TOWN OF ARLINGTON

ARLINGTON - HILL'S HILL PLAYGROUND ADA WALKWAY

ARLINGTON, MASSACHUSETTS

100% CONSTRUCTION DRAWINGS

DRAWING LIST

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L1.1 SITE PREPARATION AND DEMOLITION PLAN

2.1 SITE LAYOUT AND MATERIALS PLAN

GRADING PLAN

4.1 PLANTING PLAN

5.1 SPECIFICATIONS

LANDSCAPE DETAILS

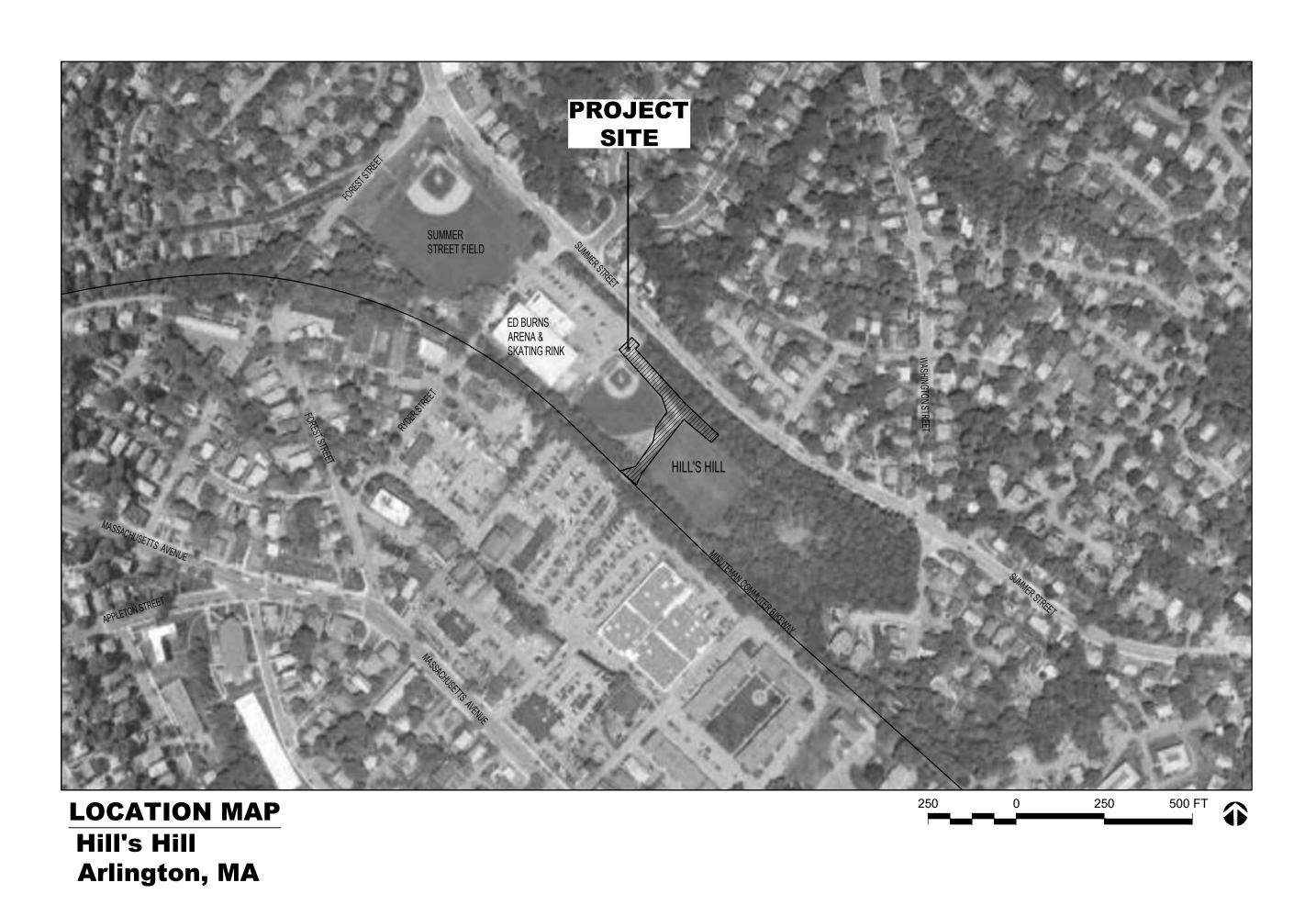
PREPARED BY:

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ARLINGTON HILL'S HILL
PLAYGROUND ADA
WALKWAY

ARLINGTON, MASSACHUSETT

TOWN OF ARLINGTON

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Project: HILL'S HILL PLAYGROUND ADA WALKWAY

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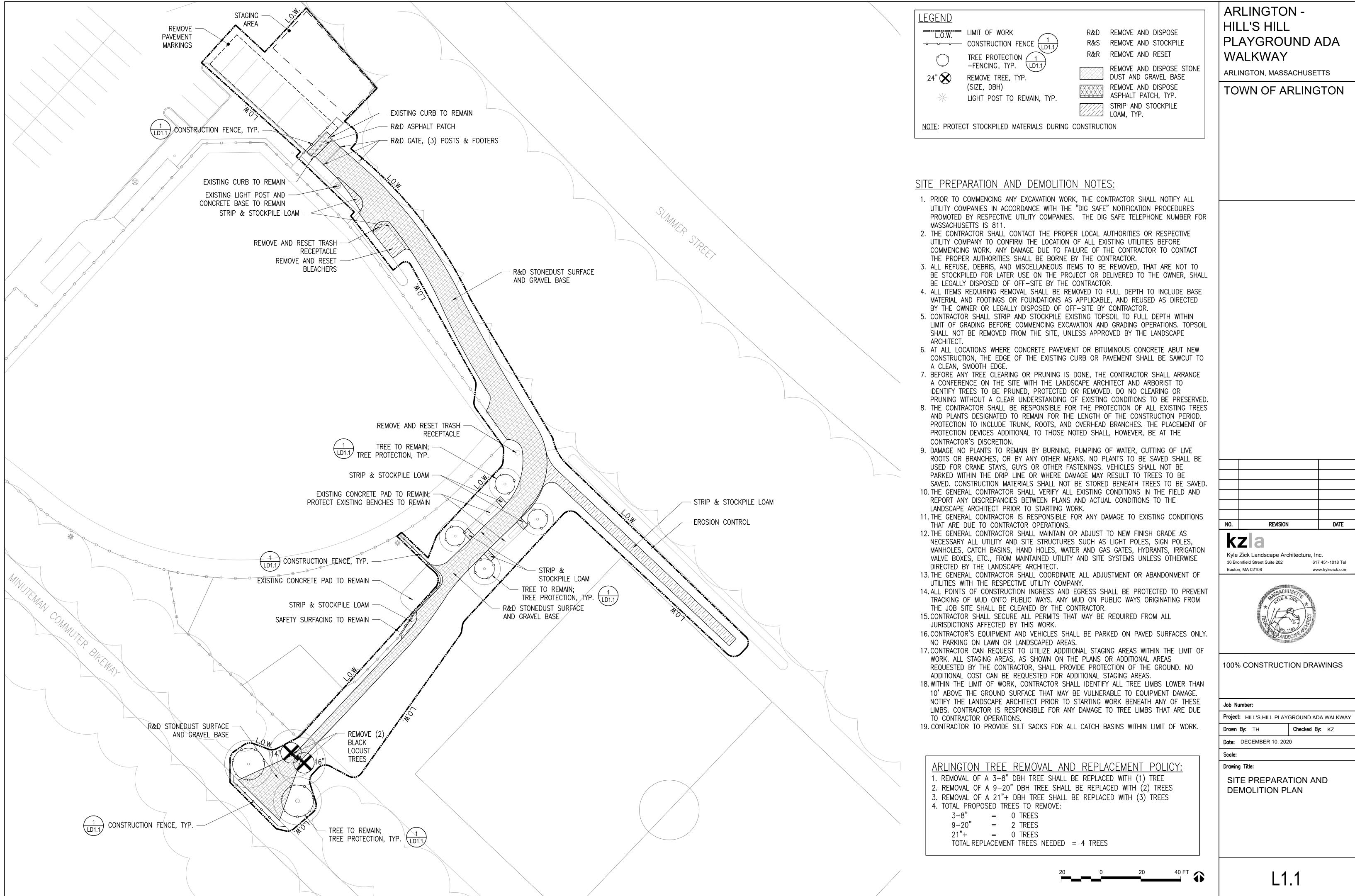
Date: DECEMBER 10, 2020

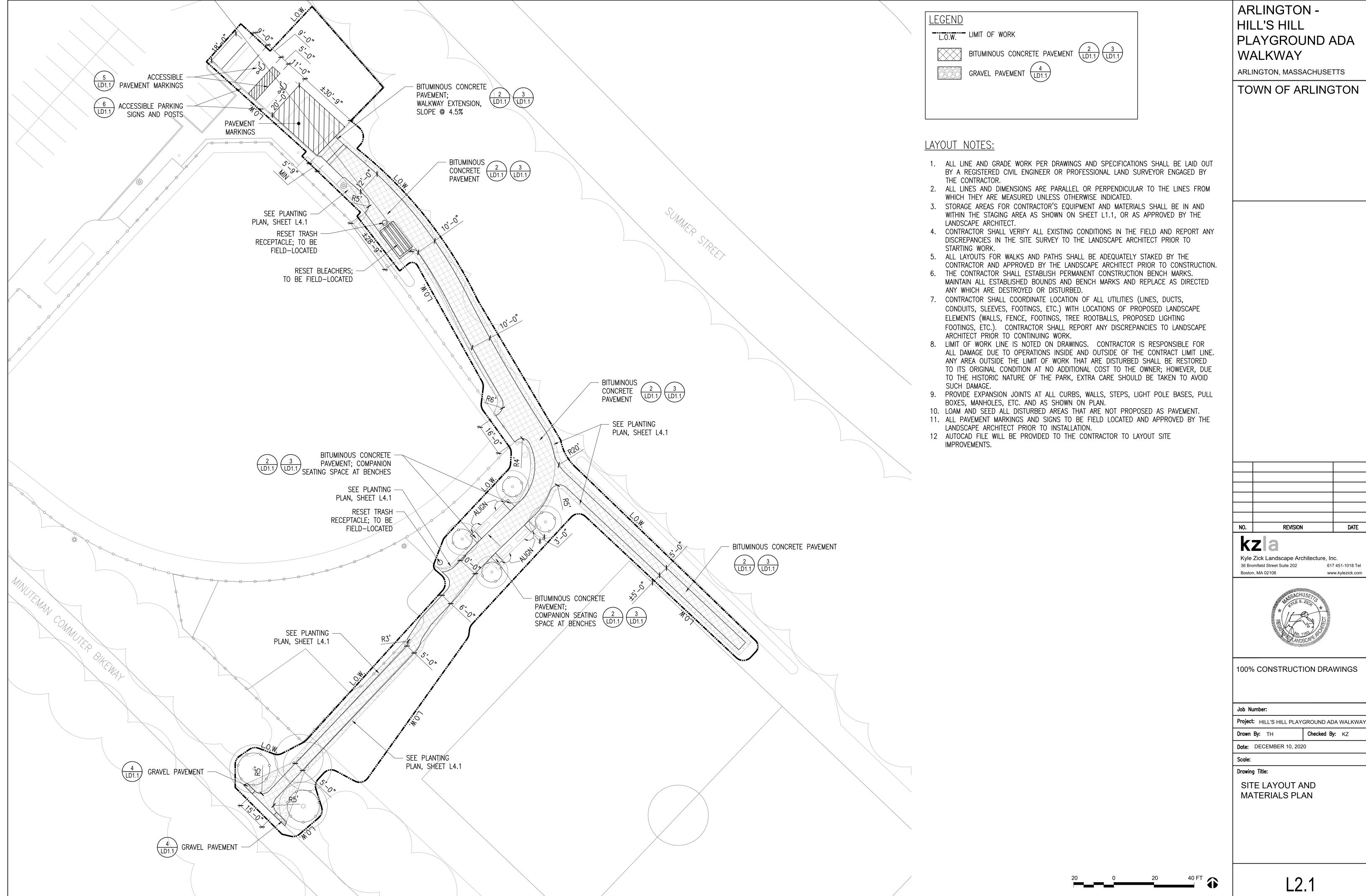
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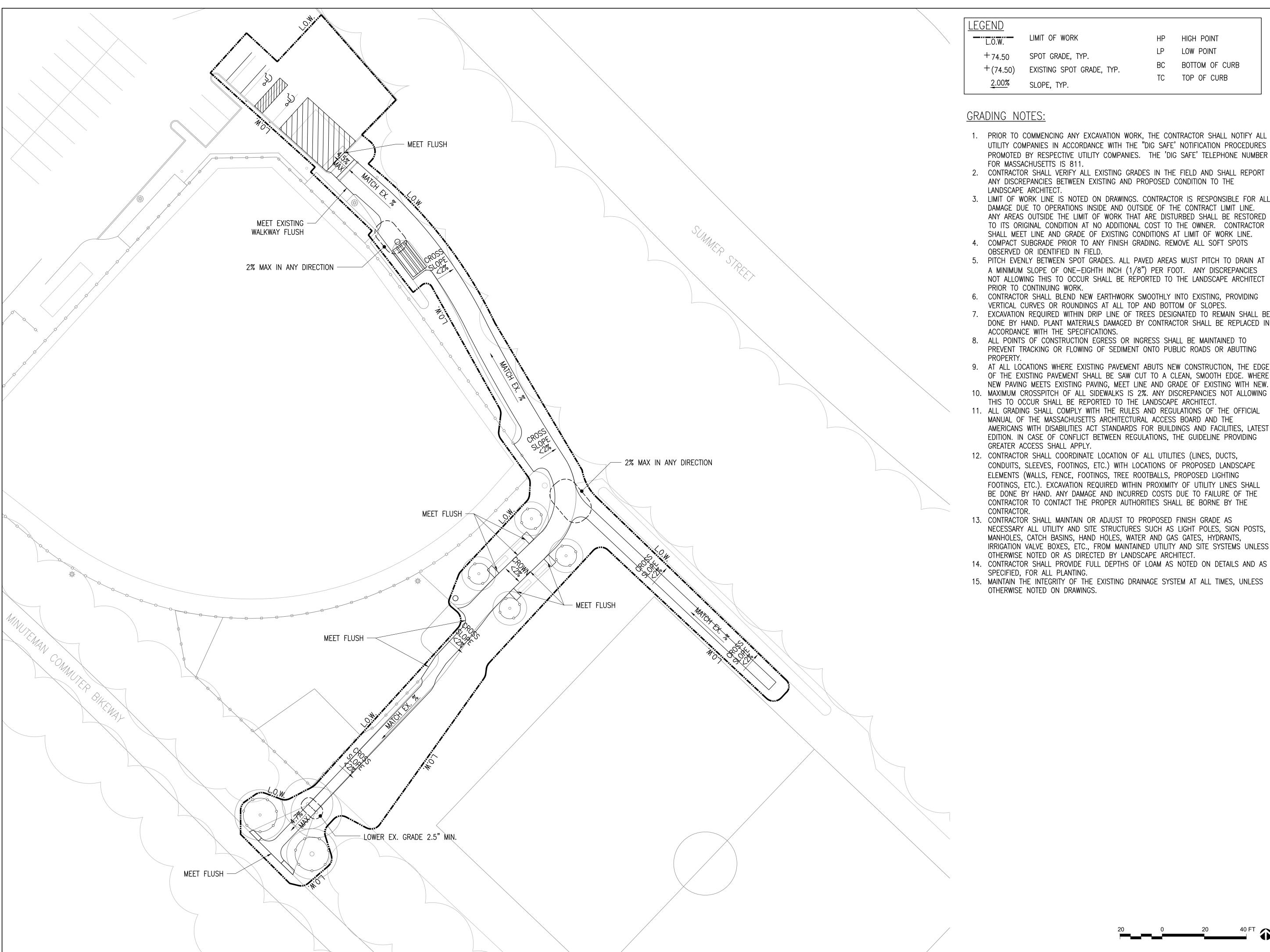
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ARLINGTON -HILL'S HILL PLAYGROUND ADA WALKWAY

ARLINGTON, MASSACHUSETTS

TOWN OF ARLINGTON

2. CONTRACTOR SHALL VERIFY ALL EXISTING GRADES IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES BETWEEN EXISTING AND PROPOSED CONDITION TO THE

- 3. LIMIT OF WORK LINE IS NOTED ON DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE DUE TO OPERATIONS INSIDE AND OUTSIDE OF THE CONTRACT LIMIT LINE. ANY AREAS OUTSIDE THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL MEET LINE AND GRADE OF EXISTING CONDITIONS AT LIMIT OF WORK LINE.
- 4. COMPACT SUBGRADE PRIOR TO ANY FINISH GRADING. REMOVE ALL SOFT SPOTS
- 5. PITCH EVENLY BETWEEN SPOT GRADES. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM SLOPE OF ONE-EIGHTH INCH (1/8") PER FOOT. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT
- 6. CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY INTO EXISTING, PROVIDING
- 7. EXCAVATION REQUIRED WITHIN DRIP LINE OF TREES DESIGNATED TO REMAIN SHALL BE DONE BY HAND. PLANT MATERIALS DAMAGED BY CONTRACTOR SHALL BE REPLACED IN
- 8. ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS OR ABUTTING
- 9. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. WHERE
- 10. MAXIMUM CROSSPITCH OF ALL SIDEWALKS IS 2%. ANY DISCREPANCIES NOT ALLOWING
- 11. ALL GRADING SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE OFFICIAL MANUAL OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD AND THE AMERICANS WITH DISABILITIES ACT STANDARDS FOR BUILDINGS AND FACILITIES, LATEST EDITION. IN CASE OF CONFLICT BETWEEN REGULATIONS, THE GUIDELINE PROVIDING
- 12. CONTRACTOR SHALL COORDINATE LOCATION OF ALL UTILITIES (LINES, DUCTS, CONDUITS, SLEEVES, FOOTINGS, ETC.) WITH LOCATIONS OF PROPOSED LANDSCAPE ELEMENTS (WALLS, FENCE, FOOTINGS, TREE ROOTBALLS, PROPOSED LIGHTING FOOTINGS, ETC.). EXCAVATION REQUIRED WITHIN PROXIMITY OF UTILITY LINES SHALL BE DONE BY HAND. ANY DAMAGE AND INCURRED COSTS DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE
- 13. CONTRACTOR SHALL MAINTAIN OR ADJUST TO PROPOSED FINISH GRADE AS NECESSARY ALL UTILITY AND SITE STRUCTURES SUCH AS LIGHT POLES, SIGN POSTS, MANHOLES, CATCH BASINS, HAND HOLES, WATER AND GAS GATES, HYDRANTS, IRRIGATION VALVE BOXES, ETC., FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS
- 14. CONTRACTOR SHALL PROVIDE FULL DEPTHS OF LOAM AS NOTED ON DETAILS AND AS
- 15. MAINTAIN THE INTEGRITY OF THE EXISTING DRAINAGE SYSTEM AT ALL TIMES, UNLESS

NO.	REVISION	DATE

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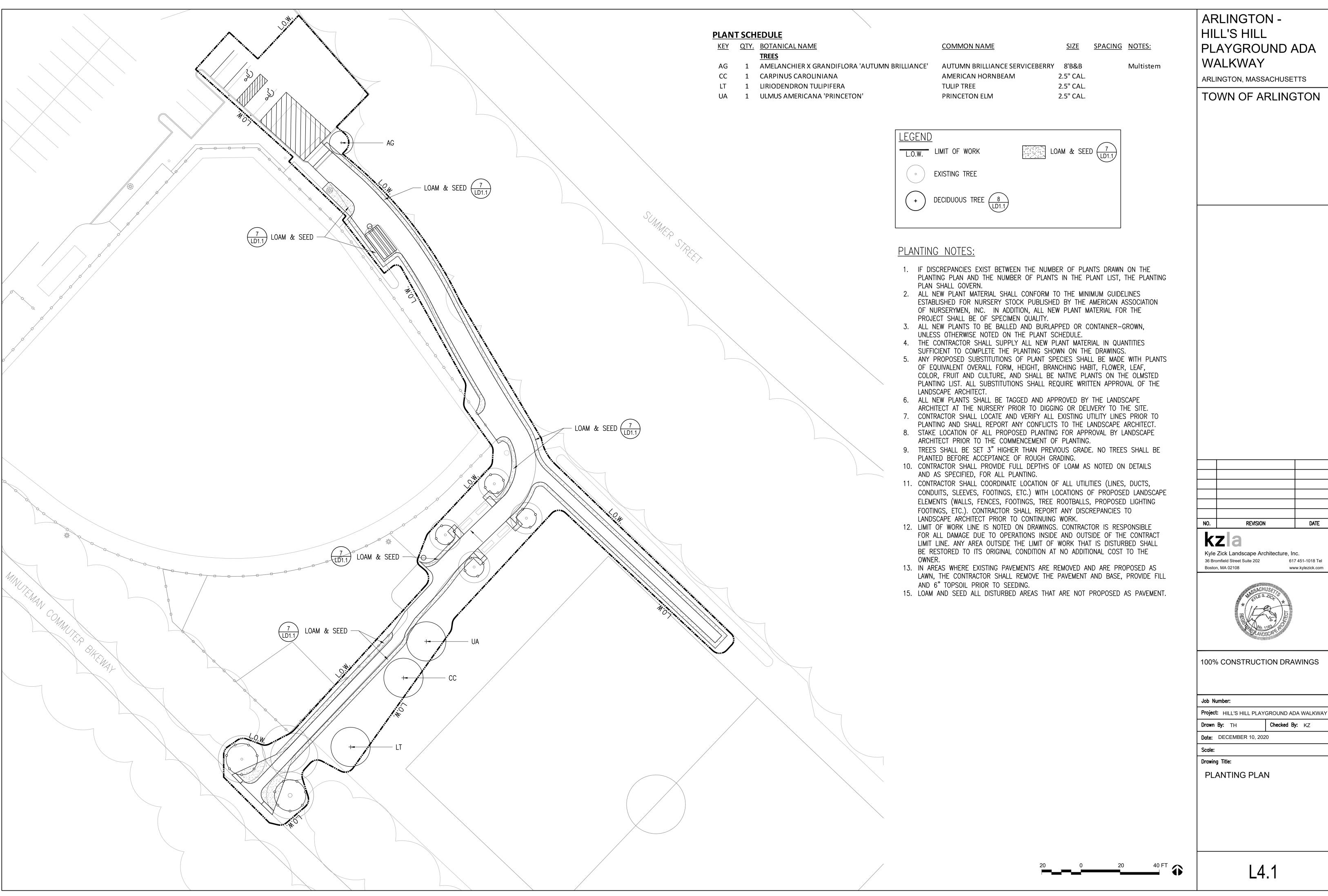
Project: HILL'S HILL PLAYGROUND ADA WALKWAY

Checked By: KZ Drawn By: TH

Date: DECEMBER 10, 2020

Drawing Title:

GRADING PLAN



SPECIFICATION NOTES:

FENCING:

1. CONSTRUCTION FENCE

- a. FENCE SHALL BE SUFFICIENT TO RESTRICT ACCESS TO SITE AND ACCOMMODATE CONSTRUCTION OPERATIONS.
- 2. TREE PROTECTION FENCE
 - a. TREE PROTECTION FENCING HEIGHT SHALL BE 4 FT. UNLESS OTHERWISE INDICATED. TREE PROTECTION FENCING SHALL BE ONE OF THE FOLLOWING, AT THE CONTRACTOR'S OPTION.
 - (1) GALVANIZED CHAIN LINK FENCING. POSTS FOR FENCING SHALL BE NOMINAL 2-1/2 IN. DIAMETER, GALVANIZED STEEL POSTS, DRIVEN A MINIMUM OF 3 FT. INTO THE GROUND. POSTS SHALL BE SPACED 10 FT. O.C. MAXIMUM. FENCE FABRIC SHALL BE 2 IN. MESH, 11 GAUGE MINIMUM.
 - (2) WIRE BOUND WOODROLL SNOW FENCE WITH 3/8 IN. X 1-1/2 IN. WIDE PICKETS, SPACED APPROX. 2 IN. APART BOUND TOGETHER WITH AT LEAST 13 GAUGE GALVANIZED STEEL WIRE AND WITH BRIGHTLY PAINTED TOP EDGE. STAKES FOR FENCING SHALL BE STEEL OR WOOD POSTS. POSTS SHALL BE SPACED 10 FT. MAXIMUM.
 - (3) POLYPROPYLENE BARRICADE FENCING MANUFACTURED BY BEN MEADOWS CO., 3589 BROAD STREET, ATLANTA, GA 30366, OR APPROVED EQUAL. STAKES FOR FENCING SHALL BE 2 IN. X 4 IN. WOOD POSTS. DRIVEN A MINIMUM OF 3 FT. INTO THE GROUND. POSTS SHALL BE SPACED 8 FT. MAX.
 - (4) PLASTIC POLYMER SAFETY FENCE, MODEL BX2050 SAFETY GRID, MANUFACTURED BY THE TENSAR CORPORATION, MORROW, GA 30260, OR APPROVED EQUAL. COLOR SHALL BE HIGH VISIBILITY ORANGE. STAKES FOR FENCING SHALL BE 2 IN. X 4 IN. WOOD POSTS, DRIVEN A MIN. OF 3 FT INTO THE GROUND, SPACED 8 FT. O.C. MAX
 - b. TREE PROTECTION SHALL REMAIN IN PLACE AND BE MAINTAINED IN WORKING CONDITION BY THE CONTRACTOR UNTIL DIRECTED FOR REMOVAL BY THE LANDSCAPE ARCHITECT. CONTRACTOR SHALL REMOVE TREE PROTECTION DEVICES FROM THE SITE AT THE COMPLETION OF THE WORK.

TREE REMOVAL

- 1. TREE REMOVAL SHALL INCLUDE THE FELLING, CUTTING, AND SATISFACTORY DISPOSAL OF ALL TREES, STUMPS AND VEGETATIVE DEBRIS PRODUCED THROUGH REMOVING THE TREES.
- 2. STUMPS SHALL BE REMOVED TO THEIR FULL DEPTH UNLESS OTHERWISE NOTED. ROOTS 3 INCHES AND LARGER SHALL BE REMOVED TO A DEPTH OF 1 FOOT BELOW FINISHED GRADE. STUMPS SHALL BE LEGALLY DISPOSED OF OFF-SITE.

PAVEMENT:

BITUMINOUS CONCRETE PAVEMENT

1. UNLESS OTHERWISE SPECIFIED, WORK AND MATERIALS FOR CONSTRUCTION OF THE BITUMINOUS CONCRETE PAVEMENT. BITUMINOUS CONCRETE CURB, AND BITUMINOUS CONCRETE PATCH SHALL CONFORM TO THE APPLICABLE PORTIONS OF THE MASSDOT SPECIFICATIONS SECTION 400.

SUBBASE AND BASE COURSES

- 1. AGGREGATE SUBBASE AND BASE COURSES FOR PAVING AND THE SPREADING, GRADING, AND COMPACTION METHODS EMPLOYED SHALL CONFORM TO STANDARD REQUIREMENTS FOR USUAL BASE COURSE OF THIS TYPE FOR FIRST CLASS ROAD WORK, AND THE MASSDOT SPECIFICATIONS SECTION 100.
- 2. PROCESSED GRAVEL SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND COARSE SAND, FREE FROM LOAM AND CLAY, SURFACE COATINGS, AND DELETERIOUS MATERIALS. GRADATION SHALL CONFORM TO THE FOLLOWING:

SIEVE NO.	% PASSING BY WEI
3" (75 MM)	100
1 ½" (37.5MM)	70-100
¾" (19 MM)	50-85
#4 (4.75UM)	30- 60
#200 (75 UM)	0 -10

3. DENSE GRADED CRUSHED STONE SHALL CONSIST OF INERT ANGULAR MATERIAL THAT IS HARD, DURABLE STONE AND STONE SCREENINGS. FREE FROM LOAM AND CLAY. SURFACE COATINGS. AND PLASTIC MATERIALS. GRADATION SHALL CONFORM TO THE FOLLOWING:

SIEVE NO. % PASSING BY WEIGHT

2" (75 MM)	100
1 ½" (37.5 MM)	70–100
¾" (19 MM)	50-85
#4 (4.75 MM)	30-55
#50 (500 UM)	8-24
#200 (75 UM)	3–10

BITUMINOUS CONCRETE

1. BITUMINOUS CONCRETE SHALL BE A STANDARD PLANT-MIXED, HOT-LAID PAVING MATERIAL. CONSISTING OF CLEAN. CRUSHED ROCK AGGREGATE, MINERAL FILLER, AND ASPHALT CONFORMING TO THE MASSDOT STANDARD SPECIFICATIONS SECTION M3.

- 2. BITUMINOUS CONCRETE PAVEMENT SHALL CONSIST OF BINDER COURSE AND TOP/WEARING COURSE. PAVEMENT DEPTH AFTER ROLLING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS. EACH COURSE SHALL BE APPLIED IN A SINGLE LIFT.
- BITUMINOUS PAVING MIXTURE, EQUIPMENT, TEMP., METHODS OF MIXING AND PLACING, AND PRECAUTIONS AS TO WEATHER & CONDITION OF BASE SHALL CONFORM TO THE MASSDOT SPECIFICATIONS SECTION 400 - CLASS I BITUMINOUS CONCRETE PAVEMENT FOR ROADWAY & PARKING AREAS.
- BITUMINOUS CONCRETE PATCH SHALL CONSIST OF BINDER AND TOP COURSES OF BITUMINOUS CONCRETE IN DEPTHS TO MATCH EXISTING PAVEMENT.
- 5. NO MIX SHALL BE PLACED ON WET OR DAMP SURFACES, OR WHEN AMBIENT TEMPERATURES ARE 40F AND FALLING.

BITUMINOUS MATERIALS

- 1. TACK COAT SHALL CONSIST OF ASPHALT EMULSION, TYPE RS-1 OR RS-2 CONFORMING TO MASSDOT SPECIFICATIONS.
- 2. PRIME COAT SHALL BE ASPHALT PRIMER CONFORMING TO MASSDOT SPECIFICATIONS, M3 ASPHALT PRIMER, AND IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M116.

BITUMINOUS CONCRETE PAVEMENT SPREADING, COMPACTION & FINISHING

- 1. THE EQUIPMENT FOR SPREADING AND FINISHING SHALL BE MECHANICAL, SELF-POWERED PAVERS, CAPABLE OF SPREADING AND FINISHING THE MIXTURE TRUE TO LINES, GRADE, WIDTH AND CROWN BY MEANS OF FULLY AUTOMATED CONTROLS FOR BOTH LONGITUDINAL AND TRANSVERSE SLOPE.
- 2. SPREADING BY HAND METHODS WILL BE PERMITTED ONLY FOR LOCATIONS IN THE WORK WHICH BECAUSE OF IRREGULARITY, INACCESSIBILITY OR OTHER UNAVOIDABLE OBSTACLES DO NOT ALLOW MECHANICAL SPREADING AND FINISHING.
- AFTER THE PAVING MIXTURE HAS BEEN PROPERLY SPREAD, COMPACTION SHALL BE OBTAINED BY THE USE OF POWER ROLLERS OF APPROVED DESIGN AND WEIGHT PER INCH OF ROLLER. THE ROLLERS SHALL BE STEEL WHEELED SUPPLEMENTED WITH PNEUMATIC-TIRED ROLLERS WHERE REQUIRED
- 4. IN PLACES NOT ACCESSIBLE TO ROLLER, MIXTURE SHALL BE COMPACTED WITH HAND TAMPERS WEIGHING AT LEAST 50 POUNDS WITH A TAMPING FACE LESS THAN OR EQUAL TO 100 SQUARE INCHES. MECHANICAL TAMPERS CAPABLE OF EQUAL COMPACTION WILL BE ACCEPTABLE IN AREAS IN WHICH THEY CAN BE EMPLOYED EFFECTIVELY.
- 5. EARTH OR OTHER APPROVED MATERIAL SHALL BE PLACED ALONG PAVEMENT EDGES IN SUCH QUANTITY AS WILL COMPACT TO THICKNESS OF COURSE BEING CONSTRUCTED, ALLOWING AT LEAST 12 INCHES OF SHOULDER WIDTH TO BE ROLLED AND COMPACTED SIMULTANEOUSLY WITH ROLLING AND COMPACTING SURFACE. PAVEMENT EDGE SHALL BE TRIMMED NEATLY TO LINE BEFORE PLACING APPROVED MATERIAL ALONG EDGE.
- THE SURFACE OF THE MIXTURE AFTER COMPACTION SHALL BE SMOOTH AND TRUE TO THE ESTABLISHED LINE AND GRADE. VARIATIONS IN PITCH OF FINISHED SURFACE SHALL BE LESS THAN OR EQUAL TO THE FOLLOWING TOLERANCES WHEN TESTED WITH A 10 FOOT STRAIGHTEDGE, APPLIED BOTH PARALLEL TO AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. a. FOR ROADWAY AND PARKING PAVEMENT SURFACE COURSE -
- 1/4 INCH IN 10 FEET. b. AT JOINT WITH EXISTING PAVEMENT, AND AT OTHER LOCATIONS WHERE AN ESSENTIALLY FLUSH TRANSITION IS REQUIRED. PAVEMENT ELEVATION TOLERANCE SHALL NOT EXCEED 0.01 FEET.
- c. AT OTHER AREAS PAVEMENT ELEVATION TOLERANCE SHALL NOT EXCEED + 0.05 FEET.
- d. IRREGULARITIES EXCEEDING THESE AMOUNTS OR THAT RETAIN WATER ON SURFACE SHALL BE CORRECTED BY REMOVING DEFECTIVE WORK AND REPLACING WITH NEW MATERIAL.
- 7. SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING.
- 8. ALL WORK SHALL COMPLY WITH ADA REQUIREMENTS.

SUBMITTALS (PRIOR TO ORDERING):

1. SUBMIT THE FOLLOWING:

- JOB MIX FORMULA FOR ALL BITUMINOUS CONCRETE MIXES, LISTING PROPERTIES AND PERTINENT INGREDIENTS FOR REVIEW AND APPROVAL
- 2. SUBMIT SAMPLES OF THE FOLLOWING: PROCESSED GRAVEL BASE DENSE GRADED CRUSHED STONE
- 3. SUBMIT TESTING FOR THE FOLLOWING: MECHANICAL GRADATION (SIEVE ANALYSIS) OF EACH MATERIAL PROPOSED FOR FILL AND BACKFILL FROM ON-SITE MATERIALS AND OFF-SITE BORROW SOURCES.

PLANTING SPECIFICATION NOTES:

SEASONS FOR PLANTING:

SPRING: DECIDUOUS MATERIALS — MARCH 21 TO MAY 1 2. FALL: DECIDUOUS MATERIALS — OCTOBER 1 TO DECEMBER 1

1. LOAM SHALL BE ONE OF THE FOLLOWING LOAMY SANDS AND SANDY LOAMS" "LOAMY SAND", "LOAMY FINE SAND" LOAM VERY FINE SAND" OR COARSE SANDY LOAM" DETERMINED BY MECHANICAL ANALYSIS (ASTM D 422) AND BASED ON THE "USDA CLASSIFICATION SYSTEM." IT SHALL BE OF UNIFORM COMPOSITION. WITHOUT ADMIXTURE OF SUBSOIL. LOAM SHALL BE FREE OF STONES GREATER THAN 0.75 INCHES, LUMPS, PLANTS AND THEIR ROOTS, DEBRIS AND OTHER EXTRANEOUS MATTER AS DETERMINED BY THE LANDSCAPE ARCHITECT

PLANTING SOIL FOR LAWN AREAS SHALL HAVE THE FOLLOWING GRAIN SIZE DISTRIBUTION FOR MATERIAL PASSING THE #10 SIEVE:

	PERCENT PASSING	BY WEIGHT
<u>MILLIMETER</u>	MAXIMUM	<u>MINIMUM</u>
2		100
1	100	82
0.5	87	65
0.25	72	49
0.10	45	30
0.05	32	22
0.002	5	2

- a. MAXIMUM SIZE SHALL BE ONE AND ONE QUARTER INCHES LARGEST DIMENSION. THE MAXIMUM RETAINED ON THE #10 SIEVE SHALL BE 25% BY WEIGHT OF THE TOTAL SAMPLE.
- b. THE RATIO OF THE PARTICLE SIZE FOR 80% PASSING (D80) TO THE PARTICLE SIZE FOR 30% PASSING (D30) SHALL BE 6.0 OR LESS. (D80/D30 < 6.0).
- ORGANIC CONTENT AND PH FOR SPECIFIC PLANTING USE SHALL BE AS FOLLOWS:
- a. AREAS PLANTED WITH TURF GRASSES
 - (1) PH: 6.0 THROUGH 7.0
 - (2) ORGANIC CONTENT 4.0 6.0 PERCENT AS DETERMINED BY THE LOSS ON IGNITION OF OVEN-DRIED SAMPLES PASSING #10 SIEVE (MUFFLE FURNACE TEMPERATURE: 450 + / - 10 DEGREES C FOR 8 HOURS)
- b. TOP 18 INCHES (450 MM) OF AREAS PLANTED WITH TREES AS DESCRIBED IN THIS SPECIFICATION:
- (1) PH: 5.5 THROUGH 6.5 FOR NON-ACID LOVING PLANTS (2) ORGANIC CONTENT 4.0 - 6.0, AS FOR AREAS PLANTED WITH TURF GRASSES.
- LOAM BORROW SHALL BE TESTED FOR CONFORMANCE TO THE SPECIFICATIONS. SOIL ADDITIVES SHALL BE USED TO COUNTERACT SOIL DEFICIENCIES AS RECOMMENDED BY THE SOILS ANALYSIS, AND AS SUPPLEMENTS FOR LAWN CONSTRUCTION.
- 4. PLACE LOAM IN TWO LIFTS. PLACE THE FIRST LIFT TO A DEPTH OF 2 INCHES. TILL THE LOAM INTO THE UNDERLYING SUBSOIL TO A DEPTH OF 2 INCHES, CREATING A BLENDED INTERFACE OF LOAM AND SUBSOIL APPROXIMATELY 4 INCHES DEEP. SPREAD SECOND LIFT OF LOAM TO A MINIMUM DEPTH OF 4 INCHES. OR AS SHOWN ON THE CONTRACT DOCUMENTS.
- 5. NO LOAM SHALL BE PLANTED, HANDLED OR SEEDED IF IT IS IN A WET OR FROZEN CONDITION.
- 6. SOIL ADDITIVES SHALL BE INCORPORATED BY HARROWING OR SIMILAR METHOD, AS APPROVED BY LANDSCAPE ARCHITECT. INCORPORATE THE FOLLOWING ADDITIVES:
- a. GROUND LIMESTONE OR ACIDULANT AS REQUIRED BY THE SOIL ANALYSIS TO ACHIEVE REQUIRED PH. b. FERTILIZER AT THE RATE AND COMPOSITION RECOMMENDED BY
- THE SOIL ANALYSIS c. OTHER SOIL AMENDMENTS AS REQUIRED BY THE SOIL
- 7. COMPACT LOAM TO THE REQUIRED DENSITY. MAXIMUM DRY DENSITY FOR TOPSOILS AND LOAM SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D698. THE FOLLOWING PERCENTAGES OF MIN. TO MAX. DRY DENSITIES SHALL BE ACHIEVED FOR FILL MATERIALS OR PREPARED SUBGRADES IN LAWN AND PLANT BEDS:

MINIMUM MAXIMUM

	111111 111111 0 1111	1717 17 11111 0 1111
a. FILLS WITHIN SEEDING		
AND PLANTING AREAS IN TOP	80%	85%
18" OF FINISHED GRADE		

SEED MIXTURE SHALL BE FRESH, CLEAN, NEW CROP SEED. GRASS SHALL BE OF THE PREVIOUS YEAR'S CROP AND THE WEED SEED CONTENT SHALL NOT EXCEED 0.25% BY WEIGHT

2. SEED MIXTURE COMPOSITION

ANALYSIS.

COMMON NAME	PROPORTION BY WEIGHT	GERMINATION MINIMUM	PURITY <u>MINIMUM</u>	
KENTUCKY BLUEGRASS (3 VARIETIES MIN./4 MAX.)	80%	85%	95%	
PERENNIAL RYE (2 VARIETIES MIN)	20%	90%	90%	

a. ALL GRASS VARIETIES SHALL BE WITHIN THE TOP 50 PERCENT OF VARIETIES TESTED IN THE NATIONAL TURFGRASS

EVALUATION PROGRAM, OR CURRENTLY RECOMMENDED AS LOW-MAINTENANCE VARIETIES BY THE UNIVERSITY OF MASSACHUSETTS OR THE UNIVERSITY OF RHODE ISLAND.

- b. SEEDING RATE SHALL BE 4 LBS PER 1.000 SQUARE FEET.
- c. SEASON FOR SEEDING SHALL BE FROM APRIL 1 TO JUNE 1 AND FROM AUGUST 15 TO SEPTEMBER 30. SEED LOAM AREAS WITHIN 5 DAYS OF SPREADING THE LOAM.

WOOD CELLULOSE FIBER MULCH

- 1. MULCH TO COVER HYDROSEEDED AREAS SHALL BE FIBER PROCESSED FROM WHOLE WOOD CHIPS AND CLEAN RECYCLED NEWSPRINT IN A 1:1 PROPORTION MANUFACTURED SPECIFICALLY FOR STANDARD HYDRAULIC MULCHING EQUIPMENT. FIBER SHALL NOT BE PRODUCED FROM RECYCLED MATERIAL SUCH AS SAWDUST, PAPER, OR CARDBOARD.
- 2. MOISTURE CONTENT SHALL NOT EXCEED 10 PERCENT, PLUS OR MINUS 3 PERCENT AS DEFINED BY THE PULP AND PAPER INDUSTRY STANDARDS. FIBER SHALL HAVE A WATER HOLDING CAPACITY OF NOT LESS THAN 900 GRAMS WATER PER 100 GRAMS FIBER.
- 3. THE MULCH SHALL BE OF SUCH CHARACTER THAT THE FIBER WILL BE DISPERSED INTO A UNIFORM SLURRY WHEN MIXED WITH WATER. MULCH SHALL BE NONTOXIC TO PLANT OR ANIMAL LIFE.
- 4. MULCH SHALL CONTAIN A NON-PETROLEUM BASED ORGANIC TACKIFIER AND A GREEN DYE TO ALLOW FOR EASY VISUAL METERING DURING APPLICATION, BUT SHALL BE NON-INJURIOUS TO PLANT GROWTH

THE CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH HIS OWN SUPPLY OF WATER TO THE SITE AT NO EXTRA COST. ALL WORK INJURED OR DAMAGED DUE TO THE LACK OF WATER, OR THE USE OF TOO MUCH WATER, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CORRECT. WATER SHALL BE FREE FROM IMPURITIES INJURIOUS TO VEGETATION.

BARK MULCH: MULCH SHALL BE HIGH QUALITY, DOUBLE-GROUND, PREMIUM BARK MULCH OF 70 PERCENT HEMLOCK BARK WITH THE BALANCE SPRUCE AND PINE BARK. MULCH SHALL HAVE BEEN AGED FOR A MINIMUM OF SIX MONTHS AND A MAXIMUM OF TWO YEARS. BARK MULCH SHALL BE SHREDDED TO A UNIFORM SIZE; FREE OF DIRT, DEBRIS AND FOREIGN MATTER; WITH PIECES NO THICKER THAN 1/4". MULCH MUST BE FREE OF STRINGY MATERIAL OR CHUNKS OVER 3 INCHES IN SIZE AND SHALL NOT CONTAIN, IN THE JUDGMENT OF THE LANDSCAPE ARCHITECT, AN EXCESS OF FINE PARTICLES.

1. GROUND LIMESTONE FOR ADJUSTMENT OF LOAM BORROW PH SHALL CONTAIN NOT LESS THAN 85 PERCENT OF TOTAL CARBONATES AND SHALL BE GROUND TO SUCH FINENESS THAT 40 PERCENT WILL PASS THROUGH 100 MESH SIEVE AND 95 PERCENT WILL PASS THROUGH A 20 MESH SIEVE. CONTRACTOR SHALL BE AWARE OF LOAM BORROW PH AND THE AMOUNT OF LIME NEEDED TO ADJUST PH TO SPECIFICATION IN ACCORDANCE WITH TESTING LAB RECOMMENDATIONS.

LAWN MAINTENANCE:

MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER ANY AREA IS SEEDED AND SHALL CONTINUE FOR A 90 DAY ACTIVE GROWING PERIOD FOR SEEDED AREAS PAST FINAL ACCEPTANCE: THE COMPLETION OF ALL LAWN CONSTRUCTION WORK, AND UNTIL FINAL ACCEPTANCE OF THE PROJECT.

PLANT MAINTENANCE:

- 1. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS PLANTED AND SHALL CONTINUE FOR A MINIMUM 90-DAY MONITORING PERIOD AND UNTIL FINAL ACCEPTANCE OR, THE END OF THE GROWING SEASON, WHICHEVER COMES LATER. THE GROWING SEASON IS FROM APRIL 1 TO NOVEMBER 1.
- 2. WATERING BAGS SHALL BE INSTALLED AROUND EACH DECIDUOUS TREE. IF TREES ARE STAKED, THE WATERING BAG SHALL BE INSTALLED AROUND ONE OF THE STAKES TO PREVENT THE TRUNK OF THE TREE FROM BEING DAMAGED BY WET CONDITIONS AND TO ENCOURAGE ROOT GROWTH. WATERING BAGS SHALL BE CAPABLE OF RELEASING 20 GALLONS OF WATER OVER A 24 HOUR PERIOD. CONTRACTOR SHALL REMOVE THE WATER BAGS AT FINAL COMPLETION OR REMAIN FOR FUTURE REMOVAL AT THE OWNER'S DISCRETION.
- 3. PLANTS SHALL BE INSPECTED FOR WATERING NEEDS AT LEAST TWICE EACH WEEK AND WATERED TO PROMOTE PLANT GROWTH AND VITALITY. THE FOLLOWING WATERING RATES ASSUME THAT THE SOIL IS FREE DRAINING.

TYPE OF PLANT/SIZE	WEEKLY WATERING RA
TREES	
1"−1½" CALIPER	40 GALLONS
1½" – 2" CALIPER	54 GALLONS
2" – 2½" CALIPER	61 GALLONS
2½" – 3" CALIPER	70 GALLONS

1. THE DATE OF THE CERTIFICATE OF FINAL ACCEPTANCE SHALL ESTABLISH THE COMMENCEMENT OF THE REQUIRED ONE-YEAR GUARANTEE AND ESTABLISHMENT PERIOD FOR PLANTING WORK.

SUBMITTALS (BEFORE ORDERING)

- SUBMIT SAMPLES OF THE FOLLOWING:
- a. BARK MULCH: SUBMIT A ONE CUBIC FOOT SAMPLE b. PEAT MOSS: SUBMIT A ONE CUBIC FOOT SAMPLE
- c. WOOD CELLULOSE FIBER MULCH d. GYPSUM
- e. PEAT MOSS
- SUBMIT MANUFACTURER'S PRODUCT DATA FOR THE FOLLOWING: a. SOIL ADDITIVES:
 - (1) LIMESTONE, INCLUDING CERTIFICATION THAT LIMESTONE CONFORMS TO SPECIFICATION.
 - (2) ACIDULANT, INCLUDING SUPPLIER'S CERTIFICATION THAT THE ACIDULANT BEING SUPPLIED CONFORMS TO SPECIFICATION.
 - (3) FERTILIZER
 - (a) PRODUCT DATA OF SEEDING AND PLANTING FERTILIZER AND CERTIFICATES SHOWING COMPOSITION AND ANALYSIS. SUBMIT FERTILIZATION RATES FOR FERTILIZER PRODUCT BASED UPON SOIL TESTING. ANALYSIS, AND RECOMMENDATIONS AS SPECIFIED. PERFORMED AND PAID FOR UNDER THESE SPECIFICATIONS.
 - (b) SUBMIT THE PURCHASING RECEIPT SHOWING THE TOTAL QUANTITY PURCHASED FOR THE PROJECT PRIOR TO INSTALLATION.
 - (4) GYPSUM
 - (5) PEAT MOSS, INCLUDING SUPPLIER'S CERTIFICATION OF
 - (6) OTHER ADDITIVES NEEDED TO AMEND A SPECIFIC SOIL TO MEET THE SPECIFICATIONS
 - SUBMIT A MANUFACTURER'S CERTIFICATE OF COMPLIANCE TO THE SPECIFICATIONS WITH EACH SHIPMENT OF SEED. THESE CERTIFICATES SHALL INCLUDE THE GUARANTEED PERCENTAGES OF SEED PURITY, WEED CONTENT AND GERMINATION, AND ALSO THE NET WEIGHT AND DATE OF SHIPMENT. NO SEED MAY BE SOWN UNTIL CONTRACTOR HAS SUBMITTED THE CERTIFICATES.
 - c. HYDROSEEDING: PRIOR TO THE START OF HYDROSEEDING, SUBMIT A CERTIFIED STATEMENT FOR APPROVAL AS TO THE NUMBER OF POUNDS OF MATERIALS TO BE USED PER 100 GALLONS OF WATER. SUBMIT COPIES OF MANUFACTURER'S LITERATURE ON WOOD CELLULOSE FIBER MULCH

3. SUBMIT TEST RESULTS OF LOAM BORROW:

- a. THE CONTRACTOR SHALL PROVIDE A ONE CUBIC FOOT REPRESENTATIVE SAMPLE FOR TESTING. ALL STOCKPILE SAMPLING SHALL BE PER ASTM D 75 AND APPENDIXES FOR
- SECURING SAMPLES FROM STOCKPILES. b. TESTING WILL BE AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL DELIVER ALL SAMPLES TO TESTING LABORATORIES VIA OVERNIGHT COURIER AND SHALL HAVE THE TESTING REPORT SENT DIRECTLY TO THE LANDSCAPE
- c. PERFORM ALL TESTS FOR GRADATION, ORGANIC CONTENT, SOIL CHEMISTRY AND PH BY UMASS SOIL AND PLANT TISSUE LABORATORY. WEST EXPERIMENT STATION. NORTH PLEASANT STREET. UNIVERSITY OF MASSACHUSETTS, AMHERST, MA 01003. (413) 545-2311.
- d. TESTING REPORTS SHALL BE DATED WITHIN 30 DAYS OF SUBMISSION TO THE LANDSCAPE ARCHITECT. TESTING REPORTS BEYOND 30 DAYS OLD WILL BE REJECTED AND NEW TESTING REPORTS MANDATED.
- e. TESTING REPORTS SHALL INCLUDE THE FOLLOWING TESTS AND RECOMMENDATIONS.
- (1) MECHANICAL GRADATION (SIEVE ANALYSIS) SHALL BE PERFORMED AND COMPARED TO THE USDA SOIL CLASSIFICATION SYSTEM. SIEVE ANALYSIS SHALL BE BY COMBINED HYDROMETER AND WET SIEVING USING SODIUM HEXAMETAPHOSPHATE AS A DISPERSANT IN COMPLIANCE WITH ASTM D 422 AFTER DESTRUCTION OF ORGANIC MATTER BY H202. TO FACILITATE REVIEW AND APPROVAL OF SIEVE ANALYSIS, PROVIDE A COMPUTER GENERATED GRADATION CURVE FROM UMASS SOIL & PLANT TISSUE LABORATORY.
- (2) PERCENT OF ORGANICS SHALL BE DETERMINED BY THE LOSS ON IGNITION OF OVEN-DRIED SAMPLES. TEST SAMPLES MINUS #10 MATERIAL SHALL BE OVEN-DRIED TO A CONSTANT WEIGHT AT A TEMPERATURE OF 450 DEGREES FAHRENHEIT (752 DEGREES CENTIGRADE).
- (3) CHEMICAL ANALYSIS SHALL BE UNDERTAKEN FOR NITRATE NITROGEN, AMMONIUM NITROGEN, PHOSPHORUS, POTASSIUM, CALCIUM, MAGNESIUM, EXTRACTABLE ALUMINUM, LEAD, ZINC, CADMIUM, COPPER, SOLUBLE SALTS, AND PH AND BUFFER PH. A CONDUCTIVITY METER SHALL BE USED TO MEASURE SOLUBLE SALTS IN 1:2 SOIL/WATER (V/V). EXCEPT WHERE OTHERWISE NOTED, NUTRIENT TESTS SHALL BE FOR AVAILABLE NUTRIENTS.
- (4) SOIL ANALYSIS TESTS SHALL SHOW RECOMMENDATIONS FOR SOIL ADDITIVES TO CORRECT SOILS DEFICIENCIES AS NECESSARY, AND FOR ADDITIVES NECESSARY TO ACCOMPLISH LAWN AND PLANTING WORK AS SPECIFIED.

ARLINGTON -HILL'S HILL PLAYGROUND ADA WALKWAY

ARLINGTON, MASSACHUSETTS

TOWN OF ARLINGTON

NO. REVISION DATE kz

Kyle Zick Landscape Architecture, Inc. 36 Bromfield Street Suite 202 617 451-1018 Tel Boston, MA 02108 www.kylezick.com

100% CONSTRUCTION DRAWINGS

Job Number: Project: HILL'S HILL PLAYGROUND ADA WALKWAY

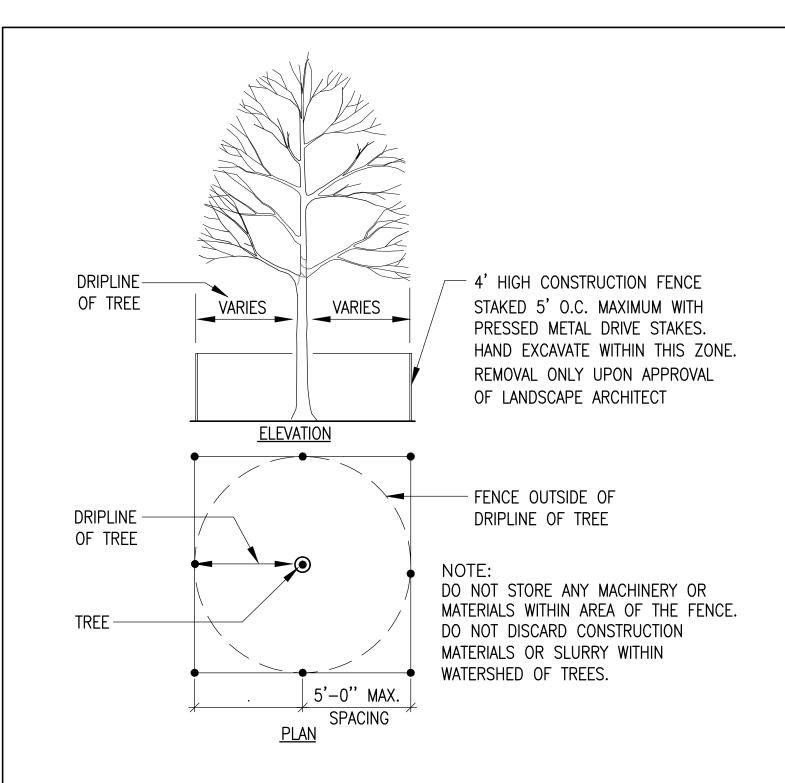
Checked By: KZ

Date: DECEMBER 10, 2020

Drawn By: TH

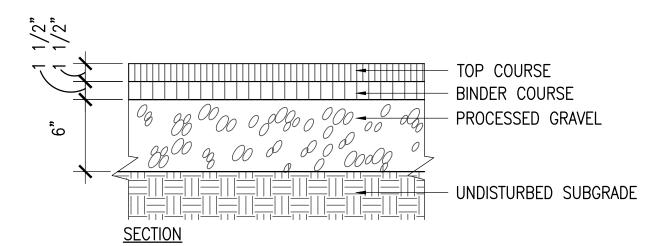
Drawing Title: **SPECIFICATIONS**

L5.1



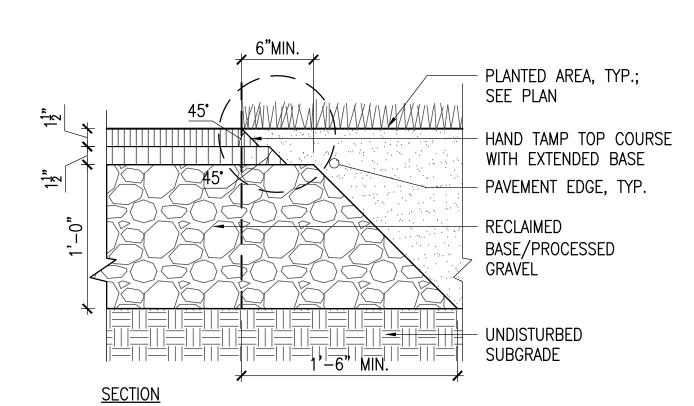
TREE AND SITE PROTECTION - FENCE

SCALE: N.T.S.

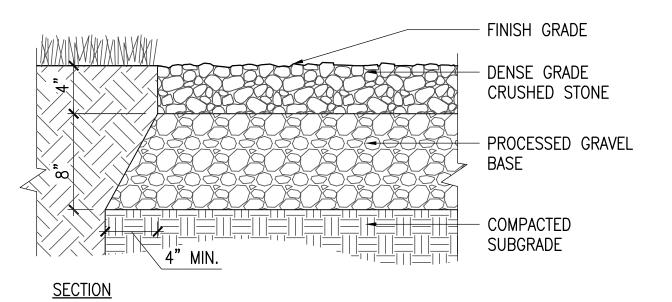


BITUMINOUS CONCRETE PAVEMENT

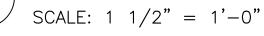
SCALE: $1 \frac{1}{2} = 1'-0''$

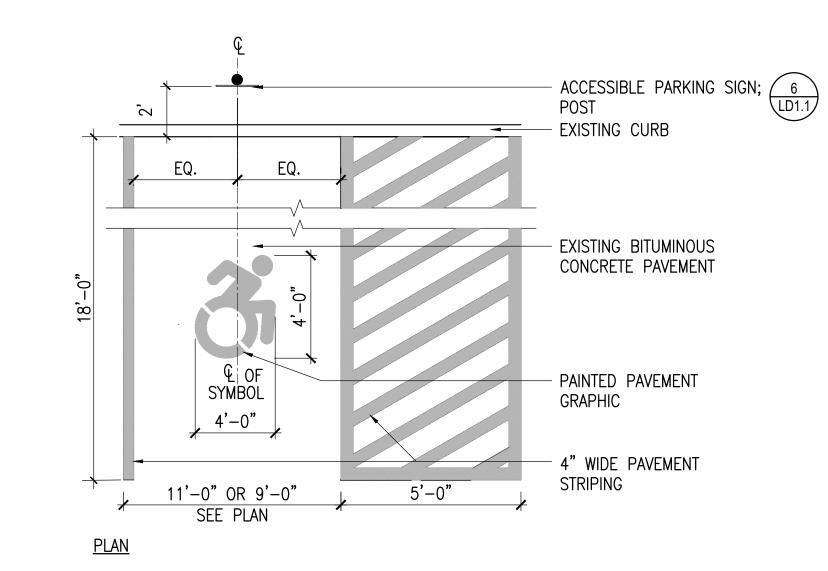


BITUMINOUS CONCRETE PAVEMENT EDGE SCALE: $1 \frac{1}{2} = 1'-0"$

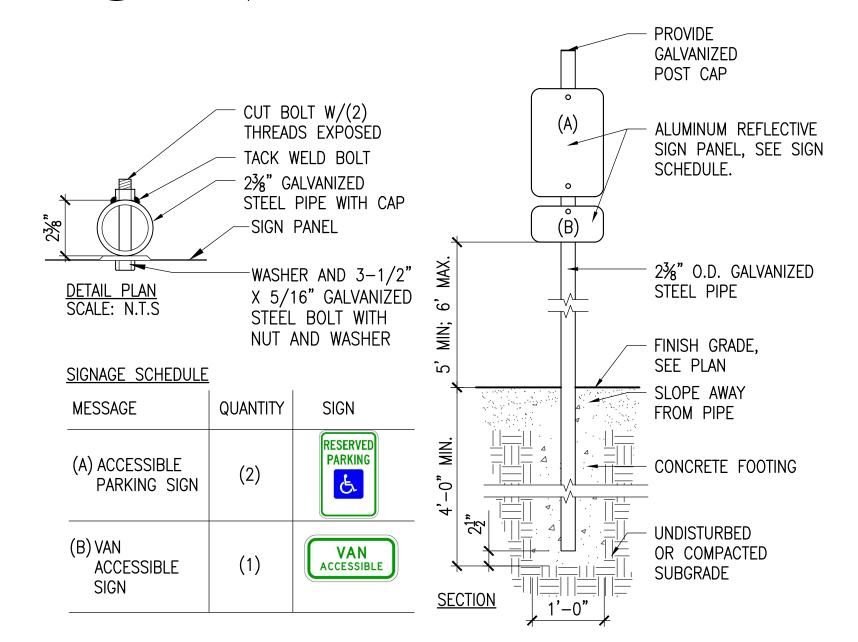


GRAVEL PAVEMENT



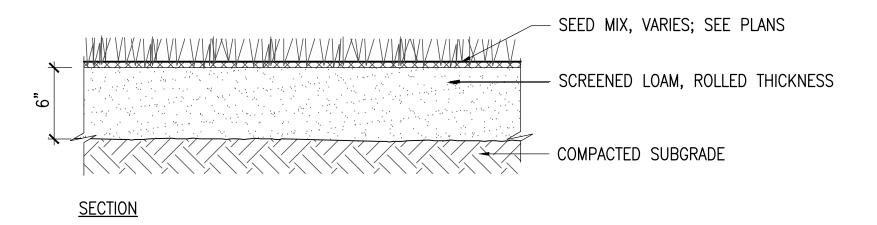


ACCESSIBLE PAVEMENT MARKINGS SCALE: 3/8" = 1'-0"

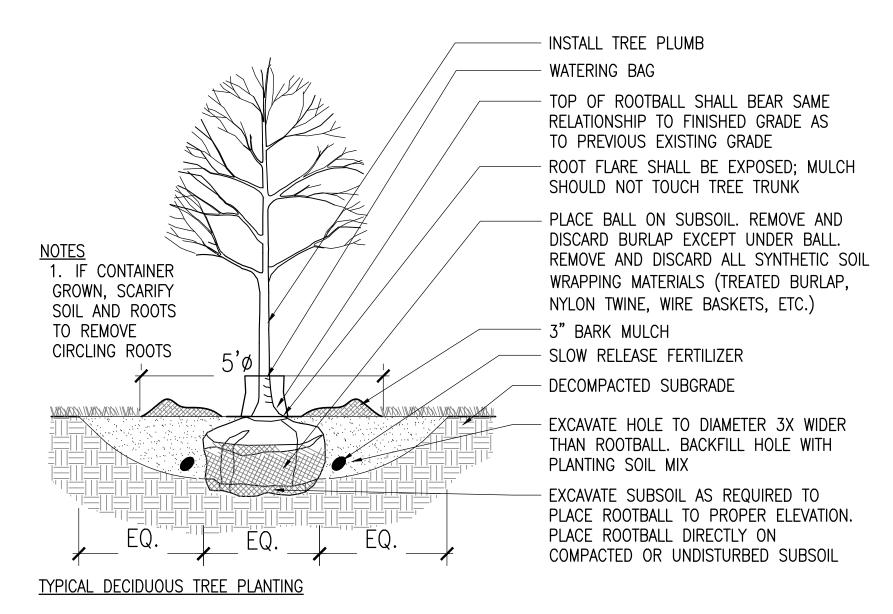


- 1. PROJECT REQUIRES TWO (2) SIGN POSTS ONE WITH SIGN (A) AND SIGN (B); ONE WITH SIGN (A).
- 2. SIGN PANEL SHALL BE 0.08" ENGINEERING-GRADE REFLECTIVE ALUMINUM SHEET. CORNERS SHALL BE ROUNDED. SIZE PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION.
- 3. ENGINEERING GRADE ALUMINUM SHALL MEET ASTM D4956 (TYPE I) RETRO REFLECTIVE STANDARDS. ALUMINUM SHALL HAVE AN OUTDOOR DURABILITY OF UP TO SEVEN YEARS.
- 4. ALL SIGNS SHALL HAVE TWO 3/8-INCH HOLES (ONE AT TOP AND ONE AT BOTTOM).
- 5. ALL HARDWARE SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153. ALL ATTACHMENTS SHALL BE CHILD-SAFE AND VANDAL RESISTANT.







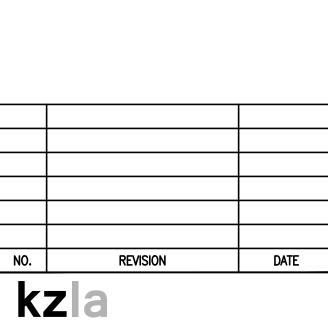






ARLINGTON, MASSACHUSETTS

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100% CONSTRUCTION DRAWINGS

Job Number:

Project: HILL'S HILL PLAYGROUND ADA WALKWAY Drawn By: TH Checked By: KZ

Date: DECEMBER 10, 2020

Drawing Title:

LANDSCAPE DETAILS

LD1.1

ACCESSIBLE PARKING SIGN; POST