CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services

Richard J. Berry, Mayor

August 31, 2016

Michael Balaskovits, PE
BOHANNAN-HUSTON, INC.
7500 Jefferson Street NE Courtyard I
Albuquerque, NM 87109

RE: **Andalucia Phase I – 6500 Coors NW**
Grading Management Plan and Grading and Drainage Plan
Engineer's Stamp Date 8-31-2016 (File: E12D015D)

Dear Mr. Balaskovits:

Based upon the information provided in your submittal received 8-31-16, the above referenced plans are approved for ESC Permit (Grading Permit and Paving Permit), Building Permit, and SO-19 Permit with the following conditions:

- The bottom of the pond will need to be lowered to 74.50 to allow for 0.5 ft of freeboard. The inlet grate elevations will need to be lowered (80.85), as well as the corresponding inverts.
- Inlet at north side of pond-lower the inlet grate elevation to match the other inlets
- Provide curb openings along median on private road on north side of site

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.

A separate SO-19 permit is required for construction within City ROW. A copy of this approval letter must be on hand when applying for the excavation/barricading permit. The work in the City ROW must be inspected and accepted. Contractor must contact Jason Rodriguez at 235-8016 and Construction Coordination at 924-3416 to schedule an inspection.

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

Sincerely,

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

Retention
% D = 14.5 Ac

Orig: Drainage file
c.pdf: via Email: Recipient, Jason Rodriguez

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

E12D015D_BP_SO-19_Appr.doc

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Andalucia Phase 1 Building Permit #: _____ City Drainage #: E12D015D

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: 5600 Coors Blvd

City Address: 101 Broadway Blvd. NE

Engineering Firm: Bohannan Huston, Inc Contact: Mike Balaskovits or Matt Satches

Address: 7500 Jefferson St. NE 87109

Phone#: 505-823-1000 Fax#: 505-798-7988 E-mail: mbalaskovits@bhinc.com

Owner: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Architect: Studio Southwest Architects, Inc. Contact: Ron Burstein, AIA, CCS

Address: 2101 Mountain Rd. NW Albuquerque, NM 87104

Phone#: 505-843-9639 Fax#: 505-992-0585 E-mail: rburstein@studioswarch.com

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

x HYDROLOGY/ DRAINAGE
___ TRAFFIC/ TRANSPORTATION
___ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

___ ENGINEER/ ARCHITECT CERTIFICATION
___ CONCEPTUAL G & D PLAN
X GRADING PLAN
___ DRAINAGE MASTER PLAN
___ DRAINAGE REPORT
___ CLOMR/LOMR
___ TRAFFIC CIRCULATION LAYOUT (TCL) $100.00
___ TRAFFIC IMPACT STUDY (TIS)
___ EROSION & SEDIMENT CONTROL PLAN (ESC)
X OTHER (SPECIFY) Drainage Management Plan

IS THIS A RESUBMITTAL?: ___ Yes X No

RECEIVED
AUG 31 2016
LAND DEVELOPMENT SECTION

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

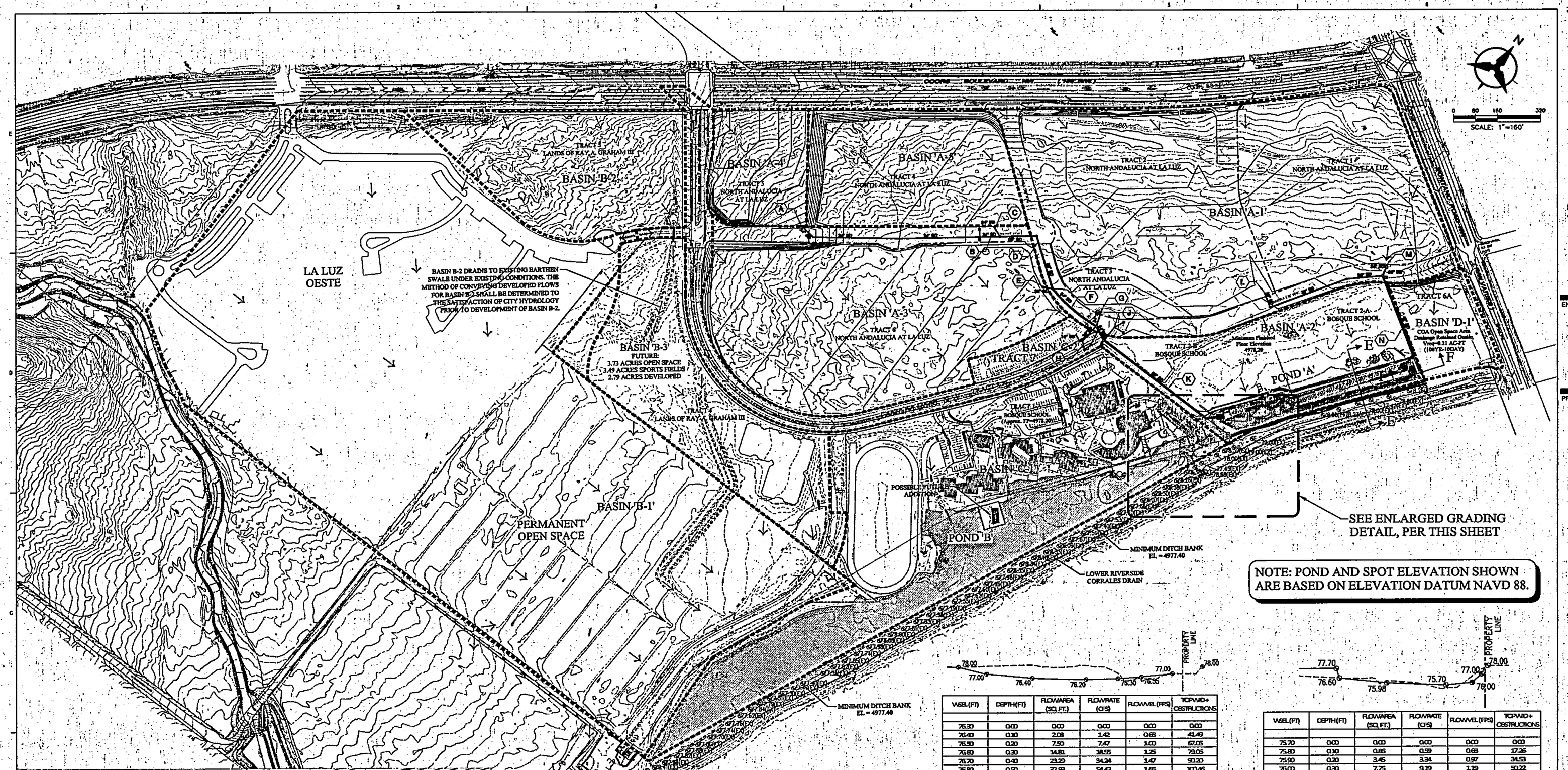
X BUILDING PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY

___ 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
X GRADING PERMIT APPROVAL
X SO-19 APPROVAL
X PAVING PERMIT APPROVAL
___ GRADING/ PAD CERTIFICATION
___ WORK ORDER APPROVAL
___ CLOMR/LOMR

___ PRE-DESIGN MEETING
___ OTHER (SPECIFY) _____

DATE SUBMITTED: 8-31-2016 By: Michael Balaskovits, PE

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___



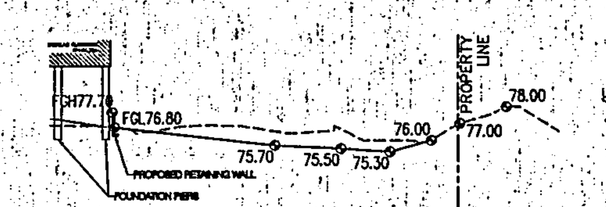
NOTE: POND AND SPOT ELEVATION SHOWN ARE BASED ON ELEVATION DATUM NAVD 88.

WSEL(FT)	DEPTH(FT)	FLOWAREA (SQ.FT.)	FLOWRATE (CFS)	FLOWVEL(FPS)	TOPWID+ OBSTRUCTIONS
76.30	0.00	0.00	0.00	0.00	0.00
76.40	0.10	2.08	1.42	0.68	41.49
76.50	0.20	7.50	7.47	1.00	67.05
76.60	0.30	14.81	18.55	1.25	79.05
76.70	0.40	23.29	34.34	1.47	93.20
76.80	0.50	32.89	54.43	1.65	103.45
76.90	0.60	43.38	79.14	1.82	110.72
77.00	0.70	54.97	108.49	1.97	120.93
77.10	0.80	67.59	142.60	2.11	131.34
77.20	0.90	81.91	181.41	2.24	135.38
77.30	1.00	94.65	224.50	2.37	139.53
77.40	1.10	108.82	271.70	2.50	143.67
77.50	1.20	123.39	322.50	2.62	147.81

A WEIR SECTION A-A
N.T.S.

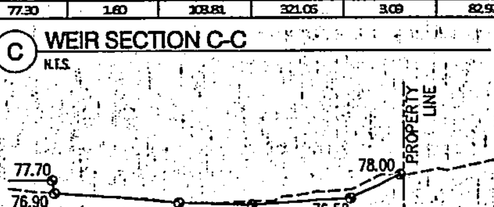
WSEL(FT)	DEPTH(FT)	FLOWAREA (SQ.FT.)	FLOWRATE (CFS)	FLOWVEL(FPS)	TOPWID+ OBSTRUCTIONS
75.70	0.00	0.00	0.00	0.00	0.00
75.80	0.10	0.85	0.59	0.68	37.28
75.90	0.20	3.45	3.34	0.97	34.58
76.00	0.30	7.75	9.19	1.19	50.22
76.10	0.40	13.02	18.29	1.41	55.14
76.20	0.50	18.78	30.17	1.61	60.65
76.30	0.60	25.08	44.69	1.79	64.59
76.40	0.70	31.78	61.89	1.95	68.91
76.50	0.80	39.02	81.62	2.09	74.88
76.60	0.90	46.74	104.08	2.23	79.76
76.70	1.00	54.75	129.12	2.35	83.30
76.80	1.10	62.80	156.37	2.49	80.84
76.90	1.20	70.92	185.67	2.62	81.38
77.00	1.30	79.08	216.88	2.74	81.92
77.10	1.40	87.29	249.91	2.86	82.27
77.20	1.50	95.53	284.65	2.98	82.62
77.30	1.60	103.81	321.05	3.09	82.97

C WEIR SECTION C-C
N.T.S.



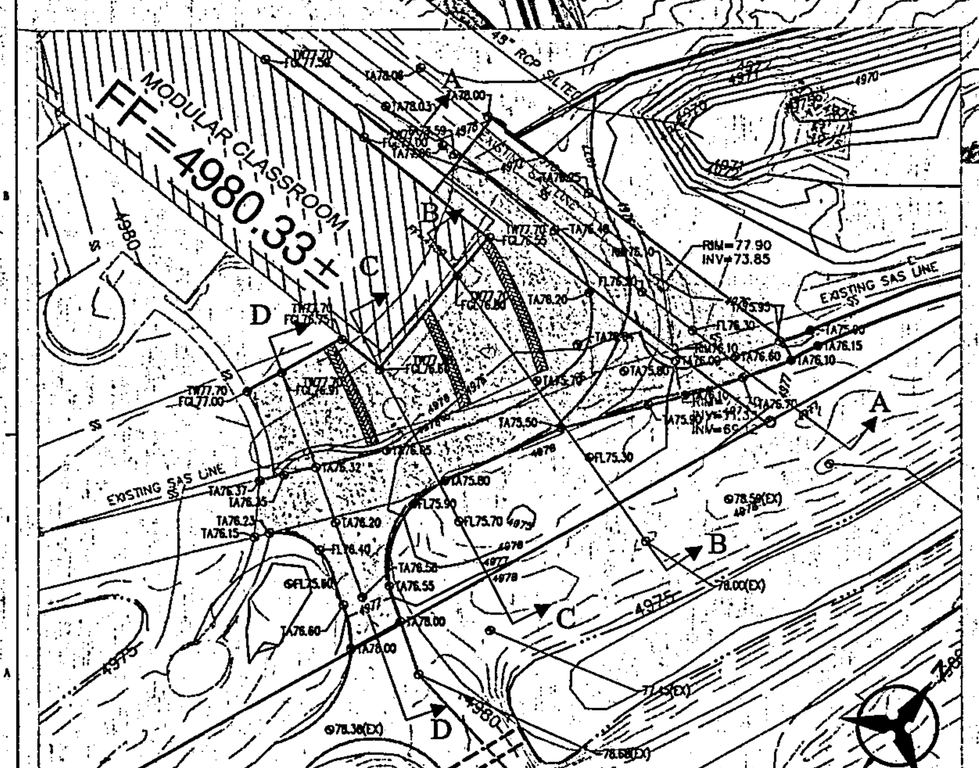
WSEL(FT)	DEPTH(FT)	FLOWAREA (SQ.FT.)	FLOWRATE (CFS)	FLOWVEL(FPS)	TOPWID+ OBSTRUCTIONS
75.30	0.00	0.00	0.00	0.00	0.00
75.40	0.10	0.45	0.30	0.68	8.50
75.50	0.20	1.78	1.72	0.97	37.81
75.60	0.30	4.05	4.77	1.18	27.69
75.70	0.40	7.31	9.91	1.35	37.45
75.80	0.50	11.37	17.37	1.53	43.73
75.90	0.60	16.05	27.14	1.69	49.59
76.00	0.70	21.37	38.29	1.84	55.26
76.10	0.80	27.26	53.50	1.98	61.65
76.20	0.90	33.69	71.01	2.11	67.03
76.30	1.00	40.67	90.67	2.23	72.41
76.40	1.10	48.16	112.55	2.35	77.80
76.50	1.20	56.23	137.55	2.45	83.18
76.60	1.30	64.81	165.73	2.55	88.55
76.70	1.40	73.94	195.37	2.65	93.55
76.80	1.50	83.60	226.94	2.75	99.33
76.90	1.60	93.58	261.36	2.85	103.17
77.00	1.70	103.64	315.31	2.95	108.01

B WEIR SECTION B-B
N.T.S.

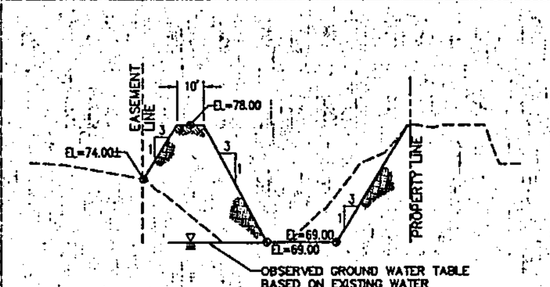


WSEL(FT)	DEPTH(FT)	FLOWAREA (SQ.FT.)	FLOWRATE (CFS)	FLOWVEL(FPS)	TOPWID+ OBSTRUCTIONS
76.20	0.00	0.00	0.00	0.00	0.00
76.30	0.10	1.29	0.88	0.68	25.74
76.40	0.20	4.76	4.73	1.00	41.70
76.50	0.30	9.60	11.89	1.24	55.22
76.60	0.40	15.79	22.65	1.44	67.49
76.70	0.50	22.50	37.05	1.62	74.78
76.80	0.60	30.74	54.92	1.79	82.07
76.90	0.70	39.52	76.25	1.94	83.35
77.00	0.80	48.70	100.89	2.09	83.38
77.10	0.90	57.39	128.35	2.24	83.40
77.20	1.00	65.98	158.40	2.38	82.42
77.30	1.10	75.88	190.84	2.52	83.44
77.40	1.20	85.27	225.98	2.65	84.46
77.50	1.30	94.77	262.51	2.77	85.48
77.60	1.40	104.35	301.57	2.89	85.49

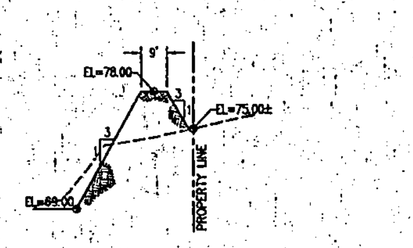
D WEIR SECTION D-D
N.T.S.



E OVERFLOW AREA ENLARGED GRADING DETAIL
SCALE 1" = 30'



A1 POND 'A' SECTION E-E
N.T.S.



A3 POND 'A' SECTION F-F
N.T.S.

P:\20120222\CDP\Drainage Eval Exhibits\20120222CDP01.dwg
Tue, 19-Feb-2013 - 8:28am, Plotted by: BORTEGA

Bohannan Huston
Courtyard I 7500 Jefferson St. NE
Albuquerque, NM 87109 (505) 823-1000

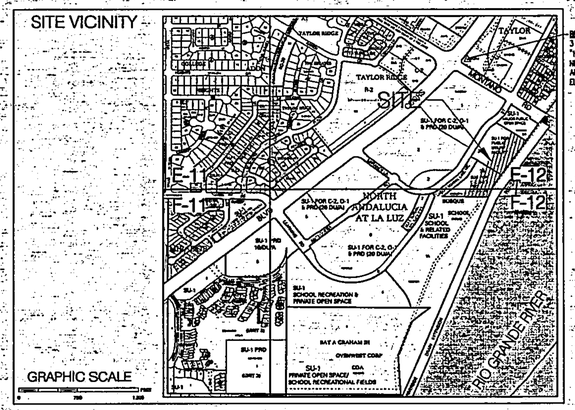
ENGINEER

PROJECT

NORTH ANDALUCIA DRAINAGE MASTER PLAN
SEC COORS AND MONTANO
ALBUQUERQUE
NEW MEXICO

DRAWN BY	BHW
REVIEWED BY	BJS
DATE	1/2013
PROJECT NO.	BHI.2012.0222
DRAWING NAME	DRAINAGE MASTER PLAN

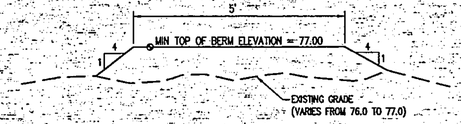
SHEET NO.
C-002
2 OF 2



BENCHMARK
3 1/4" ALUMINUM DISC MARKED "10-E12004" LOCATED AT THE NE CORNER OF COORS BLVD. NW AND MONTANO ROAD NW
ELEV = 5008.74' FT (NAVD 88)

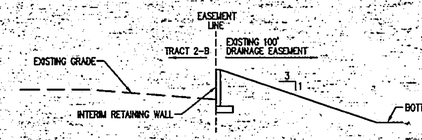
POINT TABLE		
ID	NORTHING	EASTING
1	1509041.87	1510777.08
2	1509254.06	1510932.80
3	1509270.57	1510970.46
4	1509645.19	1511246.14
5	1509620.73	1511284.99
6	1509614.42	1511310.50
7	1509602.65	1511330.57
8	1509266.01	1511003.93

POINT TABLE		
ID	NORTHING	EASTING
9	1509258.54	1511018.18
10	1509608.87	1511252.94
11	1509599.33	1511268.30
12	1509076.03	1510836.98
13	1509149.76	1510886.21
14	1509189.98	1510922.93
15	1509238.37	1510953.27

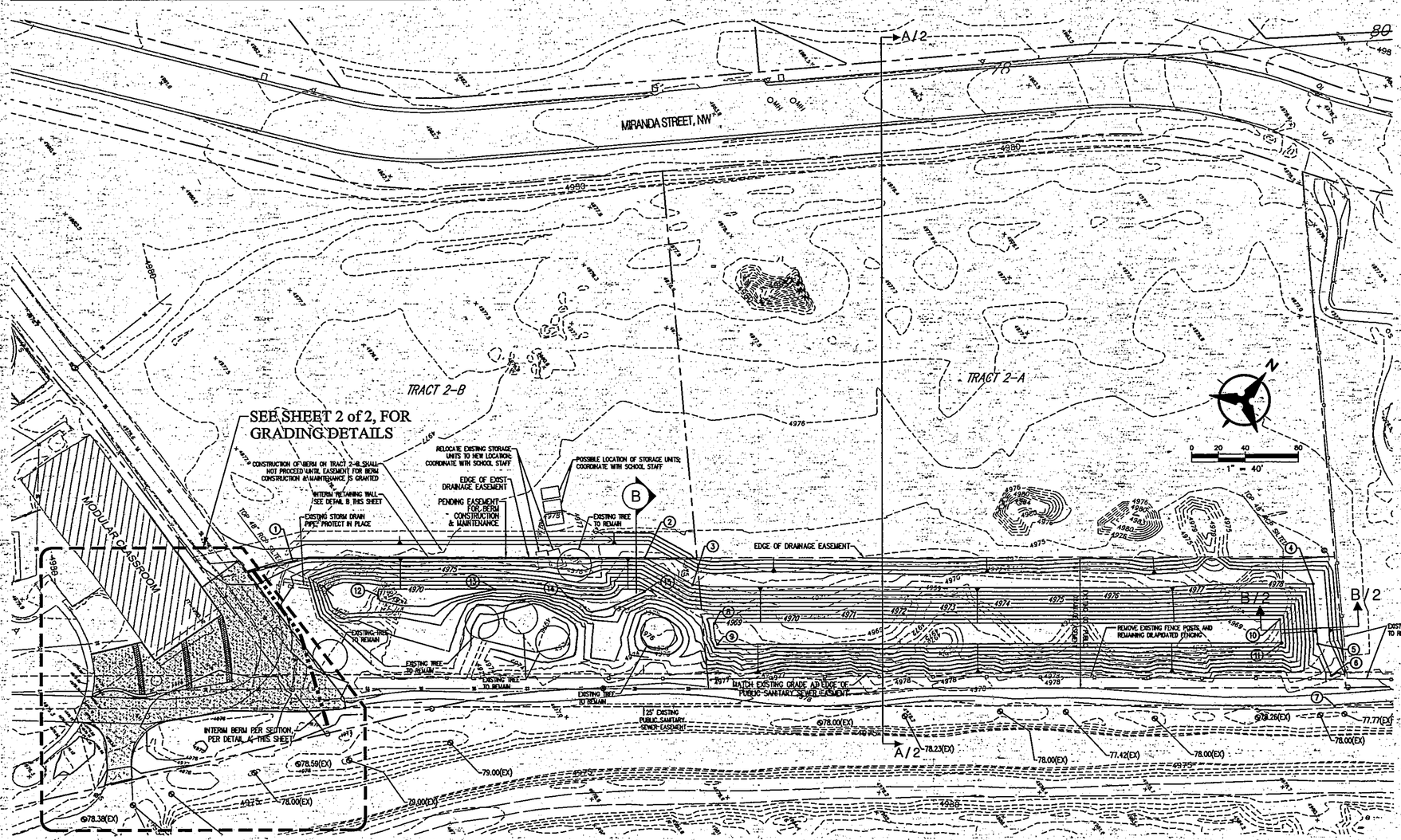


A INTERIM BERM SECTION
N.T.S.

NOTE: INTERIM BERM SHALL BE INSTALLED UNTIL SUCH TIME AS THE EASEMENT AND COVENANT FOR POND 'B' ARE EXECUTED AND RECORDED.



B INTERIM RETAINING WALL SECTION
N.T.S.



P:\20120222\CDP\Plans\General\Pond A\20120222_POND A GP01.dwg
Mon, 18-Feb-2013 - 1:32:pm, Plotted by: BORTEGA

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 GENERAL 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.

5. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.

6. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY.

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

+ (91.62)	FUTURE SPOT ELEVATION
• 91.62	PROPOSED SPOT ELEVATION
× 92.46	EXISTING SPOT ELEVATION (GRND & TC)
	EXISTING CURB & GUTTER
	PROPOSED MOUNTABLE CURB & GUTTER
	PROPOSED STANDARD CURB & GUTTER
5470	EXISTING CONTOUR W/ INDEX ELEVATION
	FLOW ARROW
	PROPOSED RETAINING WALL
	PROPOSED SLOPE
	PROPOSED STORM DRAIN

Bohannan Huston
Courtyard I 7500 Jefferson St. NE
Albuquerque, NM 87109 (505) 823-1000

ENGINEER

PROJECT

North Andalucia Drainage Pond
North Andalucia at La Luz
Albuquerque, New Mexico

REVISIONS

DRAWN BY	BHW
REVIEWED BY	JLM
DATE	2/18/2013
PROJECT NO.	20120222

DRAWING NAME
POND 'A' GRADING PLAN

SHEET NO.
1 of 2

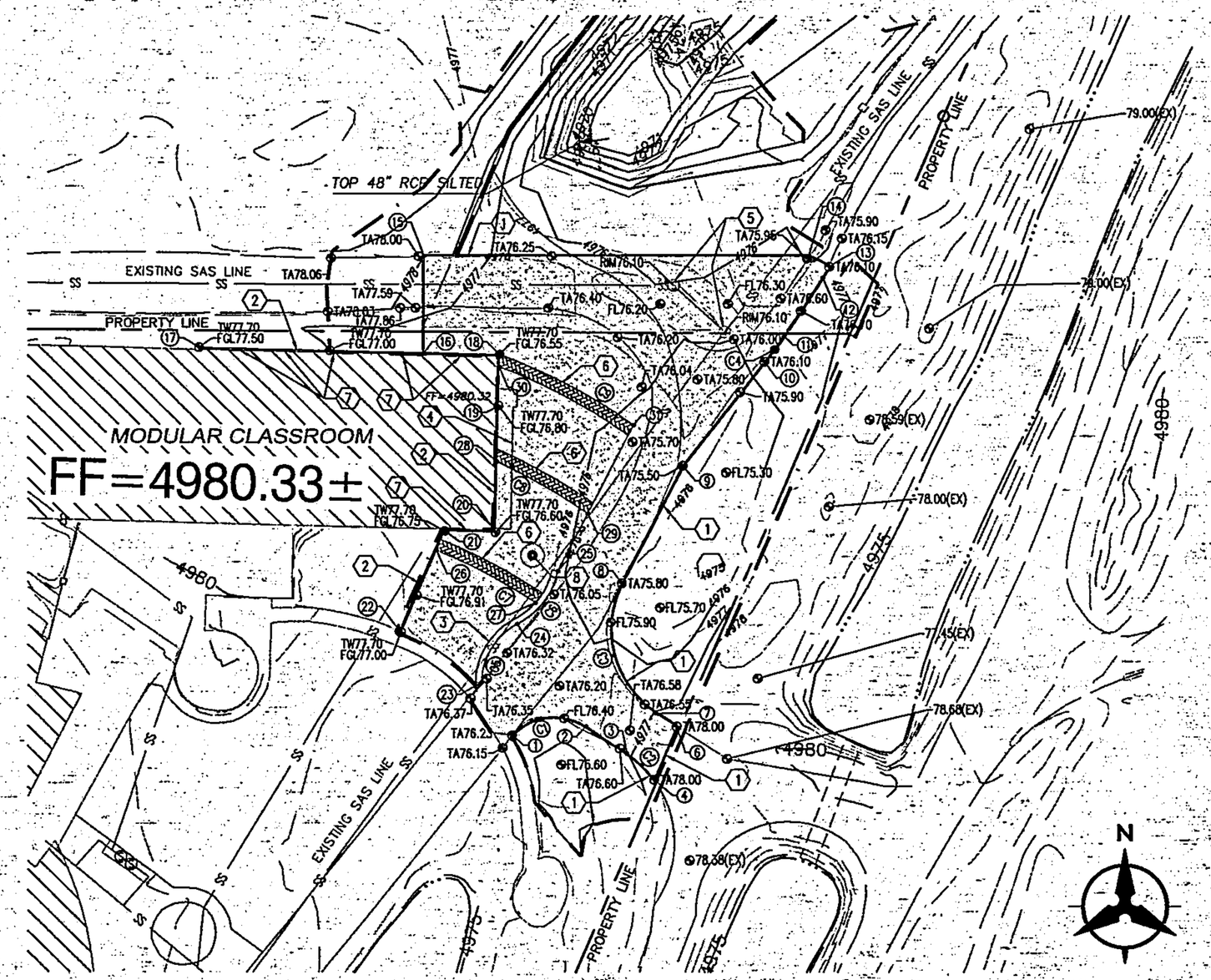
POINT TABLE		
ID	NORTHING	EASTING
1	1508795.05	370180.48
2	1508798.12	370205.51
3	1508788.71	370219.48
4	1508779.68	370228.78
5	1508798.04	370236.50
6	1508802.73	370229.46
7	1508847.83	370217.72
8	1508888.28	370238.47
9	1508924.37	370265.94
10	1508933.18	370272.45
11	1508953.54	370285.49
12	1508957.50	370287.77
13	1508961.10	370280.83
14	1508951.09	370150.78
15	1508927.52	370150.78
16	1508929.40	370074.20
17	1508879.40	370074.20

POINT TABLE		
ID	NORTHING	EASTING
18	1508926.89	370176.22
19	1508909.08	370175.79
20	1508865.52	370174.74
21	1508865.91	370157.63
22	1508830.81	370142.88
23	1508813.54	370169.95
24	1508833.73	370182.22
25	1508852.04	370195.96
26	1508859.26	370154.83
27	1508841.09	370188.47
28	1508889.69	370175.32
29	1508871.85	370206.13
30	1508922.65	370176.11
31	1508902.34	370221.76

CURVE TABLE				
ID	RADIUS	ARC	DELTA	TANGENT
C1	19.28'	27.49'	81° 39' 50"	16.66'
C2	36.76'	13.04'	20° 19' 02"	6.59'
C3	35.00'	50.99'	83° 28' 48"	31.23'
C4	85.99'	10.96'	7° 17' 59"	5.49'
C5	22.51'	24.88'	63° 19' 12"	13.88'
C6	26.05'	23.70'	52° 07' 52"	12.74'
C7	196.00'	38.29'	11° 11' 38"	19.21'
C8	196.00'	35.65'	10° 25' 14"	17.87'
C9	196.00'	45.41'	13° 16' 33"	22.81'

SITE CONTROL NOTES:

1. ALL COORD. POINTS & CURVE DATA ARE TO FACE OF CURB, EDGE OF SIDEWALK, OR FACE OF WALL.
2. CONTRACTOR TO CONTACT ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.



A OVERFLOW AREA ENLARGED GRADING DETAIL
SCALE: 1" = 30'

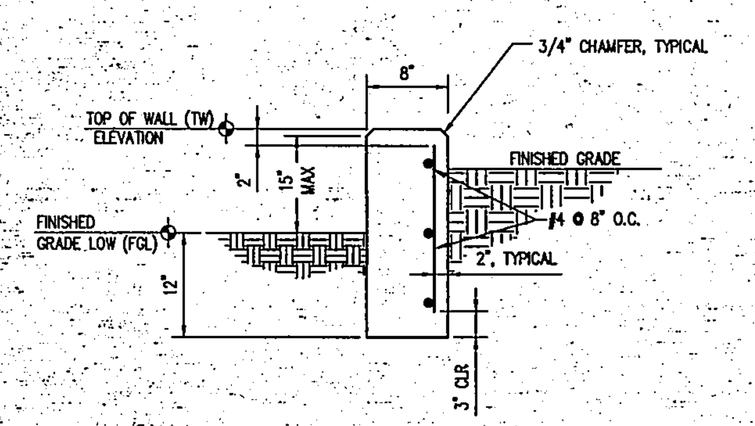
GRADING KEYED NOTES

1. CONSTRUCT FLUSH HEADER CURB PER COA STD DWG 2415.
2. CONSTRUCT CAST IN PLACE RETAINING WALL PER DETAIL D, THIS SHEET.
3. CONSTRUCT DOUBLE WYTHE BURNISHED BLOCK SEAT WALL (STACKED VERTICALLY) WITH SITE CAST 16" WIDE CONCRETE BENCH TOP; MATCH THE BLOCK SEAT WALL LOCATED AT THE MAIN ENTRANCE TO THE ADMINISTRATION BUILDING. COORDINATE DETAILS WITH KIRK WARD, BOSQUE SCHOOL, 505-898-6388 EXT 213.
4. REMOVE AND REBUILD BUILDING RAMP; MATCH EXISTING SLOPE & LAYOUT. ENSURE ADA ACCESSIBILITY.
5. ADJUST MANHOLE TO 4976.20 PER COA STD DWG 2461. ABCWUA UTILITY DEVELOPMENT (505-924-3989) MUST BE NOTIFIED BEFORE ANY WORK IS DONE TO ADJUST THE EXISTING MANHOLE RIMS DUE TO REQUIRED DRAINAGE MODIFICATIONS.
6. COLORED/TEXTURED DECORATIVE CONCRETE. COORDINATE COLOR AND PATTER WITH KIRK WARD, BOSQUE SCHOOL, 505-898-6388 EXT 213.
7. MODIFY ALL EXISTING DOWNSPOUTS TO THAT ROOF DRAINAGE IS CONVEYED OVER THE TOP OF THE NEW CONCRETE WALL.
8. APPROXIMATE LOCATION OF EXISTING TREE; PROTECT IN PLACE. CONTRACTOR SHALL FIELD ADJUST SEAT WALL AND DECORATIVE CONCRETE AS REQUIRED. COORDINATE WITH KIRK WARD, BOSQUE SCHOOL, 505-898-6388 EXT 213.

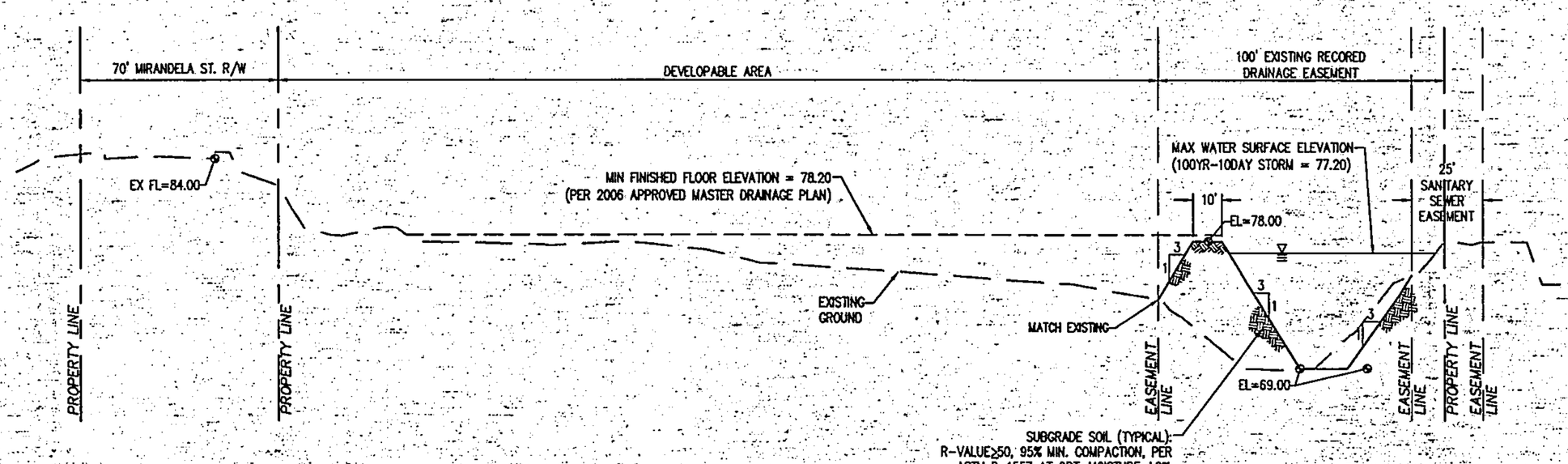
HATCHING LEGEND

6" AGGREGATE BASE COURSE OVER COMPACTED SUBGRADE

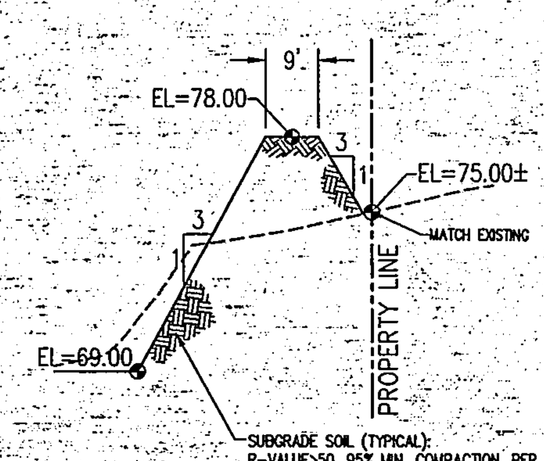
COLORED/DECORATIVE CONCRETE PAVEMENT



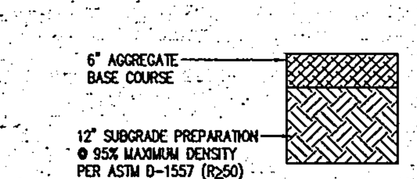
D RETAINING WALL SECTION
N.T.S.



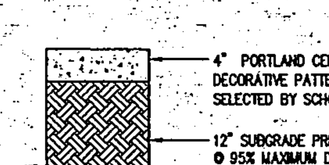
B POND 'A' SECTION A-A
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 6'



C POND 'A' SECTION B-B
N.T.S.



BASE COURSE SECTION
NOT TO SCALE



DECORATIVE CONCRETE PAVEMENT SECTION
NOT TO SCALE

Bohannan Huston
Courtyard I 7500 Jefferson St. NE
Albuquerque, NM 87109 (505) 823-1000

ENGINEER

PROJECT

North Andalucia Drainage Pond
North Andalucia at La Luz
Albuquerque, New Mexico

REVISIONS

DRAWN BY	BHW
REVIEWED BY	JLM
DATE	2/18/2013
PROJECT NO.	20120222
DRAWING NAME	

OVERFLOW AREA GRADING PLAN

SHEET NO.
2 of 2
OF

P:\20120222\CDP\Plans\General\Pond A\20120222_POND A GP02.dwg
February 18, 2013 - 2:06pm
Grading Plan

DRAINAGE MANAGEMENT PLAN

THE PURPOSE OF THIS DRAINAGE STUDY IS TO ESTABLISH AN APPROVED MASTER DRAINAGE PLAN FOR NORTH ANDALUCIA TRACTS 1–B AND TRACTS 1–2 BOSQUE SCHOOL. IN ORDER TO ACCOMPLISH THIS OBJECTIVE, THIS PLAN ANALYZES THE CURRENT AND PROPOSED FLOWS TO THE EXISTING BOSQUE SCHOOL POND 'A' AND POND 'B'. THE BOSQUE SCHOOL TRACT IS A 23.1 ACRE SITE LOCATED SOUTHEAST OF THE COORS BOULEVARD AND MONTANO ROAD INTERSECTION IN ALBUQUERQUE, NEW MEXICO (ZONE ATLAS PAGES E/F–12). IT HAS A FLAT TERRAIN WITH LOCALIZED DEPRESSIONS. A PORTION ALONG THE EAST BOUNDARY OF THE SITE IS HEAVILY VEGETATED WITH SALT CEDAR, COTTONWOOD, AND VARIOUS OTHER BOSQUE TYPE SPECIES.

THERE HAVE BEEN SEVERAL PREVIOUS DRAINAGE STUDIES PREPARED FOR THIS SITE, WITH DIFFERENT ASSUMPTIONS THAT COULD POTENTIALLY IMPACT THIS SITE. IN 1999, A DRAINAGE PLAN WAS PREPARED FOR THE BOSQUE SCHOOL BY CHAVEZ–GRIEVES CONSULTING ENGINEERS AND IN 2001, A "MASTER DRAINAGE REPORT FOR THE LANDS OF RAY A. GRAHAM III" WAS PREPARED BY BORDENAVE DESIGNS. THESE TWO STUDIES HAVE BEEN UTILIZED IN PREPARING THIS CURRENT STUDY FOR BOTH THE BOSQUE PREPARATORY SCHOOL AND NORTH ANDALUCIA.

EXISTING CONDITIONS

TRACTS 2–A & 2–B ARE WITHIN ZONE 'X' ON FEMA FIRM MAP NO. 35001C0118G. THIS MEANS THESE TRACTS ARE ONE OF THE FOLLOWING CONDITIONS:

- WITHIN THE 500 YEAR FLOODPLAIN (0.2% ANNUAL CHANCE)
- WITHIN AN AREA OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR A DRAINAGE AREA LESS THAN 1 SQUARE MILE
- PROTECTED BY LEVEES FROM THE 1% ANNUAL CHANCE FLOOD

THE LOWER CORRALES RIVERSIDE DRAIN EXTENSION BOUNDS THIS SITE TO THE EAST. THE DITCH BANK ALONG THE EAST PROPERTY LINE HAS HISTORICALLY BEEN HIGHER THEN EXISTING GRADES TO THE WEST, AND THE HISTORIC RUNOFF FROM THIS AREA WAS RETAINED AGAINST THIS BANK.

THE EXISTING RETENTION POND (DEFINED ON THIS PLAN AT POND 'B') LOCATED ON THE BOSQUE SCHOOL TRACT HAS A CAPACITY OF19.8 ACRE–FEET (BASED ON THE SURVEY PROVIDED BY PRECISION SURVEY), BOTTOM ELEVATION BEING 4973.00 AND TOP ELEVATION 4977.20.

PROPOSED CONDITIONS

PREVIOUSLY, IT WAS ANTICIPATED (BORDENAVE DESIGNS STUDY) THAT THE DRAINAGE FROM ALL OF BASIN 'B' (SEE DRAINAGE CALCULATIONS AND PLAN) WERE TO BE DIVERTED BY THE DEVELOPERS OF BASIN 'B' BY INSTALLING A ROAD AND DIVERSION CHANNEL SO THAT FLOWS WOULD NOT DRAIN ONTO THE BOSQUE SCHOOL TRACT. THESE FLOWS WOULD THEN HAVE TO BE DIVERTED OVER THE LOWER CORRALES RIVERSIDE DRAIN BY THE USE OF A FLUME CROSSING INTO THE RIO GRANDE BOSQUE ON THE EAST SIDE OF THIS DEVELOPMENT.

IT HAS SINCE BEEN DETERMINED THAT THE EASTERN SIDE OF BASIN 'B–1' HAS RESTRICTIONS THAT PREVENT DEVELOPMENT ON THE PROPERTY. THIS PROPERTY IS TO PERMANENTLY REMAIN "OPEN SPACE". IT IS THEREFORE UNLIKELY THAT THE ROADWAY, DIVERSION CHANNEL, AND FLUME CROSSING WILL EVER BE CONSTRUCTED, WHICH REQUIRES FLOWS FROM BASIN 'B' TO PERMANENTLY DRAIN ONTO THE BOSQUE SCHOOL TRACT.

ONSITE WATER HARVESTING IS BECOMING A WIDELY ACCEPTED PRACTICE, THIS MASTER DRAINAGE PLAN IS INCORPORATING THE REQUIREMENT TO RETAIN THE FIRST 0.44" OF PRECIPITATION ONSITE FOR BASINS A–1, A–5, AND B–2 IN ORDER TO REDUCE THE REQUIRED RETENTION VOLUME IN PONDS A AND B. THESE BASINS WERE CHOSEN BECAUSE THESE TRACTS HAVE YET TO BE DEVELOPED NOR HAVE PLANS SUBMITTED TO THE CITY OF ALBUQUERQUE DEVELOPMENT REVIEW BOARD.

PER THE DRAINAGE CALCULATIONS ON THIS SHEET, THE DRAINAGE VOLUME DISCHARGED TO POND 'B' IN 100–YEAR,10–DAY STORM EVENT IS 11.91 ACRE–FEET. THE ACTUAL VOLUME OF THE POND (AS DESCRIBED ABOVE) IS 21.7 ACRE–FEET AT ELEVATION 77.40.

NORTH ANDALUCIA, WHICH DRAINS TO POND 'A', HAS A REQUIRED POND VOLUME OF 15.28 ACRE–FEET. POND 'A' & 'B' WILL BE TREATED AS ONE RETENTION POND WITH OVERFLOW FROM 'A' TO 'B' IN THE LARGER STORM EVENTS. POND 'A' WILL BE RE–GRADED TO ACHIEVE THE VOLUMES GIVEN THE POND STORAGE VOLUME TABLE ON THIS SHEET. THE TOTAL REQUIRED VOLUME (FOR THE 100–YEAR, 10–DAY EVENT) FOR ALL OF BASINS 'A', 'B', AND 'C' IS 27.19 ACRE–FEET. THE TOTAL VOLUME PROVIDED IN PONDS 'A' AND 'B' IS 29.73 ACRE–FEET (AT ELEVATION 77.40), WHICH EXCEEDS THE REQUIRED 100–YEAR, 10–DAY VOLUME BY 2.5 AC–FT.

THE SPILLWAY FROM POND 'A' TO POND 'B' HAS BEEN SIZED SUCH THAT A MINIMUM OF 275 CFS CAN OVERFLOW FROM POND 'A' TO POND 'B'. THIS IS THE 100–YEAR, SIX HOUR PEAK FLOW RATE FROM BASINS CONTRIBUTING TO POND 'A'. PLEASE SEE WEIR CALCULATIONS AND CROSS SECTION, SHEET C002. THIS WILL REQUIRE SOME REGRADING IN THIS AREA TO ACHIEVE THE REQUIRED WEIR SECTIONS.

INTERIM CONDITIONS

THIS DMP ALSO INCLUDES AN INTERIM CONDITIONS ANALYSIS WHICH DEMONSTRATES THAT WHEN POND A IS RE–GRADED IN ACCORDANCE WITH THIS PLAN, IT HAS SUFFICIENT VOLUME TO CONTAIN THE 100 YEAR – 10 DAY VOLUME FROM BASINS A–3 AND A–4 UNDER DEVELOPED CONDITIONS AND FROM THE REMAINING BASINS UNDER EXISTING CONDITIONS. PLEASE SEE THE FOOTNOTES IN THE INTERIM CONDITIONS ANALYSIS TABLE FOR ADDITIONAL INFORMATION.

CONCLUSIONS

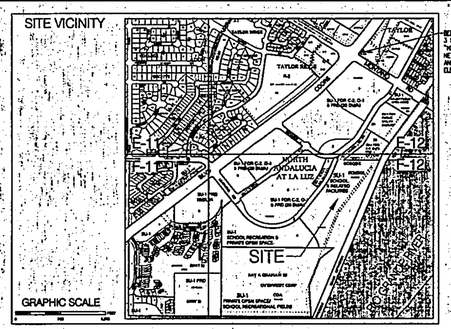
THE LOWER BUILDINGS OF THE BOSQUE SCHOOL ARE CURRENTLY SET AT A FINISHED FLOOR ELEVATION OF 4978.20. THIS PLAN ALSO ESTABLISHES THE SAME MINIMUM FINISHED FLOOR ELEVATION FOR FUTURE BUILDINGS IN BASIN A–2. THIS MINIMUM FINISHED FLOOR ELEVATION IS 1.0 FOOT ABOVE THE MAX WATER SURFACE ELEVATION FOR PONDS 'A' & 'B' IN THE 100–YEAR, 10–DAY STORM. THAT ELEVATION IS ALSO 0.5' ABOVE THE BANK OF THE RIVERSIDE DRAIN EXTENSION. IN THE EVENT OF A STORM LARGER THAN THE 100–YEAR, 10–DAY STORM, THE EXCESS FLOWS WILL OVERFLOW INTO THE RIVERSIDE DRAIN EXTENSION PRIOR TO FLOODING THE BUILDINGS.

UNDER INTERIM CONDITIONS, BASINS A–3 AND A–4 CAN BE DEVELOPED WITHOUT CAUSING AN OVERFLOW FROM POND A TO POND B.

MAP SCALE 1" = 500'

LEGEND

SITE VICINITY


TAYLOR RANCH
TAYLOR
COORS
TAYLOR CO. C.P. 1 PHASE (SU-2)
NORTH ANDALUCIA AT LA LUZ
SU-2 FOR C.O. C 2 PHASE (SU-2)
SU-2 FOR C.O. C 3 PHASE (SU-2)
SU-1 SCHOOL RECREATION & PRIVATE OPEN SPACE
SITE
SU-1 PRIVATE OPEN SPACE SCHOOL RECREATIONAL FIELDS
SU-1 SCHOOL RECREATION & PRIVATE OPEN SPACE
SU-1 PRIVATE OPEN SPACE
SU-1 PRIVATE OPEN SPACE
SU-1

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Andalucia Phase 1 Building Permit #: _____ City Drainage #: E12D015D

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: 5600 Coors Blvd

City Address: 101 Broadway Blvd. NE

Engineering Firm: Bohannan Huston, Inc Contact: Mike Balaskovits or Matt Satches

Address: 7500 Jefferson St. NE 87109

Phone#: 505-823-1000 Fax#: 505-798-7988 E-mail: mbalaskovits@bhinc.com

Owner: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Architect: Studio Southwest Architects, Inc. Contact: Ron Burstein, AIA< CCS

Address: 2101 Mountain Rd. NW Albuquerque, NM 87104

Phone#: 505-843-9639 Fax#: 505-992-0585 E-mail: rburstein@studioswarch.com

Other Contact: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:

x HYDROLOGY/ DRAINAGE
____ TRAFFIC/ TRANSPORTATION
____ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

____ ENGINEER/ ARCHITECT CERTIFICATION

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

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

X OTHER (SPECIFY) Drainage Management Plan

IS THIS A RESUBMITTAL?: ____ Yes X No

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

X BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

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

____ PRE-DESIGN MEETING
____ OTHER (SPECIFY) _____

DEFERRED AUG 15 2016 DEVELOPMENT REVIEW SECTION

DEFERRED TO 100.

DATE SUBMITTED: 8-15-2016 By: Michael Balaskovits, PE

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ____

Harmon Rita T.

From: Harmon Rita T.
Sent: Tuesday, August 30, 2016 12:09 PM
To: 'Michael Balaskovits'; Matthew Satches
Subject: E12D015D - Andalucia Phase 1 (Stamp Date: 8-15-16)

Mike,

This email is being sent in lieu of an attached comment letter in order to expedite the response for initial reviews. Responses to comments should continue to be included in the re-submittal. A reply to this email with responses to comments will not be considered a re-submittal.

Based upon the information provided in your submittal received 8-15-2016, the above referenced plan cannot be approved for Building Permit or Grading Permit until the following comments are addressed:

- Since the DMP included the road in Basin A-1, it needs to be accounted for and included in the basin map for this development.
- The DMP provided 3 outfalls for Basin A-1, and this site will need to use those outfalls, based on the planned flow rate from the DMP. The Retention Pond will need a stand pipe rather than spilling over.
- Proposed Basins A1-6 appear to need SW Culverts to discharge into the road.
- The Retention ponds will need to be detailed, provide the required freeboard.
- Label contour elevations on east side of Coors
- Retaining walls: Adjust the line type to clearly show the extents of the retaining walls along the north and south boundaries. Retaining wall along the north boundary needs FGH and FGL elevations.
- Turn on layer showing SW culverts within the site
- If project is to be phased, show some sort of ESC controls to limit sediment from rough graded portion to the paved portion. (Sediment pond, or wattles)
- Show roof discharge arrows
- It is suggested to grade the private road along northern boundary to discharge into medians. Perhaps using check dams will help in retaining more water.

If you have any question please do not hesitate to contact me.

Rita Harmon, P.E.
Senior Enginneer, Planning Department
Development Review Services
505-924-3695

Matthew Satches

From: Matthew Satches
Sent: Monday, August 15, 2016 4:02 PM
To: 'PLNDRS@cabq.gov'
Cc: Michael Balaskovits
Subject: Andalucia Hydrology Building Permit Approval
Attachments: C001 Drainage Management Plan.pdf; C100 Grading Plan.pdf; Drainage Info Sheet.pdf

All,

Please find attached the Andalucia Grading and Drainage Management Plan being submitted for Hydrology Building Permit Approval.

Thanks,

Matt Satches, E.I.
Engineer Intern
Community Development & Planning

Bohannan Huston
Courtyard I
7500 Jefferson St. NE
Albuquerque, NM 87109-4335
www.bhinc.com
voice: 505.923.3315 **facsimile:** 505.798.7988 **toll free:** 800.877.5332

DISCLAIMER: This e-mail, including attachments, may include confidential and/or proprietary information, and may be used only by the person or entity to which it is addressed. Any unauthorized review, use, disclosure or dissemination is strictly prohibited. If you received this e-mail in error, please notify the sender by reply e-mail and delete this e-mail immediately.

RECEIVED
AUG 15 2016
LAND DEVELOPMENT SECTION

Floodplain Development Permit Form

Planning Dept., City of Albuquerque

Section 1: General Provisions (Applicant to read and sign)

1. No work of any kind may start until a permit is issued.
2. Applicant is hereby informed that other permits may be required to fulfill local, state, and federal regulatory requirements.
3. Applicant hereby gives consent to the Floodplain Administrator and his/her representative to make reasonable inspections required to verify compliance.
4. Applicant must provide a Critical Habitat for Threatened & Endangered Species report if working on or near an endangered species area.
5. The applicant certifies that all statements herein and in attachments to this application are, to the best of my knowledge, true and accurate.

Applicant Signature _____ Date 8/15/16

Applicant Printed Name MICHAEL BARASKOVITS Phone #: 505-823-1000

Section 2: Proposed Development in Special Flood Hazard Area (to be completed by Applicant)

Brief Project Description Commercial Retail Development project. Building footprints will be located out of existing flood zone.

Applicant is (check one): Owner ____ Builder ____ Engineer/Architect X

Project address/Legal Disc/Location: 5600 Coors Blvd NW Albuquerque, NM 87120

Description of Work in Special Flood Hazard Area (SFHA):

A. Development Activities

Clearing X Fill ____ Drilling ____ Excavation X

Watercourse Alteration ____(Including Dredging and Channel Modifications)

Drainage Improvements X Road, Street or Bridge Construction ____

Water or Sewer Line Installation X Paving X Walls, Fences X

Storage of Materials/Equipment for more than a year. ___ Materials Volume (cu. Ft.) ____

Other (Please Specify) _____

Rev. April 2014

not req'd
for X-
protected by
Levee

B. Building Development and Building Type

New Building ____ Residential (1-4 Family) ____ Residential (More than 4 Family)_____

Commercial ____ Addition ____ Alteration ____ Demolition ____

Manufactured Home ____

If an addition or alteration:

Estimated Cost of structure before addition/alteration. _____

Estimated Cost of Project $_____ Percent of value (new/existing) _____

Is there a Grading & Drainage Plan associated with this work? Yes X No ____

Drainage file Number: Engineer stamp date 8-15-2016

Section 3: Floodplain Determination (Completed by the Floodplain Administrator)

The proposed development is located in a SFHA Zone (circle one): A AE AH AO Zone 'X'

And is located on FIRM Panel: 35001C0118G & 35001C0114H

And is located in a Floodway: ___Yes X No

BFE if Applicable: NA

Drainage File Number:_____

Floodplain Permit Number:_____

Building Permit / Work Order #:_____

Site specific Instructions:_____

_____

_____

_____

Signed: _____ Date: _____

Printed Name: _____

If proposed development is a building complete section 4.

Section 4: Requirements for building in a SFHA:

(To be completed by the Floodplain Administrator or Representative).

BFE (unless not available) _____ Minimum Finished Floor Elevation: _____

Minimum Lowest Adjacent Grade (LAG): _____

Change in water elevation (if in a Floodway):_____

Is flood-proofing required: YES ____ NO _____

If yes, method of flood-proofing:_____

Company certifying the flood-proofing:_____

An Elevation Certificate is required for structural development in a SFHA. A Certificate of Occupancy will not be granted until the Planning Department receives the Elevation Certificate.

Section 5: Post Development Certification:

A. For structural Development:

Elevation Certificate received on (Date): _____

Finished Floor Elevation: _____

Lowest adjacent grade: _____

The Floodplain Administrator or Representative verifies that the above information is acceptable ___ is not ____ acceptable per the City of Albuquerque Floodplain Ordinance.

B. The site was visually inspected on (Date) _____

Certificate of Occupancy approved on (Date) _____

Signature: _____ Date: _____

Printed Name: _____

DRAINAGE MANAGEMENT PLAN

THE PURPOSE OF THIS DRAINAGE STUDY IS TO ESTABLISH AN APPROVED MASTER DRAINAGE PLAN FOR NORTH ANDALUCIA TRACTS 1–8 AND TRACTS 1–2 BOSQUE SCHOOL. IN ORDER TO ACCOMPLISH THIS OBJECTIVE, THIS PLAN ANALYZES THE CURRENT AND PROPOSED FLOWS TO THE EXISTING BOSQUE SCHOOL POND 'A' AND POND 'B'. THE BOSQUE SCHOOL TRACT IS A 23.1 ACRE SITE LOCATED SOUTHEAST OF THE COORS BOULEVARD AND MONTANO ROAD INTERSECTION IN ALBUQUERQUE, NEW MEXICO (ZONE ATLAS PAGES E/F–12). IT HAS A FLAT TERRAIN WITH LOCALIZED DEPRESSIONS. A PORTION ALONG THE EAST BOUNDARY OF THE SITE IS HEAVILY VEGETATED WITH SALT CEDAR, COTTONWOOD, AND VARIOUS OTHER BOSQUE TYPE SPECIES.

THERE HAVE BEEN SEVERAL PREVIOUS DRAINAGE STUDIES PREPARED FOR THIS SITE, WITH DIFFERENT ASSUMPTIONS THAT COULD POTENTIALLY IMPACT THIS SITE. IN 1999, A DRAINAGE PLAN WAS PREPARED FOR THE BOSQUE SCHOOL BY CHAVEZ–GRIEVES CONSULTING ENGINEERS AND IN 2001, A 'MASTER DRAINAGE REPORT FOR THE LANDS OF RAY A. GRAHAM III' WAS PREPARED BY BORDENAVE DESIGNS. THESE TWO STUDIES HAVE BEEN UTILIZED IN PREPARING THIS CURRENT STUDY FOR BOTH THE BOSQUE PREPARATORY SCHOOL AND NORTH ANDALUCIA.

EXISTING CONDITIONS

TRACTS 2–A & 2–B ARE WITHIN ZONE 'X' ON FEMA FIRM MAP NO. 35001C0118G. THIS MEANS THESE TRACTS ARE ONE OF THE FOLLOWING CONDITIONS:

- WITHIN THE 500 YEAR FLOODPLAIN (0.2% ANNUAL CHANCE)
- WITHIN AN AREA OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR A DRAINAGE AREA LESS THAN 1 SQUARE MILE
- PROTECTED BY LEVEES FROM THE 1% ANNUAL CHANCE FLOOD

THE LOWER CORRALES RIVERSIDE DRAIN EXTENSION BOUNDS THIS SITE TO THE EAST. THE DITCH BANK ALONG THE EAST PROPERTY LINE HAS HISTORICALLY BEEN HIGHER THEN EXISTING GRADES TO THE WEST, AND THE HISTORIC RUNOFF FROM THIS AREA WAS RETAINED AGAINST THIS BANK.

THE EXISTING RETENTION POND (IDENTIFIED ON THIS PLAN AT POND 'B') LOCATED ON THE BOSQUE SCHOOL TRACT HAS A CAPACITY OF19.8 ACRE–FEET (BASED ON THE SURVEY PROVIDED BY PRECISION SURVEY), BOTTOM ELEVATION BEING 4873.00 AND TOP ELEVATION 4877.20.

PROPOSED CONDITIONS

PREVIOUSLY, IT WAS ANTICIPATED (BORDENAVE DESIGNS STUDY) THAT THE DRAINAGE FROM ALL OF BASIN 'B' (SEE DRAINAGE CALCULATIONS AND PLAN) WERE TO BE DIVERTED BY THE DEVELOPERS OF BASIN 'B' BY INSTALLING A ROAD AND DIVERSION CHANNEL SO THAT FLOWS WOULD NOT DRAIN ONTO THE BOSQUE SCHOOL TRACT. THESE FLOWS WOULD THEN HAVE TO BE DIVERTED OVER THE LOWER CORRALES RIVERSIDE DRAIN BY THE USE OF A FLUME CROSSING INTO THE RIO GRANDE BOSQUE ON THE EAST SIDE OF THIS DEVELOPMENT.

IT HAS SINCE BEEN DETERMINED THAT THE EASTERN SIDE OF BASIN 'B–1' HAS RESTRICTIONS THAT PREVENT DEVELOPMENT ON THE PROPERTY. THIS PROPERTY IS TO PERMANENTLY REMAIN 'OPEN SPACE'. IT IS THEREFORE UNLIKELY THAT THE ROADWAY, DIVERSION CHANNEL, AND FLUME CROSSING WILL EVER BE CONSTRUCTED, WHICH REQUIRES FLOWS FROM BASIN 'B' TO PERMANENTLY DRAIN ONTO THE BOSQUE SCHOOL TRACT.

ONSITE WATER HARVESTING IS BECOMING A WIDELY ACCEPTED PRACTICE, THIS MASTER DRAINAGE PLAN IS INCORPORATING THE REQUIREMENT TO RETAIN THE FIRST 0.44" OF PRECIPITATION ONSITE FOR BASINS A–1, A–5, AND B–2 IN ORDER TO REDUCE THE REQUIRED RETENTION VOLUME IN PONDS A AND B. THESE BASINS WERE CHOSEN BECAUSE THESE TRACTS HAVE YET TO BE DEVELOPED NOR HAVE PLANS SUBMITTED TO THE CITY OF ALBUQUERQUE DEVELOPMENT REVIEW BOARD.

PER THE DRAINAGE CALCULATIONS ON THIS SHEET, THE DRAINAGE VOLUME DISCHARGED TO POND 'B' IN 100–YEAR,10–DAY STORM EVENT IS 11.91 ACRE–FEET. THE ACTUAL VOLUME OF THE POND (AS DESCRIBED ABOVE) IS 21.7 ACRE–FEET AT ELEVATION 77.40.

NORTH ANDALUCIA, WHICH DRAINS TO POND 'A', HAS A REQUIRED POND VOLUME OF 15.28 ACRE–FEET. POND 'A' & 'B' WILL BE TREATED AS ONE RETENTION POND WITH OVERFLOW FROM 'A' TO 'B' IN THE LARGER STORM EVENTS. POND 'A' WILL BE RE–GRADED TO ACHIEVE THE VOLUMES GIVEN THE POND STORAGE VOLUME TABLE ON THIS SHEET. THE TOTAL REQUIRED VOLUME (FOR THE 100–YEAR, 10–DAY EVENT) FOR ALL OF BASINS 'A', 'B', AND 'C' IS 27.19 ACRE–FEET. THE TOTAL VOLUME PROVIDED IN PONDS 'A' AND 'B' IS 28.73 ACRE–FEET (AT ELEVATION 77.40), WHICH EXCEEDS THE REQUIRED 100–YEAR, 10–DAY VOLUME BY 2.5 AC–FT.

THE SPILLWAY FROM POND 'A' TO POND 'B' HAS BEEN SIZED SUCH THAT A MINIMUM OF 275 CFS CAN OVERFLOW FROM POND 'A' TO POND 'B'. THIS IS THE 100–YEAR, SIX HOUR PEAK FLOW RATE FROM BASINS CONTRIBUTING TO POND 'A'. PLEASE SEE WEIR CALCULATIONS AND CROSS SECTION, SHEET C002. THIS WILL REQUIRE SOME REGRADING IN THIS AREA TO ACHIEVE THE REQUIRED WEIR SECTIONS.

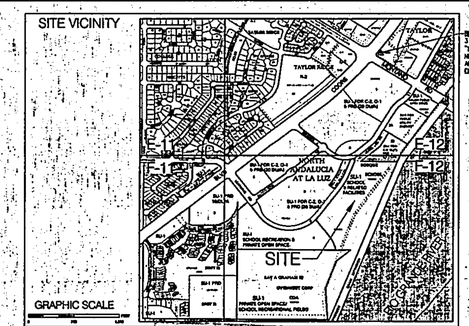
INTERIM CONDITIONS

THIS DMP ALSO INCLUDES AN INTERIM CONDITIONS ANALYSIS WHICH DEMONSTRATES THAT WHEN POND A IS RE–GRADED IN ACCORDANCE WITH THIS PLAN, IT HAS SUFFICIENT VOLUME TO CONTAIN THE 100 YEAR – 10 DAY VOLUME FROM BASINS A–3 AND A–4 UNDER DEVELOPED CONDITIONS AND FROM THE REMAINING BASINS UNDER EXISTING CONDITIONS. PLEASE SEE THE FOOTNOTES IN THE INTERIM CONDITIONS ANALYSIS TABLE FOR ADDITIONAL INFORMATION.

CONCLUSIONS

THE LOWER BUILDINGS OF THE BOSQUE SCHOOL ARE CURRENTLY SET AT A FINISHED FLOOR ELEVATION OF 4878.20. THIS PLAN ALSO ESTABLISHES THE SAME MINIMUM FINISHED FLOOR ELEVATION FOR FUTURE BUILDINGS IN BASIN A–2. THIS MINIMUM FINISHED FLOOR ELEVATION IS 1.0 FOOT ABOVE THE MAX WATER SURFACE ELEVATION FOR PONDS 'A' & 'B' IN THE 100–YEAR, 10–DAY STORM. THAT ELEVATION IS ALSO 0.8' ABOVE THE BANK OF THE RIVERSIDE DRAIN EXTENSION. IN THE EVENT OF A STORM LARGER THAN THE 100–YEAR, 10–DAY STORM, THE EXCESS FLOWS WILL OVERFLOW INTO THE RIVERSIDE DRAIN EXTENSION PRIOR TO FLOODING THE BUILDINGS.

UNDER INTERIM CONDITIONS, BASINS A–3 AND A–4 CAN BE DEVELOPED WITHOUT CAUSING AN OVERFLOW FROM POND A TO POND B.



COMBINED POND STORAGE VOLUME

ELEVATION	POND 'A' VOLUME (CF)	POND 'A' VOLUME (AC-FT)	POND 'B' VOLUME (CF)	POND 'B' VOLUME (AC-FT)	COMBINED VOLUME (CF)	COMBINED VOLUME (AC-FT)	
4969	0.00	0.00			0	0.00	
4970	16973.82	0.39			16974	0.39	
4971	39078.52	0.90			39079	0.90	
4972	66414.93	1.52			66415	1.52	
4973	98964.32	2.27	360.78	0.01	99325	2.28	
4974	138170.11	3.17	8584.09	0.20	146754	3.37	
4975	183958.35	4.22	94956.76	2.18	278915	6.40	
4976	241024.60	5.53	379597.31	8.71	620622	14.25	
4977	314316.03	7.22	764884.83	17.56	1079201	24.78	
4977.1	322729.21	7.41	809060.36	18.57	1131790	25.98	
4977.2	331266.11	7.60	854072.60	19.61	1185339	27.21	← 100 YEAR, 10 DAY MWSEL
4977.3	339908.60	7.80	899904.88	20.66	1239813	28.46	
4977.4	348662.06	8.00	946550.20	21.73	1295212	29.73	← MINIMUM DITCH BANK ELEVATION

NORTH ANDALUCIA DRAINAGE MASTER PLAN (PROPOSED CONDITIONS)

This table is based on the DPM Section 22.2, Zone: 1

BASIN ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Runoff Rate (cfs/ac.)	Q(100) (cfs)	WT E (inches)	$V(100)_{6\ HOUR}$ (ACRE-FT)	$V(100)_{10\ DAY}$ (ACRE-FT)	Volume Retained Onsite (ACRE-FT)[7]	$V(100)_{10\ DAY}$ (AC-FT, Less Ret Vol)
BASIN 'A-1' (COMMERCIAL)[1]	1209319	27.76	0.0%	10.0%	5.0%	85.0%	4.06	112.74	1.79	4.14	7.03	1.02	6.02
BASIN 'A-2' (SCHOOL)[1]	384942	8.84	0.0%	24.0%	10.0%	66.0%	3.68	32.33	1.56	1.15	1.86	-	1.86
BASIN 'A-3' (MULTIFAMILY)[1]	768953	17.65	0.0%	24.0%	10.0%	66.0%	3.68	64.58	1.56	2.29	3.72	-	3.72
BASIN 'A-4' (BANK)[1]	157588	3.62	0.0%	9.0%	9.0%	82.0%	4.02	14.56	1.76	0.53	0.90	-	0.90
BASIN 'A-5' (MULTIFAMILY)[1]	335678	7.71	0.0%	24.0%	10.0%	66.0%	3.68	28.19	1.56	1.00	1.62	0.28	1.34
BASIN 'C-2' (ROADS)[6]	237079	5.44	0.0%	5.0%	5.0%	90.0%	4.18	22.74	1.86	0.84	1.44	-	1.44
						TOTAL DRAINING TO POND 'A'		275.14		9.96	16.58	1.30	15.28
BASIN 'D-1' (COA OPEN SPACE)[2]	108063	2.48	55.0%	25.0%	10.0%	10.0%	1.94	4.82	0.71	0.15	0.18	-	0.18
BASIN 'B-1'[3]	3010221	69.11	64.5%	11.4%	4.5%	19.6%	2.05	141.61	0.79	4.55	6.21	-	6.21
BASIN 'B-2'[6]	379540	8.71	0.0%	15.0%	25.0%	60.0%	3.64	31.76	1.53	1.11	1.75	0.32	1.43
BASIN 'B-3'[4]													
OPEN SPACE	162580	3.73	75.0%	25.0%	0.0%	0.0%	1.48	5.51	0.50	0.15	0.15	-	0.15
SPORTS FIELDS	152234	3.49	0.0%	87.0%	0.0%	13.0%	2.33	8.16	0.84	0.24	0.30	-	0.30
DEVELOPED	121689	2.79	0.0%	0.0%	10.0%	90.0%	4.22	11.79	1.87	0.44	0.74	-	0.74
									TOTAL 'B-3'	0.83	1.20	-	1.20
BASIN 'C-1' (BOSQUE SCHOOL)[5]	1005137	23.07	0.0%	44.0%	25.5%	30.5%	2.95	68.25	1.15	2.21	3.07	-	3.07
						TOTAL DRAINING TO POND 'B'		267.06		8.71	12.23	0.32	11.91
						TOTAL POND 'A' AND 'B'				18.67	28.81	1.62	27.19

Notes:
[1] BASIN 'A-1' TO 'A-5' LAND TREATMENT PERCENTAGES BASED ON ZONING AND TYPE OF DEVELOPMENT ANTICIPATED.
[2] BASIN 'D-1' 100YR-10DAY VOLUME IS TO BE RETAINED ONSITE AS IT HAS HISTORICALLY (ALONG THE EAST EDGE OF THE TRACT)
[3] BASIN 'B-1' LAND TREATMENT PERCENTAGES CALCULATED FROM RECENT AERIAL ORTHOPHOTOGRAPHY.
[4] BASIN 'B-3' LAND TREATMENT PERCENTAGES BASED ON DEVELOPMENT ANTICIPATED BY THE OWNER (BOSQUE SCHOOL).
[5] BASIN 'C-1' LAND TREATMENT PERCENTAGES CALCULATED FROM RECENT AERIAL ORTHOPHOTOGRAPHY SHOW THAT THIS BASIN IS CURRENTLY APPROXIMATELY 23% IMPERVIOUS. THE PERCENTAGES USED ABOVE ALLOW FOR SOME ADDITIONAL DEVELOMPENT ON THE CAMPUS.
[6] BASINS 'C-2' CALCULATIONS BY BOHANNAN HUSTON.
[7] REQUIREMENT FOR ONSITE WATER HARVESTING (FIRST 0.44" OF PRECIPITATION RETAINED ONSITE).
[8] BASIN 'B-2' LAND TREATMENT PERCENTAGES ARE BASED ON EXISTING SU-1 PRD ZONING AT A MAXIMUM OF 10 DU/ACRE

PIPE ID's SHWON AS Ⓔ ON SHEET C-002 →

STORM DRAIN PIPE TABLE (PROPOSED CONDITIONS)

Pipe #	Size	Slope	Capacity[1]	Capacity[2]	Q(100)[3]	Comments
A	24	1.00%	22.66	14.39	14.56	Basin A-4
B	24	1.00%	22.66	25.25	20.96	Basin A-4 Plus Antequera R/W
C	24	2.00%	32.06	24.92	28.19	Basin A-5
D	36	1.00%	66.96	65.17	49.15	
E	36	1.00%	66.96	62.99	68.15	Basin A-3 Minus Antequera R/W
F	54	0.98%	181.79	118.16	107.33	
G	24	1.00%	22.66		22.56	20% of Basin A-1
H	30	0.9%	29.06		22.74	Basin C-2
J	24	2.60%	36.56		22.56	20% of Basin A-1 (Most of Mirandela R/W plus a portion of the site that drains to the surface of Mirandela)
K	60	0.32%	147.73	177.66	175.17	Total of Pipes F, G, H & J
L	30	0.80%	36.79	23.62	22.56	20% of Basin A-1
M	30	1.20%	45.05		45.10	40% of Basin A-1 (small portion of Mirandela R/W plus future private storm drain tied to stubout)
N	42	0.40%	63.60	69.39	67.66	Total of Pipes L & M

Notes:
[1] CAPACITY BASED ON THE FLOWRATE GIVEN IN THE CONSTRUCTION PLANS - CITY PROJECT NUMBER 730984
[2] BASED ON MANNINGS EQUATION, FULL PIPE FLOW
[3] Q100 BASED ON THE PROPOSED CONDITIONS ANALYSIS GIVEN IN THIS DRAINAGE MASTER PLAN

NORTH ANDALUCIA DRAINAGE MASTER PLAN (INTERIM CONDITIONS)

This table is based on the DPM Section 22.2, Zone: 1

BASIN ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Runoff Rate (cfs/ac.)	Q(100) (cfs)	WT E (inches)	$V(100)_{6\ HOUR}$ (ACRE-FT)	$V(100)_{10\ DAY}$ (ACRE-FT)
BASIN 'A-1' (COMMERCIAL SITE)[1]	1062289	24.39	50.0%	0.0%	50.0%	0.0%	2.08	50.72	0.72	1.45	1.45
BASIN 'A-1' (RIGHT-OF-WAY)[5]	147030	3.38	0.0%	15.0%	20.0%	65.0%	3.72	12.56	1.58	0.44	0.71
BASIN 'A-2' (SCHOOL)[2]	384942	8.84	60.0%	0.0%	40.0%	0.0%	1.92	16.98	0.66	0.49	0.49
BASIN 'A-3' (MULTIFAMILY)[3]	768953	17.65	0.0%	24.0%	10.0%	66.0%	3.68	64.58	1.56	2.29	3.72
BASIN 'A-4' (BANK)[3]	157588	3.62	0.0%	9.0%	9.0%	82.0%	4.02	14.56	1.78	0.53	0.90
BASIN 'A-5' (MULTIFAMILY)[1]	335678	7.71	50.0%	0.0%	50.0%	0.0%	2.08	16.03	0.72	0.46	0.46
BASIN 'C-2' (ROADS)[4]	237079	5.44	0.0%	5.0%	5.0%	90.0%	4.18	22.74	1.86	0.84	1.44
						TOTAL DRAINING TO POND 'A'[1]		198.17		4.60	7.28

Notes:
[1] UNDER INTERIM CONDITIONS, BASIN 'A-1' AND 'A-5' ARE NOT INCLUDED IN THE TOTALS DRAINING TO POND A SINCE SUBSTANTIAL PORTIONS OF THESE SITES DO NOT DRAIN TO THE ROADS IN INTERIM CONDITIONS AND RUNOFF WOULD THEREFORE POND ONSITE.
[2] BASIN A-2 INTERIM LAND TREATMENT PERCENTAGES ARE BASED ON EXISTING CONDITIONS
[3] BASIN A-3 AND A-4 ARE ANALYZED USING FULLY DEVELOPED CONDITIONS (SAME AS PROPOSED CONDITIONS)
[4] BASIN BASIN C-2 IS ANALYZED BASED ON EXISTING DEVELOPED CONDITIONS
[5] BASIN A-1 INCLUDES THE RIGHT-OF-WAY OF MIRANDELA WHICH IS 40' FACE-TO-FACE WITH A 60' R/W FOR A PORTION, AND 70' R/W FOR A PORTION

RECEIVED
AUG 15 2016
LAND DEVELOPMENT SECTION

Bohannan Huston
Courtyard I 7500 Jefferson St. NE
Albuquerque, NM 87109 (505) 823-1000

ENGINEER

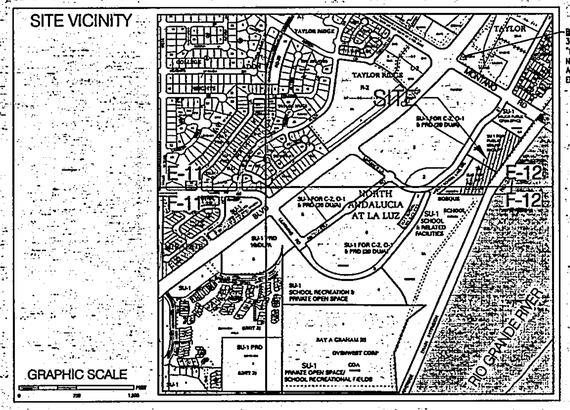
PROJECT

NORTH ANDALUCIA DRAINAGE MASTER PLAN
SEC COORS AND MONTANO
ALBUQUERQUE
NEW MEXICO

DRAWN BY	BHW
REVIEWED BY	BJS
DATE	1/2013
PROJECT NO.	BHI.2012.0222
DRAWING NAME	FINAL DRAINAGE PLAN
SHEET NO.	C-001

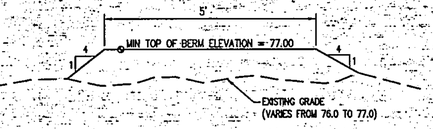
1 OF 2

P:\20120222\CDP\Drainage Eval Exhibits\20120222CDP01.dwg
Tue, 19-Feb-2013 - 8:31:am, Plotted by: BORTEGA



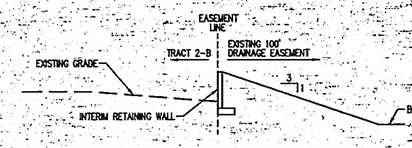
POINT TABLE		
ID	NORTHING	EASTING
1	1509041.87	1510777.08
2	1509254.06	1510932.80
3	1509270.57	1510970.46
4	1509645.19	1511246.14
5	1509620.73	1511284.99
6	1509614.42	1511310.50
7	1509602.65	1511330.57
8	1509266.01	1511003.93

POINT TABLE		
ID	NORTHING	EASTING
9	1509258.54	1511018.18
10	1509608.87	1511252.94
11	1509599.33	1511268.30
12	1509076.03	1510836.98
13	1509149.76	1510886.21
14	1509189.98	1510922.93
15	1509238.37	1510953.27

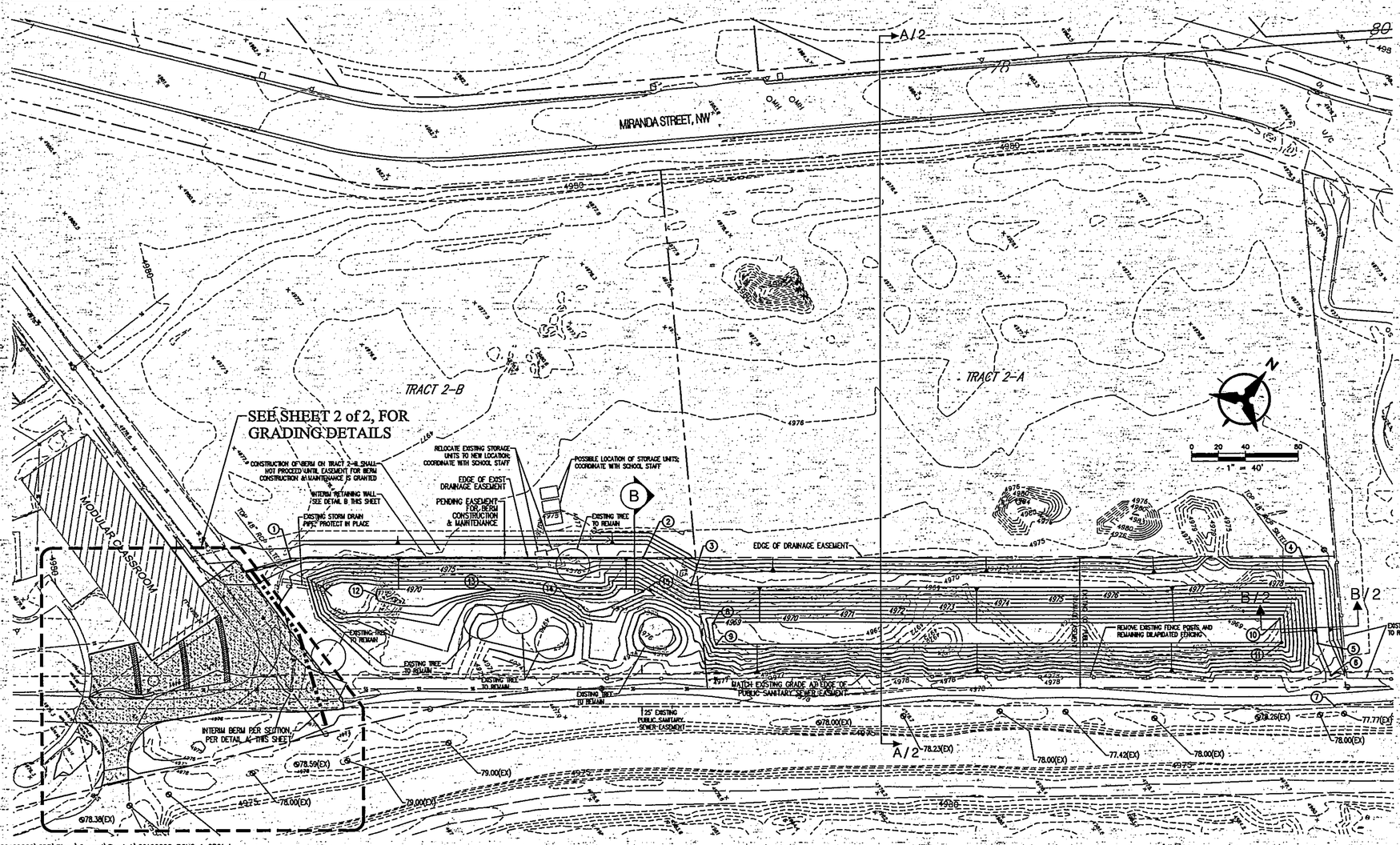


A INTERIM BERM SECTION
N.T.S.

NOTE: INTERIM BERM SHALL BE INSTALLED UNTIL SUCH TIME AS THE EASEMENT AND COVENANT FOR POND "B" ARE EXECUTED AND RECORDED.



B INTERIM RETAINING WALL SECTION
N.T.S.



P:\20120222\CDP\Plans\General\Pond A\20120222_POND A GP01.dwg
Mon, 18-Feb-2013 - 1:32pm, Plotted by: BORTEGA

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 GENERAL 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.

5. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.

6. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY.

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

• (91.62)	FUTURE SPOT ELEVATION
• 91.62	PROPOSED SPOT ELEVATION
× 92.46	EXISTING SPOT ELEVATION (GRND & TC)
	EXISTING CURB & GUTTER
	PROPOSED MOUNTABLE CURB & GUTTER
	PROPOSED STANDARD CURB & GUTTER
5470	EXISTING CONTOUR W/ INDEX ELEVATION
	FLOW ARROW
	PROPOSED RETAINING WALL
	PROPOSED SLOPE
	PROPOSED STORM DRAIN

Bohannan Huston
Courtyard I 7500 Jefferson St. NE
Albuquerque, NM 87109 (505) 823-1000

ENGINEER

BRUCE A. STID HUNTER
NEW MEXICO
14825
2/18/13
REGISTERED PROFESSIONAL ENGINEER

PROJECT

North Andalucia Drainage Pond
North Andalucia at La Luz
Albuquerque, New Mexico

REVISIONS
△
△
△
△

DRAWN BY	BHW
REVIEWED BY	JLM
DATE	2/18/2013
PROJECT NO.	20120222

DRAWING NAME
POND 'A' GRADING PLAN

SHEET NO.
1 of 2

POINT TABLE		
ID	NORTHING	EASTING
1	1508795.05	370180.48
2	1508798.12	370205.51
3	1508788.71	370219.48
4	1508779.68	370228.78
6	1508798.04	370236.50
7	1508802.73	370229.46
8	1508847.83	370217.72
9	1508888.28	370238.47
10	1508924.37	370265.94
11	1508933.18	370272.45
12	1508953.54	370285.49
13	1508957.50	370287.77
14	1508961.10	370280.83
15	1508961.09	370150.78
16	1508927.52	370150.78
17	1508929.40	370074.20

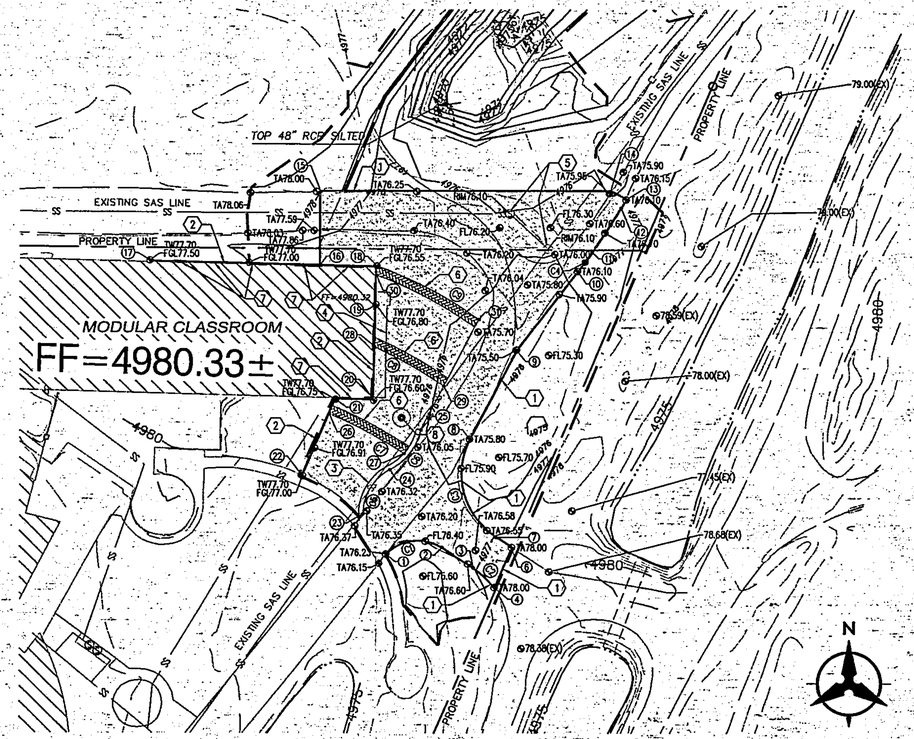
POINT TABLE		
ID	NORTHING	EASTING
18	1508926.89	370176.22
19	1508909.08	370175.79
20	1508865.52	370174.74
21	1508865.91	370157.63
22	1508830.81	370142.88
23	1508813.54	370169.95
24	1508833.73	370182.22
25	1508852.04	370195.96
26	1508859.26	370154.83
27	1508841.09	370188.47
28	1508889.69	370175.32
29	1508871.85	370206.13
30	1508922.65	370176.11
31	1508902.34	370221.76

CURVE TABLE				
ID	RADIUS	ARC	DELTA	TANGENT
C1	19.28'	27.49'	81° 39' 50"	16.66'
C2	36.76'	13.04'	20° 19' 02"	6.59'
C3	35.00'	50.99'	83° 28' 48"	31.23'
C4	85.99'	10.96'	7° 17' 59"	5.49'
C5	22.51'	24.88'	63° 19' 12"	13.88'
C6	26.05'	23.70'	52° 07' 52"	12.74'
C7	196.00'	38.29'	11° 11' 38"	19.21'
C8	196.00'	35.65'	10° 25' 14"	17.87'
C9	196.00'	45.41'	13° 16' 33"	22.81'

SITE CONTROL NOTES:

1. ALL COORD. POINTS & CURVE DATA ARE TO FACE OF CURB, EDGE OF SIDEWALK, OR FACE OF WALL.

2. CONTRACTOR TO CONTACT ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.



A OVERFLOW AREA ENLARGED GRADING DETAIL
SCALE: 1" = 30'

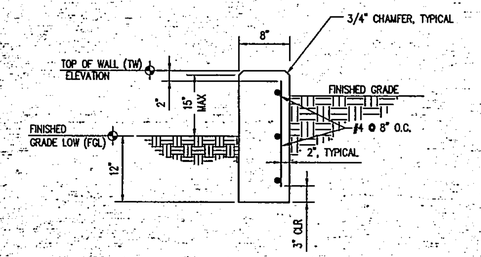
GRADING KEYED NOTES

1. CONSTRUCT FLUSH HEADER CURB PER COA STD DWG 2415.
2. CONSTRUCT CAST IN PLACE RETAINING WALL PER DETAIL D, THIS SHEET.
3. CONSTRUCT DOUBLE WYTHE BURNISHED BLOCK SEAT WALL (STACKED VERTICALLY) WITH SITE CAST 16" WIDE CONCRETE BENCH TOP; MATCH THE BLOCK SEAT WALL LOCATED AT THE MAIN ENTRANCE TO THE ADMINISTRATION BUILDING. COORDINATE DETAILS WITH KIRK WARD, BOSQUE SCHOOL, 505-898-6388 EXT 213.
4. REMOVE AND REBUILD BUILDING RAMP; MATCH EXISTING SLOPE & LAYOUT. ENSURE ADA ACCESSIBILITY.
5. ADJUST MANHOLE TO 4976.20 PER COA STD DWG 2461. ABCWUA UTILITY DEVELOPMENT (505-924-3989) MUST BE NOTIFIED BEFORE ANY WORK IS DONE TO ADJUST THE EXISTING MANHOLE RIMS DUE TO REQUIRED DRAINAGE MODIFICATIONS.
6. COLORED/TEXTURED DECORATIVE CONCRETE. COORDINATE COLOR AND PATTER WITH KIRK WARD, BOSQUE SCHOOL, 505-898-6388 EXT 213.
7. MODIFY ALL EXISTING DOWNSPOUTS TO THAT ROOF DRAINAGE IS CONVEYED OVER THE TOP OF THE NEW CONCRETE WALL.
8. APPROXIMATE LOCATION OF EXISTING TREE; PROTECT IN PLACE. CONTRACTOR SHALL FIELD ADJUST SEAT WALL AND DECORATIVE CONCRETE AS REQUIRED. COORDINATE WITH KIRK WARD, BOSQUE SCHOOL, 505-898-6388 EXT 213.

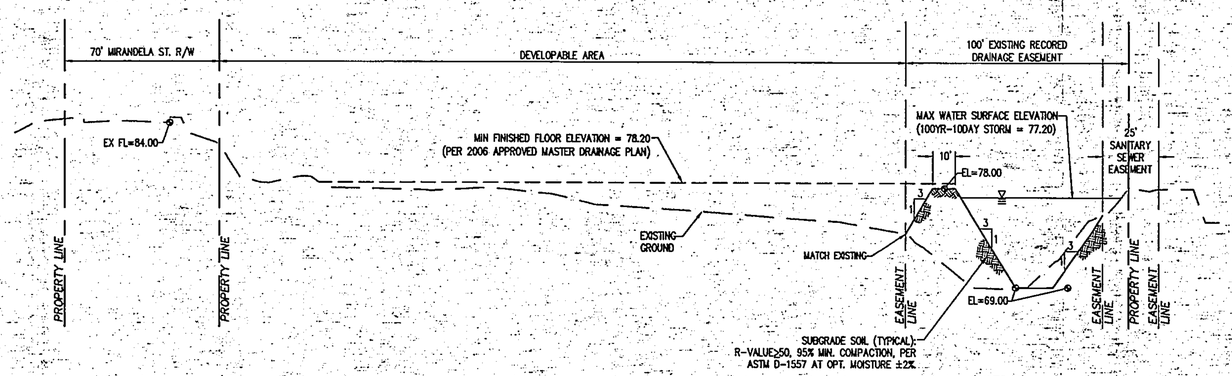
HATCHING LEGEND

6" AGGREGATE BASE COURSE OVER COMPACTED SUBGRADE

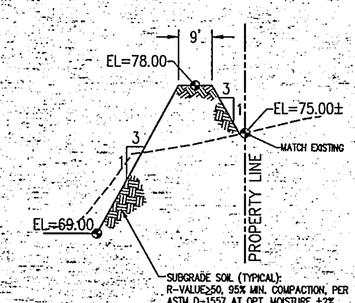
COLORED/DECORATIVE CONCRETE PAVEMENT



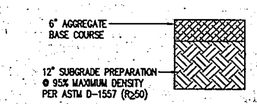
D RETAINING WALL SECTION
N.T.S.



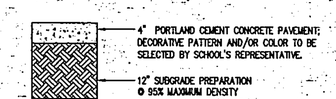
B POND 'A' SECTION A-A
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 6'



C POND 'A' SECTION B-B
N.T.S.



BASE COURSE SECTION
NOT TO SCALE



DECORATIVE CONCRETE PAVEMENT SECTION
NOT TO SCALE

Bohannan Huston
Courtyard I 7500 Jefferson St. NE
Albuquerque, NM 87109 (505) 823-1000

ENGINEER

PROJECT

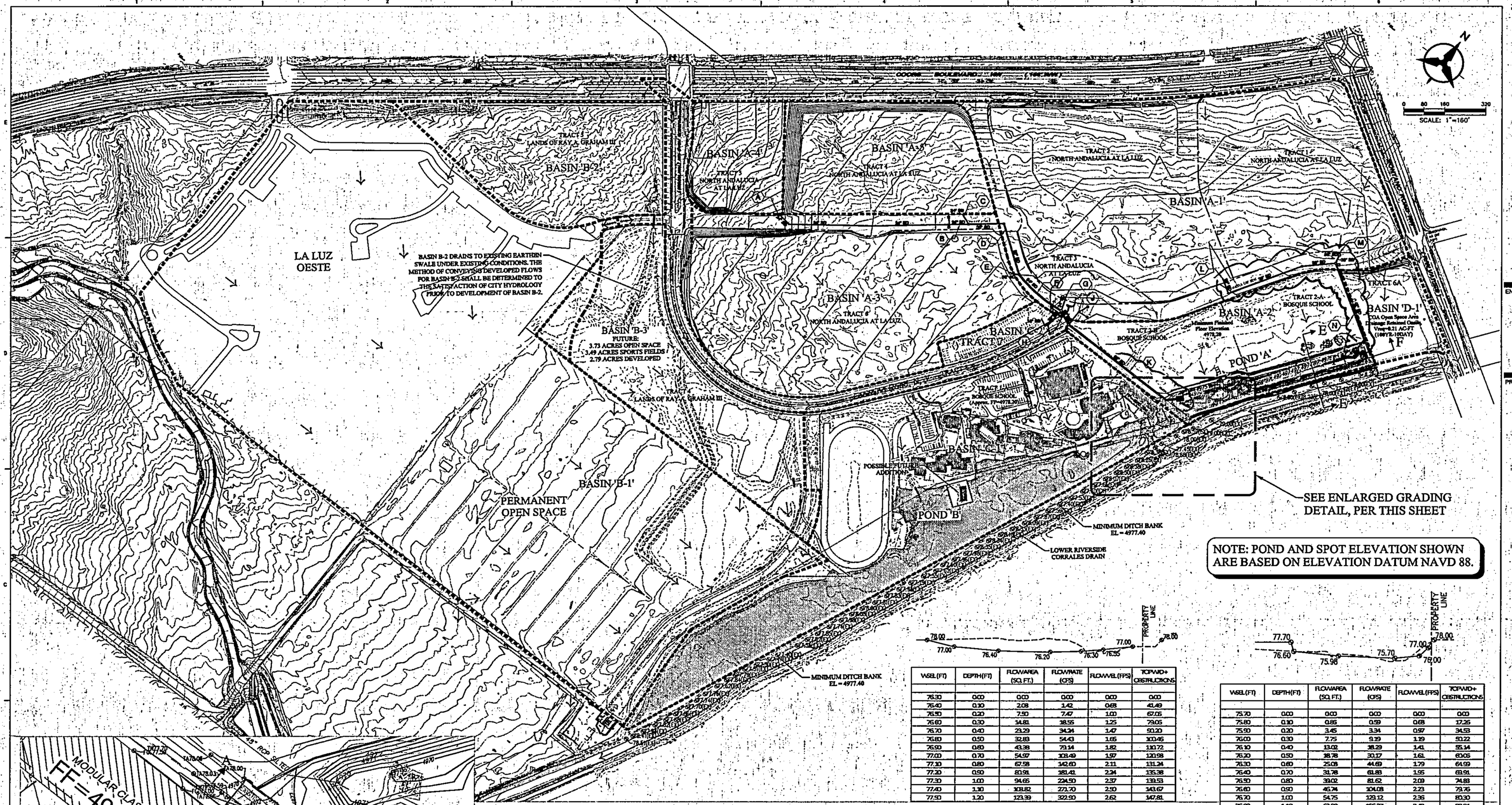
North Andalucia Drainage Pond
North Andalucia at La Luz
Albuquerque, New Mexico

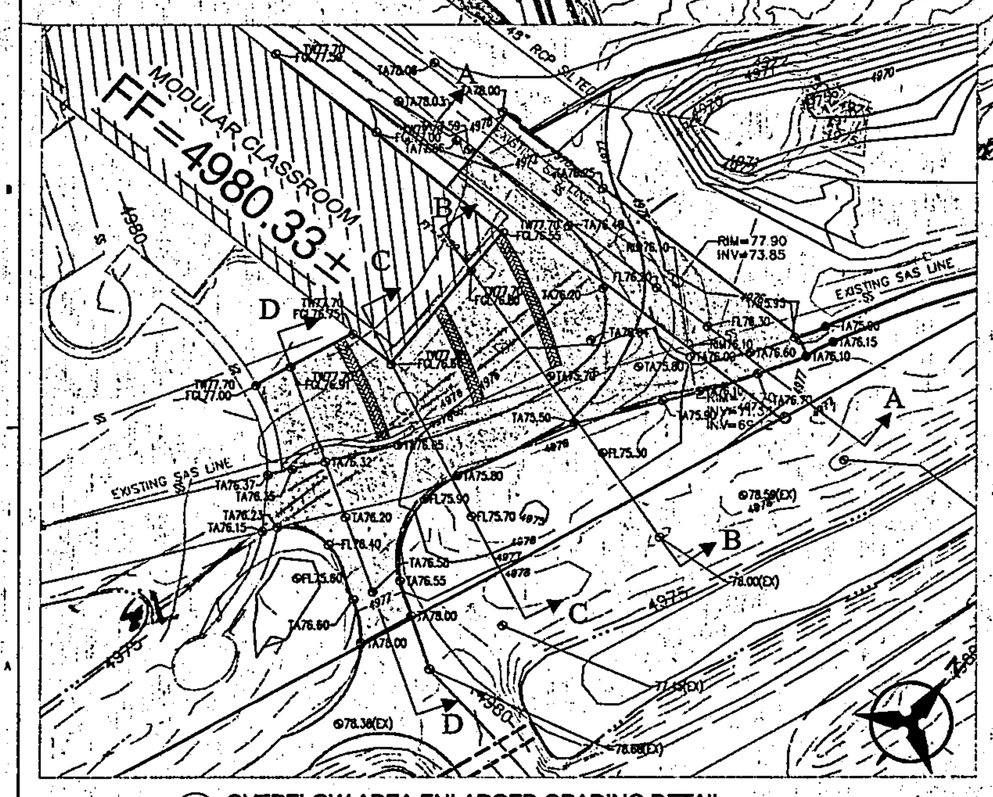
REVISIONS

DRAWN BY	BHW
REVIEWED BY	JLM
DATE	2/18/2013
PROJECT NO.	20120222
DRAWING NAME	OVERFLOW AREA GRADING PLAN

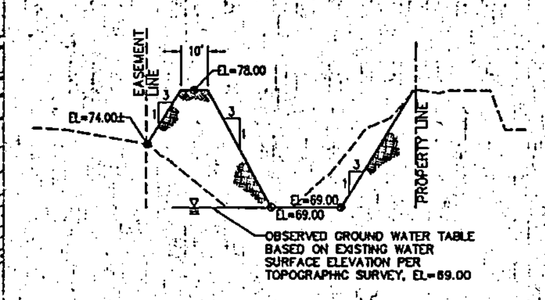
SHEET NO.
2 of 2
OF

P:\20120222\CDP\Plans\General\Pond A\20120222_POND A GP02.dwg
February 18, 2013 – 2:06pm
Grading Plan

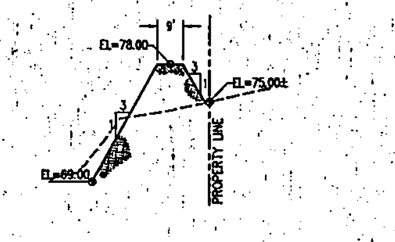




E OVERFLOW AREA ENLARGED GRADING DETAIL
SCALE: 1" = 30'



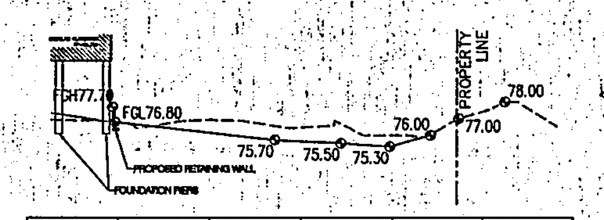
A1 POND 'A' SECTION E-E
N.T.S.



A3 POND 'A' SECTION F-F
N.T.S.

WSEL(FT)	DEPTH(FT)	FLOWAREA (SQ.FT.)	FLOWRATE (CFS)	FLOWVEL(FPS)	TOPWID+ OBSTRUCTIONS
76.30	0.00	0.00	0.00	0.00	0.00
76.40	0.10	2.08	1.42	0.68	45.49
76.50	0.20	7.50	7.42	1.00	67.05
76.60	0.30	14.81	18.55	1.25	79.05
76.70	0.40	23.29	34.34	1.47	90.30
76.80	0.50	32.83	54.43	1.66	100.46
76.90	0.60	43.38	79.14	1.82	110.72
77.00	0.70	54.97	108.49	1.97	120.98
77.10	0.80	67.58	142.60	2.11	131.34
77.20	0.90	81.98	181.41	2.24	135.38
77.30	1.00	94.65	224.50	2.37	139.51
77.40	1.10	108.82	273.70	2.50	143.67
77.50	1.20	123.39	322.90	2.62	147.81

A WEIR SECTION A-A
N.T.S.

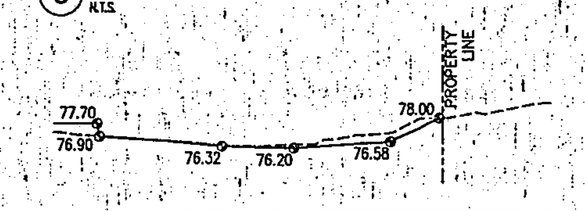


WSEL(FT)	DEPTH(FT)	FLOWAREA (SQ.FT.)	FLOWRATE (CFS)	FLOWVEL(FPS)	TOPWID+ OBSTRUCTIONS
75.30	0.00	0.00	0.00	0.00	0.00
75.40	0.10	0.45	0.32	0.68	8.90
75.50	0.20	1.78	1.72	0.97	17.81
75.60	0.30	4.05	4.77	1.18	27.63
75.70	0.40	7.31	9.91	1.36	37.45
75.80	0.50	11.37	17.37	1.53	43.73
75.90	0.60	16.05	27.14	1.69	49.99
76.00	0.70	21.37	39.29	1.84	55.26
76.10	0.80	27.26	53.50	1.98	61.65
76.20	0.90	33.69	71.01	2.11	67.08
76.30	1.00	40.67	90.67	2.23	72.41
76.40	1.10	48.18	112.95	2.35	77.80
76.50	1.20	56.23	137.95	2.45	83.18
76.60	1.30	64.81	165.73	2.55	88.56
76.70	1.40	73.94	195.37	2.65	93.95
76.80	1.50	83.60	226.94	2.75	99.33
76.90	1.60	93.58	265.36	2.85	100.17
77.00	1.70	103.64	305.31	2.95	101.01

B WEIR SECTION B-B
N.T.S.

WSEL(FT)	DEPTH(FT)	FLOWAREA (SQ.FT.)	FLOWRATE (CFS)	FLOWVEL(FPS)	TOPWID+ OBSTRUCTIONS
75.70	0.00	0.00	0.00	0.00	0.00
75.80	0.10	0.86	0.59	0.68	17.26
75.90	0.20	3.45	3.34	0.97	34.53
76.00	0.30	7.75	9.39	1.19	53.22
76.10	0.40	13.82	19.29	1.41	55.14
76.20	0.50	18.78	30.17	1.61	60.05
76.30	0.60	25.08	44.69	1.79	64.99
76.40	0.70	31.78	61.83	1.95	69.91
76.50	0.80	39.02	81.62	2.09	74.88
76.60	0.90	46.74	104.08	2.23	79.76
76.70	1.00	54.75	129.12	2.36	80.30
76.80	1.10	62.80	156.37	2.49	80.84
76.90	1.20	70.92	185.67	2.62	81.38
77.00	1.30	79.08	216.88	2.74	81.92
77.10	1.40	87.29	249.91	2.86	82.27
77.20	1.50	95.53	284.65	2.98	82.62
77.30	1.60	103.81	321.05	3.09	82.97

C WEIR SECTION C-C
N.T.S.



WSEL(FT)	DEPTH(FT)	FLOWAREA (SQ.FT.)	FLOWRATE (CFS)	FLOWVEL(FPS)	TOPWID+ OBSTRUCTIONS
75.20	0.00	0.00	0.00	0.00	0.00
75.30	0.10	1.29	0.88	0.68	25.74
75.40	0.20	4.76	4.73	1.00	41.70
75.50	0.30	9.60	11.69	1.24	55.22
75.60	0.40	15.79	22.65	1.44	67.49
75.70	0.50	22.50	37.05	1.62	74.78
75.80	0.60	30.74	54.92	1.79	82.07
75.90	0.70	39.32	75.25	1.94	89.35
77.00	0.80	48.30	100.89	2.09	90.38
77.10	0.90	57.39	128.36	2.24	91.40
77.20	1.00	65.58	158.40	2.38	92.42
77.30	1.10	73.88	190.84	2.52	93.44
77.40	1.20	85.27	225.58	2.65	94.46
77.50	1.30	94.77	262.51	2.77	95.48
77.60	1.40	104.36	301.57	2.89	96.49

D WEIR SECTION D-D
N.T.S.

P:\20120222\CDP\Drainage Evd Exhibits\20120222DP01.dwg
Tue, 19-Feb-2013 - 8:23:am, Plotted by: BORTEGA

Bohannan Huston
Courtyard I 7500 Jefferson St. NE
Albuquerque, NM 87109 (505) 823-1000

ENGINEER

PROJECT

NORTH ANDALUCIA DRAINAGE MASTER PLAN
SEC COORS AND MONTANO
ALBUQUERQUE
NEW MEXICO

DRAWN BY	BHW
REVIEWED BY	BJS
DATE	1/2013
PROJECT NO.	BHI.2012.0222
DRAWING NAME	DRAINAGE MASTER PLAN

SHEET NO.
C-002
2 OF 2