# CITY OF ALBUQUERQUE



Timothy M. Keller, Mayor

January 30, 2018

John Jacquez, P.E. Miller Engineering Consultants, Inc 3500 Comanche NE Bldg. F Albuquerque, NM, 87107

RE: Sundance Construction - Beverly Hills

Grading and Drainage Plan Engineer's Stamp Date: 01/24/18

Hydrology File: B18D023

Dear Mr. Jacquez:

PO Box 1293

Based upon the information provided in your submittal received 01/24/18, the Grading and Drainage Plan **is not** approved for Building Permit. The following comments need to be addressed for approval of the above referenced project:

Albuquerque

1. Sheet C-100. Please provide the weir calculations for the curb cuts.

NM 87103

- www.cabq.gov
- 2. Sheet C-101. Key Note 7 states approximate location of property line. All property lines and existing topographic survey information must be accurate and not approximated. At the northwest corner, it appears that the adjacent pond is on this property. Please submit a surveyed property. If the property lines are properly surveyed, then delete the word approximate location of property line from Key Note 7.
- 3. Sheet C-101. Please provide a written agreement from Lot 28 property Owner stating that grading can be conducted on their property for the benefit of Lot 29. If an agreement cannot be obtained, then the swale to divert off-site drainage to Beverly Hills will have to be within the project's boundary.
- 4. Sheet C-101. Please add the flowline information at the start of the diversion swale at the east side of the property.

# CITY OF ALBUQUERQUE



Timothy M. Keller, Mayor

- 5. Sheet C-101. Key Note 22. This pond is just pointing to an open area. Is there supposed to be a first flush pond here?? It appears that all first flush volume is included in the pond to the southwest corner of the property.
- 6. Sheet C-101, Section A-A. Please show the property line and dimension of the wall from the property line.
- 7. Sheet C-101, Section A-A. Per DPM Ch. 22.5.B, grading and construction of retaining walls at or near the property line must demonstrate that the adjacent property is not damaged or its use constrained. Any such encroachment by the wall or grading must be accompanied by written permission of both landowners. Therefore the wall may have to be moved away so that the footer does not impede the adjacent property.
- 8. Sheet C-101. Please show the half street, storm drain, and inlet which is to be constructed with the work order. Please add a note that all work within Beverly Hills Ave will be part of Work Order #722084.

PO Box 1293

9. Sheet C-501. Where is the typical pond section detail used? If not needed, then please just delete.

Albuquerque

Please provide a Private Facility Drainage Covenant per Chapter 17 of the DPM for first flush pond prior to Certificate of Occupancy.

NM 87103

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

Sincerely,

www.cabq.gov

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

Renée C Brissette

Planning Department



# City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: SIA THAKE CONSTRUCTION BEVERE	City Drainage #:
EDC#.	Work Order#:
	PRUE ACRES UNIT B
	ALBUQUEROUP NM (BETWEEN SAN MATER
City Address: Beneury Hills AVE. NE,	5 1-25)
Engineering Firm: MILLER ENCINEERING CONSU	LT4NTS NC Contact:
Address: 3500 COMANCHE NE, BLOC. F. AL	BLOUTED ENM 87107 JOHN JAGUEL
Phone#: 505 -888-1500 Fax#: 505 -8	BB-3800 E-mail: 3JACQUEZ@ MECNM.CD
	Contact:
Owner:	
Address: Fax#:	E-mail:
Phone#: rax#:	DA WA RADIES
Architect: VICILE ASSOCIATES	Contact: DANUEL BARBEN
Address: 4477 IRVING NW, SUME A	ALBUQUERQUE NM BT114
Phone#: 505-890-5030 Fax#: 505-8	40-5031 E-mail: DANIEL @ VA-ARCHITEUT
Other Contact:	Contact:
Address:	
Phone#: Fax#:	E-mail:
I note.	
30-0-0-2-0-1-0-0-0-0-0-0-0-0-0-0-0-0-0-0-	
Check all that Apply:	
DEPARTMENT:	CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:
HYDROLOGY/ DRAINAGE	BUILDING PERMIT APPROVAL
TRAFFIC/ TRANSPORTATION MS4/ EROSION & SEDIMENT CONTROL	CERTIFICATE OF OCCUPANCY
MS4/ EROSION & SEDIMENT CONTROL	
TYPE OF SUBMITTAL:	PRELIMINARY PLAT APPROVAL
ENGINEER/ ARCHITECT CERTIFICATION	SITE PLAN FOR SUB'D APPROVAL
	SITE PLAN FOR BLDG. PERMIT APPROVAL
CONCEPTUAL G & D PLAN	FINAL PLAT APPROVAL
X GRADING PLAN	SIA/ RELEASE OF FINANCIAL GUARANTEE
DRAINAGE MASTER PLAN	FOUNDATION PERMIT APPROVAL
DRAINAGE REPORT	GRADING PERMIT APPROVAL
CLOMR/LOMR	SO-19 APPROVAL
	PAVING PERMIT APPROVAL
TRAFFIC CIRCULATION LAYOUT (TCL)	GRADING/ PAD CERTIFICATION
TRAFFIC IMPACT STUDY (TIS)	WORK ORDER APPROVAL
EROSION & SEDIMENT CONTROL PLAN (ESC)	CLOMR/LOMR
	Appr Carcoat Plan
OTHER (SPECIFY)	PRE-DESIGN MEETING
	PRE-DESIGN MEETING Appr Concept Plan OTHER (SPECIFY) HAVE From DRS
IS THIS A RESUBMITTAL?: Yes Yes No	
DATE SUBMITTED: 1/24/18  By:	( VKP)
DATE SUBMITTED: By:	
COA STAFE: FLECTRONIC SUBMITTAL RECEIVED:	\ \ \ / / \ /

Map amended through: 1/28/2016

SANDIA TRIBAL LAND

GATEWAY

NORTH I-25 CORPORATE

CENTER

SU-2 M-1

SU-2 M-1

Note: Grey Shading Represents Area Outsi of the City Limits

CLITY OR SU-2 RC

SANDIA TRIBAL LANDS

SU-1 PRD or su-z c

OPEN SPA

Zone Atlas Page

B-18-Z

Selected Symbols

Design Overlay Zones 2 Mile Airport Zone

Wall Overlay Zone

SECTOR PLANS

City Historic Zones

H-1 Buffer Zone

Petroglyph Mon.

SU-2 IP or su-2 c

PROJECT

LOCATION

CORONADO INDUSTRIAL PARK

# SITE LOCATION

BEVERLY HILLS IS LOCATED AT 5401 BEVERLY HILLS N.E. IN ALBUQUERQUE, NEW MEXICO. THE UNDEVELOPED PROPERTY IS BOUNDED ON THE SOUTH AND EAST BY UNDEVELOPED LOTS AND BORDERED ON THE NORTH, AND WEST BY COMMERCIAL BUILDINGS.

# EXISTING ON SITE CONDITIONS

THE SITE IS UNDEVELOPED WITH NOT MUCH VEGETATION JUST DISTURBED SOIL THE SITE DOES NOT HAVE ANY ACCESS POINTS OR DRIVEWAYS CURRENTLY. BEVERLY HILLS IS UNIMPROVED ON THE SOUTH FRONTAGE OF THE SITE. THERE IS A DIRT ROAD ON THE SOUTH FRONTAGE. THE SITE GENERALLY SLOPES FROM THE EAST TO THE WEST TOWARD NORTHEAST AND SOUTHEAST PROPERTY CORNERS. THERE IS AN EXISTING BERM IN THE NORTHEAST CORNER TOWARDS THE NORTHWEST CORNER OF THE PROPERTY. THERE ARE NO DRAINAGE STRUCTURES ON THE PROPERTY. STORM WATER FLOWS TOWARDS THE NORTHWEST CORNER OF THE PROPERTY VIA SURFACE FLOW. THE PROPERTY HAS ONE DRAINAGE BASIN, WHICH IS IDENTIFIED AS BASIN "A" IN THE HYDROLOGY CALCULATIONS TABLES ON THIS SHEET. THIS REPORT PROVIDES INFORMATION FOR EXISTING HYDROLOGY CONDITIONS AND PROPOSED CONDITIONS HYDROLOGY. THE DRAINAGE DATA ON THIS PAGE SUMMARIZES THE EXISTING PEAK DISCHARGE AND RUNOFF VOLUME FOR BASIN A.

# PROPOSED CONDITIONS

THE PROPOSED DEVELOPMENT OF THE SITE WILL CONSIST OF A 25,700 SQUARE FOOT BUILDING, ASSOCIATED CONCRETE FLATWORK, SIDEWALKS, ASPHALT PARKING LOT, AND LANDSCAPING. THE PROPOSED GRADING AND DRAINAGE PLAN CONTAINS THE SITE INTO ONE DRAINAGE BASIN, BASIN "A". THIS DRAINAGE BASIN SURFACE FLOWS INTO BEVERLY HILLS N.E. VIA SURFACE FLOW. THE ACCESS ROAD ALONG THE SOUTH BASIN TO WATER HARVEST AREAS AT THE SOUTHEAST AND SOUTHWEST CORNERS, THEN DISCHARGES THRU A SIDEWALK CULVERT INTO THE PROPOSED BEVERLY HILLS ROADWAY TOWARDS A CURB CUT AND RIP RAP RUNDOWN TO THE SIDE OF PROPERTY. THE DRAINAGE DATA ON THIS PAGE SUMMARIZES THE PROPOSED PEAK DISCHARGE AND RUNOFF VOLUME FOR ALL THREE BASINS.

# OFFSITE FLOWS

THERE IS AN UNDEVELOPED LOT LOCATED EAST OF SITE AND SOUTHERN EDGE OF THE PROPERTY. THE FLOWS FROM THIS SITE ARE BEING DIVERTED VIA EARTHEN SWALE TO SOUTH INTO BEVERLY HILLS RIGHT OF WAY, THUS NOT AFFECTING OUR

# CONCLUSION

RUNOFF VOLUME AND FLOW RATE INCREASED AS A RESULT OF CHANGES IN LAND TREATMENTS FOR THE PROPERTY. EXISTING CONDITIONS HAD ONE DRAINAGE BASIN, BASIN "A". AS A WHOLE, THE PROPERTY'S RUNOFF VOLUME AND PEAK DISCHARGE VALUES INCREASED. THE RUNOFF VOLUME INCREASED FROM 0.008 ACRE-FEET TO 0.173 ACRE-FEET, AS A WHOLE. THE PEAK DISCHARGE INCREASED FROM 2.6 CUBIC FEET PER SECOND TO 4.0 CUBIC FEET PER SECOND, AS A WHOLE.

THE PROPOSED GRADING IMPROVEMENTS WILL INCLUDE DRAINAGE SWALES, CURB AND GUTTER, AND CURB CUTS ALLOWING STORMWATER INTO AND OUT OF THE PROPOSED WATER HARVESTING AREAS. THE WATER HARVESTING AREAS WILL BE USED TO MANAGE THE FIRST FLUSH AS REQUIRED BY THE RECENT CITY OF ALBUQUERQUE DRAINAGE ORDINANCE CHANGES. THE VOLUME OF THE FIRST FLUSH FOR BASIN "B" (0.44-0.1 INCHES \* 27500)= 780 CUBIC FEET. THE WATER HARVEST 1 VOLUME = 988 CUBIC FEET. THEREFORE, WATER HARVEST POND VOLUME = 988 CUBIC FEET > 780 CUBIC FEET. THEREFORE, THE FIRST FLUSH IS CONTAINED. ALL POSSIBLE IMPERVIOUS AREAS WILL BE DISCHARGED THROUGH THE PROPOSED WATER HARVEST AREA.

# **GENERAL NOTES:**

- EXISTING TOPOGRAPHIC DATA SHOWN ON THESE PLANS WAS PROVIDED BY TERRA LAND SURVEYS LLC. . MILLER ENGINEERING CONSULTANTS HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS INFORMATION.
- 2. ALBUQUERQUE GEODETIC REFERENCE SYSTEM STATIONS (AGRS) USED: A. AGRS STATION "14\_J22" DATA FOUND STANDARD ALUMINUM DISK NAD 83 NEW MEXICO CENTRAL ZONE STATE PLANE COORDINATES NORTHING: 1,487,017.69 US FEET EASTING: 1,561,191.23 US FEET ELEV.= 5,576.441 US FEET COMBINED GROUND TO GRID FACTOR = 0.999644295 DELTA ALPHA = (-) 0.09'08.03"
  - B. AGRS STATION "10-K21" DATA FOUND STANDARD ALUMINUM DISC NAD 83 NEW MEXICO CENTRAL ZONE STATE PLANE COORDINATES NORTHING: 1,485,161.27 US FEET EASTING: 1,561,095.89 US FEET ELEV. = 5.557.514 US FEET COMBINED GROUND TO GRID FACTOR = 0.999645218 DELTA ALPHA = (-) 0°09'08.58"
- 3. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SEDIMENT AND EROSION CONTROLDEVICES DURING THE CONSTRUCTION PHASE.
- 4. CONTRACTOR SHALL OBTAIN A GRADING PERMIT FROM THE CITY OF ALBUQUERQUE, PRIOR TO ANY GRADING OR CONSTRUCTION.
- 5. TWO WORKING DAYS PRIOR TO ANY EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- 6. ALL EMBANKMENTS SHALL BE PLACED AND COMPACTED IN LIFTS OF MAXIMUM OF 8". THE EMBANKMENTS SHALL BE WETTED AND COMPACTED TO 95% OPTIMUM DENSITY PER ASTM D1557 AND 95% UNDER ALL STRUCTURES INCLUDING DRIVEWAYS AND PARKING LOTS.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE PROPERTY SERVED.
- 8. THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- 9. THE SUBJECT PROPERTY (AS SHOWN HEREON) APPEARS TO LIE WITHIN ZONE "X" (AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.) IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM RATE MAP NO. 35001C 0129H, EFFECTIVE DATE 9-26-2008.
- 10. ALL WORK PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE STORM DRAINAGE REGULATIONS. ALL WORK PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ALBUQUERQUE "GRADING AND DRAINAGE DESIGN REQUIREMENTS AND POLICIES FOR LAND DEVELOPMENT."
- 11. THE OWNER, CONTRACTOR AND/OR BUILDER SHALL COMPLY WITH ALL APPROPRIATE LOCAL, STATE AND FEDERAL REGULATIONS AND REQUIREMENTS.
- 12. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE AND REASONABLE MEASURES TO PREVENT SEDIMENT OR POLLUTANT LADEN STORM WATER FROM EXITING THE SITE DURING CONSTRUCTION. STORMWATER MAY BE DISCHARGED IN A MANNER, WHICH COMPLIES WITH THE APPROVED GRADING AND DRAINAGE PLAN.
- 13. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE MEASURES TO PREVENT THE MOVEMENT OF CONSTRUCTION RELATED SEDIMENT, DUST, MUD, POLLUTANTS, DEBRIS, WASTE, ETC FROM THE SITE BY WIND, STORM FLOW OR ANY OTHER METHOD EXCLUDING THE INTENTIONAL, LEGAL TRANSPORTATION OF SAME IN A MANNER ACCEPTABLE BY
- 14. THE CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE THE AREAS SHOWN AS "SLOPE LIMITS" ON THE GRADING AND DRAINAGE PLAN.

- 15. THE CONTRACTOR SHALL SUBMIT A SEED MIX DESIGN TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO STARTING THE SEEDING ON THE PROJECT. THE SEED MIX DESIGN SHALL BE A SEED MIX RECOMMENDED BY THE NRCS FIELD OFFICE REPRESENTATIVE THAT IS APPROPRIATE FOR THE PROJECT LOCATION. ALL DISTURBED AREAS WITH SLOPES LESS THAN 3:1 SHALL RECEIVE CLASS "A" SEEDING. ALL DISTURBED AREAS WITH SLOPES EQUAL TO OR GREATER THAN 3:1 SHALL RECEIVE STEEP SLOPE SEEDING. THE STEEP SLOPE SEEDING SHALL CONSIST OF SEEDING IN CONJUNCTION WITH A 100% COCONUT FIBER BLEND EROSION BLANKET (NORTH AMERICAN GREEN C125) OR APPROVED EQUAL. ALL MATERIALS. EQUIPMENT AND LABOR ASSOCIATED WITH THE PROPER CONSTRUCTION OF THE STEEP SLOPE SEEDING WILL BE CONSIDERED INCIDENTAL AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THIS MATERIAL OR WORK. THE COCONUT FIBER EROSION BLANKET AND ASSOCIATED SEEDING SHALL BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE PROJECT ENGINEER PRIOR TO CONSTRUCTION.
- 16. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE ANY SPOT ELEVATIONS ON THE GRADING AND DRAINAGE PLAN WHICH APPEAR TO BE AMBIGUOUS OR DO NOT MEET THE INTENT OF THE GRADING AND DRAINAGE PLAN.
- 17. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DOES NOT MEET ADA ACCESSIBILITY REQUIREMENTS. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.0%, ALL SIDEWALKS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5.0%, AND ALL RAMPS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 15:1.
- 18. ALL SIDEWALKS AND CONCRETE FLATWORK SHALL HAVE A MINIMUM OF 0.5% SLOPE. CONTRACTOR SHALL CONTACT PROJECT ENGINEER IF THERE ARE SIDEWALKS OR CONCRETE FLATWORK WHICH DO NOT MEET THIS REQUIREMENT.
- 19. THE CONTRACTOR SHALL SUBMIT MATERIAL SUBMITTALS, CUT SHEETS AND SHOP DRAWINGS FOR ALL CIVIL RELATED ITEMS FOR REVIEW PRIOR TO CONSTRUCTION.
- 20. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS (UPDATE 8, AMENDMENT 1)
- 21. ALL EXISTING MANHOLES, VALVES AND METERS SHALL BE ADJUSTED TO NEW FINISH GRADE.

# CTURAL GROUP, IGIL & ARCHITECT



DRAINAGE HYDROLOGY

date: JANUARY 24, 2018 drawn by: V&A checked by: RRV file name: G & D Plan\_101817

C-100

Pond Ra	ting Tab	le		1	
Side Slope		2:1			
Depth	Area		Volume	Cum Volume	
(ft)	(sq ft)	(ac)	(ac-ft)	(ac-ft)	
62.5	791	0.018	0.000	0.000	
63	968	0.022	0.010	0.010	
63.5	1149	0.026	0.012	0.022	

# DRAINAGE DATA

7.5	Basin		Land Treatment Factors						
Basin	Area	Α	В	С	D	Ew	V(100-6)	V(100-24)	Q(100)
(Ac)			(Acres)				(af)	(af)	(cfs)
Existing C	Conditions								
A	0.89	0.30	0.00	0.59	0.00	1.08	0.080	0.080	2.60
Total	0.89							1	2.60
Proposed	Conditions		,		•	•			
A	0.89	0.00	0.00	0.30	0.59	2.00	0.148	0.173	4.00
Total	0.89		1-200	701					4.00

WATER HARVEST VOLUMES

Percipitat	ion Zone 3	- 10-year S	torm	P(360) =	1.73	3 in	P(1440) =	2.07	in
	Basin	Land Treatment Factors				in Till			
Basin	Area	Α	В	С	D	Ew	V(10-6)	V(10-24)	Q(*
(2.00)	(Ac)		(Acres	s)		(in)	(af)	(af)	(cf
Existing C	Conditions								
Α	0.89	0.30	0.00	0.59	0.00	0.48	0.035	0.035	1.3
Total	0.89							1	1.3
Proposed	Conditions								
Α	0.89	0.00	0.00	0.30	0.59	1.20	0.089	0.106	2.6
Total	0.89			1 - 2 - 3					2.0
	Existing C A Total Proposed A	Basin Area (Ac) Existing Conditions A 0.89 Total 0.89 Proposed Conditions A 0.89	Basin L Basin Area A (Ac) Existing Conditions A 0.89 0.30 Total 0.89 Proposed Conditions A 0.89 0.00	Basin         Area (Ac)         A (Acres           Existing Conditions         A 0.89 0.30 0.00           Total 0.89         Proposed Conditions           A 0.89 0.00 0.00	Basin         Land Treatment Factor           Basin         A         B         C           (Ac)         (Acres)         (Acres)           Existing Conditions         A         0.89         0.30         0.00         0.59           Total         0.89         0.00         0.00         0.30           Proposed Conditions         A         0.89         0.00         0.00         0.30	Basin         Land Treatment Factors           Basin         Area         ABCD           (Ac)         (Acres)           Existing Conditions         A0.89 0.30 0.00 0.59 0.00           Total 0.89         Proposed Conditions           A0.89 0.00 0.00 0.30 0.59	Basin         Land Treatment Factors           Basin         Area         A         B         C         D         Ew           (Ac)         (Acres)         (in)           Existing Conditions         A         0.89         0.30         0.00         0.59         0.00         0.48           Total         0.89         0.00         0.00         0.30         0.59         1.20	Basin         Land Treatment Factors           Basin         Area         A         B         C         D         Ew         V(10-6)           (Ac)         (Ac)         (Acres)         (in)         (af)           Existing Conditions           A         0.89         0.30         0.00         0.59         0.00         0.48         0.035           Total         0.89         0.00         0.00         0.30         0.59         1.20         0.089           A         0.89         0.00         0.00         0.30         0.59         1.20         0.089	Basin

1	in	1	
1)	Q(100)		
	(cfs)		
	2.60	]	
	2.60		
		]	
I	4.00	1	
-	4.00	1	

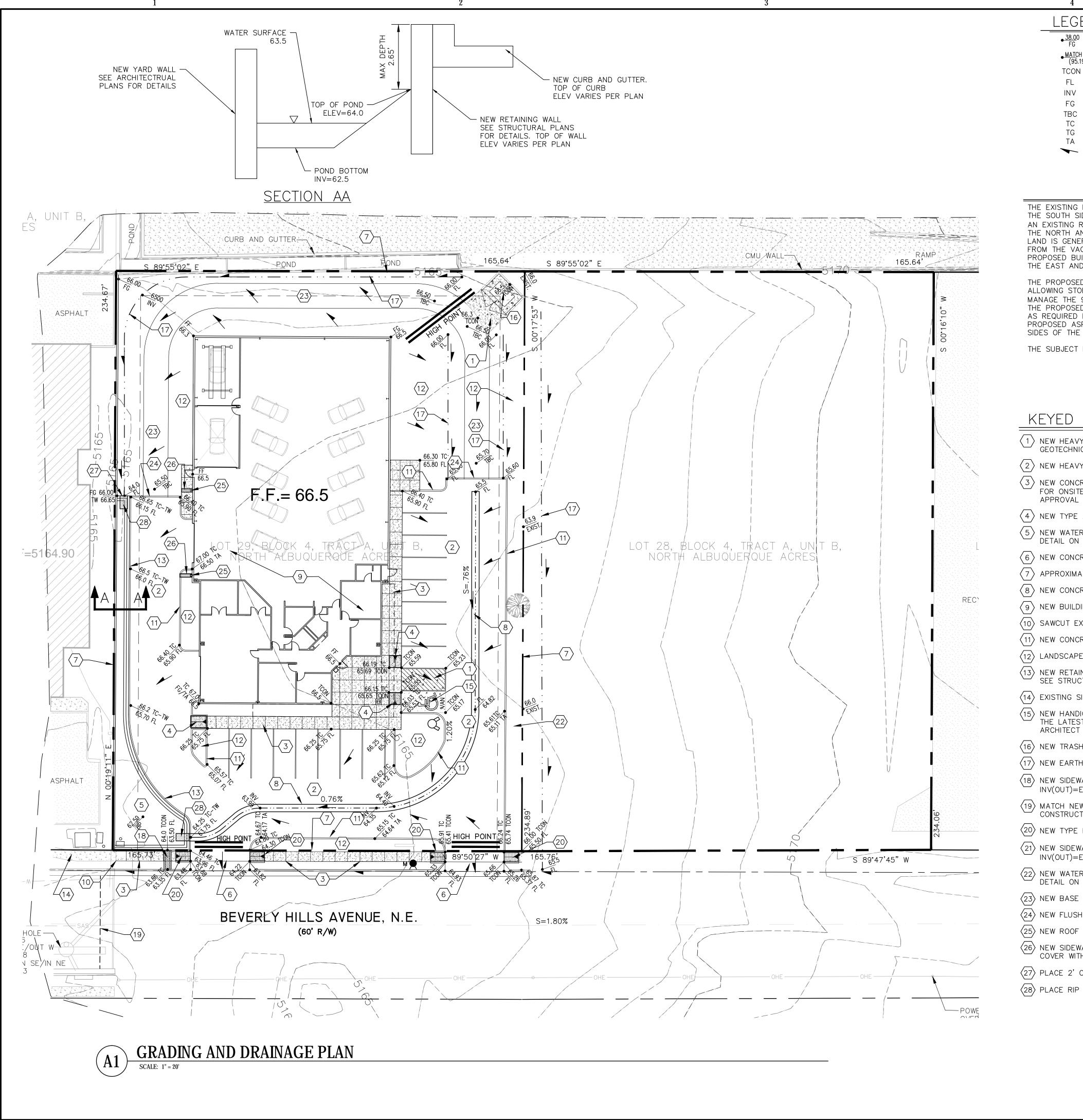
FLOOD ZONE MAP FLOOD ZONE MAP: FM35001C0129H

MILLER ENGINEERING CONSULTANTS Engineers • Planners 3500 COMANCHE, NE BUILDING F ALBUQUERQUE, NM 87107 (505)888-7500 (505)888-3800 (FAX) WWW.MECNM.COM

Ew | V(10-6) | V(10-24) | Q(10)

1.35

2.60



LEGEND:

PROPOSED SPOT ELEVATIONS (FINISHED GRADE) GRADE BREAK-HIGH POINT MATCH EXISTING ELEVATIONS SWALE TCON TOP OF CONCRETE FLOW LINE, CURB STORM DRAIN LINE INVERT FINISH GRADE PROPOSED MAJOR CONTOUR TOP OF BASE COURSE PROPOSED MINOR CONTOUR TOP OF CURB EXISTING MAJOR CONTOUR TOP OF GRATE EXISTING MINOR CONTOUR TOP OF ASPHALT FLOW ARROW TOP OF CUT SLOPE

# GRADING AND DRAINAGE NARRATIVE

THE EXISTING PROPERTY FOR BEVERLY HILLS IS LOCATED AT 5401 BEVERLY HILLS AVE. N.E. THE SITE IS ACCESSED FROM THE SOUTH SIDE FROM BEVERLY HILLS AVE. N.E. THE SITE CONSISTS OF A VACANT LOT WITH NO DEVELOPMENT. THERE IS AN EXISTING ROADWAY (BEVERLY HILLS AVE.) ON THE SOUTH SIDE. THERE IS AN EXISTING COMMERCIAL DEVELOPMENT TO THE NORTH AND WEST SIDE. THERE IS AN ADJACENT VACANT LOT LOCATED ON THE EAST SIDE OF THE PROPERTY. THE LAND IS GENERALLY FLAT AND SLOPES FROM THE NORTHEAST TO THE SOUTHWEST. THERE ARE EXISTING FLOWS COMING FROM THE VACANT LOT LOCATED EAST OF THE PROPERTY. THESE FLOWS SHEET FLOW ONTO THE PROPERTY. THE PROPOSED BUILDING WILL BE CONSTRUCTED NEAR THE CENTER OF THE SITE WITH AN ASPHALT PARKING LOT LOCATED ON THE EAST AND THE SOUTH OF THE PROPOSED BUILDING.

THE PROPOSED GRADING IMPROVEMENTS WILL INCLUDE STANDARD CURB AND GUTTER, WITH CURB CUTS AND RUNDOWNS ALLOWING STORMWATER INTO PROPOSED WATER HARVESTING AREAS. THESE WATER HARVESTING AREAS WILL BE USED TO MANAGE THE 90TH PERCENTILE STORM EVENTS (REQUIRED VOLUME = (0.33 IN. \* 25,811 SF)/12 = 710 CF, 0.016 AC-FT. THE PROPOSED WATER HARVEST AREAS VOLUME IS APPROXIMATELY 0.022 AC-FT. WHICH IS GREATER THAN 0.016 AC-FT, AS REQUIRED BY THE RECENT CITY OF ALBUQUERQUE DRAINAGE ORDINANCE CHANGES. ALL ROOF DRAINAGE AND PROPOSED ASPHALT PARKING AREAS WILL DISCHARGE INTO WATER HARVEST AREAS LOCATED AT THE EAST AND WEST SIDES OF THE PROJECT SITE.

THE SUBJECT PROPERTY IS NOT LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE AS PER FEMA MAPS.

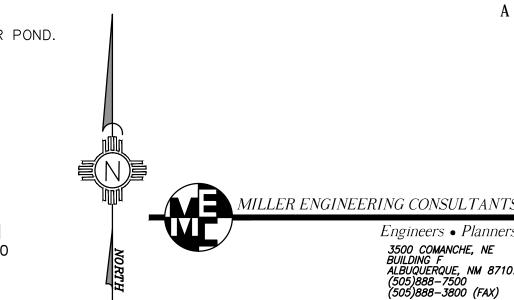
# **KEYED NOTES:**

- 1 NEW HEAVY DUTY CONCRETE PAVEMENT SECTION. SEE SECTION DETAILS ON ARCHITECTURAL PLANS AND IN THE GEOTECHNICAL REPORT.
- $\langle 2 
  angle$  NEW HEAVY DUTY HOT MIX ASPHALT PAVEMENT SECTION. SEE SECTION DETAILS ON SHEET C-501.
- 3 NEW CONCRETE SIDEWALK AS PER COA STANDARD DWG 2430 (FOR WORK IN CITY R/W) AND ARCHITECTURAL PLANS FOR ONSITE SIDEWALK. CONTRACTOR SHALL SUBMIT A JOINT PATTERN TO THE PROJECT ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- 4 NEW TYPE A HANDICAP RAMP, SEE DETAIL ON SHEET C-503.
- 5 NEW WATER HARVEST AREA 1. TOP=64.00, INV=62.50, EMERGENCY SPILLWAY SIDEWALK CULVERT INV=63.5. SEE DETAIL ON SHEET C-501.
- $\langle 6 \rangle$  NEW CONCRETE DRIVEPAD. AS PER NMDOT DETAIL 2-B ON SHEET C-502.
- $\langle 7 \rangle$  APPROXIMATE LOCATION OF PROPERTY LINE. NEW PERIMETER YARD WALL. SEE ARCHITECTURAL PLANS FOR DETAILS.
- 8 NEW CONCRETE VALLEY GUTTER. SEE COA STANDARD DWG 2420.
- (9) NEW BUILDING. SEE ARCHITECTURAL PLANS FOR DETAILS.
- $\langle 10 \rangle$  sawcut existing sidewalk to nearest construction joint and match with new concrete sidewalk.
- (11) NEW CONCRETE HEADER CURB. SEE SHEET C-501 FOR DETAILS.
- (12) LANDSCAPE AREA. SEE ARCHITECTURAL PLANS FOR DETAILS.
- $\langle 13 \rangle$  NEW RETAINING WALL AND CURB AND GUTTER SEE SECTION A-A. SEE SHEET C-501 FOR CURB AND GUTTER DETAIL. SEE STRUCTURAL PLANS FOR RETAINING WALL DETAIL.
- $\langle 14 \rangle$  EXISTING SIDEWALK TO REMAIN.
- $\langle 15 \rangle$  NEW HANDICAP PARKING WITH PARKING BUMPER. PAINTED MARKINGS AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE MUTCD. CONTRACTOR SHALL SUBMIT A PAVEMENT MARKING LAYOUT TO PROJECT ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
- $\langle 16 \rangle$  NEW TRASH ENCLOSURE, SEE ARCHITECTURAL PLANS FOR DETAILS.
- $\langle 17 \rangle$  NEW EARTHEN SWALE. SEE DETAIL SHEET C-501.
- $\langle 18 \rangle$  NEW SIDEWALK CULVERT 1 AND NEW EMERGENCY SPILLWAY AS PER COA STANDARD DWG 2236. INV(IN)= 63.50 INV(OUT)=EXISTING.
- (19) MATCH NEW ASPHALT WITH TOP OF EXISTING ASPHALT. CONTRACTOR TO FIELD VERIFY ELEVATION PRIOR TO
- $\langle 20 \rangle$  NEW TYPE B HANDICAP RAMP, SEE DETAIL SHEET C-502.
- $\langle 21 \rangle$  NEW SIDEWALK CULVERT 2 AND NEW EMERGENCY SPILLWAY AS PER COA STANDARD DWG 2236. INV(IN)= 65.50 INV(OUT)=EXISTING.
- NEW WATER HARVEST AREA 2. TOP=66.00, INV=65.50, EMERGENCY SPILLWAY SIDEWALK CULVERT INV=63.5. SEE DETAIL ON SHEET C-501.

20

SCALE: 1"=20' CONTOUR INTERVAL=1'

- $\langle 23 \rangle$  NEW BASE COURSE PAVEMENT SECTION. SEE DETAIL SHEET C-501.
- (24) NEW FLUSH CURB. SEE DETAIL SHEET C-501.
- (25) NEW ROOF DRAIN. SEE ARCHITECTURAL PLANS FOR DETAILS.
- NEW SIDEWALK CULVERT PER COA STANDARD DWG 2236. COORDINATE WITH ROOFING CONTRACTOR TO MANUFACTURE COVER WITH OPENING FOR DOWNSPOUT AT BUILDING.
- $\langle 27 \rangle$  place 2' cut in retaining wall for swale to enter pond.
- (28) PLACE RIP RAP RUNDOWN.



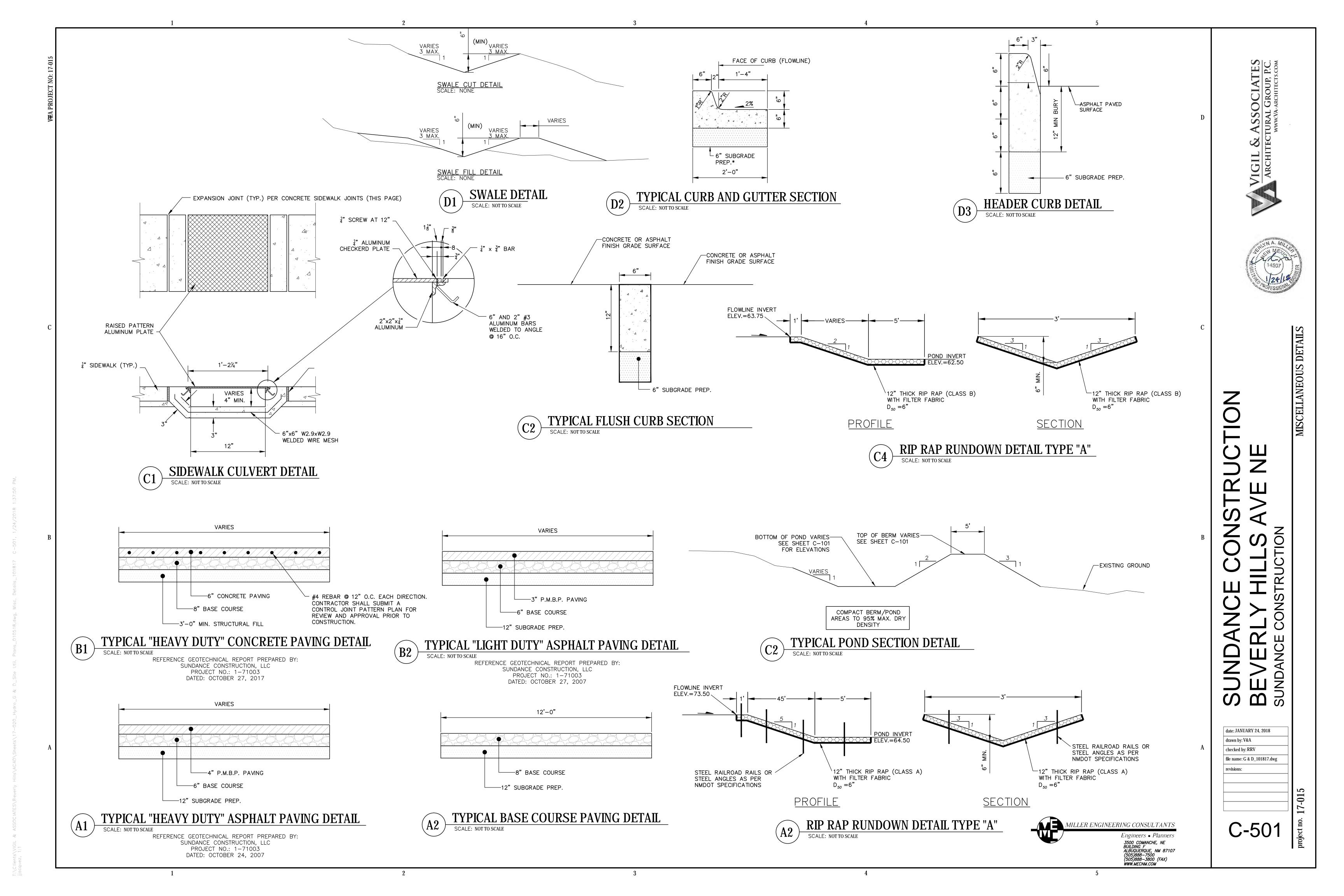
date: JANUARY 24, 2018 checked by: RRV file name: G & D\_101817.dwg

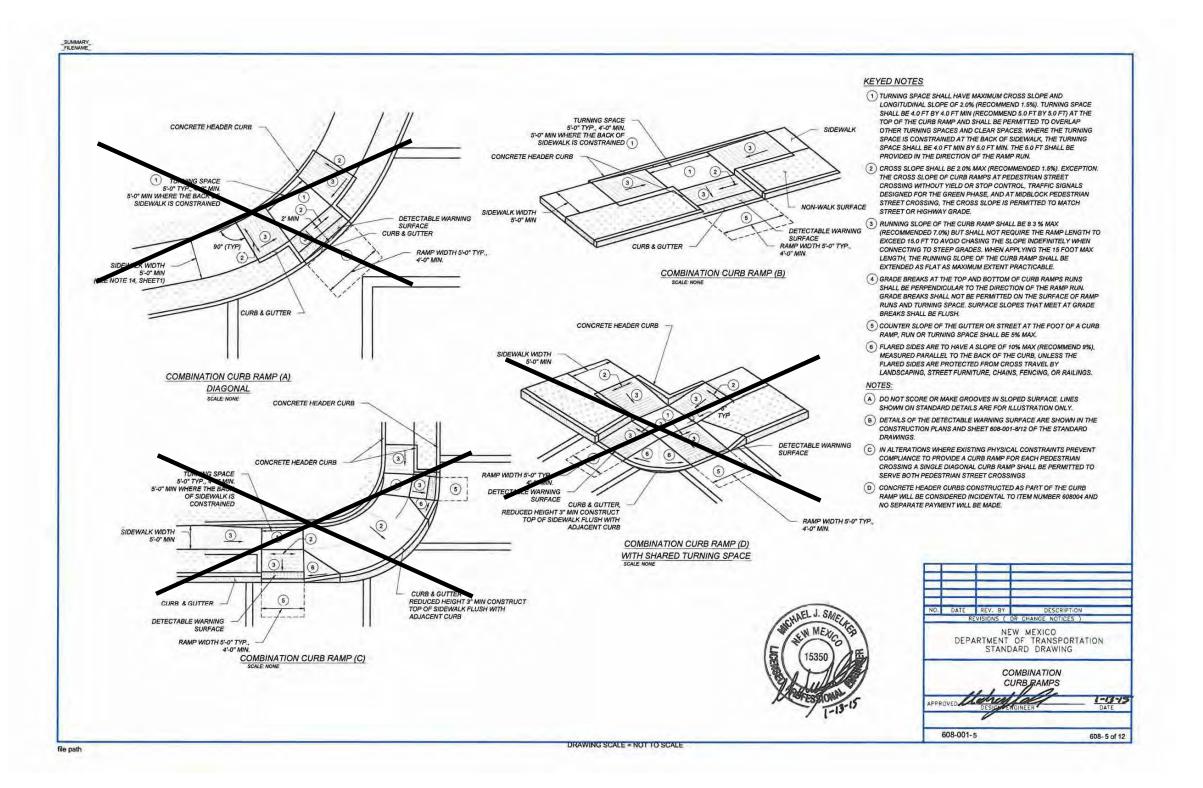
C-101

Engineers • Planne.

3500 COMANCHE, NE BUILDING F ALBUQUERQUE, NM 87107 (505)888-7500 (505)888-3800 (FAX)

WWW.MECNM.COM`





GENERAL NOTES;

1. MMDOT IS RECOGNIZED AS A TITLE II PUBLIC ENTITY UNDER THE AMERICANS WITH DISABILITIES ACT (ADA), OF 1990 (PUBLIC LAW 101-336), A TITLE II ENTITY IS DEFINED AS ANY STATE OR LOCAL GOVERNMENT ENTITY AND PROHIBITS DISCRIMINATION ON THE BASIS OF DISABILITY. THE ADA EXTENDS THE PRINCIPLES OF SECTION 504 OF THE RENHABILITATION ACT, OF 1973, AS AMENDED, TO PROTECT PERSONS WITH DISABILITIES IN ALL PUBLIC FACILITIES AND PROGRAMS IRRESPECTIVE OF THE FUNDING SOURCE

2. THESE DRAWINGS PROVIDE GUIDANCE FOR COMPLANCE WITH THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROWAG), JULY 26, 2011, OR LATEST EDITION THESE GUIDELINES SHALL APPLY TO ALL NEW AND ALTERED PEDESTRIAN ACCESS ROUTES (PAR).

3. REFER TO CONSTRUCTION PLANS FOR THE DETAILED LAYOUTS AND DETAILS.

4. PEDESTRIAN ACCESS ROUTES (PAR) SHALL BE FIRM, STABLE, AND SLIP RESISTANT. PROVIDE SLIP RESISTANT TEXTURE ON SIDEWALKS, AND CURB RAMPS BY BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP AND OR PERPENDICULAR TO PEDESTRIAN TRAVEL. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING SIDE FLARES. DO NOT SCORE OR MAKE GROOVES IN SLOPED SURFACE LINES SHOWN ON STANDARD DETAILS ARE FOR ILLUSTRATIONS ONLY.

5. VERTICAL SURFACE DISCONTINUITIES SHALL BE 0.5 INCHES MAXIMUM, VERTICAL DISCONTINUITIES BETWEEN 0.25 INCHES SHOUND ON STANDARD DETAILS ARE FOR ILLUSTRATIONS ONLY.

6. HORIZONTAL OPENINGS IN GRATINGS AND JOINTS SHALL BE 0.5 INCHES SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 50 PERCENT. THE BEVEL SHALL BE APPLIED ACCOSS THE ENTIRE VERTICAL SURFACE DISCONTINUITY.

7. HORIZONTAL OPENINGS IN GRATINGS AND JOINTS SHALL NOT PERMIT PASSAGE OF A SPHERE MORE THAN 0.5 INCHES SIN DIAMETER, ELONGATED OPENINGS IN GRATIES SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

7. PROVIDE EXPANSION JOINT MATERIAL 0.5 INCHES THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETS SHERES. PLARES, GENERAL NOTES; ACCESSIBLE PEDESTRIAN SIGNALS (APS) AND PEDESTRIAN PUSHBUTTONS 29. PEDESTRIAN SIGNAL PUSH BUTTONS SHALL COMPLY WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND LOCATED WITHIN A HORIZONTAL REACH OF 0" TO 10" AND SHALL BE WITHIN 36" TO 46" ABOVE THE SIDEWALK SURFACE. 30. PEDESTRIAN SIGNAL SHALL HAVE 4FTx4FT MIN TURNING SPACE TO PROVIDE ACCESS TO PUSH BUTTONS. ALTERATIONS TO EXISTING FACILITIES - GENERAL NOTES: ADDITIONS OR ALTERATIONS TO ANY FACILITY SHALL CONFORM TO THE REQUIREMENTS OF THE NEW CONSTRUCTION STANDARDS WITHIN THE NMDOT PEDESTRIAN ACCESS STANDARDS AND PROWAG 2011 OR LATEST EDITION. ANY DESIGN / CONSTRUCTION DEVIATION THAT IS DEEMED AN VARIANCE OR TECHNICALLY INFEASIBLE BY THE DEFINITION BELOW SHALL REQUIRE SUBMITTAL AND APPROVAL OF ADA DESIGN VARIANCE PROCEDURES. 31. EXCEPTION: IN ALTERATION WORK, IF COMPLIANCE IS TECHNICALLY INFEASIBLE, THE ALTERATION SHALL PROVIDE ACCESSIBILITY TO THE MAXIMUM EXTENT PRACTICABLE. ANY ELEMENTS OR FEATURES OF THE BUILDING OR FACILITY THAT IS BEING ALTERED AND CAN BE MADE ACCESSIBLE SHALL BE MADE ACCESSIBLE WITHIN THE SOOPE OF THE ALTERATION. 32. <u>TECHNICAL INFEASIBILITY:</u> MEANS, WITH RESPECT TO AN ALTERATION OF A BUILDING OR A FACILITY, THAT IT HAS LITTLE LIKELIHOOD OF BEING ACCOMPLISHED BECAUSE EXISTING STRUCTURAL COMDITIONS WOULD REQUIRE REMOVING OR ALTERING A LOAD-BEARING MEMBER WHICH IS AN ESSENTIAL PART OF THE STRUCTURAL FRAME; OR BECAUSE OTHER EXISTING PHYSICAL OR SITE CONSTRAINTS PROHIBIT. 33. IN ALTERATIONS WHERE EXISTING PHYSICAL CONSTRAINTS PREVENT COMPLIANCE TO PROVDE A CURB RAMP FOR EACH PEDESTRIAN CROSSING A SINGLE DIAGONAL CURB RAMP SHALL BE PERMITTED TO SERVE BOTH PEDESTRIAN STREET CROSSINGS. SIDEWALKS 12. SIDEWALK, AND CURB AND GUTTER CONSTRUCTION SHALL BE IN ACCORDANCE WITH SERIAL 609-01-1/1. 13. SIDEWALK CROSS SLOPE IS RECOMMENDED TO BE CONSTRUCTED FOR CROSS SLOPE OF 1.5% TYPICAL, BUT SHALL NOT EXCEED 2.0% CROSS SLOPE ON THE PEDESTRIAN ACCESS ROUTE (PAR). 14. SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 5.0 FT, EXCLUSIVE OF THE WIDTH OF THE CURB RETURN. EXCEPTION: WHERE SIDEWALK WIDTH NEEDS TO BE REDUCED TO NO LESS 4.0 FT, PASSING SPACES SHALL BE PROVIDED AT INTERVALS OF 200 FT MAXIMUM. PASSING SPACES SHALL BE 6.0 FT MINIMUM BY 5.0 FT MINIMUM. 15. ANY SIGNS POSTS, UTILITY POLES, FIRE HYDRANTS, TRAFFIC SIGNALS, STREET FURNITURE, AND OTHER OBJECTS SHALL NOT REDUCE THE CLEAR WIDTH TO LESS THAN 4.0 FT. 16. THE CLEAR WIDTH OF PEDESTRIAN ACCESS ROUTES (PAR) WITHIN MEDIANS AND PEDESTRIAN REFUGE ISLANDS SHALL BE 5.0 FT MINIMUM. CURB RAMPS 17. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE FEASIBLE. THE MAXIMUM SLOPE ALLOWABLE IS INDICATED IN NOTE 18 OF THE CURB RAMP STANDARD DETAILS. SLOPES THAT EXCEED THOSE INDICATED IN THE CURB RAMP STANDARD DETAILS, OR CONSTRUCTION PLANS, WILL NOT BE ACCEPTED AND WILL BE REMOVED AND RECONSTRUCTED.

18. RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.3 % MAX (RECOMMENDED 7.0%) BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAX LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE EXTENDED AS FLAT AS MAXIMUM EXTENT PRACTICABLE

19. CONSTRUCT THE CLEAR WIDTH OF CURB RAMP RUNS (EXCLUDING ANY FLARED SIDES), BLENDED TRANSITIONS, AND TURNING SPACES AS TYPICAL 5.0 FT X 5.0 FT AND MINIMUM 4.0 FT X 4.0 FT CLEAR SPACE BEYOND THE CURB FACE, WITHIN THE WIDTH OF THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LAME.

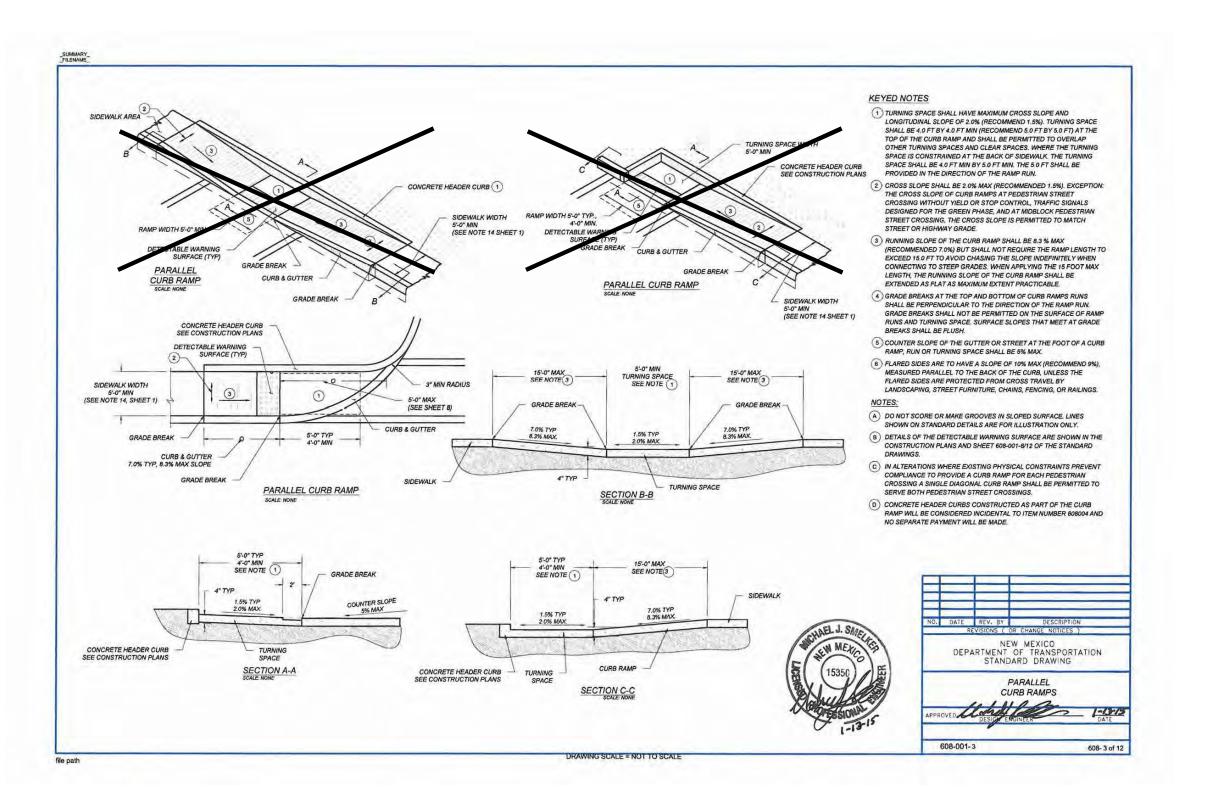
20. CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.

21. THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 13.3%. THE COUNTER SLOPE OF THE GUITTER OR ROAD AT THE FOOT OF A CURB RAMP RAMP SLOPE OF THANSITION IS NOT TO EXCEED 5.0%. VERTICAL SURFACE DISCONTINUITIES
SCALE NONE
REFER TO NOTE S 5.0%.

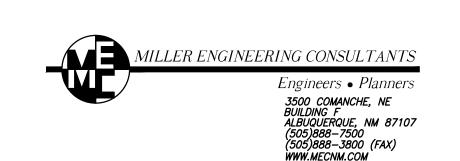
22 CONSTRUCT CURB RAMPS FLUSH TO ADJACENT ROADWAY, GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL TURNING SPACES BEHIND CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE

23. GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE CURB RAMP RUN. GRADE BREAKS SHALL BE FLUSH. NOT BE PERMITTED ON THE SURFACE OF CURB RAMP RUNS AND TURNING SPACES. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE DOMINANT DIRECTION OF TRAVEL 24. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF CURB RAMP IS NOT SOLELY DEPENDENT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 6" CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 6.0 FT FOR AN 8,3% SLOPE) CROSSWALKS 25. PROVIDE A SEPARATE CURB RAMP FOR EACH MARKED OR UNMARKED CROSSWALK. CURB RAMP LOCATIONS SHALL BE PLACED WITHIN THE WIDTH OF THE MARKED OR UNMARKED CROSSWALK AS SHOWN IN THE CONSTRUCTION PLANS. DETECTABLE WARNING NEW MEXICO DEPARTMENT OF TRANSPORTATION STANDARD DRAWING 28. DETECTABLE WARNING SURFACES (DWS) CONSISTING OF TRUNCATED DOMES SHALL BE UTILIZED WHERE CURB RAMPS, BLENDED TRANSITIONS, OR TURNING SPACE PROVIDE A FLUSH PEDESTRIAN CONNECTION TO THE STREET OR WHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CROSSES A STREET, ALLEY, TRAFFIC ISLAND, MEDIAN, OR RAILROAD. DETECTABLE WARNING SURFACES (DWS) WILL NOT BE INSTALLED AT RESIDENTIAL DRIVEWAYS. DETECTABLE WARNING SURFACE MUST BE PROVIDED AT THE JUNCTION BETWEEN THE PAR AND COMMERCIAL DRIVEWAYS THAT ARE STOP OR YIELD CONTROLLED OR ARE CONTROLLED BY A SIGNAL.

27. DETAILS OF DETECTABLE WARNING SURFACE ARE SHOWN IN CONTRACT PLANS AND SHEET 608-001-8/12 OF THE STANDARD DRAWINGS. PEDESTRIAN ACCESS ROUTE DRAWING SCALE = NOT TO SCALE



MISCELLANEOUS DETAILS



MISCELLANEOUS DETAII

date: JANUARY 24, 2018

file name: G & D\_101817.dwg

drawn by: V&A

checked by: RRV

revisions:

CONCRETE -BLOCKING

CAST IRON — CLEAN—OUT SHOE

SCALE: NOT TO SCALE

**A2** 

SIDE VIEW

TOP VIEW

TYPICAL SINGLE SAS CLEAN-OUT

-#3 BARS 6" c-c

24" X 24" X 6" CONCRETE PAD WITH STEEL REINFORCEMENT

MISCELLANEOUS DETAILS

date: JANUARY 24, 2018 drawn by: V&A checked by: RRV file name: G & D\_101817.dwg

C-503

3500 COMANCHE, NE BUILDING F ALBUQUERQUE, NM 87107 (505)888-7500 (505)888-3800 (FAX) WWW.MECNM.COM

MILLER ENGINEERING CONSULTANTS Engineers • Planners

\_1/4" LIP ⊚ ù

SIDE VIEW

TOP VIEW

TYPICAL DOUBLE SAS CLEAN-OUT

CAST IRON— CLEAN—OUT SHOE

SCALE: NOT TO SCALE

-#3 BARS 6" c-c

24" X 24" X 6" CONCRETE PAD WITH STEEL REINFORCEMENT