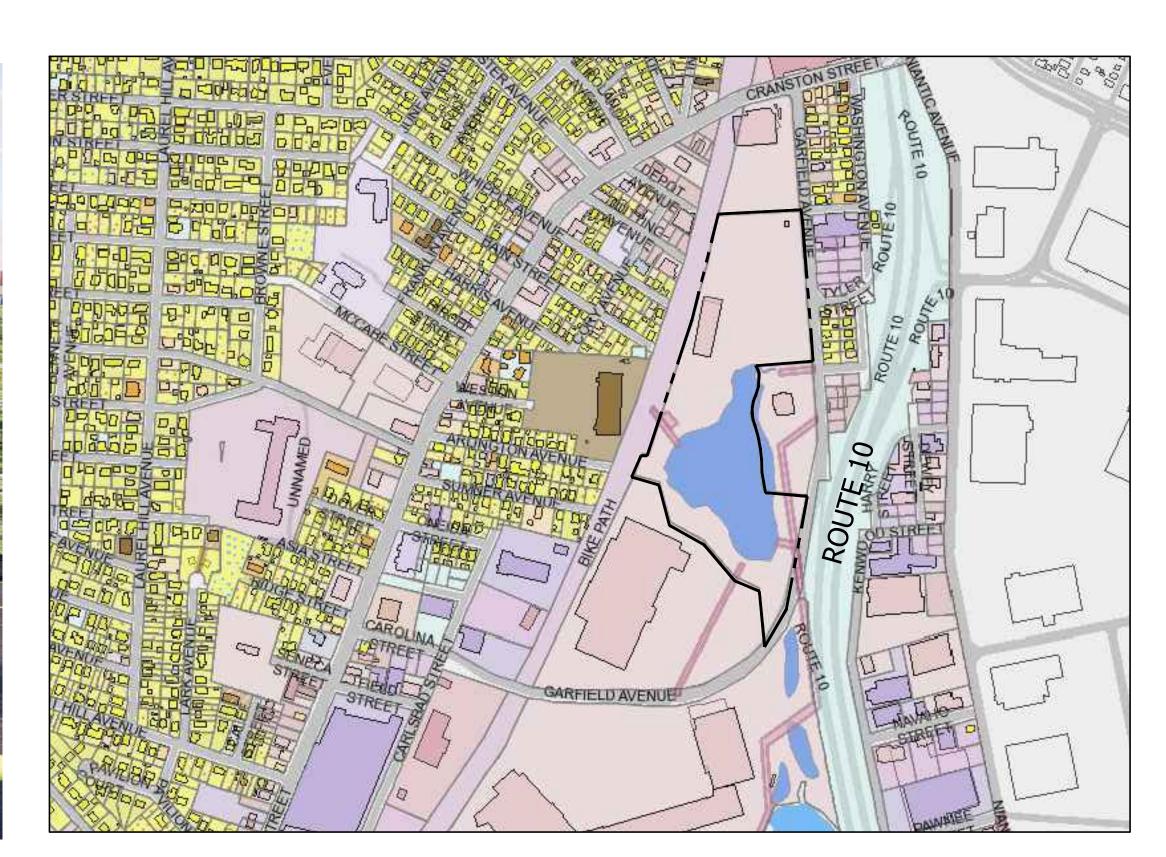
ADDRESS: 85 GARFIELD AVE, CRANSTON, RI 02920









2/7/2023 VOLUME 1 OF 1 DPR REVIEW

KAESTLE BOOS ASSOCIATES, INC. KAESTLE BOOS ARCHITECTURAL, INTERIORS & LANDSCAPE

PARISEAULT BUILDERS

| PARISEAULT | BUILDERS | BUILDERS | BUILDERS | PARISEAULT | BUILDERS | BUILDE

CONSTRUCTION MANAGEMENT

B+AC, LLC ● STRUCTURAL ENGINEER

AKAL ENGINEERING, INC. ● MECHANICAL, PLUMBING & FIRE PROTECTION ENGINEER

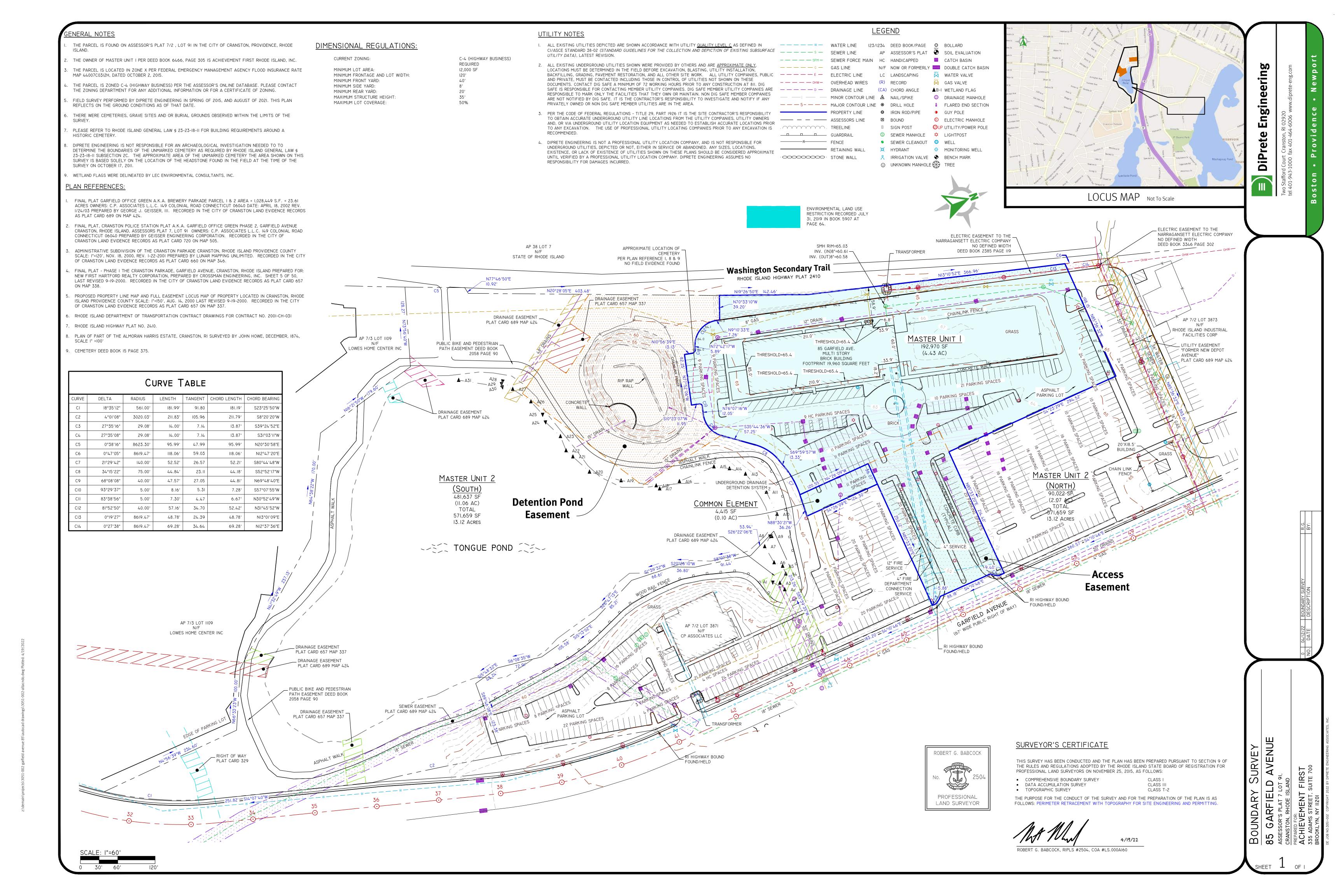
ELECTRICAL SYSTEMS ENGINEERING, INC. ELECTRICAL ENGINEER

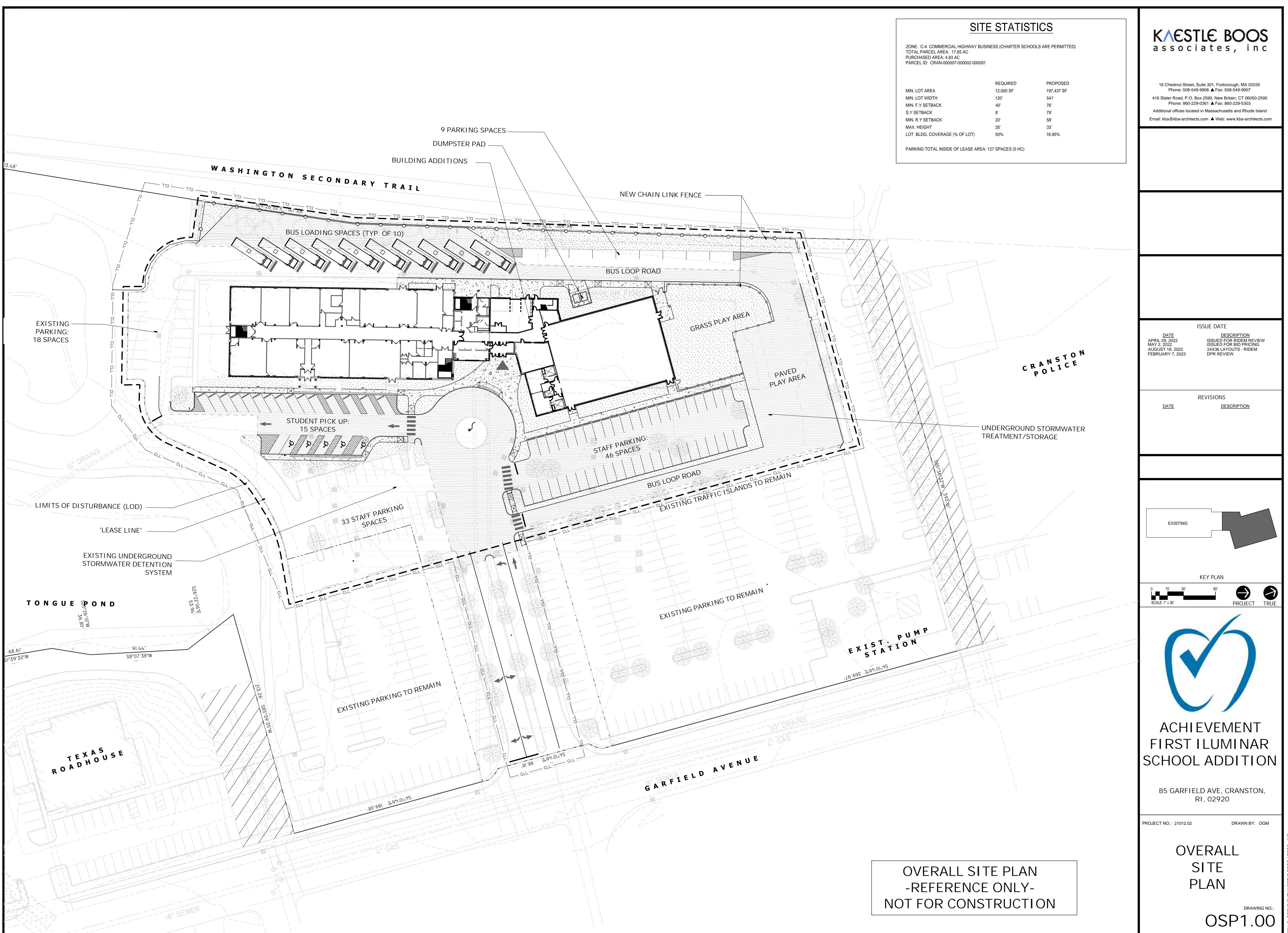
> GOOD HARBOR TECHMARK, LLC SECURITY CONSULTANT

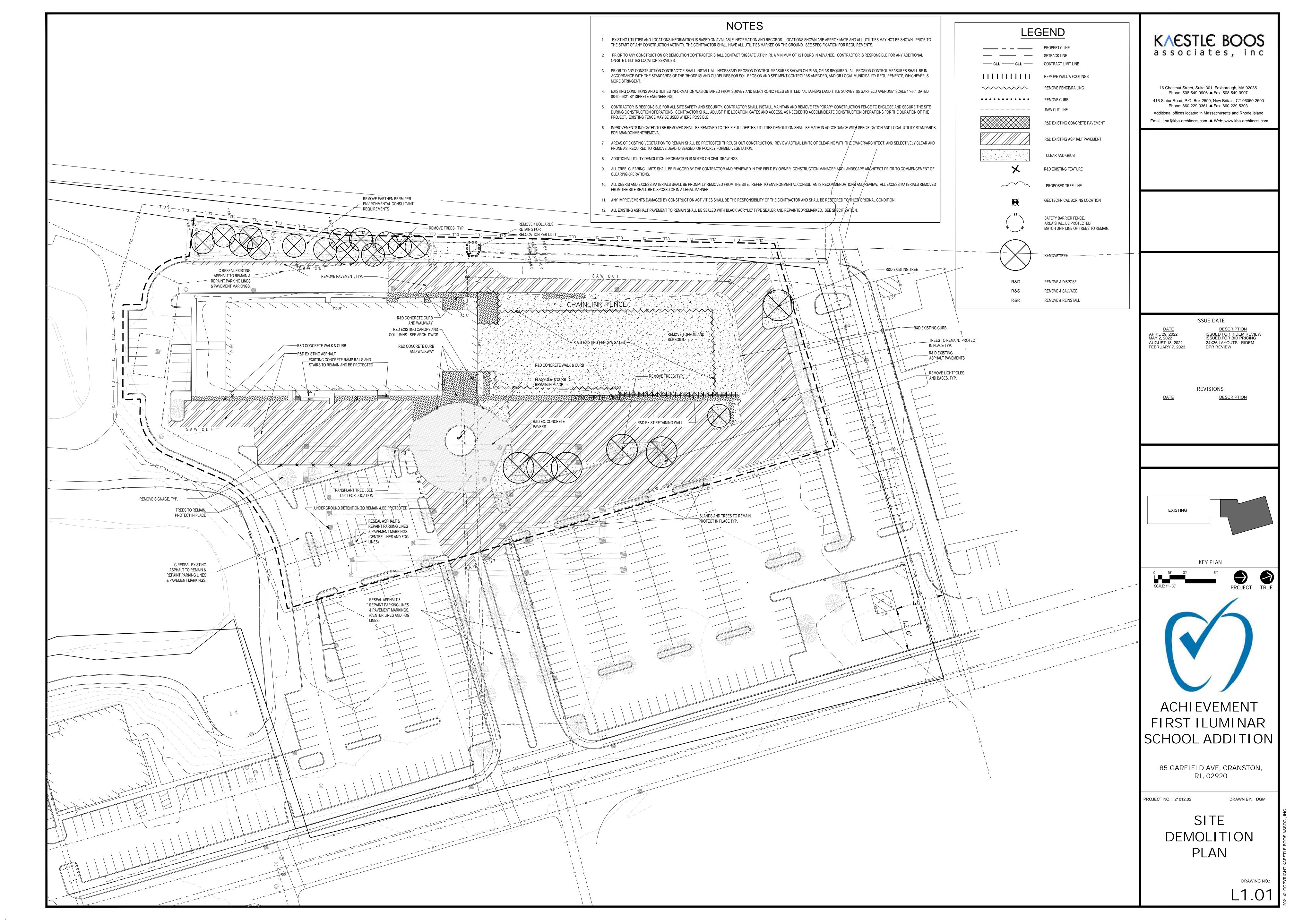
P.H.HAWLEY ASSOCIATES, LLC HARDWARE CONSULTANT

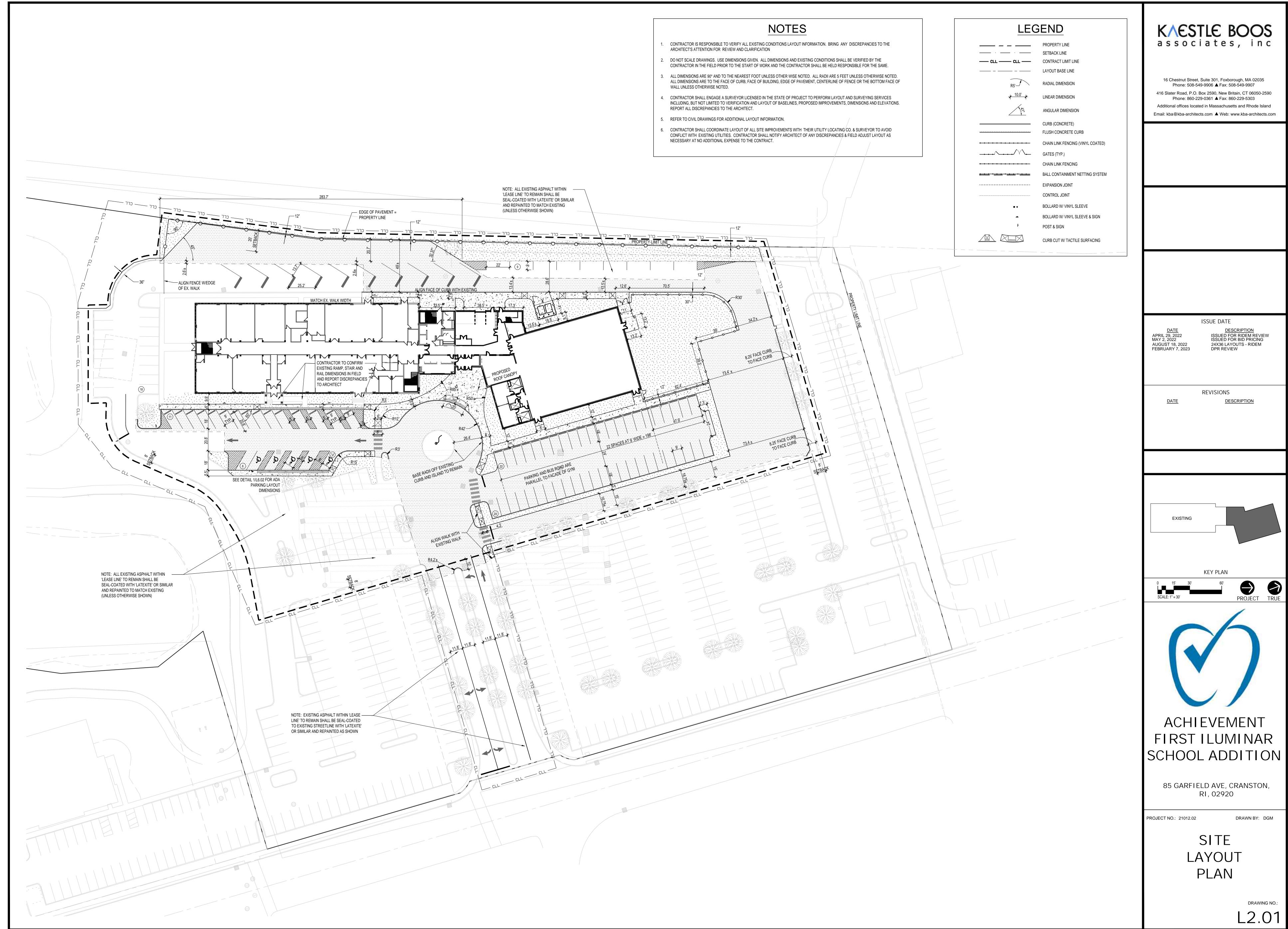
GREEN INTERNATIONAL AFFILIATES, INC. CIVIL ENGINEER

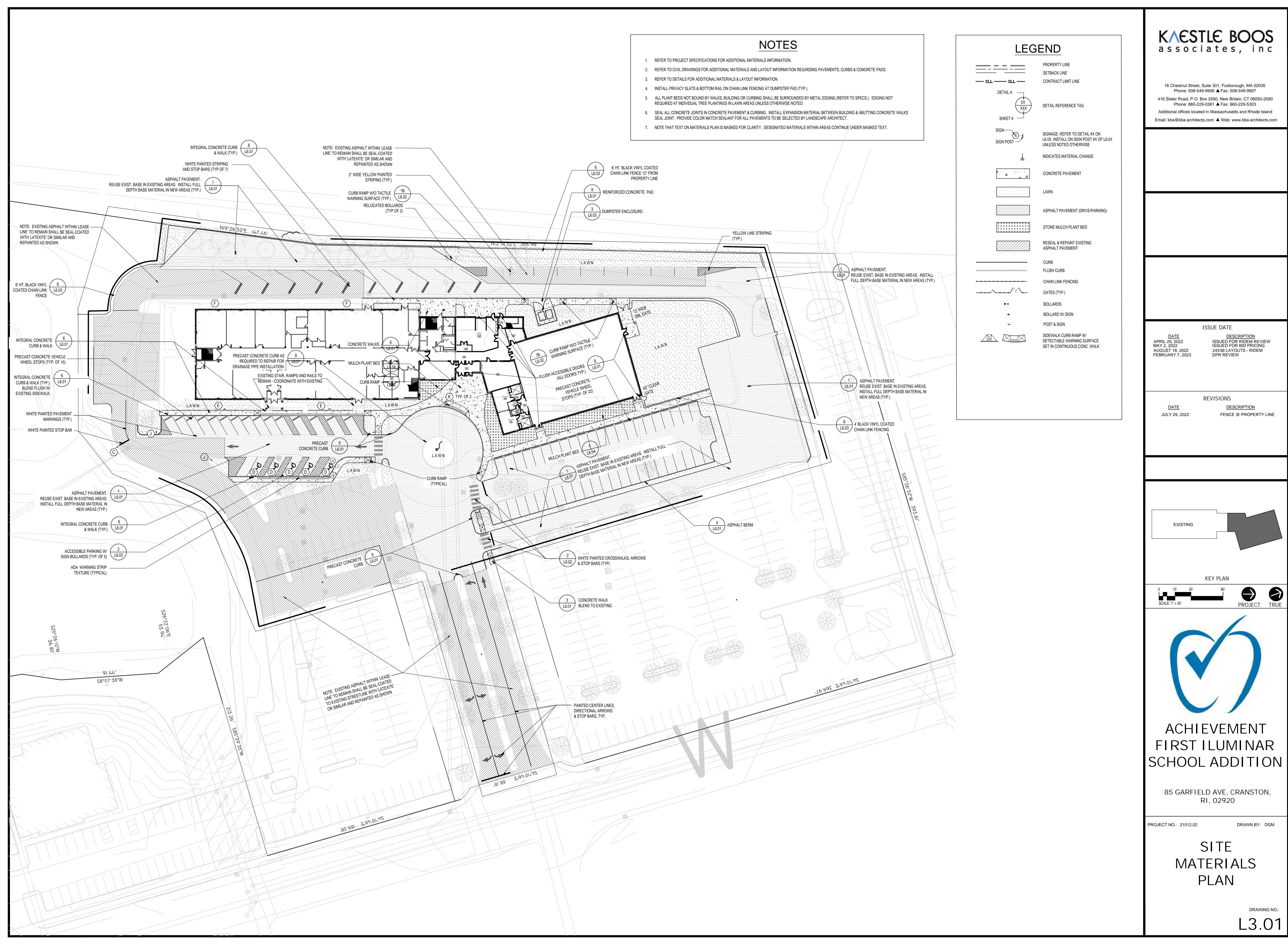
DRAWING LIST:	
-	COVER SHEET
1 of 1	SITE SURVEY
L1.00 L1.01 L2.01 L3.01 L4.01 L5.01 L6.01 L6.02 L6.03	OVERALL SITE PLAN SITE DEMOLITION PLAN SITE LAYOUT MATERIALS PLAN SITE GRADING PLAN SITE PLANTING PLAN SITE DETAILS SITE DETAILS SITE DETAILS
C1.00 C1.01 C1.02 C2.01 C2.02 C2.03	CIVIL NOTES SITE PREPARATION AND EROSION CONTROL PLAN SITE UTILITIES & DRAINAGE PLAN CIVIL DETAILS 1 CIVIL DETAILS 2 CIVIL DETAILS 3

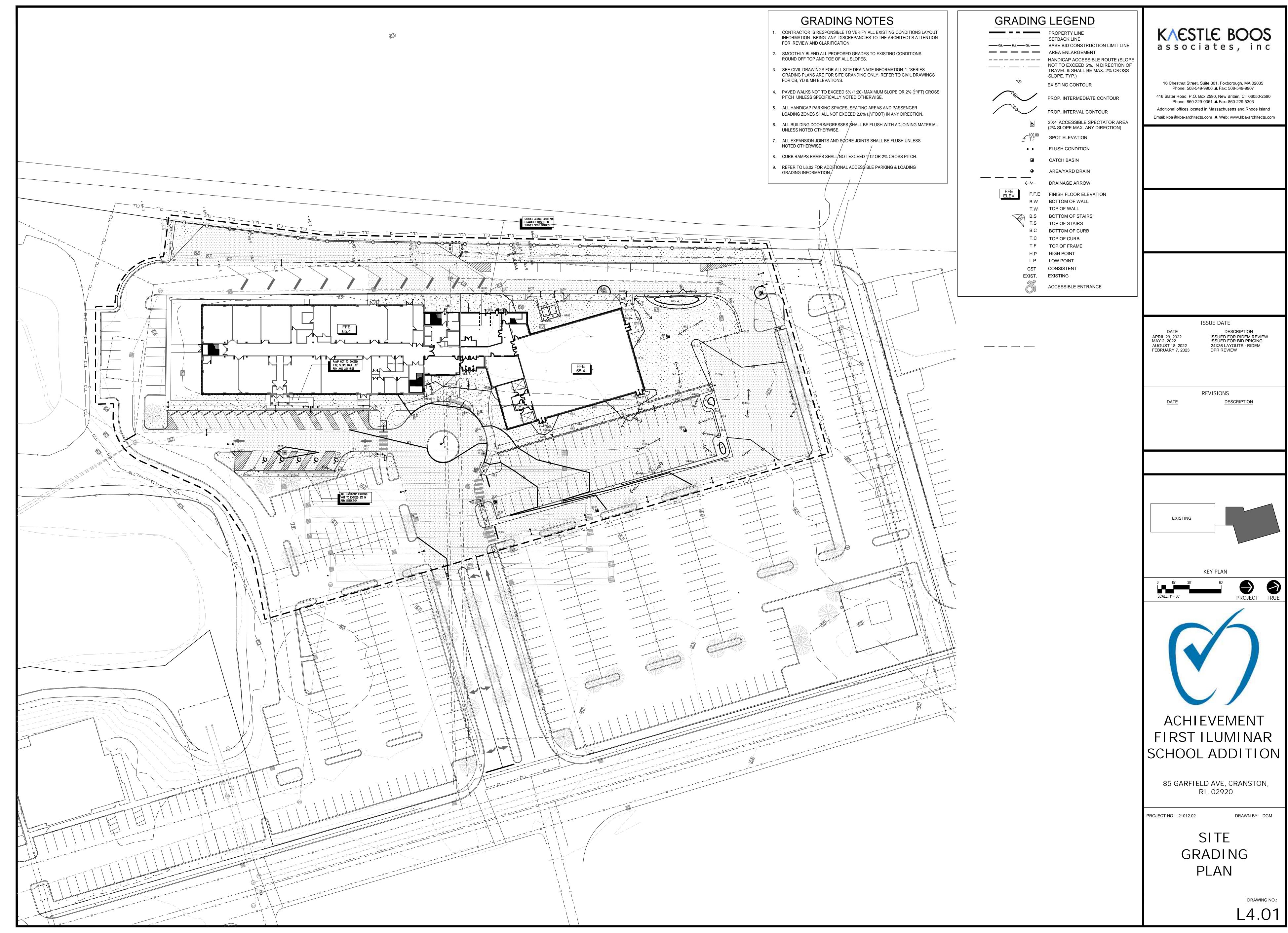


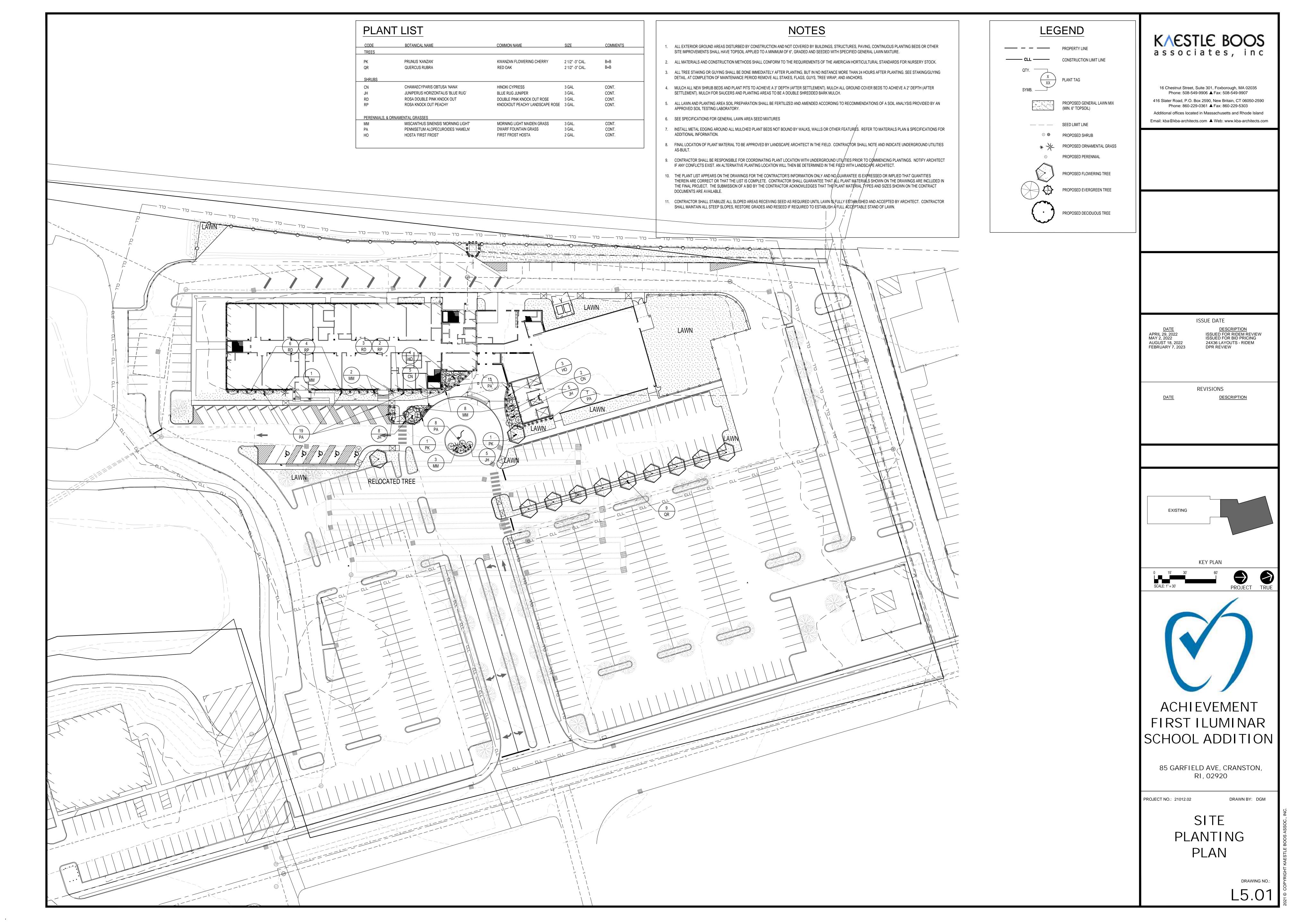


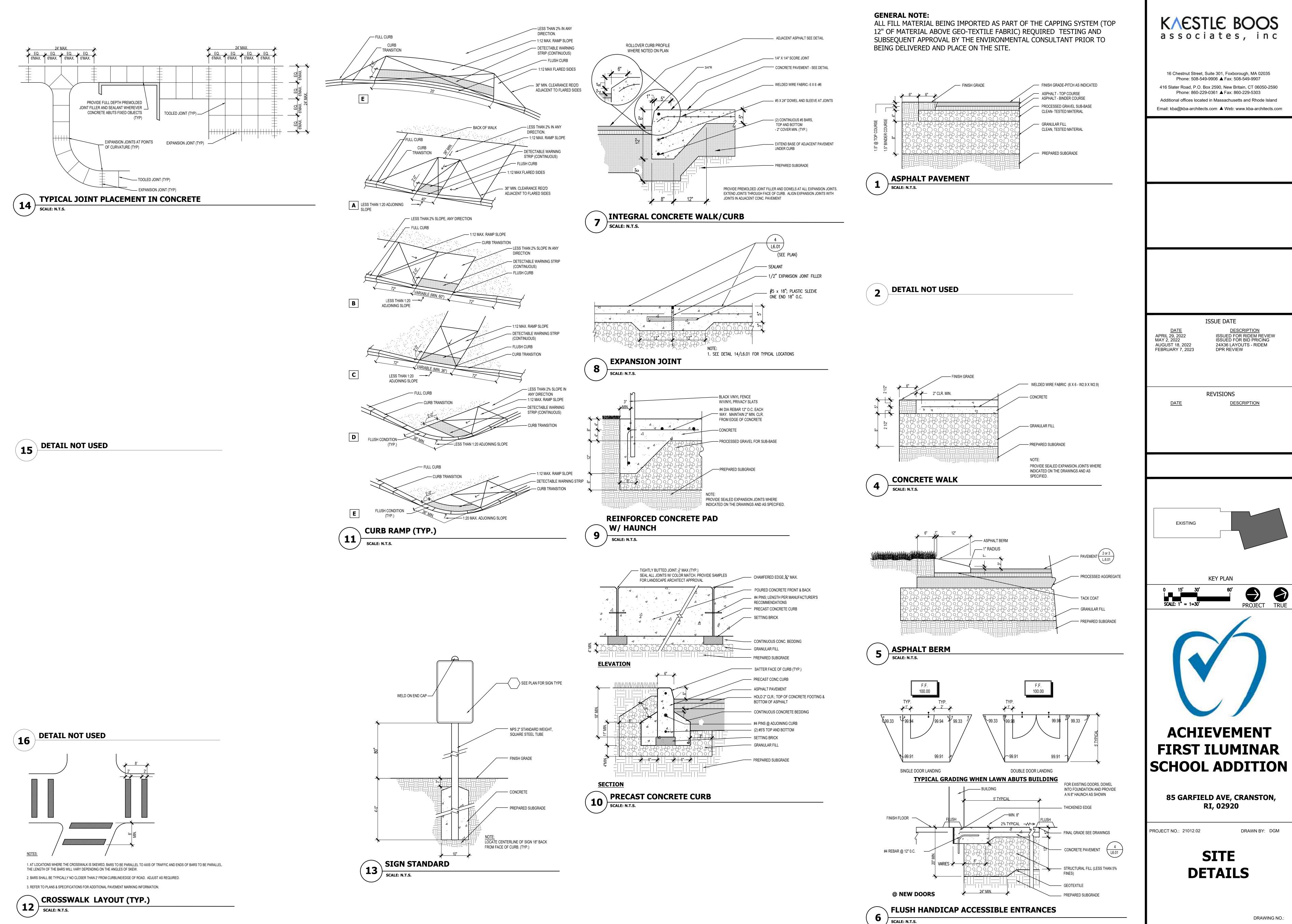




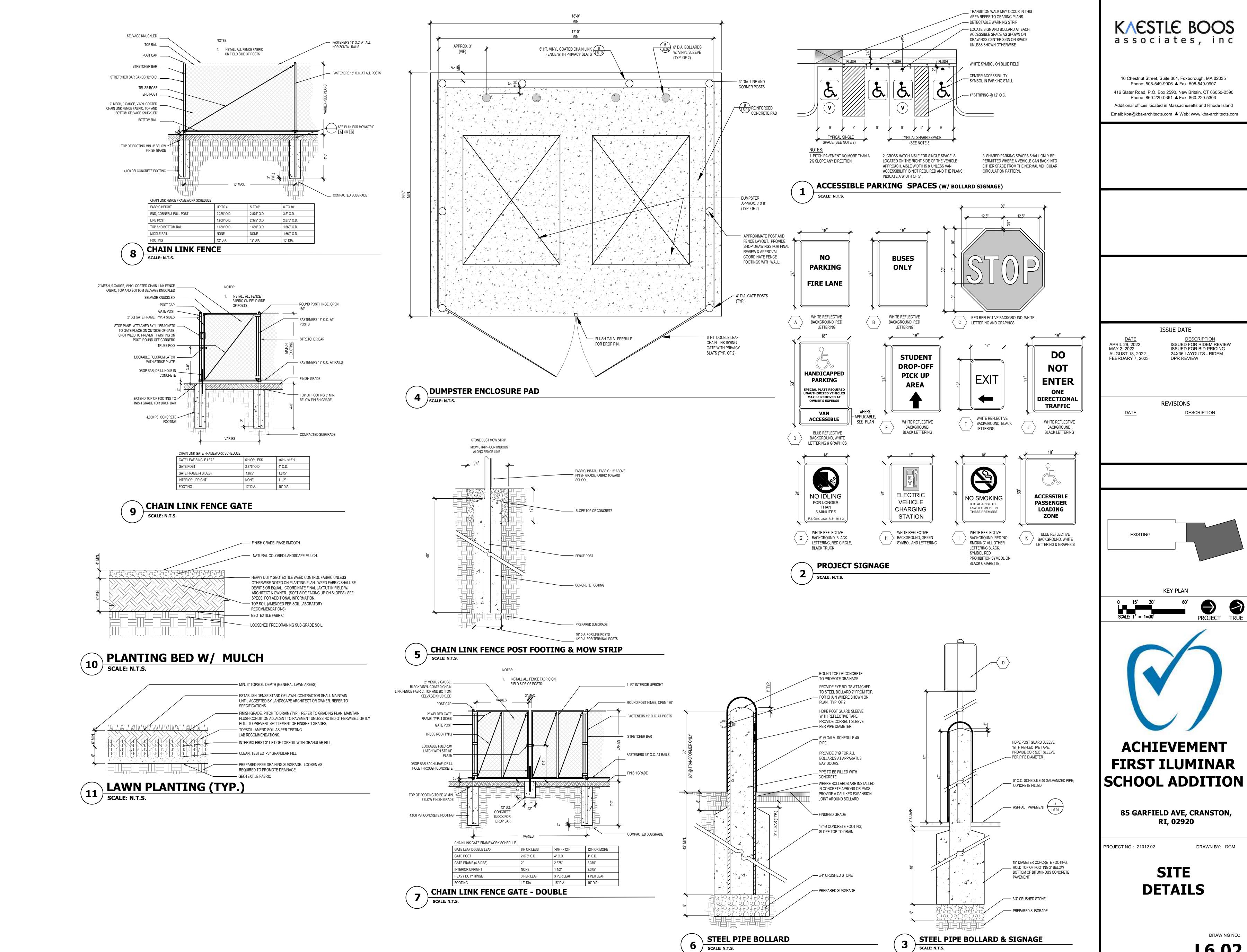




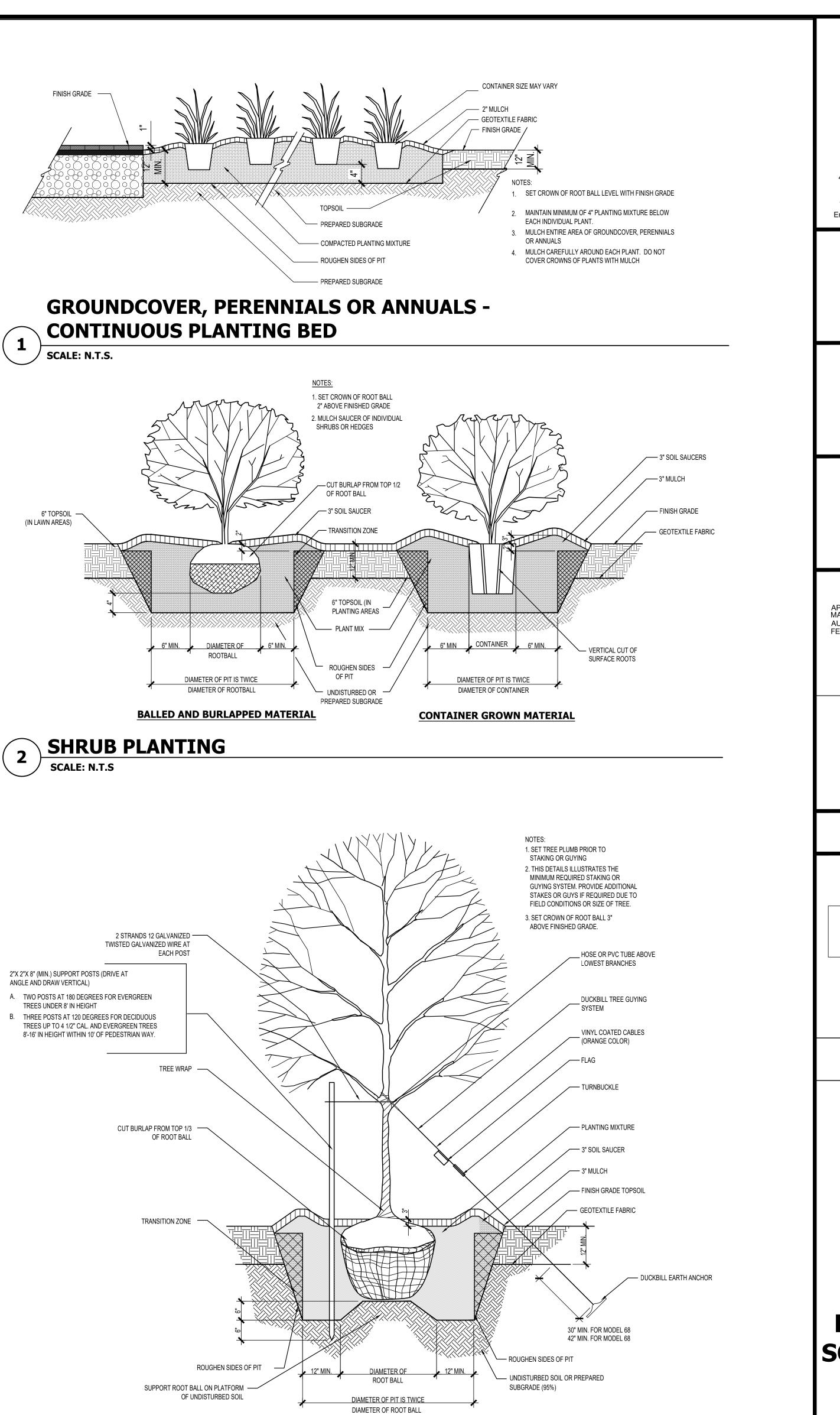




DRAWING NO.:



L6.02



B. DECIDUOUS TREE OVER 4 1/2" CALIPER. C. EVERGREEN TREES 8'-16' IN HEIGHT WHEN PLANTED GREATER THAN 10' OUTSIDE OF PEDESTRIAN WAYS. D. EVERGREEN TREES OVER 16' IN HEIGHT.

FOR USE WITH:

GUYING DETAIL

A. DECIDUOUS TREES 3"-4 1/2" CALIPER WHEN PLANTED

GREATER THAN 10' OUTSIDE OF PEDESTRIAN WAYS.

3 TREE PLANTING
SCALE: N.T.S.

FOR USE WITH:

STAKING DETAIL

A. DECIDUOUS TREES UNDER 3" CALIPER.

B. DECIDUOUS TREES 3"-4 1/2" CALIPER WHEN PLANTED WITHIN 10' OF PEDESTRIAN WAYS

C. EVERGREEN TREES UNDER 8' IN HEIGHT.

D. EVERGREEN TREES 8'-16' IN HEIGHT WHEN

PLANTED WITHIN 10' OF PEDESTRIAN WAYS.

KAESTLE BOOS associates, inc

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Phone: 860-229-0361 ▲ Fax: 860-229-5303

Additional offices located in Massachusetts and Rhode Island Email: kba@kba-architects.com ▲ Web: www.kba-architects.com

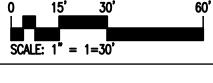
ISSUE DATE

<u>DESCRIPTION</u>
ISSUED FOR RIDEM REVIEW
ISSUED FOR BID PRICING
24X36 LAYOUTS - RIDEM
DPR REVIEW AUGUST 18, 2022 FEBRUARY 7, 2023

REVISIONS

KEY PLAN

PROJECT TRUE





ACHIEVEMENT FIRST ILUMINAR SCHOOL ADDITION

85 GARFIELD AVE, CRANSTON, RI, 02920

PROJECT NO.: 21012.02

SITE **DETAILS**

DRAWING NO.:

DRAWN BY: DGM

GENERAL CONSTRUCTION NOTES

- 1. ALL CONSTRUCTION DEBRIS SHALL BE DISPOSED OF LEGALLY OFF SITE.
- 2. CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL. DUST CONTROL SHALL INCLUDE THE WATERING OF UNPAVED ROAD SURFACES AND STREET SWEEPING OF PAVED SURFACES. STREET SWEEPING SHALL OCCUR ON THE PAVED SURFACES WITHIN THE SITE AND OFF THE SITE WHERE VEHICLE TRACKING OF SEDIMENTS HAS
- 3. DURING CONSTRUCTION, TRENCHES ARE NOT TO BE LEFT IN A CONDITION THAT WOULD DIRECT RUNOFF AROUND TREATMENT AND DETENTION FACILITIES.
- 4. ALL SITE WORK SHALL BE SECURED AT THE END OF THE WORK DAY TO REDUCE EROSION AND SEDIMENT PROBLEMS. THIS INCLUDES AS APPLICABLE, COVERING STOCKPILES OF SOIL, INSTALLING TEMPORARY VEGETATION OR BY USING GEOTEXTILES TO COVER DISTURBED AREAS WITH STEEPER SLOPES.
- 5. DEWATERING OPERATION SHALL COMPLY WITH THE REQUIREMENTS OF THE RIPDES CONSTRUCTION GENERAL PERMIT FOR CONSTRUCTION SITES THAT ARE GREATER THAN 1 ACRE.
- 6. CONSTRUCTION FENCING SHALL BE SET TO PREVENT UNCONTROLLED ACCESS TO THE SITE AT ALL TIMES AND ADJUSTED AS NECESSARY THROUGHOUT CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER DEPENDING ON PHASING.

PLAN SYMBOLS - EXISTING CONDITIONS

100×0	SPOT ELEVATION
	BOULDER/STONE
0	MONITORING WELL
BCC	BITUMINOUS CONCRETE CUR
\bigcirc	DRAIN MANHOLE
	CATCH BASIN
S	SEWER MANHOLE
\bigcirc	TELEPHONE MANHOLE
(E)	ELECTRIC MANHOLE
•	STONE BOUND
Ç	FIRE HYDRANT
₩V ***	WATER GATE VALVE
GV M	GAS GATE VALVE
-0	SIGN
O.	UTILITY POLE
\triangle	SURVEY CONTROL POINT
\Leftrightarrow	TREE

	EXISTING MAJOR 10' CONTOUR
#	EXISTING MINOR 2' CONTOUR
#	PROPOSED CONTOUR
D D	UNDERGROUND DRAIN LINE
ss	UNDERGROUND SEWER LINE
——— E ———— E ———	UNDERGROUND ELECTRIC LINE
—— ОН —— ОН —— ОН —— ӨН-	OVERHEAD UTILITY WIRES
w w	UNDERGROUND WATER LINE
G G	UNDERGROUND GAS LINE
0 0 0	FENCE
	STONE WALL
	PROPERTY LINE
	TREE/SHRUB LINE
Q \ WF-## \ Q \	WETLAND RESORURCE BOUNDRY
	FLOOD ZONE AE
	EXISTING WOOD GAURD RAIL
	EDGE OF PAVEMENT

SITE PREPARATION NOTES

- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES AND PROCEDURES; AND FOR THE SAFETY PRECAUTIONS AND PROGRAMS REQUIRED FOR THE WORK UNDER THIS CONTRACT. THE CONTRACT DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY AND THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING ALL SAFETY BARRIERS, WARNING FLASHERS, AND THE LIKE AS REQUIRED FOR THE PROTECTION OF WORKERS AND THE PUBLIC. COMPLY WITH OSHA REQUIREMENTS.
- PRIOR TO THE START OF WORK, INSTALL WOVEN POLYPROPYLENE GEOTEXTILE FILTER BAGS IN CATCH BASINS AND/OR DRYWELL STRUCTURES ON AND NEAR THE SITE. WHEN INSTALLING FILTER BAGS, HOLD APPROXIMATELY SIX INCHES OUTSIDE THE FRAME AND REPLACE THE GRATE, USING THE WEIGHT OF THE GRATE TO HOLD THE FILTER BAG IN PLACE.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY CONSTRUCTION PERMITS REQUIRED FOR THIS PROJECT.
- 4. THE CONTRACTOR SHALL PROTECT ALL UTILITIES WITHIN THE PROJECT AREA, IN THE STREET, AND ON ADJACENT PROPERTIES FROM DAMAGE AND UNDERMINING DURING EXCAVATION.
- 5. THE CONTRACTOR SHALL PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE CITY OF CRANSTON DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS.
- 6. ALL EXISTING WATER AND GAS SERVICES DESIGNATED TO BE REMOVED OR ABANDONED SHALL BE CUT AND
- CAPPED AT THE MAIN IN THE STREET.
- 8. ALL EXISTING UTILITY FRAMES, COVERS AND/OR GRATES WITHIN PROJECT LIMITS ARE TO BE ADJUSTED TO PROPOSED FINISHED GRADE UNLESS OTHERWISE NOTED.

7. ALL EXISTING SEWER AND DRAIN LINES DESIGNATED TO BE REMOVED OR ABANDONED SHALL BE CUT AND

- 9. TEMPORARY CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS SHOWN ON PLANS.
- 10. REMNANTS OF PREVIOUS BUILDING FOUNDATION, UTILITY STRUCTURES AND UNDERGROUND UTILITIES MAY BE ENCOUNTERED DURING EXCAVATION AND SHALL BE REMOVED AND DISPOSED LEGALLY OFF SITE.
- 11. PROVIDE TREE PROTECTION AT ALL TREE TRUNKS WITHIN 20' OF L.O.W. OR TEMPORARY STOCKPILES OR AS SHOWN ON PLANS.
- 12. CONTRACTOR SHALL USE EXTREME CAUTION IN REMOVING PAVEMENT AND SUB-BASE UNDER DRIP LINE OF EXISTING TREES TO AVOID DAMAGE TO ROOTS AND OVERHEAD BRANCHES.
- 13. CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL EXISTING SITE FEATURES AND STRUCTURES AS NECESSARY TO INSTALL PROPOSED SITE IMPROVEMENTS.

EROSION AND SEDIMENT CONTROLS

CAPPED AT THE MAIN IN THE STREET.

- 1. A RIPDES PERMIT WILL BE REQUIRED FOR THIS PROJECT. A DRAFT SESC HAS BEEN PREPARED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CERTIFYING THE SESC AND FOLLOWING THE REQUIREMENTS OF THE SESC PURSUANT TO THE RIPDES CONSTRUCTION GENERAL PERMIT.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING THE EROSION AND SEDIMENT DURING THE CONSTRUCTION PROCESS. SITE SPECIFIC CONDITIONS MAY REQUIRE MODIFICATIONS IN THE FIELD. BUT THE CONTRACTOR MUST ENSURE THAT THE PROJECT SPECIFICATIONS THAT ARE DEVELOPED IN THE FIELD MEET THE MINIMUM REQUIREMENTS OF THIS PLAN.
- 3. IN ORDER TO MINIMIZE EROSION AND SEDIMENT RUNOFF FROM THE SITE, THE CONTRACTOR SHOULD MAINTAIN EXISTING VEGETATION WHERE POSSIBLE AND STABILIZE THE DISTURBED PORTIONS OF THE SITE AS QUICKLY AS POSSIBLE. THIS MAY INCLUDE PHASING THE PROJECT AS NEEDED TO MINIMIZE THE SIZE OF THE DISTURBED AREAS ON THE SITE.
- 4. THE CONTRACTOR MUST ALSO ANTICIPATE INCREASED RUNOFF FROM STEEPER SLOPES AND DURING HIGH GROUNDWATER CONDITIONS. THIS MAY OCCUR DURING THE WET SEASON (TYPICALLY MARCH THROUGH APRIL) OR AFTER SIGNIFICANT PRECIPITATION EVENTS.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF SILT FENCES, DRAINAGE SWALES, EARTH DIKES, TEMPORARY SETTLING BASINS, CHECK DAMS AND TEMPORARY OR PERMANENT SEDIMENT BASINS. THESE PRACTICES DIVERT FLOWS FROM EXPOSED SOILS, LIMIT RUNOFF AND THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE TO THE DEGREE ATTAINABLE.
- 6. ALL DISTURBED SURFACES SHALL BE STABILIZED WITHIN 14 DAYS AFTER CONSTRUCTION IN ANY PORTION OF THE SITE THAT HAS BEEN COMPLETED OR WHERE CONSTRUCTION HAS TEMPORARILY CEASED.
- 7. THE CONTRACTOR SHALL, AT ALL TIMES, HAVE A STOCKPILE OF STRAW WATTLES AND SILT FENCE ADEQUATE TO REINFORCE/REPLACE EROSION AND SEDIMENT CONTROL AS NEEDED.
- 8. THE CONTRACTOR SHALL MAINTAIN EROSION CONTROL MEASURES AT ALL TIMES UNTIL ALL EARTHWORK OPERATIONS ARE COMPLETE AND ALL AREAS ARE STABILIZED TO PREVENT THE MOVEMENT OF SOIL, SILT, SEDIMENT, AND DEBRIS INTO THE DRAINAGE SYSTEM ON AND NEAR THE SITE. THE CONTRACTOR SHALL REMOVE ALL EROSION CONTROL DEVICES UPON COMPLETION AND ACCEPTANCE OF THE WORK. REFER TO LANDSCAPE PLANS FOR ADDITIONAL REQUIREMENTS.
- 9. ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN 14 DAYS OF THE INITIAL DISTURBANCE. AFTER THIS TIME, ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY. THE FOLLOWING EXCEPTIONS APPLY:
- i) STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS.
- ii) STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION WITH A DEPTH OF 2 FEET OR GREATER.

UTILITY NOTES

- 1. UTILITY WORK WITHIN THE ZONE 10 FT OUTSIDE OF FOUNDATION WALL OF THE BUILDING SHALL CONFORM TO EFFECTIVE BUILDING CODE REQUIREMENTS, CITY OF CRANSTON REQUIREMENTS, AND THE MECHANICAL, ELECTRICAL AND PLUMBING SPECIFICATIONS. UTILITIES, WITHIN THIS AREA (10 FT FROM THE FOUNDATION WALL), ARE SHOWN ON THIS DRAWING FOR COORDINATION PURPOSES. REFER TO THE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR PIPE SIZES AND MATERIALS.
- 2. ALL UNDERGROUND UTILITIES SHALL BE CONSIDERED APPROXIMATE. THEREFORE, PRIOR TO THE START OF ANY WORK ON THE SITE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION OF ALL UTILITIES. SHOWN OR NOT SHOWN ON THIS PLAN. CONTACT DIG-SAFE AT 1-888-344-7233 (1-888-DIG-SAFE) AT LEAST 72 HOURS PRIOR TO THE START OF EXCAVATION.
- 3. CONTRACTOR TO ADJUST UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN-OUTS, UTILITY MANHOLES, CATCH BASINS, INLETS, ECT.) THAT ARE AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON THE PLANS OR NOT.
- 4. ALL WORK TO BE DONE WITHIN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE CITY OF CRANSTON.
- 5. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE TAKEN FROM RECORD INFORMATION SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES.
- 6. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- 7. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES, AND BOXES TO THE PROPOSED FINISH SURFACE GRADE.
- 8. AREA OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION, AT NO ADDITIONAL COST TO THE OWNER.
- 9. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR PROPOSED LOCATION OF UTILITY SERVICES AT BUILDING.
- 10. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRICAL). FINAL DESIGN AND LOCATIONS AT THE BUILDING WILL BE PROVIDED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE UTILITY CONNECTION WITH THE RESPECTIVE COMPANIES PRIOR TO ANY UTILITY
- 11. ALL WORK MUST COMPLY WITH STATE AND LOCAL PERMITS, AS WELL AS RIDOT AND LOCAL REQUIREMENTS.
- 12. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL MATERIALS INFORMATION.
- 13. THE CONTRACTOR SHALL VERIFY THE DEPTHS OF ALL UTILITIES WITHIN THE PROPOSED TRENCHES PRIOR TO ORDERING DRAINAGE STRUCTURES. NOTIFY THE DESIGNER OF ANY CONFLICT WITH THE DESIGN PLANS AND AN EXISTING UTILITY. THE DESIGNER RESERVES THE RIGHT TO REALIGN STRUCTURE AND PIPING LOCATIONS TO SUIT ACTUAL FIELD CONDITIONS ENCOUNTERED.
- 14. THE CONTRACTOR SHALL PROTECT ALL UTILITIES WITHIN SITE AND PUBLIC WAYS NOT DESIGNATED TO BE REMOVED AND RELOCATED FROM DAMAGE AND UNDERMINING DURING EXCAVATION. THE CONTRACTOR SHALL REPLACE ITEMS DAMAGED DURING CONSTRUCTION DUE TO NEGLIGENCE, CARELESSNESS, OR MISHANDLING WITH NO COST TO THE OWNER.
- 15. SOME EXISTING UTILITY SERVICE LINES MAY NOT BE SHOWN ON THIS PLAN THAT NEED TO BE REMOVED AND RELOCATED AND/OR REMOVED AND DISPOSED TO ALLOW FOR THE PROPOSED SITE CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH UTILITY OWNERS AND TO VERIFY, LOCATE, AND DISCONNECT/RELOCATE SUCH LINES.
- 16. UTILITIES TO BE ABANDONED MAY BE REMOVED AT THE CONTRACTOR'S DISCRETION. ENDS OF ABANDONED PIPES TO REMAIN SHALL BE CUT AND CAPPED/PLUGGED. ABANDONED UTILITIES OVER 12" IN DIAMETER SHALL BE FILLED WITH FLOWABLE FILL IF TO
- 17. REFER TO LANDSCAPE PLANS AND SPECIFICATIONS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.



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Email: kba@kba-architects.com ▲ Web: www.kba-architects.com

Project Consultant



JUNE 13, 2022

GREEN INTERNATIONAL AFFILIATES, INC. Civil and Structural Engineers 100 Ames Pond Drive, Tewksbury, MA 01876 GreenIntl.com (978) 923-0400

ISSUE DATE DESCRIPTION

ISSUED FOR BID

REVISIONS DESCRIPTION

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01

KEY PLAN



PROJECT TRUE



ACHIEVEMENT FIRST ILUMINAR SCHOOL ADDITION

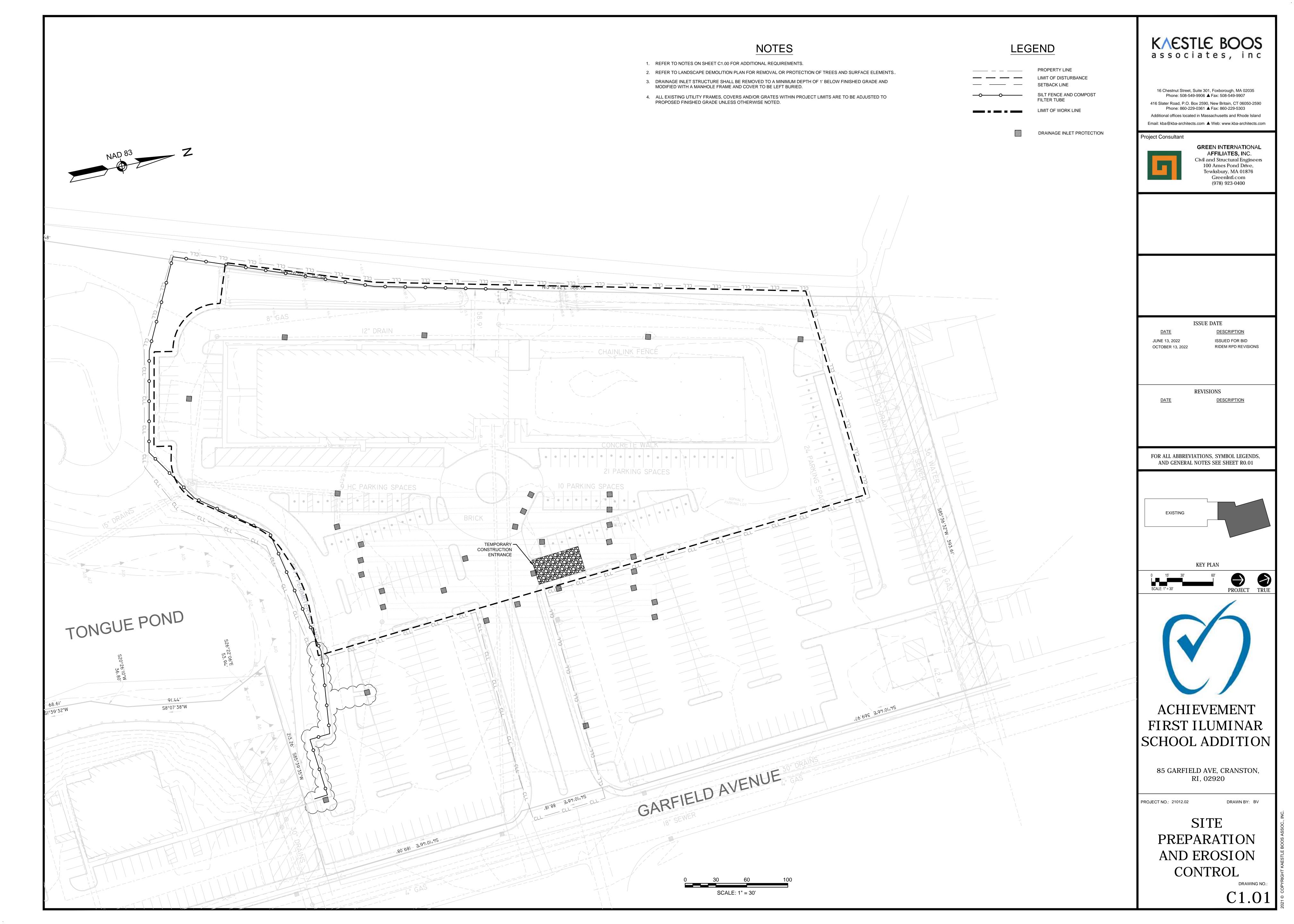
> **85 GARFIELD AVE, CRANSTON,** RI, 02920

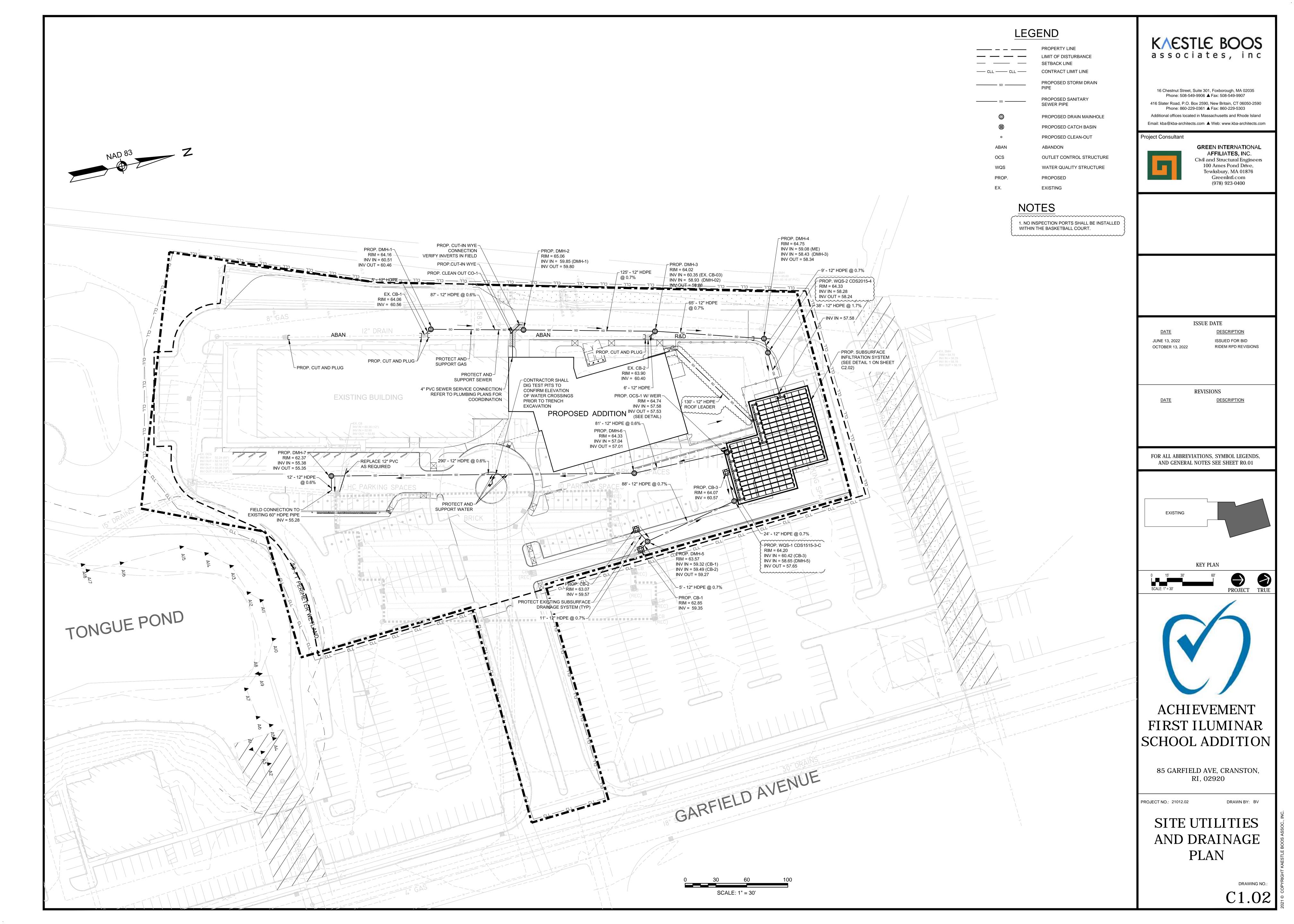
PROJECT NO.: 21012.02

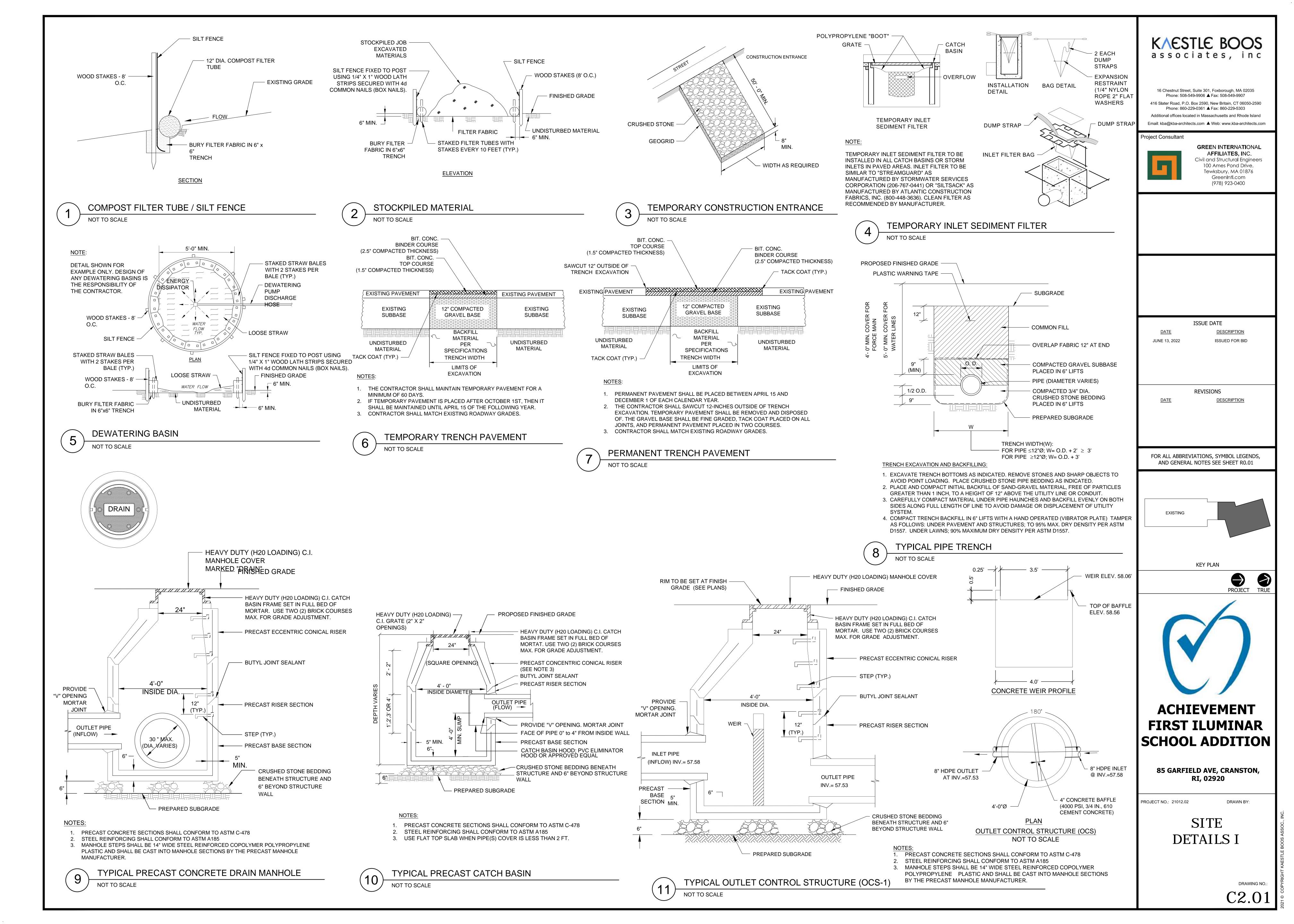
NOTES AND LEGEND

DRAWING NO.:

C1.00







AASHTO M1451 BEGIN COMPACTIONS AFTER 12" (300 **INITIAL FILL:** FILL MATERIAL FOR LAYER GRANULAR WELL-GRADED SOIL/AGGREGATE A-1, A-2-4, A-3 mm) OF MATERIAL OVER THE C' STARTS FROM THE TOP OF THE MIXTURES, <35% FINES OR PROCESSED EMBEDMENT STONE ('B' LAYER) TO 18" AGGREGATE. OR C (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT AASHTO M43¹ MOST PAVEMENT SUBBASE MATERIALS CAN BE SUBBASE MAY BE A PART OF THE 'C' 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, USED IN LIEU OF THIS LAYER. LAYER. 78, 8, 89, 9, 10

1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE

2. COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A

3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR

SUBGRADE SOILS

PROPOSED ELEVATIONS

(SEE NOTE 3)

CLEAN, CRUSHED, ANGULAR STONE

CLEAN, CRUSHED, ANGULAR STONE

DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT MANUFACTURER FOR COMPACTION REQUIREMENTS.

ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL

END CAP

AROUND CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS -

EMBEDMENT STONE: FILL

THE 'C' LAYER ABOVE.

PERIMETER STONE

EXCAVATION WALL (CAN —

PROPOSED LAYOUT

BE SLOPED OR VERTICAL)

(SEE NOTE 4)

CHAMBER.

PLEASE NOTE:

SURROUNDING THE CHAMBERS FROM

FOUNDATION STONE: FILL BELOW

TO THE FOOT (BOTTOM) OF THE

CHAMBERS FROM THE SUBGRADE UP

WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE"

THE FOUNDATION STONE ('A' LAYER) TO

CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12.000 lbs (53 kN), DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89

PLATE COMPACT OR ROLL TO ACHIEVE

A FLAT SURFACE. 23

PAVEMENT LAYER (SEE

DETAIL 1 ON SHEET L6.01)

AASHTO M43¹ NO COMPACTION REQUIRED. 3, 357, 4, 467, 5, 56, 57

> *TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR,

INCREASE COVER TO 24" (600 mm).

---- 51" (1295 mm) -----

APPROX. SEASONAL

HIGH GROUNDWATER

ELEV. 44.7'

AASHTO M43¹

3, 357, 4, 467, 5, 56, 57

CONCRETE COLLAR

CONCRETE SLAB

8" (200 mm) MIN THICKNESS

FLEXSTORM CATCH IT

WITH USE OF OPEN GRATE

6" (150 mm) INSERTA TEE

INSERTA TEE TO BE

CORRUGATION CREST

(450 mm) MIN*

6" (150 mm) MIN

- 12" (300 mm)

BOTTOM OF CHAMBERS

► BOTTOM OF STONE

ELEV. 57.6'

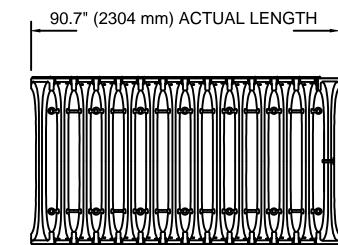
ELEV. 56.6'

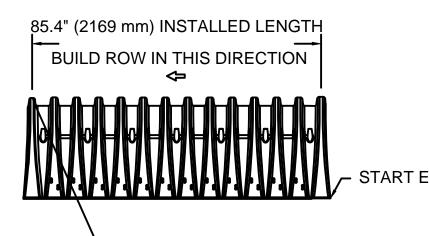
(760 mm)

CENTERED ON

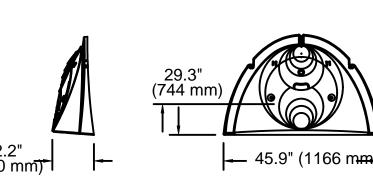
PAVEMENT

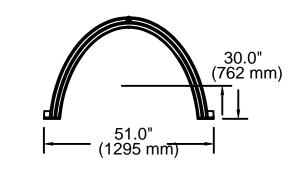
SC-740 TECHNICAL SPECIFICATION











NOMINAL CHAMBER SPECIFICATIONS SIZE (W X H X INSTALLED LENGTH) CHAMBER STORAGE

51.0" X 30.0" X 85.4" 45.9 CUBIC FEET MINIMUM INSTALLED STORAGE* 74.9 CUBIC FEET WEIGHT 75.0 lbs.

(1295 mm X 762 mm X 2169 mm) (1.30 m^3) (2.12 m^3) (33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"

PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T" PRE-CORED END CAPS END WITH "PC" CTUD

PART#	STUB	Α	В	С
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	
SC740EPE06B / SC740EPE06BPC	0 (130 11111)			0.5" (13 mm)
SC740EPE08T /SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	
SC740EPE08B / SC740EPE08BPC				0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	
SC740EPE10B / SC740EPE10BPC				0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	
SC740EPE12B / SC740EPE12BPC	12 (300 11111)			1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	
SC740EPE15B / SC740EPE15BPC	10 (0/0/11111)			1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	
SC740EPE18B / SC740EPE18BPC	10 (430 11111)			1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)		0.1" (3 mm)
SC740EPE24BR*	24" (600 mm)	18.5" (470 mm)		0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B/SC740EPE24BR ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE24B/SC740EPE24BR THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL. NOTE: ALL DIMENSIONS ARE NOMINAL

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740

- STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH
- SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - STORMTECH RECOMMENDS 3 BACKFILL METHODS: STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE. BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR

CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS

- 4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- 6. MAINTAIN MINIMUM 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- 7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- 8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- 1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
- NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS. NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS
- ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE". • WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE"
- 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVE OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

INSTALLATION NOTE

1. NO INSTALLATION PORTS SHALL BE INSTALLED WITHIN THE BASKETBALL COURT.

STORAGE CHAMBER 6" INSPECTION PORT DETAIL

1. STORAGE CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". 2. STORAGE CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION

-18" (450 mm) MIN WIDTH

CONCRETE COLLAR NOT

12" (300 mm) NYLOPLAST

W/SOLID HINGED COVER

6" (150 mm) SDR35 PIPE

SC-740 CHAMBER

INLINE DRAIN BODY

APPLICATIONS

OR GRATE

REQUIRED FOR UNPAVED

- CHAMBERS". "ACCEPTABLE FILL MATERIALS" TABLE ABOVE (2.4 m)PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS. 4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR
 - ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS
 - 5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
 - 6. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

			*INVERT ABOVE B	ASE OF CHAMBER
PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
MANIFOLD	A	12" x 12" BOTTOM MANIFOLD. ADS N-12	1.20"	7.3 CFS IN
MANIFOLD MANIFOLD	B C	12" x 12" BOTTOM MANIFOLD, ADS N-12 12" x 12" BOTTOM MANIFOLD, ADS N-12	1.20" 1.20"	4.6 CFS IN
PIPE CONNECTION CONCRETE STRUCTURE		15" BOTTOM CONNECTION (DESIGN BY ENGINEER / PROVIDED BY OTHERS)	1.3"	10.1 CFS IN
CONCRETE STRUCTURE		OCS-1 PER PLAN		4.7 CFS OUT

— 31.49 —

PLACE MINIMUM 12.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

—— BED LIMITS

SUBSURFACE STORAGE SYSTEM NOT TO SCALE

SC-740 STORMTECH CHAMBER SPECIFICATIONS CHAMBERS SHALL BE STORMTECH SC-740.

- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED. TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- 9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
- 10. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.

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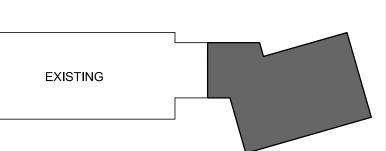
GREEN INTERNATIONAL AFFILIATES, INC. Civil and Structural Engineers 100 Ames Pond Drive, Tewksbury, MA 01876 GreenIntl.com (978) 923-0400

<u>DATE</u> DESCRIPTION JUNE 13, 2022 ISSUED FOR BID

ISSUE DATE

REVISIONS DESCRIPTION

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KEY PLAN





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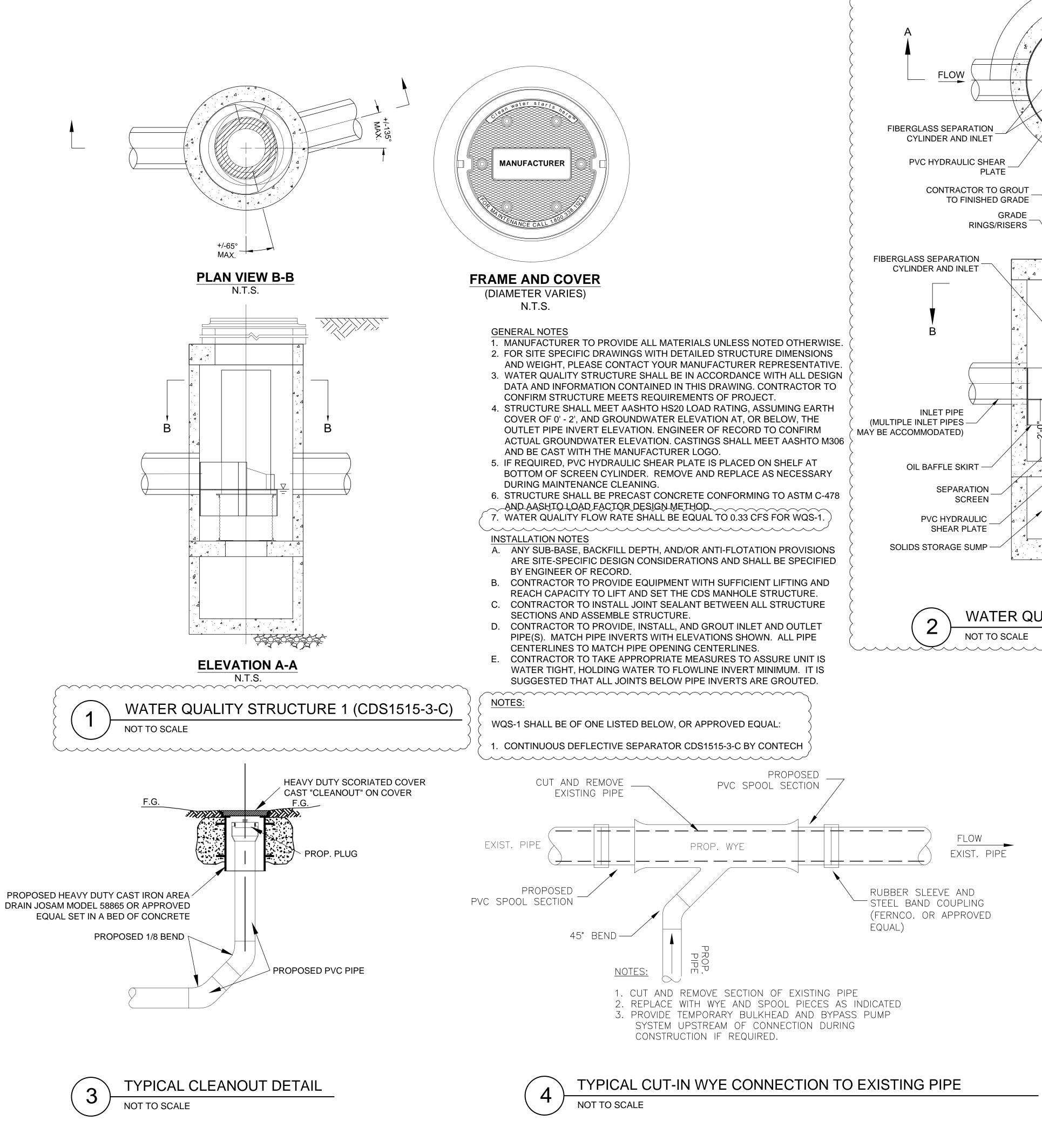
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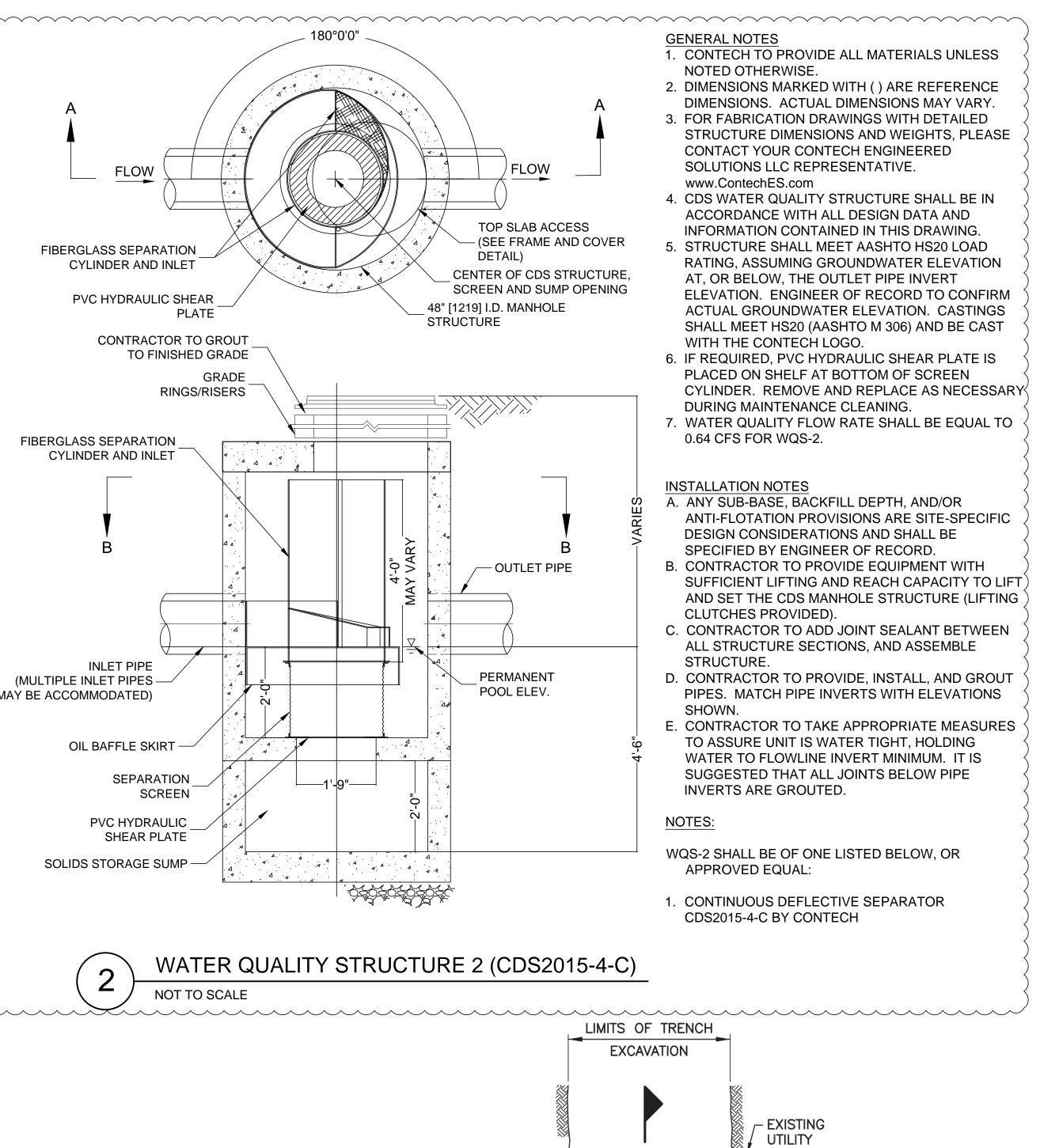
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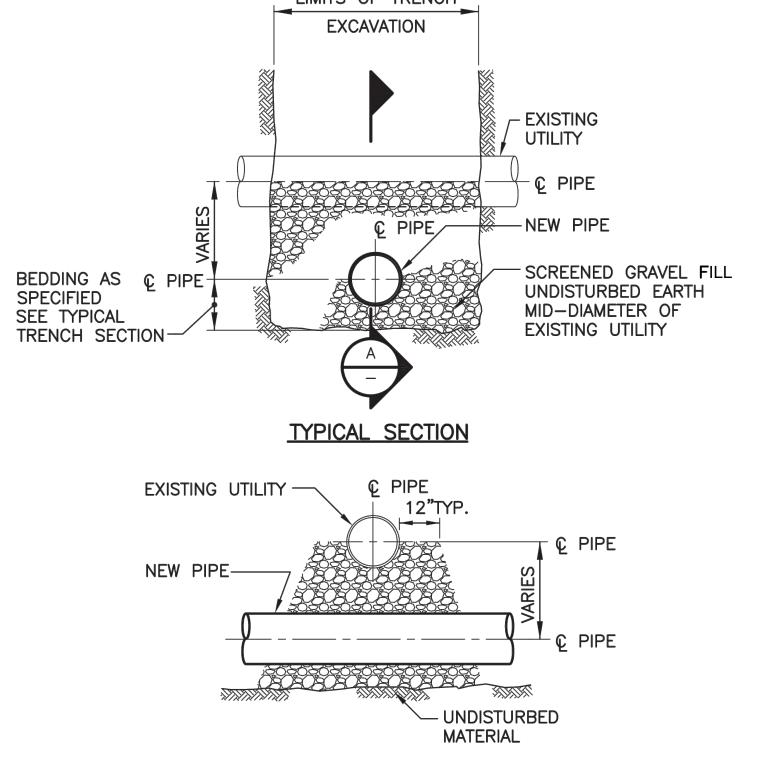
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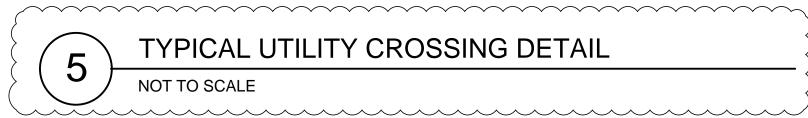
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SITE DETAILS III

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