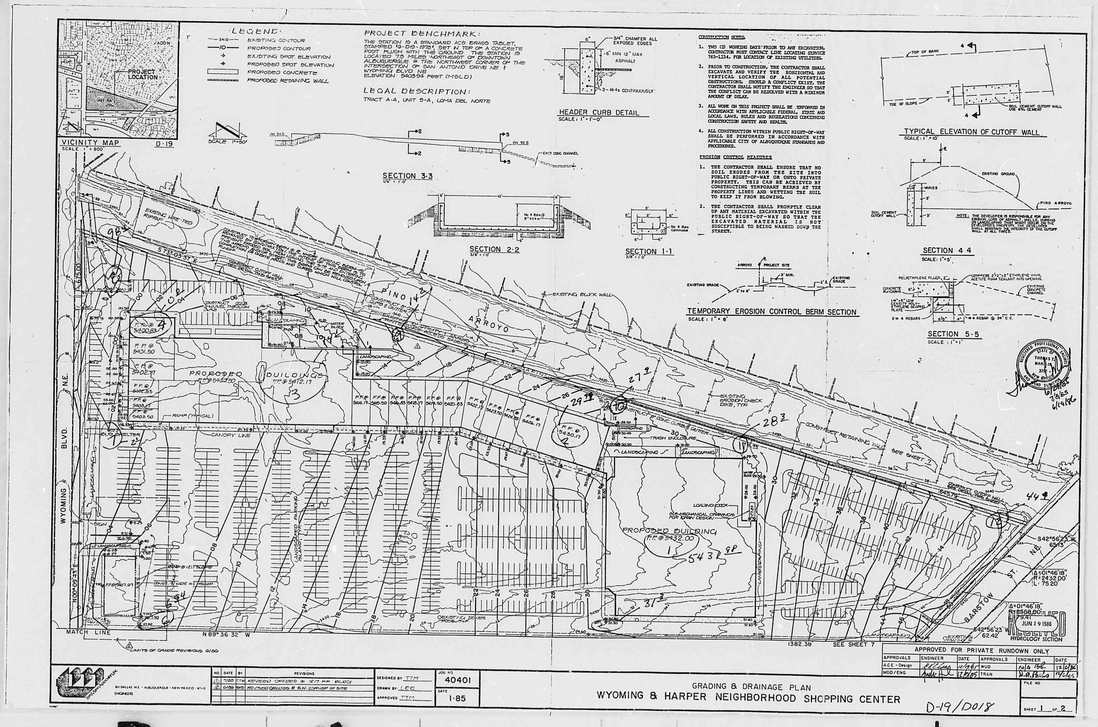


C B A

C B A


Ref. 21 DATE 2-24-93 OP 1 OF 1

CITY OF ALBUQUERQUE

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CITY CLERK RECORDER

OFFICIAL SEAL
NORBERTA SANCHEZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: MAY 8 1995

Norberta Sanchez

CITY OF ALBUQUERQUE
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PLANS/PLATS ON FILE

FILE DESC: D-19 / D 018

# PLANS/PLATS 3


C 20 B 16 A 12

CITY OF ALBUQUERQUE

C

VICINITY MAP
SCALE 1" = 800'

D-19

## LEGEND

- 5410 — EXISTING CONTOUR
- 10 — PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- PROPOSED CONCRETE
- PROPOSED RETAINING WALL

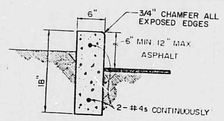
## PROJECT BENCHMARK:

THE STATION IS A STANDARD ACS BRASS TABLET, STAMPED 12-D19-1976, SET IN TOP OF A CONCRETE POST FLUSH WITH THE GROUND. THE STATION IS LOCATED 7.5 MILES NORTHEAST OF DOWNTOWN ALBUQUERQUE @ THE NORTHWEST CORNER OF THE INTERSECTION OF SAN ANTONIO DRIVE NE & WYOMING BLVD. NE.
ELEVATION: 5409.54 FEET (NGLD)

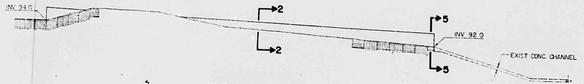
## LEGAL DESCRIPTION:

TRACT A-A, UNIT 3-A, LOMA DEL NORTE

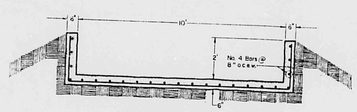
SCALE 1"=50'



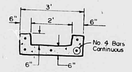

HEADER CURB DETAIL
SCALE: 1"=1'-0"




SECTION 3-3
1/8"=1'0"




SECTION 2-2
3/8"=1'0"



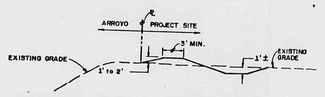

SECTION 1-1
3/8"=1'0"

### CONSTRUCTION NOTES:

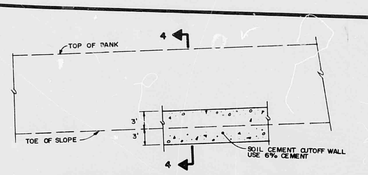
1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

### EROSION CONTROL MEASURES

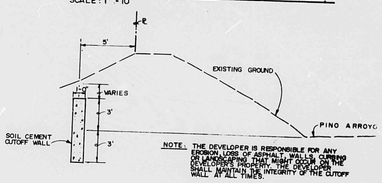
1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.



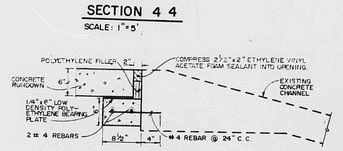

TEMPORARY EROSION CONTROL BERM SECTION
SCALE: 1"=6'




TYPICAL ELEVATION OF CUTOFF WALL
SCALE: 1"=10'




SECTION 4-4
SCALE: 1"=5'




SECTION 5-5
SCALE: 1"=1'

REGISTERED PROFESSIONAL ENGINEER
STATE OF NEW MEXICO
THOMAS T. MANN JR.
7/8/85
6/19/86

THIS PLAN SHOT TWICE
ONCE ON LIGHT AND
ONCE ON DARK.

CITY OF ALBUQUERQUE
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Ref. 21 DATE 12/4/53 COR LOR
CITY OF ALBUQUERQUE

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Karen Aanes
CITY CLERK RECORDER

OFFICIAL SEAL
NORBERTA SANCHEZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires MAY 8 1988
Norberta Sanchez

RECEIVED
JUN 19 1986
HYDROLOGY SECTION

APPROVED FOR PRIVATE RUNDOWN ONLY

| APPROVALS | ENGINEER | DATE | APPROVALS | ENGINEER | DATE |
|---|---|---|---|---|---|
| A.C.E. - Design | | 11/4/86 | WUD | N/A | 12/2/86 |
| MDD/ENG | | 12/5/85 | TRAN | D.A. Perko | 11/6/85 |

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|
| 1 | 7/85 | TTM | REVISED GRADES @ 12.17 P.F. BLDG. |
| 2 | 6/86 | EAS | REVISED GRADES @ S.W. CORNER OF SITE |

DESIGNED BY TTM
DRAWN BY LDD
APPROVED TTM
JOB NO. 40401
DATE 1-85

GRADING & DRAINAGE PLAN
WYOMING & HARPER NEIGHBORHOOD SHOPPING CENTER

FILE NO.
SHEET 1 OF 2

811 DALLAS, N.E. - ALBUQUERQUE - NEW MEXICO - 87110
ENGINEERS

D-19/D018

D 24 C 20 B 16 A 12

CITY OF ALBUQUERQUE C D

VICINITY MAP
SCALE: 1" = 800'

D-19

PROJECT LOCATION

ADDN

UNIT 5A

UNIT 5A

## LEGEND

- 5410 — EXISTING CONTOUR
- 10 — PROPOSED CONTOUR
- + EXISTING SPOT ELEVATION
- + PROPOSED SPOT ELEVATION
- EXISTING CONCRETE
- PROPOSED CONCRETE
- PROPOSED RETAINING WALL

SCALE: 1"=50'

## PROJECT BENCHMARK:

THE STATION IS A STANDARD ACS BRASS TABLET STAMPED "D-D19-1978" SET IN TOP OF A CONCRETE POST FLUSH WITH THE GROUND. THE STATION IS LOCATED 4.8 MILES NORTHEAST OF DOWNTOWN ALBUQUERQUE @ THE NORTHWEST CORNER OF THE INTERSECTION OF SAN ANTONIO DRIVE NE & WYOMING BLVD NE.
ELEVATION 6208.61 FEET (HELD)

## LEGAL DESCRIPTION:

TRACT A-A, UNIT 5-A, LOMA DEL NORTE

SECTION 3-3
1/8" = 1'-0"

SECTION 2-2
3/8" = 1'-0"

SECTION 1-1
3/8" = 1'-0"

HEADER CURB DETAIL
SCALE: 1"=1'-0"

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
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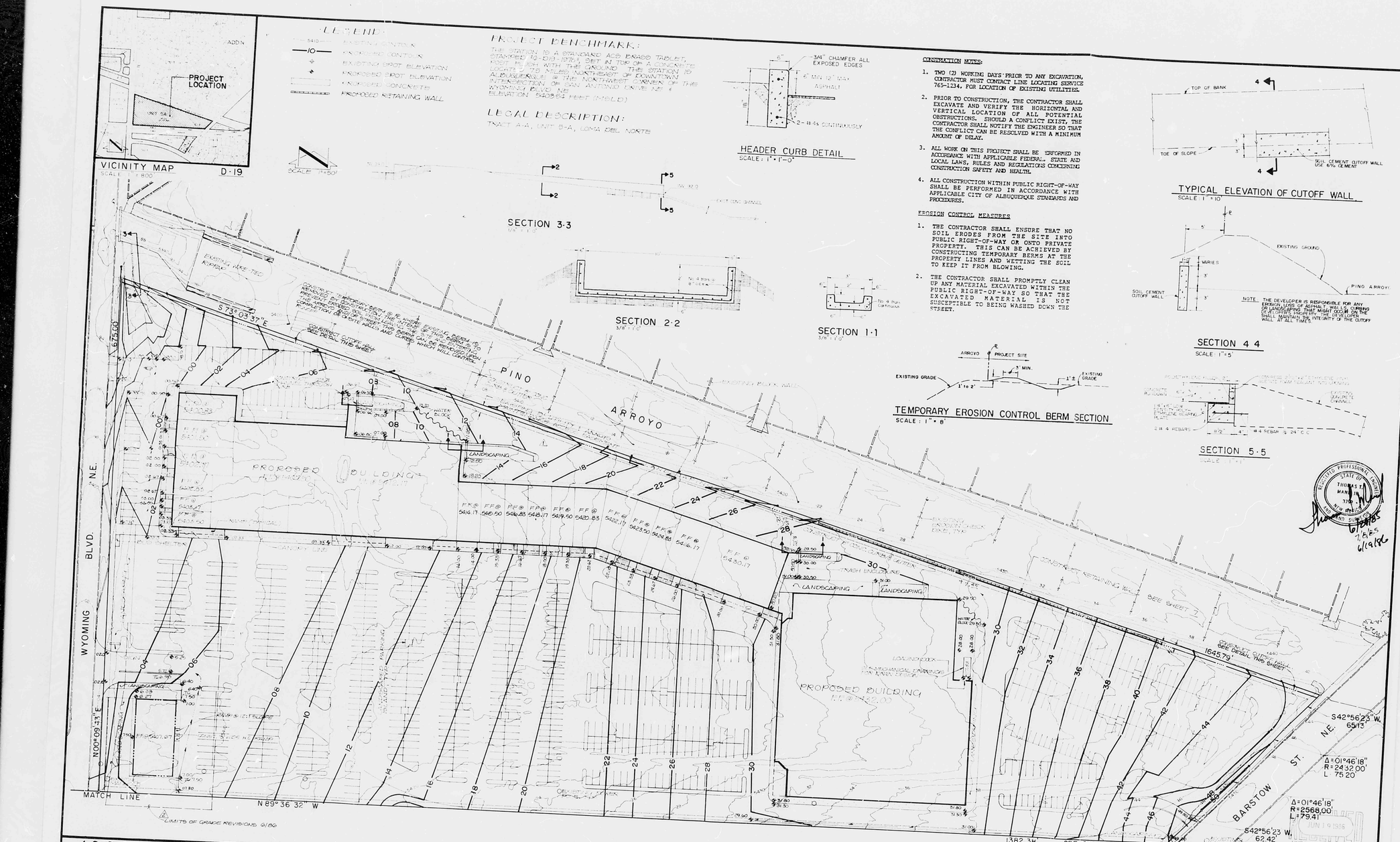
TEMPORARY EROSION CONTROL BERM SECTION
SCALE: 1"=8'

TYPICAL ELEVATION OF CUTOFF WALL
SCALE: 1"=10'

SECTION 4-4
SCALE: 1"=5'

NOTE: THE DEVELOPER IS RESPONSIBLE FOR ANY EROSION, LOSS OF ASPHALT, WALLS, CURBING OR LANDSCAPING THAT MIGHT OCCUR ON THE DEVELOPMENT. THE DEVELOPER SHALL MAINTAIN THE INTEGRITY OF THE CUTOFF WALL AT ALL TIMES.

SECTION 5-5
SCALE: 1"=1'




| NO. | DATE | BY | REVISIONS |
|---|---|---|---|
| 1 | 7/85 | TTM | REVISED SIZES & TYP FF PLACES |
| 2 | 6/86 | GKD | REVISED GRADES @ S.W. CORNER OF SITE |

BU DALLAS N.E. - ALBUQUERQUE - NEW MEXICO - 87113
ENGINEERS

DESIGNED BY TTM
DRAWN BY LFD
APPROVED TTM

JOB NO 40401
DATE 1-85

GRADING & DRAINAGE PLAN
WYOMING & HARPER NEIGHBORHOOD SHOPPING CENTER

APPROVED FOR PRIVATE RUNDOWN ONLY

| APPROVALS | ENGINEER | DATE | APPROVALS | ENGINEER | DATE |
|---|---|---|---|---|---|
| A.C.E. - Design | | | WUD | N/A | |
| MOD / ENG | | 12/2/85 | TRAN | D.A. Parks | 12/6/85 |

FILE NO.

SHEET 1 OF 2

D19/D018

THOMAS E. MANN
NEW MEXICO
7756
REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR
STATE OF NEW MEXICO
12/5/85
7/8/85
6/19/86

THIS PLAN SHOT TWICE
ONCE ON LIGHT AND
ONCE ON DARK.

CITY OF ALBUQUERQUE
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Ref. 21 DATE 2-4-93 OP 632

CITY OF ALBUQUERQUE

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RECEIVED JUN 1 6 1986 HYDROLOGY SECTION

CITY CLERK RECORDER

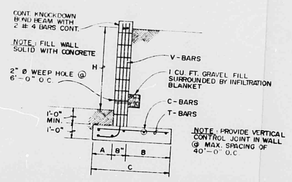
OFFICIAL SEAL
NORBERTA SANCHEZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 11 MAY 8 1987

Norberta Sanchez

D 24 C 20 B 16 A 12

CITY OF ALBUQUERQUE

C D




| WALL | H DIMENSION | A | B | C | V-BAR | C-BARS | T-BARS |
|---|---|---|---|---|---|---|---|
| A | 5'-0" | 10" | 2'-2" | 3'-8" | #4 AT 16" O.C. | 4-#4 CONT. | #4 AT 28" O.C. |
| B | 4'-0" | 8" | 1'-8" | 3'-0" | #4 AT 24" O.C. | 4-#4 CONT. | #4 AT 32" O.C. |
| C | 3'-0" | 5" | 1'-3" | 2'-4" | #4 AT 32" O.C. | 3-#4 CONT. | #4 AT 40" O.C. |
| D | 0 TO 2'-0" | 4" | 4" | 1'-4" | #4 AT 48" O.C. | 2-#4 CONT. | #4 AT 48" O.C. |

**RETAINING WALL DETAIL**
NO SCALE

## VEGETATION FOR EROSION CONTROL

1. SEED RATE:

| Species | Pure Live Seed (lbs/acre)* |
|---|---|
| Annual Rye Grass | 8.0 |
| Giant Dropseed | 2.0 |
| Sand Dropseed | 1.0 |
| Indian Ricegrass | 4.0 |
| Sideoats Grama | 6.0 |
| Total: | 21.0 |

*Rates apply to drilled seed. Double rates listed if seed is broadcast.

2. SEED APPLICATION:

a. Flat areas - cultivate area to produce an acceptable, friable seed bed, then drill seed to a depth of 1/4 to 1/2 inches.

b. Slopes 3:1 or greater - hand broadcast and cultivate into top 1/4 to 1/2 inch of soil.

3. FERTILIZER

16-20-0 @ 200 lbs. per acre applied simultaneously with seed.

4. MULCH

5,000 lbs. hay mulch per acre. Hay mulch shall be crimped into the soil so as not to exceed 2 inches in depth.

5. WATERING SCHEDULE

CONTRACTOR shall maintain a wet seed bed for a period of at least 6 weeks following seeding.

## DRAINAGE PLAN

The following items concerning the Harper and Wyoming Neighborhood Commercial Center Drainage Plan are contained hereon:

1. Vicinity Map 2. Grading Plan 3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located between Wyoming Boulevard N.E. and Barstow N.E., and north of Harper N.E. and the PNM right-of-way. At present, the site is undeveloped.

As shown by Plate D-19 of the Albuquerque Master Drainage Study, this site does not lie within a designated Flood Hazard Zone. Further study reveals that the site is bordered on the north by the Pino Arroyo. The project site is higher than the arroyo, and, therefore, flood waters are contained within the arroyo right-of-way. Barstow N.E. lies to the east of the property. The project site is lower than Barstow N.E., however, there is very little flow in Barstow adjacent to the site. The PNM easement lies south of the site. The easement is higher than the project site. The easement essentially traverses a ridge line, therefore, flows from the south are at a minimum. Wyoming Boulevard N.E. lies to the west of the site. The project site is higher than Wyoming Boulevard N.E. Offsite flows to the site are minimal. Any offsite flows entering the site will be routed through the site to the Pino Arroyo.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1'-0" intervals, 2) continuity between existing and proposed elevations, 3) the limit and character of existing improvements, and 4) the limit and character of proposed improvements. As shown by this plan, the proposed improvements consist of the construction of buildings and asphalt paving. A retaining wall will be required along the north boundary at the east end of the project. The site will be graded so that all flows converge to the northwest corner of the site. A ponding area will be constructed to detain nuisance waters. All flows will be routed through the pond and will then exit into the Pino Arroyo.

Both sides of the arroyo will be stabalized with soil cement. The depth of flow is approximately 1.5'. A freeboard of 1.5' feet was added to the depth to give a treatment depth of 3' above and below flow line. The soil cement will contain 6% cement utilizing native soils.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will result in an increase in runoff from the site. This pattern of runoff is consistent with the conceptual drainage plan.

## CALCULATIONS

**Ground Cover Information**

From SCS Bernalillo County Soil Survey, Plate 21:
EtC - Embudo Tijeras
Hydrologic Soil Group B

**Rational Method**

Discharge: $Q = CIA$
where C varies
$i = P_6(6.84)T_c^{-0.51} = 5.28$ in/hr
$P_6 = 2.5$ in (DPM Plate 22.2 D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V = CP_6A(1/12)$
where C varies
$P_6 = 2.5$ in (DPM Plate 22.2 D-1)
A = area, sf

**Existing Condition**

$A_{total} = 674,352$ sf = 15.5 Ac
$A_{IMP} = 0$ sf; % impervious = 0
$C = 0.34$ (DPM Plate 22.2 C-1)
$Q_{100} = CIA = 0.34(5.28)(15.5) = 27.8$ cfs
$V_{100} = CP_6A = 0.34(2.5/12)(674,356) = 47,767$ cf

**Developed Condition**

$A_{total} = 674,352$ sf = 15.5 Ac
$A_{IMP} = 424,840$ sf; % impervious = 93%
$C = 0.89$ (DPM Plate 22.2 C-1)
$Q_{100} = CIA = 0.89(5.28)(15.5) = 72.8$ cfs
$V_{100} = CP_6A = 0.89(2.5/12)(674,356) = 125,036$ cf

**Comparison**

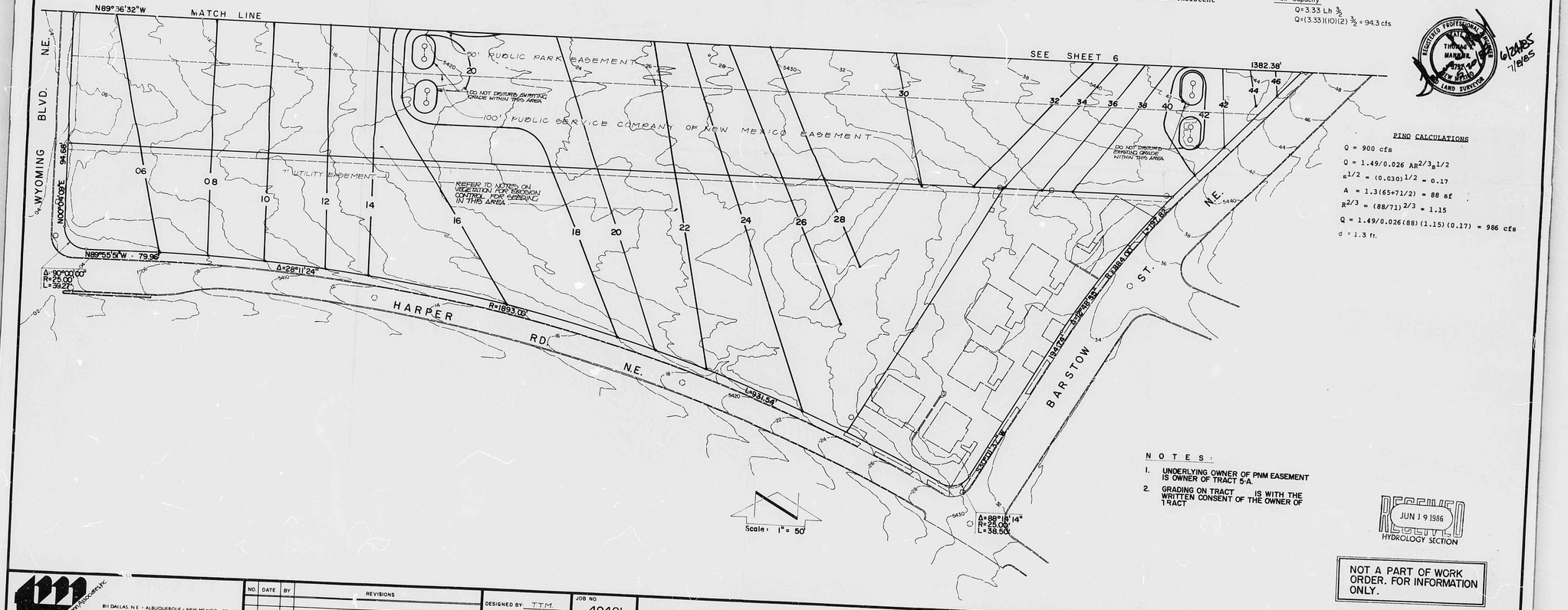
$\Delta Q_{100} = 72.8 - 27.8 = 45.0$ cf (increase)
$\Delta V_{100} = 125,036 - 47,767 = 77,269$ (increase)

Weir Capacity

$Q = 3.33\ Lh^{3/2}$
$Q = (3.33)(10)(2)^{3/2} = 94.3$ cfs

**PINO CALCULATIONS**

$Q = 900$ cfs
$Q = 1.49/0.026\ AR^{2/3}s^{1/2}$
$s^{1/2} = (0.030)^{1/2} = 0.17$
$A = 1.3(65+71/2) = 88$ sf
$R^{2/3} = (88/71)^{2/3} = 1.15$
$Q = 1.49/0.026(88)(1.15)(0.17) = 986$ cfs
$d = 1.3$ ft.




**NOTES:**

1. UNDERLYING OWNER OF PNM EASEMENT IS OWNER OF TRACT 5-A.
2. GRADING ON TRACT ___ IS WITH THE WRITTEN CONSENT OF THE OWNER OF TRACT ___

RECEIVED
JUN 19 1986
HYDROLOGY SECTION

NOT A PART OF WORK ORDER. FOR INFORMATION ONLY.

RECORDED PROFESSIONAL ENGINEER THOMAS T. MANUBE 8752 NEW MEXICO LAND SURVEYOR
6/26/86
7/18/86

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REF. 21 DATE 2/24/93 OF 4 OP

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NORBERTA SANCHEZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 11/19/ 8 1995

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

BRADLEY-MAPPIN ASSOCIATES P.C.
811 DALLAS, N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

DESIGNED BY T.T.M.
DRAWN BY L.B.D.
APPROVED T.T.M.
JOB NO. 4040I
DATE 01/85

GRADING & DRAINAGE PLAN
WYOMING & HARPER NEIGHBORHOOD SHOPPING CENTER

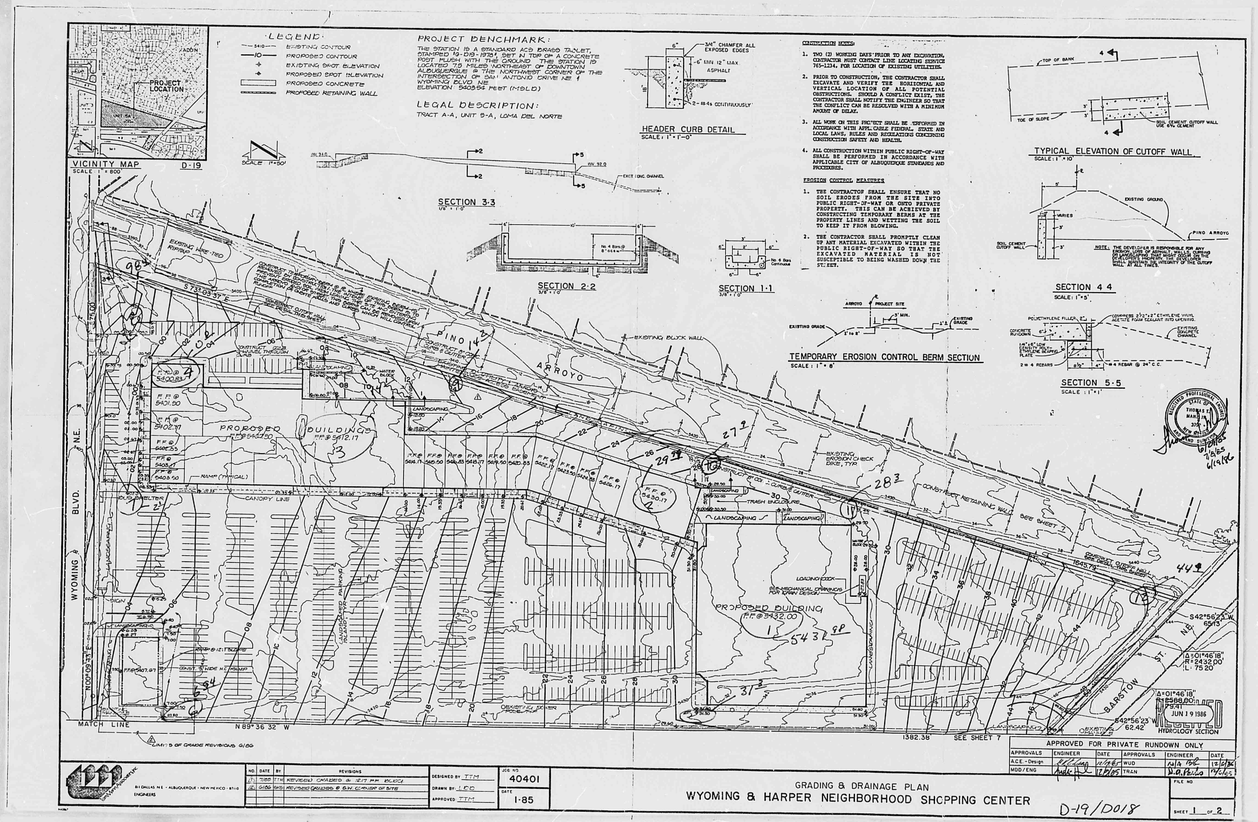
FILE NO.
SHEET 2 OF 2

D-19 / D018

D 24 C 20 B 16 A 12

CITY OF ALBUQUERQUE

C D

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C B A

R# 21 DATE 22453 CP LSP

CITY OF ALBUQUERQUE

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STATE OF NEW MEXICO
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PLANS/PLATS ON FILE

FILE DESC: D-19/D018

# PLANS/PLATS 3

C B A

C 20 B 16 A 12

CITY OF ALBUQUERQUE

C

VICINITY MAP D-19
SCALE 1" = 800'

## LEGEND

- 5410 — EXISTING CONTOUR
- 10 — PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- PROPOSED CONCRETE
- PROPOSED RETAINING WALL

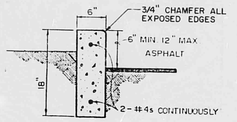
SCALE 1"=50'

## PROJECT BENCHMARK:

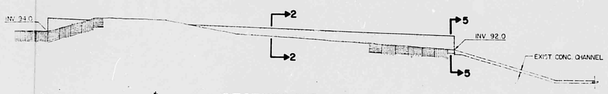
THE STATION IS A STANDARD ACE BRASS TABLET, STAMPED 16-D19-1976, SET IN TOP OF A CONCRETE POST FLUSH WITH THE GROUND. THE STATION IS LOCATED 7.5 MILES NORTHEAST OF DOWNTOWN ALBUQUERQUE @ THE NORTHWEST CORNER OF THE INTERSECTION OF SAN ANTONIO DRIVE NE & WYOMING BLVD. NE. ELEVATION: 5403.54 FEET (M.S.L.D.)

## LEGAL DESCRIPTION:

TRACT A-A, UNIT 5-A, LOMA DEL NORTE




HEADER CURB DETAIL
SCALE: 1"=1'-0"




SECTION 3-3
1/8" = 1'-0"




SECTION 2-2
3/8" = 1'-0"




SECTION 1-1
3/8" = 1'-0"

CONSTRUCTION NOTES:

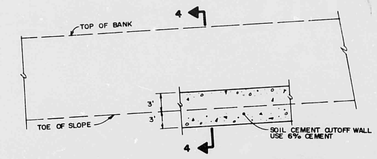
1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.




TEMPORARY EROSION CONTROL BERM SECTION
SCALE: 1" = 8'




TYPICAL ELEVATION OF CUTOFF WALL
SCALE: 1" = 10'



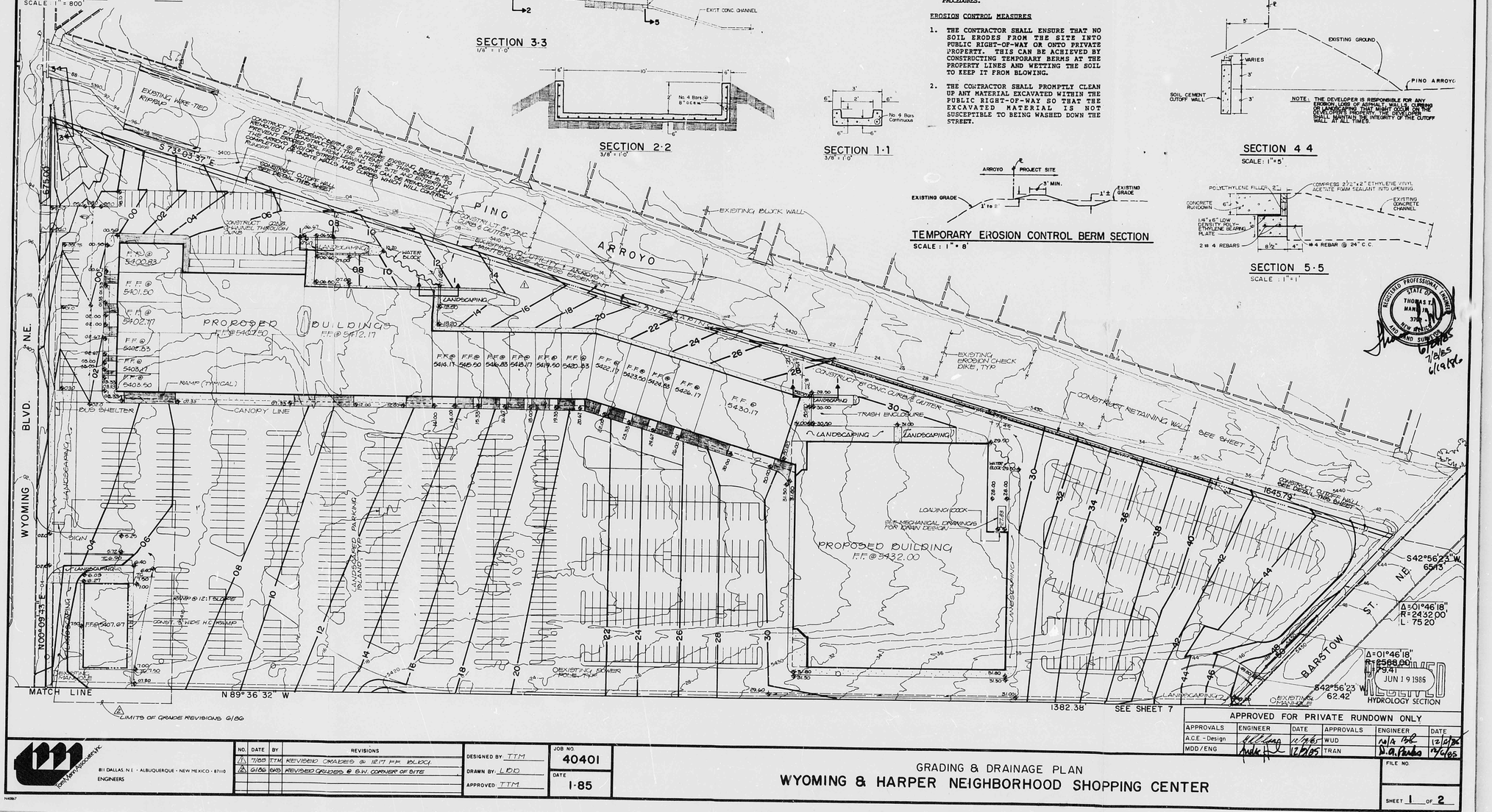

SECTION 4 4
SCALE: 1"=5'




SECTION 5-5
SCALE: 1"=1'




7/8/85
6/19/85

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JUN 19 1985
HYDROLOGY SECTION

| APPROVED FOR PRIVATE RUNDOWN ONLY | | | | | |
|---|---|---|---|---|---|
| APPROVALS | ENGINEER | DATE | APPROVALS | ENGINEER | DATE |
| A.C.E. - Design | | 11/4/85 | WUD | N/A | 12/6/85 |
| MDD/ENG | | 12/5/85 | TRAN | D.A. Perdue | 12/6/85 |

THIS PLAN SHOT TWICE ONCE ON LIGHT AND ONCE ON DARK.

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

Roll 21 DATE 6-24-53 OF 58

CITY OF ALBUQUERQUE

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Karen Aceves
CITY CLERK RECORDER

OFFICIAL SEAL
NORBERTA SANCHEZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 11 May 8 1986
Norberta Sanchez

811 DALLAS, N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|
| 1 | 7/85 | TTM | REVISED GRADES @ 12.17 FF BLDG. |
| 2 | 6/86 | GKS | REVISED GRADES @ S.W. CORNER OF SITE |

DESIGNED BY: T.T.M.
DRAWN BY: L.D.D.
APPROVED: T.T.M.

JOB NO. 40401
DATE 1-85

GRADING & DRAINAGE PLAN
WYOMING & HARPER NEIGHBORHOOD SHOPPING CENTER

FILE NO.
SHEET 1 OF 2

D19/D018

D 24 C 20 B 16 A 12 | CITY OF ALBUQUERQUE | C D

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING CONCRETE
- PROPOSED RETAINING WALL

PROJECT BENCHMARK:

THE STATION IS A STANDARD ACS BRASS TABLET, STAMPED 13-D19-1974, SET IN TOP OF A CONCRETE POST FLUSH WITH THE GROUND. THE STATION IS LOCATED 7.9 MILES NORTHEAST OF DOWNTOWN ALBUQUERQUE, @ THE NORTHWEST CORNER OF THE INTERSECTION OF SAN ANTONIO DRIVE NE & WYOMING BLVD NE.
ELEVATION 5420.84 FEET (MSL D)

LEGAL DESCRIPTION:

TRACT A-A, UNIT B-A, LOMA DEL NORTE

VICINITY MAP
SCALE: 1"=800'
D-19

HEADER CURB DETAIL
SCALE: 1"=1'-0"

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
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2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

TYPICAL ELEVATION OF CUTOFF WALL
SCALE: 1"=10'

SECTION 3-3
3/8"=1'-0"

SECTION 2-2
3/8"=1'-0"

SECTION 1-1
3/8"=1'-0"

TEMPORARY EROSION CONTROL BERM SECTION
SCALE: 1"=8'

SECTION 4-4
SCALE: 1"=5'

SECTION 5-5
SCALE: 1"=5'

PROJECT LOCATION

PROJECT BENCHMARK: THE STATION IS A STANDARD ACS BRASS TABLET, STAMPED 13-D19-1974, SET IN TOP OF A CONCRETE POST FLUSH, WITH THE GROUND. THE STATION IS LOCATED 7.9 MILES NORTHEAST OF DOWNTOWN ALBUQUERQUE, @ THE NORTHWEST CORNER OF THE INTERSECTION OF SAN ANTONIO DRIVE NE & WYOMING BLVD NE. ELEVATION 5420.84 FEET (MSL D)

LEGAL DESCRIPTION: TRACT A-A, UNIT B-A, LOMA DEL NORTE

EXISTING 6" HEADER CURB TO BE REMOVED & REPLACED WITH 6" MIN. 12" MAX. ASPHALT HEADER CURB AS REQUIRED TO PROVIDE FOR PROPER DRAINAGE AT COMPLETION OF CONSTRUCTION. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS POSSIBLE AFTER COMPLETION OF CONSTRUCTION.

SEDIMENTARY BERM S.F.E. SHALL BE PLACED AT THE PROPERTY LINE AT THE TIME OF THE START OF CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL THE INTENT OF THIS BERM IS ACCOMPLISHED BY OTHER MEANS. THIS BERM CAN BE REMOVED UPON COMPLETION OF CONSTRUCTION AND REVEGETATION OF DISTURBED AREAS AND CLEARED W/ EPA HILL CONTROL.

SOIL CEMENT CUTOFF WALL SEE DETAIL THIS SHEET

EXISTING LAKE TIED

PROPOSED BUILDING

PROPOSED BUILDING FF @ 5422.00

PINO ARROYO

WYOMING BLVD. N.E.

BARSTOW ST. N.E.

S73°03'37"E 275.00

N00°09'13"E

N89°36'32"W

S42°56'23"W 65.13

S42°56'23"W 62.42

Δ=01°46'18" R=2432.00' L=75.20

Δ=01°46'18" R=2568.00' L=79.41

1645.79'

1382.38'

SEE SHEET 7

MATCH LINE

LANDSCAPING

CONCRETE RETAINING WALL

FF@ 5419.17 5416.50 5416.83 5418.17 5419.50 5420.83 5422.17 5423.50 5424.83 5426.17

LIMITS OF GRADE REVISIONS, 9/86

APPROVED FOR PRIVATE RUNDOWN ONLY

| APPROVALS | ENGINEER | DATE | APPROVALS | ENGINEER | DATE |
|---|---|---|---|---|---|
| A.C.E. - Design | | 11/25/85 | WUD | 12/2/85 | |
| MDD/ENG | | 12/5/85 | TRAN | D.A. Peralta | 12/6/85 |

HYDROLOGY SECTION

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|
| 1 | 7/85 | TTM | REVISED GRADES & TOP OF WALL |
| 2 | 9/86 | RWS | REVISED GRADES & S.W. CORNER OF SITE |

DESIGNED BY TTM
DRAWN BY LMD
APPROVED TTM

JOB NO. 40401
DATE 1-85

811 DALLAS N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

GRADING & DRAINAGE PLAN
WYOMING & HARPER NEIGHBORHOOD SHOPPING CENTER

FILE NO.

SHEET 1 OF 2

D19/D018

REGISTERED PROFESSIONAL ENGINEER · STATE OF NEW MEXICO · THOMAS T. MANN · 7525 · 6/19/86

THIS PLAN SHOT TWICE
ONCE ON LIGHT AND
ONCE ON DARK.

CITY OF ALBUQUERQUE
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TO THE POOR QUALITY OF THE
ORIGINAL DOCUMENT.

REF 21 DATE 12/5/85 OPR

CITY OF ALBUQUERQUE

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Karen Aiken
CITY CLERK RECORDER

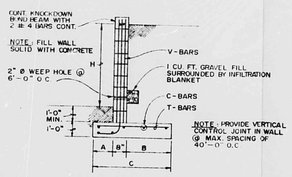
OFFICIAL SEAL
NORBERTA SANCHEZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires MAY 8 1988

Norberta Sanchez

D 24 C 20 B 16 A 12

CITY OF ALBUQUERQUE

C D




| WALL | H DIMENSION | A | B | C | V-BAR | C-BARS | T-BARS |
|---|---|---|---|---|---|---|---|
| A | 5'-0" | 10" | 2'-2" | 3'-8" | #4 AT 16" O.C. | 4-#4 CONT. | #4 AT 28" O.C. |
| B | 4'-0" | 8" | 1'-8" | 3'-0" | #4 AT 24" O.C. | 4-#4 CONT. | #4 AT 32" O.C. |
| C | 3'-0" | 5" | 1'-3" | 2'-4" | #4 AT 32" O.C. | 3-#4 CONT. | #4 AT 40" O.C. |
| D | 0 TO 2'-0" | 4" | 4" | 1'-4" | #4 AT 48" O.C. | 2-#4 CONT. | #4 AT 48" O.C. |

## RETAINING WALL DETAIL
NO SCALE

### VEGETATION FOR EROSION CONTROL

1. SEED RATE:

| Species | Pure Live Seed (lbs/acre)* |
|---|---|
| Annual Rye Grass | 8.0 |
| Giant Dropseed | 2.0 |
| Sand Dropseed | 1.0 |
| Indian Ricegrass | 4.0 |
| Sideoats Grama | 6.0 |
| Total: | 21.0 |

*Rates apply to drilled seed. Double rates listed if seed is broadcast.

2. SEED APPLICATION:

a. Flat areas - cultivate area to produce an acceptable, friable seed bed, then drill seed to a depth of 1/4 to 1/2 inches.

b. Slopes 3:1 or greater - hand broadcast and cultivate into top 1/4 to 1/2 inch of soil.

3. FERTILIZER

16-20-0 @ 200 lbs. per acre applied simultaneously with seed.

4. MULCH

5,000 lbs. hay mulch per acre. Hay mulch shall be crimped into the soil so as not to exceed 2 inches in depth.

5. WATERING SCHEDULE

CONTRACTOR shall maintain a wet seed bed for a period of at least 6 weeks following seeding.

### DRAINAGE PLAN

The following items concerning the Harper and Wyoming Neighborhood Commercial Center Drainage Plan are contained hereon:

1. Vicinity Map 2. Grading Plan 3. Calculations

The proposed improvements, as shown by the Vicinity Map, are located between Wyoming Boulevard N.E. and Barstow N.E., and north of Harper N.E. and the PNM right-of-way. At present, the site is undeveloped.

As shown by Plate D-19 of the Albuquerque Master Drainage Study, this site does not lie within a designated Flood Hazard Zone. Further study reveals that the site is bordered on the north by the Pino Arroyo. The project site is higher than the arroyo, and, therefore, flood waters are contained within the arroyo right-of-way. Barstow N.E. lies to the east of the property. The project site is lower than Barstow N.E., however, there is very little flow in Barstow adjacent to the site. The PNM easement lies south of the site. The easement is higher than the project site. The easement essentially traverses a ridge line, therefore, flows from the south are at a minimum. Wyoming Boulevard N.E. lies to the west of the site. The project site is higher than Wyoming Boulevard N.E. Offsite flows to the site are minimal. Any offsite flows entering the site will be routed through the site to the Pino Arroyo.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1'-0" intervals, 2) continuity between existing and proposed elevations, 3) the limit and character of existing improvements, and 4) the limit and character of proposed improvements. As shown by this plan, the proposed improvements consist of the construction of buildings and asphalt paving. A retaining wall will be required along the north boundary at the east end of the project. The site will be graded so that all flows converge to the northwest corner of the site. A ponding area will be constructed to detain nuisance waters. All flows will be routed through the pond and will then exit into the Pino Arroyo.

Both sides of the arroyo will be stabalized with soil cement. The depth of flow is approximately 1.5'. A freeboard of 1.5' feet was added to the depth to give a treatment depth of 3' above and below flow line. The soil cement will contain 6% cement utilizing native soils.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will result in an increase in runoff from the site. This pattern of runoff is consistent with the conceptual drainage plan.

### CALCULATIONS

**Ground Cover Information**

From SCS Bernalillo County Soil Survey, Plate 21:
EtC - Embudo Tijeras
Hydrologic Soil Group B

**Rational Method**

Discharge: $Q = CiA$
where C varies
$i = P_6(6.84)T_c^{-0.51} = 5.28$ in/hr
$P_6 = 2.5$ in (DPM Plate 22.2 D-1)
$T_c = 10$ min (minimum)
A = area, acres

Volume: $V = CP_6A(1/12)$
where C varies
$P_6 = 2.5$ in (DPM Plate 22.2 D-1)
A = area, sf

**Existing Condition**

$A_{total} = 674,352$ sf = 15.5 Ac
$A_{DPP} = 0$ sf; % impervious = 0
$^{A}C = 0.34$ (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 0.34(5.28)(15.5) = 27.8$ cfs
$V_{100} = CP_6A = 0.34(2.5/12)(674,356) = 47,767$ cf

**Developed Condition**

$A_{total} = 674,352$ sf = 15.5 Ac
$A_{DPP} = 424,840$ sf; % impervious = 93%
$^{A}C = 0.89$ (DPM Plate 22.2 C-1)
$Q_{100} = CiA = 0.89(5.28)(15.5) = 72.8$ cfs
$V_{100} = CP_6A = 0.99(2.5/12)(674,356) = 125,036$ cf

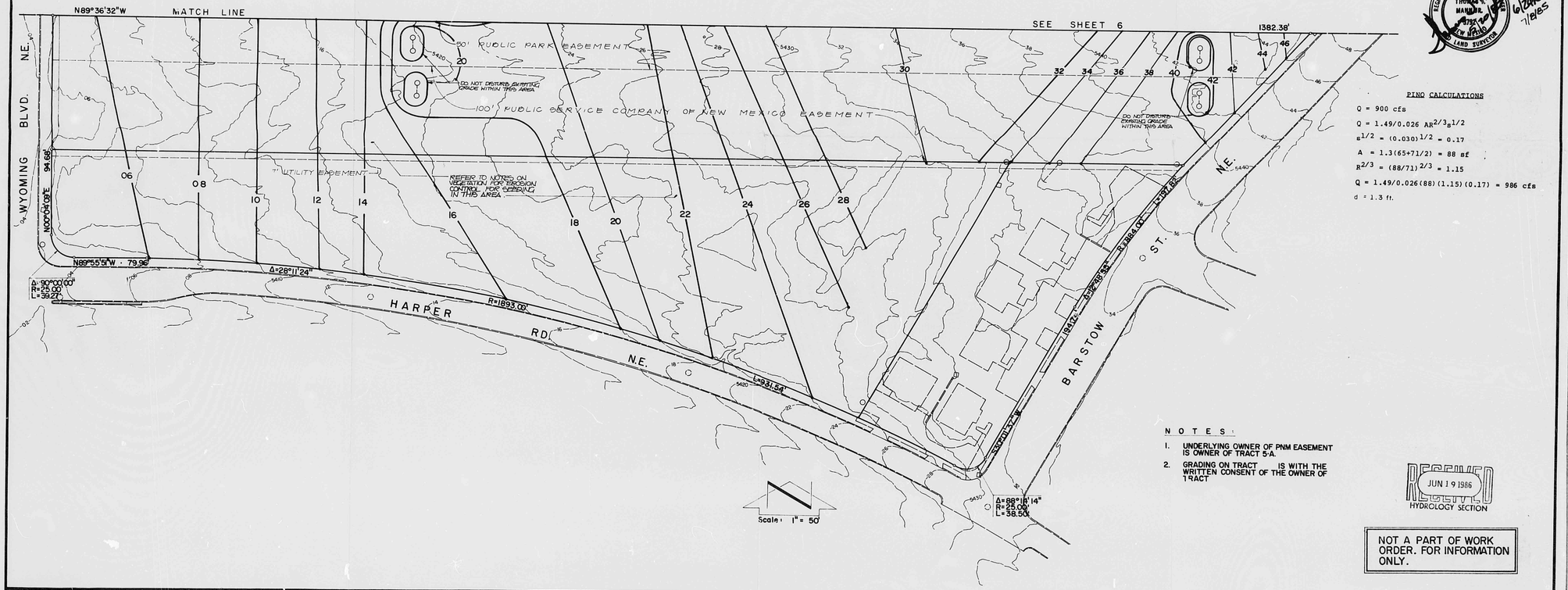
**Comparison**

$\Delta Q_{100} = 72.8 - 27.8 = 45.0$ cf (increase)
$\Delta V_{100} = 125,036 - 47,767 = 77,269$ (increase)

**Weir Capacity**

$Q = 3.33\ Lh^{3/2}$
$Q = (3.33)(10)(2)^{3/2} = 94.3$ cfs

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR — STATE OF NEW MEXICO — THOMAS T. MANN JR. — 6124 — 6/24/85




**PINO CALCULATIONS**

Q = 900 cfs
$Q = 1.49/0.026\ AR^{2/3}S^{1/2}$
$S^{1/2} = (0.030)^{1/2} = 0.17$
A = 1.3(65+71/2) = 88 sf
$R^{2/3} = (88/71)^{2/3} = 1.15$
$Q = 1.49/0.026(88)(1.15)(0.17) = 986$ cfs
d = 1.3 ft.

**NOTES:**

1. UNDERLYING OWNER OF PNM EASEMENT IS OWNER OF TRACT 5-A.
2. GRADING ON TRACT IS WITH THE WRITTEN CONSENT OF THE OWNER OF TRACT

RECEIVED JUN 19 1986 HYDROLOGY SECTION

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REF 21 DATE 6-24-85 OF 1 OF 2

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CITY CLERK RECORDER

OFFICIAL SEAL NORBERTA SANCHEZ NOTARY PUBLIC STATE OF NEW MEXICO My Commission Expires 11/19/88

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

811 DALLAS, N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS

DESIGNED BY T.T.M.
DRAWN BY L.B.D.
APPROVED T.T.M.
JOB NO. 40401
DATE 01/85

GRADING & DRAINAGE PLAN
WYOMING & HARPER NEIGHBORHOOD SHOPPING CENTER

FILE NO.
SHEET 2 OF 2

D-19 / D018

D 24 C 20 B 16 A 12 — CITY OF ALBUQUERQUE — C D