



# 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)

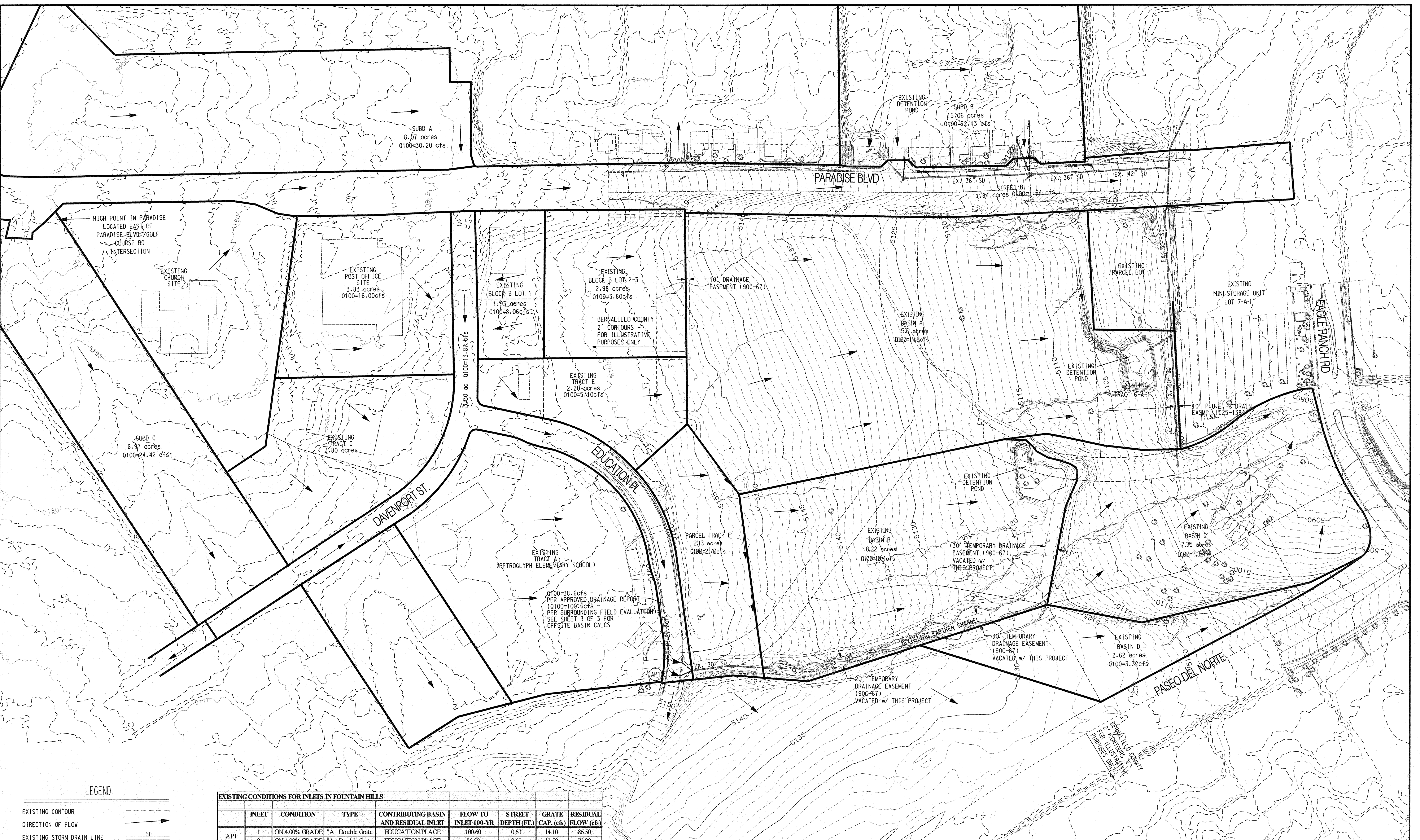
WAS A PRE-DESIGN CONFERENCE ATTENDED: \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Copy Provided

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:

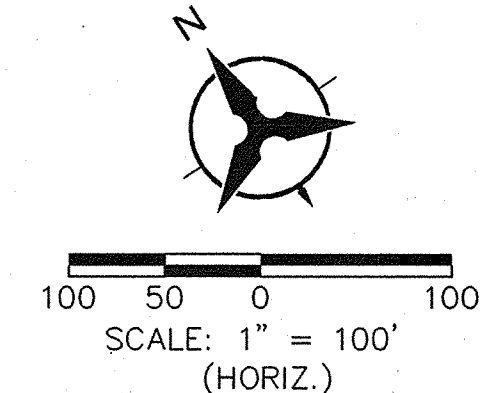
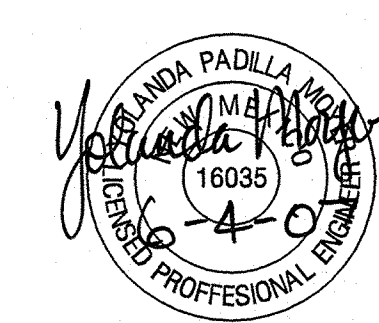
1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for 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





EXISTING CONDITIONS FOR INLETS IN FOUNTAIN HILLS								
	INLET	CONDITION	TYPE	CONTRIBUTING BASIN AND RESIDUAL INLET	FLOW TO INLET 100-YR	STREET DEPTH (FT.)	GRATE CAP. (cfs)	RESIDUAL FLOW (cfs)
API	1	ON 4.00% GRADE	"A" Double Grate	EDUCATION PLACE	100.60	0.63	14.10	86.50
	2	ON 4.00% GRADE	"A" Double Grate	EDUCATION PLACE	86.50	0.60	13.50	73.00

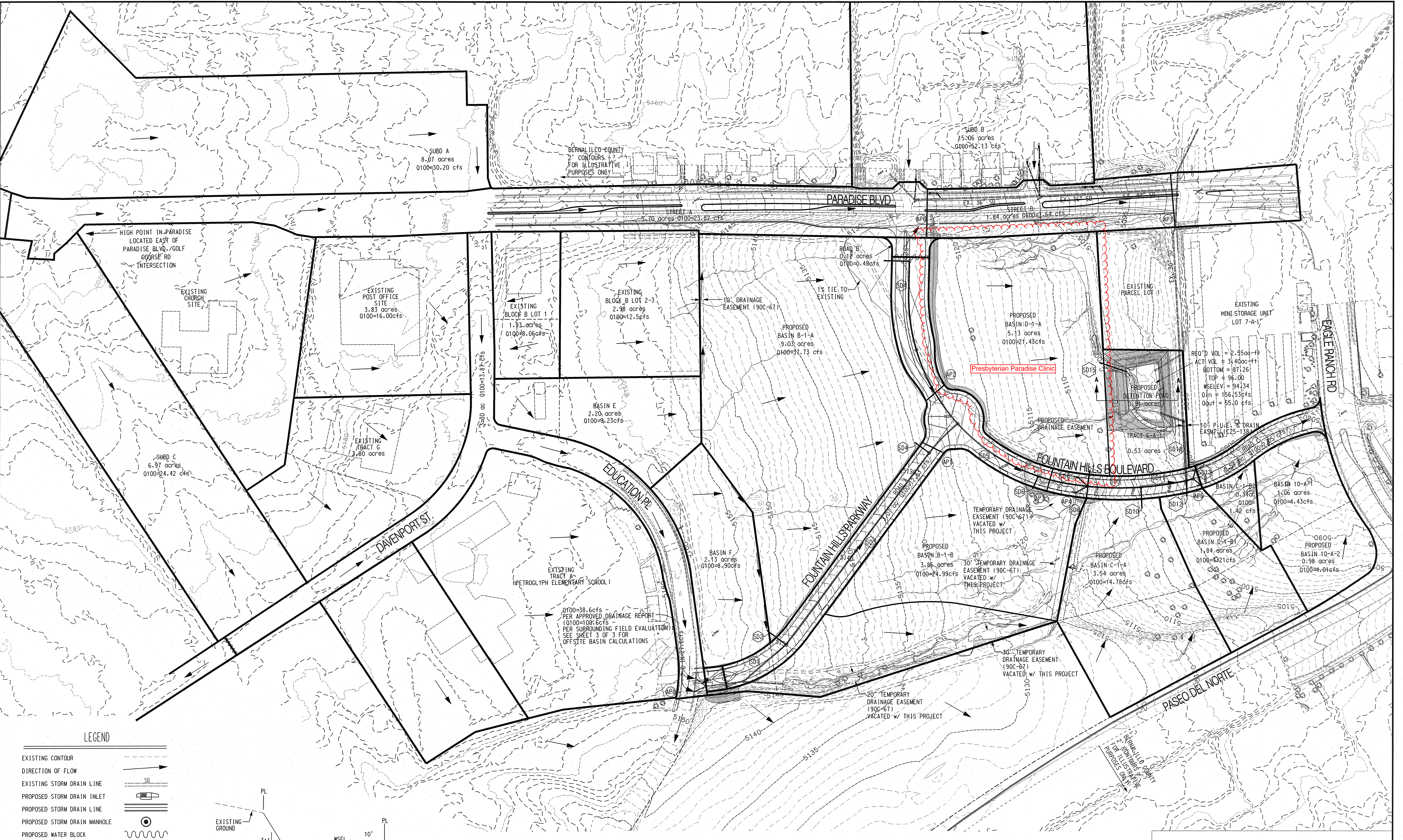
**FOUNTAIN HILLS**  
**GRADING & DRAINAGE MANAGEMENT PLAN**  
**EXISTING BASINS MAP**  
ALBUQUERQUE, NEW MEXICO  
JUNE, 2007



**Bohannon & Huston**  
Court yard | 7500 Jefferson St. NE Albuquerque, NM 87109-4335  
ENGINEERING & SPATIAL DATA & ADVANCED TECHNOLOGIES

SHEET 1 OF 3

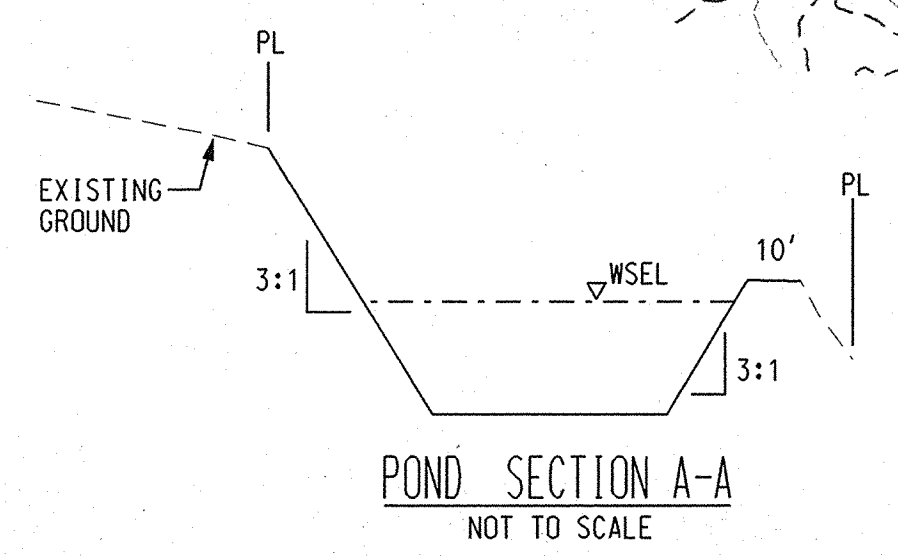




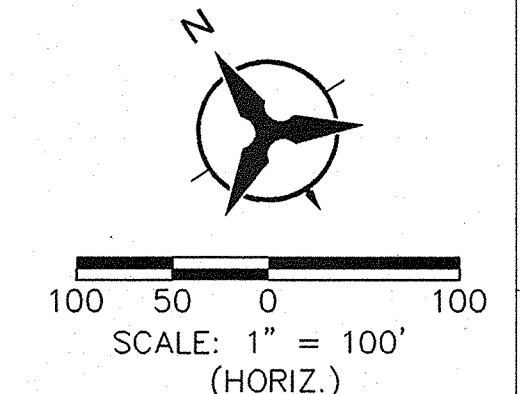
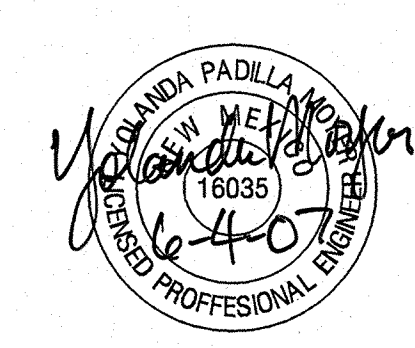
**LEGEND**

- EXISTING CONTOUR
- DIRECTION OF FLOW
- EXISTING STORM DRAIN LINE
- PROPOSED STORM DRAIN INLET
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED WATER BLOCK
- POND CONTOUR

NOTE:  
PROPOSED ROADWAY GRADES ARE APPROXIMATE  
AND ARE INTENDED TO ILLUSTRATE GRADING  
AND DRAINAGE CONCEPTS ONLY



**FOUNTAIN HILLS**  
**GRADING & DRAINAGE MANAGEMENT PLAN**  
**PROPOSED BASIN MAP**  
ALBUQUERQUE, NEW MEXICO  
JUNE, 2007



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**SHEET 2 OF 3**



SUMMARY OF ROADWAY CAPACITY ANALYSIS FOR FOUNTAIN HILLS										
Fountain Hills Parkway										
Location	Roadway Grade (%)	Roadway Cross-slope (%)	Q (100 YR) in roadway (cfs)	Curb Type	Depth of water in roadway (ft.)	Velocity of storm water in roadway (ft/s)	V <sup>2</sup> /2*g	EGL	ROW Elevation (ft.)	Comments
AP1	3.74	2.00	6.38	STD	0.27	3.59	0.20	0.47	0.85	OK
Fountain Hills Blvd.										
Location	Roadway Grade (%)	Roadway Cross-slope (%)	Q (100 YR) in roadway (cfs)	Curb Type	Depth of water in roadway (ft.)	Velocity of storm water in roadway (ft/s)	V <sup>2</sup> /2*g	EGL	ROW Elevation (ft.)	Comments
AP2	0.60	2.00	6.74	STD	0.35	1.78	0.05	0.4	0.85	OK
AP3	2.63	2.00	19.99	STD	0.40	4.15	0.27	0.65	0.85	OK
AP4	5.35	2.00	25.53	STD	0.38	5.67	0.50	0.85	0.85	OK
AP5	5.35	2.00	15.39	STD	0.33	5.06	0.40	0.73	0.85	OK
Paradise Blvd.										
Location	Roadway Grade (%)	Roadway Cross-slope (%)	Q (100 YR) in roadway (cfs)	Curb Type	Depth of water in roadway (ft.)	Velocity of storm water in roadway (ft/s)	V <sup>2</sup> /2*g	EGL	ROW Elevation (ft.)	Comments
AP6	*north half of road - Q10yr=7.8cfs provides a depth=0.31' < 0.45 for one free lane of traffic									
AP6**	5.00	2.00	11.99	STD	0.35	4.93	0.38	0.73	0.85	OK
**south half of road - Q10yr=10.23cfs provides a depth=0.32' < 0.45 for one free lane of traffic										
AP7	*north half of road - Q10yr=19.0cfs provides a depth=0.38' < 0.45 for one free lane of traffic									
AP7**	6.66	2.00	15.79	STD	0.36	5.80	0.52	0.88	0.85	OK
**south half of road - Q10yr=10.23cfs provides a depth=0.32' < 0.45 for one free lane of traffic										
Note:										
By observation, the product of the depth times the velocity is below 6.5 for the 100-year design storm, therefore for the 10-year design storm the product of the depth times the velocity will be well below the recommended value of 6.5										

DEVELOPED CONDITIONS FOR INLETS IN FOUNTAIN HILLS								
	INLET	CONDITION	TYPE	CONTRIBUTING BASIN AND RESIDUAL INLET	FLOW TO INLET 100-YR	STREET DEPTH (FT.)	GRATE CAP. (cfs)	RESIDUAL FLOW (cfs)
AP4	1	ON 5.35% GRADE	"A" Double Grate	FOUNTAIN HILLS BLVD	12.76	0.38	7.90	4.86
	2	ON 5.35% GRADE	"A" Double Grate	FOUNTAIN HILLS BLVD	12.76	0.38	7.90	4.86
AP5	3	ON 5.35% GRADE	"A" Double Grate	FOUNTAIN HILLS BLVD	7.70	0.33	5.90	1.80
	4	ON 5.35% GRADE	"A" Double Grate	FOUNTAIN HILLS BLVD	7.70	0.33	5.90	1.80

STORM DRAIN ANALYSIS FOR FOUNTAIN HILLS						
PIPE NO.	PIPE LOCATION	SIZE/TYPE	LENGTH (ft.)	SLOPE (%)	PROPOSED Q (100-YR, cfs)	PIPE CAPACITY (100-YR, CFS)
SD1	EXISTING	30" RCP	228.00	1.10	27.60	43.02
SD2	TRACT F	18" RCP	58.00	1.00	7.12	10.50
SD3	TRUNKLINE 1	30" RCP	688.00	3.74	34.72	79.32
SD4	TRACT B-1-A	30" RCP	478.00	1.00	29.91	41.02
SD5	TRUNKLINE 2	30" RCP	386.00	2.63	64.63	66.51
SD6	TRACT B-1-B	30" RCP	57.00	1.00	19.99	41.02
SD7	TRUNKLINE 3	30" RCP	128.00	5.35	84.62	94.87
SD8	INLETS	18" RCP	32.00	1.00	7.90	10.50
SD9	TRUNKLINE 4	36" RCP	134.00	5.35	100.42	154.27
SD10	TRACT C-1-A	18" RCP	59.00	1.00	11.82	10.50
SD11	TRUNKLINE 5	36" RCP	101.00	5.35	112.25	154.27
SD12	TRACT C-1-B1	18" RCP	55.00	1.00	5.77	10.50
SD13	INLETS	18" RCP	84.00	1.00	5.90	10.50
SD14	TRUNKLINE 6	42" RCP	294.00	2.20	129.82	149.23
SD15	TRACT D-1-A	24" RCP	27.74	1.50	21.73	27.72

DRAINAGE BASIN CALCULATIONS FOR FOUNTAIN HILLS									
BASIN I.D.	AREA (AC)	UNITS #		% LAND TREATMENT				DISCHARGE (CFS)	
				A	B	C	D	10 YR*	100YR*
HYRDOLOGICAL VOLUMETRIC & DISCHARGE DATA (EXISTING CALCULATED)									
BASIN A	15.60			100.0%	0.0%	0.0%	0.0%	3.9	19.79
BASIN B	8.22			100.0%	0.0%	0.0%	0.0%	2.1	10.43
BASIN C	7.35			100.0%	0.0%	0.0%	0.0%	1.8	9.32
BASIN D	2.62			100.0%	0.0%	0.0%	0.0%	0.7	3.32
BLOCK B LOT 2-3	2.98			100.0%	0.0%	0.0%	0.0%	0.7	3.78
TRACT E	2.20			60.0%	5.0%	5.0%	30.0%	2.5	5.10
TRACT F	2.13			100.0%	0.0%	0.0%	0.0%	0.5	2.70
TOTAL	41.10							12.3	54.46
HYRDOLOGICAL VOLUMETRIC & DISCHARGE DATA (DEVELOPED)									
ONSITE									
B-1-A	9.03			0.0%	5.0%	5.0%	90.0%	24.5	37.73
B-1-B	5.98			0.0%	5.0%	5.0%	90.0%	16.2	24.99
C-1-A	3.54			0.0%	5.0%	5.0%	90.0%	9.6	14.78
C-1-B1	1.73			0.0%	5.0%	5.0%	90.0%	4.7	7.21
C-1-B2	0.34			0.0%	5.0%	5.0%	90.0%	0.9	1.42
D-1-A	5.13			0.0%	5.0%	5.0%	90.0%	13.9	21.43
6-A-1	1.44			0.0%	5.0%	5.0%	90.0%	3.9	6.02
E	2.20			0.0%	5.0%	5.0%	90.0%	6.0	9.19
F	2.13			0.0%	5.0%	5.0%	90.0%	5.8	8.90
10-A-1	1.06			0.0%	5.0%	5.0%	90.0%	2.9	4.43
10-A-2	0.98			0.0%	5.0%	5.0%	90.0%	2.6	4.08
ROAD A	3.07			0.0%	5.0%	5.0%	90.0%	8.3	12.83
ROAD B	0.12			0.0%	5.0%	5.0%	90.0%	0.3	0.48
ROAD C	0.49			0.0%	5.0%	5.0%	90.0%	1.3	2.05
SUBTOTAL	37.23	0.00						100.94	155.5
OFFSITE									
TRACT A	6.91	0		0.0%	25.0%	25.0%	50.0%	13.8	23.55
BLOCK B LOT 1	1.93	0		0.0%	5.0%	5.0%	90.0%	5.2	8.06
TRACT G	3.80	11		0.0%	12.5%	12.5%	75.0%	9.3	14.78
POST OFFICE	3.83	0		0.0%	5.0%	5.0%	90.0%	10.4	16.00
SUBD C	6.97	40		0.0%	22.5%	22.5%	55.0%	14.6	24.42
EDUCATION PL	3.30	0		0.0%	5.0%	5.0%	90.0%	9.0	13.81
SUBTOTAL	26.74	51						62.3	100.6
PARADISE BLVD.									
STREET A	5.70	0		0.0%	5.0%	5.0%	90.0%	15.5	23.82
STREET B	1.84	0		0.0%	5.0%	5.0%	90.0%	5.0	7.69
SUBD A	8.70	48		0.0%	23.4%	23.4%	53.3%	17.9	30.20
SUBD B	15.06	82		0.0%	23.6%	23.6%	52.8%	30.9	52.13
SUBTOTAL	31.30	130						69.3	113.8
*010 AND 0100 CALCULATED BY RATIONAL METHOD, SECTION 22.2 OF THE DPM									

DRAINAGE MANAGEMENT PLAN

I. PURPOSE  
The purpose of this submittal is to present the grading and drainage management plan for Fountain Hills Development. The project consists of approximately 38 acres of land to be developed for commercial use.

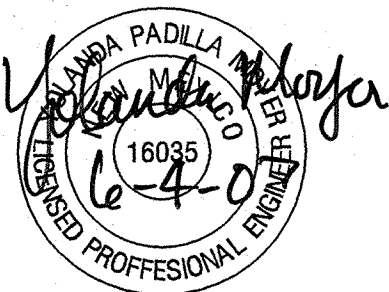
II. SITE LOCATION AND CHARACTERISTICS  
The project is south of Paradise Blvd and north of Paseo Del Norte and bordered to the west by Education Place and to the east by Eagle Ranch Road. The site is currently undeveloped tracts, with native shrubs and grasses.

III. EXISTING HYDRAULIC AND HYDROLOGIC CONDITIONS  
In the existing conditions, the site drains across relatively steep terrain towards the east. Currently offsite flow from the west flows through Education Pl and is captured by an existing storm drain system (Q100=27.6cfs) and conveyed to the drainage easement bordering the southern edge of the property, which directs the flow to a detention pond through an earthen channel with a series of check dams. Existing Tracts E and F drain to the east, into ponds on the west side of Tract B-1-A, contrary to the Drainage Report for Albuquerque West Unit 1 Improvements, Oct. 1990; however these tracts are not part of this submittal. The existing northern basin (Basin A - 15.6 ac, Q100=19.8cfs), along with offsite basin flow (Block B Lot 2-3 – 2.98 acres, Q100=3.80cfs), currently drains across the site to a detention pond in existing Tract 6-A-1. The southwestern basin (Basin B - 8.22 ac, Q100=10.4cfs) presently drains to a detention pond at the northeastern corner of the basin. The remaining portion of the site (Basin C - 7.35ac, Q100=9.3cfs and Basin D – 2.62 ac, Q100=3.32cfs), located in the southeast corner of the site, drains to the east and directly into Eagle Ranch Road.

V. PROPOSED HYDRAULIC AND HYDROLOGIC CONDITIONS  
In the proposed improvements, the west portion of the site (Basins B-1-A, B-1-B, C-1-A, C-1-B1, D-1-A, E and F) will drain through the proposed roadways or storm drains and ultimately to a permanent detention pond located in existing Tract 6-A-1. The existing earthen channel with check dams and the detention pond in Tract B-1-B will be removed and replaced with a storm drain in Fountain Hills Parkway and Fountain Hills Blvd. The developed tracts west of the proposed detention pond (Basins B-1-A, B-1-B, C-1-A, C-1-B1, D-1-A, E and F) will be assumed to discharge 20% of developed flows directly into the adjacent roadways, where it will be collected by proposed inlets in Fountain Hills Boulevard. The remaining 80% will be captured by proposed storm drain stubs. Runoff from Fountain Hills Boulevard and Fountain Hills Parkway will flow through the streets to inlets, which will tie to the proposed storm drain; see Summary of Roadway Capacities for Fountain Hills and Developed Conditions for Inlets in Fountain Hills. The proposed storm drain will outlet to the proposed detention pond in existing Tract 6-A-1; see Storm Drain Analysis for Fountain Hills. The proposed detention pond will be sized to accept a developed flow of 156.53cfs, based on AHYMO methodology, with a controlled outlet of 55cfs, in accordance with the approved grading and drainage plan, COA Hydrology File C12-D3B mentioned above. The minimum required volume is 2.50 ac-ft with the actual volume being 3.14 ac-ft; see AHYMO Program Summary Table. The east side of the site (Basins 10-A-1 and 10-A-2 and C-1-B2), along with the remaining portion of Fountain Hills Boulevard (0.49ac, Q100=2.05cfs) and the residual from the inlets (Q=3.59cfs), will flow through the street and directly into Eagle Ranch Rd (Q100=15.57cfs).

The south half of Paradise Blvd., fronting the Fountain Hills site, has been analyzed for the 100-yr and 10-yr storm capacities, assuming proposed street width of 30' F-F minimum (south side of road will be widened to include new curb and gutter, as well as new median curb and gutter, as part of this development); see Summary of Roadway Capacities for Fountain Hills. The north half of the street has been analyzed for the 10-yr storm capacities, one lane free. The proposed roadway is adequate to handle these conditions.

V. CONCLUSION  
This plan provides hydrologic and hydraulic considerations of Fountain Hills Development. These flows can be safely conveyed by the improvements proposed in this plan to the existing storm systems, which have adequate capacity to accept such runoff. With the exception of existing Tracts E and F which drain to the east, to ponds on the west side of Tract B-1-A, contrary to the approved Drainage Report for Albuquerque West Unit 1 Improvements, Oct. 1990; this submittal is in compliance with existing approved grading and drainage plans. Tracts E and F are not part of this submittal. This information provides adequate supporting documentation and guidance for approval of this plan.





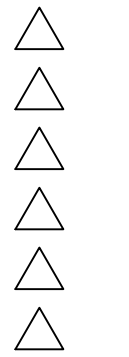


PROJECT

**PMG Paradise Clinic**  
4588 PARADISE BLVD  
ALBUQUERQUE, NM 87114

**100%  
CONSTRUCTION  
DOCUMENTS**

REVISIONS



DRAWN BY BO

REVIEWED BY GSB

DATE 09-03-2015

PROJECT NO: 15-0028.001

DRAWING NAME

**GRADING &  
DRAINAGE PLAN**

SHEET NO.

**C-100**
**SEGMENTAL RETAINING WALL CONSTRUCTION NOTES:**

RETAINING WALL CONTRACTOR TO MEET CONTRACTOR'S QUALIFICATIONS LISTED BELOW (UNLESS OTHERWISE APPROVED BY OWNER)

CONTRACTOR TO PROVIDE SHOP DRAWINGS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN NEW MEXICO & QUALIFIED TO DESIGN SEGMENTAL RETAINING WALLS TO BOHANNAN HUSTON FOR REVIEW PRIOR TO SUBMITTING TO GOVERNING ENTITY.

RETAINING WALL SYSTEM REQUIREMENTS (PROVIDED BY MANUFACTURER OR CONTRACTOR).

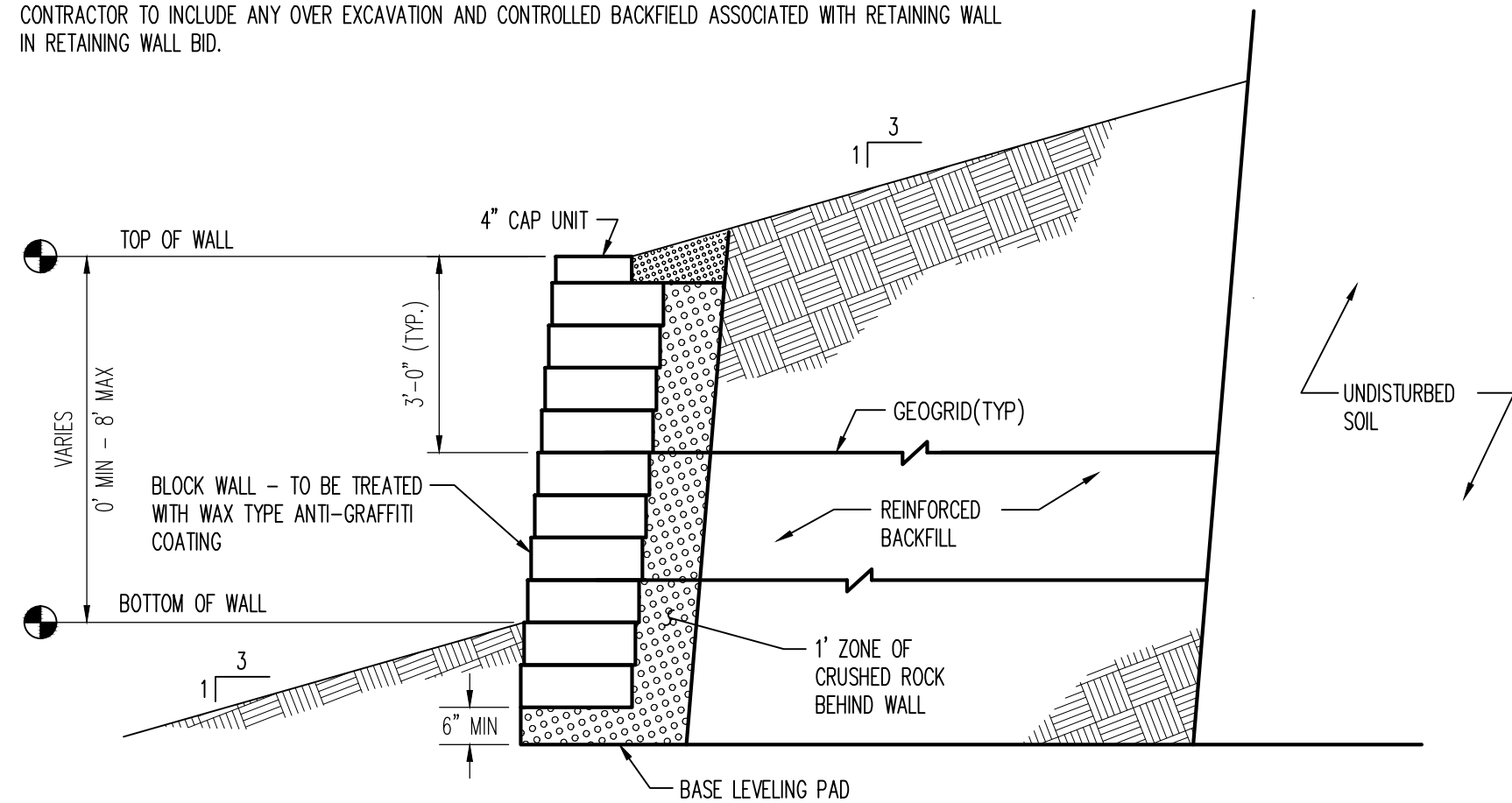
SOIL AND COMPACTION TESTING SHALL BE PERFORMED DURING CONSTRUCTION (BASE, 1/2 HEIGHT, AND FINAL).

APPROVED SHOP DRAWINGS MUST BE AVAILABLE ON-SITE AT ALL TIMES.

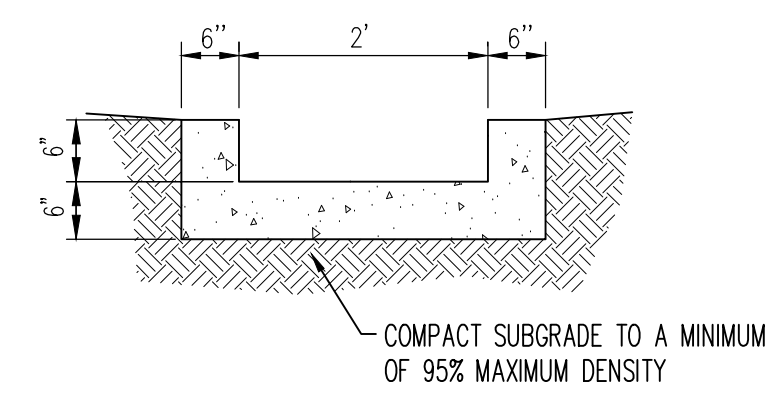
CONTRACTOR TO PROVIDE OWNER WITH COLOR SAMPLES FOR FINAL COLOR SELECTION.

ELEVATIONS SHOWN ARE TO TOP OF WALL AND BOTTOM OF WALL AT FINAL GRADE (DOES NOT INCLUDE FOOTER).

CONTRACTOR TO INCLUDE ANY OVER EXCAVATION AND CONTROLLED BACKFILL ASSOCIATED WITH RETAINING WALL IN RETAINING WALL BID.


**1 TYPICAL SEGMENTAL RETAINING WALL SECTION**  
N.T.S.

(NOTE: RETAINING WALL CONTRACTOR TO PERMIT WALL DIRECTLY THROUGH THE PERMITTING AUTHORITY. CONTRACTOR TO PROVIDE BOHANNAN HUSTON INC. WITH SHOP DRAWINGS (FOR APPROVAL) FOR EACH WALL PRIOR TO CONSTRUCTION.)


**2 CONCRETE RUNDOWN / RIBBON CHANNEL**  
N.T.S.

**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 UTILITIES 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 BARRICADE AT THE END AND BEGINNING OF EACH DAY.

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

**GRADING NOTES**

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

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

3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "GEOTECHNICAL INVESTIGATION". 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.

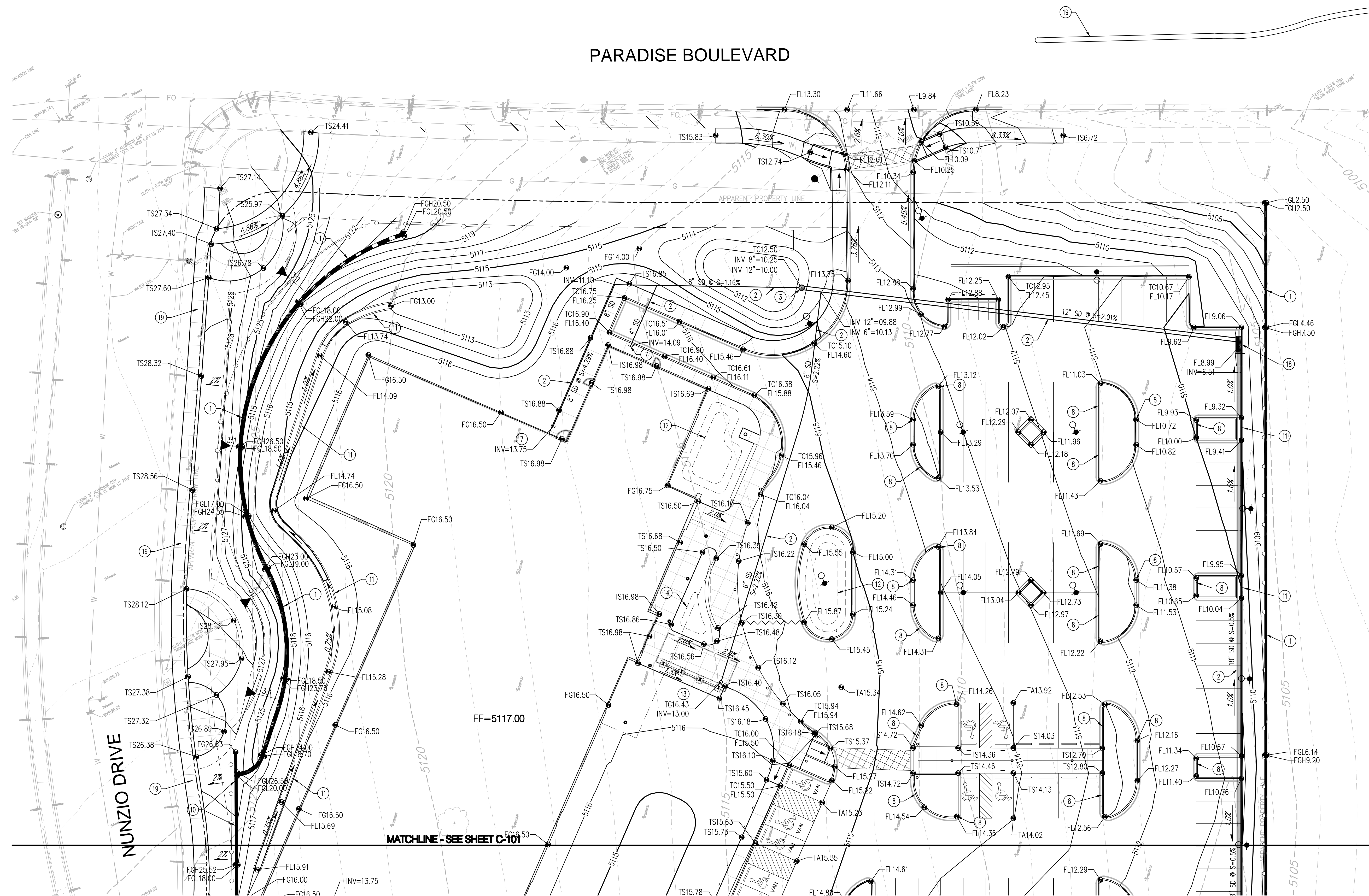
5. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES EXCEPT AS REQUIRED BY THIS PLAN.

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.

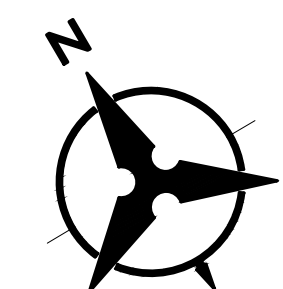
9. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION PRIOR TO BEGINNING CONSTRUCTION.

**PARADISE BOULEVARD**

**LEGEND**

---	PROPERTY LINE
---	EXISTING CONTOURS
---	EXISTING GROUND SPOT ELEVATION
65.23	PROPOSED SPOT ELEVATION
---	TO-TOP OF CURB, FL=FLOW LINE
---	TS=TOP OF SIDEWALK, TA=TOP OF ASPHALT
---	EX=EXISTING, FG=FINISHED GRADE
---	TO-TOP OF GRADE, IN=INVERT
---	FG=FINISHED GRADE HIGH
---	FG=FINISHED GRADE LOW
S=2.0%	PROPOSED DIRECTION OF FLOW
---	WATER BLOCK / RIDGE OR HIGH POINT
---	PROPOSED RETAINING WALL
---	PROPOSED INDEX CONTOURS
---	PROPOSED INTER CONTOURS
---	PROPOSED CURB & GUTTER
---	EASEMENT
SD	PROPOSED STORM DRAIN LINE
---	PROPOSED STORM DRAIN MANHOLE
---	PROPOSED STORM DRAIN INLET

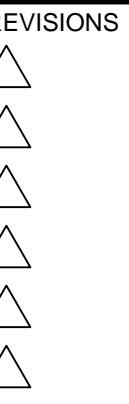
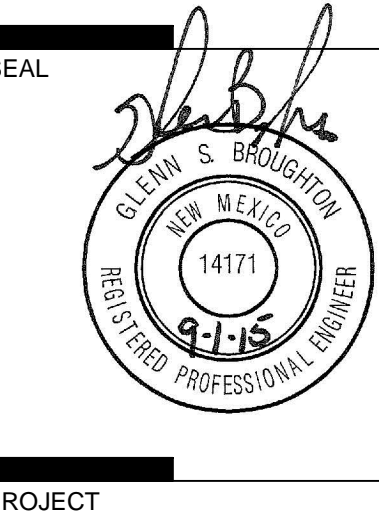
**WORK ORDER NOTES**

1. SIDEWALK & ROADWAY IMPROVEMENTS WITHIN RIGHT OF WAY WILL BE A PART OF THE CONTRACT, HOWEVER CITY WORK ORDER (INCLUDING APPROVED DRAWINGS) IS REQUIRED FOR CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING WITH A REGISTERED PROFESSIONAL ENGINEER FOR CONSTRUCTION ENGINEERING SERVICES (CITY OF ALBUQUERQUE REQUIRED INSPECTIONS DURING CONSTRUCTION). THE ENGINEER SHALL BE LICENSED IN THE STATE OF NEW MEXICO. THE ENGINEER SHALL BE RESPONSIBLE FOR CONSTRUCTION OVERSIGHT, CONSTRUCTION OBSERVATION REPORTS, CERTIFICATION CLOSE OUT AND ACCEPTANCE BY THE CITY IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1986 EDITION AS REVISED THROUGH UPDATE #8.



20 10 0 20  
SCALE: 1"=20'





KEYED NOTES

- SEGMENTAL RETAINING WALL, SEE DETAIL 1/C-100.
- INSTALL STORM DRAIN PIPE. SEE PLAN FOR SIZE & SLOPE.
- INSTALL 18" NYLOPLAST DRAIN BASIN WITH DOME GRATE. TOP OF GRATE ELEVATION SHOWN ON PLAN IS BASE OF DOME.
- CONSTRUCT 4" DIA TYPE "E" STORM DRAIN MANHOLE PER COA STD DWG 2102.
- CONSTRUCT RIP-RAP BOWL DISSIPATER, SEE 1/C-101.
- CONSTRUCT CONCRETE RUNDOWN, SEE DETAIL 2/C-100.
- INSTALL STORM DRAIN TO WITHIN 5' OF BUILDING. SEE PLUMBING PLANS FOR CONTINUATION.
- INSTALL 12" CURB OPENING FOR DRAINAGE.
- NOT USED.
- INSTALL SHORING WALL, SEE STRUCTURAL PLANS FOR DETAILS.
- CONSTRUCT 2" WIDE CONCRETE RIBBON CHANNEL, SEE DETAIL 2/C-100.
- CONSTRUCT 2" HIGH LANDSCAPE BERM, SEE LANDSCAPE PLAN FOR DETAILS. MAINTAIN POSITIVE DRAINAGE AROUND BERM ADJACENT TO BUILDING.
- INSTALL NYLOPLAST INLINE DRAIN WITH 12" ROUND PEDESTRIAN GRATE. SEE ARCHITECTURAL DETAILS FOR 'RAIN CHAIN' CONNECTION DETAIL.
- CONSTRUCT 1" HIGH LANDSCAPE BERM, SEE LANDSCAPE PLAN FOR DETAILS.
- REMOVE AND SALVAGE EXISTING WIRE FENCING AND TEE POST. CONTACT KURT WAGNER AT (505) 884-2115 TO COORDINATE DELIVERY OF SALVAGED MATERIALS.
- INSTALL 4" PIPE SLEEVE THRU WALL FOR DRAINAGE.
- CONSTRUCT TYPE "C" SINGLE GRATE STORM DRAIN INLET PER COA STD DWG 2205.
- CONSTRUCT TYPE "C" DOUBLE GRATE STORM DRAIN INLET PER COA STD DWG 2205.
- SIDEWALK AND ROADWAY IMPROVEMENTS WITHIN RIGHT OF WAY TO BE CONSTRUCTED UNDER CITY WORK ORDER, CITY PROJECT NUMBER 674481.
- INSTALL END SECTION.
- CONSTRUCT FLARED OPENING IN CONCRETE RUNDOWN PER 2/C101.
- INSTALL 11.25" VERTICAL BEND.
- REMOVE AND SALVAGE EXISTING WIRE FENCE CORNER PANELS. CONTACT KURT WAGNER AT (505) 884-2115 TO COORDINATE DELIVERY OF SALVAGED MATERIALS.
- CONSTRUCT WIRE FENCE PULL PANEL AT END OF EXISTING WIRE FENCE PER AMAFCA STD DWG 203. NEW PULL PANEL TO ABUT NEW RETAINING WALL.
- EXISTING WIRE FENCE TO REMAIN.

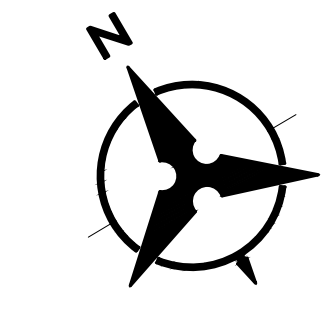
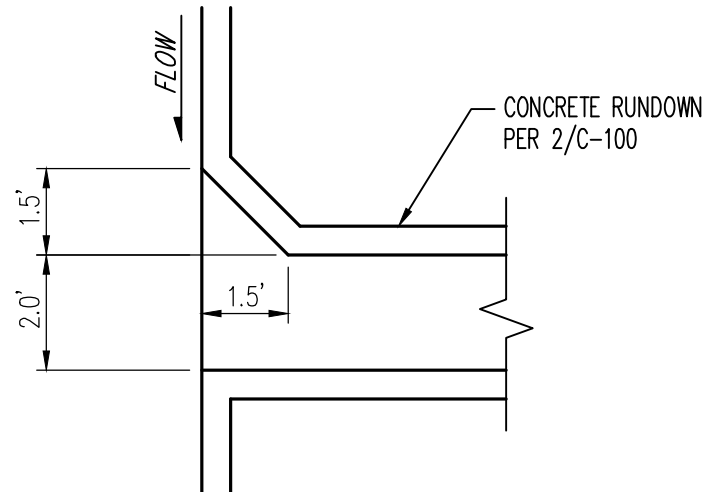
LEGEND

- PROPERTY LINE
- EXISTING CONTOURS
- EXISTING GROUND SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- TO-TOP OF CURB, FL=FLOW LINE
- TS=TOP OF SIDEWALK, TA=TOP OF ASPHALT
- EX=EXISTING, FG=FINISHED GRADE
- TO-TOP OF GRATE, IN=INVERT
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- PROPOSED RETAINING WALL
- PROPOSED INDEX CONTOURS
- PROPOSED INTER CONTOURS
- PROPOSED CURB & GUTTER
- EASEMENT
- SD
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLET

WORK ORDER NOTES

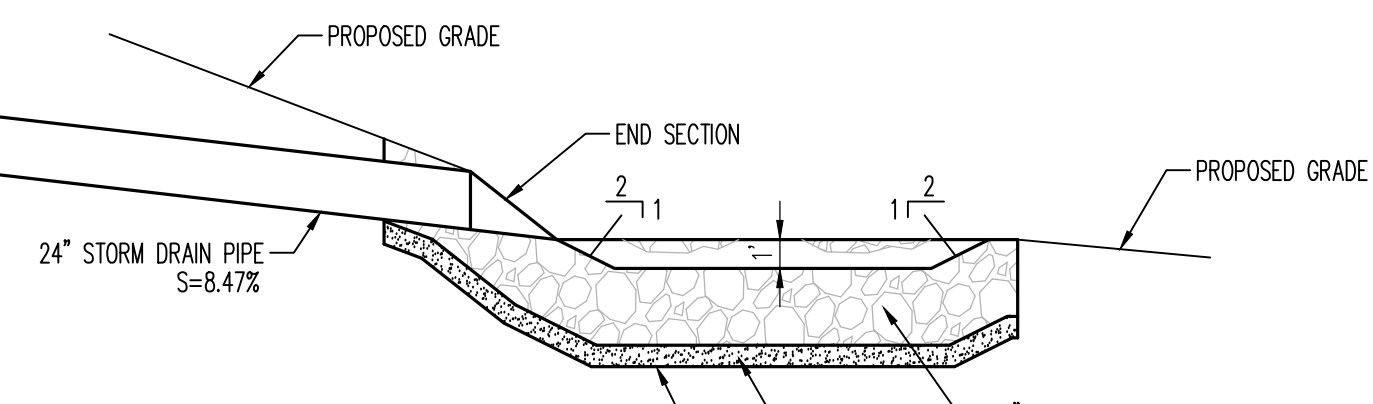
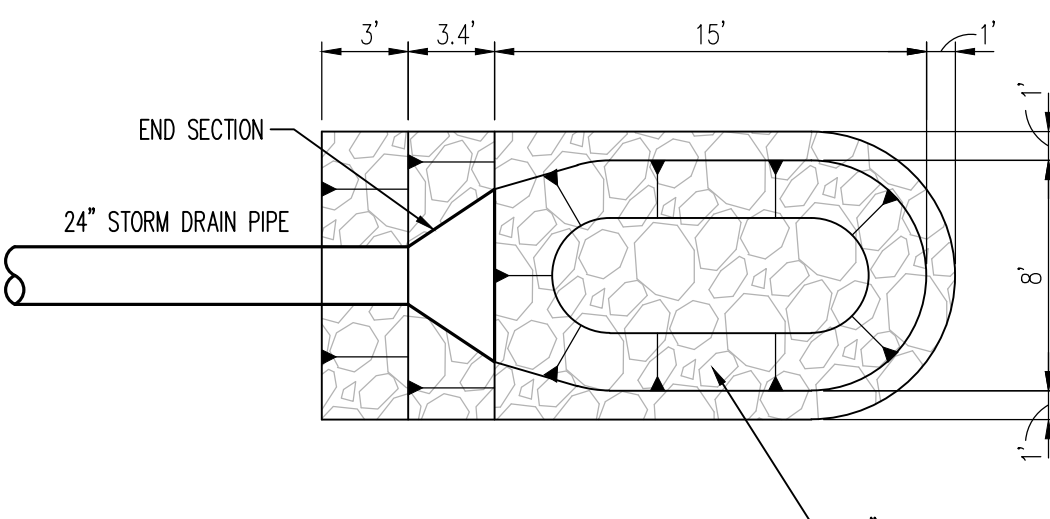
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FLARED RUNDOWN OPENING

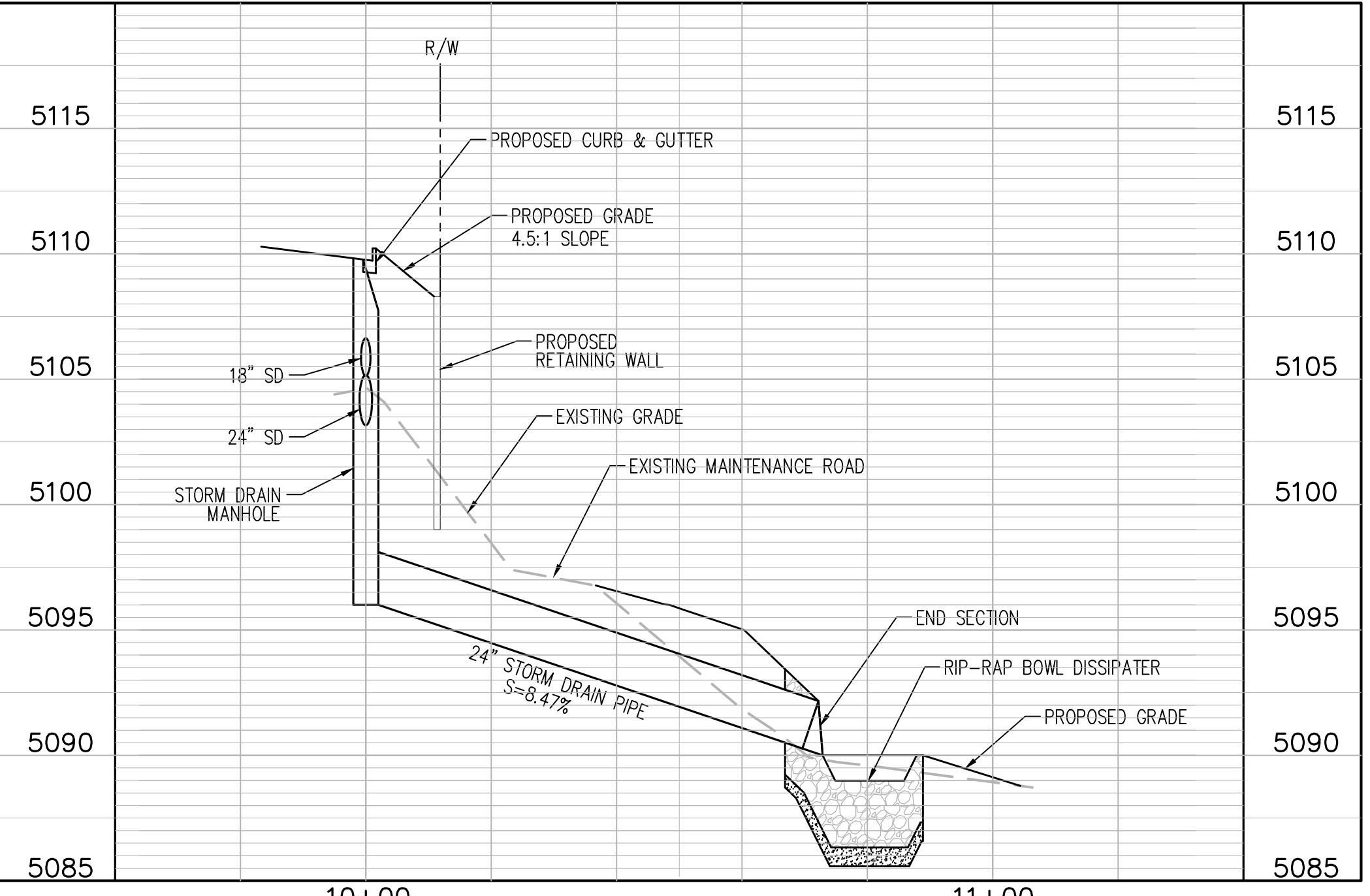


SCALE: 1"=20'

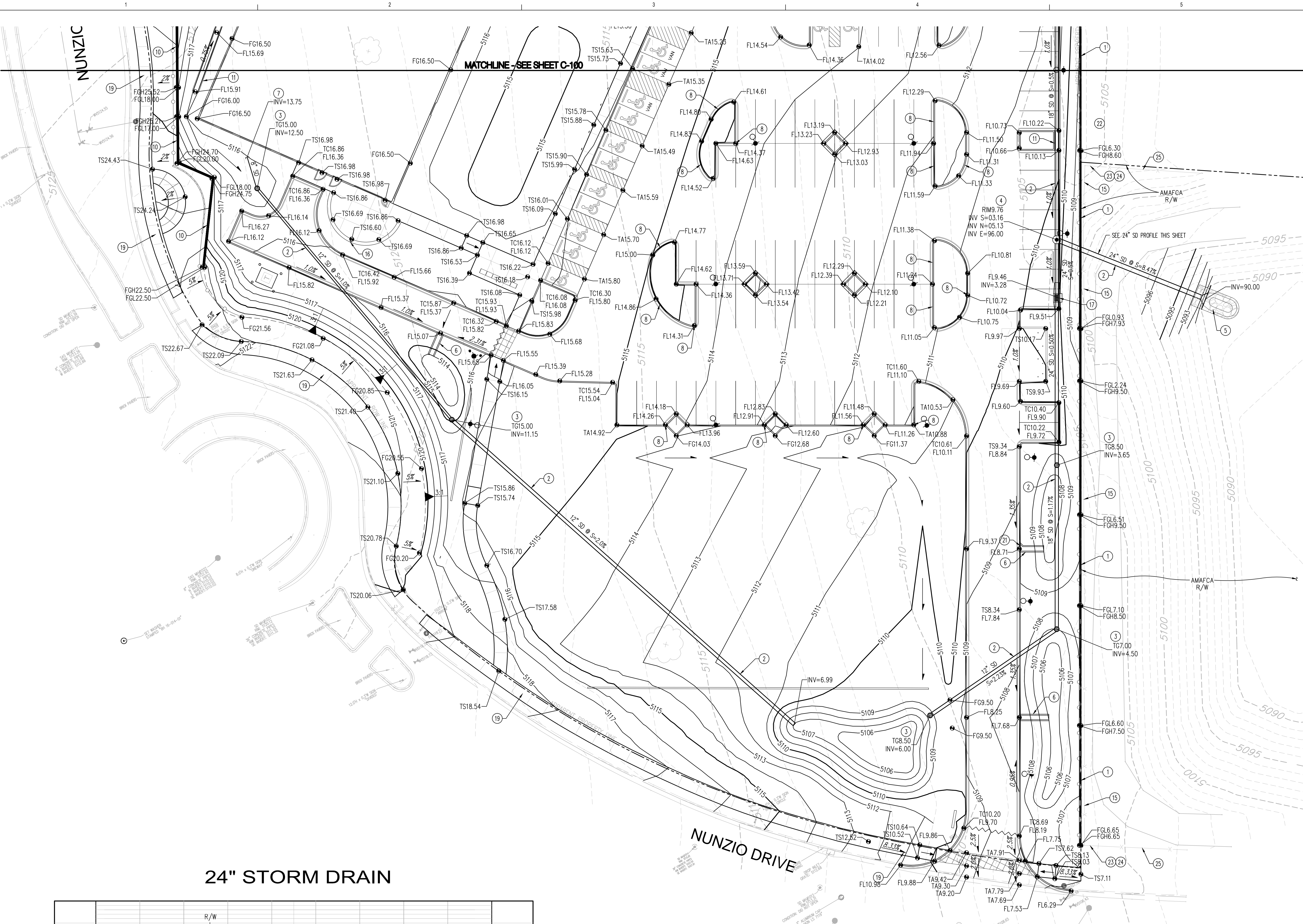
RIP-RAP BOWL DISSIPATER



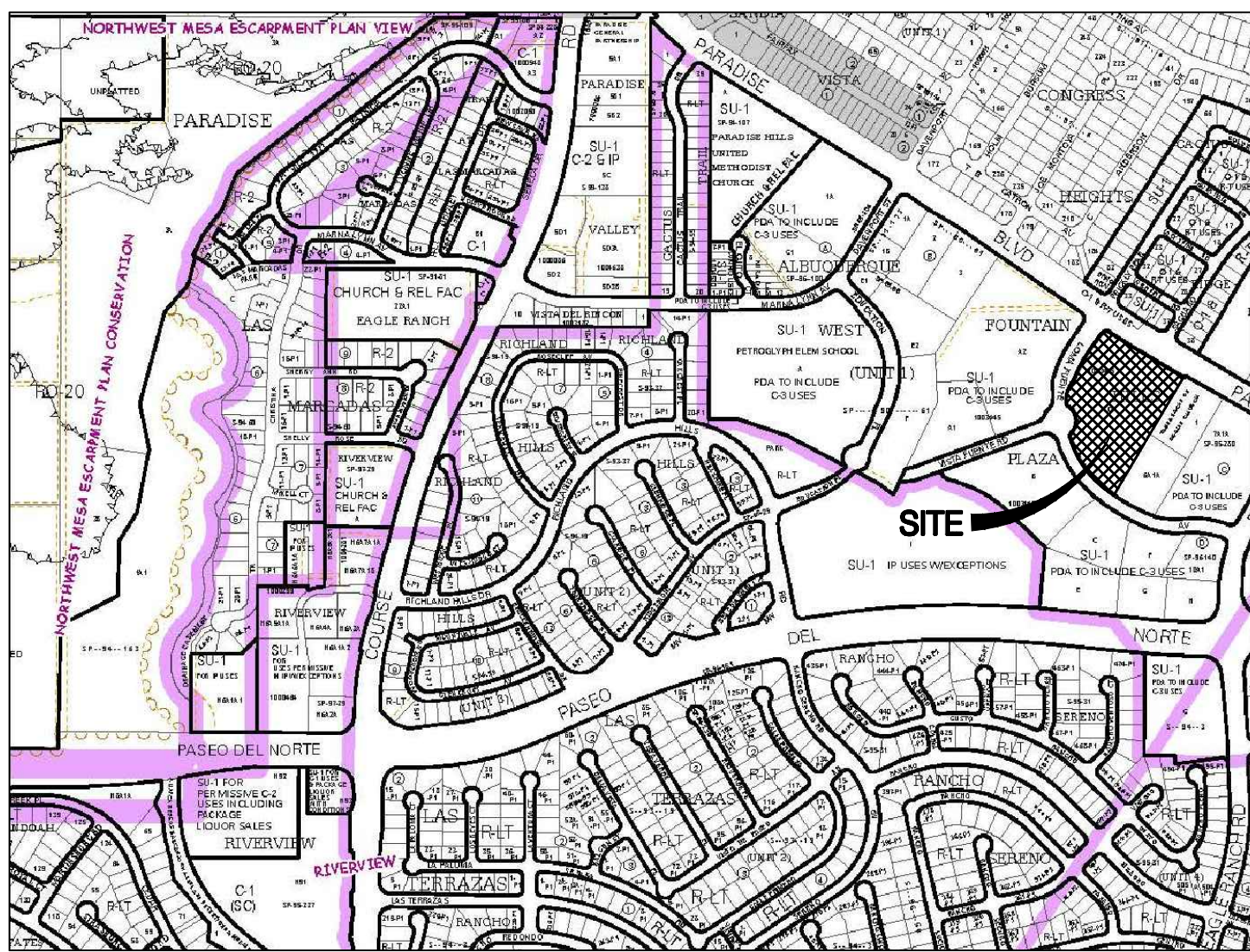
24" STORM DRAIN



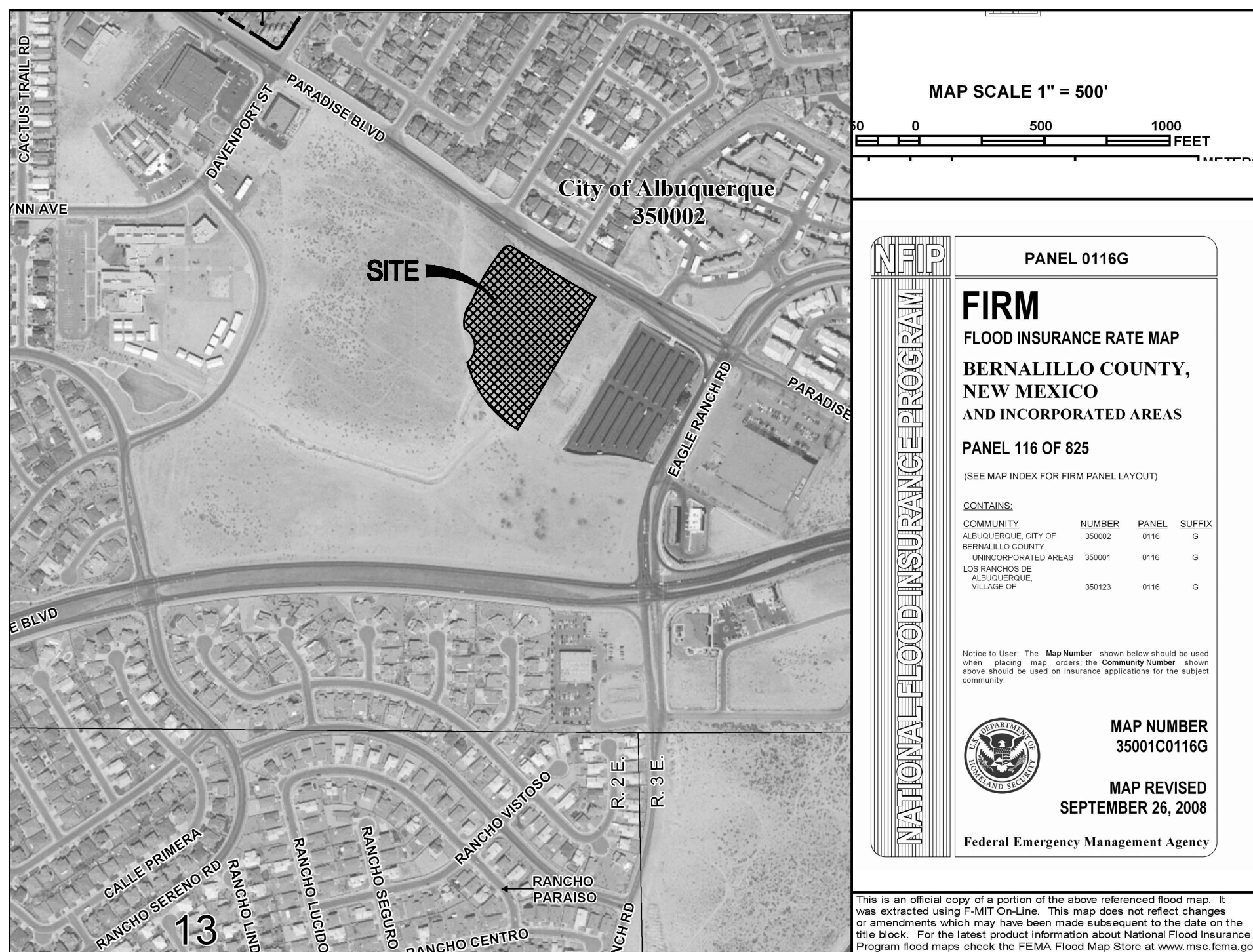
SCALE: 1"=20' (HORIZ.)  
1"=5' (VERT.)







VICINITY MAP: C-12



FEMA FIRM MAP # 35001C0116G

PREBYTERIAN PARADISE CLINIC Proposed Ultimate Development Conditions Basin Data Table															
This table is based on the DPM Section 22.2, Zone: 1															
Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages				Q <sub>100yr</sub> (cfs/sec)	Q <sub>100yr</sub> (CFS)	WT E (Inches)	V <sub>100yr</sub> (Sec)	V <sub>100yr</sub> (100days)	*Precip. Depth (in.)	"First Flush" Vol. Calc.		
			A	B	C	D							Impervious Area (SF)	Vol. Rqd. (CF)	Vol. Provided (CF)
Proposed															
1	36392	0.84	0.0%	0.0%	34.0%	66.0%	3.86	3.22	1.64	4964	7906	0.30	24019	600	1807
2	41613	0.96	0.0%	0.0%	15.0%	85.0%	4.15	3.96	1.82	6322	10655	0.30	35371	884	450
3	13109	0.30	0.0%	0.0%	6.0%	94.0%	4.28	1.29	1.91	2089	3597	0.30	12322	309	125
4	62956	1.45	0.0%	0.0%	17.0%	83.0%	4.12	5.95	1.80	9461	15962	0.30	52253	1306	1348
5	24362	0.56	0.0%	0.0%	63.0%	37.0%	3.43	1.92	1.35	2746	3850	0.30	9014	225	2607
6	28527	0.65	0.0%	0.0%	27.0%	73.0%	3.97	2.60	1.71	4054	6605	0.30	20825	521	190
7	5114	0.12	0.0%	0.0%	73.0%	27.0%	3.28	0.38	1.25	535	704	0.30	1381	35	0
8	10309	0.24	0.0%	0.0%	85.0%	15.0%	3.10	0.73	1.14	977	1166	0.30	1546	39	0
9	348	0.02	0.0%	0.0%	59.0%	41.0%	3.49	0.08	1.39	110	158	0.30	389	10	0
TOTAL	212073	5.13						20.1			50503		157120	3928	6527

\* Precipitation depth includes a deduction for initial abstraction of 0.1" and 0.04" for infiltration over a one hour period for a total abstraction of 0.14" for Land Treatment D.

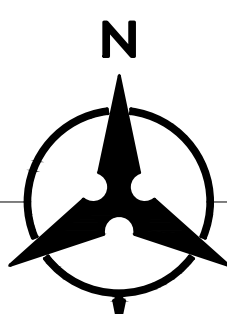
PREBYTERIAN PARADISE CLINIC STORM DRAIN PIPE TABLE									
PIPE #	Contributing Basins & Pipes	Size in.	Slope	Capacity cfs	ACTUAL FLOW cfs	ACTUAL Velocity fps	PIPE LENGTH ft	INVERT IN	INVERT OUT
STORM DRAIN PIPE									
P1	B1	12	2.01%	5.0	3.2	6.8	174.0	5110.00	5106.51
P2	B1+B2	18	0.50%	7.4	7.2	4.8	275.0	5106.51	5105.13
P3	B6	12	1.00%	3.6	2.6	4.9	136.0	5112.50	5111.15
P4	B6	12	2.00%	5.0	2.6	6.4	206.0	5111.15	5106.99
P5	B5+B6	12	2.22%	5.3	4.5	7.6	67.5	5106.00	5104.50
P6	B4+B5+B6	18	1.17%	11.4	10.5	8.6	72.5	5104.50	5103.65
P7	B3+B4+B5+B6	24	0.50%	16.0	11.7	5.5	74.0	5103.65	5103.28
P8	P2+P7	24	8.47%	65.9	18.9	18.1	70.8	5096.00	5090.00

CAPACITY IS BASED ON GRAVITY FLOW, USING MANNING'S EQUATION WITH n=0.013

PREBYTERIAN PARADISE CLINIC INLET TABLE									
INLET #	CONTRIBUTING BASIN	INLET TYPE	TOP OF GRADE	ACTUAL FLOW	AVAIL HEAD FT	CAPACITY cfs	CAPACITY WITH 50% CLOGGING	Grate Calculation	
IN-1	B1	18" DOME	5112.50	3.2	1.0	5.6	2.8	Sump	
IN-2	B2	TYPE C DBI	5108.99	4.0	0.5	7.6	3.8	Sump	
IN-3	B3	TYPE C SGL	5109.46	1.3	0.5	5.1	2.5	Sump	
IN-4	B4	24" DOME	5107.00	5.9	1.0	9.0	4.5	Sump	
IN-5	B5	18" DOME	5108.50	1.9	1.0	5.6	2.8	Sump	
IN-6	B6	18" DOME	5115.00	2.6	1.1	6.0	3.0	Sump	

LEGEND

- PROPERTY LINE
- EXISTING CONTOURS
- PROPOSED SPOT ELEVATION  
TC=TOP OF CURB, FL=FLOW LINE  
FGL=FINISHED GRADE LOW SIDE OF WALL  
FGH=FINISHED GRADE HIGH SIDE OF WALL  
EX=EXISTING, TO=TOP OF GRATE
- PROPOSED DIRECTION OF FLOW
- WATER BLOCK
- PROPOSED RETAINING WALL
- PROPOSED INDEX CONTOURS
- PROPOSED INTER CONTOURS
- EASEMENT
- PROPOSED STORM DRAIN LINE



SCALE: 1"=40'