INSULAR ABC'S INITIATIVE
Phase III Task 1 - Civil Engineer Findings

COMMONWEALTH OF NORTHERN MARIANA ISLANDS

Civil Site Maps for Required Projects

US Army Corps of Engineers
Honolulu District

Office of Insular Affairs
US Department of Interior

HHF PLANNERS
places for people

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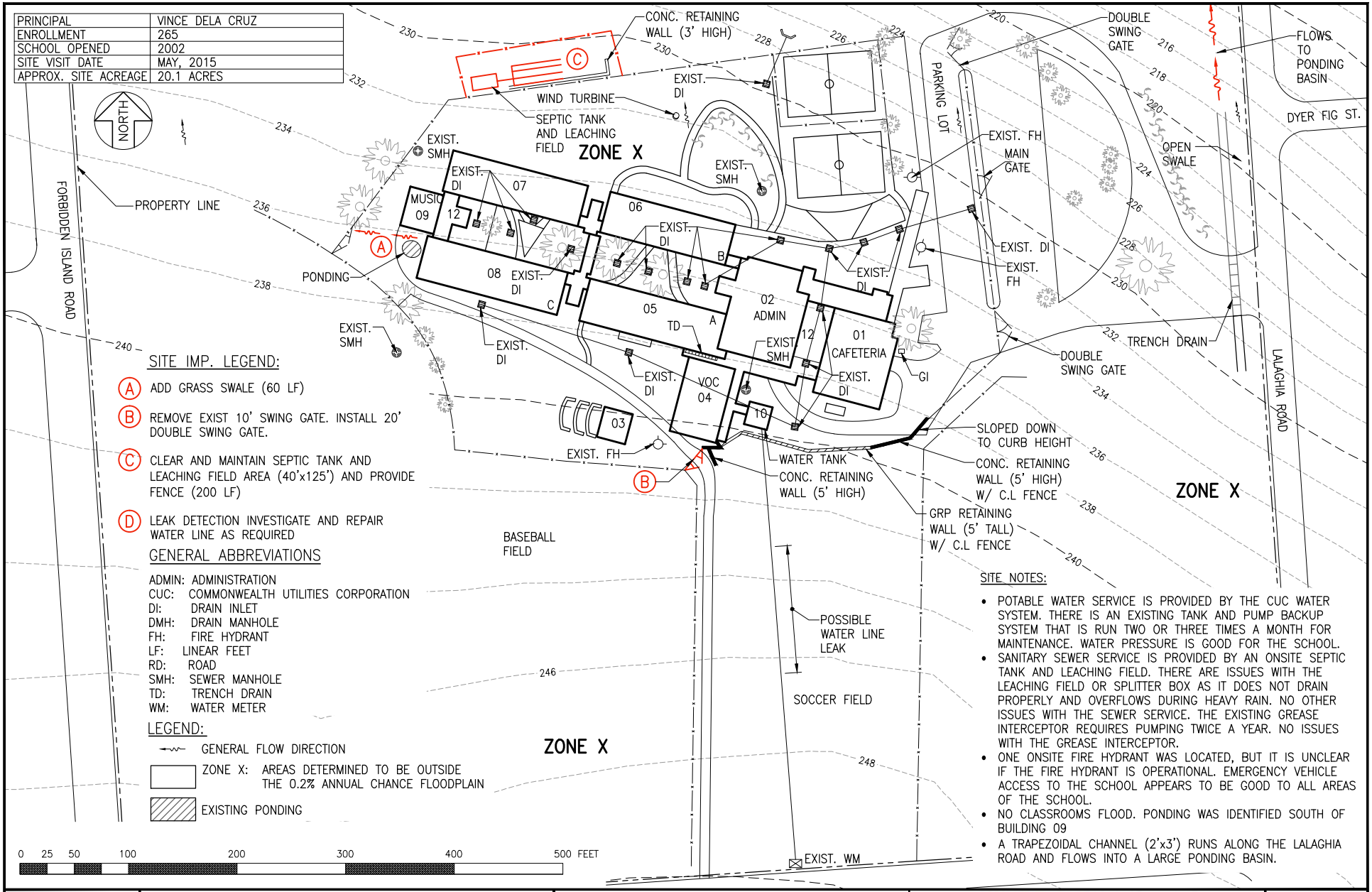
Site Maps showing the locations of recommended projects are provided for each school in alphabetical order by island.

PRINCIPAL	VINCE DELA CRUZ
ENROLLMENT	265
SCHOOL OPENED	2002
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	20.1 ACRES



SITE IMP. LEGEND:

- (A) ADD GRASS SWALE (60 LF)
- (B) REMOVE EXIST 10' SWING GATE. INSTALL 20' DOUBLE SWING GATE.
- (C) CLEAR AND MAINTAIN SEPTIC TANK AND LEACHING FIELD AREA (40'x125') AND PROVIDE FENCE (200 LF)
- (D) LEAK DETECTION INVESTIGATE AND REPAIR WATER LINE AS REQUIRED

GENERAL ABBREVIATIONS

ADMIN: ADMINISTRATION
CUC: COMMONWEALTH UTILITIES CORPORATION
DI: DRAIN INLET
DMH: DRAIN MANHOLE
FH: FIRE HYDRANT
LF: LINEAR FEET
RD: ROAD
SMH: SEWER MANHOLE
TD: TRENCH DRAIN
WM: WATER METER

LEGEND:

GENERAL FLOW DIRECTION

ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN

EXISTING PONDING

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING TANK AND PUMP BACKUP SYSTEM THAT IS RUN TWO OR THREE TIMES A MONTH FOR MAINTENANCE. WATER PRESSURE IS GOOD FOR THE SCHOOL.
- SANITARY SEWER SERVICE IS PROVIDED BY AN ONSITE SEPTIC TANK AND LEACHING FIELD. THERE ARE ISSUES WITH THE LEACHING FIELD OR SPLITTER BOX AS IT DOES NOT DRAIN PROPERLY AND OVERFLOWS DURING HEAVY RAIN. NO OTHER ISSUES WITH THE SEWER SERVICE. THE EXISTING GREASE INTERCEPTOR REQUIRES PUMPING TWICE A YEAR. NO ISSUES WITH THE GREASE INTERCEPTOR.
- ONE ONSITE FIRE HYDRANT WAS LOCATED, BUT IT IS UNCLEAR IF THE FIRE HYDRANT IS OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE GOOD TO ALL AREAS OF THE SCHOOL.
- NO CLASSROOMS FLOOD. PONDING WAS IDENTIFIED SOUTH OF BUILDING 09
- A TRAPEZOIDAL CHANNEL (2'x3') RUNS ALONG THE LALAGHIA ROAD AND FLOWS INTO A LARGE PONDING BASIN.

OIA – ASSESSMENT OF BUILDINGS AND CLASSROOMS
CMNI – SAIPAN

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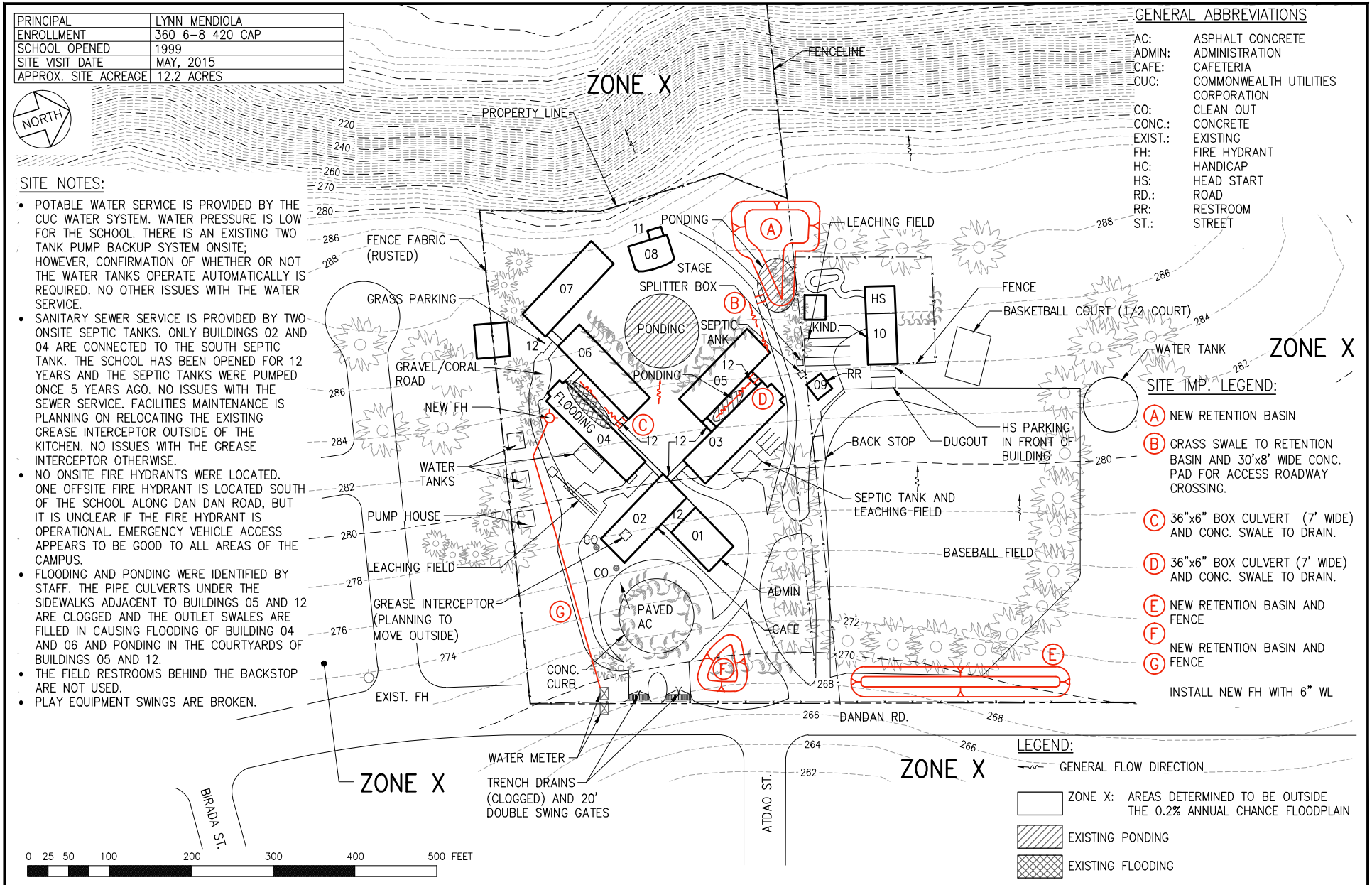
CHACHA OCEANVIEW JR HIGH SCHOOL

FIGURE 01

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	LYNN MENDIOLA
ENROLLMENT	360 6-8 420 CAP
SCHOOL OPENED	1999
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	12.2 ACRES



SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. WATER PRESSURE IS LOW FOR THE SCHOOL. THERE IS AN EXISTING TWO TANK PUMP BACKUP SYSTEM ONSITE; HOWEVER, CONFIRMATION OF WHETHER OR NOT THE WATER TANKS OPERATE AUTOMATICALLY IS REQUIRED. NO OTHER ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY TWO ONSITE SEPTIC TANKS. ONLY BUILDINGS 02 AND 04 ARE CONNECTED TO THE SOUTH SEPTIC TANK. THE SCHOOL HAS BEEN OPENED FOR 12 YEARS AND THE SEPTIC TANKS WERE PUMPED ONCE 5 YEARS AGO. NO ISSUES WITH THE SEWER SERVICE. FACILITIES MAINTENANCE IS PLANNING ON RELOCATING THE EXISTING GREASE INTERCEPTOR OUTSIDE OF THE KITCHEN. NO ISSUES WITH THE GREASE INTERCEPTOR OTHERWISE.
- NO ONSITE FIRE HYDRANTS WERE LOCATED. ONE OFFSITE FIRE HYDRANT IS LOCATED SOUTH OF THE SCHOOL ALONG DAN DAN ROAD, BUT IT IS UNCLEAR IF THE FIRE HYDRANT IS OPERATIONAL. EMERGENCY VEHICLE ACCESS APPEARS TO BE GOOD TO ALL AREAS OF THE CAMPUS.
- FLOODING AND PONDING WERE IDENTIFIED BY STAFF. THE PIPE CULVERTS UNDER THE SIDEWALKS ADJACENT TO BUILDINGS 05 AND 12 ARE CLOGGED AND THE OUTLET SWALES ARE FILLED IN CAUSING FLOODING OF BUILDING 04 AND 06 AND PONDING IN THE COURTYARDS OF BUILDINGS 05 AND 12.
- THE FIELD RESTROOMS BEHIND THE BACKSTOP ARE NOT USED.
- PLAY EQUIPMENT SWINGS ARE BROKEN.

GENERAL ABBREVIATIONS

AC:	ASPHALT CONCRETE
ADMIN:	ADMINISTRATION
CAFE:	CAFETERIA
CUC:	COMMONWEALTH UTILITIES CORPORATION
CO:	CLEAN OUT
CONC.:	CONCRETE
EXIST.:	EXISTING
FH:	FIRE HYDRANT
HC:	HANDICAP
HS:	HEAD START
RD.:	ROAD
RR:	RESTROOM
ST.:	STREET

SITE IMP. LEGEND:

- (A) NEW RETENTION BASIN
- (B) GRASS SWALE TO RETENTION BASIN AND 30'x8' WIDE CONC. PAD FOR ACCESS ROADWAY CROSSING.
- (C) 36"x6" BOX CULVERT (7' WIDE) AND CONC. SWALE TO DRAIN.
- (D) 36"x6" BOX CULVERT (7' WIDE) AND CONC. SWALE TO DRAIN.
- (E) NEW RETENTION BASIN AND FENCE
- (F) NEW RETENTION BASIN AND FENCE
- (G) INSTALL NEW FH WITH 6" WL

LEGEND:

- GENERAL FLOW DIRECTION
- ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- EXISTING PONDING
- EXISTING FLOODING

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FIGURE 02

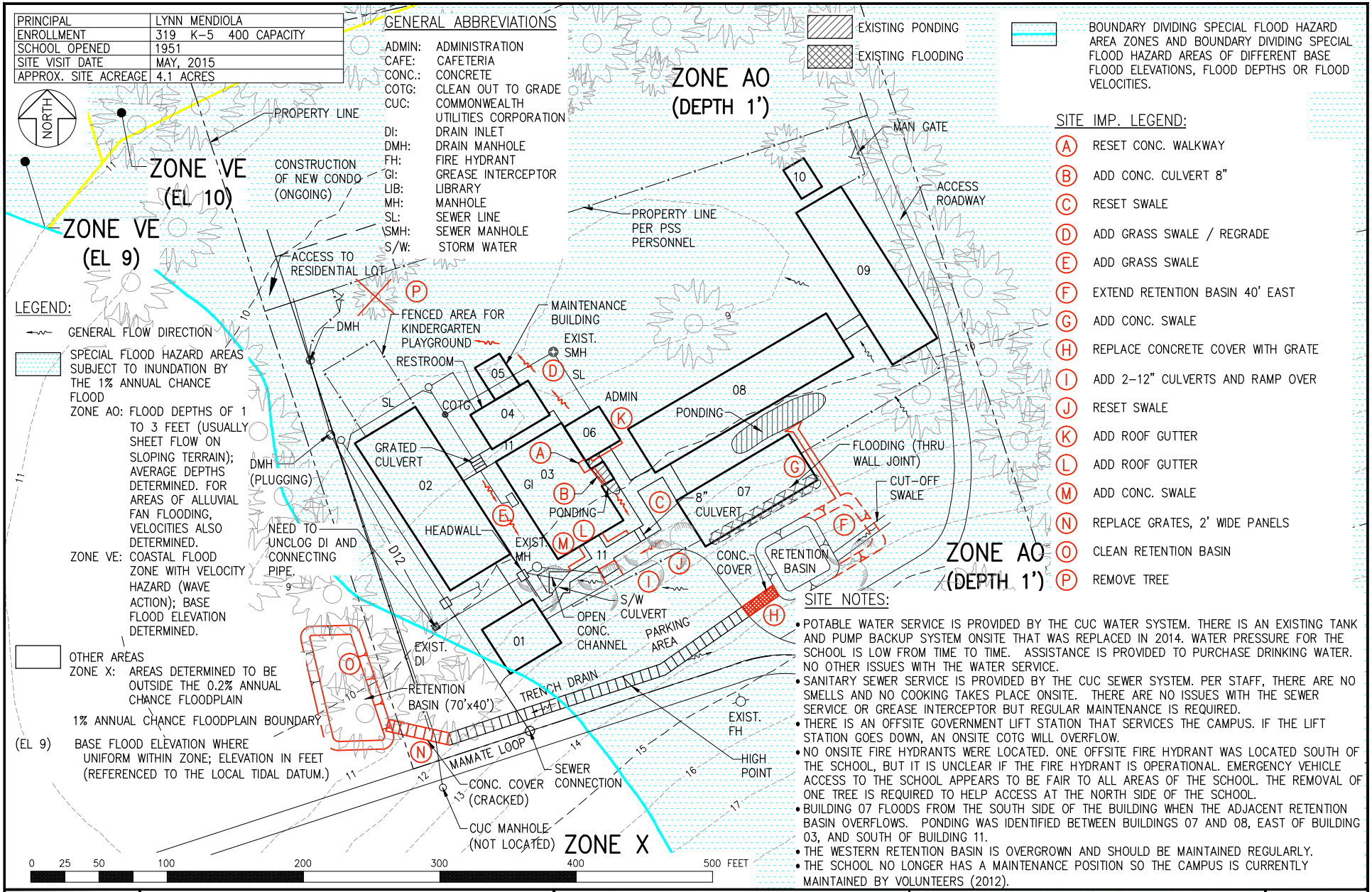
DAN DAN MIDDLE SCHOOL

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	LYNN MENDIOLA
ENROLLMENT	319 K-5 400 CAPACITY
SCHOOL OPENED	1951
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	4.1 ACRES

GENERAL ABBREVIATIONS

ADMIN: ADMINISTRATION
CAFE: CAFETERIA
CONC.: CONCRETE
COTG: CLEAN OUT TO GRADE
CUC: COMMONWEALTH UTILITIES CORPORATION
DI: DRAIN INLET
DMH: DRAIN MANHOLE
FH: FIRE HYDRANT
GI: GREASE INTERCEPTOR
LIB: LIBRARY
MH: MANHOLE
SL: SEWER LINE
SMH: SEWER MANHOLE
S/W: STORM WATER



LEGEND:

GENERAL FLOW DIRECTION

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

ZONE AO: FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW ON SLOPING TERRAIN); AVERAGE DEPTHS DETERMINED. FOR AREAS OF ALLUVIAL FAN FLOODING, VELOCITIES ALSO DETERMINED.

ZONE VE: COASTAL FLOOD ZONE WITH VELOCITY HAZARD (WAVE ACTION); BASE FLOOD ELEVATION DETERMINED.

OTHER AREAS

ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN

1% ANNUAL CHANCE FLOODPLAIN BOUNDARY

(EL 9) BASE FLOOD ELEVATION WHERE UNIFORM WITHIN ZONE; ELEVATION IN FEET (REFERENCED TO THE LOCAL TIDAL DATUM.)

EXISTING PONDING

EXISTING FLOODING

BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREA ZONES AND BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREAS OF DIFFERENT BASE FLOOD ELEVATIONS, FLOOD DEPTHS OR FLOOD VELOCITIES.

SITE IMP. LEGEND:

(A) RESET CONC. WALKWAY
(B) ADD CONC. CULVERT 8"
(C) RESET SWALE
(D) ADD GRASS SWALE / REGRADE
(E) ADD GRASS SWALE
(F) EXTEND RETENTION BASIN 40' EAST
(G) ADD CONC. SWALE
(H) REPLACE CONCRETE COVER WITH GRATE
(I) ADD 2-12" CULVERTS AND RAMP OVER
(J) RESET SWALE
(K) ADD ROOF GUTTER
(L) ADD ROOF GUTTER
(M) ADD CONC. SWALE
(N) REPLACE GRATES, 2' WIDE PANELS
(O) CLEAN RETENTION BASIN
(P) REMOVE TREE

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING TANK AND PUMP BACKUP SYSTEM ONSITE THAT WAS REPLACED IN 2014. WATER PRESSURE FOR THE SCHOOL IS LOW FROM TIME TO TIME. ASSISTANCE IS PROVIDED TO PURCHASE DRINKING WATER. NO OTHER ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY THE CUC SEWER SYSTEM. PER STAFF, THERE ARE NO SMELLS AND NO COOKING TAKES PLACE ONSITE. THERE ARE NO ISSUES WITH THE SEWER SERVICE OR GREASE INTERCEPTOR BUT REGULAR MAINTENANCE IS REQUIRED.
- THERE IS AN OFFSITE GOVERNMENT LIFT STATION THAT SERVICES THE CAMPUS. IF THE LIFT STATION GOES DOWN, AN ONSITE COTG WILL OVERFLOW.
- NO ONSITE FIRE HYDRANTS WERE LOCATED. ONE OFFSITE FIRE HYDRANT WAS LOCATED SOUTH OF THE SCHOOL, BUT IT IS UNCLEAR IF THE FIRE HYDRANT IS OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE FAIR TO ALL AREAS OF THE SCHOOL. THE REMOVAL OF ONE TREE IS REQUIRED TO HELP ACCESS AT THE NORTH SIDE OF THE SCHOOL.
- BUILDING 07 FLOODS FROM THE SOUTH SIDE OF THE BUILDING WHEN THE ADJACENT RETENTION BASIN OVERFLOWS. PONDING WAS IDENTIFIED BETWEEN BUILDINGS 07 AND 08, EAST OF BUILDING 03, AND SOUTH OF BUILDING 11.
- THE WESTERN RETENTION BASIN IS OVERGROWN AND SHOULD BE MAINTAINED REGULARLY.
- THE SCHOOL NO LONGER HAS A MAINTENANCE POSITION SO THE CAMPUS IS CURRENTLY MAINTAINED BY VOLUNTEERS (2012).

OIA – ASSESSMENT OF BUILDINGS AND CLASSROOMS
CMNI – SAIPAN

HHF PLANNERS places for people

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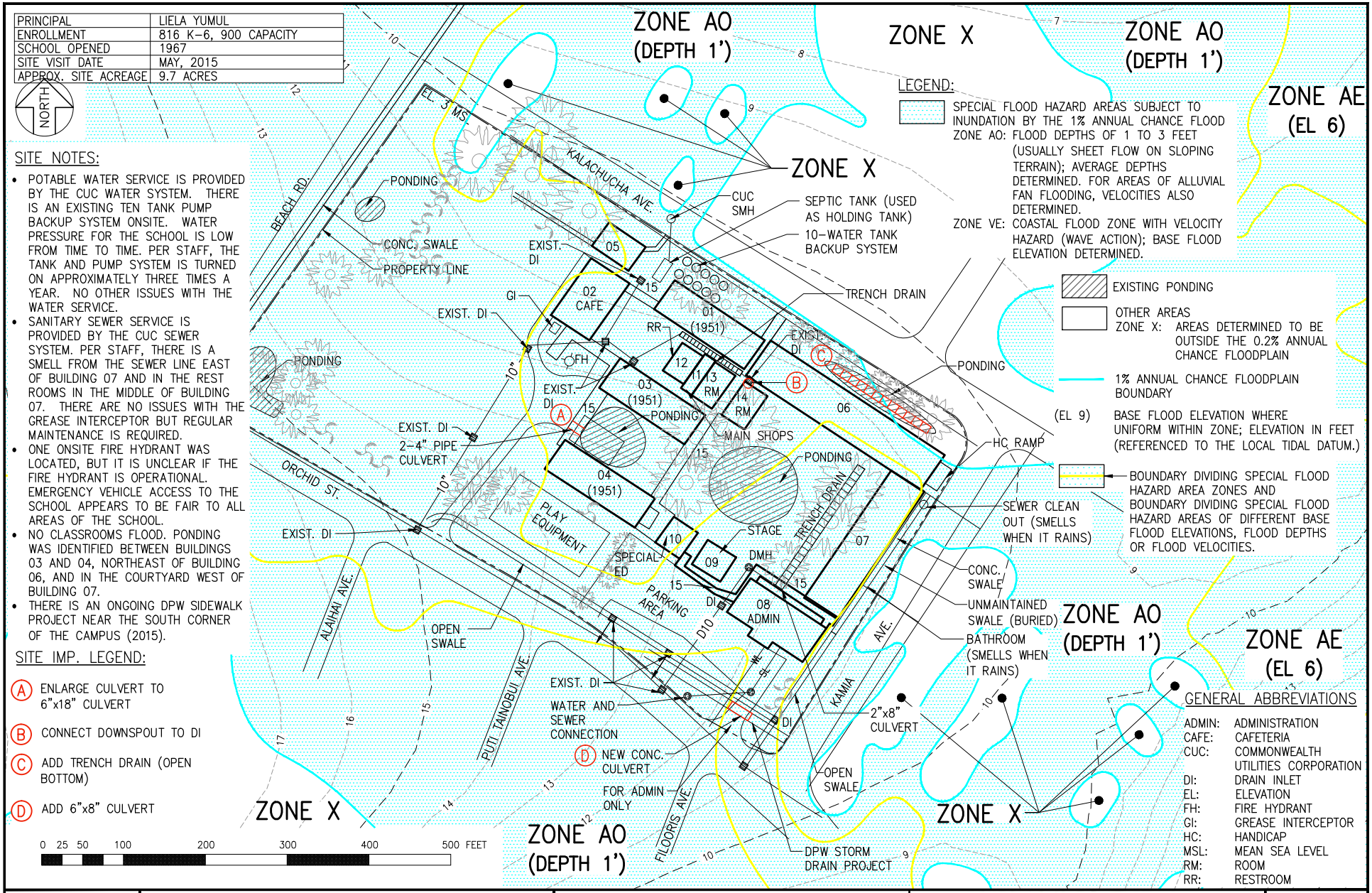
G.T. CAMACHO ELEMENTARY SCHOOL

FIGURE 03

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	LIELA YUMUL
ENROLLMENT	816 K-6, 900 CAPACITY
SCHOOL OPENED	1967
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	9.7 ACRES



SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING TEN TANK PUMP BACKUP SYSTEM ONSITE. WATER PRESSURE FOR THE SCHOOL IS LOW FROM TIME TO TIME. PER STAFF, THE TANK AND PUMP SYSTEM IS TURNED ON APPROXIMATELY THREE TIMES A YEAR. NO OTHER ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY THE CUC SEWER SYSTEM. PER STAFF, THERE IS A SMELL FROM THE SEWER LINE EAST OF BUILDING 07 AND IN THE REST ROOMS IN THE MIDDLE OF BUILDING 07. THERE ARE NO ISSUES WITH THE GREASE INTERCEPTOR BUT REGULAR MAINTENANCE IS REQUIRED.
- ONE ONSITE FIRE HYDRANT WAS LOCATED, BUT IT IS UNCLEAR IF THE FIRE HYDRANT IS OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE FAIR TO ALL AREAS OF THE SCHOOL.
- NO CLASSROOMS FLOOD. PONDING WAS IDENTIFIED BETWEEN BUILDINGS 03 AND 04, NORTHEAST OF BUILDING 06, AND IN THE COURTYARD WEST OF BUILDING 07.
- THERE IS AN ONGOING DPW SIDEWALK PROJECT NEAR THE SOUTH CORNER OF THE CAMPUS (2015).

SITE IMP. LEGEND:

- (A) ENLARGE CULVERT TO 6"x18" CULVERT
- (B) CONNECT DOWNSPOUT TO DI
- (C) ADD TRENCH DRAIN (OPEN BOTTOM)
- (D) ADD 6"x8" CULVERT

LEGEND:

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
ZONE AO: FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW ON SLOPING TERRAIN); AVERAGE DEPTHS DETERMINED. FOR AREAS OF ALLUVIAL FAN FLOODING, VELOCITIES ALSO DETERMINED.
ZONE VE: COASTAL FLOOD ZONE WITH VELOCITY HAZARD (WAVE ACTION); BASE FLOOD ELEVATION DETERMINED.

EXISTING PONDING

OTHER AREAS
ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN

1% ANNUAL CHANCE FLOODPLAIN BOUNDARY

(EL 9) BASE FLOOD ELEVATION WHERE UNIFORM WITHIN ZONE; ELEVATION IN FEET (REFERENCED TO THE LOCAL TIDAL DATUM.)

BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREA ZONES AND BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREAS OF DIFFERENT BASE FLOOD ELEVATIONS, FLOOD DEPTHS OR FLOOD VELOCITIES.

GENERAL ABBREVIATIONS

ADMIN:	ADMINISTRATION
CAFE:	CAFETERIA
CUC:	COMMONWEALTH UTILITIES CORPORATION
DI:	DRAIN INLET
EL:	ELEVATION
FH:	FIRE HYDRANT
GI:	GREASE INTERCEPTOR
HC:	HANDICAP
MSL:	MEAN SEA LEVEL
RM:	ROOM
RR:	RESTROOM

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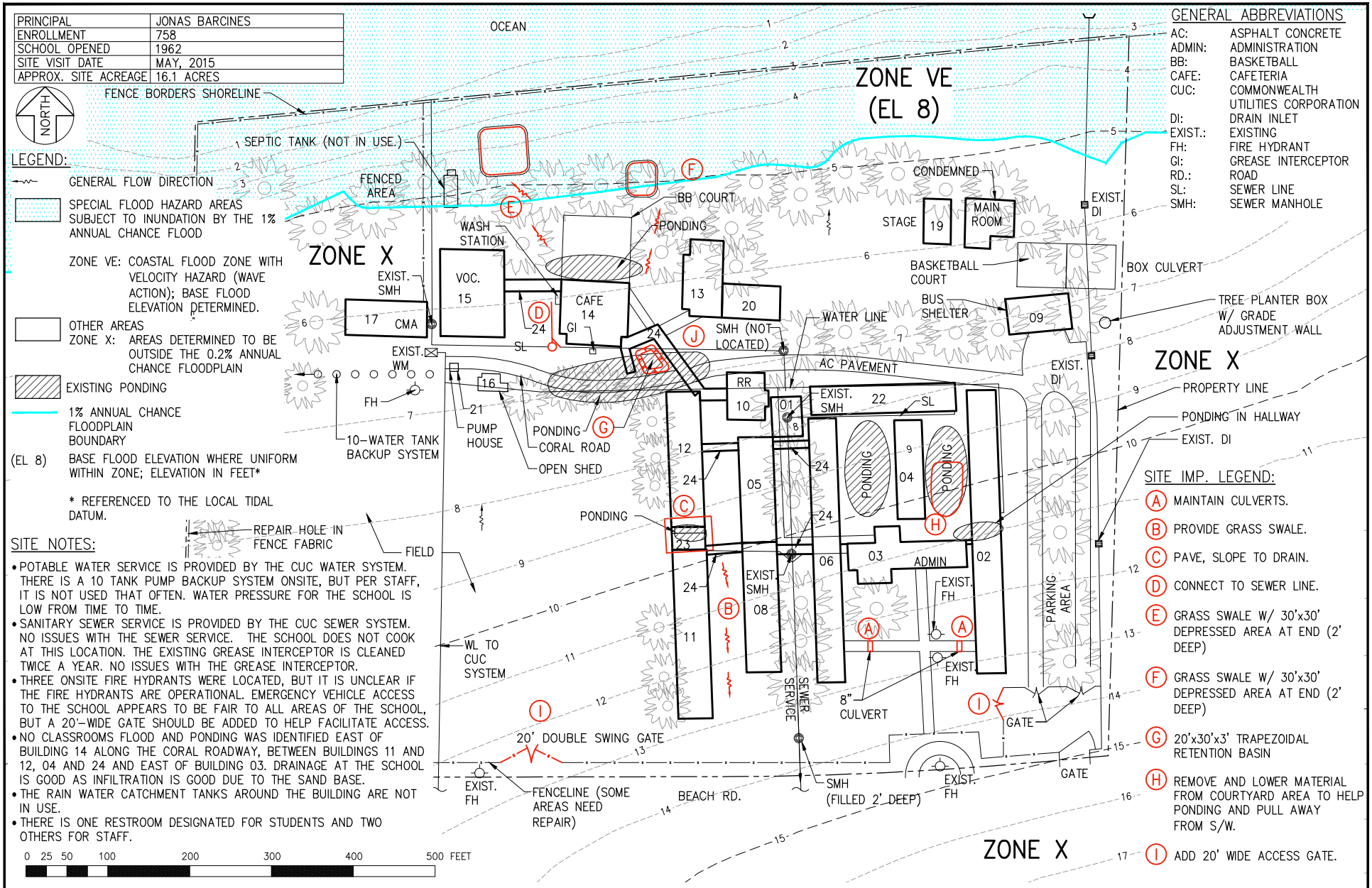
GARAPAN ELEMENTARY SCHOOL

FIGURE 04

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	JONAS BARCINES
ENROLLMENT	758
SCHOOL OPENED	1962
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	16.1 ACRES



LEGEND:

- GENERAL FLOW DIRECTION
- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
  - ZONE VE: COASTAL FLOOD ZONE WITH VELOCITY HAZARD (WAVE ACTION); BASE FLOOD ELEVATION DETERMINED.
- OTHER AREAS
  - ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- EXISTING PONDING
- 1% ANNUAL CHANCE FLOODPLAIN BOUNDARY
- (EL 8) BASE FLOOD ELEVATION WHERE UNIFORM WITHIN ZONE; ELEVATION IN FEET*

* REFERENCED TO THE LOCAL TIDAL DATUM.

GENERAL ABBREVIATIONS

AC:	ASPHALT CONCRETE
ADMIN:	ADMINISTRATION
BB:	BASKETBALL
CAFE:	CAFETERIA
CUC:	COMMONWEALTH UTILITIES CORPORATION
DI:	DRAIN INLET
EXIST.:	EXISTING
FH:	FIRE HYDRANT
GI:	GREASE INTERCEPTOR
RD.:	ROAD
SL:	SEWER LINE
SMH:	SEWER MANHOLE

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS A 10 TANK PUMP BACKUP SYSTEM ONSITE, BUT PER STAFF, IT IS NOT USED THAT OFTEN. WATER PRESSURE FOR THE SCHOOL IS LOW FROM TIME TO TIME.
- SANITARY SEWER SERVICE IS PROVIDED BY THE CUC SEWER SYSTEM. NO ISSUES WITH THE SEWER SERVICE. THE SCHOOL DOES NOT COOK AT THIS LOCATION. THE EXISTING GREASE INTERCEPTOR IS CLEANED TWICE A YEAR. NO ISSUES WITH THE GREASE INTERCEPTOR.
- THREE ONSITE FIRE HYDRANTS WERE LOCATED, BUT IT IS UNCLEAR IF THE FIRE HYDRANTS ARE OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE FAIR TO ALL AREAS OF THE SCHOOL, BUT A 20'-WIDE GATE SHOULD BE ADDED TO HELP FACILITATE ACCESS.
- NO CLASSROOMS FLOOD AND PONDING WAS IDENTIFIED EAST OF BUILDING 14 ALONG THE CORAL ROADWAY, BETWEEN BUILDINGS 11 AND 12, 04 AND 24 AND EAST OF BUILDING 03. DRAINAGE AT THE SCHOOL IS GOOD AS INFILTRATION IS GOOD DUE TO THE SAND BASE.
- THE RAIN WATER CATCHMENT TANKS AROUND THE BUILDING ARE NOT IN USE.
- THERE IS ONE RESTROOM DESIGNATED FOR STUDENTS AND TWO OTHERS FOR STAFF.

0 25 50 100 200 300 400 500 FEET

SITE IMP. LEGEND:

- (A) MAINTAIN CULVERTS.
- (B) PROVIDE GRASS SWALE.
- (C) PAVE, SLOPE TO DRAIN.
- (D) CONNECT TO SEWER LINE.
- (E) GRASS SWALE W/ 30'x30' DEPRESSED AREA AT END (2' DEEP)
- (F) GRASS SWALE W/ 30'x30' DEPRESSED AREA AT END (2' DEEP)
- (G) 20'x30'x3' TRAPEZOIDAL RETENTION BASIN
- (H) REMOVE AND LOWER MATERIAL FROM COURTYARD AREA TO HELP PONDING AND PULL AWAY FROM S/W.
- (I) ADD 20' WIDE ACCESS GATE.

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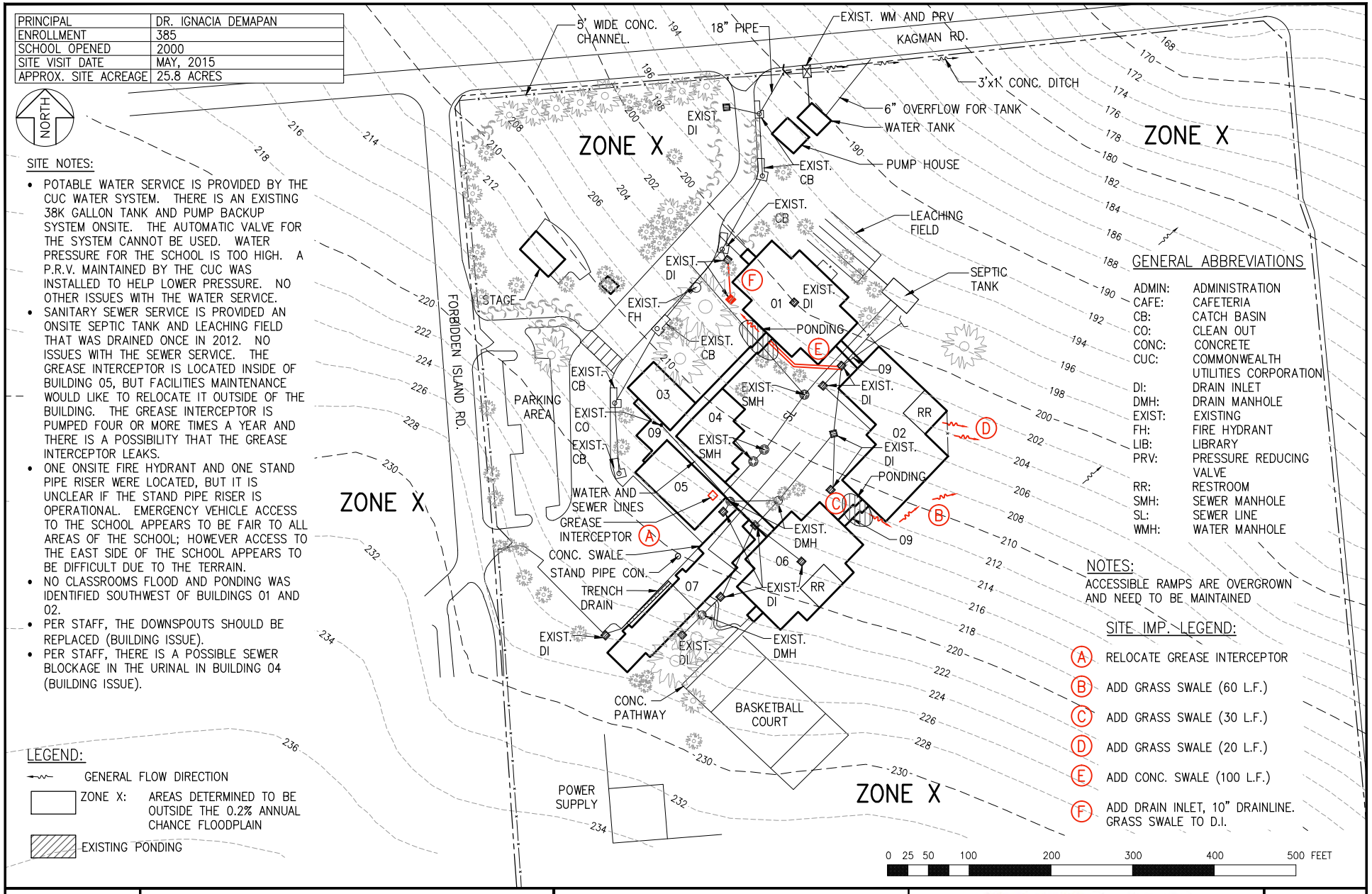
HOPWOOD JR HIGH SCHOOL

FIGURE 05

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	DR. IGNACIA DEMAPAN
ENROLLMENT	385
SCHOOL OPENED	2000
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	25.8 ACRES



SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING 38K GALLON TANK AND PUMP BACKUP SYSTEM ONSITE. THE AUTOMATIC VALVE FOR THE SYSTEM CANNOT BE USED. WATER PRESSURE FOR THE SCHOOL IS TOO HIGH. A P.R.V. MAINTAINED BY THE CUC WAS INSTALLED TO HELP LOWER PRESSURE. NO OTHER ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED AN ONSITE SEPTIC TANK AND LEACHING FIELD THAT WAS DRAINED ONCE IN 2012. NO ISSUES WITH THE SEWER SERVICE. THE GREASE INTERCEPTOR IS LOCATED INSIDE OF BUILDING 05, BUT FACILITIES MAINTENANCE WOULD LIKE TO RELOCATE IT OUTSIDE OF THE BUILDING. THE GREASE INTERCEPTOR IS PUMPED FOUR OR MORE TIMES A YEAR AND THERE IS A POSSIBILITY THAT THE GREASE INTERCEPTOR LEAKS.
- ONE ONSITE FIRE HYDRANT AND ONE STAND PIPE RISER WERE LOCATED, BUT IT IS UNCLEAR IF THE STAND PIPE RISER IS OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE FAIR TO ALL AREAS OF THE SCHOOL; HOWEVER ACCESS TO THE EAST SIDE OF THE SCHOOL APPEARS TO BE DIFFICULT DUE TO THE TERRAIN.
- NO CLASSROOMS FLOOD AND PONDING WAS IDENTIFIED SOUTHWEST OF BUILDINGS 01 AND 02.
- PER STAFF, THE DOWNSPOUTS SHOULD BE REPLACED (BUILDING ISSUE).
- PER STAFF, THERE IS A POSSIBLE SEWER BLOCKAGE IN THE URINAL IN BUILDING 04 (BUILDING ISSUE).

LEGEND:

GENERAL FLOW DIRECTION

ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN

EXISTING PONDING

GENERAL ABBREVIATIONS

ADMIN:	ADMINISTRATION
CAFE:	CAFETERIA
CB:	CATCH BASIN
CO:	CLEAN OUT
CONC:	CONCRETE
CUC:	COMMONWEALTH UTILITIES CORPORATION
DI:	DRAIN INLET
DMH:	DRAIN MANHOLE
EXIST:	EXISTING
FH:	FIRE HYDRANT
LIB:	LIBRARY
PRV:	PRESSURE REDUCING VALVE
RR:	RESTROOM
SMH:	SEWER MANHOLE
SL:	SEWER LINE
WMH:	WATER MANHOLE

NOTES:

ACCESSIBLE RAMPS ARE OVERGROWN AND NEED TO BE MAINTAINED

SITE IMP. LEGEND:

- (A) RELOCATE GREASE INTERCEPTOR
- (B) ADD GRASS SWALE (60 L.F.)
- (C) ADD GRASS SWALE (30 L.F.)
- (D) ADD GRASS SWALE (20 L.F.)
- (E) ADD CONC. SWALE (100 L.F.)
- (F) ADD DRAIN INLET, 10" DRAINLINE. GRASS SWALE TO D.I.

0 25 50 100 200 300 400 500 FEET

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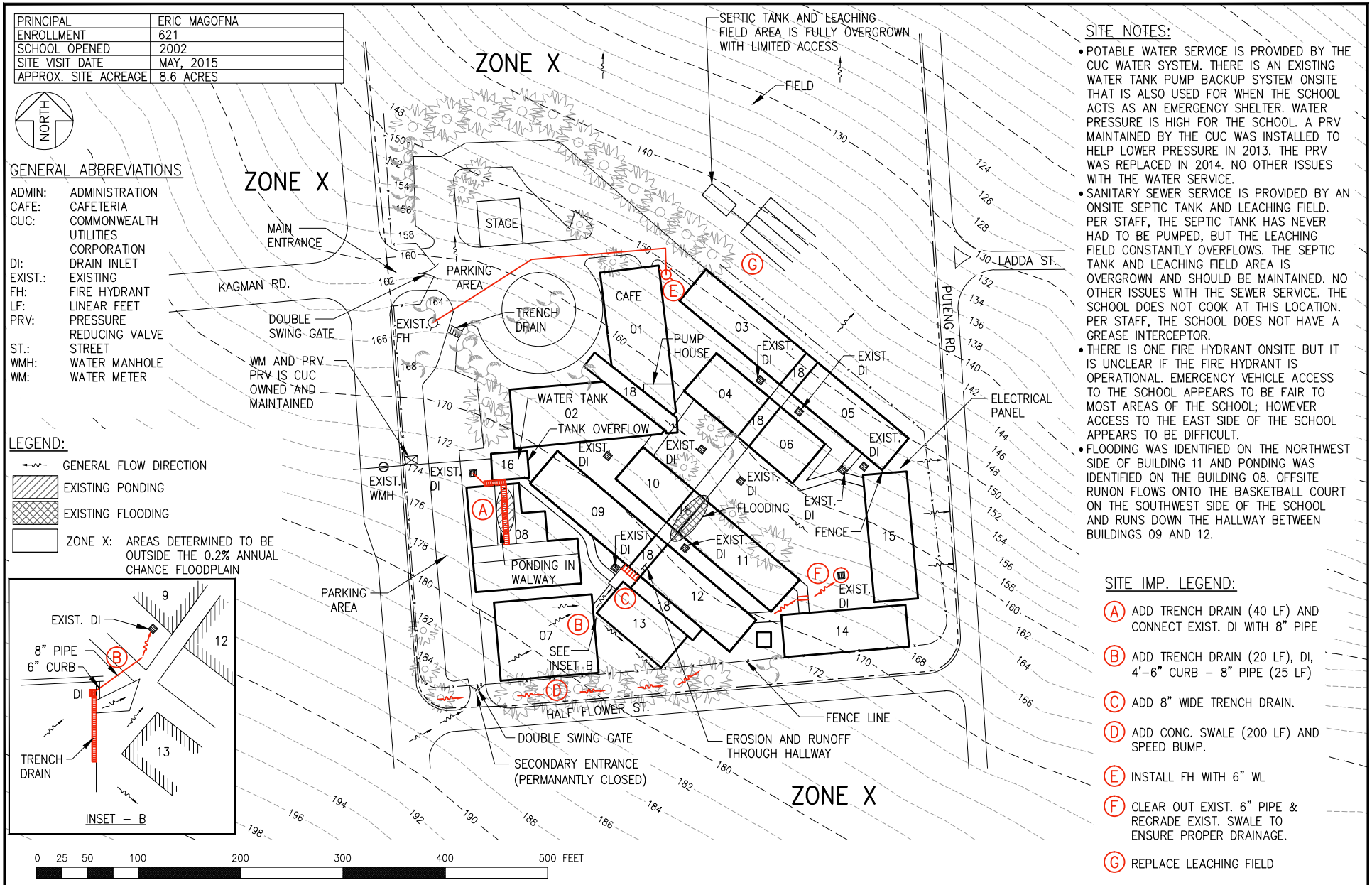
KAGMAN ELEMENTARY SCHOOL

FIGURE 06

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	ERIC MAGOFNA
ENROLLMENT	621
SCHOOL OPENED	2002
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	8.6 ACRES



GENERAL ABBREVIATIONS

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CAFE:	CAFETERIA
CUC:	COMMONWEALTH UTILITIES CORPORATION
DI:	DRAIN INLET
EXIST.:	EXISTING
FH:	FIRE HYDRANT
LF:	LINEAR FEET
PRV:	PRESSURE REDUCING VALVE
ST.:	STREET
WMH:	WATER MANHOLE
WM:	WATER METER

LEGEND:

- GENERAL FLOW DIRECTION
- EXISTING PONDING
- EXISTING FLOODING
- ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING WATER TANK PUMP BACKUP SYSTEM ONSITE THAT IS ALSO USED FOR WHEN THE SCHOOL ACTS AS AN EMERGENCY SHELTER. WATER PRESSURE IS HIGH FOR THE SCHOOL. A PRV MAINTAINED BY THE CUC WAS INSTALLED TO HELP LOWER PRESSURE IN 2013. THE PRV WAS REPLACED IN 2014. NO OTHER ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY AN ONSITE SEPTIC TANK AND LEACHING FIELD. PER STAFF, THE SEPTIC TANK HAS NEVER HAD TO BE PUMPED, BUT THE LEACHING FIELD CONSTANTLY OVERFLOWS. THE SEPTIC TANK AND LEACHING FIELD AREA IS OVERGROWN AND SHOULD BE MAINTAINED. NO OTHER ISSUES WITH THE SEWER SERVICE. THE SCHOOL DOES NOT COOK AT THIS LOCATION. PER STAFF, THE SCHOOL DOES NOT HAVE A GREASE INTERCEPTOR.
- THERE IS ONE FIRE HYDRANT ONSITE BUT IT IS UNCLEAR IF THE FIRE HYDRANT IS OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE FAIR TO MOST AREAS OF THE SCHOOL; HOWEVER ACCESS TO THE EAST SIDE OF THE SCHOOL APPEARS TO BE DIFFICULT.
- FLOODING WAS IDENTIFIED ON THE NORTHWEST SIDE OF BUILDING 11 AND PONDING WAS IDENTIFIED ON THE BUILDING 08. OFFSITE RUNON FLOWS ONTO THE BASKETBALL COURT ON THE SOUTHWEST SIDE OF THE SCHOOL AND RUNS DOWN THE HALLWAY BETWEEN BUILDINGS 09 AND 12.

SITE IMP. LEGEND:

- (A) ADD TRENCH DRAIN (40 LF) AND CONNECT EXIST. DI WITH 8" PIPE
- (B) ADD TRENCH DRAIN (20 LF), DI, 4'–6" CURB – 8" PIPE (25 LF)
- (C) ADD 8" WIDE TRENCH DRAIN.
- (D) ADD CONC. SWALE (200 LF) AND SPEED BUMP.
- (E) INSTALL FH WITH 6" WL
- (F) CLEAR OUT EXIST. 6" PIPE & REGRADE EXIST. SWALE TO ENSURE PROPER DRAINAGE.
- (G) REPLACE LEACHING FIELD

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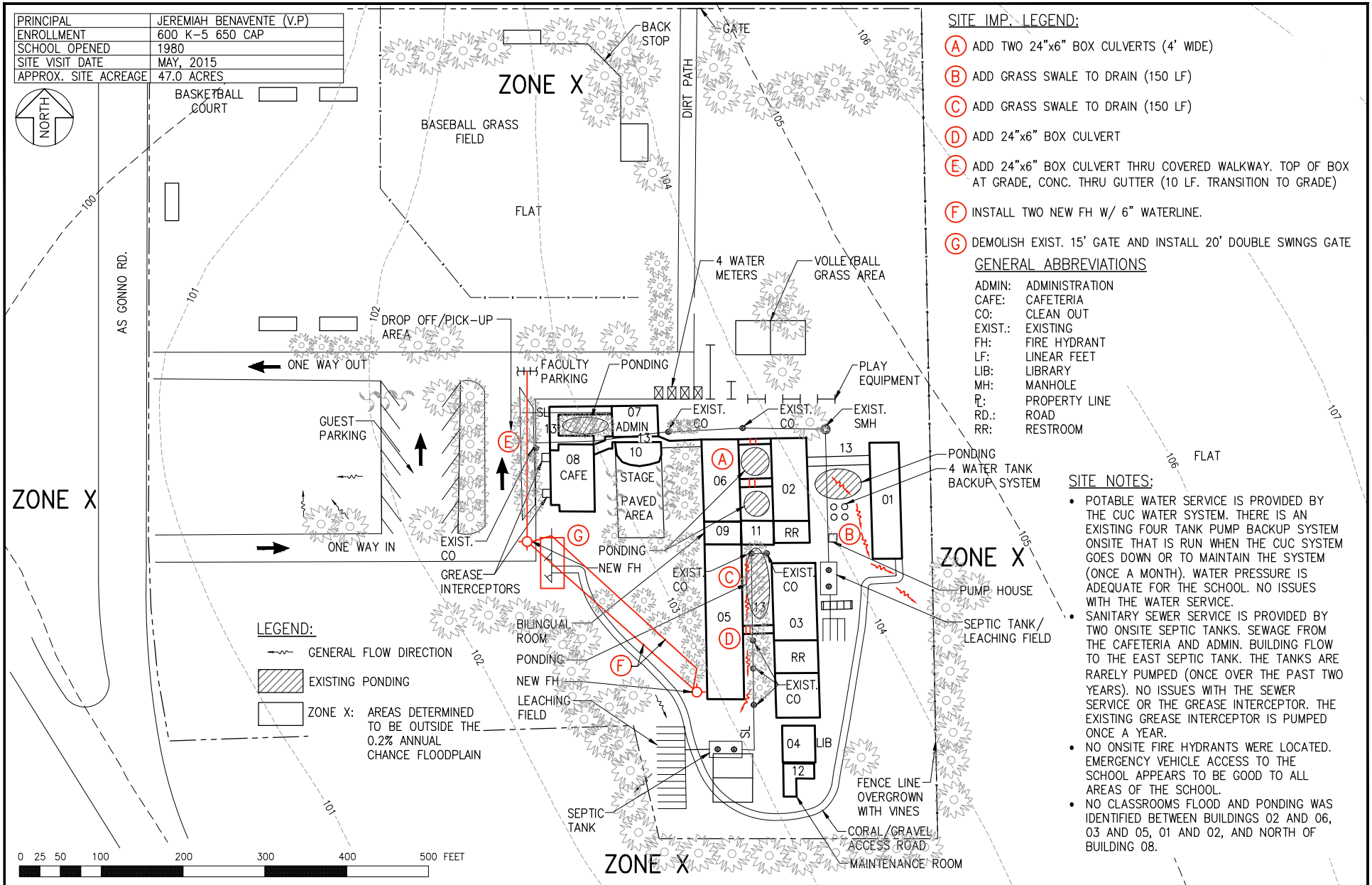
KAGMAN HIGH SCHOOL

FIGURE 07

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	JEREMIAH BENAVENTE (V.P)
ENROLLMENT	600 K-5 650 CAP
SCHOOL OPENED	1980
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	47.0 ACRES



SITE IMP. LEGEND:

- (A) ADD TWO 24"x6" BOX CULVERTS (4' WIDE)
- (B) ADD GRASS SWALE TO DRAIN (150 LF)
- (C) ADD GRASS SWALE TO DRAIN (150 LF)
- (D) ADD 24"x6" BOX CULVERT
- (E) ADD 24"x6" BOX CULVERT THRU COVERED WALKWAY. TOP OF BOX AT GRADE, CONC. THRU GUTTER (10 LF. TRANSITION TO GRADE)
- (F) INSTALL TWO NEW FH W/ 6" WATERLINE.
- (G) DEMOLISH EXIST. 15' GATE AND INSTALL 20' DOUBLE SWINGS GATE

GENERAL ABBREVIATIONS

ADMIN:	ADMINISTRATION
CAFE:	CAFETERIA
CO:	CLEAN OUT
EXIST.:	EXISTING
FH:	FIRE HYDRANT
LF:	LINEAR FEET
LIB:	LIBRARY
MH:	MANHOLE
P.L:	PROPERTY LINE
RD.:	ROAD
RR:	RESTROOM

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING FOUR TANK PUMP BACKUP SYSTEM ONSITE THAT IS RUN WHEN THE CUC SYSTEM GOES DOWN OR TO MAINTAIN THE SYSTEM (ONCE A MONTH). WATER PRESSURE IS ADEQUATE FOR THE SCHOOL. NO ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY TWO ONSITE SEPTIC TANKS. SEWAGE FROM THE CAFETERIA AND ADMIN. BUILDING FLOW TO THE EAST SEPTIC TANK. THE TANKS ARE RARELY PUMPED (ONCE OVER THE PAST TWO YEARS). NO ISSUES WITH THE SEWER SERVICE OR THE GREASE INTERCEPTOR. THE EXISTING GREASE INTERCEPTOR IS PUMPED ONCE A YEAR.
- NO ONSITE FIRE HYDRANTS WERE LOCATED. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE GOOD TO ALL AREAS OF THE SCHOOL.
- NO CLASSROOMS FLOOD AND PONDING WAS IDENTIFIED BETWEEN BUILDINGS 02 AND 06, 03 AND 05, 01 AND 02, AND NORTH OF BUILDING 08.

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KOBLERVILLE ELEMENTARY SCHOOL

FIGURE 08

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

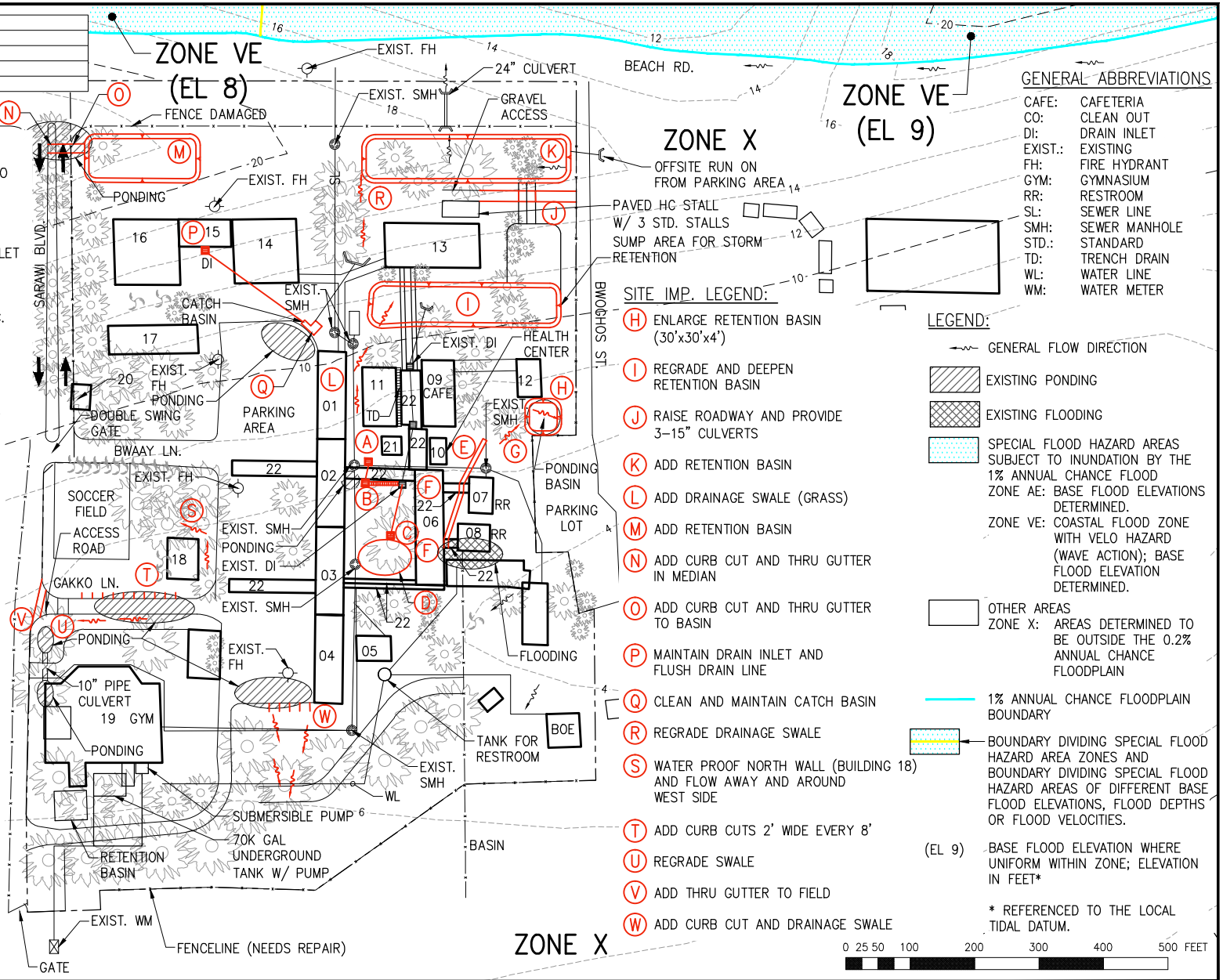
PRINCIPAL	CHERLYN CABRERA
ENROLLMENT	1,524
SCHOOL OPENED	1967
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	22.8 ACRES

SITE IMP. LEGEND:

- (A) ADD DRAIN INLET
- (B) ADD DRAIN INLET W/ TRENCH DRAIN TO EXIST. DRAIN INLET
- (C) ADD NEW DRAIN INLET W/ 18" LINE
- (D) ADD REGRADE AREA TO NEW DRAIN INLET
- (E) ADD CONC. SWALE
- (F) ADD 24"x6" BOX CULVERT (2–4' CONC. S/Ws)
- (G) ADD GRASS SWALE

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. CUC SYSTEM FILLS A 14K GALLON TANK AND PUMP SYSTEM THAT PROVIDES WATER TO THE CAMPUS. THE CUC SUPPLIED WATER CAN BYPASS THE TANK AND PUMP SYSTEM, HOWEVER THE WATER PRESSURE IS LOW IN THIS CONFIGURATION. NO OTHER ISSUES WITH THE WATER SYSTEM.
- SANITARY SEWER SERVICE IS PROVIDED BY THE CUC SEWER SYSTEM. THERE IS POSSIBLE RUNOFF INFILTRATION INTO THE SEWER SYSTEM AS SEWER BACKS UP DURING HEAVY RAINS. IT WAS UNCLEAR IF THERE WAS A GREASE INTERCEPTOR ONSITE. IF PRESENT, THERE ARE NO ISSUES WITH THE GREASE INTERCEPTOR BUT REGULAR MAINTENANCE IS REQUIRED.
- FOUR ONSITE FIRE HYDRANTS WERE LOCATED. BUT IT IS UNCLEAR IF THE FIRE HYDRANTS ARE OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE GOOD TO ALL AREAS OF THE SCHOOL.
- FLOODING WAS IDENTIFIED ON THE EAST SIDE OF BUILDING 08. PONDING WAS IDENTIFIED IN THE EAST PARKING AREA, SOUTH OF BUILDING 04, NORTH OF BUILDING 02, WEST OF BUILDING 19, SOUTH OF BUILDING 01, AND AT THE ENTRANCE TO THE SCHOOL AT BEACH ROAD.



SITE IMP. LEGEND:

- (H) ENLARGE RETENTION BASIN (30'x30'x4')
- (I) REGRADE AND DEEPEN RETENTION BASIN
- (J) RAISE ROADWAY AND PROVIDE 3–15" CULVERTS
- (K) ADD RETENTION BASIN
- (L) ADD DRAINAGE SWALE (GRASS)
- (M) ADD RETENTION BASIN
- (N) ADD CURB CUT AND THRU GUTTER IN MEDIAN
- (O) ADD CURB CUT AND THRU GUTTER TO BASIN
- (P) MAINTAIN DRAIN INLET AND FLUSH DRAIN LINE
- (Q) CLEAN AND MAINTAIN CATCH BASIN
- (R) REGRADE DRAINAGE SWALE
- (S) WATER PROOF NORTH WALL (BUILDING 18) AND FLOW AWAY AND AROUND WEST SIDE
- (T) ADD CURB CUTS 2' WIDE EVERY 8'
- (U) REGRADE SWALE
- (V) ADD THRU GUTTER TO FIELD
- (W) ADD CURB CUT AND DRAINAGE SWALE

GENERAL ABBREVIATIONS

CAFE:	CAFETERIA
CO:	CLEAN OUT
DI:	DRAIN INLET
EXIST.:	EXISTING
FH:	FIRE HYDRANT
GYM:	GYMNASIUM
RR:	RESTROOM
SL:	SEWER LINE
SMH:	SEWER MANHOLE
STD.:	STANDARD
TD:	TRENCH DRAIN
WL:	WATER LINE
WM:	WATER METER

LEGEND:

- GENERAL FLOW DIRECTION
- EXISTING PONDING
- EXISTING FLOODING
- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
  - ZONE AE: BASE FLOOD ELEVATIONS DETERMINED.
  - ZONE VE: COASTAL FLOOD ZONE WITH VELO HAZARD (WAVE ACTION); BASE FLOOD ELEVATION DETERMINED.
- OTHER AREAS
  - ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- 1% ANNUAL CHANCE FLOODPLAIN BOUNDARY
- BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREA ZONES AND BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREAS OF DIFFERENT BASE FLOOD ELEVATIONS, FLOOD DEPTHS OR FLOOD VELOCITIES.
- (EL 9) BASE FLOOD ELEVATION WHERE UNIFORM WITHIN ZONE; ELEVATION IN FEET*
- * REFERENCED TO THE LOCAL TIDAL DATUM.

0 25 50 100 200 300 400 500 FEET

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MARIANAS HIGH SCHOOL

FIGURE 09

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	JASYLEW PARICO
ENROLLMENT	600 CAPACITY
SCHOOL OPENED	1988
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	2.6 ACRES

SITE NOTES:

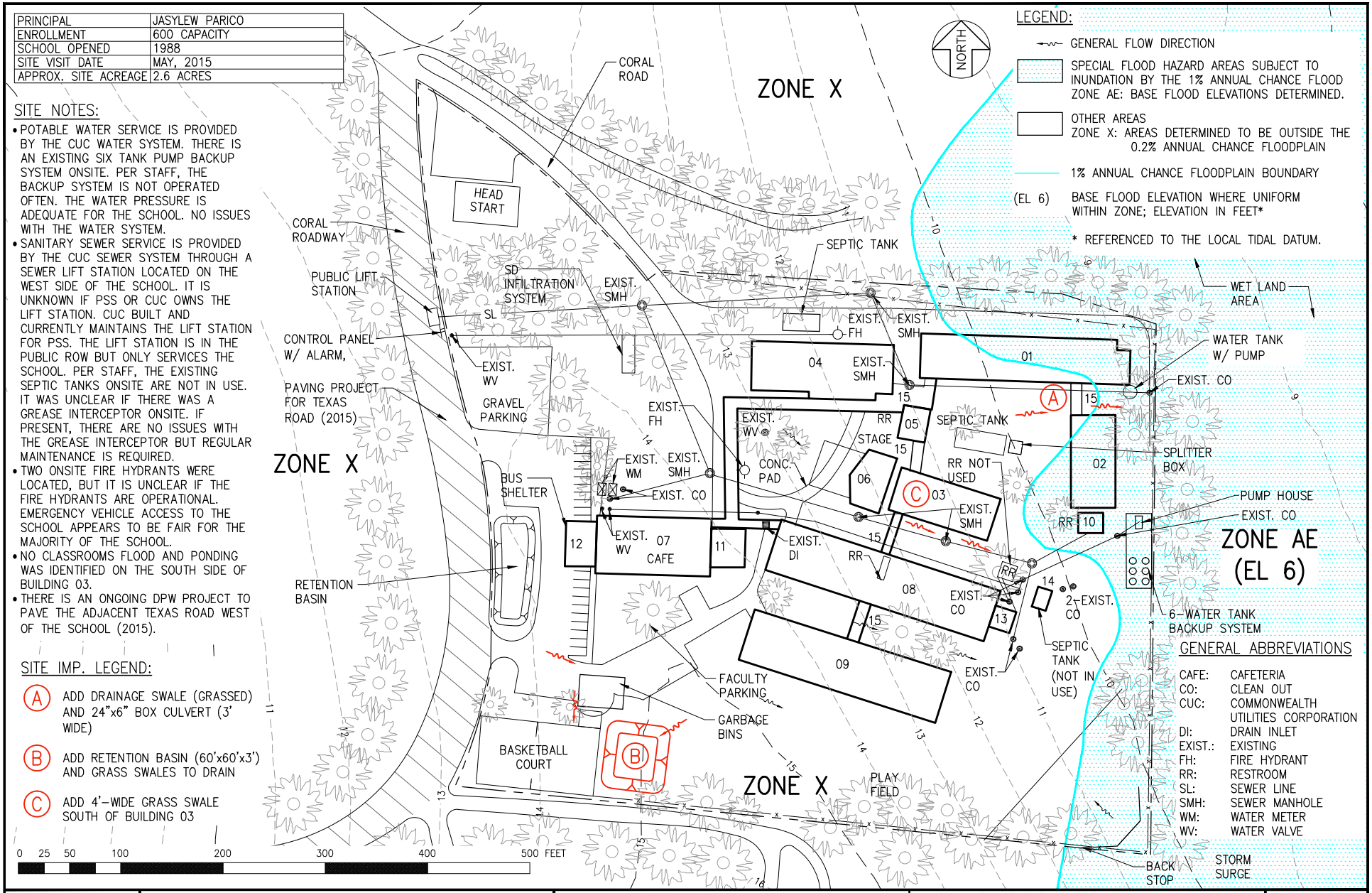
- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING SIX TANK PUMP BACKUP SYSTEM ONSITE. PER STAFF, THE BACKUP SYSTEM IS NOT OPERATED OFTEN. THE WATER PRESSURE IS ADEQUATE FOR THE SCHOOL. NO ISSUES WITH THE WATER SYSTEM.
- SANITARY SEWER SERVICE IS PROVIDED BY THE CUC SEWER SYSTEM THROUGH A SEWER LIFT STATION LOCATED ON THE WEST SIDE OF THE SCHOOL. IT IS UNKNOWN IF PSS OR CUC OWNS THE LIFT STATION. CUC BUILT AND CURRENTLY MAINTAINS THE LIFT STATION FOR PSS. THE LIFT STATION IS IN THE PUBLIC ROW BUT ONLY SERVICES THE SCHOOL. PER STAFF, THE EXISTING SEPTIC TANKS ONSITE ARE NOT IN USE. IT WAS UNCLEAR IF THERE WAS A GREASE INTERCEPTOR ONSITE. IF PRESENT, THERE ARE NO ISSUES WITH THE GREASE INTERCEPTOR BUT REGULAR MAINTENANCE IS REQUIRED.
- TWO ONSITE FIRE HYDRANTS WERE LOCATED, BUT IT IS UNCLEAR IF THE FIRE HYDRANTS ARE OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE FAIR FOR THE MAJORITY OF THE SCHOOL.
- NO CLASSROOMS FLOOD AND PONDING WAS IDENTIFIED ON THE SOUTH SIDE OF BUILDING 03.
- THERE IS AN ONGOING DPW PROJECT TO PAVE THE ADJACENT TEXAS ROAD WEST OF THE SCHOOL (2015).

SITE IMP. LEGEND:

(A) ADD DRAINAGE SWALE (GRASSED) AND 24"x6" BOX CULVERT (3' WIDE)

(B) ADD RETENTION BASIN (60'x60'x3') AND GRASS SWALES TO DRAIN

(C) ADD 4'-WIDE GRASS SWALE SOUTH OF BUILDING 03



LEGEND:

- GENERAL FLOW DIRECTION
- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD ZONE AE: BASE FLOOD ELEVATIONS DETERMINED.
- OTHER AREAS ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- 1% ANNUAL CHANCE FLOODPLAIN BOUNDARY
- (EL 6) BASE FLOOD ELEVATION WHERE UNIFORM WITHIN ZONE; ELEVATION IN FEET*
- * REFERENCED TO THE LOCAL TIDAL DATUM.

GENERAL ABBREVIATIONS

CAFE:	CAFETERIA
CO:	CLEAN OUT
CUC:	COMMONWEALTH UTILITIES CORPORATION
DI:	DRAIN INLET
EXIST.:	EXISTING
FH:	FIRE HYDRANT
RR:	RESTROOM
SL:	SEWER LINE
SMH:	SEWER MANHOLE
WM:	WATER METER
WV:	WATER VALVE

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OLEAI ELEMENTARY SCHOOL

FIGURE 10

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	NAOMI NISHIMURA
ENROLLMENT	775
SCHOOL OPENED	UNKNOWN
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	2.6 ACRES

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE ARE TWO EXISTING SETS OF FIVE TANK PUMP BACKUP SYSTEMS ONSITE, ONE FOR EACH SIDE OF THE CAMPUS (NORTH AND SOUTH). PER STAFF, THE BACKUP SYSTEMS ARE NOT USED THAT OFTEN. WATER PRESSURE IS ADEQUATE FOR THE SCHOOL. NO ISSUES WITH THE WATER SYSTEM.
- SANITARY SEWER SERVICE IS PROVIDED BY THE CUC SEWER SYSTEM AND TWO ONSITE SEPTIC TANKS. THE SEPTIC TANKS SERVICE BUILDINGS 10 AND 13, AND THE REMAINING BUILDINGS ARE SERVICED BY THE CUC SEWER SYSTEM. THE SEPTIC TANK HAS NEVER HAD TO BE PUMPED. THERE IS ALSO A HOLDING TANK FOR EFFLUENT FROM BUILDING 11 WITH AN AUTOMATIC SUBMERSIBLE PUMP TO PUMP OUT EFFLUENT TO THE CUC SYSTEM. THE SCHOOL DOES NOT COOK AT THIS LOCATION. THERE IS AN EXISTING GREASE INTERCEPTOR THAT REQUIRES PUMPING THREE TIMES A YEAR. NO ISSUES WITH THE GREASE INTERCEPTOR.
- TWO ONSITE FIRE HYDRANTS WERE LOCATED, BUT IT IS UNCLEAR IF THE FIRE HYDRANTS ARE OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE GOOD TO ALL AREAS OF THE SCHOOL. A 20'-WIDE GATE SHOULD BE ADDED TO HELP FACILITATE ACCESS.

SITE NOTES (CONT.):

- NO CLASSROOMS FLOOD AND SEVERAL PONDING LOCATIONS WERE IDENTIFIED IN THE MAIN COURTYARD EAST OF BUILDING 14. THE STAFF COMMENTED THAT THERE IS A LARGE LAKE EAST OF THE CAMPUS THAT OVERFLOWS DURING TYPHOON EVENTS AND SENDS RUNOFF INTO THE CAMPUS; HOWEVER NO CLASSROOMS FLOOD.

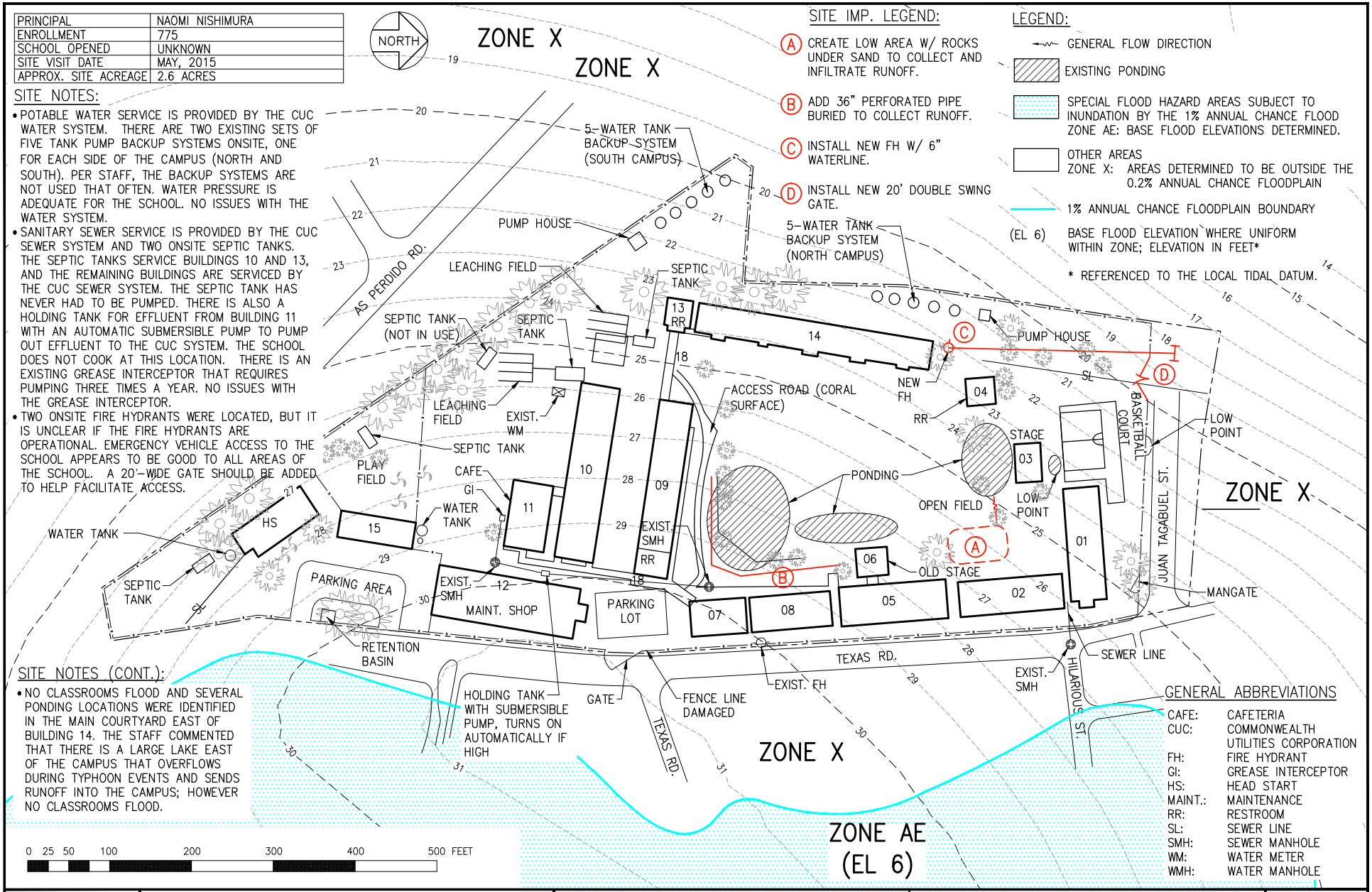
SITE IMP. LEGEND:

- (A) CREATE LOW AREA W/ ROCKS UNDER SAND TO COLLECT AND INFILTRATE RUNOFF.
- (B) ADD 36" PERFORATED PIPE BURIED TO COLLECT RUNOFF.
- (C) INSTALL NEW FH W/ 6" WATERLINE.
- (D) INSTALL NEW 20' DOUBLE SWING GATE.

LEGEND:

- GENERAL FLOW DIRECTION
- EXISTING PONDING
- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD ZONE AE: BASE FLOOD ELEVATIONS DETERMINED.
- OTHER AREAS
  ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- 1% ANNUAL CHANCE FLOODPLAIN BOUNDARY
- (EL 6) BASE FLOOD ELEVATION WHERE UNIFORM WITHIN ZONE; ELEVATION IN FEET*

* REFERENCED TO THE LOCAL TIDAL DATUM.



GENERAL ABBREVIATIONS

CAFE:	CAFETERIA
CUC:	COMMONWEALTH UTILITIES CORPORATION
FH:	FIRE HYDRANT
GI:	GREASE INTERCEPTOR
HS:	HEAD START
MAINT.:	MAINTENANCE
RR:	RESTROOM
SL:	SEWER LINE
SMH:	SEWER MANHOLE
WM:	WATER METER
WMH:	WATER MANHOLE

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REYES ELEMENTARY SCHOOL

FIGURE 11

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	MARTHA KINTOL
ENROLLMENT	826
SCHOOL OPENED	2000
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	UNKNOWN

LEGEND:

- GENERAL FLOW DIRECTION
- ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- EXISTING PONDING
- EXISTING FLOODING

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. WATER PRESSURE IS LOW FOR THE SCHOOL. THE CUC POTABLE WATER IS PUMPED FROM AN EXISTING FIRE HYDRANT AND A TANK/PUMP SYSTEM IS UTILIZED. THE PUMPS ARE CHANGED ONCE A YEAR. THE TANK APPEARS TO BE LEAKING AND DUE TO A CONTRACT DISPUTE WITH THE CONTRACTOR WHO CONSTRUCTED THE SCHOOL, IT IS UNCLEAR HOW THE WATER SYSTEM WAS INSTALLED. PSS WOULD LIKE TO FIX THE WATER SERVICE TO THE SCHOOL AND NOT HAVE IT BE PROVIDED THROUGH A FIRE HYDRANT. CUC AND PSS PLAN TO TEAM AND DEVELOP A SOLUTION. SEE INSET FOR POSSIBLE WATER SYSTEM CONNECTION LAYOUT.
- SANITARY SEWER SERVICE IS PROVIDED BY THE CUC SEWER SYSTEM VIA AN ONSITE LIFT STATION. THE LIFT STATION HAS ONE OF TWO PUMPS OPERATING. PER STAFF, THE PUMPS ARE CHANGED ONCE PER YEAR. NO OTHER ISSUES WITH THE SEWER SERVICE. THE SCHOOL DOES NOT COOK AT THIS LOCATION. A GREASE TRAP WAS NOT LOCATED.
- FOUR ONSITE FIRE HYDRANTS WERE LOCATED BUT IT IS UNCLEAR IF ALL OF THE FIRE HYDRANTS ARE OPERATIONAL. ONE OF THE FIRE HYDRANTS IS USED TO PROVIDE THE DOMESTIC WATER CONNECTION FOR THE SCHOOL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE GOOD TO ALL AREAS OF THE SCHOOL, BUT THE TRIMMING OF TREES SHOULD BE CONDUCTED TO HELP FACILITATE ACCESS.

(L) ADD CURB CUTS (THREE) 2', GRASS SWALE ENLARGE RETENTION BASIN (20'x20'x4')

(M) ADD GRASS SWALE, 24"x6" BOX CULVERT (30 LF), GRASS SWALE (50 LF)

(N) ADD GASKET FOR SEWER LIFT STATION TOP. POSSIBLE RUNOFF INFILTRATION TO LIFT STATION (NOT MUCH)

(O) TRIM TREE TO MINIMUM HEIGHT 14'

(P) LOCATE SCHOOL WATER CONNECTION AND THEN RECONNECT CUC LINE

SITE IMP. LEGEND:

(A) GRASS SWALE TO DRAIN (50 LF)

(B) REPLACE 3" PIPE WITH 8" PIPE (BOTH SIDES)

(C) REPLACE 3" PIPE WITH 8" PIPE (BOTH SIDES)

(D) GRASS SWALE FROM NORTHWEST CORNER OF BUILDING 09 TO FIELD

(E) CONC. SWALE NORTH TO WEST SIDE OF BUILDING 08. 24"x6" BOX CULVERT THRU WALKWAY, GRASS SWALE

(F) REPLACE 3" PIPE WITH 8" PIPE WEST SIDE ONLY. SWALE (GRASS) TO DRAIN (30 LF)

(G) CURB CUTS WITH DRAINAGE FLUTES TO GET RUNOFF ROAD 3' LONG EVERY 5' FOR 40' (BOTH SIDES)

(H) EXTEND AND DEEPEN EXIST. RETENTION BASIN (50'x25'x4')

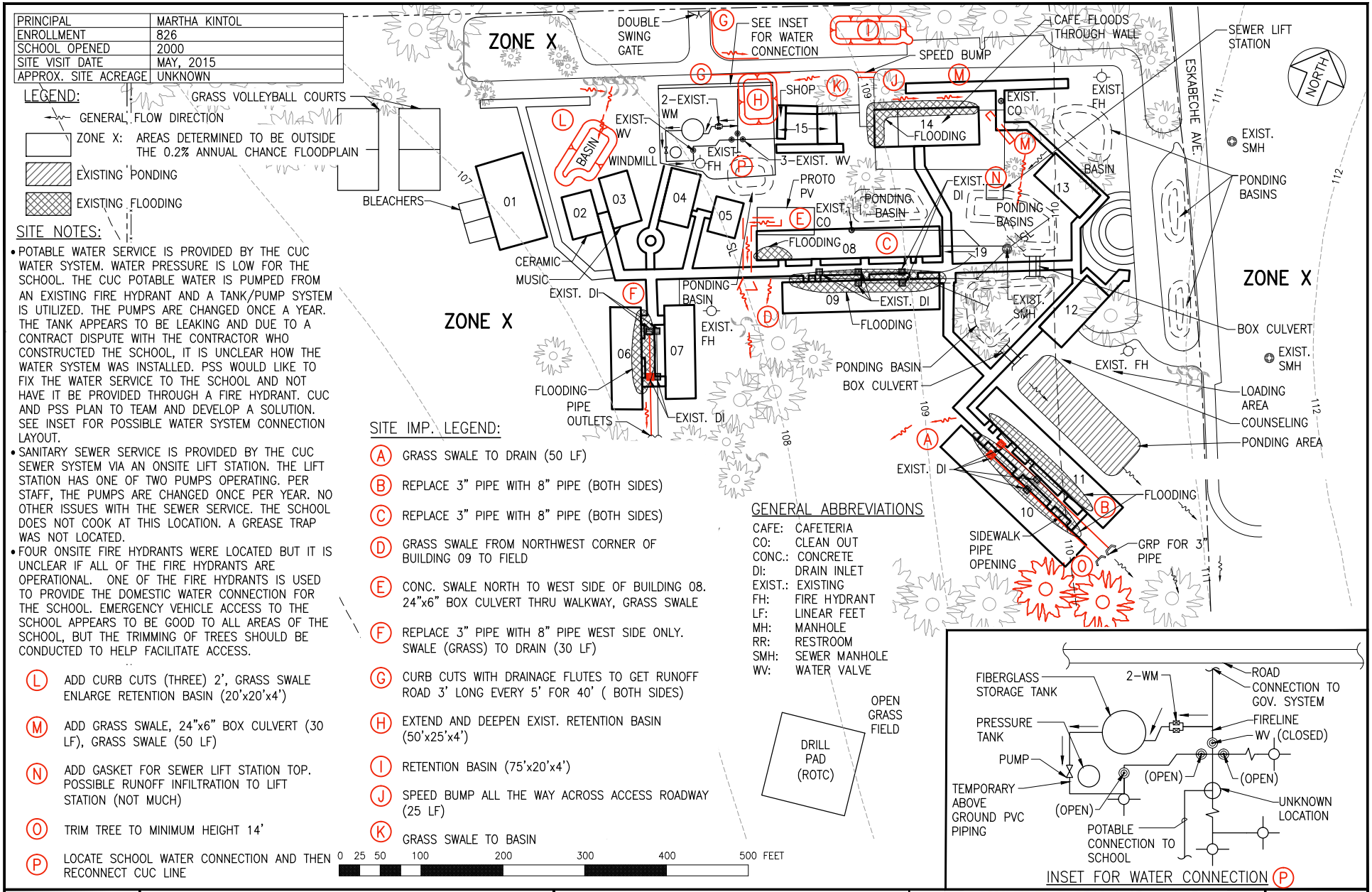
(I) RETENTION BASIN (75'x20'x4')

(J) SPEED BUMP ALL THE WAY ACROSS ACCESS ROADWAY (25 LF)

(K) GRASS SWALE TO BASIN

GENERAL ABBREVIATIONS

CAFE:	CAFETERIA
CO:	CLEAN OUT
CONC.:	CONCRETE
DI:	DRAIN INLET
EXIST.:	EXISTING
FH:	FIRE HYDRANT
LF:	LINEAR FEET
MH:	MANHOLE
RR:	RESTROOM
SMH:	SEWER MANHOLE
WV:	WATER VALVE



INSET FOR WATER CONNECTION (P)

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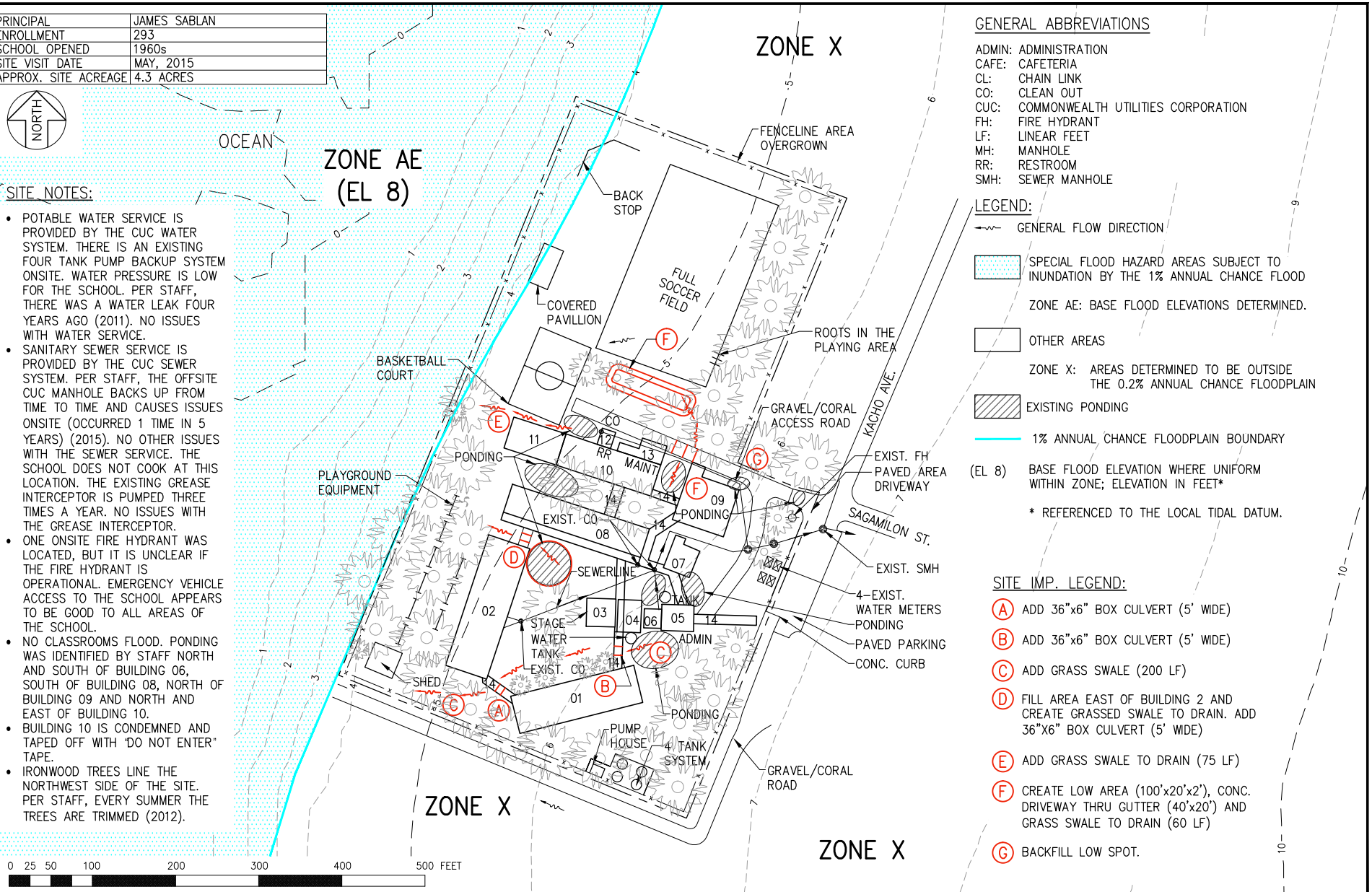
SAIPAN SOUTHERN HIGH SCHOOL

FIGURE 12

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	JAMES SABLAN
ENROLLMENT	293
SCHOOL OPENED	1960s
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	4.3 ACRES



SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING FOUR TANK PUMP BACKUP SYSTEM ONSITE. WATER PRESSURE IS LOW FOR THE SCHOOL. PER STAFF, THERE WAS A WATER LEAK FOUR YEARS AGO (2011). NO ISSUES WITH WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY THE CUC SEWER SYSTEM. PER STAFF, THE OFFSITE CUC MANHOLE BACKS UP FROM TIME TO TIME AND CAUSES ISSUES ONSITE (OCCURRED 1 TIME IN 5 YEARS) (2015). NO OTHER ISSUES WITH THE SEWER SERVICE. THE SCHOOL DOES NOT COOK AT THIS LOCATION. THE EXISTING GREASE INTERCEPTOR IS PUMPED THREE TIMES A YEAR. NO ISSUES WITH THE GREASE INTERCEPTOR.
- ONE ONSITE FIRE HYDRANT WAS LOCATED, BUT IT IS UNCLEAR IF THE FIRE HYDRANT IS OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE GOOD TO ALL AREAS OF THE SCHOOL.
- NO CLASSROOMS FLOOD. PONDING WAS IDENTIFIED BY STAFF NORTH AND SOUTH OF BUILDING 06, SOUTH OF BUILDING 08, NORTH OF BUILDING 09 AND NORTH AND EAST OF BUILDING 10.
- BUILDING 10 IS CONDEMNED AND TAPED OFF WITH "DO NOT ENTER" TAPE.
- IRONWOOD TREES LINE THE NORTHWEST SIDE OF THE SITE. PER STAFF, EVERY SUMMER THE TREES ARE TRIMMED (2012).

GENERAL ABBREVIATIONS

ADMIN: ADMINISTRATION
CAFE: CAFETERIA
CL: CHAIN LINK
CO: CLEAN OUT
CUC: COMMONWEALTH UTILITIES CORPORATION
FH: FIRE HYDRANT
LF: LINEAR FEET
MH: MANHOLE
RR: RESTROOM
SMH: SEWER MANHOLE

LEGEND:

GENERAL FLOW DIRECTION

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

ZONE AE: BASE FLOOD ELEVATIONS DETERMINED.

OTHER AREAS

ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN

EXISTING PONDING

1% ANNUAL CHANCE FLOODPLAIN BOUNDARY

(EL 8) BASE FLOOD ELEVATION WHERE UNIFORM WITHIN ZONE; ELEVATION IN FEET*

* REFERENCED TO THE LOCAL TIDAL DATUM.

SITE IMP. LEGEND:

(A) ADD 36"x6" BOX CULVERT (5' WIDE)

(B) ADD 36"x6" BOX CULVERT (5' WIDE)

(C) ADD GRASS SWALE (200 LF)

(D) FILL AREA EAST OF BUILDING 2 AND CREATE GRASSED SWALE TO DRAIN. ADD 36"X6" BOX CULVERT (5' WIDE)

(E) ADD GRASS SWALE TO DRAIN (75 LF)

(F) CREATE LOW AREA (100'x20'x2'), CONC. DRIVEWAY THRU GUTTER (40'x20') AND GRASS SWALE TO DRAIN (60 LF)

(G) BACKFILL LOW SPOT.

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SAN ANTONIO MIDDLE SCHOOL

FIGURE 13

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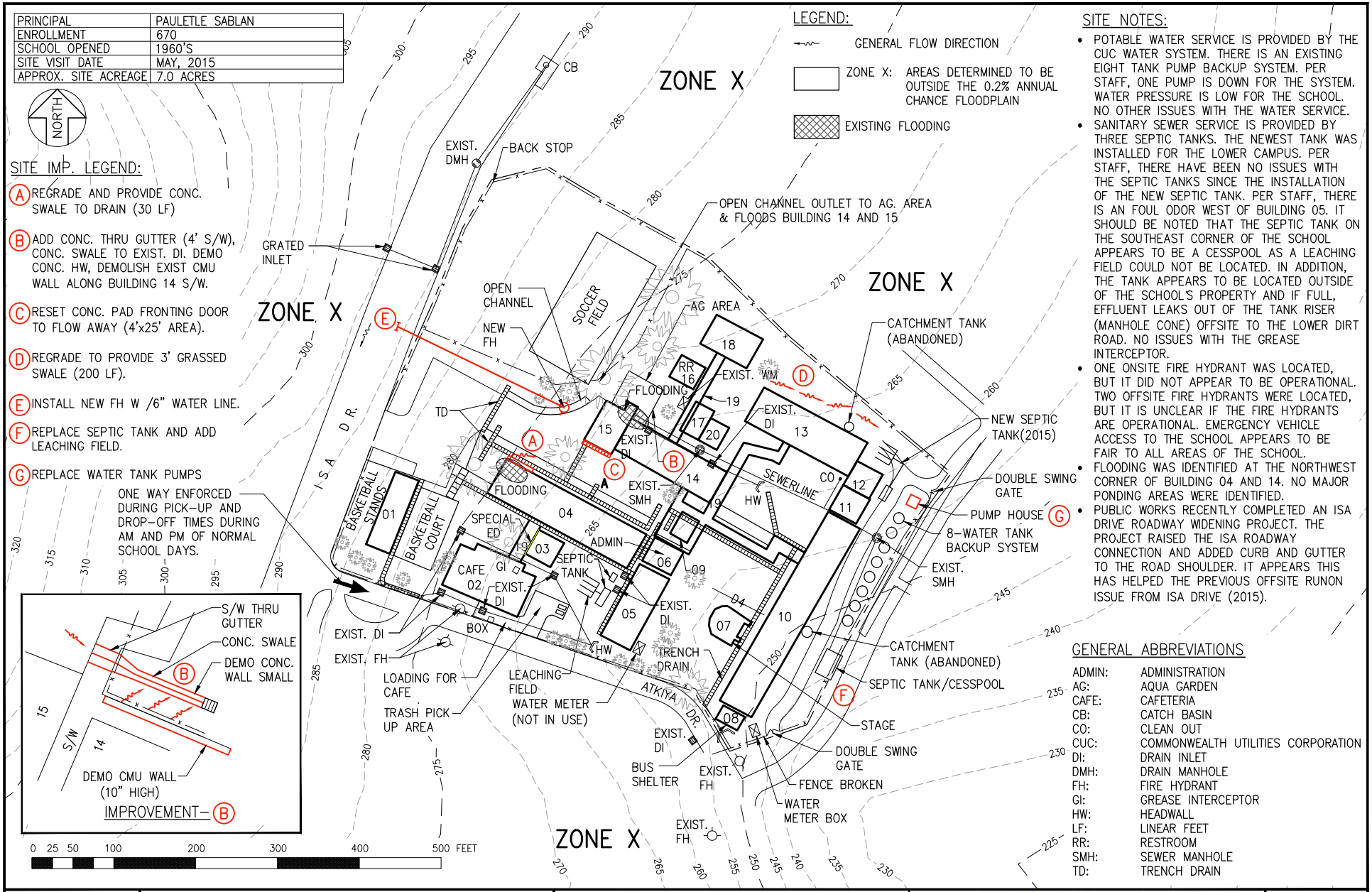
PRINCIPAL	PAULETLE SABLAN
ENROLLMENT	670
SCHOOL OPENED	1960'S
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	7.0 ACRES



SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING EIGHT TANK PUMP BACKUP SYSTEM. PER STAFF, ONE PUMP IS DOWN FOR THE SYSTEM. WATER PRESSURE IS LOW FOR THE SCHOOL. NO OTHER ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY THREE SEPTIC TANKS. THE NEWEST TANK WAS INSTALLED FOR THE LOWER CAMPUS. PER STAFF, THERE HAVE BEEN NO ISSUES WITH THE SEPTIC TANKS SINCE THE INSTALLATION OF THE NEW SEPTIC TANK. PER STAFF, THERE IS AN FOUL ODOR WEST OF BUILDING 05. IT SHOULD BE NOTED THAT THE SEPTIC TANK ON THE SOUTHEAST CORNER OF THE SCHOOL APPEARS TO BE A CESSPOOL AS A LEACHING FIELD COULD NOT BE LOCATED. IN ADDITION, THE TANK APPEARS TO BE LOCATED OUTSIDE OF THE SCHOOL'S PROPERTY AND IF FULL, EFFLUENT LEAKS OUT OF THE TANK RISER (MANHOLE CONE) OFFSITE TO THE LOWER DIRT ROAD. NO ISSUES WITH THE GREASE INTERCEPTOR.
- ONE ONSITE FIRE HYDRANT WAS LOCATED, BUT IT DID NOT APPEAR TO BE OPERATIONAL. TWO OFFSITE FIRE HYDRANTS WERE LOCATED, BUT IT IS UNCLEAR IF THE FIRE HYDRANTS ARE OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE FAIR TO ALL AREAS OF THE SCHOOL.
- FLOODING WAS IDENTIFIED AT THE NORTHWEST CORNER OF BUILDING 04 AND 14. NO MAJOR PONDING AREAS WERE IDENTIFIED.
- PUBLIC WORKS RECENTLY COMPLETED AN ISA DRIVE ROADWAY WIDENING PROJECT. THE PROJECT RAISED THE ISA ROADWAY CONNECTION AND ADDED CURB AND GUTTER TO THE ROAD SHOULDER. IT APPEARS THIS HAS HELPED THE PREVIOUS OFFSITE RUNON ISSUE FROM ISA DRIVE (2015).

GENERAL ABBREVIATIONS

ADMIN:	ADMINISTRATION
AG:	AQUA GARDEN
CAFE:	CAFETERIA
CB:	CATCH BASIN
CO:	CLEAN OUT
CUC:	COMMONWEALTH UTILITIES CORPORATION
DI:	DRAIN INLET
DMH:	DRAIN MANHOLE
FH:	FIRE HYDRANT
GI:	GREASE INTERCEPTOR
HW:	HEADWALL
LF:	LINEAR FEET
RR:	RESTROOM
SMH:	SEWER MANHOLE
TD:	TRENCH DRAIN

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CMNI – SAIPAN

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SAN VICENTE ELEMENTARY SCHOOL

FIGURE 14

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	ERICA THOMBURGH
ENROLLMENT	168 6–8
SCHOOL OPENED	1970's
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	6.8 ACRES

NORTH

SITE IMP. LEGEND:

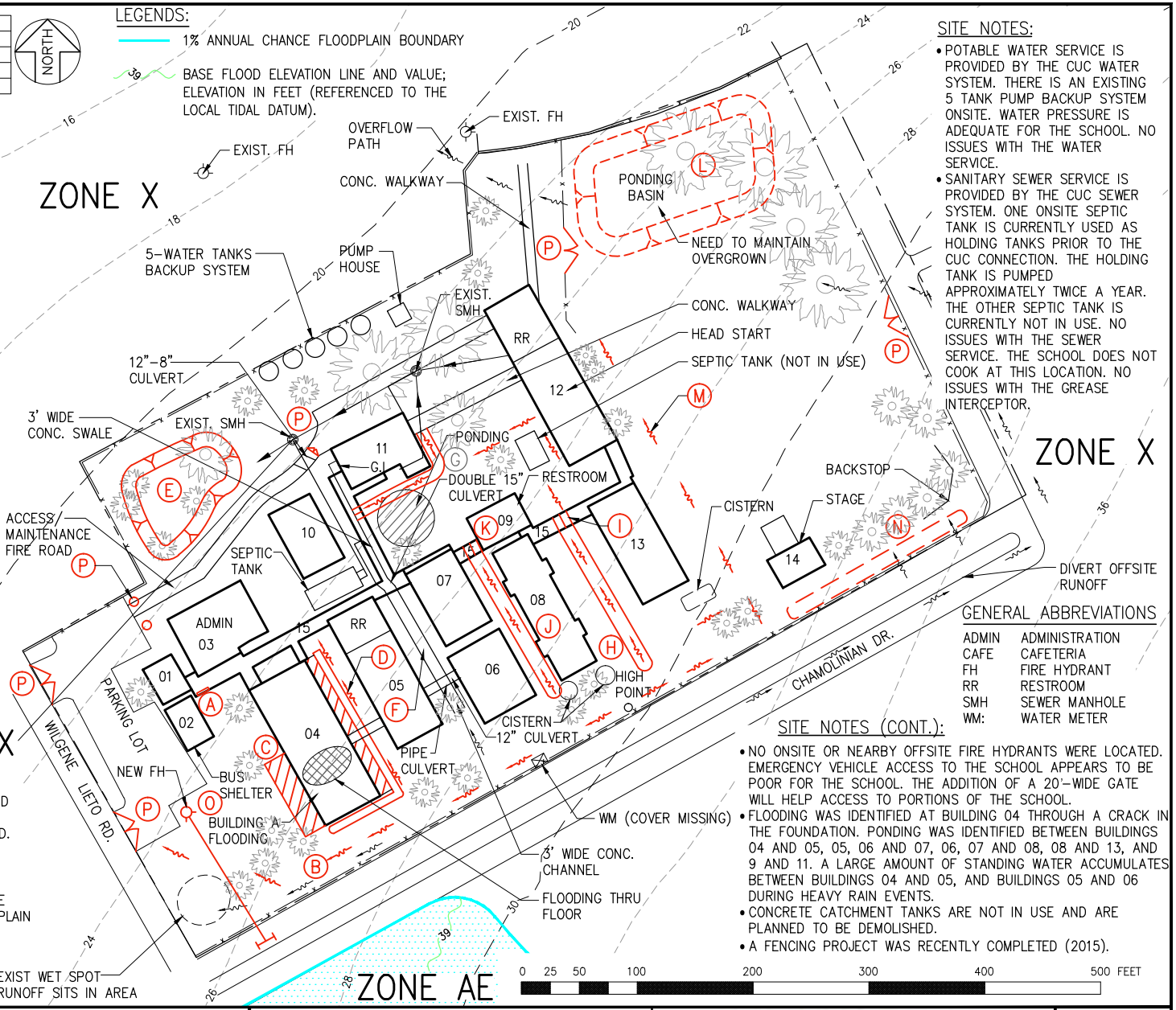
- (A) ADD CONC. CURB
- (B) ADD CONC. SWALE
- (C) REGRADE/DRAIN AWAY FROM BUILDING
- (D) REGRADE AND PROVIDE CONC. SWALE
- (E) ADD RETENTION BASIN
- (F) RESET INVERT OF CONC. CHANNEL
- (G) ADD CONC. SWALE AND NEW 2–15" CULVERT UNDER SIDEWALK
- (H) ADD CONC. SWALE
- (I) ADD 2–15" CULVERT
- (J) ADD CONCRETE SWALE
- (K) ADD 2–15" CULVERT
- (L) RESET RETENTION BASIN. REPLACE BOTTOM WITH BETTER INFILTRATING MATERIAL
- (M) ADD SWALE SYSTEM TO DIVERT STORM WATER TO NORTH TO HELP DRAIN PLAY FIELD.
- (N) REMOVE BERM
- (O) INSTALL NEW FH & 6" WL
- (P) PROVIDE NEW 20' WIDE GATE AND REMOVE EXIST. CURB TO PROVIDE 20' WIDE CLEARANCE MIN.

LEGENDS:

- GENERAL FLOW DIRECTION
- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
- ZONE AE: BASE FLOOD ELEVATIONS DETERMINED.
- OTHER AREAS
- ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- EXISTING PONDING
- EXISTING FLOODING

LEGENDS:

- 1% ANNUAL CHANCE FLOODPLAIN BOUNDARY
- BASE FLOOD ELEVATION LINE AND VALUE; ELEVATION IN FEET (REFERENCED TO THE LOCAL TIDAL DATUM).



SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING 5 TANK PUMP BACKUP SYSTEM ONSITE. WATER PRESSURE IS ADEQUATE FOR THE SCHOOL. NO ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY THE CUC SEWER SYSTEM. ONE ONSITE SEPTIC TANK IS CURRENTLY USED AS HOLDING TANKS PRIOR TO THE CUC CONNECTION. THE HOLDING TANK IS PUMPED APPROXIMATELY TWICE A YEAR. THE OTHER SEPTIC TANK IS CURRENTLY NOT IN USE. NO ISSUES WITH THE SEWER SERVICE. THE SCHOOL DOES NOT COOK AT THIS LOCATION. NO ISSUES WITH THE GREASE INTERCEPTOR.

GENERAL ABBREVIATIONS

ADMIN	ADMINISTRATION
CAFE	CAFETERIA
FH	FIRE HYDRANT
RR	RESTROOM
SMH	SEWER MANHOLE
WM:	WATER METER

SITE NOTES (CONT.):

- NO ONSITE OR NEARBY OFFSITE FIRE HYDRANTS WERE LOCATED. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE POOR FOR THE SCHOOL. THE ADDITION OF A 20'–WIDE GATE WILL HELP ACCESS TO PORTIONS OF THE SCHOOL.
- FLOODING WAS IDENTIFIED AT BUILDING 04 THROUGH A CRACK IN THE FOUNDATION. PONDING WAS IDENTIFIED BETWEEN BUILDINGS 04 AND 05, 05, 06 AND 07, 06, 07 AND 08, 08 AND 13, AND 9 AND 11. A LARGE AMOUNT OF STANDING WATER ACCUMULATES BETWEEN BUILDINGS 04 AND 05, AND BUILDINGS 05 AND 06 DURING HEAVY RAIN EVENTS.
- CONCRETE CATCHMENT TANKS ARE NOT IN USE AND ARE PLANNED TO BE DEMOLISHED.
- A FENCING PROJECT WAS RECENTLY COMPLETED (2015).

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FIGURE 15

TANAPAG ELEMENTARY SCHOOL

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ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	LOU CONNIE MONG LONA
ENROLLMENT	310
SCHOOL OPENED	1950s–1980s
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	24.2 ACRES

GENERAL ABBREVIATIONS

ADMIN: ADMINISTRATION
CAFE: CAFETERIA
CO: CLEANOUTS
CONC.: CONCRETE
FH: FIRE HYDRANT
RR: RESTROOM
S/W: SIDE WALK
WV: WATER VALVES

LEGEND:

GENERAL FLOW DIRECTION

ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN

EXISTING PONDING

EXISTING FLOODING

SITE IMP. LEGEND:

(J) ADD 36"x6" BOX CULVERT (8' WIDE)

(K) DEMOLISH AND REMOVE EXIST BUILDING PAD TO IMPROVE DRAINAGE PATTERN

(L) ADD CONC. SWALE AND 24"x6" BOX CULVERT (3' WIDE) TO DRAIN

(M) ADD GRASS SWALE TO DRAIN

(N) LOWER AREA BY 6" AND ADD THRU GUTTER

(O) ADD GRASS SWALE

(P) ADD CONC. WALKWAY WITH 36"x6" BOX CULVERT

(Q) ADD CONC. SWALE AND THRU GUTTER

(R) REMOVE BARRICADE

(S) INSTALL NEW FH (2) WITH 6" WATERLINE

SITE IMP. LEGEND:

(A) FIX SMH AND 4" PIPE (2' REPLACE)

(B) ADD CONC. SWALE FROM MIDDLE OF EAST SIDE OF BUILDING 10 TO BETWEEN BUILDING 8 AND 10

(C) ADD CONC. THRU GUTTER FOR CONC. S/W (REPLACE 10'x3' S/W)

(D) ADD GRASS SWALE

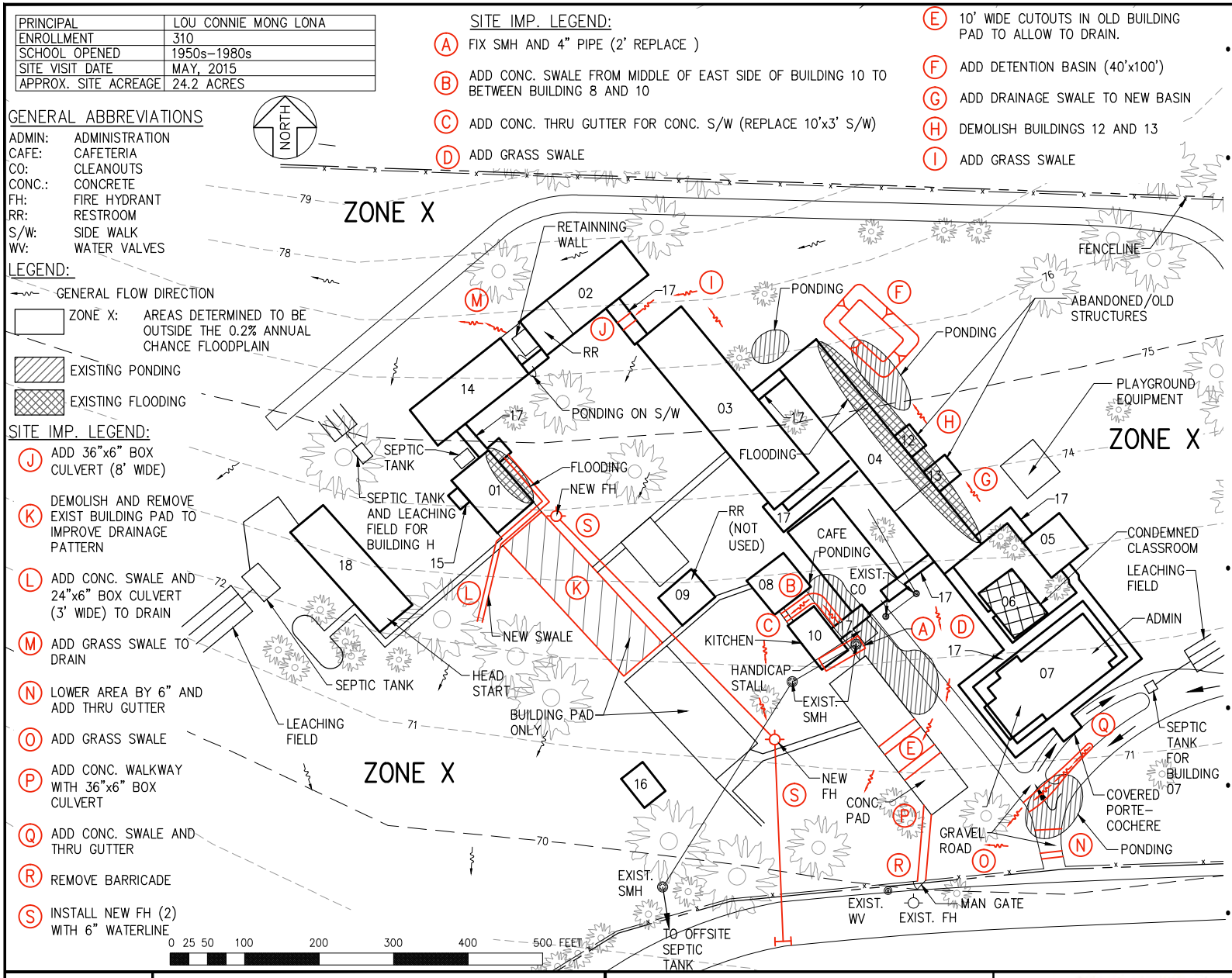
(E) 10' WIDE CUTOUTS IN OLD BUILDING PAD TO ALLOW TO DRAIN.

(F) ADD DETENTION BASIN (40'x100')

(G) ADD DRAINAGE SWALE TO NEW BASIN

(H) DEMOLISH BUILDINGS 12 AND 13

(I) ADD GRASS SWALE



SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. THERE IS AN EXISTING TANK AND PUMP BACKUP SYSTEM ONSITE, BUT THE SCHOOL DOES NOT USE OR DOES NOT REQUIRE THE SYSTEM. WATER PRESSURE IS ADEQUATE FOR THE SCHOOL.
- SANITARY SEWER SERVICE IS PROVIDED BY FOUR ONSITE SEPTIC TANK SYSTEMS (HEAD START, BUILDING 07, BUILDING 02 AND 14, BATHROOM ADJACENT TO BUILDING 01), AND ONE OFFSITE SEPTIC TANK (BUILDINGS 04, 10 AND THE CAFETERIA). NO ISSUES WITH THE ONSITE SEPTIC TANKS. PER STAFF, THE OFFSITE SEPTIC TANK IS SHARED WITH OTHER GOVERNMENT BUILDINGS AND HAD RECENTLY OVERFLOWED. PSS HAD BEEN GIVEN A CITATION DUE TO THE OVERFLOW IN THE FALL OF 2014. IT WAS FOUND THAT THE SEWER MANHOLE AND 4" SEWER LINE ADJACENT TO BUILDING 10 WAS USED TO COLLECT RUNOFF WITH THE SIDEWALL OF THE SEWER MANHOLE AND TOP OF THE 4"SEWER LINE CRACKED TO ALLOW RUNOFF TO ENTER THE SEWER LINE. FACILITIES MAINTENANCE TO REPAIR THE SEWER MANHOLE AND SEWER LINE IMMEDIATELY. COOKING IS CONDUCTED ON CAMPUS, BUT THERE ARE NO ISSUES WITH THE GREASE INTERCEPTOR.
- NO ONSITE FIRE HYDRANTS WERE LOCATED. ONE OFFSITE FIRE HYDRANT WAS LOCATED BUT IT IS UNCLEAR IF THE FIRE HYDRANT IS OPERATIONAL. A FIRE STATION IS LOCATED ACROSS THE STREET FROM THE SCHOOL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE GOOD TO ALL AREAS OF THE SCHOOL.
- FLOODING WAS IDENTIFIED ON THE NORTHEAST SIDE OF BUILDINGS 01, 04 AND 10. PONDING WAS IDENTIFIED ON NORTHWEST SIDE OF BUILDING 10 AND SOUTHEAST OF BUILDING 07.
- SEVERAL BUILDINGS ARE IN POOR CONDITION AND/OR ARE NOT IN USE. ALSO, SEVERAL CONCRETE PADS ARE STILL PRESENT ONSITE. IT IS RECOMMENDED TO TAKE A BUILDING SURVEY AND DEMOLISH AND REMOVE BUILDINGS IN POOR CONDITION/NOT IN USE ALONG WITH THE BUILDING PADS.
- THE FENCING FABRIC IS RUSTING.

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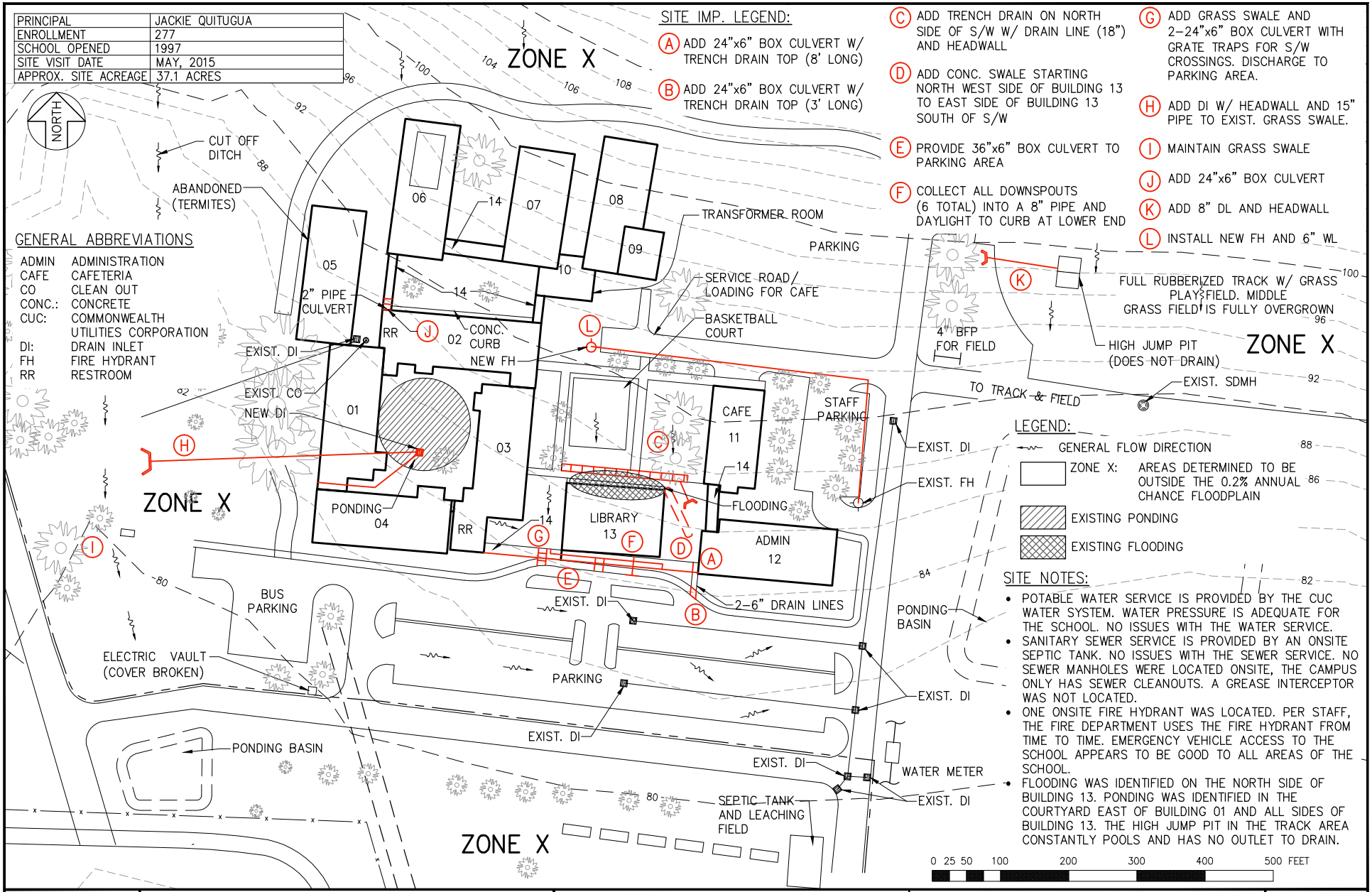
TINIAN ELEMENTARY SCHOOL

FIGURE 16

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	JACKIE QUITUGUA
ENROLLMENT	277
SCHOOL OPENED	1997
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	37.1 ACRES



GENERAL ABBREVIATIONS

ADMIN	ADMINISTRATION
CAFE	CAFETERIA
CO	CLEAN OUT
CONC.:	CONCRETE
CUC:	COMMONWEALTH UTILITIES CORPORATION
DI:	DRAIN INLET
FH	FIRE HYDRANT
RR	RESTROOM

SITE IMP. LEGEND:

- (A) ADD 24"x6" BOX CULVERT W/ TRENCH DRAIN TOP (8' LONG)
- (B) ADD 24"x6" BOX CULVERT W/ TRENCH DRAIN TOP (3' LONG)
- (C) ADD TRENCH DRAIN ON NORTH SIDE OF S/W W/ DRAIN LINE (18") AND HEADWALL
- (D) ADD CONC. SWALE STARTING NORTH WEST SIDE OF BUILDING 13 TO EAST SIDE OF BUILDING 13 SOUTH OF S/W
- (E) PROVIDE 36"x6" BOX CULVERT TO PARKING AREA
- (F) COLLECT ALL DOWNSPOUTS (6 TOTAL) INTO A 8" PIPE AND DAYLIGHT TO CURB AT LOWER END
- (G) ADD GRASS SWALE AND 2-24"x6" BOX CULVERT WITH GRATE TRAPS FOR S/W CROSSINGS. DISCHARGE TO PARKING AREA.
- (H) ADD DI W/ HEADWALL AND 15" PIPE TO EXIST. GRASS SWALE.
- (I) MAINTAIN GRASS SWALE
- (J) ADD 24"x6" BOX CULVERT
- (K) ADD 8" DL AND HEADWALL
- (L) INSTALL NEW FH AND 6" WL

LEGEND:

- GENERAL FLOW DIRECTION
- ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- EXISTING PONDING
- EXISTING FLOODING

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. WATER PRESSURE IS ADEQUATE FOR THE SCHOOL. NO ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY AN ONSITE SEPTIC TANK. NO ISSUES WITH THE SEWER SERVICE. NO SEWER MANHOLES WERE LOCATED ONSITE, THE CAMPUS ONLY HAS SEWER CLEANOUTS. A GREASE INTERCEPTOR WAS NOT LOCATED.
- ONE ONSITE FIRE HYDRANT WAS LOCATED. PER STAFF, THE FIRE DEPARTMENT USES THE FIRE HYDRANT FROM TIME TO TIME. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE GOOD TO ALL AREAS OF THE SCHOOL.
- FLOODING WAS IDENTIFIED ON THE NORTH SIDE OF BUILDING 13. PONDING WAS IDENTIFIED IN THE COURTYARD EAST OF BUILDING 01 AND ALL SIDES OF BUILDING 13. THE HIGH JUMP PIT IN THE TRACK AREA CONSTANTLY POOLS AND HAS NO OUTLET TO DRAIN.

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CMNI – TINIAN

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FIGURE 17

TINIAN JR/SR HIGH SCHOOL

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

PRINCIPAL	SHARLENE MANGLONA
ENROLLMENT	228 7-12, 500 CAPACITY
SCHOOL OPENED	1960s
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	6.8 ACRES

SITE IMP. LEGEND:

- (A) ADD CONC. SWALE
- (B) ADD 24"x6" S/W BOX CULVERT
- (C) ADD 24"x6" S/W BOX CULVERT
- (D) ADD 36"x6" S/W BOX CULVERT
- (E) ADD GRASS SWALE TO EAST END OF BUILDING 05
- (F) ADD 24"x6" S/W BOX CULVERT
- (G) ADD 36"x6" S/W BOX CULVERT
- (H) ADD TRENCH DRAIN 10' OVER EXISTING DRAINLINE.
- (I) ADD DRAINAGE SWALE (GRASS)
- (J) ENLARGE DI. (EXISTING), ADD DI, ENLARGE PIPE TO 24", EXTEND PIPE TO EAST OF BUILDING 05. ADD HEADWALL.
- (K) ADD GRASS SWALE TO SOUTH OF BUILDING 05.
- (L) INSTALL 20' DOUBLE SWING GATE.

GENERAL ABBREVIATIONS

ADMIN:	ADMINISTRATION
CAFE:	CAFETERIA
CL:	CHAIN LINK
FH:	FIRE HYDRANT
H START:	HEAD START
RR:	RESTROOM
SMH:	SEWER MANHOLE
S/W:	SIDEWALK

LEGEND:

- GENERAL FLOW DIRECTION
- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
  - ZONE AE: BASE FLOOD ELEVATIONS DETERMINED.
  - ZONE VE: COASTAL FLOOD ZONE WITH VELOCITY HAZARD (WAVE ACTION); BASE FLOOD ELEVATION DETERMINED.
- OTHER FLOOD AREAS
  - ZONE X: AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.
- OTHER AREAS
  - ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- 1% ANNUAL CHANCE FLOODPLAIN BOUNDARY
- 0.2% ANNUAL CHANCE FLOODPLAIN BOUNDARY
- BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREA ZONES AND BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREAS OF DIFFERENT BASE FLOOD ELEVATIONS, FLOOD DEPTHS OR FLOOD VELOCITIES.
- (EL 9) BASE FLOOD ELEVATION WHERE UNIFORM WITHIN ZONE; ELEVATION IN FEET*

* REFERENCED TO THE LOCAL TIDAL DATUM.

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. WATER PRESSURE IS ADEQUATE FOR THE SCHOOL. NO ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY TWO ONSITE SEPTIC TANKS. NO ISSUES WITH THE SEWER SERVICE. IT SHOULD BE NOTED THAT THERE WERE SEVERAL SEWER MANHOLES ON THE EAST SIDE OF THE CAMPUS THAT APPEARED TO LEAD OFFSITE, BUT THE STAFF WAS NOT AWARE OF AN OFFSITE SEWER CONNECTION.
- NO ONSITE FIRE HYDRANTS WERE LOCATED. TWO OFFSITE FIRE HYDRANTS WERE LOCATED, BUT IT IS UNCLEAR IF THE FIRE HYDRANT IS OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE GOOD TO ALL AREAS OF THE SCHOOL, BUT A 20'-WIDE GATE SHOULD BE ADDED TO HELP FACILITATE ACCESS.

SITE NOTES(CONT):

- NO CLASSROOMS FLOOD. PONDING WAS IDENTIFIED AT THE NORTHEAST PARKING AREA. THE NEWLY CONSTRUCTED COVERED WALKWAYS HAVE POSSIBLY CREATED PONDING AREAS AGAINST THE WALKWAYS (2015).
- COVERED WALKWAYS WERE RECENTLY CONSTRUCTED FOR THE CAMPUS (2015).
- THE FENCE IS IN FAIR TO GOOD CONDITION WITH THE MAJORITY BEING IN FAIR CONDITION.

0 25 50 100 200 300 400 500 FEET

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FIGURE 18

ROTA JUNIOR HIGH SCHOOL

DISCLAIMER: SITE PLAN FEATURES ARE CONCEPTUAL AND NOT INTENDED FOR DESIGN PURPOSES
ELEVATION CONTOURS ARE PROVIDED BY GOOGLE EARTH

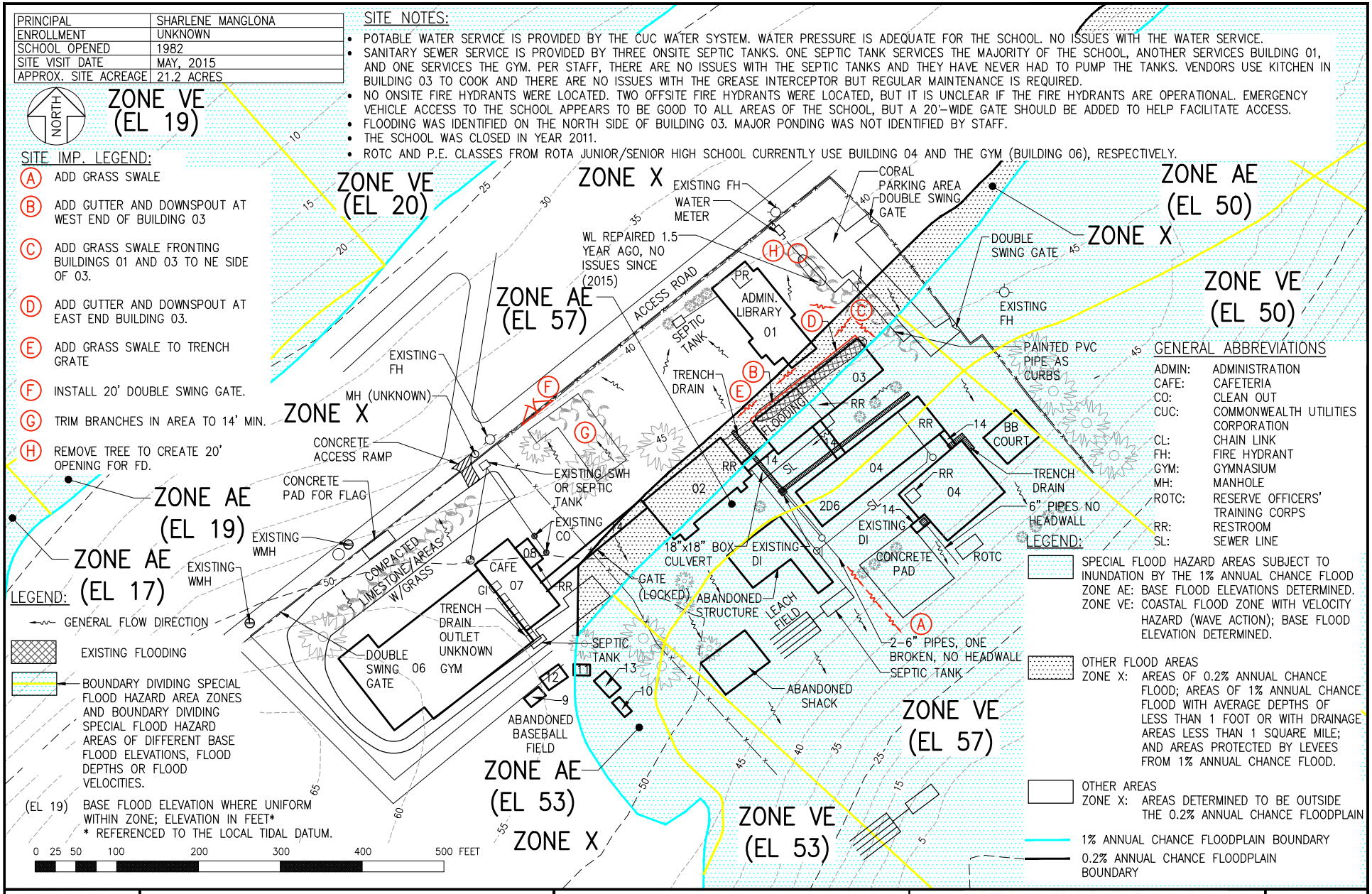
PRINCIPAL	SHARLENE MANGLONA
ENROLLMENT	UNKNOWN
SCHOOL OPENED	1982
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	21.2 ACRES

SITE NOTES:

- POTABLE WATER SERVICE IS PROVIDED BY THE CUC WATER SYSTEM. WATER PRESSURE IS ADEQUATE FOR THE SCHOOL. NO ISSUES WITH THE WATER SERVICE.
- SANITARY SEWER SERVICE IS PROVIDED BY THREE ONSITE SEPTIC TANKS. ONE SEPTIC TANK SERVICES THE MAJORITY OF THE SCHOOL, ANOTHER SERVICES BUILDING 01, AND ONE SERVICES THE GYM. PER STAFF, THERE ARE NO ISSUES WITH THE SEPTIC TANKS AND THEY HAVE NEVER HAD TO PUMP THE TANKS. VENDORS USE KITCHEN IN BUILDING 03 TO COOK AND THERE ARE NO ISSUES WITH THE GREASE INTERCEPTOR BUT REGULAR MAINTENANCE IS REQUIRED.
- NO ONSITE FIRE HYDRANTS WERE LOCATED. TWO OFFSITE FIRE HYDRANTS WERE LOCATED, BUT IT IS UNCLEAR IF THE FIRE HYDRANTS ARE OPERATIONAL. EMERGENCY VEHICLE ACCESS TO THE SCHOOL APPEARS TO BE GOOD TO ALL AREAS OF THE SCHOOL, BUT A 20'-WIDE GATE SHOULD BE ADDED TO HELP FACILITATE ACCESS.
- FLOODING WAS IDENTIFIED ON THE NORTH SIDE OF BUILDING 03. MAJOR PONDING WAS NOT IDENTIFIED BY STAFF.
- THE SCHOOL WAS CLOSED IN YEAR 2011.
- ROTC AND P.E. CLASSES FROM ROTA JUNIOR/SENIOR HIGH SCHOOL CURRENTLY USE BUILDING 04 AND THE GYM (BUILDING 06), RESPECTIVELY.

SITE IMP. LEGEND:

- (A) ADD GRASS SWALE
- (B) ADD GUTTER AND DOWNSPOUT AT WEST END OF BUILDING 03
- (C) ADD GRASS SWALE FRONTING BUILDINGS 01 AND 03 TO NE SIDE OF 03.
- (D) ADD GUTTER AND DOWNSPOUT AT EAST END BUILDING 03.
- (E) ADD GRASS SWALE TO TRENCH GRATE
- (F) INSTALL 20' DOUBLE SWING GATE.
- (G) TRIM BRANCHES IN AREA TO 14' MIN.
- (H) REMOVE TREE TO CREATE 20' OPENING FOR FD.



LEGEND:

- GENERAL FLOW DIRECTION
- EXISTING FLOODING
- BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREA ZONES AND BOUNDARY DIVIDING SPECIAL FLOOD HAZARD AREAS OF DIFFERENT BASE FLOOD ELEVATIONS, FLOOD DEPTHS OR FLOOD VELOCITIES.
- (EL 19) BASE FLOOD ELEVATION WHERE UNIFORM WITHIN ZONE; ELEVATION IN FEET*
  * REFERENCED TO THE LOCAL TIDAL DATUM.

GENERAL ABBREVIATIONS

ADMIN:	ADMINISTRATION
CAFE:	CAFETERIA
CO:	CLEAN OUT
CUC:	COMMONWEALTH UTILITIES CORPORATION
CL:	CHAIN LINK
FH:	FIRE HYDRANT
GYM:	GYMNASIUM
MH:	MANHOLE
ROTC:	RESERVE OFFICERS' TRAINING CORPS
RR:	RESTROOM
SL:	SEWER LINE

LEGEND:

- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
  ZONE AE: BASE FLOOD ELEVATIONS DETERMINED.
  ZONE VE: COASTAL FLOOD ZONE WITH VELOCITY HAZARD (WAVE ACTION); BASE FLOOD ELEVATION DETERMINED.
- OTHER FLOOD AREAS
  ZONE X: AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.
- OTHER AREAS
  ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
- 1% ANNUAL CHANCE FLOODPLAIN BOUNDARY
- 0.2% ANNUAL CHANCE FLOODPLAIN BOUNDARY

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ROTA HIGH SCHOOL (CLOSED)

FIGURE 19

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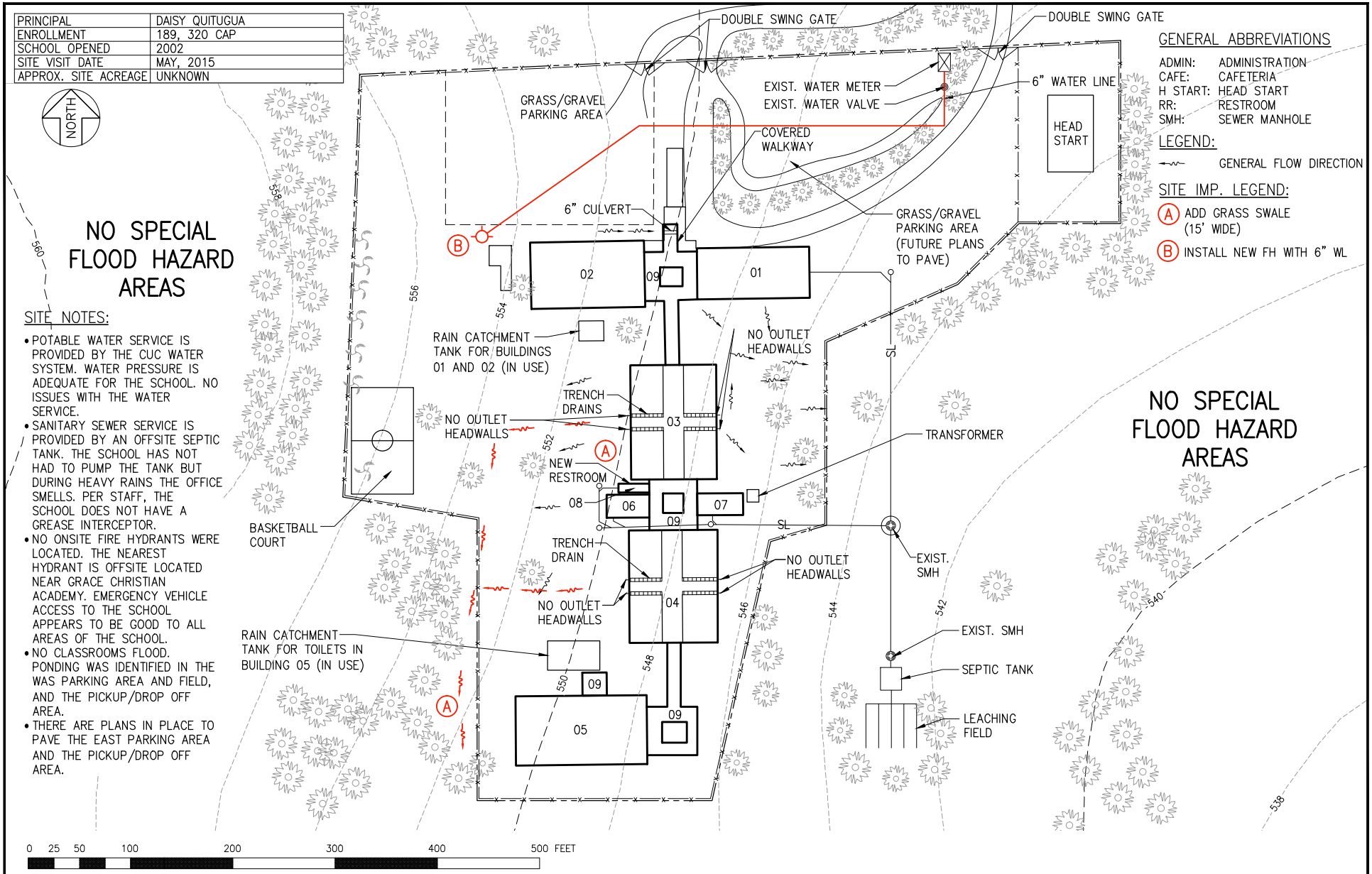
PRINCIPAL	DAISY QUITUGUA
ENROLLMENT	189, 320 CAP
SCHOOL OPENED	2002
SITE VISIT DATE	MAY, 2015
APPROX. SITE ACREAGE	UNKNOWN



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HHF PLANNERS places for people

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SINAPALO ELEMENTARY SCHOOL

FIGURE 20

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