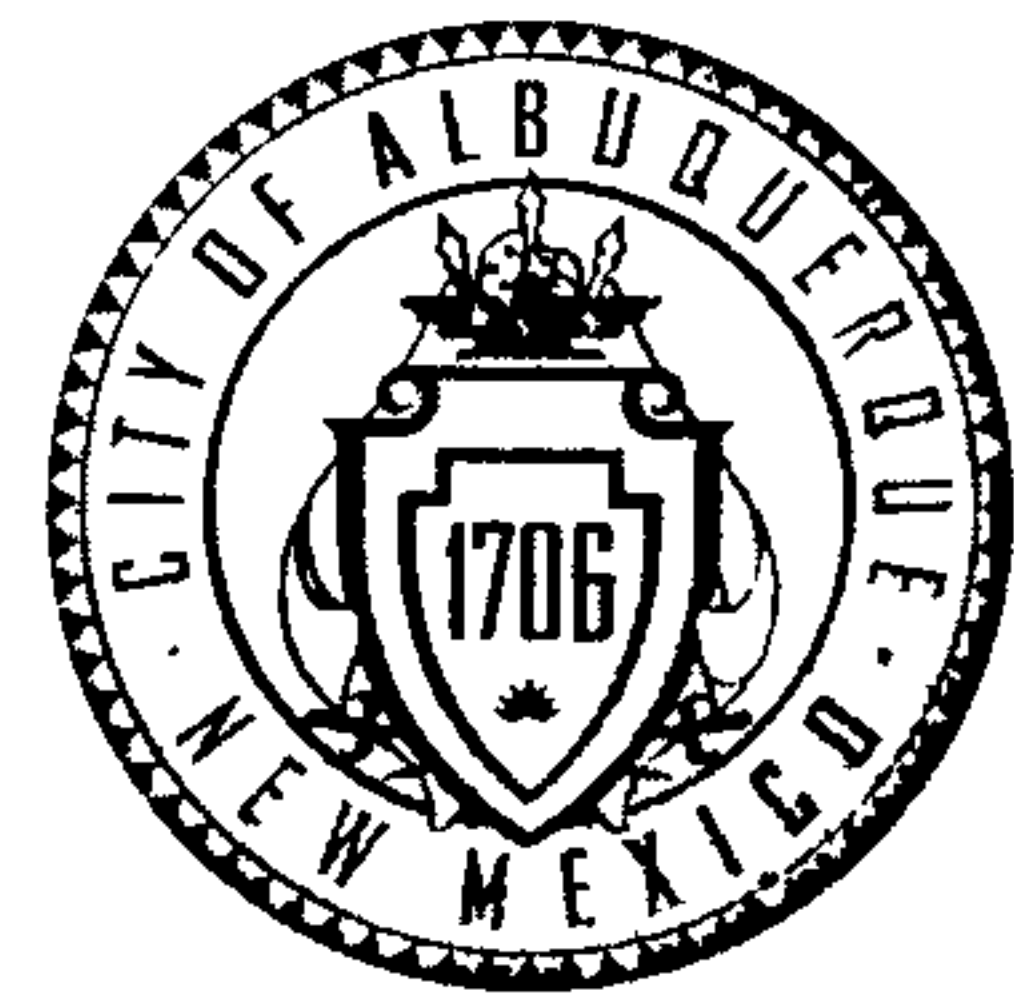


CITY OF ALBUQUERQUE



July 15, 2016

Gilbert Aldaz
Applied Engineering and Surveying Inc.
1605 Blair Drive NE
Albuquerque, NM 87112

Re: Cuatro Development
1319 4th Street NW
Request Permanent C.O. - Accepted
Engineer's Stamp Date 11/17/14 (J14D173)

Dear Mr. Aldaz,

Based upon the information provided in your submittal received 7/14/2016, the above referenced Certification is acceptable for the release of permanent Certificate of Occupancy by Hydrology.

If you have any questions you can contact me at 924-3999 or Totten Elliott at 924-3982

Sincerely,

Shahab Biazar, P.E.
City Engineer, Planning Dept.
Development and Review Services

TE/SB

C: e-mail Cordova, Camille C.; Connor, Miranda, Rachel; Sandoval, Darlene M.;
Blocker, Lois



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Cuatro Development Building Permit #: _____ City Drainage #: J14/D173
DRB#: 1007059 EPC#: _____ Work Order#: _____
Legal Description: Lots 1-14, Block 2, Paris Addition Town of Abq
City Address: 1319 4th Street NW, Albug NM 87112
Engineering Firm: Applied Engr & Survey, Inc Contact: Gilbert Aldaz
Address: 1605 Blair Drive NE, Atb, NM 87112
Phone#: 480-8125 Fax#: _____ E-mail: galda24@yahoo.com
Owner: Greater Albug. Housing Partnership Contact: Felipe Rao!
Address: 320 Gold Ave SW, Suite 918, Albug, NM 87102
Phone#: 244-1614 Fax#: _____ E-mail: _____
Architect: Integrated Design & Arch Contact: Kristen Stevens
Address: 906 1/2 Park Avenue SW, Albug, NM 87102
Phone#: 243-3499 Fax#: _____ E-mail: _____
Other Contact: Tofel Construction Contact: Kevin Cobos
Address: 3555 E 42nd Stravenue, Tucson, AZ
Phone#: 480-707-3923 Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

☒ ENGINEER/ ARCHITECT CERTIFICATION

- ☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR

☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)

☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
☒ CERTIFICATE OF OCCUPANCY

- ☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR

☐ PRE-DESIGN MEETING

☐ OTHER (SPECIFY) _____

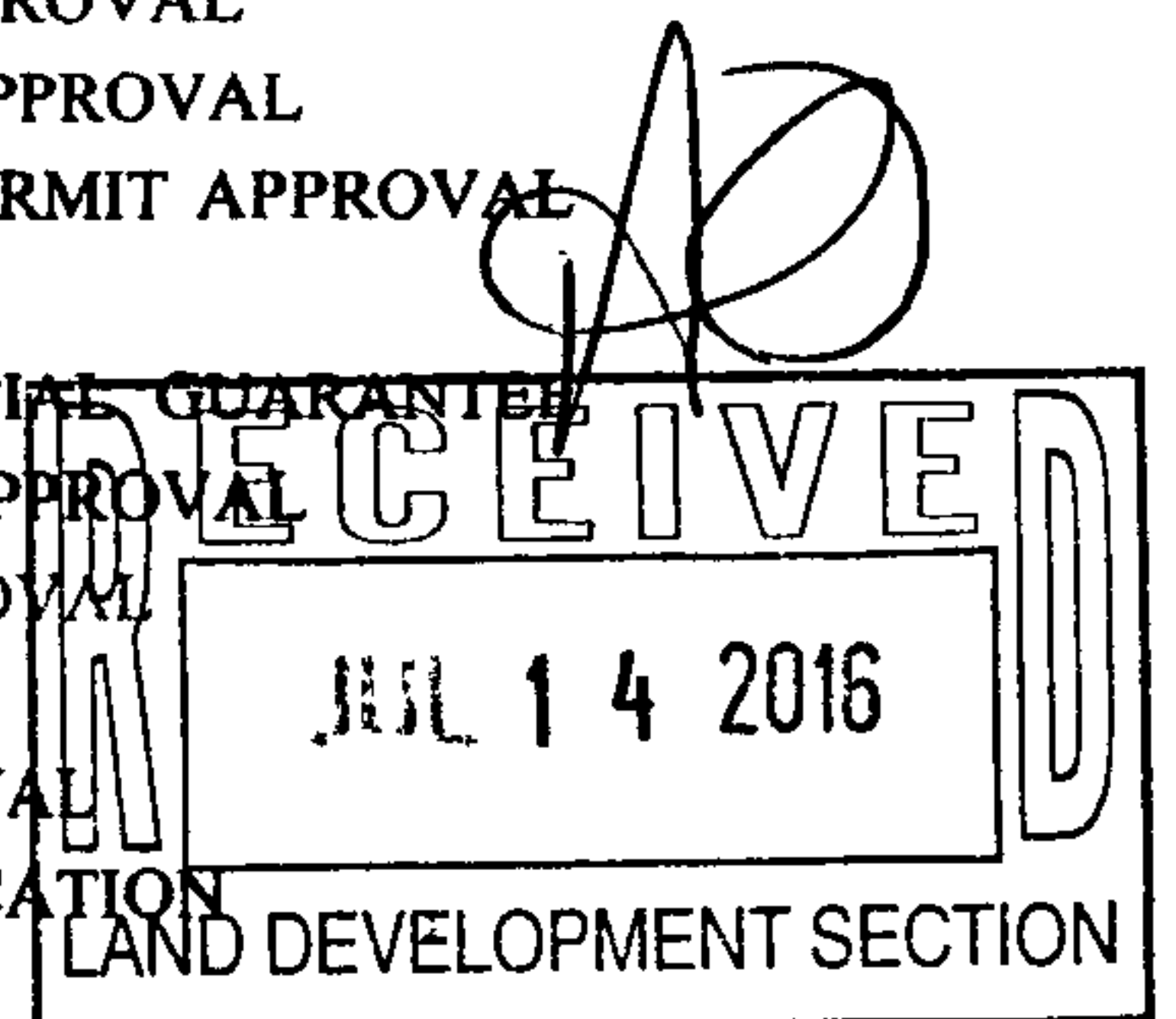
IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

DATE SUBMITTED: 06/24/16

By: Gilbert Aldaz

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____



J14D173

Harmon Rita T.

To: 'Gilbert Aldaz'
Cc: 'Kristin Stevens'; Biazar, Shahab; 'Nick Walker'; 'bob@integrateddesignarch.com'
Subject: RE: Cuatro project T201493017

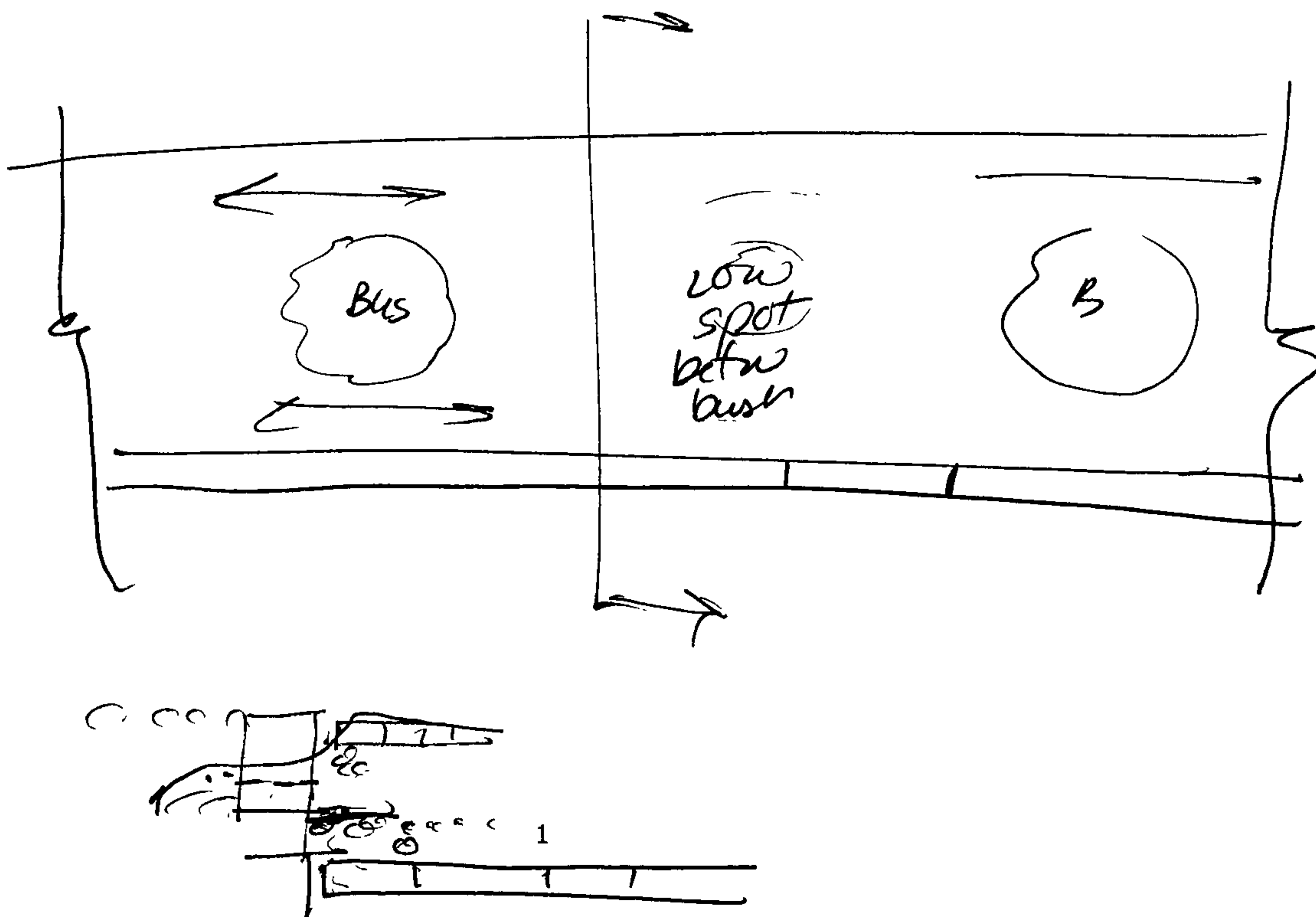
Gilbert,
Please disregard last email.

To recap on our meeting today:

- City Engineer had originally allowed the small amount of flow from the balconies to discharge onto the sidewalk. Thus, it will be allowed for C.O.
- Corner flat roof areas that sheet flow onto sidewalk were not clearly presented on the Grading and Drainage Plan, and approval of the G&D did not constitute an approval for the discharge of this roof area. However, City Engineer is allowing this roof area to discharge by sheet flow to sidewalk due to the relatively small area of roof, and also due to a clear policy not being established.
- The Geogrid system has been raised so that it is no longer an unstable surface. Raising the Geogrid has resulted in the runoff being able to overflow thru curb cuts, and coring thru curb is not necessary.
- The drainage channel is being modified/corrected so that it can hold the required volume of runoff.
- Civil Engineer to submit an updated Engineer's Certified Plan requesting Final C.O.

Rita Harmon, P.E.

Senior Engineer, Hydrology
COA, Planning Department
505-924-3695



CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



June 28, 2016

Gilbert Aldaz, P.E.

Richard J. Berry, Mayor

Applied Engineering & Surveying Inc.
1605 Blair Drive NE
Albuquerque, NM 87112

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:

✓
City Eng.
allowing.

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—*no longer needed*
- 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.

was originally 8"-12"

✓
fixed

- 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. ✓ *fixed*

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



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Cuatro Development Building Permit #: _____ City Drainage #: J14/D173
DRB#: 1007059 EPC#: _____ Work Order#: _____
Legal Description: Lots 1-14, Block 2, Paris Addition Town of Albq
City Address: 1319 4th Street NW, Albq NM 87112
Engineering Firm: Applied Engr & Survey, Inc Contact: Gilbert Aldaz
Address: 1605 Blair Drive NE, Albq, NM 87112
Phone#: 480-8125 Fax#: _____ E-mail: galdaz@yahoo.com
Owner: Greater Albq. Housing Partnership Contact: Felipe Rae
Address: 320 Gold Ave SW, Suite 918, Albq, NM 87102
Phone#: 244-1614 Fax#: _____ E-mail: _____
Architect: Integrated Design & Arch Contact: Kristen Stevens
Address: 906 1/2 Park Avenue SW, Albq, NM 87102
Phone#: 243-3499 Fax#: _____ E-mail: _____
Other Contact: Tofel Construction Contact: Kevin Cobos
Address: 3555 E 42nd Stravenue, Tucson, AZ
Phone#: 480-707-3923 Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☒ ENGINEER/ ARCHITECT CERTIFICATION

- ☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR

☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)

☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
☒ CERTIFICATE OF OCCUPANCY

- ☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR

☐ PRE-DESIGN MEETING

☐ OTHER (SPECIFY) _____

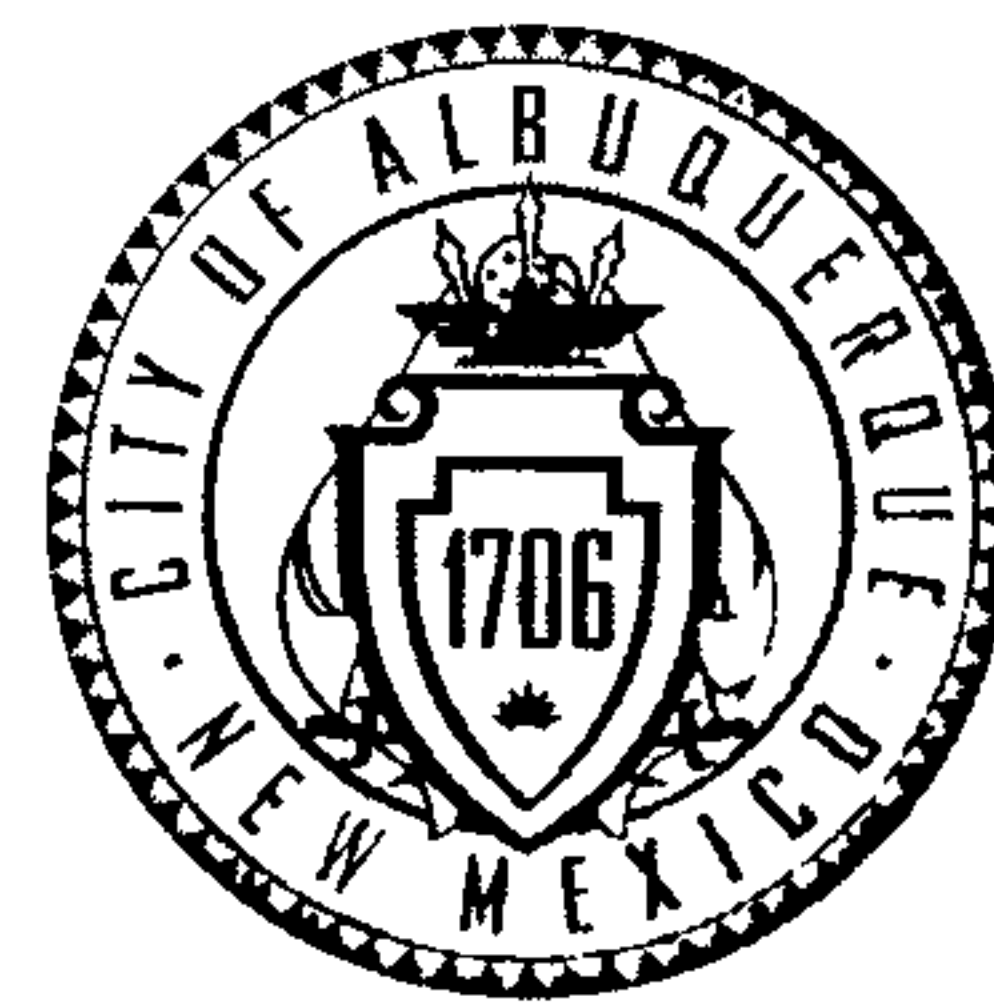
IS THIS A RESUBMITTAL?: ☐ Yes ☐ No

DATE SUBMITTED: 06/24/16

By: Gilbert Aldaz

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____



April 29, 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)
Letter from Engineer requesting Temporary C.O.
Engineer's Stamp on letter Dated 4-29-2016

Dear Mr. Aldaz:

Based on the letter received 4-29-16, the site is acceptable for a TEMPORARY 60- day Certificate of Occupancy by Hydrology, with the following conditions/comments:

- This Temporary C.O. is being given so that financing/funding for the project is not hindered
- There will not be any type of occupancy (Residential tenants nor administrative functions) until there a Permanent C.O. is given
- Most of the concrete flatwork is complete, and the parking area remains to be completed. There is no anticipated issues.
- When requesting Permanent C.O., submit a Certified As-built plan.

PO Box 1293

Albuquerque

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

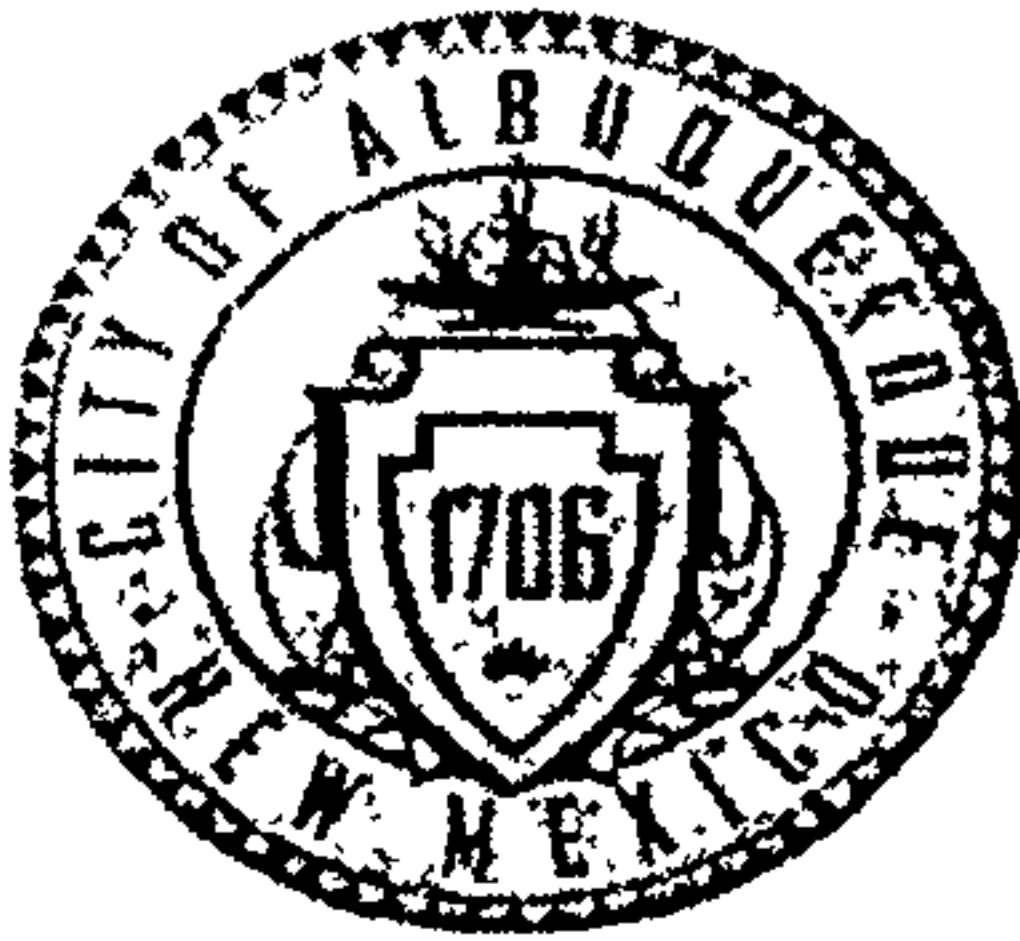
New Mexico 87103

www.cabq.gov

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



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Cuatro Development Building Permit #: _____ City Drainage #: J14/D173
DRB#: 1007059 EPC#: _____ Work Order#: _____
Legal Description: Lots 1-14, Block 2, Paris Addition, Town of Abq
City Address: 1319 4th Street NW, Albuq NM 87112
Engineering Firm: Applied Engr & Survey, Inc Contact: Gilbert Aldaz
Address: 1605 Blair Drive NE, Atb, NM 87112
Phone#: 480-8125 Fax#: _____ E-mail: galdaz@yahoo.com
Owner: Greater Albuq. Housing Partnership Contact: Felipe Rael
Address: 320 Gold Ave SW, Suite 918, Albuq, NM 87102
Phone#: 244-1614 Fax#: _____ E-mail: _____
Architect: Integrated Design & Arch Contact: Kristen Stevens
Address: 906 1/2 Park Avenue SW, Albuq, NM 87102
Phone#: 243-3499 Fax#: _____ E-mail: _____
Other Contact: Tofel Construction Contact: Kevin Cobos
Address: 3555 E 42nd Street, Tucson, AZ
Phone#: 480-707-3923 Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

☒ ENGINEER/ ARCHITECT CERTIFICATION

☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR

☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)

☐ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL? ☒ Yes ☐ No

DATE SUBMITTED: 04-29-16 By: Gilbert Aldaz

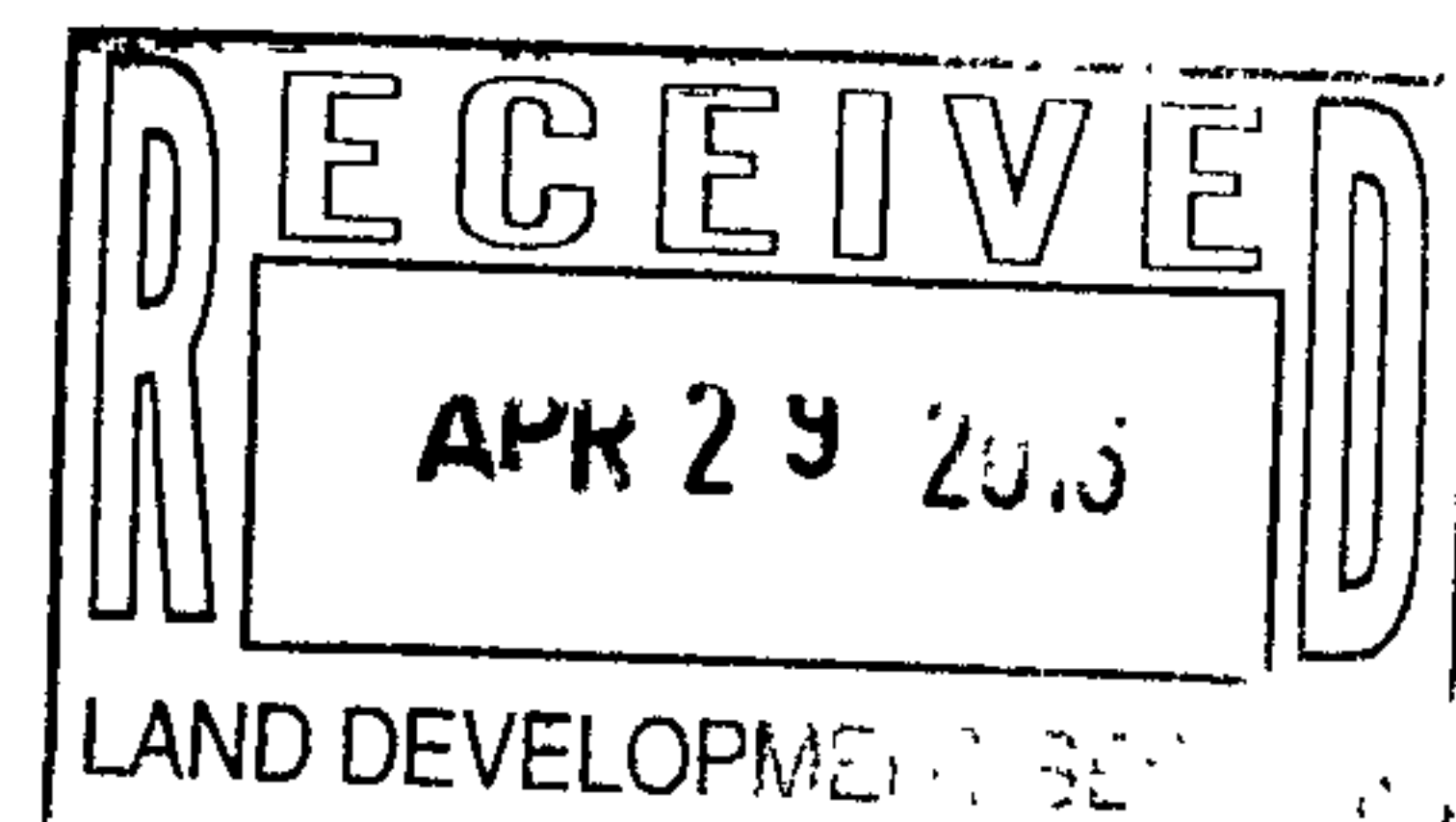
COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

☐ BUILDING PERMIT APPROVAL
☒ CERTIFICATE OF OCCUPANCY (Conditional)

☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR

☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY) _____



Applied Engineering and Surveying, Inc.

Civil Engineering, Land Planning & Surveying



April 29, 2016

Rita Harmon
Senior Engineer, Planning Dept.
Development Review Services
City of Albuquerque

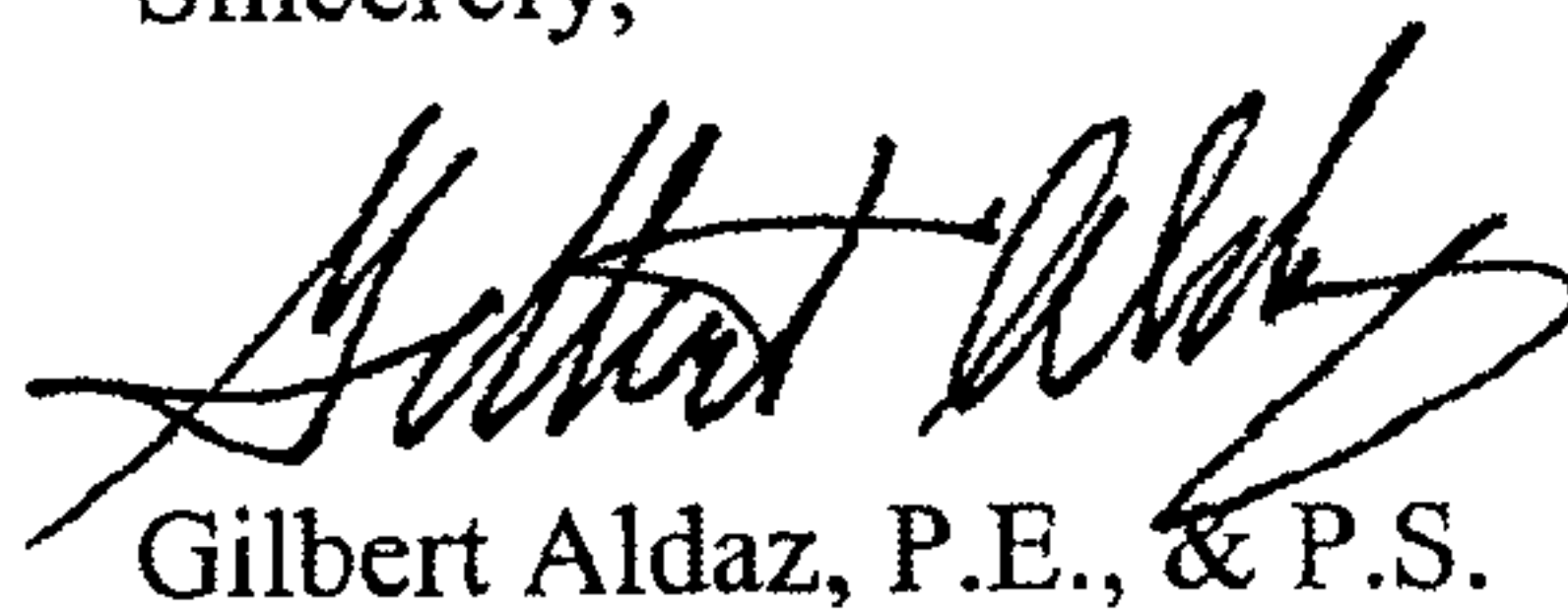
Dear Ms. Harmon:

Thanks for meeting with me and Kevin Cobos with Tofel construction today at the Cuatro Apartments. My Client "Greater Albuquerque Housing Partnership is seeking a Conditional Certificate of Occupancy for the Cuatro Apartments (J14/D173) which are located at 1319 Fourth Street NW. The as-built finish floor elevations at the Cuatro Apartments are as follows:

Tower A = 4960.50FF (Design = 4960.50FF)
Tower B = 4960.50FF (Design = 4960.50FF)
Tower C = 4960.49FF (Design = 4960.50FF)

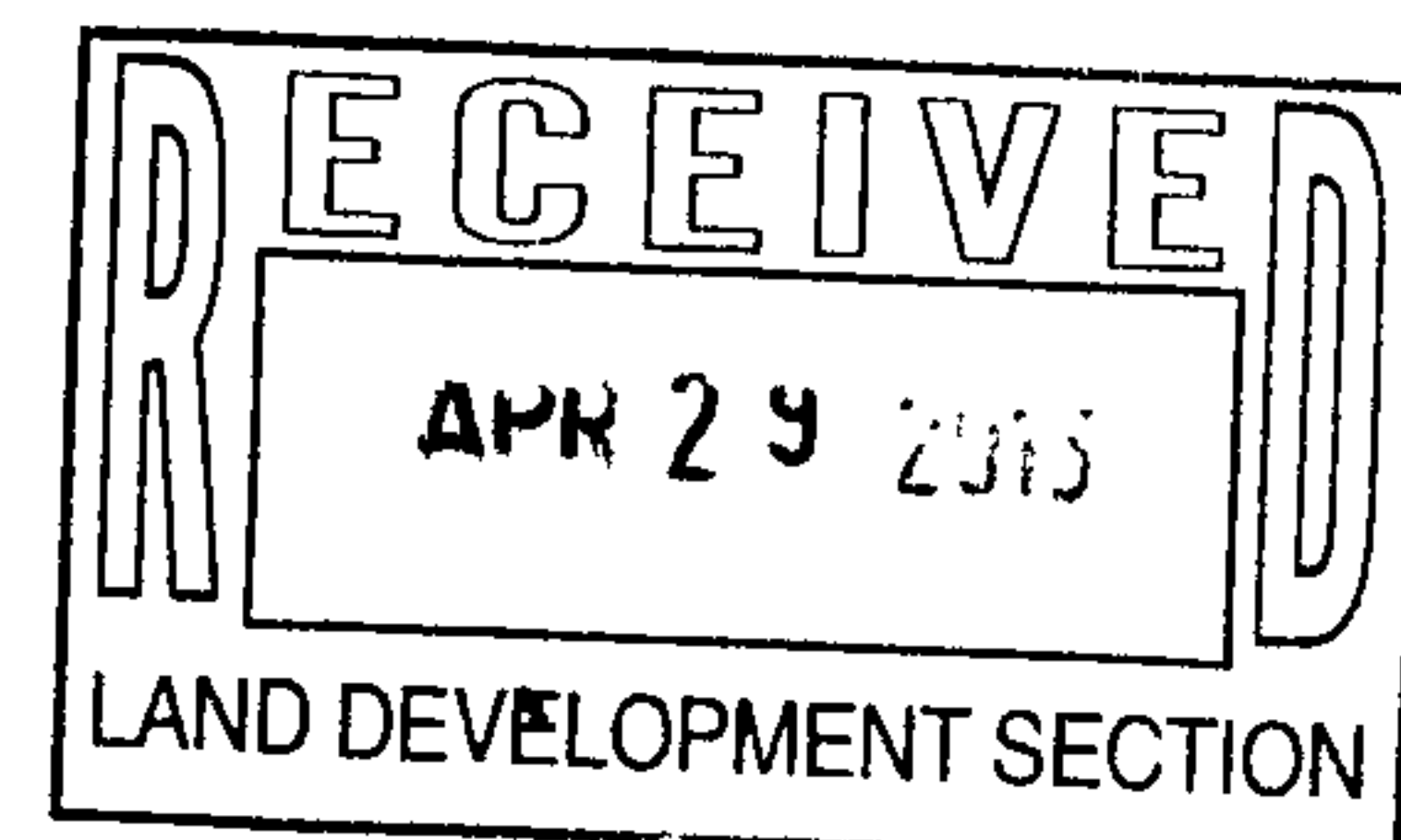
At this time the Contractor is actively working the drainage improvements along the west side of the complex which consist of a driveway and a 5' wide water harvesting area with a permeable parking spaces. The plan is to have these improvements completed and as-built and certified by me by May 31, 2016. The Client understand that they shall not move in any residential tenants until they receive the Certificate of Occupancy from your Office, thanks for your consideration.

Sincerely,


Gilbert Aldaz, P.E., & P.S.



Cc: Felipe Rael, Executive Director GAHP
Kristen Stevens, Integrated Design & Architecture
Kevin Cobos, Superintendent Tofel Construction



Community Sciences Corporation

Professional Land Surveying & Planning

505.897.0000

505.898.5195 Fax

www.communitysciences.com

April 28, 2016

To: Kevin Cobos
Superintendent, Tofel Construction
Cuatro Apartments

Re: Finish Floor Elevations

Dear Mr. Cobos,

I hereby certify that the following Finish Floor elevations at the Cuatro Apartments construction project are true and correct to the best of my knowledge and belief and as measured on April 28, 2016:

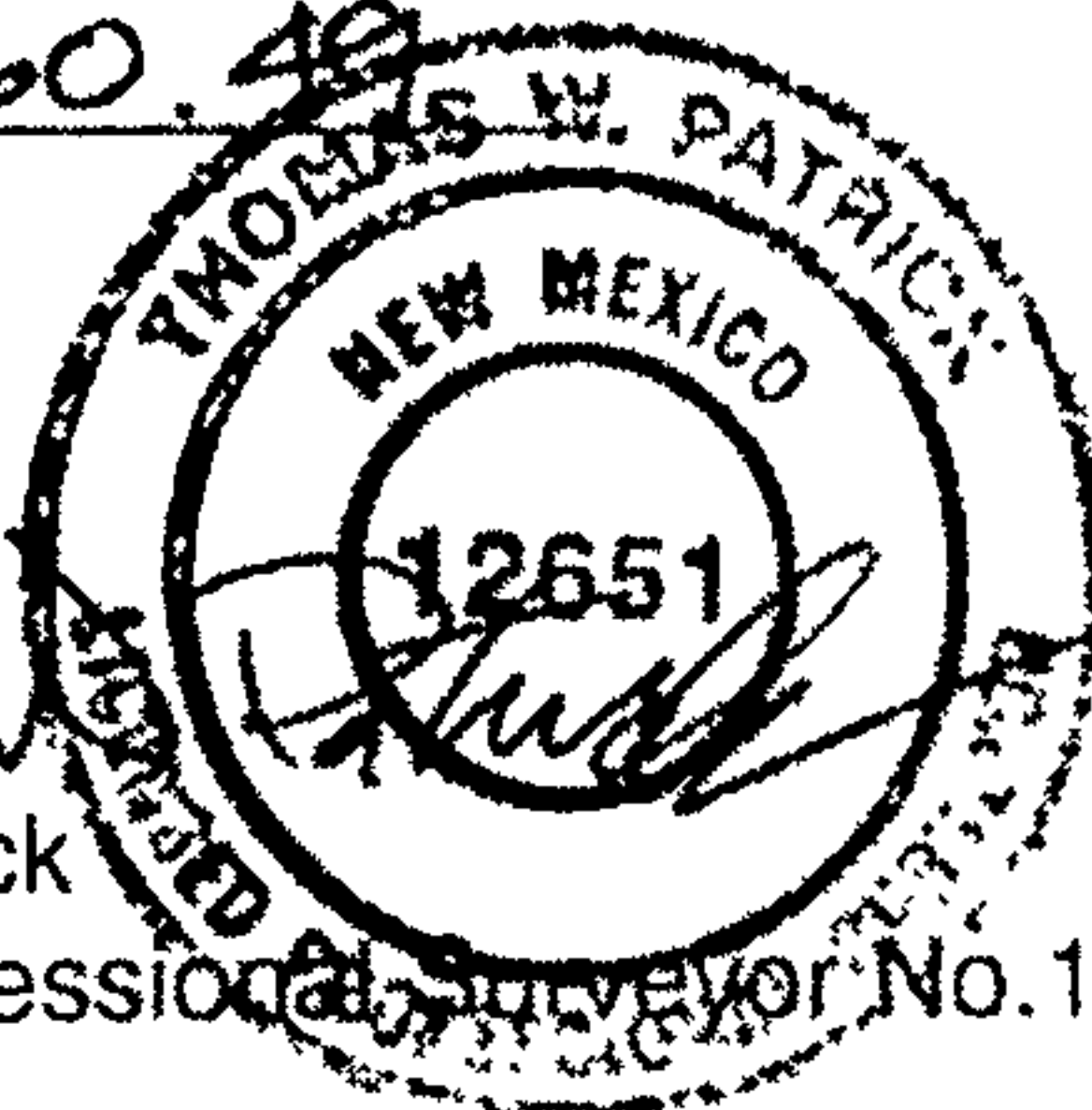
Tower A 4960.50

Tower B 4960.50

Tower C 4960.48

Respectfully,


Thomas W. Patrick
New Mexico Professional Surveyor No. 12651



Post Office Box 1328
Corrales, New Mexico 87048



Land Clark
Chief Building Official
City of Albuquerque Building Safety Division

Dear Mr. Clark,

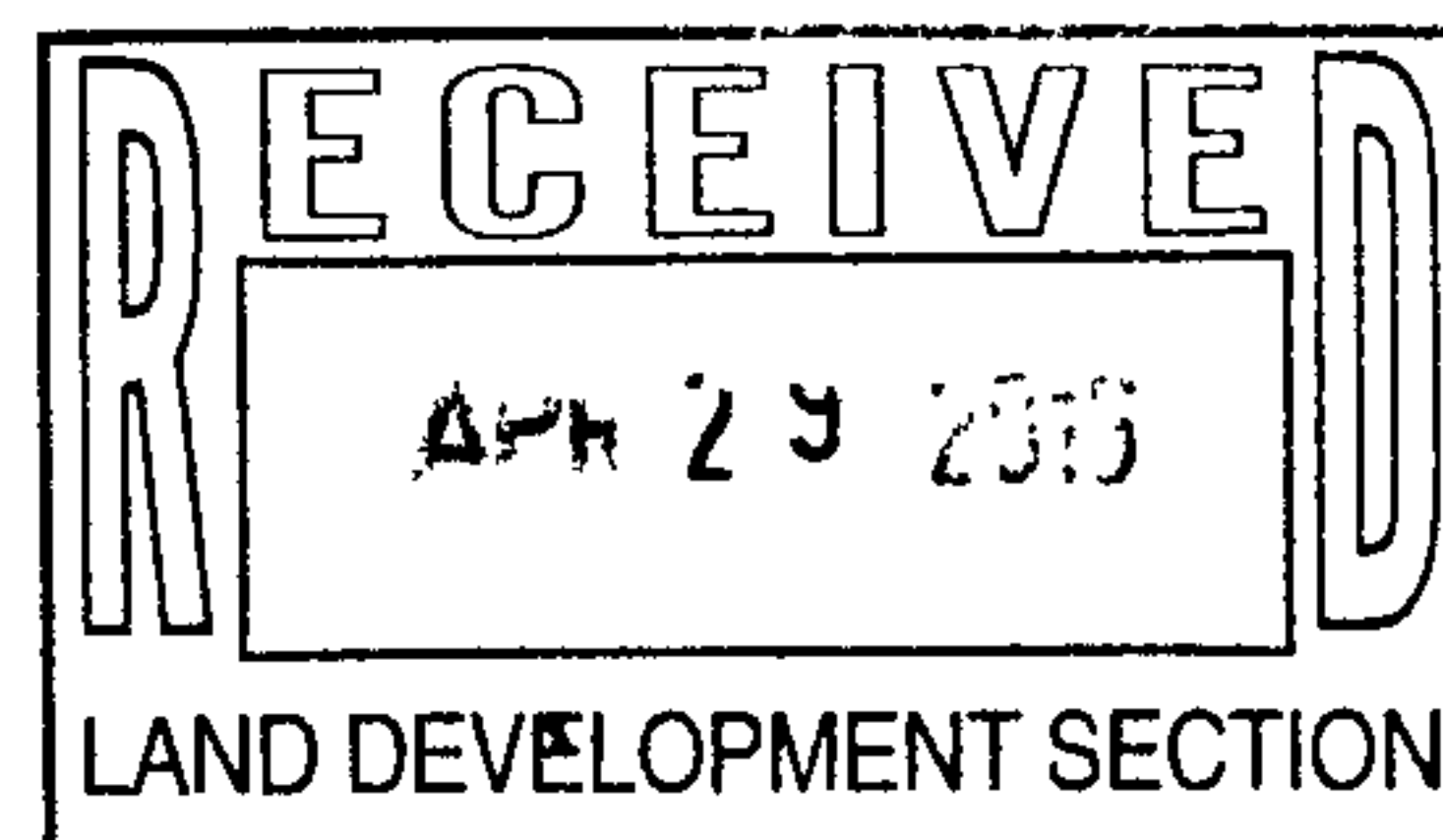
We are seeking to obtain a temporary Certificate of Occupancy for our Cuatro Apartments which are located at 1319 Fourth Street NW. Currently we have one building permit for the project and we are looking to separate the temporary Certificates of Occupancy for each tower.

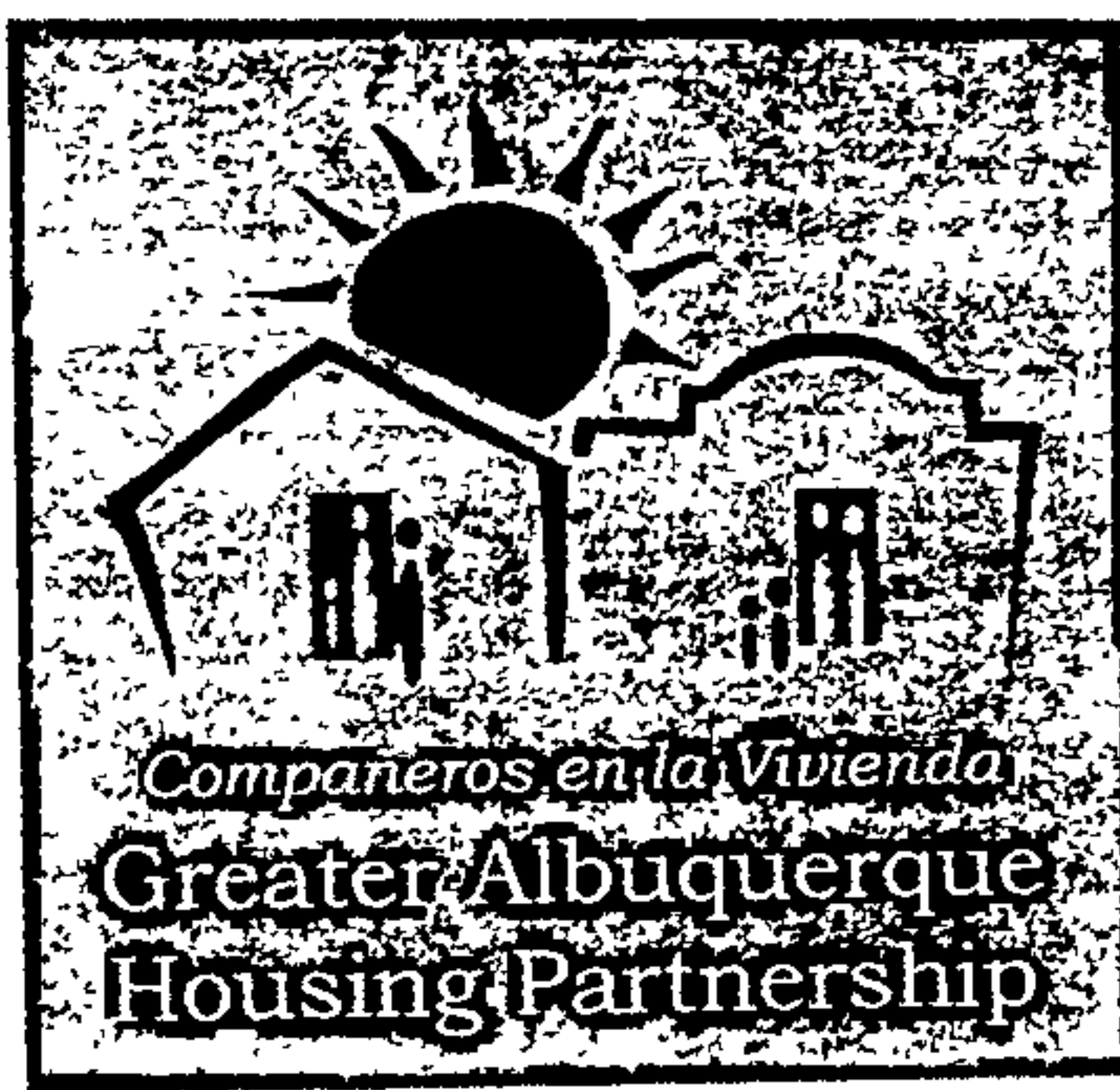
This project has a complex financing structure and it would be helpful to obtain at least one of these Certificates prior to the last business day on April 29. We will not move in any residential tenants until we receive the Certificates of Occupancy for the entire building. The request is solely to satisfy our funding requirements with our investors. The project is using Low Income Housing Tax Credits – and we can begin claiming credits with a temporary Certificates of Occupancy. This project also has a large financial commitment from the City of Albuquerque Department of Family and Community Services.

Thank you for your consideration and we look forward to discussing this request with you.

Sincerely,

Felipe Rael
Executive Director





Land Clark
Chief Building Official
City of Albuquerque Building Safety Division

Dear Mr. Clark,

We are seeking to obtain a temporary Certificate of Occupancy for our Cuatro Apartments which are located at 1319 Fourth Street NW. Currently we have one building permit for the project and we are looking to separate the temporary Certificates of Occupancy for each tower.

This project has a complex financing structure and it would be helpful to obtain at least one of these Certificates prior to the last business day on April 29. We will not move in any residential tenants until we receive the Certificates of Occupancy for the entire building. The request is solely to satisfy our funding requirements with our investors. The project is using Low Income Housing Tax Credits – and we can begin claiming credits with a temporary Certificates of Occupancy. This project also has a large financial commitment from the City of Albuquerque Department of Family and Community Services.

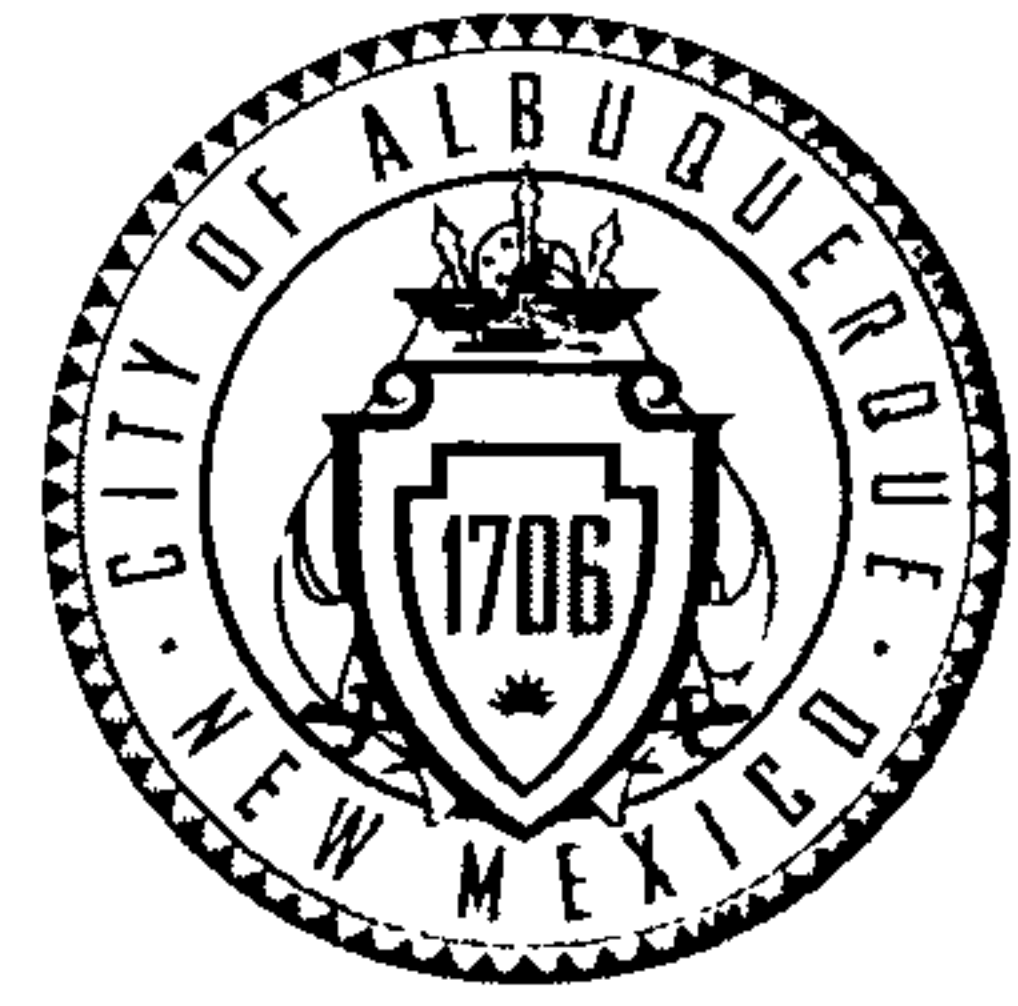
Thank you for your consideration and we look forward to discussing this request with you.

Sincerely,

Felipe Rael
Executive Director

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



November 21, 2014

Gilbert Aldaz, P.E.

Applied Engineering & Surveying Inc.

1605 Blair Drive NE

Albuquerque, NM 87112

Richard J. Berry, Mayor

**RE: Cuatro Development
Grading & Drainage Plan
Engineer's Stamp Date 11-17-2014 (File: J14D173)**

Dear Mr. Aldaz:

Based upon the information provided in your submittal received 11-17-14, the above referenced plan is approved for Building Permit.

Please attach a copy of this approved plan in the construction sets when submitting for a building permit. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

PO Box 1293

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

Albuquerque

New Mexico 87103

www.cabq.gov

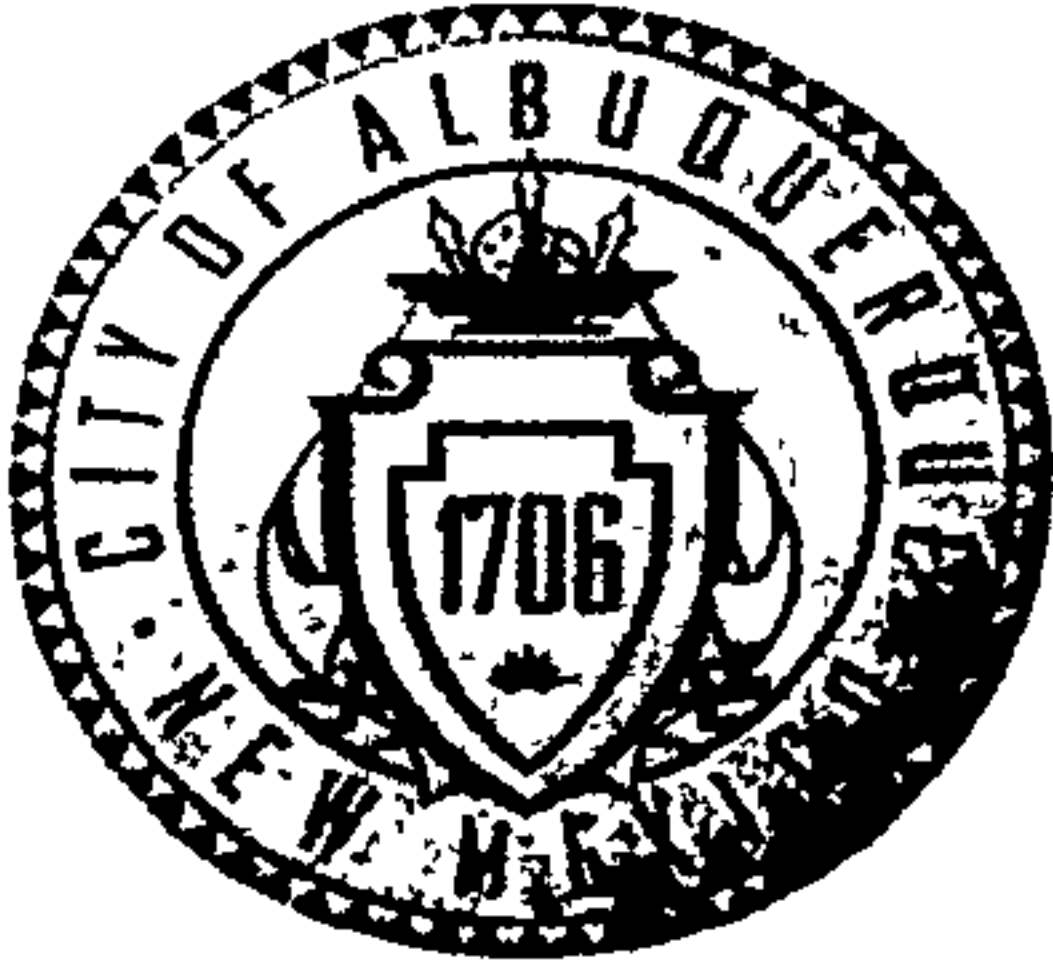
Sincerely,

Rita Harmon, P.E.

Senior Engineer, Planning Dept.

Development Review Services

Orig: Drainage file
c.pdf Addressee via Email, Monica Ortiz



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

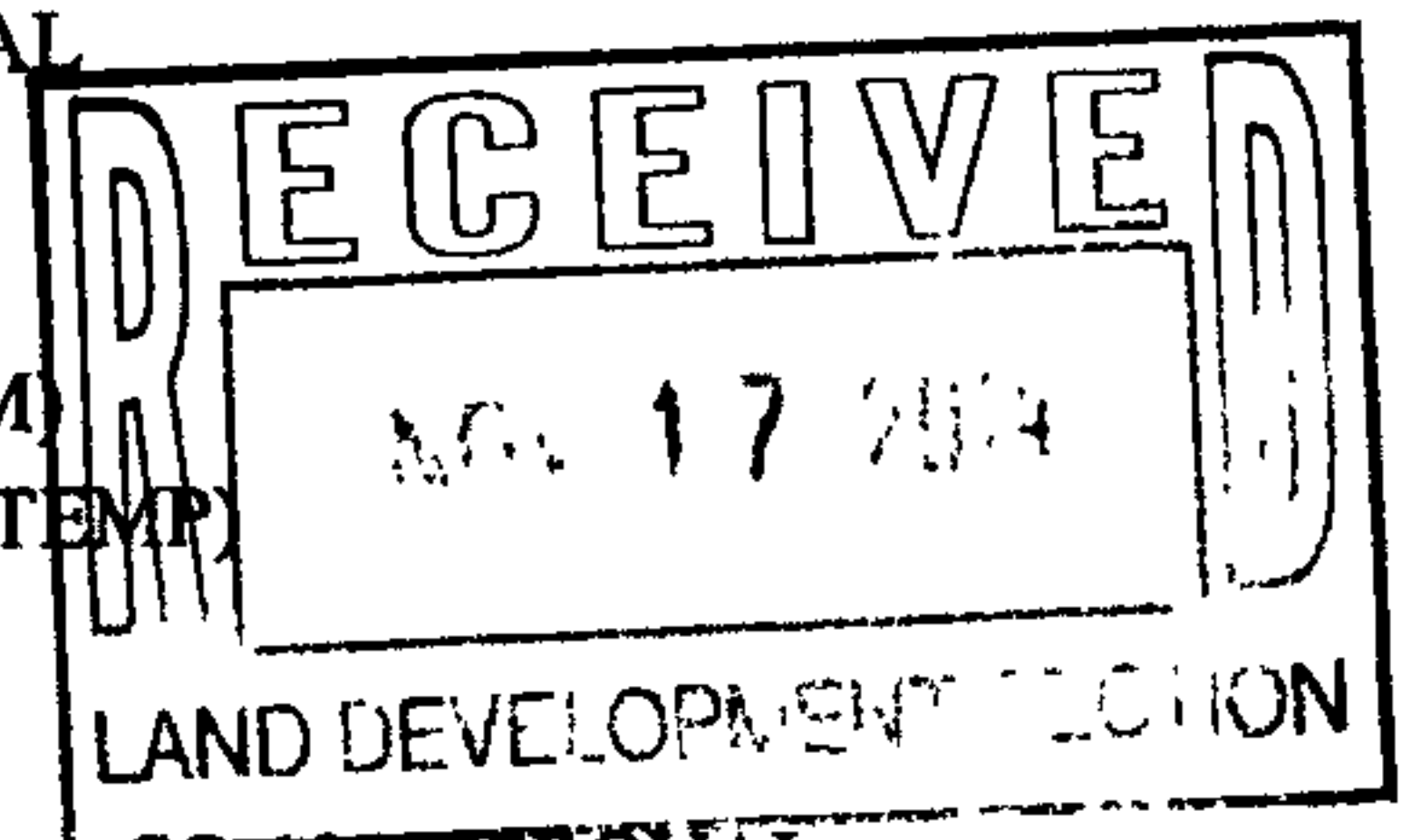
Project Title: Cuatro Development Building Permit #: _____ City Drainage #: J14D173
DRB#: 1007059 EPC#: _____ Work Order#: _____
Legal Description: Lots 1 thru 12, Block 2, Paris Addition, Town of Abo, Grant
City Address: 4th Street, Between Summer Ave & Kinley Avenue, West of 4th
Engineering Firm: Applied Engineering & Surveying Inc. Contact: Gilbert Aldaz
Address: 1605 Blair Drive NE, Albuquerque, NM 87112
Phone#: 505-480-8125 Fax#: _____ E-mail: galda247@yahoo.com
Owner: Greater Albuquerque Housing Contact: Louis Kolker
Address: 320 Gold Avenue SW, Albuquerque, NM 87112
Phone#: 505-262-9697 Fax#: _____ E-mail: _____
Architect: Integrated Design & Architect Contact: _____
Address: 906 1/2 Park Avenue SW, Albuquerque, NM 87102
Phone#: 505-243-3499 Fax#: _____ E-mail: bob@integrateddesignarch.com
Surveyor: Surv Tek, Inc Contact: Russ Hugg
Address: 9384 Valley View Drive, Albuquerque, NM 87114
Phone#: 505-897-3366 Fax#: 505-897-3377 E-mail: russhugg@survtek.com
Contractor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN 1st SUBMITTAL
☒ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERT (TCL)
☐ ENGINEER'S CERT (DRB SITE PLAN)
☐ ENGINEER'S CERT (ESC)
☐ SO-19
☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ SIA/FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. FOR BLDG. PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ GRADING CERTIFICATION
☐ SO-19 APPROVAL
☐ ESC PERMIT APPROVAL
☐ ESC CERT. ACCEPTANCE
☐ OTHER (SPECIFY) _____



WAS A PRE-DESIGN CONFERENCE ATTENDED: ☒ Yes ☐ No ☐ Copy Provided

DATE SUBMITTED: 11/17/14

By: Gilbert Aldaz

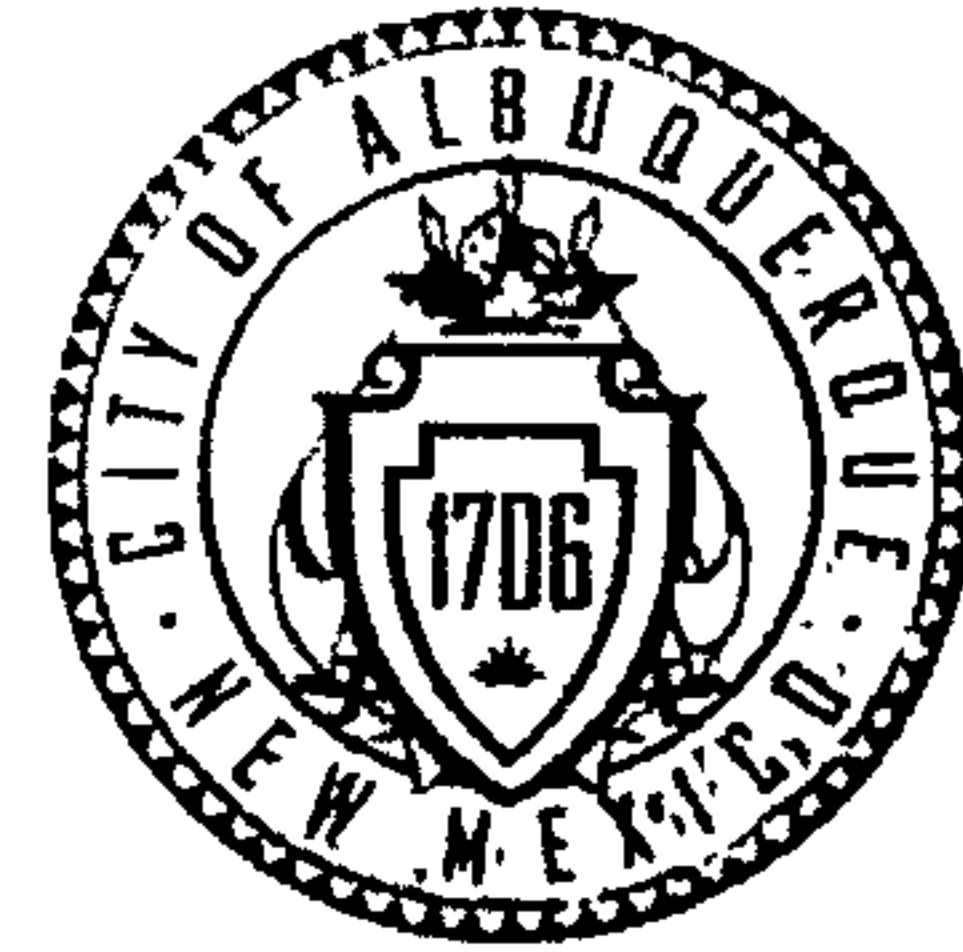
Curtis Cherne

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to 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 Plan:** 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



November 11, 2014

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

Richard J. Berry, Mayor

RE: **Cuatro Development**
Grading & Drainage Plan
Engineer's Stamp Date 10-27-2014 (File: J14D173)

Dear Mr. Aldaz:

Based upon the information provided in your submittal received 10-27-14, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

1. ✓ Revise narrative to state that an unplatted lot bounds the west property line. It is technically not an alley. **DONE**
2. ✓ Use larger scale of Flood Insurance Rate Map to show limits of flood plain (SFHA) and proximity to site. It should be clear that site is adjacent to a SFHA Zone AO, and the limits of SFHA Zone AO on 4th and Kinney should be clearly shown on Sheet 2. **SEE HATCH SHEET 2**
3. ✓ Show property line. **NOTES ADDED**
4. ✓ Water harvesting areas should not be within 10' of buildings. All runoff must discharge away from building foundations. **INCORPORATED, SEE X-SECTION SHT 4. REVISED**
5. ✓ Where does refuse area drain to? Provide positive drainage. **REVISED**
6. ✓ All connections to existing SD infrastructure needs to be field verified. There is conflicting information on the City's GIS website, the City Storm Facilities Maps, and the survey data shown on the plans. It is difficult to determine which is accurate, as there are errors in all 3 sources. The survey data on the plans is missing a SD manhole just about 70' south of the Kinley and 4th intersection. **ADDED NOTES, PART OF W.O., NOW SHOW MH.**
7. ✓ There is no objection to replacing the Type A inlet at SE corner of site to with a Manhole. Is the existing lateral to be replaced as well? If not, add note stating that it is to remain and be protected. **NOTE ADDED**
8. ✓ Plan shows a new ManHole on Summer, just west of an existing MH. Call out new MH with a keyed note. The new 18" lateral is conflicting with the Water MH. **NEW MH CALLED OUT**
9. ✓ How do roof leaders which are not along the west side of the building discharge to the west side of property? Is there a concrete channel? Piping system? Show conveyance system. **REMOVED ALL ROOF SLOPE & SCUPPERS, ONLY SHOW ROOF LEADERS THAT DRAIN TO WEST**
10. ✓ Runoff from decks cannot discharge to public sidewalk below. **CANOPY PROVIDED, MINOR FLOWS**
11. Flow arrows at the exterior spaces between the buildings point towards the building and should discharge towards the west. **REDIRECTED FROM BUILDING**
12. ✓ Keyed notes 8 and 9 refer to the Site Plan. Provide Site Plan or change reference. **UNDERSTOOD YOU RECEIVED THESE THRU EMAIL.**

1 of 2

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

Sincerely,

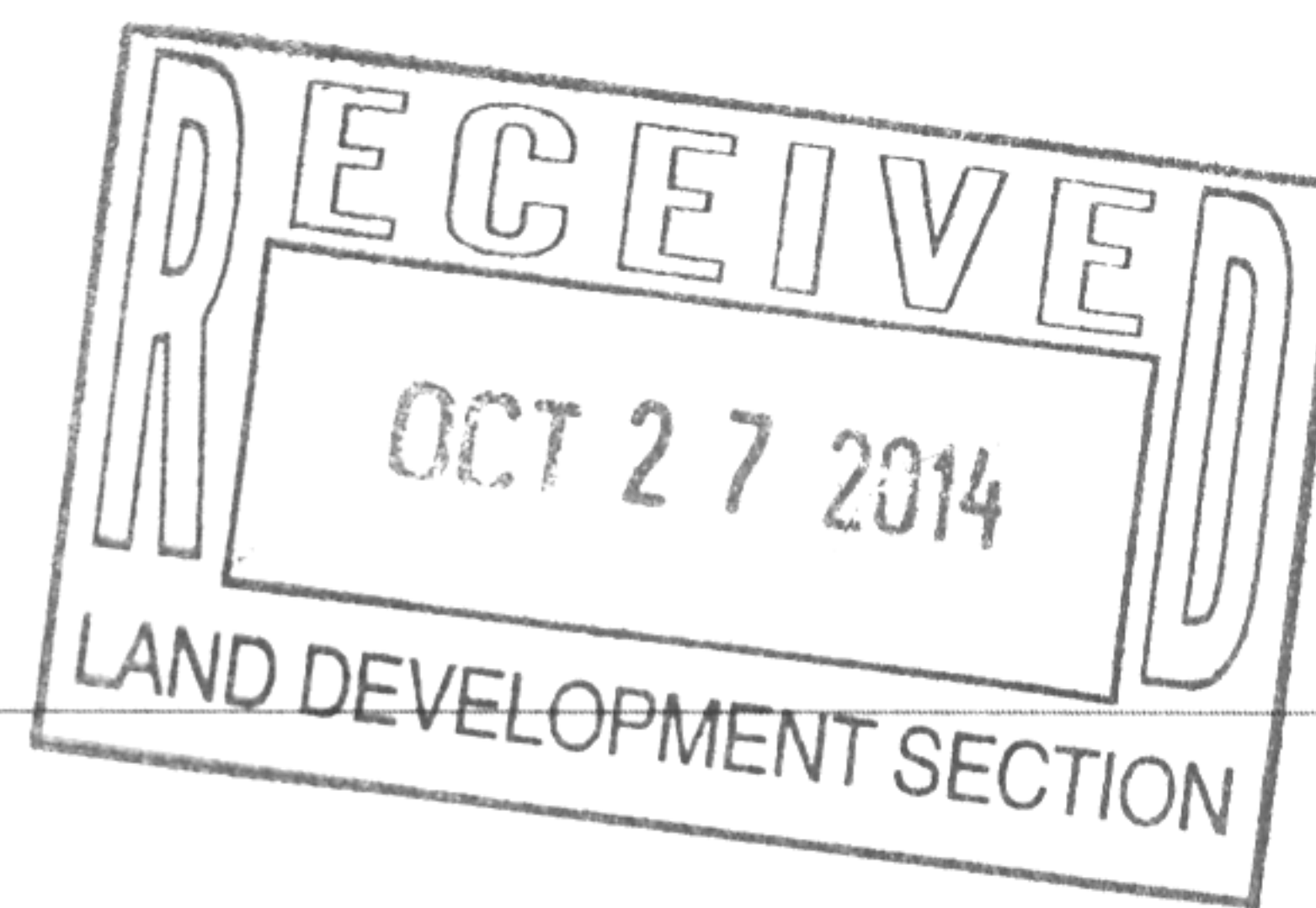
A handwritten signature in black ink, appearing to read "Rita T. Harmon", with a long horizontal flourish extending to the right.

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

Orig: Drainage file
c.pdf Addressee via Email



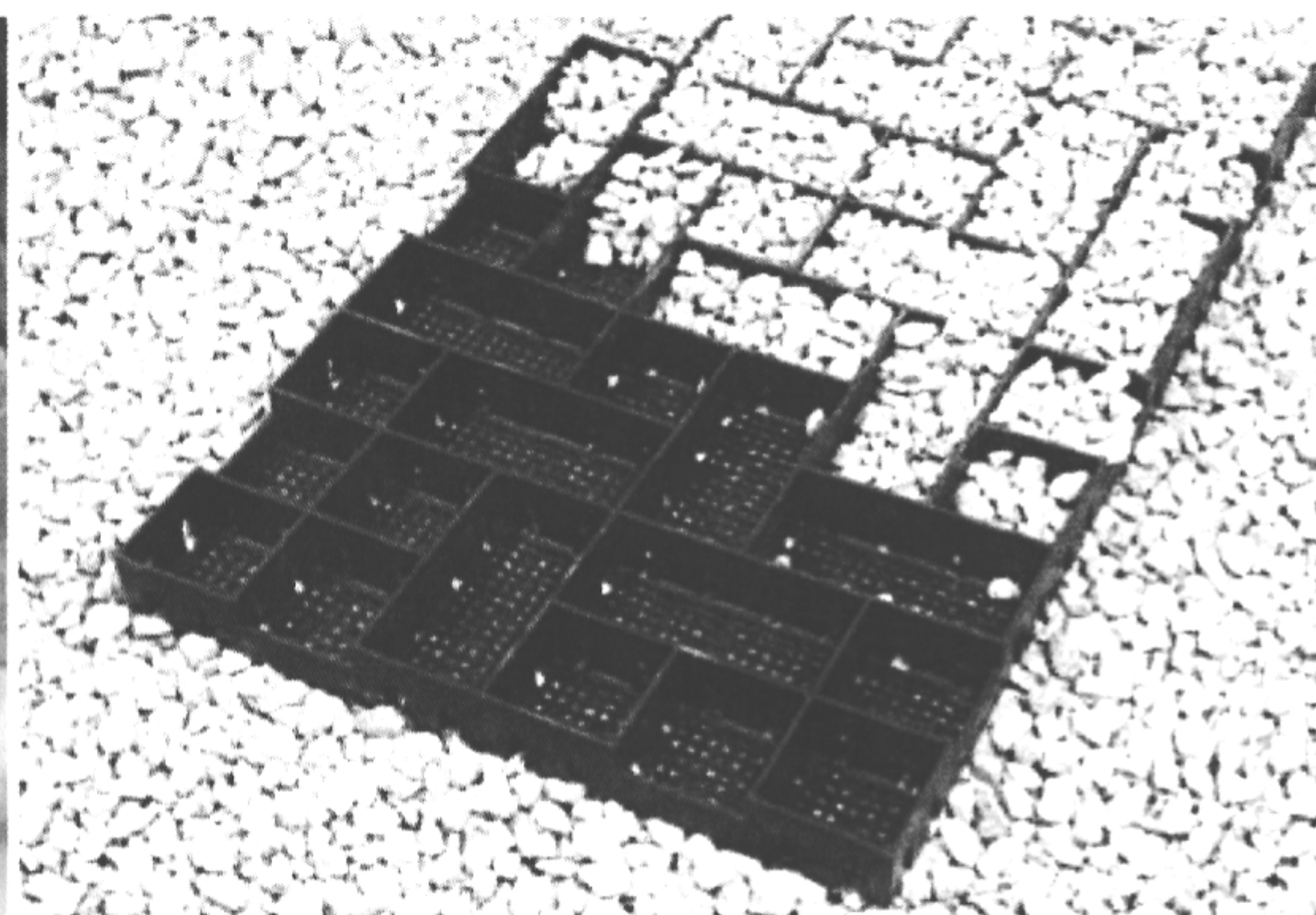
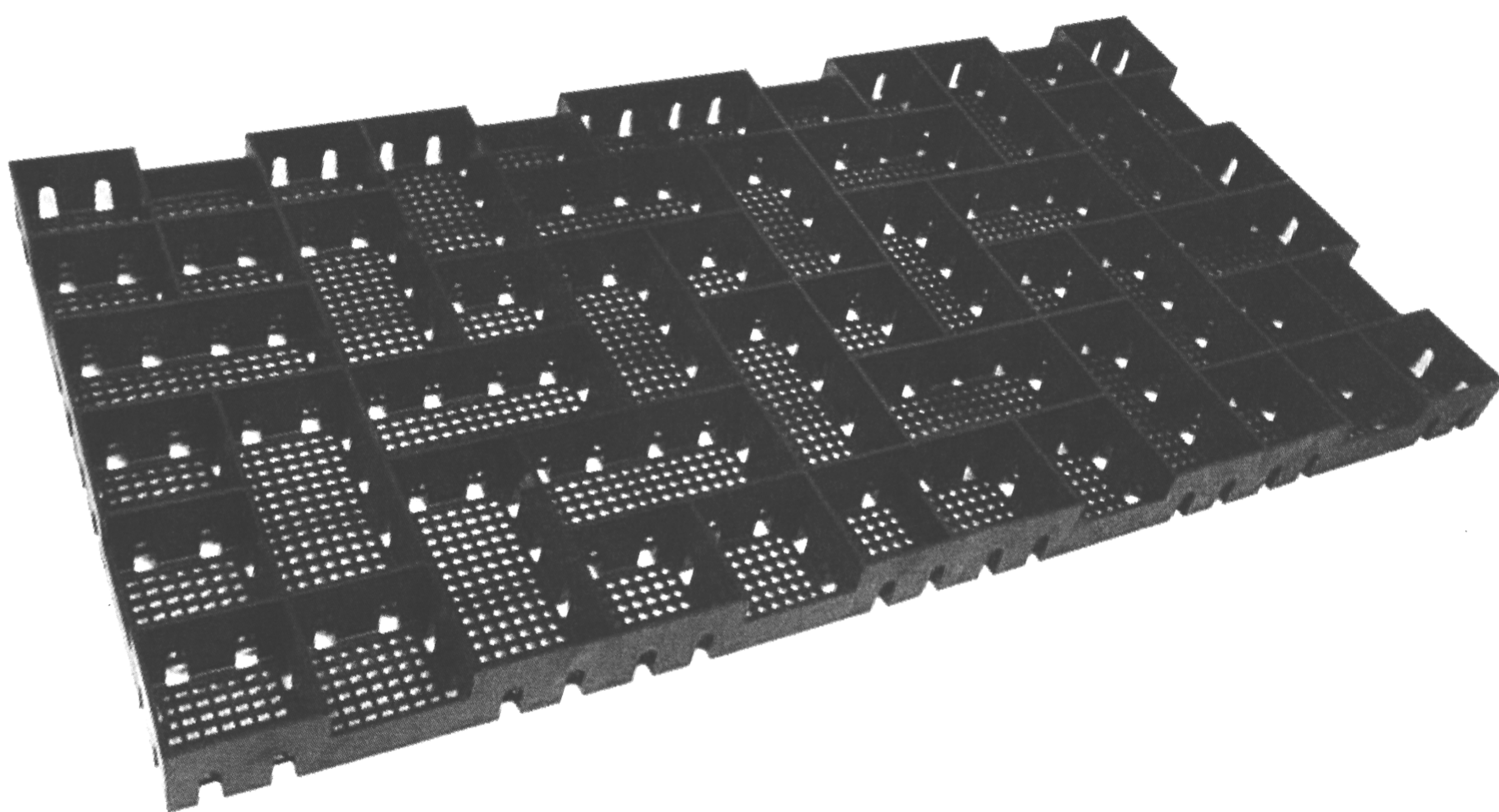
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GEOPAVE®

POROUS PAVEMENT SYSTEM

DESIGN & CONSTRUCTION OVERVIEW



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GP-001 – FEB 2014



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The GeoPave® Porous Pavement System Components

The GeoPave Porous Pavement System with aggregate or an aggregate/topsoil engineered infill provides a permeable, stabilized surface for vehicular and pedestrian load support.

The complete system has three major components:

- (1) the GeoPave unit
- (2) the porous aggregate or aggregate/topsoil engineered base, *if required*
- (3) the porous aggregate or an aggregate/topsoil engineered infill.

Other components may include a geosynthetic separation / reinforcement layer between the subgrade and base materials and sub-drain components.

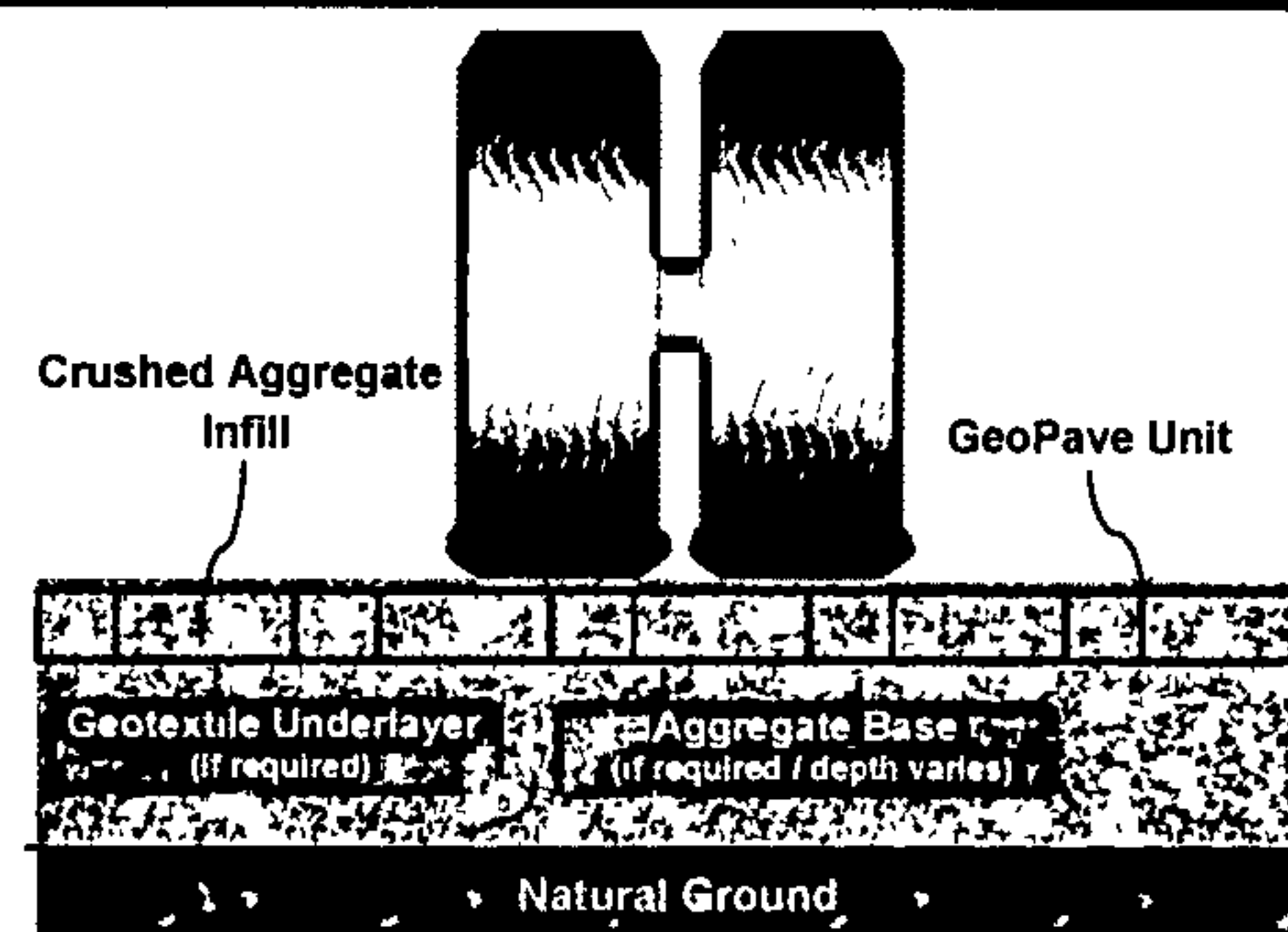


Figure 1 The GeoPave Porous Pavement System

Function of the GeoPave System Components

Function of the GeoPave Unit

The function of the GeoPave unit is to 1) create a structural framework to stabilize open-graded aggregate or an aggregate/topsoil engineered infill and to 2) increase bearing strength for vehicular or pedestrian traffic loading requirements using porous aggregate or other structural infill.

Function of the Base Material

For a given applied load over an existing sub base soil, both the base material, *if required*, and the GeoPave unit with crushed aggregate or a structural infill provide support. The depth of the base material should be determined using both loading requirements and sub base strength (Reference Table 1).

Function of the Optional Geosynthetic Layer

Under some conditions, a geosynthetic layer may be a required component between the in-situ soil and the required base layer in the porous pavement system. Generally, the geosynthetic component will serve one or more of the following functions and be one or more of the following materials:

- Tensile Reinforcement Geosynthetics:.... Woven geotextiles, Geogrids
- Separation Geosynthetics: Non-woven geotextiles, Woven geotextiles
- Drainage / Separation Geosynthetics:..... Non-woven geotextiles, Geonet / geotextile separation / drainage materials

Function of the Optional Sub-drain Component

If the porous pavement system is built over non-porous soils and an excavation is required such that water could be trapped, sub drainage becomes a required component of the system. Sub-drainage will remove harmful water accumulation that will cause degradation of the in-situ soils resulting in loss of support capacity. See **Optional Sub-Drainage Component** under **Installing the GeoPave System** for additional details.

GeoPave Material Properties & Unit Dimensions

GeoPave units shall be made from materials with physical and chemical characteristics described in Table 1. The manufactured GeoPave unit shall have a minimum deflection without breakage of 1.0 in (25 mm) when units are supported at 40 in (0.50 m) centers at 70°F (21°C). The color shall be uniform throughout all units in any given pallet.

GeoPave units shall have physical dimensions as specified in Table 1 and shown in Figure 2. GeoPave units shall contain a herringbone-type cell pattern consisting of small and large cells with a mesh bottom and vented side-walls. The monolithic mesh bottom is comprised of a series of square 0.25 in by 0.25 in (6.35 mm by 6.35 mm) openings. The small cells contain 1.0 in (25 mm) high and 0.50 in (12 mm) wide vented cell-wall openings, either 4 or 6 per cell for infill lock-up and lateral drainage between cells. The large cells contain vented cell-wall openings, 12 per cell.

The GeoPave units shall be connected with U-CLIPS side-to-side and end-to-end where the short cell side-walls of adjacent units align. The connection points vary depending on chosen laying pattern (See Figure 8 Laying Patterns). End-to-end or side-to-side warping of the GeoPave unit shall not create a greater opening between adjacent outside walls than 0.25 in (6 mm). The finished GeoPave pavement is a uniformly connected, laterally integrated porous pavement system.



Table 1 GeoPave® Porous Pavement Unit

Item	Specification & Details
Material	Up to 97% Recycled Polyethylene *
Color	Ranges Dark Shades Gray to Black
Chemical Resistance	Superior
Carbon Black for Ultraviolet Light Stabilization	1.5% - 2.0%
Unit Minimum Crush Strength (Empty) @ 70°F (21°C)	175 psi (1,202 KPa)
Unit Minimum Crush Strength (Aggregate or Aggregate/Topsoil - Filled) @ 70°F (21°C)	1,000 psi (6,869 KPa)
Flexural Modulus @ 70°F (21°C)	35,000 psi (240,000 kPa)
Nominal Dimensions (width x length)	20 in x 40 in (0.5 m x 1.0 m)
Nominal Unit Depth	2.0 in (50 mm)
Nominal Coverage Area	5.3 ft² (0.5 m²)
Cells per Unit	50
Small Cell Size	3.25 in x 3.25 in (83 mm x 83 mm)
Large Cell Size	3.25 in x 6.5 in (83 mm x 165 mm)
Top Open Area per Unit	90.5%
Bottom Open Area per Unit	32.6%
Bottom Mesh Opening Size	0.25 in x 0.25 in (6.35 mm x 6.35 mm)
Weight per Unit (nominal)	8 lbs (3.6 kg)
Runoff Coefficient @ 2.5 in/hr (64 mm/hr) Rainfall with open-graded aggregate	(0-0.15)
Runoff Coefficient @ 2.5 in/hr (64 mm/hr) Rainfall with engineered infill	(0.10-0.35)
Units per Pallet	46
<ul style="list-style-type: none"> * The percentage of recycled content may vary depending on availability of recycled materials Dimensions and weight are subject to manufacturing tolerances and are influenced by recycled components. End-to-end or side-to-side warp of the GeoPave unit shall not be greater than 0.5 in (6 mm). Avoid specifications that state material compressive strength only. Material compressive strength, with applied factors of safety must be sufficient to resist compressive and lateral loads. In addition, ultra-high compressive strength adds little value to a porous pavement system. 	

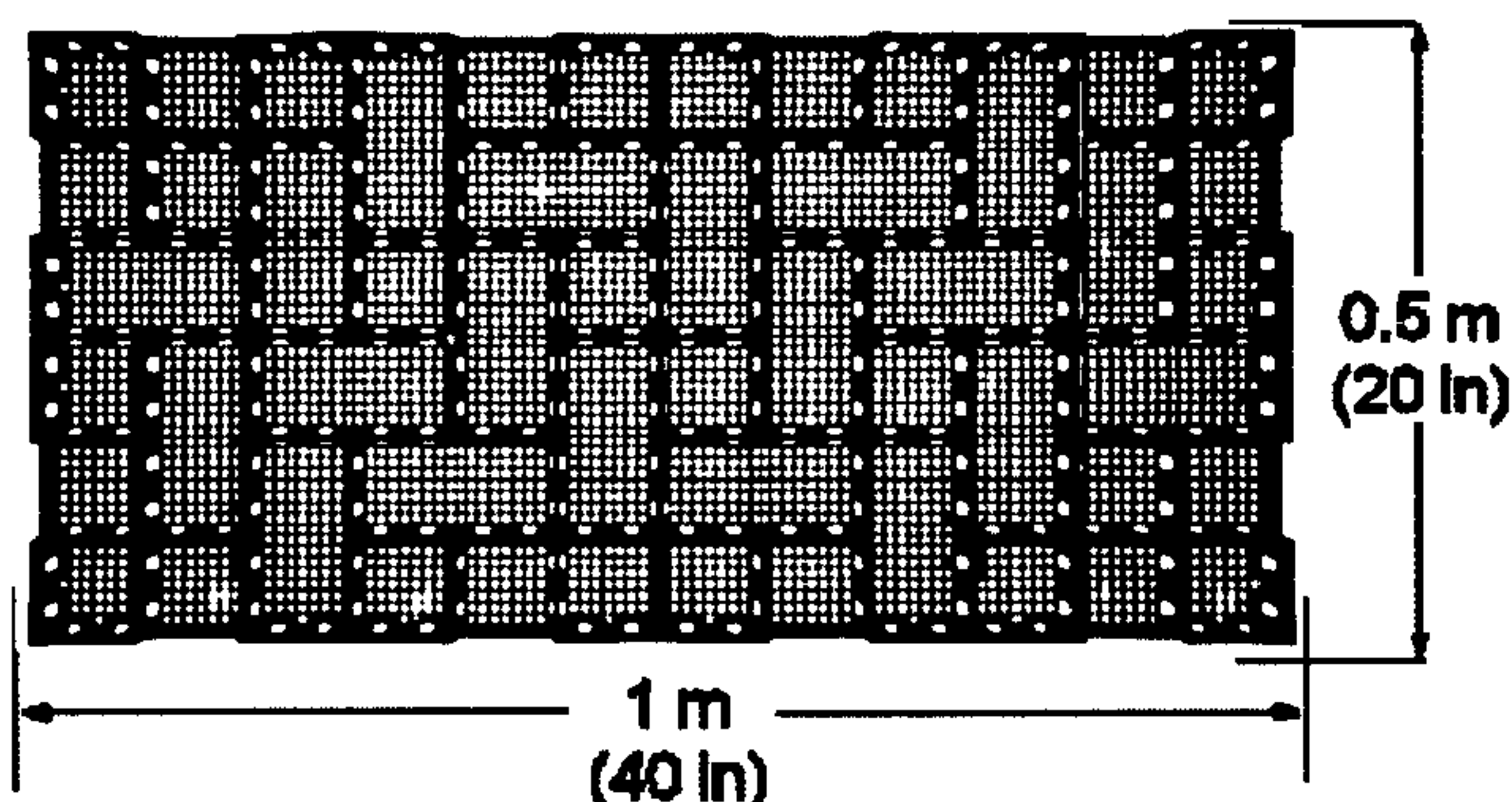


Figure 2 GeoPave Unit Nominal Dimensions

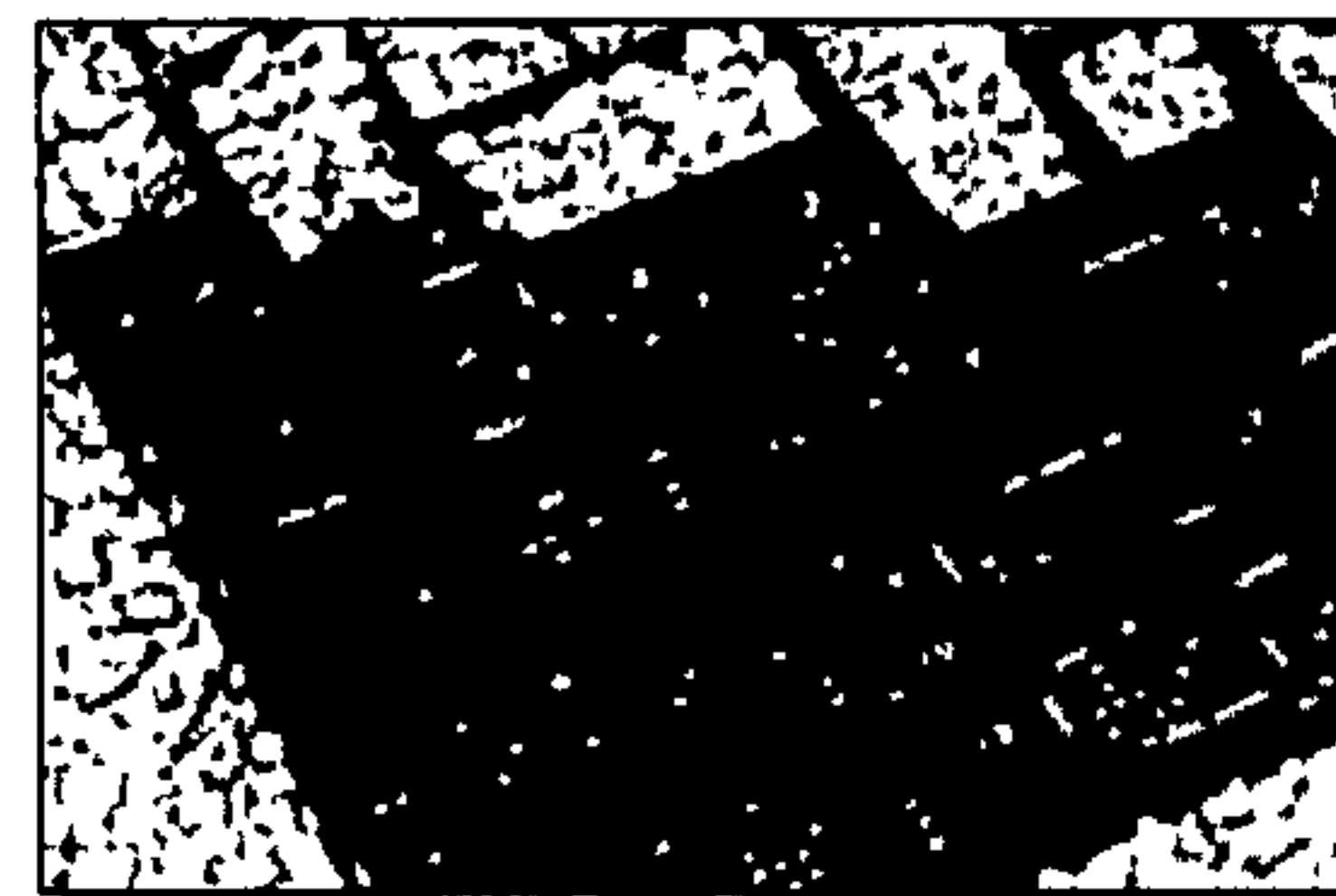


Figure 3 GeoPave Cell Configuration



Design Guideline

Table 2: Base Recommendations for the GeoPave® Unit

LOAD DESCRIPTION ¹	DEPTH OF BASE		DEPTH OF BASE	
	AGGREGATE		ENGINEERED AGGREGATE / TOPSOIL ³	
	CBR ² 2 – 4	CBR ¹ >4	CBR ² 2 – 4	CBR ² >4
Heavy Fire Truck Access & H/HS-20 loading. Typical 110 psi (758 kPa) maximum tire pressure. Single axle loadings of 32 kips (145 kN), tandem axle loadings of 48 kip (220 kN). Gross vehicle loads of 80,000 lbs (36.3 MT).	6 in (150 mm)	6 in (150 mm)	Not Recommended	Not Recommended
Light Fire Truck Access & H/HS-15 loading. Typical 85 psi (586 kPa) maximum tire pressure. Single axle loadings of 24 kips (110 kN). Gross vehicle loads of 60,000 lb (27.2 MT).	6 in (150 mm)	4 in (100 mm)	Not Recommended	Not Recommended
Utility & Delivery Truck Access & H/HS-10 loading. Typical 60 psi (414 kPa) maximum tire pressure. Single axle loadings of 16 kips (75 kN). Gross vehicle loads of 40,000 lbs (18.1 MT).	4 in (100 mm)	2 in (50 mm)	4 in (100 mm)	2 in (50 mm)
Cars & Pick-up Truck Access. Typical 45 psi (310 kPa) maximum tire pressure. Single axle loadings of 4 kips (18 kN). Gross vehicle loads of 8,000 lbs (3.6 MT).	2 in (50 mm)	None ⁴	2 in (50 mm)	None ⁴
Trail Use. Loading for pedestrian, wheelchair, equestrian, bicycle, motorcycle and ATV traffic.	None ⁴	None ⁴	None ⁴	None ⁴

¹ The GeoPave system can be applied in areas where loading is greater than those listed above. In these situations, call Presto Geosystems or an authorized Presto Geosystems' representative for specific recommendations.

² CBR is the abbreviation for California Bearing Ratio. Methods for determining CBR vary from more sophisticated laboratory methods to simple field identification methods that use hand manipulation of the soil. Presto does not recommend one method over the other; however, the user must have a high degree of confidence in the results produced by the chosen method. If other-than-CBR soil strength values exist, use available correlation charts to relate the value to CBR.

³ With the aggregate/topsoil mix and a vegetative surface, infrequent/occasional passes are recommended. Infrequent/occasional passes are defined as the number of passes over any period of time that causes no lasting damage to the vegetation. This number will be a function of vegetation type and age, climatic conditions, and maintenance practices. This number is not a function of the GeoPave material.

⁴ A minimum of 2 in (50 mm) of aggregate base should be placed below the GeoPave units as a drainage layer and an infiltration storage area. Greater depth may be required depending upon design rainfall needs and sub base permeability.

**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.

Base Materials

If necessary for loading requirements, the recommended base shall be aggregate or an engineered aggregate/topsoil mixture, and should be consistent with the chosen infill type.

Porous Base for Storage

A minimum of 2 in (50 mm) of base material is generally recommended for drainage even if not required by design for load support. Additional base depth may be added if required over a low-permeable base or to function as a storm water detention/retention layer.

Under some conditions, a geotextile separation layer may be required between the natural ground and the base material. See **Optional Geosynthetic Separation Layer**, **Optional Sub-Drainage Component**, and **Base Preparation** for information relative to installation. Care shall be exercised in choosing this layer to assure that it does not impede permeability.

Aggregate Base

When the specified infill is aggregate, the aggregate base shall be a poorly-graded crushed aggregate with a fine content less than 5%. The aggregate shall be compacted to 95% Standard Proctor Density. After compaction, the surface shall be uniform with no protrusions from larger aggregate particles.

Base Particle Size Passing Sieve Analysis

Sieve Size	% Particles Passing Opening
½ in	95-100%
3/8 in	15-20%
#4	0-5%

Aggregate/Topsoil Engineered Base

When the specified infill is an aggregate/topsoil engineered mix for vegetated surfaces, the base material shall be an aggregate/topsoil engineered mixture. A free-draining aggregate base is not recommended for porous pavements intended to be vegetated. The aggregate/topsoil engineered base ensures proper moisture retention and the nutrient component required to maintain healthy vegetation.

The aggregate/topsoil engineered base 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 1.0 in (10 mm to 25 mm) with a D_{50} of 0.5 in (13 mm). The percentage void-space of the aggregate portion when compacted 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. The mixture shall be compacted to 95% Standard Proctor Density.



Key Porous Pavement System Characteristics

Elements Important to Structural Integrity

The GeoPave unit (or any other similar material) must have five primary characteristics to adequately support loads, eliminate expansion-related failures, and to enable fast and efficient construction. Those characteristics are:

- (1) suitable wall strength
 - (2) sufficient unit stiffness
 - (3) a supporting base, if required
 - (4) a large overall area and
 - (5) a monolithic mesh bottom
- 1) **Suitable Wall Strength:** The wall strength must support wheel loading from the heaviest anticipated vehicles that will travel over the porous pavement system. Vehicular loading will create direct wall compression from tires and equipment outriggers as well as lateral forces from vehicle braking and acceleration. The wall should resist vertical and lateral deformations when loaded. **Caution** should be exercised when using systems with thin walls.
 - 2) **Sufficient Unit Stiffness:** The unit stiffness must allow deflections without unit breakage or separation when sub base soils yield under loading. When the unit is too flexible, the base soils support the complete load. When the unit is too rigid, it could break under normal loading in low temperature conditions. **Caution** should be exercised when using systems that are either too flexible or too rigid.
 - 3) **Supporting Base if required:** The unit support base must have a large enough area-of-contact with the base soil so high wheel loads at the top of the unit are reduced sufficiently when transferred to the base soil. This will provide a system with a greater range of stability. **Caution** should be exercised when using systems that have little contact area between the porous pavement unit and the base soil.
 - 4) **Large Overall Area:** A large overall area, in conjunction with the other characteristics, ensures maximum load dissipation. If unit separation should occur and any given unit functions independently, larger unit areas will lower the pressure on base and subgrade soils. **Caution** should be exercised when using systems that have smaller contact areas
 - 5) **Monolithic Mesh Bottom:** The unit should contain a monolithic mesh bottom for encapsulating the aggregate infill and preventing material loss from the bottom of the units when exposed to repeated loading and freeze-thaw cycles **Caution** should be exercised when using systems without monolithic mesh bottoms.



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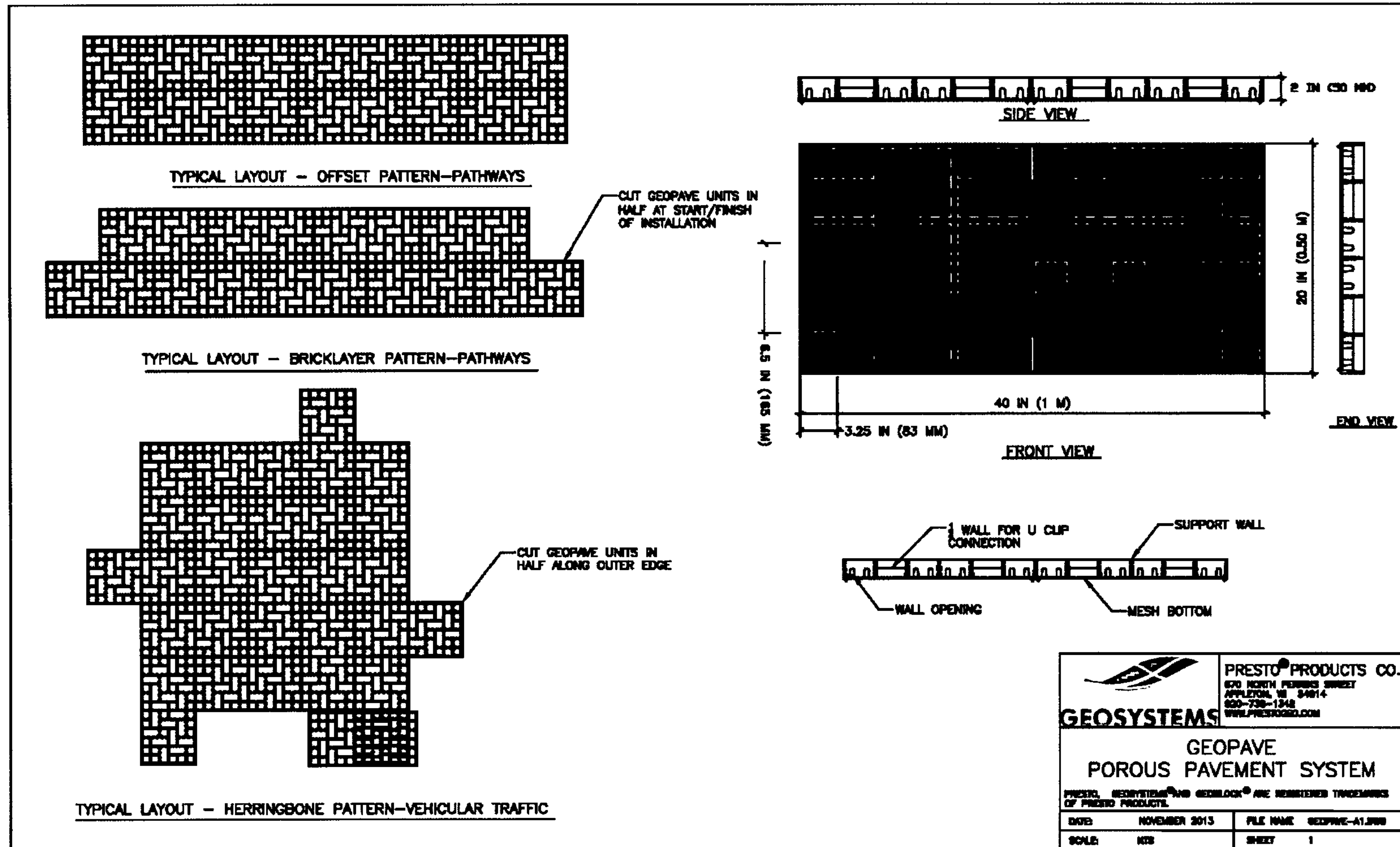


Figure 2 GeoPave System Dimensions and Layout



DESIGN GUIDELINES – BASE DEPTH					GEOPAVE MATERIAL SPECIFICATION	
LOAD DESCRIPTION	AGGREGATE SURFACE		VEGETATED SURFACE		MATERIAL	UP TO 97% RECYCLED POLYETHYLENE
	CBR 2 – 4%	CBR > 4%	CBR 2 – 4%	CBR 2 – 4%	COLOR	RANGES DARK SHADES GRAY TO BLACK
Heavy Fire Truck Access & H/HS-20 loading. Typical 110 psi (758 kPa) tire pressure. Single axle loadings of 32 kips (145 kN), tandem axle loadings of 48 kips (220 kN). Gross vehicle weight of 80,000 lbs (36.3 MT). Infrequent passes.	8 IN(150 MM)	8 IN(150 MM)	NOT RECOMMENDED	NOT RECOMMENDED	CHEMICAL RESISTANCE	SUPERIOR
Light Fire Truck Access & H/HS-15 loading. Typical 85 psi (586 kPa) tire pressure. Single axle loadings of 24 kips (110 kN). Gross vehicle loads of 60,000 lbs (27.2 MT). Infrequent passes.	8 IN(150 MM)	4 IN(100 MM)	NOT RECOMMENDED	NOT RECOMMENDED	CARBON BLACK FOR UV STABILIZATION, %	1.5 TO 2.0%
					UNIT MIN CRUSH STRENGTH – EMPTY @ 70F (21C)	175 PSI (1,202 KPa)
Utility & Delivery Truck Access & H/HS-10 loading. Typical 60 psi (414 kPa) tire pressure. Single axle loadings of 18 kips (75 kN). Gross vehicle loads of 40,000 lbs (18.1 MT). Infrequent passes.	4 IN(100 MM)	2 IN(50 MM)	4 IN(100 MM)	2 IN(50 MM)	UNIT MIN CRUSH STRENGTH – FILLED @ 70F (21C)	1,000 PSI (6,869 KPa)
					FLEXURAL MODULUS @ 70F (21C)	35,000 PSI (240,000 KPa)
Cars & Pick-up Truck Access. Typical 45 psi (310 kPa) tire pressure. Single axle loadings of 4 kips (18 kN). Gross vehicle loads of 8,000 lbs (3.6 MT). Infrequent passes.	2 IN(50 MM)	NONE	2 IN(50 MM)	NONE	NOMINAL DIMENSIONS – WIDTH X LENGTH	20 X 40 IN (0.5 X 1.0 M)
					NOMINAL UNIT DEPTH	2.0 IN (50 MM)
Trail Use. Loading for pedestrian, wheelchair, equestrian, bicycle, motorcycle and ATV traffic.	NONE	NONE	NONE	NONE	NOMINAL AREA	5.3 SQFT (0.5 SQMTR)
					CELLS PER UNIT	50
					SMALL CELL SIZE	3.25 X 3.25 IN (83 X 83 MM)
					LARGE CELL SIZE	3.25 X 6.5 IN (83 X 165 MM)
					TOP OPEN AREA PER UNIT	90.5%
					BOTTOM OPEN AREA PER UNIT	32.6%
					BOTTOM MESH OPENING SIZE	0.25 X 0.25 IN (6.35 X 6.35 MM)
					NOMINAL WEIGHT PER UNIT	8.0 LBS (3.6 KG)
					RUNOFF COEFFICIENT @ 2.5 IN/HR (64 MM) RAIN	0.15
					UNITS PER PALLET	48

Notes:

1. CBR means California Bearing Ratio.
2. Engineered base is a homogenous mixture consisting of crushed rock having an AASHTO # 5 or similar designation blended with pulverized topsoil and 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 9.5 mm to 25 mm (0.375 to 1.0 in) with a D50 of 13 mm (0.5 in). The percentage void-space of the aggregate portion when compacted shall be at least 30%. The pulverized topsoil portion shall equal 33% +/- of the total volume and be added and blended to produce a homogenous mixture prior to placement or washed into the in-place compacted aggregate. Once placed, the mixture shall be compacted to 95% Standard Proctor Density.
3. Aggregate infill shall be 0.375 to 0.5 inch (10 to 13 mm) crushed material with fine content less than 5%.
4. A minimum 2 inch (50 mm) of aggregate should be placed below the units to act as drainage layer and infiltration area.
5. Refer to the Geopave Design and Construction Overview for a complete description of the design and construction methods.

Diagram labels:

- GEOPAVE
- OPEN GRADED BASE
- IF REQ'D, GEOTEXTILE SEPARATION LAYER
- PREPARED SUB GRADE
- AGGREGATE
- ENGINEERED BASE
- VEGETATED

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SCALE: NTS	SHEET: 1

Figure 3 GeoPave System Material Properties and Usage Guideline

**Installing the GeoPave System****Subgrade Preparation**

Excavate the area, allowing for the GeoPave unit thickness and the base material depth (where the base material is required). When working with in-situ soils that have poor permeability, provide adequate drainage from the excavated area if the area has the potential to collect water. The in-situ soil should be relatively dry and free from any standing water. Finish-grade the surface of the in-situ soil specifically when the GeoPave unit is to be installed without additional base material. Level and clear the area of large objects such as rocks, pieces of wood, etc. to enable the GeoPave units to connect properly and remain stationary after installation.

Sub base or base, when required, shall be compacted and fine graded as appropriate. Caution should be exercised to assure that porous sub bases not be over compacted such that porosity is hindered.

Optional Geosynthetic Separation Layer

If required and/or specified by the project engineer, the geosynthetic layer shall be rolled out over the prepared subgrade along the alignment of the reinforced surface. The geosynthetic shall be pulled taut to ensure that there are no folds. Geosynthetic layer overlaps, if required, shall be according to plans and manufacturer's recommendations.

Optional Sub-Drainage Component

If required and/or specified by the project engineer, install the specified sub-drain and outlet according to construction drawings. Ensure that a proper slope is maintained throughout the drainage system and that the outlet is free from any obstructions preventing free drainage.

Base Preparation

If required, the specified base material is spread over the prepared base, compacted to 95% Standard Proctor Density and fine graded as appropriate. Caution should be exercised to assure that porous sub bases are not over compacted such that porosity is hindered. Refer to Table 2 for base depth recommendations.

GeoPave Unit Installation**Orientation & Laying Pattern of Units**

Place the GeoPave units with the mesh bottom to the ground.

When the application is a narrow pedestrian access lane, stagger the units to produce the bricklayer or the offset pattern.

When the application is a large area, stagger the units to produce the herringbone pattern. This pattern reduces straight seams to one and a half block lengths and allows for better disguise of the unit seams.

The staggered pattern is developed by using half GeoPave units made by field cutting a full unit and placing the units as illustrated. Cut the units with a hand or power saw to custom fit both contours and/or around obstructions. These final seam patterns assure maximum load transfer and support and improved aesthetics.

Other laying patterns are generally not recommended.

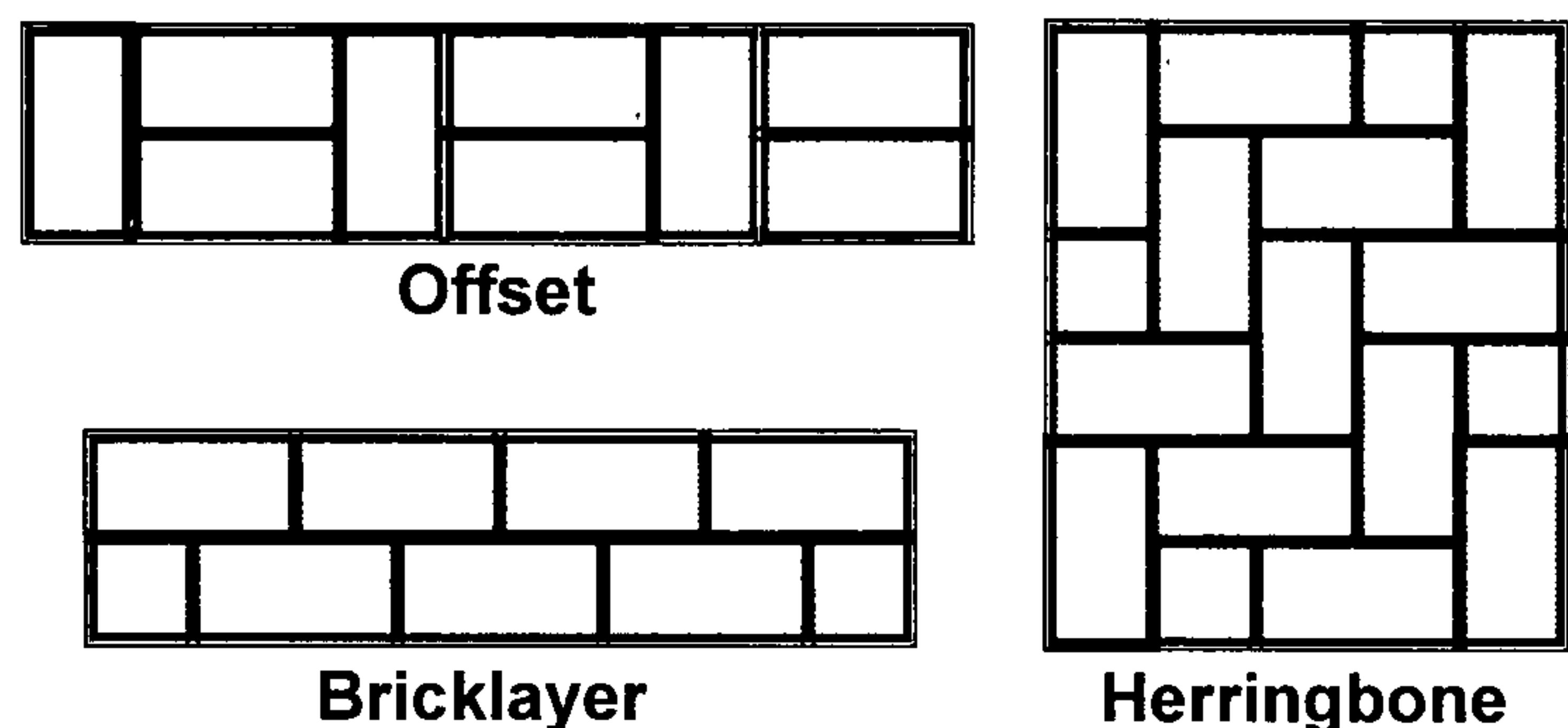


Figure 4 Laying Patterns



Positioning of Units

If required, ensure that all adjacent hard-surfaced paving work is completed before installing the GeoPave porous pavement system.

Place the first row of GeoPave units against a stationary edge when available. Units should be placed such that corners and seams do not protrude above the desired surface elevation. Abut adjoining units to form the desired laying pattern.

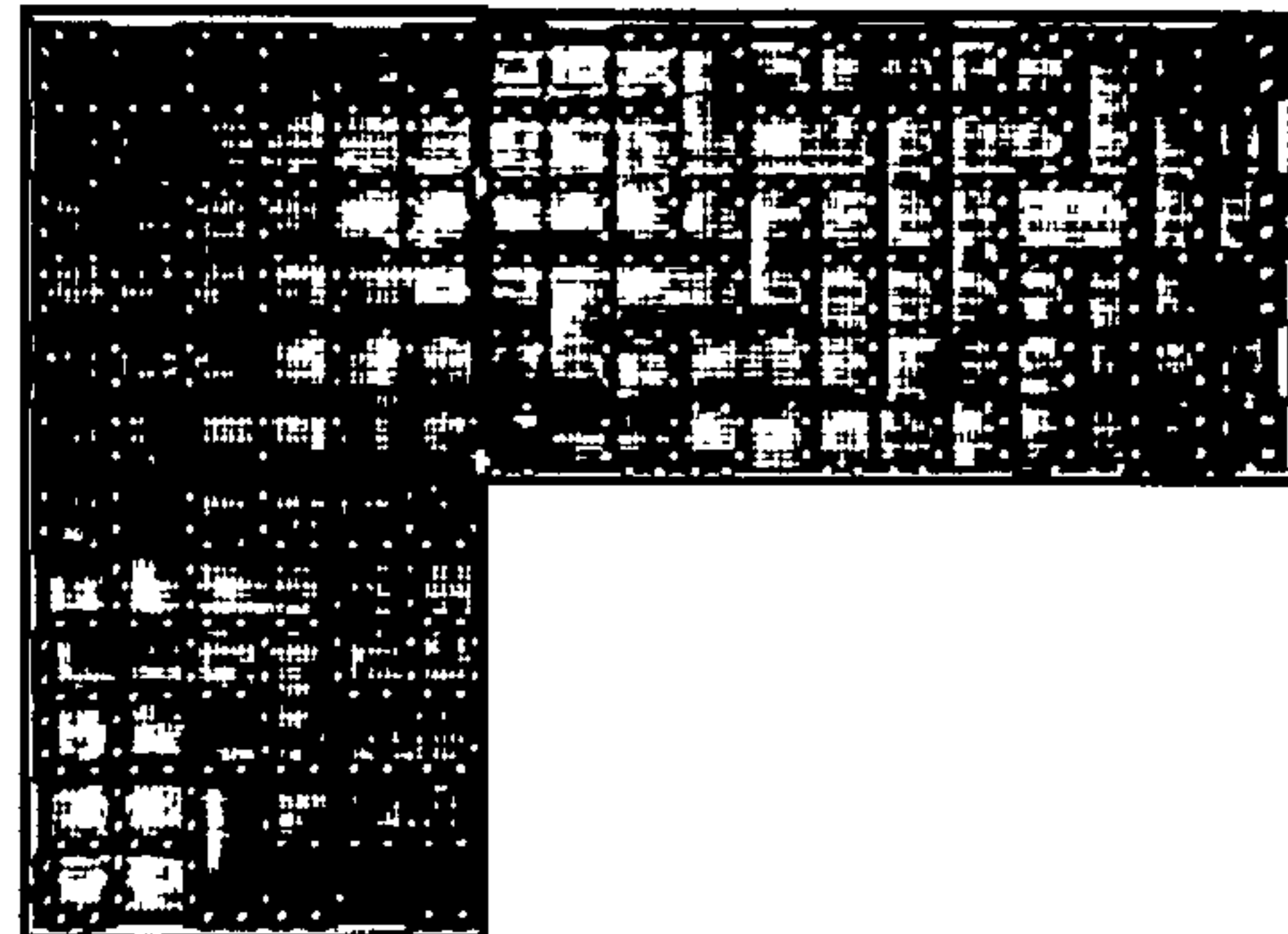


Figure 5 Joining GeoPave Units

Secure adjoining GeoPave units together using the U-CLIP connection device. U-CLIPS shall be set in place by hammer in the half-wall locations. There are four locations on each long side and two locations on each short side. They shall be driven completely so that adjacent sections have horizontally level profiles. Caution should be exercised to assure that no material is trapped between adjacent sections prior to the placement of U-CLIPS.

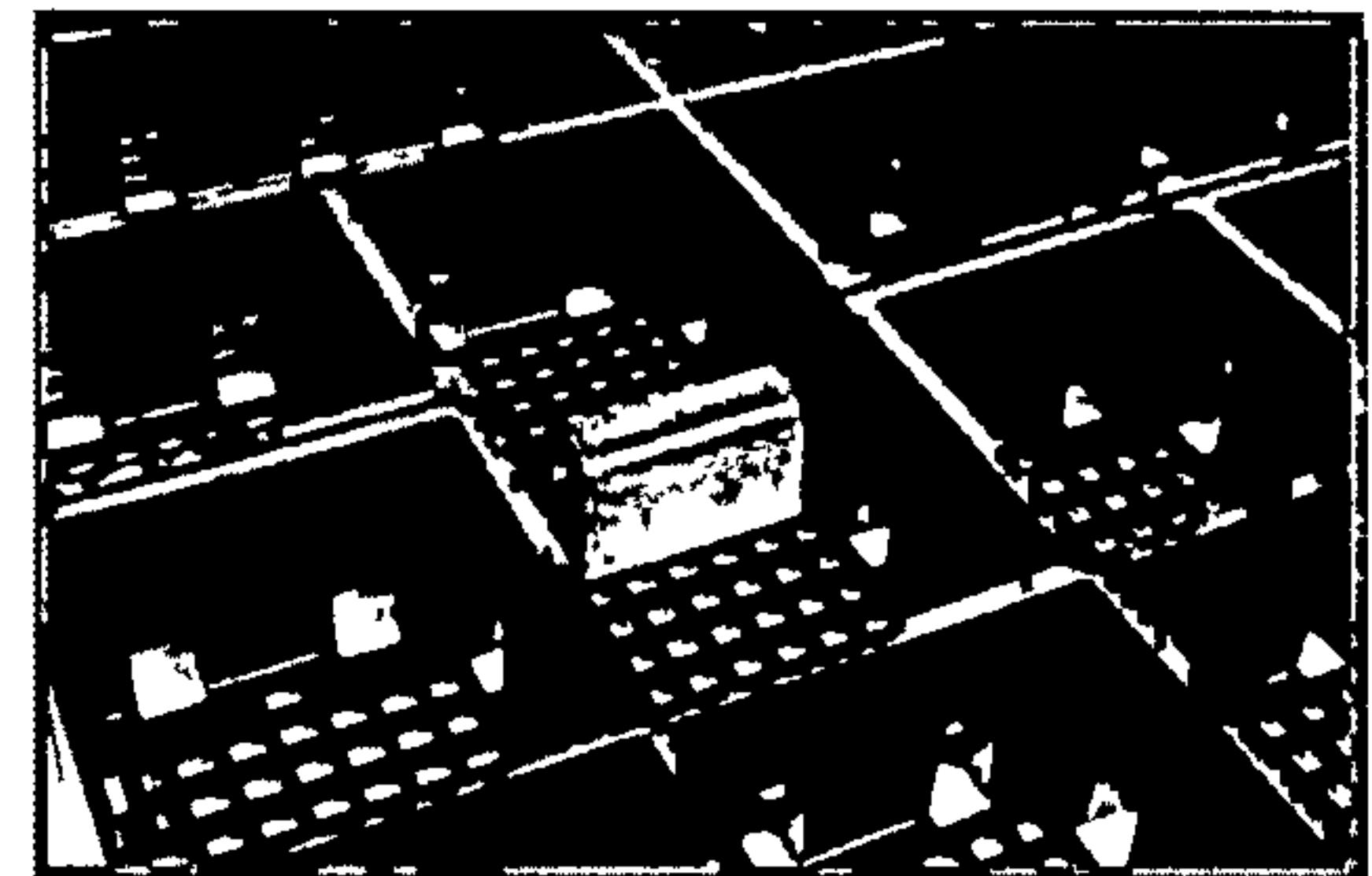
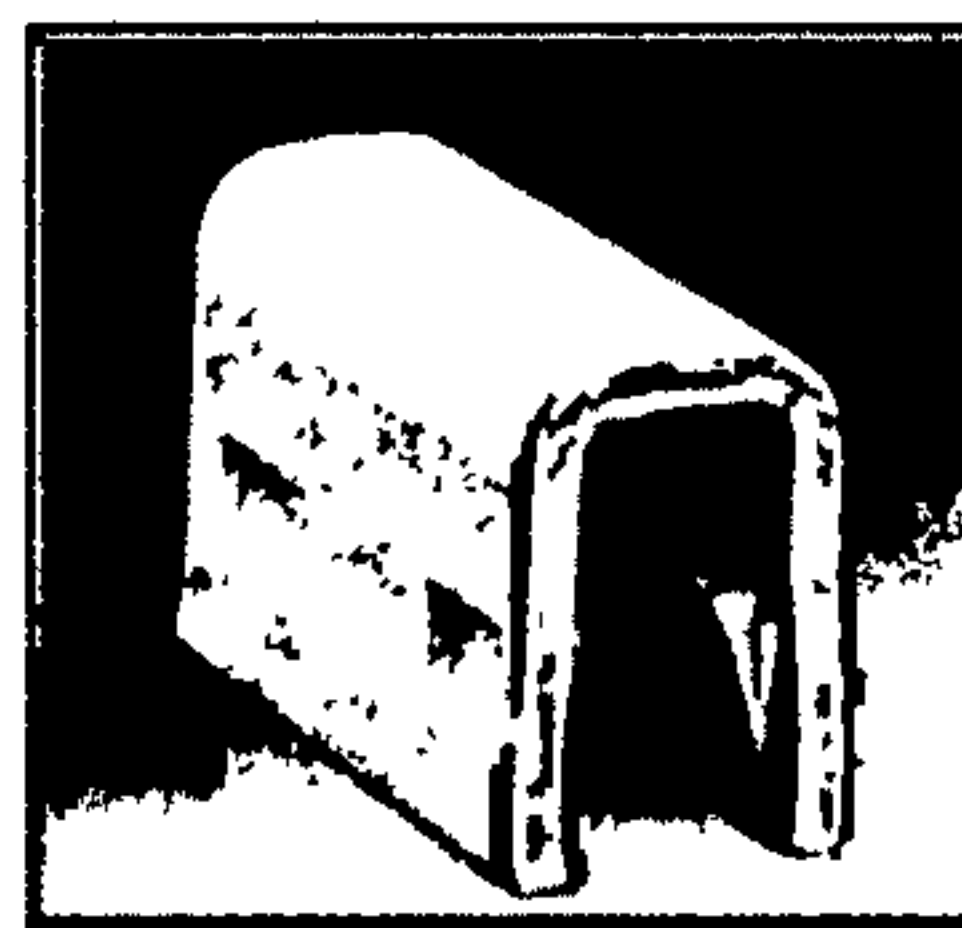


Figure 6 The U-Clip Connection Device

Optional Anchoring of Units

The GeoPave units can be fixed in-place with 0.5 in (13 mm) #4 rebar to prevent movement of the units. Anchoring may be necessary if the GeoPave units are placed on a slope (5-10%).

The anchors can be driven through the cell-wall vent holes either in the middle of the GeoPave units or along the perimeter as required.

Anchoring units in-place should occur after installation of all the units within the defined area.

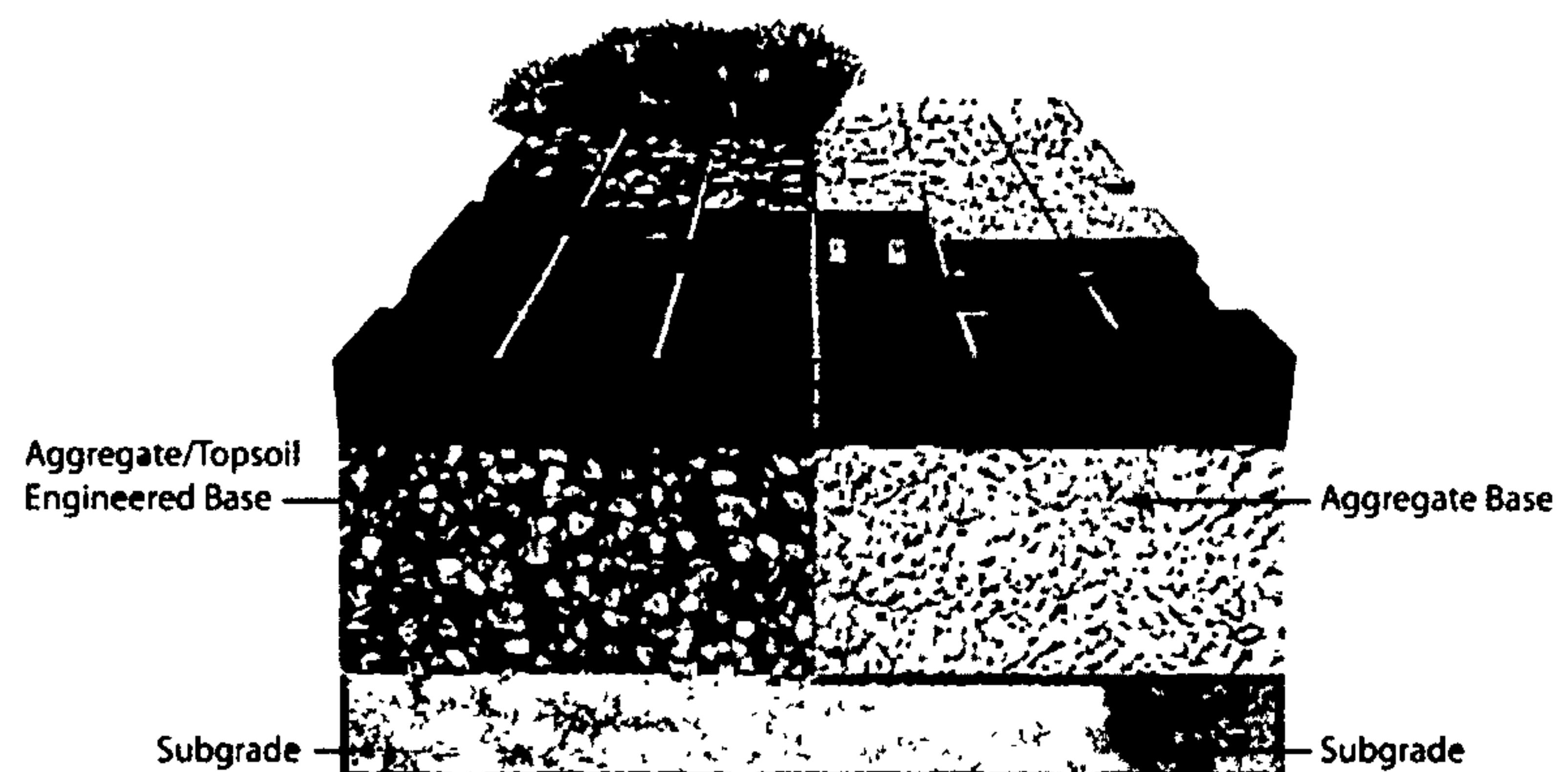


Figure 7 Optional Stake Anchoring

***Infilling the GeoPave Unit***

Infill the GeoPave units with the specified material for the intended application. Infilling should take place immediately after the units are installed to minimize movement of the units.

Infill shall be placed with each successive pile of aggregate or aggregate/topsoil mixture to be placed at the edge of previously filled GeoPave units and spread with a skid steer, small tractor or small loader. Spread the infill material uniformly over the units. Hand raking will be performed to assure that the aggregate fill is at the top of the cell walls.

Follow procedures for applying seed or sod. No specific compaction will be required, but traffic will allow for the slight settlement of the infill material under ordinary use.

Upward buckling of the GeoPave area is generally not an issue if the units have been installed using the recommended laying patterns and infilled appropriately.

Seed or Sod for Vegetated Systems

Once the aggregate/topsoil engineered mixture is evenly spread in the GeoPave units, either grass seed or sod may be applied. If using sod, the GeoPave units should be under filled by 1.0 inch (25 mm) to allow room to seat or press the sod within the GeoPave units.

Follow good seeding, fertilizing, and water procedures for turf establishing based on regional practices.

Delineation for Vegetated Systems

With vegetated systems, once healthy turf has been established, the GeoPave structure will have minimal visibility when good turf maintenance practices are followed. Delineation may be desirable to create visibility for access lanes. Delineation methods include in-ground curbing, above-ground curbing, shrubbery or vegetation, perimeter lighting or delineation markers.

Maintenance**Aggregate Surface Wear Course**

When the pavement surface is aggregate, the surface should be inspected from time to time to identify signs of slight cell infill loss. If cell infill loss occurs, additional infill material should be added.

Vegetated Surface

When the pavement surface is vegetation, lawn care should follow normal watering, fertilizing and mowing procedures. Vegetated surfaces are intended for infrequent or occasional traffic with a maximum H-10 loading. The pavement should be monitored to ensure traffic frequency and loading does not exceed the pavement design.

Snow Removal

If required, snow removal should be done using one of the following basic procedures:

- Keep a metal edged plow blade a minimum of 1.0 in (25 mm) above the surface during plowing operations, or
- Use a plow blade with a flexible rubber edge, or
- Use a plow blade with skids on the lower outside corners so that the plow blade does not come in direct contact with the porous pavement system.

When deeper ground freeze occurs, the system functions as a typical hard pavement surface. If a sharp metal plow-blade comes in direct contact with the surface during plowing, any portion of the GeoPave system that protrudes above the normal surface level could be damaged or removed by the blade.



Estimating Time and Cost of Installation

Typical Crew Size and Responsibilities

- 2 Crew to set the GeoPave units in place.
- 2 Crew to spread and level the specified infill
- 1 Equipment operator for the front-end loader.

NOTE: Adding or subtracting one or two people to the crew may result in a cost-effective productivity increase depending on local work efficiencies

Equipment Needed and Purpose

- Saws, U-clips (may be purchased from Presto's distributors/representatives) and anchors (if required) – all or some of these are used for cutting and securing the GeoPave units as required per the plans or as needed during construction.
- A small tractor/backhoe or loader for infilling of the GeoPave units.
- Rakes and shovels for final leveling of the infill material.

Typical Construction Sequences and Times

Productivity is a variable and the ranges below are typical. Select an installation rate through personal experience or after discussion of project details with Presto or one of its qualified distributors.

- 1. Place the GeoPave units on the prepared base and install connecting U-clips 60-75 units/man-hr
- 2. Fill the in-place GeoPave units using the small loader or backhoe to evenly distribute the specified infill. 100 - 120 units/man-hr
- 3. Level the infill using rakes and shovels. If aggregate, overfill the top of the cell walls 0.5 in (13 mm). If aggregate/topsoil mixture, rake flush with the top of the cell walls. 75 - 100 units/man-hr

NOTE: The above three sequences can be in progress at the same time if workspace is adequate.

Table 2 Approximate Quantities of Infill Material Required for GeoPave Unit

Depth of unit	Volume of Aggregate Required per unit	Volume of Aggregate Required per 1000 ft ² (100 m ²)
2 in (50 mm)	0.0293 yd ³ (0.0224 m ³)	5.447 yd ³ (4.48 m ³)

General Notes

- 1. The tractor/backhoe loader must be sized so it can distribute the fill material per time/productivity requirements
- 2. Experience shows that the above installation rates would be considered typical rates of installation.
- 3. As is with all construction operations, placement of material stockpiles, crew productivity, jobsite conditions, special installation requirements such as cutting and custom fitting of the GeoPave units, etc. significantly affect overall productivity, therefore actual results may be different than the estimates above.

**Total Time and Materials Required**

Area of installation = length x width of site

() ft (m) long x () ft (m) wide = () ft² (m²) Area

GeoPave units required = ft² (m²) (Area ÷ 5.38 ft² (0.50 m²)/unit
[the GeoPave unit is 20 in x 40 in (0.50 m x 1.00 m) nominal]

() ft² (m²) Area ÷ 5.38 ft² (0.50 m²)/unit = () units

Man-hr required for installation of GeoPave units = GeoPave units ÷ 75 units/man-hr

() units ÷ 75 units/man-hr = () man-hr

Infill material quantities = GeoPave units x yd³ (m³)/unit (see Table 2)

() units x () yd³ (m³)/unit = () yd³ (m³)

Man-hr required for placing infill = GeoPave units ÷ 120 units/man-hr

() units ÷ 120 units/man-hr = () man-hr

Man-hr required for leveling of infill = GeoPave units ÷ 100 units/man-hr

() units ÷ 100 units/man-hr = () man-hr

Man-hr required for placing base material = GeoPave units ÷ 100 units/man-hr

() units ÷ 100 units/man-hr = () man-hr

Total Cost of Time and Materials

GeoPave unit cost \$ /unit x units = \$

Cost of Infill \$ /yd³ (m³) x yd³ (m³) = \$

Cost of Labor \$ /man-hr x man-hr = \$

Cost of Equip. Operator \$ /man-hr x man-hr = \$

Cost of Front-end Loader \$ /hr x hr = \$

APPROXIMATE TOTAL COST \$

***Limited Warranty***

Presto Geosystems warrants each GeoPave® unit which it ships to be free from defects in materials and workmanship at the time of manufacture. Presto's exclusive liability under this warranty or otherwise will be to furnish without charge to Presto's customer at the original f.o.b. point a replacement for any unit which proves to be defective under normal use and service during the **10-year period** which begins on the date of shipment by Presto. Presto reserves the right to inspect any allegedly defective unit in order to verify the defect and ascertain its cause.

This warranty does not cover defects attributable to causes or occurrences beyond Presto's control and unrelated to the manufacturing process, including, but not limited to, abuse, misuse, mishandling, neglect, improper storage, improper installation or improper application. Presto makes no other warranties, express or implied, written or oral, including, but not limited to, any warranties or merchantability or fitness for any particular purpose, in connection with the GeoPave® system. In no event shall Presto be liable for any special, indirect, incidental or consequential damages for the breach of any express or implied warranty or for any other reason, including negligence, in connection with the GeoPave system. Contact Presto Products Company, Ph: 800-548-3424; 920-738-1328 or Email: info@prestogeo.com.

Disclaimer

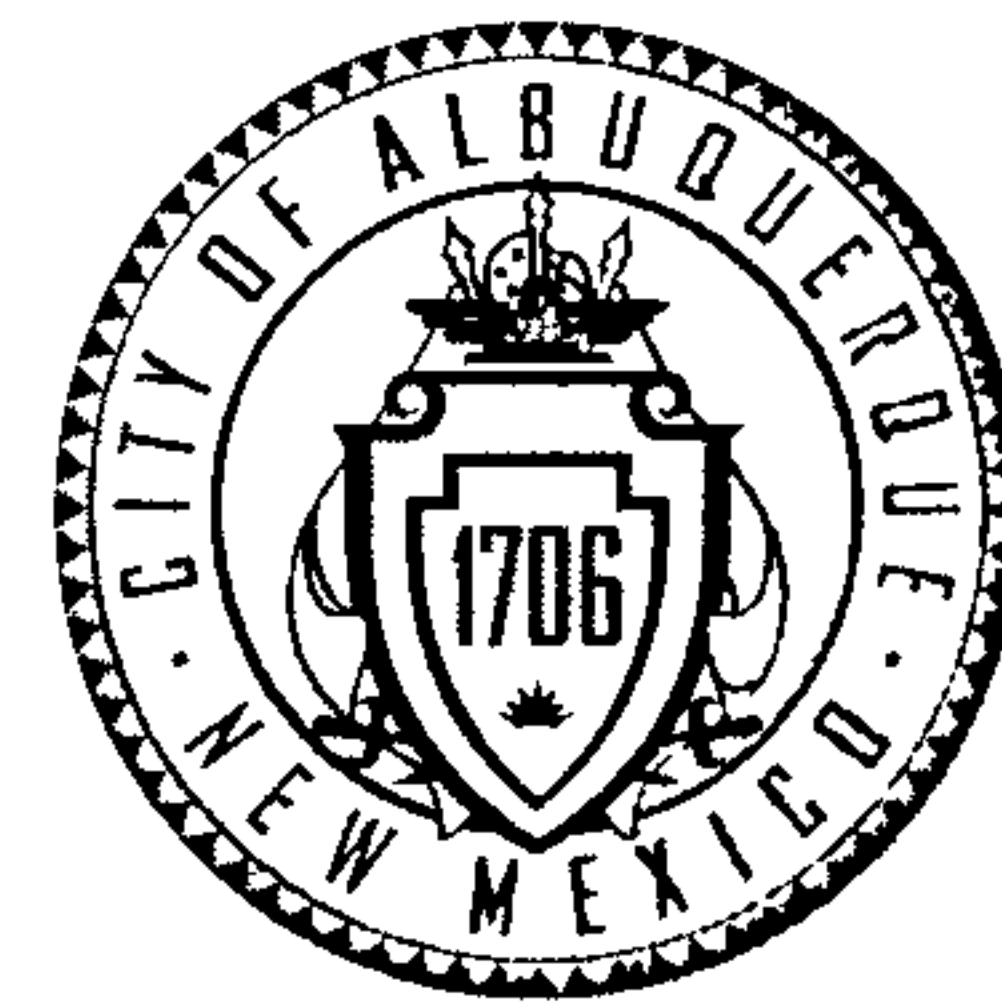
This document has been prepared for the benefit of customers interested in the GeoPave Porous Pavement System. It was reviewed carefully prior to publication. Presto assumes no liability and makes no guarantee or warranty as to its accuracy or completeness. Final determination of the suitability of any information or material for the use contemplated, or for its manner of use, is the sole responsibility of the user.

Project specifications take precedence over all manufacturers' recommendations.

Geosystems® and GeoPave® are registered trademarks of Reynolds Presto Products Inc. The GeoPave system is patent pending.

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



November 11, 2014

Gilbert Aldaz, P.E.

Applied Engineering & Surveying Inc.

1605 Blair Drive NE

Albuquerque, NM 87112

Richard J. Berry, Mayor

RE: **Cuatro Development**
Grading & Drainage Plan
Engineer's Stamp Date 10-27-2014 (File: J14D173)

Dear Mr. Aldaz:

Based upon the information provided in your submittal received 10-27-14, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

1. ✓ Revise narrative to state that an unplatted lot bounds the west property line. It is technically not an alley.
2. ✓ Use larger scale of Flood Insurance Rate Map to show limits of flood plain (SFHA) and proximity to site. It should be clear that site is adjacent to a SFHA Zone AO, and the limits of SFHA Zone AO on 4th and Kinney should be clearly shown on Sheet 2.
3. ✓ Show property line.
4. Water harvesting areas should not be within 10' of buildings. All runoff must discharge away from building foundations.
5. Where does refuse area drain to? Provide positive drainage .
6. All connections to existing SD infrastructure needs to be field verified. There is conflicting information on the City's GIS website, the City Storm Facilities Maps, and the survey data shown on the plans. It is difficult to determine which is accurate, as there are errors in all 3 sources. The survey data on the plans is missing a SD manhole just about 70' south of the Kinley and 4th intersection.
7. There is no objection to replacing the Type A inlet at SE corner of site to with a Manhole. Is the existing lateral to be replaced as well? If not, add note stating that it is to remain and be protected.
8. Plan shows a new ManHole on Summer, just west of an existing MH. Call out new MH with a keyed note. The new 18" lateral is conflicting with the Water MH.
9. How do roof leaders which are not along the west side of the building discharge to the west side of property? Is there a concrete channel? Piping system? Show conveyance system.
10. ~~Runoff from decks cannot discharge to public sidewalk below.~~ since alt. walkway
11. Flow arrows at the exterior spaces between the buildings point towards the building and should discharge towards the west.
12. Keyed notes 8 and 9 refer to the Site Plan. Provide Site Plan or change reference.

PO Box 1293

Albuquerque

New Mexico 87103

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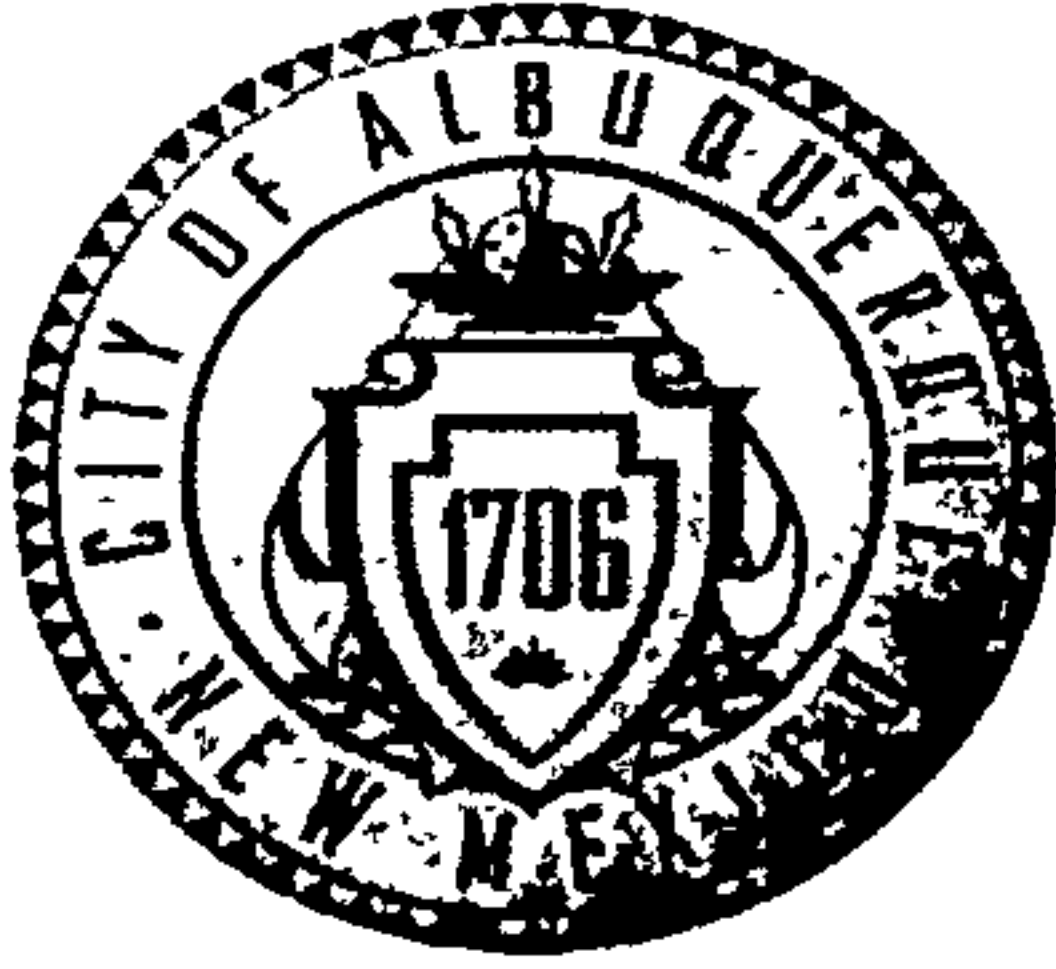
If you have any questions, you can contact me at 924-3695.

Sincerely,

A handwritten signature in black ink, appearing to read "Rita T. Harmon". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

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

Orig: Drainage file
c.pdf Addressee via Email



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

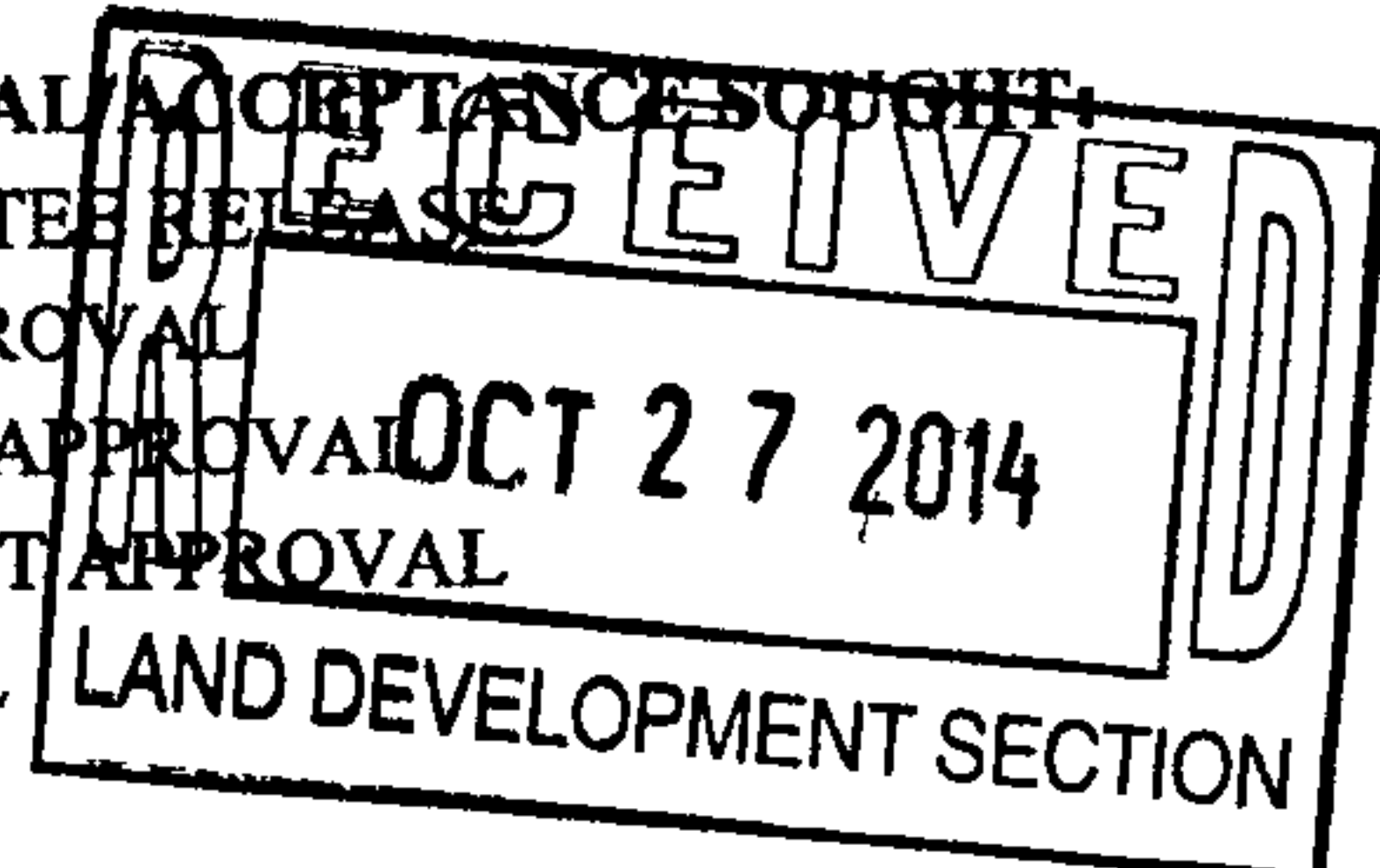
Project Title: Cuatro Development Building Permit #: _____ City Drainage #: J14D173
DRB#: 1007059 EPC#: _____ Work Order#: _____
Legal Description: Lots 1 thru 12, Block 2, Paris Addition, Town of Abq. Grant
City Address: 4th Street, Between Summer Ave & Kinley Avenue, West of 4th
Engineering Firm: Applied Engineering & Surveying Inc. Contact: Gilbert Aldaz
Address: 1605 Blair Drive NE, Albuquerque, NM 87112
Phone#: 505-480-8125 Fax#: _____ E-mail: galda247@yahoo.com
Owner: Greater Albuquerque Housing Contact: Louis Kolker
Address: 320 Gold Avenue SW, Albuquerque, NM 87112
Phone#: 505-262-9697 Fax#: _____ E-mail: _____
Architect: Integrated Design & Architect Contact: _____
Address: 906 1/2 Park Avenue SW, Albuquerque, NM 87102
Phone#: 505-243-3499 Fax#: _____ E-mail: bob@integrateddesignarch.com
Surveyor: Surv Tek, Inc. Contact: Russ Hugg
Address: 9384 Valley View Drive, Albuquerque, NM 87114
Phone#: 505-897-3366 Fax#: 505-897-3377 E-mail: russhugg@survtek.com
Contractor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN 1st SUBMITTAL
☒ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERT (TCL)
☐ ENGINEER'S CERT (DRB SITE PLAN)
☐ ENGINEER'S CERT (ESC)
☐ SO-19
☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ SIA/FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. FOR BLDG. PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ GRADING CERTIFICATION
☐ SO-19 APPROVAL
☐ ESC PERMIT APPROVAL
☐ ESC CERT. ACCEPTANCE
☐ OTHER (SPECIFY) _____



WAS A PRE-DESIGN CONFERENCE ATTENDED: ☒ Yes ☐ No Copy Provided

DATE SUBMITTED: 10/27/14

By: Gilbert Aldaz Curtis Cherne

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to 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 Plan:** 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

NEXT SHEET NO. H-14



Subject: FW: RE: J14/D173 Cuatro Drainage Submittal
From: Gilbert Aldaz (galdaz47@yahoo.com)
To: ksaldaz@yahoo.com;
Date: Monday, October 27, 2014 9:24 AM

Sent from Yahoo Mail for iPhone

----- Begin Forwarded Message -----

From: Harmon Rita T.<'rharmon@cabq.gov'>
Date: Oct 27, 2014, 8:43:21 AM
To: 'Gilbert Aldaz'<'galdaz47@yahoo.com'>
Subject: RE: J14/D173 Cuatro Drainage Submittal

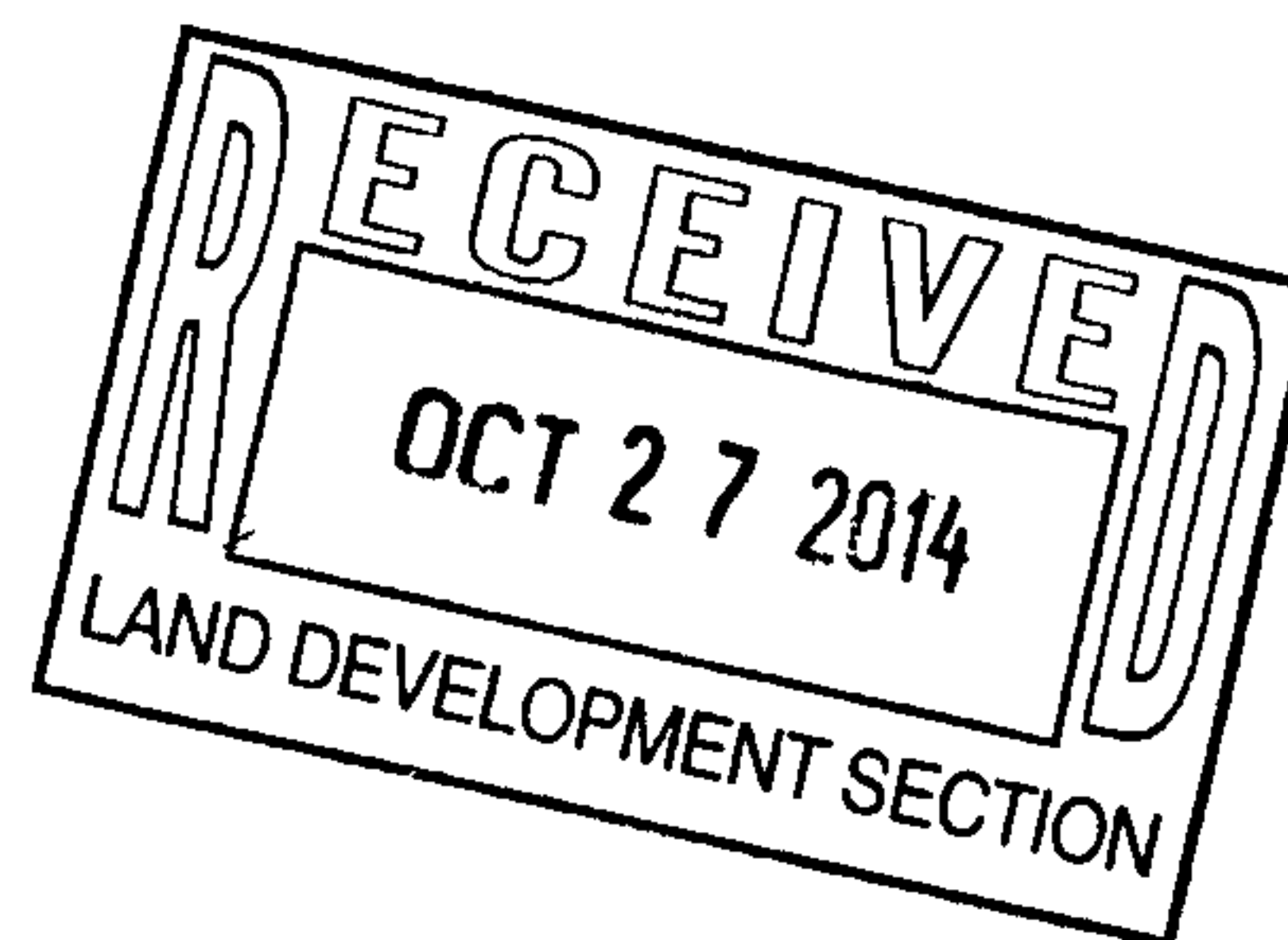
Gilbert,

Thank you, and bring a copy of this email when you submit your plans.

Rita Harmon, P.E.

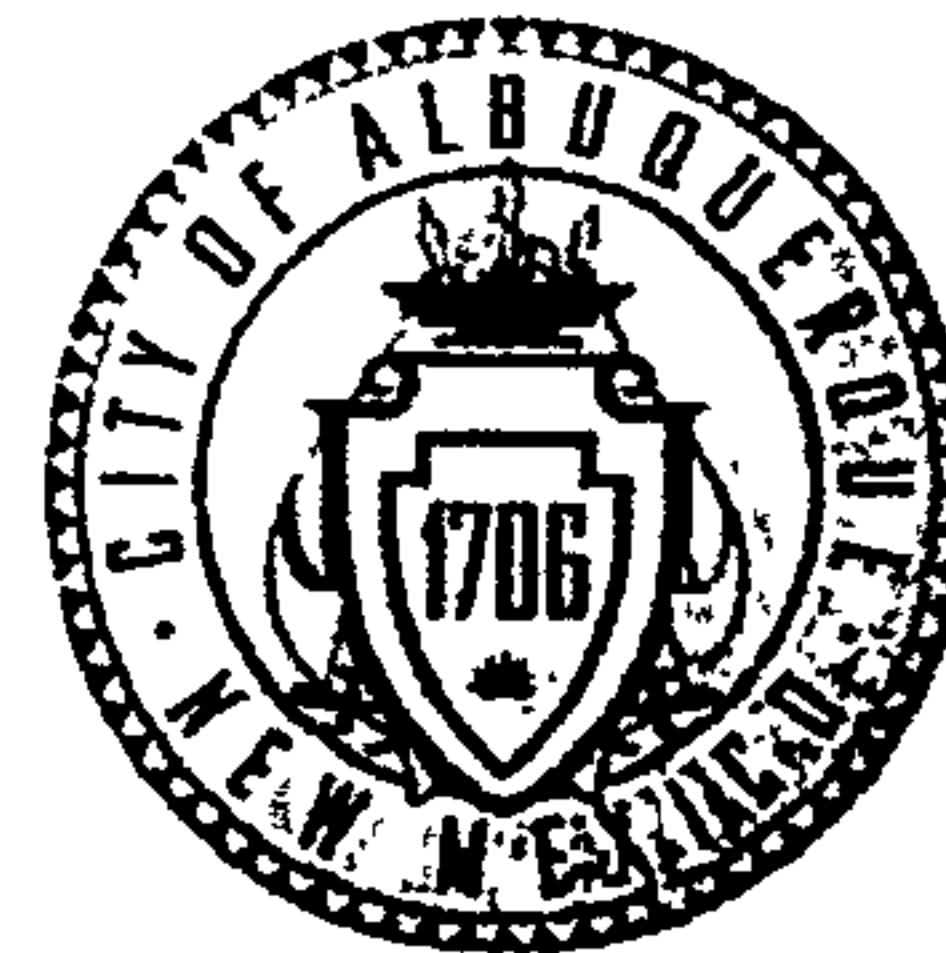
Planning Department

505-924-3695



CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



September 26, 2014

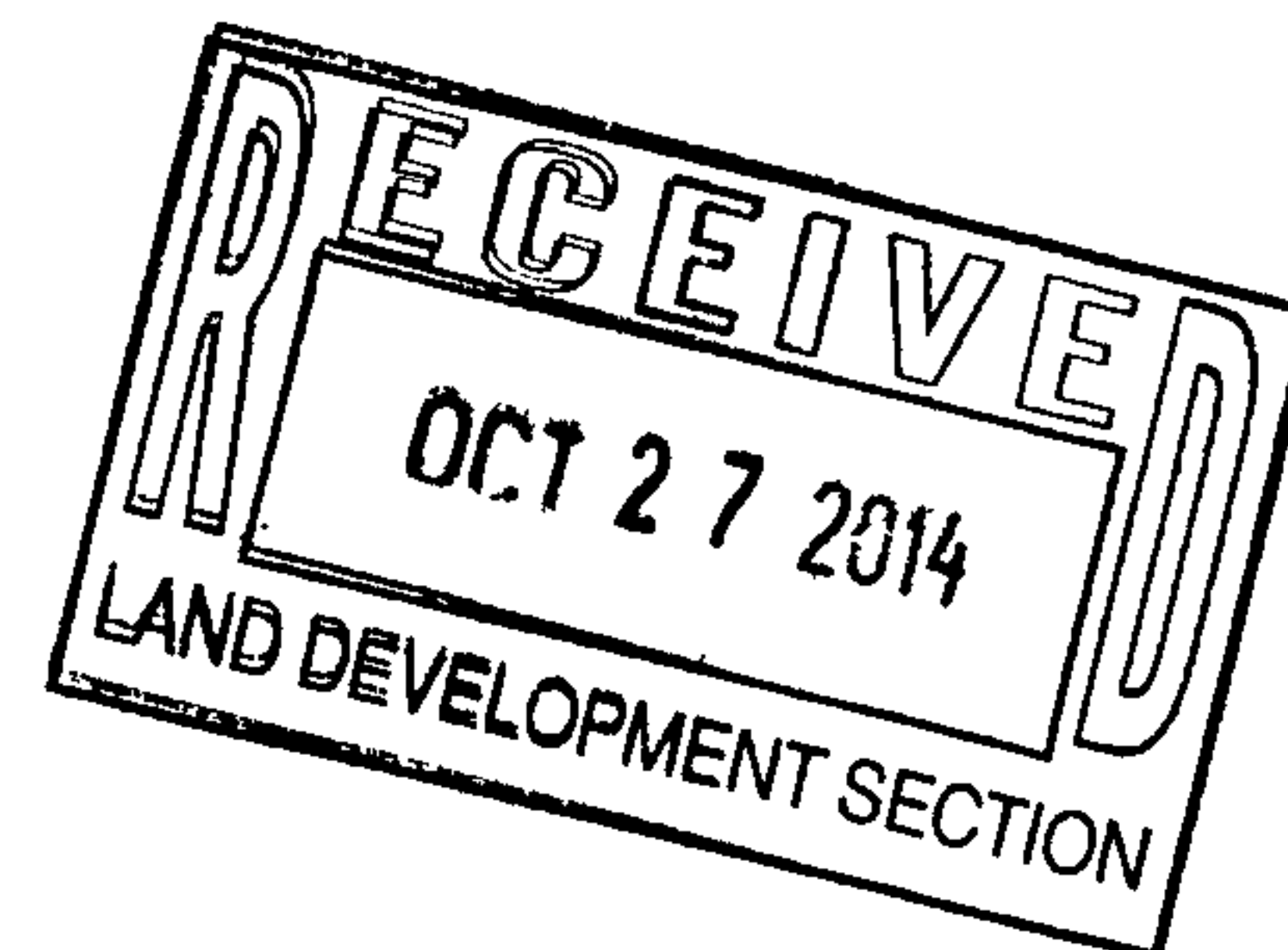
Gilbert Aldaz, P.E.

Applied Engineering & Surveying Inc.

1605 Blair Drive NE

Albuquerque, NM 87112

Richard J. Berry, Mayor



RE: **Cuatro Development
Grading & Drainage Plan
Engineer's Stamp Date 9-17-2014 (File: J14D173)**

Dear Mr. Aldaz:

Based upon the information provided in your submittal received 9-17-14, the above referenced plan cannot be approved for Preliminary Plat until the following comments are addressed:

- ✓ 1. Street names are not legible on Vicinity Map. **MADE NAMES LARGER - NO, BUT OK**
- ✓ 2. Use larger scale of Flood Insurance Rate Map to show limits of flood plain (SFHA) and proximity to site. **INCREASED SCALE OF FIRM - barely larger**
- ✓ 3. ✓ Renumber sheet 1-4, with the Erosion Control Plan being separate from the Grading and Drainage Plan Set. **DONE, SEE SHT NO. 6.**
- ✓ 4. City Storm Facilities Maps show there are two (2) storm drains in 4th Street, with the inlets midway between Kinley and Summer tying into the further storm drain. On the same note, records do not show the size of the SD along Kinney, and the SD in Summer is noted at "UNKNOWN". These Storm Drains will need to be field verified during construction. **SEE NOTE 11 ON SHT 2 & 3 ADDED**
- ✓ 5. ✓ Presently there is a Single Type-A inlet at SE corner of site, and is proposed to be replaced with a Single Type-C inlet, which has less capacity. In order to not reduce the capacity of the inlets, it must remain a Type-A. **SEE NOTE 1, SHT 3.**
- ✓ 6. ✓ The minimum size of laterals is 18" dia. **SEE NOTE 2, SHT 2 & 3**
- ✓ 7. ✓ Since laterals cannot tie into manholes at an acute angle a new manhole is needed at the 4th street connection. **SEE NOTE 3, REMOVE EXIST INLET REPLACE W/ MH?**
- ✓ 8. ✓ The manhole in Kinley and 4th is most likely a 4' dia MH, and would not be able to accommodate the three Storm Drains as shown on the plan. A new manhole will be needed in 15" diameter SD. **ADDED MH, SEE NOTE 12, SHT 2.**
- ✓ 9. Turn off architectural layers, showing only features pertinent to the drainage plan. Show only the roof limits and the building envelope limits only at the ground level. Are there exterior spaces between the buildings? If so, indicate with flow arrows the intended drainage scheme. **ADJUSTED LAYERS, ADDED ROOF & 1ST FLOOR NOTES, LANDSCAPING AND FLOW ARROWS**
- ✓ 10. Note features such as walls, columns, planters and curb adjacent to the sidewalk. What are blank areas in the porous pavement? What is the feature shown in NW corner of site? Trash enclosure? **ADDED NOTES ADJACENT TO SIDEWALK A TRASH ENCLOSURE, ATTACHED**
- ✓ 11. Indicate location of roof drains, if any. **SITE PLAN FOR INFORMATION**

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

Changed
Comment

- ✓ 12. ~~ok~~ Revise Proposed Conditions in the narrative. It incorrectly states that the outfall is to a Storm Drain system that connects to tanks. If there are tanks, indicate so. **REVISED**
- ✓ 13. ~~ok~~ Revise drainage calculation #9 so that entire area is used to calculate the first 1/2" volume. It is only the "First Flush" calculation that uses Treatment D area only. **DONE**
- ✓ 14. Keyed notes 8 and 9 refer to the Site Plan. Provide Site Plan or change reference. **ATTACHED**
- ✓ 15. Show elevation of existing grade west of property line, beyond block wall. **ADDED SITE PLAN**
- ✓ 16. Provide Manufacture's specifications on the Geopave Porous Pavement. **SEE ATTACHED**
- ✓ 17. Property is defined as Lots 1 thru 12, but Lot 6 appears to be a part of the G&D plan. Is Lot 6 included? **ALL LOTS INCLUDED WILL SEND PDF OF TOPO.**
- ✓ 18. Revise narrative to state that private lots predominately bound west property line, and the dead end of an alley. — *The alley part of the 112 lots*

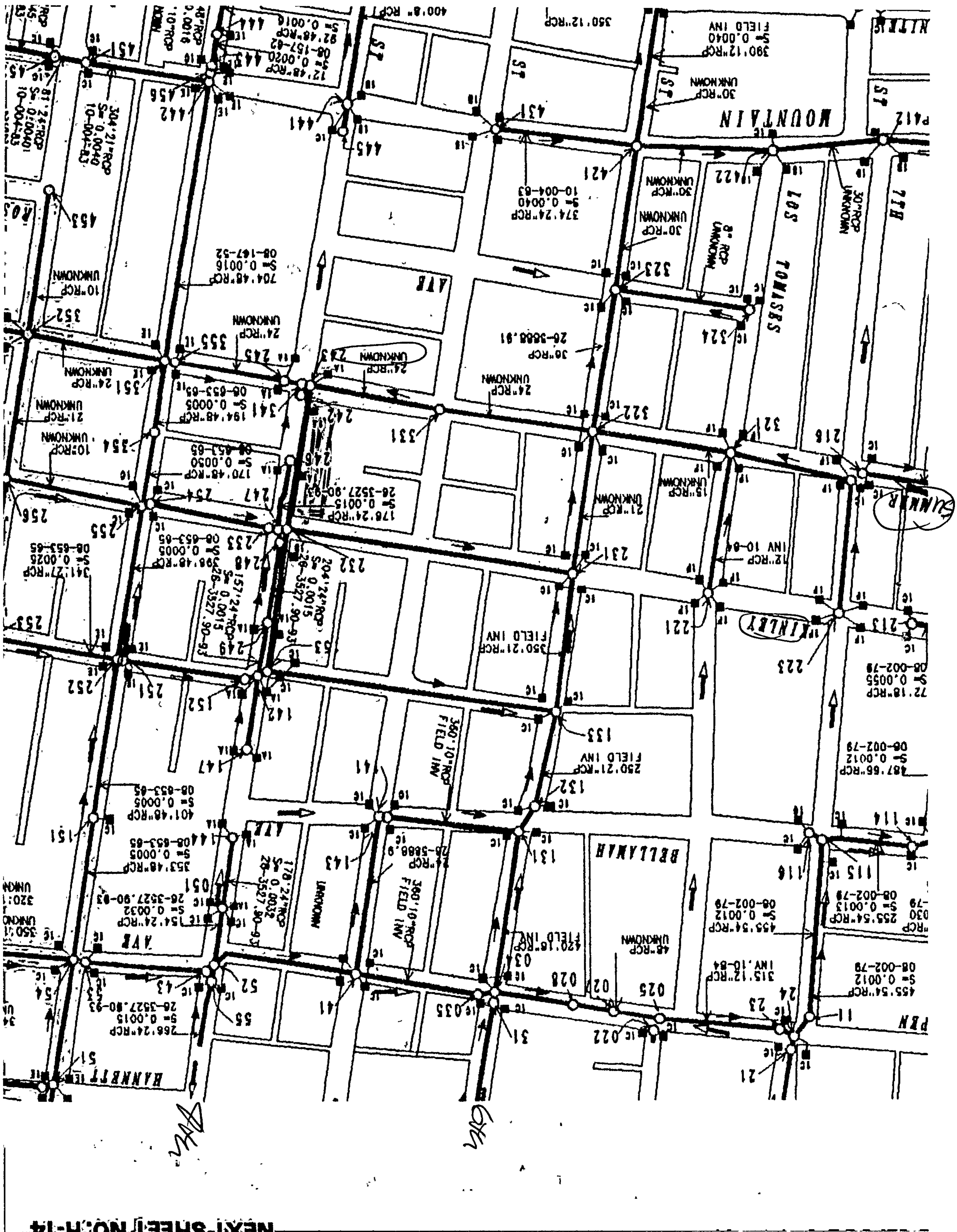
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Sincerely,



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

Orig: Drainage file
c.pdf Addressee via Email



#13D57 Samu11

1 1 1

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



September 26, 2014

Gilbert Aldaz, P.E.

Applied Engineering & Surveying Inc.

1605 Blair Drive NE

Albuquerque, NM 87112

Richard J. Berry, Mayor

RE: **Cuatro Development
Grading & Drainage Plan
Engineer's Stamp Date 9-17-2014 (File: J14D173)**

Dear Mr. Aldaz:

Based upon the information provided in your submittal received 9-17-14, the above referenced plan is approved for Preliminary Plat. A separate approval is required for Building Permit and those comments have been provided to you via the previous letter.

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

PO Box 1293

Albuquerque

New Mexico 87103

Sincerely,

Rita Harmon, P.E.

Senior Engineer, Planning Dept.

Development Review Services

www.cabq.gov

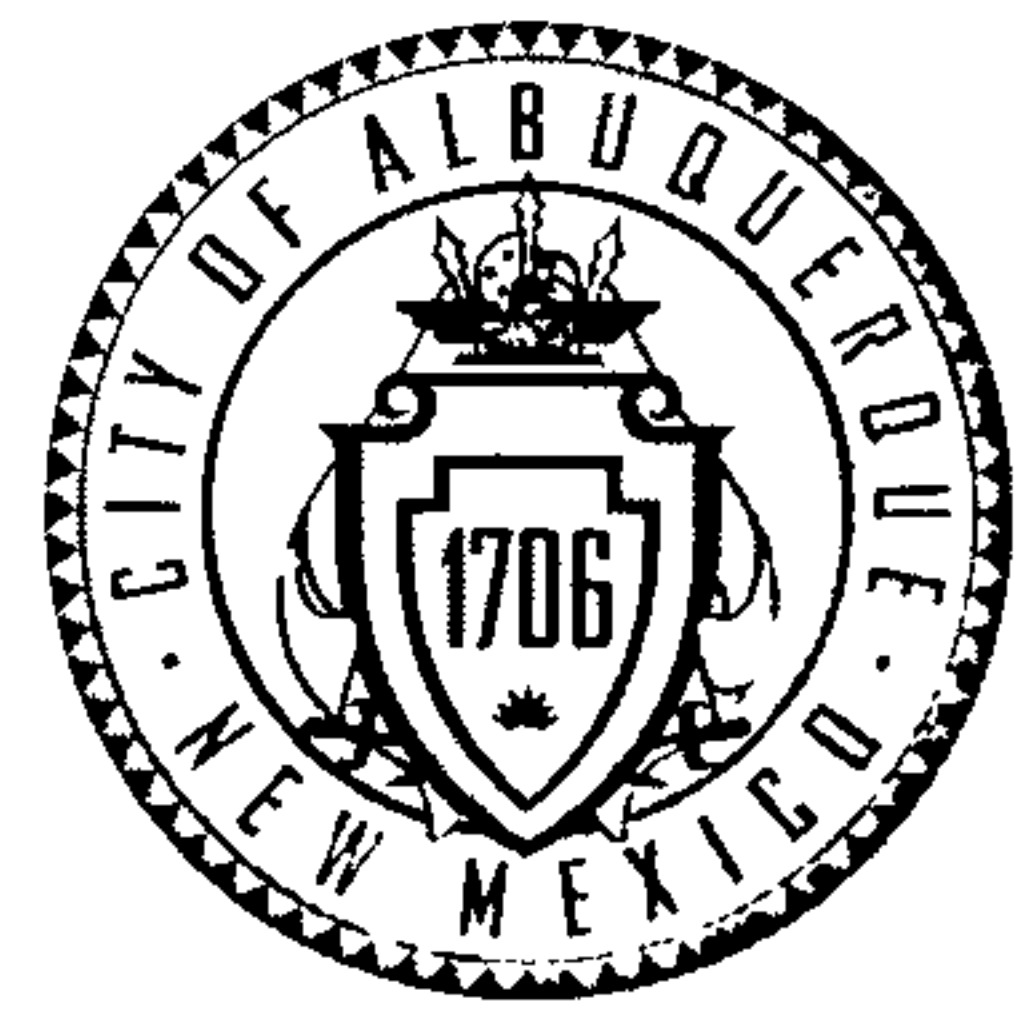
Orig: Drainage file

c.pdf Addressee via Email, Monica Ortiz

*Note:
Comments from
Previous letter need to
be addressed prior to
building permit - RTH*

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



September 26, 2014

Gilbert Aldaz, P.E.

Applied Engineering & Surveying Inc.

1605 Blair Drive NE

Albuquerque, NM 87112

Richard J. Berry, Mayor

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11. Indicate location of roof drains, if any.

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12. Revise **Proposed Conditions** in the narrative. It incorrectly states that the outfall is to a Storm Drain system that connects to tanks. If there are tanks, indicate so.
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14. Keyed notes 8 and 9 refer to the Site Plan. Provide Site Plan or change reference.
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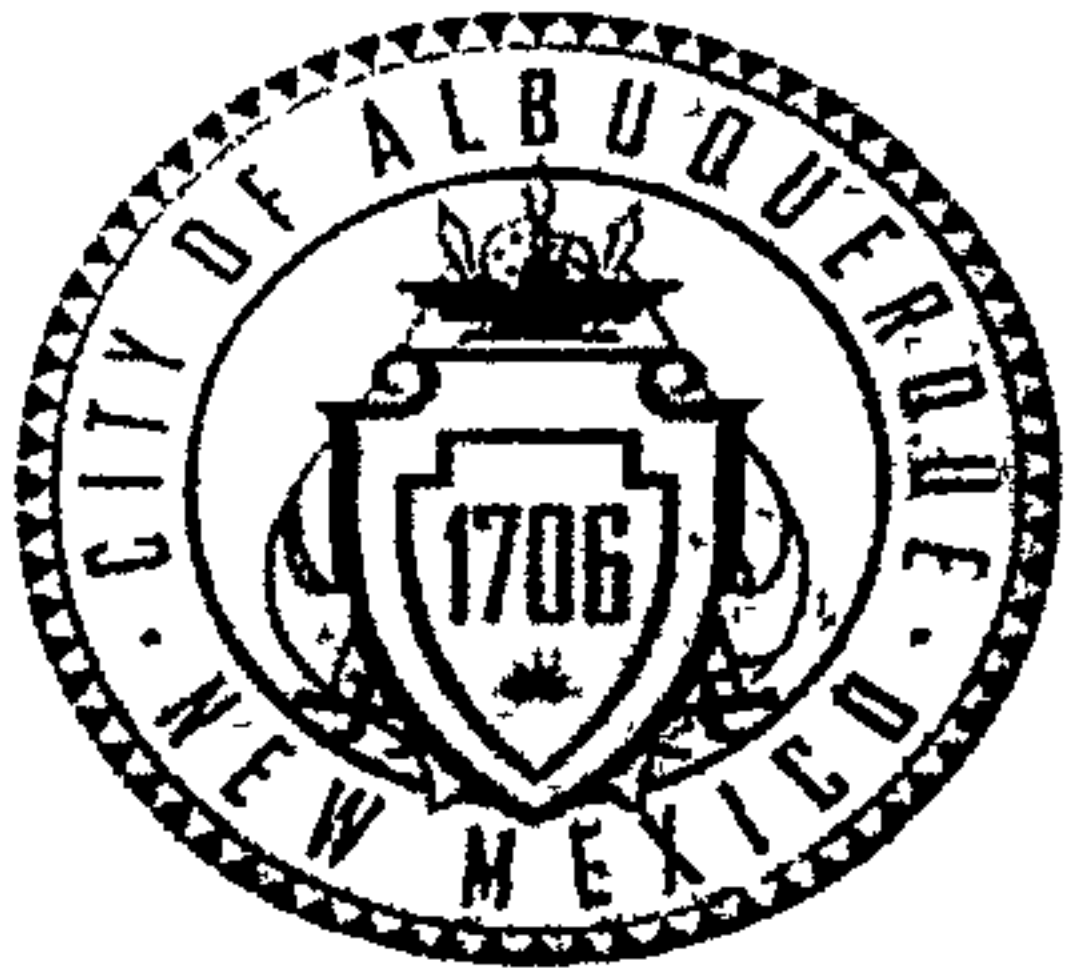
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Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf Addressee via Email



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

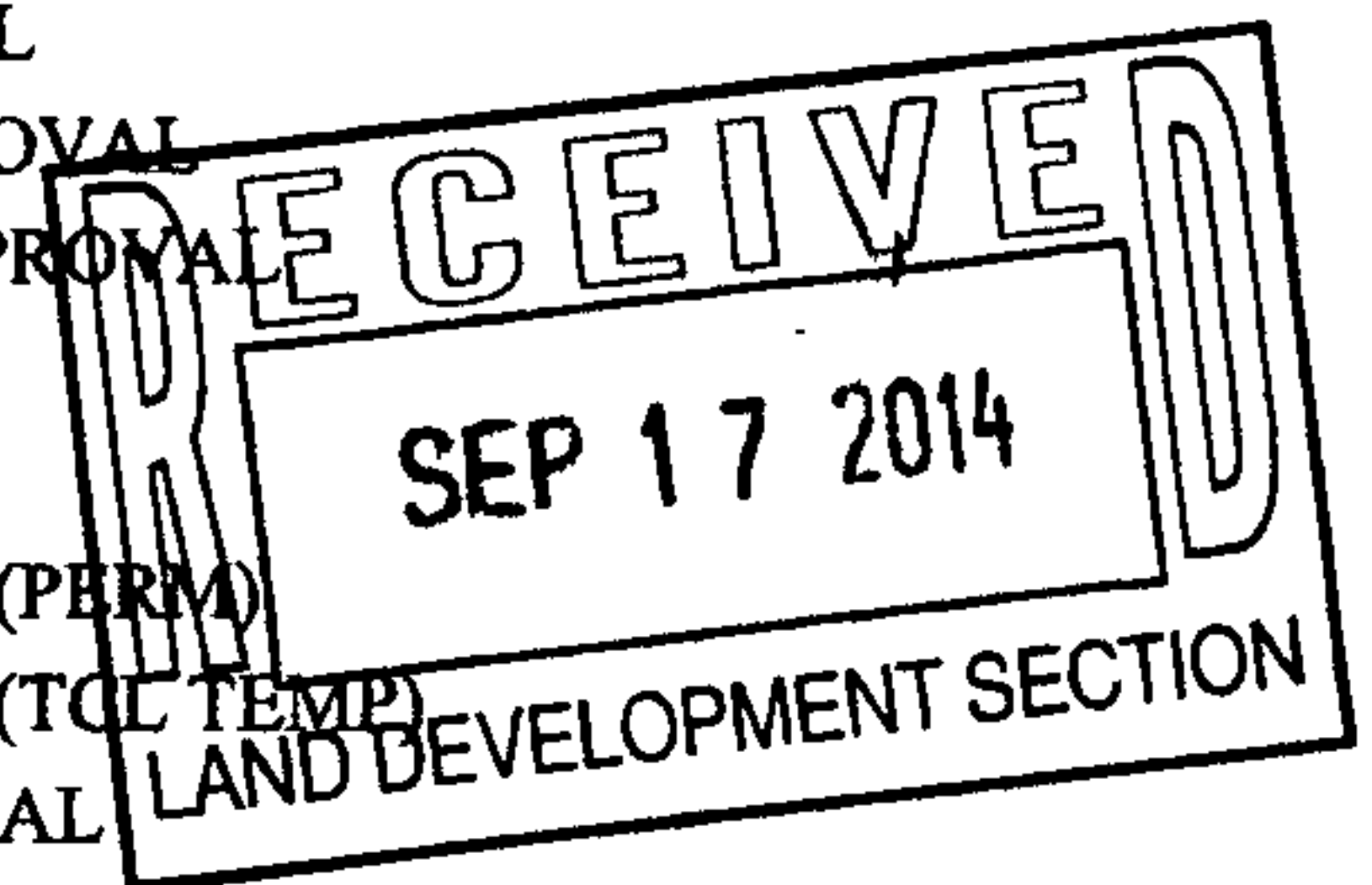
Project Title: Cuatro Development Building Permit #: _____ City Drainage #: J14D173
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: Lots 1 thru 12, Block 2, Paris Addition, Town of ABQ. GRANT
City Address: 4th Street, Between Summer Ave & Kinley Avenue, West of 4th
Engineering Firm: Applied Engineering & Surveying Inc. Contact: Gilbert Aldaz
Address: 1605 Blair Drive NE, Albuquerque, NM 87112
Phone#: 505-480-8125 Fax#: _____ E-mail: galda247@yahoo.com
Owner: Greater Albuquerque Housing Contact: Louis Kolker
Address: 320 Gold Avenue SW, Albuquerque, NM 87112
Phone#: 505-262-9697 Fax#: _____ E-mail: _____
Architect: Integrated Design & Architect Contact: _____
Address: 906 1/2 Park Avenue SW, Albuquerque, NM 87102
Phone#: 505-243-3499 Fax#: _____ E-mail: bob@integrateddesignarch.com
Surveyor: Surv Tek, Inc Contact: Russ Hugg
Address: 9384 Valley View Drive, Albuquerque, NM 87114
Phone#: 505-897-3366 Fax#: 505-897-3377 E-mail: russhugg@survtek.com
Contractor: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☒ DRAINAGE PLAN 1st SUBMITTAL
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERT (TCL)
☐ ENGINEER'S CERT (DRB SITE PLAN)
☐ ENGINEER'S CERT (ESC)
☐ SO-19
☐ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☒ SIA/FINANCIAL GUARANTEE RELEASE
☒ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. FOR BLDG. PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ GRADING CERTIFICATION
☐ SO-19 APPROVAL
☐ ESC PERMIT APPROVAL
☐ ESC CERT. ACCEPTANCE
☐ OTHER (SPECIFY)

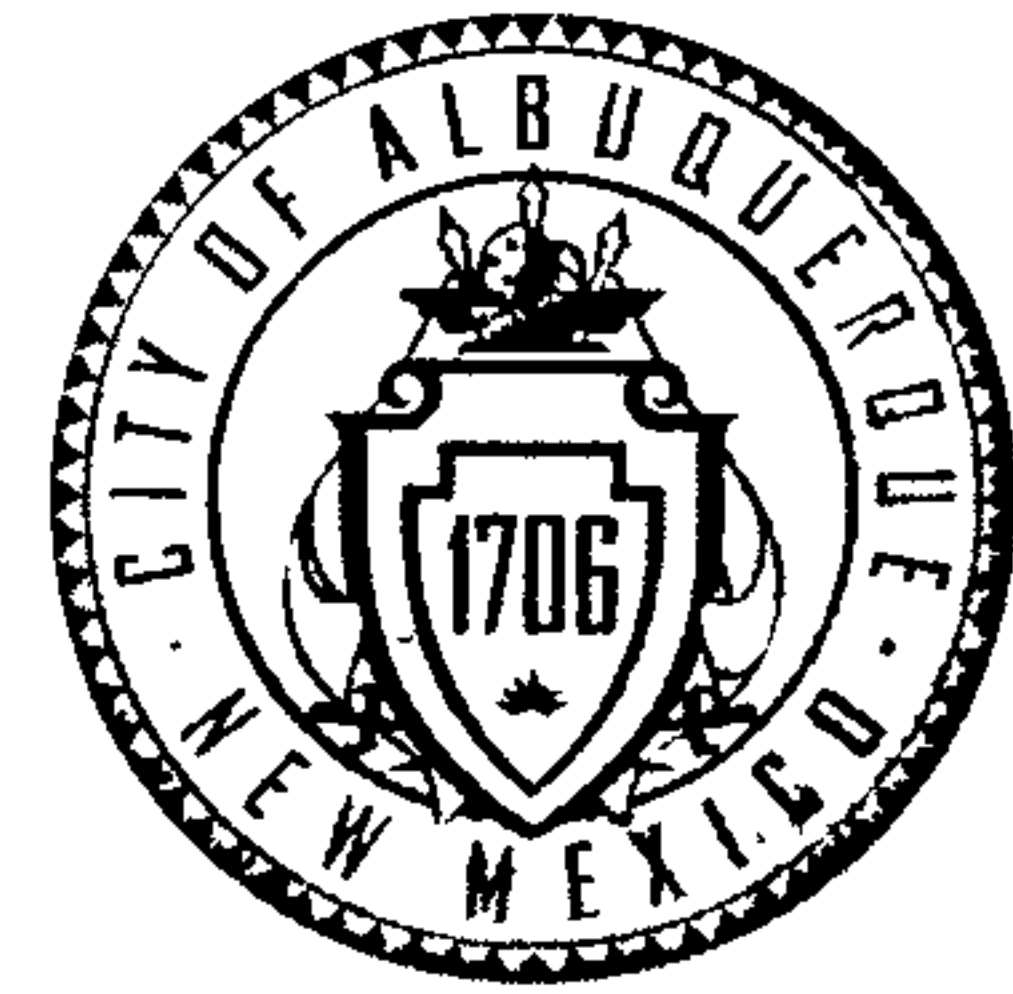


WAS A PRE-DESIGN CONFERENCE ATTENDED: ☒ Yes ☐ No Copy Provided Curtis Cherne
DATE SUBMITTED: 09-17-14 By: Gilbert Aldaz

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to 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 Plan:** 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

CITY OF ALBUQUERQUE



June 24, 2016

Kristin Stevens
Integrated Design & Architecture
906 ½ Park Ave., SW
Albuquerque, NM 87102

**Re: Cuatro
1319 4th St., NW
Request for Certificate of Occupancy- Transportation Development
Engineer's/Architect's Stamp dated 6-7-16 (J14-D173)
Certification dated 6-23-16**

Dear Ms. Stevens,

Based upon the information provided in your submittal received 6-23-16, Transportation Development has no objection to the issuance of a Permanent Certificate of Occupancy. This letter serves as a "green tag" from Transportation Development for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

If you have any questions, please contact Gary Sandoval at (505) 924-3675 or me at (505)924-3991.

Sincerely,

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services

\gs via: email
C: CO Clerk, File



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 1/2016)

Project Title: CUATRO Building Permit #: T201493017 Hydrology File #: J14/D173
DRB#: 14DRB-70332 EPC#: _____ Work Order#: 744381
Legal Description: TR A PLAT of TR A Quatro (being a REPL of LTS 1-12 BLK 2 PARIS ADDN)
City Address: 1319 4TH Street NW Albuquerque, New Mexico 87102

Applicant: Integrated Design & Architecture Contact: Kristin Stevens
Address: 906 1/2 Park Ave, SW Albuquerque, New Mexico 87102
Phone#: 505-243-3499 Fax#: 505-243-3583 E-mail: kristin@integrateddesignarch.com

Other Contact: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ AS-BUILT CERTIFICATION

☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR

☒ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ NEIGHBORHOOD IMPACT ASSESMENT (NIA)

☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ OTHER (SPECIFY) _____

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

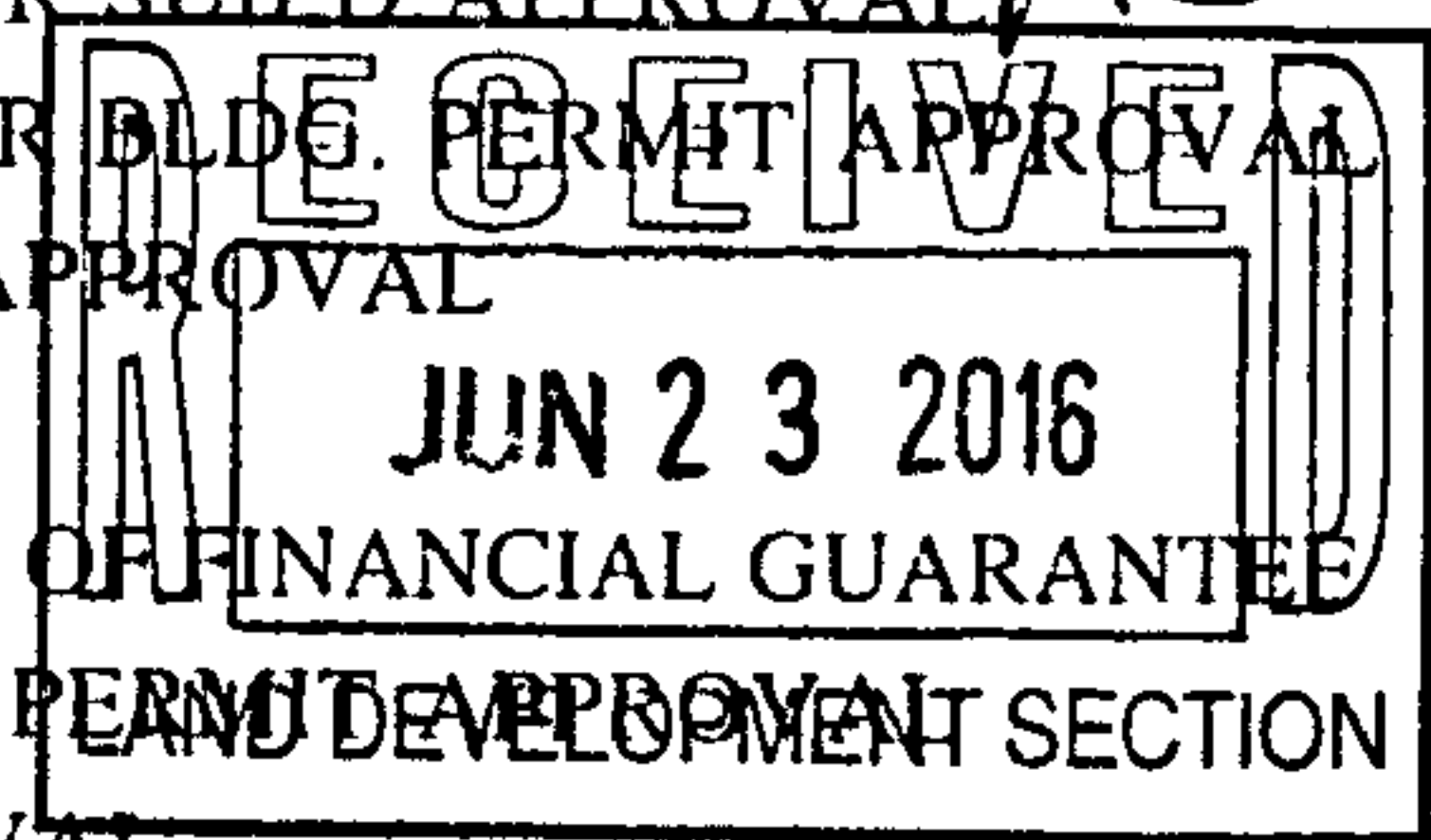
- ☐ BUILDING PERMIT APPROVAL
☒ CERTIFICATE OF OCCUPANCY
☐ GRADING/ESC PERMIT APPROVAL

☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL

☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR

☐ PRE-DESIGN MEETING?

☐ OTHER (SPECIFY) _____



IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

DATE SUBMITTED: June 23, 2016 By: Kristin Stevens

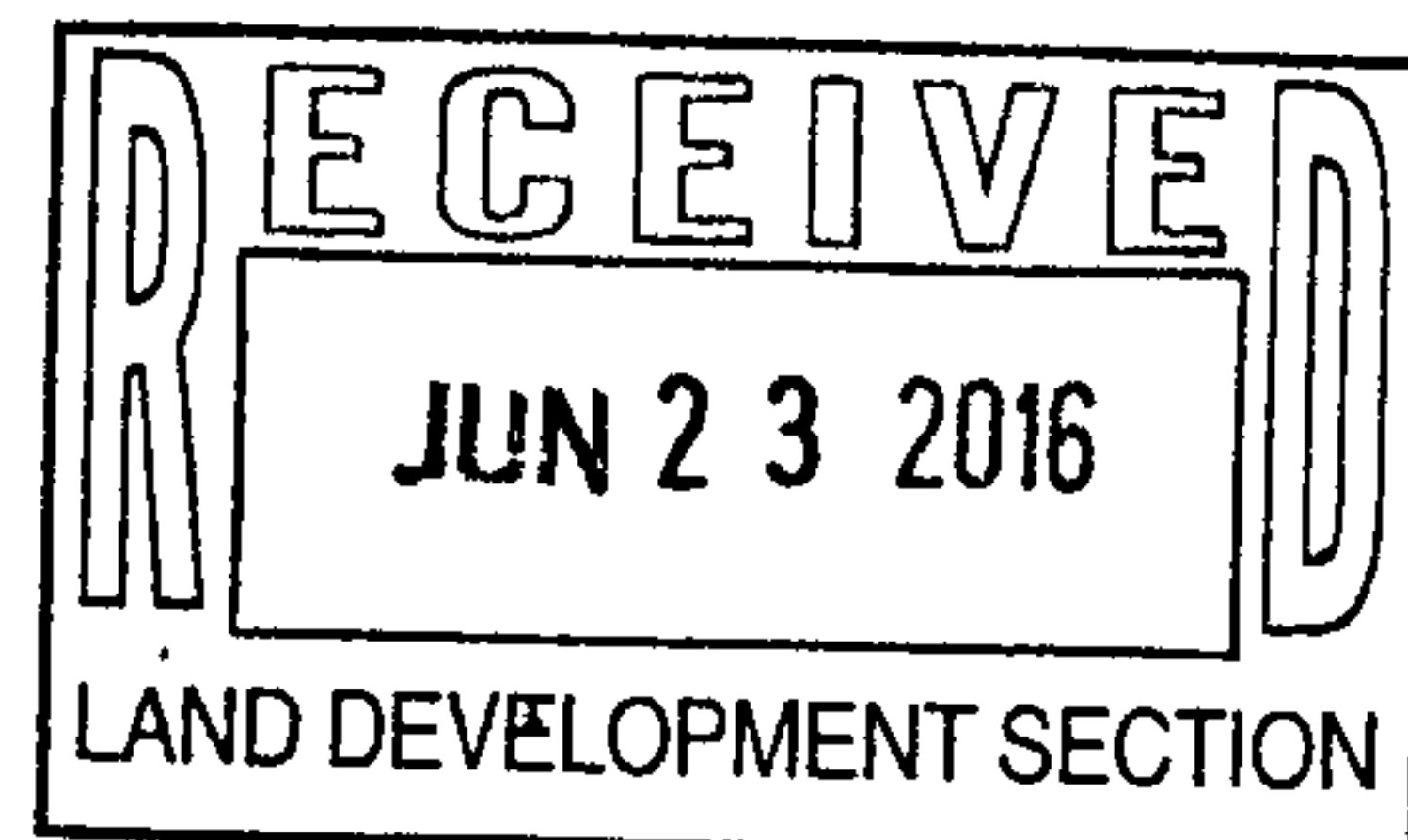
COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE RECEIVED: _____

June 23, 2016

Robert G. Hall, AIA
Integrated Design & Architecture
906 1/2 Park Ave. SW
Albuquerque, New Mexico 87102
kristin@integrateddesignarch.com

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services
PO Box 1293, Albuquerque, NM 87103



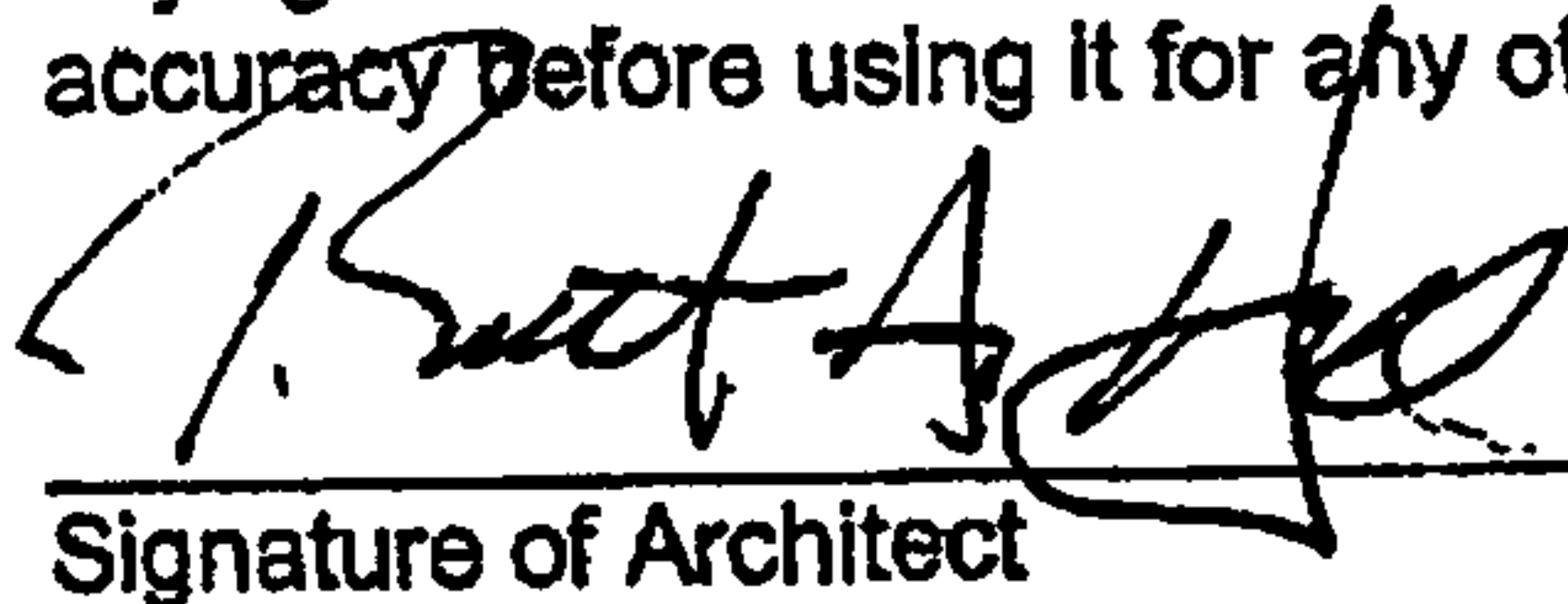
integrated
design architecture

RE: Cuatro
1319 4th St., NW
Traffic Circulation Layout
Engineer's/Architect's Stamp 5-26-16 (J14-D173)

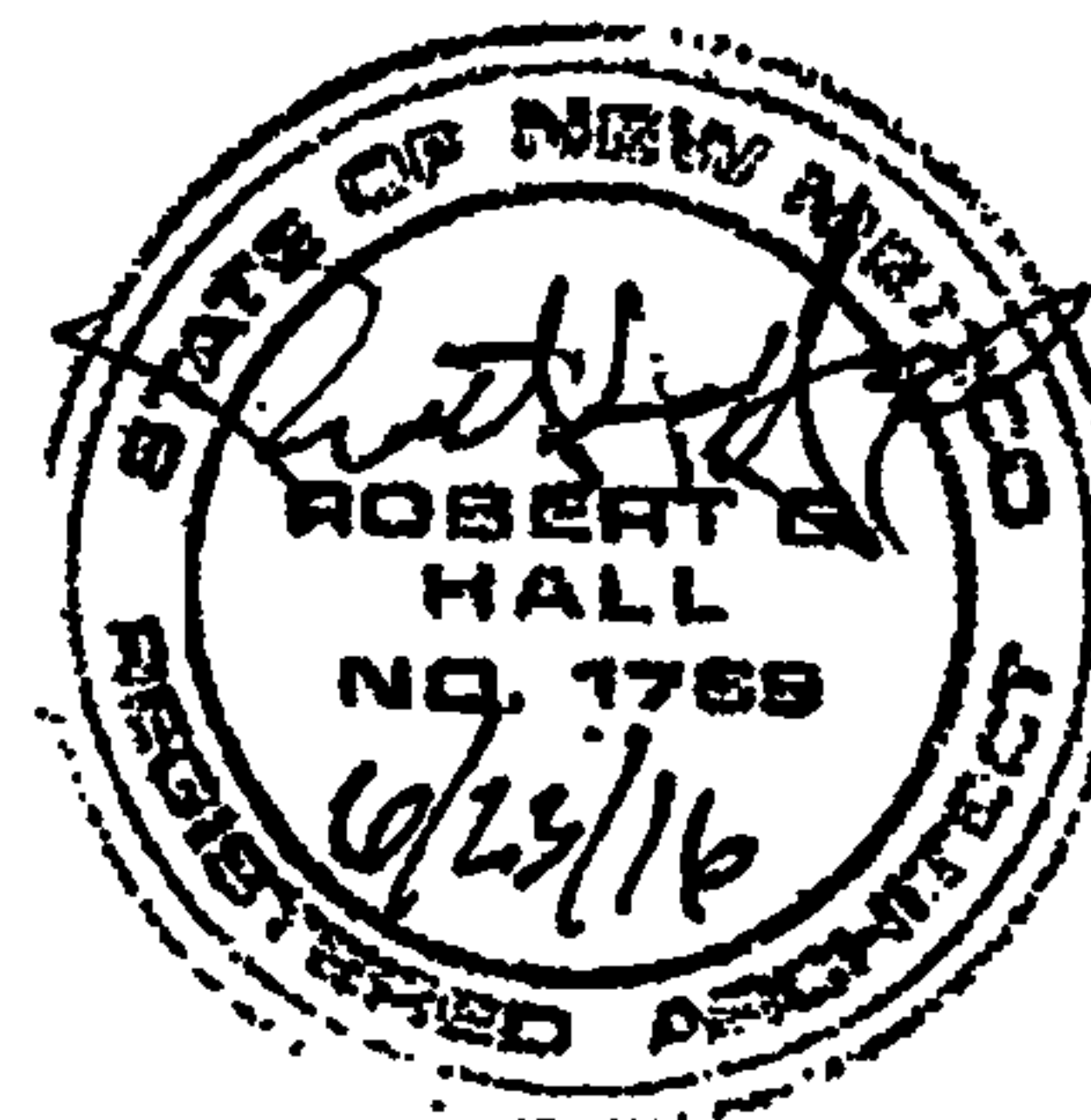
TRAFFIC CERTIFICATION

I, Robert G. Hall, AIA, NMRA, of the firm Integrated Design & Architecture, hereby certify that this project is in substantial compliance with and in accordance with the design intent of the TCL approved plan dated June 7, 2016. The record information edited onto the original design document has been obtained by Kristin Stevens of the firm Integrated Design & Architecture. I further certify that I have personally visited the project site on June 6, 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 Certificate of Occupancy.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.

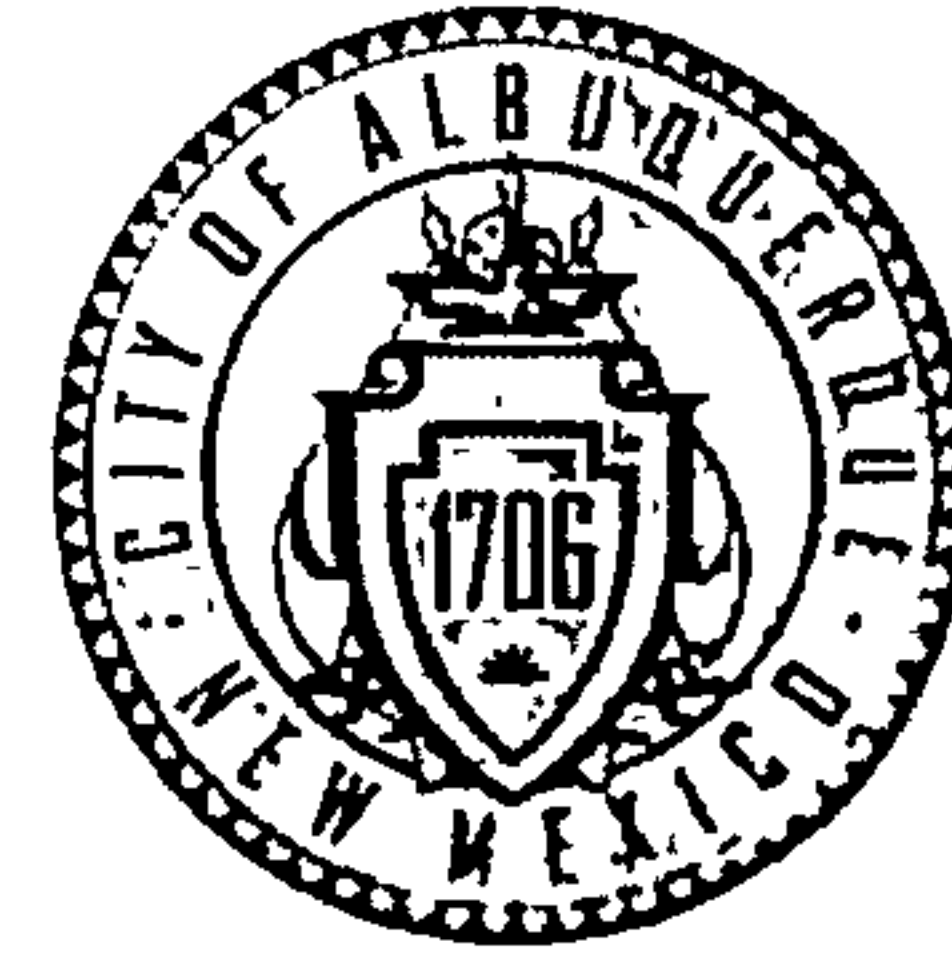

Signature of Architect

ARCHITECT'S STAMP



June 23, 2016
Date

CITY OF ALBUQUERQUE



June 13, 2016

Kristin Stevens
Integrated Design & Architecture
906 ½ Park Ave., SW
Albuquerque, NM 87102

Re: Cuatro
1319 4th St., NW
Traffic Circulation Layout
Engineer's/Architect's Stamp dated 6-7-16 (J14-D173)

Dear Ms. Kristin Stevens,

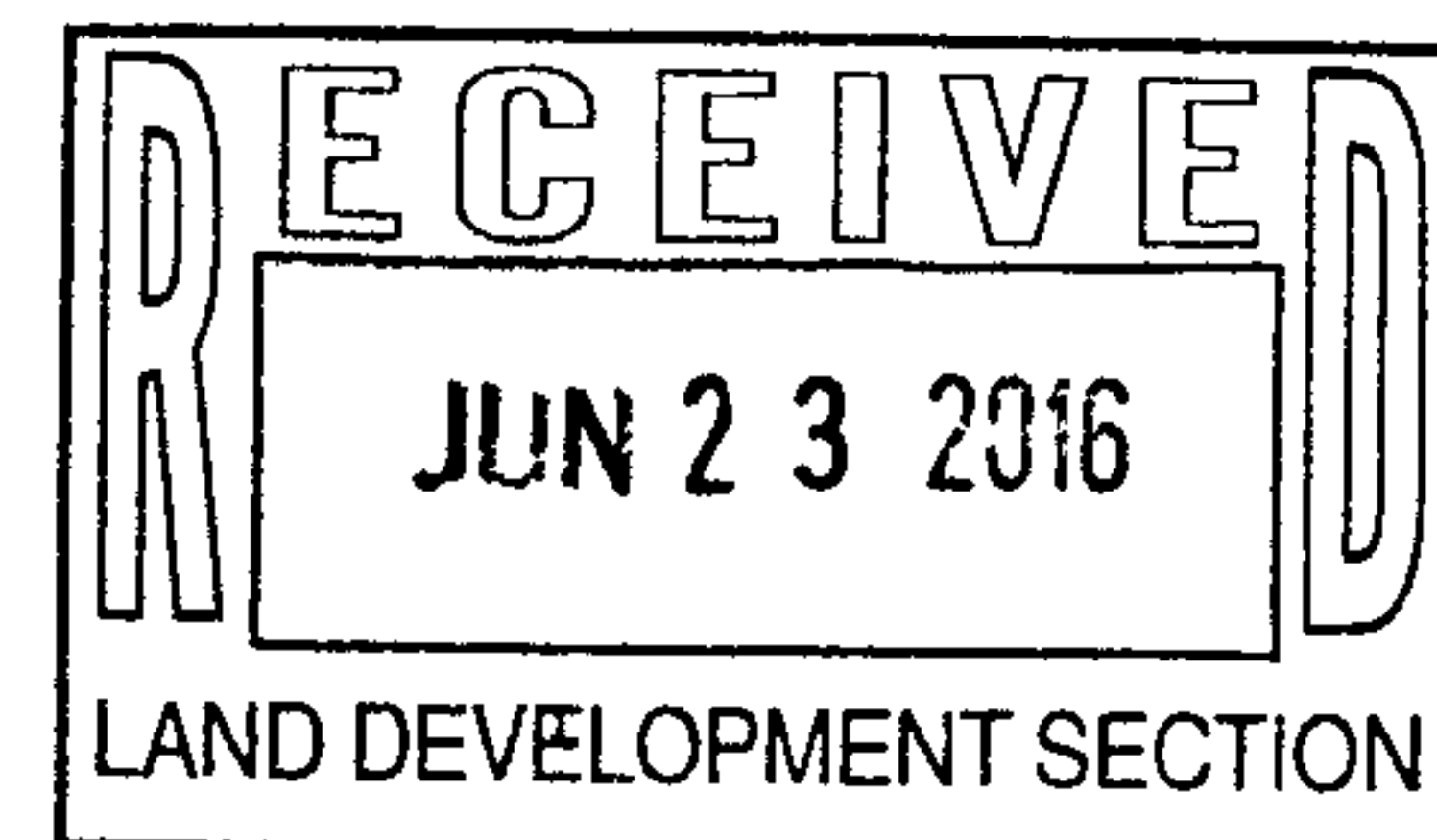
The TCL submittal received ⁶⁻⁹⁻¹⁶~~6-9-16~~ is approved for Building Permit. A copy of the stamped and signed plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation.

When the site construction is completed and a Certificate of Occupancy (C.O.) is requested, use the original City stamped approved TCL for certification. Redline any minor changes and adjustments that were made in the field. A NM registered architect or engineer must stamp, sign, and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to front counter personnel for log in and evaluation by Transportation.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3690.

Sincerely,

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services



\gs via: email
C: CO Clerk, File

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 1/2016)

Email
NO
6/15/16
Parking / Steeping not
complete

Project Title: CUATRO Building Permit #: T201493017 Hydrology File #: J14/D173
DRB#: 14DRB-70332 EPC#: _____ Work Order#: 744381
Legal Description: TR A PLAT of TR A Quatro (being a REPL of LTS 1-12 BLK 2 PARIS ADDN)
City Address: 1319 4TH Street NW Albuquerque, New Mexico 87102

Applicant: Integrated Design & Architecture Contact: Kristin Stevens
Address: 906 1/2 Park Ave, SW Albuquerque, New Mexico 87102
Phone#: 505-243-3499 Fax#: 505-243-3583 E-mail: kristin@integrateddesignarch.com

Other Contact: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

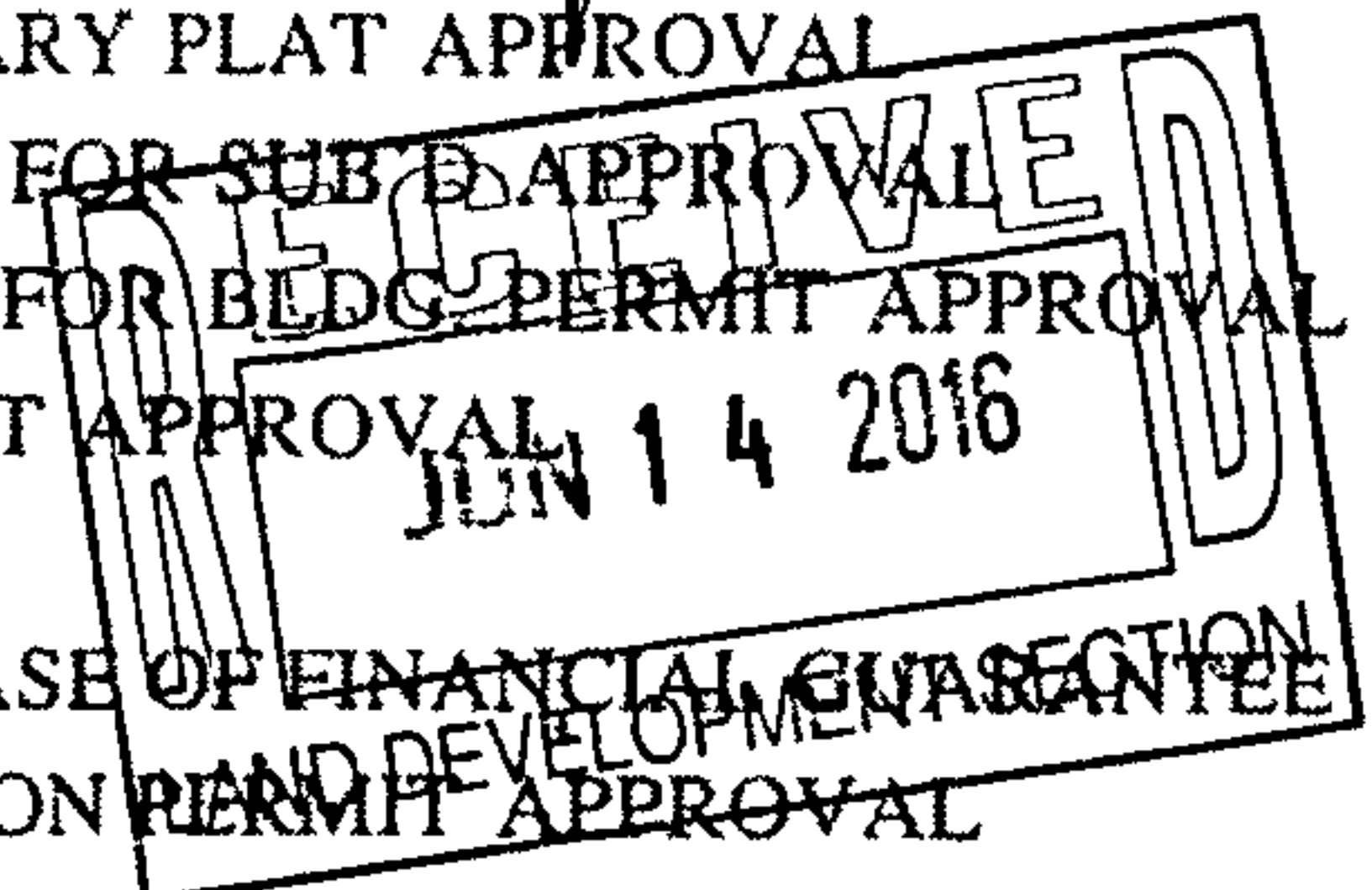
- ☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ AS-BUILT CERTIFICATION
- ☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR
- ☒ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ NEIGHBORHOOD IMPACT ASSESMENT (NIA)
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ OTHER (SPECIFY) _____

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
☒ CERTIFICATE OF OCCUPANCY
☐ GRADING/ESC PERMIT APPROVAL
- ☐ PRELIMINARY PLAT APPROVAL
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- ☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR
- ☐ PRE-DESIGN MEETING?
- ☐ OTHER (SPECIFY) _____



IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

DATE SUBMITTED: June 14, 2016 By: Kristin Stevens

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE RECEIVED: _____

June 14, 2016

Robert G. Hall, AIA
Integrated Design & Architecture
906 ½ Park Ave. SW
Albuquerque, New Mexico 87102
kristin@integrateddesignarch.com

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services
PO Box 1293, Albuquerque, NM 87103

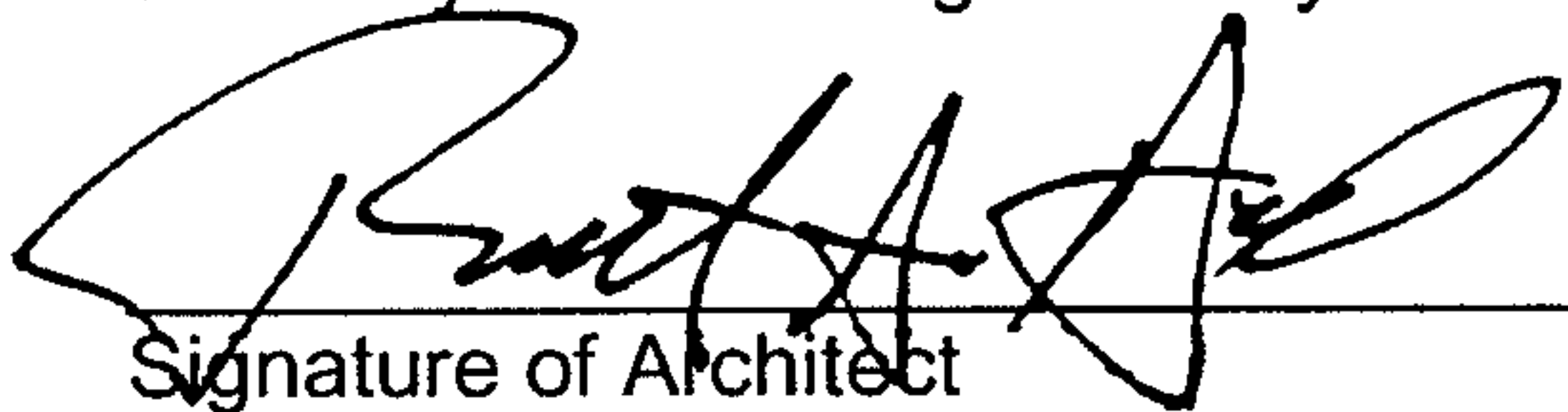
integrated
design architecture

RE: Cuatro
1319 4th St., NW
Traffic Circulation Layout
Engineer's/Architect's Stamp 5-26-16 (J14-D173)

TRAFFIC CERTIFICATION

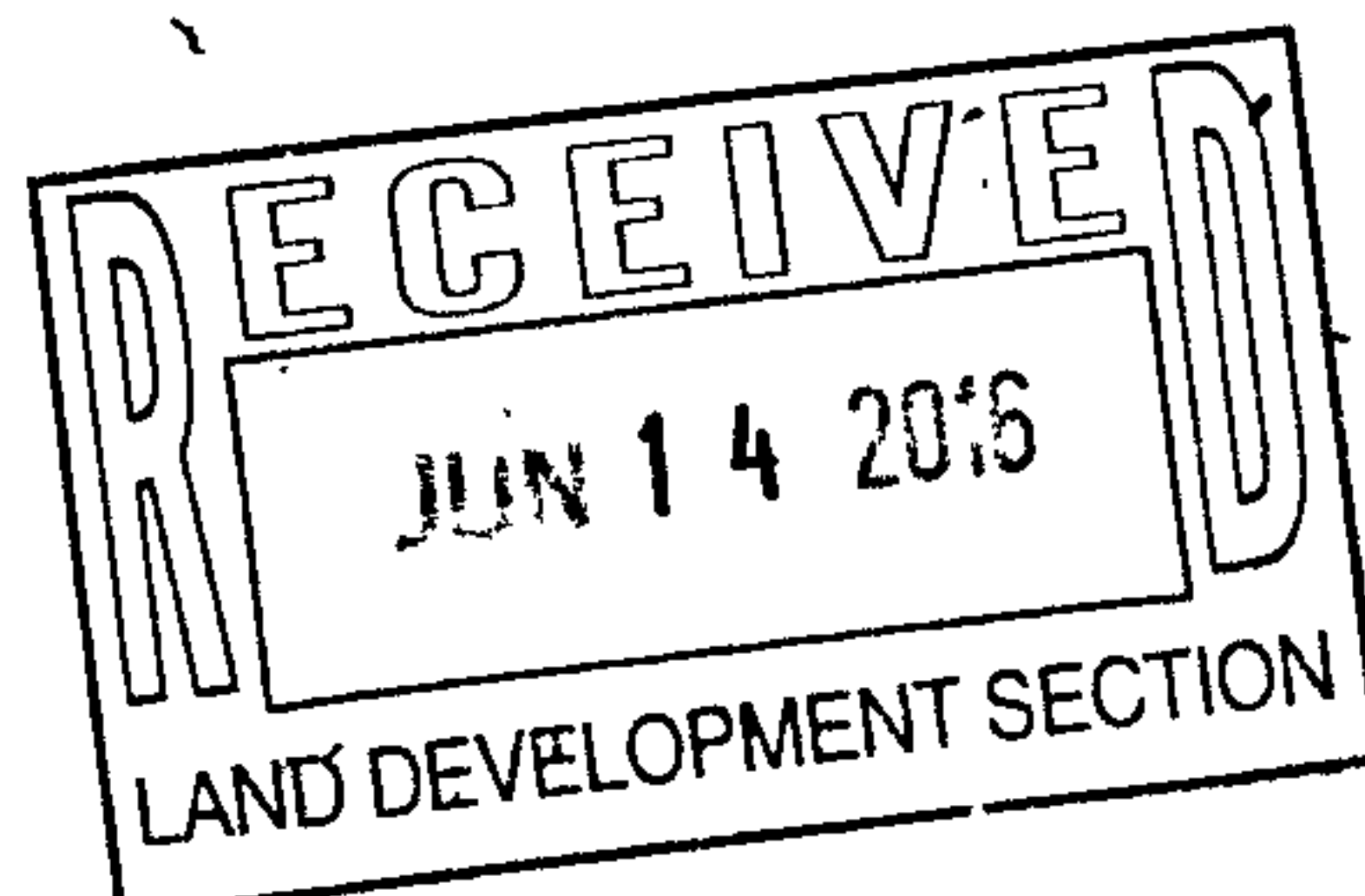
I, Robert G. Hall, AIA, NMRA, of the firm Integrated Design & Architecture, hereby certify that this project is in substantial compliance with and in accordance with the design intent of the TCL approved plan dated June 7, 2016. The record information edited onto the original design document has been obtained by Kristin Stevens of the firm Integrated Design & Architecture. I further certify that I have personally visited the project site on June 6, 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 Certificate of Occupancy.

The record information presented hereon is not necessarily complete and intended only to verify substantial compliance of the traffic aspects of this project. Those relying on the record document are advised to obtain independent verification of its accuracy before using it for any other purpose.


Signature of Architect

ARCHITECT'S STAMP

June 14, 2016
Date



CITY OF ALBUQUERQUE



June 13, 2016

Kristin Stevens
Integrated Design & Architecture
906 ½ Park Ave., SW
Albuquerque, NM 87102

Re: Cuatro
1319 4th St., NW
Traffic Circulation Layout
Engineer's/Architect's Stamp dated 6-7-16 (J14-D173)

Dear Ms. Kristin Stevens,

The TCL submittal received ⁶⁻⁹⁻¹⁶~~6-9-16~~ is approved for Building Permit. A copy of the stamped and signed plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation.

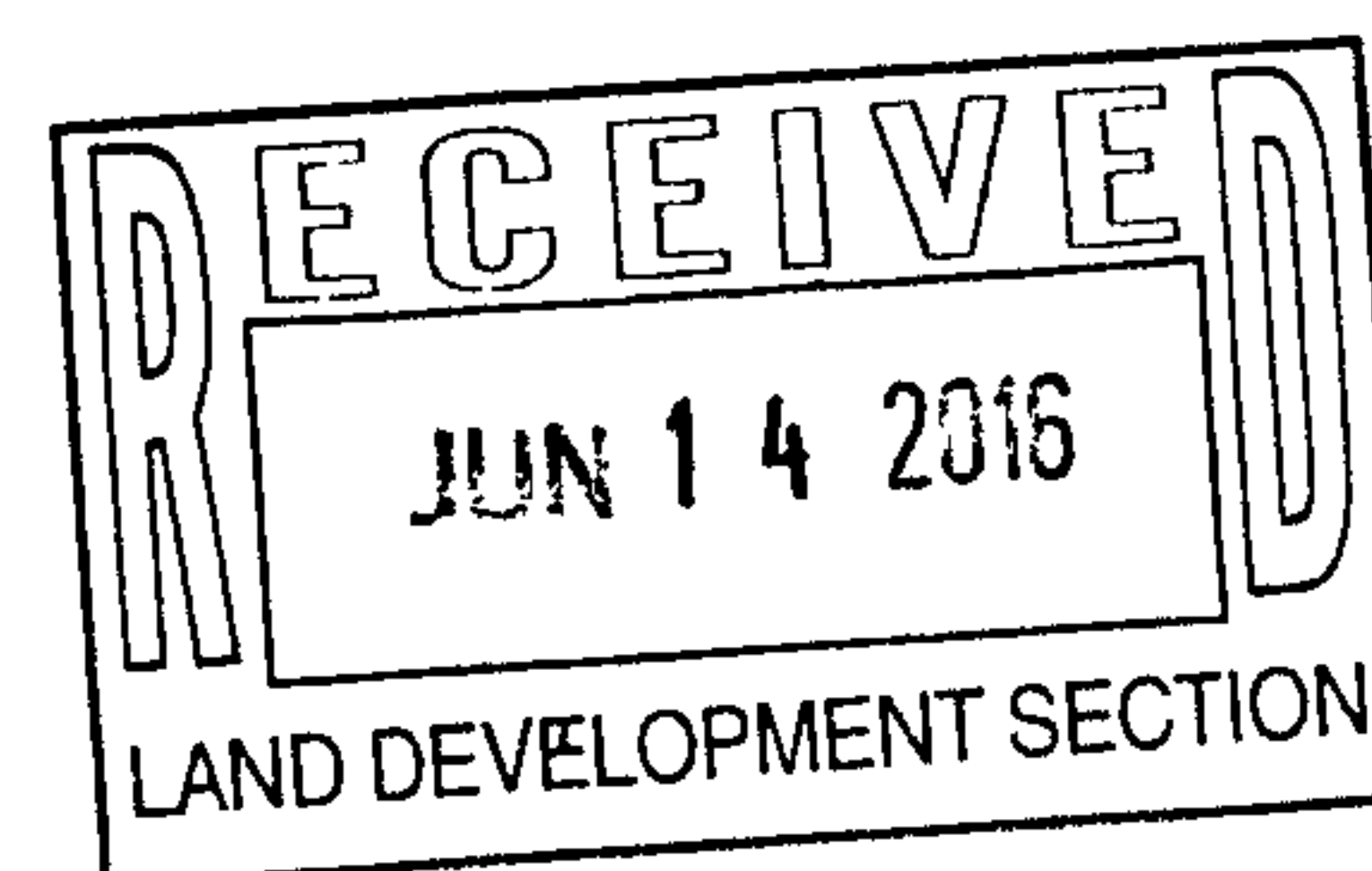
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Sincerely,

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services

\gs via: email
C: CO Clerk, File



CITY OF ALBUQUERQUE



June 13, 2016

Kristin Stevens
Integrated Design & Architecture
906 ½ Park Ave., SW
Albuquerque, NM 87102

Re: Cuatro
1319 4th St., NW
Traffic Circulation Layout
Engineer's/Architect's Stamp dated 6-7-16 (J14-D173)

Dear Ms. Kristin Stevens,

The TCL submittal received ⁶⁻⁹⁻¹⁶~~6-9-16~~ is approved for Building Permit. A copy of the stamped and signed plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation.

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Sincerely,

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services

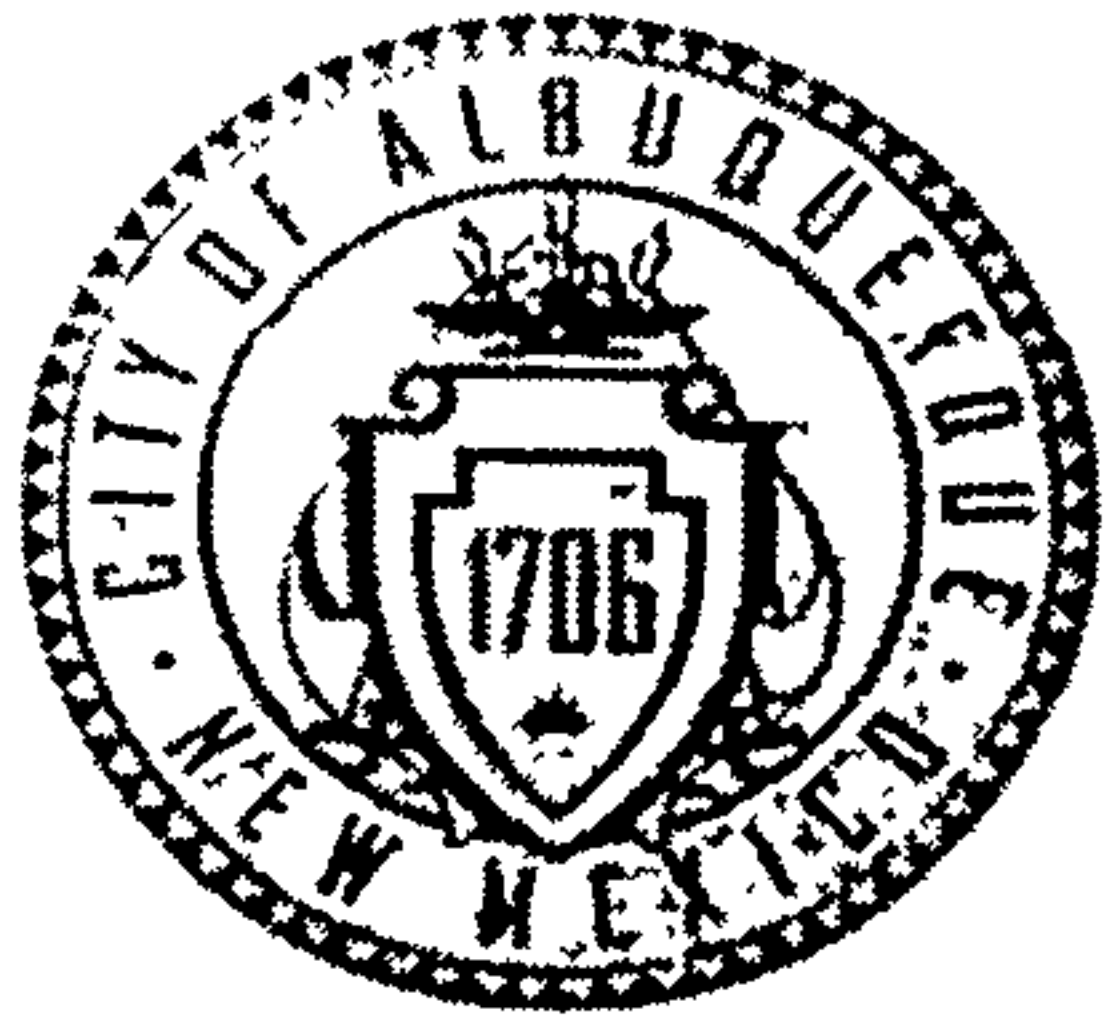
\gs via: email
C: CO Clerk, File

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 1/2016)

Project Title: CUATRO Building Permit #: T201493017 Hydrology File #: J14/D173
DRB#: 14DRB-70332 EPC#: _____ Work Order#: 744381
Legal Description: TR A PLAT of TR A Quatro (being a REPL of LTS 1-12 BLK 2 PARIS ADDN)
City Address: 1319 4TH Street NW Albuquerque, New Mexico 87102

Applicant: Integrated Design & Architecture Contact: Kristin Stevens
Address: 906 1/2 Park Ave, SW Albuquerque, New Mexico 87102
Phone#: 505-243-3499 Fax#: 505-243-3583 E-mail: kristin@integrateddesignarch.cc

Other Contact: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ AS-BUILT CERTIFICATION

☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR

☒ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ NEIGHBORHOOD IMPACT ASSESMENT (NIA)

☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ OTHER (SPECIFY) _____

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☐ GRADING/ESC PERMIT APPROVAL

☐ PRELIMINARY PLAT APPROVAL
☐ SITE PLAN FOR SUB'D APPROVAL
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL
☐ FINAL PLAT APPROVAL

☐ SIA/ RELEASE OF FINANCIAL GUARANTEE
☐ FOUNDATION PERMIT APPROVAL
☐ SO-19 APPROVAL
☐ PAVING PERMIT APPROVAL
☐ GRADING/ PAD CERTIFICATION
☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR

☐ PRE-DESIGN MEETING?

☐ OTHER (SPECIFY) _____



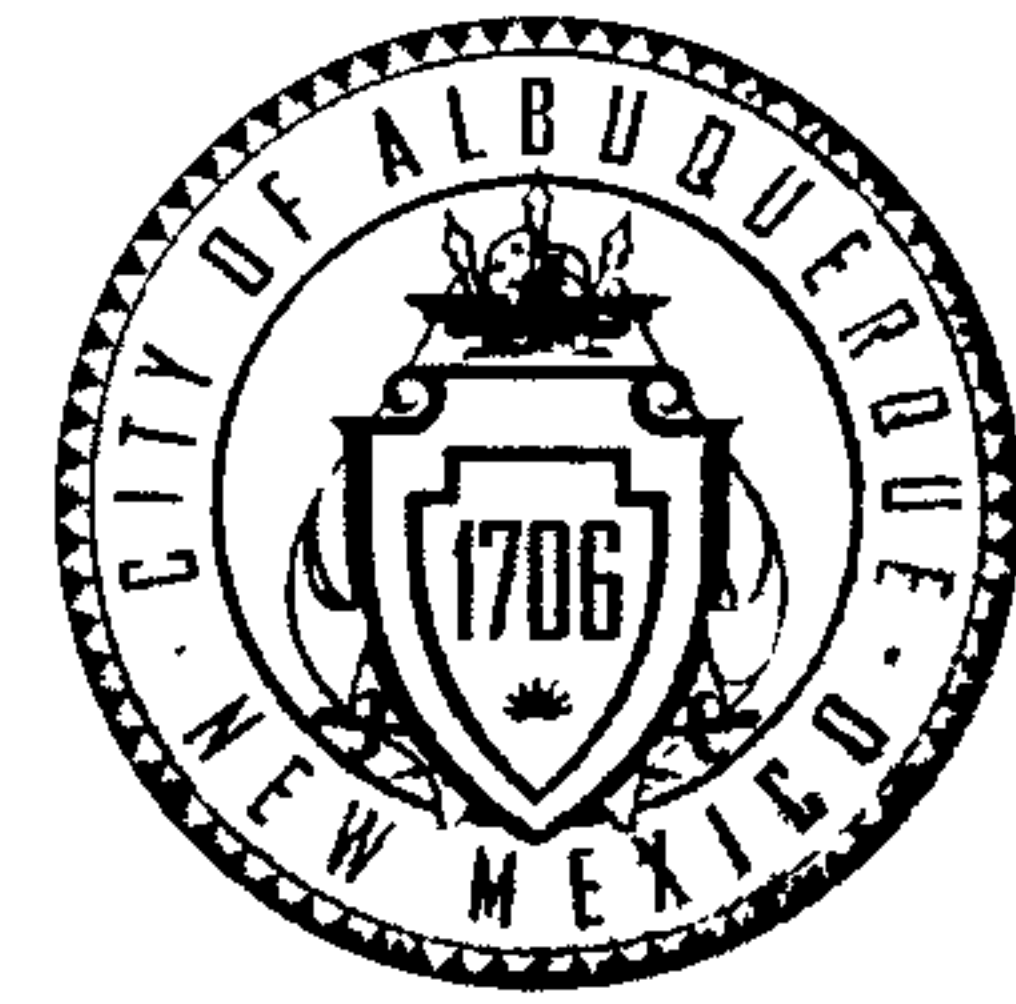
IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

DATE SUBMITTED: June 09, 2016 By: Kristin Stevens

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE RECEIVED: _____

CITY OF ALBUQUERQUE



June 1, 2016

Kristin Stevens
Integrated Design & Architecture
906 ½ Park Ave., SW
Albuquerque, NM 87102

Re: Cuatro
1319 4th St., NW
Traffic Circulation Layout
Engineer's/Architect's Stamp **5-26-16** (J14-D173)

Dear Mrs. Stevens,

Based upon the information provided in your submittal received 5-26-16, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

1. Label the compact parking spaces by placing the words "**COMPACT**" on the pavement of each space.
2. The ADA accessible parking sign must have the required language per 66-7-352.4C NMSA 1978 "**Violators Are Subject to a Fine and/or Towing.**" Please call out detail and location of HC signs.
3. Show all drive aisle widths and radii.
4. List radii for all curves shown; for passenger vehicles, the minimum end island radius is 15 ft. Landscape island radius for delivery trucks, fire trucks, etc. is 25 ft. or larger.
5. Please provide a sight distance exhibit (see the *Development Process Manual, Chapter 23, Section 3*). Please show this detail for Kinley Ave. and Summer Ave.
6. Please add the following note to the clear sight triangle: "Landscaping and signage will not interfere with clear sight requirements. Therefore, signs, walls, trees, and shrubbery between 3 and 8 feet tall (as measured from the gutter pan) will not be acceptable in this area."
7. Please add a note on the plan stating "All improvements located in the Right of Way must be included on the work order."
8. Unused curb cuts must be replaced with sidewalk and curb & gutter. A build note must be provided referring to the appropriate City Standard drawing.
9. All broken or cracked sidewalk must be replaced with sidewalk and curb & gutter. A build note must be provided referring to the appropriate City Standard drawing.
10. Please include two copies of the traffic circulation layout at the next submittal.

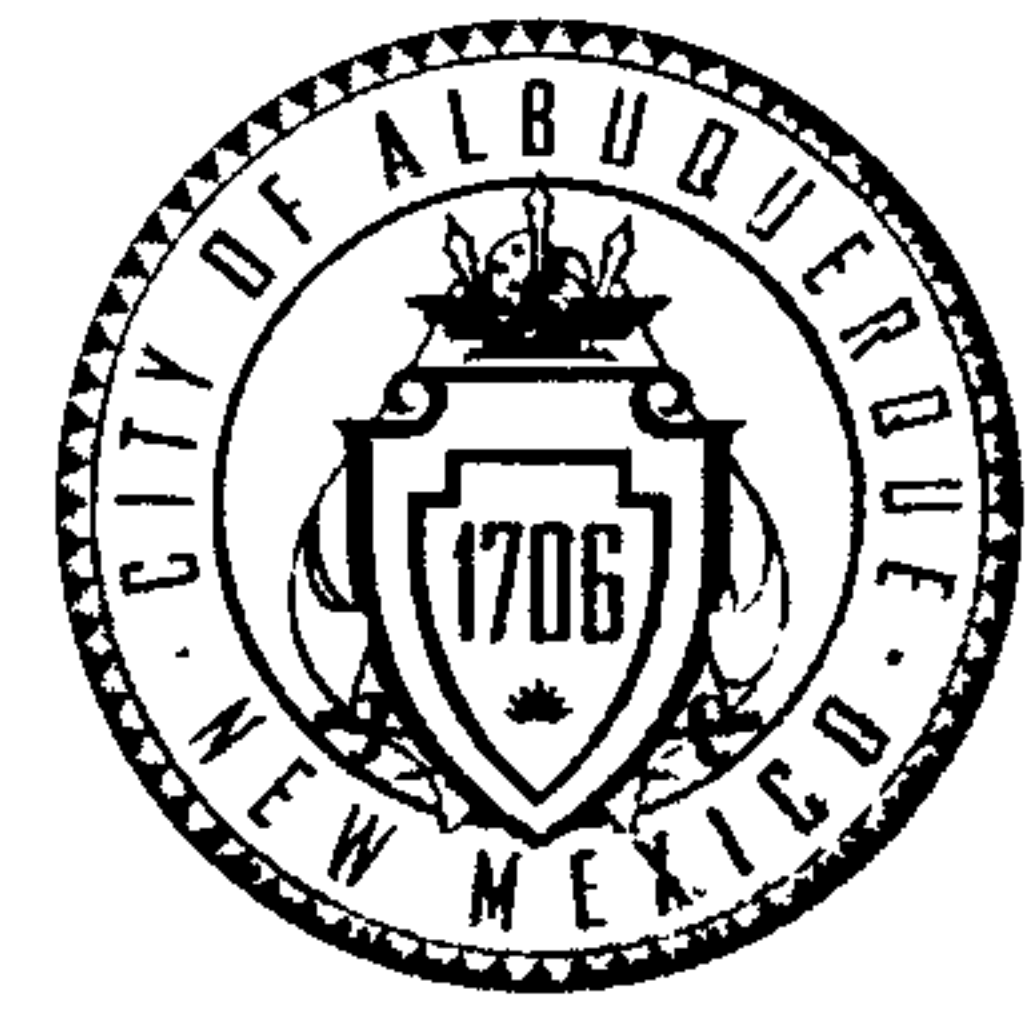
PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE



Resubmit acceptable package along with fully completed Drainage Transportation Information Sheet to front counter personnel for log in and evaluation by Transportation. If you have any questions, please contact Gary Sandoval (505) 924-3675 or me at 924-3991.

Sincerely,

A handwritten signature in black ink, appearing to read 'R Michel', is written over a horizontal line.

Racquel M. Michel, P.E.
Traffic Engineer, Planning Dept.
Development Review Services

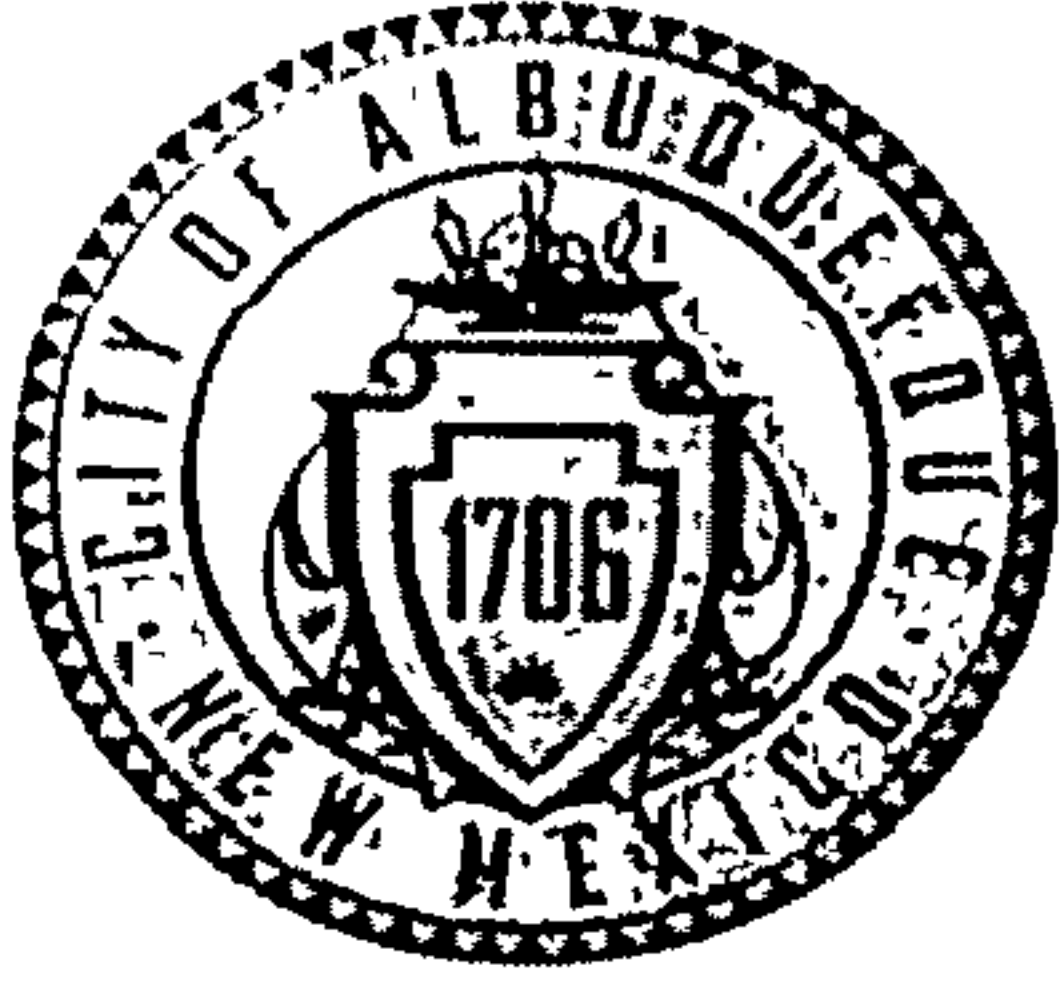
\gs via: email
C: CO Clerk, File

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 1/2016)

Project Title: CUATRO Building Permit #: T201493017 Hydrology File #: J14/D173
DRB#: 14DRB-70332 EPC#: _____ Work Order#: 744381
Legal Description: TR A PLAT of TR A Quatro (being a REPL of LTS 1-12 BLK 2 PARIS ADDN)
City Address: 1319 4TH Street NW Albuquerque, New Mexico 87102

Applicant: Integrated Design & Architecture Contact: Kristin Stevens
Address: 906 1/2 Park Ave, SW Albuquerque, New Mexico 87102
Phone#: 505-243-3499 Fax#: 505-243-3583 E-mail: kristin@integrateddesignarch.com

Other Contact: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ AS-BUILT CERTIFICATION

☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR

☒ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ NEIGHBORHOOD IMPACT ASSESMENT (NIA)

☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ OTHER (SPECIFY) _____

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

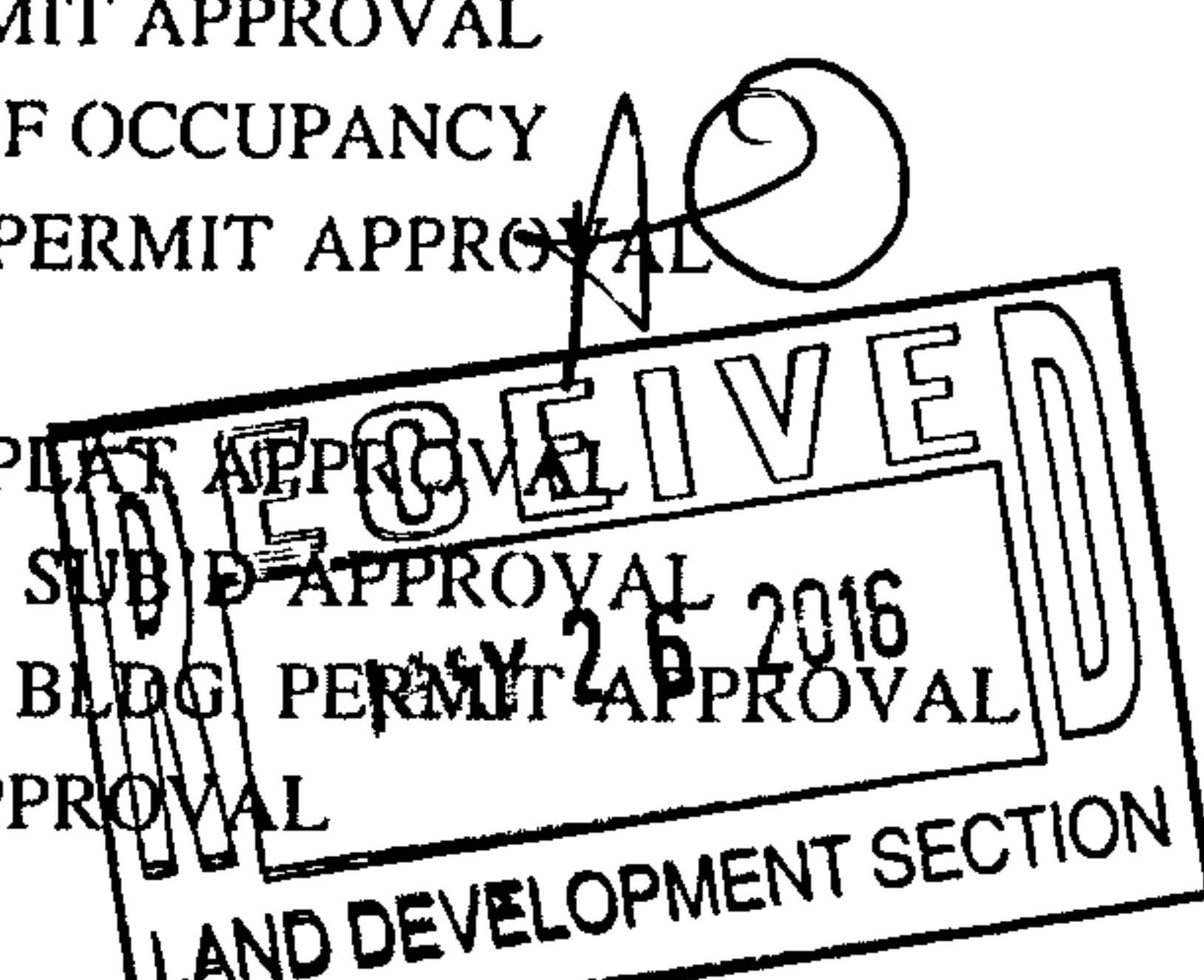
- ☐ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☐ GRADING/ESC PERMIT APPROVAL

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☐ WORK ORDER APPROVAL
☐ CLOMR/LOMR

☐ PRE-DESIGN MEETING?

☐ OTHER (SPECIFY) _____



IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

DATE SUBMITTED: May 26, 2016 By: Mrs. Kristin Stevens

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE RECEIVED: _____