

# CITY OF ALBUQUERQUE



January 31, 2012

David Soule, P.E.  
Rio Grande Engineering  
P.O. Box 67305  
Albuquerque, NM 87199

**Re: Assisted Living SEC, Grading and Drainage Plan  
Engineer's Stamp date 11-22-11 (C13/D016D)**

Dear Mr. Soule,

Based upon the information provided in your submittal received 1-3-12, the above referenced plan is approved for Site Plan for Building Permit action by the DRB.

The above referenced plan cannot be approved for Building Permit until the following comments are addressed:

- Since the curb and gutter is setting grade, it is to be built by Work Order. Since there will be a Work Order all improvements in the ROW (including pipes through curb) should be built by Work Order and an Infrastructure List is required.
- Please replace the Notes that specify "To be built per SO 19" and replace with "To be built by separate Work Order". The SO-19 notes, "Notice to Contractors" on the plan could be removed

If you have any questions, you can contact me at 924-3986.

Sincerely,

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

C: e-mail

# DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 01/28/2003rd)

PROJECT TITLE: Westside assisted liven  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_

ZONE MAP/DRG. FILE #: c13 d 016d  
WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION: lot 4a1a albuquerque West unit 2  
CITY ADDRESS: \_\_\_\_\_

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

CONTACT: David Soule, PE  
PHONE: (505)321-9099  
ZIP CODE: 87199

OWNER: CGI  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: 95003

ARCHITECT: Modulous  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

SURVEYOR: Geo surv CO  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: David Vigil  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

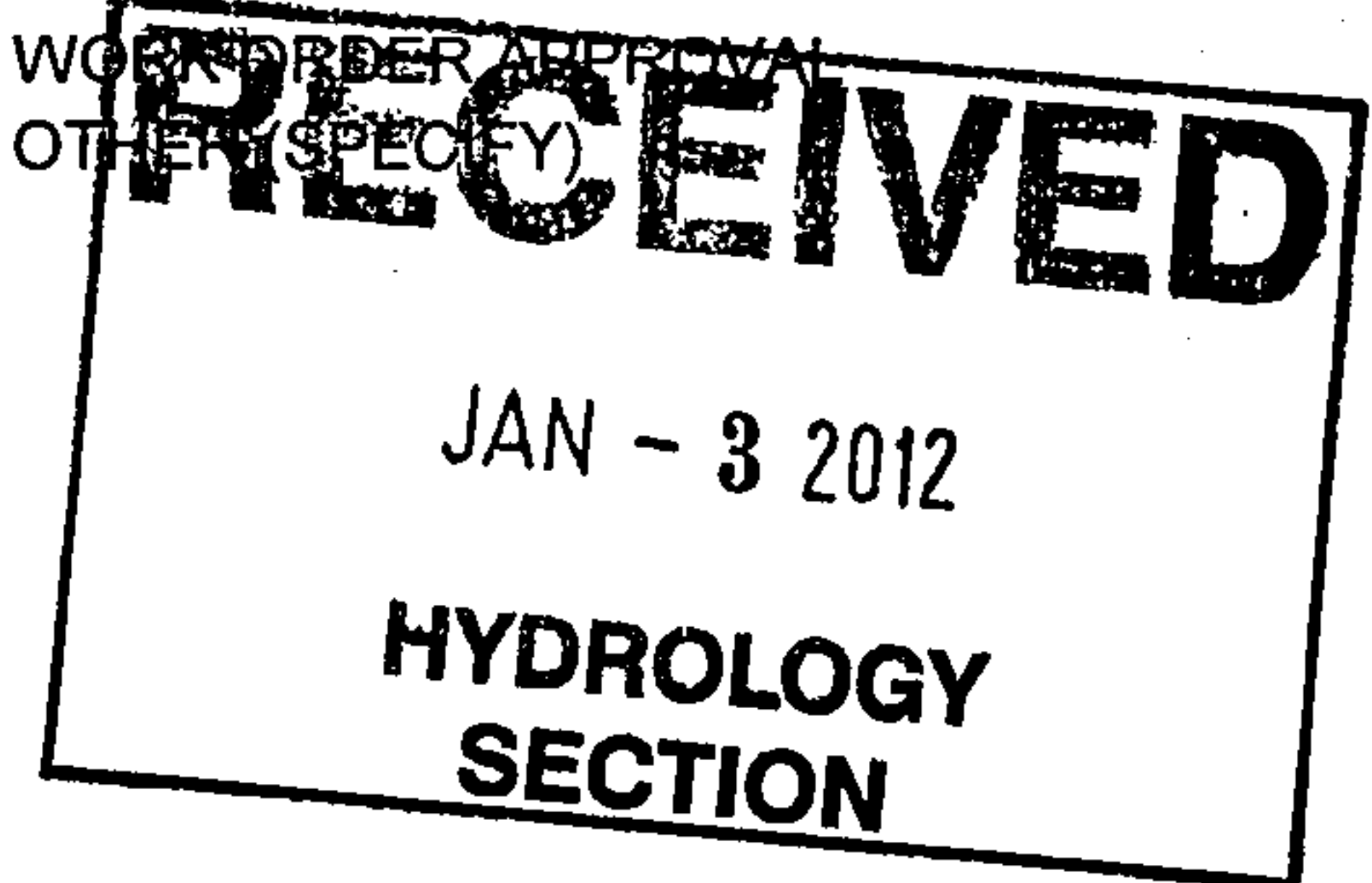
CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

## 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: 11/18/2011 BY: David Soule

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage 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:

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

# CITY OF ALBUQUERQUE



April 21, 2011

David Soule, P.E.  
Rio Grande Engineering  
P.O. Box 67305  
Albuquerque, NM 87199

**Re: Assisted Living SEC, Grading and Drainage Plan  
Engineer's Stamp date 4-11-11 (C13/D016D)**

Dear Mr. Soule,

Based upon the information provided in your submittal received 4-12-11, the above referenced plan is approved for Site Plan for Building Permit action by the DRB.

The above referenced plan cannot be approved for Building Permit until the following comments are addressed:

- Provide the upstream invert for the pipe in the detention pond.
- The Site Plan must be approved by DRB.
- An SO 19 Permit will be required for the drain pipes through the curb, unless they will be built per Work Order.

If you have any questions, you can contact me at 924-3986.

Sincerely,

A handwritten signature in cursive script that reads "Curtis A. Cherne".

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

C: file

# DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 01/28/2003rd)

PROJECT TITLE: Westside assisted living  
 DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_

ZONE MAP/DRG. FILE #: c13 / D06D  
 WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION: lot 4a1a albuquerque West unit 2  
 CITY ADDRESS: \_\_\_\_\_

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

CONTACT: David Soule, PE  
 PHONE: (505)321-9099  
 ZIP CODE: 87199

OWNER: CGI  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
 PHONE: \_\_\_\_\_  
 ZIP CODE: 95003

ARCHITECT: Modulous  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
 PHONE: \_\_\_\_\_  
 ZIP CODE: \_\_\_\_\_

SURVEYOR: Geo surv CO  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE: \_\_\_\_\_

CONTACT: David Vigil  
 PHONE: \_\_\_\_\_  
 ZIP CODE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
 PHONE: \_\_\_\_\_  
 ZIP CODE: \_\_\_\_\_

**CHECK TYPE OF SUBMITTAL:**

- \_\_\_\_\_ 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

**CHECK TYPE OF APPROVAL SOUGHT:**

- \_\_\_\_\_ 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

APR 1 2 2011  
**HYDROLOGY  
 SECTION**

DATE SUBMITTED: 4/11/2011 BY: David Soule

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage 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.

DRAINAGE REPORT

For

**WESTSIDE ASSISTED LIVING  
SEQ  
PASEO DEL NORTE AND EAGLE RANCH  
Albuquerque, New Mexico**

Prepared by

Rio Grande Engineering  
PO Box 67305  
Albuquerque, New Mexico 87193

APRIL 2011



David Soule P.E. No. 14522

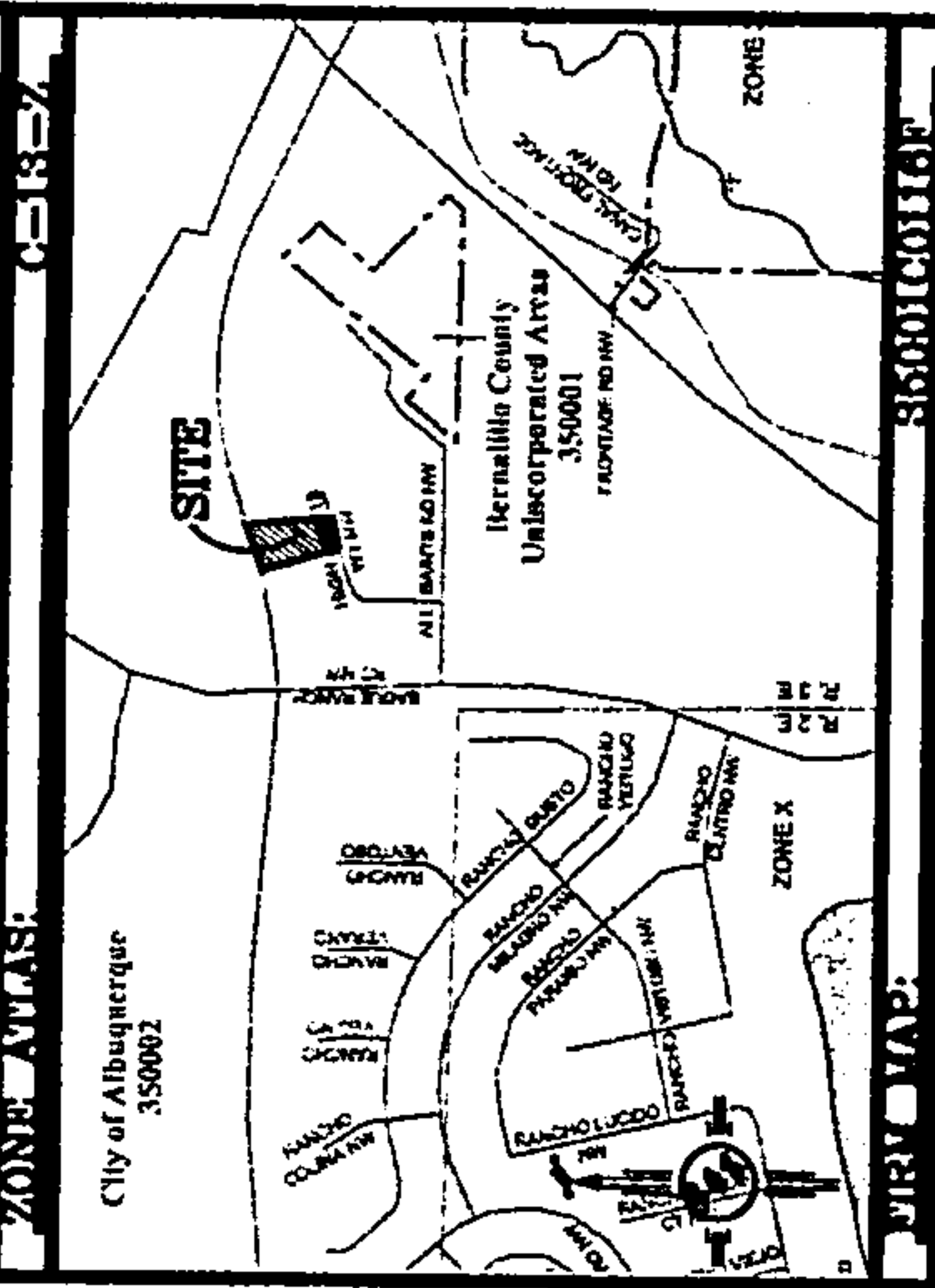
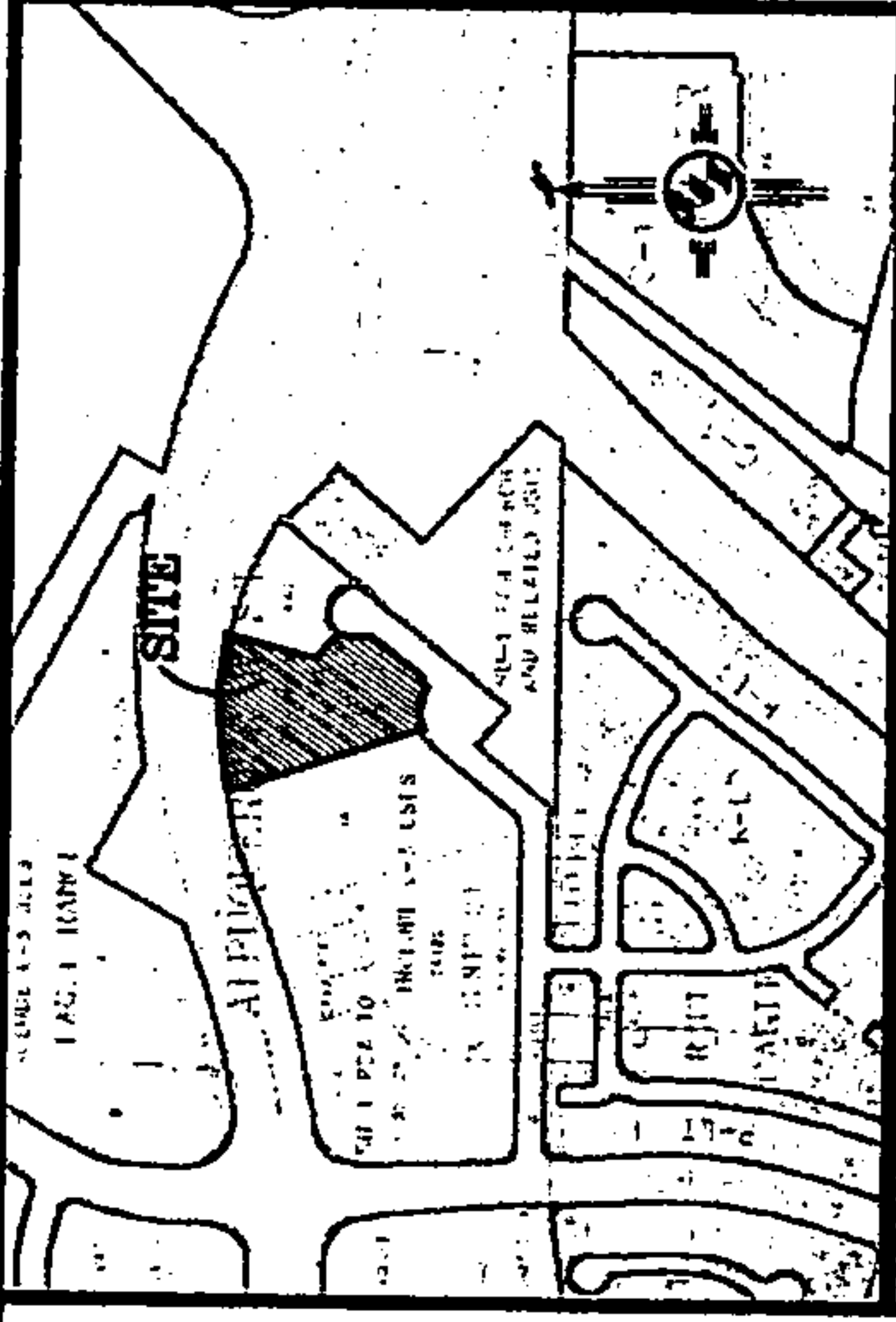
## **PROPOSED CONDITIONS**

The proposed improvements consist of a 20,000 square foot assisted living facility. The site will be graded such that there are 6 basins. Basins 1,2,3,5 are all captured by an onsite storm drainage and routed to a retention/detention pond. This pond has a metered outlet by two 3" pvc pipes. As shown using AHYMO this pond will have peak discharge of 1.29 cfs. The pipes are laid at adverse grade to act as a oil water separator. The pond has an emergency overflow. Basins 4 free discharges .62 cfs to High assets way and basin 6 harvests the water. The entire site will generate a peak flow rate of 1.91 cfs to High Assets.

## **SUMMARY AND RECOMMENDATIONS**

The site is not impacted by upland flow. This site is governed by the Albuquerque West Master Drainage Study. This site will discharge 1.91 cfs which is less than the 1.97 cfs allowed. The pond was sized properly and has emergency overflow. The outfall has been designed to allow for water quality. The site has shallow ponds for harvesting.

The proposed site development does not adversely affect the upstream or downstream facilities. The site was designed in conformance to City of Albuquerque Drainage design policy utilizing the City of Albuquerque DPM criterion. Therefore, we request approval of the site-grading plan. Since this site encompasses more than 1 acre, a NPDES permit might be required prior to construction activity.



PASEO DEL NORTE

BASIN 1-14 AC

BASIN 2-91 AC

LOT 4-A-2  
94C, FOLIO 278

LOT 3-A-2-A  
FILED 2006C, FOLIO 280

AS-CIP  
N 1261444.219  
E 1518271.085  
S 8127.978  
W 1000.000  
CENTRAL ZONE  
S-A -00-14-47.44'  
G.P.D. 979677278

BASINS-109 AC

PT-0001.00  
PT-0001.18

BASIN 4-17 AC

BASIN 5-10 AC

BASIN 6-13 AC

HIGH ASSETS WAY NW



|                         |                                                                |  |                  |                 |              |                |
|-------------------------|----------------------------------------------------------------|--|------------------|-----------------|--------------|----------------|
| EXAMINER'S<br>SEAL      | ASSISTED LIVING-SEC<br>PASEO DEL NORTE AND<br>EAGLE RANCH ROAD |  | OWNER<br>BY NCNU | DATE<br>4-04-11 | SHEET #<br>1 | JOB #<br>21103 |
|                         | BASIN<br>MAP                                                   |  |                  |                 |              |                |
| DWD SOLE<br>P.L. #14822 |                                                                |  |                  |                 |              |                |

Weighted E Method

|                |              |                 |             |         |             |         |             |         |             |         | 100-Year, 6-hr.       |                   |             | 10-day            |
|----------------|--------------|-----------------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|-----------------------|-------------------|-------------|-------------------|
| Basin          | Area<br>(sf) | Area<br>(acres) | Treatment A |         | Treatment B |         | Treatment C |         | Treatment D |         | Weighted E<br>(ac-ft) | Volume<br>(ac-ft) | Flow<br>cfs | Volume<br>(ac-ft) |
|                |              |                 | %           | (acres) | %           | (acres) | %           | (acres) | %           | (acres) |                       |                   |             |                   |
| NATIVE         | 67082.00     | 1.540           | 70%         | 1.078   | 30%         | 0.462   | 0%          | 0       | 0%          | 0.000   | 0.509                 | 0.065             | 2.33        | 0.065             |
| basin 1        | 6098.40      | 0.140           | 0%          | 0       | 35%         | 0.049   | 25%         | 0.035   | 40%         | 0.056   | 1.270                 | 0.015             | 0.44        | 0.022             |
| basin 2        | 39639.60     | 0.910           | 0%          | 0       | 8%          | 0.073   | 16%         | 0.1456  | 78%         | 0.710   | 1.749                 | 0.133             | 3.67        | 0.227             |
| basin 3        | 3920.40      | 0.090           | 0%          | 0       | 30%         | 0.027   | 25%         | 0.0225  | 45%         | 0.041   | 1.335                 | 0.010             | 0.30        | 0.015             |
| basin 4        | 7405.20      | 0.170           | 0%          | 0       | 28%         | 0.048   | 9%          | 0.0153  | 65%         | 0.111   | 1.557                 | 0.022             | 0.62        | 0.037             |
| basin 5        | 4356.00      | 0.100           | 0%          | 0       | 4%          | 0.004   | 8%          | 0.008   | 88%         | 0.088   | 1.840                 | 0.015             | 0.42        | 0.027             |
| basin 6        | 5662.80      | 0.130           | 40%         | 0.052   | 42%         | 0.055   | 8%          | 0.0104  | 10%         | 0.013   | 0.734                 | 0.008             | 0.26        | 0.010             |
| total proposed | 67082.40     | 1.54            | 3%          | 0.05    | 17%         | 0.26    | 15%         | 0.24    | 66%         | 1.02    |                       | 0.20              | 5.71        | 0.34              |

Equations:

Weighted E = Ea\*Aa + Eb\*Ab + Ec\*Ac + Ed\*Ad / (Total Area)

Volume = Weighted D \* Total Area

Flow = Qa \* Aa + Qb \* Ab + Qc \* Ac + Qd \* Ad

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 |

Developed Conditons

|                            |  |  |  |  |      |       |        |            |         |     |             |
|----------------------------|--|--|--|--|------|-------|--------|------------|---------|-----|-------------|
| POND DEVELOPED FLOW        |  |  |  |  |      |       |        |            |         |     |             |
| TO POND                    |  |  |  |  | 0.17 | ac ft | 7525.5 | CUBIC FEET | 4.82    | cfs | 100-yr 6 hr |
| TO HIGH ASSES <sup>1</sup> |  |  |  |  | 0.02 |       |        |            | 0.62342 | CFS |             |
| HARVESTED                  |  |  |  |  | 0.01 | ac ft | 346.19 |            |         |     |             |
|                            |  |  |  |  |      |       |        |            |         |     |             |
| ROUTED THROUGH POND        |  |  |  |  |      |       |        |            |         |     |             |
| POND                       |  |  |  |  | 1.29 | CFS   |        |            |         |     |             |
| FREE DISCHARGE             |  |  |  |  | 0.62 | CFS   |        |            |         |     |             |
|                            |  |  |  |  |      |       |        |            |         |     |             |
| TOTAL                      |  |  |  |  | 1.91 |       |        |            |         |     |             |
| ALLOWED                    |  |  |  |  | 1.97 | OK    |        |            |         |     |             |

# VOLUME CALCULATIONS

INV=40.30

| ACTUAL<br>ELEV. | DEPTH<br>(FT)  | VOLUME<br>(AC-FT) | Q<br>(CFS) |             |
|-----------------|----------------|-------------------|------------|-------------|
|                 | (above outlet) |                   |            | BOTH PIPES  |
| 5038.97         | 0              | 0                 | 0.000      |             |
| 5039.97         | 0.00           | 0.0044            | 0.000      |             |
| 5040.97         | 0.67           | 0.0104            | 0.174      | 0.348973404 |
| 5041.97         | 1.67           | 0.0182            | 0.294      | 0.58756825  |
| 5042.97         | 2.67           | 0.0278            | 0.377      | 0.754115681 |
| 5043.97         | 3.67           | 0.0396            | 0.445      | 0.890024985 |
| 5044.97         | 4.67           | 0.0537            | 0.504      | 1.007769063 |
| 5045.97         | 5.67           | 0.0702            | 0.557      | 1.11312735  |
| 5046.97         | 6.67           | 0.0894            | 0.605      | 1.209341354 |
| 5047.97         | 7.67           | 0.1115            | 0.649      | 1.298445425 |
| 5048.97         | 8.67           | 0.1366            | 0.691      | 1.381815666 |

## Orifice Equation

$$Q = CA \text{ SQRT}(2gH)$$

$$C = 0.6$$

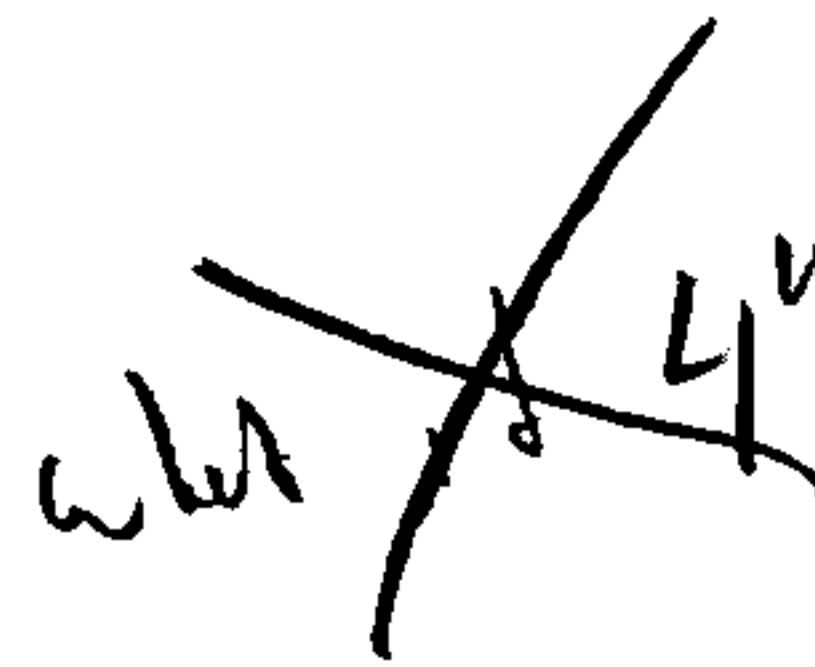
$$\text{Diameter (in)} = 3$$

$$\text{Area (ft}^2\text{)} = 0.04908739$$

$$g = 32.2$$

$$H \text{ (Ft)} = \text{Depth of water above center of orifice}$$

$$Q \text{ (CFS)} = \text{Flow}$$



# AHYMO.OUT

AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Rel: 01a  
 RUN DATE (MON/DAY/YR) = 04/05/2011  
 START TIME (HR:MIN:SEC) = 16:44:32 USER NO.=  
 AHYMO\_Temp\_User:20122010  
 INPUT FILE = cuments and  
 Settings\Owner\Desktop\2011jobs\1110-pdnassistedliving\pdn040511.txt

\*S AHYMO - PDN RETIREMENT  
 \*S POND ROUTING

START TIME=0.0 PUNCH CODE=0

RAINFALL TYPE=2  
 QUARTER=0.0 ONE= 2.20 IN  
 SIX= 2.66 IN DAY= 3.12 IN DT = 0.05 HR

24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE  
 AREAS (NM & AZ) - D1

| DT = 0.050000 HOURS |        |        | END TIME = 24.000002 HOURS |        |        |        |
|---------------------|--------|--------|----------------------------|--------|--------|--------|
| 0.0000              | 0.0031 | 0.0062 | 0.0096                     | 0.0133 | 0.0171 | 0.0214 |
| 0.0274              | 0.0368 | 0.0470 | 0.0575                     | 0.0690 | 0.0807 | 0.0927 |
| 0.1052              | 0.1178 | 0.1320 | 0.1467                     | 0.1627 | 0.1893 | 0.2211 |
| 0.2637              | 0.3120 | 0.3717 | 0.4513                     | 0.5408 | 0.6955 | 0.9358 |
| 1.3477              | 1.6372 | 1.8656 | 1.9803                     | 2.0808 | 2.1531 | 2.2106 |
| 2.2607              | 2.2974 | 2.3311 | 2.3588                     | 2.3781 | 2.3931 | 2.4065 |
| 2.4190              | 2.4300 | 2.4404 | 2.4505                     | 2.4603 | 2.4683 | 2.4729 |
| 2.4775              | 2.4820 | 2.4862 | 2.4903                     | 2.4943 | 2.4983 | 2.5022 |
| 2.5059              | 2.5096 | 2.5132 | 2.5167                     | 2.5202 | 2.5235 | 2.5268 |
| 2.5300              | 2.5331 | 2.5363 | 2.5393                     | 2.5423 | 2.5452 | 2.5481 |
| 2.5509              | 2.5537 | 2.5565 | 2.5593                     | 2.5620 | 2.5646 | 2.5673 |
| 2.5699              | 2.5725 | 2.5750 | 2.5775                     | 2.5800 | 2.5825 | 2.5849 |
| 2.5873              | 2.5897 | 2.5920 | 2.5944                     | 2.5967 | 2.5990 | 2.6012 |
| 2.6034              | 2.6057 | 2.6078 | 2.6100                     | 2.6122 | 2.6143 | 2.6164 |
| 2.6185              | 2.6205 | 2.6226 | 2.6246                     | 2.6266 | 2.6286 | 2.6306 |
| 2.6326              | 2.6345 | 2.6364 | 2.6383                     | 2.6402 | 2.6421 | 2.6439 |
| 2.6458              | 2.6476 | 2.6494 | 2.6512                     | 2.6530 | 2.6548 | 2.6565 |
| 2.6583              | 2.6600 | 2.6617 | 2.6635                     | 2.6652 | 2.6669 | 2.6686 |
| 2.6703              | 2.6721 | 2.6738 | 2.6755                     | 2.6772 | 2.6789 | 2.6806 |
| 2.6823              | 2.6840 | 2.6857 | 2.6874                     | 2.6891 | 2.6908 | 2.6925 |
| 2.6941              | 2.6958 | 2.6975 | 2.6992                     | 2.7009 | 2.7025 | 2.7042 |
| 2.7059              | 2.7075 | 2.7092 | 2.7109                     | 2.7125 | 2.7142 | 2.7158 |
| 2.7175              | 2.7191 | 2.7208 | 2.7224                     | 2.7240 | 2.7257 | 2.7273 |
| 2.7289              | 2.7306 | 2.7322 | 2.7338                     | 2.7354 | 2.7371 | 2.7387 |
| 2.7403              | 2.7419 | 2.7435 | 2.7451                     | 2.7467 | 2.7483 | 2.7499 |
| 2.7515              | 2.7531 | 2.7547 | 2.7563                     | 2.7579 | 2.7595 | 2.7611 |
| 2.7626              | 2.7642 | 2.7658 | 2.7674                     | 2.7689 | 2.7705 | 2.7721 |
| 2.7736              | 2.7752 | 2.7767 | 2.7783                     | 2.7798 | 2.7814 | 2.7829 |
| 2.7845              | 2.7860 | 2.7876 | 2.7891                     | 2.7906 | 2.7922 | 2.7937 |
| 2.7952              | 2.7967 | 2.7983 | 2.7998                     | 2.8013 | 2.8028 | 2.8043 |
| 2.8058              | 2.8073 | 2.8088 | 2.8103                     | 2.8118 | 2.8133 | 2.8148 |
| 2.8163              | 2.8178 | 2.8193 | 2.8208                     | 2.8223 | 2.8237 | 2.8252 |
| 2.8267              | 2.8282 | 2.8296 | 2.8311                     | 2.8326 | 2.8340 | 2.8355 |
| 2.8369              | 2.8384 | 2.8398 | 2.8413                     | 2.8427 | 2.8442 | 2.8456 |
| 2.8471              | 2.8485 | 2.8499 | 2.8514                     | 2.8528 | 2.8542 | 2.8556 |
| 2.8570              | 2.8585 | 2.8599 | 2.8613                     | 2.8627 | 2.8641 | 2.8655 |
| 2.8669              | 2.8683 | 2.8697 | 2.8711                     | 2.8725 | 2.8739 | 2.8753 |

| AHYMO.OUT |        |        |        |        |        |        |
|-----------|--------|--------|--------|--------|--------|--------|
| 2.8767    | 2.8780 | 2.8794 | 2.8808 | 2.8822 | 2.8836 | 2.8849 |
| 2.8863    | 2.8877 | 2.8890 | 2.8904 | 2.8917 | 2.8931 | 2.8944 |
| 2.8958    | 2.8971 | 2.8985 | 2.8998 | 2.9012 | 2.9025 | 2.9038 |
| 2.9052    | 2.9065 | 2.9078 | 2.9091 | 2.9105 | 2.9118 | 2.9131 |
| 2.9144    | 2.9157 | 2.9170 | 2.9183 | 2.9196 | 2.9209 | 2.9222 |
| 2.9235    | 2.9248 | 2.9261 | 2.9274 | 2.9287 | 2.9300 | 2.9313 |
| 2.9325    | 2.9338 | 2.9351 | 2.9363 | 2.9376 | 2.9389 | 2.9401 |
| 2.9414    | 2.9427 | 2.9439 | 2.9452 | 2.9464 | 2.9477 | 2.9489 |
| 2.9501    | 2.9514 | 2.9526 | 2.9539 | 2.9551 | 2.9563 | 2.9575 |
| 2.9588    | 2.9600 | 2.9612 | 2.9624 | 2.9636 | 2.9649 | 2.9661 |
| 2.9673    | 2.9685 | 2.9697 | 2.9709 | 2.9721 | 2.9733 | 2.9745 |
| 2.9756    | 2.9768 | 2.9780 | 2.9792 | 2.9804 | 2.9815 | 2.9827 |
| 2.9839    | 2.9851 | 2.9862 | 2.9874 | 2.9885 | 2.9897 | 2.9909 |
| 2.9920    | 2.9932 | 2.9943 | 2.9955 | 2.9966 | 2.9977 | 2.9989 |
| 3.0000    | 3.0011 | 3.0023 | 3.0034 | 3.0045 | 3.0056 | 3.0068 |
| 3.0079    | 3.0090 | 3.0101 | 3.0112 | 3.0123 | 3.0134 | 3.0145 |
| 3.0156    | 3.0167 | 3.0178 | 3.0189 | 3.0200 | 3.0211 | 3.0222 |
| 3.0232    | 3.0243 | 3.0254 | 3.0265 | 3.0275 | 3.0286 | 3.0297 |
| 3.0307    | 3.0318 | 3.0329 | 3.0339 | 3.0350 | 3.0360 | 3.0371 |
| 3.0381    | 3.0392 | 3.0402 | 3.0412 | 3.0423 | 3.0433 | 3.0443 |
| 3.0454    | 3.0464 | 3.0474 | 3.0484 | 3.0494 | 3.0504 | 3.0515 |
| 3.0525    | 3.0535 | 3.0545 | 3.0555 | 3.0565 | 3.0575 | 3.0585 |
| 3.0595    | 3.0604 | 3.0614 | 3.0624 | 3.0634 | 3.0644 | 3.0654 |
| 3.0663    | 3.0673 | 3.0683 | 3.0692 | 3.0702 | 3.0712 | 3.0721 |
| 3.0731    | 3.0740 | 3.0750 | 3.0759 | 3.0769 | 3.0778 | 3.0787 |
| 3.0797    | 3.0806 | 3.0815 | 3.0825 | 3.0834 | 3.0843 | 3.0852 |
| 3.0862    | 3.0871 | 3.0880 | 3.0889 | 3.0898 | 3.0907 | 3.0916 |
| 3.0925    | 3.0934 | 3.0943 | 3.0952 | 3.0961 | 3.0970 | 3.0979 |
| 3.0988    | 3.0996 | 3.1005 | 3.1014 | 3.1023 | 3.1031 | 3.1040 |
| 3.1049    | 3.1057 | 3.1066 | 3.1075 | 3.1083 | 3.1092 | 3.1100 |
| 3.1109    | 3.1117 | 3.1125 | 3.1134 | 3.1142 | 3.1151 | 3.1159 |
| 3.1167    | 3.1175 | 3.1184 | 3.1192 | 3.1200 |        |        |

COMPUTE NM HYD ID=1 HYD NO=101 DA= .0019 SQ MI  
 PER A=0 PER B=11 PER C=17 PER D=72  
 TP=-.270 MASSRAIN=-1

\*\*\*\*\*WARNING\*\*\*\*\* SUM OF TREATMENT TYPES DOES NOT EQUAL 100 PERCENT OR  
 TOTAL AREA

K = 0.147150HR TP = 0.270000HR K/TP RATIO = 0.545000 SHAPE  
 CONSTANT, N = 7.106428  
 UNIT PEAK = 2.6401 CFS UNIT VOLUME = 0.9955 B = 526.28  
 P60 = 2.2000  
 AREA = 0.001354 SQ MI IA = 0.10000 INCHES INF = 0.04000  
 INCHES PER HOUR  
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  
 0.050000

K = 0.242752HR TP = 0.270000HR K/TP RATIO = 0.899080 SHAPE  
 CONSTANT, N = 3.941993  
 UNIT PEAK = 0.70979 CFS UNIT VOLUME = 0.9802 B = 351.29  
 P60 = 2.2000  
 AREA = 0.000546 SQ MI IA = 0.41207 INCHES INF = 1.00379  
 INCHES PER HOUR  
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =  
 0.050000

PRINT HYD ID=1 CODE=3

AHYMO.OUT  
PARTIAL HYDROGRAPH 101.00

| TIME   | TIME<br>FLOW<br>HRS<br>CFS | FLOW<br>CFS | TIME   | TIME<br>FLOW<br>HRS<br>CFS | FLOW<br>CFS | TIME   | FLOW<br>CFS |
|--------|----------------------------|-------------|--------|----------------------------|-------------|--------|-------------|
|        | 0.000                      | 0.0         |        | 5.100                      | 0.0         | 10.200 | 0.0         |
| 15.300 | 0.0                        |             | 20.400 | 0.0                        |             |        |             |
|        | 0.150                      | 0.0         |        | 5.250                      | 0.0         | 10.350 | 0.0         |
| 15.450 | 0.0                        |             | 20.550 | 0.0                        |             |        |             |
|        | 0.300                      | 0.0         |        | 5.400                      | 0.0         | 10.500 | 0.0         |
| 15.600 | 0.0                        |             | 20.700 | 0.0                        |             |        |             |
|        | 0.450                      | 0.0         |        | 5.550                      | 0.0         | 10.650 | 0.0         |
| 15.750 | 0.0                        |             | 20.850 | 0.0                        |             |        |             |
|        | 0.600                      | 0.0         |        | 5.700                      | 0.0         | 10.800 | 0.0         |
| 15.900 | 0.0                        |             | 21.000 | 0.0                        |             |        |             |
|        | 0.750                      | 0.0         |        | 5.850                      | 0.0         | 10.950 | 0.0         |
| 16.050 | 0.0                        |             | 21.150 | 0.0                        |             |        |             |
|        | 0.900                      | 0.1         |        | 6.000                      | 0.0         | 11.100 | 0.0         |
| 16.200 | 0.0                        |             | 21.300 | 0.0                        |             |        |             |
|        | 1.050                      | 0.2         |        | 6.150                      | 0.0         | 11.250 | 0.0         |
| 16.350 | 0.0                        |             | 21.450 | 0.0                        |             |        |             |
|        | 1.200                      | 0.4         |        | 6.300                      | 0.0         | 11.400 | 0.0         |
| 16.500 | 0.0                        |             | 21.600 | 0.0                        |             |        |             |
|        | 1.350                      | 0.8         |        | 6.450                      | 0.0         | 11.550 | 0.0         |
| 16.650 | 0.0                        |             | 21.750 | 0.0                        |             |        |             |
|        | 1.500                      | 2.5         |        | 6.600                      | 0.0         | 11.700 | 0.0         |
| 16.800 | 0.0                        |             | 21.900 | 0.0                        |             |        |             |
|        | 1.650                      | 4.2         |        | 6.750                      | 0.0         | 11.850 | 0.0         |
| 16.950 | 0.0                        |             | 22.050 | 0.0                        |             |        |             |
|        | 1.800                      | 3.1         |        | 6.900                      | 0.0         | 12.000 | 0.0         |
| 17.100 | 0.0                        |             | 22.200 | 0.0                        |             |        |             |
|        | 1.950                      | 1.8         |        | 7.050                      | 0.0         | 12.150 | 0.0         |
| 17.250 | 0.0                        |             | 22.350 | 0.0                        |             |        |             |
|        | 2.100                      | 1.1         |        | 7.200                      | 0.0         | 12.300 | 0.0         |
| 17.400 | 0.0                        |             | 22.500 | 0.0                        |             |        |             |
|        | 2.250                      | 0.7         |        | 7.350                      | 0.0         | 12.450 | 0.0         |
| 17.550 | 0.0                        |             | 22.650 | 0.0                        |             |        |             |
|        | 2.400                      | 0.5         |        | 7.500                      | 0.0         | 12.600 | 0.0         |
| 17.700 | 0.0                        |             | 22.800 | 0.0                        |             |        |             |
|        | 2.550                      | 0.4         |        | 7.650                      | 0.0         | 12.750 | 0.0         |
| 17.850 | 0.0                        |             | 22.950 | 0.0                        |             |        |             |
|        | 2.700                      | 0.2         |        | 7.800                      | 0.0         | 12.900 | 0.0         |
| 18.000 | 0.0                        |             | 23.100 | 0.0                        |             |        |             |
|        | 2.850                      | 0.2         |        | 7.950                      | 0.0         | 13.050 | 0.0         |
| 18.150 | 0.0                        |             | 23.250 | 0.0                        |             |        |             |
|        | 3.000                      | 0.1         |        | 8.100                      | 0.0         | 13.200 | 0.0         |
| 18.300 | 0.0                        |             | 23.400 | 0.0                        |             |        |             |
|        | 3.150                      | 0.1         |        | 8.250                      | 0.0         | 13.350 | 0.0         |
| 18.450 | 0.0                        |             | 23.550 | 0.0                        |             |        |             |
|        | 3.300                      | 0.1         |        | 8.400                      | 0.0         | 13.500 | 0.0         |
| 18.600 | 0.0                        |             | 23.700 | 0.0                        |             |        |             |
|        | 3.450                      | 0.1         |        | 8.550                      | 0.0         | 13.650 | 0.0         |
| 18.750 | 0.0                        |             | 23.850 | 0.0                        |             |        |             |
|        | 3.600                      | 0.0         |        | 8.700                      | 0.0         | 13.800 | 0.0         |
| 18.900 | 0.0                        |             | 24.000 | 0.0                        |             |        |             |
|        | 3.750                      | 0.0         |        | 8.850                      | 0.0         | 13.950 | 0.0         |
| 19.050 | 0.0                        |             | 24.150 | 0.0                        |             |        |             |
|        | 3.900                      | 0.0         |        | 9.000                      | 0.0         | 14.100 | 0.0         |
| 19.200 | 0.0                        |             | 24.300 | 0.0                        |             |        |             |
|        | 4.050                      | 0.0         |        | 9.150                      | 0.0         | 14.250 | 0.0         |
| 19.350 | 0.0                        |             | 24.450 | 0.0                        |             |        |             |
|        | 4.200                      | 0.0         |        | 9.300                      | 0.0         | 14.400 | 0.0         |

|        |       |        | AHYMO.OUT |     |        |
|--------|-------|--------|-----------|-----|--------|
| 19.500 | 0.0   | 24.600 | 0.0       |     |        |
|        | 4.350 | 0.0    | 9.450     | 0.0 | 14.550 |
| 19.650 | 0.0   | 24.750 | 0.0       |     |        |
|        | 4.500 | 0.0    | 9.600     | 0.0 | 14.700 |
| 19.800 | 0.0   |        |           |     |        |
|        | 4.650 | 0.0    | 9.750     | 0.0 | 14.850 |
| 19.950 | 0.0   |        |           |     |        |
|        | 4.800 | 0.0    | 9.900     | 0.0 | 15.000 |
| 20.100 | 0.0   |        |           |     |        |
|        | 4.950 | 0.0    | 10.050    | 0.0 | 15.150 |
| 20.250 | 0.0   |        |           |     |        |

RUNOFF VOLUME = 2.41100 INCHES = 0.2443 ACRE-FEET  
 PEAK DISCHARGE RATE = 4.19 CFS AT 1.650 HOURS BASIN AREA = 0.0019 SQ. MI.

|                                                       |              |                |          |        |
|-------------------------------------------------------|--------------|----------------|----------|--------|
| * ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR |              |                |          |        |
| ROUTE RESERVOIR                                       | ID=2         | HYD NO=102     | INFLOW=1 | CODE=3 |
|                                                       | OUTFLOW(CFS) | STORAGE(AC-FT) | ELEV(FT) |        |
|                                                       | 0.0          | 0.000          | 38.97    |        |
|                                                       | 0.05         | 0.0044         | 39.97    |        |
|                                                       |              | 0.44           | 0.0104   | 40.97  |
|                                                       | 0.65         | 0.0182         | 41.97    |        |
|                                                       | 0.80         | 0.0278         | 42.97    |        |
|                                                       | 0.93         | 0.0396         | 43.97    |        |
|                                                       | 1.04         | 0.0537         | 44.97    |        |
|                                                       | 1.14         | 0.0702         | 45.97    |        |
|                                                       | 1.23         | 0.0894         | 46.97    |        |
|                                                       | 1.32         | 0.1115         | 47.97    |        |
|                                                       | 1.40         | 0.1366         | 48.97    |        |

| * * * * *     | * * * * *       | * * * * *      | * * * * *         | * * * * *        |
|---------------|-----------------|----------------|-------------------|------------------|
| TIME<br>(HRS) | INFLOW<br>(CFS) | ELEV<br>(FEET) | VOLUME<br>(AC-FT) | OUTFLOW<br>(CFS) |
| 0.00          | 0.00            | 38.97          | 0.000             | 0.00             |
| 0.15          | 0.00            | 38.97          | 0.000             | 0.00             |
| 0.30          | 0.00            | 38.97          | 0.000             | 0.00             |
| 0.45          | 0.00            | 38.97          | 0.000             | 0.00             |
| 0.60          | 0.00            | 38.97          | 0.000             | 0.00             |
| 0.75          | 0.00            | 38.97          | 0.000             | 0.00             |
| 0.90          | 0.05            | 39.02          | 0.000             | 0.00             |
| 1.05          | 0.16            | 39.29          | 0.001             | 0.02             |
| 1.20          | 0.37            | 39.91          | 0.004             | 0.05             |
| 1.35          | 0.82            | 40.72          | 0.009             | 0.34             |
| 1.50          | 2.50            | 42.29          | 0.021             | 0.70             |
| 1.65          | 4.19            | 45.01          | 0.054             | 1.04             |
| 1.80          | 3.15            | 46.85          | 0.087             | 1.22             |
| 1.95          | 1.84            | 47.54          | 0.102             | 1.28             |
| 2.10          | 1.09            | 47.62          | 0.104             | 1.29             |
| 2.25          | 0.69            | 47.39          | 0.099             | 1.27             |
| 2.40          | 0.48            | 47.01          | 0.090             | 1.23             |
| 2.55          | 0.35            | 46.50          | 0.080             | 1.19             |
| 2.70          | 0.25            | 45.94          | 0.070             | 1.14             |

|      |      |       | AHYMO.OUT |      |
|------|------|-------|-----------|------|
| 2.85 | 0.18 | 45.27 | 0.059     | 1.07 |
| 3.00 | 0.14 | 44.56 | 0.048     | 0.99 |
| 3.15 | 0.11 | 43.80 | 0.038     | 0.91 |
| 3.30 | 0.08 | 43.00 | 0.028     | 0.80 |
| 3.45 | 0.06 | 42.15 | 0.020     | 0.68 |
| 3.60 | 0.04 | 41.33 | 0.013     | 0.51 |
| 3.75 | 0.03 | 40.63 | 0.008     | 0.31 |
| 3.90 | 0.02 | 40.23 | 0.006     | 0.15 |
| 4.05 | 0.02 | 40.05 | 0.005     | 0.08 |
| 4.20 | 0.02 | 39.96 | 0.004     | 0.05 |
| 4.35 | 0.02 | 39.89 | 0.004     | 0.05 |
| 4.50 | 0.02 | 39.83 | 0.004     | 0.04 |
| 4.65 | 0.02 | 39.77 | 0.004     | 0.04 |
| 4.80 | 0.02 | 39.72 | 0.003     | 0.04 |
| 4.95 | 0.02 | 39.69 | 0.003     | 0.04 |
| 5.10 | 0.02 | 39.65 | 0.003     | 0.03 |
| 5.25 | 0.02 | 39.63 | 0.003     | 0.03 |
| 5.40 | 0.03 | 39.60 | 0.003     | 0.03 |
| 5.55 | 0.03 | 39.59 | 0.003     | 0.03 |
| 5.70 | 0.03 | 39.58 | 0.003     | 0.03 |
| 5.85 | 0.03 | 39.57 | 0.003     | 0.03 |
| 6.00 | 0.03 | 39.56 | 0.003     | 0.03 |
| 6.15 | 0.03 | 39.56 | 0.003     | 0.03 |
| 6.30 | 0.03 | 39.56 | 0.003     | 0.03 |
| 6.45 | 0.03 | 39.56 | 0.003     | 0.03 |
| 6.60 | 0.03 | 39.56 | 0.003     | 0.03 |
| 6.75 | 0.03 | 39.56 | 0.003     | 0.03 |
| 6.90 | 0.03 | 39.56 | 0.003     | 0.03 |
| 7.05 | 0.03 | 39.56 | 0.003     | 0.03 |
| 7.20 | 0.03 | 39.56 | 0.003     | 0.03 |
| 7.35 | 0.03 | 39.56 | 0.003     | 0.03 |
| 7.50 | 0.03 | 39.56 | 0.003     | 0.03 |
| 7.65 | 0.03 | 39.56 | 0.003     | 0.03 |
| 7.80 | 0.03 | 39.56 | 0.003     | 0.03 |
| 7.95 | 0.03 | 39.56 | 0.003     | 0.03 |
| 8.10 | 0.03 | 39.56 | 0.003     | 0.03 |
| 8.25 | 0.03 | 39.55 | 0.003     | 0.03 |

| TIME<br>(HRS) | INFLOW<br>(CFS) | ELEV<br>(FEET) | VOLUME<br>(AC-FT) | OUTFLOW<br>(CFS) |
|---------------|-----------------|----------------|-------------------|------------------|
| 8.40          | 0.03            | 39.55          | 0.003             | 0.03             |
| 8.55          | 0.03            | 39.55          | 0.003             | 0.03             |
| 8.70          | 0.03            | 39.55          | 0.003             | 0.03             |
| 8.85          | 0.03            | 39.55          | 0.003             | 0.03             |
| 9.00          | 0.03            | 39.54          | 0.003             | 0.03             |
| 9.15          | 0.03            | 39.54          | 0.003             | 0.03             |
| 9.30          | 0.03            | 39.54          | 0.003             | 0.03             |
| 9.45          | 0.03            | 39.54          | 0.003             | 0.03             |
| 9.60          | 0.03            | 39.54          | 0.002             | 0.03             |
| 9.75          | 0.03            | 39.53          | 0.002             | 0.03             |
| 9.90          | 0.03            | 39.53          | 0.002             | 0.03             |
| 10.05         | 0.03            | 39.53          | 0.002             | 0.03             |
| 10.20         | 0.03            | 39.53          | 0.002             | 0.03             |
| 10.35         | 0.03            | 39.52          | 0.002             | 0.03             |
| 10.50         | 0.03            | 39.52          | 0.002             | 0.03             |
| 10.65         | 0.03            | 39.52          | 0.002             | 0.03             |
| 10.80         | 0.03            | 39.52          | 0.002             | 0.03             |
| 10.95         | 0.03            | 39.51          | 0.002             | 0.03             |
| 11.10         | 0.03            | 39.51          | 0.002             | 0.03             |
| 11.25         | 0.03            | 39.51          | 0.002             | 0.03             |
| 11.40         | 0.03            | 39.51          | 0.002             | 0.03             |
| 11.55         | 0.03            | 39.50          | 0.002             | 0.03             |

|       |      |       |           |      |
|-------|------|-------|-----------|------|
|       |      |       | AHYMO.OUT |      |
| 11.70 | 0.03 | 39.50 | 0.002     | 0.03 |
| 11.85 | 0.03 | 39.50 | 0.002     | 0.03 |
| 12.00 | 0.03 | 39.50 | 0.002     | 0.03 |
| 12.15 | 0.03 | 39.49 | 0.002     | 0.03 |
| 12.30 | 0.03 | 39.49 | 0.002     | 0.03 |
| 12.45 | 0.02 | 39.49 | 0.002     | 0.03 |
| 12.60 | 0.02 | 39.49 | 0.002     | 0.03 |
| 12.75 | 0.02 | 39.48 | 0.002     | 0.03 |
| 12.90 | 0.02 | 39.48 | 0.002     | 0.03 |
| 13.05 | 0.02 | 39.48 | 0.002     | 0.03 |
| 13.20 | 0.02 | 39.47 | 0.002     | 0.03 |
| 13.35 | 0.02 | 39.47 | 0.002     | 0.03 |
| 13.50 | 0.02 | 39.47 | 0.002     | 0.02 |
| 13.65 | 0.02 | 39.47 | 0.002     | 0.02 |
| 13.80 | 0.02 | 39.46 | 0.002     | 0.02 |
| 13.95 | 0.02 | 39.46 | 0.002     | 0.02 |
| 14.10 | 0.02 | 39.46 | 0.002     | 0.02 |
| 14.25 | 0.02 | 39.46 | 0.002     | 0.02 |
| 14.40 | 0.02 | 39.45 | 0.002     | 0.02 |
| 14.55 | 0.02 | 39.45 | 0.002     | 0.02 |
| 14.70 | 0.02 | 39.45 | 0.002     | 0.02 |
| 14.85 | 0.02 | 39.44 | 0.002     | 0.02 |
| 15.00 | 0.02 | 39.44 | 0.002     | 0.02 |
| 15.15 | 0.02 | 39.44 | 0.002     | 0.02 |
| 15.30 | 0.02 | 39.44 | 0.002     | 0.02 |
| 15.45 | 0.02 | 39.43 | 0.002     | 0.02 |
| 15.60 | 0.02 | 39.43 | 0.002     | 0.02 |
| 15.75 | 0.02 | 39.43 | 0.002     | 0.02 |
| 15.90 | 0.02 | 39.43 | 0.002     | 0.02 |
| 16.05 | 0.02 | 39.42 | 0.002     | 0.02 |
| 16.20 | 0.02 | 39.42 | 0.002     | 0.02 |
| 16.35 | 0.02 | 39.42 | 0.002     | 0.02 |
| 16.50 | 0.02 | 39.42 | 0.002     | 0.02 |
| 16.65 | 0.02 | 39.41 | 0.002     | 0.02 |

| TIME<br>(HRS) | INFLOW<br>(CFS) | ELEV<br>(FEET) | VOLUME<br>(AC-FT) | OUTFLOW<br>(CFS) |
|---------------|-----------------|----------------|-------------------|------------------|
| 16.80         | 0.02            | 39.41          | 0.002             | 0.02             |
| 16.95         | 0.02            | 39.41          | 0.002             | 0.02             |
| 17.10         | 0.02            | 39.41          | 0.002             | 0.02             |
| 17.25         | 0.02            | 39.40          | 0.002             | 0.02             |
| 17.40         | 0.02            | 39.40          | 0.002             | 0.02             |
| 17.55         | 0.02            | 39.40          | 0.002             | 0.02             |
| 17.70         | 0.02            | 39.39          | 0.002             | 0.02             |
| 17.85         | 0.02            | 39.39          | 0.002             | 0.02             |
| 18.00         | 0.02            | 39.39          | 0.002             | 0.02             |
| 18.15         | 0.02            | 39.39          | 0.002             | 0.02             |
| 18.30         | 0.02            | 39.38          | 0.002             | 0.02             |
| 18.45         | 0.02            | 39.38          | 0.002             | 0.02             |
| 18.60         | 0.02            | 39.38          | 0.002             | 0.02             |
| 18.75         | 0.02            | 39.38          | 0.002             | 0.02             |
| 18.90         | 0.02            | 39.37          | 0.002             | 0.02             |
| 19.05         | 0.02            | 39.37          | 0.002             | 0.02             |
| 19.20         | 0.02            | 39.37          | 0.002             | 0.02             |
| 19.35         | 0.02            | 39.36          | 0.002             | 0.02             |
| 19.50         | 0.02            | 39.36          | 0.002             | 0.02             |
| 19.65         | 0.02            | 39.36          | 0.002             | 0.02             |
| 19.80         | 0.02            | 39.36          | 0.002             | 0.02             |
| 19.95         | 0.02            | 39.35          | 0.002             | 0.02             |
| 20.10         | 0.02            | 39.35          | 0.002             | 0.02             |
| 20.25         | 0.02            | 39.35          | 0.002             | 0.02             |
| 20.40         | 0.02            | 39.35          | 0.002             | 0.02             |

| AHYMO.OUT |      |       |       |      |
|-----------|------|-------|-------|------|
| 20.55     | 0.02 | 39.34 | 0.002 | 0.02 |
| 20.70     | 0.02 | 39.34 | 0.002 | 0.02 |
| 20.85     | 0.02 | 39.34 | 0.002 | 0.02 |
| 21.00     | 0.02 | 39.34 | 0.002 | 0.02 |
| 21.15     | 0.02 | 39.33 | 0.002 | 0.02 |
| 21.30     | 0.02 | 39.33 | 0.002 | 0.02 |
| 21.45     | 0.02 | 39.33 | 0.002 | 0.02 |
| 21.60     | 0.02 | 39.32 | 0.002 | 0.02 |
| 21.75     | 0.02 | 39.32 | 0.002 | 0.02 |
| 21.90     | 0.02 | 39.32 | 0.002 | 0.02 |
| 22.05     | 0.02 | 39.32 | 0.002 | 0.02 |
| 22.20     | 0.02 | 39.31 | 0.002 | 0.02 |
| 22.35     | 0.02 | 39.31 | 0.002 | 0.02 |
| 22.50     | 0.02 | 39.31 | 0.001 | 0.02 |
| 22.65     | 0.02 | 39.31 | 0.001 | 0.02 |
| 22.80     | 0.02 | 39.30 | 0.001 | 0.02 |
| 22.95     | 0.02 | 39.30 | 0.001 | 0.02 |
| 23.10     | 0.02 | 39.30 | 0.001 | 0.02 |
| 23.25     | 0.02 | 39.30 | 0.001 | 0.02 |
| 23.40     | 0.02 | 39.29 | 0.001 | 0.02 |
| 23.55     | 0.02 | 39.29 | 0.001 | 0.02 |
| 23.70     | 0.01 | 39.29 | 0.001 | 0.02 |
| 23.85     | 0.01 | 39.28 | 0.001 | 0.02 |
| 24.00     | 0.01 | 39.28 | 0.001 | 0.02 |
| 24.15     | 0.01 | 39.28 | 0.001 | 0.02 |
| 24.30     | 0.01 | 39.26 | 0.001 | 0.01 |
| 24.45     | 0.00 | 39.24 | 0.001 | 0.01 |
| 24.60     | 0.00 | 39.21 | 0.001 | 0.01 |
| 24.75     | 0.00 | 39.18 | 0.001 | 0.01 |
| 24.90     | 0.00 | 39.16 | 0.001 | 0.01 |
| 25.05     | 0.00 | 39.13 | 0.001 | 0.01 |

| TIME<br>(HRS) | INFLOW<br>(CFS) | ELEV<br>(FEET) | VOLUME<br>(AC-FT) | OUTFLOW<br>(CFS) |
|---------------|-----------------|----------------|-------------------|------------------|
|---------------|-----------------|----------------|-------------------|------------------|

|       |      |       |       |      |
|-------|------|-------|-------|------|
| 25.20 | 0.00 | 39.11 | 0.001 | 0.01 |
| 25.35 | 0.00 | 39.09 | 0.001 | 0.01 |
| 25.50 | 0.00 | 39.08 | 0.000 | 0.01 |
| 25.65 | 0.00 | 39.06 | 0.000 | 0.00 |

PEAK DISCHARGE = 1.290 CFS - PEAK OCCURS AT HOUR 2.05  
 MAXIMUM WATER SURFACE ELEVATION = 47.639  
 MAXIMUM STORAGE = 0.1042 AC-FT INCREMENTAL TIME= 0.050000HRS

PRINT HYD ID=2 CODE=3

PARTIAL HYDROGRAPH 102.00

| TIME   | TIME        | FLOW | TIME   | TIME        | FLOW | TIME   | FLOW |
|--------|-------------|------|--------|-------------|------|--------|------|
| HRS    | FLOW<br>HRS | CFS  | HRS    | FLOW<br>HRS | CFS  | HRS    | CFS  |
|        | 0.000       | 0.0  |        | 5.550       | 0.0  | 11.100 | 0.0  |
| 16.650 | 0.0         | 0.0  | 22.200 | 0.0         | 0.0  | 11.250 | 0.0  |
| 16.800 | 0.150       | 0.0  | 22.350 | 0.0         | 0.0  | 11.400 | 0.0  |
| 16.950 | 0.300       | 0.0  | 22.500 | 0.0         | 0.0  | 11.550 | 0.0  |
| 17.100 | 0.450       | 0.0  | 22.650 | 0.0         | 0.0  | 11.700 | 0.0  |
| 17.250 | 0.600       | 0.0  | 22.800 | 0.0         | 0.0  | 11.850 | 0.0  |
| 17.400 | 0.750       | 0.0  | 22.950 | 0.0         | 0.0  |        |      |

| AHYMO.OUT |       |     |        |        |     |        |
|-----------|-------|-----|--------|--------|-----|--------|
| 17.550    | 0.900 | 0.0 | 23.100 | 6.450  | 0.0 | 12.000 |
|           | 0.0   |     |        | 0.0    |     |        |
|           | 1.050 | 0.0 | 23.250 | 6.600  | 0.0 | 12.150 |
| 17.700    | 0.0   |     |        | 0.0    |     |        |
|           | 1.200 | 0.0 | 23.400 | 6.750  | 0.0 | 12.300 |
| 17.850    | 0.0   |     |        | 0.0    |     |        |
|           | 1.350 | 0.3 | 23.550 | 6.900  | 0.0 | 12.450 |
| 18.000    | 0.0   |     |        | 0.0    |     |        |
|           | 1.500 | 0.7 | 23.700 | 7.050  | 0.0 | 12.600 |
| 18.150    | 0.0   |     |        | 0.0    |     |        |
|           | 1.650 | 1.0 | 23.850 | 7.200  | 0.0 | 12.750 |
| 18.300    | 0.0   |     |        | 0.0    |     |        |
|           | 1.800 | 1.2 | 24.000 | 7.350  | 0.0 | 12.900 |
| 18.450    | 0.0   |     |        | 0.0    |     |        |
|           | 1.950 | 1.3 | 24.150 | 7.500  | 0.0 | 13.050 |
| 18.600    | 0.0   |     |        | 0.0    |     |        |
|           | 2.100 | 1.3 | 24.300 | 7.650  | 0.0 | 13.200 |
| 18.750    | 0.0   |     |        | 0.0    |     |        |
|           | 2.250 | 1.3 | 24.450 | 7.800  | 0.0 | 13.350 |
| 18.900    | 0.0   |     |        | 0.0    |     |        |
|           | 2.400 | 1.2 | 24.600 | 7.950  | 0.0 | 13.500 |
| 19.050    | 0.0   |     |        | 0.0    |     |        |
|           | 2.550 | 1.2 | 24.750 | 8.100  | 0.0 | 13.650 |
| 19.200    | 0.0   |     |        | 0.0    |     |        |
|           | 2.700 | 1.1 | 24.900 | 8.250  | 0.0 | 13.800 |
| 19.350    | 0.0   |     |        | 0.0    |     |        |
|           | 2.850 | 1.1 | 25.050 | 8.400  | 0.0 | 13.950 |
| 19.500    | 0.0   |     |        | 0.0    |     |        |
|           | 3.000 | 1.0 | 25.200 | 8.550  | 0.0 | 14.100 |
| 19.650    | 0.0   |     |        | 0.0    |     |        |
|           | 3.150 | 0.9 | 25.350 | 8.700  | 0.0 | 14.250 |
| 19.800    | 0.0   |     |        | 0.0    |     |        |
|           | 3.300 | 0.8 | 25.500 | 8.850  | 0.0 | 14.400 |
| 19.950    | 0.0   |     |        | 0.0    |     |        |
|           | 3.450 | 0.7 | 25.650 | 9.000  | 0.0 | 14.550 |
| 20.100    | 0.0   |     |        | 0.0    |     |        |
|           | 3.600 | 0.5 | 25.800 | 9.150  | 0.0 | 14.700 |
| 20.250    | 0.0   |     |        | 0.0    |     |        |
|           | 3.750 | 0.3 | 25.950 | 9.300  | 0.0 | 14.850 |
| 20.400    | 0.0   |     |        | 0.0    |     |        |
|           | 3.900 | 0.2 | 26.100 | 9.450  | 0.0 | 15.000 |
| 20.550    | 0.0   |     |        | 0.0    |     |        |
|           | 4.050 | 0.1 | 26.250 | 9.600  | 0.0 | 15.150 |
| 20.700    | 0.0   |     |        | 0.0    |     |        |
|           | 4.200 | 0.0 | 26.400 | 9.750  | 0.0 | 15.300 |
| 20.850    | 0.0   |     |        | 0.0    |     |        |
|           | 4.350 | 0.0 | 26.550 | 9.900  | 0.0 | 15.450 |
| 21.000    | 0.0   |     |        | 0.0    |     |        |
|           | 4.500 | 0.0 | 26.700 | 10.050 | 0.0 | 15.600 |
| 21.150    | 0.0   |     |        | 0.0    |     |        |
|           | 4.650 | 0.0 | 26.850 | 10.200 | 0.0 | 15.750 |
| 21.300    | 0.0   |     |        | 0.0    |     |        |
|           | 4.800 | 0.0 | 27.000 | 10.350 | 0.0 | 15.900 |
| 21.450    | 0.0   |     |        | 0.0    |     |        |
|           | 4.950 | 0.0 | 27.150 | 10.500 | 0.0 | 16.050 |
| 21.600    | 0.0   |     |        | 0.0    |     |        |
|           | 5.100 | 0.0 |        | 10.650 | 0.0 | 16.200 |
| 21.750    | 0.0   |     |        |        |     |        |
|           | 5.250 | 0.0 |        | 10.800 | 0.0 | 16.350 |
| 21.900    | 0.0   |     |        |        |     |        |
|           | 5.400 | 0.0 |        | 10.950 | 0.0 | 16.500 |
| 22.050    | 0.0   |     |        |        |     |        |



# DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 01/28/2003rd)

PROJECT TITLE: Westside assisted liven  
 DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_

ZONE MAP/DRG. FILE #: c13 d 016d  
 WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION: lot 4a1a albuquerque West unit 2  
 CITY ADDRESS: \_\_\_\_\_

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

CONTACT: David Soule, PE  
 PHONE: (505)321-9099  
 ZIP CODE: 87199

OWNER: CGI  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
 PHONE: \_\_\_\_\_  
 ZIP CODE: 95003

ARCHITECT: Modulous  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
 PHONE: \_\_\_\_\_  
 ZIP CODE: \_\_\_\_\_

SURVEYOR: Geo surv CO  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE: \_\_\_\_\_

CONTACT: David Vigil  
 PHONE: \_\_\_\_\_  
 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

OK

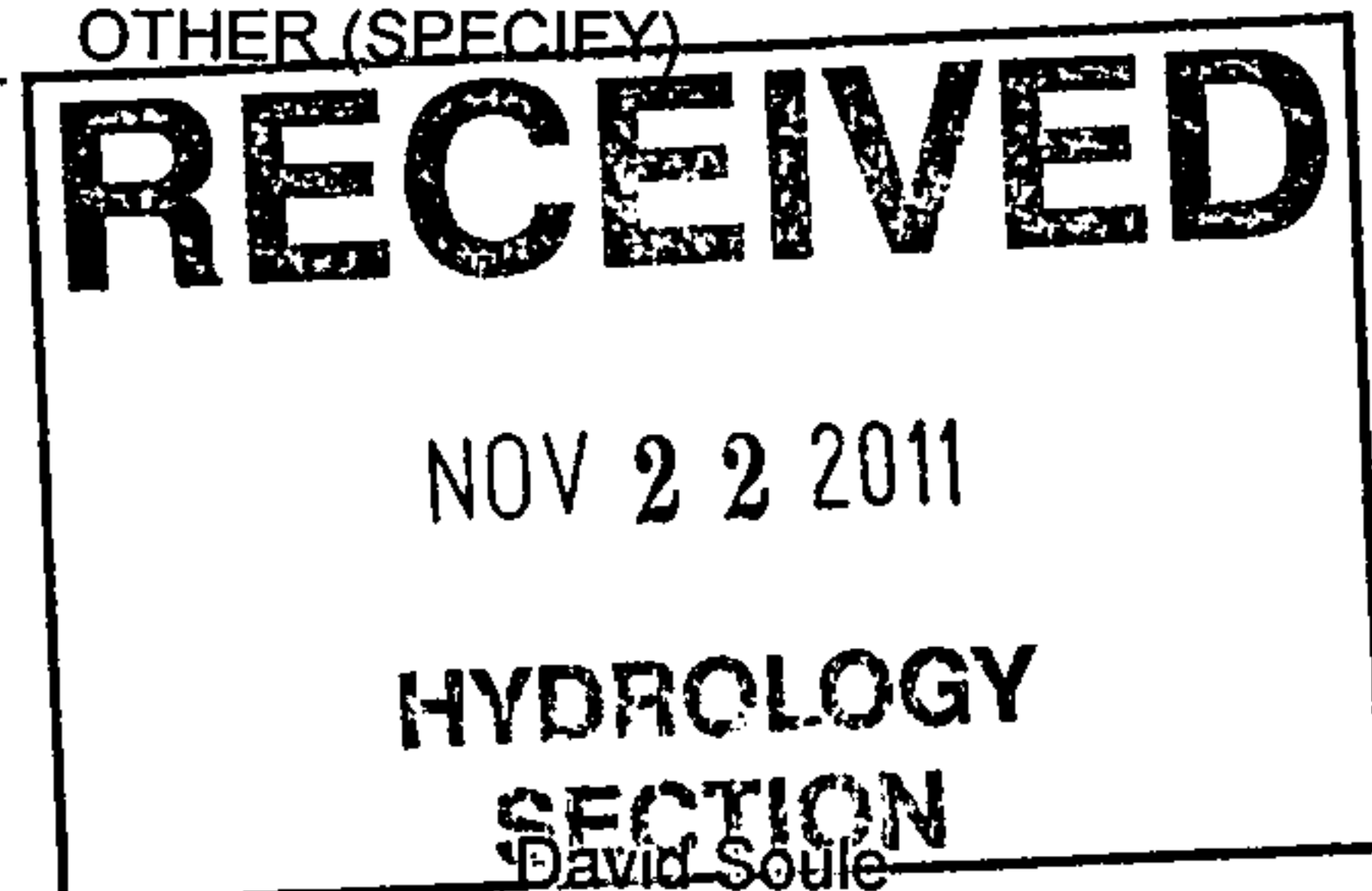
new  
now  
called  
12-20-11

- ☐ 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: 11/18/2011 BY: \_\_\_\_\_



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 sumbittal may be required based on the following:

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

## NOTICE TO CONTRACTORS

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1983.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 785-1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.
8. CONTRACTOR SHALL DETERMINE LOCATION OF ANY UNDERGROUND FACILITY IN OR NEAR WORK AREAS, INCLUDING REQUESTS TO OWNERS/OPERATORS OF SAID FACILITIES PER SECTION 82-14-5 NMSA 1978.
9. CONTRACTOR SHALL PLAN ALL EXCAVATION TO MINIMIZE INTERFERENCE OR DAMAGE OF UNDERGROUND FACILITIES.
10. CONTRACTOR SHALL PROVIDE ADVANCE TELEPHONE NOTICE OF COMMENCEMENT, EXTENT AND DURATION OF ALL EXCAVATION WORK TO THE ONE-CALL NOTIFICATION SYSTEM, OR TO OWNERS/OPERATORS OF ANY EXISTING UNDERGROUND FACILITY IN OR NEAR THE EXCAVATION AREA THAT ARE NOT MEMBERS OF THE ONE-CALL NOTIFICATION CENTER. IN ORDER THAT OWNERS/OPERATORS MAY LOCATE AND MARK UNDERGROUND FACILITY PER SECTION 82-14-5 NMSA 1978 PRIOR TO ANY COMMENCEMENT OF WORK, CONTRACTOR SHALL REQUEST REAFFIRMATION OF LOCATION EVERY TEN (10) WORKING DAYS AFTER INITIAL REQUEST.
11. CONTRACTOR SHALL MAINTAIN EIGHTEEN (18) INCHES BETWEEN EXISTING UNDERGROUND FACILITIES FOR WHICH HAVE BEEN PREVIOUSLY IDENTIFIED AND MARKED BY THE OWNERS/OPERATORS OF SAID FACILITIES. CUTTING EDGE OR POINT OF ANY MECHANICAL EXCAVATING EQUIPMENT UTILIZED IN EXCAVATION AREA WILL BE USED IN A MANNER NECESSARY TO PREVENT DAMAGE TO EXISTING UNDERGROUND FACILITIES.
12. CONTRACTOR SHALL PROVIDE SUPPORT FOR EXISTING UNDERGROUND FACILITIES IN OR NEAR EXCAVATION AREA AS NECESSARY TO PREVENT DAMAGE TO SAID FACILITIES.
13. CONTRACTOR SHALL BACKFILL ALL EXCAVATIONS IN A MANNER AND WITH MATERIALS AS MAY BE NECESSARY TO PREVENT DAMAGE TO AND PROVIDE RELIABLE SUPPORT DURING AND FOLLOWING BACK FILLING ACTIVITIES FOR PREEXISTING UNDERGROUND FACILITIES IN OR NEAR EXCAVATION AREA.
14. CONTRACTOR SHALL IMMEDIATELY NOTIFY BY TELEPHONE THE OWNER/OPERATOR OF ANY UNDERGROUND FACILITY WHICH MAY HAVE BEEN DAMAGED OR DISLODGED DURING EXCAVATION WORK.
15. CONTRACTOR SHALL NOT MOVE OR OBLITERATE MARKINGS MADE PURSUANT TO CHAPTER 82, ARTICLE 14 NMSA 1978, OR FABRICATE MARKINGS IN A UNMARKED LOCATION FOR THE PURPOSE OF CONCEALING OR AVOIDING LIABILITY FOR VIOLATION OF OR NONCOMPLIANCE WITH THE PROVISIONS OF CHAPTER 82, ARTICLE 11 NMSA 1978.
16. CONTRACTOR SHALL NOTIFY NEW MEXICO UTILITIES 3 DAYS IN ADVANCE OF CONSTRUCTION.

## WATER SHUTOFF PLAN

## SHUTOFF VALVES:

## NOTES:

1. WATER SHUT-OFF SHALL BE COORDINATED WITH ABCWIA
2. ONLY WATER SYSTEMS PERSONNEL ARE AUTHORIZED TO OPERATE VALVES.
3. NOTIFY ABCWIA THREE(3) WORKING DAYS IN ADVANCE OF EXECUTION OF THE WATER SHUT-OFF PLAN
4. ALL WATERLINES TO BE 3/4" COPPER, UNLESS OTHERWISE NOTED.
5. SHUT-OFF VALVES INDICATED IN THE ABOVE PLAN IN THE EVENT OF EMERGENCY

## LEGEND

- EXISTING SAS MANHOLE
- EX. 8" SAS — EXISTING SANITARY SEWER LINE
- PROPOSED SAS MANHOLE
- PROPOSED SAS CLEANOUT
- 8" SAS — PROPOSED SANITARY SEWER LINE
- SANITARY SEWER SERVICE LINE
- EX. 12" WL — EXISTING WATER LINE
- PROPOSED METER
- PROPOSED VALVE W/BOX
- PROPOSED FIRE HYDRANT
- WATER SERVICE LINE
- 8" WL — PROPOSED WATER LINE
- PROPOSED STORM SEWER LINE
- ===== EXISTING CURB & CUTTER
- ===== PROPOSED CURB & CUTTER
- CENTERLINE
- RIGHT-OF-WAY
- DRY UTILITY TRENCH
- BOUNDARY LINE
- EASEMENT

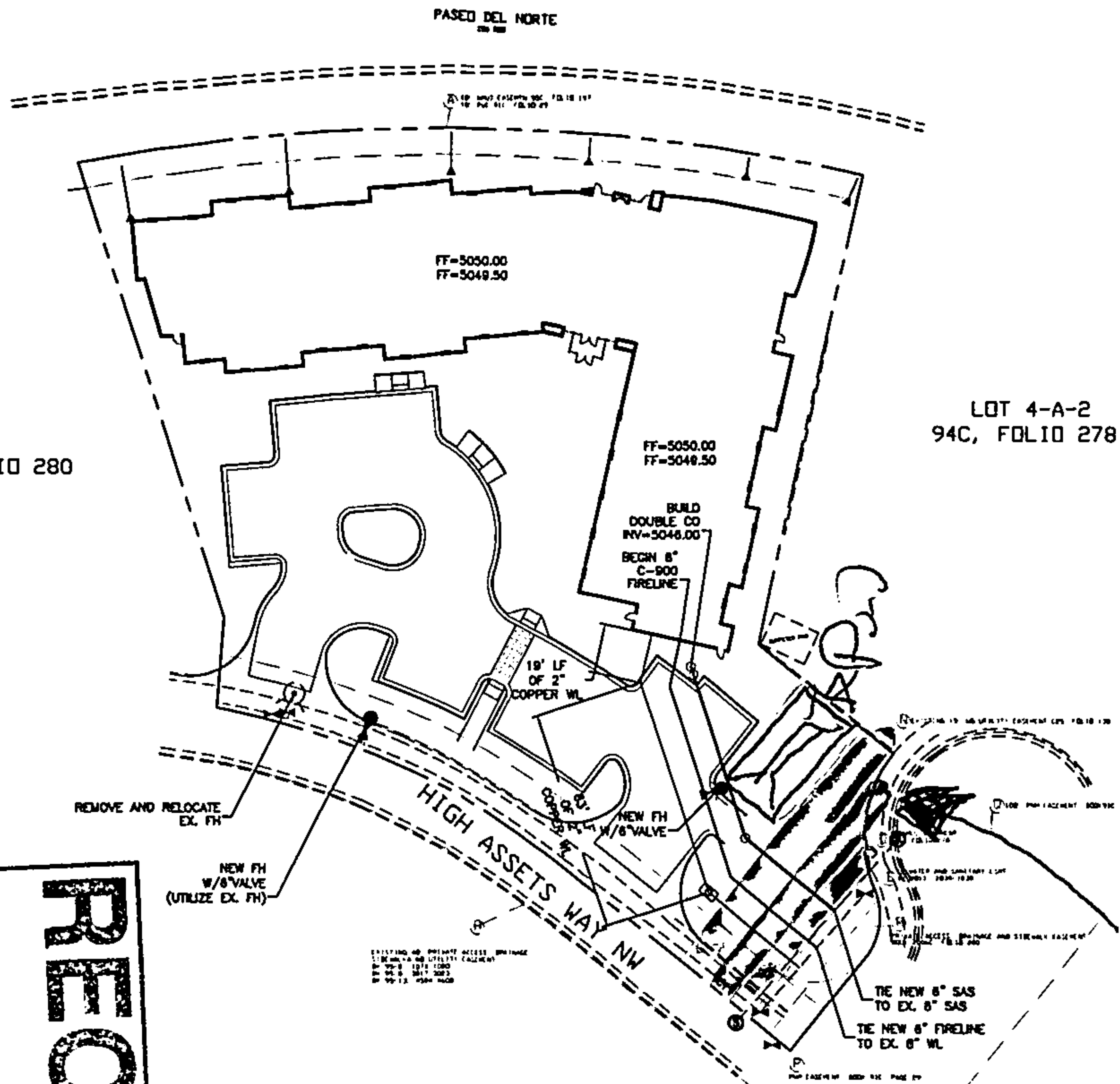
## GENERAL NOTES:

1. 4" MINIMUM BURY REQUIRED FOR ALL UTILITIES UNLESS OTHERWISE NOTED.
2. REFERENCE ARCHITECTURAL PLANS FOR WATER LINE RISER LOCATIONS.
3. CLEAN OUTS ARE TO BE BUILT PER UNIFORM PLUMBING CODE STANDARDS.
4. ALL BLOCKING IS PER CITY OF ALBUQUERQUE STANDARD DWG. 2320.
5. ALL PIPE MATERIAL TO BE USED PER UPC.

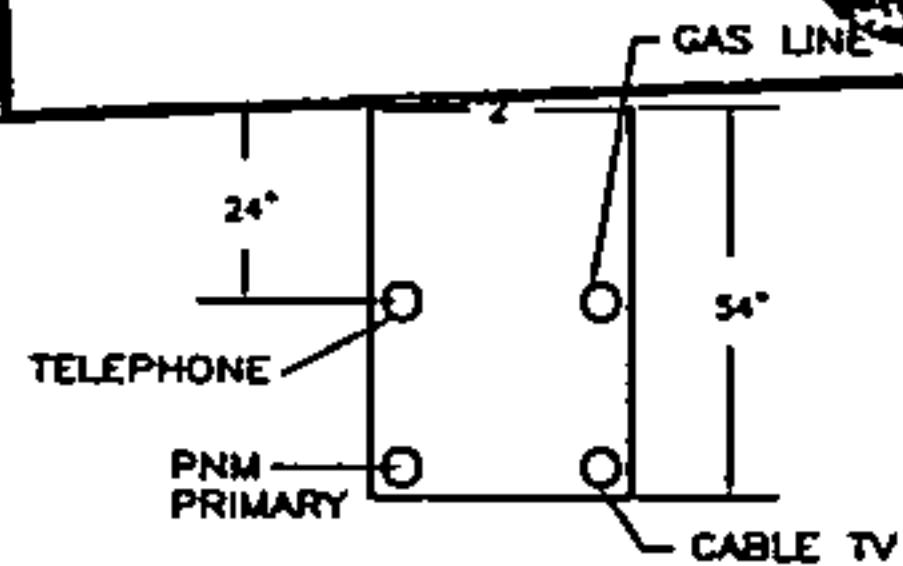
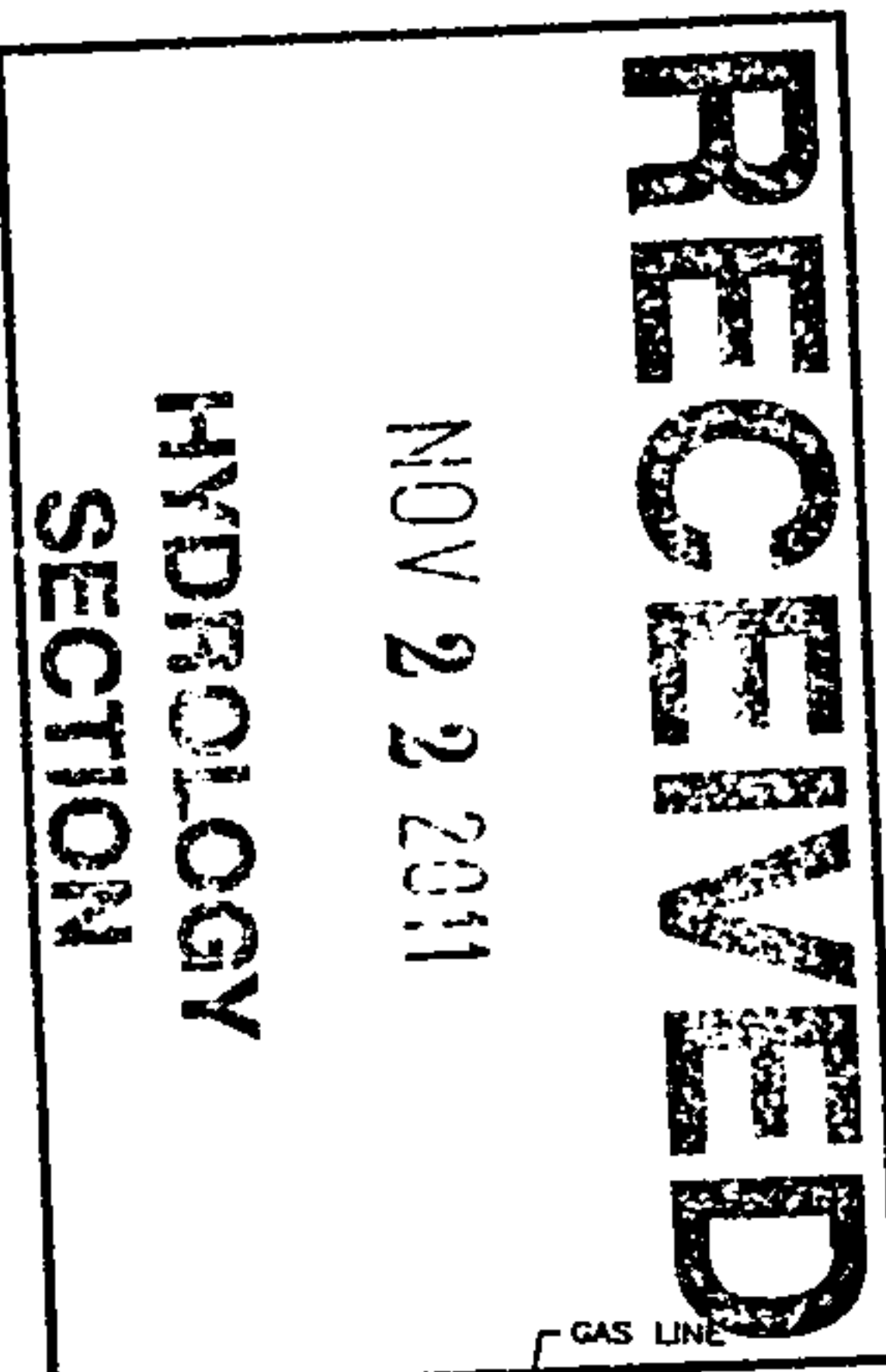
|                            |                                                                                                          |                                                        |
|----------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| ENGINEER'S SEAL            | PASEO DEL NORTE<br>RETIREMENT HOME<br>MASTER UTILITY<br>PLAN                                             | DRAWN BY: WCVJ<br>DATE: 2-21-11<br>21104-L0002-2-21-11 |
| DAVID SOULE<br>P.E. #14522 | Rio Grande<br>Engineering<br>1100 CENTRAL AVENUE<br>SUITE 101<br>ALBUQUERQUE, NM 87104<br>(505) 872-0899 | SHEET #<br>—<br>JOB #<br>21104                         |

LOT 3-A-2-A  
2006C, FOLIO 280

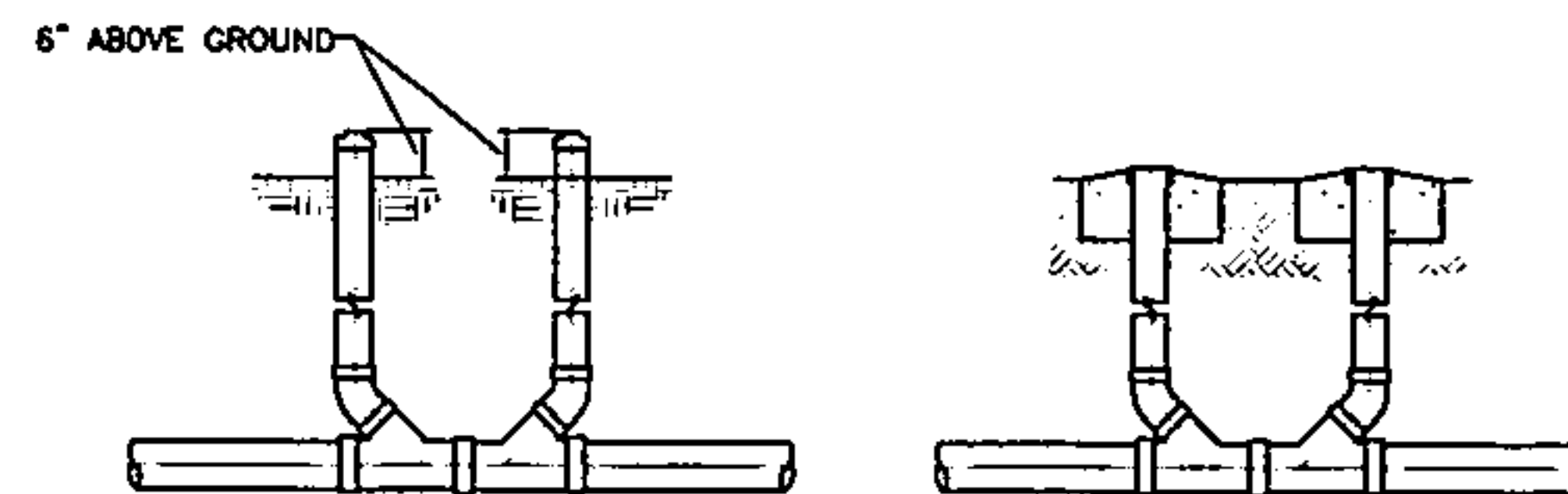
LOT 4-A-2  
94C, FOLIO 278



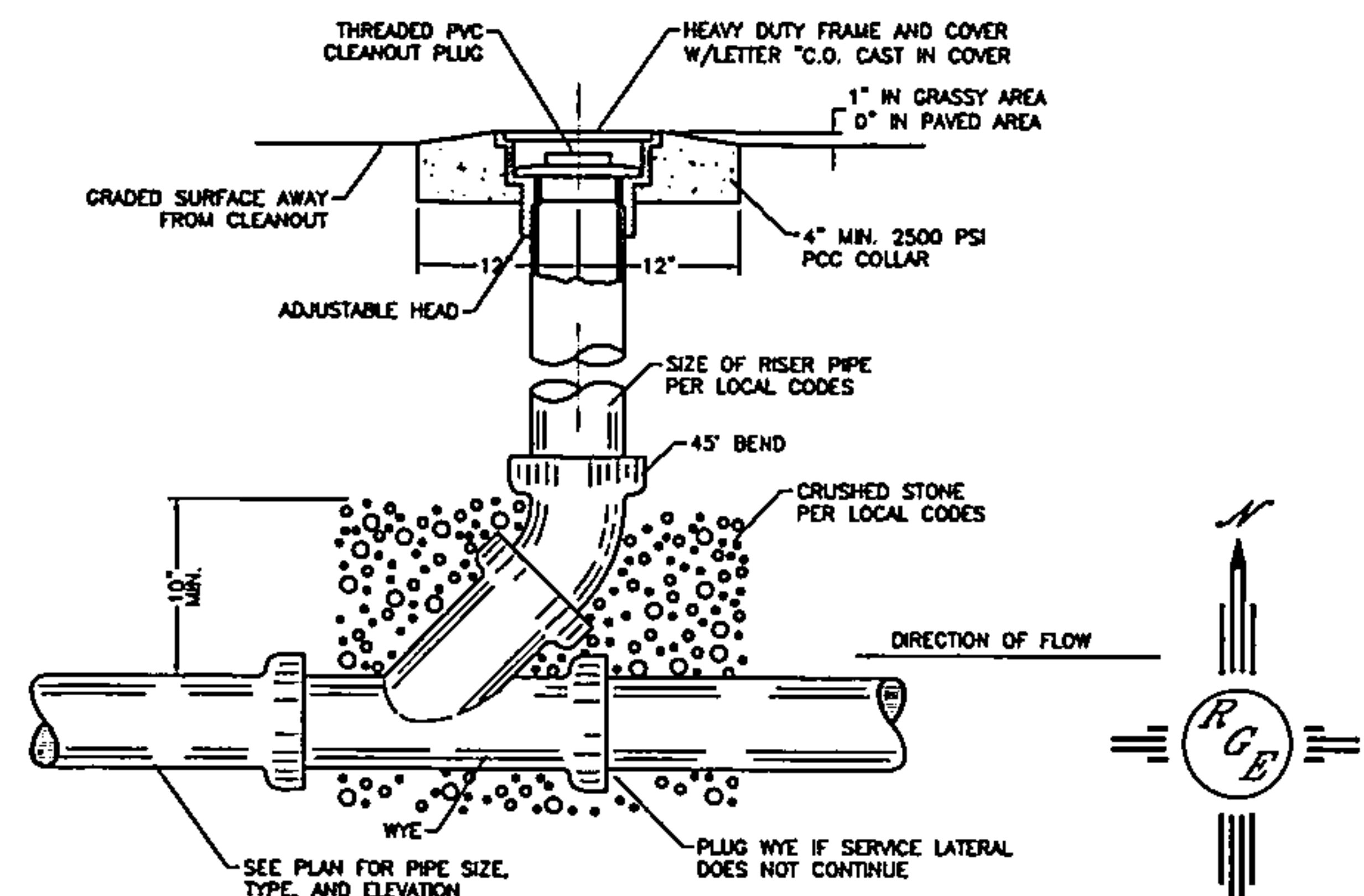
Easements



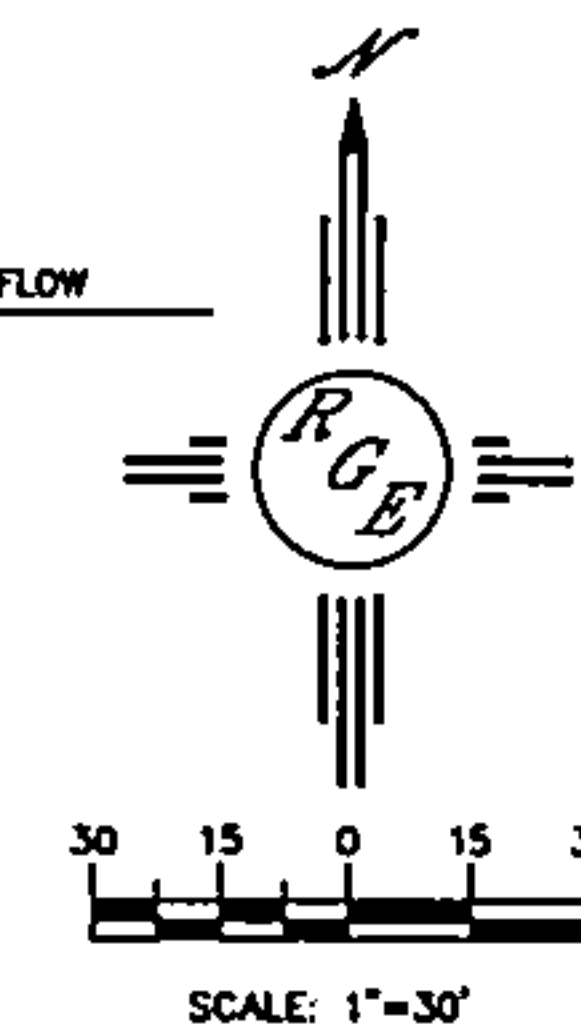
UTILITY TRENCH DETAIL  
NTS



SANITARY SEWER DOUBLE CLEAN-OUTS  
NTS



SANITARY SEWER CLEAN-OUT  
NTS



**RIO GRANDE ENGINEERING OF NEW MEXICO, LLC**

November 18, 2011

Mr. Curtis Cherne, PE  
City Hydrologist  
Planning Department  
City of Albuquerque

**RE: Grading and Drainage Plan  
(C12/D016d)**

Dear Curtis:

The purpose of this letter is to accompany the enclosed grading plan for the referenced project. This plan has been modified to address your written comments dated 4/21/11. The following is a summary of your comment and the method of address is in bold

1. Provide invert of outlet pipe

**The invert for the pipe is specified in the 'call out'. The pipe is designed at inverse grade with outlet 18" above pond bottom. This is a water quality feature to minimize floatables and hydrocarbon leaving pond**

2. Site Plan needs to be approved

**The base shown is the same as base for site plan, approval of site plan by others**

3. Add SO19

**We have added SO19 notes for curb and gutter and drainage work**

4. Show missing curb

**We have added build notes for the missing curb and gutter**

5. Call out curb opening

**We have referenced property COA standard detail**

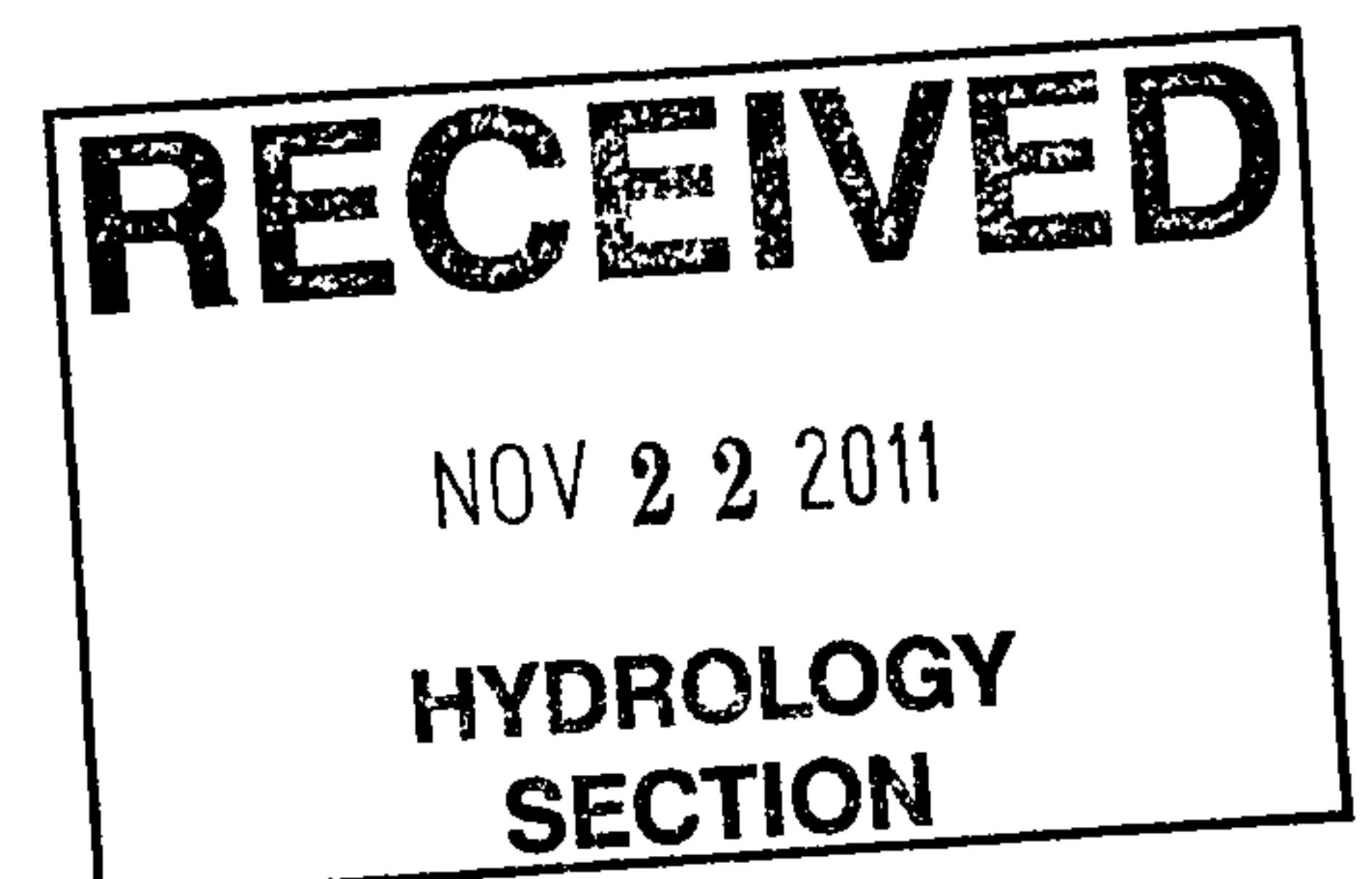
Should you have any questions regarding this resubmittal, please do not hesitate to call me.

Sincerely,

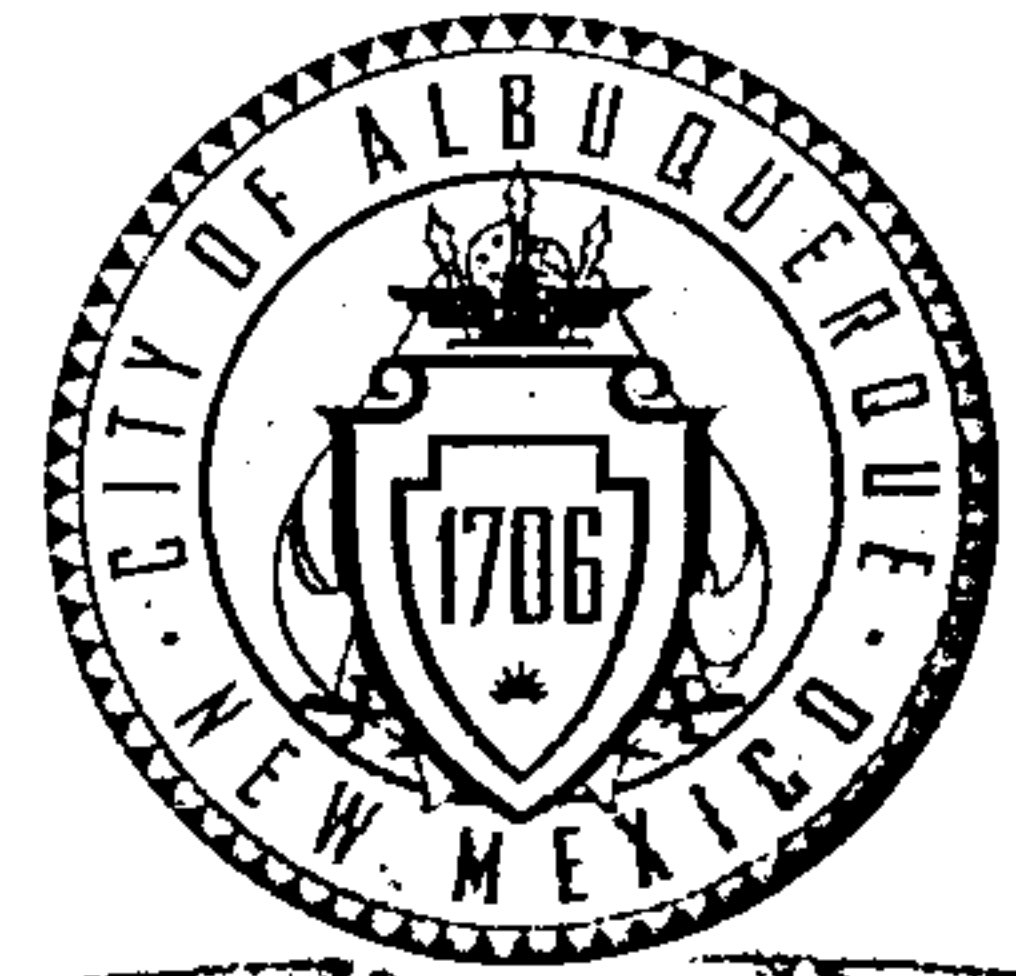


David Soule, PE

Enclosures



# CITY OF ALBUQUERQUE



March 29, 2011

David Soule, P.E.  
Rio Grande Engineering  
P.O. Box 67305  
Albuquerque, NM 87199

**Re: Assisted Living SEC, Conceptual Grading and Drainage Plan  
Engineer's Stamp date 2-23-11 (C13/D016D)**

Dear Mr. Soule,

Based upon the information provided in your submittal received 3-8-11, the above referenced plan cannot be approved for Site Plan for Building Permit action by the DRB until the following comments area addressed:

- It is not evident that the pond is sized appropriately. Provide drainage calculations to support the size of the pond.
- The pond outlet should not discharge across the sidewalk. Hydrology has been asked by DMD Street/Storm maintenance to minimize the use of sidewalk culverts. A drain line thru the curb may be a solution.
- Provide the high point/basin divide near the east drive entrance.

If you have any questions, you can contact me at 924-3695.

Sincerely,

A handwritten signature in cursive script, reading "Curtis A. Cherne".

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

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

C: file