CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services Section

August 9,, 2012

Daniel Herr, R.A.
Slagle Herr Architects
1600 Rio Grande NW
Albuquerque, NM 87104

Re: **Certification for Permanent Building Certificate of Occupancy (C.O.)**
Antenna Development Project for Raytheon KTech., [M-21/D017]
1460 Innovation Parkway SE
Architect's Stamp Dated 08/06/12

Dear Mr. Herr:

Based upon the information provided in your submittal received 08-08-12, 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 me at (505)924-3630.

Sincerely,

Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

slagleherr.com

Re: Antenna Development Project for Raytheon Ktech at 1460 Innovation Parkway SE, Albuquerque, NM

DRB Project No. 10043206 (AA)

TRAFFIC CERTIFICATION

I, Dan Herr, NMPE or NMRA 3076, of the firm SlagleHerr Architects, hereby certify that this project is in substantial compliance with and in accordance with the design intent of the Amended Site Development Plan dated 1-25-12. I certify that I have personally visited the project site on 8-2-12 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 permanent 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.

Dan Herr
SlagleHerr Architects, Inc.

8-6-12
Date

STATE OF NEW MEXICO
DANIEL
HERR
NO. 3076
REGISTERED ARCHITECT

RECEIVED
AUG 08 2012

slagle HERR Architects
1600 rio grande nw albuquerque
fax 505 246 0437 new mexico 87104 505 246 08[illegible]

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: ANTENNA DEVELOPMENT PROJECT FOR RAYTHEON KTECH
ZONE MAP/DRG. FILE #: M-21 / D017
DRB #: 1004320 (PREVIOUS) EPC#: _____
WORK ORDER#: _____

LEGAL DESCRIPTION: TRACT E-B-2 PLAT OF TRACTS E-2-A AND E-2-B SANDIA RESEARCH PARK
CITY ADDRESS: 1460 INNOVATION PARKWAY SE ALBUQUERQUE NM

ENGINEERING FIRM: RIO GRANDE ENGINEERING — CONTACT: DAVID SOULE
ADDRESS: 1606 CENTRAL AVE. SUITE 201 — PHONE: 872-0999
CITY, STATE: ALBUQUERQUE NM 87106 — ZIP CODE: 87106

OWNER: RAYTHEON KTECH — CONTACT: MARY CLUM
ADDRESS: 1300 EUBANK SE — PHONE: 998-5830
CITY, STATE: ALBUQUERQUE NM — ZIP CODE: 87123

ARCHITECT: SLAGLE HERR ARCHITECTS — CONTACT: DAN HERR
ADDRESS: PO BOX 57106 — PHONE: 246-0870
CITY, STATE: ALBUQUERQUE — ZIP CODE: 87187

SURVEYOR: CONSTRUCTION TECHNOLOGIES INC — CONTACT: JOHN GALLEGOS
ADDRESS: PO BOX 65395 — PHONE: 917-8921
CITY, STATE: ALBUQUERQUE — ZIP CODE: 87193

CONTRACTOR: JAYNES CORP — CONTACT: DOUG BOLING
ADDRESS: 2906 BROADWAY NE — PHONE: 345-8591
CITY, STATE: ALBUQUERQUE — ZIP CODE: 87107

CHECK TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEERS CERTIFICATION (TCL)
- ☒ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN) (AA)
- ☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

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

RECEIVED
AUG 08 2012

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☒ NO
- ☐ COPY PROVIDED

DATE SUBMITTED: 8-8-12

BY: _____

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature , location and scope ot 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**

CITY OF ALBUQUERQUE

August 30, 2011

David Soule, P.E.
Rio Grande Engineering
P.O. Box 67305
Rio Rancho, NM 87193

Re: KTECH ANTENNA SITE, TRACT E-2-B SANDIA SCIENCE & TECHNONOLOGY PARK, 1460 INNOVATION PARKWAY GRADING AND DRAINAGE PLAN ENIGNEER'S STAMP DATE 05/15/11 (M21/D017)

Dear Mr. Soule,

Based upon the information provided in your submittal received 8-22-11, the above referenced plan can not be approved for Site Development Plan for Building Permit and Building Permit until the following comments are addressed.

- Include the boundary description and address to the plan.
- Provide additional spot elevation around the pond to assure that the runoff will drain out of the site through the entrances.
- Provide pond calculations for the proposed ponds.
- What is the top width of the pond along the Innovation Parkway. It appears a berm has to be built to assure that the pond does not fail along the street side.

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

Sincerely,

Shahab Biazar, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE REPORT

For

KTECH
ANTENNA SITE
1460 INNOVATION WAY SE
Albuquerque, New Mexico

Prepared by

Rio Grande Engineering
PO Box 67305
Albuquerque, New Mexico 87193

August 2011

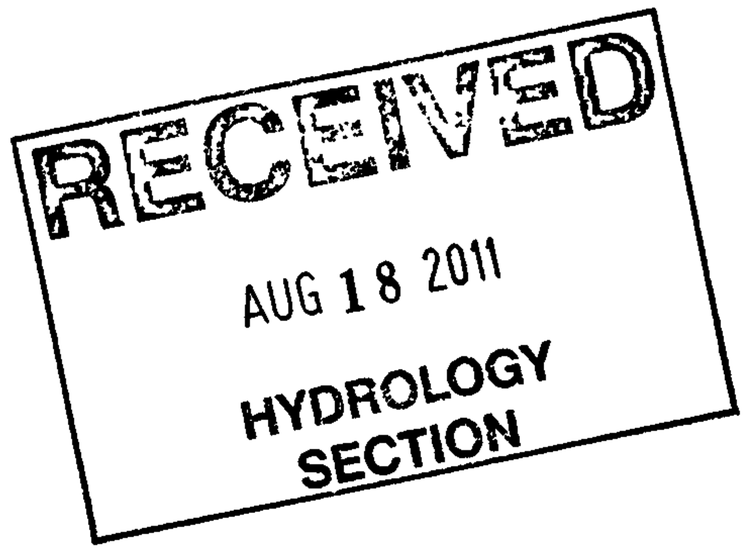


TABLE OF CONTENTS

Appendix

Map Pocket
Site Grading and Drainage Plan

PURPOSE

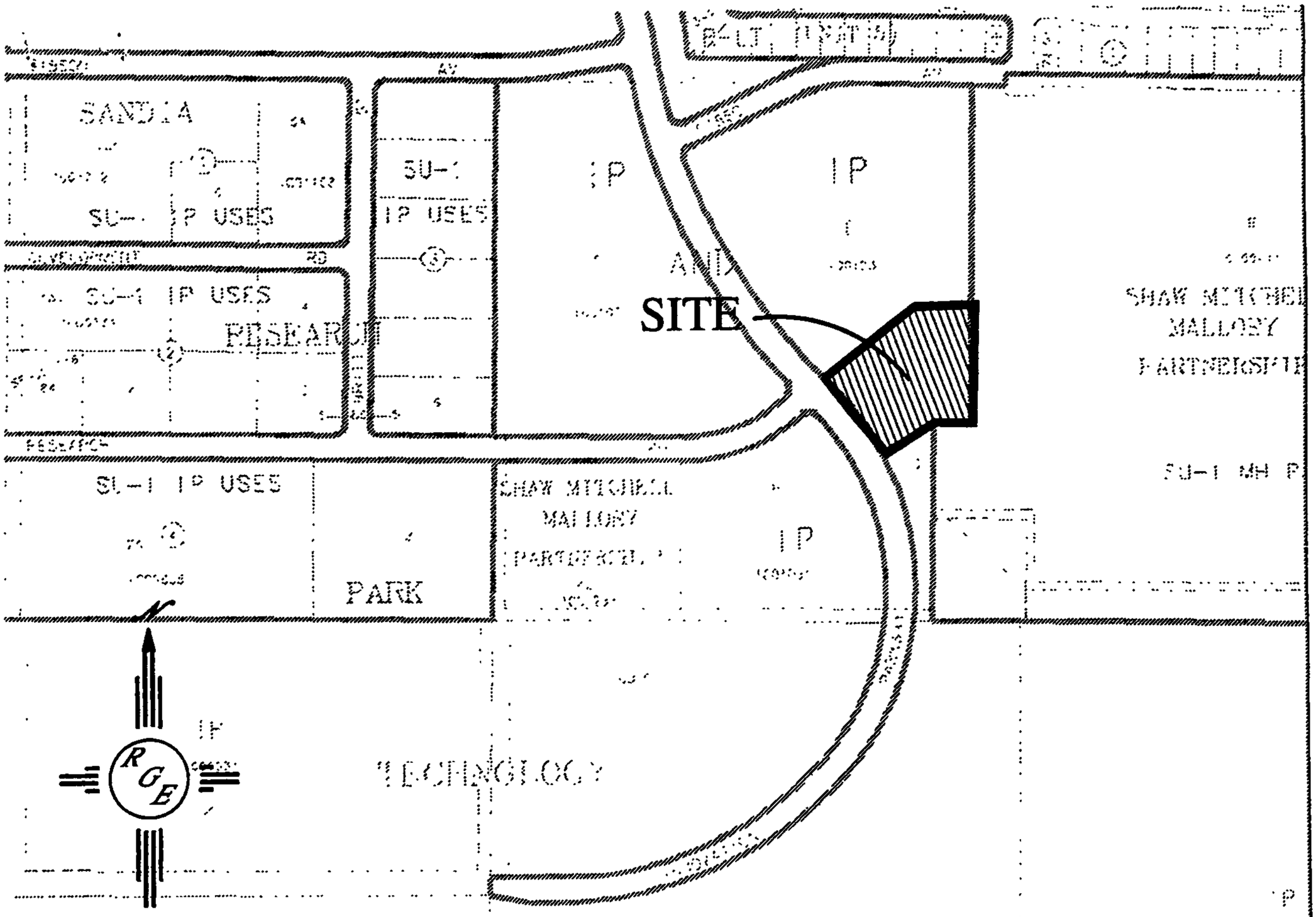
The purpose of this report is to provide the Drainage Management Plan for the construction of an antenna site located at 1460 Innovation parkway SE. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

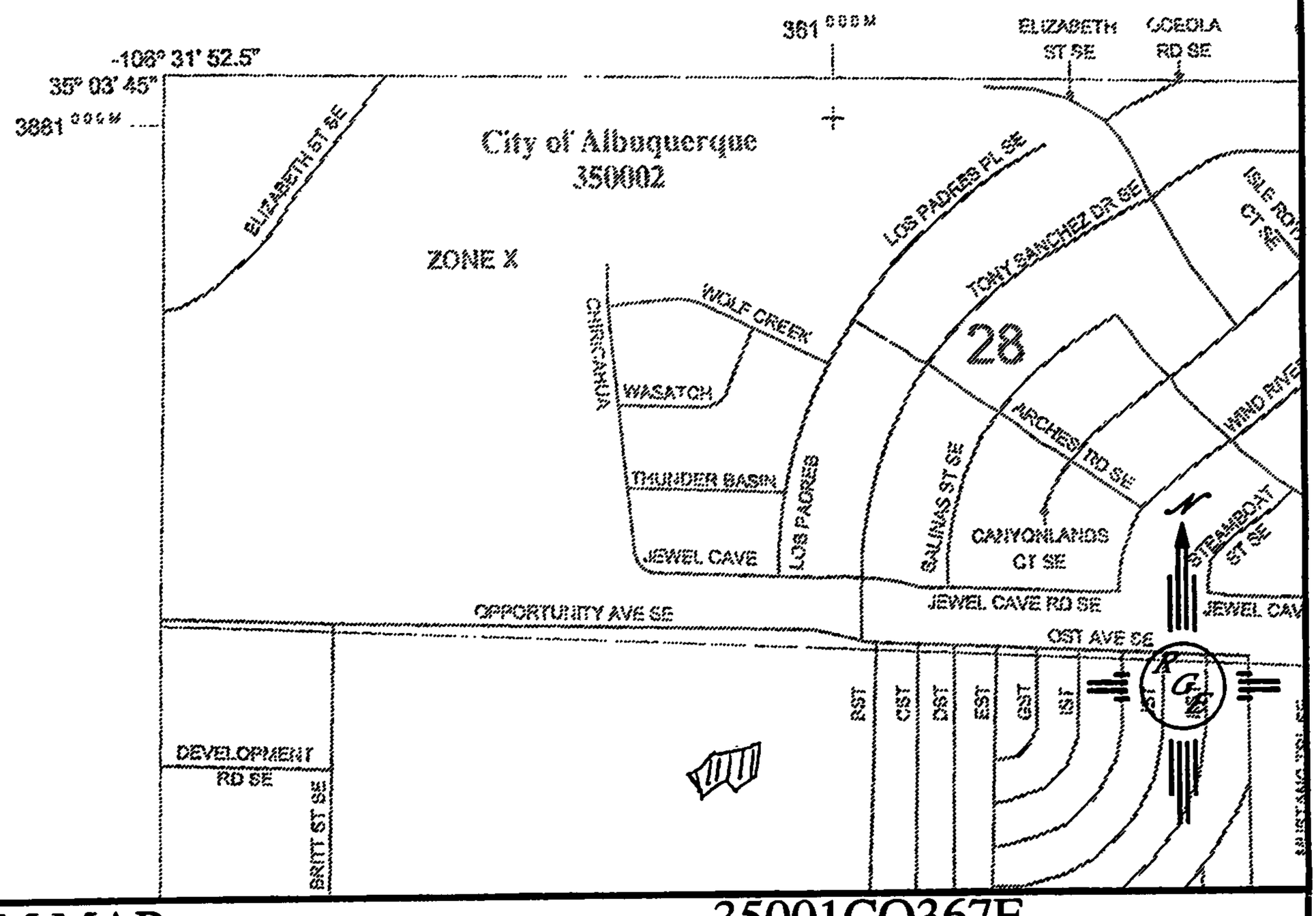
The subject of this report, as shown on the Exhibit A, is a 1.45-acre parcel of land located within the Sandia Science and Technology Park on the southeast corner of Innovation Parkway and Research drive. The legal description of this site is tract E-2-B, Sandia Science and Technology Park. As shown on FIRM map 35013C0367E, the entire site is located within Flood Zone X. The site appears to have been rough graded in the past, but has significant native re-vegetation. The entire downstream infrastructure has been constructed. The site is part of the Sandia Science and Technology park drainage master plan. The master drainage study and allowed a peak discharge rate of 1.57 cfs per acre. The development of this site shall conform to the Blue Sky Master Drainage Plan.

EXISTING CONDITIONS

The site is currently a partially rough graded lot. The site currently discharges directly to Innovation and research drive. This flow is contained within the streets and discharged at allowed throttled rates to Eubank. The upland flow is diverted to Gibson by a private street within ght adjacent mobile home park.



VICINITY MAP: M-21-Z



FIRM MAP 35001CO367E

LEGAL DESCRIPTION:

PROPOSED CONDITIONS

The proposed improvements consist of approximately 12,500 paved yard for antennas. This yard has truck access from both sides. The site will be graded such that there will be six basins, Basins A-D contain the drive approaches and the northern portion of the lot. These basins will free discharge to the extension of Research drive. These basins discharge a peak rate of 1.74 cfs during a 100-year, 6-hour event. Each basin contains a 1-deep harvesting pond at the low spot to eliminate nuisance flows form entering the conveyance system. Basin E, contains the majority of the site that will remain undeveloped as well as the antenna yard. This site will drain to a large, shallow detention pond that will discharge at a peak rate of .45 cfs via a 4" pvc pipe. The pond will discharge out the driveway onto the research drive extension. The pond has been sized for the entire 100-year, 6-hour volume, so a stage storage analysis is not required.

SUMMARY AND RECOMMENDATIONS

This project is a development within a master planned industrial park. The site is designed to conform to the master drainage plan of the development. This site will discharge 2.19 cfs which is less than the 2.28 cfs allowed. Since the effected area site encompasses less than 1 acre, a NPDES permit should not be required prior to any construction activity.

APPENDIX A

SITE HYDROLOGY

Weighted E Method

Existing Developed Basins

											100-Year, 6-hr		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)			
ALLOWABLE PER DMP	63162 00	1.450											2.28
BASIN A	16672 00	0 383	67%	0 256433425	10.0%	0.038	5 0%	0 01914	18%	0.069	1 024	0.033	0 99
BASIN B	6494 00	0 149	73%	0.10882966	6 0%	0.009	6 0%	0 00894	15%	0.022	0.968	0.012	0.37
BASIN C	4178.00	0.096	70%	0.067139578	20 0%	0 019	10.0%	0 00959	0%	0.000	0 775	0.006	0.21
BASIN D	2821.00	0.065	59%	0.038209137	15 0%	0 010	12.0%	0 00777	14%	0 009	1 013	0.005	0 17
BASIN E	32997.00	0.758	43%	0.325727961	10 0%	0 076	10 0%	0 07575	37%	0 280	1 378	0 087	2 47

Equations:

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

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad 1.74

Where for 100-year, 6-hour storm

Ea= 0 66 Qa= 1.87
Eb= 0.92 Qb= 2 6
Ec= 1 29 Qc= 3.45
Ed= 2.36 Qd= 5.02

BASINS A,B,C,D FREE DISCHARGE 1 74
BASIN E THOTTLED TO 0 453
TOTAL SITE DISCHARGE 2 19

DETENTION POND SIZE 3789.16 CUBIC FEET

VOLUME CALCULATIONS

ACTUAL ELEV.	DEPTH (FT)	VOLUME (AC-FT)	Q (CFS)
POND TOP	1.33	0.0895	0.453

Orifice Equation

Q = CA SQRT(2gH)

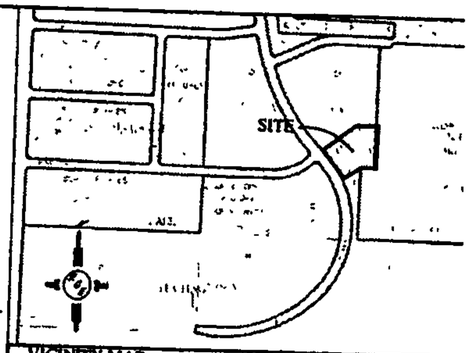
C =	0.6	
Diameter (in)	4	
Area (ft^2)=	0.08726646	
g =	32.2	
H (Ft) =	Depth of water above center of orifice	
Q (CFS)=	Flow	

EROSION CONTROL NOTES:

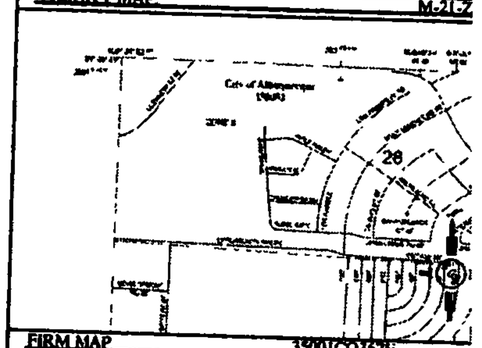
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A GRADING PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL (CITY) ACCEPTANCE OF ANY PROJECT.
6. ENCROACHMENT INTO ADJACENT PROPERTIES IS NOT ALLOWED WITHOUT A WRITTEN ENCROACHMENT AGREEMENT WITH THE ADJACENT PROPERTY OWNERS.

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.



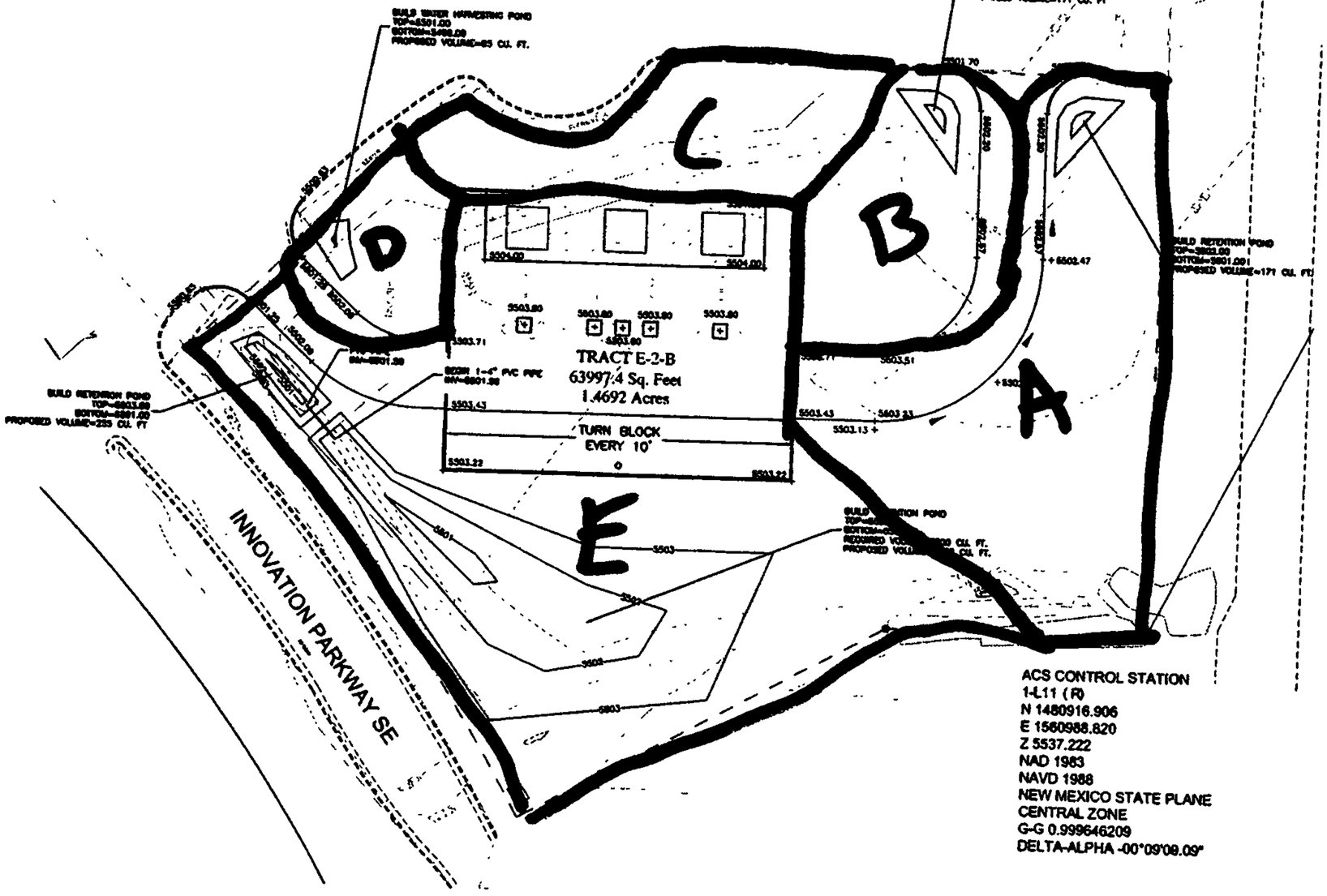
VICINITY MAP M-21-Z



FIRM MAP 35001C0367F

LEGAL DESCRIPTION

TRACT E-2-B



ACS CONTROL STATION
1-L11 (R)
N 1480916.906
E 1560988.820
Z 5537.222
NAD 1983
NAVD 1988
NEW MEXICO STATE PLANE
CENTRAL ZONE
G-G 0.999646209
DELTA-ALPHA -00°09'09.09"

LEGEND

- LOT LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED CONTOUR
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- FLOW ARROW
- CENTERLINE
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CAUTION:

EXISTING UTILITIES ARE NOT SHOWN IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.

SCALE: 1"=20'

ENGINEER'S SEAL	1460 INNOVATION PARKWAY	DRAWN BY WCM
	GRADING AND DRAINAGE PLAN	DATE 6-10-11
		21135-GRADE-E-2-B-11
	Rio Grande Engineering	SHEET # -
DAVID SOULE P.E. #14327		JOB # 21135

DRAINAGE REPORT

For

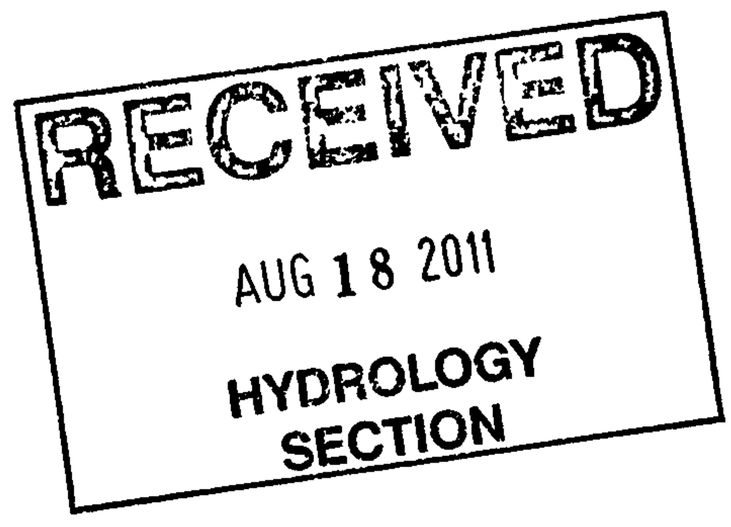
Parkway

KTECH
ANTENNA SITE
1460 INNOVATION WAY SE
Albuquerque, New Mexico

Prepared by

Rio Grande Engineering
PO Box 67305
Albuquerque, New Mexico 87193

August 2011



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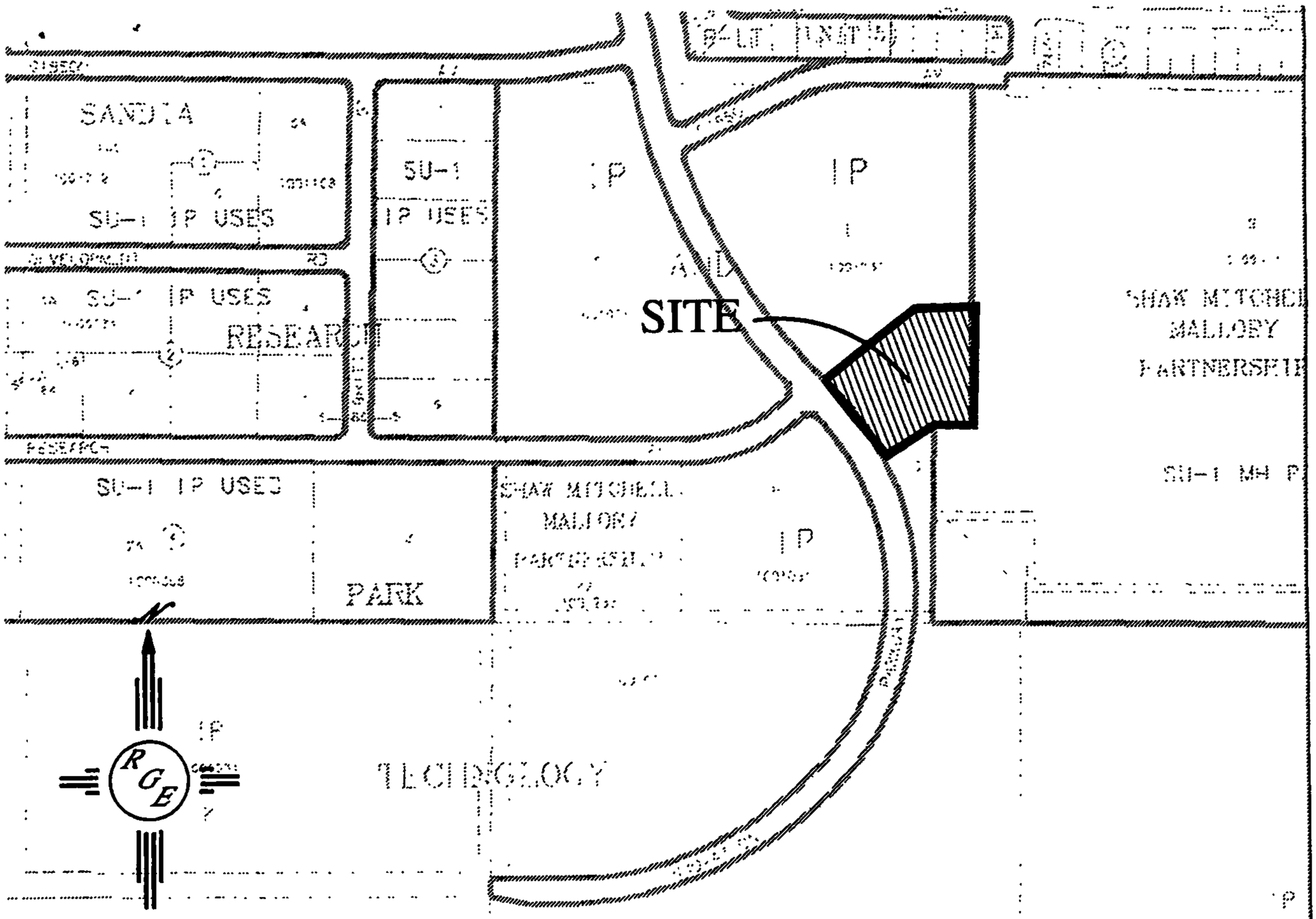
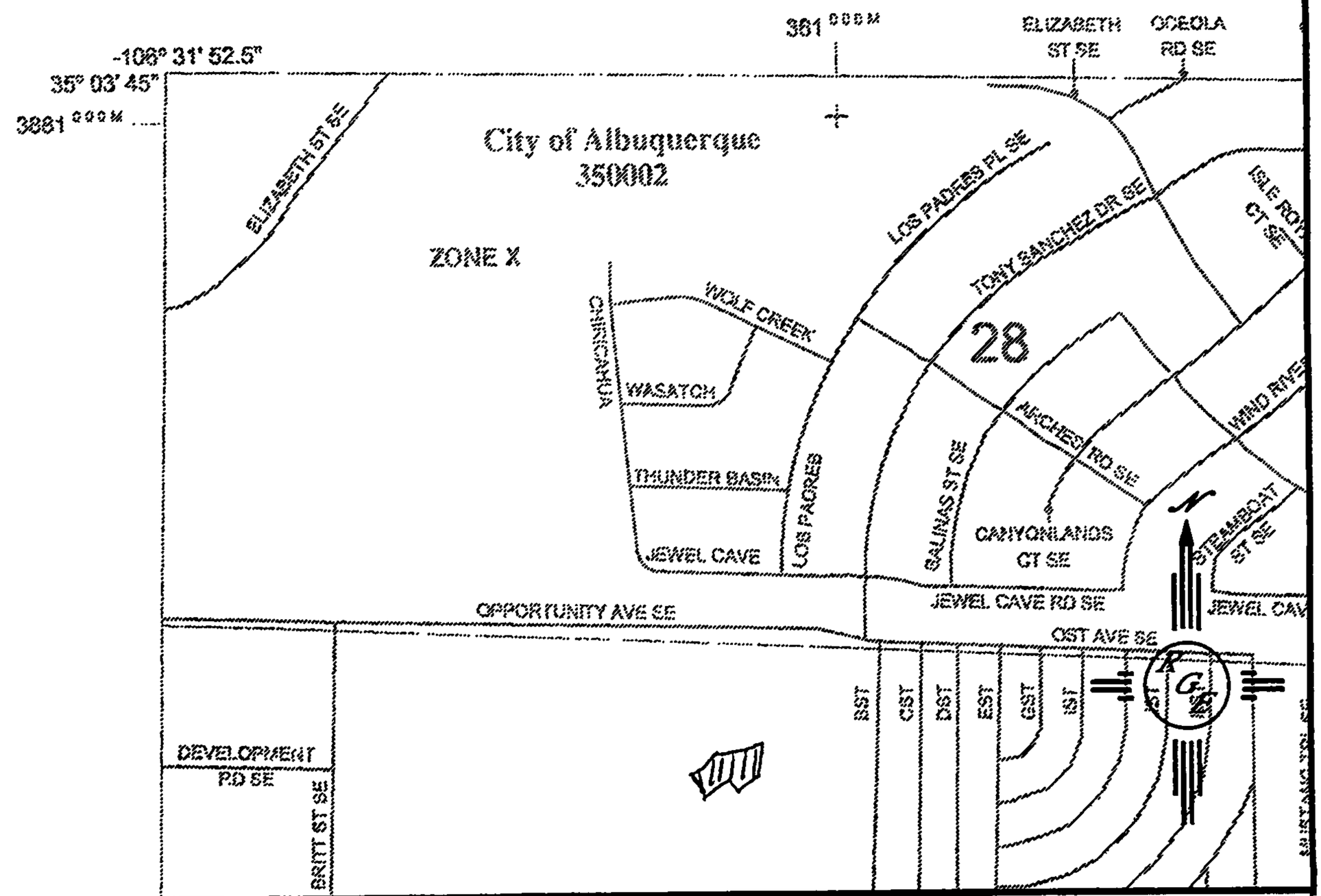


VICINITY MAP: M-21-Z



FIRM MAP 35001CO367E

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			%	(acres)	%	(acres)	%	(acres)	%	(acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
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1.74

Where for 100-year, 6-hour storm

Ea= 0.66
Eb= 0.92
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Qa= 1.87
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BASINS A,B,C,D FREE DISCHARGE	1.74
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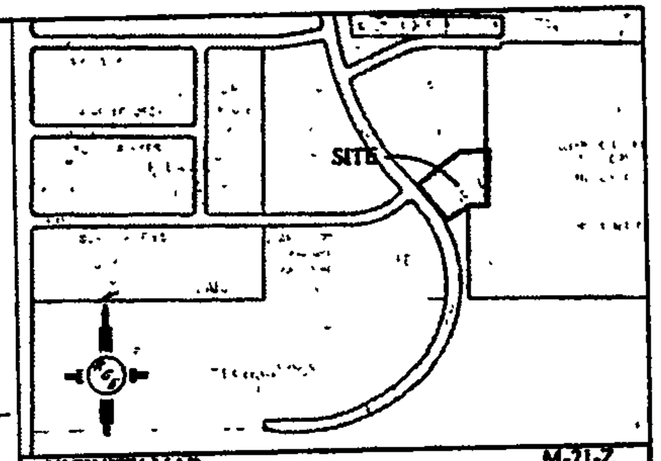
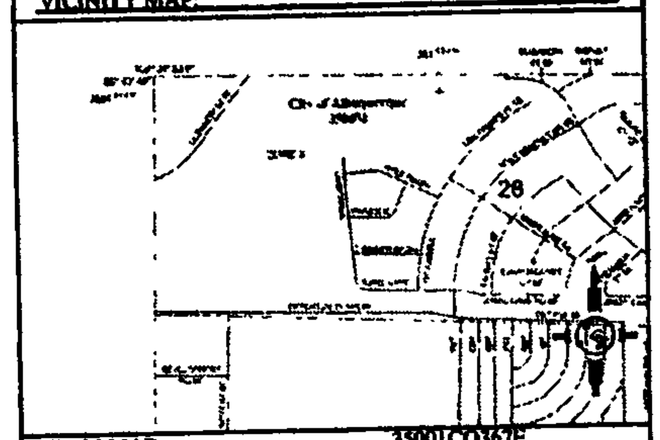


VICINITY MAP: M-21-Z



FIRM MAP 35001C0367E

LEGAL DESCRIPTION:

TRACT E-2-B

LEGEND

- LOT LINE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED CONTOUR
- PROPOSED INDEX CONTOUR
- FLOW ARROW
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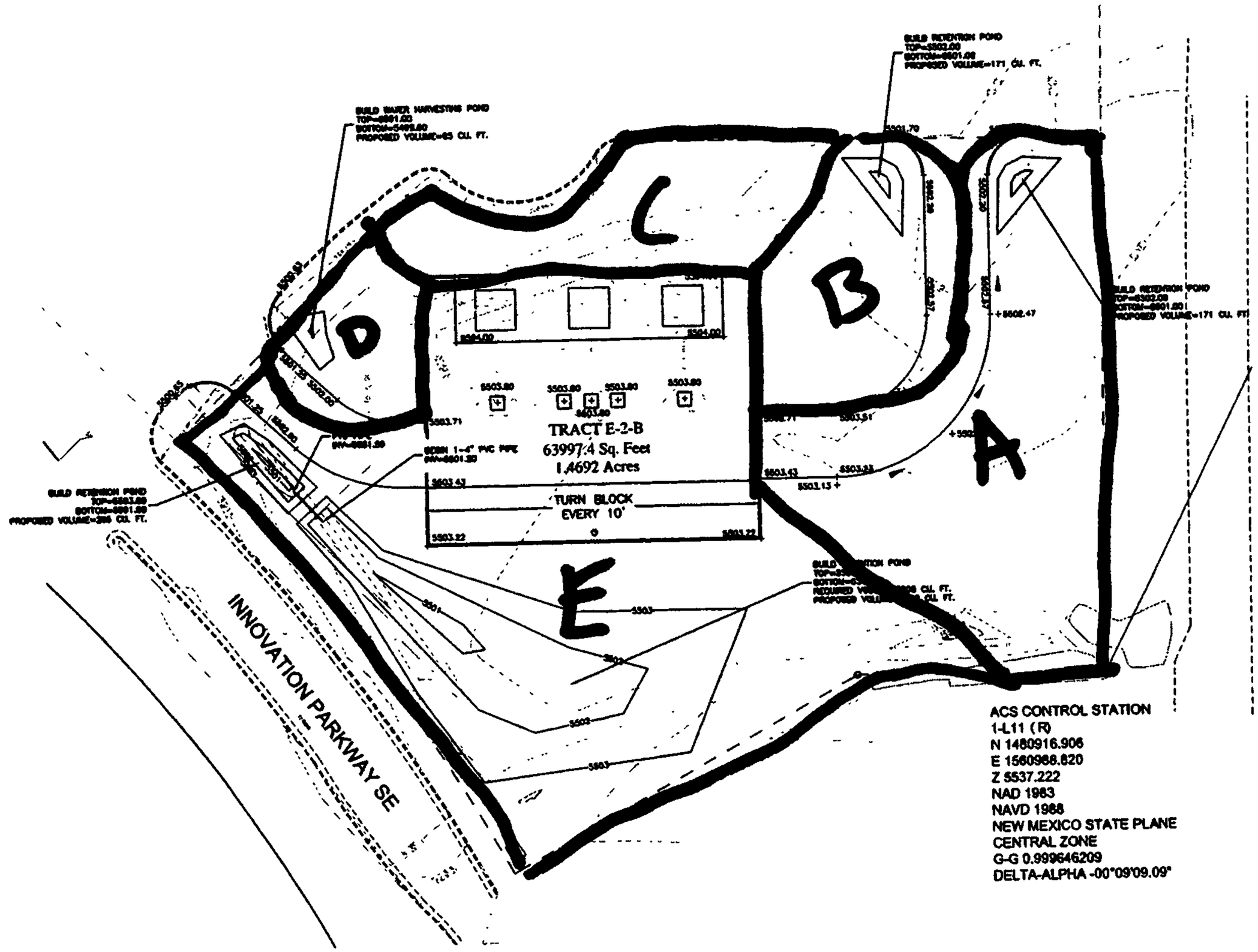
- LIMITS OF TYP. RIP RAP CHANNEL



ACS CONTROL STATION
1-L11 (R)
N 1480916.906
E 1560988.820
Z 5537.222
NAD 1983
NAVD 1988
NEW MEXICO STATE PLANE
CENTRAL ZONE
G-G 0.999646209
DELTA-ALPHA -00°09'09.09"

CAUTION:
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20 10 0 10 20
SCALE: 1"=20'

ENGINEER'S SEAL	1460 INNOVATION PARKWAY	DRAWN BY: WDM
	GRADING AND DRAINAGE PLAN	DATE: 6-19-11
	Rio Grande Engineering	SHEET #: -
DAVID SOULE P.E. #14583		JOB #: 21125

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 01/28/2003rd)

PROJECT TITLE: ***KTECH ANTENNA SITE*** ZONE MAP/DRG. FILE #: M21/D017

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TR E-2-B PLAT OF TRACTS E-2-A & E-2-B SANDIA SCIENCE &TECHNOLOGY PARK

CITY ADDRESS: ***1460 INNOVATION PARKWAY***

ENGINEERING FIRM:	Rio Grande Engineering	CONTACT:	David Soule, PE
ADDRESS:	PO BOX 67305	PHONE:	(505)321-9099
CITY, STATE:	Alb	ZIP CODE:	87199
OWNER:	AVALON TECH II LLC	CONTACT:	
ADDRESS:	111 LOMAS BLVD NW SUITE 200	PHONE:	
CITY, STATE:	alb	ZIP CODE:	87102
ARCHITECT:	***Slagle Herr***	CONTACT:	Bill Klienschmit
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	Geo surv CO	CONTACT:	David Vigil
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

- x DRAINAGE REPORT
- _____ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- _____ DRAINAGE PLAN RESUBMITTAL
- _____ CONCEPTUAL GRADING & DRAINAGE PLAN
- x GRADING PLAN
- _____ EROSION CONTROL PLAN
- _____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- _____ CLOMR/LOMR
- _____ TRAFFIC CIRCULATION LAYOUT (TCL)
- _____ ENGINEERS CERTIFICATION (TCL)
- _____ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- _____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- _____ SIA / FINANACIAL GUARANTEE RELEASE
- _____ PRELIMINARY PLAT APPROVAL
- _____ S. DEV. PLAN FOR SUB'D. APPROVAL
- x S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- _____ SECTOR PLAN APPROVAL
- _____ FINAL PLAT APPROVAL
- _____ FOUNDATION PERMIT APPROVAL
- s BUILDING PERMIT APPROVAL
- _____ CERTIFICATE OF OCCUPANCY (PERM.)
- _____ CERTIFICATE OF OCCUPANCY (TEMP.)
- x GRADING PERMIT APPROVAL
- _____ PAVING PERMIT APPROVAL
- _____ WORK ORDER APPROVAL
- _____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- _____ YES
- x NO
- _____ COPY PROVIDED

$50.00

RECEIVED
AUG 18 2011
22
HYDROLOGY SECTION

DATE SUBMITTED: 8/17/2011 BY: David Soule

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a dranage submittal.
The particular nature, location and scope of the proposed development defines the degree of drainage detail.
One or more of the following levels of sumbittal may be required based on the following:

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

CITY OF ALBUQUERQUE

September 19, 2011

David Soule, P.E.
Rio Grande Engineering
P.O. Box 67305
Rio Rancho, NM 87193

Re: KTECH ANTENNA SITE, TRACT E-2-B SANDIA SCIENCE & TECHNONOLOGY PARK, 1460 INNOVATION PARKWAY GRADING AND DRAINAGE PLAN ENIGNEER'S STAMP DATE 09/12/11 (M21/D017)

Dear Mr. Soule,

Based upon the information provided in your submittal received 9-12-11, the above referenced plan is approved for Building Permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharge and a Topsoil Disturbance Permit since it is disturbing ¾ of an acre or more.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

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

Sincerely,

Shahab Biazar, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 01/28/2003rd)

PROJECT TITLE: ***Ktech antenae*** ZONE MAP/DRG. FILE #: M21/D017

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TR E-2-B SANDIA SCIENCE &TECHNOLOGY PARK

CITY ADDRESS: 1460 INNOVATION PKWY SE

ENGINEERING FIRM:	Rio Grande Engineering	CONTACT:	David Soule, PE
ADDRESS:	PO BOX 67305	PHONE:	(505)321-9099
CITY, STATE:	Alb	ZIP CODE:	87199
OWNER:	AVALON TECH II LLC	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	GEOSURV CO	CONTACT:	David Vigil
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

CHECK TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- x DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEERS CERTIFICATION (TCL)
- ____ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANACIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- x S DEV. PLAN FOR SUB'D. APPROVAL
- ____ S DEV PLAN FOR BLDG PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- X BUILDING PERMIT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY (PERM.)
- ____ CERTIFICATE OF OCCUPANCY (TEMP.)
- x GRADING PERMIT APPROVAL
- x PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- x NO
- ____ COPY PROVIDED

DATE SUBMITTED: 9/9/11 BY: David Soule

SEP 12 2011

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

The particular nature, location and scope of the proposed development defines the degree of drainage detail

One or more of the following levels of sumbittal may be required based on the following:

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

RIO GRANDE ENGINEERING OF NEW MEXICO, LLC

September 12, 2011

Mr. Shahab Biazar,PE
Senior Engineer
Planning Department
City of Albuquerque

RE: Grading and Drainage Plan
(M21/D017)

Dear Shahab:

The purpose of this letter is to accompany the enclosed grading plan for the referenced project. This plan has been modified to address your written comments dated 8/30/11. The following is a summary of your comments and our responses in bold

1.Include the boundary and address on plan.

This has been added

2.Provide additional spot elevations around pond to assure drainage

This has been added

3. Provide pond calculations

Please find attached

4. What is pond width along innovation parkway

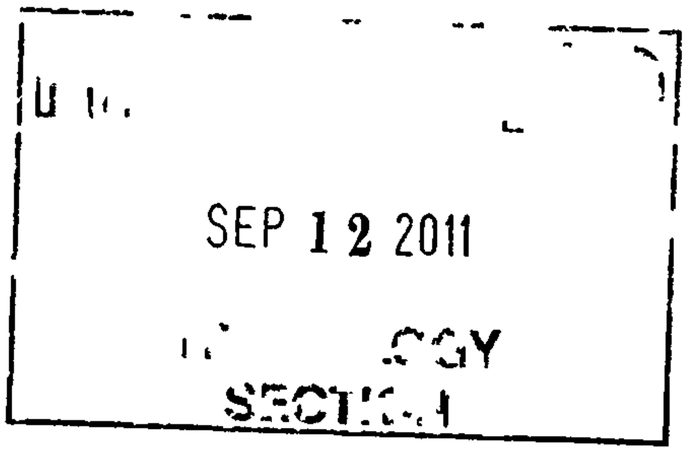
Berm has berm has been raised.

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

Sincerely,

David Soule, PE

Enclosures



VOLUME CALCULATIONS

ACTUAL ELEV.	DEPTH (FT)	VOLUME (AC-FT)	Q (CFS)
5501	0	0	0
5501.5	0	0.002	0.125
2.00	0.50	0.0764	0.243
3.00	1.50	0.1374	0.485

invert

area	volume
1889	
4764	3326.5
7203	5983.5

Orifice Equation

Q = CA SQRT(2gH)

C = 0.6

Diameter (in) 4

Area (ft^2)= 0.08726646

g = 32.2

H (Ft) = Depth of water above center of orifice

Q (CFS)= Flow

Weighted E Method

Existing Developed Basins

											100-Year, 6-hr		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)			
ALLOWABLE PER DMP	63162.00	1.450											2.28
BASIN A	16672 00	0 383	67%	0 256433425	10.0%	0 038	5 0%	0 01914	18%	0.069	1 024	0 033	0.99
BASIN B	6494.00	0.149	73%	0 10882966	6 0%	0 009	6.0%	0 00894	15%	0.022	0.968	0 012	0.37
BASIN C	4178.00	0.096	70%	0 067139578	20 0%	0 019	10 0%	0 00959	0%	0.000	0.775	0 006	0.21
BASIN D	2821.00	0.065	59%	0 038209137	15 0%	0 010	12.0%	0 00777	14%	0.009	1 013	0 005	0.17
BASIN E	32997.00	0.758	43%	0 325727961	10 0%	0 076	10 0%	0 07575	37%	0.280	1 378	0 087	2.47

Equations:

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

Volume = Weighted D * Total Area

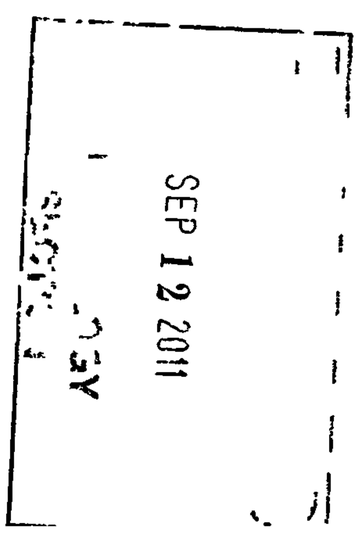
Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad 1.74

Where for 100-year, 6-hour storm

Ea= 0.66 Qa= 1 87
Eb= 0.92 Qb= 2.6
Ec= 1 29 Qc= 3.45
Ed= 2 36 Qd= 5.02

BASINS A,B,C,D FREE DISCHARGE 1.74
BASIN E THOTTLED TO 0.453
TOTAL SITE DISCHARGE 2.19

DETENTION POND SIZE 3789.16 CUBIC FEET



CITY OF ALBUQUERQUE

August 30, 2011

David Soule, P.E.
Rio Grande Engineering
P.O. Box 67305
Rio Rancho, NM 87193

Re: KTECH ANTENNA SITE, TRACT E-2-B SANDIA SCIENCE & TECHNONOLOGY PARK, 1460 INNOVATION PARKWAY GRADING AND DRAINAGE PLAN ENIGNEER'S STAMP DATE 05/15/11 (M21/D017)

Dear Mr. Soule,

Based upon the information provided in your submittal received 8-22-11, the above referenced plan can not be approved for Site Development Plan for Building Permit and Building Permit until the following comments are addressed.

- Include the boundary description and address to the plan.
- Provide additional spot elevation around the pond to assure that the runoff will drain out of the site through the entrances.
- Provide pond calculations for the proposed ponds.
- What is the top width of the pond along the Innovation Parkway. It appears a berm has to be built to assure that the pond does not fail along the street side.

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

Sincerely,

Shahab Biazar, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

SEP 12 2011

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

September 22, 2011

David Soule, P.E.
Rio Grande Engineering
P.O. Box 67305
Rio Rancho, NM 87193

Re: KTECH ANTENNA SITE, TRACT E-2-B SANDIA SCIENCE & TECHNONOLOGY PARK, 1460 INNOVATION PARKWAY GRADING AND DRAINAGE PLAN ENIGNEER'S STAMP DATE 09/22/11 (M21/D017)

Dear Mr. Soule,

Based upon the information provided in your submittal received 9-22-11, the above referenced plan is approved for Building Permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharge and a Topsoil Disturbance Permit since it is disturbing ¾ of an acre or more.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

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

Sincerely,

Shahab Biazar, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 01/28/2003rd)

PROJECT TITLE: ***Ktech antenae*** ZONE MAP/DRG. FILE #: M21/D017

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TR E-2-B SANDIA SCIENCE &TECHNOLOGY PARK

CITY ADDRESS. 1460 INNOVATION PKWY SE

ENGINEERING FIRM:	Rio Grande Engineering	CONTACT:	David Soule, PE
ADDRESS:	PO BOX 67305	PHONE:	(505)321-9099
CITY, STATE:	Alb	ZIP CODE:	87199
OWNER:	AVALON TECH II LLC	CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	GEOSURV CO	CONTACT:	David Vigil
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	

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- ____ ENGINEERS CERTIFICATION (TCL)
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- ____ CERTIFICATE OF OCCUPANCY (TEMP)
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- x PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

SEP 22 2011

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- x NO
- ____ COPY PROVIDED

DATE SUBMITTED 9/22/11 BY: David Soule

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a dranage submittal.
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3. **Drainage Report** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

RIO GRANDE ENGINEERING OF NEW MEXICO, LLC

September 22, 2011

Mr. Shahab Biazar,PE
Senior Engineer
Planning Department
City of Albuquerque

RE: Grading and Drainage Plan
(M21/D017)

Dear Shahab:

The purpose of this letter is to accompany the enclosed grading plan for the referenced project. This plan has been modified to address owner comments. The foot print of the pond has been shrunk. The use is a temporary use as an antennae testing facility. This site conforms to previous plan that was prepared based upon your written comments dated 8/30/11.
Should you have any questions regarding this resubmittal, please do not hesitate to call me.

Sincerely,

David Soule, PE

Enclosures