

# TOWN OF BOXFORD

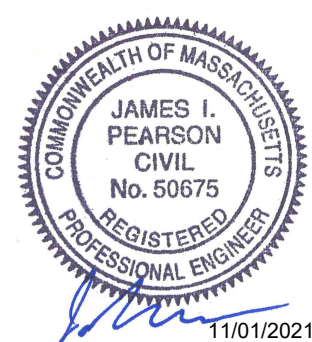
## BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT HARRY LEE COLE SCHOOL



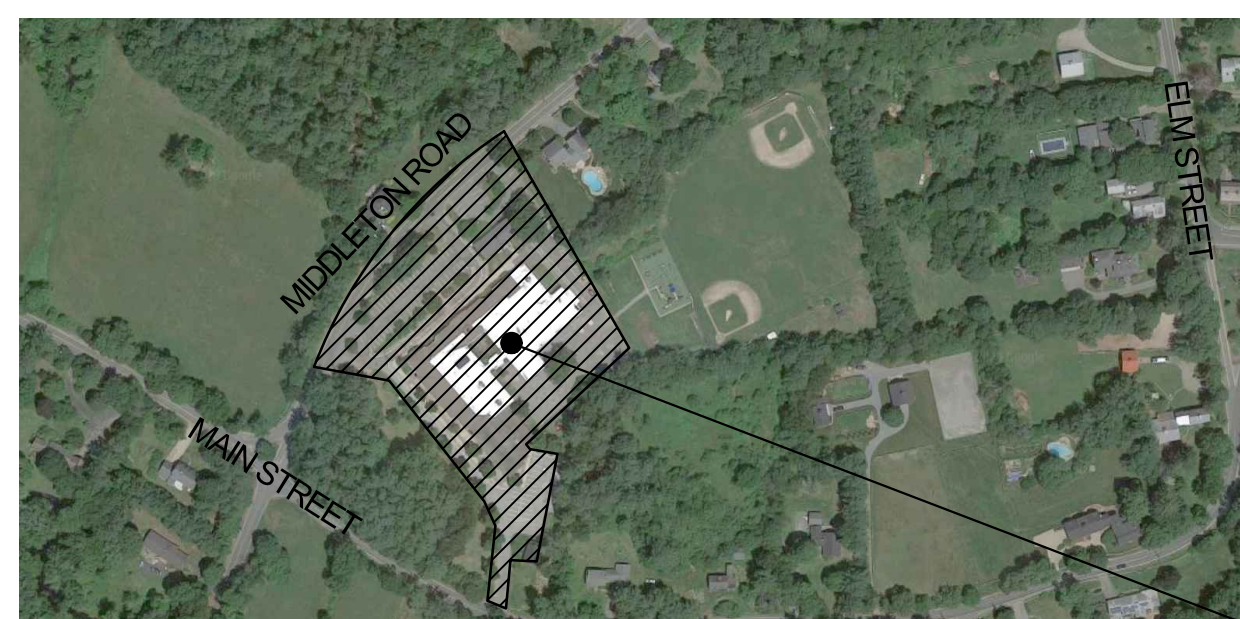
STEVE CLIFFORD, DIRECTOR OF FACILITIES  
BOXFORD PUBLIC SCHOOLS  
28 MIDDLETON ROAD  
BOXFORD, MA 01921  
978-887-0771 ext. 225



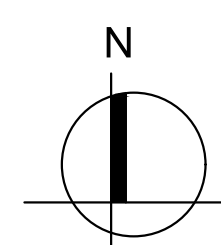
JAMES PEARSON, PE, TECHNICAL SPECIALIST  
55 WALKERS BROOK DRIVE  
READING, MA 01867  
978-532-1900



### Locus Map



HARRY LEE COLE SCHOOL  
26 MIDDLETON ROAD, BOXFORD, MA 01921



- RENDERING FOR ILLUSTRATIVE PURPOSES ONLY -

**-PERMITTING ONLY-  
- NOT FOR CONSTRUCTION -**

**NOVEMBER 1, 2021**

LANDSCAPE ARCHITECTURAL, CIVIL,  
ENVIRONMENTAL, ELECTRICAL AND  
UTILITY DESIGN:  
55 Walkers Brook Drive, Suite 100  
Reading, MA 018667  
(978) 532 1900  
www.westonandsampson.com

### ZONING

SCHOOL: HARRY LEE COLE SCHOOL  
SITE ADDRESS: 26 and 28 MIDDLETON ROAD  
PARCEL MAP/LOT: 32-1-21  
ZONING DISTRICT: O - OFFICIAL OR OPEN SPACE DISTRICT  
OVERLY DISTRICT: NONE

Description	Required	Proposed
<b>Minimum Lot Dimensions</b>		
Area (Acres)	N/A	N/A
Frontage on street	N/A	N/A
<b>Minimum Required Yard Dimensions/Setbacks</b>		
Front Yard (1)	50	N/A
Side Yard	N/A	N/A
Rear Yard	N/A	N/A
<b>Max. Bldg. Height</b>		
Stories	3	N/A
Feet	35	N/A
<b>Coverage (2)</b>		
Building Coverage % of lot area	25%	N/A
<b>Accessory Buildings or Structures</b>		
Min. Bldg. Separation	20	N/A
Side/rear setbacks	20	N/A

### WAIVER REQUESTS

- 196-29. NEW DRIVEWAYS**  
**B(2). DRIVEWAYS:** The first 25 feet in from the paved portion of the public way shall have a max slope of 3%; the max driveway slope along the centerline shall be 12%; any slopes over 8% shall be paved. To preserve the stability of the natural topography, no cut or fill in excess of 8 feet of the natural topography shall be allowed within the limits of the driveway cross section.

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GENERAL NOTES

- 1. TOPOGRAPHIC AND EXISTING CONDITIONS INFORMATION COMPILED BY WESTON & SAMPSON, OCTOBER 2020.
2. REFER TO EXISTING CONDITIONS LEGEND. ANY QUANTITIES SHOWN ON THE PLANS ARE FOR BIDDING PURPOSES ONLY.
3. LOCATIONS OF ANY UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY.
4. ANY DISCREPANCIES OR CONFLICTS BETWEEN THE DRAWINGS AND EXISTING CONDITIONS, EXISTING CONDITIONS TO REMAIN, TEMPORARY CONSTRUCTION, PERMANENT CONSTRUCTION AND WORK OF ADJACENT CONTRACTS
5. ALL ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE GENERAL CONTRACTOR ON 'AS-BUILT' DRAWINGS.
6. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS OUTSIDE THE PROJECT LIMITS, SHALL BE RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE OWNER.
7. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS NEEDED TO PROTECT HIS EMPLOYEES, AS WELL AS PUBLIC USERS FROM INJURY DURING THE ENTIRE CONSTRUCTION PERIOD AT NO EXPENSE TO THE OWNER
8. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH THE NAME OF THE OSHA 'COMPETENT PERSON' PRIOR TO CONSTRUCTION.
9. FILLING OF EXCAVATED AREAS SHALL NOT TAKE PLACE WITHOUT THE PRESENCE OR PERMISSION OF THE OWNER'S REPRESENTATIVE.
10. ALL EXISTING DRAINAGE FACILITIES TO REMAIN SHALL BE MAINTAINED FREE OF DEBRIS, SOIL, SEDIMENT, AND FOREIGN MATERIAL AND OPERATIONAL THROUGHOUT THE LIFE OF THE CONTRACT.
11. CONTRACTOR'S STAGING AREA MUST BE WITHIN THE CONTRACT LIMIT LINE AND/OR IN AREAS APPROVED BY OWNER.
12. THE CONTRACTOR SHALL KEEP ALL STREETS AND WALKS THAT ARE NOT RESTRICTED FROM PUBLIC USE DURING CONSTRUCTION BROOM CLEAN AT ALL TIMES.
13. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH TOWN OF BOXFORD ORDINANCES.

EROSION AND SEDIMENT CONTROL NOTES

- 1. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE PUT INTO PLACE PRIOR TO BEGINNING ANY CONSTRUCTION OR DEMOLITION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUAL MAINTENANCE OF ALL CONTROL DEVICES THROUGHOUT THE DURATION OF THE PROJECT.
3. CONTRACTOR SHALL MEET ALL OF THE STATE OF MASSACHUSETTS D.E.P. REGULATIONS FOR SEDIMENT AND EROSION CONTROL AT NO ADDITIONAL COST TO THE OWNER.
4. EXCAVATED MATERIAL STOCKPILED ON THE SITE SHALL BE SURROUNDED BY A RING OF UNBROKEN SEDIMENT AND EROSION CONTROL FENCE.
5. EROSION CONTROL BARRIERS TO BE INSTALLED AT THE TOE OF SLOPES. SEE SITE PLAN, NOTES, DETAILS AND SPECIFICATIONS.

DEMOLITION & SITE PREPARATION NOTES

- 1. THE CONTRACTOR SHALL INCLUDE IN THE BID THE COST OF REMOVING ANY EXISTING SITE FEATURES AND APPURTENANCES NECESSARY TO ACCOMPLISH THE CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS.
2. THE OWNER RESERVES THE RIGHT TO REVIEW ALL MATERIALS DESIGNATED FOR REMOVAL AND TO RETAIN OWNERSHIP OF SUCH MATERIALS.
3. UNLESS SPECIFICALLY NOTED TO BE REMOVED AND STOCKPILED (R&S) OR REUSED AND RELOCATED (R&R), ALL SITE FEATURES CALLED TO BE REMOVED AND DEMOLISHED (R&D) SHALL BE REMOVED WITH THEIR FOOTINGS, ATTACHMENTS, BASE MATERIAL, ETC.
4. ALL EXISTING SITE FEATURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PERIOD.
5. DURING EARTHWORK OPERATIONS, CONTRACTOR SHALL TAKE CARE TO NOT DISTURB EXISTING MATERIALS TO REMAIN.
6. IT SHALL BE THE CONTRACTOR'S OPTION, WITH CONCURRENCE OF THE OWNER'S REPRESENTATIVE, TO REUSE EXISTING GRAVEL PAVEMENT BASE COURSE IF IT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS FOR GRAVEL BORROW.

LAYOUT & MATERIALS NOTES

- 1. COORDINATE ALL LAYOUT ACTIVITIES WITH THE SCOPE OF WORK CALLED FOR BY DEMOLITION, MATERIALS, GRADING AND UTILITIES OPERATIONS ENCOMPASSED BY THIS CONTRACT.
2. THE LAYOUT OF SITE AMENITIES MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
3. ALL PROPOSED SITE FEATURES SHALL BE LAID OUT AND STAKED FOR REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF INSTALLATION.
4. ALL PROPOSED PAVEMENTS SHALL MEET THE LINE AND GRADE OF EXISTING ADJACENT PAVEMENT SURFACES AND SHALL BE TREATED WITH AN RS-1 TACK COAT AT POINT OF CONNECTION.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES ON THE GROUND AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS OF ALL PROPOSED GATES.
7. ALL LAYOUT LINES, OFFSETS, OR REFERENCES TO LOCATING OBJECTS ARE EITHER PARALLEL OR PERPENDICULAR UNLESS OTHERWISE DESIGNATED WITH ANGLE OFFSETS NOTED.
8. REFER TO DETAIL DRAWINGS FOR CONSTRUCTION DETAILS.
9. ONLY CLEAN FILL SHALL BE USED. CLEAN FILL SHALL BE CLEAR FROM TRASH, DEBRIS, ASPHALT, BRICK, CONCRETE, METAL, WOOD, RECYCLED CONSTRUCTION MATERIALS, OR OTHER DELETERIOUS MATERIALS.
10. TO FACILITATE LAYOUT OF PROPOSED SITE FEATURES AND FACILITIES, LAYOUT INFORMATION FOR CERTAIN FUTURE WORK, WHICH IS NOT INCLUDED WITHIN THE SCOPE OF THIS CONTRACT HAS BEEN PROVIDED ON THE LAYOUT AND MATERIALS PLAN FOR INFORMATION ONLY.

GRADING & DRAINAGE NOTES

- 1. ALL WORK RELATING TO INSTALLATION, RENOVATION OR MODIFICATION OF WATER, UTILITY STORMWATER DRAINAGE AND/OR SEPTIC UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS OF THE TOWN, AND STATE OF MASSACHUSETTS.
2. THE CONTRACTOR SHALL VERIFY ALL GRADES ON THE GROUND AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER'S REPRESENTATIVE.
3. ALL GRADING IS TO BE SMOOTH AND CONTINUOUS WHERE PROPOSED SURFACE MEETS EXISTING SURFACE. BLEND THE TWO PAVEMENTS AND ELIMINATE ROUGH SPOTS AND ABRUPT GRADE CHANGES AND MEET LINE AND GRADE OF EXISTING CONDITIONS WITH NEW IMPROVEMENTS.
4. CONTRACTOR SHALL ENSURE ALL AREAS ARE PROPERLY PITCH TO DRAIN, WITH NO SURFACE WATER PONDING OR PUDDLING.
5. ALL NEW WALKWAYS MUST CONFORM TO CURRENT AMERICANS WITH DISABILITIES ACT (ADA), AND MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) REGULATIONS.
6. ALL UTILITY GRATES, COVERS OR OTHER SURFACE ELEMENTS INTENDED TO BE EXPOSED AT GRADE SHALL BE FLUSH WITH THE ADJACENT FINISHED GRADE AND ADJUSTED TO PROVIDE A SMOOTH TRANSITION AT ALL EDGES.
7. THE CONTRACTOR SHALL CONFIRM AND/OR SET SUBGRADE ELEVATIONS TO ALLOW FOR POSITIVE DRAINAGE AND PROVIDE EROSION CONTROL DEVICES, STRUCTURES, MATERIALS AND CONSTRUCTION METHODS TO DIRECT SILT MIGRATION AWAY FROM DRAINAGE AND OTHER UTILITY SYSTEMS.
8. EXCAVATION REQUIRED WITHIN PROXIMITY OF KNOWN EXISTING UTILITY LINES SHALL BE DONE BY HAND.
9. WHERE NEW EARTHWORK MEETS EXISTING EARTHWORK, CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY INTO EXISTING, PROVIDING VERTICAL CURVES OR ROUNDS AT ALL TOP AND BOTTOM OF SLOPES.
10. WHERE A SPECIFIC LIMIT OF WORK LINE IS NOT OBVIOUS OR IMPLIED, BLEND GRADES TO EXISTING CONDITIONS WITHIN 5 FEET OF PROPOSED CONTOURS.
11. RESTORE ALL DISTURBED AREAS AND LIMITS OF ALL REMOVALS TO LOAM AND SEED (L&S) UNLESS OTHERWISE NOTED.
12. SEE EARTHWORK SECTION OF SPECIFICATIONS FOR EXCAVATION AND FILLING PROCEDURES.

PLANTING NOTES

- 1. THE DEPTH OF THE TOPSOIL LOAM FOR ALL PROPOSED LAWN AREAS SHALL BE 6" MINIMUM. ALL DISTURBED AREAS SHALL BE RESTORED WITH LOAM AND SEED UNLESS OTHERWISE NOTED.
2. ALL REFERENCES TO LOAM AND SEED REFER TO HYDROMULCH SEEDED LAWN.
3. ANY DISCREPANCIES BETWEEN THE PLANS AND THE PLANTING SCHEDULE, CONTRACTOR SHALL OWN THE LARGER QUANTITY AND SIZE AT NO ADDITIONAL COST TO THE OWNER.

ABBREVIATIONS

GENERAL

Table with 2 columns: PROPOSED and GENERAL. Lists various materials and construction terms like ADJUST, BITUMINOUS CONCRETE, BASELINE, etc.

UTILITIES

Table with 2 columns: GICI, CBCI, CB, etc. and descriptions like GUTTER INLET W/ CURB INLET, CATCH BASIN W/ CURB INLET, etc.

ALIGNMENT/GRADING

Table with 2 columns: Abbreviations and Descriptions. Lists terms like BC, PI, PC, PT, PRC, PCC, PVI, PVC, PVT, ELEV, CC, H.P., L.P., R, STA, S.S.D., TC, TW, CL.

Project: BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT. Logo for Town of Boxford, Massachusetts. HARRY LEE COLE SCHOOL, 26 AND 28 MIDDLETON ROAD, BOXFORD, MA 01921.

Weston & Sampson logo and contact information: Weston & Sampson Engineers, Inc., 55 Walkers Brook Drive, Suite 100, Reading, MA 01867. Phone: 978.532.1900, Fax: 800.SAMPSON.

Consultants section with a large empty box for listing consultants.

Revisions table with columns: No., Date, Description. Contains 2 entries: 1. 08/24/21 PER REVISED LAYOUT, 2. 11/01/21 PER PEER REVIEW.

Seal for James I. Pearson, Civil Engineer No. 50675, State of Massachusetts, dated 11/01/2021.

Issued For: PERMITTING ONLY NOT FOR CONSTRUCTION

Scale: AS SHOWN
Date: MAY 13, 2021
Drawn By: EJA
Reviewed By: CB
Approved By: JIP

W&S Project No.: ENG20-0865
W&S File No.:

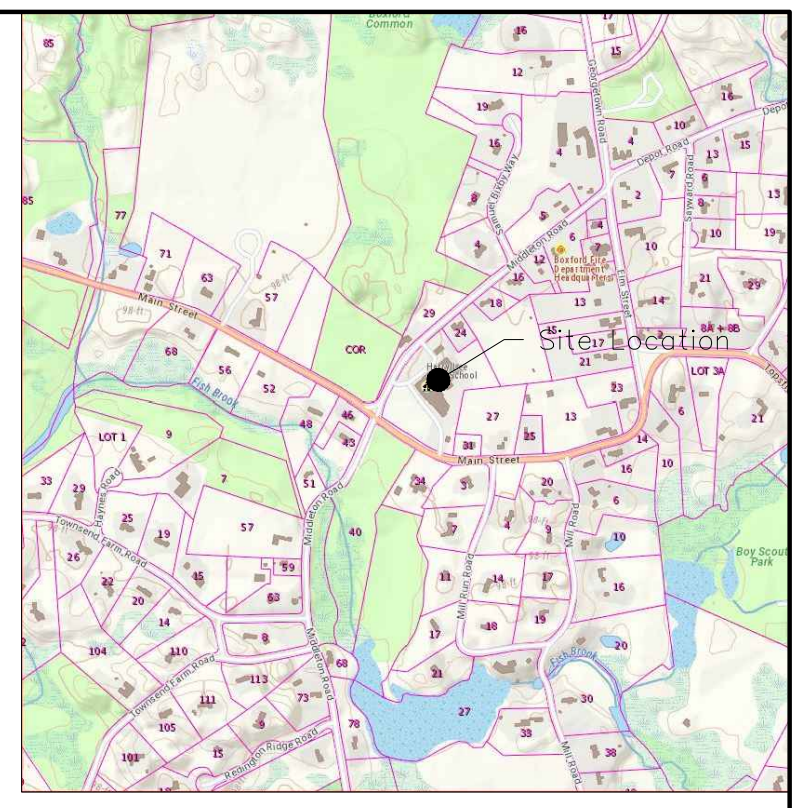
Drawing Title: LEGEND, GENERAL NOTES & SYMBOLS

Sheet Number: C001

Match Line  
(See Sheet 2)

LANDS N/F  
TOWN OF BOXFORD  
28 MIDDLETON ROAD  
AREA = 346226.28  
SQ.FT. (7.948 ACRES)

LANDS N/F  
RUSSELL GORDON  
27 MAIN STREET  
BK 35595 PG 291



LOCATION MAP  
NOT TO SCALE

**SURVEY NOTES:**

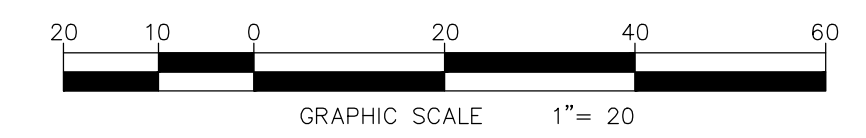
1. UNDERGROUND UTILITY LOCATIONS SHOWN HEREON ARE BASED ON UTILITY EVIDENCE VISIBLE AT GROUND SURFACE AND RECORD DRAWINGS AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES.
2. SURVEY PERFORMED BY WESTON & SAMPSON ENGINEERS IN OCTOBER 2020.
3. CONTOURS AND ELEVATIONS SHOWN BASED ON GPS OBSERVATIONS ON NAVD83 VERTICAL DATUM.
4. NORTH ORIENTATION IS BASED ON GPS OBSERVATIONS TAKEN AT THE TIME OF THE FIELD SURVEY. MAPPING PREPARED ON NAD83 STATE PLANE COORDINATE SYSTEM (MASSACHUSETTS MAINLAND).
5. STREETLINE ALONG MIDDLETON ROAD, AS DEPICTED HEREON, IS FROM THE MAP REFERENCE 1. NO RECORD LAYOUT FOR MIDDLETON ROAD WAS FOUND ON FILE.

LANDS N/F  
RUSSELL GORDON  
31 MAIN STREET  
BK 35595 PG 293

Benchmark "B"  
Mag Nail in  
12" Tree  
Elev. = 93.13'

**EXISTING CONDITIONS LEGEND**

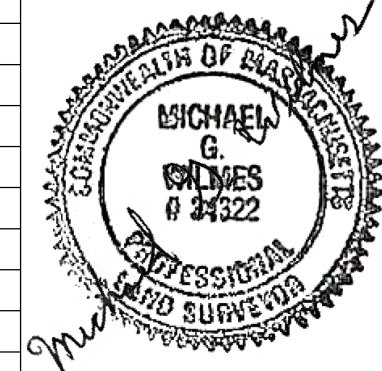
- |   |   |  |  |
|---|---|--|--|
| <ul style="list-style-type: none"> <li>— EDGE OF WOODS</li> <li>— DECIDUOUS TREE</li> <li>— CONIFEROUS TREE</li> <li>— SHRUB/BUSH</li> <li>— SIGN</li> <li>— UTILITY POLE</li> <li>— LIGHT POLE</li> <li>— HYDRANT</li> <li>— WATER SHUTOFF</li> <li>— MONUMENT</li> <li>— IRON PIN / IRON ROD</li> <li>— HANDICAP SPACE</li> </ul> | <ul style="list-style-type: none"> <li>— ST — STORM SEWER LINE</li> <li>— S — SANITARY SEWER LINE</li> <li>— W — WATER LINE</li> <li>— G — GAS LINE</li> <li>— SIG — SIGNAL WIRE LINE</li> <li>— C — CABLE LINE</li> <li>— FO — FIBER OPTIC LINE</li> <li>— LPS — LOW PRESSURE SEWER LINE</li> <li>— E — ELECTRIC LINE</li> <li>— OHU — OVERHEAD UTILITIES</li> <li>— T — TELEPHONE LINE</li> <li>— S — SANITARY MANHOLE (SMH)</li> <li>— DMH — DRAINAGE MANHOLE (DMH)</li> <li>— CB — CATCHBASIN (CB)</li> <li>— M — METAL POST/BOLLARD (BOL)</li> </ul> | <ul style="list-style-type: none"> <li>— H — HAND HOLE</li> <li>— E — ELEC. METER</li> <li>— G — GAS METER</li> <li>— P — PROPERTY LINE</li> <li>— E — EASEMENT</li> <li>— 10 — MAJOR CONTOUR LINE</li> <li>— 5 — MINOR CONTOUR LINE</li> <li>— W/F — WOOD FRAMED</li> <li>— CH — CHAIN LINK FENCE</li> <li>— W — WOOD FENCE</li> <li>— X — FENCE</li> <li>— CD — CLEANDOUT</li> <li>— MW — MONITORING WELL</li> <li>— ST — STONEWALL</li> </ul> | <ul style="list-style-type: none"> <li>— EM — ELECTRIC MANHOLE (MHE)</li> <li>— UM — UNKNOWN MANHOLE</li> <li>— TM — TELEPHONE MANHOLE (MHT)</li> <li>— V — VENT PIPE</li> <li>— CNO — COULD NOT OPEN</li> <li>— F — FLOW DIRECTION</li> <li>— MCN — MAGNETIC CONCRETE NAIL</li> <li>— WLF #FOB1 — WETLAND FLAG (DELINEATED BY OTHERS)</li> <li>— WET-TR — WETLAND LINE</li> <li>— E — EDGE OF WATER (BY AERIAL IMAGE)</li> <li>— EP — ELECTRIC PEDESTAL</li> <li>— GW — GUY WIRE</li> <li>— FE — FINISHED FLOOR ELEVATION</li> <li>— SE — SPOT ELEVATION</li> <li>— MB — MAILBOX</li> </ul> |
|---|---|--|--|



I CERTIFY THAT THE PROPERTY LINES SHOWN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

Michael G. Wilmes 11/11/20  
Michael G. Wilmes, L.S. 34322 Date

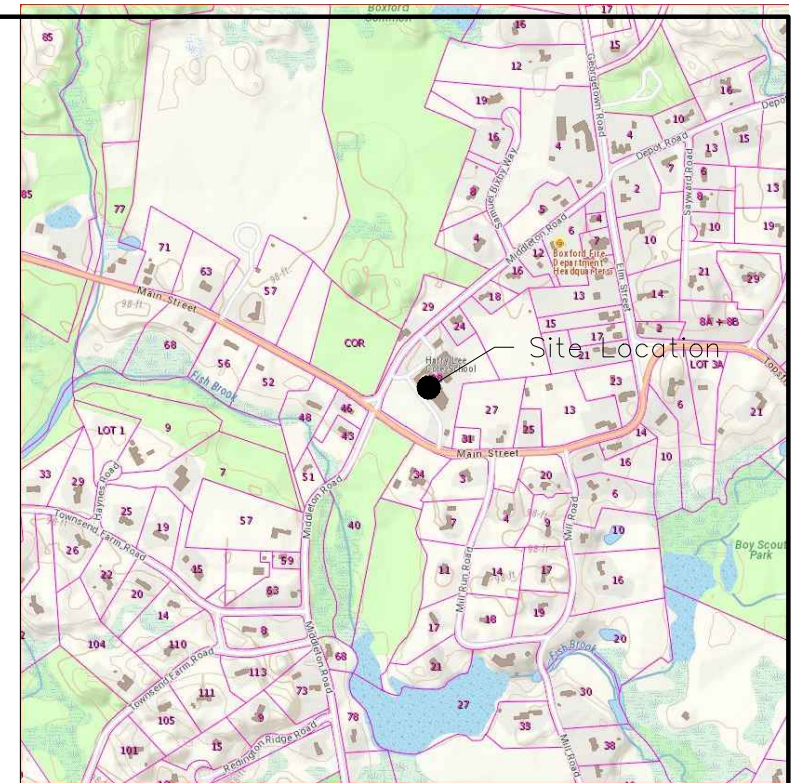
REVISIONS	
DATE	DESCRIPTION



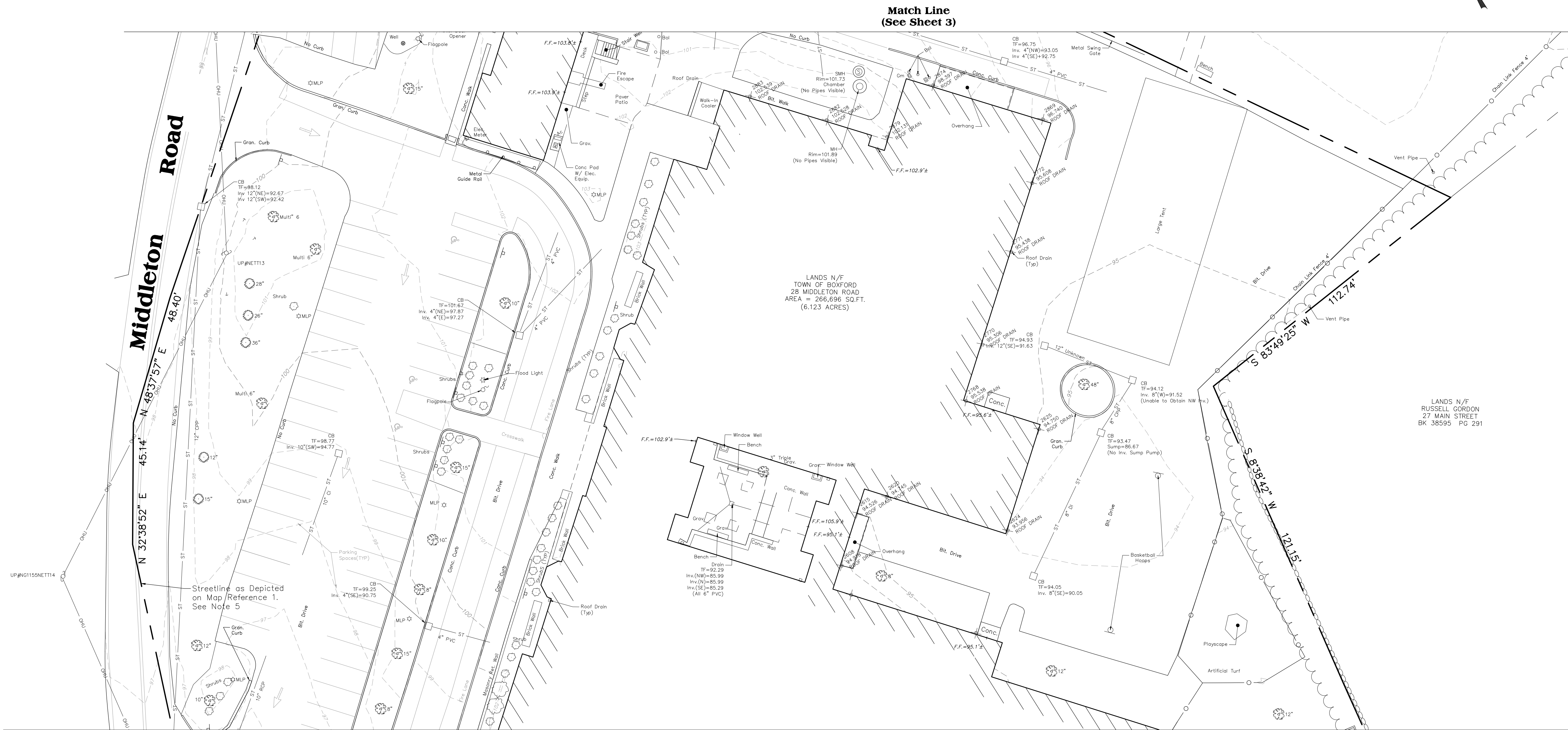
BOUNDARY AND TOPOGRAPHIC MAP OF  
**LANDS OF TOWN OF BOXFORD**  
**HARRY LEE COLE SCHOOL**  
TOWN OF BOXFORD  
COUNTY OF ESSEX COMMONWEALTH OF MASSACHUSETTS

Weston & Sampson  
55 Walkers Brook Drive, Suite 100, Reading, MA 01867

CAD FILE:  
ENG20-0870 Harry Lee Cole  
DATE: NOV. 11, 2020 SHEET 1 OF 3  
SCALE: 1"=20' DRAWING NO. C 002



**LOCATION MAP**  
NOT TO SCALE

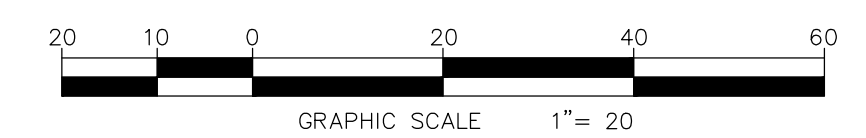


Match Line  
(See Sheet 3)

Match Line  
(See Sheet 1)

**EXISTING CONDITIONS LEGEND**

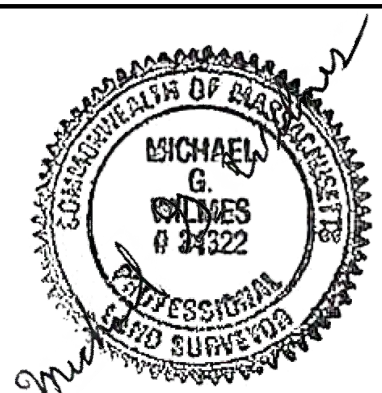
- |  |     |                          |  |                    |
|--|-----|--------------------------|--|--------------------|
|  | ST  | STORM SEWER LINE         |  | HAND HOLE          |
|  | S   | SANITARY SEWER LINE      |  | ELEC. METER        |
|  | W   | WATER LINE               |  | GAS METER          |
|  | G   | GAS LINE                 |  | PROPERTY LINE      |
|  | SIG | SIGNAL WIRE LINE         |  | EASEMENT           |
|  | C   | CABLE LINE               |  | MAJOR CONTOUR LINE |
|  | FO  | FIBER OPTIC LINE         |  | MINOR CONTOUR LINE |
|  | LPS | LOW PRESSURE SEWER LINE  |  | WOOD FRAMED        |
|  | E   | ELECTRIC LINE            |  | CHAIN LINK FENCE   |
|  | OHU | OVERHEAD UTILITIES       |  | WOOD FENCE         |
|  | T   | TELEPHONE LINE           |  | FENCE              |
|  |     | SANITARY MANHOLE (SMH)   |  | CLEANOUT           |
|  |     | DRAINAGE MANHOLE (DMH)   |  | MONITORING WELL    |
|  |     | CATCHBASIN (CB)          |  | STONEWALL          |
|  |     | METAL POST/BOLLARD (BOL) |  |                    |



I CERTIFY THAT THE PROPERTY LINES SHOWN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

*Michael G. Wilmes* 11/11/20  
Michael G. Wilmes, L.S. 34322 Date

REVISIONS	
DATE	DESCRIPTION



(SEE SHEET 1 FOR SURVEY NOTES)

BOUNDARY AND TOPOGRAPHIC MAP OF  
**LANDS OF TOWN OF BOXFORD**  
**HARRY LEE COLE SCHOOL**  
TOWN OF BOXFORD

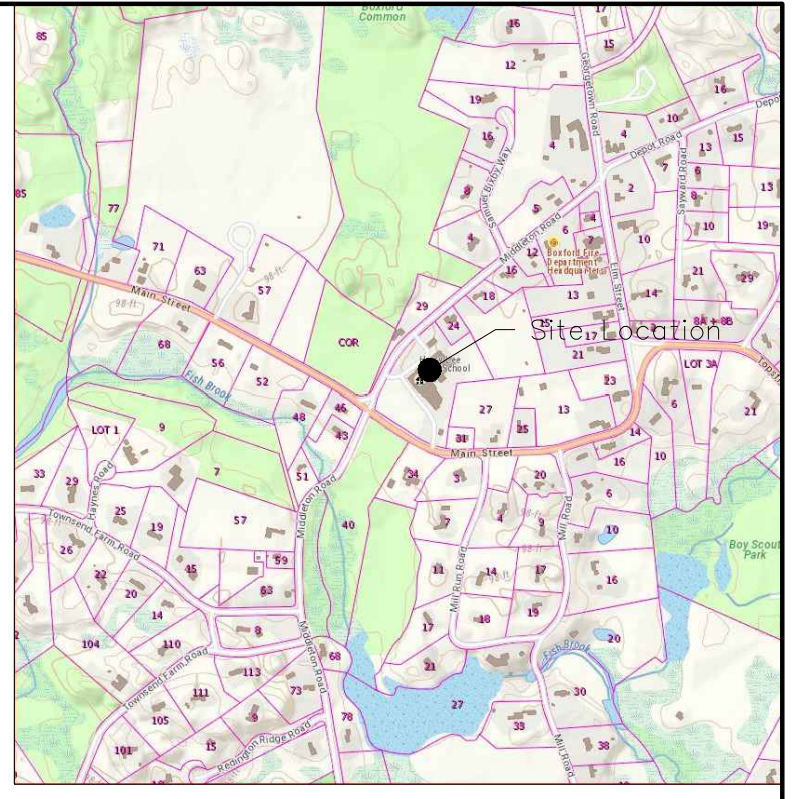
COUNTY OF ESSEX COMMONWEALTH OF MASSACHUSETTS

Weston & Sampson  
55 Walkers Brook Drive, Suite 100, Reading, MA 01867

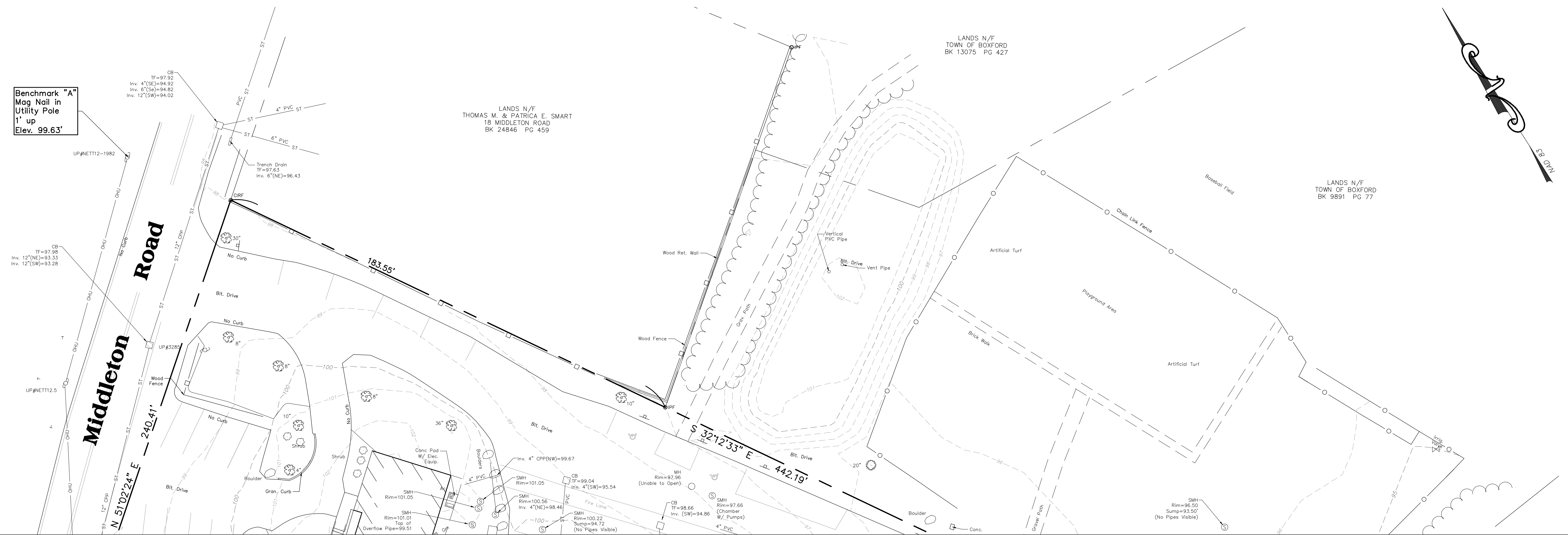
CAD FILE: ENG20-0870 Harry Lee Cole  
DATE: NOV. 11, 2020 SHEET 2 OF 3  
SCALE: 1"=20' DRAWING NO: C 003

**EXISTING CONDITIONS LEGEND**

- EDGE OF WOODS
- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB/BUSH
- SIGN
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- WATER SHUTOFF
- GAS VALVE
- WATER VALVE
- MONUMENT
- IRON PIN / IRON ROD
- HANDICAP SPACE
- HAND HOLE
- ELEC. METER
- GAS METER
- PROPERTY LINE
- EASEMENT
- 10' MAJOR CONTOUR LINE
- 5' MINOR CONTOUR LINE
- W/F WOOD FRAMED
- CHAIN LINK FENCE
- WOOD FENCE
- FENCE
- CLEANOUT
- MONITORING WELL
- STONEWALL
- ST STORM SEWER LINE
- S SANITARY SEWER LINE
- W WATER LINE
- G GAS LINE
- SIG SIGNAL WIRE LINE
- C CABLE LINE
- FO FIBER OPTIC LINE
- LPS LOW PRESSURE SEWER LINE
- E ELECTRIC LINE
- OHU OVERHEAD UTILITIES
- T TELEPHONE LINE
- S SANITARY MANHOLE (SMH)
- D DRAINAGE MANHOLE (DMH)
- CB CATCHBASIN (CB)
- M METAL POST/BOLLARD (BOL)
- E ELECTRIC MANHOLE (EHE)
- U UNKNOWN MANHOLE
- M TELEPHONE MANHOLE (MHT)
- V VENT PIPE
- CN COULD NOT OPEN
- F FLOW DIRECTION
- M MAG NAIL
- WLF #10B1 WETLAND FLAG (DELINEATED BY OTHERS)
- WET-TR WETLAND LINE
- EOW EDGE OF WATER (BY AERIAL IMAGE)
- EP ELECTRIC PEDESTAL
- GW GUY WIRE
- F.F. FINISHED FLOOR ELEVATION
- S.P. SPOT ELEVATION
- MB MAILBOX

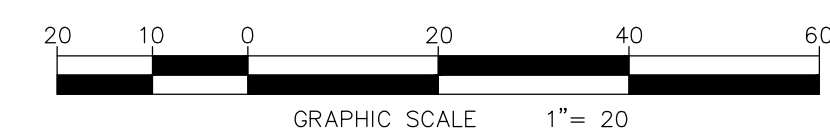


**LOCATION MAP**  
NOT TO SCALE



**Match Line**  
(See Sheet 2)

Benchmark "A"  
Mag Nail in  
Utility Pole  
1' up  
Elev. 99.63'



I CERTIFY THAT THE PROPERTY LINES SHOWN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

*Michael G. Wilmes* 11/11/20  
Michael G. Wilmes, L.S. 34322 Date

REVISIONS	
DATE	DESCRIPTION



(SEE SHEET 1 FOR SURVEY NOTES)

BOUNDARY AND TOPOGRAPHIC MAP OF  
**LANDS OF TOWN OF BOXFORD**  
**HARRY LEE COLE SCHOOL**  
TOWN OF BOXFORD

COUNTY OF ESSEX COMMONWEALTH OF MASSACHUSETTS

Weston & Sampson  
Weston & Sampson Engineers, Inc.  
55 Walkers Brook Drive, Suite 100, Reading, MA 01867

CAD FILE: ENG20-0870 Harry Lee Cole  
DATE: NOV. 11, 2020 SHEET 3 OF 3  
SCALE: 1"=20' DRAWING NO.: C 004

**SURVEY NOTES**

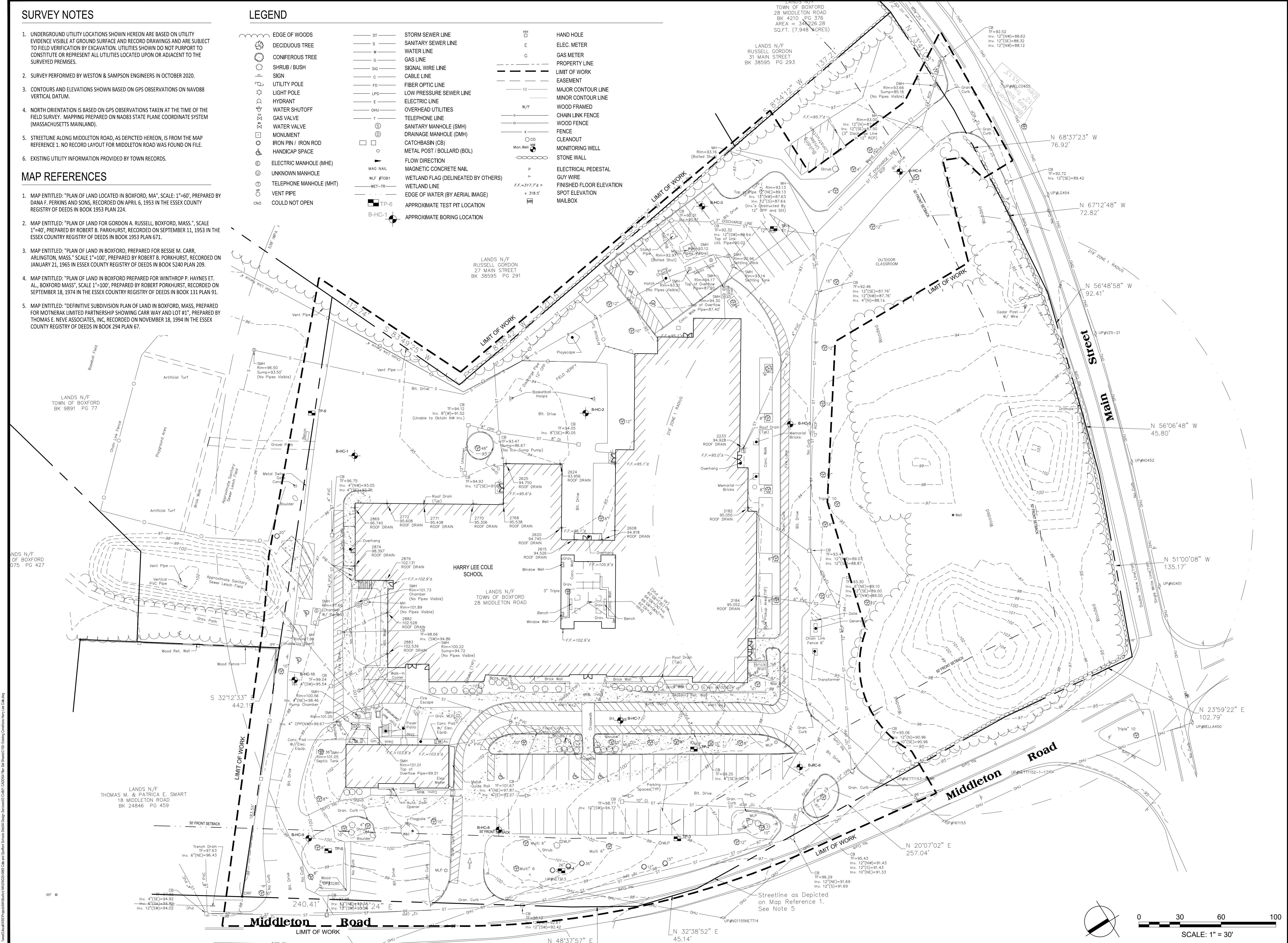
- UNDERGROUND UTILITY LOCATIONS SHOWN HEREON ARE BASED ON UTILITY EVIDENCE VISIBLE AT GROUND SURFACE AND RECORD DRAWINGS AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES.
- SURVEY PERFORMED BY WESTON & SAMPSON ENGINEERS IN OCTOBER 2020.
- CONTOURS AND ELEVATIONS SHOWN BASED ON GPS OBSERVATIONS ON NAVD88 VERTICAL DATUM.
- NORTH ORIENTATION IS BASED ON GPS OBSERVATIONS TAKEN AT THE TIME OF THE FIELD SURVEY. MAPPING PREPARED ON NAD83 STATE PLANE COORDINATE SYSTEM (MASSACHUSETTS MAINLAND).
- STREETLINE ALONG MIDDLETON ROAD, AS DEPICTED HEREON, IS FROM THE MAP REFERENCE 1. NO RECORD LAYOUT FOR MIDDLETON ROAD WAS FOUND ON FILE.
- EXISTING UTILITY INFORMATION PROVIDED BY TOWN RECORDS.

**MAP REFERENCES**

- MAP ENTITLED: "PLAN OF LAND LOCATED IN BOXFORD, MA", SCALE: 1"=60', PREPARED BY DANA F. PERKINS AND SONS, RECORDED ON APRIL 6, 1953 IN THE ESSEX COUNTY REGISTRY OF DEEDS IN BOOK 1953 PLAN 224.
- MAP ENTITLED: "PLAN OF LAND FOR GORDON A. RUSSELL, BOXFORD, MASS.", SCALE 1"=40', PREPARED BY ROBERT B. PARKHURST, RECORDED ON SEPTEMBER 11, 1953 IN THE ESSEX COUNTY REGISTRY OF DEEDS IN BOOK 1953 PLAN 671.
- MAP ENTITLED: "PLAN OF LAND IN BOXFORD, PREPARED FOR BESSIE M. CARR, ARLINGTON, MASS.", SCALE 1"=100', PREPARED BY ROBERT B. PARKHURST, RECORDED ON JANUARY 21, 1965 IN ESSEX COUNTY REGISTRY OF DEEDS IN BOOK 5240 PLAN 209.
- MAP ENTITLED: "PLAN OF LAND IN BOXFORD PREPARED FOR WINTHROP P. HAYNES ET. AL., BOXFORD MASS", SCALE 1"=100', PREPARED BY ROBERT PARKHURST, RECORDED ON SEPTEMBER 18, 1974 IN THE ESSEX COUNTY REGISTRY OF DEEDS IN BOOK 131 PLAN 91.
- MAP ENTITLED: "DEFINITIVE SUBDIVISION PLAN OF LAND IN BOXFORD, MASS, PREPARED FOR MOTNERAK LIMITED PARTNERSHIP SHOWING CARR WAY AND LOT #1", PREPARED BY THOMAS E. NEVE ASSOCIATES, INC. RECORDED ON NOVEMBER 18, 1994 IN THE ESSEX COUNTY REGISTRY OF DEEDS IN BOOK 294 PLAN 67.

**LEGEND**

	EDGE OF WOODS		STORM SEWER LINE		HAND HOLE
	DECIDUOUS TREE		SANITARY SEWER LINE		ELEC. METER
	CONIFEROUS TREE		WATER LINE		GAS METER
	SHRUB / BUSH		GAS LINE		PROPERTY LINE
	SIGN		SIGNAL WIRE LINE		LIMIT OF WORK
	UTILITY POLE		CABLE LINE		EASEMENT
	LIGHT POLE		FIBER OPTIC LINE		MAJOR CONTOUR LINE
	HYDRANT		LOW PRESSURE SEWER LINE		MINOR CONTOUR LINE
	WATER SHUTOFF		ELECTRIC LINE		WOOD FRAMED
	GAS VALVE		OVERHEAD UTILITIES		CHAIN LINK FENCE
	WATER VALVE		TELEPHONE LINE		WOOD FENCE
	MONUMENT		SANITARY MANHOLE (SMH)		FENCE
	IRON PIN / IRON ROD		DRAINAGE MANHOLE (DMH)		CLEANOUT
	HANDICAP SPACE		CATCHBASIN (CB)		MONITORING WELL
	ELECTRIC MANHOLE (MHE)		METAL POST / BOLLARD (BOL)		STONE WALL
	UNKNOWN MANHOLE		FLOW DIRECTION		ELECTRICAL PEDESTAL
	TELEPHONE MANHOLE (MHT)		MAGNETIC CONCRETE NAIL		GUY WIRE
	VENT PIPE		WETLAND FLAG (DELINEATED BY OTHERS)		FINISHED FLOOR ELEVATION
	COULD NOT OPEN		WET LINE		SPOT ELEVATION
			EDGE OF WATER (BY AERIAL IMAGE)		MAILBOX
			APPROXIMATE TEST PIT LOCATION		
			APPROXIMATE BORING LOCATION		



Project:  
**BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT**

HARRY LEE COLE SCHOOL  
 26 AND 28 MIDDLETON ROAD  
 BOXFORD, MA 01921

**Weston & Sampson**

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Consultants:


Revisions:

No.	Date	Description
1	08/24/21	PER REVISED LAYOUT
2	11/01/21	PER PEER REVIEW

Scale: AS SHOWN

Date: MAY 13, 2021

Drawn By: EJA

Reviewed By: CB

Approved By: JIP

W&S Project No.: ENG20-0865  
 W&S File No.:

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Drawing Title:

**EXISTING CONDITIONS PLAN**

Sheet Number:

**C100**

Scale: 1" = 30'

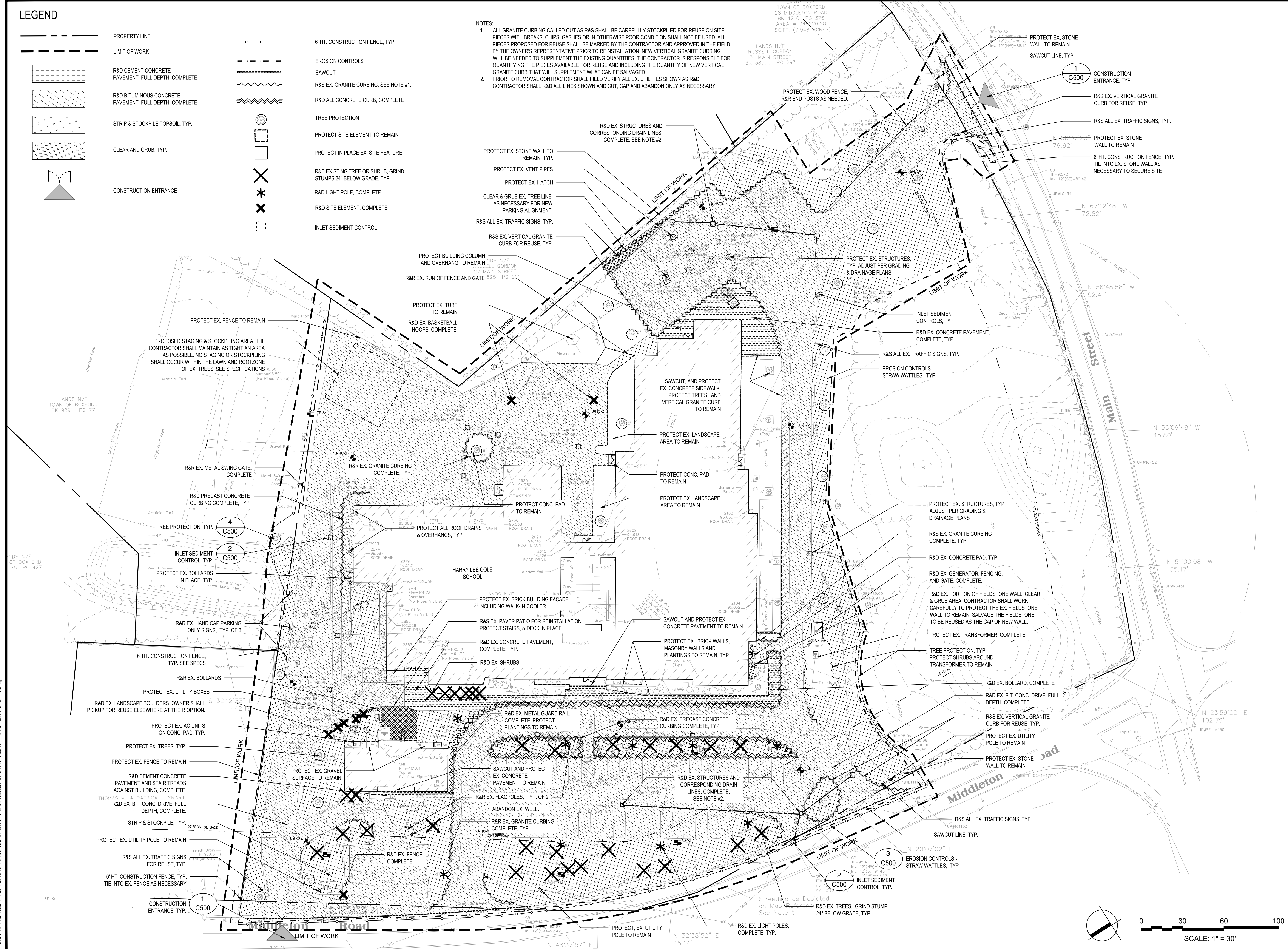
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**LEGEND**

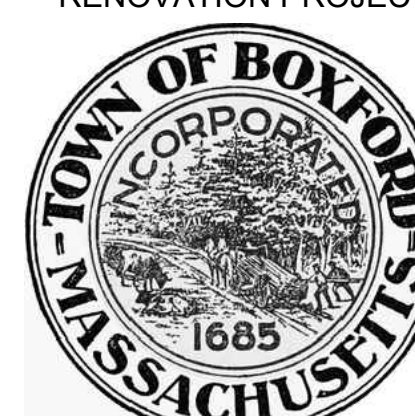
- PROPERTY LINE
- LIMIT OF WORK
- R&D CEMENT CONCRETE PAVEMENT, FULL DEPTH, COMPLETE
- R&D BITUMINOUS CONCRETE PAVEMENT, FULL DEPTH, COMPLETE
- STRIP & STOCKPILE TOPSOIL, TYP.
- CLEAR AND GRUB, TYP.
- CONSTRUCTION ENTRANCE
- 6' HT. CONSTRUCTION FENCE, TYP.
- EROSION CONTROLS
- SAWCUT
- R&S EX. GRANITE CURBING, SEE NOTE #1.
- R&D ALL CONCRETE CURB, COMPLETE
- TREE PROTECTION
- PROTECT SITE ELEMENT TO REMAIN
- PROTECT IN PLACE EX. SITE FEATURE
- R&D EXISTING TREE OR SHRUB, GRIND STUMPS 24" BELOW GRADE, TYP.
- R&D LIGHT POLE, COMPLETE
- R&D SITE ELEMENT, COMPLETE
- INLET SEDIMENT CONTROL

**NOTES:**

1. ALL GRANITE CURBING CALLED OUT AS R&S SHALL BE CAREFULLY STOCKPILED FOR REUSE ON SITE. PIECES WITH BREAKS, CHIPS, GASHES OR IN OTHERWISE POOR CONDITION SHALL NOT BE USED. ALL PIECES PROPOSED FOR REUSE SHALL BE MARKED BY THE CONTRACTOR AND APPROVED IN THE FIELD BY THE OWNER'S REPRESENTATIVE PRIOR TO REINSTALLATION. NEW VERTICAL GRANITE CURBING WILL BE NEEDED TO SUPPLEMENT THE EXISTING QUANTITIES. THE CONTRACTOR IS RESPONSIBLE FOR QUANTIFYING THE PIECES AVAILABLE FOR REUSE AND INCLUDING THE QUANTITY OF NEW VERTICAL GRANITE CURB THAT WILL SUPPLEMENT WHAT CAN BE SALVAGED.
2. PRIOR TO REMOVAL CONTRACTOR SHALL FIELD VERIFY ALL EX. UTILITIES SHOWN AS R&D. CONTRACTOR SHALL R&D ALL LINES SHOWN AND CUT, CAP AND ABANDON ONLY AS NECESSARY.



Project: **BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT**



**HARRY LEE COLE SCHOOL**  
26 AND 28 MIDDLETON ROAD  
BOXFORD, MA 01921

**Weston & Sampson**

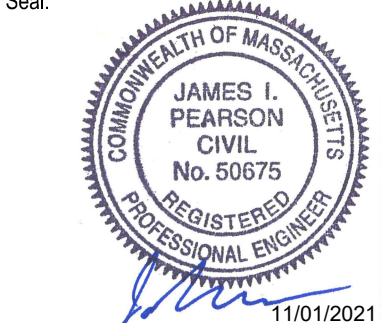
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No.	Date	Description
1	08/24/21	PER REVISED LAYOUT
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Drawn By: EJA

Reviewed By: CB

Approved By: JIP

W&S Project No.: ENG20-0865  
W&S File No.:

Drawing Title:

**SITE PREPARATION & EROSION & SEDIMENT CONTROL PLAN**

Sheet Number:

**C110**

Scale: 1" = 30'

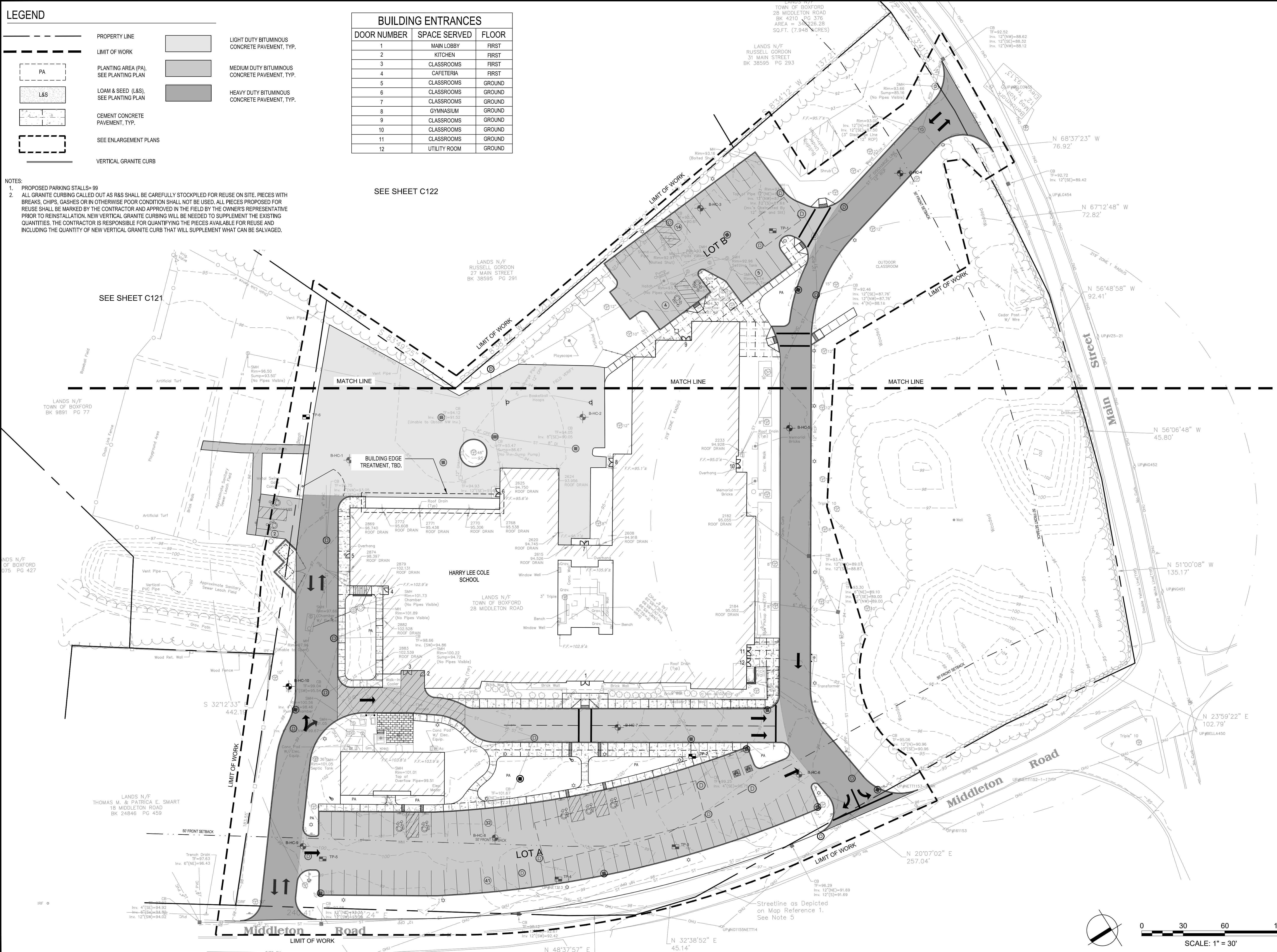
**LEGEND**

	PROPERTY LINE		LIGHT DUTY BITUMINOUS CONCRETE PAVEMENT, TYP.
	LIMIT OF WORK		MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT, TYP.
	PLANTING AREA (PA), SEE PLANTING PLAN		HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT, TYP.
	LOAM & SEED (L&S), SEE PLANTING PLAN		
	CEMENT CONCRETE PAVEMENT, TYP.		
	SEE ENLARGEMENT PLANS		
	VERTICAL GRANITE CURB		

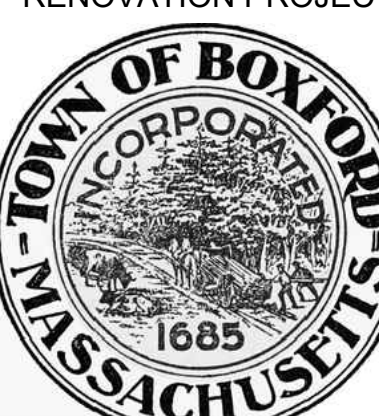
BUILDING ENTRANCES		
DOOR NUMBER	SPACE SERVED	FLOOR
1	MAIN LOBBY	FIRST
2	KITCHEN	FIRST
3	CLASSROOMS	FIRST
4	CAFETERIA	FIRST
5	CLASSROOMS	GROUND
6	CLASSROOMS	GROUND
7	CLASSROOMS	GROUND
8	GYMNASIUM	GROUND
9	CLASSROOMS	GROUND
10	CLASSROOMS	GROUND
11	CLASSROOMS	GROUND
12	UTILITY ROOM	GROUND

- NOTES:**
- PROPOSED PARKING STALLS= 99
  - ALL GRANITE CURBING CALLED OUT AS R&S SHALL BE CAREFULLY STOCKPILED FOR REUSE ON SITE. PIECES WITH BREAKS, CHIPS, GASHES OR IN OTHERWISE POOR CONDITION SHALL NOT BE USED. ALL PIECES PROPOSED FOR REUSE SHALL BE MARKED BY THE CONTRACTOR AND APPROVED IN THE FIELD BY THE OWNER'S REPRESENTATIVE PRIOR TO REINSTALLATION. NEW VERTICAL GRANITE CURBING WILL BE NEEDED TO SUPPLEMENT THE EXISTING QUANTITIES. THE CONTRACTOR IS RESPONSIBLE FOR QUANTIFYING THE PIECES AVAILABLE FOR REUSE AND INCLUDING THE QUANTITY OF NEW VERTICAL GRANITE CURB THAT WILL SUPPLEMENT WHAT CAN BE SALVAGED.

SEE SHEET C122



Project: **BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT**



TOWN OF BOXFORD  
BOXFORD, MA 01921

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No.	Date	Description
1	08/24/21	PER REVISED LAYOUT
2	11/01/21	PER PEER REVIEW

Seal:



JAMES L. PEARSON  
CIVIL  
No. 50675  
11/01/2021

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Scale:  
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Drawn By:  
Reviewed By:  
Approved By:

W&S Project No.: ENG20-0865  
W&S File No.:

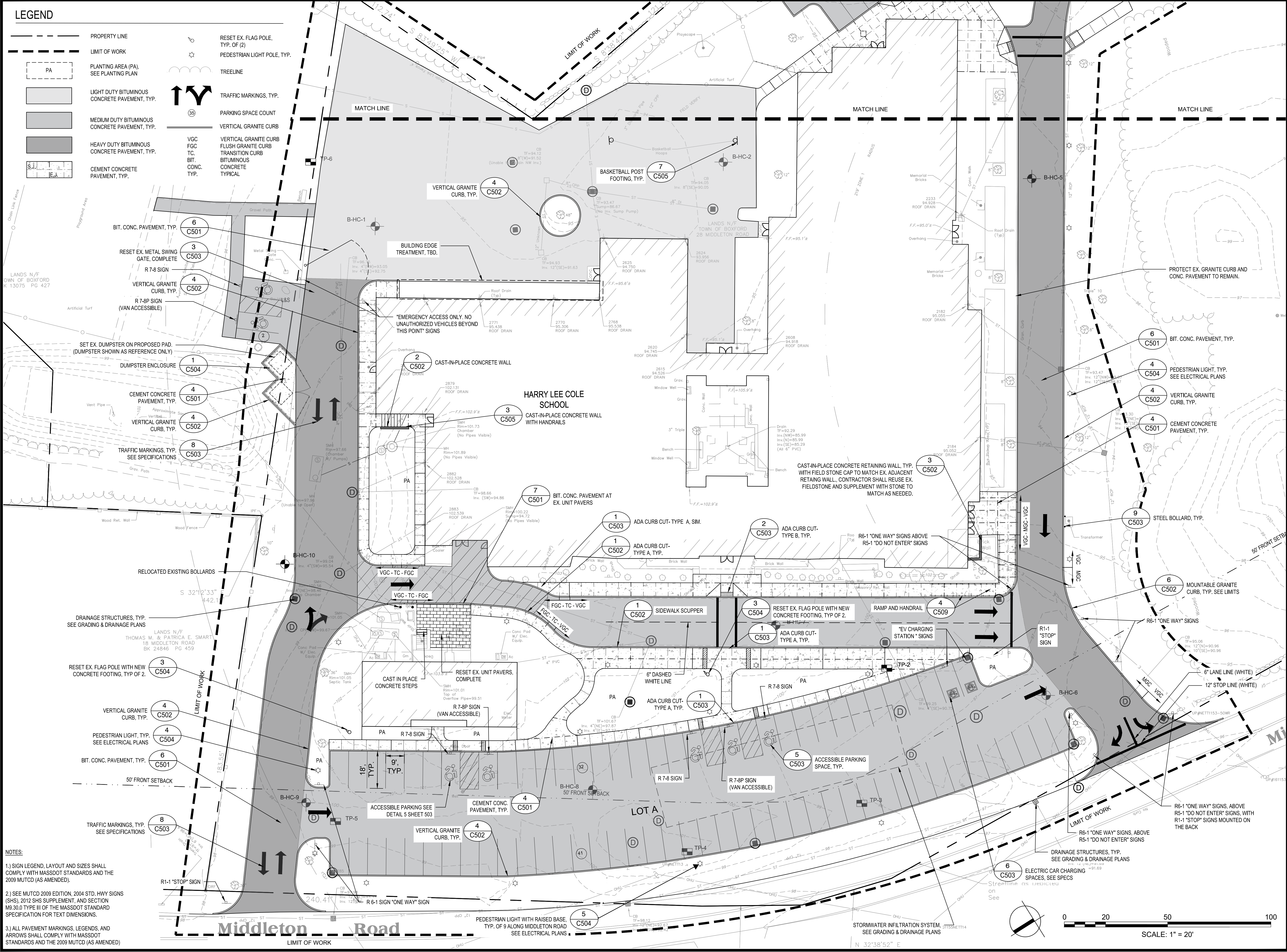
**OVERALL MATERIALS & LAYOUT PLAN**

Sheet Number:  
**C120**



**LEGEND**

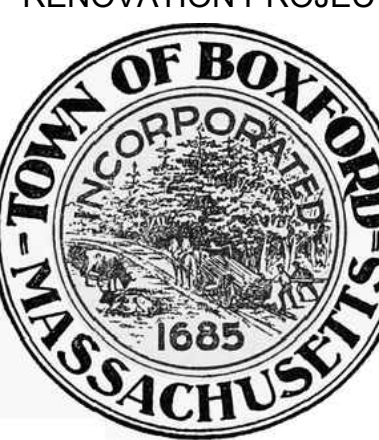
- PROPERTY LINE
- - - LIMIT OF WORK
- PA PLANTING AREA (PA), SEE PLANTING PLAN
- Light Gray Box MEDIUM DUTY BITUMINOUS CONCRETE PAVEMENT, TYP.
- Dark Gray Box HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT, TYP.
- White Box with Dotted Pattern CEMENT CONCRETE PAVEMENT, TYP.
- Star Symbol RESET EX. FLAG POLE, TYP. OF (2)
- Circle with Star Symbol PEDESTRIAN LIGHT POLE, TYP.
- Wavy Line Symbol TREELINE
- Arrow Symbol TRAFFIC MARKINGS, TYP.
- Circle with '30' Symbol PARKING SPACE COUNT
- Vertical Line Symbol VERTICAL GRANITE CURB
- Vertical Line with Dotted Pattern Symbol FLUSH GRANITE CURB
- Vertical Line with Dotted Pattern and Arrow Symbol TRANSITION CURB
- Vertical Line with Dotted Pattern and Arrow Symbol BITUMINOUS CONCRETE TYPICAL



**NOTES:**

- 1.) SIGN LEGEND, LAYOUT AND SIZES SHALL COMPLY WITH MASSDOT STANDARDS AND THE 2009 MUTCD (AS AMENDED).
- 2.) SEE MUTCD 2009 EDITION, 2004 STD. HWY SIGNS (SHS), 2012 SHS SUPPLEMENT, AND SECTION M9.30.0 TYPE III OF THE MASSDOT STANDARD SPECIFICATION FOR TEXT DIMENSIONS.
- 3.) ALL PAVEMENT MARKINGS, LEGENDS, AND ARROWS SHALL COMPLY WITH MASSDOT STANDARDS AND THE 2009 MUTCD (AS AMENDED)

Project: **BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT**



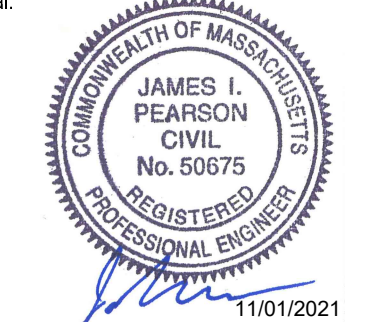
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2	11/01/21	PER PEER REVIEW

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Drawn By: \_\_\_\_\_

Reviewed By: \_\_\_\_\_

Approved By: \_\_\_\_\_

W/S Project No.: ENG20-0865  
W/S File No.: \_\_\_\_\_

Drawing Title: **MATERIALS & LAYOUT ENLARGEMENT PLAN**

Sheet Number: **C121**

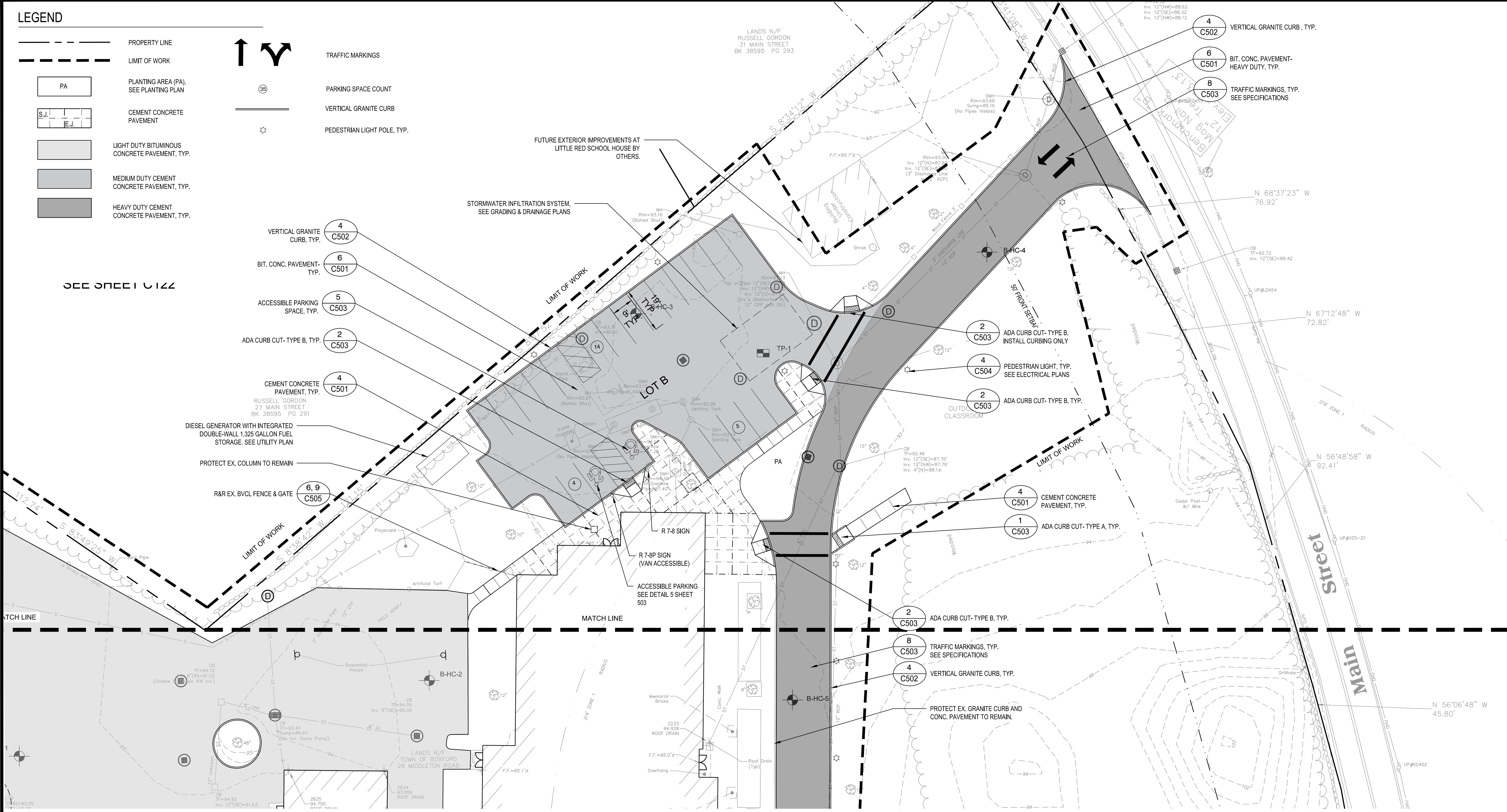
Scale: 1" = 20'

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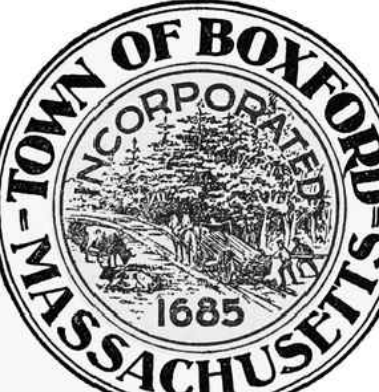
**LEGEND**

- PROPERTY LINE
- LIMIT OF WORK
- PLANTING AREA (PA), SEE PLANTING PLAN
- CEMENT CONCRETE PAVEMENT
- LIGHT DUTY BITUMINOUS CONCRETE PAVEMENT, TYP.
- MEDIUM DUTY CEMENT CONCRETE PAVEMENT, TYP.
- HEAVY DUTY CEMENT CONCRETE PAVEMENT, TYP.
- TRAFFIC MARKINGS
- PARKING SPACE COUNT
- VERTICAL GRANITE CURB
- PEDESTRIAN LIGHT POLE, TYP.

SEE SHEET C122



Project:  
**BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT**



TOWN OF BOXFORD  
 BOXFORD, MA 01921

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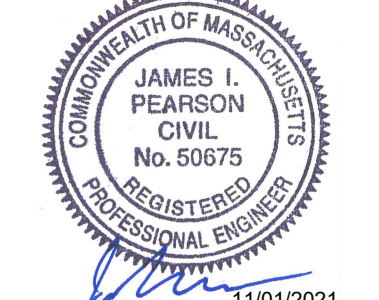
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1	09/24/21	PER REVISED LAYOUT
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JAMES I. PEARSON  
 CIVIL  
 No. 50675  
 REGISTERED PROFESSIONAL ENGINEER  
 11/01/2021

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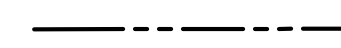



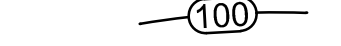
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**MATERIALS & LAYOUT ENLARGEMENT PLAN**

Sheet Number:

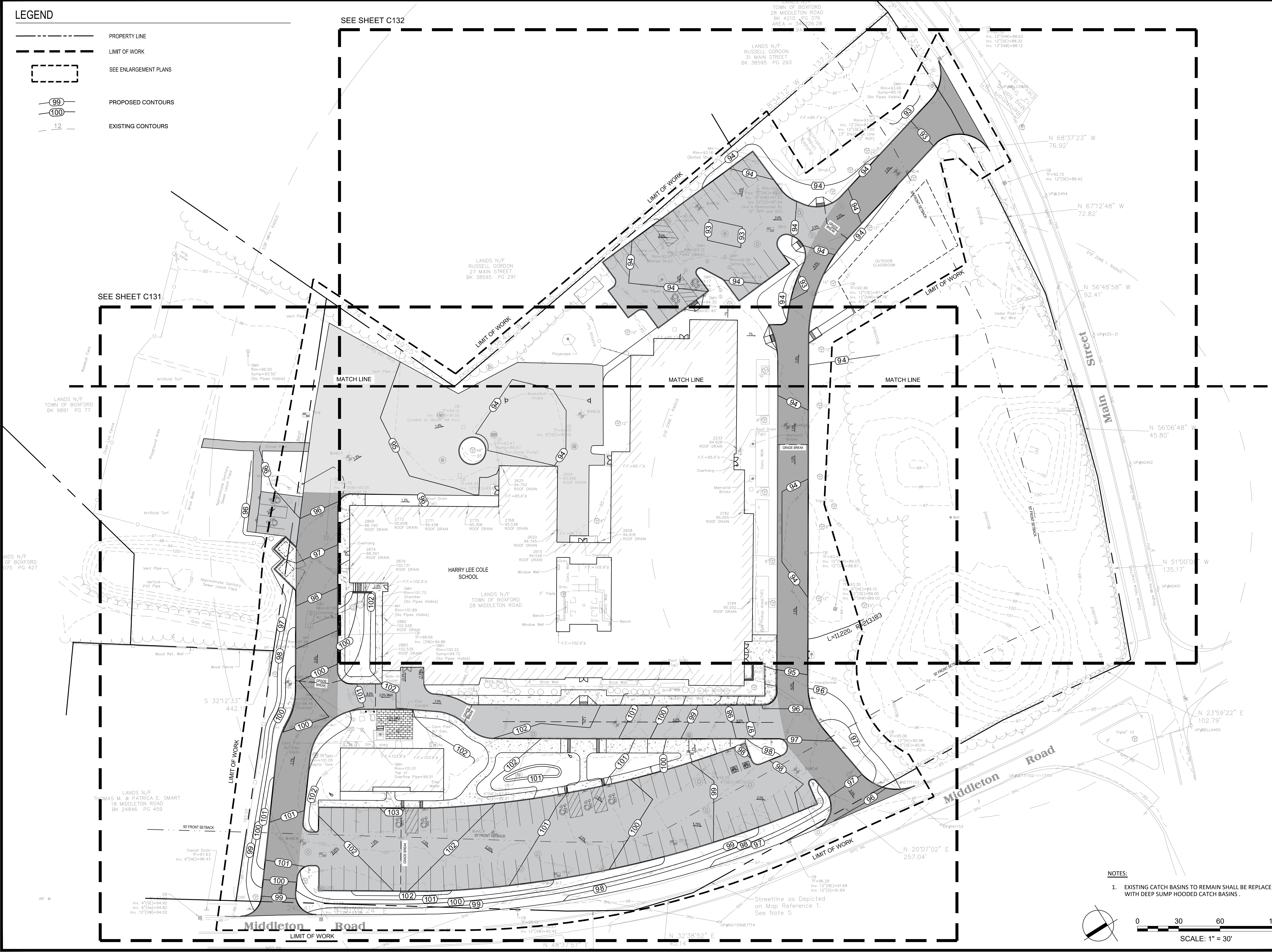
**C122**

LEGEND

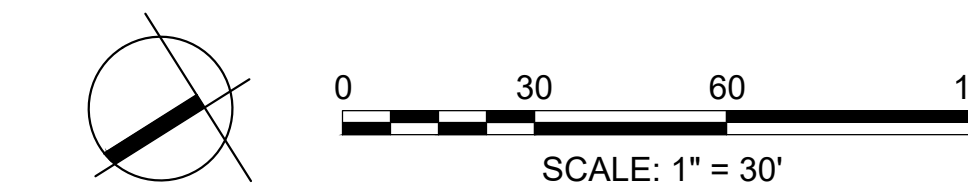
-  PROPERTY LINE
-  LIMIT OF WORK
-  SEE ENLARGEMENT PLANS
-  PROPOSED CONTOURS
-  EXISTING CONTOURS

SEE SHEET C132

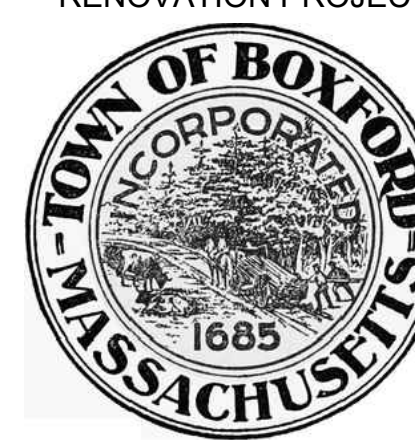
SEE SHEET C131



- NOTES:
- EXISTING CATCH BASINS TO REMAIN SHALL BE REPLACED WITH DEEP SUMP HOODED CATCH BASINS.



Project: BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT



HARRY LEE COLE SCHOOL  
26 AND 28 MIDDLETON ROAD  
BOXFORD, MA 01921

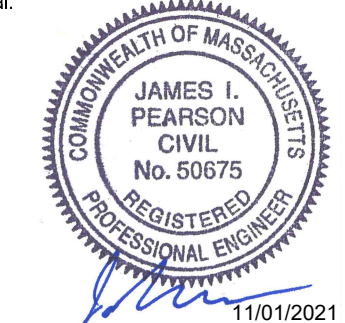
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2	11/01/21	PER PEER REVIEW

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Date: MAY 13, 2021  
Drawn By: EJA  
Reviewed By: CB  
Approved By: JIP

W&S Project No.: ENG20-0865  
W&S File No.:

Drawing Title:

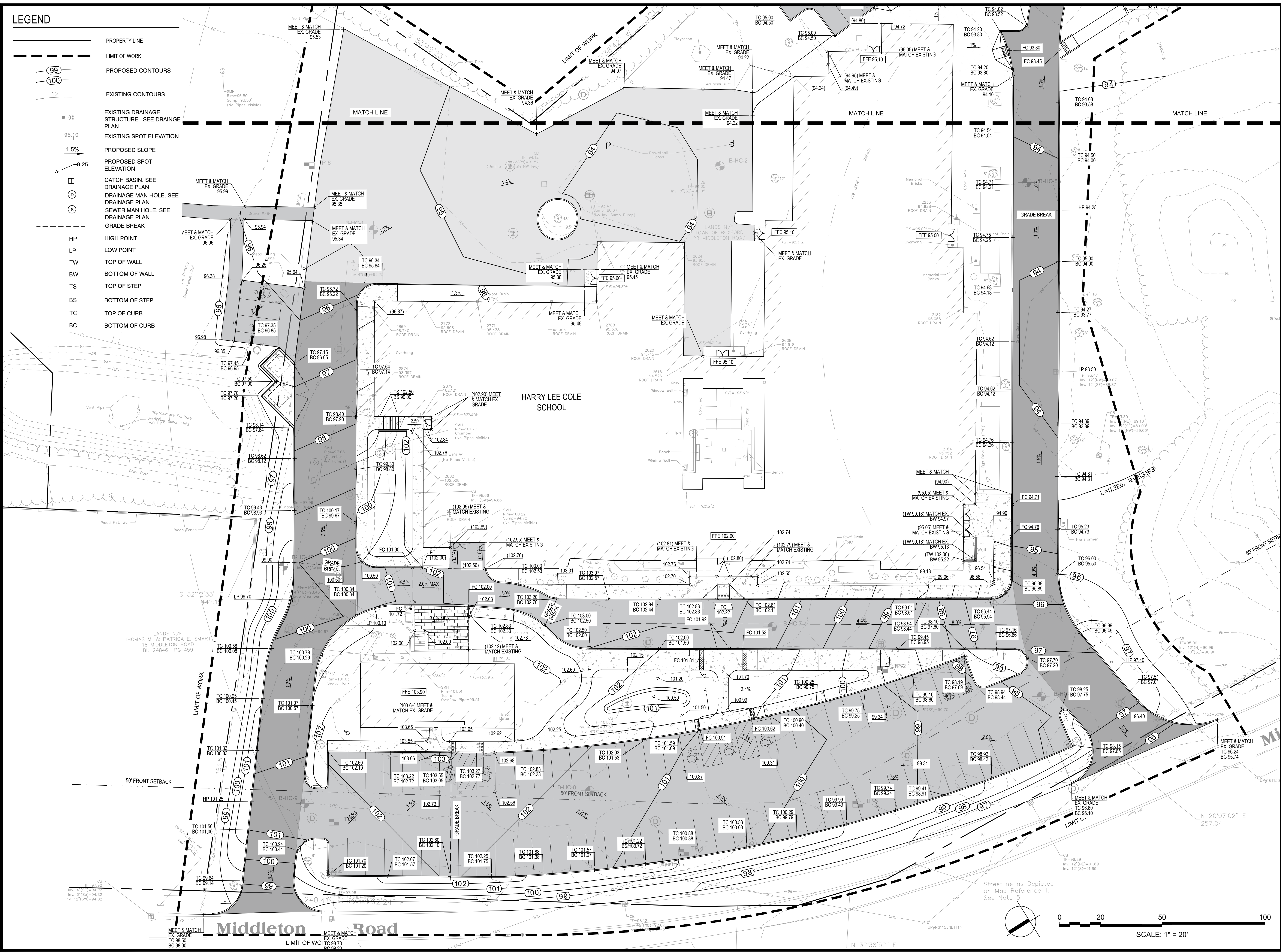
**OVERALL  
GRADING PLAN**

Sheet Number:

**C130**

**LEGEND**

	PROPERTY LINE
	LIMIT OF WORK
	PROPOSED CONTOURS
	EXISTING CONTOURS
	EXISTING DRAINAGE STRUCTURE. SEE DRAINAGE PLAN
	EXISTING SPOT ELEVATION
	PROPOSED SLOPE
	PROPOSED SPOT ELEVATION
	CATCH BASIN. SEE DRAINAGE PLAN
	DRAINAGE MAN HOLE. SEE DRAINAGE PLAN
	SEWER MAN HOLE. SEE DRAINAGE PLAN
	GRADE BREAK
	HIGH POINT
	LOW POINT
	TOP OF WALL
	BOTTOM OF WALL
	TOP OF STEP
	BOTTOM OF STEP
	TOP OF CURB
	BOTTOM OF CURB



Project: **BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT**

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 Date: MAY 13, 2021  
 Drawn By: CTK  
 Reviewed By: JIP  
 Approved By: JRF  
 W&S Project No.: ENG20-0865  
 W&S File No.:

Drawing Title:  
**GRADING ENLARGEMENT PLAN**

Sheet Number:  
**C131**

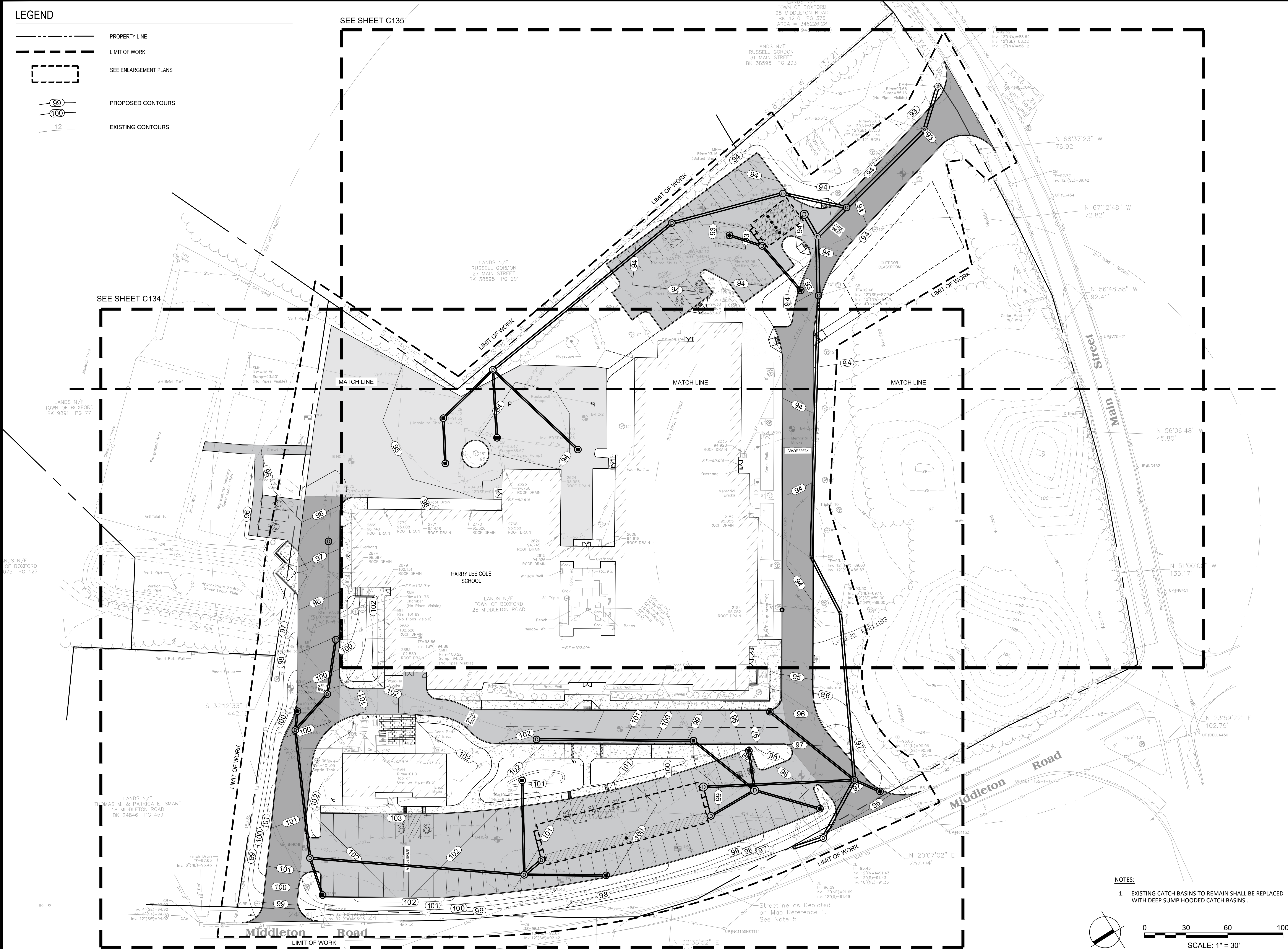


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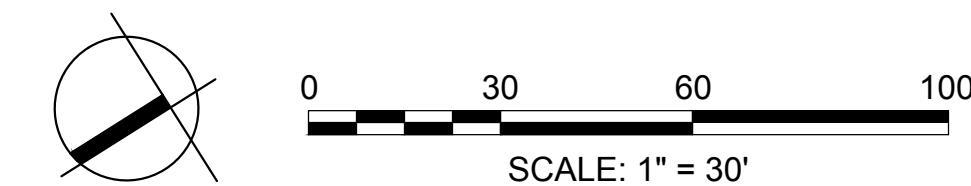
- PROPERTY LINE
- LIMIT OF WORK
- SEE ENLARGEMENT PLANS
- PROPOSED CONTOURS
- EXISTING CONTOURS

SEE SHEET C135

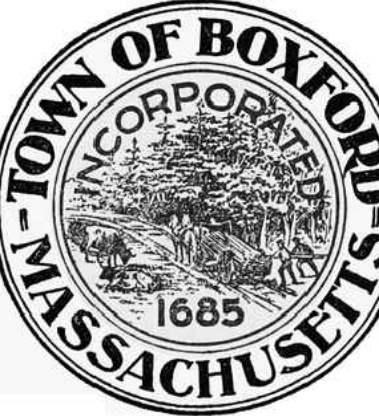
SEE SHEET C134



- NOTES:**
- EXISTING CATCH BASINS TO REMAIN SHALL BE REPLACED WITH DEEP SUMP HOODED CATCH BASINS.



Project:  
**BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT**



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 BOXFORD, MA 01921


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 W&S File No.:

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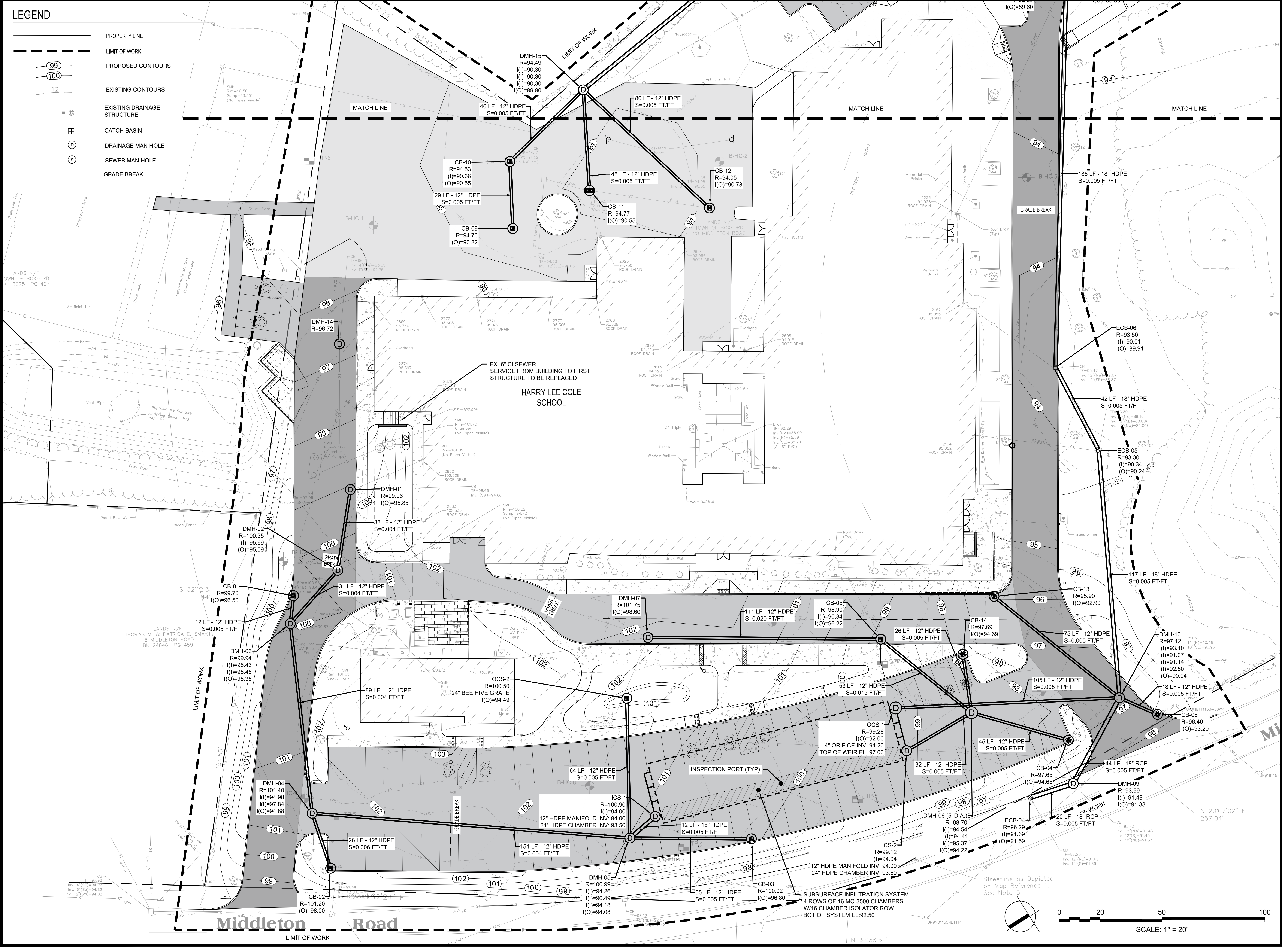
**DRAINAGE PLAN**

Sheet Number:

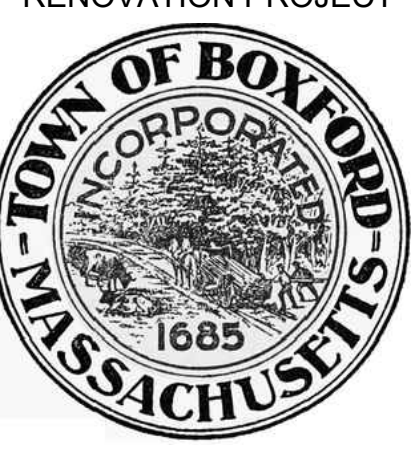
**C133**

**LEGEND**

- PROPERTY LINE
- - - - - LIMIT OF WORK
- ⑨⑨     PROPOSED CONTOURS
- ⑩⑩     EXISTING CONTOURS
- ⑫     EXISTING DRAINAGE STRUCTURE
- CATCH BASIN
- DRAINAGE MAN HOLE
- ⊙     SEWER MAN HOLE
- - - - - GRADE BREAK



Project: **BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT**



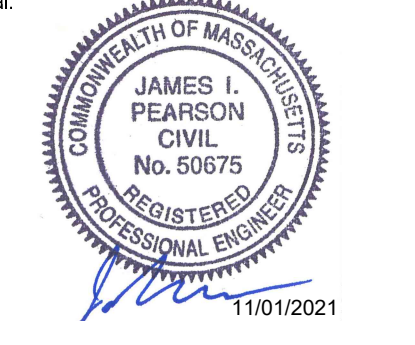
TOWN OF BOXFORD  
BOXFORD, MA 01921

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Consultants:


Revisions:

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1	08/24/21	PER REVISED LAYOUT
2	11/01/21	PER PEER REVIEW

Seal: 

Issued For:

Scale: AS NOTED

Date:

Drawn By: **CTK**

Reviewed By: **JJP**

Approved By: **JRF**

W&S Project No.: **ENG20-0865**

W&S File No.:

Drawing Title:

**DRAINAGE ENLARGEMENT PLAN**

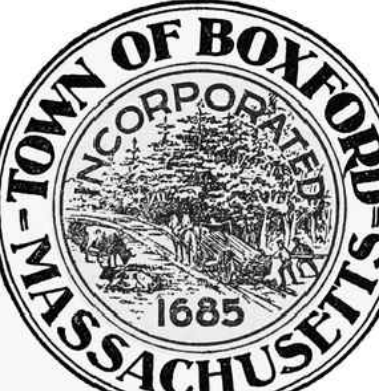
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**C134**

**LEGEND**

- PROPERTY LINE
- LIMIT OF WORK
- PROPOSED CONTOURS
- EXISTING CONTOURS
- EXISTING DRAINAGE STRUCTURE
- CATCH BASIN
- DRAINAGE MAN HOLE
- SEWER MAN HOLE
- GRADE BREAK

Project: BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT



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JAMES I. PEARSON  
CIVIL  
No. 50675  
REGISTERED PROFESSIONAL ENGINEER  
11/01/2021

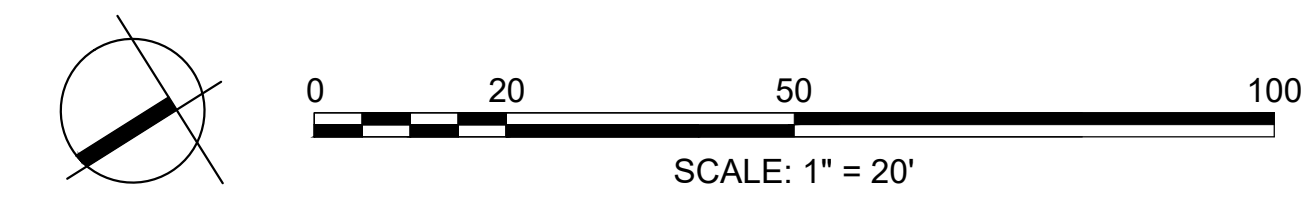
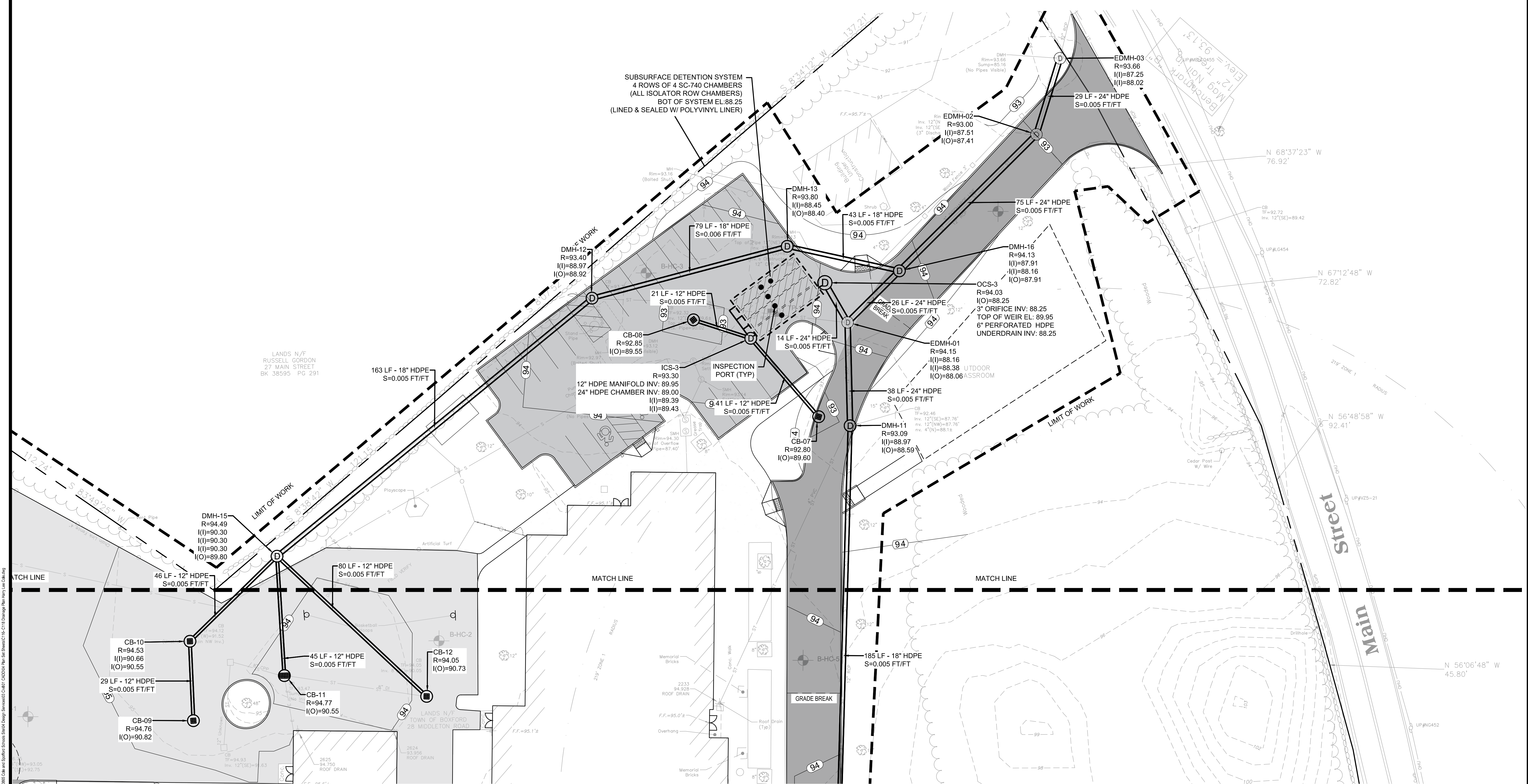
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Date:  
Drawn By: CTK  
Reviewed By: JIP  
Approved By: JRF

W&S Project No.: ENG20-0865  
W&S File No.:

DRAINAGE ENLARGEMENT PLAN

Sheet Number:  
**C135**



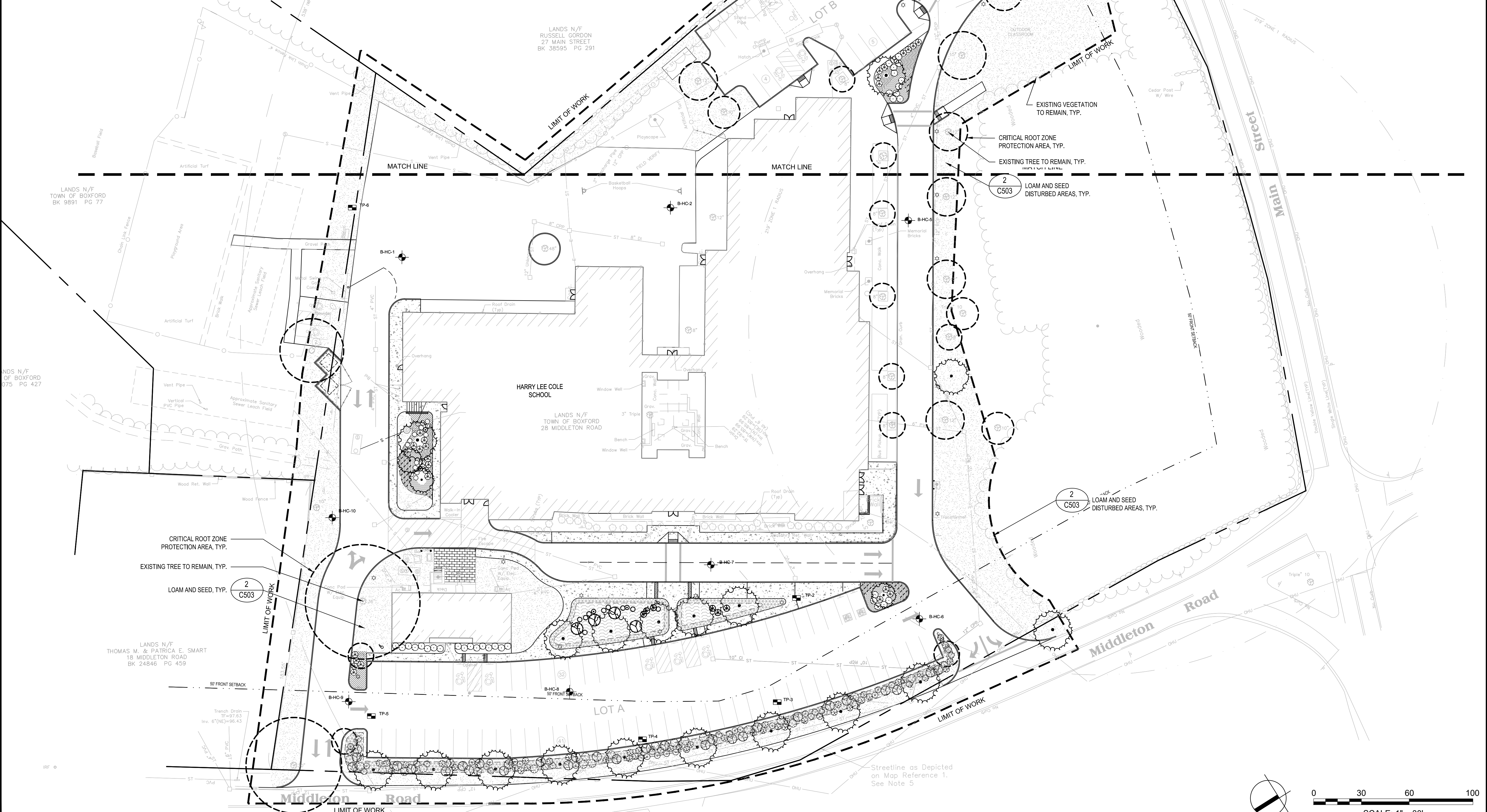
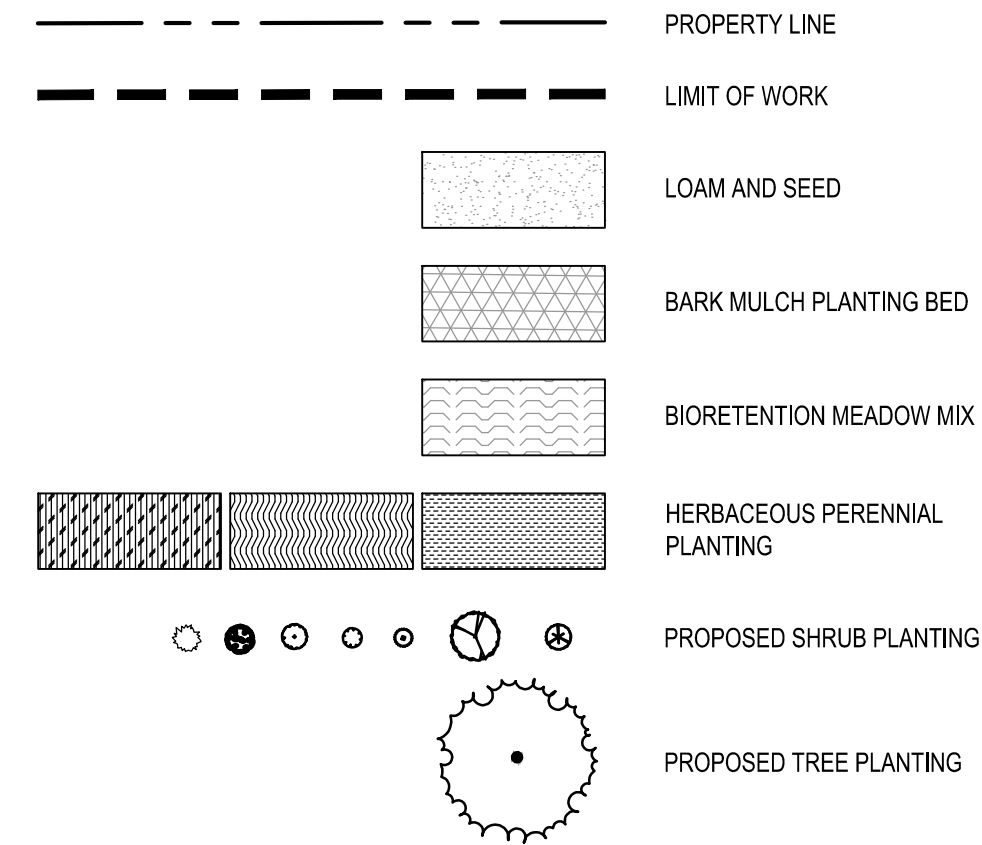
Rev. 1.8 Date: 10/24/2019



**OVERALL PLANTING SCHEDULE**

QUANTITY	KEY	BOTANIC NAME	COMMON NAME	SIZE	NOTES
<b>TREES</b>					
1	AR	ACER RUBRUM	RED MAPLE	2-2.5" CAL.	---
6	AS	ACER SACCHARUM	SUGAR MAPLE	2-2.5" CAL.	---
3	AC	AMELANCHIER CANADENSIS	SERVICEBERRY	10-12" HEIGHT	MULTI-STEM
8	OY	OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM	2-2.5" CAL.	---
3	UP	ULMUS AMERICANA 'VALLEY FORGE'	AMERICAN ELM	2-2.5" CAL.	---
<b>SHRUBS</b>					
34	AMI	ARONIA MELANOCARPA 'IROQUOIS BEAUTY'	BLACK CHOKEBERRY	#3 CONTAINER	3-4' HEIGHT MIN.
17	CA	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	10 GALLON	3-4' HEIGHT MIN.
29	IG	ILEX GLABRA	INKBERRY	10 GALLON	3-4' HEIGHT MIN.
39	IVB	ILEX VERTICILLATA 'BERRY POPPINS'	WINTERBERRY HOLLY	B&B, 3-4' HT.	3-4' HEIGHT, FEMALE CULTIVAR
7	IVM	ILEX VERTICILLATA 'MR. POPPINS'	WINTERBERRY HOLLY	B&B, 3-4' HT.	3-4' HEIGHT, MALE CULTIVAR
23	MP	MYRICA PENNSYLVANICA	BAYBERRY	B&B, 3-4' HT.	3-4' HEIGHT MIN.
32	VDB	VIBURNUM DENTATUM 'BLUE MUFFIN'	ARROWWOOD VIBURNUM	#3 CONTAINER	3-4' HEIGHT MIN.
<b>PERENNIALS / GRASSES / SEDGES</b>					
161	AN	ASTER NOVAE-ANGLIAE 'PURPLE DOME'	NEW ENGLAND ASTER	#1 CONTAINER	SPACE 18" O.C.
370	CP	CAREX PENNSYLVANICA	OAK SEDGE	#1 CONTAINER	SPACE 12" O.C.
373	SS	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	LITTLE BLUESTEM	#1 CONTAINER	SPACE 18" O.C.
<b>BIORETENTION MEADOW MIX</b>					
53	--	CAREX COMOSA	COSMOS SEDGE	--	PLUG, SPACE 12" O.C.
159	--	CAREX SCOPARIA	BLUNT BROOM SEDGE	--	PLUG, SPACE 12" O.C.
521	--	DICHANTHELIUM CLANDESTINUM	DEERTONGUE GRASS	--	PLUG, SPACE 12" O.C.
32	--	JUNCUS EFFUSUS	SLENDER RUSH	--	PLUG, SPACE 12" O.C.
31	--	JUNCUS TENUIS	SOFT RUSH	--	PLUG, SPACE 12" O.C.
66	--	PANICUM VIRGATUM	SWITCHGRASS	--	PLUG, SPACE 24" O.C.

**LEGEND**



Project:  
**BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT**

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Seal:

Issued For:

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Drawn By:

Reviewed By:

Approved By:

W&S Project No.: ENG20-0865  
 W&S File No.:

Drawing Title:

**OVERALL PLANTING PLAN**



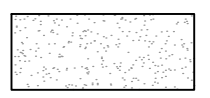
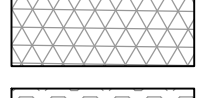
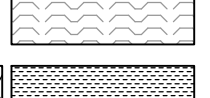
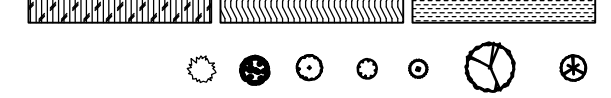


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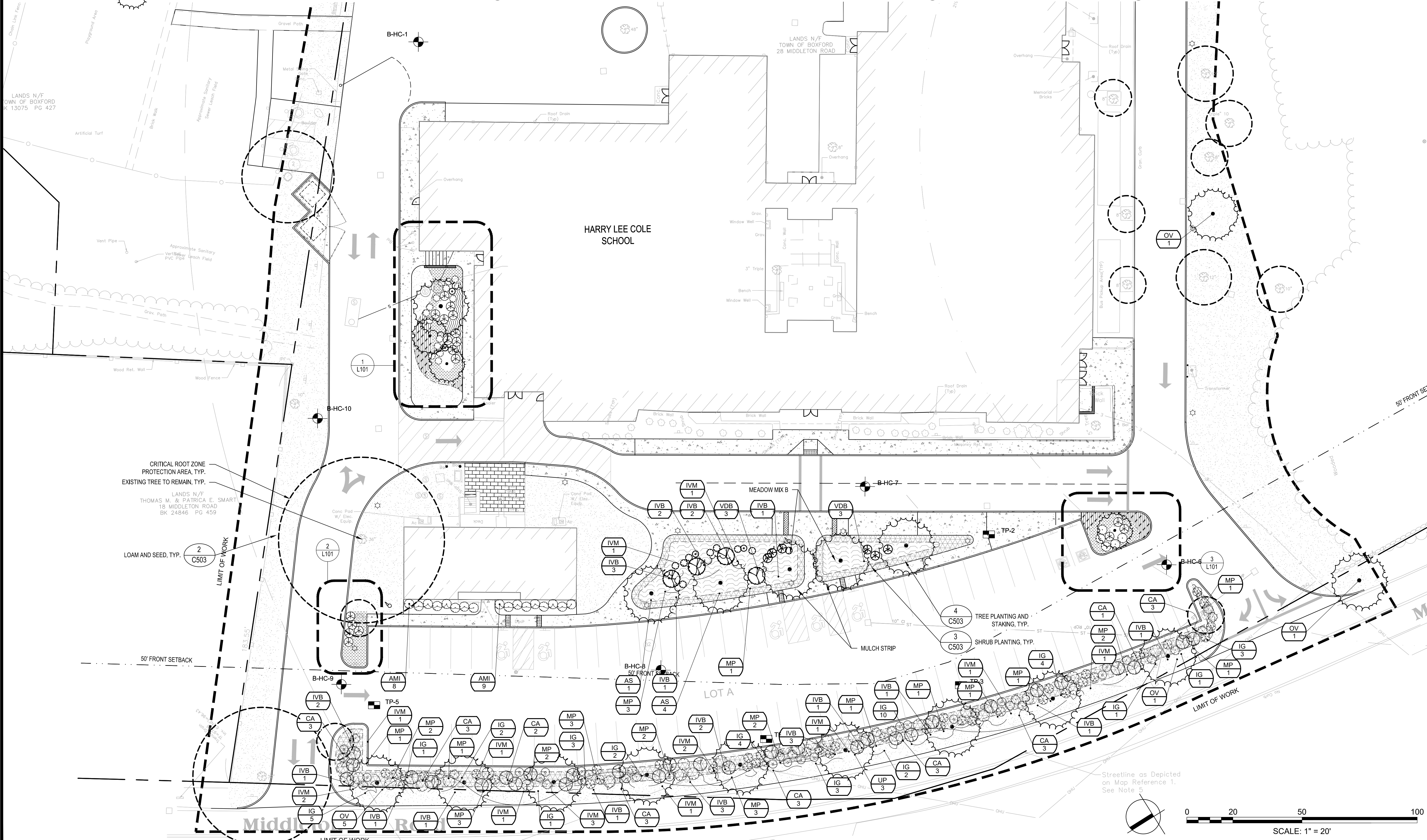
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-  PROPERTY LINE
-  LIMIT OF WORK
-  LOAM AND SEED
-  BARK MULCH PLANTING BED
-  BIORETENTION MEADOW MIX
-  HERBACEOUS PERENNIAL PLANTING
-  PROPOSED SHRUB PLANTING
-  PROPOSED TREE PLANTING

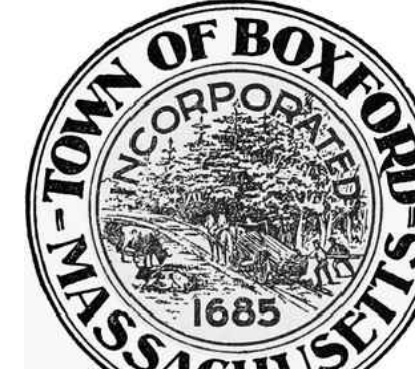
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**2 PLANTING ENLARGEMENT**  
SCALE: 1"=10'

**3 PLANTING ENLARGEMENT**  
SCALE: 1"=10'



Project:  
BOXFORD PUBLIC  
SCHOOLS SITE  
RENOVATION PROJECT



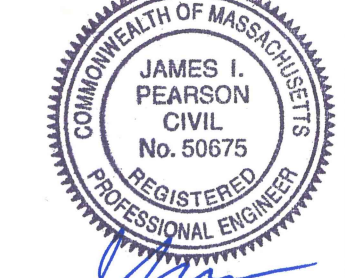
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Seal:  
  
 JAMES I. PEARSON  
 CIVIL  
 No. 50675  
 REGISTERED  
 PROFESSIONAL ENGINEER  
 11/01/2021

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 Reviewed By:  
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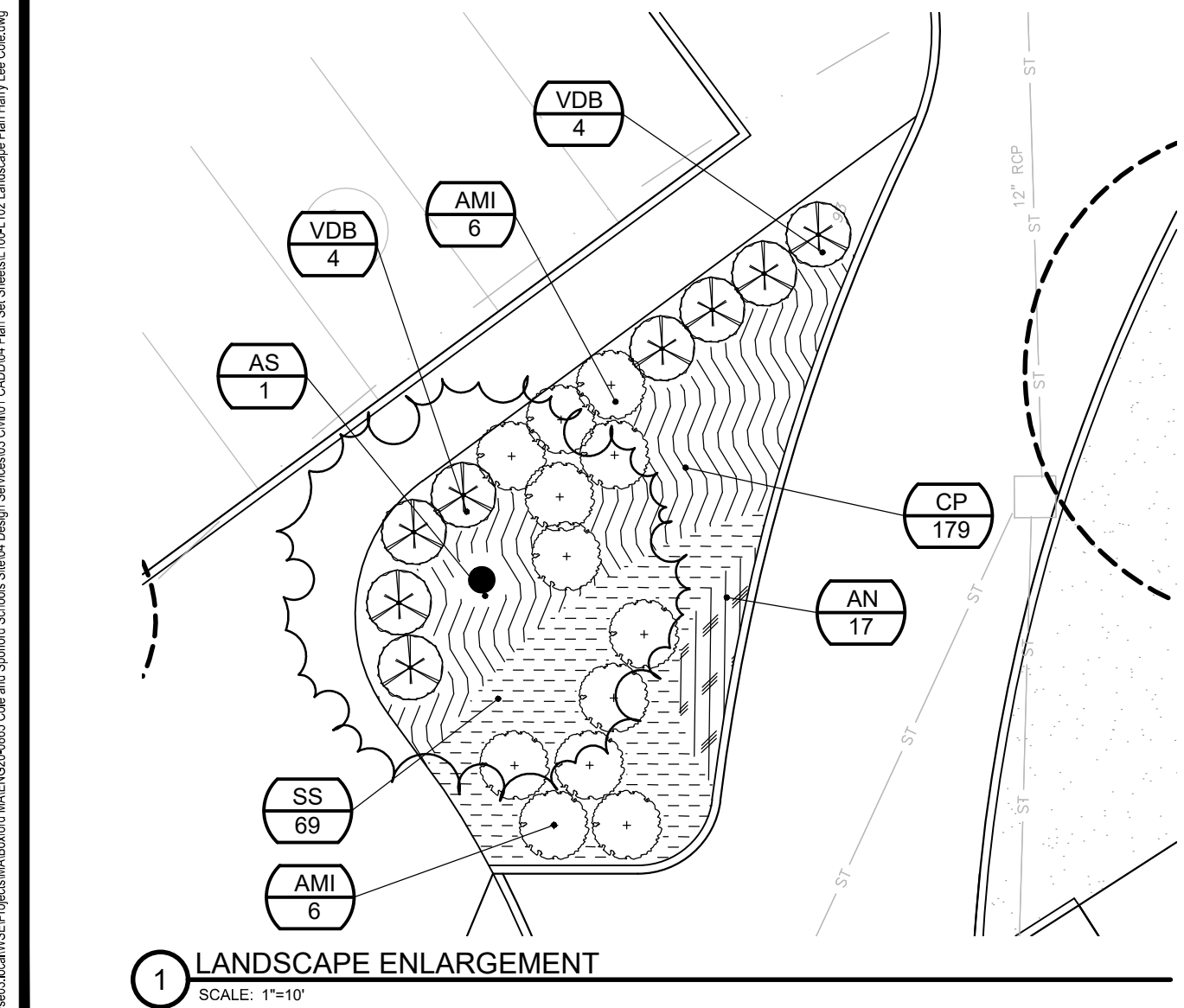
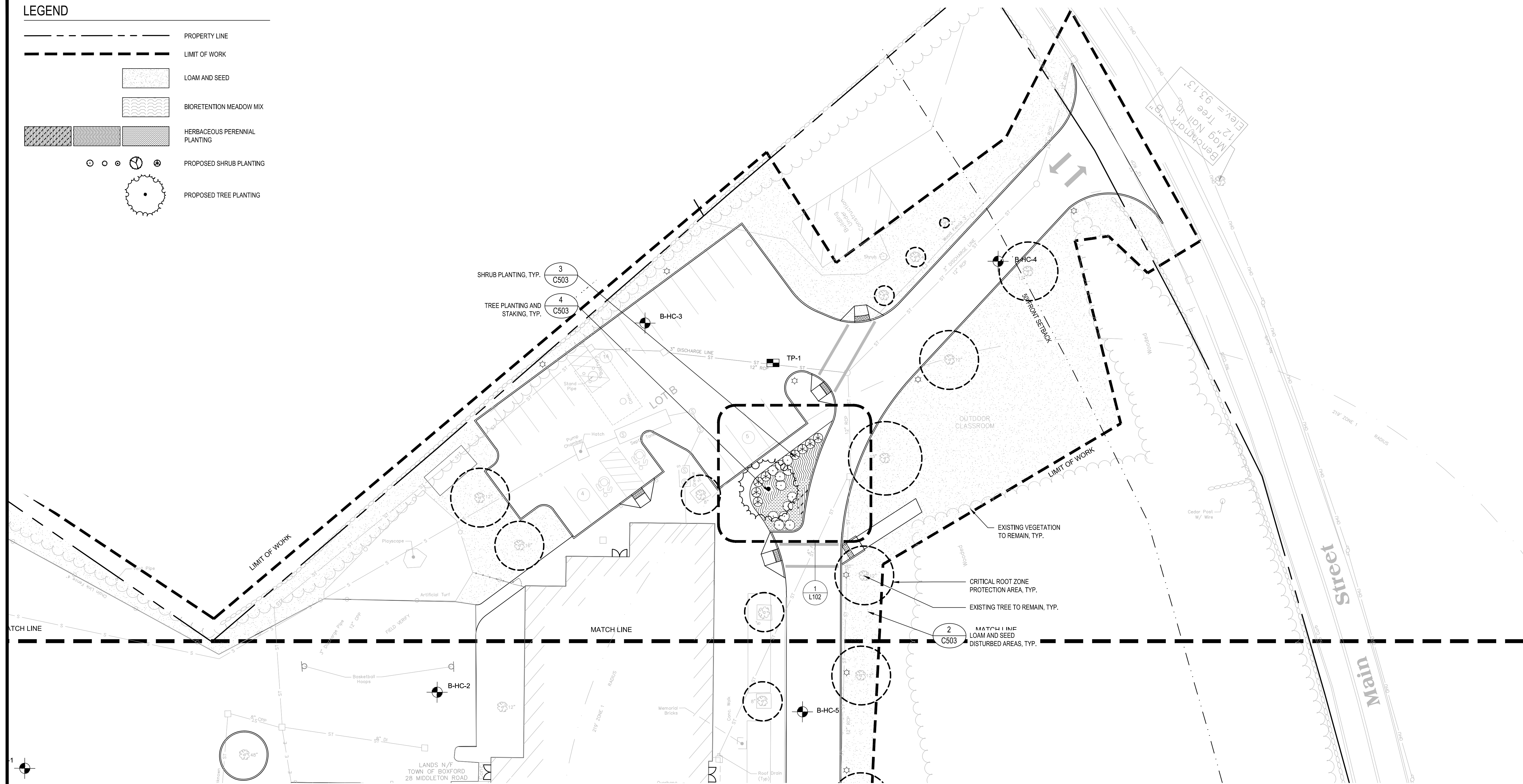
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**PLANTING ENLARGEMENT PLAN**

Sheet Number:  
**L101**

**LEGEND**

- PROPERTY LINE
- LIMIT OF WORK
- LOAM AND SEED
- BIORETENTION MEADOW MIX
- HERBACEOUS PERENNIAL PLANTING
- PROPOSED SHRUB PLANTING
- PROPOSED TREE PLANTING



Project:  
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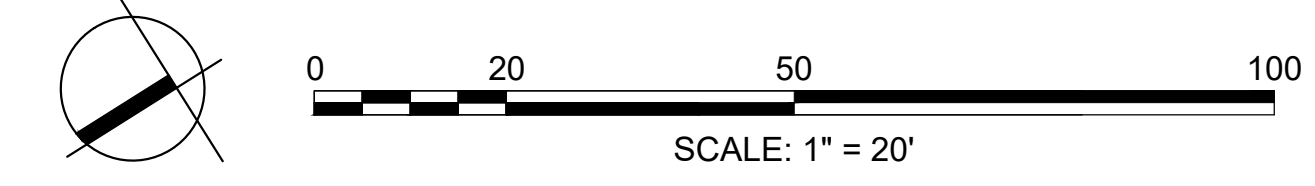
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 Drawn By:  
 Reviewed By:  
 Approved By:

W&S Project No.: ENG20-0865  
 W&S File No.:

Drawing Title:  
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Sheet Number:  
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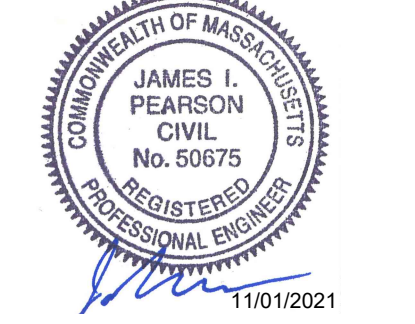
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 Plot Date: 11/01/21  
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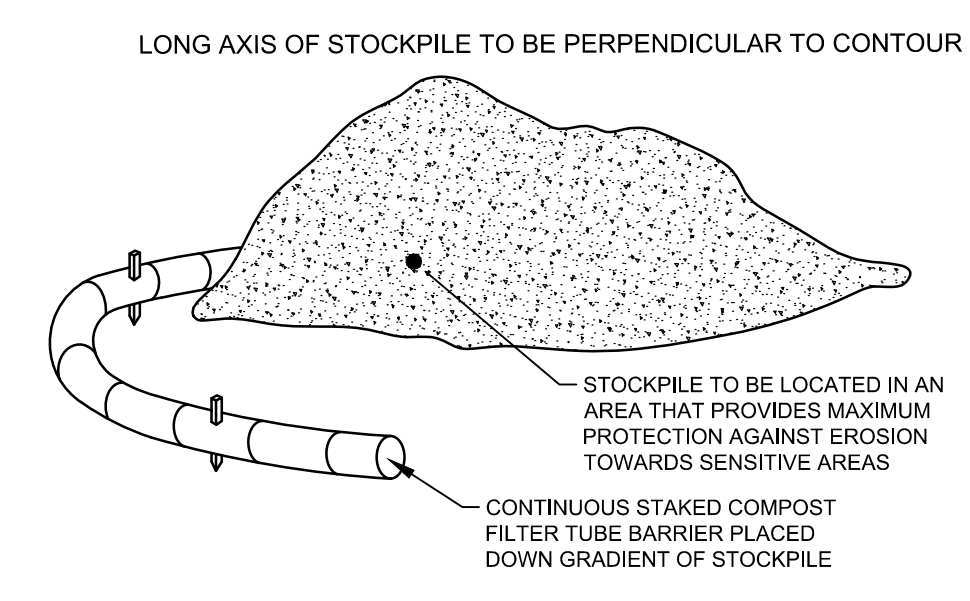
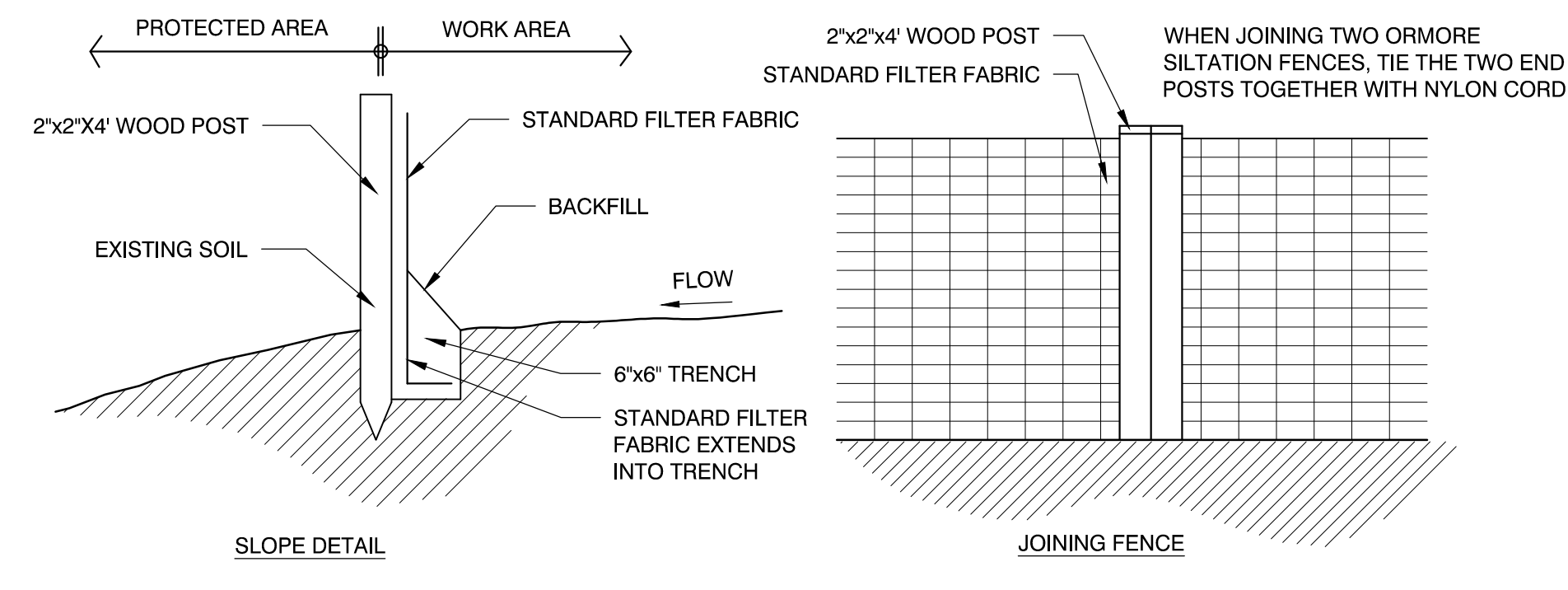
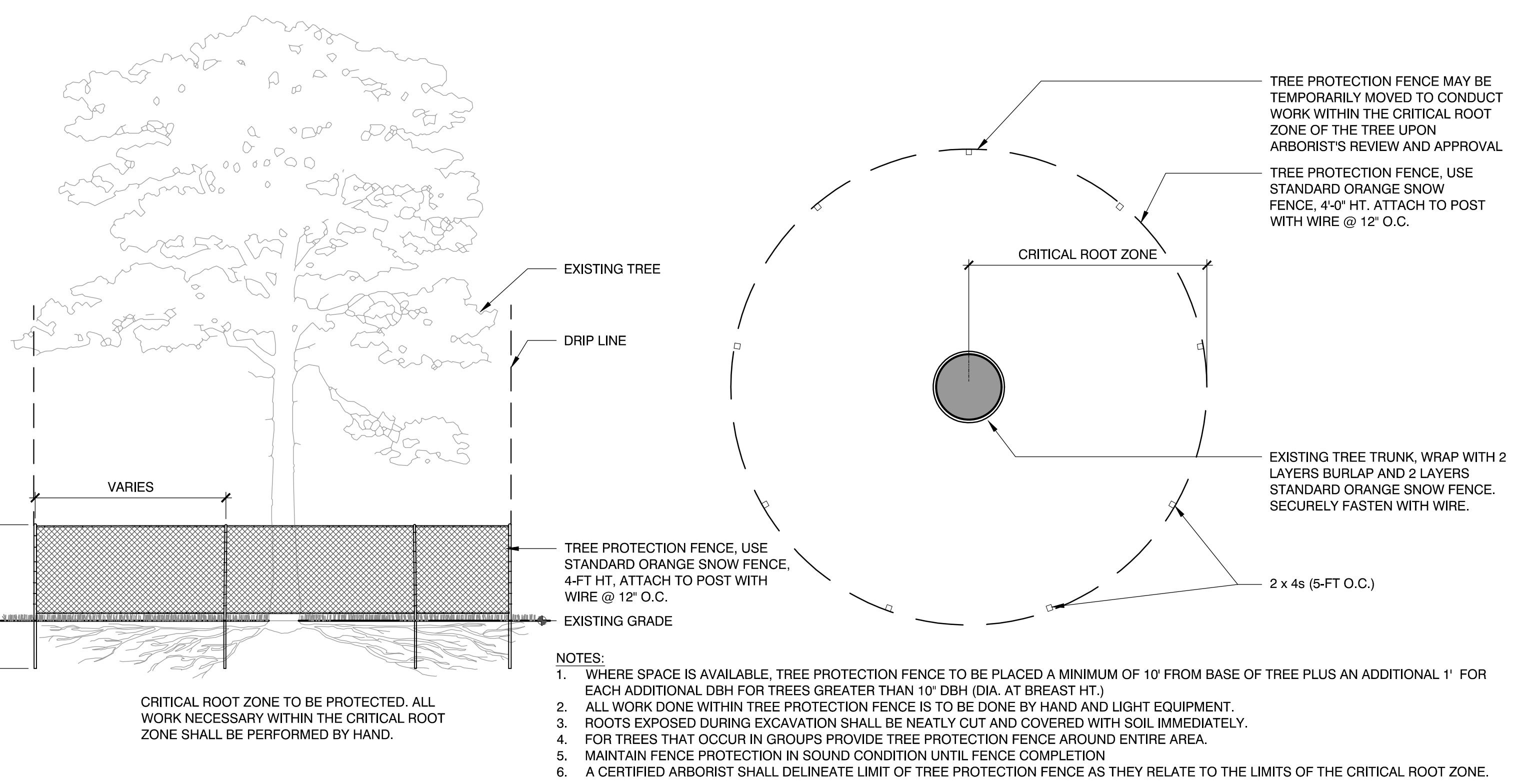
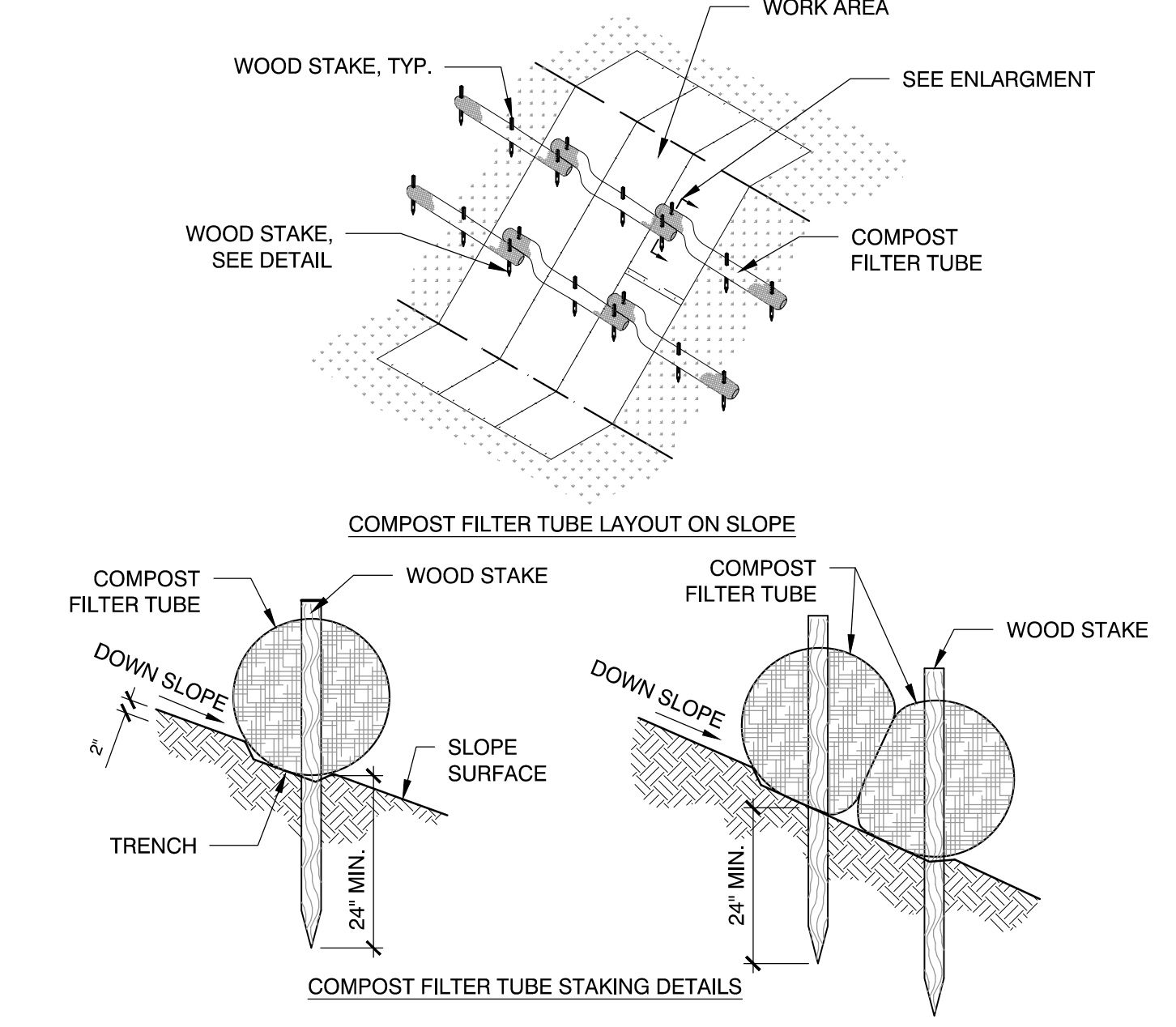
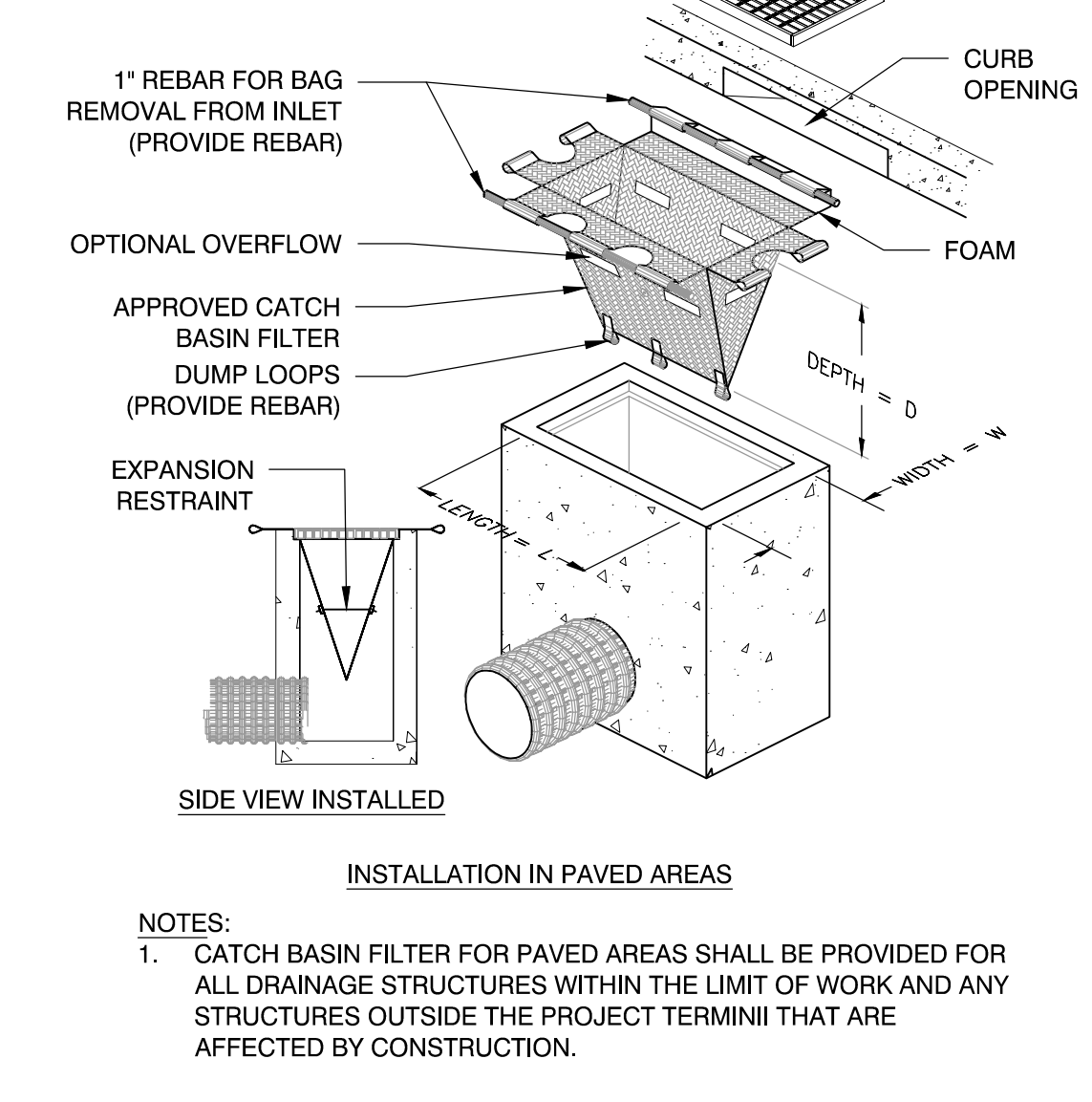
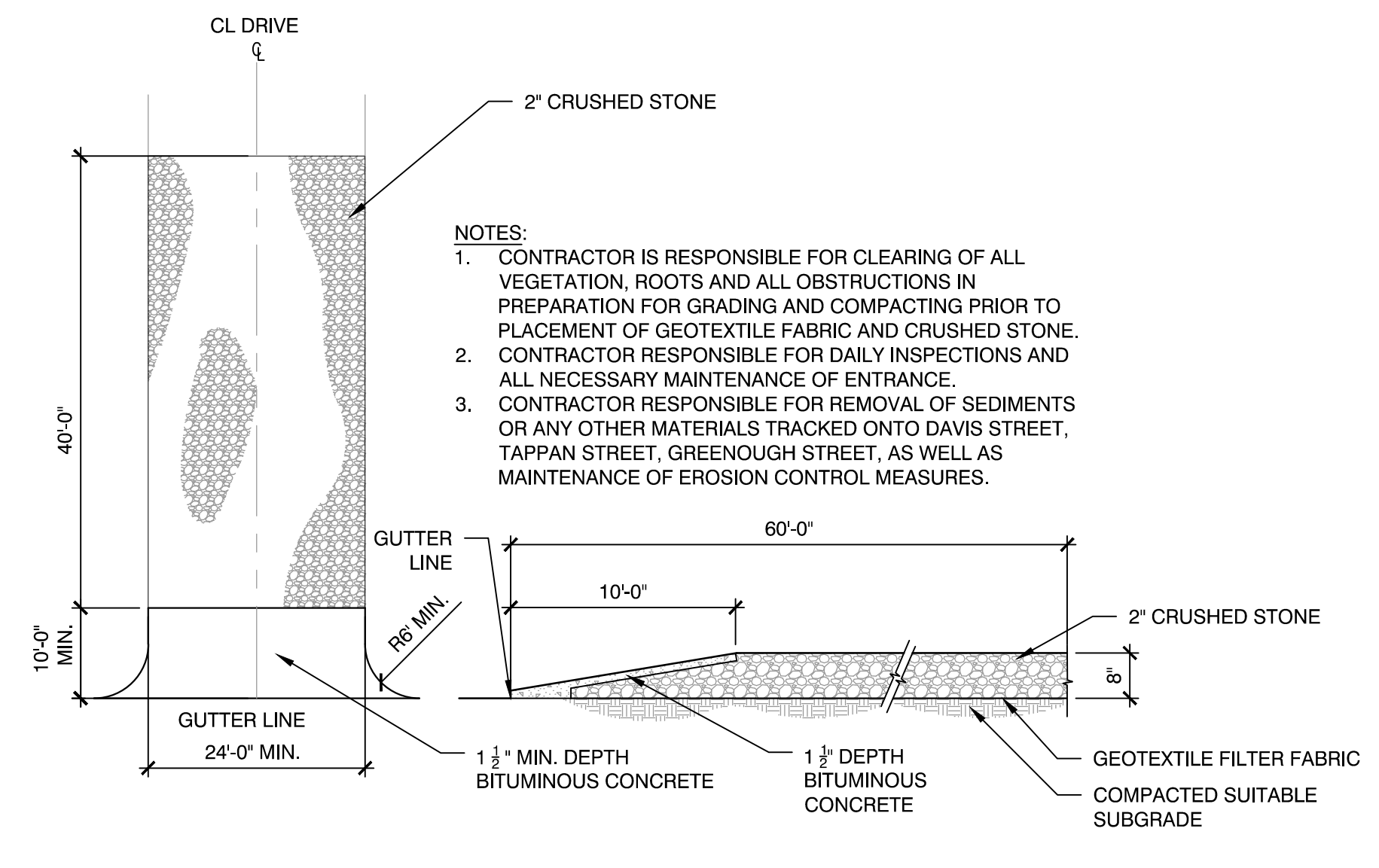
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Date: MAY 13, 2021  
Drawn By: EJA  
Reviewed By: CB  
Approved By: JIP  
W&S Project No.: ENG20-0865  
W&S File No.:

Drawing Title:

**SITE CONSTRUCTION DETAILS**

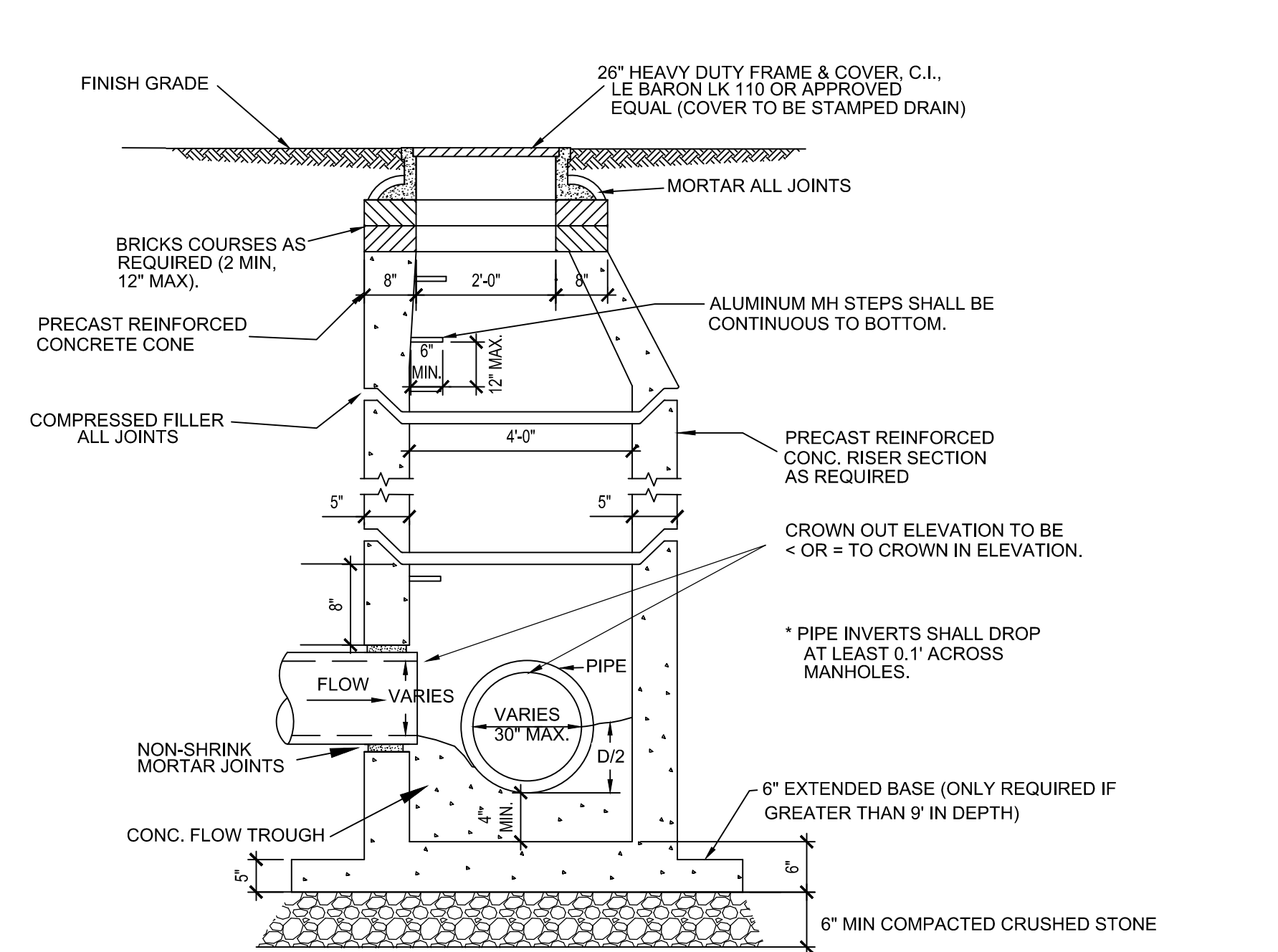
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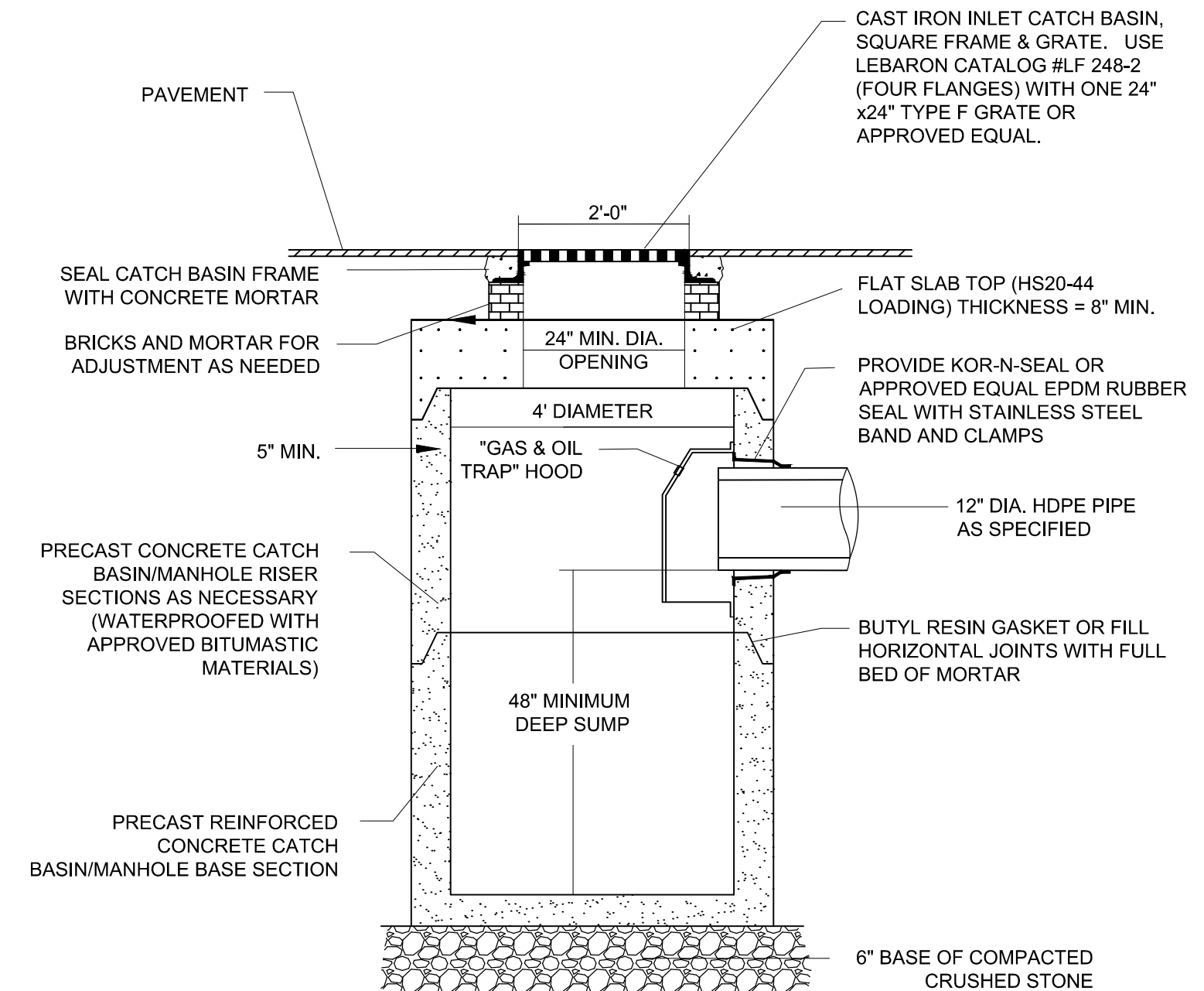
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Rev. 1.8 Date: 10/24/2019



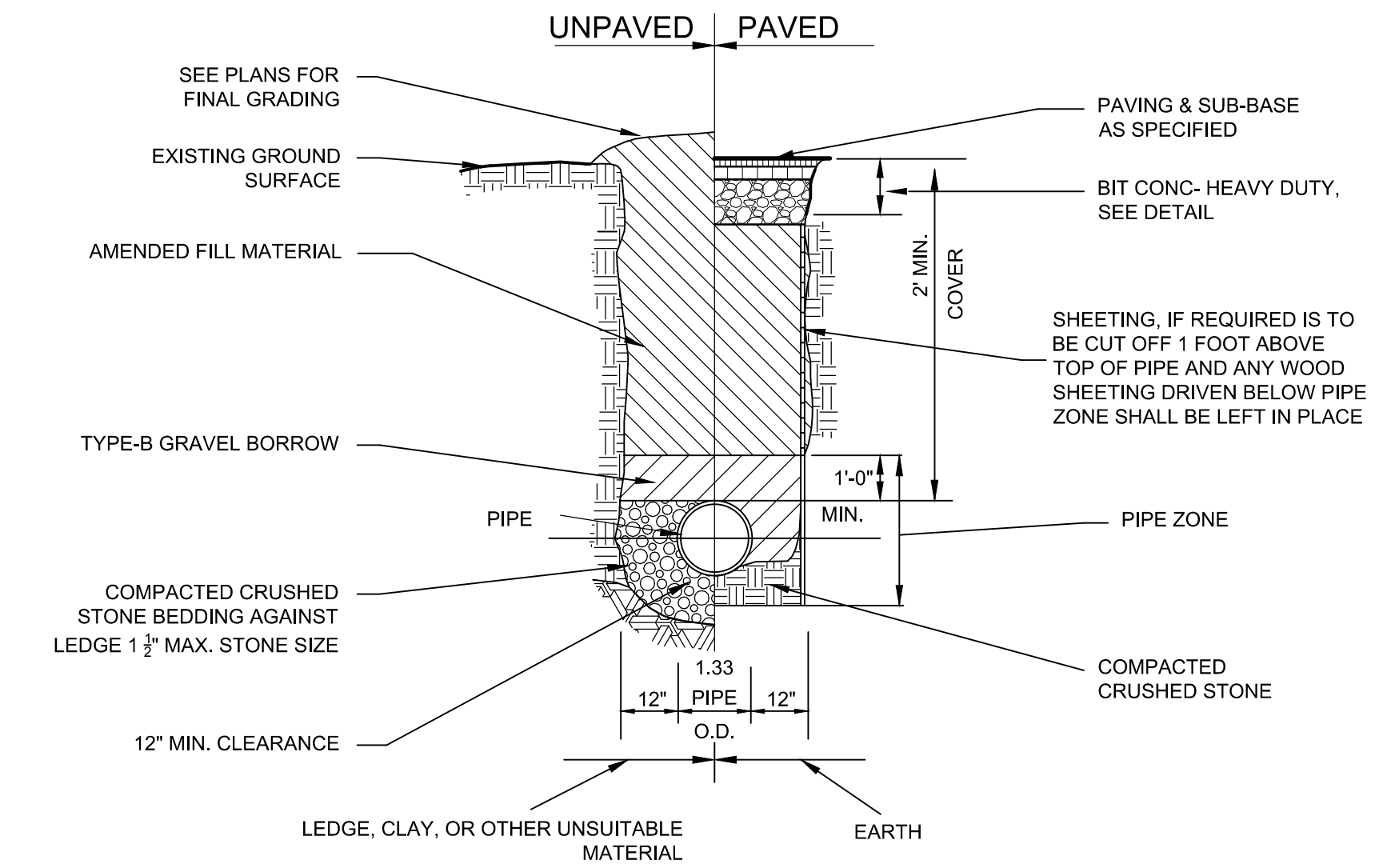
- NOTE:
1. THE DRAIN MANHOLE SHALL BE DESIGNED TO RESIST BUOYANCY. ASSUMING GROUNDWATER IS AT GRADE, MANUFACTURER SHALL PROVIDE BUOYANCY CALCULATIONS, STAMPED BY A MASSACHUSETTS P.E.
  2. MANHOLE FRAME AND COVER SHALL BE H-20 WHEEL LOAD RATED.

1 TYPICAL PRECAST CONCRETE MANHOLE  
SCALE: N.T.S.

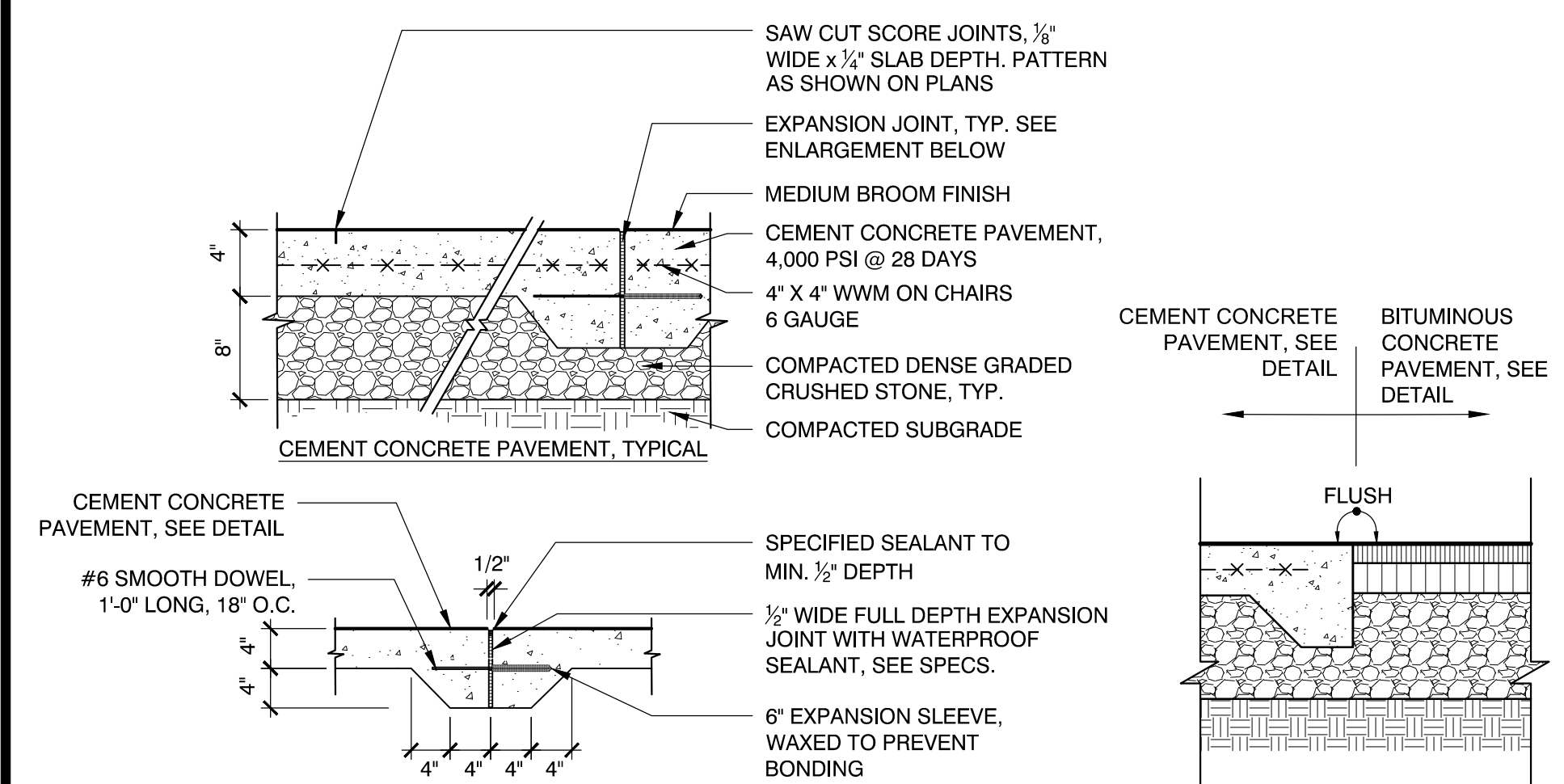


- NOTES:
1. FOR DOUBLE CATCH BASINS, STRUCTURE SHALL BE 6' IN DIAMETER.
  2. THE CATCH BASIN SHALL BE DESIGNED TO RESIST BUOYANCY. ASSUMING GROUNDWATER IS AT GRADE, MANUFACTURER SHALL PROVIDE BUOYANCY CALCULATIONS, STAMPED BY A MASSACHUSETTS P.E.
  3. MANHOLE FRAME AND COVER SHALL BE H-20 WHEEL LOAD RATED.

2 STANDARD CATCH BASIN  
SCALE: N.T.S.



3 TYPICAL STORM DRAIN TRENCH DETAIL  
SCALE: N.T.S.

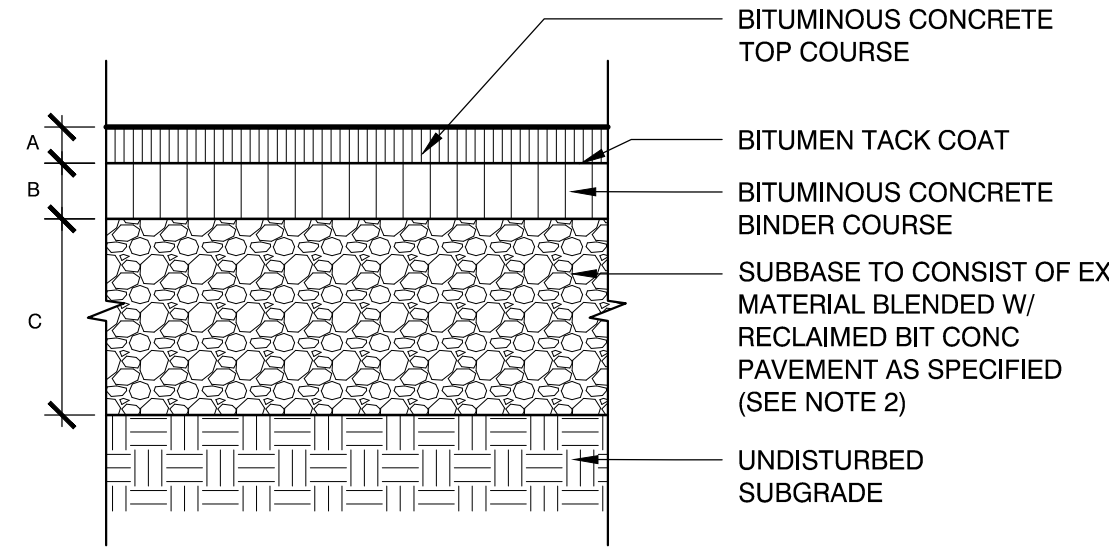


- EXPANSION JOINT INSTALLATION NOTES:
1. DOWEL IS TYPICAL AT ALL EXPANSION JOINTS (18" O.C.) WITHIN CONCRETE PAVING AND BETWEEN NEW CONCRETE PAVING AND EXISTING CONCRETE PAVING TO REMAIN. DELETE EXPANSION SLEEVE AND DOWEL WHERE JOINT ABUTS WALL, CURBS, OR OTHER VERTICAL SURFACES, UNLESS OTHERWISE NOTED.
  2. EXPANSION JOINTS MAX. 25'-0" O.C. UNLESS SHOWN OTHERWISE.
  3. EXPANSION JOINTS SHALL BE PLACED WHERE NEW CEMENT CONCRETE PAVEMENT MEETS EXISTING PAVEMENT OR WALLS TO REMAIN.
  4. NEW CONCRETE PAVEMENT SHALL MEET EX. CONCRETE PAVEMENT IN THE SA MANNER AS DETAILS ABOVE.

4 CEMENT CONCRETE PAVEMENT  
SCALE: N.T.S.

PAVEMENT DEPTH SCHEDULE

	TOP (A)	BINDER (B)	SUBBASE (C)
HEAVY DUTY	2.0"	3.0"	SEE BELOW
MEDIUM DUTY	1.5"	2.5"	SEE BELOW
LIGHT DUTY	1.0"	2.0"	SEE BELOW



- NOTES:
1. CONTRACTOR TO PROVIDE SMOOTH TRANSITION WHERE NEW PAVEMENT ABUTS EXISTING PAVEMENT, TYP.
  2. PROVIDE 10" (MIN) OF RECLAIMED/BLENDED MATERIAL AS SUBSTRATE OVER NEW TRENCHES.

5 BITUMINOUS CONCRETE PAVEMENT  
SCALE: N.T.S.

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Date: MAY 13, 2021

Drawn By: EJA

Reviewed By: CB

Approved By: JIP

W&S Project No.: ENG20-0865

W&S File No.:

Drawing Title:

SITE CONSTRUCTION DETAILS

Sheet Number:

C501

Scale: AS SHOWN

Date: MAY 13, 2021

Drawn By: EJA

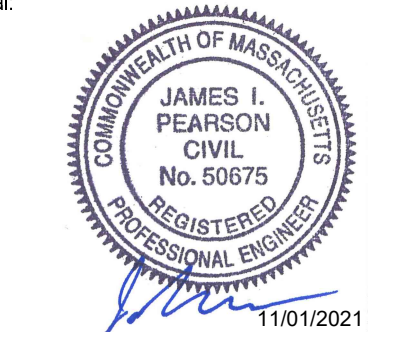
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Approved By: JIP

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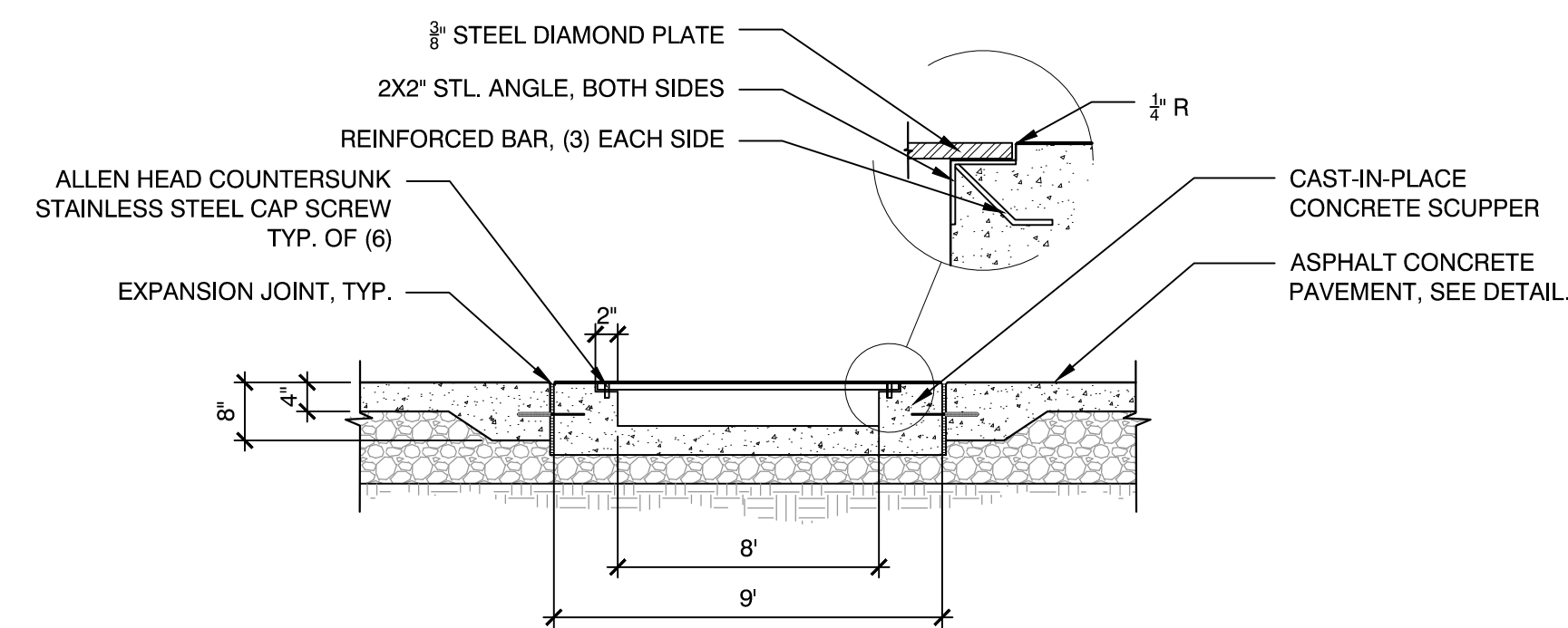
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 Reviewed By: CB  
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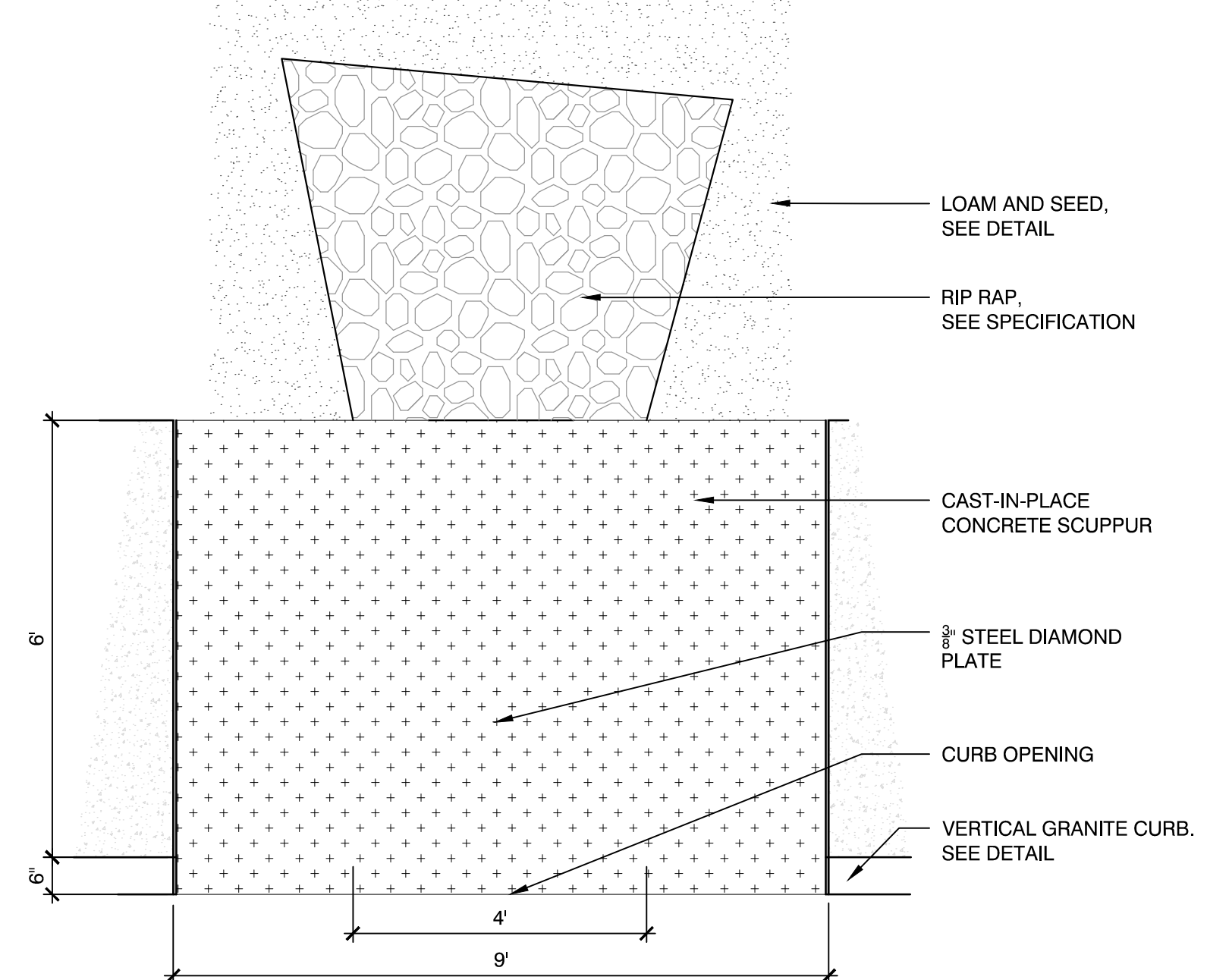
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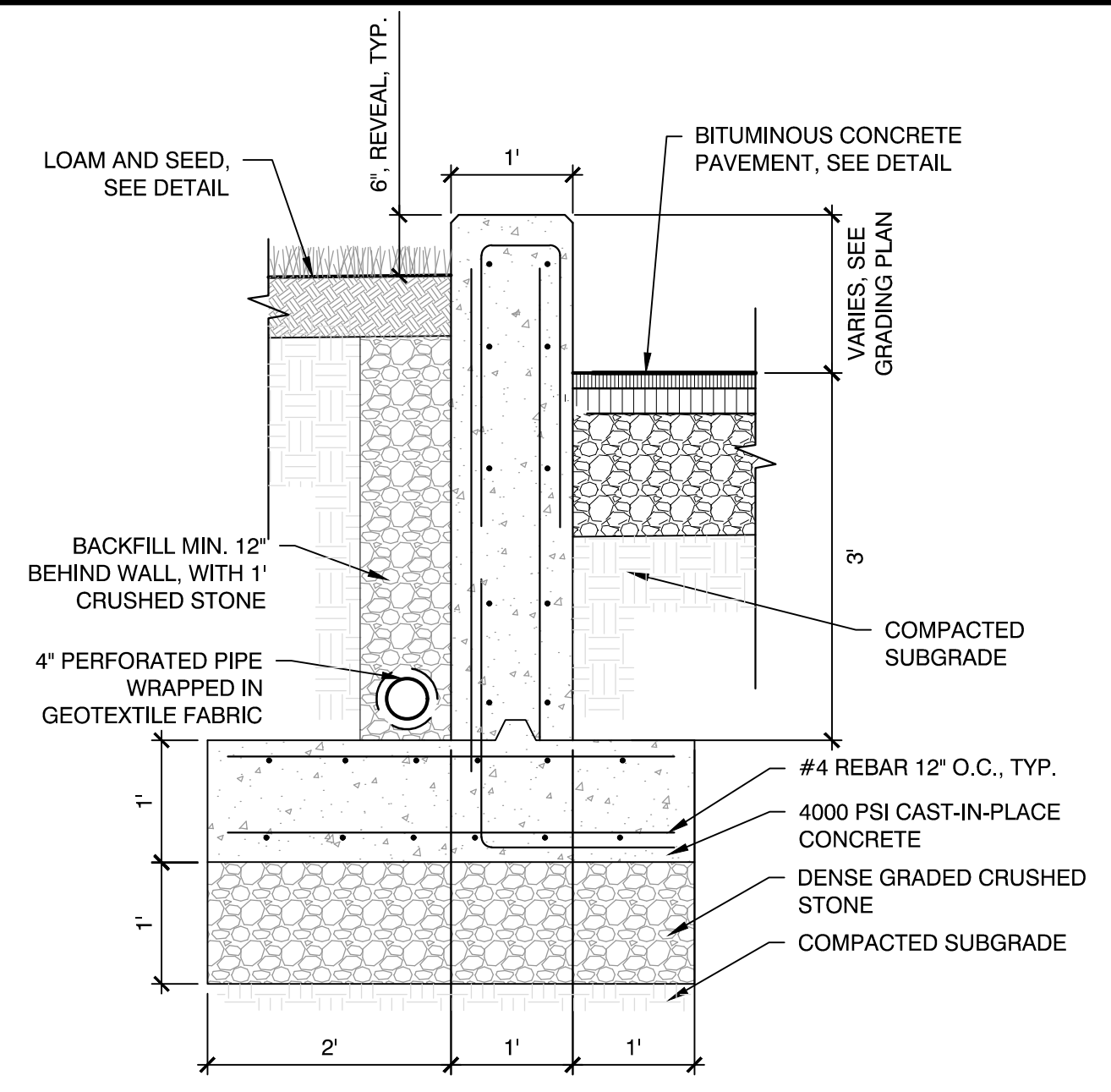
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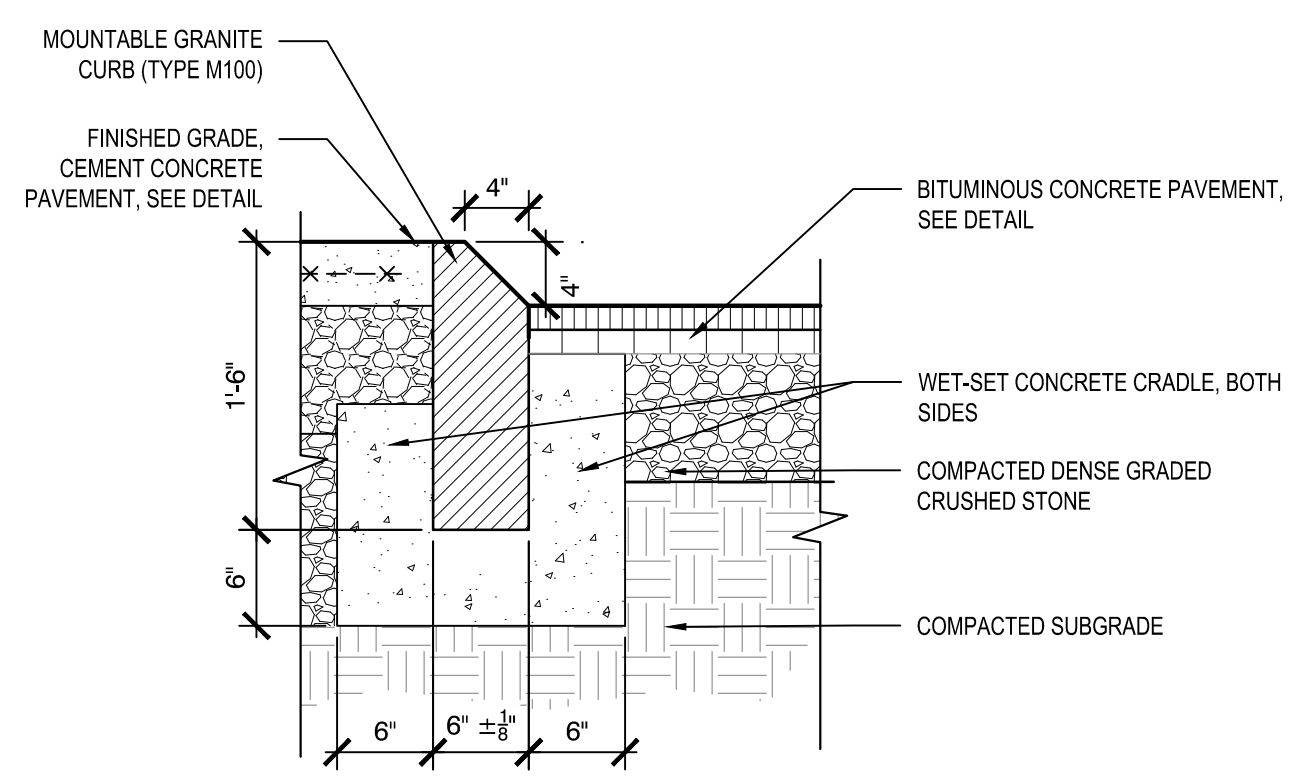
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 SCALE: N.T.S.



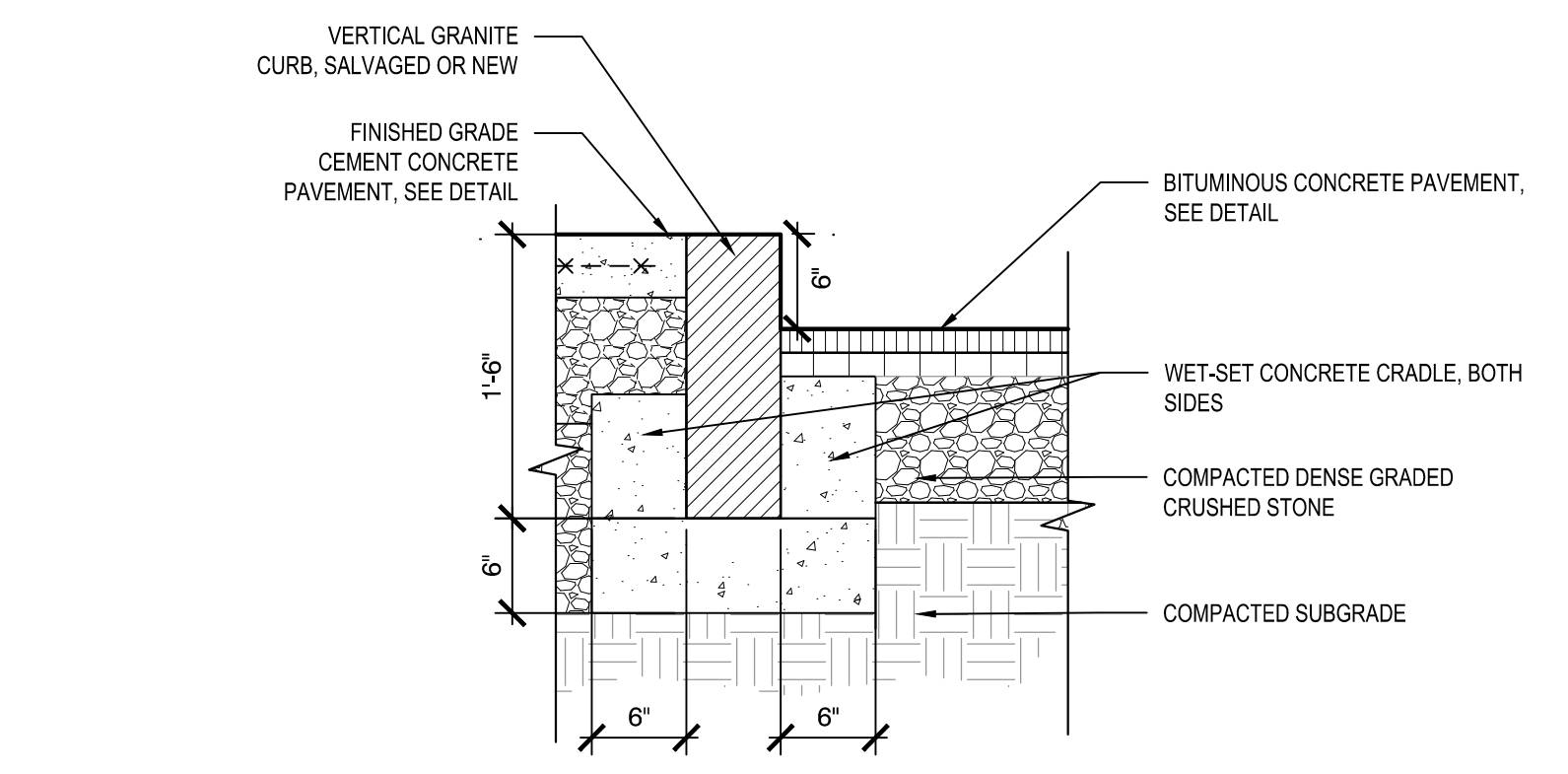
**2** CONCRETE RETAINING WALL  
 SCALE: N.T.S.



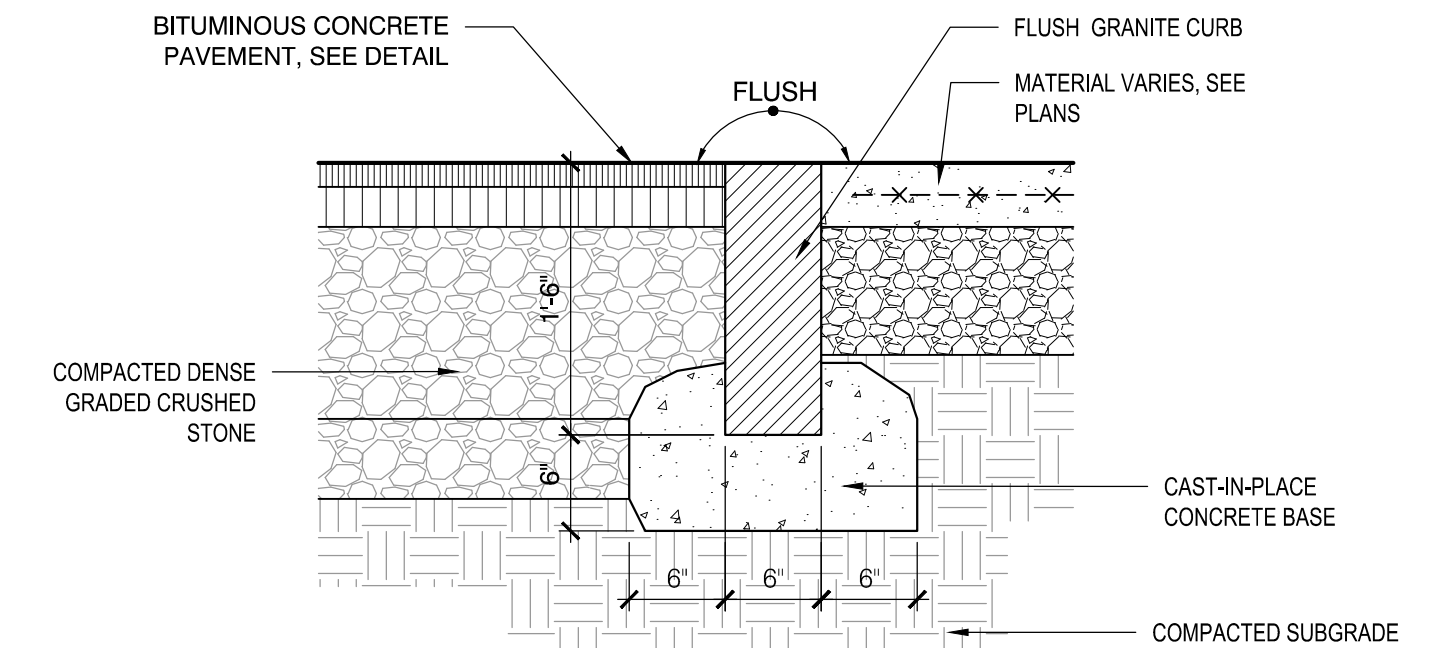
**3** CAST-IN-PLACE CONCRETE RETAINING WALL WITH FIELDSTONE CAP (PLACEHOLDER)  
 SCALE: N.T.S.



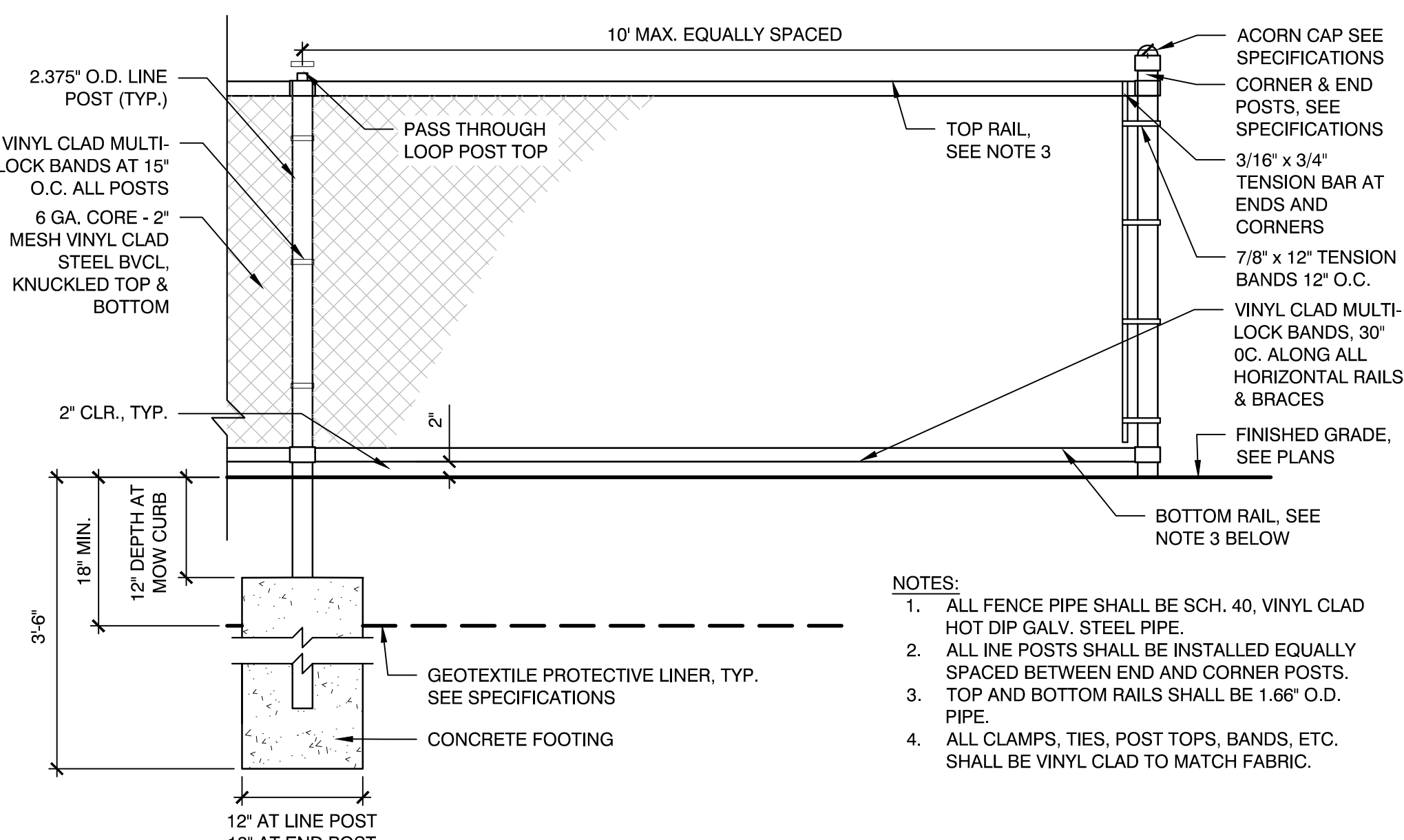
**4** VERTICAL GRANITE CURB  
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**5** FLUSH GRANITE CURB  
 SCALE: N.T.S.

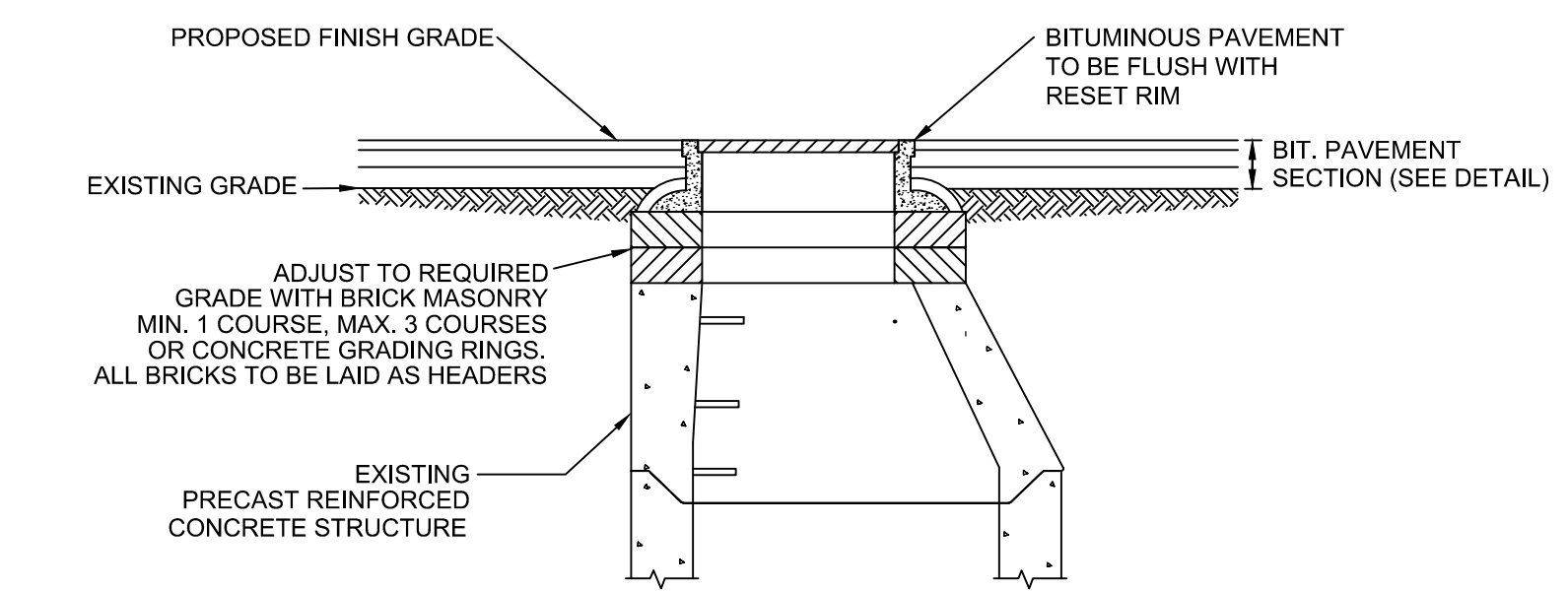


**6** MOUNTABLE GRANITE CURB  
 SCALE: N.T.S.



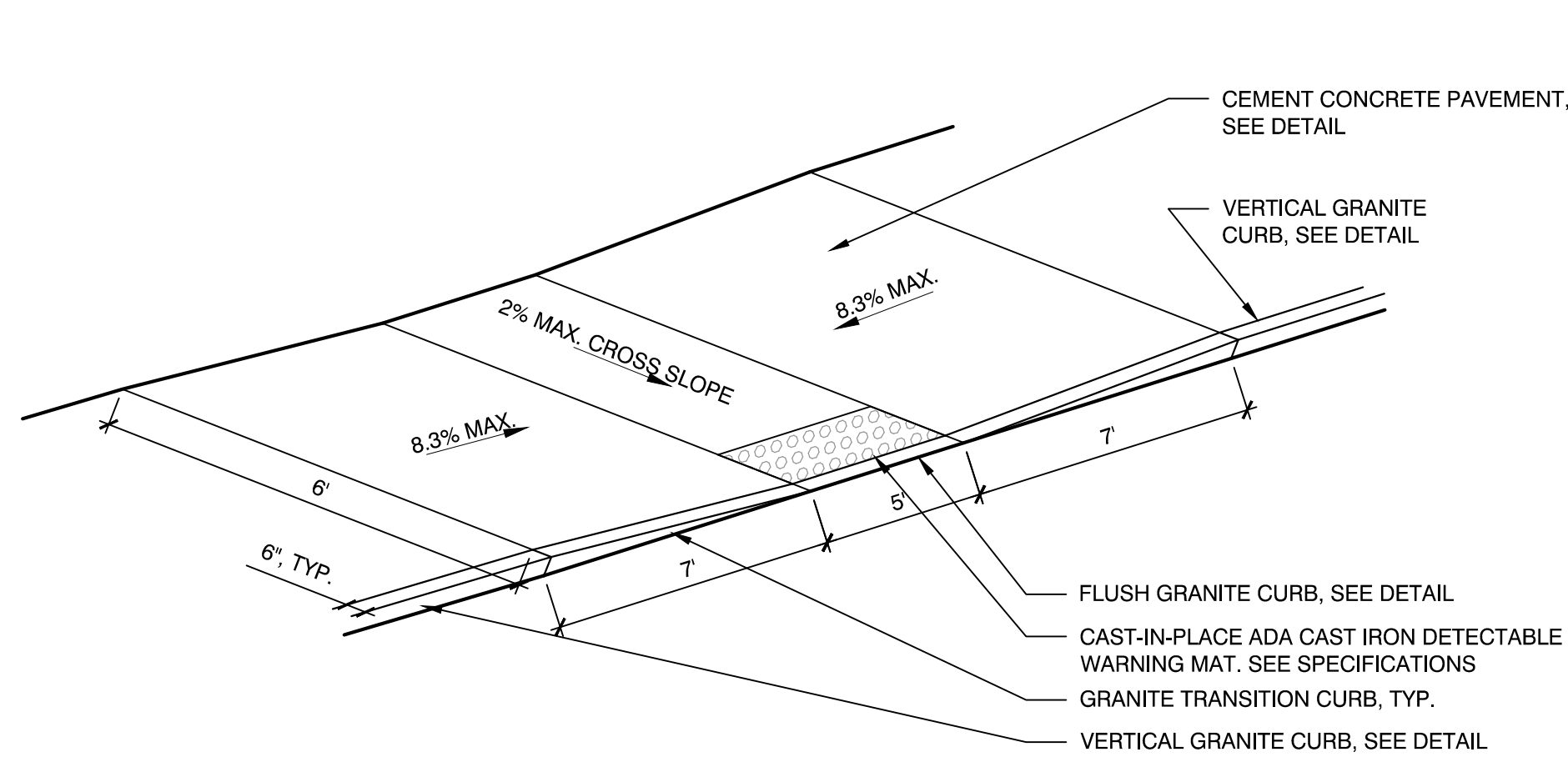
**7** 4' HT. BVCL FENCE  
 SCALE: N.T.S.

- NOTES:
- ALL FENCE PIPE SHALL BE SCH. 40, VINYL CLAD HOT DIP GALV. STEEL PIPE.
  - ALL LINE POSTS SHALL BE INSTALLED EQUALLY SPACED BETWEEN END AND CORNER POSTS.
  - TOP AND BOTTOM RAILS SHALL BE 1.66" O.D. PIPE.
  - ALL CLAMPS, TIES, POST TOPS, BANDS, ETC. SHALL BE VINYL CLAD TO MATCH FABRIC.

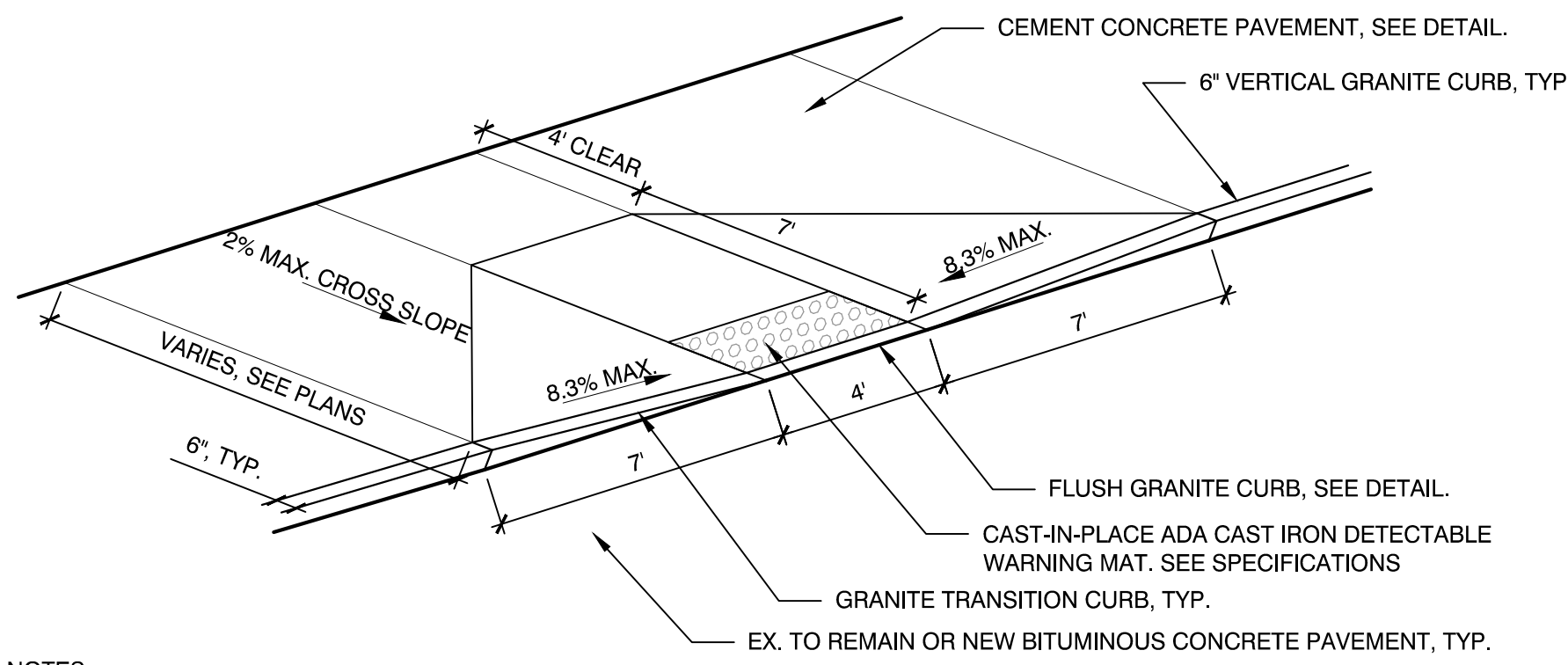


**8** ADJUSTMENT OF MANHOLE COVER FOR GRADE CHANGES  
 SCALE: N.T.S.

11/23/21 10:58 AM C:\Users\jlp\OneDrive\Documents\Boxford Public Schools\Site Renovation\Drawings\Sheet\Construction Details\C502.dwg User: jlp Job: Detail.dwg

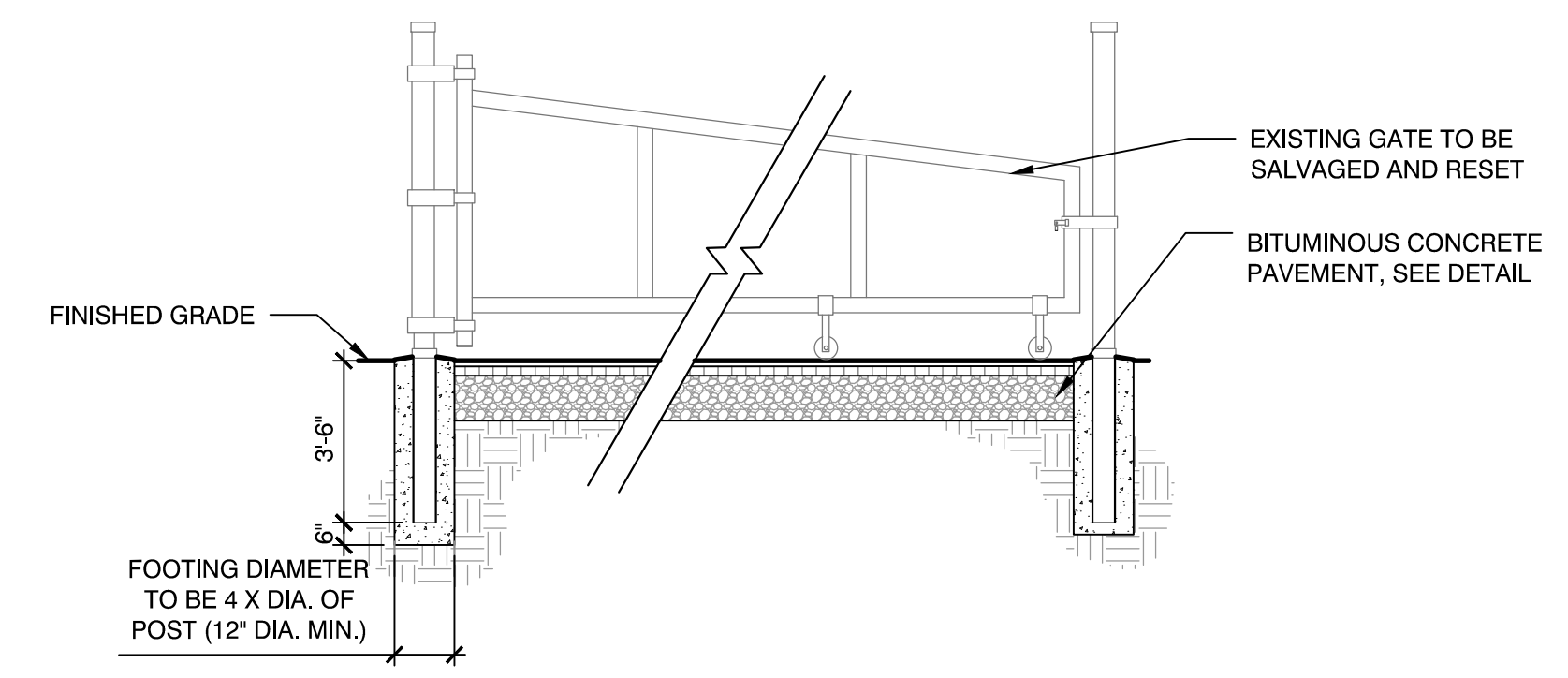


1 ADA CURB CUT-TYPE A  
SCALE: N.T.S.



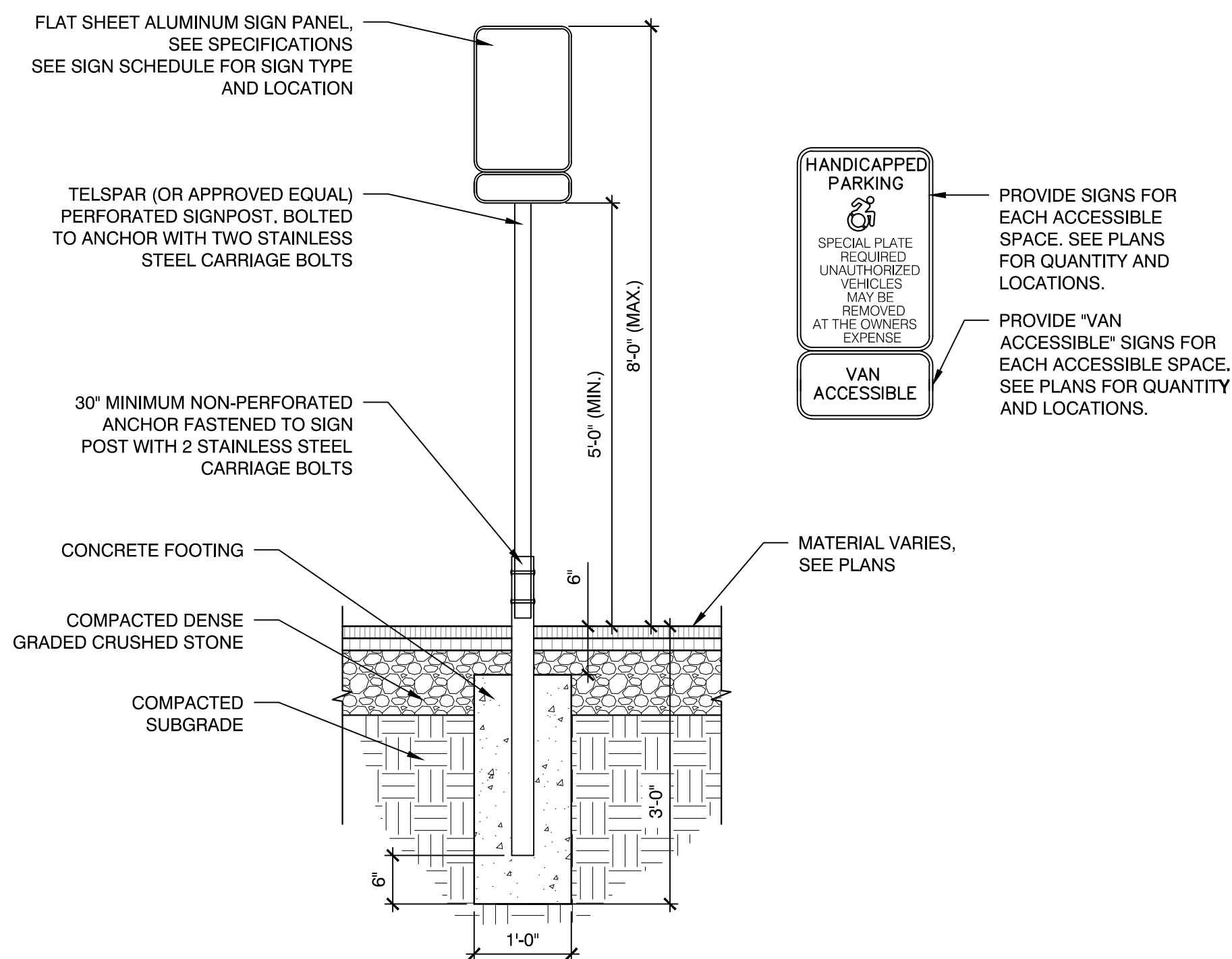
- NOTES:
- CONTRACTOR SHALL PROVIDE CLEAN AND STRAIGHT SAWCUT LINES AT LIMIT OF REMOVAL OF EXISTING ASPHALT PAVEMENT TO REMAIN. CONTRACTOR SHALL VERIFY LIMITS OF EXISTING ASPHALT PAVEMENT REMOVAL PRIOR TO COMMENCING DEMOLITION.
  - CONTRACTOR SHALL REMOVE AND REPLACE ASPHALT PAVEMENT, GRAVEL BORROW, AND SUBGRADE NECESSARY TO CONSTRUCT A CLEAN, SMOOTH TRANSITION AT ADA CURB CUT.

2 ADA CURB CUT-TYPE B  
SCALE: N.T.S.

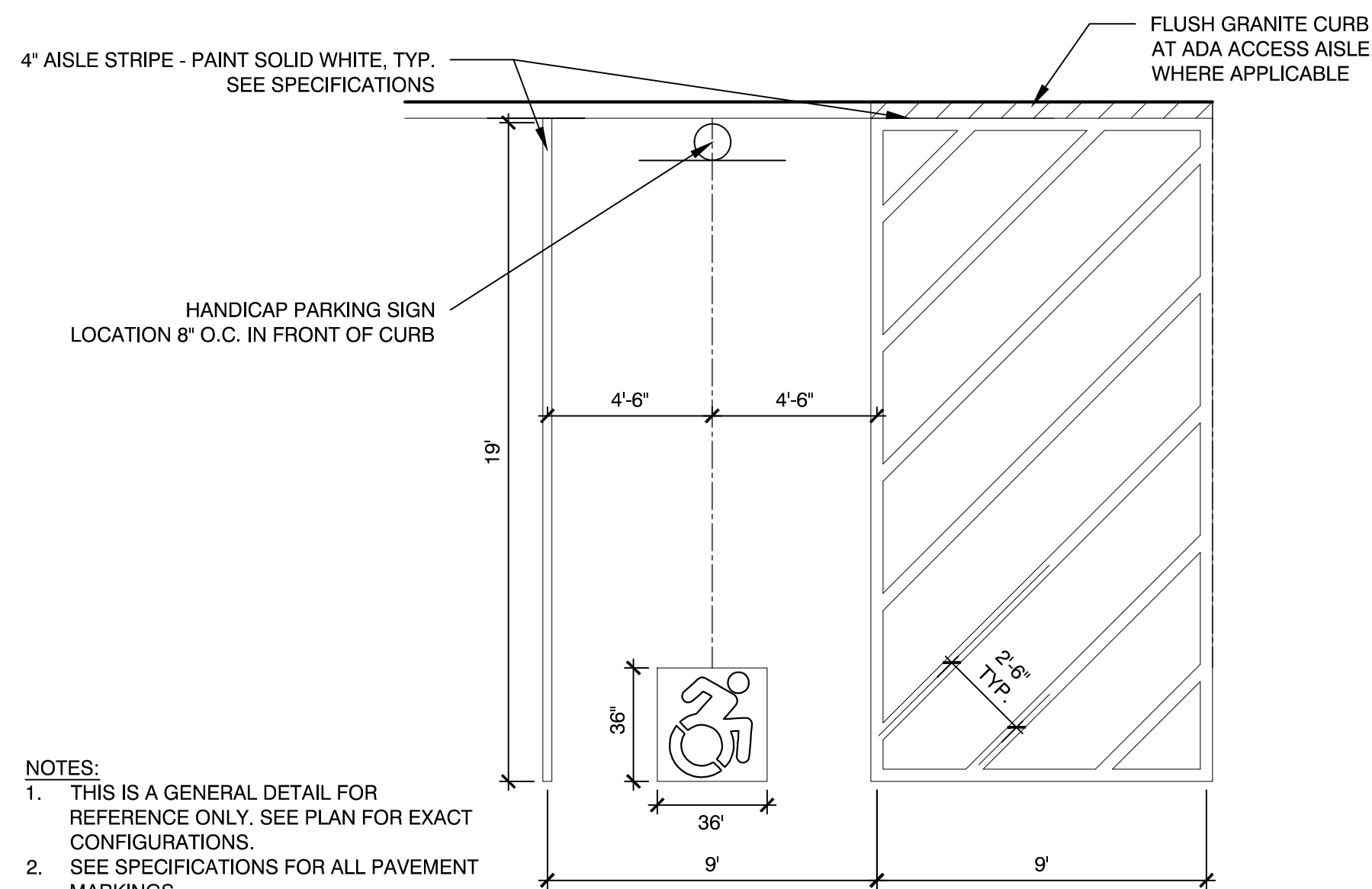


CONCRETE FOOTING:  
NORMAL WEIGHT CONCRETE AIR ENTRAINED WITH NOT LESS THAN 4,500 PSI COMPRESSIVE STRENGTH (28 DAYS), 3 INCH SLUMP, AND 1-INCH MAXIMUM SIZE AGGREGATE.

3 EX. METAL SWING GATE, RESET  
SCALE: N.T.S.

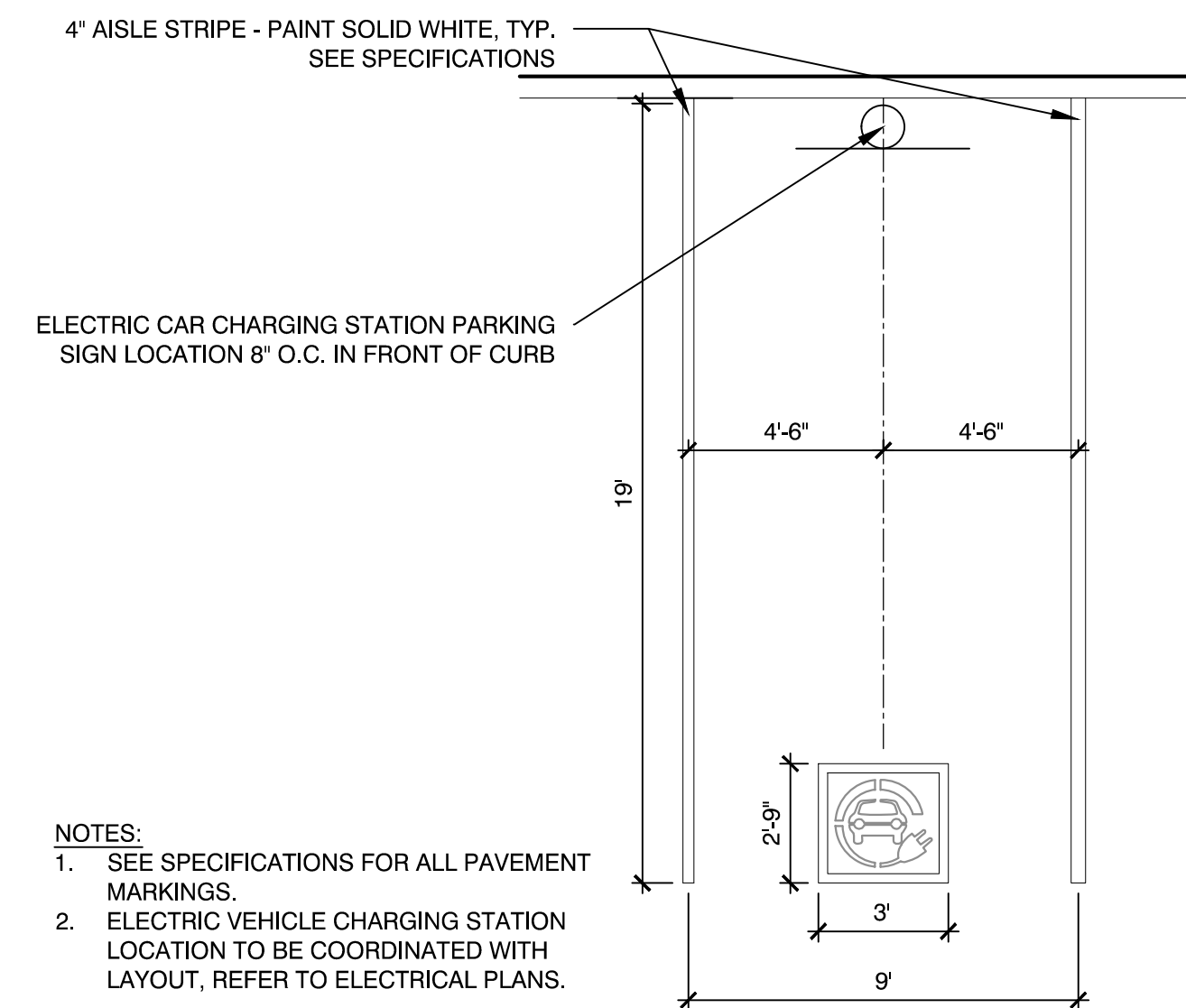


4 SIGN POST FOOTING  
SCALE: N.T.S.



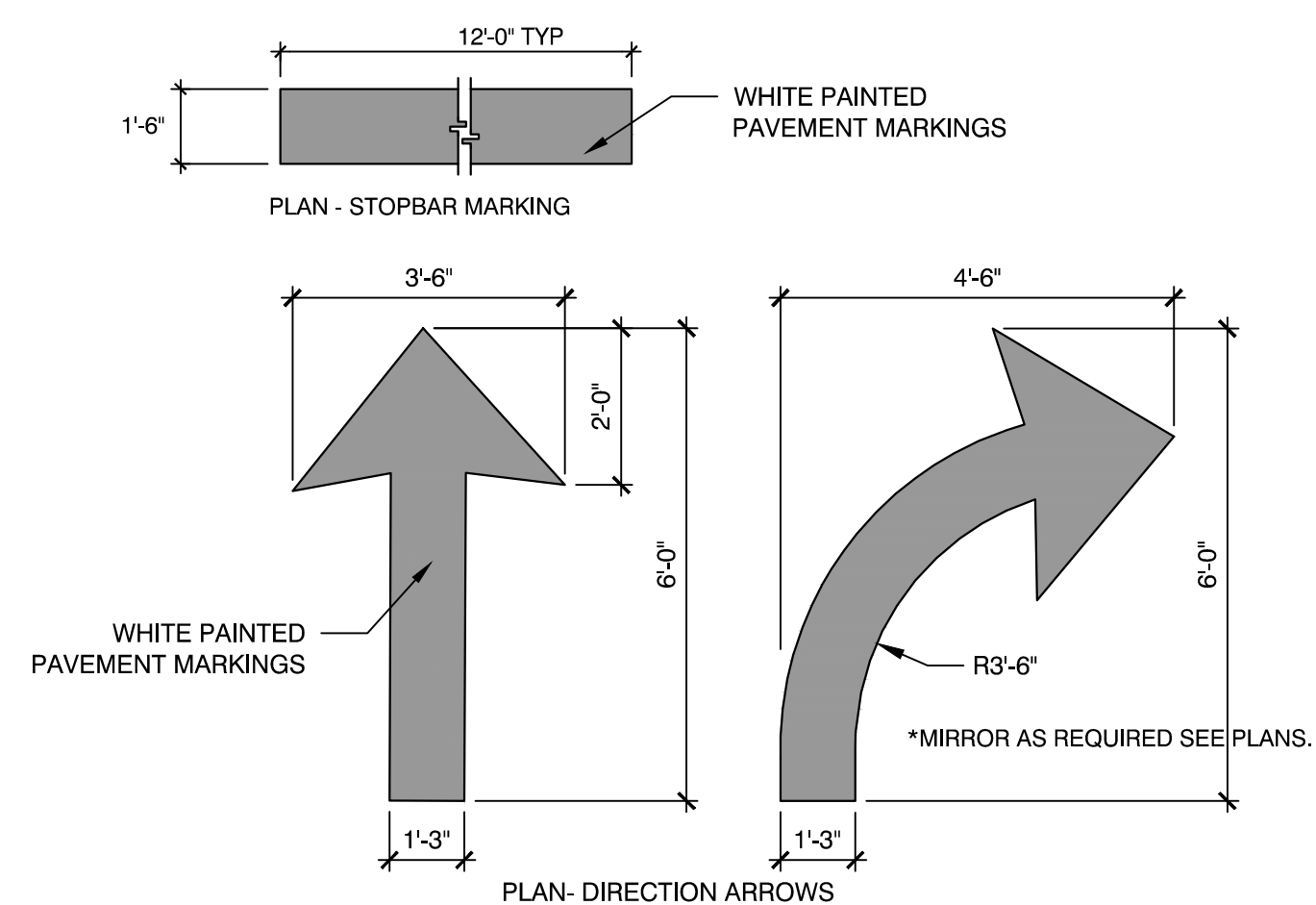
- NOTES:
- THIS IS A GENERAL DETAIL FOR REFERENCE ONLY. SEE PLAN FOR EXACT CONFIGURATIONS.
  - SEE SPECIFICATIONS FOR ALL PAVEMENT MARKINGS.
  - UNIVERSAL WHITE PAINTED ADA SYMBOL PLACED IN A BLUE PAINTED FIELD.

5 ACCESSIBLE PARKING SPACE LAYOUT  
SCALE: N.T.S.



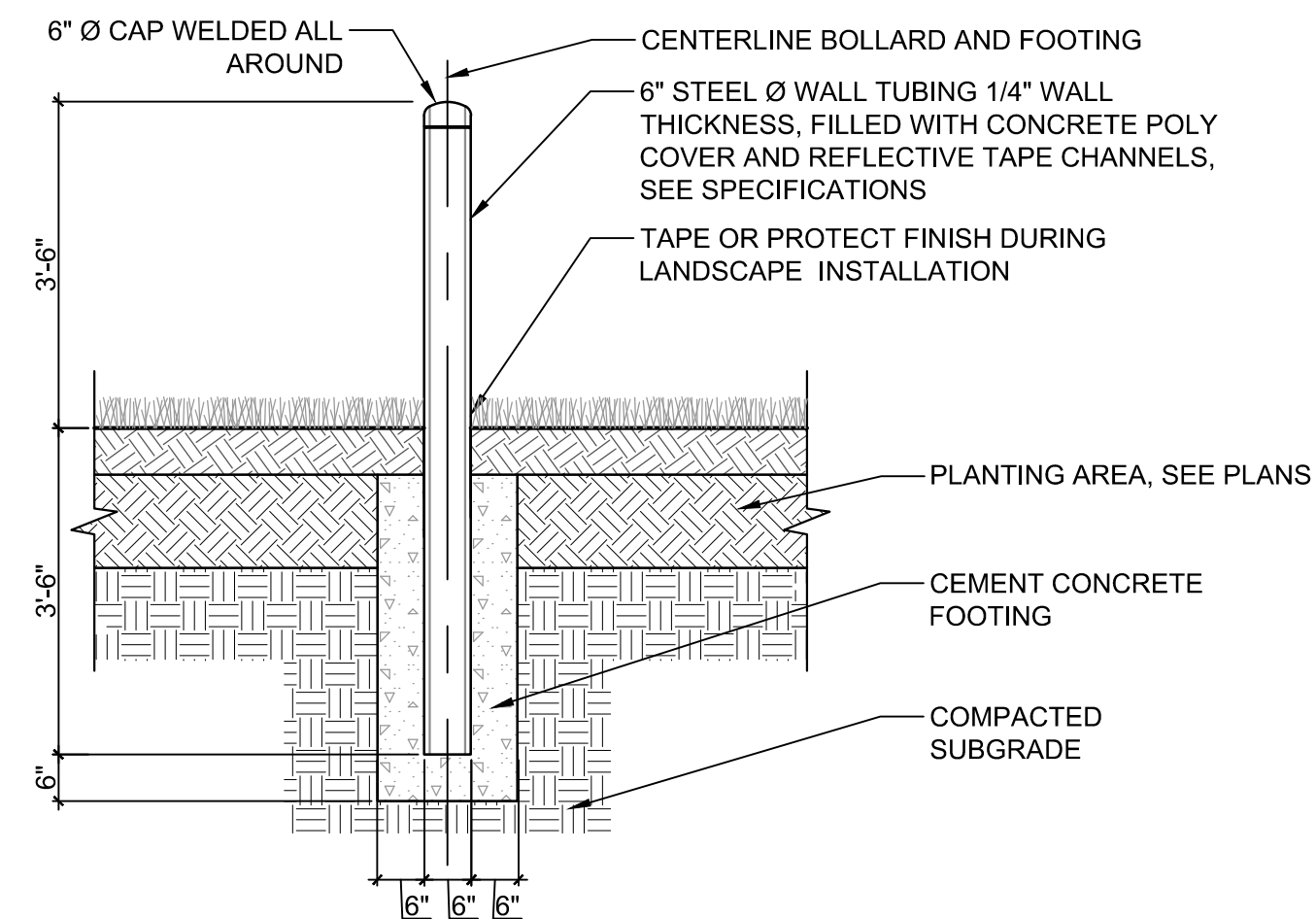
- NOTES:
- SEE SPECIFICATIONS FOR ALL PAVEMENT MARKINGS.
  - ELECTRIC VEHICLE CHARGING STATION LOCATION TO BE COORDINATED WITH LAYOUT, REFER TO ELECTRICAL PLANS.

6 ELECTRIC CAR CHARGING STATION PARKING SPACE LAYOUT  
SCALE: N.T.S.



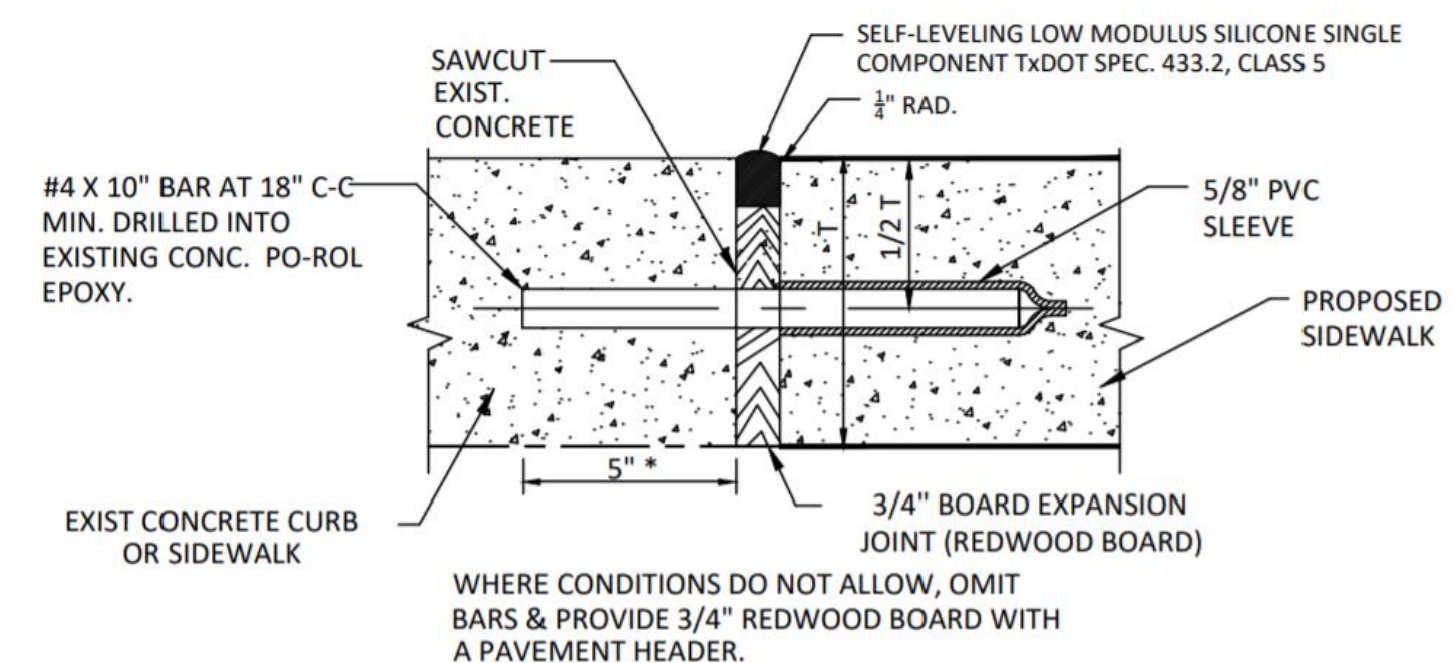
- NOTES:
- SEE PLANS FOR LOCATIONS OF EACH, AND COMBINATIONS THEREIN.

7 DIRECTIONAL ARROW AND STOP BAR TRAFFIC MARKINGS  
SCALE: N.T.S.



- NOTES:
- SEE PLAN FOR BOLLARD LOCATIONS.
  - BOLLARD FOUNDATION CONCRETE TO BE 4000 PSI MIN.
  - EXACT LOCATION TO BE DETERMINED IN THE FIELD AND APPROVED BY TOWN BEFORE INSTALLATION.
  - 6 INCH GALVANIZED PIPE PROVIDED BY MISC. METALS CONTRACTOR. INSTALLATION AND CONCRETE BY GENERAL CONTRACTOR.

8 EXTERIOR STEEL BOLLARD  
SCALE: N.T.S.



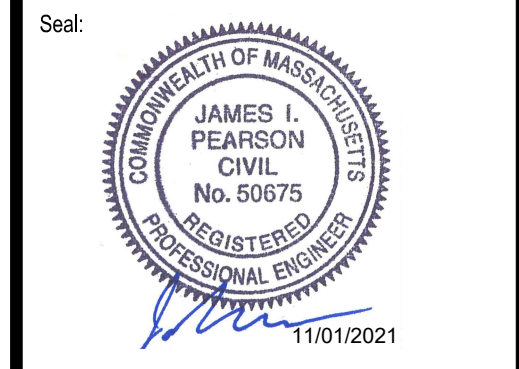
WHERE CONDITIONS DO NOT ALLOW, OMIT BARS & PROVIDE 3/4 INCH REDWOOD BOARD WITH A PAVEMENT HEADER.

9 PROPOSED SIDEWALK AT EXISTING CONCRETE  
SCALE: N.T.S.

Consultants:

Revisions:

No.	Date	Description
1	08/24/21	PER REVISED LAYOUT
2	11/01/21	PER PEER REVIEW



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Scale: AS SHOWN  
Date: MAY 13, 2021  
Drawn By: EJA  
Reviewed By: CB  
Approved By: JIP  
W&S Project No.: ENG20-0865  
W&S File No.:

Drawing Title:  
SITE  
CONSTRUCTION  
DETAILS

Sheet Number:  
C503

Revisions:

No.	Date	Description
1	08/24/21	PER REVISED LAYOUT
2	11/01/21	PER PEER REVIEW

Scale: AS SHOWN  
Date: MAY 13, 2021  
Drawn By: EJA  
Reviewed By: CB  
Approved By: JIP

Seal: JAMES I. PEARSON CIVIL No. 50575 REGISTERED PROFESSIONAL ENGINEER 11/01/2021

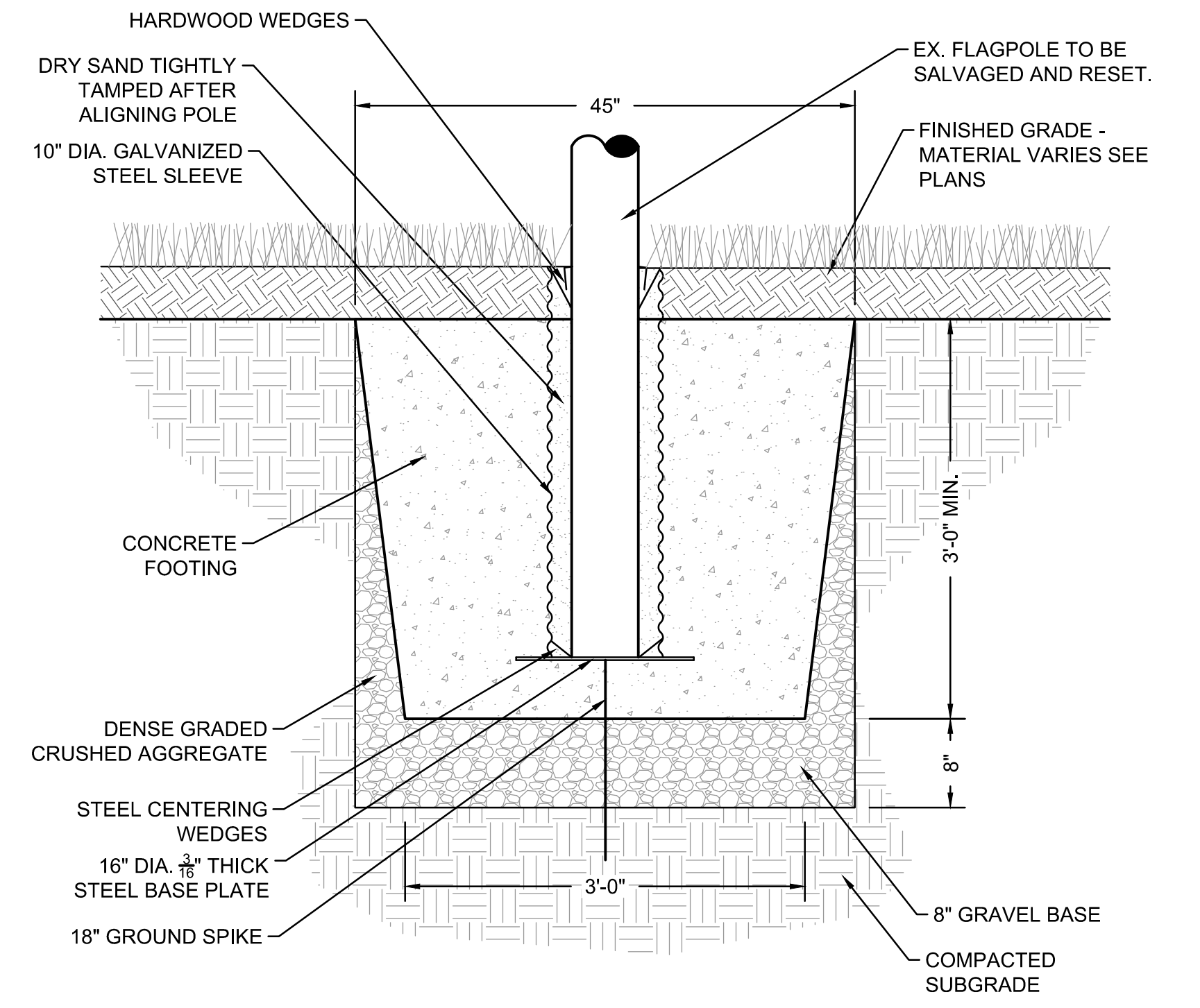
Issued For: PERMITTING ONLY NOT FOR CONSTRUCTION

Scale: AS SHOWN  
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Approved By: JIP

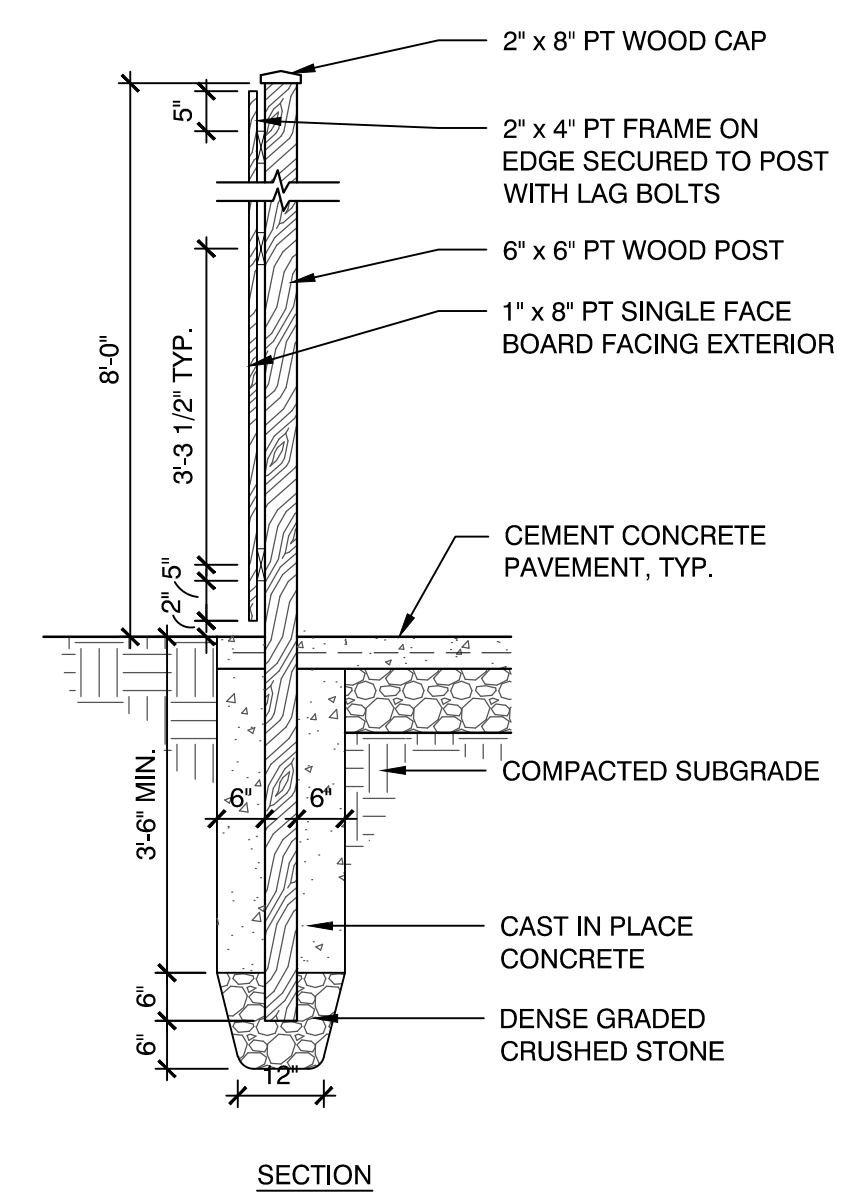
W&S Project No.: ENG20-0865  
W&S File No.:

Drawing Title: SITE CONSTRUCTION DETAILS

Sheet Number: C504

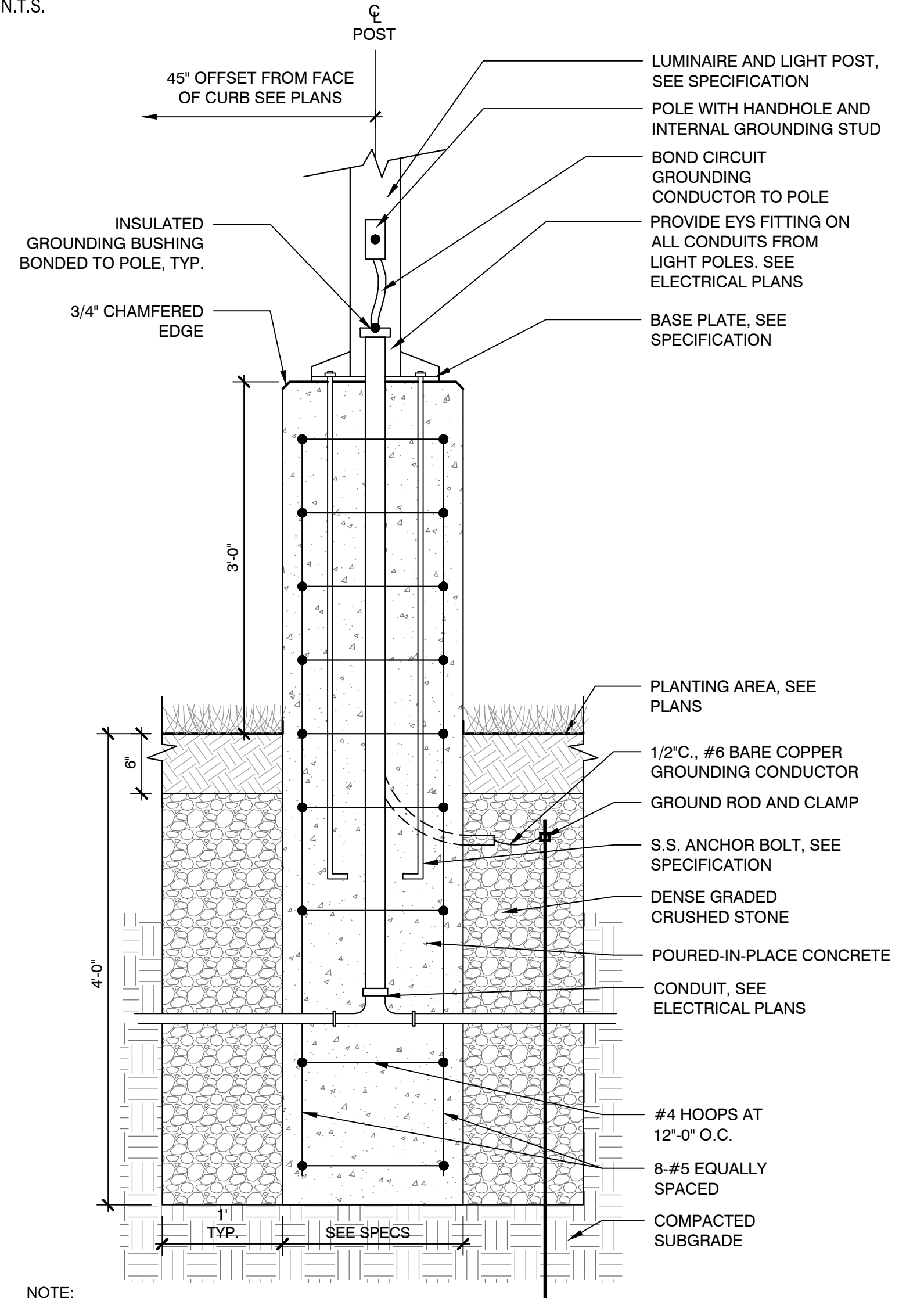


3 FLAGPOLE FOUNDATION  
SCALE: N.T.S.



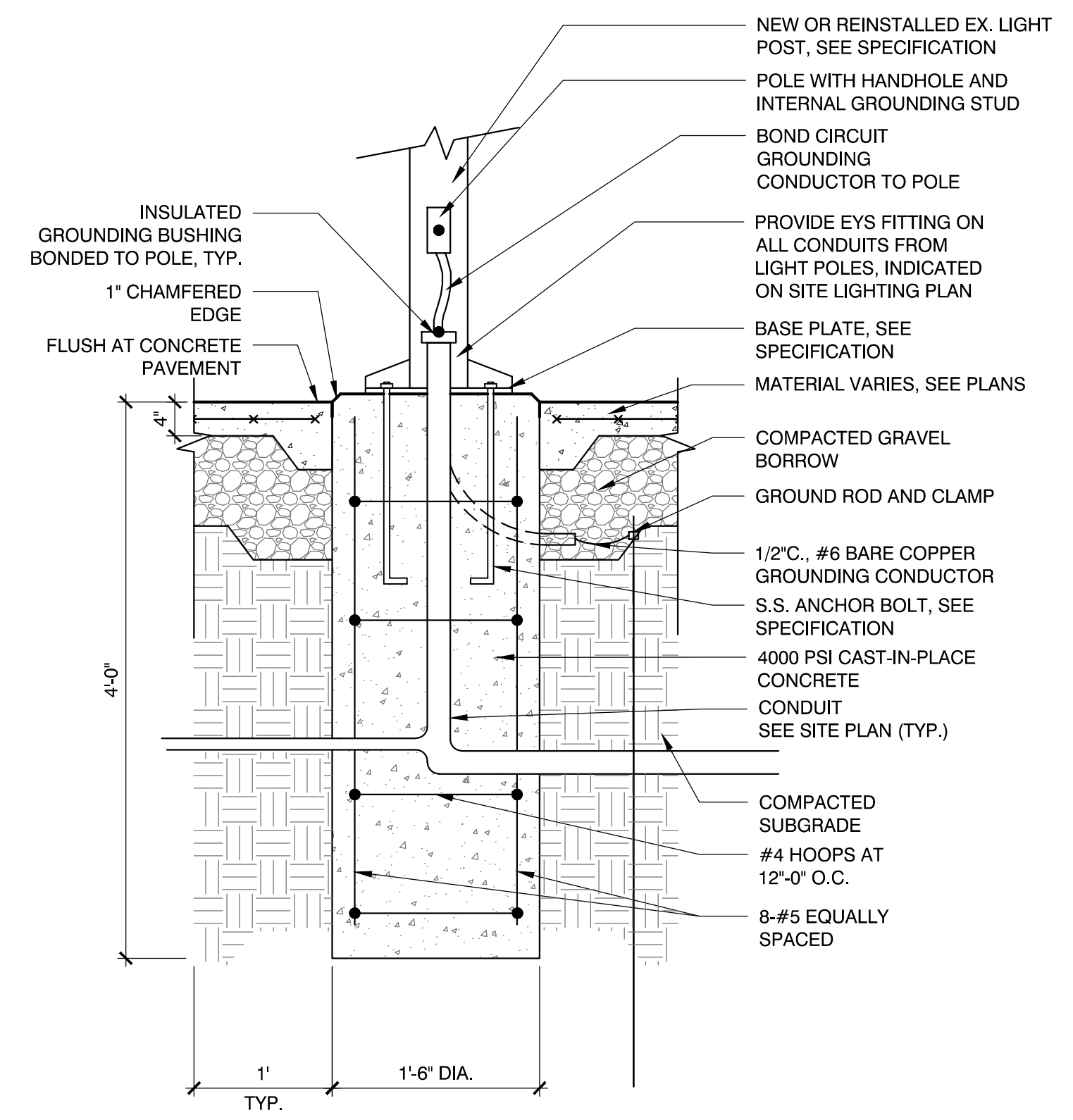
2 WOOD SCREENING FENCE AT DUMPSTER ENCLOSURE  
SCALE: N.T.S.

- NOTES:
1. ALL MATERIALS SHALL BE PRESSURE TREATED (PT) TIMBER UNLESS OTHERWISE NOTED.
  2. ALL HARDWARE AND FASTENERS SHALL BE GALVANIZED.
  3. INSTALL CANE BOLT DROP BAR ON EACH GATE. INSTALL LATCH AND GATE PULL.
  4. PROVIDE DIAGONAL ANGLE BRACE FOR EACH LEAF. (COLOR: BLACK)



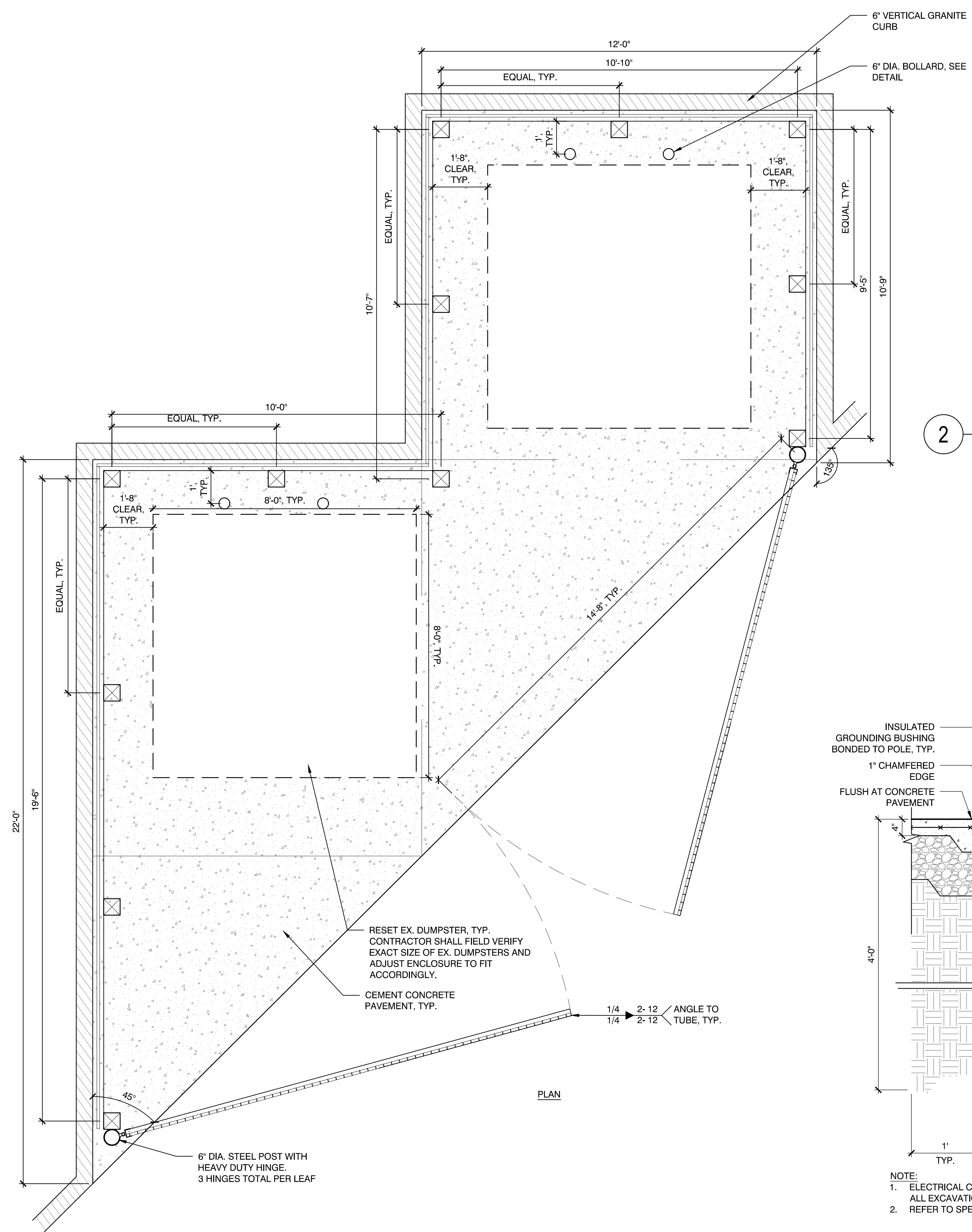
5 PEDESTRIAN LIGHT POLE FOUNDATION (RAISED BASE)  
SCALE: N.T.S.

- NOTE:
1. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR, ALL EXCAVATION, BACK & CONCRETE SHALL BE BY GENERAL CONTRACTOR.
  2. REFER TO SPECIFICATIONS FOR MATERIALS.



4 PEDESTRIAN LIGHT POLE FOUNDATION  
SCALE: N.T.S.

- NOTE:
1. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR, ALL EXCAVATION, BACKFILL, & CONCRETE SHALL BE BY GENERAL CONTRACTOR.
  2. REFER TO SPECIFICATIONS FOR MATERIALS.



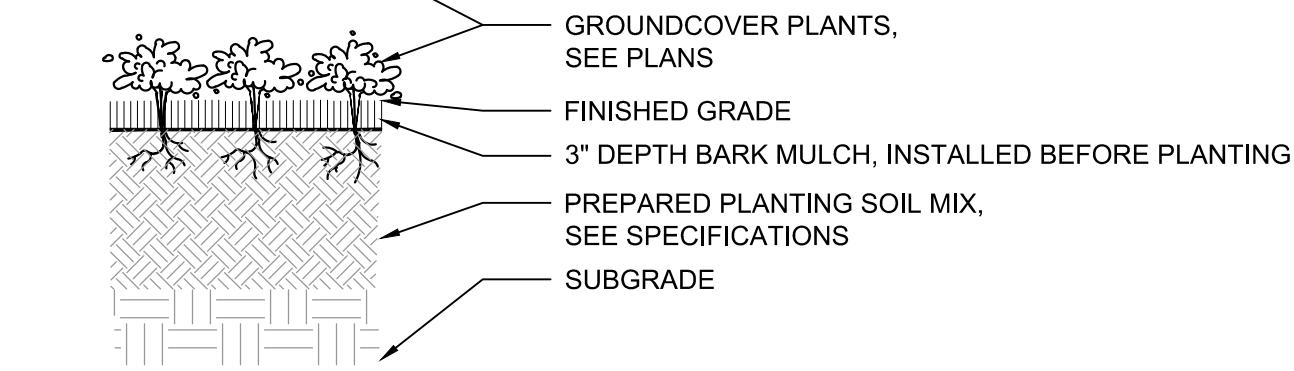
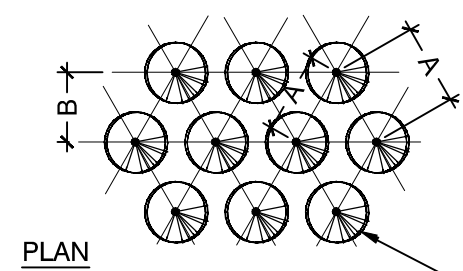
1 DUMPSTER ENCLOSURE  
SCALE: N.T.S.

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 Plot Title: SITE CONSTRUCTION DETAILS  
 Plot Sheet: C504  
 Plot Date: 11/01/21 10:58 AM  
 Plot User: jip



GROUND COVER SPACING TABLE

PLANT SPACING "A"	PLANT SPACING "B"	PLANTS	AREA UNIT
6" O.C.	5.2'	4.61	1 SQ. FT.
8" O.C.	6.93'	2.6	1 SQ. FT.
10" O.C.	8.66'	1.66	1 SQ. FT.
12" O.C.	10.4'	1.15	1 SQ. FT.

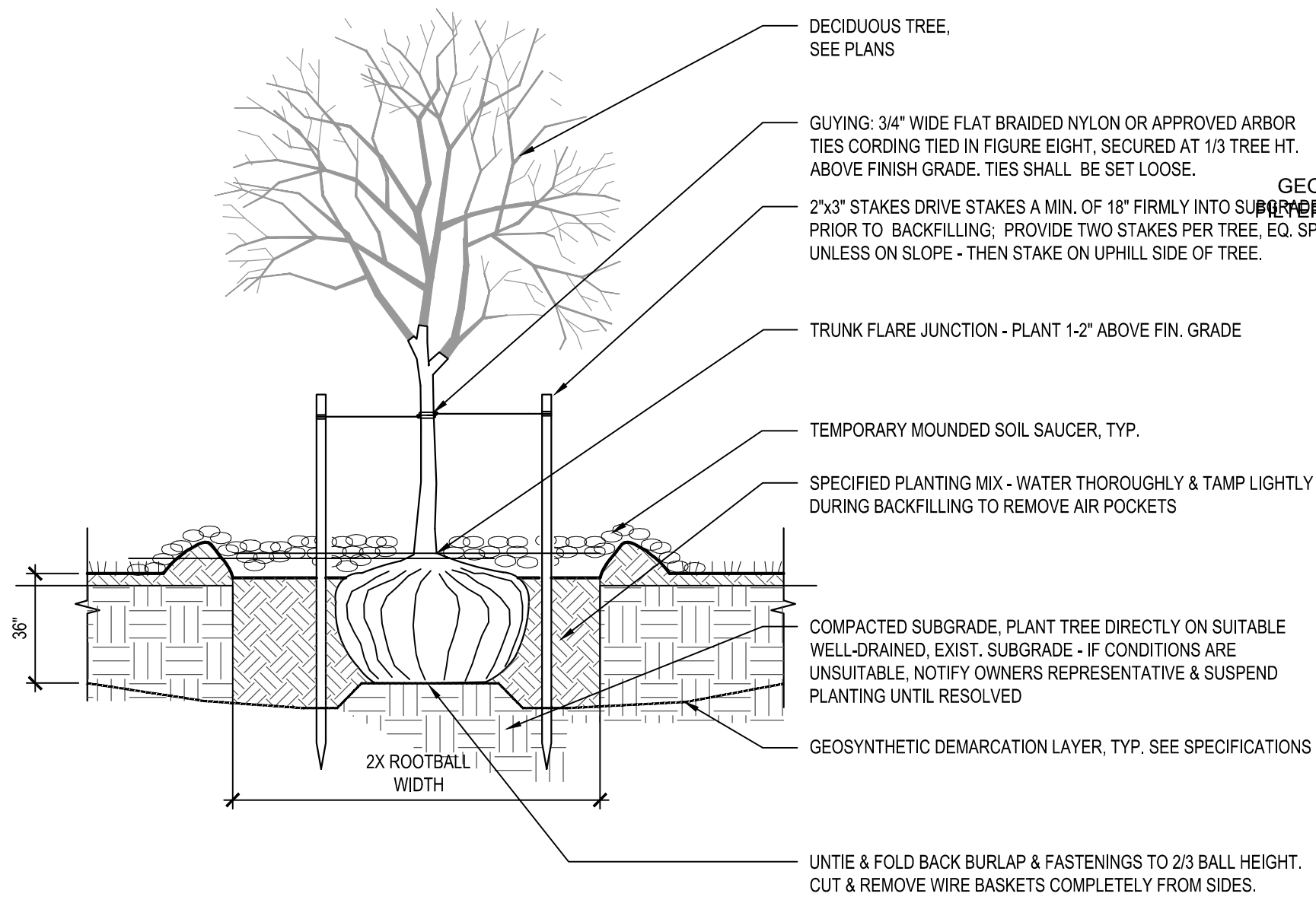
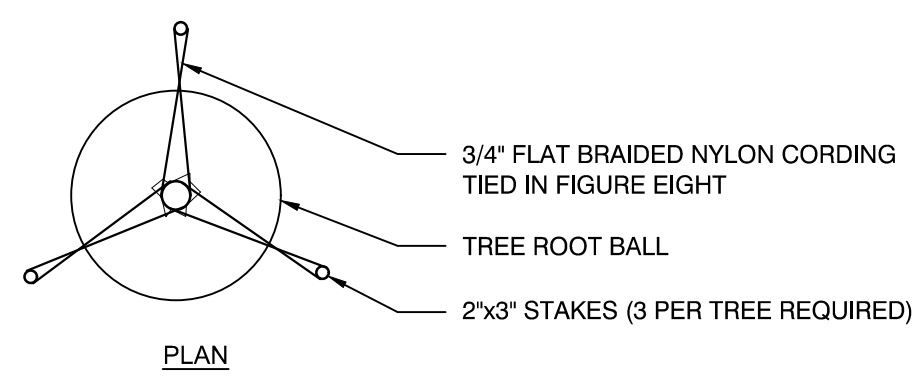


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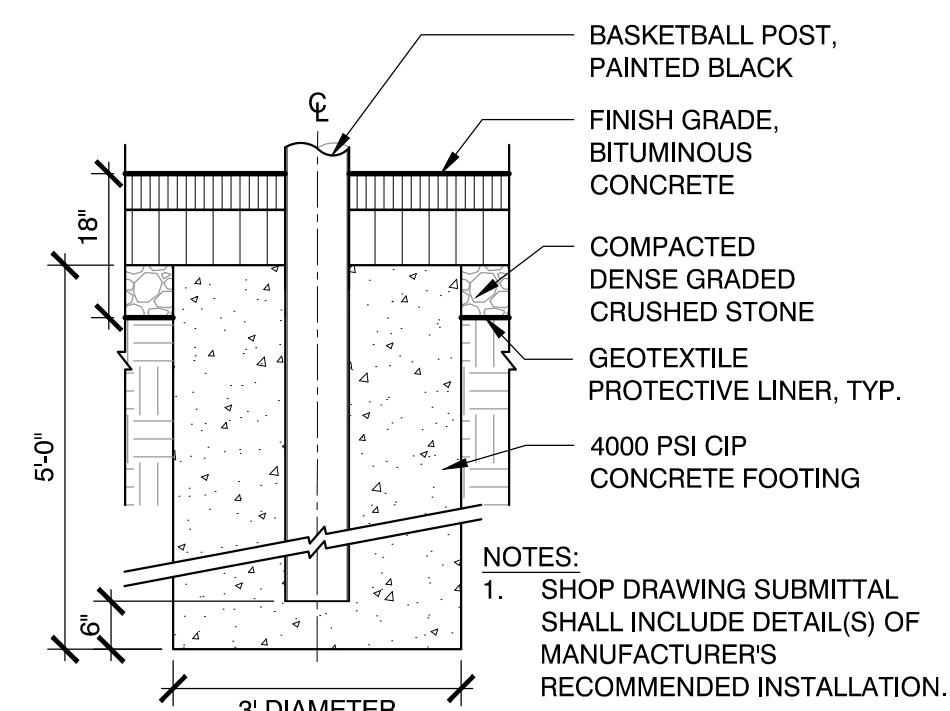
NOTES:

1. ALL GROUNDCOVERS TO BE PLANTED IN TRIANGULAR PATTERN. SEE PLANTING SCHEDULE FOR SPACING.
2. JUTE EROSION CONTROL MAT TO BE USED ON ALL SLOPES 3:1 OR GREATER. SEE SPECIFICATIONS.

1 GROUND COVER PLANTING  
SCALE: N.T.S.



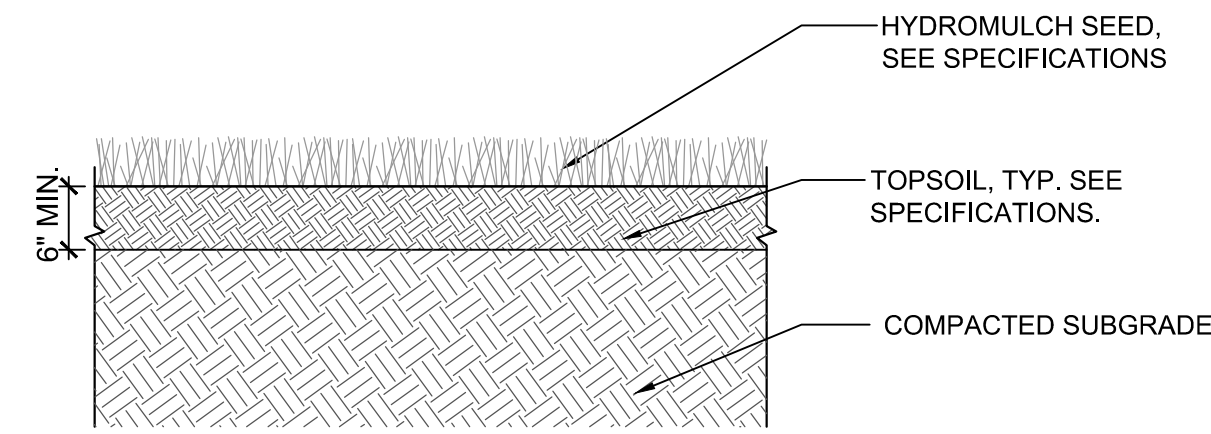
4 TREE PLANTING AND STAKING  
SCALE: N.T.S.



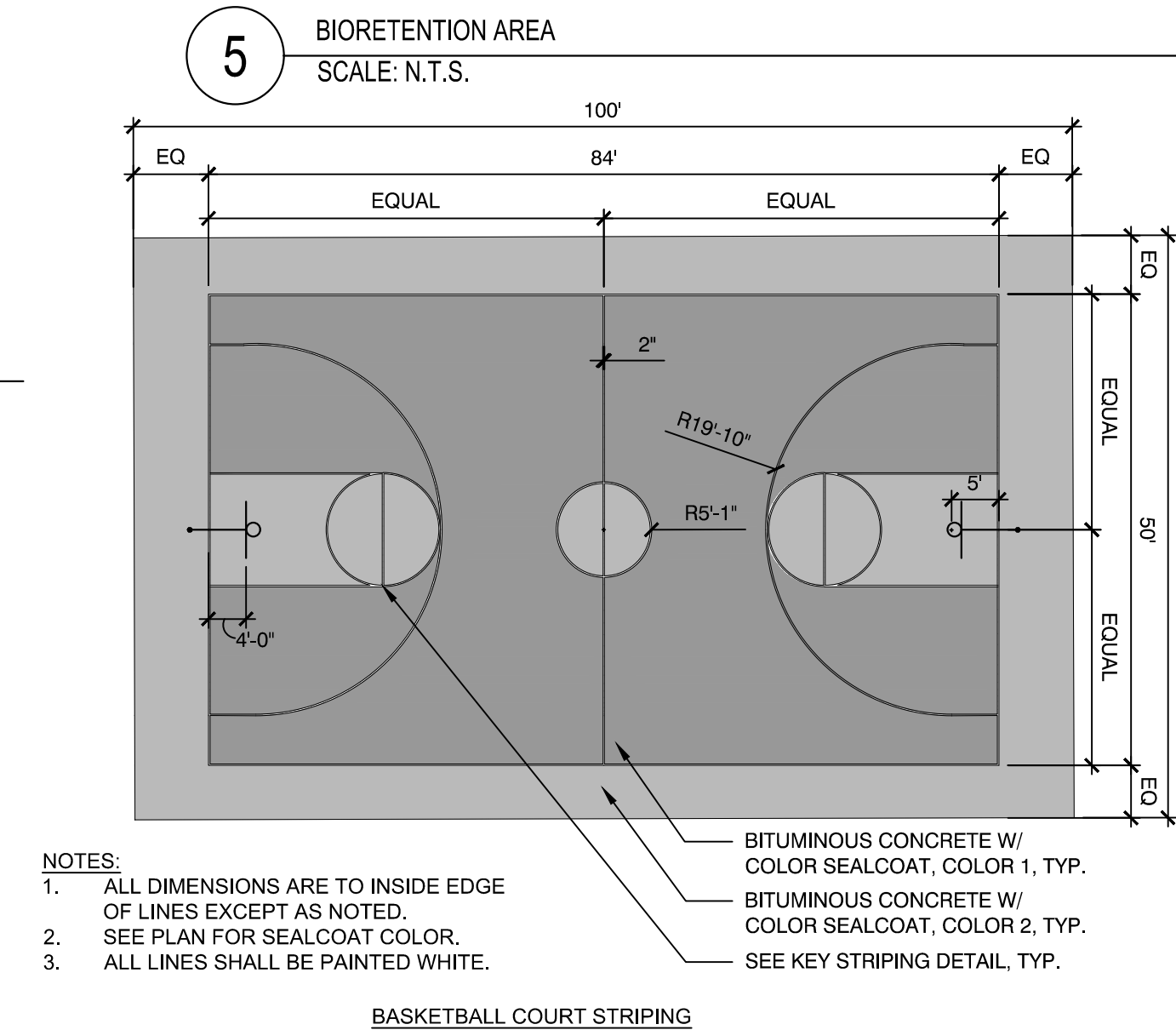
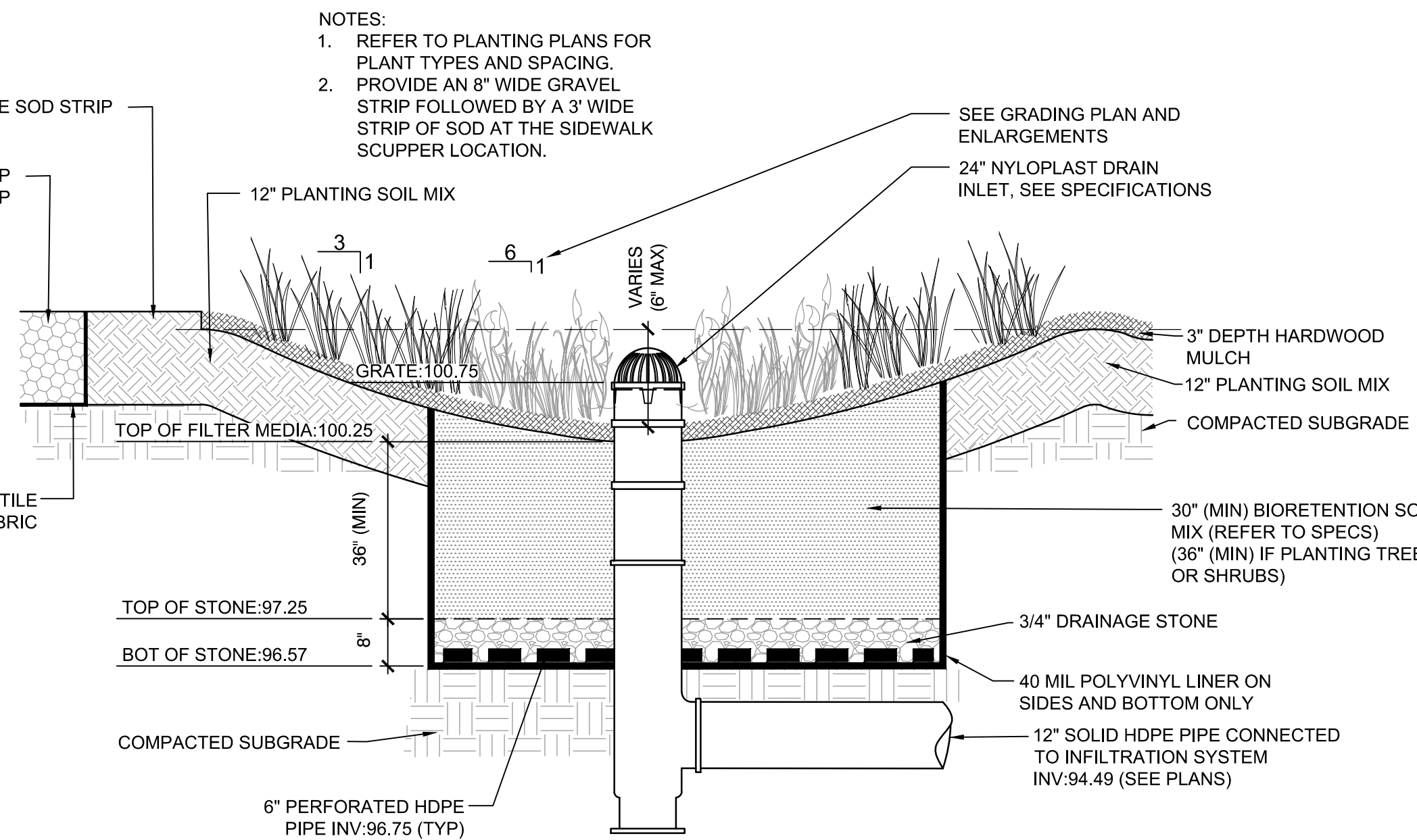
- NOTES:
1. SHOP DRAWING SUBMITTAL SHALL INCLUDE DETAIL(S) OF MANUFACTURER'S RECOMMENDED INSTALLATION.

7 BASKETBALL POST FOOTING (PLACEHOLDER)  
SCALE: N.T.S.

2 LOAM AND SEED  
SCALE: N.T.S.



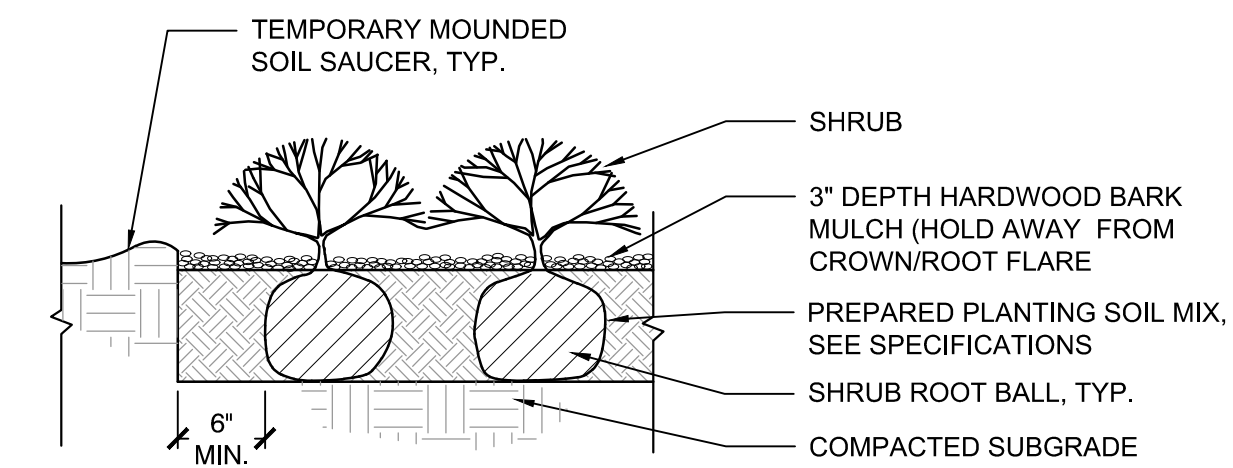
5 BIORETENTION AREA  
SCALE: N.T.S.



- NOTES:
1. ALL DIMENSIONS ARE TO INSIDE EDGE OF LINES EXCEPT AS NOTED.
  2. SEE PLAN FOR SEALCOAT COLOR.
  3. ALL LINES SHALL BE PAINTED WHITE.

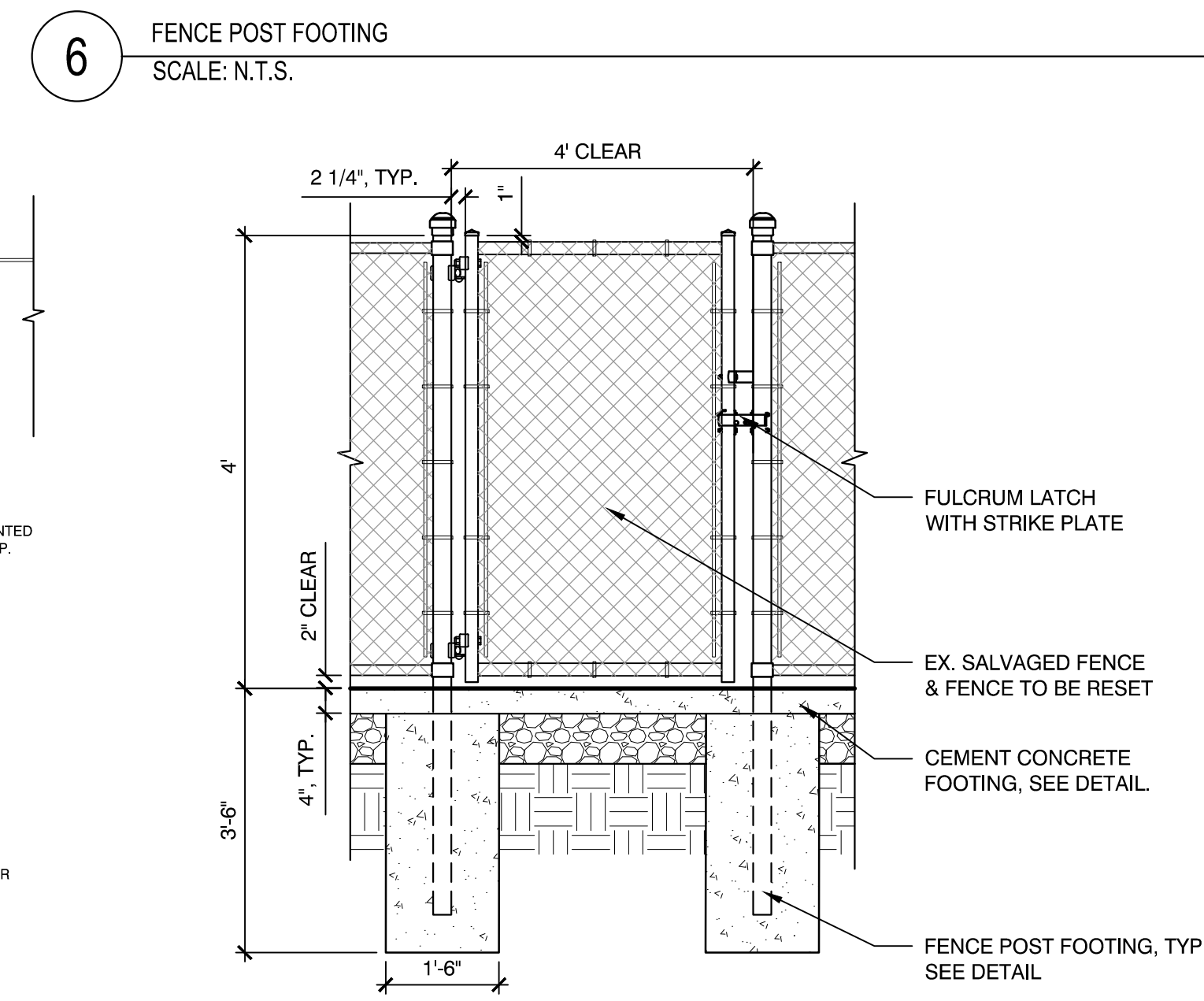
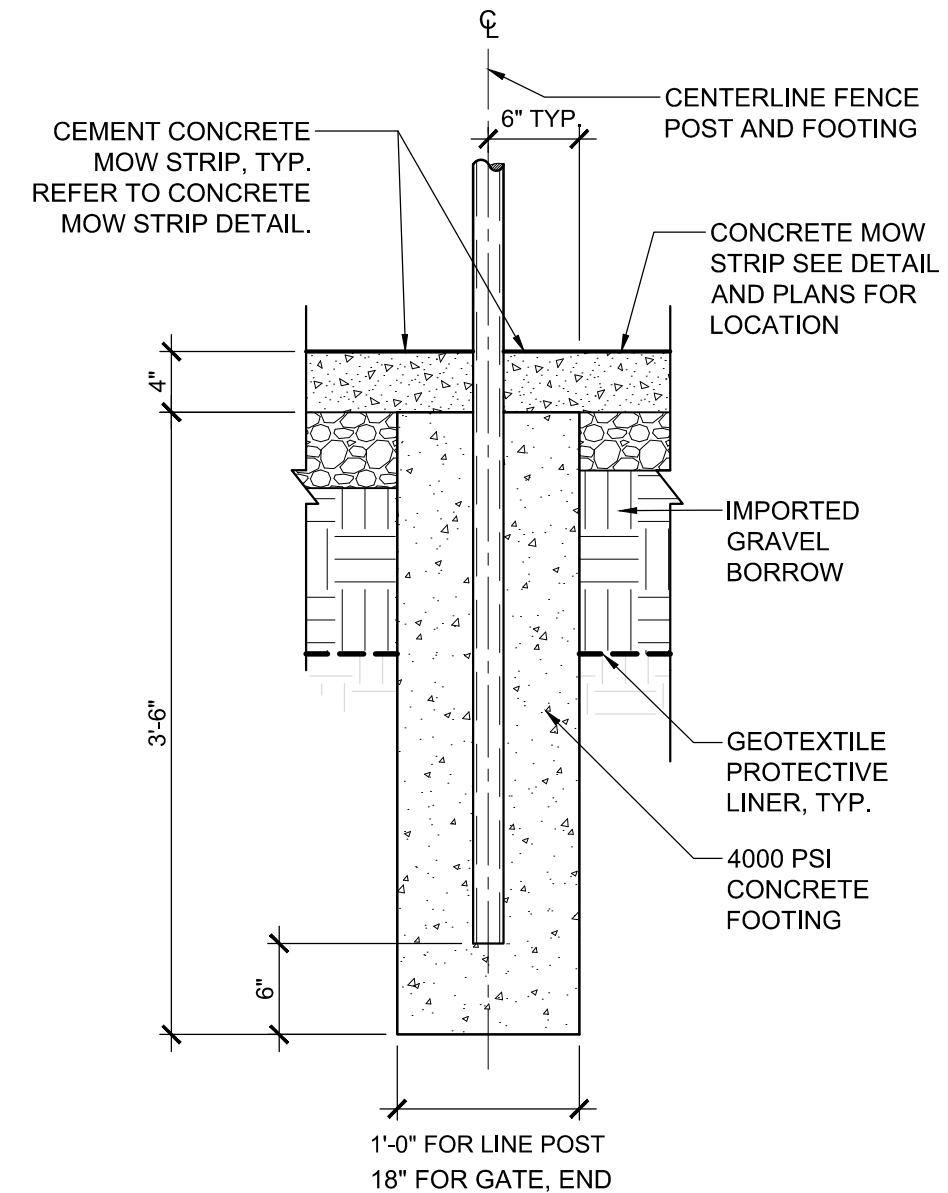
8 BASKETBALL COURT LAYOUT (PLACEHOLDER)  
SCALE: N.T.S.

3 SHRUB PLANTING  
SCALE: N.T.S.



- NOTE:
1. ALL MULCH MUST BE DARK IN COLOR. PROVIDE SAMPLE PRIOR TO INSTALLATION TO BE APPROVED BY OWNER'S REPRESENTATIVE.

6 FENCE POST FOOTING  
SCALE: N.T.S.



9 GATE POST AND FOOTING  
SCALE: N.T.S.

Project:  
BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT

HARRY LEE COLE SCHOOL  
26 AND 28 MIDDLETON ROAD  
BOXFORD, MA 01921

Weston & Sampson Engineers, Inc.  
55 Walkers Brook Drive, Suite 100  
Reading, MA 01867  
978.532.1900 800.SAMPSON  
www.westonandsampson.com

Consultants:

Revisions:

No.	Date	Description
1	08/24/21	PER REVISED LAYOUT
2	11/01/21	PER PEER REVIEW

Seal:  
COMMONWEALTH OF MASSACHUSETTS  
JAMES I. PEARSON  
CIVIL  
No. 50675  
REGISTERED PROFESSIONAL ENGINEER  
11/01/2021

Issued For:  
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W&S File No.:

Drawing Title:  
SITE CONSTRUCTION DETAILS

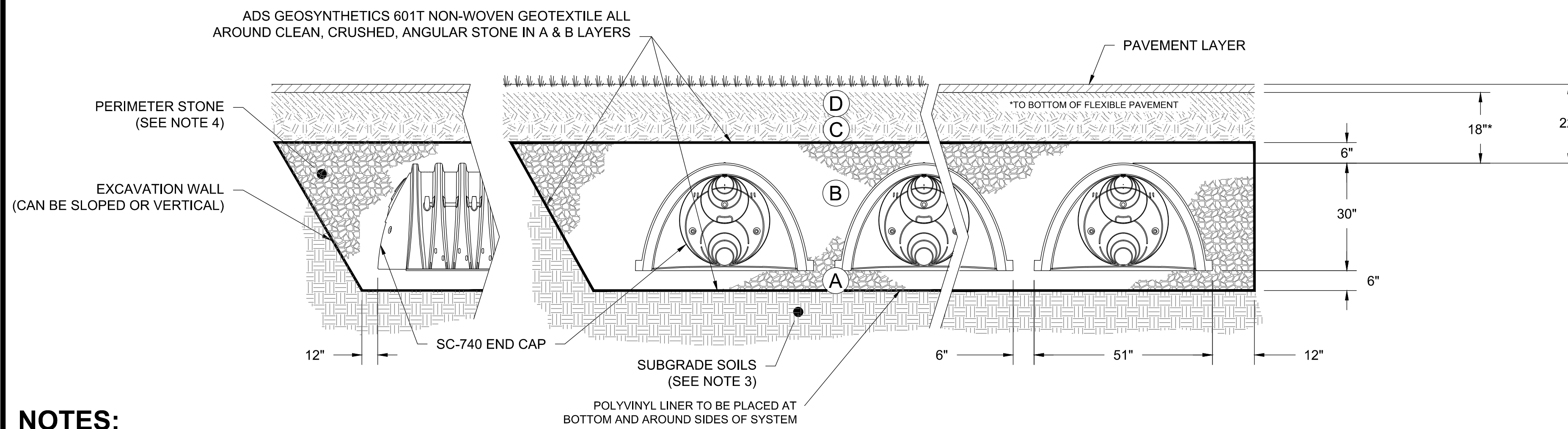
Sheet Number:  
C505

## ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	<b>FINAL FILL:</b> FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	<b>INITIAL FILL:</b> FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2-4, A-3  OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	<b>EMBEDMENT STONE:</b> FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	<b>FOUNDATION STONE:</b> FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

**PLEASE NOTE:**

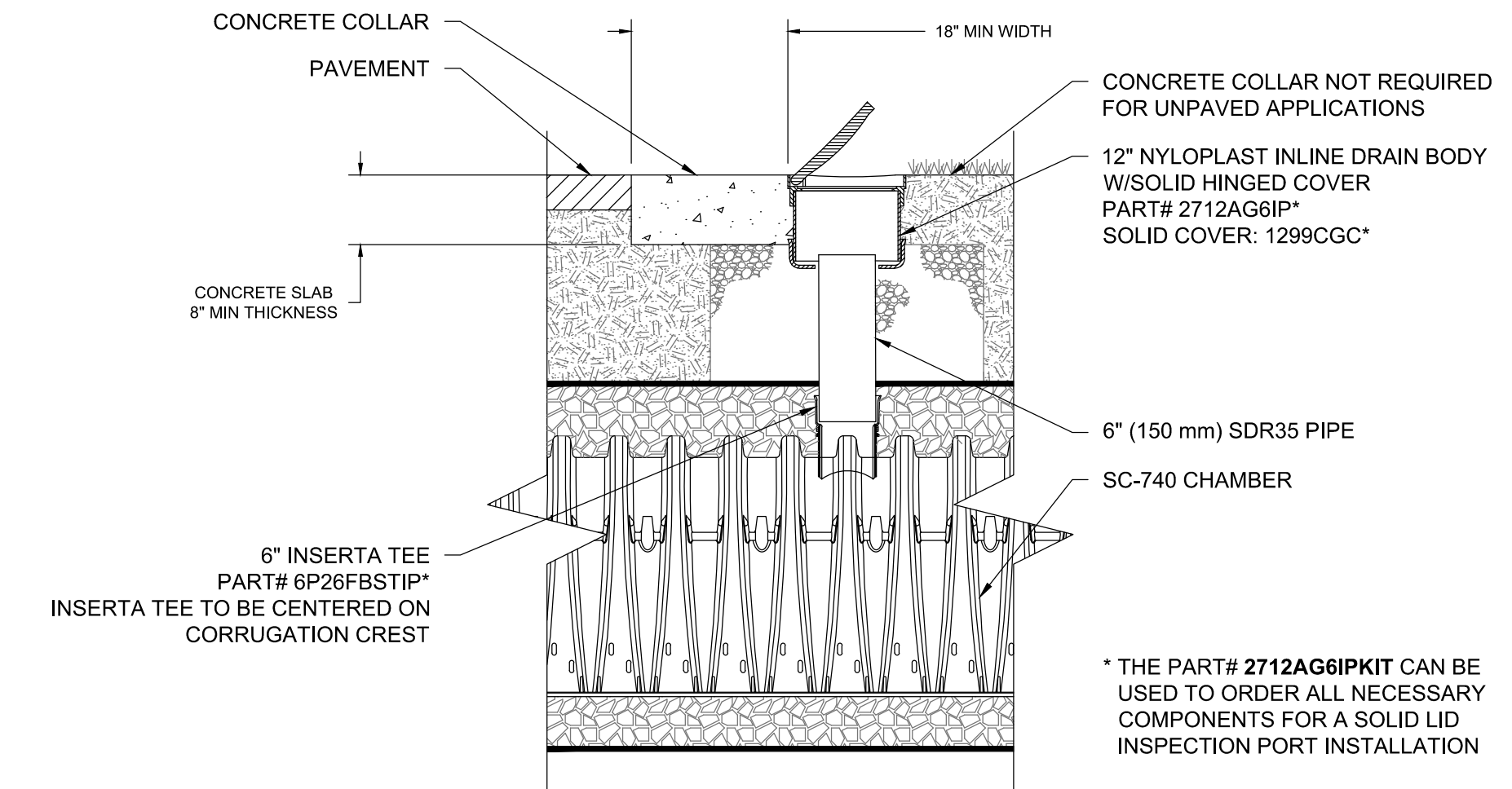
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



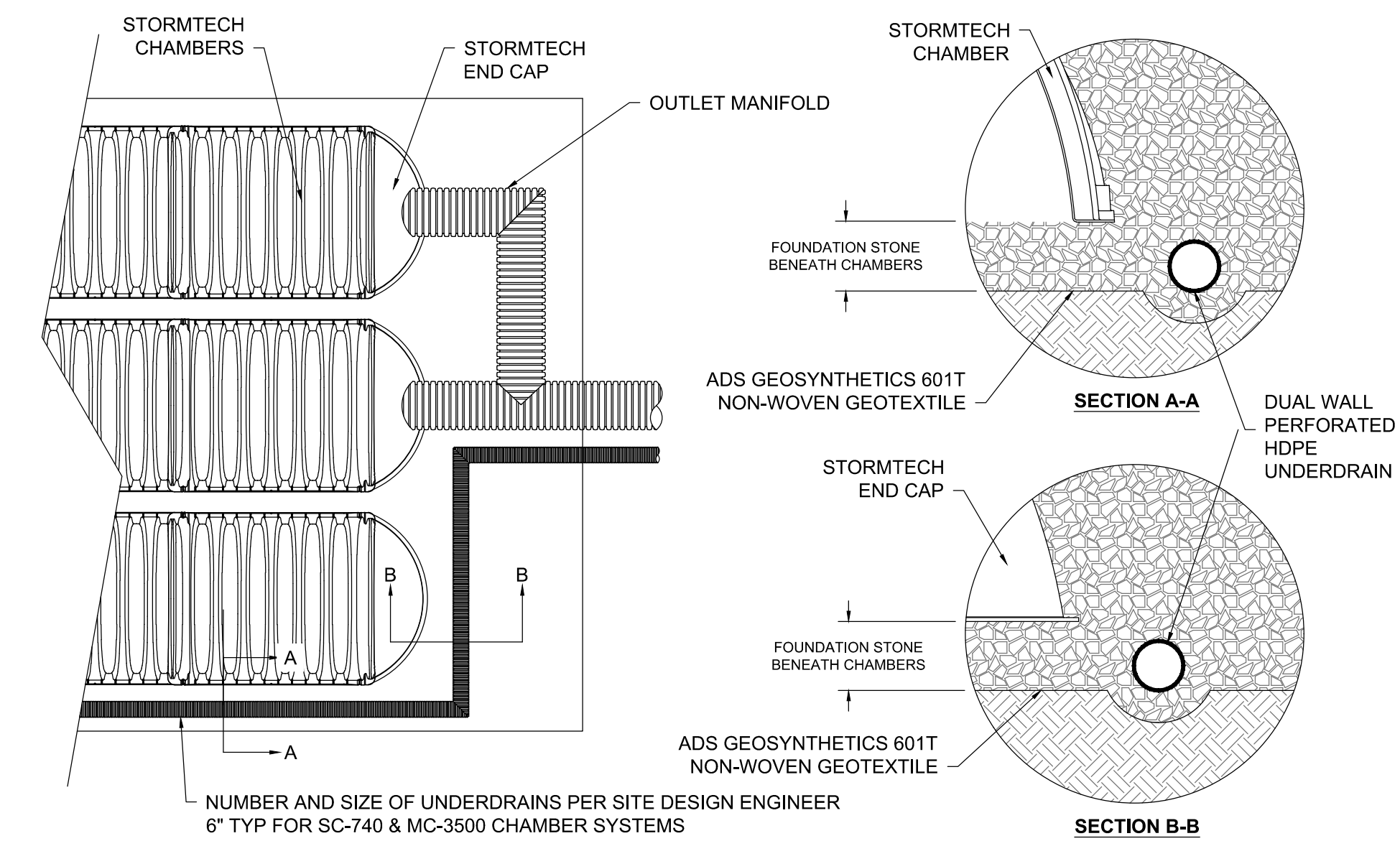
**NOTES:**

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- DETENTION SYSTEM IS TO BE SEALED AND LINED WITH A POLYVINYL LINER ALONG THE SIDES AND THE BOTTOM OF THE SYSTEM.

**1** DETENTION SYSTEM (DS-1) SUBSURFACE CHAMBER SYSTEM DETAILS  
SCALE: NTS



**2** STORMWATER CHAMBER INSPECTION PORT  
SCALE: NTS



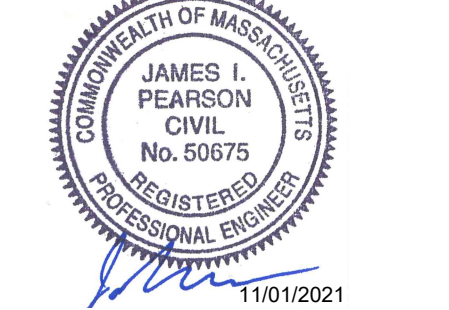
**3** SC-740 UNDERDRAIN  
SCALE: NTS

Consultants:


Revisions:

No.	Date	Description
1	08/24/21	PER REVISED LAYOUT
2	11/01/21	PER PEER REVIEW

Seal:




Issued For:

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Scale: AS SHOWN

Date: MAY 13, 2021

Drawn By: EJA

Reviewed By: CB

Approved By: JIP

W&S Project No.: ENG20-0865

W&S File No.:

Drawing Title:

**SITE CONSTRUCTION DETAILS**

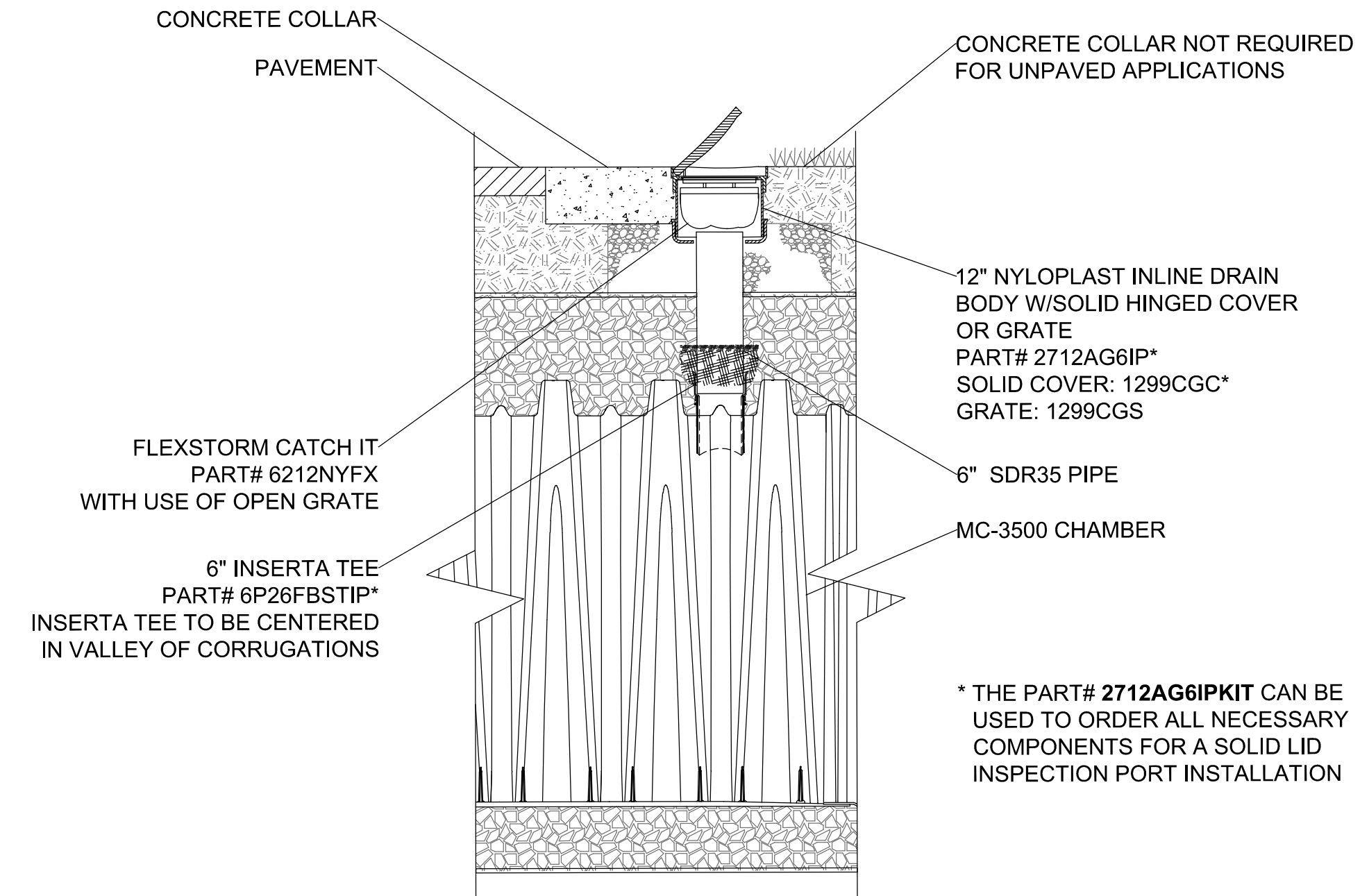
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**C506**

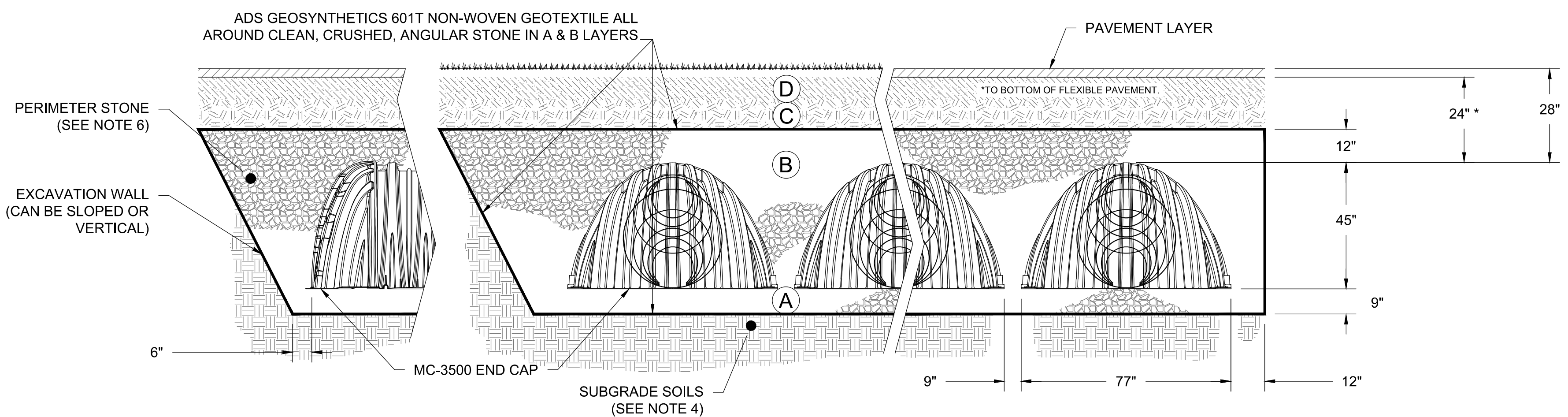
## ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145* A-1, A-2-4, A-3  OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43* 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43* 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

PLEASE NOTE:  
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".  
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.  
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



2 STORMWATER CHAMBER INSPECTION PORT  
SCALE: NTS



**NOTES:**

1. MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
5. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.

1 INFILTRATION SYSTEM (IS-1) SUBSURFACE CHAMBER SYSTEM DETAILS  
SCALE: NTS

Project: BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT

HARRY LEE COLE SCHOOL  
26 AND 28 MIDDLETON ROAD  
BOXFORD, MA 01921

**Weston & Sampson**

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55 Walkers Brook Drive, Suite 100  
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Revisions:

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1	08/24/21	PER REVISED LAYOUT
2	11/01/21	PER PEER REVIEW

Seal:

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 Date: MAY 13, 2021  
 Drawn By: EJA  
 Reviewed By: CB  
 Approved By: JIP

W&S Project No.: ENG20-0865  
 W&S File No.:

Drawing Title:

# SITE CONSTRUCTION DETAILS

Sheet Number:

# C507

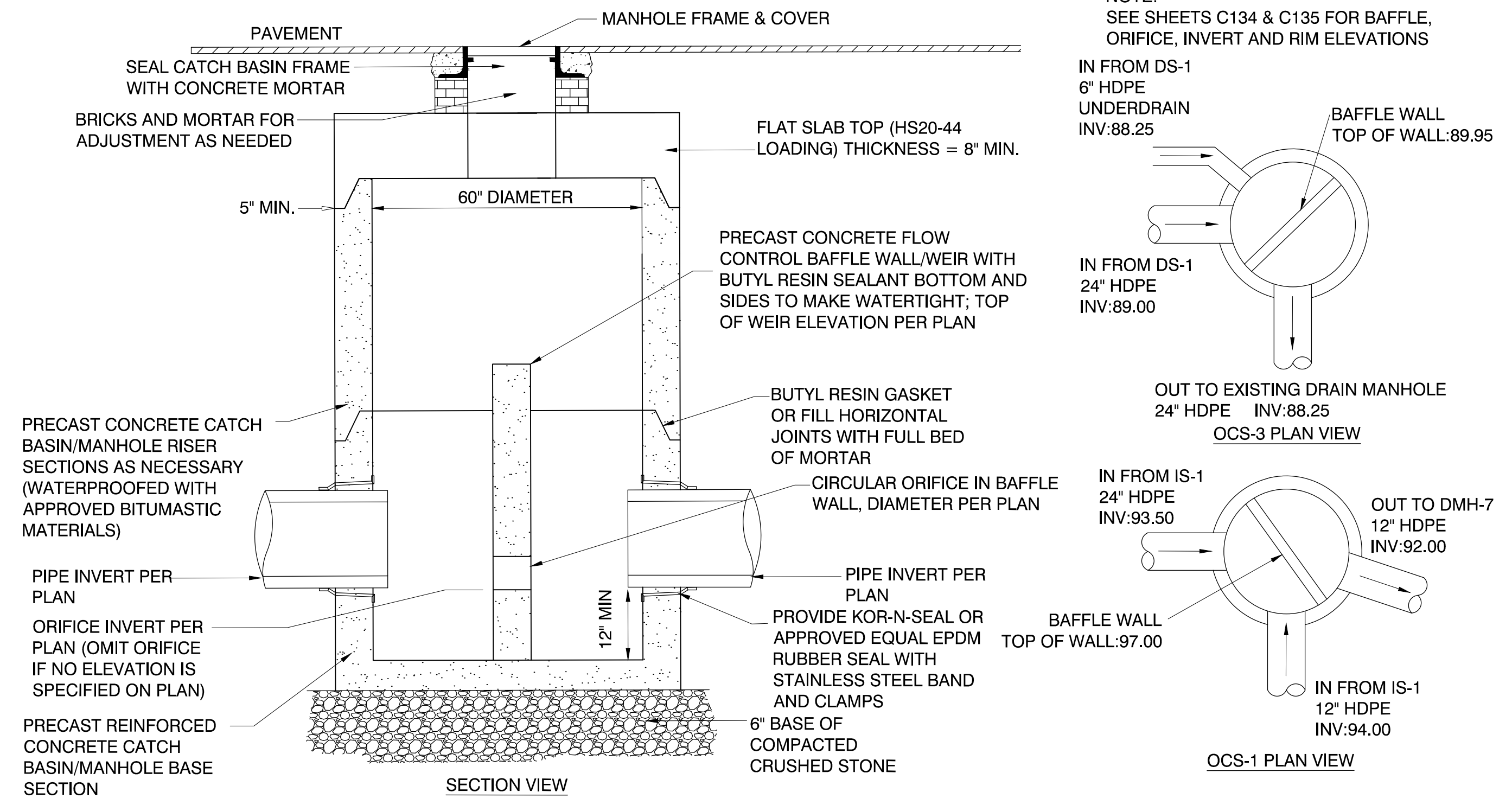
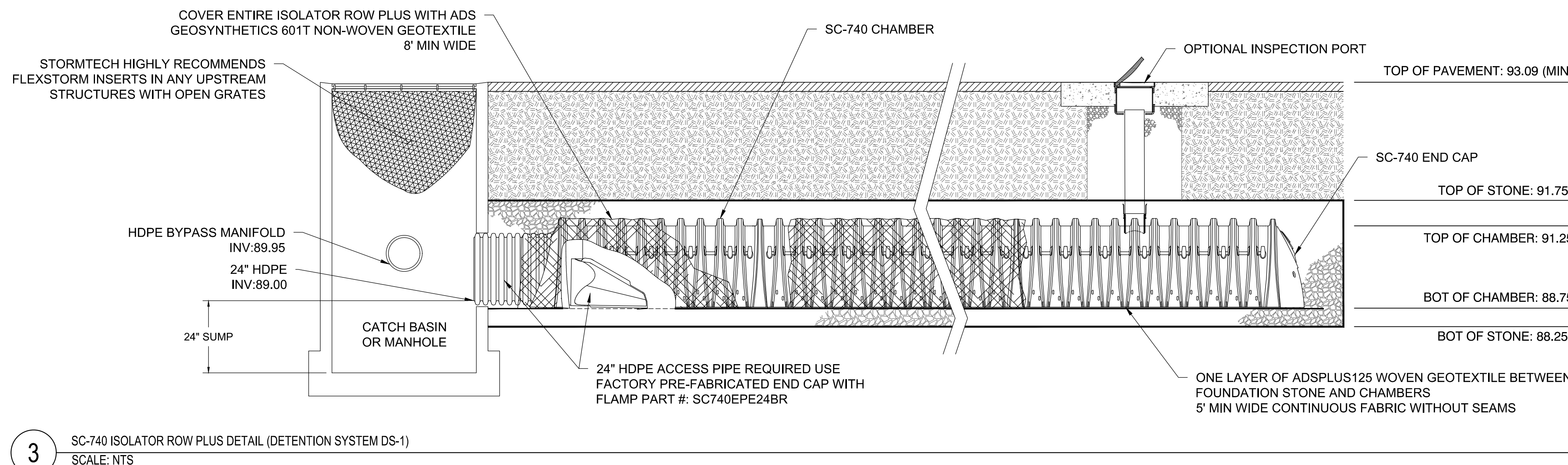
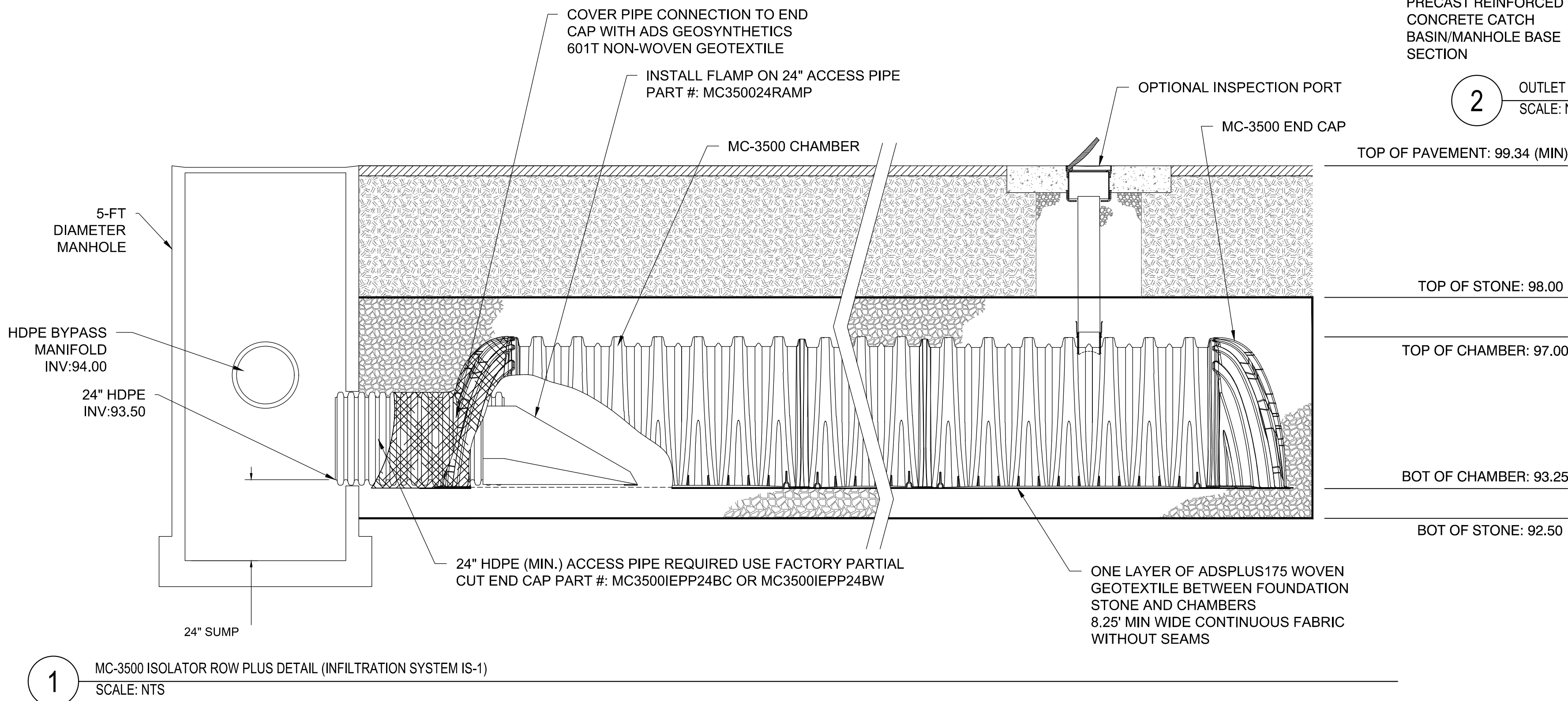
Rev. 1.8 Date: 10/24/2019

**INSPECTION & MAINTENANCE**

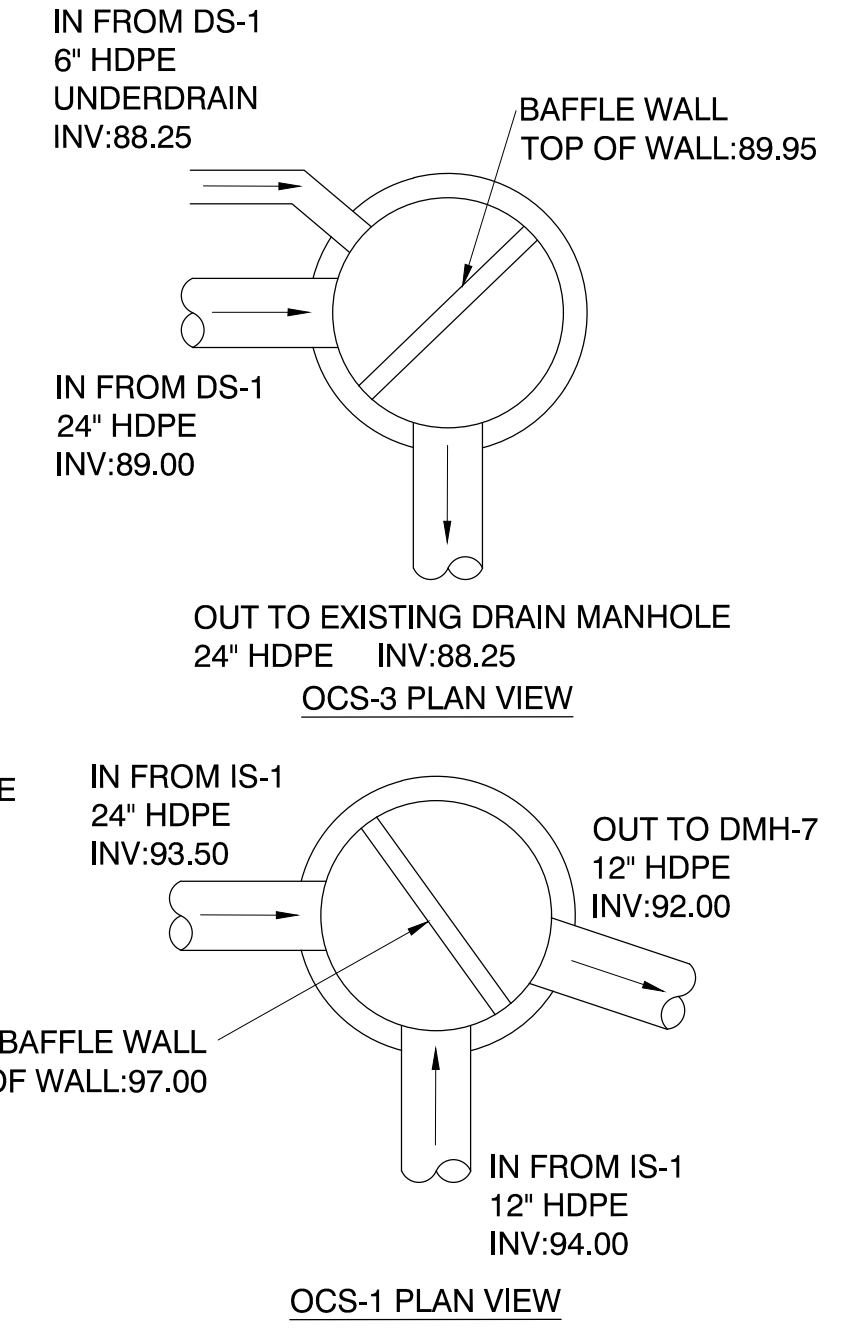
- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
    - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
    - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
    - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
    - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
    - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
  - B. ALL ISOLATOR PLUS ROWS
    - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
    - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
      - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
      - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
    - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
  - B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
  - C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

**NOTES**

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



NOTE:  
SEE SHEETS C134 & C135 FOR BAFFLE,  
ORIFICE, INVERT AND RIM ELEVATIONS



Project:  
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SCHOOLS SITE  
RENOVATION PROJECT

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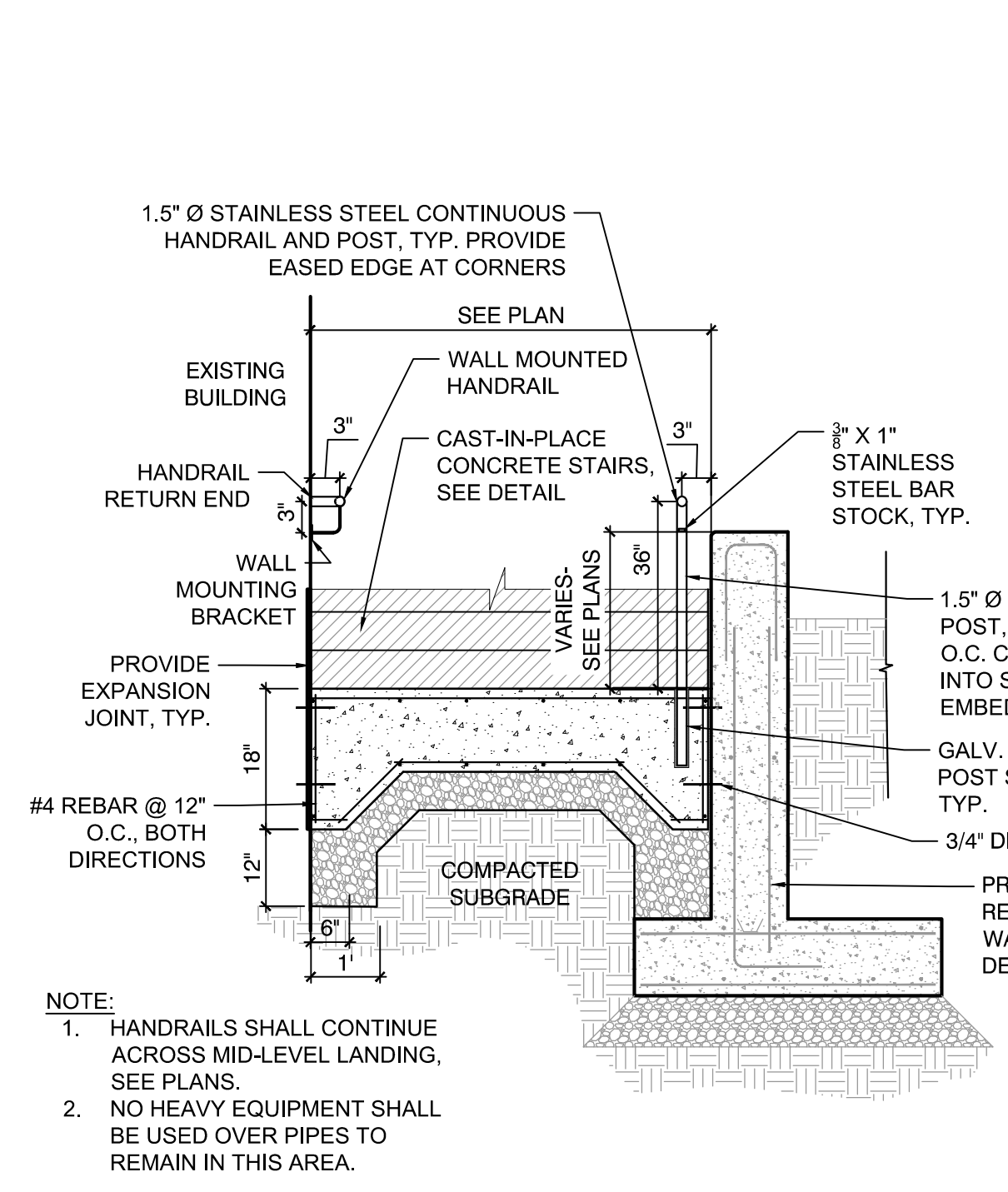
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**SITE  
CONSTRUCTION  
DETAILS**

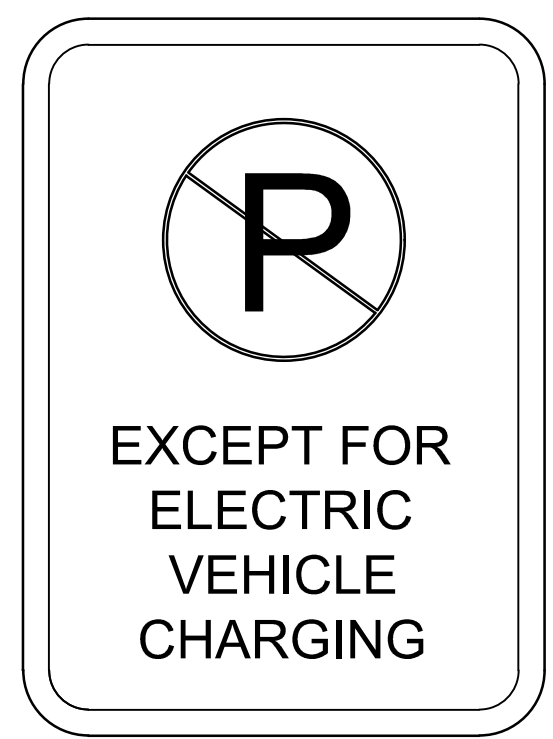
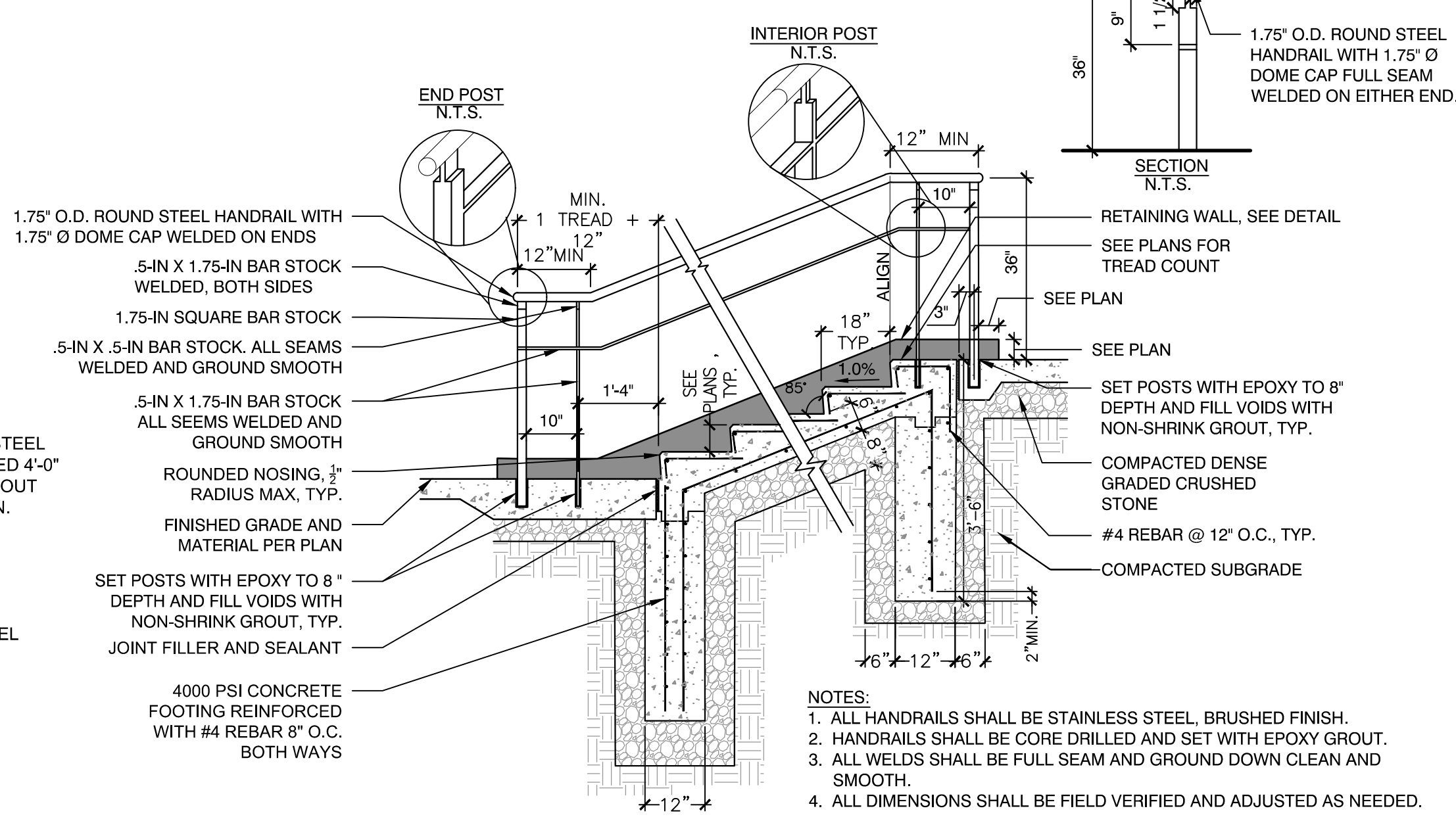
Sheet Number:  
**C508**

IDENTIFICATION NUMBER	TEXT	PANEL SIZE			NUMERALS & LETTERS				COLOR COMB.	NUMBER OF SIGNS REQUIRED	TOTAL AREA SQ. FT.	POST SIZE AND NUMBER REQUIRED	
		WIDTH	HEIGHT	CORNER RADII	BORDER WIDTH	MARGIN WIDTH	NUM. IN.	UPPER CASE					LOWER CASE
R1-1		30"	30"							WHITE ON RED	4	12.50	P5-1 1
R5-1		36"	36"							WHITE ON RED	5	18.00	P5-1 2
R6-1		36"	12"							BLACK ON WHITE	9	5.00	P5-1 2
R7-8		12"	18"							WHITE ON BLUE	5	4.50	P5-1 1
R7-8P		12"	18"							WHITE ON BLUE	4	4.50	P5-1 2

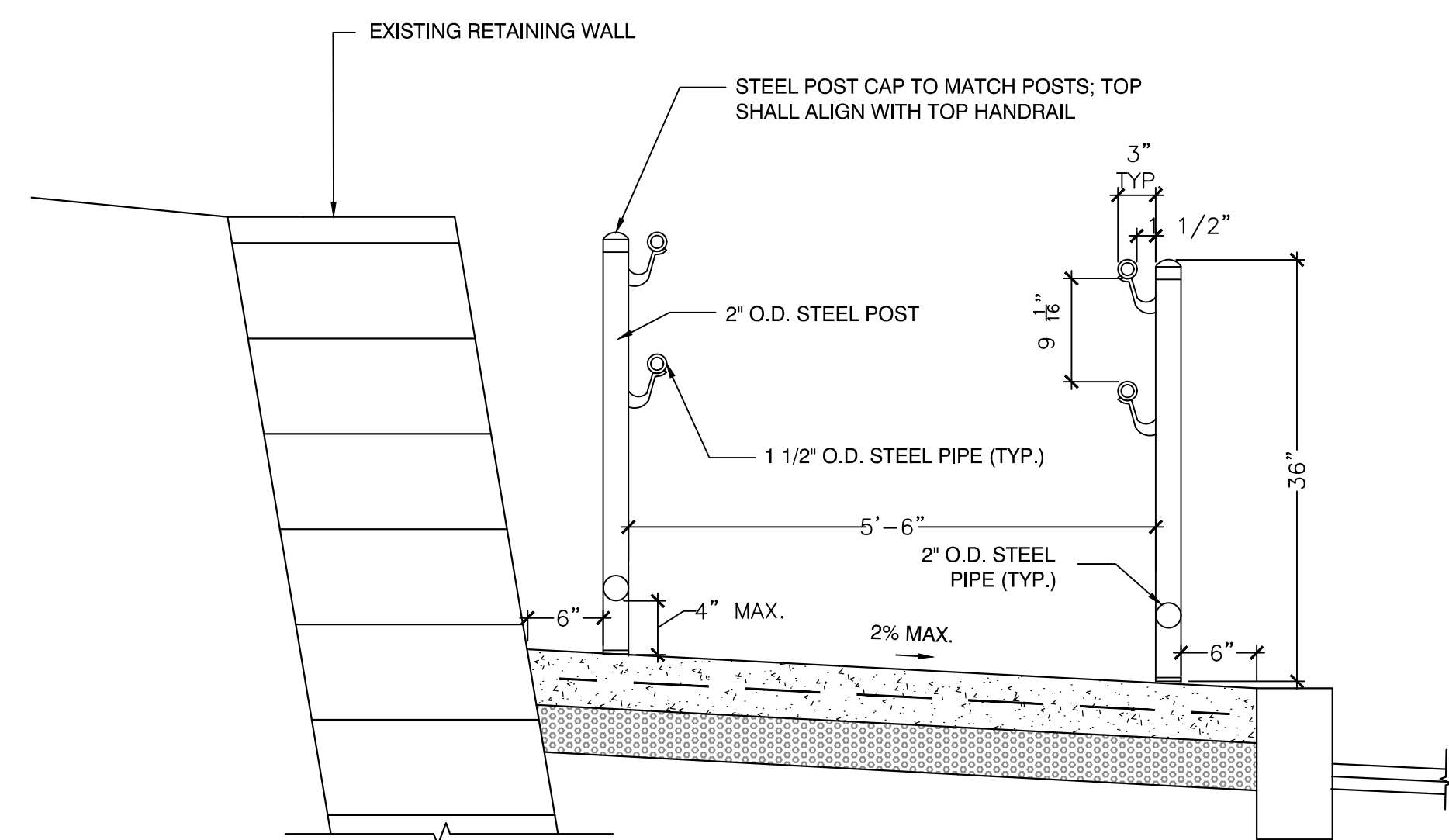
1 PERMANENT TRAFFIC SIGN SUMMARY  
SCALE: N.T.S.



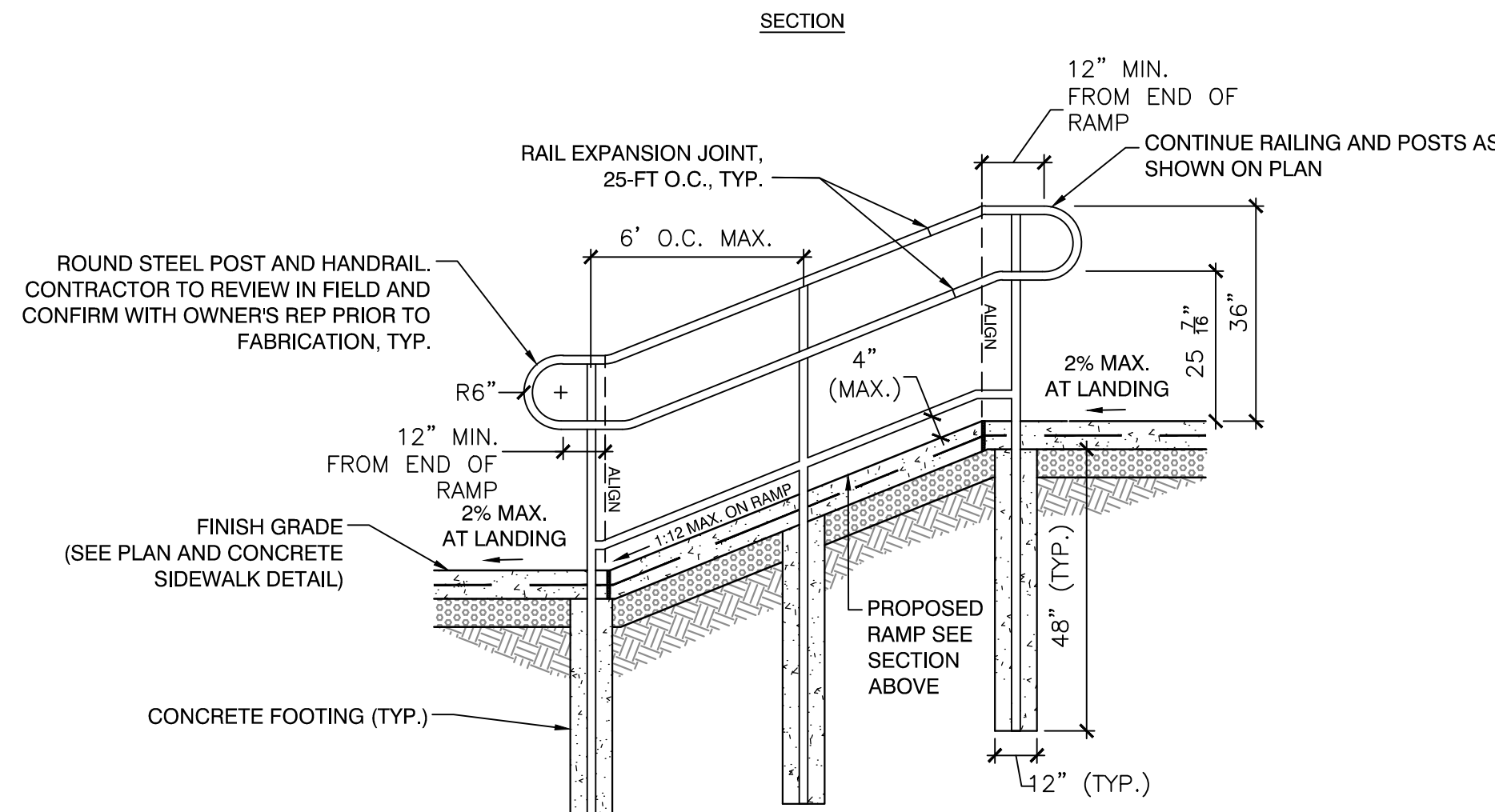
3 CONCRETE STEP DETAIL  
SCALE: N.T.S.



2 EV CHARGING STATION SIGN  
SCALE: N.T.S.



NOTES:  
1. VERTICAL POSTS SHALL BE SET @ 6' MAXIMUM, EVENLY SPACED ALONG THE HORIZONTAL RAIL, UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS.  
2. CONTRACTOR SHALL SUBMIT LARGE SCALE SHOP DRAWINGS OF HANDRAILS AND ALL NECESSARY HARDWARE PER SPECIFICATIONS



NOTE:  
1. ALL HANDRAILS SHALL BE POWDERCOATED GALVANIZED STEEL. COLOR TO BE SELECTED BY OWNER'S REPRESENTATIVE.  
2. ALL WELDS SHALL BE GROUND DOWN CLEAN AND SMOOTH.  
3. ALL DIMENSIONS SHALL BE FIELD VERIFIED AND ADJUSTED AS NEEDED.

4 RAMP AND HANDRAIL  
SCALE: N.T.S.

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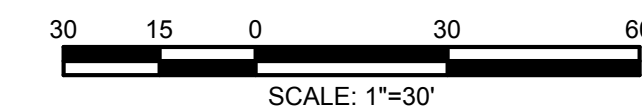
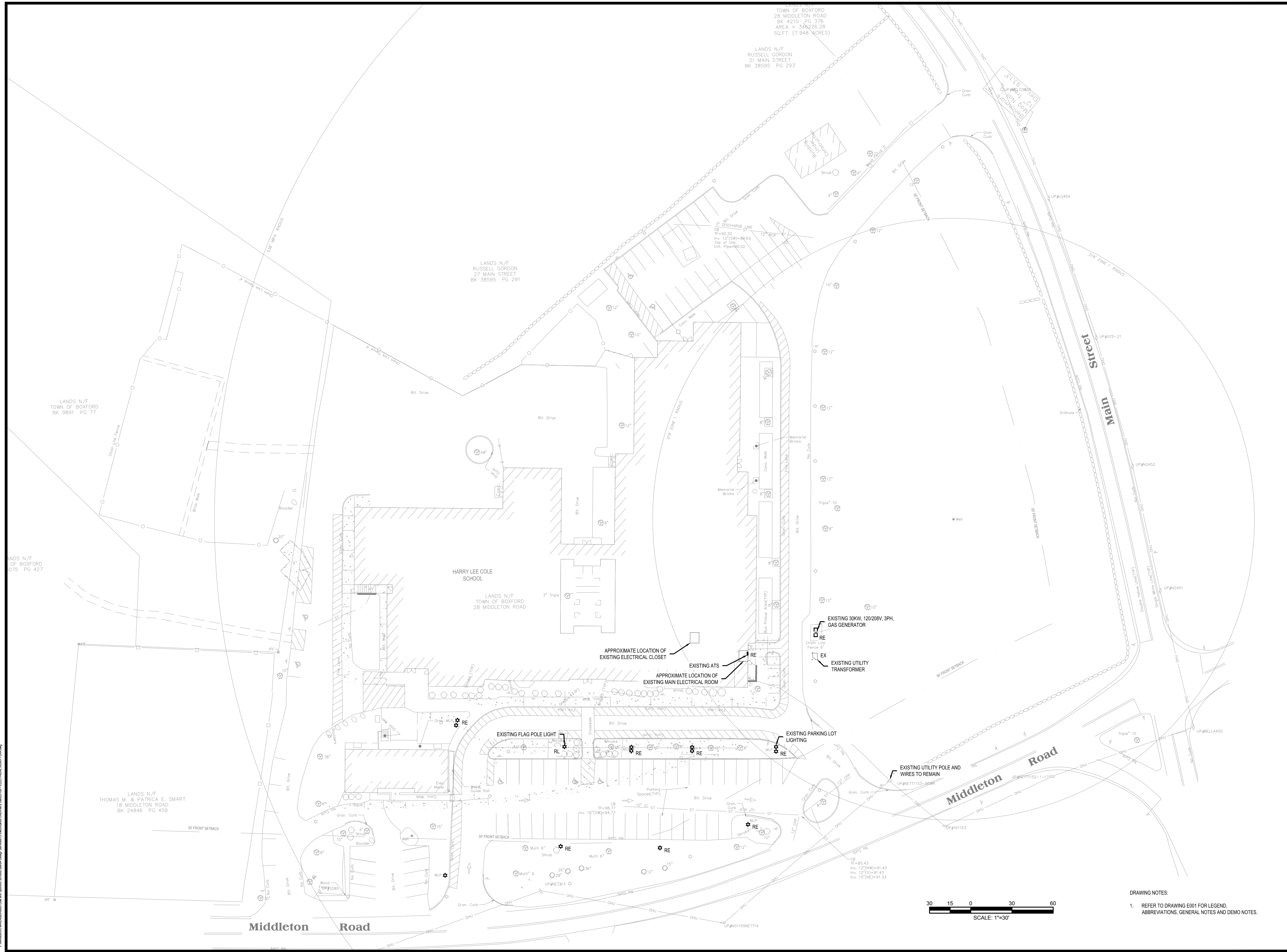
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Drawing Title:  
 SITE CONSTRUCTION DETAILS  
 Sheet Number:  
 C509





DRAWING NOTES:  
 1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS, GENERAL NOTES AND DEMO NOTES.

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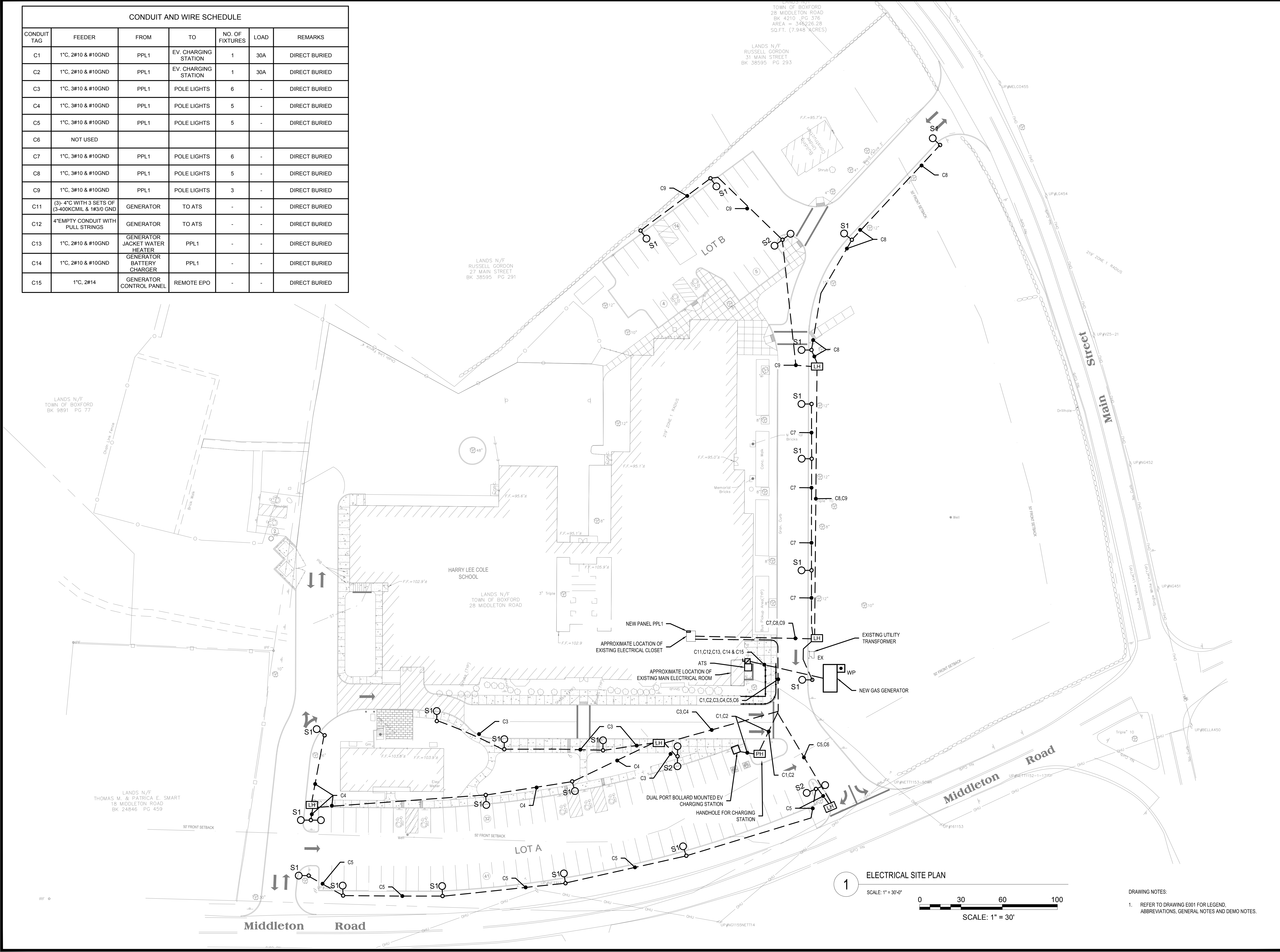
Drawing Title:  
**ELECTRICAL DEMOLITION PLAN**

Sheet Number:  
**ED100**

P:\Projects\2020\ED100 - Harry Lee Cole School Demolition Plan.dwg (13/05/2021 10:50:54 AM) - E:\Projects\2020\ED100 - Harry Lee Cole School Demolition Plan.dwg

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CONDUIT AND WIRE SCHEDULE						
CONDUIT TAG	FEEDER	FROM	TO	NO. OF FIXTURES	LOAD	REMARKS
C1	1"C, 2#10 & #10GND	PPL1	EV. CHARGING STATION	1	30A	DIRECT BURIED
C2	1"C, 2#10 & #10GND	PPL1	EV. CHARGING STATION	1	30A	DIRECT BURIED
C3	1"C, 3#10 & #10GND	PPL1	POLE LIGHTS	6	-	DIRECT BURIED
C4	1"C, 3#10 & #10GND	PPL1	POLE LIGHTS	5	-	DIRECT BURIED
C5	1"C, 3#10 & #10GND	PPL1	POLE LIGHTS	5	-	DIRECT BURIED
C6	NOT USED					
C7	1"C, 3#10 & #10GND	PPL1	POLE LIGHTS	6	-	DIRECT BURIED
C8	1"C, 3#10 & #10GND	PPL1	POLE LIGHTS	5	-	DIRECT BURIED
C9	1"C, 3#10 & #10GND	PPL1	POLE LIGHTS	3	-	DIRECT BURIED
C11	(3)- 4" WITH 3 SETS OF (3)-400KCMIL & 1#3/0 GND	GENERATOR	TO ATS	-	-	DIRECT BURIED
C12	4" EMPTY CONDUIT WITH PULL STRINGS	GENERATOR	TO ATS	-	-	DIRECT BURIED
C13	1"C, 2#10 & #10GND	GENERATOR JACKET WATER HEATER	PPL1	-	-	DIRECT BURIED
C14	1"C, 2#10 & #10GND	GENERATOR BATTERY CHARGER	PPL1	-	-	DIRECT BURIED
C15	1"C, 2#14	GENERATOR CONTROL PANEL	REMOTE EPO	-	-	DIRECT BURIED



**1 ELECTRICAL SITE PLAN**  
 SCALE: 1" = 30'-0"  
 0 30 60 100  
 SCALE: 1" = 30'

**DRAWING NOTES:**  
 1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS, GENERAL NOTES AND DEMO NOTES.

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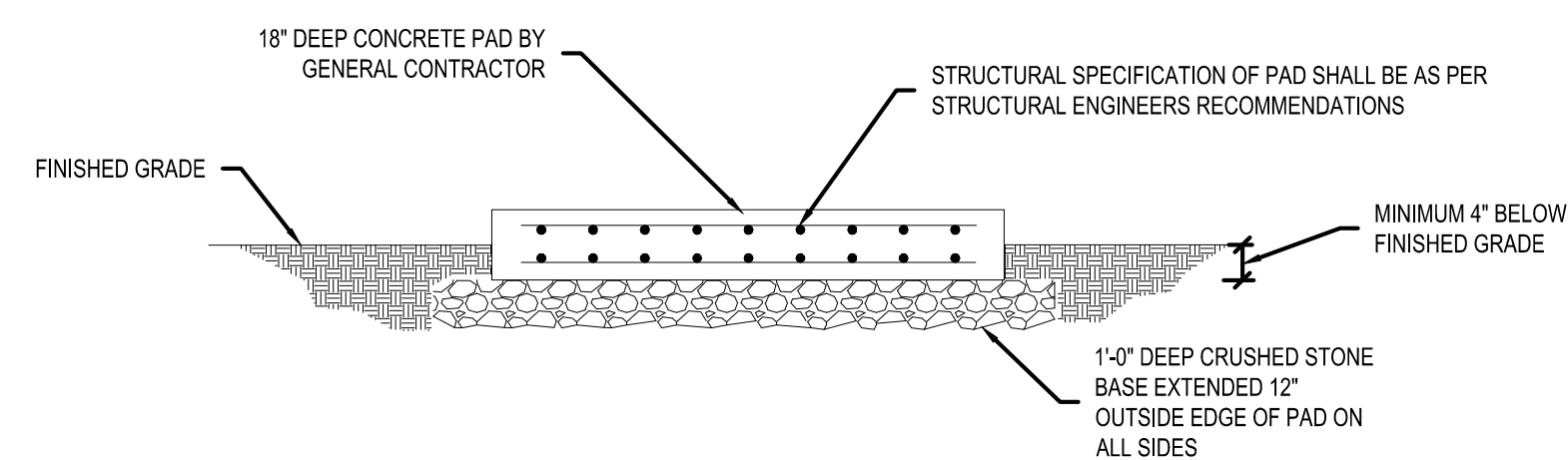
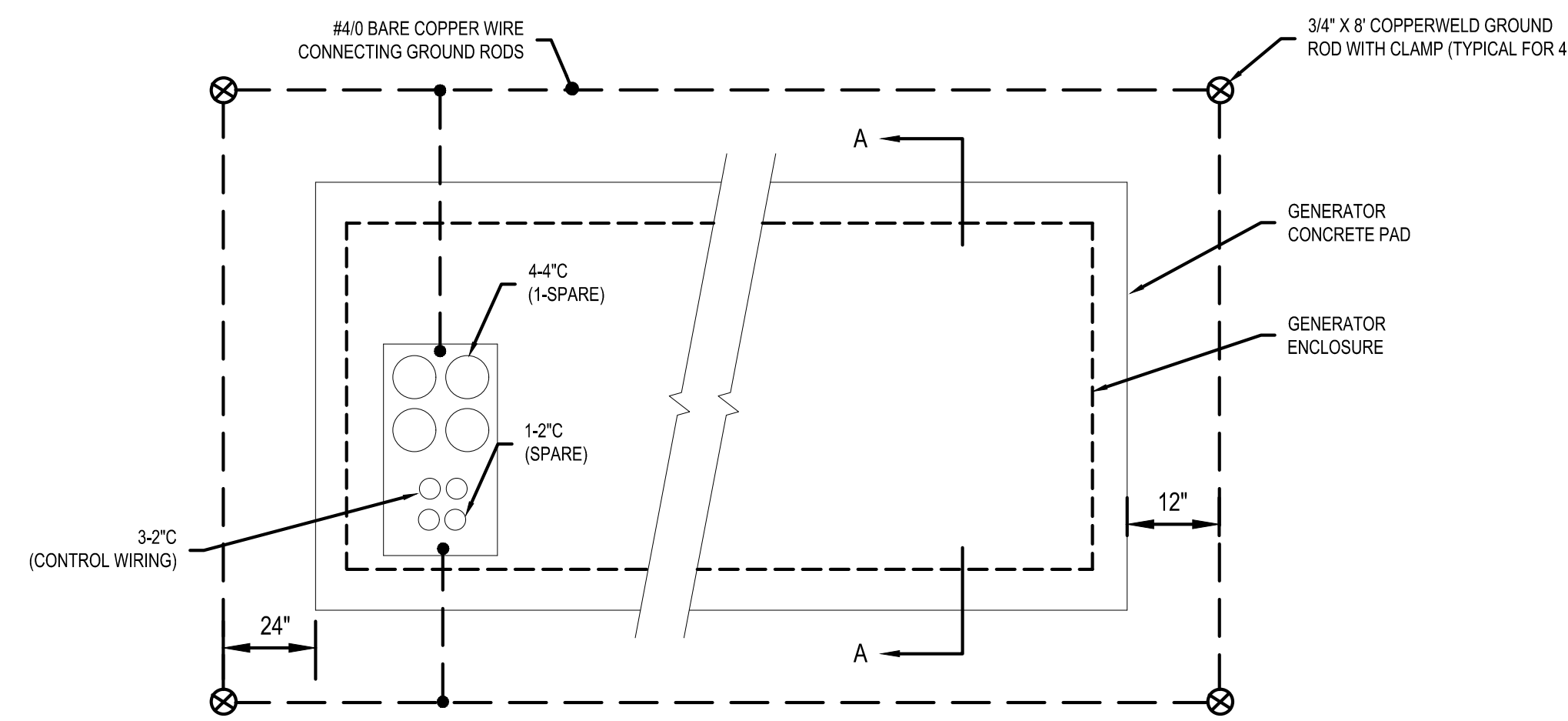
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Drawing Title:  
**ELECTRICAL SITE PLAN**

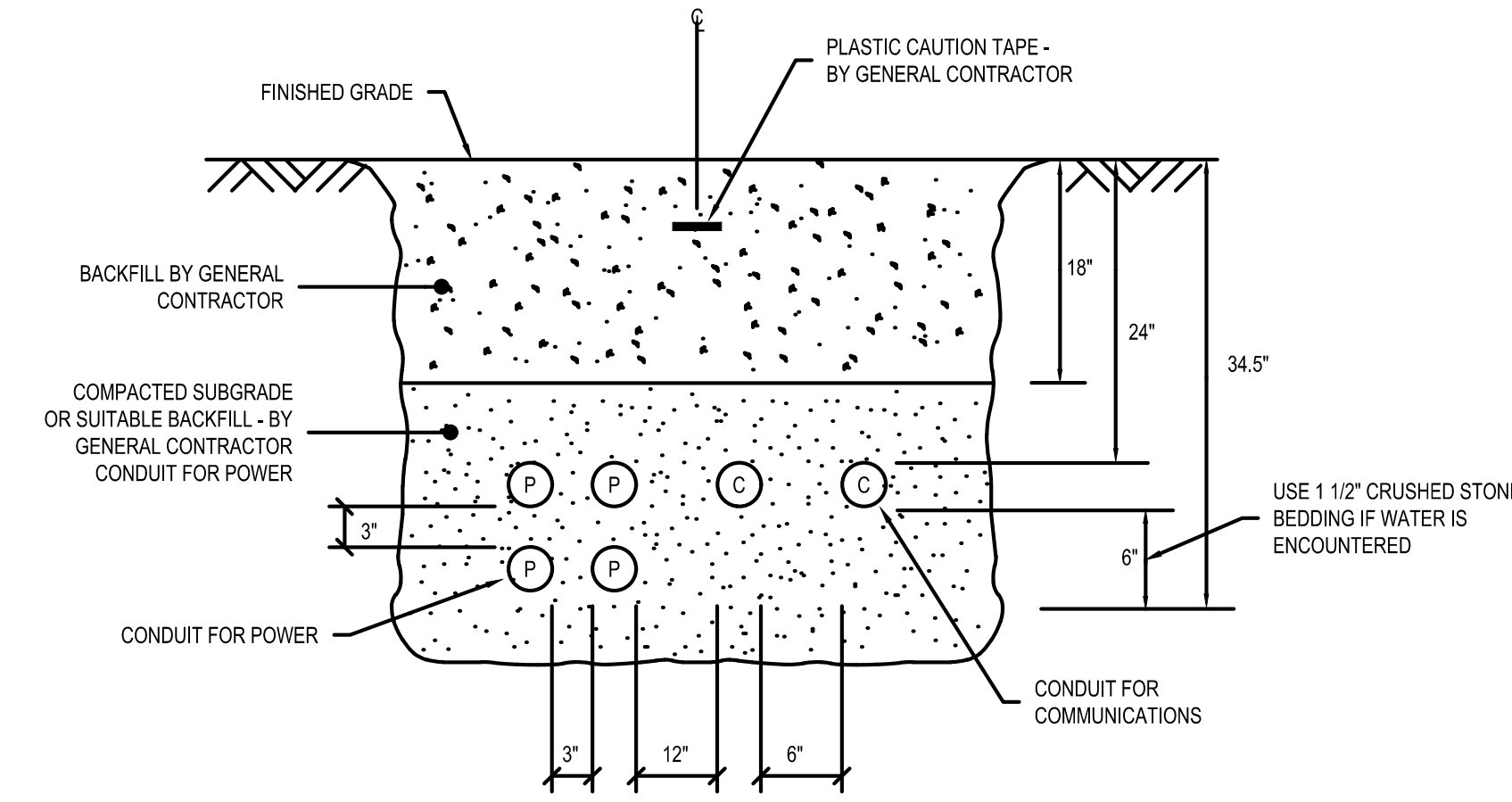
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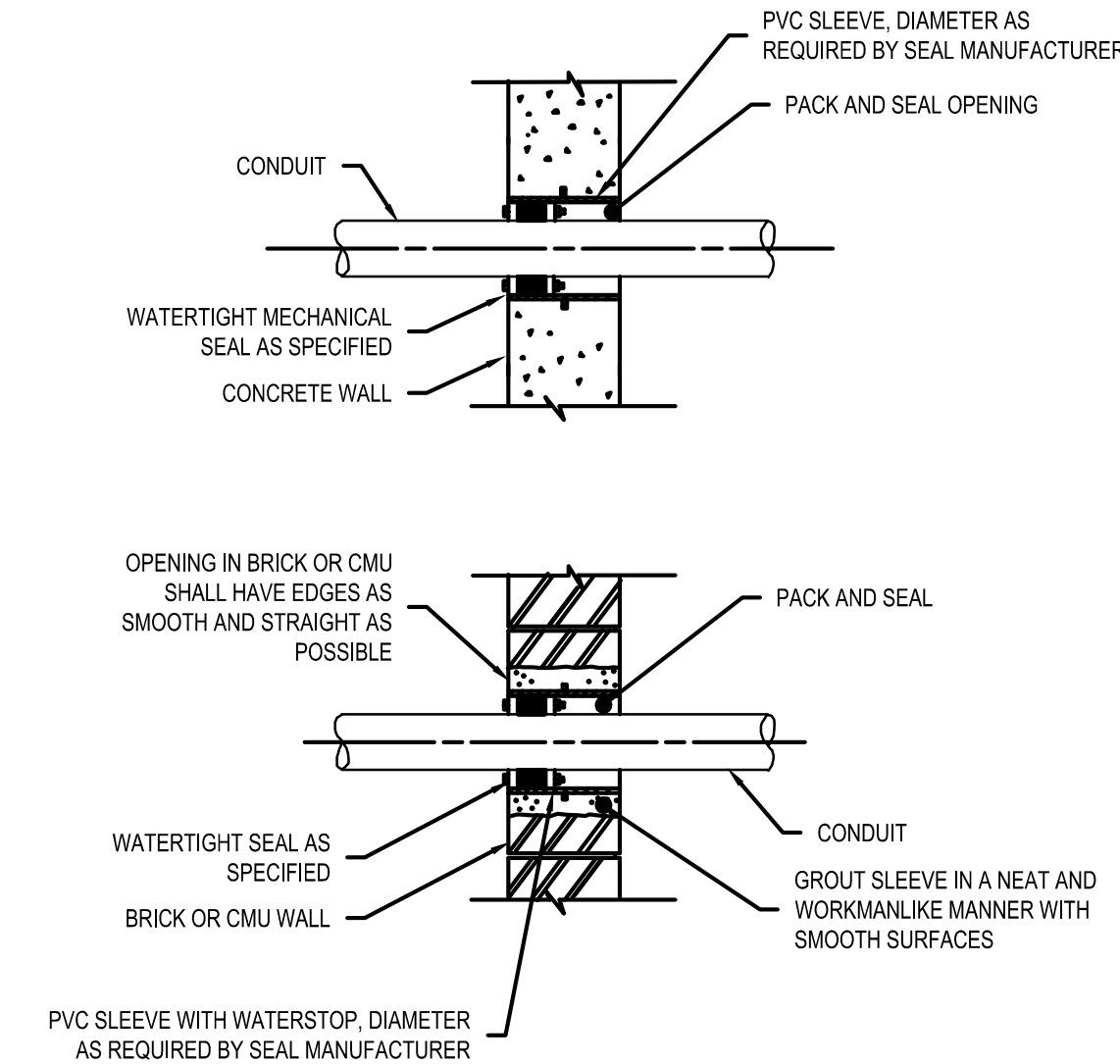


- NOTE:
- PAD DIMENSIONS SHALL BE PER GENERATOR MANUFACTURER RECOMMENDATIONS.
  - REFER TO ONE-LINE FOR EXACT NUMBER OF CONDUITS

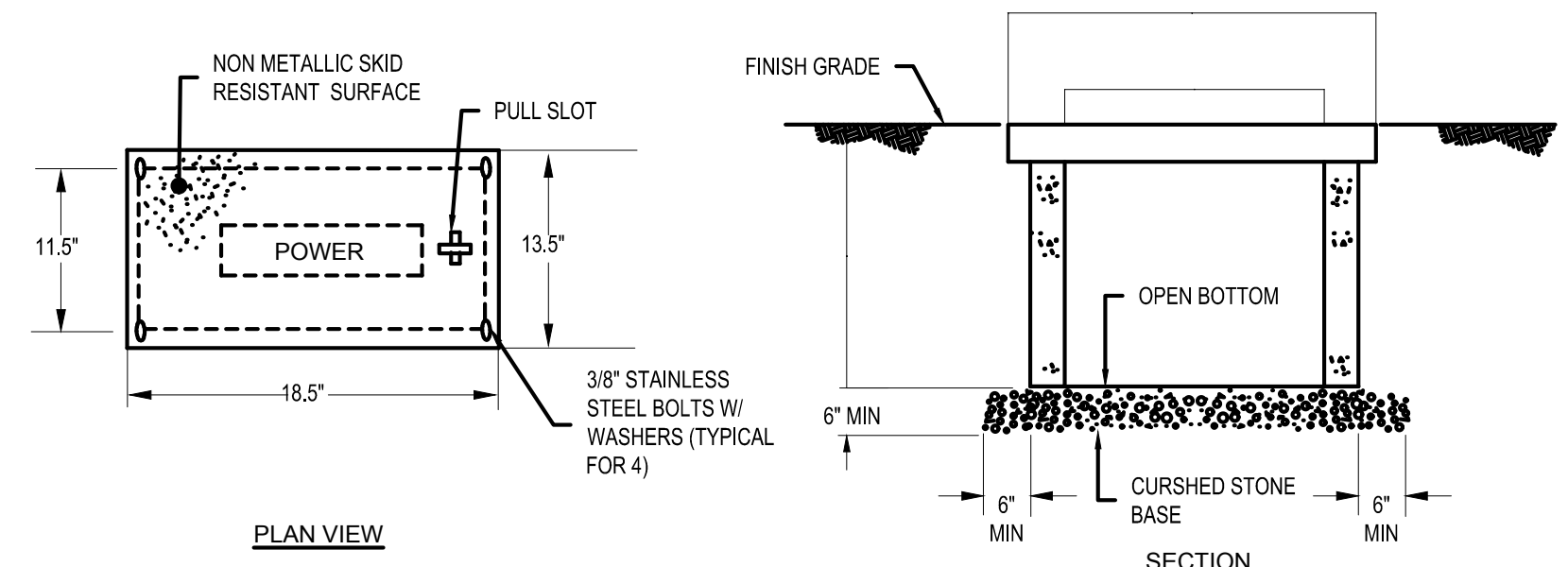
3 GENERATOR/ENCLOSURE PAD DETAIL  
NTS



2 TYPICAL DIRECT BURIED CONDUIT DETAIL  
NTS

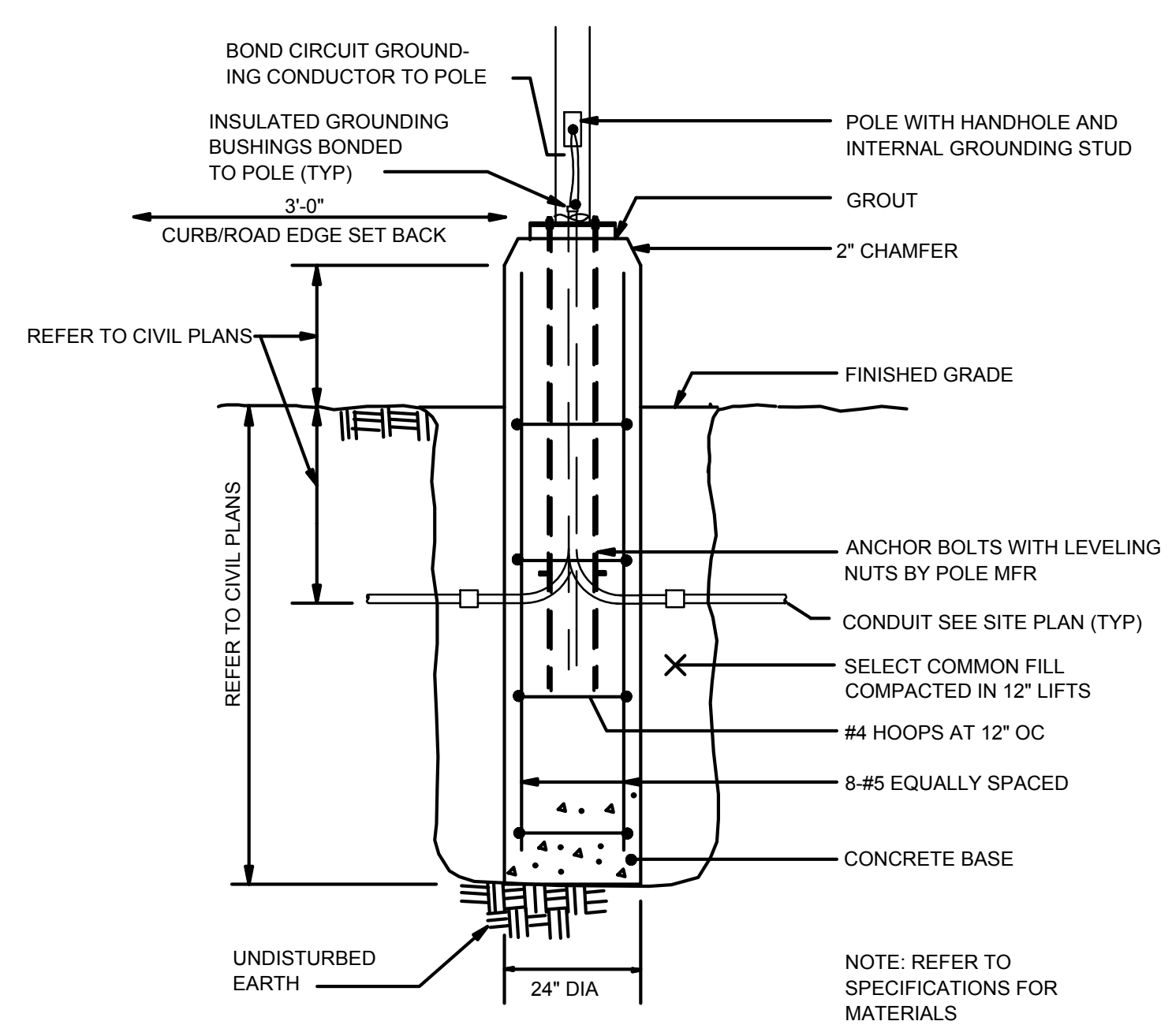


1 WATERTIGHT CONDUIT PENETRATIONS  
NTS



- NOTES:
- THIS HANDHOLE IS INTENDED FOR NON-DELIBERATE VEHICULAR TRAFFIC ONLY.
  - HANDHOLE SHALL BE PREFABRICATED POLYMER CONCRETE AGGREGATE EQUAL TO QUAZITE OR EQUAL PRE CAST CONCRETE CONSTRUCTION.

4 PREFABRICATED HANDHOLE "PH" & "LH" DETAIL  
NTS



5 TYPICAL LIGHT POLE BASE DETAIL  
NTS

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Drawing Title:

ELECTRICAL DETAILS

Sheet Number:

E501

Consultants:

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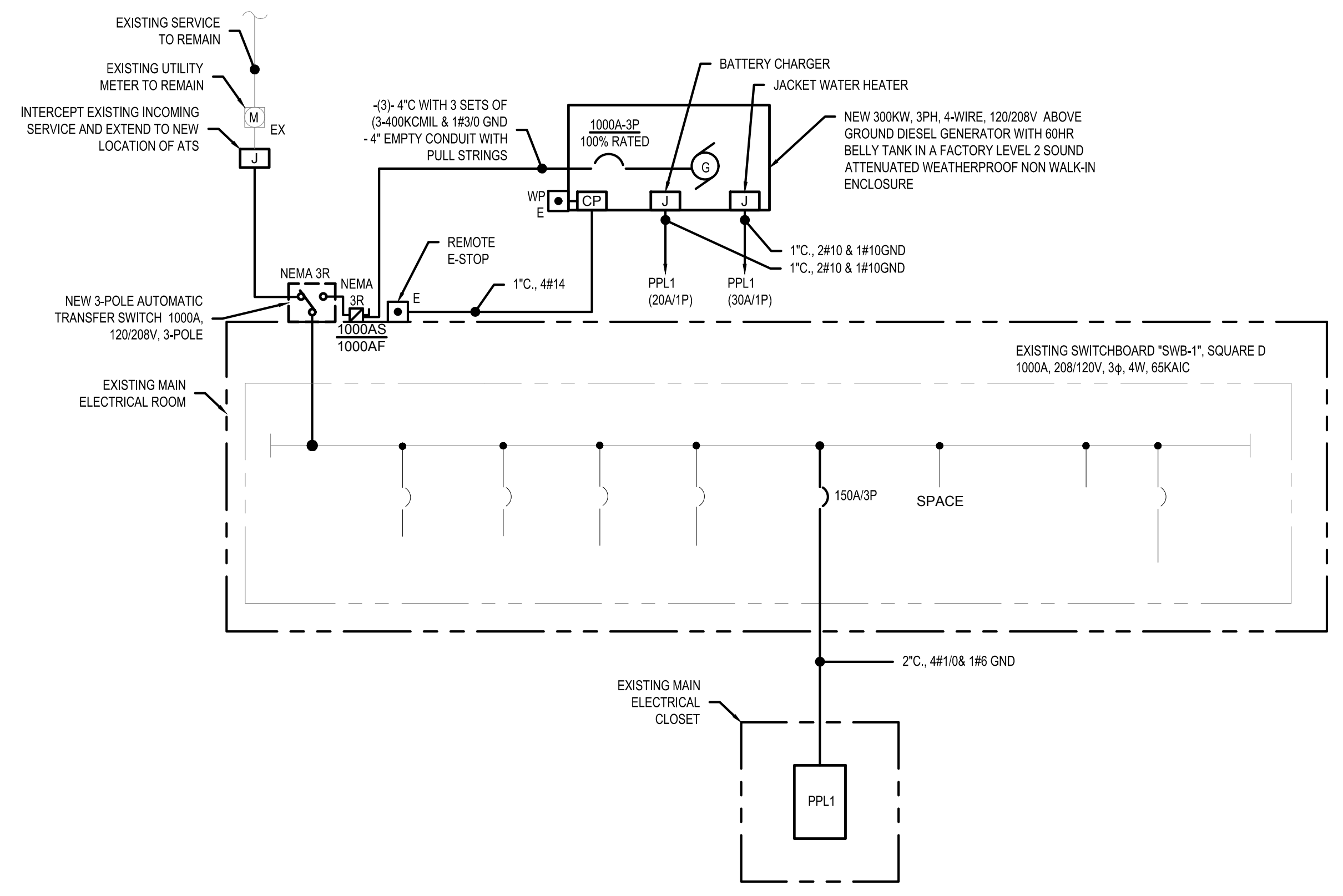
Sheet Number:

E601

**PANELBOARD SCHEDULE**

DESIGNATION: PPL1 S.C. RATING: 22,000 A RMS SYSTEM REMARKS:  
 LOCATION: EXISTING ELECTRICAL CLOSET SERVICE: 120/208V, 3Ø/4W  
 RATING: 200 AMPS MOUNTING: SURFACE  
 MAIN: 150 AMP MCB

CKT. NO.	LOAD DESIGNATION	BREAKER TRIP	POLE	PHASE			BREAKER TRIP	LOAD DESIGNATION	CKT. NO.
				A	B	C			
1	EV CHARGING STATION	40		↑		↑	40	EV-CHARGING STATION	2
3	-	-					-	-	4
5	GENERATOR JACKET WATER HEATER	30			↑		20	BATTERY CHARGER	6
7	SITE LIGHTS	20		↑		↑	20	SITE LIGHTS	8
9	-	-					20	-	10
11	-	-					20	-	12
13	SITE LIGHTS	20		↑		↑	20	SITE LIGHTS	14
15	-	-					20	-	16
17	-	-					20	-	18
19	SITE LIGHTS	20		↑		↑	20	SITE LIGHTS	20
21	-	-					-	-	22
23	-	-					-	-	24
25	SITE LIGHTS	20		↑		↑	20	SPARE	26
27	-	-					20	SPARE	28
29	-	-					20	SPARE	30
31	SPARE	20		↑		↑	20	SPARE	32
33	SPARE	20		↑		↑	20	SPARE	34
35	SPARE	20		↑		↑	20	SPARE	36
37	SPARE	20		↑		↑	20	SPARE	38
39	SPARE	20		↑		↑	20	SPARE	40
41	SPARE	20		↑		↑	20	SPARE	42



1 HARRY LEE SCHOOL ONE-LINE  
 NTS

- NOTES:
- CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING XXXX TRIP PLUG IN EXISTING SQUARE D XXXX AMP BREAKER WITH A NEW TRIP PLUG # XXXX.