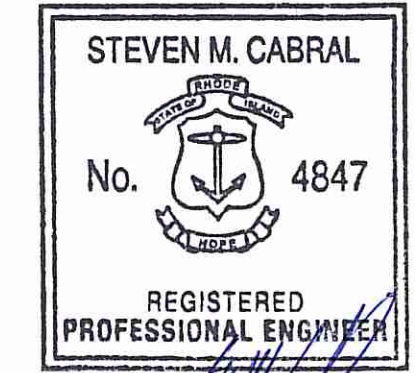


CROSSMAN ENGINEERING
 Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone: (401) 738-5660
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KEY PLAN

PROJECT TITLE:
HIGHLAND HILLS
 PLAT MAP 51 LOT 11
 ZONING DISTRICTS
 A-2, I-1, OS and R-3
 HIGHLAND CORPORATE DRIVE
 CUMBERLAND, RHODE ISLAND

PREPARED FOR:
A.R. BUILDING COMPANY
 310 SEVEN FIELDS BOULEVARD
 SEVEN FIELDS, PA
 16046

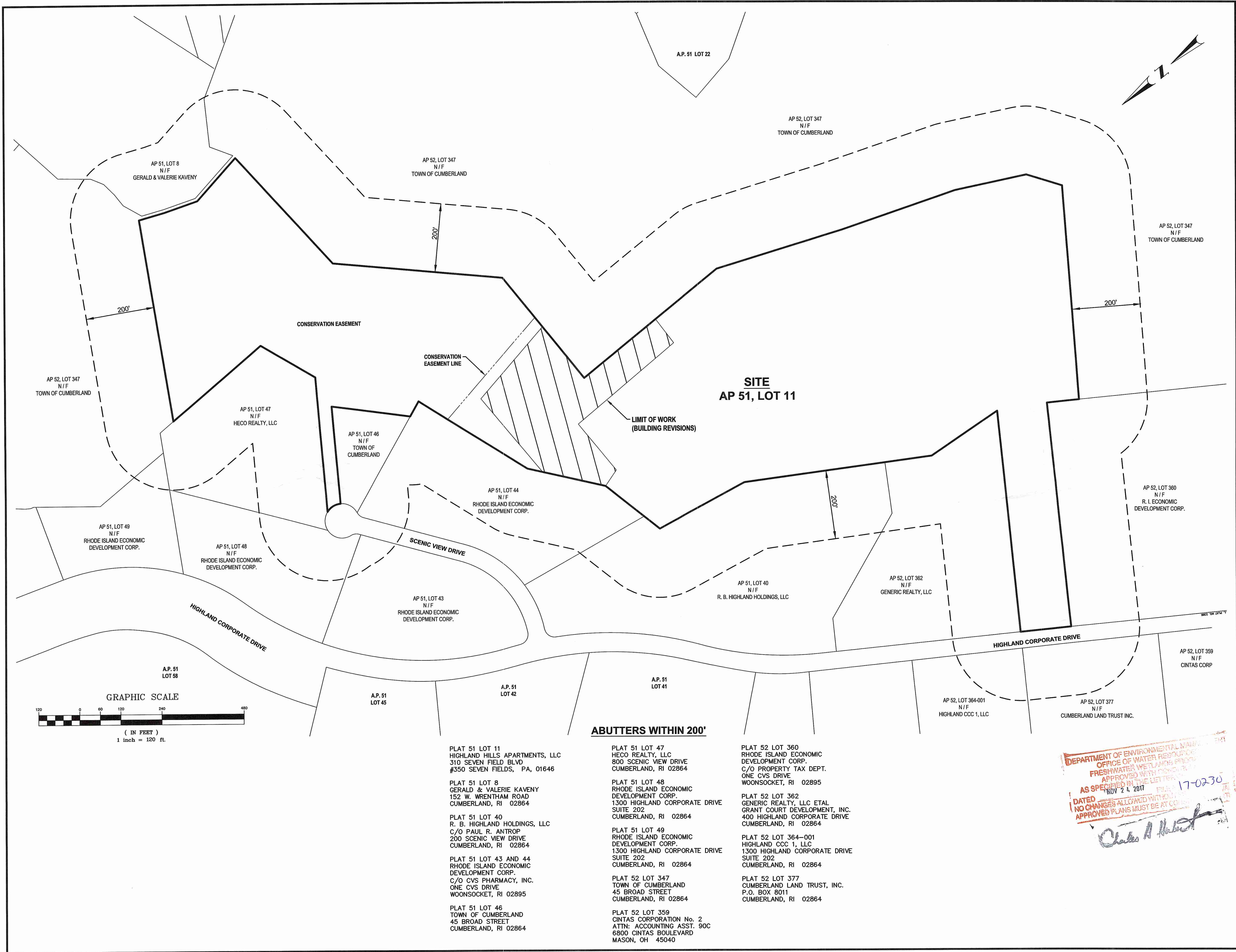
DRAWING TITLE:
VICINITY MAP

DATE: AUGUST 2017 SCALE: 1"=800'
 DWG. NAME: 2035-C02-VICINITY.dwg

REVISIONS	NUMBER	REMARKS	DATE
△	---	---	---

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER DIVISION
 APPROVED WITH COMMENTS AS SPECIFIED IN THE LETTER
 NOV 24 2017 17-0230
 NO CHANGES ALLOWED WITH APPROVED PLANS MUST BE APPROVED
James M. White

DRAWING NUMBER
C2
 SHEET: 3 OF 18



Crossman Engineering

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STEVEN M. CABRAL

No. 4847

REGISTERED PROFESSIONAL ENGINEER

9-17-17

KEY PLAN

PROJECT TITLE:

HIGHLAND HILLS

PLAT MAP 51 LOT 11
ZONING DISTRICTS
A-2, I-1, OS and R-3

HIGHLAND CORPORATE DRIVE
CUMBERLAND, RHODE ISLAND

PREPARED FOR:

A.R. BUILDING COMPANY

310 SEVEN FIELDS BOULEVARD
SEVEN FIELDS, PA
16046

DRAWING TITLE:

200' RADIUS MAP

DATE: AUGUST 2017 **SCALE:** 1"=120'

DWG. NAME: 2035-C03-RADIUS.dwg

REVISIONS

NUMBER	REMARKS	DATE
--	--	--

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PERMIT
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER
 NOV 24 2017 FILE # 17-0230
 DATED
 NO CHANGES ALLOWED WITHOUT
 APPROVED PLANS MUST BE AT CONSULTANT'S RISK

Charles A. Hackett

DRAWING NUMBER

C3

SHEET: 4 OF 18



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STEVEN M. CABRAL
 No. 4847
 REGISTERED PROFESSIONAL ENGINEER
SM Cabral
 9-17-17

KEY PLAN

PROJECT TITLE:
HIGHLAND HILLS
 PLAT MAP 51 LOT 11
 ZONING DISTRICTS
 A-2, I-1, OS and R-3
 HIGHLAND CORPORATE DRIVE
 CUMBERLAND, RHODE ISLAND

PREPARED FOR:
A.R. BUILDING COMPANY
 310 SEVEN FIELDS BOULEVARD
 SEVEN FIELDS, PA
 16046

DRAWING TITLE:
**AERIAL PLAN
 PREVIOUS LAYOUT**

DATE: AUGUST 2017 SCALE: 1"=100'

DWG. NAME: 2035-C04.1-AERIAL-EX.dwg

REVISIONS	NUMBER	REMARKS	DATE
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT			
OFFICE OF WATER & FRESHWATER RESOURCES			
APPROVED WITH AS SPECIFIED IN THE PERMITS			
DATED NOV 24, 2017			17-0230
NO CHANGES			
APPROVED			

DRAWING NUMBER
C4.1
 SHEET: 5 OF 18



- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

CROSSMAN ENGINEERING

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KEY PLAN

PROJECT TITLE:
HIGHLAND HILLS
 PLAT MAP 51 LOT 11
 ZONING DISTRICTS
 A-2, I-1, OS and R-3
 HIGHLAND CORPORATE DRIVE
 CUMBERLAND, RHODE ISLAND

PREPARED FOR:
A.R. BUILDING COMPANY
 310 SEVEN FIELDS BOULEVARD
 SEVEN FIELDS, PA
 16046

DRAWING TITLE:
**AERIAL PLAN
 PROPOSED LAYOUT**

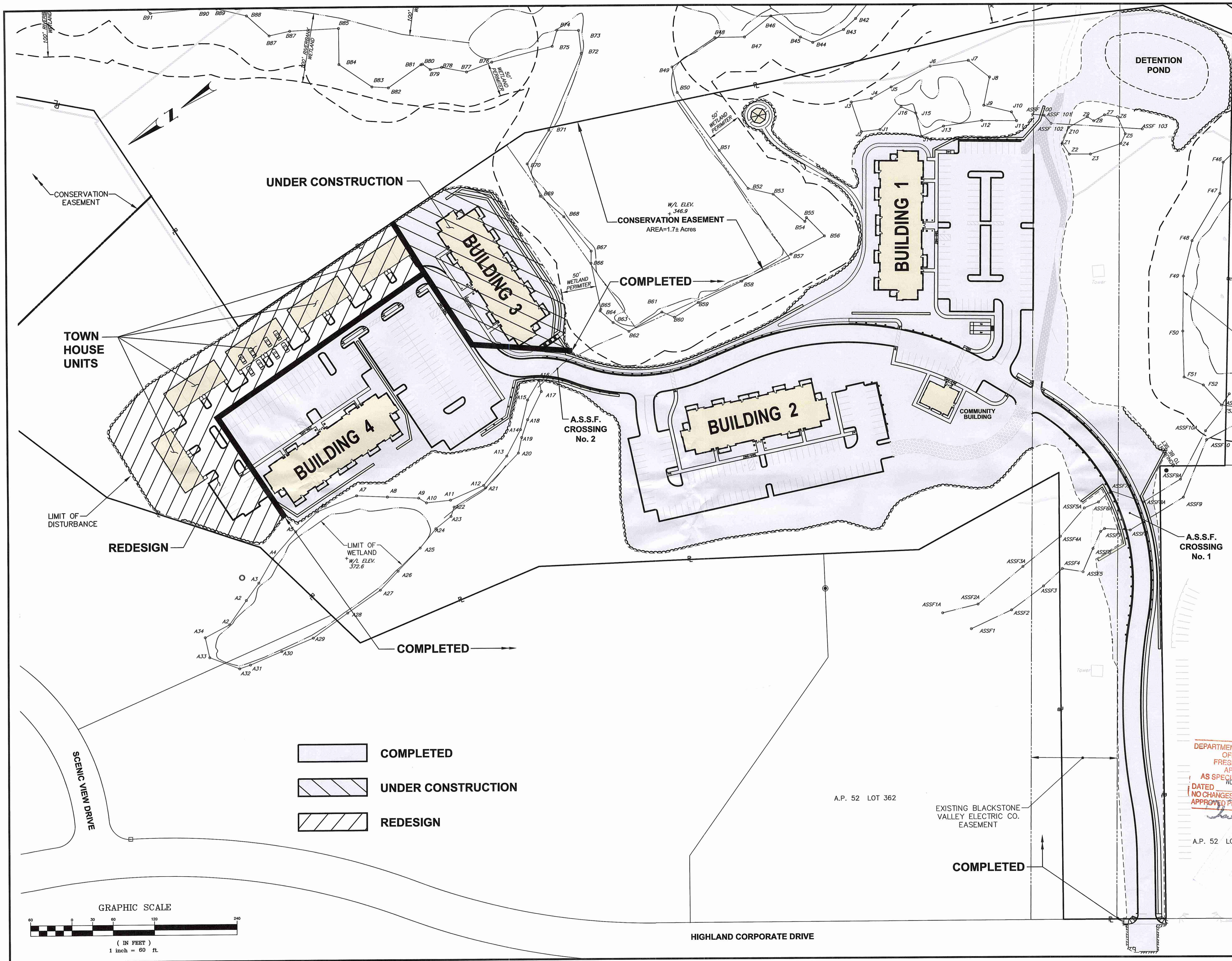
DATE: AUGUST 2017 **SCALE:** 1"=100'
DWG. NAME: 2035-C04.2-AERIAL-PR.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	APPROVED WITH COMMENTS AS SPECIFIED IN PERMITTING	NOV 24 2017
2	NO CHANGES ALLOWED WITHOUT APPROVED PLANS MUST BE APPROVED	17-0230

Steven M. Cabral

DRAWING NUMBER
C4.2
 SHEET: 6 OF 18



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STEVEN M. CABRAL
 No. 4847
 REGISTERED PROFESSIONAL ENGINEER
 9-17-17

KEY PLAN

PROJECT TITLE:
HIGHLAND HILLS
 PLAT MAP 51 LOT 11
 ZONING DISTRICTS
 A-2, I-1, OS and R-3
 HIGHLAND CORPORATE DRIVE
 CUMBERLAND, RHODE ISLAND

PREPARED FOR:
A.R. BUILDING COMPANY
 310 SEVEN FIELDS BOULEVARD
 SEVEN FIELDS, PA
 16046

DRAWING TITLE:
CONSTRUCTION PROGRESS PLAN

DATE: AUGUST 2017 SCALE: 1"=60'
 DWG. NAME: 2035-C06-CONSTRUCTION.dwg

REVISIONS	NUMBER	DATE	REMARKS
AS SPECIFIED IN THE	17-0230	NOV 2 2017	
DATED			
NO CHANGES ALLOWED			
APPROVED PLANS MUST			

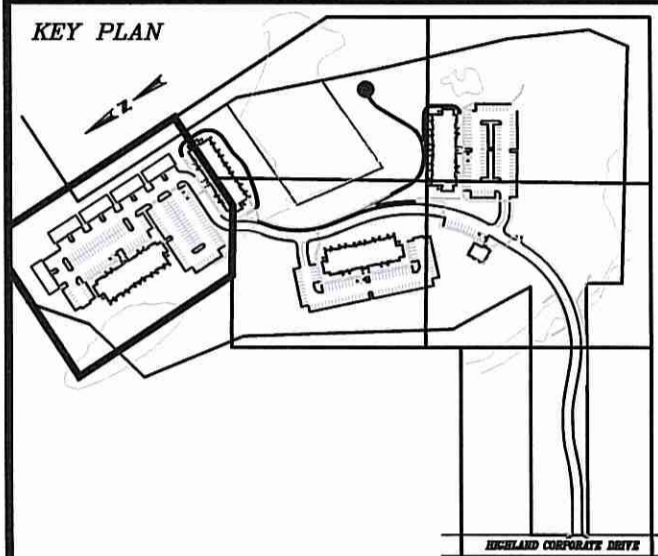
DRAWING NUMBER
C6
 SHEET: 8 OF 18



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PROJECT TITLE:

HIGHLAND HILLS

PLAT MAP 51 LOT 11
 ZONING DISTRICTS
 A-2, I-1, OS and R-3

HIGHLAND CORPORATE DRIVE
 CUMBERLAND, RHODE ISLAND

PREPARED FOR:

A.R. BUILDING COMPANY
 310 SEVEN FIELDS BOULEVARD
 SEVEN FIELDS, PA
 16046

DRAWING TITLE:

**SITE LAYOUT PLAN
 (AREA 4) - PREVIOUS**

DATE: AUGUST 2017 SCALE: 1"=20'

DWG. NAME: 2035-C07.1-SITE-EX.dwg

REVISIONS

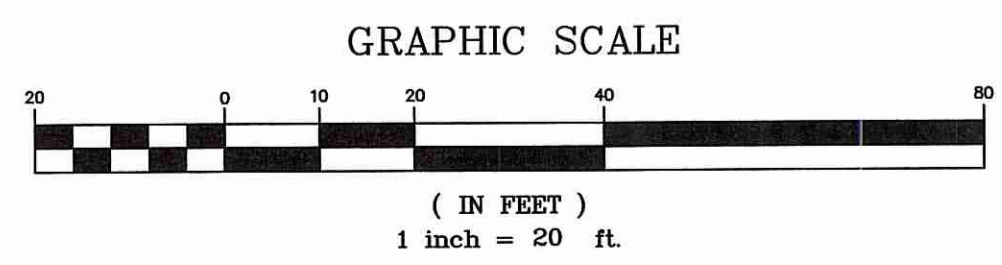
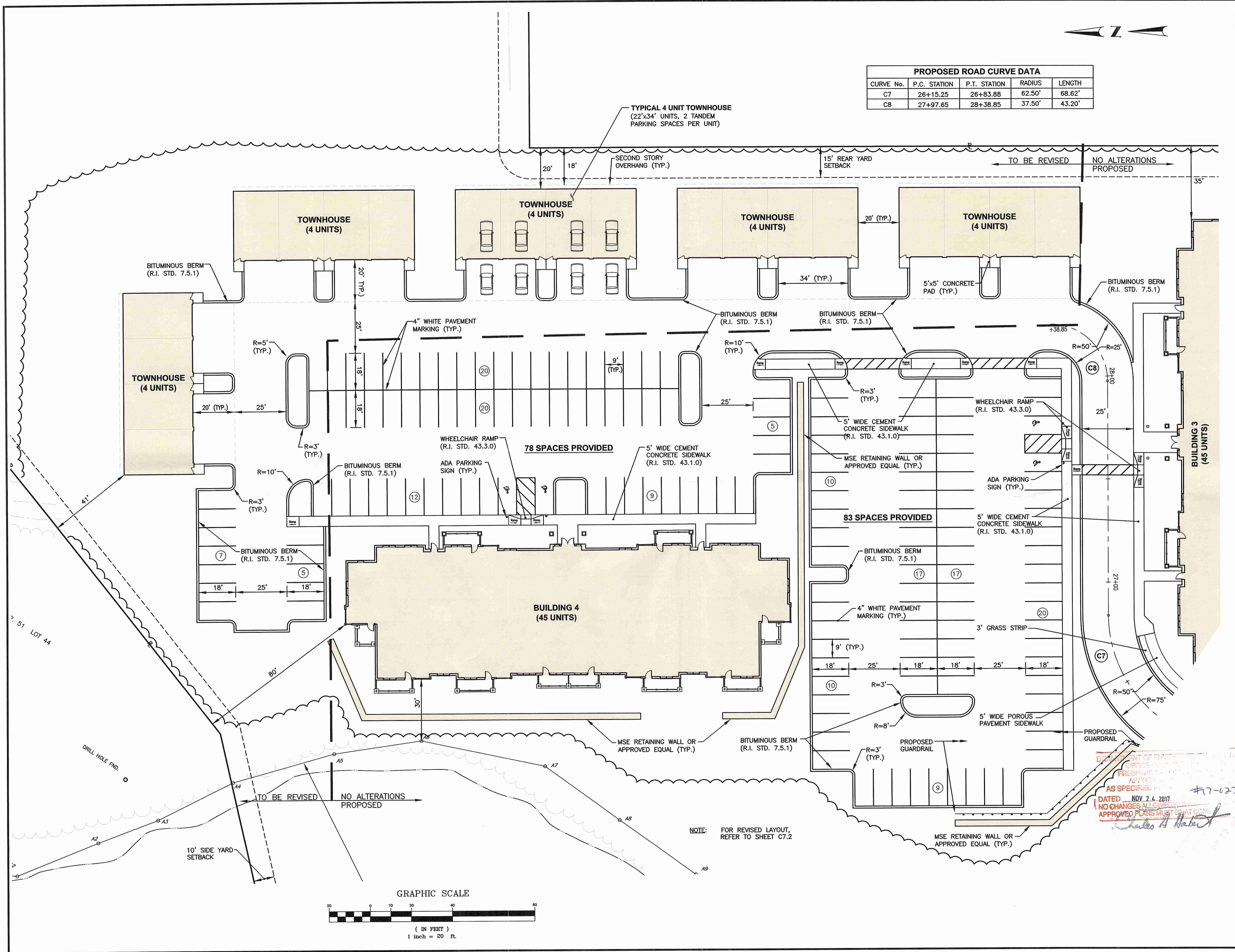
NUMBER	REMARKS	DATE

DRAWING NUMBER

C7.1

SHEET: 9 OF 18

PROPOSED ROAD CURVE DATA				
CURVE No.	P.C. STATION	P.T. STATION	RADIUS	LENGTH
C7	26+15.25	26+83.88	62.50'	68.62'
C8	27+97.65	28+38.85	37.50'	43.20'



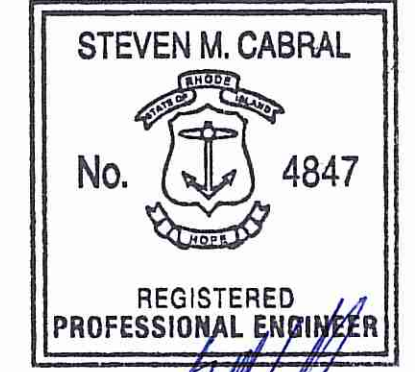
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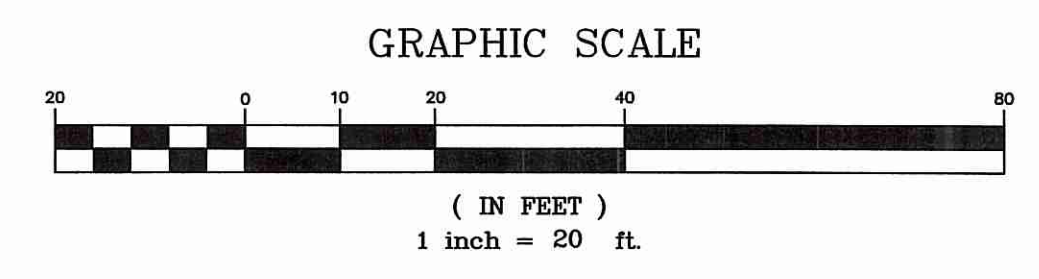
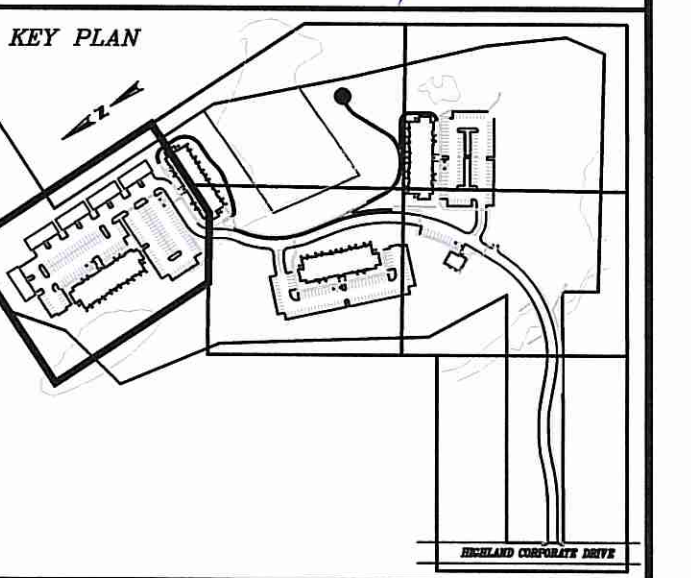
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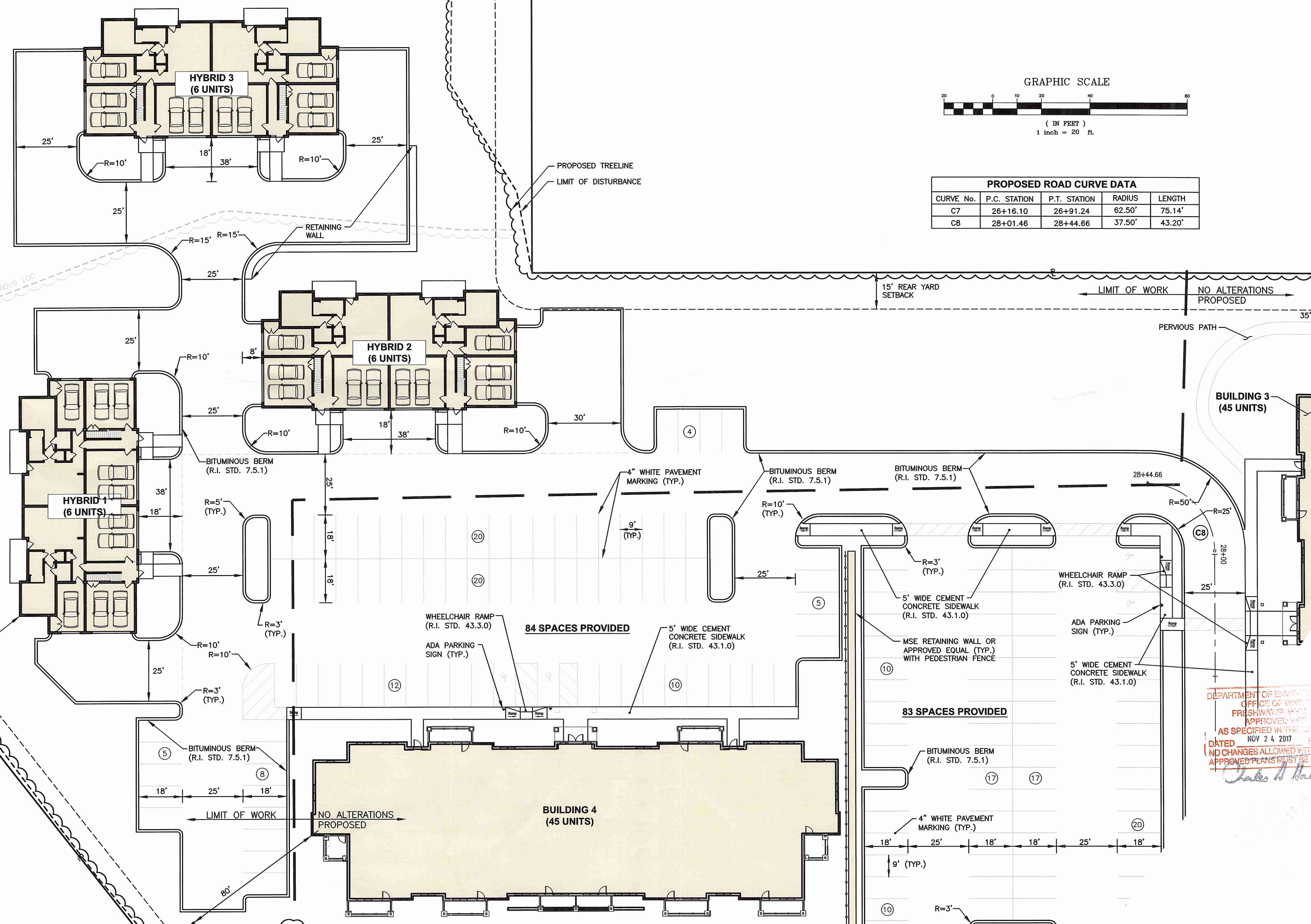
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9-17-17



PROPOSED ROAD CURVE DATA				
CURVE No.	P.C. STATION	P.T. STATION	RADIUS	LENGTH
C7	26+16.10	26+91.24	62.50'	75.14'
C8	28+01.46	28+44.66	37.50'	43.20'



PROJECT TITLE:
HIGHLAND HILLS
 PLAT MAP 51 LOT 11
 ZONING DISTRICTS
 A-2, I-1, OS and R-3
 HIGHLAND CORPORATE DRIVE
 CUMBERLAND, RHODE ISLAND

PREPARED FOR:
A.R. BUILDING COMPANY
 310 SEVEN FIELDS BOULEVARD
 SEVEN FIELDS, PA
 16046

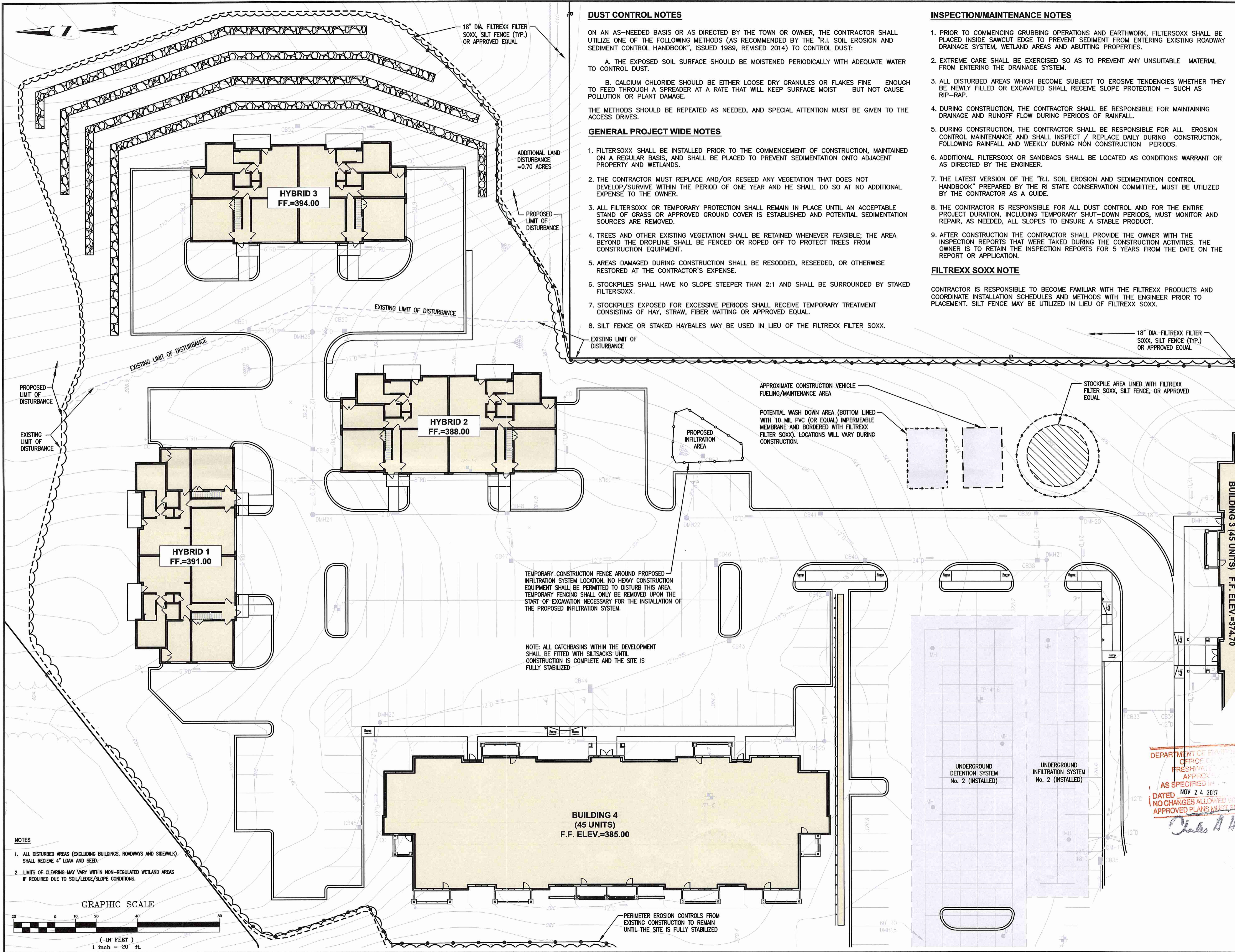
DRAWING TITLE:
**SITE LAYOUT PLAN
 (AREA 4) - PROPOSED**

DATE: AUGUST 2017 SCALE: 1"=20'
 DWG. NAME: 2035-C07.2-SITE-PR.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	AS SPECIFIED IN THE PERMITS DATED NOV 24, 2017	11-23-17
2	NO CHANGES ALLOWED WITH APPROVED PLANS MUST BE AT CONSTRUCTION	

DRAWING NUMBER
C7.2
 SHEET: 10 OF: 18



DUST CONTROL NOTES

ON AN AS-NEEDED BASIS OR AS DIRECTED BY THE TOWN OR OWNER, THE CONTRACTOR SHALL UTILIZE ONE OF THE FOLLOWING METHODS (AS RECOMMENDED BY THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK", ISSUED 1989, REVISED 2014) TO CONTROL DUST:

- A. THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
 - B. CALCIUM CHLORIDE SHOULD BE EITHER LOOSE DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH A SPREADER AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE.
- THE METHODS SHOULD BE REPEATED AS NEEDED, AND SPECIAL ATTENTION MUST BE GIVEN TO THE ACCESS DRIVES.

GENERAL PROJECT WIDE NOTES

1. FILTERSOXX SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, MAINTAINED ON A REGULAR BASIS, AND SHALL BE PLACED TO PREVENT SEDIMENTATION ONTO ADJACENT PROPERTY AND WETLANDS.
2. THE CONTRACTOR MUST REPLACE AND/OR RESEED ANY VEGETATION THAT DOES NOT DEVELOP/SURVIVE WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. ALL FILTERSOXX OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED AND POTENTIAL SEDIMENTATION SOURCES ARE REMOVED.
4. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHENEVER FEASIBLE; THE AREA BEYOND THE DROPLINE SHALL BE FENCED OR ROPED OFF TO PROTECT TREES FROM CONSTRUCTION EQUIPMENT.
5. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESEEDDED, RESEEDDED, OR OTHERWISE RESTORED AT THE CONTRACTOR'S EXPENSE.
6. STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED FILTERSOXX.
7. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW, FIBER MATTING OR APPROVED EQUAL.
8. SILT FENCE OR STAKED HAYBALES MAY BE USED IN LIEU OF THE FILTREXX FILTER SOXX.

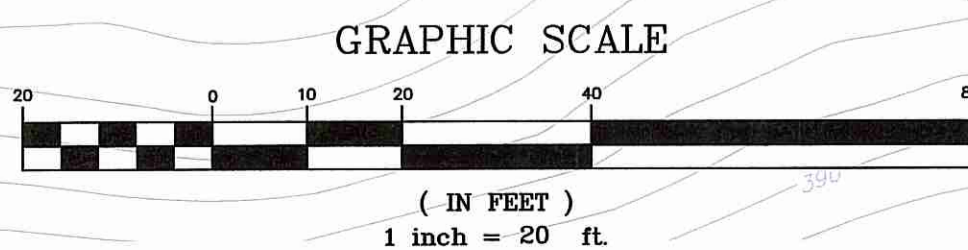
INSPECTION/MAINTENANCE NOTES

1. PRIOR TO COMMENCING GRUBBING OPERATIONS AND EARTHWORK, FILTERSOXX SHALL BE PLACED INSIDE SAWCUT EDGE TO PREVENT SEDIMENT FROM ENTERING EXISTING ROADWAY DRAINAGE SYSTEM, WETLAND AREAS AND ADJUTING PROPERTIES.
2. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE DRAINAGE SYSTEM.
3. ALL DISTURBED AREAS WHICH BECOME SUBJECT TO EROSION TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SLOPE PROTECTION - SUCH AS RIP-RAP.
4. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING PERIODS OF RAINFALL.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT / REPLACE DAILY DURING CONSTRUCTION, FOLLOWING RAINFALL AND WEEKLY DURING NON CONSTRUCTION PERIODS.
6. ADDITIONAL FILTERSOXX OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
7. THE LATEST VERSION OF THE "R.I. SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK" PREPARED BY THE RI STATE CONSERVATION COMMITTEE, MUST BE UTILIZED BY THE CONTRACTOR AS A GUIDE.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL DUST CONTROL AND FOR THE ENTIRE PROJECT DURATION, INCLUDING TEMPORARY SHUT-DOWN PERIODS, MUST MONITOR AND REPAIR, AS NEEDED, ALL SLOPES TO ENSURE A STABLE PRODUCT.
9. AFTER CONSTRUCTION THE CONTRACTOR SHALL PROVIDE THE OWNER WITH THE INSPECTION REPORTS THAT WERE TAKEN DURING THE CONSTRUCTION ACTIVITIES. THE OWNER IS TO RETAIN THE INSPECTION REPORTS FOR 5 YEARS FROM THE DATE ON THE REPORT OR APPLICATION.

FILTREXX SOXX NOTE

CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE FILTREXX PRODUCTS AND COORDINATE INSTALLATION SCHEDULES AND METHODS WITH THE ENGINEER PRIOR TO PLACEMENT. SILT FENCE MAY BE UTILIZED IN LIEU OF FILTREXX SOXX.

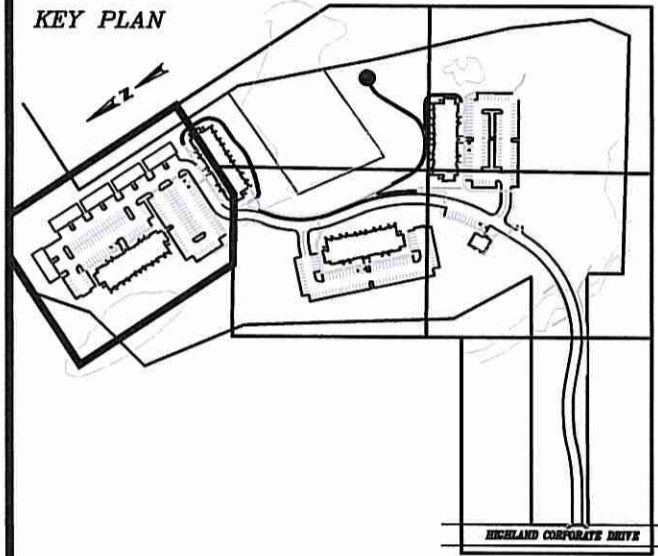
- NOTES**
1. ALL DISTURBED AREAS (EXCLUDING BUILDINGS, ROADWAYS AND SIDEWALK) SHALL RECEIVE 4" LOM AND SEED.
 2. LIMITS OF CLEARING MAY VARY WITHIN NON-REGULATED WETLAND AREAS IF REQUIRED DUE TO SOIL/SLOPE CONDITIONS.



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STEVEN M. CABRAL
 No. 4847
 REGISTERED PROFESSIONAL ENGINEER
 9-17-17



PROJECT TITLE:
HIGHLAND HILLS
 PLAT MAP 51 LOT 11
 ZONING DISTRICTS
 A-2, I-1, OS and R-3
HIGHLAND CORPORATE DRIVE
CUMBERLAND, RHODE ISLAND

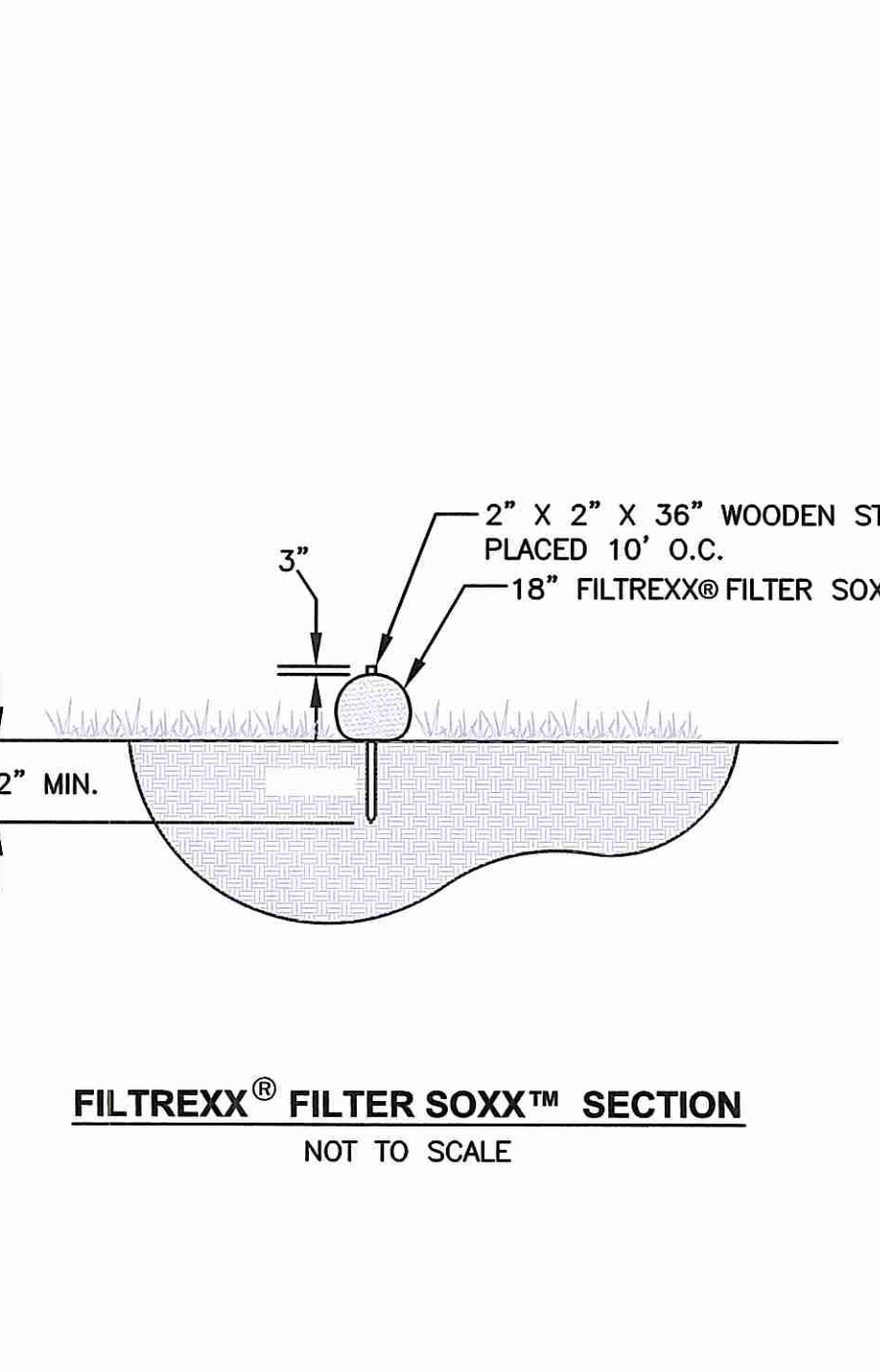
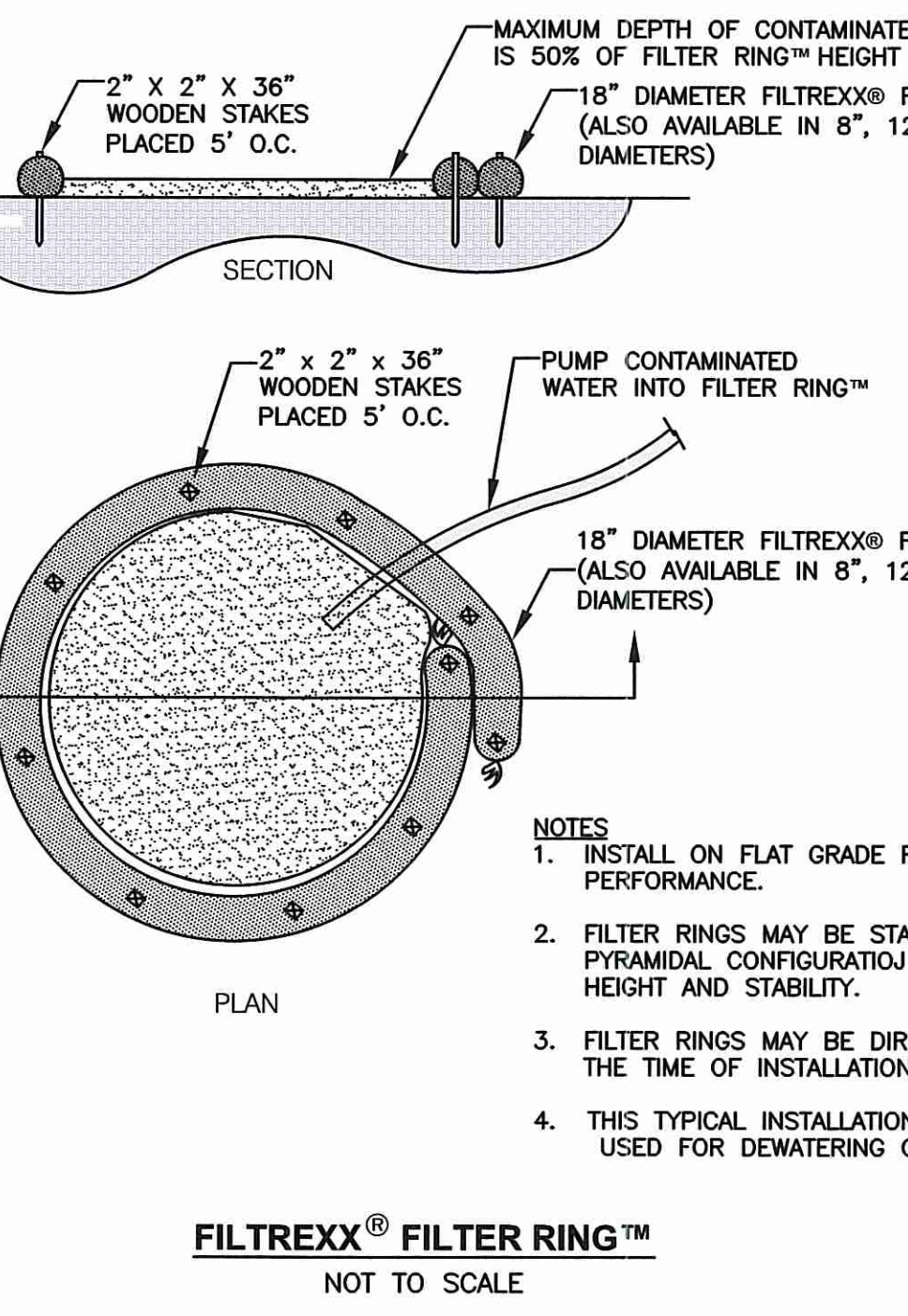
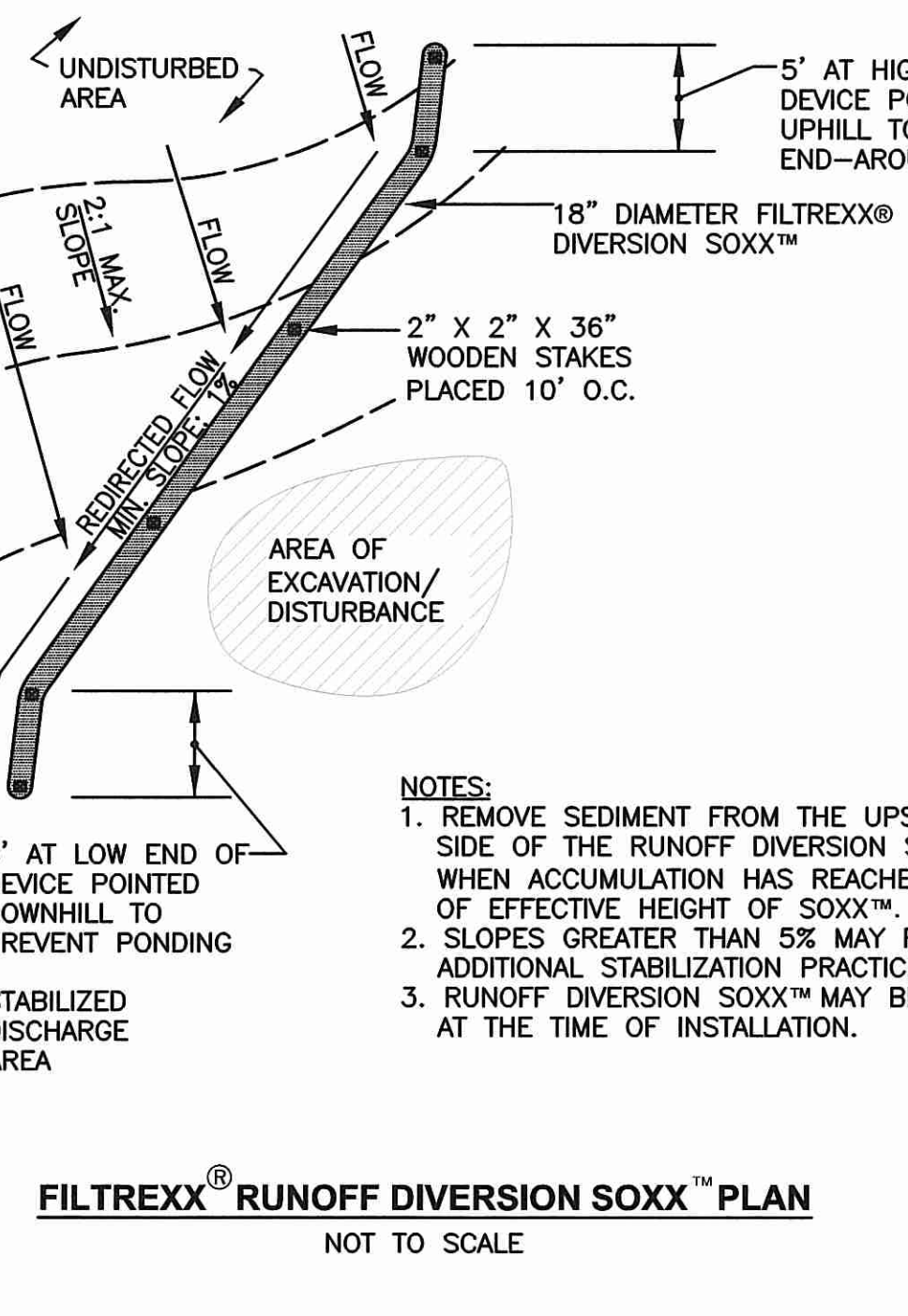
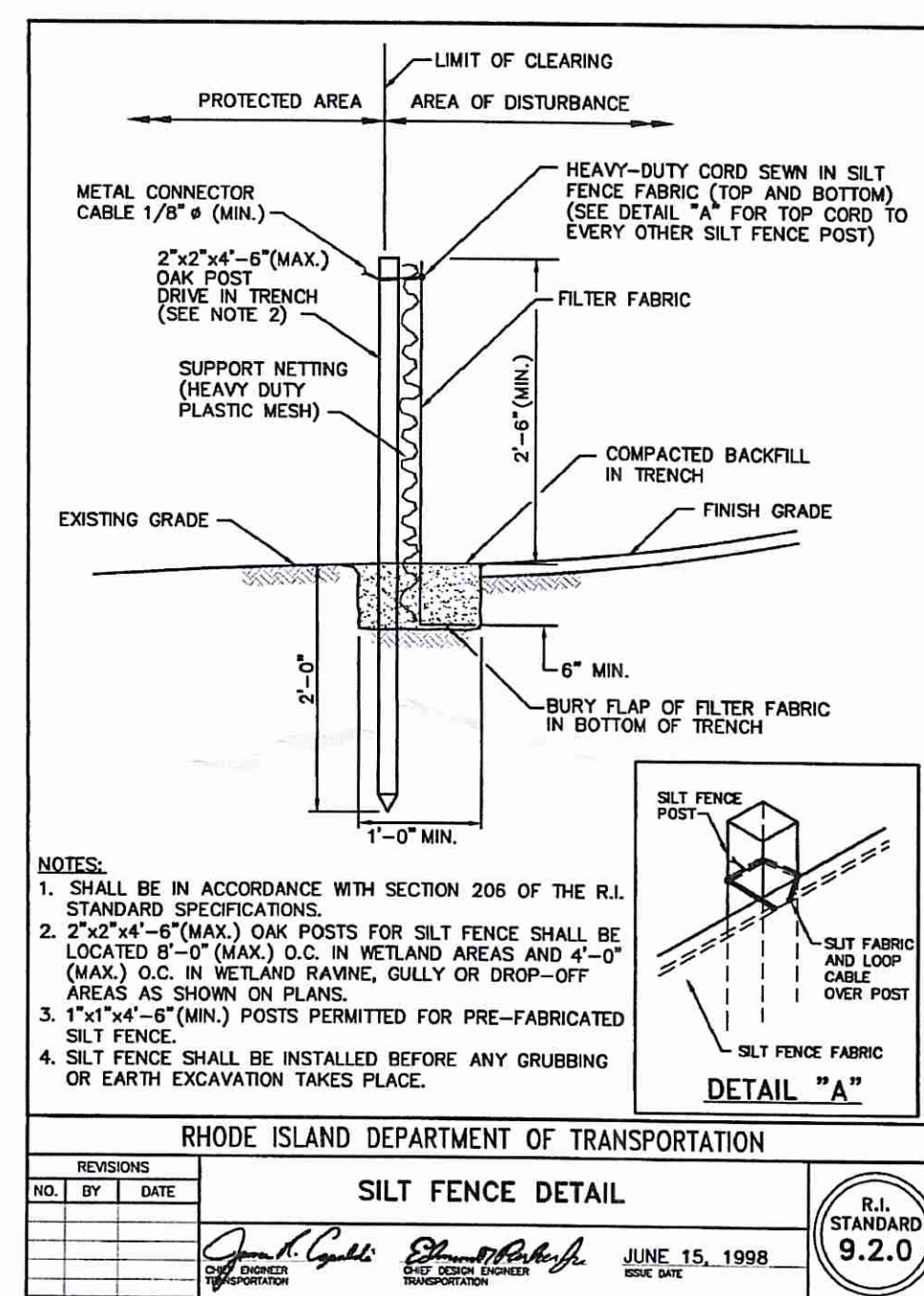
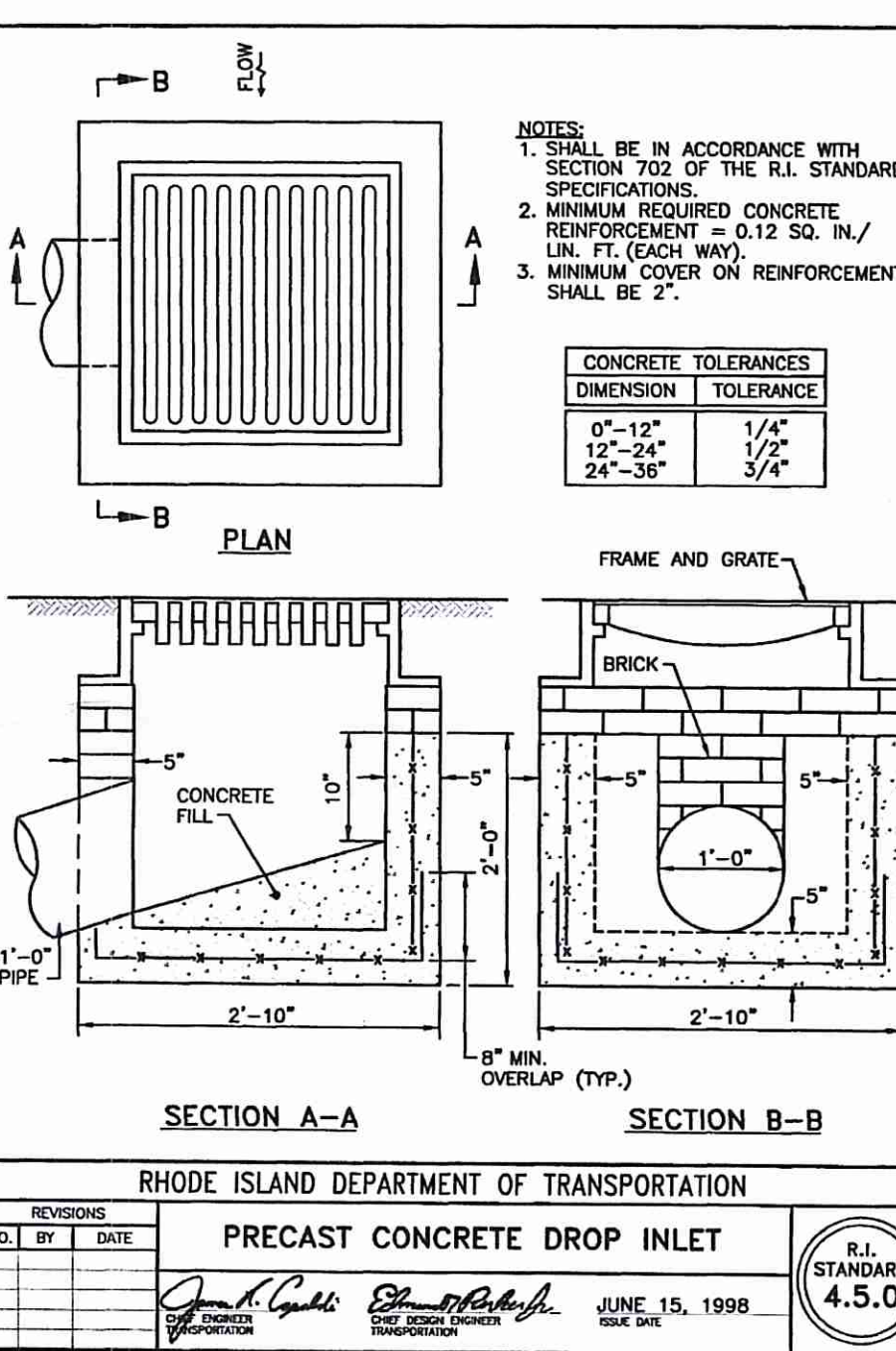
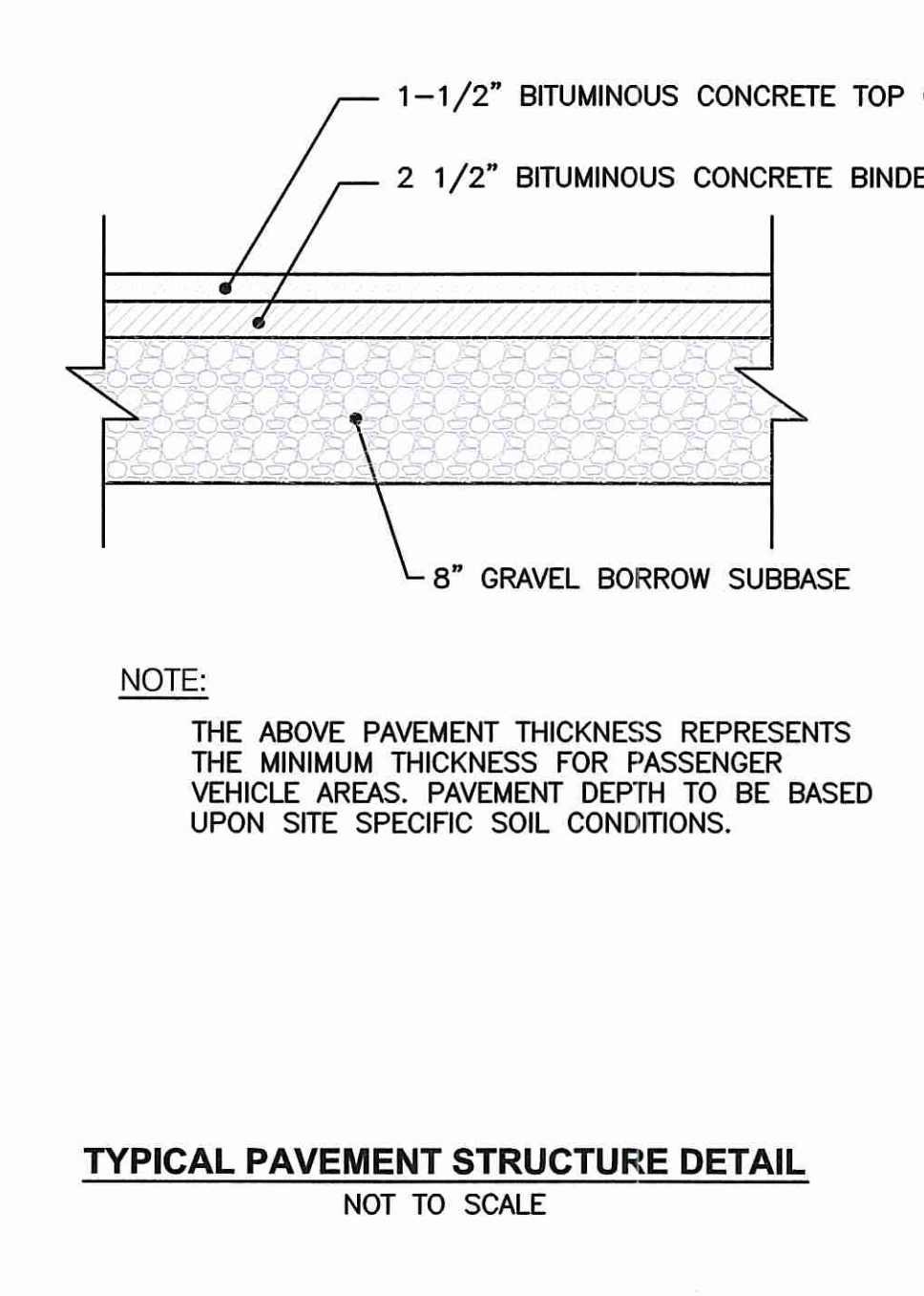
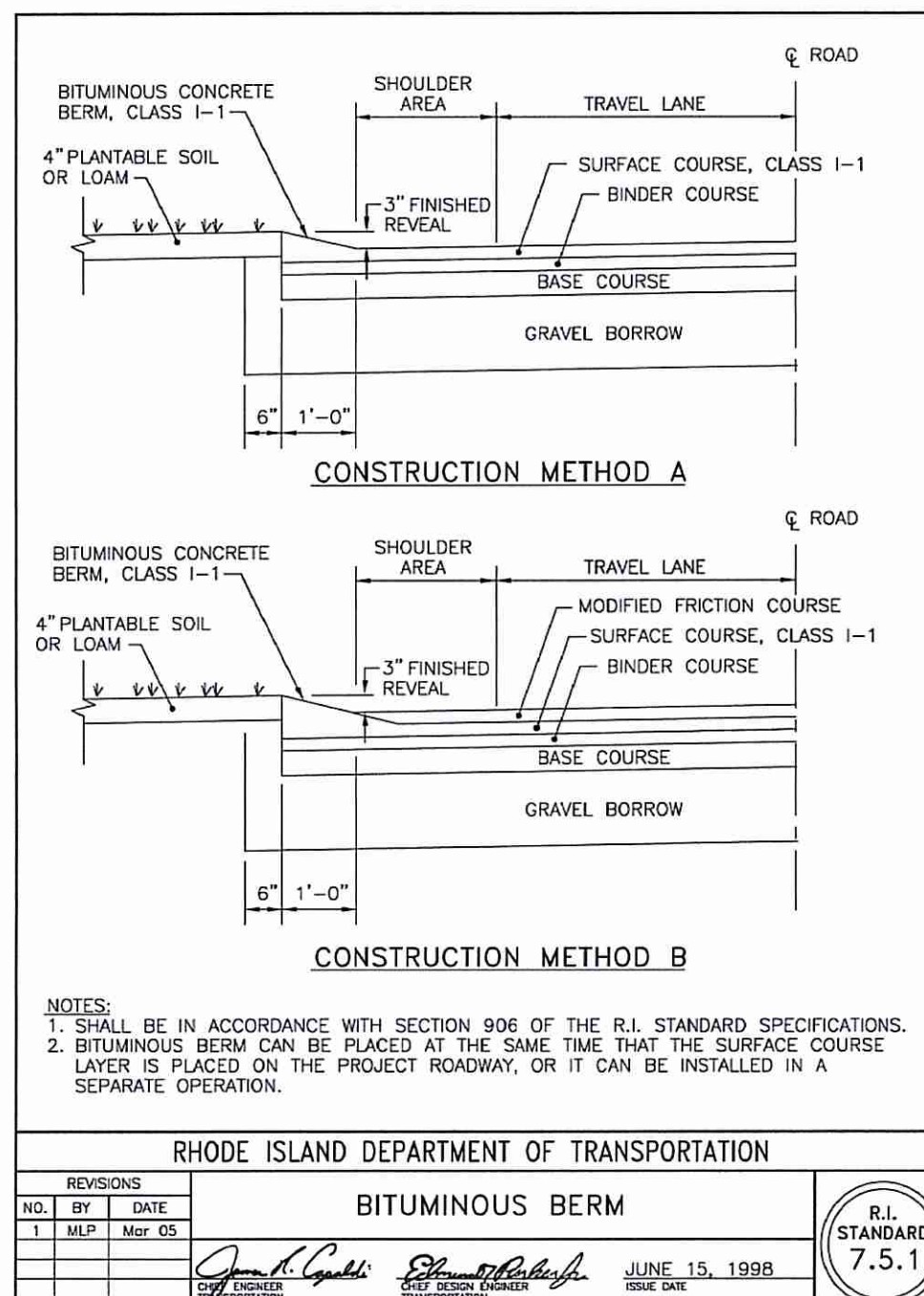
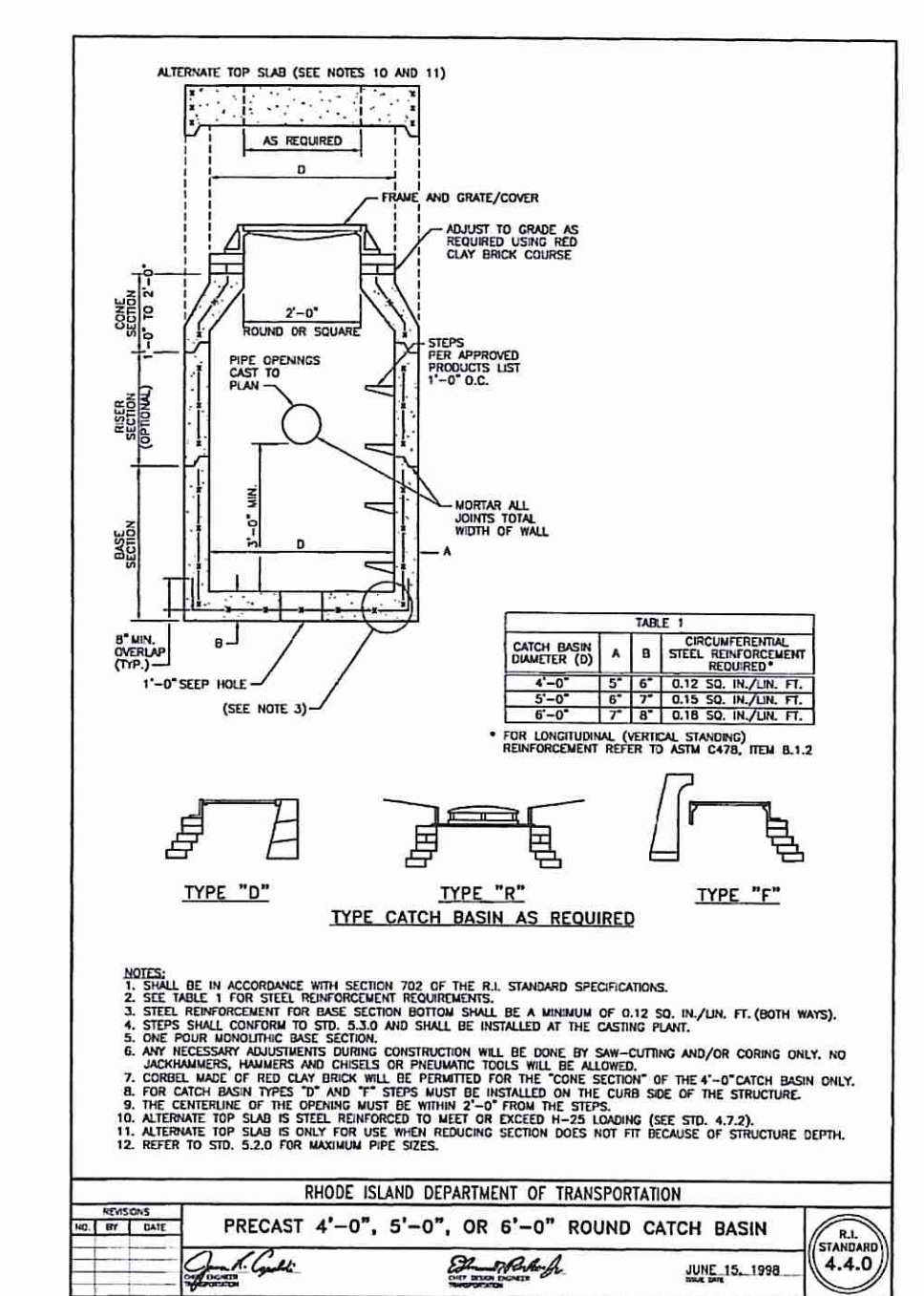
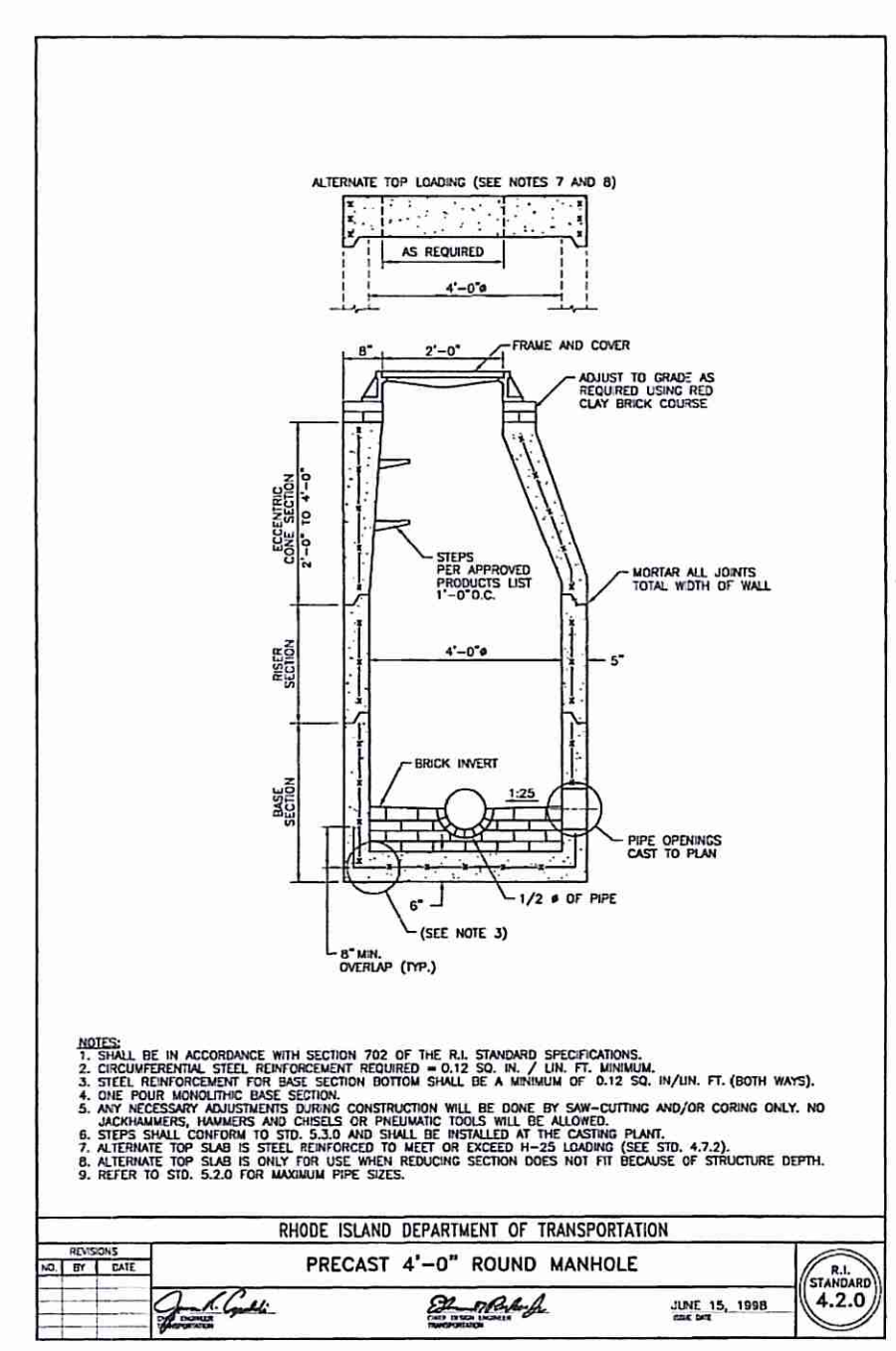
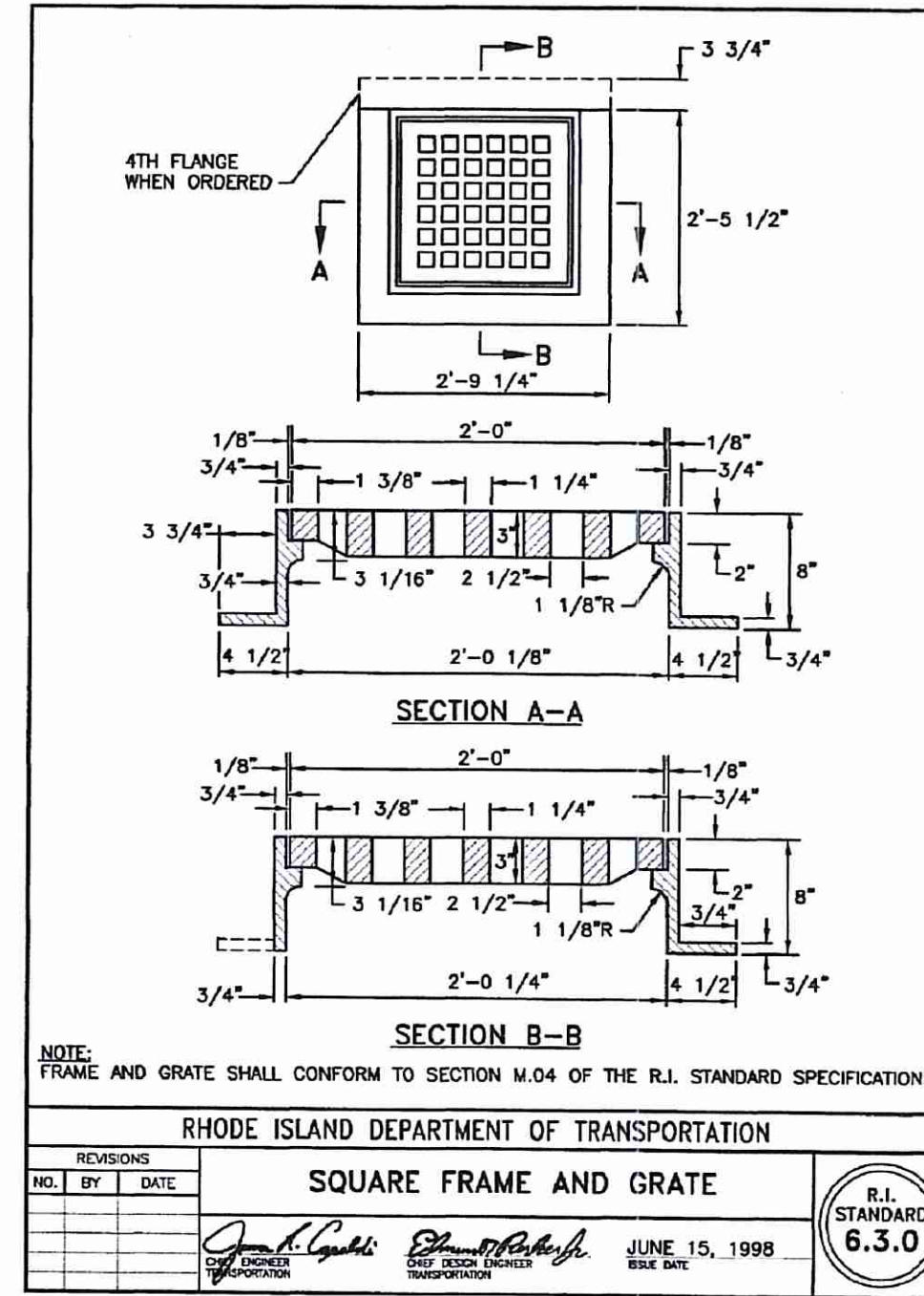
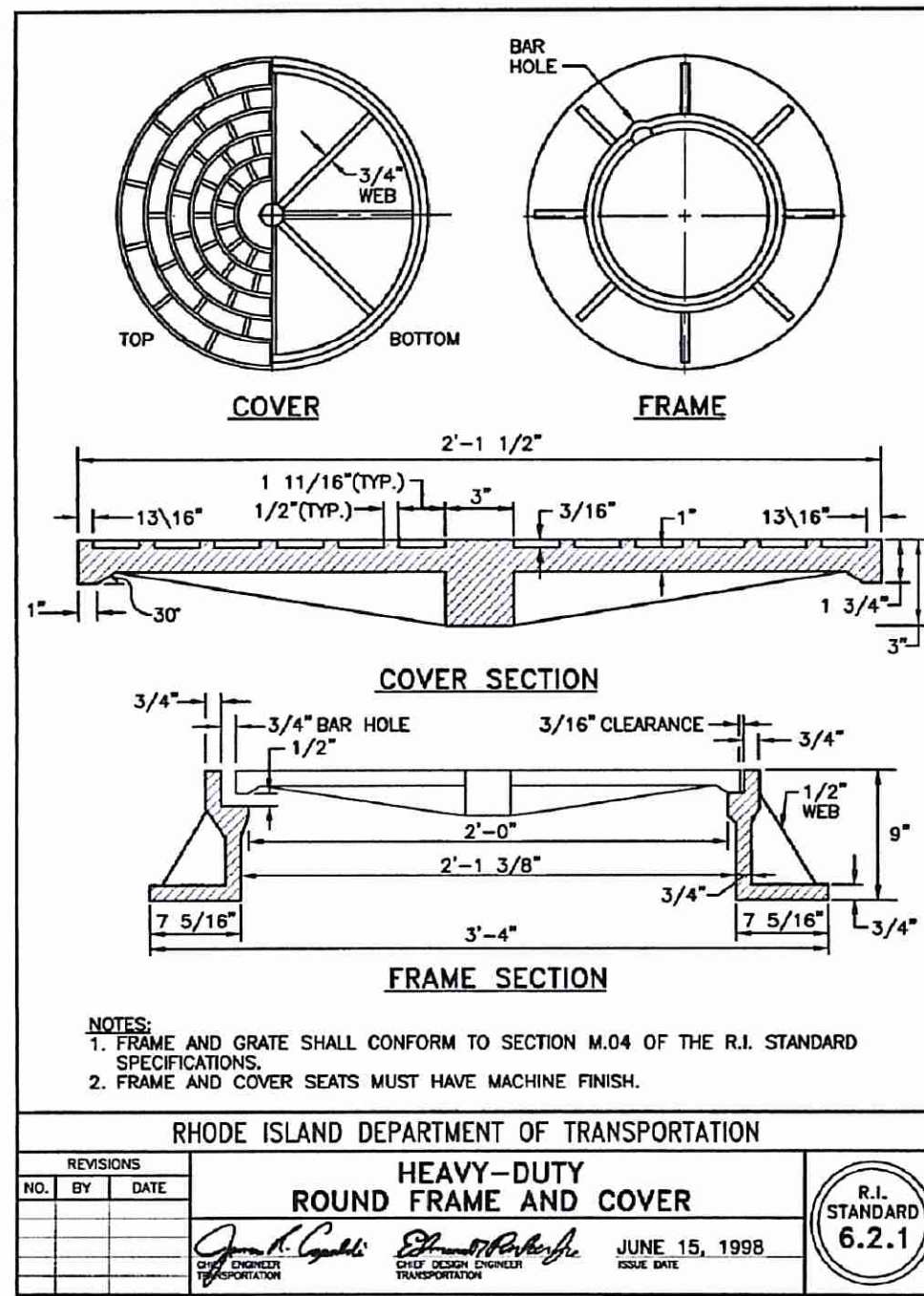
PREPARED FOR:
A.R. BUILDING COMPANY
 310 SEVEN FIELDS BOULEVARD
 SEVEN FIELDS, PA
 16046

DRAWING TITLE:
SOIL EROSION and SEDIMENT CONTROL PLAN
 DATE: AUGUST 2017 SCALE: 1"=20'
 DWG. NAME: 2035-C10-SOIL.dwg

REVISIONS		
NUMBER	REMARKS	DATE
17-0230		

DRAWING NUMBER
C10
 SHEET: 13 OF 18

DEPARTMENT OF PERMITTING
 OFFICE OF PERMITTING
 FRESHWATER DIVISION
 APPROVED AS SPECIFIED BY
 DATED NOV 24 2017
 NO CHANGES ALLOWED TO APPROVED PLANS WITHOUT APPROVED PLANS MULLER
 Charles H. Muller



CROSSMAN ENGINEERING
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STEVEN M. CABRAL
 No. 4847
 REGISTERED PROFESSIONAL ENGINEER
 9-17-97

KEY PLAN

PROJECT TITLE:
HIGHLAND HILLS
 PLAT MAP 51 LOT 11
 ZONING DISTRICTS
 A-2, I-1, OS and R-3
 HIGHLAND CORPORATE DRIVE
 CUMBERLAND, RHODE ISLAND

PREPARED FOR:
A.R. BUILDING COMPANY
 310 SEVEN FIELDS BOULEVARD
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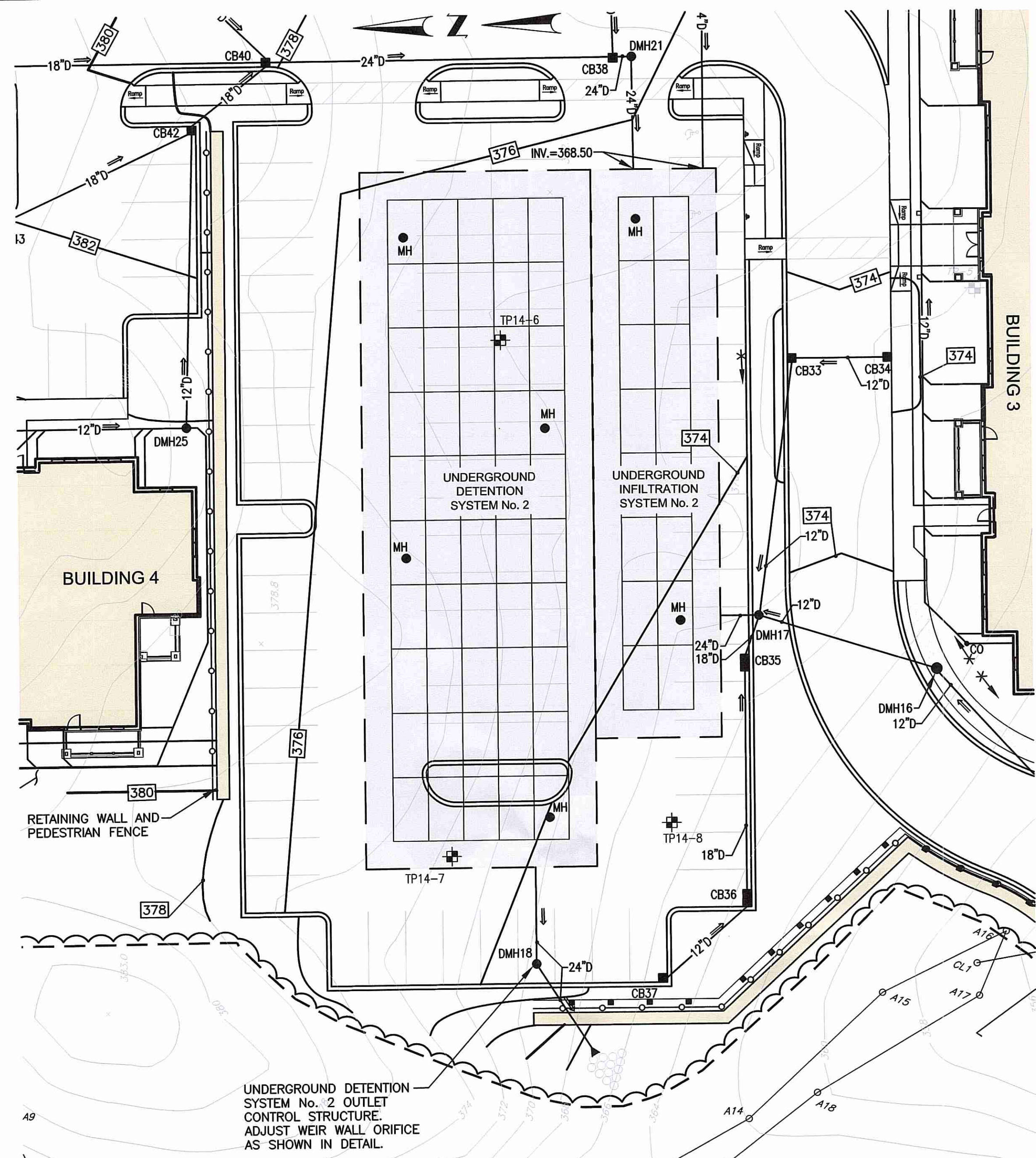
DRAWING TITLE:
MISCELLANEOUS DETAILS PLAN No. 1

DATE: AUGUST 2017
 SCALE: NO SCALE
 DWG. NAME: 2035-C11-DETAIL1.dwg

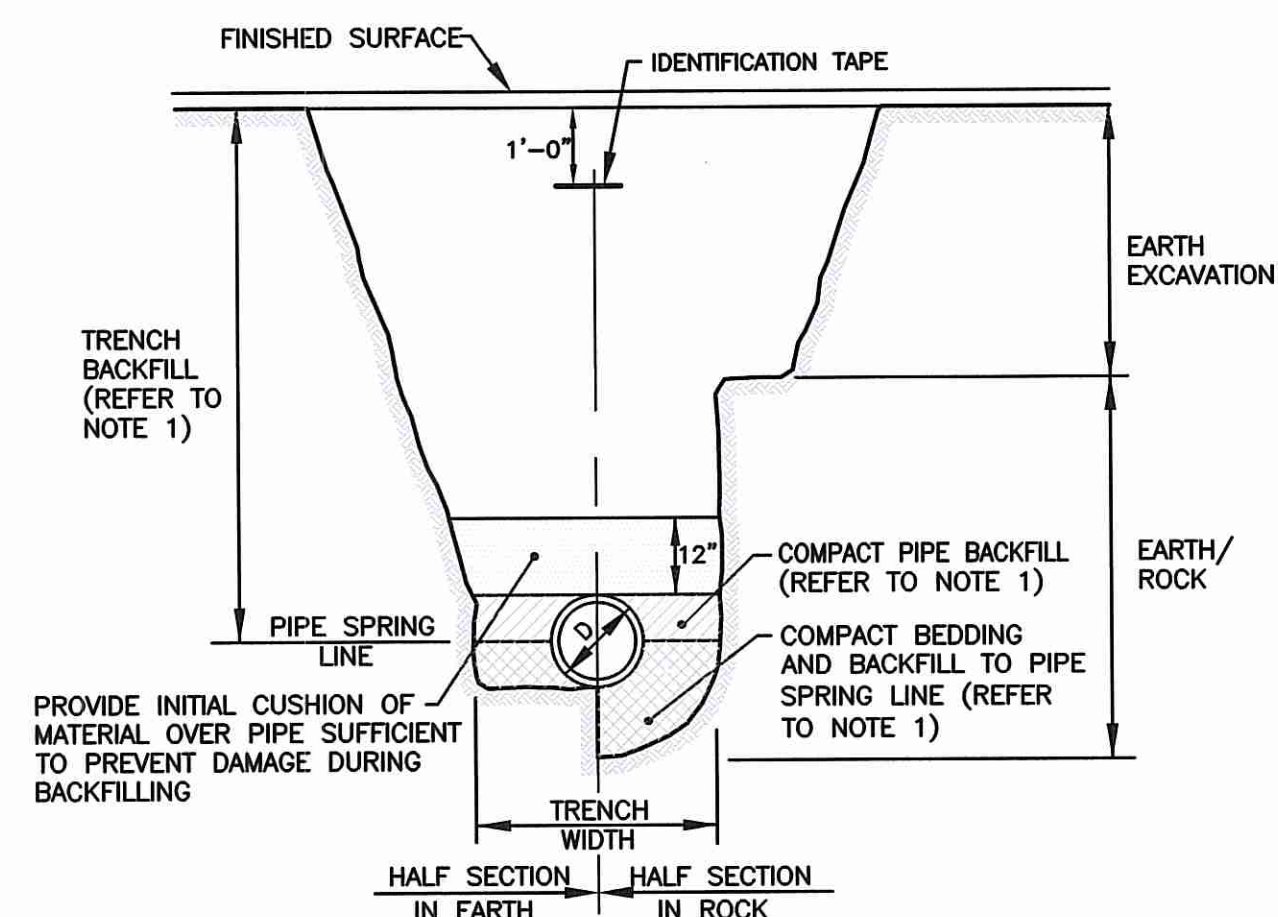
REVISIONS

NUMBER	REMARKS	DATE
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DRAWING NUMBER
C11
 SHEET: 14 OF 18

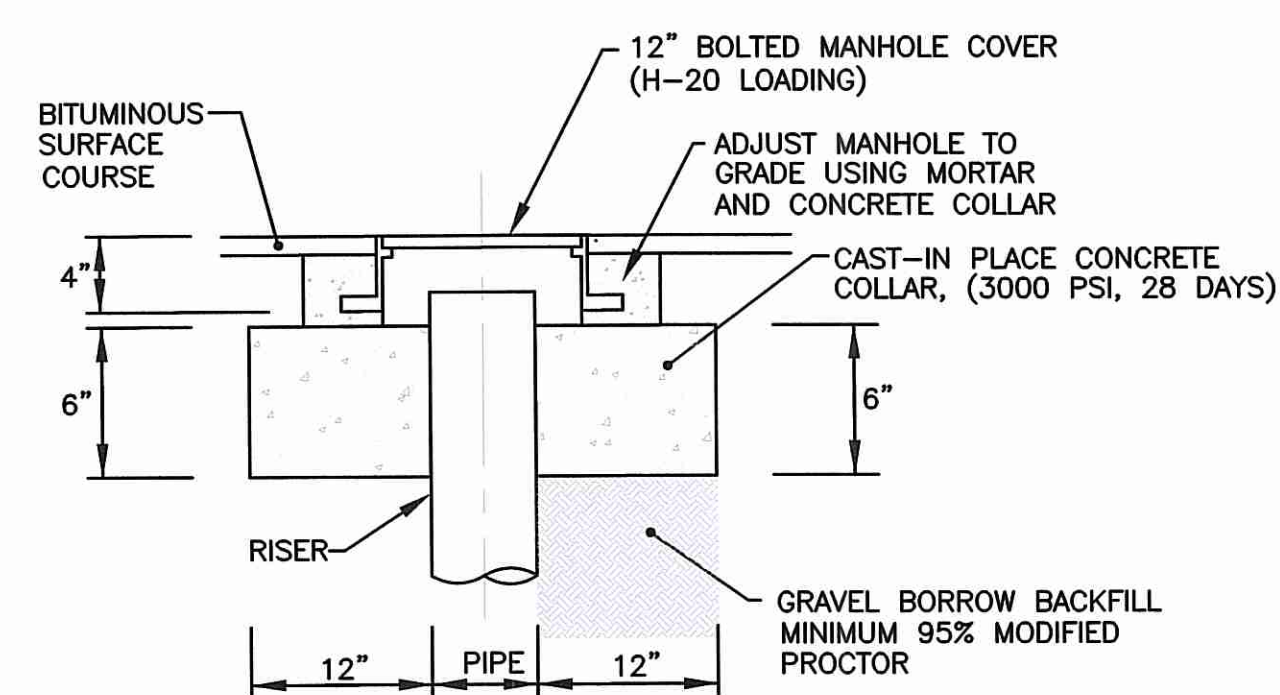


UNDERGROUND DETENTION SYSTEM No. 2 OUTLET CONTROL STRUCTURE IDENTIFICATION DETAIL
SCALE: 1"=20'

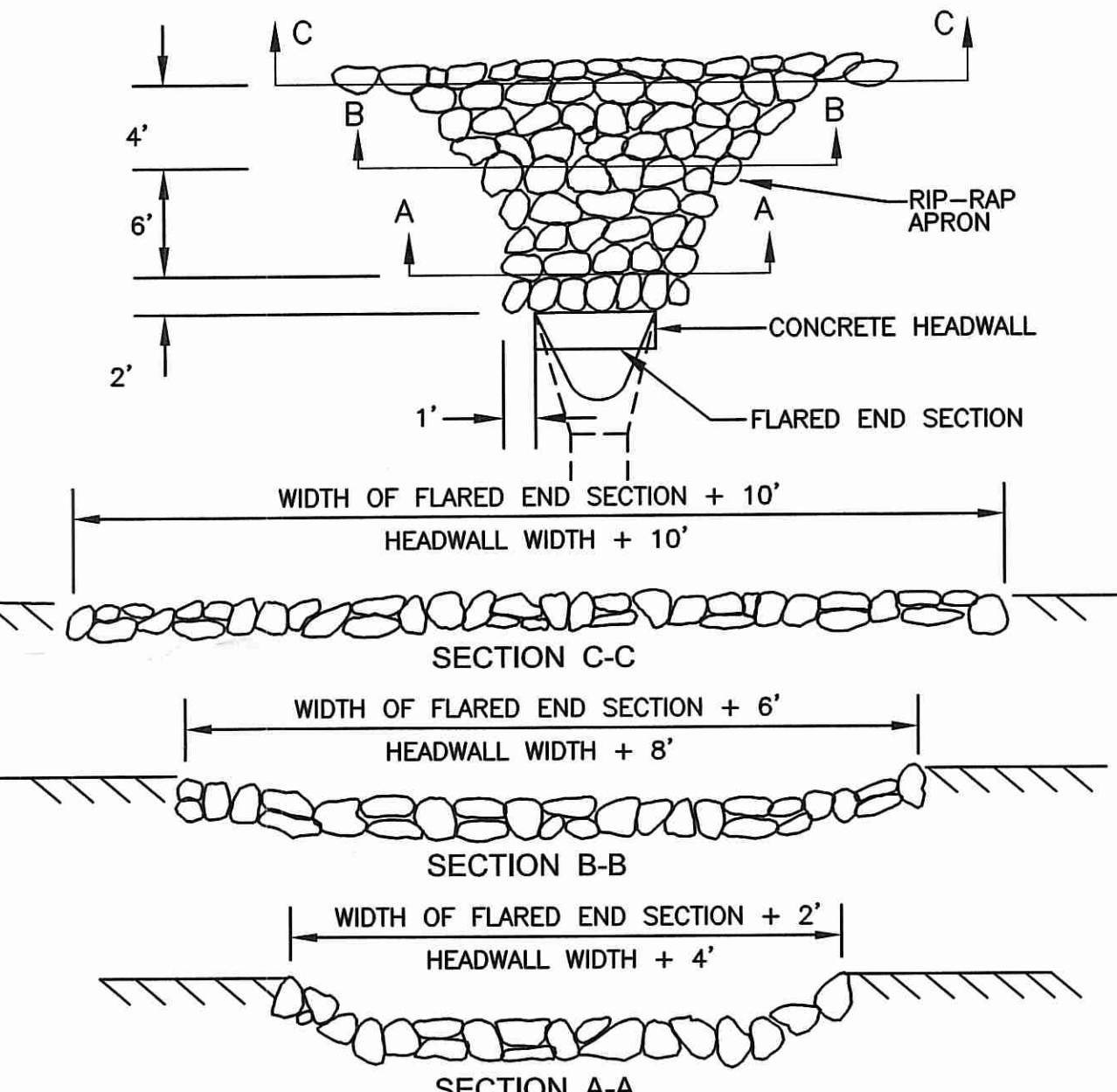


TRENCH DETAIL
NOT TO SCALE

NOTES:
1. PIPE BEDDING AND BACKFILL TO SPRING LINE SHALL CONSIST OF CRUSHED STONE-3/4" MINUS. PIPE BACKFILL SHALL CONSIST OF CRUSHED STONE (WRAPPED IN FILTER FABRIC) OR GRAVEL (3" MINUS, WITH SIEVE ANALYSIS APPROVED BY ENGINEER), OR OTHER APPROVED MATERIAL. TRENCH BACKFILL SHALL CONSIST OF SUITABLE EXCAVATED MATERIAL OR OTHER APPROVED MATERIAL. ALL BEDDING/BACKFILL TO BE COMPACTED TO 95% DRY DENSITY, MODIFIED PROCTOR METHOD.
2. ALL TRENCH EXCAVATION AND ANY SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND OSHA REGULATIONS.
3. MINIMUM TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE AT BELL PLUS 12". MAXIMUM TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE AT BELL PLUS 24".

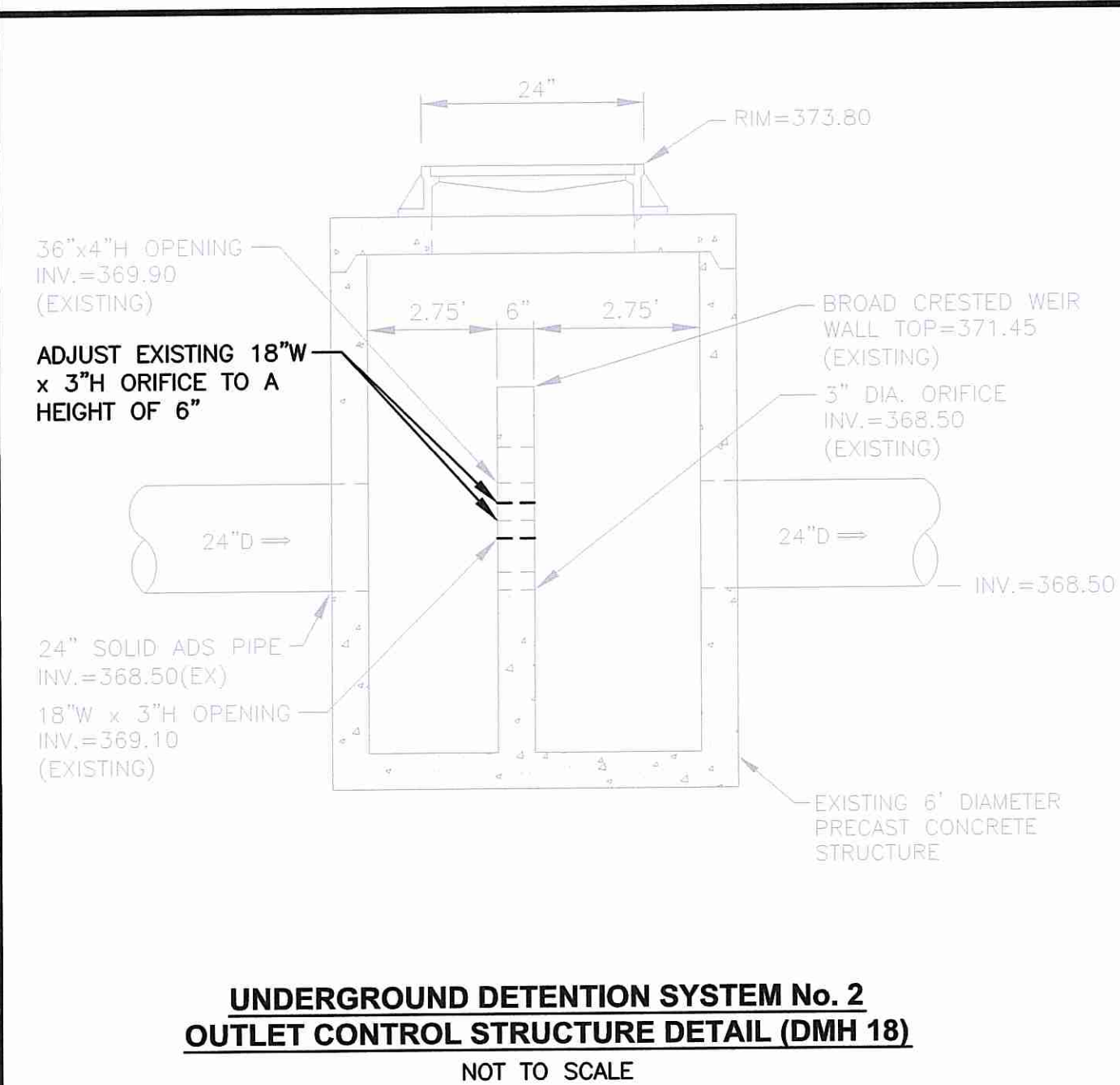


STORM DRAIN CLEAN-OUT DETAIL
NOT TO SCALE

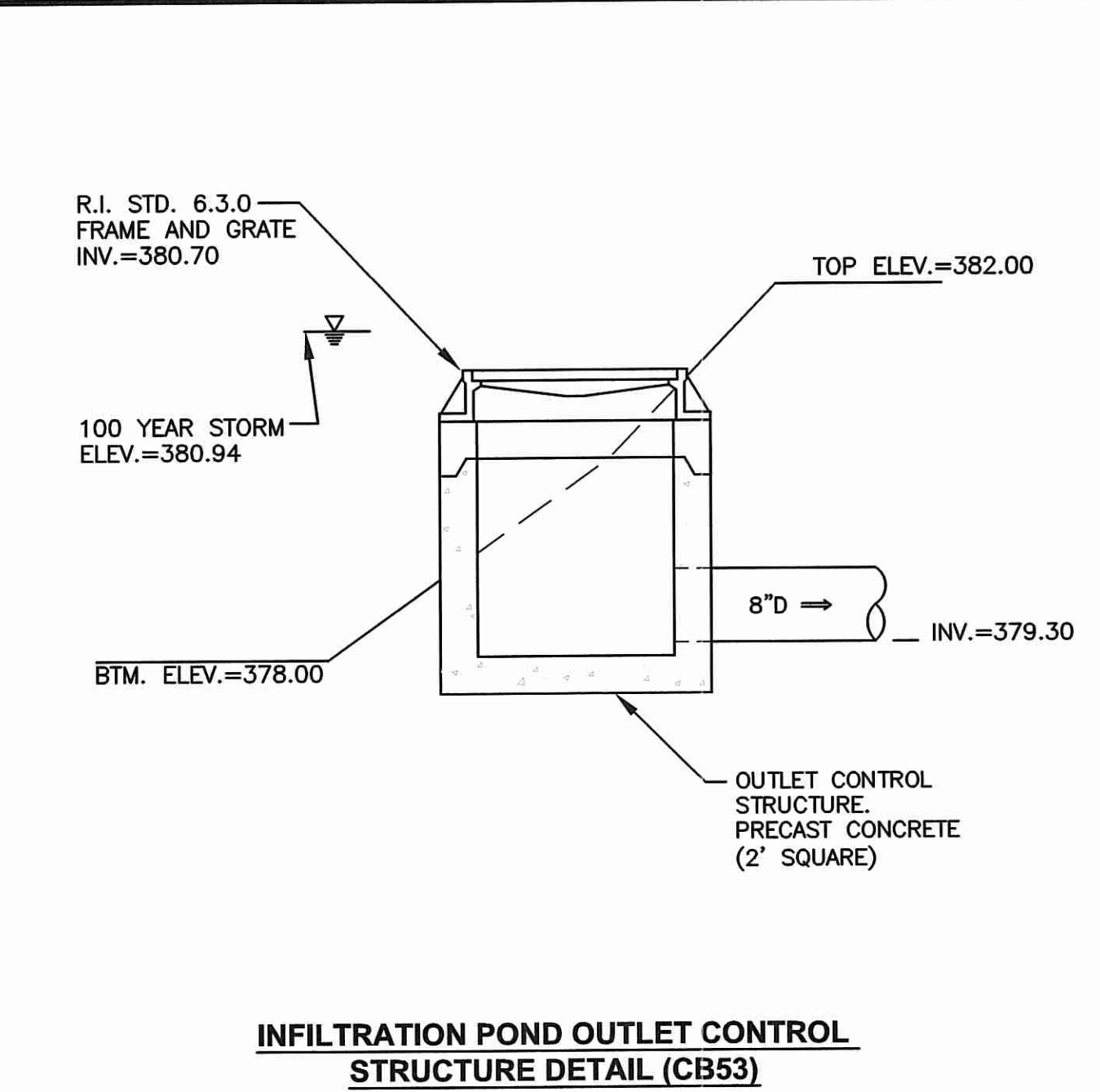


TYPICAL LAYOUT OF RIP-RAP OUTLET PROTECTION AT FLARED END SECTIONS AND CONCRETE HEADWALLS
NOT TO SCALE

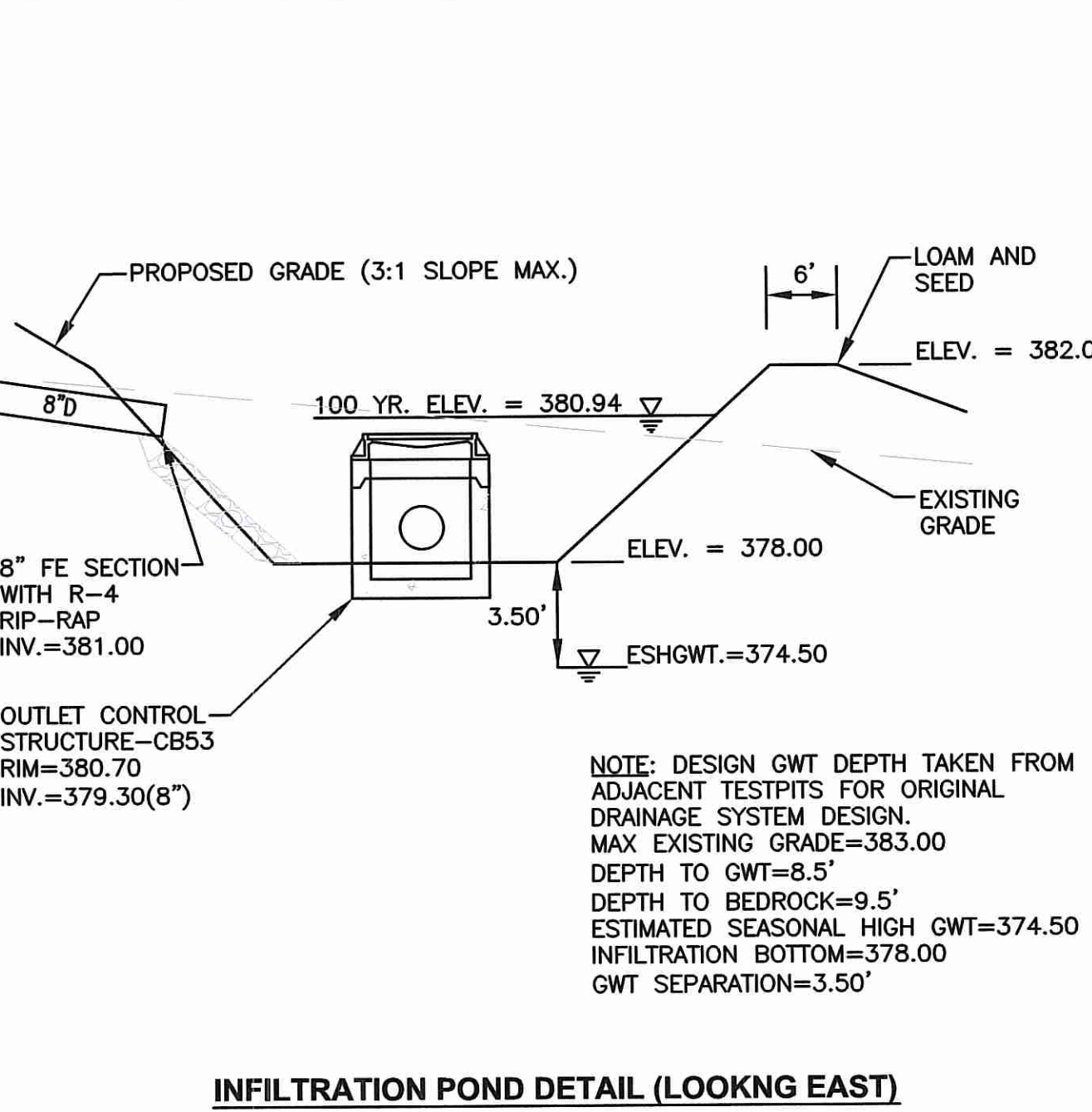
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WATER RESOURCES DIVISION
APPROVED WITH COMMENTS
AS SPECIFIED IN THE PERMIT
DATED NOV 24, 2017
NO CHANGES ALLOWED WITHOUT WRITTEN APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Hester



UNDERGROUND DETENTION SYSTEM No. 2 OUTLET CONTROL STRUCTURE DETAIL (DMH 18)
NOT TO SCALE



INFILTRATION POND OUTLET CONTROL STRUCTURE DETAIL (CB53)
NOT TO SCALE



INFILTRATION POND DETAIL (LOOKNG EAST)
NOT TO SCALE

INFILTRATION POND CONSTRUCTION NOTE

- WITHIN THE INFILTRATION SYSTEM, THE CONTRACTOR SHALL REMOVE ALL TOPSOIL AND SUBSOIL AREAS (A AND B HORIZONS) AND ANY EXISTING SOILS THAT YIELD A PERMEABILITY RATE <2.41 INCHES/HOUR. CONTRACTOR SHALL COORDINATE A BOTTOM BED INSPECTION WITH OWNER AND ENGINEER. IF NECESSARY THE AREA SHALL BE PREPARED WITH SAND FILL SOIL MEETING THE MEDIA REQUIREMENTS OF SAND FILTERS, AS DESCRIBED IN THE RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, MARCH 2015, SECTION 5.5 (ASTM C-33 SAND). THE DEPTH OF EXISTING SOIL REMOVAL SHALL BE VERIFIED BY THE ENGINEER. PLACEMENT OF THE SAND FILL (ASTM C-33 SAND), SHALL BE USED TO BRING THE BOTTOM OF BASIN TO THE DESIGN ELEVATIONS.
- INFILTRATION SYSTEM CONSTRUCTION AND MATERIALS SHALL CONFORM TO RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, MARCH 2015, APPENDIX F.3 CONSTRUCTION STANDARDS/SPECIFICATIONS FOR INFILTRATION BMP'S. AFTER CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE FINAL INSPECTIONS WITH THE OWNER IN ACCORDANCE WITH TABLE F-5 IN APPENDIX F.3.
- THE CONTRACTOR IS REQUIRED TO SUBMIT A LIST OF MATERIALS, GRADATIONS AND THE NAME AND ADDRESS OF THE SUPPLIERS TO THE ENGINEER FOR APPROVAL PRIOR TO BRINGING MATERIAL ON SITE. MATERIAL CERTIFICATIONS SHALL ALSO BE REQUIRED FOR REVIEW AND APPROVAL.
- THE CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE ABOVE REFERENCED MANUAL. THE MANUAL CAN BE FOUND AT: <http://www.dem.ri.gov/pubs/regs/water/swmanual.pdf>.
- GREAT CARE MUST BE TAKEN TO PREVENT THE INFILTRATION AREA FROM COMPACTION; BY MARKING OFF THE UNDERGROUND INFILTRATION LOCATION BEFORE THE START OF CONSTRUCTION, AND BY CONNECTING UPSTREAM DRAINAGE AREAS ONLY AFTER CONSTRUCTION IS COMPLETE AND THE CONTRIBUTING AREA IS STABILIZED.
- IF LARGE ROCKS OR BOULDERS ARE FOUND WITHIN 36" BELOW THE INFILTRATION SYSTEMS, OR WITHIN A 10' PERIMETER AROUND SYSTEM, THE CONTRACTOR SHALL REMOVE THE ROCKS/BOULDERS AND REPLACE WITH GRAVEL BORROW. CONTRACTOR SHALL COORDINATE WITH ENGINEER.

CROSSMAN ENGINEERING
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Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone: (508) 695-1700
Email: cel@crossmaneng.com

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KEY PLAN

PROJECT TITLE:
HIGHLAND HILLS
PLAT MAP 51 LOT 11
ZONING DISTRICTS
A-2, I-1, OS and R-3
HIGHLAND CORPORATE DRIVE
CUMBERLAND, RHODE ISLAND

PREPARED FOR:
A.R. BUILDING COMPANY
310 SEVEN FIELDS BOULEVARD
SEVEN FIELDS, PA
16046

DRAWING TITLE:
MISCELLANEOUS DETAILS PLAN No. 2

DATE: AUGUST 2017 **SCALE:** NO SCALE

DWG. NAME: 2035-C12-DETAIL2.dwg

REVISIONS

NUMBER	REMARKS	DATE
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DRAWING NUMBER
C12
SHEET: 15 OF 18



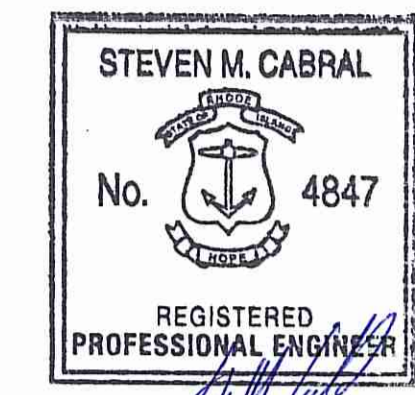
CROSSMAN ENGINEERING

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KEY PLAN

PROJECT TITLE:
HIGHLAND HILLS
PLAT MAP 51 LOT 11
ZONING DISTRICTS
A-2, I-1, OS and R-3
HIGHLAND CORPORATE DRIVE
CUMBERLAND, RHODE ISLAND

PREPARED FOR:
A.R. BUILDING COMPANY
310 SEVEN FIELDS BOULEVARD
SEVEN FIELDS, PA
16046

DRAWING TITLE:
LIGHTING PLAN

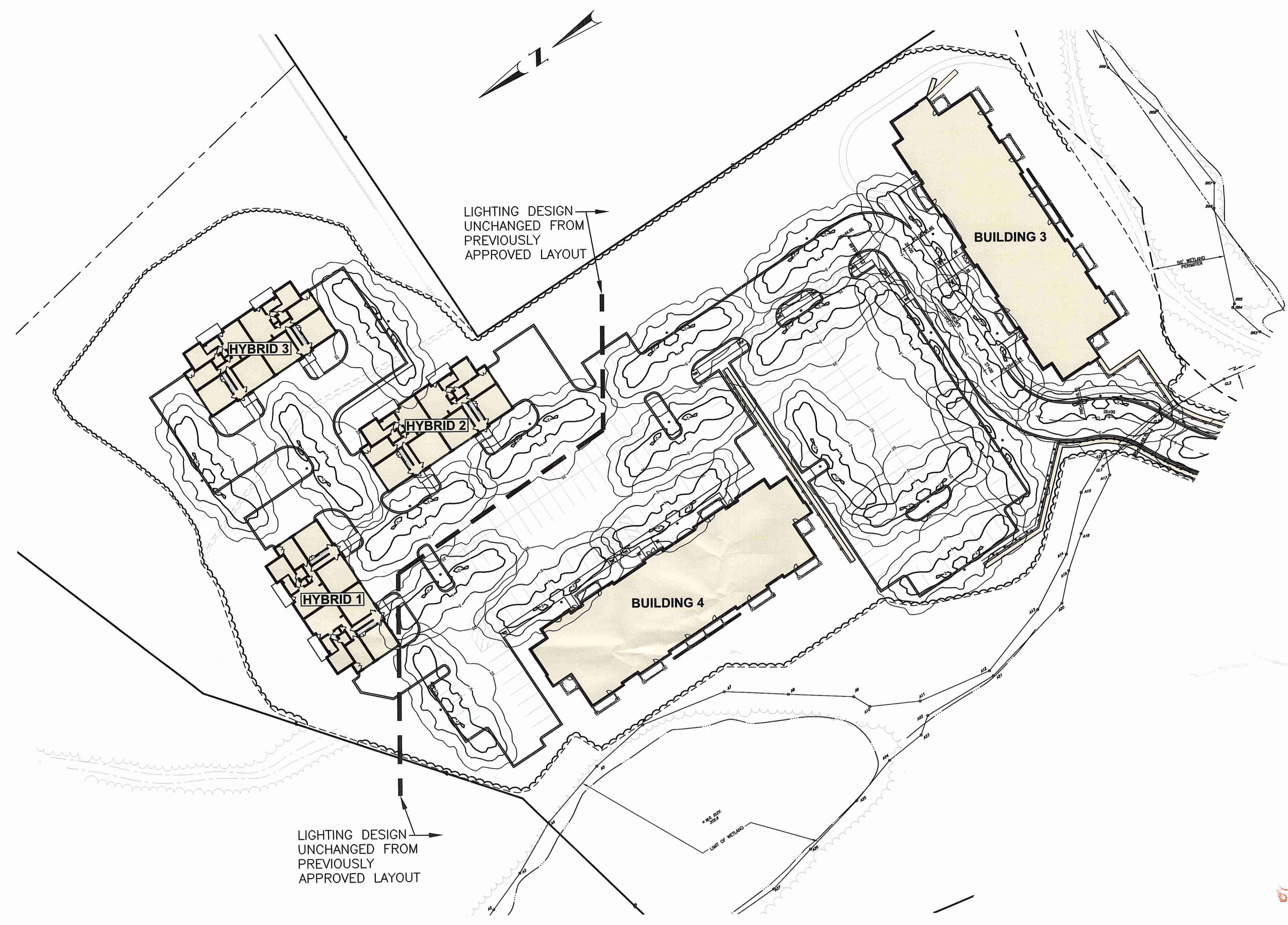
DATE: AUGUST 2017 **SCALE:** AS SHOWN

DWG. NAME: 2035-E01-LIGHT.dwg

REVISIONS

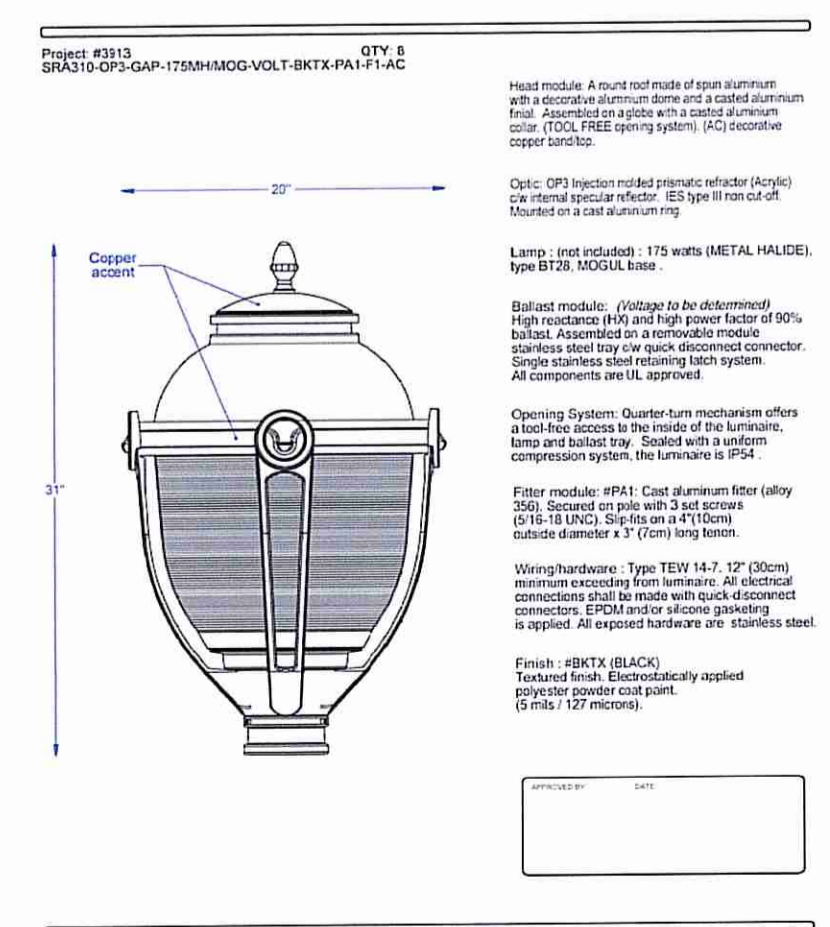
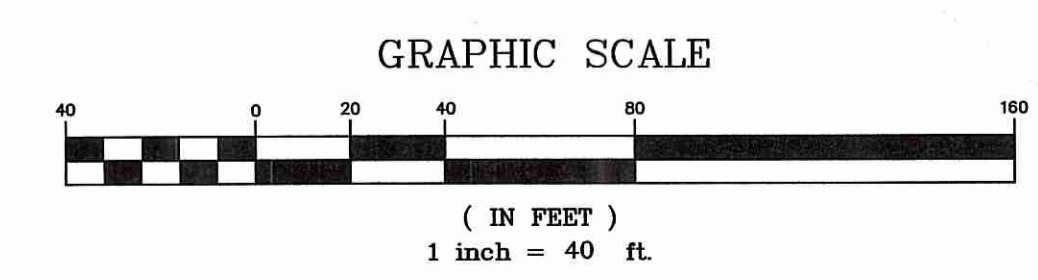
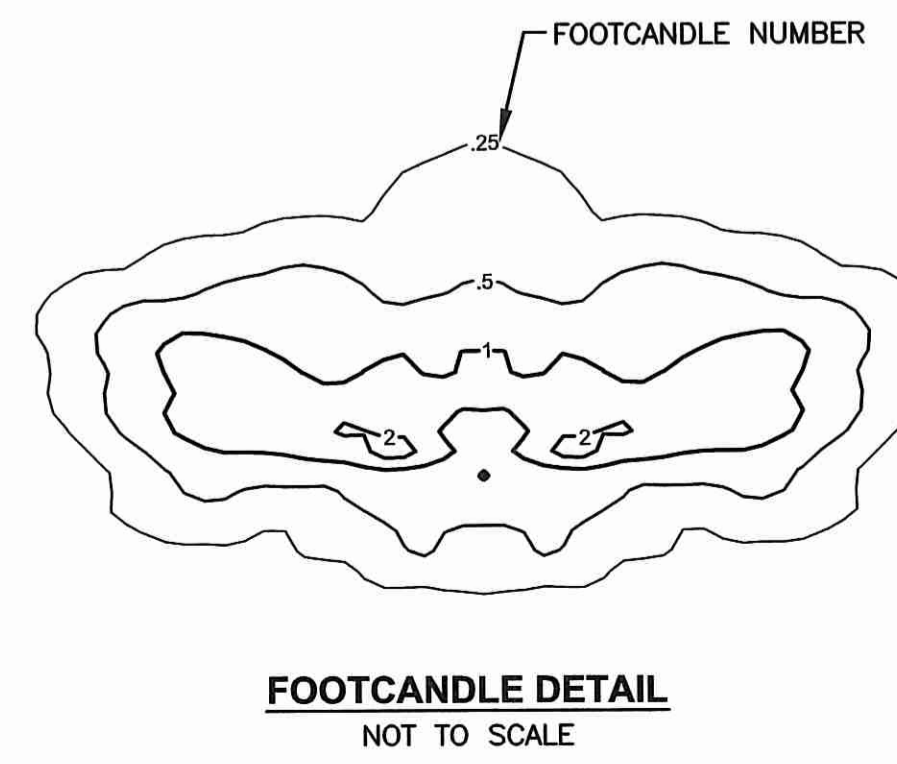
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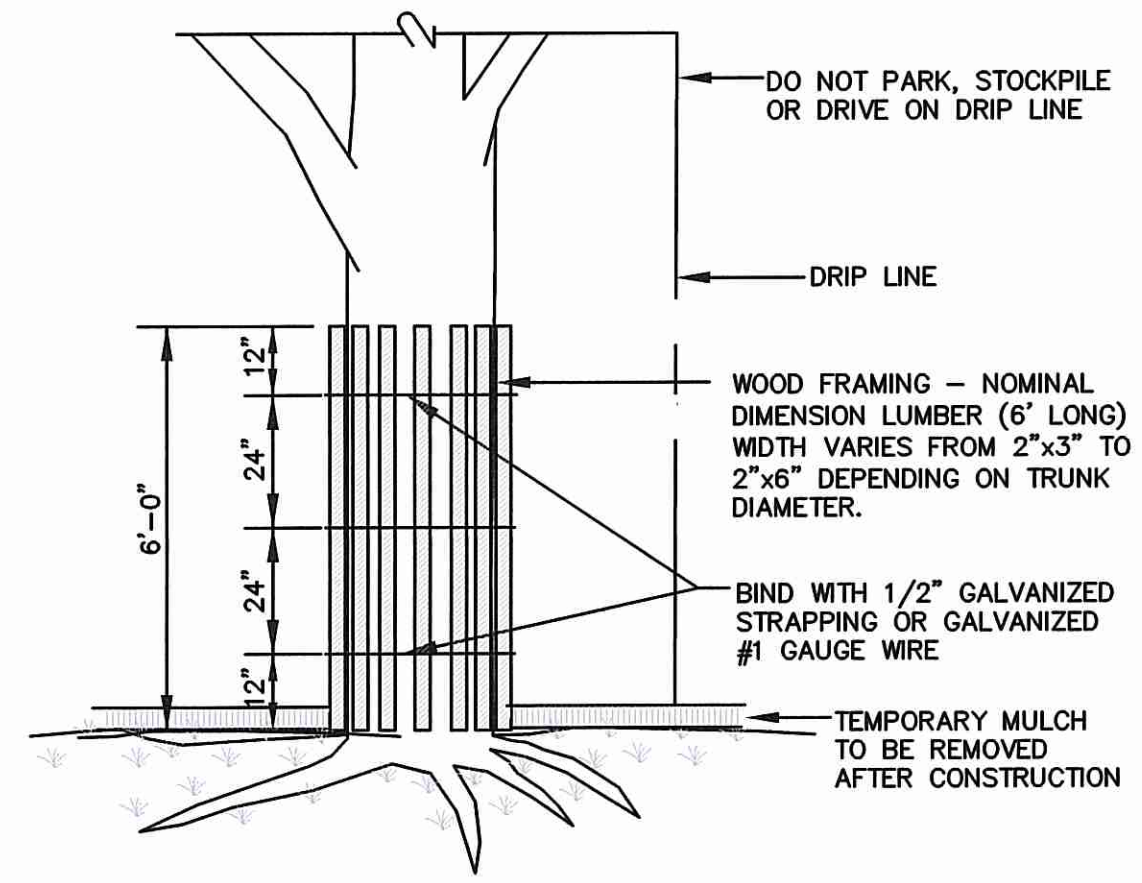
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SHEET: 16 OF 18



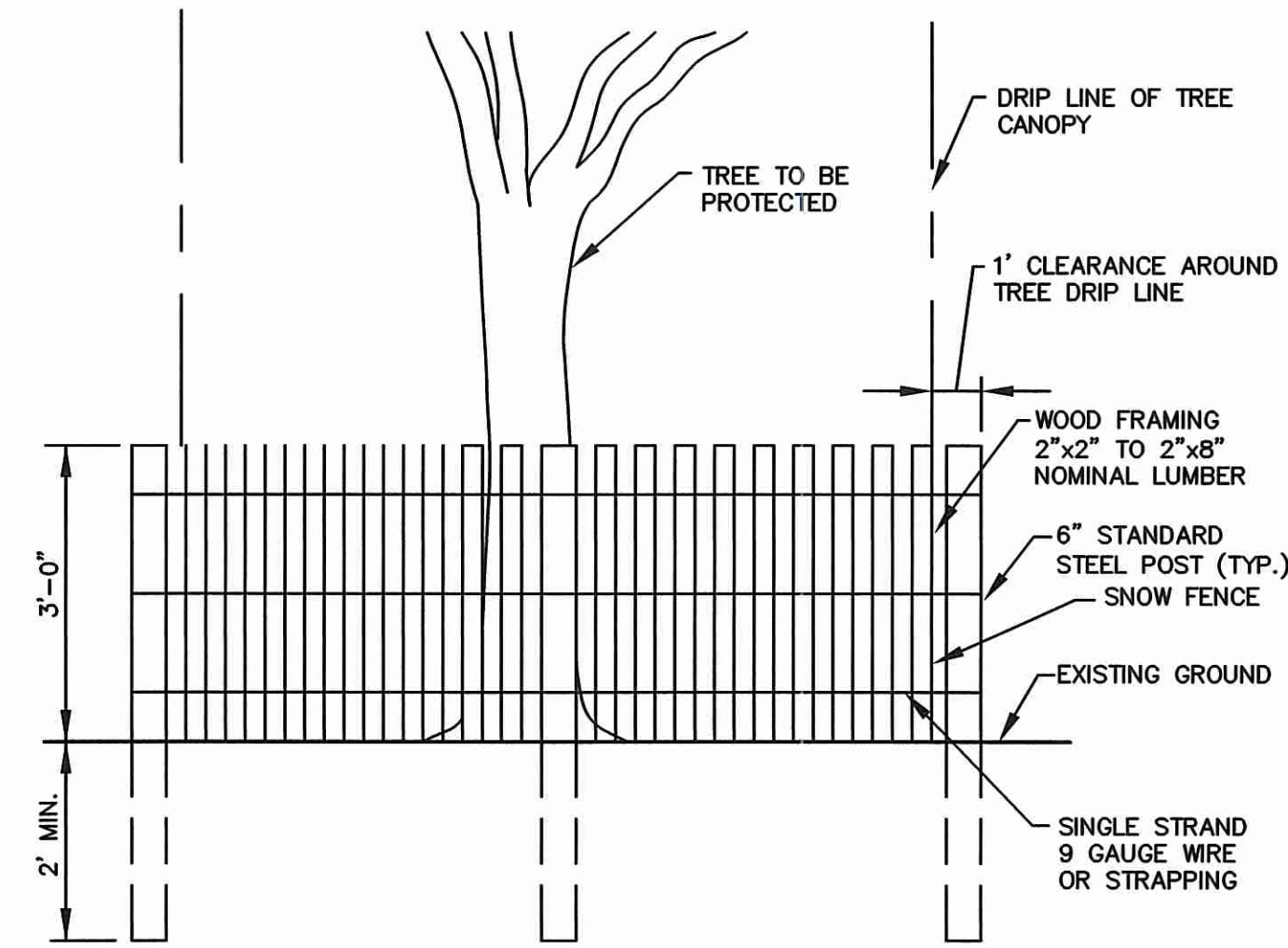
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WATER QUALITY
APPROVED WITH COMMENTS
AS SPECIFIED IN THE COMMENTS
REV 2 4 2017
DATED 8/17/17
NO CHANGES ALLOWED WITHOUT PERMIT
APPROVED BY: *Charles H. Roberts*

NOTE:
LIGHTING FIXTURE STYLE AND MANUFACTURER MAY VARY.

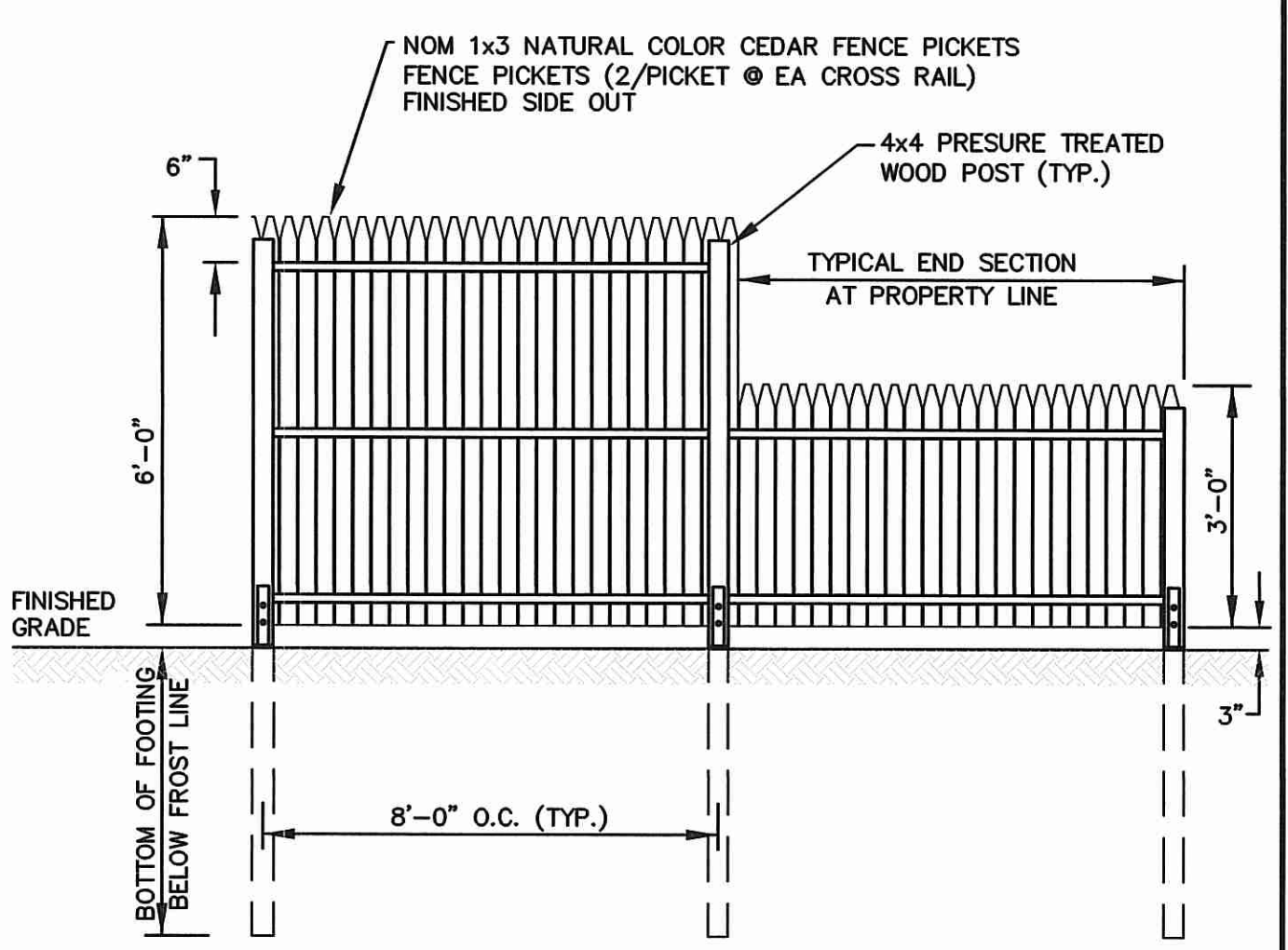




TREE TRUNK PROTECTION DEVICE DETAIL
NOT TO SCALE



DRIPLINE TREE PROTECTION DETAIL
NOT TO SCALE



STOCKADE FENCE DETAIL
NOT TO SCALE

SEEDING NOTES

1. LOAM SHALL BE SPREAD TO A MINIMUM DEPTH OF 6" OVER ALL AREAS DESIGNATED ON PLANS.
2. SHAPE AND SMOOTH THE SURFACE TO THE LINES AND GRADES AS SHOWN ON PLANS.
3. FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN A SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 3 TO 4 INCHES OF THE PLANTING SOIL. APPLY AT THE RATE OF 8 POUNDS PER 1,000 SQUARE FEET AT SEEDING.
4. LIME: SPREAD EVENLY AND WORK INTO THE SOIL DURING PREPARATION OF SEED BED AT THE RATE OF ONE TON PER ACRE. INCORPORATE INTO THE SOIL BY DICING OR OTHER APPROVED METHOD. DISTRIBUTE LIME UNIFORMLY AND WORK INTO TOP 4 INCHES OF TOP SOIL (MINIMUM) AND UNIFORMLY BLEND BY DICING OR ROTOTILLING.
5. APPLICATION OF SEED:
 - A. RATE OF APPLICATION OF SEED SHALL BE 8 POUNDS PER 1,000 SQUARE FEET OR AS INDICATED ON PLANS.
 - B. SEEDING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS, AND ONLY DURING THE FOLLOWING DATES:
 - SPRING SEEDING: MARCH 15 TO MAY 31
 - FALL SEEDING: AUGUST 15 TO OCTOBER 15
 - C. THE CONTRACTOR SHALL KEEP ALL SEEDING AREAS WATERED AND IN GOOD CONDITION, RESEEDING IF AND WHEN NECESSARY FOR AN 8 WEEK PERIOD UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA. THE CONTRACTOR SHALL ALSO MAINTAIN THESE AREAS IN AN APPROVED CONDITION UNTIL PROVISIONAL ACCEPTANCE.
 - D. DURING THIS PERIOD, WATER TURF AS NECESSARY TO MAINTAIN AN ADEQUATE SUPPLY OF MOISTURE WITHIN THE ROOT ZONE. AN ADEQUATE SUPPLY OF MOISTURE IS EQUIVALENT TO ONE INCH OF ABSORBED WATER PER WEEK THAT IS DELIVERED AT WEEKLY INTERVALS IN THE FORM OF NATURAL RAIN OR IS AUGMENTED AS REQUIRED BY PERIODIC WATERING.
 - E. OVERSEED WHEN NECESSARY TO PROMOTE GRASS GROWTH.
 - F. REPLANT AREAS VOID OF TURF ONE SQUARE FOOT OR LARGER.
6. SEED:
 - a. SEED ALL AREAS DESIGNATED ON PLAN AS WELL AS ALL DISTURBED EXISTING AREAS WITH THE FOLLOWING SEED MIX:

SEED MIX No. 1
(SLOPES, MEADOWS AND GENERAL RESTORATION AREA)

TYPE	% BY WEIGHT
CREeping RED FESCUE	70
ASTORIA BENTGRASS	5
BIRDFOOT TREFOL	15
PERENNIAL RYE GRASS	10

APPLICATION RATE = 200 lbs. / ACRE

SEED MIX No. 2
(MOWED AREAS)

TYPE	% BY WEIGHT
NASSAU KENT BLUE	60
JAMESTOWN CHEWINGS FESCUE	20
PALMER PERENNIAL RYE GRASS	20

APPLICATION RATE = 200 lbs. / ACRE

SEED MIX No. 3
(DETENTION/RETENTION AREAS)

TYPE	% BY WEIGHT
CREeping RED FESCUE	28
TALL FESCUE	24
PERENNIAL RYE GRASS	18
LITTLE BLUESTEM	15
REDTOP	4
NORTHEAST WILDFLOWER MIX	4

APPLICATION RATE = 220 lbs. / ACRE OR 5 LBS. PER 1,000 S.F.

SEED MIX No. 4
(BIO-DETENTION AREAS)

TYPE	% BY WEIGHT
HARD FESCUE	60
SHEEP FESCUE	40

APPLICATION RATE = 25-50 LBS./ACRE

SEED MIX No. 5
(WETLAND AREAS)

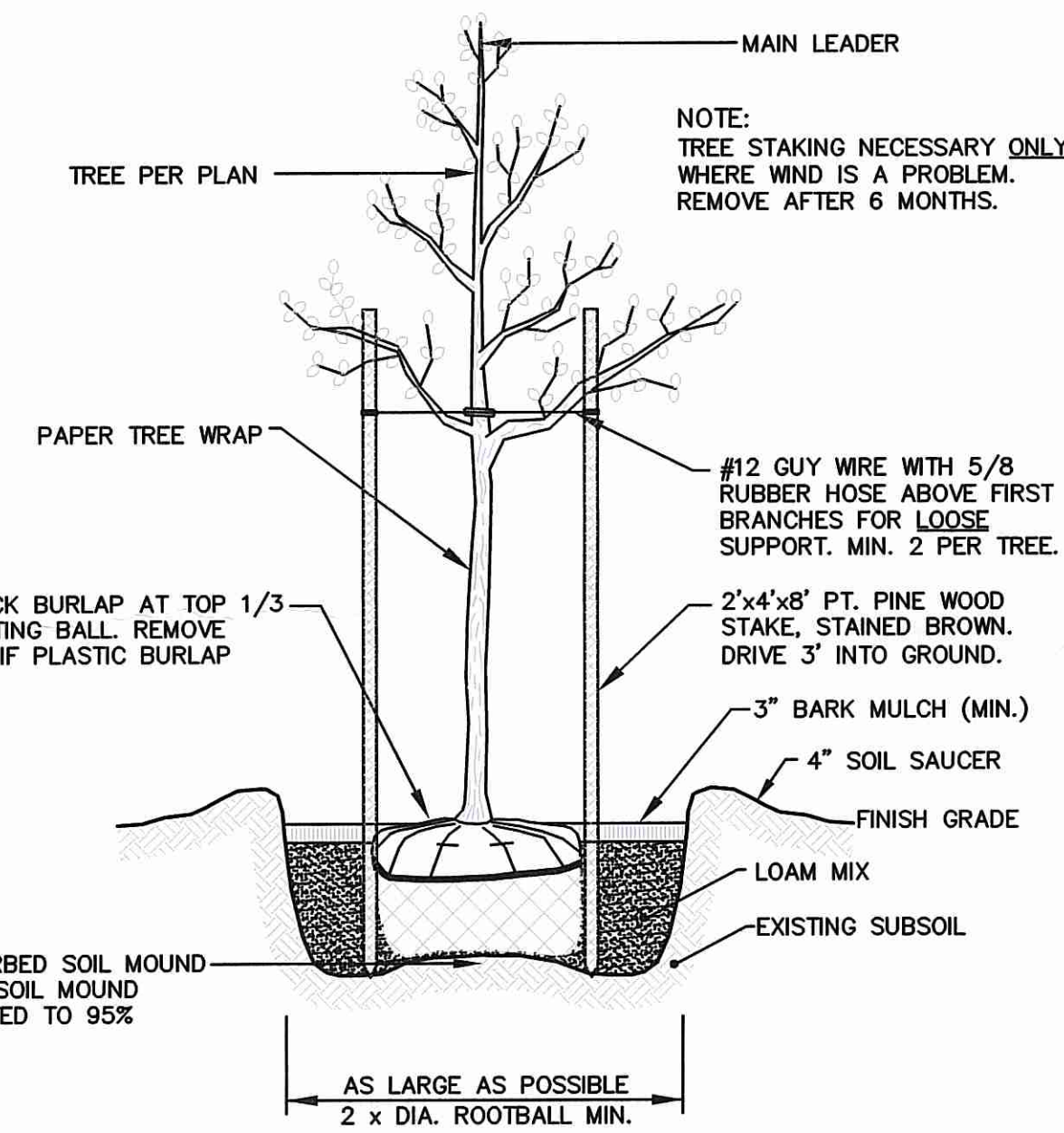
TYPE	% BY WEIGHT
REDTOP (AGROSTIS STOLONIFERA)	25
DEET TONGUE (PANICUM CLANDESTINUM)	20
BLUEJOINT GRASS (CALAMAGROSTIS CANAD.)	20
ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)	10
SWITCHGRASS (PANICUM VIGATUM)	10
JOE PYE WEED (EUPATORIUM FISTULOSUM)	5
YELLOW FLAG IRIS (IRIL VERSICOLOR)	5
RICEGRASS (LEERSIA ORYZOIDES)	5

APPLICATION RATE = 60 lbs. / ACRE

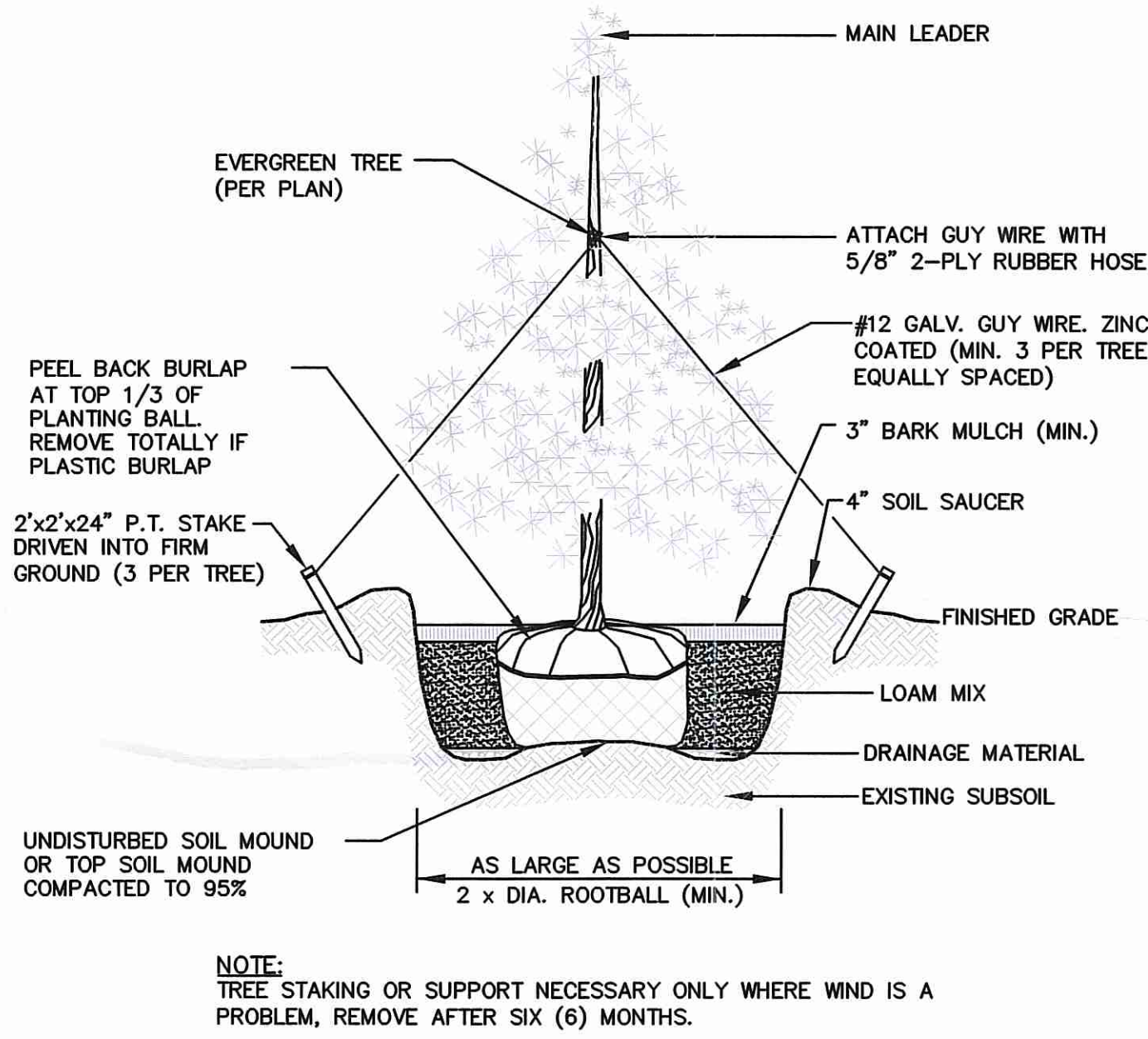
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER QUALITY
FRESHWATER DIVISION
APPROVED
AS SPECIFIED IN THE
DATED NOV 2 & 2017
NO CHANGES ALLOWED WITHOUT APPROVED PLANS MUST BE

LANDSCAPE CONSTRUCTION NOTES

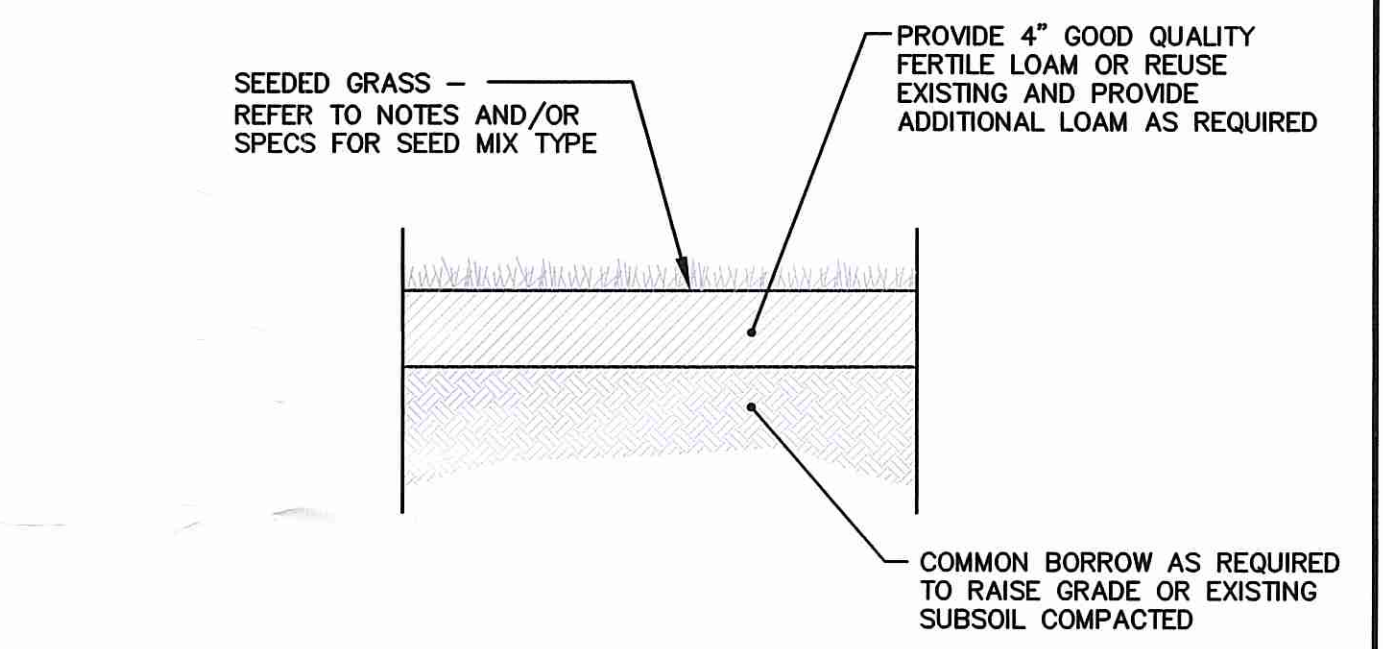
1. FURNISH AND INSTALL ALL PLANTS SHOWN ON THE DRAWINGS SPECIFIED HEREIN, AND IN THE QUANTITIES LISTED ON THE PLANT LIST. NO SUBSTITUTIONS WILL BE PERMITTED, UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.
2. LOAM TO BE SCREENED, GOOD QUALITY, FERTILE, FREE OF WEEDS, STICKS, STONES OVER 3/4", AND ROOTS. SPREAD TO A MINIMUM OF 6" OVER ALL PLANTED AREAS.
3. BIO-DETENTION AREAS-PLANTING SOIL AND MULCH: LOAMY SAND TO A SANDY LOAM-80% SAND <20% SILT, <2% CLAY. WELL AGED GRADED COMPOST (25% OF SOIL MIX). WELL AGED, AERATED DARK BROWN HARD-WOOD MULCH (AGED 6 MONTHS).
4. NURSERY STOCK SHALL MEET THE STANDARDS OF THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION AS TO GRADING AND QUALITY.
5. ONLY NURSERY-GROWN PLANTS, GROWN IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICES, AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS, WILL BE ACCEPTED.
6. SET PLANTS PLUMB AND AT A LEVEL THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. SETTLE BACKFILL MATERIAL FOR PLANTS, THOROUGHLY AND PROPERLY BY FIRING OR TAMPING. FORM SAUCERS, CAPABLE OF HOLDING WATER. ABOUT INDIVIDUAL PLANTS, BY PLACING RIDGES OF PLANTING SOIL AROUND EACH.
7. STAKE ALL TREES OVER 5 FEET AS SHOWN ON PLANS. REMOVE STAKES AT THE END OF THE GUARANTEE PERIOD.
8. WATERING: WATER ALL PLANTS WITHIN 48 HOURS AFTER PLANTING, IF CONDITIONS WARRANT, AND AS MANY TIMES THEREAFTER TO SUSTAIN HEALTHY CONDITIONS UNTIL LANDSCAPE INSTALLATION IS COMPLETED. SATURATE THE SOIL AROUND EACH PLANT THOROUGHLY AT EACH WATERING.
9. PRUNING: PRUNE PLANTS, AS DIRECTED BY OWNER, AT THE PROJECT SITE BEFORE OR IMMEDIATELY AFTER PLANTING IN ACCORDANCE WITH THE BEST HORTICULTURAL PRACTICE. CUT BROKEN, DEAD OR INJURED BRANCHES IMMEDIATELY ABOVE THE STEM COLLAR ON THE TRUNK OR LIMB. PRUNE ALL BROKEN ROOTS ON THE PLANT SIDE OF THE BREAK. PAINT CUTS OVER 3/4" IN DIAMETER WITH TREE WOUND PAINT. PRUNING SHALL NOT DEFORM OR OTHERWISE DESTROY THE TYPICAL SHAPE OR SYMMETRY OF THE PLANT, AND SHALL NOT REDUCE THE HEIGHT BY MORE THAN ONE-THIRD. DO NOT CUT BACK THE LEADER OF THE PLANT UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
10. FERTILIZING: FERTILIZE SHRUB BEDS WITH 10-6-4 FERTILIZER BROADCAST AT A RATE OF THREE POUNDS PER 100 SQUARE FEET OF SURFACE AREA BROADCAST. APPLY THE FERTILIZER UNIFORMLY TO THE SURFACE BEDS AND WORK INTO THE UPPER TWO INCHES OF SOIL. FERTILIZE INDIVIDUAL TREES AT A RATE OF ONE AGRIFORM PELLET PER INCH OF TRUNK DIAMETER (FOLLOW MANUFACTURER'S WRITTEN INSTRUCTIONS). APPLY A SECOND APPLICATION OF FERTILIZER TO ALL PLANT ITEMS AT THE SAME SPECIFIED RATES OVER THE MULCH AT THE END OF AN EIGHT WEEK PERIOD.
11. LIMING: ADD POWDERED LIME EVERY SIX MONTHS - OR SLOW RELEASE GRANULAR LIME-AS PER MANUFACTURER'S INSTRUCTION.
12. MULCHING: WITHIN A 72 HOUR PERIOD AFTER PLANTING, COVER ALL PLANTED AREAS WITH 3" DARK HEMLOCK MULCH. NO RED OR DYED MULCH IS TO BE USED. MULCH SHOULD BE PULLED ONE INCH AWAY FROM PLANT TRUNK OR STEM, AND NOT ALLOWED TO REST DIRECTLY AGAINST THE TRUNK OR STEM.
13. GUARANTEE: ALL PLANTS FURNISHED BY THE CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER PRELIMINARY INSPECTION AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD. ALL DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED AT ONCE BY THE CONTRACTOR, FREE OF CHARGE.



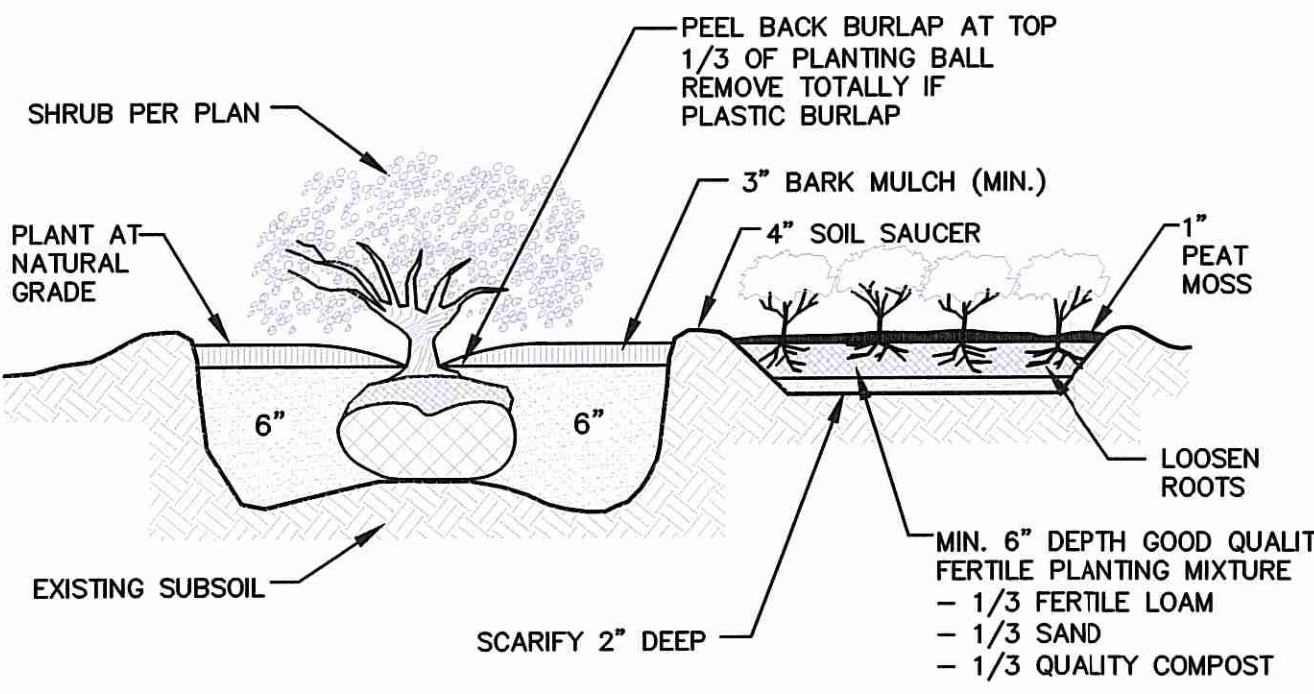
DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



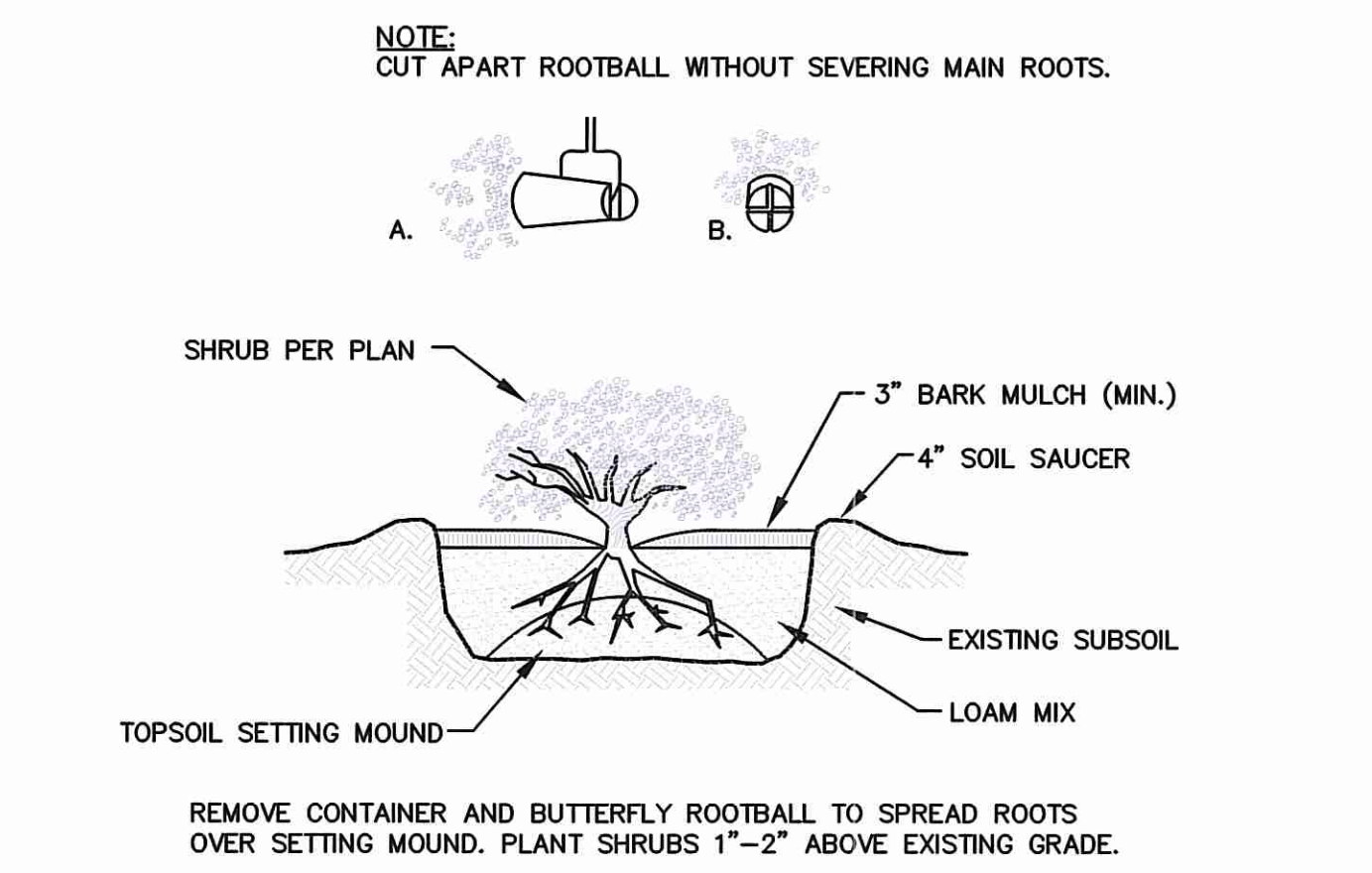
EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



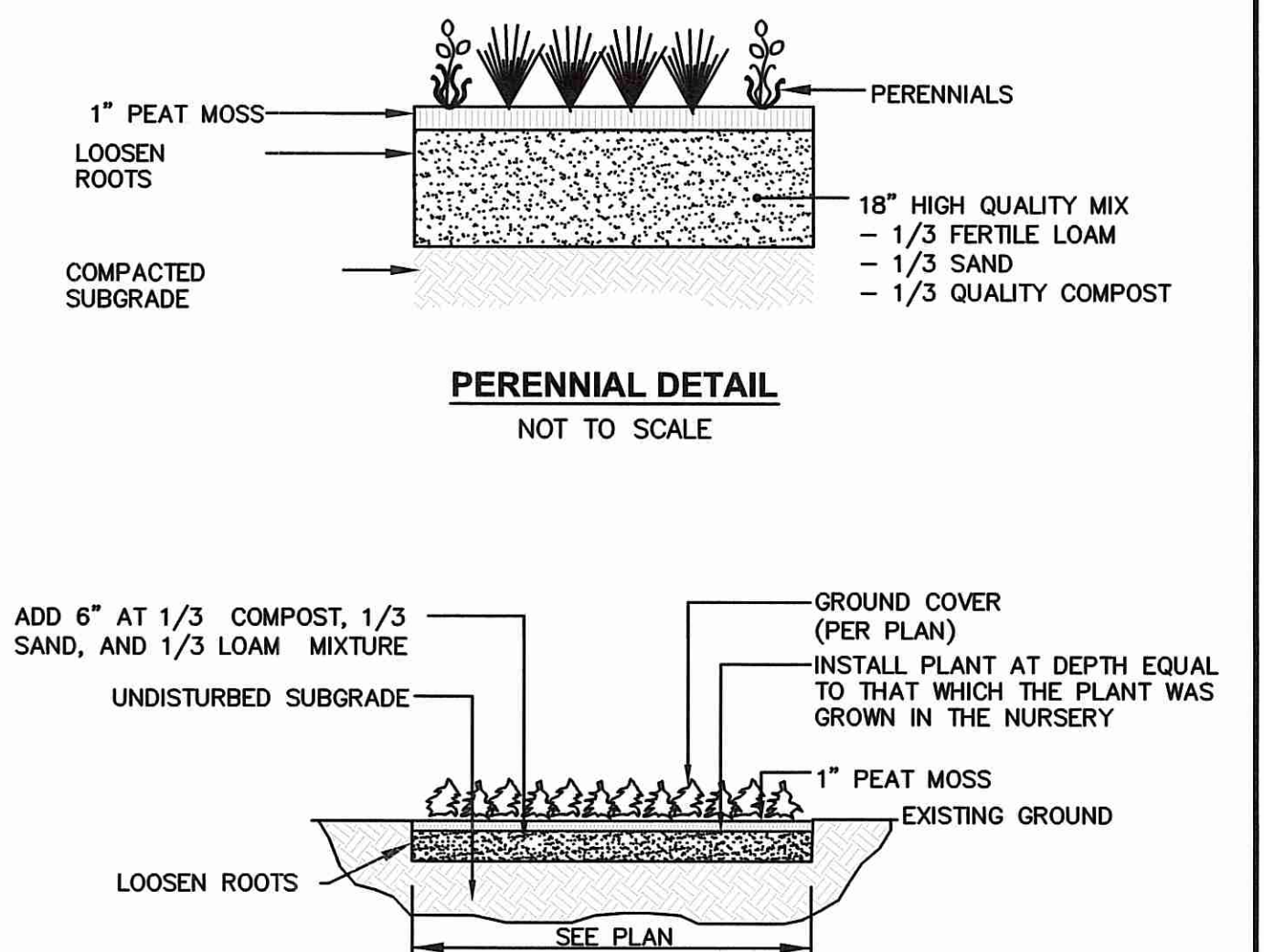
LOAM-SEED DETAIL
NOT TO SCALE



SHRUB and GROUNDCOVER PLANTING DETAIL
NOT TO SCALE



CONTAINER GROWN PLANTING DETAIL
NOT TO SCALE

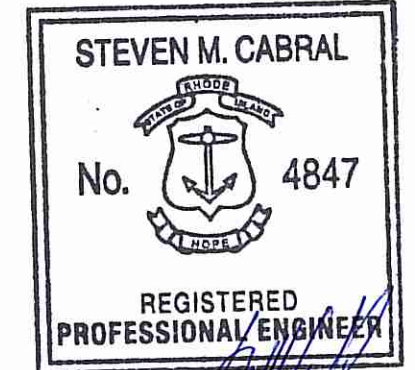


PERENNIAL and GROUNDCOVER PLANTING DETAIL
NOT TO SCALE

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KEY PLAN

PROJECT TITLE:

HIGHLAND HILLS
PLAT MAP 51 LOT 11
ZONING DISTRICTS
A-2, I-1, OS and R-3

HIGHLAND CORPORATE DRIVE
CUMBERLAND, RHODE ISLAND

PREPARED FOR:

A.R. BUILDING COMPANY

310 SEVEN FIELDS BOULEVARD
SEVEN FIELDS, PA
16046

DRAWING TITLE:

LANDSCAPING
DETAIL PLAN

DATE: AUGUST 2017 SCALE: NO SCALE
DWG. NAME: 2198-L02-LNDET.dwg

REVISIONS

NUMBER	REMARKS	DATE
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DRAWING NUMBER
L2
SHEET: 18 OF: 18