

• L E G E N D •

MATERIALS

CONCRETE
RIP-RAP

LINES

SUBDIVISION BOUNDARY
PROPERTY LINE (PLAN)
PROPERTY LINE (SECTION)
CENTERLINE
EASEMENT LINE
MATCH LINE
SECTION CUT LINE

EARTHWORK

CONTOUR LINE
SPOT ELEVATION
PROJECT / PHASE BOUNDARY
FLOWLINE
DIRECTION OF FLOW

MISCELLANEOUS UTILITIES

GAS LINE
UNDERGROUND TELEPHONE
UNDERGROUND ELECTRICAL
STORM DRAIN
STORM DRAIN MANHOLE
STORM DRAIN INLET

SANITARY SEWER

SANITARY SEWER LINE
SANITARY SEWER MANHOLE
SAS SERVICE CONNECTIONS
SAS CAP OR PLUG
ENCASEMENT

WATER

WATER LINE
WATER SERVICE CONNECTIONS
GATE VALVE
FIRE HYDRANT
BUTTERFLY VALVE
REDUCER
WATER PRESSURE ZONE BOUNDARY

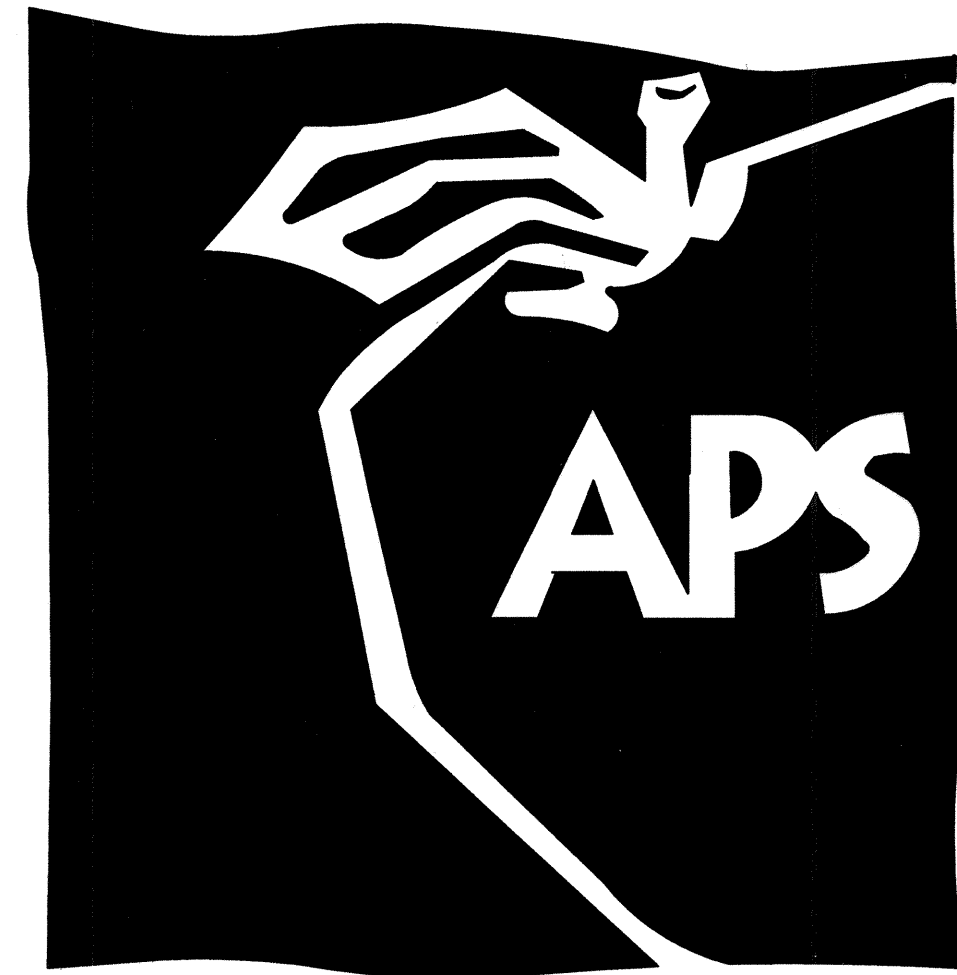
WATER FITTINGS

CAPS AND PLUGS
ELBOW
CROSS
TEE

MISCELLANEOUS

CHAINLINK FENCE
FIELD FENCE
COMMON YARD WALL
RETAINING WALL
POWER OR TELEPHONE POLE

CONSTRUCTION PLANS for CHAMISA STORM DRAIN SURGE POND JAMES MONROE MIDDLE SCHOOL ALBUQUERQUE, NEW MEXICO NOVEMBER, 2007



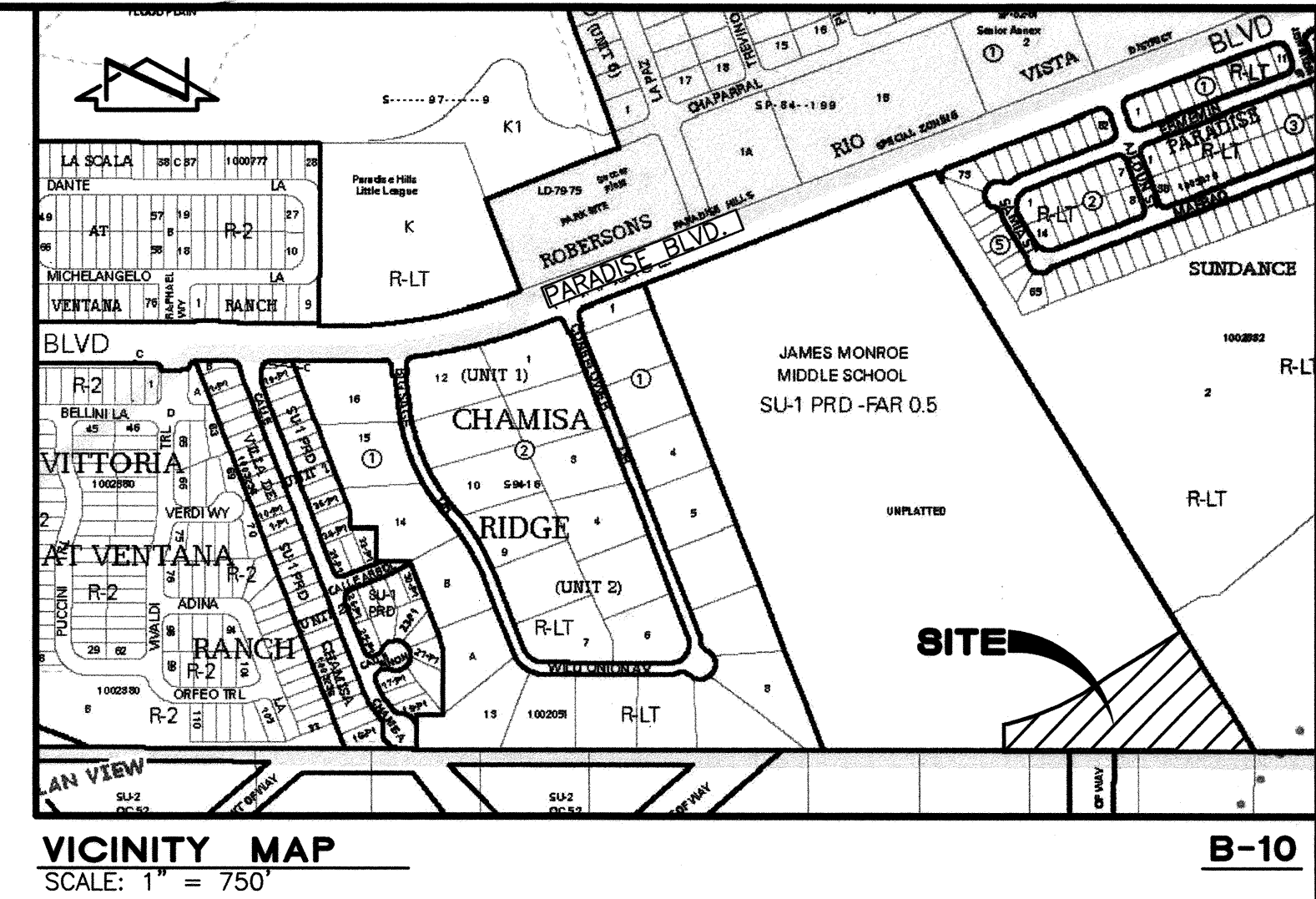
INDEX OF DRAWINGS

SHEET	DESCRIPTION
1	COVER SHEET, VICINITY MAP, GENERAL NOTES, LEGEND AND INDEX OF DRAWINGS
2	SITE PLAN, GRADING PLAN, AND GRADING NOTES
3	SECTIONS AND DETAILS
4	AS-BUILT CONDITIONS & HYDRAULIC CALCULATIONS

RECORD DRAWING

APPROVED AS RECORD DRAWINGS
DESIGN REVIEW SECTION
CITY CONSTRUCTION ENGINEER
DATE: 4-01-2009

Sheet 4 added by consultant to show additional Record Drawing information



GENERAL NOTES:

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS-PUBLIC WORKS CONSTRUCTION-1986 - UPDATE NO. 7, AMENDMENT 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 PUBLIC UTILITIES AND ABASTO UTILITY LOCATION CO. (889-8307) FOR LOCATION OF EXISTING PRIVATE UTILITIES.
- 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 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.
- SHOULD A CONFLICT EXIST BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY FOR ALL PARTIES.
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING SAFETY AND HEALTH.
- ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
- BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE.
- TACK COAT REQUIREMENTS SHALL BE DETERMINED DURING CONSTRUCTION BY THE PROJECT ENGINEER.
- SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
- IF CURB IS DEEPER FOR A DRIVEPAD OR A HANDICAP RAMP, THE DRIVEPAD OR RAMP SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF THE CURB AND GUTTER.
- ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.
- CONTRACTOR SHALL COORDINATE WITH NMUI FOR THE EXECUTION OF THE VALVE SHUT OFF PLAN, NOT LESS THAN SEVEN (7) WORKING DAYS IN ADVANCE OF ANY WORK THAT MAY AFFECT THE EXISTING PUBLIC WATER UTILITIES. ONLY NMUI PERSONNEL SHALL OPERATE EXISTING VALVES. REFER TO SECTION 18 OF THE SPECIFICATION. THE NMUI PHONE NUMBER IS 986-2661.
- CONTRACTOR SHALL NOTIFY THE CITY SURVEYOR NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATION OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF THE SPECIFICATIONS.
- FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION CO-ORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION CO-ORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADING ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. CONTRACTOR MUST REFER TO SECTION 19 OF THE STANDARD SPECIFICATION FOR TRAFFIC CONTROL.
- ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PLASTIC REFLECTORIZED STRIPING BY CONTRACTOR TO EXISTING LOCATION OR AS INDICATED BY THIS PLAN SET.
- CAUTION: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR. ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED-OUT IN ACCORDANCE WITH OSHA 29 CFR 1926, SUBPART P-EXCAVATIONS.
- ANY WORK OCCURRING WITHIN AN ARTERIAL ROADWAY REQUIRES TWENTY-FOUR HOUR CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.
- WHEN APPLICABLE, CONTRACTOR SHALL, ON BEHALF OF THE OWNER AND OPERATORS, SECURE TOPSOIL DISTURBANCE PERMIT FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE CITY PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL CONSTRUCTION SIGNING UNTIL PROJECT HAS BEEN ACCEPTED BY THE CITY OF ALBUQUERQUE.

HIGH MESA Consulting Group
FORMERLY HIGH MESA CONSULTING GROUP, INC.
6010-B MIDWAY PARK BLVD. NE • ALBUQUERQUE, NEW MEXICO 87109
PHONE: 505.345.4250 • FAX: 505.345.4254 • www.highmesacg.com

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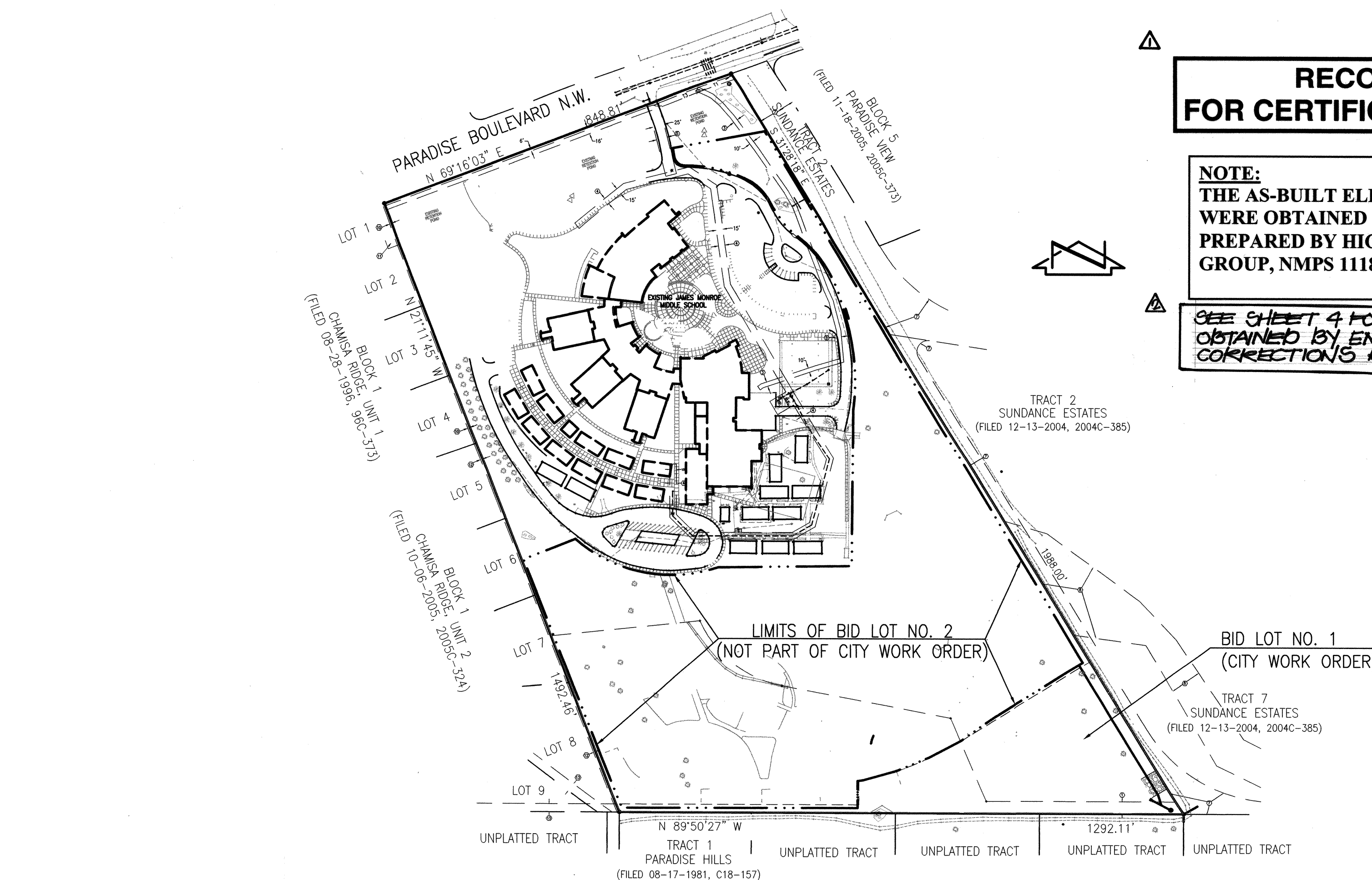
REV.	SHEETS	CITY	ENGINEER	DATE	USER	DEPARTMENT	DATE	USER	DEPARTMENT	DATE
1-3	1-4									
ENGINEERS STAMP & SIGNATURE		APPROVALS		ENGINEER		DATE		*****		
12-17-2007		BRC Chairman		J. Alford		12/17/07		APPROVED FOR CONSTRUCTION		
		Transportation		[Signature]		12/17/07				
		Water/Wastewater		[Signature]		12-17-07				
		Hydrology		Bradley H. Kingston		12/17/07		[Signature] 12-12-07		
		C.I.P.						City Engineer Date		
		Const. Mngt.								
		Const. Coord.								
City Project No.				SHEET				OF		
662382				1				34		

GRADING NOTES

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION - 1986, UPDATE 7, INCLUDING AMENDMENT 1.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 280-1880 (ALBUQUERQUE AREA) 1-800-321-ALERT (2537) (STATEWIDE) FOR LOCATION OF EXISTING PUBLIC UTILITIES AND ABASTO UTILITY LOCATION CO. (889-8307) FOR LOCATION OF EXISTING PRIVATE UTILITIES.
- 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 REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. 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.
- SHOULD A CONFLICT EXIST BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY FOR ALL PARTIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING SAFETY AND HEALTH.
- 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 THE STREET.
- WHEN APPLICABLE, THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION. AN EXCAVATION PERMIT IS REQUIRED FOR ALL WORK WITHIN PUBLIC RIGHT-OF-WAY.
- A DISPOSAL SITE FOR ALL EXCESS EXCAVATION MATERIAL (CONTAMINATED OR OTHERWISE), ASPHALTIC PAVING, CONCRETE PAVING, ETC. SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND IN HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT SHALL BE MADE.
- A BORROW SITE FOR IMPORT MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A BORROW SITE AND IN HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT SHALL BE MADE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFELY OBTAINING THE REQUIRED COMPACTION. THE CONTRACTOR SHALL SELECT AND USE METHODS WHICH SHALL NOT BE INJURIOUS OR DAMAGING TO THE EXISTING FACILITIES AND STRUCTURES WHICH SURROUND THE WORK AREAS.
- THE CONTRACTOR SHALL CONFINE HIS WORK WITHIN THE CONSTRUCTION LIMITS IN ORDER TO PRESERVE THE EXISTING IMPROVEMENTS AND SO AS NOT TO INTERFERE WITH THE OPERATIONS OF THE EXISTING FACILITIES.
- 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.
- ALL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% ASTM D-1557 UNLESS A GREATER COMPACTION REQUIREMENT IS OTHERWISE SPECIFIED.
- ALL EXISTING UTILITIES ENCOUNTERED WITHIN THE WORK LIMITS SHALL BE ADJUSTED TO GRADE AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- MAXIMUM UNPROTECTED SLOPES SHALL BE 3:1.
- ROUGH GRADING TOLERANCES SHALL BE ± 0.33 FT.
- UNDER FEDERAL LAW, THE OPERATOR(S) OF CONSTRUCTION SITES WHERE 1 OR MORE ACRES ARE DISTURBED MUST SUBMIT A NOTICE OF INTENT (N.O.I.) TO OBTAIN COVERAGE UNDER AN NPDES STORM WATER CONSTRUCTION GENERAL PERMIT.
- WHEN APPLICABLE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND FILE AN N.O.I. WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.
- CAUTION: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR. ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED-OUT IN ACCORDANCE WITH OSHA 29 CFR 1926, SUBPART P-EXCAVATIONS.

GRADING PLAN

SCALE: 1" = 50'



OVERALL SITE PLAN (FOR ORIENTATION ONLY)

SCALE: 1" = 200'

RECORD DRAWING FOR CERTIFICATION, SEE SHEET 1

NOTE:
THE AS-BUILT ELEVATIONS DEPICTED HEREON WERE OBTAINED FROM THE AS-BUILT SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED JULY 17, 2008.

SEE SHEET 4 FOR SUPPLEMENTAL DATA OBTAINED BY ENGINEER TO VERIFY CORRECTIONS BY CONTRACTOR.

PROJECT SUMMARY:

BID LOT NO. 1 IS THE CITY WORK ORDER PORTION OF THE MASS GRADING PROJECT FOR THE APS PROTOTYPE #2 ELEMENTARY SCHOOL BID LOT #2 (NOT PART OF CITY WORK ORDER) CONSISTS OF THE PRIVATE EARTHWORK PORTION OF THE MASS GRADING PLAN.

HIGH MESA Consulting Group

FORMERLY JEFF MORTENSEN AND ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. NE • ALBUQUERQUE, NEW MEXICO 87109
PHONE: 505.345.4250 • FAX: 505.345.4254 • www.highmesacg.com
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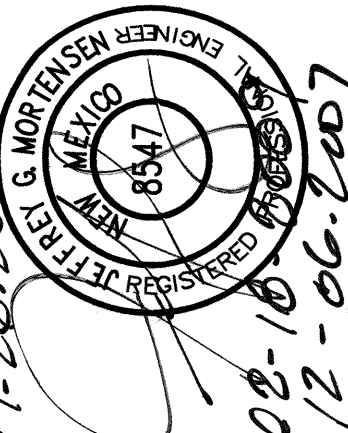
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: SITE PLAN, GRADING PLAN, AND GRADING NOTES
CHAMISA STORM DRAIN SURGE POND AT
JAMES MONROE MIDDLE SCHOOL

Design Review Committee	City Engineer Approval	City Engineer
APPROVED DEC 17 2007 DESIGN REVIEW COMMITTEE	FEB 12 2008 CITY ENGINEER	

City Project No. 662382 Zone Map No. B-10 Sheet 2 of 43

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS	
CONTRACTOR	Shumate Constructors	DATE	06/08/08	NO.	2006.187.3	DATE	07/07	NO.	DATE
WORK SHOWN BY	HMCg	DATE	07/08	BY	HMCg	DATE	11-2007	DESIGNED BY	G.R.B.
FIELD ACCEPTANCE BY	HMCg	DATE	07/08	NO.		DATE	11-2007	DRAWN BY	DWZ/JLP
REVISIONS		DATE	11/08	NO.		DATE	11-2007	CHECKED BY	J.G.H.
MICRO-FILM INFORMATION		RECORDED BY		NO.		DATE		NO.	



NOTE:

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 JULY 13, 2007. THE TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE "PARTIAL TOPOGRAPHIC SURVEY - JAMES MONROE MIDDLE SCHOOL" PREPARED BY HIGH MESA CONSULTING GROUP, NMPS NO. 11184, DATED JULY 13, 2007.

- +63.1 RECORD INFORMATION OBTAINED FROM AS-BUILT SURVEY
- ✓ AS-CONSTRUCTED = AS-DESIGNED VERIFIED BY AS-BUILT SURVEY
- RECORD INFORMATION EDITED BY ENGINEER
- ✓ AS-CONSTRUCTED = AS-DESIGNED VERIFIED BY ENGINEER



HIGH MESA Consulting Group
FORMERLY JEFF MORITSEN AND ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. NE • ALBUQUERQUE, NEW MEXICO 87109
PHONE: 505.345.4250 • FAX: 505.345.4254 • www.highmesacg.com
~~2006.186.7~~ 2007.186.3

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP					
TITLE: SECTIONS AND DETAILS CHAMISA STORM DRAIN SURGE POND AT JAMES MONROE MIDDLE SCHOOL					
Design Review Committee		City Engineer Approval		No./Day/Yr.	
APPROVED DEC 17 2007 DESIGN REVIEW COMMITTEE		APPROVED FEB 12 2008 CITY ENGINEER		12-17-2007	
City Project No.		Zone Map No.		Sheet	
662382		B-10		3 of 43	

SCANNED & PLANNING

2 DRAINAGE PLAN

I. EXECUTIVE SUMMARY AND INTRODUCTION

THE CHAMISA STORM DRAIN SURGE POND IS LOCATED AT THE SOUTHEAST CORNER OF THE JAMES MONROE MIDDLE SCHOOL SITE IN ALBUQUERQUE'S NORTHWEST MESA. THIS SUBMITTAL IS A SUPPLEMENT TO THE PREVIOUSLY APPROVED MASTER DRAINAGE PLAN FOR THE SITE DATED AUGUST 31, 2007. THE COMPLETED CONSTRUCTION DEVIATED FROM THE APPROVED WORK ORDER PLANS REQUIRING ADDITIONAL EVALUATION TO DEMONSTRATE COMPLIANCE WITH THE DESIGN INTENT OF THE CITY ENGINEER APPROVED PLANS. THIS SUBMITTAL IDENTIFIES THE DEVIATIONS FOLLOWED BY JUSTIFICATION FOR ACCEPTANCE OF THE COMPLETED CONSTRUCTION.

THIS SUBMITTAL IDENTIFIES AND EVALUATES THE AS-BUILT CONDITIONS OF THE CHAMISA MASTER STORM DRAIN SURGE POND CONSTRUCTED ON THE JAMES MONROE MIDDLE SCHOOL PROPERTY IN SUPPORT OF THE FOLLOWING:
- EVALUATION OF AS-CONSTRUCTED STORAGE AND SPILLWAY CAPACITIES
- APPROVAL AND ACCEPTANCE OF CITY PROJECT #662382 BY THE CITY
- REQUEST FOR DPM VARIANCE TO SPILLWAY CAPACITY.

II. PROJECT DESCRIPTION

AS SHOWN BY VICINITY MAP, THE SITE IS LOCATED ON THE SOUTH SIDE OF PARADISE BOULEVARD NW BETWEEN UNIVERSE BOULEVARD NW AND THE UNSER BLVD. NW EXTENSION. AS SHOWN BY PANEL 104 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS, BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AREAS, DATED 2008, THIS PROPERTY DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE.

III. BACKGROUND DOCUMENTS

THE FOLLOWING IS A LIST OF RELEVANT DOCUMENTS RELIED UPON IN THE PREPARATION OF THIS DRAINAGE SUBMITTAL:

- A. MASTER DRAINAGE PLAN (MDP) DATED AUGUST 31, 2007 PREPARED BY HIGH MESA CONSULTING GROUP (HMC). THIS REPORT ESTABLISHED THE CRITERIA UPON WHICH THE SOUTHERLY PORTION OF THE SITE COULD BE DEVELOPED AS AN ELEMENTARY SCHOOL SITE. THE PERTINENT CRITERIA PERTAINING TO THE CHAMISA STORM DRAIN SURGE POND ARE AS FOLLOWS -
1. $V_{100} = 145,850$ CF = 3.35 AC-FT
 2. $V_{10-yr} = 4.63$ AC-FT
 3. $Q_{100} = 132.2$ CFS
 4. STORAGE CAPACITY = 4.67 AC-FT (INTERIM) AND 4.4 AC-FT (ULTIMATE) REQUIRED BY THE CHAMISA SD MASTER PLAN
 5. SPILLWAY CAPACITY = 132.2 CFS (INTERIM)
- B. GRADING AND DRAINAGE PLAN DATED DECEMBER 7, 2007 PREPARED BY BOHANNAN-HUSTON, INC. (BHI) FOR PROTOTYPE ELEMENTARY SCHOOL NO. 2 (AKA SUNSET VIEW ELEMENTARY SCHOOL). THIS PLAN REPRESENTS A REFINEMENT TO THE ABOVE REFERENCED MASTER DRAINAGE REPORT AND ESTABLISHED THE FOLLOWING PERTINENT CRITERIA PERTAINING TO THE CHAMISA STORM DRAIN SURGE POND -
1. $V_{100} = 116,810$ CF = 2.68 AC-FT
 2. $V_{10-yr} = 3.95$ AC-FT
 3. $Q_{100} = 132.1$ CFS
- C. WORK ORDER CONSTRUCTION PLANS FOR THE CHAMISA MASTER STORM DRAIN SURGE POND (CPN 662382) DATED DECEMBER 17, 2007 PREPARED BY HIGH MESA CONSULTING GROUP. THIS PLAN SET REPRESENTS BASIS FOR THIS SUBMITTAL AGAINST WHICH AS-CONSTRUCTED CONDITIONS ARE COMPARED TO THE THE AS-APPROVED DESIGN.
- D. PLAT OF JAMES MONROE MIDDLE SCHOOL / SUNSET VIEW ELEMENTARY SCHOOL PREPARED BY HIGH MESA CONSULTING GROUP FILED DECEMBER 31, 2008 IN BOOK 2008C, PAGE 266. THIS RECORDED PLAT DEMONSTRATES THAT THE PREVIOUS PUBLIC DRAINAGE EASEMENT UPON WHICH THE NEW SCHOOL CONSTRUCTION ENCRoACHED HAD BEEN VACATED AND REPLACED WITH A NEW PUBLIC DRAINAGE EASEMENT COINCIDING WITH THE AS-CONSTRUCTED IMPROVEMENTS ASSOCIATED WITH THE ABOVE REFERENCED WORK ORDER PLANS

IV. EXISTING CONDITIONS AND REQUIREMENTS

THE CHAMISA MASTER STORM DRAIN SURGE POND HAS BEEN CONSTRUCTED AS AN INTERIM RETENTION POND. IN THE INTERIM CONDITION, IT SERVES ONLY THE APS PROPERTY. IN THE ULTIMATE CONDITION, IT WILL BE CONVERTED INTO A DETENTION POND SERVING ADJACENT PROPERTIES IN ADDITION TO THE SCHOOL SITES.

IN THE INTERIM CONDITION, THE POND NEEDS TO HAVE SUFFICIENT CAPACITY TO CONTAIN THE V_{10-yr} DEVELOPED VOLUME OF RUNOFF GENERATED BY THE APS PROPERTY, 172,000 CF (3.95 AC-FT) BASED UPON THE BHI PLAN. IN THE ULTIMATE CONDITION, THE POND NEEDS TO HAVE SUFFICIENT CAPACITY TO CONTAIN 4.4 AC-FT BASED UPON THE HMC MDP AND THE CHAMISA STORM DRAIN COST SHARE AGREEMENT.

THE AS-CONSTRUCTED STORAGE CAPACITY OF THE INTERIM RETENTION POND IS 191,660 CF (4.40 AC-FT). THIS CONDITION COMPARES FAVORABLY WITH THE REQUIRED DESIGNED (BHI) VOLUME OF 3.95 AC-FT. IN THE AS-CONSTRUCTED CONDITION, THE INTERIM RETENTION POND HAS EXCESS CAPACITY TO CONTAIN THE V_{10-yr} DEVELOPED VOLUME OF RUNOFF GENERATED BY THE APS PROPERTY. THE V_{10-yr} DEVELOPED VOLUME OF RUNOFF CAN BE STORED BELOW THE MINIMUM ELEVATION OF THE INTERIM OVERFLOW SPILLWAY.

THE INTERIM RETENTION POND REQUIRES A SPILLWAY CAPABLE OF PASSING THE Q_{100} DESIGN STORM IN THE FULLY DEVELOPED CONDITION, 125 CFS BASED UPON THE BHI PLAN. IN THE ULTIMATE CONDITION WHEN THE POND IS CONVERTED TO A PERMANENT DETENTION POND, AN EMERGENCY SPILLWAY IS NOT REQUIRED.

THE SPILLWAY INTENDED TO SERVE ONLY THE INTERIM CONDITION IS CONSTRUCTED OF NATURAL ROCK RIP-RAP AT THE HISTORIC DISCHARGE POINT OF THE PROPERTY. THE DESIGN WIDTH FOR THE SPILLWAY IS 40 FEET AND A DEPTH OF 1.0 FEET. THE AS-CONSTRUCTED WIDTH IS 37 FEET WITH A DEPTH OF 0.6 FEET. THE CAPACITY OF THE AS-CONSTRUCTED SPILLWAY IS 69 CFS. THIS CONDITION DOES NOT COMPARE FAVORABLY WITH THE AS-DESIGNED CAPACITY OF 125 CFS USING THE BHI PLAN FOR REFERENCE.

V. DEVELOPED CONDITIONS

THE AS-CONSTRUCTED FACILITY IS DEFICIENT WITH RESPECT TO OVERFLOW SPILLWAY CAPACITY. THE AS-CONSTRUCTED CAPACITY IS APPROXIMATELY 52% OF THE AS-DESIGNED CAPACITY AND 55% OF THE CAPACITY REQUIRED USING THE SITE SPECIFIC BHI PLAN. THIS CORRELATES APPROXIMATELY TO A 10-YEAR RAINFALL EVENT FOR THE INTERIM FACILITY. IN LIEU OF RECONSTRUCTING THIS INTERIM FEATURE OF THE POND, A DPM VARIANCE IS REQUESTED TO LOWER THE CRITERIA FROM A 100-YEAR RAINFALL EVENT TO A 10-YEAR RAINFALL EVENT.

THE STORAGE CAPACITY OF THE AS-CONSTRUCTED POND COMPARES FAVORABLY TO THE AS-DESIGNED CAPACITY AND REQUIRES NO FURTHER ANALYSES OR JUSTIFICATIONS.

THE NEW 48-INCH RCP STORM DRAIN DISCHARGING INTO THE PROPOSED SURGE POND IS PRIVATE, YET DESIGNED AND CONSTRUCTED TO PUBLIC STORM DRAIN STANDARDS BECAUSE IT LIES WITHIN THE NEW PUBLIC DRAINAGE EASEMENT. BECAUSE THIS PORTION OF THE WORK COMPLETED IS "PRIVATE", IT SHALL BE THE RESPONSIBILITY OF THE UNDERLYING PROPERTY OWNER TO OWN, OPERATE AND MAINTAIN THIS PRIVATE IMPROVEMENT.

VI. AS-CONSTRUCTED PLAN

THE AS-CONSTRUCTED PLAN THAT APPEARS HEREON SHOWS: 1) EXISTING GRADES INDICATED BY CONTOURS AT 1-FOOT, 0-INCH INTERVALS OBTAINED FROM A TOPOGRAPHIC SURVEY PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED JULY 17, 2007, 2) SUPPLEMENTAL RECORD DATA OBTAINED UNDER THE DIRECT SUPERVISION OF THE ENGINEER, NMPE 8547, ON DECEMBER 12, 2008, 3) BOUNDARY AND EASEMENT DATA FROM THE PLAT FILED DECEMBER 31, 2008, AS REFERENCED ABOVE, AND 4) THE LIMIT AND CHARACTER OF EXISTING IMPROVEMENTS AS SHOWN BY THE AFOREMENTIONED TOPOGRAPHIC SURVEY.

VII. CALCULATIONS

THE CALCULATIONS CONTAINED HEREON ANALYZE THE FOLLOWING ASPECTS OF THE INTERIM RETENTION POND -

- A. STORAGE CAPACITY USING THE AVERAGE END-AREA METHOD
B. OVERFLOW SPILLWAY CAPACITY USING HAESTAD METHOD SOFTWARE VERSION 6.0.

VIII. CONCLUSIONS

REVIEW OF THE AS-CONSTRUCTED CONDITIONS COMPARED WITH THE AS-APPROVED PLANS RESULTS IN THE FOLLOWING CONCLUSIONS:

- A. THE EXISTING DRAINAGE EASEMENT ENCUMBERING THE SITE DATED APRIL 19, 2001 HAS BEEN VACATED BY DEVELOPMENT REVIEW BOARD ACTION 08DRB-70402 AND SUBSEQUENT PLAT OF TRACT A, JAMES MONROE MIDDLE SCHOOL / SUNSET VIEW ELEMENTARY SCHOOL FILED 12/31/2008, BOOK 2008C, PAGE 266
- B. THE AS-CONSTRUCTED IMPROVEMENTS LIE WITHIN THE NEW PUBLIC DRAINAGE EASEMENT CREATED BY THE RECENTLY RECORDED PLAT OF RECORD REFERENCED ABOVE
- C. THE FUTURE CHAMISA STORM DRAIN PROJECT WILL CONVERT THE INTERIM RETENTION BASIN TO A PERMANENT PUBLIC DETENTION POND
- D. THE AS-CONSTRUCTED POND HAS ADEQUATE CAPACITY TO SERVE THE SITE IN THE INTERIM CONDITION
- E. THE AS-CONSTRUCTED POND HAS ADEQUATE CAPACITY TO SERVE THE SITE AND THE CONTRIBUTING WATERSHED IN THE ULTIMATE CONDITION
- F. THE AS-CONSTRUCTED POND SATISFIES THE SCHOOL DISTRICT'S OBLIGATIONS UNDER THE CHAMISA STORM DRAIN COST SHARE AGREEMENT
- G. THE INTERIM RETENTION POND HAS BEEN PROVIDED WITH AN OVERFLOW SPILLWAY TO SERVE UNTIL THE POND IS CONVERTED TO A PERMANENT DETENTION POND WHEN THE OVERFLOW SPILLWAY IS PLANNED TO BE REMOVED BY SUBSEQUENT WORK ORDER (I.E. CHAMISA STORM DRAIN COST SHARE AGREEMENT)
- H. THE INTERIM OVERFLOW SPILLWAY HAS SUFFICIENT CAPACITY TO PASS THE 10-YEAR RAINFALL EVENT, BUT NOT THE 100-YEAR RAINFALL EVENT UNDER DEVELOPED CONDITIONS; A DPM VARIANCE IS REQUIRED AS A CONDITION FOR WORK ORDER ACCEPTANCE.

A DPM DESIGN VARIANCE IS REQUESTED TO REDUCE THE REQUIREMENTS FOR THE INTERIM SPILLWAY CAPACITY TO PASS THE 100-YEAR RAINFALL EVENT (125 CFS), IN THE DEVELOPED CONDITION, TO A CAPACITY EQUIVALENT TO A 10-YEAR RAINFALL EVENT (69 CFS). APPROVAL OF THIS REQUEST FOR VARIANCE IS JUSTIFIED FOR THE FOLLOWING REASONS:

- A. INTERIM, NOT PERMANENT CONDITION
B. THE LAND IMMEDIATELY DOWNSTREAM OF THE INTERIM RETENTION POND IS UNDEVELOPED
C. PER THE CHAMISA STORM DRAIN COST SHARE AGREEMENT, THE UNDEVELOPED LAND SITUATED DOWNSTREAM OF THE SITE CAN NOT BE DEVELOPED IN ADVANCE OF THE COMPLETION OF THE CHAMISA STORM DRAIN THAT WILL CONVERT THE INTERIM RETENTION POND TO A PERMANENT DETENTION POND
D. THE INTERIM RETENTION POND HAS EXCESS CAPACITY OF ALMOST 0.5 AC-FT ABOVE AND BEYOND THAT REQUIRED TO ACCOMMODATE THE V_{10-yr} DEVELOPED VOLUME OF RUNOFF GENERATED BY THE APS PROPERTY
E. THE EXCESS CAPACITY OF THE INTERIM RETENTION POND WILL PARTIALLY OFFSET THE NEED TO PASS THE 100-YEAR RAINFALL EVENT AND MINIMIZE APPARENT IMPACTS ON DOWNSTREAM PROPERTIES SHOULD THE SPILLWAY BECOME ACTIVATED

2 AS-BUILT POND VOLUME

BY AVERAGE END METHOD

ELEVATION	AREA (SF)	VOLUME (CF)	Σ VOLUME (CF)	Σ VOLUME (AC-FT)
5357.3	0	602	602	0.01
5358	1720	4615	5217	0.12
5359	7510	11950	17167	0.39
5360	16390	23915	41082	0.94
5361	31440	41085	82167	1.89
5362	50730	59602	141769	3.25
5363	68475	70998	212766	4.88
5364	73520			

V AS-BUILT = 4.88 AC-FT \geq 4.67 AC-FT = V DESIGN

2 AS-BUILT SPILLWAY CAPACITY

A. RECTANGULAR WEIR CAPACITY (USING HAESTAD METHODS 6.0)

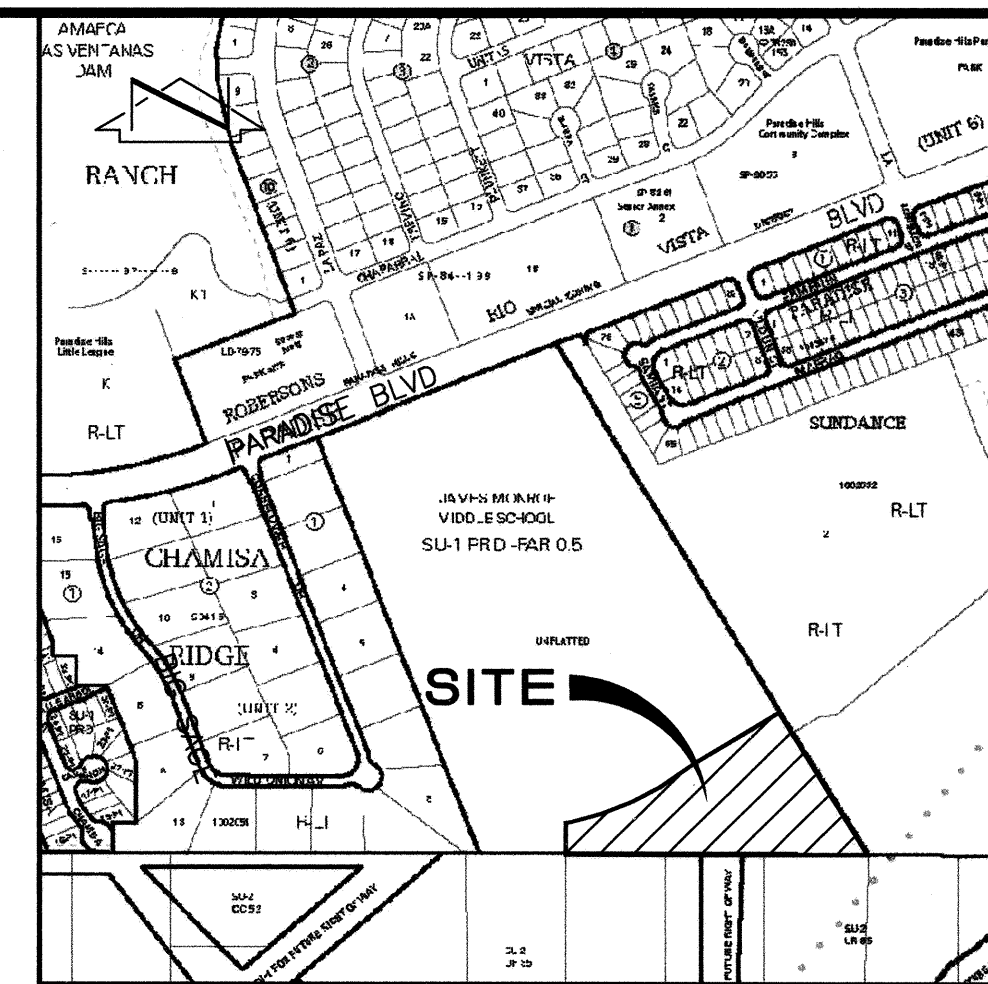
CRESTWIDTH	AVG. DEPTH	CAPACITY
1. 7.5	1.0'	37.9 CFS
2. 37.5	0.6'	27.1 CFS

B. V-NOTCH WEIR CAPACITY (USING HAESTAD METHODS 6.0) - SOUTH END ONLY

NOTCH ANGLE	DEPTH	CAPACITY
143.13°	1.0'	3.7 CFS

C. TOTAL CAPACITY

$$Q_{CAP} = (\text{RECTANGULAR WEIR CAPACITY}) + (V\text{-NOTCH WEIR CAPACITY}) \\ = 37.9 + 27.1 + 3.7 = 68.7 \text{ CFS}$$



VICINITY MAP
SCALE: 1" = 750'

LEGAL DESCRIPTION

TRACT A, JAMES MONROE M.S./SUNSET VIEW E.S.
STREET ADDRESSES: JAMES MONROE MIDDLE SCHOOL - 6100 PARADISE BLVD NW, ALBUQUERQUE NM 87114
SUNSET VIEW E.S. - 6121 PARADISE BLVD NW, ALBUQUERQUE NM 87114

2 SURVEY NOTE:

THIS IS NOT A BOUNDARY SURVEY. DATA IS SHOWN FOR ORIENTATION ONLY. BOUNDARY INFORMATION DEPICTED BY THIS PLAN IS BASED UPON THE PLAT FOR THIS TRACT PREPARED BY HIGH MESA CONSULTING GROUP AND FILED DECEMBER 31, 2008.

TOPOGRAPHIC INFORMATION DEPICTED HEREON IS BASED UPON THE PARTIAL TOPOGRAPHIC SURVEY (AS-BUILT SURVEY) PREPARED BY HIGH MESA CONSULTING GROUP, NMPS 11184, DATED JULY 17, 2007, FOR THE PURPOSE OF OBTAINING AS-BUILT INFORMATION FOR THIS PROJECT. RECORD INFORMATION VERIFIED BY ENGINEER WAS OBTAINED UNDER DIRECT SUPERVISION OF JEFFREY G. MORTENSEN NMPE 8547 ON DECEMBER 12, 2008 FOR THE PURPOSES OF VERIFYING AS-BUILT DATA ALONG THE SOUTHEAST EDGE OF THE POND AFTER BEING CORRECTED BY THE CONTRACTOR.

2 STORM DRAIN NOTE:

MAINTENANCE OF THE 48" RCP STORM DRAIN AND ITS APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY BEING SERVED.

RECORD DRAWING LEGEND

CONSTRUCT	RECORD INFORMATION (VERIFIED BY ENGINEER)
✓	AS-CONSTRUCTED = AS-DESIGNED (VERIFIED BY ENGINEER)
38' 42"	RECORD INFORMATION (VERIFIED BY ENGINEER)
+25.2	RECORD INFORMATION (VERIFIED BY ENGINEER)
28.98' 42"	RECORD INFORMATION (VERIFIED BY ENGINEER)
CLF	CHAIN LINK FENCE
HDPE	HIGH DENSITY POLYETHYLENE
MH	MAN HOLE
RCP	REINFORCED CONCRETE PIPE
SD	STORM DRAIN
SI	STORM INLET
TCLF	TEMPORARY CHAIN LINK FENCE
TOE	TOE OF SLOPE
TOP	TOP OF SLOPE
+60.9	SPOT ELEVATION (VERIFIED BY SURVEYOR)
5360	EXISTING CONTOUR
⊗	EXISTING MANHOLE

RECORD DRAWING



2007.186.3

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: CHAMISA STORM DRAIN SURGE POND AT JAMES MONROE MIDDLE SCHOOL

Design Review Committee City Engineer Approval

NO.	DATE	REVISIONS
1	11/08	ADD THIS SHEET

City Project No. 662382

Zone Map No. B-10

Sheet 4

Of 4