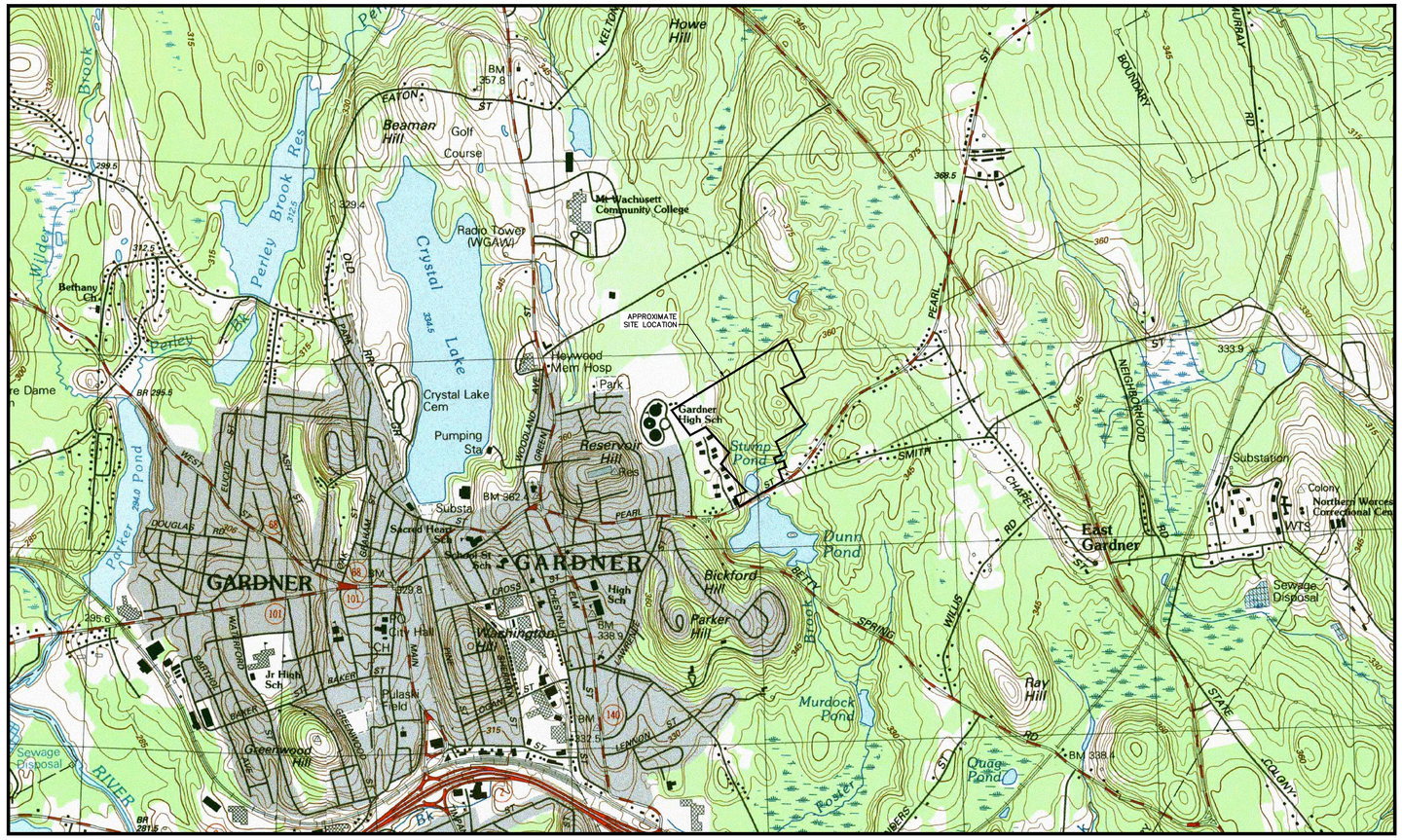
GARDNER ELEMENTARY SCHOOL

PEARL STREET · GARDNER · MASSACHUSETTS

DEFINITIVE SITE PLAN

MAY 8, 2020



LOCATION MAP

SCALE: 1" = 1000'

SHEET INDEX

SHEET No.	SHEET TITLE
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C100	KEY MAP
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C301-C305	SITE PREPARATION AND EROSION & SEDIMENT CONTROL PLAN
C306	TEMPORARY BYPASS FOR CULVERT INSTALLATION
C307	PHASING PLAN
C401-C405	SITE LAYOUT PLAN
C501-505	GRADING AND DRAINAGE PLAN
C601-605	UTILITY PLAN
C701	PEARL STREET TRAFFIC IMPROVEMENT PLAN
C702-705	PAVEMENT MARKING AND SIGNING PLANS
C706	TRAFFIC SIGN SUMMARY
C801-813	CONSTRUCTION DETAILS
L5.0	SOILS PLANS
L5.1	OVERALL SEED PLANTING PLAN
L5.2	PLANTING PLAN NORTH
L5.3	PLANTING PLAN SOUTH
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L5.6	PLANTING DETAILS
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A202	EXTERIOR ELEVATIONS - 'A & B' WING
A203	EXTERIOR ELEVATIONS - 'B' WING
A204	EXTERIOR ELEVATIONS - 'C' WING

PREPARED FOR

CITY OF GARDNER
95 PLEASANT STREET
GARDNER, MA 01440

PREPARED BY

FUSS & O'NEILL
1550 MAIN STREET, SUITE 400
SPRINGFIELD, MA 01103
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PROJECT TEAM

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May, 11, 2020
COMMONWEALTH OF MASSACHUSETTS
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CIVIL
No. 37860
REGISTERED PROFESSIONAL ENGINEER

CONSULTANTS:

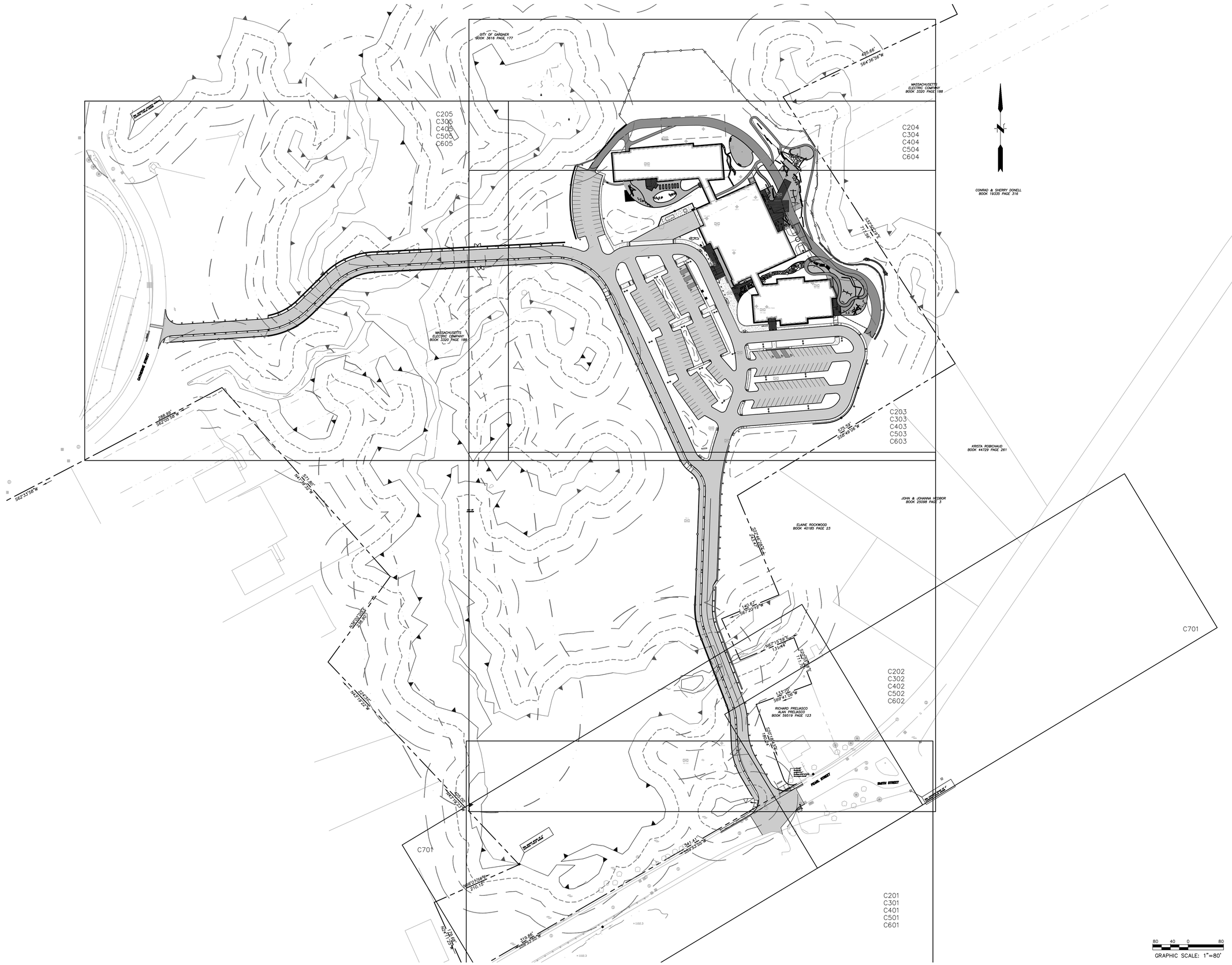
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GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C000



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May, 11, 2020

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KEY MAP

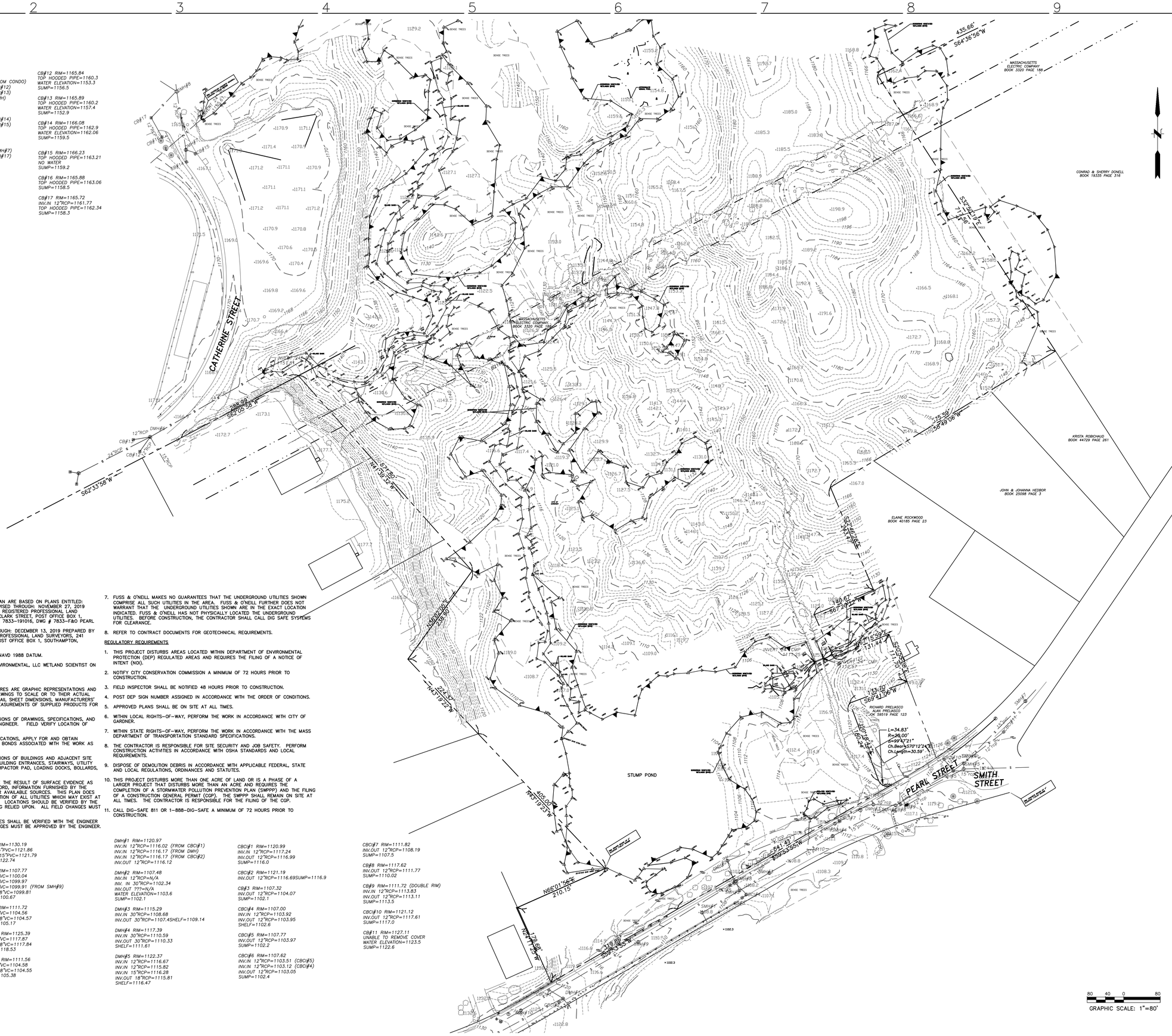
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=80'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C100

File Path: J:\DWG\P2018\03\63\B10\Civil\Plan\20180363.B10_STP01.dwg Layout: C-100 Plotted: Fri, May 08, 2020 - 11:09 AM User: abell
MS VIEW: LAYER STATE: PLOT_INFO



DMH#6 RIM=1166.30
INV.IN 15"RCP=1160.78 (FROM CONDO)
INV.IN 12"RCP=1159.20 (CB#12)
INV.IN 12"RCP=1159.21 (CB#13)
INV.IN 24"RCP=1153.89 (DMH)
INV.OUT 24"RCP=1153.86

DMH#7 RIM=1166.04
INV.IN 12"RCP=1161.90 (CB#14)
INV.IN 12"RCP=1161.83 (CB#15)
INV.OUT 12"RCP=1161.24
SUMP=1161.2

DMH#8 RIM=1164.59
INV.IN 12"RCP=1160.54 (DMH#7)
INV.IN 12"RCP=1160.64 (CB#17)
INV.IN 12"RCP=1160.39
INV.OUT 12"RCP=1160.21
SUMP=1159.87

CB#12 RIM=1165.84
TOP HOODED PIPE=1160.3
WATER ELEVATION=1153.3
SUMP=1156.5

CB#13 RIM=1165.89
TOP HOODED PIPE=1160.2
WATER ELEVATION=1157.4
SUMP=1152.9

CB#14 RIM=1166.08
TOP HOODED PIPE=1162.9
WATER ELEVATION=1162.06
SUMP=1159.5

CB#15 RIM=1166.23
TOP HOODED PIPE=1163.21
NO WATER
SUMP=1159.2

CB#16 RIM=1165.88
TOP HOODED PIPE=1163.06
SUMP=1158.5

CB#17 RIM=1165.72
INV.IN 12"RCP=1161.77
TOP HOODED PIPE=1162.34
SUMP=1158.3

MAP REFERENCE

1. EXISTING CONDITIONS DEPICTED ON THIS PLAN ARE BASED ON PLANS ENTITLED:
   1.1. F&O GARDNER AS SENT 11-27-19, REVISED THROUGH: NOVEMBER 27, 2019 PREPARED BY HERITAGE SURVEYS, INC., REGISTERED PROFESSIONAL LAND SURVEYORS, 241 COLLEGE HIGHWAY & CLARK STREET, POST OFFICE BOX 1, SOUTHAMPTON, MASSACHUSETTS, JOB # 7833-191016, DWG # 7833-F&O PEARL ST. GARDNER, MAP # 7833-191127.
   1.2. WETLAND – 12-13-2019, REVISED THROUGH: DECEMBER 13, 2019 PREPARED BY HERITAGE SURVEYS, INC., REGISTERED PROFESSIONAL LAND SURVEYORS, 241 COLLEGE HIGHWAY & CLARK STREET, POST OFFICE BOX 1, SOUTHAMPTON, MASSACHUSETTS, JOB # 7833-191016,
2. TOPOGRAPHIC ELEVATIONS ARE BASED ON NAVD 1988 DATUM.
3. WETLANDS WERE DELINEATED BY LUCAS ENVIRONMENTAL, LLC WETLAND SCIENTIST ON NOVEMBER 10, 2019.

GENERAL NOTES

1. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SHOWN ON THE DRAWINGS TO SCALE OR TO THEIR ACTUAL DIMENSION OR LOCATION. COORDINATE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
2. DO NOT RELY SOLELY ON ELECTRONIC VERSIONS OF DRAWINGS, SPECIFICATIONS, AND DATA FILES THAT ARE PROVIDED BY THE ENGINEER. FIELD VERIFY LOCATION OF PROJECT FEATURES.
3. PERFORM NECESSARY CONSTRUCTION NOTIFICATIONS, APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK AS REQUIRED BY THE CONTRACT DOCUMENTS.
4. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDINGS AND ADJACENT SITE ELEMENTS INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
5. LOCATION OF UTILITIES SHOWN HEREON ARE THE RESULT OF SURFACE EVIDENCE AS LOCATED BY FIELD SURVEY, PLANS OF RECORD, INFORMATION FURNISHED BY THE RESPECTIVE UTILITY COMPANIES, AND OTHER AVAILABLE SOURCES. THIS PLAN DOES NOT NECESSARILY DEPICT THE EXACT LOCATION OF ALL UTILITIES WHICH MAY EXIST AT THIS TIME WITHIN THE PREMISES SURVEYED. LOCATIONS SHOULD BE VERIFIED BY THE RESPECTIVE UTILITY COMPANY BEFORE BEING RELIED UPON. ALL FIELD CHANGES MUST BE APPROVED BY THE ENGINEER.
6. LOCATION AND INVERTS OF EXISTING UTILITIES SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO CONSTRUCTION. ALL FIELD CHANGES MUST BE APPROVED BY THE ENGINEER.
7. FUSS & O'NEILL MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA. FUSS & O'NEILL FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. FUSS & O'NEILL HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. BEFORE CONSTRUCTION, THE CONTRACTOR SHALL CALL DIG SAFE SYSTEMS FOR CLEARANCE.
8. REFER TO CONTRACT DOCUMENTS FOR GEOTECHNICAL REQUIREMENTS.

REGULATORY REQUIREMENTS

1. THIS PROJECT DISTURBS AREAS LOCATED WITHIN DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) REGULATED AREAS AND REQUIRES THE FILING OF A NOTICE OF INTENT (NOI).
2. NOTIFY CITY CONSERVATION COMMISSION A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION.
3. FIELD INSPECTOR SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION.
4. POST DEP SIGN NUMBER ASSIGNED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
5. APPROVED PLANS SHALL BE ON SITE AT ALL TIMES.
6. WITHIN LOCAL RIGHTS-OF-WAY, PERFORM THE WORK IN ACCORDANCE WITH CITY OF GARDNER.
7. WITHIN STATE RIGHTS-OF-WAY, PERFORM THE WORK IN ACCORDANCE WITH THE MASS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
8. THE CONTRACTOR IS RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. PERFORM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
9. DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
10. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND OR IS A PHASE OF A LARGER PROJECT THAT DISTURBS MORE THAN AN ACRE AND REQUIRES THE COMPLETION OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND THE FILING OF A CONSTRUCTION GENERAL PERMIT (CGP). THE SWPPP SHALL REMAIN ON SITE AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR THE FILING OF THE CGP.
11. CALL DIG-SAFE 811 OR 1-888-DIG-SAFE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION.

SMH#1 RIM=1108.49
INV.IN 18"PVC=1095.18
INV.OUT 18"PVC=1095.07
SHELF=1096.39

SMH#2 RIM=1108.01
INV.IN 8"VC=1097.83
INV. IN 15"PVC=1097.78
INV.OUT 18"PVC=1097.35
SHELF=1098.81

SMH#3 RIM=1108.19
INV.IN 12"PVC HOODED=1102.74
INV.IN 15"PVC=1099.24
INV.OUT 15"PVC=1099.09
SHELF=1099.94

SMH#4 RIM=1111.59
INV.IN 15"PVC=1106.19
INV.OUT 15"PVC=1106.23
SHELF=1106.97

SMH#5 RIM=1123.16
INV.IN 8"VC=1115.84
INV.IN 15"PVC=1115.60
INV.OUT 15"PVC=1115.54
SHELF=1116.48

SMH#6 RIM=1123.16
INV.IN 15"PVC=1115.82
INV.OUT 15"PVC=1115.74
SHELF=1116.51

SMH#7 RIM=1130.19
INV.IN 15"PVC=1121.86
INV.OUT 15"PVC=1121.79
SHELF=1122.74

SMH#8 RIM=1107.77
INV.IN 8"VC=1100.04
INV.IN 8"VC=1099.97
INV.IN 8"VC=1099.91 (FROM SMH#9)
INV.OUT 8"VC=1099.81
SHELF=1100.67

SMH#9 RIM=1111.72
INV.IN 8"VC=1104.56
INV.OUT 8"VC=1104.57
SHELF=1105.17

SMH#10 RIM=1125.39
INV.IN 8"VC=1117.87
INV.OUT 8"VC=1117.84
SHELF=1118.53

SMH#11 RIM=1111.56
INV.IN 8"VC=1104.58
INV.OUT 8"VC=1104.55
SHELF=1105.38

DMH#1 RIM=1120.97
INV.IN 12"RCP=1116.02 (FROM CBC#1)
INV.IN 12"RCP=1116.17 (FROM DMH)
INV.IN 12"RCP=1116.17 (FROM CBC#2)
INV.OUT 12"RCP=1116.12

DMH#2 RIM=1107.48
INV.IN 12"RCP=N/A
INV. IN 30"RCP=1102.34
INV.OUT ???=N/A
WATER ELEVATION=1103.6
SUMP=1102.1

DMH#3 RIM=1115.29
INV.IN 30"RCP=1108.68
INV.OUT 30"RCP=1107.4SHELF=1109.14

DMH#4 RIM=1117.39
INV.IN 30"RCP=1110.59
INV.OUT 30"RCP=1110.33
SHELF=1111.61

DMH#5 RIM=1122.37
INV.IN 12"RCP=1116.67
INV.IN 12"RCP=1115.82
INV.IN 15"RCP=1116.28
INV.OUT 18"RCP=1115.81
SHELF=1116.47

CBC#1 RIM=1120.99
INV.IN 12"RCP=1117.24
INV.OUT 12"RCP=1116.99
SUMP=1116.0

CBC#2 RIM=1121.19
INV.OUT 12"RCP=1116.69SUMP=1116.9

CB#3 RIM=1107.32
INV.OUT 12"RCP=1104.07
SUMP=1102.1

CBC#4 RIM=1107.00
INV.IN 12"RCP=1103.92
INV.OUT 12"RCP=1103.95
SHELF=1102.6

CBC#5 RIM=1107.77
INV.OUT 12"RCP=1103.97
SUMP=1102.2

CBC#6 RIM=1107.62
INV.IN 12"RCP=1103.51 (CBC#5)
INV.IN 12"RCP=1103.12 (CBC#4)
INV.OUT 12"RCP=1103.05
SUMP=1102.4

CBC#7 RIM=1111.82
INV.OUT 12"RCP=1108.19
SUMP=1107.5

CB#8 RIM=1117.62
INV.OUT 12"RCP=1111.77
SUMP=1110.02

CB#9 RIM=1111.72 (DOUBLE RIM)
INV.IN 12"RCP=1113.83
INV.OUT 12"RCP=1113.11
SUMP=1113.5

CBC#10 RIM=1121.12
INV.OUT 12"RCP=1117.61
SUMP=1117.0

CB#11 RIM=1127.11
UNABLE TO REMOVE COVER
WATER ELEVATION=1123.5
SUMP=1122.6

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May, 11, 2020

COMMONWEALTH OF MASSACHUSETTS
ERIC M. BERNARDIN
CIVIL
No. 37950
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PROFESSIONAL ENGINEER

CONSULTANTS:

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www.fando.com

EXISTING CONDITIONS PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=80'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C200

File Path: J:\DWG\P2018\03\63\B10\Civil\Plan\20180363.B10_EXE01.dwg Layout: C-200 Plotted: Fri, May 08, 2020 - 10:10 AM User: abell
MS VIEW | LAYER STATE | PLOT_INFO



LEGEND

EXISTING

- IRON PIPE FOUND
- IRON BAR FOUND
- BOUND FOUND
- CHAIN LINK FENCE
- STOCKADE FENCE
- WIRE FENCE
- BARBED WIRE FENCE
- 1' CONTOUR INTERVAL
- 5' CONTOUR INTERVAL
- SPOT ELEVATION × 000.00
- WATER MAIN/GATE
- GAS MAIN/GATE
- OVERHEAD UTILITIES
- ELECTRIC LINE
- CABLE TV
- STORM DRAIN/MANHOLE
- SANITARY SEWER/MANHOLE
- BERM/CURB
- TELEPHONE
- CATCH BASIN
- UTILITY POLE
- LIGHT POLE
- BOLLARD
- HANDHOLE
- CONTROL VALVE
- ELECTRICAL SERVICE
- TELEPHONE SERVICE
- GAS SERVICE
- CATV SERVICE
- SIGN
- FLOODLIGHT
- WATER SHUT-OFF
- HYDRANT
- WELL
- WETLAND DELINEATION FLAG
- BORDERING VEGETATED WETLANDS
- ISOLATED VEGETATED WETLANDS
- INLAND BANK
- 100' WETLAND BUFFER
- 30' NO DISTURB ZONE
- 60' NO BUILD ZONE
- 100' INNER RIPARIAN
- 200' RIVERFRONT

GRAPHIC SCALE: 1"=30'

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May, 11, 2020

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EXISTING CONDITIONS PLAN

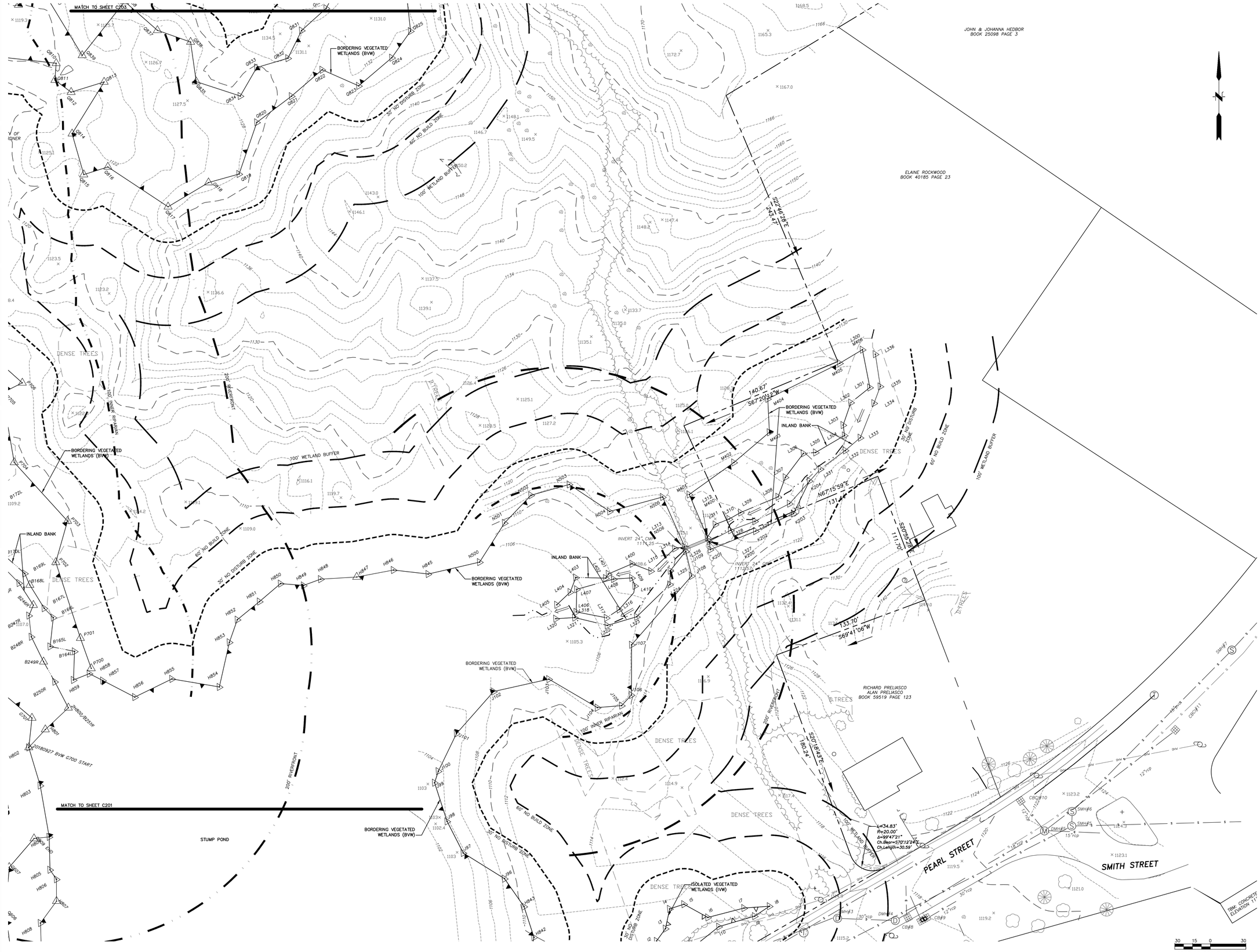
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C201

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LAYER STATE:
PLOT_INFO



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EXISTING CONDITIONS PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C202

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PLOT_INFO
LAYER STATE:
MS VIEW:

BORDERING VEGETATED WETLANDS (BVW)

APPROXIMATE VERNAL POOL

30' NO DISTURB ZONE

50' NO BUILD ZONE

60' NO BUILD ZONE

100' WETLAND BUFFER

MATCH TO SHEET C204

MATCH TO SHEET C205

MASSACHUSETTS ELECTRIC COMPANY
BOOK 3320 PAGE 188

CONRAD & SHERRY DONELL
BOOK 19335 PAGE 316

KRISTA ROBICHAUD
BOOK 44729 PAGE 261

S32°50'19"E
717.56'

S58°49'06"W
575.59'

GRAPHIC SCALE: 1"=30'

EXISTING CONDITIONS PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

SITE PERMITTING

C203

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

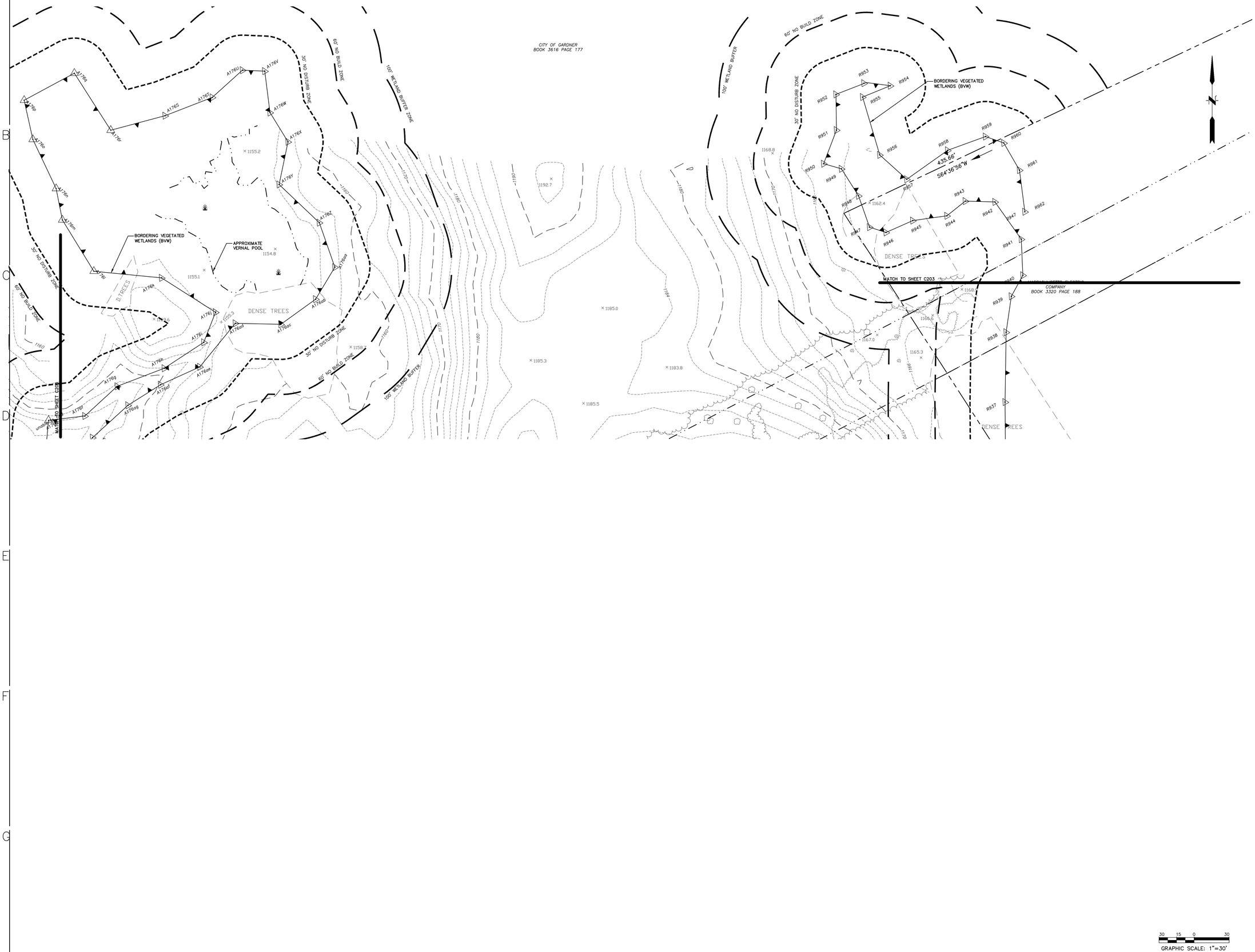
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May, 11, 2020
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EXISTING CONDITIONS PLAN

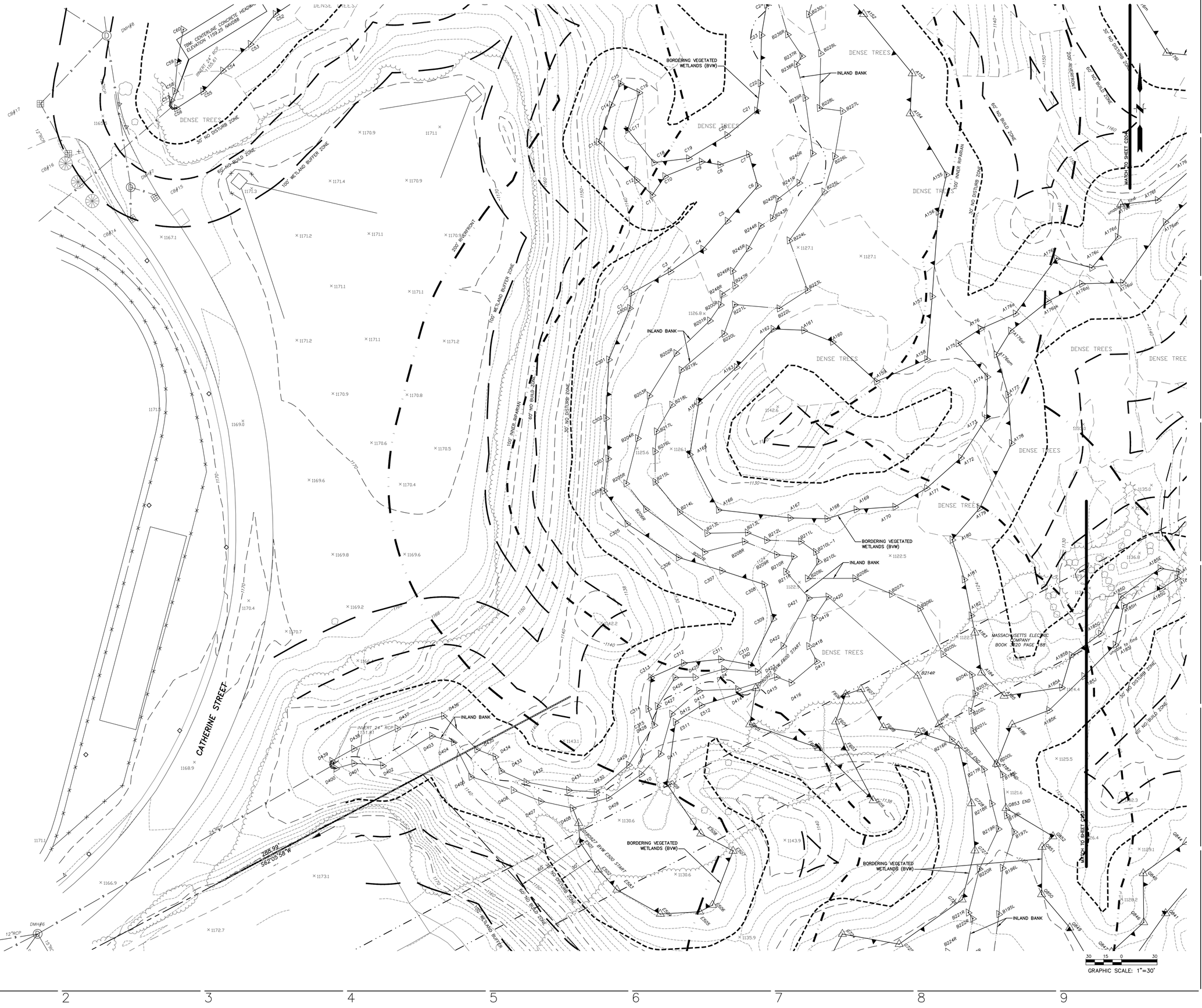
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C204

File Path: J:\DWG\P2018\03\63\B10\Civil\Plan\20180363.B10_EXE01.dwg Layout: C204 Plotted: Fri, May 08, 2020 - 10:10 AM User: abell
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PLOT_INFO



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May, 11, 2020

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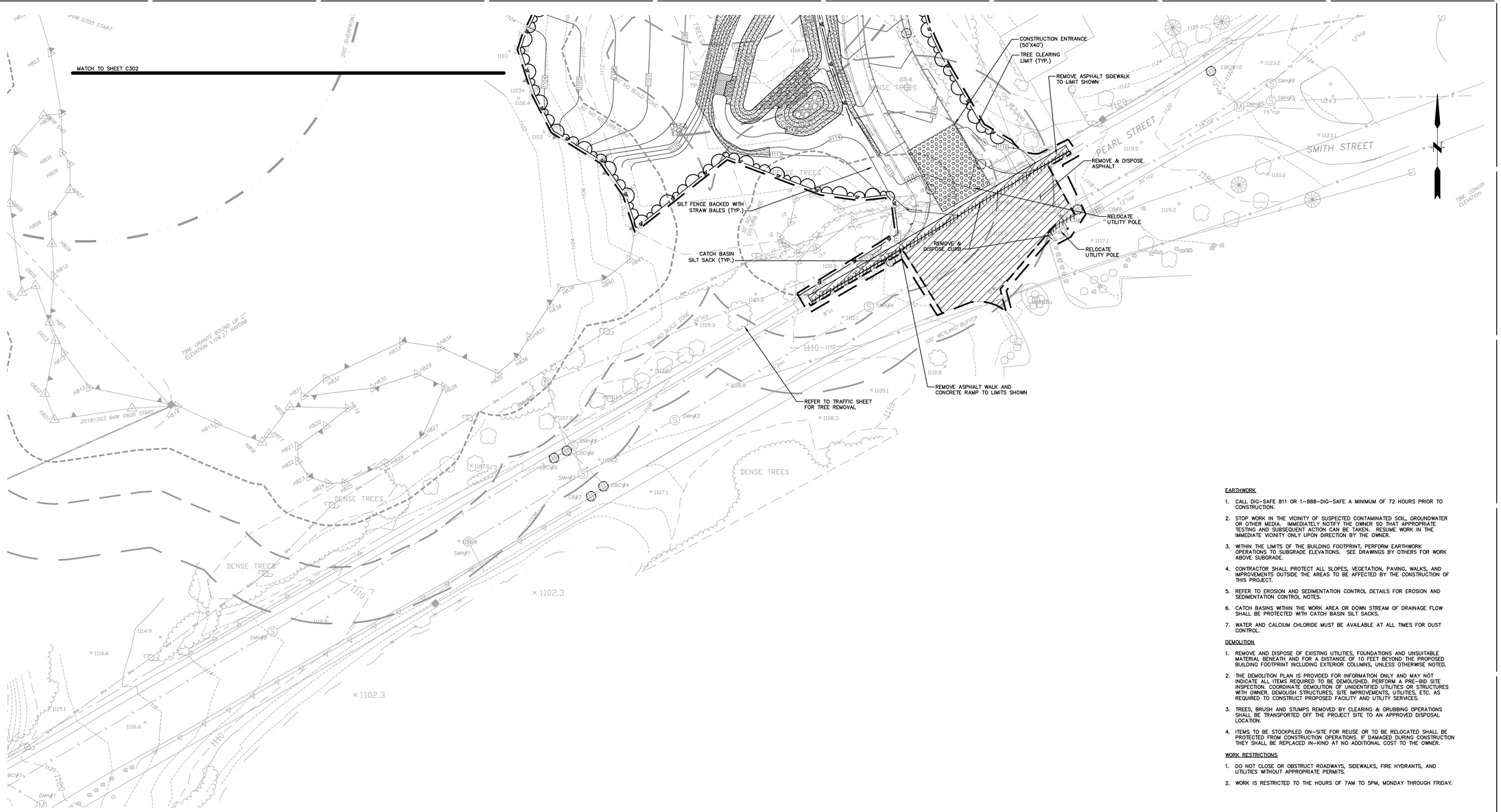
EXISTING CONDITIONS PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C205



EARTHWORK

1. CALL DIG–SAFE 811 OR 1–888–DIG–SAFE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION.
2. STOP WORK IN THE VICINITY OF SUSPECTED CONTAMINATED SOIL, GROUNDWATER OR OTHER MEDIA. IMMEDIATELY NOTIFY THE OWNER SO THAT APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN. RESUME WORK IN THE IMMEDIATE VICINITY ONLY UPON DIRECTION BY THE OWNER.
3. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, PERFORM EARTHWORK OPERATIONS TO SUBGRADE ELEVATIONS. SEE DRAWINGS BY OTHERS FOR WORK ABOVE SUBGRADE.
4. CONTRACTOR SHALL PROTECT ALL SLOPES, VEGETATION, PAVING, WALKS, AND IMPROVEMENTS OUTSIDE THE AREAS TO BE AFFECTED BY THE CONSTRUCTION OF THIS PROJECT.
5. REFER TO EROSION AND SEDIMENTATION CONTROL DETAILS FOR EROSION AND SEDIMENTATION CONTROL NOTES.
6. CATCH BASINS WITHIN THE WORK AREA OR DOWN STREAM OF DRAINAGE FLOW SHALL BE PROTECTED WITH CATCH BASIN SILT SACKS.
7. WATER AND CALCIUM CHLORIDE MUST BE AVAILABLE AT ALL TIMES FOR DUST CONTROL.

DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS, UNLESS OTHERWISE NOTED.
2. THE DEMOLITION PLAN IS PROVIDED FOR INFORMATION ONLY AND MAY NOT INDICATE ALL ITEMS REQUIRED TO BE DEMOLISHED. PERFORM A PRE–BID SITE INSPECTION. COORDINATE DEMOLITION OF UNIDENTIFIED UTILITIES OR STRUCTURES WITH OWNER. DEMOLISH STRUCTURES, SITE IMPROVEMENTS, UTILITIES, ETC. AS REQUIRED TO CONSTRUCT PROPOSED FACILITY AND UTILITY SERVICES.
3. TREES, BRUSH AND STUMPS REMOVED BY CLEARING & GRUBBING OPERATIONS SHALL BE TRANSPORTED OFF THE PROJECT SITE TO AN APPROVED DISPOSAL LOCATION.
4. ITEMS TO BE STOCKPILED ON–SITE FOR REUSE OR TO BE RELOCATED SHALL BE PROTECTED FROM CONSTRUCTION OPERATIONS. IF DAMAGED DURING CONSTRUCTION THEY SHALL BE REPLACED IN–KIND AT NO ADDITIONAL COST TO THE OWNER.

WORK RESTRICTIONS

1. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, FIRE HYDRANTS, AND UTILITIES WITHOUT APPROPRIATE PERMITS.
2. WORK IS RESTRICTED TO THE HOURS OF 7AM TO 5PM, MONDAY THROUGH FRIDAY.

LEGEND & ABBREVIATIONS

- WETLAND DELINEATION FLAG
- WETLAND BOUNDARY
- ISOLATED VEGETATED WETLAND (IVW)
- BORDERING VEGETATED WETLAND (BVW)
- 30' NO BUILD ZONE
- 60' NO DISTURB ZONE
- 100' WETLAND BUFFER
- INLAND BANK
- 100' INNER RIPARIAN
- 200' RIVERFRONT
- LIMIT OF WORK
- SAWCUT
- REMOVE & DISPOSE
- SILT FENCE BACKED WITH STRAW BALES
- PROPOSED TREE CLEARING LIMIT
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET
- CATCH BASIN SILT SACK
- DRAINAGE MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- TYP. TYPICAL

GRAPHIC SCALE: 1"=30'

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May, 11, 2020

COMMONWEALTH OF MASSACHUSETTS
ERIC M. BERNARDIN
CIVIL
No. 37950
REGISTERED
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SPRINGFIELD, MA 01101
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SITE PREPARATION AND EROSION & SEDIMENT CONTROL PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C301

File Path: J:\DWG\P2018\0363\B10\Civil\Plan\20180363.B10_ERO01.dwg Layout: C301 Plotted: Fri, May 08, 2020 - 10:07 AM User: abell
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MATCH TO SHEET C303

MATCH TO SHEET C301

CATCH BASIN SILT SACK (TYP.)

SILT FENCE BACKED WITH STRAW BALES (TYP.)

EROSION CONTROL BLANKET (TYP.)

TREE CLEARING LIMIT (TYP.)

REMOVE & DISPOSE 24" STORM PIPE

CATCH BASIN SILT SACK (TYP.)

BORDERING VEGETATED WETLANDS (BVW)

SILT FENCE BACKED WITH STRAW BALES (TYP.)

CONSTRUCTION ENTRANCE (50'X40')

TREE CLEARING LIMIT (TYP.)

REMOVE ASPHALT SIDEWALK TO LIMIT SHOWN

REMOVE & DISPOSE ASPHALT

RELOCATE UTILITY POLE

SILT FENCE BACKED WITH STRAW BALES (TYP.)

JOHN & JOHANNA HEDBOR
BOOK 25098 PAGE 3

ELAINE ROCKWOOD
BOOK 40185 PAGE 23

RICHARD PRELIASCO
ALAN PRELIASCO
BOOK 59519 PAGE 123

PEARL STREET

SMITH STREET

DENSE TREES

100' WETLAND BUFFER

60' NO BUILD ZONE

30' NO DISTURB ZONE

200' RIVERFRONT

GRAPHIC SCALE: 1"=30'

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SITE PREPARATION AND EROSION & SEDIMENT CONTROL PLAN

GARDNER ELEMENTARY SCHOOL

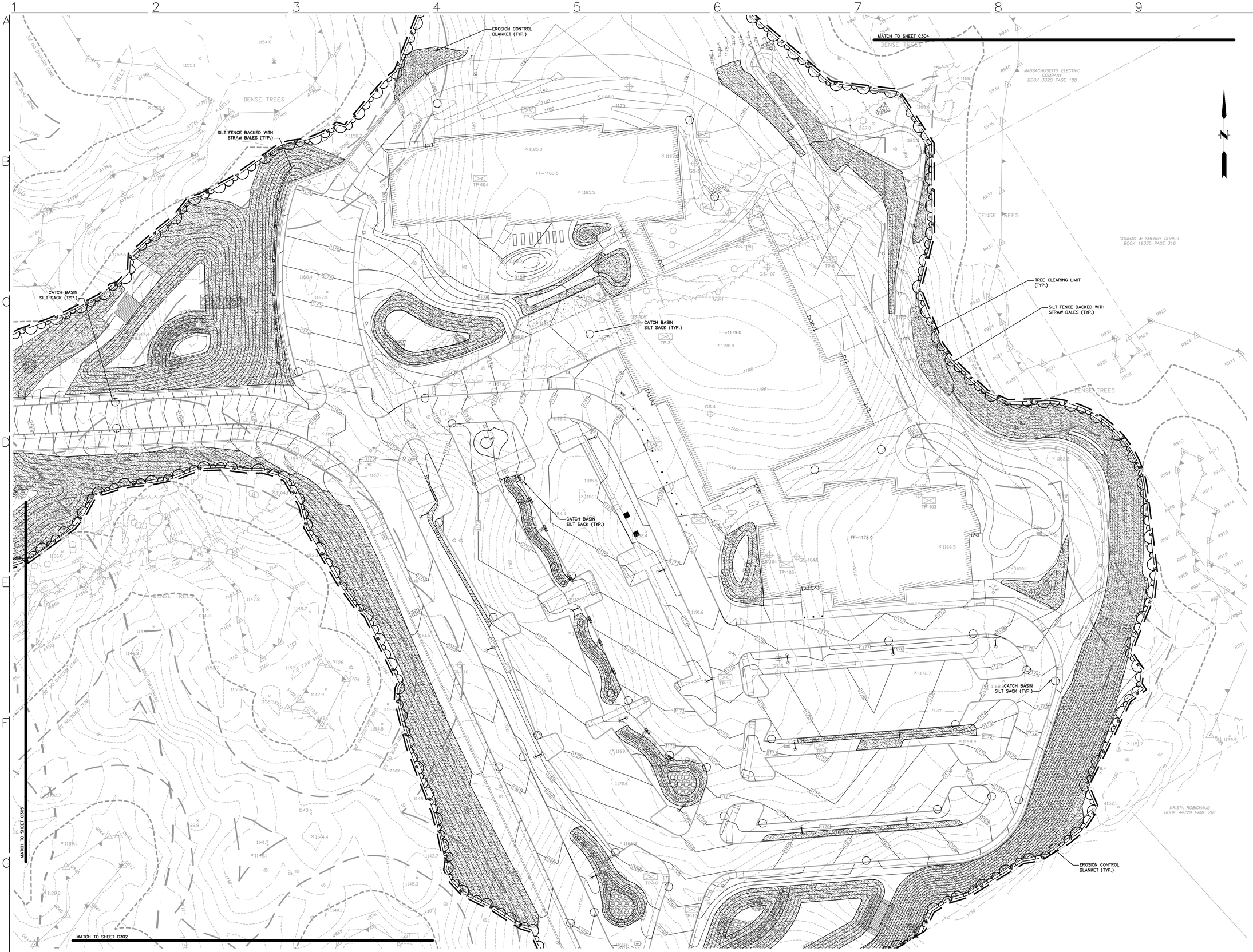
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C302

File Path: J:\DWG\P2018\0363\B10\Civil\Plan\20180363.B10_ERO01.dwg Layout: C302 Plotted: Fri, May 08, 2020 - 10:07 AM User: abell
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SITE PREPARATION AND EROSION & SEDIMENT CONTROL PLAN

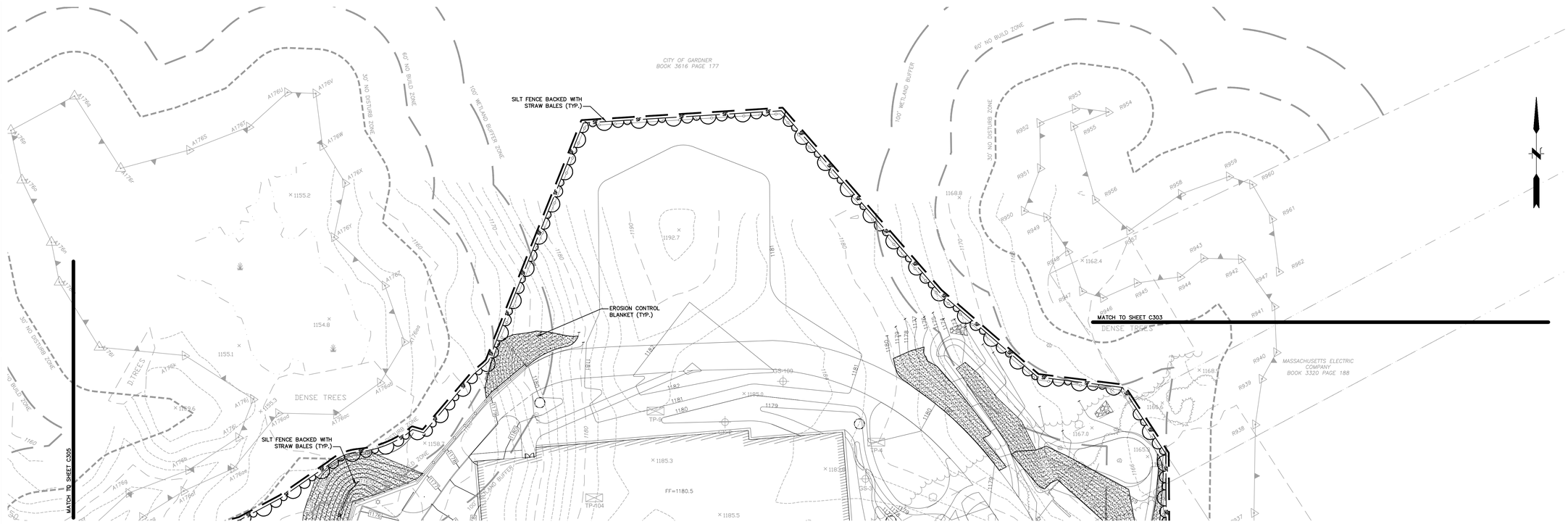
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C303

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SILT FENCE BACKED WITH STRAW BALES (TYP.)
EROSION CONTROL BLANKET (TYP.)
SILT FENCE BACKED WITH STRAW BALES (TYP.)
MATCH TO SHEET C303
MATCH TO SHEET C305
CITY OF GARDNER BOOK 3616 PAGE 177
MASSACHUSETTS ELECTRIC COMPANY BOOK 3320 PAGE 188
60' NO BUILD ZONE
30' NO DISTURB ZONE
100' WETLAND BUFFER ZONE
DENSE TREES
FF=1180.5
TP-101
TP-102
TP-103
TP-104
GS-100
GS-101
GS-102
GS-103
GS-104
GS-105
GS-106
GS-107
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GS-133
GS-134
GS-135
GS-136
GS-137
GS-138
GS-139

CATCH BASIN SILT SACK (TYP.)

SILT FENCE BACKED WITH STRAW BALES (TYP.)

CATCH BASIN SILT SACK (TYP.)

CONSTRUCTION ENTRANCE (50'X24')

REMOVE & DISPOSE ASPHALT

SAWCUT

REMOVE & DISPOSE CURB

SAWCUT

EROSION CONTROL BLANKET (TYP.)

PROPOSED TREELINE (TYP.)

MATCH TO SHEET C304

MATCH TO SHEET C303

CATHERINE STREET

DENSE TREES

30' NO DISTURB ZONE

60' NO BUILD ZONE

100' WETLAND BUFFER ZONE

200' RIVERFRONT

100' INNER RIPARIAN

MASSACHUSETTS ELECTRIC COMPANY BOOK 3620 PAGE 185

GRAPHIC SCALE: 1"=30'

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SITE PREPARATION AND EROSION & SEDIMENT CONTROL PLAN

GARDNER ELEMENTARY SCHOOL

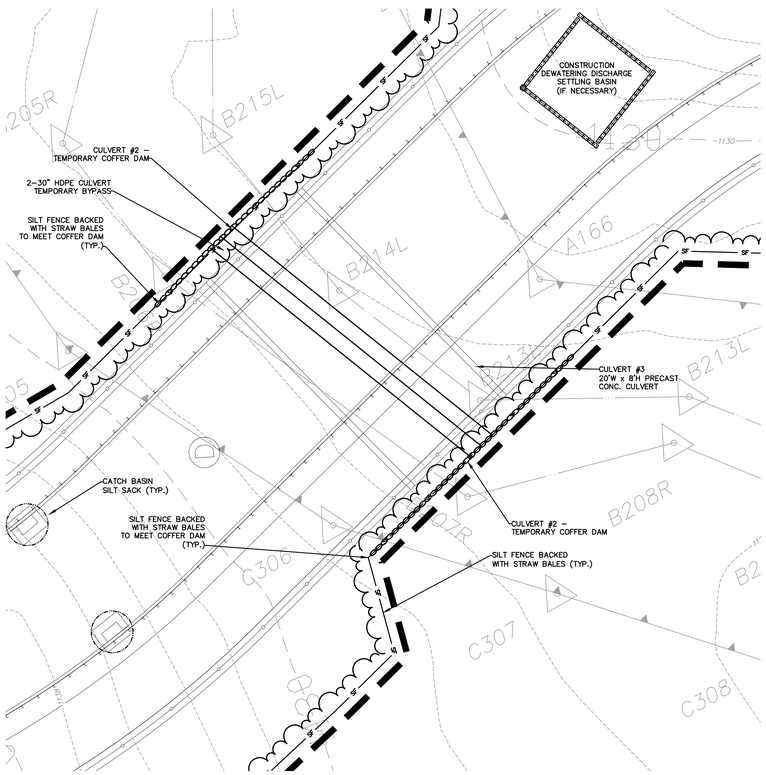
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

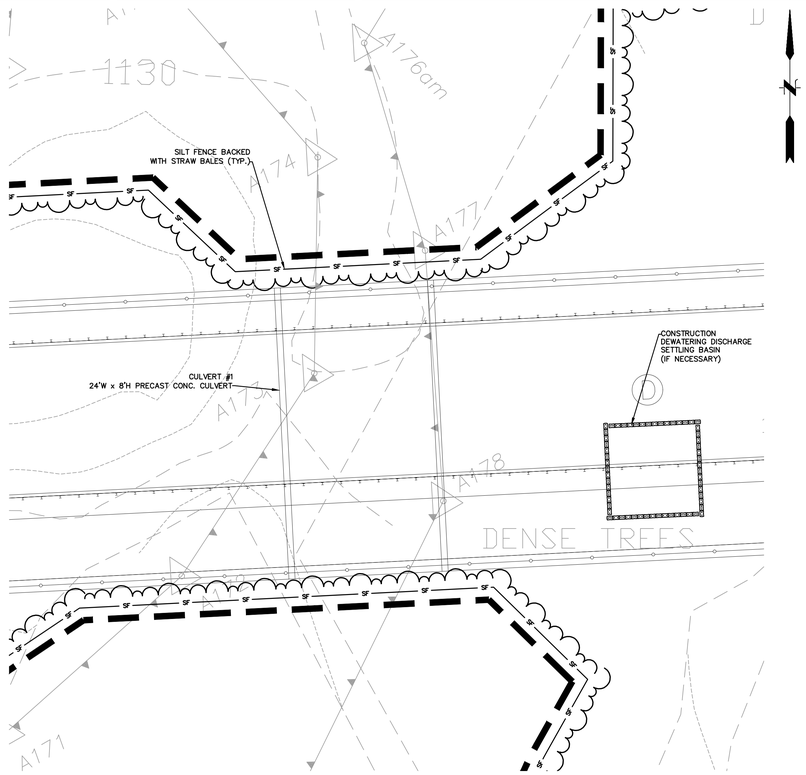
C305

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PLOT_INFO



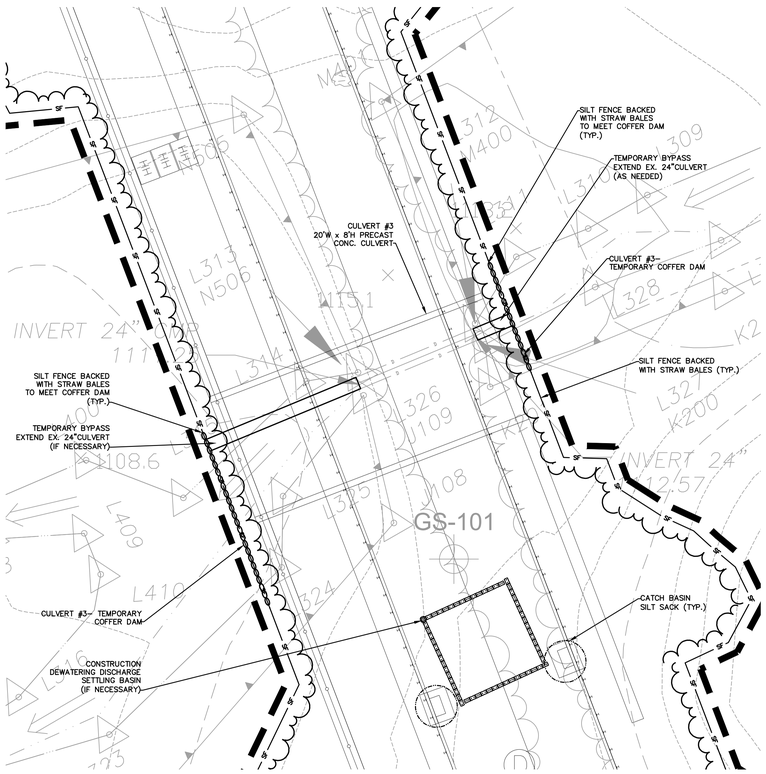
CULVERT #2 – FOSTER BROOK CROSSING

SCALE: 1"=10'



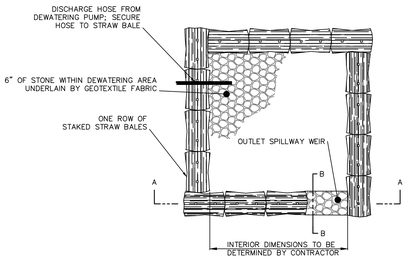
CULVERT #1 – WETLAND CROSSING

SCALE: 1"=10'

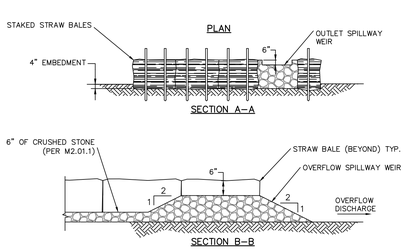


CULVERT #3 – INTERMITTENT STREAM CROSSING

SCALE: 1"=10'



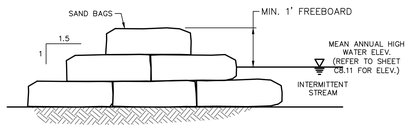
SIZING FORMULA:
CUBIC FT. OF REQUIRED STORAGE =
PUMP DISCHARGE RATE (GPM) x 16

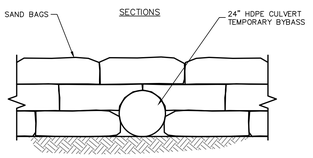


NOTES:
1. STRAW BALES FOR EROSION CONTROL SHALL CONFORM TO SECTION 767 OF THE STANDARD SPECIFICATIONS INCLUDING MATERIALS AND CONSTRUCTION METHODS.
2. BALES OF STRAW SHALL BE FASTENED WITH WIRE AND HAVE A MINIMUM SIZE OF 1'x1.5'x3'.
3. STONE SHALL CONSIST OF 1–1/2 INCH STONE CONFORMING TO SUBSECTION M2.01.1 OF THE STANDARD SPECIFICATIONS.
4. FILTER FABRIC SHALL CONFORM TO A TYPE I FABRIC AS INCLUDED WITHIN SECTION M9.50.0 OF THE STANDARD SPECIFICATIONS.

CONSTRUCTION DEWATERING DISCHARGE SETTLING BASIN (IF NECESSARY)

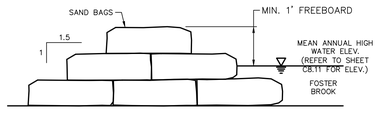
SCALE: N.T.S.

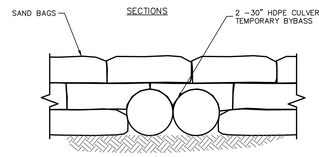




TEMPORARY COFFER DAM
CULVERT #3 – INTERMITTENT STREAM

SCALE: N.T.S.





TEMPORARY COFFER DAM
CULVERT #2 – FOSTER BROOK

SCALE: N.T.S.

LEGEND

- WETLAND DELINEATION FLAG (A00)
- WETLAND BOUNDARY
- INLAND BANK
- LIMIT OF WORK
- SILT FENCE BACKED WITH STRAW BALES (SF)
- COFFER DAM
- PROPOSED TREELINE
- REMOVE & DISPOSE PIPE
- DRAINAGE MANHOLE
- CATCH BASIN
- CATCH BASIN SILT STACK

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May, 11, 2020

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TEMPORARY BYPASS FOR CULVERT INSTALLATION

GARDNER ELEMENTARY SCHOOL

PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C306

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MS VIEW:



PRE-CONSTRUCTION

- MEET WITH CONTRACTOR, OWNER'S PROJECT MANAGER (OPM), CONSTRUCTION INSPECTORS, CITY STAFF, UTILITY LIAISONS, AND PERSONNEL FROM PERMITTING AUTHORITIES TO REVIEW THE CONTRACTOR'S PROPOSED CONSTRUCTION SEQUENCING AND APPROACH
- REVIEW REQUIRED INSPECTIONS AND MATERIALS TESTING REQUIREMENTS
- REVIEW ANY SPECIAL PROVISIONS RELATED TO REGULATORY PERMITTING
- REVIEW SITE SPECIFIC OPERATIONS AND MAINTENANCE PLANS INCLUDING HEALTH & SAFETY PLAN AND STORMWATER POLLUTION PREVENTION PLAN
- REVIEW CONTRACTOR'S PROPOSED STAGING AND LAYDOWN AREAS
- REVIEW CONTRACTOR'S PROPOSED WORK HOURS AND MAJOR SITE ACCESS ROUTES TO BE USED BY CONSTRUCTION PERSONNEL

GENERAL:

- CLEAR TREES, LEAVING STUMPS AND GROUND COVER
- INSTALL EROSION AND SEDIMENTATION CONTROLS

PHASE 1

- CLEAR AND GRUB AREA
- PREPARE CUT AND FILL AREAS,
- LAYOUT STOCKPILE LOCATIONS
- INSTALL CULVERT #3
- INSTALL GRAVITY WALLS
- FILL AND COMPACT AREAS
- INSTALL STORMWATER DRAINAGE
- INSTALL SANITARY SEWER
- INSTALL SITE UTILITIES
- ROUGH GRADE DRIVEWAY, MULTI-USE PATH, PARKING LOT, AND BUILDING AREA
- PLACE SUBBASE FOR DRIVEWAY AND MULTI-USE PATH
- PLACE HOT MIX ASPHALT BINDER FOR DRIVEWAY AND MULTI-USE PATH
- PROVIDE SEEDING AND OTHER STABILIZATION MEASURES

PHASE 2

- CLEAR AND GRUB AREA
- ROUGH GRADE PARKING LOT, DRIVEWAYS, SIDEWALKS, BUILDING AREA
- INSTALL GRAVITY WALLS
- INSTALL STORMWATER DRAINAGE
- INSTALL SANITARY SEWER
- INSTALL SITE UTILITIES
- CONSTRUCT BUILDING
- PLACE SUBBASE FOR PARKING LOTS, DRIVEWAYS, AND SIDEWALKS
- PLACE HOT MX ASPHALT BINDER FOR PARKING LOTS AND DRIVEWAYS
- PLACE CONCRETE SIDEWALKS
- PREPARE CUT AND FILL AREAS,
- LAYOUT STOCKPILE LOCATIONS

PHASE 3

- INSTALL EROSION AND SEDIMENTATION CONTROLS
- CLEAR AND GRUB AREA
- ROUGH GRADE PARKING LOT, DRIVEWAY, SIDEWALK, AND MULTI-USE PATH
- INSTALL GRAVITY WALLS
- INSTALL STORMWATER DRAINAGE
- INSTALL SANITARY SEWER
- INSTALL SITE UTILITIES
- CONSTRUCT BUILDING
- PLACE SUBBASE FOR PARKING LOTS, DRIVEWAYS, AND SIDEWALKS
- PLACE HOT MX ASPHALT BINDER FOR PARKING LOTS AND DRIVEWAYS
- PLACE CONCRETE SIDEWALKS

PHASE 4

- INSTALL EROSION AND SEDIMENTATION CONTROLS
- CLEAR AND GRUB AREA
- ROUGH GRADE DRIVEWAY, MULTI-USE PATH, AND PLAYGROUND AREAS
- INSTALL GRAVITY WALLS
- INSTALL CULVERT #1 AND CULVERT #2
- INSTALL STORMWATER DRAINAGE
- INSTALL SANITARY SEWER
- INSTALL SITE UTILITIES
- PLACE SUBBASE FOR PARKING LOTS, DRIVEWAYS, AND SIDEWALKS
- PLACE HOT MX ASPHALT BINDER FOR PARKING LOTS, DRIVEWAYS, AND SIDEWALKS
- CONSTRUCT PLAYGROUND AREAS AND INSTALL PLAYGROUND EQUIPMENT
- FINISH GRADE SITE, LOAM AND SEED, INSTALL LANDSCAPING
- COMPLETE PEARL STREET IMPROVEMENTS
- PLACE HOT MX ASPHALT FOR ALL DRIVEWAYS, PARKING LOTS, AND MULTI-USE PATH
- REMOVE SEDIMENTATION CONTROLS DEVICES WHEN ALL DISTURBED AREAS ARE STABILIZES.

THIS CONSTRUCTION SEQUENCE IS SUBJECT TO CHANGE BASED ON CONSTRUCTION METHODS OR DUE TO OTHER UNFORESEEN CIRCUMSTANCES.

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PHASING PLAN

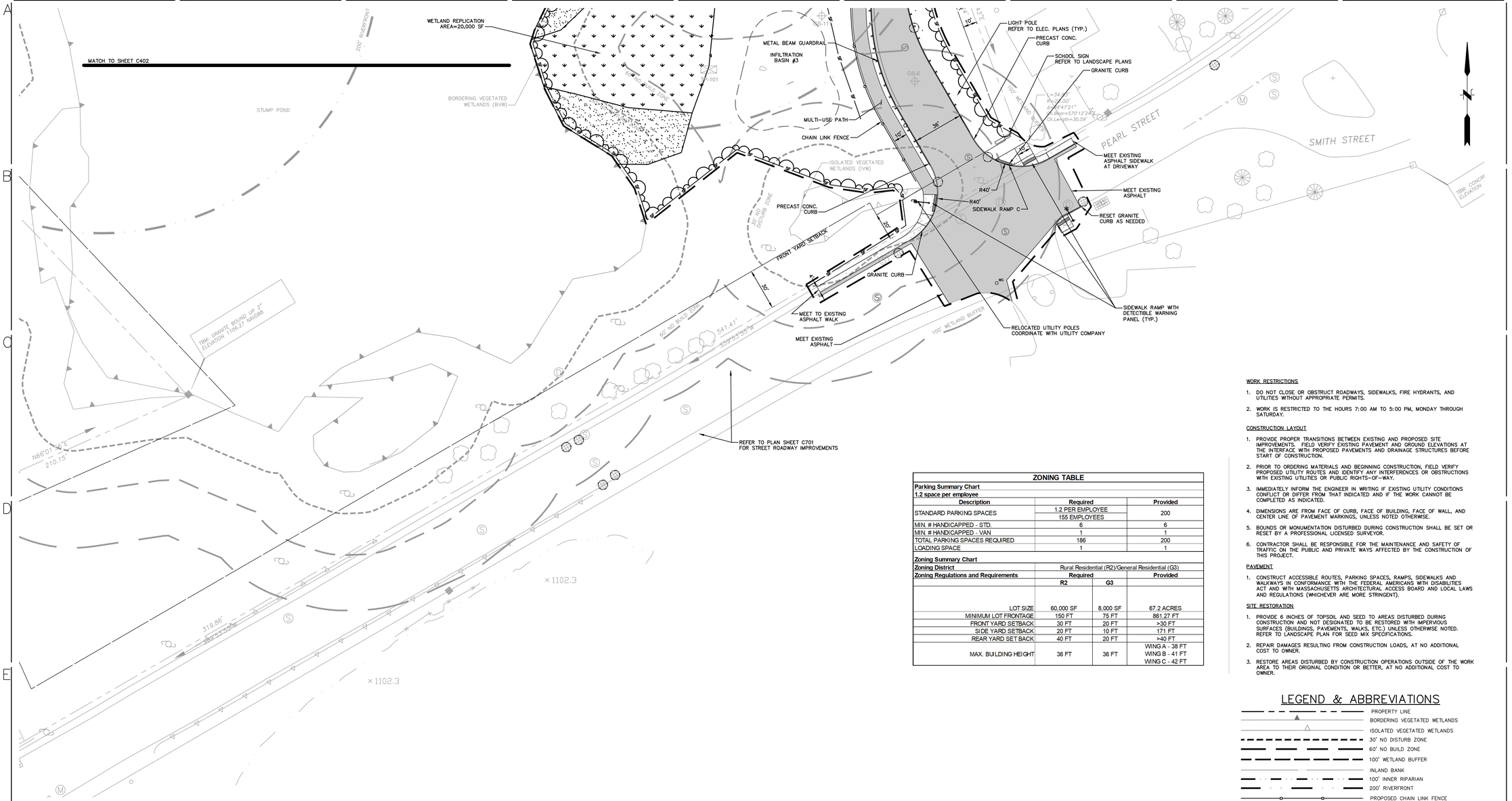
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=80'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C307

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ZONING TABLE			
Parking Summary Chart			
1,2 space per employee			
Description	**Required**		**Provided**
STANDARD PARKING SPACES	1.2 PER EMPLOYEE 155 EMPLOYEES		200
MIN. # HANDICAPPED - STD.	6		6
MIN. # HANDICAPPED - VAN	1		1
TOTAL PARKING SPACES REQUIRED	186		200
LOADING SPACE	1		1
Zoning Summary Chart			
Zoning District	Rural Residential (R2)/General Residential (G3)		
Zoning Regulations and Requirements	**Required**		**Provided**
	R2	**G3**	
LOT SIZE	60,000 SF	8,000 SF	67.2 ACRES
MINIMUM LOT FRONTAGE	150 FT	75 FT	861.27 FT
FRONT YARD SETBACK	30 FT	20 FT	>30 FT
SIDE YARD SETBACK	20 FT	10 FT	171 FT
REAR YARD SET BACK	40 FT	20 FT	>40 FT
MAX. BUILDING HEIGHT	36 FT	36 FT	WING A - 38 FT WING B - 41 FT WING C - 42 FT

WORK RESTRICTIONS

1. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, FIRE HYDRANTS, AND UTILITIES WITHOUT APPROPRIATE PERMITS.
2. WORK IS RESTRICTED TO THE HOURS 7:00 AM TO 5:00 PM, MONDAY THROUGH SATURDAY.

CONSTRUCTION LAYOUT

1. PROVIDE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED SITE IMPROVEMENTS. FIELD VERIFY EXISTING PAVEMENT AND GROUND ELEVATIONS AT THE INTERFACE WITH PROPOSED PAVEMENTS AND DRAINAGE STRUCTURES BEFORE START OF CONSTRUCTION.
2. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, FIELD VERIFY PROPOSED UTILITY ROUTES AND IDENTIFY ANY INTERFERENCES OR OBSTRUCTIONS WITH EXISTING UTILITIES OR PUBLIC RIGHTS-OF-WAY.
3. IMMEDIATELY INFORM THE ENGINEER IN WRITING IF EXISTING UTILITY CONDITIONS CONFLICT OR DIFFER FROM THAT INDICATED AND IF THE WORK CANNOT BE COMPLETED AS INDICATED.
4. DIMENSIONS ARE FROM FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS NOTED OTHERWISE.
5. BOUNDS OR MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND SAFETY OF TRAFFIC ON THE PUBLIC AND PRIVATE WAYS AFFECTED BY THE CONSTRUCTION OF THIS PROJECT.

PAVEMENT

1. CONSTRUCT ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH MASSACHUSETTS ARCHITECTURAL ACCESS BOARD AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).

SITE RESTORATION

1. PROVIDE 6 INCHES OF TOPSOIL AND SEED TO AREAS DISTURBED DURING CONSTRUCTION AND NOT DESIGNATED TO BE RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) UNLESS OTHERWISE NOTED. REFER TO LANDSCAPE PLAN FOR SEED MIX SPECIFICATIONS.
2. REPAIR DAMAGES RESULTING FROM CONSTRUCTION LOADS, AT NO ADDITIONAL COST TO OWNER.
3. RESTORE AREAS DISTURBED BY CONSTRUCTION OPERATIONS OUTSIDE OF THE WORK AREA TO THEIR ORIGINAL CONDITION OR BETTER, AT NO ADDITIONAL COST TO OWNER.

LEGEND & ABBREVIATIONS

- PROPERTY LINE
- BORDERING VEGETATED WETLANDS
- ISOLATED VEGETATED WETLANDS
- 30' NO DISTURB ZONE
- 60' NO BUILD ZONE
- 100' WETLAND BUFFER
- INLAND BANK
- 100' INNER RIPARIAN
- 200' RIVERFRONT
- PROPOSED CHAIN LINK FENCE
- PROPOSED VINYL CHAIN LINK FENCE
- PROPOSED METAL BEAM GUARDRAIL
- PROPOSED CURB
- PROPOSED GRAVITY RETAINING WALL
- PROPOSED CONC. SIDEWALK
- PROPOSED HEAVY DUTY CONC. WALK
- PROPOSED ASPHALT
- PROPOSED WETLAND REPLICATION AREA
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED WATER GATE VALVE
- PROPOSED UTILITY POLE
- PROPOSED RELOCATED POLE
- TYP. TYPICAL
- ELEC. ELECTRICAL
- CONC. CONCRETE

30 15 0 30
GRAPHIC SCALE: 1"=30'

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May, 11, 2020

COMMONWEALTH OF MASSACHUSETTS
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SITE LAYOUT PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C401

File Path: J:\DWG\P2018\0363\B10\Civil\Plan\20180363.B10_STP01.dwg Layout: C-401 Plotted: Fri, May 08, 2020 - 3:21 PM User: abell
PLOT_INFO
LAYER STATE:
MS VIEW:

MATCH TO SHEET C403

MATCH TO SHEET C401

SIDEWALK RAMP E

R10'

R62'

MULTI-USE RAMP TYPE A

INFILTRATION BASIN #1

PRECAST CONC. CURB

METAL BEAM GUARDRAIL

MULTI-USE PATH

CHAIN LINK FENCE

LIGHT POLE
REFER TO ELEC. PLANS (TYP.)

GRAVITY RETAINING WALL

GRAVITY
RETAINING WALL

32'

24'

10'

SIDE YARD SETBACK

S22°46'28"E
243.47'

JOHN & JOHANNA HEDBOR
BOOK 25098 PAGE 3

ELAINE ROCKWOOD
BOOK 40185 PAGE 23

140.67'
S67°20'12"W

BORDERING VEGETATED
WETLANDS (BVW)

INLAND BANK

30' NO DISTURB ZONE

60' NO BUILD ZONE

100' WETLAND BUFFER

N67°15'59"E
131'

S20°55'28"E
111.70'

GRAVITY RETAINING WALL

133.70'
S69°41'06"W

RICHARD PRELIASCO
ALAN PRELIASCO
BOOK 39519 PAGE 123

200' RIVERFRONT

S20°18'41"E

LIGHT POLE
REFER TO ELEC. PLANS (TYP.)

PRECAST CONC.
CURB

SCHOOL SIGN
REFER TO LANDSCAPE PLANS

GRANITE CURB

L=34.00'
R=40.00'
Δ=48°47'21"
Ch.Bear=S70°12'24"E
Ch.Length=30.59'

PEARL STREET

SMITH STREET

MEET EXISTING
ASPHALT SIDEWALK
AT DRIVEWAY

MEET EXISTING
ASPHALT

RESET GRANITE
CURB AS NEEDED

R40'

SIDEWALK RAMP C

PRECAST CONC.
CURB

WETLAND REPLICATION
AREA=20,000 SF

METAL BEAM GUARDRAIL

INFILTRATION
BASIN #3

MULTI-USE PATH

CHAIN LINK FENCE

36'

20'

ISOLATED VEGETATED
WETLANDS (IVW)

STUMP POND

100' INNER RIPARIAN

200' RIVERFRONT

GS-101

GS-6

TBM: CONCRETE
ELEVATION 1124

GRAPHIC SCALE: 1"=30'

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SITE LAYOUT PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
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REVISIONS:	

SITE
PERMITTING

C402

File Path: J:\DWG\P2018\03\63\B10\Civil\Plan\20180363.B10_STP01.dwg Layout: C-402 Plotted: Fri, May 08, 2020 - 10:02 AM User: abell
XREF:
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LAYER STATE:
PLOT_INFO

SITE LAYOUT PLAN

GRAPHIC SCALE: 1"=30'

MATCH TO SHEET C404

MATCH TO SHEET C405

REFER TO LANDSCAPE PLANS FOR DETAILED INFORMATION FOR THESE FEATURES

BORDERING VEGETATED WETLANDS (BVW)

APPROXIMATE VERNAL POOL

50' NO DISTURB ZONE

60' NO BUILD ZONE

100' RIVERFRONT

30' NO DISTURB ZONE

60' NO BUILD ZONE

30' NO DISTURB ZONE

100' WETLAND BUFFER

60' NO BUILD ZONE

30' NO DISTURB ZONE

WETLAND BUFFER

GRAVITY RETAINING WALL

CHAIN LINK FENCE

CHAIN LINK DOUBLE LEAF SWING GATE

SLOPED GRANITE EDGING

INFILTRATION BASIN #2

INFILTRATION BASIN #4

INFILTRATION BASIN #1

PRECAST CONC. CURB

METAL BEAM GUARDRAIL

MONOLITHIC CONC. CURB AND WALK

STEEL PIPE FILLED CONC. BOLLARD (TYP. 17'-4.5' OC)

RAIN GARDEN #1

HEAVY DUTY CONC. WALK (FLUSH)

FLUSH PRECAST CONC. CURB

CONC. EQUIPMENT PAD GENERATOR REFER TO ELEC. PLANS

CONC. RETAINING WALL

CONC. STAIRS

TRANSFORMER REFER TO ELEC. PLANS

LOADING DOCK REFER TO ARCHITECTURAL PLANS

FLAG POLE REFER TO LANDSCAPE PLANS

SIDEWALK RAMP TYPE F

SIDEWALK RAMP TYPE A

SIDEWALK RAMP TYPE D

SIDEWALK RAMP TYPE E

SIDEWALK RAMP TYPE B

CONC. SIDEWALK

MULTI-USE RAMP TYPE A

2' WIDE LEAK OFF WITH WASHED STONE SURFACING

BIO-SWALE

BOLLARD REFER TO LANDSCAPING PLAN (TYP.)

ELEC. VEHICLE CHARGING STATION

BIKE RACK REFER TO LANDSCAPE PLAN

BOLLARD REFER TO LANDSCAPE PLANS (TYP.)

CONCRETE SIDEWALK

LIGHT POLE (TYP.)

UTILITY POLE (TYP.)

MULTI-USE PATH

SIDE YARD SETBACK

REAR YARD SETBACK

MASSACHUSETTS ELECTRIC COMPANY BOOK 3320 PAGE 188

CONRAD & SHERRY DONELL BOOK 19335 PAGE 316

KRISTA ROBICHAUD BOOK 44729 PAGE 261

S32°50'19"E 717.56'

S58°49'06"W

TP-101 TP-102 TP-103 TP-104 TP-105 TP-106 TP-107 TP-108 TP-109 TP-110 TP-111 TP-112

GS-101 GS-102 GS-103 GS-104 GS-104A GS-105 GS-106 GS-107 GS-108 GS-109 GS-110 GS-111 GS-112 GS-1 GS-2 GS-3 GS-4 GS-5 GS-6

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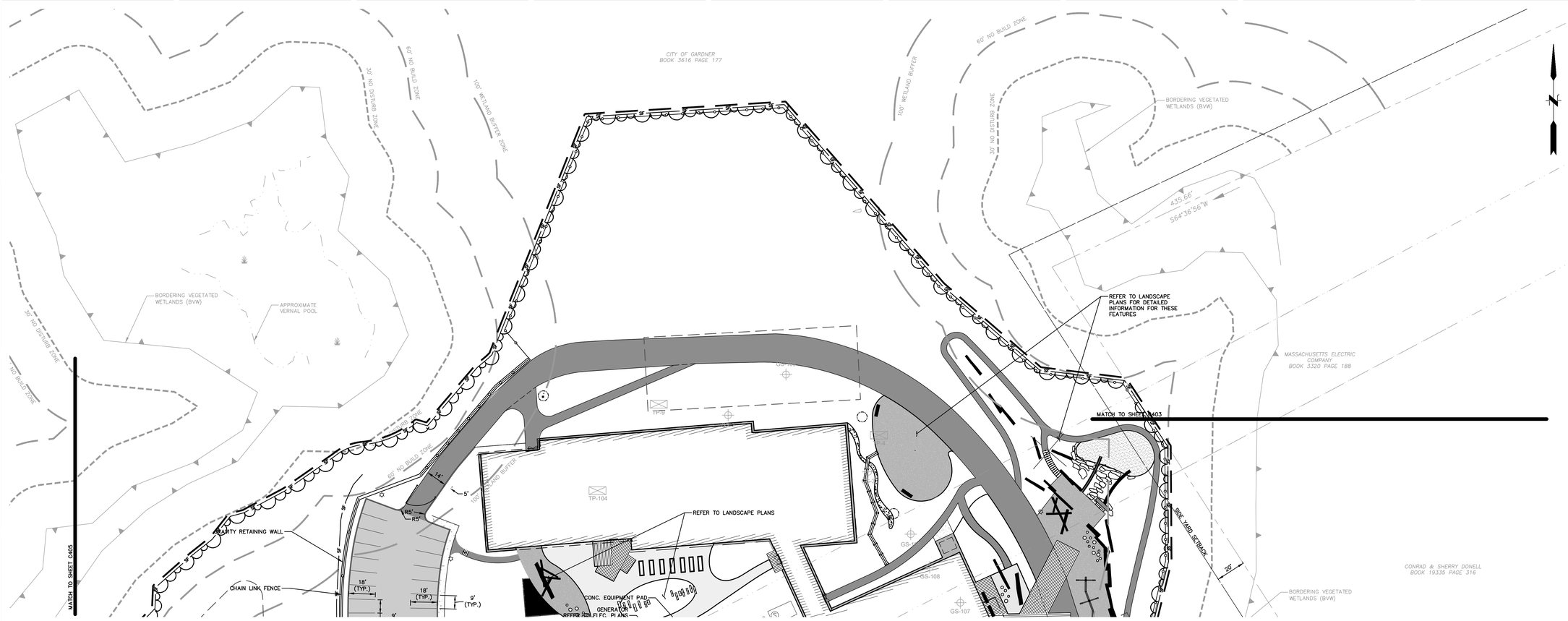
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GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
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SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C403



GRAPHIC SCALE: 1"=30'

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SITE LAYOUT PLAN

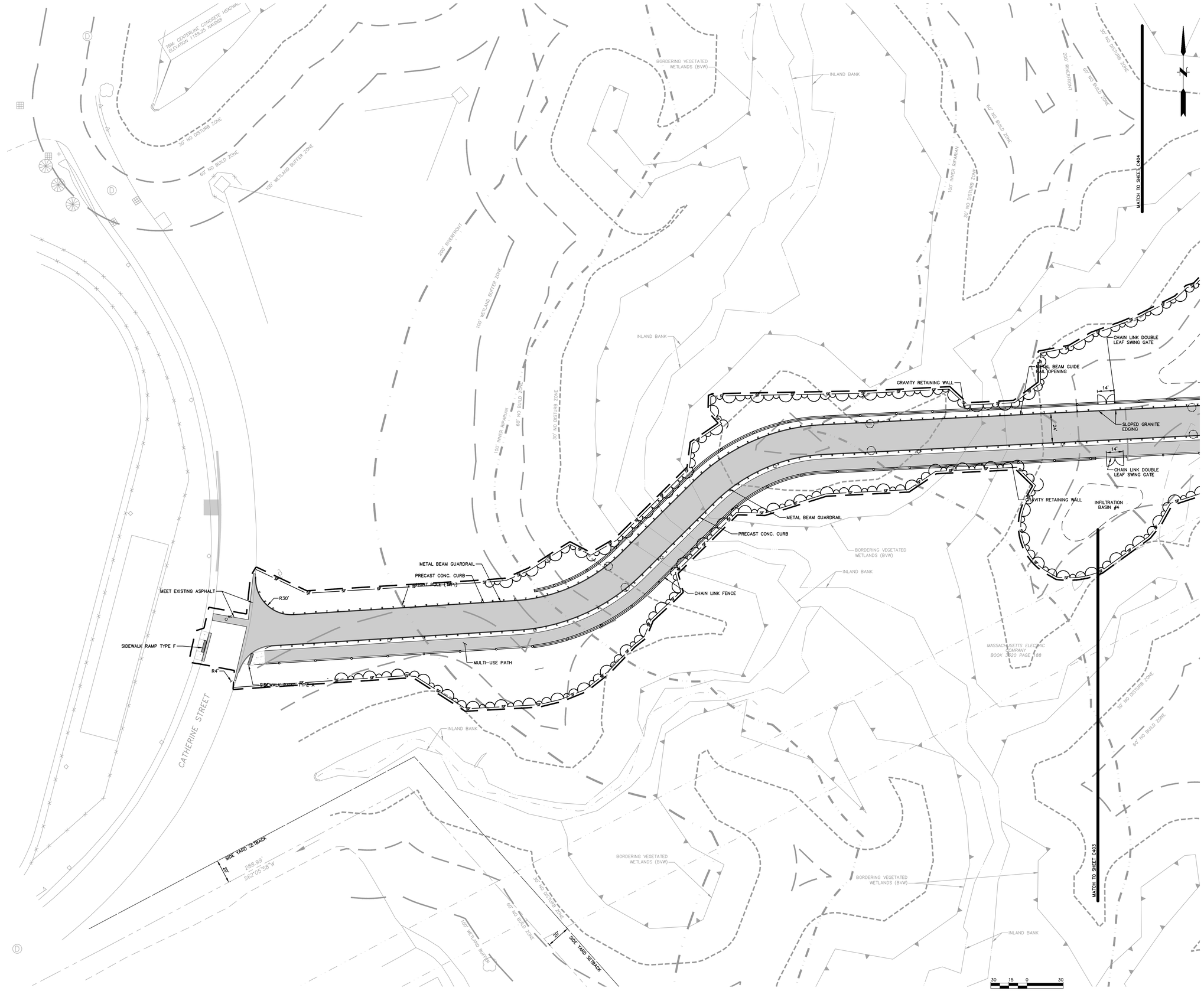
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SITE PERMITTING

C404

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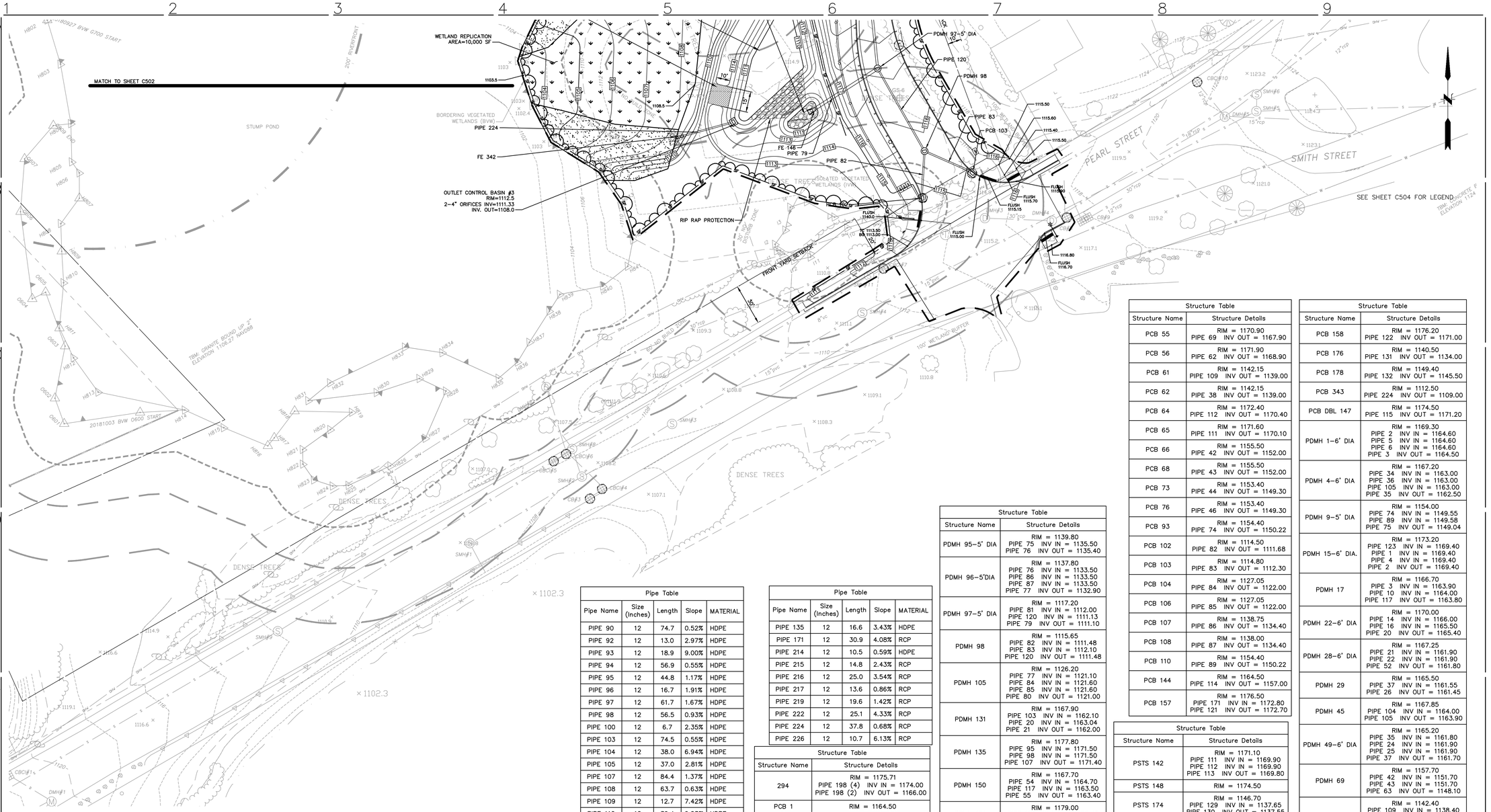
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SITE PERMITTING

C405

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LAYER STATE: PLOT_INFO
MS VIEW:



Structure Table	
Structure Name	Structure Details
PCB 55	RIM = 1170.90 PIPE 69 INV OUT = 1167.90
PCB 56	RIM = 1171.90 PIPE 62 INV OUT = 1168.90
PCB 61	RIM = 1142.15 PIPE 109 INV OUT = 1139.00
PCB 62	RIM = 1142.15 PIPE 38 INV OUT = 1139.00
PCB 64	RIM = 1172.40 PIPE 112 INV OUT = 1170.40
PCB 65	RIM = 1171.60 PIPE 111 INV OUT = 1170.10
PCB 66	RIM = 1155.50 PIPE 42 INV OUT = 1152.00
PCB 68	RIM = 1155.50 PIPE 43 INV OUT = 1152.00
PCB 73	RIM = 1153.40 PIPE 44 INV OUT = 1149.30
PCB 76	RIM = 1153.40 PIPE 46 INV OUT = 1149.30
PCB 93	RIM = 1154.40 PIPE 74 INV OUT = 1150.22
PCB 102	RIM = 1114.50 PIPE 82 INV OUT = 1111.68
PCB 103	RIM = 1114.80 PIPE 83 INV OUT = 1112.30
PCB 104	RIM = 1127.05 PIPE 84 INV OUT = 1122.00
PCB 106	RIM = 1127.05 PIPE 85 INV OUT = 1122.00
PCB 107	RIM = 1138.75 PIPE 86 INV OUT = 1134.40
PCB 108	RIM = 1138.00 PIPE 87 INV OUT = 1134.40
PCB 110	RIM = 1154.40 PIPE 89 INV OUT = 1150.22
PCB 144	RIM = 1164.50 PIPE 114 INV OUT = 1157.00
PCB 157	RIM = 1176.50 PIPE 171 INV IN = 1172.80 PIPE 121 INV OUT = 1172.70

Structure Table	
Structure Name	Structure Details
PCB 158	RIM = 1176.20 PIPE 122 INV OUT = 1171.00
PCB 176	RIM = 1140.50 PIPE 131 INV OUT = 1134.00
PCB 178	RIM = 1149.40 PIPE 132 INV OUT = 1145.50
PCB 343	RIM = 1112.50 PIPE 224 INV OUT = 1109.00
PCB DBL 147	RIM = 1174.50 PIPE 115 INV OUT = 1171.20
PDMH 1-6' DIA	RIM = 1169.30 PIPE 2 INV IN = 1164.60 PIPE 5 INV IN = 1164.60 PIPE 6 INV IN = 1164.60 PIPE 3 INV OUT = 1164.50
PDMH 4-6' DIA	RIM = 1167.20 PIPE 34 INV IN = 1163.00 PIPE 36 INV IN = 1163.00 PIPE 105 INV IN = 1163.00 PIPE 35 INV OUT = 1162.50
PDMH 9-5' DIA	RIM = 1154.00 PIPE 74 INV IN = 1149.55 PIPE 89 INV IN = 1149.58 PIPE 75 INV OUT = 1149.04
PDMH 15-6' DIA.	RIM = 1173.20 PIPE 123 INV IN = 1169.40 PIPE 1 INV IN = 1169.40 PIPE 4 INV IN = 1169.40 PIPE 2 INV OUT = 1169.40
PDMH 17	RIM = 1166.70 PIPE 3 INV IN = 1163.90 PIPE 10 INV IN = 1164.00 PIPE 117 INV OUT = 1163.80
PDMH 22-6' DIA	RIM = 1170.00 PIPE 14 INV IN = 1166.00 PIPE 16 INV IN = 1165.50 PIPE 20 INV OUT = 1165.40
PDMH 28-6' DIA	RIM = 1167.25 PIPE 21 INV IN = 1161.90 PIPE 22 INV IN = 1161.90 PIPE 52 INV OUT = 1161.80
PDMH 29	RIM = 1165.50 PIPE 37 INV IN = 1161.55 PIPE 26 INV OUT = 1161.45
PDMH 45	RIM = 1167.85 PIPE 104 INV IN = 1164.00 PIPE 105 INV OUT = 1163.90
PDMH 49-6' DIA	RIM = 1165.20 PIPE 35 INV IN = 1161.80 PIPE 24 INV IN = 1161.90 PIPE 25 INV IN = 1161.90 PIPE 37 INV OUT = 1161.70
PDMH 69	RIM = 1157.70 PIPE 42 INV IN = 1151.70 PIPE 43 INV IN = 1151.70 PIPE 63 INV OUT = 1148.10
PDMH 70-6' DIA	RIM = 1142.40 PIPE 109 INV IN = 1138.40 PIPE 38 INV IN = 1138.40 PIPE 71 INV IN = 1138.40 PIPE 129 INV OUT = 1138.40
PDMH 74	RIM = 1151.60 PIPE 44 INV IN = 1147.70 PIPE 46 INV IN = 1147.70 PIPE 70 INV OUT = 1146.20
PDMH 83	RIM = 1172.75 PIPE 64 INV IN = 1168.20 PIPE 45 INV OUT = 1168.10
PDMH 87	RIM = 1144.00 PIPE 70 INV IN = 1140.30 PIPE 71 INV OUT = 1140.20

Structure Table	
Structure Name	Structure Details
PDMH 95-5' DIA	RIM = 1139.80 PIPE 75 INV IN = 1135.50 PIPE 76 INV OUT = 1135.40
PDMH 96-5'DIA	RIM = 1137.80 PIPE 76 INV IN = 1133.50 PIPE 86 INV IN = 1133.50 PIPE 87 INV IN = 1133.50 PIPE 77 INV OUT = 1132.90
PDMH 97-5' DIA	RIM = 1117.20 PIPE 81 INV IN = 1112.00 PIPE 120 INV IN = 1111.13 PIPE 79 INV OUT = 1111.10
PDMH 98	RIM = 1115.65 PIPE 82 INV IN = 1111.48 PIPE 83 INV IN = 1112.10 PIPE 120 INV OUT = 1111.48
PDMH 105	RIM = 1126.20 PIPE 77 INV IN = 1121.10 PIPE 84 INV IN = 1121.60 PIPE 85 INV IN = 1121.60 PIPE 80 INV OUT = 1121.00
PDMH 131	RIM = 1167.90 PIPE 103 INV IN = 1162.10 PIPE 20 INV IN = 1163.04 PIPE 21 INV OUT = 1162.00
PDMH 135	RIM = 1177.80 PIPE 95 INV IN = 1171.50 PIPE 98 INV IN = 1171.50 PIPE 107 INV OUT = 1171.40
PDMH 150	RIM = 1167.70 PIPE 54 INV IN = 1164.70 PIPE 117 INV IN = 1163.50 PIPE 55 INV OUT = 1163.40
PDMH 151	RIM = 1179.00 PIPE 119 INV IN = 1171.40 PIPE 118 INV OUT = 1170.30
PDMH 156	RIM = 1122.60 PIPE 80 INV IN = 1117.70 PIPE 81 INV OUT = 1117.60
PDMH 159	RIM = 1174.90 PIPE 121 INV IN = 1169.90 PIPE 122 INV IN = 1169.90 PIPE 123 INV OUT = 1169.90
PDMH 337	RIM = 1177.60 PIPE 94 INV IN = 1170.30 PIPE 107 INV IN = 1170.30 PIPE 217 INV OUT = 1170.30
PDMH 340	RIM = 1171.39 PIPE 222 INV IN = 1166.00 PIPE 110 INV OUT = 1160.50
PDMH 344	RIM = 1172.50 PIPE 45 INV IN = 1167.20 PIPE 226 INV OUT = 1166.53
PSTS 18	RIM = 1172.09 PIPE 7 INV IN = 1167.70 PIPE 9 INV IN = 1167.48 PIPE 50 INV OUT = 1166.36
PSTS 27	RIM = 1171.70 PIPE 12 INV IN = 1167.30 PIPE 53 INV IN = 1166.30 PIPE 51 INV OUT = 1165.47
PSTS 80	RIM = 1172.60 PIPE 62 INV IN = 1168.65 PIPE 60 INV IN = 1168.65 PIPE 61 INV OUT = 1167.86
PSTS 84	RIM = 1171.59 PIPE 69 INV IN = 1167.20 PIPE 68 INV IN = 1166.00
PSTS 87	RIM = 1182.00 PIPE 90 INV IN = 1173.93 PIPE 92 INV OUT = 1173.83
PSTS 126	RIM = 1171.09 PIPE 56 INV IN = 1165.71 PIPE 17 INV IN = 1166.70 PIPE 100 INV OUT = 1165.61

Structure Table	
Structure Name	Structure Details
PSTS 142	RIM = 1171.10 PIPE 111 INV IN = 1169.90 PIPE 112 INV IN = 1169.90 PIPE 113 INV OUT = 1169.80
PSTS 148	RIM = 1174.50
PSTS 174	RIM = 1146.70 PIPE 129 INV IN = 1137.65 PIPE 130 INV OUT = 1137.55
PSTS 323	RIM = 1168.20 PIPE 128 INV IN = 1161.65 PIPE 214 INV OUT = 1161.55
PSTS 331	RIM = 1180.90 PIPE 133 INV IN = 1174.85 PIPE 219 INV OUT = 1174.75
PSTS 332	RIM = 1169.60 PIPE 127 INV IN = 1164.50 PIPE 134 INV OUT = 1162.39
PSTS 333	RIM = 1174.89 PIPE 125 INV IN = 1169.10 PIPE 135 INV OUT = 1169.00
PSTS 335	RIM = 1171.75 PIPE 215 INV IN = 1166.70 PIPE 126 INV OUT = 1166.60
PSTS 336	RIM = 1173.40 PIPE 216 INV IN = 1168.70 PIPE 124 INV OUT = 1168.01
PYD 86 WITH DOME	RIM = 1171.25 PIPE 67 INV OUT = 1167.20
PYD 111	RIM = 1177.80 PIPE 90 INV OUT = 1174.30
PYD 116	RIM = 1177.80 PIPE 96 INV IN = 1173.00 PIPE 97 INV OUT = 1173.00
PYD 117	RIM = 1177.80 PIPE 97 INV IN = 1172.00 PIPE 98 INV OUT = 1172.00
PYD 119	RIM = 1179.50
PYD 165	RIM = 1173.50 PIPE 216 INV OUT = 1169.50
PYD 167	RIM = 1173.50 PIPE 125 INV OUT = 1170.50
PYD 169	RIM = 1172.00 PIPE 215 INV OUT = 1167.00
PYD 171	RIM = 1170.50 PIPE 127 INV OUT = 1165.60
PYD 173	RIM = 1163.95

Pipe Table				
Pipe Name	Size (Inches)	Length	Slope	MATERIAL
PIPE 90	12	74.7	0.52%	HDPE
PIPE 92	12	13.0	2.97%	HDPE
PIPE 93	12	18.9	9.00%	HDPE
PIPE 94	12	56.9	0.55%	HDPE
PIPE 95	12	44.8	1.17%	HDPE
PIPE 96	12	16.7	1.91%	HDPE
PIPE 97	12	61.7	1.67%	HDPE
PIPE 98	12	56.5	0.93%	HDPE
PIPE 100	12	6.7	2.35%	HDPE
PIPE 103	12	74.5	0.55%	HDPE
PIPE 104	12	38.0	6.94%	HDPE
PIPE 105	12	37.0	2.81%	HDPE
PIPE 107	12	84.4	1.37%	HDPE
PIPE 108	12	63.7	0.63%	HDPE
PIPE 109	12	12.7	7.42%	HDPE
PIPE 110	12	39.4	9.23%	HDPE
PIPE 111	12	18.3	1.49%	HDPE
PIPE 112	12	40.3	1.43%	HDPE
PIPE 113	12	50.1	0.63%	HDPE
PIPE 114	12	42.2	7.24%	HDPE

Pipe Table				
Pipe Name	Size (Inches)	Length	Slope	MATERIAL
PIPE 135	12	16.6	3.43%	HDPE
PIPE 171	12	30.9	4.08%	RCP
PIPE 214	12	10.5	0.59%	HDPE
PIPE 215	12	14.8	2.43%	RCP
PIPE 216	12	25.0	3.54%	RCP
PIPE 217	12	13.6	0.86%	RCP
PIPE 219	12	19.6	1.42%	RCP
PIPE 222	12	25.1	4.33%	RCP
PIPE 224	12	37.8	0.68%	RCP
PIPE 226	12	10.7	6.13%	RCP

Structure Table	
Structure Name	Structure Details
294	RIM = 1175.71 PIPE 198 (4) INV IN = 1174.00 PIPE 198 (2) INV OUT = 1166.00
PCB 1	RIM = 1164.50
PCB 3	RIM = 1164.50
PCB 4	RIM = 1170.10 PIPE 5 INV OUT = 1165.00
PCB 5	RIM = 1169.39 PIPE 53 INV OUT = 1167.67
PCB 7	RIM = 1169.42 PIPE 9 INV OUT = 1167.70
PCB 8	RIM = 1166.50 PIPE 10 INV OUT = 1164.50
PCB 9	RIM = 1169.80 PIPE 6 INV OUT = 1165.00
PCB 11	RIM = 1170.25 PIPE 16 INV OUT = 1166.00
PCB 12	RIM = 1167.22 PIPE 14 INV OUT = 1165.50
PCB 13	RIM = 1174.00 PIPE 1 INV OUT = 1169.60
PCB 14	RIM = 1173.70 PIPE 4 INV OUT = 1169.70
PCB 25	RIM = 1172.80 PIPE 17 INV OUT = 1167.00
PCB 30	RIM = 1167.30 PIPE 22 INV OUT = 1162.50
PCB 31	RIM = 1165.00 PIPE 24 INV OUT = 1162.00
PCB 32	RIM = 1165.00 PIPE 25 INV OUT = 1162.00
PCB 46	RIM = 1167.20 PIPE 36 INV OUT = 1163.70
PCB 47	RIM = 1167.20 PIPE 34 INV OUT = 1163.70
PCB 51	RIM = 1169.90 PIPE 56 INV OUT = 1165.90
PCB 53	RIM = 1171.90 PIPE 60 INV OUT = 1168.90

Pipe Table				
Pipe Name	Size (Inches)	Length	Slope	MATERIAL
PIPE 115	12	67.7	0.60%	HDPE
PIPE 116	12	37.1	3.24%	HDPE
PIPE 117	18	41.6	0.81%	HDPE
PIPE 118	12	75.8	4.44%	HDPE
PIPE 119	12	12.7	0.94%	HDPE
PIPE 120	12	69.1	0.55%	HDPE
PIPE 121	12	87.5	3.36%	HDPE
PIPE 122	12	33.2	3.70%	HDPE
PIPE 123	12	48.3	1.15%	HDPE
PIPE 124	12	10.2	6.19%	HDPE
PIPE 125	12	34.5	4.37%	HDPE
PIPE 126	12	7.4	1.85%	HDPE
PIPE 127	12	18.1	7.04%	HDPE
PIPE 128	12	49.4	0.54%	HDPE
PIPE 129	18	142.4	0.55%	HDPE
PIPE 130	18	62.3	1618.01%	HDPE
PIPE 131	12	35.9	7.84%	HDPE
PIPE 132	12	60.8	0.83%	HDPE
PIPE 133	12	116.0	1.45%	HDPE
PIPE 134	12	19.0	5.23%	RCP

Pipe Table				
Pipe Name	Size (Inches)	Length	Slope	MATERIAL
PIPE 1	12	27.2	0.92%	HDPE
PIPE 2	12	107.6	4.72%	HDPE
PIPE 3	18	113.8	0.55%	HDPE
PIPE 4	12	23.9	1.63%	HDPE
PIPE 5	12	26.4	1.91%	HDPE
PIPE 6	12	19.8	2.70%	HDPE
PIPE 7	12	35.0	2.42%	HDPE
PIPE 9	12	43.4	0.54%	HDPE
PIPE 10	12	12.2	5.73%	HDPE
PIPE 12	12	39.3	3.31%	HDPE
PIPE 14	12	48.5	1.16%	HDPE
PIPE 16	12	11.5	8.49%	HDPE
PIPE 17	12	45.6	0.71%	HDPE
PIPE 20	18	50.8	5.14%	HDPE
PIPE 21	24	14.0	1.11%	HDPE
PIPE 22	12	22.1	3.41%	HDPE
PIPE 24	12	13.0	1.20%	HDPE
PIPE 25	12	13.2	1.17%	HDPE
PIPE 26	18	82.5	0.56%	HDPE
PIPE 34	12	15.2	6.87%	HDPE

Pipe Table				
Pipe Name	Size (Inches)	Length	Slope	MATERIAL
PIPE 35	18	142.2	0.51%	HDPE
PIPE 36	12	15.2	6.87%	HDPE
PIPE 37	18	33.0	0.54%	HDPE
PIPE 38	12	12.7	7.40%	HDPE
PIPE 42	12	27.3	1.30%	HDPE
PIPE 43	12	27.3	1.30%	HDPE
PIPE 44	12	33.3	5.52%	HDPE
PIPE 45	15	110.8	0.84%	HDPE
PIPE 46	12	31.4	5.85%	HDPE
PIPE 50	12	26.1	5.00%	HDPE
PIPE 51	12	24.2	1.52%	HDPE
PIPE 52	24	30.6	1.06%	HDPE
PIPE 53	12	34.3	4.62%	HDPE
PIPE 54	12	32.6	8.14%	HDPE
PIPE 55	24	60.9	0.68%	RCP
PIPE 56	12	37.1	0.55%	HDPE
PIPE 60	12	42.9	0.64%	HDPE
PIPE 61	12	7.2	6.90%	HDPE
PIPE 62	12	51.3	0.53%	HDPE
PIPE 63	18	49.0	1.26%	HDPE

Pipe Table				
Pipe Name	Size (Inches)	Length	Slope	MATERIAL
PIPE 64	12	61.3	0.51%	HDPE
PIPE 67	12	24.1	0.87%	HDPE
PIPE 68	12	10.0	6.23%	HDPE
PIPE 69	12	28.7	2.78%	HDPE
PIPE 70	12	129.6	4.70%	HDPE
PIPE 71	12	93.3	2.04%	HDPE
PIPE 74	12	14.4	6.66%	HDPE
PIPE 75	12	177.1	7.87%	HDPE
PIPE 76	12	25.4	9.27%	HDPE
PIPE 77	18	145.5	8.36%	HDPE
PIPE 79	24	53.5	1.16%	HDPE
PIPE 80	18	45.4	7.94%	HDPE
PIPE 81	18	98.1	5.98%	HDPE
PIPE 82	12	34.4	0.67%	RCP
PIPE 83	12	38.4	0.59%	RCP
PIPE 84	12	16.9	3.26%	HDPE
PIPE 85	12	19.6	2.61%	HDPE
PIPE 86	12	18.2	6.85%	HDPE
PIPE 87	12	18.3	6.76%	HDPE
PIPE 89	12	21.5	3.65%	HDPE

Structure Table	
Structure Name	Structure Details
FE 50	PIPE 26 INV IN = 1161.00
FE 121	PIPE 55 INV IN = 1163.00
FE 125	PIPE 52 INV IN = 1161.50
FE 137	PIPE 108 INV IN = 1174.10
FE 139	PIPE 63 INV IN = 1147.50
FE 141	PIPE 110 INV IN = 1157.00
FE 143	PIPE 113 INV IN = 1169.50
FE 145	PIPE 114 INV IN = 1154.00
FE 146	PIPE 79 INV IN = 1110.50
FE 149	PIPE 116 INV IN = 1169.50
FE 152	PIPE 118 INV IN = 1167.00
FE 175	PIPE 130 INV IN = 113.50
FE 177	PIPE 131 INV IN = 1131.30
FE 180	PIPE 132 INV IN = 1145.00
FE 342	PIPE 224 INV IN = 1108.75

GRAPHIC SCALE: 1"=30'

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May, 11, 2020

COMMONWEALTH OF MASSACHUSETTS
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GRADING AND DRAINAGE PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C501

File Path: J:\DWG\P2019\03B19\Civil\Plan\20190363 B19_GRD01.dwg Layout: C-501 Plotted: Fri, May 08, 2020 - 10:14 AM User: abell
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MATCH TO SHEET C503

MATCH TO SHEET C501

PDMH 49-6" DIA
PIPE 37
PDMH 29
TC 1164.90
BC 1164.40
FLUSH 1164.55
1164.70
1164.55
FLUSH 1164.35
TC 1164.75
BC 1164.25
FE 50
OUTLET CONTROL BASIN #1
RIM=1163.5
2--4" ORIFICES INV=1161.0
INV OUT=1157.0
JOHN & JOHANNA HEDBOR
BOOK 25098 PAGE 3
SEDIMENT FOREBAY
INFILTRATION BASIN #1
TOP OF BASIN=1165.0
BOTTOM OF BASIN=1160.0
RIP RAP PROTECTION
10' SIDE YARD SETBACK
ELAINE ROCKWOOD
BOOK 40185 PAGE 23
PCB 93
PIPE 74
PCB 110
PIPE 89
PDMH 9-5' DIA
PIPE 75
PDMH 95-5' DIA
TW 1140.5
BW 1120.0
PCB 107
PIPE 76
PIPE 86
PDMH 96-5'DIA
PCB 108
PIPE 87
TW 1135.5
BW 1114.0
PIPE 77
TW 1135.5
BW 1111.0
CULVERT #3
20'W x 10'H PRE-CAST
CONCRETE CULVERT
INVERT 24
TW 1135.0
BW 1119.0
PCB 106
PIPE 85
PDMH 105
PCB 104
PIPE 84
TW 1126.5
BW 1115.0
PIPE 80
PDMH PDMH 156
RICHARD PRELIASCO
ALAN PRELIASCO
BOOK 39519 PAGE 123
INFILTRATION BASIN #3
TOP OF BASIN=1114.0
BOTTOM OF BASIN=1110.0
SEDIMENT FOREBAY
TW 1124.0
BW 1103.0
PERMANENT TURF REINFORCEMENT
MAT EMERGENCY SPILLWAY
ELEV. 1113.5
PIPE 81
WETLAND REPLICATION
AREA=10,000 SF
PDMH 97-5' DIA
PIPE 120
PDMH 98
1115.50
1115.60
1115.40
1115.50
PIPE 83
PCB 103
PIPE 224
FE 342
FE 146
PIPE 79
PIPE 82
OUTLET CONTROL BASIN #3
RIM=1112.5
2--4" ORIFICES INV=1111.33
INV. OUT=1108.0
RIP RAP PROTECTION
TW 1113.50
BW 113.00
FLUSH 1140.0
FLUSH 1115.00
FLUSH 1115.50
FLUSH 1115.70
FLUSH 1115.15
PEARL STREET
SMITH STREET
TBM: CONCRETE BOUND
ELEVATION 1124.54 NAD
BORDERING VEGETATED WETLANDS (BVW)
INLAND BANK
DENSE TREES
100' WETLAND BUFFER
60' NO BUILD ZONE
30' NO DISTURB ZONE
200' RIVERFRONT
STUMP POND
SEE SHEET C504 FOR LEGEND
GRAPHIC SCALE: 1"=30'

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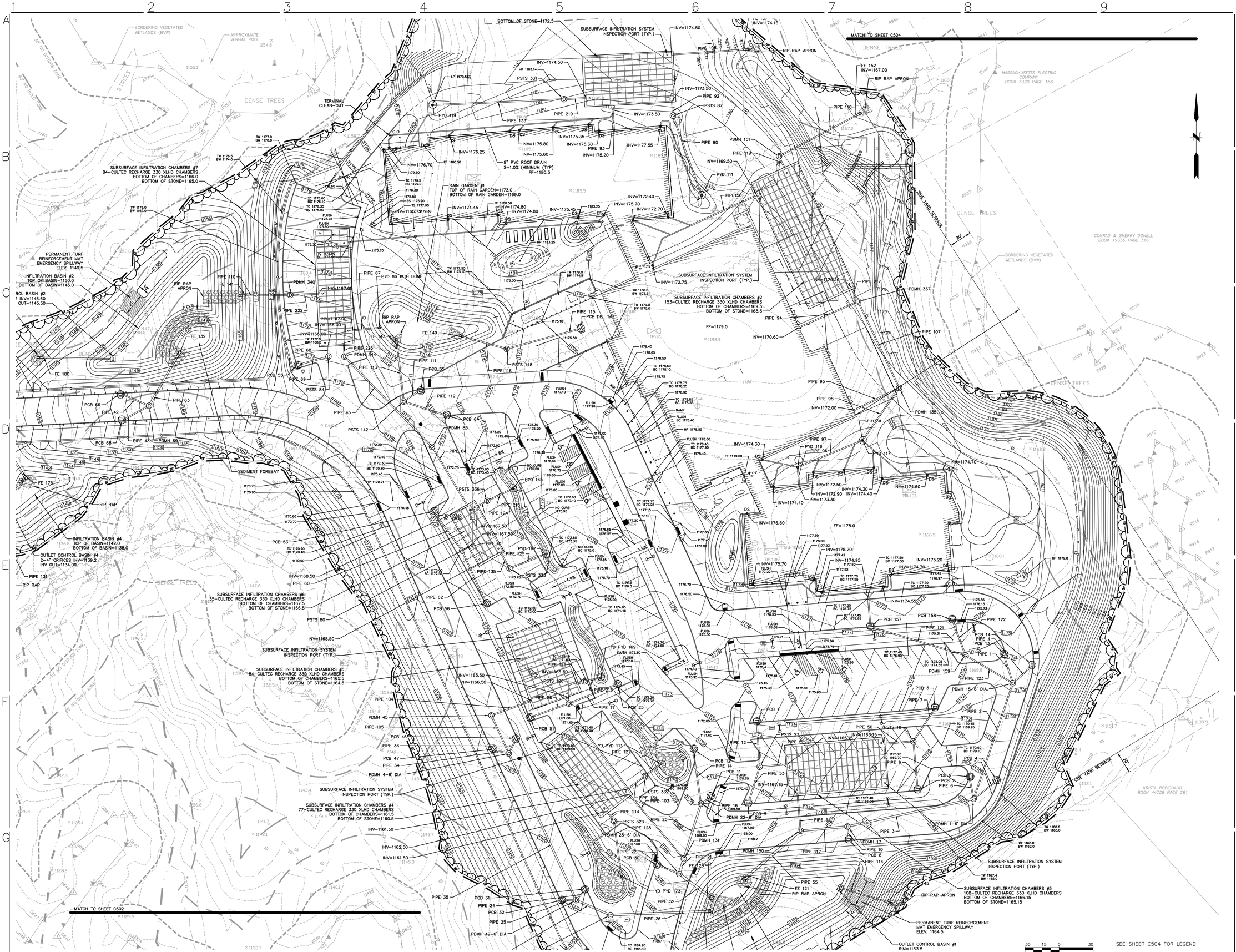
GRADING AND DRAINAGE PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C502



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GRADING AND DRAINAGE PLAN

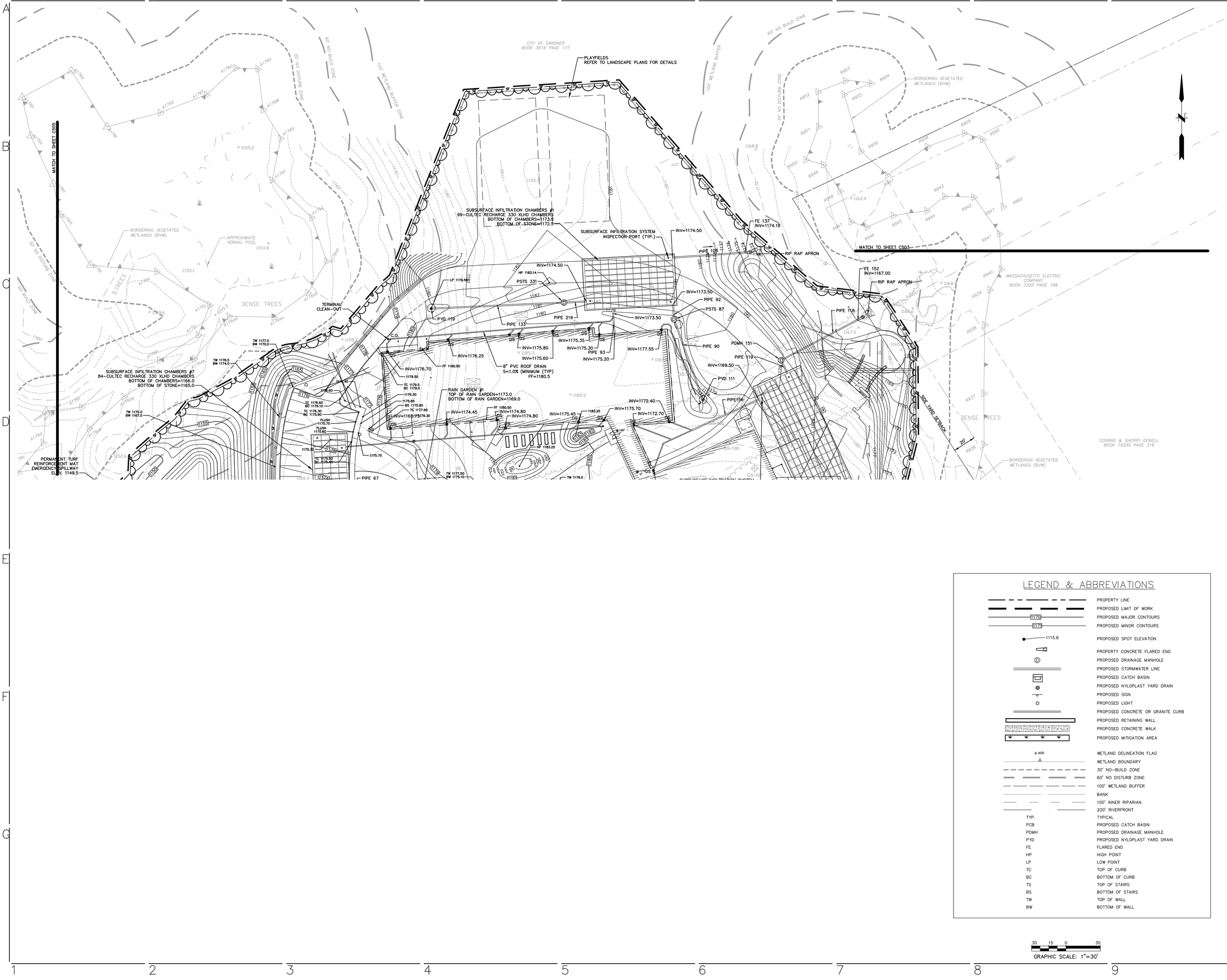
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C503

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MS VIEW: LAYER STATE: PLOT_INFO



LEGEND & ABBREVIATIONS

	PROPERTY LINE
	PROPOSED LIMIT OF WORK
1170	PROPOSED MAJOR CONTOURS
1178	PROPOSED MINOR CONTOURS
1115.6	PROPOSED SPOT ELEVATION
	PROPERTY CONCRETE FLARED END
	PROPOSED DRAINAGE MANHOLE
	PROPOSED STORMWATER LINE
	PROPOSED CATCH BASIN
	PROPOSED NYLOPLAST YARD DRAIN
	PROPOSED SIGN
	PROPOSED LIGHT
	PROPOSED CONCRETE OR GRANITE CURB
	PROPOSED RETAINING WALL
	PROPOSED CONCRETE WALK
	PROPOSED MITIGATION AREA
A00	WETLAND DELINEATION FLAG
	WETLAND BOUNDARY
	30' NO-BUILD ZONE
	60' NO DISTURB ZONE
	100' WETLAND BUFFER
	BANK
	100' INNER RIPARIAN
	200' RIVERFRONT
TYP.	TYPICAL
PCB	PROPOSED CATCH BASIN
PDMH	PROPOSED DRAINAGE MANHOLE
PYD	PROPOSED NYLOPLAST YARD DRAIN
FE	FLARED END
HP	HIGH POINT
LP	LOW POINT
TC	TOP OF CURB
BC	BOTTOM OF CURB
TS	TOP OF STAIRS
BS	BOTTOM OF STAIRS
TW	TOP OF WALL
BW	BOTTOM OF WALL

30 15 0 30
GRAPHIC SCALE: 1"=30'

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May, 11, 2020

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GRADING AND DRAINAGE PLAN

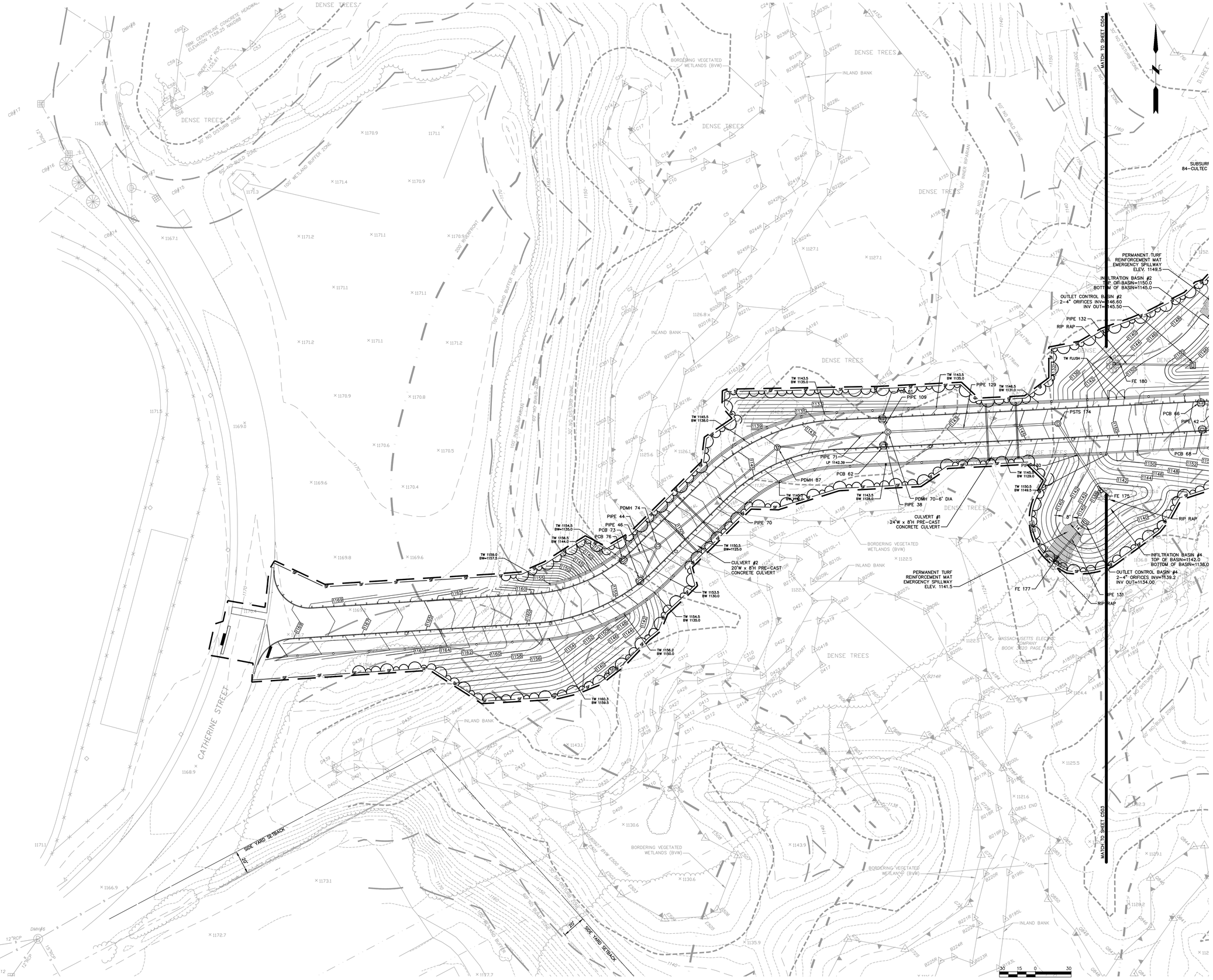
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
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SITE
PERMITTING

C504

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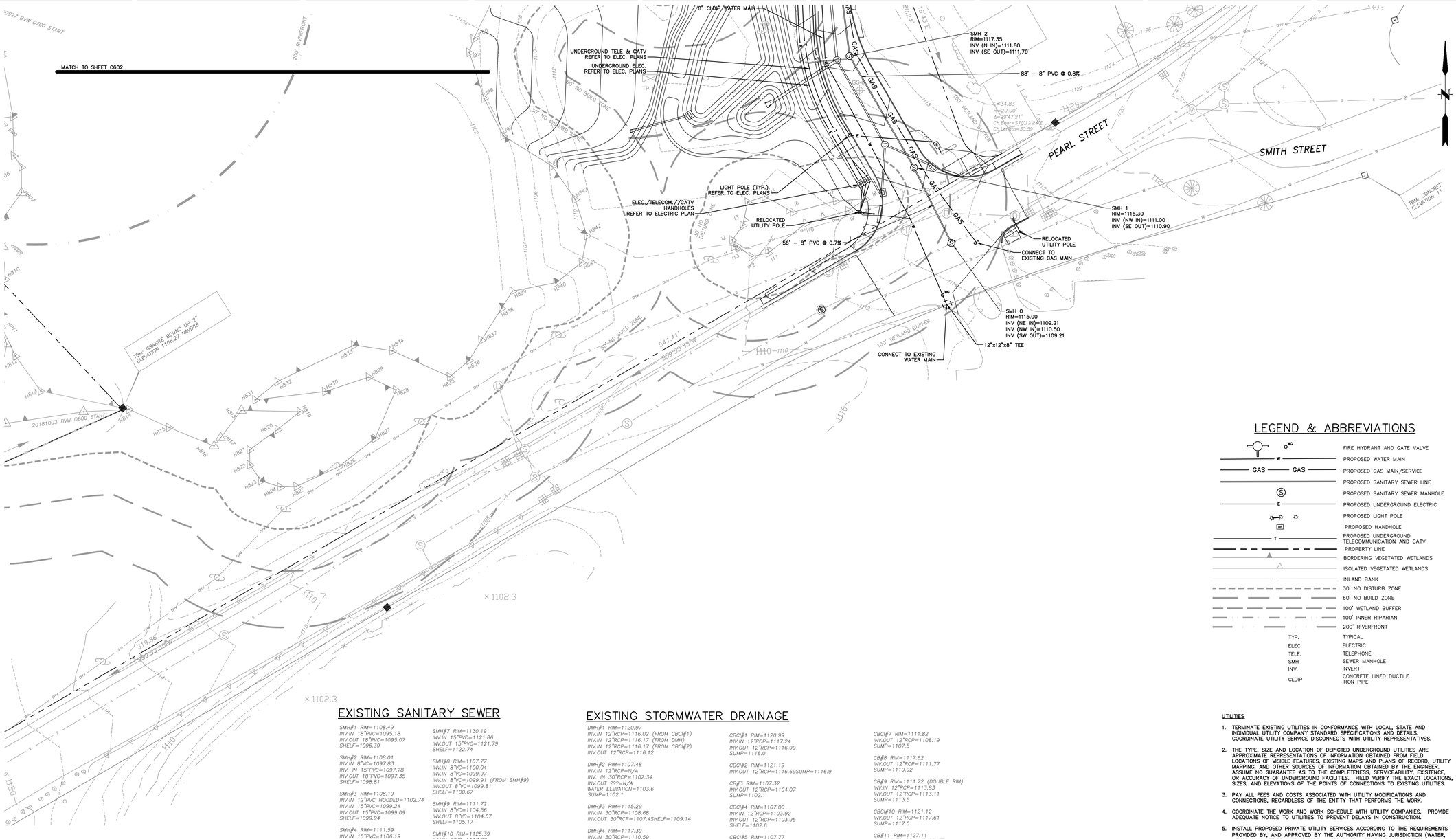
GRADING AND DRAINAGE PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C505



EXISTING SANITARY SEWER

SMH#1 RIM=1108.49
INV.IN 18"PVC=1095.18
INV.OUT 18"PVC=1095.07
SHELF=1096.39

SMH#2 RIM=1108.01
INV.IN 8"VC=1097.83
INV. IN 15"PVC=1097.78
INV.OUT 18"PVC=1097.35
SHELF=1098.81

SMH#3 RIM=1108.19
INV.IN 12"PVC HOODED=1102.74
INV.IN 15"PVC=1099.24
INV.OUT 15"PVC=1099.09
SHELF=1099.94

SMH#4 RIM=1111.59
INV.IN 15"PVC=1106.19
INV.OUT 15"PVC=1106.23
SHELF=1106.97

SMH#5 RIM=1123.16
INV.IN 8"VC=1115.84
INV.IN 15"PVC=1115.60
INV.OUT 15"PVC=1115.54
SHELF=1116.48

SMH#6 RIM=1123.16
INV.IN 15"PVC=1115.82
INV.OUT 15"PVC=1115.74
SHELF=1116.51

SMH#7 RIM=1130.19
INV.IN 15"PVC=1121.86
INV.OUT 15"PVC=1121.79
SHELF=1122.74

SMH#8 RIM=1107.77
INV.IN 8"VC=1100.04
INV.IN 8"VC=1099.97
INV.IN 8"VC=1099.91 (FROM SMH#9)
INV.OUT 8"VC=1099.81
SHELF=1100.67

SMH#9 RIM=1111.72
INV.IN 8"VC=1104.56
INV.OUT 8"VC=1104.57
SHELF=1105.17

SMH#10 RIM=1125.39
INV.IN 8"VC=1117.87
INV.OUT 8"VC=1117.84
SHELF=1118.53

SMH#11 RIM=1111.56
INV.IN 8"VC=1104.58
INV.OUT 8"VC=1104.55
SHELF=1105.38

EXISTING STORMWATER DRAINAGE

DMH#1 RIM=1120.97
INV.IN 12"RCP=1116.02 (FROM CBCI#1)
INV.IN 12"RCP=1116.17 (FROM DMH)
INV.IN 12"RCP=1116.17 (FROM CBCI#2)
INV.OUT 12"RCP=1116.12

DMH#2 RIM=1107.48
INV.IN 12"RCP=N/A
INV. IN 30"RCP=1102.34
INV.OUT ???=N/A
WATER ELEVATION=1103.6
SUMP=1102.1

DMH#3 RIM=1115.29
INV.IN 30"RCP=1108.68
INV.OUT 30"RCP=1107.4SHELF=1109.14

DMH#4 RIM=1117.39
INV.IN 30"RCP=1110.59
INV.OUT 30"RCP=1110.33
SHELF=1111.61

DMH#5 RIM=1122.37
INV.IN 12"RCP=1116.67
INV.IN 12"RCP=1115.82
INV.IN 15"RCP=1116.28
INV.OUT 18"RCP=1115.81
SHELF=1116.47

CBCI#1 RIM=1120.99
INV.IN 12"RCP=1117.24
INV.OUT 12"RCP=1116.99
SUMP=1116.0

CBCI#2 RIM=1121.19
INV.OUT 12"RCP=1116.69SUMP=1116.9

CBI#3 RIM=1107.32
INV.OUT 12"RCP=1104.07
SUMP=1102.1

CBCI#4 RIM=1107.00
INV.IN 12"RCP=1103.92
INV.OUT 12"RCP=1103.95
SHELF=1102.6

CBCI#5 RIM=1107.77
INV.OUT 12"RCP=1103.97
SUMP=1102.2

CBCI#6 RIM=1107.62
INV.IN 12"RCP=1103.51 (CBCI#5)
INV.IN 12"RCP=1103.12 (CBCI#4)
INV.OUT 12"RCP=1103.05
SUMP=1102.4

CBCI#7 RIM=1111.82
INV.OUT 12"RCP=1108.19
SUMP=1107.5

CBI#8 RIM=1117.62
INV.OUT 12"RCP=1111.77
SUMP=1110.02

CBI#9 RIM=1111.72 (DOUBLE RIM)
INV.IN 12"RCP=1113.83
INV.OUT 12"RCP=1113.11
SUMP=1113.5

CBCI#10 RIM=1121.12
INV.OUT 12"RCP=1117.61
SUMP=1117.0

CBI#11 RIM=1127.11
UNABLE TO REMOVE COVER
WATER ELEVATION=1123.5
SUMP=1122.6

LEGEND & ABBREVIATIONS

- FIRE HYDRANT AND GATE VALVE
- PROPOSED WATER MAIN
- PROPOSED GAS MAIN/SERVICE
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED LIGHT POLE
- PROPOSED HANDHOLE
- PROPOSED UNDERGROUND TELECOMMUNICATION AND CATV
- PROPERTY LINE
- BORDERING VEGETATED WETLANDS
- ISOLATED VEGETATED WETLANDS
- INLAND BANK
- 30' NO DISTURB ZONE
- 60' NO BUILD ZONE
- 100' WETLAND BUFFER
- 100' INNER RIPARIAN
- 200' RIVERFRONT

TYP.	TYPICAL
ELEC.	ELECTRIC
TELE.	TELEPHONE
SMH	SEWER MANHOLE
INV.	INVERT
CLDIP	CONCRETE LINED DUCTILE IRON PIPE

UTILITIES

1. TERMINATE EXISTING UTILITIES IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. COORDINATE UTILITY SERVICE DISCONNECTS WITH UTILITY REPRESENTATIVES.
2. THE TYPE, SIZE AND LOCATION OF DEPICTED UNDERGROUND UTILITIES ARE APPROXIMATE REPRESENTATIONS OF INFORMATION OBTAINED FROM FIELD LOCATIONS OF VISIBLE FEATURES, EXISTING MAPS AND PLANS OF RECORD, UTILITY MAPPING, AND OTHER SOURCES OF INFORMATION OBTAINED BY THE ENGINEER. ASSUME NO GUARANTEE AS TO THE COMPLETENESS, SERVICEABILITY, EXISTENCE, OR ACCURACY OF UNDERGROUND FACILITIES. FIELD VERIFY THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES.
3. PAY ALL FEES AND COSTS ASSOCIATED WITH UTILITY MODIFICATIONS AND CONNECTIONS, REGARDLESS OF THE ENTITY THAT PERFORMS THE WORK.
4. COORDINATE THE WORK AND WORK SCHEDULE WITH UTILITY COMPANIES. PROVIDE ADEQUATE NOTICE TO UTILITIES TO PREVENT DELAYS IN CONSTRUCTION.
5. INSTALL PROPOSED PRIVATE UTILITY SERVICES ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY THE AUTHORITY HAVING JURISDICTION (WATER, SEWER, GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). COORDINATE FINAL DESIGN LOADS AND LOCATIONS WITH OWNER AND ARCHITECT.
6. REMOVAL OF OVERHEAD WIRE AND POLES SHALL BE COORDINATED BY THE CONTRACTOR.
7. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF DRAINAGE AND UTILITIES WITHIN 10 FEET OF BUILDING FOOTPRINT.
8. NOTIFY ABUTTING PROPERTY OWNERS AND THE CITY OF GARDNER NAME 24 HOURS PRIOR TO DISRUPTION OF UTILITY SERVICE.
9. ALL WATER SERVICE AND SEWER SERVICE CONNECTIONS SHALL BE COORDINATED WITH THE CITY OF GARDNER DPW AND WATER DEPTARTMENT.

30 15 0 30
GRAPHIC SCALE: 1"=30'

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May, 11, 2020

COMMONWEALTH OF MASSACHUSETTS
ERIC M. BERNARDIN
CIVIL
No. 37950
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CONSULTANTS:

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413.452.0445
www.fando.com

UTILITY PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C601

File Path: J:\DWG\P2018\0363\B10\Civil\Plan\20180363 B10_UTL01.dwg Layout: C-601 Plotted: Fri, May 08, 2020 - 10:41 AM User: abell
MS VIEW: LAYER STATE: PLOT_INFO

MATCH TO SHEET C603

MATCH TO SHEET C601

SMH 70
RIM=1166.90
INV (N IN)=1158.61
INV (S OUT)=1158.61

FIRE HYDRANT & GATE VALVE

6" CLDIP

8"x8"x6" TEE

8"X8"X8" TEE

SMH 7
RIM=1162.75
INV (N IN)=1155.10
INV (S OUT)=1155.00

116' – 8" PVC @ 6.9%

8" CLDIP WATER MAIN

SMH 6
RIM=1155.00
INV (N IN)=1147.10
INV (S OUT)=1147.00

184' – 8" PVC @ 8.7%

SMH 5
RIM=1140.05
INV (N IN)=1131.10
INV (S OUT)=1131.00

ELEC./TELECOM.//CATV HANDHOLES
REFER TO ELECTRIC PLAN

215' – 8" PVC @ 7.6%

UNDERGROUND TELE & CATV
REFER TO ELEC. PLANS

UNDERGROUND ELEC.
REFER TO ELEC. PLANS

SMH 3
RIM=1122.60
INV (N IN)=1114.62
INV (S OUT)=1114.62

93' – 8" PVC @ 3.0%

8" CLDIP WATER MAIN

UNDERGROUND TELE & CATV
REFER TO ELEC. PLANS

UNDERGROUND ELEC.
REFER TO ELEC. PLANS

ELEC./TELECOM.//CATV HANDHOLES
REFER TO ELECTRIC PLAN

RELOCATED UTILITY POLE

LIGHT POLE (TYP.)
REFER TO ELEC. PLANS

SMH 2
RIM=1117.35
INV (N IN)=1111.80
INV (SE OUT)=1111.70

88' – 8" PVC @ 0.8%

SMH 1
RIM=1115.30
INV (NW IN)=1111.00
INV (SE OUT)=1110.90

JOHN & JOHANNA HEDBOR
BOOK 25098 PAGE 3

ELAINE ROCKWOOD
BOOK 40185 PAGE 23

RICHARD PRELIASCO
ALAN PRELIASCO
BOOK 59519 PAGE 123

BORDERING VEGETATED WETLANDS (BVW)

PEARL STREET

SMITH STREET

30' NO DISTURB ZONE

50' NO BUILD ZONE

100' WETLAND BUFFER

100' INNER RIPARIAN

200' RIVERFRONT

TBM: CONCRETE ELEVATION 1120

GRAPHIC SCALE: 1"=30'

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UTILITY PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C602

File Path: J:\DWG\P2018\0363\B10\Civil\Plan\20180363.B10_UTL01.dwg Layout: C-602 PlotText Fri, May 08, 2020 - 10:41 AM User: abell

MS VIEW:

LAYER STATE:

PLOT_INFO

MATCH TO SHEET C604

MATCH TO SHEET C602

LIGHT POLE (TYP.)
REFER TO ELEC. PLANS

HANDHOLE (TYP.)
REFER TO ELEC. PLANS

UNDERGROUND ELEC. (TYP.)
REFER TO ELEC. PLANS

1500 GALLON
GREASE TANK

FF=1180.5

4' – 8" PVC @ 4.6%

INV=1172.60

UNDERGROUND
ELECTRIC SERVICE

TRANSFORMER

INV=1174.60

INV=1174.60

48' – 8" PVC @ 1.0%

SMH 15
RIM=1180.80
INV (N IN)=1172.10
INV (SE OUT)=1172.00

8" CLDIP WATER MAIN

GAS SERVICE
PER GAS COMPANY

FIRE HYDRANT &
GATE VALVE

34' – 8" PVC @ 6.6%

SMH 14
RIM=1182.00
INV (NE IN)=1173.80
INV (SW OUT)=1173.80

GAS METER

49' – 8" PVC @ 8.2%

GENERATOR POWER

SMH 13
RIM=1175.20
INV (NW IN)=1169.80
INV (NE IN)=1169.80
INV (SE OUT)=1169.70

FF=1179.0

4" CLDIP DOMESTIC WATER SERVICE

6" CLDIP FIRE WATER SERVICE

8"x6" REDUCER

GENERATOR GAS LINE

UNDERGROUND ELEC. (TYP.)
REFER TO ELEC. PLANS

124' – 8" PVC @ 1.0%

INV=1171.00

45' – 8" PVC @ 2.0%

UNDERGROUND ELEC. (TYP.)
REFER TO ELEC. PLANS

UNDERGROUND TELE. &
CATV (TYP.)
REFER TO ELEC. PLANS

SMH 10
RIM=1178.05
INV (NE IN)=1170.10
INV (NW IN)=1168.50
INV (SE OUT)=1168.40

145' – 8" PVC @ 1.5%

8"x8"x6" DUCTILE
IRON TEE

8" CLDIP WATER
MAIN

8"x8"x8" DUCTILE
IRON TEE

UTILITY RISERS

UNDERGROUND ELEC. (TYP.)
REFER TO ELEC. PLANS

ELEC./TELECOM.//CATV
HANDHOLES
REFER TO ELECTRIC PLAN

8"CLDIP WATER MAIN

UNDERGROUND TELE. &
CATV (TYP.)
REFER TO ELEC. PLANS

UNDERGROUND ELEC.
REFER TO ELEC. PLANS

SMH 66
RIM=1176.90
INV (E IN)=1170.00
INV (SW OUT)=1170.00

29' – 8" PVC @ 1.7%

INV=1170.50

39' – 8" PVC @ 9.9%

SMH 9
RIM=1176.45
INV (NW IN)=1166.20
INV (NE IN)=1166.20
INV (S OUT)=1166.10

FF=1178.0

FIRE HYDRANT &
GATE VALVE

BEND (TYP)

6" DUCTILE IRON FIRE SERVICE

8"x6" DUCTILE IRON
REDUCER

8" DUCTILE IRON

78' – 8" PVC @ 2.1%

SMH 8
RIM=1174.35
INV (N IN)=1164.50
INV (S OUT)=1164.50

72' – 8" PVC @ 2.1%

SMH 85
RIM=1171.65
INV (N IN)=1163.00
INV (S OUT)=1162.90

115' – 8" PVC @ 3.7%

LIGHT POLE (TYP.)
REFER TO ELEC.

UNDERGROUND ELEC. (TYP.)
REFER TO ELEC. PLANS

LIGHT POLE (TYP.)
REFER TO SITE
LIGHTING PLAN E603

SMH 70
RIM=1166.90
INV (N IN)=1158.61
INV (S OUT)=1158.61

LIGHT POLE (TYP.)
REFER TO ELEC. PLANS

MASSACHUSETTS ELECTRIC
COMPANY
BOOK 3320 PAGE 188

CONRAD & SHERRY DONELL
BOOK 19335 PAGE 316

KRISTA ROBICHAUD
BOOK 44729 PAGE 261

S12°50'10"E
175.58'

30' NO DISTURB ZONE

100' BUFFER ZONE

50' NO DISTURB ZONE

60' NO BUILD ZONE

RIVERFRONT

GRAPHIC SCALE: 1"=30'

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UTILITY PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

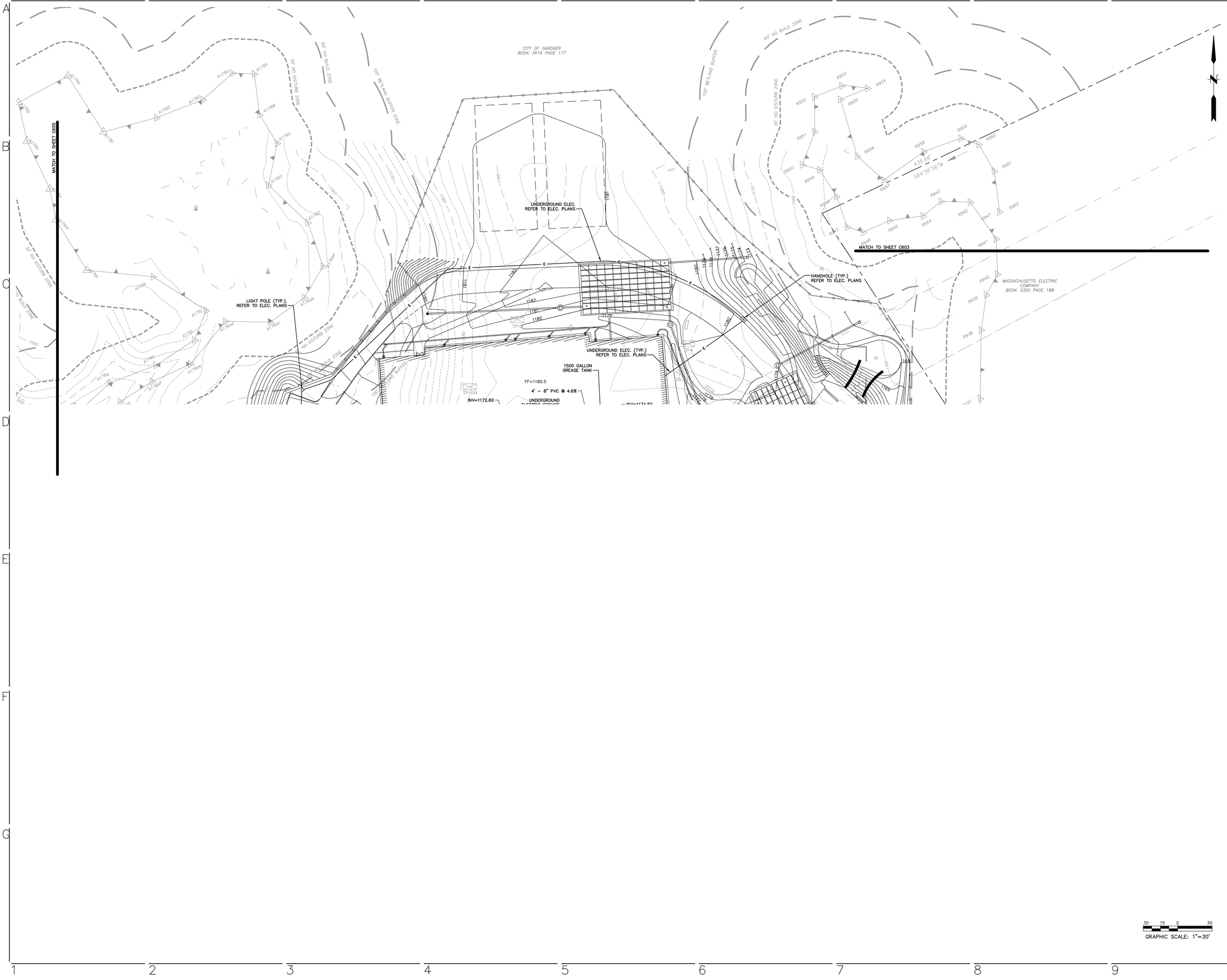
PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE
PERMITTING

C603

File Path: J:\DWG\P2018\0363\B10\Civil\Plan\20180363 B10_UTL01.dwg Layout: C-603 Plotted: Fri, May 08, 2020 - 10:41 AM User: abell

MS VIEW: LAYER STATE: PLOT_INFO


MATCH TO SHEET C605
MATCH TO SHEET C603
CITY OF GARDNER
BOOK 3616 PAGE 177
MASSACHUSETTS ELECTRIC COMPANY
BOOK 3320 PAGE 188
60' NO BUILD ZONE
30' NO DISTURB ZONE
100' WETLAND BUFFER ZONE
UNDERGROUND ELEC.
REFER TO ELEC. PLANS
LIGHT POLE (TYP.).
REFER TO ELEC. PLANS
HANDHOLE (TYP.)
REFER TO ELEC. PLANS
UNDERGROUND ELEC. (TYP.)
REFER TO ELEC. PLANS
1500 GALLON
GREASE TANK
FF=1180.5
4" – 8" PVC @ 4.6%
UNDERGROUND
INV=1172.60
INV=1174.60
TP-104
TP-105
TP-106
TP-107
TP-108
TP-109
TP-110
TP-111
TP-112
TP-113
TP-114
TP-115
TP-116
TP-117
TP-118
TP-119
TP-120
TP-121
TP-122
TP-123
TP-124
TP-125
TP-126
TP-127
TP-128
TP-129
TP-130
TP-131
TP-132
TP-133
TP-134
TP-135
TP-136
TP-137
TP-138
TP-139
TP-140
TP-141
TP-142
TP-143

EXISTING STORMWATER DRAINAGE

DMH#6 RIM=1166.30
INV.IN 15"RCP=1160.78 (FROM CONDO)
INV.IN 12"RCP=1159.20 (CB#12)
INV.IN 12"RCP=1159.21 (CB#13)
INV.IN 24"RCP=1153.89 (DMH)
INV.OUT 24"RCP=1153.86

DMH#7 RIM=1166.04
INV.IN 12"RCP=1161.90 (CB#14)
INV.IN 12"RCP=1161.83 (CB#15)
INV.OUT 12"RCP=1161.24
SUMP=1161.2

DMH#8 RIM=1164.59
INV.IN 12"RCP=1160.54 (DMH#7)
INV.IN 12"RCP=1160.64 (CB#17)
INV.IN 12"RCP=1160.39
INV.OUT 12"RCP=1160.21
SUMP=1159.87

CB#12 RIM=1165.84
TOP HOODED PIPE=1160.3
WATER ELEVATION=1153.3
SUMP=1156.5

CB#13 RIM=1165.89
TOP HOODED PIPE=1160.2
WATER ELEVATION=1157.4
SUMP=1152.9

CB#14 RIM=1166.08
TOP HOODED PIPE=1162.9
WATER ELEVATION=1162.06
SUMP=1159.5

CB#15 RIM=1166.23
TOP HOODED PIPE=1163.21
NO WATER
SUMP=1159.2

CB#16 RIM=1165.88
TOP HOODED PIPE=1163.06
SUMP=1158.5

CB#17 RIM=1165.72
INV.IN 12"RCP=1161.77
TOP HOODED PIPE=1162.34
SUMP=1158.3

TBM: CENTERLINE CONCRETE HEADW
ELEVATION 1159.25 NAVD88

30' NO DISTURB ZONE
60' NO-BUILD ZONE
100' WETLAND BUFFER ZONE
200' RIVERFRONT
100' INNER RIPARIAN
MATCH TO SHEET C604
MATCH TO SHEET C603

8" CLDIP WATER MAIN

CONTINUE TELE. & CABLE TO CATHERINE STREET TO MIDDLE SCHOOL APPROXIMATELY 1400' +/-

CONNECT TO EXISTING WATER MAIN (FIELD VERIFY LOCATION PRIOR TO CONSTRUCTION)

LIGHT POLE (TYP.). REFER TO ELEC. PLANS

UNDERGROUND ELEC. (TYP.) REFER TO ELEC. PLANS

UNDERGROUND TELE. & CATV (TYP.) REFER TO ELEC. PLANS

CATHERINE STREET

MASSACHUSETTS ELECTRIC COMPANY BOOK 3020 PAGE 188

GRAPHIC SCALE: 1"=30'

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May, 11, 2020

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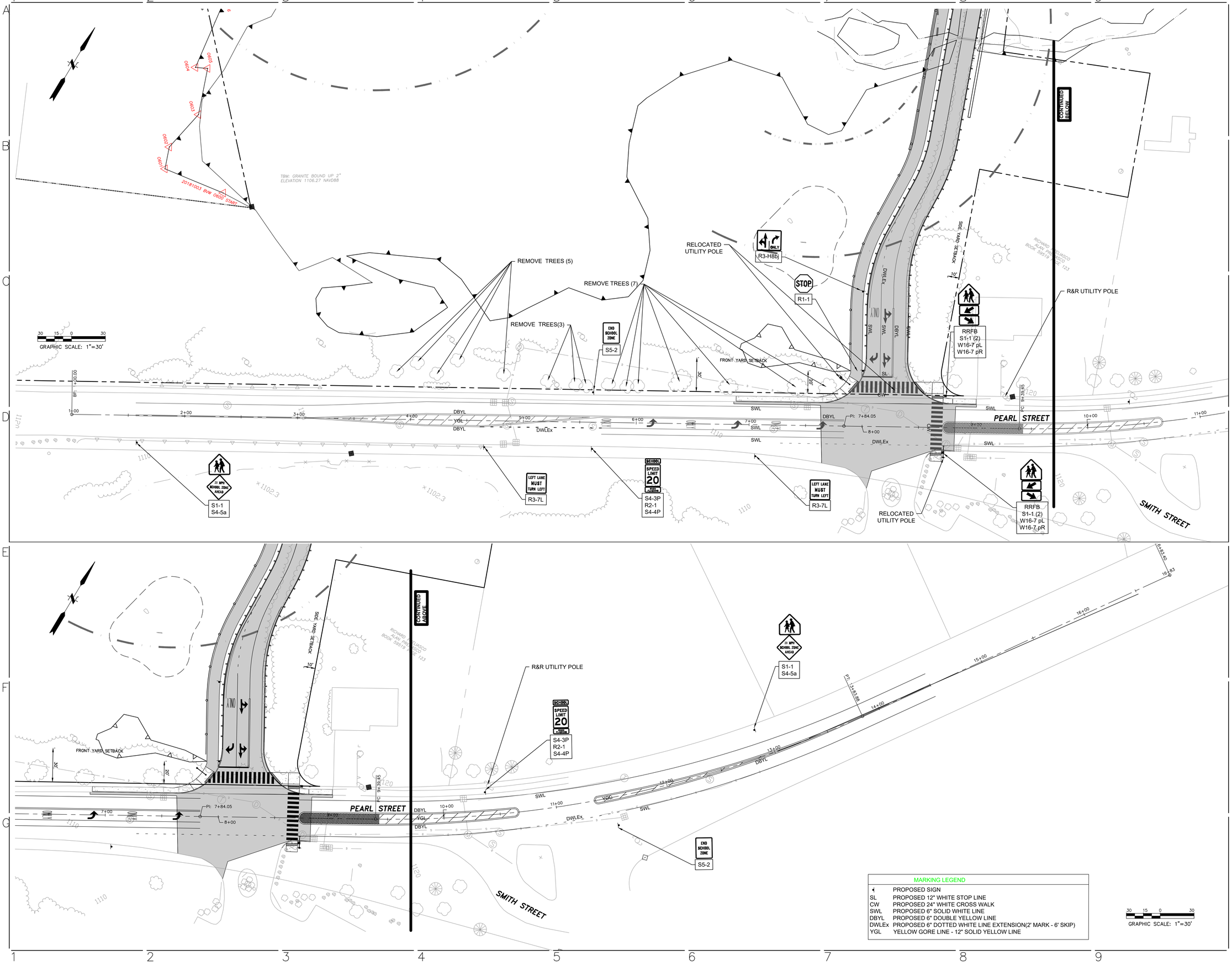
UTILITY PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C605



MARKING LEGEND	
	PROPOSED SIGN
SL	PROPOSED 12" WHITE STOP LINE
CW	PROPOSED 24" WHITE CROSS WALK
SWL	PROPOSED 6" SOLID WHITE LINE
DBYL	PROPOSED 6" DOUBLE YELLOW LINE
DWLEx	PROPOSED 6" DOTTED WHITE LINE EXTENSION(2' MARK - 6' SKIP)
YGL	YELLOW GORE LINE - 12" SOLID YELLOW LINE

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PEARL STREET TRAFFIC IMPROVEMENT PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C701

File Path: J:\DWG\P2018\03\63B1B\Civil\Plan\20180363.B1S_STP01_Traffic.dwg Layout: C-701 Plotted: Fri, May 08, 2020 - 10:38 AM User: abell

MATCH TO SHEET C403

MATCH TO SHEET C401

BORDERING VEGETATED WETLANDS (BVW)

30' NO DISTURB ZONE

60' NO BUILD ZONE

100' WETLAND BUFFER

100' INNER RIPARIAN

200' RIVERFRONT

INLAND BANK

ISOLATED VEGETATED WETLANDS (IVW)

STUMP POND

PEDESTRIAN CROSSING SIGN (W11-2)

STOP SIGN (R1-1)

WHITE PAINTED "ONLY" (TYP.)

WHITE PAINTED PAVEMENT ARROW (TYP.)

4" SINGLE WHITE LANE LINE

4" DOTTED WHITE LANE LINE

4" SINGLE WHITE EDGE LINE

4" DOUBLE YELLOW CENTER LINE

INTERSECTION LANE CONTROL SIGN (2 LANE, STRAIGHT OR LEFT RIGHT) (R3-8b)

SPEED LIMIT (20) SIGN R2-1(20)

R9-8a

RRFB S1-1 (2) W16-7 pL W16-7 pR

S1-1 S4-5a

S4-4P R2-1 S4-4P

S5-2

PEARL STREET

SMITH STREET

JOHN & JOHANNA HEDBOR BOOK 25098 PAGE 3

ELAINE ROCKWOOD BOOK 40185 PAGE 23

RICHARD PRELIASCO ALAN PRELIASCO BOOK 59519 PAGE 123

GS-101

GS-102

GS-111

TP-1

TP-101

S27°46'10"E 240.47'

140.67' S67°20'23"W

N67°18'59"E 131.47'

S20°05'38"E 111.70'

133.70' S69°41'06"W

S20°01'43"E 160.24'

L=34.83'
R=20.00'
Δ=99°46'31"
Ch.Brg=S70°12'24"E
Ch.Length=30.59'

PCC R=30.00'

10+00

11+00

12+00

TBM: CONCRETE ℄ ELEVATION 1124

GRAPHIC SCALE: 1"=30'

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PAVEMENT MARKING AND SIGNING PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
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REVISIONS:	

SITE PERMITTING

C702

File Path: J:\DWG\P2018\03630\B10\Civil\Plan\20180363.B10_PVT01.dwg Layout: C-702 Plotted: Fri, May 08, 2020 - 10:28 AM User: abell
LAYER STATE:
PLOT_INFO
MS VIEW:

BORDERING VEGETATED WETLANDS (BVW)
APPROXIMATE VERNAL POOL
30' NO DISTURB ZONE
60' NO BUILD ZONE
AUTHORIZED VEHICLES ONLY SIGN (R5-11)
EMERGENCY VEHICLE ACCESS LANE
NO PARKING EMERGENCY VEHICLES ONLY SIGN
100' WETLAND BUFFER
ACCESSIBLE PARKING SIGN (TYP.)
ADA ACCESSIBLE PARKING - 2 TYP.
4"SINGLE WHITE LINE (TYP.)
TWO WAY TRAFFIC (W6-3)
DO NOT ENTER SIGN (R5-1)
DO NOT ENTER SIGN (R5-1)
NO PARKING LOADING ZONE SIGN (R7-6)
WHITE PAINTED STOP LINE (TYP.)
PAINTED PEDESTRIAN CROSSWALK (TYP.)
ACCESSIBLE PARKING SIGN (TYP.)
DO NOT ENTER SIGN (R5-1)
STOP SIGN (R1-1)
SCHOOL BUS LOADING ZONE SIGN
VAN ACCESSIBLE PARKING
ADA ACCESSIBLE PARKING - 2 TYP.
STOP SIGN (R1-1)
DELIVERIES SIGN
STOP SIGN (R1-1)
STOP SIGN (R1-1)
BUS DROP OFF PICK UP
PEDESTRIAN CROSSING SIGN (W11-2)
BORDERING VEGETATED WETLANDS (BVW)
WHITE PAINTED PAVEMENT ARROW (TYP.)
PEDESTRIAN CROSSING SIGN (W11-2)
4" SINGLE WHITE EDGE LINE
4"SINGLE WHITE LINE (TYP.)
4"SINGLE WHITE LINE (TYP.)
4" DOUBLE YELLOW CENTER LINE
100' WETLAND BUFFER
200' RIVERFRONT
30' NO DISTURB ZONE
60' NO BUILD ZONE
MATCH TO SHEET C405
MATCH TO SHEET C402
MATCH TO SHEET C404
MASSACHUSETTS ELECTRIC COMPANY BOOK 3320 PAGE 188
CONRAD & SHERRY DONELL BOOK 19335 PAGE 316
BORDERING VEGETATED WETLANDS (BVW)
S32°50'19"E 117.58'
30' NO DISTURB ZONE
60' NO BUILD ZONE
100' WETLAND BUFFER
STOP SIGN (R1-1)
DO NOT ENTER SIGN (R5-1)
DO NOT ENTER SIGN (R5-1)
ACCESSIBLE PARKING SIGN (TYP.)
ADA ACCESSIBLE PARKING - 2 TYP.
STUDENT DROP-OFF HERE
SCHOOL BUS LOADING ZONE SIGN
STOP SIGN (R1-1)
BEGIN ONE WAY SIGN (R6-6)
NO PARKING EMERGENCY VEHICLES ONLY SIGN
EMERGENCY VEHICLE ACCESS LANE
STUDENT DROP OFF PICK UP
4"SINGLE WHITE LINE (TYP.)
AUTHORIZED VEHICLES ONLY SIGN (R5-11)
DO NOT ENTER SIGN (R5-1)
STOP SIGN (R1-1)
4"SINGLE WHITE LINE (TYP.)
DO NOT ENTER SIGN (R5-1)
KRISTA ROBICHAUD BOOK 44729 PAGE 261
STOP SIGN (R1-1)
PEDESTRIAN CROSSING SIGN (W11-2)
PEDESTRIAN CROSSING SIGN (W11-2)
ONE WAY SIGN (R6-1R)
DO NOT ENTER SIGN (R5-1)
4" SINGLE WHITE LINE (TYP.)
PAINTED PEDESTRIAN CROSSWALK (TYP.)
PEDESTRIAN CROSSING SIGN (W11-2)
PEDESTRIAN CROSSING SIGN (W11-2)
575.59'
S58°49'06"W
GRAPHIC SCALE: 1"=30'

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PAVEMENT MARKING AND SIGNING PLAN

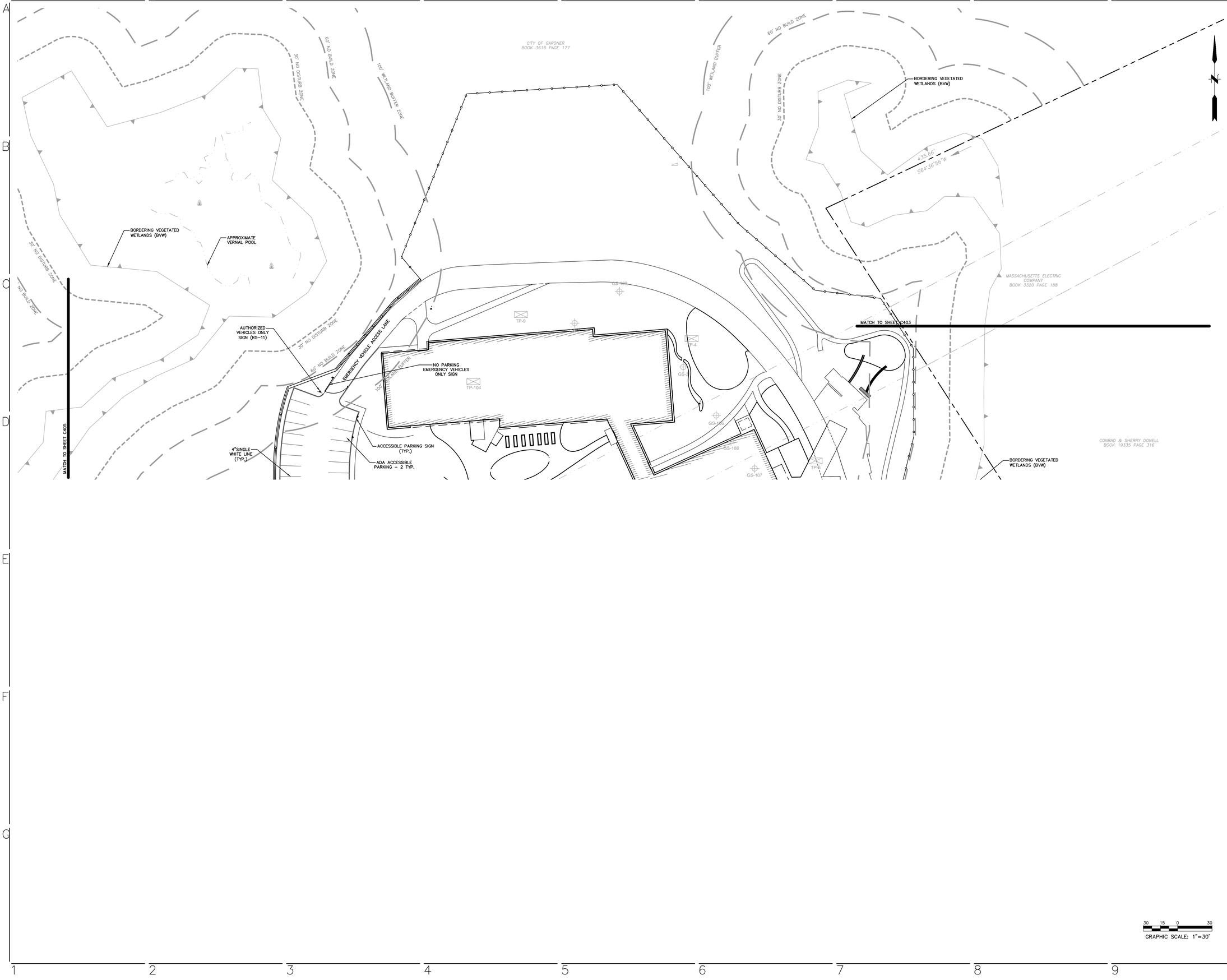
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C703

File Path: J:\DWG\P2018\03\63\B10\Civil\Plan\20180363.B10_PVT01.dwg Layout: C-703 Plotted: Fri, May 08, 2020 - 10:29 AM User: abell
XREF:
LAYER STATE:
PLOT_INFO
MS VIEW:



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May, 11, 2020

COMMONWEALTH OF MASSACHUSETTS
ERIC M. BERNARDIN
CIVIL
No. 37950
REGISTERED
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PAVEMENT MARKING AND SIGNING PLAN

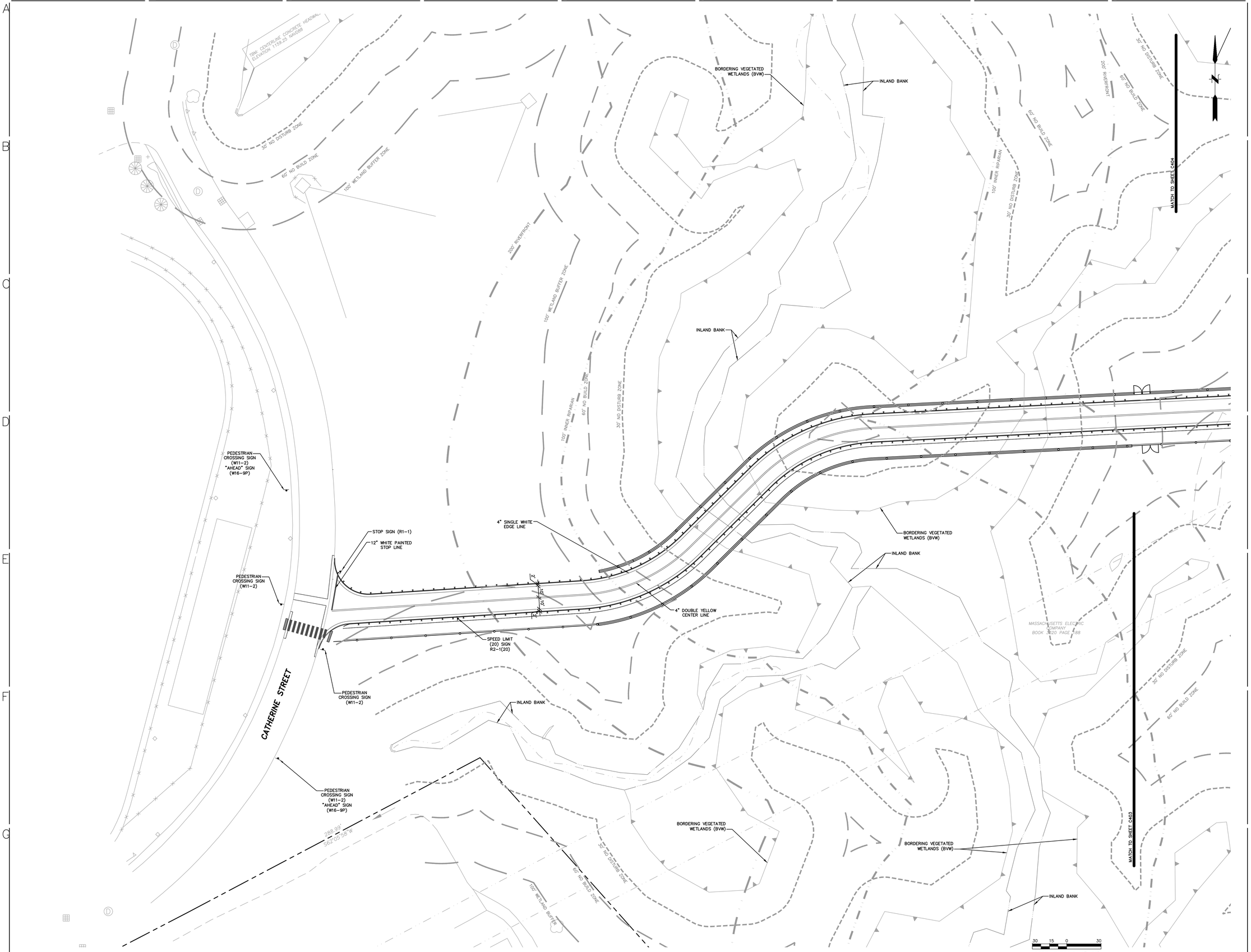
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	1"=30'
DRAWN BY:	
REVISIONS:	

SITE
PERMITTING

C704

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MS VIEW: | LAYER STATE: | PLOT_INFO



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C705

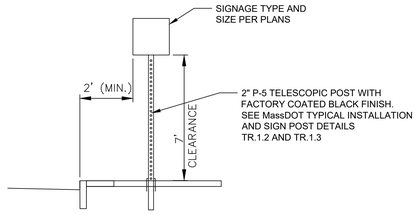
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MS VIEW: LAYER STATE: PLOT_INFO

NOTES:
HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE 1990 MDPW "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS", AND ALL ADMENDMENTS WILL GOVERN.

ALL P5 SIGN POSTS SHALL BE FACTORY COATED BLACK

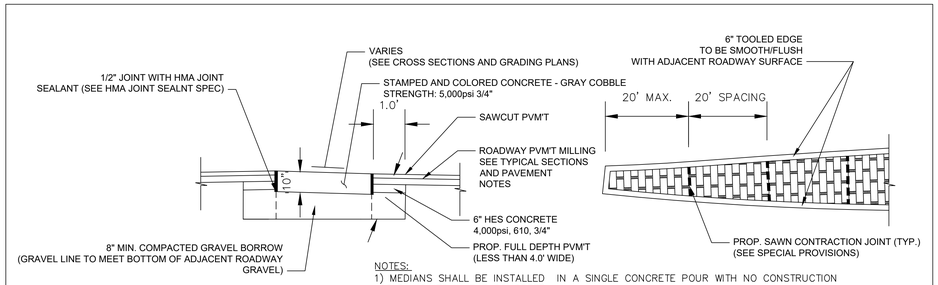
(PBS) = PAINTED BOTH SIDES

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	SIGN FACE AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R1-1	30	30	STOP	SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (INCLUDING LATEST REVISION)			1	WHITE	RED	RED	P-5 1 REQ'D	6.25	6.25
R2-1(20)	24	30	SPEED LIMIT 20				2	WHITE	BLACK	BLACK	P-5 2 REQ'D	5.00	10.00
R3-7L	30	30	LEFT LANE MUST TURN LEFT				2	WHITE	BLACK	BLACK	P-5 2 REQ'D	6.25	12.50
R3-H8bj	30	30	ONLY				1	WHITE	BLACK	BLACK	P-5 1 REQ'D	6.25	6.25
W16-7 pL	24	12					2	YELLOW	BLACK	BLACK	P-5 2 REQ'D	2.00	4.00
W16-7 pR	24	12					2	YELLOW	BLACK	BLACK	2 MOUNTED WITH W16-7 pL	2.00	4.00
S1-1	36	36					6	YELLOW	BLACK	BLACK	2 MOUNTED WITH S4-5a 2 MOUNTED WITH W16-7pL	6.75	40.50
S4-3P	24	8	SCHOOL				2	YELLOW	BLACK	BLACK	2 MOUNTED WITH R2-1(20)	1.33	2.66
S4-4P	24	10	WHEN FLASHING				2	YELLOW	BLACK	BLACK	2 MOUNTED WITH R2-1(20)	1.67	2.66
S4-5a	36	36	20 MPH SCHOOL ZONE AHEAD				2	YELLOW	BLACK	BLACK	P-5 2 REQ'D	9.00	18.00
S5-2	24	30	END SCHOOL ZONE				2	WHITE	BLACK	BLACK	P-5 2 REQ'D	5.00	10.00



NOTES:
1. 4' MINIMUM POST EMBEDMENT.
2. 2' MINIMUM OFFSET FROM ROADWAY EDGE. WHEN POST IS MOUNTED WITHIN SIDEWALK, THE MINIMUM OFFSET MAY BE REDUCED TO 1' TO PROVIDE A MINIMUM 3' CLEAR PATH..

X TYPICAL SIGN MOUNTING LOCATION
SCALE: N.T.S.

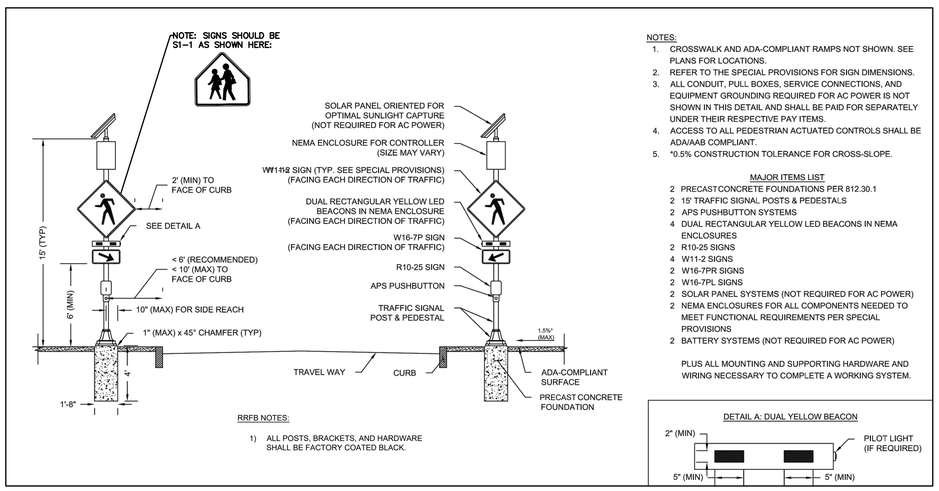


NOTES:
1) MEDIANS SHALL BE INSTALLED IN A SINGLE CONCRETE POUR WITH NO CONSTRUCTION (COLD) JOINTS IN THE CONCRETE.

2) SAWN CONTRACTION JOINTS SHALL BE INSTALLED EVERY 20' (MAXIMUM). SEE SPECIAL PROVISIONS FOR MATERIALS AND METHOD OF JOINT INSTALLATION.

3) A 6" TOOLED EDGE SHALL BE INSTALLED TO MAKE A SMOOTH TRANSITION TO THE ADJACENT PAVEMENT

X STAMPED & COLORED CONCRETE MEDIAN – GREY COBBLE
SCALE: N.T.S.



RRFB NOTES:
1) ALL POSTS, BRACKETS, AND HARDWARE SHALL BE FACTORY COATED BLACK.

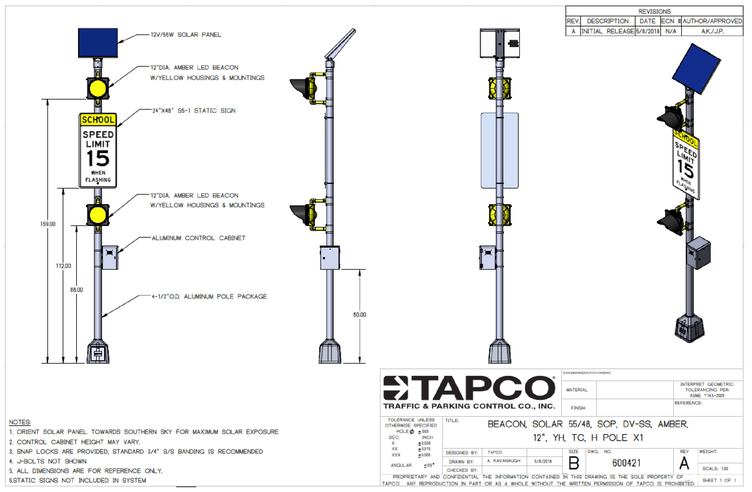
NOTES:
1. CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
2. REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
3. ALL CONDUIT, PULL BOXES, SERVICE CONNECTIONS, AND EQUIPMENT GROUNDING REQUIRED FOR AC POWER IS NOT SHOWN IN THIS DETAIL AND SHALL BE PAID FOR SEPARATELY UNDER THEIR RESPECTIVE PAY ITEMS.
4. ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT.
5. *0.5% CONSTRUCTION TOLERANCE FOR CROSS-SLOPE.

MAJOR ITEMS LIST
2 PRECAST CONCRETE FOUNDATIONS PER 812.30.1
2 15' TRAFFIC SIGNAL POSTS & PEDESTALS
2 APS PUSHBUTTON SYSTEMS
4 DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
2 R10-25 SIGNS
4 W11-2 SIGNS
2 W16-7PR SIGNS
2 W16-7PL SIGNS
2 SOLAR PANEL SYSTEMS (NOT REQUIRED FOR AC POWER)
2 NEMA ENCLOSURES FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISIONS
2 BATTERY SYSTEMS (NOT REQUIRED FOR AC POWER)

PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.

DETAIL A: DUAL YELLOW BEACON

X RECTANGULAR RAPID FLASHING BEACON (RRFB)
SCALE: N.T.S.



NOTES:
1. ORIENT SOLAR PANEL TOWARDS SOUTHERN SKY FOR MAXIMUM SOLAR EXPOSURE
2. CONTROL CABINET HEIGHT MAY VARY.
3. SNAP LOCKS ARE PROVIDED, STANDARD 3/4" S/S BANDING IS RECOMMENDED
4. J-BOLTS NOT SHOWN
5. ALL DIMENSIONS ARE FOR REFERENCE ONLY.
6.STATIC SIGNS NOT INCLUDED IN SYSTEM

X SCHOOL ZONE WARNING BEACON (SCZB)
SCALE: N.T.S.

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TRAFFIC SIGN SUMMARY

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GARDNER, MA

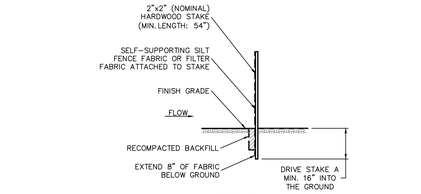
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DATE: 05/08/2020
SCALE: N.T.S.
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REVISIONS:

SITE PERMITTING

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EROSION & SEDIMENT CONTROL NOTES

1. EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO STUMP REMOVAL AND CONSTRUCTION. STABILIZATION OF ALL REGRADED AND SOIL STOCKPILE AREAS WILL BE INITIATED AND MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
2. SEDIMENT REMOVED FROM EROSION CONTROL STRUCTURES WILL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THIS PLAN. ALL STRAW BALES OR SILT FENCE RETAINING SEDIMENT OVER 6" HIGH SHALL HAVE THE SEDIMENT REMOVED AND ALL DAMAGED EROSION CONTROLS REMOVED AND REPLACED.
3. THE CONTRACTOR WILL BE ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER TOWN AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY. THE OWNER SHALL BE RESPONSIBLE FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE LIFE OF HIS CONTRACT. DUST CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO, SPRINKLING OF WATER ON EXPOSED SOILS AND HAUL ROADS. CONTRACTOR SHALL CONTROL DUST TO PREVENT A HAZARD TO TRAFFIC ON ADJACENT ROADWAYS.
5. IF FINAL GRADING IS TO BE DELAYED FOR MORE THAN THIRTY (30) DAYS AFTER LAND DISTURBANCES CEASE, TEMPORARY VEGETATION OR MULCH SHALL BE USED TO STABILIZE SOILS. OUTSIDE OF THE GROWING SEASON, ONLY WOOD MULCH SHALL BE USED.
6. WHERE DEWATERING IS NECESSARY, THERE SHALL NOT BE A DISCHARGE DIRECTLY INTO WETLANDS OR WATERCOURSES. PROPER METHODS AND DEVICES SHALL BE UTILIZED TO THE EXTENT PERMITTED BY LAW, SUCH AS PUMPING WATER INTO A TEMPORARY SEDIMENTATION BASIN, PROVIDING SURGE PROTECTION AT THE INLET AND THE OUTLET OF PUMPS, FLOATING THE INTAKE OF THE PUMP, OR OTHER METHODS TO MINIMIZE AND RETAIN THE SUSPENDED SOLIDS. IF A PUMPING OPERATION IS CAUSING TURBIDITY PROBLEMS, SAID OPERATION SHALL CEASE UNTIL SUCH TIME AS FEASIBLE MEANS OF CONTROLLING TURBIDITY ARE DETERMINED AND IMPLEMENTED. THE CONTRACTOR MUST SUBMIT HIS DESIGN ALONG WITH THE LOCATIONS OF THE BASIN TO THE TOWN PRIOR TO CONSTRUCTION.
7. INSPECTION – A CERTIFIED PROFESSIONAL EROSION AND SEDIMENT CONTROL PERSONAL OR ENGINEER SHALL INSPECT ALL DISTURBED AREAS OF THE CONSTRUCTION ACTIVITY THAT HAVE NOT BEEN FINALLY STABILIZED, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE EVERY WEEK AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.25 INCH OR GREATER. INSPECTION REPORTS SHALL BE SUBMITTED TO THE OWNER WEEKLY, AND TO THE INLAND WETLANDS AGENT AND THE PLANNING & ZONING COMMISSION MONTHLY. WHERE SITES HAVE BEEN FINALLY STABILIZED, SUCH INSPECTION SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH FOR THREE MONTHS. CONTROLS SHALL BE CLEANED, REPAIRED, AND OR REPLACED AS REQUIRED. ANY DAMAGED CONTROLS SHALL BE REPAIRED IMMEDIATELY.
8. PERFORM CONSTRUCTION SEQUENCING IN SUCH A MANNER TO CONTROL EROSION AND TO MINIMIZE THE TIME THAT EARTH MATERIALS ARE EXPOSED BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED.

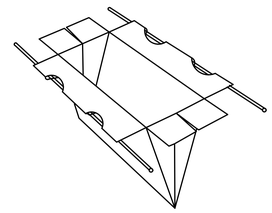


SILT FENCE NOTES:

1.) INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.

2.) SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE SPECIFICATIONS.

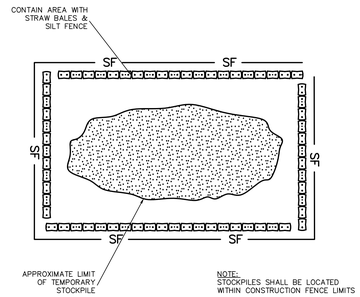
1 SILT FENCE
SCALE: N.T.S.



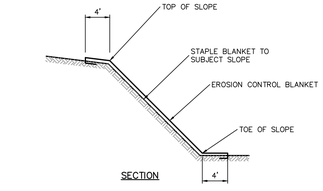
NOTES:

1. SIZED TO FIT ANY SIZE OR SHAPE CATCH BASIN.
2. ALL SEAMS DOUBLE STITCHED.
3. PERMEABILITY – REGULAR FLOW SILTSACK – 40 gal./min./sq. ft.
   HI – FLOW SILTSACK – 200 gal./min./sq. ft.

2 CATCH BASIN SILT SACK
SCALE: N.T.S.



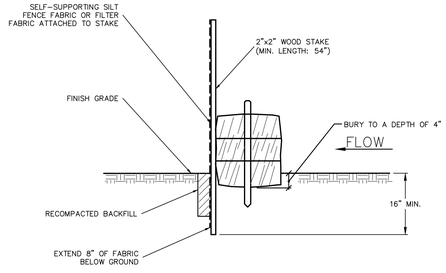
3 TEMPORARY SOIL STOCKPILE
SCALE: N.T.S.



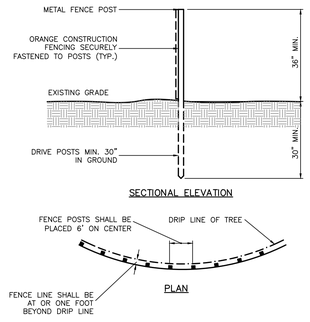
NOTE:

REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS FOR DETAILS ON INSTALLATION INCLUDING STAPLING PATTERN, OVERLAPPING DETAILS, EDGE EMBEDMENT, AND ANCHOR DETAILS. TO BE INSTALLED ON SLOPES 3:1 OR GREATER.

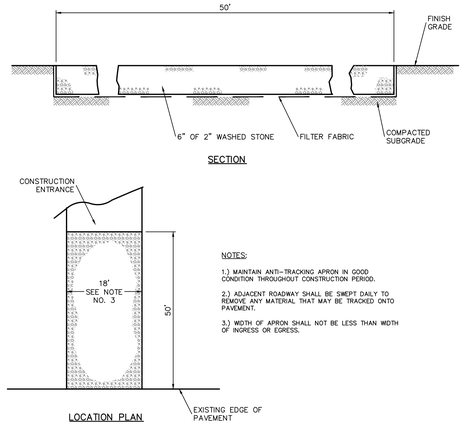
4 EROSION CONTROL BLANKET
SCALE: N.T.S.



5 SILT FENCE BACKED W/ STRAW BALES
SCALE: N.T.S.



6 TREE PROTECTION FENCING
SCALE: N.T.S.



7 CONSTRUCTION ENTRANCE
SCALE: N.T.S.

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CONSTRUCTION DETAILS

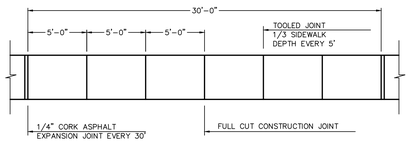
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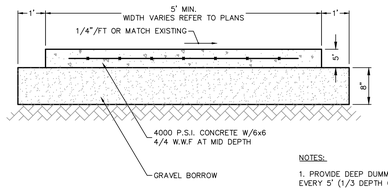
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PLAN

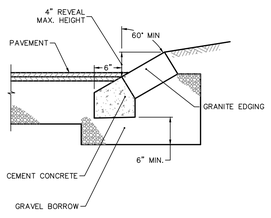


SECTION

NOTES:

1. PROVIDE DEEP DUMMY JOINT EVERY 5' (1/3 DEPTH OF SLAB)
2. REPLACE 1/4" EXPANSION JOINT IF EXISTING JOINT FALLS WITHIN RECONSTRUCTION.

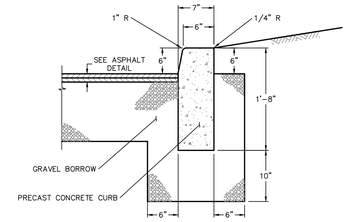
1 CONCRETE SIDEWALK
SCALE: N.T.S.



NOTES:

1. LENGTH OF CURB VARIES TO FIT RADIUS. 2 FT. MIN AND 6 FEET MAX.
2. ENDS SHALL BE SQUARE TO TOP AND RADIAL TO FACE.
3. BUTT ENDS TOGETHER AS CLOSE AS POSSIBLE. MAXIMUM SPACE OF 1/2" ALLOWED. 8" DOWN FROM TOP. JOINT SHALL BE MORTARED FULL DEPTH.
4. 1/2" EXPANSION JOINT EVERY 50± FEET.
5. CURBS TO BE SET ON A RADIUS OF 100 FEET OR LESS SHALL BE CUT TO THE CURVE REQUIRED, AND THEIR ENDS CUT ON RADIAL LINES.
6. 1/2" EXPANSION JOINT AND FILLER WHEN CURB IS ADJACENT TO CONCRETE SIDEWALK.

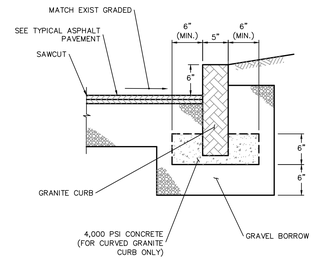
2 SLOPED GRANITE EDGING – TYPE SB
SCALE: N.T.S.



NOTES:

1. 1 INCH DEEP BEVELED JOINT AT TOP AND FACE OF CURB.
2. FULL DEPTH EVERY 10 FEET. 1/2 INCH EXPANSION JOINT AND FILLER EVERY 30 FEET.
3. 1/2 INCH EXPANSION JOINT AND FILLER WHEN CURB IS ADJACENT TO CONCRETE SIDEWALK.

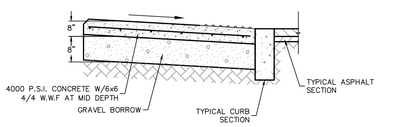
3 PRECAST CONCRETE CURB
SCALE: N.T.S.



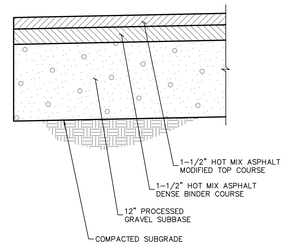
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6. 1/2" EXPANSION JOINT AND FILLER WHEN CURB IS ADJACENT TO CONCRETE SIDEWALK.

4 GRANITE CURB
SCALE: N.T.S.



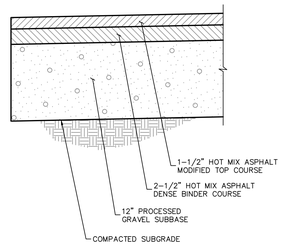
5 HEAVY DUTY CONCRETE SIDEWALK
SCALE: N.T.S.



SECTION

NOTE:
1. USE ON MULTI-USE PATH, FIRE LANE, AND PARKING AREAS.

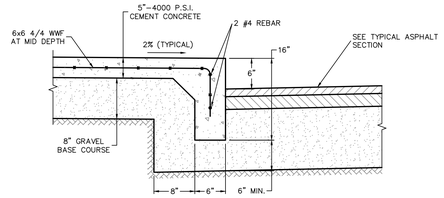
6 STANDARD ASPHALT DETAIL (TYPICAL)
SCALE: N.T.S.



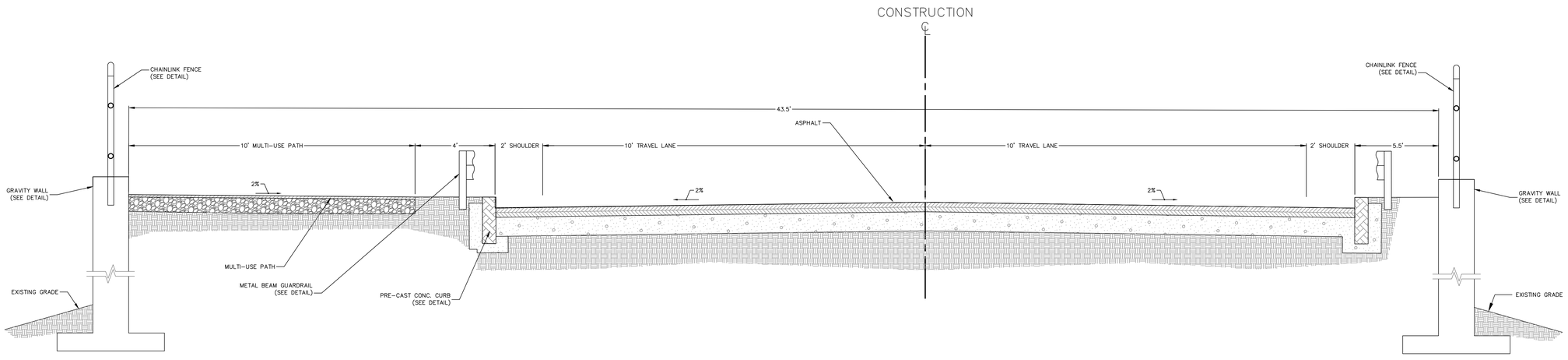
SECTION

NOTE:
1. USE ON DRIVEWAYS.

7 HEAVY DUTY ASPHALT DETAIL (TYPICAL)
SCALE: N.T.S.



8 MONOLITHIC CONCRETE CURB AND WALK
SCALE: N.T.S.



9 TYPICAL DRIVEWAY SECTION
SCALE: N.T.S.

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May, 11, 2020
COMMONWEALTH OF MASSACHUSETTS
ERIC M. BERNARDIN
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No. 37950
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PROFESSIONAL ENGINEER

CONSULTANTS:

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CONSTRUCTION DETAILS

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	N.T.S.
DRAWN BY:	
REVISIONS:	

SITE
PERMITTING

C802

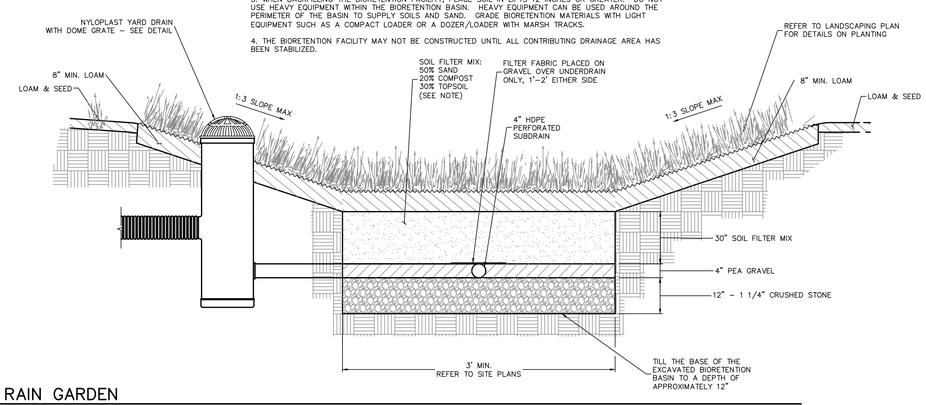
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MS VIEW: | LAYER STATE: | PLOT_INFO

BIORETENTION BASIN NOTES:
1. SAND COMPONENT SHALL MEET ASTM D422. COMPOST COMPONENT SHALL CONSIST OF WELL-AGED, WELL-AERATED LEAF COMPOST. TOPSOIL COMPONENT SHALL BE A SANDY LOAM, LOAMY SAND, OR LOAM TEXTURE CLAY OF SOIL MIX SHOULD NOT EXCEED 3%.

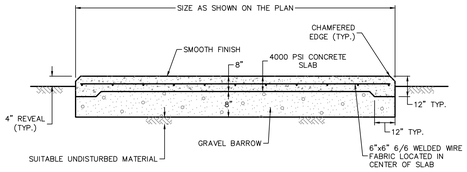
2. THE SOIL SHOULD BE UNIFORM MIX, FEE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES. NO OTHER MATERIALS OR SUBSTANCES SHOULD BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE BIORETENTION SOIL SHOULD BE FREE OF NOXIOUS WEEDS.

3. WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12 INCHES OR GREATER. DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. THE BIORETENTION FACILITY MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.



1 RAIN GARDEN
SCALE: N.T.S.



SECTION

NOTE:
1. TYPICAL SLAB SECTION APPLIES TO DUMPSTER AND MISC. MECHANICAL PADS UP TO 12'x12'. SEE PLANS FOR PAD SIZE AND LOCATION.
2. VERIFY PAD SIZE WITH MEP PLANS AND SPECIFICATIONS.

2 CONCRETE EQUIPMENT PAD
SCALE: N.T.S.

EXTERIOR CONCRETE NOTES:

1. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE MASSACHUSETTS STATE BUILDING CODE 8TH EDITION AND ALL LOCAL REQUIREMENTS.

2. DIMENSIONS AND CONDITIONS SHALL BE VERIFIED IN FIELD PRIOR TO THE COMMENCEMENT OF WORK.

3. ALL CONCRETE SHALL HAVE A DESIGN STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED.

4. REINFORCING RODS SHALL BE ASTM A615, GRADE 60 EXCEPT WHERE FIELD BENDING IS REQUIRED, GRADE 40.

5. WELDED WIRE MESH SHALL BE ASTM A185. ALL WELDED WIRE MESH SHALL BE IN SHEET FORM.

6. PROVIDE SAW CUT EXPANSION/CONTROL JOINTS AT AREAS NOTED. ALL SAW CUT EXPANSION JOINTS SHALL BE A MINIMUM OF 1/4 OF THE SLAB THICKNESS AND A MAXIMUM OF 1/3 OF THE SLAB THICKNESS. JOINTS MUST BE CUT WITHIN 24 HOURS OF CONCRETE PLACEMENT.

7. JOINTS MUST BE SPACED IN ACCORDANCE WITH ACI-318 AND THE FOLLOWING RECOMMENDATIONS:
4" THICK SLAB–15'X15' < 250 SQ FT
5" THICK SLAB–18'X18' < 325 SQ FT
6" THICK SLAB–20'X20' < 400 SQ FT
8" THICK SLAB–25'X25' < 500 SQ FT

8. ALL CONCRETE SHALL BE MIXED AND PLACED IN ACCORDANCE WITH THE ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI–318–89 (R92).

9. CONCRETE CONTRACTOR SHALL INSTALL CHASES THROUGH THE FOUNDATION WALLS AS DIRECTED BY THE GENERAL CONTRACTOR.

10. EXTERIOR CONCRETE SLABS TO HAVE A LIGHT BROOM FINISH. CONCRETE SLABS TO RECEIVE (1) COAT OF CLEAR SEALER/HARDENER EXCEPT AS NOTED.

11. ALL REINFORCING BARS TO HAVE MINIMUM 2" COVERAGE.

12. ALL CONCRETE TO BE POURED WITH A MAXIMUM 4" SLUMP.

13. FLOOR SLAB REINFORCING MUST BE LOCATED AT OR ABOVE MID DEPTH OF THE FLOOR SLAB UNLESS TOP AND BOTTOM REINFORCEMENT IS SPECIFIED. SHEETS ARE TO BE USED IN ALL WELDED WIRE MESH APPLICATIONS. WELDED WIRE MESH TO BE PLACED WITH CHAIRS OR BOLSTERS ONLY.

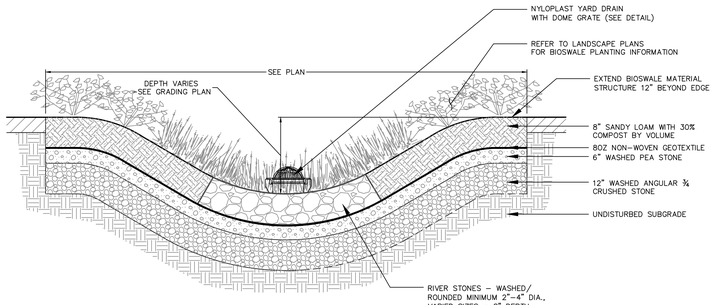
14. POURING CONCRETE FLOORS IN A CHECKERBOARD PATTERN IS NOT APPROVED OR RECOMMENDED BY ACI.

15. SEPARATE POURS MUST HAVE SMOOTH DOWELS (WRAPPED OR GREASED). DOWEL SIZES SHALL BE AS FOLLOWS:
4" THICK SLAB 1/2"X12" LONG 18" O.C.
5" THICK SLAB 1/2"x12" LONG 18" O.C.
6" THICK SLAB 3/4"x16" LONG 18" O.C.
8" THICK SLAB 3/4"x18" LONG 18" O.C.
BOND BREAKER COMPOUND TO BE PAINTED ON PRIOR TO POURING ADJACENT SLAB.

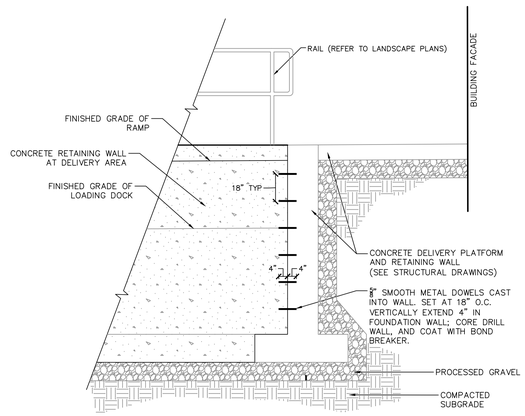
16. ENGINEER TO APPROVE SUBGRADES PRIOR TO SLAB INSTALLATION.

17. CONTROL JOINTS AROUND ALL SLAB PENETRATIONS SHOULD BE SAWCUT THE FULL DEPTH OF THE SLAB OR BE DONE AS A CONSTRUCTION JOINT (POURED SEPARATELY).

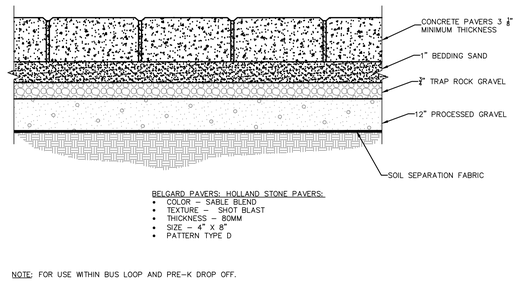
18. ALL JOINTS SHALL BE FILLED AND SEALED.



3 BIOSWALE
SCALE: N.T.S.



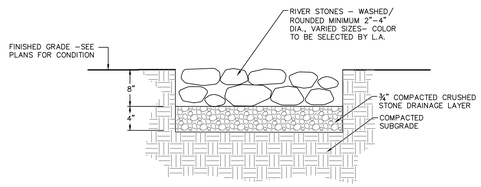
4 PINNED CONCRETE RETAINING WALL AT DELIVERY PLATFORM
SCALE: N.T.S.



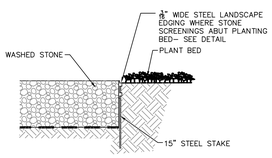
BELGARD PAVERS: HOLLAND STONE PAVERS:
- COLOR – SABLE BLEND
- TEXTURE – SHOT BLAST
- THICKNESS – 80MM
- SIZE – 4" X 8"
- PATTERN TYPE D

NOTE: FOR USE WITHIN BUS LOOP AND PRE-K DROP OFF.

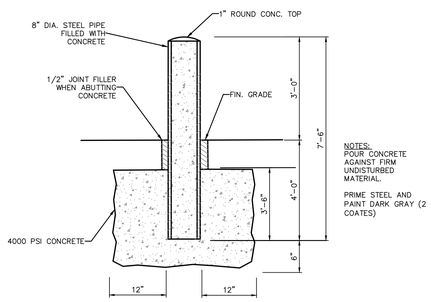
5 CONCRETE BELGARD PAVERS
SCALE: N.T.S.



6 WASHED STONE SURFACING
SCALE: N.T.S.



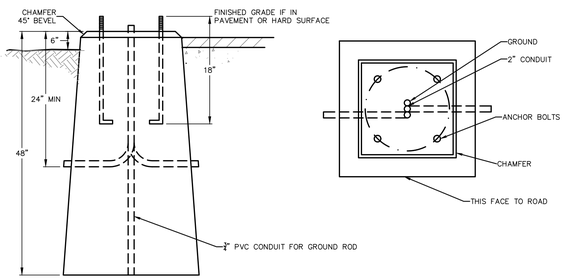
7 STEEL LANDSCAPE EDGING
SCALE: N.T.S.



NOTES:
POUR CONCRETE AGAINST FIRM UNDISTURBED MATERIAL.

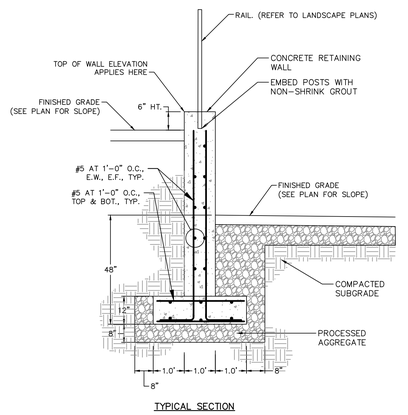
PRIME STEEL AND PAINT DARK GRAY (2 COATES)

8 STEEL PIPE FILLED CONCRETE BOLLARD
SCALE: N.T.S.



NOTES:
1. CONCRETE SHALL BE MINIMUM 4,000 PSI, 28 DAY
2. CONDUIT SHALL BE SCHEDULE 40 PVC

9 CONCRETE LIGHT STANDARD BASE – D–403
SCALE: N.T.S.



TYPICAL SECTION

10 CONCRETE RETAINING WALL
SCALE: N.T.S.

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CONSTRUCTION DETAILS

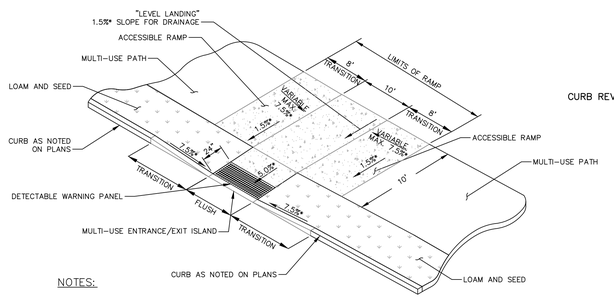
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
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DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C803

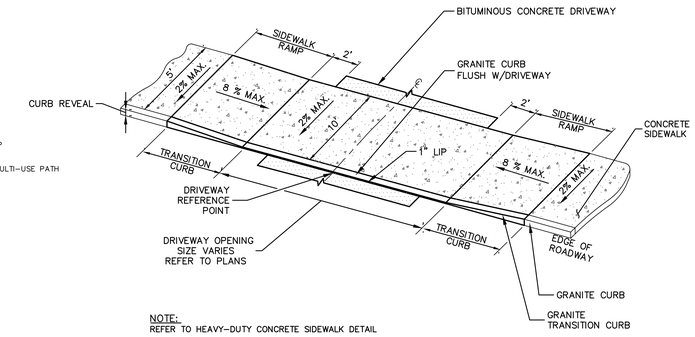
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MS VIEW:



NOTES:

– SEE DETAIL 4, SHEET C3.06 FOR CONCRETE AND REINFORCING DETAILS
– * CONSTRUCTION TOLERANCE ± 0.5%

1 MULTI–USE RAMP
SCALE: N.T.S.

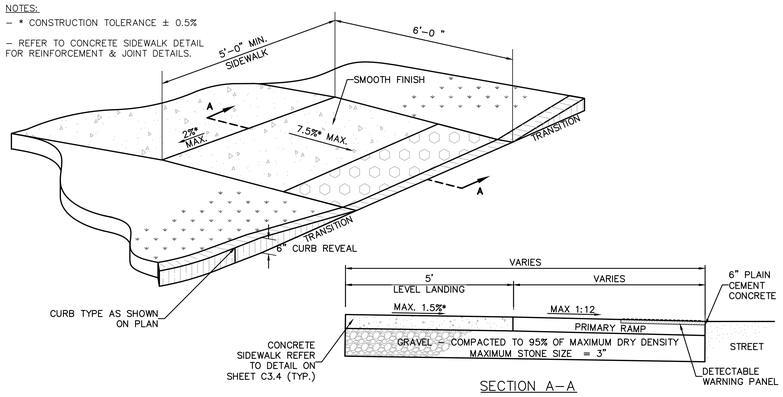


NOTE:
REFER TO HEAVY–DUTY CONCRETE SIDEWALK DETAIL

2 DRIVEWAY APRON
SCALE: N.T.S.

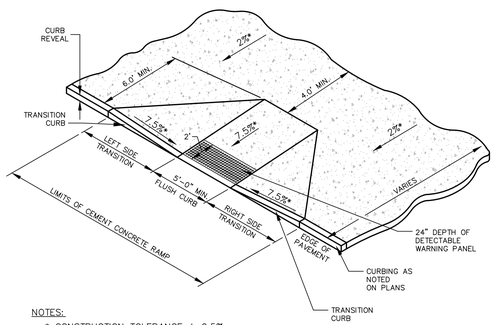
NOTES:
– * CONSTRUCTION TOLERANCE ± 0.5%

– REFER TO CONCRETE SIDEWALK DETAIL FOR REINFORCEMENT & JOINT DETAILS.



SECTION A–A

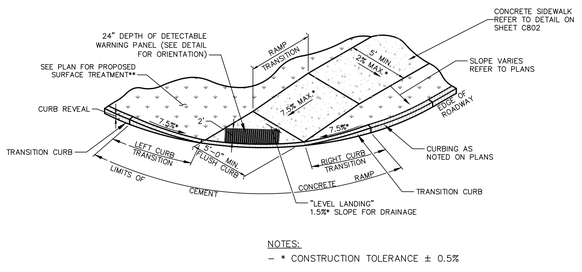
3 SIDEWALK RAMP TYPE A
SCALE: N.T.S.



NOTES:
– * CONSTRUCTION TOLERANCE ± 0.5%

– REFER TO CONCRETE SIDEWALK DETAIL FOR REINFORCEMENT & JOINT DETAILS.

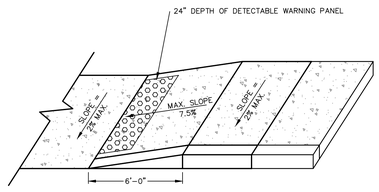
4 SIDEWALK RAMP TYPE B
SCALE: N.T.S.



NOTES:
– * CONSTRUCTION TOLERANCE ± 0.5%

– REFER TO CONCRETE SIDEWALK DETAIL FOR REINFORCEMENT & JOINT DETAILS.

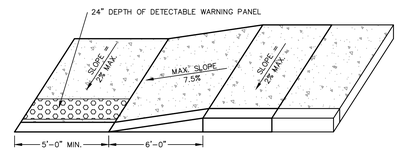
5 SIDEWALK RAMP TYPE C
SCALE: N.T.S.



NOTES:
– * CONSTRUCTION TOLERANCE ± 0.5%

– REFER TO CONCRETE SIDEWALK DETAIL FOR REINFORCEMENT & JOINT DETAILS.

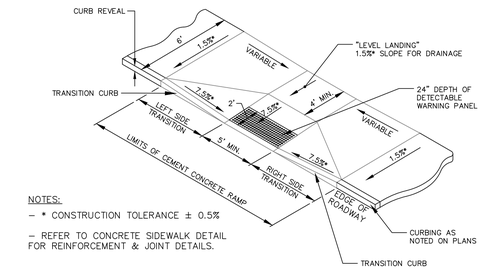
6 SIDEWALK RAMP TYPE D
SCALE: N.T.S.



NOTES:
– * CONSTRUCTION TOLERANCE ± 0.5%

– REFER TO CONCRETE SIDEWALK DETAIL FOR REINFORCEMENT & JOINT DETAILS.

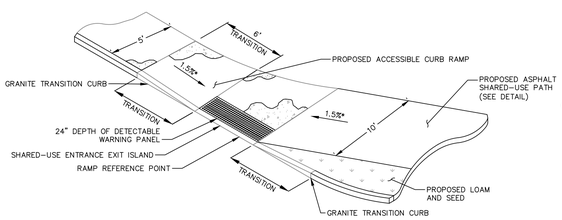
7 SIDEWALK RAMP TYPE E
SCALE: N.T.S.



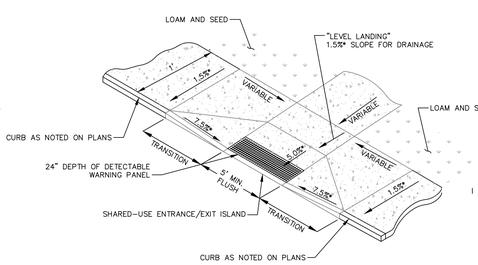
NOTES:
– * CONSTRUCTION TOLERANCE ± 0.5%

– REFER TO CONCRETE SIDEWALK DETAIL FOR REINFORCEMENT & JOINT DETAILS.

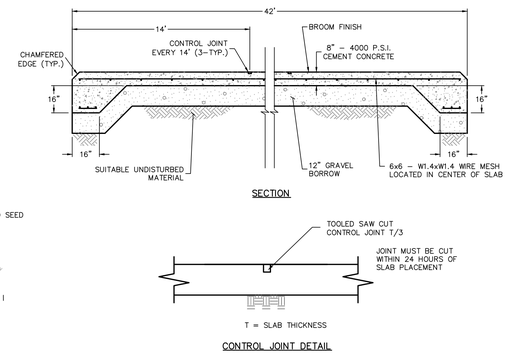
8 SIDEWALK RAMP TYPE F
SCALE: N.T.S.



9 SIDEWALK RAMP TYPE G
SCALE: N.T.S.



10 SIDEWALK RAMP TYPE H
SCALE: N.T.S.



SECTION

CONTROL JOINT DETAIL

11 CONCRETE PAD
SCALE: N.T.S.

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May, 11, 2020

COMMONWEALTH OF MASSACHUSETTS ERIC M. BERNARDIN CIVIL No. 37060 REGISTERED PROFESSIONAL ENGINEER

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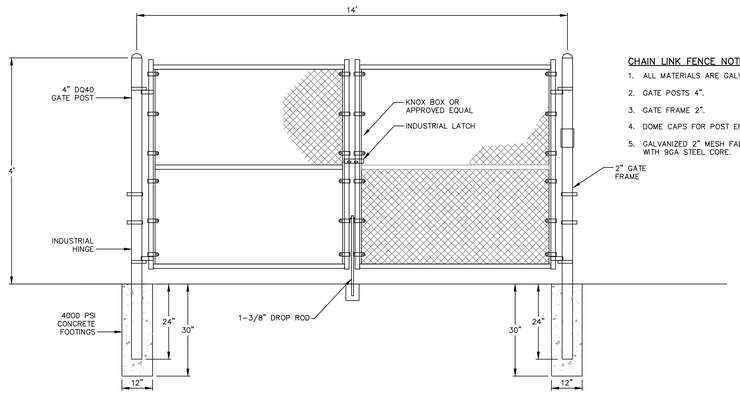
GARDNER ELEMENTARY SCHOOL
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PROJ. NUMBER:	1806
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SCALE:	N.T.S.
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C804

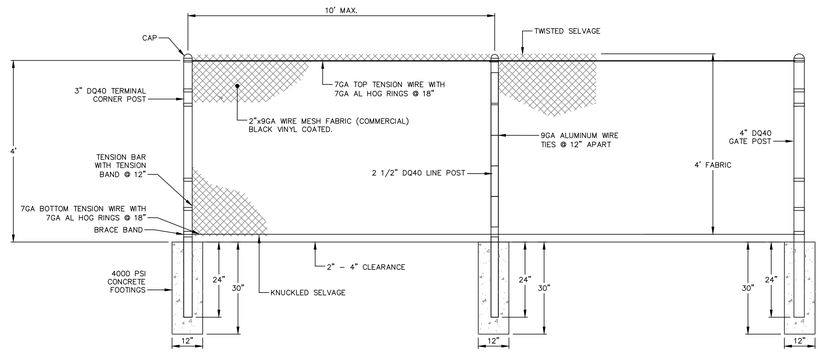
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CHAIN LINK FENCE NOTES:

1. ALL MATERIALS ARE GALVANIZED.
2. GATE POSTS 4".
3. GATE FRAME 2".
4. DOME CAPS FOR POST ENDS.
5. GALVANIZED 2" MESH FABRIC WITH 9GA STEEL CORE.

1 CHAIN LINK DOUBLE LEAF SWING GATE
SCALE: N.T.S.



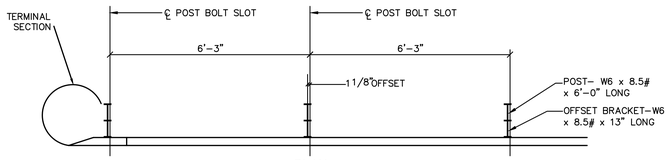
NOTES:

1. FOOTING DESIGN TO BE CHECKED BY AN ENGINEER FOR WIND LOADS IF SLATS ARE USED OR IF POOR SOIL CONDITIONS EXIST.
2. STRAIGHT RUNS BETWEEN BRACED POSTS SHALL NOT EXCEED 500 FT.
3. FENCE DETAILS ARE INTENDED AS A GUIDE ONLY. ALL FENCE MATERIALS AND CONSTRUCTION METHODS SHALL BE APPROVED BY THE ENGINEER AND FENCE MANUFACTURER.

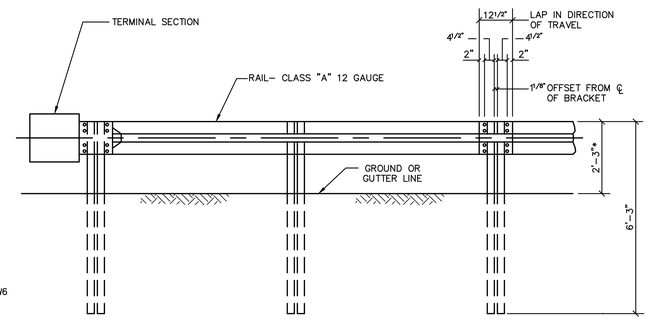
CHAIN LINK FENCE NOTES:

1. ALL MATERIALS ARE GALVANIZED.
2. GATE POSTS 4".
3. TERMINAL POSTS 3".
4. LINE POSTS 2.5".
5. 7GA TOP AND BOTTOM TENSION WIRE TO MATCH FABRIC ATTACHED BY 7GA HOG RINGS WITH STEEL CORE.
6. TENSION BARS WITH TENSION BANDS @ 12".
7. DOME CAPS FOR POST ENDS.
8. 9GA TIE WIRES WITH STEEL CORE ON LINE POSTS.
9. 3" BRACE BANDS ON TERMINAL CORNER POSTS.
10. 9 GAUGE 2" WIRE MESH FABRIC (COMMERCIAL) BLACK VINYL COATED.

2 CHAIN LINK FENCE
SCALE: N.T.S.

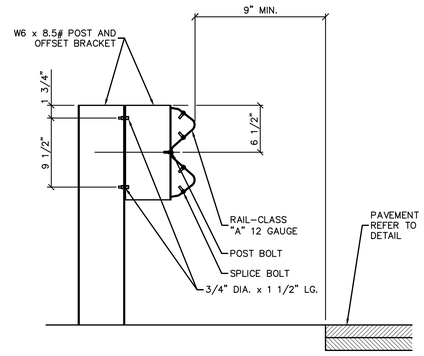


PLAN



ELEVATION

NOTE: FOR DETAILS, DIMENSIONS AND MATERIALS NOT SHOWN SEE MASS HIGHWAY STEEL BEAM HIGHWAY GUARD STANDARDS AND SPECIFICATIONS



TYPICAL POST SECTION

3 METAL BEAM GUARDRAIL
SCALE: N.T.S.

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www.fando.com

CONSTRUCTION DETAILS

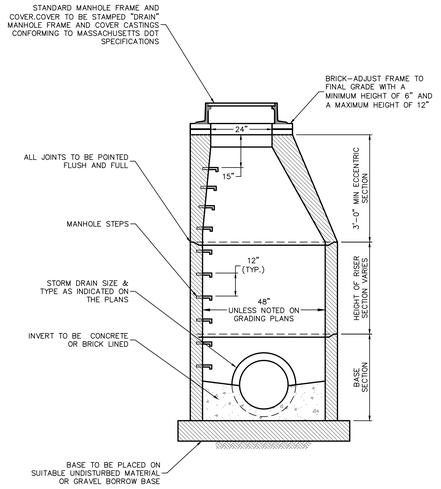
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	N.T.S.
DRAWN BY:	
REVISIONS:	

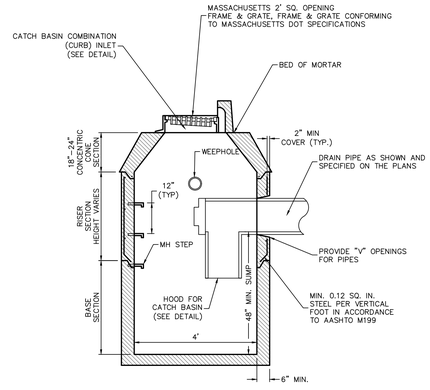
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C805

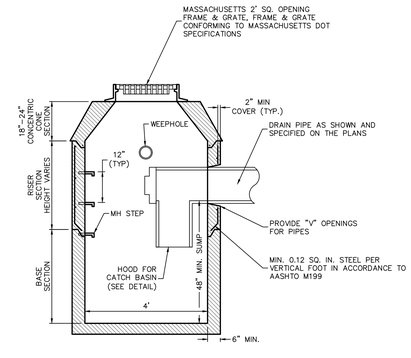
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LAYER STATE:
PLOT_INFO



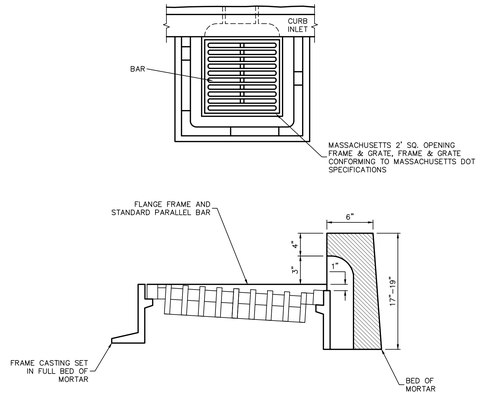
1 DRAINAGE MANHOLE
SCALE: N.T.S.



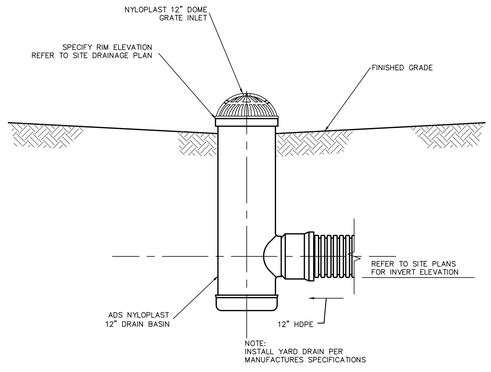
2 PRECAST CONCRETE CATCH BASIN WITH COMBINATION (CURB) INLET
SCALE: N.T.S.



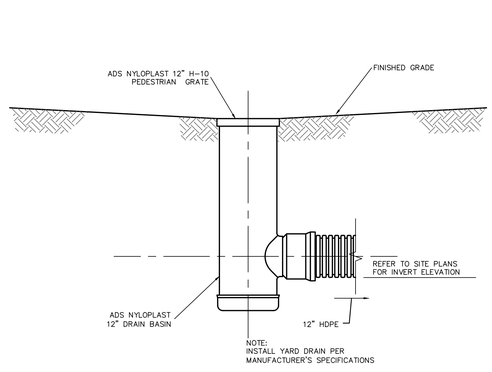
3 PRECAST CONCRETE CATCH BASIN
SCALE: N.T.S.



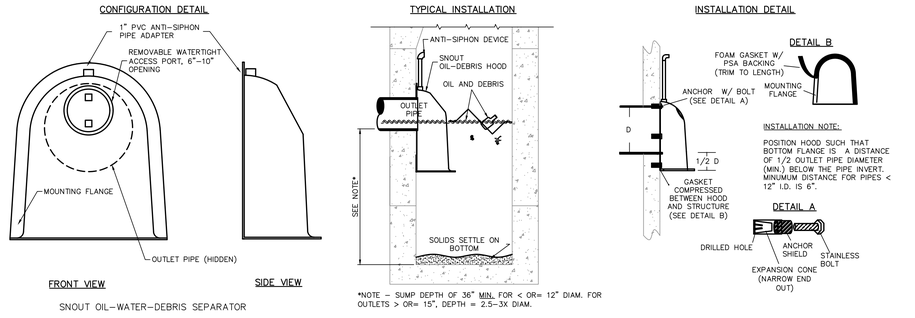
4 CATCH BASIN COMBINATION (CURB) INLET
SCALE: N.T.S.



5 NYLOPLAST YARD DRAIN WITH DOME GRATE
SCALE: N.T.S.



6 NYLOPLAST YARD DRAIN
SCALE: N.T.S.



SNOUT OIL-WATER-DEBRIS SEPARATOR

*NOTE - SUMP DEPTH OF 36" MIN. FOR < OR= 12" DIAM. FOR OUTLETS > OR= 15", DEPTH = 2.5-3X DIAM.

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 434-0277
   WEB SITE: www.bmpinc.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT PIPE AND ELBOW AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION (SNOUT SIZE ALWAYS LARGER THAN PIPE SIZE).
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 12" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL AND PIPE SHALL BE FINISHED FLUSH TO WALL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

7 HOOD FOR CATCH BASIN
SCALE: N.T.S.

JWA
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308 Main Street
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May, 11, 2020
COMMONWEALTH OF MASSACHUSETTS
ERIC M. BERNARDIN
CIVIL
No. 37950
REGISTERED
PROFESSIONAL ENGINEER

CONSULTANTS:

FUSS & O'NEILL
150 MAIN STREET, SUITE 400
WORCESTER, MA 01601
413.452.0445
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CONSTRUCTION DETAILS

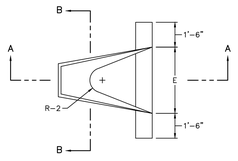
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
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DRAWN BY:	
REVISIONS:	

SITE PERMITTING

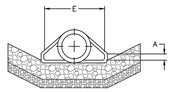
C806

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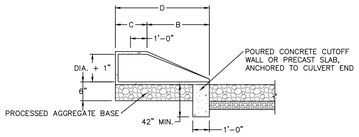


PLAN

DIMENSIONS						
DIA.	A	B	C	D	E	F
12"	4"	2'-0"	6'-0 3/8"	6'-0 3/8"	2'-0"	1'-7 15/16"
15"	6"	2'-3"	3'-10"	6'-1"	2'-6"	2'-0 5/16"
18"	9"	2'-3"	3'-10"	6'-1"	3'-0"	2'-5"
24"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	2'-9 3/16"
30"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3'-1"
36"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3'-11 13/16"
42"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	4'-5 7/8"
48"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	4'-8 1/2"



END VIEW

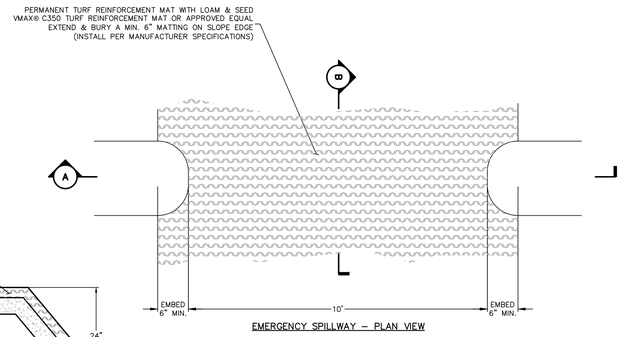


SECTION A–A



SECTION B–B

1 CONCRETE CULVERT FLARED END
SCALE: N.T.S.

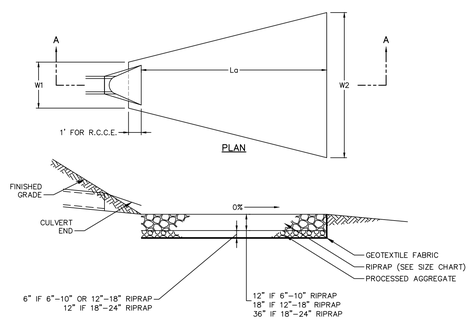


EMERGENCY SPILLWAY – PLAN VIEW

SECTION B – SIDE ELEVATION

SECTION A – FRONT ELEVATION

2 PERMANENT TURF REINFORCEMENT MAT EMERGENCY SPILLWAY
SCALE: N.T.S.



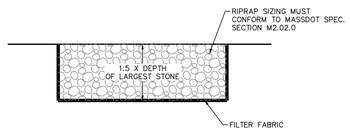
PLAN

SECTION A–A

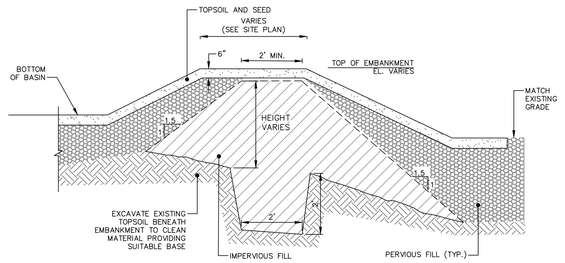
PIPE SIZE	La	W1	W2	RIPRAP TYPE
12" OR LESS	12'	3'	11'-6"	6"–10"
15"	14'	4'	14'	6"–10"
18"	16'	4'-6"	16'	12"–18"
24"	18'	6'	18'	12"–18"
30"	18'	7'-6"	20'-6"	12"–18
36"	20'	9'	23'	18"–24"
42"	22'	10'-6"	26'	18"–24"
48"	26'	12'	30'-6"	18"–24"
54"	28'	13'-6"	33'-6"	18"–24"
60"	30'	15'	36'	18"–24"

NOTE:
CALCULATION FOR APRON ARE BASED ON THE 2000 CONNDOT DRAINAGE MANUAL (REVISED DECEMBER 2003).

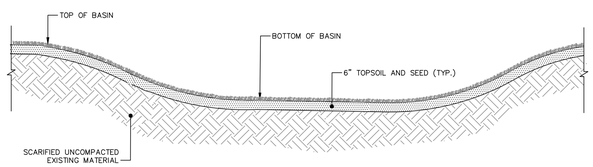
3 CONCRETE FLARED END W/RIP RAP APRON
SCALE: N.T.S.



4 RIP RAP PROTECTION
SCALE: N.T.S.



EMBANKMENT



BASIN

EMBANKMENT NOTES:

1. IMPERVIOUS MATERIAL FOR USE IN BASIN EMBANKMENT AREAS SHALL BE COMPOSED OF CLAYS, SILTY CLAYS, OR CLAYEY SILTS. THE SOIL SHALL BE FREE OF RUBBISH, ICE, VEGETATIVE MATTER, LOAM, OR OTHER DEBRIS AND HAVE THE FOLLOWING GRADATION AS DEFINED BY A STANDARD SEIVE TEST (ASTM D422):

MIN. PERCENT PASSING (BY WT).	SIEVE SIZE
100	3.5"
80–100	3/4"
40–90	No. 4
30–85	No. 40
25–75	No. 200

2. PERVIOUS BACKFILL MATERIAL FOR USE IN FILL AREAS ASSOCIATED WITH BASIN EMBANKMENTS SHALL BE COMPOSED OF SATISFACTORY ON-SITE MATERIAL OR BORROW SOIL MATERIALS WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE FROM EXCAVATIONS. SATISFACTORY ON-SITE MATERIAL SHALL HAVE SOIL CLASSIFICATION GROUPS OF GW, GP, GM, SW, SP, AND SM ACCORDING TO ASTM D 2487, OR A COMBINATION OF THESE GROUPS AND SHALL BE FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES (75 MM) IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATTER.

3. PIPE INSTALLED THROUGH EMBANKMENT SHALL INCLUDE WATER-TIGHT JOINTS.

BASIN NOTES:

1. SEED MIX SHALL BE NEW ENGLAND WETLAND PLANTS "NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES".

5 INFILTRATION BASIN
SCALE: N.T.S.

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CONSTRUCTION DETAILS

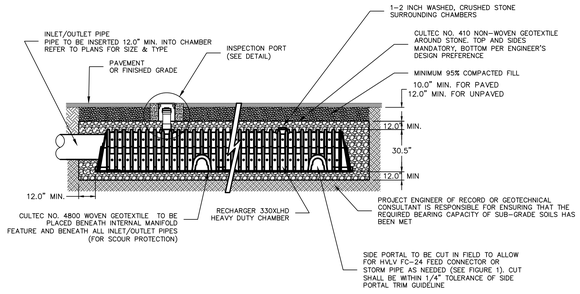
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

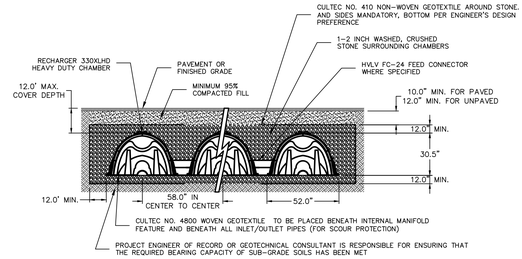
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REVISIONS:	

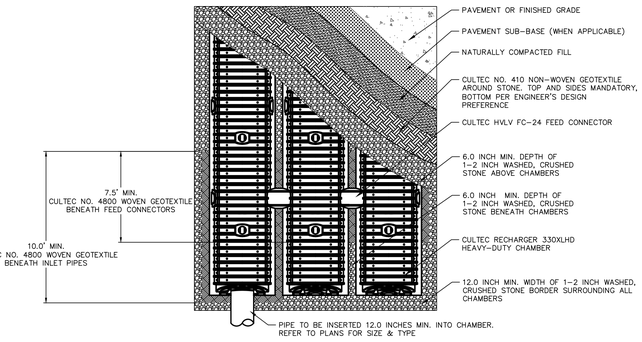
SITE PERMITTING

C807

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MS VIEW:







GENERAL NOTES

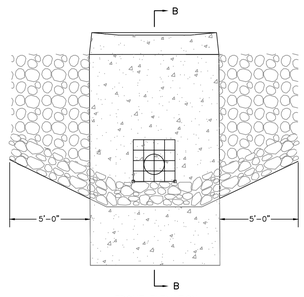
1. RECHARGER 330XL HD BY CULTEC, INC. OF BROOKFIELD, CT. STORAGE PROVIDED = 11.32 CF/FT PER DESIGN UNIT.
2. REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
3. USE RECHARGER 330XL HD HEAVY DUTY FOR TRAFFIC AND/OR H-25 APPLICATIONS.
4. ALL RECHARGER 330XL HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.
5. ALL RECHARGER 330XL HD CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

1 SUBSURFACE INFILTRATION SYSTEM (TYP.) – CULTEC RECHARGER 330 XLHD CHAMBERS (OR APPROVED EQUAL)

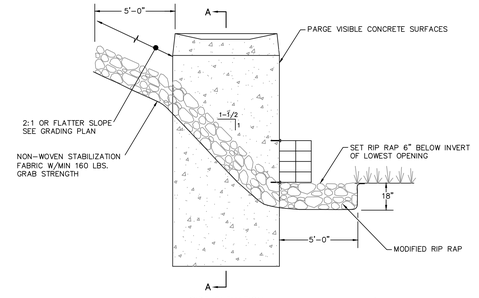
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2 TYPICAL INSPECTION PORT DETAIL FOR NON-TRAFFIC APPLICATION

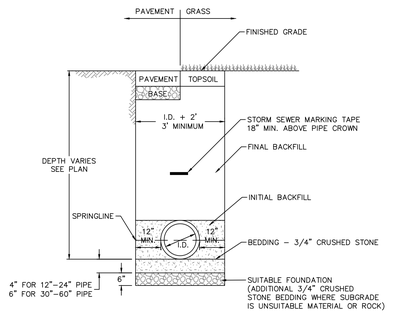
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FRONT ELEVATION

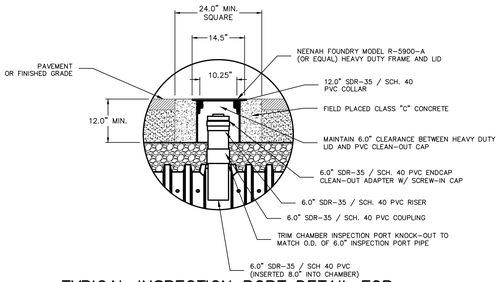


SIDE ELEVATION



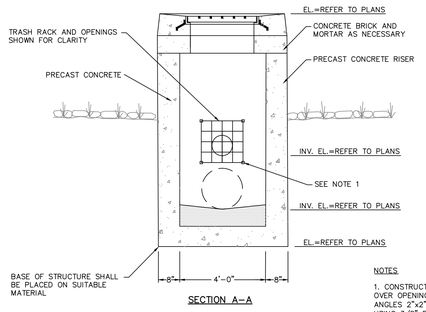
5 STORMWATER DRAINAGE TRENCH

SCALE: N.T.S.

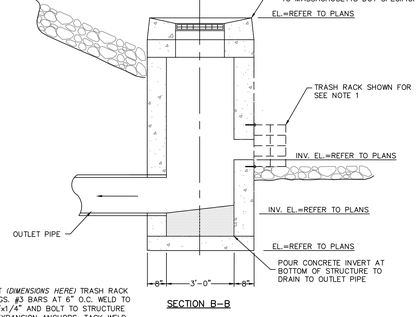


3 TYPICAL INSPECTION PORT DETAIL FOR TRAFFIC APPLICATION

SCALE: N.T.S.



SECTION A-A



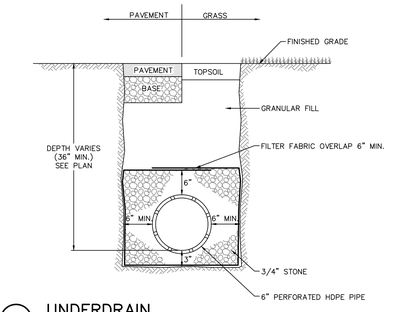
SECTION B-B

NOTES

1. CONSTRUCT *(DIMENSIONS HERE)* TRASH RACK OVER OPENINGS. #3 BARS AT 6" O.C. WELD TO ANGLES 2"x2"x1/4" AND BOLT TO STRUCTURE USING 3/8" EXPANSION ANCHORS. TACK WELD BARS.

4 OUTLET CONTROL STRUCTURE

SCALE: N.T.S.



6 UNDERDRAIN

SCALE: N.T.S.

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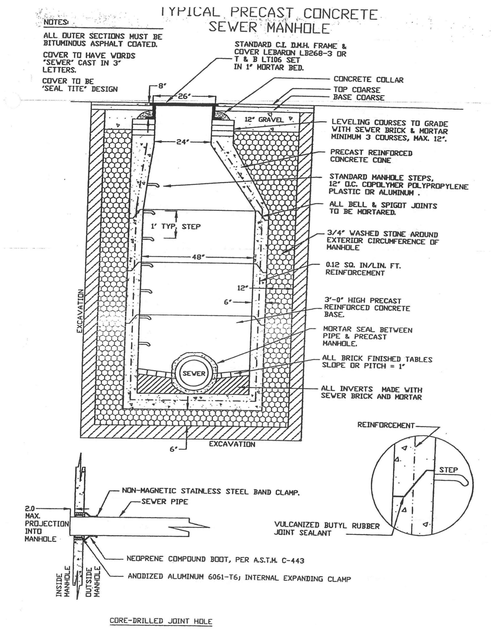
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

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REVISIONS:	

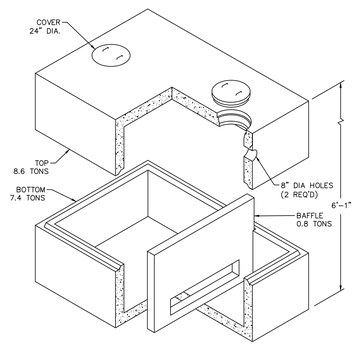
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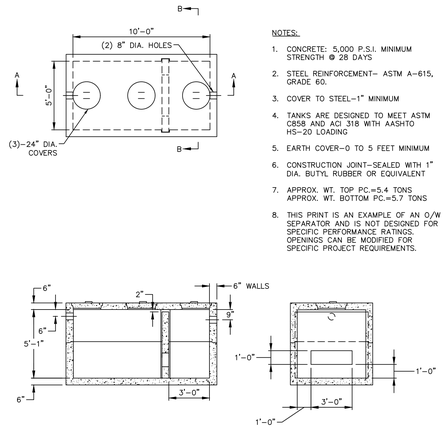
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1 CITY OF GARDNER DETAIL
SANITARY SEWER MANHOLE
SCALE: N.T.S.



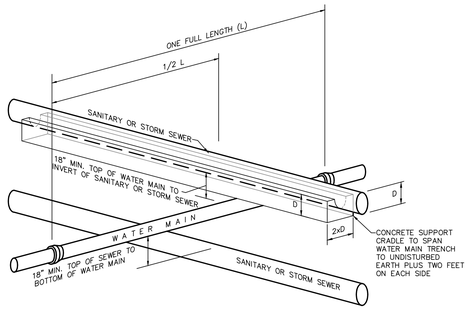
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NOTES:

1. CONCRETE: 5,000 P.S.I. MINIMUM STRENGTH @ 28 DAYS
2. STEEL REINFORCEMENT– ASTM A-615, GRADE 60.
3. COVER TO STEEL–1" MINIMUM
4. TANKS ARE DESIGNED TO MEET ASTM C858 AND ACI 318 WITH AASHTO HS-20 LOADING
5. EARTH COVER–0 TO 5 FEET MINIMUM
6. CONSTRUCTION JOINT–SEALED WITH 1" DIA. BUTYL RUBBER OR EQUIVALENT
7. APPROX. WT. TOP P.C.=5.4 TONS APPROX. WT. BOTTOM P.C.=5.7 TONS
8. THIS PRINT IS AN EXAMPLE OF AN O/W SEPARATOR AND IS NOT DESIGNED FOR SPECIFIC PERFORMANCE RATINGS. OPENINGS CAN BE MODIFIED FOR SPECIFIC PROJECT REQUIREMENTS.

2 OIL/WATER SEPARATOR (1,500 GALLON CAPACITY)
SCALE: N.T.S.

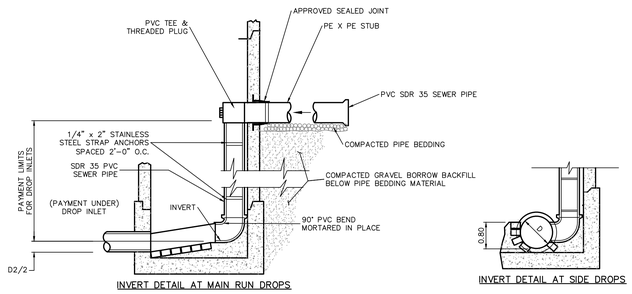


NOTES:

IF 18" VERTICAL SEPARATION CAN NOT BE ACHIEVED AT LOCATIONS OF WATER MAIN & SEWER CROSSINGS, CONTRACTOR SHALL CONSTRUCT EITHER OF THE FOLLOWING OPTIONS:

1. CONSTRUCT SANITARY SEWER OF PVC PRESSURE PIPE MATERIAL 10' ON EACH SIDE OF THE WATER MAIN/STORM SEWER AND TEST PROPOSE SANITARY SEWER AT 150 PSI PRESSURE.
2. ENCASE SEWER PIPE IN CONCRETE, 4' DISTANCE ON EACH SIDE OF WATER MAIN/ STORM SEWER CROSSING. CONCRETE ENCASEMENT SHALL BE MINIMUM 6" ALL AROUND PROPOSED SEWER PIPE.

3 SECTION WATER/SEWER SEPARATION REQUIREMENTS
SCALE: N.T.S.



NOTES:

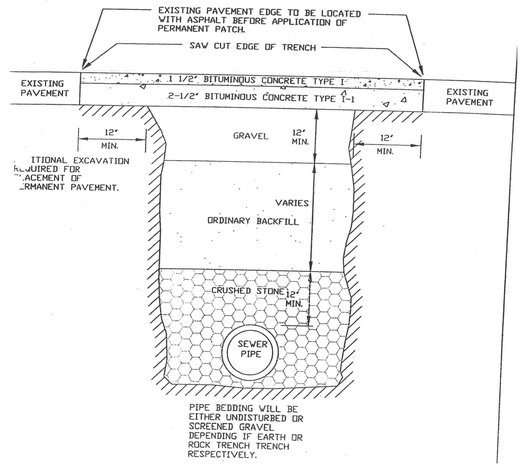
1.) DIMENSIONS AND CONSTRUCTION OF DROP MANHOLE TO BE SIMILAR TO TYPICAL MANHOLE EXCEPT AS SHOWN.

2.) DROP PIPE SHALL BE THE SAME DIAMETER AS INLET PIPE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

INSIDE DROP INLET FOR SEWERS 12" DIAMETER AND SMALLER

4 SANITARY MANHOLE INSIDE DROP
SCALE: N.T.S.

TYPICAL RESURFACING OF TRENCH
NO SCALE



5 CITY OF GARDNER DETAIL
SANITARY SEWER TRENCH
SCALE: N.T.S.

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May, 11, 2020
COMMONWEALTH OF MASSACHUSETTS
ERIC M. BERNARDIN
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No. 37950
REGISTERED PROFESSIONAL ENGINEER

CONSULTANTS:

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WORCESTER, MA 01601
413.452.0445
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CONSTRUCTION DETAILS

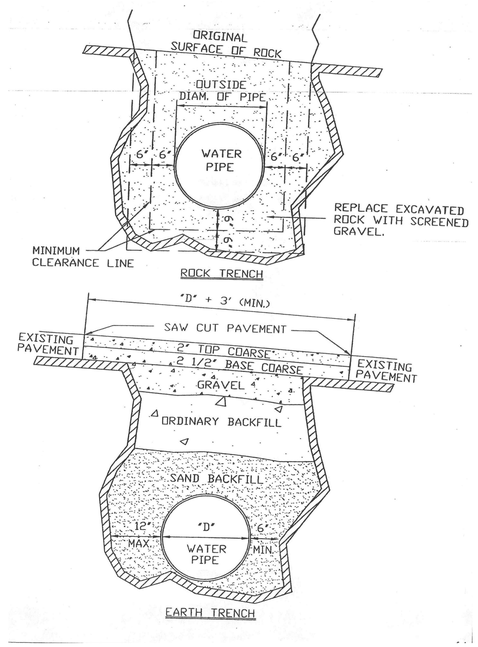
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	N.T.S.
DRAWN BY:	
REVISIONS:	

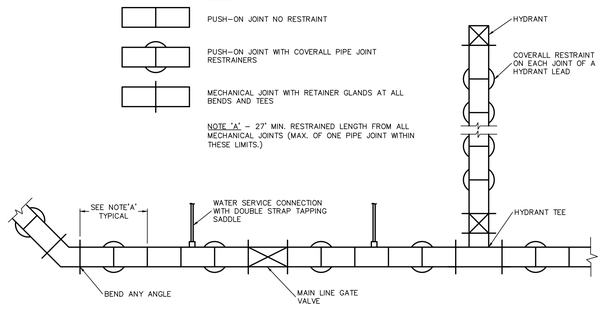
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C809

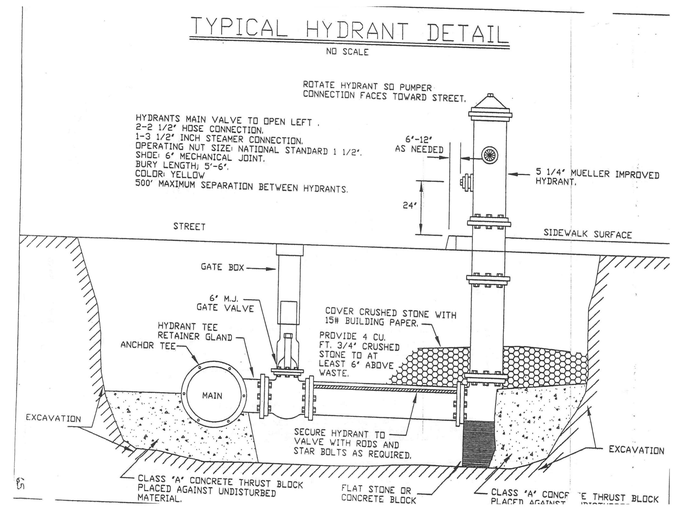
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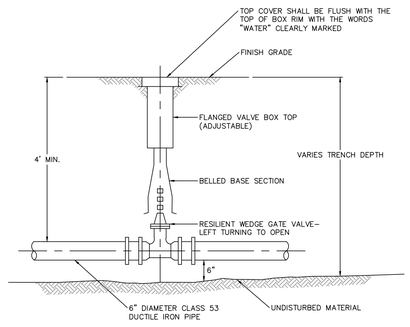
1 CITY OF GARDNER DETAIL
WATER MAIN TRENCH
SCALE: N.T.S.



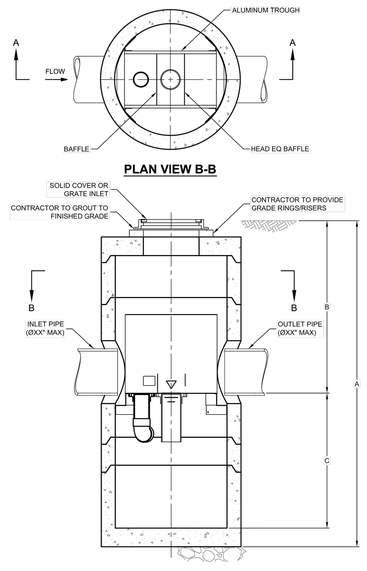
2 WATER MAIN JOINT RESTRAINT
SCALE: N.T.S.



3 CITY OF GARDNER DETAIL
HYDRANT AND VALVE DETAIL
SCALE: N.T.S.



4 GATE VALVE
SCALE: N.T.S.



VortSentry®
THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5281,114; 7,296,692; RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.

VORTSENTRY HS DESIGN NOTES

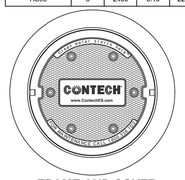
VSHS RATED TREATMENT CAPACITY IS SHOWN IN THE TABLE BELOW, OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY VARIES. CONTACT YOUR CONTECH REPRESENTATIVE FOR ADITIONAL INFORMATION.

THE STANDARD SOLID COVER CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW.

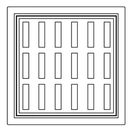
	CONFIGURATION OPTION DESCRIPTION
	GRATE INLET (NO INLET PIPE)
	GRATE INLET WITH INLET PIPE

VORTSENTRY HS GENERAL INFORMATION

Model	Manhole Diameter (ID)		Total Treatment Flow Rate		Typical Total Distance Rim to Outside Bottom A		Typical Distance Rim to Invert B		Typical Depth Below Invert (inside) C		Approximate Minimum Distance Rim to Invert		Maximum Pipe Diameter (ID)	
	FT	mm	CFS	L/S	FT	m	FT	m	FT	mm	FT	m	IN	mm
HS36	3	900	0.55	15.6	10.16	3.10	4.08	1.24	5.58	1702	3.00	0.91	18	450
HS48	4	1200	1.20	34.0	13.25	4.04	6.00	1.83	6.75	2057	4.00	1.22	24	600
HS60	5	1500	2.20	62.3	15.13	4.61	6.50	1.98	7.96	2425	4.82	1.47	30	750
HS72	6	1800	3.70	104.8	16.56	5.05	6.75	2.06	9.15	2788	5.59	1.70	36	900
HS84	7	2100	5.60	158.6	18.85	5.75	7.75	2.36	10.35	3156	5.00	1.52	42	1050
HS96	8	2400	8.10	229.4	20.87	6.36	8.50	2.59	11.54	3518	6.91	2.11	48	1200



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



FRAME AND GRATE
(24" SQUARE)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
WATER QUALITY FLOW RATE (CFS)	*
PEAK FLOW RATE (CFS)	*
RETURN PERIOD OF PEAK FLOW (YRS)	*

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
OUTLET PIPE	*	*	*

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
4. VORTSENTRY HS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO H520 AND CASTINGS SHALL MEET AASHTO M306 LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.

INSTALLATION NOTES
1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE VORTSENTRY HS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
3. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
4. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
5. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

VORTSENTRY HS
STANDARD DETAIL

5 STORMWATER TREATMENT SYSTEM – VORSENTRY (OR APPROVED EQUAL)
SCALE: N.T.S.

JWA
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GARDNER ELEMENTARY SCHOOL
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GARDNER, MA

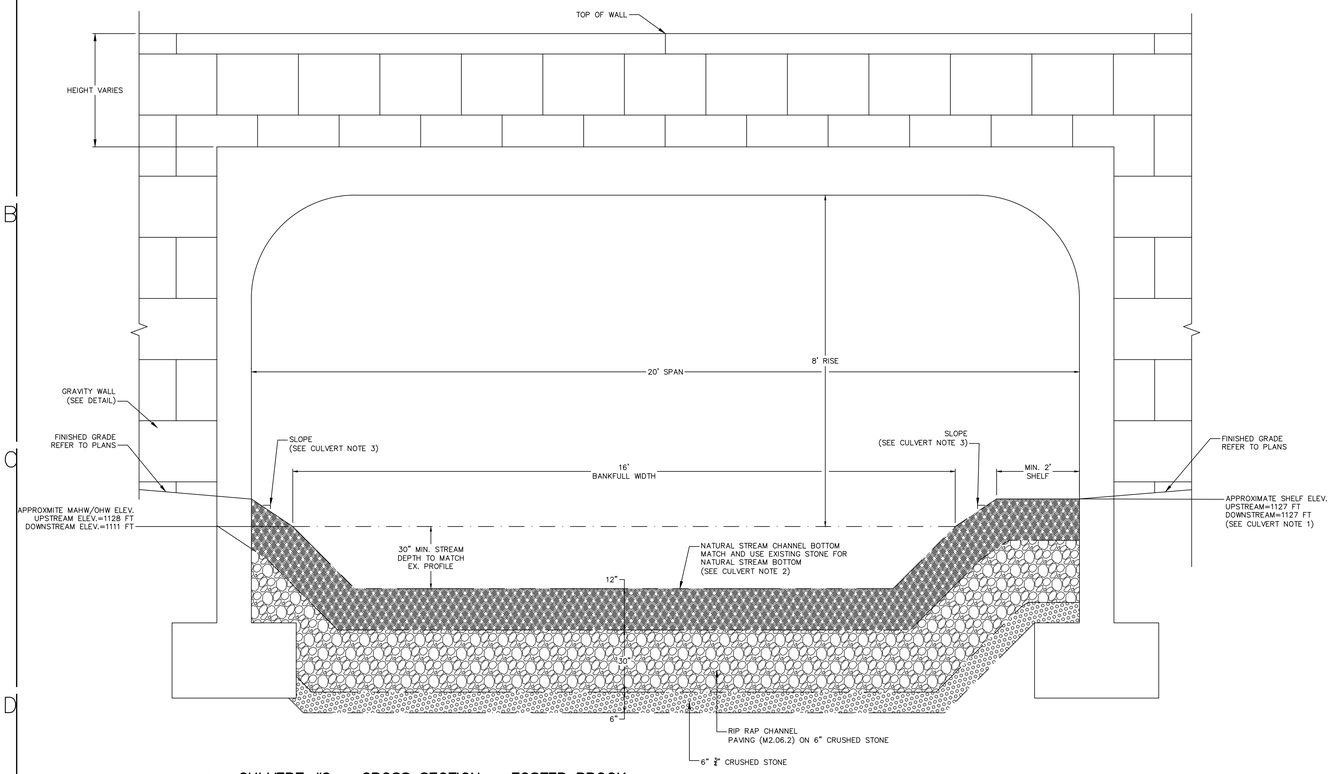
CONSTRUCTION DETAILS

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	N.T.S.
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C810

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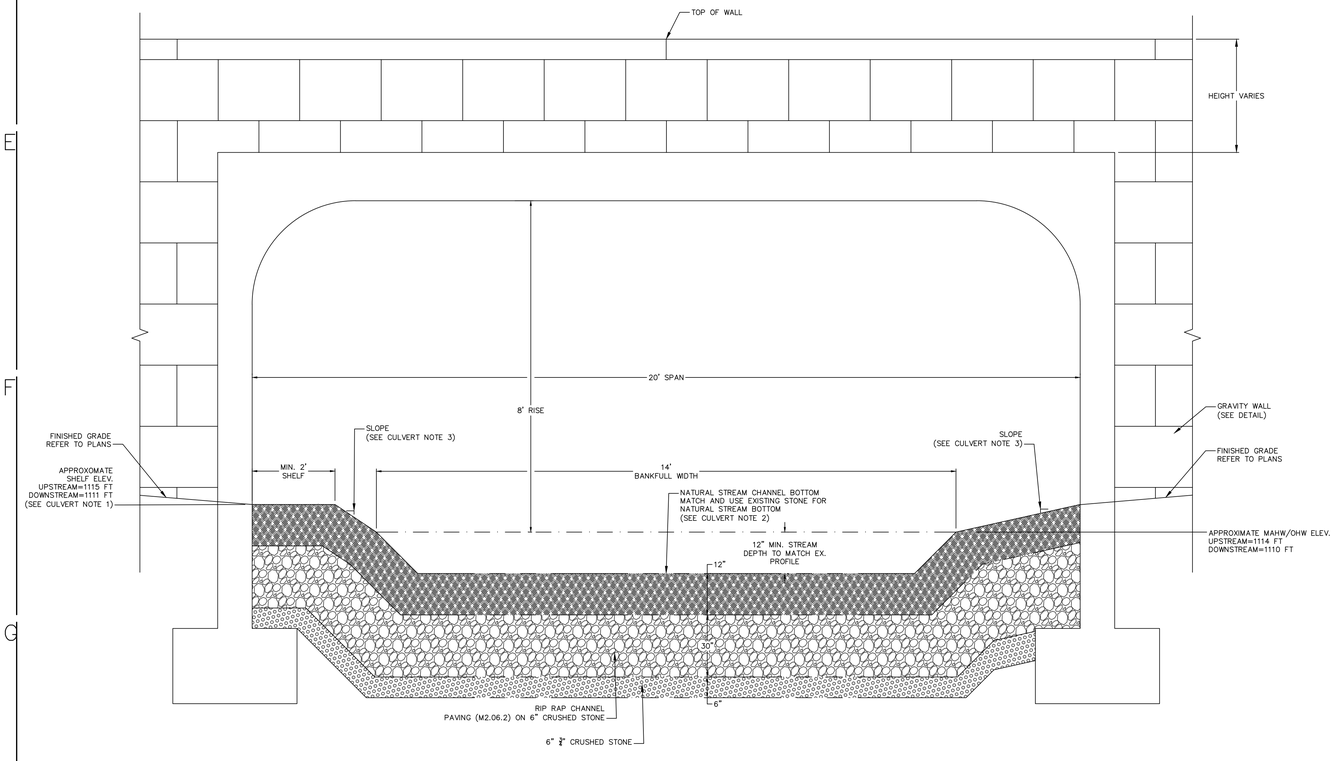


1 CULVERT #2 – CROSS SECTION – FOSTER BROOK

SCALE: N.T.S.

CULVERT NOTES:

1. SHELF ELEVATIONS MUST BE MINIMUM 1 FOOT ABOVE THE MAHW AND OHW.
2. EXISTING STREAM BED TO REMAIN. DISTURBANCE SHOULD BE MINIMIZED TO INCLUDE REMOVAL OF EXISTING CULVERT, PLACEMENT OF COFFER DAMS, INSTALLATION OF CULVERT FOOTING, AND TEMPORARY BY PASS PIPES. REPLACE DISTURBED STREAM WITH NATURAL STEAM BOTTOM AS SHOWN ON DETAIL.
3. SLOPE SHOULD MATCH EXISTING SLOPE CONDITIONS. MAXIMUM SLOPE OF 1:1.5.



2 CULVERT #3 – CROSS–SECTION – INTERMITTENT STREAM

SCALE: N.T.S.

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CONSTRUCTION DETAILS

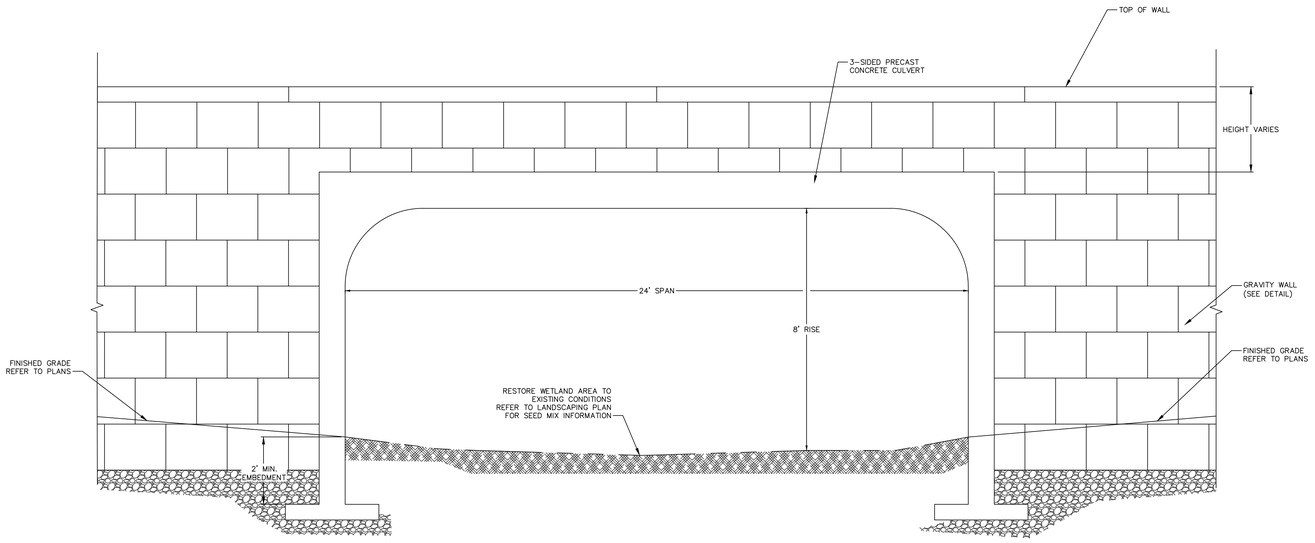
GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	N.T.S.
DRAWN BY:	
REVISIONS:	

SITE
PERMITTING

C811

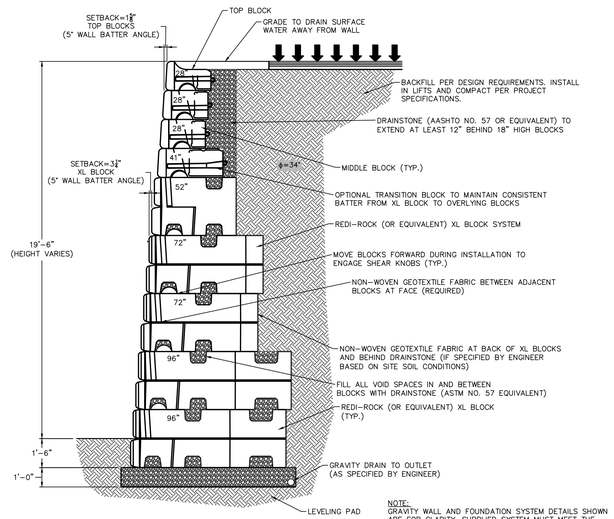
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PLOT_INFO
LAYER STATE:
MS VIEW:



NOTE:
PRECAST CONCRETE CULVERT AND FOUNDATION SYSTEM DETAILS SHOWN ARE FOR CLARITY. SUPPLIED SYSTEM MUST MEET THE GEOMETRY AND DIMENSIONS AS SHOWN. CONTRACTOR MUST SUBMIT FULL SHOP DRAWINGS AND DESIGN CALCULATION PREPARED BY A MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER.

1 CULVERT #1 – CROSS SECTION – WETLAND CROSSING

SCALE: N.T.S.



NOTE:
GRAVITY WALL AND FOUNDATION SYSTEM DETAILS SHOWN ARE FOR CLARITY. SUPPLIED SYSTEM MUST MEET THE GEOMETRY AND DIMENSIONS AS SHOWN. CONTRACTOR MUST SUBMIT FULL SHOP DRAWINGS AND DESIGN CALCULATION PREPARED BY A MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER.

2 GRAVITY WALL (PC SYSTEM REDIROCK OR EQUAL)

SCALE: N.T.S.

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CONSULTANTS:

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WORCESTER, MA 01601
413.452.0445
www.fando.com

CONSTRUCTION DETAILS

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	N.T.S.
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C812

File Path: J:\DWG\P2018\03\63\B10\Civil\Details\20180363_DET01.B10.dwg Layout: C812 Plotted: Fri, May 08, 2020 - 10:55 AM User: abell
PLOT_INFO
LAYER STATE:
MS VIEW:

STOP SIGN (R1-1) DETAIL
30"X30"



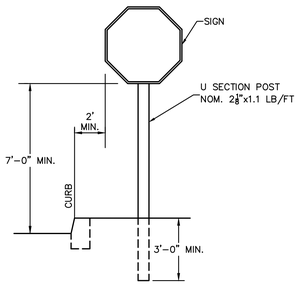
DO NOT ENTER SIGN (R5-1) DETAIL
30"X30"



BEGIN ONE WAY SIGN (R6-6) DETAIL
24"X30"



AHEAD PLAQUE (W16-9P) DETAIL
18X30"



TYPICAL POST DETAIL
N.T.S.



INTERSECTION LANE CONTROL (2 LANE) DETAIL
48"X30"



SPEED LIMIT SIGN (R2-1(20)) DETAIL
24"X30"



ONE WAY SIGN (R6-1R) DETAIL
36"X12"



AUTHORIZED VEHICLES ONLY (R5-11) DETAIL
30"X24"



TWO WAY TRAFFIC SIGN (W3-3) DETAIL
30"X30"



PEDESTRIAN CROSSING SIGN (W11-2, FYG) DETAIL
30"X30"



DELIVERIES SIGN DETAIL
24"X18"



SCHOOL BUS LOADING ZONE SIGN DETAIL
12"X18"



LOADING ZONE SIGN (R7-6) DETAIL
12"X18"



NO PARKING EMERGENCY VEHICLES ONLY SIGN DETAIL
12"X18"



MASSACHUSETTS STATE HANDICAPPED PARKING SIGN (R7-8MA) DETAIL
12"X18"

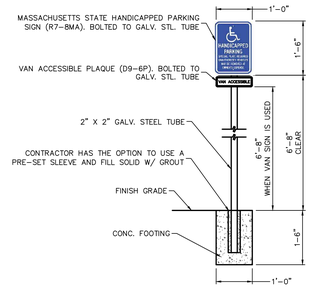


STUDENT DROP-OFF SIGN DETAIL
12"X18"

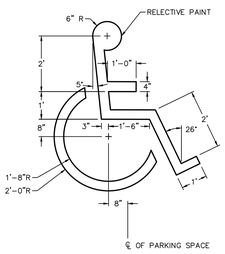


VAN ACCESSIBLE PLAQUE (D9-6P) DETAIL
18"X9"

1 STANDARD MUTCD SIGNS
SCALE: N.T.S.

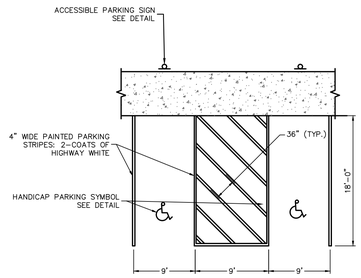


2 DISABLED PARKING SIGN
SCALE: N.T.S.

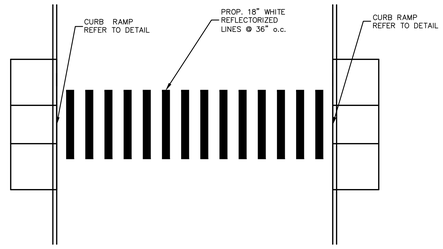


NOTES
1. SYMBOL PAINTED HIGHWAY WHITE (TWO COATS)

3 HANDICAP PARKING SYMBOL
SCALE: N.T.S.



4 ACCESSIBLE PARKING STALL
SCALE: N.T.S.



5 PEDESTRIAN CROSSWALK
SCALE: N.T.S.

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May, 11, 2020

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CONSTRUCTION DETAILS

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	05/08/2020
SCALE:	N.T.S.
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

C813

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XREF:
LAYER STATE:
PLOT_INFO
MS VIEW:



SOILS LEGEND & PREPARATION NOTES

- SH — TYPE A: TREE / SHRUB PLANTING AREA — 12" PLANTING SOIL, 6" MIN. HORTICULTURAL SUBSOIL — 1-2 L5.6
- GC — TYPE B: GROUNDCOVER — 6" AMENDED SOIL — 3 L5.6
- LN — TYPE C: LAWN AREA — 8" PLANTING SOIL — 4 L5.6
- RG — RAIN GARDEN — REFER TO CIVIL DWGS
- IB — INFILTRATION BASIN — REFER TO CIVIL DWGS
- BS — BIOSWALE — REFER TO CIVIL DWGS
- WR — WETLAND RESTORATION — REFER TO CIVIL DWGS.

0 40 80 160 ft

N

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MASSACHUSETTS — STEPHEN D. STIMSON — NO. 973 — REGISTERED LANDSCAPE ARCHITECT

CONSULTANTS:
STIMSON
STEPHEN STIMSON ASSOCIATES LANDSCAPE ARCHITECTS, INC.
2 MOUNTAIN ROAD
PRINCETON, MA 01541
T 978 464 5200
WWW.STIMSONSTUDIO.COM

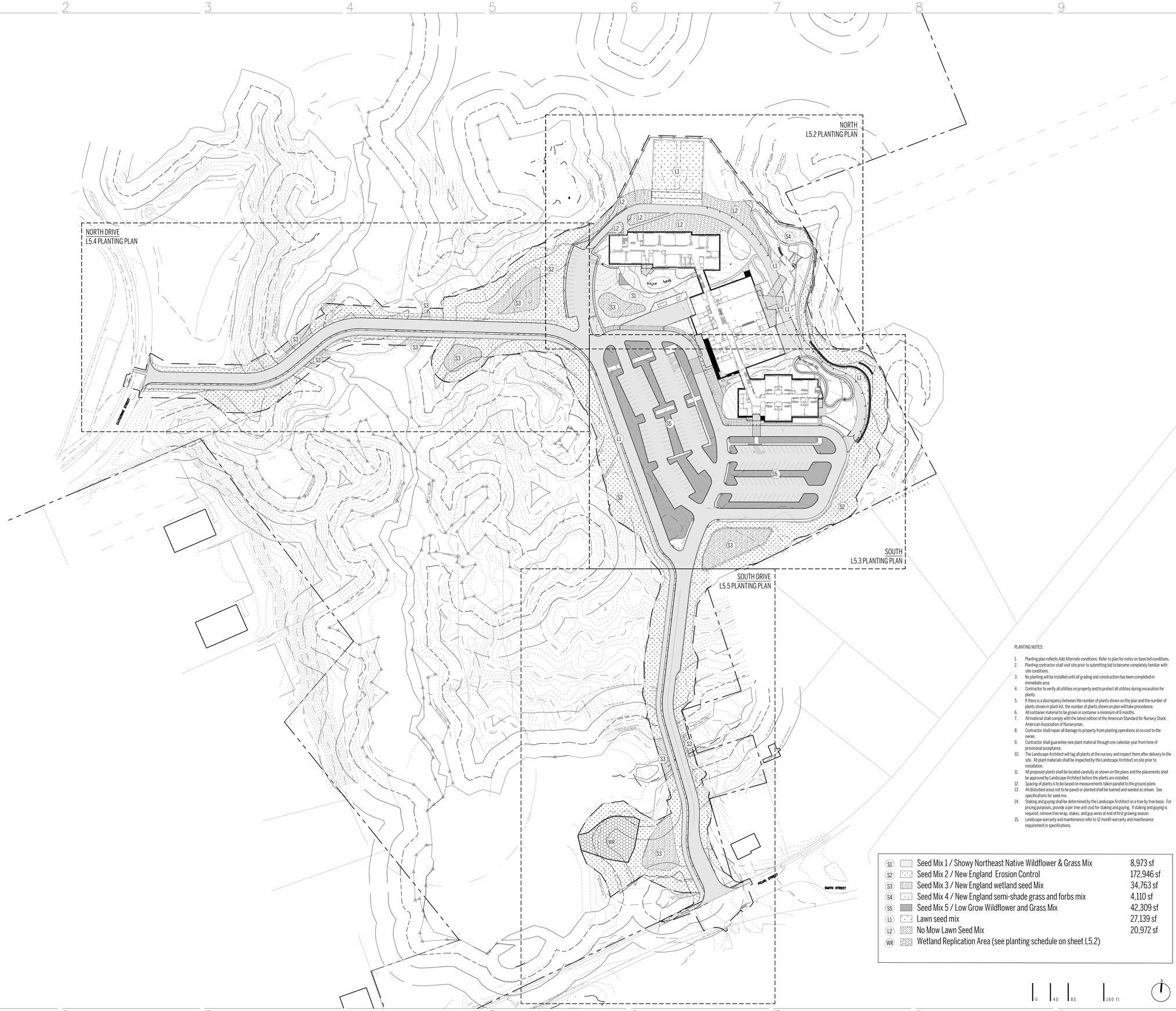
SOILS PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	04/15/2020
SCALE:	1"=80'-0"
DRAWN BY:	SL/BO/JN
REVISIONS:	

SITE PERMITTING

L5.0



PLANTING NOTES:

1. Planting plan reflects Add Alternate conditions. Refer to plan for notes on base bid conditions.
2. Planting contractor shall visit site prior to submitting bid to become completely familiar with site conditions.
3. No planting will be installed until all grading and construction has been completed in immediate area.
4. Contractor to verify all utilities on property and to protect all utilities during excavation for plants.
5. If there is a discrepancy between the number of plants shown on the plan and the number of plants shown in plant list, the number of plants shown on plan will take precedence.
6. All container material to be grown in container a minimum of 6 months.
7. All material shall comply with the latest edition of the American Standard for Nursery Stock. American Association of Nurseryman.
8. Contractor shall repair all damage to property from planting operations at no cost to the owner.
9. Contractor shall guarantee new plant material through one calendar year from time of provisional acceptance.
10. The Landscape Architect will tag all plants at the nursery and inspect them after delivery to the site. All plant materials shall be inspected by the Landscape Architect on site prior to installation.
11. All proposed plants shall be located carefully as shown on the plans and the placements shall be approved by Landscape Architect before the plants are installed.
12. Spacing of plants is to be based on measurements taken parallel to the ground plane.
13. All disturbed areas not to be paved or planted shall be loamed and seeded as shown. See specifications for seed mix.
14. Staking and guying shall be determined by the Landscape Architect on a tree by tree basis. For pricing purposes, provide a per tree unit cost for staking and guying. If staking and guying is required, remove tree wrap, stakes, and guy wires at end of first growing season.
15. Landscape warranty and maintenance refer to 12 month warranty and maintenance requirement in specifications.

S1	Seed Mix 1 / Showy Northeast Native Wildflower & Grass Mix	8,973 sf
S2	Seed Mix 2 / New England Erosion Control	172,946 sf
S3	Seed Mix 3 / New England wetland seed Mix	34,763 sf
S4	Seed Mix 4 / New England semi-shade grass and forbs mix	4,110 sf
S5	Seed Mix 5 / Low Grow Wildflower and Grass Mix	42,309 sf
L1	Lawn seed mix	27,139 sf
L2	No Mow Lawn Seed Mix	20,972 sf
WR	Wetland Replication Area (see planting schedule on sheet L5.2)	

0 40 80 160 ft

N

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No. 973
REGISTERED LANDSCAPE ARCHITECT
COMMONWEALTH OF MASSACHUSETTS

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OVERALL SEED PLANTING PLAN

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	04/15/2020
SCALE:	1"=80'-0"
DRAWN BY:	SL/BO/JN
REVISIONS:	

SITE PERMITTING

L5.1

PLANT_SCHEDULE_WETLAND_REPLICATION

TREES	BOTANICAL / COMMON NAME	CONT	CAL	QTY
	Acer rubrum / Red Maple	B & B	1"	18
	Betula alleghaniensis / Yellow Birch	B & B	1"	13
	Betula populifolia / Gray Birch	B & B	1"	11
	Quercus bicolor / Swamp White Oak	B & B	1"	11
SHRUBS	BOTANICAL / COMMON NAME	CONT	SIZE	QTY
	Alnus rugosa / Speckled Alder	Container Grown	1.5' -2' H	11
	Cornus amomum / Silky Dogwood	Container Grown	1.5' -2' H	21
	Ilex verticillata / Winterberry	Container Grown	1.5' -2' H	26
	Vaccinium corymbosum / Highbush Blueberry	Container Grown	1.5' -2' H	26
	Viburnum recognitum / Southern Arrowwood	Container Grown	1.5' -2' H	21
GROUND COVERS	CODE	BOTANICAL / COMMON NAME	CONT	QTY
	S3	New England Wetmix Wetland Seed Mix / Seed Mix 3	Seed	10,000SF

NOTE: SNAGS,BRUSH PILES, LOGS, AND WOODY DEBRIS TO BE ADDED TO THE WETLAND REPLICATION AREA PER CIVIL SPECS / MITIGATION PLAN.

PLANT_SCHEDULE

TREES	BOTANICAL / COMMON NAME	CONT	CAL/SIZE	QTY
AR1	Acer rubrum `Autumn Blaze` / Autumn Blaze Red Maple	Container Grown	1.5"-2" Cal	16
AR2	Acer rubrum `Autumn Blaze` / Autumn Blaze Red Maple	B & B	2.5"-3" Cal	49
BP2	Betula populifolia `Whitespire Sr.` / Gray Birch	Container Grown	1.5"-2" Cal	88
BP3	Betula populifolia `Whitespire Sr.` / Gray Birch	B & B	2.5"-3" Cal	13
BP1	Betula populifolia `Whitespire Sr.` / Gray Birch	Container Grown	1"-1.5"	116
FG	Fagus grandifolia `Site Salvaged` / American Beech	Container Transpl.	1"-2.5" Cal	150
LL	Larix laricina / Tamarack	Container Grown	6'-8' H	18
NS1	Nyssa sylvatica `Black Tupelo` / Sour Gum	Container Grown	1.5"-2" Cal	7
NS2	Nyssa sylvatica `Black Tupelo` / Sour Gum	B & B	2.5"-3" Cal	16
QP	Quercus palustris / Pin Oak	B & B	2.5"-3" Cal	19
QR	Quercus rubra / Red Oak	B & B	2.5"-3" Cal	7
TP	Thuja plicata `Green Giant` / Western Red Cedar	B & B	6'-8' H	17
TC2	Tsuga canadensis / Canadian Hemlock	B & B	6'-8' H	48
TC1	Tsuga canadensis / Canadian Hemlock	Bare Root	3'-4' H	110
SHRUBS	BOTANICAL / COMMON NAME	CONT	SIZE	QTY
CA	Clethra alnifolia / Summersweet Clethra	5 gal	1.5'-2' H	63
CM	Cornus mas / Cornelian Cherry Dogwood	5 gal		3
CR	Cornus sericea / Red Twig Dogwood	5 gal	2.5'-3'	31
CS	Cornus stolonifera `Arctic Fire` / Arctic Fire Dogwood	5 gal	2'-2.5' H	32
HV	Hamamelis vernalis / Spring Blooming Witchhazel	7 Gal	3' H	25
HI	Hamamelis x intermedia `Arnold Promise` / Arnold Promise Hybrid Witch Hazel	5 Gal	3' H	30
IV	Ilex verticillata `Red Sprite` / Red Sprite Winterberry	5 gal	2'-2.5' H	112
MG	Myrica gale / Sweetgale	5 gal	2.5'-3' H	7
MP	Myrica pensylvanica / Northern Bayberry	5 gal	2'-2.5' H	175
RT	Rhus typhina / Staghorn Sumac	7 Gal	3' H	14
VB	Vaccinium corymbosum `Bluecrop` / Bluecrop Highbush Blueberry	5 gal	2'-2.5' H	23
VN	Vaccinium corymbosum `North Land` / Dwarf Highland Cranberry	5 gal	2'-2.5' H	9
VP	Vaccinium corymbosum `Patriot` / Patriot Blueberry	5 gal	2'-2.5' H	24
SHRUB AREAS	BOTANICAL / COMMON NAME	CONT	SPACING	QTY
AU	Arctostaphylos uva-ursi `Massachusetts` / Massachusetts Manzanita	1 gal	24" o.c.	76
AM	Aronia melanocarpa `UCONNAM165` TM / Low Scape Mound Chokeberry	1 gal	24" o.c.	57
CP	Comptonia peregrina / Sweet Fern	1 gal	24" o.c.	2,372
RG	Rhus aromatica `Grow-Low` / Fragrant Sumac	1 gal	24" o.c.	2,660
GROUND COVERS	BOTANICAL / COMMON NAME	CONT	SPACING	QTY
DP	Dennstaedtia punctilobula / Hay-scented Fern	1 Gal	24" o.c.	832
MS	Matteuccia struthiopteris / Ostrich Fern	1 Gal	24" o.c.	70
TN	Thelypteris noveboracensis / New York Fern	1 Gal	24" o.c.	461
SEEDED AREAS	SEED MIX	TYPE	RATE	SF
L	Lawn Seed Mix, See Specifications	Seed	5 lbs/1000 sf	27,139 sf
L2	No Mow Lawn Seed Mix, Prairie Nursery	Seed	5 lb/1000 sf	20,972 sf
S1	Seed Mix 1 / Showy Northeast Native Wildflower & Grass Mix, Ernst Seeds	Seed	1 lb/2000 sf	8,973 sf
S2	Seed Mix 2 /New England Erosion Control Seed Mix, Restoration Seed Mix for Dry Sites, New England Wetland Plants	Seed	1 lb/1250 sf	172,946 sf
S3	Seed Mix 3 / New England Wetmix, New England Wetland Plants	Seed	1 lb/2500 sf	34,763 sf
S4	Seed Mix 4 / New England Semi-Shade Grass and Forbs Mix, New England Wetland Plants	Seed	1 lb/1000 sf	4,110 sf
S5	Seed Mix 5 / Low-Growing Wildflower and Grass Mix, Ernst Seeds	Seed	1 lb/1450 sf	42,309 sf

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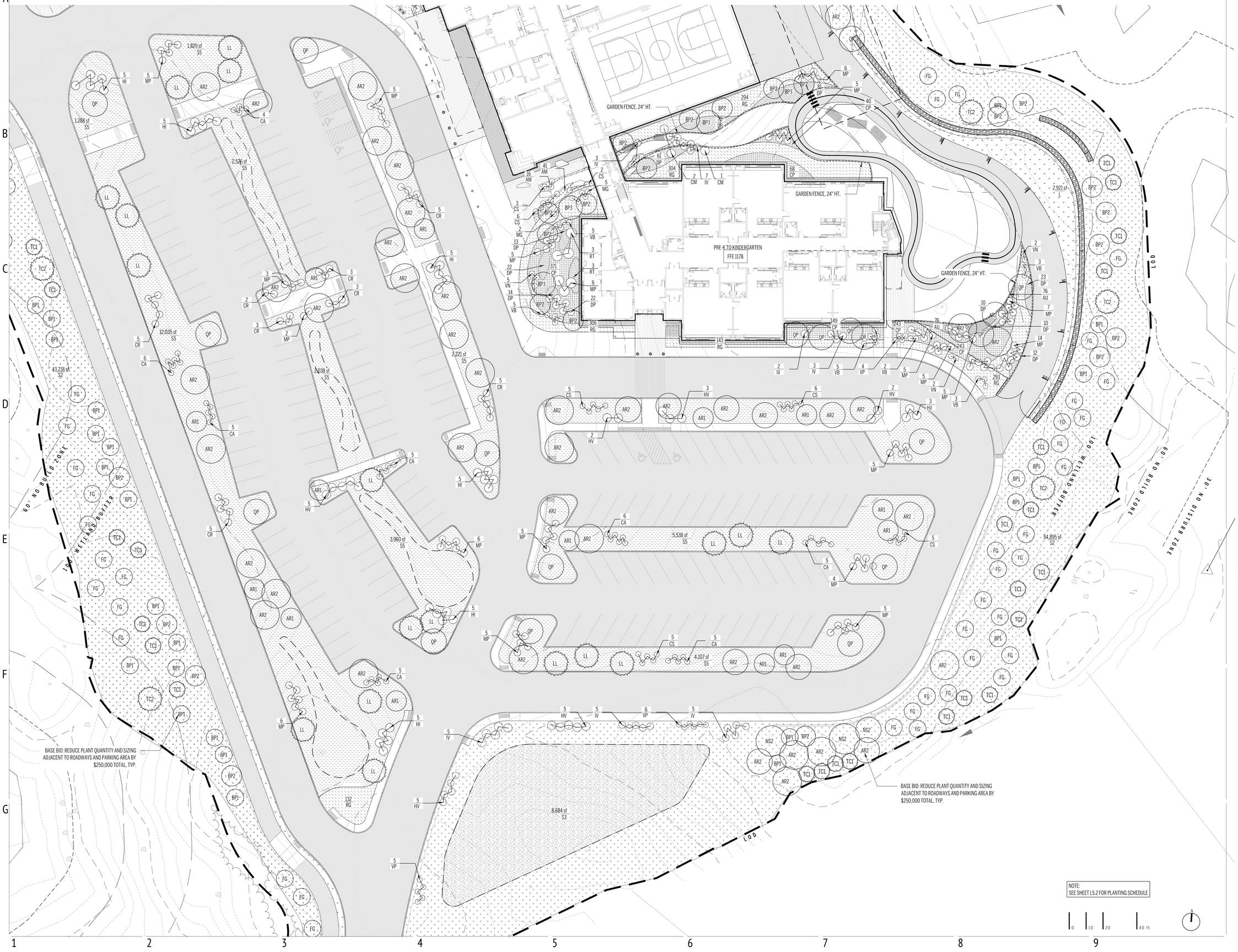
Planting Plan
North

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	04/15/2020
SCALE:	1" = 20'-0"
DRAWN BY:	SL/BO/JN
REVISIONS:	

SITE PERMITTING

L5.2



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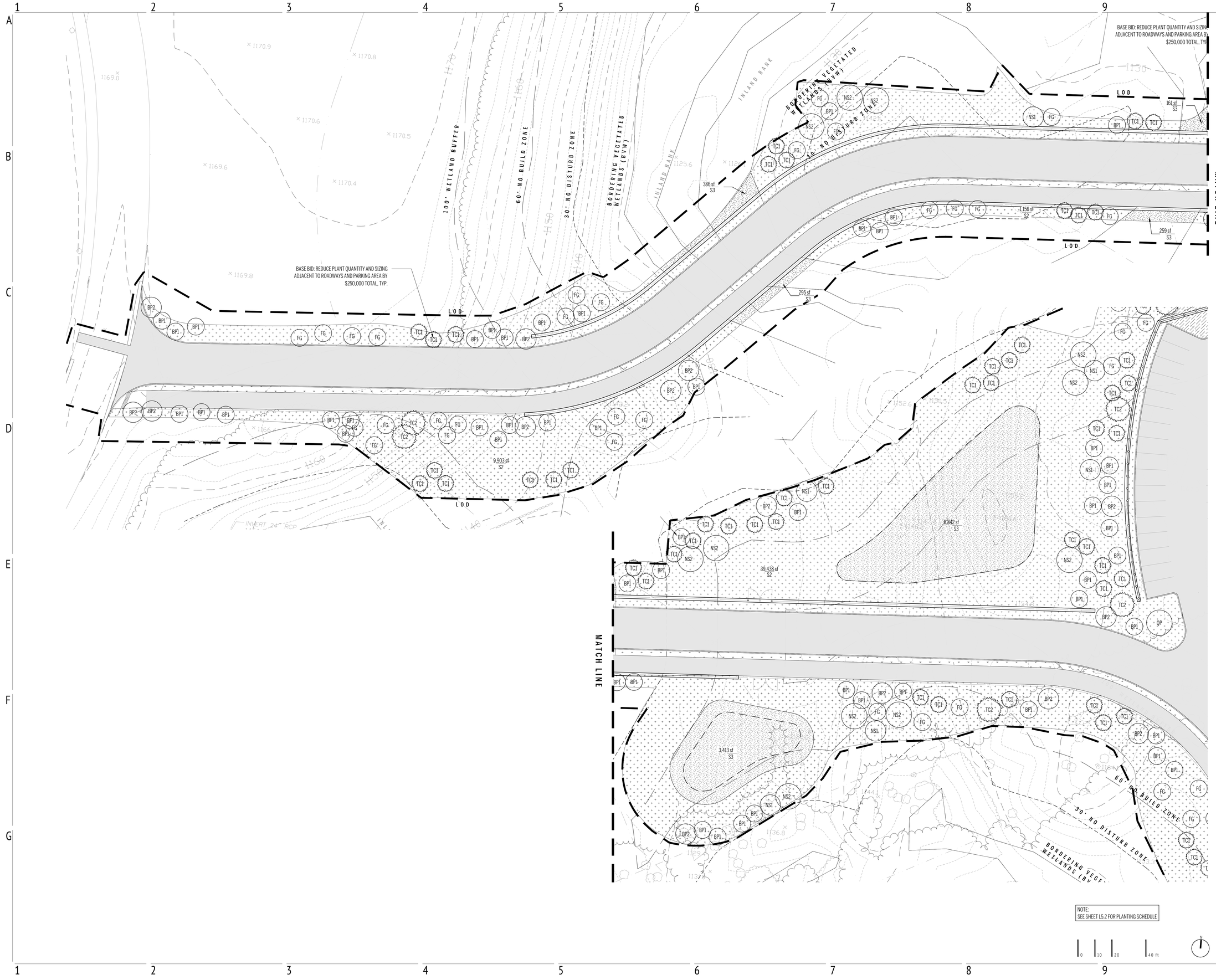
Planting Plan South

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	04/15/2020
SCALE:	1" = 20'-0"
DRAWN BY:	
REVISIONS:	

SITE PERMITTING

L5.3



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Planting Plan
North Drive

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	04/15/2020
SCALE:	1" = 20'-0"
DRAWN BY:	SL/BO/JN
REVISIONS:	

SITE PERMITTING

L5.4



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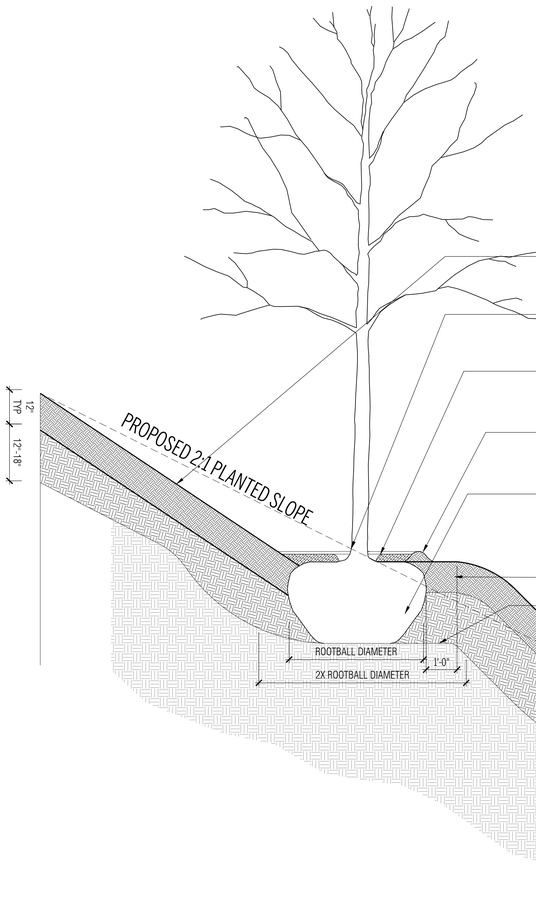
Planting Plan
South Drive

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	04/15/2020
SCALE:	1" = 20'-0"
DRAWN BY:	SL/BO/JN
REVISIONS:	

SITE PERMITTING

L5.5

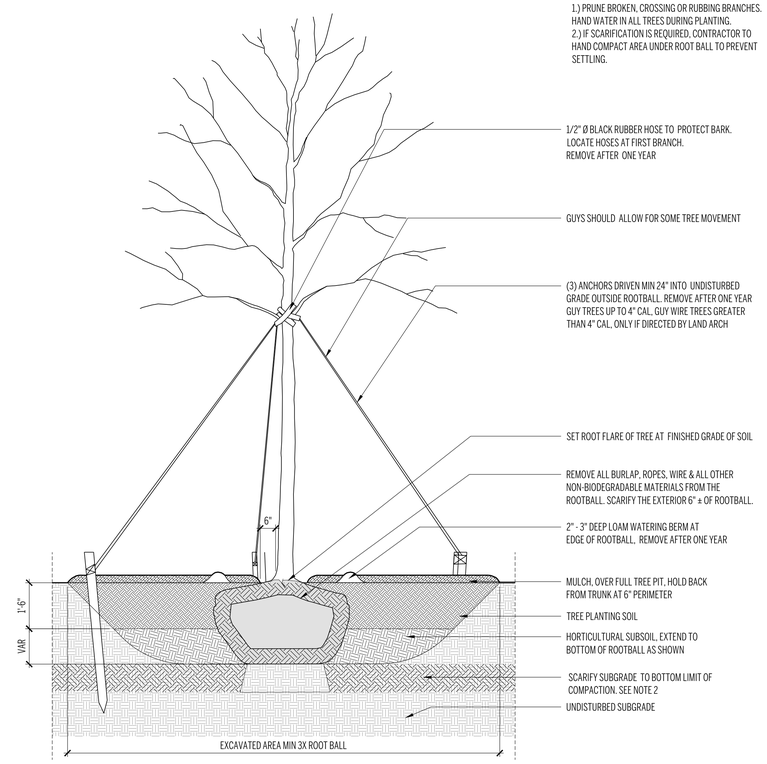


10 TREE PLANTING
1/2" = 1'-0"

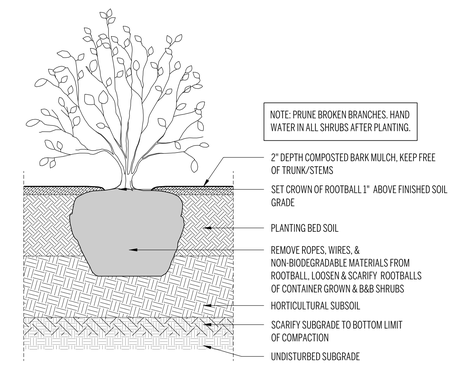
NOTE: PRUNE BROKEN, CROSSING OR RUBBING BRANCHES. REFER TO SPECIFICATIONS FOR STAKING INFORMATION. ALL TREE STAKING TO BE VERIFIED BY LA PRIOR TO INSTALLATION.

EROSION CONTROL FABRIC SHOULD BE INSTALLED FOR ALL SLOPES EXCEEDING 2:1, REFER TO SPECIFICATIONS

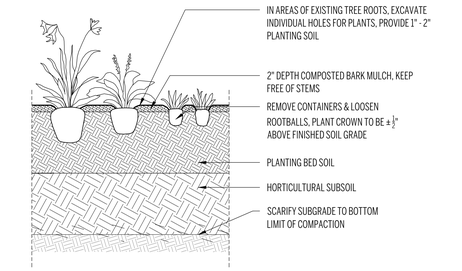
NOTE: CONTRACTOR TO REDUCE DEPTH OF HORTICULTURAL SUBSOIL W/ IN ROOT PROTECTION ZONE OF EXISTING VEGETATION AND LEDGE, AS REQUIRED



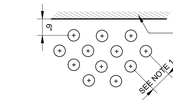
9 TREE PLANTING
1/2" = 1'-0"



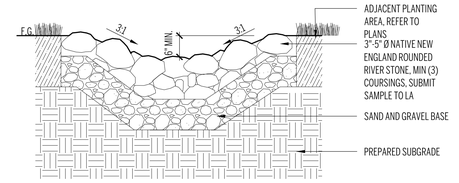
8 SHRUB PLANTING
1" = 1'-0"



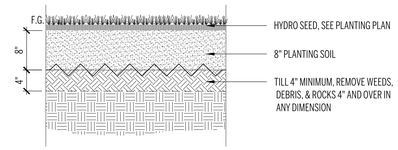
7 PERRENIAL & GROUNDCOVER PLANTING
1" = 1'-0"



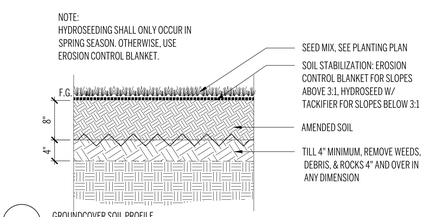
6 PERRENIAL, VINE & GROUNDCOVER TRIANGULATION LAYOUT
1" = 1'-0"



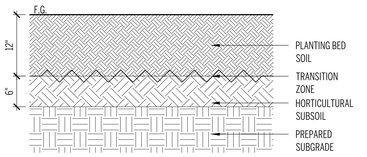
5 STONE SWALE - TYPICAL
1"=1'-0"



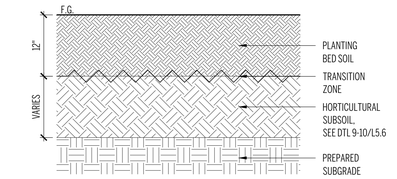
4 LAWN SOIL PROFILE
1" = 1'-0"



3 GROUNDCOVER SOIL PROFILE
1" = 1'-0"



2 SHRUB SOIL PROFILE
1" = 1'-0"



1 TREE SOIL PROFILE
1" = 1'-0"

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Planting Details

GARDNER ELEMENTARY SCHOOL
PEARL STREET
GARDNER, MA

PROJ. NUMBER:	1806
DATE:	04/15/2020
SCALE:	See Detail
DRAWN BY:	SL / JA
REVISIONS:	

SITE PERMITTING

L5.6



C1 A WING - NORTH ELEVATION
1/8" = 1'-0"



F1 A WING - SOUTH ELEVATION
1/8" = 1'-0"

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EXTERIOR ELEVATIONS - 'A' WING

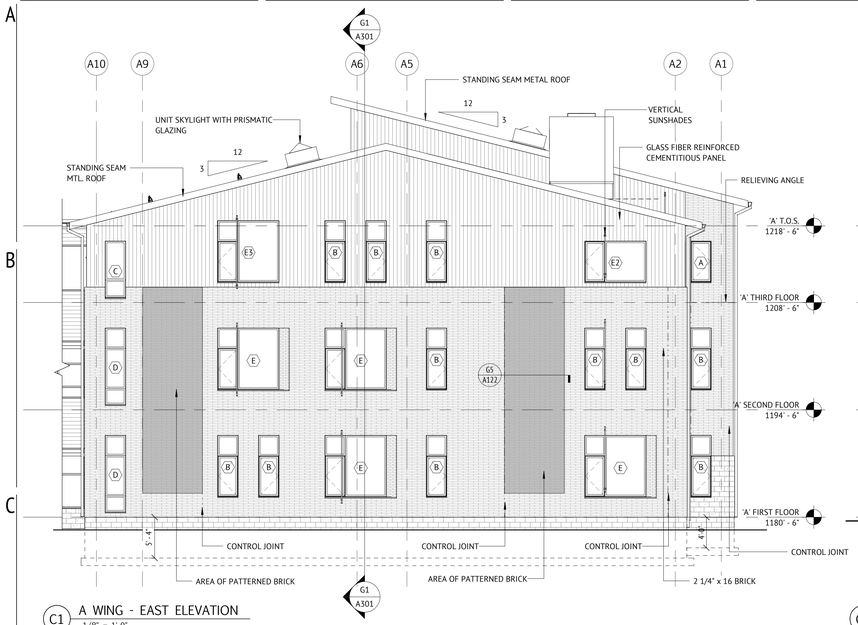
GARDNER ELEMENTARY SCHOOL

CITY OF GARDNER, MA
PEARL STREET

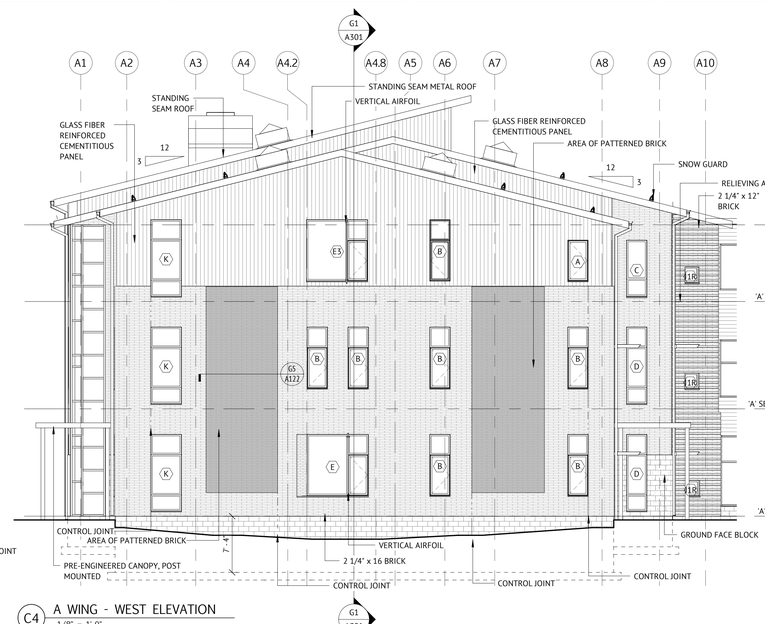
PROJ. NUMBER:	1806
DATE:	04/09/2020
SCALE:	As indicated
DRAWN BY:	AG / CD / HDA
REVISIONS:	

60% MSBA SET

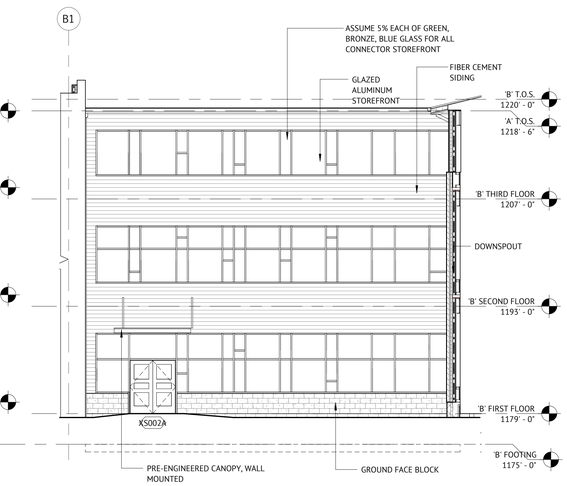
A201



C1 A WING - EAST ELEVATION
1/8" = 1'-0"



C4 A WING - WEST ELEVATION
1/8" = 1'-0"

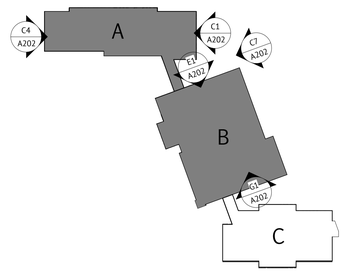


C7 STAIR 2 EAST ELEVATION
1/8" = 1'-0"



E1 B WING - NORTH ELEVATION
1/8" = 1'-0"

G1 B WING - SOUTH ELEVATION
1/8" = 1'-0"



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CONSULTANTS:

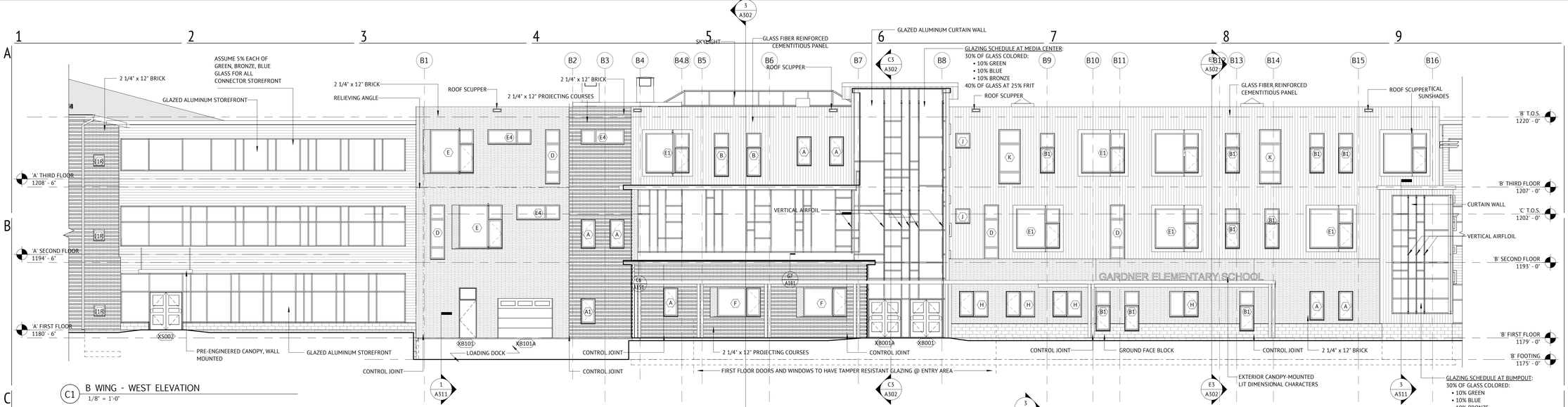
EXTERIOR ELEVATIONS - 'A' & 'B' WING

GARDNER ELEMENTARY SCHOOL
CITY OF GARDNER, MA
PEARL STREET

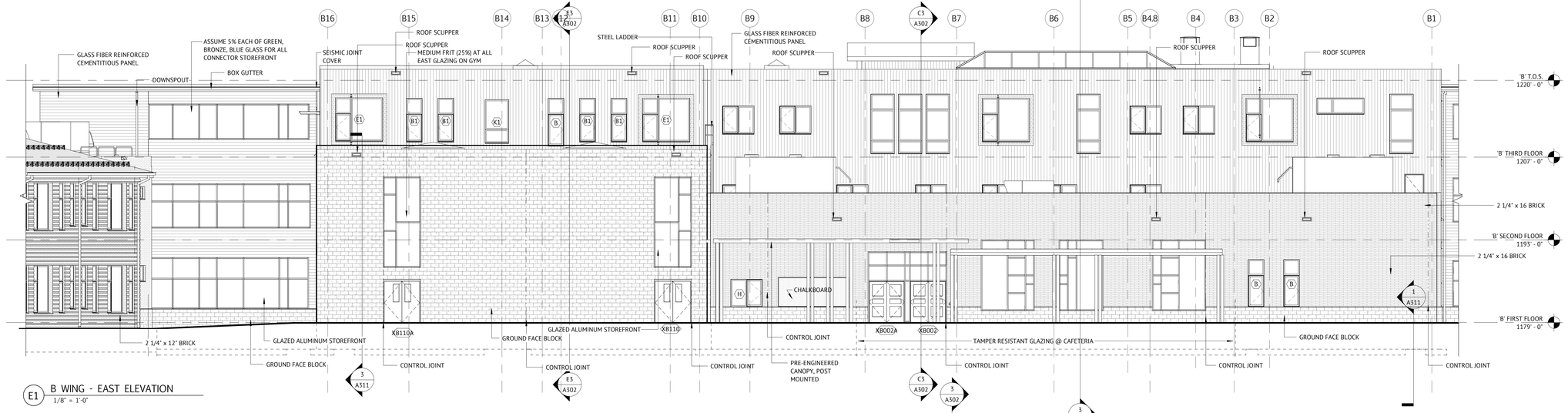
PROJ. NUMBER:	1806
DATE:	04/09/2020
SCALE:	As indicated
DRAWN BY:	AG / GD / HDA
REVISIONS:	

60% MSBA SET

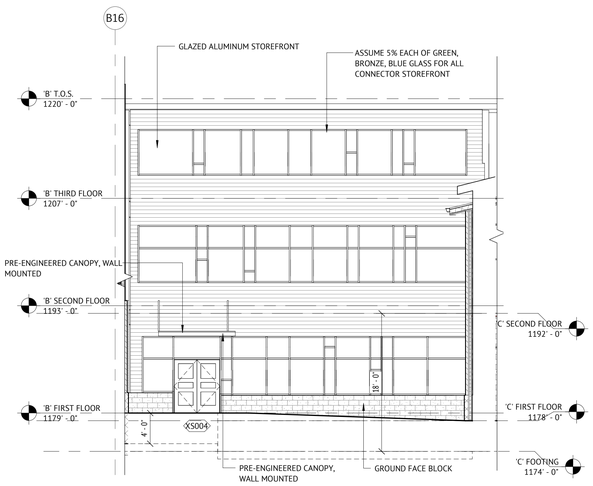
A202



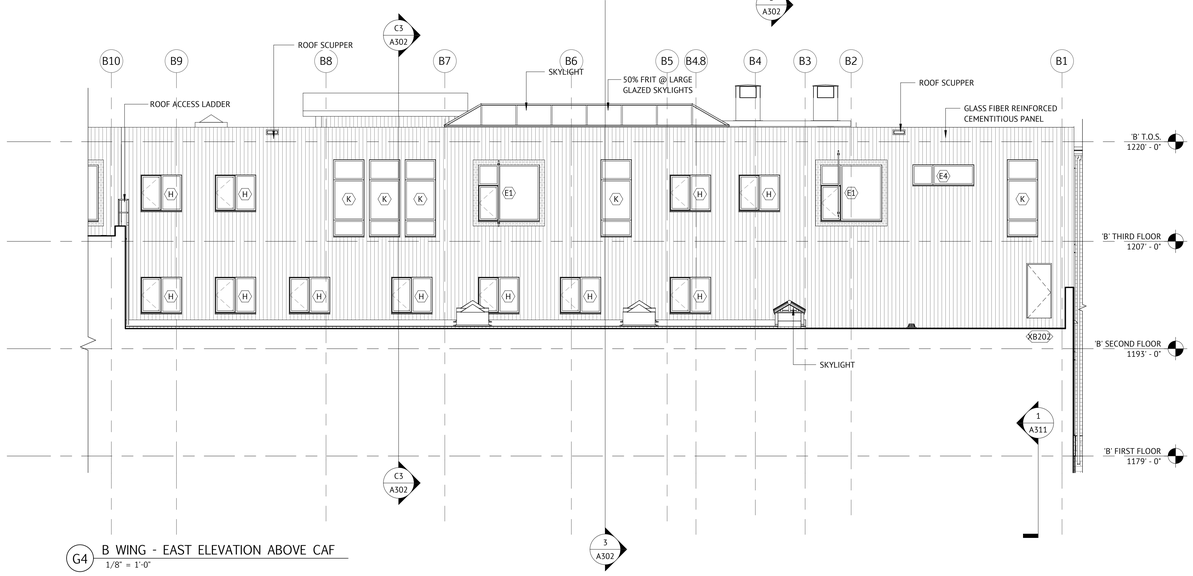
C1 B WING - WEST ELEVATION
1/8" = 1'-0"



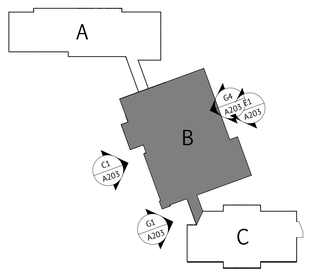
E1 B WING - EAST ELEVATION
1/8" = 1'-0"



G1 STAIR 4 - WEST ELEVATION
1/8" = 1'-0"



G4 B WING - EAST ELEVATION ABOVE CAF
1/8" = 1'-0"



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CONSULTANTS:

EXTERIOR ELEVATIONS - 'B' WING

GARDNER ELEMENTARY SCHOOL
CITY OF GARDNER, MA
PEARL STREET

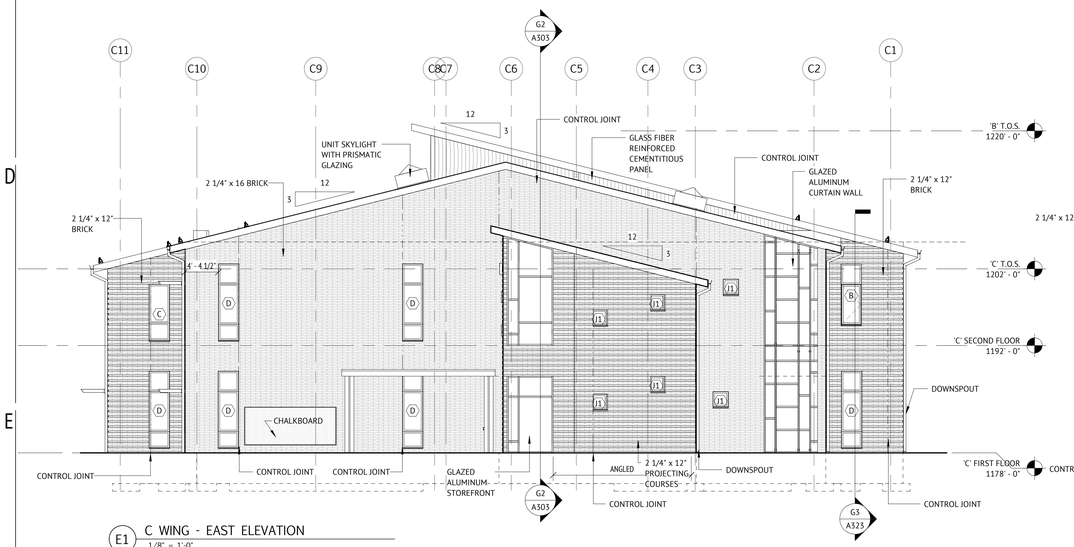
PROJ. NUMBER:	1806
DATE:	04/09/2020
SCALE:	As indicated
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REVISIONS:	

60% MSBA SET

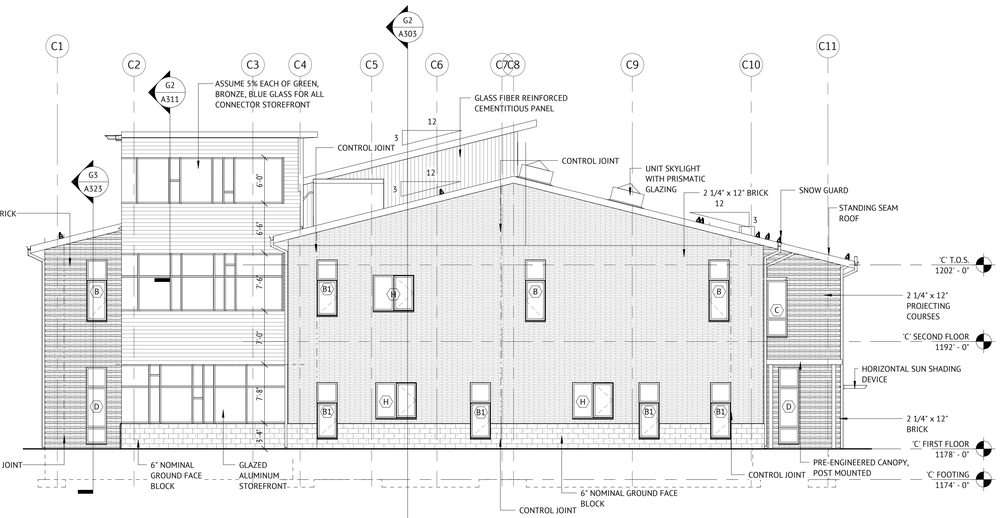
A203



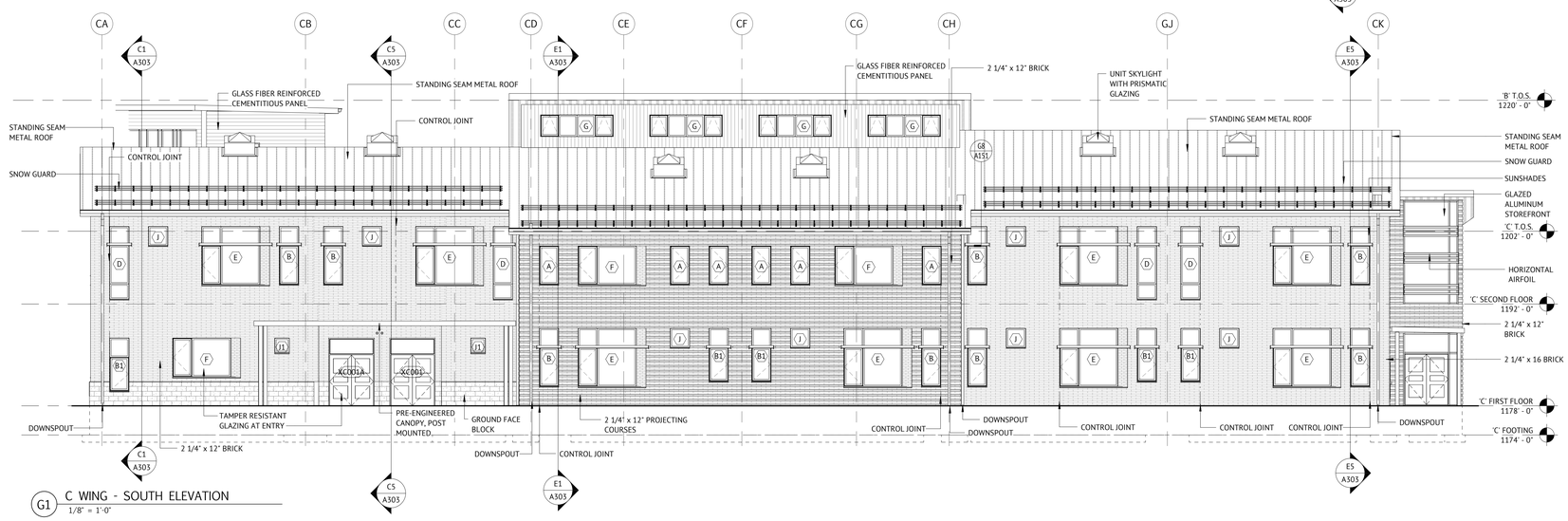
C3 C WING - NORTH ELEVATION
1/8" = 1'-0"



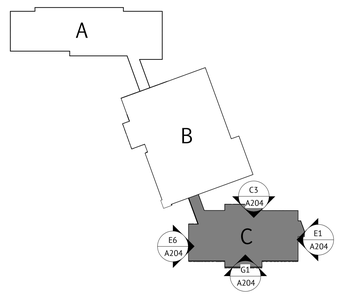
E1 C WING - EAST ELEVATION
1/8" = 1'-0"



E6 C WING - WEST ELEVATION
1/8" = 1'-0"



G1 C WING - SOUTH ELEVATION
1/8" = 1'-0"



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CONSULTANTS:

EXTERIOR ELEVATIONS - 'C' WING

GARDNER ELEMENTARY SCHOOL
CITY OF GARDNER, MA
PEARL STREET

PROJ. NUMBER:	1806
DATE:	04/09/2020
SCALE:	As indicated
DRAWN BY:	'AG' / 'GD' / HDA
REVISIONS:	

60% MSBA SET

A204