

CITY OF ALBUQUERQUE



June 20²⁹, 2016 AC

Åsa Nilsson-Weber, P.E.
Isaacson & Arfman, P.A.
128 Monroe Street NE
Albuquerque, NM, 87108

Richard J. Berry, Mayor

**RE: Manzano High School Gym
Grading and Drainage Plan
Engineer's Stamp Date 6-8-2016 (File: K22D020)**

Dear Ms. Nilsson-Weber:

Based upon the information provided in your submittal received 6-8-2016, the above referenced submittal is approved for Building Permit.

Please attach a copy of this approved plan in the construction sets when submitting for a building permit. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

Since the disturbed area during construction will be over 1-acre, a Grading Permit will be required (see attached). The Developer should be aware that the ESC Grading Permit must be approved prior to any grading on the site. The approval of the Erosion and Sediment Control Plan is not an approval to begin grading. The ESC Grading Permit will not be processed without an approved ESC Plan.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Abiel Carrillo, P.E.
Principal Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Manzano High School Gymnasium Building Permit #: _____ City Drainage #: K22D020
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: Unplatted lands of APS also known as Manzano High School, City of Albuquerque, New Mexico
City Address: 12200 Lomas Blvd. NE, 87112

Engineering Firm: Isaacson & Arfman, P.A. Contact: sa Nilsson-Weber
Address: 128 Monroe Street NE - Albuquerque, NM 87108
Phone#: (505) 268-8828 Fax#: _____ E-mail: asaw@iacivil.com

Owner: APS Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Architect: Studio Southwest Contact: Richard Braun
Address: 2101 Mountain Rd. NW 87104
Phone#: 505-843-9639 Fax#: _____ E-mail: _____

Other Contact: _____ Contact: _____
Address: _____
Phone#: _____ Fax#: _____ E-mail: _____

Check all that Apply:

DEPARTMENT:
☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:
☒ ENGINEER ARCHITECT CERTIFICATION

☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR

☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)

☐ OTHER (SPECIFY) _____

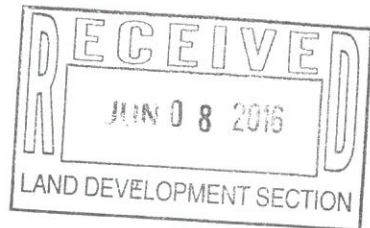
IS THIS A RESUBMITTAL?: ☒ Yes ☐ No

DATE SUBMITTED: JUNE 8, 2016 By: Asa Nilsson-Weber, P.E.

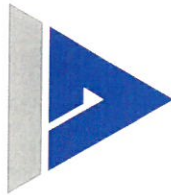
CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY

☐ 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) _____



COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____



June 8, 2016

Mr. Abiel Carrillo, P.E.
Principal Engineer – Hydrology
Planning Dept. – City of Albuquerque

RE: MANZANO HIGH SCHOOL GYM – K22D020

Dear Mr. Carrillo,

Attached with this letter are the following:

- A. One set of the revised Grading and Drainage plan sheets with stamp date 06-08-16;
- B. Excerpts from the approved Amendment to Drainage Master Plan for Manzano High School by Wilson & Co. with stamp dated 04-20-16;
- C. Full size print of sheet CP-101: Paving Plan provided for information.

Minor revisions were made to the Project Data and First Flush notes on sheet CG-100. The following numbered responses (R) correspond to your review comments provided by e-mail on March 31, 2016 (shown italicized).

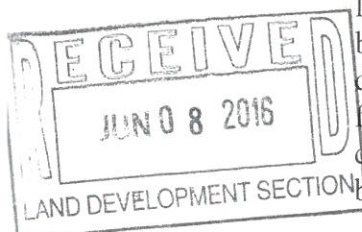
- 1. *We recommend having outfalls for the first flush ponding areas. For example, sidewalk culverts for the areas around the building, and median cuts on the low side of the island to prevent stormwater backing up into the parking lot.*

R: All roof discharge will be piped directly to the proposed storm drain system. The landscaped depressions we are calling for within the landscaping around the building is for water harvesting. No sidewalk culverts are needed. Regarding the depressed landscaping within the parking islands, these will accept stormwater from a portion of the pavement and any excess will flow over the top of the downstream curb which is lower than the inlet pavement. No stormwater will back up into the parking lot. No changes to the plan set.

- 2. *Please ensure that the additional information that will be provided includes references (and excerpts if applicable) from the master plan for the High School.*

R: Excerpts from the approved master plan are included. Minor note changes on sheet CG-100 (labeled Rev. 1).

- 3. *Provide the site plan to better understand paving and sidewalk improvement limits.*



3a. *The roadway that wraps around the north side of the building appears to terminate behind the curb without a driveway, and it has a different hatching than the southern access aisle. The keyed note suggests that it is a paved road.*

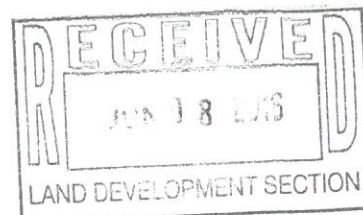
R: A copy of the paving plan is included for information of the sidewalk improvement limits. Regarding the referenced roadway on the north side of the building, the paving plan calls this out as aggregate base course (as approved by the Fire Marshal for firetruck access). Per the paving plan, the curb at the terminus is to be mountable median curb.

If you have any questions or comments during your review, we would like to address them as quickly as possible to complete the approval process. Please don't hesitate to call me or Bryan Bobrick and we will be happy to meet with you to clarify and / or address any additional comments quickly.

Sincerely,
Isaacson & Arfman, PA



Åsa Nilsson-Weber, PE



JUNE 8, 2016

Excerpts from the approved

**AMENDMENT TO
DRAINAGE MASTER PLAN
FOR
MANZANO HIGH SCHOOL**

In support of

Hydrology approval for

**Manzano High School Gym project
COA Hydrology Project K22D020**



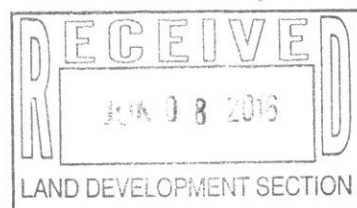
ISAACSON & ARFMAN, P.A.

Consulting Engineering Associates

Thomas O. Isaacson, PE(RET.) & LS(RET.)

Fred C. Arfman, PE

Åsa Nilsson-Weber, PE



CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



Richard J. Berry, Mayor

May 23, 2016

Donald Duneman, P.E.
Wilson & Company, Inc.
4900 Lang Ave. NE
Albuquerque, NM 87109

**Re: Manzano High School Drainage Master Plan
Amendment April 2016
Engineer's Stamp Date 4/20/2016
Hydrology File: K22D020**

Dear Mr. Duneman,

Based upon the information provided in your submittal received 4/20/2016, the above referenced Drainage Master Plan is approved for future permitting within the study's limits.

Please include references/excerpts from this report when submitting improvement plans.

If you have any questions, you can contact me at 924-3986.

Sincerely,

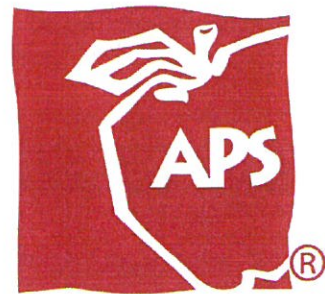
Abiel Carrillo, P.E.
Principal Engineer, Planning Dept.
Development Review Services

Orig: Drainage file

**Amendment to
Drainage Master Plan
for
Manzano High School
Albuquerque, New Mexico**

April 2016

PREPARED FOR:



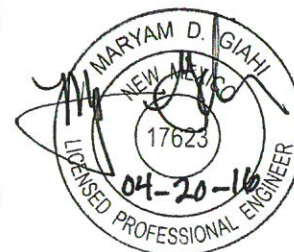
ALBUQUERQUE
PUBLIC SCHOOLS



**MANZANO
HIGH SCHOOL**
Home of the Monarchs

PREPARED BY:

Wilson & Company, Engineers & Architects
4900 Lang Ave. NE
Albuquerque, New Mexico 87109
WCI File No. 14-600-090-00



REPORT CERTIFICATION

I, Maryam D Giahi, P.E, NMPE # 17623, do hereby certify that this report was prepared by me or under my supervision and that I am a duly registered Professional Engineer under the laws of the State of New Mexico.

1. Introduction

Wilson & Company Inc. (WCI) prepared this report under contract with Albuquerque Public Schools (APS) for Manzano High School in the city of Albuquerque, NM. The drainage improvements are part of an ongoing plan to improve drainage and increase safety on the Manzano High School campus. This report analyzes collection of storm runoff directed west of the site from the proposed gymnasium and future classrooms expansion in a detention pond west of the existing soccer field. All existing runoff is currently accumulated in the soccer field. See Figure 1, Vicinity Map.

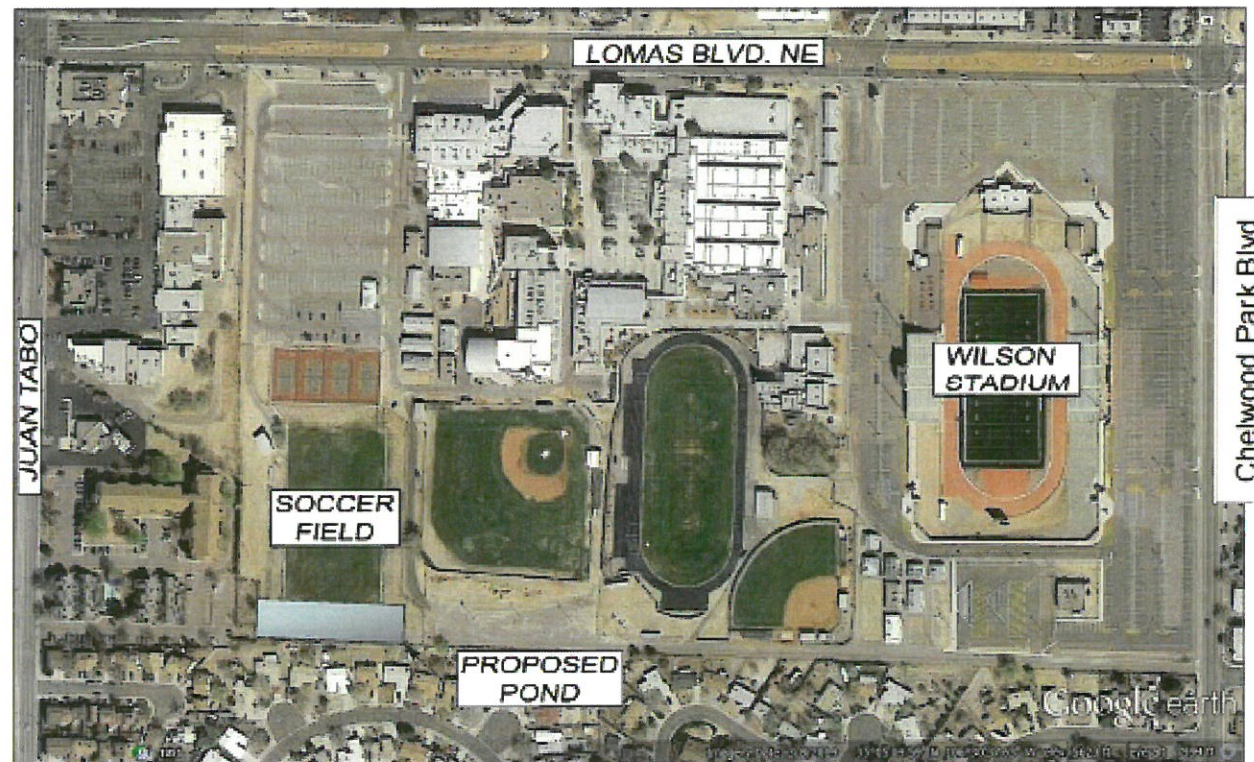


Figure 1 - Vicinity Map

2. Project Description

Manzano High School is bounded by Lomas Boulevard to the north, Wilson Stadium & Chelwood Park to the east, Manzano Park Subdivision to the south and Manzano Shopping Center to the west. Runoff from the proposed improvements draining west will be detained in a detention pond along the west edge of the property and also provide a retention area for the first flush storm runoff. The proposed detention pond will be sized to capture runoff from the 100-year, 24-hour storm event.

Storm drain systems near the new gymnasium were analyzed to convey developed runoff. The system as in the existing conditions will drain into the soccer field. Runoff from the basins along the west edge of the property will be captured by inlets and

detained in a proposed detention pond before discharging into the soccer field. Outlet pipes from the detention pond will convey flows into the field. See Tables 4 and 5, Analysis Point Summary, Proposed Detention Pond Data and Appendix B, CulverMaster calculations. See Plate 1, Drainage Plan in Appendix D.

Peak Flow (cfs)	Runoff Volume (ac-ft)
28.24	1.370

Table 4 - Analysis Point Summary

Peak Flow (cfs)		Peak Volume (ac-ft)		Pond Elevation (ft)		Maximum WSEL (ft)
In	Out	Required	Provided	Top	Bottom	
28.03	16.43	0.372	0.503	5,588.0	5,585.5	5,587.44

Table 5 – Proposed Detention Pond Data

The first flush retention volume per the COA Significant Drainage Ordinance Changes dated May 12, 2014 was calculated for all the proposed development which includes basins 124, 201 and 202. See Table 6, First Flush Retention Pond Data.

Impervious Area (ac)	Rainfall Depth (in)	V _{req'd} (ac-ft)	V _{prov'd} (ac-ft)	Top Elevation (ft)	Bottom Elevation (ft)
7.040	0.34	0.1995	0.2074	5,585.5	5,583.5

Table 6 - First Flush Retention Pond Data

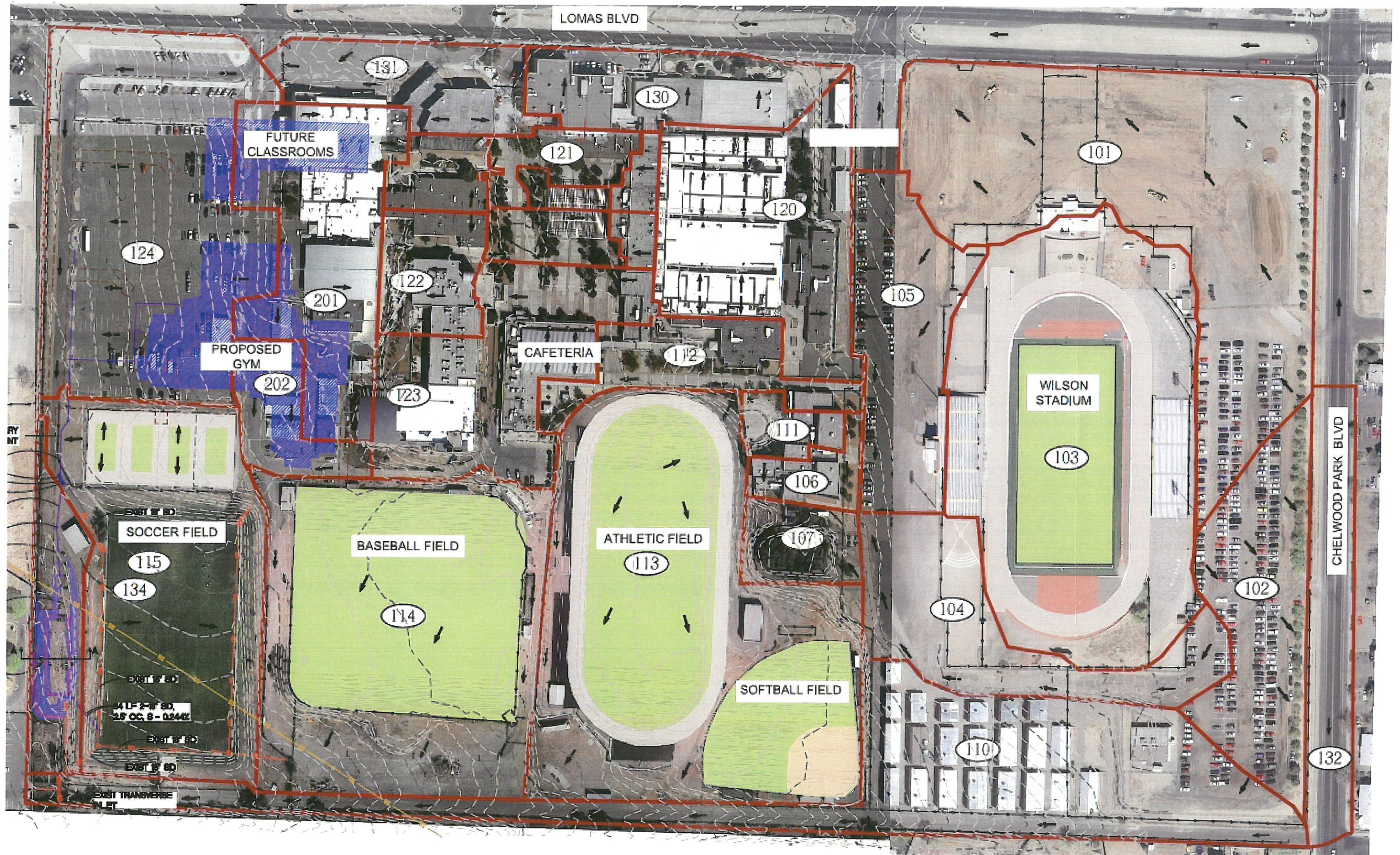
7. Hydraulics

Bentley FlowMaster v8i and CulvertMaster v3.3 were used to analyze inlets, parking lot capacity and the pond outlet pipes. See Appendix B, Hydraulics calculations. Runoff generated in the parking lot sheet flow south and will be captured by inlets in the access road to the soccer field. Future parking lot inlets west of classrooms will capture flows generated in that area and drain into the proposed pond. Two 18" pipes can convey peak flows from the detention pond into the field. See Appendix B for calculations

8. Summary

The MHSDMP hydrology model was utilized to analyze the proposed detention pond. The proposed improvements are in accordance with the MHSDMP to detain all onsite flows and do not alter the drainage patterns identified in the MHSDMP. The proposed detention pond is designed to detain the 100-year, 24-hour peak runoff from the basins along the west edge of the campus. The outflow from the soccer field pond was

restricted to 8 cfs per the MHDMP. Regular maintenance of the system is strongly recommended.





MANZ

FU

ment Type (%)		Peak Discharge	Runoff Volume	Yield
		100yr-6hr	100yr-24hr	
C	D	(ft ³ /sec)	(acre-ft)	cfs/ac
0	100	32.35	1.702	5.40
0	100	12.05	0.634	5.31
0	50	24.89	1.126	4.07
0	85	10.04	0.506	5.10
0	90	9.93	0.508	5.23
0	95	2.04	0.105	5.23
10	10	1.84	0.063	3.17
0	90	24.78	1.269	5.15
0	95	1.71	0.087	5.18
0	93	5.70	0.294	5.14
10	20	23.14	0.867	3.43
20	15	19.11	0.682	3.45
20	10	13.46	0.464	3.08
0	95	15.52	0.805	5.68
0	90	9.66	0.494	5.17
0	100	4.24	0.223	5.44
0	95	12.86	0.667	5.27
0	90	24.42	1.250	5.16
0	85	6.81	0.343	5.04
0	90	6.29	0.321	5.11
0	90	6.29	0.321	5.07
97	3	3.83	0.120	3.95
0	90	12.66	0.648	5.17
0	85	3.58	0.180	5.26



GRAPHIC SCALE



(IN FEET)
1 inch = 100 ft.

MANZANO HIGH SCHOOL GYMNASIUM & FUTURE CLASSROOM EXPANSION PLATE 1 - DRAINAGE PLAN

Analysis Point 1 (AP1)	
Peak Flow (cfs)	Runoff Volume (ac-ft)
28.03	1.370

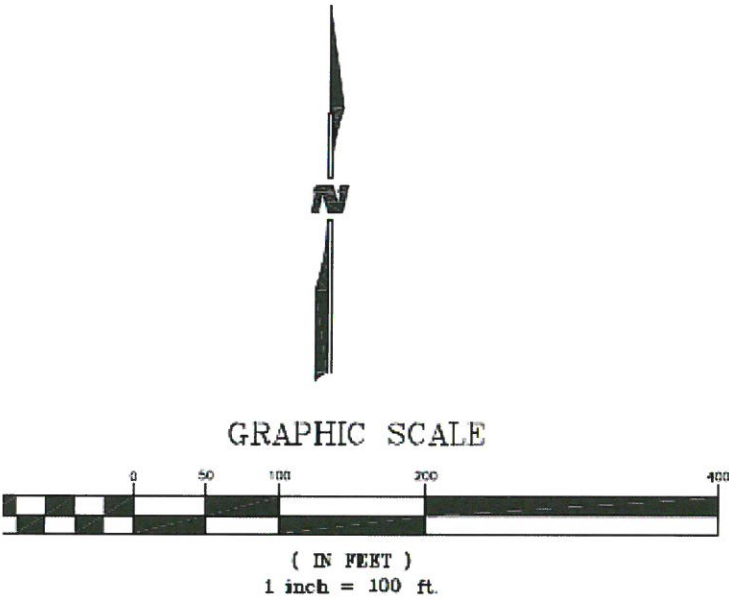
First Flush Retention Pond Data					
Impervious Area (ac)	Rainfall Depth (in)	V _{req'd} (ac-ft)	V _{prov'd} (ac-ft)	Top Elevation (ft)	Bottom Elevation (ft)
7.040	0.34	0.1995	0.2074	5,585.5	5,583.5

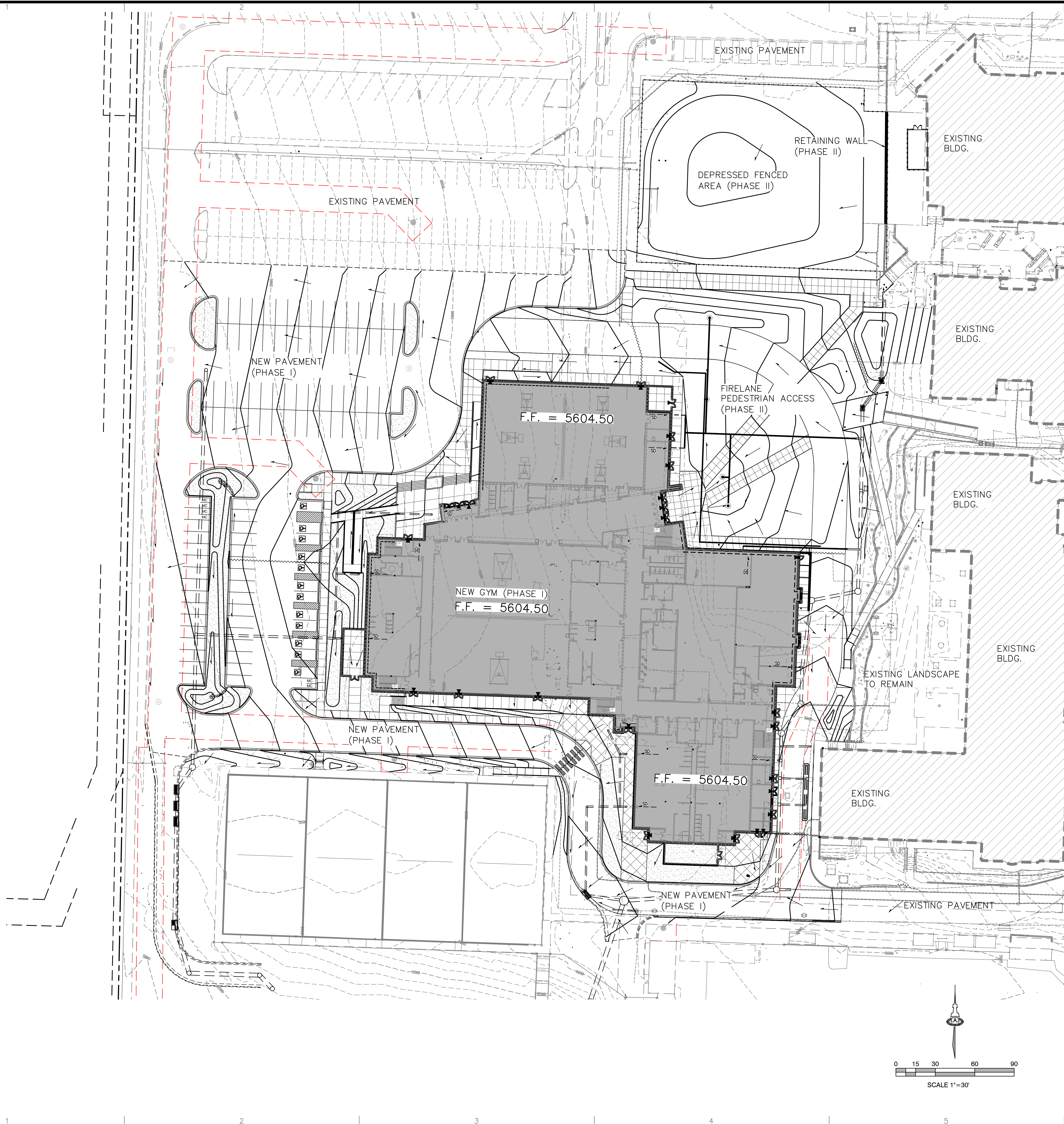
Proposed Detention Pond Data						
Peak Flow (cfs)		Peak Volume (ac-ft)		Pond Elevation (ft)		Maximum WSEL (ft)
In	Out	Required	Provided	Top	Bottom	
28.03	16.43	0.372	0.503	5,588.0	5,585.5	5,587.44

Basin ID	Area	Land Treatment Type (%)				Peak Discharge	Runoff Volume	Yield
	(acres)					100yr-6hr	100yr-24hr	
		A	B	C	D	(ft ³ /sec)	(acre-ft)	cfs/ac
101 ¹	5.99	0	0	0	100	32.35	1.702	5.40
102 ²	2.27	0	0	0	100	12.05	0.634	5.31
103	6.12	35	15	0	50	24.89	1.126	4.07
104	1.97	0	15	0	85	10.04	0.506	5.10
105	1.90	0	10	0	90	9.93	0.508	5.23
106	0.39	0	5	0	95	2.04	0.105	5.23
107	0.58	50	30	10	10	1.84	0.063	3.17
110	4.81	0	10	0	90	24.78	1.269	5.15
111	0.33	0	5	0	95	1.71	0.087	5.18
112	1.11	0	7	0	93	5.70	0.294	5.14
113	6.75	40	30	10	20	23.14	0.867	3.43
114	5.54	35	30	20	15	19.11	0.682	3.45
115	4.37	70	0	20	10	13.46	0.464	3.08
120	2.73	0	5	0	95	15.52	0.805	5.68
121	1.87	0	10	0	90	9.66	0.494	5.17
122	0.78	0	0	0	100	4.24	0.223	5.44
123	2.44	0	5	0	95	12.86	0.667	5.27
124	4.73	0	10	0	90	24.42	1.250	5.16
130 ¹	1.35	0	15	0	85	6.81	0.343	5.04
131 ¹	1.23	0	10	0	90	6.29	0.321	5.11
132 ²	1.24	0	10	0	90	6.29	0.321	5.07
134 ³	0.97	0	0	97	3	3.83	0.120	3.95
201	2.45	0	10	0	90	12.66	0.648	5.17
202	0.68	0	15	0	85	3.58	0.180	5.26

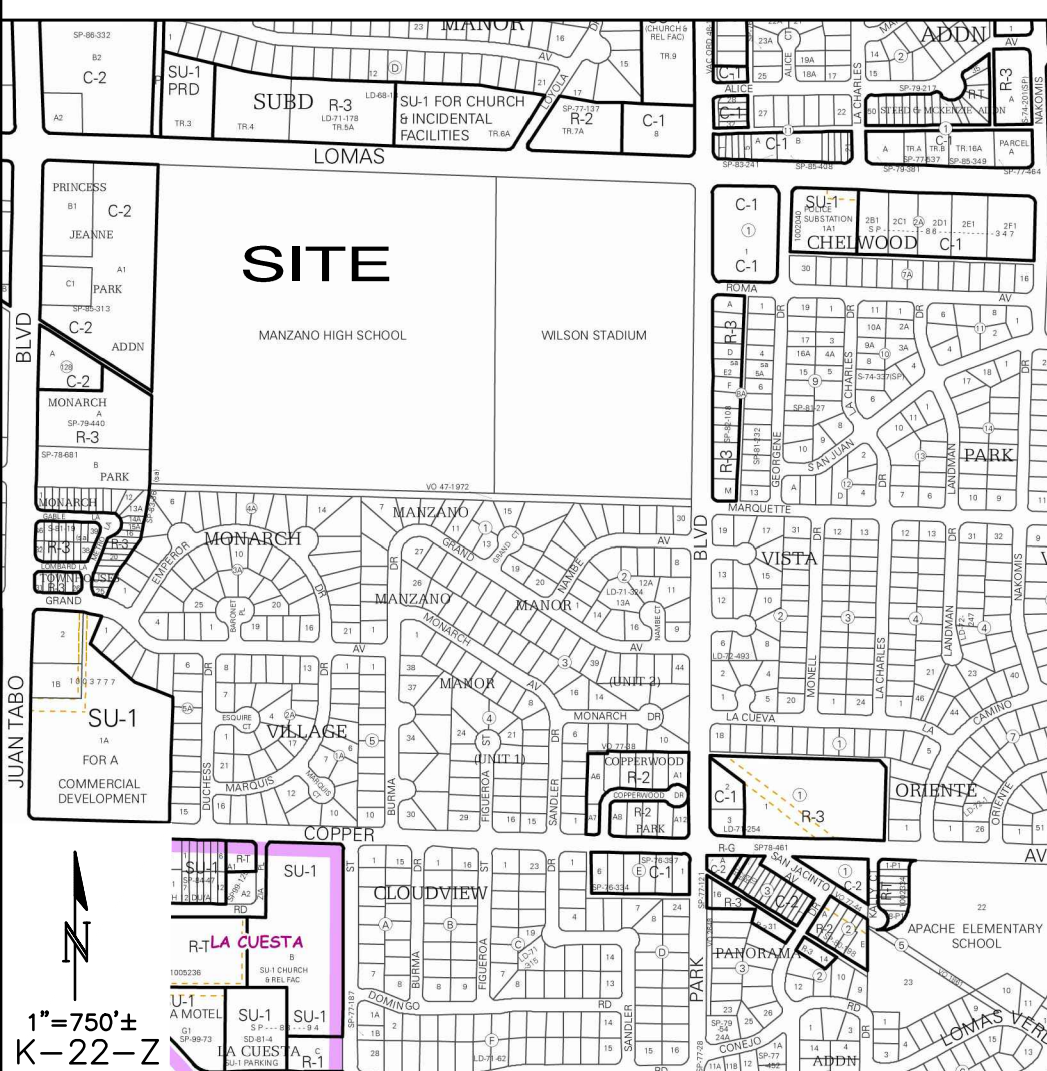
Gymnasium / future classroom & west parking Basins

- ¹ Drains to Lomas Blvd
- ² Drains to Chelwood Park Blvd
- ³ Part of basin 110 in 2008 report





VICINITY MAP K-22



PROJECT DATA

PROPERTY: THE SITE IS A PORTION OF A FULLY DEVELOPED APS SCHOOL PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP K-22. THE SITE IS BOUND TO THE EAST BY SCHOOL FACILITIES, TO THE SOUTH BY SPORTS FIELDS, TO THE WEST BY DEVELOPED RETAIL PROPERTIES AND TO THE NORTH BY LOMAS BLVD.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE CONSTRUCTION OF A NEW GYM BUILDING WITH ASSOCIATED ASPHALT PAVED PARKING, PEDESTRIAN WALKS, DRAINAGE IMPROVEMENTS, AND LANDSCAPING.

LEGAL: UNPLATTED LANDS OF APS ALSO KNOWN AS MANZANO HIGH SCHOOL, CITY OF ALBUQUERQUE, NEW MEXICO.

ADDRESS: 12200 LOMAS BLVD NE, ALBUQUERQUE, NM 87112

BENCHMARK: AN ACS BRASS DISK STAMPED "3-J22 1979", SET FLUSH WITH THE GROUND. THE STATION IS LOCATED IN NE INTERSECTION OF LOMAS BOULEVARD NE AND CHELWOOD PARK BLVD NE. ELEVATION = 5667.46 FEET (NAVD 1988)

FLOOD HAZARD: THE PROPERTY SURVEYED HEREON HAS A ZONE X DESIGNATION WHICH IS FURTHER DESCRIBED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN" BASED UPON REVIEW OF THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAPS, PANEL 359 OF 825, DATED SEPTEMBER 26, 2008.

DRAINAGE PLAN CONCEPT: THE PROPOSED IMPROVEMENTS WILL DISCHARGE TO THE ON-SITE STORM DRAIN SYSTEM TO FOLLOW HISTORIC FLOWPATTERN. OVERALL DISCHARGE IS EXPECTED TO BE REDUCED BASED ON A DECREASE IN IMPERMEABLE AREA. WILSON ENGINEERING IS PREPARING A SEPARATE MASTER STORM DRAIN IMPROVEMENT PLAN INCLUDING CONSTRUCTION DOCUMENTS TO UPDATE THE ON-SITE STORM DRAIN SYSTEM. ALL CALCULATIONS FOR THIS DEVELOPMENT ARE INCLUDED IN THEIR STORM DRAIN ANALYSIS.

ENGINEER: ASA M. NILSSON-WEBER, P.E., NMPE 17631
ISAACSON & ARFMAN, P.A.
128 MONROE NE, 87108
TELEPHONE: (505) 268-8828

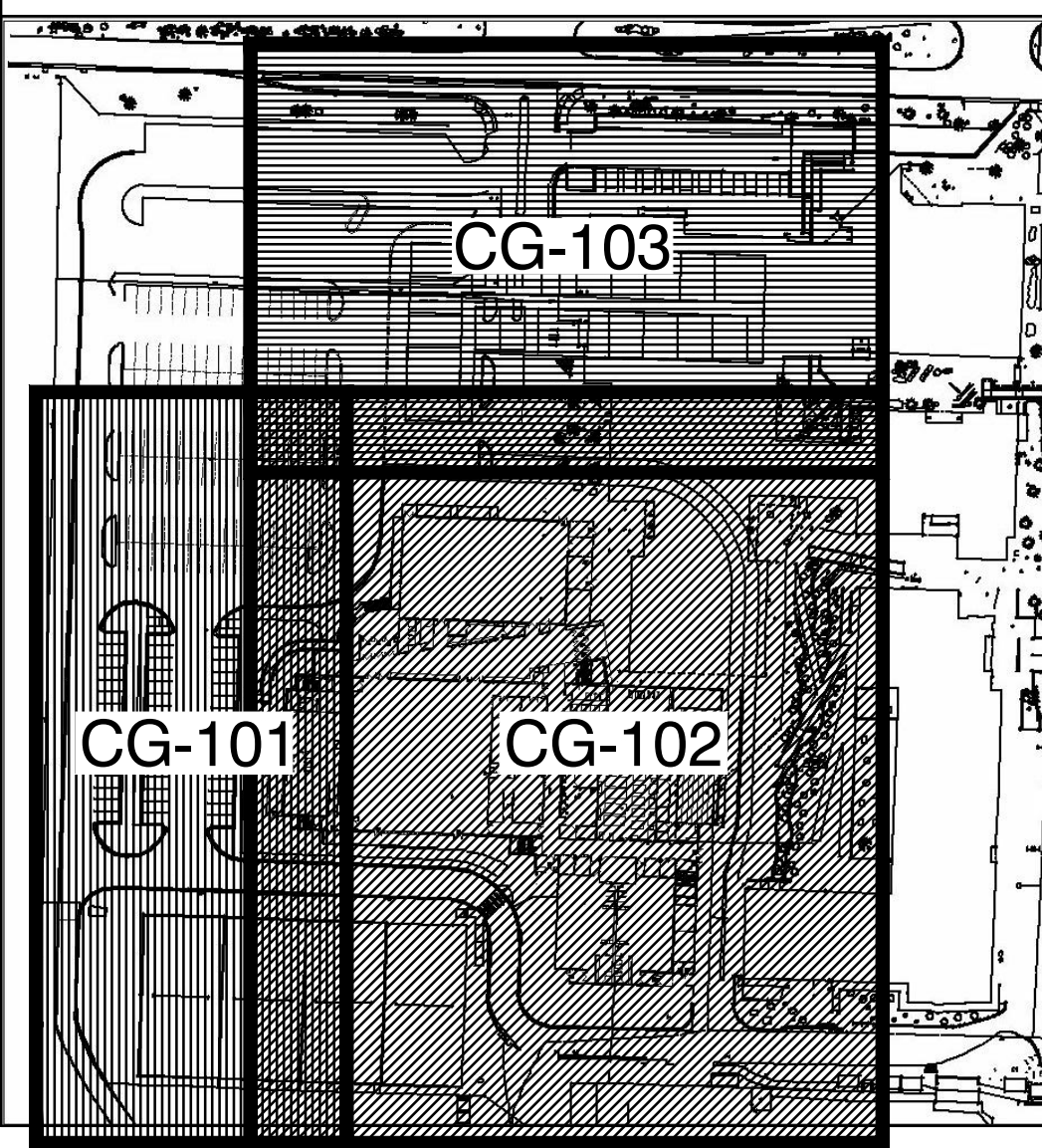
SURVEYOR: CHARLES G. CALA, JR., NMPS 11184
HIGH MESA CONSULTING GROUP
6010-B MIDWAY PARK BLVD. NE, 87109
TELEPHONE: (505) 345-4250

FIRST FLUSH

STORMWATER CONTROL MEASURES ARE REQUIRED TO PROVIDE MANAGEMENT OF "FIRST FLUSH" (DEFINED AS THE 90TH PERCENTILE STORM EVENT OR 0.34" [0.44" LESS 0.1" FOR INITIAL ABSTRACTION] OF STORMWATER WHICH DISCHARGES DIRECTLY TO A PUBLIC STORM DRAINAGE SYSTEM).

PER COORDINATION WITH A.P.S., WILSON ENGINEERING WILL BE PROVIDING FIRST FLUSH RETENTION FOR THE OVERALL MANZANO HIGH SCHOOL PROPERTY (FOR THIS AND FUTURE PROPOSED PROJECTS). IN THE INTERIM, THE SOCCER FIELD WHICH ACCEPTS 100% OF THE DISCHARGE FROM THIS PROPOSED DEVELOPMENT, WILL CONTINUE TO PROVIDE FIRST FLUSH VOLUME. WHERE AVAILABLE, DEPRESSED LANDSCAPING WILL BE UTILIZED TO ACCEPT LOCALIZED DISCHARGE FROM PAVEMENT TO PROVIDE ADDITIONAL CAPACITY.

SITE KEY



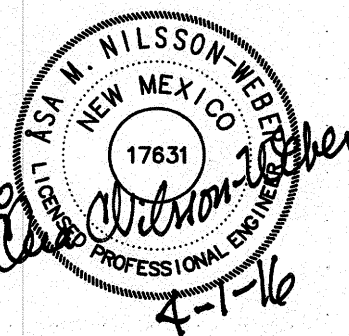
STUDIO SOUTHWEST ARCHITECTS, INC.
2101 Mountain Rd. NW, Albuquerque, NM 87104
505.843.9639 fax 505.843.9683
Web Site: www.studioswarch.com
E-Mail: mail@studioswarch.com

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CONSULTANTS

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87108
Ph. 505-268-8828 www.isaact.com
2091 CG-101.dwg Mar 30, 2016

Architect Engineer



MANZANO HIGH SCHOOL GYMNASIUM
LOMAS BLVD
ALBUQUERQUE, NM

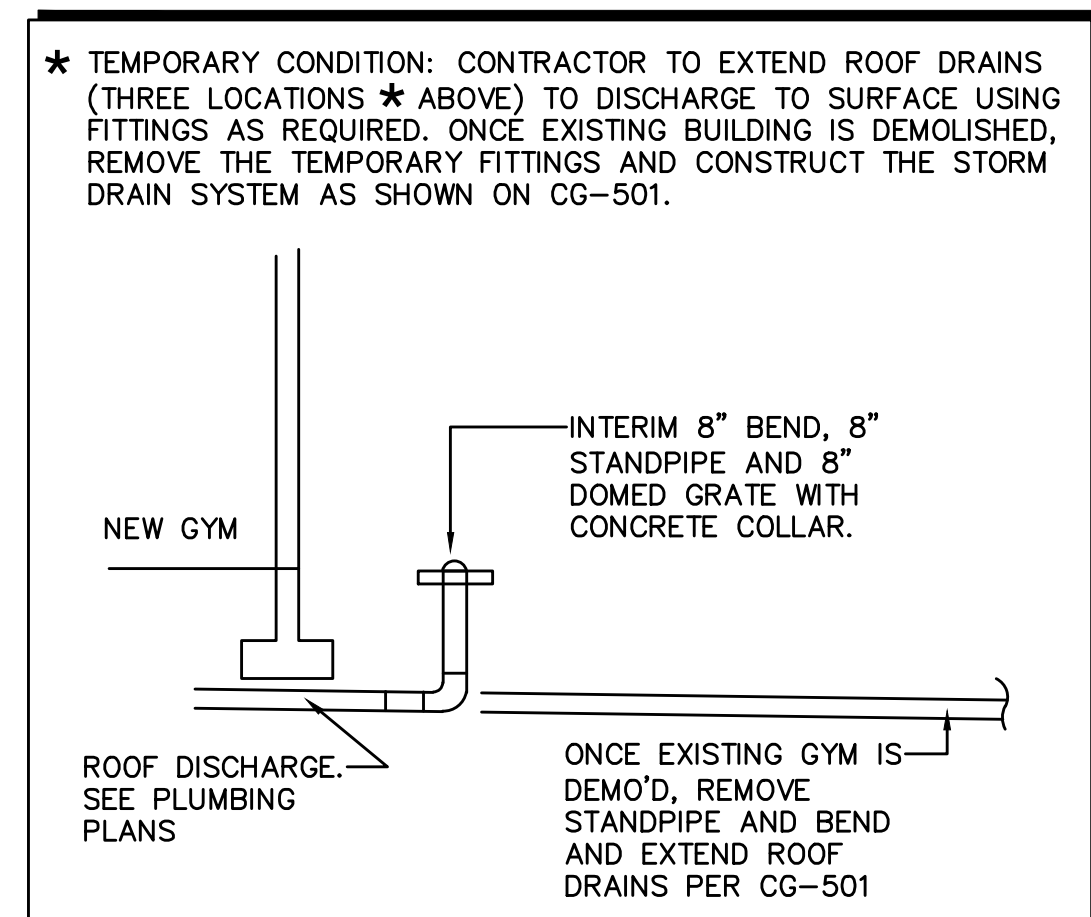
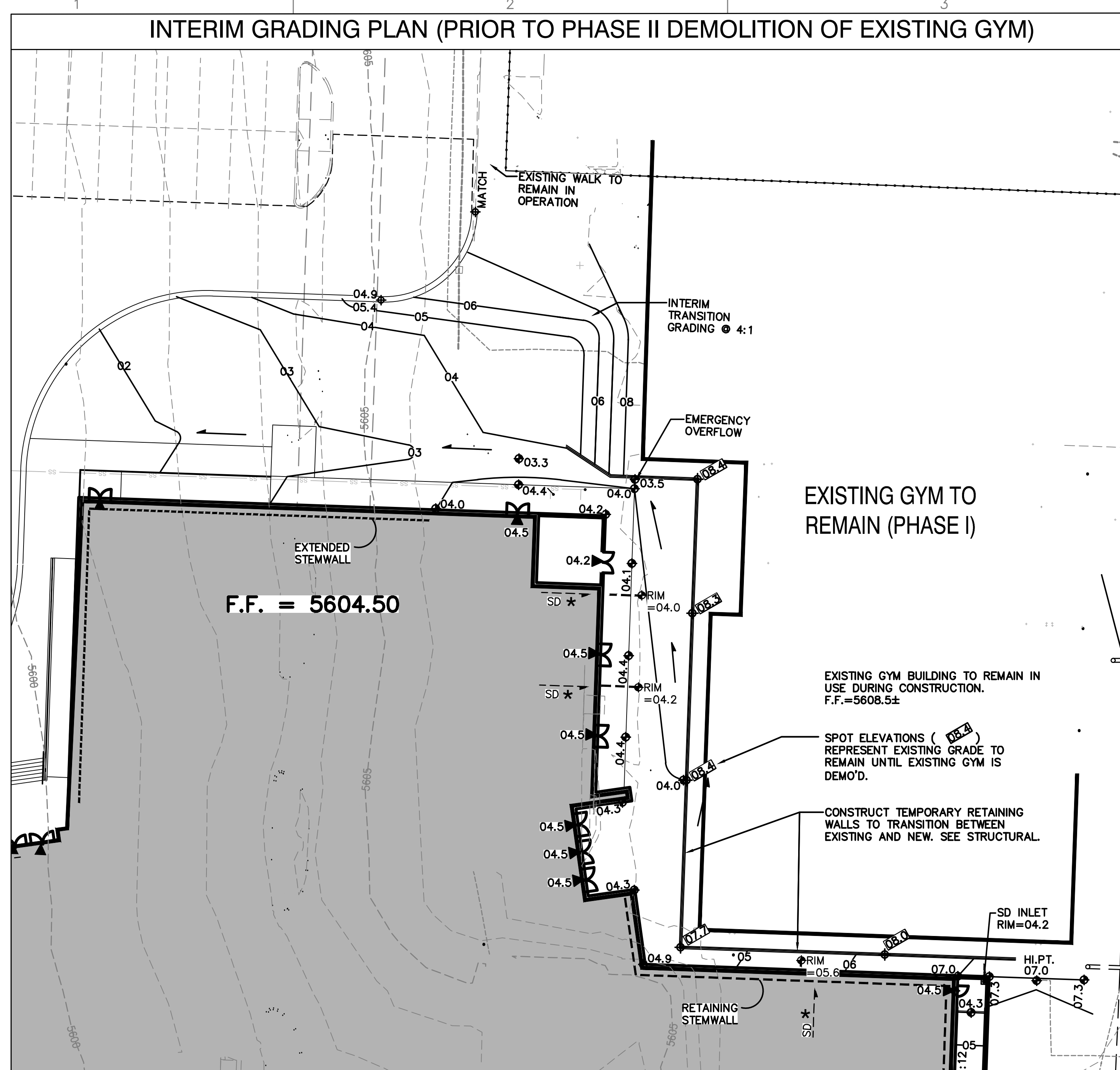
Key Plan

MARK	DATE	DESCRIPTION
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PROJECT NO:		1401
CAD DWG FILE:		
DRAWN BY:		
CHECKED BY:	ANW	
DATE:	APRIL 1, 2016	

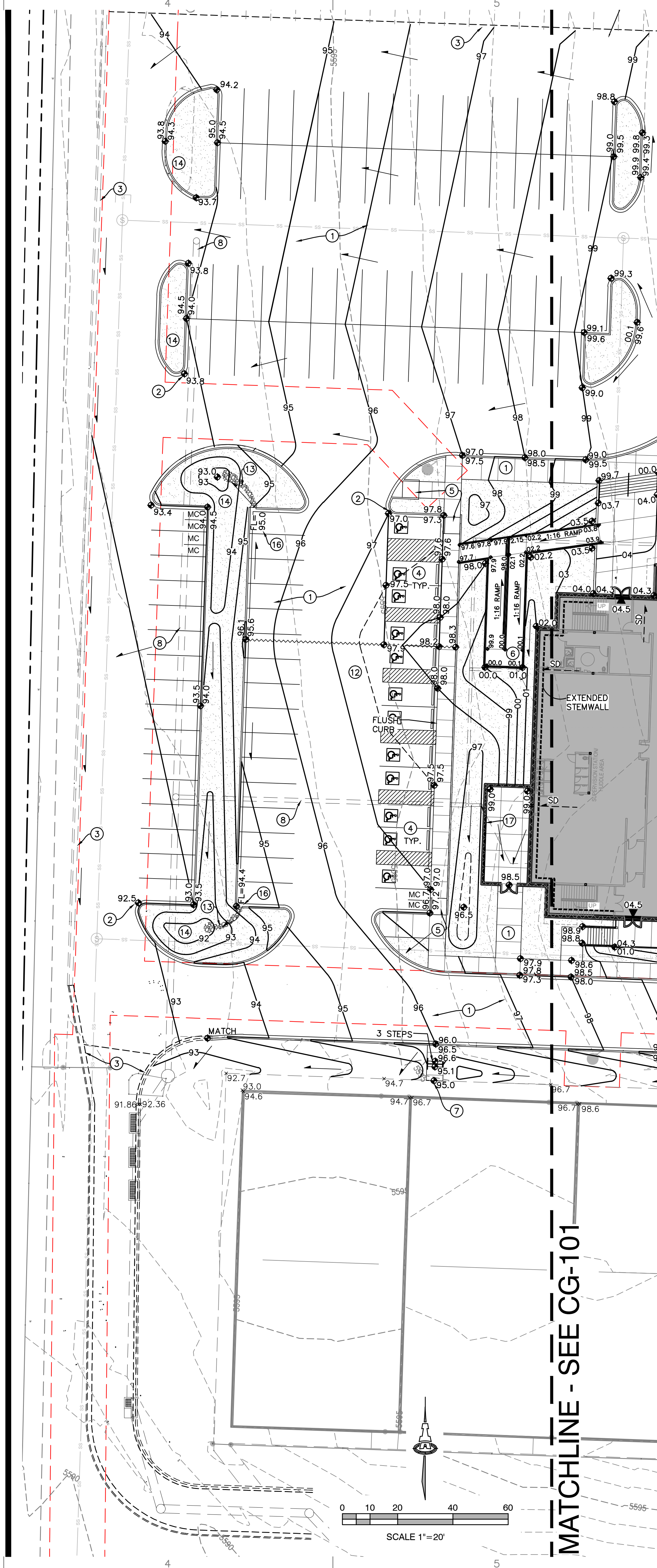
SHEET TITLE

OVERALL
GRADING AND
DRAINAGE PLAN

CG-100

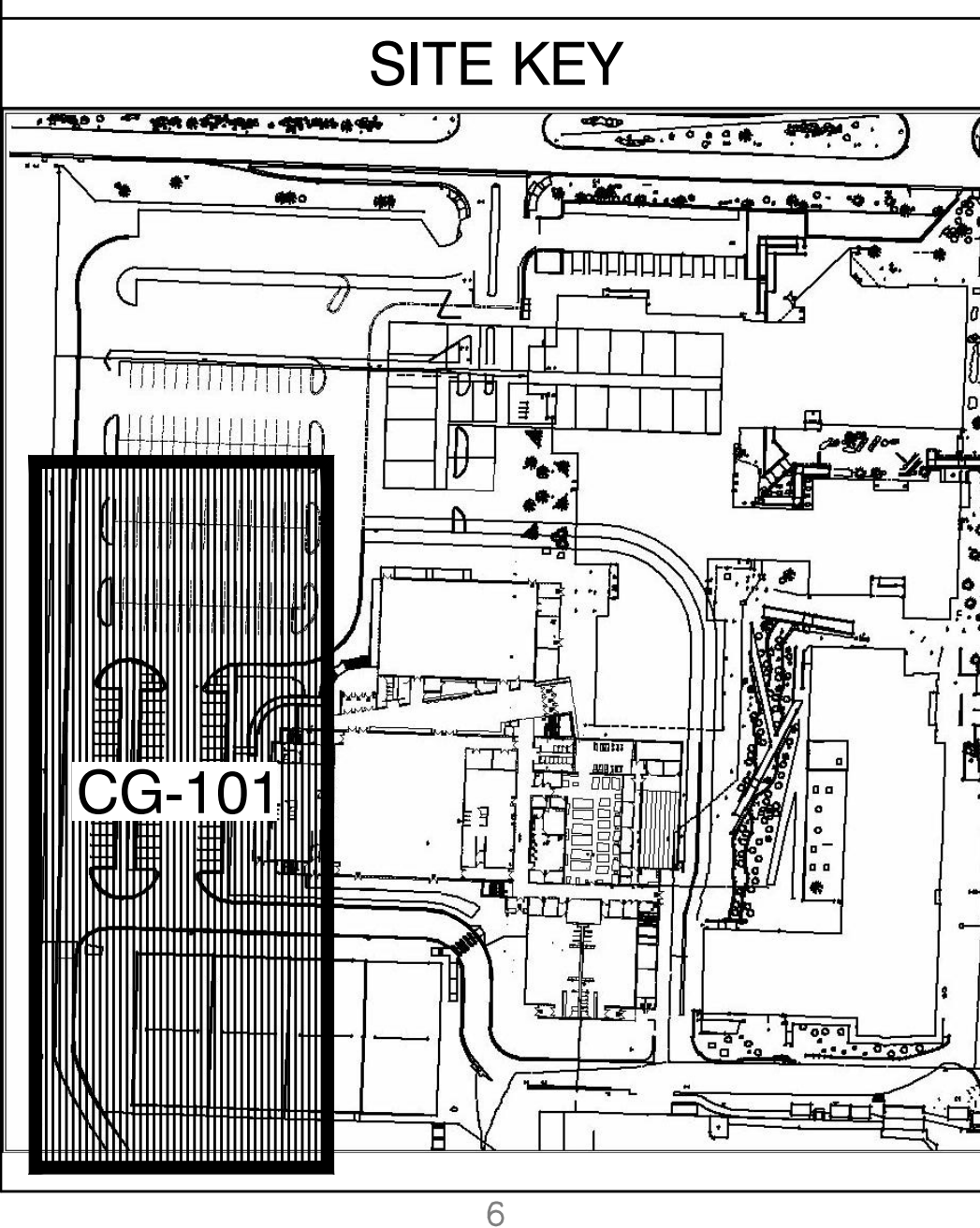


INTERIM STORM DRAIN DISCHARGE



- ### KEYED NOTES
- THE FOLLOWING KEYED NOTES ARE FOR USE ON SHEETS CG-101, CG-102 AND CG-103. NOT ALL NOTES ARE REFERENCED ON EACH SHEET.
1. CONSTRUCT NEW PAVEMENT, CURB AND GUTTER, SIDEWALKS AT ELEVATIONS SHOWN. SEE PAVING PLAN (CP-101) FOR ADDITIONAL INFORMATION.
 2. TO ENSURE READABILITY, NOT ALL PAVEMENT SPOT ELEVATIONS SHOW ADJACENT TOP OF CURB / TOP OF WALK ELEVATION. TEXT SHOWN WITHIN FLOWLINE REPRESENTS FLOWLINE ELEVATION. ADD 0.5' TYPICAL FOR TOP OF ADJACENT CURB OR WALK ELEVATIONS UNLESS NOTED.
 3. TRANSITIONS BETWEEN NEW AND EXISTING PAVEMENT SHALL BE SMOOTH.
 4. SLOPE WITHIN HANDICAP PARKING AREA TO MEET ADA REQUIREMENTS. MAX. SLOPE = 2% IN ANY DIRECTION.
 5. CONSTRUCT 1:12 (MAX.) SIDEWALK RAMP. SEE SHEET CP-501. PAVING DETAILS: TOP OF ASPHALT TO BE FLUSH WITH TOP OF CONCRETE EDGE FOR ADA COMPLIANCE.
 6. SITE PEDESTRIAN ACCESS RAMP (1:12 MAX.) WITH RETAINING WALLS. SEE ARCHITECTURAL.
 7. SITE EXTERIOR STAIRS/STEPS. SEE ARCHITECTURAL.
 8. PORTION OF SITE STORM DRAIN SYSTEM TO BE INSTALLED PRIOR TO THIS PROJECT UNDER SEPARATE CONTRACT (BY OTHERS) SEE CG-501 FOR ADDITIONAL INFORMATION.
 9. PROPOSED ROOF DISCHARGE LOCATION. SEE CG-501 FOR CONTINUATION.
 10. CONSTRUCT EXTENDED STEM WALL TO ACHIEVE GRADE DIFFERENCE. SEE ARCHITECTURAL.
 11. CONSTRUCT RETAINING STEM WALL TO ACHIEVE GRADE DIFFERENCE. SEE ARCHITECTURAL.
 12. ONE-HALF FOOT DESIGN CONTOURS (0.5' INCREMENTS) SHOWN DASHED TO CLARIFY GRADING CONCEPT. SEE LEGEND FOR ADDITIONAL INFORMATION.
 13. INSTALL COBBLE EROSION PROTECTION THIS AREA. NOTE: PER A.P.S. STANDARDS, ALL ROCK EROSION PROTECTION WITHIN THE SCHOOL SITE IS TO BE 6" AVG. DIA. ROUNDED ROCK EMBEDDED IN CONCRETE. NO LOOSE COBBLE SWALES OR EROSION PROTECTION SHALL BE ALLOWED ON A.P.S. DISTRICT PROPERTIES.
 14. TYPICAL FOR LANDSCAPE: DEPRESS LANDSCAPING TO PROVIDE SHALLOW WATER HARVESTING BASIN. NOTE: NO WATER HARVESTING SHALL OCCUR WITHIN 10' OF BUILDINGS.
 15. CONSTRUCT SITE STORM DRAIN SYSTEM THIS AREA AS PART OF PHASE II (FOLLOWING THE REMOVAL OF THE EXISTING GYM BUILDING.) SEE CG-501 FOR ADDITIONAL INFORMATION.
 16. PROVIDE 18" WIDE OPENING IN CURB AT FLOWLINE ELEVATION SHOWN. SEE CG-501 FOR DETAIL.
 17. CONSTRUCT SITE RETAINING WALL TO ACHIEVE REQUIRED GRADE DIFFERENCE AT ELEVATIONS SHOWN. SEE ARCHITECTURAL FOR ADDITIONAL INFORMATION INCLUDING GUARDRAILS WHERE REQUIRED.
 18. CONSTRUCT 2' WIDE CONCRETE ALLEY GUTTER AT ELEVATIONS SHOWN.
 19. CONSTRUCT 6" HIGH HEADER CURB TO DEFLECT UPSTREAM FLOW SOUTH - PROPOSED POND. SEE ENLARGED DETAIL THIS SHEET FOR ADDITIONAL INFORMATION.

- ### LEGEND
- EXISTING CONTOUR
 - 02- PROPOSED 1' CONTOUR
 - 02.5- PROPOSED 0.5' CONTOUR
 - 03.8 PROPOSED SPOT ELEVATION
 - FLOW ARROW
 - FF = 5604.50 FINISH FLOOR ELEVATION
 - INV= INVERT ELEVATION
 - FL= FLOWLINE ELEVATION
 - PROPOSED STORM DRAIN
 - ~~~~~ PROPOSED GRADE BREAK



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MANZANO HIGH SCHOOL GYMNASIUM

LOMAS BLVD
ALBUQUERQUE, NM

Key Plan

NTS

MARK	DATE	DESCRIPTION
ISSUE:		PERMIT
PROJECT NO:		1401
CAD DWG FILE:		
DRAWN BY:		
CHECKED BY:	ANW	
DATE:	APRIL 1, 2016	

SHEET TITLE

GRADING AND DRAINAGE PLAN 1 OF 3

CG-101