CITY OF ALBUQUERQUE

February 6, 2018

J. Graeme Means, P.E.
High Mesa Consulting Group
6010 B Midway Park Blvd NE
Albuquerque, NM 87109

RE: **Mark 3S Holly Development**
9300 Holly NE
Grading and Drainage Plan
Engineer's Stamp Date 1/30/18 (File: C20D062)

Dear Mr. Means:

Based on the information provided in your submittal received on 1/31/18, this plan cannot be approved until the following are corrected:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Prior to Grading Permit:

1. Provide a subbasin delineation map showing the area draining to each first flush pond. Quantify impervious v. pervious area.
2. Each pond needs to be sized for the impervious area draining to it.
3. For redevelopment, the first flush requirement is calculated as: Volume = 0.26" x Rebuilt Impervious Area. The rebuilt impervious area is the impervious area for the new school expansion, plus the impervious area of repaved parking lot/play area at the existing school.
4. The storm drain connection in the Public ROW needs to be 18" min. RCP class 3. Also add a Public/Private divide line at the new private manhole.
5. Provide a detail for the new retaining wall adjacent to Paseo del Norte ROW. Demonstrate that the adjacent ROW is not damaged or constrained in its use by the new wall.

Prior to Building Permit:

6. A Private Facility Drainage Covenant is required for the stormwater quality ponds. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee ($25, payable to City of Albuquerque) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants.
7. Correct the depth of gravel under the perforated pipe (1' vs 1").

CITY OF ALBUQUERQUE

Prior to Certificate of Occupancy:

8. The Private Facility Drainage Covenant must be recorded with Bernalillo County and a copy included with the drainage certification.
9. Either a recorded SIA with financial guarantee or City acceptance and close-out of the public Work Order is required.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

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

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Mark 3S Holly Development Building Permit #: _____ City Drainage #: C20/D062

DRB#: 1005237 EPC#: 17 EPC-40033, 17 EPC-40034 Work Order#: _____

Legal Description: Tract A-1, Mark 3S Holly Development

City Address: 9300 Holly Ave NE Albuquerque, NM 87122

Engineering Firm: High Mesa Consulting Group Contact: J. Graeme Means #13676

Address: 6010 - B Midway Park Blvd. NE, Albuquerque NM 87109

Phone#: (505) 345-4250 Fax#: (505) 345-4254 E-mail: gmeans@highmesacg.com

Owner: See Architect Contact: _____

Address: _____

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

Architect: Benjamin Gardner Contact: Benjamin Gardner

Address: PO Box 40071 Albuquerque NM 87196

Phone#: (505) 720-6817 Fax#: _____ E-mail: benjaming@dpsdesign.org

Other Contact: _____ Contact: _____

Address: _____

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

Check all that Apply:

DEPARTMENT:

X 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-NIA)

_____ EROSION & SEDIMENT CONTROL PLAN (ESC)

_____ OTHER (SPECIFY) _____

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

X OTHER (SPECIFY) Rough Grading

IS THIS A RESUBMITTAL?: _____ Yes X No

DATE SUBMITTED: 01/31/2018 By: Ryan Curley

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

DRAINAGE PLAN

I. EXECUTIVE SUMMARY AND INTRODUCTION

THE PROPOSED MARK 3S HOLLY EXPANSION DEVELOPMENT IS LOCATED WITHIN THE LA CUEVA SECTOR PLAN AREA OF NORTH ALBUQUERQUE ACRES. THE EXPANSION INCORPORATES ADDITIONAL PROPERTY WEST OF THE EXISTING DEVELOPMENT TO EXPAND THE EXISTING SCHOOL CAMPUS. THE SITE DEVELOPMENT PLANS FOR THE PROPOSED EXPANSION WERE APPROVED THROUGH EPC AND DRB AS AN AMENDMENT TO A PREVIOUSLY APPROVED PLAN. A CONCEPTUAL GRADING PLAN WAS INCLUDED IN THE EPC SET AND THIS SUBMITTAL IS CONSISTENT WITH THAT PLAN. MOST OF THE REQUIRED PUBLIC INFRASTRUCTURE IN HOLLY AVENUE NE HAS BEEN CONSTRUCTED BY PREVIOUS PROJECTS DESIGNED AND INSPECTED BY THIS ENGINEER (LOS VIGILS, VINEYARD COURT ESTATES, MARK 3S HOLLY IMPROVEMENTS). THE REMAINING PORTIONS REQUIRED FOR THIS PROJECT ARE THE PERMANENT HALF-WIDTH PAVING AND THE CONSTRUCTION OF TWO STORM INLETS. THE SITE DISCHARGES FREELY TO PUBLIC DRAINAGE IMPROVEMENTS IN HOLLY THAT WERE DESIGNED AND SIZED FOR THIS DISCHARGE. SITE RUNOFF WILL BE DIRECTED TO DEPRESSED WATER QUALITY AREAS PRIOR TO DISCHARGING TO HOLLY. CONCURENT WITH THE DRB SITE PLAN APPROVALS, A PLATTING ACTION WAS ALSO DONE TO SUPPORT THE LOT LINE ELIMINATIONS, NEW LOTS LINES AND VACATION OF 2 FEET OF HOLLY RIGHT-OF-WAY BEING INCORPORATED INTO THE SITE. THE PURPOSE OF THIS PLAN IS TO OBTAIN BUILDING PERMIT APPROVAL.

II. PROJECT DESCRIPTION:

AS SHOWN BY VICINITY MAP C-20 LOCATED HEREON, THE SITE IS LOCATED IN THE NORTH ALBUQUERQUE ACRES SECTION OF ALBUQUERQUE, ON HOLLY AVE NE BETWEEN VENTURA ST. N.E. AND HOLBROOK STREET N.E. THE EXISTING LEGAL DESCRIPTION IS TRACT A-1 MARK 3S HOLLY DEVELOPMENT. THE SITE IS ZONED SU-2/MIXED USE AND THE PROPOSED DEVELOPMENT IS CONSISTENT WITH THE ZONING AND THE APPROVED SITE DEVELOPMENT PLANS.

AS SHOWN BY PANEL 141 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS, BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AREAS, DATED SEPTEMBER 26, 2008, THE SITE DOES NOT LIE WITHIN THE VICINITY OF ANY DESIGNATED FLOOD HAZARD ZONES.

III. BACKGROUND DOCUMENTS

THE FOLLOWING IS A LIST OF DOCUMENTS RELATED TO THE SITE AND SURROUNDING AREA. THIS LIST MAY NOT BE INCLUSIVE, HOWEVER, REPRESENTS A SUMMARY OF RELEVANT PLANS AND DOCUMENTS WHICH ARE KNOWN TO THE ENGINEER AT THE TIME OF PLAN PREPARATION.

A. THE "NORTH AND SOUTH DOMINGO BACA ARROYO AND PASEO DEL NORTE CORRIDOR DRAINAGE MANAGEMENT PLAN" PREPARED FOR AMAFCA BY RESOURCE TECHNOLOGY, INC. (RTI) DATED DECEMBER, 1991. THIS PLAN HAS BEEN ADOPTED BY AMAFCA AS A GUIDELINE FOR DRAINAGE MANAGEMENT WITHIN THIS AREA WHICH INCLUDES THE NORTH DOMINGO BACA ARROYO (NDBA). AMAFCA RESOLUTION 1992-3 DATED JANUARY 03, 1992 FORMALLY ADOPTED THIS PLAN WHICH IDENTIFIES THE EXTENSION OF PERMANENT DRAINAGE IMPROVEMENTS WITHIN THE NDBA CORRIDOR, AND ESTABLISHED DEVELOPED DRAINAGE BASIN BOUNDARIES WITHIN THE PLAN AREAS. AS SHOWN BY THIS PLAN, THIS SITE IS IDENTIFIED TO DRAIN TO PUBLIC STORM DRAIN IMPROVEMENTS CONSTRUCTED WITHIN THE HOLLY RIGHT-OF-WAY.

B. REQUEST FOR LETTER OF MAP REVISION (LOMR) FOR THE NORTH DOMINGO BACA ARROYO CARMEL AVENUE STORM DRAIN EXTENSION PREPARED BY JMA DATED 12/08/2003 AND APPROVED BY FEMA 03/23/2004 (FEMA CASE NUMBER 04-06-671P). THIS LOMR SUPPORTS THE COMPLETED NORTH DOMINGO BACA ARROYO CARMEL AVENUE STORM DRAIN EXTENSION COST SHARE PROJECT BY AMAFCA. UPON FEMA APPROVAL, AND IT REMOVED THE ASSOCIATED FLOODPLAIN DESIGNATION FROM THE NDBA WEST OF A POINT MIDBLOCK BETWEEN HOLBROOK STREET AND EUBANK.

C. DRAINAGE REPORT FOR "LOS VIGILS SUBDIVISION" BY HIGH MESA CONSULTING GROUP FORMERLY KNOWN AS JEFF MORTENSEN & ASSOCIATES, INC, DATED 12/31/2002, HYDROLOGY FILE C20/D41. THIS PLAN THE CONSTRUCTION OF A 45 LOT RESIDENTIAL SUBDIVISION LOCATED TO THE NORTH OF THIS PROJECT ON THE NORTH SIDE OF HOLLY. THE LOS VIGILS PROJECT EXTENDED THE HOLLY STORM DRAIN ACROSS THE FRONTAGE OF THIS SITE AND DESIGNED THE REQUIRED INLETS ON THE SOUTH SIDE WHICH MUST NOW BE CONSTRUCTED. A BASIN MAP, STREET HYDRAULICS AND STORM DRAIN HYDRAULICS ANALYSIS WERE INCLUDED IN THIS SUBMITTAL TO ADDRESS THE EXTENSION OF HOLLY TO HOLBROOK ALL DEVELOPMENT ON HOLLY, INCLUDING THIS SITE.

D. GRADING PLAN FOR "DESERT RIDGE OFFICE PARK" BY JMA, HYDROLOGY FILE C20/D51. THIS PLAN WAS APPROVED FOR THE UPSTREAM SITE IMMEDIATELY TO THE EAST (PROJECT # 1003277).

E. DRAINAGE REPORT FOR "VINEYARD COURT ESTATES" BY HIGH MESA CONSULTING GROUP FORMERLY KNOWN AS JEFF MORTNESEN & ASSOCIATES, INC, DATED 08/21/2003. THIS PLAN WAS FOR THE CONSTRUCTION OF A 45 LOT RESIDENTIAL SUBDIVISION LOCATED TO THE NORTHEAST OF THIS PROJECT ON THE NORTH SIDE OF HOLLY. THE VINEYARD COURT ESTATES PROJECT EXTENDED THE HOLLY STORM DRAIN AND STREET IMPROVEMENTS ACROSS ITS FRONTAGE. A BASIN MAP, STREET HYDRAULICS AND STORM DRAIN HYDRAULICS ANALYSIS WERE INCLUDED IN THIS SUBMITTAL TO ADDRESS THE EXTENSION OF HOLLY TO HOLBROOK AND ALL DEVELOPMENT ON HOLLY, INCLUDING THIS SITE.

F. GRADING AND DRAINAGE PLANS FOR MARK 3S HOLLY DEVELOPMENT BY HIGH MESA CONSULTING GROUP FORMERLY KNOWN AS JEFF MORTENSEN & ASSOCIATES, INC DATED 05/11/2015. THIS PLAN FOLLOWED THE DRAINAGE OF CONCEPT OF FREE DISCHARGE TO THE PERMANENT PUBLIC HOLLY PAVING AND STORM DRAINAGE IMPROVEMENTS WHICH IS CONSISTENT WITH PREVIOUSLY APPROVED PLANS FOR NDBA DEVELOPMENT WHICH INCLUDES THIS SITE. THE DRAINAGE CONCPETS PRESENTED THEREIN WILL BE CONSISTENT WITH THOSE NOW PROPOSED.

THE PROPOSED CONSTRUCTION DRAINING DIRECTLY AND FREELY TO PERMANENT HOLLY AVENUE NE DRAINAGE IMPROVEMENTS AS PROPOSED AND DESCRIBED HEREIN IS IN ACCORDANCE WITH THE POLICIES AND REQUIREMENTS OF THE ABOVE LISTED DOCUMENTS, AND IS CONSISTENT WITH THE CONCEPTS PREVIOUSLY ESTABLISHED BY THE CITY AND AMAFCA FOR NDBA DEVELOPMENT.

IV. EXISTING CONDITIONS:

THE DEVELOPMENT TO BE EXPANDED IS CURRENTLY DEVELOPED AS A MONTESSORI SCHOOL WITH PAVED PARKING, UTILITY AND LANDSCAPING IMPROVEMENTS. THE ADJACENT LOT TO BE EXPANDED INTO WAS PREVIOUSLY DEVELOPED INTO A LANDSCAPING BUSINESS. EXISTING RUNOFF FOR BOTH SITES DRAIN TO HOLLY AVE NE TO EXISTING DOWNSTREAM PUBLIC STORM DRAIN FACILITIES THAT WERE CONSTRUCTED BY LOS VIGILS AND THE PREVIOUS MARK 3S HOLLY DEVELOPMENT (REF. C & H). HOLLY AVE NE TO THE NORTH IS A PUBLIC STREET WITH HALF-WIDTH (NORTH) PERMANENT PAVING IMPROVEMENTS. THE UPSTEAM SECTION OF HOLLY HAS PERMANENT FULL WIDTH IMPROVEMENTS. CONSTRUCTED BY VINEYARD COURT ESTATES, CPN 718781. PASEO DEL NORTE TO THE SOUTH IS A FULLY DEVELOPED PUBLIC STREET WITH A DRAINAGE DITCH, PUBLIC STORM DRAIN, AND PAVED ASPHALT TRAIL.

OFFSITE FLOWS DO NOT ENTER THE SITE FROM THE DEVELOPED SITE TO THE EAST OR FROM THE PUBLIC STREETS TO THE NORTH AND SOUTH WHICH EXHIBIT PARALLEL TOPOGRAPHY. THE UNDEVELOPED SITE TO THE WEST IS TOPOGRAPHICALLY LOWER AND INCAPABLE OF CONTRIBUTING OFFSITE FLOWS.

V. DEVELOPED CONDITIONS

THE PROPOSED IMPROVEMENTS CONSIST OF DEMOLITION AND REMOVAL OF EXISTING LANDSCAPING BUSINESS TO ALLOW FOR EXPANSION OF CURRENT MONTESSORI SCHOOL CAMPUS. THE EXPANSION WILL INCLUDE A NEW INFANT DAYCARE BUILDING WITH PAVED PARKING, UTILITY, AND LANDSCAPING IMPROVEMENTS. THE SITE WILL CONTINUE TO DISCHARGE FREELY INTO HOLLY AVE NE. PRIOR TO DISCHARGING OFF SITE, RUNOFF WILL BE DIRECTED TO LANDSCAPED AREAS DEPRESSED TO THE MAXIMUM EXTENT POSSIBLE TO RETAIN 670 CF OF THE 1020 CF REQUIRED FOR THE 80TH PERCENTILE FIRST FLUSH FOR WATER QUALITY AND ROOF DRAINAGE WILL BE PIPED TO A DIRECT STORM DRAIN CONNECTION BUT WILL FIRST BE ROUTED THROUGH A STORM WATER QUALITY MANHOLE TO TREAT FIRST FLUSH.

AS DEMONSTRATED BY THE STREET HYDRAULIC, STORM DRAIN AND INLET CALCULATIONS AND ANALYSIS CONTAINED WITHIN THE DRAINAGE REPORTS FOR LOS VIGILS AND VINEYARD COURT ESTATES, THE HOLLY STORM DRAIN AND STREET IS DESIGNED TO ACCEPT THE FREE DISCHARGE OF FULLY DEVELOPED RUNOFF FROM THE PROPERTIES FRONTING ON HOLLY, INCLUDING THIS SITE. ALL IMPROVEMENTS PROPOSED HEREIN ARE CONSISTENT WITH THE PREVIOUSLY APPROVED DEVELOPMENT PLANS FOR THIS SECTION OF HOLLY.

VI. GRADING PLAN

THE GRADING PLAN SHOWS: 1) EXISTING GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1 FT INTERVALS FROM THE HMCG TOPO SURVEY DATED 01/10/2017 & 05/16/2017, 2) PROPOSED GRADES INDICATED BY FINISHED FLOOR ELEVATIONS, SPOT ELEVATIONS, AND CONTOURS AT 1 FT INTERVALS, 3) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS, 4) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 5) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES.

VII. CALCULATIONS

THE CALCULATIONS, REPRODUCED FORM THE APPROVED CONCEPTUAL GRADING PLAN AND WHICH APPEAR HEREON, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS DEMONSTRATED BY THE LOMR AND APPROVED DRAINAGE REPORTS PREPARED BY THIS OFFICE TO SUPPORT THE CONSTRUCTED AMAFCA NDBA PROJECT AND FOR LOS VIGILS, VINEYARD COURT ESTATES, AND THE DESERT RIDGE OFFICE PARK PROJECT (SEE REFERENCES), THE PUBLIC STORM DRAIN IN HOLLY IS SIZED FOR FREE DISCHARGE OF FULLY DEVELOPED RUNOFF FROM THIS SITE.

IX. CONCLUSION

1) THE PROPOSED SITE IMPROVEMENTS AND DRAINAGE CONCEPT ARE CONSISTENT WITH THE DEVELOPMENT CRITERIA ESTABLISHED BY PREVIOUSLY APPROVED PLANS FOR NDBA DEVELOPMENT AND THIS SPECIFIC PROJECT. 2) DEVELOPED RUNOFF FROM THIS SITE WILL DRAIN FREELY TO PERMANENT PUBLIC HOLLY PAVING AND STORM DRAINAGE IMPROVEMENTS, WHICH WERE CONSTRUCTED FOR LOS VIGILS AND VINEYARD COURT ESTATES. 3) THERE ARE NO DPM DESIGN VARIANCES, DRAINAGE EASEMENTS OR DRAINAGE COVENANTS ANTICIPATED AT THIS TIME.

CALCULATIONS

I. SITE CHARACTERISTICS

A. PRECIPITATION ZONE = 3

B. $P_{6,100} = P_{360}$ = 2.60

C. TOTAL PROJECT AREA (A_T) = 108,525 SF = 2.49 AC

D. LAND TREATMENTS

1. EXISTING LAND TREATMENT

a. BASIN A — AREA (SF/AC)

Total Area	57,025 /	**1.31**	%
Treatment A Area			
Treatment B Area			
Treatment C Area	42,769 /	**0.98**	75
Treatment D Area	14,256 /	**0.33**	25

b. BASIN B — AREA (SF/AC)

Total Area	51,500 /	**1.18**	%
Treatment A Area			
Treatment B Area	5,150 /	**0.12**	10
Treatment C Area	5,150 /	**0.12**	10
Treatment D Area	41,200 /	**0.95**	80

2. DEVELOPED LAND TREATMENT

a. BASIN A — AREA (SF/AC)

Total Area	57,025 /	**1.31**	%
Treatment A Area			
Treatment B Area			
Treatment C Area	5,703 /	**0.13**	10
Treatment D Area	51,323 /	**1.18**	90

b. BASIN B — AREA (SF/AC)

Total Area	51,500 /	**1.18**	%
Treatment A Area			
Treatment B Area			
Treatment C Area	15,450 /	**0.35**	30
Treatment D Area	36,050 /	**0.83**	70

II. HYDROLOGY

A. EXISTING CONDITION

1. BASIN A

a. VOLUME

$E_W = (E_AA_A+E_BA_B+E_CA_C+E_DA_D)/A_T$

E_W = ((0.00*0.66) + (0.00*0.92) + (0.98*1.29) + (0.33*2.36))/1.31 = **1.56 IN**

$V_{100} = (E_W/12)A_T$ = (1.56/12)1.31 = 0.1703 AC-FT = **7,420 CF**

b. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$

$Q_P = Q_{100}$ = ((0.00*1.87) + (0.00*2.6) + (0.98*3.45) + (0.33*5.02)) = **5.0 CFS**

2. BASIN B

a. VOLUME

$E_W = (E_AA_A+E_BA_B+E_CA_C+E_DA_D)/A_T$

E_W = ((0.00*0.66) + (0.12*0.92) + (0.12*1.29) + (0.95*2.36))/1.18 = **2.11 IN**

$V_{100} = (E_W/12)A_T$ = (2.11/12)1.18 = 0.2075 AC-FT = **9,040 CF**

b. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$

$Q_P = Q_{100}$ = ((0.00*1.87) + (0.12*2.6) + (0.12*3.45) + (0.95*5.02)) = **5.5 CFS**

B. DEVELOPED CONDITION

1. BASIN A

a. VOLUME

$E_W = (E_AA_A+E_BA_B+E_CA_C+E_DA_D)/A_T$

E_W = ((0.00*0.66) + (0.00*0.92) + (0.13*1.29) + (1.18*2.36))/1.31 = **2.25 IN**

$V_{100} = (E_W/12)A_T$ = (2.25/12)1.31 = 0.2456 AC-FT = **10,700 CF**

b. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$

$Q_P = Q_{100}$ = ((0.00*1.87) + (0.00*2.6) + (0.13*3.45) + (1.18*5.02)) = **6.4 CFS**

2. BASIN B

a. VOLUME

$E_W = (E_AA_A+E_BA_B+E_CA_C+E_DA_D)/A_T$

E_W = ((0.00*0.66) + (0.00*0.92) + (0.35*1.29) + (0.83*2.36))/1.18 = **2.04 IN**

$V_{100} = (E_W/12)A_T$ = (2.04/12)1.18 = 0.2006 AC-FT = **8,740 CF**

b. PEAK DISCHARGE

$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$

$Q_P = Q_{100}$ = ((0.00*1.87) + (0.00*2.6) + (0.35*3.45) + (0.83*5.02)) = **5.4 CFS**

C. COMPARISON

1. BASIN A

a. VOLUME

ΔV_{100} = 10,700 - 7,420 = **3280.00 CF** **44.2%** (INCREASE)

b. PEAK DISCHARGE

ΔQ_{100} = 6.4 - 5.0 = **1.40 CFS** **28.0%** (INCREASE)

2. BASIN B

a. VOLUME

ΔV_{100} = 8,740 - 9,040 = **-300.00 CF** **-3.3%** (DECREASE)

b. PEAK DISCHARGE

ΔQ_{100} = 5.4 - 5.5 = **-0.10 CFS** **-1.8%** (DECREASE)

D. FIRST FLUSH CALCULATIONS

1. BASIN A RETENTION REQUIREMENT

a. VOLUME

$V_{RQ} = ((P_{FF}-I_{AD})/12)A_D$, A_D DOES NOT INCLUDE ROOF AREA SINCE IT WILL BE TREATED BY WATER QUALITY MANHOLE

V_{RQ} = ((0.26-0.10)/12)(40262.5) = **540 CF**

2. BASIN B RETENTION REQUIREMENT

$V_{RQ} = ((P_{FF}-I_{AD})/12)A_D$

V_{RQ} = ((0.26-0.10)/12)(36050.00) **480 CF**

3. **WATER QUALITY PONDING PROVIDED ONSITE** (BASED ON AVERAGE END AREA METHOD)

BASIN A V_{CAP} = **565 CF**

BASIN B V_{CAP} = **105 CF**

E. BASIN A RUNDOWN OVERFLOW CALCULATIONS

Q_{REQ} = 6.4CFS

$Q_{CAP} = C*L*H^{(3/2)}$

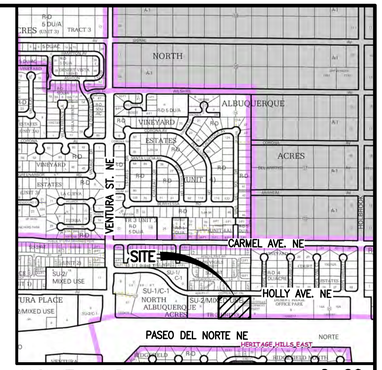
C=3.0 ,L =4 FT, H = 0.67 FT (8" CURB)

$Q_{CAP} = 3.0*4.0*0.67^{(3/2)}$

Q_{CAP} = 6.58 CFS > Q_{REQ} = 6.4 CFS

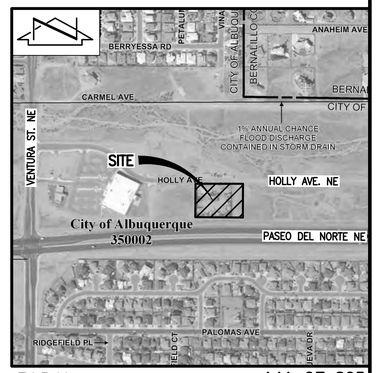
LEGEND

AC	ASPHALT CURB	FL	FLOWLINE
AL	AREA LIGHT	INV	INVERT
BBC	BRICK BUILDING COLUMN	MC	MOTORCYCLE SPACES
BCSW	BURIED CONCRETE SIDEWALK	TA	TOP OF ASPHALT PAVEMENT
BTM	BOTTOM	TC	TOP OF CURB
C&G	CURB AND GUTTER	TG	TOP OF GRATE
CF	LANDSCAPING CRUSHER FINES	+ 95.05	EXISTING SPOT ELEVATION
CM	POURED CONCRETE MOUND	89.00	PROPOSED SPOT ELEVATION
CMU	CONCRETE MASONRY UNIT WALL		EXISTING FLOWLINE
CND	ELECTRIC CONDUIT		PROPOSED FLOWLINE
CONC	CONCRETE	-5590-	EXISTING CONTOUR
CRW	CMU RETAINING WALL	92	PROPOSED CONTOUR
CSW	CONCRETE SIDEWALK		EXISTING DIRECTION OF FLOW
DYS	PAINTED DOUBLE YELLOW TRAFFIC STRIPE		PROPOSED DIRECTION OF FLOW
E/PM	ELECTRIC LINE BY PAINT MARK		RIGHT OF WAY LINE
EA	EDGE OF ASPHALT		PUBLIC EASEMENT LINE
EM	ELECTRIC METER		HIGH POINT / DIVIDE
EO	ELECTRIC OUTLET		RETAINING WALL
FH	FIRE HYDRANT		EXISTING STORM DRAIN MANHOLE
FL	FLOWLINE		EXISTING FIRE HYDRANT
G/PM	GAS LINE BY PAINT MARK		PROPOSED FIRE HYDRANT
GA	GATE		EXISTING SANITARY SEWER MAN HOLE
GRV	LANDSCAPING GRAVEL		SANITARY SEWER MAN HOLE
GTS	GATE STOP POST		EXISTING VALVE BOX
GW	GUY WIRE ANCHOR		PROPOSED VALVE BOX
GWAP	GUY WIRE ANCHOR POLE		EXISTING DOUBLE CLEANOUT
INV	PIPE INVERT		PROPOSED DOUBLE CLEANOUT
IVB	IRRIGATION VALVE BOX		EXISTING SINGLE CLEANOUT
KSW	KEYSTONE WALL		PROPOSED SINGLE CLEANOUT
LS	LANDSCAPING IMPROVEMENTS		EXISTING WATER SERVICE
LSD	LANDSCAPING DIVIDER		PROPOSED WATER SERVICE
MED	MEDIAN		EXISTING WATER LINE
MH	MANHOLE		PROPOSED WATER LINE
MLP	METAL LIGHT POLE		EXISTING SANITARY SEWER LINE
OHC(1)	OVERHEAD COMMUNICATION (# OF LINES)		PROPOSED SANITARY SEWER LINE
OHE(1)	OVERHEAD ELECTRIC (3 OF LINES)		EXISTING FIRE LINE
OHG(2)	OVERHEAD GUY WIRE (# OF LINES)		PROPOSED FIRE LINE
PG	PIPE GATE		EXISTING POST INDICATOR VALVE
PS	PAINTED PARKING STALL STRIPE		PROPOSED POST INDICATOR VALVE
PVC	POLYVINYL CHLORIDE PIPE		LOT LINE
RCP	REINFORCED CONCRETE PIPE		PROPOSED BASIN BOUNDARY
ROH	ROOF OVERHANG		PROPOSED CONCRETE
RR	LANDSCAPING RIVER ROCK		PROPOSED ASPHALT PAVING
RRT	LANDSCAPING RAILROAD TIES		
SAS	SANITARY SEWER		
SAS/PM	SANITARY SEWER BY PAINT MARK		
SB	PAINTED TRAFFIC STOP BAR		
SD/PM	STORM DRAIN BY PAINT MARK		
SDI	STORM DRAIN INLET		
SDMH	STORM DRAIN MANHOLE		
SDP	SERVICE DROP POLE		
SF	SILT FENCE (IN POOR CONDITION)		
SGN	OMU SIGN		
SLGT	SLIDING GATE		
SLP	SYNTHETIC LIGHT POLE		
SP	STEEL POLE		
STC	SEPTIC TANK COVER		
STS	STONE SIGN ON STUCCO WALL		
STW	STUCCO WALL		
SWS	PAINTED SOLID WHITE TRAFFIC STRIPE		
SYD	PAINTED SOLID YELLOW TRAFFIC STRIPE		
TA	TOP OF ASPHALT		
TC	TOP OF CURB		
TCO	TOP OF CONCRETE		
TG	TOP OF GRATE		
TS	TRAFFIC SIGN		
TW	TOP OF WALL		
TYP	TYPICAL		
UPT	POSSIBLE UNDERGROUND PROPANE TANK		
VG	CONCRETE VALLEY GUTTER		
W/PM	WATER LINE BY PAINT MARK		
WCR	CONCRETE WHEELCHAIR RAMP		
WF	OUTDOOR WATER FAUCET		
WLP	WOOD LIGHT POLE		
WMB	WATER METER BOX		
WPP	WOOD POWER POLE		
WVB	WATER VALVE BOX		
WWC	WWC		
XC	EXTRUDED CONCRETE CURB		
1.0'ø	TREE TRUNK DIAMETER		
	CONIFEROUS TREE		
	SMALL CONIFEROUS TREE		
	DECIDUOUS TREE		
	SMALL DECIDUOUS TREE		
	SHRUB		
	SMALL SHRUB		
	YUCCA		
	LANDSCAPING BOULDER		
*	PAINTED UTILITY LINE MARK		



VICINITY MAP — C-20

SCALE: 1" = 500'



F.I.R.M. — 141 OF 825

SCALE: 1" = 500'

LEGAL DESCRIPTION

TRACT A-1, HOLLY MARK3S DEVELOPMENT FILED 12/18/2017 (2017C-0146)

TEMPORARY BENCHMARK #1 (T.B.M.)

A #5 REBAR W/CAP STAMPED "HMCG CONTROL NMPS 11184" SET IN DIRT, NEAR THE NORTHWEST CORNER OF LOT 7 IN THE NORTHWEST PORTION OF THE SITE, NOT SHOWN.
ELEVATION = 5578.05 FEET (NAVD 88)

TEMPORARY BENCHMARK #2 (T.B.M.)

A MAG NAIL W/WASHER SET IN THE TOP OF A CONCRETE CURB, IN THE NORTHEASTERN PORTION OF THE SITE, AS SHOWN ON CC-101 AND CU-101.
ELEVATION = 5592.04 FEET (NAVD 88)

TEMPORARY BENCHMARK #3 (T.B.M.)

A MAG NAIL W/WASHER SET IN AN ASPHALT PATH, IN THE SOUTHERN PORTION OF THE SITE, NOT SHOWN.
ELEVATION = 5586.17 FEET (NAVD 88)

INDEX OF DRAWINGS

J. GRAEME MEANS NEW MEXICO 13676 REGISTERED PROFESSIONAL ENGINEER

01-30-2018

File Path: P:\DATA\2017\2017.014.4\DWG | Plot Date: 01-30-2018 | Plot Time: 09:43 am | File Name: 170144_C-100.DWG

HIGH MESA Consulting Group
Engineers, Surveyors & Subdivision Utility Consultants
6010-B Midway Park Blvd. NE • Albuquerque, New Mexico 87109
Phone: 505.345.4250 • Fax: 505.345.4254 • www.highmesacg.com

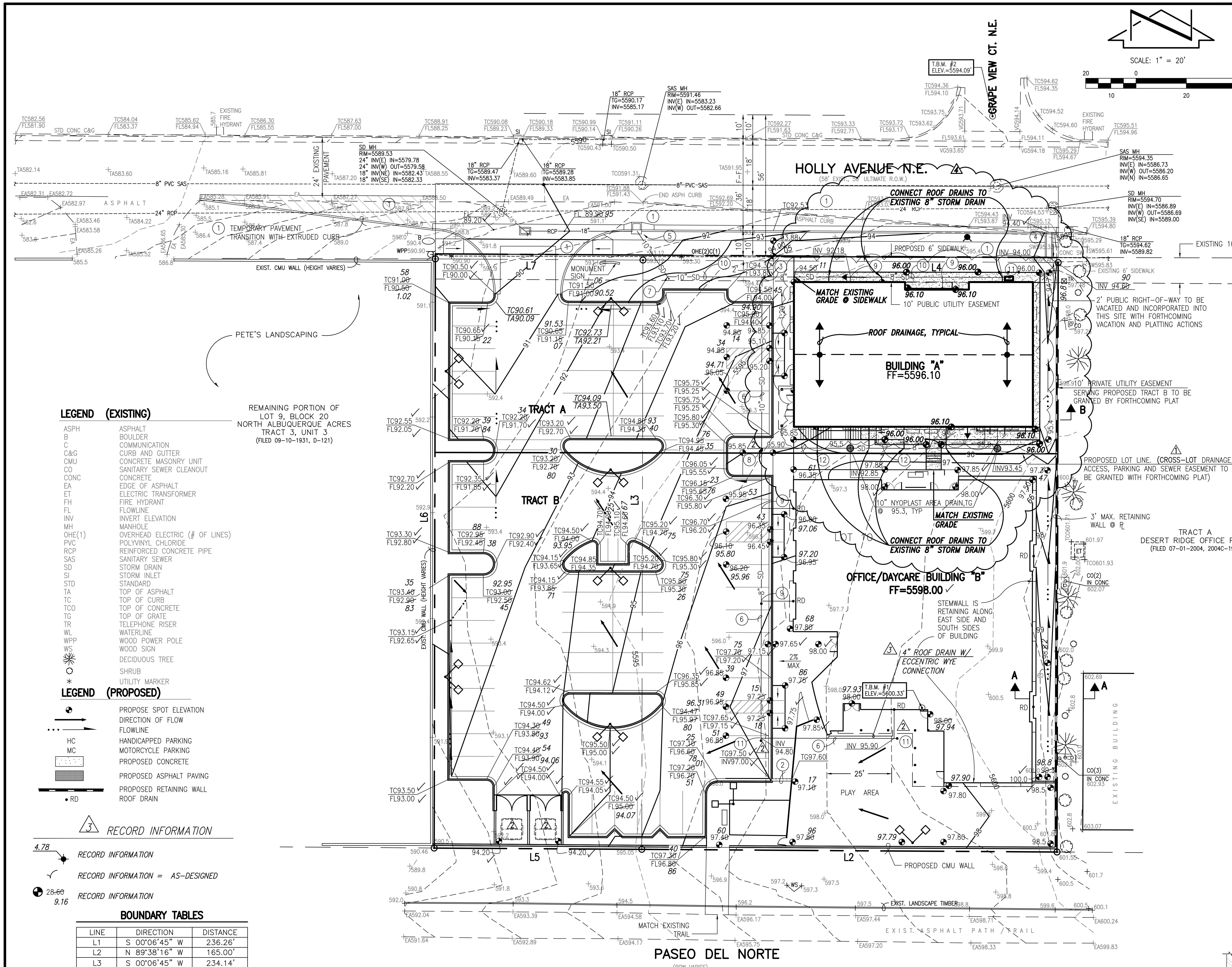
COVER SHEET

MARK 3S HOLLY DEVELOPMENT

DESIGNED BY R.J.C.
DRAWN BY S.C.C./J.Y.R.
APPROVED BY G.M.

NO.	DATE	BY	REVISIONS

JOB NO. 2017.014.4
DATE 01-2018
SHEET C-100 OF



LEGAL DESCRIPTION:

LOT 10 AND THE EAST HALF OF LOT 9, BLOCK 20, NORTH ALBUQUERQUE ACRES, TRACT 3, UNIT 3, ALBUQUERQUE, NEW MEXICO, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON SEPTEMBER 10, 1931, BOOK D, PAGE 121.

PROJECT BENCHMARK

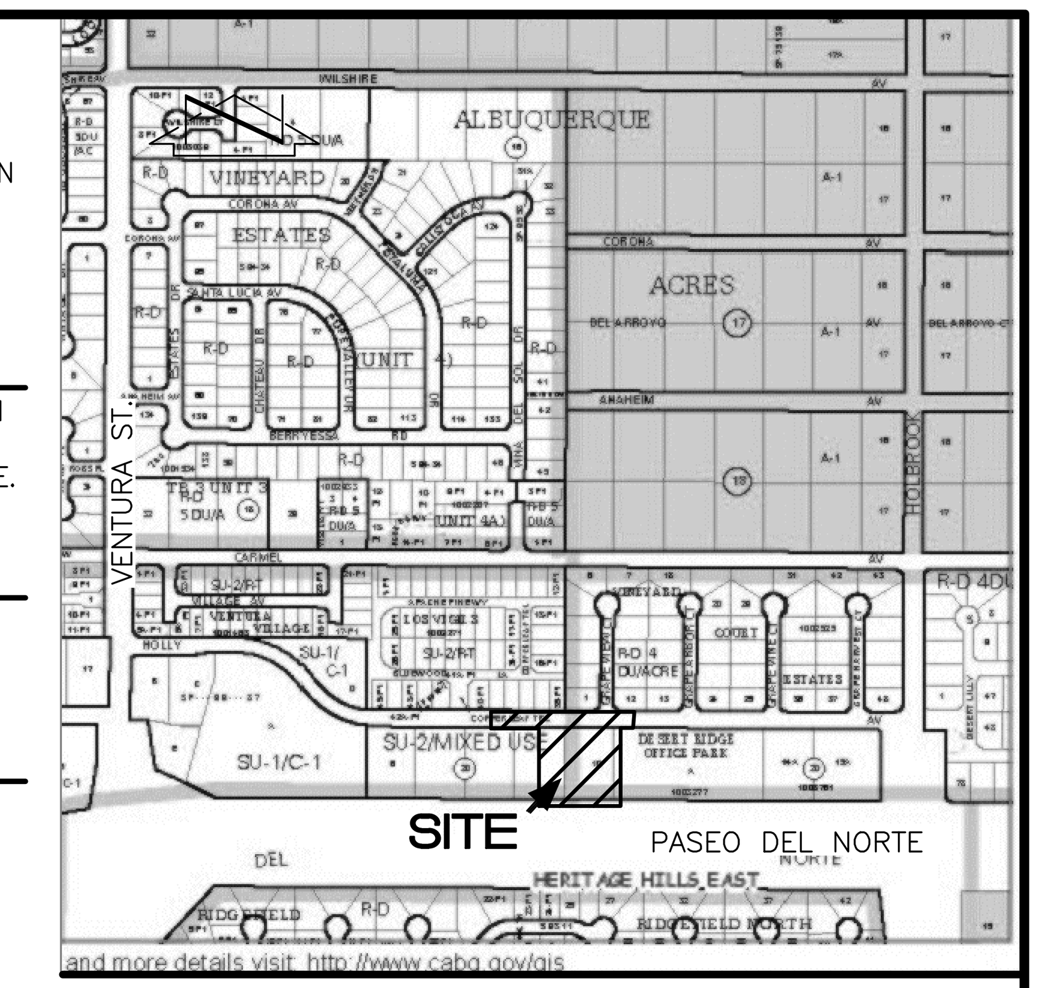
STANDARD ACS BRASS TABLET STAMPED, "1-B20", SET IN TOP OF A CONCRETE POST, AT THE NORTHEAST INTERSECTION OF BARSTOW STREET AND MODESTO AVENUE. ELEVATION = 5474.51 FEET (NGVD 1929)

T.B.M. #1

REBAR #5 WITH CAP STAMPED, "JMA CONTROL NMPS 11184", AS SHOWN ON THIS SHEET.
ELEVATION = 5600.33 FEET (NGVD 1929)

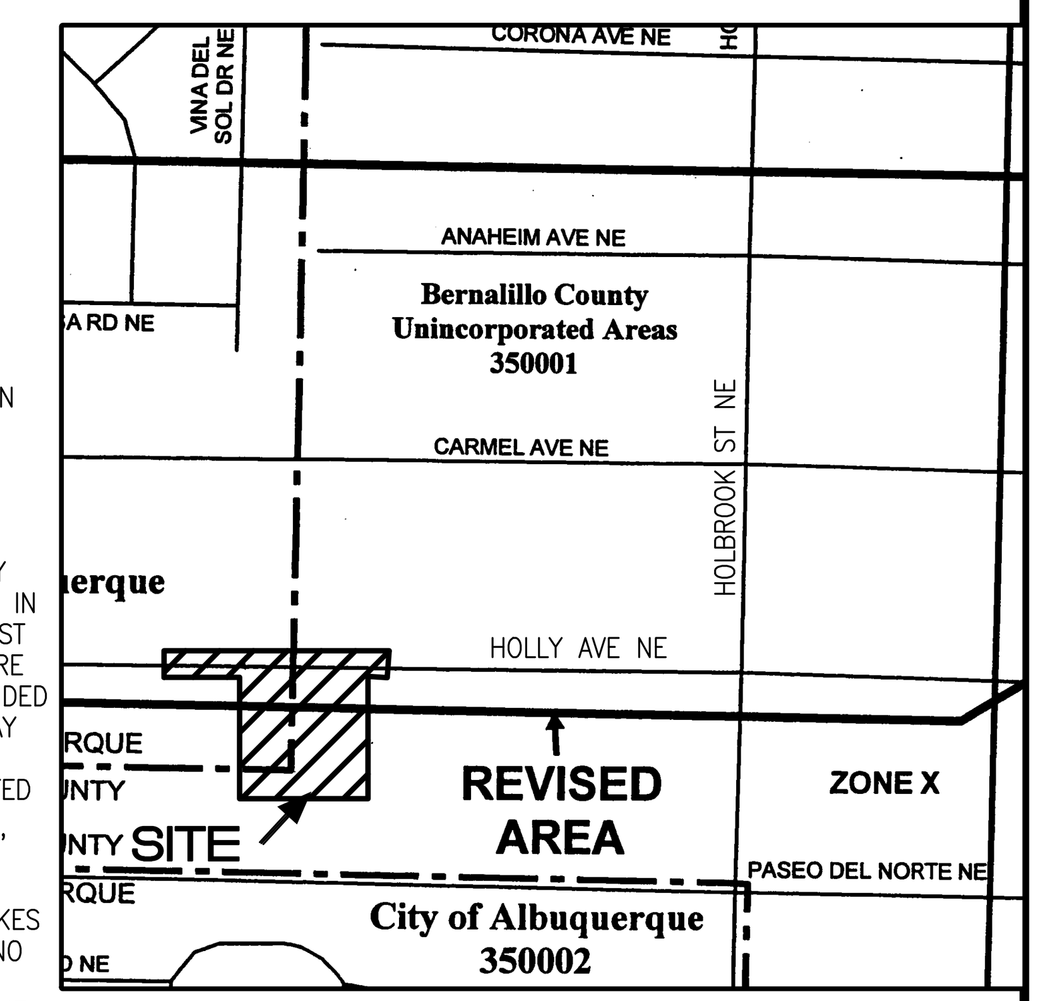
T.B.M. #2

ALUMINUM CAP STAMPED, "PLS #11184", AS SHOWN ON THIS SHEET.
ELEVATION = 5594.09 FEET (NGVD 1929)



VICINITY MAP C-20

SCALE: 1" = 750'



F.I.R.M. PANEL 142 OF 825

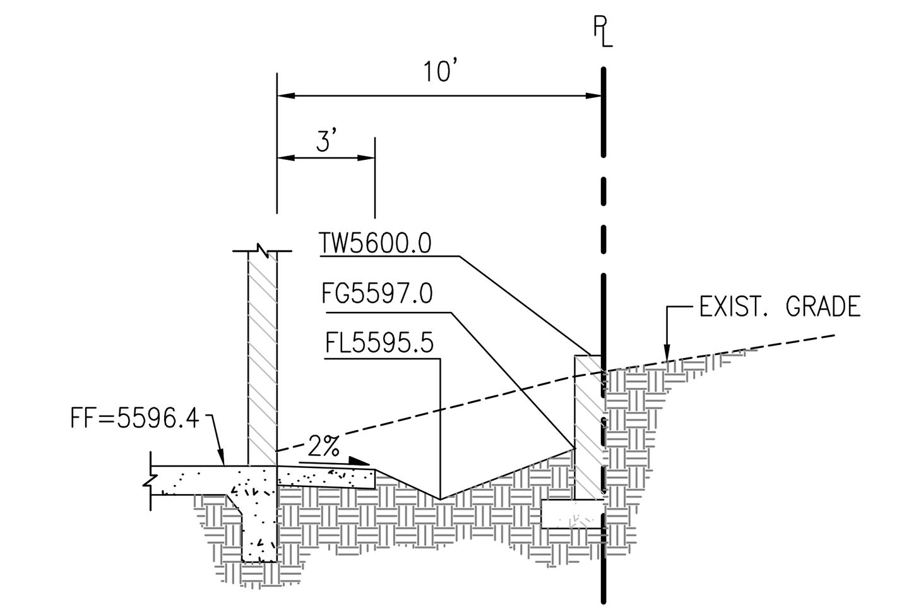
SCALE: 1" = 500' REVISED 3/23/2004

CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
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. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
5. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILTIES PIPELINES, AND UNDERGROUND UTILITY LINES.
IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
6. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S)SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.

EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
3. WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.



SECTION B-B

SCALE: 1" = 6'

LEGEND (EXISTING)

ASPH	ASPHALT
B	BOULDER
C	COMMUNICATION
C&G	CURB AND GUTTER
CMU	CONCRETE MASONRY UNIT
CO	SANITARY SEWER CLEANOUT
CONC	CONCRETE
EA	EDGE OF ASPHALT
ET	ELECTRIC TRANSFORMER
FH	FIRE HYDRANT
FL	FLOWLINE
INV	INVERT ELEVATION
MH	MANHOLE
OHE(1)	OVERHEAD ELECTRIC (# OF LINES)
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
SAS	SANITARY SEWER
SD	STORM DRAIN
SI	STORM INLET
STD	STANDARD
TA	TOP OF ASPHALT
TC	TOP OF CURB
TCO	TOP OF CONCRETE
TG	TOP OF GRATE
TR	TELEPHONE RISER
WL	WATERLINE
WPP	WOOD POWER POLE
WS	WOOD SIGN
	DECIDUOUS TREE
	SHRUB
*	UTILITY MARKER

LEGEND (PROPOSED)

	PROPOSE SPOT ELEVATION
	DIRECTION OF FLOW
	FLOWLINE
HC	HANDICAPPED PARKING
MC	MOTORCYCLE PARKING
	PROPOSED CONCRETE
	PROPOSED ASPHALT PAVING
	PROPOSED RETAINING WALL
• RD	ROOF DRAIN

3 RECORD INFORMATION

4.78	*RECORD INFORMATION*
√	*RECORD INFORMATION = AS-DESIGNED*
28.60 / 9.16	*RECORD INFORMATION*

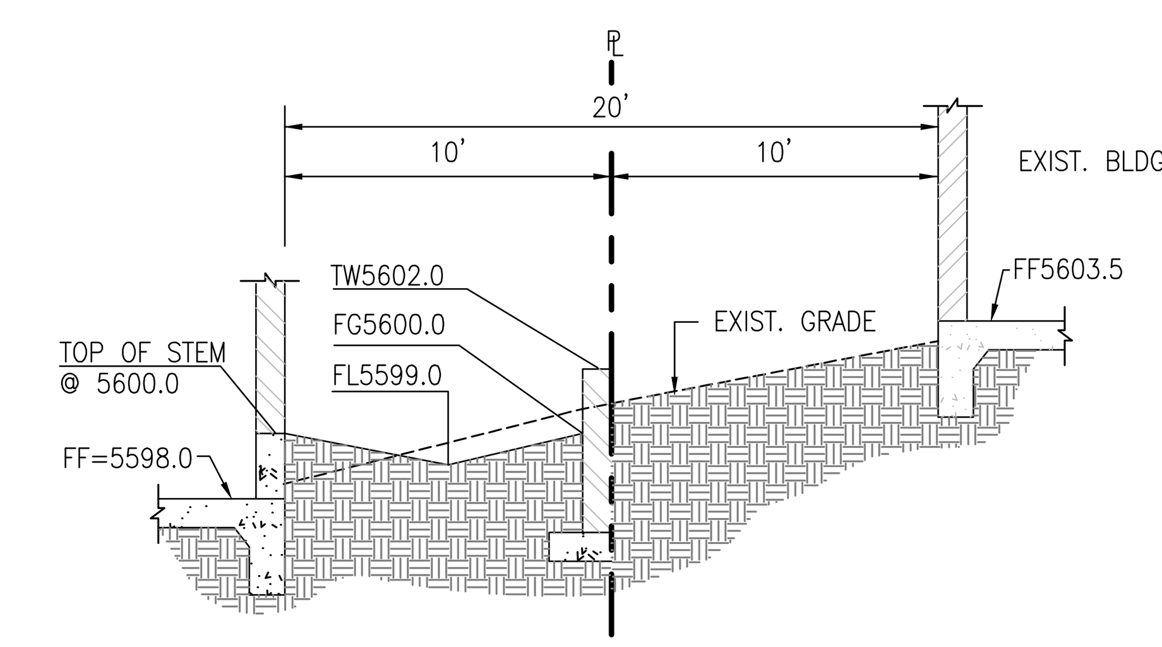
BOUNDARY TABLES

LINE	DIRECTION	DISTANCE
L1	S 00°06'45" W	236.26'
L2	N 89°38'16" W	165.00'
L3	S 00°06'45" W	234.14'
L4	S 89°39'42" E	165.00'
L5	N 89°38'16" W	82.50'
L6	N 00°06'45" E	236.16'
L7	S 89°39'42" E	82.50'

THIS IS NOT A BOUNDARY SURVEY; DATA IS SHOWN FOR ORIENTATION ONLY. THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON THE BOUNDARY SURVEY PREPARED BY JMA, NMPS NO. 11184, DATED 10/24/2006. TOPOGRAPHIC SURVEY INFORMATION IS BASED UPON A TOPOGRAPHIC SURVEY PREPARED BY JMA, ON 10/24/2006, NMPS NO.11184.

KEYED NOTES

1. HOLLY AVENUE N.E. IMPROVEMENTS TO BE CONSTRUCTED BY CITY WORK ORDER
2. ~~CONSTRUCT~~ 12" SIDEWALK CULVERT PER COA STD DWG 2236
3. ~~INSTALL~~ COMBINATION WYE/BEND W/ CLEANOUT TO GRADE INV 91.13
4. 24" SIDEWALK CULVERT BY CITY WORK ORDER
5. CONNECTION TO STORM INLET STUB. INV 86.75
6. ~~INSTALL~~ 8" HDPE (SMOOTH INTERIOR) STORM DRAIN @ S = 0.02 (2%) SIZE 8" OR 10" AS NOTED
7. ~~INSTALL~~ 8" HDPE WYE W/ CLEANOUT, INV 90.00
8. ~~INSTALL~~ 8" HDPE BEND/WYE W/ CLEANOUT TO GRADE, WITH 8"x10" SIZE INCREASE INV 92.50
9. ~~INSTALL~~ 8" WYE, CONNECT TO ROOF DRAIN
10. ~~INSTALL~~ HDPE (SMOOTH INTERIOR) STORM DRAIN @ S = 0.0300 (3%). SIZE 8" OR 10" AS NOTED.
11. ~~INSTALL~~ CLEANOUT TO GRADE
12. ~~INSTALL~~ 8" HDPE (SMOOTH INTERIOR) STORM DRAIN @ S = 0.0100 (1%)



SECTION A-A

SCALE: 1" = 6'

J. GRAEME MEANS NEW MEXICO 13676 REGISTERED PROFESSIONAL ENGINEER
10/31/06
02/05/07 10/05/07
03/28/07 5/11/2015

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS SURVEYORS (505) 345-4250
FAX: 505 345-4254 ESTABLISHED 1977

GRADING PLAN (FOR INFORMATION ONLY)

MARK 3S HOLLY DEVELOPMENT

DESIGNED BY G.M.
DRAWN BY J.Y.R. RRW/JLP
APPROVED BY G.M.

NO.	DATE	BY	REVISIONS
1	01/07	G.M.	ADDRESS EPC COMMENTS, ADDED DETAIL FOR CONSTRUCTION
2	03/07	G.M.	REVISE ROOF DRAINS, DELETE SEWER DRAINS
3	10/07	G.M.	*ENGINEER'S CERTIFICATION - BUILDING "B"*
4	05/15	G.M.	***BUILDING "A" CONSTRUCTION***

JOB NO. 2015.012.1 ~~2006.070.6~~
DATE 10-2006
SHEET C003 OF

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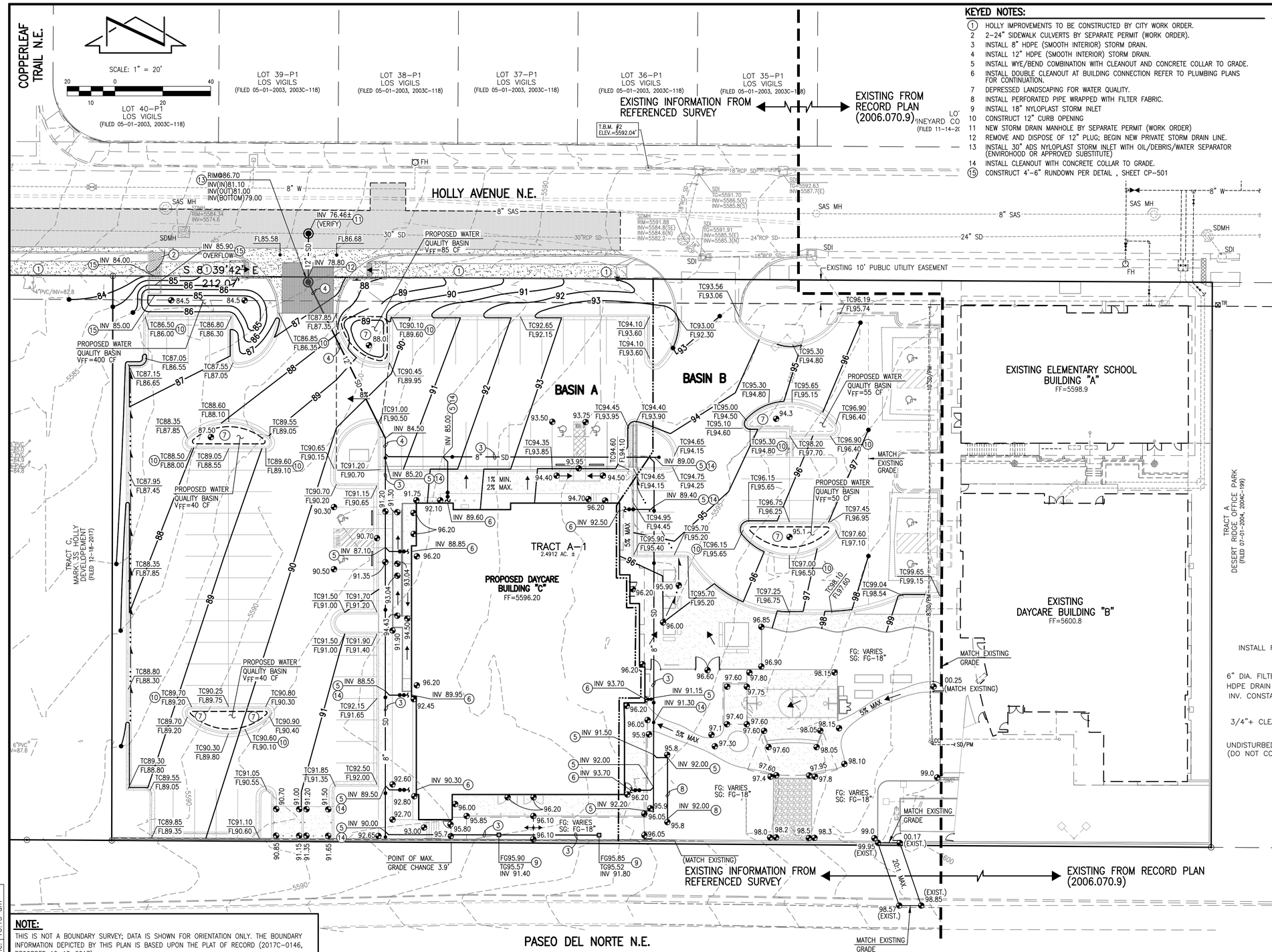
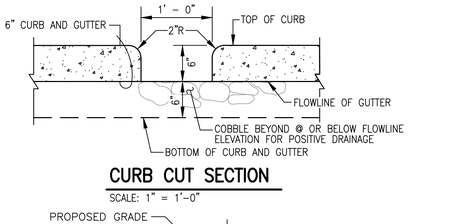


KEYED NOTES:

1. HOLLY IMPROVEMENTS TO BE CONSTRUCTED BY CITY WORK ORDER.
2. 2–24" SIDEWALK CULVERTS BY SEPARATE PERMIT (WORK ORDER).
3. INSTALL 8" HDPE (SMOOTH INTERIOR) STORM DRAIN.
4. INSTALL 12" HDPE (SMOOTH INTERIOR) STORM DRAIN.
5. INSTALL WYE/BEND COMBINATION WITH CLEANOUT AND CONCRETE COLLAR TO GRADE.
6. INSTALL DOUBLE CLEANOUT AT BUILDING CONNECTION REFER TO PLUMBING PLANS FOR CONTINUATION.
7. DEPRESSED LANDSCAPING FOR WATER QUALITY.
8. INSTALL PERFORATED PIPE WRAPPED WITH FILTER FABRIC.
9. INSTALL 18" NYLOPLAST STORM INLET
10. CONSTRUCT 12" CURB OPENING
11. NEW STORM DRAIN MANHOLE BY SEPARATE PERMIT (WORK ORDER)
12. REMOVE AND DISPOSE OF 12" PLUG; BEGIN NEW PRIVATE STORM DRAIN LINE.
13. INSTALL 30" ADS NYLOPLAST STORM INLET WITH OIL/DEBRIS/WATER SEPARATOR (ENVIROHOOD OR APPROVED SUBSTITUTE)
14. INSTALL CLEANOUT WITH CONCRETE COLLAR TO GRADE.
15. CONSTRUCT 4'–6" RUNDOWN PER DETAIL , SHEET CP–501

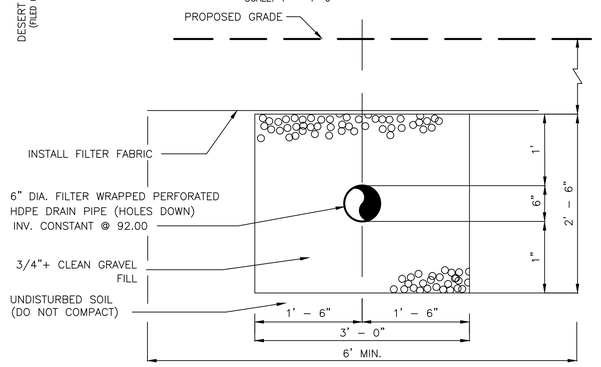
CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE–SPOTTING) OF EXISTING UTILITIES.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
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. ALL CONSTRUCTION WITHIN PUBLIC RIGHT–OF–WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
5. UTILITY INFORMATION SHOWN HEREON IS BASED UPON ONSITE SURFACE EVIDENCE, REVIEW OF AVAILABLE ABCWUA AND CITY OF ALBUQUERQUE RECORD DRAWINGS AND DISTRIBUTION MAPS AND UTILITY LINE–SPOTS PROVIDED BY HIGH MESA CONSULTING GROUP (2016.059.1 AND 2016.059.2). IN ADDITION, UTILITY LINE–SPOTS WERE REQUESTED VIA THE NEW MEXICO ON CALL SERVICE (TICKET NOS. 16DE200007 AND 17AP210205). UTILITY LINES THAT APPEAR ON THESE DRAWINGS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
6. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.
7. THE GRADES INDICATED ON THIS PLAN ARE FINISHED GRADES UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEAVING SUBGRADE AT ELEVATIONS THAT SHALL ACCOMMODATE PROPOSED IMPROVEMENTS AS INDICATED ON THE PLANS INCLUDING, BUT NOT LIMITED TO, SURFACE DRAINAGE STRUCTURES, PAVING AND LANDSCAPING SURFACING.
8. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT–OF–WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
9. BACKFILL COMPACTION SHALL BE ACCORDING TO MAJOR LOCAL STREET USE.
10. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR EARTHWORK REQUIREMENTS, AS APPLICABLE



CURB CUT SECTION

SCALE: 1" = 1'–0"



TYPICAL PERFORATED PIPE SECTION

SCALE: 1" = 1'

NOTE:

THIS IS NOT A BOUNDARY SURVEY; DATA IS SHOWN FOR ORIENTATION ONLY. THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON THE PLAT OF RECORD (2017C–146, RECORDED 12–18–2017).

UNLESS OTHERWISE NOTED THE TOPOGRAPHIC AND UTILITY INFORMATION DEPICTED HEREON IS BASED UPON THE EXISTING TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY THIS FIRM, NMPS NO. 11184, DATED 01/10/2017 (2016.059.1), ALSO A PARTIAL TOPOGRAPHIC AND UTILITY SURVEY PREPARED BY THIS FIRM, NMPS NO. 11184, DATED 05/16/2017 (2016.059.2), AND ALSO A TOPOGRAPHIC SURVEY PREPARED BY THIS FIRM, NMPS NO. 11184, DATED 10/24/2006 (2006.070.1), AND ALSO THE RECORD DRAWINGS PREPARED BY THIS FIRM, NMPE 13676, DATED 09/27/2007 (2006.070.9).

J. GRAEME MEANS NEW MEXICO 13676 REGISTERED PROFESSIONAL ENGINEER

01–30–2018

HIGH MESA Consulting Group
Engineers, Surveyors & Subsurface Utility Coordinators
6010–B Midway Park Blvd. NE • Albuquerque, New Mexico 87109
Phone: 505.345.4250 • Fax: 505.345.4254 • www.highmesacg.com

GRADING AND DRAINAGE PLAN
MARK 3S HOLLY DEVELOPMENT

DESIGNED BY R.J.C.
DRAWN BY S.C.C./J.Y.R.
APPROVED BY G.M.

NO.	DATE	BY	REVISIONS

JOB NO. 2017.014.4
DATE 01–2018
SHEET CG–101 OF

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