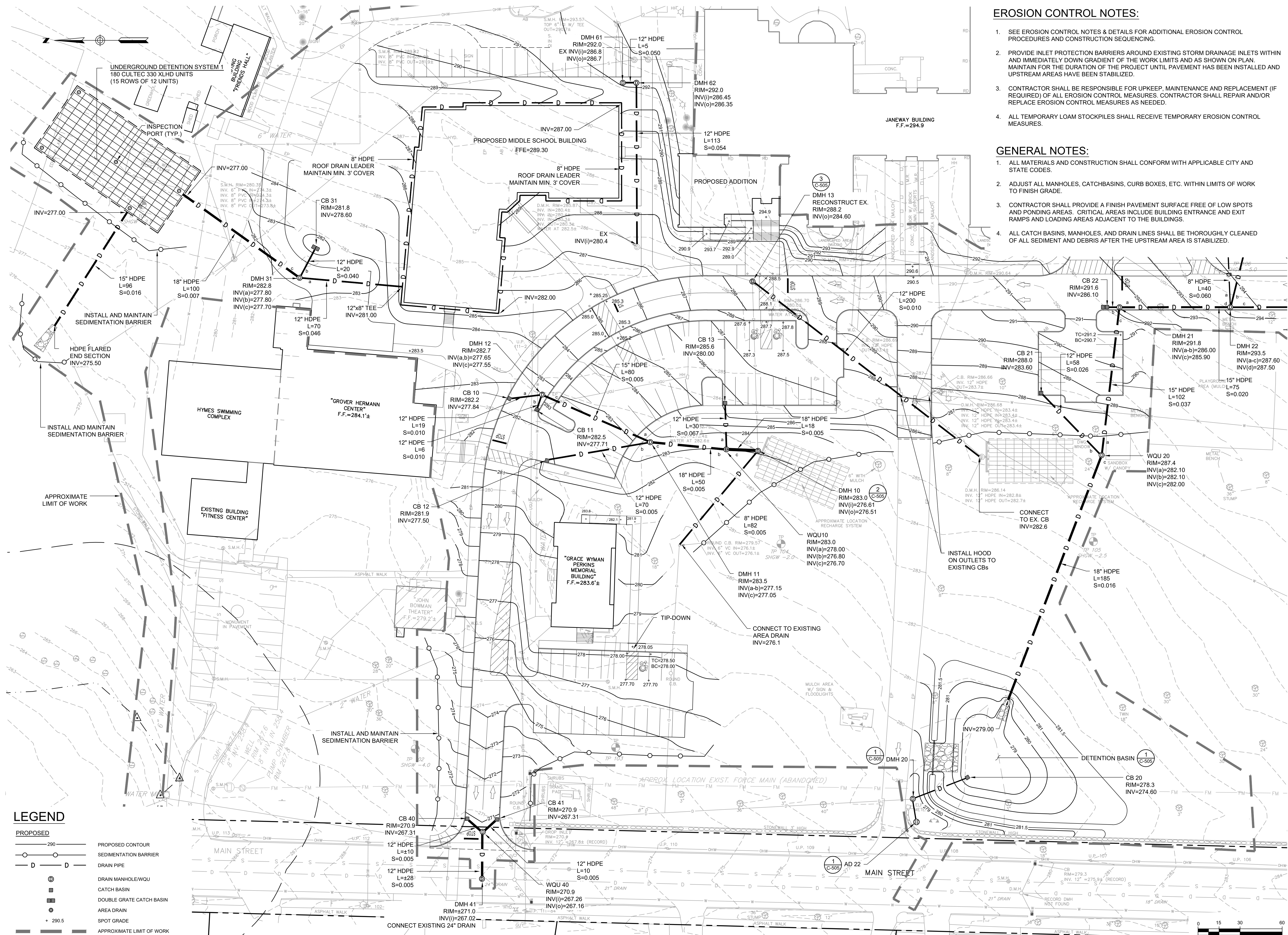




EROSION CONTROL NOTES:

1. SEE EROSION CONTROL NOTES & DETAILS FOR ADDITIONAL EROSION CONTROL PROCEDURES AND CONSTRUCTION SEQUENCING.
2. PROVIDE INLET PROTECTION BARRIERS AROUND EXISTING STORM DRAINAGE INLETS WITHIN AND IMMEDIATELY DOWN GRADIENT OF THE WORK LIMITS AND AS SHOWN ON PLAN. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED AND UPSTREAM AREAS HAVE BEEN STABILIZED.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR UPKEEP, MAINTENANCE AND REPLACEMENT (IF REQUIRED) OF ALL EROSION CONTROL MEASURES. CONTRACTOR SHALL REPAIR AND/OR REPLACE EROSION CONTROL MEASURES AS NEEDED.
4. ALL TEMPORARY LOAM STOCKPILES SHALL RECEIVE TEMPORARY EROSION CONTROL MEASURES.

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE CITY AND STATE CODES.
2. ADJUST ALL MANHOLES, CATCHBASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
3. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND EXIT RAMPS AND LOADING AREAS ADJACENT TO THE BUILDINGS.
4. ALL CATCH BASINS, MANHOLES, AND DRAIN LINES SHALL BE THOROUGHLY CLEANED OF ALL SEDIMENT AND DEBRIS AFTER THE UPSTREAM AREA IS STABILIZED.



PETERMAN
ARCHITECTS, INC.

Civil
Oak Consulting Group
P.O. Box 1123
Newburyport, MA 01950
(978) 312-3120



Doctor Franklin Perkins School
971 Main Street Lancaster, MA

PROJECT
SCALE
DRAWN
CHECKED
DATE

19026.00

06/26/2020

1	△	
2	△	
3	△	8-18-20 RESPONSE TO COMMENTS
2	△	8-13-20 75% CDS
1	△	8-3-20 RESPONSE TO COMMENTS
REV. NO.	REV. DATE	DESCRIPTION

PROJECT
NAME

Perkins School Phase 1
971 Main Street
Lancaster, MA

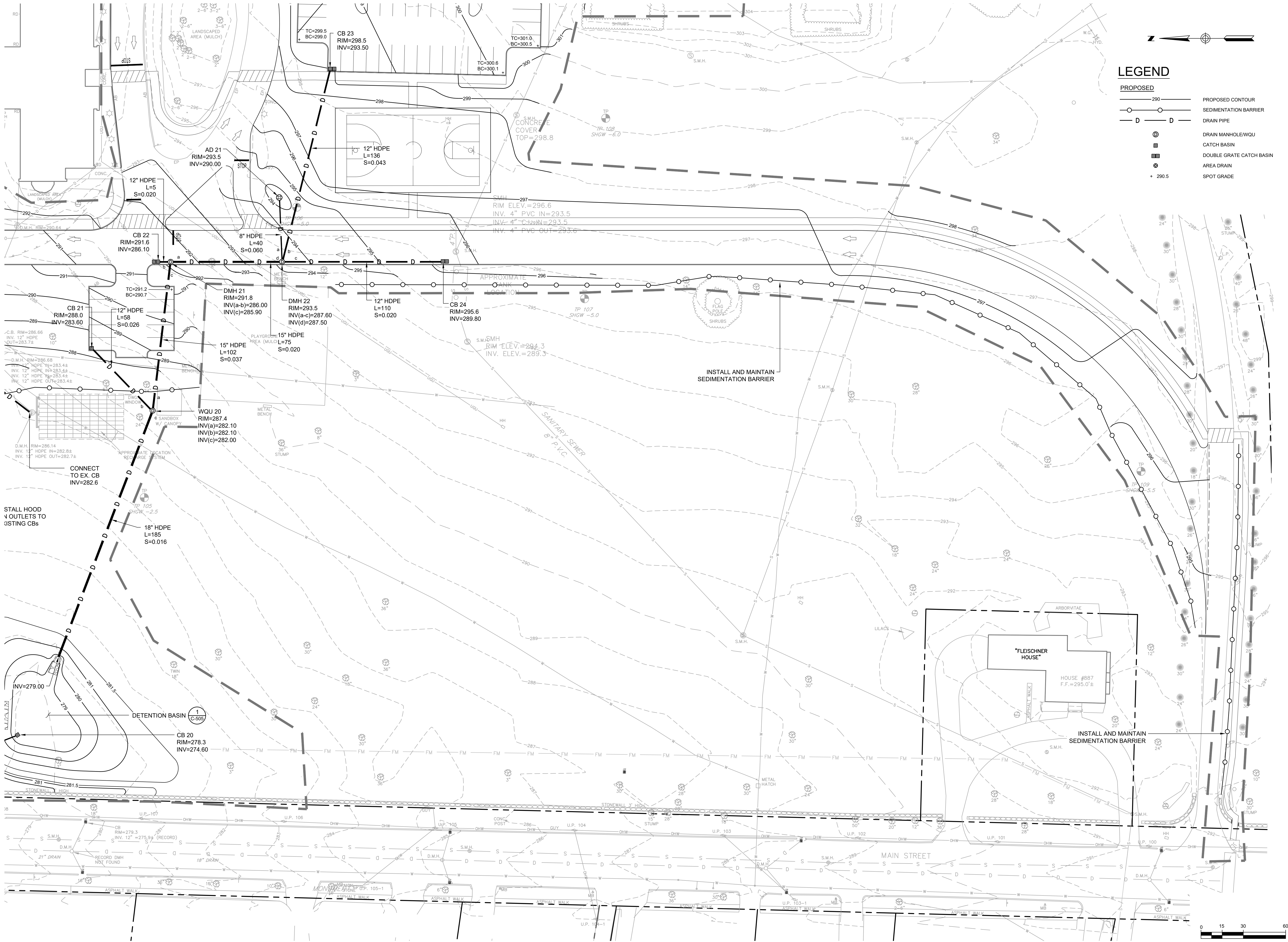
SHEET
TITLE

GRADING AND
DRAINAGE PLAN

SHEET
NUMBER

C-301

75% CDS



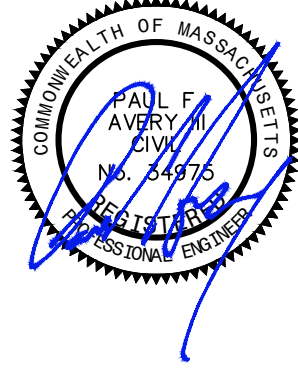
LEGEND

PROPOSED

- 290 — PROPOSED CONTOUR
- SEDIMENTATION BARRIER
- D — DRAIN PIPE
- ⊙ — DRAIN MANHOLE/WQU
- ▣ — CATCH BASIN
- ▤ — DOUBLE GRATE CATCH BASIN
- ⊙ — AREA DRAIN
- + 290.5 — SPOT GRADE



Civil
Oak Consulting Group
P.O. Box 1123
Newburyport, MA 01950
(978) 312-3120



Doctor Franklin Perkins School
971 Main Street Lancaster, MA

PROJECT	19026.00
SCALE	
DRAWN	
CHECKED	
DATE	06/26/2020

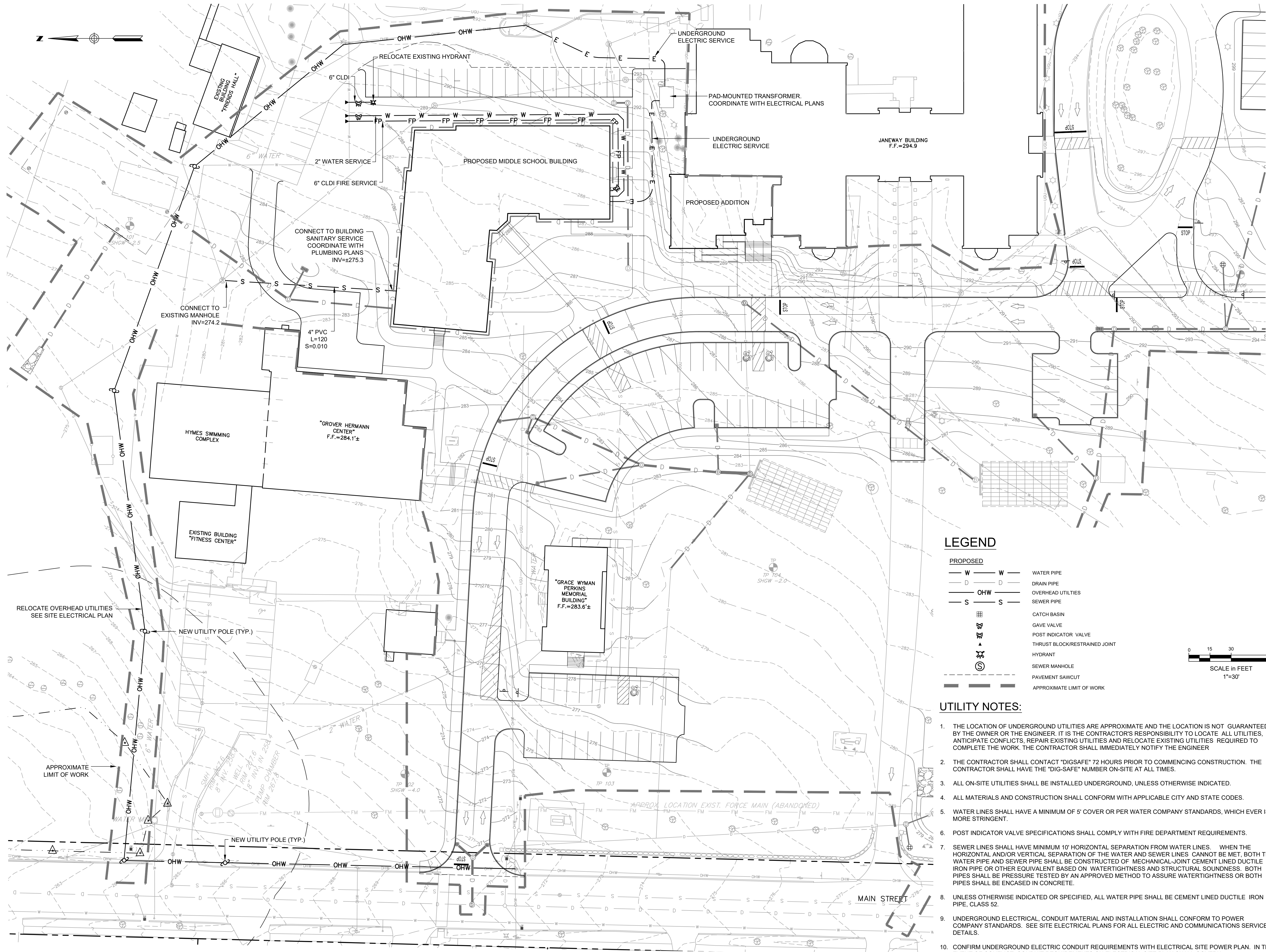
1	△	
2	△	8-18-20 RESPONSE TO COMMENTS
3	△	8-13-20 75% CDS
1	△	8-3-20 RESPONSE TO COMMENTS
REV. NO.	REV. DATE	DESCRIPTION

PROJECT NAME
Perkins School Phase 1
971 Main Street
Lancaster, MA

SHEET TITLE
GRADING AND
DRAINAGE PLAN

SHEET NUMBER
C-302

75% CDs

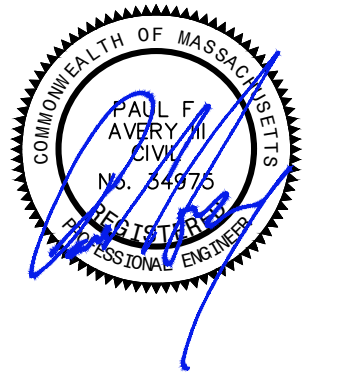


LEGEND

- PROPOSED
- W W WATER PIPE
 - D D DRAIN PIPE
 - OHW OHW OVERHEAD UTILITIES
 - S S SEWER PIPE
 - CATCH BASIN
 - GAVE VALVE
 - POST INDICATOR VALVE
 - THRUST BLOCK/RESTRAINED JOINT
 - HYDRANT
 - SEWER MANHOLE
 - PAVEMENT SAWCUT
 - APPROXIMATE LIMIT OF WORK

UTILITY NOTES:

- THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER
- THE CONTRACTOR SHALL CONTACT "DIGSAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG-SAFE" NUMBER ON-SITE AT ALL TIMES.
- ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND, UNLESS OTHERWISE INDICATED.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE CITY AND STATE CODES.
- WATER LINES SHALL HAVE A MINIMUM OF 5' COVER OR PER WATER COMPANY STANDARDS, WHICH EVER IS MORE STRINGENT.
- POST INDICATOR VALVE SPECIFICATIONS SHALL COMPLY WITH FIRE DEPARTMENT REQUIREMENTS.
- SEWER LINES SHALL HAVE MINIMUM 10' HORIZONTAL SEPARATION FROM WATER LINES. WHEN THE HORIZONTAL AND/OR VERTICAL SEPARATION OF THE WATER AND SEWER LINES CANNOT BE MET, BOTH THE WATER PIPE AND SEWER PIPE SHALL BE CONSTRUCTED OF MECHANICAL-JOINT CEMENT LINED DUCTILE IRON PIPE OR OTHER EQUIVALENT BASED ON WATERTIGHTNESS AND STRUCTURAL SOUNDNESS. BOTH PIPES SHALL BE PRESSURE TESTED BY AN APPROVED METHOD TO ASSURE WATERTIGHTNESS OR BOTH PIPES SHALL BE ENCASED IN CONCRETE.
- UNLESS OTHERWISE INDICATED OR SPECIFIED, ALL WATER PIPE SHALL BE CEMENT LINED DUCTILE IRON PIPE, CLASS 52.
- UNDERGROUND ELECTRICAL, CONDUIT MATERIAL AND INSTALLATION SHALL CONFORM TO POWER COMPANY STANDARDS. SEE SITE ELECTRICAL PLANS FOR ALL ELECTRIC AND COMMUNICATIONS SERVICE DETAILS.
- CONFIRM UNDERGROUND ELECTRIC CONDUIT REQUIREMENTS WITH ELECTRICAL SITE POWER PLAN. IN THE EVENT OF CONFLICT, CONDUIT REQUIREMENTS ON ELECTRICAL SITE PLAN SHALL GOVERN.



Doctor Franklin Perkins School
971 Main Street Lancaster, MA

© Peterman Architects, Inc.

PROJECT
SCALE
DRAWN
CHECKED
DATE

1	△	
2	△	
3	△	8-18-20 RESPONSE TO COMMENTS
2	△	8-13-20 75% CDS
1	△	8-3-20 RESPONSE TO COMMENTS
REV. NO.	REV. DATE	DESCRIPTION

PROJECT
NAME

Perkins School Phase 1
971 Main Street
Lancaster, MA

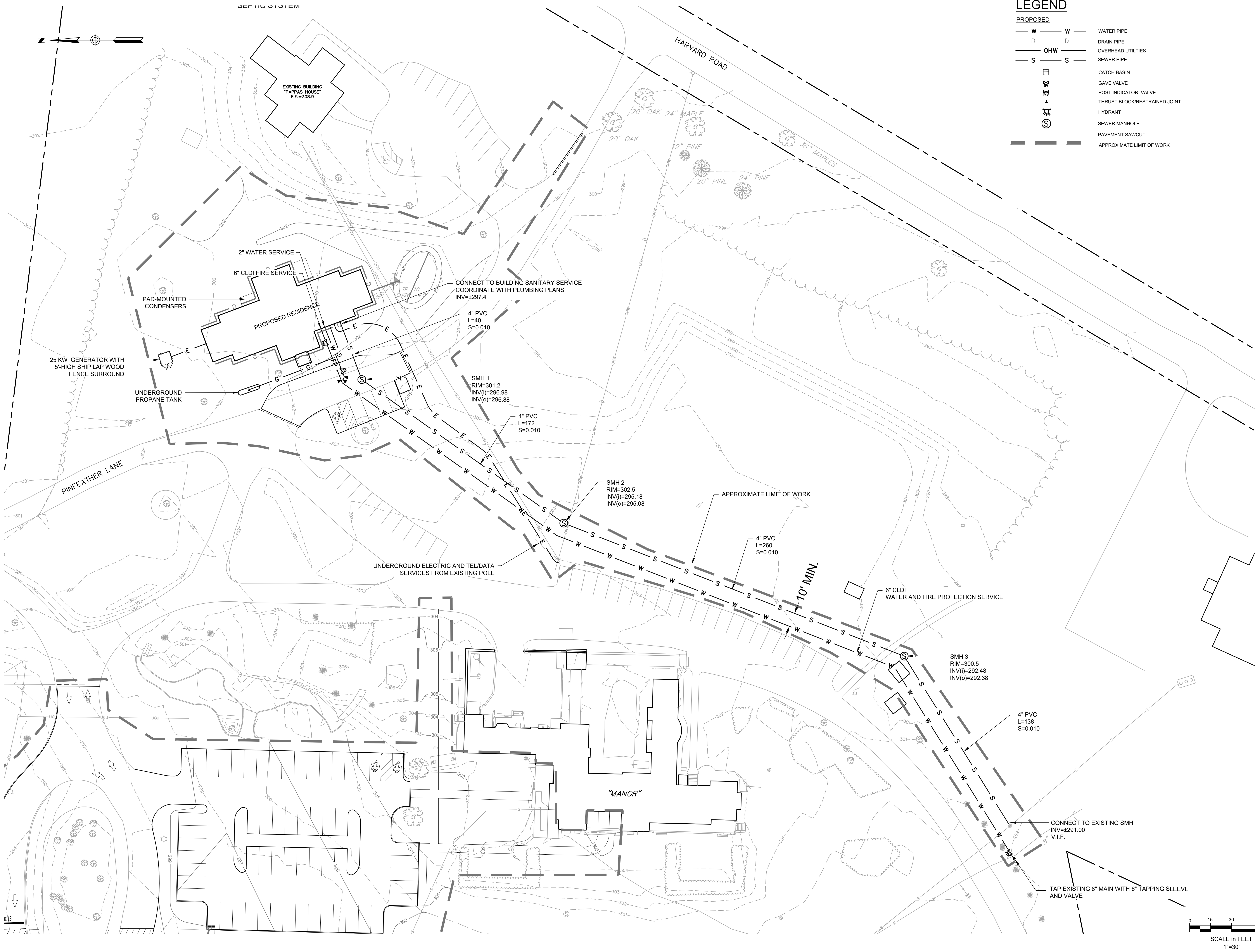
SHEET
TITLE

SITE UTILITIES PLAN

SHEET
NUMBER

C-401

75% CDs



LEGEND

PROPOSED

- | | | |
|-----|-----|-------------------------------|
| W | W | WATER PIPE |
| D | D | DRAIN PIPE |
| OHW | OHW | OVERHEAD UTILITIES |
| S | S | SEWER PIPE |
| ⊞ | ⊞ | CATCH BASIN |
| ⊞ | ⊞ | GATE VALVE |
| ⊞ | ⊞ | POST INDICATOR VALVE |
| ⊞ | ⊞ | THRUST BLOCK/RESTRAINED JOINT |
| ⊞ | ⊞ | HYDRANT |
| ⊞ | ⊞ | SEWER MANHOLE |
| ⊞ | ⊞ | PAVEMENT SAWCUT |
| --- | --- | APPROXIMATE LIMIT OF WORK |



PETERMAN
ARCHITECTS, INC.

Civil
Oak Consulting Group
P.O. Box 1123
Newburyport, MA 01950
(978) 312-3120



Doctor Franklin Perkins School
971 Main Street Lancaster, MA

© Peterman Architects, Inc.

PROJECT
SCALE
DRAWN
CHECKED
DATE

19026.00

06/26/2020

Δ	____
Δ	____
3	Δ 8-18-20 RESPONSE TO COMMENTS
2	Δ 8-13-20 75% CDS
1	Δ 8-3-20 RESPONSE TO COMMENTS
REV. NO.	REV. DATE DESCRIPTION

PROJECT
NAME

Perkins School Phase 1
971 Main Street
Lancaster, MA

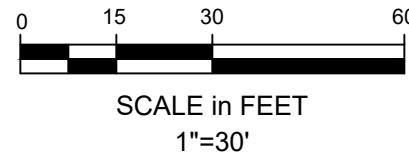
SHEET
TITLE

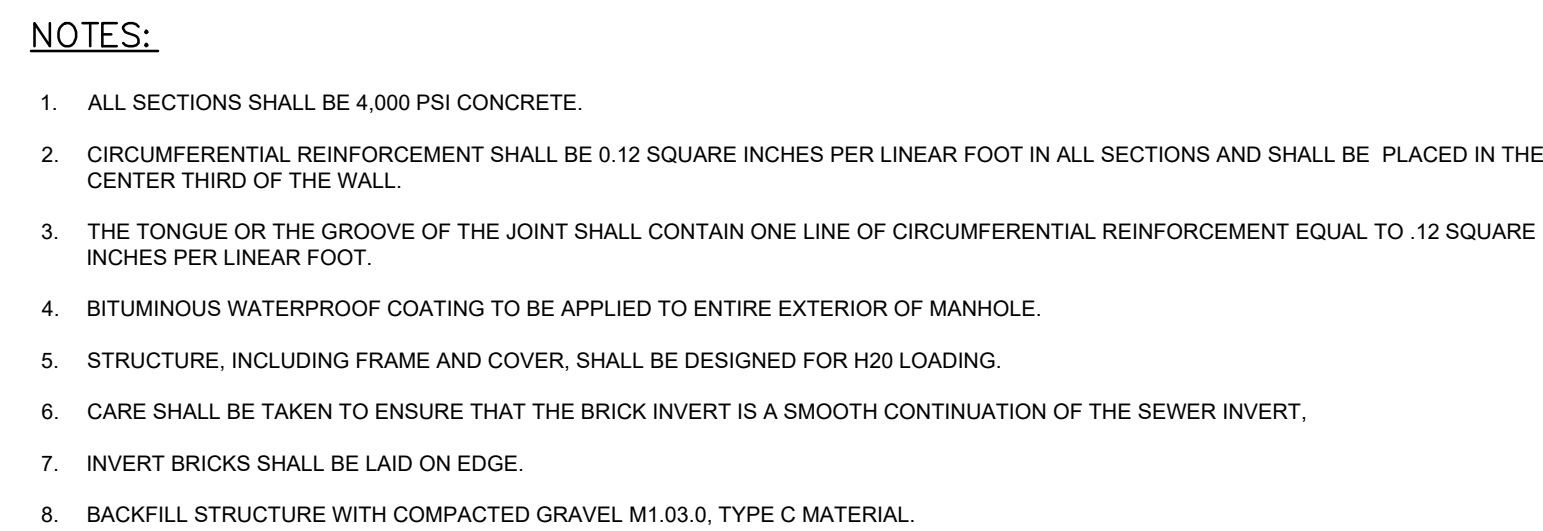
SITE UTILITIES PLAN

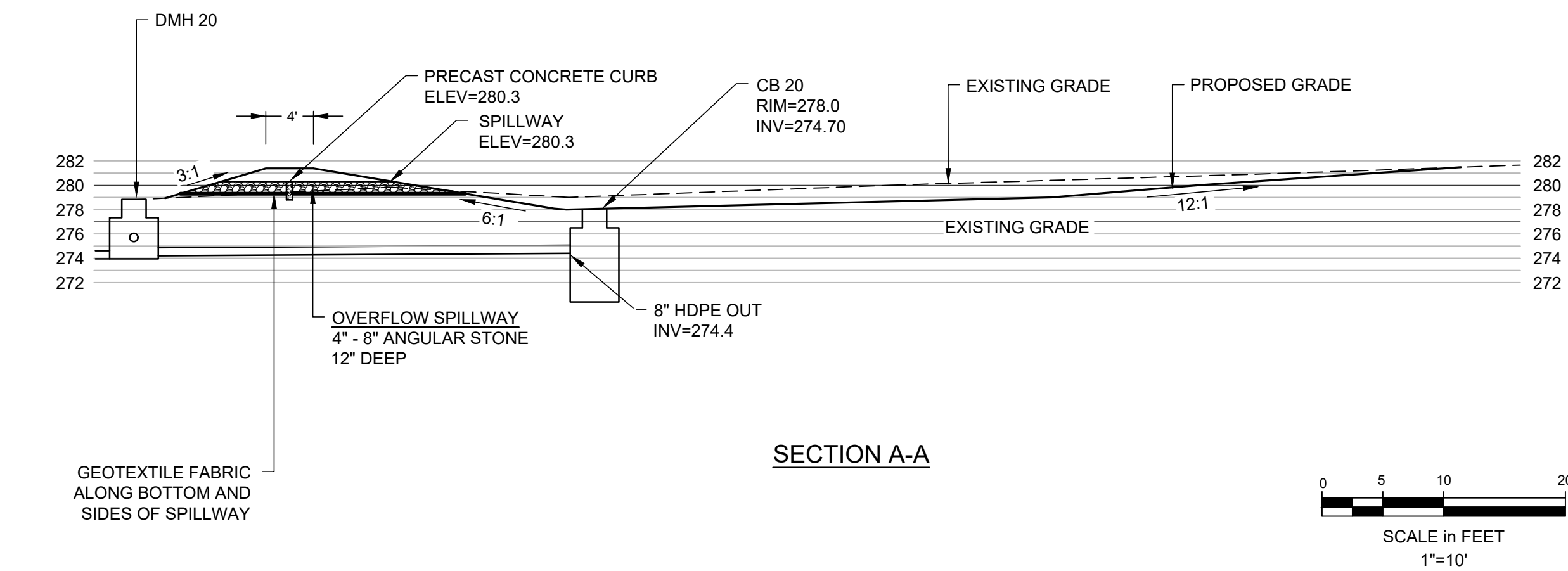
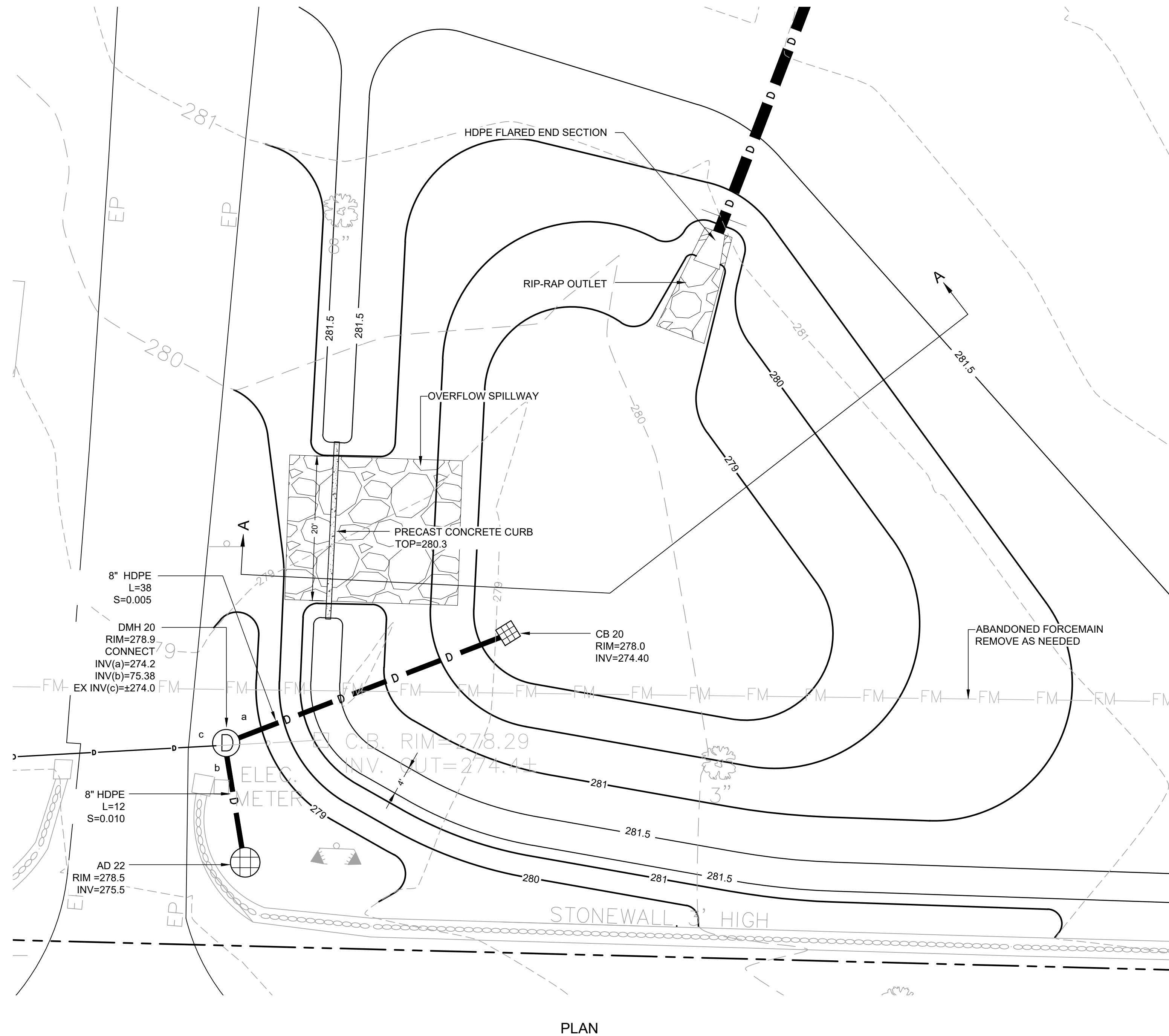
SHEET
NUMBER

C-402

75% CDs

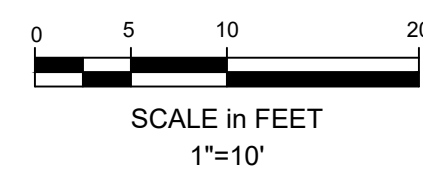






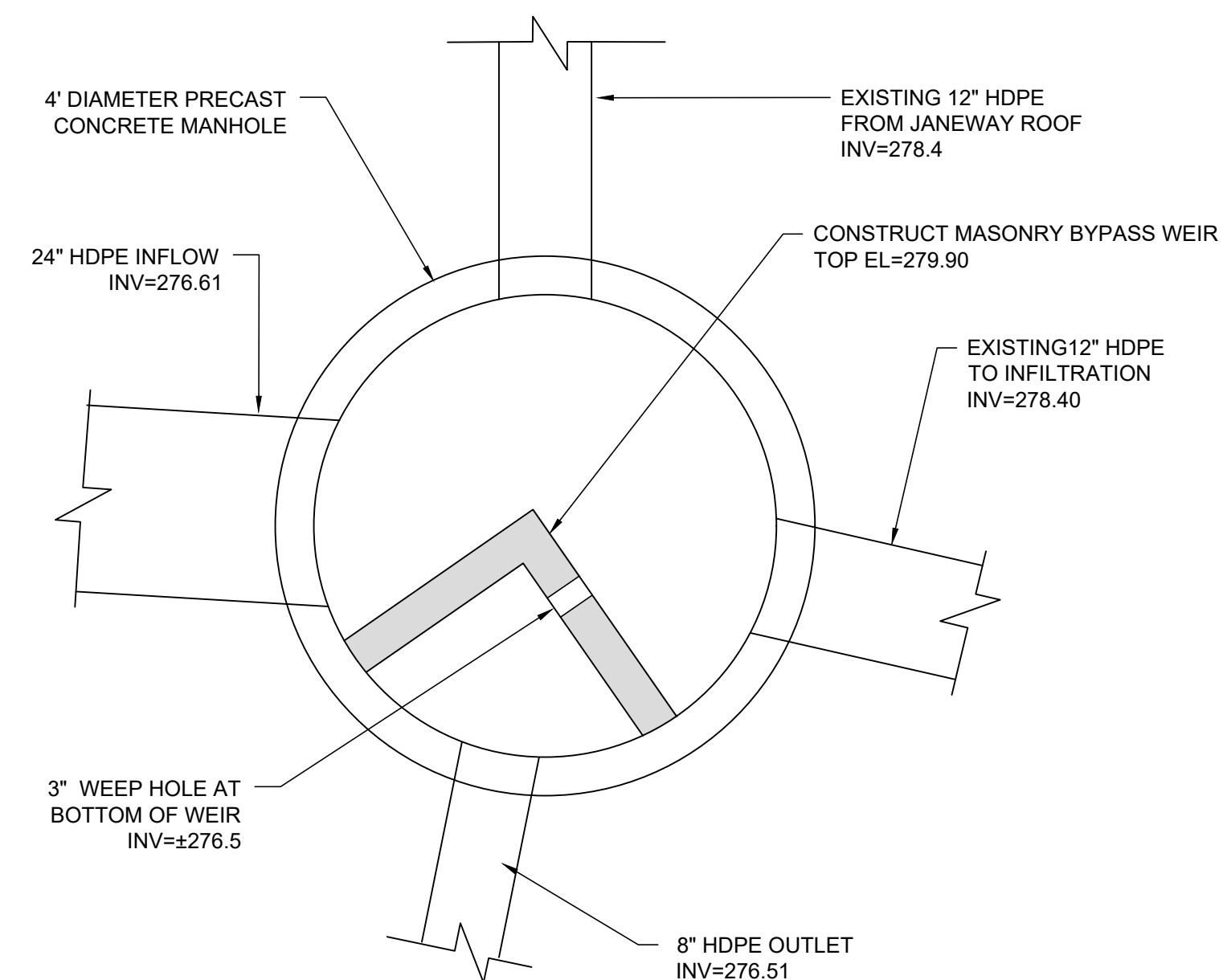
NOTES:

- BERM AREAS ABOVE EXISTING GRADE SHALL BE CONSTRUCTED WITH COMPACTED NATIVE FILL MATERIAL OBTAINED FROM THE SITE.
- EXCEPT FOR OVERFLOW SPILLWAY, ALL DISTURBED AREAS SHALL BE STABILIZED WIT LOAM AND SEED .



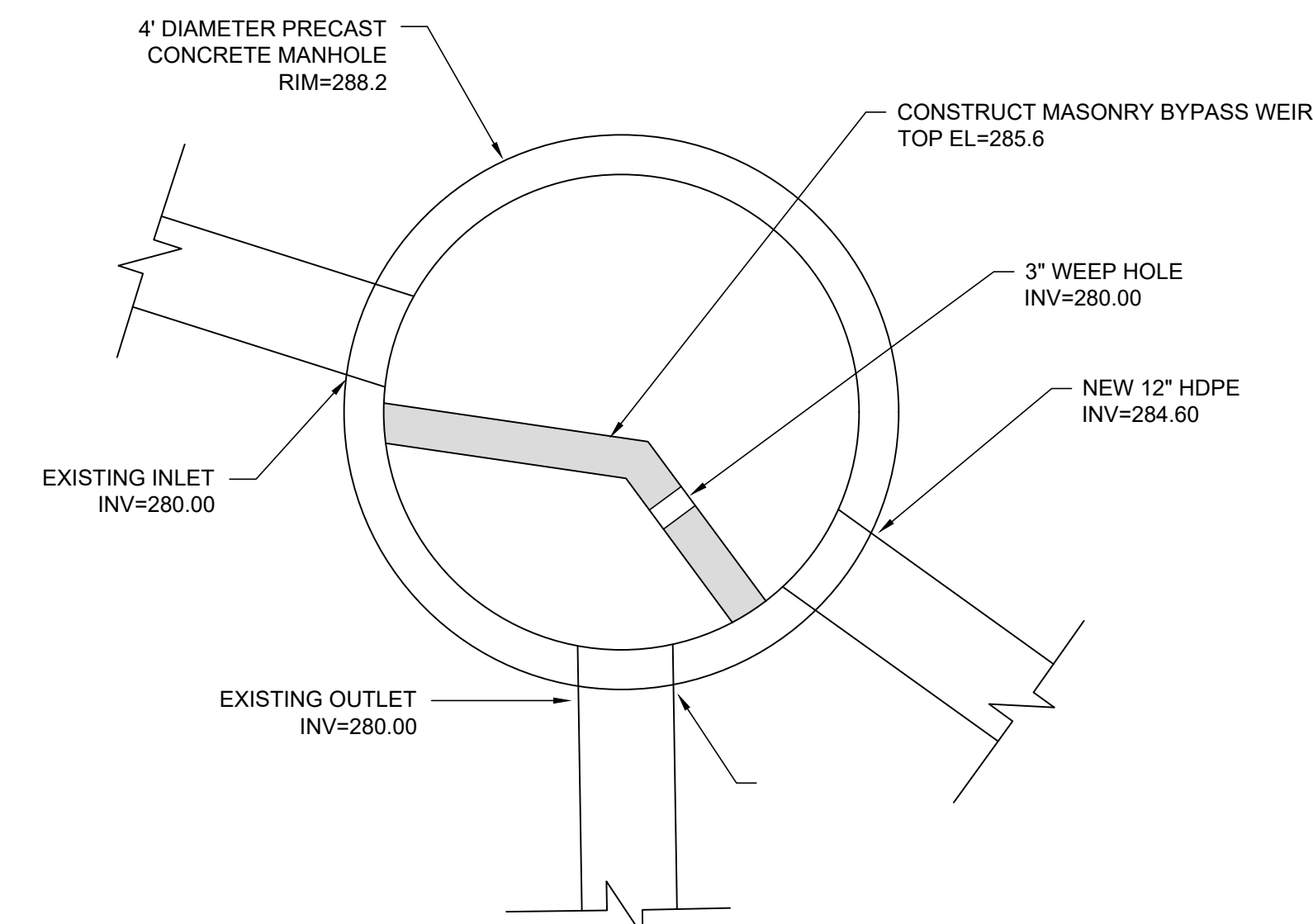
1 DETENTION BASIN DETAIL

SCALE: 1"=10'



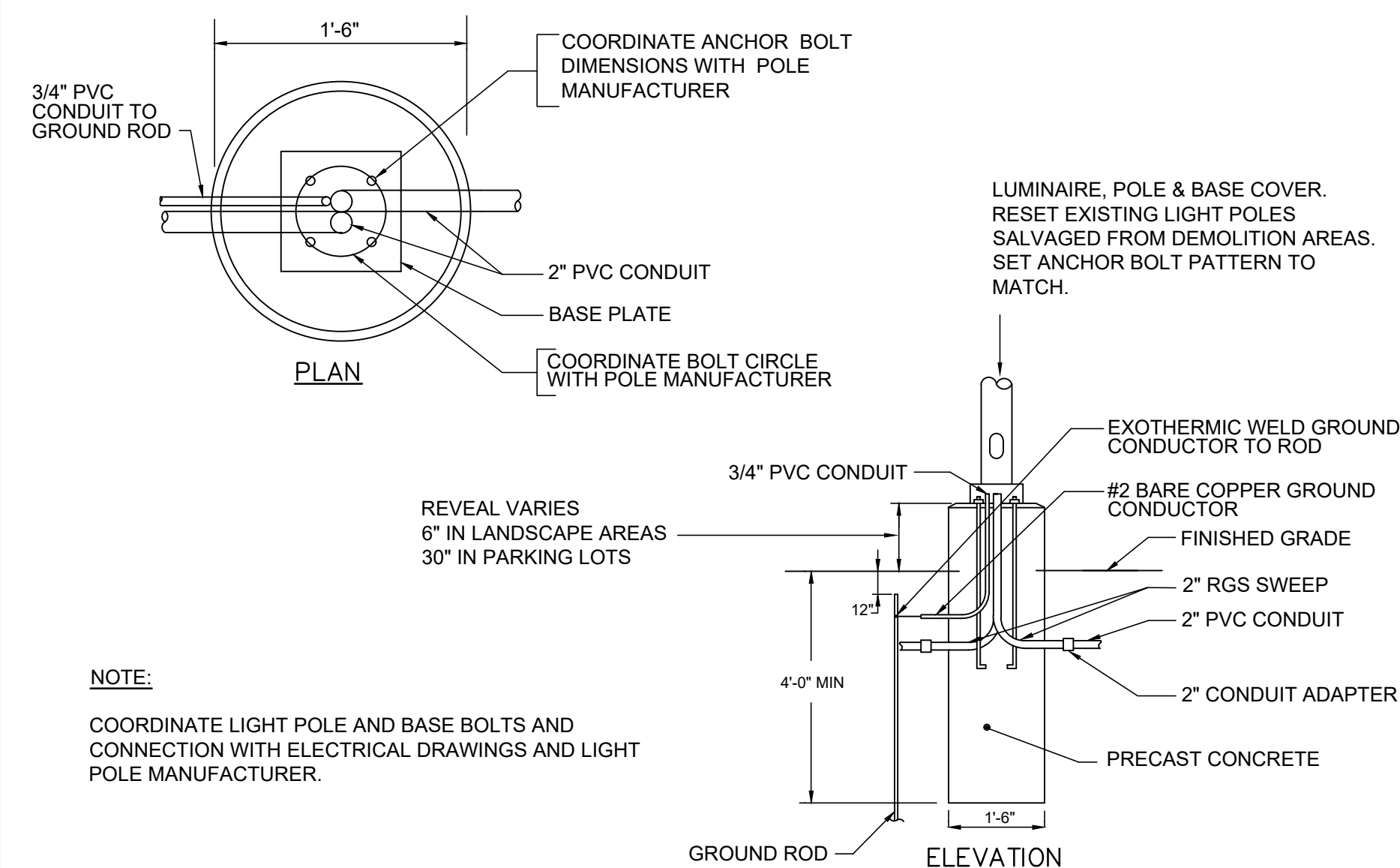
2 DRAIN MANHOLE DMH 10 DETAIL

NOT TO SCALE



3 DRAIN MANHOLE DMH 13 DETAIL

NOT TO SCALE



NOTE:

COORDINATE LIGHT POLE AND BASE BOLTS AND CONNECTION WITH ELECTRICAL DRAWINGS AND LIGHT POLE MANUFACTURER.

4 LIGHT POLE BASE DETAIL

NOT TO SCALE



Doctor Franklin Perkins School
971 Main Street Lancaster, MA

© Peterman Architects, Inc.

PROJECT
SCALE
DRAWN
CHECKED
DATE

19026.00

06/26/2020

1	△	8-13-20	75% CDS
2	△	8-13-20	75% CDS
3	△	8-18-20	RESPONSE TO COMMENTS
REV. NO.	REV. DATE	DESCRIPTION	

PROJECT
NAME

Perkins School Phase 1
971 Main Street
Lancaster, MA

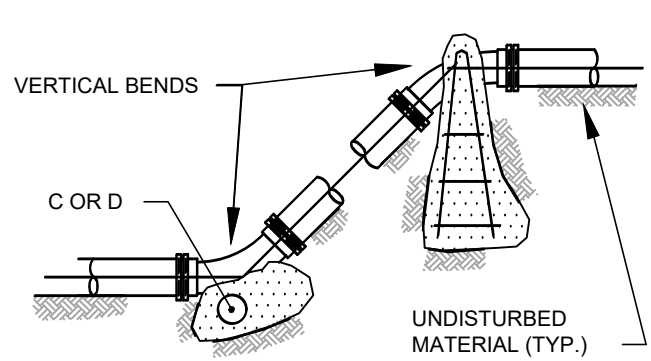
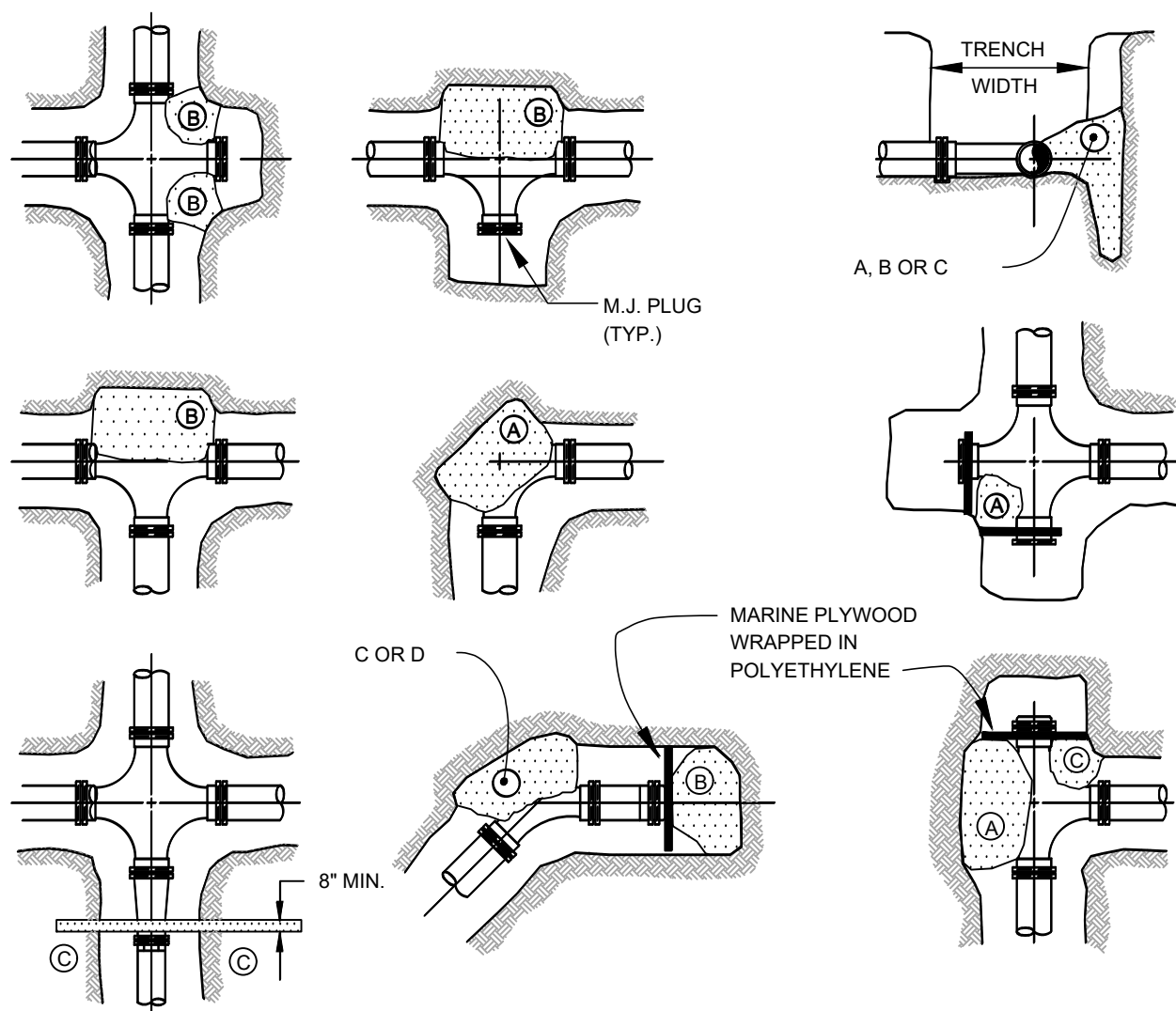
SHEET
TITLE

SITE DETAILS

SHEET
NUMBER

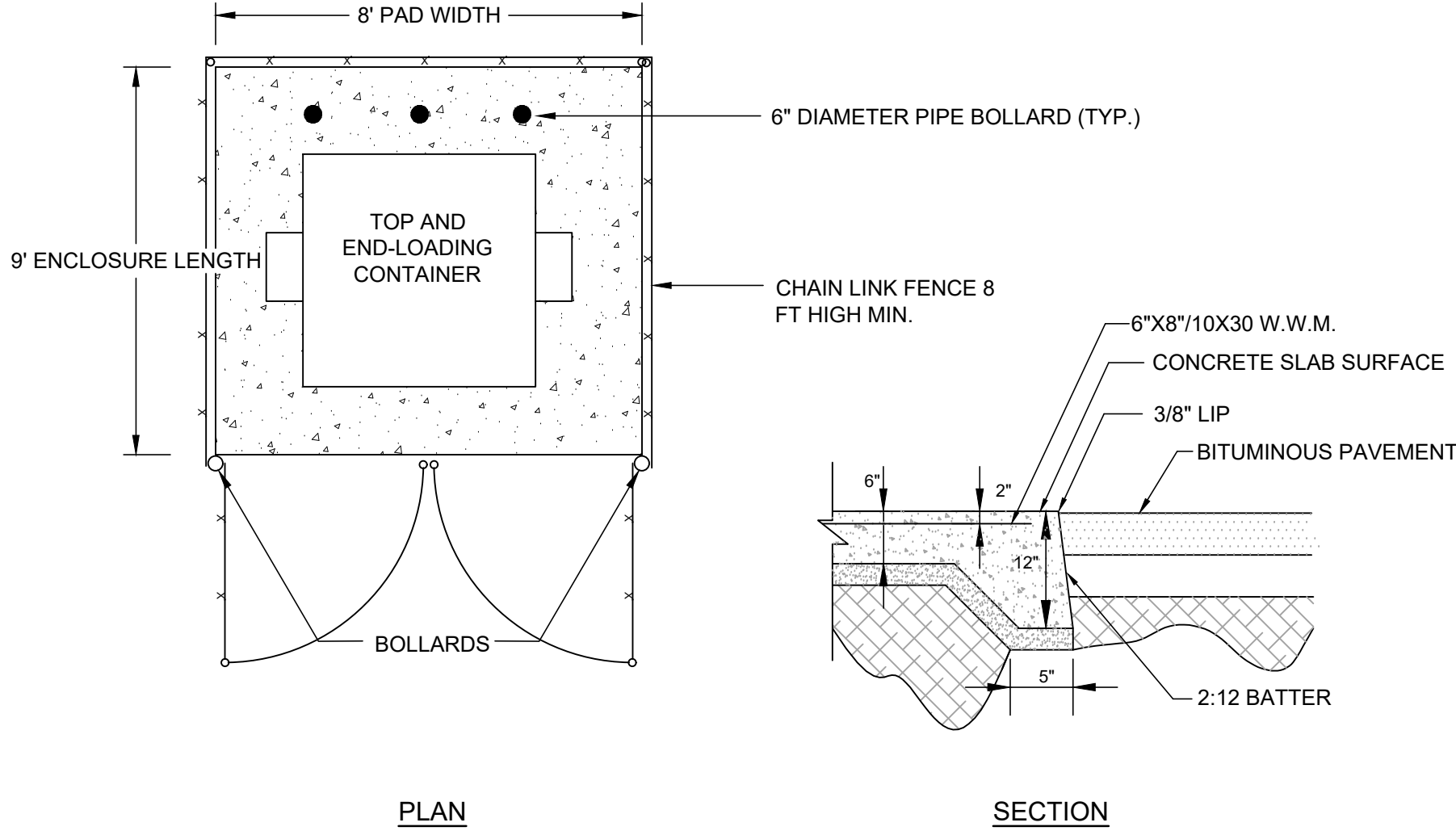
C-505

75% CDs



- NOTES:
- POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
 - ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
 - PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
 - WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLANDS MUST BE USED, GRIP RING, MEGA-LUG OR STAR GRIP

TEST PRESSURE = 200psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL					
	REACTION TYPE	PIPE SIZE				
		4"	6"	8"	10"	12"
A 90°		0.89	2.19	3.82	11.14	17.24
B 180°		0.65	1.55	2.78	8.38	12.00
C 45°		0.48	1.19	2.12	6.02	9.32
D 22-1/2°		0.25	0.60	1.06	3.08	4.74
E 11-1/4°		0.13	0.30	0.54	1.54	2.38

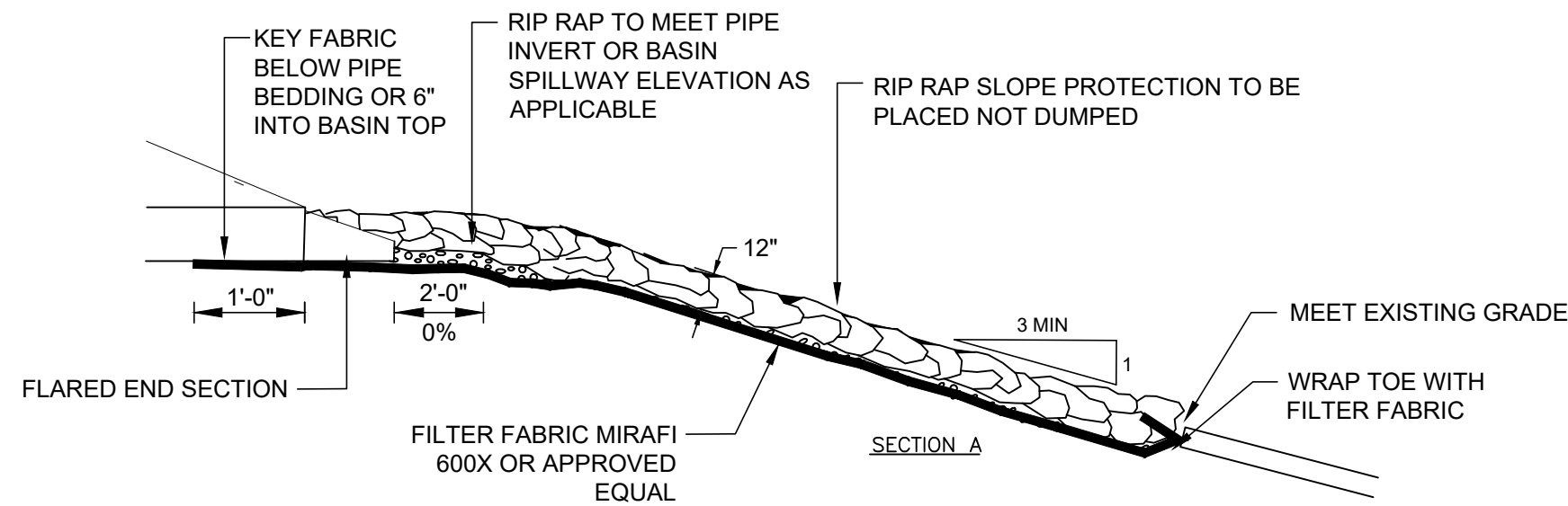


1 THRUST BLOCK DETAIL

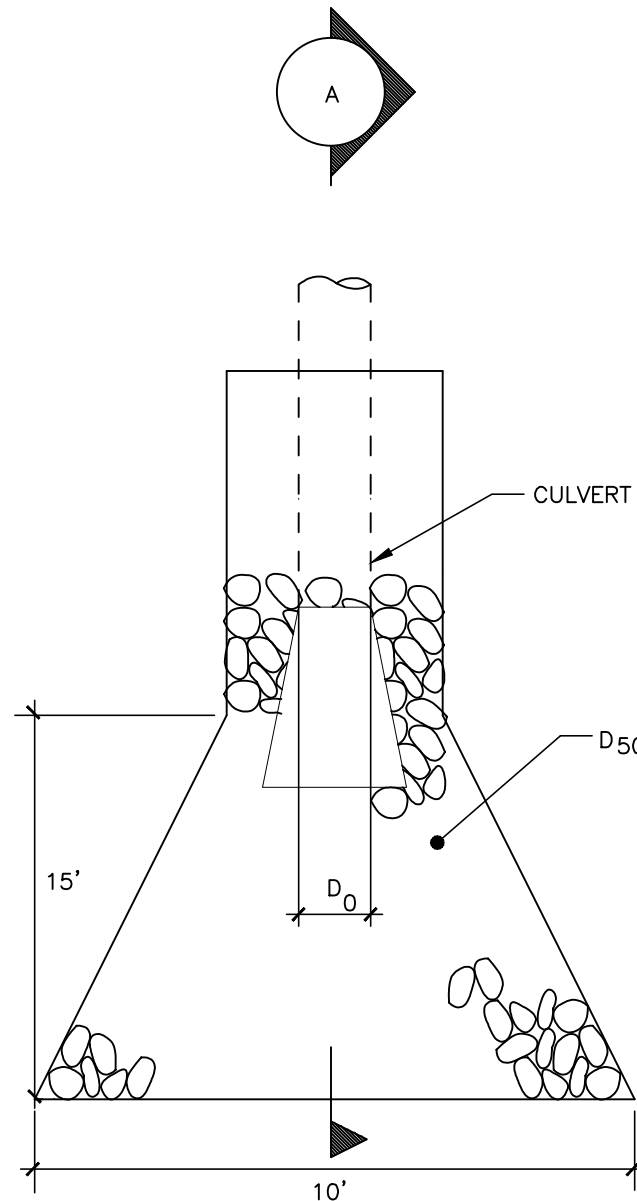
NOT TO SCALE

2 DUMPSTER PAD WITH ENCLOSURE

NOT TO SCALE



- NOTES:
- FIELD STONE, QUARRY STONE, OR ROCK FRAGMENTS SHALL BE SOUND, OF APPROVED QUALITY, AND FREE FROM STRUCTURAL DEFECTS. THE STONES SHALL BE ANGULAR AND APPROXIMATELY RECTANGULAR IN SHAPE. FLAT OR ROUND ROCKS ARE NOT ACCEPTABLE.
 - A WELL GRADED MIXTURE OF ROCK SIZES (4" - 8") SHALL BE USED FOR STONE. FIFTY PERCENT BY WEIGHT OF THE STONE MIXTURE SHALL BE SMALLER THAN THE MEDIAN SIZE STONE (d50). THE LARGEST STONE SIZE IN THE MIXTURE SHALL BE 1.5 TIMES THE d50 SIZE.

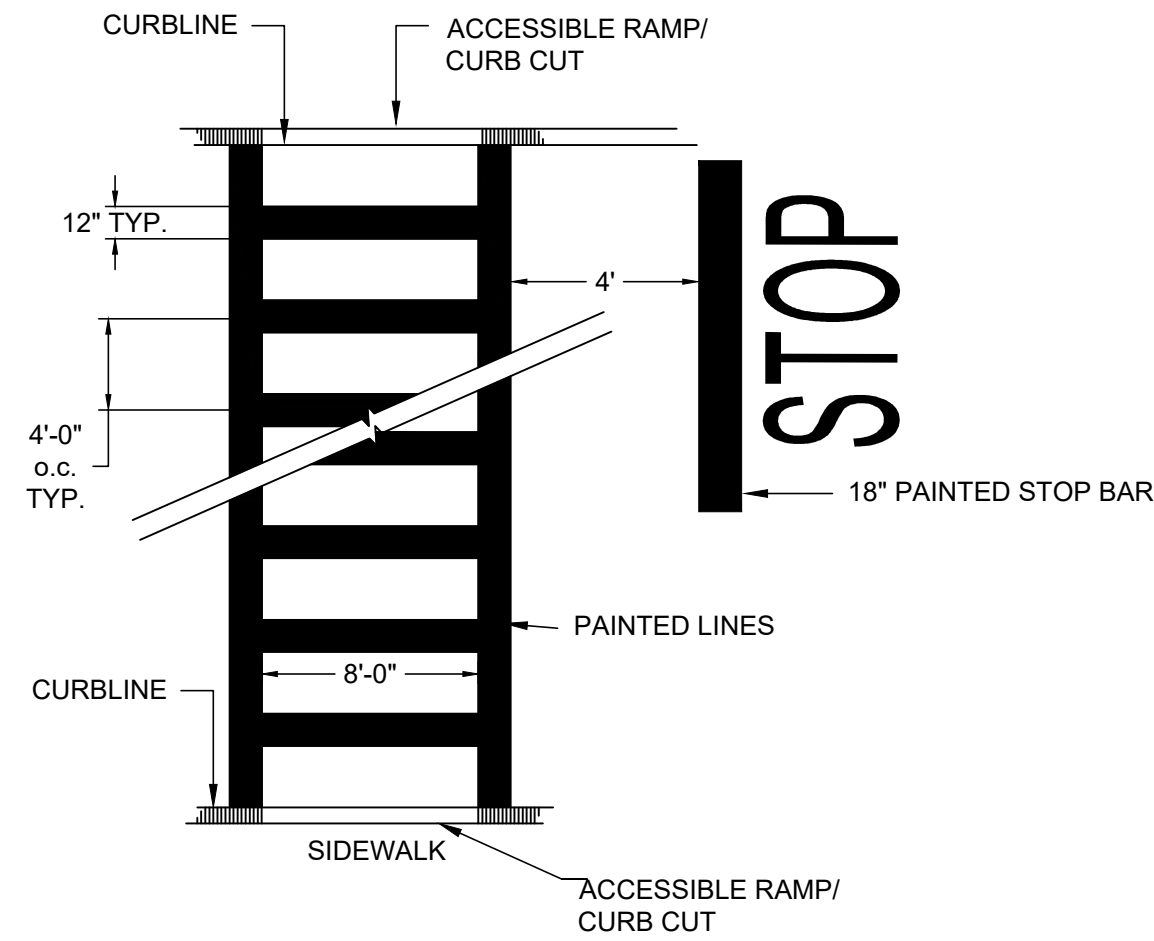


3 RIP-RAP OUTLET DETAIL

NOT TO SCALE

4 CROSS WALK DETAIL

NOT TO SCALE



- NOTES:
- SEE SITE PLAN FOR LOCATIONS.
 - ALL PAINT USED SHALL BE WHITE TRAFFIC PAINT.



Doctor Franklin Perkins School
971 Main Street Lancaster, MA

© Peterman Architects, Inc.

PROJECT
SCALE
DRAWN
CHECKED
DATE

19026.00

06/26/2020

PROJECT
NAME

Perkins School Phase 1
971 Main Street
Lancaster, MA

SHEET
TITLE

SITE DETAILS

SHEET
NUMBER

C-506

75% CDs