CITY OF ALBUQUERQUE



October 13, 2015

Jeffrey Mortensen, PE High Mesa Consulting Group 6010 –B Midway Park Blvd NE Albuquerque, NM 87109

Re: Chaparral ES Kindergarten Addn. Phase 2 & Phase 3

6325 Milne Rd NW

Engineer's Stamp dated: 5/21/2014 (F10D005)

Certification dated: 10-9-15

Dear Mr. Mortensen,

Based on the Certification received 10/13/2015, the site is acceptable for release of Certificate of Occupancy by Hydrology.

PO Box 1293

If you have any questions, you can contact me at 924-3999 or Totten Elliott at 924-3982.

Albuquerque

NM 87103

www.cabq.gov

Sincerely,

Rita Harmon, P.E.

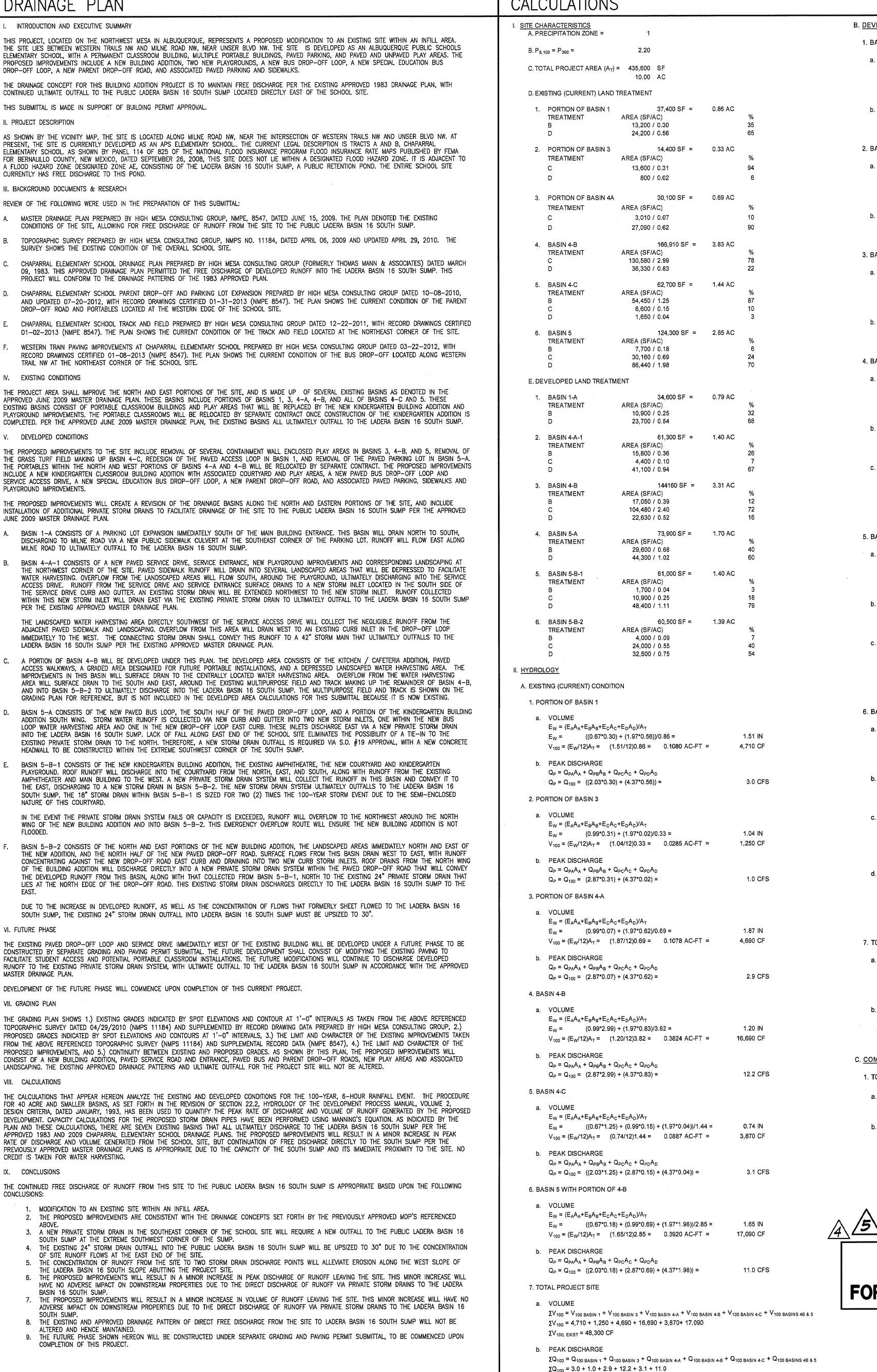
Senior Engineer, Hydrology

Planning Department

CO Clerk email

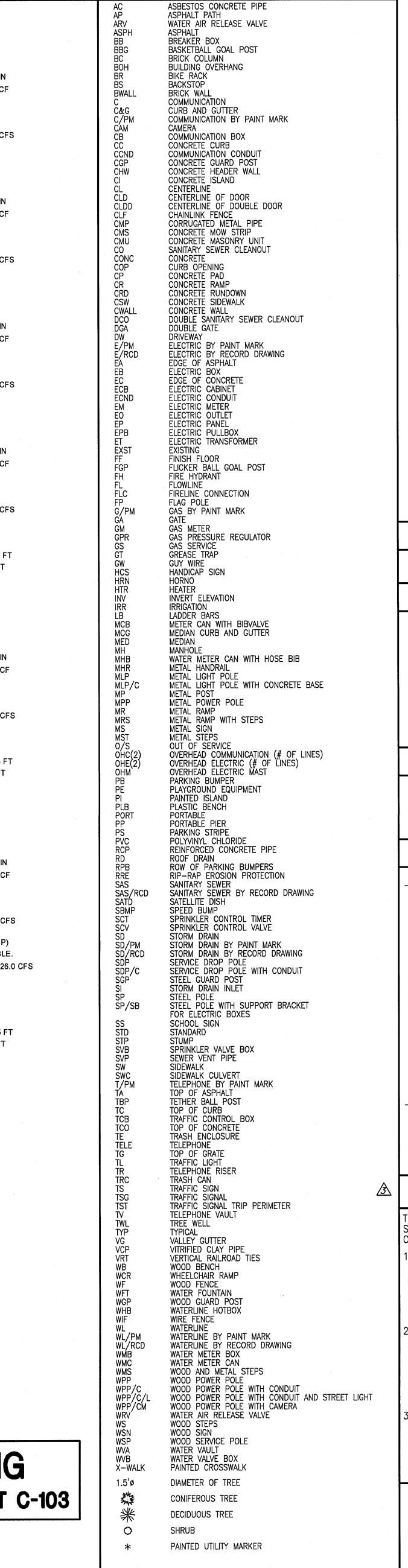
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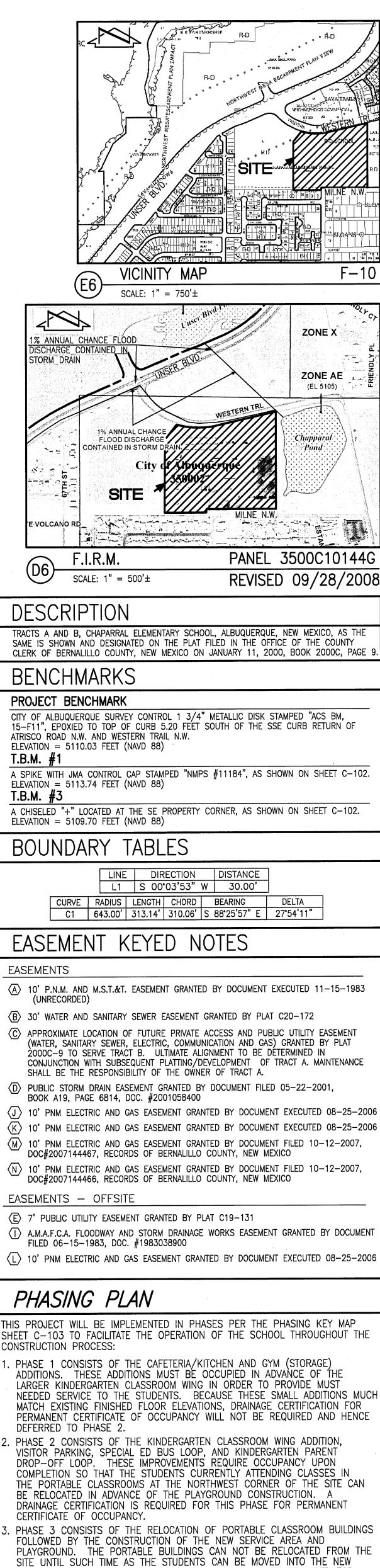


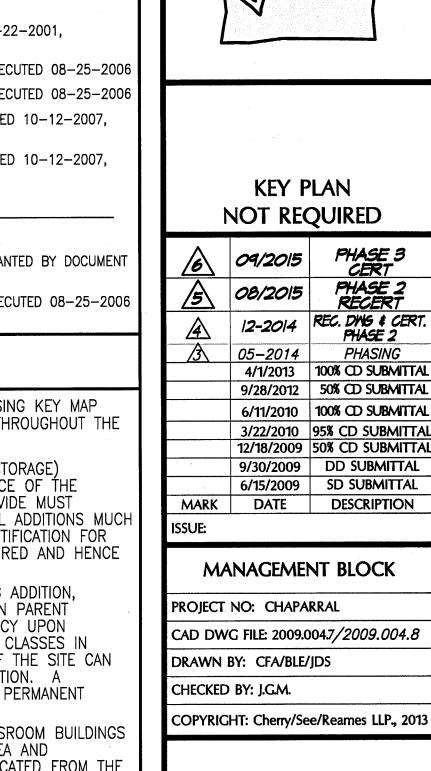
 $\Sigma Q_{100, EXIST} = 33.2 CFS$

10.00 AC G (CURRENT) LAND TREATMENT RTION OF BASIN 1 37,400 SF = 0.86 AC	B. <u>DEVELOPED CONDITION</u> 1. BASIN 1-A a. VOLUME $E_{W} = (E_{A}A_{A} + E_{B}A_{B} + E_{C}A_{C} + E_{D}A_{D})/A_{T}$ $E_{W} = ((0.67*0.25) + (1.97*0.54))/0.79 = 1.56 \text{ IN}$ $V_{100} = (E_{W}/12)A_{T} = (1.56/12)0.79 = 0.1033 \text{ AC-FT} = 4,500 \text{ CF}$
PROJECT AREA (A _T) = 435,600 SF 10.00 AC G (CURRENT) LAND TREATMENT RTION OF BASIN 1 37,400 SF = 0.86 AC EATMENT AREA (SF/AC) % 13,200 / 0.30 35	a. VOLUME $E_{W} = (E_{A}A_{A} + E_{B}A_{B} + E_{C}A_{C} + E_{D}A_{D})/A_{T}$ $E_{W} = ((0.67*0.25) + (1.97*0.54))/0.79 = 1.56 \text{ IN}$
G (CURRENT) LAND TREATMENT RTION OF BASIN 1 37,400 SF = 0.86 AC EATMENT AREA (SF/AC) % 13,200 / 0.30 35	$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$ $E_W = ((0.67*0.25) + (1.97*0.54))/0.79 = 1.56 IN$
G (CURRENT) LAND TREATMENT RTION OF BASIN 1 37,400 SF = 0.86 AC EATMENT AREA (SF/AC) % 13,200 / 0.30 35	
EATMENT AREA (SF/AC) % 13,200 / 0.30 35	1100 (2W/12//1) (1.001.12/01.10 01.1000 1.0 1.1 1.1 1.1 1.1 1.1 1.
, ,	b. PEAK DISCHARGE $Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$
	$Q_P = Q_{100} = ((2.03*0.25) + (4.37*0.54)) = 2.9 CFS$
RTION OF BASIN 3 14,400 SF = 0.33 AC EATMENT AREA (SF/AC) %	2. BASIN 4-A-1
13,600 / 0.31 94 800 / 0.02 6	a. VOLUME $E_{W} = (E_{A}A_{A} + E_{B}A_{B} + E_{C}A_{C} + E_{D}A_{D})/A_{T}$ $E_{W} = ((0.0740.36) + (0.0840.40) + (4.0740.04)/4.44 = 4.56 \text{ [N]}$
RTION OF BASIN 4A 30,100 SF = 0.69 AC	$E_W = ((0.67*0.36) + (0.99*0.10) + (1.97*0.94))/1.41 = 1.56 IN$ $V_{100} = (E_W/12)A_T = (1.56/12)1.41 = 0.1829 AC-FT = 7,970 CF$
EATMENT AREA (SF/AC) % 3,010 / 0.07 10	b. PEAK DISCHARGE $Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$
27,090 / 0.62 90 SIN 4-B 166,910 SF = 3.83 AC	$Q_P = Q_{100} = ((2.03*0.36) + (2.87*0.10) + (4.37*0.94)) = 5.1 CFS$
EATMENT AREA (SF/AC) % 130,580 / 2.99 78 36,330 / 0.83 22	3. BASIN 4-B
SIN 4-C 62,700 SF = 1.44 AC	a. VOLUME $E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$
EATMENT AREA (SF/AC) % 54,450 / 1.25 87 6,600 / 0.15 10	$E_W = ((0.67*0.39) + (0.99*2.40) + (1.97*0.52))/3.31 = 1.11 IN$ $V_{100} = (E_W/12)A_T = (1.11/12)3.31 = 0.3061 AC-FT = 13,330 CF$
1,650 / 0.04 3	b. PEAK DISCHARGE
SIN 5 124,300 SF = 2.85 AC EATMENT AREA (SF/AC) % 7,700 / 0.18 6	$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$ $Q_P = Q_{100} = ((2.03*0.39) + (2.87*2.40) + (4.37*0.52)) = 9.9 CFS$
30,160 / 0.69 24 86,440 / 1.98 70	4. BASIN 5-A
OPED LAND TREATMENT	a. VOLUME $E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$
SIN 1-A 34,600 SF = 0.79 AC EATMENT AREA (SF/AC) % 10,900 / 0.25 32	$E_W = ((0.67*0.68) + (1.97*1.02))/1.70 = 1.45 \text{ IN}$ $V_{100} = (E_W/12)A_T = (1.45/12)1.70 = 0.2050 \text{ AC-FT} = 8,930 \text{ CF}$
23,700 / 0.54 68	b. PEAK DISCHARGE
SIN 4-A-1 61,300 SF = 1.40 AC EATMENT AREA (SF/AC) % 15,800 / 0.36 26	$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$ $Q_P = Q_{100} = ((2.03*0.68) + (4.37*1.02)) = 5.8 CFS$
4,400 / 0.10 7 41,100 / 0.94 67	c. 12" STORM DRAIN CAPACITY, S = 3.0%
SIN 4-B 144160 SF = 3.31 AC EATMENT AREA (SF/AC) %	$Q_{CAP} = C_m/n^*A^*R^{2/3}*S^{1/2}$ (MANNING'S EQUATION) $C_m = 1.49 \qquad A = 0.75 \text{ FT} * \pi = 1.77 \text{ SF} \qquad R = A/P = 0.375 \text{ FT}$
17,050 / 0.39 12 104,480 / 2.40 72	n = 0.013 P = $2 * \pi * 0.75$ FT = 4.71 FT S = 0.0120 FT/FT $Q_{CAP} = 1.49/0.013 * 0.79 * 0.25^{2/3} * 0.0300^{1/2}$
22,630 / 0.52 16 SIN 5-A 73,900 SF = 1.70 AC	Q _{CAP} = 6.2 CFS > Q _{5-A} = 5.8 CFS; OK 5. BASIN 5-B-1
EATMENT AREA (SF/AC) % 29,600 / 0.68 40 44,300 / 1.02 60	a. VOLUME
SIN 5-B-1 61,000 SF = 1.40 AC	$E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$ $E_W = ((0.67*0.04) + (0.99*0.25) + (1.97*1.11))/1.40 = 1.76 IN$
EATMENT AREA (SF/AC) % 1,700 / 0.04 3 10,900 / 0.25 18	$V_{100} = (E_W/12)A_T = (1.76/12)1.40 = 0.2054 \text{ AC-FT} = 8,950 \text{ CF}$
48,400 / 1.11 79	b. PEAK DISCHARGE $Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$
SIN 5-B-2 60,500 SF = 1.39 AC EATMENT AREA (SF/AC) % 4,000 / 0.09 7	$Q_P = Q_{100} = ((2.03*0.04) + (2.87*0.25) + (4.37*1.11)) = 5.6 CFS$
24,000 / 0.55 40 32,500 / 0.75 54	c. 18" STORM DRAIN CAPACITY, S = 1.2% $Q_{CAP} = C_m/n^*A^*R^{2/3}*S^{1/2} (MANNING'S EQUATION)$
<u>(</u>	$C_m = 1.49$ $A = 0.75 \text{ FT} * \pi = 1.77 \text{ SF}$ $R = A/P = 0.375 \text{ FT}$ $n = 0.013$ $P = 2 * \pi * 0.75 \text{ FT} = 4.71 \text{ FT}$ $S = 0.0120 \text{ FT/FT}$
(CURRENT) CONDITION	$Q_{CAP} = 1.49/0.013 * 1.77 * 0.375^{2/3} * 0.012^{1/2}$ $Q_{CAP} = 11.6 \text{ CFS} > 2*Q_{5-B-1} = 11.4 \text{ CFS}; \text{ OK}$
DN OF BASIN 1	6. BASIN 5-B-2
$= (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$ $= ((0.67*0.30) + (1.97*0.56))/0.86 = 1.51 \text{ IN}$	a. VOLUME $E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$
$_{10} = (E_W/12)A_T = (1.51/12)0.86 = 0.1080 AC-FT = 4,710 CF$ AK DISCHARGE	$E_W = ((0.67*0.09) + (0.99*0.55) + (1.97*0.75))/1.39 = 1.50 IN$ $V_{100} = (E_W/12)A_T = (1.50/12)1.39 = 0.1736 AC-FT = 7,560 CF$
$= Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$ $= Q_{100} = ((2.03*0.30) + (4.37*0.56)) = 3.0 CFS$	b. PEAK DISCHARGE
ON OF BASIN 3	$Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$ $Q_P = Q_{100} = ((2.03*0.09) + (2.87*0.55) + (4.37*0.75)) = 4.8 CFS$
LUME $= (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$	c. EXISTING 24" STORM DRAIN TIE-IN CAPACITY, S = 0.4% (FROM 2009 CMP)
= (0.99*0.31) + (1.97*0.02)/0.33 = 1.04 IN $= (E_W/12)A_T = (1.04/12)0.33 = 0.0285 \text{ AC-FT} = 1,250 \text{ CF}$	$Q_{EXIST\ 24"\ CAP}$ = 20.7 CFS > $Q_{100\ EXIST\ 2009\ MDP}$ = 15.6 CFS; 5.1 CFS AVAILABLE. $Q_{EXIST\ 24"\ CAP}$ = 20.7 CFS < Q_{EXIST} + Q_{5-B-1} + Q_{5-B-2} = 15.6 + 5.6 + 4.8 CFS = 26.0 CFS
AK DISCHARGE	THEREFORE EXISTING 24" SD OUTFALL REQUIRES UPSIZING
$= Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$ $= Q_{100} = (2.87*0.31) + (4.37*0.02) = 1.0 CFS$	d. NEW 30" STORM DRAIN CAPACITY, S = 0.4% $Q_{CAP} = C_m/n^*A^*R^{2/3}*S^{1/2}$ (MANNING'S EQUATION)
ON OF BASIN 4-A	$C_m = 1.49$ $A = (1.25 \text{ FT})^2 * \pi = 4.91 \text{ SF}$ $R = A/P = 0.625 \text{ FT}$ $n = 0.013$ $P = 2 * \pi * 1.25 \text{ FT} = 7.85 \text{ FT}$ $S = 0.0040 \text{ FT/FT}$
$= (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$	$Q_{CAP} = 1.49/0.013 * 4.91 * 0.625^{2/3} * 0.0040^{1/2}$ $Q_{30"CAP} = 26.0 CFS > Q_{EXIST} + Q_{5-B-1} + Q_{5-B-2} = 26.0 CFS; OK$
A = (0.99*0.07) + (1.97*0.62)/0.69 = 1.87 IN $A = (E_W/12)A_T = (1.87/12)0.69 = 0.1078 \text{ AC-FT} = 4,690 \text{ CF}$	7. TOTAL PROJECT SITE
AK DISCHARGE = Q _{PA} A _A + Q _{PB} A _B + Q _{PC} A _C + Q _{PD} A _D	a. VOLUME
$= Q_{100} = (2.87*0.07) + (4.37*0.62) =$ 2.9 CFS	$\Sigma V_{100} = V_{100 1-A} + V_{100 4-A-1} + V_{100 4-B} + V_{100 5-A} + V_{100 5-B-1} + V_{100 5-B-2}$ $\Sigma V_{100} = 4,500 + 7,970 + 13,330 + 8,930 + 8,950 + 7,560$
4-B	$\Sigma V_{100, DEV} = 51,230 \text{ CF}$ b. PEAK DISCHARGE
$A_{D} = (E_{A}A_{A} + E_{B}A_{B} + E_{C}A_{C} + E_{D}A_{D})/A_{T}$ $A_{D} = (0.99^{*}2.99) + (1.97^{*}0.83)/3.82 = 1.20 \text{ IN}$	$\Sigma Q_{100} = Q_{100 1-A} + Q_{100 4-A-1} + Q_{100 4-B} + Q_{100 5-A} + Q_{100 5-B-1} + Q_{100 5-B-2}$ $\Sigma Q_{100} = 2.9 + 5.1 + 9.9 + 5.8 + 5.6 + 5.0$
$_{00} = (E_W/12)A_T = (1.20/12)3.82 = 0.3824 \text{ AC-FT} = 16,690 \text{ CF}$	$\Sigma Q_{100, DEV} = 34.5 \text{ CFS}$
AK DISCHARGE = $Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$ = $Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$ 12.2 CES	C. <u>COMPARISON</u>
$= Q_{100} = (2.87*2.99) + (4.37*0.83) =$ 12.2 CFS	1. TOTAL PROJECT SITE
DLUME	a. VOLUME $(\Sigma V_{100, DEV} - \Sigma V_{100, EXIST})$ $\Delta V_{100} = 51,230 - 48,300 = 2,930 \text{ CF}$ (INCREASE)
$A_{A} = (E_{A}A_{A} + E_{B}A_{B} + E_{C}A_{C} + E_{D}A_{D})/A_{T}$ $A_{A} = ((0.67*1.25) + (0.99*0.15) + (1.97*0.04))/1.44 = 0.74 N $ $A_{A} = (0.74/12)A_{A} = (0.74/12)A_{A} = 0.0887 A_{C} = E_{T} = 0.3870 CE_{T} = 0.3870$	b. PEAK DISCHARGE (ΣQ _{100, DEV} - ΣQ _{100, EXIST})
$_{00} = (E_W/12)A_T = (0.74/12)1.44 = 0.0887 AC-FT = 3,870 CF$ AK DISCHARGE	$\Delta Q_{100} = 34.5-33.2 = 1.3 CFS$ (INCREASE)
$= Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$ $= Q_{100} = ((2.03*1.25) + (2.87*0.15) + (4.37*0.04)) = 3.1 CFS$	
5 WITH PORTION OF 4-B	
LUME = (E _A A _A +E _B A _B +E _C A _C +E _D A _D)/A _T	∧
$A_{00} = (E_{W}/12)A_{T} = (1.65/12)2.85 = 0.3920 \text{ AC-FT} = 17,090 \text{ CF}$	\ <u>\\\/5\</u> \ <u>\</u> /6\
AK DISCHARGE	
$= Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$	RECORD DRAWING
$= Q_{100} = ((2.03*0.18) + (2.87*0.69) + (4.37*1.98)) = 11.0 CFS$	
	FOR CERTIFICATION, SEE SHEET C-10



EXISTING LEGEND





CHERRY/SEE/REAMES

ARCHITECTS, LLP

220 gold avenue sw albuquerque, nm 87102

505 - 842 - 1278 fax 505 - 766 - 9269

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HIGH\ Consulting Group **6010-B MIDWAY PARK BLVD. NE**

ALBUQUERQUE. NEW MEXICO 87109

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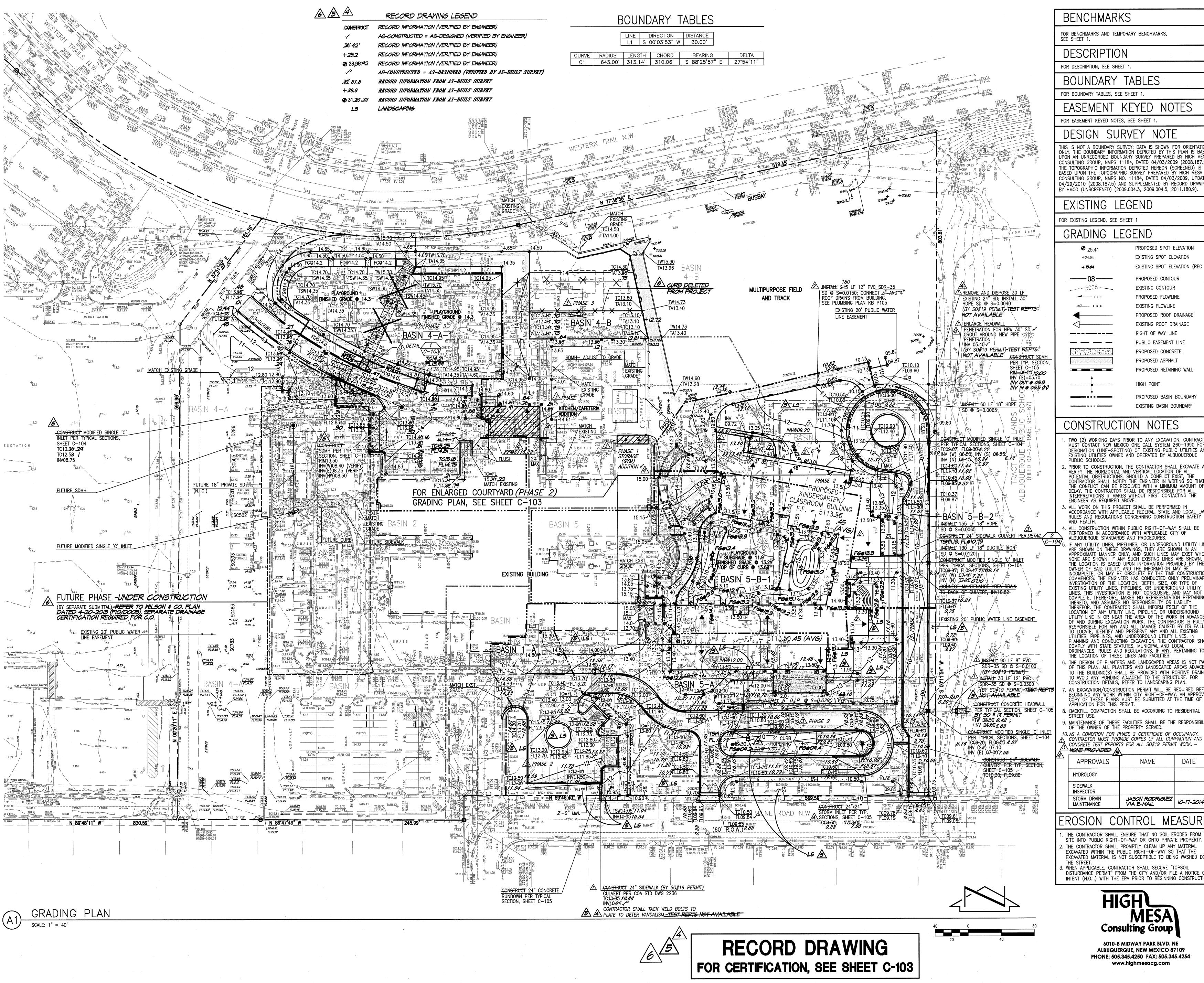
BUILDING. DRAINAGE CERTIFICATION OF PHASE 3 WILL BE REQUIRED FOR

PROJECT CLOSEOUT.

TITLE OF SHEET DRAINAGE PLAN AND **CALCULATIONS**

> SHEET NUMBER C-101

SHEET OF



FOR BENCHMARKS AND TEMPORARY BENCHMARKS,

BOUNDARY TABLES

EASEMENT KEYED NOTES

THIS IS NOT A BOUNDARY SURVEY; DATA IS SHOWN FOR ORIENTATION ONLY. THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON AN UNRECORDED BOUNDARY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 04/03/2009 (2008.187.5). THE TOPOGRAPHIC INFORMATION DEPICTED HEREON (SCREENED) IS BASED UPON THE TOPOGRAPHIC SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED 04/03/2009, UPDATED 04/29/2010 (2008.187.5) AND SUPPLEMENTED BY RECORD DRAWINGS BY HMCG (UNSCREENED) (2009.004.3, 2009.004.5, 2011.180.9).

EXISTING LEGEND

FOR EXISTING LEGEND, SEE SHEET 1

EXISTING SPOT ELEVATION EXISTING SPOT ELEVATION (REC DWG PROPOSED CONTOUR __-5008---EXISTING CONTOUR PROPOSED FLOWLINE EXISTING FLOWLINE PROPOSED ROOF DRAINAGE EXISTING ROOF DRAINAGE RIGHT OF WAY LINE PUBLIC EASEMENT LINE _____ PROPOSED CONCRETE

PROPOSED SPOT ELEVATION

HIGH POINT PROPOSED BASIN BOUNDARY EXISTING BASIN BOUNDARY

PROPOSED ASPHALT

PROPOSED RETAINING WALL

MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 FOR DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE 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. . ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY

4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES. . 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 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 PERPENSIONATION REPTAINING , THEREFORE, MAKES NO REPRESENTATION PERTAINING HERETO, 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

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 JTILITIES, 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 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 AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED

APPLICATION FOR THIS PERMIT. BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL O. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED. 10. AS A CONDITION FOR PHASE 2 CERTIFICATE OF OCCUPANCY, CONTRACTOR MUST PROVIDE COPIES OF ALL COMPACTION AND

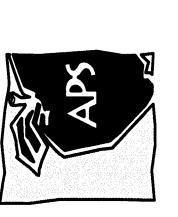
JASON RODRIGUEZ VIA E-MAIL 10-17-2014

. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. 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 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.



6010-B MIDWAY PARK BLVD. NE **ALBUQUERQUE, NEW MEXICO 87109** PHONE: 505.345.4250 FAX: 505.345.4254 www.highmesacg.com

CHERRY/SEE/REAMES ARCHITECTS, LLP 220 gold avenue sw albuquerque, nm 87102 505 - 842 - 1278 fax 505 - 766 - 9269



KEY PLAN NOT REQUIRED

NOT REQUIRED				
6	09/2015	PHASE 3 CERT		
<u>\$</u>	08/2015	PHASE 2 RECERT		
<u></u>	12-2014	REC. DNG & CERT. PHASE 2		
<u>/</u> 3\	05-2014	PHASING & X-WALK		
A	11-2013	RD MODS		
\triangle	4/13/2013	SO#19		
	4/1/2013	100% CD SUBMITTAL		
	9/28/2012	50% CD SUBMITTAL		
	6/11/2010	100% CD SUBMITTAL		
-	3/22/2010	95% CD SUBMITTAL		
	12/18/2009	50% CD SUBMITTAL		
	9/30/2009	DD SUBMITTAL		
		I		

MANAGEMENT BLOCK

MARK DATE DESCRIPTION

6/15/2009 | SD SUBMITTAL

PROJECT NO: CHAPPARAL CAD DWG FILE: 2009.004.7/2009.004.

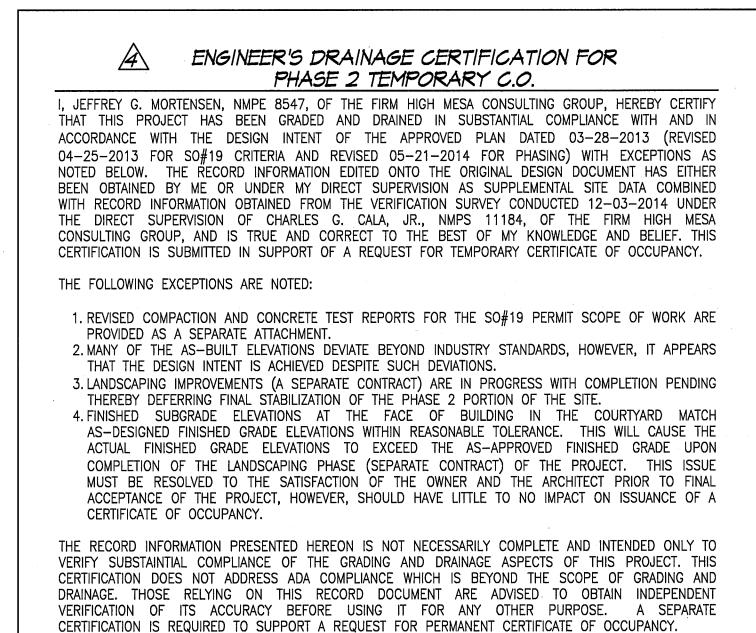
DRAWN BY: JLP/CFA/BLE/E.J.S./J.Y.R. COPYRIGHT: Cherry/See/Reames LLP., 2013

TITLE OF SHEET

GRADING PLAN

SHEET NUMBER

C-102 SHEET OF



PLAYGROUND

TOP OF CONTAINMENT

FÍNISHED GRADE @ 13.200

TG13.00: 13.14

INV (N) -09:85 ^X C

F.F. = 5113.50.45 (AVG)

G12.80*12.69*

PHASE 3— PLAYGROUND CLASS ROOM BUILDING NEW KINDERGARTEN CLASSROOM BLDG. SPED BUS LOOP

PHASING KEY MAP

JEFFREY G. MORTENSEN, NMPE 8547, OF THE FIRM HIGH MESA CONSULTING GROUP, HEREB CERTIFY THAT THE PHASE 2 PORTION OF THIS PROJECT HAS BEEN GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 03-28-2013 (REVISED 04-25-2013 FOR SO#19 CRITERIA AND REVISED RECORD DRAWING LEGEND EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR PERSONNE UNDER MY DIRECT SUPERVISION AS SUPPLEMENTAL SITE DATA COMBINED WITH RECORD RECORD INFORMATION (VERIFIED BY ENGINEER) INFORMATION OBTAINED FROM THE VERIFICATION SURVEYS CONDUCTED 12-03-2014 AND AS-CONSTRUCTED = AS-DESIGNED (VERIFIED BY ENGINEER) 08-19-2015 UNDER THE DIRECT SUPERVISION OF CHARLES G. CALA, JR., NMPS 11184, THE FIRM HIGH MESA CONSULTING GROUP, AND IS TRUE AND CORRECT TO THE BEST OF MY

13.43

) 09.00 *8.97*

09,20,14

14.40

F5013.3

RECORD INFORMATION (VERIFIED BY ENGINEER) RECORD INFORMATION (VERIFIED BY ENGINEER) ● 28,95.92 RECORD INFORMATION (VERIFIED BY ENGINEER) AS-CONSTRUCTED = AS-DESIGNED (VERIFIED BY AS-BUILT SURVEY)

RECORD INFORMATION FROM AS-BUILT SURVEY RECORD INFORMATION FROM AS-BUILT SURVEY RECORD INFORMATION FROM AS-BUILT SURVEY LANDSCAPING

PROPOSED

/KINDERGARTEN/

CLASSROOM

BUILDING

INV (S) 10.15 10.12

TG12-80 12.76 INV10-00 10.07

CONSTRUCT 24" BEEHIVE INLET (TYPICAL OF 7)
PER TYPICAL SECTION, SHEET 5

F.F. = 5113.50 45 (AY6)

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THIS CERTIFICATION DOES NOT ADDRESS ADA COMPLIANCE WHICH IS BEYOND THE SCOPE OF GRADING AND DRAINAGE. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE. A SEPARATE CERTIFICATION IS REQUIRED TO SUPPORT A REQUEST FOR ACCEPTANCE OF THE PHASE 3 PORTION OF THE PROJECT.

ENGINEER'S DRAINAGE CERTIFICATION FOR PHASE 2 PERMANENT C.O.

KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR

. REVISED COMPACTION AND CONCRETE TEST REPORTS FOR THE SO#19 PERMIT SCOPE

2. LANDSCAPING IMPROVEMENTS (A SEPARATE CONTRACT) ARE COMPLETE BASED UPON VISUAL

MANY OF THE AS—BUILT ELEVATIONS DEVIATE BEYOND INDUSTRY STANDARDS, HOWEVER,

I.FINISHED GRADE ELEVATIONS AT THE FACE OF PHASE 2 BUILDING OFTEN EXCEED THE

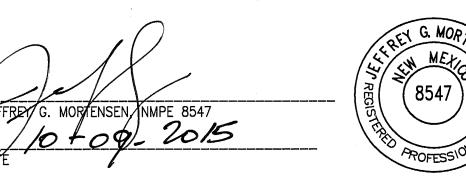
AS-APPROVED FINISHED GRADE. THIS CONDITION HAS BEEN REVIEWED BY THE OWNER AND

SITE INSPECTION BY THE ENGINEER HENCE FINAL STABILIZATION OF THE PHASE 2 PORTION

WORK ARE NOW AVAILABLE THEREFORE NO LONGER REMAIN AN OUTSTANDING ITEM.

APPEARS THAT THE DESIGN INTENT IS ACHIEVED DESPITE SUCH DEVIATIONS.

PERMANENT CERTIFICATE OF OCCUPANCY FOR THE PHASE 1 AND PHASE 2 BUILDINGS AND



ENGINEER'S DRAINAGE CERTIFICATION FOR PHASE 3

JEFFREY G. MORTENSEN, NMPE 8547, OF THE FIRM HIGH MESA CONSULTING GROUP, HEREBY CERTIFY THAT THE PHASE 3 PORTION OF THIS PROJECT HAS BEEN GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 03-28-2013 (REVISED 04-25-2013 FOR SO#19 CRITERIA AND REVISED 05—21—2014 FOR PHASING)WITH EXCEPTIONS AS NOTED BELOW, THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR PERSONNEL UNDER MY DIRECT SUPERVISION AS SUPPLEMENTAL SITE DATA COMBINED WITH RECORD INFORMATION OBTAINED FROM THE PHASE 3 SPECIFIC VERIFICATION SURVEY CONDUCTED 09-18-2015 UNDER THE DIRECT SUPERVISION OF CHARLES G. CALA, JR., NMPS 11184, O THE FIRM HIGH MESA CONSULTING GROUP, AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED TO DOCUMENT COMPLETION OF THE PHASE 3 WORK SPECIFIED ON THE AS-APPROVED PLAN

THE FOLLOWING EXCEPTIONS ARE NOTED:

THE FOLLOWING EXCEPTIONS ARE NOTED:

OF THE PROJECT HAS BEEN ACHIEVED.

ARCHITECT AND FOUND TO BE ACCEPTABLE TO EACH.

, THE EXISTING PORTABLE CLASSROOM BUILDING SITUATED NORTH OF THE BASIN 4B WATER HARVESTING AREA WAS NOT RELOCATED. THIS DOES NOT HAVE AN ADVERSE IMPACT ON SITE DRAINAGE. SURFACE RUNOFF FROM THIS PORTION OF THE SITE ENTERS THE WATER HARVESTING AREA AS INTENDED. 2.THE CURB SPECIFIED FOR THE NORTH EDGE OF THE BASIN 4B WATER HARVESTING AREA WAS DELETED FROM PROJECT SCOPE. THIS DOES NOT HAVE AN ADVERSE IMPACT ON SITE DRAINAGE. SURFACE RUNOFF ENTERS THE WATER HARVESTING AREA AS INTENDED. 3.THE RAISED WALKWAY SEPARATING THE NEW PLAY AREAS WAS DELETED. THIS DOES NOT HAVE AN ADVERSE IMPACT ON SITE DRAINAGE AS THE NET EFFECT IS A REDUCTION I 4. THE NEW PLAY AREA WAS SHIFTED APPROXIMATELY 6 FEET NORTH TO AVOID POST-SURVEY ELECTRIC PULL BOX. THIS DOES NOT HAVE AN ADVERSE IMPACT ON SITE

DRAINAGE AS THERE IS NO NET INCREASE IN SITE IMPERVIOUSNESS AND DRAINAGE PATTERNS WERE NOT ALTERED. 5.LANDSCAPING IMPROVEMENTS (A SEPARATE CONTRACT) ARE IN PROGRESS BASED UPON VISUAL SITE INSPECTION BY THE ENGINEER CONDUCTED 09-23-2015 HENCE FINAL STABILIZATION OF THE PHASE 3 PORTION OF THE PROJECT IS CONSIDERED COMPLETE. 6. MANY OF THE AS—BUILT ELEVATIONS DEVIATE BEYOND INDUSTRY STANDARDS, HOWEVER, BASED UPON VISUAL SITE INSPECTION CONDUCTED 09-23-2015 FOLLOWING A 0.72-INCH RAINFALL (KNMALBUQ35) 09-22-2015, IT APPEARS THAT THE DESIGN INTENT IS ACHIEVED

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED NLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THIS CERTIFICATION DOES NOT ADDRESS ADA COMPLIANCE WHICH IS BEYOND THE SCOPE OF GRADING AND DRAINAGE. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHE PURPOSE. A SEPARATE CERTIFICATION IS REQUIRED TO SUPPORT A REQUEST FOR CERTIFICAT OF OCCUPANCY FOR THE "FUTURE PHASE" OF WORK AT THE WEST EDGE OF THE ELEMENTAR



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 JANUARY 11, 2000, BOOK 2000C, PAGE 9

TRACTS A AND B, CHAPPARRAL ELEMENTARY SCHOOL, ALBUQUERQUE,

DESIGN SURVEY NOTE

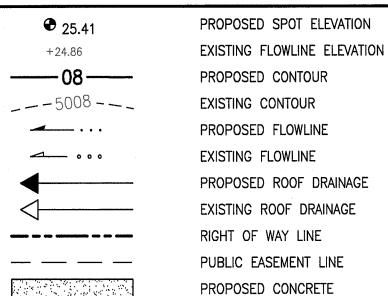
DESCRIPTION

THIS IS NOT A BOUNDARY SURVEY; DATA IS SHOWN FOR ORIENTATION ONLY. THE BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON AN UNRECORDED BOUNDARY SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED 04/03/2009 (2008.187.5). THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON TH TOPOGRAPHIC SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED 04/03/2009 AND UPDATED 04/29/2010 (2008.187.5).

EXISTING LEGEND

FOR EXISTING LEGEND, SEE SHEET C-101

GRADING LEGEND



PROPOSED RETAINING WALL HIGH POINT

PROPOSED ASPHALT

PROPOSED BASIN BOUNDARY EXISTING BASIN BOUNDARY

. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 FOR DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC SCHOOLS.

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.

. 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. . ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICALBLE 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 AM 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 AN' AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILIT 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. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART

THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT 1 THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN. 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. . BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL

STREET USE.

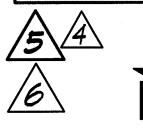
9. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED. 10. AS A CONDITION FOR PHASE 2 CERTIFICATE OF OCCUPANCY, CONTRACTOR MUST PROVIDE COPIES OF ALL COMPACTION AND CONCRETE TEST REPORTS FOR ALL SO#19 PERMIT 🛕 WORK. — NONE PROVIDED 겵

747	<u>4\</u>			
	APPROVALS	NAME	DATE	
	HYDROLOGY			
	SIDEWALK INSPECTOR			
	STORM DRAIN MAINTENANCE	JASON RODRIGUEZ VIA E-MAIL	10-17-2014	

EROSION CONTROL **MEASURES**

THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. 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 . 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 BÉGINNING CONSTRUCTION

RECORD DRAWING



Consulting Group

6010-B MIDWAY PARK BLVD. NE **ALBUQUERQUE, NEW MEXICO 87109** PHONE: 505.345.4250 FAX: 505.345.4254 www.highmesacg.com

CHERRY/SEE/REAMES ARCHITECTS, LLP 220 gold avenue sw albuquerque, nm 87102 505 - 842 - 1278 fax 505 - 766 - 9269

h3.28-2013



KEY PLAN NOT DECLUDED

NOT REQUIRED			
6 09/2015		PHASE 3 CERT	
\$	08/2015	PHASE 2 RECERT	
4	12-2014	REC. DWG & CE PHASE 2	
/3\	05-2014	PHASING	
	4/1/2013	100% CD SUBMIT	
	9/28/2012	50% CD SUBMIT	
	6/11/2010	100% CD SUBMIT	
	3/22/2010	95% CD SUBMIT	
	12/18/2009	50% CD SUBMIT	
	9/30/2009	DD SUBMITTA	
	6/15/2009	SD SUBMITTA	
MARK	DATE	DESCRIPTION	

MANAGEMENT BLOCK

PROJECT NO: CHAPPARAL CAD DWG FILE: 2009.004.7/2009.004.8

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DRAWN BY: JLP/CFA/BLE/JDS CHECKED BY: J.G.M.

TITLE OF SHEET

COURTYARD GRADING **PLAN**

SHEET NUMBER

C-103 SHEET OF



PER TYPICAL SECTION SHEET 5

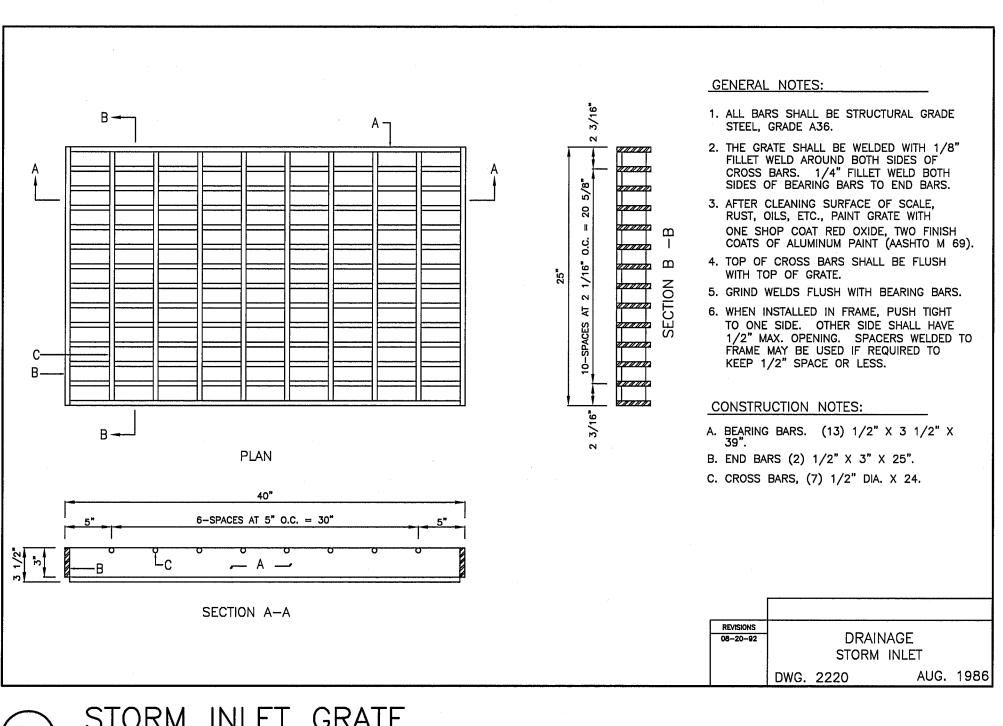
CONSTRUCT 24"x24" STORM INLET PER TYPICAL SECTION SHEET 5

TG12.50; INV (N) 10.75 12.46 10.64

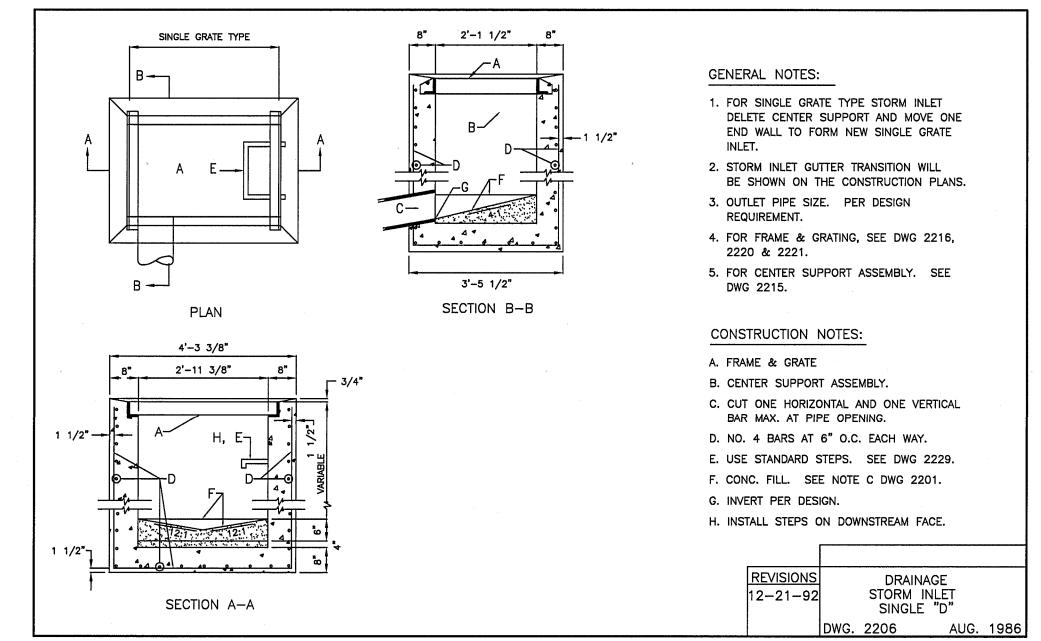
COURTYARD GRADING PLAN - PHASE 2

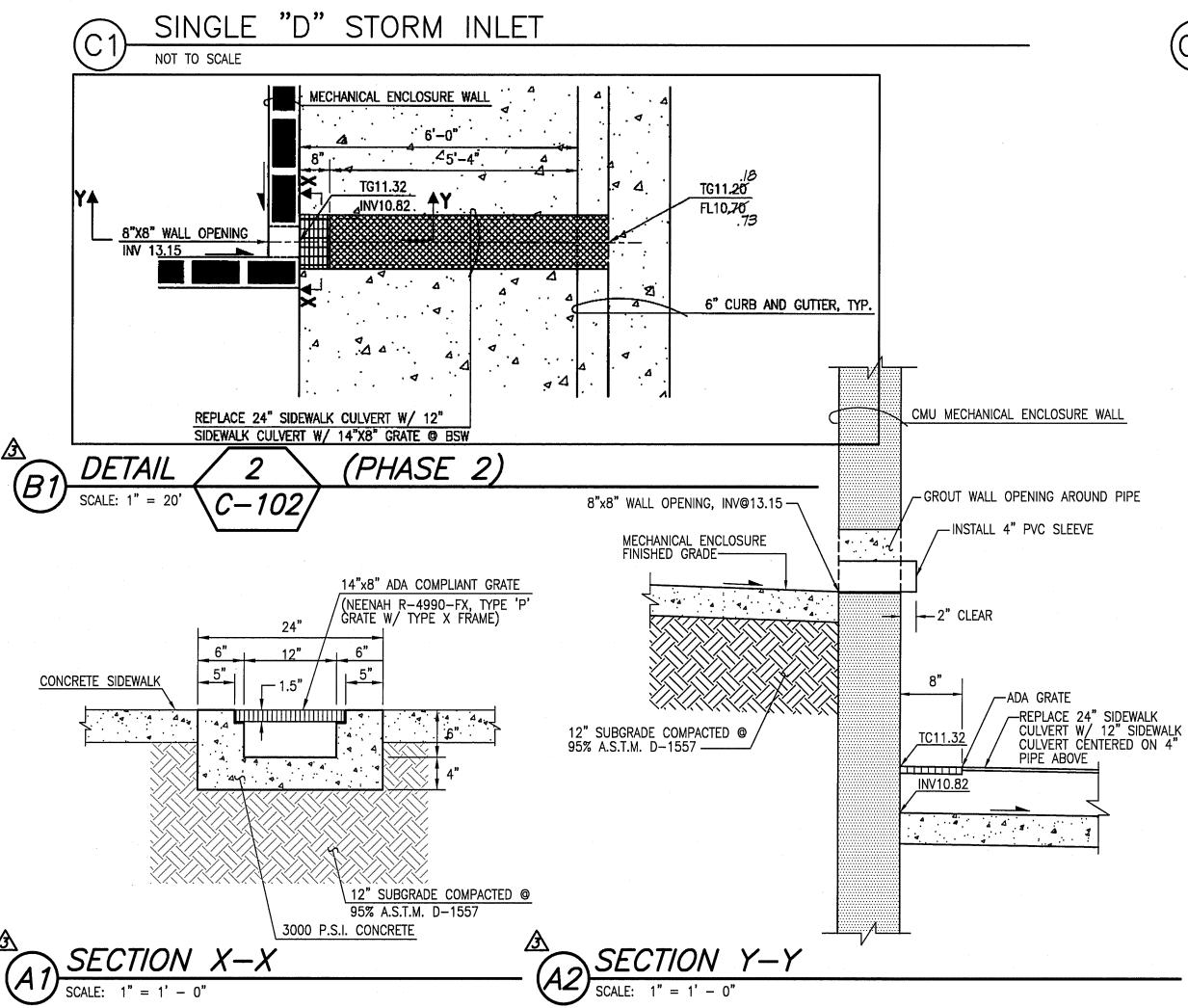
TG12.80 12.74

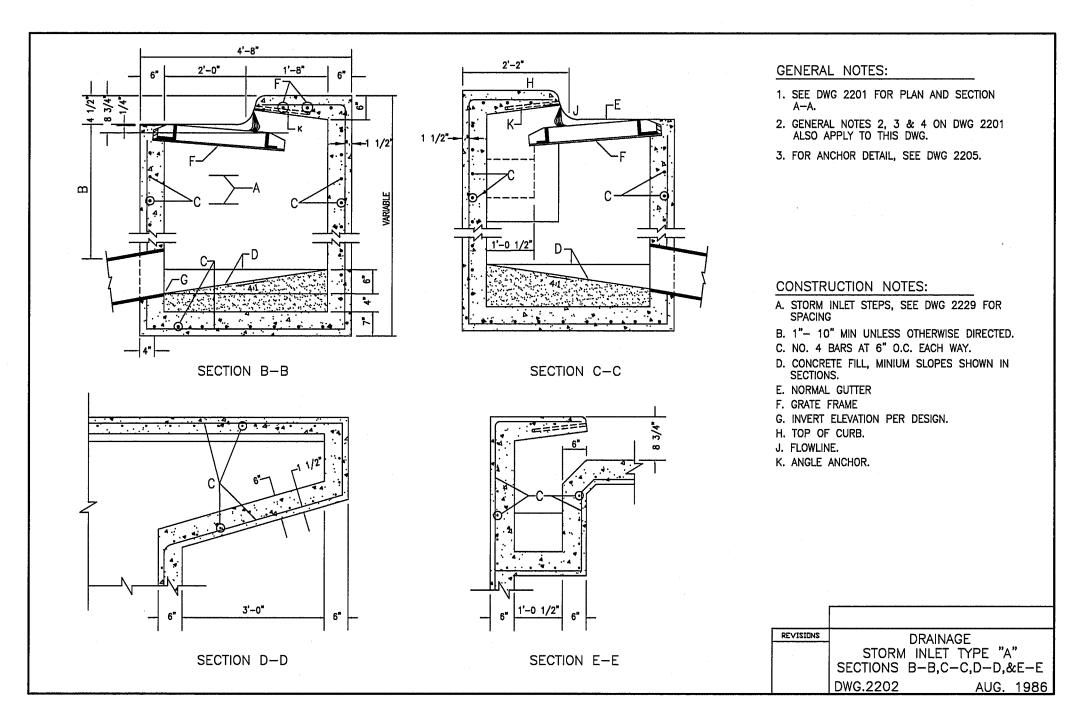
INV10.25 10.28





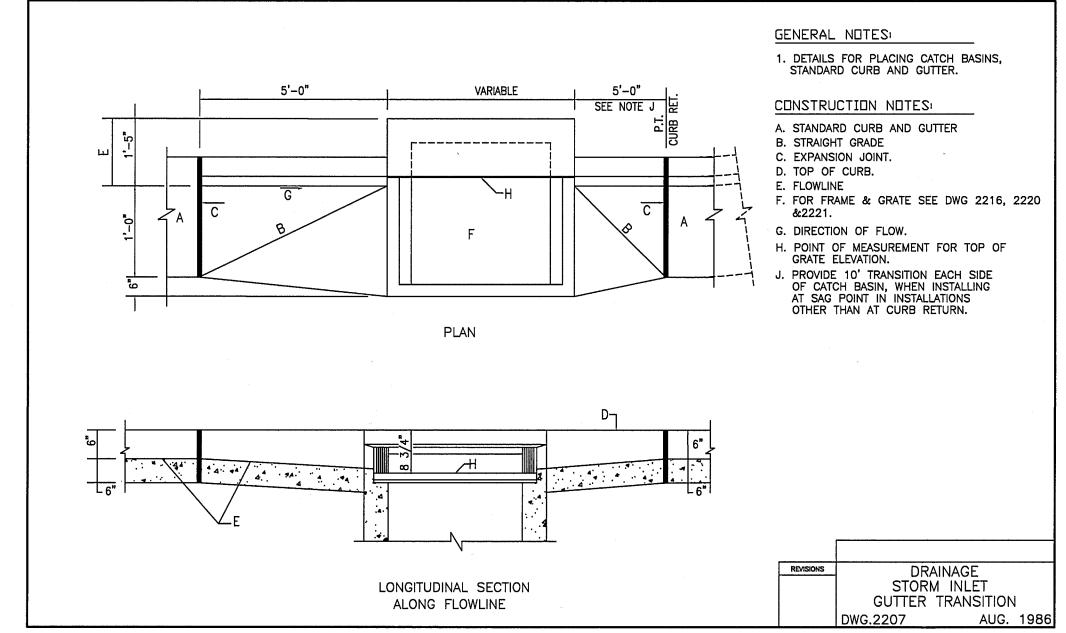






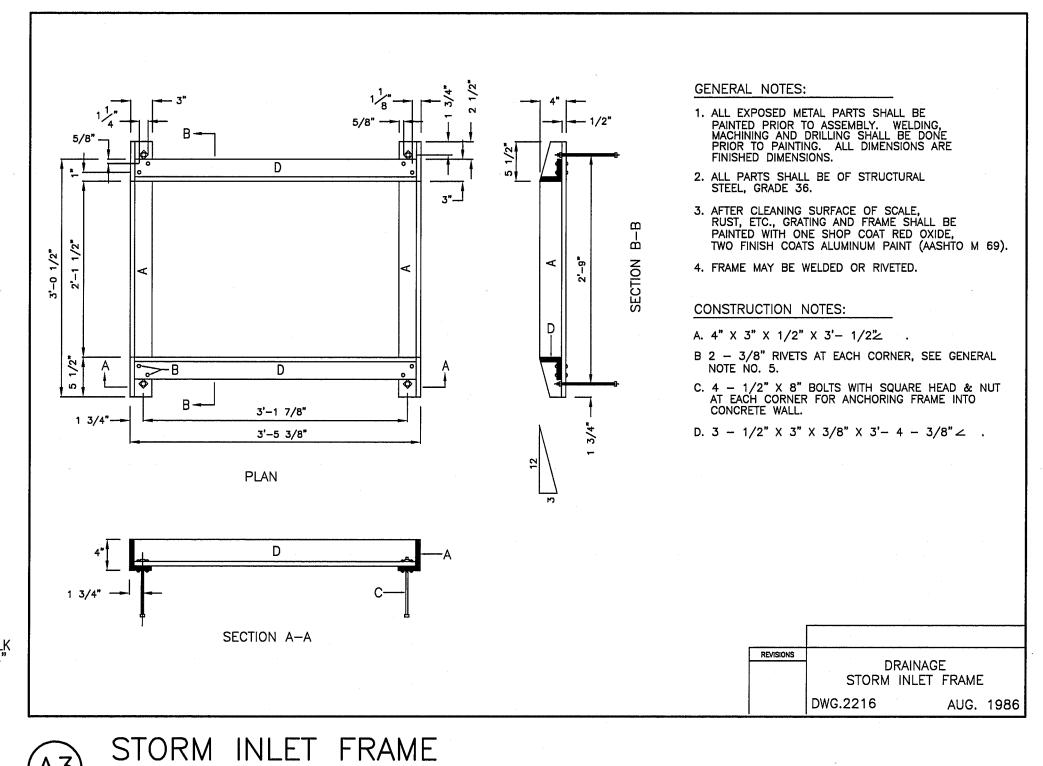
STORM INLET TYPE "A" SECTIONS B-B, C-C, D-D, & E-E

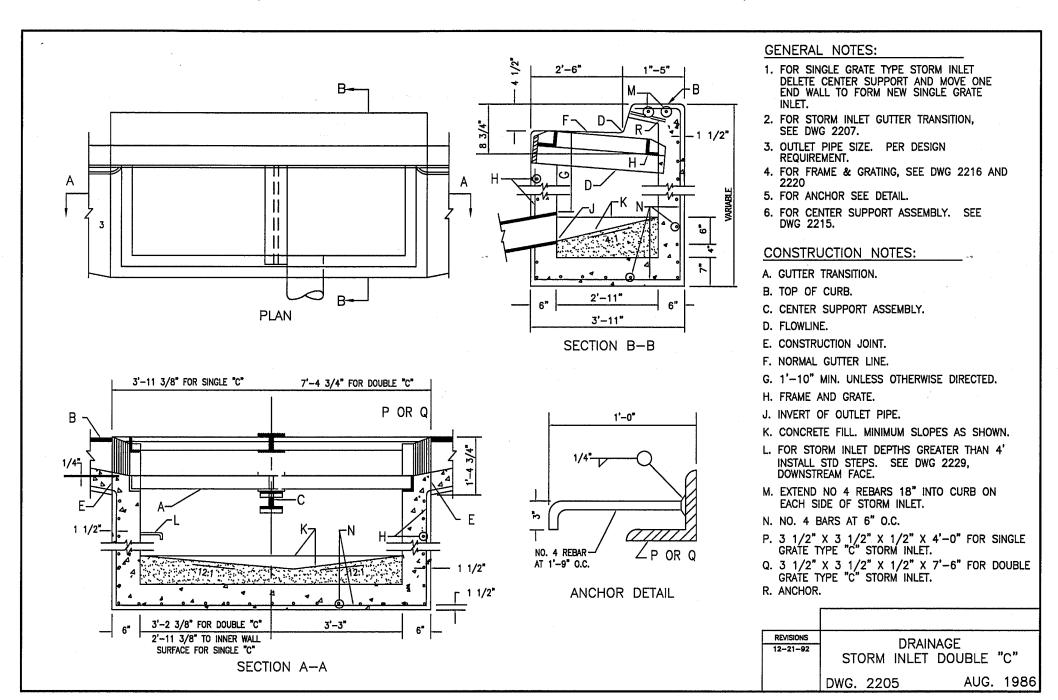
NOT TO SCALE



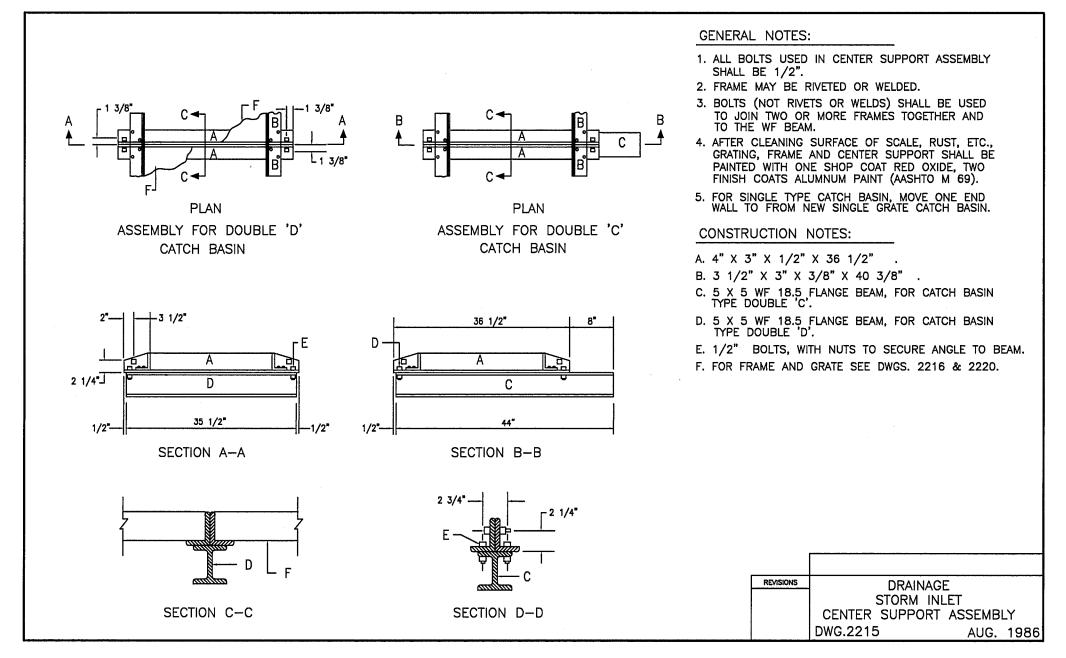
MODIFIED 'C' STORM INLET GUTTER TRANSITION

NOT TO SCALE

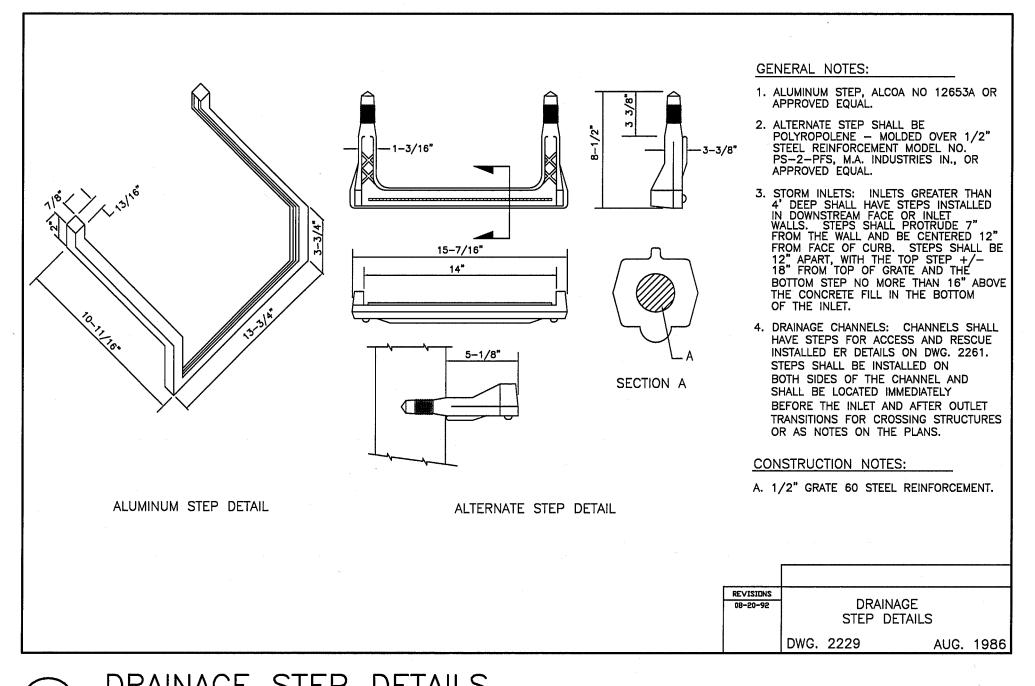




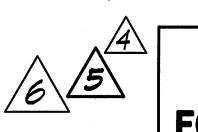




C5 STORM INLET CENTER SUPPORT ASSEMBLY



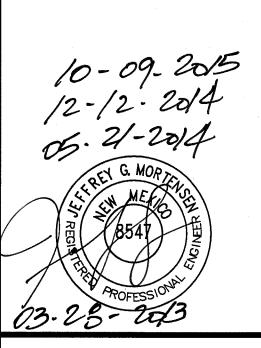
DRAINAGE STEP DETAILS



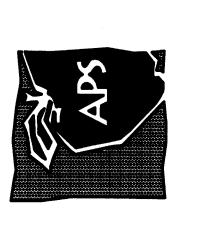
RECORD DRAWING FOR CERTIFICATION, SEE SHEET C-103







Chaparral Elementary School Addition 6325 Milne Rd NW Albuquerque, NM 87120



KEY PLAN NOT REQUIRED

6	09/2015	PHASE 3 CERT
<u>\$</u>	08/2015	PHASE 2 RECERT
À	12-2014	REC. DWG & CERT. PHASE 2
/3\	05-2014	PHASING
	4/1/2013	100% CD SUBMITTAL
	9/28/2012	50% CD SUBMITTAL
	6/11/2010	100% CD SUBMITTAL
	3/22/2010	95% CD SUBMITTAL
	12/18/2009	50% CD SUBMITTAL
	9/30/2009	DD SUBMITTAL
	6/15/2009	SD SUBMITTAL
MARK	DATE	DESCRIPTION
ISSUE:		

MANAGEMENT BLOCK

PROJECT NO: CHAPARRAL

CAD DWG FILE: 2009.004.7/2009.004.8

DRAWN BY: CFA/BLE/JDS

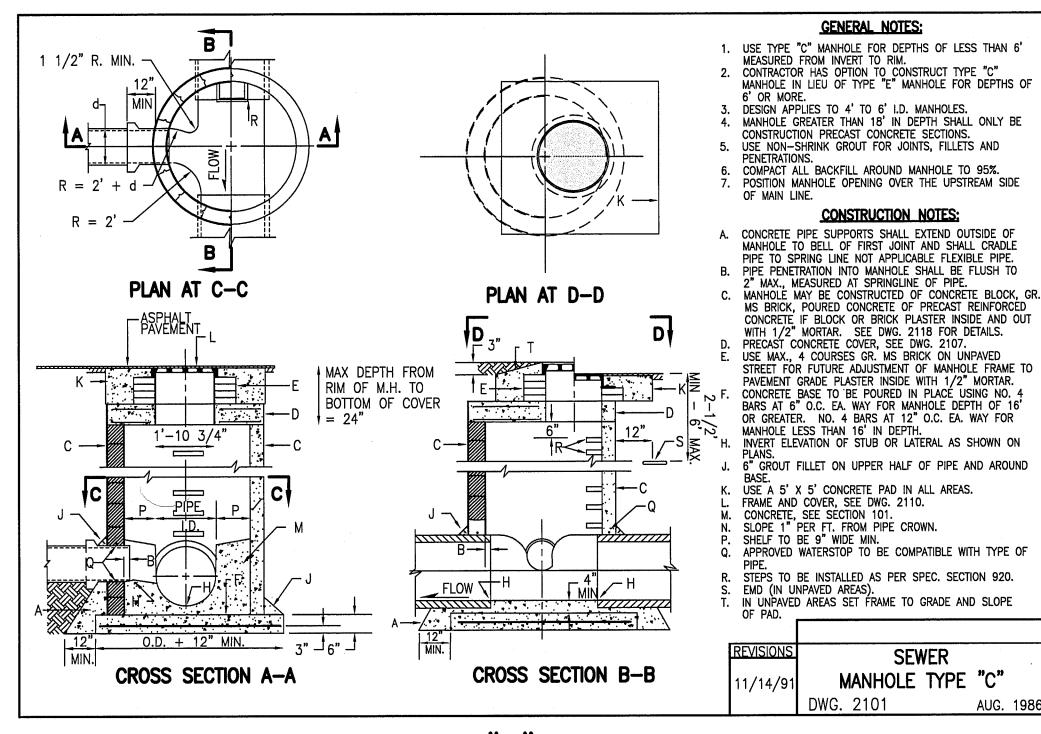
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TITLE OF SHEET

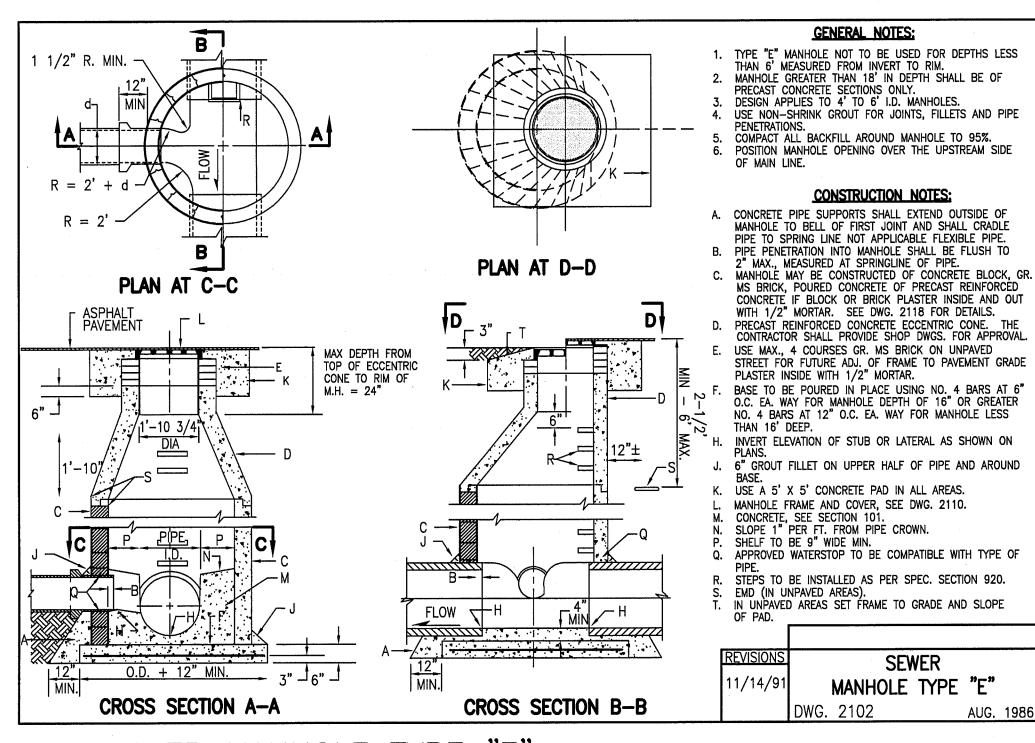
STORM INLET DETAILS

SHEET NUMBER

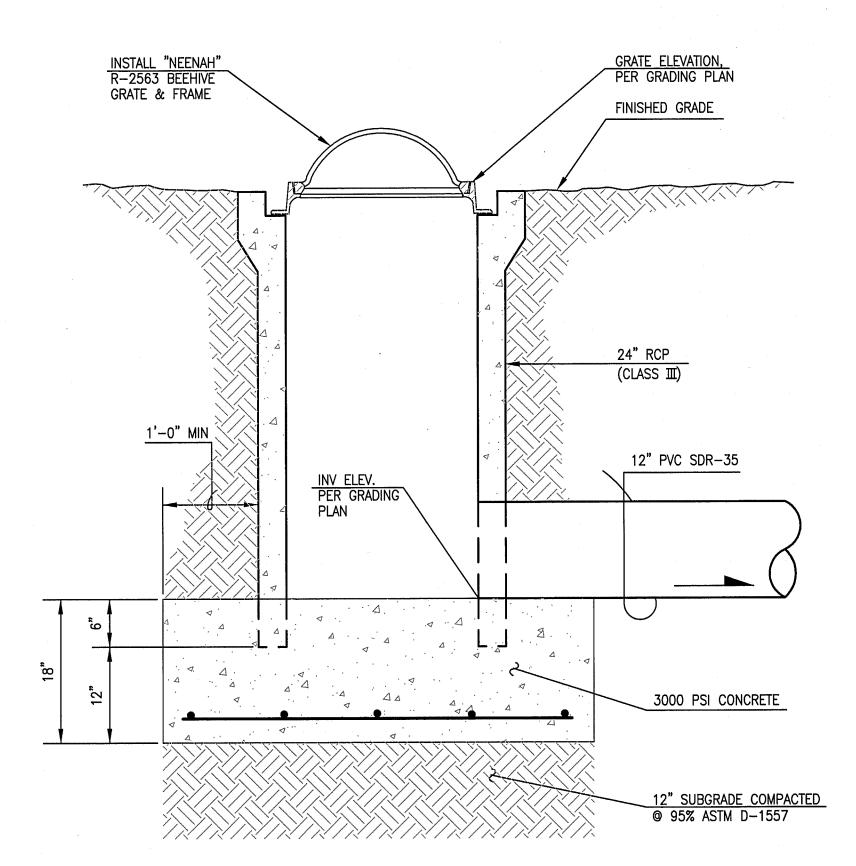
C-104 SHEET OF TYPICAL RUNDOWN SECTION



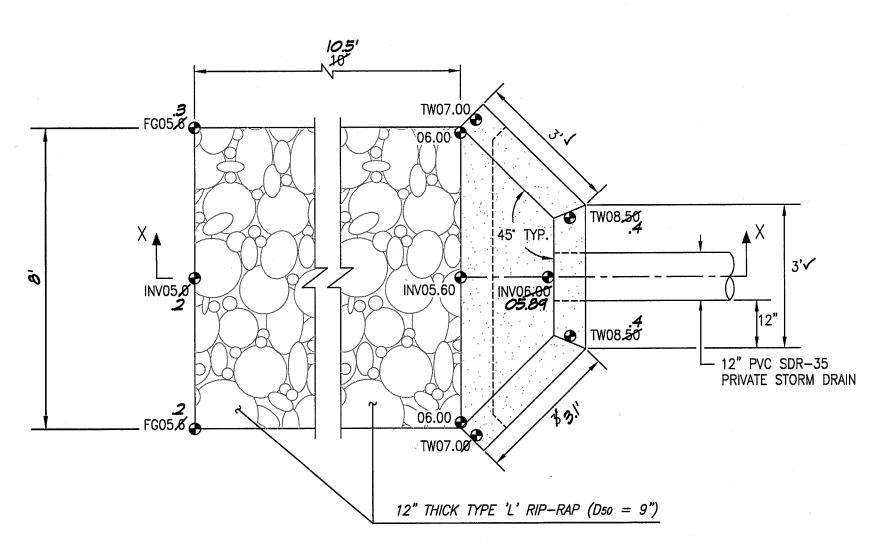
SEWER MANHOLE TYPE "C"



SEWER MANHOLE TYPE "E"

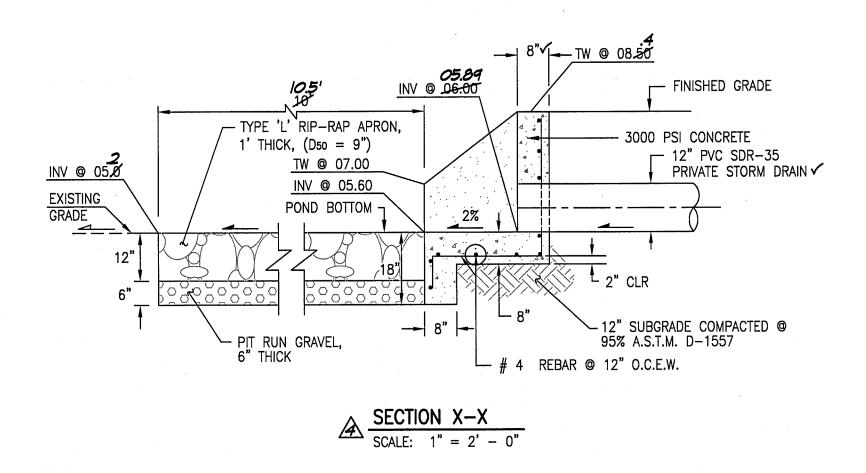


BEEHIVE INLET SECTION



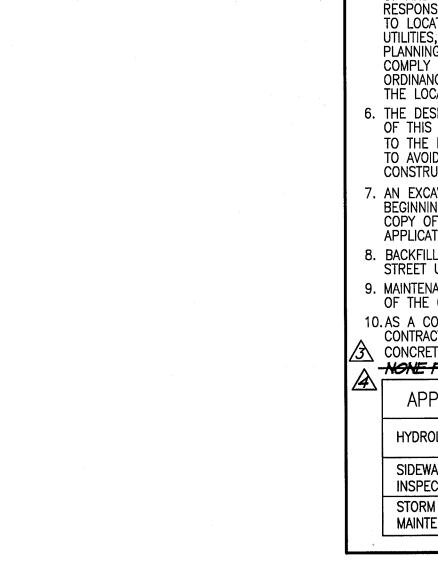
 $\frac{3}{4}$ TYPICAL HEADWALL PLAN VIEW (PHASE 2)

SCALE: 1" = 2' - 0"



TYPICAL HEADWALL (BY SO#19 PERMIT) - PHASE 2

NOT TO SCALE



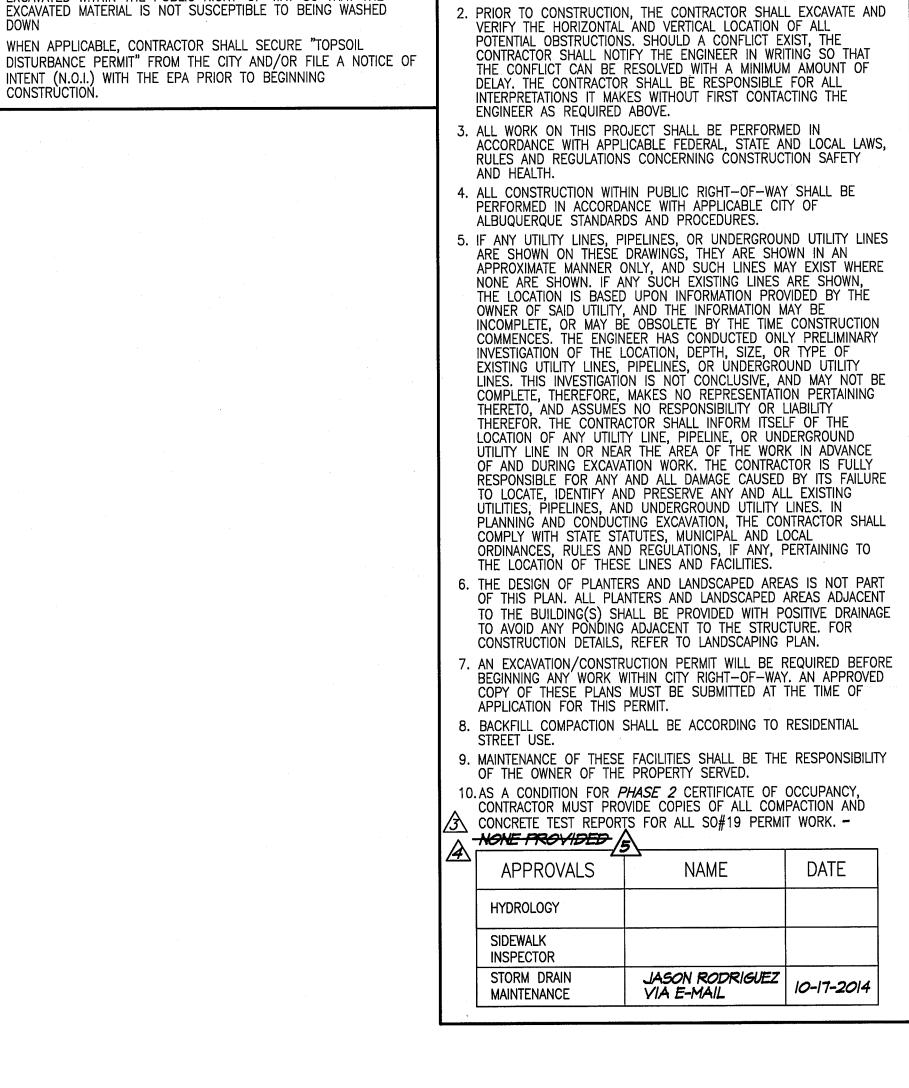
THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE

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

WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL

INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING

CONSTRÙCTIOŃ.



TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 FOR DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE

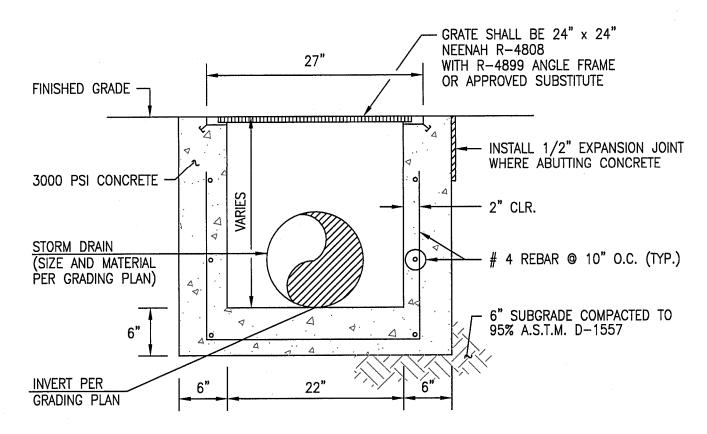
CHERRY/SEE/REAMES

ARCHITECTS, LLP

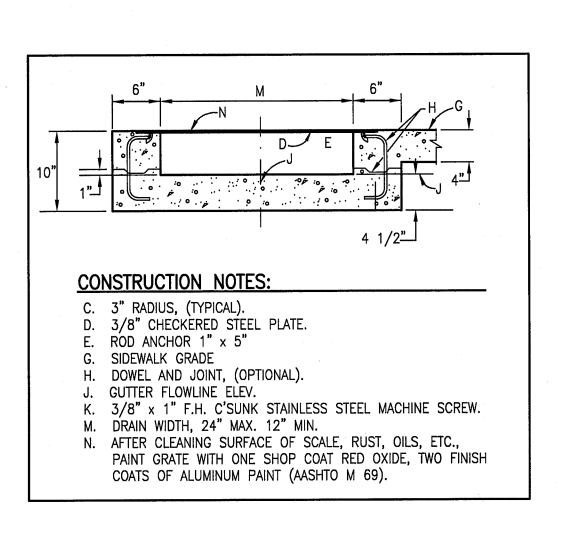
220 gold avenue sw albuquerque, nm 87102

505 - 842 - 1278 fax 505 - 766 - 9269

PUBLIC SCHOOLS.

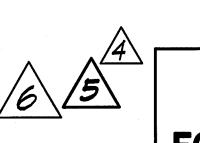


TYPICAL 24"X24" STORM INLET SECTION



SIDEWALK CULVERT (PRIVATE)

SCALE: 1" = 0'-6"



RECORD DRAWING FOR CERTIFICATION, SEE SHEET C-103



ALBUQUERQUE, NEW MEXICO 87109

PHONE: 505.345.4250 FAX: 505.345.4254 www.highmesacg.com

08/2015 12-2014 REC. DNG & CERT PHASE 2 05-2014 PHASING 4/13/2013 4/1/2013 100% CD SUBMITTAL 9/18/2012 50% CD SUBMITTA 6/11/2010 100% CD SUBMITTAL 9/30/2009 DD SUBMITTAI 6/15/2009 SD SUBMITTAL MARK DATE DESCRIPTION

KEY PLAN

NOT REQUIRED

09/2015

MANAGEMENT BLOCK

PROJECT NO: CHAPARRAL

CAD DWG FILE: 2009.004.7/2009.004.8

DRAWN BY: CFA/BLE/JDS/EJS/SCC

CHECKED BY: J.G.M. COPYRIGHT: Cherry/See/Reames LLP., 20

TITLE OF SHEET DRAINAGE AND MANHOLE SECTIONS & DETAILS

SHEET NUMBER

C-105 SHEET OF