



June 2, 2015

Bruce Stidworthy
Bohannon-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 5-20-2015 (File: C17-D008)**

Dear Mr. Stidworthy:

Based upon the information provided in your submittal received 5-12-15, the above referenced plan can be approved for a building permit until the following comments are addressed:

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

- 1) On the AHYMO output for the pond routing, show steps in 10-minute increments in lieu of 1-hour increments, and cut off the run after about 10 hours once the vast majority of the outflow has discharged from the pond. Also, provide an additional table showing how the outflow versus the elevations were derived for each of the ponds within the AHYMO input. (If the top of grate were set at 75.00 for the upstream pond, the pond would not have an outflow rate of 3.0 cfs at an elevation of 75.00.)
- 2) Make sure that the water surface elevation within the AHYMO run matches what is shown on Sheet C-001, and also provide the required and provided storage volumes along with the WSEL information. (There is a minor discrepancy of 77.28 in the AHYMO versus 77.41 on the plans for Pond "A".)
- 3) On Sheet C-100, show more spot elevations and a "top of pond boundary" defining the top of the Pond "A" if it is at an elevation of 77.85. It is not clear that the top of the pond is set at this top elevation within the grading plan itself. Provide similar information for the other pond.
- 4) For SD-1, SD-2, and SD-3 on Sheet C002, the actual flow is shown to exceed capacity. Revise as necessary.

5) For the Basin Data Table, add a column showing the 100-year flow for each of the basins. (This will make it easier to relate how the actual flow is derived for the capacity calculations.)

6) The storm drain along the east side of the building seems insufficient to handle runoff from Basins B2-A, B2-B, B2-C, and B2-D in addition to possible runoff from the building. Double-check, and also show all roof drain locations for building.

7) Provide concrete rundown details for rundowns R1 and R2. Also, make reference to them on Sheet C-001 by the same designation. (You have them called out as "RD-1", "RD-2", etc.)

8) For the each of the riprap details, call out sizing of riprap stones.

9) Provide capacity calculations for the on-site sidewalk culverts.

10) For the "Inlet Table", provide the parameters used to compute capacities whether it was based on the weir equation or the orifice equation.

11) Label existing storm drain information for the off-site flows of 26 cfs and 4 cfs including pipe size, slopes, and invert information.

12) The swale designated SW-2 will allow a lot of infiltration immediately adjacent to the building. It is recommended to change this from a riprap swale to a concrete swale or storm drain.

13) Provide another spot elevation on the west side of the waterblock at the entrance to the site at the curb location near the corner of the retaining wall. Also, show the existing curb elevations that the accessway is tying into.

14) Provide more grading information south of the new building to show how the courts are draining.

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 Addresssee via Email



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: _____ Building Permit #: _____ City Drainage #: _____

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

Legal Description: _____

City Address: _____

Engineering Firm: _____ Contact: _____

Address: _____

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

Owner: _____ Contact: _____

Address: _____

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

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
- _____ 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
- _____ BUILDING PERMIT APPROVAL
- _____ GRADING PERMIT APPROVAL
- _____ PAVING PERMIT APPROVAL
- _____ WORK ORDER APPROVAL
- _____ GRADING CERTIFICATION
- _____ SO-19 APPROVAL
- _____ ESC PERMIT APPROVAL
- _____ ESC CERT. ACCEPTANCE
- _____ OTHER (SPECIFY) _____

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

DATE SUBMITTED: _____ By: _____

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

May 20, 2015

Ms. Jeanne Wolfenbarger, PE
Senior Engineer
City of Albuquerque
600 2nd St NW
Albuquerque, NM 87102

Re: Paseo Del Norte Sportsplex, Hydrology Re-Submittal

Dear Ms. Wolfenbarger:

Enclosed for your review is a copy of the revised grading plan and drainage management plan. The revisions are based on comments received in your letter dated April 3, 2015. Below is a brief description of how the comments were addressed:

1. A survey benchmark has been provided on the Grading Plan (C-100). The property line and easements are shown more clearly. Typical property line cross-sections are shown on the Grading Plan Detail Sheet (C-102) as well.
2. Emergency overflow for Pond "A" is to the North over the curb into the paved parking lot. Associated calculations for the overflow weir are shown on the Drainage Management Plan (C-001 & C-002). If Pond "A" overflows, it does not threaten other properties and will simply flow to Pond "B." The overflow capacity for this pond exceeds the peak inflow to Pond "A"; therefore, the one foot of freeboard is not necessary.

Pond "B" was adjusted to include one foot of freeboard. Calculations and associated AHYMO model can be found on the Drainage Management Plan (C-002).

3. The waterblock at the property line is now shown with more clarity. Additional details for the driveway grading have been provided as well. The Deceleration Lane runoff will flow along the proposed curb and gutter and continue west along the Paseo Del Norte Frontage Road. Spot elevations have been made more legible and an additional cross-section along the southern property line has been added to the Grading Plan Detail Sheet (C-101) for clarity.
4. RipRap details on sheet C-102 and keyed notes on C-101 have been updated to reflect different scenarios around the site.
5. Storm drainpipe sizing and slopes have been provided on the Drainage Management Plan (C-001 & C-002). All basin analysis and associated calculations (i.e. inlet, pipe, weir, rundown, and culverts) are shown on the Drainage Management Plan (C-001 & C-002).
6. Invert elevations are now provided throughout all storm drainpipe networks.

Engineering ▲

Spatial Data ▲

Advanced Technologies ▲

7. The concrete ribbon channel connection point is detailed on the Grading Plan Detail Sheet (C-102). All associated calculations are on the Drainage Management Plan (C-002).
8. Spot elevations have been included for more clarity in the parking lot and along the south and west sides of the building.
9. AHYMO input and output files are attached to this submittal. First Flush calculations are provided on the Drainage Management Plan (C-001).
10. Offsite drainage basin information has been provided and is described below:
 - a. An offsite basin map showing the Eastern Offsite Basin is shown on sheet C-002. The Southern Offsite Basin flow was determined from the "I-25 / Paseo Del Norte Interchange Reconstruction Design Build Project" Drainage Report dated December 2014; therefore, a basin map was not provided.
 - b. The runoff just south of the North Diversion Channel will ultimately outfall to the inlet just south of the AMAFCA North Diversion Channel. This inlet is now shown on the Drainage Management Plan (C-001).
11. The runoff along the east side of the building will be conveyed via a storm drain system that ultimately outfalls to Pond "A." Additional details and calculations have been provided on the Grading Plan (C-100) and Drainage Management Plan (C-001 & C-002).

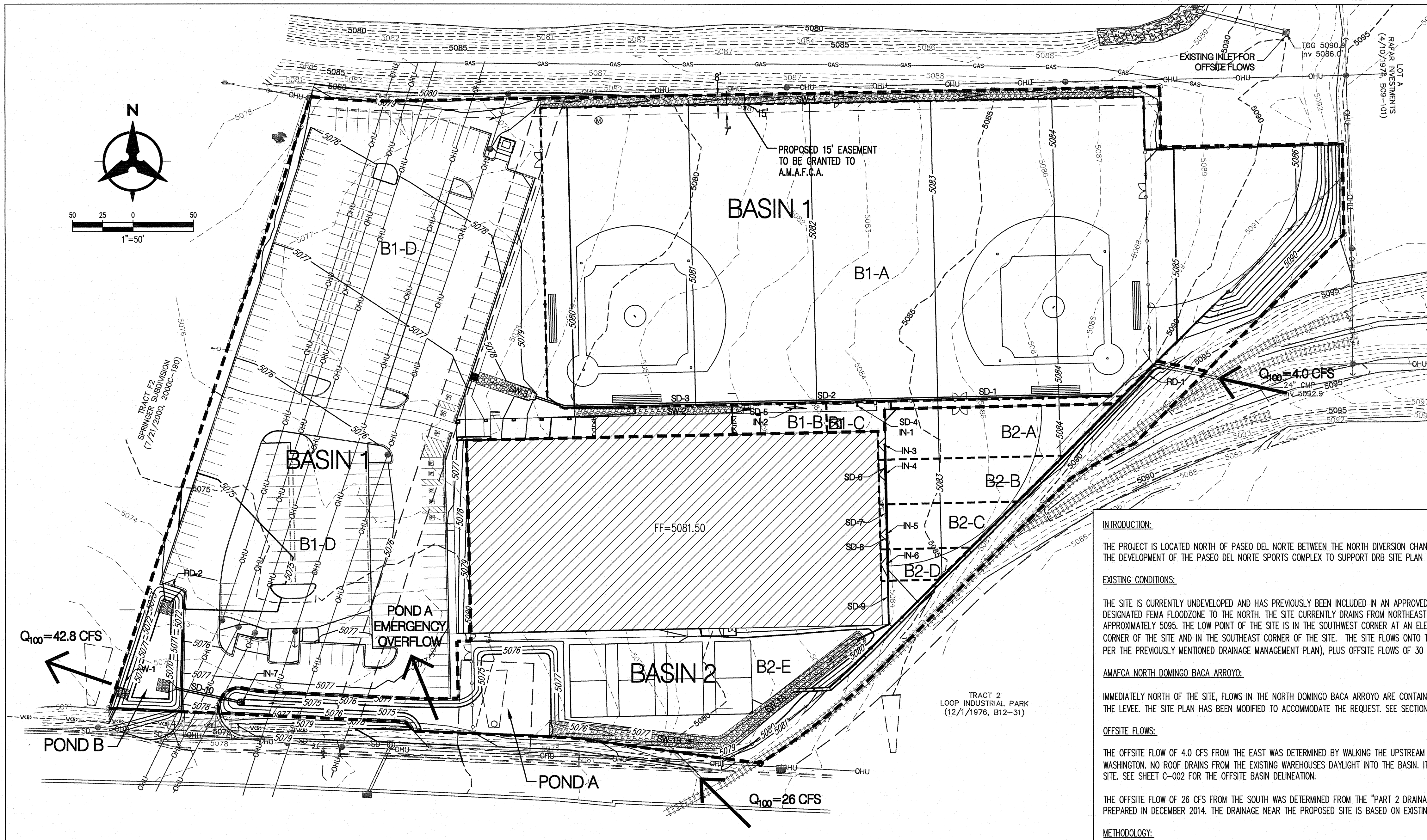
With this resubmittal, we are requesting Hydrology Building Permit Approval. If you have any questions or require further information, please feel free to contact me.

Sincerely,



Matthew Satches, EI
Engineer Intern
Community Development & Planning

MHS/kp
Enclosures



- LEGEND**
- PROPERTY LINE
 - EXISTING CONTOURS
 - PROPOSED DIRECTION OF FLOW
 - WATER BLOCK
 - PROPOSED RETAINING WALL
 - PROPOSED INDEX CONTOURS
 - PROPOSED INTER CONTOURS
 - PROPOSED CURB & GUTTER
 - EASEMENT
 - BASIN BOUNDARY
 - PROPOSED STORM DRAIN LINE

INTRODUCTION:

THE PROJECT IS LOCATED NORTH OF PASEO DEL NORTE BETWEEN THE NORTH DIVERSION CHANNEL AND WASHINGTON ST. THE PURPOSE OF THIS SUBMITAL IS TO PROVIDE A DRAINAGE MANAGEMENT PLAN FOR THE DEVELOPMENT OF THE PASEO DEL NORTE SPORTS COMPLEX TO SUPPORT DRB SITE PLAN FOR BUILDING PERMIT APPROVAL AND FINAL 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 SITE IS IN THE NORTHEAST CORNER AT AN ELEVATION OF APPROXIMATELY 5085. 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 SOUTHWEST CORNER OF THE SITE. THE SITE FLOWS ONTO THE ADJACENT PROPERTY TO THE WEST AT AN UNDEVELOPED FLOW OF APPROXIMATELY 16.01 CFS (ONSITE FLOW 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. 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 WALKING THE UPSTREAM AREA TO IDENTIFY THE DRAINAGE BASIN. 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. SEE SHEET C-002 FOR THE OFFSITE BASIN DELINEATION.

THE OFFSITE FLOW OF 26 CFS FROM THE SOUTH WAS DETERMINED FROM THE "PART 2 DRAINAGE REPORT FOR THE I-25 / PASEO DEL NORTE INTERCHANGE RECONSTRUCTION DESIGN BUILD PROJECT" PREPARED IN DECEMBER 2014. THE DRAINAGE NEAR THE PROPOSED SITE IS BASED ON 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" SHEET C-002. 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.

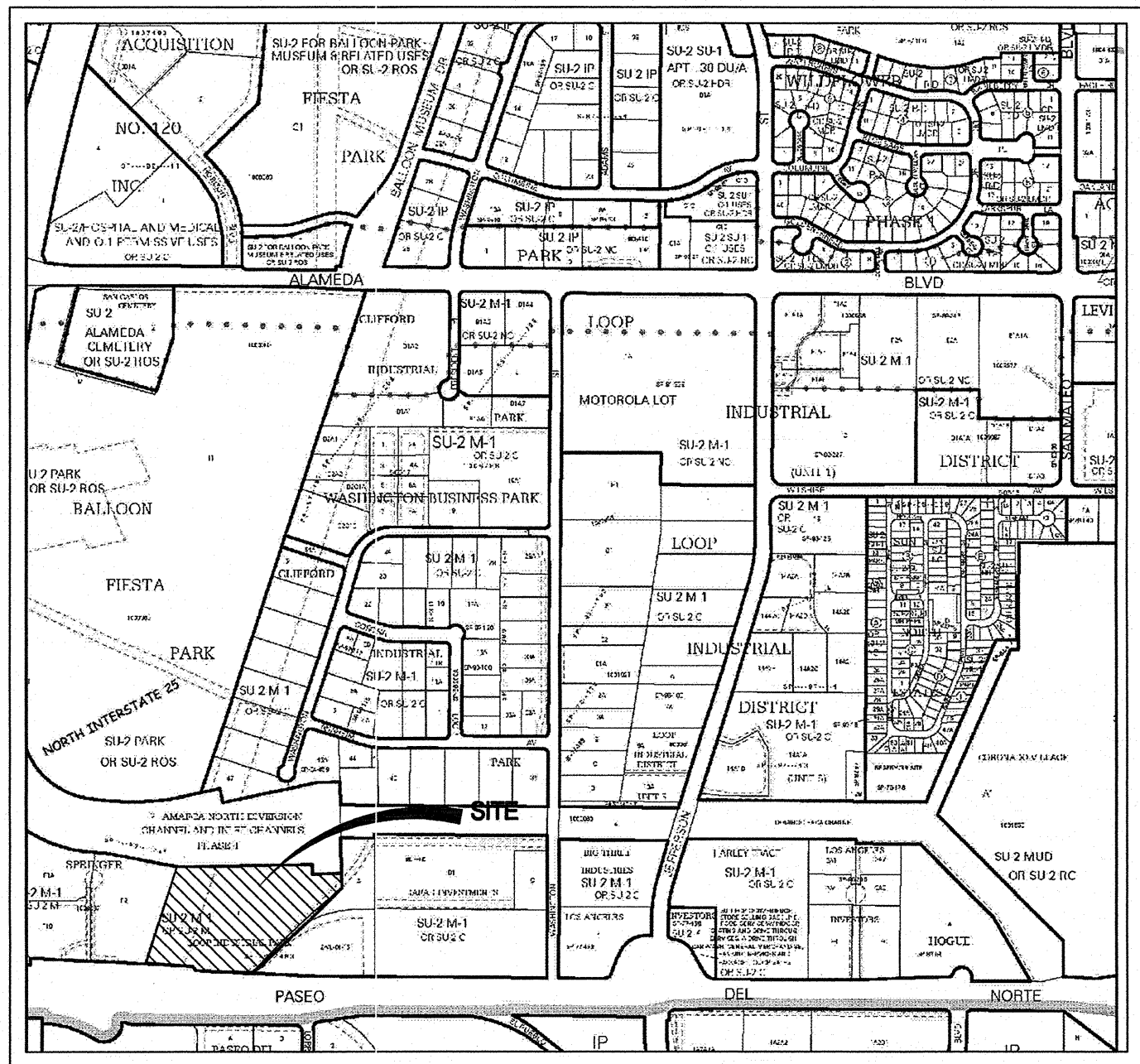
POND "A":
BOTTOM OF POND: 5074.5 FT
TOP OF POND: 5077.85
MAXIMUM WATER SURFACE ELEVATION: 5077.41 FT

POND "B":
BOTTOM OF POND: 5070 FT
TOP OF POND: 5073.6
MAXIMUM WATER SURFACE ELEVATION: 5072.59 FT

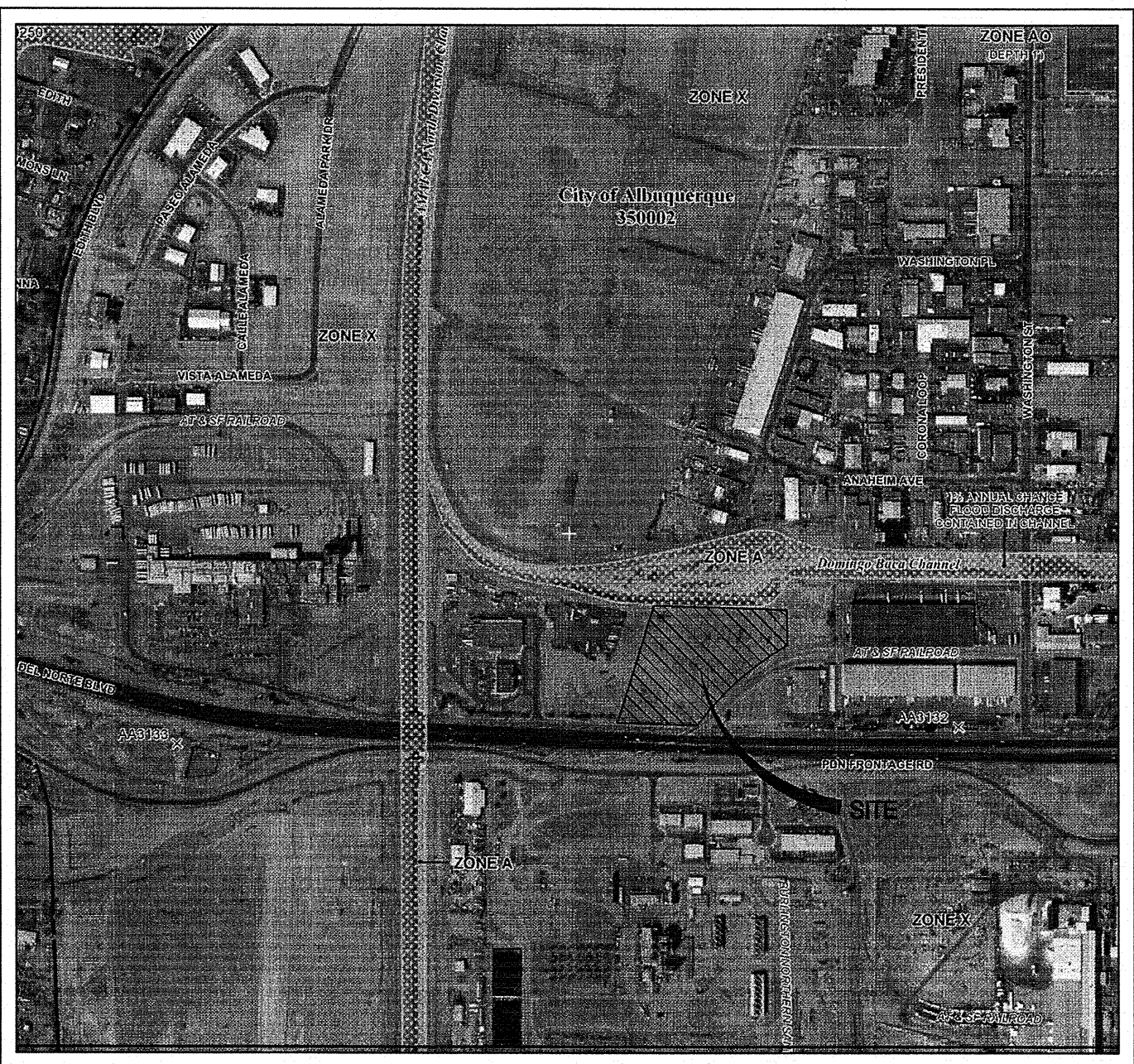
FIRST FLUSH
IMPERVIOUS AREA = 110,794 SF
REQUIRED VOLUME = 4,062 CF
PROVIDED VOLUME (POND "A") = 2,554 CF
PROVIDED VOLUME (POND "B") = 1,849 CF
TOTAL PROVIDED VOLUME = 4,403 CF

CONCLUSION:

THE PEAK DISCHARGE FROM OUR SITE IS 42.8 CFS WHICH IS LESS THAN THE ALLOWABLE DISCHARGE OF 46.0 CFS. FURTHERMORE, THE GRADING PLAN AND THIS DRAINAGE MANAGEMENT PLAN DEMONSTRATE THAT WE ARE IN CONFORMANCE WITH THE CITY OF ALBUQUERQUE HYDROLOGY REQUIREMENTS. WE REQUEST BUILDING PERMIT APPROVAL.



ZONE ATLAS PAGE C-17
NTS



FEMA FLOODPLAIN MAP 35001C0136G
NTS

SPORTSPLEX
tract A,
loop industrial park
Albuquerque, New Mexico

slagleherr
4135 second st sw
albuquerque nm
87102
5052460870
slagleherr.com

drainage
management plan

revisions

date
5-20-15
sheet
c001

Bohannon & Huston
www.bhinc.com 800.877.5332

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	281759	6.47	0.0%	0.0%	80.2%	19.8%
B1-A	146368	3.36	0.0%	0.0%	100.0%	0.0%
B1-B	1881	0.04	0.0%	0.0%	25.0%	75.0%
B1-C	2318	0.05	0.0%	0.0%	12.0%	88.0%
B1-D	131192	3.01	0.0%	0.0%	60.0%	40.0%
BASIN 2	115739	2.66	0.0%	0.0%	52.6%	47.4%
B2-A	7134	0.16	0.0%	0.0%	98.0%	2.0%
B2-B	4954	0.11	0.0%	0.0%	96.0%	4.0%
B2-C	3511	0.08	0.0%	0.0%	94.0%	6.0%
B2-D	1586	0.04	0.0%	0.0%	93.0%	7.0%
B2-E	98554	2.26	0.0%	0.0%	45.0%	55.0%
TOTAL	397498	9.125	-	-	-	-

BASIN & SUBBASIN DATA TABLE

INLET TABLE					
Inlet #	Inlet Type	Basin	Actual Flow	Avail Head ft	Capacity CFS
IN1	1-10" NYLOPLAST (DOME GRT)*	B1-C	0.24	0.30	1.00
IN2	1-10" NYLOPLAST (DOME GRT)*	B1-B	0.19	0.30	1.00
IN3	1-10" NYLOPLAST (DROP IN GRT)*	B2-A	0.52	0.20	0.55
IN4	1-10" NYLOPLAST (DROP IN GRT)*	B2-B	0.36	0.20	0.55
IN5	1-10" NYLOPLAST (DROP IN GRT)*	B2-C	0.26	0.20	0.55
IN6	1-10" NYLOPLAST (DROP IN GRT)*	B2-D	0.12	0.20	0.55
IN7	1-30" NYLOPLAST (DOME GRT)	B2-E	ORIFICE CONTROLLED		
* - INLET PLACED IN SUMP CONDITION AND CAPACITIES BASED ON LESSER OF ORIFICE AND WIER EQUATIONS					

INLET TABLE

STORM DRAIN PIPE TABLE					
PIPE #	INLET/SD/BASIN	Size in.	Slope	Capacity* cfs	ACTUAL FLOW cfs
SD1	B1-A	18	0.50%	7.43	10.55
SD2	SD-1, SD-4	18	0.50%	7.43	10.79
SD3	SD-2, SD-5	18	0.50%	7.43	10.98
SD4	IN-1	10	1.50%	2.68	0.24
SD5	IN-2	10	1.50%	2.68	0.19
SD6	IN-3	10	0.50%	1.55	0.52
SD7	IN-4, SD-6	10	0.50%	1.55	0.88
SD8	IN-5, SD-7	10	0.50%	1.55	1.14
SD9	IN-6, SD-8	10	0.50%	1.55	1.26
SD10	IN-7	24	2.00%	31.99	22.8**
*Capacity Based on Manning's Eq w/ N=0.013					
**See AHYMO Analysis For Peak Discharge From POND "A"					

STORM DRAIN PIPE TABLE

CONCRETE RUNDOWN TABLE									
Rundown #	Basin ID	Rundown Type	Required Flow	Weir Height ft	Weir Length ft	Weir Capacity**	Channel Width ft	Channel Height ft	Minimum Slope
R1	EAST STORM DRAIN	Rectangle	4.00		N/A		2.00	0.50	1.00%
R2	Basin 1	Rectangle	22.31	0.67	16.00	24.00	6.00	0.50	33.00%
Capacity Based on Manning's Eq w/ N=0.013 - *									
Weir Eq: Q=2.65L*(h^1.5) - **									

RUNDOWN TABLE

SWALE CAPACITY TABLE					
Rundown #	Contributing Basins & Flows	Required Flow	Manning's Coefficient	Channel Slope	Stream Capacity*
SW-1A	B2-A, B2-B, B2-C, B2-D, 1/2-B2-E, OS-E	9.79	0.035	0.50%	29.29
SW-1B	B2-A, B2-B, B2-C, B2-D, B2-E, OS-E, OS-S	40.31	0.035	1.30%	47.22
SW-2	EXCESS B1-A FLOW	3.55	0.035	1.00%	6.17
SW-3	B1-A, B1-B, B1-C	10.98	0.035	0.50%	14.66
SW-4	MINIMAL OFFSITE FLOWS	1.11	0.035	1.50%	4.11
Capacity Based on Manning's Eq - *					

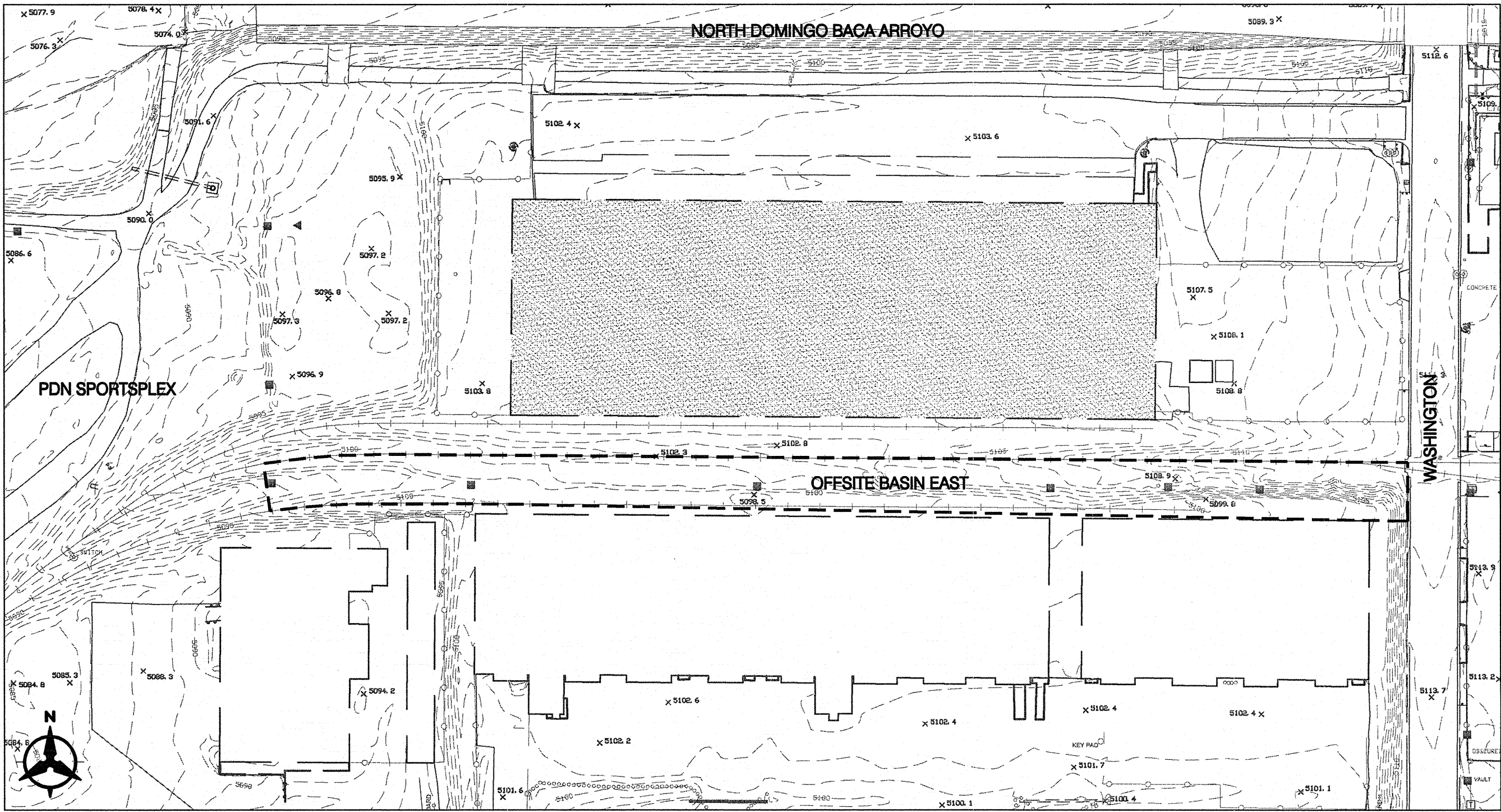
SWALE CAPACITY TABLE

WEIR CAPACITY TABLE					
WEIR #	Contributing Basins & Flows	Required Flow	Weir Height (FT)	Weir Length (FT)	Weir Capacity*
EMERGENCY OVERFLOW W1	BASIN 2, OFFSITE SOUTH, OFFSITE EAST	31.60	0.40	250.0	168.00
	ENTIRE SITE	42.83	2.00	8.00	60.00
Weir Coefficient = 2.65 - *					

WEIR CAPACITY TABLE

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4) - Ver. S4.01a, Rel: 01a RUN DATE (MON/DAY/YR) =05/20/2015												
INPUT FILE = P:\20150146\CDP\HYDRO\Building Permit\100YR-BP-SUB.HYM USER NO.= AHYMO_Temp_User:20122010												
		FROM		TO	PEAK	RUNOFF		TIME TO	CFS		PAGE	= 1
	HYDROGRAPH	ID		ID	AREA	DISCHARGE	VOLUME	RUNOFF	PEAK	PER		
COMMAND	IDENTIFICATION	NO.		NO.	(SQ MI)	(CFS)	(AC-FT)	(INCHES)	(HOURS)	ACRE		NOTATION
*S AHYMO FILE FOR ALBUQUERQUE SPORTS COMPLEX - ALBUQUERQUE,NM, BH PROJ # 20150146												
*S 100 YEAR - 6 HOUR STORM												
*S												
*S INPUT FILE -- P:\20150146\CDP\HYDRO\Building Permit\100YR-BP-SUB.HYM												
*S OUTPUT FILE -- P:\20150146\CDP\HYDRO\Building Permit\100YR-BP-SUB.OUT												
START	TIME= 0											
LOCATION	ALBUQUERQUE											
RAINFALL TYPE= 1 NOAA 14												
*S*****												
*S	-----											
S COMPUTE BASIN DEVELOPED CONDITIONS												
*S	-----											
*S BASIN 1												
COMPUTE NM HYD		B1	-	1	0.01011	23.87	0.748	1.38795	1.5		3.639 PER IMP= 19.80	
*S BASIN 2												
COMPUTE NM HYD		B2	-	2	0.00425	11.12	0.372	1.63935	1.5		4.087 PER IMP= 47.90	
*S*****												
*S ADDITION OF OFFSITE SOUTH TO BASIN 2												
ADD HYD		SOUTH B2	-	20	0.01284	37.19	1.316	1.92121	1.5			
*S ADDITION OF OFFSITE EAST TO BASIN 2												
ADD HYD		EAST B2	-	21	0.01468	41.22	1.434	1.83216	1.5			
*S ROUTE BASIN 2 & OFFSITE EAST & SOUTH TO POND "A". OUTFLOW BASED ON 30" NYLOPLAST DOME GRATE.												
ROUTE RESERVOIR		PONDA	-	10	0.01468	22.8	1.595	2.03672	1.65		MAX VOLUME = 0.467 AC-FT	
*S ADDITION OF POND "A" TO BASIN 1												
ADD HYD		PAB1	-	22	0.02479	44.13	2.343	1.77215	1.55			
*S ROUTE BASIN 1 TO POND "B". OUTFLOW BASED ON WEIR CALCULATIONS												
ROUTE RESERVOIR		PONDB	-	11	0.02479	42.83	2.343	1.77183	1.6		MAX VOLUME = 0.143 AC-FT	

AHYMO SUMMARY DATA TABLE



EASTERN OFFSITE BASIN MAP

SCALE 1"=100'

BASIN AND SUB-BASIN HYDROLOGIC ANALYSIS:

THE HYDROLOGIC ANALYSIS PROVIDED WITH THIS DRAINAGE MANAGEMENT PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 22.2 OF THE DPM. BASIN AND SUB-BASIN BOUNDARIES ARE DELINEATED PER SHEET C001. SUB-BASINS WERE DEFINED FOR ANALYSIS ON STORM DRAINS, INLETS, RUNDOWNS, AND SWALES. ANALYSIS OF THESE DRAINAGE STRUCTURES CAN BE FOUND ON THIS SHEET.

AHYMO ANALYSIS:

SEE NARRATIVE SHEET C001.

INLET TABLE:

STORM DRAIN INLETS HAVE BEEN DESIGNED IN SUMP CONDITION. ALL NYLOPLAST INLET CAPACITIES ARE BASED ON NOMOGRAPHS PROVIDED BY THE MANUFACTURER. SEE TABLE THIS SHEET FOR CAPACITIES AND CONTRIBUTING FLOWS.

INLET 3 IS UNDERSIZED FOR THE SUB-BASIN IT IS INTENDED TO CONTAIN. ONCE CAPACITY IS REACHED, EXCESS FLOW WILL CONTINUE SOUTH TO INLET 4 WHICH HAS ENOUGH CAPACITY TO ACCEPT THE ADDITIONAL FLOWS.

STORM DRAIN TABLE:

STORM DRAINS WERE SIZED BASED ON MANNING'S EQUATION AND GRAVITY FLOW. SIZE OF STORM DRAINS RANGE FROM 10" TO 24". SEE TABLE THIS SHEET FOR ALL STORM DRAIN REACH ANALYSIS.

THE 18" STORM DRAIN REACH NORTH OF THE BUILDING IS UNDERSIZED. A MAJORITY OF THE RUNOFF FROM THE ATHLETIC FIELD WILL CONTINUE WEST INTO THE PARKING LOT AND WON'T REACH THE PIPE. THE PORTION OF RUNOFF THAT IS UNABLE TO FLOW TO THIS PIPE WILL CONTINUE SOUTH INTO A RIPRAP SWALE THAT WAS SIZED WITH ENOUGH CAPACITY TO COMPENSATE FOR THE EXCESS RUNOFF. SEE SWALE CAPACITY TABLE THIS SHEET FOR MORE INFORMATION.

RUNDOWN TABLE:

CONCRETE RUNDOWN HAVE BEEN DESIGNED USING MANNING'S EQUATION AND THE WEIR EQUATION. RUNDOWN "R1" IS DESIGNED TO CONTAIN THE OFFSITE FLOWS FROM THE EAST. RUNDOWN "R2" IS WEIR CONTROLLED AND ULTIMATELY OUTFALLS INTO POND "B".

SWALE CAPACITY TABLE:

ALL RIPRAP SWALES HAVE BEEN DESIGNED USING MANNING'S EQUATION. SEE TABLE THIS SHEET FOR CAPACITIES AND CONTRIBUTING FLOWS.

WEIR CAPACITY TABLE:

ALL WEIR CAPACITIES HAVE BEEN DESIGNED USING A WEIR COEFFICIENT OF 2.65. SEE TABLE THIS SHEET FOR CAPACITIES AND CONTRIBUTING FLOWS.

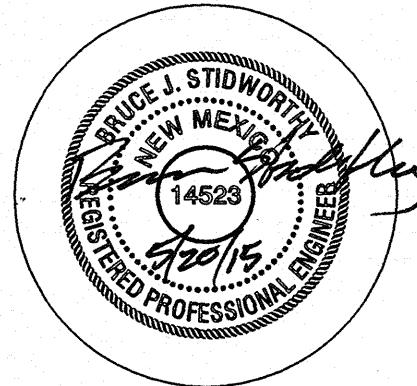
SPORTSPLEX

tract A,
loop industrial park
Albuquerque, New Mexico



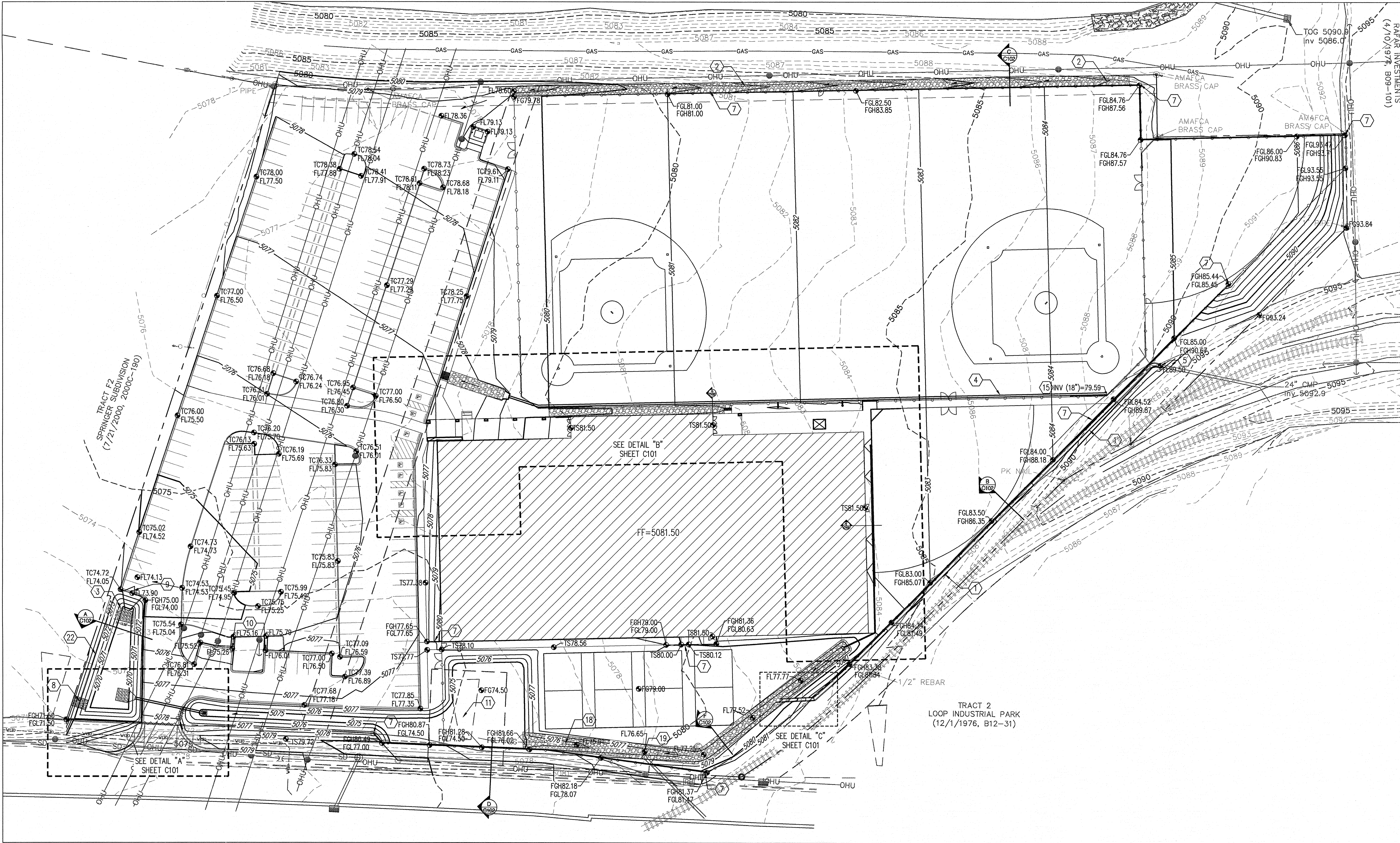
4 1 3 s e c o n d s t s w
a l b u q u e r q u e n m
8 7 1 0 2
5 0 5 2 4 6 0 8 7 0
s l a g l e h e r r . c o m

drainage
management plan



revisions

date
5-20-15
sheet
c002



PROJECT BENCHMARK

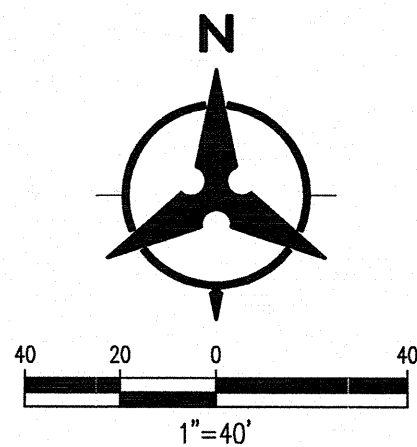
Intersection of PDN & North Diversion Channel @ Southwest Quadrant of Bridge Abutment
3-1/4" Alum Disc
ACS Monument "13_D16"
NAD 1983CENTRAL ZONE
X=1534181.325
Y=1518996.001
Z=5073.471 (NAVD 1988)
G-G=0.999673570
Mapping Angle=-00°12'17.26"

GRADING NOTES

- EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
- THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
- 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).
- EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
- 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.
- THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY.
- 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.
- PAVING AND ROADWAY GRADES SHALL BE +/- 0.1' FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATION.
- ALL PROPOSED CONTOURS REFLECT TOP OF PAVEMENT ELEVATIONS IN THE PARKING AREA AND MUST BE ADJUSTED FOR MEDIANS AND ISLANDS.
- VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION PRIOR TO BEGINNING CONSTRUCTION.

LEGEND

- PROPERTY LINE
- EXISTING CONTOURS
- 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
- PROPOSED DIRECTION OF FLOW
- WATER BLOCK
- PROPOSED RETAINING WALL
- PROPOSED INDEX CONTOURS
- PROPOSED INTER CONTOURS
- PROPOSED CURB & GUTTER
- EASEMENT
- PROPOSED STORM DRAIN LINE



Bohannon & Huston
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GRADING KEYED NOTES

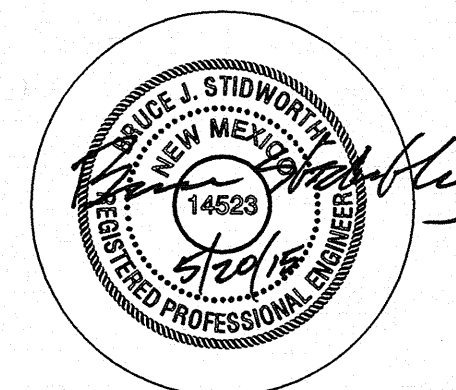
- INSTALL NEW CONCRETE RIBBON CHANNEL PER DETAIL "I" SHEET C102.
- INSTALL NEW RIP RAP SWALE PER DETAIL "J" SHEET C102.
- INSTALL NEW RIP RAP BLANKET PER DETAIL "L" SHEET C102.
- INSTALL NEW STORM DRAIN. SEE PLAN FOR SIZE. TIE FIELD SUBDRAINS TO STORM DRAIN PER SUBDRAIN MANUFACTURER'S RECOMMENDATIONS
- DAYLIGHT EXISTING CULVERT INTO NEW CONCRETE RIBBON CHANNEL. SEE DETAIL "M" SHEET C102.
- INSTALL CMP STORM DRAIN END SECTION SEE PLAN FOR SIZE.
- INSTALL RETAINING WALL, SEE STRUCTURAL SHEETS FOR DETAILS.
- INSTALL NEW POND WEIR PER DETAIL "H" SHEET C102.
- INSTALL NEW 16" WIDE CONCRETE RUNDOWN.
- INSTALL CURB OPENING PER DETAIL "K" SHEET C102.
- EXISTING BILLBOARD TO REMAIN. MATCH EXISTING GRADE WITHIN 5' OF BILLBOARD FOUNDATION. SEE DETAIL "D" SHEET C102.
- INSTALL NEW 10" NYLOPLAST DOME INLET OR APPROVED EQUAL.
- INSTALL NEW 10" NYLOPLAST DROP-IN INLET OR APPROVED EQUAL.
- INSTALL NEW 30" NYLOPLAST DOME INLET OR APPROVED EQUAL.
- INSTALL STORM DRAIN CAP.
- INSTALL PRE-FABRICATED STORM DRAIN FITTING WITH WATER-TIGHT GASKET, SEE PLAN FOR SIZE.
- CONSTRUCT NEW 24" SIDEWALK CULVERT PER COA STD DWG. 2236.
- INSTALL NEW RIP RAP SWALE PER DETAIL "F" SHEET C102.
- DAYLIGHT EXISTING STORM DRAIN INTO SWALE.
- INSTALL PRE-FABRICATED STORM DRAIN BEND. SEE PLAN FOR SIZE.
- CONSTRUCT NEW DOUBLE 24" SIDEWALK CULVERT PER COA STD DWG. 2236.
- INSTALL CONCRETE HEADER CURB PER COA STD DWG. 2415.

* NOT ALL KEYED NOTES USED ON THIS SHEET
** FOR TYPICAL CROSS-SECTIONS SEE SHEET C102

SPORTSPLEX
tract A,
loop industrial park
Albuquerque, New Mexico

413 seconds t s w
albuquerque n m
87102
5052460870
slagleherr.com

grading and
drainage plan



revisions

date
5-20-15
sheet
c100

GRADING KEYED NOTES

1. INSTALL NEW CONCRETE RIBBON CHANNEL PER DETAIL "I" SHEET C102.
2. INSTALL NEW RIP RAP SWALE PER DETAIL "J" SHEET C102.
3. INSTALL NEW RIP RAP BLANKET PER DETAIL "L" SHEET C102.
4. INSTALL NEW STORM DRAIN. SEE PLAN FOR SIZE. TIE FIELD SUBDRAINS TO STORM DRAIN PER SUBDRAIN MANUFACTURER'S RECOMMENDATIONS
5. DAYLIGHT EXISTING CULVERT INTO NEW CONCRETE RIBBON CHANNEL. SEE DETAIL "M" SHEET C102.
6. INSTALL CMP STORM DRAIN END SECTION SEE PLAN FOR SIZE.
7. INSTALL RETAINING WALL, SEE STRUCTURAL SHEETS FOR DETAILS.
8. INSTALL NEW POND WEIR PER DETAIL "H" SHEET C102.
9. INSTALL NEW 16" WIDE CONCRETE RUNDOWN.
10. INSTALL CURB OPENING PER DETAIL "K" SHEET C102.
11. EXISTING BILLBOARD TO REMAIN. MATCH EXISTING GRADE WITHIN 5' OF BILLBOARD FOUNDATION. SEE DETAIL "D" SHEET C102.
12. INSTALL NEW 10" NYLOPLAST DOME INLET OR APPROVED EQUAL.
13. INSTALL NEW 10" NYLOPLAST DROP-IN INLET OR APPROVED EQUAL.
14. INSTALL NEW 30" NYLOPLAST DOME INLET OR APPROVED EQUAL.
15. INSTALL STORM DRAIN CAP.
16. INSTALL PRE-FABRICATED STORM DRAIN FITTING WITH WATER-TIGHT GASKET, SEE PLAN FOR SIZE.
17. CONSTRUCT NEW 24" SIDEWALK CULVERT PER COA STD DWG. 2236.
18. INSTALL NEW RIP RAP SWALE PER DETAIL "F" SHEET C102.
19. DAYLIGHT EXISTING STORM DRAIN INTO SWALE.
20. INSTALL PRE-FABRICATED STORM DRAIN BEND. SEE PLAN FOR SIZE.
21. CONSTRUCT NEW DOUBLE 24" SIDEWALK CULVERT PER COA STD DWG. 2236.
22. INSTALL CONCRETE HEADER CURB PER COA STD DWG. 2415.

* NOT ALL KEYED NOTES USED ON THIS SHEET

** FOR TYPICAL CROSS-SECTIONS SEE SHEET C102

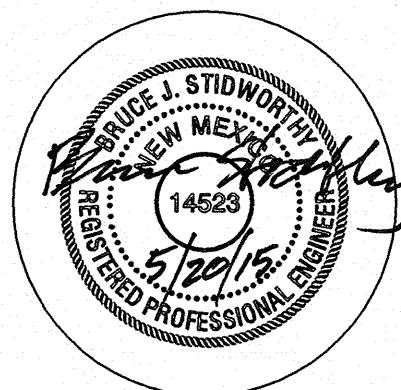
SPORTSPLEX

tract A,
loop industrial park
Albuquerque, New Mexico



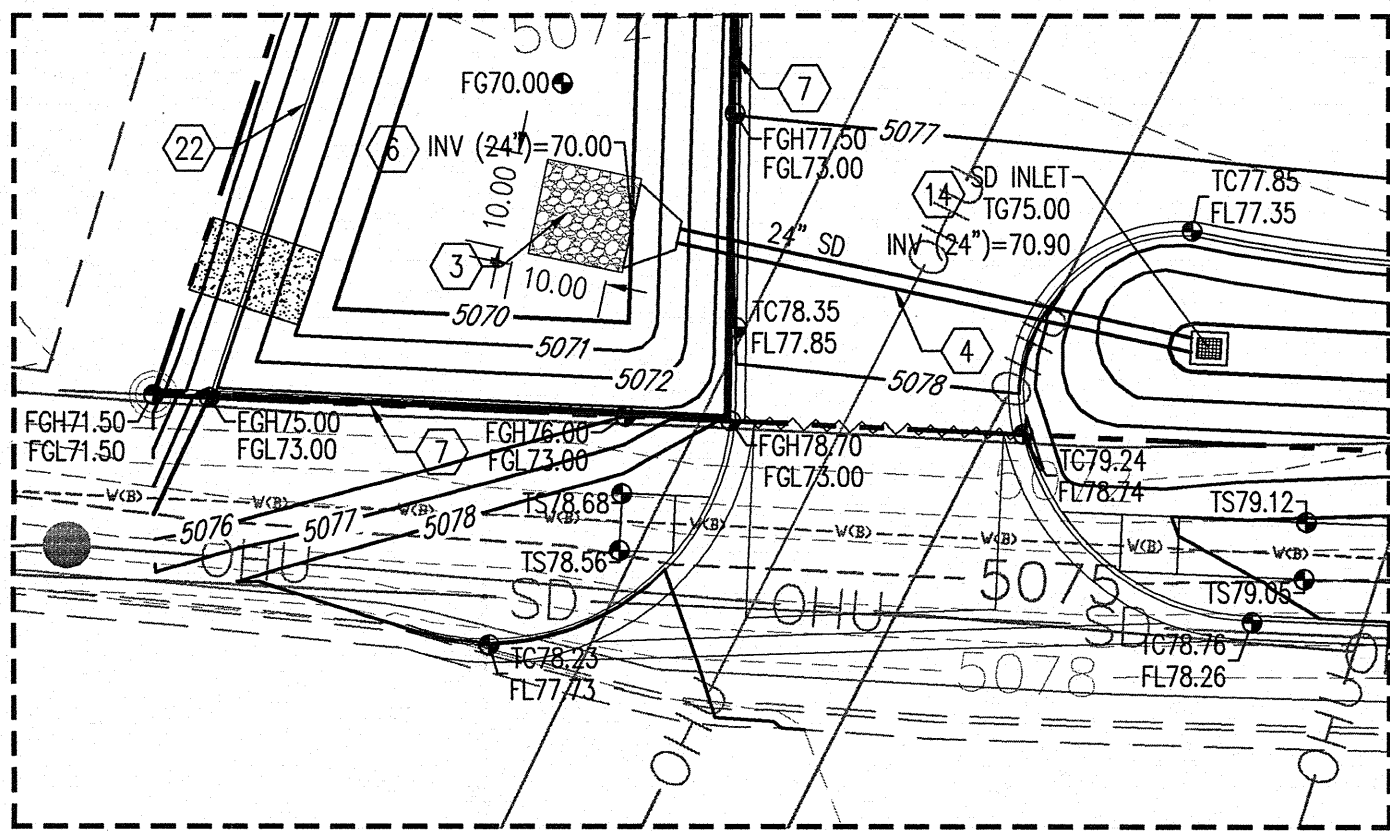
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albuquerque n m
87102
5052460870
slagleherr.com

grading and
drainage plan

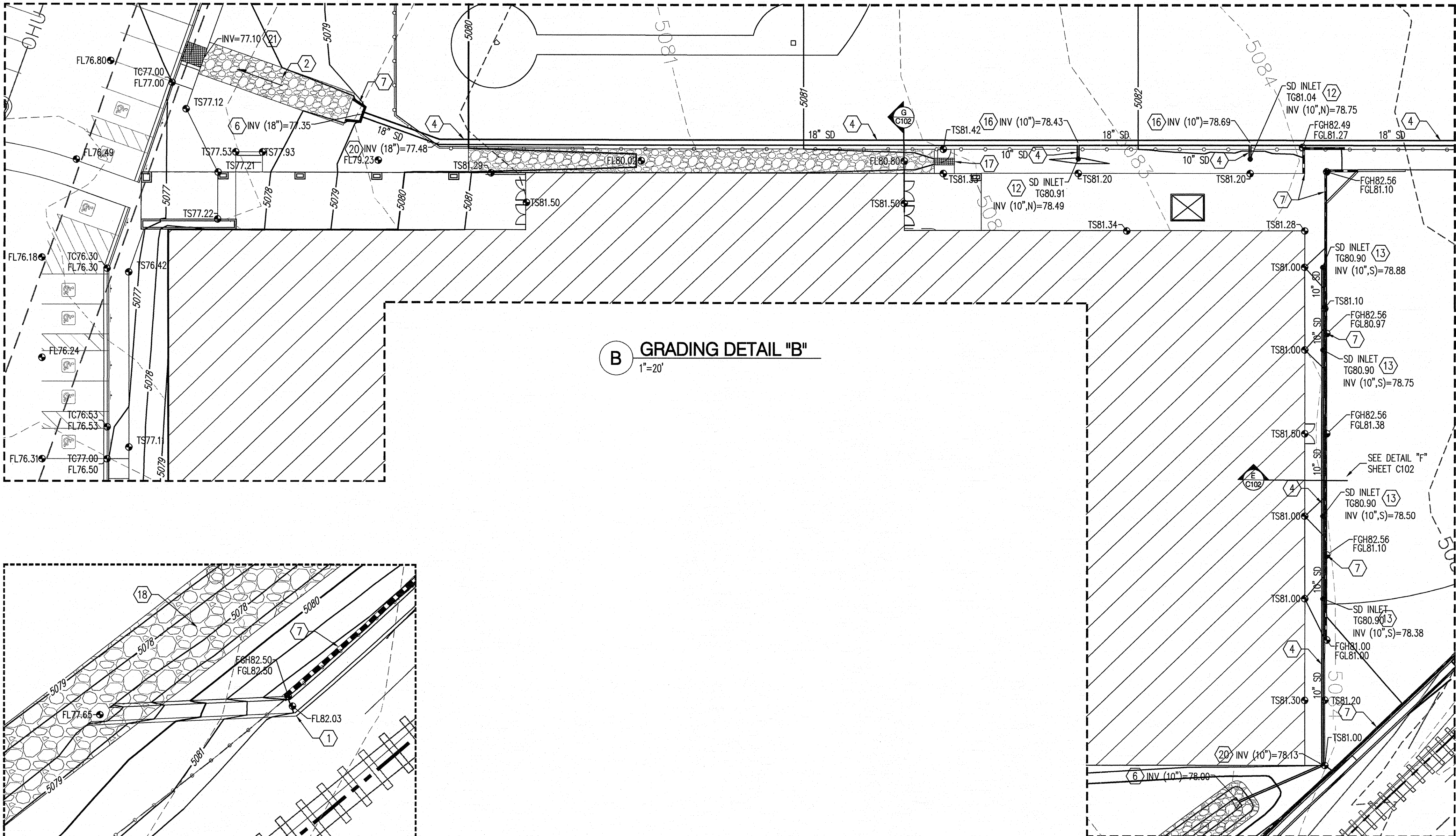


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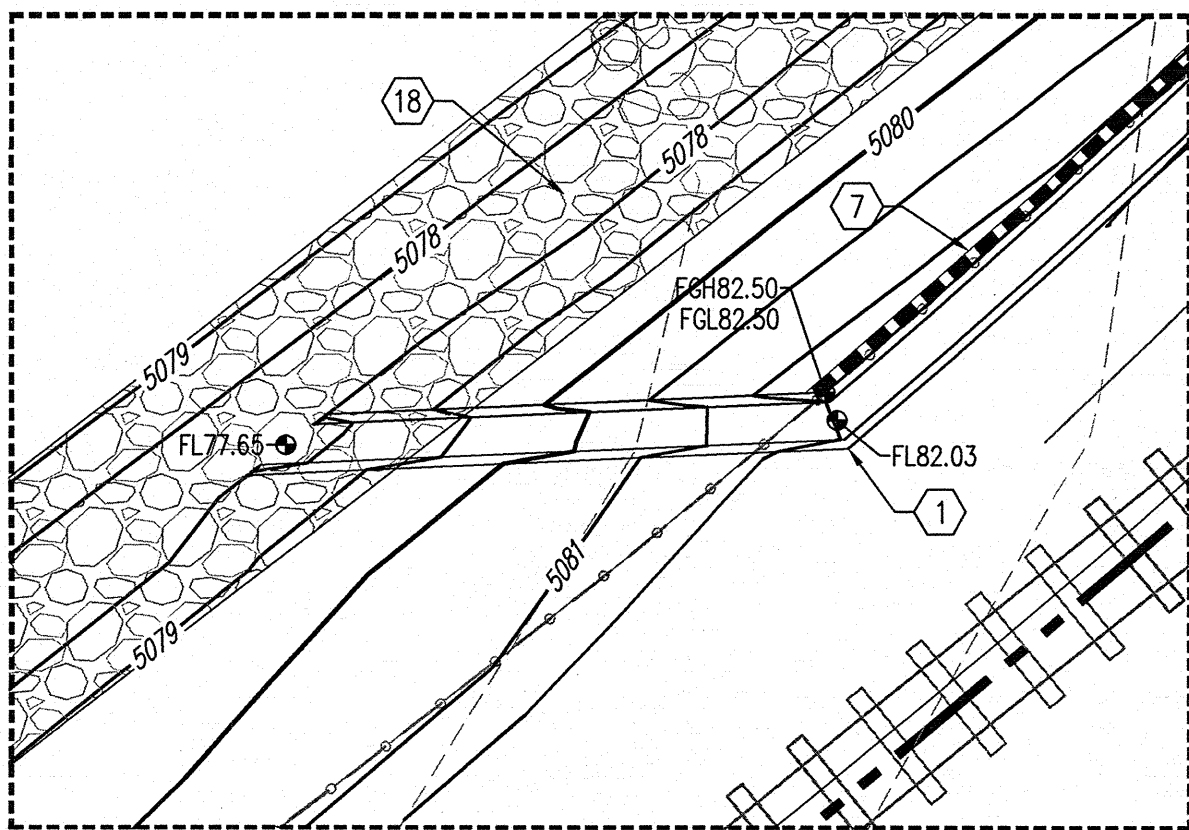
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c101



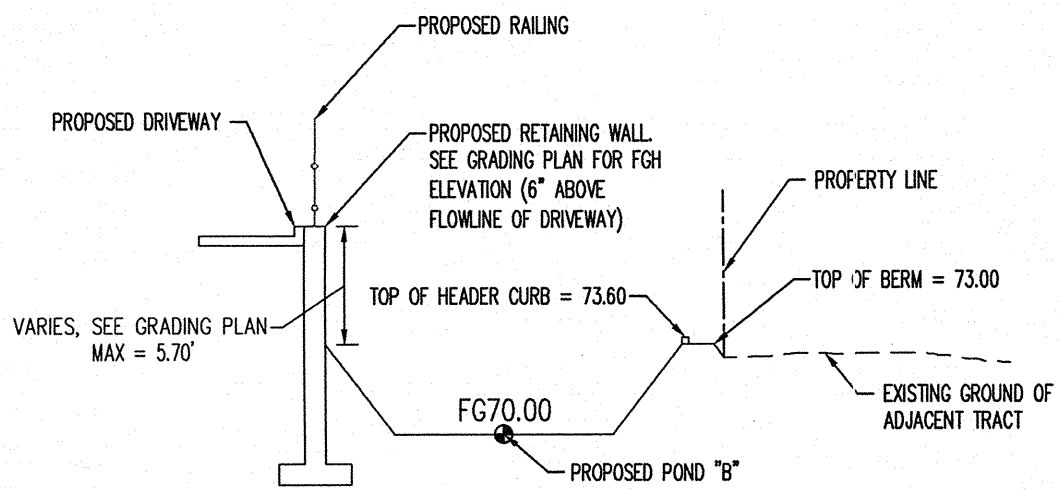
A GRADING DETAIL "A"
1"=20'



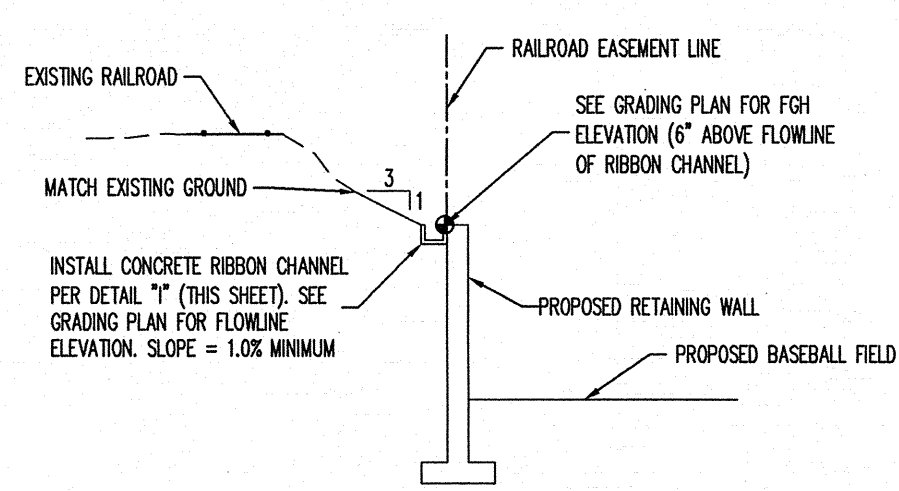
B GRADING DETAIL "B"
1"=20'



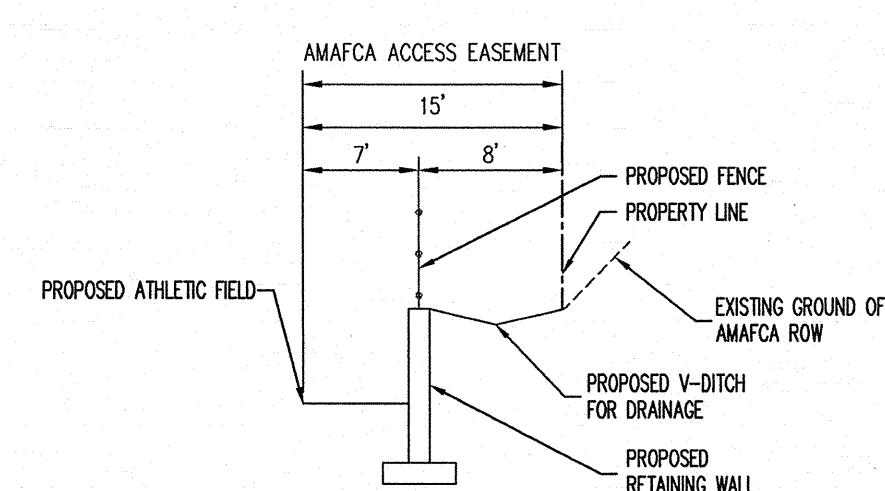
C GRADING DETAIL "C"
1"=10'



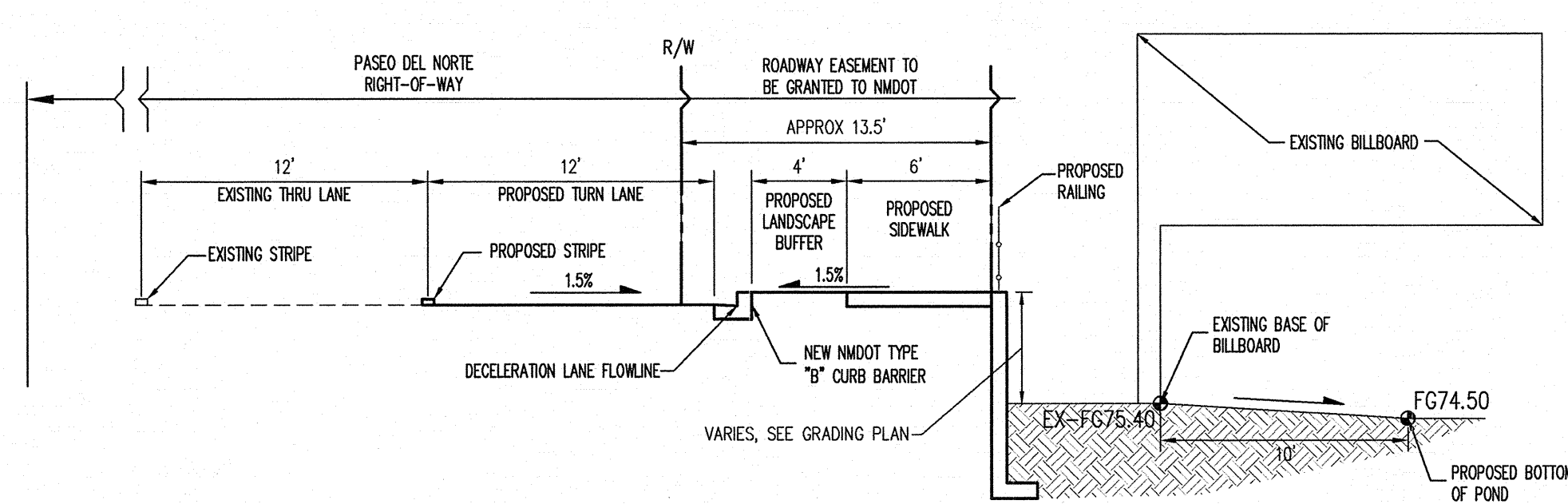
A CROSS-SECTION "A"
N.T.S.



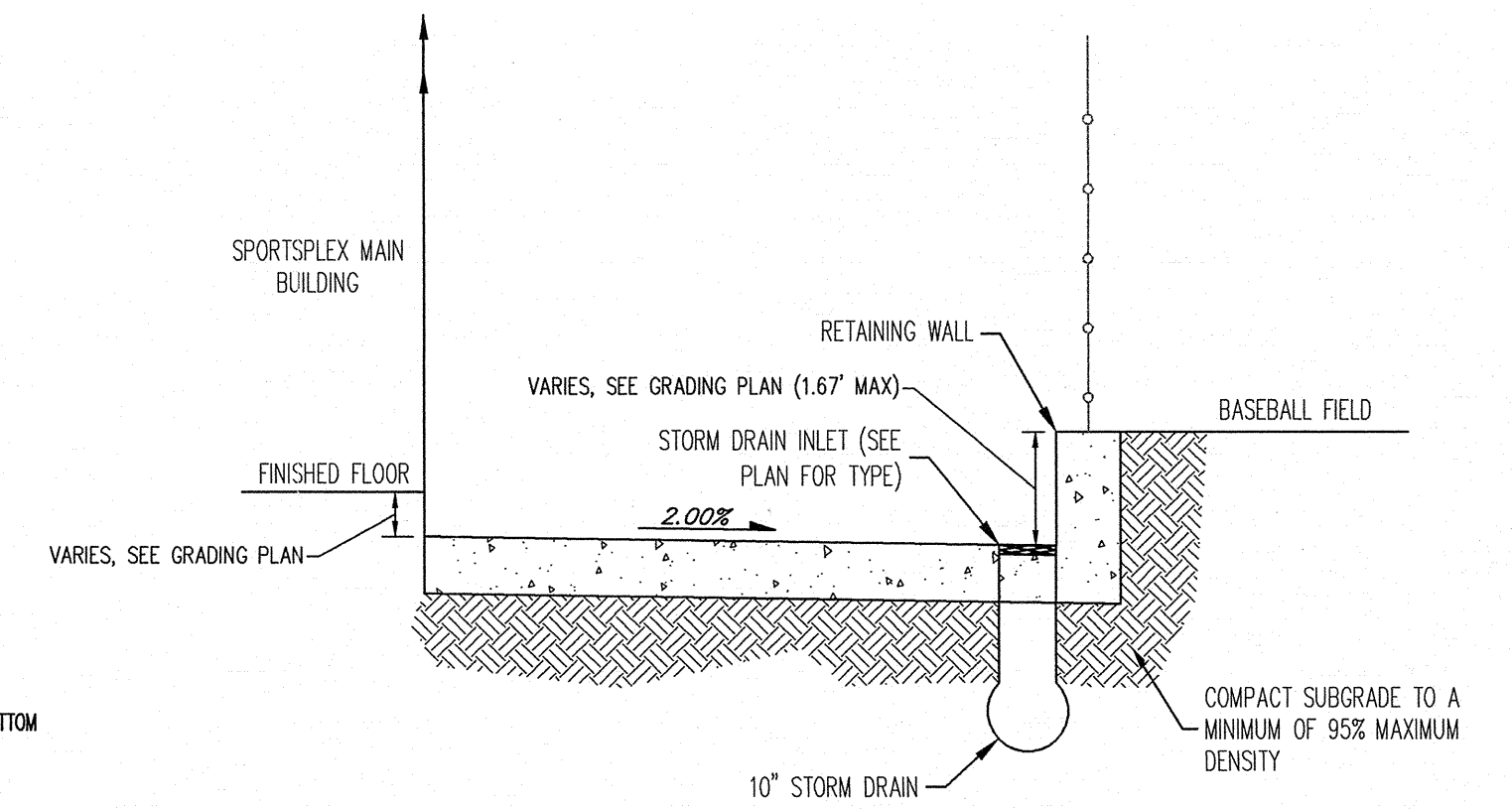
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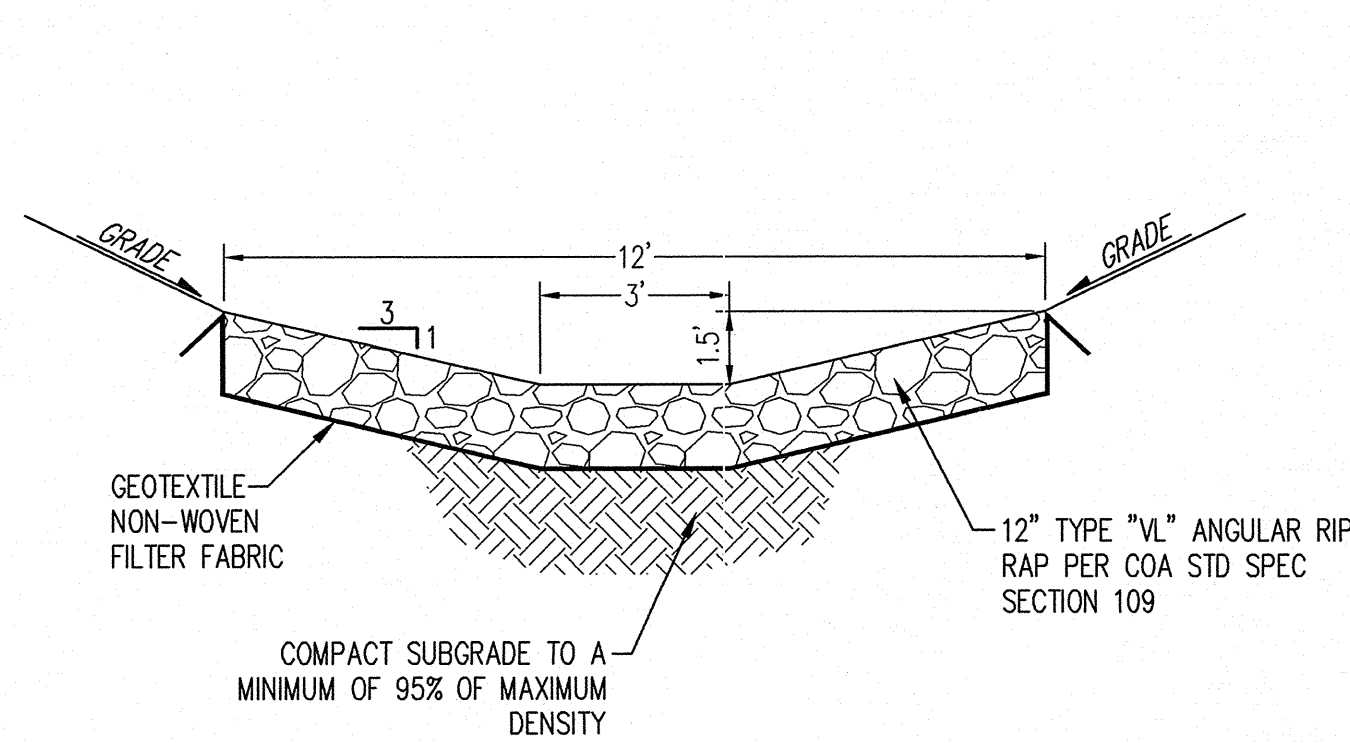
C CROSS-SECTION "C"
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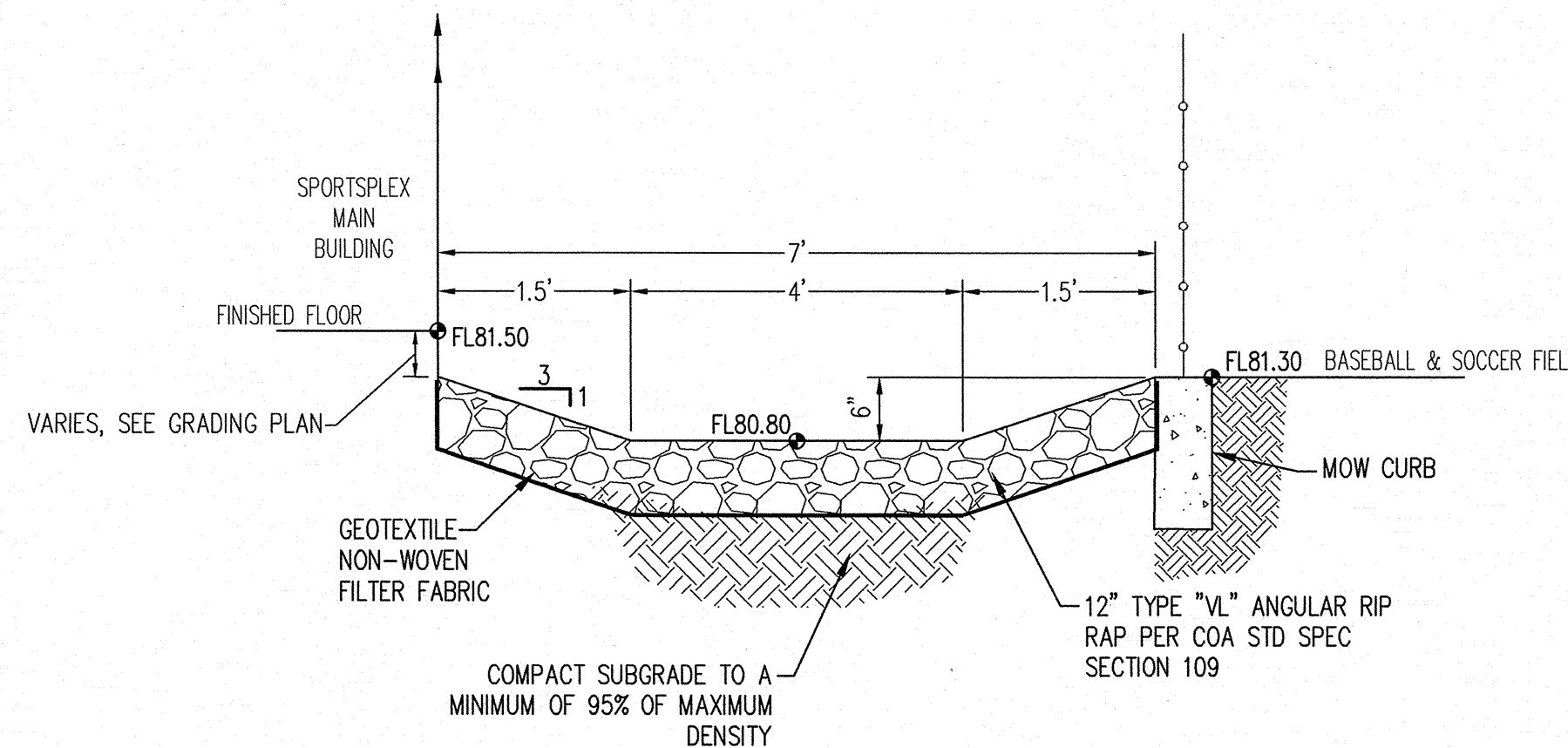
D CROSS-SECTION "D"
N.T.S.



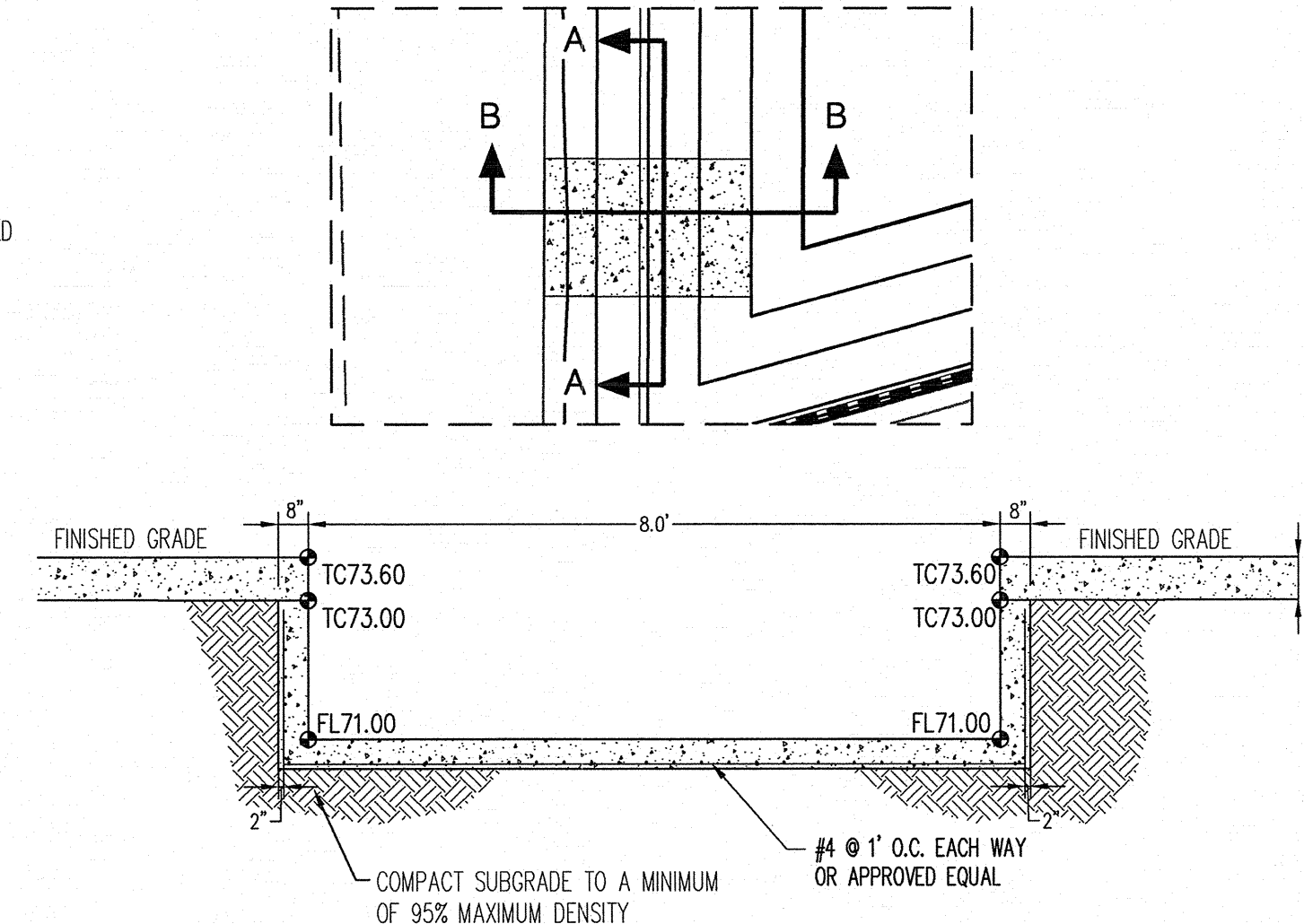
E CROSS-SECTION "E"
N.T.S.



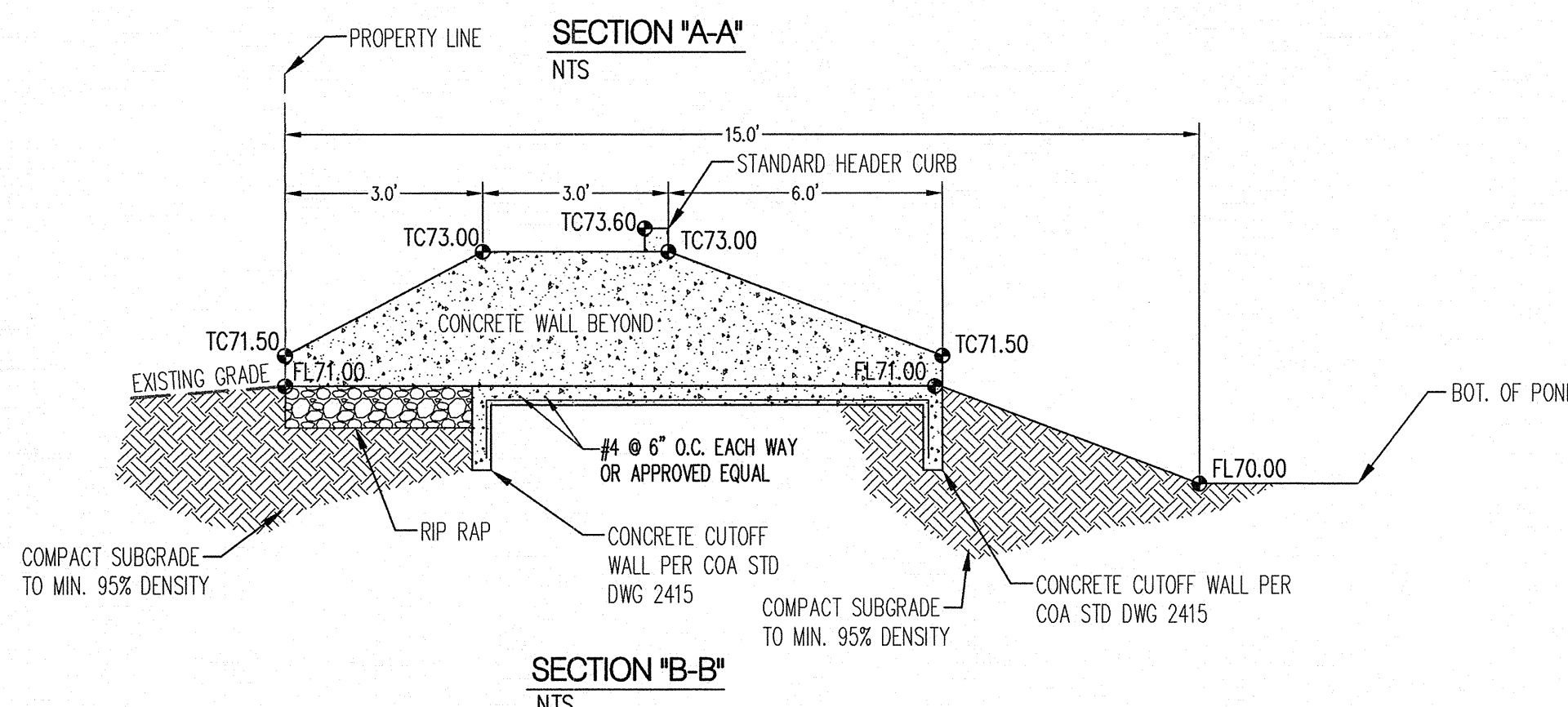
F CROSS-SECTION "F"
N.T.S.



G CROSS-SECTION "G"
N.T.S.

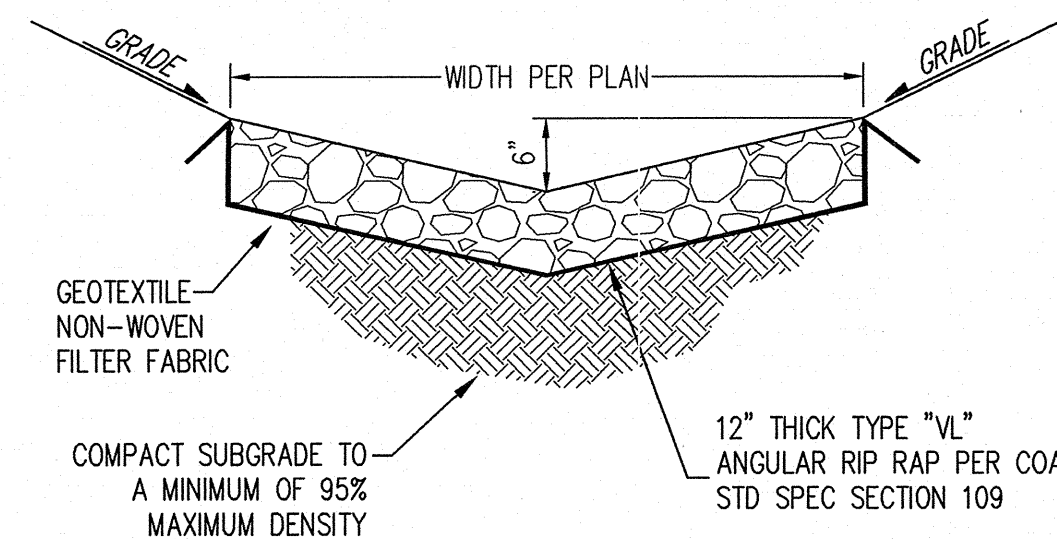


SECTION "A-A"
N.T.S.

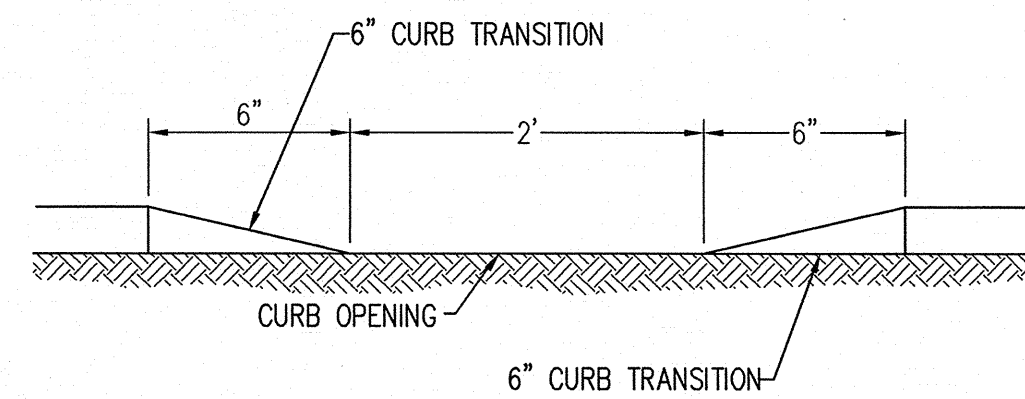


SECTION "B-B"
N.T.S.

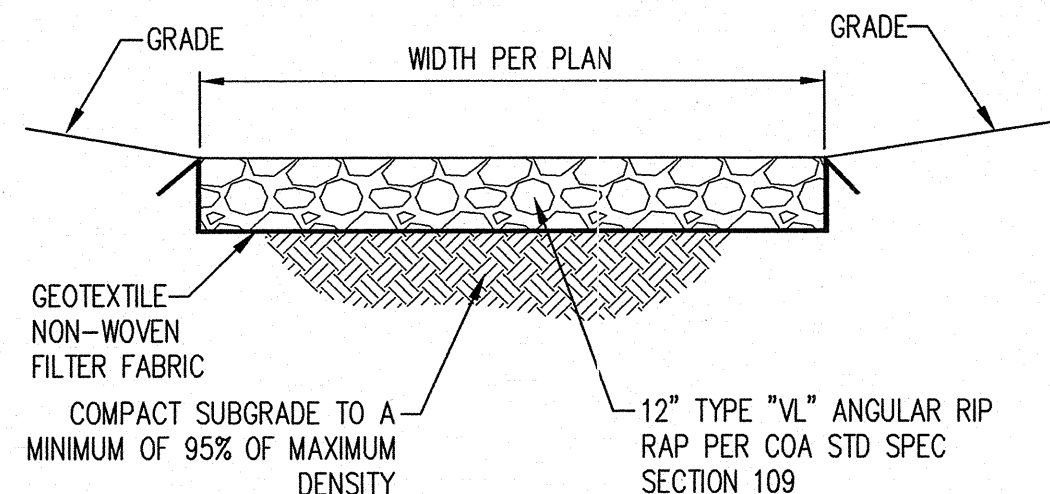
H WEIR DETAIL
N.T.S.



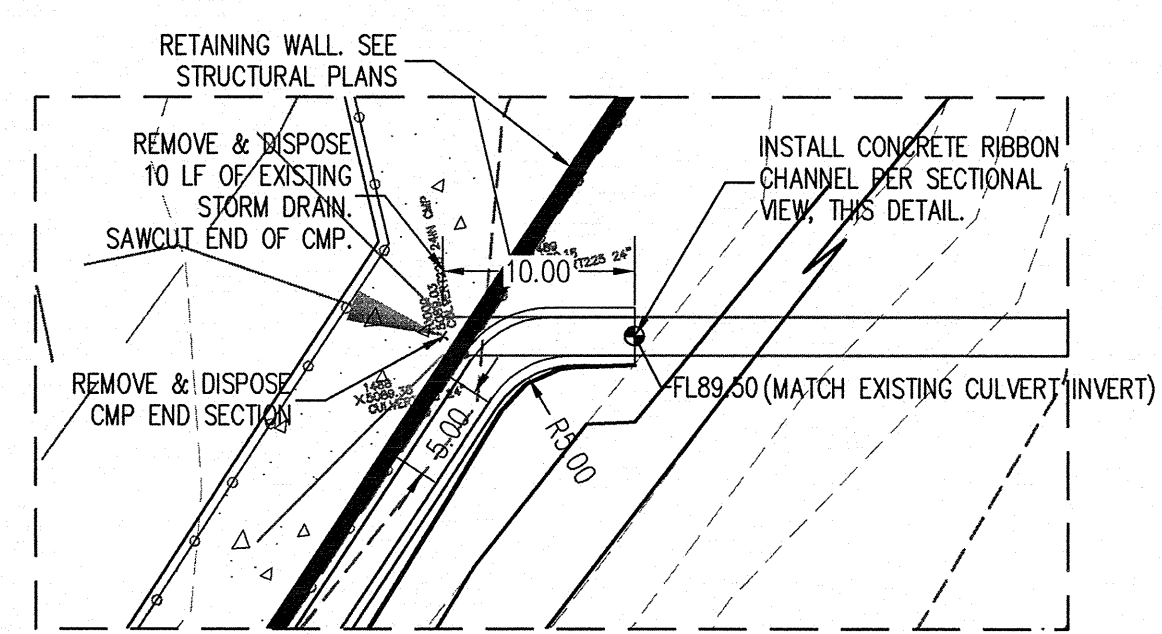
J RIP-RAP SWALE DETAIL
N.T.S.



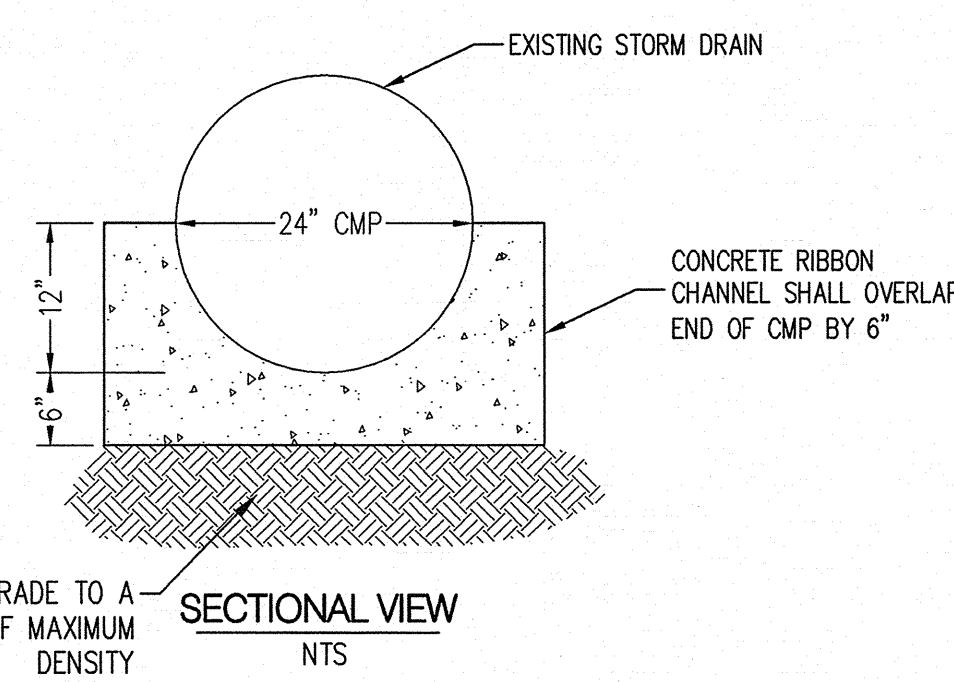
K TYPICAL CURB OPENING
N.T.S.



L RIP-RAP BLANKET DETAIL
N.T.S.



PLAN VIEW
1"=10'



SECTIONAL VIEW
N.T.S.

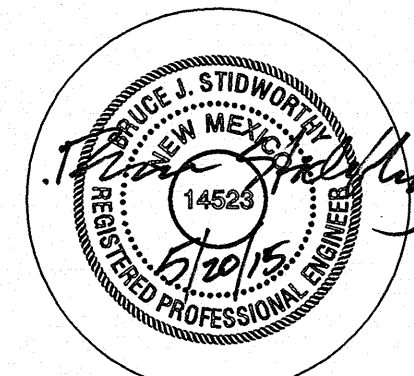
M STORM DRAIN & RUNDOWN CONNECTION
N.T.S.

I CONCRETE RIBBON CHANNEL
N.T.S.

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5-20-15
sheet
c102

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Harmon Rita T.

From: Mazur, Lynn <lmazur@amafca.org>
Sent: Friday, May 29, 2015 2:43 PM
To: Wolfenbarger, Jeanne
Cc: Harmon Rita T.; Bruce Stidworthy (bstidwor@bhinc.com); Matthew Satches (msatches@bhinc.com)
Subject: PdN Sportsplex

Re: Paseo del Norte Sportsplex, City Project No. 1004205, ZAP C-17
Engineer's Stamp dated 5/20/15

AMAFCA approves release of building permit. The 15-foot easement along the toe of the Domingo Baca Channel has been granted to AMAFCA and recorded at the County Clerk's office.

Albuquerque Metropolitan Arroyo Flood Control Authority

Lynn M. Mazur, P.E., C.F.M.
Development Review Engineer
2600 Prospect Ave NE
Albuquerque, NM 87107
Office: (505) 884-2215
Mobile: (505) 362-1273

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100YR-BP-SUB.OUT

AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Rel: 01a
 RUN DATE (MON/DAY/YR) = 05/20/2015
 START TIME (HR:MIN:SEC) = 08:54:28 USER NO.=
 AHYMO_Temp_User:20122010
 INPUT FILE = P:\20150146\CDP\Hydro\Building Permit\AHYMO
 WORKAREA\100YR-BP-SUB.HYM

*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-SUB.HYM
 *
 *S OUTPUT FILE -- P:\20150146\CDP\HYDRO\AHYMO\100YR-BP-SUB.OUT
 *
 *AHYMO FOR PROPOSED AND RESERVOIR ROUTING CONDITION.
 *
 *

START TIME=0.0 HR PUNCH CODE=0

LOCATION ALBUQUERQUE, NEW MEXICO
 City of Albuquerque soil infiltration values (LAND FACTORS) used for
 computations.

Land Treatment	Initial Abstr.(in)	Unif. Infilt.(in/hour)
A	0.65	1.67
B	0.50	1.25
C	0.35	0.83
D	0.10	0.04

*

 *
 * 6 HR RAINFALL TABLE
 *

*100 YEAR - 6 HOUR
 RAINFALL TYPE=1 RAIN QUARTER=0.0
 RAIN ONE=2.01 IN RAIN SIX=2.35 IN
 RAIN DAY=2.75 IN DT=0.05 HRS

6-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE
 AREAS (NM & AZ) - D1

DT = 0.050000 HOURS				END TIME = 6.000000 HOURS			
0.0000	0.0023	0.0046	0.0071	0.0099	0.0127	0.0159	
0.0203	0.0272	0.0347	0.0424	0.0509	0.0595	0.0684	
0.0776	0.0870	0.0974	0.1084	0.1204	0.1437	0.1728	
0.2117	0.2559	0.3104	0.3831	0.4649	0.6062	0.8258	
1.2021	1.4666	1.6752	1.7800	1.8719	1.9379	1.9905	
2.0362	2.0697	2.1005	2.1259	2.1418	2.1530	2.1629	
2.1722	2.1803	2.1879	2.1953	2.2025	2.2084	2.2118	
2.2152	2.2186	2.2217	2.2247	2.2278	2.2307	2.2336	
2.2363	2.2391	2.2417	2.2443	2.2469	2.2494	2.2518	
2.2542	2.2565	2.2588	2.2611	2.2633	2.2654	2.2676	
2.2697	2.2717	2.2738	2.2758	2.2778	2.2798	2.2817	
2.2837	2.2856	2.2874	2.2893	2.2911	2.2930	2.2948	
2.2965	2.2983	2.3000	2.3017	2.3034	2.3051	2.3068	
2.3084	2.3100	2.3117	2.3133	2.3148	2.3164	2.3180	
2.3195	2.3210	2.3225	2.3240	2.3255	2.3269	2.3284	
2.3298	2.3313	2.3327	2.3341	2.3355	2.3368	2.3382	
2.3396	2.3409	2.3422	2.3436	2.3449	2.3462	2.3474	
2.3487	2.3500						

100YR-BP-SUB.OUT

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*S
*
*
*S*****
*S-----
*S-----
*S*  COMPUTE BASIN DEVELOPED CONDITIONS
*S-----
*S-----
*S
*S
*S BASIN 1
*
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COMPUTE NM HYD ID=1 HYD=B1 AREA=.01011SQ MI
 PER A=0 PER B=0 PER C=80.2 PER D=19.8
 TP=0.1333 HR MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 7.9031 CFS UNIT VOLUME = 0.9978 B = 526.28
 P60 = 2.0100
 AREA = 0.002002 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE
 CONSTANT, N = 4.440407
 UNIT PEAK = 23.329 CFS UNIT VOLUME = 1.001 B = 383.54
 P60 = 2.0100
 AREA = 0.008108 SQ MI IA = 0.35000 INCHES INF = 0.83000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

PRINT HYD ID=1 CODE=20

HYDROGRAPH FROM AREA B1

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	FLOW	CFS	HRS	FLOW	CFS	HRS	CFS
0.000	0.0	0.0	2.000	2.4	0.0	4.000	0.0
1.000	0.3	0.1	3.000	0.1	0.0	5.000	0.0

RUNOFF VOLUME = 1.38795 INCHES = 0.7484 ACRE-FEET
 PEAK DISCHARGE RATE = 23.87 CFS AT 1.500 HOURS BASIN AREA =
 0.0101 SQ. MI.

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*
*
*S BASIN 2
*
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100YR-BP-SUB.OUT

*

COMPUTE NM HYD

ID=2 HYD=B2 AREA=.00425SQ MI

PER A=0 PER B=0 PER C=52.1 PER D=47.9

TP=0.1333 HR MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 8.0372 CFS UNIT VOLUME = 0.9978 B = 526.28
 P60 = 2.0100
 AREA = 0.002036 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE
 CONSTANT, N = 4.440407
 UNIT PEAK = 6.3710 CFS UNIT VOLUME = 0.9998 B = 383.54
 P60 = 2.0100
 AREA = 0.002214 SQ MI IA = 0.35000 INCHES INF = 0.83000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

PRINT HYD

ID=2 CODE=20

HYDROGRAPH FROM AREA B2

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	FLOW	CFS	HRS	FLOW	CFS	HRS	CFS
6.000	0.000	0.0	2.000	1.3		4.000	0.0
	0.0						
	1.000	0.3	3.000	0.0		5.000	0.0

RUNOFF VOLUME = 1.63935 INCHES = 0.3716 ACRE-FEET
 PEAK DISCHARGE RATE = 11.12 CFS AT 1.500 HOURS BASIN AREA =
 0.0043 SQ. MI.

*

*

*S OFFSITE SOUTH

*

*

COMPUTE NM HYD

ID=3 HYD=B3 AREA=.00859SQ MI

PER A=0 PER B=0 PER C=5 PER D=95

TP=0.1333 HR MASS RAIN=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 32.218 CFS UNIT VOLUME = 0.9988 B = 526.28
 P60 = 2.0100

100YR-BP-SUB.OUT

AREA = 0.008161 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE
 CONSTANT, N = 4.440407
 UNIT PEAK = 1.2358 CFS UNIT VOLUME = 0.9924 B = 383.54
 P60 = 2.0100
 AREA = 0.000430 SQ MI IA = 0.35000 INCHES INF = 0.83000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=3 CODE=20

HYDROGRAPH FROM AREA B3

TIME	TIME FLOW HRS CFS	FLOW CFS	TIME	TIME FLOW HRS CFS	FLOW CFS	TIME	FLOW HRS CFS
6.000	0.000 0.1	0.0		2.000	3.7	4.000	0.1
	1.000	1.1		3.000	0.1	5.000	0.1

RUNOFF VOLUME = 2.06074 INCHES = 0.9441 ACRE-FEET
 PEAK DISCHARGE RATE = 26.08 CFS AT 1.500 HOURS BASIN AREA = 0.0086 SQ. MI.

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 *S OFFSITE EAST
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COMPUTE NM HYD ID=4 HYD=B4 AREA=.00184SQ MI

PER A=0 PER B=0 PER C=100 PER D=0
 TP=0.1333 HR MASS RAIN=-1

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046 SHAPE
 CONSTANT, N = 4.440407
 UNIT PEAK = 5.2941 CFS UNIT VOLUME = 0.9995 B = 383.54
 P60 = 2.0100
 AREA = 0.001840 SQ MI IA = 0.35000 INCHES INF = 0.83000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=4 CODE=20

HYDROGRAPH FROM AREA B4

TIME	FLOW	TIME	FLOW	TIME	FLOW
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100YR-BP-SUB.OUT

TIME	FLOW		TIME	FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	0.000	0.0		1.000	0.0	2.000	0.3
3.000	0.0						

RUNOFF VOLUME = 1.21081 INCHES = 0.1188 ACRE-FEET
 PEAK DISCHARGE RATE = 4.02 CFS AT 1.500 HOURS BASIN AREA = 0.0018 SQ. MI.

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*S ADDITION OF OFFSITE SOUTH TO BASIN 2
 ADD HYD ID=20 HYD=SOUTHB2 ID I=3 ID II=2 CODE=20
 PRINT HYD ID=20 CODE=20

HYDROGRAPH FROM AREA SOUTHB2

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	FLOW	CFS	HRS	FLOW	CFS	HRS	CFS
	HRS			HRS			
	0.000	0.0		2.000	5.1	4.000	0.1
6.000	0.2						
	1.000	1.3		3.000	0.1	5.000	0.1

RUNOFF VOLUME = 1.92121 INCHES = 1.3156 ACRE-FEET
 PEAK DISCHARGE RATE = 37.19 CFS AT 1.500 HOURS BASIN AREA = 0.0128 SQ. MI.

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*S ADDITION OF OFFSITE EAST TO BASIN 2
 ADD HYD ID=21 HYD=EASTB2 ID I=4 ID II=20 CODE=20
 PRINT HYD ID=21 CODE=20

HYDROGRAPH FROM AREA EASTB2

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	FLOW	CFS	HRS	FLOW	CFS	HRS	CFS
	HRS			HRS			
	0.000	0.0		2.000	5.4	4.000	0.1
6.000	0.2						
	1.000	1.3		3.000	0.2	5.000	0.1

RUNOFF VOLUME = 1.83216 INCHES = 1.4344 ACRE-FEET
 PEAK DISCHARGE RATE = 41.22 CFS AT 1.500 HOURS BASIN AREA = 0.0147 SQ. MI.

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100YR-BP-SUB.OUT

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*S ROUTE BASIN 2 & OFFSITE EAST & SOUTH TO POND "A". OUTFLOW BASED ON 30" NYLOPL
ROUTE RESERVOIR ID=10 HYD=PONDA INFLOW ID=21 CODE=20

OUTFLOW (CFS) STORAGE(AC-FT) ELEV (FT)

0.010	0.0000	5074.50
3.000	0.0586	5075.00
9.250	0.1190	5075.50
13.500	0.1996	5076.00
17.000	0.2897	5076.50
21.250	0.3905	5077.00
24.000	0.5269	5077.50
26.500	0.7450	5078.00

$$0.6(3.14)\sqrt{2(32.2)(3.1)}$$

$$26.6 \text{ cfs}$$



Handwritten note: 0.2 cfs @ 20h

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	5074.50	0.000	0.00
1.00	1.35	5074.55	0.006	0.29
2.00	5.40	5076.21	0.238	15.01
3.00	0.16	5074.59	0.010	0.52
4.00	0.07	5074.51	0.001	0.07
5.00	0.11	5074.51	0.002	0.10
6.00	0.16	5074.52	0.003	0.15
7.00	0.00	5074.50	0.000	0.01
8.00	0.00	5074.50	0.000	0.01
9.00	0.00	5074.50	0.000	0.01
10.00	0.00	5074.50	0.000	0.01
11.00	0.00	5074.50	0.000	0.01
12.00	0.00	5074.50	0.000	0.01
13.00	0.00	5074.50	0.000	0.01
14.00	0.00	5074.50	0.000	0.01
15.00	0.00	5074.50	0.000	0.01
16.00	0.00	5074.50	0.000	0.01
17.00	0.00	5074.50	0.000	0.01
18.00	0.00	5074.50	0.000	0.01
19.00	0.00	5074.50	0.000	0.01
20.00	0.00	5074.50	0.000	0.01
21.00	0.00	5074.50	0.000	0.01
22.00	0.00	5074.50	0.000	0.01
23.00	0.00	5074.50	0.000	0.01
24.00	0.00	5074.50	0.000	0.01
25.00	0.00	5074.50	0.000	0.01
26.00	0.00	5074.50	0.000	0.01
27.00	0.00	5074.50	0.000	0.01
28.00	0.00	5074.50	0.000	0.01
29.00	0.00	5074.50	0.000	0.01
30.00	0.00	5074.50	0.000	0.01
31.00	0.00	5074.50	0.000	0.01
32.00	0.00	5074.50	0.000	0.01
33.00	0.00	5074.50	0.000	0.01
34.00	0.00	5074.50	0.000	0.01
35.00	0.00	5074.50	0.000	0.01

Handwritten note: 10 min. avg.

100YR-BP-SUB.OUT

36.00	0.00	5074.50	0.000	0.01
37.00	0.00	5074.50	0.000	0.01
38.00	0.00	5074.50	0.000	0.01
39.00	0.00	5074.50	0.000	0.01
40.00	0.00	5074.50	0.000	0.01
41.00	0.00	5074.50	0.000	0.01
42.00	0.00	5074.50	0.000	0.01
43.00	0.00	5074.50	0.000	0.01
44.00	0.00	5074.50	0.000	0.01
45.00	0.00	5074.50	0.000	0.01
46.00	0.00	5074.50	0.000	0.01
47.00	0.00	5074.50	0.000	0.01
48.00	0.00	5074.50	0.000	0.01
49.00	0.00	5074.50	0.000	0.01
50.00	0.00	5074.50	0.000	0.01
51.00	0.00	5074.50	0.000	0.01
52.00	0.00	5074.50	0.000	0.01
53.00	0.00	5074.50	0.000	0.01
54.00	0.00	5074.50	0.000	0.01
55.00	0.00	5074.50	0.000	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
56.00	0.00	5074.50	0.000	0.01
57.00	0.00	5074.50	0.000	0.01
58.00	0.00	5074.50	0.000	0.01
59.00	0.00	5074.50	0.000	0.01
60.00	0.00	5074.50	0.000	0.01
61.00	0.00	5074.50	0.000	0.01
62.00	0.00	5074.50	0.000	0.01
63.00	0.00	5074.50	0.000	0.01
64.00	0.00	5074.50	0.000	0.01
65.00	0.00	5074.50	0.000	0.01
66.00	0.00	5074.50	0.000	0.01
67.00	0.00	5074.50	0.000	0.01
68.00	0.00	5074.50	0.000	0.01
69.00	0.00	5074.50	0.000	0.01
70.00	0.00	5074.50	0.000	0.01
71.00	0.00	5074.50	0.000	0.01
72.00	0.00	5074.50	0.000	0.01
73.00	0.00	5074.50	0.000	0.01
74.00	0.00	5074.50	0.000	0.01
75.00	0.00	5074.50	0.000	0.01
76.00	0.00	5074.50	0.000	0.01
77.00	0.00	5074.50	0.000	0.01
78.00	0.00	5074.50	0.000	0.01
79.00	0.00	5074.50	0.000	0.01
80.00	0.00	5074.50	0.000	0.01
81.00	0.00	5074.50	0.000	0.01
82.00	0.00	5074.50	0.000	0.01
83.00	0.00	5074.50	0.000	0.01
84.00	0.00	5074.50	0.000	0.01
85.00	0.00	5074.50	0.000	0.01
86.00	0.00	5074.50	0.000	0.01
87.00	0.00	5074.50	0.000	0.01
88.00	0.00	5074.50	0.000	0.01
89.00	0.00	5074.50	0.000	0.01
90.00	0.00	5074.50	0.000	0.01
91.00	0.00	5074.50	0.000	0.01
92.00	0.00	5074.50	0.000	0.01
93.00	0.00	5074.50	0.000	0.01
94.00	0.00	5074.50	0.000	0.01

100YR-BP-SUB.OUT

95.00	0.00	5074.50	0.000	0.01
96.00	0.00	5074.50	0.000	0.01
97.00	0.00	5074.50	0.000	0.01
98.00	0.00	5074.50	0.000	0.01
99.00	0.00	5074.50	0.000	0.01
100.00	0.00	5074.50	0.000	0.01
101.00	0.00	5074.50	0.000	0.01
102.00	0.00	5074.50	0.000	0.01
103.00	0.00	5074.50	0.000	0.01
104.00	0.00	5074.50	0.000	0.01
105.00	0.00	5074.50	0.000	0.01
106.00	0.00	5074.50	0.000	0.01
107.00	0.00	5074.50	0.000	0.01
108.00	0.00	5074.50	0.000	0.01
109.00	0.00	5074.50	0.000	0.01
110.00	0.00	5074.50	0.000	0.01
111.00	0.00	5074.50	0.000	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
112.00	0.00	5074.50	0.000	0.01
113.00	0.00	5074.50	0.000	0.01
114.00	0.00	5074.50	0.000	0.01
115.00	0.00	5074.50	0.000	0.01
116.00	0.00	5074.50	0.000	0.01
117.00	0.00	5074.50	0.000	0.01
118.00	0.00	5074.50	0.000	0.01
119.00	0.00	5074.50	0.000	0.01
120.00	0.00	5074.50	0.000	0.01
121.00	0.00	5074.50	0.000	0.01
122.00	0.00	5074.50	0.000	0.01
123.00	0.00	5074.50	0.000	0.01
124.00	0.00	5074.50	0.000	0.01
125.00	0.00	5074.50	0.000	0.01
126.00	0.00	5074.50	0.000	0.01
127.00	0.00	5074.50	0.000	0.01
128.00	0.00	5074.50	0.000	0.01
129.00	0.00	5074.50	0.000	0.01
130.00	0.00	5074.50	0.000	0.01
131.00	0.00	5074.50	0.000	0.01
132.00	0.00	5074.50	0.000	0.01
133.00	0.00	5074.50	0.000	0.01
134.00	0.00	5074.50	0.000	0.01
135.00	0.00	5074.50	0.000	0.01
136.00	0.00	5074.50	0.000	0.01
137.00	0.00	5074.50	0.000	0.01
138.00	0.00	5074.50	0.000	0.01
139.00	0.00	5074.50	0.000	0.01
140.00	0.00	5074.50	0.000	0.01
141.00	0.00	5074.50	0.000	0.01
142.00	0.00	5074.50	0.000	0.01
143.00	0.00	5074.50	0.000	0.01
144.00	0.00	5074.50	0.000	0.01
145.00	0.00	5074.50	0.000	0.01
146.00	0.00	5074.50	0.000	0.01
147.00	0.00	5074.50	0.000	0.01
148.00	0.00	5074.50	0.000	0.01
149.00	0.00	5074.50	0.000	0.01
150.00	0.00	5074.50	0.000	0.01
151.00	0.00	5074.50	0.000	0.01
152.00	0.00	5074.50	0.000	0.01
153.00	0.00	5074.50	0.000	0.01

100YR-BP-SUB.OUT				
154.00	0.00	5074.50	0.000	0.01
155.00	0.00	5074.50	0.000	0.01
156.00	0.00	5074.50	0.000	0.01
157.00	0.00	5074.50	0.000	0.01
158.00	0.00	5074.50	0.000	0.01
159.00	0.00	5074.50	0.000	0.01
160.00	0.00	5074.50	0.000	0.01
161.00	0.00	5074.50	0.000	0.01
162.00	0.00	5074.50	0.000	0.01
163.00	0.00	5074.50	0.000	0.01
164.00	0.00	5074.50	0.000	0.01
165.00	0.00	5074.50	0.000	0.01
166.00	0.00	5074.50	0.000	0.01
167.00	0.00	5074.50	0.000	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
168.00	0.00	5074.50	0.000	0.01
169.00	0.00	5074.50	0.000	0.01
170.00	0.00	5074.50	0.000	0.01
171.00	0.00	5074.50	0.000	0.01
172.00	0.00	5074.50	0.000	0.01
173.00	0.00	5074.50	0.000	0.01
174.00	0.00	5074.50	0.000	0.01
175.00	0.00	5074.50	0.000	0.01
176.00	0.00	5074.50	0.000	0.01
177.00	0.00	5074.50	0.000	0.01
178.00	0.00	5074.50	0.000	0.01
179.00	0.00	5074.50	0.000	0.01
180.00	0.00	5074.50	0.000	0.01
181.00	0.00	5074.50	0.000	0.01
182.00	0.00	5074.50	0.000	0.01
183.00	0.00	5074.50	0.000	0.01
184.00	0.00	5074.50	0.000	0.01
185.00	0.00	5074.50	0.000	0.01
186.00	0.00	5074.50	0.000	0.01
187.00	0.00	5074.50	0.000	0.01
188.00	0.00	5074.50	0.000	0.01
189.00	0.00	5074.50	0.000	0.01
190.00	0.00	5074.50	0.000	0.01
191.00	0.00	5074.50	0.000	0.01
192.00	0.00	5074.50	0.000	0.01
193.00	0.00	5074.50	0.000	0.01
194.00	0.00	5074.50	0.000	0.01
195.00	0.00	5074.50	0.000	0.01
196.00	0.00	5074.50	0.000	0.01
197.00	0.00	5074.50	0.000	0.01
198.00	0.00	5074.50	0.000	0.01
199.00	0.00	5074.50	0.000	0.01

PEAK DISCHARGE = 22.796 CFS - PEAK OCCURS AT HOUR 1.65
 MAXIMUM WATER SURFACE ELEVATION = 5077.281
 MAXIMUM STORAGE = 0.4672 AC-FT INCREMENTAL TIME= 0.050000HRS

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*S ADDITION OF POND "A" TO BASIN 1.

ADD HYD ID=22 HYD=PAB1 ID I=1 ID II=10 CODE=20

PRINT HYD ID=22 CODE=20

HYDROGRAPH FROM AREA PAB1

100YR-BP-SUB.OUT

TIME	TIME FLOW HRS CFS	FLOW CFS	TIME	TIME FLOW HRS CFS	FLOW CFS	TIME HRS	FLOW CFS
	0.000	0.0		40.000	0.0	80.000	0.0
120.000	1.000	0.6	160.000	41.000	0.0	81.000	0.0
121.000	2.000	17.4	161.000	42.000	0.0	82.000	0.0
122.000	3.000	0.6	162.000	43.000	0.0	83.000	0.0
123.000	4.000	0.1	163.000	44.000	0.0	84.000	0.0
124.000	5.000	0.1	164.000	45.000	0.0	85.000	0.0
125.000	6.000	0.2	165.000	46.000	0.0	86.000	0.0
126.000	7.000	0.0	166.000	47.000	0.0	87.000	0.0
127.000	8.000	0.0	167.000	48.000	0.0	88.000	0.0
128.000	9.000	0.0	168.000	49.000	0.0	89.000	0.0
129.000	10.000	0.0	169.000	50.000	0.0	90.000	0.0
130.000	11.000	0.0	170.000	51.000	0.0	91.000	0.0
131.000	12.000	0.0	171.000	52.000	0.0	92.000	0.0
132.000	13.000	0.0	172.000	53.000	0.0	93.000	0.0
133.000	14.000	0.0	173.000	54.000	0.0	94.000	0.0
134.000	15.000	0.0	174.000	55.000	0.0	95.000	0.0
135.000	16.000	0.0	175.000	56.000	0.0	96.000	0.0
136.000	17.000	0.0	176.000	57.000	0.0	97.000	0.0
137.000	18.000	0.0	177.000	58.000	0.0	98.000	0.0
138.000	19.000	0.0	178.000	59.000	0.0	99.000	0.0
139.000	20.000	0.0	179.000	60.000	0.0	100.000	0.0
140.000	21.000	0.0	180.000	61.000	0.0	101.000	0.0
141.000	22.000	0.0	181.000	62.000	0.0	102.000	0.0
142.000	23.000	0.0	182.000	63.000	0.0	103.000	0.0
143.000	24.000	0.0	183.000	64.000	0.0	104.000	0.0
144.000	25.000	0.0	184.000	65.000	0.0	105.000	0.0
145.000	26.000	0.0	185.000	66.000	0.0	106.000	0.0
146.000	27.000	0.0	186.000	67.000	0.0	107.000	0.0
147.000	28.000	0.0	187.000	68.000	0.0	108.000	0.0
148.000			188.000				

100YR-BP-SUB.OUT							
149.000	29.000	0.0	189.000	69.000	0.0	109.000	0.0
150.000	30.000	0.0	190.000	70.000	0.0	110.000	0.0
151.000	31.000	0.0	191.000	71.000	0.0	111.000	0.0
152.000	32.000	0.0	192.000	72.000	0.0	112.000	0.0
153.000	33.000	0.0	193.000	73.000	0.0	113.000	0.0
154.000	34.000	0.0	194.000	74.000	0.0	114.000	0.0
155.000	35.000	0.0	195.000	75.000	0.0	115.000	0.0
156.000	36.000	0.0	196.000	76.000	0.0	116.000	0.0
157.000	37.000	0.0	197.000	77.000	0.0	117.000	0.0
158.000	38.000	0.0	198.000	78.000	0.0	118.000	0.0
159.000	39.000	0.0	199.000	79.000	0.0	119.000	0.0

RUNOFF VOLUME = 1.77215 INCHES = 2.3430 ACRE-FeET
 PEAK DISCHARGE RATE = 44.13 CFS AT 1.550 HOURS BASIN AREA = 0.0248 SQ. MI.

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*S ROUTE BASIN 1 TO POND "B". OUTFLOW BASED ON WEIR CALCULATIONS.
 ROUTE RESERVOIR ID=11 HYD=PONDB INFLOW ID=22 CODE=20

OUTFLOW (CFS)	STORAGE(AC-FT)	ELEV (FT)
0.010	0.0001	5070.00
0.015	0.0154	5070.50
0.020	0.0425	5071.00
7.495	0.0694	5071.50
21.200	0.1004	5072.00
38.947	0.1358	5072.50
59.963	0.1757	5073.00

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	5069.00	-0.031	0.00
1.00	0.56	5070.08	0.003	0.01
2.00	17.40	5071.90	0.094	18.55
3.00	0.61	5071.05	0.045	0.70
4.00	0.09	5071.00	0.043	0.09
5.00	0.12	5071.01	0.043	0.12
6.00	0.18	5071.01	0.043	0.18
7.00	0.01	5071.00	0.042	0.02

100YR-BP-SUB.OUT				
8.00	0.01	5070.98	0.042	0.02
9.00	0.01	5070.97	0.041	0.02
10.00	0.01	5070.95	0.040	0.02
11.00	0.01	5070.94	0.039	0.02
12.00	0.01	5070.92	0.038	0.02
13.00	0.01	5070.91	0.038	0.02
14.00	0.01	5070.90	0.037	0.02
15.00	0.01	5070.88	0.036	0.02
16.00	0.01	5070.87	0.035	0.02
17.00	0.01	5070.86	0.035	0.02
18.00	0.01	5070.84	0.034	0.02
19.00	0.01	5070.83	0.033	0.02
20.00	0.01	5070.82	0.033	0.02
21.00	0.01	5070.81	0.032	0.02
22.00	0.01	5070.79	0.031	0.02
23.00	0.01	5070.78	0.031	0.02
24.00	0.01	5070.77	0.030	0.02
25.00	0.01	5070.76	0.029	0.02
26.00	0.01	5070.75	0.029	0.02
27.00	0.01	5070.73	0.028	0.02
28.00	0.01	5070.72	0.028	0.02
29.00	0.01	5070.71	0.027	0.02
30.00	0.01	5070.70	0.026	0.02
31.00	0.01	5070.69	0.026	0.02
32.00	0.01	5070.68	0.025	0.02
33.00	0.01	5070.67	0.025	0.02
34.00	0.01	5070.66	0.024	0.02
35.00	0.01	5070.65	0.024	0.02
36.00	0.01	5070.64	0.023	0.02
37.00	0.01	5070.63	0.023	0.02
38.00	0.01	5070.62	0.022	0.02
39.00	0.01	5070.61	0.021	0.02
40.00	0.01	5070.60	0.021	0.02
41.00	0.01	5070.59	0.020	0.02
42.00	0.01	5070.58	0.020	0.02
43.00	0.01	5070.58	0.020	0.02
44.00	0.01	5070.57	0.019	0.02
45.00	0.01	5070.56	0.019	0.02
46.00	0.01	5070.55	0.018	0.02
47.00	0.01	5070.54	0.018	0.02
48.00	0.01	5070.53	0.017	0.02
49.00	0.01	5070.53	0.017	0.02
50.00	0.01	5070.52	0.016	0.02
51.00	0.01	5070.51	0.016	0.02
52.00	0.01	5070.50	0.016	0.02
53.00	0.01	5070.49	0.015	0.01
54.00	0.01	5070.48	0.015	0.01
55.00	0.01	5070.46	0.014	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
56.00	0.01	5070.45	0.014	0.01
57.00	0.01	5070.44	0.014	0.01
58.00	0.01	5070.43	0.013	0.01
59.00	0.01	5070.42	0.013	0.01
60.00	0.01	5070.41	0.013	0.01
61.00	0.01	5070.40	0.012	0.01
62.00	0.01	5070.38	0.012	0.01
63.00	0.01	5070.37	0.012	0.01
64.00	0.01	5070.36	0.011	0.01
65.00	0.01	5070.35	0.011	0.01
66.00	0.01	5070.35	0.011	0.01

100YR-BP-SUB.OUT				
67.00	0.01	5070.34	0.010	0.01
68.00	0.01	5070.33	0.010	0.01
69.00	0.01	5070.32	0.010	0.01
70.00	0.01	5070.31	0.010	0.01
71.00	0.01	5070.30	0.009	0.01
72.00	0.01	5070.29	0.009	0.01
73.00	0.01	5070.29	0.009	0.01
74.00	0.01	5070.28	0.009	0.01
75.00	0.01	5070.27	0.008	0.01
76.00	0.01	5070.26	0.008	0.01
77.00	0.01	5070.26	0.008	0.01
78.00	0.01	5070.25	0.008	0.01
79.00	0.01	5070.24	0.008	0.01
80.00	0.01	5070.24	0.007	0.01
81.00	0.01	5070.23	0.007	0.01
82.00	0.01	5070.22	0.007	0.01
83.00	0.01	5070.22	0.007	0.01
84.00	0.01	5070.21	0.007	0.01
85.00	0.01	5070.21	0.006	0.01
86.00	0.01	5070.20	0.006	0.01
87.00	0.01	5070.20	0.006	0.01
88.00	0.01	5070.19	0.006	0.01
89.00	0.01	5070.19	0.006	0.01
90.00	0.01	5070.18	0.006	0.01
91.00	0.01	5070.18	0.005	0.01
92.00	0.01	5070.17	0.005	0.01
93.00	0.01	5070.17	0.005	0.01
94.00	0.01	5070.16	0.005	0.01
95.00	0.01	5070.16	0.005	0.01
96.00	0.01	5070.15	0.005	0.01
97.00	0.01	5070.15	0.005	0.01
98.00	0.01	5070.15	0.005	0.01
99.00	0.01	5070.14	0.004	0.01
100.00	0.01	5070.14	0.004	0.01
101.00	0.01	5070.13	0.004	0.01
102.00	0.01	5070.13	0.004	0.01
103.00	0.01	5070.13	0.004	0.01
104.00	0.01	5070.12	0.004	0.01
105.00	0.01	5070.12	0.004	0.01
106.00	0.01	5070.12	0.004	0.01
107.00	0.01	5070.11	0.004	0.01
108.00	0.01	5070.11	0.003	0.01
109.00	0.01	5070.11	0.003	0.01
110.00	0.01	5070.10	0.003	0.01
111.00	0.01	5070.10	0.003	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
112.00	0.01	5070.10	0.003	0.01
113.00	0.01	5070.10	0.003	0.01
114.00	0.01	5070.09	0.003	0.01
115.00	0.01	5070.09	0.003	0.01
116.00	0.01	5070.09	0.003	0.01
117.00	0.01	5070.09	0.003	0.01
118.00	0.01	5070.08	0.003	0.01
119.00	0.01	5070.08	0.003	0.01
120.00	0.01	5070.08	0.003	0.01
121.00	0.01	5070.08	0.002	0.01
122.00	0.01	5070.08	0.002	0.01
123.00	0.01	5070.07	0.002	0.01
124.00	0.01	5070.07	0.002	0.01
125.00	0.01	5070.07	0.002	0.01

100YR-BP-SUB.OUT				
126.00	0.01	5070.07	0.002	0.01
127.00	0.01	5070.07	0.002	0.01
128.00	0.01	5070.06	0.002	0.01
129.00	0.01	5070.06	0.002	0.01
130.00	0.01	5070.06	0.002	0.01
131.00	0.01	5070.06	0.002	0.01
132.00	0.01	5070.06	0.002	0.01
133.00	0.01	5070.06	0.002	0.01
134.00	0.01	5070.06	0.002	0.01
135.00	0.01	5070.05	0.002	0.01
136.00	0.01	5070.05	0.002	0.01
137.00	0.01	5070.05	0.002	0.01
138.00	0.01	5070.05	0.002	0.01
139.00	0.01	5070.05	0.002	0.01
140.00	0.01	5070.05	0.002	0.01
141.00	0.01	5070.05	0.001	0.01
142.00	0.01	5070.04	0.001	0.01
143.00	0.01	5070.04	0.001	0.01
144.00	0.01	5070.04	0.001	0.01
145.00	0.01	5070.04	0.001	0.01
146.00	0.01	5070.04	0.001	0.01
147.00	0.01	5070.04	0.001	0.01
148.00	0.01	5070.04	0.001	0.01
149.00	0.01	5070.04	0.001	0.01
150.00	0.01	5070.04	0.001	0.01
151.00	0.01	5070.03	0.001	0.01
152.00	0.01	5070.03	0.001	0.01
153.00	0.01	5070.03	0.001	0.01
154.00	0.01	5070.03	0.001	0.01
155.00	0.01	5070.03	0.001	0.01
156.00	0.01	5070.03	0.001	0.01
157.00	0.01	5070.03	0.001	0.01
158.00	0.01	5070.03	0.001	0.01
159.00	0.01	5070.03	0.001	0.01
160.00	0.01	5070.03	0.001	0.01
161.00	0.01	5070.03	0.001	0.01
162.00	0.01	5070.03	0.001	0.01
163.00	0.01	5070.02	0.001	0.01
164.00	0.01	5070.02	0.001	0.01
165.00	0.01	5070.02	0.001	0.01
166.00	0.01	5070.02	0.001	0.01
167.00	0.01	5070.02	0.001	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
168.00	0.01	5070.02	0.001	0.01
169.00	0.01	5070.02	0.001	0.01
170.00	0.01	5070.02	0.001	0.01
171.00	0.01	5070.02	0.001	0.01
172.00	0.01	5070.02	0.001	0.01
173.00	0.01	5070.02	0.001	0.01
174.00	0.01	5070.02	0.001	0.01
175.00	0.01	5070.02	0.001	0.01
176.00	0.01	5070.02	0.001	0.01
177.00	0.01	5070.02	0.001	0.01
178.00	0.01	5070.02	0.001	0.01
179.00	0.01	5070.02	0.001	0.01
180.00	0.01	5070.02	0.001	0.01
181.00	0.01	5070.02	0.001	0.01
182.00	0.01	5070.02	0.001	0.01
183.00	0.01	5070.01	0.001	0.01
184.00	0.01	5070.01	0.001	0.01

100YR-BP-SUB.OUT				
185.00	0.01	5070.01	0.001	0.01
186.00	0.01	5070.01	0.001	0.01
187.00	0.01	5070.01	0.001	0.01
188.00	0.01	5070.01	0.000	0.01
189.00	0.01	5070.01	0.000	0.01
190.00	0.01	5070.01	0.000	0.01
191.00	0.01	5070.01	0.000	0.01
192.00	0.01	5070.01	0.000	0.01
193.00	0.01	5070.01	0.000	0.01
194.00	0.01	5070.01	0.000	0.01
195.00	0.01	5070.01	0.000	0.01
196.00	0.01	5070.01	0.000	0.01
197.00	0.01	5070.01	0.000	0.01
198.00	0.01	5070.01	0.000	0.01
199.00	0.01	5070.01	0.000	0.01

PEAK DISCHARGE = 42.833 CFS - PEAK OCCURS AT HOUR 1.60
 MAXIMUM WATER SURFACE ELEVATION = 5072.592
 MAXIMUM STORAGE = 0.1432 AC-FT INCREMENTAL TIME= 0.050000HRS

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FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 08:54:28