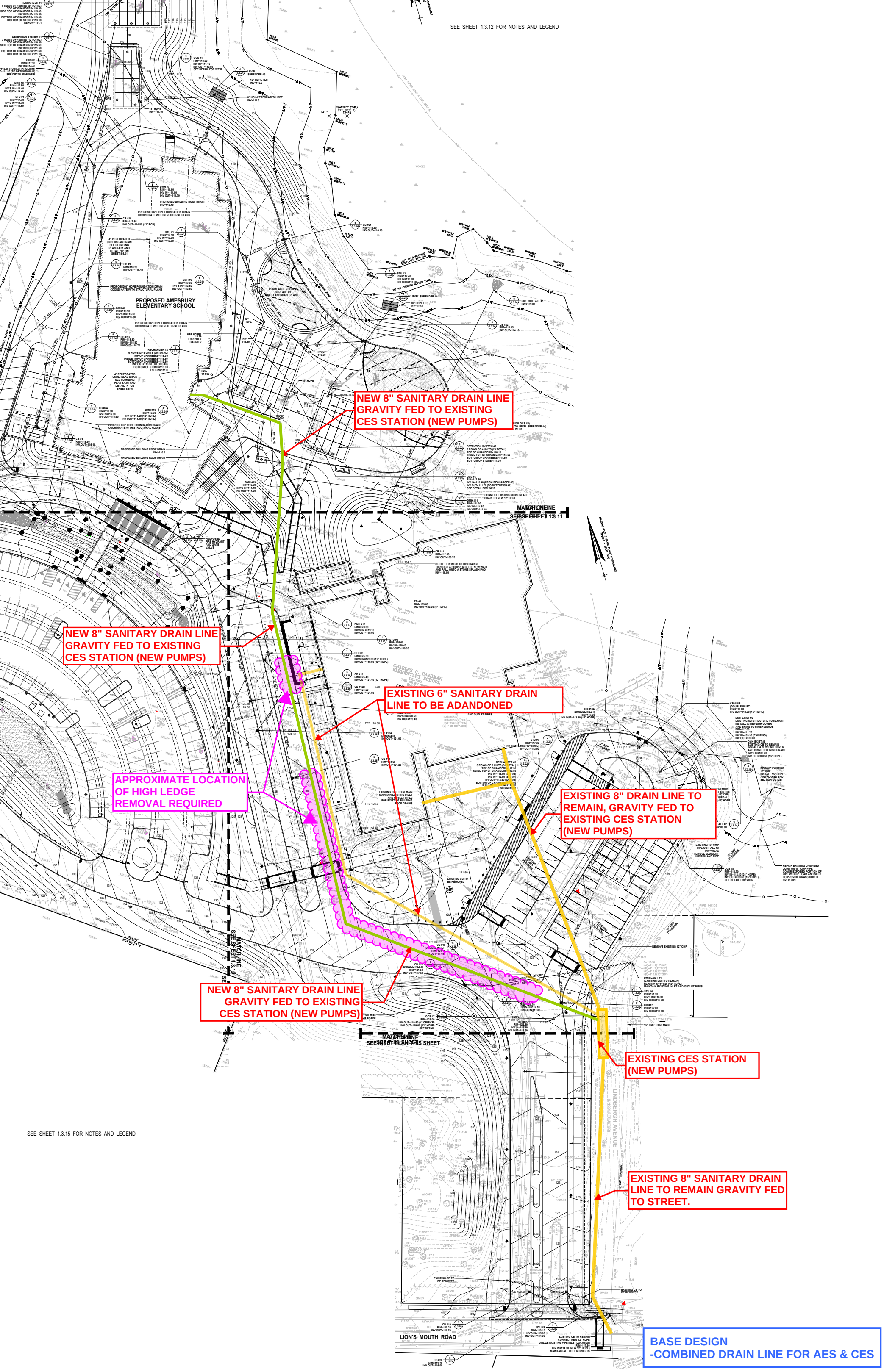
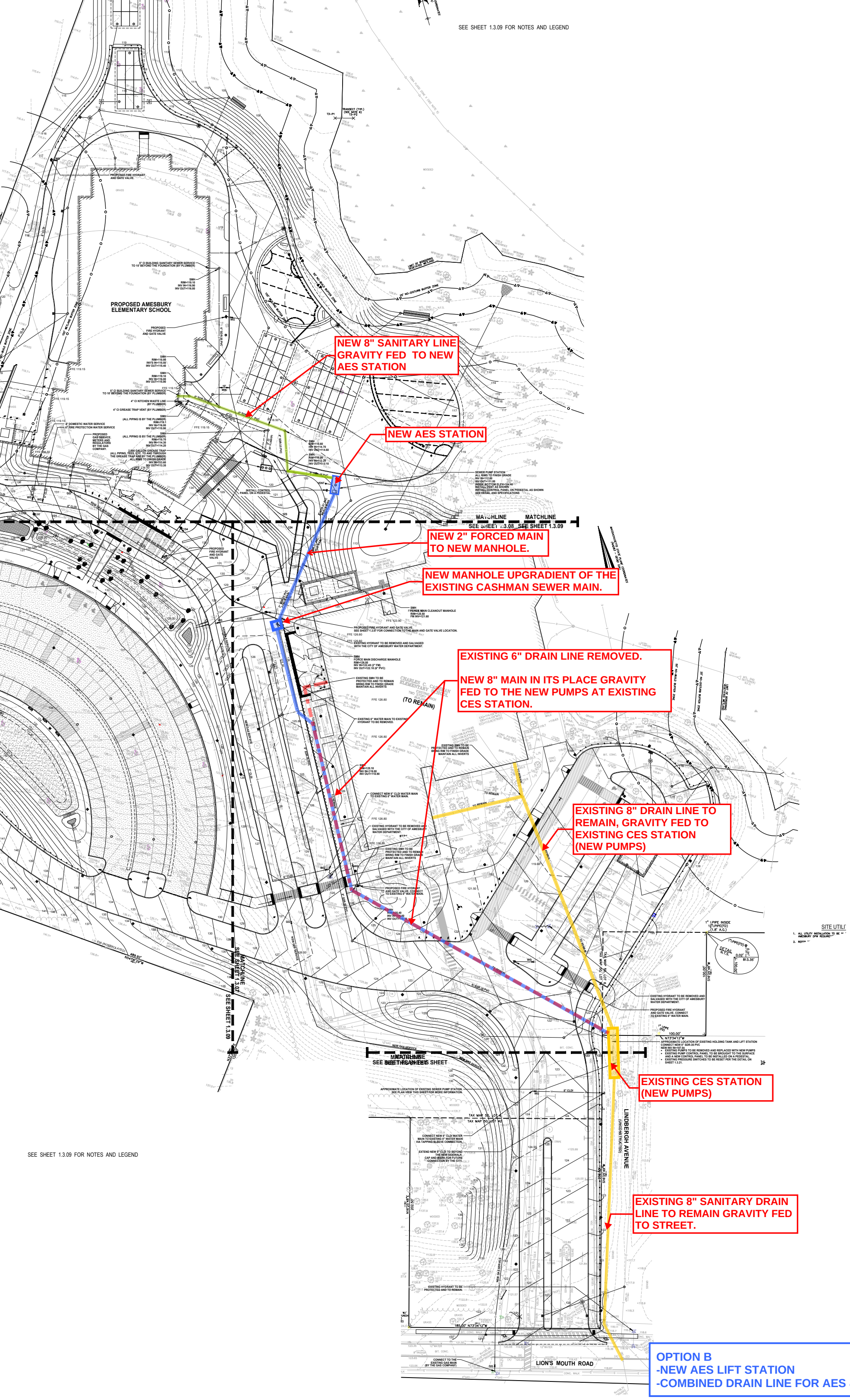
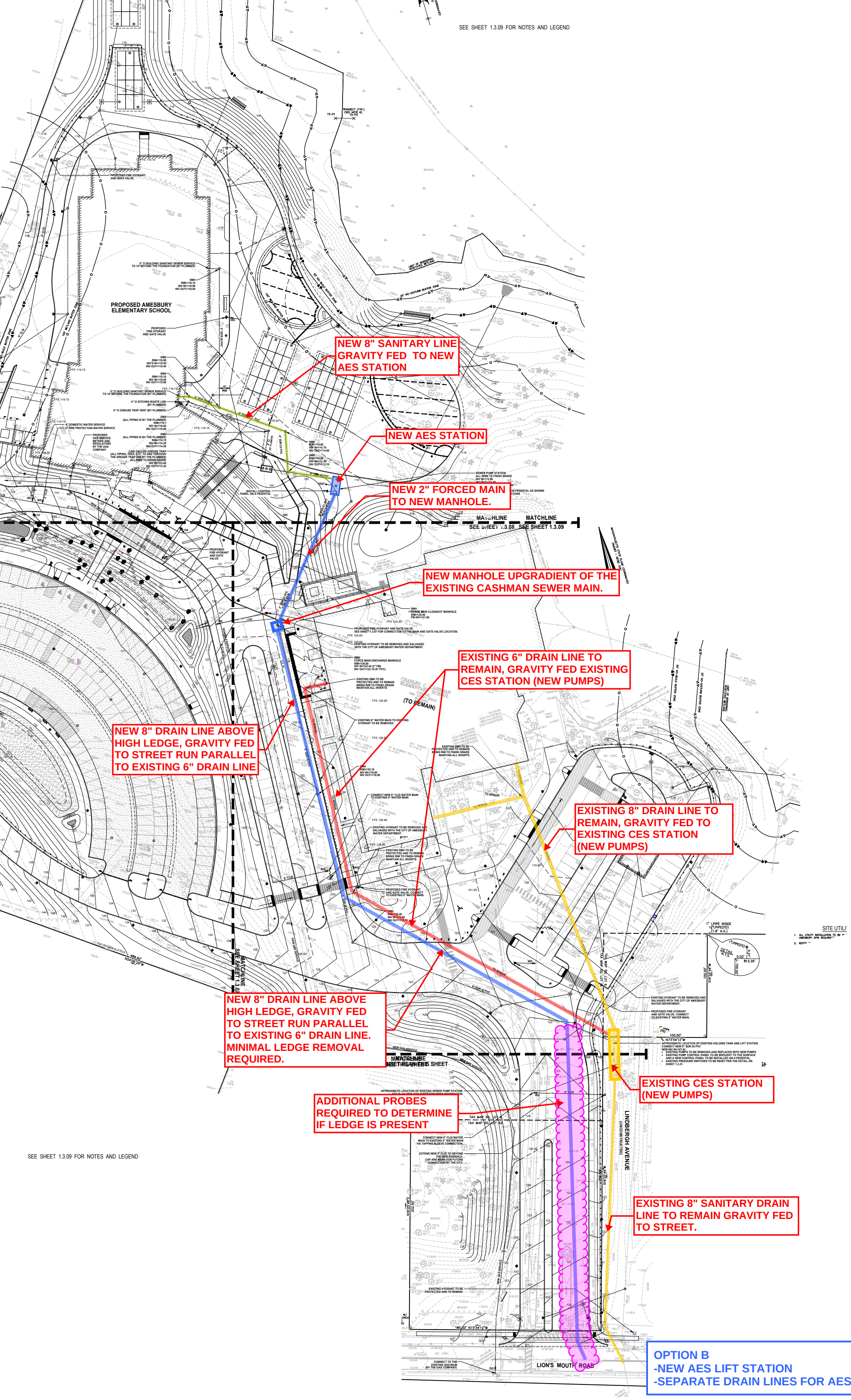
AMESBURY ELEMENTARY SCHOOL

AES & CES Sewer Line and Lift Stations

Design Option	Concerns/Risks	Additional Costs	Lifecycle Costs	Logistics/Schedule
Base Contract				
New Deep 8" Drain Line Gravity Fed from New AES to Existing CES Lift Station (New Pumps) Existing 8" Drain Line Gravity Fed from CES Lift Station to Lions Mouth Road	Probes Inidicate High Ledge Along Path of Drain Line Deep Ledge Removal Req'd	Ledge Removal (ROM): $200,000.00 - $275,000.00	N/A	Ledge Removal - approximately 2 month duration Removal cannot occur during Summer 2022 when Cashman site work Needs to Be Completed Utility Installation Delay (AES Permanent Power) Cashman Parking Lot Impact & Noise Disruption
Option A - AES Lift Station - Combined Flow				
New 8" Drain Line Gravity Fed from AES to New AES Lift Station New Lift Station for AES with 2" Forced Main to New Manhole (MH) at CES Replace Existing 6" Drain Line w/New 8" Drain Line Gravity Fed from MH to Existing CES Lift Station (New Pumps) COMBINED FLOW (AES & CES) Existing 8" Drain Line Gravity Fed from CES Lift Station to Lions Mouth Road	Potential Shallow Ledge Removal Sizing of CES Replacement Pumps (DPW)	Construction (ROM): $100,000.00 - 125,000.00 (Lift Station & Forced Main) Redesign for AES Pumps: ~$18,000.00 Potential CREDIT for Regular Trench Excavation: TBD Add'l Cost to Upsize the CES Replacement Pumps: ~$2,500.00	Yearly Maintenance Cost for Add'l Pumps: ~$1,500/yr AES Pumps Run Time: 220 mins/day (22 mins x 10 times/day) ~$2.00/day or $440.00/yr (220 days)	Work Could Proceed Immediately Procurement of Equipment Corresponds with Summer 2022 Site Work and CES Closure
Option B - AES Lift Station - Separate Lines				
AES FLOW - New 8" Drain Line Gravity Fed from AES to New AES Lift Station New Lift Station for AES with 2" Forced Main to New Manhole (MH) at CES New 8" Drain Line Gravity Fed from MH to Lions Mouth Road	Potential Shallow Ledge Removal Adjacent to CES Potential Ledge Removal at Driveway	Construction (ROM): $100,000.00 - 125,000.00 (Lift Station & Forced Main) Redesign for AES Pumps: ~$18,000.00 Add'l Probes for Ledge: ~$4,000.00	Yearly Maintenance Cost for Add'l Pumps: ~$1,500/yr AES Pumps Run Time: 220 mins/day (22 mins x 10 times/day) ~$2.00/day or $440.00/yr (220 days)	Work Could Proceed Immediately Ledge Probes During Vacation Breaks Procurement of Equipment Corresponds with Summer 2022 Site Work
CES FLOW - Existing 6" Drain Line Gravity Fed to Remain from CES to Existing CES Lift Station (New Pumps) Existing 8" Drain Line Gravity Fed to Remain from CES Lift Station to Lions Mouth Road		Add'l Extended Pipe and Associated Trenching: TBD Potential CREDIT for Regular Trench Excavation: TBD Potential Add'l Ledge Removal: TBD		


SEE SHEET 1.3.12 FOR NOTES AND LEGEND
PROPOSED AMESBURY ELEMENTARY SCHOOL
NEW 8" SANITARY DRAIN LINE GRAVITY FED TO EXISTING CES STATION (NEW PUMPS)
NEW 8" SANITARY DRAIN LINE GRAVITY FED TO EXISTING CES STATION (NEW PUMPS)
EXISTING 6" SANITARY DRAIN LINE TO BE ADANDONED
APPROXIMATE LOCATION OF HIGH LEDGE REMOVAL REQUIRED
EXISTING 8" DRAIN LINE TO REMAIN, GRAVITY FED TO EXISTING CES STATION (NEW PUMPS)
NEW 8" SANITARY DRAIN LINE GRAVITY FED TO EXISTING CES STATION (NEW PUMPS)
EXISTING CES STATION (NEW PUMPS)
EXISTING 8" SANITARY DRAIN LINE TO REMAIN GRAVITY FED TO STREET.
MATCHLINE SEE SHEET 1.3.11
MATCHLINE SEE SHEET 1.3.10
MATCHLINE SEE SHEET 1.3.15
LIONS MOUTH ROAD
LINDBERGH AVENUE
SEE SHEET 1.3.15 FOR NOTES AND LEGEND
BASE DESIGN
-COMBINED DRAIN LINE FOR AES & CES


SEE SHEET 1.3.09 FOR NOTES AND LEGEND
PROPOSED AMESBURY ELEMENTARY SCHOOL
NEW 8" SANITARY LINE GRAVITY FED TO NEW AES STATION
NEW AES STATION
MATCHLINE SEE SHEET 1.3.08
MATCHLINE SEE SHEET 1.3.09
NEW 2" FORCED MAIN TO NEW MANHOLE.
NEW MANHOLE UPGRADIENT OF THE EXISTING CASHMAN SEWER MAIN.
EXISTING 6" DRAIN LINE REMOVED.
NEW 8" MAIN IN ITS PLACE GRAVITY FED TO THE NEW PUMPS AT EXISTING CES STATION.
(TO REMAIN)
EXISTING 8" DRAIN LINE TO REMAIN, GRAVITY FED TO EXISTING CES STATION (NEW PUMPS)
EXISTING CES STATION (NEW PUMPS)
EXISTING 8" SANITARY DRAIN LINE TO REMAIN GRAVITY FED TO STREET.
LINDBERGH AVENUE
LION'S MOUTH ROAD
SEE SHEET 1.3.09 FOR NOTES AND LEGEND
OPTION B
-NEW AES LIFT STATION
-COMBINED DRAIN LINE FOR AES & CES


SEE SHEET 1.3.09 FOR NOTES AND LEGEND
PROPOSED AMESBURY ELEMENTARY SCHOOL
NEW 8" SANITARY LINE GRAVITY FED TO NEW AES STATION
NEW AES STATION
NEW 2" FORCED MAIN TO NEW MANHOLE.
MATCHLINE SEE SHEET 1.3.08
MATCHLINE SEE SHEET 1.3.09
NEW MANHOLE UPGRADIENT OF THE EXISTING CASHMAN SEWER MAIN.
EXISTING 6" DRAIN LINE TO REMAIN, GRAVITY FED EXISTING CES STATION (NEW PUMPS)
NEW 8" DRAIN LINE ABOVE HIGH LEDGE, GRAVITY FED TO STREET RUN PARALLEL TO EXISTING 6" DRAIN LINE
EXISTING 8" DRAIN LINE TO REMAIN, GRAVITY FED TO EXISTING CES STATION (NEW PUMPS)
NEW 8" DRAIN LINE ABOVE HIGH LEDGE, GRAVITY FED TO STREET RUN PARALLEL TO EXISTING 6" DRAIN LINE. MINIMAL LEDGE REMOVAL REQUIRED.
EXISTING CES STATION (NEW PUMPS)
ADDITIONAL PROBES REQUIRED TO DETERMINE IF LEDGE IS PRESENT
EXISTING 8" SANITARY DRAIN LINE TO REMAIN GRAVITY FED TO STREET.
LINDBERGH AVENUE (UNCONSTRUCTED)
LION'S MOUTH ROAD
OPTION B
-NEW AES LIFT STATION
-SEPARATE DRAIN LINES FOR AES & CES
SEE SHEET 1.3.09 FOR NOTES AND LEGEND