ENGINEER'S CERTIFICATION: Buildings 1, 2, 3, & 4
I, Thomas O. Isaacson, licensed under the laws of the State of New Mexico, do hereby certify that the noted portions of Grading and Drainage Improvements for Buildings 1, 2, 3, and 4 were constructed in substantial compliance with the approved plan dated 07/19/99 (City Approval Letter dated 10/29/99) as field verified by Marquez Surveying Company, NMLS No. 10,283 in March 2000 in accordance with the "New Mexico Engineering and Surveying Act" Section 61-23-1 through 61-23-32 NMSD (1978).

Thomas O. Isaacson, PE & LS No. 3895 — Date 3/29/00

APPROVALS	NAME	DATE
HYDROLOGY		
INSPECTOR	Thomas Gallegos	05-25-00
A.C.E./FIELD		
PERMIT NO.	MAP NO. D-18	

LOUISIANA PURCHASE ~ GRADING & DRAINAGE PLAN

SCALE: 1"=20'

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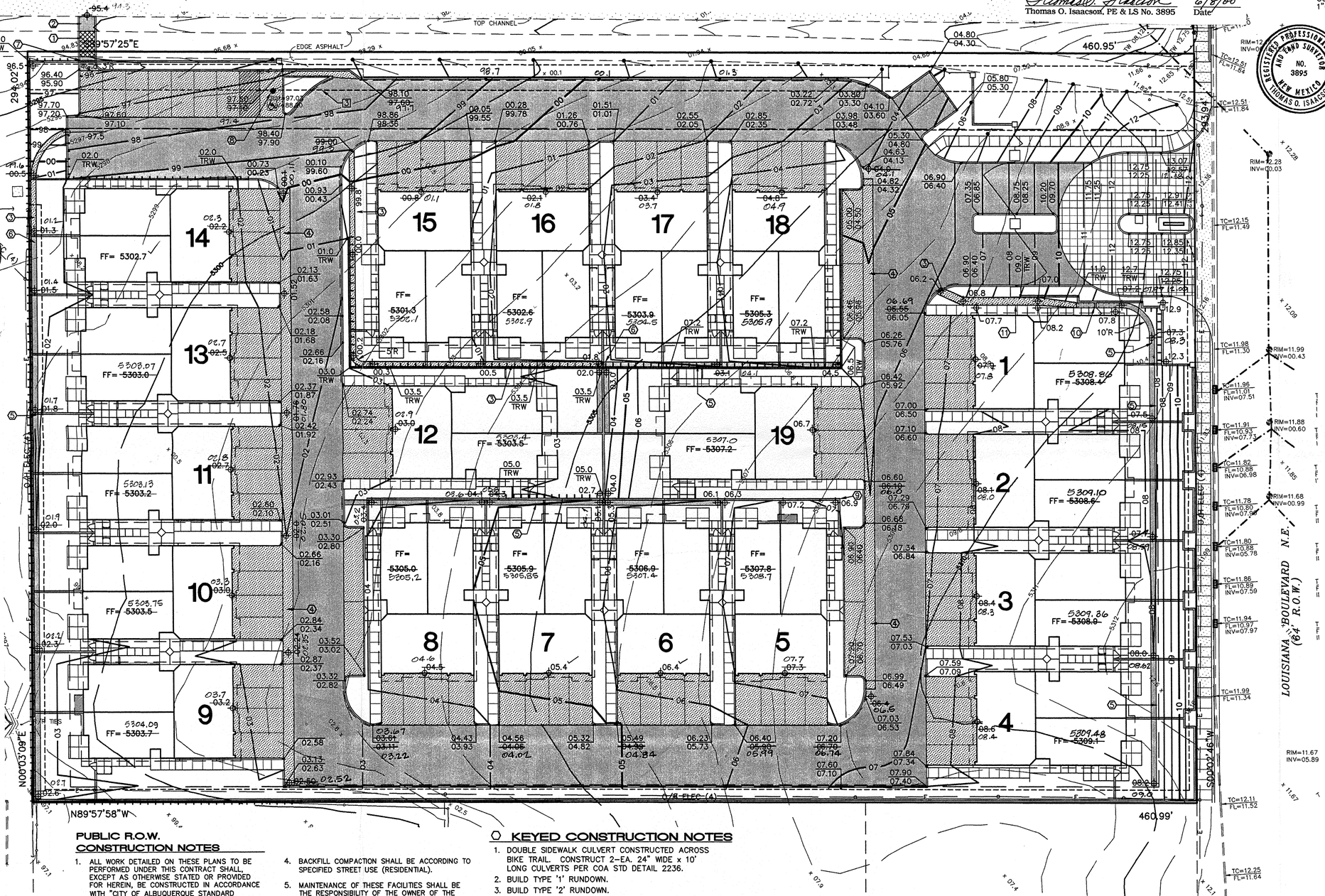
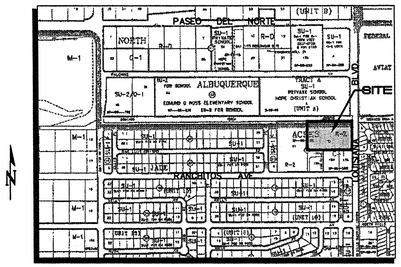
LEGEND

- 08.4 — FINISH SPOT ELEVATION
- 06.26 / 05.76 — TOP OF CURB SPOT ELEV. FLOWLINE
- TYPE 2 RUNDOWN
- TYPE 2R RUNDOWN
- DRAINAGE SWALE
- RETAINING WALL (HASH MARKS SHOWN ON LOW SIDE)
- 06.6 TRW — TOP OF RETAINING WALL ELEV.
- 03.2 — INVERT ELEVATION IN RUNDOWN OR SWALE
- CONCRETE PAVEMENT
- ASPHALT PAVEMENT
- 08 — PROPOSED CONTOUR

ENGINEER'S CERTIFICATION: FINAL CERTIFICATION
I, Thomas O. Isaacson, licensed under the laws of the State of New Mexico, do hereby certify that the Grading and Drainage Improvements for all Buildings were constructed in substantial compliance with the approved plan dated 07/19/99 (City Approval Letter dated 10/29/99) as field verified by Marquez Surveying Company, NMLS No. 10283 in March 2000 and Community Sciences Corporation, NMLS No. 4972 in April 2000 and May 2000 in accordance with the "New Mexico Engineering and Surveying Act" Section 61-23-1 through 61-23-32 NMSD (1978).

Thomas O. Isaacson, PE & LS No. 3895 — Date 6/8/00





D-18 — 1"=750'±

VICINITY MAP

GENERAL INFORMATION

1. Legal Description: North Albuquerque Acres, Tract A, Unit A, Block 13, Lot X-2
2. Area: 3.11 Acres
3. Survey: Boundary & Topographic Survey by Aldrich Land Surveying, October 1998.
4. Benchmark: ACS Monument "1-D19", 1" iron pin with cap "NMPS 5958" set in concrete. Elevation = 5312.77
5. Flood Hazard: Per Panel 10 of the Flood Rate Insurance Maps, the site is not within any flood zone.
6. Offsite Flows: There are no offsite flows entering the property.

EXISTING DRAINAGE CONDITIONS

Site runoff from the property sheet flows to the west property line. Site is located within Precipitation Zone 3.

Existing Q_{100} Runoff is calculated as follows:
A_A = 3.11 ac, A_B = A_C = A_D = 0 ac
Q_{100} = (3.11)(1.87) = 5.8 cfs

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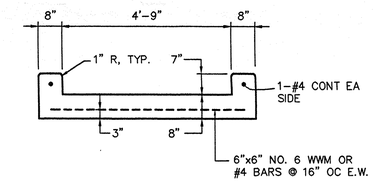
PROPOSED DRAINAGE PLAN

The site is adjacent to the south side of the Domingo Baca Arroyo, a concrete-lined drainage channel. The site will be graded to drain to the northwest corner of the property. A small private concrete rundown will carry developed flows over the top of the channel where they will combine with channel runoff.

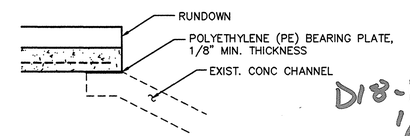
Developed Flows:
A_A = 0, A_B = 0.42 ac, A_C = 0.30 ac, A_D = 2.39 ac
Q_{100} = 0.42(2.60) + 0.30(3.45) + 2.39(5.02) = 14.1 cfs
V_{100} = [0.42(0.077) + 0.30(0.108) + 2.39(0.197)] 43,560 = 23,329 cu ft

Check Domingo Baca Channel Rundown Capacity:
Flow will be controlled by the 2 – 24" sidewall culverts.
Q_{100} = 14.1 cfs, ÷ 2 = 7.05 cfs per culvert
by Manning Formula Solution, d = 0.47'
Available d = 7" = 0.58' so OK.



TYPE 1 RUNDOWN

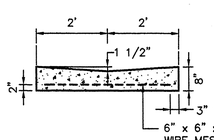
SCALE: 1/2" = 1'-0"



D18-D36 1/1

RUNDOWN-CHANNEL CONNECTION

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



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NOTES:
1. CONTRACTION JOINTS @ 6' O.C.
2. EXPANSION JOINTS @ 36' O.C.

VALLEY GUTTER

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

PUBLIC R.O.W. CONSTRUCTION NOTES

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREIN, BE CONSTRUCTED IN ACCORDANCE WITH "CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS PUBLIC WORKS CONSTRUCTION 1988."
2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE, 260-1990, FOR LOCATION OF EXISTING LINES.
3. 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 OR SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.
4. BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE (RESIDENTIAL).
5. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
6. 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.

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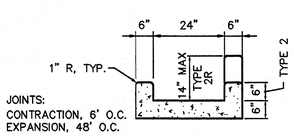
KEYED CONSTRUCTION NOTES

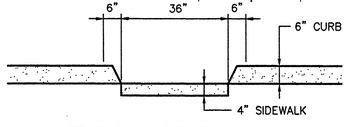
1. DOUBLE SIDEWALK CULVERT CONSTRUCTED ACROSS BIKE TRAIL. CONSTRUCT 2-EA. 24" WIDE x 10' LONG CULVERTS PER COA STD DETAIL 2236.
2. BUILD TYPE '1' RUNDOWN.
3. BUILD TYPE '2' RUNDOWN.
4. BUILD CONCRETE VALLEY GUTTER.
5. BUILD CONCRETE DRAINAGE SWALE.
6. TRANSITION RUNDOWN SIDEWALL HEIGHT FROM 2" TO 6" TYPICAL HEIGHT OVER 3' LENGTH AT CONNECTION TO CONCRETE DRAINAGE SWALE.
7. PROVIDE 2-3 EA 24"W x 8"H OPENINGS IN WALL FOR DRAINAGE WAY.
8. REGRADE SANITARY SEWER MANHOLE PER CITY STANDARDS, TOP COVER = 97.30
9. PROVIDE DRAINAGE OPENING IN WALL.
10. BUILD SIDEWALK WITH TURNED DOWN EDGE TO A DEPTH 6" BELOW DRAINAGE SWALE.
11. BUILD TYPE 2R RUNDOWN.



JOINTS:
CONTRACTION, 6' O.C.
EXPANSION, 48' O.C.

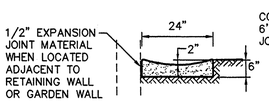
TYPE 2 & 2R RUNDOWNS

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



TYPICAL SIDEWALK / CURB CONNECTION

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



CONTRACTION JOINTS @ 6' O.C. AND EXPANSION JOINTS @ 48' O.C.

PCC DRAINAGE SWALE

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

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque New Mexico

006GRD.DWGdlv — 07/13/99

SHEET C-1

ENGINEER'S CERTIFICATION: Buildings 5-17 & 19
I, Thomas O. Isaacson, licensed under the laws of the State of New Mexico, do hereby certify that the noted portions of Grading and Drainage Improvements for Buildings 5-17 and 19 were constructed in substantial compliance with the approved plan dated 07/19/99 (City Approval Letter dated 10/29/99) as field verified by Community Sciences Corporation, NMLS No. 4972 in April 2000 in accordance with the "New Mexico Engineering and Surveying Act" Section 61-23-1 through 61-23-32 NMSD (1978).

Thomas O. Isaacson, PE & LS No. 3895 — Date 4/18/00

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