

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Interim Director



Mayor Timothy M. Keller

January 5, 2022

Robert Fierro, P.E.
Fierro & Company
6300 Montano Rd. NW
Albuquerque, NM 87120

**RE: Meineke
5901 Carmel Ave. NW
Grading and Drainage Plan
Engineer's Stamp Date: 11/04/21
Hydrology File: C18D049**

Dear Mr. Fierro:

PO Box 1293

Based upon the information provided in your submittal received 11/05//2021, the Grading & Drainage Plan is approved for Building Permit and SO-19 Permit. Please attach a copy of this approved plan in the construction sets for Building Permit processing along with a copy of this letter.

Albuquerque

PRIOR TO CERTIFICATE OF OCCUPANCY:

NM 87103

1. Engineer's Certification, per the DPM Part 6-14 (F): *Engineer's Certification Checklist For Non-Subdivision* is required.

www.cabq.gov

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department



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) _____

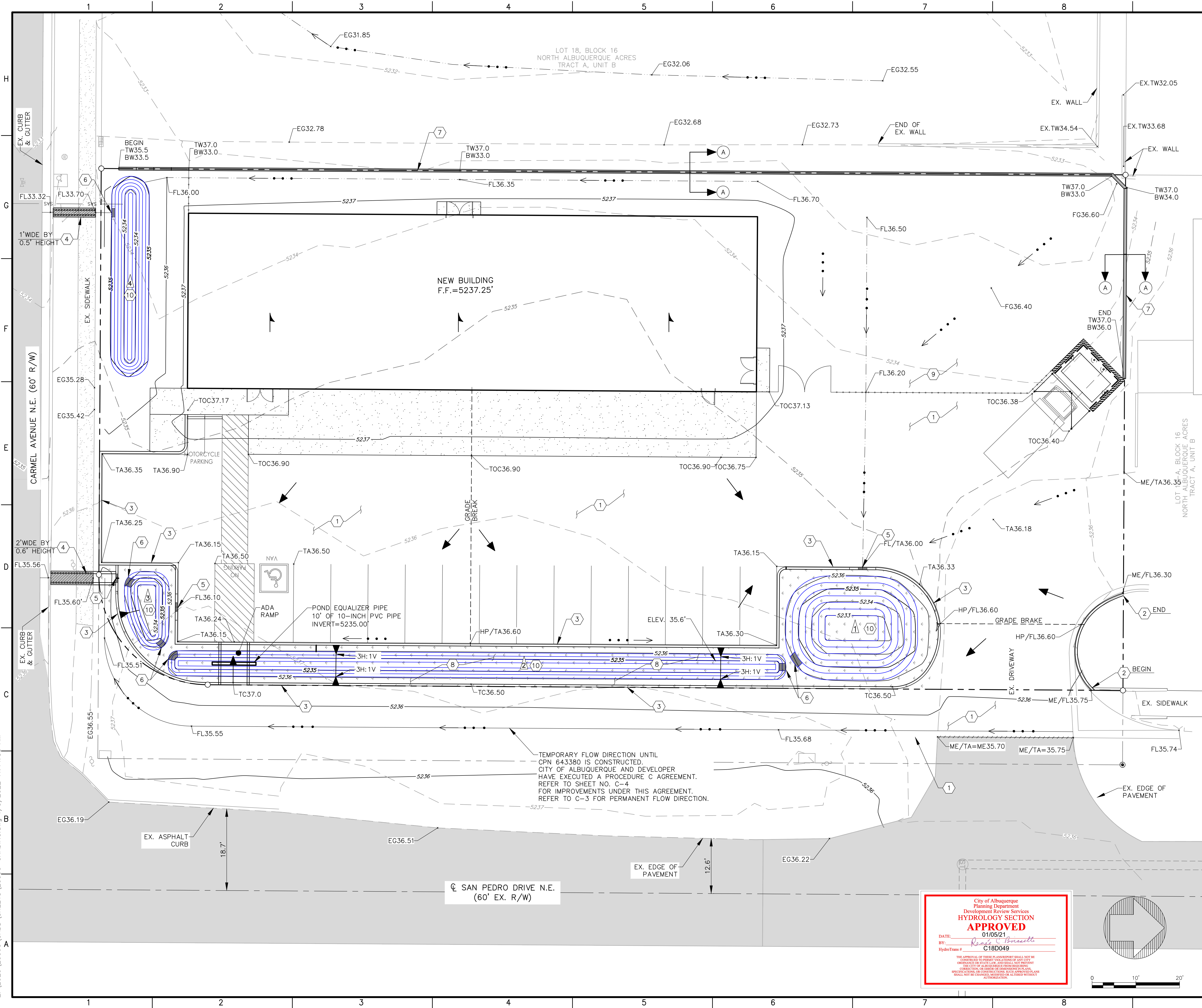
DATE SUBMITTED: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

Z:\2020\20060\CADD\20060-SHEETS\20060-GRADING.dwg 1/3/2022 11:14:38 AM



Private Drainage Facilities within City Right-of-Way
Notice to Contractor
(Special Order 19 ~ "50-19")

1. Build sidewalk culvert per COA STD DWG 2236. Work is permitted and inspected by DMD Construction Services Division.
2. An excavation permit will be required before beginning any work within City Right-Of-Way.
3. All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning construction safety and health.
4. Prior to any excavation, the contractor must contact **New Mexico One Call**, dial "811" (or (505) 260-1990) for the location of existing utilities.
5. Prior to construction, the contractor shall excavate and verify the locations of all obstructions. Should a conflict exist, the contractor shall notify the engineer so that the conflict can be resolved with a minimum amount of delay.
6. Backfill compaction shall be 95%.
7. Maintenance of the facility shall be the responsibility of the owner of the property being served.
8. Work on arterial streets may be required on a 24-hour basis.
9. For excavation and barricading inspections, contact DMD Construction Services Division.

KEYED NOTES:

- 1 NEW ASPHALT.
- 2 REMOVE AND CONSTRUCT SAME TYPE OF CURB
- 3 CONSTRUCT CONCRETE HEADER CURB PER DETAIL 2/C-2.
- 4 CONSTRUCT 2-FT. WIDE SIDEWALK CULVERT WITH STEEL PLATE TOP PER COA STD. DWG. 2236.
- 5 CONSTRUCT CURB OPENING PER DETAIL 1/C-2.
- 6 CONSTRUCT SPILLWAY PER DETAIL 5/C-2.
- 7 CONSTRUCT RETAINING WALL. REFER TO TYPICAL SECTION A-A DETAIL 4/C-2.
- 8 CONSTRUCT DEPRESSED LANDSCAPING.
- 9 GRAVEL SURFACE.
- 10 SIDE SLOPES NEED TO BE STABILIZED WITH NATIVE GRASS SEED (PER CITY SPEC 1012) WITH AGGREGATE MULCH OR EQUAL (MUST SATISFY THE "FINAL STABILIZATION CRITERIA" CGP 2.2.14.B.)

STORMWATER QUALITY VOLUME POND:

- SWQ POND #1
VOL. @ SPILLWAY = 702 CU.FT.,
TOP ELEV.=5236.0', BTM. ELEV.=5233.0',
WSEL=5235.6' AT SPILLWAY OVERFLOW
SIDE SLOPE 3H:1V
- SWQ POND #2
VOL. @ SPILLWAY= 220 CU.FT.,
TOP ELEV.=5236.0', BTM. ELEV.=5235.25',
WSEL=5235.6' AT SPILLWAY OVERFLOW,
SIDE SLOPE 3H:1V
- SWQ POND #3
VOL.=36 CU.FT.,
TOP ELEV.=5236', BTM. ELEV.=5235.0',
WSEL=5235.6' AT FLOWLINE OF CURB OPENING,
SIDE SLOPE 3H:1V
- SWQ POND #4
VOL.=36 CU.FT.,
TOP ELEV.=5235', BTM. ELEV.=5233.75',
WSEL=5234.75' AT SPILLWAY OVERFLOW,
SIDE SLOPE 3H:1V

LEGEND

---	PROPERTY BOUNDARY
○	APPARENT CORNER
⊙	SANITARY SEWER MH
⊕	WATER VALVE
⊕	FIRE HYDRANT
⊕	GUY WIRE
⊕	POWER POLE
---	FENCE
---	RETAINING WALL
---	FLOWLINE
---	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	PROPOSED MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
FL	FLOW LINE
TBC	TOP BACK OF CURB
TC	TOP OF CURB
TOC	TOP OF CONCRETE
TS	TOP OF SIDEWALK
TW	TOP OF WALL
BW	BOTTOM OF WALL
EG	EXISTING GRADE
---	FLOW PATH
---	FLOW DIRECTION
---	ROOF FLOW DIRECTION
---	NEW CONCRETE
---	DEPRESSED LANDSCAPING
---	PROPOSED CONTOUR INCREMENT

Fierro & Company
ENGINEERING & SURVEYING
6300 MONTANO RD., NW, SUITE C
ALBUQUERQUE, NEW MEXICO 87120
PH (505) 352-8930
www.fierrocompany.com



MEINEKE
5901 CARMEL AVE N.E.
ALBUQUERQUE, NEW MEXICO

PROJECT NAME

NO.	DESCRIPTION	DATE	REV.

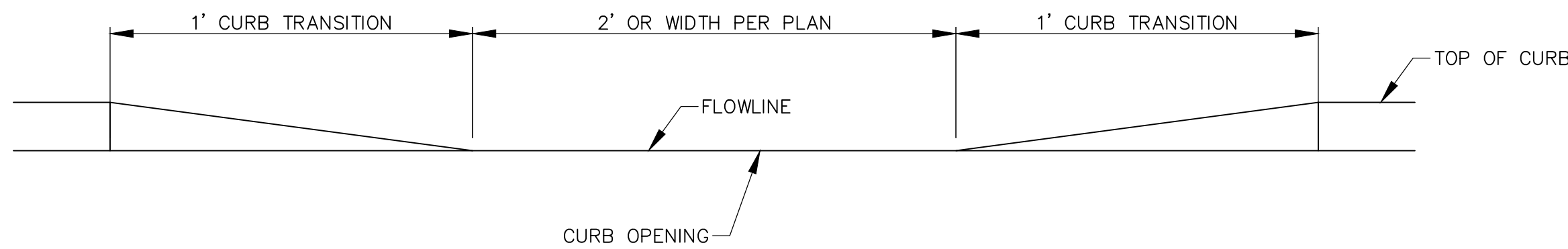
PROJECT NO:	20060
DESIGNED BY:	RJF
DRAWN BY:	RJS
CHECKED BY:	RJF
DATE:	NOVEMBER 2021
SHEET TITLE	

GRADING
PLAN

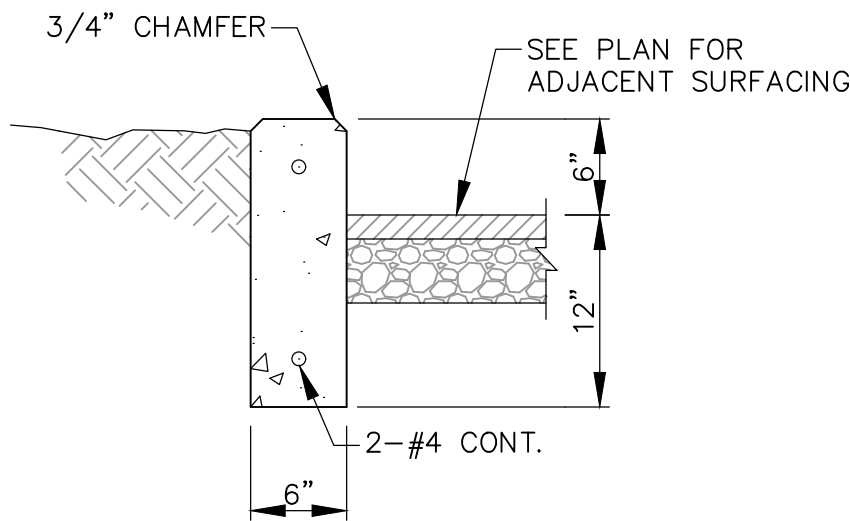
SHEET NO:

C-1

Z:\2020\20060\CADD\20060-SHEETS\20060-DETAILS.dwg 11/5/2021 8:23:42 AM



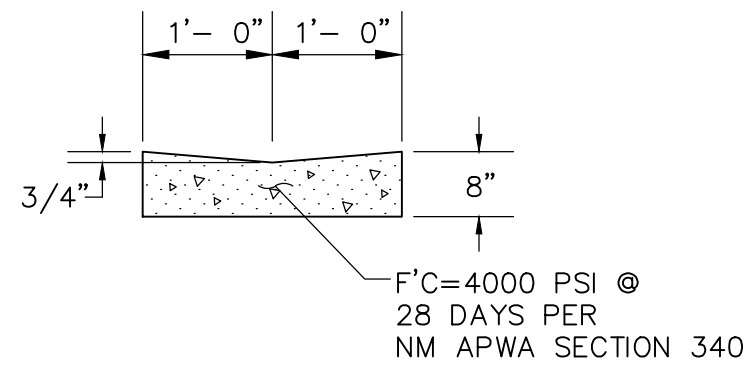
1 TYPICAL CURB OPENING
SCALE: NTS



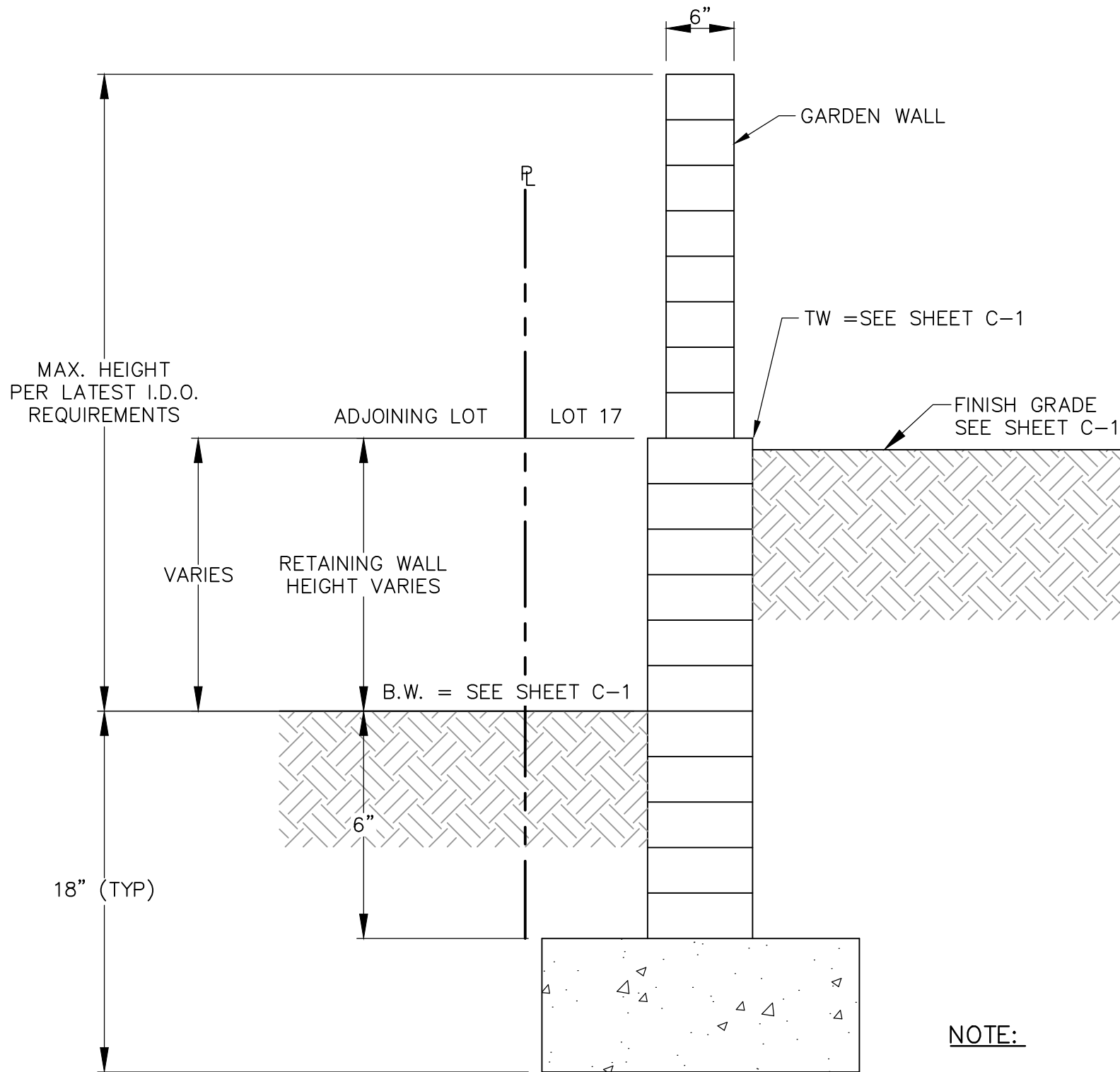
2 HEADER CURB DETAIL
SCALE: NTS

CURB GENERAL NOTES

1. ANY DEVIATIONS FROM THESE STANDARDS SHALL BE SUBMITTED TO THE CITY ENGINEER FOR PRIOR APPROVAL
2. ALL WORK IN PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED BY A LICENSED CONTRACTOR AND REQUIRES PERMIT AND APPROVAL BY THE DEPT OF PUBLIC WORKS.
3. SUBGRADE SHALL BE COMPACTED TO 95% ASTM D 1557, MIN.
4. CURB SHALL BE PORTLAND CEMENT CONCRETE. PORTLAND CEMENT CONCRETE SHALL BE 3000 PSI @ 28 DAYS w/CLASS F FLY ASH AND 7% +/- 2% AIR ENTRAINMENT. (MAX 20% FLY ASH BY WEIGHT).
5. FOR CONCRETE CURB CONSTRUCT TRANSVERSE JOINTS AS FOLLOWS:
 - TOOLED CONTRACTION JOINTS AT 5' INTERVALS.
 - 1/2" PRE-MOLDED BITUMINOUS EXPANSION JOINTS AT 15' INTERVALS.
 - SEALED EXPANSION JOINTS AT 90' INTERVALS.
6. DIMENSIONS AT ROUNDED CORNERS MEASURED TO INTERSECTION OF STRAIGHT LINES.



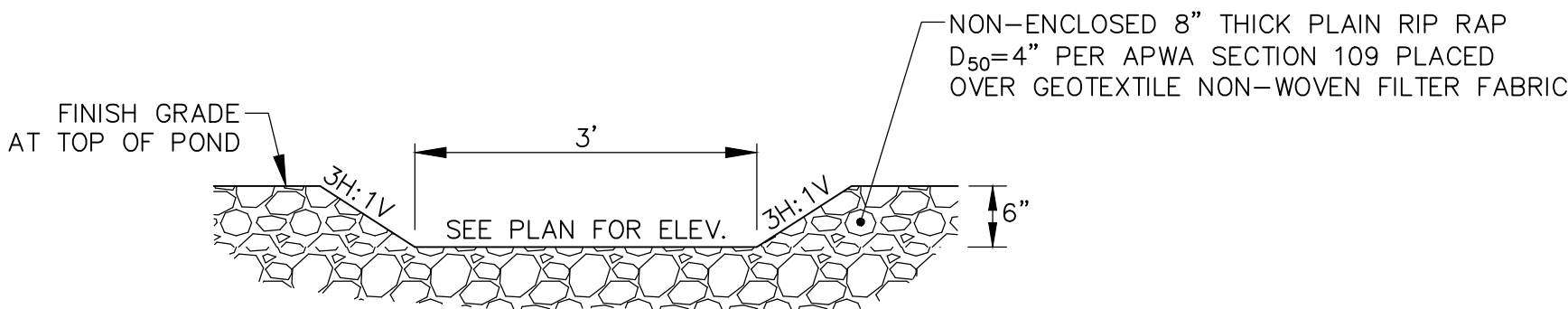
3 2-FT WIDE GUTTER (COA STD. DWG. 2415)
SCALE: NTS



NOTE:

ENTIRE WALL INCLUDING FOOTER TO BE BUILT ON SITE'S PROPERTY BEING LOT 17, BLOCK 16, NORTH ALBUQUERQUE ACRES, TRACT A, UNIT B. UNLESS WRITTEN PERMISSION IS OBTAINED FROM ADJOINING PROPERTY OWNER.

4 SECTION A-A (TYPICAL RETAINING WALL NOMENCLATURE)
SCALE: NTS



5 SPILLWAY DETAIL
SCALE: NTS



ENGINEER'S SEAL

MEINEKE
5901 CARMEL AVE N.E.
ALBUQUERQUE, NEW MEXICO

PROJECT NAME

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	20060
DESIGNED BY:	RJF
DRAWN BY:	RJS
CHECKED BY:	RJF
DATE:	NOVEMBER 2021

SHEET TITLE
DETAILS

SHEET NO:
C-2

EXISTING BASIN MAP

HYDROLOGY SUMMARY EXISTING CONDITION								
Basin	Total Area (acres)	Land Treatment (%)				Q ₁₀₀ (cfs)	V _{100yr-24hr} (ac-ft)	V _{100yr-10day} (ac-ft)
		A	B	C	D			
100	0.633	0.0	0.0	93.8	6.2	2.1	0.063	0.067
101	0.253	0.0	0.0	55.7	44.3	0.9	0.038	0.050
102	0.253	0.0	0.0	55.5	44.5	0.9	0.038	0.050

HYDROLOGY SUMMARY PROPOSED CONDITION								
Basin	Total Area (acres)	Land Treatment (%)				Q ₁₀₀ (cfs)	V _{100yr-24hr} (ac-ft)	V _{100yr-10day} (ac-ft)
		A	B	C	D			
200	0.176	0.0	32.3	0.0	67.7	0.7	0.031	0.044
201	0.548	0.0	10.6	17.6	71.8	2.2	0.103	0.144

HYDROLOGIC CALCULATIONS



PROPOSED BASIN MAP

STORMWATER QUALITY VOLUME POND (BASIN 200):

TOTAL NEW LAND TREATMENT "D" AREA = 5,200 SQ.FT.
WATER QUALITY STORAGE REQUIRED (NEW DEVELOPMENT) = $5,200 \text{ SQ.FT.} \times (0.42") \times (1'/12") = 182 \text{ CU.FT.}$
WATER QUALITY STORAGE DESIGNED = 185 CU.FT.; THEREFORE SWQ VOLUME MET FOR BASIN 200.

STORMWATER QUALITY VOLUME POND (BASIN 201):

WATER QUALITY STORAGE REQUIRED (NEW DEVELOPMENT)= $17,128 \text{ SQ.FT.} \times (0.42) \times (1' / 12") = 600 \text{ CU.FT.}$

PROPOSED STORMWATER QUALITY VOLUME:

TOTAL SWQP VOL. = SWQP #1VOL. + SWQP #2VOL. + SWQP #3VOL.
= 702 CU.FT. + 220 CU.FT. + 36 CU.FT. = 958 CU.FT.
THEREFORE; THE DESIGNED SWQ POND VOLUME OF 958 CU.FT. IS SUFFICIENT TO TREAT THE STORM
WATER QUALITY VOLUME OF 600 CU.FT. FROM BASIN 201.

STORMWATER QUALITY VOL. CALCULATIONS



Introduction

The site is located at 5901 San Pedro Drive NE being on Lot 17, Block 16, North Albuquerque Acres. Said lot will dedicate the east 17-feet for additional right-of-way for San Pedro Drive, which has obtained preliminary plat approval. The additional right-of-way is being requested by the City for future widening of San Pedro Drive. The City and developer are under a Procedure C agreement for improvements on San Pedro as shown on Sheet C-4.

On-site improvements include a 5,200 sq.ft. building and parking lot for an automotive shop. The site was most recently used as a yard for a landscaping supplier company. The purpose of this Grading & Drainage Plan is to 1) provide hydrologic and hydraulic analysis of the existing and proposed condition, 2) satisfy the Stormwater Quality Volume requirement, and 3) seek permit for grading and building approval.

Methodology

Hydrologic procedures presented in the Hydrology Section of the DMP, Article 6-2(a), approved June 26, 2020 were followed.

Existing Condition

The existing site was most recently used by a landscaping supplier that sold several types of gravel and landscaping rocks. The soil has been heavily compacted by the landscaping company and prior businesses located on this site. Offset runoff from Basin 101 and 102 enter the site at the northeast corner as shown on the "Existing Basin Map". The offsite and on-site runoff then flow west to the adjoining lot (Lot 18), which then flows across the parking lot and into Carmel Avenue NE. With the development of Lot 16, located north of the site, an inlet was proposed at the shared driveway and to be connected to the storm drain system on San Pedro Drive. However, the proposed inlet was not installed resulting in runoff from Basin 101 and 102 continuing to discharge through the site and Lot 18. Refer to Hydrology File #C18-082.

Proposed Condition

Improvements includes a 5200 sq.ft. building and parking lot to be used for an automotive repair shop. On-site Basins include Basin 200 and 201.

Improvements in Basin 200 includes the proposed building and landscaping south of the building. This basin will treat the storm water quality volume via a pond prior to discharging to Carmel Avenue. There will be minimal pollutants from this basin as it will not contain any parking from automobiles or storage of any contaminants related to an automobile facility. The site is small and has been made smaller with the 17-foot dedication for San Pedro. Also runoff cannot be routed by surface conveyance from behind the building to the front and the pond is not that deep to connect to via pipe.

Improvements from Basin 201 includes the parking lot, shared driveway, and landscaping with stormwater quality ponds. Two stormwater quality ponds are proposed. There is an ADA ramp which crosses SWQP #1. A storm pipe under the ADA ramp will direct runoff to SWQP #2. SWQP #1 will overflow into SWQP #2. SWQP #2 will outlet via a curb opening and runoff will be directed towards the proposed sidewalk culvert.

Basin 101 and 102 will not discharge through the site as under the existing condition. Runoff from these basins will discharge to the proposed inlet on San Pedro as it was intended under drainage report C18-D082 and CPN 6433.82. However, runoff will continue draining to Carmel Ave until the improvements in San Pedro under CPN 643380 have been constructed.

Conclusion

The proposed development will not increase the peak discharge or volumetric runoff into Carmel Avenue, since runoff from Basin 101 and 102 will be intercepted by to the storm drain system on San Pedro and will no longer surface drain on Carmel Ave with the improvement on San Pedro which is anticipated to occur in 2022. The City's drainage criteria was used and met. This drainage report is being submitted for review, and seeks approval.

SIDEWALK CULVERT CAPACITY (BASIN 200 OUTLET)

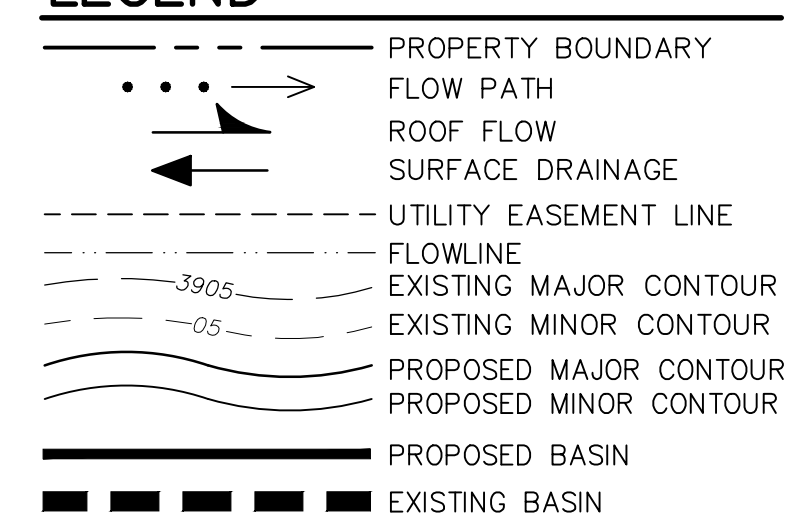
REQUIRED CONVENANCE = 0.7 CFS
CAPACITY CALCULATED USING MANNINGS EQUATION = 2.7 CFS
COMPUTATION BELOW:
 $Q_{CAPACITY} = CLH^{3/2} = 2.7 * 1 * 0.5^{3/2} = 1.0 \text{ CFS}$

SIDEWALK CULVERT CAPACITY (BASIN 201 OUTLET)

REQUIRED CONVEANCE = 2.2 CFS
CAPACITY CALCULATED USING MANNINGS EQUATION = 2.7 CFS
COMPUTATION BELOW:
 $Q_{CAPACITY} = CLH^{3/2} = 2.7 * 2 * 0.6^{3/2} = 2.5 \text{ CFS}$

SIDEWALK CULVERT WEIR CALC.

LEGEND

[illegible]