

LOCUS MAP

N.T.S.

LIST OF DRAWINGS

- SP1.1 TOPOGRAPHIC SURVEY
- SP1.2 SITE PREPARATION PLAN
- SP1.2 SITE PREPARATION DETAILS
- L1.1 LAYOUT AND MATERIALS PLAN
- L2.1 GRADING AND UTILITY PLAN
- L2.2 UTILITY DETAILS
- L3.1 PLANTING PLAN
- L3.2 PLANTING DETAILS
- L4.1 DETAIL SHEET I
- L4.2 DETAIL SHEET II
- L4.3 DETAIL SHEET III
- L4.4 DETAIL SHEET IV
- L5.1 RISE PRE-SCHOOL PLAYGROUND RESURFACING PLANS
- E0.0 ELECTRICAL LEGEND AND NOTES
- E1.0 ELECTRICAL SITE PLAN

**90% DESIGN DEVELOPMENT/PERMITTING | MARCH 17, 2025**

# TOWN OF READING

## BIRCH MEADOW PARK | PHASE II RENOVATIONS

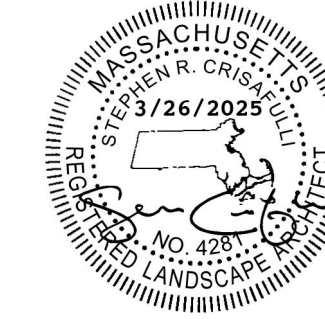
READING, MA

OWNER

Town of Reading  
16 Lowell Street  
Reading, MA 01867  
(781) 942-9001

LANDSCAPE ARCHITECT/CIVIL ENGINEER

Activitas  
70 Milton Street  
Dedham, MA 02026  
(781) 326-2600



SURVEY

Reed Land Surveying, Inc.  
109 Rhode Island Road, Suite 4A  
Lakeville, MA 02347  
(508) 932-1181

ELECTRICAL ENGINEER

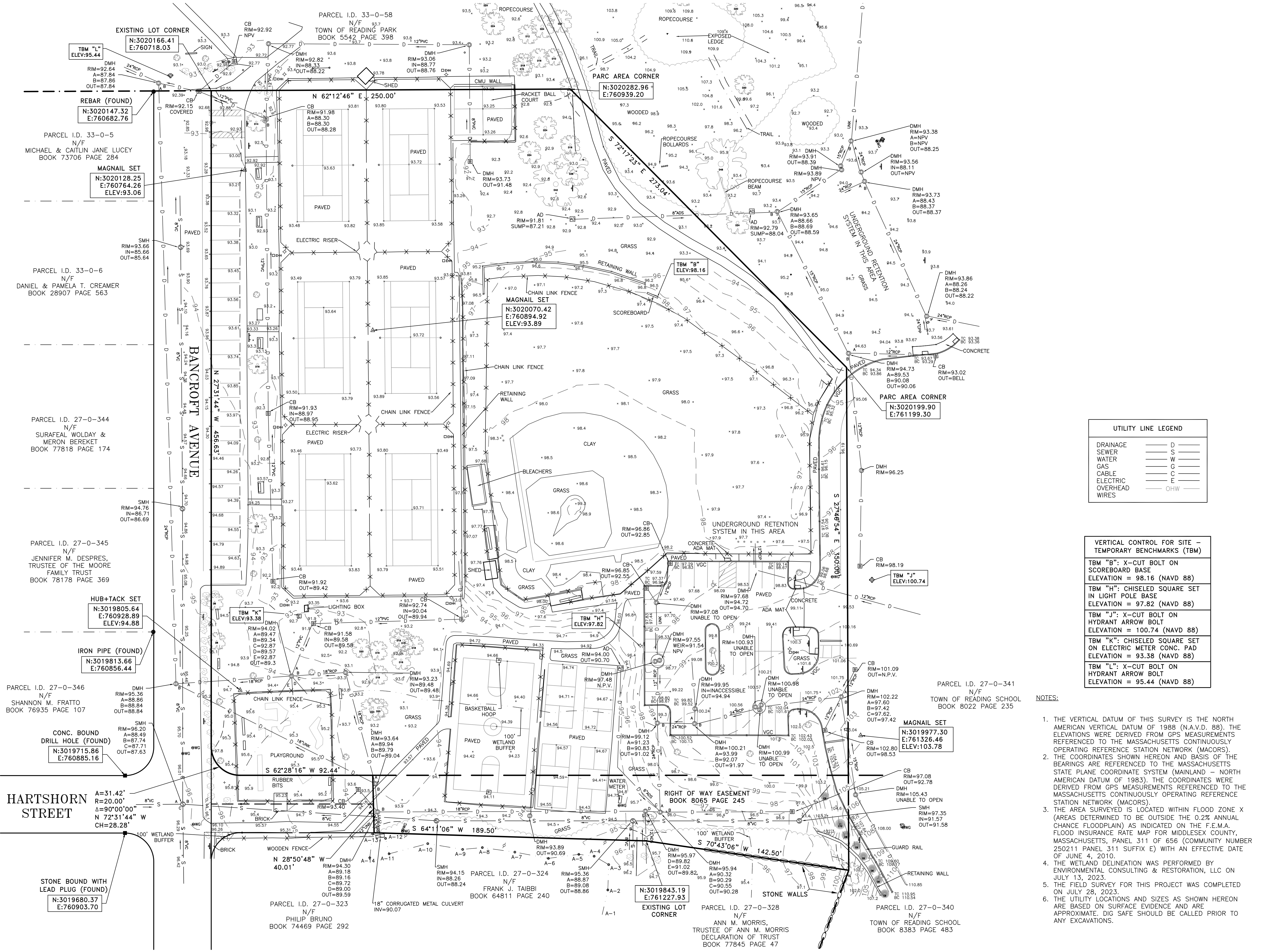
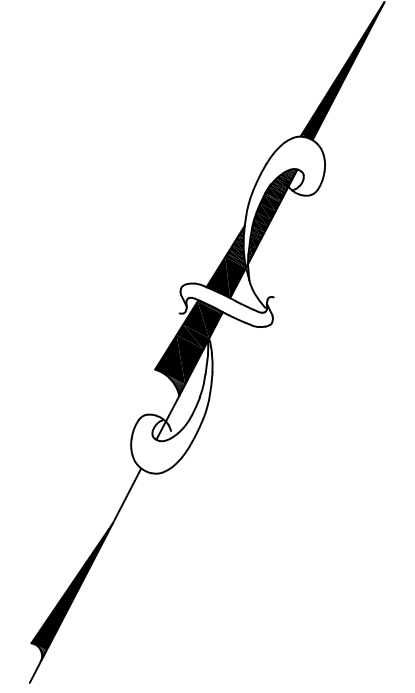
NV5 ENGINEERS  
200 Brickstone Square, Suite 201  
Andover, MA 01810  
(978) 296-6223

TOWN OF READING  
BIRCH MEADOW PARK | PHASE II RENOVATIONS

**90% DESIGN DEVELOPMENT/PERMITTING | MARCH 17, 2025**

REVISIONS:			PROJECT NO. 24037.00
NO.	DATE	SHEETS REVISED	NOTES
1	03.26.25	L2.1,L2.2,L3.1,L3.2	CC NOI SUBMISSION





**LEGEND**

THESE STANDARD SYMBOLS MAY BE FOUND IN THE DRAWING

- ⊕ STREET SIGN
- ⊕ FIRE HYDRANT
- ⊕ CABLE MANHOLE
- ⊕ DRAIN MANHOLE
- ⊕ ELECTRIC MANHOLE
- ⊕ SEWER MANHOLE
- ⊕ TELEPHONE MANHOLE
- ⊕ WATER MANHOLE
- ⊕ UNKNOWN MANHOLE
- ⊕ CATCH BASIN
- ⊕ ELECTRIC BOX/MTR
- ⊕ CABLE BOX
- ⊕ TELEPHONE BOX
- ⊕ GAS METER
- ⊕ MONITORING WELL
- ⊕ GAS GATE
- ⊕ WATER GATE
- ⊕ ELECTRIC HAND HOLE
- ⊕ UTILITY POLE
- ⊕ LIGHT POLE
- ⊕ GUY WIRE
- ⊕ YARD LIGHT
- ⊕ BOUND
- ⊕ BOUND W/ DRILL HOLE
- ⊕ POST/BOLLARD
- ⊕ ROOF DRAIN
- ⊕ BUSH/SHRUB
- ⊕ PARKING SPACES

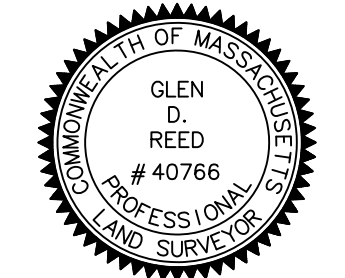
**UTILITY LINE LEGEND**

DRAINAGE	D
SEWER	S
WATER	W
GAS	G
CABLE	C
ELECTRIC	E
OVERHEAD WIRES	OHW

**VERTICAL CONTROL FOR SITE - TEMPORARY BENCHMARKS (TBM)**

TBM "B": X-CUT BOLT ON SCOREBOARD BASE ELEVATION = 98.16 (NAVD 88)
TBM "H": CHISELED SQUARE SET IN LIGHT POLE BASE ELEVATION = 97.82 (NAVD 88)
TBM "J": X-CUT BOLT ON HYDRANT ARROW BOLT ELEVATION = 100.74 (NAVD 88)
TBM "K": CHISELED SQUARE SET ON ELECTRIC METER CONC. PAD ELEVATION = 93.38 (NAVD 88)
TBM "L": X-CUT BOLT ON HYDRANT ARROW BOLT ELEVATION = 95.44 (NAVD 88)

- NOTES:**
1. THE VERTICAL DATUM OF THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88). THE ELEVATIONS WERE DERIVED FROM GPS MEASUREMENTS REFERENCED TO THE MASSACHUSETTS CONTINUOUSLY OPERATING REFERENCE STATION NETWORK (MACORS).
  2. THE COORDINATES SHOWN HEREON AND BASIS OF THE BEARINGS ARE REFERENCED TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (MAINLAND - NORTH AMERICAN DATUM OF 1983). THE COORDINATES WERE DERIVED FROM GPS MEASUREMENTS REFERENCED TO THE MASSACHUSETTS CONTINUOUSLY OPERATING REFERENCE STATION NETWORK (MACORS).
  3. THE AREA SURVEYED IS LOCATED WITHIN FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS INDICATED ON THE F.E.M.A. FLOOD INSURANCE RATE MAP FOR MIDDLESEX COUNTY, MASSACHUSETTS, PANEL 311 SUFFIX E) WITH AN EFFECTIVE DATE OF JUNE 4, 2010.
  4. THE WETLAND DELINEATION WAS PERFORMED BY ENVIRONMENTAL CONSULTING & RESTORATION, LLC ON JULY 13, 2023.
  5. THE FIELD SURVEY FOR THIS PROJECT WAS COMPLETED ON JULY 28, 2023.
  6. THE UTILITY LOCATIONS AND SIZES AS SHOWN HEREON ARE BASED ON SURFACE EVIDENCE AND ARE APPROXIMATE. DIG SAFE SHOULD BE CALLED PRIOR TO ANY EXCAVATIONS.



*Glen D. Reed*  
 GLEN D. REED, P.L.S. LICENSE NO. 40766  
 AS AGENT FOR REED LAND SURVEYING, INC.  
 NOT INDIVIDUALLY

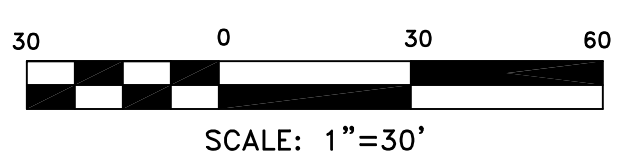
**Reed**  
 Land Surveying, Inc.

109 RHODE ISLAND ROAD, SUITE 4A  
 LAKEVILLE, MASSACHUSETTS 02347  
 (508) 923-1181 FAX: (508) 923-1191

© 2025 REED LAND SURVEYING, INC.

**TOPOGRAPHIC SURVEY**  
 AT  
**READING MEMORIAL HIGH SCHOOL**  
 BIRCH MEADOW DRIVE  
 READING, MASSACHUSETTS  
 (MIDDLESEX COUNTY)  
 PREPARED FOR  
**ACTIVITAS INC.**

FILE: 21026 TOPO
DATE: AUGUST 4, 2023
REVISIONS
#1 UPDATED DRAINAGE INV.S 1/10/25

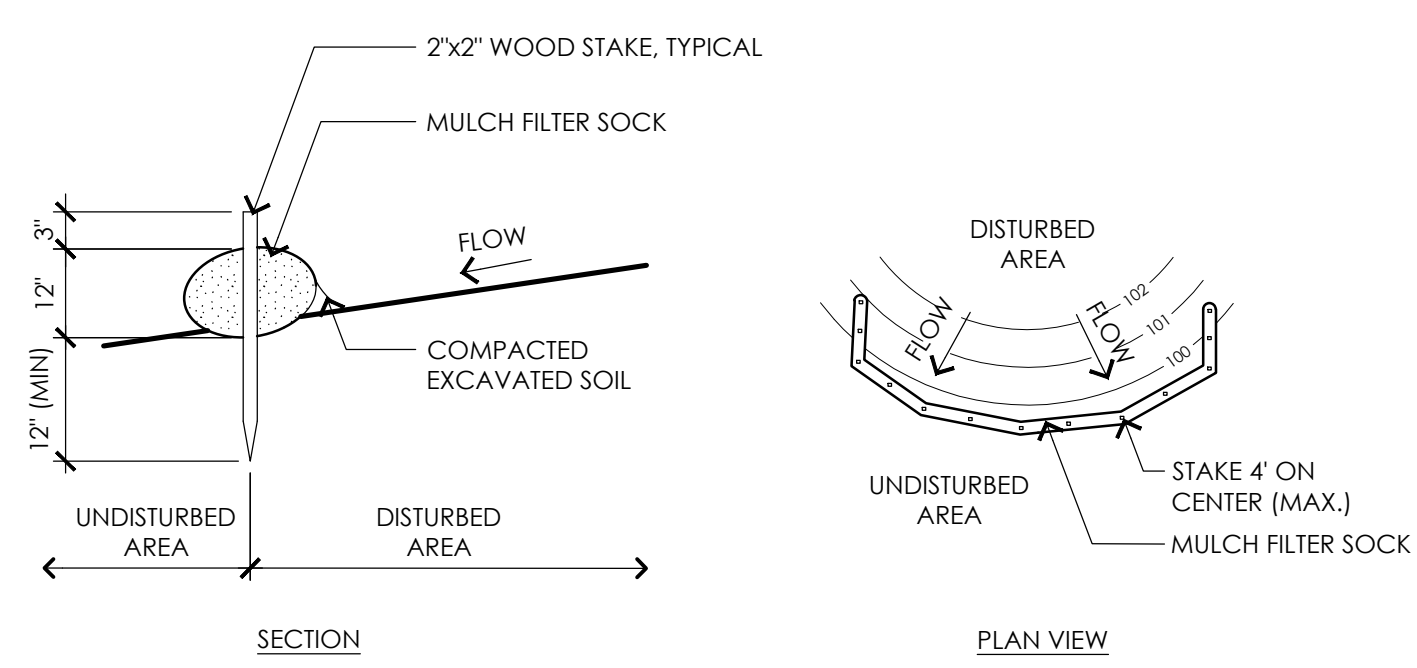




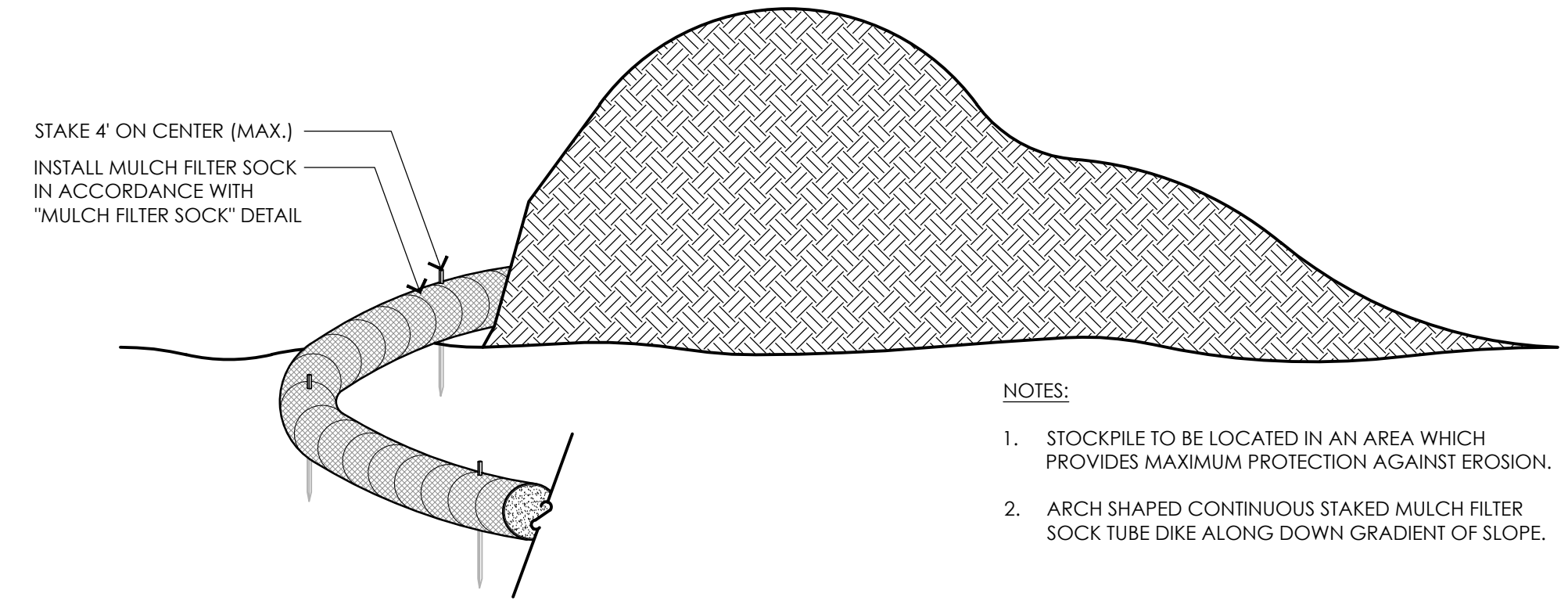
**CONSULTANTS**

ELECTRICAL ENGINEER -  
 NV'S ENGINEERS

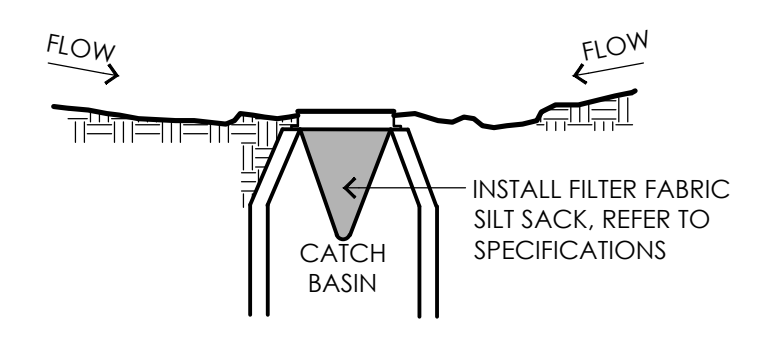
SURVEY -  
 REED LAND SURVEY, INC.



- NOTES:**
1. PLACE MULCH FILTER SOCK ON LEVEL GRADE. EXTEND BOTH ENDS OF THE TUBE AT LEAST 8'-0" UPSLOPE AT 45 DEGREES TO THE MAIN ALIGNMENT.
  2. REMOVE DEPOSITS WHEN SEDIMENT ACCUMULATION IS ONE THIRD THE HEIGHT OF THE EXPOSED MULCH FILTER SOCK OR ONE HALF OF THE EXPOSED FILTER SOCK.
  3. MULCH FILTER SOCK SHALL REMAIN IN WORKING ORDER UNTIL THE SITE IS STABILIZED. ADDITIONAL EROSION CONTROLS SHALL BE INSTALLED AS NEEDED TO PREVENT SILT FROM LEAVING THE SITE AT NO ADDITIONAL COST TO THE OWNER.
  4. ALL CONTROLS SHALL BE SET 5' FROM BOTTOM TOE OF SLOPE



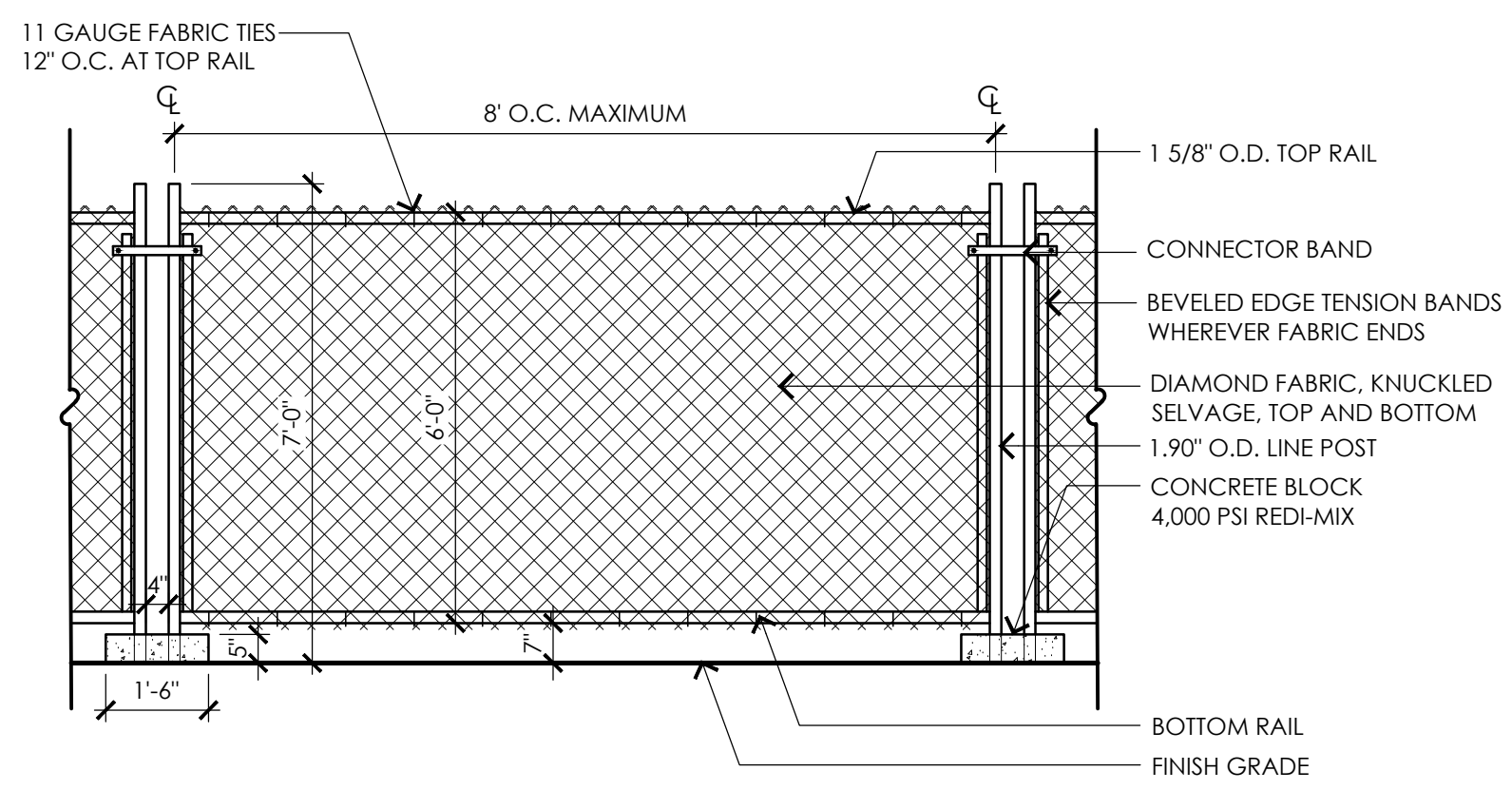
- NOTES:**
1. STOCKPILE TO BE LOCATED IN AN AREA WHICH PROVIDES MAXIMUM PROTECTION AGAINST EROSION.
  2. ARCH SHAPED CONTINUOUS STAKED MULCH FILTER SOCK TUBE DIKE ALONG DOWN GRADIENT OF SLOPE.



**1** MULCH FILTER SOCK  
 NOT TO SCALE

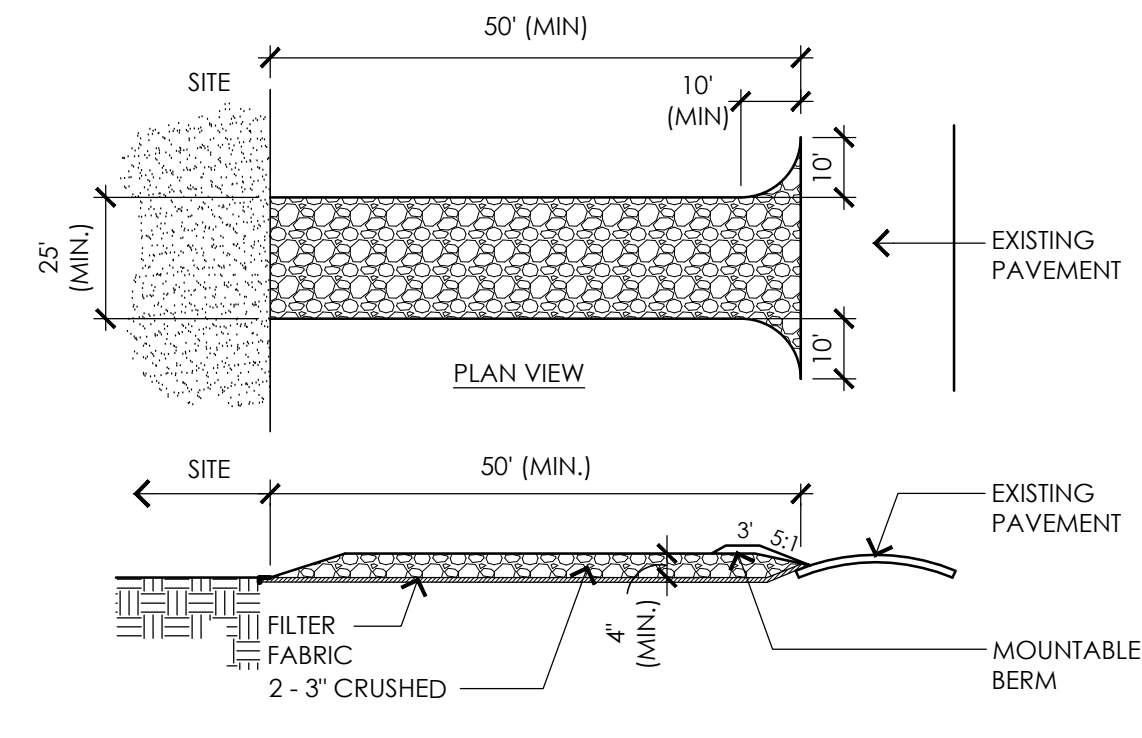
**2** TEMPORARY MATERIAL STOCKPILE  
 NOT TO SCALE

**3** SILT SACK  
 NOT TO SCALE



- NOTES:**
1. TEMPORARY CONSTRUCTION FENCE SHALL BE PROVIDED AT PROJECT LIMITS AS SHOWN ON THE SITE PREPARATION PLAN AND AS SPECIFIED. CONTRACTOR PROPOSED MODIFICATIONS TO TEMPORARY CONSTRUCTION FENCE, SUCH AS BUT NOT LIMITED TO THE USE OF SNOW FENCE (OR SIMILAR) WILL NOT BE CONSIDERED, UNLESS OTHERWISE NOTED.
  2. POST SPACING SHALL BE EQUIDISTANT.
  3. CONTRACTOR SHALL MAINTAIN A SECURE SITE AT ALL TIMES. CONTRACTOR SHALL PROVIDE ADDITIONAL TEMPORARY CONSTRUCTION FENCE AT NO ADDITIONAL COST TO THE OWNER IF NECESSARY TO PROPERLY SECURE THE SITE.

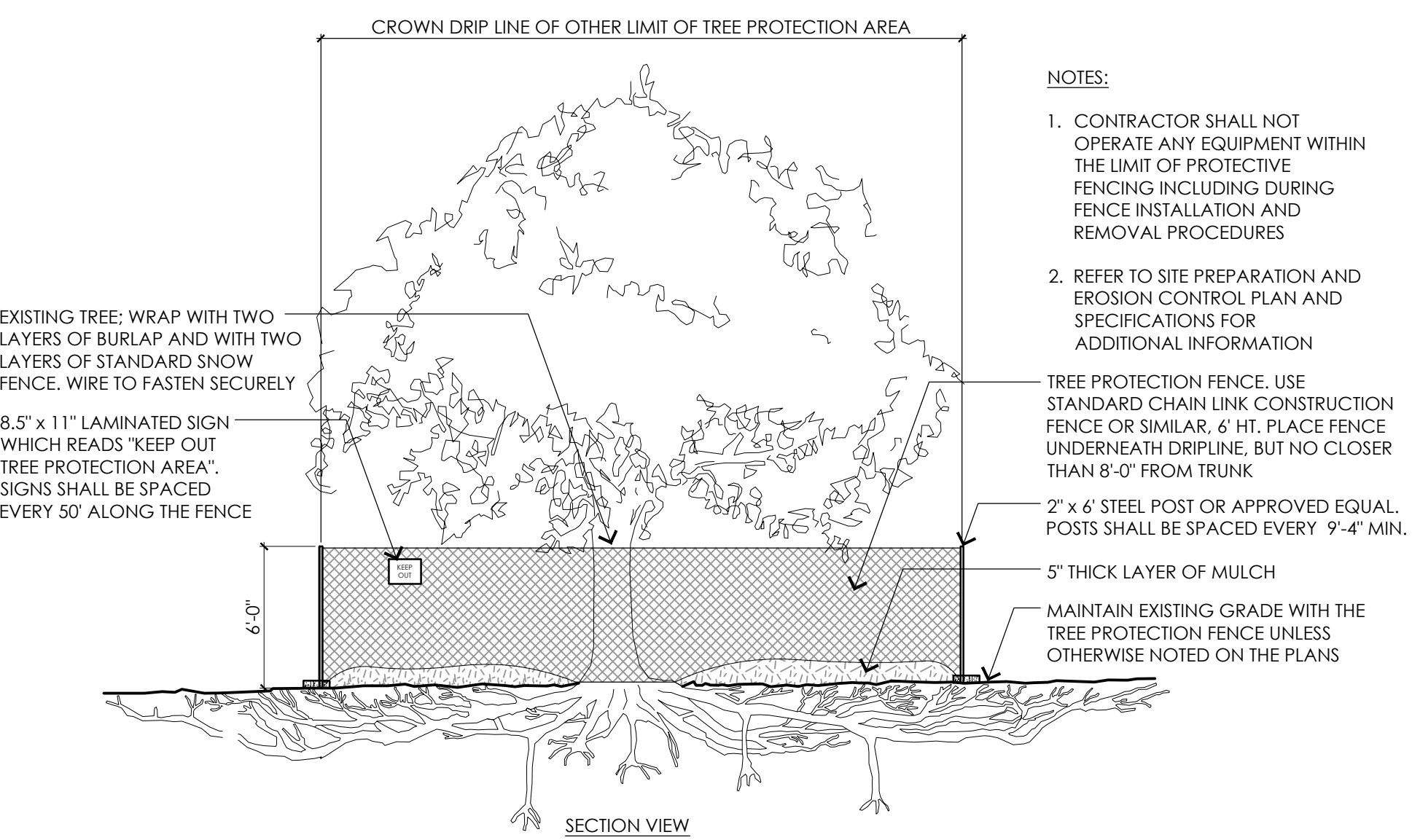
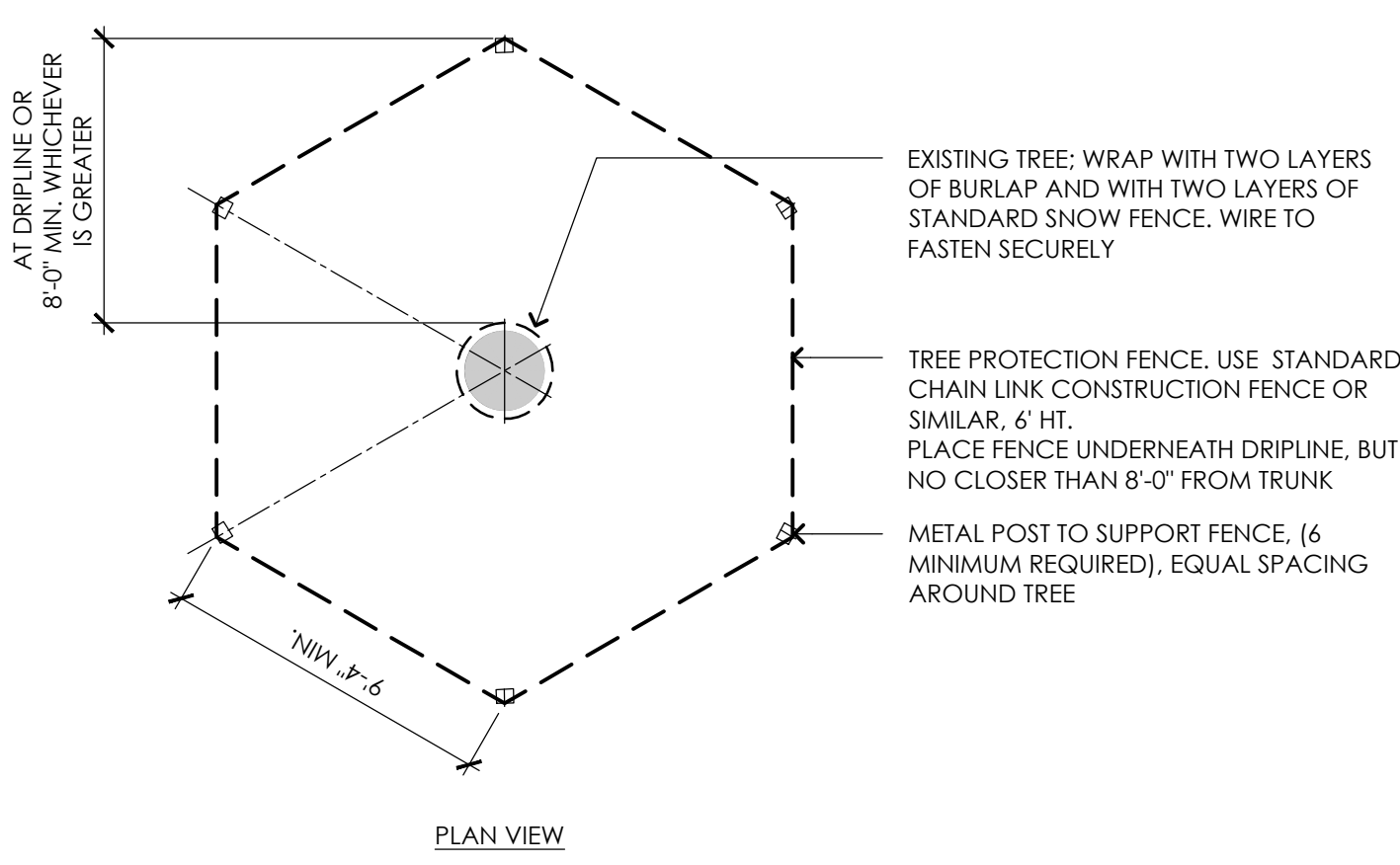
- NOTES:**
1. ENTRANCE WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. CONTRACTOR SHALL REVIEW FINAL LOCATION AND SIZE ON TEMPORARY CONSTRUCTION ENTRANCE WITH OWNER AND LANDSCAPE ARCHITECT PRIOR TO MOBILIZATION.
  2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT INTO RIGHT-OF-WAY OR ADJACENT PARKING AREAS AND DRIVES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED AND/OR TRACKED ONTO PUBLIC RIGHTS-OF-WAYS OR ADJACENT PARKING AREAS AND DRIVES MUST BE REMOVED IMMEDIATELY. MOUNTABLE BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED.
  3. CONTRACTOR SHALL WASH WHEELS OF VEHICLES AT CONSTRUCTION ENTRANCE PRIOR TO VEHICLES EXITING SITE TO PREVENT SOIL MATERIAL FROM BEING TRACKED FROM THE SITE.
  4. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED.



**4** TEMPORARY CONSTRUCTION FENCE  
 NOT TO SCALE

**5** TEMPORARY CONSTRUCTION ENTRANCE  
 NOT TO SCALE

ALL TREE PROTECTION TO BE REVIEWED IN THE FIELD WITH TOWN TREE WARDEN AND LANDSCAPE ARCHITECT PRIOR TO MOBILIZATION.



- NOTES:**
1. CONTRACTOR SHALL NOT OPERATE ANY EQUIPMENT WITHIN THE LIMIT OF PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL PROCEDURES
  2. REFER TO SITE PREPARATION AND EROSION CONTROL PLAN AND SPECIFICATIONS FOR ADDITIONAL INFORMATION
- TREE PROTECTION FENCE. USE STANDARD CHAIN LINK CONSTRUCTION FENCE OR SIMILAR, 6' HT. PLACE FENCE UNDERNEATH DRIPLINE, BUT NO CLOSER THAN 8'-0" FROM TRUNK
- 2" x 6" STEEL POST OR APPROVED EQUAL. POSTS SHALL BE SPACED EVERY 9'-4" MIN.
- 5" THICK LAYER OF MULCH
- MAINTAIN EXISTING GRADE WITH THE TREE PROTECTION FENCE UNLESS OTHERWISE NOTED ON THE PLANS

**6** EXISTING TREE PROTECTION  
 NOT TO SCALE

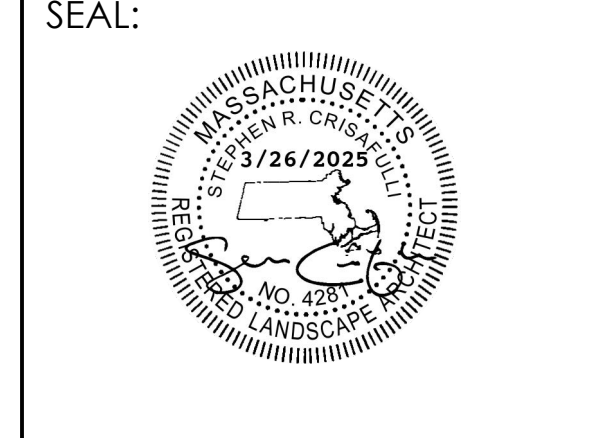
**TOWN OF READING**  
 Reading, MA  
 BIRCH MEADOW PARK | PHASE II RENOVATIONS

90% Design Development/  
 Permitting - March 17, 2025

**REVISIONS:**

NO.	DATE	DESCRIPTION

SCALE: AS NOTED  
 PROJECT NO.: 24037.00  
 FILE: 24037.00-SP1.2-SP\_DET.dwg  
 DRAWN: AJA  
 CHECKED: SRC/HCG



SHEET TITLE:  
 SITE PREPARATION  
 DETAILS

SHEET NO:  
**SP1.2**

### LAYOUT AND MATERIALS LEGEND

- APPROXIMATE LIMIT OF WORK
- WETLAND EDGE
- 100' WETLAND BUFFER
- 35' WETLAND BUFFER
- 10' HIGH CHAIN LINK FENCE
- 4' HIGH ORNAMENTAL FENCE IN CEMENT CONCRETE CURB
- CEMENT CONCRETE PAVEMENT
- BITUMINOUS CONCRETE PAVEMENT
- POURED-IN-PLACE PLAYGROUND SURFACING
- ATHLETIC COURT LIGHTING
- SITE LIGHTING
- SIGNAGE
- SITE BENCH
- TRASH/RECYCLING RECP/TACLES

### LAYOUT AND MATERIALS NOTES

- EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY REED LAND SURVEYING INC., LOCATED AT 109 RHODE ISLAND ROAD, SUITE 4A, LAKEVILLE, MA, AND DATED AUGUST 4, 2023.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ARE BASED ON THE SURVEY REFERENCED ABOVE. THE CONTRACTOR SHALL NOTIFY DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
- CONTRACTOR(S) SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.
- WHILE THE CONTRACTOR MAY USE THE ELECTRONIC DRAWINGS FOR LAYOUT PURPOSES, IT IS HIS RESPONSIBILITY TO CHECK ALL LAYOUT IN THE FIELD TO CONFIRM CONFORMITY WITH THE PROJECT DRAWINGS, SPECIFICATIONS, AND APPROVED SHOP DRAWINGS AND SUBMITTALS. USE OF ONLY THE ELECTRONIC DRAWINGS WITHOUT A SITE CHECK OF LAYOUT IS NOT ACCEPTABLE.
- FINAL LOCATIONS OF ALL BENCHES, TRASH/RECYCLING RECEPTACLES, SIGNAGE, AND LIGHT POLES TO BE REVIEWED IN THE FIELD WITH THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

**CONSULTANTS**

ELECTRICAL ENGINEER -  
 NVS ENGINEERS

SURVEY -  
 REED LAND SURVEY, INC.

**TOWN OF READING**  
 Reading, MA

**BIRCH MEADOW PARK | PHASE II RENOVATIONS**

90% Design Development/  
 Permitting - March 17, 2025

REVISIONS:

NO.	DATE	DESCRIPTION

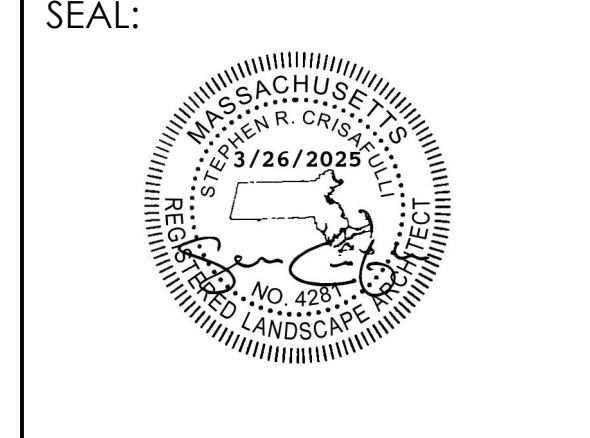
SCALE: 1"=20'-0"

PROJECT NO.: 24037.00

FILE: 24037.00-11-LM\_PLAN.dwg

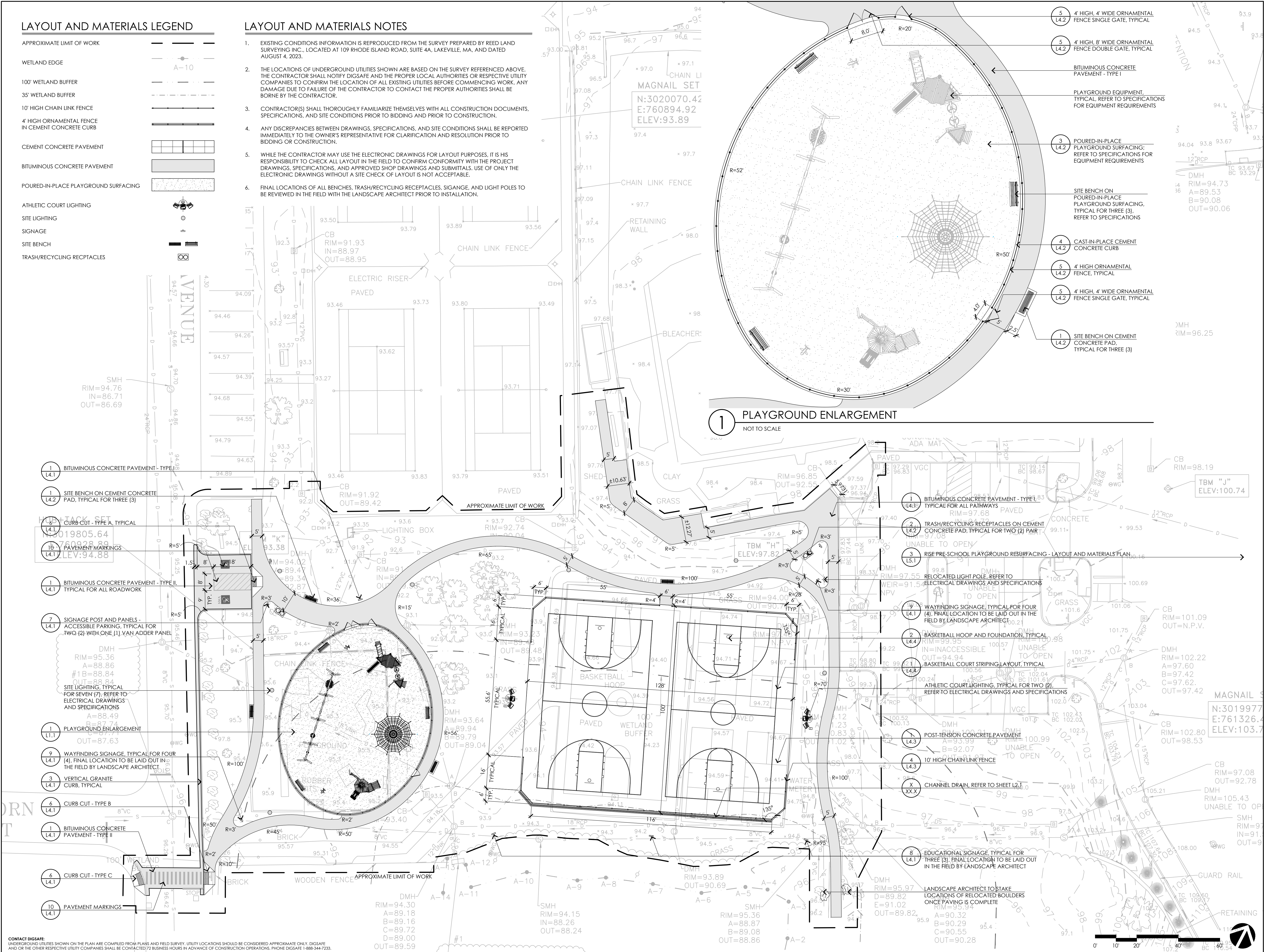
DRAWN: AJA

CHECKED: SRC/HCG



SHEET TITLE:  
**LAYOUT AND MATERIALS PLAN**

SHEET NO.: **L1.1**



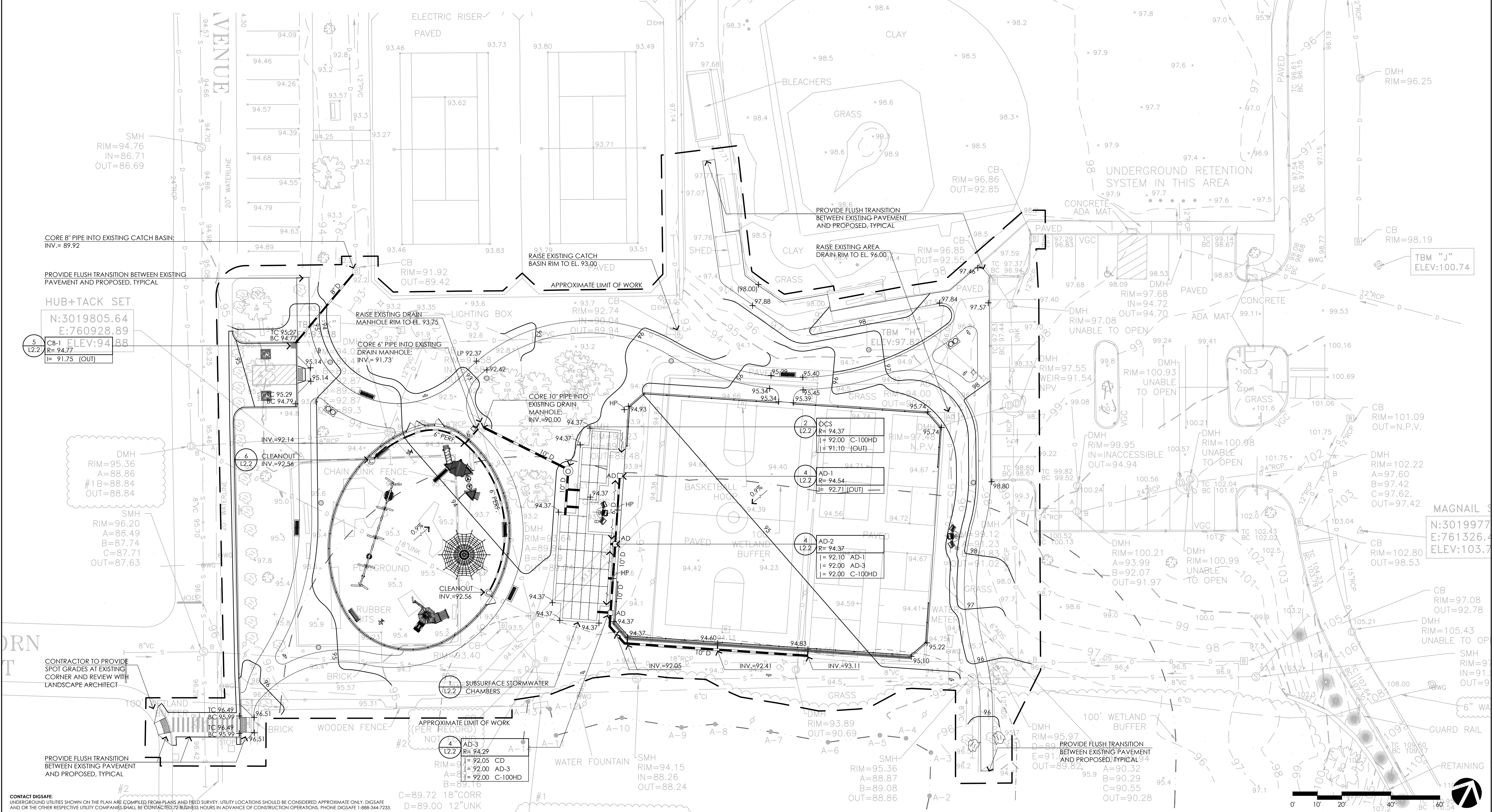
**CONTACT DIGSAFE:**  
 UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

### GRADING AND UTILITY LEGEND

- APPROXIMATE LIMIT OF WORK
- WETLAND EDGE
- 100' WETLAND BUFFER
- 35 WETLAND BUFFER
- EXISTING 1" CONTOUR
- PROPOSED 1" CONTOUR
- EXISTING SPOT GRADE
- PROPOSED SPOT GRADE
- PROPOSED SLOPE DIRECTION
- PROPOSED SOLID DRAINPIPE
- PROPOSED PERFORATED DRAINPIPE
- PROPOSED AREA DRAIN
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED CLEANOUT

### GRADING AND UTILITY NOTES

1. EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY REED LAND SURVEYING INC., LOCATED AT 109 RHODE ISLAND ROAD, SUITE 4A, LAKEVILLE, MA, AND DATED AUGUST 4, 2023.
2. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ARE BASED ON THE SURVEY REFERENCED ABOVE. THE CONTRACTOR SHALL NOTIFY DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
3. CONTRACTOR SHALL VERIFY EXISTING GRADES AND NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
4. 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 OWNER'S REPRESENTATIVE FOR RESOLUTION OF THE CONFLICT.
5. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ALL ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANY.
6. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION, AT THE CONTRACTOR'S EXPENSE.
7. PROTECT AND MAINTAIN EXISTING ON-SITE DRAINAGE STRUCTURES AND PIPES UNLESS OTHERWISE NOTED. REFER TO UTILITY PLANS.
8. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK. PONDING AT TRANSITION AREAS WILL NOT BE ALLOWED.
9. CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS, STRUCTURES AND PLANTING BEDS.



**CONSULTANTS**

ELECTRICAL ENGINEER -  
 NVS ENGINEERS

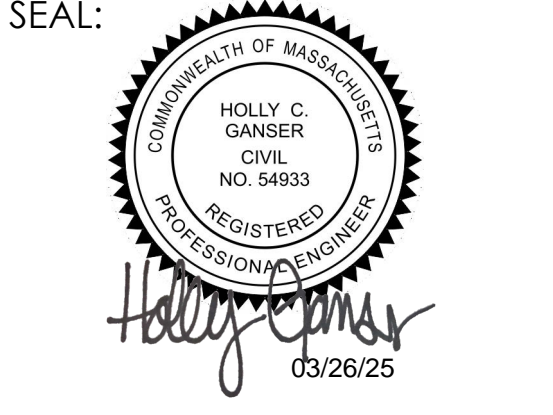
SURVEY -  
 REED LAND SURVEY, INC.

**TOWN OF READING**  
 Reading, MA  
 BIRCH MEADOW PARK | PHASE II RENOVATIONS

90% Design Development/  
 Permitting - March 17, 2025

NO.	DATE	DESCRIPTION
1	03.26.25	CC NO1 SUBMISSION

SCALE: 1"=20'-0"  
 PROJECT NO.: 24037.00  
 FILE: 24037.00-L2.1-G\_PLAN.dwg  
 DRAWN: BJM  
 CHECKED: SRC/HCG



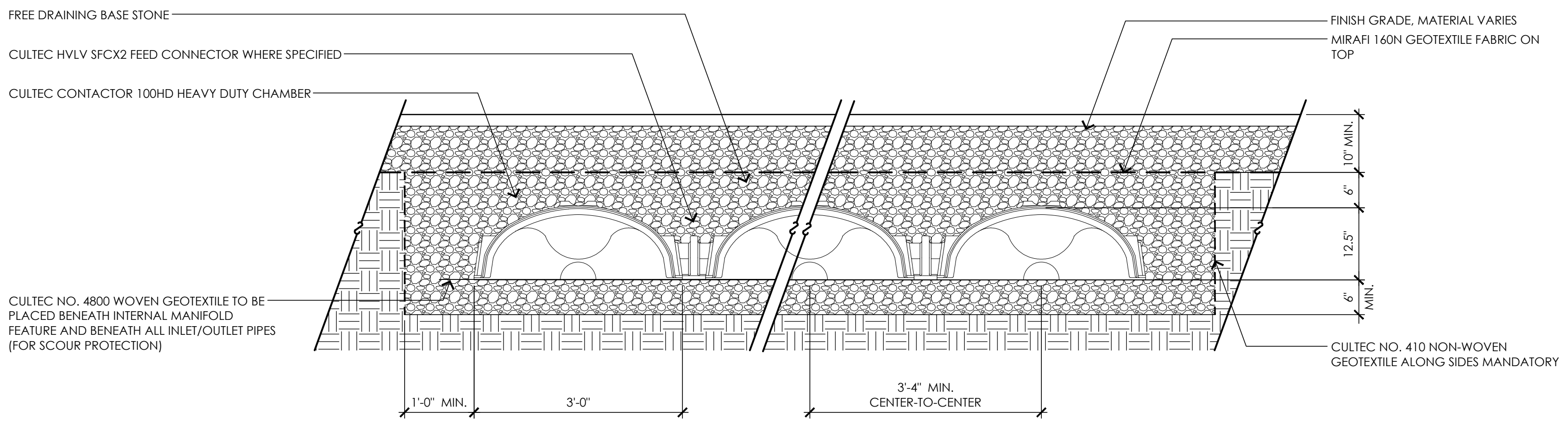
SHEET TITLE:  
 GRADING AND UTILITY PLAN

SHEET NO.:  
**L2.1**

- NOTES:**
- DESIGN BASED ON CULTEC C-100HD SYSTEM.
  - CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR CHAMBER SYSTEM TO INCLUDE ALL HEADER PIPES AND CONNECTIONS TO THE SYSTEM.
  - CONTRACTOR MAY PROPOSE ALTERNATE SYSTEM, BUT IS RESPONSIBLE FOR ALL CALCULATIONS TO SHOW COMPLIANCE WITH SYSTEM REQUIREMENTS.

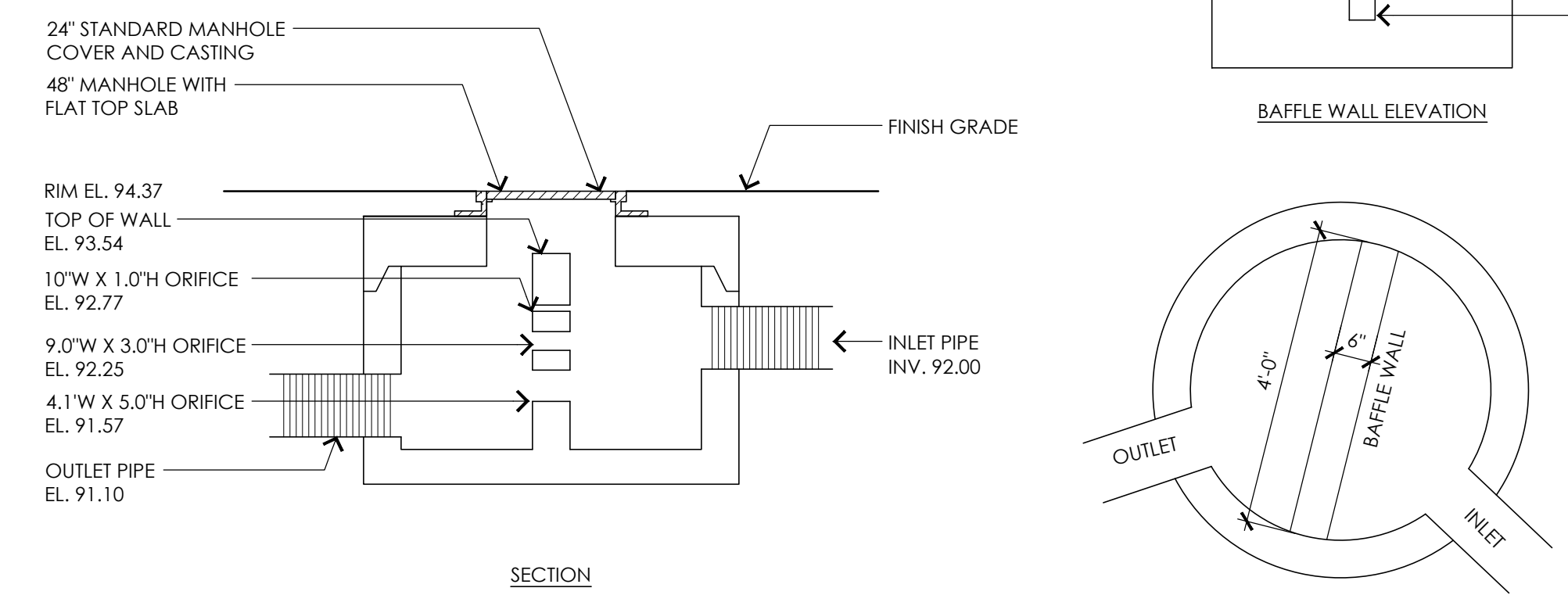
SYSTEM CALCULATIONS	
OVERALL FOOTPRINT	1,190 SF
TOTAL STORAGE VOLUME	1,183 CF
STONE VOID RATIO	30%
ESTIMATED # OF UNITS	43
UNIT TYPE	C-100HD

SYSTEM ELEVATIONS	
SYSTEM COMPONENT	ELEVATION
GROUNDWATER	89.50
BOTTOM OF STONE	91.50
BOTTOM OF CULTECS	92.00
TOP OF CULTECS	93.04
TOP OF STONE	93.54
FINISH GRADE	>94.37



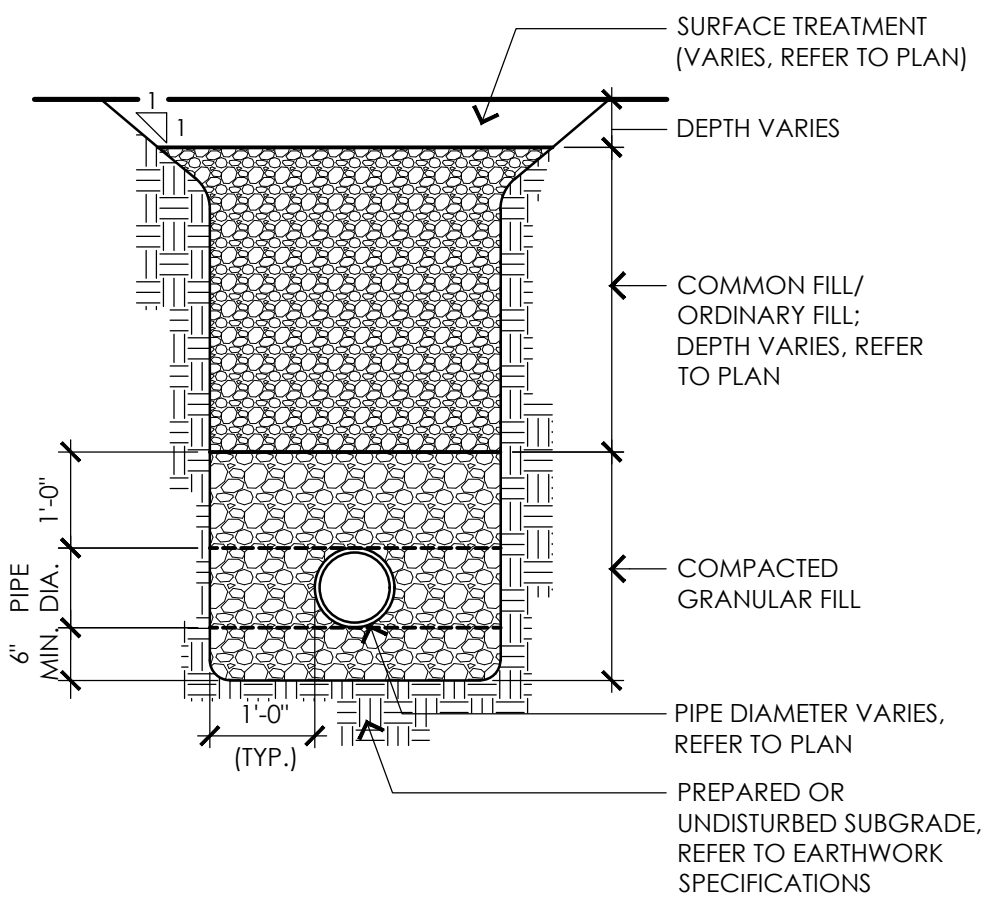
**1 SUBSURFACE STORMWATER CHAMBERS**  
NOT TO SCALE

- NOTES:**
- ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
  - PROVIDE "V" KNOCKOUTS FOR PIPES WITH 1" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
  - JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.



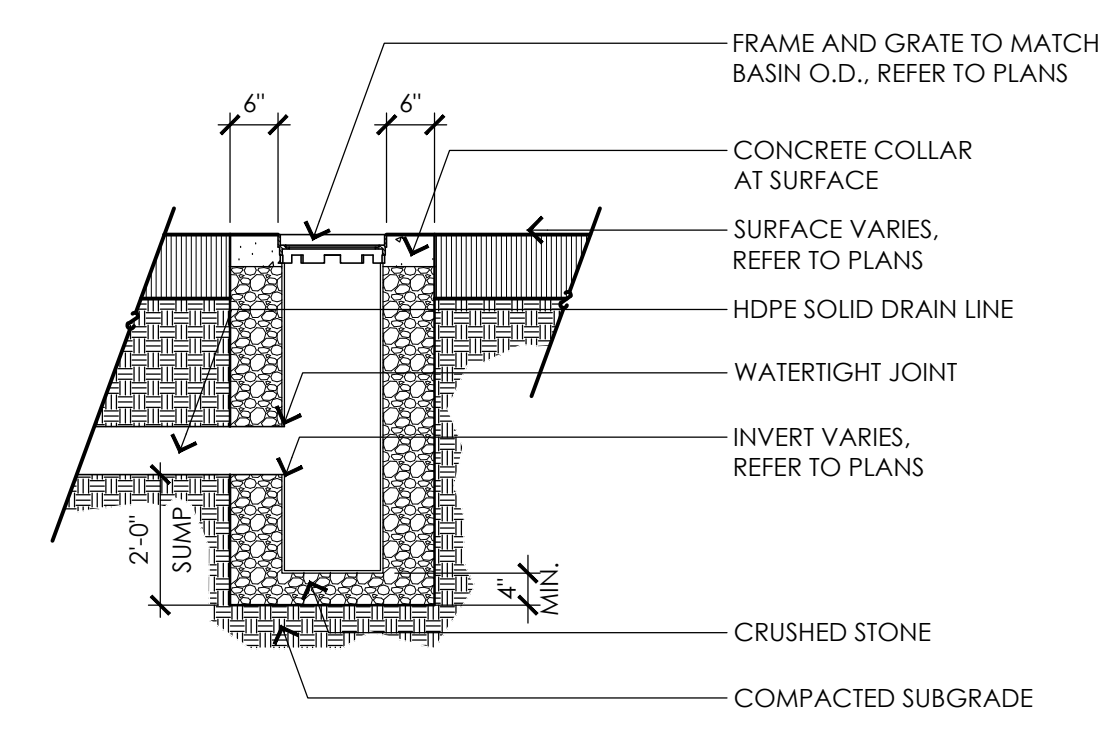
**2 OUTLET CONTROL STRUCTURE**  
NOT TO SCALE

- NOTE:**  
PROVIDE APPROPRIATE CAUTION TAPE AS REQUIRED PER CODE.



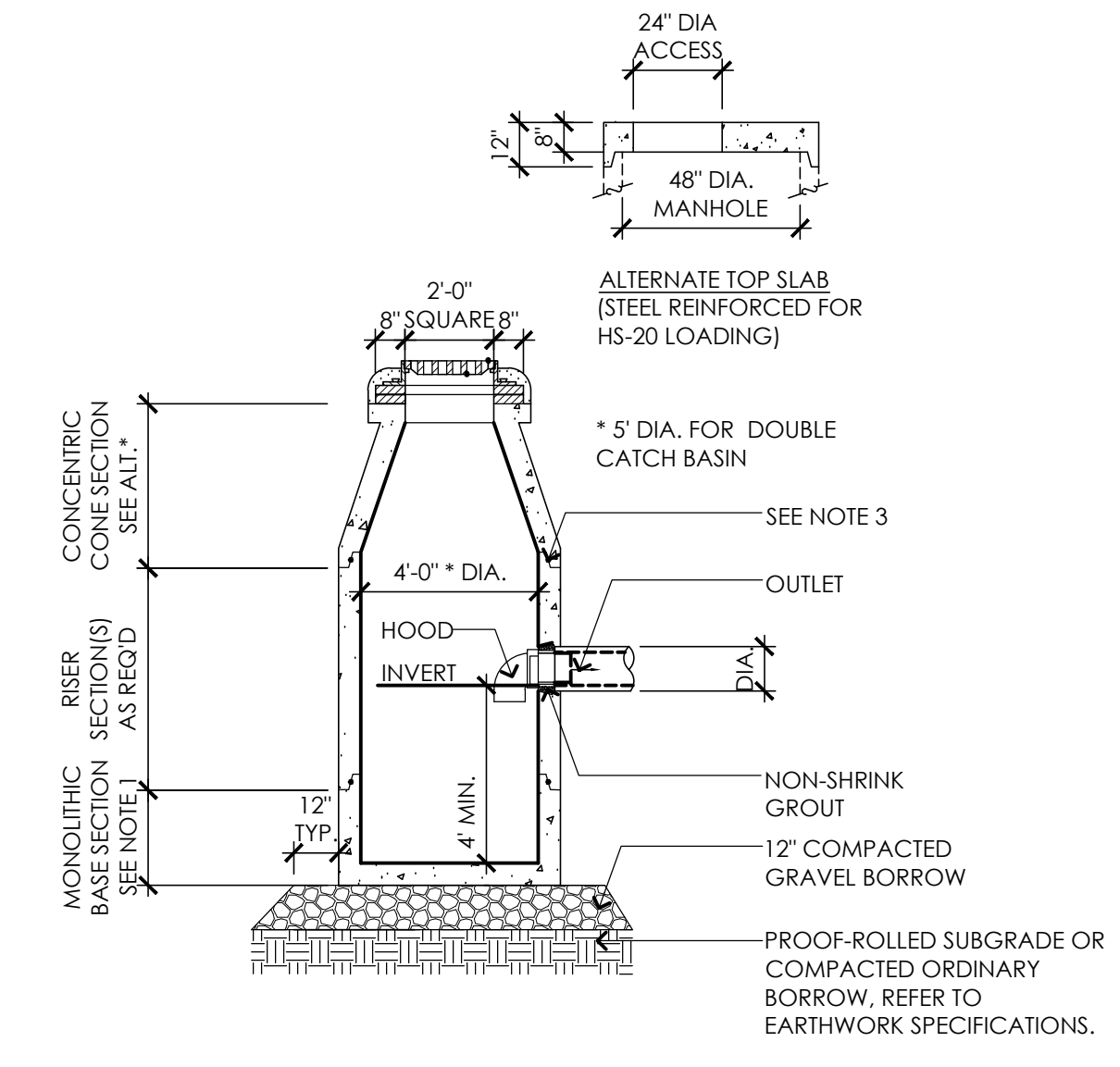
**3 UTILITY TRENCH**  
NOT TO SCALE

- NOTES:**
- GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
  - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
  - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE.

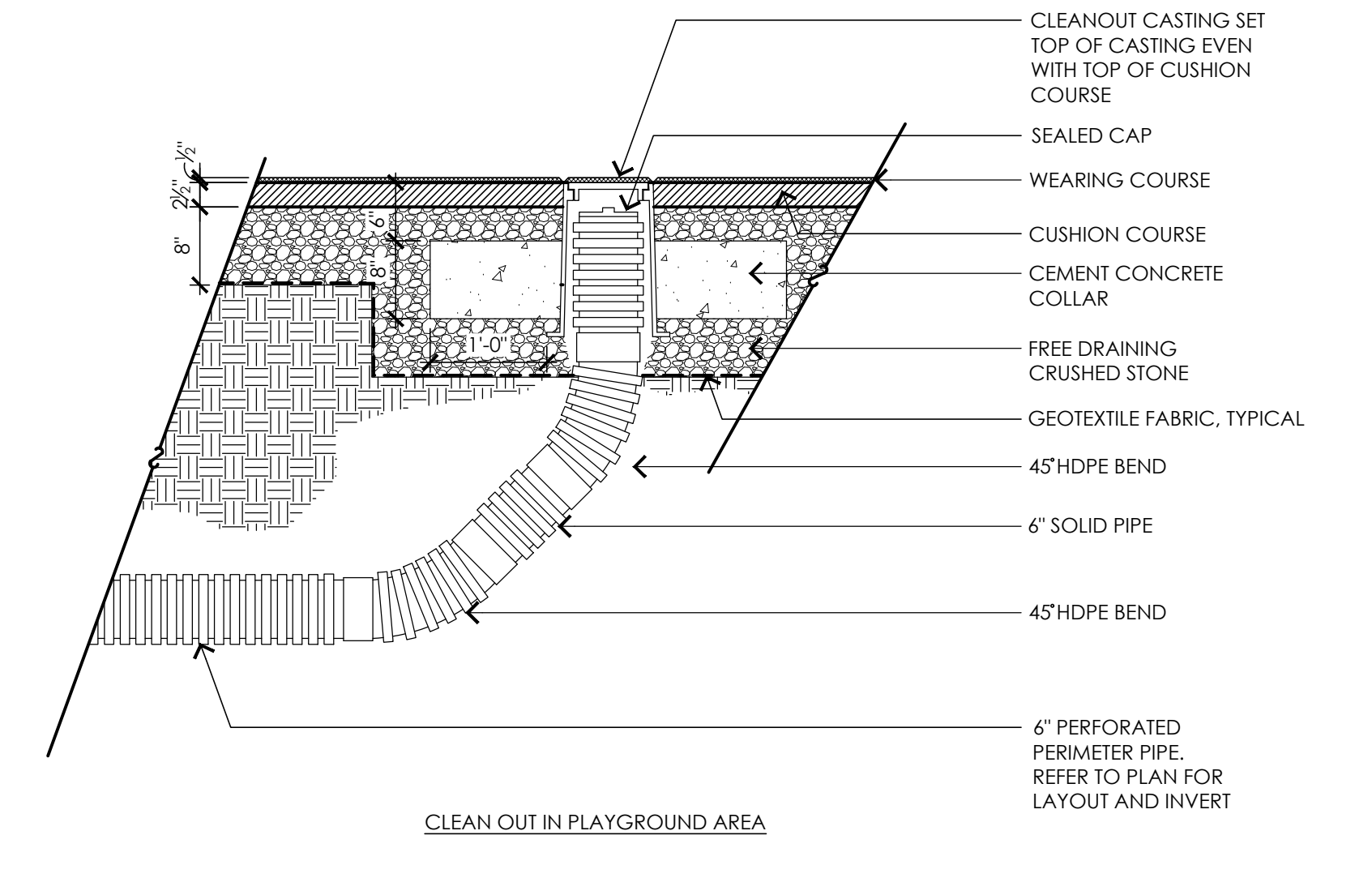


**4 AREA DRAIN**  
NOT TO SCALE

- NOTES:**
- ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
  - PROVIDE "V" KNOCKOUTS FOR PIPES WITH 1" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
  - JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
  - CATCH BASIN FRAME SHALL BE SET IN FULL MORTAR BED, ADJUST TO GRADE WITH CLAY BRICK AND MORTAR. (2 BRICK COURSES MIN., 5 BRICK COURSES MAX.)



**6 CATCH BASIN**  
NOT TO SCALE



**5 CLEANOUT**  
NOT TO SCALE

**CONSULTANTS**  
ELECTRICAL ENGINEER -  
NV5 ENGINEERS  
SURVEY -  
REED LAND SURVEY, INC.

**TOWN OF READING**  
Reading, MA  
BIRCH MEADOW PARK | PHASE II RENOVATIONS

90% Design Development/  
Permitting - March 17, 2025

REVISIONS:		
NO.	DATE	DESCRIPTION
1	03.26.25	CC NOI SUBMISSION

SCALE: AS NOTED  
PROJECT NO.: 24037.00  
FILE: 24037.00-L2-UT\_DET\_1.dwg  
DRAWN: BJM  
CHECKED: SRC/HCG

SEAL:  
  
Holly C. Ganser  
03/26/25

SHEET TITLE:  
UTILITY DETAILS

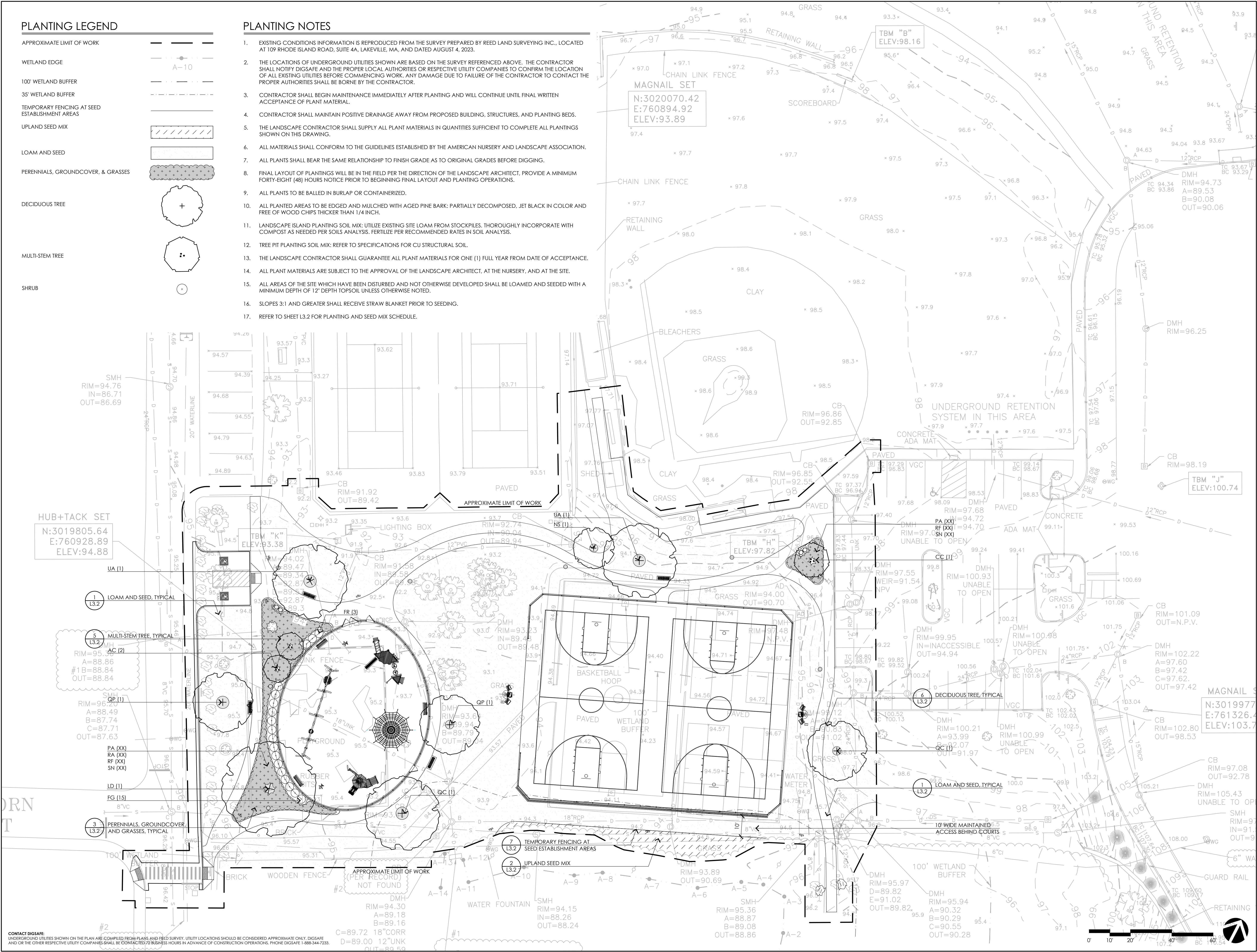
SHEET NO:  
**L2.2**

### PLANTING LEGEND

- APPROXIMATE LIMIT OF WORK
- WETLAND EDGE
- 100' WETLAND BUFFER
- 35' WETLAND BUFFER
- TEMPORARY FENCING AT SEED ESTABLISHMENT AREAS
- UPLAND SEED MIX
- LOAM AND SEED
- PERENNIALS, GROUNDCOVER, & GRASSES
- DECIDUOUS TREE
- MULTI-STEM TREE
- SHRUB

### PLANTING NOTES

1. EXISTING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY REED LAND SURVEYING INC., LOCATED AT 109 RHODE ISLAND ROAD, SUITE 4A, LAKEVILLE, MA, AND DATED AUGUST 4, 2023.
2. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ARE BASED ON THE SURVEY REFERENCED ABOVE. THE CONTRACTOR SHALL NOTIFY DIGSAFE AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANIES TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. ANY DAMAGE DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR.
3. CONTRACTOR SHALL BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING AND WILL CONTINUE UNTIL FINAL WRITTEN ACCEPTANCE OF PLANT MATERIAL.
4. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM PROPOSED BUILDING, STRUCTURES, AND PLANTING BEDS.
5. THE LANDSCAPE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE ALL PLANTINGS SHOWN ON THIS DRAWING.
6. ALL MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
7. ALL PLANTS SHALL BEER THE SAME RELATIONSHIP TO FINISH GRADE AS TO ORIGINAL GRADES BEFORE DIGGING.
8. FINAL LAYOUT OF PLANTINGS WILL BE IN THE FIELD PER THE DIRECTION OF THE LANDSCAPE ARCHITECT. PROVIDE A MINIMUM FORTY-EIGHT (48) HOURS NOTICE PRIOR TO BEGINNING FINAL LAYOUT AND PLANTING OPERATIONS.
9. ALL PLANTS TO BE BALLED IN BURLAP OR CONTAINERIZED.
10. ALL PLANTED AREAS TO BE EDGED AND MULCHED WITH AGED PINE BARK; PARTIALLY DECOMPOSED, JET BLACK IN COLOR AND FREE OF WOOD CHIPS THICKER THAN 1/4 INCH.
11. LANDSCAPE ISLAND PLANTING SOIL MIX: UTILIZE EXISTING SITE LOAM FROM STOCKPILES, THOROUGHLY INCORPORATE WITH COMPOST AS NEEDED PER SOILS ANALYSIS. FERTILIZE PER RECOMMENDED RATES IN SOIL ANALYSIS.
12. TREE PIT PLANTING SOIL MIX: REFER TO SPECIFICATIONS FOR CU STRUCTURAL SOIL.
13. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR ONE (1) FULL YEAR FROM DATE OF ACCEPTANCE.
14. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT, AT THE NURSERY, AND AT THE SITE.
15. ALL AREAS OF THE SITE WHICH HAVE BEEN DISTURBED AND NOT OTHERWISE DEVELOPED SHALL BE LOAMED AND SEED WITH A MINIMUM DEPTH OF 12" DEPTH TOPSOIL UNLESS OTHERWISE NOTED.
16. SLOPES 3:1 AND GREATER SHALL RECEIVE STRAW BLANKET PRIOR TO SEEDING.
17. REFER TO SHEET L3.2 FOR PLANTING AND SEED MIX SCHEDULE.



#### CONSULTANTS

ELECTRICAL ENGINEER -  
 NVS ENGINEERS  
 SURVEY -  
 REED LAND SURVEY, INC.

# TOWN OF READING

Reading, MA  
 BIRCH MEADOW PARK | PHASE II RENOVATIONS

90% Design Development/  
 Permitting - March 17, 2025

NO.	DATE	DESCRIPTION
1	03.26.25	CC NOI SUBMISSION

SCALE: 1"=20'-0"  
 PROJECT NO.: 24037.00  
 FILE: 24037.00-L3.1-P\_PLAN.dwg  
 DRAWN: AJA  
 CHECKED: SRC/HCG

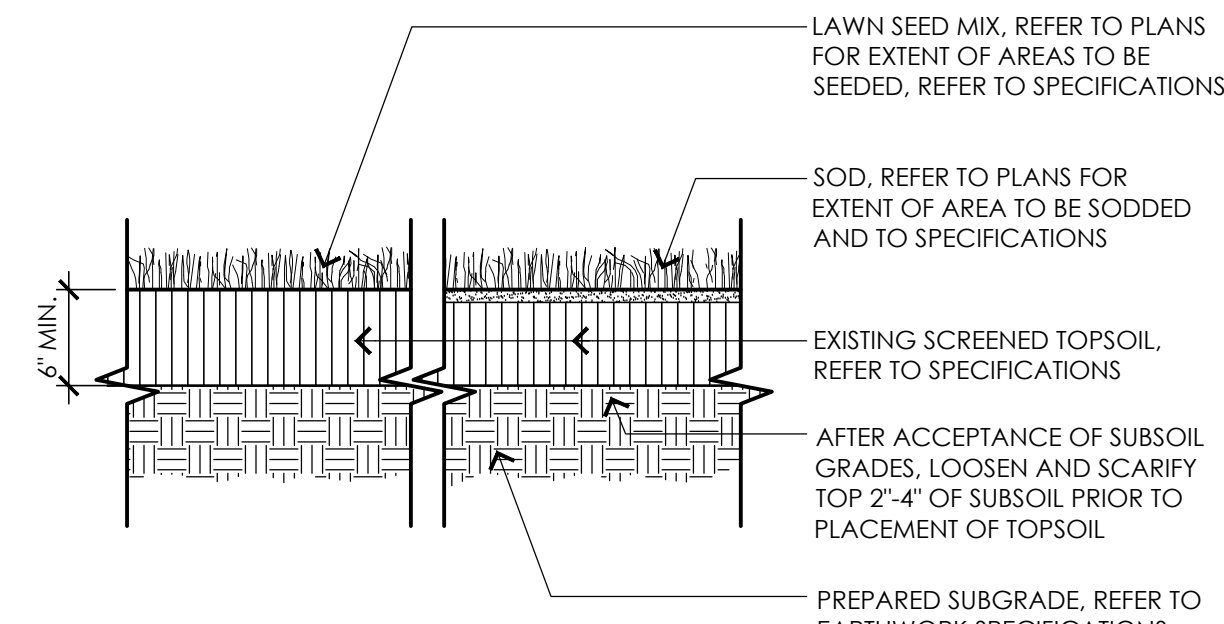


SHEET TITLE:  
 PLANTING PLAN

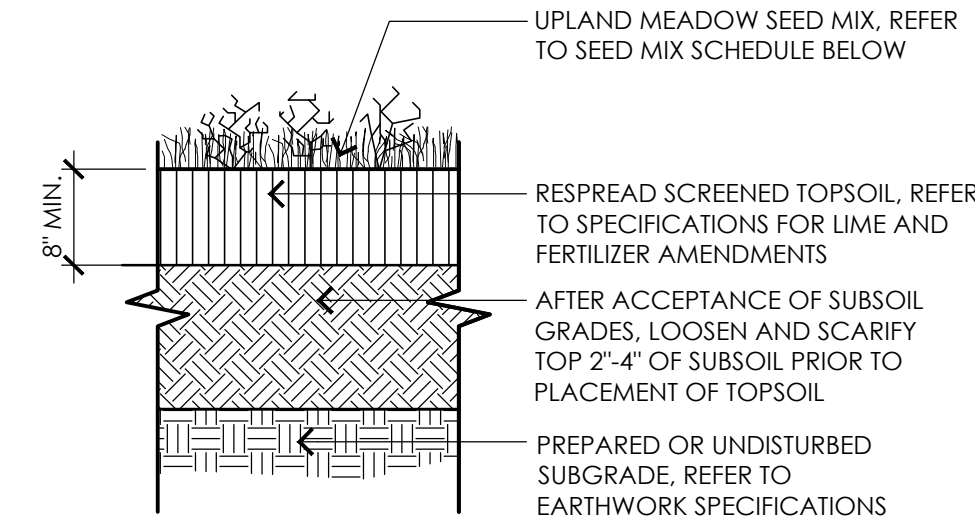
SHEET NO:  
**L3.1**

**CONTACT DIGSAFE:**  
 UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

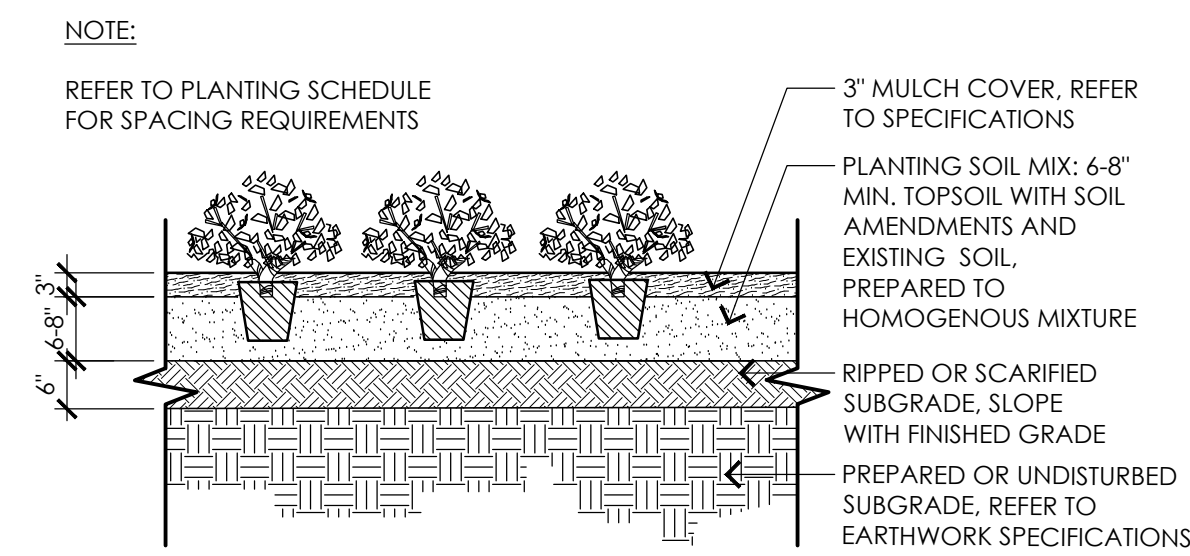
NOTE:  
REFER TO SHEETS L3.1 AND L3.2 FOR LIMITS OF SOD MOW STRIP AREAS.



**1** LOAM AND SEED / SOD  
NOT TO SCALE

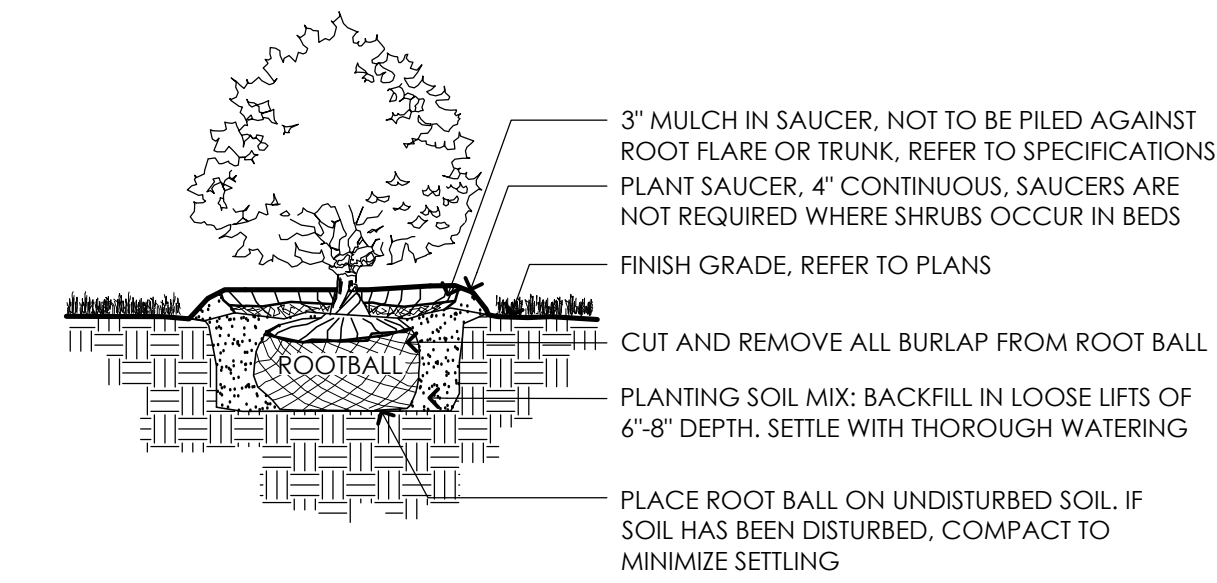


**2** UPLAND SEED MIX  
NOT TO SCALE

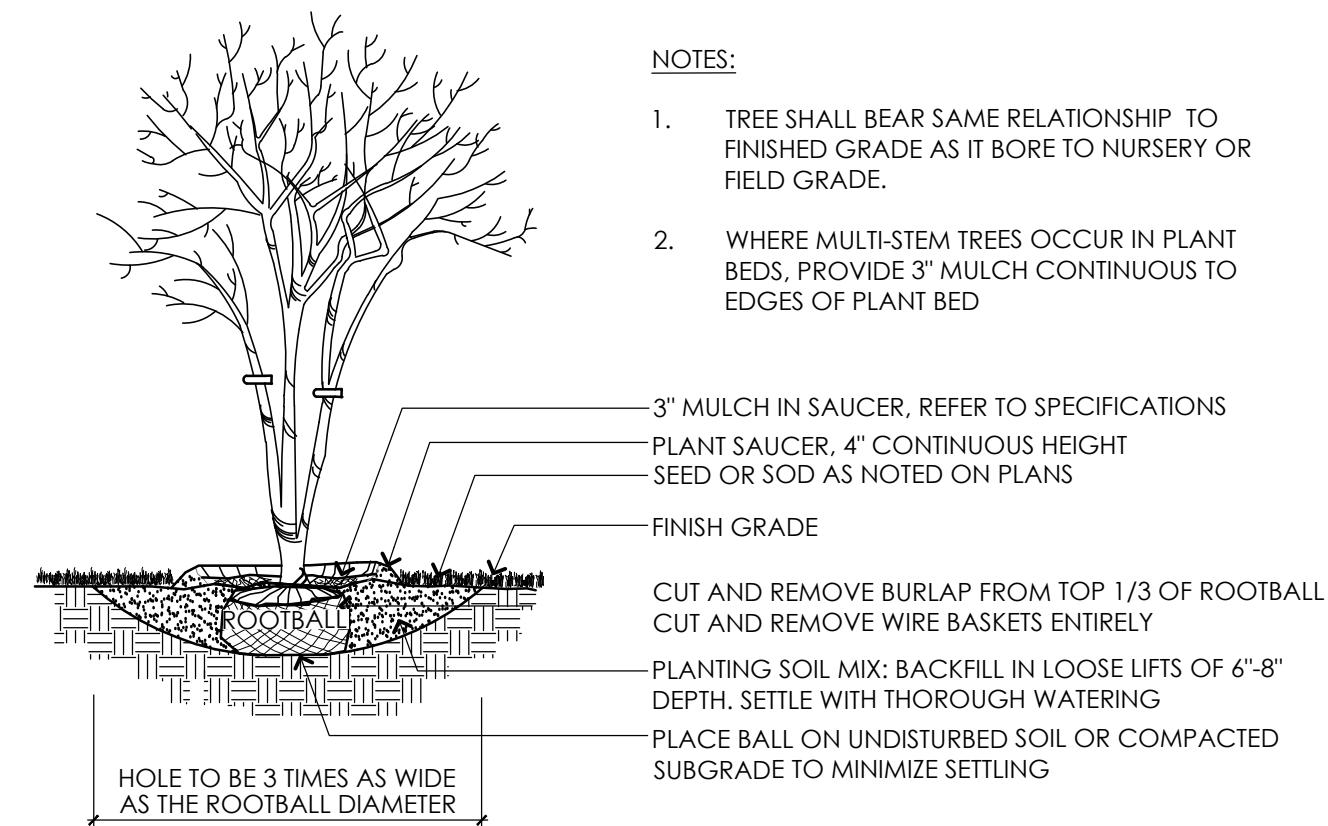


**3** PERENNIALS, GROUNDCOVER, AND GRASSES  
NOT TO SCALE

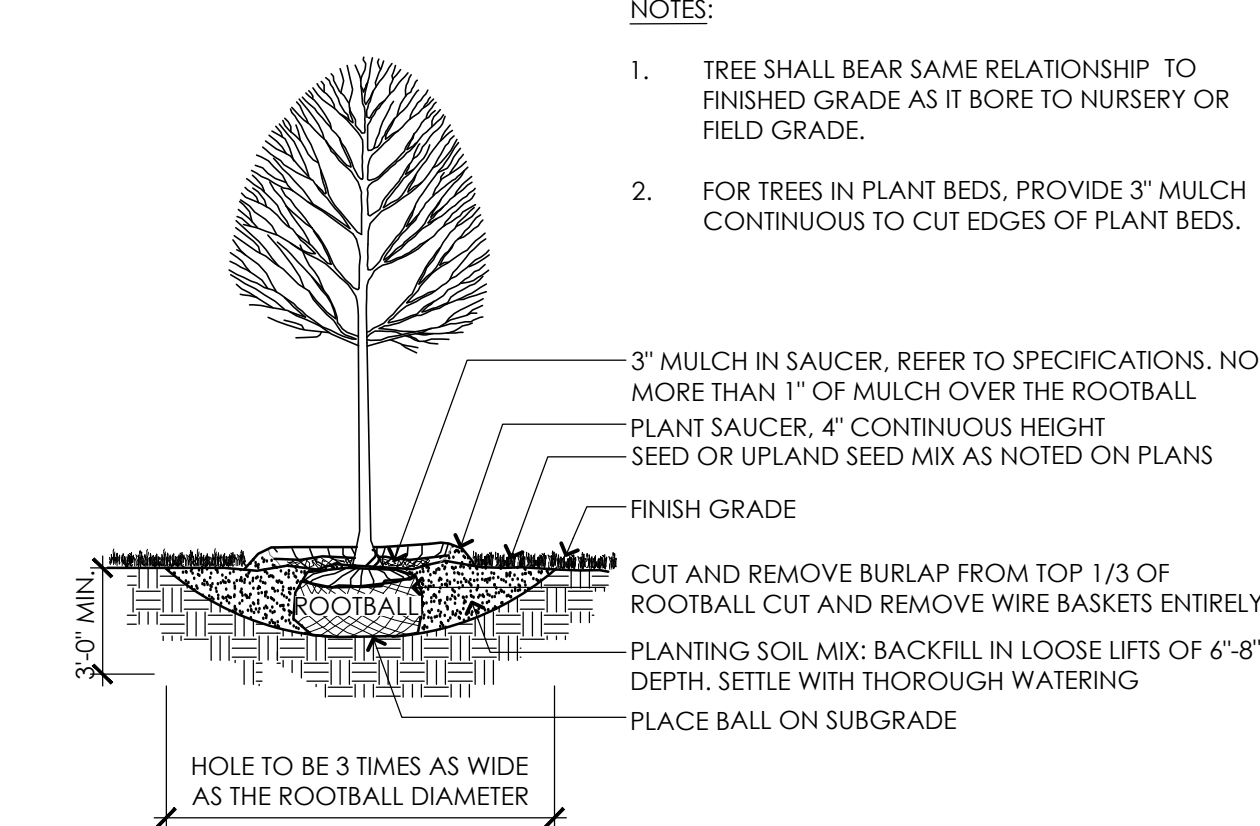
NOTES:  
1. SHRUB SHALL BEAR SAME RELATIONSHIP TO FINISHED GRADE AS IT BORE TO NURSERY OR FIELD GRADE.  
2. WHERE SHRUBS OCCUR IN GROUPINGS IN PLANT BEDS, PROVIDE 2 - FOOT DEEP CONTINUOUS LOAM BED AND 3" MULCH CONTINUOUS TO CUT EDGES OF PLANT BED



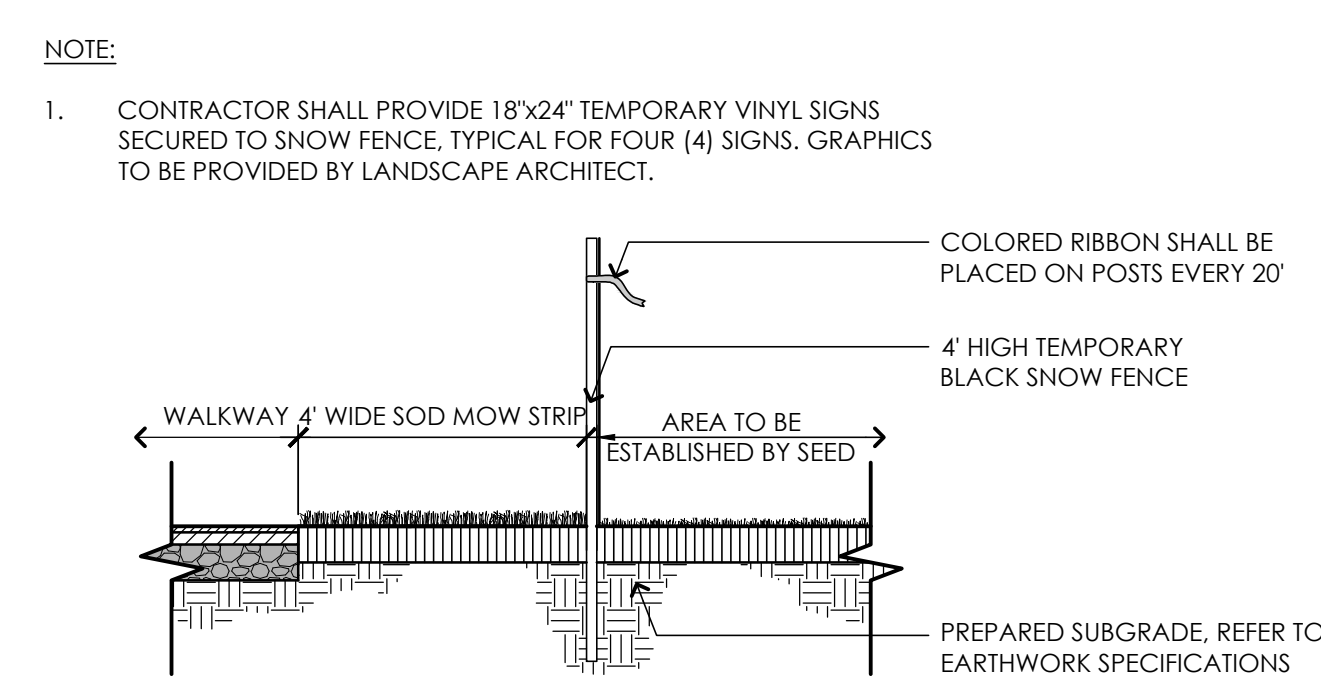
**4** SHRUB  
NOT TO SCALE



**5** MULTI-STEM TREE  
NOT TO SCALE



**6** DECIDUOUS TREE  
NOT TO SCALE



**7** TEMPORARY FENCING AT SEED ESTABLISHMENT AREAS  
NOT TO SCALE

PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	NOTES
<b>TREES</b>					
AC	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	5'-6" HT.; HT.		B&B
CC	CERCIS CANADENSIS	EASTERN REDBUD	5'-6" HT.		B&B
LT	LIRIODENDRON TULIPIFERA	YELLOW POPLAR	3-3.5" CAL.		B&B
NS	NYSSA SYLVATICA	BLACK TUPELO	2-2.5" CAL.		B&B
QC	QUERCUS COCCINEA	SCARLET OAK	3-3.5" CAL.		B&B
QP	QUERCUS PALUSTRIS	PIN OAK	3-3.5" CAL.		B&B
UA	ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	3-3.5" CAL.		B&B
<b>SHRUBS</b>					
FG	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	3 GAL.		SPACE 24" O.C
IG	ILEX GLABRA	INKBERRY	3 GAL.		SPACE 36" O.C
<b>PERENNIALS, GROUNDCOVERS AND GRASSES</b>					
PA	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	1 GAL.		SPACE 24" O.C
RA	RHUS AROMATICA 'GRO-LOW'	FRAGRANT SUMAC	1 GAL.		SPACE 36" O.C
RF	RUDBECKIA HIRTA	BLACK-EYED SUSAN	1 GAL.		SPACE 24" O.C
SN	SALVIA NEMOROSA	WOODLAND SAGE	1 GAL.		SPACE 18" O.C

UPLAND SEED MIX

BOTANICAL NAME	COMMON NAME	
<b>NEW ENGLAND ROADSIDE MATRIX UPLAND SEED MIX</b>		
ELYMUS CANADENSIS	CANADA WILD RYE	FACW+
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	FACU
FESTUCA RUBRA	CREeping RED FESCUE	FACU
ANDROPOGON GERARDII	BIG BLUESTEM	FAC
SORGHASTRUM NUTANS	INDIAN GRASS	UPL
CHAMAECRISTA FASCICULATA	PARTRIDGE PEA	FACU
PANICUM VIRGATUM	SWITCHGRASS	FAC
RHUS TYPHINA	STAGHORN SUMAC	
CORNUS AMOMUM	SILKY DOGWOOD	FACW
CORNUS RACEMOSA	GREY DOGWOOD	FAC
ASCLEPIAS SYRIACA	COMMON MILKWEEED	FACU-
ZIZIA AUREA	GOLDEN ALEXANDERS	FAC
DESMODIUM CANADENSE	SHOWY TICK TREFOIL	FAC
LESPEDEZA CAPITATA	BUSH CLOVER	FACU-
HELIOPSIS HELIANTHOIDES	OX EYE SUNFLOWER	UPL
MONARDA FISTULOSA	WILD BERGAMOT	UPL
RUDBECKIA HIRTA	BLACK EYED SUSAN	FACU-
ASTER LAEVIS	SMOOTH BLUE ASTER	UPL
EUTHAMIA GRAMINIFOLIA	GRASS LEAVED GOLDENROD	FAC
SOLIDAGO JUNCEA	EARLY GOLDENROD	

APPLY 18LBS/ACRE: 1250 SF/LB

NOTES:

- SEED MIXES SHALL BE EQUIVALENT TO THE SEED MIXES SHOWN AS DESIGNED AND SUPPLIED BY NEW ENGLAND WETLAND PLANTS, INC., AMHERST, MA (413) 548-8000.
- CONTRACTOR SHALL SUBMIT ALL SEED MIXES TO LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO PLACING ORDER.

UPLAND SEED MIX | 50:50 Blend of Upland Seed Mix and Wet Meadow Seed Mix. Quantity: Site Development Areas (±5,400 sf) 1 lb/1250 sf (qty. ±5 lbs)

CONSULTANTS

ELECTRICAL ENGINEER -  
NVS ENGINEERS

SURVEY -  
REED LAND SURVEY, INC.

TOWN OF READING  
Reading, MA  
BIRCH MEADOW PARK | PHASE II RENOVATIONS

90% Design Development/  
Permitting - March 17, 2025

REVISIONS:

NO.	DATE	DESCRIPTION
1	03.26.25	CC NOI SUBMISSION

SCALE:	AS NOTED
PROJECT NO.:	24037.00
FILE:	24037.00-L3.2-P_DET.dwg
DRAWN:	AJA
CHECKED:	SRC/HCG

SEAL:



SHEET TITLE:

PLANTING DETAILS  
AND SCHEDULES

SHEET NO.:

**L3.2**



**CONSULTANTS**

ELECTRICAL ENGINEER -  
 NV5 ENGINEERS  
 SURVEY -  
 REED LAND SURVEY, INC.

**TOWN OF READING**  
 Reading, MA  
 BIRCH MEADOW PARK | PHASE II RENOVATIONS

90% Design Development/  
 Permitting - March 17, 2025

REVISIONS:

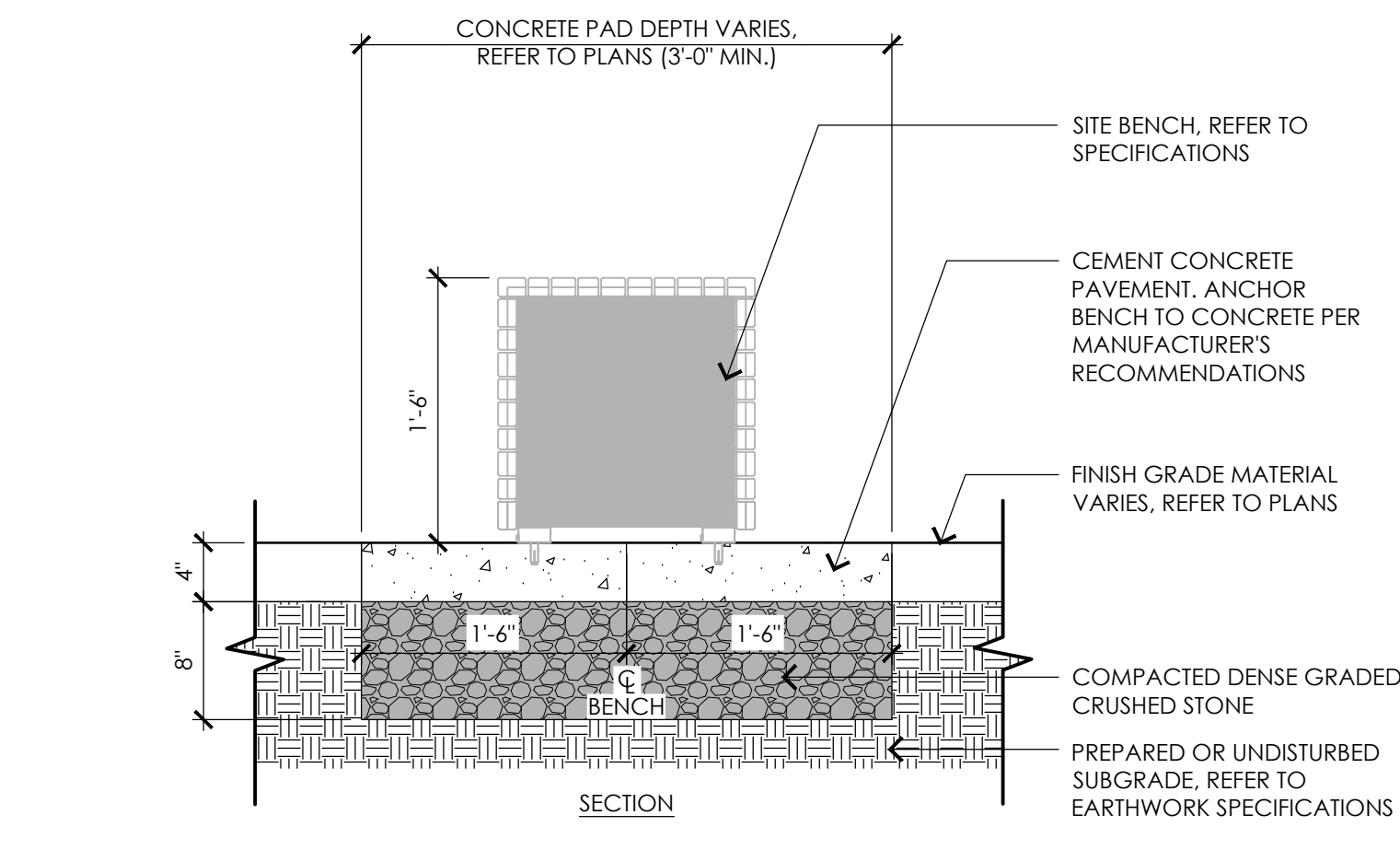
NO.	DATE	DESCRIPTION

SCALE: AS NOTED  
 PROJECT NO.: 24037.00  
 FILE: 24037.00-14.2-DET\_2.dwg  
 DRAWN: AJA  
 CHECKED: SRC/HCG

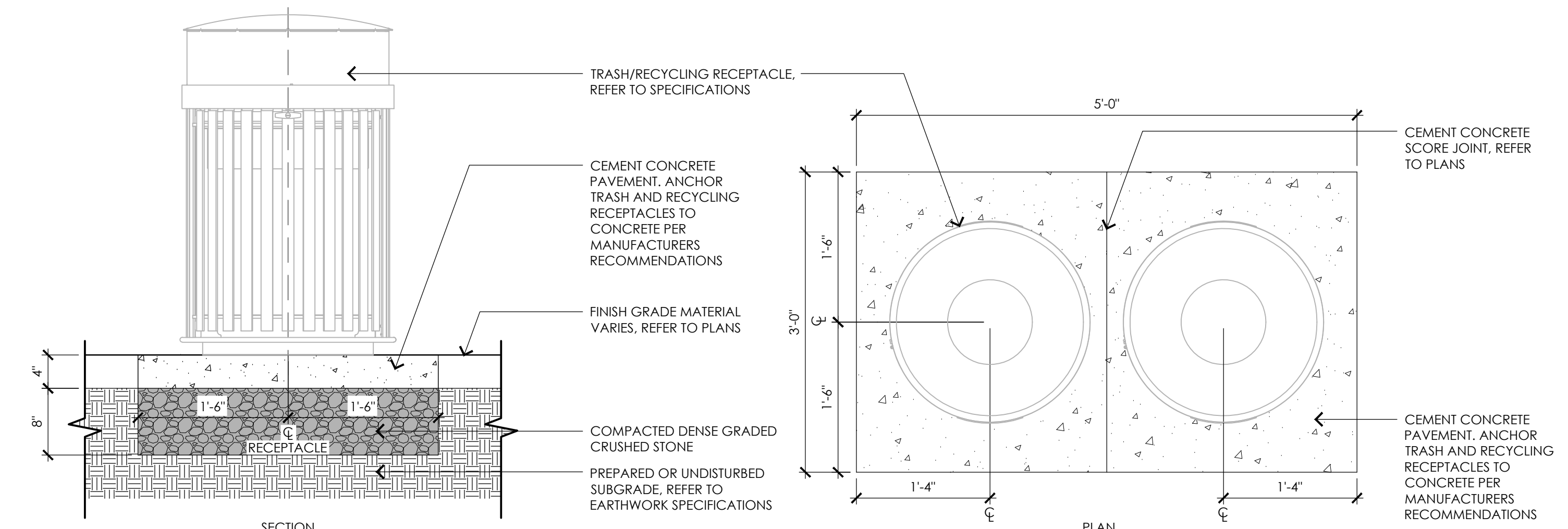


SHEET TITLE:  
 DETAIL SHEET II

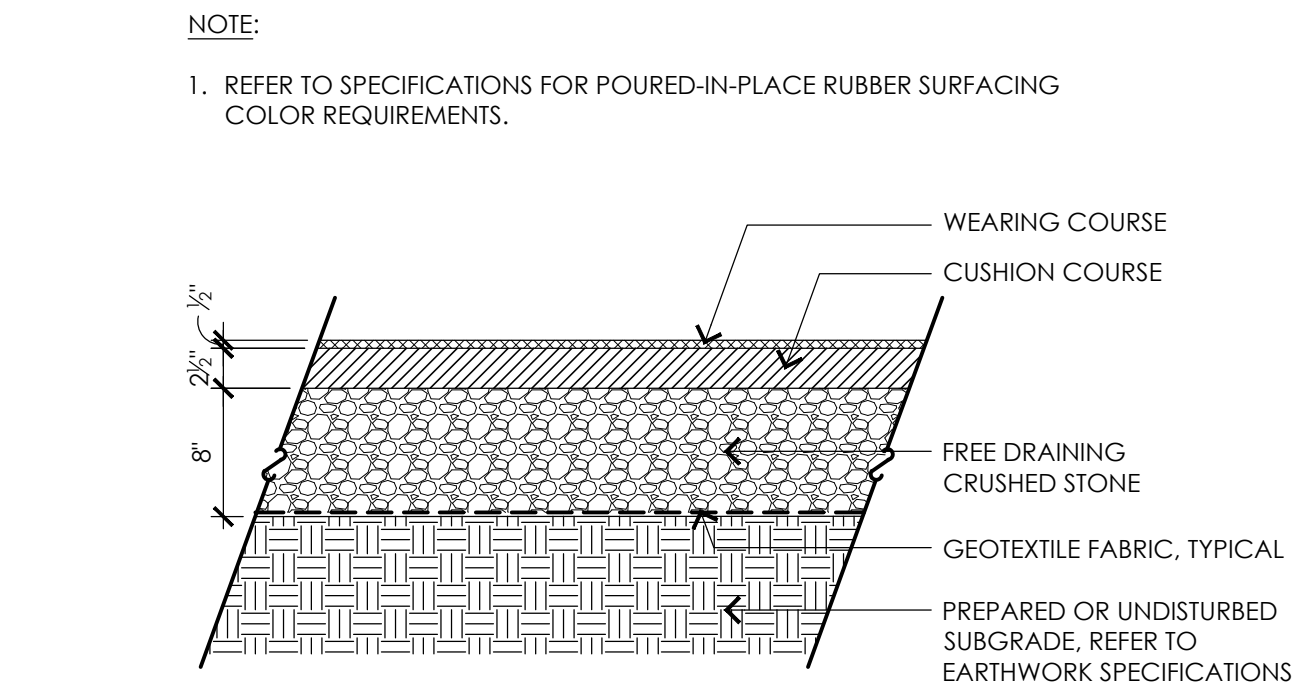
SHEET NO:  
**L4.2**



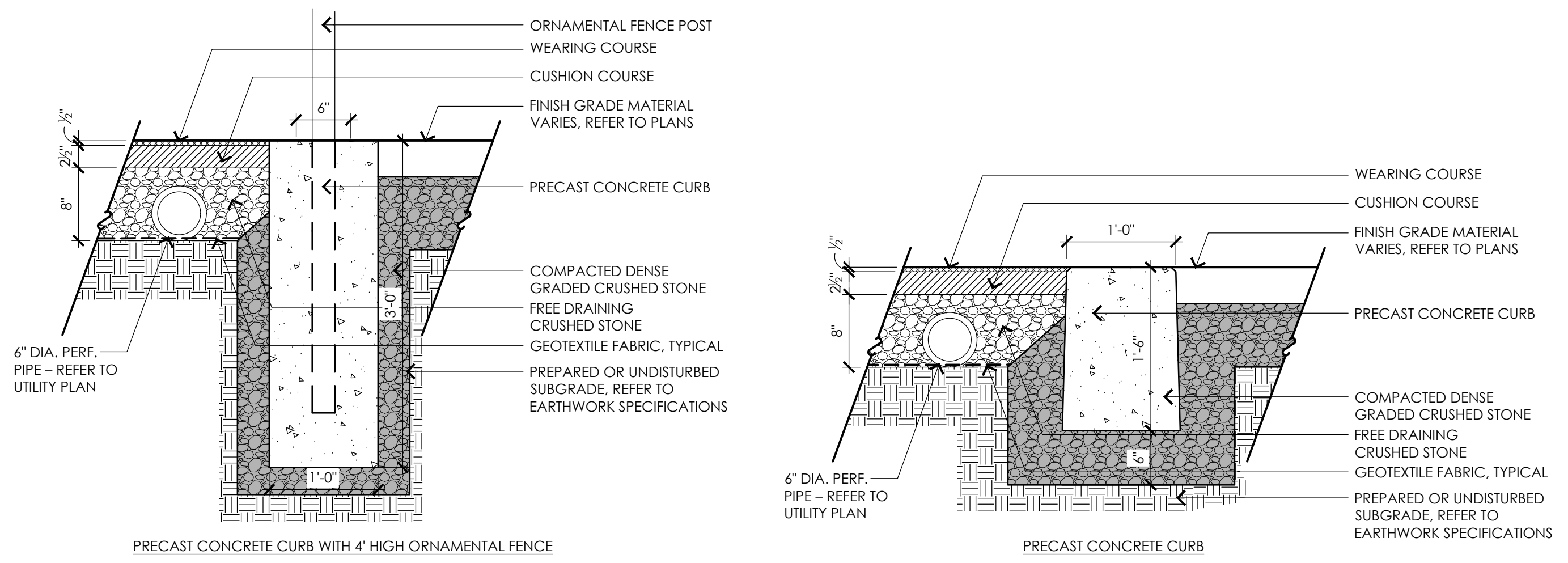
**1 SITE BENCH**  
 NOT TO SCALE



**2 TRASH/RECYCLING RECPTACLES ON CEMENT CONCRETE PAD**  
 NOT TO SCALE

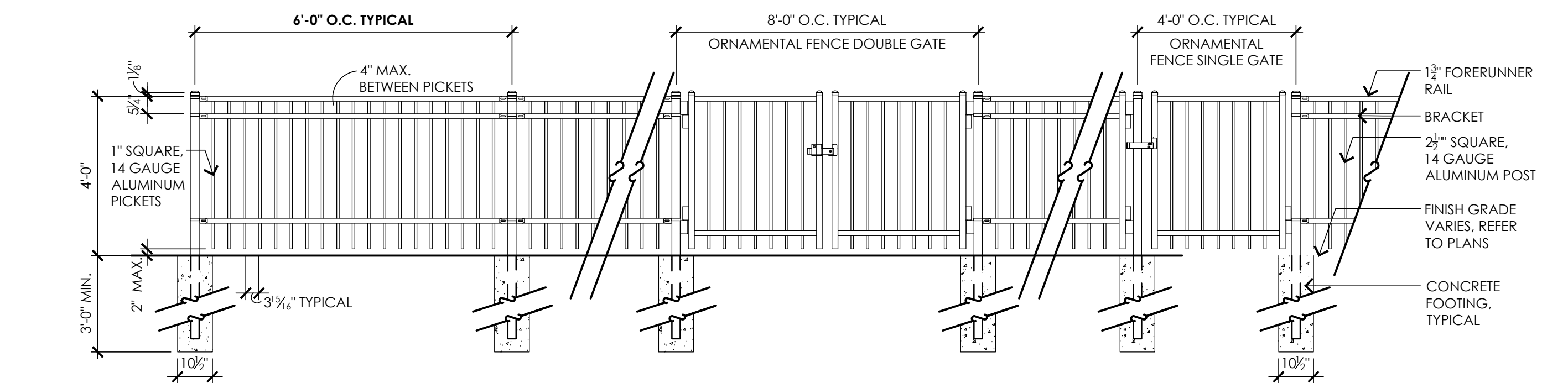


**3 POURED-IN-PLACE PLAYGROUND SURFACING**  
 NOT TO SCALE

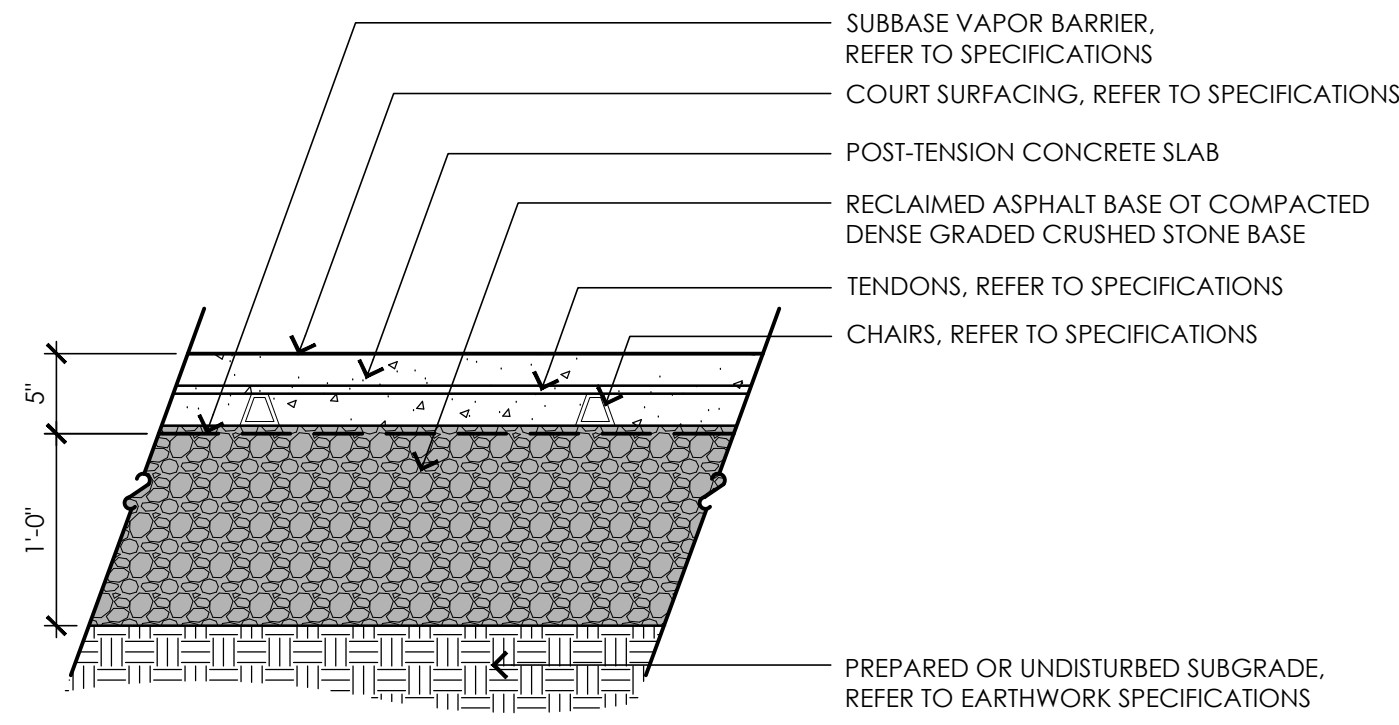


**4 PRECAST CONCRETE CURB**  
 NOT TO SCALE

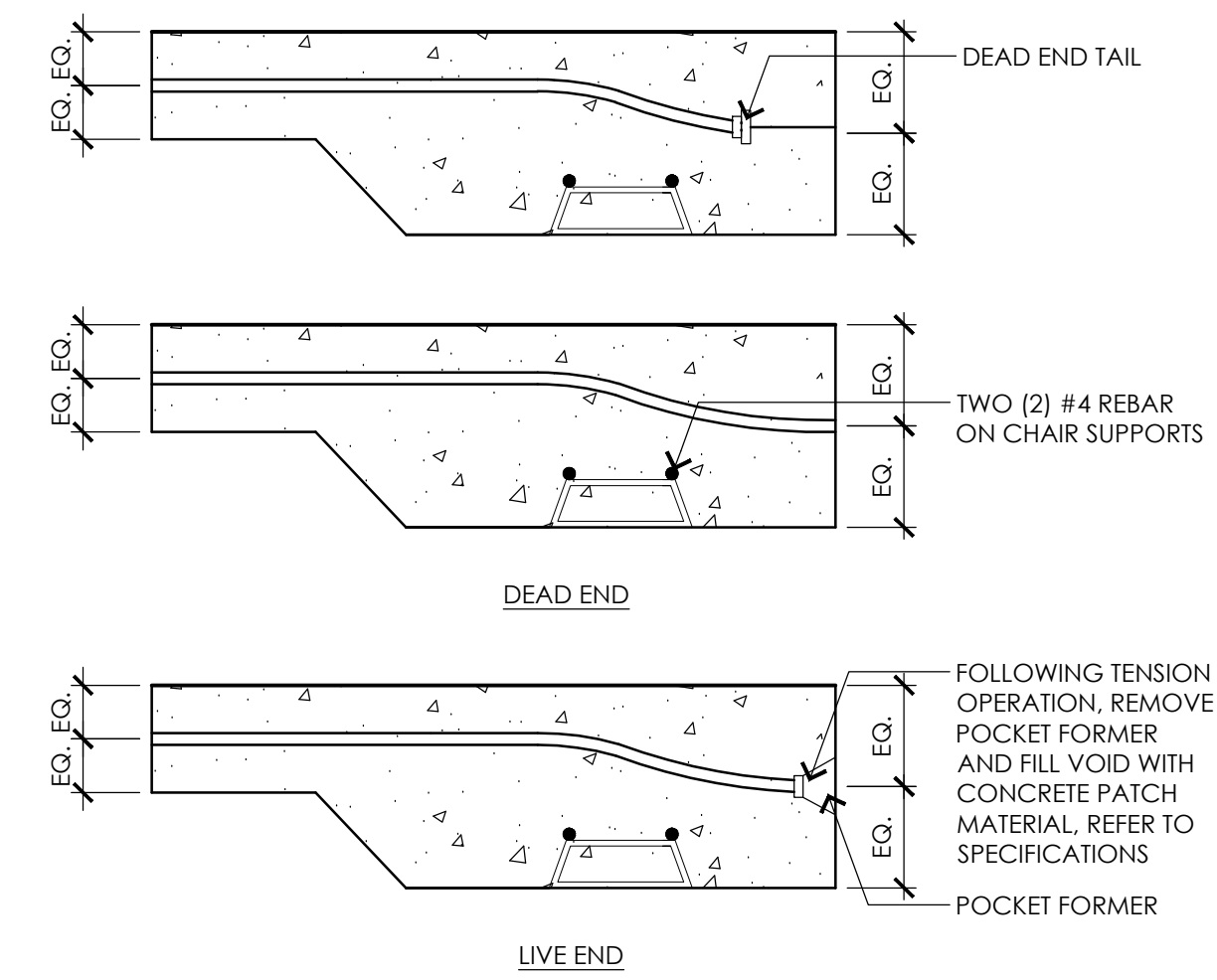
NOTES:  
 1. ORNAMENTAL FENCE MODEL SHALL BE AMERISTAR AEGIS PLUS - MAJESTIC (3 RAIL), REFER TO SPECIFICATIONS  
 2. MAINTAIN TOP OF PICKETS 4'-0" ABOVE GRADE. ALL PICKETS AND POSTS SHALL REMAIN PLUMB; NO STEPPING



**5 4' HIGH ORNAMENTAL FENCE AND GATES**  
 NOT TO SCALE



**1** POST-TENSION CONCRETE PAVEMENT  
NOT TO SCALE

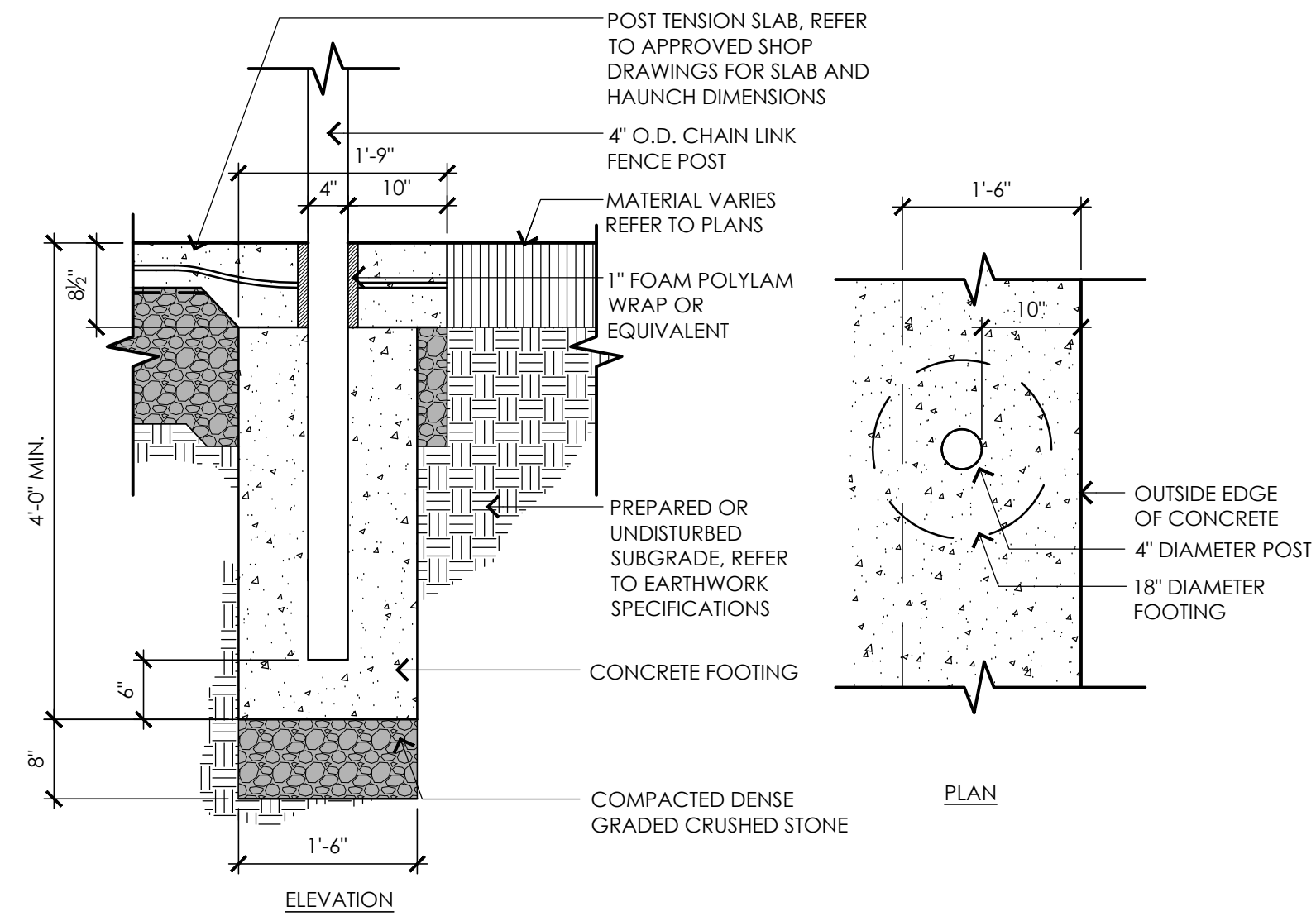


**2** POST-TENSION CONCRETE EDGE  
NOT TO SCALE

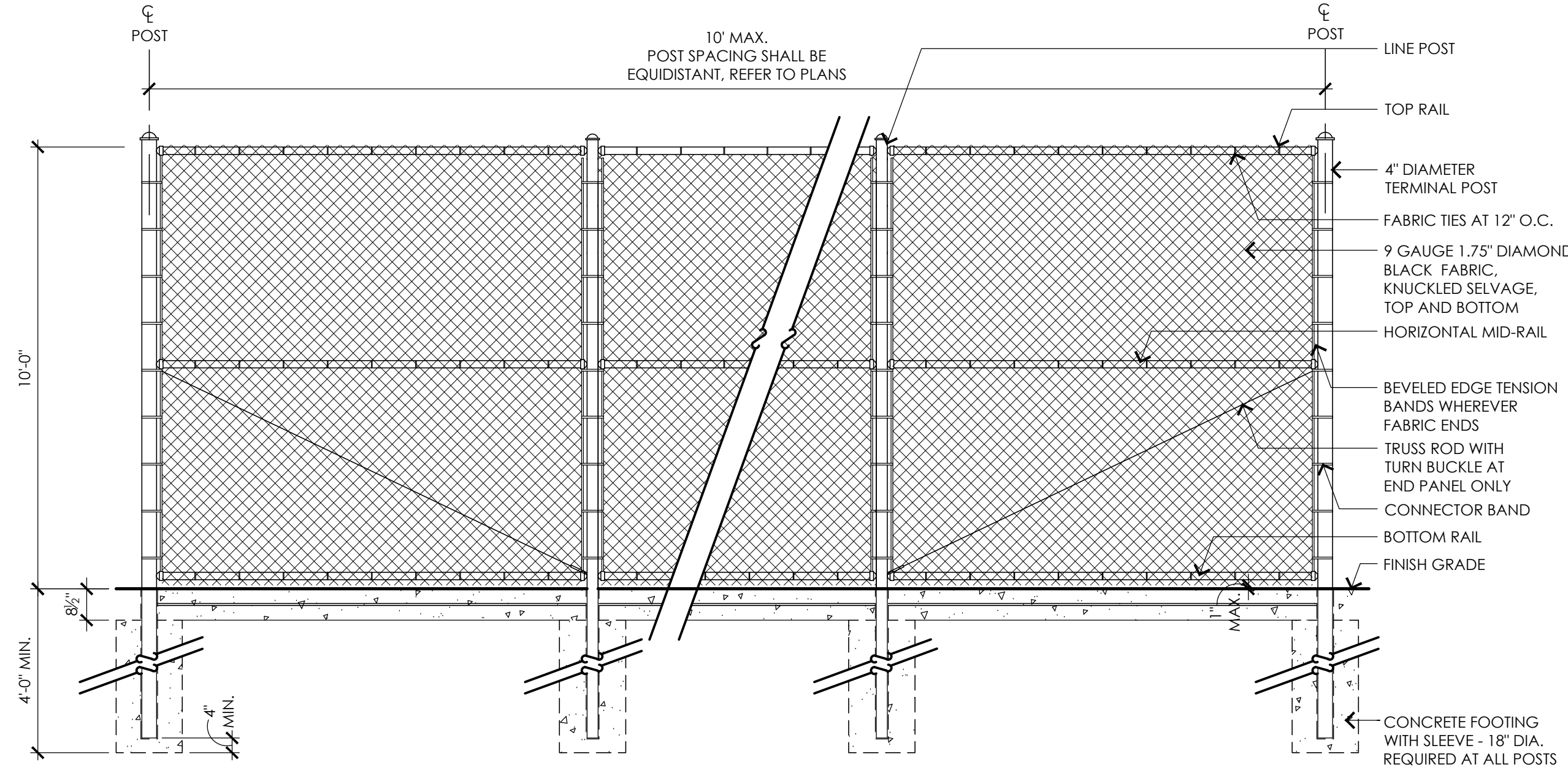
NOTES:

- ALL JOINTS WELDED FOR SOLID FRAME ON GATE PANELS.
- POST SPACING SHALL BE EQUIDISTANT AS NOTED ON LAYOUT AND MATERIALS PLAN.
- CHAIN LINK FENCE POST FOOTING AND POSTS TO BE POURED AND SET PRIOR TO POURING POST-TENSION CONCRETE SLAB.

CONCRETE FOOTING DEPTH X WIDTH	H
TERMINAL	48"x18"
LINE	48"x15"



**3** 10' HIGH CHAIN LINK FENCE POST AT PERIMETER OF BASKETBALL COURT  
NOT TO SCALE



**4** 10' HIGH CHAIN LINK FENCE  
NOT TO SCALE

CONSULTANTS  
ELECTRICAL ENGINEER -  
NVS ENGINEERS  
SURVEY -  
REED LAND SURVEY, INC.

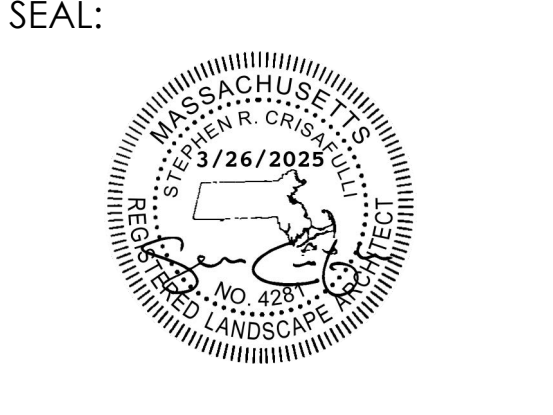
**TOWN OF READING**  
Reading, MA  
BIRCH MEADOW PARK | PHASE II RENOVATIONS

90% Design Development/  
Permitting - March 17, 2025

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: AS NOTED  
PROJECT NO.: 24037.00  
FILE: 24037.00-L4.3-DET\_3.dwg  
DRAWN: AJA  
CHECKED: SRC/HCG

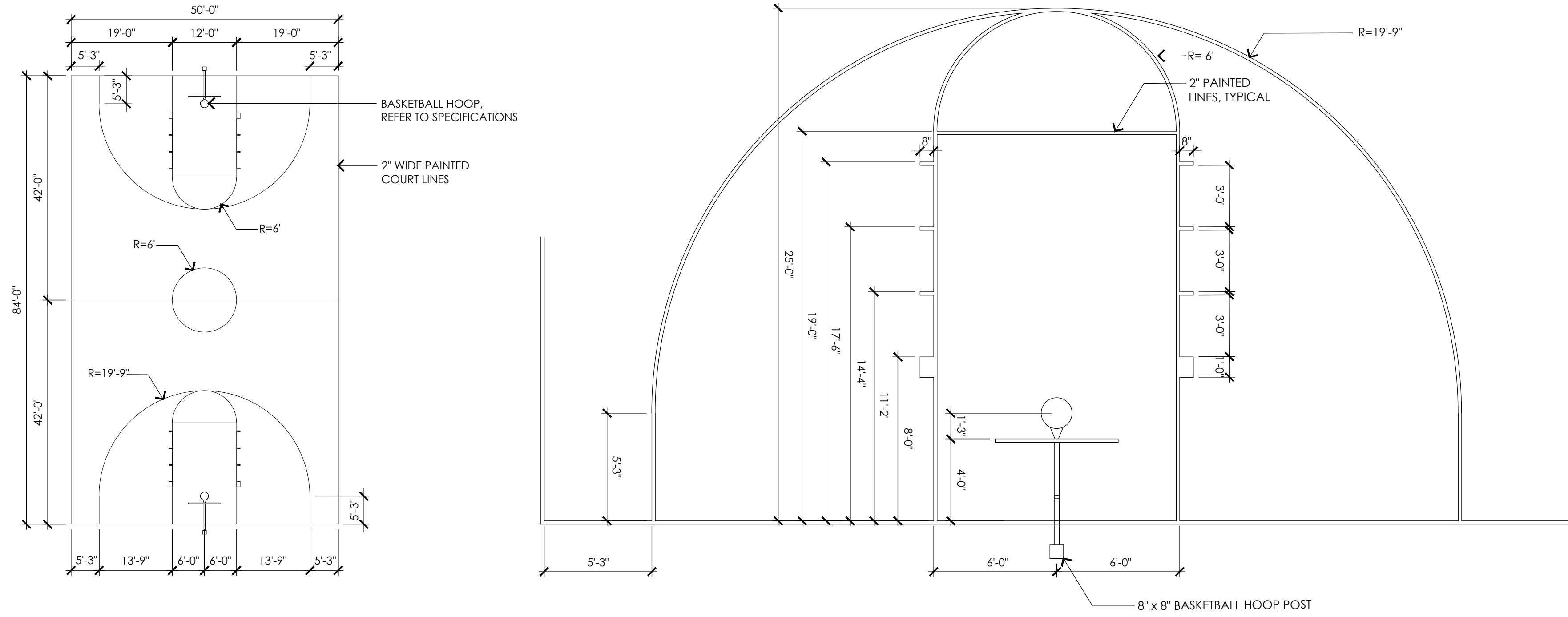


SHEET TITLE:  
DETAIL SHEET III

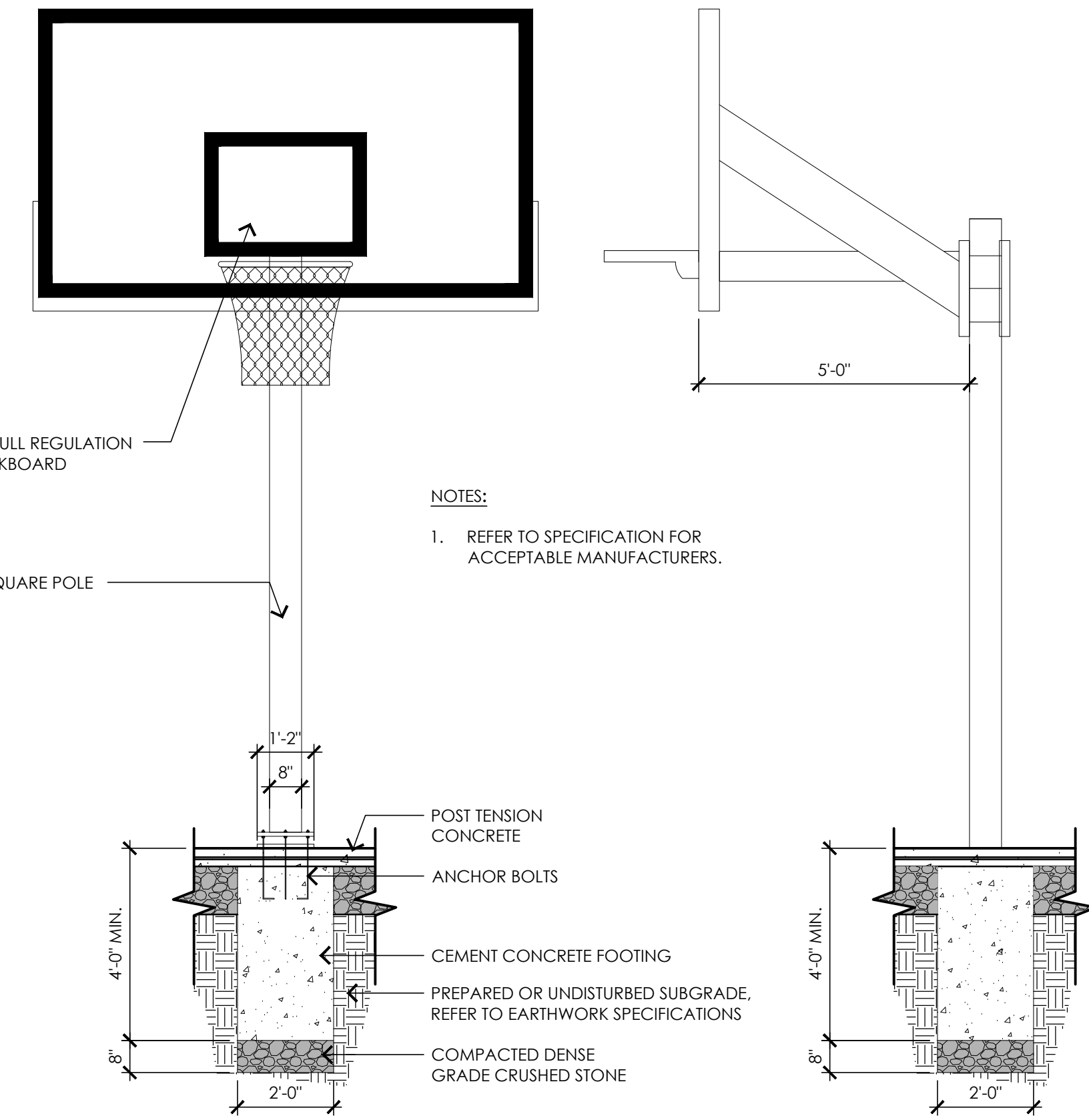
SHEET NO:  
**L4.3**

**NOTES:**

1. LINES SHALL BE 2" WIDE. COLOR TO BE WHITE.
2. MEASUREMENTS TAKEN FROM OUTSIDE TO OUTSIDE.
3. REFER TO SPECIFICATIONS FOR COURT COLORING REQUIREMENTS.



**1 BASKETBALL COURT STRIPING LAYOUT**  
NOT TO SCALE



**2 BASKETBALL HOOP AND FOOTING**  
NOT TO SCALE

**CONSULTANTS**

- ELECTRICAL ENGINEER -  
NVS ENGINEERS  
SURVEY -  
REED LAND SURVEY, INC.

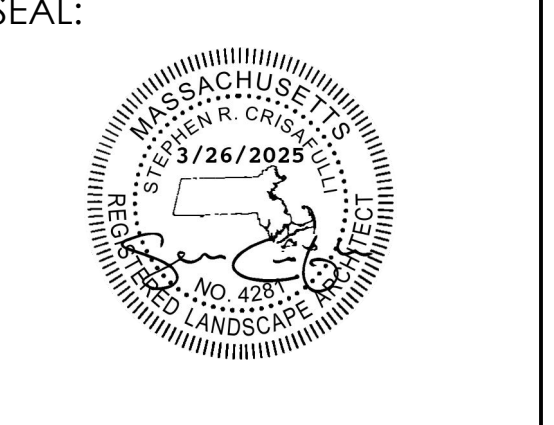
**TOWN OF READING**  
Reading, MA  
BIRCH MEADOW PARK | PHASE II RENOVATIONS

90% Design Development/  
Permitting - March 17, 2025

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE:	AS NOTED
PROJECT NO.:	24037.00
FILE:	24037.00-L4.4-DET_4.dwg
DRAWN:	AJA
CHECKED:	SRC/HCG

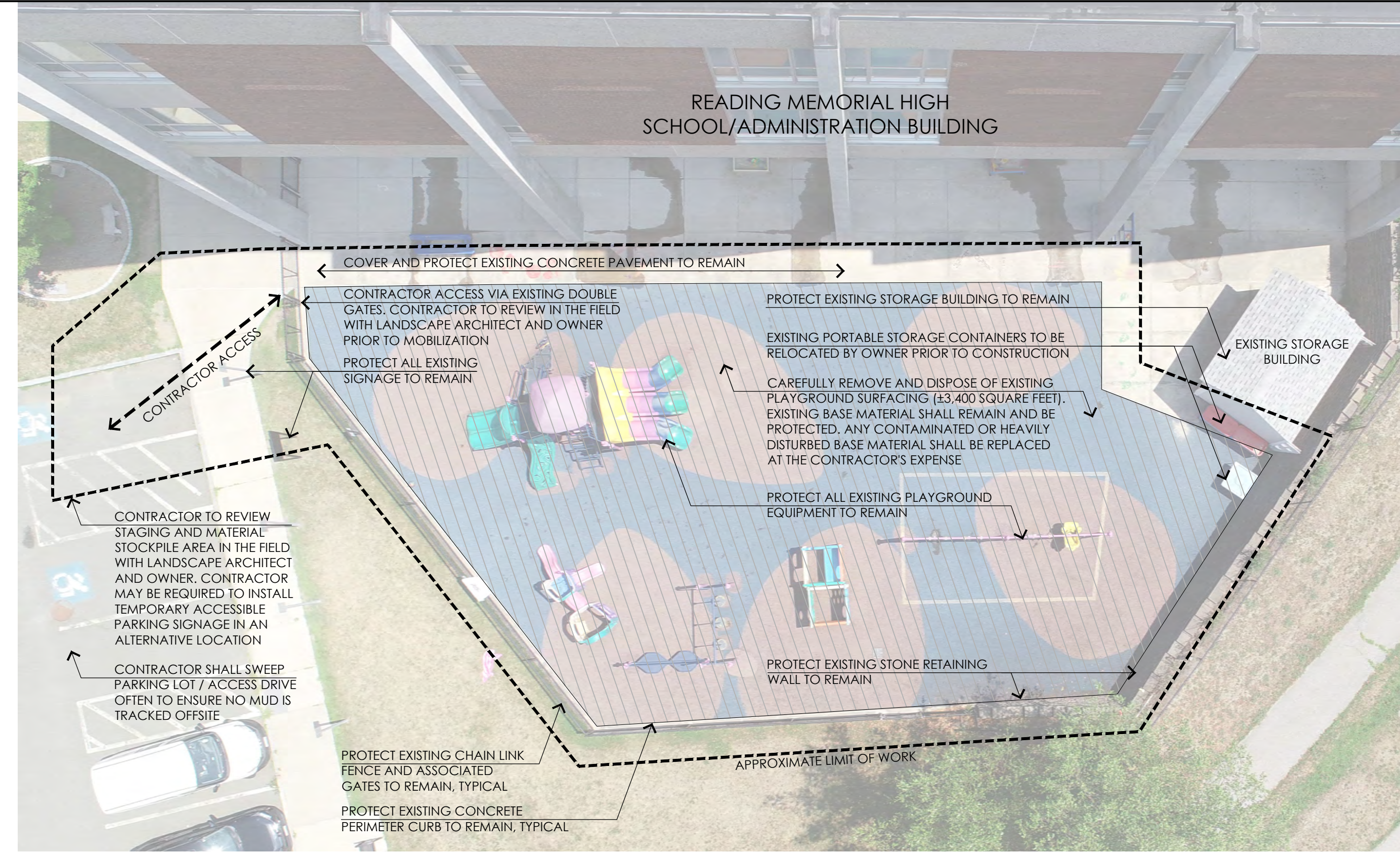


SHEET TITLE:  
DETAIL SHEET IV

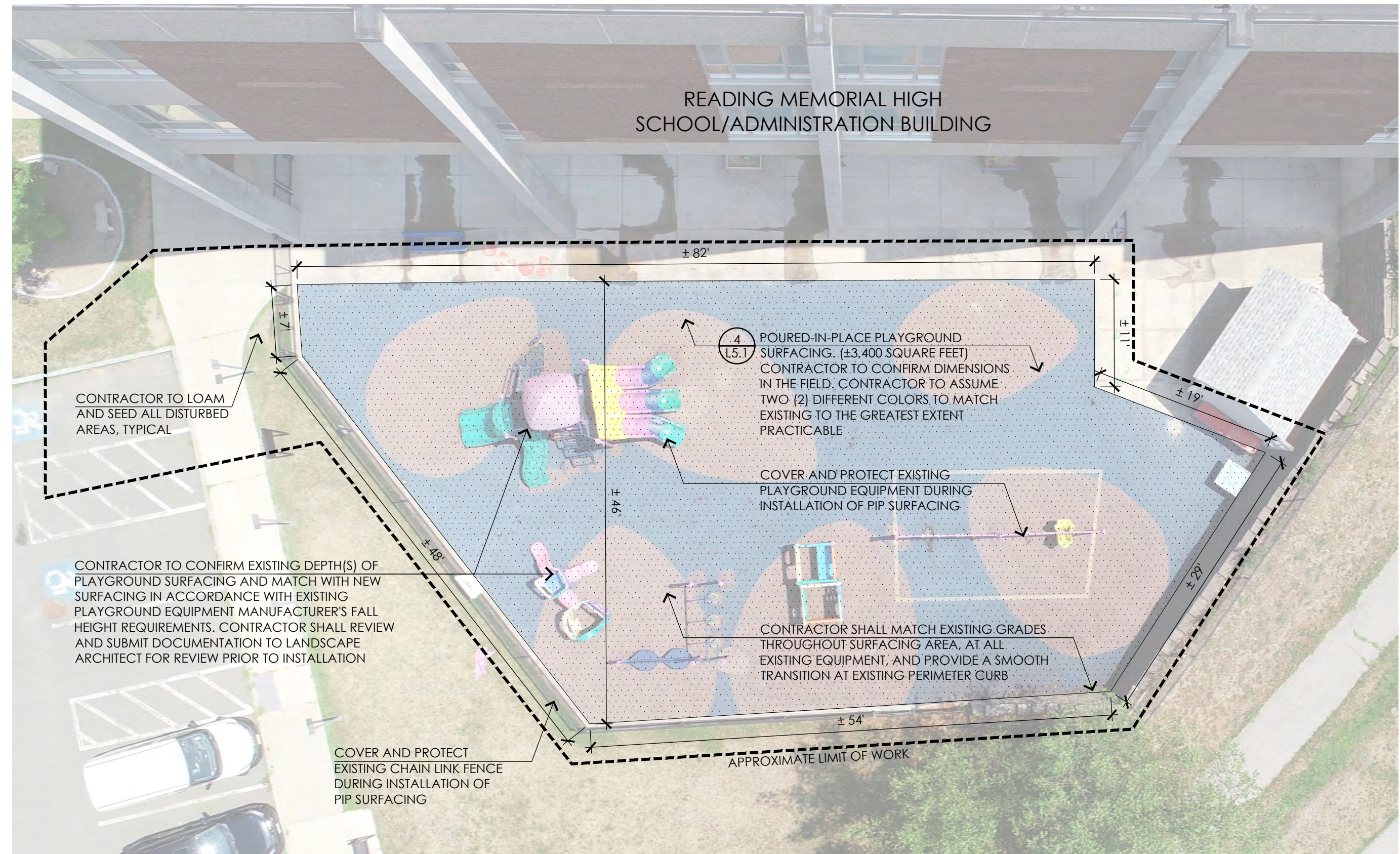
SHEET NO:  
**L4.4**



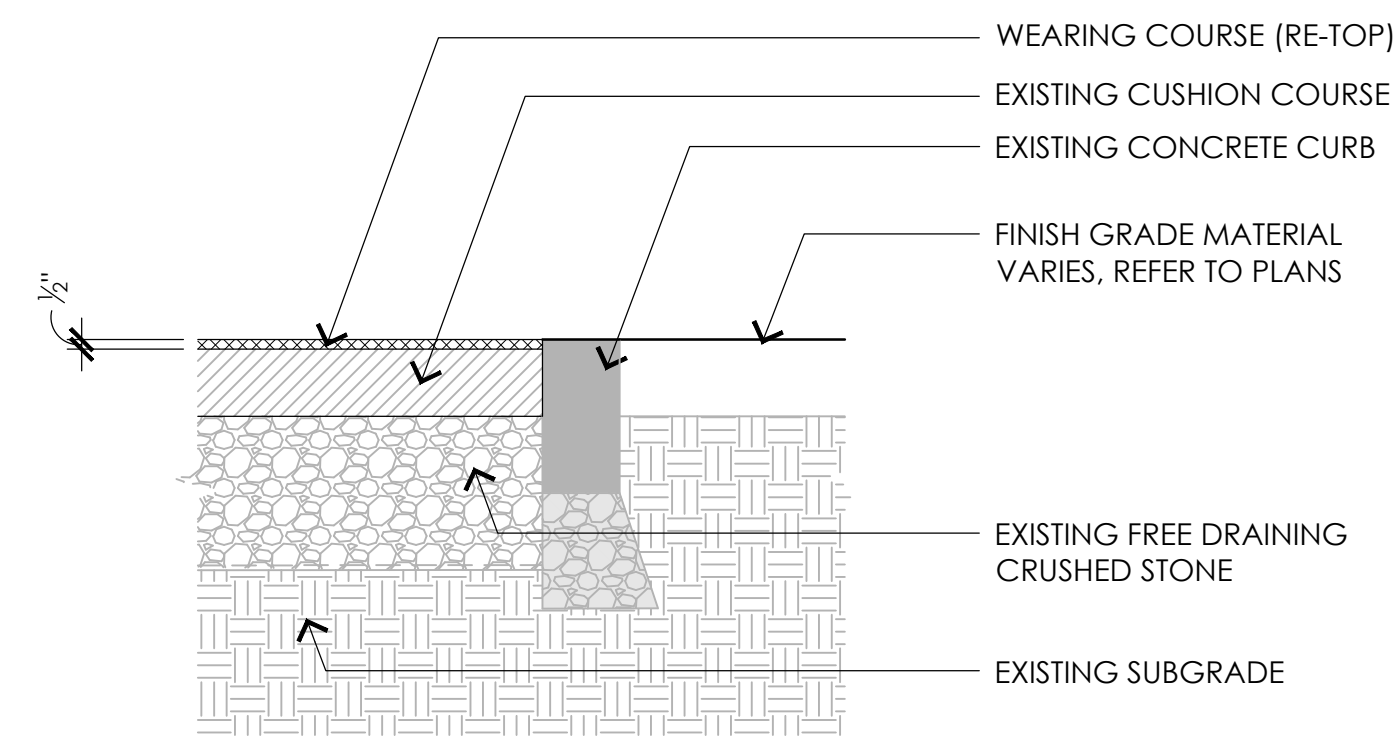
1 RISE PRE-SCHOOL PLAYGROUND RESURFACING - EXISTING CONDITIONS  
NOT TO SCALE



2 RISE PRE-SCHOOL PLAYGROUND RESURFACING - SITE PREPARATION  
NOT TO SCALE



3 RISE PRE-SCHOOL PLAYGROUND RESURFACING - SITE PLAN  
NOT TO SCALE



4 POURED-IN-PLACE PLAYGROUND SURFACING  
NOT TO SCALE

CONSULTANTS

ELECTRICAL ENGINEER -  
NVS ENGINEERS

SURVEY -  
REED LAND SURVEY, INC.

**TOWN OF READING**  
Reading, MA  
BIRCH MEADOW PARK | PHASE II RENOVATIONS

90% Design Development/  
Permitting - March 17, 2025

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: AS NOTED  
PROJECT NO.: 24037.00  
FILE: 24037.00-L5.1-DET\_PLAYGROUND.dwg  
DRAWN: AJA  
CHECKED: SRC/HCG



SHEET TITLE:  
RISE PRE-SCHOOL  
PLAYGROUND  
RESURFACING PLANS

SHEET NO:  
**L5.1**

LIGHTING FIXTURE SCHEDULE - LED									
TYPE	MANUFACTURERS	CATALOG NUMBER	DESCRIPTION	COLOR	CRI	LUMENS	INPUT		REMARKS
							WATTS	VOLTS	
BA1	MUSCO	TLC-LED-550	CUSTOM SPORTS LIGHT	5700K	75	67,000	1.62	240	MOUNTED AT 50' AFG
BA2	MUSCO	TLC-LED-550	CUSTOM SPORTS LIGHT	5700K	75	67,000	1.62	240	MOUNTED AT 50' AFG
L1									

**NOTES:**

- NOTES 2-3 APPLY TO ALL APPLICABLE LIGHTING FIXTURES. THE REMARKS COLUMN SHALL NOTE ADDITIONAL REQUIREMENTS.
- FIXTURES SPECIFIED WITH CATALOG NUMBERS ARE THE BASIS OF DESIGN AND ESTABLISH QUALITY LEVEL FOR EQUAL FIXTURES FROM MANUFACTURERS LISTED WITHOUT CATALOG NUMBERS. WHERE ONLY ONE MANUFACTURER LISTED, THERE SHALL BE NO SUBSTITUTION.
- VERIFY EXACT MOUNTING CONDITIONS AND PROVIDE APPROPRIATE ACCESSORIES AND HARDWARE TO ACCOMMODATE REQUIREMENTS.

BRANCH CIRCUIT & FEEDER LEGEND	
	BRANCH CIRCUIT OR FEEDER CONCEALED IN FINISHED AREAS
	BRANCH CIRCUIT OR FEEDER TURNING UP TOWARDS OBSERVER
	BRANCH CIRCUIT OR FEEDER TURNING DOWN AWAY FROM OBSERVER
	CONDUIT STUBBED ABOVE CEILING
	BRANCH CIRCUIT HOME RUN TICKS INDICATE QUANTITY OF CONDUCTORS, GROUND CONDUCTORS ARE NOT INDICATED. NO TICKS INDICATES 2#12 & 1#12G IN 3/4" MINIMUM. R22A-1,3,5 INDICATES PANEL AND CIRCUIT DESIGNATION FROM WHICH HOMERUN SHALL ORIGINATE. EACH CIRCUIT SHALL BE 20A-1P (20AMP SINGLE POLE) UNLESS NOTED OTHERWISE.
	FLEXIBLE CONNECTION TO EQUIPMENT, RACEWAY AND CONDUCTOR RATING TO MATCH ASSOCIATED BRANCH CIRCUIT OR FEEDER

ONE LINE SYMBOLS LEGEND	
	3 PHASE, 3 WIRE DELTA CONNECTION
	3 PHASE, 4 WIRE WYE SOLIDLY GROUNDED
	PANELBOARD

SITE LEGEND	
	ELECTRIC HAND HOLE
	UNDERGROUND ELECTRIC 'UE-EX' INDICATES EXISTING

EXISTING EQUIPMENT LEGEND	
	EXISTING EQUIPMENT TO REMAIN
	EXISTING EQUIPMENT TO BE REMOVED
	EXISTING EQUIPMENT TO BE RELOCATED
	NEW LOCATION OF EXISTING RELOCATED EQUIPMENT
	EXISTING EQUIPMENT TO BE REMOVED AND NEW EQUIPMENT TO BE INSTALLED ON EXISTING BRANCH/FEEDER
	EXISTING EQUIPMENT FOR INFORMATION ONLY. INDICATED BY SYMBOL WITH LIGHT AND OUT OF FUNCTION LINE TYPE
	EXISTING EQUIPMENT TO BE REWORKED. INDICATED BY SYMBOL WITH DASHED AND IN FUNCTION LINE TYPE

LIGHTING FIXTURE LEGEND	
	LIGHTING FIXTURE WALL MOUNTED '8' INDICATES CIRCUIT NUMBER
	POLE MOUNTED SPORTS LIGHTING FIXTURE. 'BA1' INDICATES FIXTURE TYPE '2' INDICATES CIRCUIT NUMBER

ABBREVIATIONS			
A/AMP	AMPERE	KWH	KILOWATT HOURS
AC	ALTERNATING CURRENT	LTG	LIGHTING
ADA	AMERICAN WITH DISABILITIES ACT	MCB	MAIN CIRCUIT BREAKER
AF	AMPERE FRAME	MEC	MASSACHUSETTS ELECTRICAL CODE
AFF	ABOVE FINISHED FLOOR	M/G	MOTOR/GENERATOR SET
AFG	ABOVE FINISHED GRADE	MH	MANHOLE
AIC	AMPERE INTERRUPTING CAPACITY	MLO	MAIN LUGS ONLY
AL	ALUMINUM	MTD	MOUNTED
AT	AMPERE TRIP	MTG	MOUNTING
ATS	AUTOMATIC TRANSFER SWITCH	NC	NORMALLY CLOSED CONTACT
AWG	AMERICAN WIRE GAUGE	NEC	NATIONAL ELECTRICAL CODE
B	BURIED	NO	NORMALLY OPEN CONTACT
C	CONDUIT	NTS	NOT TO SCALE
CA	CABLE	#	NUMBER
CATV	CABLE TELEVISION	OPD	OVER CURRENT PROTECTION DEVICE
CCTV	CLOSED CIRCUIT TELEVISION SYSTEM	POS	PROVIDED UNDER OTHER SECTIONS
CB	CIRCUIT BREAKER	PVC	POLYVINYL CHLORIDE
CKT	CIRCUITS	PWR	POWER
CPU	CENTRAL PROCESSING UNIT	RGS	RIGID GALVANIZED STEEL
¢	CENTERLINE	RMS	ROOT MEAN SQUARE VALUE
dB	DECIBEL	RPM	REVOLUTIONS PER MINUTE
DC	DIRECT CURRENT	SPD	SURGE PROTECTIVE DEVICE
DWG	DRAWING	SN	SOLID NEUTRAL
EC	ELECTRICAL CONTRACTOR	SWBD	SWITCHBOARD
EMT	ELECTRICAL METALLIC TUBING	TB	TERMINAL BLOCK
FDR	FEEDER	TEL	TELEPHONE
FLMT	FLEXIBLE LIQUID TIGHT METALLIC TUBING	TERMN	TERMINAL
FREQ	FREQUENCY	TSP	TWISTED SHIELDED-PAIR
GEC	GROUNDING ELECTRODE CONDUCTOR	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
GFI	GROUND FAULT INTERRUPTING	TYP	TYPICAL
GND	GROUND	UG	UNDERGROUND
HH	HANDHOLE	UNO	UNLESS NOTED OTHERWISE
HP	HORSEPOWER	UPS	UNINTERRUPTIBLE POWER SUPPLY
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	UTP	UNSHIELDED TWISTED-PAIR
HZ	HERTZ	V	VOLTS
IG	ISOLATED GROUND	VA	VOLT-AMPERE
JB	JUNCTION BOX	VSD	VARIABLE SPEED DRIVE
KVA	KILOVOLT-AMPERE	W	WATTS
KW	KILOWATT	WP	WEATHERPROOF

**CONSULTANTS**

ELECTRICAL ENGINEER -  
 NVS ENGINEERS

SURVEY -  
 REED LAND SURVEY, INC.

**TOWN OF READING**  
 Reading, MA  
 BIRCH MEADOW PARK | PHASE II RENOVATIONS

DD/Permitting  
 November 2024

REVISIONS:		
NO.	DATE	DESCRIPTION

SCALE: NTS  
 PROJECT NO.: 24037.00  
 FILE:  
 DRAWN: MVM  
 CHECKED: DJC

SEAL:

SHEET TITLE:  
 ELECTRICAL LEGEND  
 AND SCHEDULES

SHEET NO:  
**E0.0**

CONTACT DIGSAFE:  
 UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

CONSULTANTS

ELECTRICAL ENGINEER -  
 NVS ENGINEERS

SURVEY -  
 REED LAND SURVEY, INC.

**TOWN OF READING**  
 Reading, MA  
 BIRCH MEADOW PARK | PHASE II RENOVATIONS

DD/Permitting  
 November 2024

REVISIONS:

NO.	DATE	DESCRIPTION

SCALE: 1"=20'-0"  
 PROJECT NO.: 24037.00  
 FILE:  
 DRAWN: MYM  
 CHECKED: DJC

SEAL:

SHEET TITLE:

ELECTRICAL  
 SITE PLAN

SHEET NO:

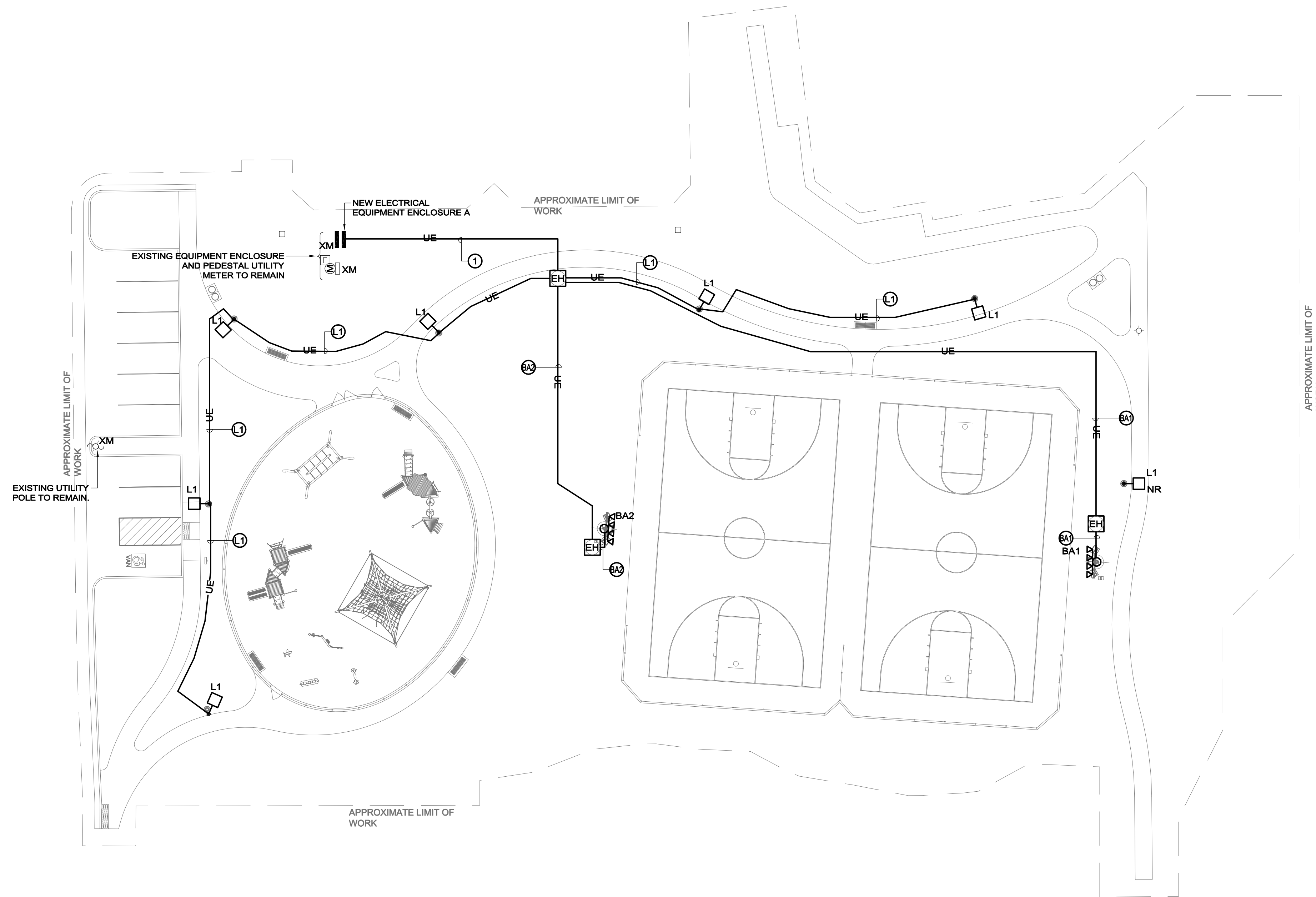
**E1.0**

**NOTES:**

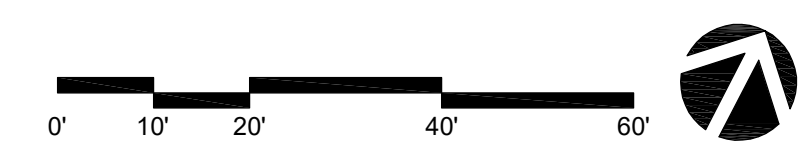
- REFER TO DRAWING E0.0 FOR LEGEND, SYMBOLS AND GENERAL NOTES.
- REFER TO LANDSCAPE/CIVIL DRAWINGS FOR ASSOCIATED NOTES, DETAILS, HEIGHTS AND EXACT OF ALL SITE LIGHTING/SPORTS LIGHTING FIXTURES.
- CIRCUIT NUMBERS DENOTE CIRCUITING INTENT. EXACT NUMBER DESIGNATIONS SHALL BE DETERMINED IN THE FIELD AND REFLECTED ON THE AS BUILT DRAWINGS. INTERCONNECTING BRANCH WIRING SHALL BE SIZED EQUAL TO THE HOMERUN UNLESS NOTED OTHERWISE.
- VOLTAGE DROP HAS BEEN CONSIDERED IN THE DESIGN OF ALL BRANCH CIRCUITRY AND FEEDER SIZES BASED ON EQUIPMENT LAYOUTS AND SHORTEST CONDUCTOR/RACEWAY ROUTING. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DEVIATIONS TAKEN THAT WILL INCREASE CONDUCTOR/RACEWAY LENGTHS. BRANCH CIRCUITS LONGER THAN 75' FOR 120V FROM PANEL TO LAST OUTLET SHALL BE INCREASED A MINIMUM OF ONE SIZE ABOVE THAT SPECIFIED TO LIMIT VOLTAGE DROP TO LESS THAN 3%. FEEDERS SHALL FOLLOW SIMILAR GUIDELINES AND BE LIMITED TO A 2% DROP.
- ALL SITE LIGHTING AND SPORTS LIGHTING SHALL BE CONTROLLED VIA THE MUSCO CONTROLLER.
- MAINTAIN CONTINUITY OF BRANCH CIRCUITRY ASSOCIATED WITH ALL EXISTING POWER DEVICES TO REMAIN.
- PANELBOARD SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.

DIRECT BURIED CONDUIT SCHEDULE			
TAG	DESCRIPTION	CONDUIT	CONDUCTORS
1	PATHWAY LIGHTING L1	1"	2#10+#10G
	SPORTS LIGHTING BA1		2#10+#10G
	SPORTS LIGHTING BA2		2#10+#10G
BA1	SPORTS LIGHTING BA1	1"	2#10+#10G
BA2	SPORTS LIGHTING BA2	1"	2#10+#10G
L1	PATHWAY LIGHTING L1	1"	2#10+#10G

NOTES:  
 1. CONDUIT SHALL BE DIRECT BURIED. REFER TO DETAIL E513 ON DRAWING E2.0 FOR ADDITIONAL INFORMATION.  
 2. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION INCLUDING BUT NOT LIMITED TO CONCRETE REINFORCEMENT REQUIRED UNDER PAVED AREAS INTENDED FOR VEHICULAR TRAFFIC.  
 3. ALL CONDUCTORS SHALL BE SUITABLE FOR WET LOCATIONS.  
 4. PROVIDE ALL EMPTY/SPARE CONDUIT WITH NYLON PULL STRING.



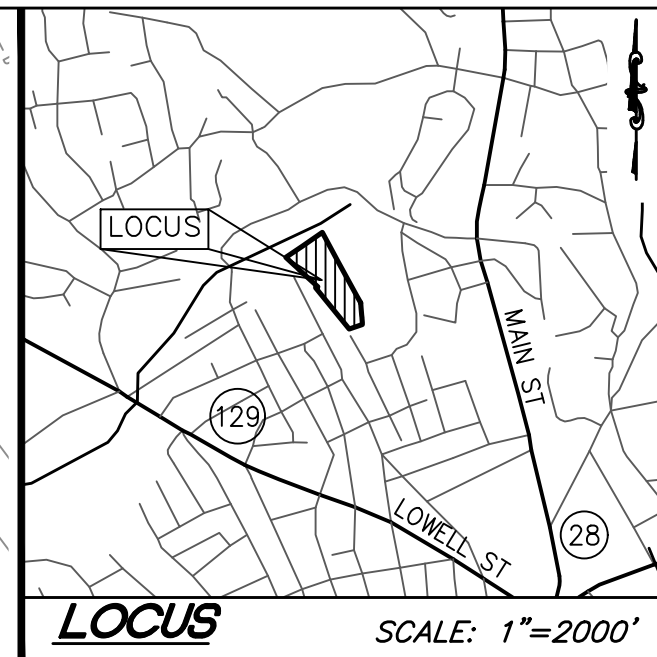
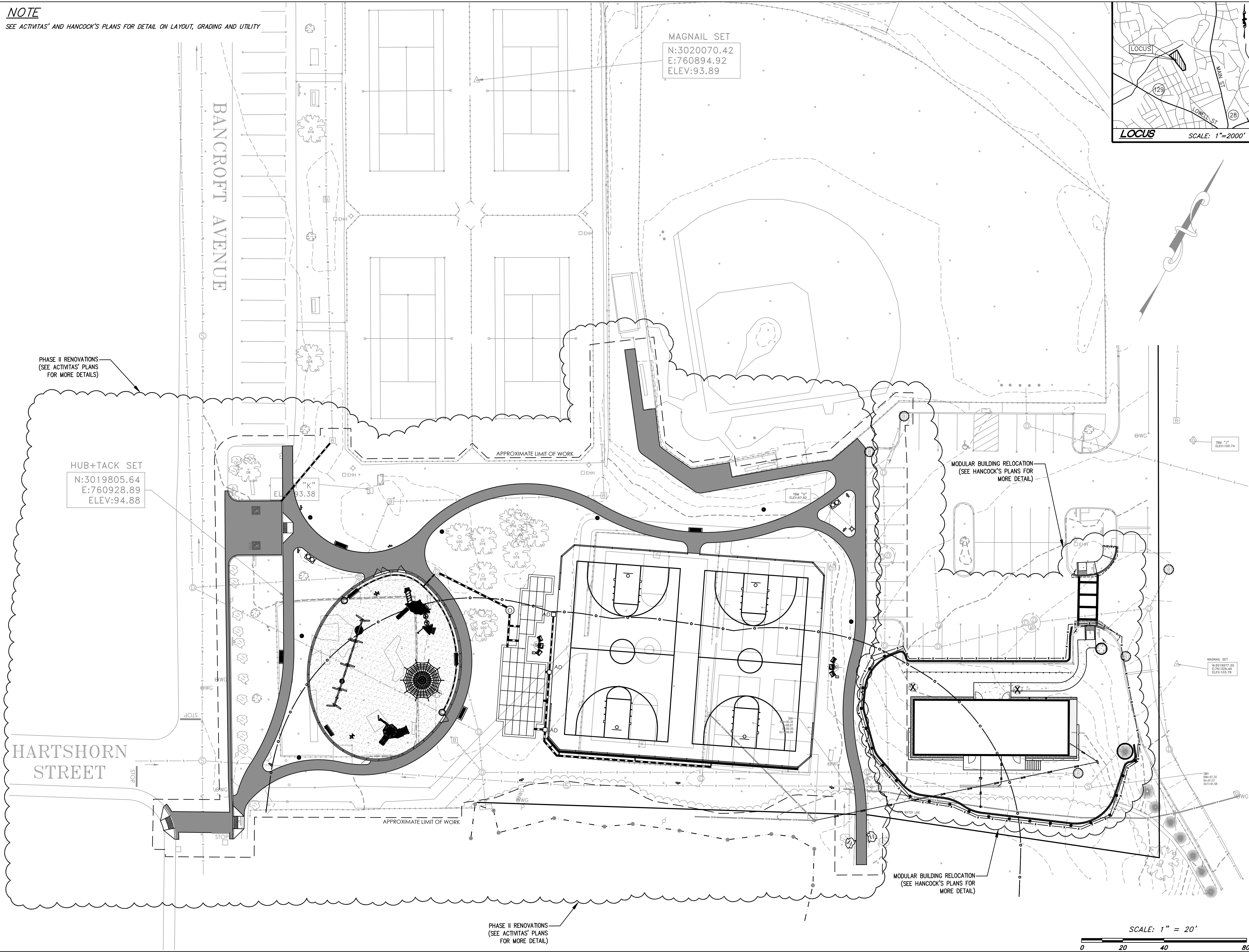
**ELECTRICAL SITE PLAN**  
 SCALE: 1"=20'-0"



CONTACT DIGSAFE:  
 UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE COMPILED FROM PLANS AND FIELD SURVEY. UTILITY LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ONLY. DIGSAFE AND/OR THE OTHER RESPECTIVE UTILITY COMPANIES SHALL BE CONTACTED 72 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS. PHONE DIGSAFE 1-888-344-7233.

**NOTE**

SEE ACTIVITAS' AND HANCOCK'S PLANS FOR DETAIL ON LAYOUT, GRADING AND UTILITY



**ACTIVITAS**  
landscape architecture | civil engineering  
70 Milton Street | Dedham, MA 02026-2915  
(781) 326-2600 | activitas.com

**HANCOCK ASSOCIATES**  
Civil Engineers | Land Surveyors | Wetland Scientists  
185 CENTRE STREET, DANVERS, MA 01923  
VOICE: (978) 777-3050, FAX: (978) 774-7816  
WWW.HANCOCKASSOCIATES.COM

**CONSULTANTS**  
ELECTRICAL ENGINEER -  
NVS ENGINEERS  
SURVEY -  
REED LAND SURVEY, INC.

**TOWN OF READING**  
Reading, MA  
BIRCH MEADOW PARK | MODULAR BUILDING  
RELOCATION AND  
PHASE II RENOVATION

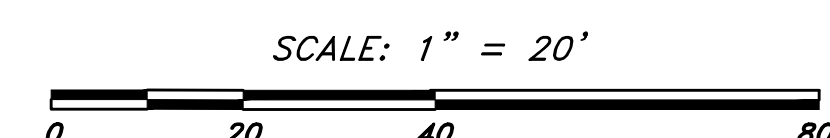
90% Design Development/  
Permitting - March 25, 2025

REVISIONS:		
NO.	DATE	DESCRIPTION

SCALE: 1"=20'-0"  
PROJECT NO.: 28302  
FILE:  
DRAWN: JTE  
CHECKED: JJP  
SEAL:

SHEET TITLE:  
**OVERALL  
SITE PLAN**

SHEET NO.:  
**CO**

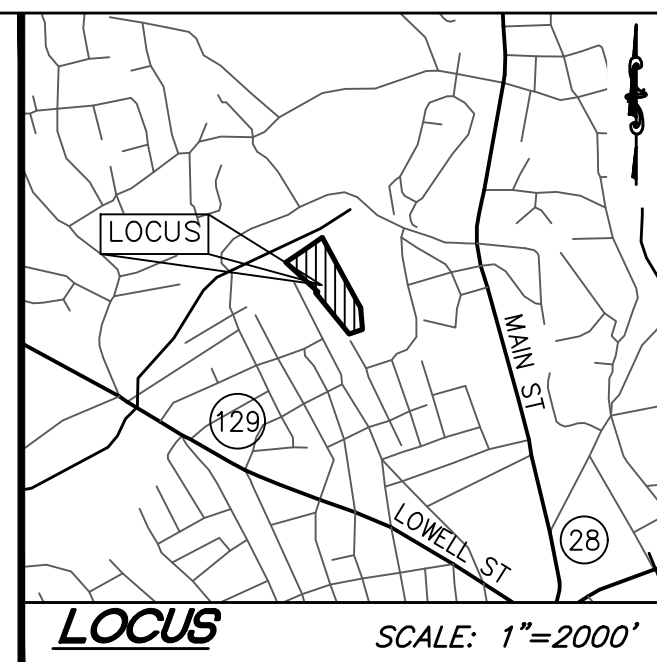
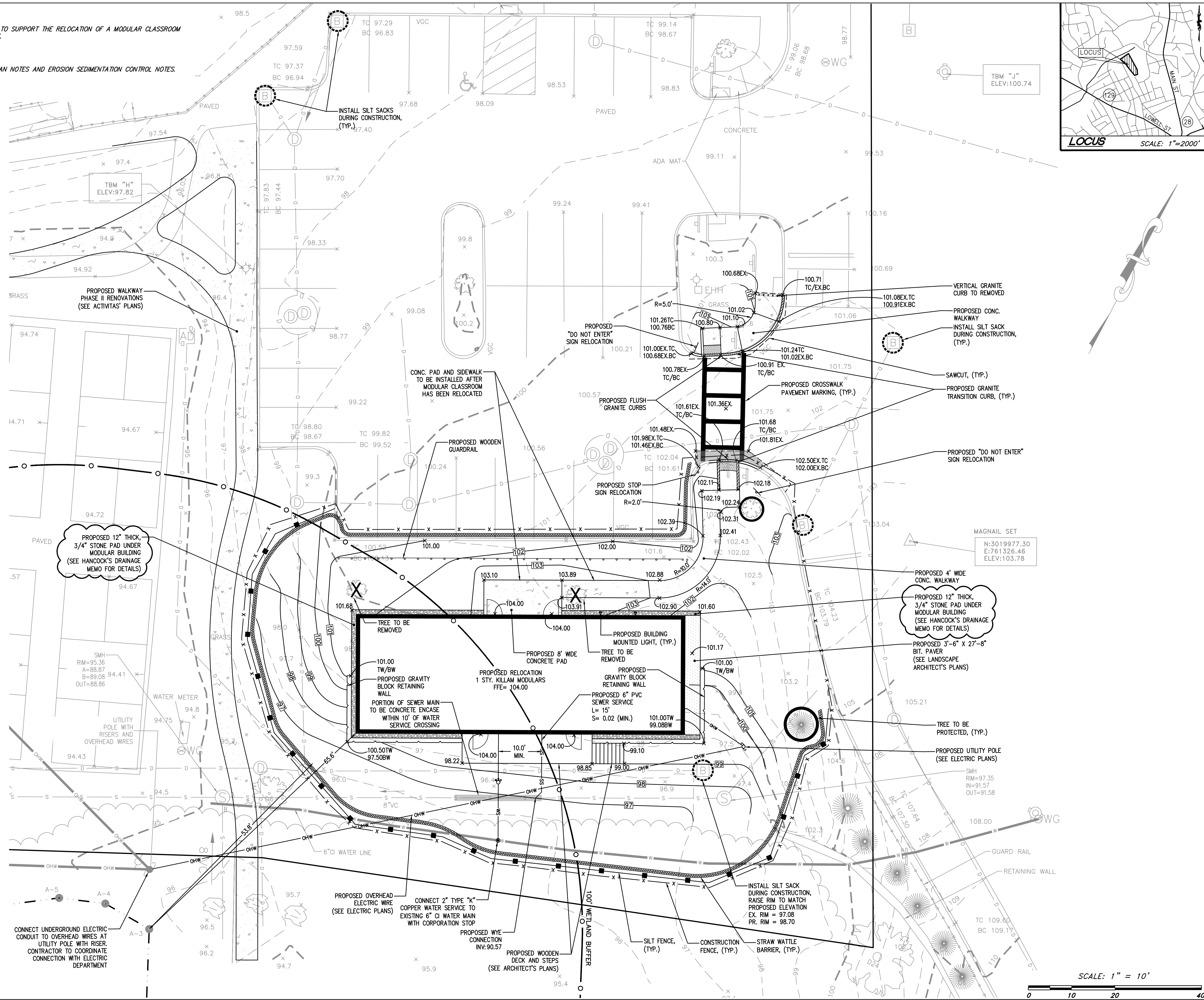


**PLAN INTENT**

THE PURPOSE OF THIS PLAN IS TO SUPPORT THE RELOCATION OF A MODULAR CLASSROOM MODULAR BUILDING TO THE SITE.

**NOTE**

SEE SHEET 2 OF 3 FOR SITE PLAN NOTES AND EROSION SEDIMENTATION CONTROL NOTES.



**ACTIVITAS**  
landscape architecture | civil engineering  
70 Milton Street | Dedham, MA 02026-2915  
(781) 326-2600 | activitas.com

**HANCOCK ASSOCIATES**  
Civil Engineers | Land Surveyors | Wetland Scientists  
185 CENTRE STREET, DANVERS, MA 01923  
VOICE: (978) 777-3050, FAX: (978) 774-7816  
WWW.HANCOCKASSOCIATES.COM

**CONSULTANTS**  
ELECTRICAL ENGINEER -  
NV5 ENGINEERS  
SURVEY -  
REED LAND SURVEY, INC.

**TOWN OF READING**  
Reading, MA  
**BIRCH MEADOW PARK | MODULAR BUILDING RELOCATION**

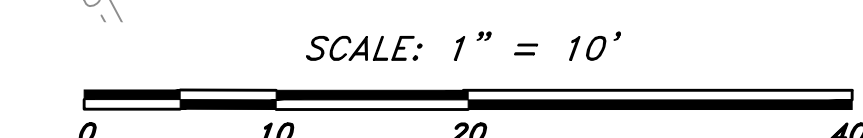
90% Design Development/  
Permitting - March 25, 2025

REVISIONS:	
NO.	DESCRIPTION
1	04.01.25 DRAINAGE STONE PAD DETAIL REV.

SCALE: 1" = 10'-0"  
PROJECT NO.: 28302  
FILE:  
DRAWN: JJE  
CHECKED: JJP

SEAL:  
  
JOSEPH D. PEZNOLO

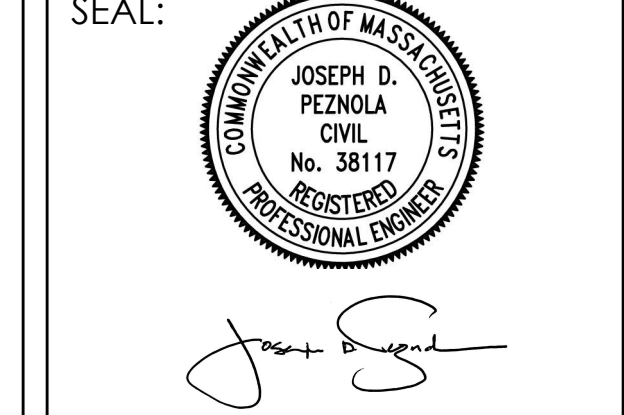
SHEET TITLE:  
**SITE PLAN**  
SHEET NO.:  
**C1**





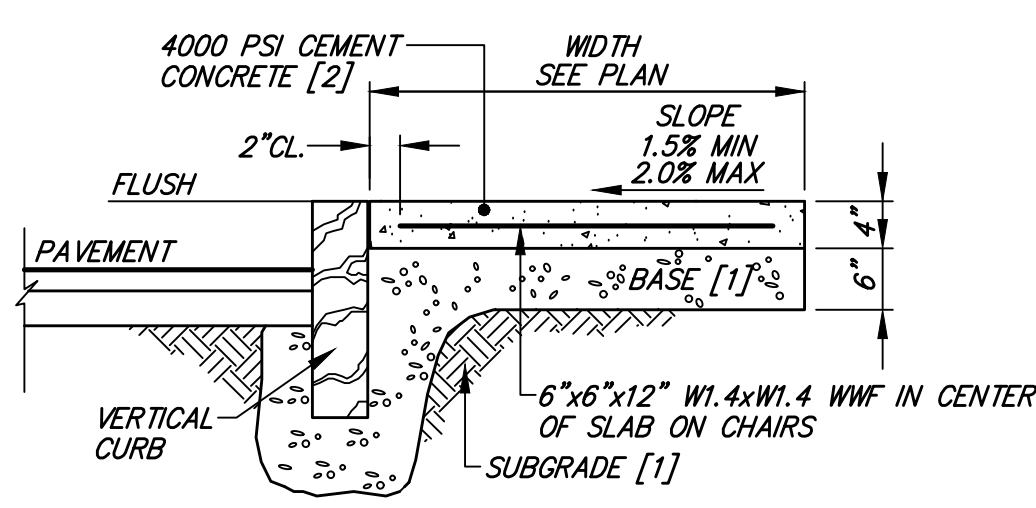
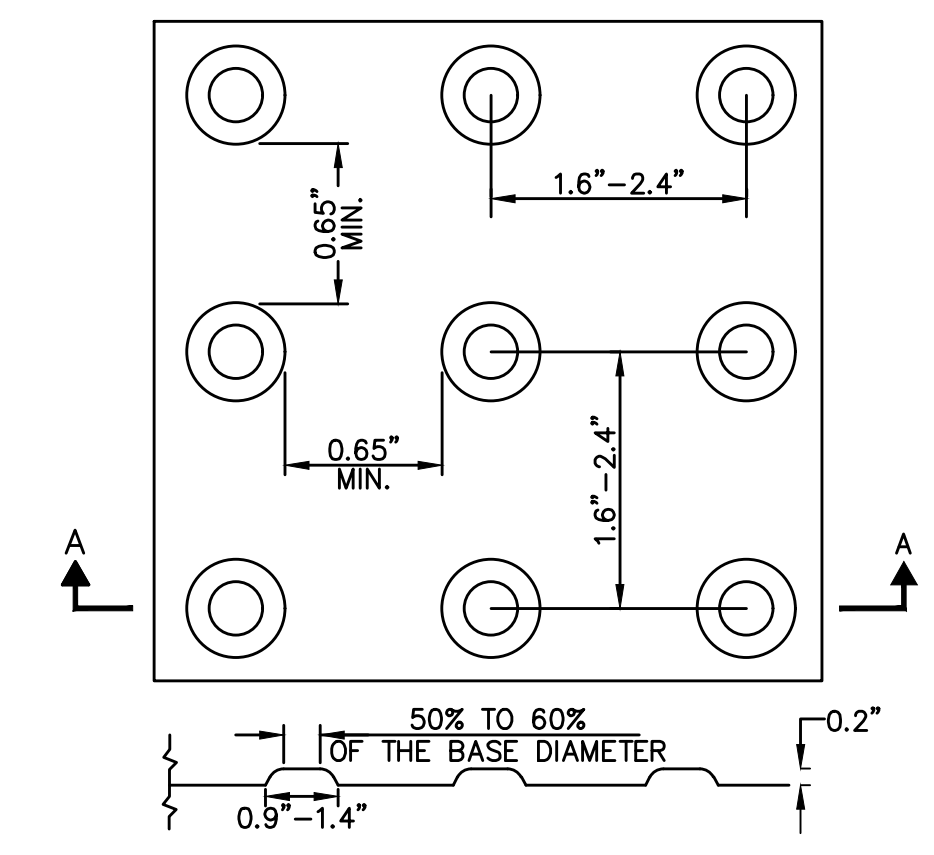
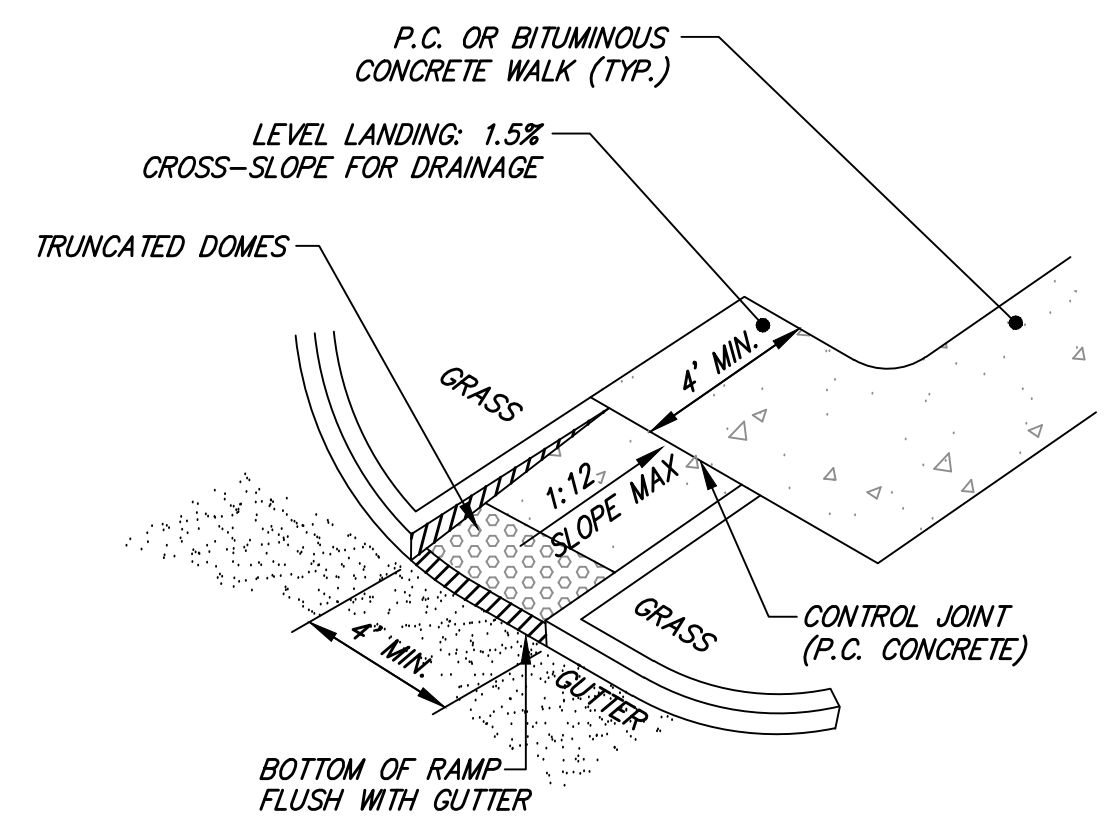
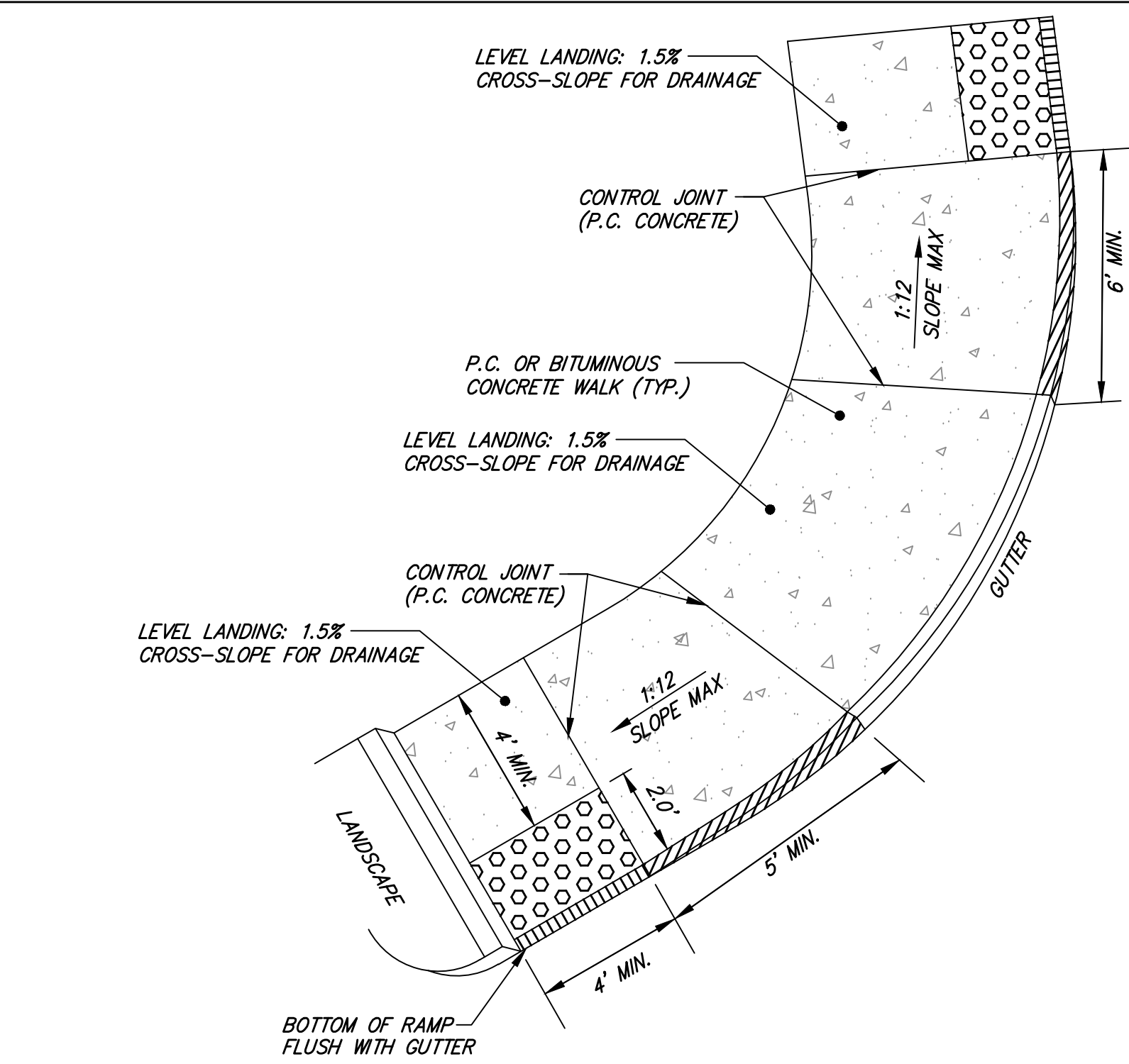
REVISIONS:	
NO.	DATE DESCRIPTION
1	04.01.25 DRAINAGE STONE PAD DETAIL REV.

SCALE: AS SHOWN  
PROJECT NO.: 28302  
FILE:  
DRAWN: JTE  
CHECKED: JJP



SHEET TITLE:  
**DETAIL SHEET**

SHEET NO.:  
**C3**



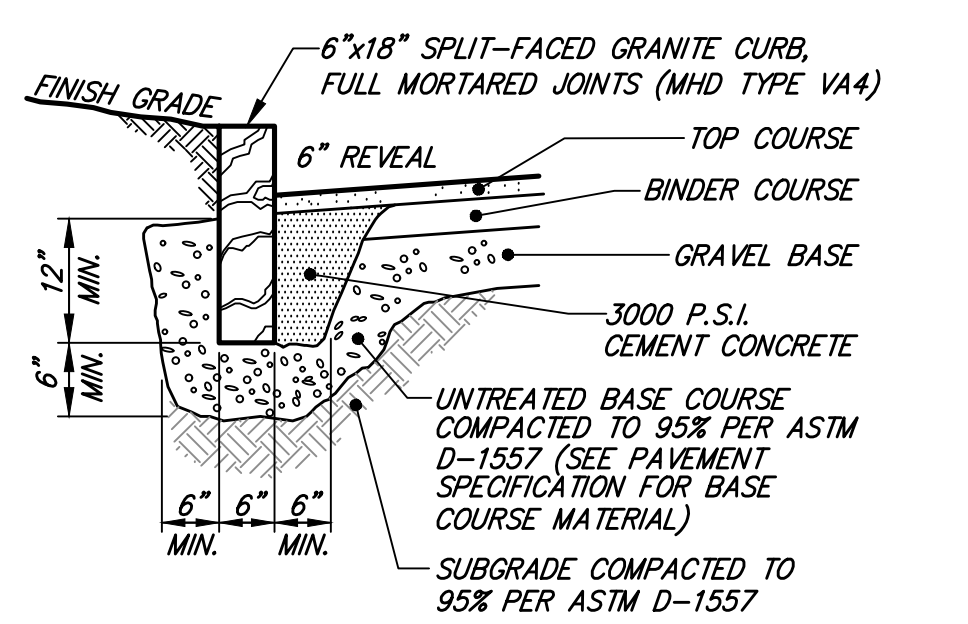
- NOTES:**
1. THE MAXIMUM ALLOWABLE SIDEWALK AND RAMP CROSS SLOPES SHALL BE 1.5 (1% MIN.).
  2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
  3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE CURB RAMPS SHALL BE 7.5%.
  4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E. HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
  5. CURB TREATMENT VARIES, SEE PLAN FOR CURB TYPE.
  6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
  7. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
  8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5'x5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
  9. ELIMINATE CURBING AT RAMP WHERE IT ABUTS ROADWAY, EXCEPT WHERE VERTICAL CURBING IS INDICATED ON THE DRAWINGS TO BE INSTALLED AND SET FLUSH.

**3 CEMENT CONCRETE SIDEWALK**  
CROSS SECTION  
NOT TO SCALE

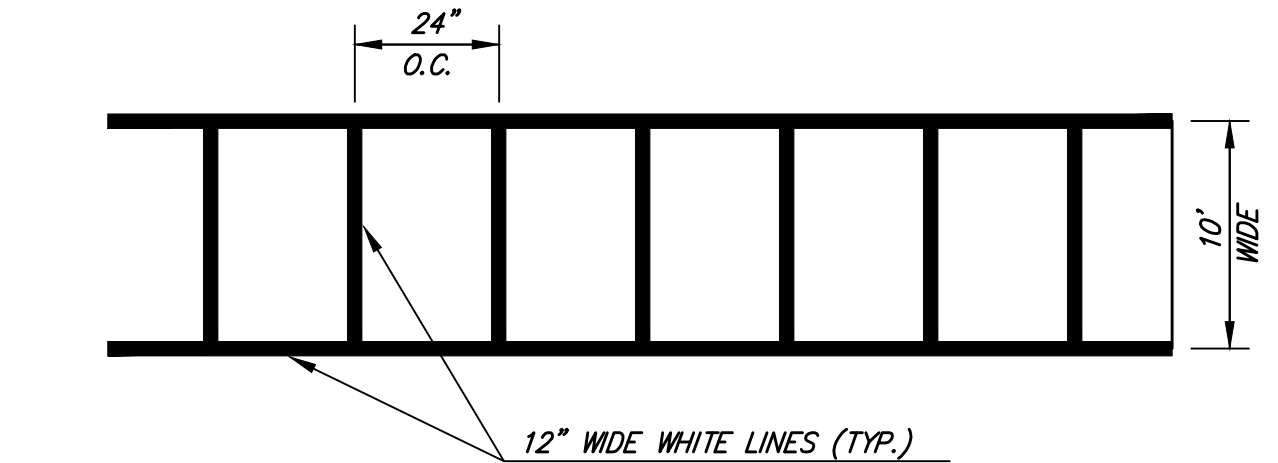
**4 ACCESSIBLE PEDESTRIAN RAMP**  
NOT TO SCALE

**1 DETECTABLE WARNING PANEL**  
NOT TO SCALE

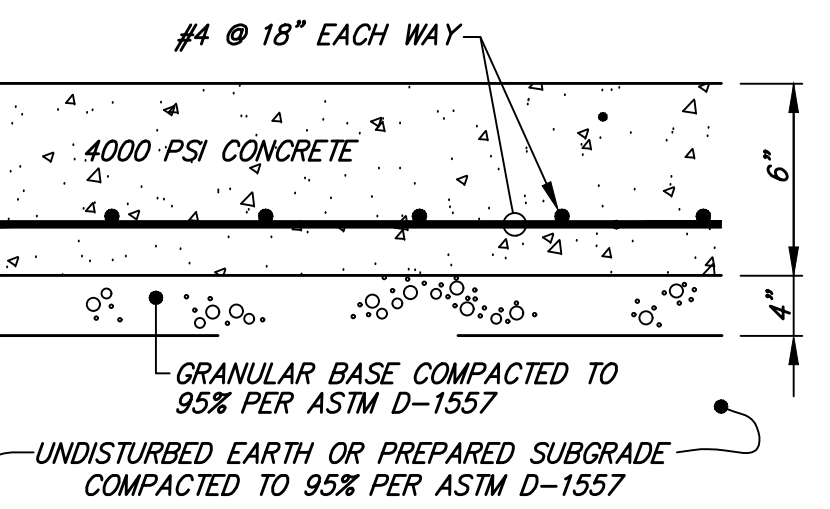
**2 4' HIGH BLOCK RETAINING WALL**  
NOT TO SCALE



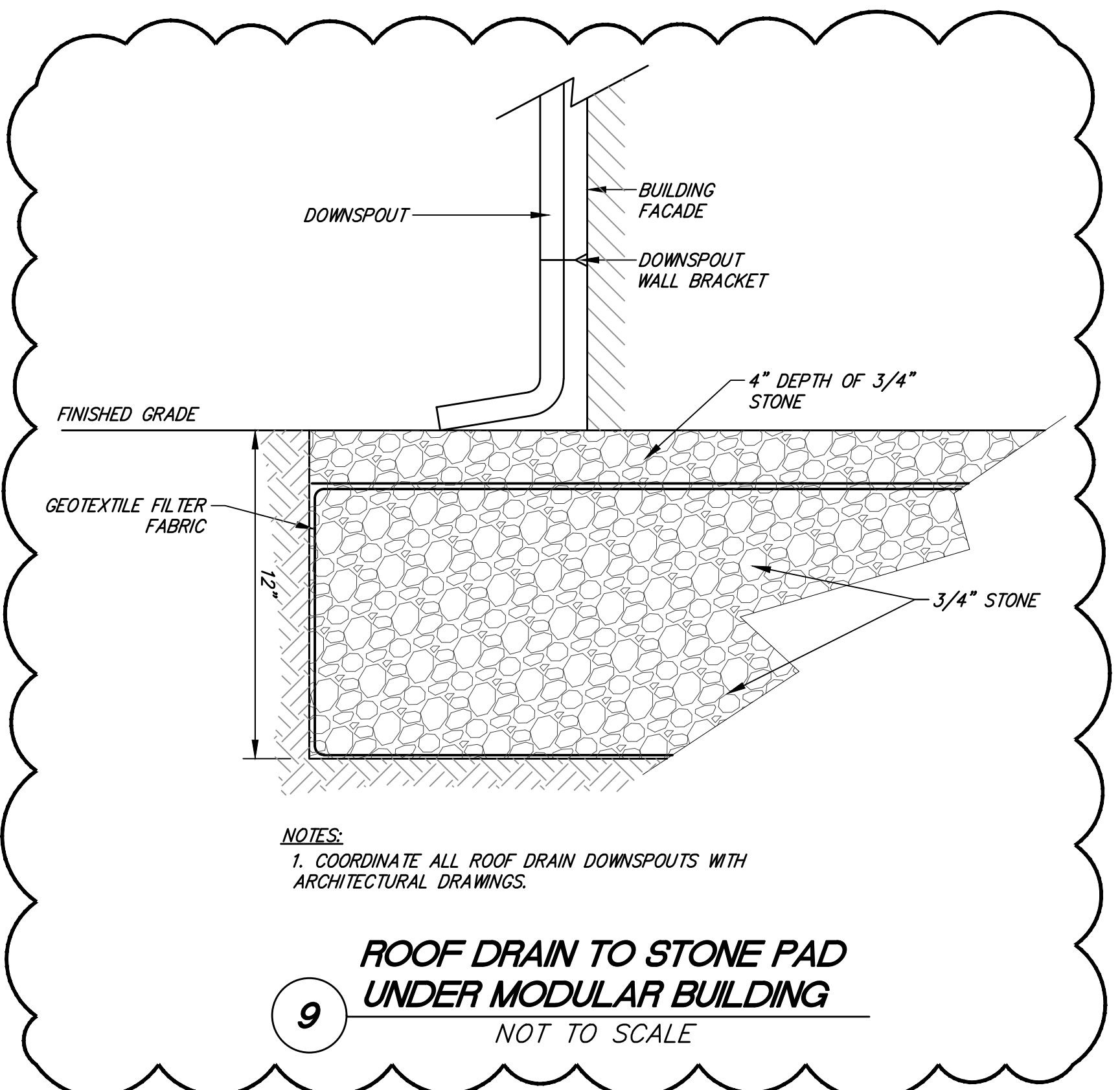
**5 VERTICAL GRANITE CURB**  
CROSS SECTION  
NOT TO SCALE



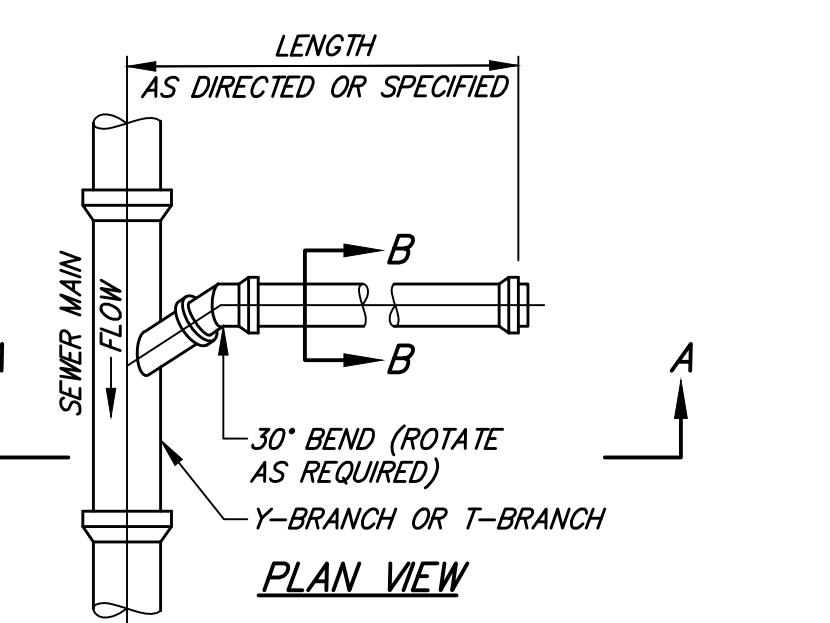
**6 CROSSWALK STRIPING DETAIL**  
NOT TO SCALE



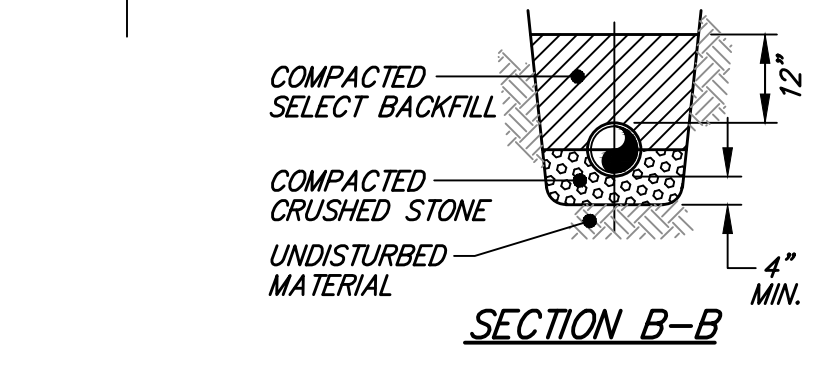
**7 CONCRETE PAD**  
TYPICAL CROSS SECTION  
NOT TO SCALE



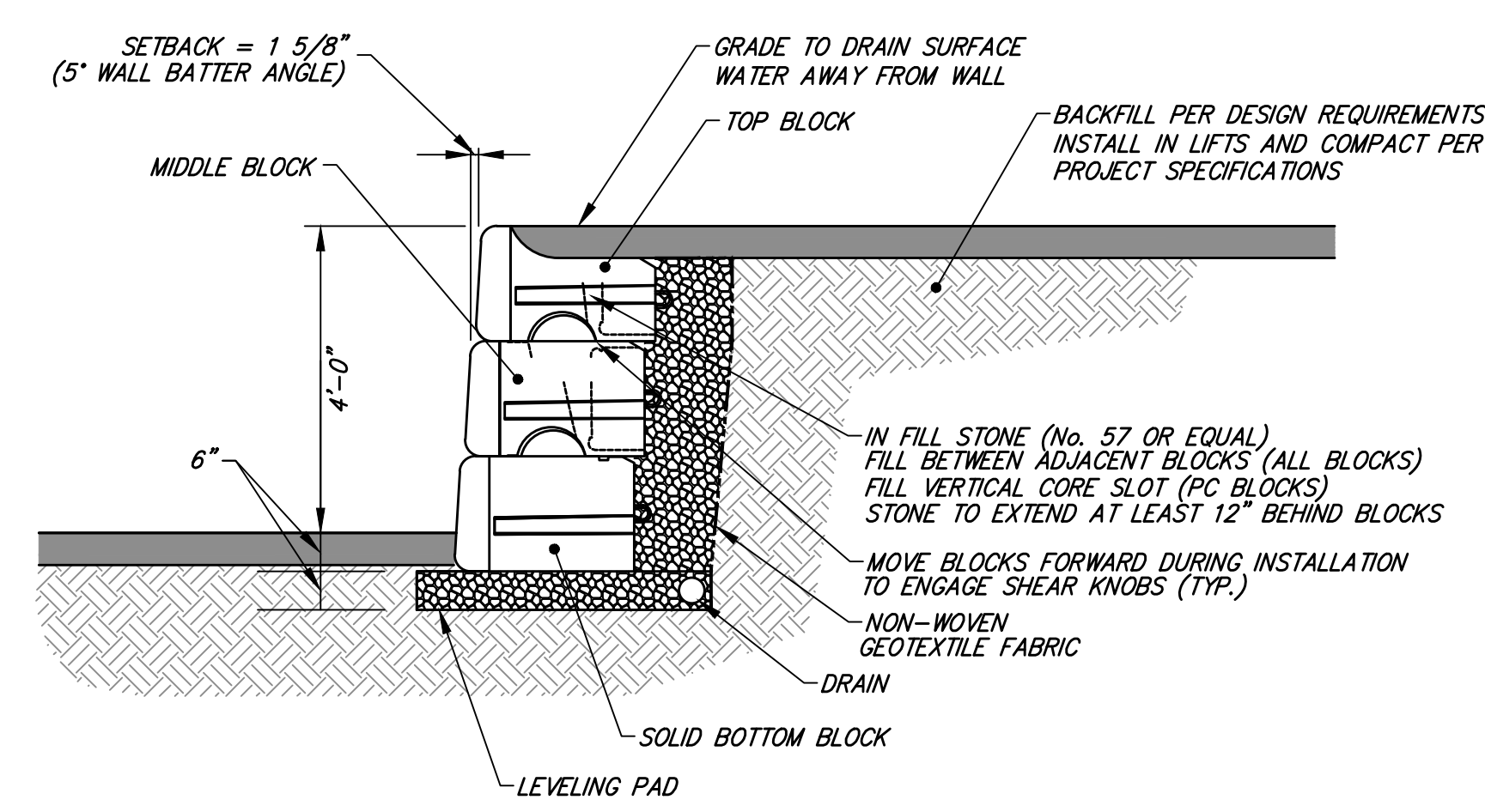
**8 WATER SERVICE**  
TYPICAL PROFILE  
NOT TO SCALE



**9 ROOF DRAIN TO STONE PAD UNDER MODULAR BUILDING**  
NOT TO SCALE



**10 SEWER CONNECTION**  
NOT TO SCALE



**11 PIPE TRENCH**  
TYPICAL CROSS SECTION  
NOT TO SCALE

**FOUNDATION, BEDDING, & BACKFILL MATERIALS**

PIPE MATERIAL	HDP, PVC	RC, DI
FOUNDATION STABILIZATION	[6]	[6]
BEDDING	[1]	[1]
HAUNCHING	[1]	[1]
INITIAL BACKFILL	[1]	[1]
FINAL BACKFILL	[4]	[4]
MIN. PIPE COVER	[5]	[5]

**NOTES:**

- [1] PLACE 3/4" ± GRADED GRANULAR BACKFILL AT OPTIMUM MOISTURE IN HORIZONTAL, 8"-DEEP, LOOSE LAYERS; COMPACT TO 95% PER ASTM D-1557.
- [2] MINIMUM WIDTH OF TRENCH MEASURED AT THE SPRINGLINE OF THE PIPE, INCLUDING ANY NECESSARY SHEATHING.

PIPE I.D.	WIDTH
LESS THAN 21"	O.D. + 12"
21" TO 42"	O.D. + 24"
GREATER THAN 42"	O.D. + 30"

- [3] INSTALL PIPE IN CENTER OF TRENCH.
- [4] IN PLANTED OR UNIMPROVED AREAS, USE ON-SITE EXCAVATED MATERIAL FOR FINAL BACKFILL. COMPACT TO 95% PER ASTM D-1557. IN PAVED AREAS, OBTAIN ENGINEER APPROVAL OF ON-SITE EXCAVATED MATERIALS FOR USE AS FINAL BACKFILL.
- [5] MINIMUM COVER OVER TOP OF PIPE:

PIPE MATERIAL	HDP, PVC	RC, DI
WATER	5'-0"	5'-0"
SEWER	4'-0"	4'-0"
DRAIN	1'-6"	1'-0"

[6] FOR FOUNDATION STABILIZATION, USE 2" ± CRUSHED STONE.