CITY OF ALBUQUERQUE

PLANNING DEPARTMENT - Development Review Services



Richard J. Berry, Mayor

October 21, 2014

Jeffrey G. Mortensen, P.E. High Mesa Consulting Group 6010-B Midway Park Blvd NE Albuquerque, NM 87109

RE: Valle Vista ES Bus Lane- 1700 Mae Ave. SW

Grading and Drainage Plan

Engineer's Stamp Date 10-16-2014 (File: K12D027)

Dear Mr. Mortensen:

Based upon the information provided in your submittal received 10-17-14, the above referenced Plan is approved for Grading Permit, Paving Permit, and SO-19 Permit.

A separate SO-19 permit is required for construction within City ROW. A copy of this approval letter must be on hand when applying for the excavation/barricading permit. The work in the City ROW must be inspected and accepted. Contractor must contact Jason Rodriguez at 235-8016 and Construction Coordination at 924-3416 to schedule an increasion.

Sincerely,

Rita Harmon, P.E.

Senior Engineer, Planning Dept. Development Review Services

inspection.

If you have any questions, you can contact me at 924-3695.

Albuquerque

PO Box 1293

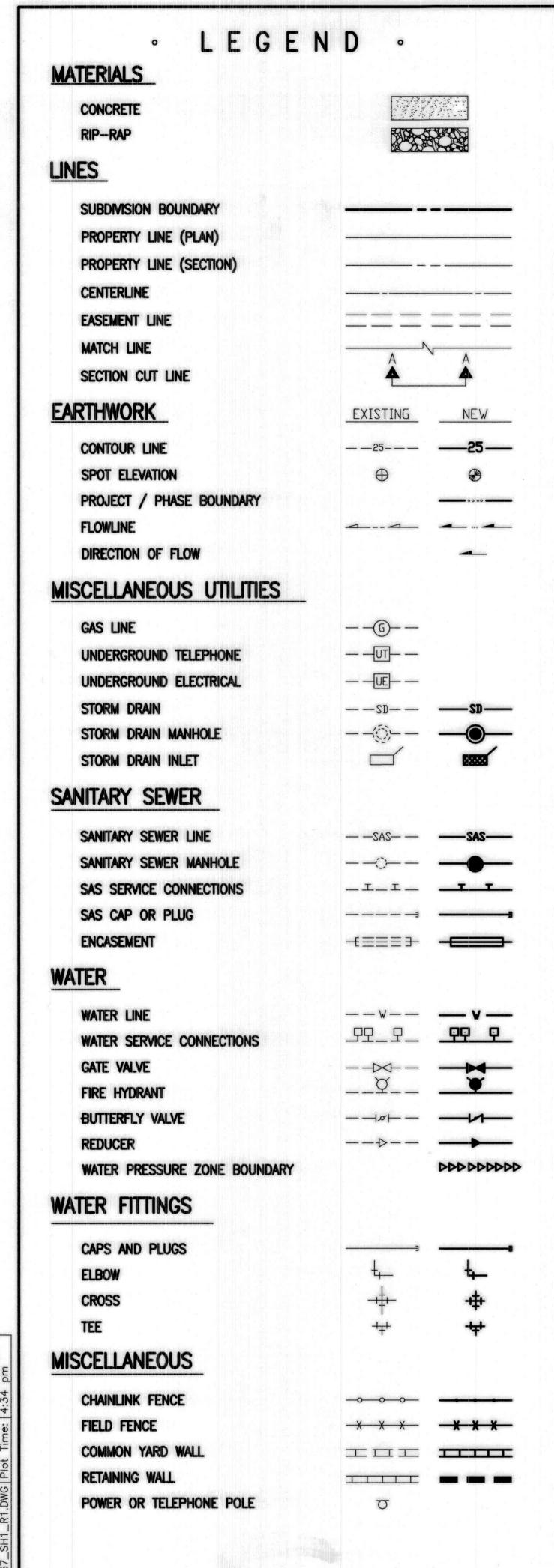
New Mexico 87103

www.cabq.gov

Orig: Drainage file

c.pdf: via Email: Recipient, Monica Ortiz, Jason Rodriguez and Antoinette Baldonado

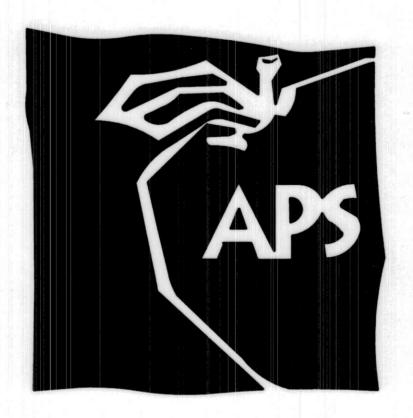
(DMD)



CONSTRUCTION PLANS for

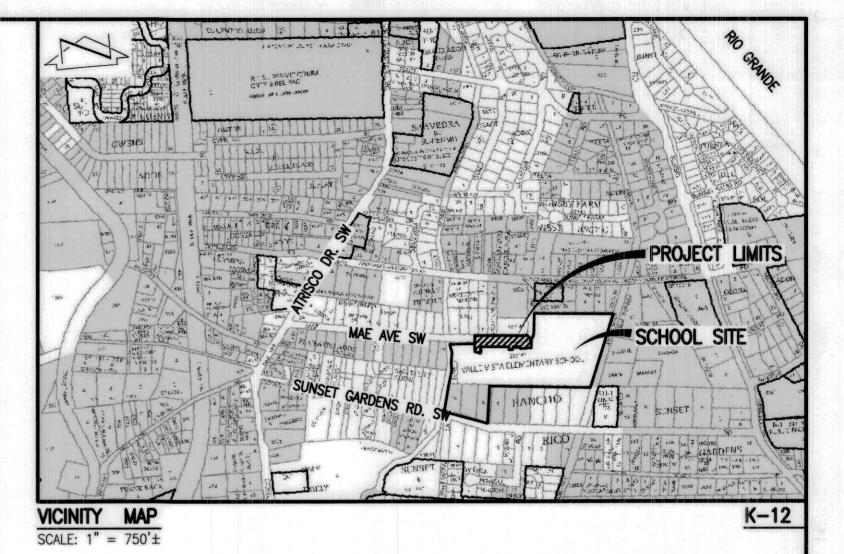
BUS LANE IMPROVEMENTS VALLE VISTA ELEMENTARY SCHOOL

ALBUQUERQUE, NEW MEXICO SEPTEMBER, 2014



INDEX OF DRAWINGS

DESCRIPTION
COVER SHEET, VICINITY MAP, GENERAL NOTES, LEGEND AND INDEX OF DRAWINGS
DEMOLITION PLAN
SITE PLAN
PAVING SECTIONS AND DETAILS
GRADING PLAN
DRAINAGE PLAN AND CALCULATIONS



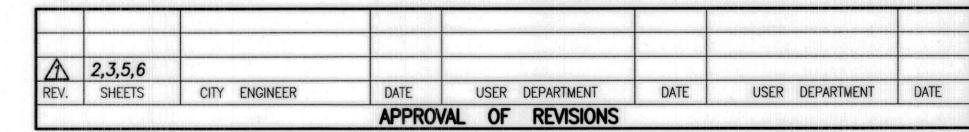
GENERAL NOTES:

- 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 NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1987, PUBLISHED BY THE NEW MEXICO CHAPTER AMERICAN PUBLIC WORKS ASSOCIATION. (REVISED 12/06)
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR
 DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC
 SCHOOLS.
- 3. 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.
- 4. 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.
- 5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION
- 6. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES / REGULATIONS CONCERNING SAFETY AND HEALTH.
- 7. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
- 8. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATE MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
- 9. CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO ENSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE ENGINEER. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATION OF THE PAVEMENT 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.
- 10. ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS SHALL COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
 PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, LATEST EDITION.
- 11. IF THE REMOVAL OF EXISTING CURB AND GUTTER, SIDEWALK, AND/OR PAVING IS REQUIRED, THE CONTRACTOR SHALL SAWCUT AND/OR REMOVE TO THE NEAREST JOINT. WHEN ABUTTING NEW PAVEMENT TO EXISTING, THE CONTRACTOR SHALL CUT BACK THE EXISTING PAVING TO A STRAIGHT LINE IN ORDER TO REMOVE ANY BROKEN OR CRACKED PAVEMENT. CURB AND GUTTER AND/OR PAVEMENT SHOWN AS EXISTING AND NOT TO BE REMOVED UNDER THIS CONTRACT AND WHICH IS DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- 12. 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.
- 13. 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.
- 14. 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.
- 15. 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.
- 16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING APPROPRIATE MEANS AND METHODS TO EXCAVATE AND TRENCH AND/OR INSTALL PIPE SO AS TO NOT EXCEED RIGHT—OF—WAY OR EASEMENT LIMITS, AND SO AS NOT TO INTERFERE WITH OTHER UTILITIES OR IMPROVEMENTS. THIS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
- 17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, SUPPORTING AND REPLACING, IF DAMAGED, ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.
- 18. ALL DIMENSIONS AND RADII OF CURB, CURB RETURNS, AND WALLS ARE SHOWN TO THE FACE OF CURB AND/OR WALL.
- THE CONTRACTOR SHALL NOTIFY THE OWNER 48 HOURS PRIOR TO STRIPING SO THAT LAYOUT CAN BE VERIFIED.
 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.

 21. WHEN APPLICABLE, CONTRACTOR SHALL SECURE, ON BEHALF OF THE OWNER AND OPERATORS, "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.
- 22. ALL FILL SHALL BE CLEAN, FREE FROM VEGETATION, DEBRIS, AND OTHER DELETERIOUS MATERIALS, AND SHALL NOT BE CONTAMINATED
- WITH HYDROCARBONS OR OTHER CHEMICAL CONTAMINANTS.

 23 ALL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% ASTM D=1557 LINESS A GREATER COMPACTION REQUIREMENT IS OTHERWIS
- 23. ALL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% ASTM D-1557 UNLESS A GREATER COMPACTION REQUIREMENT IS OTHERWISE SPECIFIED.
 24. CAUTION: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE
- 24. 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.

JOB NO. 2013.186.7





HIGH MESA Consulting Group

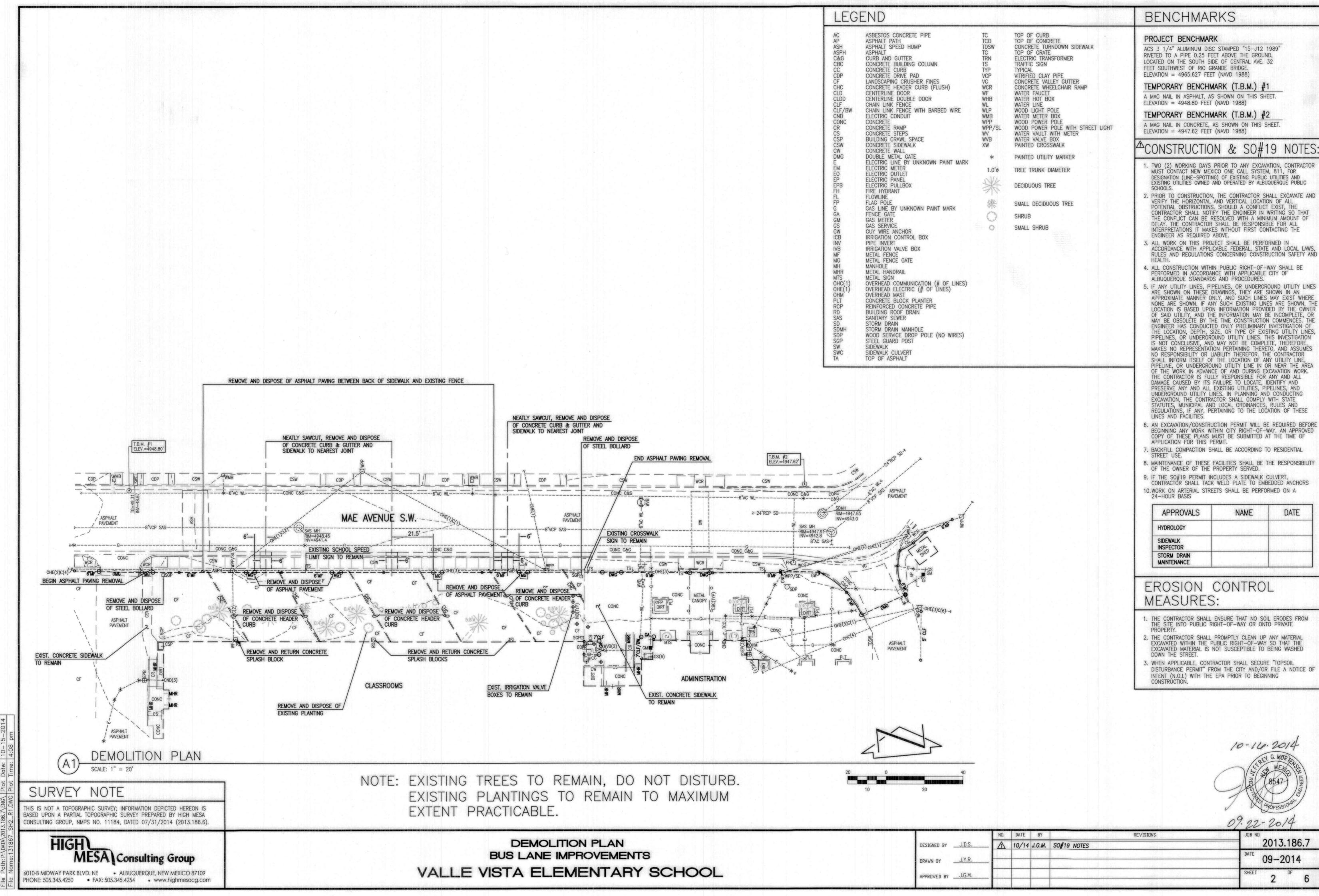
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PHONE: 505.345.4250 • FAX: 505.345.4254 • www.highmesacg.com

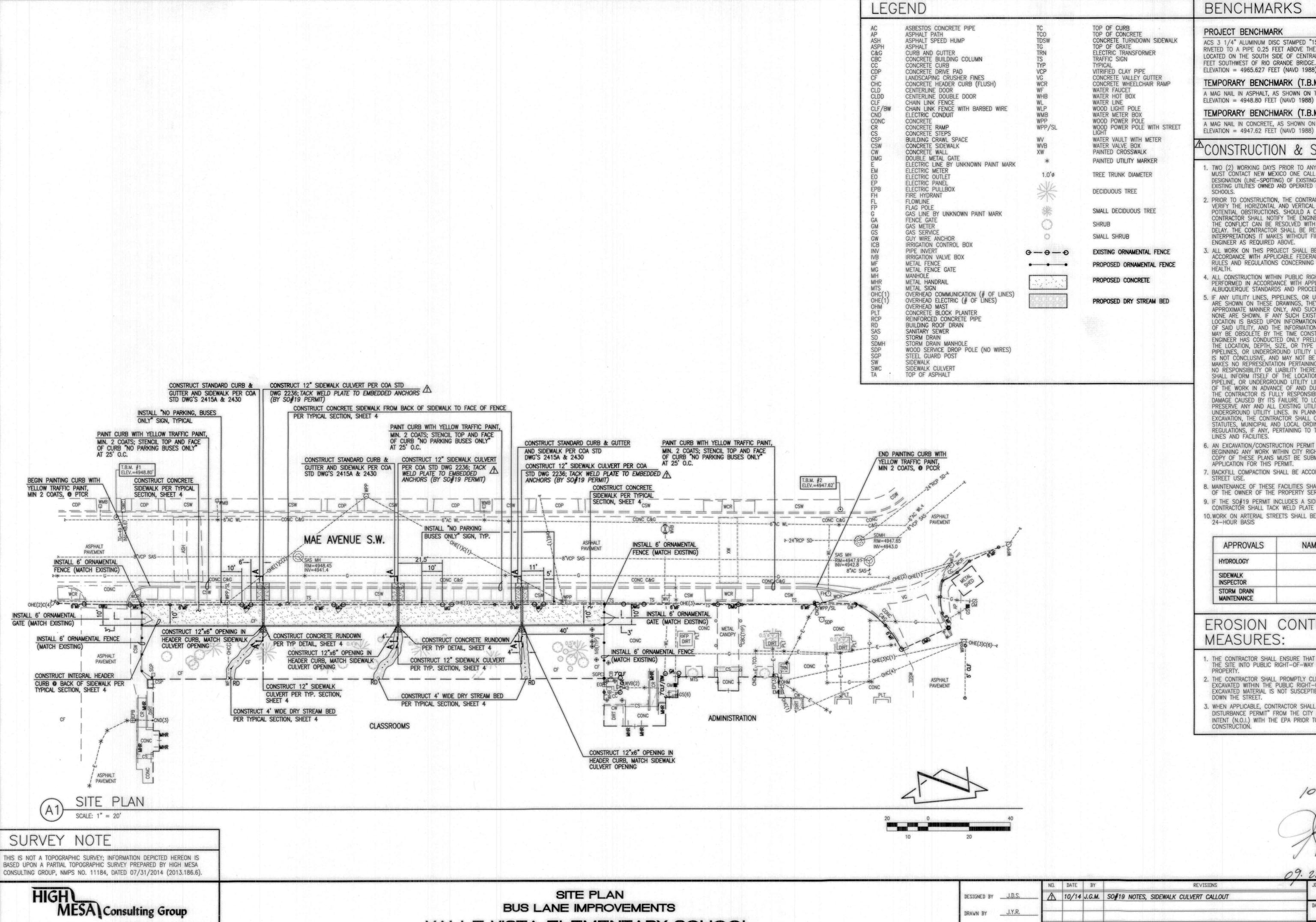
CONSTRUCTION

APPROVED FOR

SHEET 1 OF 6

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BENCHMARKS

PROJECT BENCHMARK

ACS 3 1/4" ALUMINUM DISC STAMPED "15-J12 1989" RIVETED TO A PIPE 0.25 FEET ABOVE THE GROUND, LOCATED ON THE SOUTH SIDE OF CENTRAL AVE. 32 FEET SOUTHWEST OF RIO GRANDE BRIDGE. ELEVATION = 4965.627 FEET (NAVD 1988)

TEMPORARY BENCHMARK (T.B.M.) #1 A MAG NAIL IN ASPHALT, AS SHOWN ON THIS SHEET.

TEMPORARY BENCHMARK (T.B.M.) #2 A MAG NAIL IN CONCRETE, AS SHOWN ON THIS SHEET.

$^{-}$ CONSTRUCTION & SO#19 NOTES:

- 1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 811, FOR DESIGNATION (LINE-SPOTTING) OF EXISTING PUBLIC UTILITIES AND EXISTING UTILITIES OWNED AND OPERATED BY ALBUQUERQUE PUBLIC
- 2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
- 3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND
- 4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- 5. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, TH LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- 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.
- 8. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- 9. IF THE SO#19 PERMIT INCLUDES A SIDEWALK CULVERT, CONTRACTOR SHALL TACK WELD PLATE TO EMBEDDED ANCHORS. 10. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A

APPROVALS	NAME	DATE
HYDROLOGY		
SIDEWALK INSPECTOR		
STORM DRAIN MAINTENANCE		

EROSION CONTROL MEASURES:

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

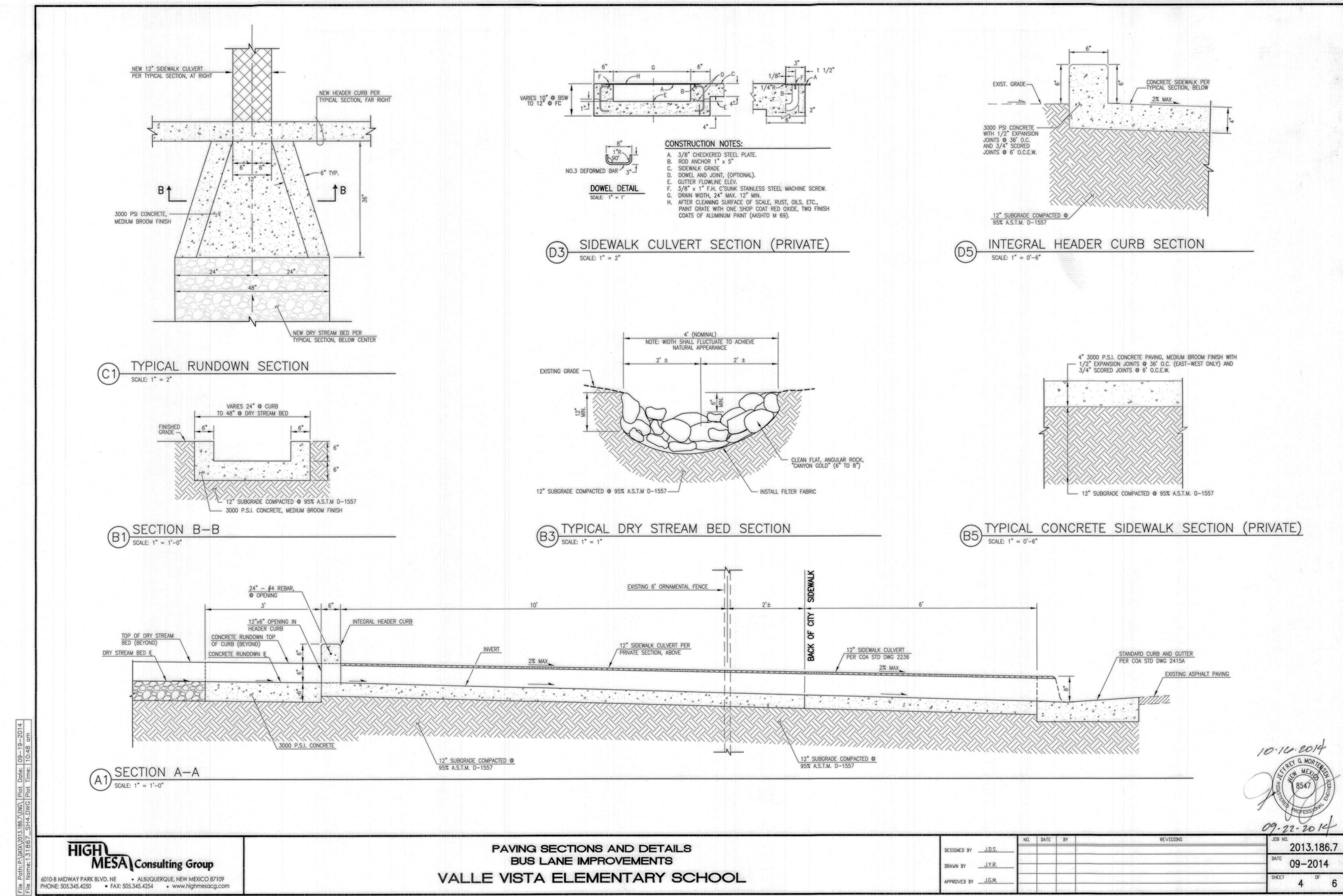
APPROVED BY J.G.M.

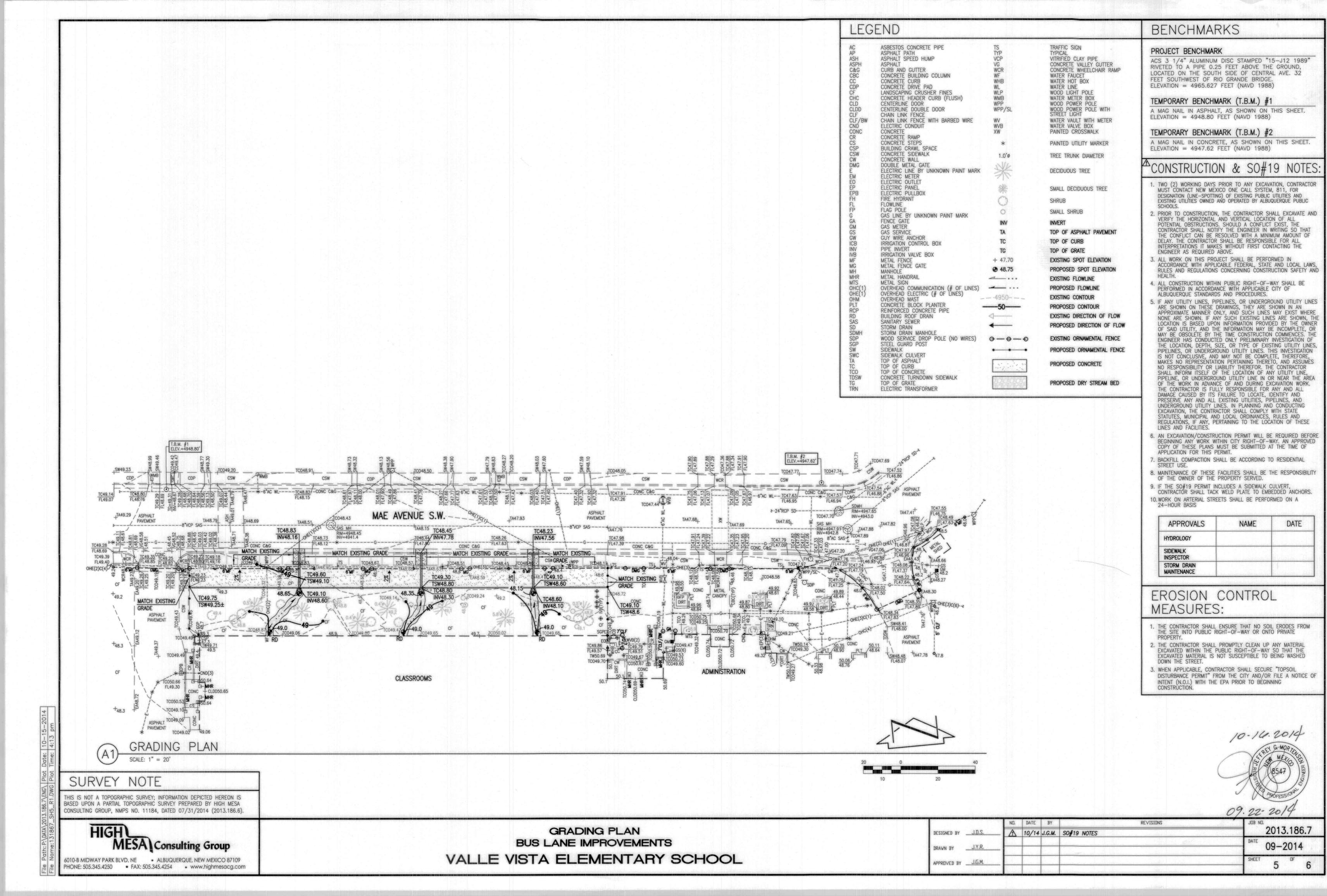
2013.186.7 09-2014

VALLE VISTA ELEMENTARY SCHOOL

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PHONE: 505.345.4250 • FAX: 505.345.4254 • www.highmesacg.com





CONCENTRATED DISCHARGE VIA NEW SIDEWALK CULVERTS.

THIS SUBMITTAL IS MADE IN SUPPORT OF SO #19 PERMIT AND FLOODPLAIN DEVELOPMENT PERMIT WITHIN THE JURISDICTION OF THE CITY OF ALBUQUERQUE.

II. PROJECT DESCRIPTION

AS SHOWN BY THE VICINITY MAP, THE SCHOOL SITE IS LOCATED ON THE SOUTH AND EAST SIDES (MAE STREET SW, WEST OF ATRISCO DRIVE SW AND SOUTH OF GONZALES SW. CURRENT LEGAL DESCRIPTION IS A PORTION OF TRACT 23E1AC, MRGCD NO. 39. AS SHOWN BY PANEL 333 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, AUGUST 16, 1012, THIS SITE LIES WITHIN A DESIGNATED FLOOD HAZARD ZONE (ZONE AH), WITH A BASE FLOOD ELEVATION (BFE) OF 4948. AS SUCH, A FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED FOR THIS PROJECT.

III. BACKGROUND DOCUMENTS AND RESEARCH

THE PREPARATION OF THIS PLAN RELIED UPON THE FOLLOWING DOCUMENT:

 TOPOGRAPHIC SURVEY PREPARED BY HIGH MESA CONSULTING GROUP (NMPS 11184) DATED 7/31/2014. THIS REFERENCED SURVEY PROVIDES THE BASIS FOR THE EXISTING CONDITIONS OF THE PROJECT SITE.

IV. EXISTING CONDITIONS

THE OVERALL SITE IS DEVELOPED AS AN APS ELEMENTARY SCHOOL. THE PROJECT AREA CONSISTS OF A PORTION OF THE SITE IMMEDIATELY ADJACENT TO MAE AVENUE SW THAT SERVES AS A STUDENT STAGING AREA FOR BUS PICK-UP / DROP-OFF ALONG MAE AVENUE SW. ACCESS TO THE BUSES RESTRICTED BY ORNAMENTAL FENCING, WITH FOUR (4) ORNAMENTAL GATES THAT ACT AS QUEUE POINTS FOR THE STUDENTS. THIS AREA IS CURRENTLY LANDSCAPED, WITH NO PAVED ACCESS WITHIN THE SCHOOL PROPERTY SOUTH OF THE FENCE. THIS AREA GENERALLY DRAINS SOUTH TO NORTH WITH RUNOFF SHEETFLOWING ACROSS THE PUBLIC SIDEWALK AND INTO MAE AVE SW. THREE (3) ROOF DRAINS DISCHARGE ONTO THE EXISTING LANDSCAPING, RESULTING IN EROSION WITHIN THE LANDSCAPED AREA AND STANDING WATER IN THE STUDENT STAGING AREAS.

THERE ARE NO OFFSITE FLOWS IMPACTING THIS PROJECT SITE; PERMANENT SCHOOL IMPROVEMENTS LIE TO THE THE WEST, SOUTH, AND EAST OF THE PROJECT SITE, AND MAE AVENUE TO THE NORTH I TOPOGRAPHICALLY LOWER THAN THE PROJECT SITE.

V. DEVELOPED CONDITIONS

THE PROPOSED CONSTRUCTION CONSISTS OF PAVED SIDEWALK PEDESTRIAN IMPROVEMENTS ACCOMMODATE MORE EFFICIENT AND SAFER STAGING AND MOVEMENT OF STUDENTS, AS WELL AS THE ADDITION OF DRY STREAM BEDS AND SIDEWALK CULVERTS TO CONVEY ROOF RUNOFF NORTH TO MAE AVENUE SW, MITIGATING THE EROSION AND STANDING WATER WITHIN THIS AREA. A NEW HEADER CURB AT THE BACK OF THE PROPOSED SIDEWALKS WILL CONTAIN EXISTING GRAVEL LANDSCAPING, MITIGATING THE POTENTIAL MIGRATION OF GRAVEL ONTO THE NEW PAVED STUDENT STAGING AREA.

RUNOFF FROM THE PAVED IMPROVEMENTS WILL CONTINUE TO SHEETFLOW FROM SOUTH TO NORTH INTO MAE AVENUE SW. CONCENTRATED RUNOFF FROM THE THREE (3) ROOF DRAINS WILL BE CONVEYED VIA NEW DRY STREAM BED NORTH TO NEW SIDEWALK CULVERTS. FROM THIS POINT, THE NEW CULVERTS EXTENDING THROUGH BOTH THE EXISTING AND PROPOSED SIDEWALKS WILL DISCHARGE RUNOFF DIRECTLY TO MAE AVENUE SW. THE NEW SIDEWALK CULVERTS WILL BE CONSTRUCTED BY SO#19 PERMIT WITHIN THE PUBLIC RIGHT-OF-WAY.

THE PROPOSED IMPROVEMENTS WILL NOT ALTER OFFSITE FLOW CONDITIONS.

VI. GRADING PLAN

THE GRADING PLAN SHOWS 1.) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS 2 THE LIMIT AND CHARACTER OF THE EXISTING AND PROPOSED IMPROVEMENTS, AND 3.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE PROPOSED GRADING WILL MAINTAIN THE CURRENT DRAINAGE PATTERN OF RUNOFF FLOW FROM SOUTH TO NORTH WITH DISCHARGE TO MAE STREET SW.

VII. EROSION AND SEDIMENT CONTROL PLAN

THIS PROJECT DISTURBS LESS THAN ONE-ACRE OF LAND, THEREFORE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS NOT BEEN PREPARED. THE SMALL SIZE OF THIS PROJECT DOES NOT WARRANT THE PREPARATION OF A SITE SPECIFIC EROSION AND SEDIMENT CONTROL PLAN SHOULD SEDIMENT BECOME MOBILIZED AND EXIT THE PROJECT SITE, THE CONTRACTOR SHALL BE REQUIRED TO CLEAN-UP AND REMOVE THE SEDIMENT THAT MIGRATES ONTO THE EXISTING PUBLIC SIDEWALK TO ENSURE NO SEDIMENT IS DEPOSITED INTO MAE AVENUE SW.

VIII. CALCULATIONS

THE CALCULATIONS CONTAINED HEREON ANALYZE THE EXISTING AND DEVELOPED CONDITIONS FOR TH 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS DEMONSTRATED BY THESE CALCULATIONS, THE PROPOSED IMPROVEMENTS WILL RESULT IN A NEGLIGIBLE INCREASE (0.1 CFS) IN THE DEVELOPED RUNOFF GENERATED BY THIS PORTION OF THE SITE.

IX. CONCLUSIONS

THE FOLLOWING CONCLUSIONS HAVE BEEN ESTABLISHED AS A RESULT OF THE EVALUATIONS CONTAINED

- 1. THE PROPOSED IMPROVEMENTS REPRESENT A MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL
- 2. THE PROPOSED IMPROVEMENTS WILL MAINTAIN THE EXISTING DRAINAGE PATTERNS OF THIS PORTION OF THE EXISTING ELEMENTARY SCHOOL SITE. 3. THE PROPOSED IMPROVEMENTS WILL RESULT IN A MINOR INCREASE IN THE IMPERVIOUSNESS OF
- THE USE OF DRYSTREAM BEDS TO MANAGE EXISTING ROOF RUNOFF. 4. THE PROPOSED IMPROVEMENTS WILL RESULT IN A NEGLIGIBLE (0.1 CFS) INCREASE IN PEAK

THIS PORTION OF THE SITE, HOWEVER IT WILL ENHANCE DISCONNECTED IMPERVIOUSNESS THROUGH

DISCHARGE GENERATED BY THIS PORTION OF THE SITE. 5. THE PROPOSED IMPROVEMENTS WILL ACCEPT AND CONVEY ROOF DRAIN RUNOFF TO MAE AVENUE SW, MITIGATING EXISTING EROSION AND STANDING WATER WITHIN THE STUDENT STAGING AREA.

6. NEW SIDEWALK CULVERTS PROPOSED WITHIN THE PUBLIC RIGHT-OF-WAY WILL BE CONSTRUCTED

- 7. AS THIS PROJECT LIES WITHIN A DESIGNATED FLOOD HAZARD ZONE (ZONE AH), A FLOODPLAIN
- DEVELOPMENT PERMIT IS REQUIRED. 8. THE PROPOSED IMPROVEMENTS WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES OR
- DOWNSTREAM DRAINAGE CONDITIONS. 9. THIS PROJECT IS NOT SUBJECT TO AN EPA NPDES PERMIT

CALCULATIONS

A. PRECIPITATION ZONE = 2.20 B. $P_{100, 6 HR} = P_{360} =$

8,530 SF C. TOTAL PROJECT AREA (A_T) = 0.20 AC

D. LAND TREATMENTS

SITE CHARACTERISTICS

1. EXISTING LAND TREATMENT TREATMENT AREA (SF/AC) % 8,070 / 0.19 460 / 0.01

2. DEVELOPED LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
Α		
В		
C	6,160 / 0.14	70
D	2,370 / 0.06	30

II. HYDROLOGY

A. EXISTING CONDITION

- 1. VOLUME $E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$
- 1.04 IN (0.44*0.00) + (0.67*0.00) + (0.99*0.19) + (1.97*0.01)/0.20 = $V_{100,6 \text{ HR}} = (E_W/12)A_T = (1.04/12)0.20 =$ 740 CF 0.0170 AC-FT =
- 2. PEAK DISCHARGE
- $Q_{P} = Q_{PA}A_{A} + Q_{PB}A_{B} + Q_{PC}A_{C} + Q_{PD}A_{D}$ $Q_P = Q_{100} = (1.29 * 0.00) + (2.03 * 0.00) + (2.87 * 0.19) + (4.37 * 0.01) =$ 0.6 CFS

B. DEVELOPED CONDITION

- 1. VOLUME
- $E_W = (E_A A_A + E_B A_B + E_C A_C + E_D A_D)/A_T$ (0.44*0.00) + (0.67*0.00) + (0.99*0.14) + (1.97*0.06)/0.20 =1.28 IN $V_{100, 6 HR} = (E_W/12)A_T = (1.28/12)0.20 =$ 940 CF 0.0215 AC-FT =
- 2. PEAK DISCHARGE $Q_P = Q_{PA}A_A + Q_{PB}A_B + Q_{PC}A_C + Q_{PD}A_D$

0.7 CFS

(INCREASE)

 $Q_P = Q_{100} = (1.29*0.00) + (2.03*0.00) + (2.87*0.14) + (4.37*0.06) =$

C. COMPARISON

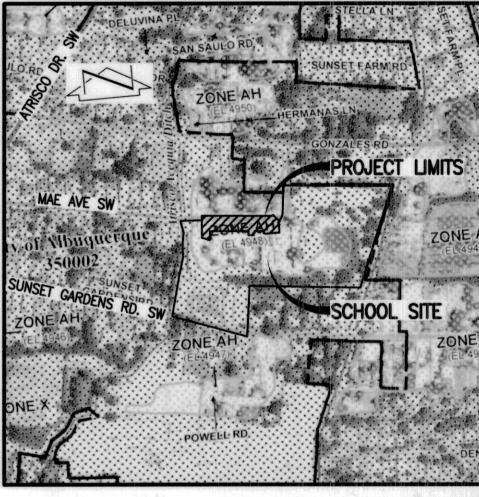
- 1. VOLUME
- $\Delta V_{100.6 \, HR} = 940 740 =$
- 2. PEAK DISCHARGE

0.7 - 0.6 =0.1 CFS (INCREASE)

PROJECT LIMITS SCHOOL SITE

K - 12

FEDERAL EMERGENCY



PANEL 333 OF

DATE 08-16-2012

BENCHMARKS

PROJECT BENCHMARK

ACS 3 1/4" ALUMINUM DISC STAMPED "15-J12 1989" RIVETED TO A PIPE 0.25 FEET ABOVE THE GROUND, LOCATED ON THE SOUTH SIDE OF CENTRAL AVE. 32 FEET SOUTHWEST OF RIO GRANDE BRIDGE. ELEVATION = 4965.627 FEET (NAVD 1988)

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

A MAG NAIL IN ASPHALT, AS SHOWN ON SHEET 2. ELEVATION = 4948.80 FEET (NAVD 1988)

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

A MAG NAIL IN CONCRETE, AS SHOWN ON SHEET 2. ELEVATION = 4947.62 FEET (NAVD 1988)

LEGAL DESCRIPTION

A PORTION OF TRACT 23E1A3, MRGCD NO. 39, ALSO KNOWN AS VALLE VISTA ELEMENTARY SCHOOL



MESA Consulting Group

DRAINAGE PLAN AND CALCULATIONS BUS LANE IMPROVEMENTS VALLE VISTA ELEMENTARY SCHOOL

2013.186.7 10/14 J.G.M. ADDED FLOODPLAIN DEVELOPMENT PERMIT REQUIREMENT DESIGNED BY J.D.S. 09-2014 DRAWN BY APPROVED BY J.G.M. 6