

# CITY OF ALBUQUERQUE

Planning Department  
David Campbell, Director



Mayor Timothy M. Keller

August 22, 2019

Matt Satches, P.E.  
Bohannon Huston, Inc.  
7500 Jefferson St NE  
Albuquerque, NM 87109

**RE: Westgate Community Center  
10001 DeVargas Rd SW  
Grading and Drainage Plan  
Engineer's Stamp Date: 8/12/19  
Hydrology File: M09D030**

Dear Mr. Satches:

PO Box 1293

Based on the submittal received on 8/14/19, the Grading and Drainage Plan cannot be approved until the following corrections are made:

Prior to Building Permit:

Albuquerque

NM 87103

www.cabq.gov

1. Provide hydraulic calculations for the riprap swale along the north side of the project; and calculations from Pond 1 back on the plan.
2. Put the concrete swale (emergency overflow) from pond 1 back on the plan. Any alternative design needs to be designed and stamped by a professional engineer and provided on the stamped grading plan.
3. Put the riprap swale into pond 1 back on the plan. Any alternative design needs to be designed and stamped by a professional engineer and provided on the stamped grading plan.
4. Put the riprap swale along east property line back on the plan. Any alternative design needs to be designed and stamped by a professional engineer and provided on the stamped grading plan.
5. Provide an armored swale and slope stabilization around the western future building pad. Put the retaining wall section (former section A-A) back on the plan for the section of stem wall that is getting built.
6. Include a note that *no work shall be allowed in the public ROW without an approved Work Order.*

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7. Will the basin B-2 area be used for staging? It needs to be reseeded if so; specify reseeding per section 1012 for all disturbed areas.
8. Depress the landscaping in the parking islands to provide additional water quality and allow water to enter the islands instead of ponding/ backing up in the parking spots.
9. Screen-back or otherwise annotate what parking islands & curbs will be built now and which are future.

Prior to Certificate of Occupancy (For Information):

10. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision*, will be required.
11. City acceptance and close-out of the public Work Order will be required, unless a financial guarantee has been posted.

If you have any questions, please contact me at 924-3695 or [dpeterson@cabq.gov](mailto:dpeterson@cabq.gov).

PO Box 1293

Sincerely,

Albuquerque

NM 87103

Dana M. Peterson  
Senior Engineer, Planning Dept.  
Development Review Services

[www.cabq.gov](http://www.cabq.gov)



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

**Project Title:** \_\_\_\_\_ **Building Permit #:** \_\_\_\_\_ **Hydrology File #:** \_\_\_\_\_

**DRB#:** \_\_\_\_\_ **EPC#:** \_\_\_\_\_ **Work Order#:** \_\_\_\_\_

**Legal Description:** \_\_\_\_\_

**City Address:** \_\_\_\_\_

**Applicant:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Owner:** \_\_\_\_\_ **Contact:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone#:** \_\_\_\_\_ **Fax#:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**TYPE OF SUBMITTAL:** \_\_\_\_\_ PLAT (\_\_\_# OF LOTS) \_\_\_\_\_ RESIDENCE \_\_\_\_\_ DRB SITE \_\_\_\_\_ ADMIN SITE

**IS THIS A RESUBMITTAL?:** \_\_\_\_\_ Yes \_\_\_\_\_ No

**DEPARTMENT:** \_\_\_\_\_ TRAFFIC/ TRANSPORTATION \_\_\_\_\_ HYDROLOGY/ DRAINAGE

Check all that Apply:

**TYPE OF SUBMITTAL:**

- \_\_\_\_\_ ENGINEER/ARCHITECT CERTIFICATION
- \_\_\_\_\_ PAD CERTIFICATION
- \_\_\_\_\_ CONCEPTUAL G & D PLAN
- \_\_\_\_\_ GRADING PLAN
- \_\_\_\_\_ DRAINAGE MASTER PLAN
- \_\_\_\_\_ DRAINAGE REPORT
- \_\_\_\_\_ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- \_\_\_\_\_ ELEVATION CERTIFICATE
- \_\_\_\_\_ CLOMR/LOMR
- \_\_\_\_\_ TRAFFIC CIRCULATION LAYOUT (TCL)
- \_\_\_\_\_ TRAFFIC IMPACT STUDY (TIS)
- \_\_\_\_\_ OTHER (SPECIFY) \_\_\_\_\_
- \_\_\_\_\_ PRE-DESIGN MEETING?

**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
- \_\_\_\_\_ FLOODPLAIN DEVELOPMENT PERMIT
- \_\_\_\_\_ OTHER (SPECIFY) \_\_\_\_\_

**DATE SUBMITTED:** \_\_\_\_\_ **By:** \_\_\_\_\_

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

FEE PAID: \_\_\_\_\_

**PROPOSED DRAINAGE NARRATIVE**

**INTRODUCTION:**  
WESTGATE COMMUNITY CENTER IS LOCATED NORTH OF DEVARGAS ROAD, EAST OF SNOW VISTA CHANNEL AND WEST OF 98TH STREET. THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE A DRAINAGE MANAGEMENT PLAN FOR THE DEVELOPMENT OF THE WESTGATE COMMUNITY CENTER AND REQUEST COA HYDROLOGY BUILDING & GRADING PERMIT APPROVAL.

**EXISTING CONDITIONS:**  
THE SITE IS CURRENTLY UNDEVELOPED AND FREE DISCHARGES TO THE SOUTH INTO DEVARGAS ROAD. THE SITE CURRENTLY DRAINS FROM NORTHWEST TO SOUTHWEST. THE SITE IS BORDERED TO THE WEST BY THE SNOW VISTA CHANNEL. THIS CHANNEL AND THE WESTGATE SITE, ARE NOT LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE (FEMA FIRM MAP #35001C0336H).

**SITE HISTORY:**  
SEVERAL DRAINAGE REPORTS AND STUDIES HAVE INCLUDED THE SITE WITHIN THEIR ANALYSIS. SAD 222 DRAINAGE REPORT PREPARED BY THE LARKIN GROUP DATED 9/12/2000 STATES THAT THE INFRASTRUCTURE WITHIN THE TOWER/SAGE DRAINAGE BASIN WAS INITIALLY SIZED PRIOR TO THE ADOPTION OF AHYMO. SINCE THE ADOPTION OF AHYMO, IT WAS FOUND THAT THE RUNOFF CONTRIBUTING TO INFRASTRUCTURE WITHIN THE TOWER/SAGE DRAINAGE BASIN, INCLUDING THE 98TH STREET STORM DRAIN, WAS MORE THAN INITIALLY THOUGHT. THE STORM DRAIN WITHIN 98TH STREET WAS SIZED TO CARRY RUNOFF GENERATED WITHIN THE 98TH STREET RIGHT OF WAY. THE PROPERTY OWNERS ALONG THE WEST EDGE OF 98TH STREET BETWEEN TOWER ROAD AND DEVARGAS ROAD ARE NOT INCLUDED WITHIN THE ANALYSIS OF SAD 222 AS THEY WILL MANAGE THEIR OWN RUNOFF ONSITE. THE AMOLE HUBBELL DRAINAGE MANAGEMENT PLAN FINAL FACILITIES REPORT DATED 7/22/1999 NOTES SIMILAR DRAINAGE ISSUES WITHIN THE TOWER/SAGE DRAINAGE BASIN. PER THE REPORT, THE CITY OF ALBUQUERQUE HAS RESTRICTED NEW DEVELOPMENT TO A RUNOFF RATE OF 1.29 CFS/ACRE. THIS WAS PROPOSED TO ALLEVIATE THE ISSUES DOWNSTREAM OF THE SITE. A NEW AMOLE HUBBELL DRAINAGE REPORT PREPARED BY WILSON & CO DATED 3/26/14 REANALYZED THE AGING 1999 REPORT. THIS NEW REPORT DESCRIBES THE SITE'S RUNOFF AS DISCHARGING AT THE NORTHWEST CORNER OF 98TH STREET AND DEVARGAS ROAD AS ANALYSIS POINT 5166 AT A RATE OF 181 CFS. THIS ANALYSIS POINT INCLUDES THE TRAILER PARK TO THE EAST AS WELL AS PROPERTY ALONG THE WESTERN SIDE OF 98TH STREET. THE SAD 222 REPORT PREVIOUSLY STATED THAT THESE PROPERTIES WILL MANAGE THEIR OWN RUNOFF ONSITE. THESE ARE CONTRADICTING STATEMENTS. FURTHER ANALYSIS OF THE AS-BUILT OF SAD 222 SHOW THAT THE STORM DRAIN WITHIN 98TH STREET WAS DESIGNED TO HAVE A CAPACITY OF 59.30 CFS. THIS FLOW IS SIGNIFICANTLY LESS THAN THE 181 CFS THAT THE 2014 AMOLE HUBBELL DRAINAGE REPORT DESCRIBES.

THE STORM DRAIN WITHIN 98TH STREET IS UNDER CAPACITY AND CANNOT HANDLE DEVELOPED FLOWRATES FROM THE WESTGATE COMMUNITY CENTER SITE. AFTER MEETING WITH COA HYDROLOGY ON 8/7/2018 AND RESEARCHING THE AFOREMENTIONED REPORTS AND AS-BUILTS, IT WAS DETERMINED THAT THE SITE WILL BE REQUIRED TO RETAIN THE 100 YEAR - 6 HOUR STORM EVENT ONSITE.

**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 WITHIN PRECIPITATION ZONE 1. LAND TREATMENT PERCENTAGES WERE CALCULATED BASED ON THE SITE CONDITIONS.

**PROPOSED CONDITIONS:**  
WESTGATE COMMUNITY CENTER IS BEING CONSTRUCTED IN PHASES. THE FIRST PHASE WILL CONSTRUCT THE CENTRAL PORTION OF THE BUILDING AND THE FIRST ROW OF PARKING. THE FUTURE BUILDOUT OF THE SITE IS INCLUDED WITHIN THE DESIGN OF THE ONSITE PONDS AND INFRASTRUCTURE.

THE SITE IS DIVIDED INTO 2 LARGE BASINS (BASIN A & BASIN B) GENERALLY SEPARATING THE SITE NORTH AND SOUTH.

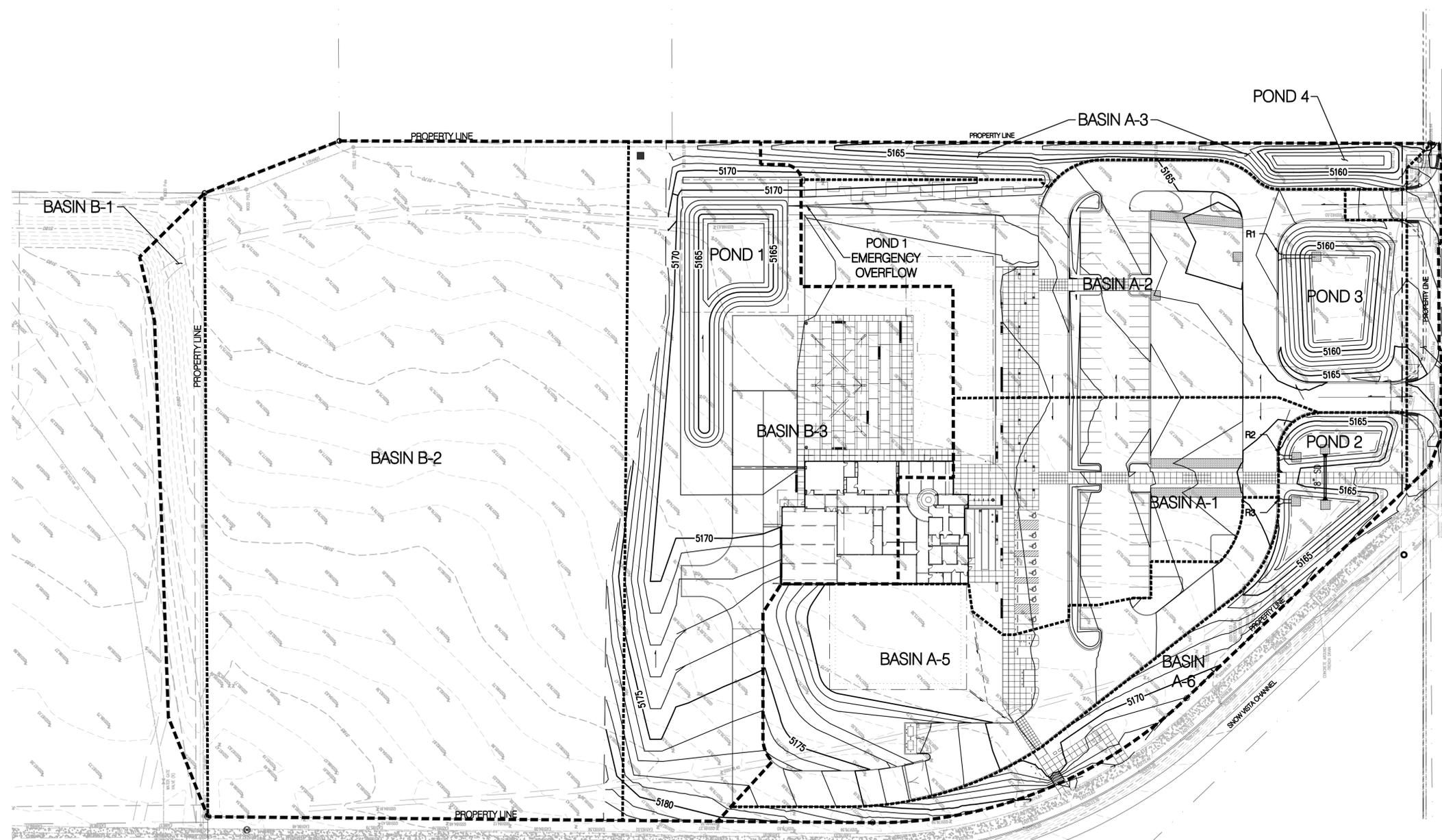
BASIN A IS LOCATED ON THE SOUTH PORTION OF THE SITE. THIS BASIN DRAINS FROM NORTH TO SOUTH AND CONTAINS A PORTION OF THE PROPOSED BUILDING AS WELL AS THE PARKING LOT SOUTH OF THE BUILDING. THERE ARE VARIOUS CURB OPENINGS WITHIN THE PROPOSED PARKING AREA. THESE CURB OPENINGS ARE NOT SIZED FOR A DESIGN STORM EVENT. SUB-BASINS A-1, A-5, & A-6 ALL DRAIN TO PROPOSED POND 2 WITH A CUMULATIVE 100YR-6HR VOLUME OF APPROXIMATELY 17,945 CF. SUB-BASIN A-2 DRAINS TO PROPOSED POND 3 WITH A 100YR-6HR VOLUME OF APPROXIMATELY 12,975 CF. POND 2 AND POND 3 ARE LOCATED ALONG THE SOUTHERN PROPERTY LINE. THESE PONDS ARE SIZED TO RETAIN THE VOLUME FROM SUB-BASINS A-1, A-2, A-5, & A-6. POND 2 IS UNDERSIZED AND OVERFLOW FROM THIS POND CONTINUES INTO POND 3. SUB-BASIN A3 IS A SMALL BASIN ON THE EAST SIDE OF THE SITE WHICH DRAINS TO PROPOSED POND 4 WITH A 100YR-6HR VOLUME OF APPROXIMATELY 1,321 CF. SUB-BASIN A-4 IS WITHIN THE PROPOSED PUBLIC SIDEWALK ACCESS EASEMENT. THIS SUB-BASIN IS NOT RETAINED ONSITE, BUT DISCHARGES APPROXIMATELY 0.82 CFS INTO DEVARGAS ROAD.

BASIN B IS LOCATED ON THE NORTH PORTION OF THE SITE. THIS BASIN IS PRIMARILY UNDEVELOPED AND WILL CONTINUE TO BE UNDEVELOPED. SUB-BASINS B-1 AND B-2 DISCHARGE TO THE SOUTHEAST INTO POND 1. SUB-BASIN B-3 DISCHARGES TO THE NORTH AND EAST OF THE EXISTING BUILDING INTO POND 1 AS WELL. THE 100YR-6HR VOLUME REQUIRED FOR POND 1 IS APPROXIMATELY 30,785 CF. DURING A LARGER STORM EVENT, RUNOFF FROM POND 1 WILL OVERFLOW TO THE SOUTH INTO A LANDSCAPED AREA.

FIRST FLUSH VOLUME IS RETAINED WITHIN THE 100YR-6HR STORM EVENT.

SEE POND DATA THIS SHEET FOR MORE INFORMATION.

**CONCLUSION:**  
THE SITE RETAINS THE 100 YEAR-6 HOUR STORM EVENT. THEREFORE, WE ARE IN CONFORMANCE WITH THE CITY OF ALBUQUERQUE HYDROLOGY REQUIREMENTS AND REQUEST BUILDING & GRADING PERMIT APPROVAL.



**POND DATA:**

**POND 1:**  
(BASIN B-1, B-2, B-3)  
VOLUME REQUIRED = 30,785 CF  
VOLUME PROVIDED = 33,561 CF  
TOP OF POND = 5168.00  
MAX WATER SURFACE ELEVATION = 5167.75  
EMERGENCY OVERFLOW ELEVATION = 5168.00

**POND 2:**  
(BASIN A-1, A-5, A-6)  
VOLUME REQUIRED = 17,946 CF  
VOLUME PROVIDED = 9,585 CF  
TOP OF POND = 5164.50  
MAX WATER SURFACE ELEVATION = 5164.50\*  
\* POND OVERFLOWS TO POND 3 (OVERFLOW VOL=8,361 CF)

**POND 3: (FUTURE)**  
(BASIN A-2 & OVERFLOW OF BASIN A-1, A-5, A-6)  
VOLUME REQUIRED = 21,336 CF  
VOLUME PROVIDED = 24,678 CF  
TOP OF POND = 5162.00  
MAX WATER SURFACE ELEVATION = 5161.25

**POND 4:**  
(BASIN A-4)  
VOLUME REQUIRED (100YR-10DAY) = 1,321 CF  
VOLUME PROVIDED = 3,024 CF  
TOP OF POND = 5160.00  
MAX WATER SURFACE ELEVATION = 5159.20

**WESTGATE COMMUNITY CENTER**  
Existing Developed 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(100yr) (cfs/ac.) | Q(CFS)       | V(100yr) (inches) | V(100yr-6hr) (CF) | V(100yr-24hr) (CF) |
|------------------|---------------|--------------|----------------------------|------|------|------|--------------------|--------------|-------------------|-------------------|--------------------|
|                  |               |              | A                          | B    | C    | D    |                    |              |                   |                   |                    |
| EXISTING BASIN A | 232346        | 5.33         | 100.0%                     | 0.0% | 0.0% | 0.0% | 1.29               | 6.88         | 0.44              | 8519              | 8519               |
| EXISTING BASIN B | 347850        | 7.99         | 100.0%                     | 0.0% | 0.0% | 0.0% | 1.29               | 10.30        | 0.44              | 12755             | 12755              |
| <b>TOTAL</b>     | <b>580196</b> | <b>13.32</b> | -                          | -    | -    | -    | -                  | <b>17.18</b> | -                 | <b>21274</b>      | <b>21274</b>       |

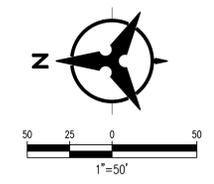
**Proposed Developed Conditions Basin Data Table**  
This table is based on the DPM Section 22.2, Zone: 1

| Basin ID                     | Area (SQ. FT) | Area (AC.)   | Land Treatment Percentages |      |        |       | Q(100yr) (cfs/ac.) | Q(CFS)       | V(100yr) (inches) | V(100yr-6hr) (CF) | V(100yr-10day) (CF) | FIRST FLUSH (CF) |
|------------------------------|---------------|--------------|----------------------------|------|--------|-------|--------------------|--------------|-------------------|-------------------|---------------------|------------------|
|                              |               |              | A                          | B    | C      | D     |                    |              |                   |                   |                     |                  |
| <b>CURRENT ONSITE BASINS</b> |               |              |                            |      |        |       |                    |              |                   |                   |                     |                  |
| BASIN A-1                    | 48209         | 1.11         | 0.0%                       | 0.0% | 15.0%  | 85.0% | 4.15               | 4.59         | 1.82              | 7324              | 12344               | 1161             |
| BASIN A-2                    | 87769         | 2.01         | 0.0%                       | 0.0% | 20.0%  | 80.0% | 4.07               | 8.20         | 1.77              | 12975             | 21577               | 1989             |
| BASIN A-3                    | 16007         | 0.37         | 0.0%                       | 0.0% | 100.0% | 0.0%  | 2.87               | 1.05         | 0.99              | 1321              | 1321                | 0                |
| BASIN A-4                    | 9262          | 0.21         | 0.0%                       | 0.0% | 35.0%  | 65.0% | 3.85               | 0.82         | 1.63              | 1256              | 1993                | 171              |
| BASIN A-5                    | 55201         | 1.27         | 0.0%                       | 0.0% | 20.0%  | 80.0% | 4.07               | 5.16         | 1.77              | 8161              | 13570               | 1251             |
| BASIN A-6                    | 28423         | 0.65         | 0.0%                       | 0.0% | 95.0%  | 5.0%  | 2.95               | 1.92         | 1.04              | 2461              | 2635                | 40               |
| BASIN B-1                    | 18834         | 0.43         | 0.0%                       | 0.0% | 100.0% | 0.0%  | 2.87               | 1.24         | 0.99              | 1554              | 1554                | 0                |
| BASIN B-2                    | 207317        | 4.76         | 0.0%                       | 0.0% | 100.0% | 0.0%  | 2.87               | 13.66        | 0.99              | 17104             | 17104               | 0                |
| BASIN B-3                    | 109175        | 2.51         | 0.0%                       | 0.0% | 65.0%  | 35.0% | 3.40               | 8.51         | 1.33              | 12128             | 16808               | 1083             |
| <b>TOTAL</b>                 | <b>580197</b> | <b>13.32</b> | -                          | -    | -      | -     | -                  | <b>45.15</b> | -                 | <b>64282</b>      | <b>123977</b>       | <b>5695</b>      |

**Concrete Rundown**

| Rundown # | Basin ID | Rundown Type | Actual Flow (Q100) | Min Weir** Length ft | Weir Opening Width ft | Weir Opening Height ft | Channel Height ft | Channel Width ft | Minimum Slope | Capacity* CFS |
|-----------|----------|--------------|--------------------|----------------------|-----------------------|------------------------|-------------------|------------------|---------------|---------------|
| R1        | A-2      | Rectang      | 8.2                | 6.00                 | 6.00                  | 0.67                   | 0.67              | 2.00             | 1.80%         | 11.18         |
| R2        | A-1      | Rectang      | 4.6                | 4.00                 | 6.00                  | 0.67                   | 0.67              | 2.00             | 4.90%         | 18.44         |
| R3        | A-5      | Rectang      | 5.2                | 4.00                 | 6.00                  | 0.67                   | 0.67              | 2.00             | 11.00%        | 27.63         |

Weir Eq:  $Q=2.65L(H^{1.5})$  - \*\* Capacity Based on Manning's Eq w/  $N=0.013$  - \*



**LEGEND**

- PROPERTY LINE
- LIMITS OF GRADING
- - - 5025 --- EXISTING INDEX CONTOUR
- - - 5024 --- EXISTING INTERMEDIATE CONTOUR
- 5025 --- PROPOSED INDEX CONTOUR
- 5024 --- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED MAJOR-BASIN
- PROPOSED SUB-BASIN

| NO. | DATE | REVISIONS | CHECKED BY: |
|-----|------|-----------|-------------|
|     |      |           |             |
|     |      |           |             |

LEE GAMESKY ARCHITECTS P.C.  
2412 MILES ROAD SE  
ALBUQUERQUE, NM 87106  
505.842.8865 FAX 842.1693  
lee@gamm.com

**WESTGATE COMMUNITY CENTER**  
Albuquerque, New Mexico

PROJECT ARCHITECT: LEE GAMESKY, AIA  
Project #: 16-01-AL  
Date: 08.12.2019

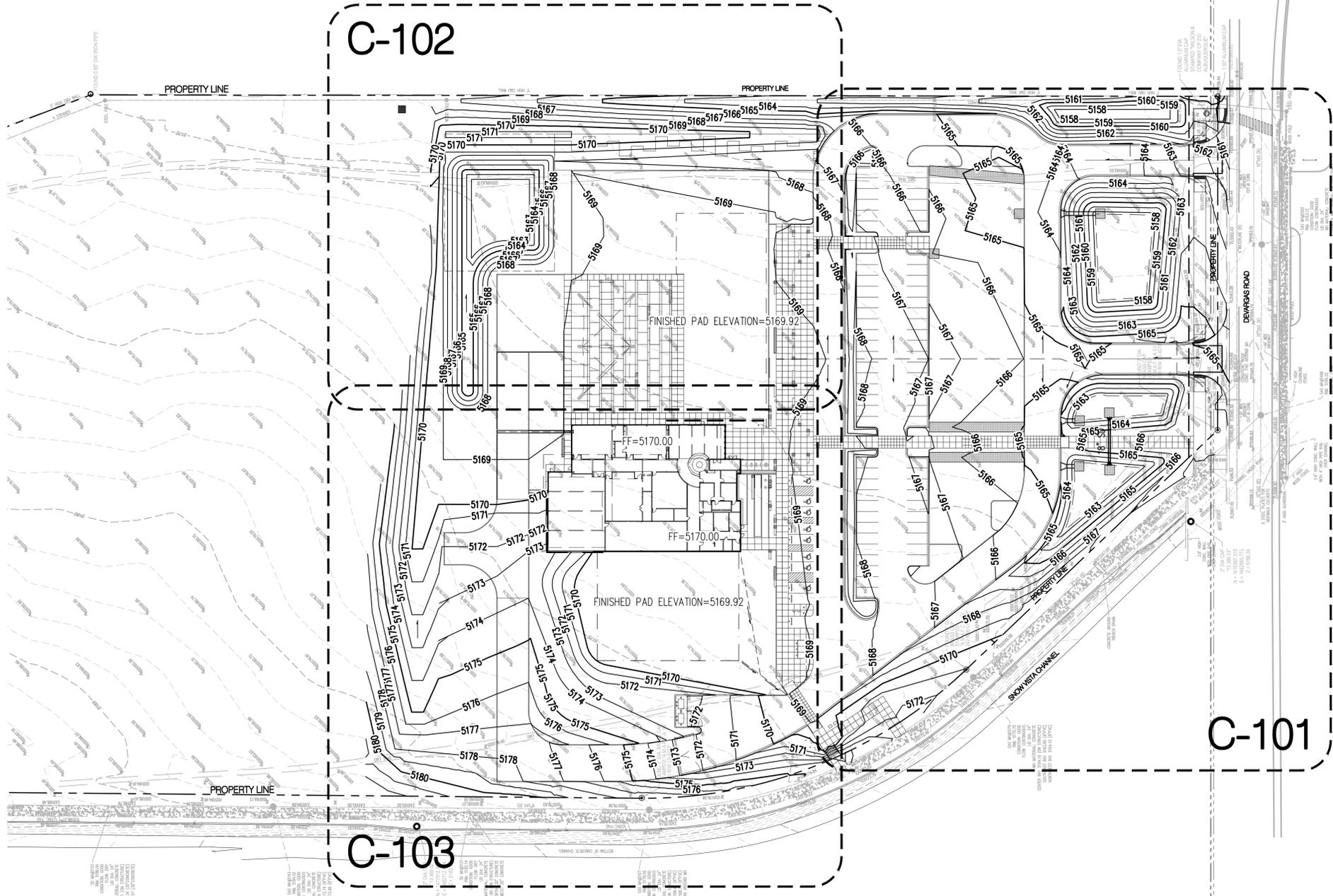
**DRAINAGE MANAGEMENT PLAN**

By: \_\_\_\_\_ Sheet: Of: \_\_\_\_\_  
File: \_\_\_\_\_ **C-001**

100% CONSTRUCTION DOCUMENTS

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

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Wed, 14-Aug-2019 10:11:01 am, Plotted by: MSATCHES



**LEGEND**

- PROPERTY LINE
- LIMITS OF GRADING
- 5025- EXISTING INDEX CONTOUR
- 5024- EXISTING INTERMEDIATE CONTOUR
- EX5025.25 EXISTING GROUND SPOT ELEVATION
- 5025- PROPOSED INDEX CONTOUR
- 5024- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED FINISHED GRADE SPOT ELEVATION  
 TO=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK  
 TO=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW
- PROPOSED CURB & GUTTER
- DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- SWALE FLOWLINE
- TOP OF BERM
- GRADE BREAK

**NOTE**  
 CONTRACTOR SHALL PROVIDE AS-BUILT GRADING INFORMATION STAMPED BY A PROFESSIONAL SURVEYOR. AS-BUILT INFORMATION REQUIRED SHALL BE COORDINATED WITH THE ENGINEER AND SHALL BE SUFFICIENTLY DETAILED TO VERIFY THAT THE DRAINAGE WILL FUNCTION IN ACCORDANCE WITH THE DESIGN. AS-BUILT DATA SHALL BE PROVIDED AT LEAST 3 WORKING DAYS PRIOR TO CONTRACTOR'S REQUEST FOR TEMPORARY CERTIFICATE OF OCCUPANCY. AS-BUILT DATA SHALL BE UPDATED AND RE-SUBMITTED ONE WEEK PRIOR TO FINAL CERTIFICATE OF OCCUPANCY REQUEST. AT A MINIMUM, AS-BUILT DATA SHALL INCLUDE:

- ALL GRATES AND INVERTS OF CATCH BASINS
- APPROXIMATELY 75% OF ALL DESIGN SPOT ELEVATIONS & FINISHED FLOOR ELEVATIONS.

**NOTE**  
 HDPE PIPE AND FITTINGS SHALL BE INSTALLED AND BACKFILLED PER MANUFACTURER SPECIFICATIONS. CONNECTIONS TO CONCRETE MANHOLES AND CONCRETE DROP INLETS SHALL USE WATER STOP GASKETS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS

**NOTE**  
 ENDS OF ALL STORM DRAIN PIPES, CULVERTS, & CMP END SECTIONS (LARGER THAN 12") SHALL BE COVERED WITH STEEL BARS APPROXIMATELY 12" SQUARE. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL. HYDRAULIC INTEGRITY SHALL NOT BE COMPROMISED. BARS TO BE PAINTED TO MATCH BUILDING.

**NOTE**  
 SIDEWALK CROSS-SLOPES SHALL BE AT A MINIMUM OF 1.0% AND A MAXIMUM OF 2.0%

- GENERAL NOTES**
- A. 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 STANDARD SPECIFICATIONS SHALL APPLY.
  - B. 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.
  - C. 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.
  - D. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
  - E. 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.
  - F. 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.
  - G. 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.
  - H. 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.
  - I. 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.).
  - J. 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.
  - K. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN AND OBTAIN APPROVAL OF SUCH PLAN FROM THE BERNALILLO COUNTY, TRAFFIC ENGINEERING DEPARTMENT, PRIOR TO BEGINNING ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.
  - L. 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.
  - M. 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.
  - N. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO CONFORM WITH EPA REQUIREMENTS, INCLUDING COMPLIANCE WITH NPDES PHASE 2 REQUIREMENTS.
  - O. THE CONTRACTOR SHALL PROVIDE 1 HARD COPY AND 1 ELECTRONIC COPY OF THE EPA STORM WATER POLLUTION PREVENTION PLAN ALONG WITH THE APPROPRIATE SUBMITTAL FEE TO CITY OF ALBUQUERQUE TWO WEEKS PRIOR TO THE START OF SITE DISTURBANCE.

- GRADING NOTES**
- P. EXCEPT AS PROVIDED HEREIN, GRADING SHALL BE PERFORMED AT THE ELEVATIONS AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS PLAN.
  - Q. THE COST FOR REQUIRED CONSTRUCTION DUST AND EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE PROJECT COST.
  - R. 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 SPECIFICATIONS (FIRST PRIORITY), AND/OR THE ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS (SECOND PRIORITY).
  - S. EARTH SLOPES SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS SHOWN OTHERWISE.
  - T. 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.
  - U. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY.
  - V. 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.
  - W. PAD ELEVATION SHALL BE +/- 0.05' FROM BUILDING PLAN ELEVATION.
  - X. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF ELEVATION CONTROL STATION PRIOR TO BEGINNING CONSTRUCTION.

| NO. | DATE | REVISIONS | CHECKED BY: |
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 Albuquerque, New Mexico

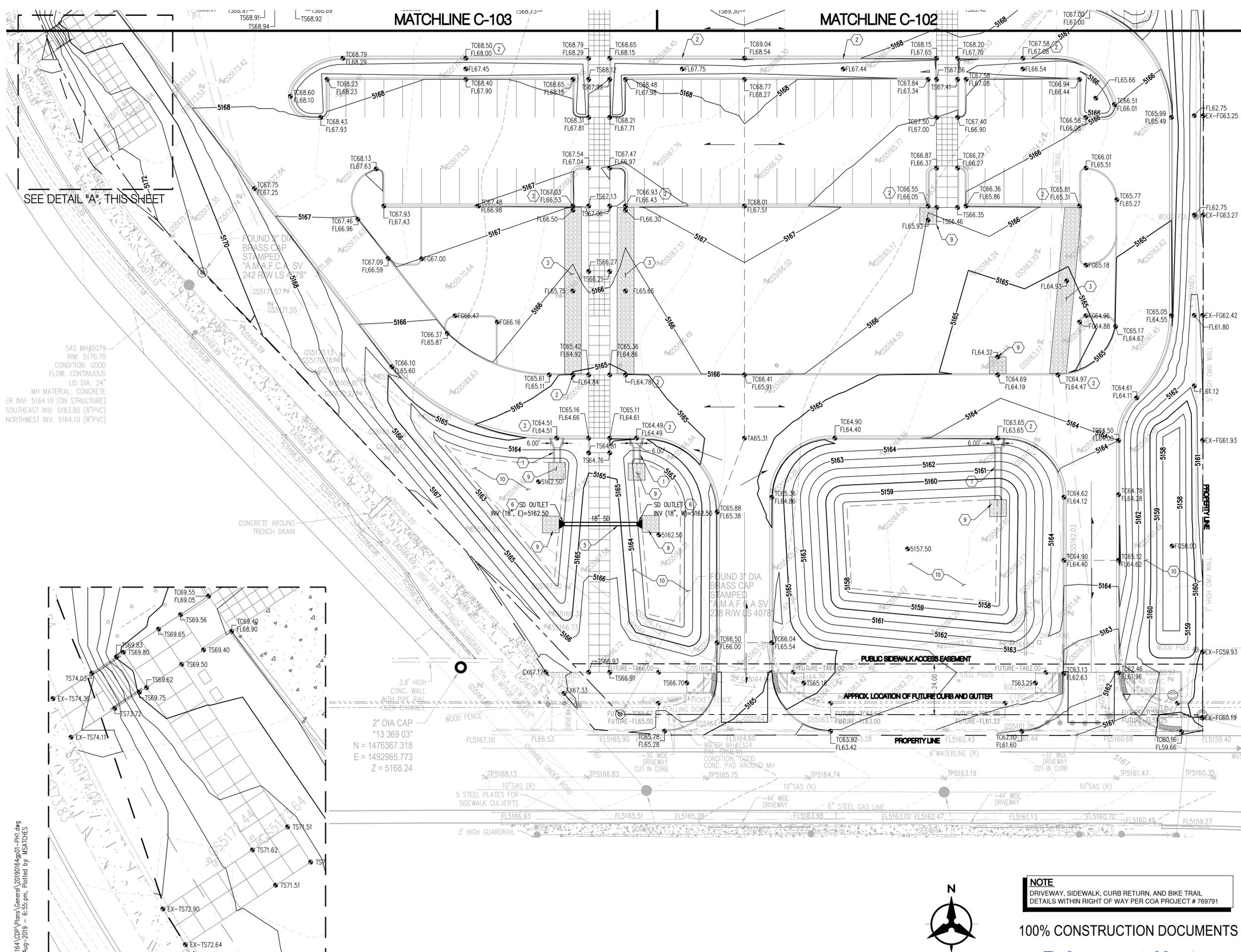
PROJECT ARCHITECT:  
 LEE GAMESKY, AIA

Project #: 16-01-AL  
 Date: 08.12.2019

OVERALL GRADING AND DRAINAGE PLAN

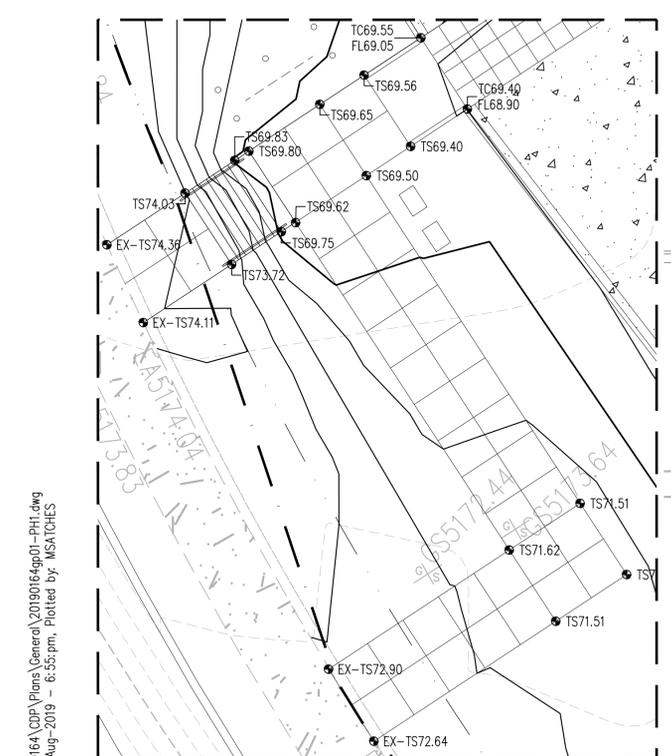
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SEE DETAIL "A", THIS SHEET

SAS MH#2079  
 RIM: 5170.70  
 CONDITION: GOOD  
 FLOW: CONTINUOUS  
 LID DIA: 24"  
 MH MATERIAL: CONCRETE  
 ER INV: 5164.10 (ON STRUCTURE)  
 SOUTHEAST INV: 5163.80 (8" PVC)  
 NORTHWEST INV: 5164.10 (8" PVC)



**A** SIDEWALK DETAIL  
 1" = 10'

2" DIA CAP  
 "13.369 03"  
 N = 1476367.318  
 E = 1492965.773  
 Z = 5168.24

**GRADING KEYED NOTES\***

1. INSTALL CONCRETE RUNDOWN PER DETAIL A, SHEET C-102.
2. INSTALL CONCRETE CURB OPENING PER DETAIL B, SHEET C-102.
3. INSTALL RIP RAP SWALE PER DETAIL E, SHEET C-102.
4. RETENTION POND EMERGENCY OVERFLOW LOCATION.
5. INSTALL HDPE (N12 WT. OR APPROVED EQUAL) STORM DRAIN PIPE. SEE PLAN FOR SIZE.
6. INSTALL CMP END SECTION (CONTECH OR APPROVED EQUAL), SEE PLAN FOR SIZE.
7. RETAINING WALL. SEE STRUCTURAL PLAN FOR DETAILS.
8. INSTALL BERM PER SECTION A-A, SHEET C-102.
9. INSTALL RIP-RAP PAD PER DETAIL C, SHEET C-102.
10. RETENTION POND.
11. BEGIN TRANSITION FROM FULL HEIGHT CURB TO FLUSH CURB. SEE SITE PLAN FOR CURB DETAILS.
12. END TRANSITION FROM FULL HEIGHT CURB TO FLUSH CURB. SEE SITE PLAN FOR CURB DETAILS.
13. INSTALL CONCRETE VALLEY GUTTER PER DETAIL D, SHEET C-102.
14. INSTALL CONCRETE RUNDOWN PER DETAIL F, SHEET C-102. CENTER ON ROOF DRAIN.
15. INSTALL 24" SIDEWALK CULVERT PER COA STD DWG 2236. REPLACE 2'X2' SECTION OF CHECKERED STEEL WITH PEDESTRIAN RATED GRATE. CENTER ON ROOF DRAIN.
16. FUTURE PHASE, INSTALL STRUCTURAL FILL PER GEOTECH REPORT.

\*NOT ALL KEYED NOTES ARE USED ON THIS SHEET

**LEGEND**

- PROPERTY LINE
- LIMITS OF GRADING
- - - 5025 --- EXISTING INDEX CONTOUR
- - - 5024 --- EXISTING INTERMEDIATE CONTOUR
- EX5025.25 EXISTING GROUND SPOT ELEVATION
- 5025 --- PROPOSED INDEX CONTOUR
- - - 5024 --- PROPOSED INTERMEDIATE CONTOUR
- XX.XX PROPOSED FINISHED GRADE SPOT ELEVATION
- TC=TOP OF CURB, FL=FLOW LINE
- TS=TOP OF SIDEWALK, FG=FINISH GROUND HIGH, FOL=FINISH GROUND LOW
- PROPOSED CURB & GUTTER
- S=2.0% --- DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- TOP OF BERM
- XX.XX FUTURE SPOT ELEVATION

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 lee@gamm.com



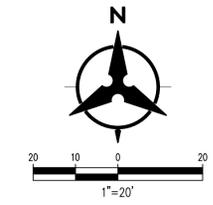
**WESTGATE COMMUNITY CENTER**  
 Albuquerque, New Mexico  
 PROJECT ARCHITECT:  
 LEE GAMESKY, AIA

Project #: 16-01-AL  
 Date: 08.12.2019

**GRADING AND DRAINAGE - SOUTH**

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**C-101**

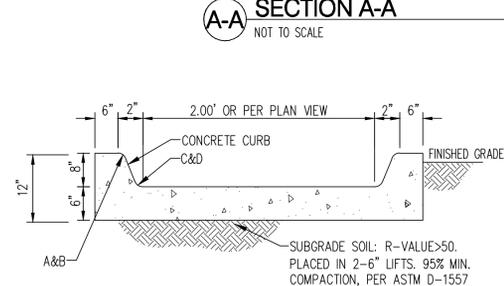
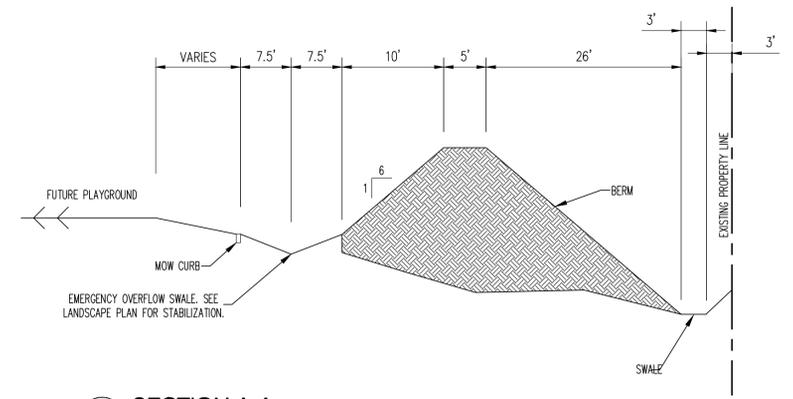
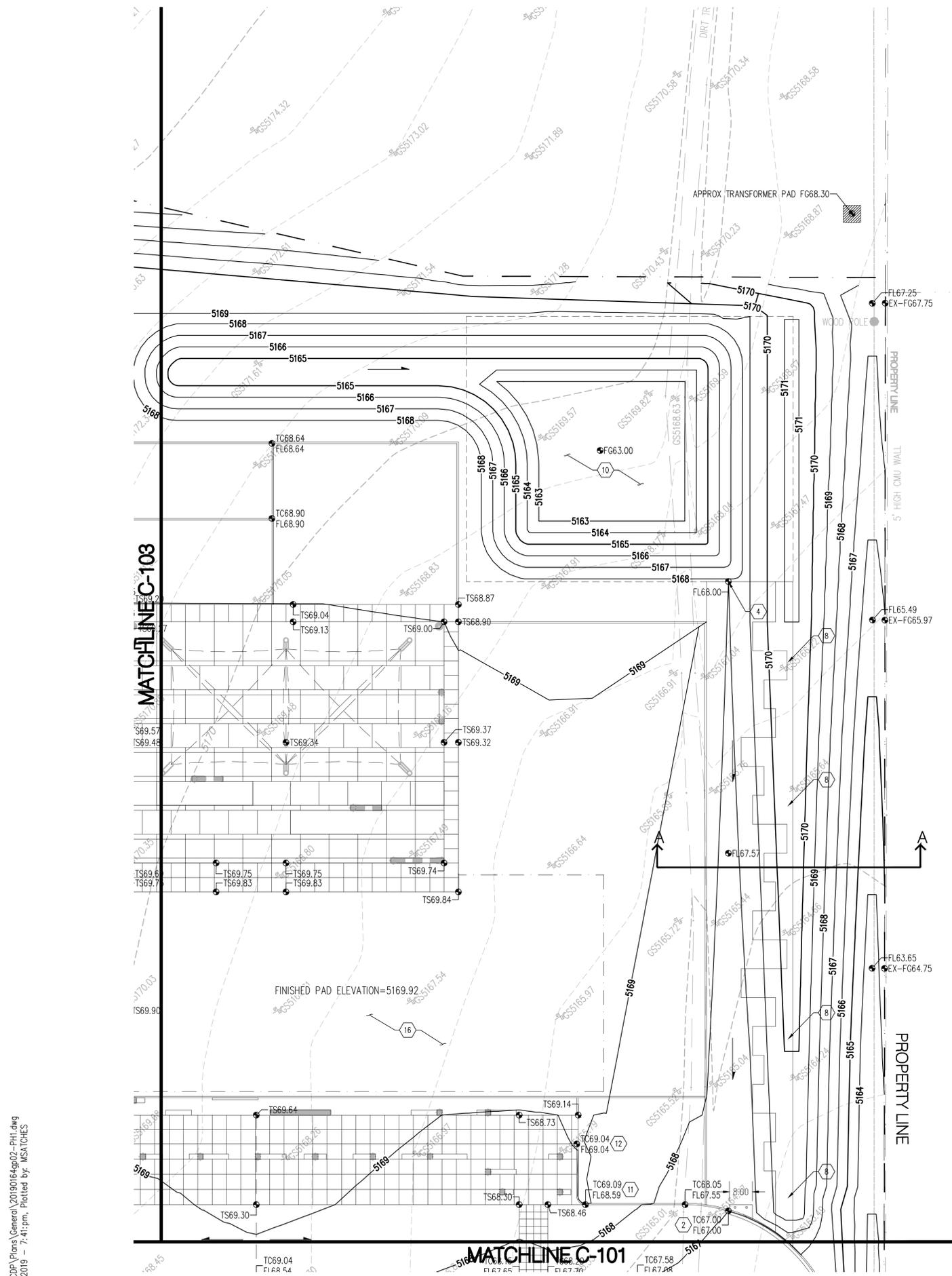
**NOTE**  
 DRIVEWAY, SIDEWALK, CURB RETURN, AND BIKE TRAIL  
 DETAILS WITHIN RIGHT OF WAY PER COA PROJECT # 769791



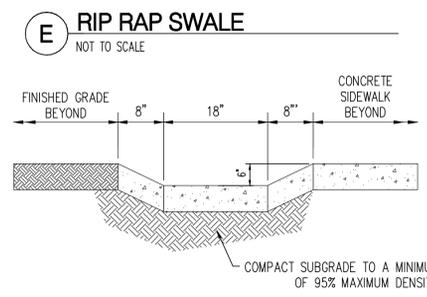
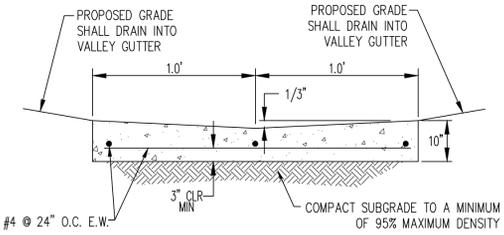
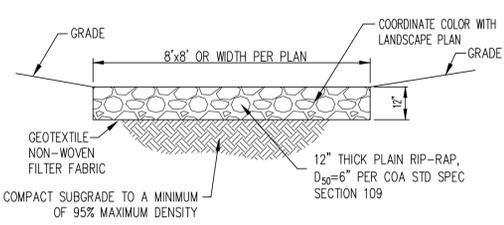
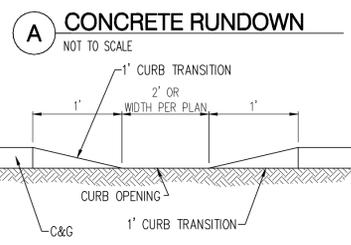
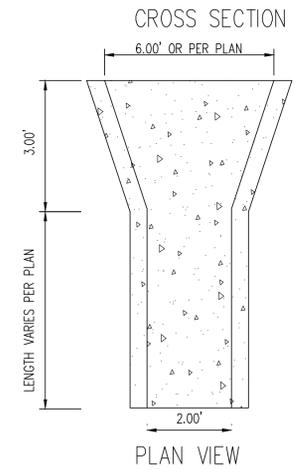
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 Tue, 13-Aug-2019 - 8:35:pm. Plotted by: MSA/TCHES



- A. ±0.75" RADIUS.
- B. DIMENSIONS AT ROUNDED CORNERS MEASURED TO INTERSECTION OF STRAIGHT LINES.
- C. ±2" RADIUS.
- D. DIMENSIONS AT ROUNDED CORNERS MEASURED TO INTERSECTION OF STRAIGHT LINES.



- ### GRADING KEYED NOTES\*
1. INSTALL CONCRETE RUNDOWN PER DETAIL A, SHEET C-102.
  2. INSTALL CONCRETE CURB OPENING PER DETAIL B, SHEET C-102.
  3. INSTALL RIP RAP SWALE PER DETAIL E, SHEET C-102.
  4. RETENTION POND EMERGENCY OVERFLOW LOCATION.
  5. INSTALL HDPE (N12 WT. OR APPROVED EQUAL) STORM DRAIN PIPE. SEE PLAN FOR SIZE.
  6. INSTALL CMP END SECTION (CONTECH OR APPROVED EQUAL), SEE PLAN FOR SIZE.
  7. RETAINING WALL. SEE STRUCTURAL PLAN FOR DETAILS.
  8. INSTALL BERM PER SECTION A-A, SHEET C-102.
  9. INSTALL RIP-RAP PAD PER DETAIL C, SHEET C-102.
  10. RETENTION POND.
  11. BEGIN TRANSITION FROM FULL HEIGHT CURB TO FLUSH CURB. SEE SITE PLAN FOR CURB DETAILS.
  12. END TRANSITION FROM FULL HEIGHT CURB TO FLUSH CURB. SEE SITE PLAN FOR CURB DETAILS.
  13. INSTALL CONCRETE VALLEY GUTTER PER DETAIL D, SHEET C-102.
  14. INSTALL CONCRETE RUNDOWN PER DETAIL F, SHEET C-102. CENTER ON ROOF DRAIN.
  15. INSTALL 24" SIDEWALK CULVERT PER COA STD DWG 2236. REPLACE 2'X2' SECTION OF CHECKERED STEEL WITH PEDESTRIAN RATED GRATE. CENTER ON ROOF DRAIN.
  16. FUTURE PHASE. INSTALL STRUCTURAL FILL PER GEOTECH REPORT.
- \*NOT ALL KEYED NOTES ARE USED ON THIS SHEET

### LEGEND

|  |  |
|--|--|
|  | PROPERTY LINE                          |
|  | LIMITS OF GRADING                      |
|  | EXISTING INDEX CONTOUR                 |
|  | EXISTING INTERMEDIATE CONTOUR          |
|  | EXISTING GROUND SPOT ELEVATION         |
|  | PROPOSED INDEX CONTOUR                 |
|  | PROPOSED INTERMEDIATE CONTOUR          |
|  | PROPOSED FINISHED GRADE SPOT ELEVATION |
|  | PROPOSED FLOW LINE                     |
|  | PROPOSED TOP OF SIDEWALK               |
|  | PROPOSED GROUND HIGH                   |
|  | PROPOSED GROUND LOW                    |
|  | PROPOSED CURB & GUTTER                 |
|  | DIRECTION OF FLOW                      |
|  | WATER BLOCK/GRADE BREAK                |
|  | PROPOSED STORM DRAIN LINE              |
|  | PROPOSED STORM DRAIN MANHOLE           |
|  | PROPOSED STORM DRAIN INLET             |
|  | TOP OF BERM                            |
|  | FUTURE SPOT ELEVATION                  |

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WESTGATE COMMUNITY CENTER  
Albuquerque, New Mexico

PROJECT ARCHITECT:  
LEE GAMELSKY, AIA

Project #:  
16-01-AL

Date:  
08.12.2019

GRADING AND DRAINAGE - EAST

By: \_\_\_\_\_ Sheet: \_\_\_\_\_ Of: \_\_\_\_\_  
File: \_\_\_\_\_ C-102

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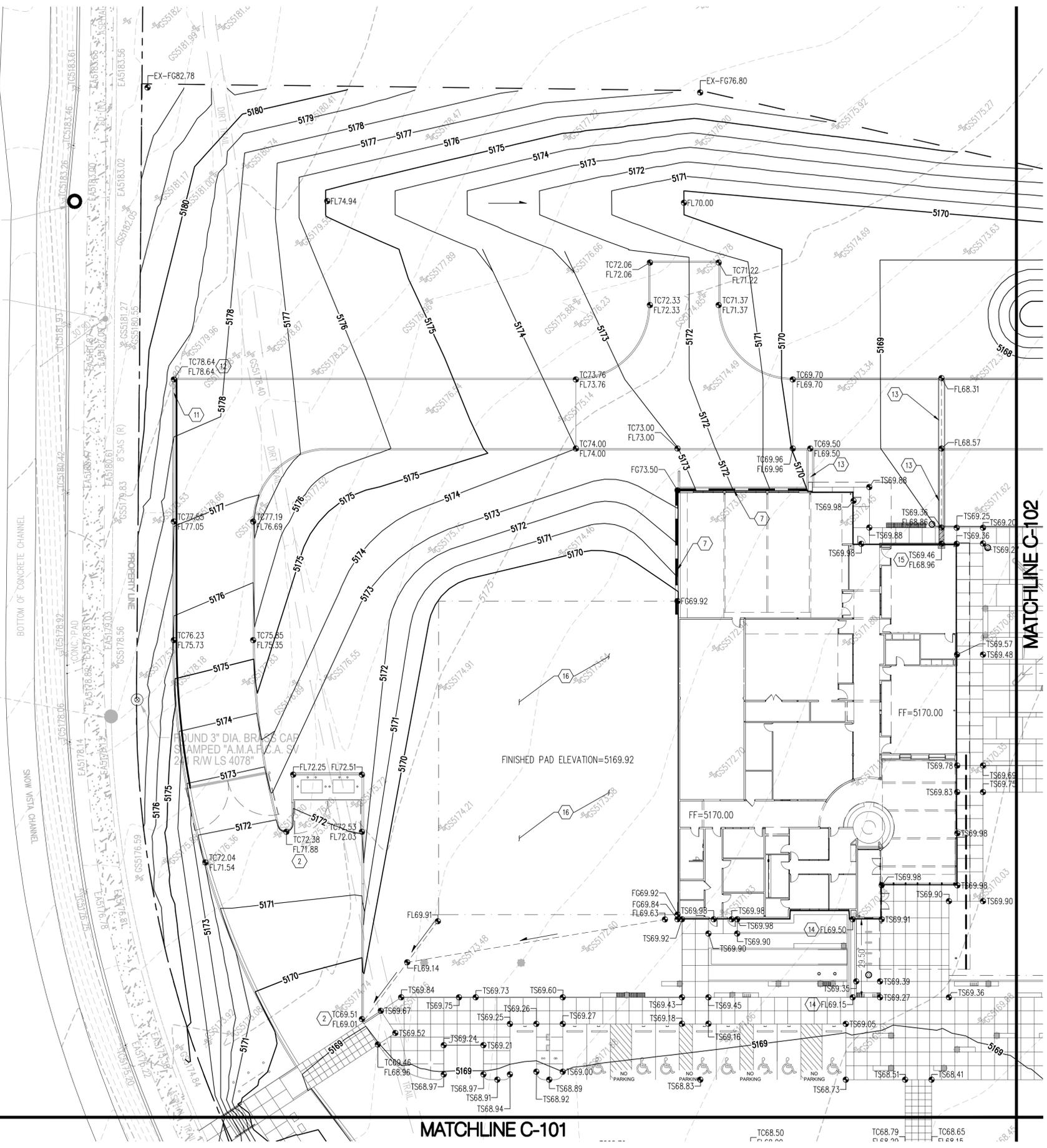
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Mon, 12-Aug-2019 - 7:41:pm. Plotted by: MSA\TCHEG

2" DIA CAP  
"13 369 02"  
1477012.503  
1492712.654  
Z = 5182.98

SD MH#2121  
RIM: 5182.14  
CONDITION: GOOD  
FLOW: DRY  
LID DIA: 24"  
MATERIAL: CONCRETE  
(ON STRUCTURE)  
30" CONCRETE  
30" CONCRETE

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Mon, 12-Aug-2019 - 7:41:pm  
Plotted by: MSAT/CHES



### GRADING KEYED NOTES\*

1. INSTALL CONCRETE RUNDOWN PER DETAIL A, SHEET C-102.
2. INSTALL CONCRETE CURB OPENING PER DETAIL B, SHEET C-102.
3. INSTALL RIP RAP SWALE PER DETAIL E, SHEET C-102.
4. RETENTION POND EMERGENCY OVERFLOW LOCATION.
5. INSTALL HDPE (N12 WT. OR APPROVED EQUAL) STORM DRAIN PIPE. SEE PLAN FOR SIZE.
6. INSTALL CMP END SECTION (CONTECH OR APPROVED EQUAL), SEE PLAN FOR SIZE.
7. RETAINING WALL. SEE STRUCTURAL PLAN FOR DETAILS.
8. INSTALL BERM PER SECTION A-A, SHEET C-102.
9. INSTALL RIP-RAP PAD PER DETAIL C, SHEET C-102.
10. RETENTION POND.
11. BEGIN TRANSITION FROM FULL HEIGHT CURB TO FLUSH CURB. SEE SITE PLAN FOR CURB DETAILS.
12. END TRANSITION FROM FULL HEIGHT CURB TO FLUSH CURB. SEE SITE PLAN FOR CURB DETAILS.
13. INSTALL CONCRETE VALLEY GUTTER PER DETAIL D, SHEET C-102.
14. INSTALL CONCRETE RUNDOWN PER DETAIL F, SHEET C-102. CENTER ON ROOF DRAIN.
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16. FUTURE PHASE. INSTALL STRUCTURAL FILL PER GEOTECH REPORT.

\*NOT ALL KEYED NOTES ARE USED ON THIS SHEET

### LEGEND

- PROPERTY LINE
- LIMITS OF GRADING
- - - 5025 EXISTING INDEX CONTOUR
- - - 5024 EXISTING INTERMEDIATE CONTOUR
- EX5025.25 EXISTING GROUND SPOT ELEVATION
- 5025 PROPOSED INDEX CONTOUR
- - - 5024 PROPOSED INTERMEDIATE CONTOUR
- XX.XX PROPOSED FINISHED GRADE SPOT ELEVATION
- TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK, TG=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW
- PROPOSED CURB & GUTTER
- S=2.0% DIRECTION OF FLOW
- WATER BLOCK/GRADE BREAK
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- TOP OF BERM
- XX.XX FUTURE SPOT ELEVATION

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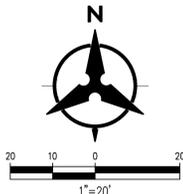
WESTGATE COMMUNITY CENTER  
Albuquerque, New Mexico

PROJECT ARCHITECT: LEE GAMELSKY, AIA  
Date: 08.12.2019

Project #: 16-01-AL  
Date: 08.12.2019

GRADING AND DRAINAGE - WEST

By: \_\_\_\_\_ Sheet: \_\_\_\_\_ Of: \_\_\_\_\_  
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