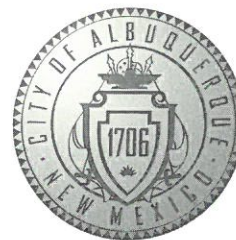


# CITY OF ALBUQUERQUE



September 12, 2017

Yolanda Padilla Moyer, P.E.  
Bohannon Huston  
7601 Jefferson NE, Suite 100  
Albuquerque, NM 87109

**RE: Del Webb @ Mirehaven Phase 2A  
Grading & Drainage Plan Revision 4  
Engineer's Stamp Date 3-11-16 (Rev. 4 Date: 08/17)  
Hydrology File: H09D017F**

Dear Ms. Padilla-Moyer:

Based upon the information provided in your submittal received 8/16/17, and supplemental information received on 9/7/17, the above-referenced project is re-approved for grading permit.

Engineer's Certification will be required prior to Pad Certification/Release of Financial Guarantee per the DPM Checklist. If you have any questions, you can contact me at 924-3695 or [dpeterson@cabq.gov](mailto:dpeterson@cabq.gov).

Sincerely,

Dana Peterson, P.E.  
Senior Engineer, Planning Dept.  
Development Review Services

September 7, 2017

Mr. Dana Peterson, P.E.  
City of Albuquerque  
600 2<sup>nd</sup> Street NW  
Albuquerque, NM 87102

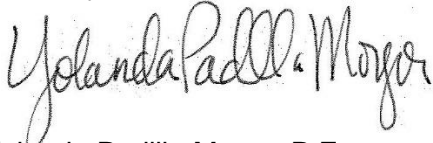
Re: Revised Grading and Drainage Plan, Del Webb @ Mirehaven, Phase 2A – Design  
Revision #4 - Addendum #1 to Drainage Management Plan for Del Webb Phase 2 @  
Mirehaven Tracts M of the Watershed Subdivision - DRB Case No. 1006864 and  
Hydrology File: H09D017F.

Dear Dana:

In response to your letter dated August 21, 2017. Please find enclosed a revised Basin Map which shows Basin G.5 flow adjacent to Lot 22 and combining with Basin G.6. I have also provided update swale analysis to show the new swale adjacent to Lot 22, which is specified as a 5' wide, 1' deep swale of 1"-2" fractured cobble in Design Revision #4. In additions, I have also provided updated swale analysis for the swale behind lots 16-22, which the plan shows as a 7' wide, 1' deep swale of 1"-2" fractured cobble. In these swale analysis, it shows that the depth of flow based on the addition of Basin G.5 is still within the limits of the designed cross-sections mentioned above. There are no adverse affects with rerouting of Basin G.5 along Lot 22 with a new swale or having combining with Basin G.6 in the existing swale behind Lots 16-22.

Please let me know if you have any questions or concerns.

Sincerely,



Yolanda Padilla Moyer, P.E.  
Senior Project Manager  
Community Development & Planning



Enclosure

cc: Kevin Patton, Pulte Homes

Engineering ▲

Spatial Data ▲

Advanced Technologies ▲



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

**Project Title:** DEL WEBB @ MIREHAVEN PHASE 2A **Building Permit #:** \_\_\_\_\_ **City Drainage #:** H-8/H-9  
**DRB#:** 10006864 **EPC#:** \_\_\_\_\_ **Work Order#:** 650388  
**Legal Description:** DEL WEBB @ MIREHAVEN PHASE 2A (A REPLAT OF TRACT N-2-A-1 & TRACT M OF WATERSHED)  
**City Address:** \_\_\_\_\_

**Engineering Firm:** BOHANNAN HUSTON INC **Contact:** Yolanda Moyer  
**Address:** 7500 JEFFERSON ST NE COURTYARD 1 ALBUQUERQUE NM 87109  
**Phone#:** 823-1000 **Fax#:** \_\_\_\_\_ **E-mail:** ypadilla@bhinc.com

**Owner:** PULTE **Contact:** KEVIN PATTON  
**Address:** 7601 JEFFERSON STREET NE SUITE 310 ALBUQ. NM 87109  
**Phone#:** 505-341-8591 **Fax#:** \_\_\_\_\_ **E-mail:** kevin.patton@pultegroup.com

**Architect:** \_\_\_\_\_ **Contact:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Other Contact:** \_\_\_\_\_ **Contact:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

Check all that Apply:

**DEPARTMENT:**

☒ HYDROLOGY/ DRAINAGE  
☐ TRAFFIC/ TRANSPORTATION  
☐ MS4/ EROSION & SEDIMENT CONTROL

**TYPE OF SUBMITTAL:**

☐ ENGINEER/ ARCHITECT CERTIFICATION  
  
☐ CONCEPTUAL G & D PLAN  
☐ GRADING PLAN  
☐ DRAINAGE MASTER PLAN  
☐ DRAINAGE REPORT  
☐ CLOMR/LOMR  
  
☐ TRAFFIC CIRCULATION LAYOUT (TCL)  
☐ TRAFFIC IMPACT STUDY (TIS)  
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)

☒ OTHER (SPECIFY) Revision to existing approved plan

IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

**CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:**

☐ BUILDING PERMIT APPROVAL  
☐ CERTIFICATE OF OCCUPANCY  
  
☐ PRELIMINARY PLAT APPROVAL  
☐ SITE PLAN FOR SUB'D APPROVAL  
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE  
☐ FOUNDATION PERMIT APPROVAL  
☒ GRADING PERMIT APPROVAL  
☐ SO-19 APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ GRADING/ PAD CERTIFICATION  
☐ WORK ORDER APPROVAL  
☐ CLOMR/LOMR  
  
☐ PRE-DESIGN MEETING  
☐ OTHER (SPECIFY) \_\_\_\_\_

**DATE SUBMITTED:** 09-07-17 **By:** YOLANDA PADILLA MOYER, P.E.

COA STAFF: \_\_\_\_\_ ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

Analyzer Report

Drainage Structure Analyzer

Channel Hydraulic Analysis

Date: Thursday, September 7, 2017 11:02:50 AM

Input Data

Shape	V-Shaped
Material	Gravel Riprap 2"
Roughness	0.026000
Left Slope	40.0000%
Right Slope	40.0000%
Bed Slope	0.5000%
Depth	1.0000 ft

5' wide channel 1' deep = side  
slopes 40% Q= 3.1cfs (Basin G.5)  
Q100=3.1 cfs < Qallowable=6.06cfs

Output Results

Flow Rate	6.0574 cfs
Depth	1.0000 ft
Velocity	2.4230 ft/s
Top Width	5.0000 ft
Critical Depth	0.8170 ft

Subcritical





Analyzer Report

Drainage Structure Analyzer

Channel Hydraulic Analysis

Date: Thursday, September 7, 2017 11:02:25 AM

Input Data

Shape	V-Shaped
Material	Gravel Riprap 2"
Roughness	0.026000
Left Slope	28.0000%
Right Slope	28.0000%
Bed Slope	0.5000%
Depth	1.0000 ft

7' wide channel 1' deep = side  
slopes 28% Q= 3.1cfs (Basin G.5)  
Q100=3.1 cfs < Qallowable=8.87cfs

Output Results

Flow Rate	8.8664 cfs
Depth	1.0000 ft
Velocity	2.4826 ft/s
Top Width	7.1429 ft
Critical Depth	0.8250 ft

Subcritical



Analyzer Report

Drainage Structure Analyzer

Channel Hydraulic Analysis

Date: Thursday, September 7, 2017 11:02:07 AM

Input Data

Shape	V-Shaped
Material	Gravel Riprap 2"
Roughness	0.026000
Left Slope	28.0000%
Right Slope	28.0000%
Bed Slope	0.7000%
Depth	1.0000 ft

7' wide channel 1' deep = side slopes 28%  
Q= 6.9cfs (Basin G.5 + 1/2 Basin G.6)  
Q100=6.9 cfs < Qallowable=10.49cfs

Output Results

Flow Rate	10.4909 cfs
Depth	1.0000 ft
Velocity	2.9375 ft/s
Top Width	7.1429 ft
Critical Depth	0.8820 ft

Subcritical



Analyzer Report

Drainage Structure Analyzer

Channel Hydraulic Analysis

Date: Thursday, September 7, 2017 11:01:47 AM

Input Data

Shape V-Shaped  
Material Gravel Riprap 2"  
Roughness 0.026000  
Left Slope 28.0000%  
Right Slope 28.0000%  
Bed Slope 1.0600%  
Depth 1.0000 ft

7' wide channel 1' deep = side slopes 28%  
Q= 10.7cfs (Basin G.5 + Basin G.6)  
Q100=10.7 cfs < Qallowable=12.91cfs

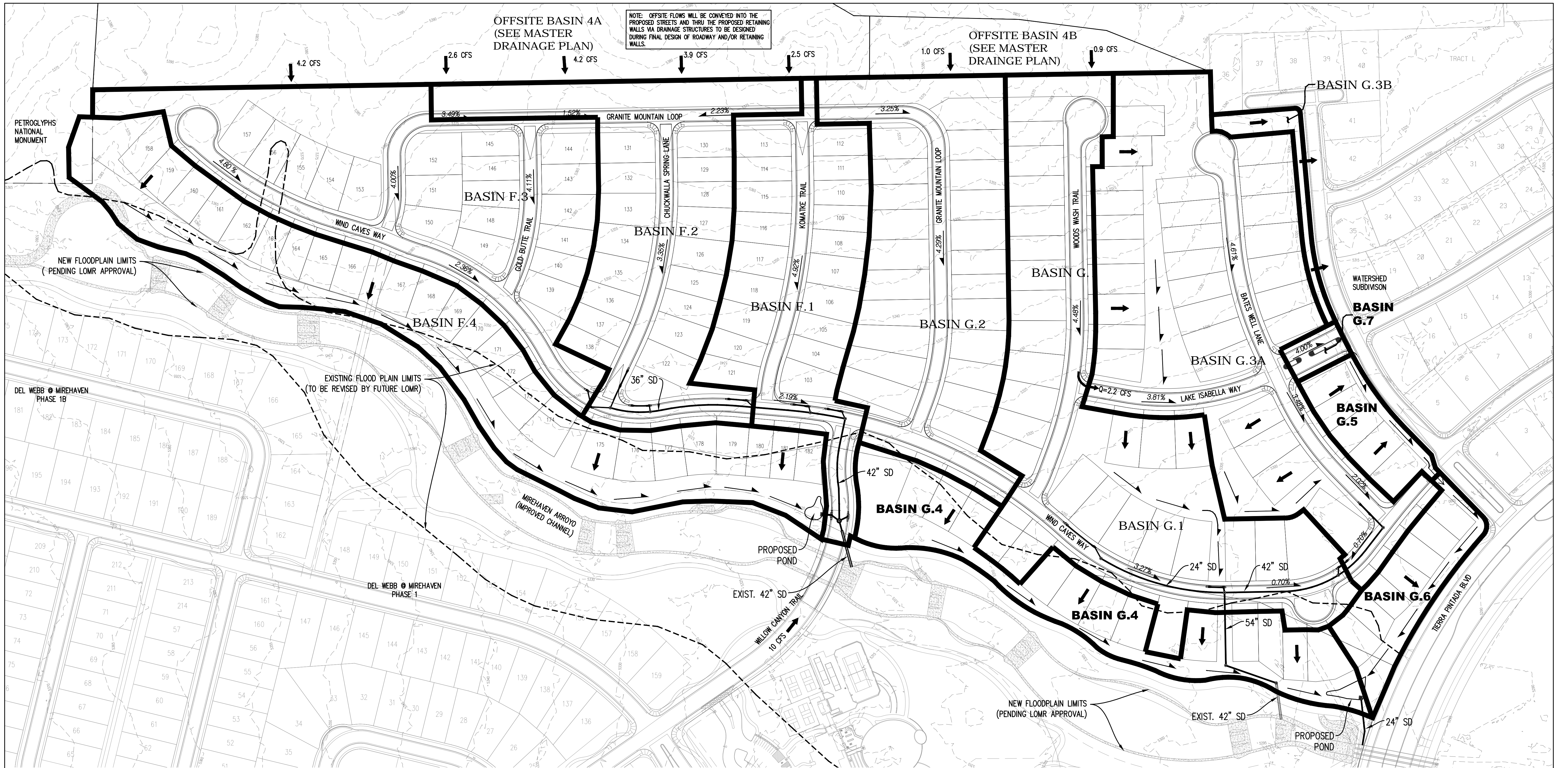
Output Results

Flow Rate 12.9097 cfs  
Depth 1.0000 ft  
Velocity 3.6147 ft/s  
Top Width 7.1429 ft  
Critical Depth 0.9590 ft

Subcritical







DEVELOPED BASIN SUMMARY							
BASIN I.D.	AREA (AC)	% LAND TREATMENT				DISCHARGE (CFS) 100YR	VOLUME (AC-FT)
F.1	4.99	0.00%	29.00%	29.00%	42.00%	16.2	0.54
F.2	5.83	0.00%	29.00%	29.00%	42.00%	19.0	0.64
F.3	7.58	0.00%	29.00%	29.00%	42.00%	24.7	0.83
F.4	7.05	0.00%	10.00%	40.00%	50.00%	24.9	0.85
G.1	10.23	0.00%	29.00%	29.00%	42.00%	33.3	1.12
G.2	5.97	0.00%	29.00%	29.00%	42.00%	19.4	0.65
G.3A	7.22	0.00%	29.00%	29.00%	42.00%	23.5	0.79
G.3B	0.40	0.00%	0.00%	100.00%	0.00%	1.1	0.03
G.4	2.50	0.00%	10.00%	40.00%	50.00%	8.8	0.30
G.5	0.94	0.00%	29.00%	29.00%	42.00%	3.1	0.10
G.6	2.34	0.00%	29.00%	29.00%	42.00%	7.6	0.26
G.7	0.23	0.00%	10.00%	10.00%	80.00%	0.9	0.03
TOTAL	55.28					182.7	6.1

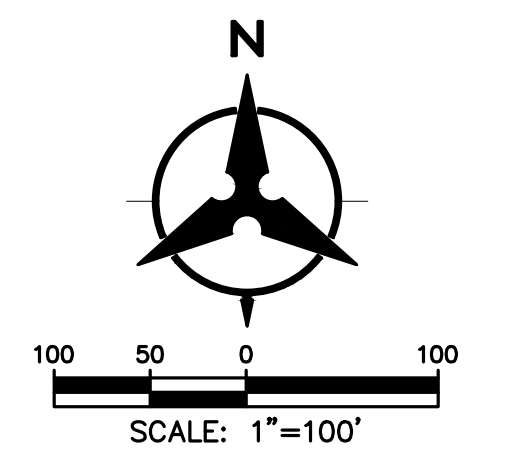
NOTE: ALL BLOCKS DRAIN TOWARD THE FRONT/STREET UNLESS OTHERWISE NOTED BY FLOW ARROW/DIRECTION ABOVE.

## DEL WEBB @ MIREHAVEN PHASE 2 PROPOSED BASINS MAP

MARCH 2016

### LEGEND

- BASIN BOUNDARY
- FLOW ARROW
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- PROPOSED STREET SLOPE OR FLOW PATH
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLET





# CITY OF ALBUQUERQUE



August 21, 2017

Yolanda Padilla Moyer, P.E.  
Bohannon Huston  
7601 Jefferson NE, Suite 100  
Albuquerque, NM 87109

**RE: Del Webb @ Mirehaven Phase 2A  
Grading & Drainage Plan Revision 4  
Engineer's Stamp Date 3-11-16 (Rev. 4 Date: 08/17)  
Hydrology File: H09D017F**

Dear Ms. Padilla-Moyer:

Based upon the information provided in your submittal received 8/16/17, the above-referenced project cannot be re-approved until the following are addressed:

1. An Engineer Certified Addendum to the Drainage Report is required to support the new drainage pattern. The following should be addressed:
  - a. Proposed Basin Map: Basin G.5 will now drain into G.6
  - b. Geometry and hydraulic capacity of the new swale adjacent to lot 22.
  - c. Hydraulic capacity of the swale behind lots 16-22, accounting for the additional flow from G.5. This swale may need to be upsized.

Engineer's Certification will be required prior to Pad Certification/Release of Financial Guarantee per the DPM Checklist. If you have any questions, you can contact me at 924-3695 or [dpeterson@cabq.gov](mailto:dpeterson@cabq.gov).

Sincerely,

Dana Peterson, P.E.  
Senior Engineer, Planning Dept.  
Development Review Services

# City of Albuquerque

## Planning Department

Development &amp; Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

**Project Title:** DEL WEBB @ MIREHAVEN PHASE 2A Building Permit #: \_\_\_\_\_ City Drainage #: H-8/H-9  
**DRB#:** 10006864 **EPC#:** \_\_\_\_\_ **Work Order#:** 650388  
**Legal Description:** DEL WEBB @ MIREHAVEN PHASE 2A (A REPLAT OF TRACT N-2-A-1 & TRACT M OF WATERSHED)  
**City Address:** \_\_\_\_\_

<b>Engineering Firm:</b> BOHANNAN HUSTON INC	<b>Contact:</b> Yolanda Moyer
<b>Address:</b> 7500 JEFFERSON ST NE COURTYARD 1 ALBUQUERQUE NM 87109	
<b>Phone#:</b> 823-1000	<b>E-mail:</b> ypadilla@bhinc.com
<b>Fax#:</b>	

<b>Owner:</b>	<u>PULTE</u>	<b>Contact:</b>	<u>KEVIN PATTON</u>
<b>Address:</b>	<u>7601 JEFFERSON STREET NE SUITE 310 ALBUQ. NM 87109</u>		
<b>Phone#:</b>	<u>505-341-8591</u>	<b>Fax#:</b>	<u>E-mail: kevin.patton@pultegroup.com</u>

Architect: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

**Other Contact:** \_\_\_\_\_ **Contact:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

Check all that Apply:

## DEPARTMENT:

<u>  x  </u>	HYDROLOGY/ DRAINAGE
<u>      </u>	TRAFFIC/ TRANSPORTATION
<u>      </u>	MS4/ EROSION & SEDIMENT CONTROL

**TYPE OF SUBMITTAL:**

\_\_\_\_\_ ENGINEER/ ARCHITECT CERTIFICATION  
 \_\_\_\_\_ CONCEPTUAL G & D PLAN  
 \_\_\_\_\_ GRADING PLAN  
 \_\_\_\_\_ DRAINAGE MASTER PLAN  
 \_\_\_\_\_ DRAINAGE REPORT  
 \_\_\_\_\_ CLOMR/LOMR  
 \_\_\_\_\_ TRAFFIC CIRCULATION LAYOUT (TCL)  
 \_\_\_\_\_ TRAFFIC IMPACT STUDY (TIS)  
 \_\_\_\_\_ EROSION & SEDIMENT CONTROL PLAN (ESC)

X OTHER (SPECIFY) Revision to existing approved plan

IS THIS A RESUBMITTAL?:   x   Yes        No

**CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:**

☐ BUILDING PERMIT APPROVAL  
☐ CERTIFICATE OF OCCUPANCY  
  
☐ PRELIMINARY PLAT APPROVAL  
☐ SITE PLAN FOR SUB'D APPROVAL  
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE  
☐ FOUNDATION PERMIT APPROVAL  
☒ GRADING PERMIT APPROVAL  
☐ SO-19 APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ GRADING/ PAD CERTIFICATION  
☐ WORK ORDER APPROVAL  
☐ CLOMR/LOMR  
  
☐ PRE-DESIGN MEETING  
☐ OTHER (SPECIFY)

DATE SUBMITTED: 08-15-17 By: YOLANDA PADILLA MOYER, P.E.

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED:



August 15, 2017

Mr. Doug Hughes, P.E.  
City of Albuquerque  
600 2<sup>nd</sup> Street NW  
Albuquerque, NM 87102

Re: Revised Grading and Drainage Plan, Del Webb @ Mirehaven, Phase 2A  
DRB Case No. 1006864

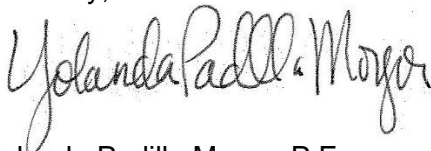
Dear Doug:

Please find enclosed design revision #4 to the approved grading and drainage plan for Phase 2A of the above referenced project.

The revision consists of adding a swale along the eastside of Lot 22 to convey the flow from lots 23-27 to the swale behind lots 16-22 and down to the pond located at the southern corner of the development as should on Sheet 7 of 7.

Please find enclosed the revised grading plan. We are requesting your review and approval. I appreciate your time and consideration. If you have questions or require additional information, please contact me at 823-1000.

Sincerely,



Yolanda Padilla Moyer, P.E.  
Senior Project Manager  
Community Development & Planning

Enclosure

cc: Kevin Patton, Pulte Homes



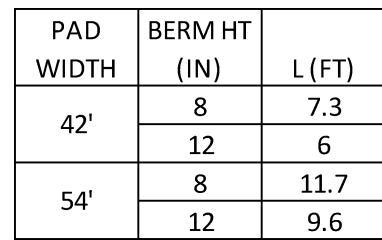


Diagram illustrating the cross-section of a retaining wall. The wall has a total height of 8' MAX. and a base width of 6". The wall is composed of a series of blocks, with the top section labeled "CARRY ON BY OTHERS". The wall is supported by a foundation labeled "TW XX,XX" and "BW XX,XX". The wall is shown with a "VARIES" dimension for the base width and a "VARIES" dimension for the height of the wall above the foundation. The wall is shown with a "VARIES" dimension for the base width and a "VARIES" dimension for the height of the wall above the foundation.

TW=FINISHED GRADE ELEVATION AT TOP OF RETAINING WALL  
BW=FINISHED GRADE ELEVATION AT BOTTOM OF RETAINING WALL

(RETAINING HEIGHT IS TAKEN TO BE DIFFERENCE IN FINISHED GRADES ON LEFT AND RIGHT SIDE OF WALL. HEIGHT IS IN ACCORDANCE WITH CITY COMPREHENSIVE ZONING CODE, SECTION 14-16-3-19, GENERAL HEIGHT AND DESIGN REGULATIONS FOR WALLS, FENCES, AND RETAINING WALLS.



\*\* BOTTOM OF BASIN IS 1' BELOW PROPERTY LINE  
ELEVATION SEE GRADING PLANS FOR EXACT  
ELEVATIONS

- |                              |              |
|------------------------------|--------------|
| PROPOSED SPOT ELEVATION      | ● 5235.25    |
| EXISTING SPOT ELEVATION      | ● EX 5235.25 |
| PROPOSED CONTOUR             | — 5025 —     |
| EXISTING STORM DRAIN LINE    | ===          |
| PROPOSED STORM DRAIN INLET   |              |
| PROPOSED STORM DRAIN LINE    |              |
| PROPOSED STORM DRAIN MANHOLE |              |
| PROPOSED WATER BLOCK         |              |
| RETAINING WALL               |              |
| PAD                          |              |
| TURNED BLOCK                 | TB           |
| STREET SLOPE                 |              |



1. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE PUBLIC WORKS STANDARDS SHALL APPLY.
2. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA REQUIREMENTS WITH RESPECT TO STORM WATER DISCHARGE.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL POTENTIAL OBSTRUCTIONS INCLUDING ALL UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION OBSERVER OR ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
4. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
5. ALL ELECTRICAL, TELEPHONE, CABLE TV, GAS AND OTHER UTILITY LINES, CABLES, AND APPURTENANCES ENCOUNTERED DURING CONSTRUCTION THAT REQUIRE RELOCATION, SHALL BE COORDINATED WITH THAT UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY ADJUSTMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCES CAUSED BY UTILITY COMPANY WORK CREWS. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE CONSTRUCTION OBSERVER.
7. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT PROPERTIES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
8. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY.
9. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS FOR THE PROJECT PRIOR TO COMMENCING CONSTRUCTION (I.E., BARRICADING, TOPSOIL DISTURBANCE, EXCAVATION PERMITS, EPA STORM WATER PERMITS, ETC.).
10. ALL PROPERTY CORNERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A REGISTERED LAND SURVEYOR.
11. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE CITY OF ALBUQUERQUE, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.
12. ALL BARRICADES AND CONSTRUCTION SIGNING SHALL CONFORM TO APPLICABLE SECTIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), US DEPARTMENT OF TRANSPORTATION, LATEST EDITION.
13. THE CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION BARRICADES AND SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.
14. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.

3. MEASURES AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
2. CONTRACTOR SHALL OBTAIN AND ABIDE BY A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DIVISION, PRIOR TO CONSTRUCTION. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE, AND FEDERAL DUST CONTROL REQUIREMENTS AND REQUIREMENTS AND WILL BE RESPONSIBLE FOR PREPARING AND OBTAINING ALL NECESSARY APPLICATIONS AND APPROVALS.
3. ALL WORK RELATIVE TO FOUNDATION CONSTRUCTION, SITE PREPARATION, AND PAVEMENT INSTALLATION, AS SHOWN ON THIS PLAN, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SOILS REPORT PREPARED BY XENIYARD DATED JULY 22, 2013. ALL OTHER WORK UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS (FIRST PRIORITY), AND/OR THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).
4. TWO WORKING DAYS PRIOR TO EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (765-1264) FOR LOCATION OF EXISTING UTILITIES.
5. PRIOR TO GRADING, ALL VEGETATION DEBRIS, AND NEAR SURFACE ORGANICALLY CONTAMINATED SOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED. VEGETATION AND DEBRIS SHALL BE DISPOSED OF OFF-SITE OR STOCK-PILED FOR USE IN PLANTERS AND NON-STRUCTURAL FILLS.
6. EARTH SLOPES SHALL NOT EXCEED 4 HORIZONTAL TO 1 VERTICAL, UNLESS SHOWN OTHERWISE.
7. 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.
8. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY. THIS SHOULD BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES WETING THE SOIL TO PROTECT IT FROM WIND EROSION.
9. A DISPOSAL SITE FOR ALL EXCESS EXCAVATION AND UNSUITABLE 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 SITE AND HAUL THERE TO SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.
10. PAVING AND ROADWAY GRADES SHALL BE +/- 0.1" FROM PLAN ELEVATIONS. PAD ELEVATION SHALL BE +/- 0.05" FROM BUILDING PLAN ELEVATIONS.
11. ALL SPOT ELEVATIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED. VALLEY GUTTER ELEVATIONS ARE SHOWN AT FLOWLINE ELEVATION.

[illegible]

**Bohannon**  **Huston**  
www.bhinc.com 800.877.5332



**CITY OF ALBUQUERQUE**  
**DEPARTMENT OF**  
**MUNICIPAL DEVELOPMENT**

DEL WEBB @ MIREHAVEN PHASE 2  
OVERALL GRADING PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
TY PROJECT NO.		ZONE MAP NO.	SHEET 1 OF 7	





P:\20160158\CDP\Plans\General\20160158\_grading02-rev.dwg  
Thu, 5-Jan-2017 - 4:52:pm, Plotted by: YPADILLA

BHI JOB NO. 20160158

- LEGEND**
- PROPOSED SPOT ELEVATION: 5235.25
  - EXISTING SPOT ELEVATION: EX 5235.25
  - PROPOSED CONTOUR: 5225
  - EXISTING STORM DRAIN LINE: ---
  - PROPOSED STORM DRAIN INLET: □
  - PROPOSED STORM DRAIN LINE: ===
  - PROPOSED STORM DRAIN MANHOLE: ○
  - PROPOSED WATER BLOCK: ~~~
  - RETAINING WALL: [Symbol]
  - PAD: 10 P=5300.00
  - TURNED BLOCK: TB
  - STREET SLOPE: XX



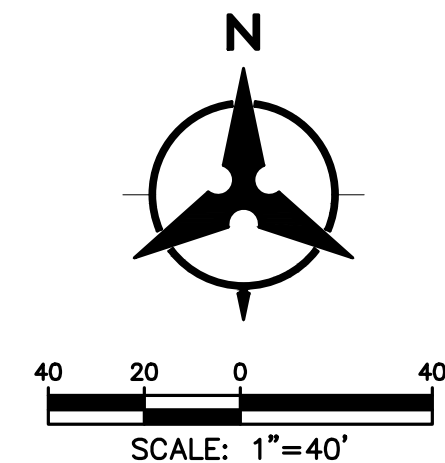
CONTRACTOR SHALL INSTALL 7' WIDE 1' DEEP SWALE ALONG THE NORTHSIDE OF MIREHAVEN ARROYO MAINTENANCE ROAD FROM LOT 158 TO PEDESTRIAN TRAIL BETWEEN LOTS 166/167, AN 8' WIDE 1' DEEP SWALE FROM LOT 167 TO THE PEDESTRIAN TRAIL BETWEEN LOTS 174/175 AND A 12' WIDE 1.5' DEEP SWALE FROM LOT 175 TO POND WEST OF WILLOW CANYON.

CONTRACTOR SHALL INSTALL 8' WIDE 1' DEEP SWALE ALONG THE NORTHSIDE OF MIREHAVEN ARROYO MAINTENANCE ROAD FROM LOT 1 TO POND BEHIND LOT 15.

CONTRACTOR SHALL INSTALL 7' WIDE 1' DEEP SWALE ALONG THE BACKSIDE OF LOT 23 TO LOT 27 AND FROM THE POND AT LOT 16 TO LOT 22.

SWALE LOCATION VARIES BEHIND LOTS 9-11 AND 172-174. SEE PLAN FOR LOCATION

SWALE SHALL BE 12" OF 95% COMPACTION WITH FILTER FABRIC AND 1" TO 2" FRACTURED COBBLE



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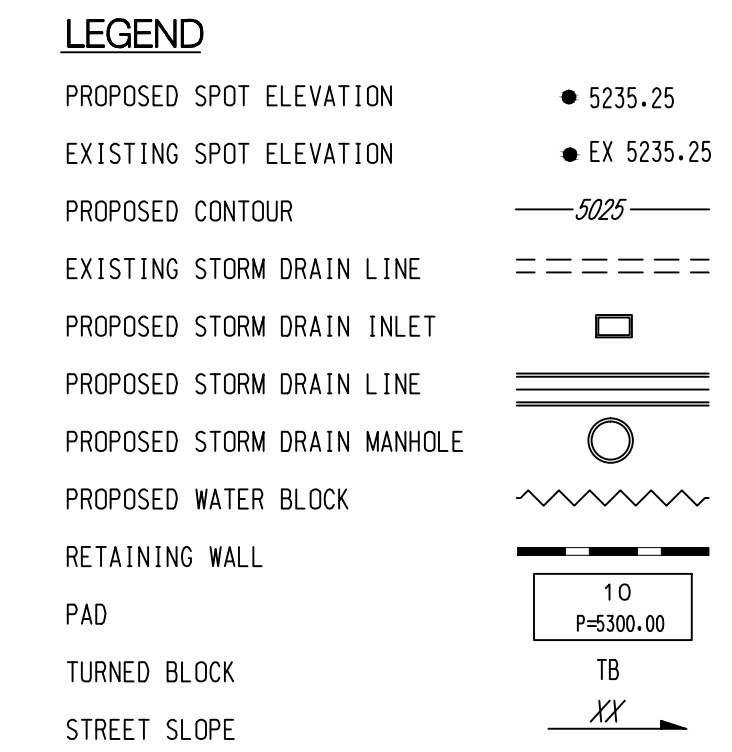


**CITY OF ALBUQUERQUE**  
**DEPARTMENT OF**  
**MUNICIPAL DEVELOPMENT**

DEL WEBB @ MIREHAVEN PHASE 2  
GRADING PLAN

DESIGN REVIEW COMMITTEE		CITY ENGINEER APPROVAL		MO./DAY/YR.	
CITY PROJECT NO.	ZONE MAP NO.	LAST DESIGN UPDATE	SHEET	OF	
				2	
				7	





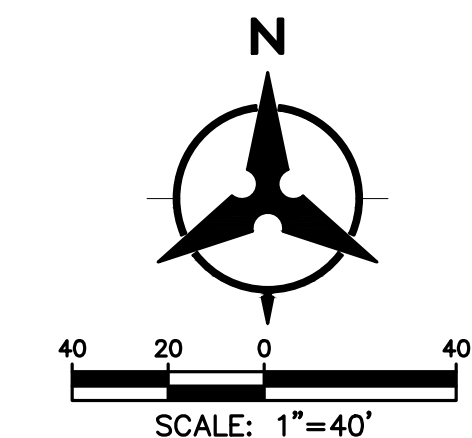
CONTRACTOR SHALL INSTALL 7' WIDE 1' DEEP SWALE ALONG THE NORTHSIDE OF MIREHAVEN ARROYO MAINTENANCE ROAD FROM LOT 158 TO PEDESTRIAN TRAIL BETWEEN LOTS 166/167, AN 8' WIDE 1' DEEP SWALE FROM LOT 167 TO THE PEDESTRIAN TRAIL BETWEEN LOTS 174/175 AND A 12' WIDE 1.5' DEEP SWALE FROM LOT 175 TO POND WEST OF WILLOW CANYON.

CONTRACTOR SHALL INSTALL 8' WIDE 1' DEEP  
SWALE ALONG THE NORTHSIDE OF MIREHAVEN  
ARROYO MAINTENANCE ROAD FROM LOT 1 TO  
POND BEHIND LOT 15.

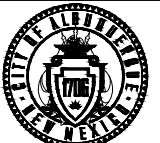
CONTRACTOR SHALL INSTALL 7' WIDE 1' DEEP  
SWALE ALONG THE BACKSIDE OF LOT 23 TO  
LOT 27 AND FROM THE POND AT LOT 16 TO  
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SWALE LOCATION VARIES BEHIND LOTS 9-11  
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**CITY OF ALBUQUERQUE**  
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**MUNICIPAL DEVELOPMENT**

DEL WEBB @ MIREHAVEN PHASE 2  
GRADING PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
PROJECT NO.		ZONE MAP NO.	SHEET 3 OF 7	

BHI JOB NO. 20160158





- LEGEND**
- PROPOSED SPOT ELEVATION • 5235.25
  - EXISTING SPOT ELEVATION • EX 5235.25
  - PROPOSED CONTOUR — 5025 —
  - EXISTING STORM DRAIN LINE - - - - -
  - PROPOSED STORM DRAIN INLET □
  - PROPOSED STORM DRAIN LINE |||||
  - PROPOSED STORM DRAIN MANHOLE ○
  - PROPOSED WATER BLOCK ~~~~~
  - RETAINING WALL [Symbol]
  - PAD 10 P=5300.00
  - TURNED BLOCK TB
  - STREET SLOPE XX



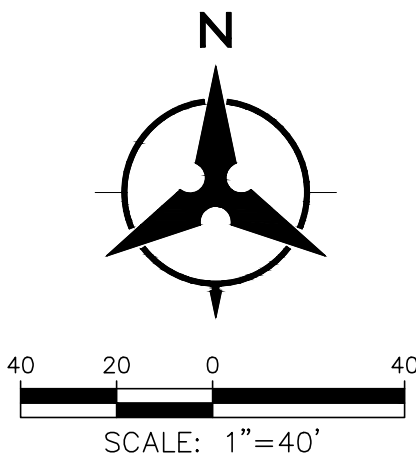
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CONTRACTOR SHALL INSTALL 8' WIDE 1' DEEP SWALE ALONG THE NORTHSIDE OF MIREHAVEN ARROYO MAINTENANCE ROAD FROM LOT 1 TO POND BEHIND LOT 15.

CONTRACTOR SHALL INSTALL 7' WIDE 1' DEEP SWALE ALONG THE NORTHSIDE OF LOT 23 TO LOT 27 AND FROM THE POND AT LOT 16 TO LOT 22.

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**CITY OF ALBUQUERQUE**  
**DEPARTMENT OF**  
**MUNICIPAL DEVELOPMENT**

**DEL WEBB @ MIREHAVEN PHASE 2**  
**GRADING PLAN**

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR	MO./DAY/YR
CITY PROJECT NO.	ZONE MAP NO.	SHEET 4 OF 7	

BENCH MARKS		AS-BUILT INFORMATION	
USC&GS BRASS DISC STAMPED "REWARD 1969"	CONTRACTOR	DATE	DATE
GEOGRAPHIC POSITION (NAD 83)	INSPECTED BY	DATE	DATE
N.M. STATE PLANE COORDINATES	ACCEPTANCE BY	DATE	DATE
(CENTRAL ZONE)	VERIFICATION BY	DATE	DATE
N=1487364.063 E=1491190.819	DRAWINGS CHECKED BY	DATE	DATE
GROUND TO GRID = 0.999675005	MICRO-FILM INFORMATION		
DELTA ALPHA = -0071712.26"	RECORDED BY	DATE	DATE
NAVD 1988 ELEVATION = 5319.688	NO.		

ENGINEER'S SEAL		SURVEY INFORMATION	
		FIELD NOTES	
		NO.	BY
YPM	YPM		
04/17 LOT 34 SIDEYARD REVISION	01/17 REVISED NORTH GRADING/RETAINING WALLS		
08/16 LOTS 58-67 DRAIN TO WOODS WASH TR.	REVISIONS		
NO. DATE	DESIGN		
DESIGNED BY YPM	DATE 01/2016		
DRAWN BY AR	DATE 01/2016		
CHECKED BY YPM	DATE 01/2016		





P: \\20160158\CDP\Plans\General\20160158\_grading02-rev.dwg  
Thu, 5-Jan-2017 - 4:54:pm, Plotted by: YPADILLA

BHI JOB NO. 20160158

**LEGEND**

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EXISTING SPOT ELEVATION      ● EX 5235.25  
PROPOSED CONTOUR      -5225-  
EXISTING STORM DRAIN LINE      ---  
PROPOSED STORM DRAIN INLET      □  
PROPOSED STORM DRAIN LINE      ===  
PROPOSED STORM DRAIN MANHOLE      ○  
PROPOSED WATER BLOCK      ~~~~~  
RETAINING WALL      [Hatched Box]  
PAD      [Box with 10, P=5300.00]  
TURNED BLOCK      TB  
STREET SLOPE      XX

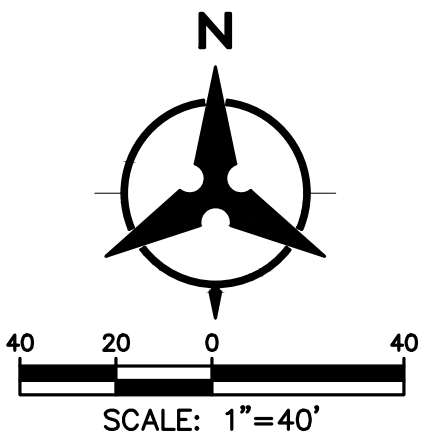
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**CITY OF ALBUQUERQUE**  
**DEPARTMENT OF**  
**MUNICIPAL DEVELOPMENT**

**DEL WEBB @ MIREHAVEN PHASE 2**  
**GRADING PLAN**

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
		5	7


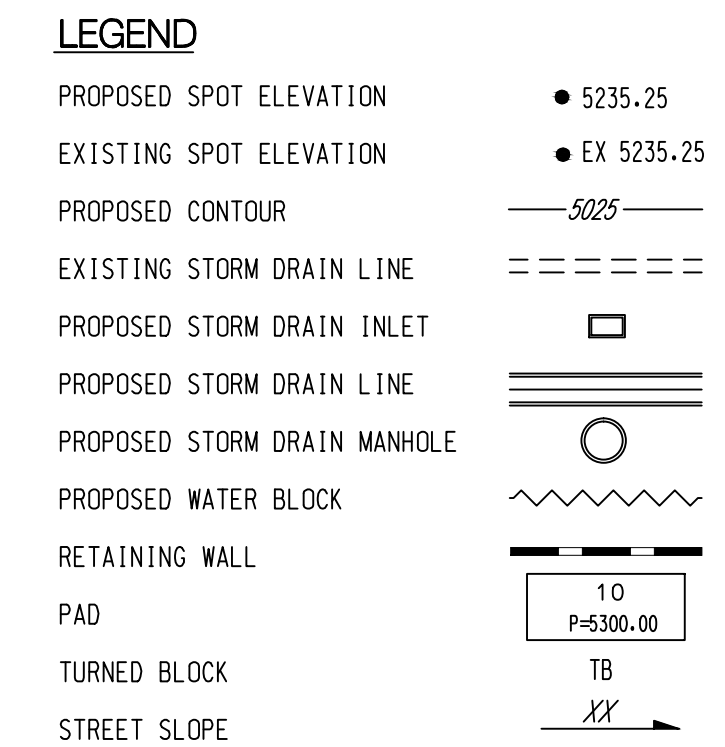
ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS-BUILT INFORMATION	
		FIELD NOTES		USC&GS BRASS DISC STAMPED "REWARD 1969"		CONTRACTOR	
		NO.	BY	DATE	GEOGRAPHIC POSITION (NAD 83)	STAMPED BY	DATE
					N.M. STATE PLANE COORDINATES	INSPECTOR'S	DATE
					(CENTRAL ZONE)	ACCEPTANCE BY	DATE
					N=1487364.063 E=1491190.819	VERIFICATION BY	DATE
					GROUND TO GRID = 0.999675005	DRAWINGS	DATE
					DELTA ALPHA = -007712.26"	CORRECTED BY	DATE
					NAVD 1988 ELEVATION = 5319.688	RECORDED BY	DATE
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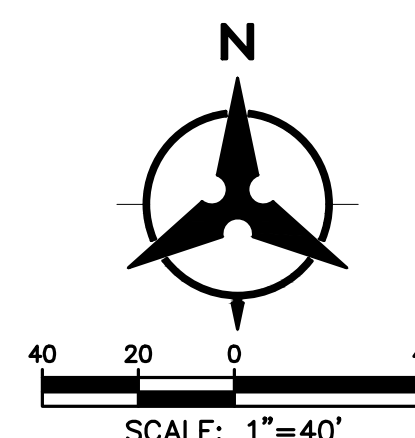
CONTRACTOR SHALL INSTALL 7' WIDE 1' DEEP SWALE ALONG THE NORTHSIDE OF MIREHAVE ARROYO MAINTENANCE ROAD FROM LOT 158 PEDESTRIAN TRAIL BETWEEN LOTS 166/167 AN 8' WIDE 1' DEEP SWALE FROM LOT 167 TO THE PEDESTRIAN TRAIL BETWEEN LOTS 174/175 AND A 12' WIDE 1.5' DEEP SWALE FROM LOT 175 TO POND WEST OF WILLOW CANYON.

CONTRACTOR SHALL INSTALL 8' WIDE 1' C  
SWALE ALONG THE NORTHSIDE OF MIREHAY  
ARROYO MAINTENANCE ROAD FROM LOT 1 TO  
POND BEHIND LOT 15.

CONTRACTOR SHALL INSTALL 7' WIDE 1' C  
SWALE ALONG THE BACKSIDE OF LOT 23 TO  
LOT 27 AND FROM THE POND AT LOT 16 TO  
LOT 22.

SWALE LOCATION VARIES BEHIND LOTS 9-1  
AND 172-174. SEE PLAN FOR LOCATION

SWALE SHALL BE 12" OF 95% COMPACTION  
WITH FILTER FABRIC AND 1" TO 2"  
FRACTURED COBBLE



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**CITY OF ALBUQUERQUE**  
**DEPARTMENT OF**  
**MUNICIPAL DEVELOPMENT**

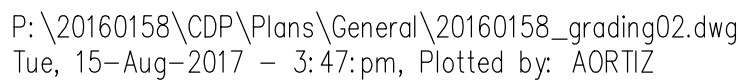
DEL WEBB @ MIREHAVEN PHASE 2  
GRADING PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL
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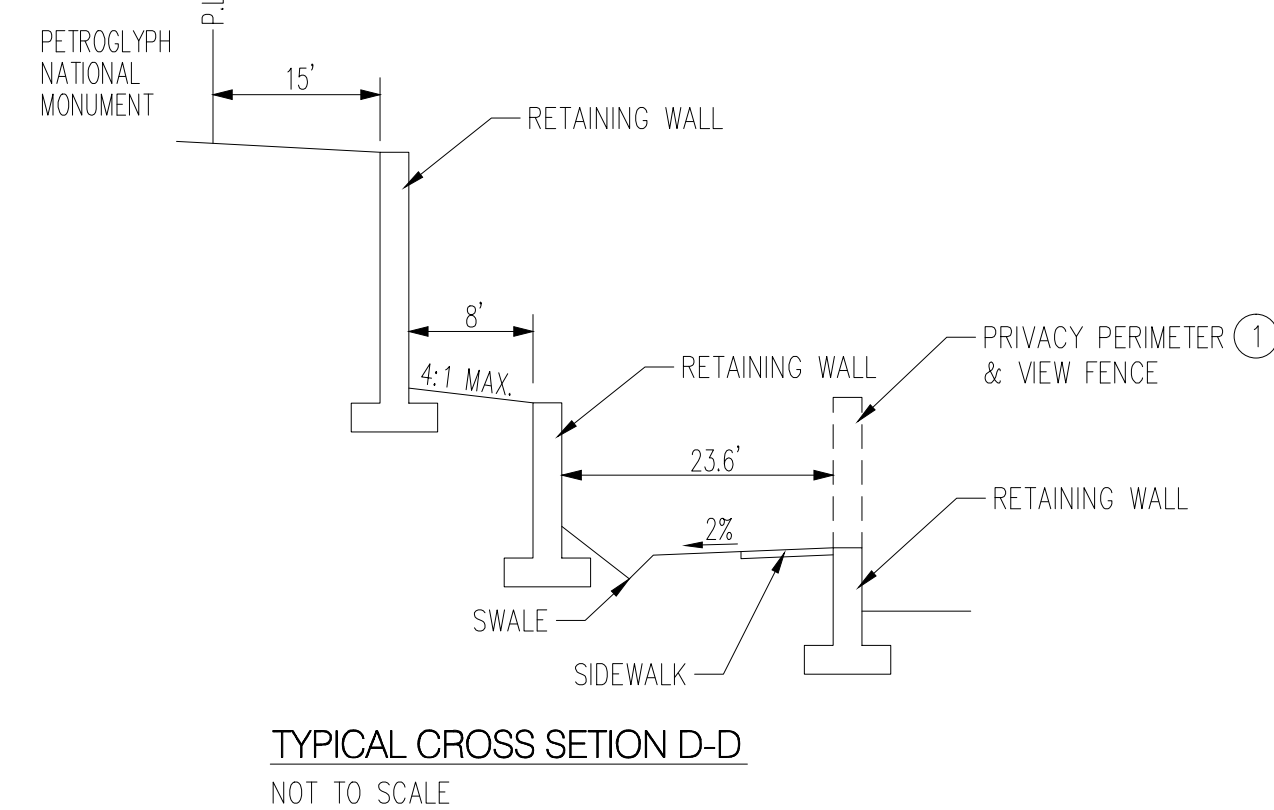
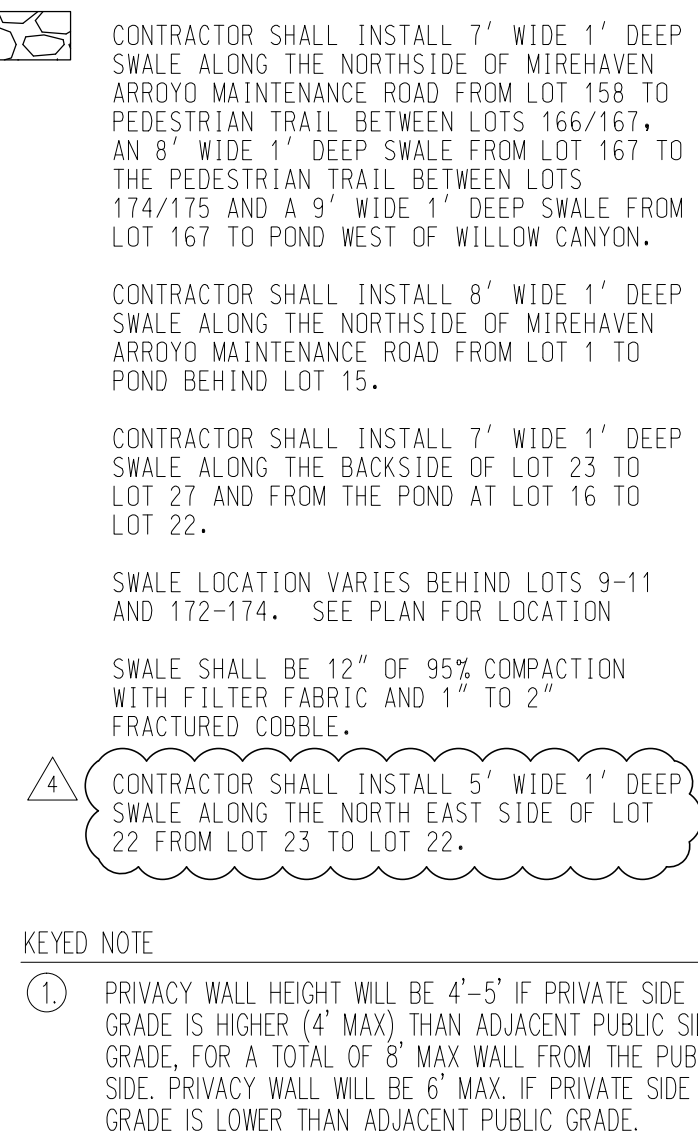
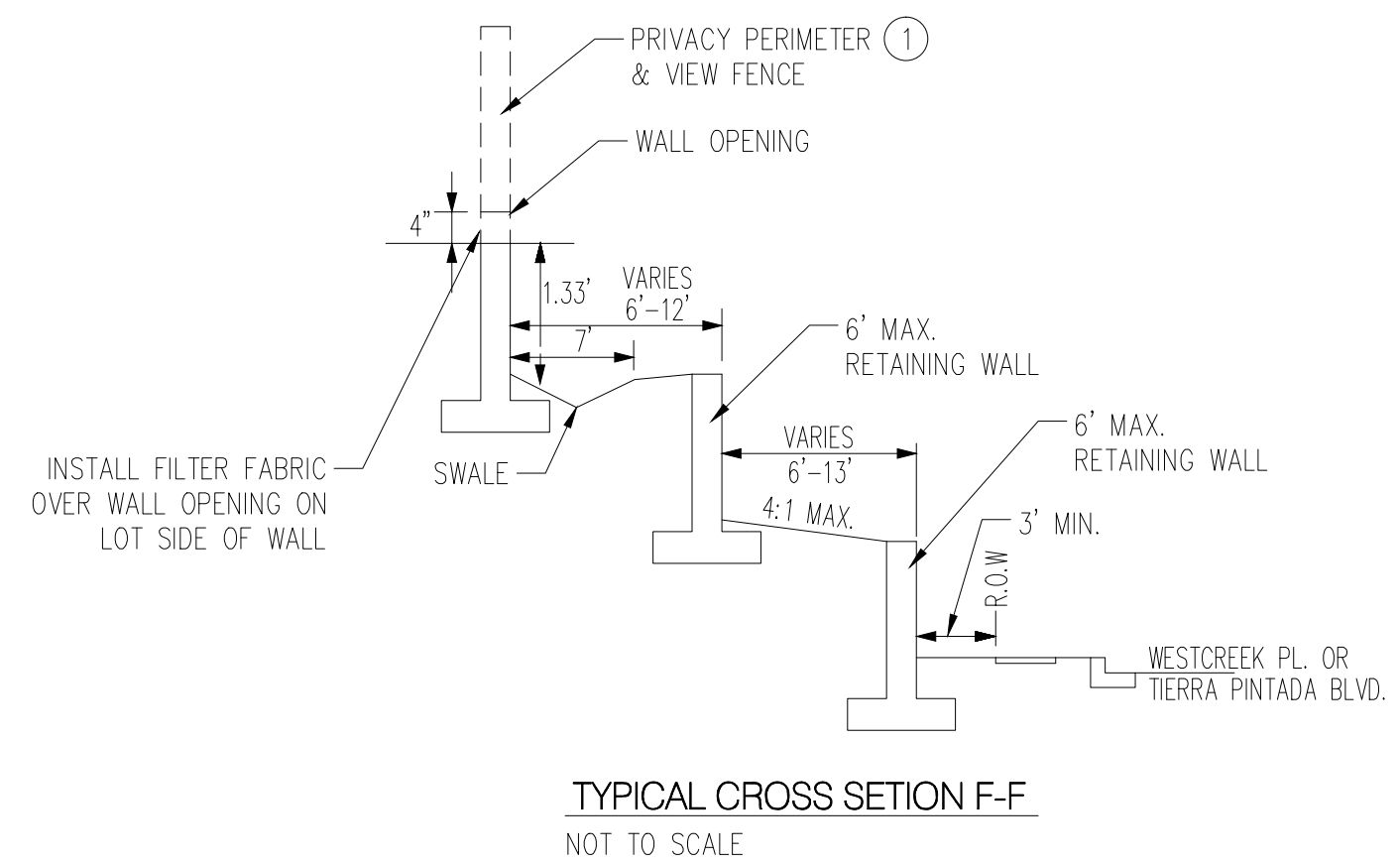
PROJECT NO.	ZONE M.
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[illegible]





TYPICAL CROSS SECTION E-E  
NOT TO SCALE

[illegible]