WINTER HILL COMMUNITY INNOVATION SCHOOLYARD PROJECT - PHASE I CONSTRUCTION DOCUMENTS

Project No. 1757
Winter Hill Community Innovation School
115 Sycamore Street
Somerville, Massachusetts

Prepared For:

CITY OF SOMERVILLE, MASSACHUSETTS Joseph A. Curtatone, Mayor

Michael F. Glavin, Executive Director

Mayor's Office of Strategic Planning and Community Development

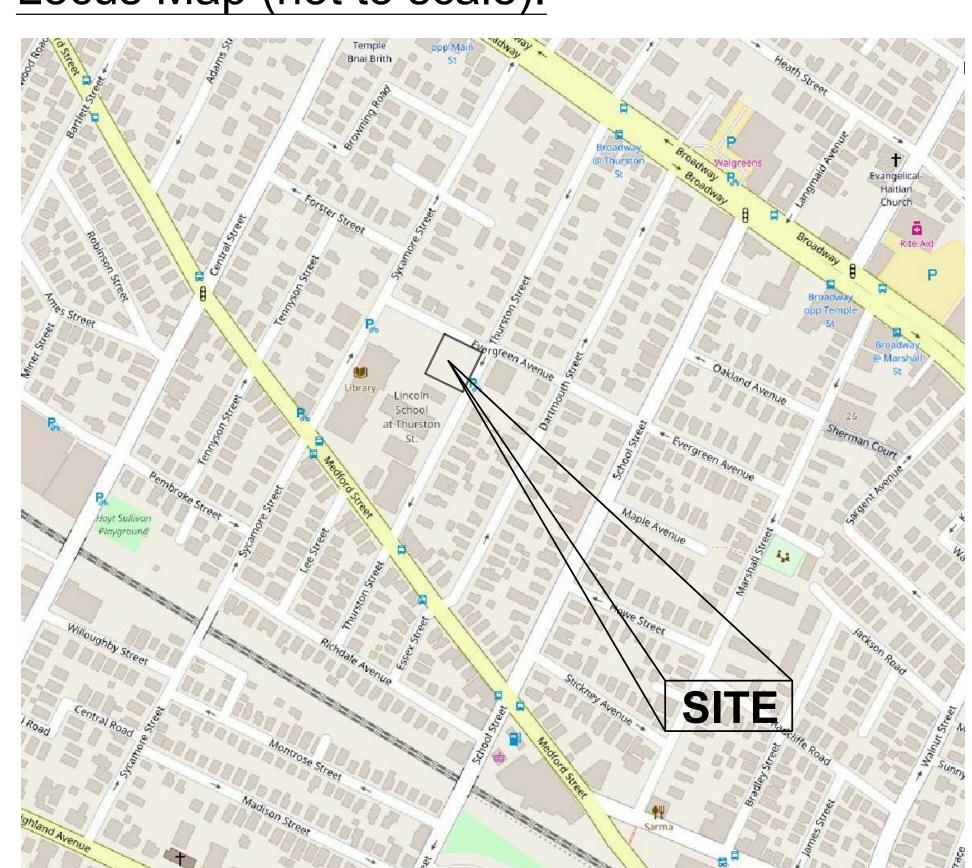
Brad Rawson, Executive Director
Director of Transportation and Infrastructure

Luisa Oliveira, Project Manager

Parks and Open Space
City Hall
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Somerville, MA 02143
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Dra	wing Index	Date	Revised
	SITE PLAN (EXISTING CONDITIONS)	09/30/16	
L-1	SITE PREPARATION PLAN	03/08/17	
L-2	LAYOUT, MATERIALS, GRADING & PLANTING PLAN	03/08/17	
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E-0	ELECTRICAL LEGEND, NOTES & ABBREVIATIONS	03/08/17	
E-1	ELECTRICAL SITE PLAN	03/08/17	
E-2	ELECTRICAL DETAILS	03/08/17	
E-3	ELECTRICAL SCHEDULES	03/08/17	

Locus Map (not to scale):



Prepared By:



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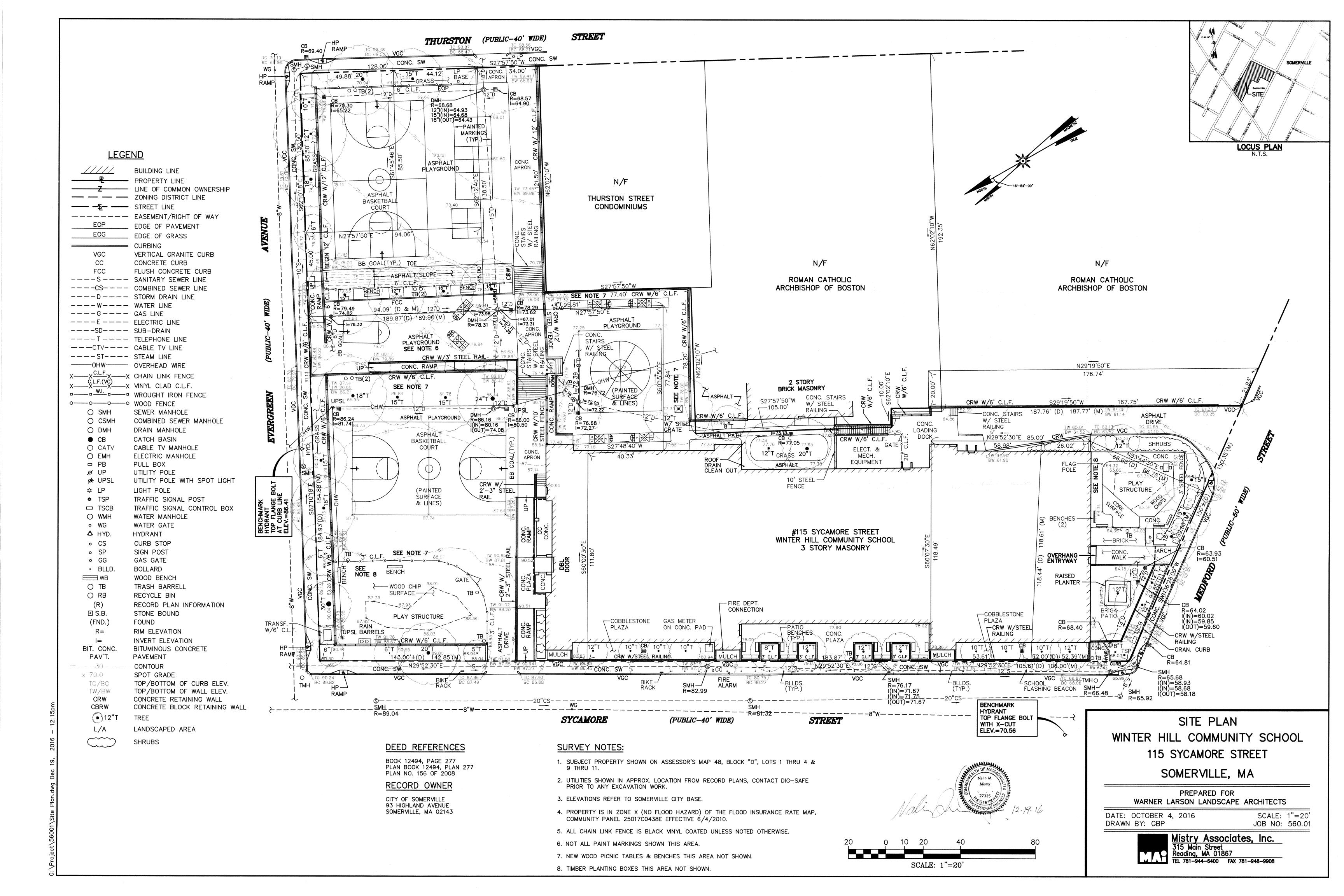
SURVEYOR

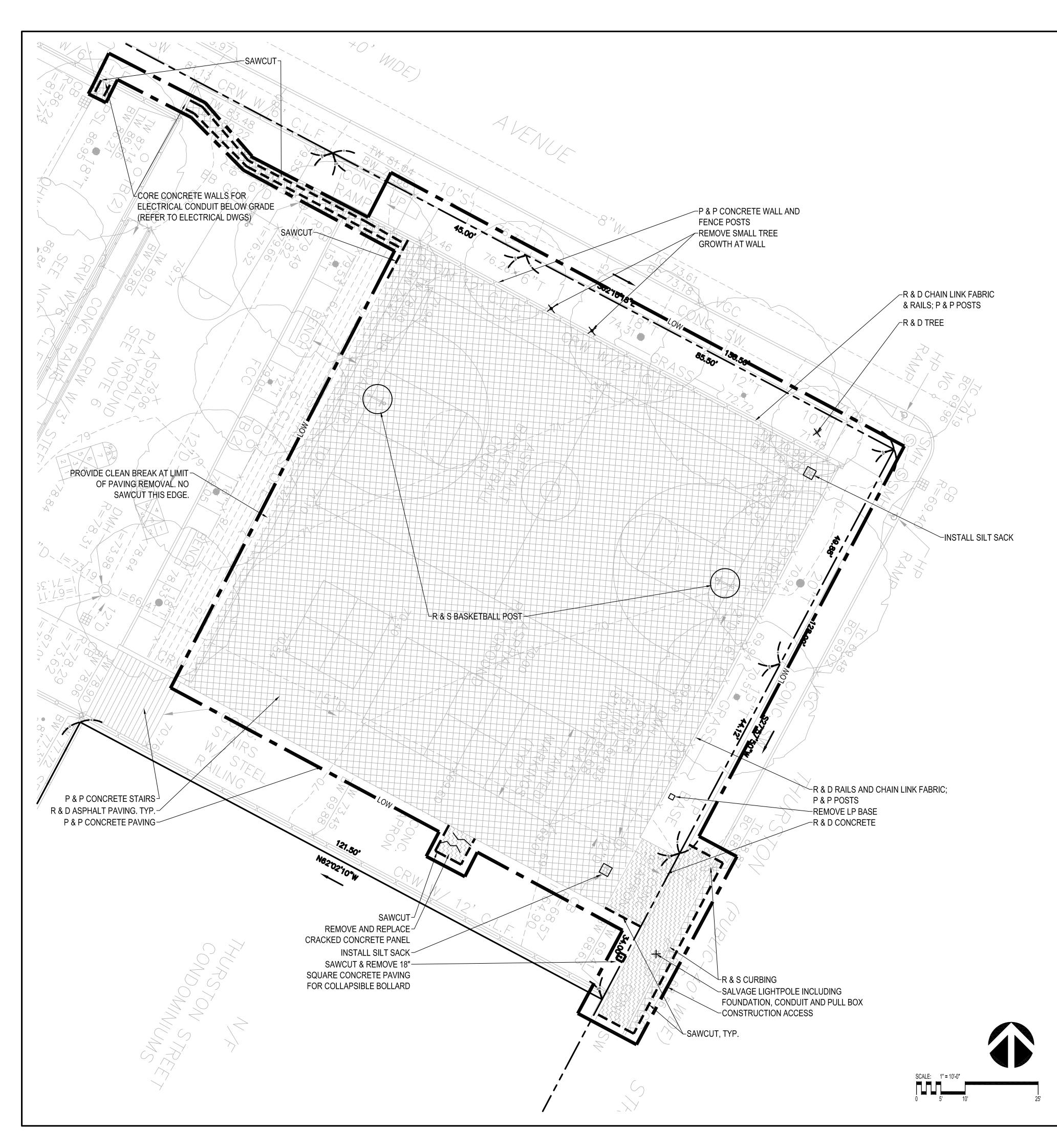
Mistry Associates, Inc. 315 Main Street Reading, MA 01867 | 781-944-6400

ELECTRICAL ENGINEER

RDK Engineers
200 Brickstone Square
Andover, MA 01810 | 978-296-6326

March 8, 2017 BID SET





SITE PREPARATION NOTES:

- 1. EXISTING CONDITIONS INFORMATION IS FROM A SURVEY BY MISTRY ASSOCIATES, INC. DATED SEPTEMBER 30, 2016.
- 2. CONTRACTOR SHALL NOTIFY DIGSAFE (1-888-DIG-SAFE) AND VERIFY UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
- 3. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED TO ROADS, WALKS, UTILITIES, SITE IMPROVEMENTS, EXISTING OR PROPOSED, DAMAGED BY THIS PROJECT.
- 4. CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO STARTING WORK.
- 5. CONTRACTOR SHALL REMOVE ALL EXISTING STRUCTURES, FOOTINGS, PAVEMENT, WALKS, WALLS, STAIRS, TREES, SHRUBS, ETC. NECESSARY TO COMPLETE THE WORK UNDER THIS CONTRACT.
- 6. ALL ITEMS INDICATED "R&D" SHALL BE LEGALLY <u>DISPOSED</u> OF OFF-SITE UNLESS OTHER USE FOR MATERIAL IS INDICATED.
- 7. ITEMS TO BE <u>SALVAGED</u> SHALL BE STORED ON-SITE WITHIN CONSTRUCTION FENCING AND SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. SALVAGED MATERIALS SHALL BE DELIVERED TO A LOCAL OFF-SITE CITY OWNED FACILITY.
- 8. REFER TO GEOTECHNICAL INFORMATION FOR SUBSURFACE EXPLORATION LOCATIONS AND INFORMATION.
- PROTECT AND MAINTAIN EXISTING TREE AND LAWN WITHIN LIMIT OF WORK. EQUIPMENT ACCESS AND MATERIAL STORAGE IS PROHIBITED AT LANDSCAPE AREAS.
- 10. PRUNE TREES AS DIRECTED BY THE LANDSCAPE ARCHITECT TO CLEAR FENCE AND LIGHTING INSTALLATION.
- 11. CONSTRUCTION STAGING AREAS ON SITE SHALL BE COORDINATED WITH THE OWNER AND SECURED WITH TEMPORARY CONSTRUCTION FENCING. CONTRACTOR SHALL COORDINATE WITH THE OWNER TO MAINTAIN SAFE PEDESTRIAN AND EMERGENCY ACCESS TO THE SCHOOL AT ALL TIMES. ON-SITE PARKING IS LIMITED AND ON-STREET PARKING IS PROHIBITED. ANY VEHICLE PARKING OFF-SITE SHALL CONFORM TO THE TRAFFIC MANAGEMENT PLAN.

LEGEND:

LOW	APPROXIMATE LIMIT OF WORK LINE
P & P	PRESERVE AND PROTECT
R & D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCKPILE
ETR	EXISTING TO REMAIN PRESERVE AND PROTECT
	REMOVE AND DISPOSE ASPHALT PAVING
	REMOVE AND DISPOSE CONCRETE PAVING



LANDSCAPE ARCHITECTS

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WINTER HILL COMMUNITY INNOVATION SCHOOLYARD PROJECT - PHASE I

115 SYCAMORE STREET
SOMERVILLE
MASSACHUSETTS

PREPARED FOR: CITY OF SOMERVILLE PARKS AND OPEN SPACE

REVISIONS

NO. DATE DESCRIPTION

DATE: 3/8/2017

1" = 10'

JOB #:

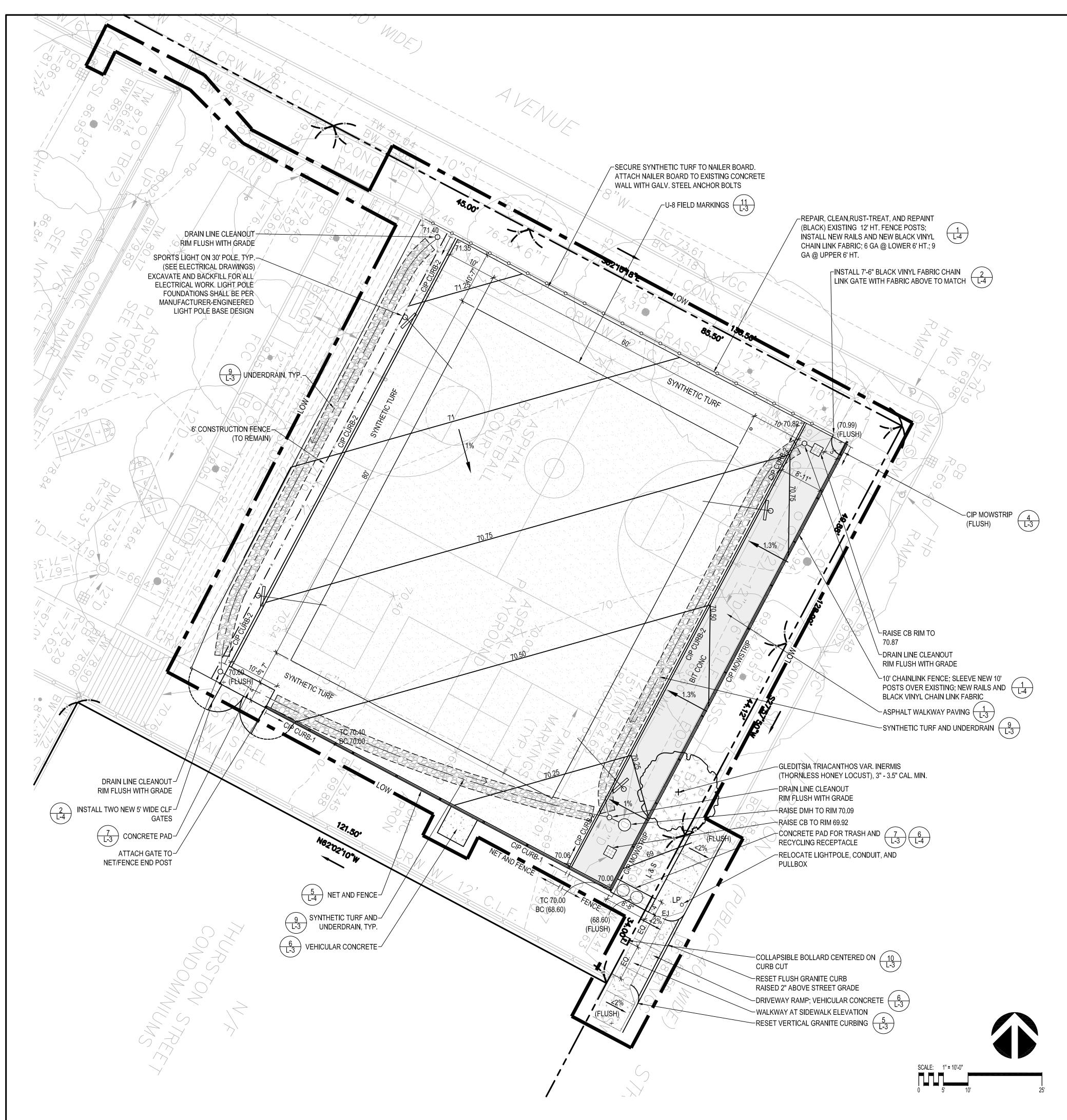
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SCALE:

SITE PREPARATION PLAN

L-'

21614.00



GENERAL NOTES:

- 1. EXISTING CONDITIONS INFORMATION IS FROM A SURVEY BY MISTRY ASSOCIATES, INC. DATED SEPTEMBER 30, 2016.
- 2. CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO STARTING WORK.
- 3. CONTRACTOR SHALL NOTIFY DIGSAFE 1-888-DIG-SAFE AND VERIFY UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
- 4. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED TO ROADS, WALKS, UTILITIES, SITE IMPROVEMENTS, EXISTING OR PROPOSED. DAMAGED BY THIS PROJECT.
- 5. ITEMS INDICATED AS "RELOCATED" ARE SALVAGED AND STORED FROM EXISTING SITE ARE TO BE INSTALLED BY THE GENERAL CONTRACTOR.
- 6. FOR SITE LIGHTING SEE ELECTRICAL DRAWINGS

LAYOUT NOTES:

- 1. CONTRACTOR SHALL STAKE OUT ALL SITE IMPROVEMENTS BOTH HORIZONTALLY AND VERTICALLY IN THE FIELD, AND SUCH STAKEOUT TO BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
- 2. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE NOTED.
- 3. DIMENSIONS FOR LIGHTS ARE TO THE CENTER UNLESS OTHERWISE NOTED.

GRADING NOTES:

- 1. SPOT GRADES AND CONTOURS INDICATED ON THE THIS PLAN DESCRIBE FINAL SURFACE ELEVATIONS FOR COMPLETED CONSTRUCTION.
- 2. ALL CHANGES IN PAVEMENT MATERIALS SHALL BE FLUSH WITH EACH OTHER UNLESS OTHERWISE SHOWN.
- 3. IF EXISTING TREE, UTILITIES OR STRUCTURES IMPEDE EXCAVATION ACTIVITIES IN ANY MANNER, CONTRACTOR SHALL INFORM THE LANDSCAPE ARCHITECT AND OWNER PRIOR TO CONTINUING WITH CONSTRUCTION ACTIVITIES.
- 4. ALL PAVED WALKWAY AREAS AND ACCESSIBLE ROUTES SHALL BE GRADED SUCH THAT THEY ARE IN FULL COMPLIANCE WITH THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD RULES AND REGULATIONS.

PLANTING NOTES:

- 1. CONTRACTOR SHALL STAKE PLANT LOCATIONS TO BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- 2. ALL PLANT MATERIAL AND PLANTING PROCEDURES SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE 'AMERICAN STANDARD FOR NURSERY STOCK' PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION
- 3. PLANTING TO BE MULCHED PER SPECIFICATIONS TO A DEPTH OF 3".
- 4. ALL PLANT MATERIALS TO BE GUARANTEED FOR ONE FULL YEAR FROM SUBSTANTIAL COMPLETION

LEGEND:

Low	APPROXIMATE LIMIT OF WORK LINE
	ASPHALT PAVING 1 L-3
EXPANSION JOINT EJ	CONCRETE PAVING 6,7 L-3
	UNDERDRAIN 9 L-3
	SYNTHETIC TURF 9 L-3
L&S	LOAM AND SEED
10'	DIMENSION
— — —111 — — —	EXISTING CONTOUR
53	PROPOSED CONTOUR
x 112.5	EXISTING SPOT ELEVATION
+ 53.25 + (53.25)	PROPOSED SPOT ELEVATION INTERPOLATED EXISTING SPOT ELEVATION; V.I.F.
	PERFORATED UNDERDRAIN
1%	PROPOSED SLOPE
TC	TOP OF CURB
BC	BOTTOM OF CURB
\odot	TREE
V.I.F.	VERIFY IN FIELD



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COMMUNITY
INNOVATION
SCHOOLYARD
PROJECT - PHASE I

115 SYCAMORE STREET SOMERVILLE MASSACHUSETTS

PREPARED FOR: CITY OF SOMERVILLE PARKS AND OPEN SPACE

NO. DATE DESCRIPTION

DATE: 3/8/2017

SCALE: 1" = 10'

REVISIONS

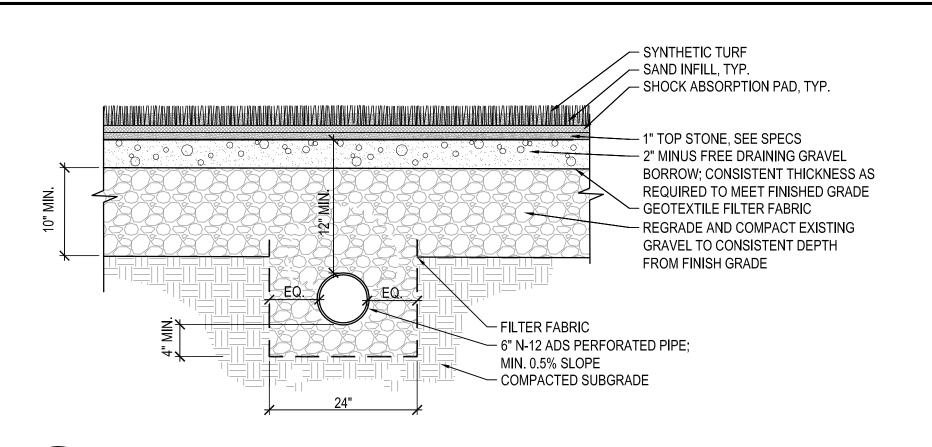
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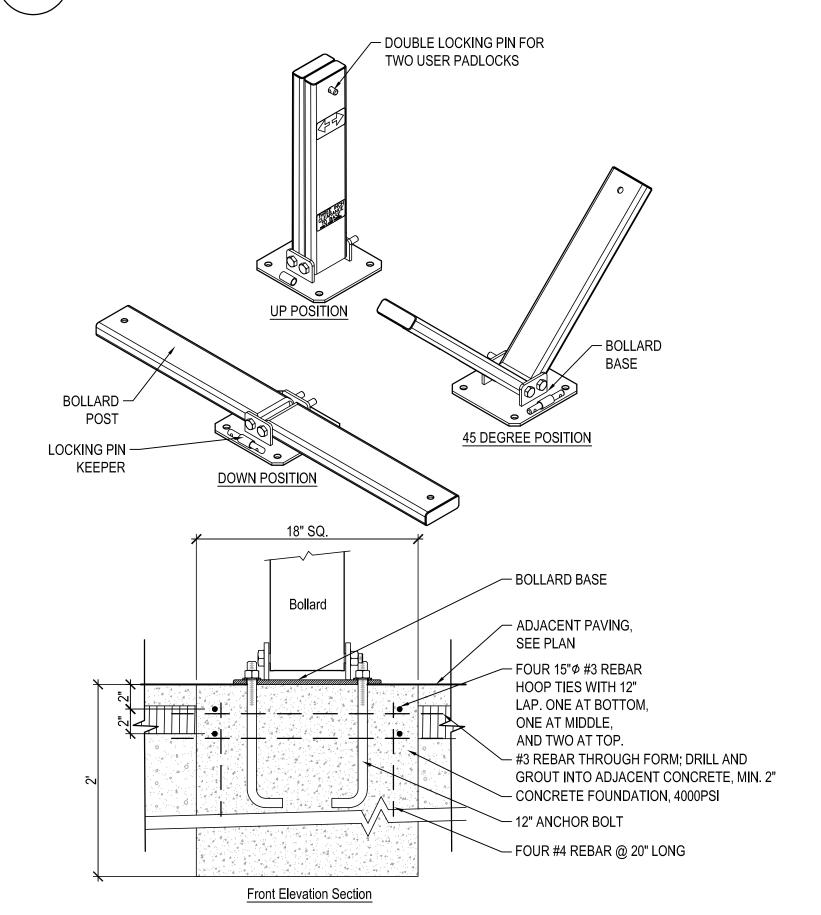
LAYOUT, MATERIALS, GRADING & PLANTING PLAN

L-2

21614.00

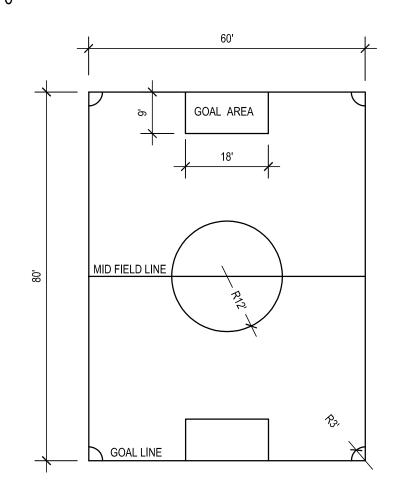


9 SYNTHETIC TURF AND UNDERDRAIN
SCALE: 1"=1'-0"



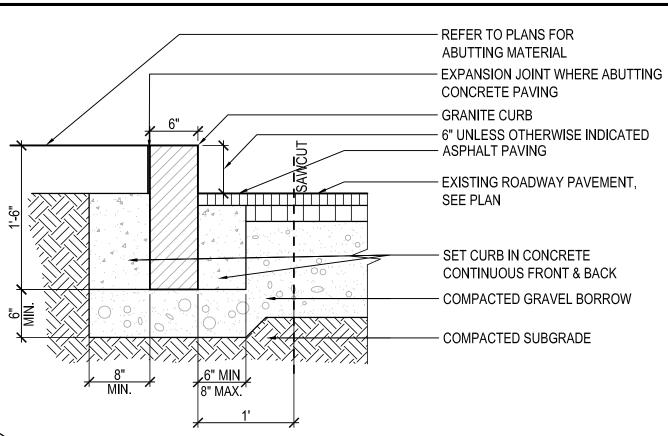
COLLAPSIBLE BOLLARD

SCALE: 1" = 1'-0"



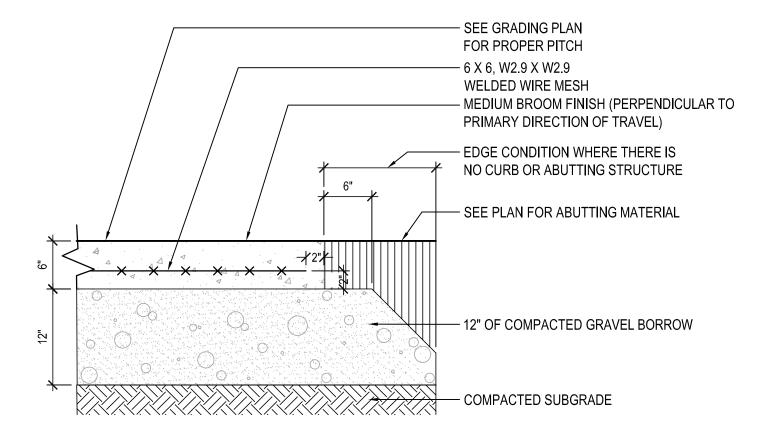
NOTES:
1. SYNTHETIC TURF FIELD, SEE SPECIFICATIONS FOR TUFTED/INLAID LINES.
2. FOLLOW AYSO AND MIAA FIELD GUIDELINES FOR SOCCER FIELD

11 U-8 FIELD MARKINGS
SCALE: 1" = 20'-0"



5 VERTICAL GRANITE CURB

SCALE: 1" = 1'-0"

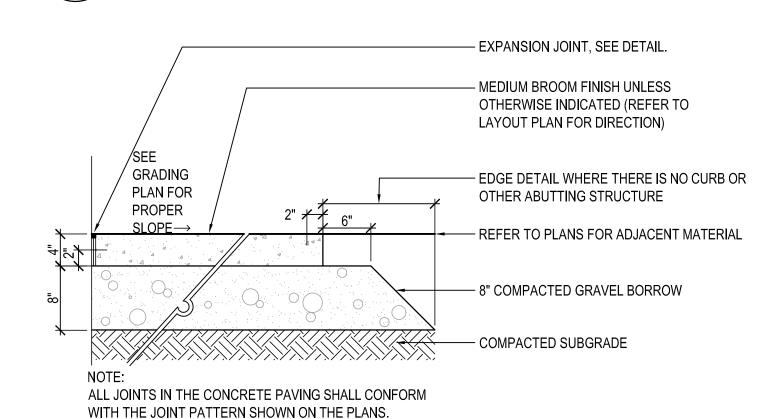


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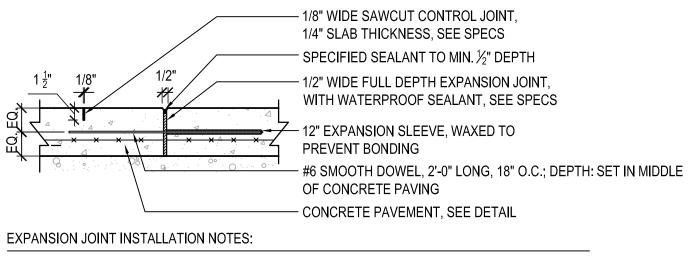
1. ALL JOINTS IN THE CONCRETE PAVING SHALL CONFORM WITH THE JOINT PATTERN SHOWN ON THE PLANS.

2. INSTALL EXPANSION JOINTS AT ALL FIXED OBJECTS AND AT A MAXIMUM OF 20' APART UNLESS SPACED MORE CLOSELY ON THE PLANS.

6 VEHICULAR CONCRETE
SCALE: 1" = 1'-0"



7 CONCRETE PAD SCALE: 1" = 1'-0"

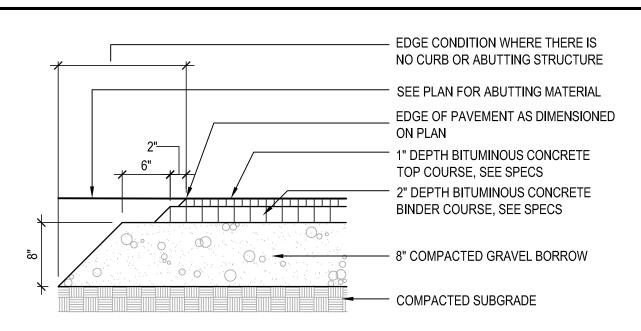


DOWEL IS TYPICAL AT ALL EXPANSION JOINTS WITHIN CONCRETE PAVING.
 DELETE EXPANSION SLEEVE AND DOWEL WHERE JOINT ABUTS WALL, CURBS, OR OTHER VERTICAL SURFACES.

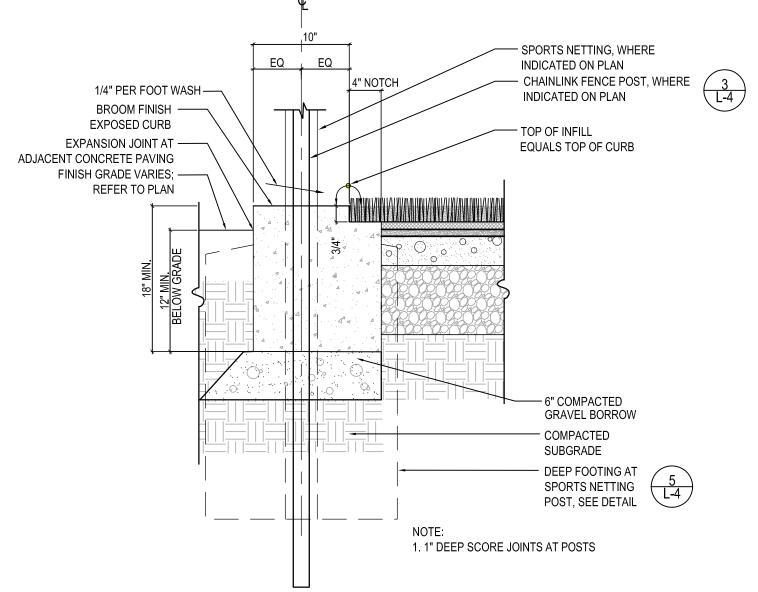
CONTROL JOINT INSTALLATION NOTES:

1. CONTROL JOINTS 5'-0" O.C. UNLESS SHOWN OTHERWISE ON DRAWIINGS.

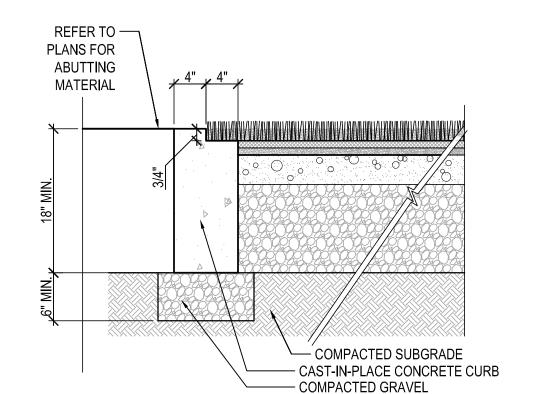
8 EXPANSION AND CONTROL JOINTS
SCALE: 1" = 1'-0"



1 ASPHALT WALKWAY PAVING



CAST-IN-PLACE (CIP) CURB 1
SCALE: NTS



3 CAST-IN-PLACE (CIP) CURB 2

EXTEND CONC. 4" MIN. BELOW FINISH GRADE AT ADJACENT LANDSCAPE AREA GATE OR FENCE POST, LOCATE IN CENTER OF MOWSTRIP. SLEEVE OVER EXISTING WHERE INDICATED ON PLAN. - SAWCUT AT POSTS - FLUSH WITH FINISH GRADE AT ASPHALT PAVING 4000 PSI CONCRETE MOWSTRIP, SEE SPECIFICATIONS. - 6" COMPACTED GRAVEL BORROW FENCE POST WITH 4' FOOTING, SEE FENCE POST DETAIL COMPACTED SUBGRADE

4 CAST-IN-PLACE (CIP) MOWSTRIP
SCALE: NTS

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WINTER HILL COMMUNITY INNOVATION SCHOOLYARD PROJECT - PHASE I

115 SYCAMORE STREET SOMERVILLE MASSACHUSETTS

PREPARED FOR: CITY OF SOMERVILLE PARKS AND OPEN SPACE

REVISIONS

NO. DATE DESCRIPTION

DATE: 3/8/2017

AS NOTED

21614.00

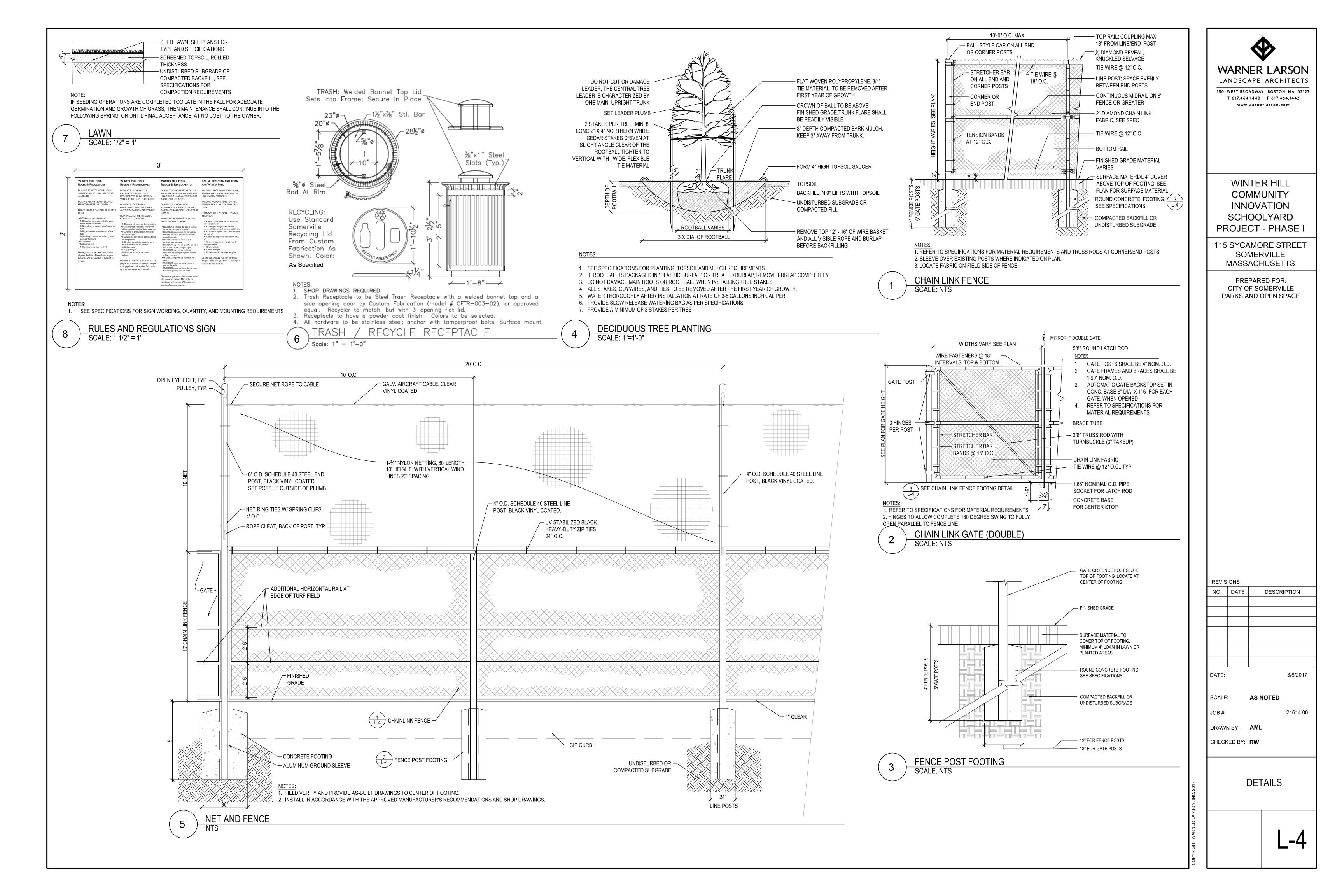
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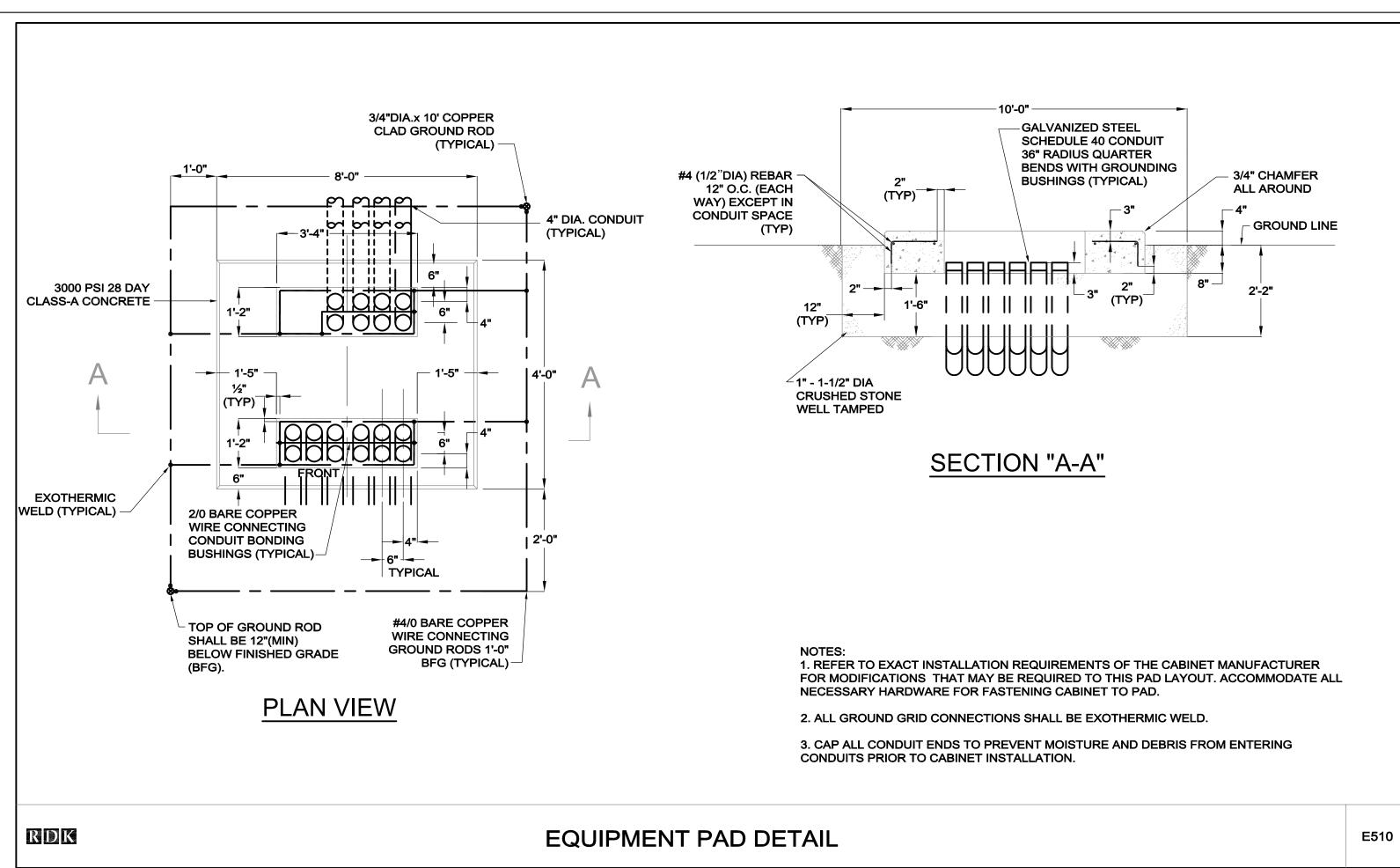
SCALE

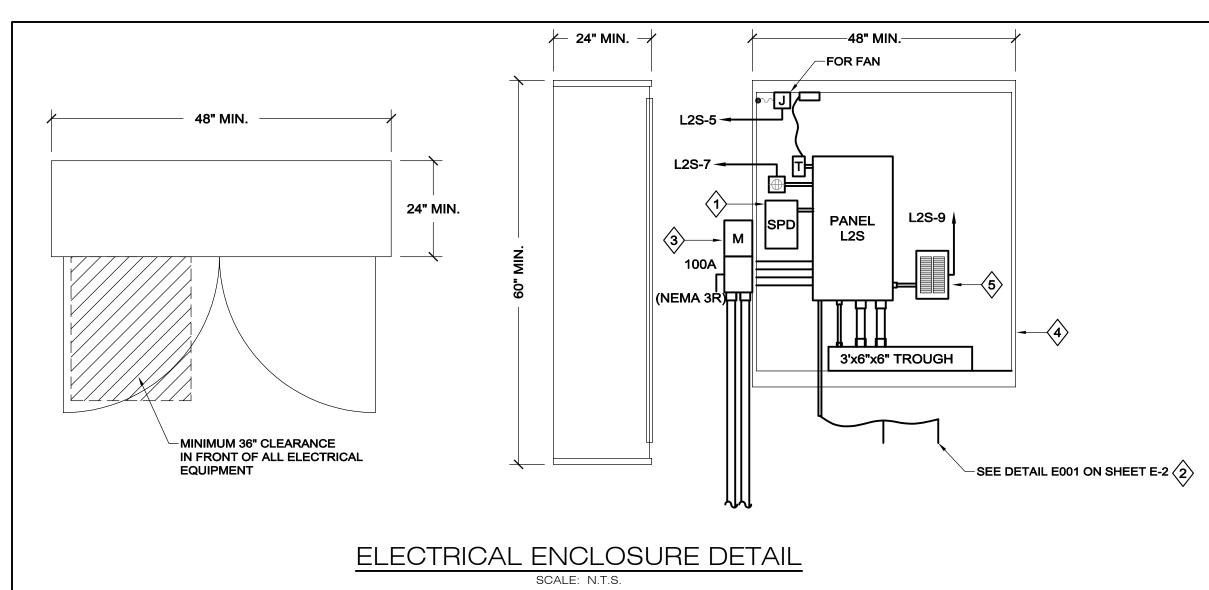
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DETAILS

L-3







$\langle \hat{1} \rangle$	SERVICE ENTRANCE TVSS SHALL HAVE A MAXIMUM SURGE RATING CAPACITY OF 125KA PER MODE (250KA PER PHASE). TVSS SHALL BE INDIVIDUALLY MOUNTED IN A NEMA 1 ENCLOSURE CONNECTED TO THE SERVICE VIA A 60A-3P CIRCUIT BREAKER. PROVIDE WITH INDICATING LAMPS, SURGE COUNTER AND FORM C CONTACT FOR CONNECTION TO THE BUILDING AUTOMATION SYSTEM AS A GENERAL ALARM. INTERCONNECT THE TVSS WITH THE BUILDING AUTOMATION SYSTEM WITH 2#14-3/4"C. TVSS SHALL BE TG SERIES AS MANUFACTURED BY CURRENT TECHNOLOGY, LM SERIES BY LIEBERT OR CPS SERIES FROM CUTLER HAMMER.
2	THE SERVICE SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 250 OF THE NEC. BOND ALL ELECTRICALLY CONDUCTIVE MATERIALS TO THE GROUNDING SYSTEM.
3	PROVIDE CLASS 320 METER SOCKET, 240/120Y, 1PHASE,3W WITH MANUAL BYPASS LEVER IN NEMA 3R ENCLOSURE. COORDINATE EXACT REQUIREMENTS WITH EVERSOURCE.
4>	ENCLOSURE SHALL BE CUSTOM FABRICATED, LOCKABLE TWO DOOR STAINLESS STEEL FREE STANDING PADMOUNTED VENTILATED ENCLOSURE AS MANUFACTURED BY HOFFMAN WATERSHED SERIES OR APPROVED EQUAL. ENCLOSURE SHALL BE EQUIPPED WITH EXHAUST FAN AND HEATER AS ILLUSTRATED. PROVIDE STAINLESS STEEL FEET TO ELEVATE ENCLOSURE 1" ABOVE PAD. CONTRACTOR SHALL CONFIRM EXACT DIMENSIONS OF ENCLOSURE BASED ON ACTUAL EQUIPMENT SIZE AND ENCLOSURE MANUFACTURER'S RECOMMENDATIONS. PROVIDE DIMENSIONED DRAWING FOR REVIEW BY ENGINEER PRIOR TO PURCHASE.
5	PROVIDE 800W UNIT HEATER WITH INTEGRAL THERMOSTAT

LIGHTING FIXTURE LEGEND POLE MOUNTED LIGHTING FIXTURE ONE LINE SYMBOLS LEGEND DISCONNECT SWITCH, UNFUSED DISCONNECT SWITCH, FUSED "XXAF" INDICATES FUSE RATING "XXAS" INDICATES SWITCH SIZE CIRCUIT BREAKER, FIXED "XXAF" INDICATES FRAME SIZE "XXAT" INDICATES TRIP **┿**──── POTENTIAL TRANSFORMER "2" INDICATES QUANTITY **CURRENT TRANSFORMER** "3" - INDICATES QUANTITY "500:5A" - INDICATES PRIMARY TO SECONDARY TURNS RATIO **TRANSFORMER** 3 PHASE, 3 WIRE DELTA CONNECTION 3 PHASE, 4 WIRE WYE SOLIDLY GROUNDED

R21A

PANELBOARD

"5"- INDICATES CIRCUIT NUMBER

JUNCTION BOX

PULLBOX

РВ

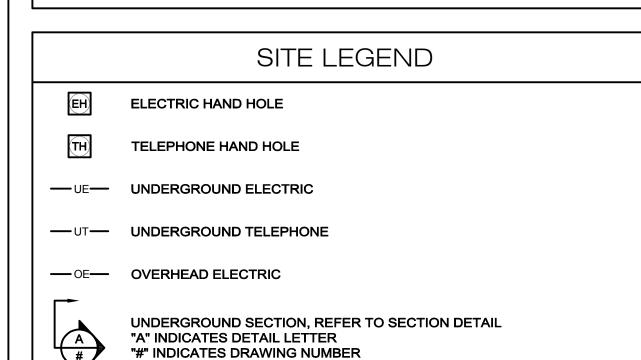
"WP" - INDICATES WEATHERPROOF

	TELECOMMUNICATIONS LEGEND		7
lacksquare	TELEPHONE OUTLET		
∇	DATA OUTLET		/
∇	COMBINATION TELEPHONE/DATA OUTLET		1
		$\overline{}$,
	WIRING DEVICE LEGEND		/

DUPLEX RECEPTACLE, GROUNDING TYPE, RATED 20A, 125V

"GFI"- INDICATES INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER

DOUBLE DUPLEX RECEPTACLE, GROUNDING TYPE, RATED 20A, 125V



BRANCH CIRCUIT & FEEDER LEGEND BRANCH CIRCUIT OR FEEDER CONCEALED IN FINISHED AREAS BRANCH CIRCUIT OR FEEDER, CONCEALED IN OR UNDER FLOOR SLAB 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, R22A-1,3,5 GROUND CONDUCTORS ARE NOT INDICATED. NO TICKS INDICATES 2#12 & 1#12G IN 3/4"C 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. H42B-1 100A-3P FEEDER HOMERUN. REFER TO LEGEND OF FEEDER SIZES FOR CONDUCTOR AND RACEWAY REQUIREMENTS DESIGNATED INSIDE TAG. H42B-1 INDICATES PANEL AND CIRCUIT NUMBER DESIGNATION FROM WHICH HOME RUN SHALL ORIGINATE, 100A-3P INDICATES 100 AMPERE, 3 POLE CIRCUIT

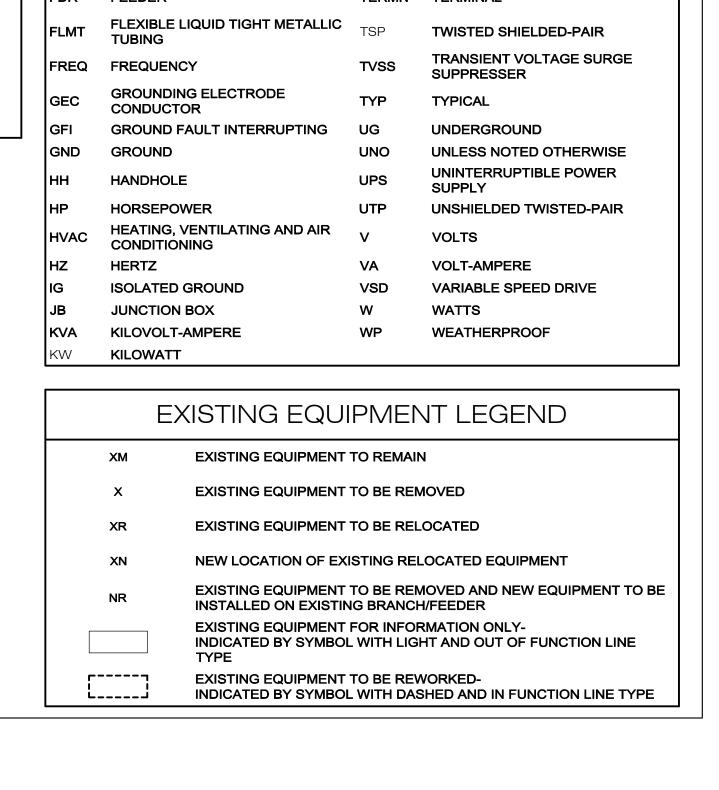
SECURITY LEGEND

CLOSED CIRCUIT TV CAMERA

CCTV

POWER DISTRIBUTION
Y/120 VOLT PANELBOARD, SURFACE MOUNTED ER TO SCHEDULE OF PANELBOARDS
STOMER METER
LITY METER AND SOCKET

	CLOSED CIRCUIT TV CAIVIERA						
	ABBRE\	/IATIC	DNS				
A/AMP	AMPERE	KWH	KILOWATT HOURS				
AC .	ALTERNATING CURRENT	LTG	LIGHTING				
ADA .	AMERICAN WITH DISABILITIES ACT	МСВ	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				
LAIC	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				
В	BURIED	NO	NORMALLY OPEN CONTACT				
c	CONDUIT	NTS	NOT TO SCALE				
CA	CABLE	#	NUMBER				
CATV	CABLE TELEVISION	OPD	OVER CURRENT PROTECTION DEVICE				
11:0:13	CLOSED CIRCUIT TELEVISION SYSTEM	POS	PROVIDED UNDER OTHER SECTIONS				
СВ	CIRCUIT BREAKER	PVC	POLYVINYL CHLORIDE				
СКТ	CIRCUITS	PWR	POWER				
CPU	CENTRAL PROCESSING UNIT	RGS	RIGID GALVANIZED STEEL				
Œ.	CENTERLINE	RMS	ROOT MEAN SQUARE VALUE				
dB I	DECIBEL	RPM	REVOLUTIONS PER MINUTE				
DC I	DIRECT CURRENT	SN	SOLID NEUTRAL				
DWG	DRAWING	SWBD	SWITCHBOARD				
EC I	ELECTRICAL CONTRACTOR	ТВ	TERMINAL BLOCK				
EMT	ELECTRIC METALLIC TUBING	TEL	TELEPHONE				
FDR	FEEDER	TERMN	TERMINAL				
1 1 1 N/I I	FLEXIBLE LIQUID TIGHT METALLIC TUBING	TSP	TWISTED SHIELDED-PAIR				
FREQ	FREQUENCY	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER				
1(4+(1	GROUNDING ELECTRODE CONDUCTOR	TYP	TYPICAL				
GFI	GROUND FAULT INTERRUPTING	UG	UNDERGROUND				
GND (GROUND	UNO	UNLESS NOTED OTHERWISE				
нн і	HANDHOLE	UPS	UNINTERRUPTIBLE POWER SUPPLY				
HP I	HORSEPOWER	UTP	UNSHIELDED TWISTED-PAIR				
	HEATING, VENTILATING AND AIR CONDITIONING	V	VOLTS				
HZ I	HERTZ	VA	VOLT-AMPERE				
IG I	ISOLATED GROUND	VSD	VARIABLE SPEED DRIVE				
JB .	JUNCTION BOX	W	WATTS				
KVA I	KILOVOLT-AMPERE	WP	WEATHERPROOF				
•							





COMMUNITY **INNOVATION SCHOOLYARD** PROJECT - PHASE I 115 SYCAMORE STREET

www.warnerlarson.com

ENGINEERS

Andover, MA - Boston, MA - Amherst, MA Durham, NC - Charlotte, NC

Andover, MA 01810-1488

WINTER HILL

SOMERVILLE **MASSACHUSETTS**

PREPARED FOR: CITY OF SOMERVILLE PARKS AND OPEN SPACE

DATE:			
SCALE	:	1" =	10'-0"
JOB #:			
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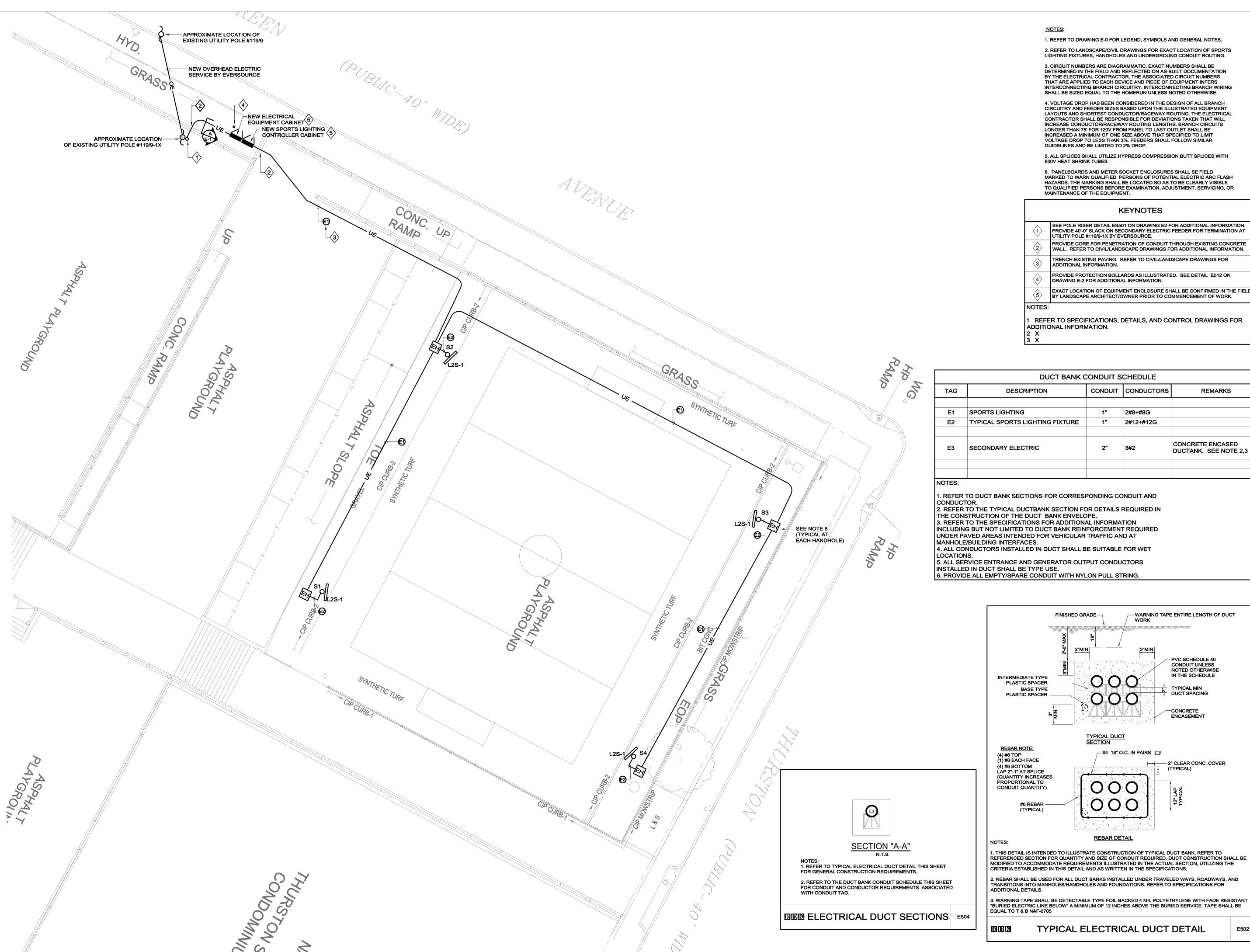
REVISIONS

NO. DATE

DESCRIPTION

3/8/2017

20160633



NOTES:

1. REFER TO DRAWING E-0 FOR LEGEND, SYMBOLS AND GENERAL NOTES.

2. REFER TO LANDSCAPE/CIVIL DRAWINGS FOR EXACT LOCATION OF SPORTS LIGHTING FIXTURES, HANDHOLES AND UNDERGROUND CONDUIT ROUTING.

3. CIRCUIT NUMBERS ARE DIAGRAMMATIC. EXACT NUMBERS SHALL BE DETERMINED IN THE FIELD AND REFLECTED ON AS-BUILT DOCUMENTATION BY THE ELECTRICAL CONTRACTOR. THE ASSOCIATED CIRCUIT NUMBERS THAT ARE APPLIED TO EACH DEVICE AND PIECE OF EQUIPMENT INFERS INTERCONNECTING BRANCH CIRCUITRY. INTERCONNECTING BRANCH WIRING SHALL BE SIZED EQUAL TO THE HOMERUN UNLESS NOTED OTHERWISE.

4. VOLTAGE DROP HAS BEEN CONSIDERED IN THE DESIGN OF ALL BRANCH CIRCUITRY AND FEEDER SIZES BASED UPON THE ILLUSTRATED EQUIPMENT LAYOUTS AND SHORTEST CONDUCTOR/RACEWAY ROUTING. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DEVIATIONS TAKEN THAT WILL INCREASE CONDUCTOR/RACEWAY ROUTING 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 2% DROP.

5. ALL SPLICES SHALL UTILIZE HYPRESS COMPRESSION BUTT SPLICES WITH 600V HEAT SHRINK TUBES.

6. PANELBOARDS AND METER SOCKET ENCLOSURES 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.

KEYNOTES

SEE POLE RISER DETAIL ES501 ON DRAWING E2 FOR ADDITIONAL INFORMATION. PROVIDE 40'-0" SLACK ON SECONDARY ELECTRIC FEEDER FOR TERMINATION AT UTILITY POLE #119/9-1X BY EVERSOURCE. PROVIDE CORE FOR PENETRATION OF CONDUIT THROUGH EXISTING CONCRETE WALL. REFER TO CIVIL/LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.

PROVIDE PROTECTION BOLLARDS AS ILLUSTRATED. SEE DETAIL E512 ON

BY LANDSCAPE ARCHITECT/OWNER PRIOR TO COMMENCEMENT OF WORK.

- TRENCH EXISTING PAVING. REFER TO CIVIL/LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
- DRAWING E-2 FOR ADDITIONAL INFORMATION. EXACT LOCATION OF EQUIPMENT ENCLOSURE SHALL BE CONFIRMED IN THE FIELD

REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.

	DUCT BANK (CONDUIT S	CHEDULE		
TAG	DESCRIPTION	CONDUIT CONDUCTORS		REMARKS	
E1	SPORTS LIGHTING	1"	2#8+#8G		
E2	TYPICAL SPORTS LIGHTING FIXTURE	1"	2#12+#12G		
E3	SECONDARY ELECTRIC	2"	3#2	CONCRETE ENCASED DUCTANK. SEE NOTE 2,	

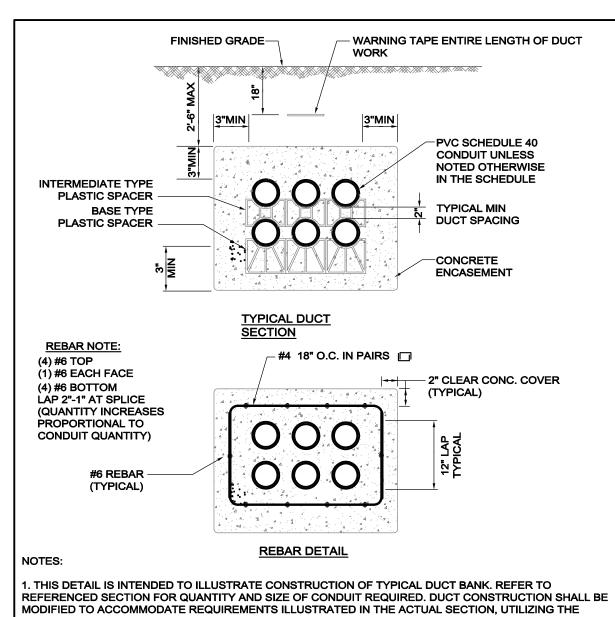
. REFER TO DUCT BANK SECTIONS FOR CORRESPONDING CONDUIT AND

2. REFER TO THE TYPICAL DUCTBANK SECTION FOR DETAILS REQUIRED IN THE CONSTRUCTION OF THE DUCT BANK ENVELOPE. 3. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION INCLUDING BUT NOT LIMITED TO DUCT BANK REINFORCEMENT REQUIRED

4. ALL CONDUCTORS INSTALLED IN DUCT SHALL BE SUITABLE FOR WET

5. ALL SERVICE ENTRANCE AND GENERATOR OUTPUT CONDUCTORS INSTALLED IN DUCT SHALL BE TYPE USE.

6. PROVIDE ALL EMPTY/SPARE CONDUIT WITH NYLON PULL STRING.



TYPICAL ELECTRICAL DUCT DETAIL

20160633 JOB #: DRAWN BY: **DF**

E502

DATE:

SCALE:

REVISIONS

NO. DATE

DESCRIPTION

3/8/2017

CHECKED BY: MM

ELECTRICAL SITE PLAN

1" = 10'-0"

WARNER LARSON

LANDSCAPE ARCHITECTS

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Andover, MA 01810-1488

WINTER HILL

COMMUNITY

INNOVATION

SCHOOLYARD

PROJECT - PHASE I

115 SYCAMORE STREET

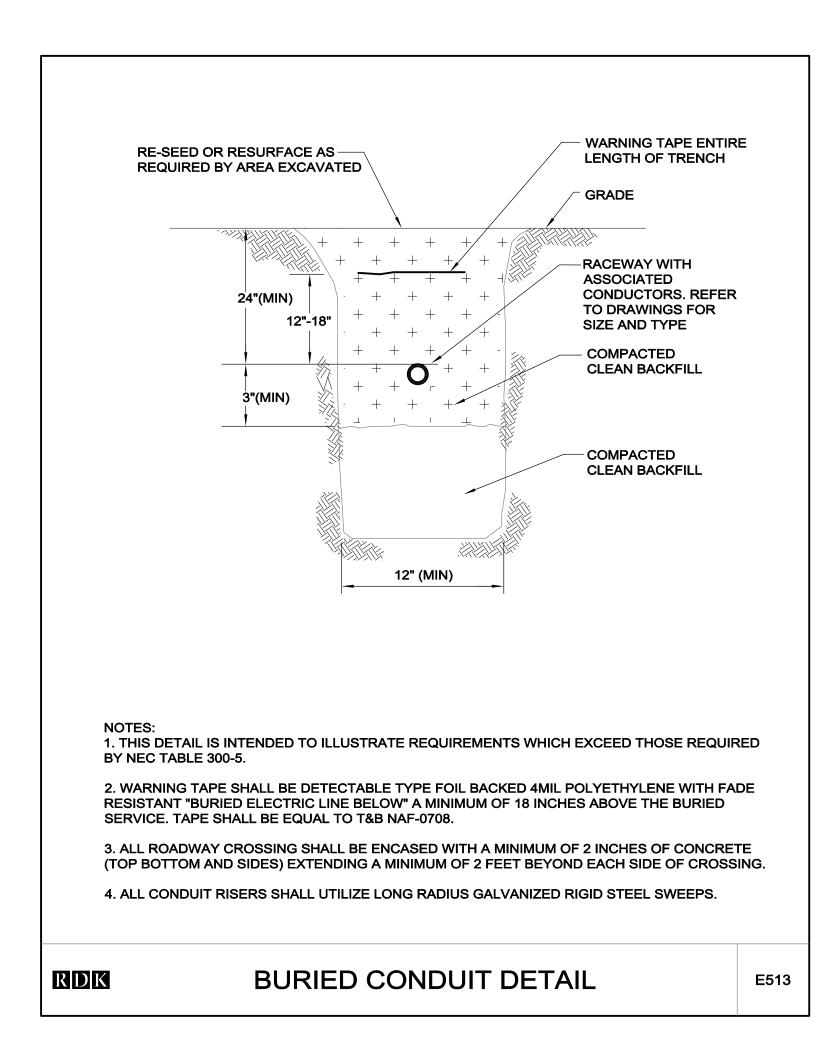
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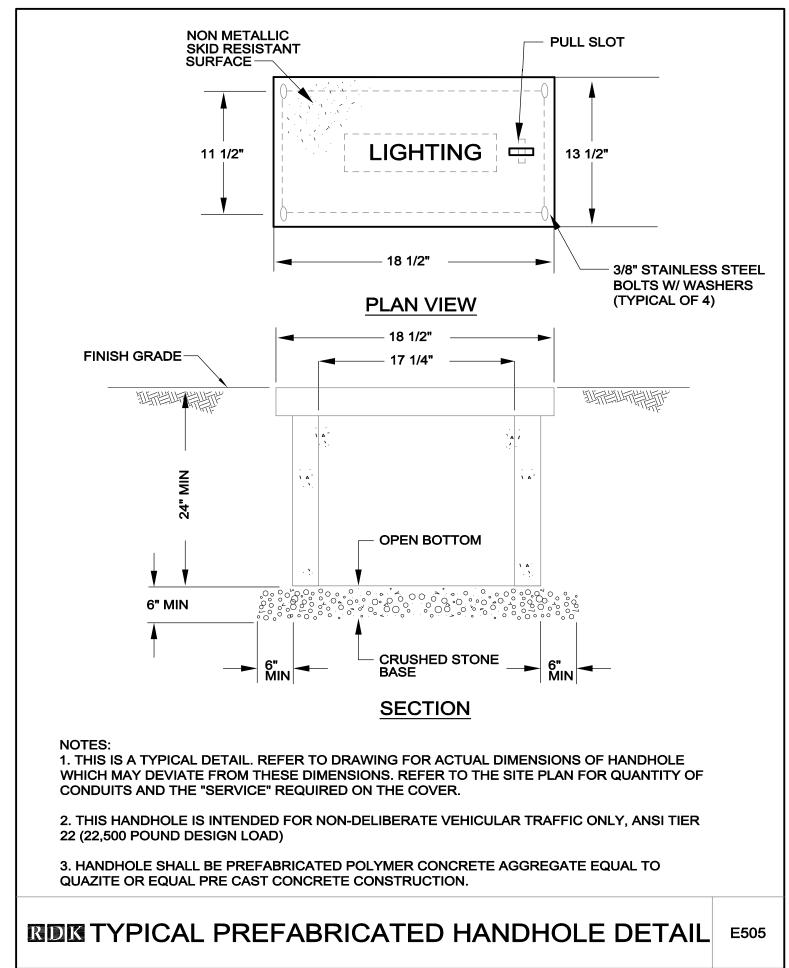
MASSACHUSETTS

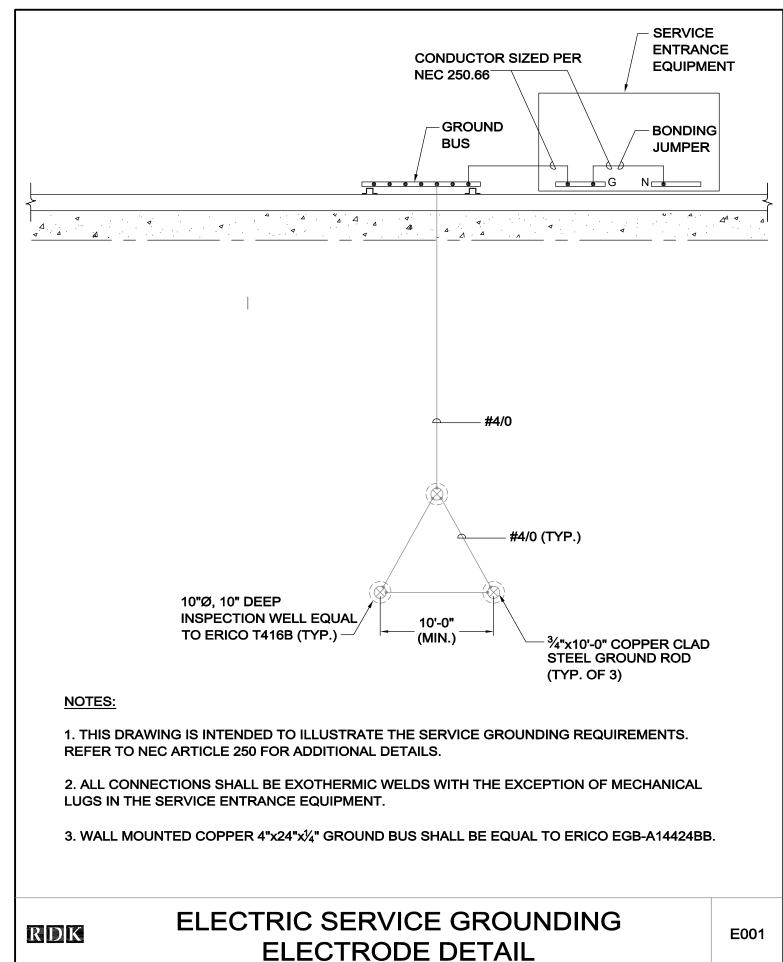
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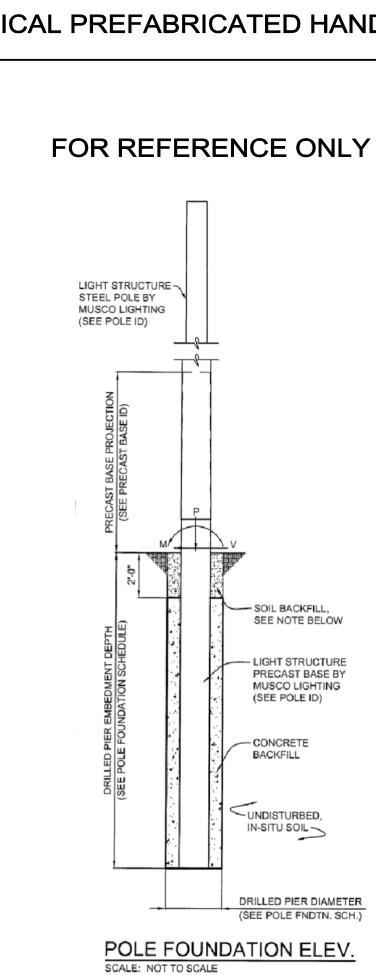
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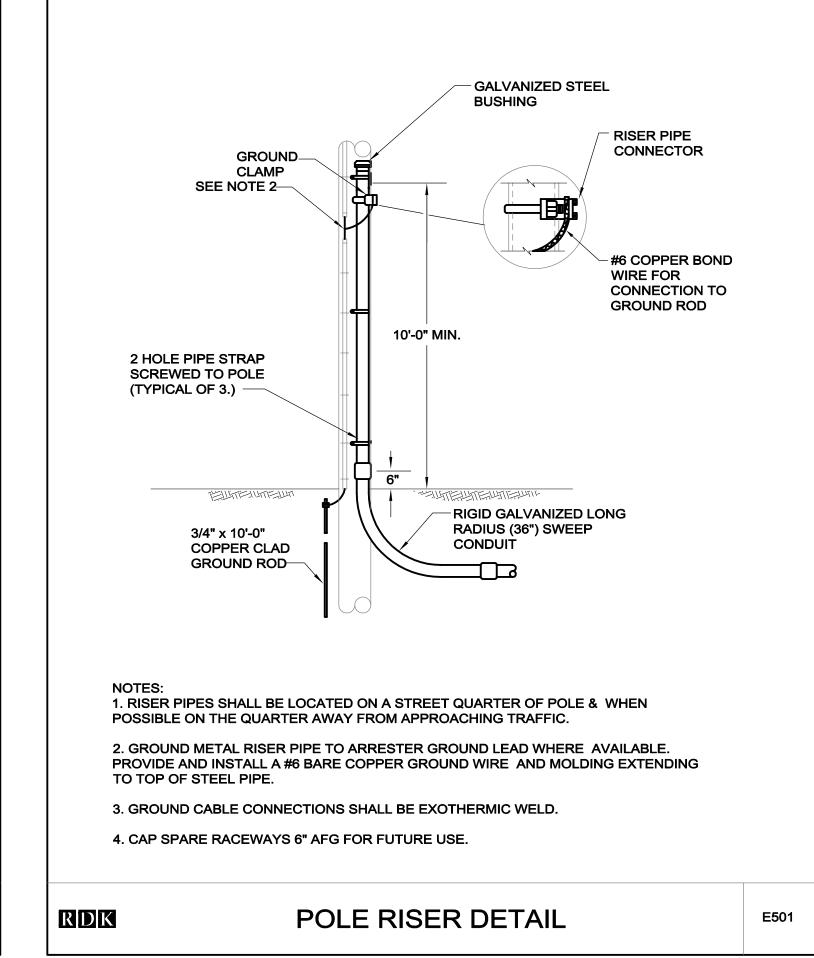


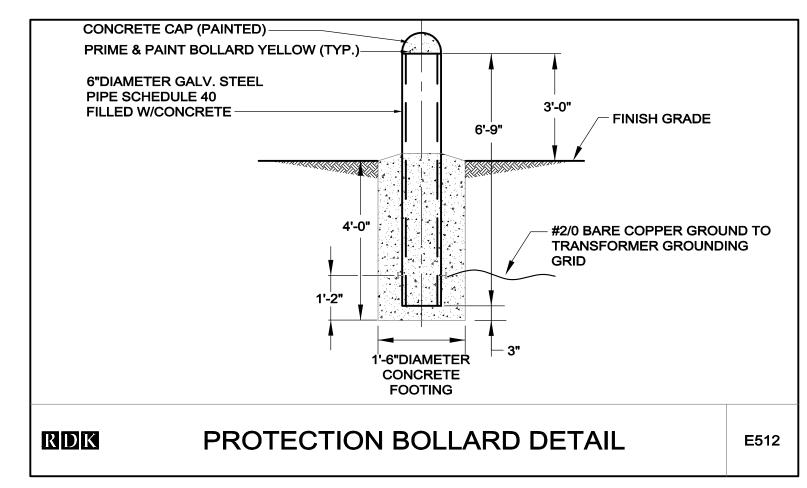


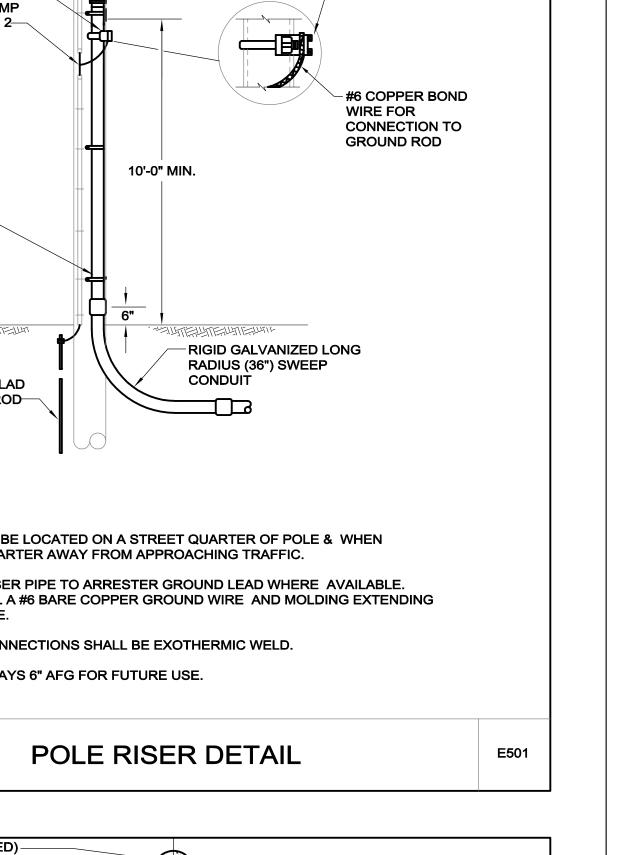




SOIL BACKFILL NOTE:
THE TOP TWO FEET OF ANNULUS SHALL BE BACKFILLED WITH
SOIL, WITH A CLASSIFICATION OF CLASS 5 (TABLE 1806.2) OR
BETTER. COMPACTION, 95% FOR COHESIVE SOIL AND 98%
FOR A COHESIONLESS SOIL BASED UPON STANDARD
PROCTOR TESTING (ASTM D698).







REVISIONS DESCRIPTION NO. DATE

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SCHOOLYARD

PROJECT - PHASE I

115 SYCAMORE STREET SOMERVILLE **MASSACHUSETTS**

PREPARED FOR:

CITY OF SOMERVILLE PARKS AND OPEN SPACE

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3/8/2017 DATE:

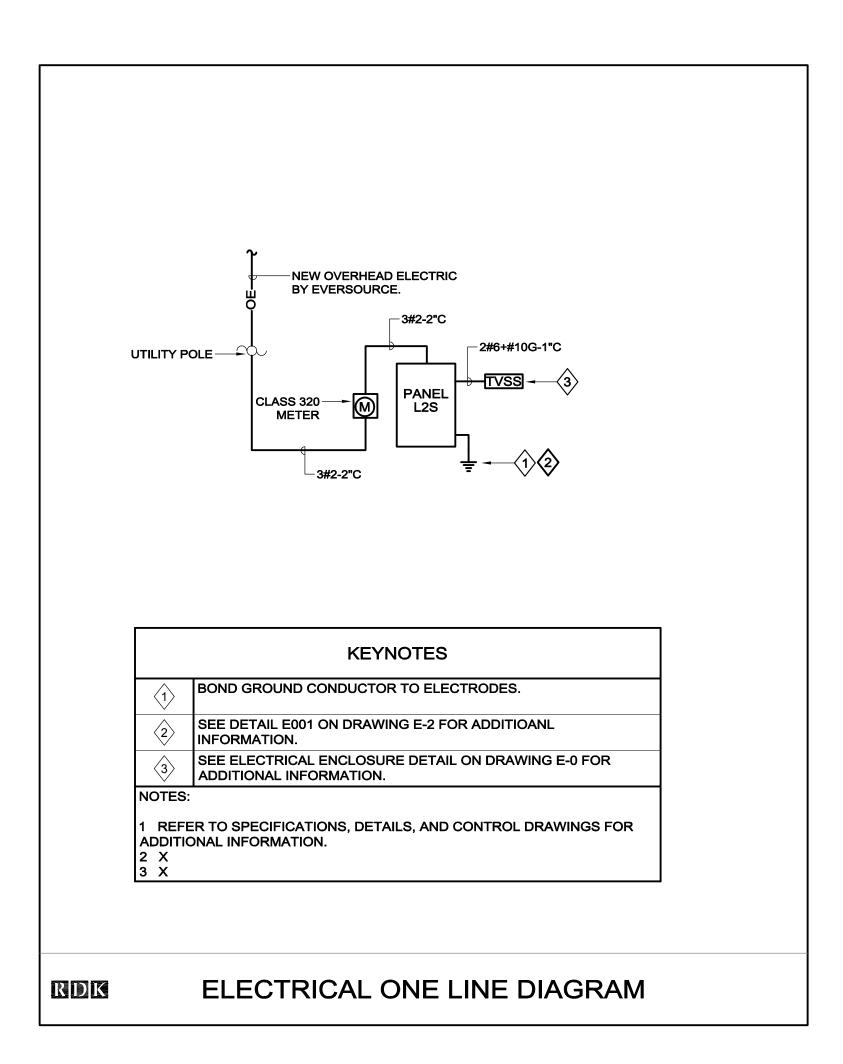
SCALE: JOB #:

DRAWN BY: **DF**

CHECKED BY: MM

ELECTRICAL DETAILS

20160633



	LIGHTING FIXTURE SCHEDULE												
TVDE	MANUFACTURERS	CATALOG NUMBER	DESCRIPTION		LAMPS			DRIVER			INPUT		REMARKS
1111	WANDFACTORERS	CATALOG NOWBER	DESCRIPTION	QTY	TYPE	COLOR	CRI	QTY	LUMENS	TYPE	WATTS	VOLTS	KLIVIARRO
S1	MUSCO	TLC-LED-400	CUSTOM SPORTS LIGHTING FIXTURE MOUNTED ON 30' POLE	2	LED	5700K	75	2	38,000	LED	800		
S 2	MUSCO	TLC-LED-400	CUSTOM SPORTS LIGHTING FIXTURE MOUNTED ON 30' POLE	2	LED	5700K	75	2	38,000	LED	800		
S 3	MUSCO	TLC-LED-400	CUSTOM SPORTS LIGHTING FIXTURE MOUNTED ON 30' POLE	2	LED	5700K	75	2	38,000	LED	800		
S4	MUSCO	TLC-LED-400	CUSTOM SPORTS LIGHTING FIXTURE MOUNTED ON 30' POLE	2	LED	5700K	75	2	38,000	LED	800		

NOTES

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

	PANEL	L2S	VOLTS	120/240	MOUNT.	FLUSH	GROUND BUS	Υ	
	MAIN	100A - SE RATED	BUS	100A	AIC	10,000			
			_	1 PH, 3 W		CABINET			
	AMPS/		LOAD	LOAD BY F	PHASE, kVA	LOAD		AMPS/	
CIR.	POLES	DESCRIPTION OF LOAD	kVA	Α	В	kVA	DESCRIPTION OF LOAD	POLES	CIF
1	20/2	SPORTS LIGHTING	1.60	1.60			TVSS	60/2	2
3	20/2	SPORTS EIGHTING	1.60		1.60		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	00/2	4
5	20/1	ENCLOSURE FAN	1.00	1.00			SPARE	20/1	6
7	20/1	ENCLOSURE RECEPTACLE	0.18		0.18		SPARE	20/1	8
9	201	ENCLOSURE HEATER	0.80	0.80			SPARE	20/1	10
11	20/1	SPARE			0.00		SPARE	20/1	12
13	20/1	SPARE		0.00			SPARE	20/1	14
15	20/1	SPARE			0.00		SPARE	20/1	16
17	20/1	SPARE		0.00			SPARE	20/1	18
				3.40	1.78		TOTAL CONNECTED KVA-	5.18	
							DEMAND FACTOR	1.00	
							TOTAL DEMAND KVA-	5.18	
							TOTAL AMPERES-	21.58	
							Loads for links to other sheets:		
							Phase A	3.40	
							Phase B	1.78	





WINTER HILL COMMUNITY INNOVATION SCHOOLYARD PROJECT - PHASE I

115 SYCAMORE STREET SOMERVILLE MASSACHUSETTS

PREPARED FOR: CITY OF SOMERVILLE PARKS AND OPEN SPACE

REVISIONS

NO.	DATE	DESCRIPTION
DATE:		3/8/2017

JATE:

SCALE: NT

JOB #:

DRAWN BY: **DF**CHECKED BY: **MM**

ELECTRICAL SCHEDULES

E-3

20160633