

# CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



July 17, 2014

Richard J. Berry, Mayor

David Aube, P.E.  
Hartman + Majewski Design Group  
120 Vassar Dr. SE Suite 100  
Albuquerque, NM 87106

RE: **El Manzanal Subdivision** - 704 Griegos Road, NW  
**Conceptual Grading & Drainage Plan**  
**Engineer's Stamp Date (none) (File: F14D069)**

Dear Mr. Aube:

Based upon the information provided in your submittal received 6-25-14, the above referenced plan has recently been reviewed for EPC which generated comments. In our discussion subsequent to that, it is understood that the first flush is to be managed by on-site ponding, rather than using cisterns. The submittal shows that there is sufficient volume provided by the ponds to capture the first flush, and that the cisterns are a secondary but not a necessary measure. Therefore, the comments generated by Hydrology for EPC have been addressed, and the Conceptual Grading and Drainage Plan is acceptable.

Prior to approval for Preliminary Plat, Site Plan for Subdivision, Building Permit action by the DRB the following comments should be addressed.

1. Show existing spot elevations/ contours on site and adjacent to property
2. State how the first flush is to be managed.

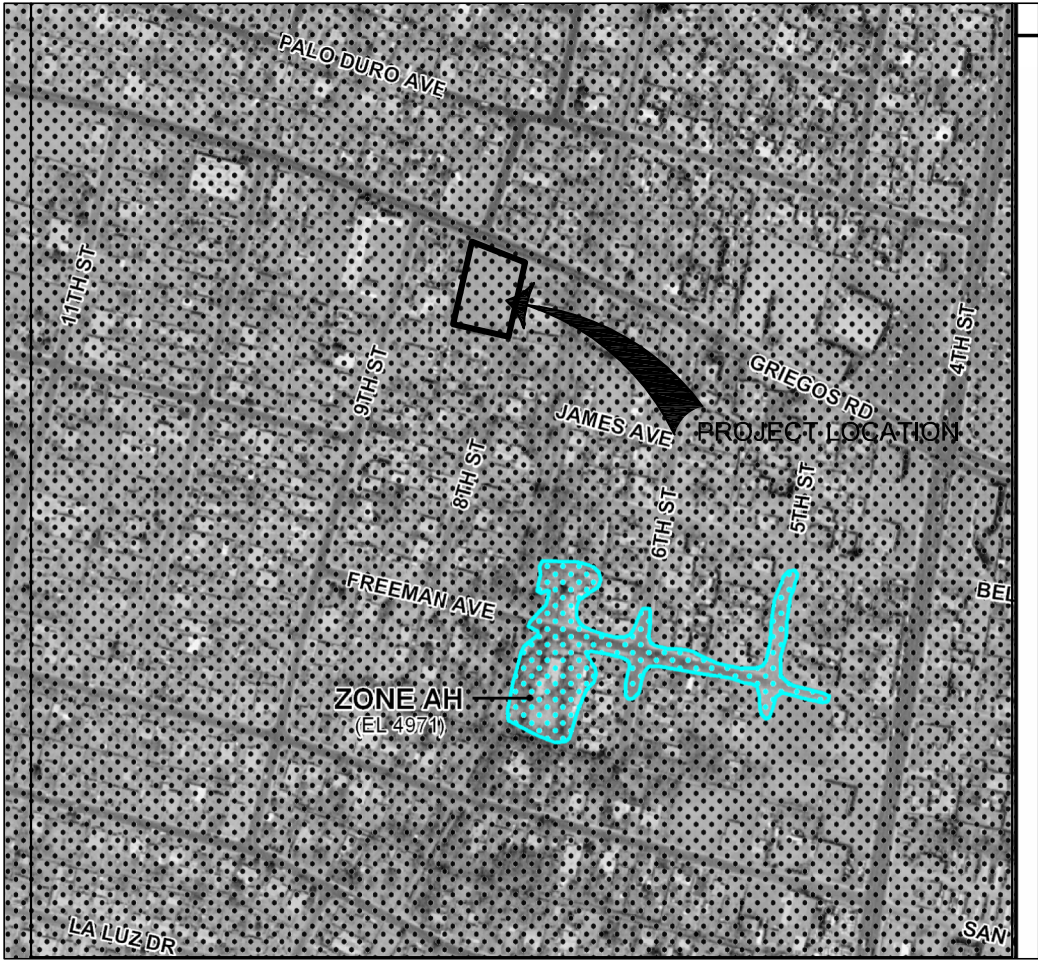
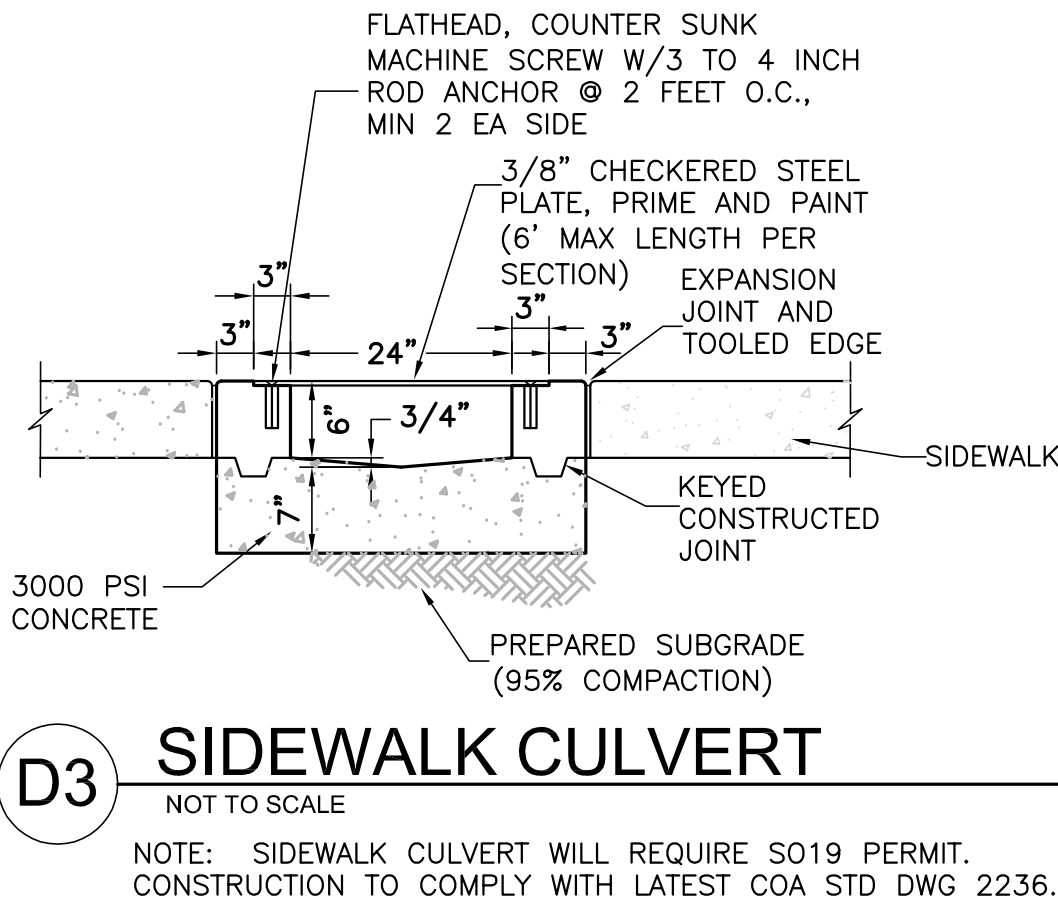
Keep in mind that the plan was not reviewed at the level of detail required for Building Permit approval. If you have any questions, you can contact me at 924-3695.

Sincerely,

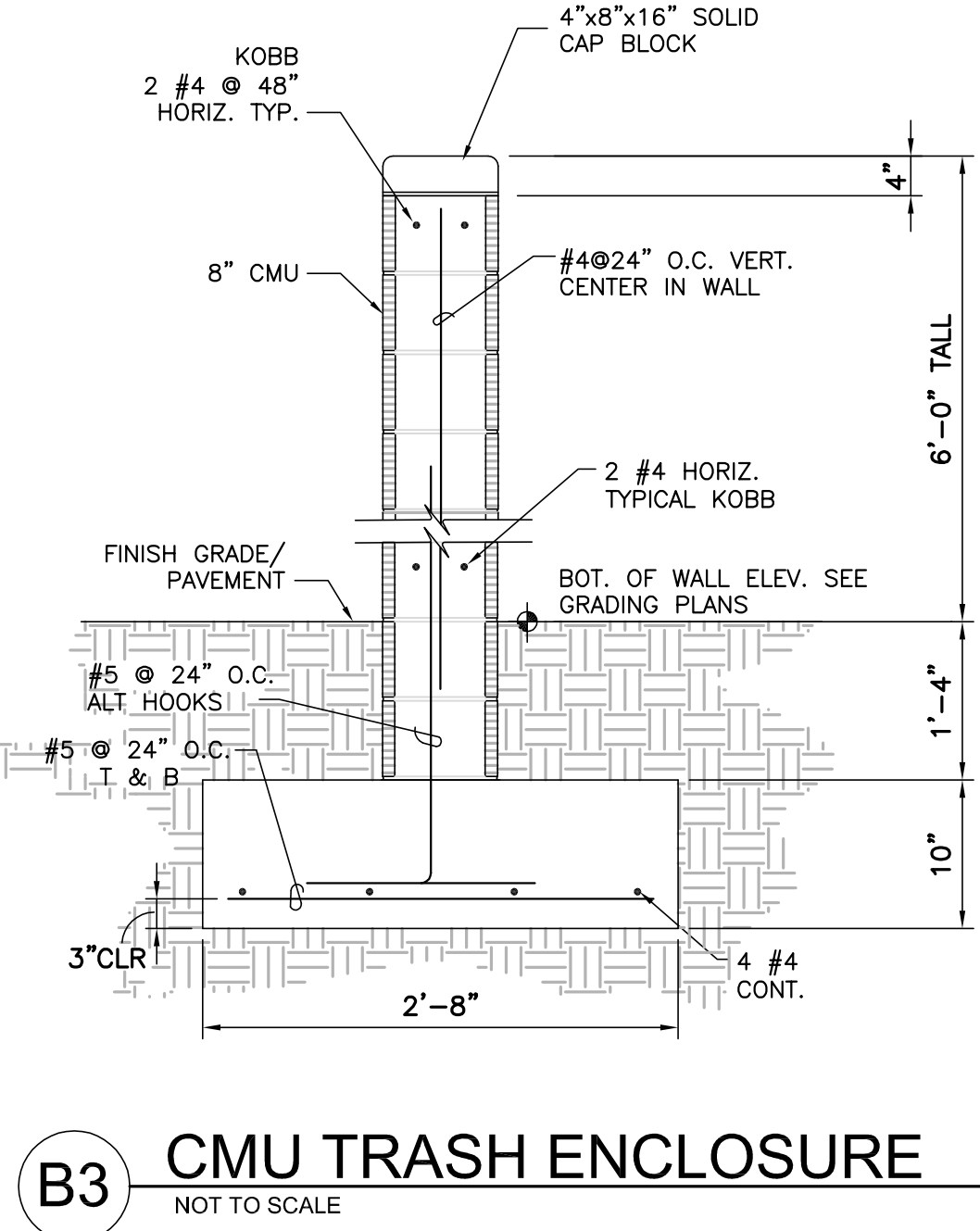
Rita Harmon, P.E.  
Senior Engineer, Planning Dept.  
Development Review Services

Orig: Drainage file  
c.pdf Addressee via Email





Drainage Summary				
Project:	EL MANZANAL			
Project Numbe:	2488			
Date:	06/24/14			
By:	Dave A			
Site Location				
Precipitaion Zone	2	Per Table A-1	COA DPM	Section 22.2
Existing summary				
Basin Name	Ex 1			
Area (sf)	33056			
Area (acres)	0.76			
%A Land treatment				
%B Land treatment	100			
%C Land treatment	0			
%D Land treatment	0			
Soil Treatment (acres)				
Area "A"	0.00			
Area "B"	0.76			
Area "C"	0.00			
Area "D"	0.00			
Excess Runoff (acre-feet)				
100yr. 6hr.	0.0493			
10yr. 6hr.	0.0177			
2yr. 6hr.	0.0013			
100yr. 24hr.	0.0493			
Peak Discharge (cfs)				
100 yr.	1.73			
10yr.	0.72			
2yr.	0.06			
Proposed summary				
Basin Name	Pro 1	Pro 2	Pro 3	
Area (sf)	6289	22540	4227	
Area (acres)	0.14	0.52	0.10	
%A Land treatment				
%B Land treatment	15	50	10	
%C Land treatment	70		75	
%D Land treatment	15	50	15	
Soil Treatment (acres)				
Area "A"	0.00	0.00	0.00	
Area "B"	0.02	0.26	0.01	
Area "C"	0.10	0.00	0.07	
Area "D"	0.02	0.26	0.01	
Excess Runoff (acre-feet)				
100yr. 6hr.	0.0148	0.0625	0.0101	
10yr. 6hr.	0.0073	0.0349	0.0050	
2yr. 6hr.	0.0027	0.0175	0.0019	
100yr. 24hr.	0.0155	0.0711	0.0105	
Peak Discharge (cfs)				
100 yr.	0.47	1.81	0.32	
10yr.	0.26	1.06	0.18	
2yr.	0.10	0.50	0.07	



## I. PURPOSE AND SCOPE

THE PURPOSE OF THIS DRAINAGE PLAN IS TO PRESENT THE EXISTING AND PROPOSED DRAINAGE MANAGEMENT PLANS FOR THE EL MANZANAL HOUSING PROJECT ON GRIEGOS ROAD NW AT 8TH STREET NW.

## II. SITE DESCRIPTION

THE PROJECT SITE IS LOCATED SOUTH SIDE OF GRIEGOS ROAD NW AT THE PROJECTED INTERSECTION OF 8TH STREET NW.

THE SITE IS CURRENTLY VACANT AND GENERALLY SLOPES FROM NORTH TO SOUTH. THE TOTAL DROP ACROSS THE SITE IS ONLY ABOUT 6". THE TOTAL SITE AREA IS APPROXIMATELY 0.75 ACRES.

## III. COMPUTATIONAL PROCEDURES

HYDROLOGIC ANALYSIS WAS PERFORMED UTILIZING THE DESIGN CRITERIA BASED ON SECTION 22.2, HYDROLOGY, OF THE DEVELOPMENT PROCESS MANUAL.

## IV. PRECIPITATION

THE STORM EVENT USED FOR THE FOLLOWING CALCULATIONS IS THE 100YR-6HR STORM. THE PROJECT SITE IS LOCATED IN ZONE 2 (BETWEEN THE RIO GRANDE AND SAN MATEO).

## V. EXISTING DRAINAGE CONDITIONS (REFER TO CD2)

CURRENTLY THE STORM WATER RUN-OFF DRAINS FROM NORTH TO SOUTH ACROSS THE SITE BEFORE FLOWING ONTO 8TH STREET NW. RUNOFF FROM THE NORTH IS CONTAINED IN GRIEGOS ROAD NW AND DOES NOT ENTER THE SITE. RUNOFF FROM THE ADJACENT LOTS IS MINIMAL AND IS NEGLECTED IN THIS ANALYSIS. THERE ARE DEVELOPED RESIDENTIAL LOTS ON THE EAST AND WEST OF THE SITE.

FOR A 100YR-6HR STORM EVENT THE SITE'S STORM WATER RUN-OFF VOLUME IS 0.05 AC-FT WITH A PEAK DISCHARGE OF 1.73 CFS.

## VI. PROPOSED DRAINAGE CONDITIONS (REFER TO CD3)

THIS PROJECT IS PROPOSING TO ADD EIGHT (8) HOUSING UNITS ON INDIVIDUAL LOTS WITH COMMON PARKING LOTS ON THE NORTH SIDE (GRIEGOS ENTRANCE) AND SOUTH SIDE (8TH STREET ENTRANCE). THE PARKING LOTS WILL BE GRAVEL AND WILL ALLOW FOR PERCOLATION OF RETAINED WATER. THERE IS ALSO A ORCHARD OF APPLE TREES (EL MANZANAL) AT THE CORE OF THE DEVELOPMENT. EACH RESIDENCE WILL HAVE A CORRUGATED METAL RAIN BARREL TO HARVEST SOME OF STORM RUNOFF BEFORE IT OVERTOPS AND FLOWS DOWN INTO THE ORCHARD. THERE IS ALSO A COMMON PLAY AREA LOCATED AT THE NORTH EAST CORNER THAT WILL BE UTILIZED FOR WATER RETENTION/PERCOLATION.

EACH RESIDENCE WILL ALSO HAVE A LOCALIZED DEPRESSION IN THE BACK YARD TO COLLECT EXCESS RUNOFF.

THE NORTHERN PARKING LOT AND ALL LANDSCAPING OUTSIDE OF THE DEVELOPMENT PERIMETER WALL IS DEFINED AS BASIN PRO No. 1. THE PARKING AREA WHEREVER POSSIBLE IS COMPOSED OF AGGREGATE RATHER THAN ASPHALT PAVEMENT. THERE IS A CONCRETE DRIVE PAD AT THE ENTRANCE AND IN FRONT OF THE REFUSE CONTAINER. HANDICAP PARKING SPACES WILL ALSO BE CONSTRUCTED WITH CONCRETE PAVEMENT. THE REMAINDER OF THE PARKING LOT WILL BE 3" THICK 1" SAN LAZARUS GRAVEL. THE PARKING AREA WILL BE SET TO CONTAIN 2" OF EXCESS RUNOFF BEFORE OVERTOPPING A HIGH POINT IN THE DRIVEWAY AND FLOWING OUT INTO THE GRIEGOS ROAD NW RIGHT OF WAY. PRO No.1 WILL GENERAL A PEAK DISCHARGE RATE OF 0.47 CFS AND A EXCESS RUNOFF VOLUME OF 0.0148 ACRE FEET (640 CF). THE AREA OF THE GRAVEL PARKING LOT IS 3241 SF, WITH A PONDING VOLUME OF 561 CUBIC FEET (INCLUDING WATER STORED ABOVE THE CONCRETE DRIVE PAD AND REFUSE CONTAINER APRON).

PROPOSED BASIN PRO No. 2 IS WITHIN THE SITE PERIMETER WALL AND CONTAINS THE 8 RESIDENTIAL UNITS. EACH UNIT WILL HAVE LOCALIZED PONDING AREAS WITH A MAJORITY OF THE EXCESS RUNOFF FLOWING OUT TO THE ORCHARD AT THE CORE OF THE DEVELOPMENT AND INTO THE COMMON PLAY AREA AT THE NORTH EAST CORNER OF THE SITE. PRO No.2 WILL GENERAL A PEAK DISCHARGE RATE OF 1.81 CFS AND A EXCESS RUNOFF VOLUME OF 0.0625 ACRE FEET (2722.5 CUBIC FEET). THE AREA OF THE LOCALIZED PONDING AREAS, THE ORCHARD AND PLAY AREA IS 3070 SF, WITH A PONDING VOLUME OF 1535 CUBIC FEET.

THE SOUTHERN PARKING LOT AND ALL LANDSCAPING OUTSIDE OF THE DEVELOPMENT PERIMETER WALL IS DEFINED AS BASIN PRO No. 3. THE PARKING AREA WHEREVER POSSIBLE IS COMPOSED OF AGGREGATE RATHER THAN ASPHALT PAVEMENT. THERE IS A CONCRETE DRIVE PAD AT THE ENTRANCE. HANDICAP PARKING SPACES WILL ALSO BE CONSTRUCTED WITH CONCRETE PAVEMENT. THE REMAINDER OF THE PARKING LOT WILL BE 3" THICK 1" SAN LAZARUS GRAVEL. THE PARKING AREA WILL BE SET TO CONTAIN 2" OF EXCESS RUNOFF BEFORE OVERTOPPING A HIGH POINT IN THE DRIVEWAY AND FLOWING OUT INTO THE 8TH STREET NW RIGHT OF WAY. PRO No.3 WILL GENERAL A PEAK DISCHARGE RATE OF 0.32 CFS AND A EXCESS RUNOFF VOLUME OF 0.0101 ACRE FEET (440 CUBIC FEET). THE AREA OF THE GRAVEL PARKING LOT IS 2717 SF, WITH A PONDING VOLUME OF 462 CUBIC FEET (INCLUDING WATER STORED ABOVE THE CONCRETE DRIVE PAD).

THE COMBINED DISCHARGE FROM THE PROPOSED AND OFFSITE BASINS IS 2.60 CFS. WITH AN ALLOWABLE HISTORIC DISCHARGE OF 1.73 CFS. ON SITE PONDING WILL STORE 0.0585 ACRE FEET OF WATER OUT OF THE 0.0874 ACRE FEET GENERATED BY THE 100 YEAR 6 HOUR STORM.

## VII. CONCLUSIONS

AS A RESULT OF THE PROPOSED CONSTRUCTION THERE WILL BE THE FOLLOWING FLOWRATES:

PRO BASIN No.1 - .047 CU-FT/SEC  
PRO BASIN No.2 - 1.81 CU-FT/SEC  
PRO BASIN No.3 - 0.32 CU-FT/SEC

THE SITE HAS BEEN SET TO CONTAIN 65% OF THE 100 YEAR 6 HOUR STORM RUNOFF WITHIN THE PONDS. THE SITE HAS NOT BEEN DESIGNED FOR FULL RETENTION. IF STORM EVENTS EXCEED THE 100 YEAR 6 HOUR VOLUME OR IF EVENTS OCCUR BACK TO BACK THE EXCESS RUNOFF WILL BE DISCHARGED INTO THE SURROUNDING ROADWAYS.

Revisions:

Sheet Title:

## PRELIMINARY DRAINAGE PLAN

Scale: 1"=10'

Date: 06/24/14

Drawn: DAA

Checked: DAA

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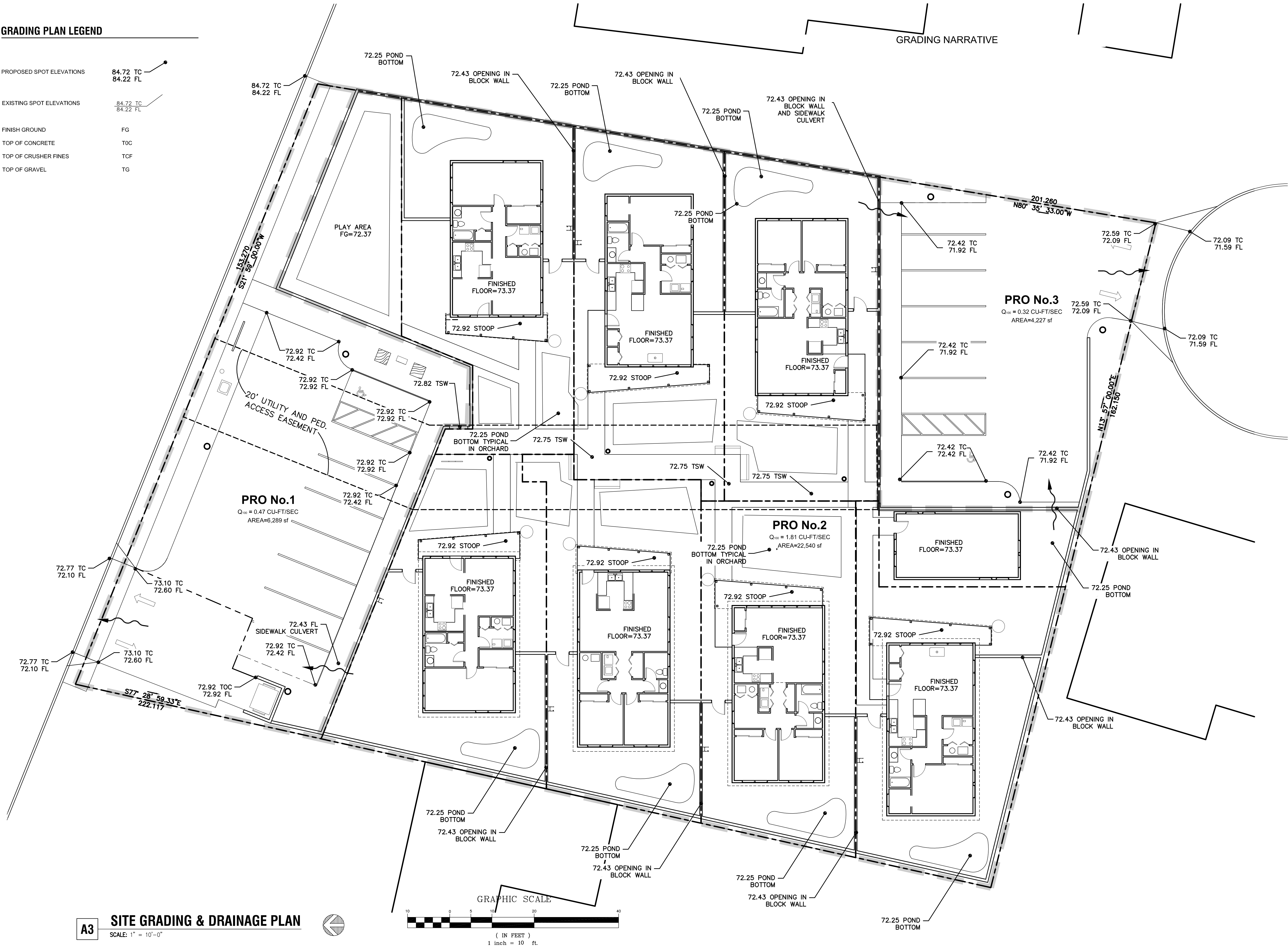
JOB NUMBER: 0205



GRADING PLAN LEGEND

PROPOSED SPOT ELEVATIONS	84.72 TC 84.22 FL
EXISTING SPOT ELEVATIONS	84.72 TC 84.22 FL
FINISH GROUND	FG
TOP OF CONCRETE	T0C
TOP OF CRUSHER FINES	TCF
TOP OF GRAVEL	TG

GRADING NARRATIVE



**A3 SITE GRADING & DRAINAGE PLAN**  
SCALE: 1" = 10'-0"



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**EL MANZANAL**  
704 Griegos Road NW  
Albuquerque, NM 87107

Revisions:  
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Sheet Title:  
**PRELIMINARY  
GRADING AND  
DRAINAGE PLAN**

Scale: 1"=10'  
Date: 06/24/14  
Drawn: DAA  
Checked: DAA

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