CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services

Richard J. Berry, Mayor

November 10, 2016

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

RE: DAVITA Albuquerque
Grading and Drainage Plan
Engineer's Stamp Date 10-10-2016 (File: K21D009H1)

Dear Mr. Miller:

Based upon the information provided in your submittal received 10-12-2016, the above referenced plan is approved for Building Permit and for SO-19 Permit with the following conditions:

1. Extend the sidewalk culverts 1-foot behind the sidewalk.
2. Specify to the Contractor the intended size of the culverts. The standard detail only shows the acceptable opening widths. Note that the minimum width of the culvert is based on the opening of the channel.
3. References to the Drainage Master Plan for the Copper Pointe Development should have been included in the Plan. However, this project does appear to total a smaller impervious footprint than the development anticipated by the master plan for Copper Pointe (a parking lot extension and building with minimal landscaped islands).
4. An approved ESC Plan is secured through the Stormwater Quality Engineer.

Please attach a copy of this approved plan in the construction sets when submitting for the building permit. Prior to Certificate of Occupancy release, Engineering Certification per the DPM Checklist will be required.

Prior to any grading of the site, an ESC Grading Permit needs to be submitted to the Stormwater Quality Engineer; the approval of the ESC Grading Permit is contingent on the approval of your final ESC Plan.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Abiel Carrillo, P.E.
Principal Engineer, Planning Dept.
Development Review Services

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: COPPER POINTE DIALYSIS TREATMENT CENTER Building Permit #: _____ City Drainage #: _____

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: TRACT NUMBERED ONE-A (1-A) OF THE PLAT OF TRACT 1-A COPPER POINTE SUBDIVISION

City Address: 10500 COPPER POINTE WAY NE, ALBUQUERQUE, N.M.

Engineering Firm: MILLER ENGINEERING CONSULTANTS Contact: JOHN JACQUEZ

Address: 3500 COMANCHE NE, BLDG. F, ALBUQUERQUE, NM 87107

Phone#: 505-888-7500 Fax#: 505-888-3800 E-mail: JJACQUEZ@MECNM.com

Owner: DAVITA / GENESIS KC DEVELOPMENT LLC Contact: DAX CHESHIER MGR DDP

Address: 2000 16TH STREET, LEVEL 12, DENVER, CO 80202 / 2900 CR 3210, LONE OAK TX

Phone#: _____ Fax#: _____ E-mail: _____

Architect: SEARER ROBBINS & STEPHENS Contact: _____

Address: 1730 EAST NORTHERN AVENUE, SUITE 124, PHOENIX, AZ 85020

Phone#: 602-277-1187 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
X GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ CLOMR/LOMR

____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
X EROSION & SEDIMENT CONTROL PLAN (ESC)

____ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ____ Yes X No

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

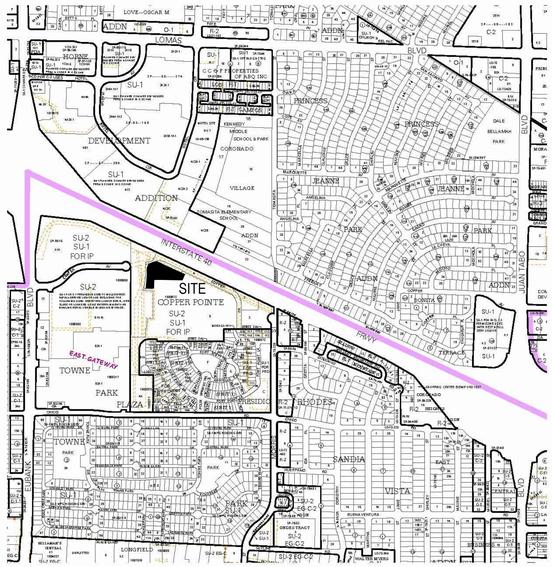
X BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY

____ 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) CONCEPT APPROVAL TO DRB.

DATE SUBMITTED: _____ By: for JOHN JACQUEZ

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___



C1 VICINITY MAP

ZONE ATLAS MAP K-21-C

SITE LOCATION

DAVITA ALBUQUERQUE II IS LOCATED AT 10500 COPPER POINT WAY N.E. IN ALBUQUERQUE, NM. THE UNDEVELOPED PROPERTY IS BOUNDED ON THE SOUTH BY AN EXISTING PARKING LOT AND BORDERED ON THE EAST, NORTH, AND WEST BY EXISTING PAVED ROADWAYS.

EXISTING ON SITE CONDITIONS

THE SITE IS UNDEVELOPED BUT HAS BEEN CLEARED AND GRUBBED. THE SITE DOES NOT HAVE ANY ACCESS POINTS OR DRIVEWAYS CURRENTLY. THE SITE GENERALLY SLOPES FROM THE SOUTH AND THE SOUTHEAST 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 8,180 SQUARE FOOT BUILDING, ASSOCIATED CONCRETE FLATWORK, SIDEWALKS, ASPHALT PARKING LOT, AND LANDSCAPING. THE PROPOSED GRADING AND DRAINAGE PLAN DIVIDES THE SITE INTO THREE DRAINAGE BASINS. BASIN "A", BASIN "B", AND BASIN "C". BASIN "A" IS THE SMALLEST DRAINAGE BASIN AND IS LOCATED ALONG THE WEST AND NORTH SIDES OF THE SITE. THIS DRAINAGE BASIN SURFACE FLOWS INTO COPPER POINT WAY AND AN UN-NAMED ACCESS ROAD ALONG THE WEST. BASIN "B" IS THE LARGEST BASIN AND IS LOCATED IN THE CENTRAL PORTION OF THE PROPERTY. THIS BASIN FLOWS TOWARDS A CURB CUT AND RIP RAP RUNDOWN TO A WATER HARVESTING POND (RETENTION). BASIN "C" IS LOCATED ON THE EAST SIDE OF THE PROPERTY. THIS DRAINAGE BASIN FLOWS TOWARDS A WATER HARVESTING POND (RETENTION) VIA SURFACE FLOW AND AN EARTHEN SWALE. THE DRAINAGE DATA ON THIS PAGE SUMMARIZES THE PROPOSED PEAK DISCHARGE AND RUNOFF VOLUME FOR ALL THREE BASINS.

OFFSITE FLOWS

THERE IS AN EXISTING PARKING LOT LOCATED ALONG THE SOUTHEASTERN EDGE OF THE PROPERTY. THE PARKING LOT HAS AN ASPHALT CURB THAT RUNS ALONG THE SOUTH AND EAST EDGES OF THE PROPERTY. THE ASPHALT CURB HAS A CURB CUT LOCATED AT THE NORTHWEST CORNER OF THE EXISTING PARKING LOT.

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". PROPOSED CONDITIONS HAS THREE DRAINAGE BASINS, BASIN "A", BASIN "B", AND BASIN "C". AS A WHOLE, THE PROPERTY'S RUNOFF VOLUME AND PEAK DISCHARGE VALUES INCREASED. THE RUNOFF VOLUME INCREASED FROM 0.103 ACRE-FEET TO 0.245 ACRE-FEET, AS A WHOLE. THE PEAK DISCHARGE INCREASED FROM 3.48 CUBIC FEET PER SECOND TO 5.61 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 AREA. 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 * IMPERVIOUS AREA)= 713 CUBIC FEET. THE WATER HARVEST 1 VOLUME = 740 CUBIC FEET. THEREFORE, WATER HARVEST POND 1 MANAGES THE FIRST FLUSH FOR BASIN "B". THE VOLUME OF THE FIRST FLUSH FOR BASIN "C" (0.44-0.1 INCHES * IMPERVIOUS AREA)= 122 CUBIC FEET. THE WATER HARVEST 1 VOLUME = 261 CUBIC FEET. THEREFORE, WATER HARVEST POND 2 MANAGES THE FIRST FLUSH FOR BASIN "C"(SEE CALCULATIONS BELOW). ALL POSSIBLE IMPERVIOUS AREAS WILL BE DISCHARGED THROUGH THE PROPOSED WATER HARVEST AREA.

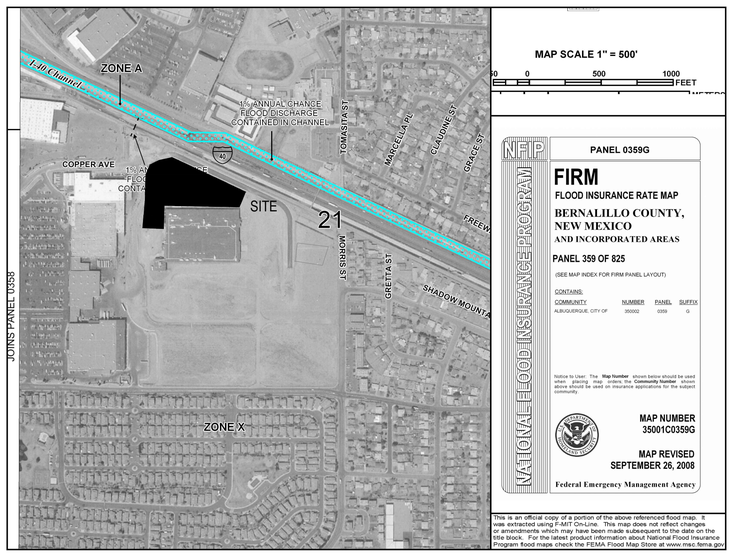
GENERAL NOTES:

1. 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 CONTROL DEVICES 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.
7. 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. APPROX. HALF OF SUBJECT PROPERTY IS LOCATED WITHIN ZONE X (SOUTH EASTERN ⅔ OF 4TH STREET FRONTAGE). THE REMAINING WESTERN AND NORTHERN PORTION OF THE PROPERTY IS LOCATED IN ZONE X (500 YEAR) DESIGNATING AREAS DETERMINED TO BE OUTSIDE THE 100-YEAR FLOOD PLANE ACCORDING TO THE FLOOD INSURANCE RATE MAP, ALBUQUERQUE, NEW MEXICO AND UNINCORPORATED AREAS PER MAP NO 35001C 0332G.
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 THE CITY.
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.

SPECIAL ORDER 19

DRAINAGE FACILITIES WITHIN THE CITY RIGHT-OF-WAY NOTICE TO CONTRACTOR

1) AN EXCAVATION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
2) ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HERON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #7 AMENDMENT 1.
3) TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL 260-1990, FOR LOCATION OF EXISTING UTILITIES.
4) PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5) BACK FILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
6) MAINTENANCE OF THE FACILITY SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.
7) WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24 – HOUR BASIS.



MAP SCALE 1" = 500'

50 0 500 1000 FEET

NFIP

PANEL 0359G

FIRM

FLOOD INSURANCE RATE MAP

BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AREAS

PANEL 359 OF 825

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALBUQUERQUE, CITY OF	350002	0359	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

NATIONAL FLOOD INSURANCE PROGRAM

MAP NUMBER 35001C0359G

MAP REVISED SEPTEMBER 26, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

A1 FLOOD ZONE MAP

FLOOD ZONE MAP: 35001C0359G

WATER HARVEST VOLUMES

WATER HARVEST AREA 1 proposed

Pond Rating Table				
Side Slope		4:1		
Depth (ft)	Area (sq ft)	(ac)	Volume (ac-ft)	Cum Volume (ac-ft)
5461	476	0.011	0.000	0.000
5462	972	0.022	0.017	0.017

WATER HARVEST AREA 2 proposed

Pond Rating Table				
Side Slope		4:1		
Depth (ft)	Area (sq ft)	(ac)	Volume (ac-ft)	Cum Volume (ac-ft)
5464	127	0.003	0.000	0.000
5465	378	0.009	0.006	0.006

DRAINAGE DATA

Precipitation Zone 3 - 10-year Storm P(360) = 1.59 in P(1440) = 1.98 in

Basin	Basin Area (Ac)	Land Treatment Factors A (Acres)	B	C	D	Ew (in)	V(10-6) (af)	V(10-24) (af)	Q(10) (cfs)
Existing Conditions									
A	1.34	0.00	1.34	0.00	0.00	0.36	0.040	0.040	1.59
Total	**1.34**								**1.59**
Proposed Conditions									
A	0.30	0.00	0.13	0.00	0.17	1.01	0.025	0.030	0.73
B	0.73	0.00	0.15	0.00	0.58	1.27	0.077	0.093	2.14
C	0.31	0.00	0.18	0.00	0.13	0.84	0.022	0.025	0.65
Total	**1.34**								**3.53**

Precipitation Zone 3 - 100-year Storm P(360) = 2.43 in P(1440) = 2.93 in

Basin	Basin Area (Ac)	Land Treatment Factors A (Acres)	B	C	D	Ew (in)	V(100-6) (af)	V(100-24) (af)	Q(100) (cfs)
Existing Conditions									
A	1.34	0.00	1.34	0.00	0.00	0.92	0.103	0.103	3.48
Total	**1.34**								**3.48**
Proposed Conditions									
A	0.30	0.00	0.13	0.00	0.17	1.74	0.043	0.050	1.19
B	0.73	0.00	0.15	0.00	0.58	2.06	0.126	0.150	3.30
C	0.31	0.00	0.18	0.00	0.13	1.52	0.039	0.045	1.12
Total	**1.34**								**5.61**

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

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

Designed JMJ | Job # 16-026
Drawn RA | File C-100
Checked VAM | Date 10-05-16

KERWYN A. MILLER NEW MEXICO 14507 REGISTERED PROFESSIONAL ENGINEER
Engineers Stamp

Date	Revision Description

BERNALILLO COUNTY

DAVITA ALBUQUERQUE II

CITY OF ALBUQUERQUE, NEW MEXICO

GRADING AND DRAINAGE
HYDROLOGY REPORT

Davita
Albuquerque II
at
10500 Copper Point Way NE
Albuquerque, New Mexico

SHEET NO.
C-100

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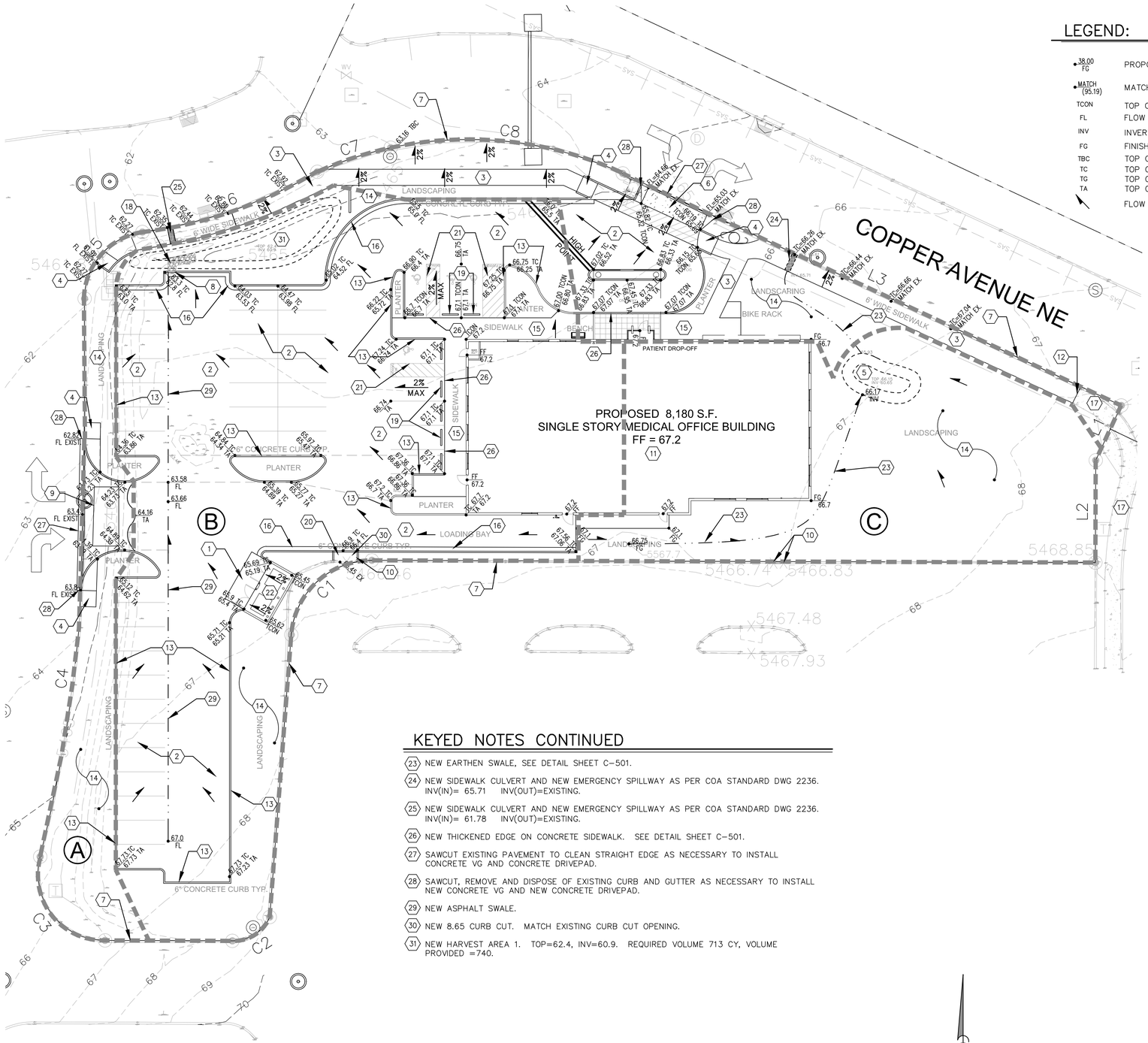


LEGEND:

38.00 FG	PROPOSED SPOT ELEVATIONS (FINISHED GRADE)		GRADE BREAK–HIGH POINT
MATCH (95.19)	MATCH EXISTING ELEVATIONS		SWALE
TCON	TOP OF CONCRETE	SD	STORM DRAIN LINE
FL	FLOW LINE, CURB		
INV	INVERT		
FG	FINISH GRADE	5895	PROPOSED MAJOR CONTOUR
TBC	TOP OF BASE COURSE		PROPOSED MINOR CONTOUR
TC	TOP OF CURB	5895	EXISTING MAJOR CONTOUR
TG	TOP OF GRATE		EXISTING MINOR CONTOUR
TA	TOP OF ASPHALT		
	FLOW ARROW		

GRADING AND DRAINAGE NARRITIVE

THE EXISTING PROPERTY FOR DAVITA ALBUQUERQUE II IS LOCATED AT 10500 COPPER POINTE WAY N.E. THE SITE IS ACCESSED FROM THE NORTH AND WEST SIDE FROM COPPER POINTE WAY N.E. THE SITE CONSISTS OF A VACANT LOT WITH NO DEVELOPMENT. THERE IS AN EXISTING ROADWAY (COPPER POINTE WAY) ON THE NORTH AND WEST SIDE. THERE IS AN EXISTING COMMERCIAL DEVELOPMENT TO THE EAST AND SOUTH SIDE. THE LAND IS GENERALLY FLAT AND SLOPES FROM THE SOUTHEAST TO THE NORTHWEST. THERE ARE EXISTING FLOWS COMING FROM THE DEVELOPMENT TO THE SOUTH. THESE FLOWS ARE ENTERING THE SITE THROUGH TWO EXISTING CURB CUTS ON THE SOUTH END OF THE SITE. THE PROPOSED BUILDING WILL BE CONSTRUCTED NEAR THE CENTER OF THE SITE WITH AN ASPHALT PARKING LOT TO THE NORTH AND WEST 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. THIS WATER HARVESTING AREAS WILL BE USED TO MANAGE THE 90TH PERCENTILE STORM EVENTS (REQD VOL= (0.33 IN. * 36000 SF)/12 = 990 CF. PROPOSED WATER HARVEST AREA VOL IS GREATER THAN 1100 CF > 990 CF, 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 IN THE NORTHEAST CORNER OF THE SITE AND THE EASTERN PORTION OF THE SITE.

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

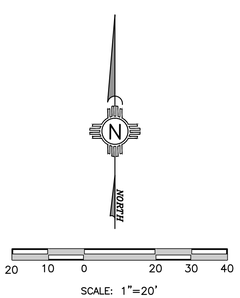
NOTE TO CONTRACTOR: ALL EXISTING UTILITIES THAT ARE BEING AFFECTED BY NEW IMPROVEMENTS ON THIS PROJECT SHALL ADJUST THEM TO GRADE. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES AS NECESSARY FOR ALL ADJUSTMENTS TO EXISTING UTILITIES.

KEYED NOTES:

1. NEW HEAVY DUTY CONCRETE PAVEMENT SECTION. SEE SECTION DETAILS ON ARCHITECTURAL PLANS AND IN THE GEOTECHNICAL REPORT.
2. NEW HOT MIX ASPHALT PAVEMENT SECTION. SEE SECTION DETAILS ON SHEET C–502. ALL PARKING STALLS SHALL BE LIGHT DUTY HOT MIX ASPHALT. ALL OTHER ASPHALT SHALL BE HEAVY DUTY HOT MIX ASPHALT.
3. NEW CONCRETE SIDEWALK. AS PER COA STANDARD DWG 2430 AND SHEET C–501. 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–501.
5. NEW WATER HARVEST AREA 2. TOP=66.15, INV=64.65. REQ'D. VOL.=122 CY PROVIDED VOL.=261 CF. 1 WITH FILTER FABRIC. SEE DETAIL ON SHEET C–501.
6. NEW CONCRETE DRIVEPAD. AS PER COA STANDARD DETAIL 2425, DRIVE PAD DOESN'T MEET ADA COMPLIANCE. ADA ACCESS IS LOCATED BEHIND DRIVE PAD AS SHOWN.
7. APPROXIMATE LOCATION OF PROPERTY LINE.
8. NEW 36" WIDE CURB CUT.
9. NEW CONCRETE VALLEY GUTTER. SEE COA STANDARD DWG 2420.
10. EXISTING CURB CUTS TO REMAIN.
11. NEW BUILDING. SEE ARCHITECTURAL PLANS FOR DETAILS.
12. SAWCUT EXISTING SIDEWALK TO NEAREST CONSTRUCTION JOINT AND MATCH WITH NEW CONCRETE SIDEWALK.
13. NEW CONCRETE HEADER CURB. SEE SHEET C–501 FOR DETAILS.
14. LANDSCAPE AREA. SEE ARCHITECTURAL PLANS FOR DETAILS.
15. NEW CONCRETE SIDEWALK/FLATWORK. SEE SHEET C–501.
16. NEW CURB AND GUTTER. MATCH EXISTING CURB AND GUTTER SECTION AND ELEVATIONS. SEE SHEET C–501 FOR DETAILS.
17. EXISTING SIDEWALK TO REMAIN
18. NEW LOOSE RIP RAP RUNDOWN. SEE DETAIL ON SHEET C–501.
19. NEW PARKING BUMBERS, SEE ARCHITECTURAL PLANS FOR DETAILS.
20. NEW CONCRETE CHANNEL. SEE SECTION DETAIL ON C–501. CONTRACTOR SHALL FIELD VERIFY ELEVATIONS TO ENSURE POSITIVE DRAINAGE AND LOCATION PRIOR TO CONSTRUCTION.
21. 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.
22. NEW TRASH ENCLOSURE, SEE ARCHITECTURAL PLANS FOR DETAILS.

KEYED NOTES CONTINUED

23. NEW EARTHEN SWALE, SEE DETAIL SHEET C–501.
24. NEW SIDEWALK CULVERT AND NEW EMERGENCY SPILLWAY AS PER COA STANDARD DWG 2236. INV(IN)= 65.71 INV(OUT)=EXISTING.
25. NEW SIDEWALK CULVERT AND NEW EMERGENCY SPILLWAY AS PER COA STANDARD DWG 2236. INV(IN)= 61.78 INV(OUT)=EXISTING.
26. NEW THICKENED EDGE ON CONCRETE SIDEWALK. SEE DETAIL SHEET C–501.
27. SAWCUT EXISTING PAVEMENT TO CLEAN STRAIGHT EDGE AS NECESSARY TO INSTALL CONCRETE VG AND CONCRETE DRIVEPAD.
28. SAWCUT, REMOVE AND DISPOSE OF EXISTING CURB AND GUTTER AS NECESSARY TO INSTALL NEW CONCRETE VG AND NEW CONCRETE DRIVEPAD.
29. NEW ASPHALT SWALE.
30. NEW 8.65 CURB CUT. MATCH EXISTING CURB CUT OPENING.
31. NEW HARVEST AREA 1. TOP=62.4, INV=60.9. REQUIRED VOLUME 713 CY, VOLUME PROVIDED =740.



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

A1 GRADING AND DRAINAGE PLAN
SCALE: 1" = 20'

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Designed	JMJ	Job #	16-026
Drawn	RA	File	C-101
Checked	VAM	Date	8-24-16

JERILYN A. MILLER
NEW MEXICO
14507
REGISTERED PROFESSIONAL ENGINEER
10/10/16
Engineers Stamp

NEW MEXICO
BERNALILLO COUNTY
CITY OF ALBUQUERQUE, NEW MEXICO

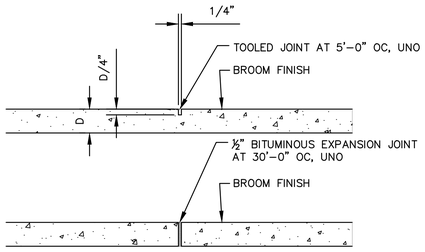
DAVITA ALBUQUERQUE II

GRADING AND DRAINAGE PLAN

Date	Revision Description

DaVita
Albuquerque II
at
10500 Copper Point Way NE
Albuquerque, New Mexico

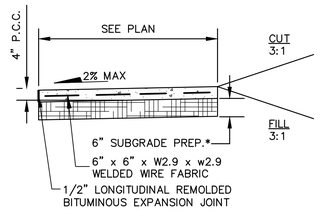
SHEET NO.
C-101



CONCRETE SIDEWALK JOINTS

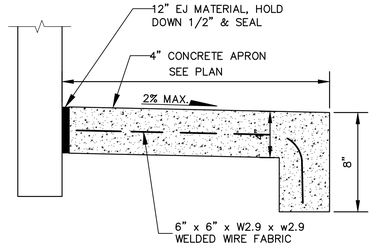
NO SCALE

NOTE: CONCRETE JOINT PATTERNS SHALL BE SUBMITTED BY CONTRACTOR FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.



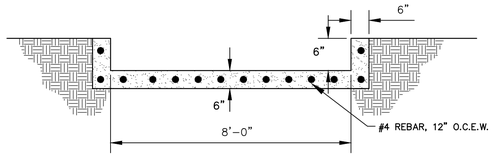
TYPICAL SIDEWALK SECTION

NO SCALE



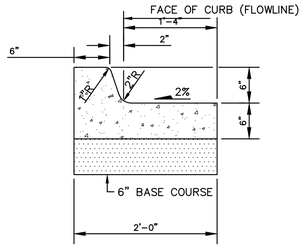
C3 CONCRETE THICKENED EDGE

SCALE: NOT TO SCALE



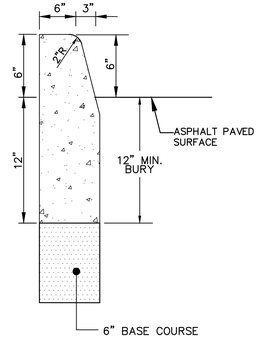
A2 CONCRETE CHANNEL DETAIL

SCALE: NOT TO SCALE



B2 TYPICAL CURB AND GUTTER

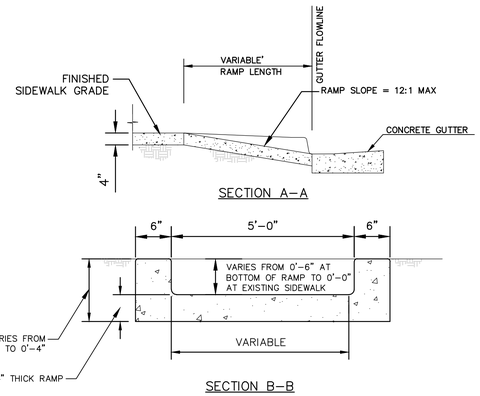
SCALE: NOT TO SCALE

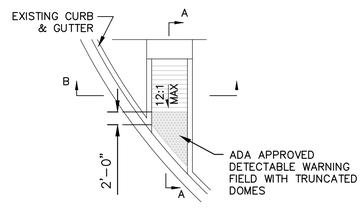


* 6" SUBGRADE PREP. SHALL BE CONSIDERED INCIDENTAL TO ITEM NO. 609200, HEADER CURB, AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THE WORK

D4 TYPICAL HEADER CURB DETAIL

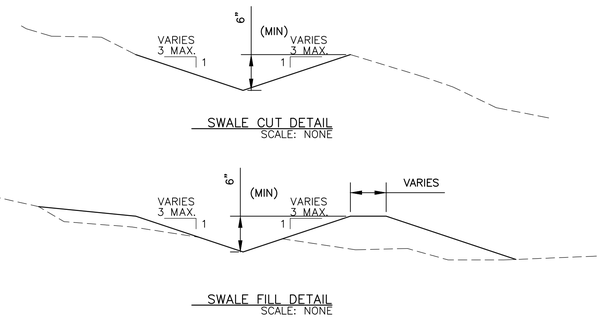
SCALE: NOT TO SCALE





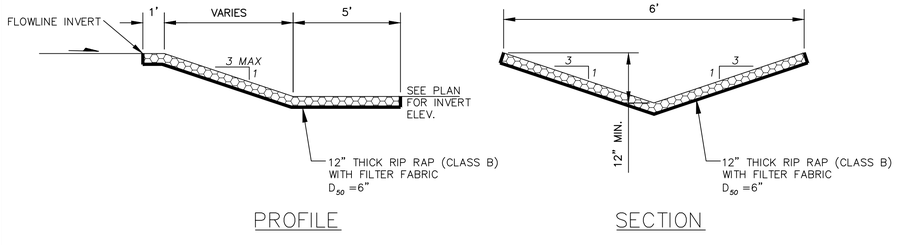
A2 HANDICAP RAMP DETAIL

SCALE: NOT TO SCALE



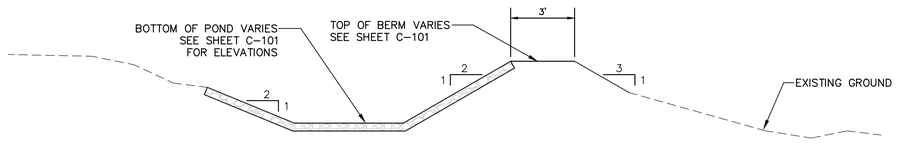
C2 EARTHENED SWALE DETAIL

SCALE: NOT TO SCALE



A1 RIP RAP RUNDOWN DETAIL TYPE "A"

SCALE: NOT TO SCALE



C2 TYPICAL WATER HARVEST AREA DETAIL

SCALE: NOT TO SCALE

MILLER ENGINEERING CONSULTANTS
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3500 COMANCHE, NE
BUILDING F
ALBUQUERQUE, NM 87107
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Designed	JMJ	Job #	16-022
Drawn	RA	File	C-501
Checked	VAM	Date	10-10-16

VERLYN A. MILLER NEW MEXICO 14507 REGISTERED PROFESSIONAL ENGINEER 10/10/16

Engineers Stamp

NEW MEXICO

DAVITA ALBUQUERQUE II

CITY OF ALBUQUERQUE, NEW MEXICO

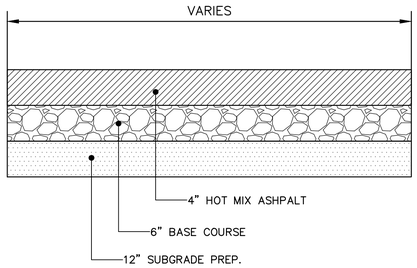
BERNALILLO COUNTY

MISCELLANEOUS DETAILS

Date	Revision Description

DaVita Albuquerque II
at
10600 Copper Point Way NE
Albuquerque, New Mexico

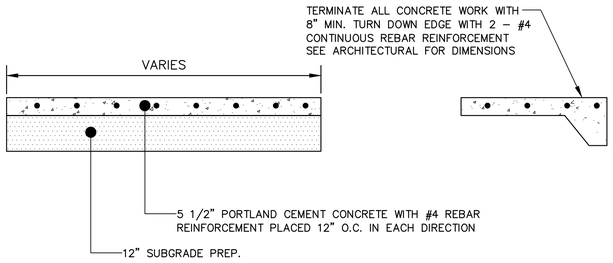
SHEET NO.
C-501



A3 HEAVY DUTY HOT MIX ASPHALT PAVING SECTION

SCALE: NOT TO SCALE

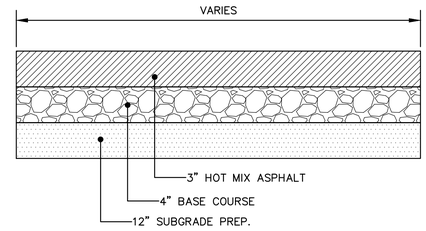
NOTE: FOR MINIMUM REQUIREMENTS
REFER TO THE GEOTECHNICAL REPORT PREPARED BY TERRACON CONSULTANTS, L.L.C., PROJECT NO. 66105046, DATED SEPTEMBER 22, 2010.



B3 TYPICAL HEAVY DUTY CONCRETE PAVING SECTION

SCALE: NOT TO SCALE

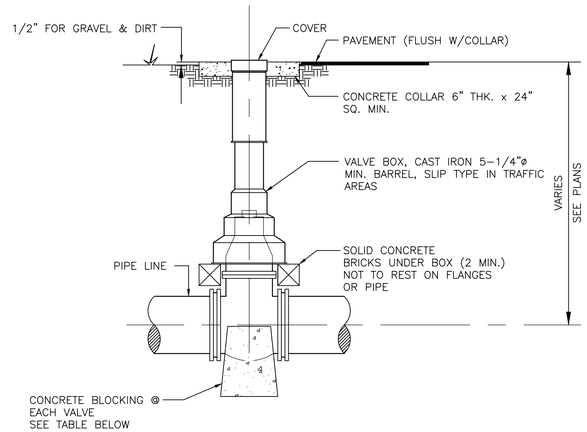
NOTE: FOR MINIMUM REQUIREMENTS
REFER TO THE GEOTECHNICAL REPORT PREPARED BY TERRACON CONSULTANTS, L.L.C., PROJECT NO. 66105046, DATED SEPTEMBER 22, 2010.



C3 LIGHT DUTY HOT MIX ASPHALT PAVING SECTION

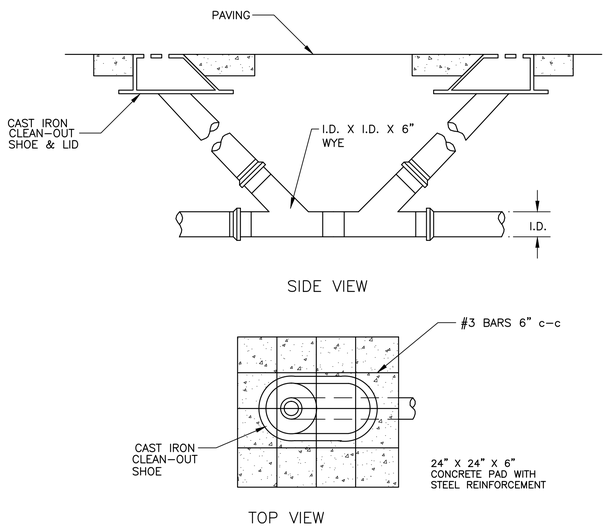
SCALE: NOT TO SCALE

REFERENCE GEOTECHNICAL REPORT PREPARED BY:
EARTHWORKS ENGINEERING GROUP
PROJECT NO.: A16-538
DATED: JULY 26, 2016



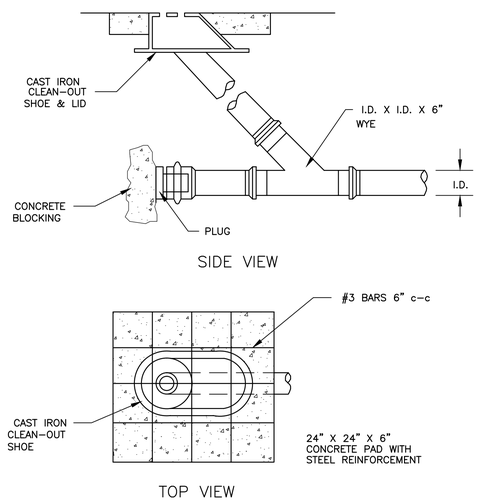
C3 TYPICAL VALVE DETAIL

SCALE: NOT TO SCALE



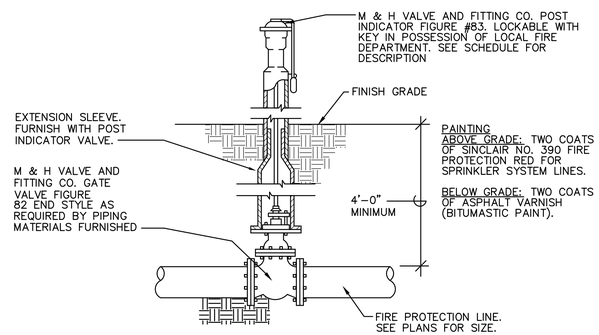
A2 TYPICAL SEWER DOUBLE CLEAN OUT DETAIL

SCALE: NOT TO SCALE



B2 TYPICAL SEWER SINGLE CLEAN OUT DETAIL

SCALE: NOT TO SCALE



C3 POST INDICATOR VALVE DETAIL

SCALE: NOT TO SCALE

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Designed	JMJ	Job #	16-022
Drawn	RA	File	C-502
Checked	VAM	Date	10-10-16

Engineers Stamp

VERLYN A. MILLER, JR. NEW MEXICO 14507 REGISTERED PROFESSIONAL ENGINEER

NEW MEXICO

DAVITA ALBUQUERQUE II

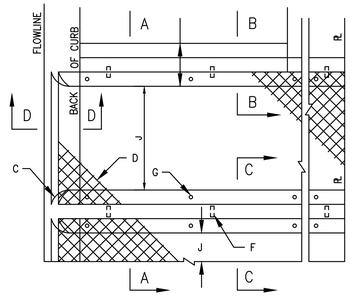
CITY OF ALBUQUERQUE, NEW MEXICO BERNALILLO COUNTY

MISCELLANEOUS DETAILS

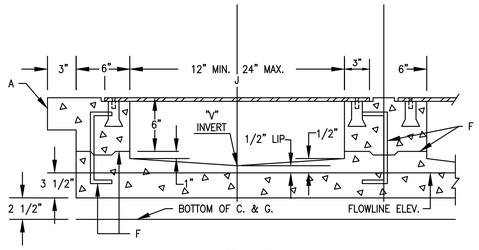
Date	Revision Description

DaVita Albuquerque II at 10500 Copper Point Way NE Albuquerque, New Mexico

SHEET NO.
C-502

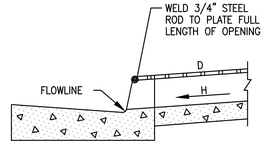


PLAN
SINGLE AND OR MULTIPLE CULVERT

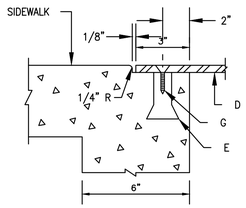


SECTION A–A

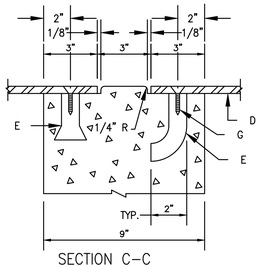
B. EDGE OF SIDEWALK OR SETBACK (VARIABLE).
C. 3" RADIUS (TYPICAL).
D. 3/8" CHECKERED STEEL PLATE (PAINT PER NOTE 7, ABOVE).
E. FOR SECURING PLATE USE 1" X 5" S.S. ROD ANCHOR, "RED HEAD MULTI-SET II SRM-38 ANCHOR" OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS AT MAX. 24" O.C., A MINIMUM OF 2 PER SIDE AND ONE WITHIN 6" OF EACH END.
F. CONSTRUCTION JOINT IS OPTIONAL. IF USED, SPACE DOWELS AT 18" O.C. MAX., 1 1/2" MINIMUM FROM FACE OF CONCRETE.
G. 3/8" – 16 X 1 1/4" COUNTERSUNK, F.H., STAINLESS STEEL, MACHINE SCREW.
H. SLOPE 1/4" PER FT. MIN.
J. DRAIN WIDTH PER PLAN (12" MIN., 24" MAX.).



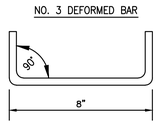
SECTION D–D



SECTION B–B



SECTION C–C



DOWEL DETAIL

GENERAL NOTES:

1. PLACING OF DRAIN THRU EXIST. SIDEWALK AND CURB & GUTTER REQUIRES THAT ENTIRE SIDEWALK AND C & G STONES BE REMOVED AND REPLACED AS DETAILED HEREIN.
2. BOTTOM SLAB OF CULVERT SHALL BE POURED MONOLITHICALLY WITH NEW GUTTER.
3. THE INVERT SHALL BE TROWELED TO PRODUCE A HARD POLISHED SURFACE OF MAX. DENSITY AND SMOOTHNESS. INVERT SHALL BE V-SHAPED TO WITHIN 3" OF OUTLET, THEN WARPED TO PARALLEL FLOWLINE AT OUTLET, UNLESS OTHERWISE SHOWN.
4. ALL EXPOSED CONC. SURFACE SHALL MATCH GRADE, COLOR, FINISH AND SCORING OF ADJACENT CURB AND SIDEWALK.
5. SIDEWALK REPLACED DURING CONSTRUCTION SHALL BE POURED MONOLITHICALLY WITH CULVERT WALLS.
6. IF ROD ANCHORS ARE USED, DRILL & TAP FOR F.H. MACHINE SCREW. ATTACH ANCHORS TO PLATE AND SECURE PLATE IN PLACE PRIOR TO POURING OF WALLS.
7. LENGTH OF EACH PLATE SHALL BE SUCH THAT THE WEIGHT WILL NOT EXCEED 300 LBS. AND SHALL BE STRESS RELIEVED AFTER FABRICATION. CLEAN SURFACE OF PLATE AND FRAMING MEMBERS AND PAINT W/ ONE SHOP COAT RED OXIDE AND TWO FINISH COATS ALUMINUM PAINT (AASHTO M 69).
8. THE CITY WILL NOT ASSUME RESPONSIBILITY FOR MAINTENANCE OF ANY SIDEWALK CULVERT INSTALLED BY OR FOR PRIVATE PROPERTY OWNERS.

C2 SIDEWALK CULVERT DETAIL

SCALE: NOT TO SCALE

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WWW.MECNM.COM

Designed	JMJ	Job #	16-022
Drawn	RA	File	C-503
Checked	VAM	Date	10-10-16

Engineers Stamp

Date	Revision Description

BERNALILLO COUNTY
NEW MEXICO

DAVITA ALBUQUERQUE II

CITY OF ALBUQUERQUE, NEW MEXICO

MISCELLANEOUS DETAILS

DaVita
Albuquerque II
at
10500 Copper Point Way NE
Albuquerque, New Mexico

SHEET NO.
C-503

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