



D. Mark Goodwin & Associates, P.A.
Consulting Engineers

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmgs@swcp.com

June 2, 1998

Mr. Fred Aguirre
City of Albuquerque
Hydrology Department
P.O. Box 1293
Albuquerque, NM 87103

Re: Lamplighter Estates

Dear Mr. Aguirre:

I have no objection to Tierra West LLC in performing the Grading Certification utilizing our plan.

Please call if you have any questions or concerns.

Sincerely,

MARK GOODWIN & ASSOCIATES, PA


Mark GOODWIN, PE

DMG/st

r:\wampite\grading.crt

RECEIVED
JUN 16 1998
HYDROLOGY SECTION

SAS Gravity Line	Brockton Court	End of Cul-de-sac	Everton Street
SAS Gravity Line	Drayton Street	Fulton Court	Hampton Street
SAS Gravity Line	Aniston Street	Hampton Street	Aniston Court
SAS Gravity Line	Chelton Court	End of Cul-de-sac	Everton Street
Storm Sewer	Fulton Court	Everton Court	Bear Trlh
Storm Sewer	Drayton Street	Everton Street	Hampton Street

Catch basins, and RCP included with Storm Sewer

Water Infrastructure to include
valves, fittings, valve boxes, fire hydrants as required

Sanitary Sewer to include, manholes,
service connections as required

Storm Sewer Modifications

Residential Street Lights Per DDM

Certified Grading with Private Retaining Walls & Private Drainage (Non-work order item) Required for

SIA/Financial Release

Internal Sidewalks deferred

Prepared By: _____

Print Name: Ronald R. Bohannon, P.E.

Firm: Tierra West Development Mgmt Services

Development Review Board Member Approvals

Transportation Dev.	Date	Utility Dev.	Date	Cult. & Rec	Date
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City Engineer/AMAFCA	Date
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DRB Chairman	Date
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AMAFCA	Date
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DRB Case No. 94-236
 Project Number _____
 Date Submitted _____
 Prelim. Plat Approved _____
 Prelim. Plat Expires _____

EXHIBIT "A"
To Subdivision Improvements Agreement
DEVELOPMENT REVIEW BOARD (DRB) REQUIRED INFRASTRUCTURE LISTING
for Lamplighter Estates Subdivision

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed to be constructed for the above development. This summary is not necessarily a complete listing. During the design process, if the City determines that appurtenant items have not been included in the summary, those items will be included in the listing and related financial guarantee, if the items normally are the Subdivider responsibility. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility are the responsibility of the Subdivider and will be included in the financial guarantee provided to the City.

<u>Size</u>	<u>Type Improvement</u>	<u>Location</u>	<u>From</u>	<u>To</u>
30'/F-F	Residential Street Curb & Gutter, w/median sidewalks 4' (Both Sides)*	Hampton Street	Moon Street	Aniston Street
30'/F-F	Residential Street Curb & Gutter sidewalks 4' (Both Sides)*	Hampton Street	Aniston Street	Drayton Street
30'/F-F	Residential Street Curb & Gutter sidewalks 4' (Both Sides)*	Everton Street	Aniston Street	Drayton Street
20'/F-F	Residential Street Curb & Gutter sidewalks 4' (Both Sides)*	Drayton Street	Fulton Court	Hampton Street
20'/F-F	Residential Street Curb & Gutter sidewalks 4' (Both Sides)*	Aniston Street	Hampton Street	Aniston Court
20'/F-F	Residential Street Curb & Gutter sidewalks 4' (Both Sides)*	Chelton Court	Cul-de-sac	Everton Street
20'/F-F	Residential Street Curb & Gutter sidewalks 4' (Both Sides)*	Brockton Court	Cul de sac	Everton Street
6'	Sidewalk	Moon Street	North Place	South Place
6"	Water PVC Line	Hampton Street	Moon Street	Drayton Street
6"	Water PVC Line	Everton Street	Aniston Street	Drayton Street
6"	Water PVC Line	Brockton Court	Everton Street	End of Cul-de sac
6"	Water PVC Line	Drayton Street	Fulton Court	Hampton Street
6"	Water PVC Line	Chelton Court	Chelton Court	Everton Street
6"	Water PVC Line	Aniston Street	Hampton Street	Aniston Court
6"	Water PVC Line	20' PUE	Aniston Court	Moon Street
6"	SAS Gravity Line	20' PUE	Fulton Court	Dear Trib.
8"	SAS Gravity Line	Hampton Street	Moon Street	Drayton Street
8"	SAS Gravity Line	Everton Street	Aniston Street	Drayton Street

PURPOSE

The intent of this report is to present the Drainage Management Plan for Final Plat and Work Order Approvals. All applicable ordinances and the Development Process Manual were utilized for this analysis. The latest version of AHYMO was used to determine the various peak rates used for design in this plan.

EXISTING CONDITIONS

This site comprises an undeveloped area of 18.5 acres and will be developed into a typical 80 lot residential subdivision. The area under study is bounded by the improved Bear Trib on the north, by the improved Moon Street on the east by an apartment complex on the south and by undeveloped lands to the west.

Current on-site runoff flows to the west onto the property owned by the Greater Albuquerque Jewish Federation. The flow ultimately reaches Wyoming where it is collected and conveyed by an existing storm drain. No off-site flows enter this project; Moon Street and the Bear Trib intercept all potential off-site runoff.

PROPOSED MANAGEMENT PLAN

As a developed project, we propose to collect all on-site runoff in the two main streets and carry this runoff to the northwest corner of the site. At this point we will collect the runoff in a new storm drain and convey the flow a short distance to the Bear Trib for discharge. Since the time of concentration for the Bear Trib is measured in hours, this discharge scheme is appropriate since the runoff from this project will occur well ahead of the peak in the Bear Trib.

The lot layout, setback requirements and the elevation of the Bear Trib will not allow for a hard lined drainage easement out of the subdivision over the proposed storm drain. Therefore, consistent with past projects, the storm drain and inlet system proposed by this study was sized utilizing 2 - 100 Year, 6 Hour Storms. This value turned out to be 144 cfs resulting in the need for 4 - Type "A" inlets, 7 - Type "Double C" inlets and a 48 inch discharge line. Inlet placing starts well upstream so flow depths in the street do not exceed DPM criteria. The storm drain was analyzed as an open channel and not under pressure flow conditions, thus ensuring further conservation.

The typical streets within the subdivision will be 32 feet face to face within a 50 foot right-of-way. Mountable curb and gutter will be used except where runoff levels require standard curb and gutter. The 100 Year - 6 Hour storm was used for analysis of the streets. The total design storm was determined to be 72 cfs with the northern most street carrying 40 cfs and the southern street 32 cfs. Using DPM criteria standard curb and gutter will be required for half the length of each street. This is not created by the depth of flow but by the potential for hydraulic jumps in each street.

INTERIM EROSION CONTROL

The erosion control plan centers on the fact that storm waters will not be allowed free discharge during the construction process nor off the finished lots prior to home construction. This detail is shown on the plans.

CONCLUSIONS

It is shown in this report that free discharge is appropriate. It has also been shown that the facilities for handling stormwaters have been adequately planned and sized per all current criteria.



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT Mystery Acres
SUBJECT Drainage
BY MG DATE 3/9/94
CHECKED _____ DATE _____
SHEET 1 OF 19

This proposed project comprises an area of 18.5 Ac. and will be constructed into an 80 lot residential subdivision.

The drainage concept will be to collect runoff via the streets and convey these flows by means of a storm drain to the improved Bear Trib Arroyo.

There is insufficient room to provide a hard lined easement over the storm drain so we will size the storm drain for the 2 X 6 Hr. Storm.

We will calculate the 6 hour storm to check street capacities.

Precipitation Zone = 3

$P_1 = 2.14$ in

$P_6 = 2.60$ in

$P_{24} = 3.10$ in

$P_{10 DAY} = 4.90$ in.

Area of Total Site = 18.5 Ac. = 0.0289 SQ. Mi.

Area of D.A. 1 = 10.2 = 0.0159 SQ. Mi.

Area of D.A. 2 = 8.3 Ac. = 0.0130 SQ. Mi.

Land Treatments:

Treatment A = 0

Treatment B = 40%

Treatment C = 10%

Treatment D = 50%



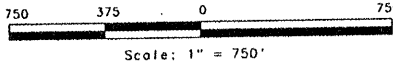
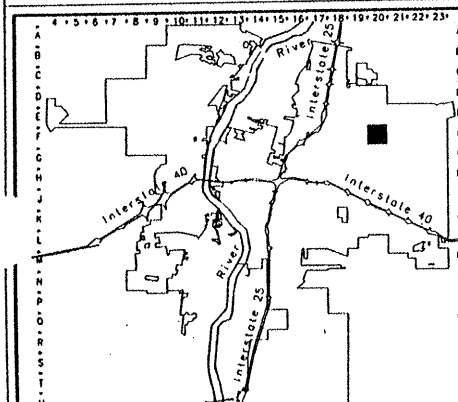
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PROJECT Mystery Acres
SUBJECT Drainage
BY MG DATE 3/9/94
CHECKED _____ DATE _____
SHEET 2 OF 19

Per Attached AHYMO RUNS:

Total Site	$Q_{6-100} = 72 \text{ cfs}$	Vol. = 2.57 AC-Ft.
D.A. 1	$Q_{6-100} = 40 \text{ cfs}$	Vol. = 1.41 AC-Ft.
D.A. 2	$Q_{6-100} = 32 \text{ cfs}$	Vol. = 1.16 AC-Ft.

Storm Drain Design $Q = 144 \text{ cfs}$

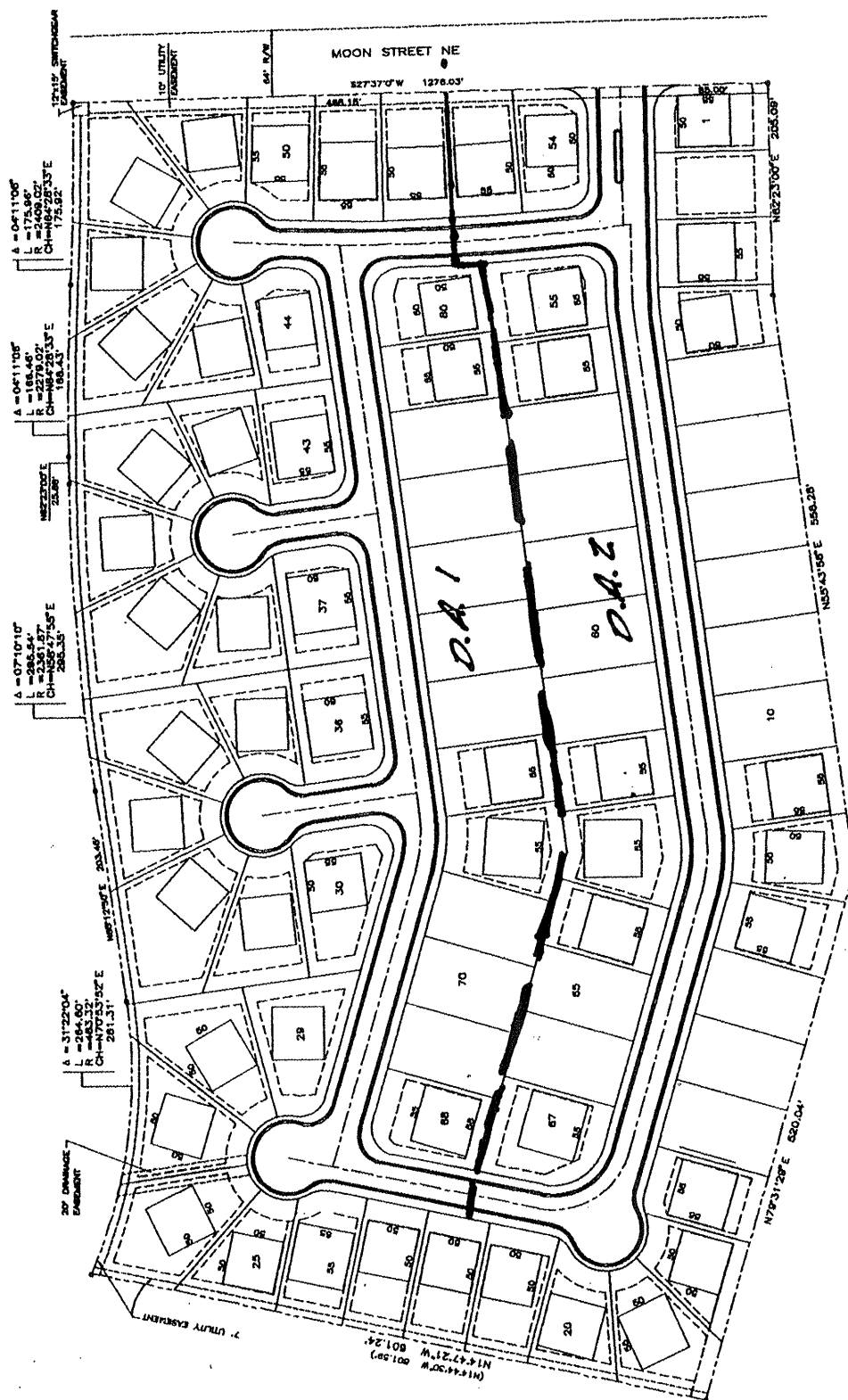


LEGAL DESCRIPTION
T11N
R4E
SEC 32

UNIFORM PROPERTY CODE
1-020 061

A G I S
Abuquerque Geographic Information System
City of Albuquerque
© Planning Department July 07, 1993

F-20-Z

[illegible]

Company	D. MARK GOODWIN & ASSOCIATES, P.A. CONSULTING ENGINEERS & SURVEYORS	Street	1	1
Address	P.O. BOX 90606 ALBUQUERQUE, NEW MEXICO 87198 (505) 828-2200	City	ALBUQ	
Phone		State	NM	

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RAIN ONE=2.14 IN RAIN SIX=2.60 IN
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RAIN ONE=2.14 IN RAIN SIX=2.60 IN

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.1126	.1192	.1262	.1322	.1385	.1452	.1597
.1922	.2422	.3139	.4119	.5407	.7049	.9093
1.1588	1.3904	1.4871	1.5687	1.6414	1.7074	1.7683
1.8247	1.8775	1.9270	1.9735	2.0174	2.0589	2.0982
2.1354	2.1707	2.2041	2.2359	2.2661	2.2737	2.2807
2.2875	2.2939	2.3001	2.3060	2.3117	2.3172	2.3226
2.3277	2.3328	2.3376	2.3423	2.3470	2.3514	2.3558
2.3601	2.3643	2.3683	2.3723	2.3762	2.3801	2.3838
2.3875	2.3911	2.3947	2.3982	2.4016	2.4050	2.4083
2.4115	2.4147	2.4179	2.4210	2.4241	2.4271	2.4301
2.4330	2.4359	2.4388	2.4416	2.4444	2.4472	2.4499
2.4526	2.4553	2.4579	2.4605	2.4631	2.4656	2.4681
2.4706	2.4731	2.4755	2.4779	2.4803	2.4827	2.4850
2.4873	2.4896	2.4919	2.4942	2.4964	2.4986	2.5008
2.5030	2.5052	2.5073	2.5094	2.5115	2.5136	2.5157
2.5177	2.5198	2.5218	2.5238	2.5258	2.5277	2.5297
2.5317	2.5336	2.5355	2.5374	2.5393	2.5412	2.5430
2.5449	2.5467	2.5486	2.5504	2.5522	2.5540	2.5557
2.5575	2.5593	2.5610	2.5627	2.5645	2.5662	2.5679
2.5696	2.5713	2.5729	2.5746	2.5762	2.5779	2.5795
2.5811	2.5828	2.5844	2.5860	2.5876	2.5891	2.5907
2.5923	2.5938	2.5954	2.5969	2.5984	2.6000	

COMPUTE NM HYD

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 P60 = 2.1400
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RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033330

5 of 19

K = .128707HR TF = .133300HR K/TF RATIO = .965545 SHAPE
CONSTANT, N = 3.658772
UNIT PEAK = 35.961 CFS UNIT VOLUME = .9999 B = 331.74
P60 = 2.1400
AREA = .014450 SQ MI IA = .47000 INCHES INF = 1.16600 I
NCHES PER HOUR

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= .033330

PRINT HYD

ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.67017 INCHES = 2.5743 ACRE-FEET
PEAK DISCHARGE RATE = 71.91 CFS AT 1.500 HOURS BASIN AREA =
.0289 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

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2.4330	2.4359	2.4388	2.4416	2.4444	2.4472	2.4499
2.4526	2.4553	2.4579	2.4605	2.4631	2.4656	2.4681
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RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT

= .033330

8 of 19

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UNIT PEAK = 19.785 CFS UNIT VOLUME = .9996 B = 331.74

P60 = 2.1400

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NCHES PER HOUR

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= .033330

PRINT HYD

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PARTIAL HYDROGRAPH 101.10

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FINISH

NORMAL PROGRAM FINISH

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- PEAK AT 1.40 HR.

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.1126	.1192	.1262	.1322	.1385	.1452	.1597
.1922	.2422	.3139	.4119	.5407	.7049	.9093
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2.1354	2.1707	2.2041	2.2359	2.2661	2.2737	2.2807
2.2875	2.2939	2.3001	2.3060	2.3117	2.3172	2.3226
2.3277	2.3328	2.3376	2.3423	2.3470	2.3514	2.3558
2.3601	2.3643	2.3683	2.3723	2.3762	2.3801	2.3838
2.3875	2.3911	2.3947	2.3982	2.4016	2.4050	2.4083
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2.4330	2.4359	2.4388	2.4416	2.4444	2.4472	2.4499
2.4526	2.4553	2.4579	2.4605	2.4631	2.4656	2.4681
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2.5923	2.5938	2.5954	2.5969	2.5984	2.6000	

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 CONSTANT, N = 7.106420
 UNIT PEAK = 25.662 CFS UNIT VOLUME = .9989 B = 526.28
 P60 = 2.1400
 TA = 10.000 INCHES INF = .04000

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11 of 19

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UNIT PEAK = 16.176 CFS UNIT VOLUME = .9994 B = 331.74

P60 = 2.1400

AREA = .006500 SQ MI IA = .47000 INCHES INF = 1.16600 I

NCHES PER HOUR

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PARTIAL HYDROGRAPH 101.10

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PEAK DISCHARGE RATE = 32.36 CFS AT 1.500 HOURS BASIN AREA =

.0130 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 14:31:37



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT Mystery Acres
SUBJECT Drainage
BY MMG DATE 3/9/94
CHECKED _____ DATE _____
SHEET 12 OF 19

We now need to check street capacities:

Northern Street - O.A. 1

$$Q = 40 \text{ cfs}$$

32' FF street w/ worst case grade of 2.50%
Mountable curb



$$V = \frac{1.486}{.017} P^{2/3} S^{1/2}$$

$$A = 2(1/2)(.32)(16) + .01(32) = 5.44 \text{ ft}^2$$
$$WP = 32.66$$

$$V = \frac{1.486}{.017} \left(\frac{5.44}{32.66} \right)^{2/3} (.025)^{1/2} = 4.18 \text{ fps}$$

$$Q = AV = 23 \text{ cfs} < 40$$

The northern street will require standard curb for $1/2$ its' length.

Using Plate 22.3 D-1:

$$\text{For } Q = 40 \quad S = 2.5\% \rightarrow D = 0.49' \quad V = 5.1 \text{ fps}$$

$$\frac{V^2}{2g} + D = 0.89 \text{ close enough}$$



Southern Street - D.A. 2

$$Q = 32 \text{ cfs}$$

32' FF with slope (AVG.) = 2.50%

Same problem as D.A. 1

We will need std. curb for about $\frac{1}{2}$ length

$$\Rightarrow D = 0.45 \quad V = 4.7$$

$$\frac{V^2}{2g} + D = 0.79' \text{ O.K.}$$

Summarizing: Both streets need lower $\frac{1}{2}$ of std. curb; No hydraulic jump problems.

Now need to place inlets & size storm drain for $Q = 144 \text{ cfs}$

Northern Street $Q = 79 = 39.5 \text{ ca. side}$

Place 2 - A inlets - one on ea. side

$$D = 0.72' \text{ interception} = 12 \text{ cfs ca.}$$

$$Q = 55 \text{ cfs} \quad D = 0.62'$$

Using Double C $\rightarrow$ interception = 11 cfs ca.

$$Q \text{ entering knuckle} = 33 \text{ cfs}$$

Southern Street

$$Q = 65 \text{ cfs} \quad D = 0.66$$

Using A inlet $\rightarrow$ interception = 12 cfs ca



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT Mystery Acres
SUBJECT Drainage
BY MG DATE 3/9/94
CHECKED _____ DATE _____
SHEET 14 OF 19

$Q = 41 \text{ cfs}$ $D = 0.55'$
using Double C $\rightarrow$ interception = 10 cfs cu

Q entering knuckle = 21 cfs

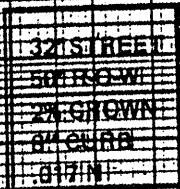
Total Q in knuckle = 54 cfs
inlets @ this location are in a sump
with a 0.87' Head. allowable $\rightarrow$ treat as weir

$$Q = CLH^{3/2} \Rightarrow L = \frac{Q}{CH^{3/2}} = \frac{54}{2.9(.87)^{3/2}} = 23'$$

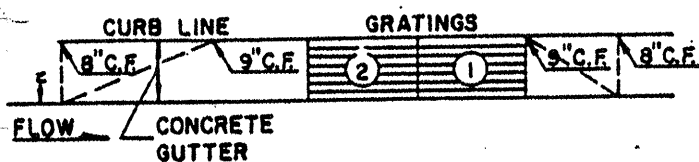
Per City Std. DWG. 2205 L for a Double C
= 7.33' $\rightarrow$ need 3 Double "C" inlets

Total inlets = 4 - A inlets
7 - Double C inlets

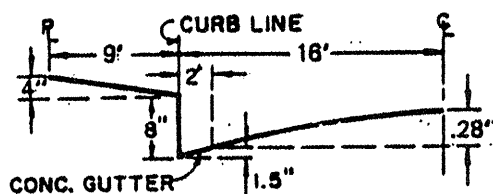
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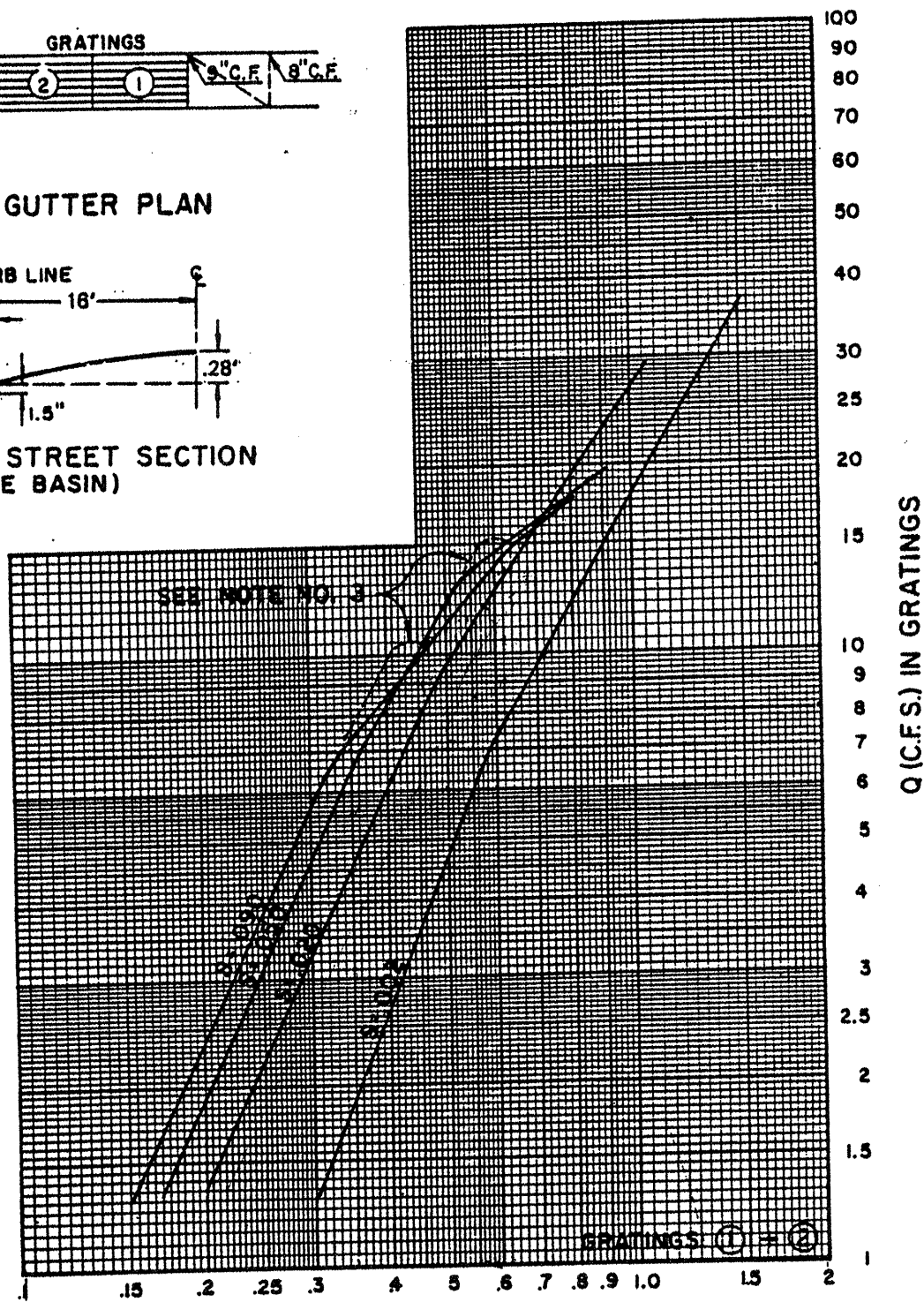
GRATING CAPACITIES FOR TYPE DOUBLE "C," AND "D"



GRATING & GUTTER PLAN

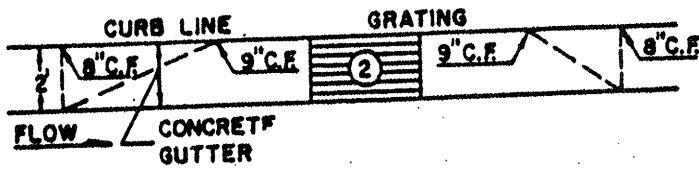


TYPICAL HALF STREET SECTION (ABOVE BASIN)

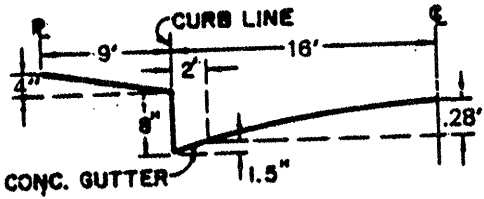


D = DEPTH OF FLOW (FT.) ABOVE NORMAL GUTTER GRADE

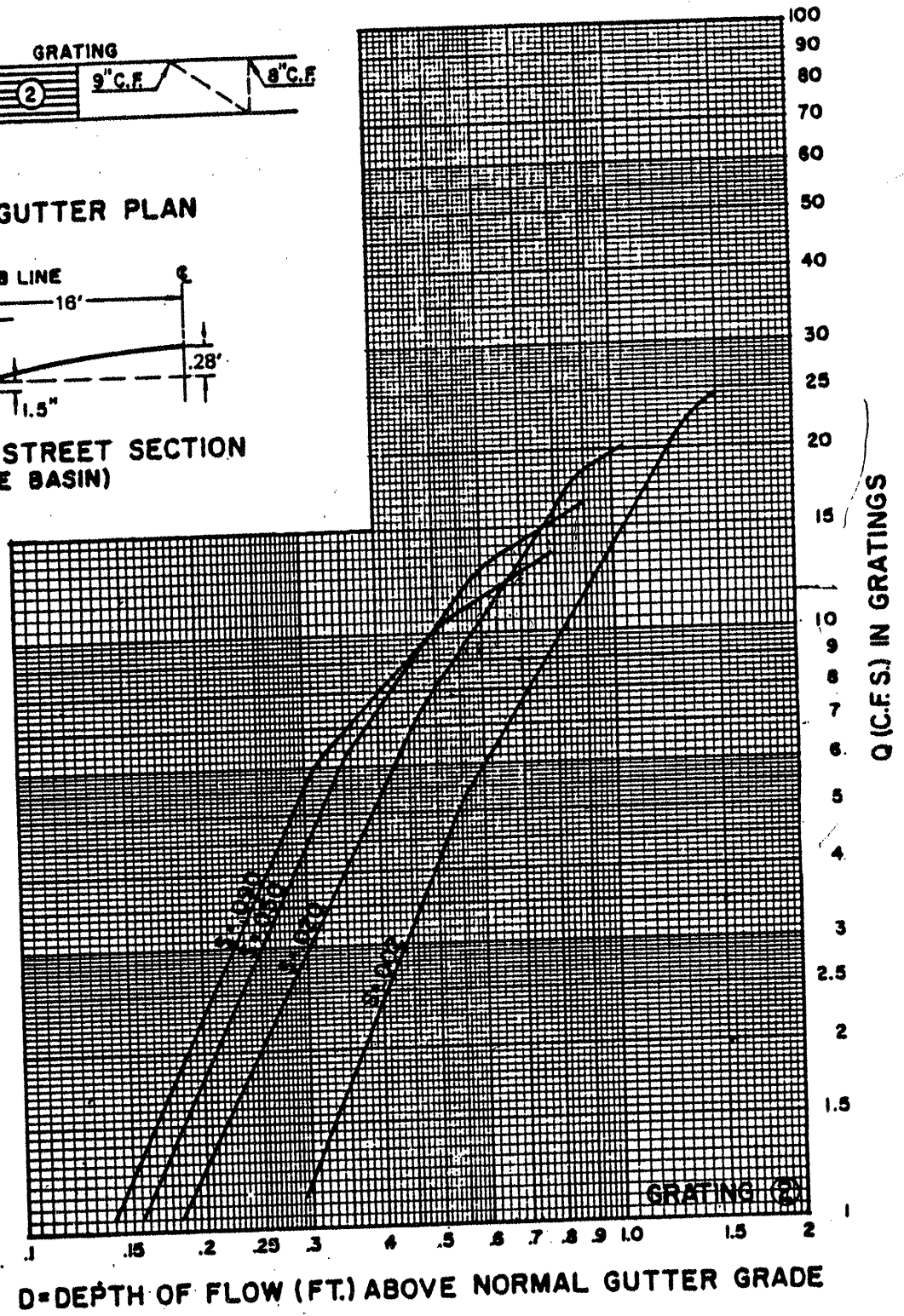
GRATING CAPACITIES FOR TYPE "A", "C" and "D"

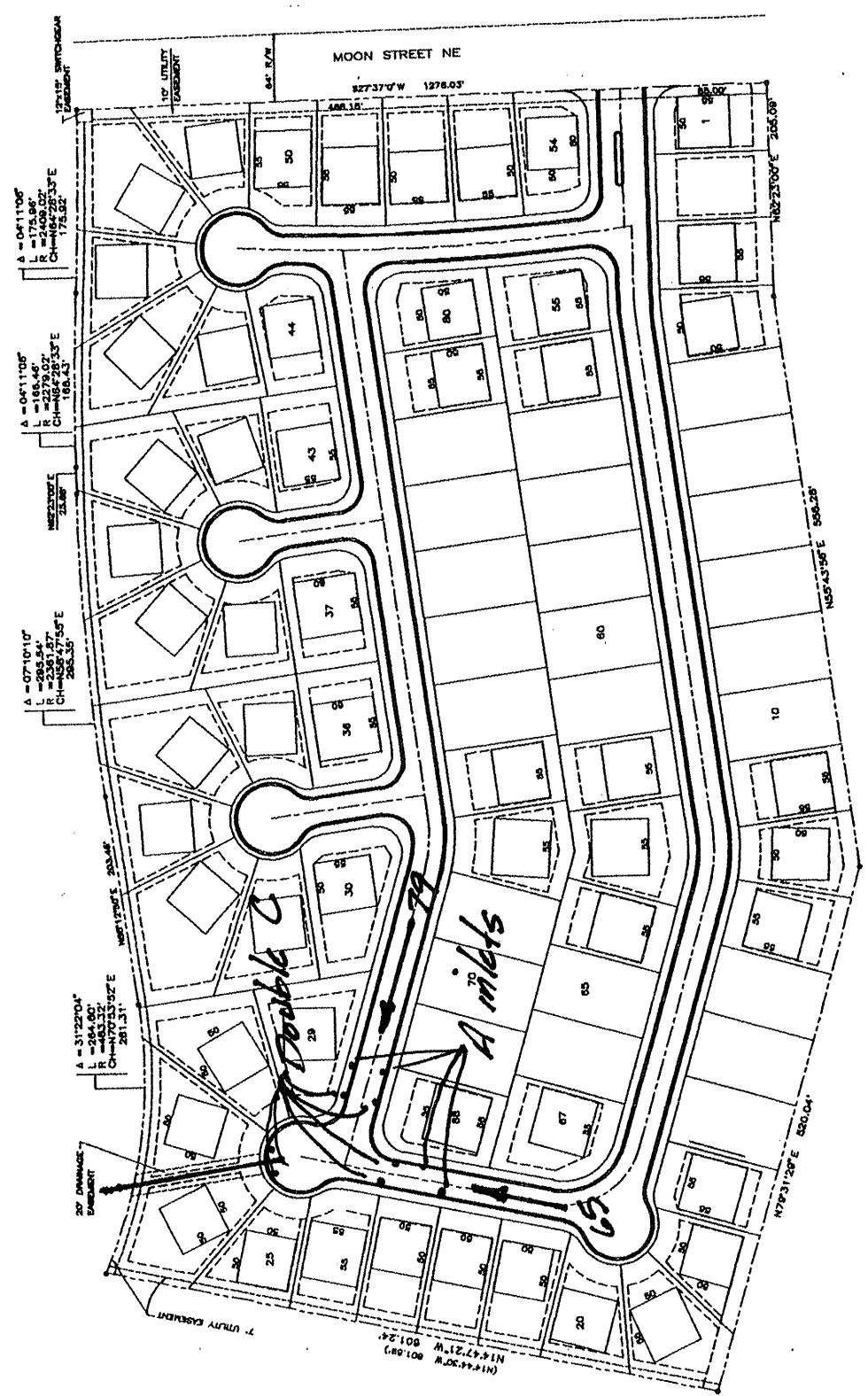


GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)





PROPERTY MAP	ZONE MAP
THE (TEMPORARY) EASEMENT	
ALL EASEMENTS	
LEGAL DESCRIPTION	
LEGEND	

dmg D. MARK GOODMAN & ASSOCIATES
CONSULTING ENGINEERS & SURVEYORS
P.O. BOX 90000
ALBUQUERQUE, NEW MEXICO 87199
(505) 825-2200

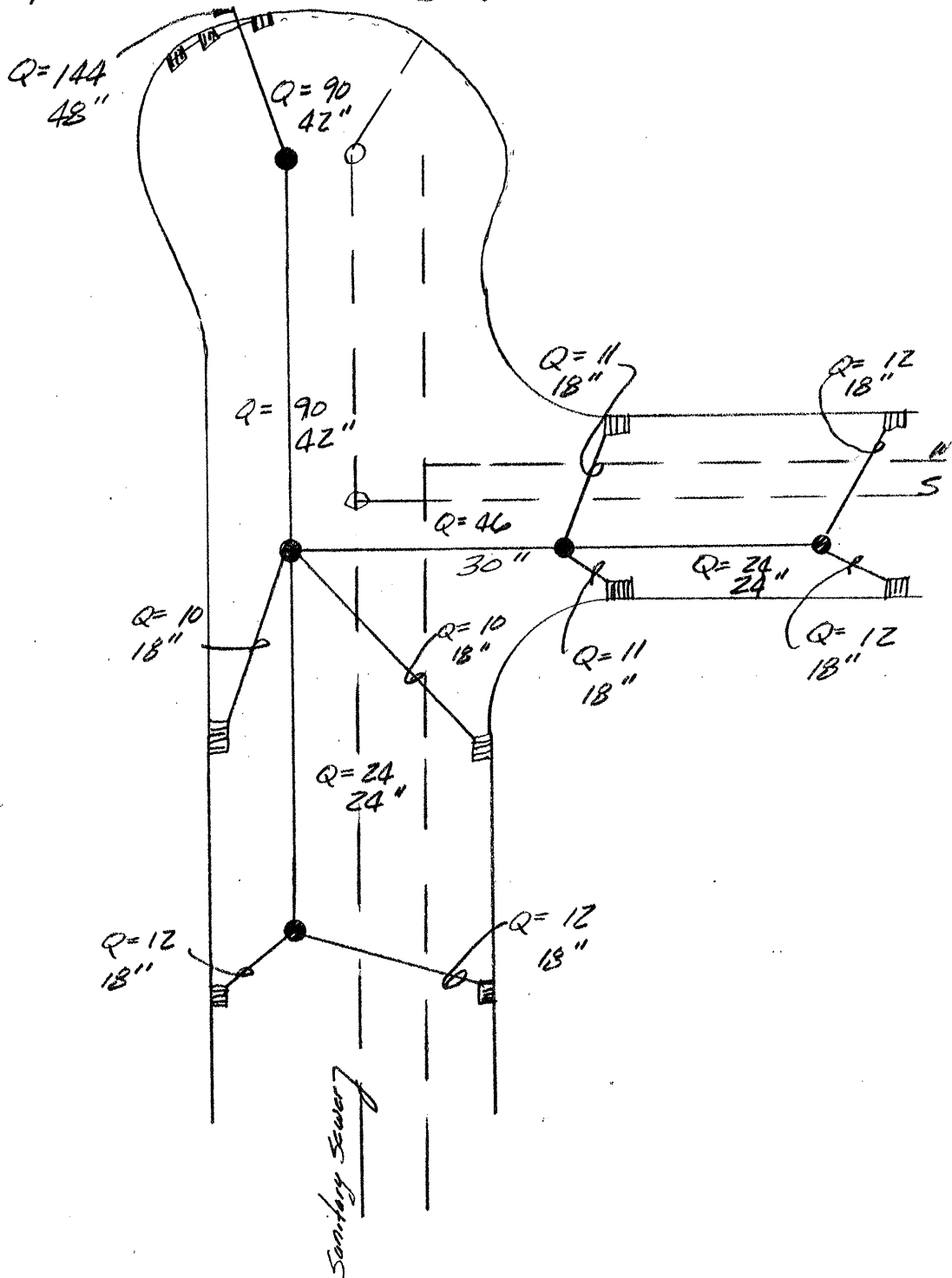
Drawn	Checked	Scale	Sheet
			1 of 1

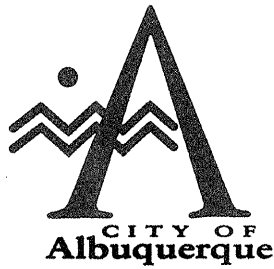


D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT Mystery Acres
SUBJECT Drainage
BY DMG DATE 3/4/94
CHECKED _____ DATE _____
SHEET 19 OF 19

We will now size connectors & main using
open channel (Mannings) conditions





June 16,1998

Ronald R. Bohannon
Tierra West LLC
4421 McLeod Rd. NE Suite D
Albuquerque, New Mexico 87109

RE: ENGINEER CERTIFICATION FOR FINANCIAL RELEASE FOR LAMPLIGHTER
ESTATES (F20-13B) CERTIFICATION STATEMENT DATED 6/15/98
DRB 94-236 WO #4951.90

Dear Mr. Bohannon:

Based on the information provided on your June 16,1998 submittal, Engineer Certification for the above referenced site is acceptable.

If I can be of further assistance, please feel free to contact me 924-3986.

C: Andrew Garcia
Terri Martin
File

Sincerely

Bernie J. Montoya CE
Associate Engineer





Tierra West, LLC

June 16, 1998

Mr. Bernie J. Montoya CE
Associate Engineer
Albuquerque Public Works Dept.
P.O. Box 1293
Albuquerque, New Mexico 87103

Re: Certification of Grading and Drainage for the Lamplighter Estates Subdivision,
and Release of Financial Guarantees, Drainage File F20/13B
Lots 1-54 & 1-26, Tract A-1-B, Academy Estates, Unit 5
City Project No. 4951.90

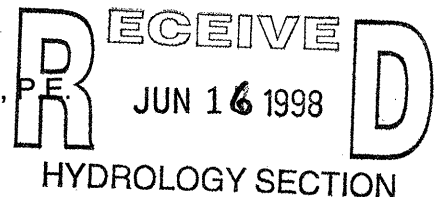
Dear John:

Enclosed please find one copy of the As-Built Grading and Drainage Plan for the Lamplighter Estates Subdivision and the letter of authorization from Mark Goodwin and Associates authorizing Tierra West LLC to complete the Certification of Grading for the site. J. R. Hale Contracting Inc. has completed all of the on-site paving, curb and gutter and grading as well as the required improvements in the Bear Tributary Drainage Arroyo. All of the required storm sewer and utility work has been completed. The entire subdivision is now complete and has been constructed in substantial compliance with the approved plan. We are therefore requesting final Certification of Grading and Drainage for the site, and release of Financial Guarantees.

Should you have any questions, please do not hesitate to contact our office.

Sincerely,

Ronald R. Bohannon, P.E.



Enclosure

cc: Joe Mock

JN: 930016

RRB/rw



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 9, 1996

Joe Kelley
Chavez-Grieves Engineering
5639 Jefferson NE
Albuquerque, NM 87109

RE: ENGINEER CERTIFICATION FOR AN ADDITION AND PAVING @ THE
QUARTERS ON WYOMING (F20-D5) CERTIFICATION STATEMENT
DATED 1/2/96.

Dear Mr. Kelley:

Based on the information provided on your January 3, 1996
submittal, Engineer Certification for the above referenced site
is acceptable.

Please be advised that any revisions that are incorporated to the
drainage plan must be resubmitted for our review and approval.
My records indicate that approval was given on your plan drawing
dated 9/21/95. The revision indicated on your 10/31/95 date was
never submitted for our review. It is crucial that all
revisions be resubmitted so that our records are updated and will
not hold back the issuance of the Certificate of Occupancy.

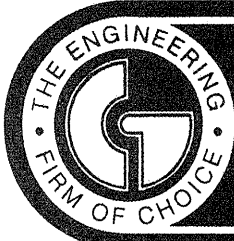
If I can be of further assistance, please feel free to contact me
at 768-2667.

Sincerely,

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
Claudio Vigil
File



CHAVEZ • GRIEVES

CONSULTING ENGINEERS, INC.

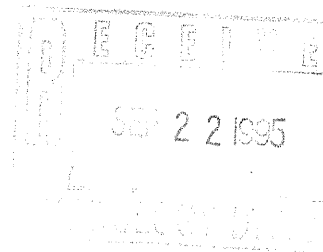
5639 JEFFERSON STREET NE • ALBUQUERQUE, NEW MEXICO 87109 • PHONE (505) 344-4080 • FAX (505) 343-8759

GRADING AND DRAINAGE PLAN

QUARTERS RESTAURANT

BUILDING ADDITION

September 1995



ENGINEER'S STATEMENT

I certify that I am a Registered Professional Engineer in the State of New Mexico and that this report was prepared by me or under my supervision. I have personally inspected this land, and it appears that no grading, filling, or excavation has occurred thereon since the existing contour map was prepared.

Joe R. Kelly 9/21/95

Celebrating 15 Years of Engineering Leadership

LOCATION

This site is located in Albuquerque's northeast heights on Wyoming, north of Montgomery. It is the site of an existing restaurant.

LEGAL DESCRIPTION

Lots 2 and 1-B, and Tract 11-N, Block 11, Ofimano J. Gutierrez Lower Terrace Addition of the City of Albuquerque, New Mexico.

ZONING AND SURROUNDING DEVELOPMENT

The site is zoned C-2, and has been developed in accordance with this designation. The paved surfaces of fully-developed City streets abut the site on the west. Other businesses abut the site on its north and south sides. A City of Albuquerque reservoir site abuts the site on the east. Drainage and access easements exist along the south and north property lines of the site, providing drainage and access to the City Reservoir site. It is in a business district on Wyoming, which is lined with commercial developments on both sides of the street adjacent to the site.

The site is currently being replatted to accommodate the new building configuration.

FLOOD HAZARD ZONES

As shown by Panel 3500020017 of the National Flood Insurance Rate Maps for the City of Albuquerque, dated October 14, 1983, the site is not in a designated flood hazard zone. However, Wyoming Blvd in front of the site is in a Zone AO (Depth 1) flood hazard zone. Zone AO designates "areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths or inundation are shown, but no flood hazard factors are determined."

RELATED REPORTS

No drainage reports for this site are on record at City Hydrology. However, two reports are on file which address runoff from the adjacent reservoir site. F-20/D5 addresses drainage to the easement that is on place on the north side of the Quarters property, while F-20/D19 addresses the paved access in the easement on the south side of the Quarters property.

EXISTING SITE CONDITIONS AND DRAINAGE PATTERN

The site is an existing restaurant. It is nearly all roof and pavement surfaces, with a small portion of landscaping. All the drainage basins slope to the west at 1% to 2%, and discharge directly to the paved surfaces of Wyoming Blvd. City storm drain lines are adjacent to the site, with inlets to the storm drain on Wyoming Blvd.

Visual inspection shows that storm runoff from the reservoir site on the east discharges to the south and north on reservoir property, and then to the storm drains in Wyoming Blvd via the underground storm drains in the easements located on the Quarters property. Storm runoff is prevented from crossing the east property line at any other location by a berm that exists along the east property line.

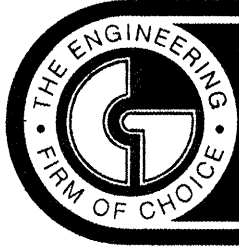
PROPOSED SITE CONDITIONS AND DRAINAGE PATTERN

The proposed drainage pattern is the same as the existing pattern. The only difference between existing and developed conditions will be that a building will be constructed in an existing asphalt parking lot in Basin D. This building requires the redirection of runoff to the south behind the buildings, and then to the west to Wyoming.

The result of this redistribution of runoff is that runoff from Basin D decreases, while runoff from Basin F increases by the same amount. There is no net difference in runoff discharged to Wyoming. Both existing and developed runoff to Wyoming is the same.

HYDROLOGY

The runoff calculations and design have been done in accordance with Section 22.2 of the Development Process Manual of the City of Albuquerque, January 1993. The new building addition makes no change in the amount of runoff from the site. The site has free discharge to Wyoming because it discharges to the public storm drain system that is adjacent to the site, and because it is an infill site. This is in accordance with City Hydrology requirements for site development in the City of Albuquerque.



CHAVEZ • GRIEVES

CONSULTING ENGINEERS, INC.

5639 JEFFERSON STREET NE · ALBUQUERQUE, NEW MEXICO 87109 · PHONE (505) 344-4080 · FAX (505) 343-8759

RUNOFF CALCULATIONS - SIMPLIFIED PROCEDURE

By: JOE KELLEY, P.E.
Project: QUARTER'S RESTAURANT ADDITION

Date: 9/20/95
Zone Atlas: F-20

This procedure is in accordance with the City of Albuquerque Development Process Manual, Volume 2, Section 22.2, "Hydrology", peak discharge rate for small watersheds less than forty acres in size.

Precipitation Zone from Figure A-1: 3
Land treatment descriptions are in Table A-4.

1. RUNOFF RATE COMPUTATION

Use Equation a-10: $Q_p = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$

Values of Q_{pi} are from Table A-9, and are in CFS/acre. Area values are in acres.

BASIN	Q_{PA}	A_A	Q_{PB}	A_B	Q_{PC}	A_C	Q_{PD}	A_D	Q_p
EXISTING BASIN RATE OF RUNOFF (CFS)									
A	1.87	0	2.60	0	3.45	0	5.02	0.266	1.34
B	1.87	0	2.60	0.091	3.45	0	5.02	0.476	2.63
C	1.87	0	2.60	0.002	3.45	0	5.02	0.320	1.61
D	1.87	0	2.60	0	3.45	0	5.02	0.479	2.40
E	1.87	0	2.60	0.011	3.45	0	5.02	0.046	0.26
F	1.87	0	2.60	0	3.45	0	5.02	0.134	0.67
TOTAL									8.91

[illegible]

DRAINAGE INFORMATION

PROJECT TITLE: QUARTERS RESTAURANT ADDITION ZONE ATLAS/DRNG. FILE #: E20 / 105
DRB#: _____ EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: Lot 1-B, Ofimano J Gutierrez Addition
CITY ADDRESS: 4516 Wyoming NE
ENGINEERING FIRM: Chavez-Grieves CONTACT: Joe Kelley
ADDRESS: 5639 Jefferson NE PHONE: 344-4080
OWNER: Quarter's Restaurant CONTACT: _____
ADDRESS: _____ PHONE: _____
ARCHITECT: Claudio Vigil CONTACT: _____
ADDRESS: _____ PHONE: _____
SURVEYOR: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

☒ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☒ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION
☐ OTHER

PRE-DESIGN MEETING:

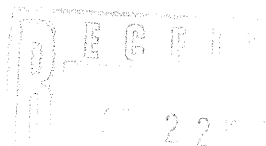
☐ YES
☒ NO
☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D. APPROVAL
☐ S. DEV. PLAN FOR BLDG. PRMT. APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY APPROVAL
☒ GRADING PERMIT APPROVAL
☒ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER _____ (SPECIFY)

DATE SUBMITTED: Sept. 21, 1995

BY: Joe Kelley, P.E.





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 26, 1995

Joe Kelley
Chavez-Grieges Engineering
5639 Jefferson NE
Albuquerque, NM 87109

RE: DRAINAGE PLAN FOR AN ADDITION & PAVING @ THE qUARTERS ON
WYOMING (F20-D5) ENGINEER'S STAMP DATED 9/21/95.

Dear Mr. Kelley:

Based on the information provided on your September 22, 1995
submittal, the above referenced site is approved for Building
Permit and Grading/Paving.

Please attach a copy of this approved plan to the construction
sets prior to sign-off by Hydrology.

Also, prior to Certificate of Occupancy release, Engineer
Certificaiton per the D.P.M. checklist will be required.

If I can be of further assistance, please feel free to contact me
at 768-2667.

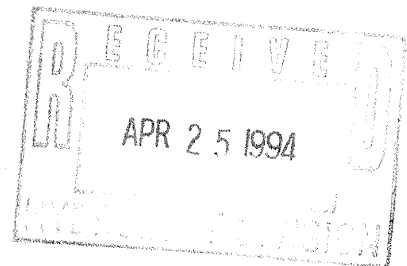
Sincerely,

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

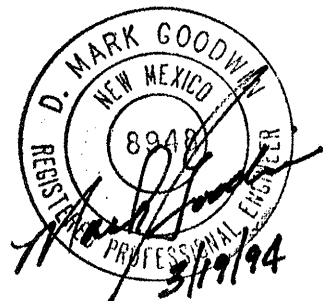
c: Andrew Garcia
File

DRAINAGE REPORT
for
LAMPLIGHTER ESTATES

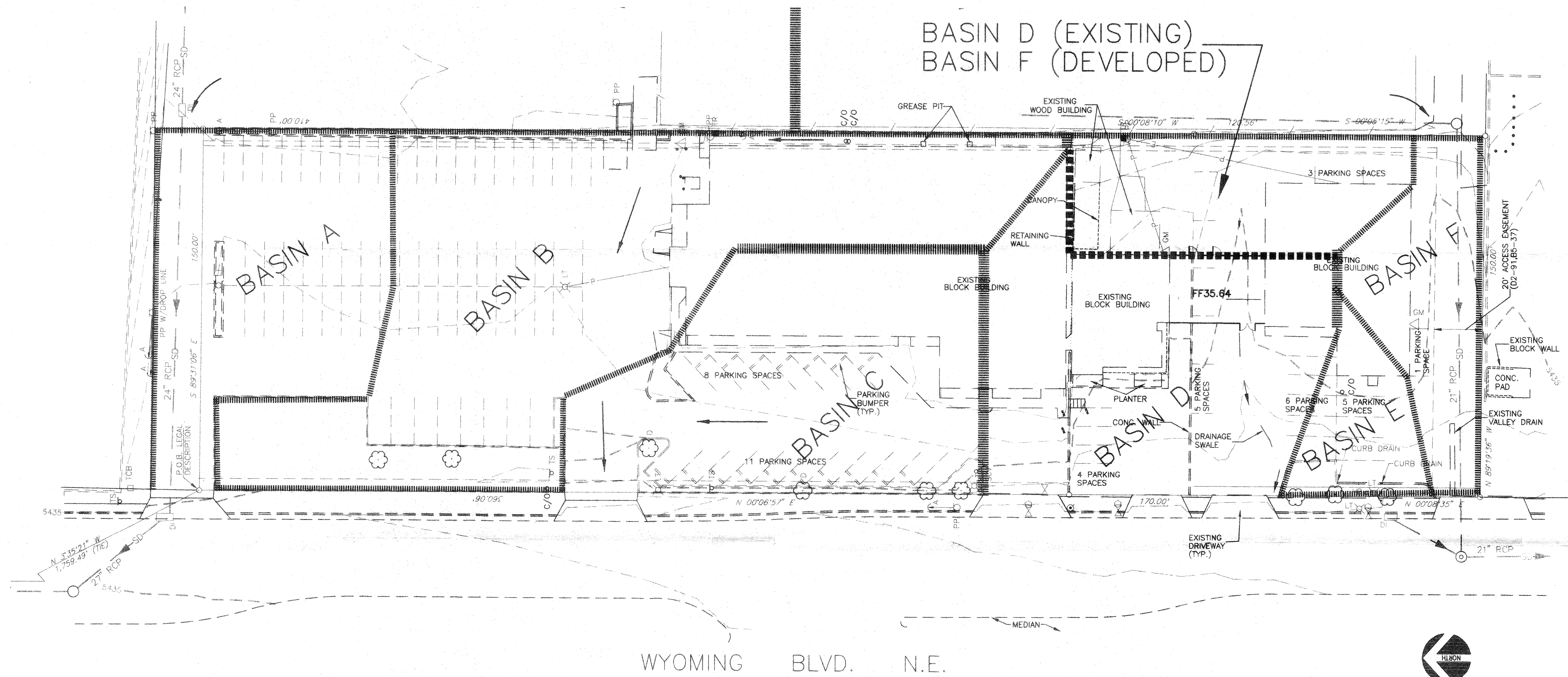


Prepared for
Mock Homes
3550 Pan American NE
Albuquerque, NM 87109

March 1994



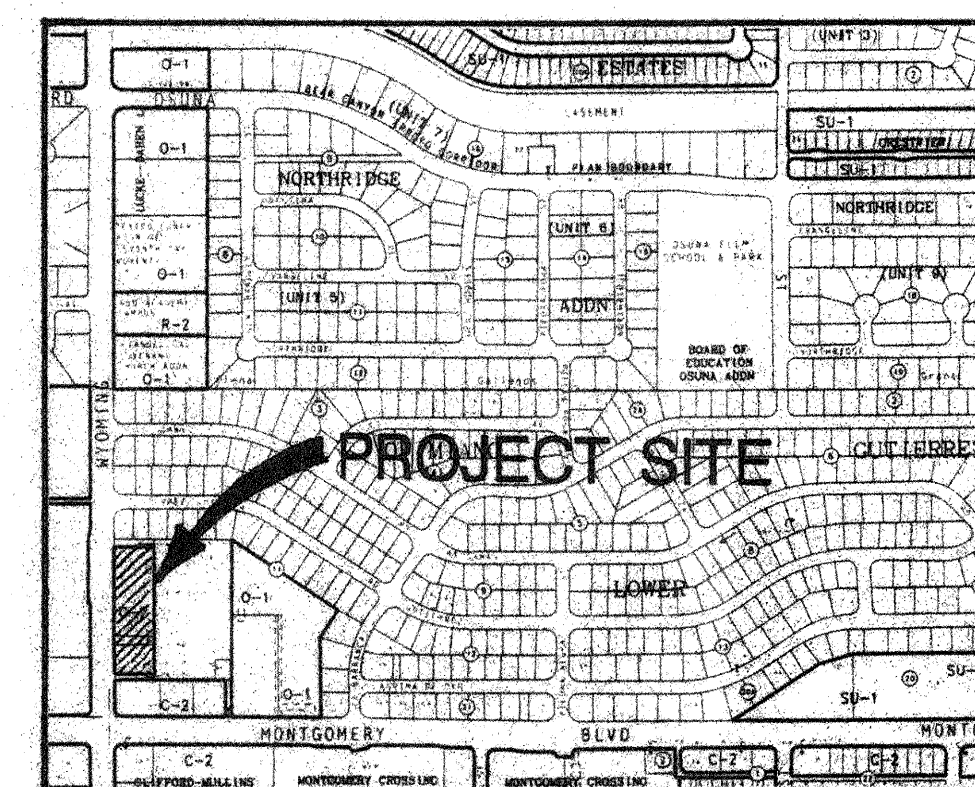
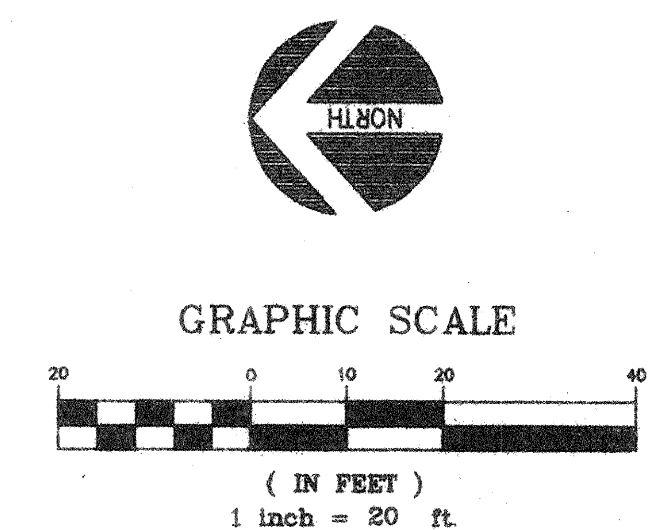
JOB NO. N03-102-0185
FILE: QRC2.DWG (PLOT VIEW: "PLOTDB" IN PS)
REV: 09-22-95



LEGEND

○ PP	POWER POLE	○ C/O	CLEAN OUT
— A —	ANCHOR	⊙	MANHOLE (STORM)
⊗ LT	LIGHT POLE	---	INDEX CONTOUR
•	GUARD POST	---	INTERMEDIATE CONTOUR
⊕ TS	TRAFFIC SIGN	☼ D	TREE (DECIDUOUS)
■ TR	TELEPHONE RISER	☼ E	TREE (EVERGREEN)
△ GM	GAS METER	□ TP	TRANSFORMER PAD
⊗	FIRE HYDRANT	— P —	OVERHEAD ELECTRIC CABLE
○ WM	WATER METER	— / — / —	CHAIN LINK FENCE
⊗	WATER VALVE	X 25.0	ELEVATION AT NATURAL GROUND
□ DI	DROP INLET	X 25.00	ELEVATION ON HARD SURFACE
○ VB	VACUUM BREAKER		
○ SCV	SPRINKLER CONTROL VALVE		

X 25.00 25.00	ELEVATION ON TOP OF CURB ELEVATION AT FLOW LINE
---	SWALE
	EXISTING BASIN LINE
	NEW BASIN LINE
→	OVERLAND FLOW



VICINITY MAP

F 20

JOE P. KELLEY
REGISTERED PROFESSIONAL ENGINEER
NEW MEXICO
9006
SEP 22 1995
9/21/95

REV.	DATE	DESCRIPTION	DRAWN	APPR'D.
CHAVEZ • GRIEVÉS CONSULTING ENGINEERS, INC. 5630 JEFFERSON STREET N.E. • ALBUQUERQUE, NEW MEXICO 87110 PHONE (505) 344-4080 • FAX (505) 343-8759				
QUARTERS RESTAURANT AT WYOMING EXPANSION ALBUQUERQUE NEW MEXICO				
DRAINAGE BASINS				
DESIGNED BY:	JK	SCALE:	1" = 20'	C0
DRAWN BY:	WMT	JOB NUMBER:	N03-102-0185	
REVIEWED BY:	VJC	DATE:	SEPT 1995	
				1 of 3

EROSION CONTROL, ENVIRONMENTAL PROTECTION, AND STORM WATER POLLUTION PREVENTION PLAN

THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY NECESSARY DUST OR EROSION CONTROL PERMITS FROM REGULATORY AGENCIES.

THE CONTRACTOR SHALL SECURE A "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DIVISION PRIOR TO BEGINNING CONSTRUCTION.

THE CONTRACTOR SHALL PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY TO KEEP IT FROM WASHING OFF THE PROJECT SITE.

THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO OTHER PROPERTY BY CONSTRUCTING TEMPORARY EROSION CONTROL BERMS, OR INSTALLING SILT FENCES AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.

WATERING, AS REQUIRED FOR CONSTRUCTION AND DUST CONTROL, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE THEREFORE. CONSTRUCTION AREAS SHALL BE WATERED FOR DUST CONTROL IN COMPLIANCE WITH GOVERNMENT ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SUPPLYING WATER AS REQUIRED.

ANY AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY LANDSCAPING OR AN IMPERVIOUS SURFACE SHALL BE REVEGETATED WITH RECLAMATION SEEDING.

SEEDING OF DISTURBED AREAS SHALL BE DONE IN ACCORDANCE WITH C.O.A. STANDARD SPECIFICATION #1012, "NATIVE GRASS SEEDING."

THE CONTRACTOR SHALL PROPERLY HANDLE AND DISPOSE OF ALL REMOVED ASPHALT BY HAULING TO AN APPROVED LANDFILL IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW MEXICO SOLID WASTE ACT.

ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING ITEMS DESIGNED FOR REMOVAL, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT WASTE PRODUCTS (OIL, GAS, TIRES, ETC.), GARBAGE, GRUBBING, EXCESS CUT MATERIAL, VEGETATIVE DEBRIS, ETC. SHALL APPROPRIATELY BE DISPOSED OF OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY PERMITS REQUIRED FOR HAUL OR DISPOSAL OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH GOVERNMENT REGULATIONS REGARDING THE ENVIRONMENT, ENDANGERED SPECIES, AND ARCHAEOLOGICAL RESOURCES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP AND REPORTING OF SPILLS OF HAZARDOUS MATERIALS ASSOCIATED WITH THE CONSTRUCTION SITE. HAZARDOUS MATERIALS INCLUDE GASOLINE, DIESEL FUEL, MOTOR OIL, SOLVENTS, CHEMICALS, PAINT, ETC. WHICH MAY BE A THREAT TO THE ENVIRONMENT. THE CONTRACTOR SHALL REPORT THE DISCOVERY OF PAST OR PRESENT SPILLS TO THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE AT 1-505-822-1558 OR 1-800-219-6157.

THE CONTRACTOR SHALL TAKE DUE PRECAUTIONS TO PREVENT THE POLLUTION OF SURFACE AND UNDERGROUND WATER. CONTACT WITH SURFACE WATER BY CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL BE MINIMIZED. EQUIPMENT MAINTENANCE AND REFUELLING OPERATIONS SHALL BE PERFORMED IN AN ENVIRONMENTALLY SAFE MANNER IN COMPLIANCE WITH GOVERNMENT REGULATIONS.

THE AIR POLLUTION CONTROL REGULATIONS OF THE ALBUQUERQUE/BERNALILLO COUNTY AIR QUALITY CONTROL BOARD (1-505-768-2638) LIMIT THE EMISSION OF PARTICULATES AND THE USE OF CUTBACK ASPHALT. THE CONTRACTOR SHALL APPRISE HIMSELF OF THESE REGULATIONS PRIOR TO BIDDING AND PERFORMING THE WORK.

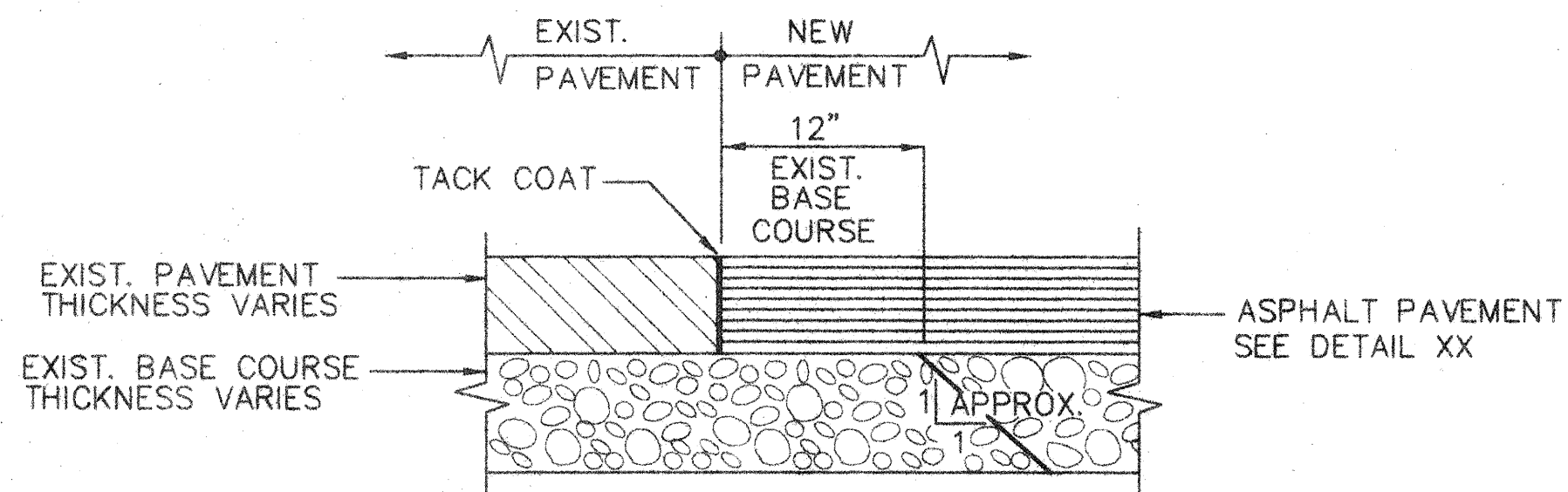
THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING NOISE AND HOURS OF OPERATIONS.

LEGEND

PP	POWER POLE	---	INDEX CONTOUR
A	ANCHOR	---	INTERMEDIATE CONTOUR
LT	LIGHT POLE	D	TREE (DECIDUOUS)
•	GUARD POST	E	TREE (EVERGREEN)
TS	TRAFFIC SIGN	TP	TRANSFORMER PAD
TR	TELEPHONE RISER	P	OVERHEAD ELECTRIC CABLE
GM	GAS METER	/ /	CHAIN LINK FENCE
FD	FIRE HYDRANT	X 25.0	ELEVATION AT NATURAL GROUND
WM	WATER METER	X 25.00	ELEVATION ON HARD SURFACE
WV	WATER VALVE	X 25.00 X 25.00	ELEVATION ON TOP OF CURB ELEVATION AT FLOW LINE
DI	DROP INLET	---	SWALE
VB	VACUUM BREAKER	---	LIMITS OF REMOVAL
SCV	SPRINKLER CONTROL VALVE		
C/O	CLEAN OUT		
MANHOLE (STORM)			

KEYED NOTES

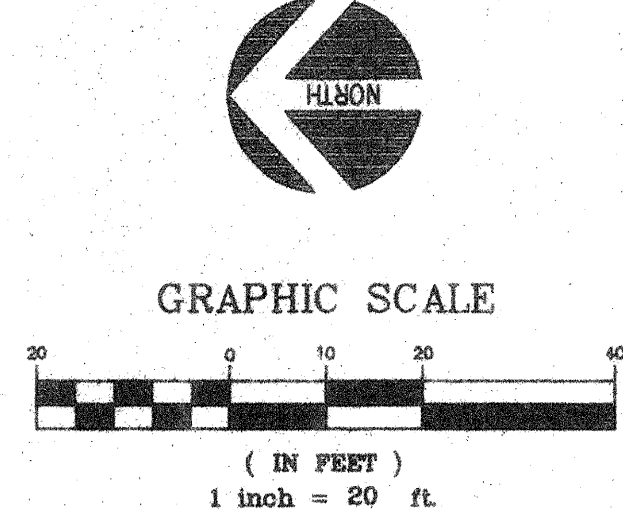
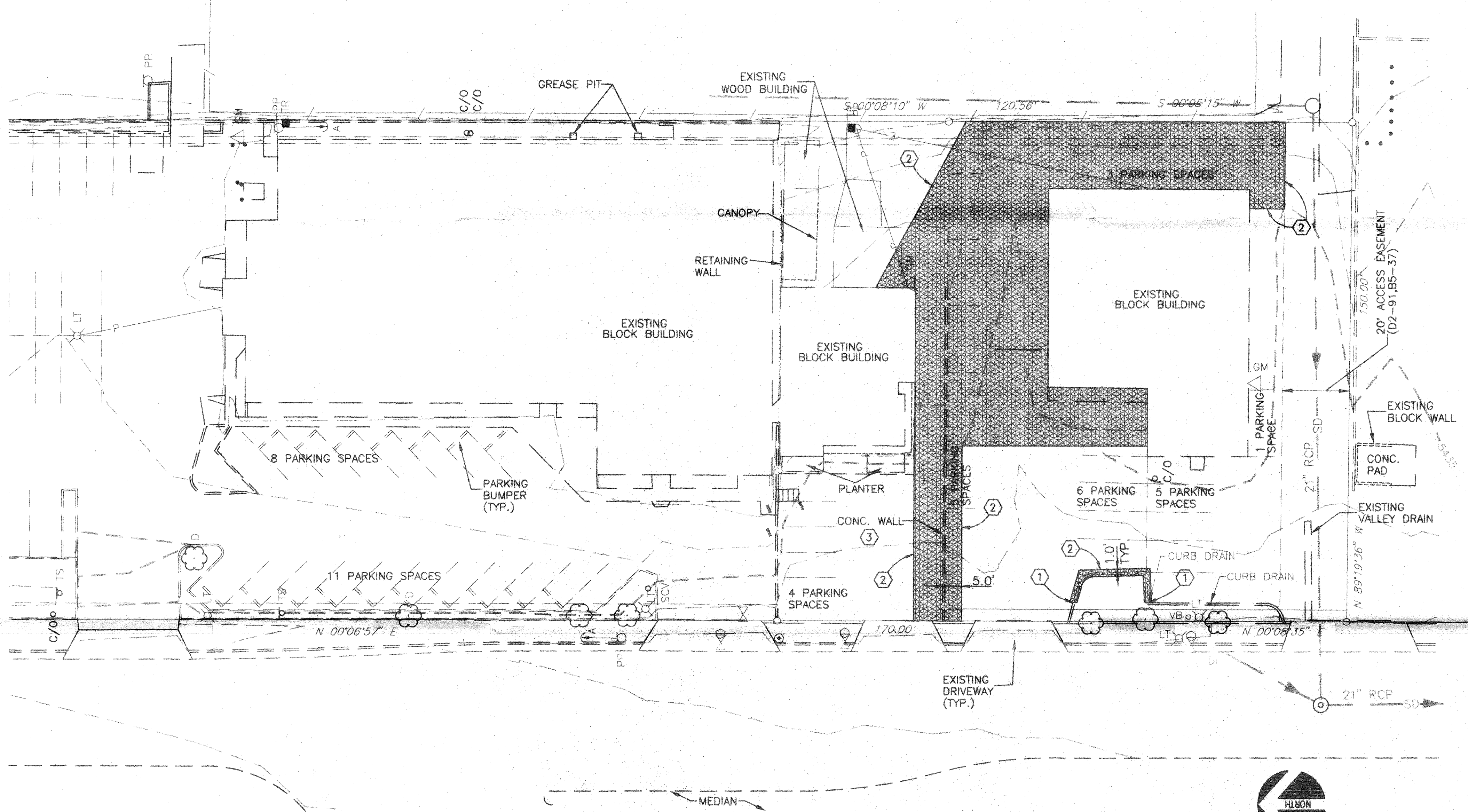
- SAWCUT AND REMOVE EXISTING CONCRETE CURBING.
- NEATLY SAWCUT, REMOVE AND REPLACE EXISTING PAVEMENT PER DETAIL THIS SHEET. APPLY TACK COAT TO SAWED EDGE PRIOR TO NEW PAVEMENT INSTALLATION.
- REMOVE EXISTING CONCRETE WALL.



CONSTRUCTION NOTES:

- MAKE CUTS WITH A CUTTING WHEEL OR PNEUMATIC PAVEMENT CUTTER.
- CUT EXISTING PAVING CLEAN, VERTICAL, AND STRAIGHT.
- REMOVE AND REPAIR IRREGULAR PAVEMENT EDGES.
- EXIST. AGGREGATE BASE COURSE TO BE PROTECTED AND REMAIN UNDISTURBED TO PREVENT LOSS OF DENSITY AND SUPPORT UNDER EXIST. PAVEMENT.

PAVEMENT CUT AND JOINT SECTION



CHAVEZ • GRIEVES CONSULTING ENGINEERS, INC.

5630 JEFFERSON STREET N.E. • ALBUQUERQUE, NEW MEXICO 87109
PHONE (505) 344-4080 • FAX (505) 343-8759

QUARTERS RESTAURANT AT WYOMING EXPANSION
ALBUQUERQUE NEW MEXICO

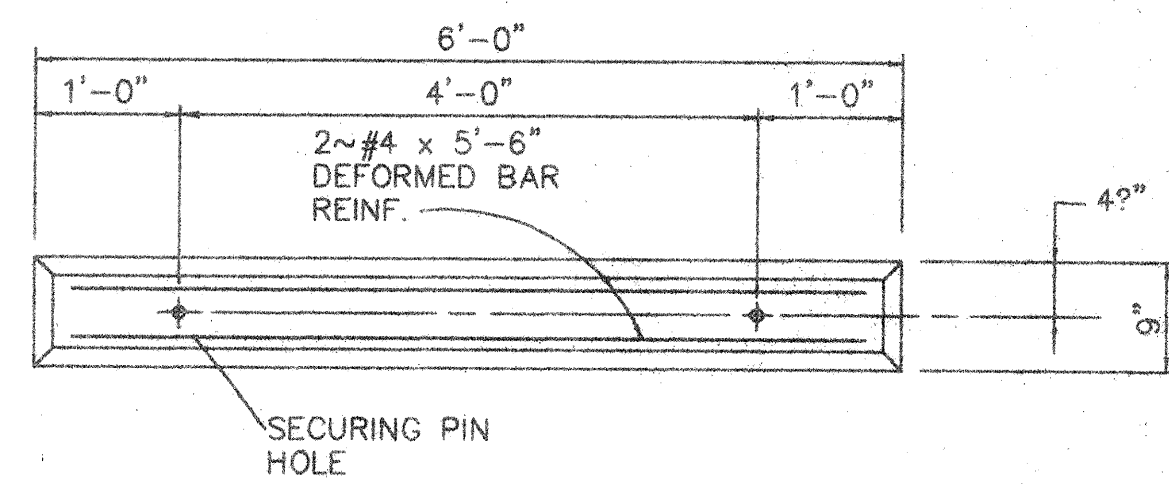
DEMOLITION PLAN

DESIGNED BY:	JK	SCALE:	1" = 20'
DRAWN BY:	WMT	JOB NUMBER:	N03-102-0195
REVIEWED BY:	VJC	DATE:	SEPT 1995

C1

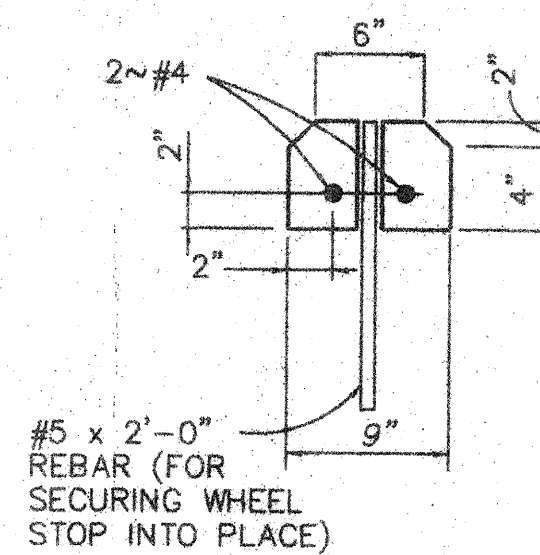
2 of 3

JOB NO. N03-102-0195
FILE ORC2.DWG (PLOT VIEW: "PLOTDMO" IN PS)
REV: 08-22-95



PLAN
SCALE 1"=1'-0"

PRE-CAST CONCRETE WHEEL STOP

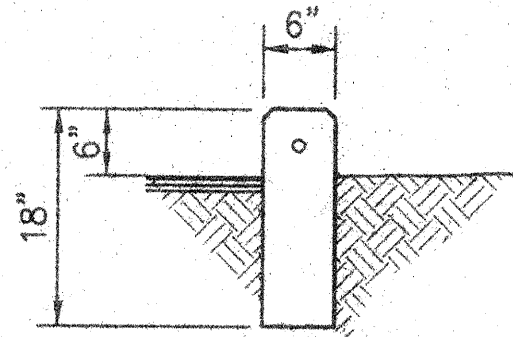


SECTION
SCALE 1 1/2"=1'-0"

AS SHOWN

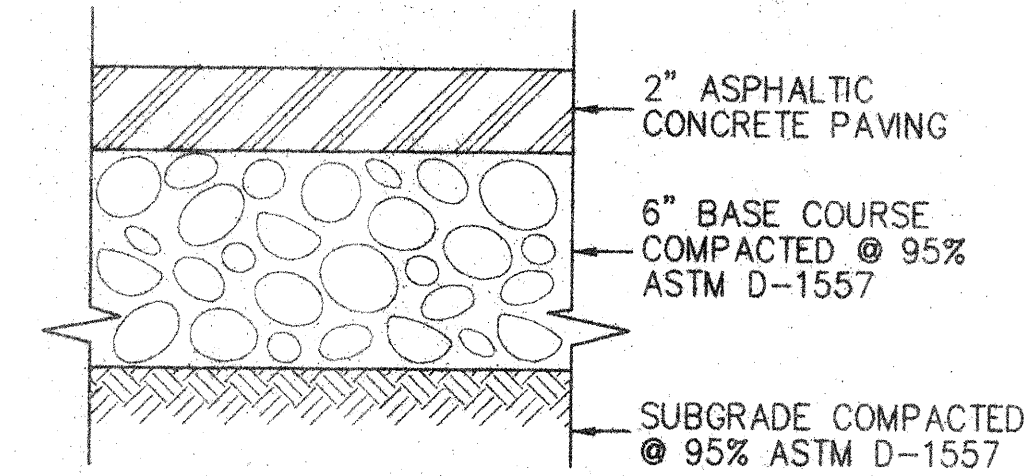
CONSTRUCTION NOTES:

1. USE 4000 PSI PCC AT 28 DAYS.
2. PROVIDE EXPANSION JOINTS @ 36' O.C. @ IMMOVABLE OBJECTS AND @ BEGINNING AND END OF CURVES.
3. PROVIDE CONTRACTION JOINTS @ 6' O.C.
4. SEE JOINT DETAILS THIS SHEET.
5. ALL EXPOSED CONCRETE CORNERS TO HAVE 3/4" RADII.



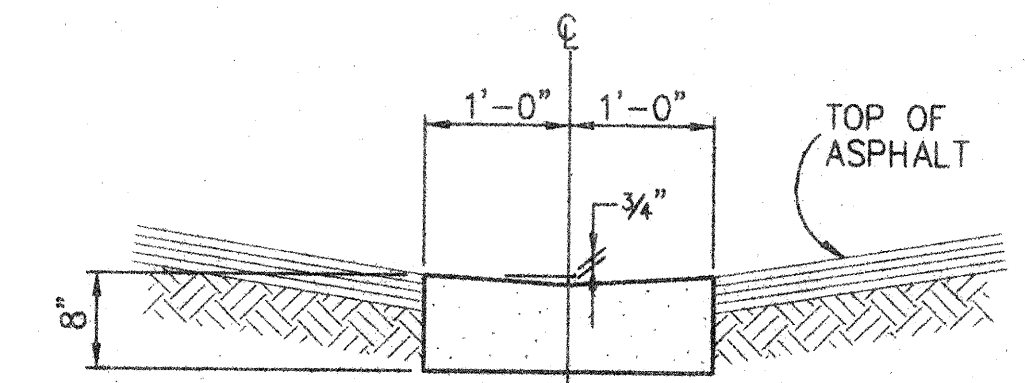
CONCRETE HEADER CURB DETAIL

3/4"=1'-0"



PAVING SECTION

NTS



CONCRETE VALLEY GUTTER

3/4"=1'-0"

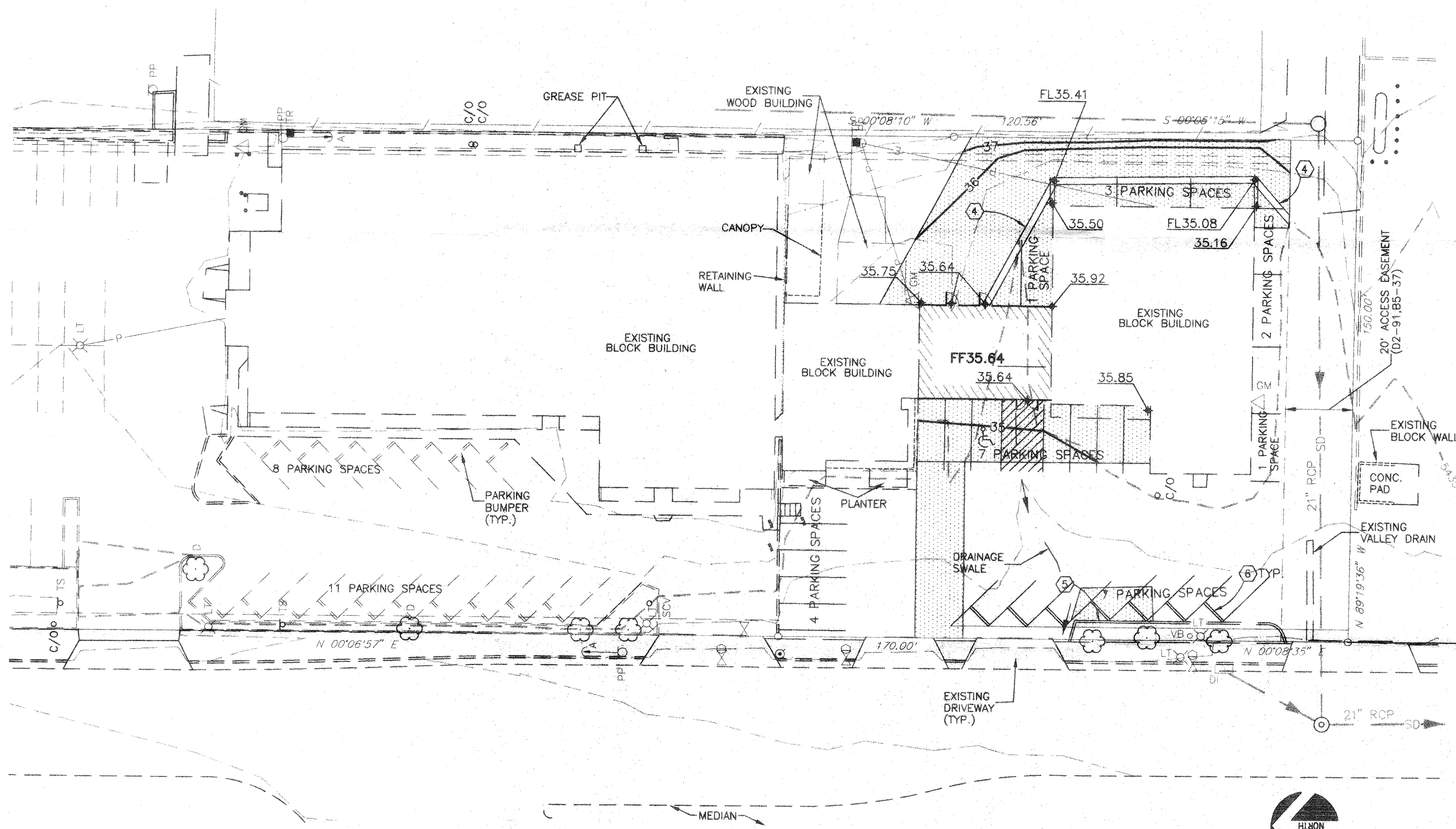
LEGEND

PP	POWER POLE	---	INDEX CONTOUR
A	ANCHOR	---	INTERMEDIATE CONTOUR
LT	LIGHT POLE	D	TREE (DECIDUOUS)
•	GUARD POST	E	TREE (EVERGREEN)
TS	TRAFFIC SIGN	TP	TRANSFORMER PAD
TR	TELEPHONE RISER	P	OVERHEAD ELECTRIC CABLE
GM	GAS METER	---/---/---	CHAIN LINK FENCE
Q	FIRE HYDRANT	X 25.0	ELEVATION AT NATURAL GROUND
WM	WATER METER	X 25.00	ELEVATION ON HARD SURFACE
X	WATER VALVE	X 25.00 25.00	ELEVATION ON TOP OF CURB ELEVATION AT FLOW LINE
DI	DROP INLET	---	SWALE
VB	VACUUM BREAKER	---	NEW ASPHALT PAVING
SCV	SPRINKLER CONTROL VALVE	35.92	NEW SPOT ELEVATION
C/O	CLEAN OUT	---	NEW BUILDING
⊙	MANHOLE (STORM)		

KEYED NOTES

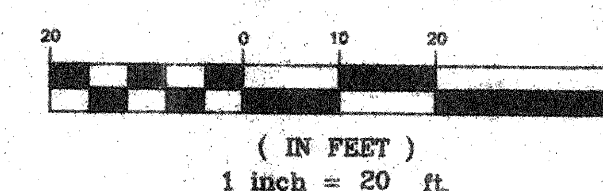
4. INSTALL VALLEY GUTTER PER DETAIL THIS SHEET.
5. INSTALL CONCRETE CURBING PER DETAIL THIS SHEET.
6. INSTALL PARKING BUMPER PER DETAIL THIS SHEET.

ADDITIONAL PARKING REQUIRED
FOR NEW ADDITION: 6
ADDITIONAL SPACES PROVIDED: 6



WYOMING BLVD. N.E.

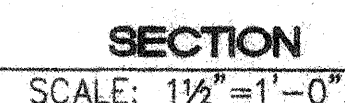
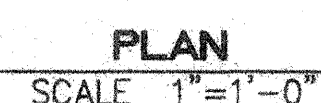
GRAPHIC SCALE



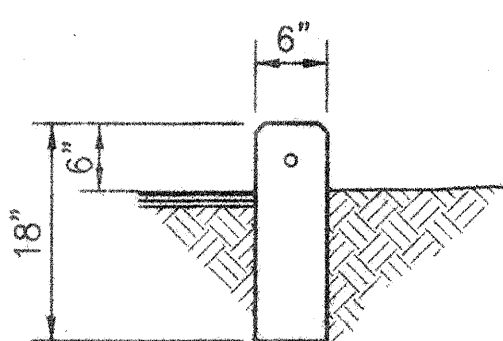
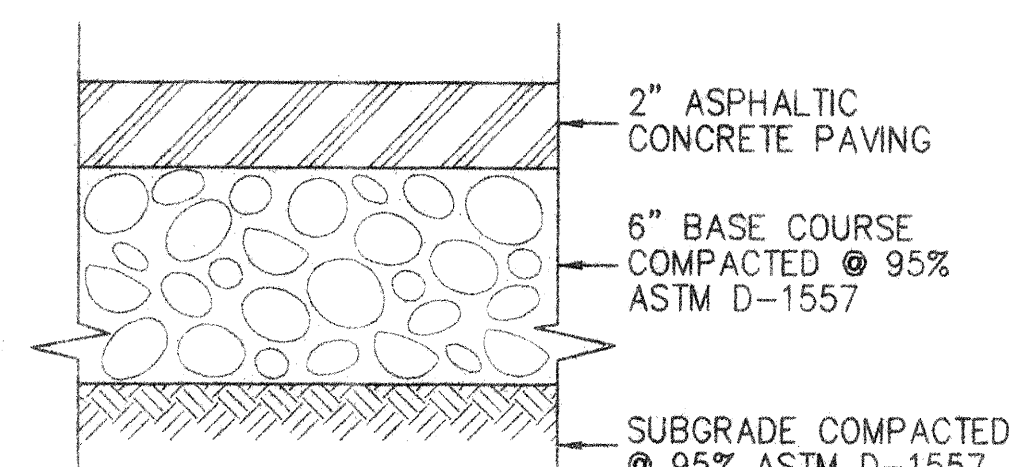
JOE P. KELLEY
NEW MEXICO
9996
REGISTERED PROFESSIONAL ENGINEER

RECEIVED
SEP 22 1995

REV.	DATE	DESCRIPTION	DRAWN	APPR'D.
CHAVEZ • GRIEVES CONSULTING ENGINEERS, INC. 5638 JEFFERSON STREET N.E. • ALBUQUERQUE, NEW MEXICO 87109 PHONE (505) 344-4080 • FAX (505) 343-8759				
QUARTERS RESTAURANT AT WYOMING EXPANSION ALBUQUERQUE NEW MEXICO				
GRADING & DRAINAGE				
DESIGNED BY:	JK	SCALE:	1"=20'	C2
DRAWN BY:	WMT	JOB NUMBER:	N03-102-0195	
REVIEWED BY:	YJC	DATE:	SEP 1995	
				3 of 3



1. USE 4000 PSI PCC AT 28 DAYS.
2. PROVIDE EXPANSION JOINTS @ 36' O.C., @ IMMOVABLE OBJECTS AND @ BEGINNING AND END OF CURVES.
3. PROVIDE CONTRACTION JOINTS @ 6' O.C.
4. ALL EXPOSED CONCRETE CORNERS TO HAVE $\frac{3}{4}"$ RADII.

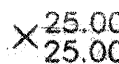
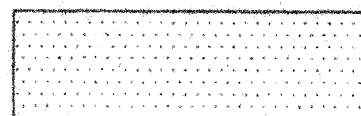
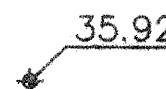

$$3/4'' = 1' - 0''$$


NTS


$$3/4'' = 1' - 0''$$

- 4 INSTALL VALLEY GUTTER PER DETAIL THIS SHEET.
- 5 INSTALL CONCRETE CURBING PER DETAIL THIS SHEET.
- 6 INSTALL PARKING BUMPER PER DETAIL THIS SHEET.
- 7 INSTALL 2 - 4" CONCRETE FILLED PIPE BOLLARDS.
EXTEND 2' INTO THE GROUND, SURROUNDED BY
3" MINIMUM OF CONCRETE.
- 8 INSTALL 12" x 18" "HANDICAP RESERVED" SIGN
ON BUILDING, 7' ABOVE SIDEWALK.

LEGEND

	PP	POWER POLE		INDEX CONTOUR	
	A	ANCHOR		INTERMEDIATE CONTOUR	
	LT	LIGHT POLE		D	TREE (DECIDUOUS)
		GUARD POST		E	TREE (EVERGREEN)
	TS	TRAFFIC SIGN		TP	TRANSFORMER PAD
	TR	TELEPHONE RISER		P	OVERHEAD ELECTRIC CABLE
	GM	GAS METER			CHAIN LINK FENCE
		FIRE HYDRANT		X 25.0	ELEVATION AT NATURAL GROUND
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		WATER VALVE		X 25.00 25.00	ELEVATION ON TOP OF CURB ELEVATION AT FLOW LINE
	DI	DROP INLET			SWALE
	VB	VACUUM BREAKER			NEW ASPHALT PAVING
	SCV	SPRINKLER CONTROL VALVE		35.92	NEW SPOT ELEVATION
	C/O	CLEAN OUT			NEW BUILDING
		MANHOLE (STORM)			EXISTING BUILDING
	(TC 35.01)	AS-BUILT SPOTS			

PROJECT BENCHMARK

ACS CONTROL STATION "3-F19", LOCATED AT THE NORTHWEST QUADRANT OF THE INTERSECTION OF WYOMING BLVD AND MONTGOMERY BLVD. ELEVATION = 5431.59

SURVEY DATA

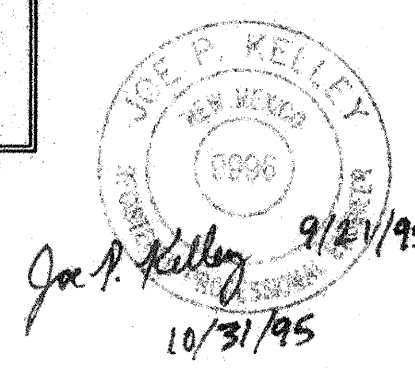
SURVEY INFORMATION WAS PROVIDED BY ALBUQUERQUE SURVEYING CO., INC.
SURVEY WAS PERFORMED IN SEPTEMBER, 1995.

LEGAL DESCRIPTION

LOT 2 & 1-B, AND TRACT 11-N, BLOCK 11, OFIMIANO J. GUTIERREZ
LOWER TERRACE SUBDIVISION.

I HEREBY CERTIFY THIS DRAINAGE
PLAN IS IN SUBSTANTIAL COMPLIANCE
WITH THE APPROVED DRAINAGE PLAN.

SIGNED: Joe Kille
DATE: 11/2/96


CHAVEZ • GRIEVES
CONSULTING ENGINEERS, INC.

5639 JEFFERSON STREET N.E. • ALBUQUERQUE, NEW MEXICO 87109
PHONE (505) 344-4080 • FAX (505) 343-8759

QUARTERS RESTAURANT AT WYOMING
EXPANSION

ALBUQUERQUE NEW MEXICO

GRADING & DRAINAGE

DESIGNED BY:	JK	SCALE:	1"=20'
DRAWN BY:	WMT	JOB NUMBER:	N03-102-019
REVIEWED BY:	VJC	DATE:	OCT 1988

C2

3 of 3

JOB NO.: N03-102-0195
 FILE: QRC1.DWG (PLOT VIEW: "PLOTGD" IN PS)
 REV: 10-31-95