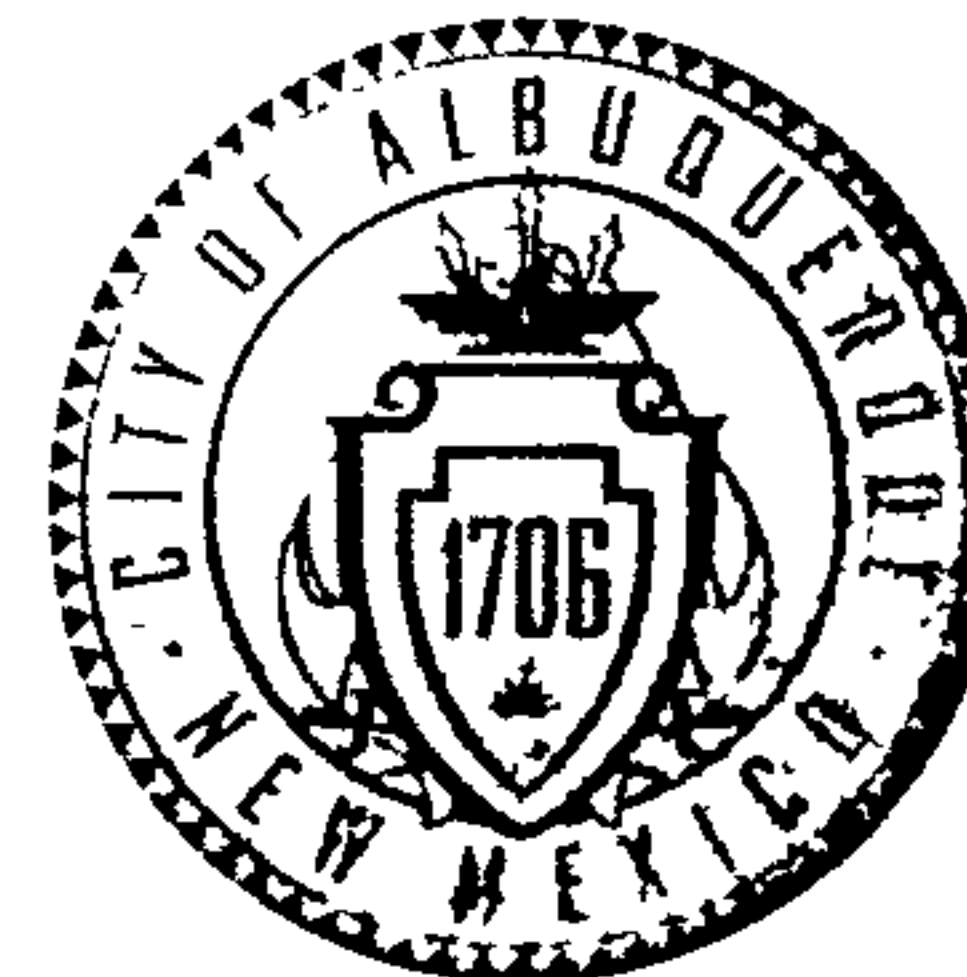


CITY OF ALBUQUERQUE



August 5, 2009

David Soule, P.E.
Rio Grande Engineering
P.O. Box 67305
Rio Rancho, NM 87193

**Re: Service Electric, 3714-3720 Commercial St., Grading and Drainage Plan
Engineer's Stamp date 8-5-09 (G15/D058)**

Dear Mr. Soule,

Based upon the information provided in your submittal received 8-5-09, the above referenced plan is approved for free discharge to the City storm drain system and for SO 19 Permit to connect to the storm drain.

PO Box 1293

Albuquerque

NM 87103

Sincerely,

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

www.cabq.gov

C: file
Antoinette Baldonado, Excavation and Barricading
Duane Schmitz, Street/Storm Drain Maintenance

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 01/28/2003rd)

PROJECT TITLE: Service Electric
~~Lot 1, Alameda Business Park~~
 DRB #: _____ EPC #: _____

ZONE MAP/DRG. FILE #: G-15 / D058
 WORK ORDER #: _____

LEGAL DESCRIPTION: Tract 5,6a,7a Graceland acres
 CITY ADDRESS: 3714-3720 Commercial street

ENGINEERING FIRM: Rio Grande Engineering
 ADDRESS: PO BOX 67305
 CITY, STATE: Alb

CONTACT: David Soule, PE
 PHONE: (505)321-9099
 ZIP CODE: 87193

OWNER: SERVICE ELECTRIC
 ADDRESS: 6714 Commercial
 CITY, STATE: _____

CONTACT: David Soule
 PHONE: 321-9099
 ZIP CODE: _____

ARCHITECT: _____
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

SURVEYOR: GEOSURVCO
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: JOHN GALLEGOS
 PHONE: 975-4567
 ZIP CODE: _____

CONTRACTOR: _____
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

CHECK TYPE OF APPROVAL SOUGHT:

- ☒ DRAINAGE REPORT
- ☒ DRAINAGE PLAN 1st SUBMITTAL, *REQUIRES TCL or equal*
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEERS CERTIFICATION (TCL)
- ☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ☐ OTHER

- ☐ SIA / FINANACIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☒ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY (PERM.)
- ☐ CERTIFICATE OF OCCUPANCY (TEMP.)
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY) _____

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☒ YES
- ☐ NO
- ☐ COPY PROVIDED

DATE SUBMITTED: 5/15/2009 BY: David Soule

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drange submittal.
 The particular nature, location and scope of the proposed development defines the degree of drainage detail.
 One or more of the following levels of submittal may be required based on the following:

- Conceptual Grading and Drainage Plans:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
- Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
- Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

RECEIVED
 AUG 05 2003
 HYDROLOGY SECTION

\$ 50.00

RECEIVED
 MAY 19 2009
 HYDROLOGY SECTION

**CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
DEVELOPMENT SERVICE / HYDROLOGY SECTION**

G-15/0058

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO. G15

DATE: 5-11-09

PLANNING DIVISION NO S: ZONING: M-1

DRB:

SUBJECT: Service Electric

STREET ADDRESS (IF KNOWN): On Commercial, north of Candelaria

SUBDIVISION NAME:

LOT# 5, LATER

APPROVAL REQUESTED: Building Permit

50-17
county
proposed
city

ATTENDANCE: David Soule, PE – Design Engineer, Brad Bingham, PE – Principal Engineer, City of Albuquerque

FINDINGS: Proposed to eliminate on-site pond due to construction of large diameter storm drain in Commercial in 2005 and finished in 2006. Site is now allowed free discharge but must construct on-site storm drain and make new connection to main.

THE UNDERSIGNED AGREES THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE SUBJECT TO CHANGE IF FURTHER INVESTIGATION REVEALS THAT THEY ARE NOT REASONABLE OR THAT THEY ARE BASED ON INACCURATE INFORMATION

SIGNED:

TITLE :

David Soule
R. G. - Jr. Eng.

SIGNED:

TITLE :

Bradley L. Bingham
City Hydrologist

****NOTE** PLEASE PROVIDE A COPY OF THIS RECAP WITH YOUR DRAINAGE SUBMITTAL**



DRAINAGE REPORT

For

**Service Electric
3714-3720 Commercial Street NE
Bernalillo County, New Mexico**

Prepared by

Rio Grande Engineering
PO Box 67305
Albuquerque, New Mexico 87193

MAY 2009



David Soule P.E. No. 14522

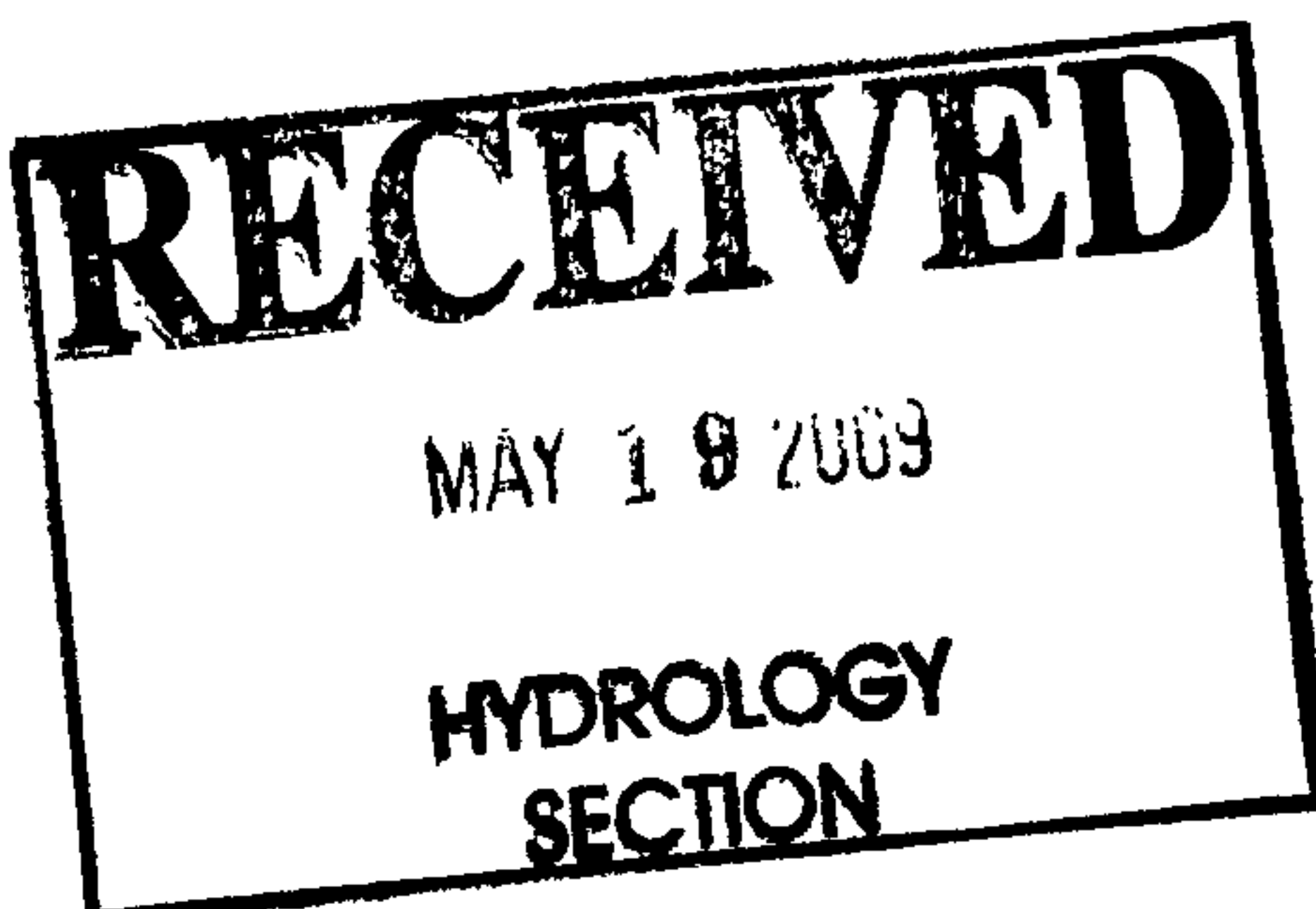


TABLE OF CONTENTS

Purpose3

Introduction3

Exhibit A-Vicinity Map4

Existing Conditions5

Proposed Conditions5

Summary6

Appendix

Site Hydrology A

Map Pocket
Site Grading and Drainage Plan

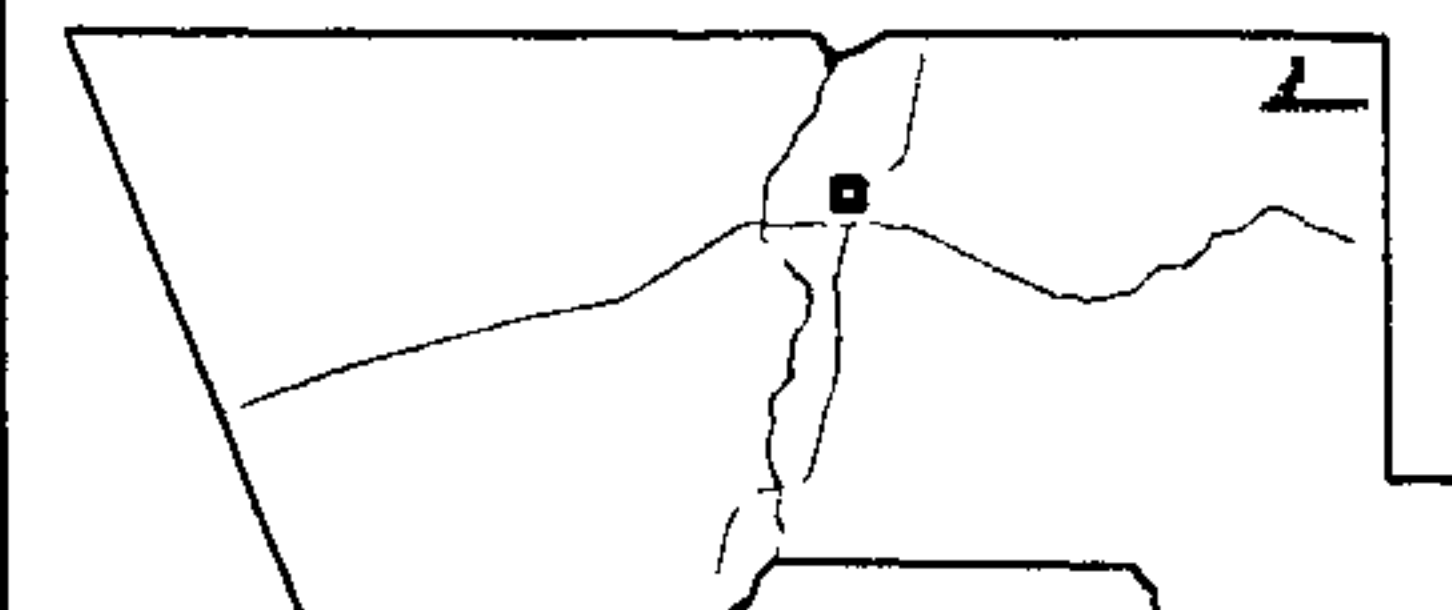
PURPOSE

The purpose of this report is to provide the Drainage Management Plan for an addition of an approximately 1,800 square foot warehouse on and existing development of a 1.29- acre contractor's yard. This plan was prepared in accordance with the Bernalillo County design utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that with the proposed modifications, the existing improvements do not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A, is a 1.29-acre parcel of land located on the east side of Commercial Road, north of Candelaria. The legal description of this site is tract 5, 6A, 7A, Graceland Acres. As shown on FIRM map 35001C0332E, the northern half of the property is located within Flood Zone AH with base flood elevation of 4975.

The site is currently developed as a contractor's yard. The site is graded to drain to a large retention pond. The site is currently 100% developed. The purpose of this grading plan is to modify the existing pond to allow for the construction of a warehouse. The City of Albuquerque has recently constructed a 42" storm drain within Commercial Road along this site's frontage. The storm drain is maintained by the City. This system is an extension of the local Claremont Pond drainage basin. There are no design files at the City or at the County. This system drains the AH flood zone. A LOMR was never prepared. A pre-design meeting was held with Bradley Bingham, the City of Albuquerque Hydrologist. The City will allow free discharge to this system. A copy of the conference documentation has been included in appendix A.



LEGAL DESCRIPTION

T10N
R3E
SEC 4

UNIFORM PROPERTY CODE

1-015-060



Map amended through February 2009



PUBLIC WORKS DIVISION
GIS PROGRAM

This information is for reference only.
Bernalillo County assumes no liability for errors
associated with the use of these data. Users are
solely responsible for confirming data accuracy
when necessary. Source data are from
Bernalillo County and the City of Albuquerque.
For current information visit www.berncounty.gov.

G-15-Z

EXISTING CONDITIONS

The site is currently developed as a contractor's yard. The majority of the site is either a building or paved for parking and storage of materials and equipment. The site is graded to drain to a central retention pond. Minor flows enter the site. The site is affected by flood zone AH, a new City of Albuquerque storm drain effectively removes this flood zones effect even though a Letter of Map revision was never completed. The pond retains the entire site with a 3' freeboard.

PROPOSED CONDITIONS

The proposed improvements consist of modifications to the site grading to allow for an 1800 square foot expansion to an existing building. As shown on the enclosed grading plan the pond will be modified from a retention pond to a free discharge system with a surge/groundwater recharge pond. The site will discharge a peak rate of 5.5 cfs to the existing storm drain. Due to the desire to continue recharge potential, an additional 'surge' pond will remain in the rear of the property. As shown in appendix A, the pipe has more capacity than required.

SUMMARY AND RECOMMENDATIONS

This project consists of an addition to an existing development. The site is surrounded by developed sites. The site currently ponds the entire site storm water generated within a 6' deep pond. Due to the construction of a city maintained storm drain adjacent to the site, the site will be allowed free discharge with a portion of the ponding to be modified to act as a 'surge pond' that allows ground water recharge. This solution was discussed with City of Albuquerque Hydrology , a documentation of this meeting is included within appendix A, an additional copy of this report

will be submitted to COA as well. The site was designed in conformance to Bernalillo County Drainage design policy utilizing the City of Albuquerque Drainage criterion. Therefore, we request approval of the site-grading plan. Since the area of work is less than ½ acre, a NPDES permit might not be required prior to any construction activity. Prior to construction a Bernalillo County barricading/excavation permit and City of Albuquerque storm drain permit is required.

APPENDIX A

SITE HYDROLOGY

**CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
DEVELOPMENT SERVICE / HYDROLOGY SECTION**

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO. G15

DATE: 5-11-09

PLANNING DIVISION NO. S: ZONING: M-1

DRB:

SUBJECT: Service Electric

STREET ADDRESS (IF KNOWN): On Commercial, north of Candelaria

SUBDIVISION NAME:

APPROVAL REQUESTED: Building Permit

ATTENDANCE: David Soule, PE – Design Engineer, Brad Bingham, PE – Principal Engineer, City of Albuquerque

FINDINGS: Proposed to eliminate on-site pond due to construction of large diameter storm drain in Commercial in 2005 and finished in 2006. Site is now allowed free discharge but must construct on-site storm drain and make new connection to main.

THE UNDERSIGNED AGREES THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE SUBJECT TO CHANGE IF FURTHER INVESTIGATION REVEALS THAT THEY ARE NOT REASONABLE OR THAT THEY ARE BASED ON INACCURATE INFORMATION

SIGNED:

TITLE :

gmm
R. G. - Jr. E. V.

SIGNED:

TITLE :

Bradley L. Bingham
City Hydrologist

****NOTE**** PLEASE PROVIDE A COPY OF THIS RECAP WITH YOUR DRAINAGE SUBMITTAL.

Weighted E Method

											100-Year, 6-hr.		10-day	
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Volume (ac-ft)
			%	(acres)	%	(acres)	%	(acres)	%	(acres)				
BASIN B	64480.00	1.291	0%	0	0%	0.000	8%	0.1084	92%	1.183	1.888	0.203	5.48	0.361

Equations:

Weighted E = $E_a \cdot A_a + E_b \cdot A_b + E_c \cdot A_c + E_d \cdot A_d$ / (Total Area)

Volume = Weighted D * Total Area

Flow = $Q_a \cdot A_a + Q_b \cdot A_b + Q_c \cdot A_c + Q_d \cdot A_d$

Where for 100-year, 6-hour storm

Ea= 0.44	Qa= 1.29
Eb= 0.67	Qb= 2.03
Ec= 0.99	Qc= 2.87
Ed= 1.97	Qd= 4.37

Pipe Capacity

Pipe	D	Slope	Area	R	Q Provided	Q Required	Velocity
	(in)	(%)	(ft^2)		(cfs)	(cfs)	(ft/s)
15	18	3.4	1.77	0.375	19.42	5.50	3.11

Manning's Equation:

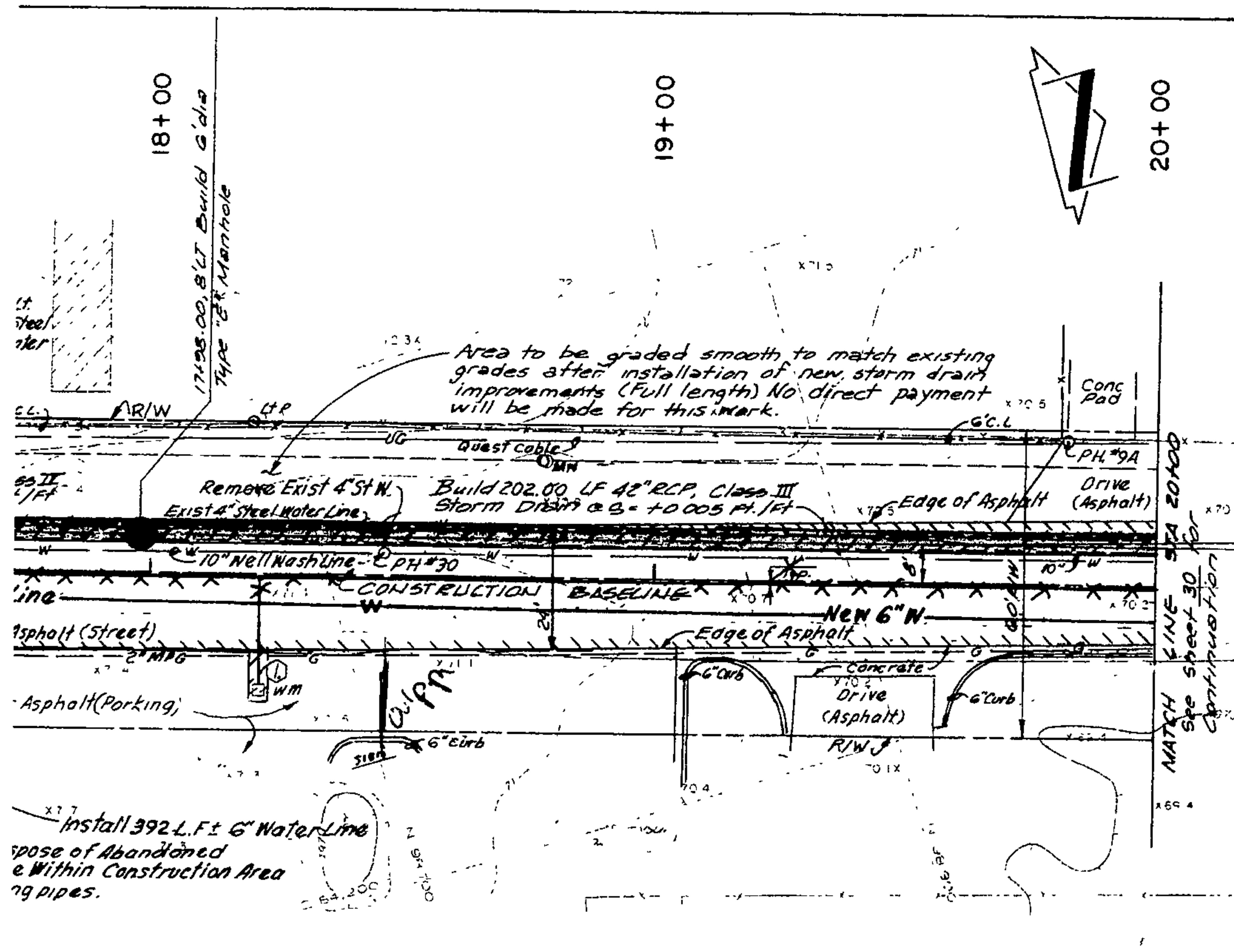
$Q = 1.49/n * A * R^{(2/3)} * S^{(1/2)}$

A = Area

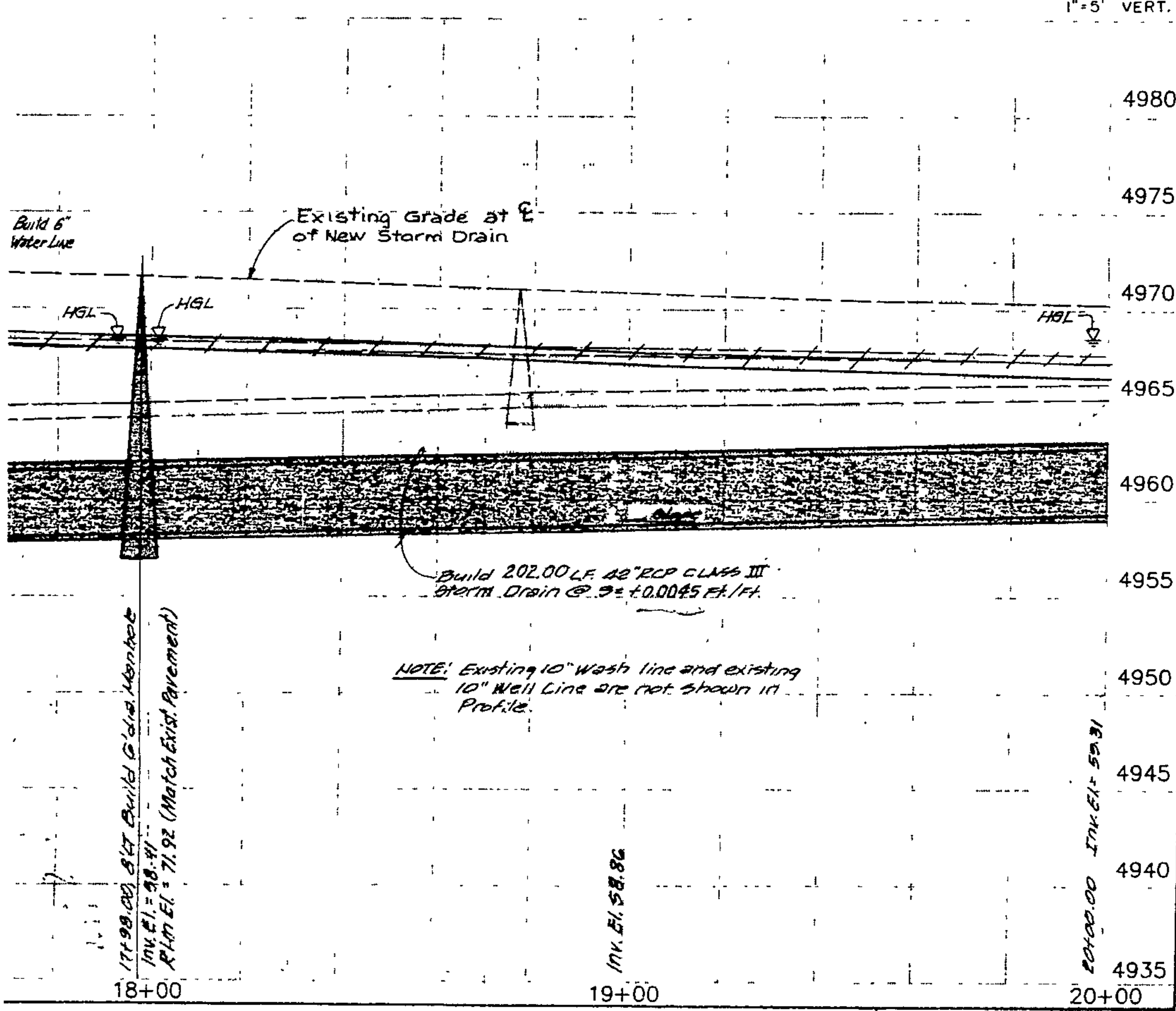
R = D/4

S = Slope

n = 0.013



L STREET



NOTES

KEYED NOTES:

- Remove and replace water service line from meter to main with copper tubing, and replace water meter box per COA Std. Dwg 2362. No splicing shall be allowed. Use heavyweight cover per COA Std. Dwg. 2369 on 3/4" to 1" services.
- Existing wheelchair ramp is to remain. If the wheelchair ramp is disturbed by construction, it shall be replaced in its entirety per COA Standard Dwg. 2441, Case-I.

ABASTO UTILITY LOCATING CO.
POTHOLE LOCATIONS

SYMBOL	UTILITY	DIAMETER	DEPTH TO TP
PH 17-A1	GAS (MET)	2"	43"
PH 17-A2	WL (STL)	16"	51"
PH 16-A	WL (MET)	10"	44"
PH 30	WL	10"	NO LOCATE
PH 9-A	COMM	1"	25 1/2"

NOTE:
For grading around storm drain inlets see general note on sheet 30.

AS BUILT INFORMATION

CONTRACTOR	DATE
MMUCI	2005

BENCH MARKS

CONTROL STATION	STATION MARK	DATE
NM47-11 ELEV. 4968.53 (SLD 1929)	STANDARD NMHC BRASS TABLET, STAMPED "STA. NM47-11", SET IN TOP OF A CONCRETE POST FLUSH WITH THE GROUND. STATION IS LOCATED IN THE CENTER OF THE MEDIAN STRIP IN THE 3200 BLOCK	8-9-05

ENGINEER'S SEAL

APPROVED
DESIGN REVIEW COMMITTEE

APPROVED
CITY ENGINEER

RECORD DRAWING
8-12-05

FROM: ORIGINAL PROVIDED BY THE CONTRACTOR

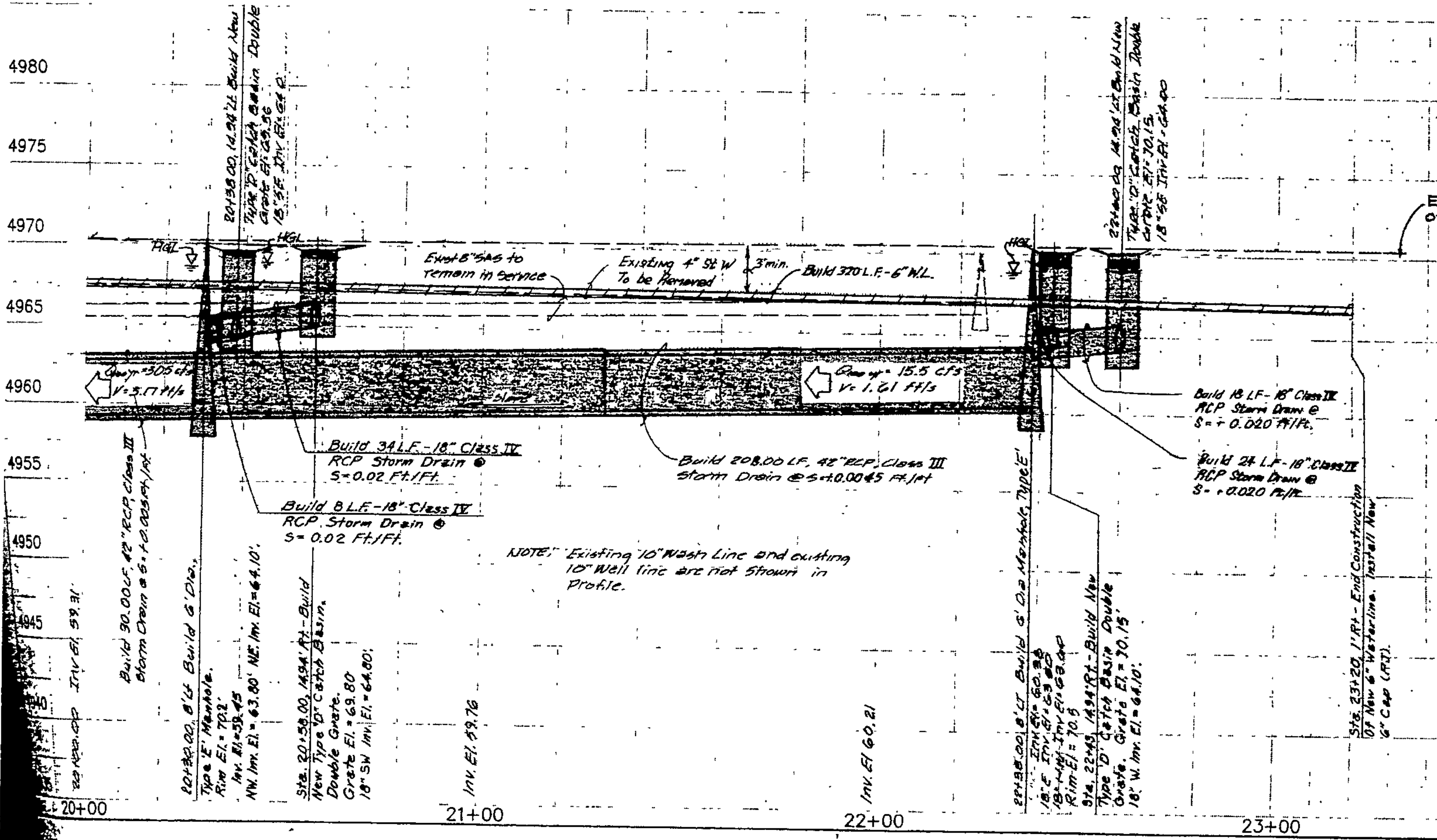
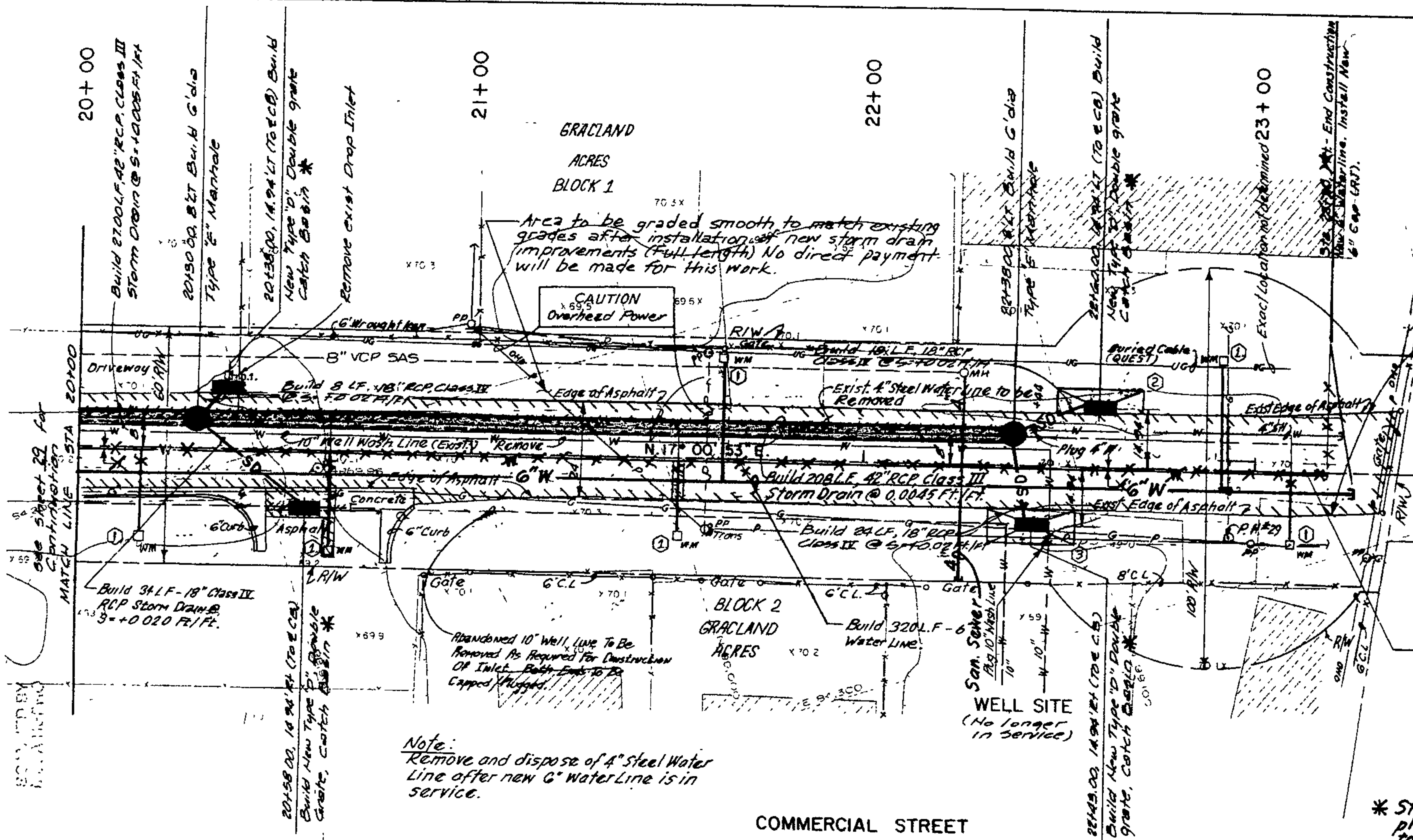
REMARKS
REVISIONS
NO. DATE

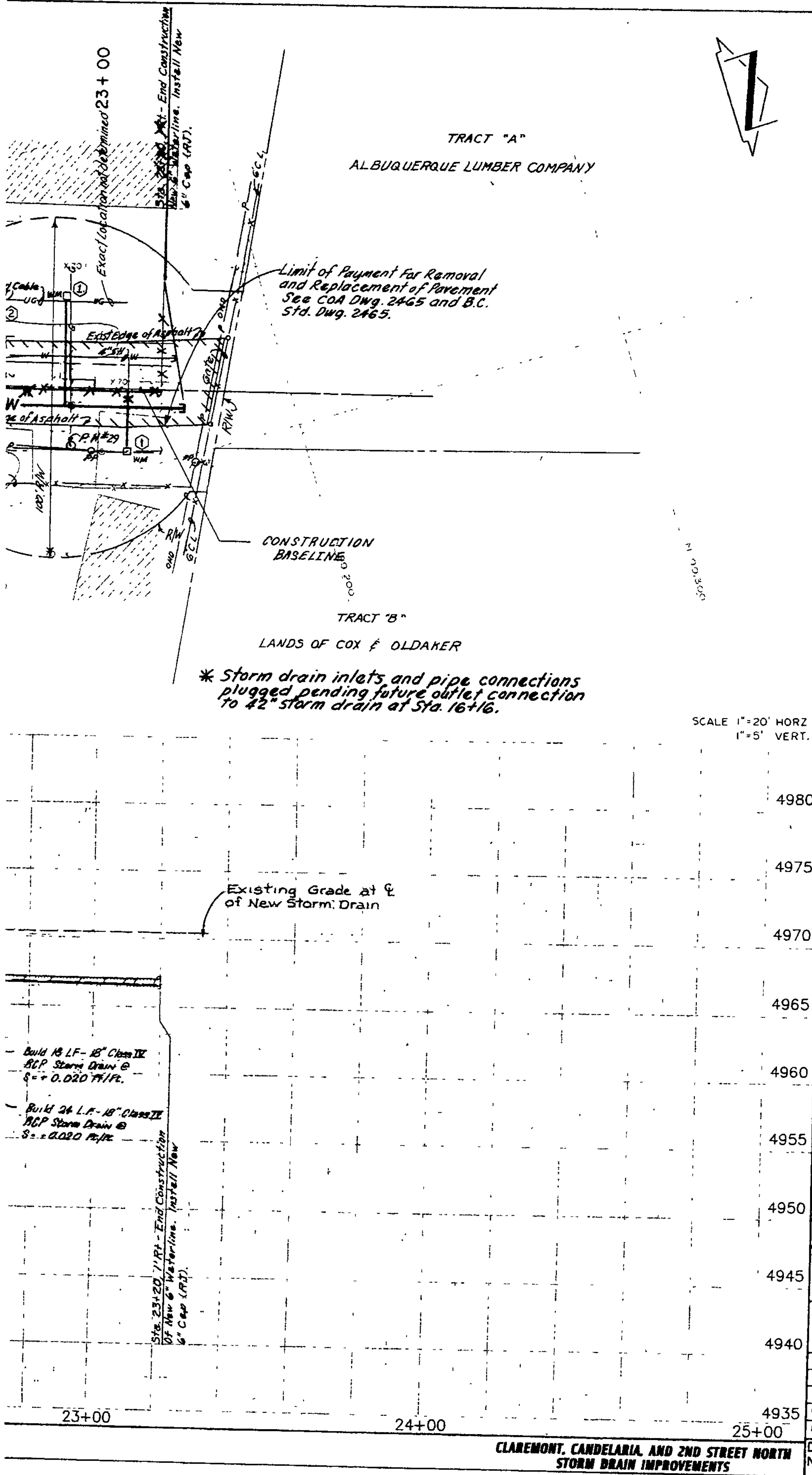
SCANLON & ASSOCIATES INC.
CONSULTING ENGINEERS
ALBUQUERQUE • SANTA FE
JOB No. 91106

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE
STORM DRAIN PLAN AND PROFILE
COMMERCIAL STREET

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER
D.R.C. CHAIRMAN	B. J. Anthony	1-28-94		
TRANSPORTATION	R. H. Hulse	1-05-99		
UTILITY	William J. Kelly	12-29-99		
HYDROLOGY	Stanley	11-5-99		





NOTES

KEYED NOTES:

1. Remove and replace water service line from meter to main with copper tubing, and replace water meter box per COA Std. Dwg. 2362 and 2363. No splicing shall be allowed. Use heavyweight cover per COA Std. Dwg. 2369 on 3/4" to 1" services

2. Sta. 22+60, 14.94' Lt.
Build 20' x 6' Asphalt Pad around catch basin slope to match top of grade elevation all around.

3. Station 22+43, 14.94' Rt.
Build 20' x 8' Asphalt Pad around catch basin slope to match top of grade elevation all around.

**ABASTO UTILITY LOCATING CO.
POTHOLE LOCATIONS**

SYMBOL	UTILITY	DIAMETER	DEPTH TO TP
PH 29	GAS (MET)	2 1/2"	52"

GENERAL NOTES

1. Area around inlets must be graded to drain to inlets. Grade for a distance of 100' on either side of inlet, along edge of roadway, at the direction of the project engineer. The cost for this grading shall be considered incidental to the cost of the inlet and no separate payment shall be made therefor.

AS BUILT INFORMATION

CONTRACTOR NAME: *SCANLON & ASSOCIATES*

STATION MARK: NM47-11 ELEV. 4968.53 (SLD 1929)

STATION MARK IS A STANDARD NMHC BRASS TABLET, STAMPED "STA. NM47-11", SET IN TOP OF A CONCRETE POST FLUSH WITH THE GROUND. STATION IS LOCATED IN THE CENTER OF THE MEDIAN STRIP IN THE 3200 BLOCK OF SECOND STREET, N.W. LOCATION IS 400'± SOUTH OF THE SOUTH R/W OF MILDRED AVENUE N.W.

SURVEY INFORMATION

FIELD NOTES

NO	BY	DATE
1	SURVEYING SERVICES	8-91
2	SURVEYING SERVICES	8-91

ENGINEER'S SEAL

APPROVED

DESIGN REVIEW COMMITTEE

APPROVED

CITY ENGINEER

RECORD DRAWING 8-12-05

ALBUQUERQUE - SANTA FE

SCANLON & ASSOCIATES

CONSULTING ENGINEERS

JOB No. 91106

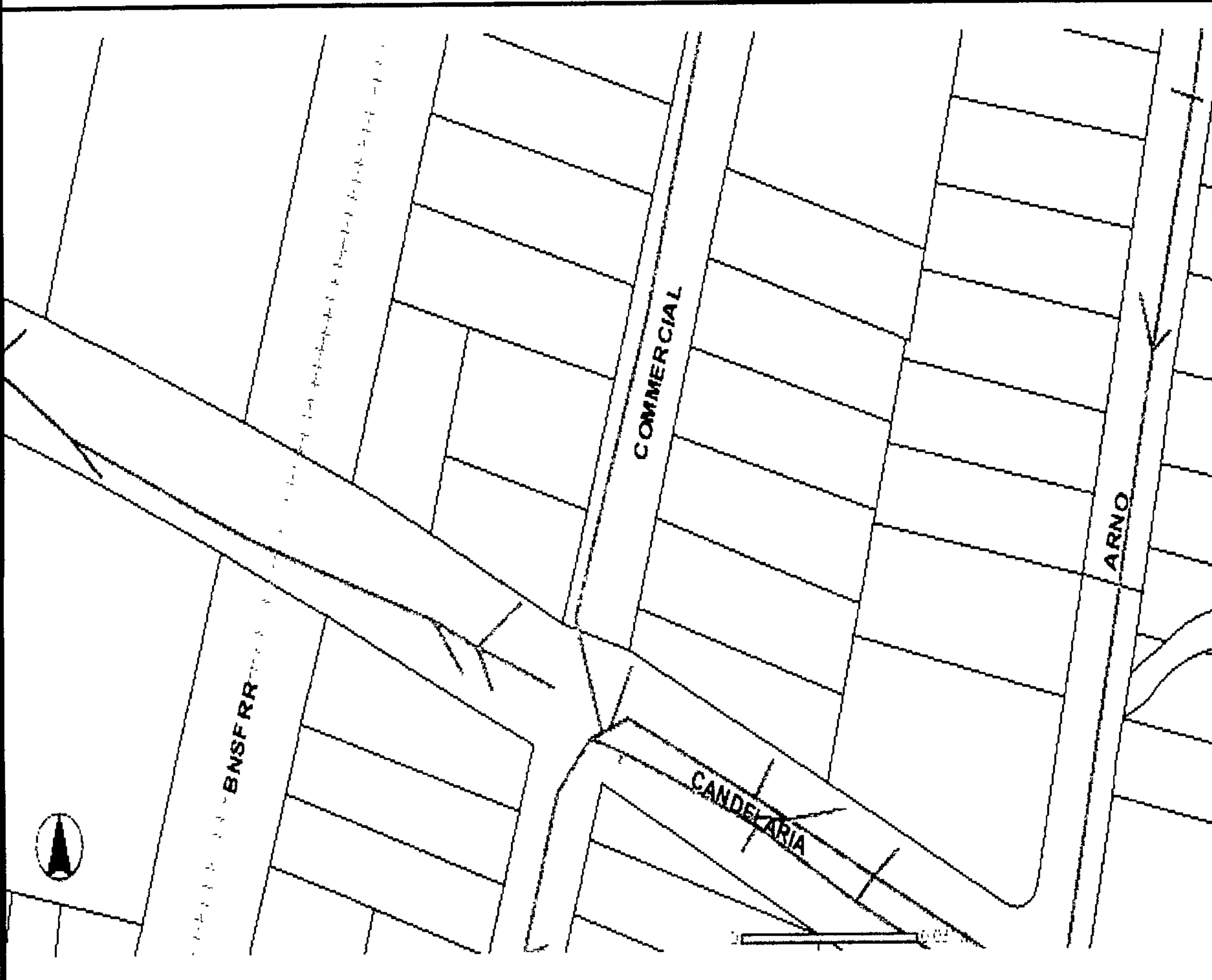
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: STORM DRAIN PLAN AND PROFILE
COMMERCIAL STREET

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. CHAIRMAN	<i>B.G. Goodwin</i>	1-28-94			
TRANSPORTATION	<i>Alvarez</i>	1-05-94			
UTILITY	<i>William J. Hays</i>	12-29-93			
HYDROLOGY	<i>Stacy B. Hays</i>	1/5/94			

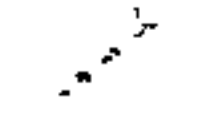
DRAWING NO. 427L92 MAP NO. G-15 SHEET 30 OF 5

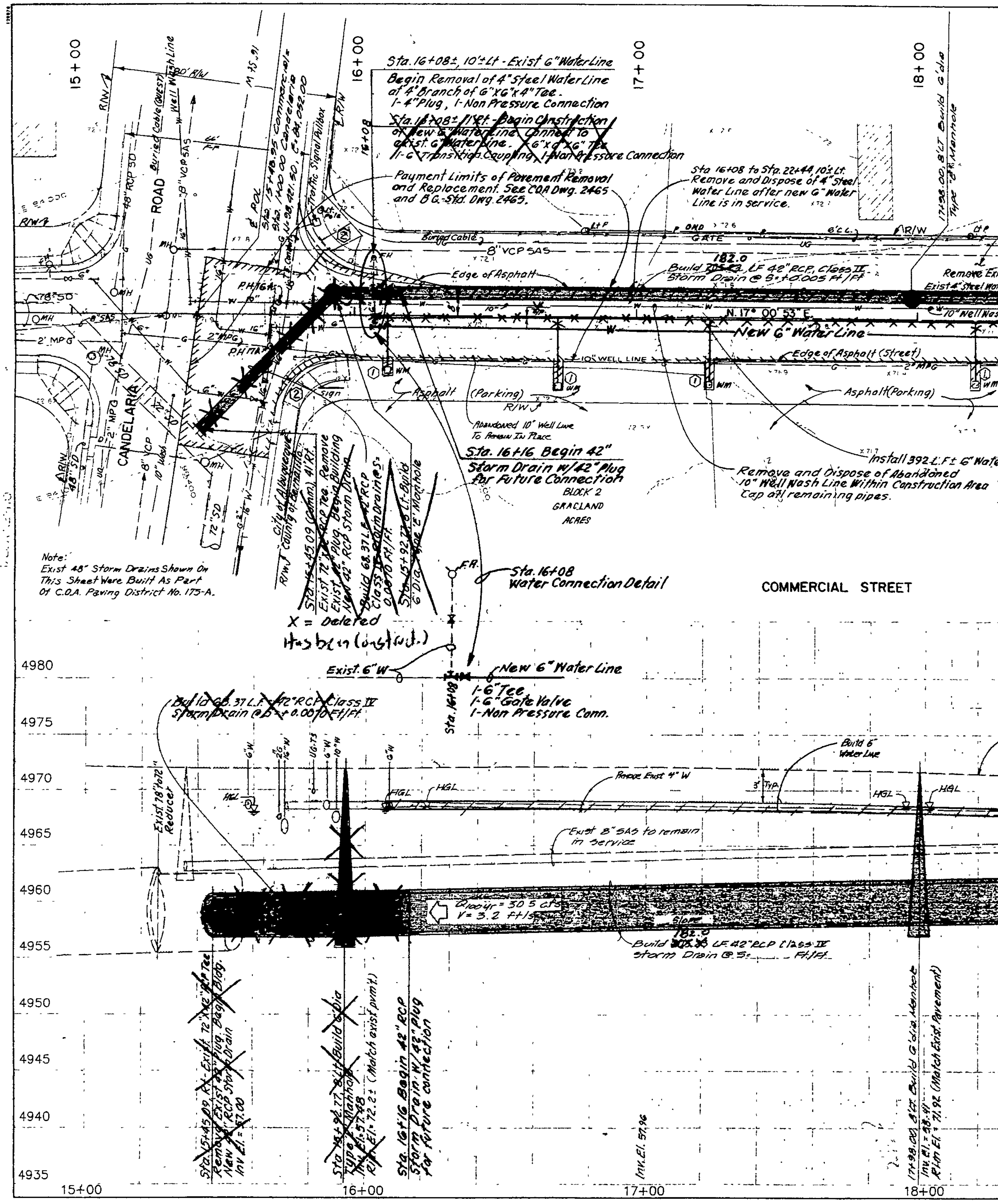
ArcIMS HTML Viewer Map



☒ Overview

Legend

- Legend**
-  STORM LINES
 -  RAILROADS
 -  RailRoad
 -  FREEWAYS
 -  STREET NAMES
 -  PARCELS
 -  MUNICIPAL LIMITS
 -  ALBUQUERQUE
 -  CORRALES
 -  LOS RANCHOS
 -  RIO RANCHO
 -  TIJERAS
 -  UNINCORPORATED AREAS



Note:
Exist 48" Storm Drains Shown On
This Sheet Were Built As Part
Of C.O.A. Paving District No. 175-A.

Sta. 16+08±, 10'± Lt. - Exist 6" Water Line
Begin Removal of 4" Steel Water Line
of 4" Branch of 6" X 6" X 4" Tee.
1- 4" Plug, 1- Non Pressure Connection

Sta. 16+08±, 11'± Lt. - Begin Construction
of New 6" Water Line Connected to
Exist 6" Water Line. 6" X 6" X 6" Tee
11- 6" Transition Coupling, 1- Non Pressure Connection

Payment Limits of Pavement Removal
and Replacement. See C.O.A. Dwg. 2465
and B.G. Std. Dwg. 2465.

Sta. 16+08 to Sta. 22+44 10'± Lt.
Remove and Dispose of 4" Steel
Water Line after new 6" Water
Line is in service.

182.0
Build 305.33 LF 42" RCP, Class II
Storm Drain @ 5'± 0.005 Ft./Ft.

Remove Exi.
Exist 4" Steel Water

New 6" Water Line

Asphalt (Parking)

Sta. 16+16 Begin 42"
Storm Drain w/ 42" Plug
for Future Connection
BLOCK 2
GRACLAND
ACRES

Install 392 L.F.± 6" Water
Remove and Dispose of Abandoned
10" Well Wash Line Within Construction Area
Cap off remaining pipes.

Sta. 16+08
Water Connection Detail

COMMERCIAL STREET

X = Deleted
Has been (constructed.)

Exist. 6" W

New 6" Water Line

1- 6" Tee
1- 6" Gate Valve
1- Non Pressure Conn.

Build 106.37 L.F. 42" RCP, Class II
Storm Drain @ 5'± 0.0010 Ft./Ft.

Exist 18" 1012"
Reducer

Reduce Exist 4" W

Exist 8" SAS to remain
in service

Q_{max} = 30.5 CFS
V = 3.2 Ft./Sec.

182.0
Build 305.33 LF 42" RCP, Class II
Storm Drain @ 5'± Ft./Ft.

Sta. 15+45.09 R/W - Exist 12" X 12" RCP Tee
Remove Exist 12" Plug, Begin Building
New 12" RCP Storm Drain
Inv. El. = 57.00

Sta. 16+08.77 - Build 6" Dia
Type 2 Manhole
Inv. El. = 57.28
R/W El. = 72.2± (Match exist pvt. t.)

Sta. 16+16 Begin 42" RCP
Storm Drain w/ 42" Plug
for future connection

Inv. El. 57.96

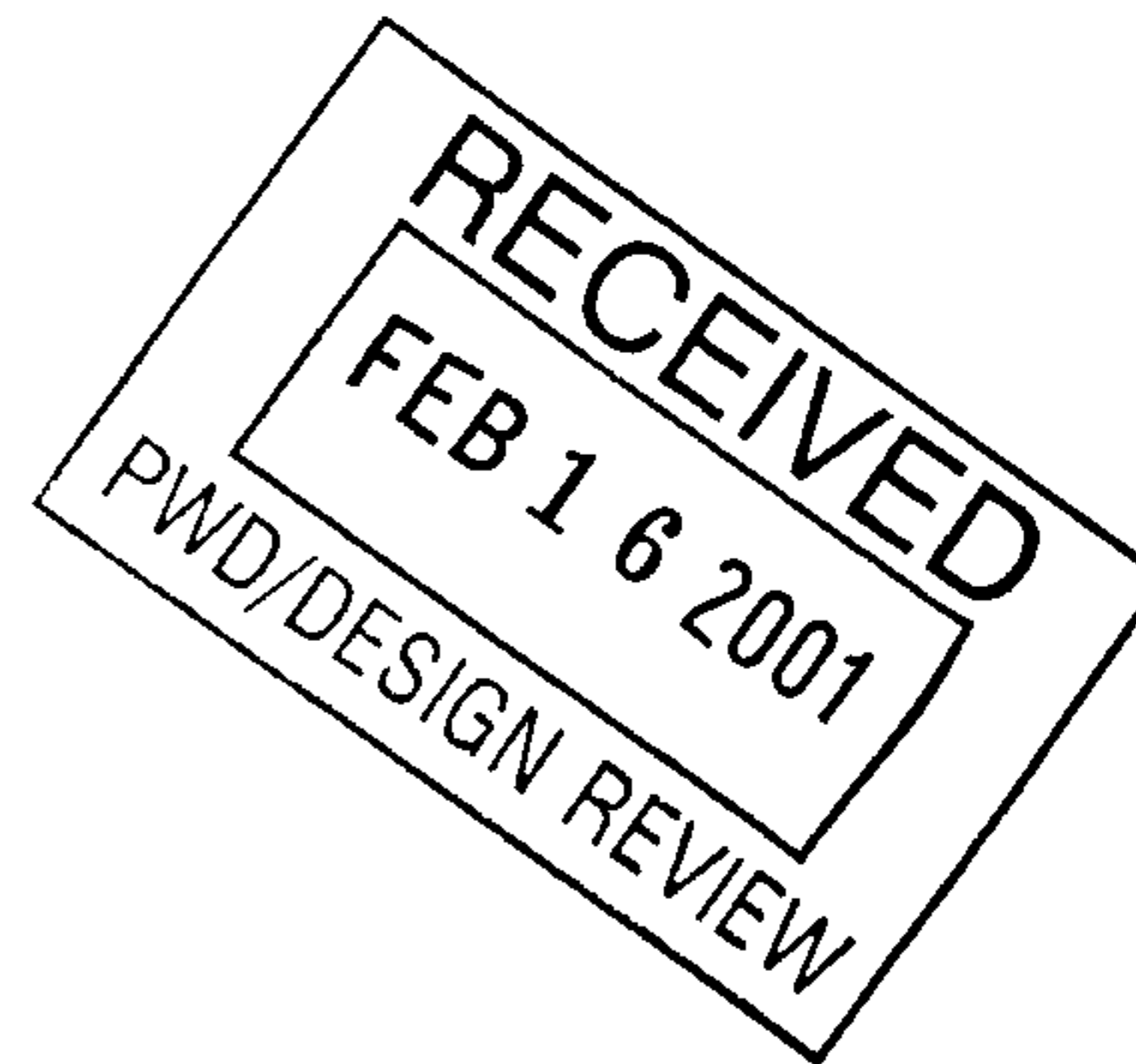
17+09.00 - Build 6" Dia Manhole
Inv. El. = 58.41
R/W El. = 71.92 (Match Exist Pavement)

**WILSON
& COMPANY**

4900 Lang Ave NE
Albuquerque, NM 87109
P.O. Box 94000 87199-4000
505-348-4000

Loren

Albuquerque
Colorado Springs
Cotton
Denver
Durango
Houston
Kansas City
Lincoln
Oklahoma City
Phoenix
Salt Lake
Wichita



16 February, 2001

Development Review Board
City of Albuquerque
600 Second St. NW
Plaza Del Sol
Albuquerque, NM 87102

Re: Preliminary/Final Plat Submittal
(Amended Copies)
Lots 6-A & 7-A, Graceland Acres
WCEA File: X0-218-010
DRB Project #1000902
Application #01440-00000-00213
Schedule Hearing Date: 2/21/01

To Whom It May Concern:

The purpose of this letter is to submit amended copies of the proposed Preliminary/Final Plat regarding the above referenced project. The reason for the amendment is a change to the title to included Lot 6-A. This reference was left out in the original submittal. If there are any questions please feel free to contact me. Thank you for your time and consideration.

WILSON & COMPANY
Agent for Service Electric Co.

Patrick Jaramillo
Senior CADD Technician
Survey Department
(505)-348-4042
pajaramillo@wilsonco.com

paj

cc: file

Attachments: 6 copies



County of Bernalillo

State of New Mexico

BOARD OF COUNTY COMMISSIONERS

TOM RUTHERFORD, CHAIR
DISTRICT 3

BARBARA J. SEWARD, VICE CHAIR
DISTRICT 4

KEN SANCHEZ, MEMBER
DISTRICT 1

STEVE D. GALLEGOS, MEMBER
DISTRICT 2

LES HOUSTON, MEMBER
DISTRICT 5

JUAN R. VIGIL, COUNTY MANAGER



MARK J. CARRILLO, ASSESSOR
JUDY D. WOODWARD, CLERK
IRA ROBINSON, PROBATE JUDGE
JOE BOWDICH, SHERIFF
ORLANDO VIGIL, TREASURER

2400 BROADWAY, S.E.
ALBUQUERQUE, NEW MEXICO 87102
PUBLIC WORKS (505) 848-1500

February 6, 2001

Chris Perea
Wilson & Company
4900 Lang Avenue NE
Albuquerque New Mexico 87109

RE: Grading and Drainage Plan for 3716 Commercial N.E. (G15-D58) (PWDN 169)
Dated January 26, 2001

Dear Mr. Perea:

The above referenced plan received January 30, 2001 is approved. Upon completion of the project an Engineer's Certification will be required.

If you have any questions please call me a 924-3982.

Sincerely,

A handwritten signature in black ink, appearing to read "Carlos A. Montoya".

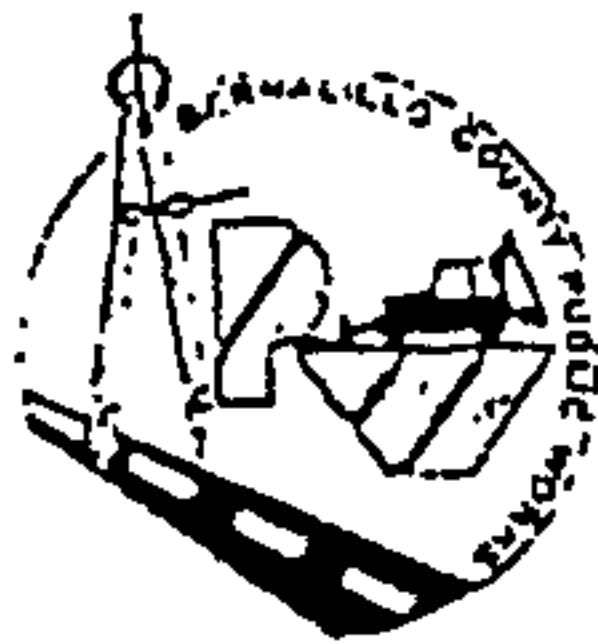
Carlos A. Montoya
City/County Floodplain Administrator

C: Lynn Mazur, AMAFCA
Brian Kent, Bernalillo County

BERNALILLO COUNTY

- ☐ NEW SUBMITTAL
☐ RESUBMITTAL
☐ FINAL SIGNOFF

TODAY'S DATE:



PWD
10015

PWD SUBMITTAL

Use for all PWD applications EXCEPT Street Excavation

CASE NO: PWDN 169

CARLOS MONTOLIVA

OWNER

OWNER Service Electric

PHONE

MAILING ADDRESS 3714 Commercial

CITY Albany ZIP 87107

AGENT

AGENT / CONTRACTOR Wilson & Company

PHONE 348 4053

MAILING ADDRESS 4900 Lang

CITY Albany ZIP 87107

STATE LICENSE NO. 13686

EXP DATE 12/00

VOLUME

CLASS

LICENSE NO. 13686

PHONE 348 4053

ARCHITECT/ENGINEER

SITE INFORMATION

SITE ADDRESS / DIRECTIONS West on Cardelaria from I-25 North on

ZONE ATLAS NO. G-15/D058

LEGAL DESCRIPTION Commercial Lot 7 Hw 9 in Block 2 of Graceland Acres

LOT SIZE: 1.29 Ac

EXISTING BUILDING(S) AND USE:

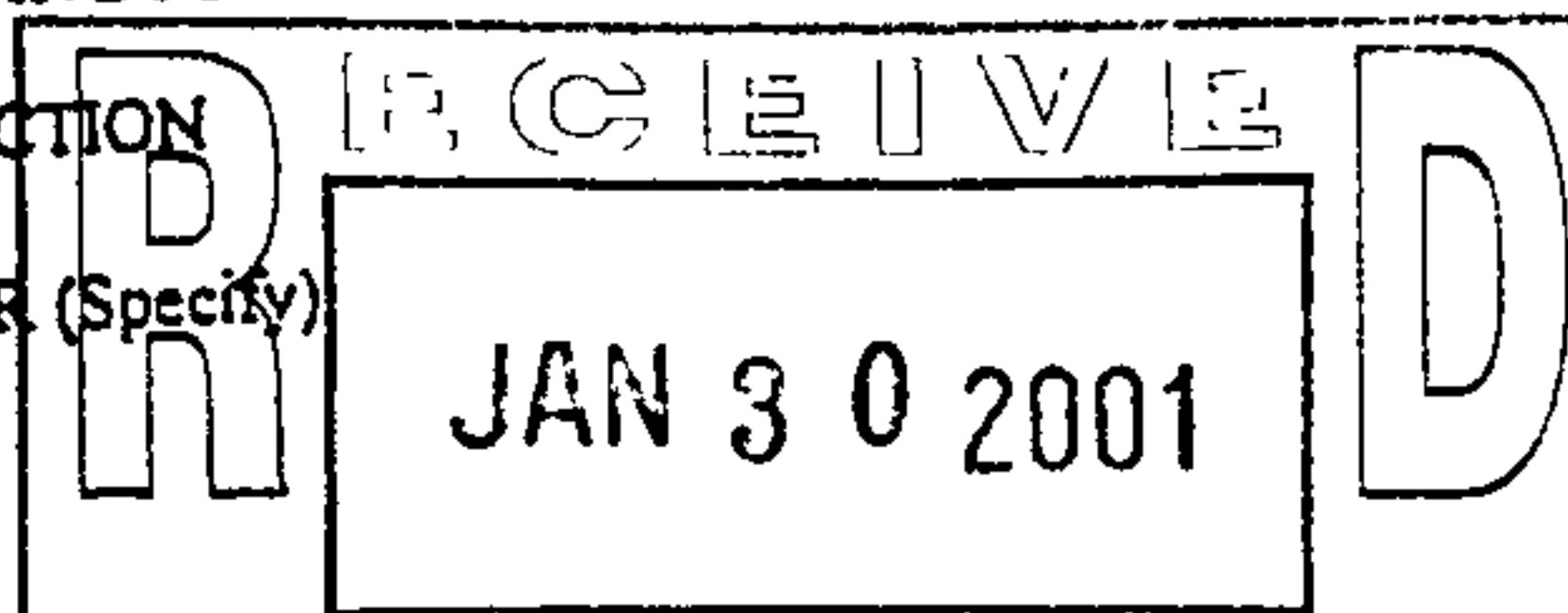
PROPOSED BUILDING(S):

UPC # 1-015-060-055-100-309-21

TYPE OF SUBMITTAL

- ☐ REPLAT
☐ MINOR SUBDIVISION
☐ MAJOR SUBDIVISION
☐ CONSTRUCTION DRAWINGS
☒ GRADING & DRAINAGE PLAN
☐ AS-CONSTRUCTED GRADING & DRAINAGE PLAN
☐ VARIANCE REQUEST
☐ LAND DIVISION

- ☐ TRAFFIC IMPACT ANALYSIS / TRAFFIC STUDY
☐ INFRASTRUCTURE LIST / DESIGN REVIEW
☐ SPECIAL USE PERMIT
☐ BARRICADING PERMIT
☐ BUILDING PERMIT
☐ INSPECTION
☐ OTHER (Specify)



The issuance of a permit or a review or approval of plan specifications, computations, and shop drawings shall not be interpreted to be a permit for, or an approval of any variance or violation of any of the provisions of any COUNTY or STATE codes, ordinances, standards, or policies. Nor shall such issuance of a permit or approval of plans, specifications, computations, and shop drawings prevent any authorized COUNTY representative or COUNTY inspector from thereafter requiring the correction of errors in said plans, specifications, computations, or shop drawings or from stopping construction operations which are being carried on thereunder when in violation of any COUNTY or STATE codes, ordinances, standards, or policies.

☐ Owner ☒ Agent ☐ Contractor

Signature

[Signature]

Date

1/26/01
12/27/00

COUNTY

BERNALILLO COUNTY USE ONLY

C/R's:

TOTAL FEE:

Receipt No.:

Received By:

**WILSON
& COMPANY****FAX TRANSMISSION****WILSON & COMPANY, ENGINEERS & ARCHITECTS**

4900 Lang Ave., N.E.

Albuquerque, New Mexico 87109

(505) 348-4000

Fax: (505) 348-4055

To: Carlos Montoya C.A. Date: 2/2/01
Brian Kent BCND Pages: 4, including this cover sheet.

Fax #: 924-3864 / 848-1510

From: Chris Perea Project #: 60 Task #: _____

Subject: Calcs, easment

COMMENTS:

COMP. CAP

**WILSON
& COMPANY**

LOC. Service Street

FILE

CK.

PROJ. X0218010

SHEET 1

DATE

1/22/01

SUBJ. Length Tensar

OF 1

Length of Geo Grid

$$L = \frac{(\gamma_b H + Zq) H K_a FS}{Z \tan \phi (\gamma_r H + q)}$$

$$Z \tan \phi (\gamma_r H + q)$$

H=6

L

q=100 pcf

 $\gamma_b = 120$ pcf for Backfill material

H = 6 ft Height of Wall

q = 100 psf External Load adjacent to wall

FS = 2 Factor of Safety

 $\phi = 28^\circ$ for Clay silty materials $\gamma_r = 100$ pcf for Saturated Clay silty material $K_a = .29$ for internal stability

$$L = \frac{(120(6) + 2(100))(6)(.29)(2)}{2 \tan(28^\circ) (100(6) + 100)} = \underline{\underline{4.3 \text{ ft} < H=6 \text{ ft}}}$$

OK

$$\text{Also see min length} = .6H = .6(6) = 3.6 < H=6 \text{ ft}$$

OK

from Tensar Technical notes Design Guidelines



from Technical Documentation

Stability Analysis (continued)

External Stability

Sliding

The factor of safety against sliding is determined as follows:

$$FS_{sl} = R_s / P_a$$

where

$$R_s = W_r C_d \tan \phi - \text{sliding resistance}$$

Overturing

The factor of safety against overturning about the toe of the wall is determined as follows:

$$FS_{ov} = M_r / M_d$$

where

$$M_r = W_r \times X_r - \text{resisting moment}$$

$$M_d = (P_s \times ((H+h)/3)) + (P_q \times ((H+h)/2)) - \text{driving moment}$$

Bearing Capacity

The factor of safety against bearing capacity is determined as follows:

$$FS_{bc} = Q_u / Q_a$$

where q_u is the ultimate bearing capacity of a strip footing having the width equal to the width of the reinforced zone and q_a is the bearing pressure calculated by the Meyerhof approach. The bearing capacity is determined by the traditional calculation:

$$Q_u = cN_c + 1/2 \gamma B N_\gamma + \gamma H_e m b N_q$$

The bearing pressure is determined as follows:

$$Q_a = (W_r + qL\beta) / B$$

$$\text{where } B = L - 2e$$

The equivalent base (B) is used to reduce the area available to resist vertical loads to account for the eccentricity (e) of the foundation load.

Minimum Length

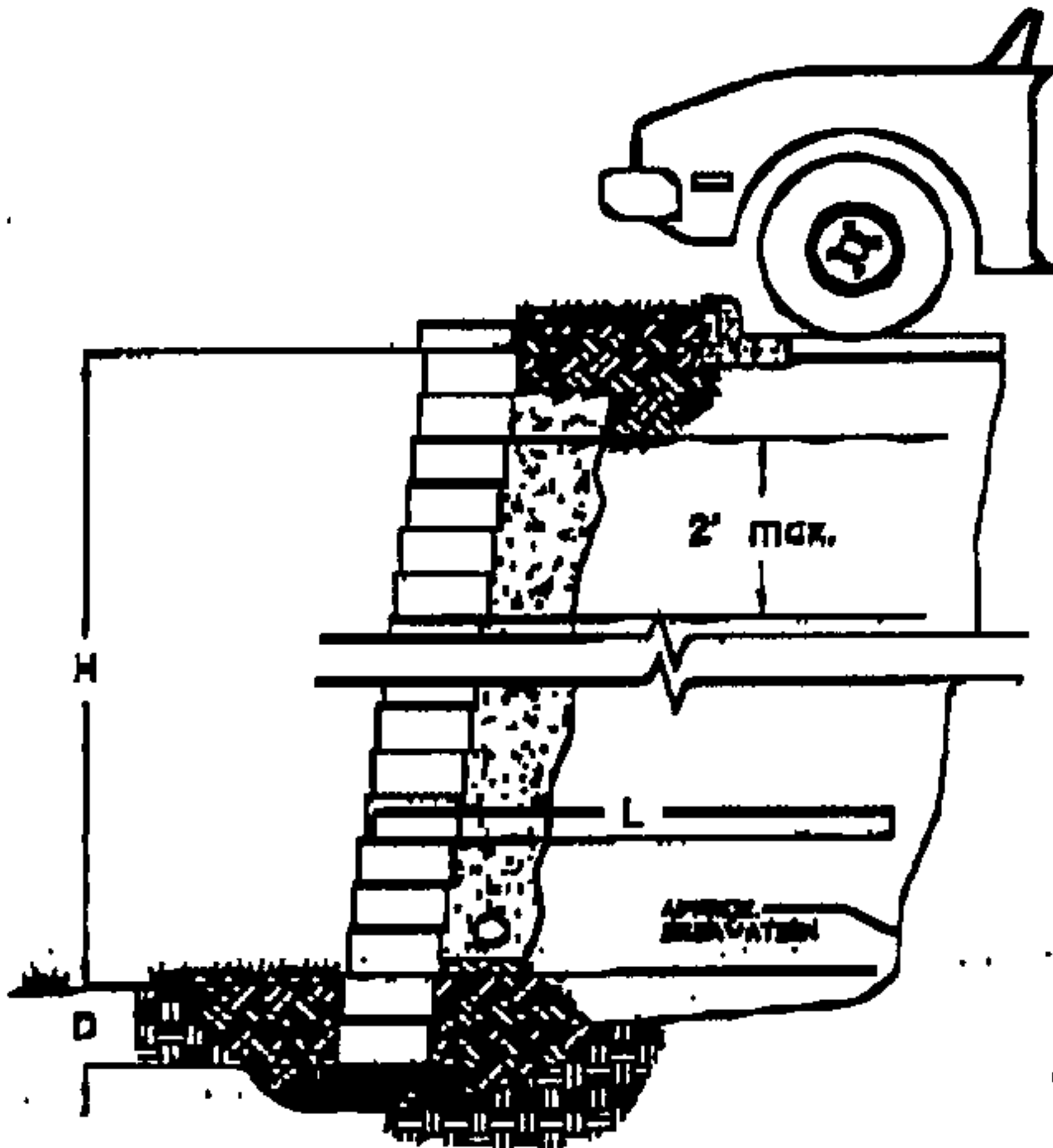
In addition to the geosynthetic length needed to meet the minimum factors of safety for the above analysis, a minimum geosynthetic length of 60 percent of the total wall height (0.6H) is typically recommended.

$$L_{min} = .6(6') = 3.6' < H = 5' \text{ o.k.}$$



Geogrid Estimating Tables

Surcharge Backfill

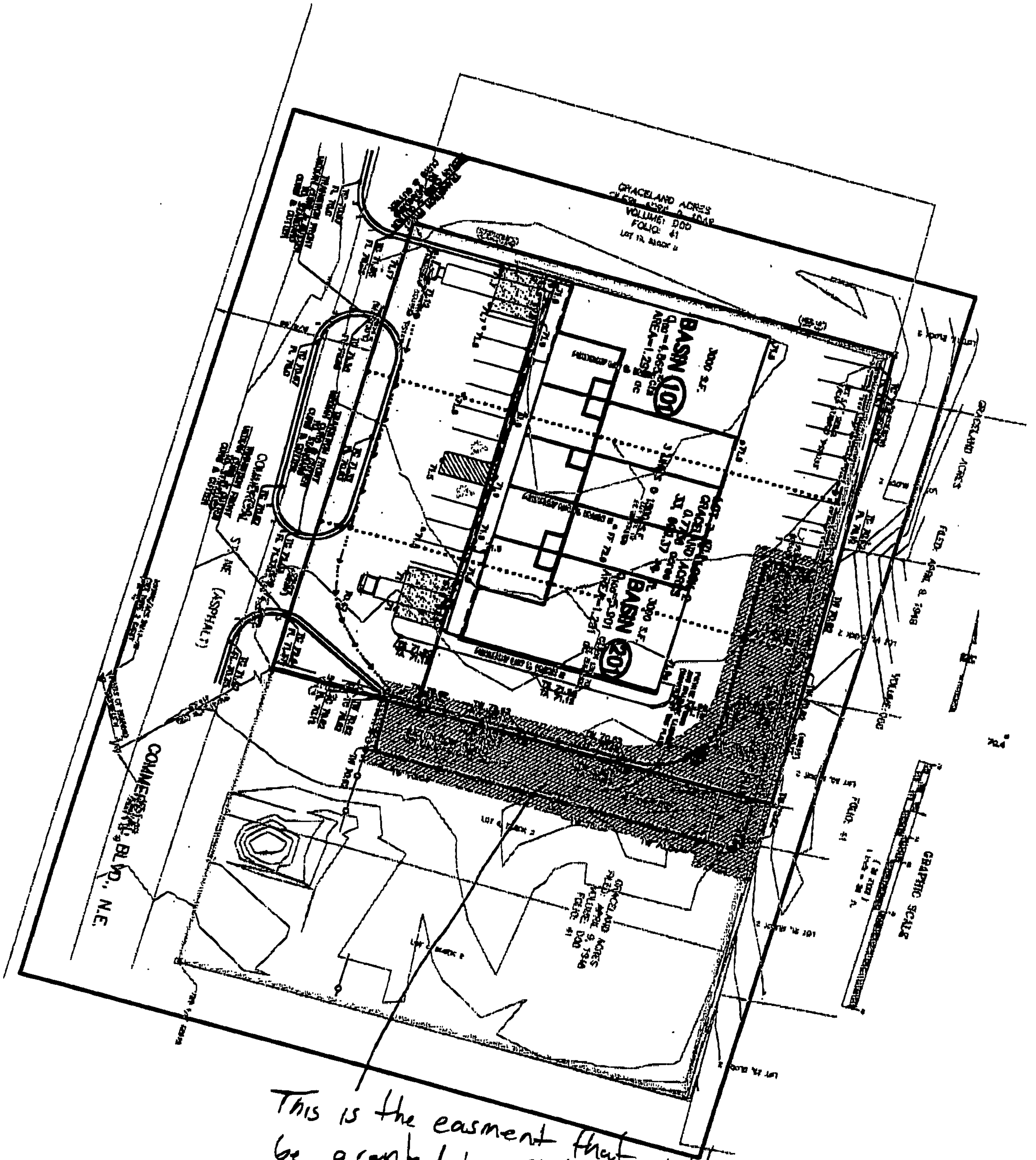


This table is provided for estimating purposes only. It should not be used or relied upon for any application without verification of accuracy, suitability, and applicability for the use contemplated, which is the sole responsibility of the user. A final, project-specific design should be prepared by a qualified, licensed, professional engineer based on actual site conditions.

This table was prepared assuming a soil weight (γ) of 120 p.c.f. and internal friction angles (ϕ) shown. Factors of safety used were: sliding - 1.5, overturning - 2.0, tensile overstress of geogrid - 1.5, and pullout of geogrid from soil - 1.5. Allowable design strengths assumed for geogrids were those provided by the respective geogrid manufacturers. Preparation of this table did not include consideration or analysis of global slope stability or allowable bearing capacity of foundation soils. These must be reviewed for each project by a qualified geotechnical engineer.

There are three tables provided in this guide (pages 32, 33, and 34) to help estimate geogrid for different wall loading situations - level backfill, sloping backfill, and surcharges. To estimate geogrid quantities, first locate correct table. After locating correct table, look under the column appropriate for project soils. Move down to rows corresponding to chosen geogrid brand. Determine the height (H) of the proposed wall and read across the row (under appropriate soil column) to approximate geogrid type, number of layers, and lengths of each layer.

	Gravel ($\phi=34^\circ$)					Sand ($\phi=30^\circ$)					Silt and Clay ($\phi=28^\circ$)				
	H(feet)	D(feet)	geogrid	layers	L(feet)	H(feet)	D(feet)	geogrid	layers	L(feet)	H(feet)	D(feet)	geogrid	layers	L(feet)
Miragrid®	4	0.5	2T	2	4.0	4	0.5	2T	2	5.0	4	0.5	2T	2	5.5
	5	0.5	2T	3	5.0	5	0.5	2T	3	5.5	5	0.5	2T	3	6.0
	6	0.5	2T	3	5.0	6	0.5	5T	3	6.0	6	0.5	5T	3	6.5
	7	1.0	2T	4	6.0	7	1.0	5T	4	7.0	7	1.0	5T	4	7.5
	8	1.0	5T	4	6.5	8	1.0	5T	5	7.5	8	1.0	5T	5	8.0
	9	1.0	5T	5	7.0	9	1.0	5T	5	8.0	9	1.0	5T	6	8.5
Stratagrid®	10	1.0	5T	5	7.0	10	1.0	5T	6	8.5	10	1.0	5T	7	9.0
	12	1.0	5T	7	8.0	12	1.0	5T	8	9.5	12	1.0	5T	8	10.5
	4	0.5	200	2	4.5	4	0.5	200	2	5.0	4	0.5	200	2	5.5
	5	0.5	200	2	5.0	5	0.5	200	2	6.0	5	0.5	200	2	6.0
	6	0.5	200	3	5.0	6	0.5	200	3	6.0	6	0.5	200	3	6.5
	7	1.0	200	3	6.0	7	1.0	200	4	7.0	7	1.0	200	4	7.5
Tensar®	8	1.0	200	4	6.5	8	1.0	200	5	7.5	8	1.0	200	5	8.0
	9	1.0	200	5	7.0	9	1.0	200	5	8.0	9	1.0	200	6	8.5
	10	1.0	200	5	7.0	10	1.0	300	5	8.5	10	1.0	300	5	9.0
	12	1.0	300	6	8.0	12	1.0	300	7	9.5	12	1.0	300	7	10.5
	4	0.5	UX1200	2	3.5	4	0.5	UX1200	2	3.5	4	0.5	UX1200	2	4.0
	5	0.5	UX1200	3	4.0	5	0.5	UX1200	3	4.0	5	0.5	UX1200	3	4.5
Fortrac®	6	0.5	UX1400	2	4.0	6	0.5	UX1400	2	4.0	6	0.5	UX1400	2	5.0
	7	1.0	UX1400	3	4.5	7	1.0	UX1400	3	4.5	7	1.0	UX1400	3	5.5
	8	1.0	UX1400	3	5.0	8	1.0	UX1400	3	5.0	8	1.0	UX1400	3	6.0
	9	1.0	UX1400	4	5.5	9	1.0	UX1400	4	5.5	9	1.0	UX1400	4	7.0
	10	1.0	UX1400	5	6.0	10	1.0	UX1400	5	6.0	10	1.0	UX1400	5	7.5
	12	1.0	UX1400	6	7.0	12	1.0	UX1400	6	7.0	12	1.0	UX1400	7	9.0
	4	0.5	20/13-20	2	4.0	4	0.5	20/13-20	2	5.0	4	0.5	20/13-20	2	5.5
	5	0.5	20/13-20	3	5.0	5	0.5	20/13-20	3	5.5	5	0.5	20/13-20	3	6.0
	6	0.5	20/13-20	3	5.0	6	0.5	20/13-20	4	6.0	6	0.5	35/20-20	3	6.5
	7	1.0	35/20-20	3	6.0	7	1.0	35/20-20	4	7.0	7	1.0	35/20-20	4	7.5
	8	1.0	35/20-20	4	6.5	8	1.0	35/20-20	5	7.5	8	1.0	35/20-20	5	8.0
	9	1.0	35/20-20	5	7.0	9	1.0	35/20-20	5	8.0	9	1.0	35/20-20	6	8.5
	10	1.0	35/20-20	5	7.5	10	1.0	35/20-20	6	8.5	10	1.0	35/20-20	7	9.0
	12	1.0	35/20-20	7	8.0	12	1.0	35/20-20	8	9.5	12	1.0	35/20-20	8	10.5



This is the easment that will be granted by Plat through CDRA / DRB by owner. All set backs and potential building foundations will not encroach pond



Brian Kent
<bkent@mercury.bern
co.gov>

01/31/01 05:04 PM

To: "Carlos Montoya" <cmontoya@cabq.gov>

cc:
Subject: Resubmittal PWDN#*169

Carlos,

Bernalillo County has received the pond covenant and our comments have been sufficiently addressed. We don't have any additional issues. Please send out an approval letter if you don't have any other comments.

Thanks

BK

✓ 171 (A512-D28) (C215-D58)
Approved (C22-D64)
(B19-D18)
✓ 125 (C24-D5)
✓ 176 (C22-D2)
/65 (C22-D63)
Pw.DN 148 (A22-D11)

County of Bernalillo

State of New Mexico

BOARD OF COUNTY COMMISSIONERS

BARBARA J. SEWARD, CHAIR

DISTRICT 4

TOM RUTHERFORD, VICE CHAIR

DISTRICT 3

KEN SANCHEZ, MEMBER

DISTRICT 1

STEVE D. GALLEGOS, MEMBER

DISTRICT 2

LES HOUSTON, MEMBER

DISTRICT 5

JUAN R. VIGIL, COUNTY MANAGER



2400 BROADWAY, S.E.
ALBUQUERQUE, NEW MEXICO 87102
PUBLIC WORKS (505) 848-1500

MARK CARRILLO, ASSESSOR

JUDY D. WOODWARD, CLERK

IRA ROBINSON, PROBATE JUDGE

JOE BOWDICH, SHERIFF

ORLANDO VIGIL, TREASURER

January 16, 2001

Chris Perea
Wilson & Co.
4900 Lang Avenue N.E.
Albuquerque, New Mexico 87109

RE: Grading and Drainage Plan for 3716 Commercial N.E. (G-15-D58) (PWDN 169)
Dated December 22, 2000

Dear Mr. Perea P.E.:

I have reviewed the referenced drainage plan received January 2, 2001 and forward the following comments. Also, this is a compilation of AMAFCA, City, and County comments.

1. The floodplain elevation is 4972 in this area. Finish floor should be above the floodplain elevation.
2. A Pond Covenant will be required. Easements will be required for any portion of the pond outside of the proposed building property.
3. Pond calculations need to be for the displaced floodplain volume (new building) and 100 year /10 day storm or two 100 year 6 hour storms. Show on site limits of basins 101 and 201.
4. Please submit the calculations for the use of Tensar Geogrid. Will this length of geogrid be long enough to support saturated soil? Will the water table affect this pond?
5. Please give details on the access ramp.
6. The pond is being placed on the property lines. Please indicate the setbacks for buildings outside of your property. Please address any problems with foundations or walls next to the pond.

A handwritten signature in black ink, appearing to read "Carlos A. Montoya".

Carlos A. Montoya

City/County Floodplain Administrator

C: Lynn Mazur, AMAFCA
Brian Kent, Bernalillo County



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

12/22/00 09:09 AM

Subject:

Brad,

Have you received an Elevation Certificate for 3164 Granada Court SW? We were told the FF elevation was 1 ft. below the FEMA floodplain elevation.

Dave

----- Forwarded by Brad L. Bingham/PWD/CABQ on 01/09/01 08:38 AM -----



"David A. Lorenzo"
<daloreno@mercury.bernco.gov>

01/02/01 03:55 PM

To: "BRAD BINGHAM (E-mail)" <bbingham@cabq.gov>

cc:
Subject: PWDN 169 Resubmittal

Brad,

Have you received a copy of the resubmittal for PWDN 169 (dated 12/22/00)? Let us know if you need a copy.

Dave

----- Forwarded by Brad L. Bingham/PWD/CABQ on 01/09/01 08:38 AM -----



Brian Kent
<bkent@mercury.bernco.gov>

01/03/01 04:50 PM

To: "Brad Bingham" <bbingham@cabq.gov>

cc:
Subject:

Brad,

These are our comments for PWDN # 169

Legal: Lots 5 thru 7 in block 2 of Grace land Acres
Address: 3716 Commercial N.E.
Engineer: Wilson & Co.
Owner: Service Electric

1. A portion of this property appears to be within a designated 100-year floodplain as shown on the National Flood Insurance Program's Flood Insurance rate map.
2. The Floodplain elevation is 4972 in this area. Finish floor should be above floodplain elevation.
3. Pond Covenant required. Easement required for portion of pond outside property plat(s).
4. Pond calculations need to be for volume of displaced floodplain (new building) and 100yr/10day storm or 2- 100yr/ 6hr. storms. Show on site limits of basins 101 and 201.

Chris Perea of Wilson has called me about the status of this plan. Would you have any additional comments for us to forward to him for correction?

Thanks,

BK



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

bkent@mercury.bern

co.gov>

12/19/00 11:39 AM

cc:

Subject: Review Comments for PWDN # 169

Brad,

These are our comments for PWDN # 169

Legal: Lot # 7 thru 9, Block # 2, of Graceland Acres
ZAP: G-15
Owner: Service Electric
Engineer: Wilson & Company

1. A portion of this property appears to be within a designated 100-year floodplain as shown on the National Flood Insurance Program's Flood Insurance rate Map.
2. The Floodplain elevation is 4972 in this area. Finish floor should be above floodplain elevation.
3. Pond Covenant required. Easement required for portion of pond outside property plat(s).
4. Pond calculations need to be for volume of displaced floodplain (new building) and 100yr/10day storm or 2- 100yr/ 6hr. storms. Show on site limits of basins 101 and 201.

Thanks,

Brian Kent

----- Forwarded by Brad L. Bingham/PWD/CABQ on 01/09/01 08:38 AM -----



Brian Kent
<bkent@mercury.bern
co.gov>

12/21/00 05:07 PM

To: "Brad Bingham" <bbingham@cabq.gov>, "Lynn Mazur"
<lynnmazur@yahoo.com>

cc:

Subject: PWDN # 176 Comments

Lynn, Brad

These are B.C. P.W. Comments for PWDN # 176

1. Provide spot elevations of bottom of Wave Action Lining.
2. Show calculations for culverts. What's their purpose if the drive is to maintain flow line elevation?
3. Provide an encroachment agreement to AMAFCA for drive, or remove culverts.
4. Scour wall needs to be continuous.

Legal: lot # 20, Block 10, Tract # 2, Unit # 1, NAA
ZAP: C-22
Engineer: Phil Clark
Owner: Aragon

----- Forwarded by Brad L. Bingham/PWD/CABQ on 01/09/01 08:38 AM -----



"David A. Lorenzo"
<daloreenzo@mercury.
bernco.gov>

To: "BRAD BINGHAM (E-mail)" <bbingham@cabq.gov>

cc:

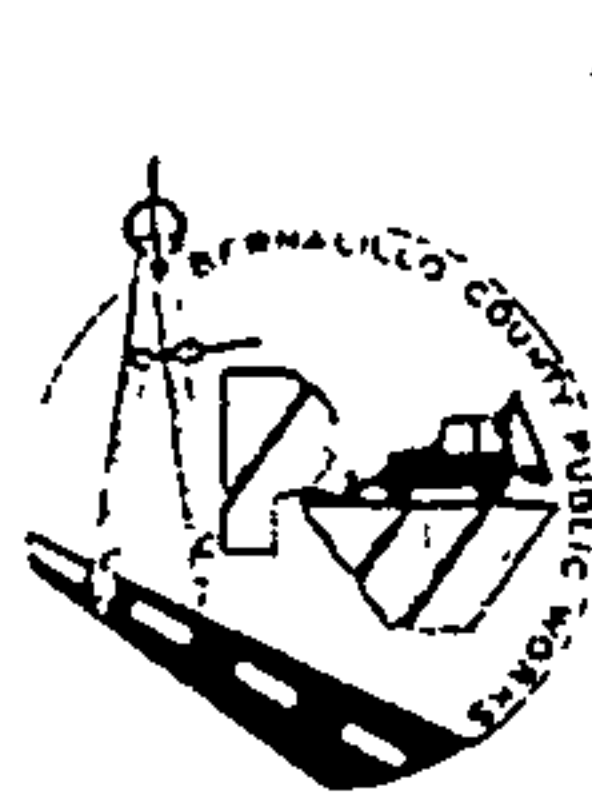
*outside
AMAFCA*

*evaluation
cont
on As built*

BERNALILLO COUNTY

- ☐ NEW SUBMITTAL
☒ RESUBMITTAL
☐ FINAL SIGNOFF

TODAY'S DATE.



PWER 2030

FP 12/22/00

PWD SUBMITTAL

Use for all PWD applications EXCEPT Street Excavation

BRIAN BINGHAM CASE NO. PWDN 169

OWNER

OWNER <u>Service Electric</u>	PHONE
MAILING ADDRESS <u>3716 Commercial</u>	CITY <u>Albany</u> ZIP <u>87107</u>

AGENT

AGENT / CONTRACTOR <u>Wilson & Company</u>	PHONE <u>348 4053</u>
MAILING ADDRESS <u>4900 Lang</u>	CITY <u>Albany</u> ZIP <u>87107</u>
STATE LICENSE NO. <u>13686</u>	EXP DATE <u>12/00</u> VOLUME CLASS
ARCHITECT/ENGINEER	LICENSE NO. <u>13686</u> PHONE <u>348 4053</u>

SITE INFORMATION

SITE ADDRESS / DIRECTIONS <u>West on Candelaria from I-25 North on</u>	ZONE ATLAS NO. <u>G-15</u>
<u>Commercial</u>	
LEGAL DESCRIPTION <u>lot 7 thru 9 in Block 2 of Graceland Acres</u>	
	LOT SIZE <u>1.29 Ac</u>
EXISTING BUILDING(S) AND USE	PROPOSED BUILDING(S).
UPC # <u>1-015-060-055-100-309-21</u>	

TYPE OF SUBMITTAL

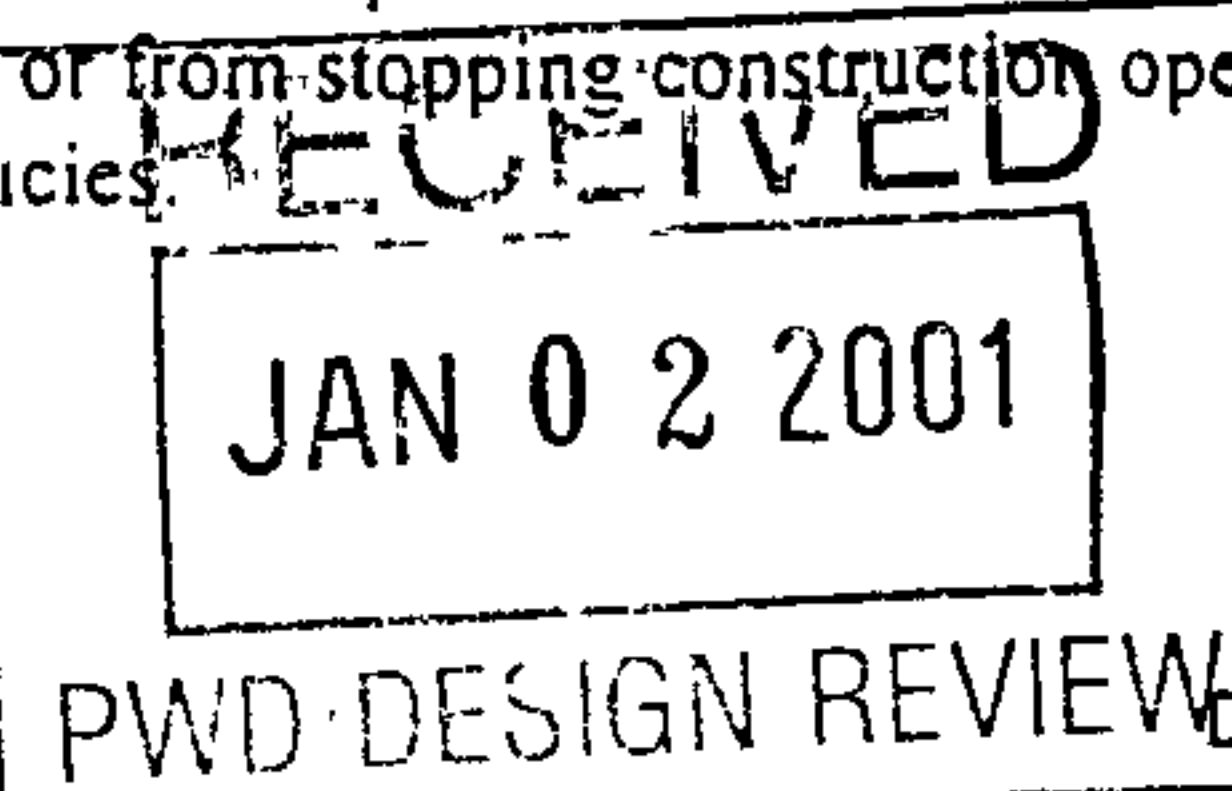
- | | |
|---|--|
| ☐ REPLAT | ☐ TRAFFIC IMPACT ANALYSIS / TRAFFIC STUDY |
| ☐ MINOR SUBDIVISION | ☐ INFRASTRUCTURE LIST / DESIGN REVIEW |
| ☐ MAJOR SUBDIVISION | ☐ SPECIAL USE PERMIT |
| ☐ CONSTRUCTION DRAWINGS | ☐ BARRICADING PERMIT |
| ☒ GRADING & DRAINAGE PLAN | ☐ BUILDING PERMIT |
| ☐ AS-CONSTRUCTED GRADING & DRAINAGE PLAN | ☐ INSPECTION |
| ☐ VARIANCE REQUEST | ☐ OTHER (Specify): |
| ☐ LAND DIVISION | |

The issuance of a permit or a review or approval of plan specifications, computations, and shop drawings, shall not be interpreted to be a permit for, or an approval of any variance or violation of any of the provisions of any COUNTY or STATE codes, ordinances, standards, or policies. Nor shall such issuance of a permit or approval of plans, specifications, computations, and shop drawings prevent any authorized COUNTY representative or COUNTY inspector from thereafter requiring the correction of errors in said plans, specifications, computations, or shop drawings or from stopping construction operations which are being carried on thereunder when in violation of any COUNTY or STATE codes, ordinances, standards, or policies.

☐ Owner ☒ Agent ☐ Contractor

Signature

Cheryl R.

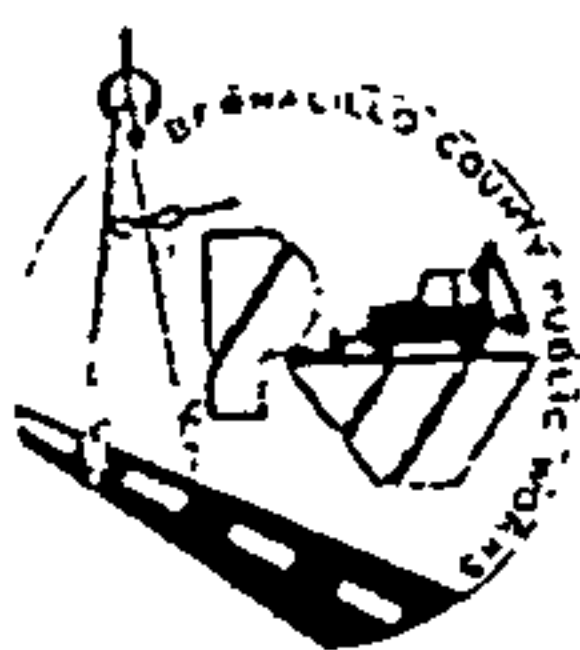


Date 12/22/00

COUNTY

BERNALILLO COUNTY USE ONLY		
C/R's	TOTAL FEE	
	Receipt No.	
	Received By	

BERNALILLO COUNTY



FP

PWD SUBMITTAL

Use for all PWD applications EXCEPT Street Excavation

- ☒ NEW SUBMITTAL
☐ RESUBMITTAL
☐ FINAL SIGNOFF

TODAY'S DATE: 11/11/00

R/RND BING HAM

CASE NO.

PWEP-1873

PWDN-169

OWNER

OWNER SERVICE Electrical PHONE _____
 MAILING ADDRESS 3716 COMMERCIAL ST NE CITY Albuquerque ZIP 87107

AGENT

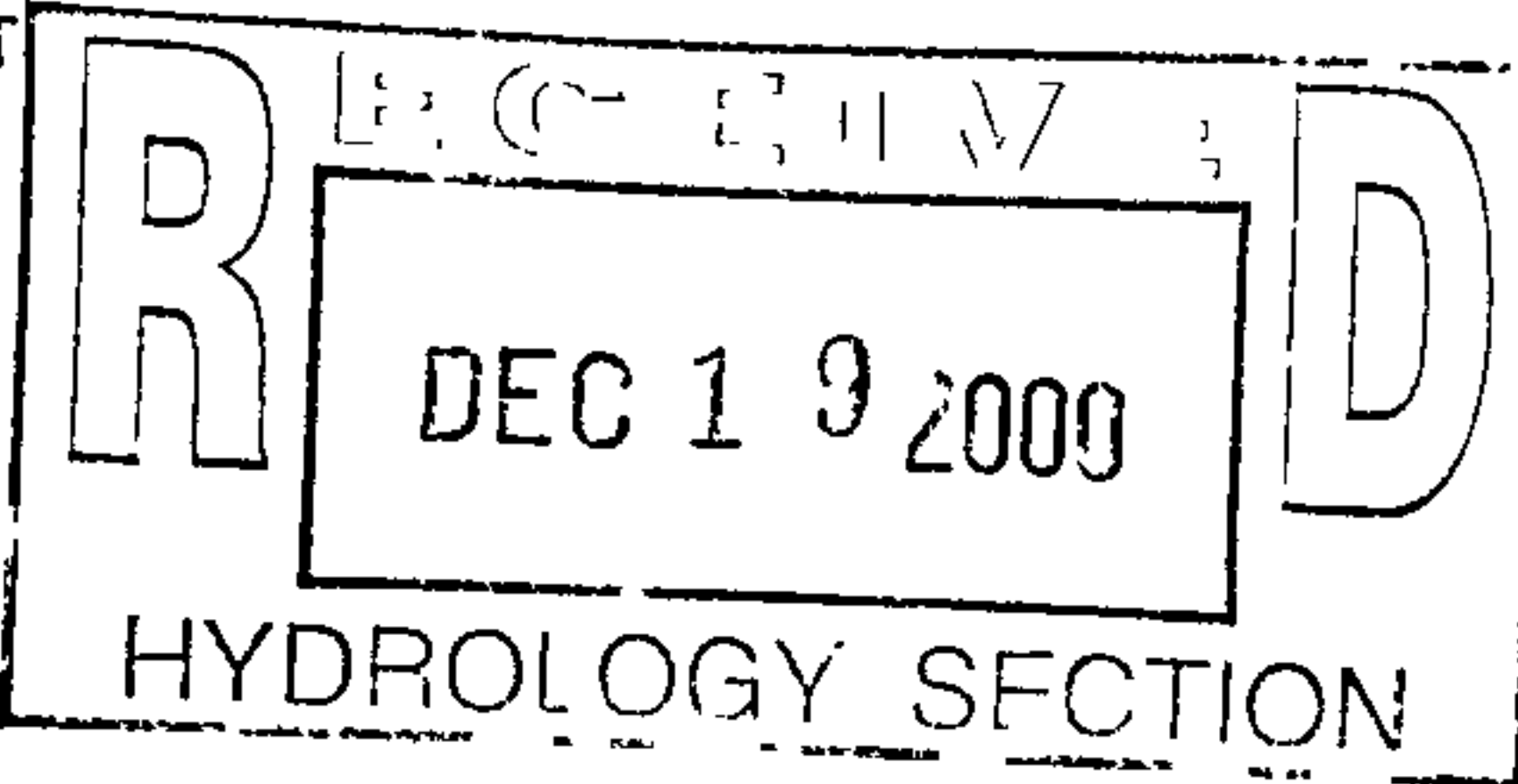
AGENT / CONTRACTOR Wilson & Co PHONE 348 4000
 MAILING ADDRESS 4900 Lang CITY Albuquerque ZIP 87109
 STATE LICENSE NO 13686 EXP DATE 12/2000 VOLUME _____ CLASS _____
 ARCHITECT/ENGINEER 13686 ENGINEER LICENSE NO _____ PHONE 348 4000

SITE INFORMATION

SITE ADDRESS / DIRECTIONS Candelaria and Edith west on Candelaria to Commercial / Candelaria
 LEGAL DESCRIPTION Lots 7 thru 9 in Block 2 of Graceland Acres LOT SIZE .7736 Ac
 EXISTING BUILDING(S) AND USE _____ PROPOSED BUILDING(S) _____
 UPC # 1-015-055-100-309-Z1
-060-

TYPE OF SUBMITTAL

- | | |
|---|--|
| ☐ REPLAT | ☐ TRAFFIC IMPACT ANALYSIS / TRAFFIC STUDY |
| ☐ MINOR SUBDIVISION | ☐ INFRASTRUCTURE LIST / DESIGN REVIEW |
| ☐ MAJOR SUBDIVISION | ☐ SPECIAL USE PERMIT |
| ☐ CONSTRUCTION DRAWINGS | ☐ BARRICADING PERMIT |
| ☒ GRADING & DRAINAGE PLAN | ☒ BUILDING PERMIT |
| ☐ AS-CONSTRUCTED GRADING & DRAINAGE PLAN | ☐ INSPECTION |
| ☐ VARIANCE REQUEST | ☐ OTHER (Specify): |
| ☐ LAND DIVISION | |



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- ☐ Owner ☒ Agent ☐ Contractor

Signature

Chen

Date 11/11/00

COUNTY

BERNALILLO COUNTY USE ONLY	
C/R's	TOTAL FEE:
	Receipt No.:
	Received By: