3

SITE ASSESSMENT

MALIBU MIDDLE HIGH SCHOOL
SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT

LPA

3.0 Site Assessment Overview

This section will present analysis for site components at Malibu Middle & High School. This analysis includes various site narratives and plan diagrams illustrating the following:

- Site Utilities (Storm Drain, Fire, Domestic Water and Sewer)
- Athletics/ Physical Education Spaces
- Unique Site Features
- Site Circulation and Access
- Site-wide Infrastructure (Mechanical, Gas, Electrical, Fire Alarm and Low Voltage Systems)

The assessment portion of this document includes a representation of the current state of the site and buildings, at the time of the school site survey. The following pages document visual observations by the planning team and information identified by the District Facilities and Maintenance and Operations staff.

Each category that was evaluated is ranked using a scale of as follows:

CATEGORY [1] NO WORK NEEDED AT THIS TIME
CATEGORY [2] MINOR/ PATCH & REPAIR
CATEGORY [3] STANDARD MODERNIZATION
CATEGORY [4] MAJOR MODERNIZATION
CATEGORY [5] COMPLETE REPLACEMENT

3.0-1 Overall Site Plan

***Refer to Exhibit 3.0-1 Overall Site Plan Diagram**

3.0-2 Environmentally Sensitive Habitat Area (ESHA)

The City of Malibu's Local Coastal Program ESHA Overlay Map 2 and United States Geological Survey (USGS) Point Dume California 7.5 minute topographic quadrangle map shows an unnamed stream along the western edge of the middle school. Riparian areas within developed areas are designated as ESHA. The city of Malibu maintains policies to protect environmentally sensitive habitat areas within city limits and new developments must be sited and designed to minimize impacts to the ESHA. A development buffer between the limits of the ESHA will be required and is typically 100' minimum.

The unnamed stream potentially fits the definition of a water of the United States and is subject to the Clean Water Act Section 404.

Proposed septic systems should be designed and sited to avoid impacts to the ESHA. Adequate setbacks are required to protect the ESHA from increases in water and lateral see page of wastewater.


N

Figure 3.0-1 Overall Site Plan Diagram

LPA

3.1 Site Utilities

Rating Legend:

CATEGORY [1] NO WORK NEEDED AT THIS TIME
CATEGORY [2] MINOR/ PATCH & REPAIR
CATEGORY [3] STANDARD MODERNIZATION
CATEGORY [4] MAJOR MODERNIZATION
CATEGORY [5] COMPLETE REPLACEMENT

3.1-1 Domestic Water

Category [4]

The majority of the domestic water mains and laterals are original to building construction dates and should be regarded as having reached their service life.

***See Existing Domestic Water Utilities Diagram**

3.1-2 Fire Water

Category [4]

The campus is served by a dedicated fire water system of unknown age servicing onsite fire hydrants and building fire water connections. Useful service life of underground fire water lines should be regarded as 50 years.

***See Existing Fire Water Utilities Diagram**

3.1-3 Sewer Water

Category [4]

The campus is served by multiple on-site wastewater treatment systems consisting of septic tanks and seepage pits. Record drawings indicate recent replacement of the septic tank in the high school rec court and new systems to be installed as part of the phase 3 construction work. Existing sewer lines outside of the phase 3 work appear to be original to building construction dates and should be regarded as having reached their service life.

***See Existing Sanitary Sewer Utilities Diagram**

3.1-4 Storm Drainage

Category [4]

The high school site drains via sheet flow and underground storm drain flowing southerly discharging to Morning View Drive through the driveways and curb outlets.

The middle school site drains via sheet flow flowing southerly toward Morning View Drive through driveways and underground storm drain flowing westerly with connections to a unnamed stream.

Drain inlets were observed with standing water and captured trash. Discussions with site personnel reveal areas of flooding at the bottom of the tennis courts, basketball courts, and outside building 1.

Underground storm drain piping is of unknown age and should be regarded as having a useful life of 50 years.

***See Existing Storm Drain Utilities Diagram**

3.2-10 Campus-Wide Electrical

Site Wide Electrical (Malibu Middle & High School)

Category [3]

School is currently being fed from 750 KVA utility transformer. The main switchgear is indoor, and it is a 2000A, 480Y/277V, 3-phase, 4 wire unit. The utility transformer was roughly installed around year 2015 and some distribution equipment seem to be in good condition. Older 1200A switchgear, which feeds most of campus, is also being fed from the 2000A switchgear. The electrical distribution system consists of original (very old) and newer equipment from different manufacturers. The campus electrical distribution system is currently partially backed up by a 60 KW emergency generator. Current switch gear is adequate for campus expansion, but old switchgear and other distribution panels are old and need to be replaced. Staff members mentioned that power goes out at least once per month during summer, and at least 2-3 times per month during winter. A larger backup emergency generator or inverter is highly recommended.

Site Wide Electrical (Malibu Middle & High School)
Category [3]

School is currently being fed from 75 KVA utility transformer. The main switchgear is indoor, and it is a 800A, 208Y/120V, 3-phase, 4 wire unit. The utility transformer was roughly installed around year 2011 and distribution equipment seem to be in good condition. A solar panel system was installed on school buildings roof few years. Current electrical distribution system capacity can neither handle additional loads such as adding air conditioning system to classrooms, nor expanding school by adding more buildings. A complete system replacement is recommended. Staff members mentioned that power goes out at least once per month during summer, and at least 2-3 times per month during winter. A backup emergency generator or inverter is highly recommended.

3.2-11 Site Wide Fire Alarm

Category [4]

Fire alarm systems will need to be replaced at all existing buildings if there is significant modernization work to be done.

3.2-12 Campus-Wide Low Voltage Systems

Malibu Middle & High School

Underground Vault Conduit Pathway System:

Category [3]

Observation: During our site visit we found a total of four (4) vaults located through-out the campus. Out of the four (4), we had the opportunity to open two (2). It is suggested to perform a campus cable audit of all used and unused cabling to determine what cable is abandoned and able to remove from underground pathways.

The underground vaults and conduit system located through-out school campus that we found has a minimum of (1) 4" conduit pathway for re-use. Under the assumption with at least (1) conduit spare for re-use, it is safe to determine future cabling requirements can be met sharing the same conduit for both fiber and copper backbone. New fiber and copper backbone cabling to existing buildings can be used across parallel systems to minimize cabling. Keeping the copper/fiber backbone to a minimum and removing unused cabling will add additional pathway availability and conduit real-estate.

We also noticed there is 50% of non-OSP cabling in the underground conduit pathway system that does not meet NFPA 70, NFPA 70E, National Electrical Code 2017 code requirements and/or TIA industry standards. These cables must be removed and replaced with OSP cable and update code requirements and minimize damage to equipment and cabling with protection from water, rodents and lightning surges. Surges will almost always surpass the voltage rating of these devices causing them to fail. Proper grounding and bonding is necessary at all times.

Vault system can be reused and phased for new construction if required (additional vaults required per phasing to be determined).

Cabrillo Elementary School

Exterior Conduit Pathway:

Category [3]

Observation: Horizontal conduit system located on canopy across school campus to each buildings IDF.

Recommendation: Conduit infrastructure to be rerouted and/or extended to new MDF room location. Re-use 50% of existing conduit is a factor pending on location of MDF.

3.2-8 Campus-Wide Mechanical Systems

Malibu Middle & High School

Category [3]

The base mechanical system is unit ventilators and water source heat pumps. The cooling tower was recently replaced. All other equipment is appears to be in the middle of its useful life. The controls system appears to have limited functionality and in need of replacement. The current mechanical system has limited to no economizer function and does not give the district the ability to take advantage of the mild climate and over ventilate spaces.

Cabrillo Elementary School

Category [3]

Typical mechanical system is heater closets with furnaces inside. Ventilation appears to be from operable windows. No economized function is present. No energy management system is installed. Systems are at the end of their useful life and should be replaced.

3.2-9 Campus-Wide Site Gas Distribution

Malibu Middle & High School

Category [3]

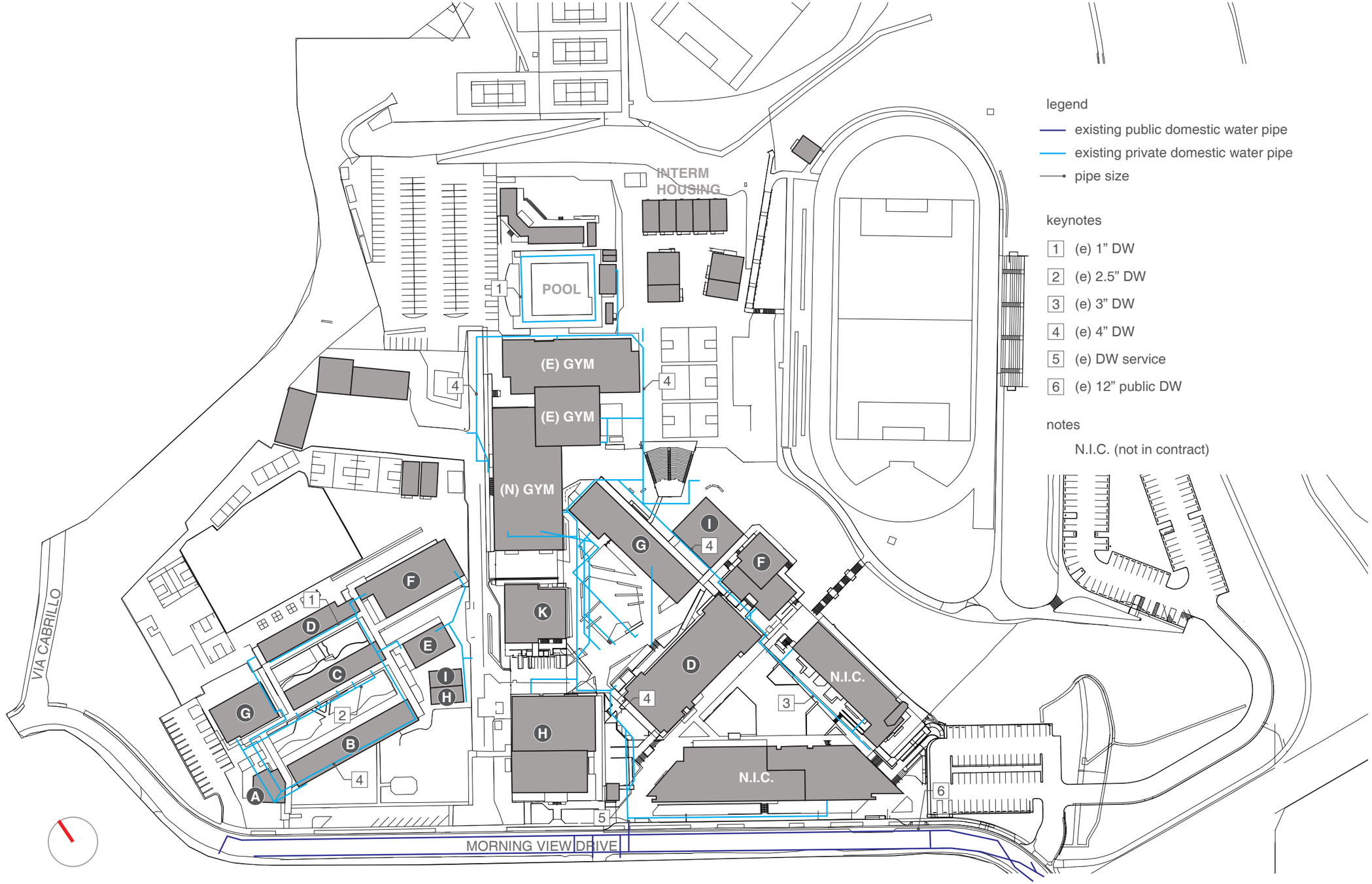
Observation: It was disclosed to LPA that the current site gas piping was standard pressure. However, during the site visit at least one (1) gas pressure regulator was discovered indicating the site is being fed by medium pressure gas. For any future modernization and/or new construction the service pressure will need to be verified. It also appeared that the existing underground site gas piping is steel. Any modernization or new construction requiring new underground site gas piping shall be polyethylene pipe.

Cabrillo Elementary School

Category [3]

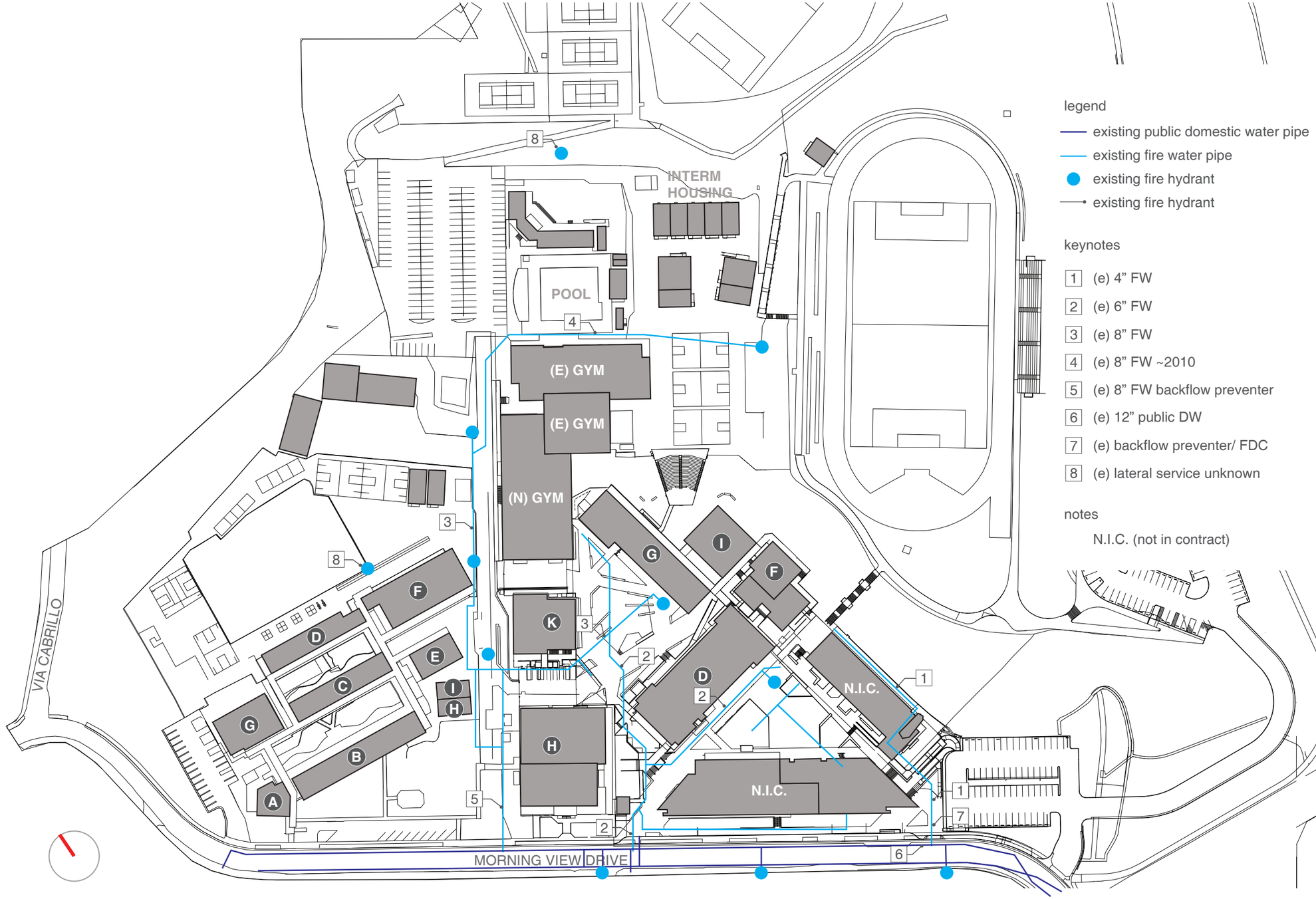
Observation: The existing gas distribution appears to be standard pressure with steel underground piping. Any modernization or new construction requiring new underground site gas piping shall be polyethylene pipe.

Figure 3.1-1 Campus-Wide Civil Domestic Water



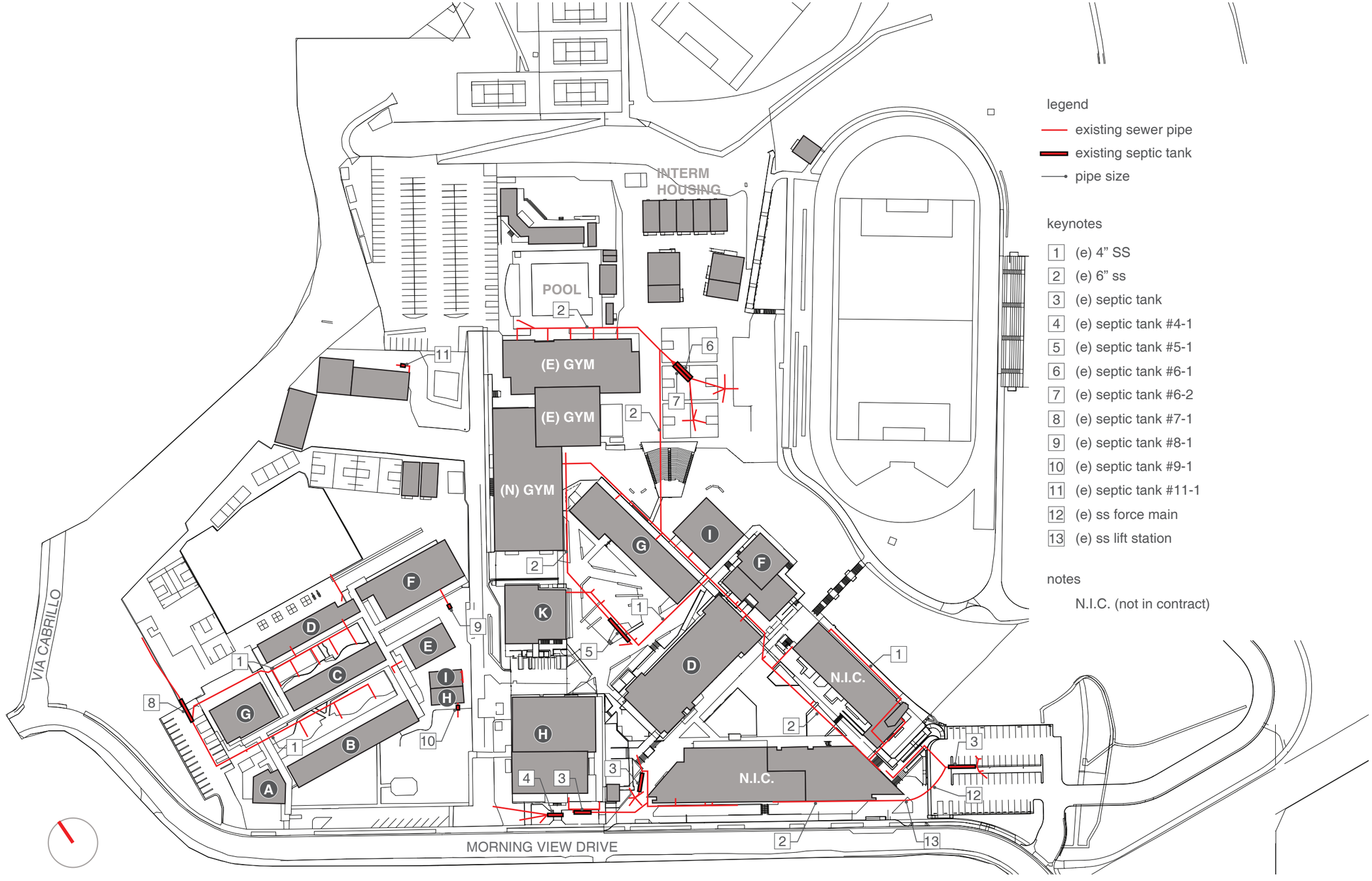
LPA

Figure 3.1-2 Campus-Wide Civil Fire Water



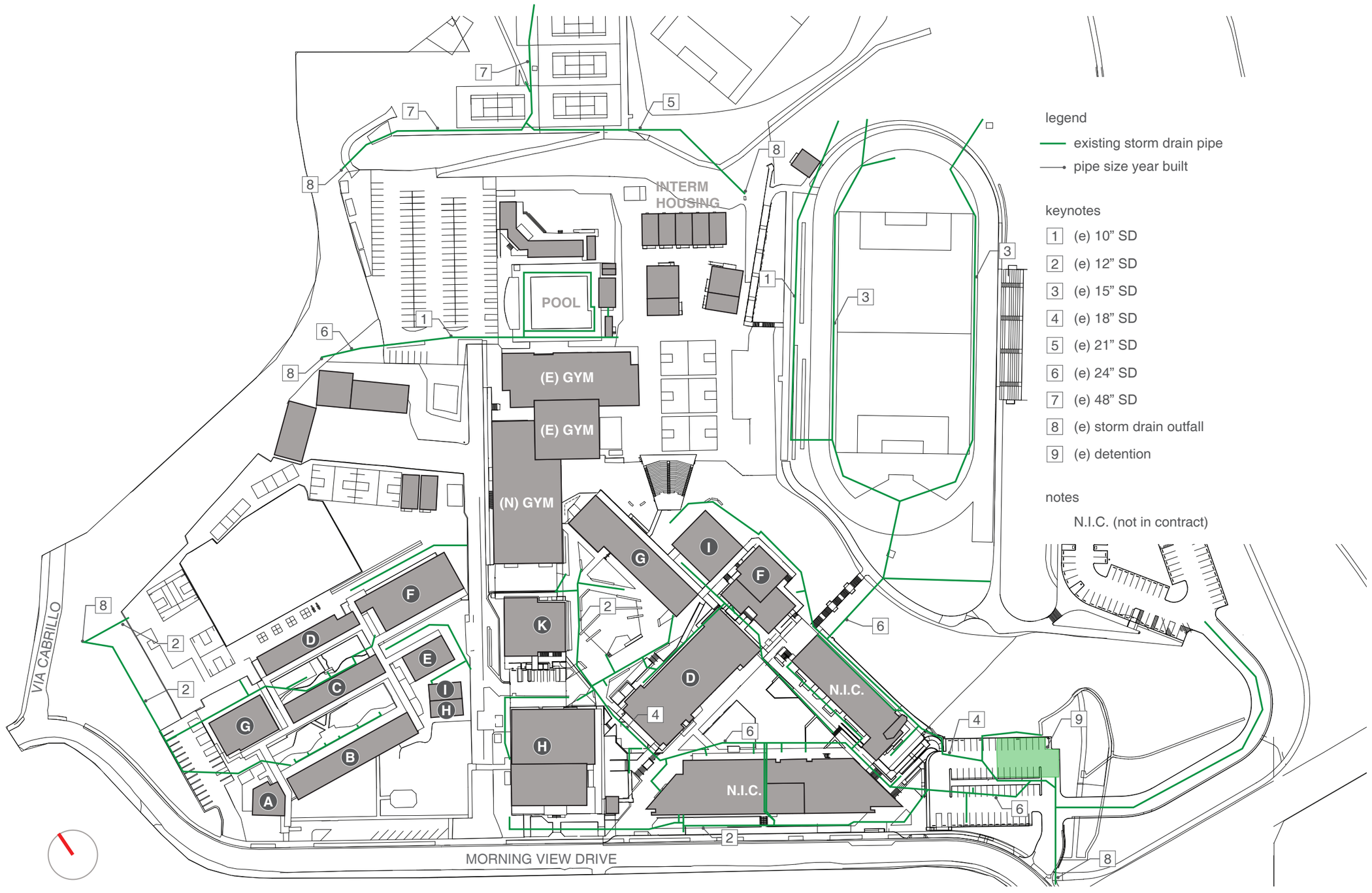
LPA

Figure 3.1-3 Campus-Wide Civil Septic Sewer



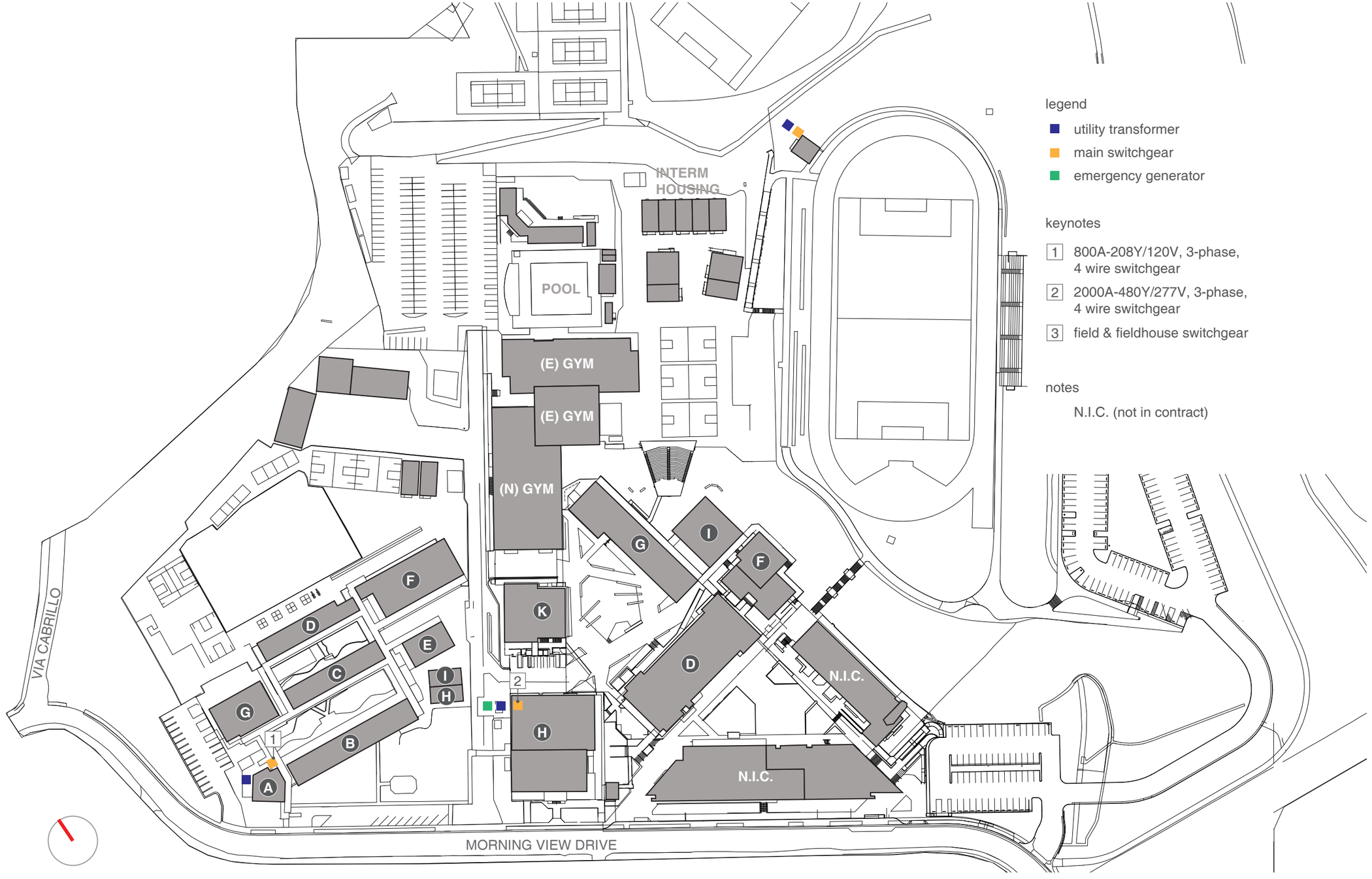
LPA

Figure 3.1-4 Campus-Wide Civil Storm Water



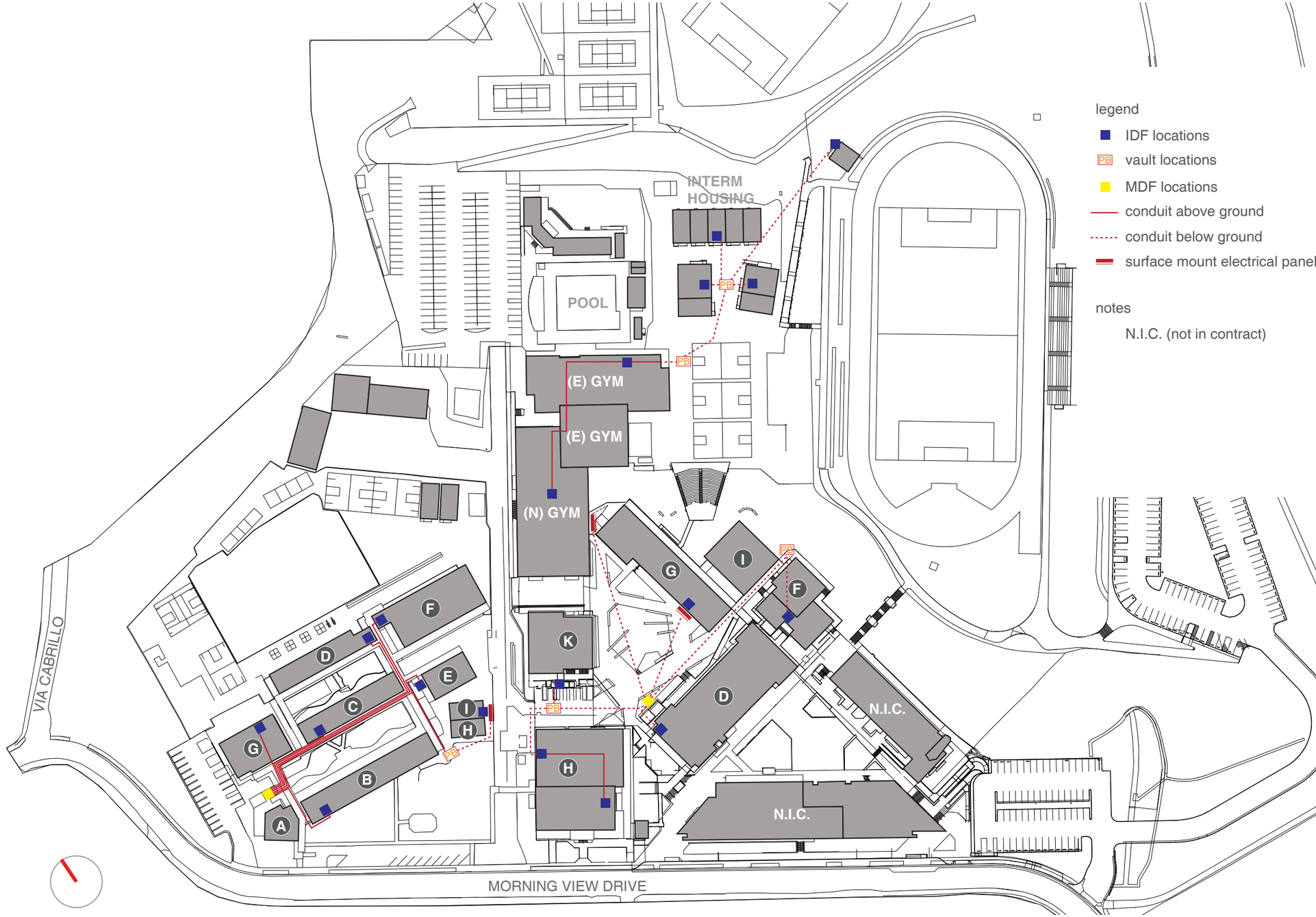
LPA

Figure 3.1-5 Campus-Wide Electrical Systems



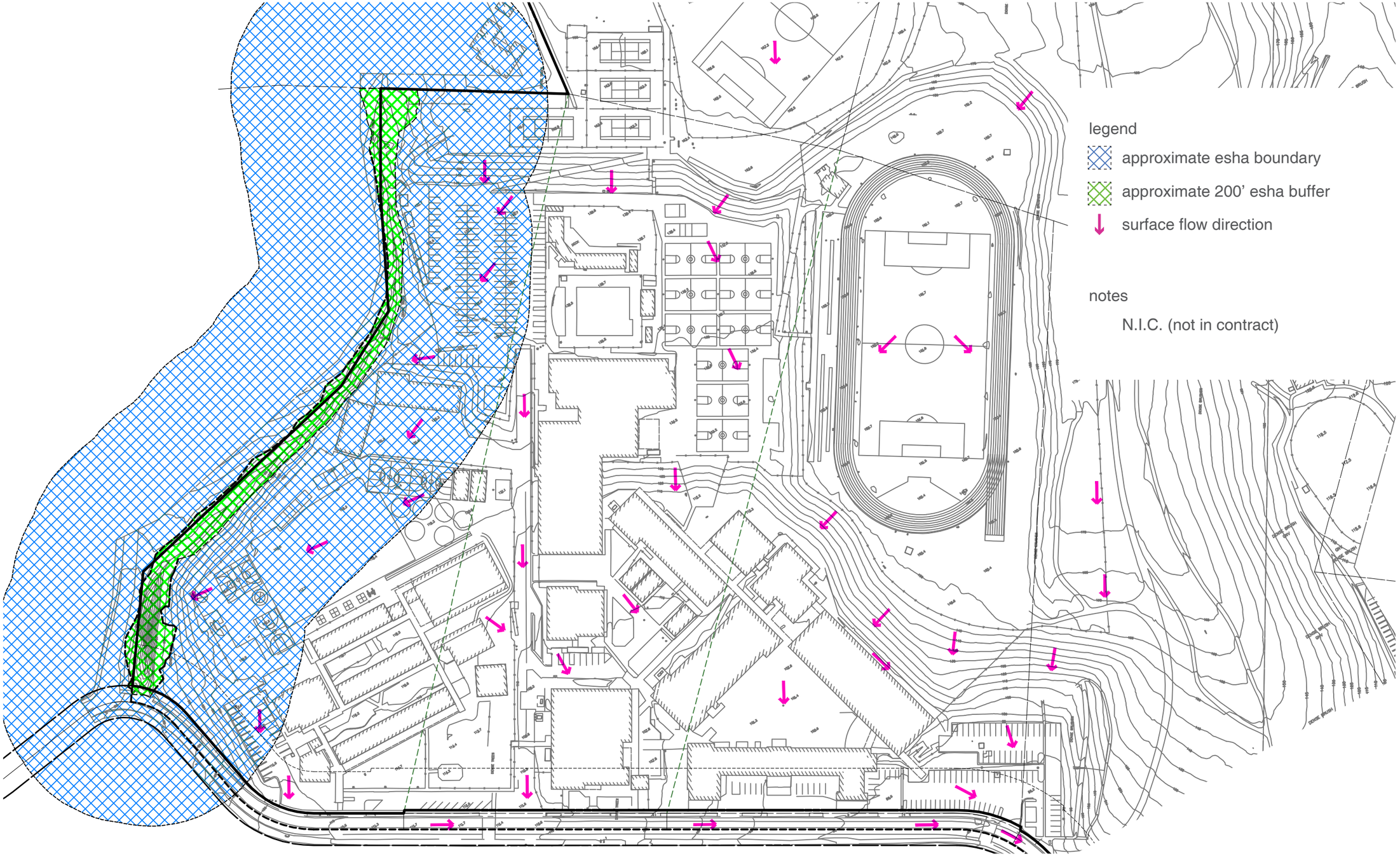
LPA

Figure 3.1-6 Campus-Wide Technology Systems



LPA

Figure 3.1-7 Grading Plan and ESHA Overlay



LPA

3.2 Malibu Middle & High School Existing Site Assessment

Rating Legend:

CATEGORY [1] NO WORK NEEDED AT THIS TIME
CATEGORY [2] MINOR/ PATCH & REPAIR
CATEGORY [3] STANDARD MODERNIZATION
CATEGORY [4] MAJOR MODERNIZATION
CATEGORY [5] COMPLETE REPLACEMENT

3.2-1 Pedestrian Circulation + Site Accessibility

The campus is built into the foothills which makes accessibility around the campus a challenge. There are several different pad elevations connected by stairs and ramps. The main campus although not steep is sloped and has several stairs and ramps between the buildings. Occasionally a lift will be required for access. There is a large ramp system at the west side of Bldg J1 (New Gym) and J (Old Gym). Ramps and stairs allow access to the tennis courts and track levels. However a walkway access to the softball field or the upper multi use field (adjacent to Clover Heights Avenue) is not available. Truncated domes are missing at pedestrian/vehicular crossings along the main entry drive north into campus (south of Bldg J1 & south of Bldg K). Cross slopes at various locations through out campus are greater than the maximum 2 percent cross slope.

Most gates were controlled by administration or staff so no accessible or panic hardware was installed. The gates adjacent to Clover Heights Avenue do not have accessible hardware and are chained opened/closed by the campus.

3.2-2 Vehicular Circulation + Parking

Category [5]

Child drop-off and pick-up currently occur within the Main access road into the campus and the upper parking lot. Busses utilize the same roadway and block access once arrived and offloading begins. The single access point for bus and car drop off causes severe traffic during morning drop-off and afternoon pick-up.

Upper parking lot has approximately 132 parking stalls. 128 standard stalls and 4 ADA stalls. The new lot east of the track has approximately 150 parking stalls. 145 standard stalls and 5 ADA stalls. Parking behind Bldg K has 2 ADA stalls both are compliant.

3.2-2 Paving

Category [4]

Concrete Paving is in fair condition, but cross slope and low spots are apparent throughout the campus. The cafeteria and lunch area have several chips, crack, lifting panels and cross slope issues. Various areas around campus have panels lifting and are ground down for ADA compliance. The concrete at the amphitheater is in poor shape, cracks, deteriorated/non-existent joint sealants, and cracks are prevalent. Stairs at the amphitheater are worn and lights are non-functional. Pool deck is deteriorated and worn and should be replaced. Concrete along the north side of Bldg J.(Old Gym) has cross slope issues, saw cut trench patches, and cracks. Concrete paving at the track level is fair to good shape. A few panels with cracks/lifting, but most concrete panels are in good shape.

Concrete stairs are generally in poor shape. Most are missing the grooves and color differentiation at the step nosing. Several have chips, gouges and exposed handrail posts. Handrails seem compliant, but have lost a majority of the protective paint coating. Rust and deterioration are prevalent on the majority of the handrails.

Concrete ramps are generally in fair shape. Concrete ramp has some lifting at panels and degraded expansion joint sealants, slopes seem to be compliant with current code. Handrails seem compliant, but have rust due to loss of paint.

3.2-3 AC Paving

Category [3]

AC Paving is worn throughout campus and calls for replacement. The Hardcourt paving area can be rated as fair, but has several depressed areas due to constant trenching for new/upgraded infrastructure. Main entrance spine from Morning View Drive is cracking in several locations and worn down. The bus yard is in fair condition with a few areas of worn AC paving which can be filled. The upper parking lot northwest of the pool has several worn and cracked areas and should have the paving replaced. A newer upper parking lot and access road southeast of the track is in good condition. The vehicular access ramp to the tennis courts and the paving south of the courts is in poor shape with cracks, depressions, and erosion issues. It should be replaced. Parking areas south of the gym and Bldg K are in fair shape.

in no longer prevalent in any of the planters. Many large slopes have no planting and have erosion issues.(South of tennis courts, west of track, and west of amphitheater)

Most trees are in good condition. A few along the western property and along the amphitheater slope should be accessed for possible trimming work.

3.2 MMHS School Existing Site Assessment

3.2-4 Irrigation

Category [5]

The irrigation system is comprised of several points of connection(POC) with individual controllers. None of the POCs utilize a Flow Sensor or Master Valve. A single POC has been used to operate the irrigation system for the upper fields.(baseball, softball, and multi-use) A separate POC for the football field and associated planting areas. Two (2) other POCs supply water for the irrigation of main campus southwest of track. Systems are old, but operate consistently. Controllers are hard wired and utilize standard wiring to the valves. The control valves are Superior brass type, spray heads are mainly Toro brand, and fields utilize Hunter rotor heads. A booster pump is located on campus southwest of the track. All irrigation water is supplied by potable water line.

3.2-5 Fencing + Gates

Category [3]

Currently there is chain link fencing along the eastern perimeter of the high school. It is in fair shape, could use some fabric mesh replacement. The southern boundary is also chain link and is currently in fair condition, could use some fabric mesh replacement. The western boundary is chain link fencing along the bus yard and the existing upper parking lot. A few areas have eroded and fencing should be adjusted/fixed. The western boundary chain link continues to the northern boundary and is in fair shape. The northern boundary by Clover Heights Avenue cul-de-sac is chain link fencing. It is in fair shape.

3.2-6 Physical Education Teaching Stations

Category [3]

Malibu High School offers extensive sports/ athletic options including football, baseball, softball, boys/girls basketball, boys/girls tennis, boy/girls swimming, boys/girls water polo, boys/ girls volleyball, boys/girls soccer, boys/girls cross country, boys/girls lacrosse, dance and track and field.

The campus has the following facilities:

- 9 Basketball Courts (outdoor)
- 4 Tennis Courts (outdoor)
- 1 Volleyball Court (indoor)
- 1 Football Field
- 1 Softball Field (outdoor)
- 1 Baseball Field (outdoor)
- 2 Multi Use Fields (outdoor)
- 1 Four Hundred Meter 8-lane Track (outdoor)
- 1 Shot Put (outdoor)
- 2 Long Jump (outdoor)
- 1 High Jump (outdoor)
- 1 Pole Vault (outdoor)
- 1 Discus (outdoor)
- 1 Pool

The Basketball courts are located on AC Paving which is poor to fair shape. Several infrastructure projects have left trench patches and low spots in the court AC paving. The backboard, nets, and goals are generally in good condition.

The Tennis Courts are located northwest of the track. The three (3) southern courts are in fair/poor shape. The fencing is rusting, a few cracks in the courts, the southern boundary fence posts required reinforcement, and a 6 inch plus difference between the east and west courts. The north tennis court is in fair shape with the exception of drainage/debris from the adjacent walk accessing the court area. No bleachers are present, only portable benches which are in fair condition.

The Football Field is a natural turf field. It has a few worn areas, but is in generally good shape. Both the Visitor and Home bleachers are not currently compliant with current ADA code standards for seating. The Home bleachers do not have separated walkway for pedestrians.

Softball Field is located north of the tennis courts just south of Clover Heights Avenue cul-de-sac. It is oriented in the northwest direction. The chain link back stop is in fair/poor shape. The dugouts and outfield fence are chain link with windscreen and in fair shape. The bleachers do not have any access(paved) access to them nor do they have ADA compliant seating. The concession shack is in very poor shape and should be replaced.

The Baseball Field is located east of the tennis courts. It is oriented in the southeast direction. The chain link back stop is in fair shape, but seems to be undersized. The bleachers have a concrete walk providing access, but no ADA compliant seating. The scoring booth is in poor shape and can only be accessed by non-compliant stairs.

The two (2) Multi Use Fields are located northwest and northeast of the Baseball Field. Both fields are all grass and in fair shape with some worn areas. Both seem to be used for soccer practice, physical education.

The Track is a synthetic system seems to be about 400 meters. It has eight (8) lanes and the Home bleachers are directly adjacent to the last lane leaving no room for pedestrian access separate from the track. The track is in fair shape with some worn areas and low spots.

The Shot Put area is south of the track in a turf area. There is no accessible path to the shot put ring or pit. The pit is in poor shape and is inundated with many weeds, very little sand, and a rudimentary

border.

The Long Jump pits and runway is located on the west side of the track. There are two (2) runways with different lengths and associated pits. The runways utilize the synthetic track surfacing and is worn but in fair shape. The pits are in fair shape with a few weeds, but no sand catcher system.

High Jump is located just north of the shot put area. It is located in an area fully enclosed in synthetic track surfacing. Track surfacing is worn but in fair shape. A low spot is prevalent with the high jump area.

The Pole Vault area is located north of the long jump pits. The pole vault runway utilizes the synthetic track system and is in fair shape.

Discus area is located at the north end of the track area. It is a concrete pad located in the D-Zone turf area. The Discus is overlaid onto the football/ soccer field at the interior of the track.

The Pool is located to the north of Bldg. J(Old Gym). It is completely enclosed by a chain link fence with windscreen. The concrete pool deck is worn and deteriorated. The Maintenance and Operations staff noted that the pool systems have had various problems.

Pool facility is for District and community use. It currently is in poor shape. The pool decking is old (1990's), pitted and cracked. Staff reports issues with pumps, backwashing and equipment corrosion. The bleachers within the pool area are not ADA compliant. Perimeter chainlink fencing with windscreen is in fair shape.

3.2 MMHS School Existing Site Assessment

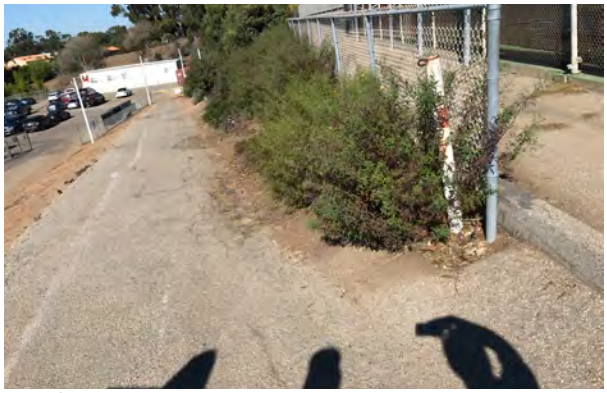
3.2-13 Photos

Concrete Paving

Handrails

Missing Truncated Domes

AC Degraded



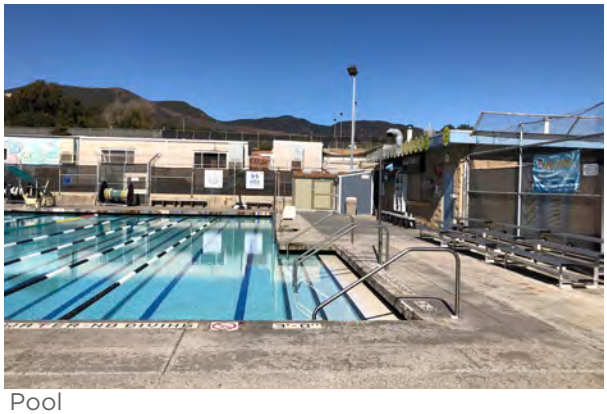
Erosion

Erosion

Chainlink Fencing

Cross Slope

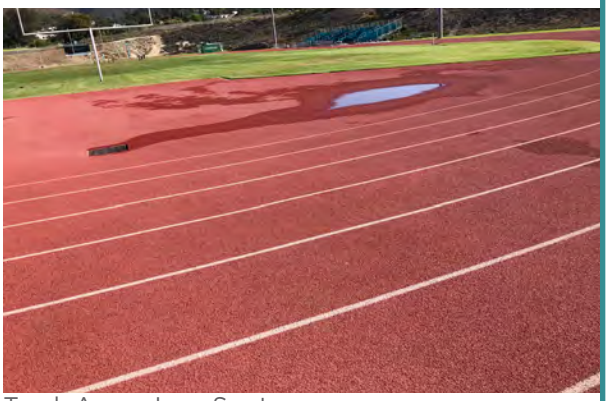
3.2-13 Photos



Pool

Track Area - Bleachers

Track Area - Shotput



Track Area - Low Spot

Tennis - Rusty Fence

Tennis - Unsteady Post

Broken Drainage - Concrete Ditch

Broken Drainage - Gopher

3.3 Cabrillo Elementary School Existing Site Assessment

Rating Legend:

CATEGORY [1] NO WORK NEEDED AT THIS TIME
CATEGORY [2] MINOR/ PATCH & REPAIR
CATEGORY [3] STANDARD MODERNIZATION
CATEGORY [4] MAJOR MODERNIZATION
CATEGORY [5] COMPLETE REPLACEMENT

3.3-1 Pedestrian Circulation + Site Accessibility

Category [4]

The campus is built into relatively minimal sloping area of the foothills. Accessibility throughout the site is not as challenging as Malibu High School. Most of the ramps meet current code and allow for access to the entire campus. The exceptions are noted in the ramp portion of this assessment. Stairs while prevalent on the campus are missing grooves and color differentiation at the tread nosing which makes them non-compliant. Stairs north of buildings B and C are missing items noted previously along with handrails. Cross slope at hardcourts from portables to Bldg. F has cross slopes greater than 2 percent which makes them non-compliant.

3.3-2 Vehicular Circulation + Parking

Category [4]

Child drop-off seems to occur at the parking lot along Morning View Drive. The parking lot drive aisle is inadequate for drop-off and vehicular circulation for parking purposes. The ADA stall has an access aisle which has a cross slope in excess of 2 percent which is not compliant with current codes.

A small staff parking lot is located west of Bldg. G. ADA parking stalls in this lot meet all requirements of current code. Additional makeshift parking was provided east of Bldg. E, and west of the fire lane south of Bldg H. Throughout the campus several cars are parked in non-designated areas which implies parking scarce for this site.

3.3-3 Paving

Category [4]

Concrete paving is of the original construction and has cracking, lifting, and is worn. North of Bldg. B there has been a thin layer of concrete over laid on the existing paving. This thin layer is cracking and several pieces have been removed by wear leaving several shallow divots in the paving. Concrete paving south of Bldg. C has several large cracks in panels and by existing overhead column posts. Walkway between Bldg. G and Bldg. C and D has large cracks. Lunch area concrete is in fair shape with a few locations of cracked panels and

Several concrete stairs are in fair/poor condition. Stairs south of Bldg. G do not have a complaint lower landing. Stairs placed north of Bldg. B and C are in good shape, but lack ADA compliant features. Stairway east of Bldg. E is in poor shape and is missing several code required elements. The ramp adjacent to this stairway is also in poor shape and lacks elements required by code. Handrails seem compliant just peeling paint and rust in several locations.

Concrete ramps are in fair/poor shape with a few having cracks in some panels. Entry to Administration Building has a slope greater than 5 percent, therefore it is considered a ramp and must meet all ramp code required elements. Handrails seem compliant just peeling paint and rust in several locations.

Small garden areas south of Bldg. C and D have non-accessible paving areas and vertical differences greater than 1 inch.

3.3-4 AC Paving

Category [4]

AC Paving is worn throughout campus and warrants replacement. The parking lots along Morning Side Drive, west of fire lane south of Bldg H, and east of Bldg. H has worn AC paving and is cracking. The AC paving between Bldg. E, F, & I is degraded and cracked.

The AC paving at the hardcourts is damaged and worn in several areas. Ball walls paving is eroded and has cracks in several locations. Area south of the multi use field has degraded paving allow for water intrusion to the subbase. South of the portable buildings and restroom has patched, cracked, and degraded AC paving throughout. AC paving area north of the multi use field and at the edge of the Environmentally Sensitive Habitat Area(ESHA) is severely eroded. Paving surrounding the sand play area has several large cracks throughout leading to the northwest corner which has a catch basin.

3.3-5 Irrigation

Category [4]

The irrigation system is connected to the domestic water system. POC(s) is unknown, no Master Valve or Flow Sensor for system.

3.3-6 Fencing + Gates

3.3 Cabrillo ES Existing Site Assessment

Category [4]

Tube steel fencing along Morning Side Drive from Administration building to mid-way down the parking lot. The remainder of the fencing is chain link. The tube steel is in good condition, while the chain link fence is in fair condition. The entrance to the school has tube steel double gates with lever/ panic hardware and closers. All seem compliant with current codes.

The eastern perimeter is chain link fencing in fair shape. Various top rails/posts may need to be replaced due to wear. Gates along this portion have lever hardware and no closers.

West perimeter is chain link that is in fair shape. Maintenance gates with no accessible hardware are located at the loading dock area, while an accessible gate with lever/panic hardware and a closer is located adjacent to the ADA stalls and Bldg. G.

North perimeter fencing is chain link and is poor shape. Fence posts along the Environmentally Sensitive Habitat Area(ESHA) is eroding down the slope.

3.3-7 Site Amenities

Category [4]

Lunch tables are old and faded. They seem to be in fair condition.

Lunch shade shelter is metal frame with fabric roof. Fabric is in fair shape but is loosely fastened to frame. Metal frame is in poor shape with widespread rust.

Sand box area is in poor shape. Curbing enclosing sand is chipped no elements in the sand area. Play structure is old and faded. Play surfacing seems recent and is in fair shape. Portable buildings have been placed over existing basketball courts south of the bus yard. Four (4) Basketball goals remain, one over laid by tetherball area and other three (3) by the sand area. Ball Walls are painted plywood and in fair/poor condition. AC paving within Playground/Hardcourt area is in generally poor condition. (See AC paving) Backstops have chain link which is in poor condition.

3.3-8 Landscape

Category [3]

Landscaping throughout campus is minimal. Many planters have mature shrubs and trees and no groundcover or mulch. Turf field is in fair shape with only a few areas that are worn from use.

3.3-14 Photos

Truncated Domes

Limited Parking

No Handrails

Cross Slope > 2%

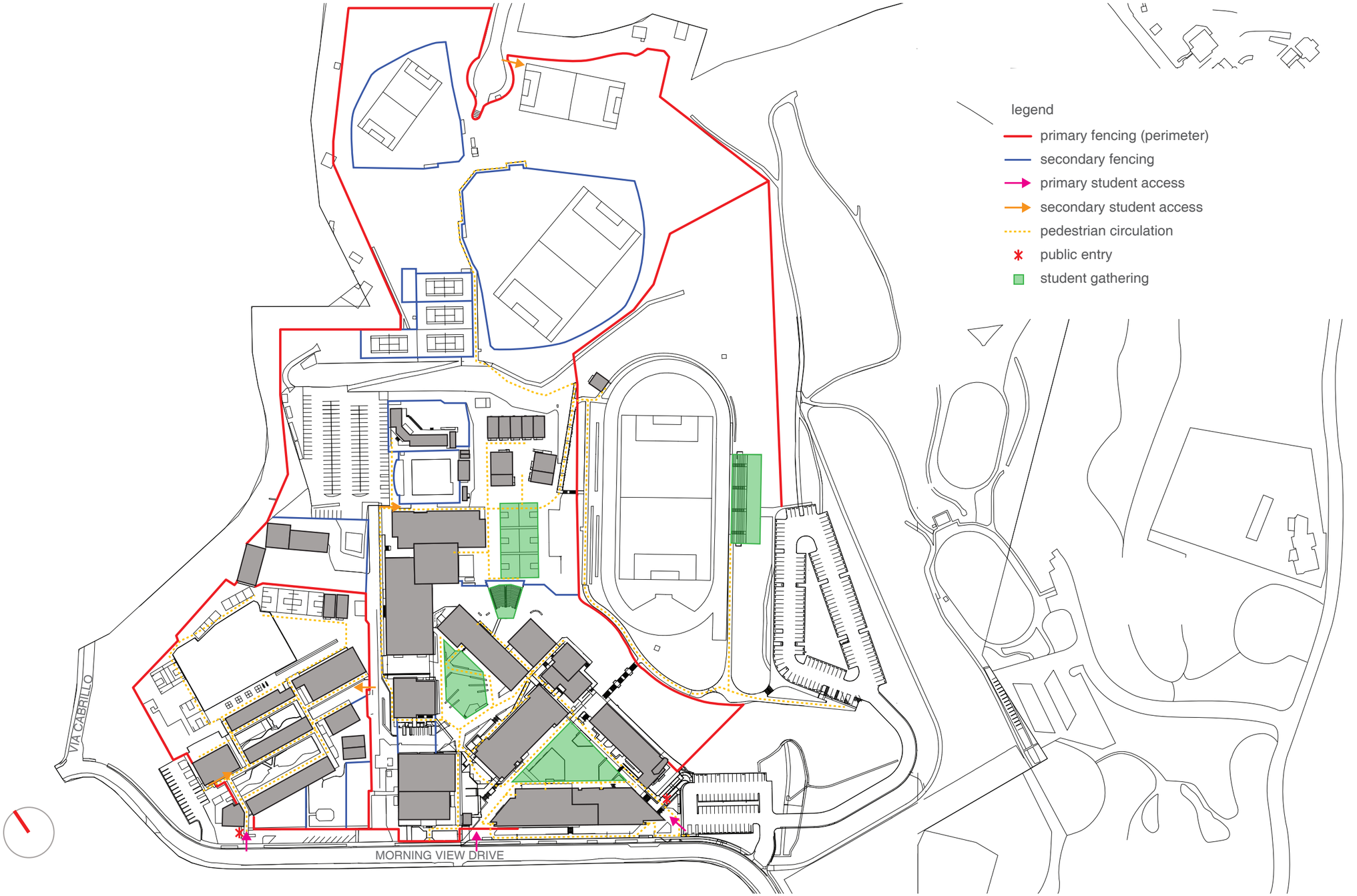
Concrete Cracking

Erosion

Play Equipment

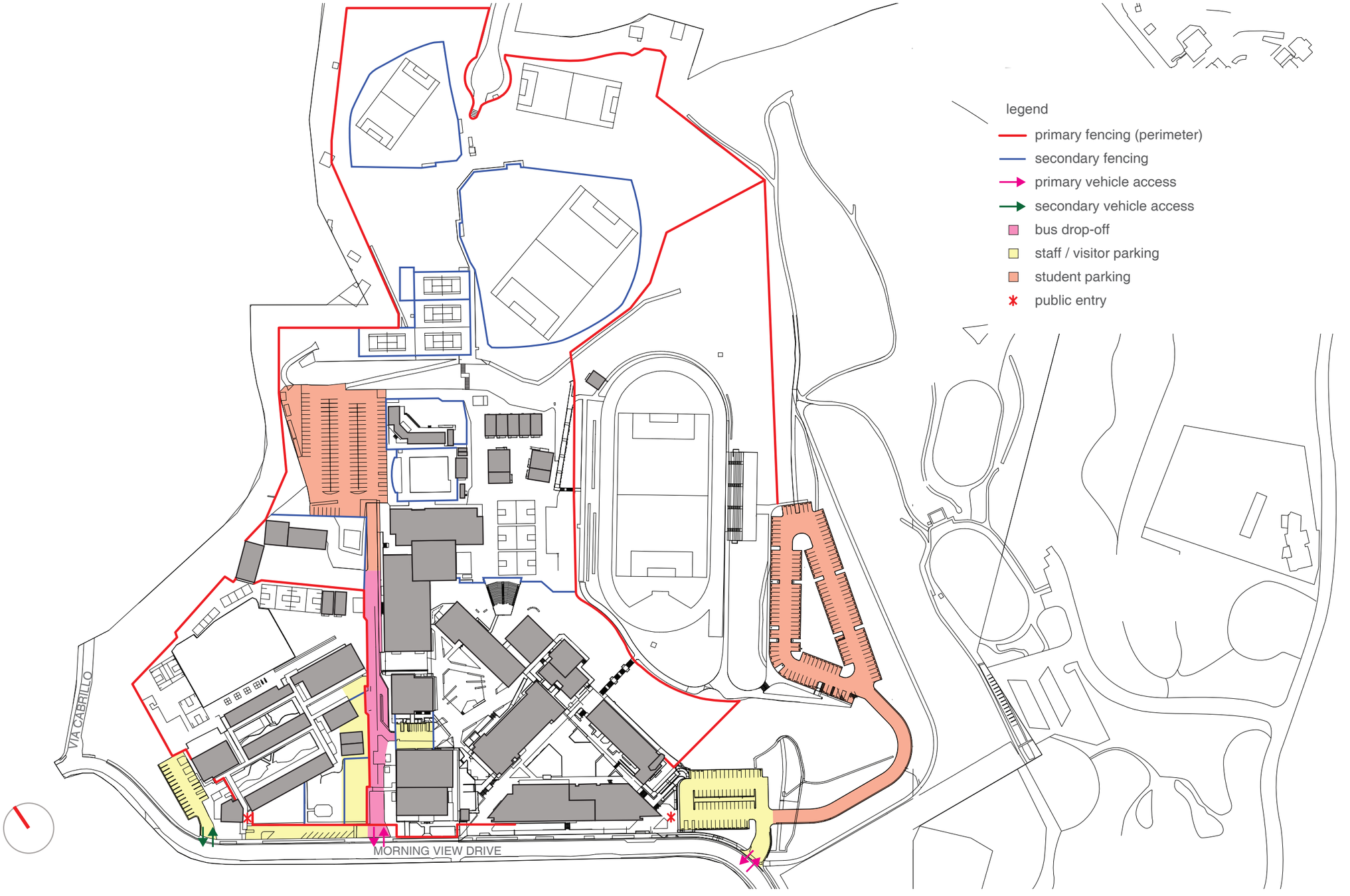
Walls

Figure 3.4-1 Pedestrian Circulation



LPA

Figure 3.4-2 Vehicular Circulation



LPA

Figure 3.4-3 Fencing