

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



June 28, 2016

Gilbert Aldaz, P.E.
Applied Engineering & Surveying Inc.
1605 Blair Drive NE
Albuquerque, NM 87112

Richard J. Berry, Mayor

RE: Cuatro Development – 1319 4th St. NW (File: J14D173)
Grading & Drainage Plan, Engineer's Stamp Date 11-17-2014
Engineer's Certification Date 6-23-16

Dear Mr. Aldaz:

Based on the Certification received 6-27-16, the site is acceptable for a TEMPORARY 30 - day Certificate of Occupancy by Hydrology, with the following conditions/comments:

- Balconies cannot discharge into the sidewalk nor can any portion of the roof sheet flow and discharge into sidewalk below (including private sidewalk). It is recommended that for balconies that presently discharge into sidewalk below, the drain be relocated to drain into the adjacent roof. The roof will then require a gutter and down-spout system to discharge to the nearest landscaping. Please coordinate with the architect.
- Area with Geogrid system is to drain into channel along western boundary. The curb cuts are not deep enough, and the channel is filled with cobble. Per the Grading and drainage plan, the cobble should be approximately 8" – 12" below the top of curb. To rectify the problem, the following fixes are recommended:
 - Core drill holes in the curb, just above the Geogrid
 - Between the landscaping bushes in the channel, lower the top of rip-rap /cobble to about 14"-18" below the top of curb. The increase in depth is to compensate for the volume taken up by the landscaping bushes. Water should be able to flow from low spot to low spot between the bushes.
- In parking area, the infill material of the Geogrid system is extremely unstable and must be stabilized. Per the specs, a well – graded material was recommended (see snapshot below). Mixing in crusher fines, angular rock, and smaller diameter rock to improve gradation is recommended.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

**Infill Materials**

The recommended infill shall be an aggregate or an aggregate/topsoil engineered infill for aggregate and vegetated pavements respectively. When specifying infill type, consideration should be given to appropriateness of infill for loading requirements, traffic frequency, and subgrade strength.

Aggregate Infill

The aggregate infill shall be a well-graded 0.375 in to 0.5 in (10 mm to 13 mm) crushed angular stone with a fine content less than 5%.

Aggregate/Topsoil Engineered Infill

The aggregate/topsoil engineered infill shall consist of a homogenous mixture consisting of 1) a clear-stone/crushed rock having an AASHTO #5 or similar designation blended with 2) pulverized topsoil and 3) a void component generally containing air and/or water. This homogenous mixture will promote vegetative growth and provide required structural support. The aggregate portion shall have a particle range from 0.375 in to 0.5 in (10 mm to 13 mm). The percentage void-space of the aggregate portion shall be at least 30%. The pulverized topsoil shall equal 33% of the total volume and be added and blended to produce a homogenous mixture prior to placement.

Choice of vegetation shall be determined based upon local climate and proposed use.

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

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf Addressee via Email, Cordova, Camille C.; Miranda, Rachel; Sandoval, Darlene M.; Blocker, Lois
contractor: Kevin Cobos

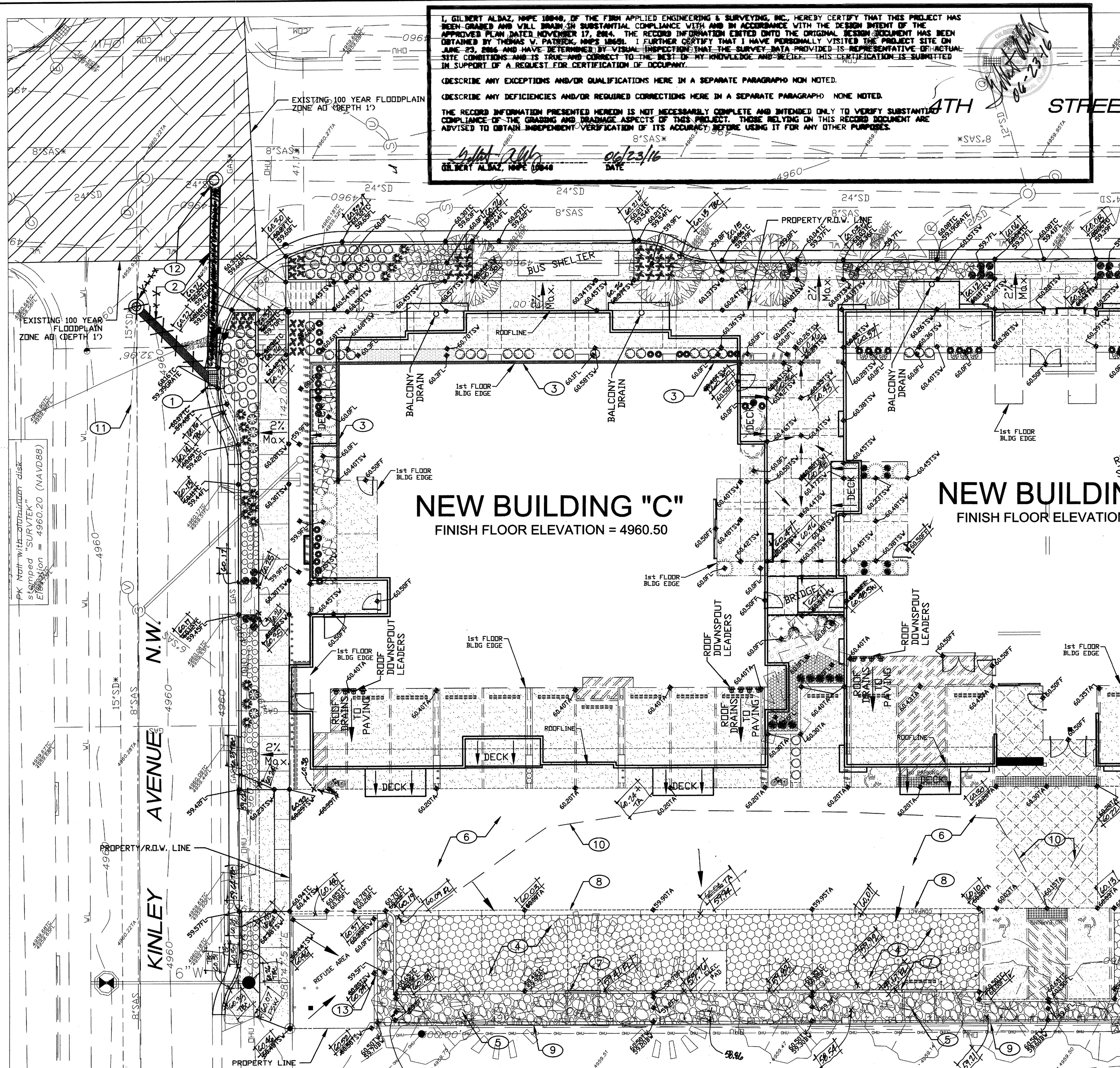
I, GILBERT ALBAZ, NPS 10848, OF THE FIRM APPLIED ENGINEERING & SURVEYING, INC. HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRANTED AND WILL BE IN SUBSTANTIAL COMPLIANCE WITH THE DESIGN INVENT OF THE APPROVED PLAN DATED NOVEMBER 17, 2014. THE RECORD INFORMATION CITED INTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY THOMAS W. PATRICK, NPS 12651. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON JUNE 23, 2016 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATION OF OCCUPANCY.

(DESCRIBE ANY EXCEPTIONS AND/OR QUALIFICATIONS HERE IN A SEPARATE PARAGRAPH) NONE NOTED.

(DESCRIBE ANY DEFICIENCIES AND/OR REQUIRED CORRECTIONS HERE IN A SEPARATE PARAGRAPH) NONE NOTED.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THESE RECORDS ARE NOT TO BE USED FOR ANY OTHER PURPOSES.

GILBERT ALBAZ, NPS 10848
DATE 06/23/16

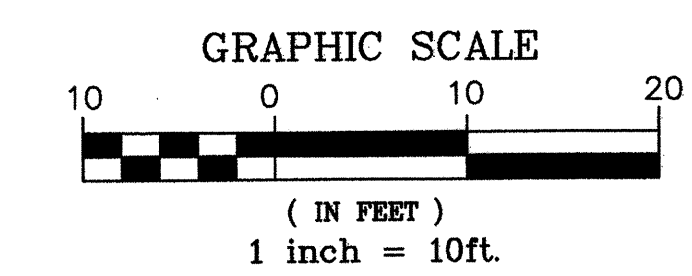
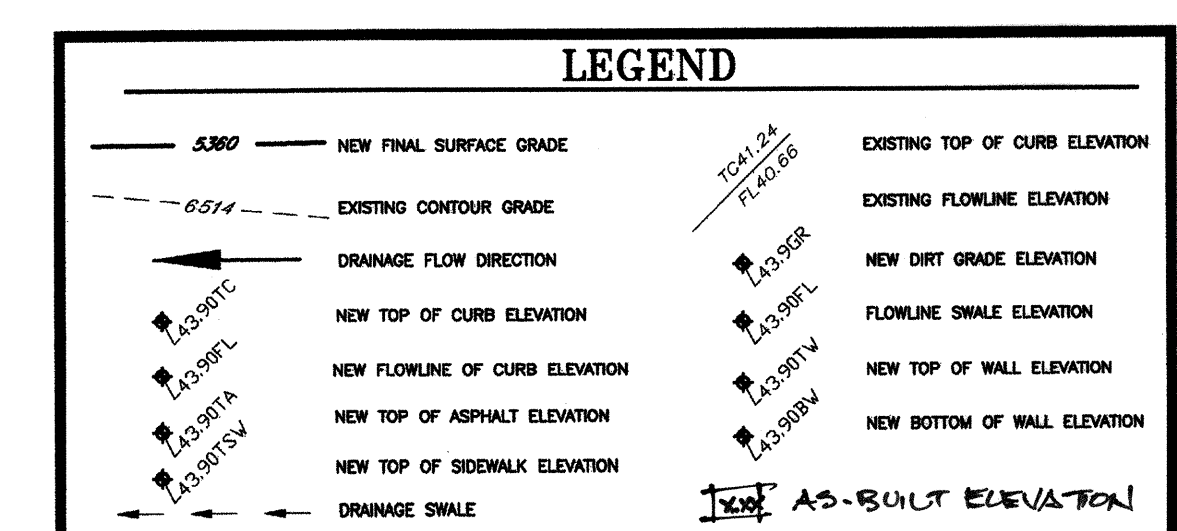


KEYED INVERT DATA

(A) Storm Drain MH Rim = 4960.49' Inv. = 4956.84' (N) Inv. = 4956.89' (S) Inv. = 4956.74' (W) Inv. = 4956.41' (E)	(J) Storm Drain Inlet Top of Grate = 4958.56' Inv. = 4954.16' (NE)	(R) Sanitary Sewer MH Rim = 4960.52' Inv. = 4950.47' (S) Inv. = 4950.32' (N) Inv. = 4950.22' (E) Inv. = 4950.17' (W)
(B) Storm Drain Inlet Top of Grate = 4959.52' Inv. = 4957.6' (E)	(K) Storm Drain MH Rim = 4959.41' Inv. = 4956.91' (SW) Inv. = 4955.06' (NE) Inv. = 4953.71' (E) Inv. = 4953.66' (W)	(S) Sanitary Sewer MH Rim = 4959.56' Inv. = 4949.41' (S) Inv. = 4949.41' (N) Inv. = 4949.41' (E) Inv. = 4949.41' (W) No Lines Flowing
(C) Storm Drain MH Rim = 4960.30' Inv. = 4956.38' (N) Inv. = 4956.25' (S) Inv. = 4956.30' (NW)	(L) Storm Drain MH Rim = 4959.61' No Access - Lid Cracked	(T) Sanitary Sewer MH Rim = 4959.70' Inv. = 4952.00' (N) Inv. = 4949.55' (W) Inv. = 4949.35' (E)
(D) Storm Drain MH Rim = 4960.06' Inv. = 4956.11' (N) Inv. = 4956.06' (S)	(M) Storm Drain Inlet Top of Grate = 4958.85' Inv. = 4956.35' (SE)	(U) Sanitary Sewer MH Rim = 4960.02' Lid Sealed
(E) Storm Drain MH Rim = 4959.43' Inv. = 4957.5' (E)	(N) Storm Drain MH Rim = 4959.93' Inv. = 4956.13' (NW) Inv. = 4956.13' (NE) Inv. = 4955.93' (N) Inv. = 4955.88' (S)	(V) Sanitary Sewer MH Rim = 4960.30' Inv. = 4955.75' (SW) Inv. = 4952.05' (W)
(F) Manhole Rim = 4959.98' Full of debris	(O) Storm Drain Inlet Top of Grate = 4959.19' Inv. = 4957.29' (SE)	(W) Sanitary Sewer MH Rim = 4959.95' Inv. = 4951.31' (E) Inv. = 4951.31' (W) Inv. = 4951.26' (N) Inv. = 4951.16' (S)
(G) Sanitary Sewer MH Rim = 4959.93' Inv. = 4952.89' (E)	(P) Storm Drain Inlet Top of Grate = 4959.07' Inv. = 4956.97' (SW)	(X) Sanitary Sewer MH Rim = 4959.97' Inv. = 4952.82' (S)
(H) Storm Drain MH Rim = 4959.29' Inv. = 4954.34' (W) Inv. = 4954.24' (E) Inv. = 4954.29' (SW)		

CONSTRUCTION NOTES:

1. CONSTRUCT SINGLE TYPE 'C' INLET
2. INSTALL 18" STORM DRAIN.
3. INSTALL 6" HIGH CONCRETE STEM WALL ABOVE FINISH FLOOR GRADE AT THIS LOCATION WITH ELEVATION = 4960.90
4. INSTALL GEOPAVE POROUS PAVEMENT SYSTEM WITH POROUS AGGREGATE PER PRESTO GEOSYSTEMS MANUFACTURERS RECOMMENDATIONS (SEE DETAIL SHEET 4).
5. INSTALL 12" THICK WITH 2-4" ROUND COBBLE DRAIN FIELD.
6. ASPHALT PAVING, SEE SITE PLAN FOR DETAILS.
7. 6" CONCRETE CURB WITH 1' OPENING, SEE SITE PLAN FOR DETAILS.
8. CONCRETE STRIP, SEE SITE PLAN FOR DETAILS.
9. BLOCK WALL, SEE SITE PLAN FOR DETAILS.
10. WATER SURFACE ELEVATION = 4960.15 REQUIRED FOR 0.5' RUNOFF DETENTION PRIOR TO SPILLING OVER DRIVEWAY.
11. FIELD VERIFY THE SIZE, TYPE OF PIPE, INVERT LOCATION OF EXISTING STORMDRAIN LINE SINCE THE AS-BUILTS ARE NOT CLEAR WITH THIS INFORMATION AND SEND TO ENGINEER PRIOR TO CONSTRUCTION OF NEW STORMDRAIN LINE FOR FIELD ADJUSTMENTS IF REQUIRED.
12. INSTALL NEW 4' ROUND MANHOLE IN EXISTING STORMDRAIN LINE.
13. OVERTURN ONE CMU BLOCK AT GRADE TO ALLOW DRAINAGE WATER FROM REFUSE AREA TO DRAIN TO LANDSCAPED AREA.



City Project No. TBD

FILE:	DRAINAGE AND GRADING PLAN CUATRO DEVELOPMENT-NORTH HALF	DATE/REVISIONS:
		SHEET NUMBER: CIVIL104 2 OF 4
APPLIED ENGINEERING AND SURVEYING, INC. ENGINEERS AND PLANNERS 1000 West Drive NE Albuquerque, New Mexico 87112 Office: (505) 485-8728 gordon@aesn.com		

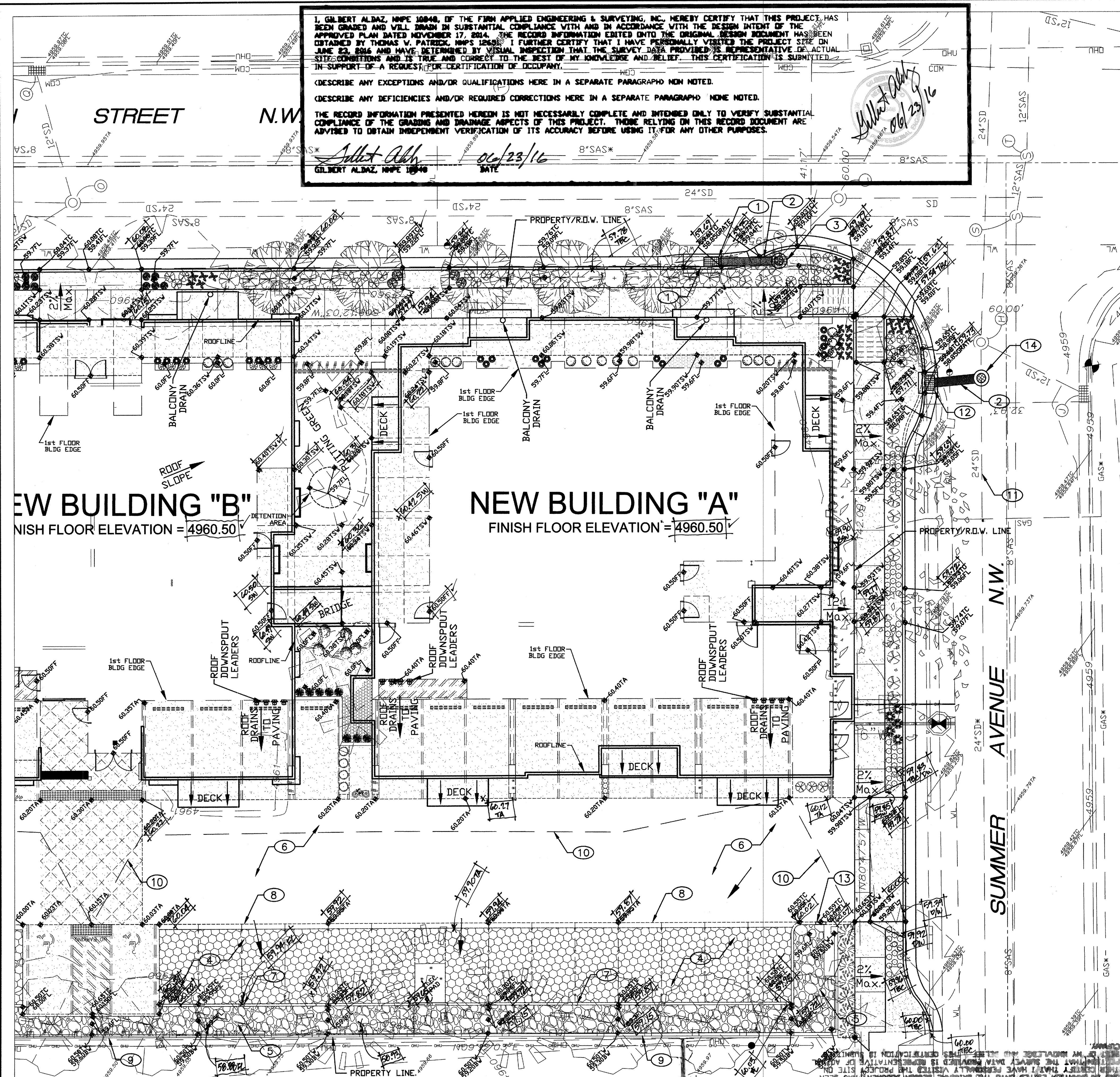
I, GILBERT ALBAZ, NPE 10848, OF THE FIRM APPLIED ENGINEERING & SURVEYING, INC., HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL BE IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED NOVEMBER 17, 2014. THE RECORD INFORMATION ENTERED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY THOMAS W. PATRICK, NPS 12851. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE ON JUNE 23, 2016 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR CERTIFICATION OF OCCUPANCY.

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THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSES.

Sublet Albz 06/23/16
GILBERT ALBAZ, NPE 10848

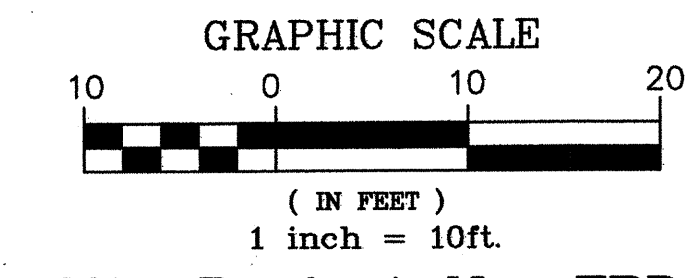
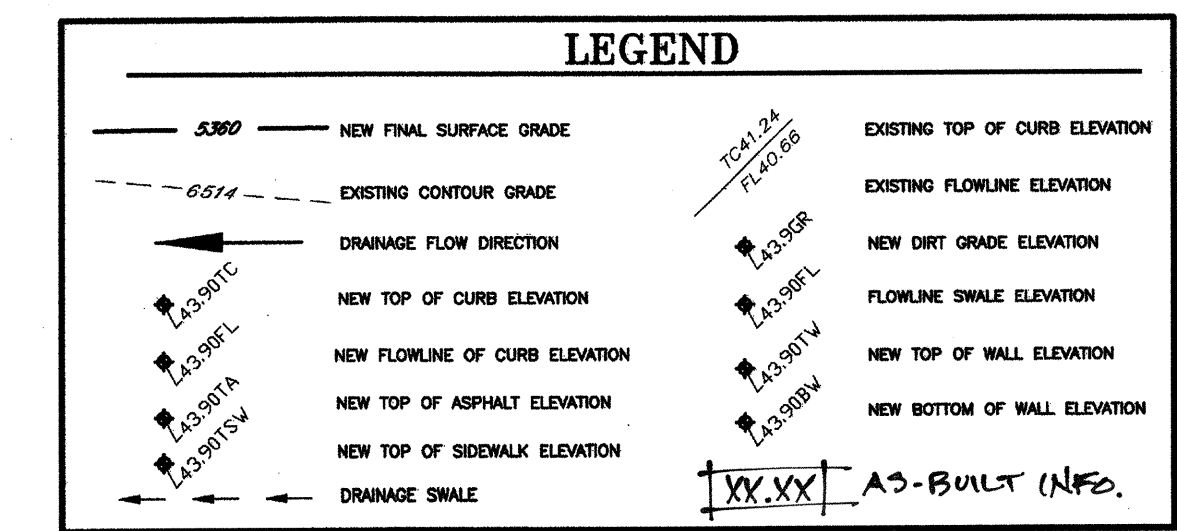


KEYED INVERT DATA

<p>① Storm Drain MH Rim = 4960.49' Inv. = 4956.84' (N) Inv. = 4956.69' (S) Inv. = 4956.79' (NE) Inv. = 4956.74' (W)</p> <p>② Storm Drain Inlet Top of Grate = 4959.52' Inv. = 4957.6'</p> <p>③ Storm Drain MH Rim = 4960.30' Inv. = 4956.38' (N) Inv. = 4956.25' (S) Inv. = 4956.30' (NW)</p> <p>④ Storm Drain MH Rim = 4960.08' Inv. = 4956.11' (N) Inv. = 4956.06' (S)</p> <p>⑤ Storm Drain Inlet Top of Grate = 4959.43' Inv. = 4957.5'</p> <p>⑥ Manhole Rim = 4959.98' Full of debris</p> <p>⑦ Sanitary Sewer MH Rim = 4959.93' Inv. = 4952.89' (E)</p> <p>⑧ Storm Drain MH Rim = 4959.29' Inv. = 4954.34' (W) Inv. = 4954.24' (E) Inv. = 4954.29' (SW)</p>	<p>⑨ Storm Drain Inlet Top of Grate = 4958.56' Inv. = 4954.16' (NE)</p> <p>⑩ Storm Drain MH Rim = 4959.41' Inv. = 4956.91' (SW) Inv. = 4955.06' (NE) Inv. = 4953.71' (E) Inv. = 4953.66' (W)</p> <p>⑪ Storm Drain Inlet Top of Grate = 4959.85' Inv. = 4956.35' (SE)</p> <p>⑫ Storm Drain MH Rim = 4959.93' Inv. = 4956.13' (NW) Inv. = 4956.13' (NE) Inv. = 4955.93' (N) Inv. = 4955.88' (S)</p> <p>⑬ Storm Drain Inlet Top of Grate = 4959.19' Inv. = 4957.29' (SE)</p> <p>⑭ Storm Drain Inlet Top of Grate = 4959.07' Inv. = 4956.97' (SW)</p> <p>⑮ Sanitary Sewer MH Rim = 4959.93' Inv. = 4952.89' (E)</p> <p>⑯ Storm Drain MH Rim = 4959.29' Inv. = 4954.34' (W) Inv. = 4954.24' (E) Inv. = 4954.29' (SW)</p>	<p>⑰ Sanitary Sewer MH Rim = 4960.52' Inv. = 4950.47' (S) Inv. = 4950.32' (N) Inv. = 4950.22' (E) Inv. = 4950.17' (W)</p> <p>⑱ Sanitary Sewer MH Rim = 4959.56' Inv. = 4949.41' (S) Inv. = 4949.41' (N) Inv. = 4949.41' (E) Inv. = 4949.41' (W) No Lines Flowing</p> <p>⑲ Sanitary Sewer MH Rim = 4959.70' Inv. = 4952.00' (N) Inv. = 4949.55' (W) Inv. = 4949.35' (E)</p> <p>⑳ Sanitary Sewer MH Rim = 4959.02' Lid Sealed</p> <p>㉑ Sanitary Sewer MH Rim = 4960.30' Inv. = 4955.75' (SW) Inv. = 4952.05' (W)</p> <p>㉒ Sanitary Sewer MH Rim = 4959.95' Inv. = 4951.31' (E) Inv. = 4951.31' (W) Inv. = 4951.26' (N) Inv. = 4951.16' (S)</p> <p>㉓ Sanitary Sewer MH Rim = 4959.97' Inv. = 4952.82' (S)</p>
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CONSTRUCTION NOTES:

1. CONSTRUCT SINGLE TYPE 'A' INLET
2. INSTALL 18" STORM DRAIN.
3. REMOVE EXISTING TYPE 'A' INLET AND INSTALL 4' ROUND MANHOLE, EXISTING LATERAL ON 4TH STREET IS TO REMAIN.
4. INSTALL GEOPAVE POROUS PAVEMENT SYSTEM WITH POROUS AGGREGATE PER PRESTO GEOSYSTEMS MANUFACTURERS RECOMMENDATIONS (SEE DETAIL SHEET 4).
5. INSTALL 12" THICK WITH 2-4" ROUND COBBLE DRAIN FIELD.
6. ASPHALT PAVING, SEE SITE PLAN FOR DETAILS.
7. 6" CONCRETE CURB WITH 1' OPENING, SEE SITE PLAN FOR DETAILS.
8. CONCRETE STRIP, SEE SITE PLAN FOR DETAILS.
9. BLOCK WALL, SEE SITE PLAN FOR DETAILS.
10. WATER SURFACE ELEVATION = 4960.15 REQUIRED FOR 0.5' RUNOFF DETENTION PRIOR TO SPILLING OVER DRIVEWAY.
11. FIELD VERIFY SIZE OF EXISTING STORMDRAIN LINE PRIOR TO CONSTRUCTION, IF DIFFERENT THAN 24" DIAMETER ADVISE ENGINEER PRIOR TO CONSTRUCTION.
12. CONSTRUCT SINGLE TYPE 'C' INLET.
13. 2' WIDE CURB OPENING TO ALLOW DRAINAGE TO OVERFLOW OUT TO DRIVEWAY ON SUMMER AVENUE.
14. INSTALL NEW 4' ROUND MANHOLE IN EXISTING STORMDRAIN LINE.



City Project No. TBD

FILE:		DATE/REVISIONS:
<p align="center">DRAINAGE AND GRADING PLAN CUATRO DEVELOPMENT-SOUTH HALF</p> <p align="center">APPLIED ENGINEERING AND SURVEYING, INC. ENGINEERS AND PLANNERS 1005 Bar Drive NE Albuquerque, New Mexico 87112 Office: (505) 485-8125 gpat@aes-inc.com</p>		
SHEET NUMBER:		CIVIL105 3 OF 4

GRADING PLAN - SOUTH HALF
SCALE: 1" = 10'