CITY OF ALBUQUERQUE

Planning Department
David S. Campbell, Director

Timothy M. Keller, Mayor

February 21, 2018

Jake Bordenave
Bordenave Designs
PO Box 91194
Albuquerque, NM 87199

RE: **Homewood Suites - 5400 San Antonio Dr. NE**
Grading and Drainage Plan
Engineer's Stamp Date2/xx/2018
Hydrology File: E18D050

Dear Mr. Bordenave:

Based on the information provided in the submittal received on 2/20/17 the above-referenced Grading Plan cannot be approved for Building Permit until the following comments are addressed.

1. All sheets of the G&D Plan must be stamped and signed by a registered professional Engineer and all sheets must have the same stamp date.
2. The revised plan must be submitted and reapproved for Sight Plan for Building Permit and the approved plan must be included in the Site Plan for Building Permit prior to final DRB signoff on that plan. The Sight plan for Building Permit Approval must be checked on the DTIS Form.
3. Grading Plan approval is also required for Building Permit Approval and Work Order Approval, and should be so checked on the DTIS form.
4. The location of the temporary bridge & north abutment must also be shown on the G&D Plan.
5. Notes are to be added to the G&D Plan and the DRC P&P stating that "The existing Public Storm Drain thru this site must remain functional at all times. Temporary diversion ditches will be constructed and maintained when the storm drain is not in service".
6. The storm drain design and calculations must be submitted and approved by Hydrology prior to approval of the DRC Work Order Plans. The computer printouts should either be put on the G&D Plan or in a report with engineer's stamp on them. Revised calculations were missing from the last submittal.
7. Profiles of the public pipes should show Q, V, and HGL. They were missing from the revised G&D submittal.
8. Private maintenance will be required for the piece of pipe that will be left in the Channel Right of way that will just receive private drainage. An Agreement and Covenant will be required prior to DRC approval, and the recording information

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Orig: Drainage File

should be noted on both the DRC Plans and the Grading and Drainage Plan. The covenant must be recorded prior to DRC approval.

9. A new public easement must be recorded prior to DRC approval. The original signed and notarized document complete with exhibits is to be turned into Madeline Caruthers along with a $25 check to Bernalillo County for each document to be recorded. The document will be routed for approval and recorded by the City and you will be copied with any comments and/or the recorded document.
10. The new easement must be labeled on the G&D plan with recording information.
11. Keynote # 4 is used to label both the public channel south of the site and the private channel south and east of the existing building. Public must be differentiated from private.
12. Keynote # 17 needs to be changed to "Existing MH to remain"
13. Remove Keynote #13 next to the existing MH at Keynote #17 because that piece of existing pipe will remain public.
14. Keynote #24 does not point to anything on the drawing. The existing easement must be shown, and the note should say "To be vacated at a later date".
15. Typical sections must be added on the G&D Plan thru the edges of the site showing existing and proposed grade, existing and proposed improvements, the property line, and maximum and minimum dimensions both vertical and horizontal. Particular attention must be given to grading (either cut or fill) near property lines. Per DPM 22.5.B, "Care should be taken to ensure that existing foundations, retaining walls, stable slopes or other structures are not endangered and that the adjacent property is not damaged or its use constrained due to grading at or near the property line".
16. A draft Elevation Certificate is required for the portion of the building being constructed in the Floodplain, and a Floodplain Permit application must be submitted to Rudy Rael. Approval of the floodplain permit is required prior to approval of the Grading and Drainage Plan for Building Permit.
17. The final Elevation Certificate must be submitted to Rudy Rael with the as-built floor elevation prior to Certificate of Occupancy.
18. An Engineer's Certification is required prior to Certificate of Occupancy.
19. A LOMR-F may be submitted to FEMA to remove the Flood Insurance requirement from federally backed loans.
20. Sheets to be included in the DRC plans "For Information Only" include:
    a. The Plat & the Permanent Drainage Easement
    b. The approved G&D Plan.
    c. Bike Path Detour Plan & written approval of Parks Department.
    d. Temporary Bridge Plan & Permit
    e. Landfill Mitigation Plan & Permit.
21. A sheet should be added to the G&D Plan showing the entire area of disturbance associated with this project including the staging area south of the South Pino Arroyo. The sheet should include a line indicating the limits of disturbance, a note identifying the area of disturbance, and a note requiring stabilization of all disturbed areas prior to Certificate of Occupancy.
22. The "Grading" and "Erosion Control" notes are on sheet C1.1 in two different places. Delete one of the sets of notes.
23. A separate Erosion Control Plan must be submitted to the Storm Water Quality Section on the fourth floor prior to G&D Plan approval. The Plan must be approved prior to inclusion in the DRC plans.

If you have any questions, I can be contacted at 924-3986 or jhughes@cabq.gov.

Sincerely,

James D. Hughes P.E.
Principal Engineer, Planning Dept.
Development Review Services

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Orig: Drainage File

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 10/2015)

Project Title: HOMEWOOD SUITES Building Permit #: _____ Hydrology File #: E18D050

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

Legal Description: TRACT A-3-A

City Address: 5400 SAN ANTONIO DRIVE, NE

Applicant: BORDENAVE DESIGNS Contact: JAKE

Address: PO BOX 91194, ALB., NM 87199

Phone#: 505-823-1344 Fax#: 505-821-9105 E-mail: jakebordenave@comcast.net

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)

___ EROSION & SEDIMENT CONTROL PLAN (ESC)

___ OTHER (SPECIFY) _____

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) _____

IS THIS A RESUBMITTAL?: X Yes ___ No

DATE SUBMITTED: 02/15/18 By: _____

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: ___

#KEYED NOTES

1. EXISTING BUILDING TO REMAIN.
2. EXISTING CONCRETE SIDEWALK TO REMAIN.
3. EXISTING ASPHALT DRIVEWAY AND PARKING TO REMAIN.
4. EXISTING PUBLIC CONCRETE CHANNEL & ASPHALT BIKE TRAIL (PINO ARROYO).
5. PROPOSED BUILDING. SEE ARCHITECTURAL FOR DETAILS.
6. PROPOSED CONCRETE TURNDOWN SIDEWALK. SEE SHEET C1.2 FOR DETAILS.
7. PROPOSED CONCRETE HEADER CURB. SEE SHEET C1.2 FOR DETAILS.
8. PROPOSED CONCRETE CURB AND GUTTER. SEE SHEET C1.2 FOR DETAILS.
9. PROPOSED HEAVY DUTY ASPHALT PAVEMENT. SEE SHEET C1.2 FOR DETAILS.
10. EXISTING 36" PUBLIC STORM DRAIN TO REMAIN IN PUBLIC EASEMENT ON PRIVATE PROPERTY.
11. EXISTING 36" PUBLIC STORM DRAIN TO BE REMOVED.
12. EXISTING 36" PUBLIC STORM DRAIN TO BECOME PRIVATE STORM DRAIN ON VACATED PUBLIC EASEMENT.
13. EXISTING 36" PUBLIC STORM DRAIN AND 6' MANHOLE (RIM 12.85, INV. 02.62) TO BECOME PRIVATE STORM DRAIN ON PUBLIC PROPERTY.
*14. PROPOSED 36" PUBLIC STORM DRAIN IN 30' PUBLIC EASEMENT ON PRIVATE PROPERTY.
*15. PROPOSED 6' TYPE 'E' MANHOLE PER COA STD. DWG. 2209.
*16. PROPOSED 6' TYPE 'E' MANHOLE PER COA STD. DWG. 2209.
*16a. PROPOSED 6' TYPE 'E' MANHOLE PER COA STD. DWG. 2209.
*17. EXISTING MANHOLE FORMED ONSITE. ADJUST ONSITE, CONSTRUCT NEW OR CONSTRUCT 8' TYPE 'C'. TO BE DETERMINED ONSITE WITH CITY DRAINAGE PERSONNEL DURING CONSTRUCTION. INLET INV. 02.01, RIM 08.85.
*18. PROPOSED CONCRETE CHANNEL TO EXISTING CONCRETE SIDE INLET TO PINO ARROYO CHANNEL PER COA STD. DWG 2260.
19. PROPOSED PRIVATE CONCRETE CHANNEL TO BE EXTENDED, PRIVATE DBL. 'D' CATCH BASIN AND 12" OUTLET TO BE CONNECTED TO EXISTING 36" STORM DRAIN. SEE SHEET C1.2 FOR DETAILS.
20. PROPOSED 12:1 CONCRETE SIDEWALK RAMP w/ 24" TRUNCATED DOME MAT AT BASE.
21. 10"x10" CONCRETE OR POLY CARBONATE CATCH BASIN w/ 6" PVC OR SMOOTH WALL HDPE OUTLET PIPE. OUTLET INV. 14.95. SEE SHEET C1.2 FOR DETAILS.
22. 10"x10" CONCRETE OR POLYCARBONATE CATCH BASIN w/ 6" PVC OR SMOOTH WALL HDPE OUTLET PIPE. OUTLET INV. 14.45. SEE SHEET C1.2 FOR DETAILS.
23. MASONRY RETAINING WALL. SEE STRUCTURAL PLANS FOR DETAILS.
24. EXISTING 30' WIDE PUBLIC STORM DRAIN EASEMENT.
25. EXISTING 10' WIDE PUBLIC UTILITY EASEMENT.
26. FLOOD PLAIN BOUNDARY. FINISHED FLOOR ELEVATION CERTUFUCATES OF BUILDINGS IN THE FLOOD PLAIN ARE REQUIRED.

DRAINAGE NOTES

1. THE SITE WAS PREVIOUSLY DEVELOPED AS AN HOTEL. THAT USE WILL CONTINUE AND THE FACILITY WILL BE EXPANDED INTO EXISTING PARKING AREA AND EXISTING BARE LAND.

2. THE NEWLY DEVELOPED AS WELL AS THE EXISTING RUNOFF WILL BE DIRECT DISCHARGED TO THE PINO ARROYO VIA IMPERMEABLE SURFACES DUE TO LAND FILL CONCERNS.

3. EXISTING AND PROPOSED FLOW RATES WILL NOT BE TABULATED AND COMPARED. INCOMING FLOW RATES (SHOWN ON THE AS-BUILT PLANS) IN THE STORM DRAIN WILL BE USED TO ESTABLISH GRADES AND PIPE SIZES OF THE NEW PORTION OF THE STORM DRAIN. DESIGN FLOW RATE, VELOCITY, WATER SURFACE AND HGL WILL BE SHOWN ON THE CITY APPROVED WORK ORDER PLANS.

4. AN ESC PLAN IS REQIRED FOR THE SITE.

5. THE BULK OF THE SITE IS LOCATED IN AN AREA DESIGNATED 'ZONE X' PER FEMA FIRM MAP NO. 137H, DATED AUGUST, 2012.

6. EXISTING TOPOGRAPHY FOR THE SITE WAS OBTAINED BY CONSTRUCTION SURVEY TECHNOLOGIES, INC. IN JUNE, 2015 AND HARRIS SURVEYING IN OCTOBER, 2017.

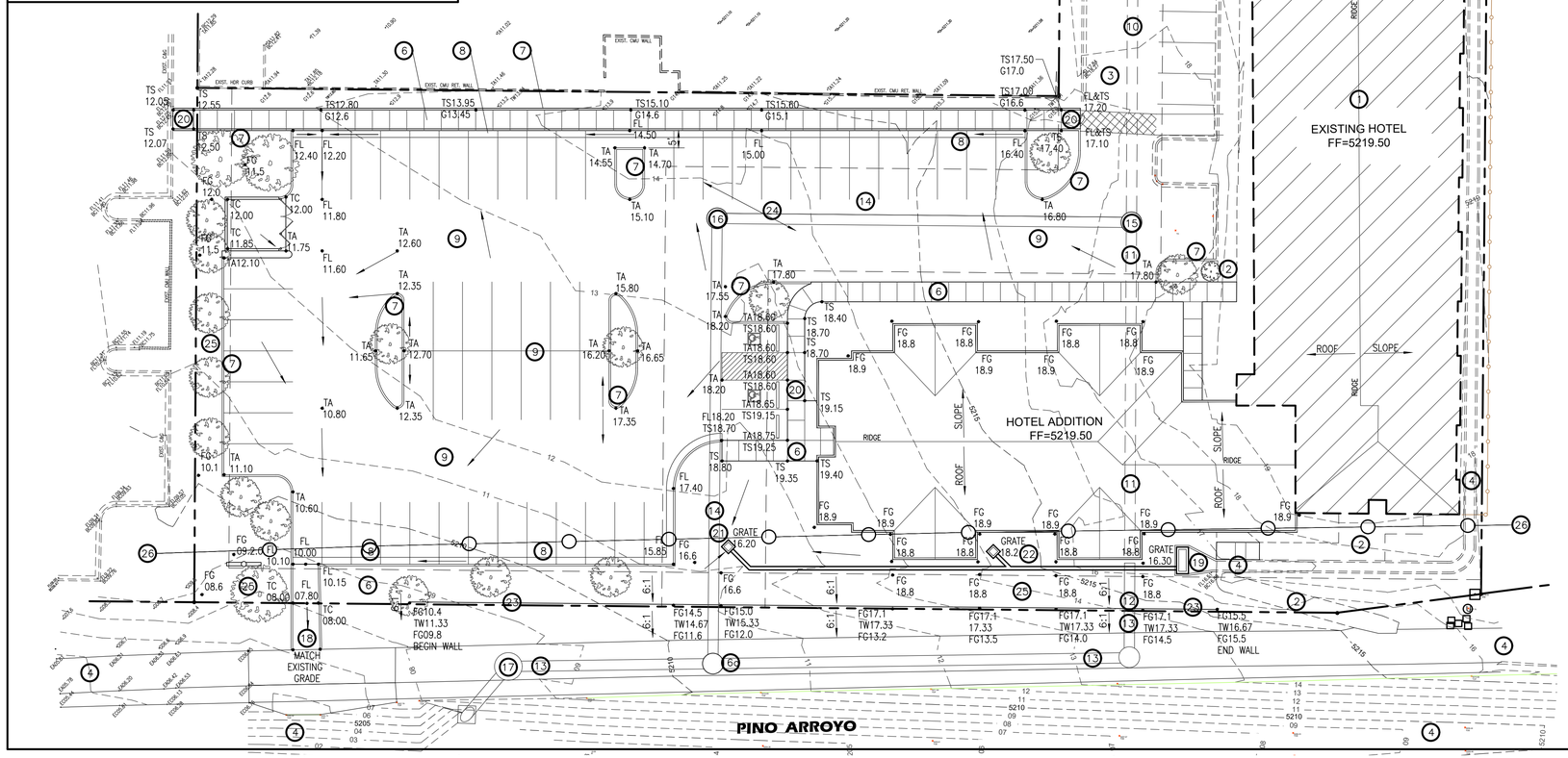
***NOTE:**
ITEMS IN KEYED NOTES 14 THRU 18 SHALL BE CONSTRUCTED UNDER CITY WORK ORDER, PROJECT NO. 735186

NOTE:
ITEM NO. 13 IS AN EXISTING PUBLIC STORM DRAIN. PER AN AGREEMENT AND COVENANT BETWEEN THE CITY OF ALBUQUERQUE AND THE OWNER OF THE ADJOINING PROPERTY THE STORM DRAIN EAST OF MANHOLE (ITEM NO. 17) IS NOW A PRIVATE FACILITY ON PUBLIC PROPERTY PER A DOCUMENT FILED IN THE PUBLIC RECORDS AS DOCUMENT _____ , FILED _____.

I, EDWARD MARTINEZ, PE, A REGISTERED NEW MEXICO PROFESSIONAL ENGINEER (NMPE #13731) HAVE REVIEWED THIS STORM DRAIN PLAN. I FIND THIS PLAN MEETS THE REQUIREMENTS AND INTENT OF THE LANDFILL CHARACTERIZATION AND MITIGATION DESIGN FOR HOMEWOOD SUITES, 5400 SAN ANTONIO DRIVE NE, DRIVE NE, ALBUQUERQUE, NEW MEXICO FEBRUARY 2017 BY ZIA ENGINEERING (STAMPED 2-15-2017) AND AS PREVIOUSLY APPROVED BY THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DEPARTMENT.

_____
EDWARD H. MARTINEZ, PE (NMPE #13731)

GRADING PLAN



SCALE 1 INCH = 20 FEET
20 10 0 10 20 40 60

LEGAL DESCRIPTION

TRACT A-3-A, J GROUP ADDITION

PERMANENT BENCHMARK

ACS STATION , ELEVATION (NAVD 1988)

GRADING NOTES

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT THE NEW MEXICO ONE CALL SYSTEM AT 260-1990 FOR LOCATION OF EXISTING UTILITIES.

2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1986 EDITION THROUGH UPDATE NO. 9. ITEMS 14, 15, 16, 17 AND 19 ARE TO BE CONSTRUCTED PER CITY OF ALBUQUERQUE REQUIREMENTS.

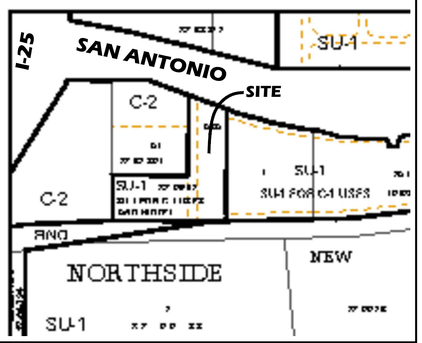
EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO PUBLIC RIGHT-OF-WAY OR PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY THE CONSTRUCTION OF TEMPORARY SOIL BERMS OR SILT FENCES AT PROPERTY LINES AND WETTING SOIL TO PREVENT IT FROM BLOWING. IF THE SITE IS CONTROLLED BY A SWPPP PLAN, EROSION CONTROL SHALL BE ACCOMPLISHED ACCORDING TO THE PLAN.

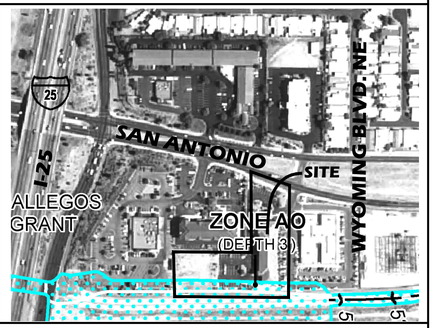
2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.

3. THE CONTRACTOR SHALL SECURE THE APPROPRIATE BARRICADING, TOP SOIL DISTURBANCE AND ACCESS PERMITS FROM THE COUNTY PRIOR TO BEGINNING CONSTRUCTION.

VICINITY MAP NO. E-18



FEMA FIRM PANEL NO. 137H



GRADING NOTES

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2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

4. ALL CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE COUNTY OF BERNALILLO STANDARDS AND PROCEDURES.

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO PUBLIC RIGHT-OF-WAY OR PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY THE CONSTRUCTION OF TEMPORARY SOIL BERMS OR SILT FENCES AT PROPERTY LINES AND WETTING SOIL TO PREVENT IT FROM BLOWING. IF THE SITE IS CONTROLLED BY A SWPPP PLAN, EROSION CONTROL SHALL BE ACCOMPLISHED ACCORDING TO THE PLAN.

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. THE CONTRACTOR SHALL SECURE THE APPROPRIATE BARRICADING, TOP SOIL DISTURBANCE AND ACCESS PERMITS FROM THE COUNTY PRIOR TO BEGINNING CONSTRUCTION.

no.	date	remarks	by
		REVISIONS	

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NO. 5110 NEW MEXICO JEAN J. BORDENAVE
02/XX/17

project title
HOMEWOOD SUITES SAN ANTONIO NE ALBUQUERQUE, NM

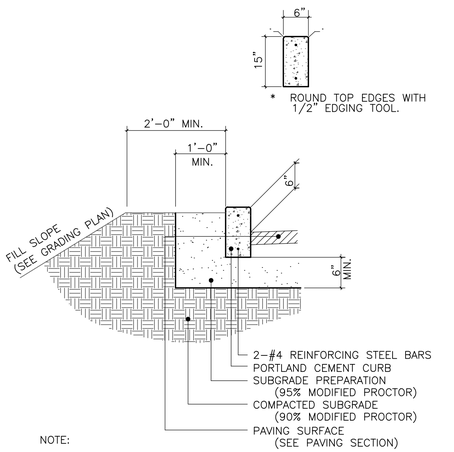
sheet title
CONCEPTUAL GRADE AND DRAIN

drawn by	design by	project no.
METO	JJB	1715

BORDENAVE DESIGNS
P.O. BOX 91194, ALBUQUERQUE, NM 87199
Office (505)823-1344 Cell (505)480-6812
Email JakeBordenave@comcast.net

sheet
C1.1

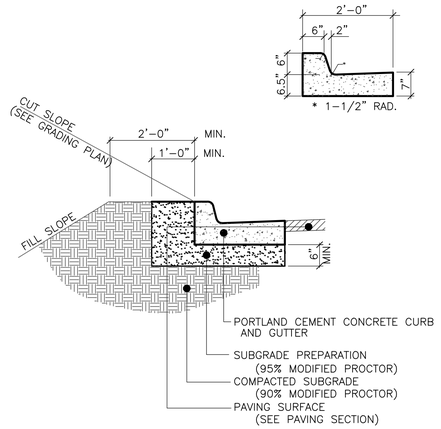
HEADER CURB



NOTE:

PROVIDE CONTRACTION JOINTS AT 5 FEET ON CENTER AND EXPANSION JOINTST AT 50 FEET ON CENTER UNLESS OTHERWISE STATED ON SITE PLANS OR IF CURB ABUTS SIDEWALK; WHERE CURB JOINTS SHALL MATCH SIDEWALK JOINTS.

2' x 6" HIGH CONCRETE CURB



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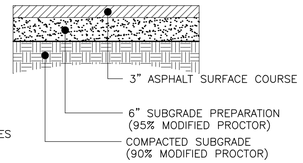
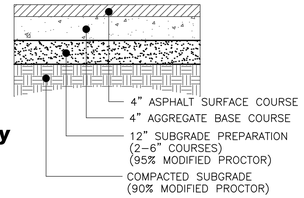
ASPHALT PAVEMENT



light duty
IN PARKING SPACES ONLY

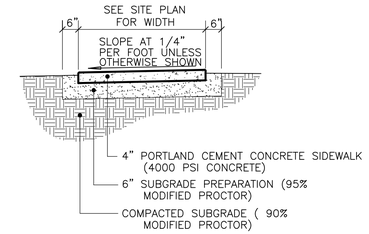


heavy duty
IN TRUCK LANES

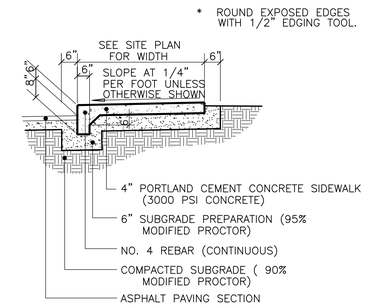
NOTES:

1. ASPHALT MIX DESIGN TO USE CITY OF ALBUQUERQUE AGGREGATE CLASS C AND HAVE A MARSHALL STABILITY GREATER THAN 1800 LBS.
2. ASPHALT CONCRETE COURSES GREATER THAN 3" IN THICKNESS SHALL BE PLACED WITH MULTIPLE LIFTS. MINIMUM LIFT THICKNESS 1 1/2".

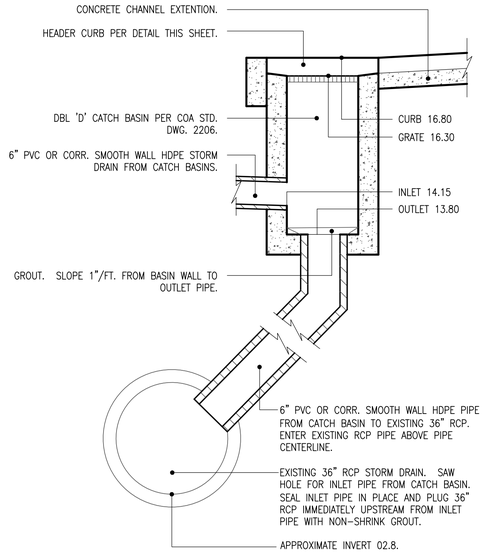
SIDEWALK



TURNDOWN SIDEWALK

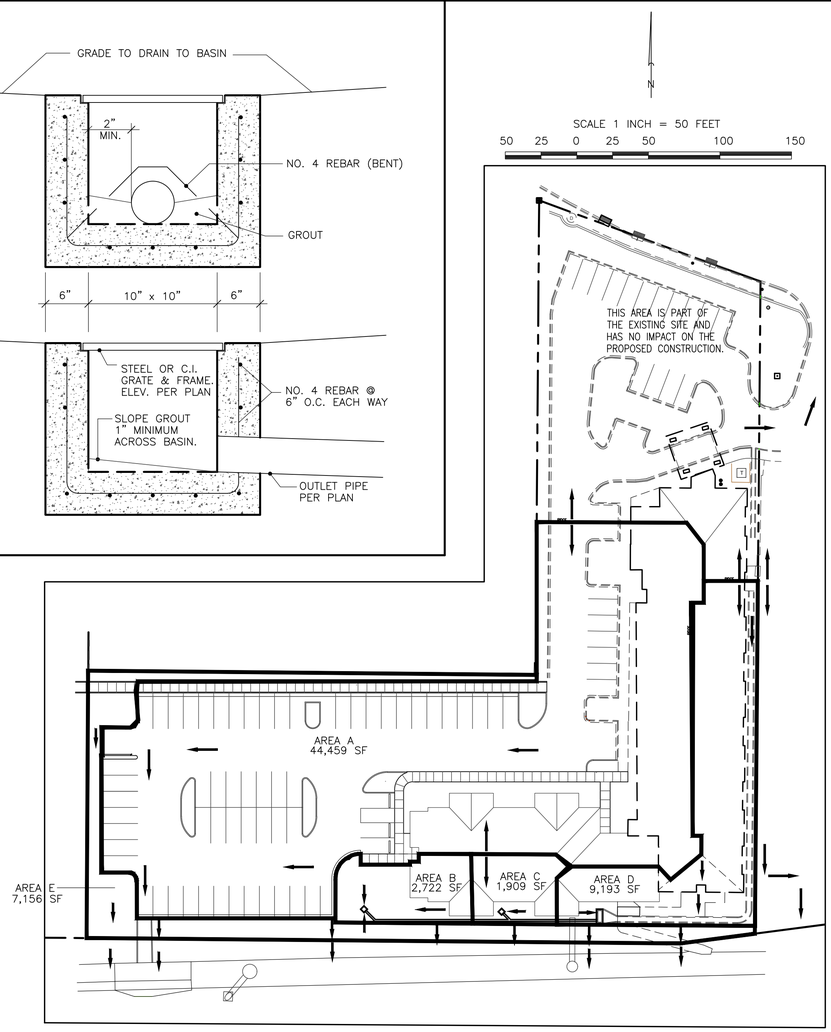


STORM DRAIN OUTLET



CONCRETE CATCH BASIN

DRAINAGE DATA



DRAINAGE FACILITY CALCULATIONS

BASIN A
CONCRETE CHANNEL FROM PARKING LOT TO SIDE CHANNEL INLET
BROAD CRESTED WEIR
Q = CLH*1.5 where Q = 4.97 cfs, C = 2.8, H = 0.4' and L = weir length
L = 7.01,' USE 8' WEIR LENGTH

BASIN B
GRATED CATCH BASIN – SUMP
ORIFICE INLET
$Q = CA(2gH)^{0.5}$ where the orifice opening is 50% of the basin opening and a 50% clogging factor at grate, Q = 0.22 cfs, orifice factor = 0.60,
g = 32.2'/sec/sec, H = 0.25'
$0.22 = 0.6A((2)(32.2)(0.25))^{0.5}$
$A = 0.09(2)(2) = 0.36$ sf, USE 10"x10" CATCH BASIN
ORIFICE OUTLET
$Q = CA(2gH)^{0.5}$ where orifice factor = 0.60, g = 32.2'/se/sec, H = 1.5'
$0.22 = 0.6A((2)(32.2)(1.5))^{0.5}$
A = 0.037 sf, Radius = 0.12' , USE 6" PIPE

BASIN C
GRATED CATCH BASIN – SUMP
ORIFICE INLET
$Q = CA(2gH)^{0.5}$ where the orifice opening is 50% of the basin opening and a 50% clogging factor at grate, Q = 0.21 cfs, orifice factor = 0.60,
g = 32.2'/sec/sec, H = 0.25'
$0.21 = 0.6A((2)(32.2)(0.25))^{0.5}$
$A = 0.09(2)(2) = 0.36$ sf, USE 10"x10" CATCH BASIN
ORIFICE OUTLET
$Q = CA(2gH)^{0.5}$ where orifice factor = 0.60, g = 32.2'/sec/sec, H = 1.5'
$0.22 = 0.6A((2)(32.2)(1.5))^{0.5}$
A = 0.037 sf, Radius = 0.12' , USE 6" PIPE

CONDITION	ASI N	RETURN PERIOD	TREATMENT TYPE	TREATMENT AREA	EXCESS PRECIPITATION	PEAK RUNOFF	RUNOFF VOLUME	RUNOFF RATE
			(table 4)		(table 8)	(table 9)		
-	-	year	-	sq. ft.	in.	cfs/acre	cu. ft	cfs
DEVELOPED	S	10	A	0	0.19	0.58	0	0.00
	I		B	4459	0.36	1.19	134	0.12
	T		C	7885	0.62	2	407	0.36
	E		D	51050	1.5	3.39	6381	3.97
			TOTAL	63394			6922	4.46
		100	A	0	0.66	1.87	0	0.00
			B	4459	0.92	2.6	342	0.27
			C	7885	1.29	3.45	848	0.62
			D	51050	2.36	5.02	10040	5.88
			TOTAL	63394			11229	6.77
	A	100	A	0	0.66	1.87	0	0.00
			B	1251	0.92	2.6	96	0.07
			C	2459	1.29	3.45	264	0.19
			D	40749	2.36	5.02	8014	4.70
			TOTAL	44459			8374	4.97
	B	100	A	0	0.66	1.87	0	0.00
			B	1717	0.92	2.6	132	0.10
			C	0	1.29	3.45	0	0.00
			D	1005	2.36	5.02	198	0.12
			TOTAL	2722			329	0.22
	C	100	A	0	0.66	1.87	0	0.00
			B	0	0.92	2.6	0	0.00
			C	399	1.29	3.45	43	0.03
			D	1510	2.36	5.02	297	0.17
			TOTAL	1909			340	0.21
	D	100	A	0	0.66	1.87	0	0.00
			B	0	0.92	2.6	0	0.00
			C	1491	1.29	3.45	160	0.12
			D	7702	2.36	5.02	1515	0.89
			TOTAL	9193			1675	1.01
	E	100	A	0	0.66	1.87	0	0.00
			B	3536	0.92	2.6	271	0.21
			C	3536	1.29	3.45	380	0.28
			D	84	2.36	5.02	17	0.01
			TOTAL				668	0.50

DRAINAGE FACILITY CALCULATIONS continued

OUTLET PIPE FROM BASIN B TO BASIN D
PVC OR SMOOTH WALL HDPE (set velocity = 2.5 fps minimum)
$Q = (1.489/n)AR^{0.67}S^{0.5}$, where Q = 0.43cfs, n = 0.13, A = 0.196sf, R = 0.125
$S = (0.43/(0.125)^{0.67}(1.489/.013))^2 = 0.0043$ ft.ft, USE 0.50%

BASIN D
DBL 'D' CATCH BASIN – SUMP
ORIFICE INLET
$Q = CA(2gH)^{0.5}$ where 50% clogging factor at grate, Q = 1.01cfs, orifice factor = 0.60, A = 4.20sf,
g = 32.2'/sec/sec,
$1.01 = (0.6)(2.1)((2)(32.2)(H))^{0.5}$
D = 0.32 ft,
ORIFICE OUTLET
$Q = CA(2gH)^{0.5}$ where Q = 1.54cfs, orifice factor = 0.60, g = 32.2'/sec/sec, H = 2.5',
$1.44 = 0.6A((2)(32.2)(1.5))*0.5$
A = 0.037 sf, Radius = 0.12' , USE 6" PIPE

LEGEND

TBM	TEMPORARY BENCHMARK
G	GROUND
FF	FINISH FLOOR
FG	FINISH GRADE after lanscaping
FL	FLOWLINE
TA	TOP OF ASPHALT
TC	TOP OF CONCRETE
BC	TOP OF CURB
TP	TOP OF EARTH PAD
TS	TOP OF SIDEWALK
TW	TOP OF WALL
FH	FIRE HYDRANT
WM	WATER METER
WV	WATER VALVE
MH	MANHOLE
CB	CATCH BASIN GRATE
GM	GAS MATER
GV	GAS VALVE
LP	LIGHT POLE
PP	POWER POLE
GW	GUY WIRE
PED	ELEC., TEL. OR CBL PED.
OHU	OVERHEAD UTILITIES
◄RD/C	ROOF DRAINAGE POINT

FEMA FLOODPLAIN BOUNDARY
DRAINAGE BASIN BOUNDARY
EROSION SETBACK LINE
EXISTING CONTOUR (MAJOR MINOR)
PROPOSED CONTOUR
EXISTING SPOT ELEVATION (XX.XX)
PROPOSED SPOT ELEVATION (XX.XX)
RECORD SPOT ELEVATION (XX.XX XX.XX)
STRUCTURES (EXISTING / PROPOSED)

UNDERGROUND UTILITIES

EXISTING — — S,T,U — — —

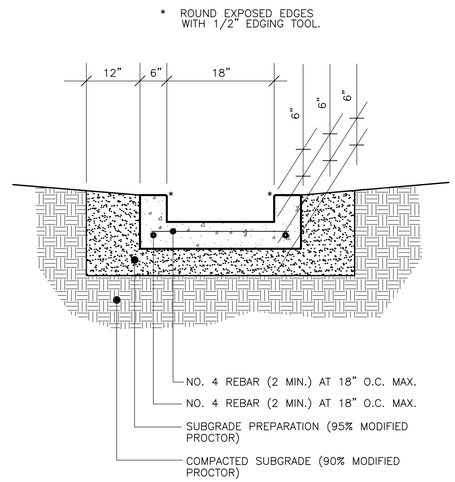
S,T,U – SIZE (INCHES), TYPE & USE

TYPE: CI- Cast Iron, DI-Ductile Iron, CMP-Corr. Metal, HDPE-High Density Poly ethelyne, PVC- Polyvinyl Chloride, RCP-Reinforced Conc.

USES: SD-STORM DRAIN, SAS-SANITARY SEWER, W-WATER, IRR- IRRIGATION

PROPOSED S,T,U,

CONCRETE CHANNEL



no.	date	remarks	by

REVISIONS

DEGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NO. 5110 NEW MEXICO JOHN J. BORDENAVE
12/26/17

project title
HOMEWOOD SUITES SAN ANTONIO NE ALBUQUERQUE, NM

sheet title
SITE DETAILS & DRAINAGE CALCS

drawn by	design by	project no.
METO	JJB	1715

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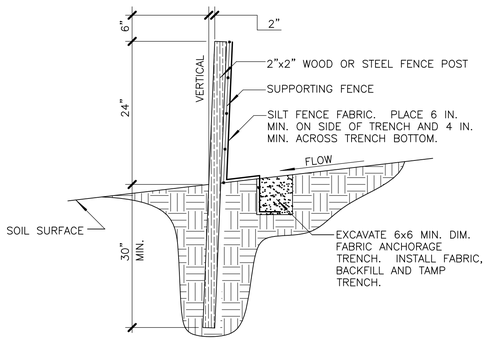
C1.2

SILT FENCE



NOTES:

1. POST SPACING SHALL BE NO MORE THAN 10 FT. WITH A SUPPORTING FENCE AND NO MORE THAN 4 FEET WITHOUT A SUPPORTING FENCE.

2. SILT FENCE USED AS A SILT DAM IN CONCENTRATED FLOWS SHALL HAVE A SUPPORTING FENCE AND A POST SPACING OF NO MORE THAN 4 FT. SILT DAMS SHALL BE CLEANED ON A REGULAR BASIS.

3. POSTS FOR 4 FT. MAXIMUM POST SPACING SHALL BE 2 IN. SQUARE, OR HEAVIER, WOOD POSTS OR STANDARD I OR U SECTION POST WEIGHING NO LESS THAT 1.0 LB./FT. POSTS FOR 10 FT. MAXIMUM POST SPACING SHALL BE 4 IN. SQUARE, OR HEAVIER, WOOD POSTS OR STEEL POSTS AS SPECIFIED ABOVE.

4. SUPPORTING FENCE SHALL BE WIRE MESH (14 GA. MIN. WITH 2" MAX. OPENING SIZE.

5. SUPPORTING FENCE SHALL BE FASTENED SECURELY TO POSTS WITH STAPLES OR WIRE TIES. FILTER FABRIC SHALL BE FASTENED SECURELY TO SUPPORTING FENCE WITH WIRE TIES SPACED AT 24 IN. MAX. ALONG THE TOP AND MID-SECTION. WHEN A SUPPORTING FENCE IS NOT USED, FILTER FABRIC SHALL BE SECURELY FASTENED TO POSTS WITH STAPLES OR WIRE TIES.

GENERAL NOTES

1. WHEN DOING WORK IN THE CITY ROW, PREVENT DIRT FROM GETTING INTO THE STREET. IF DIRT DOES IS IN THE STREET, STREET SHOULD BE SWEPT AT THE END OF EACH DAY OR DURING THE DAY IF RAIN IS IMMINENT OR IF THE CONTRACTOR INTRODUCES WATER INTO THE STREET.

2. WHEN CUTTING THE STREET FOR UTILITIES THE EXCAVATED SOIL SHOULD BE PLACED ON THE UPHILL SIDE OF THE STREET CUT OR A WATTLE/FILTER SOCK PLACED AT THE TOE ON THE DOWNHILL SIDE OF THE CUT. THE CONTRACTOR SHALL SWEEP THE AREA AFTER THE CUT IS PAVED.

3. ON STREETS WHERE THE LONGITUDINAL SLOPE IS STEEPER THAN 2.5%, WATTLES OR A J-HOOK SILT FENCE SHALL BE PLACED IN THE FRONT YARD SWALE.

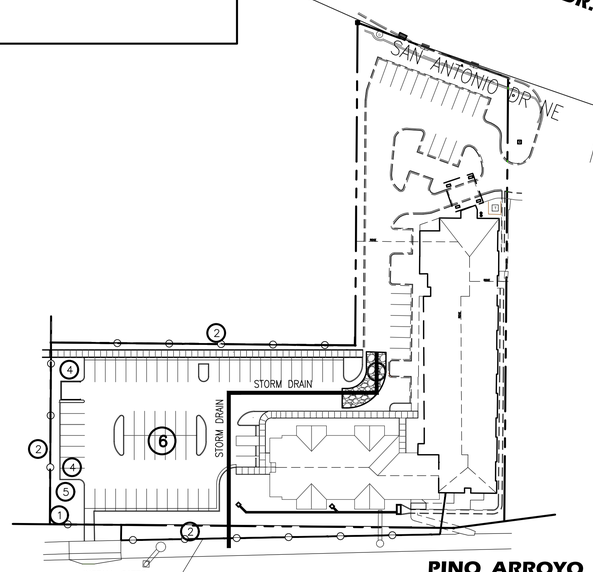
4. WHEN INSTALLING BURIED UTILITIES BEHIND THE CURB THE EXCAVATED SOIL SHALL NOT BE PLACED IN THE STREET.

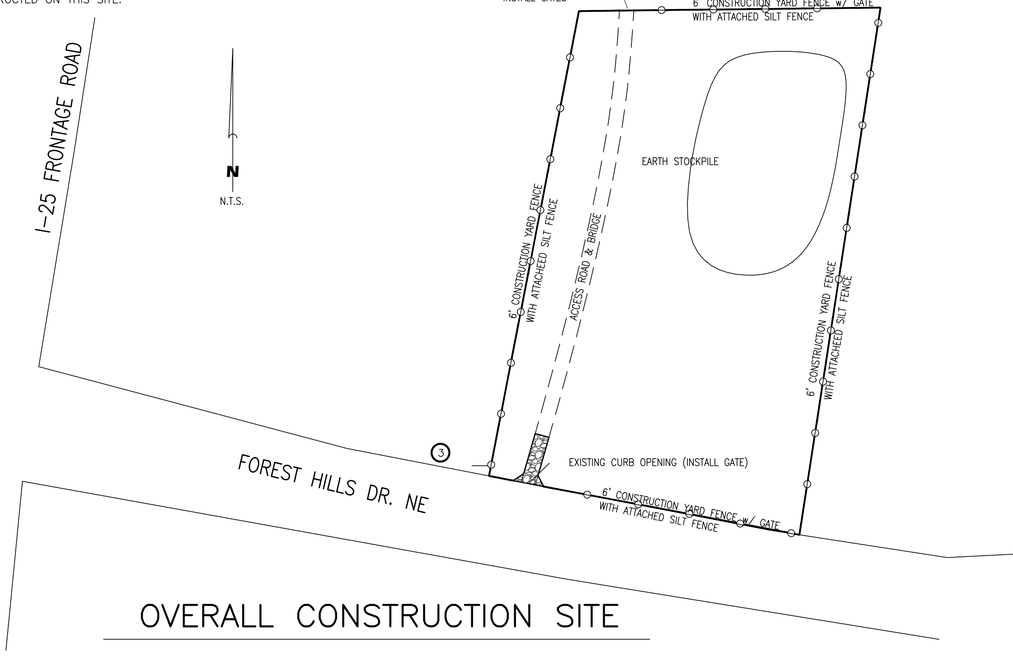
5. A SEDIMENT POND SHALL BE BUILT AT THE DOWNSTREAM END OF LONG STREETS WITH A LARGE WATTLE OR NUMEROUS SMALLER WATTLES PLACED AT THE POND SPILLWAY.

KEYED NOTES

1. INSTALL NPDES SIGN. SIGN SHALL BE VISIBLE FROM THE SIDEWALK.
2. INSTALL SILT FENCE PER DETAIL THIS SHEET.
3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE PER DETAIL THIS SHEET.
4. INSTALL WASHOUT AREA, PORTABLE TOILET AREA.
5. EQUIPMENT STAGING AND MATERIAL STORAGE AREA.
6. NO WATER HARVESTING POND WILL BE CONSTRUCTED ON THIS SITE.

CONSTRUCTION SITE





OVERALL CONSTRUCTION SITE

GENERAL EROSION CONTROL NOTES

SEE SWPPP PLAN FOR CONTRACTOR RESPONSIBLE FOR EACH CONTROL MEASURE LISTED AND BMP DETAILS.

1. ROUGH GRADING PHASE
INSTALL SILT FENCE, STABILIZED CONSTRUCTION SITE ENTRANCE, AND SEDIMENT PONDS WHERE PRACTICAL. INSTALL EROSION CONTROL MEASURES BEFORE ANY GRADING WHERE POSSIBLE. IF NOT POSSIBLE MEASURES SHALL BE INSTALLED CONCURRENT WITH MAJOR GRADING. APPLY WATER TO DISTURBED AREAS FOR SOIL STABILIZATION AS NECESSARY.

2. BUILDING CONSTRUCTION & UTILITY INSTALLATION PHASE
MAINTAIN SOIL EROSION MEASURES DURING ENTIRE PHASE. APPLY WATER TO DISTURBED AREAS FOR SOIL STABILIZATION AS NECESSARY.

3. FINAL STABILIZATION PHASE
INSTALL FINAL STRUCTURAL AND STABILIZATION CONTROLS PER APPROVED SITE WORK AND LANDSCAPING PLANS (REFERENCED BY SWPPP).

SITE SPECIFIC CONTROL NOTES

DURING CONSTRUCTION
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE REQUIRED BETWEEN PAVED/UNPAVED ROADWAYS.

2. INSTALL SILT FENCE AT INITIAL GRADING FOR TEMPORARY EROSION CONTROL. SILT FENCE MAY BE ATTACHED TO CONSTRUCTION SECURITY FENCING FOR ADDITIONAL STABILITY WHERE NECESSARY.

3. DISTURBED EARTH SURFACES SHALL BE WATERED AS NECESSARY FOR TEMPORARY STABILIZATION AND DUST CONTROL.

4. MATERIAL'S STORAGE AND EQUIPMENT STAGING AREAS MAY BE RELOCATED BASED ON CONTRACTOR PREFERENCE AND CHANGING CONDITIONS ON THE JOB SITE.

5. LOCATIONS OF TRASH, PORTA-LETS AND CONCRETE WASH-OUT PITS TO BE RED LINED ON THIS DRAWING AND A PROTECTED COPY OF SAME SHALL BE AFFIXED TO THE SITE SIGN BOARD CONTAINING SWPPP INFORMATION.

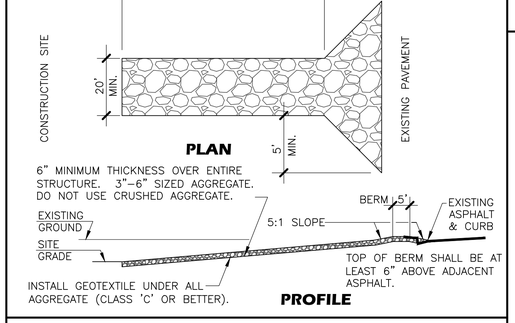
6. THERE IS NO DIRECT DISCHARGE FOR THIS SITE TO WATERS OF THE U.S. OR LISTED WETLANDS.

7. SOILS ARE BEING HAULED TO OR BORROWED FROM AN OFFSITE LOCATION.

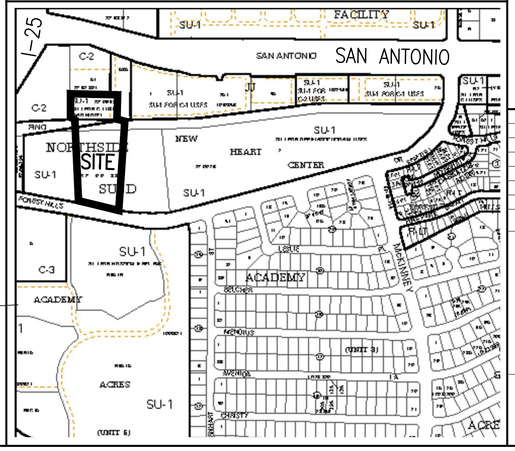
AFTER CONSTRUCTION
1. REFER TO APPROVED CONSTRUCTION DRAWINGS FOR FINAL STRUCTURAL CONTROLS INCLUDING SIDEWALKS, DRIVEWAYS, PARKING AREAS, RUNDOWNS, DRAINAGEWAYS AND PONDS.

1 REFER TO APPROVED LANDSCAPING DRAWINGS FOR FINAL STABILIZATION OF PERVIOUS DISTURBED AREAS.

STABILIZED CONSTRUCTION ENTRANCE



VICINITY MAP NO. E-18



GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXECUTING ALL APPLICABLE NATIONAL POLLUTANT DISCHARE ELIMINATION SYSTEM (NPDES) REQUIREMENTS. THOSE REQUIREMENTS SHALL INCLUDE, BUT NOT BE LIMITED TO, OBTAINING AN NPDES PERMIT PRIOR TO ANY CONSTRUCTION, FILING THE NOTICE OF INTENT (NOI) AND THE NOTICE OF TERMINATION (NOT) APPLICATIONS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE IMPLEMENTATION AND INSPECTION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) INCLUDING THE FILING OF THE INSPECTION REPORTS.

2. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED SWPPP ON-SITE AT ALL TIMES.

3. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR PREPARE APPLICATIONS FOR AND OBTAIN ANY NECESSARY DUST OR EROSION CONTROL PERMITS FROM THE APPLICABLE REGULATORY AGENCIES.

4. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS CONCERNING SURFACE AND SUBSURFACE WATER. CONTACT WITH SURFACE AND SUBSURFACE WATER BY CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL BE MINIMIZED. EQUIPMENT MAINTENANCE AND REFUELING OPERATIONS SHALL BE PERFORMED IN AN ENVIRONMENTALLY SAFE MANNER IN COMPLIANCE WITH GOVERNMENT REGULATIONS.

5. WHERE PRIVATE STORM DRAIN INLETS ARE SUSCEPTIBLE TO INFLOW OF SILT OR DEBRIS FROM, OR DUE TO, CONSTRUCTION ACTIVITIES, PROTECTION FROM SAID INFLOW SHALL BE PROVIDED UTILIZING BEST MANAGEMENT PRACTICES (BMPS) IDENTIFIED IN THE APPROVED SWPPP.

NO OFFSITE STORM DRAIN INLETS SHALL BE BLOCKED. ONLY ONSITE/PROPOSED STORM DRAIN INLETS CAN BE BLOCKED DURING CONSTRUCTION.

6. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE IT SHALL BE REMOVED FROM THE ADJACENT PROPERTY OR RIGHT-OF-WAY AT THE TIME OF OCCURRENCE. IN ADDITION, THE CONTRACTOR SHALL MAINTAIN A REGIMEN OF STREET SWEEPING AND GENERAL CLEAN-UP MEASURES.

7. ANY AREAS DISTURBED BY CONSTRUCTION AND NOT TO BE COVERED BY DESIGNED LANDSCAPING OR IMPERVIOUS SURFACES SHALL BE REVEGETATED WITH NATIVE GRASS SEEDING. UNLESS INDICATED OTHERWISE ON THESE PLANS OR ON THE LANDSCAPING PLAN, NATIVE GRASS SEEDING SHALL BE CLASS 'A SEEDING PER SECTION 1012 OF THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, APWA NM CHAPTER, LATEST EDITION.

WHEN CONSTRUCTION ACTIVITIES CEASE AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME WITHIN 14 DAYS, SURFACE STABILIZATION MEASURES, AS DEFINED ON THE SWPPP, MUST BE INITIATED.

8. ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING, BUT NOT LIMITED TO, ITEMS RESULTING FROM DEMOLITION, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT WASTE PRODUCTS (OIL, GAS, DIESEL, TIRES, ETC.), GARBAGE, DEBRIS FROM GRUBBING AND EXCESS CUT MATERIAL SHALL BE APPROPRIATELY DISPOSED OF OFF-SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PROPER PERMITS TO HAUL AND DISPOSE OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE IS PROPERLY PERMITTED PER LOCAL, STATE AND FEDERAL REGULATIONS TO ACCEPT THE WASTE BEING DISPOSED OF.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPORTING AND CLEAN-UP OF SPILLS OF HAZARDOUS MATERIALS ASSOCIATED WITH THE CONSTRUCTION SITE. HAZARDOUS MATERIALS ARE THOSE WHICH MAY BE A THREAT TO THE ENVIRONMENT, INCLUDING, BUT NOT LIMITED TO, GASOLINE, DIESEL FUEL, MOTOR OIL, SOLVENTS, CHEMICALS AND PAINTS. THE CONTRACTOR SHALL REPORT THE DISCOVERY OF PAST OR PRESENT SPILLS TO THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE TEAM AT 505-827-9329.

BMP LEGEND

SILT FENCE

STABILIZED CONSTRUCTION ENTRANCE

CATCH BASIN PROTECTION

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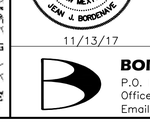
REVISIONS



11/13/17

project title
HOMESTEAD SUITES
SAN ANTONIO NE
ALBUQUERQUE, NM

sheet title
SITE DETAILS

drawn by	design by	project no.
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