CITY OF ALBUQUERQUE

April 3, 2015

Bruce Stidworthy
Bohannan-Huston, Inc.
7500 Jefferson St. NE Courtyard 1
Albuquerque, NM 87109

RE: **Paseo del Norte Sports Complex, Tract A, Loop Industrial Park**
Grading and Drainage Plan
Engineer's Stamp Date 3-12-2015 (File: C17-D008)

Dear Mr. Stidworthy:

Based upon the information provided in your submittal received 3-09-15, the above referenced plan can be approved for a grading permit based on the rough grades shown on the plan, but it cannot be approved for Building Permit. Final grades still need to be submitted, reviewed, and approved, and the following comments need to be addressed prior to obtaining a building permit:

1) Provide a survey benchmark, and clearly show the property line and easements.

2) The comment letter from November 10, 2014 asks to show both an emergency overflow for Pond A and 1 foot of freeboard. These comments still have to be addressed.

3) Proposed elevations along the deceleration lane and along the railroad tracks need to be more legible. The waterblock needs to be more clearly defined at the access off of Paseo del Norte.

4) Keyed Note 2 appears to be calling out riprap blankets in the wrong location.

5) For all on-site proposed storm drains on the Grading and Drainage Plan, show the pipe flow that is being conveyed, the pipe size and slope, and the capacity calculations. Also, provide capacity calculations for all on-site sidewalk culverts, inlets, and weir.

6) Provide all invert elevations for beginning and end of all proposed storm drains. Call out pipe bends and manholes where the storm drain pipes change direction and provide invert elevations at these locations.

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

7) Show slope and capacity calculations for concrete ribbon channel. Provide detail of how the 24" CMP connects into the ribbon channel. Detail downstream end of ribbon channel along with the riprap shown on the plan.

8) Provide key spot elevations for construction of the parking lot. Also provide more spot elevations along the building on south and west side.

9) Provide full AHYMO input and output files in addition to the summary provided. Show the first flush calculations on the drainage management plan.

10) Provide off-site basin map that is discharging to the on-site. Address off-site flow that is discharging to the site from the site to the east just north of the railroad tracks.

11) Provide a way to capture flow along the east side of the building and then discharge it to either the new storm to the north or to the south side of the building.

If you have any questions, you can contact me at 924-3924.

Sincerely,

Jeanne Wolfenbarger, P.E.
Senior Engineer, Planning Dept.
Development Review Services

Orig: Drainage file
c.pdf Addressee via Email

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Paseo Del Norte Sports Complex Building Permit #: _____ City Drainage #: C17-D008

DRB#: 1004205 EPC#: _____ Work Order#: _____

Legal Description: Lot 1 Loop Industrial Park

City Address: North of PDN between North Diversion Channel and Washington Street

Engineering Firm: Bohannan Huston, Inc. Contact: Bruce Stidworthy or Matt Satches

Address: 7500 Jefferson St NE Courtyard 1

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

Owner: Loop Industrial, LLC Contact: Scott Grady

Address: P.O. Box 1443 Corrales NM, 87048

Phone#: 505-233-0413 Fax#: _____ E-mail: RVSG7@rayleehomes.com

Architect: _____ Contact: _____

Address: _____

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

Surveyor: _____ Contact: _____

Address: _____

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

Contractor: _____ Contact: _____

Address: _____

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

TYPE OF SUBMITTAL:

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

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

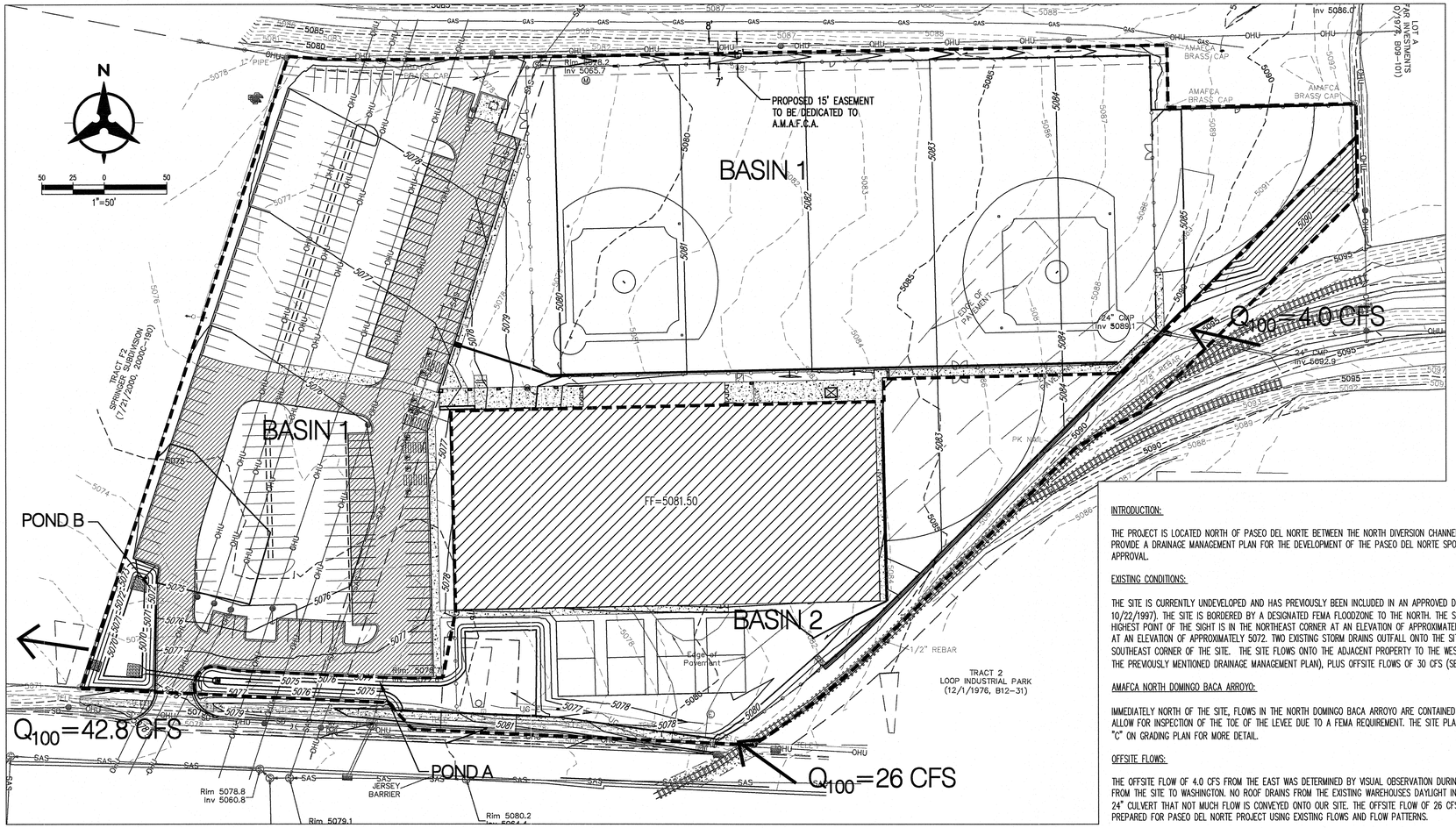
- ____ SIA/FINANCIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D APPROVAL
- ____ S. DEV. FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY (PERM)
- ____ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ____ FOUNDATION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

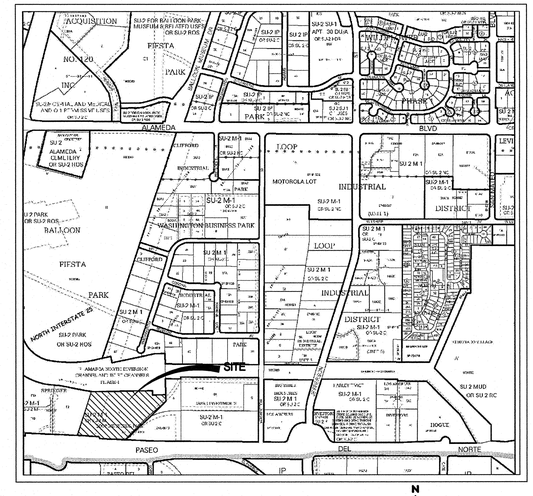
WAS A PRE-DESIGN CONFERENCE ATTENDED: ____ Yes X No ____ Copy Provided

DATE SUBMITTED: March 12, 2015 By: Bruce Stidworthy

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

1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report**: Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development





ZONE ATLAS PAGE C-17
NTS

N

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4) – Ver. S4.01a, Rel: 01a RUN DATE (MON/DAY/YR) =03/11/2015
INPUT FILE = P:\20150146\CDP\Hydro\Building Permit\100yr-bp.hym USER NO.= AHYMO_Temp_User:20122010

COMMAND	FROM TO HYDROGRAPH IDENTIFICATION NO.	ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	TIME TO RUNOFF (INCHES)	PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
*S AHYMO FILE FOR ALBUQUERQUE SPORTS COMPLEX - ALBUQUERQUE,NM , BH PROJ # 2015									
*S 100 YEAR - 6 HOUR STORM									
*S									
*S INPUT FILE -- P:\20150146\CDP\HYDRO\AHYMO\100YR-BP.HYM									
*S OUTPUT FILE -- P:\20150146\CDP\HYDRO\AHYMO\100YR-BP.OUT									
START							TIME=	0.00	
LOCATION	ALBUQUERQUE								
RAINFALL TYPE= 1 NOAA 14							RAIN6=	2.350	
*S ----------									
S COMPUTE BASIN DEVELOPED CONDITIONS									
*S ----------									
*S									
*S BASIN 1									
COMPUTE NM HYD	B1 - 1		0.00993	23.11	0.717	1.35395	1.500	3.636	PER IMP= 16.00
*S BASIN 2									
COMPUTE NM HYD	B2 - 2		0.00513	13.51	0.454	1.65814	1.500	4.115	PER IMP= 50.00
*S OFFSITE SOUTH									
COMPUTE NM HYD	B3 - 3		0.00859	26.08	0.944	2.06074	1.500	4.743	PER IMP= 95.00
*S OFFSITE EAST									
COMPUTE NM HYD	B4 - 4		0.00184	4.02	0.119	1.21081	1.500	3.417	PER IMP= 0.00
*S ADDITION OF OFFSITE SOUTH TO BASIN 2									
ADD HYD	SOUTHB2 3& 2	20	0.01372	39.59	1.398	1.91015	1.500	4.508	
*S ADDITION OF OFFSITE EAST TO BASIN 2									
ADD HYD	EASTB2 4&20	21	0.01556	43.61	1.517	1.82745	1.500	4.379	
*S ROUTE BASIN 2 & OFFSITE EAST & SOUTH TO EAST POND. OUTFLOW BASED ON 30" NYLOP									
ROUTE RESERVOIR	PONDA 21	10	0.01556	23.51	1.677	2.02043	1.650	2.361	AC-FT= 0.503
*S ADDITION OF POND 1 TO BASIN 1.									
ADD HYD	PAB1 1&10	22	0.02549	44.08	2.394	1.76082	1.550	2.702	
*S ROUTE BASIN 1 TO WEST POND. OUTFLOW BASED ON WEIR CALCULATOR									
ROUTE RESERVOIR	PONDB 22	11	0.02549	42.84	2.393	1.76050	1.600	2.626	AC-FT= 0.159
FINISH									

AHYMO SUMMARY DATA TABLE

LEGEND

- PROPERTY LINE
- 5301 EXISTING CONTOURS
- S=2.0% PROPOSED DIRECTION OF FLOW
- WATER BLOCK
- PROPOSED RETAINING WALL
- 5305 PROPOSED INDEX CONTOURS
- PROPOSED INTER CONTOURS
- PROPOSED CURB & GUTTER
- EASEMENT
- PROPOSED LIGHTING
- SD PROPOSED STORM DRAIN LINE

PASEO DEL NORTE SPORTSPLEX
Developed 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
PROPOSED BASINS						
BASIN 1	276626	6.35	0.0%	0.0%	84.0%	16.0%
BASIN 2	128788	2.96	0.0%	0.0%	50.0%	50.0%
TOTAL	**405414**	**9.31**	-	-	-	-

INTRODUCTION:

THE PROJECT IS LOCATED NORTH OF PASEO DEL NORTE BETWEEN THE NORTH DIVERSION CHANNEL AND WASHINGTON ST. THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE A DRAINAGE MANAGEMENT PLAN FOR THE DEVELOPMENT OF THE PASEO DEL NORTE SPORTS COMPLEX AND REQUEST DRB SITE PLAN FOR BUILDING PERMIT APPROVAL.

EXISTING CONDITIONS:

THE SITE IS CURRENTLY UNDEVELOPED AND HAS PREVIOUSLY BEEN INCLUDED IN AN APPROVED DRAINAGE PLAN (C-17 / D019 OFFICE WAREHOUSE DATED 10/22/1997). THE SITE IS BORDERED BY A DESIGNATED FEMA FLOODZONE TO THE NORTH. THE SITE CURRENTLY DRAINS FROM NORTHEAST TO THE SOUTHWEST. THE HIGHEST POINT OF THE SIGHT IS IN THE NORTHEAST CORNER AT AN ELEVATION OF APPROXIMATELY 5095. THE LOW POINT OF THE SITE IS IN THE SOUTHWEST CORNER AT AN ELEVATION OF APPROXIMATELY 5072. TWO EXISTING STORM DRAINS OUTFALL ONTO THE SITE NEAR THE NORTHEAST CORNER OF THE SITE AND IN THE SOUTHEAST CORNER OF THE SITE. THE SITE FLOWS ONTO THE ADJACENT PROPERTY TO THE WEST AT AN UNDEVELOPED FLOW OF APPROXIMATELY 16.01 CFS (PER THE PREVIOUSLY MENTIONED DRAINAGE MANAGEMENT PLAN), PLUS OFFSITE FLOWS OF 30 CFS (SEE "OFFSITE FLOWS" BELOW) FOR A TOTAL OF 46 CFS.

AMAFCA NORTH DOMINGO BACA ARROYO:

IMMEDIATELY NORTH OF THE SITE, FLOWS IN THE NORTH DOMINGO BACA ARROYO ARE CONTAINED VIA A LEVEE. AMAFCA HAS REQUESTED A 15' ACCESS EASEMENT TO ALLOW FOR INSPECTION OF THE TOE OF THE LEVEE DUE TO A FEMA REQUIREMENT. THE SITE PLAN HAS BEEN MODIFIED TO ACCOMMODATE THE REQUEST. SEE SECTION "C" ON GRADING PLAN FOR MORE DETAIL.

OFFSITE FLOWS:

THE OFFSITE FLOW OF 4.0 CFS FROM THE EAST WAS DETERMINED BY VISUAL OBSERVATION DURING SITE VISITS. THE BASIN RUNS BETWEEN THE RAILROAD TRACKS FROM THE SITE TO WASHINGTON. NO ROOF DRAINS FROM THE EXISTING WAREHOUSES DAYLIGHT INTO THE BASIN. IT IS CLEAR FROM THE EXISTING CONDITION OF THE 24" CULVERT THAT NOT MUCH FLOW IS CONVEYED ONTO OUR SITE. THE OFFSITE FLOW OF 26 CFS FROM THE SOUTH WAS DETERMINED BY THE DRAINAGE REPORT PREPARED FOR PASEO DEL NORTE PROJECT USING EXISTING FLOWS AND FLOW PATTERNS.

METHODOLOGY:

THE HYDROLOGIC ANALYSIS PROVIDED WITH THIS DRAINAGE MANAGEMENT PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 22.2 OF THE DPM. THE SITE IS LOCATED WEST OF THE RIO GRANDE WITHIN PRECIPITATION ZONE 2. ALTHOUGH THE SITE IS SMALL ENOUGH TO USE THE "SMALL WATERSHEDS" PROCEDURE GIVEN IN SECTION A.6, WE ELECTED TO USE AHYMO IN ORDER TO MODEL THE STORMWATER FLOWS THROUGH THE TWO PROPOSED PONDS ON THE SITE. LAND TREATMENT PERCENTAGES WERE CALCULATED BASED ON THE ACTUAL CONDITIONS IN EACH ONSITE BASIN AND ARE SUMMARIZED IN THE "AHYMO SUMMARY DATA TABLE" AND "BASIN DATA TABLE" THIS SHEET. PIPE SIZING BETWEEN POND "A" AND POND "B" WAS BASED ON THE ORIFICE EQUATION. THE WEIR OUTLET FOR POND "B" WAS BASED ON THE WEIR EQUATION.

PROPOSED CONDITIONS:

IT WAS DETERMINED THAT THE MAXIMUM ALLOWABLE DISCHARGE FROM OUR SITE IS APPROXIMATELY 46.0 CFS. THIS IS DERIVED FROM EXISTING ONSITE CONDITIONS PLUS THE ADDITIONAL OFFSITE FLOWS. THE OFFSITE FLOWS WILL BE CONVEYED THROUGH OUR SITE. BASIN 2 ALONG WITH THE OFFSITE FLOWS ARE CONVEYED TO POND "A" VIA A SWALE ALONG THE SOUTHERN PORTION OF THE SITE. POND "A" ULTIMATELY OUTFALLS INTO A 24" PIPE WHERE IT IS ROUTED TO POND "B". EMERGENCY OVERFLOW FROM POND "A" IS TO THE NORTH OVER THE CURB INTO THE PAVED PARKING LOT. THE LENGTH OF OVERFLOW WEIR IS GREATER THAN 100' AND THE OVERFLOW CAPACITY FAR EXCEEDS THE PEAK INFLOW TO THE POND. POND "B" MITIGATES THE DISCHARGE FROM BASIN 1 AND POND "A". A WEIR ON THE WEST SIDE POND "B" OUTFALLS TO THE ADJACENT PROPERTY AT A MAXIMUM DISCHARGE RATE OF 42.8 CFS WHICH IS LESS THAN EXISTING CONDITIONS. THE FIRST FLUSH DEVELOPED BY THE IMPERVIOUS AREA IS RETAINED IN POND "B". THE EMERGENCY OVERFLOW CAPACITY OF THE POND "B" WEIR IS APPROXIMATELY 57.7 CFS WHICH EXCEEDS THE PEAK INFLOW. ONCE THE SITE OUTFALLS ONTO THE ADJACENT PROPERTY, IT WILL CONTINUE ON ITS HISTORIC FLOW PATH.

POND "A":
BOTTOM OF POND: 5074.5 FT
TOP OF POND: 77.85
MAXIMUM WATER SURFACE ELEVATION: 5077.41 FT

POND "B"
BOTTOM OF POND: 5070 FT
TOP OF POND: 5073.5
MAXIMUM WATER SURFACE ELEVATION: 5072.59 FT

CONCLUSION:

THE PEAK DISCHARGE FROM OUR SITE IS 42.8 CFS WHICH IS LESS THAN THE ALLOWABLE DISCHARGE OF 46.0 CFS. THEREFORE, WE ARE IN CONFORMANCE WITH THE CITY OF ALBUQUERQUE HYDROLOGY REQUIREMENTS AND REQUEST ROUGH GRADING AND BUILDING PERMIT APPROVAL.

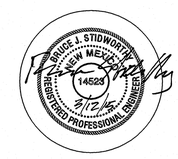
Bohannan Huston
www.bhinc.com 800.877.5332

SPORTSPLEX

tract A,
loop industrial park
Albuquerque, New Mexico

BH Staff General
413 seconds tsw
albuquerquenm
87102
5052460870
slagleherr.com

drainage management plan



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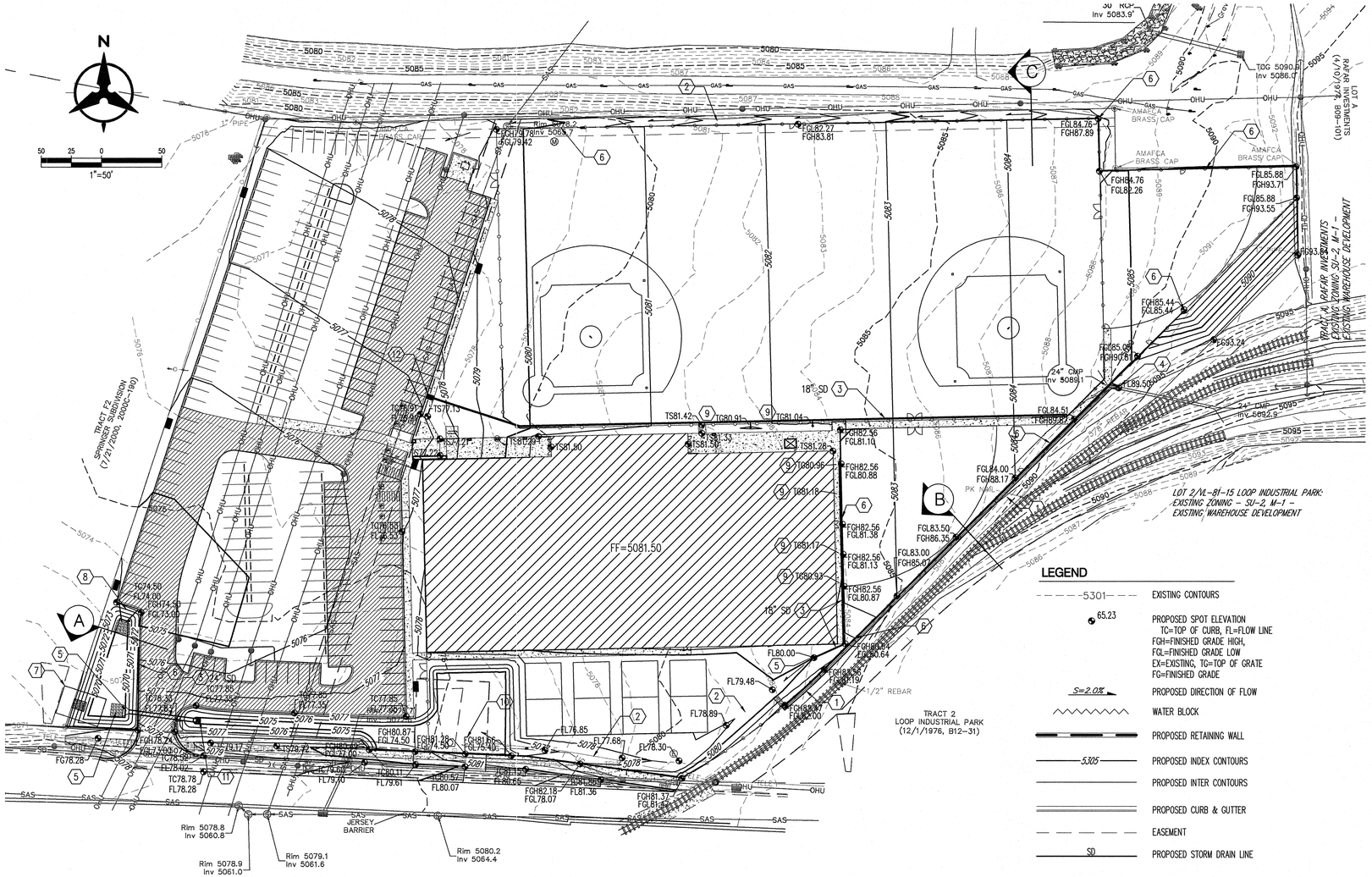
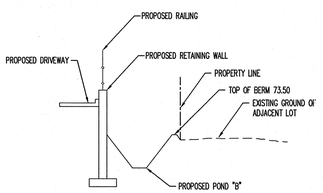


LEGEND

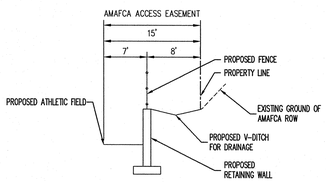
-5301-	EXISTING CONTOURS
65.23	PROPOSED SPOT ELEVATION TC=TOP OF CURB, FL=FLOW LINE FGH=FINISHED GRADE HIGH, FGL=FINISHED GRADE LOW EX=EXISTING, TG=TOP OF GRATE FG=FINISHED GRADE
S=2.0%	PROPOSED DIRECTION OF FLOW
	WATER BLOCK
	PROPOSED RETAINING WALL
5305	PROPOSED INDEX CONTOURS
	PROPOSED INTER CONTOURS
	PROPOSED CURB & GUTTER
	EASEMENT
SD	PROPOSED STORM DRAIN LINE

○ GRADING KEYED NOTES

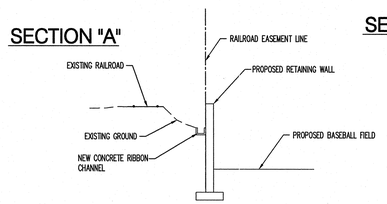
1. NEW CONCRETE CHANNEL PER DETAIL THIS SHEET.
2. NEW RIP RAP BLANKET PER DETAIL THIS SHEET.
3. NEW STORM DRAIN, SEE PLAN FOR SIZE AND SLOPE.
4. DAYLIGHT EXISTING STORM DRAIN INTO NEW CONCRETE RIBBON CHANNEL.
5. CONSTRUCT CMP STORM DRAIN END SECTION SEE PLAN FOR SIZE.
6. RETAINING WALL, SEE STRUCTURAL SHEETS FOR DETAILS.
7. CONSTRUCT NEW POND WEIR PER DETAIL THIS SHEET.
8. NEW 16' WIDE CONCRETE RUNDOWN
9. INSTALL NEW 12" NYLOPLAST STORM DRAIN INLET WITH PEDESTRIAN RATED GRATE OR APPROVED EQUAL.
10. EXISTING BILLBOARD TO REMAIN. MATCH EXISTING GRADE WITHIN 5' OF BILLBOARD FOUNDATION.
11. NEW 30" NYLOPLAST INLET OR APPROVED EQUAL.
12. CONSTRUCT NEW 24" SIDEWALK CULVERT PER COA STD DWG. 2236.



SECTION "A"



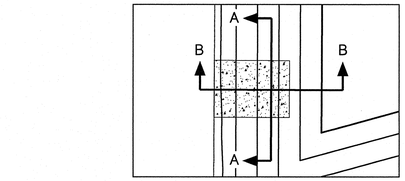
SECTION "C"

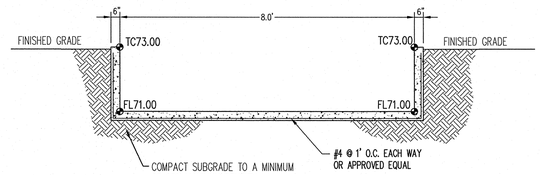


SECTION "B"

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". 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.





SECTION "A-A"
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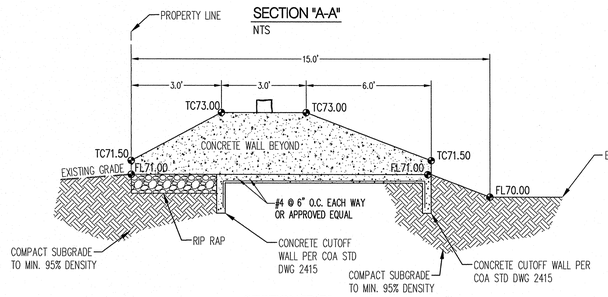

SECTION "B-B"
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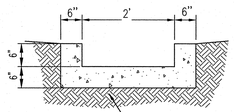
WEIR DETAIL



CONCRETE RIBBON CHANNEL
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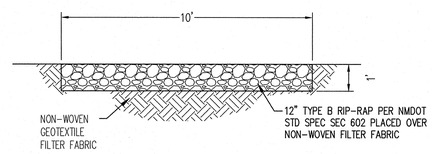

RIP-RAP BLANKET DETAIL
N.T.S.

Bohannan Huston
www.bhinc.com 800.877.5332

SPORTSPLEX

tract A,
loop industrial park
Albuquerque, New Mexico

Bhdi
Engineering
4 1 3 s e c o n d s t s w
a l b u q u e r q u e n m
8 7 1 0 2
5 0 5 2 4 6 0 8 7 0
s l a g l e h e r r . c o m

grading and drainage plan

revisions

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sheet
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