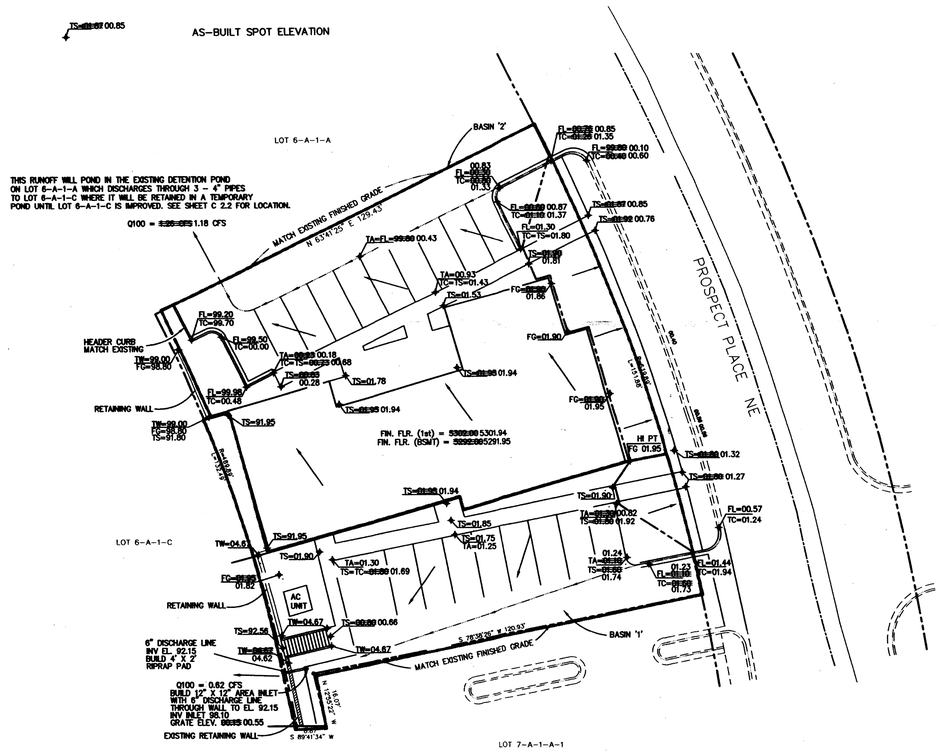
LEGEND

———	DRAINAGE BASIN BOUNDARY
——29——	EXISTING CONTOUR
——29——	PROPOSED CONTOUR
——→——	FLOW DIRECTION
———	PROPERTY LINE
TS=01.95	FINISHED SPOT ELEVATION
▬	NEW SIDEWALK CULVERT
	EXISTING CURB AND GUTTER
	NEW CURB AND GUTTER
———	SWALE
TS=[illegible] 00.85	AS-BUILT SPOT ELEVATION

ABBREVIATIONS

TA	TOP OF ASPHALT PAVING ELEVATION
TC	TOP OF CONCRETE CURB ELEVATION
TS	TOP OF CONCRETE SIDEWALK ELEVATION
TW	TOP OF CONCRETE RETAINING WALL ELEVATION
FG	FINISHED ELEVATION OF EARTH
FL	FLOWLINE ELEVATION OF CONCRETE GUTTER



CONTRACTOR SHALL BUILD A TEMPORARY RETENTION POND ON LOT 6-A-1-C PER THE PLAN ON SHEET C 2.2

GRADING AND DRAINAGE PLAN

SCALE 1" = 20'

N

DRAINAGE DISCUSSION

EXISTING CONDITIONS:

THE PROJECT SITE IS CURRENTLY UNDEVELOPED. THE SITE HAS BEEN RECENTLY GRADED ACCORDING TO AN OVERALL SITE GRADING AND DRAINAGE PLAN PREPARED BY MARK GOODWIN AND ASSOCIATES AND STAMPED 1-11-95. THE MASTER GRADING AND DRAINAGE PLAN, TITLED "AFC OFFICE BUILDINGS" INCLUDED THIS SITE AS WELL AS LOT 6-A-1-A TO THE NORTH AND 6-A-1-C TO THE EAST FOR A TOTAL OF 2.928 ACRES. THIS SITE CONTAINS APPROXIMATELY 0.404 ACRES. SINCE THE SITE HAS BEEN RECENTLY GRADED, THE VEGETATION IS SPARSE. THE EXISTING SITE SLOPES TO THE EAST AT LESS THAN 1% WITH A STEEP SLOPE AT THE EASTERN EDGE THAT VARIES FROM 5 TO 8 FEET IN HEIGHT.

OFFSITE DRAINAGE:

SINCE THIS SITE WAS GRADED ACCORDING TO THE MASTER GRADING AND DRAINAGE PLAN REFERENCED ABOVE, NO OFFSITE DRAINAGE ENTERS THE SITE. THE PROPOSED GRADING AND DRAINAGE SHOWN WITHIN THIS PLAN HAS MAINTAINED HISTORIC OFFSITE DRAINAGE PATTERNS WHICH ALSO MATCH THE MASTER GRADING AND DRAINAGE PLAN.

PROPOSED DRAINAGE:

THE PROPOSED DRAINAGE PLAN FOR THIS SITE IS IN ACCORDANCE WITH THE MASTER GRADING AND DRAINAGE PLAN REFERENCED ABOVE. THE SITE HAS BEEN DIVIDED INTO TWO DRAINAGE BASINS. THE SOUTHERN BASIN '1' INCORPORATES APPROXIMATELY 0.14 ACRES WHICH INCLUDES THE SOUTHERN PARKING CANOPY AND PAVEMENT, LANDSCAPING AREAS AND STAIRWELL. THE NORTHERN BASIN '2' CONTAINS 0.27 ACRES AND INCLUDES THE BUILDING ROOF, THE NORTHERN PARKING LOT AND THE LANDSCAPE AREA EAST OF THE BUILDING ADJACENT TO PROSPECT PLACE. BASIN '2' WILL DRAIN NORTH INTO THE EXISTING DETENTION POND ON LOT 6-A-1-A AS WAS PROPOSED IN THE MASTER GRADING AND DRAINAGE PLAN. BASIN '2' WILL DISCHARGE INTO THE LOWER POND, POND 'B', VIA AN AREA DRAIN AND PIPE NEAR THE WESTERN PROPERTY LINE. THIS DISCHARGE IS ALSO IN ACCORDANCE WITH THE MASTER GRADING AND DRAINAGE PLAN.

DRAINAGE CALCULATIONS:

THESE CALCULATIONS HAVE BEEN PREPARED IN ACCORDANCE WITH THE ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, SECTION 22.2, VOLUME 2, "DESIGN CRITERIA", DATED JANUARY, 1993.
THE SITE IS WITHIN PRECIPITATION ZONE 3 AS SHOWN IN FIGURE A-1. THEREFOR PEAK DISCHARGE RATES FOR A 100 YEAR - 6 HOUR STORM ARE 2.60 CFS/ACRE AND 5.02 CFS/ACRE FOR TREATMENT TYPES 'B' AND 'D' RESPECTIVELY AS SHOWN IN TABLE A-9. EXCESS PRECIPITATION IS 0.92 INCHES AND 2.36 INCHES FOR TREATMENT TYPES 'B' AND 'D' RESPECTIVELY PER TABLE A-8.

BASIN '1'

AREA=0.14 ACRES
TYPE 'A' SOIL = 0%
TYPE 'B' SOIL = 23.98%
TYPE 'C' SOIL = 0%
TYPE 'D' SOIL = 76.02%
100 YEAR 6 HOUR RUNOFF

Q100 = 0.14 X 0.2398 X 2.60 CFS/AC + 0.14 X 0.7602 X 5.02 CFS/AC = 0.62 CFS
V100 = (0.14 X 0.2398 X 0.92 IN + 0.14 X 0.7602 X 2.36 IN)/12 = 0.02351 AC-FT
V100 = 0.02351 X 43560 = 1024 CF

10 YEAR 6 HOUR RUNOFF
Q10 = 0.62 CFS x 0.667 = 0.41 CFS
V10 = 1024 CF X 0.667 = 683 CF

BASIN '2'

AREA=~~0.27~~ ACRES 0.237 ACRES
TYPE 'A' SOIL = 0%
TYPE 'B' SOIL = ~~13.62%~~ 1.90%
TYPE 'C' SOIL = 0%
TYPE 'D' SOIL = ~~86.38%~~ 98.10%
100 YEAR 6 HOUR RUNOFF
Q100 = 0.237 X 0.019 X 2.60 CFS/AC + 0.237 X 0.9810 X 5.02 CFS/AC = 1.18 CFS
~~Q100 = 0.27 X 0.1362 X 2.60 CFS/AC + 0.27 X 0.8638 X 5.02 CFS/AC = 1.27 CFS~~
~~V100 = (0.27 X 0.1362 X 0.92 IN + 0.27 X 0.8638 X 2.36 IN)/12 = 0.04852 AC-FT~~
V100 = (0.237 X 0..019 X 0.92 IN + 0.237 X 0.9810 X 2.36 IN)/12 = 0.0461 AC-FT
~~V100 = 0.04852 X 43560 = 2118 CF~~ 0.0461 X 43560 = 2007 CF

10 YEAR 6 HOUR RUNOFF
~~Q10 = 1.27 CFS x 0.667 = 0.85 CFS~~ 1.18 CFS X 0.667 = 0.7871 CFS
~~V10 = 2118 CF X 0.667 = 1413 CF~~ 2007 CF X 0.667 = 1339 CF

EXISTING POND 'A' CALCULATIONS:

THE MASTER GRADING AND DRAINAGE PLAN INCLUDED THE AREA OF LOT 6-A-1-B (THIS SITE) WITH THE AREA OF LOT 6-A-1-A TO THE NORTH (TOTAL AREA 1.2913 AC) IN THE RUNOFF VOLUME CALCULATION FOR BASIN 'A' OF THE MASTER DRAINAGE PLAN. TO ASSURE ADEQUATE DETENTION VOLUME WAS PROVIDED IN THE EXISTING POND ON ON LOT 6-A-1-A (POND 'A' PER THE MASTER GRADING AND DRAINAGE PLAN), THE TOTAL RUNOFF VOLUME FROM LOT 6-A-1-A AND FOR LOT 6-A-1-B BASIN 2 WILL BE COMBINED TO COMPARE TOTAL RUNOFF VOLUME.

BASIN 'A'

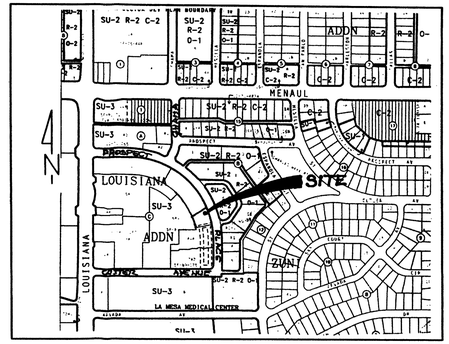
AREA=1.2913 - 0.404 = .8873 ACRES
TYPE 'A' SOIL = 0%
TYPE 'B' SOIL = 24.82%
TYPE 'C' SOIL = 0%
TYPE 'D' SOIL = 75.18%
100 YEAR 6 HOUR RUNOFF

V100 = (0.8873 X 0.2482 X 0.92 IN + 0.8873 X 0.7518 X 2.36 IN)/12 = 0.1481 AC-FT

BASIN '2'

FROM ABOVE V100 = 0.0461 AC-FT

V100 TOTAL = ~~0.1942~~ 0.1942 AC-FT VS. THE MASTER PLAN'S V100 = (.2482 X .92 + .7518 X 2.36) X 1.2913/12 = 0.2155 AC-FT. THEREFOR IS LESS THAN THE VOLUME ANTICIPATED BY THE MASTER AND WE CAN CONCLUDE THE DETENTION PONDS AND STORM DRAIN SYSTEMS DESIGNED IN THE MASTER PLAN ARE ADEQUATE FOR THIS SITE'S PROPOSED DEVELOPMENT.



VICINITY MAP
ZONE ATLAS PAGE H-19

LEGAL DESCRIPTION
LOT 6-A-1-B OF THE LOUISIANA SUBDIVISION
ALBUQUERQUE, NEW MEXICO

TEMPORARY BENCHMARK

A TEMPORARY BENCHMARK HAS BEEN SET AT THE NORTHWEST CORNER OF PARCEL 6-A AND IS A REBAR PAINTED PERMANENT ORANGE.
ELEVATION 5297.16

ACS BENCHMARK

A SQUARE CUT ON TOP OF THE CONCRETE CURB ON THE NORTHWEST SIDE OF THE HANDICAP RAMP AND IS A REBAR

STATION IS LOCATED IN THE SOUTHWEST QUADRANT OF THE INTERSECTION OF LOUISIANA BLVD. AND INDIAN SCHOOL ROAD, NE.
ELEVATION 5271.07

GENERAL NOTES

1. THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, (LATEST EDITION) SHALL GOVERN ALL WORK AND MATERIALS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING BLUE STAKE TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL REGULATIONS GOVERNING CONSTRUCTION PROJECTS.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOP SOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DEPARTMENT PRIOR TO BEGINNING WORK.
5. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM, OR IS BLOWN FROM THE SITE INTO THE PUBLIC RIGHT-OF-WAY OR ANY ADJACENT PRIVATE PROPERTY. THE CONTRACTOR SHALL REMOVE ANY SOIL SOIL THAT HAS ENTERED THE PUBLIC RIGHT-OF-WAY OR ADJACENT PUBLIC PROPERTY AT NO ADDITIONAL COST TO THE OWNER.
5. ALL POINTS ON THE EAST PROPERTY LINE (ADJACENT TO PUBLIC RIGHT-OF-WAY) SHALL BE AT LEAST 0.87' ABOVE THE FLOWLINE IN THE GUTTER ALONG THE WEST RIGHT-OF-WAY LINE OF PROSPECT PLACE.

ENGINEER'S CERTIFICATION

THE SITE INCLUDING THE TEMPORARY RETENTION POND ON LOT 6-A-1-C HAS BEEN COMPLETED IN SUBSTANTIAL COMPLIANCE WITH THE ORIGINAL APPROVED GRADING AND DRAINAGE PLAN EXCEPT AS IDENTIFIED BY AS-CONSTRUCTED GRADING PLAN TO THE LEFT AND AS FOLLOWS:
- THE EAST SIDE LAWN BETWEEN THE BUILDING AND PROSPECT PLACE IS GRADED TO DRAIN TO PROSPECT PLACE. THE AFFECTED AREA IS 0.0328 AC REMOVED FROM BASIN 2. THE TOTAL DISCHARGE FROM THIS AREA TO PROSPECT PLACE IS 0.0328 X 2.60 CFS/AC = 0.09 CFS (TYPE B SOIL). BASIN 2 HAS BEEN ADJUSTED TO REFLECT THIS CHANGE.
- THE RETENTION POND ON LOT 6-A-1-C HAS BEEN RELOCATED TO WEST OF THE ORIGINAL LOCATION TO AVOID CONFLICT WITH EXISTING UNDERGROUND POWER FEEDERS.

LARRY D. READ, P.E.
1 Aug 1996

LAWRENCE D. READ NEW MEXICO 10998 REGISTERED PROFESSIONAL ENGINEER

AUG - 8

LAWRENCE D. READ NEW MEXICO 10998 REGISTERED PROFESSIONAL ENGINEER 7-SEPT-95

GRADING AND DRAINAGE PLAN

BONDS, PELTIER & GUSTAFSON OFFICE
PROSPECT PLACE NE
ALBUQUERQUE, NEW MEXICO

PREPARED BY: LARRY D. READ, P.E.
P.O. BOX 90233
ALBUQUERQUE, NEW MEXICO 87199
(505) 858-3165

SHEET C 2.1

60 30 0 60 Feet

N

GRADING NOTES

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.

2. THE COST FOR THE REQUIRED SWPPP, CONSTRUCTION DUST, AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.

3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION," AS PROVIDED BY THE ARCHITECT OR OWNER. ALL OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS.

4. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.

5. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED SPECIFICALLY BY THIS PLAN.

6. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY. THIS SHOULD BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS OR SILT FENCE AT THE PROPERTY LINES AND WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.

7. A DISPOSAL SITE FOR ANY & ALL EXCESS EXCAVATION MATERIAL, AND UNSUITABLE MATERIAL AND/OR A BORROW SITE CONTAINING ACCEPTABLE FILL MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL OR BORROW SITE AND HAUL TO OR FROM SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.

8. PAVING AND ROADWAY GRADES SHALL BE +/- 0.05' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATION.

9. ALL PROPOSED CONTOURS REFLECT TOP OF PAVEMENT ELEVATIONS IN THE PARKING AREA AND MUST BE ADJUSTED FOR MEDIANS AND ISLANDS.

10. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION PRIOR TO BEGINNING CONSTRUCTION.

11. THE CONTRACTOR SHALL PROVIDE THE SWPPP DOCUMENT (IF NECESSARY) AND SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.

DRAINAGE MANAGEMENT PLAN

I. INTRODUCTION

The purpose of this submittal is to provide a Drainage Management Plan for the correction of a drainage situation at the Peltier, Gustafson, and Miller (PG&M) Building. The building is located at 7020 Prospect Place in Northeast Albuquerque. Apparently, when the adjacent property to the west (American Financial Center AFC-5) was constructed, the parking lot was placed higher than the finished floor of the existing PG&M building. This ultimately left a low point about one foot deep which traps water during intense storms and floods the basement of the PG&M building.

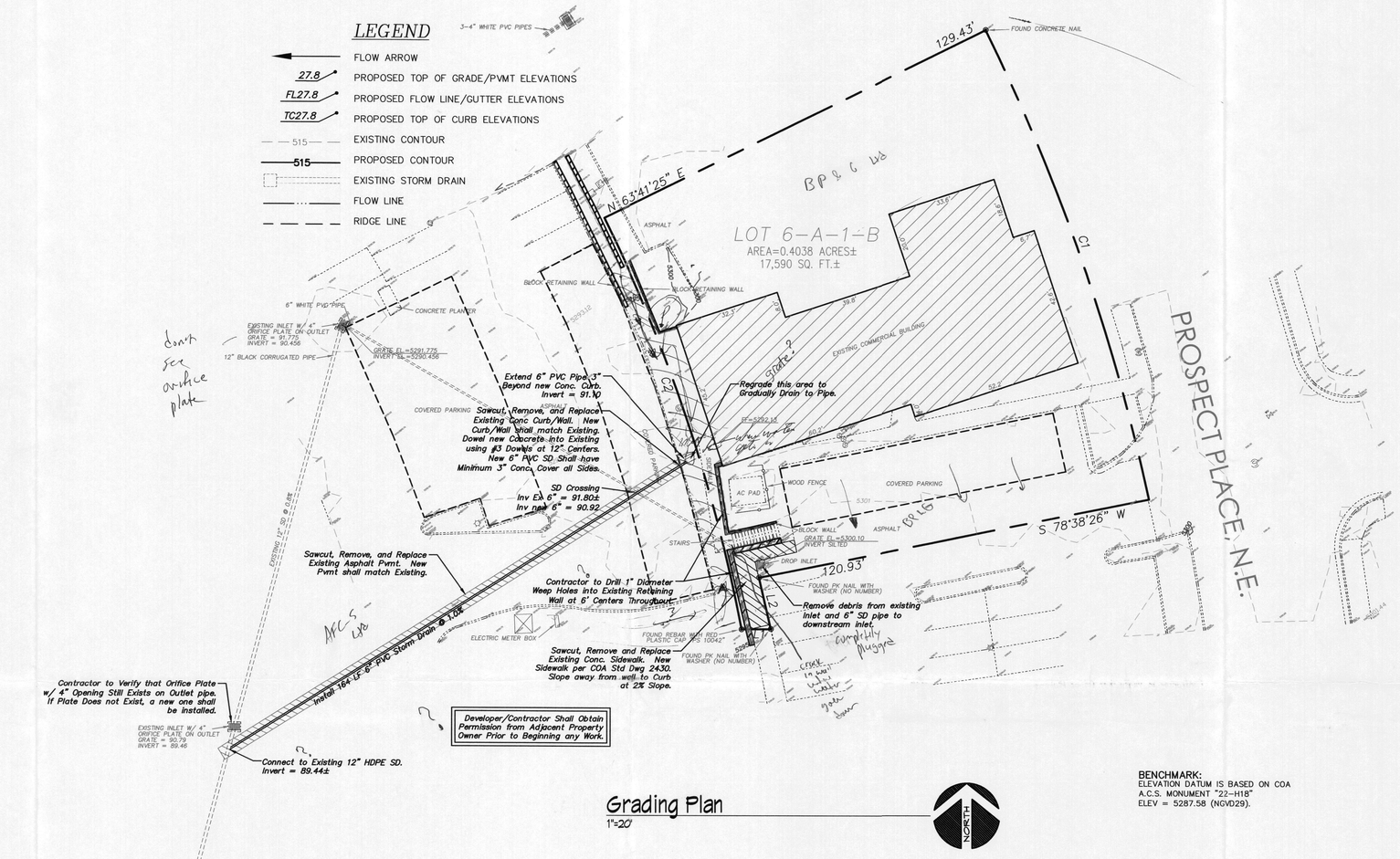
II. EXISTING AND PROPOSED HYDROLOGIC CONDITIONS

There are no proposed changes to the quantity of impervious area to either of the PG&M or AFC-5 sites; therefore, the flow rate or the volume of rainfall leaving the site will not change.

III. CONCLUSION

As stated in the introduction, there is a drainage problem located at the PG&M building. In order to correct the situation, we are proposing that a new 6" pipe be installed to allow the low area to properly drain. There are currently steel plates with 4" openings in each of the inlets located in the AFC-5 parking lot. We propose to install the new 6" pipe downstream of the last AFC-5 inlet, which will allow more of a free flow condition through the 18" pipe to which it is being connected. We are providing a solution that should reduce the frequency of any flooding of the PG&M basement.

This drainage management plan provides for grading and drainage elements which are capable of safely draining the 100 year storm and which meet city requirements. With this submittal, we are requesting paving permit approval.

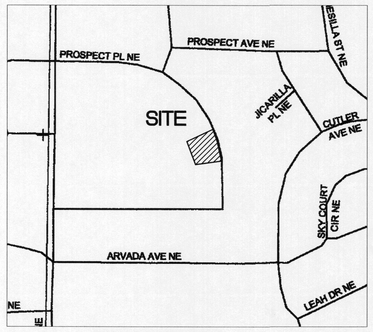


Grading Plan

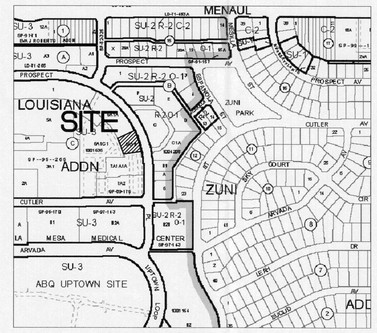
1"=20'

NORTH

BENCHMARK:
ELEVATION DATUM IS BASED ON COA A.C.S. MONUMENT "22-H18" ELEV = 5287.58 (NGVD29).



FIRM PANEL 0352E



ZONE ATLAS PAGE H19

RECEIVED
SEP 27 2006
HYDROLOGY SECTION

Wooten Engineering

5017 Sanbusco Dr NE, Rio Rancho, NM 87144
Ph: 505.771.8038 Fax: 505.771.8905

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

SURVEY NOTES:

1. SURVEY WAS PREPARED BY DAVID TIBBETTS SURVEYING CO., P.O. BOX 2337, LOS LUNAS, NM, 87031. PHONE NO. 505.865.0396.

2. LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY AND ARE BASED ON LOCATION OF SURFACE APPURTENANCES AND OTHER SURFACE INDICATIONS OF UNDERGROUND UTILITIES. OTHER UTILITIES MAY EXIST THAT ARE NOT SHOWN.

GENERAL NOTES

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY.

2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #6.

3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (260-1990) FOR LOCATION OF EXISTING UTILITIES.

4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS, SHOULD A CONFLICT EXIST. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

5. CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND HEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.

6. CONTRACTOR SHALL RECORD DATA ON ALL UTILITY LINES AND ACCESSORIES AS REQUIRED BY THE CITY OF ALBUQUERQUE FOR THE PREPARATION OF "AS CONSTRUCTED" DRAWINGS. CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED.

7. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY GRAFFITI FROM ALL EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.

8. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ALBUQUERQUE WATER SYSTEMS DIVISION (857-8200) FIVE (5) WORKING DAYS IN ADVANCE OF ANY WORK THAT MAY AFFECT EXISTING PUBLIC WATER OR SEWER UTILITIES. EXISTING VALVES TO BE OPERATED BY CITY PERSONNEL ONLY. CONTRACTOR SHALL CONTACT THE WATER SYSTEMS DIVISION THREE (3) WORKING DAYS PRIOR TO NEEDING VALVES TURNED ON OR OFF.

Permit Review Documents

Peltier, Gustafson, & Miller Bldg
Grading/Drainage Improvements
Albuquerque, New Mexico

Project Title

Drawn By JTW Checked By JTW

Proj. No. 2006029 Date 09/26/06

Revisions

JEFFREY TODD WOOTEN NEW MEXICO 16892 REGISTERED PROFESSIONAL ENGINEER 9/27/06 Engineer

GRADING PLAN

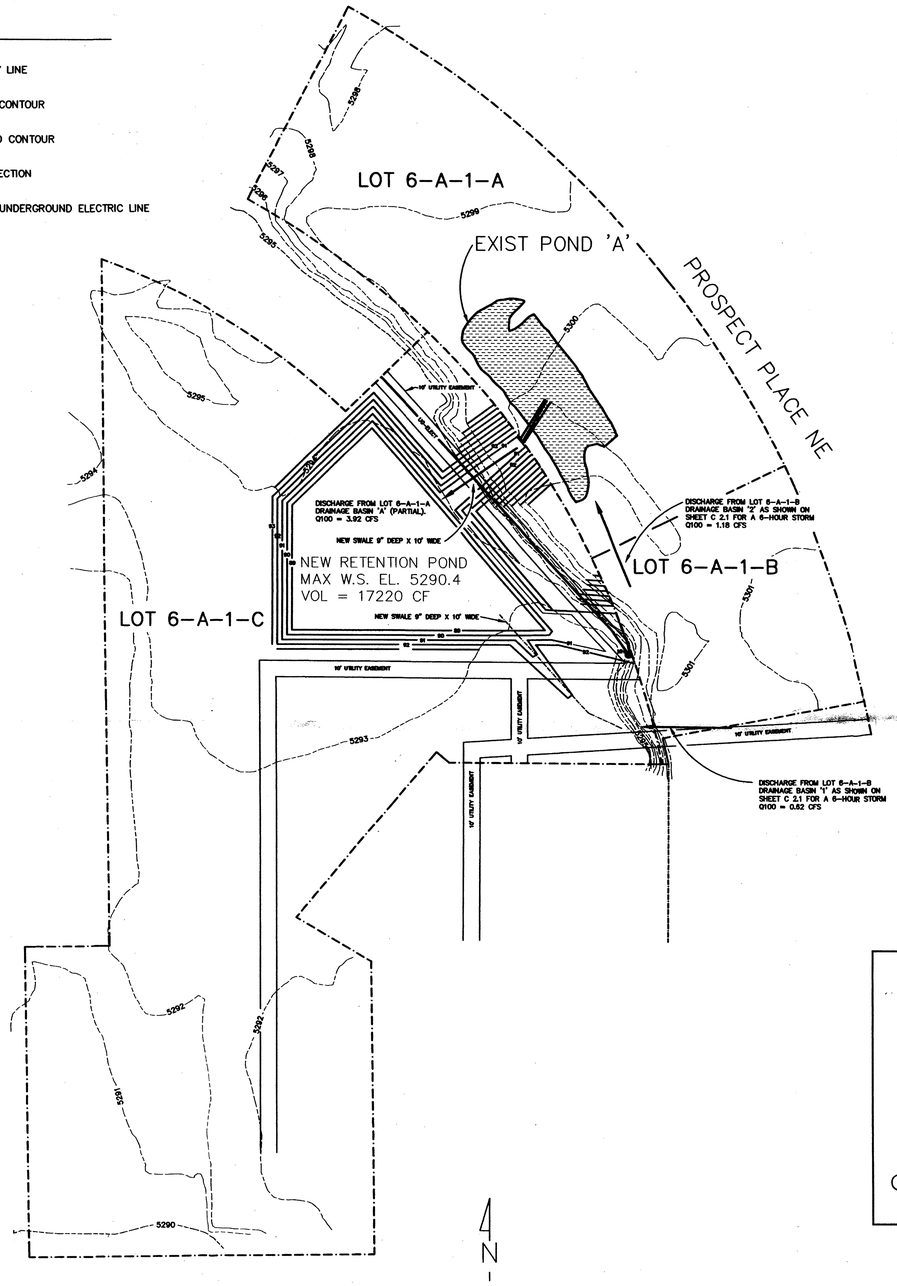
C1

Sheet Title

Sheet 1 of 1

LEGEND

- PROPERTY LINE
- 29 EXISTING CONTOUR
- 29 PROPOSED CONTOUR
- FLOW DIRECTION
- UG-ELECT EXISTING UNDERGROUND ELECTRIC LINE



OFFSITE PONDING AREAS

SCALE: 1" = 40'

NOTICE TO CONTRACTOR

THIS PLAN REQUIRES TWO CHANNELS TO BE CONSTRUCTED ACROSS AN UNDERGROUND ELECTRIC LINE. CONTRACTOR SHALL COORDINATE WITH PNM TO EXPOSE, LOCATE, AND VERIFY SUFFICIENT COVER EXISTS PRIOR TO START OF CONSTRUCTION.

1 THE ENGINEER HAS NOT INVESTIGATED THE EXISTENCE OR LOCATION OF UNDERGROUND UTILITIES OR OTHER FACILITIES WITHIN THE PROJECT SITE. THE CONTRACTOR SHALL CONTACT BLUE STAKE PRIOR TO START OF CONSTRUCTION. IF ANY CONFLICT ARISES, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.

ENGINEER'S CERTIFICATION

THE SITE INCLUDING THE TEMPORARY RETENTION POND ON LOT 6-A-1-C HAS BEEN COMPLETED IN SUBSTANTIAL COMPLIANCE WITH THE ORIGINAL APPROVED GRADING AND DRAINAGE PLAN EXCEPT AS IDENTIFIED BY AS-CONSTRUCTED GRADING PLAN TO THE LEFT AND AS FOLLOWS:

- THE EAST SIDE LAWN BETWEEN THE BUILDING AND PROSPECT PLACE IS GRADED TO DRAIN TO PROSPECT PLACE. THE AFFECTED AREA IS 0.0328 AC REMOVED FROM BASIN 2. THE TOTAL DISCHARGE FROM THIS AREA TO PROSPECT PLACE IS 0.0328 X 2.60 CFS/AC = 0.09 CFS (TYPE B SOIL). BASIN 2 HAS BEEN ADJUSTED TO REFLECT THIS CHANGE.
- THE RETENTION POND ON LOT 6-A-1-C HAS BEEN RELOCATED TO WEST OF THE ORIGINAL LOCATION TO AVOID CONFLICT WITH EXISTING UNDERGROUND POWER FEEDERS.

LARRY D. READ P.E.
1 Aug 1996

LAWRENCE D. READ NEW MEXICO 10998 REGISTERED PROFESSIONAL ENGINEER

RETENTION POND CALCULATIONS:

THESE CALCULATIONS HAVE BEEN PREPARED IN ACCORDANCE WITH THE ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, SECTION 22.2, VOLUME 2, "DESIGN CRITERIA", DATED JANUARY, 1993.
THE SITE IS WITHIN PRECIPITATION ZONE 3 AS SHOWN IN FIGURE A-1. THEREFOR RAINFALL DEPTH FOR A 100 YEAR – 6 HOUR STORM IS 2.60 INCHES AND 4.90 INCHES
FOR A 100 YEAR – 10 DAY STORM AS SHOWN IN TABLE A-2. EXCESS PRECIPITATION IS 0.92 INCHES AND 2.36 INCHES FOR TREATMENT TYPES 'B' AND 'D' RESPECTIVELY PER TABLE A-8.

BASIN '1'

AREA=0.14 ACRES
TYPE 'A' SOIL = 0%
TYPE 'B' SOIL = 23.98%
TYPE 'C' SOIL = 0%
TYPE 'D' SOIL = 76.02%

100 YEAR 6 HOUR VOLUME
V100 = (0.14 X 0.2398 X 0.92 IN + 0.14 X 0.7602 X 2.36 IN)/12 = 0.02351 AC-FT
V100 = 0.02351 X 43560 = 1024 CF

100 YEAR 10 DAY VOLUME
V10DAY = V360 + AD(P10DAY-P6HR)/12
V10DAY = 1024 + .7602(6098)(4.90-2.60)/12 = 1912 CF

BASIN '2'

AREA=0.27 ACRES
TYPE 'A' SOIL = 0%
TYPE 'B' SOIL = 13.82%
TYPE 'C' SOIL = 0%
TYPE 'D' SOIL = 86.18%

100 YEAR 6 HOUR VOLUME
V100 = (0.27 X 0.1382 X 0.92 IN + 0.27 X 0.8618 X 2.36 IN)/12 = 0.04862 AC-FT
V100 = 0.04862 X 43560 = 2118 CF

100 YEAR 10 DAY VOLUME
V10DAY = V360 + AD(P10DAY-P6HR)/12
V10DAY = 2118 + .8618(6098)(4.90-2.60)/12 = 3125 CF

BASIN 'A' (LOT 6-A-1-A)

AREA=0.8873 ACRES
TYPE 'A' SOIL = 0%
TYPE 'B' SOIL = 24.82%
TYPE 'C' SOIL = 0%
TYPE 'D' SOIL = 75.18%

100 YEAR 6 HOUR VOLUME
V100 = (0.8873 X 0.2482 X 0.92 IN + 0.8873 X 0.7518 X 2.36 IN)/12 = 0.1481 AC-FT
V100 = 0.1481 X 43560 = 6450 CF

100 YEAR 10 DAY VOLUME
V10DAY = V360 + AD(P10DAY-P6HR)/12
V10DAY = 6450 + .7518(38651)(4.90-2.60)/12 = 12019 CF

100 YEAR 10 DAY VOLUME = 1912 + 3125 + 12019 = 17056 CF < 17220 PROVIDED
PROVIDED IN THE RETENTION POND BELOW EL 5290.24 WHICH IS 1' BELOW FINISH FLOOR ELEVATION OF THE BUILDING ON LOT 6-A-1-B. POND SIZE IS OK!

LAWRENCE D. READ NEW MEXICO 10998 REGISTERED PROFESSIONAL ENGINEER

OFFSITE STORMWATER PONDS

BONDS, PELTIER & GUSTAFSON OFFICE
PROSPECT PLACE NE
ALBUQUERQUE, NEW MEXICO

PREPARED BY: LARRY D. READ, P.E.
P.O. BOX 90233
ALBUQUERQUE, NEW MEXICO 87199
(505) 858-3165

SHEET C 2.2