CITY OF ALBUQUERQUE

June 4, 2008

Jeffrey L. Mulbery, P.E.
Bohannan Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

Re: Sony Imageworks Grading and Drainage Plan
Engineer's Stamp dated 5-8-08 (R16/DA3006)

Dear Mr. Mulberry,

Based upon the information provided in your submittals received 5-9-08 and 6-4-08, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Prior to Temporary or Permanent Certificate of Occupancy release:

- Engineer Certification per the DPM checklist will be required.
- Include the berm and the berm detail, received 6-4-08, on the certified plan.
- Per the AHYMO data submitted 6-4-08, the max water surface elevation for the pond in Basin 3 is 5298.75. Update this on the certified plan.

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

Sincerely,

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

Copy: file

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(Rev. 12/05)

PROJECT TITLE: Sony Imageworks @ Mesa del Sol ZONE MAP/DRG. FILE # R-16-Z/DA3006
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: A Portion of Tract 22, Mesa del Sol, Innovation Park
CITY ADDRESS: _____

ENGINEERING FIRM: Bohannan Huston Inc. CONTACT: Jeff Mulbery
ADDRESS: 7500 Jeferson St. SE PHONE: (505) 798-7986
CITY, STATE: Albuquerque, NM ZIP CODE: 87109-4335

OWNER: Forest City Covington, N.M., LLC CONTACT: Many Barrera
ADDRESS: 801 University Blvd. SE, Suite 200 PHONE: 505-400-3021
CITY, STATE: Albuquerque, NM ZIP CODE: 87106

ARCHITECT: Decker/Perich/Sabatini CONTACT: Tim Veltkamp
ADDRESS: 7601 Jefferson NE PHONE: (505)761-9700
CITY, STATE: Albuquerque, NM ZIP CODE: 87109

SURVEYOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:
_____ DRAINAGE REPORT
_____ DRAINAGE PLAN 1st SUBMITTAL
__X__ DRAINAGE PLAN RESUBMITTAL
_____ CONCEPTUAL G & D PLAN
__X__ GRADING PLAN
_____ EROSION CONTROL PLAN
_____ ENGINEER'S CERT (HYDROLOGY)
_____ CLOMR/LOMR
_____ TRAFFIC CIRCULATION LAYOUT
_____ ENGINEER/ARCHITECT CERT (TCL)
_____ ENGINEER/ARCHITECT CERT (DRB S.P.)
_____ ENGINEER/ARCHITECT CERT (AA)
_____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL 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
_____ FOUNDATION PERMIT APPROVAL
__X__ BUILDING PERMIT APPROVAL
_____ CERTIFICATE OF OCCUPANCY (PERM)
_____ CERTIFICATE OF OCCUPANCY (TEMP)
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ WORK ORDER APPROVAL
__X__ OTHER (ROUGH GRADING PERMIT)

RECEIVED
JUN 04 2008
HYDROLOGY SECTION

RECEIVED
MAY 09 2008
HYDROLOGY SECTION

already have it

WAS A PRE-DESIGN CONFERENCE ATTENDED:
_____ YES
_____ NO
_____ COPY PROVIDED

SUBMITTED BY: Jeff Mulbery/MB DATE: 5-09-08

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 define 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.

Bohannan ▲ Huston INC.

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM
87109-4335

www.bhinc.com

voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

June 3, 2008

for C.O.

Curtis Cherne, P.E.
Planning Department
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RECEIVED
JUN 04 2008
HYDROLOGY SECTION

Re: Sony Imageworks Grading and Drainage
Plan Engineer's Stamp dated 5-8-08 (R16/DA3006)

Dear Curtis:

The purpose of this letter is to respond to comments we received to the above mentioned building permit submittal. We have addressed the comments as follows:

Comment 1:

> 'It is not clear how the pond in Basin 3 will function. The HWL is equal to the grate height at 98.50. The volume provided is 10, 540 cu. ft., which is less than the 100 yr-6hr storm produces. In addition, the pipe leaving the pond will carry 2.98 cfs and the basin produces 8.5 cfs. Therefore, it appears run-off will overtop the pond and the HWL is not 98.5 as stated. Show the extents of the WSE.HWL in the parking lot if that is your intention. Also, the 24-hour storm is required for ponds of this type. Provide a hydrograph for this pond.'

Response:

We have provided documentation with this letter that shows the inlet capacity as the pond fills. The attached AHYMO model demonstrates the 24hr rainfall hydrograph along with the HWL and peak discharge, elevation 98.75 and 2.82 cfs respectively. Therefore, the storm water does not overtop the top of pond at 99.00. Similarly, peak discharge from the basin is 8.5 cfs, but peak discharge from the pond is 2.82 cfs.

Comment 2:

> 'It appears that run-off from the northeast portion of the future parking area will leave the site. A berm may be required along the rear property line to prevent run-off from leaving the site.'

Response:

With this letter, we have provided a detail of the drainage control berm that we will issue to the contractor.

Comment 3:

> 'A manhole is shown on the studios lot where the 36" line comes in from this site. The as-built plan from the studios show a manhole was not constructed. Call out a Tee if that was built and provide an invert. '

Response:

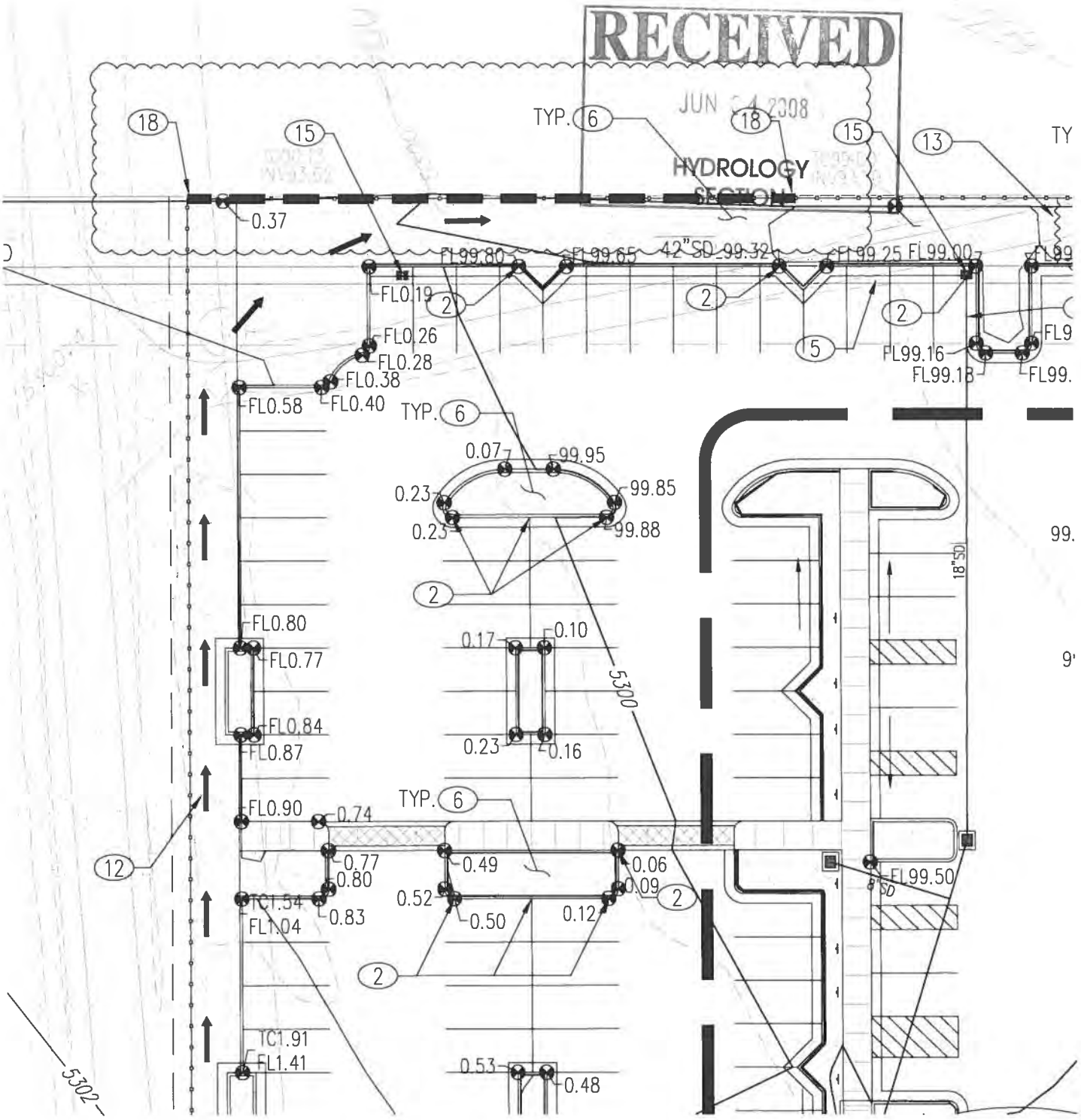
We intend to document this change with the drainage certification for the studios.

Please let us know if you find these responses sufficient. Thank you.

Sincerely,

Justin Smith, E.I.
Community Development and Planning

JS/cc
Enclosures



GRADING KEYED NOTES

18. INSTALL DRAINAGE CONTROL BERM 1' ABOVE FINISHED GRADE, PER DETAIL SHEET 1.1

architecture
interiors
planning
engineering

Dekker/Perich/Sabatini

6801 Jefferson NE
Suite 100
Albuquerque, NM 87109

505 761-9700
fax 761-4222
dps@dpsabq.com

C100
Grading and
Drainage Plan

Add Drainage Control Berm

Sony Imageworks-Shell
@Mesa del Sol
5640 University Blvd SE
Albuquerque, NM 87119

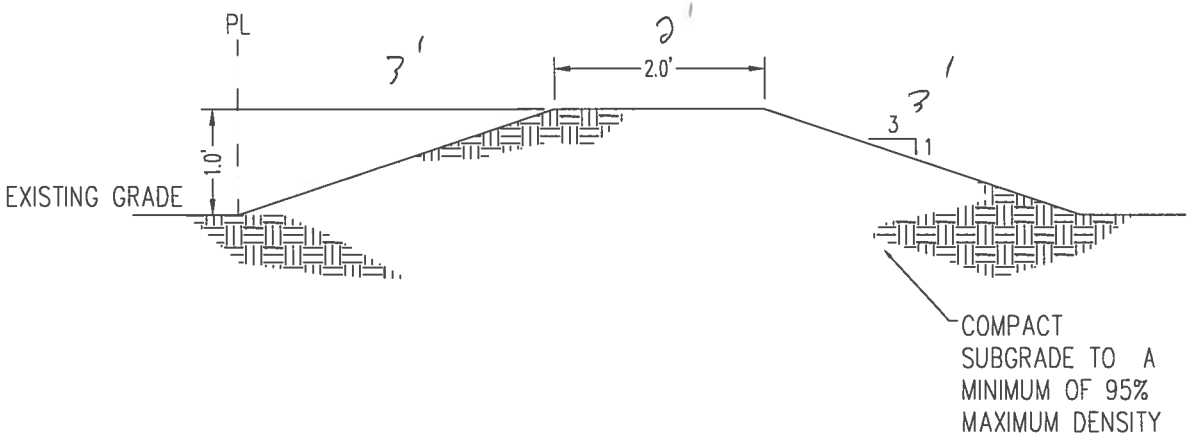
DRAWN BY	JDS
REVIEWED BY	JLM
DATE ISSUED	06/04/08
PROJECT NO.	080321

SCALE 1"=30'

1.0

14'

6'



DRAINAGE CONTROL BERM
NTS

architecture
interiors
planning
engineering

Dekker/Perich/Sabatini

6801 Jefferson NE
Suite 100
Albuquerque, NM 87109

505 761-9700
fax 761-4222
dps@dpsabq.com

C100 Grading and Drainage Plan	Add Drainage Control Berm		
Sony Imageworks-Shell @Mesa del Sol 5640 University Blvd SE Albuquerque, NM 87119	DRAWN BY	JDS	SCALE NTS
	REVIEWED BY	JLM	1.1
	DATE ISSUED	06/04/08	
	PROJECT NO.	080321	2 OF 2

Single D inlet, in sump condition:

Open Area (for orifice calc in sq. 3.93

Length of Weir (feet): 8.40

Head (ft)	Head (in)	Weir Q	Orifice Q	Control Q
0.083	1	0.54	5.46	0.54
0.167	2	1.53	7.73	1.53
0.25	3	2.81	9.46	2.81
0.333	4	4.33	10.93	4.33
0.417	5	6.05	12.22	6.05
0.5	6	7.96	13.39	7.96
0.583	7	10.02	14.46	10.02
0.667	8	12.25	15.46	12.25
0.75	9	14.62	16.39	14.62
0.833	10	17.12	17.28	17.12
0.917	11	19.75	18.12	18.12
1	12	22.50	18.93	18.93

This sheet is used to justify outflow for the Ahymo storage-disharge table.

This sheet is used to show pipe capacity with and without 6" of head over the grate elevation.

Manning's Eqn: Q = 1.49/n x AR^2/3 x S^1/2

Pipe Dia	12	inches
A	0.7854	sq. ft
WP	3.1416	ft.
R	0.25	ft.
Slope	0.7000%	
n	0.013	

Q= 2.989
V= 3.81

Note: do not modify these cells

Customize for your exact head . . .

Analysis of water entrance into end of pipe by orifice equation

Orrifice Eqn: Q = .62*A*(2gH)^.5

Head	3.48	feet -- to middle of pipe
A	0.7854	sq. ft

Q= 7.290 **(for Ahymo)**

weir still dominates

Note: do not modify these cells

Pond Volume Calculation - Average End Area Method

Basin: 3

ELEV. (FT)	AREA (SQ.FT)	AVG. AREA (SQ.FT)	HEIGHT (FT)	VOLUME (CF)	VOLUME (CF)	VOLUME (AC-FT)
97	3839.7				0	
		4014.45	0.33	1324.768		
97.33	4189.2				1324.768	0.030412
		4367.2	0.33	1441.176		
97.66	4545.2				2765.944	0.063497
		4726.45	0.34	1606.993		
98	4907.7				4372.938	0.100389
		5089.75	0.33	1679.617		
98.33	5271.8				6052.555	0.138948
		5398.95	0.17	917.8215		
98.5	5526.1				6970.377	0.160018
		5728.55	0.083	475.4696		
98.583	5931				7445.846	0.170933
		5981.2	0.084	502.4208		
98.667	6031.4				7948.267	0.182467
		6082.1	0.083	504.8143		
98.75	6132.8				8453.081	0.194056
		6183.9	0.083	513.2637		
98.833	6235				8966.345	0.205839
		6286.5	0.084	528.066		
98.917	6338				9494.411	0.217962
		6389.95	0.083	530.3658		
99	6441.9				10024.78	0.230137

```
    AHYMO PROGRAM (AHYMO_97) -                          - Version:  1997.02c
         RUN DATE (MON/DAY/YR) = 06/02/2008
         START TIME (HR:MIN:SEC) = 16:13:03     USER NO.= AHYMO-S-9702c1BohanHu-AH
         INPUT FILE = rp1.hym


*S  AHYMO FILE FOR SONY IMAGEWORKS DRAINAGE
*S   DEVELOPED CONDITIONS, 24HR, 100YR.
*S
*S  FILE: B3.txt
*S  REVISED: 04/23/08
*S
*
*  ASSUMPTIONS:
*  1. USED LAND TREATMENTS USED IN GRADING AND DRAINAGE PLAN
*  3. PRECIPITATION CALCULATED PER DPM FOR ZONE 2
*S_____________________________________________________________________
* RAINFALL FOR MESA DEL SOL BASINS PER DPM TABLE A-2 AND A-3
* 100YR
RAINFALL              TYPE=2  RAIN QUARTER=0.0  RAIN ONE=2.01
                       RAIN SIX=2.35  RAIN DAY=2.75 DT=.05

               COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
               DT =     .050000 HOURS       END TIME =    24.000000 HOURS
                  .0000   .0024   .0049   .0075   .0102   .0130   .0158
                  .0188   .0219   .0252   .0286   .0321   .0358   .0397
                  .0439   .0482   .0529   .0578   .0631   .0689   .0751
                  .0836   .0930   .1201   .1842   .2944   .4649   .7103
                 1.0460  1.3107  1.4303  1.5302  1.6176  1.6959  1.7667
                 1.8313  1.8906  1.9452  1.9955  2.0421  2.0851  2.0946
                 2.1034  2.1115  2.1191  2.1262  2.1330  2.1394  2.1455
                 2.1513  2.1569  2.1622  2.1673  2.1723  2.1771  2.1817
                 2.1862  2.1905  2.1948  2.1989  2.2028  2.2067  2.2105
                 2.2142  2.2178  2.2213  2.2248  2.2282  2.2315  2.2347
                 2.2379  2.2410  2.2440  2.2470  2.2500  2.2529  2.2557
                 2.2585  2.2613  2.2640  2.2666  2.2693  2.2719  2.2744
                 2.2769  2.2794  2.2818  2.2842  2.2866  2.2889  2.2913
                 2.2935  2.2958  2.2980  2.3002  2.3024  2.3046  2.3067
                 2.3088  2.3109  2.3129  2.3150  2.3170  2.3190  2.3209
                 2.3229  2.3248  2.3267  2.3286  2.3305  2.3323  2.3342
                 2.3360  2.3378  2.3396  2.3414  2.3431  2.3449  2.3466
                 2.3483  2.3500  2.3517  2.3534  2.3551  2.3569  2.3586
                 2.3602  2.3619  2.3636  2.3653  2.3669  2.3686  2.3703
                 2.3719  2.3736  2.3752  2.3768  2.3785  2.3801  2.3817
                 2.3833  2.3849  2.3865  2.3881  2.3897  2.3913  2.3929
                 2.3944  2.3960  2.3976  2.3991  2.4007  2.4022  2.4038
                 2.4053  2.4068  2.4084  2.4099  2.4114  2.4129  2.4144
                 2.4159  2.4174  2.4189  2.4204  2.4219  2.4234  2.4248
                 2.4263  2.4278  2.4292  2.4307  2.4322  2.4336  2.4350
                 2.4365  2.4379  2.4394  2.4408  2.4422  2.4436  2.4450
                 2.4464  2.4478  2.4493  2.4506  2.4520  2.4534  2.4548
                 2.4562  2.4576  2.4589  2.4603  2.4617  2.4630  2.4644
                 2.4658  2.4671  2.4685  2.4698  2.4711  2.4725  2.4738
                 2.4751  2.4765  2.4778  2.4791  2.4804  2.4817  2.4830
                 2.4843  2.4856  2.4869  2.4882  2.4895  2.4908  2.4921
                 2.4934  2.4946  2.4959  2.4972  2.4984  2.4997  2.5010
                 2.5022  2.5035  2.5047  2.5060  2.5072  2.5085  2.5097
                 2.5109  2.5122  2.5134  2.5146  2.5158  2.5170  2.5183
                 2.5195  2.5207  2.5219  2.5231  2.5243  2.5255  2.5267
                 2.5279  2.5291  2.5303  2.5314  2.5326  2.5338  2.5350
                 2.5361  2.5373  2.5385  2.5396  2.5408  2.5420  2.5431
                 2.5443  2.5454  2.5466  2.5477  2.5488  2.5500  2.5511
                 2.5523  2.5534  2.5545  2.5556  2.5568  2.5579  2.5590
                 2.5601  2.5612  2.5623  2.5635  2.5646  2.5657  2.5668
                 2.5679  2.5690  2.5701  2.5711  2.5722  2.5733  2.5744
                 2.5755  2.5766  2.5776  2.5787  2.5798  2.5809  2.5819
                 2.5830  2.5841  2.5851  2.5862  2.5872  2.5883  2.5893
                 2.5904  2.5914  2.5925  2.5935  2.5946  2.5956  2.5966
                 2.5977  2.5987  2.5997  2.6008  2.6018  2.6028  2.6038
                 2.6049  2.6059  2.6069  2.6079  2.6089  2.6099  2.6109
                 2.6119  2.6129  2.6139  2.6149  2.6159  2.6169  2.6179
                 2.6189  2.6199  2.6209  2.6219  2.6229  2.6238  2.6248
                 2.6258  2.6268  2.6278  2.6287  2.6297  2.6307  2.6316
                 2.6326  2.6336  2.6345  2.6355  2.6364  2.6374  2.6384
                 2.6393  2.6403  2.6412  2.6421  2.6431  2.6440  2.6450
                 2.6459  2.6469  2.6478  2.6487  2.6497  2.6506  2.6515
                 2.6524  2.6534  2.6543  2.6552  2.6561  2.6571  2.6580
```

0.005	0.1389	5298.333
0.006	0.1600	5298.500
0.540	0.1709	5298.583
1.530	0.1824	5298.667
2.810	0.1940	5298.750
4.330	0.2058	5298.833
6.050	0.2180	5298.917
7.023	0.2301	5299.000

* * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5296.67	-.030	.00
.50	.00	5297.00	.000	.00
1.00	.00	5297.00	.000	.00
1.50	8.52	5297.96	.096	.00
2.00	2.00	5298.72	.190	2.39
2.50	.26	5298.58	.170	.51
3.00	.09	5298.53	.163	.18
3.50	.06	5298.51	.161	.08
4.00	.05	5298.51	.161	.05
4.50	.04	5298.51	.161	.05
5.00	.05	5298.51	.161	.05
5.50	.05	5298.51	.161	.05
6.00	.06	5298.51	.161	.05
6.50	.06	5298.51	.161	.06
7.00	.05	5298.51	.161	.06
7.50	.05	5298.51	.161	.05
8.00	.05	5298.51	.161	.05
8.50	.05	5298.51	.161	.05
9.00	.05	5298.51	.161	.05
9.50	.05	5298.51	.161	.05
10.00	.05	5298.51	.161	.05
10.50	.04	5298.51	.161	.04
11.00	.04	5298.51	.161	.04
11.50	.04	5298.51	.161	.04
12.00	.04	5298.51	.161	.04
12.50	.04	5298.51	.161	.04
13.00	.04	5298.51	.161	.04
13.50	.04	5298.50	.161	.04
14.00	.04	5298.50	.161	.04
14.50	.04	5298.50	.161	.04
15.00	.04	5298.50	.161	.04
15.50	.03	5298.50	.161	.03
16.00	.03	5298.50	.161	.03
16.50	.03	5298.50	.161	.03
17.00	.03	5298.50	.161	.03
17.50	.03	5298.50	.161	.03
18.00	.03	5298.50	.161	.03
18.50	.03	5298.50	.161	.03
19.00	.03	5298.50	.161	.03
19.50	.03	5298.50	.160	.03
20.00	.03	5298.50	.160	.03
20.50	.03	5298.50	.160	.03
21.00	.03	5298.50	.160	.03
21.50	.03	5298.50	.160	.03
22.00	.03	5298.50	.160	.03
22.50	.03	5298.50	.160	.03
23.00	.03	5298.50	.160	.03
23.50	.03	5298.50	.160	.03
24.00	.03	5298.50	.160	.03
24.50	.00	5298.50	.160	.01
25.00	.00	5298.50	.160	.01
25.50	.00	5298.50	.160	.01
26.00	.00	5298.49	.159	.01
26.50	.00	5298.49	.159	.01
27.00	.00	5298.49	.159	.01
27.50	.00	5298.49	.159	.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
28.00	.00	5298.49	.158	.01
28.50	.00	5298.48	.158	.01
29.00	.00	5298.48	.158	.01
29.50	.00	5298.48	.158	.01

PEAK DISCHARGE = 2.818 CFS - PEAK OCCURS AT HOUR 1.85

2.6589	2.6598	2.6607	2.6616	2.6625	2.6634	2.6644
2.6653	2.6662	2.6671	2.6680	2.6689	2.6698	2.6707
2.6715	2.6724	2.6733	2.6742	2.6751	2.6760	2.6769
2.6778	2.6786	2.6795	2.6804	2.6813	2.6821	2.6830
2.6839	2.6848	2.6856	2.6865	2.6874	2.6882	2.6891
2.6900	2.6908	2.6917	2.6925	2.6934	2.6942	2.6951
2.6959	2.6968	2.6976	2.6985	2.6993	2.7002	2.7010
2.7019	2.7027	2.7035	2.7044	2.7052	2.7061	2.7069
2.7077	2.7085	2.7094	2.7102	2.7110	2.7119	2.7127
2.7135	2.7143	2.7151	2.7160	2.7168	2.7176	2.7184
2.7192	2.7200	2.7209	2.7217	2.7225	2.7233	2.7241
2.7249	2.7257	2.7265	2.7273	2.7281	2.7289	2.7297
2.7305	2.7313	2.7321	2.7329	2.7337	2.7344	2.7352
2.7360	2.7368	2.7376	2.7384	2.7392	2.7399	2.7407
2.7415	2.7423	2.7431	2.7438	2.7446	2.7454	2.7462
2.7469	2.7477	2.7485	2.7492	2.7500		

```
**********************************************************************
*S    DRAINAGE BASIN 3
COMPUTE NM HYD          ID=1  HYD NO=B3  AREA=0.00308 SQ MI
                        PER A=0   PER B=8   PER C=8 PER D=84
                        TP=0.133 HR  MASS RAIN=-1

     K =   .072485HR    TP =   .133000HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
     UNIT PEAK =   10.237    CFS   UNIT VOLUME =    .9981       B =   526.28       P60 = 2.0100
     AREA =      .002587 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000


     K =   .119497HR    TP =   .133000HR    K/TP RATIO =   .898476     SHAPE CONSTANT, N =  3.944947
     UNIT PEAK =   1.3023    CFS   UNIT VOLUME =    .9906       B =   351.48       P60 = 2.0100
     AREA =      .000493 SQ MI    IA =    .42500 INCHES    INF =   1.04000 INCHES PER HOUR
     RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .050000

PRINT HYD               ID=1     CODE=10
```

HYDROGRAPH FROM AREA B3

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.0	10.000	.0	15.000	.0
20.000 .0							
.500	.0	5.500	.1	10.500	.0	15.500	.0
20.500 .0							
1.000	.0	6.000	.1	11.000	.0	16.000	.0
21.000 .0							
1.500	8.5	6.500	.1	11.500	.0	16.500	.0
21.500 .0							
2.000	2.0	7.000	.1	12.000	.0	17.000	.0
22.000 .0							
2.500	.3	7.500	.1	12.500	.0	17.500	.0
22.500 .0							
3.000	.1	8.000	.1	13.000	.0	18.000	.0
23.000 .0							
3.500	.1	8.500	.0	13.500	.0	18.500	.0
23.500 .0							
4.000	.0	9.000	.0	14.000	.0	19.000	.0
24.000 .0							
4.500	.0	9.500	.0	14.500	.0	19.500	.0
24.500 .0							

```
     RUNOFF VOLUME =     2.26417 INCHES     =        .3719 ACRE-FEET
     PEAK DISCHARGE RATE =       8.52 CFS  AT   1.500 HOURS   BASIN AREA =   .0031 SQ. MI.

*S
*
*
*
ROUTE RESERVOIR     ID=21  HYD=POND   INFLOW ID=1   CODE=10
                    OUTFLOW           STORAGE          ELEV
                    (CFS)             (AC-FT)          (FT)
                                0.001          0.0000          5297.000
                                0.002          0.0304          5297.333
                                0.003          0.0635          5297.667
                                0.004          0.1004          5298.000
```

```
 MAXIMUM WATER SURFACE ELEVATION =      5298.750
 MAXIMUM STORAGE =          .1941 AC-FT       INCREMENTAL TIME=      .050000HRS

*                    = 8455 ft3
*
FINISH

     NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 16:13:03
```

CITY OF ALBUQUERQUE

May 16, 2008

Jeffrey L. Mulbery, P.E.
Bohannan Huston, Inc.
7500 Jefferson St NE
Albuquerque, NM 87109

Re: Sony Imageworks Grading and Drainage Plan

Engineer's Stamp dated 5-8-08 (R16/DA3006)

Dear Mr. Mulberry,

Based upon the information provided in your submittal received 5-9-08, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

- It is not clear how the pond in Basin 3 will function. The HWL is equal to the grate height at 98.50. The volume provided is 10540 cu. ft., which is less than the 100 yr-6hr storm produces. In addition, the pipe leaving the pond will carry 2.98 cfs and the basin produces 8.5 cfs. Therefore, it appears runoff will overtop the pond and the HWL is not 98.5 as stated. Show the extents of the WSE/HWL in the parking lot if that is your intention. Also, the 24-hour storm is required for ponds of this type. Provide a hydrograph for the pond.

- It appears that runoff from the northeast portion of the future parking area will leave the site. A berm may be required along the rear property line to prevent runoff from leaving this site.

- A manhole is shown on the studios lot where the 36" line comes in from this site. The as-built plan from the studios show a manhole was not constructed. Call out a Tee if that was built and provide an invert.

For future reference, including the Schott facility, Foundation Permit and Rough Grading Permit approvals do not approve building storm drainage facilities, paving, curb and gutter, etc. Foundation Permit approves to pour the foundation at the specified finished floor elevation, only. Rough Grading Permit approves moving dirt to a "rough" grade. Storm drain facilities can be built with Grading Permit and Building Permit approvals.

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

Sincerely,

Curtis A. Cherne

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(Rev. 12/05)

PROJECT TITLE: Sony Imageworks @ Mesa del Sol ZONE MAP/DRG. FILE # R-16-Z/DA3006
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: A Portion of Tract 22, Mesa del Sol, Innovation Park
CITY ADDRESS: _____

ENGINEERING FIRM: Bohannan Huston Inc. CONTACT: Jeff Mulbery
ADDRESS: 7500 Jeferson St. SE PHONE: (505) 798-7986
CITY, STATE: Albuquerque, NM ZIP CODE: 87109-4335

OWNER: Forest City Covington, N.M., LLC CONTACT: Many Barrera
ADDRESS: 801 University Blvd. SE, Suite 200 PHONE: 505-400-3021
CITY, STATE: Albuquerque, NM ZIP CODE: 87106

ARCHITECT: Decker/Perich/Sabatini CONTACT: Tim Veltkamp
ADDRESS: 7601 Jefferson NE PHONE: (505)761-9700
CITY, STATE: Albuquerque, NM ZIP CODE: 87109

SURVEYOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:
_____ DRAINAGE REPORT
_____ DRAINAGE PLAN 1st SUBMITTAL
__X__ DRAINAGE PLAN RESUBMITTAL
_____ CONCEPTUAL G & D PLAN
__X__ GRADING PLAN
_____ EROSION CONTROL PLAN
_____ ENGINEER'S CERT (HYDROLOGY)
_____ CLOMR/LOMR
_____ TRAFFIC CIRCULATION LAYOUT
_____ ENGINEER/ARCHITECT CERT (TCL)
_____ ENGINEER/ARCHITECT CERT (DRB S.P.)
_____ ENGINEER/ARCHITECT CERT (AA)
_____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL 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
_____ FOUNDATION PERMIT APPROVAL
__X__ BUILDING PERMIT APPROVAL
_____ CERTIFICATE OF OCCUPANCY (PERM)
_____ CERTIFICATE OF OCCUPANCY (TEMP)
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ WORK ORDER APPROVAL
__X__ OTHER (ROUGH GRADING PERMIT)

already have it

RECEIVED
MAY 09 2008
HYDROLOGY SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED:
_____ YES
_____ NO
_____ COPY PROVIDED

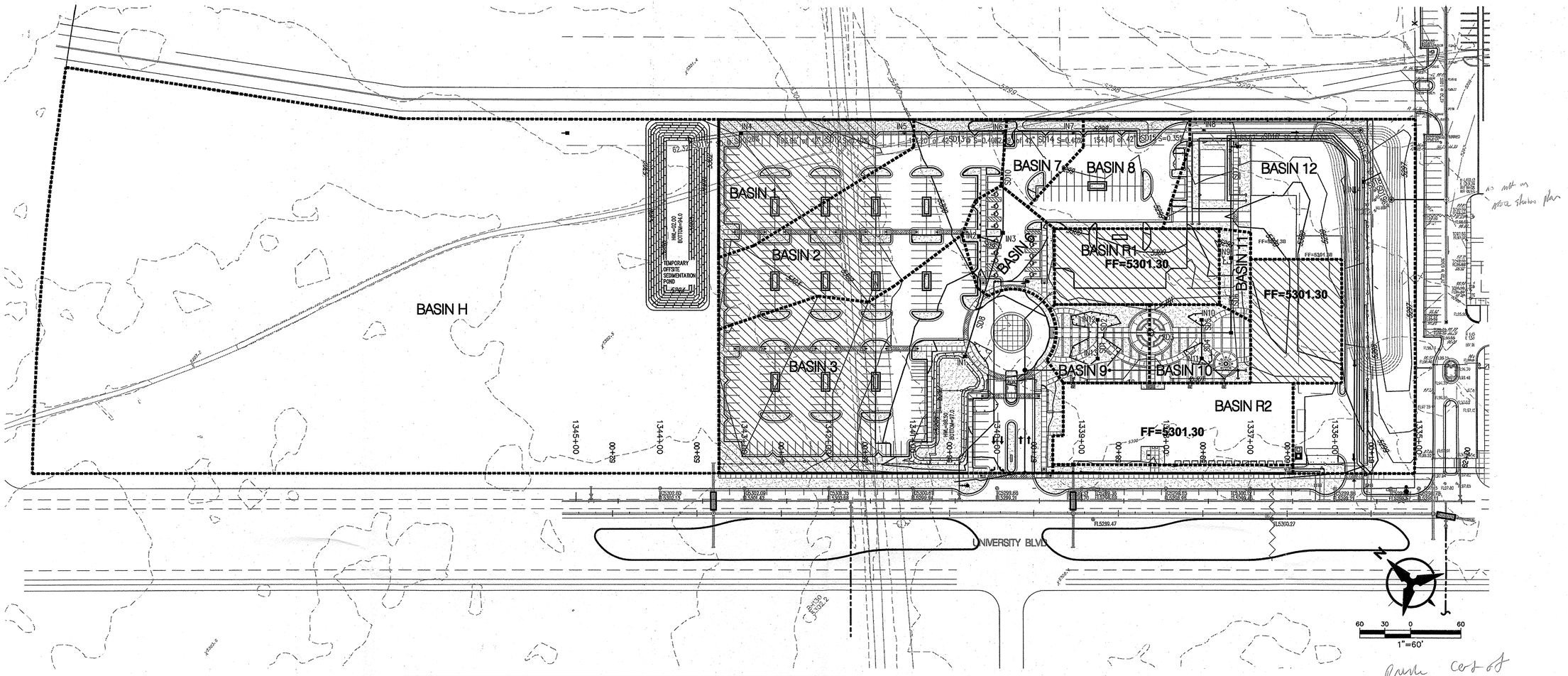
SUBMITTED BY: Jeff Mulbery/MB DATE: 5-09-08

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 define 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.



STORM DRAIN PIPE TABLE

Sony Imageworks

PIPE #	Contributing Basins and Storm Drains	Size in.	Slope	Capacity* cfs	ACTUAL FLOW cfs
SD1	half of B9+1/3 of R2	12	0.50%	2.52	2.07
SD2	half of B9+half of R1	12	2.29%	5.39	1.48
SD3	SD1+SD2	18	0.50%	7.43	3.55
SD4	half of B10+1/3 of R2	12	0.50%	2.52	2.08
SD5	half of B10+half of R1	12	2.43%	5.55	1.50
SD6	SD3+SD4+SD5	18	1.00%	10.50	7.13
SD7	SD6+B11+1/3 of R2	24	1.00%	22.62	9.03
SD8*	B3	12	0.70%	2.98	2.58
SD9	1/8 of B6	8	0.50%	0.85	0.14
SD10	7/8 of B6+SD9+SD8	18	0.90%	9.97	3.69
SD11	H1	42	0.26%	51.30	36.24
SD12	SD11+1/3 of B1	42	0.40%	63.63	37.05
SD13	SD12+2/3 of B1	42	0.40%	63.63	38.67
SD14	SD13+B2	42	0.40%	63.63	46.48
SD15	SD14+B7	42	0.35%	59.52	47.21
SD16	SD15+B8+SD7	42	0.33%	57.80	58.10
SD17	SD16	42	0.56%	75.29	58.10
SD18	B12	18	0.50%	7.43	7.28
SD19	SD18+SD17	42	0.56%	75.29	65.38

*Actual flow based on calculated storage and outflow for pond area.

SONY IMAGEWORKS

Proposed Conditions Basin Data Table

This table is based on the DPM Section 22.2, Zone: 2

Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100) (cfs/ac.)	Q(100) (CFS)	WT E (inches)	V(100-6hr) (CF)	V(100-10day) CF
ONSITE PROPOSED BASINS											
1	23699.9	0.54	0.0%	10.0%	0.0%	90.0%	4.46	*2.43*	*1.99*	3922	6766
2	40277.3	0.92	0.0%	10.0%	0.0%	90.0%	4.46	*4.12*	*1.99*	6666	11499
3	85760.9	1.97	0.0%	15.0%	0.0%	85.0%	4.34	*8.54*	*1.92*	13715	23434
4	NOT USED										
5	NOT USED										
6	10867.4	0.25	0.0%	10.0%	0.0%	90.0%	4.46	*1.11*	*1.99*	1799	3103
7	7081.91	0.16	0.0%	10.0%	0.0%	90.0%	4.46	*0.72*	*1.99*	1172	2022
8	18210.3	0.42	0.0%	10.0%	0.0%	90.0%	4.46	*1.86*	*1.99*	3014	5199
9	10502	0.24	0.0%	10.0%	0.0%	90.0%	4.46	*1.07*	*1.99*	1738	2998
10	10729	0.25	0.0%	10.0%	0.0%	90.0%	4.46	*1.10*	*1.99*	1776	3063
11	3603.73	0.08	0.0%	10.0%	0.0%	90.0%	4.46	*0.37*	*1.99*	596	1029
12	71157	1.63	0.0%	10.0%	0.0%	90.0%	4.46	*7.28*	*1.99*	11776	20315
R1	17550	0.40	0.0%	0.0%	0.0%	100.0%	4.70	*1.89*	*2.12*	3101	5441
R2	42556.6	0.98	0.0%	0.0%	0.0%	100.0%	4.70	*4.59*	*2.12*	7518	13193
TOTAL	**341996**	**7.85**	-	-	-	-	-	***35.10***	-	***56793***	***98062***
OFFSITE BASIN - PROPOSED CONDITIONS											
H	347413	7.98	0.0%	0.0%	10.0%	90.0%	4.54	*36.24*	*2.02*	58510	100200

INLET TABLE

Inlet #	Contributing Basins	Inlet Type	Actual Flow	Avail Head ft	Capacity CFS
IN1*	B3	1-SGL COA TYPE D	8.54	0.70	13.00
IN2	1/8 B6	24" STD NYLOPLAST	0.14	0.50	3.60
IN3	7/8 B6	1-SGL COA TYPE D	0.97	0.50	8.00
IN4	1/3 B1	GRATED MANHOLE	0.81	0.50	8.00
IN5	2/3 B1	GRATED MANHOLE	1.62	0.50	8.00
IN6	B2	GRATED MANHOLE	4.12	0.50	8.00
IN7	B7	GRATED MANHOLE	0.72	0.50	8.00
IN8	B8+1/4 B12	GRATED MANHOLE	3.68	0.50	8.00
IN9	B11+1/3 R2	1-SGL COA TYPE D	1.90	0.50	8.00
IN10	1/2 B10+1/2 R1	24" STD NYLOPLAST	1.50	0.50	3.60
IN11	1/2 B10+1/3 R2	24" STD NYLOPLAST	2.08	0.50	3.60
IN12	1/2 B9+1/2 R1	24" STD NYLOPLAST	1.48	0.50	3.60
IN13	1/2 B9+1/3 R2	24" STD NYLOPLAST	2.07	0.50	3.60
IN14	3/4 B12	1-SGL COA TYPE C	5.46	0.67	8.00

* Inlet receives overflow from a rainwater harvesting pond with a storage volume of 10,540 ft³.
The actual head available varies with each inlet, but in no case is the available head less than 0.5'.

LEGEND

FUTURE PHASE

DRAINAGE MANAGEMENT PLAN

I. INTRODUCTION

The purpose of this submittal is to present a grading and drainage plan for the proposed Sony Imageworks building at Mesa del Sol. The site is located northwest of Albuquerque Studios. There is vacant land to the northwest and a public road to the northeast and southwest. The project will include three buildings along with a utility yard, parking and landscaped areas. The development will proceed in three phases, however it is the intention of this DMP to address drainage for full build-out. With this submittal we are seeking Hydrology approval for Building Permit approval.

II. EXISTING HYDROLOGIC CONDITIONS

The site is approximately 7.9 acres and is currently undeveloped. The land slopes 0.5% to 1.0% from the west to the east and there is sparse vegetation cover. According to the FEMA Community Map Panel #35001C0363D, the site is not located within a floodplain. The Mesa del Sol Film Studio Drainage Management Plan (dated July 21, 2006) describes the existing drainage throughout the area. According to that DMP, the site is located on a portion of Basin H. This basin drains to a temporary pond which in turn drains to a regional retention pond. The allowable discharge from the pond was calculated in the DMP using 90% land treatment D and 10% land treatment C. The allowable discharge from Basin H is 75cfs.
The analysis of the existing hydrology was performed in accordance with section 22.2 of the Development Process Manual.

IV. PROPOSED HYDROLOGIC CONDITIONS

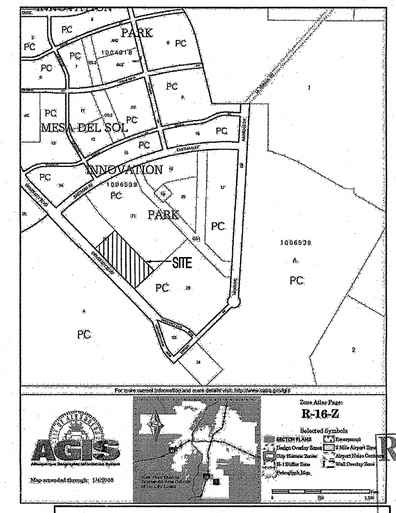
The site was divided into multiple basins and drains both overland and through a system of storm drains. Basin 3 drains to a small water harvesting pond. The pond drains to the onsite storm drain system. Basins 1, 2, 7, 8, and 12 drain to the northeast property line and a series of storm drain inlets. Basins 6, 9, 10 and 11 are interior courtyard basins which flow directly to storm drain inlets and into the storm drain system. Please see Basin Data table for associated computations. The total flow from the site is 35.10 cfs. All flow is eventually directed to the existing storm drain system and regional retention pond which was built with the Film Studio project.

Offsite Drainage

In the approved DMP, all of Basin H flowed into the temporary pond and storm drain. Since a portion of basin H (labeled basin H–1 in data table) is not being developed with this project, the flow from that portion will affect the site drainage. A new temporary pond will be built north/northwest of the site to capture this flow. Using the same developed land treatment percentages as the approved DMP (90% D and 10% C), the flow from Basin H–1 is 36.24cfs. This flow will be picked up in the storm drain system which drains to the regional detention pond.

V. CONCLUSION

The total flow discharged from the site is approximately 72cfs which is less than the allowable discharge of 75cfs. These flows were computed in accordance with section 22.2 of the Development Process Manual.
The drainage management plan is capable of safely passing the 100 year storm and meets city requirements. The peak discharge for this site is lower then the allowable described in the approved drainage report.



Bohannan ▲ Huston INC
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

architecture
interiors
planning
engineering
Dekker
Perich
Sabatini
7601 Jefferson NE
Suite 100
Albuquerque, NM 87109
505 761-9700
fax 761-4222
dps@dpsdesign.org

ARCHITECT

ENGINEER

JEFFREY L. MULBERRY
NEW MEXICO
16858
5.8.08
LICENSED PROFESSIONAL ENGINEER

PROJECT

SONY IMAGEWORKS - SHELL
@ Mesa del Sol
5640 University Blvd. SE
Albuquerque, NM 87119

REVISIONS

DRAWN BY	MJB
REVIEWED BY	JLM
DATE	05/06/08
PROJECT NO.	07-0116
DRAWING NAME	GRADING PLAN

RECEIVED
MAY 09 2008
HYDROLOGY SECTION

SHEET NO.
DMP01
OF

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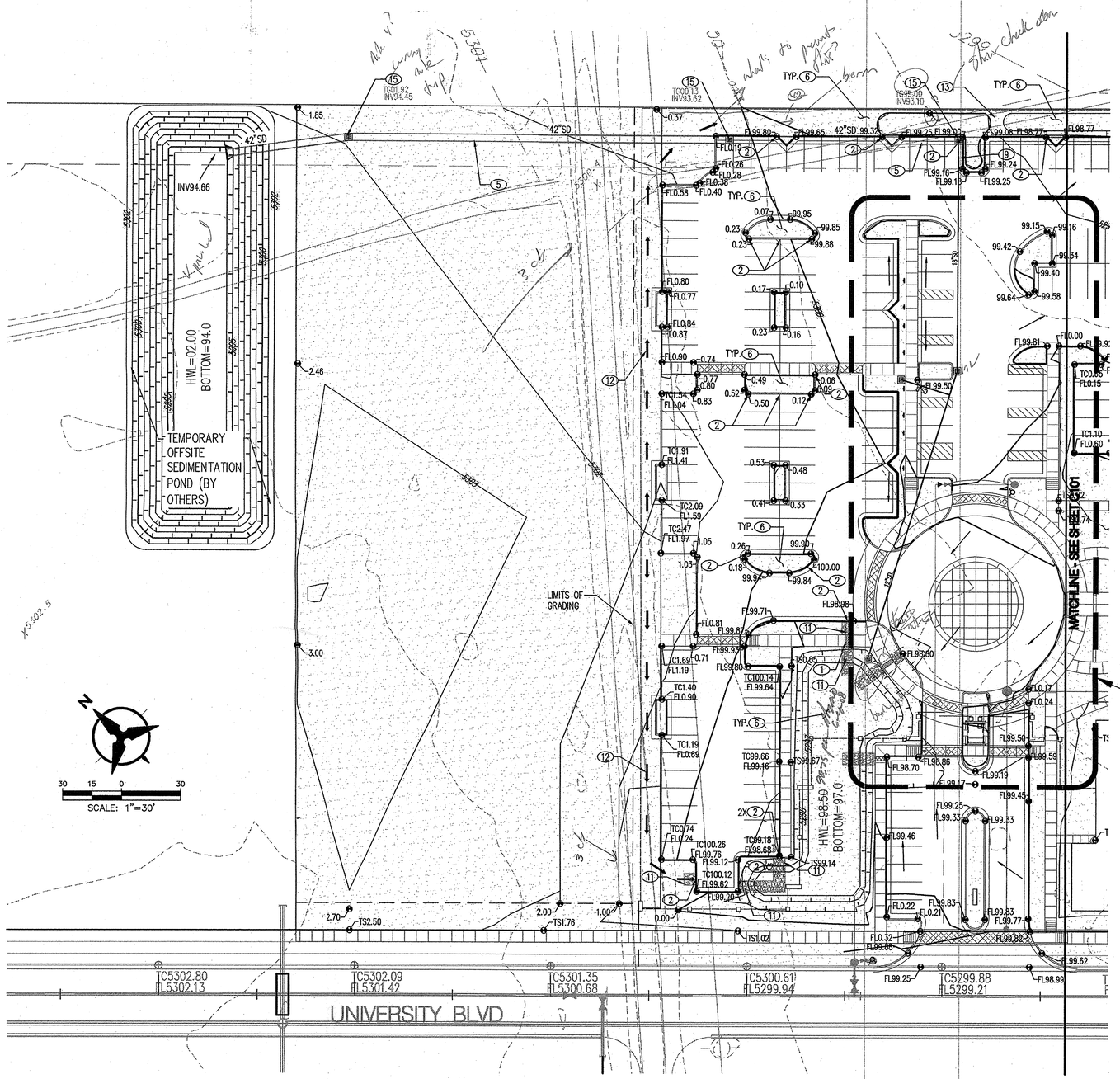
Fri, 9-May-2008 – 9:06:am, Plotted by: MBALASKOVITS



GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.

2. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.

3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

4. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.

5. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.

6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.

7. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

8. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.

9. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).

10. ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.

11. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.

12. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.

13. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.

14. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.

GRADING KEYED NOTES

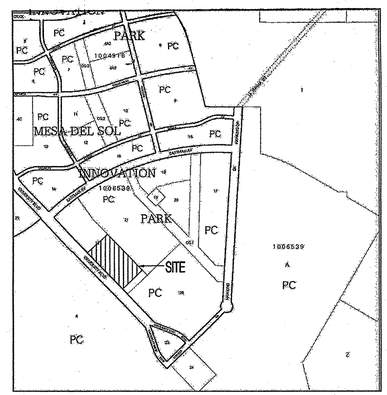
1. INSTALL SINGLE 24" SIDEWALK CULVERT PER COA STD DWG 2236.
2. INSTALL 24" CURB OPENING, SEE SHEET L003 FOR DETAIL.
3. INSTALL HDPE N-12 WT (OR APPROVED EQUAL) STORM DRAIN PIPE, SIZE PER PLANS.
4. INSTALL STORM DRAIN INLET TYPE "D" PER COA STD DWG 2205 OR NYLOPLAST CURB INLET STRUCTURE W/ STANDARD 2'X2' (221.3 SQ.IN APPROXIMATE DRAIN AREA INCLUDING HOOD) H-25 RATED GRATE (OR APPROVED EQUAL).
5. EXISTING STORM DRAIN CONSTRUCTED UNDER SEPARATE CONTRACT. PROTECT IN PLACE.
6. WATER HARVESTING AREA, SEE SHEET L003 FOR DETAILS AND EROSION PROTECTION.
7. INSTALL STORM DRAIN INLET TYPE "C" PER COA STD DWG 2205.
8. INSTALL 30" NYLOPLAST (OR APPROVED EQUAL) STORM BASIN INLET STRUCTURE. GRATE SHALL BE STANDARD (H-25 LOADING).
9. REMOVE CAP AND TIE TO EXISTING STORM DRAIN STUB-OUT.
10. EXTEND ROOF DRAIN TO WITHIN 5' OF BUILDING, SEE PLUMBING PLANS FOR CONTINUATION.
11. INSTALL 6' WIDE RIP RAP RUNDOWN AND 6'X6' RIP RAP BLANKET PER DETAIL 1, SHEET C102.
12. INSTALL TEMPORARY DIVERSION SWALE PER DETAIL 3, SHEET C102.
13. INSTALL RIP RAP CHECK DAM PER DETAIL 2, SHEET C102.
14. INSTALL PRE-FABRICATED DRAINAGE FITTING, SEE PLAN FOR SIZES.
15. EXISTING GRATED MANHOLE. PROTECT IN PLACE AND ADJUST TO FINISHED GRADE AS NECESSARY.
16. INSTALL RCP (TYPE IV) STORM DRAIN PIPE. SEE PLAN FOR SIZES.
17. INSTALL 24" NYLOPLAST (OR APPROVED EQUAL) STORM BASIN INLET. GRATE SHALL BE STANDARD (H-25 LOADING) AND PEDESTRIAN RATED FOR ADA COMPLIANCE.

NOTE

HDPE PIPE AND FITTINGS SHALL BE INSTALLED AND BACKFILLED PER MANUFACTURER SPECIFICATIONS. CONNECTIONS BETWEEN CONCRETE AND NYLOPLAST INLETS SHALL USE WATER STOP GASKETS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS

SIDEWALK CROSS SLOPE SHALL BE BETWEEN 1% MIN AND 2% MAX.

1.85 X C/S = 1.76 ac/sq.inch = 5.5 cfs



VICINITY MAP
ZONE MAP R-16

GRADING NOTES

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.

2. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.

3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION," AS PROVIDED BY THE ARCHITECT OR OWNER. ALL OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT, (FIRST PRIORITY) SPECIFICATIONS, AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).

4. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.

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7. A DISPOSAL SITE FOR ANY & ALL EXCESS EXCAVATION MATERIAL, AND UNSUITABLE MATERIAL AND/OR A BORROW SITE CONTAINING ACCEPTABLE FILL MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE OBSERVER. ALL COSTS INCURRED IN OBTAINING A DISPOSAL OR BORROW SITE AND HAUL TO OR FROM SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.

8. PAVING AND ROADWAY GRADES SHALL BE +/- 0.1' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATION.

9. ALL PROPOSED CONTOURS REFLECT TOP OF PAVEMENT ELEVATIONS IN THE PARKING AREA AND MUST BE ADJUSTED FOR MEDIANS AND ISLANDS.

10. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION PRIOR TO BEGINNING CONSTRUCTION.

LEGEND

- PROPERTY LINE
- 5301 EXISTING CONTOURS
- X5301.15 EXISTING GROUND SPOT ELEVATION
- 65.23 PROPOSED SPOT ELEVATION (TC=TOP OF CURB, FL=FLOW LINE, TW=TOP OF WALL, BW=BOTTOM OF WALL, TG=TOP OF GRADE, TS=TOP OF SIDEWALK, EX=EXISTING)
- S=2.0% PROPOSED DIRECTION OF FLOW
- WATER BLOCK
- 5305 PROPOSED INDEX CONTOURS
- PROPOSED INTER CONTOURS
- PROPOSED CURB & GUTTER
- EASEMENT
- PROPOSED STORM DRAIN INLET
- EXISTING MONUMENT
- PROPOSED RETAINING WALL
- PROPOSED TEMPORARY SWALE

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interiors
planning
engineering

Dekker
Perich
Sabatini

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ARCHITECT

BUILDING
PERMIT
SUBMITTAL

ENGINEER

JEFFREY L. MULBERRY
NEW MEXICO
16858
REGISTERED PROFESSIONAL ENGINEER
5-8-08

PROJECT

SONY IMAGEWORKS - SHELL
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Albuquerque, NM 87119

REVISIONS
1. 05.08.08 - GRADING REVISIONS
2.
3.
4.

DRAWN BY	MJB
REVIEWED BY	JLM
DATE	05/06/08
PROJECT NO.	07-0116

DRAWING NAME
GRADING AND DRAINAGE PLAN

RECEIVED
MAY 09 2008
HYDROLOGY SECTION

SHEET NO.
C100
OF

Bohannan ▲ Huston INC.
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

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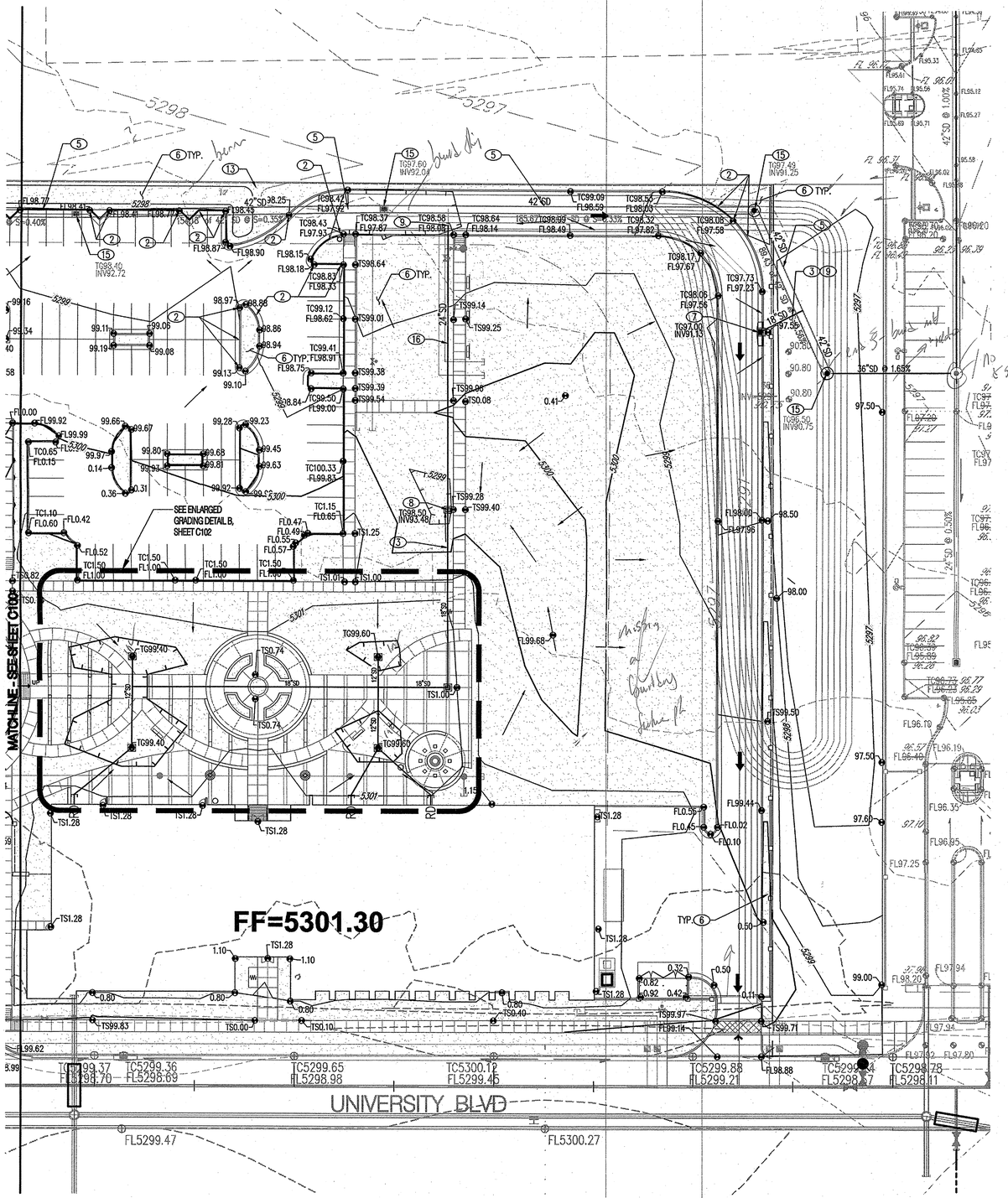

GRADING KEYED NOTES

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2. INSTALL 24" CURB OPENING, SEE SHEET L003 FOR DETAIL.
3. INSTALL HDPE N-12 WT (OR APPROVED EQUAL) STORM DRAIN PIPE, SIZE PER PLANS.
4. INSTALL STORM DRAIN INLET TYPE "D" PER COA STD DWG 2205 OR NYLOPLAST CURB INLET STRUCTURE W/ STANDARD 2'X2' (221.3 SQ.IN APPROXIMATE DRAIN AREA INCLUDING HOOD) H-25 RATED GRATE (OR APPROVED EQUAL).
5. EXISTING STORM DRAIN CONSTRUCTED UNDER SEPARATE CONTRACT. PROTECT IN PLACE.
6. WATER HARVESTING AREA, SEE SHEET L003 FOR DETAILS AND EROSION PROTECTION.
7. INSTALL STORM DRAIN INLET TYPE "C" PER COA STD DWG 2205.
8. INSTALL 30" NYLOPLAST (OR APPROVED EQUAL) STORM BASIN INLET STRUCTURE. GRATE SHALL BE STANDARD (H-25 LOADING).
9. REMOVE CAP AND TIE TO EXISTING STORM DRAIN STUB-OUT.
10. EXTEND ROOF DRAIN TO WITHIN 5' OF BUILDING, SEE PLUMBING PLANS FOR CONTINUATION.
11. INSTALL 6' WIDE RIP RAP RUNDOWN AND 6'X6' RIP RAP BLANKET PER DETAIL 1, SHEET C102.
12. INSTALL TEMPORARY DIVERSION SWALE PER DETAIL 3, SHEET C102.
13. INSTALL RIP RAP CHECK DAM PER DETAIL 2, SHEET C102.
14. INSTALL PRE-FABRICATED DRAINAGE FITTING, SEE PLAN FOR SIZES.
15. EXISTING GRATED MANHOLE. PROTECT IN PLACE AND ADJUST TO FINISHED GRADE AS NECESSARY.
16. INSTALL RCP (TYPE IV) STORM DRAIN PIPE. SEE PLAN FOR SIZES.
17. INSTALL 24" NYLOPLAST (OR APPROVED EQUAL) STORM BASIN INLET. GRATE SHALL BE STANDARD (H-25 LOADING) AND PEDESTRIAN RATED FOR ADA COMPLIANCE.

LEGEND

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- PROPOSED CURB & GUTTER
- EASEMENT
- PROPOSED STORM DRAIN INLET
- EXISTING MONUMENT
- PROPOSED RETAINING WALL
- PROPOSED TEMPORARY SWALE

NOTE

HDPE PIPE AND FITTINGS SHALL BE INSTALLED AND BACKFILLED PER MANUFACTURER SPECIFICATIONS. CONNECTIONS BETWEEN CONCRETE AND NYLOPLAST INLETS SHALL USE WATER STOP GASKETS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS

SIDEWALK CROSS SLOPE SHALL BE BETWEEN 1% MIN AND 2% MAX.

SCALE: 1"=30'

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DRAWN BY	MJB
REVIEWED BY	JLM
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PROJECT NO.	07-0116
DRAWING NAME	

GRADING AND DRAINAGE PLAN

SHEET NO. C101 OF

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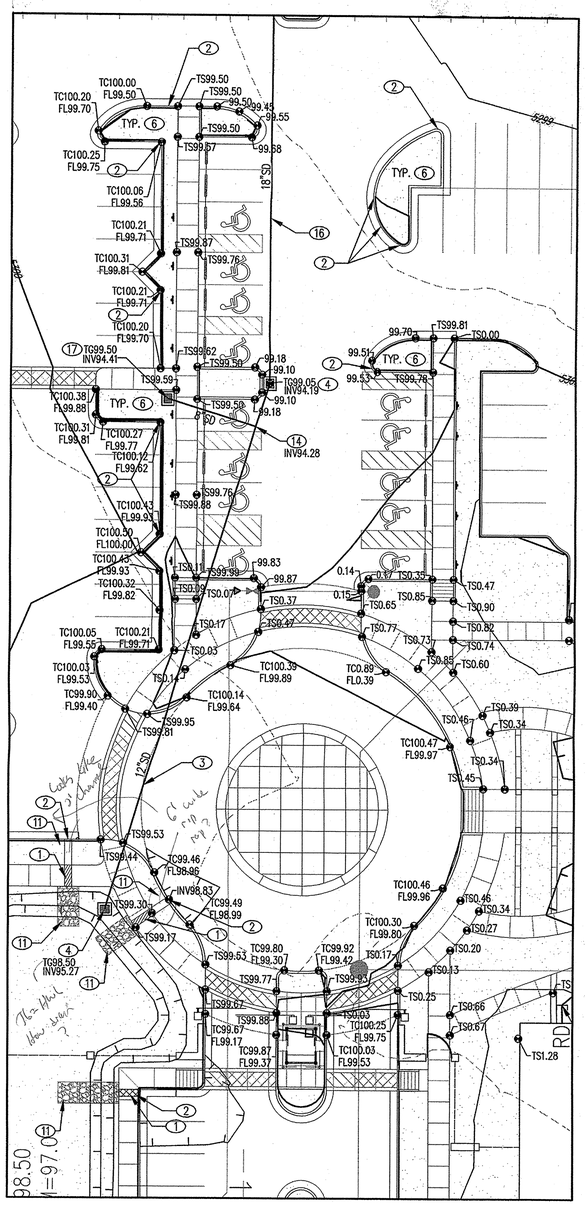

GRADING DETAIL A
1"=20'

NOTE

HDPE PIPE AND FITTINGS SHALL BE INSTALLED AND BACKFILLED PER MANUFACTURER SPECIFICATIONS. CONNECTIONS BETWEEN CONCRETE AND NYLOPLAST INLETS SHALL USE WATER STOP GASKETS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS

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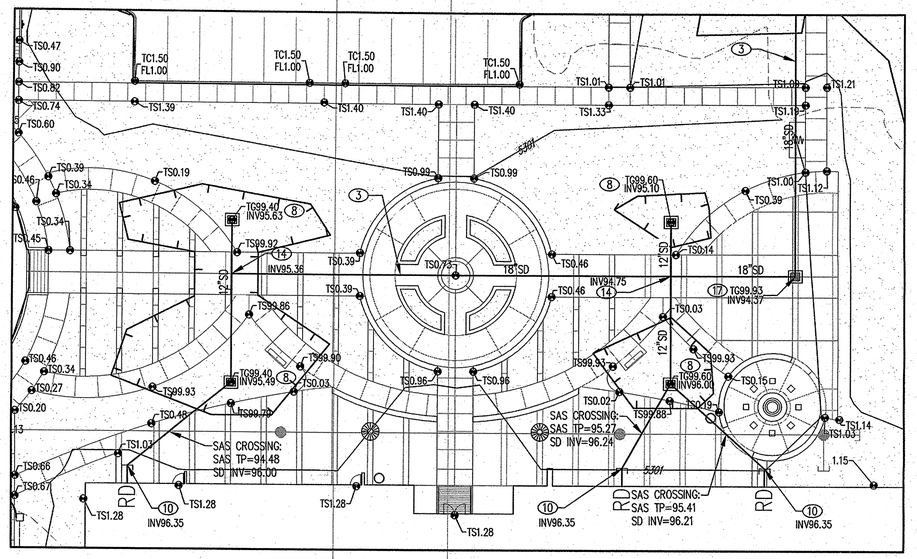
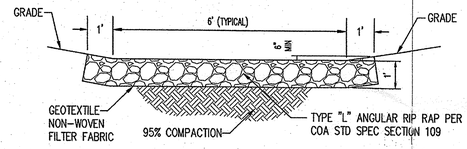
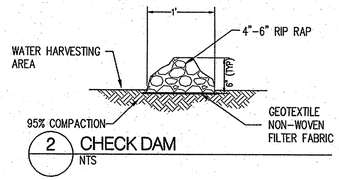


GRADING DETAIL B
1"=20'

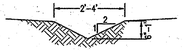


NOTE: TOP OF RIP RAP TO MATCH FINISHED GRADES/CONTOURS SHOWN ON GRADING PLAN

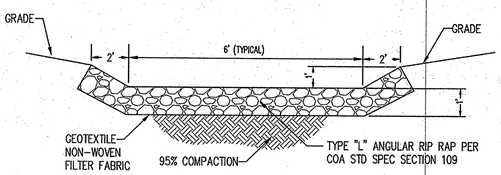
1 RIP RAP BLANKET
NTS



2 CHECK DAM
NTS



3 TEMPORARY SWALE
NTS



NOTE: TOP OF RIP RAP TO MATCH FINISHED GRADES/CONTOURS SHOWN ON GRADING PLAN

4 RIP RAP RUNDOWN
NTS

LEGEND

- PROPERTY LINE
- 5301 — EXISTING CONTOURS
- X 5301.15 — EXISTING GROUND SPOT ELEVATION
- 65.23 — PROPOSED SPOT ELEVATION
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- EASEMENT
- PROPOSED STORM DRAIN INLET
- EXISTING MONUMENT
- PROPOSED RETAINING WALL
- PROPOSED TEMPORARY SWALE

GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.

2. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.

3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

4. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.

5. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.

6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.

7. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

8. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.

9. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).

10. ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.

11. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.

12. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.

13. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.

14. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.

GRADING NOTES

1. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.

2. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.

3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION," AS PROVIDED BY THE ARCHITECT OR OWNER. ALL OTHER WORK SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT, (FIRST PRIORITY) SPECIFICATIONS, AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).

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GRADING KEYED NOTES

1. INSTALL SINGLE 24" SIDEWALK CULVERT PER COA STD DWG 2236.

2. INSTALL 24" CURB OPENING, SEE SHEET L003 FOR DETAIL.

3. INSTALL HDPE N-12 WT (OR APPROVED EQUAL) STORM DRAIN PIPE, SIZE PER PLANS.

4. INSTALL STORM DRAIN INLET TYPE "D" PER COA STD DWG 2205 OR NYLOPLAST CURB INLET STRUCTURE W/ STANDARD 2'X2' (221.3 SQ.IN APPROXIMATE DRAIN AREA INCLUDING HOOD) H-25 RATED GRATE (OR APPROVED EQUAL).

5. EXISTING STORM DRAIN CONSTRUCTED UNDER SEPARATE CONTRACT. PROTECT IN PLACE.

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7. INSTALL STORM DRAIN INLET TYPE "C" PER COA STD DWG 2205.

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9. REMOVE CAP AND TIE TO EXISTING STORM DRAIN STUB-OUT.

10. EXTEND ROOF DRAIN TO WITHIN 5' OF BUILDING, SEE PLUMBING PLANS FOR CONTINUATION.

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