

2. HANDICAP RAMP PER ARCHITECTURAL SITE PLAN.

TRENCH DRAIN THROUGH SIDEWALK PER DETAIL ON SHEET CG-501. ADJUST LOCATION AS NECESSARY TO MATCH ROOF DRAIN.

 5'X5'X12" THICK FRACTURED FACE ROCK, AT DOWNSTREAM SIDE OF CURB CUT/SIDEWALK CULVERT. INSTALL OVER GEOTEX 501 NON-WOVEN GEO-TEXTILE. VARY ROCK SIZE FROM 4" TO 8" DIA. (6" MEDIAN.) TOP OF ROCK ELEVATIONS MUST MATCH PROPOSED GRADE TO CONVEY WATER AT DISCHARGE POINTS.

WATER HARVESTING AREA TO TREAT "FIRST FLUSH". INSTALL PER GRADES SHOWN.

6. 12" THICK FRACTURED FACE ROCK, ON SIDE SLOPES OF WATER HARVESTING POND OVER GEOTEX 501 NON-WOVEN GEO-TEXTILE. VARY ROCK SIZE FROM 4" TO 8" DIA. (6" MEDIAN.) TOP OF ROCK ELEVATIONS MUST MATCH PROPOSÉD GRADE TO CONVEY WATER AT DISCHARGE POINTS.

7. 2' WIDE CURB OPENING PER DETAIL ON SHEET CG-501.

8. GRADE CONCRETE DUMPSTER PAD TOWARDS DRAIN.

9. 2-4" PVC PIPES THROUGH SIDEWALK PER DETAIL ON SHEET CG-501.

10. 2' WIDE SIDEWALK CULVERT PER COA STD DWG #2236. 11. EXTENDED STEMWALL

12. RETAINING WALL.

13. 2' WIDE SIDEWALK CULVERT IN RIGHT-OF-WAY TO BE INSTALLED AND INSPECTED AS PART OF WORK ORDER

14. SEE DETAIL "A" ON THIS SHEET.

## CALCULATIONS

CALCULATIONS: Innova Plaza: Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE CALCULATIONS: 100-YEAR, 6-HOUR STORM AREA OF SITE: |62108.63| SF = 1.4 AC.

		Treatment	%		
Area A	=	0	0%		
Area B	$\underline{\underline{}}$	0	0%		
Area C		46581.473	75%		
Area D	=	15527.158	25%		
TOTAL	=	62108.63	100%		

## **DEVELOPED FLOWS:**

		Treatment	%	EXCESS PRECIP:
rea A	i <b>`</b>	0	0%	Precip. Zon 3
rea B	i <b>'=</b> .	3105	5%	$E_A = 0.66$
rea C	=	6211	10%	$E_{\rm B} = 0.92$
rea D	<b>!</b>	52792	85%	$E_{\rm C} = 1.29$
TAL	=	62108.63	100%	$E_{\rm D} = 2.36$

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm) Weighted E =  $E_A A_A + E_B A_B + E_C A_C + E_D A_D$ 

	$A_A + A_B + A_C$	+ A <sub>D</sub>
56 :	Darratarrati E -	2 10

		2.00	****	20.010		
On-Site V	olume of R	unoff: V	360 =	=E*A / 12		
Iistoric	-	8061	CF	Developed V	=	11288 CF
On-Site Pea	k Discharge	Rate: Qp	$= Q_{pA}$	A <sub>A</sub> +Q <sub>pB</sub> A <sub>B</sub> +Q <sub>pC</sub>	Ac+Q	PDAD / 43,560
or Precip	itation 23					

$Q_{pA}$	=	1.87			$Q_{pC}$	=	3.45
$Q_{\mathrm{pB}}$	<b>=</b>	2.60			$Q_{ m pD}$	=	5.02
listoric <sup>1</sup>	=		5.5	CFS	Developed Q	=	6.8 (

PROPOSED CONTOUR 1.56 in. | Developed E = 2.18 in.

DESCRIPTION Discharges to Trumbull thru sdwk culvert

PROPOSED SPOT ELEVATION FLOW ARROW

FF = 6881.0FINISH FLOOR ELEVATION

GROUND AT TOP OF RETAINING WALL ELEVATION GROUND AT BASE OF RETAINING WALL

INVERT ELEVATION INV=72.5

Area of bas in flows = The following calculations are based on Treatment areas as shown in table to the right LAND TREATMENT Sub-basin Weighted Excess Precipitation (see formula above) Weighted E = 2.18 in. Sub-basin Volume of Runoff (see formula above) C = 10%D = 85% 2090 CF ub-basin Peak Discharge Rate: (see formula above) 1.3 cfs DESCRIPTION Discharges to Bell Ave BASIN NO. B Area of bas in flows = 50611 SF The following calculations are based on Treatment areas as shown in table to the right Sub-basin Weighted Excess Precipitation (see formula above) Weighted E = 2.18 in. B = 5%Sub-basin Volume of Runoff (see formula above) C = 10% D = 85% 9198 CF

## 90% STORM "FIRST FLUSH" RETENTION:

 $V_{FF} = AREA OF %D X 0.34"/12$ 

 $V_{FF} = 52,792 \text{ SF X } 0.34"/12 = 1,496 \text{ CF}$ 

TOTAL PONDING PROVIDED = 1,520 CF > REQUIRED.

ub-basin Peak Discharge Rate: (see formula above)

ISAACSON & ARFMAN, P.A. Consulting Engineering Associates 128 Monroe Street N.E. Albuquerque, New Mexico 87108 Ph. 505-268-8828 www.iacivil.com

FLOOD ZONE: THIS SITE IS OUTSIDE THE 100-YEAR FLOODPLAIN PER FEMA FIRM PANEL NO. 35001C00358H DATED 08/16/2012.

SITE

FORCE

PROJECT DATA

GENEVIEVE DONART

P.O. BOX 44414

BENCHMARK: ACS MONUMENT "4-L22"

DRAINS ONTO THE PROPERTY.

FROM A 2' WIDE SIDEWALK CULVERT.

ISAACSON & ARFMAN, P.A.

PHONE: (505) 268-8828

CARTESIAN SURVEYS, INC.

RIO RANCHO, NM 87174

PHONE: (505) 896-3050

ELEV=5586.425 (NAVD 1988)

EXISTING CONDITIONS: THE EXISTING SITE WAS FORMERLY A SCHOOL BUS YARD. THERE IS SOME CONCRETE REMAINING FROM OLD BUILDING FOUNDATIONS. THE SITE SLOPES FROM THE

ONSITE STORM WATER OF 5.5 CFS DISCHARGES TO BELL AVE OVER THE SIDEWALK. THE ADJACENT HALF OF EUBANK BLVD

PROPOSED CONDITIONS: THE PROPOSED SITE WILL HAVE ONE

OF EUBANK, WHICH WILL REDIRECT OFFSITE FLOW TO THE NORTH. THE SITE DISCHARGES 5.5 CFS TO BELL AVE FROM

THE NORTHWEST DRIVEPAD AND 1.3 CSF TO TRUMBULL AVE

**LEGEND** 

EXISTING CONTOUR

5,700 SF BLDG, (NORTH) AND A SECOND PAD FOR A FUTURE

BUILDING (SOUTH). CURB IS ADDED ALONG THE ADJOINING EDGE

SOUTHEAST TO THE NORTHWEST AT APPROXIMATELY 1.5%.

128 MONROE ST NE, ABQ. NM 87108

LEGAL DESCRIPTION: LOT 1A, BLOCK 48, SKYLINE HEIGHTS

1"=750'±

L-20-Z

SUBDIVISION

ENGINEER:

SURVEYOR:

SITE AREA: 1.43 ACRES

VEL PLA IERC SITE , PLAZA IG & DR ANK SE, DINC DINC INNOV/ GRADIN 401 EUB

REVISION DATE

NOVEMBER 13, 2014

SHEET NUMBER

Nov 13,2014

CG-101

## CITY OF ALBUQUERQUE

August 28, 2015



Genny Donart, P.E. Isaacson & Arfman, P.A. 128 Monroe St NE Albuquerque, New Mexico 87108

RE: Innova Plaza

Grading and Drainage Plan Permanent CO - Accepted

**Engineers Stamp Date 11/13/14 (L20D067)** 

Certification Date 8/26/15

Dear Ms. Donart,

Based upon the information provided in your submittal received 8/26/15, the above referenced Certification is acceptable for the release of a permanent Certificate of Occupancy by Hydrology.

PO Box 1293

If you have any questions, please contact me at 924-3695 or Totten Elliott 924-3982.

Albuquerque

New Mexico 87103

www.cabq.gov

TE/RH C: File Sincerely,

Rita Harmon, P.E.

Senior Engineer, Hydrology

Planning Department