = 1/2 (2.7) (51) = 68.9 FT.²
P1 = 62 FT.
P2 = 5 FT.
P3 = 44 FT.
P4 = 4.5 FT.
P5 = 50 FT.
P6 = 52 FT.
P7 = 54 FT.
ΣA = 703 FT.²
ΣP = 272 FT.
S = 0.026
N = 0.025
R = A/P = 2.585
R^2/3 = 1.883
S^1/2 = 0.161
Q = 1.49/0.025 (703) (1.883) (0.161)
Q = 12,702 cfs
V = 18.07 FT/SEC
SCALE:
HORIZ. = 1" = 40'-0"
VERT. = 1" = 2'-0"
SECTION 'B-B'
44
43
42
41
40
39
38
37
36