40B COMPREHENSIVE PERMIT

THE VILLAGES AT CRICKET LANE

BYFIELD, MA

DATE: JANUARY 22, 2020

REV: AUGUST 17, 2020

PREPARED FOR:

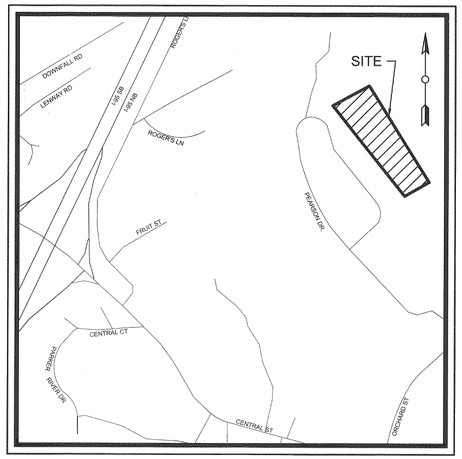
OWNER/DEVELOPER

CRICKET ROAD DEVELOPMENT, LLC

92 MIDDLESEX ROAD

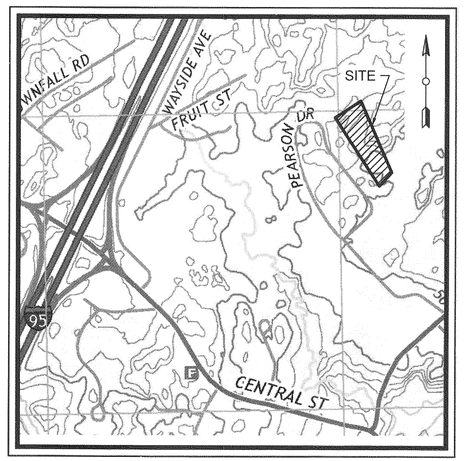
TYNGSBOROUGH MA, 01879

INDEX OF DRAWINGS



LOCATION MAP

Scale: N.T.S



USGS MAP

Scale: N.T.S.

THE LAW REQUIRES NOTIFICATION
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PREPARED BY:

RANGER ENGINEERING GROUP, INC

Ranger Engineering Group, Inc.
13 Branch Street, Suite 101
Methuen, MA 01844
Tel: 978-208-1762
rangereng.com

NOT FOR CONSTRUCTION

Ranger Engineering Group, Inc.
13 Branch Street, Suite 101
Methuen MA 01844
Tel: 978-208-1762
rangereng.com

THE VILLAGE AT CRICKET LANE
BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

COVER SHEET

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO
1	08/26/2020	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS0001

SHEET 1 OF 19

O:\MYPROJECTS\CRICKET DEVELOPMENT\DESIGN_PUBLISH\CS0001-CS0000.dwg PLOTTED: 8/17/2020 11:01 AM BY: Olin Richter PLOTSTYLE: TTI Env ANSI.stb PROJECT STATUS: —

ABBREVIATIONS

ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BOS	BOTTOM OF SLOPE
CB	CATCH BASIN
CCB	CAPE COD BERM
CLDI	CEMENT LINED DUCTILE IRON
C.L.F.	CHAIN LINK FENCE
CONC	CONCRETE
COND	CONDUIT
DCB	DOUBLE CATCH BASIN
DH	DRILL HOLE
DMH	DRAIN MANHOLE
DS	DOWN SPOUT
ELEV	ELEVATION
EOG	EDGE OF GRASS
EQ	EQUAL
ESHGW	ESTIMATED SEASONAL HIGH GROUND WATER
EXIST	EXISTING
FDN	FOUNDATION
FES	FLARED END SECTION
FND	FOUND
FP	FIRE PROTECTION SERVICE
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GF	GARAGE FLOOR
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HAND PIT
HYD	HYDRANT
INV	INVERT ELEVATION
IP	IRON PIPE
IR	IRON ROD
L/A	LANDSCAPE AREA
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OCS	OUTLET CONTROL STRUCTURE
OE	OVERHEAD ELECTRIC
OWS	OIL WATER SEPARATOR
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PERF	PERFORATED
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE PIPE
PWW	PAVED WATER WAY
RCP	REINFORCED CONCRETE PIPE
REM	REMOVE
REMOD	REMODEL
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
SGC	SLOPE GRANITE CURB
SMH	SEWER MANHOLE
STR	STRUCTURE
SW	SIDEWALK
TOS	TOP OF SLOPE
TSV&B	TAPPING SLEEVE, VALVE AND BOX
TYP	TYPICAL
UGD	UNDERGROUND DETENTION SYSTEM
UGU	UNDERGROUND UTILITY
VCP	VITRIFIED CLAY PIPE
WCR	WHEEL CHAIR RAMP
WTF	WATER TANK FEED
WQU	WATER QUALITY UNIT

GENERAL NOTES:

1. EXISTING CONDITIONS INFORMATION

   A. BASE PLAN:

      a. THE LOCUS IS SHOWN ON TOWN OF NEWBURY ASSESSOR'S MAP R-20 LOT 75, LOCATED IN ZONING DISTRICT AGRICULTURAL-RESIDENTIAL (R-AG) AND IS KNOWN AS 55 PEARSON DRIVE (BYFIELD) NEWBURY, MA 01922.

      b. TOPOGRAPHY SHOWN ON THIS PLAN IS A RESULT OF A FIELD SURVEY PERFORMED BY TTI ENVIRONMENTAL, INC. DURING DECEMBER 2015.

      c. DEED REFERENCE: BOOK 34428 PAGE 106, ESSEX COUNTY REGISTRY OF DEEDS.

      d. WETLANDS DELINEATION BY RIMMER ENVIRONMENTAL INC. IN DECEMBER 2015 AND UPDATED IN OCTOBER AND NOVEMBER 2017.

      e. TEST PITS PERFORMED BY TTI ENVIRONMENTAL IN NOVEMBER 2015 AND BY RANGER ENGINEERING AND DESIGN, LLC IN NOVEMBER 2017.

   B. REFERENCES

      a. PLAN BOOK 152, PLAN 63, "DEFINITIVE PLAN, HIGHFIELDS NEWBURY, MASSACHUSETTS, PREPARED BY PORT ENGINEERING ASSOCIATES, INC. DATED:AUG. 1978, SCALE: 1"=100';

      b. PLAN BOOK 396, PLAN 5, "APPROVAL NOT REQUIRED PLAN, PIKE DEVELOPMENT LLC, ORCHARD STREET NEWBURY, MASSACHUSETTS, PREPARED BY CAMMETT ENGINEERING, DATED:11-06-05, SCALE: 1"=40'.

   C. UTILITIES:
      THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE.

      THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR IS TO CONTACT "DIG SAFE" AT 1-888-344-7233, 72 HOURS PRIOR TO ANY EXCAVATION PERFORMED ON SITE.

2. MATERIALS
   A. CURBING:
      ON SITE:
      ALL CURBING ON SITE SHALL BE SLOPED GRANITE CURB (SGC) WITH A 6 INCH VERTICAL REVEAL UNLESS OTHERWISE NOTED.

   B. BITUMINOUS CONCRETE PAVEMENT:

      ROADWAYS:
      SURFACE COURSE: 1-1/2 INCH BITUMINOUS TOP COURSE (M3.11.00)
      BINDER COURSE: 2-1/2 INCHES BITUMINOUS BINDER COURSE (M3.11.00)
      GRAVEL BASE COURSE: 6 INCHES SELECT COMPACTED DENSE GRADES CRUSHED STONE FOR SUBBASE (M2.01.7)
      GRAVEL BASE COURSE: 6 INCHES SELECT COMPACTED SUBBASE (M1.030 TYPE C)

      PARKING AREAS & RESIDENTIAL DRIVEWAYS:
      SURFACE COURSE: 1 INCH BITUMINOUS TOP COURSE (M3.11.00)
      BINDER COURSE: 2 INCHES BITUMINOUS BINDER COURSE (M3.11.00)
      GRAVEL BASE COURSE: 8 INCHES SELECT COMPACTED GRANULAR FILL (M1.030 TYPE C)

   C. BITUMINOUS CONCRETE SIDEWALK:
      SURFACE COURSE: 1 INCH BITUMINOUS TOP COURSE (M3.11.00)
      BINDER COURSE: 1-1/2 INCHES BITUMINOUS BINDER COURSE (M3.11.00)
      GRAVEL BASE COURSE: 8 INCHES SELECT COMPACTED GRANULAR FILL (M1.030 TYPE C)

   D. LANDSCAPE AREAS:
      ALL DISTURBED AREAS NOT COVERED BY STRUCTURES OR PAVEMENT AND NOT OTHERWISE SPECIFIED ON THE LANDSCAPE PLAN SHALL RECEIVE 6 INCHES OF TOPSOIL (M1.07.0). THESE AREAS ARE TO BE SEEDED AND WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED OR MULCHED AS DIRECTED BY THE ARCHITECT.

   E. DISTURBED AREAS:
      AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

   F. LAYOUT DIMENSIONS:
      LAYOUT DIMENSIONS ARE FROM FACE OF BUILDINGS, RETAINING WALLS, CURBS OR BERMS.

   G. TRAFFIC CONTROLS:
      ALL SITE SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

   H. ADA CONFORMANCE:
      ALL HANDICAPPED ACCESSIBLE RAMPS AND SIDEWALKS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE AMERICANS WITH DISABILITIES ACT AND THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (WHICHEVER IS MORE RESTRICTIVE).

3. UTILITIES
   A. EXISTING UTILITIES:
      THE LOCATION AND ELEVATIONS OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON THE SURVEY NOTED ABOVE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND PRIOR TO ORDERING STRUCTURES.

   B. PRIVATE UTILITIES:
      THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE OR ELECTRIC). FINAL DESIGN AND LOCATIONS AT THE BUILDING WILL BE PROVIDED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE UTILITY CONNECTIONS WITH THE RESPECTIVE UTILITY COMPANIES PRIOR TO ANY UTILITY CONSTRUCTION OR DEMOLITION.

   C. EXTERIOR LIGHTING:
      ONSITE LIGHTING SHALL BE SOLAR POWERED STREET LIGHTS.

   D. STORM DRAINAGE:
      STORM DRAIN PIPING SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) WITH CORRUGATED EXTERIOR, SMOOTH LINED WITH LOCK TIGHT JOINTS UNLESS OTHERWISE NOTED ON THE GRADING & DRAINAGE PLAN.

   E. PROPOSED STRUCTURES:
      RIM ELEVATIONS OF PROPOSED DRAINAGE MANHOLES AND ASSOCIATED STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS. ARE TO BE SET FLUSH AND CONSISTENT WITH THE GRADING PLAN. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, GAS GATES AND OTHER UTILITIES TO FINISH GRADE WITHIN LIMITS OF WORK.

   F. GENERAL CONSTRUCTION REQUIREMENTS:
      a. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD, THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

      b. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATION REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.

LEGEND: EXISTING

	HYDRANT
SMH	SEWER MANHOLE
DMH	DRAIN MANHOLE
EMH	ELECTRIC MANHOLE
TMH	TELEPHONE MANHOLE
MH	MANHOLE (UNKNOWN TYPE)
CB	CATCH BASIN
	AREA DRAIN
	METAL COVER
	LIGHT POLE
	GAS METER
	VALVE
WG	WATER GATE
	UTILITY POLE
STL	STEAM LINE
UGE	UNDERGROUND ELECTRIC LINE
S	SEWER LINE
D	DRAIN LINE
W	WATER LINE
DS	DOMESTIC WATER SERVICE
FP	FIRE PROTECTION SERVICE
G	GAS LINE
C	UNDERGROUND CABLE
T	TELEPHONE LINE
OH	OVERHEAD WIRES
	TREE LINE
39	EXISTING CONTOURS
40	EXISTING CONTOUR (5' INTERVAL)
X 100.00	EXISTING SPOT GRADE
	CHAIN LINK FENCE
	WOOD FENCE
	BOLLARD
CONC.	CONCRETE
BIT. CONC.	BITUMINOUS CONCRETE
VGC	VERTICAL GRANITE CURBING
CLF	CHAIN LINK FENCE
BCB	BITUMINOUS CONCRETE BERM
	SIGN
	TREE
	FLAG POLE
AC	AIR CONDITIONER UNIT
RIM=	RIM ELEVATION
EL.	ELEVATION
INV	INVERT
RCP	REINFORCED CONCRETE PIPE
PVC	POLYVINYL CHLORIDE PIPE
TP	
	TEST PIT
	SOIL BORING
(MW)	SOIL BORING WITH MONITORING WELL

LEGEND: PROPOSED

BUILDING	
BIT. CONC. PAVEMENT	
BIT. CONC. SIDEWALK	
BIT. CONC. DRIVEWAY	
SPOT ELEVATION	46.34 x
LIGHT	
SIGN	
CONTOUR	100
WATER LINE DOMESTIC	W
SANITARY SEWER	S
STORM SEWER	
GAS LINE	UG
UNDERGROUND ELECTRIC	E
OVERHEAD ELECTRIC	
FOUNDATION DRAIN	
ROOF DRAIN	D
SANITARY MANHOLE	S
STORM DRAIN MANHOLE	D
STORM DRAIN INLET	
STORM DRAIN FLARED END SECTION	
CONIFEROUS TREE	
DECIDUOUS TREE	
TREE LINE	
FIRE HYDRANT	
WATER VALVE	
CONSTRUCTION ENTRANCE	
SILT SACK	
SILT FENCE/SILT SOCK	SF
SILT FENCE/SILT SOCK	HDSF
WETLAND FLAG	
PROP. WETLAND REPLACEMENT	

NOT FOR CONSTRUCTION

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13 Branch Street, Suite 101
Methuen MA, 01844
Tel: 978-208-1762
rangereng.com

COMMONWEALTH OF MASSACHUSETTS
BENJAMIN C. OSGOOD JR.
CIVIL
NO. 43611
REGISTERED PROFESSIONAL ENGINEER
9/17/20

THE VILLAGE AT CRICKET LANE

BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

LEGEND, NOTES AND ABBREVIATIONS

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO
1	06/26/2020	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS0002

SHEET 2 OF 19

Q:\PROJECTS\CRICKET DEVELOPMENT\DESIGN_PUBLISH\CS0001-CS0022.dwg PLOTTED: 9/17/2020 11:01 AM, BY: Orin Rohlfer PLOTSTYLE: TTI Env NCS.ctb PROJECT STATUS: —

PLAN BOOK 396 PLAN 6

VERNAL POOL AREA SUMMARY	
'A' SERIES WETLAND	
ELEVATION	AREA
53.5	4,355 SF ±
54.0	14,810 SF ±
54.3	19,115 SF ±
ADDITIONAL AREA EXTENDING OFF-SITE	
1,495 SF ± AT A DEPTH OF 12 INCHES ±	
TOTAL VOLUME = 0.26 ACRE FT	

VOLUME CALCULATIONS:

'A' SERIES CALCULATIONS
VOLUME ELEV. 53.5 TO 54.0 = 4,355 + 14,810 / 2 X .5 = 4,791 CUBIC FT
VOLUME ELEV. 54.0 TO 54.3 = 14,810 + 19,115 / 2 X .3 = 5,089 CUBIC FT
VOLUME EXTENDING OFF-SITE = 1,495 X 1 = 1,495 CUBIC FT

TOTAL = 11,375 CUBIC FT

ACRE FT = CUBIC FT / 43,560 = 0.26

NOTE:

1. WETLAND RESOURCE AREAS SHOWN WERE APPROVED BY THE NEWBURY CONSERVATION COMMISSION ON JULY 16 2019

NOTE:

WETLAND FLAGS D20 AND C4 HAVE BEEN DELETED.

MAP R-39 LOT 8
N/F
COMMONWEALTH OF MASSACHUSETTS -
DIVISION OF FISH AND GAME

100' TITLE 5 OFFSET TO VERNAL POOL

100' WETLAND BUFFER ZONE

S 28°32'53" E 125.60'
S 28°08'18" E 151.20'
S 28°15'44" E 146.18'
S 27°53'23" E 104.31'
S 25°43'01" E 52.32'
S 29°02'06" E 199.07'
S 27°44'39" E 87.23'

N 66°10'23" E 164.75'
N 67°03'18" E 231.02'
N 56°33'25" E 6.14'
N 66°45'39" E 160.46'
S 25°13'52" E 105.77'
S 23°23'46" E 93.19'
N 67°46'16" E 30.47'
N 37°43'33" W 148.25'
N 37°26'40" W 210.62'
N 38°45'51" W 136.99'
N 37°47'19" W 160.55'
N 38°21'46" W 131.20'
N 38°27'03" W 156.41'
N 37°31'44" W 61.66'
N 04°57'47" E 462.49'
S 42°11'45" W 148.63'

DH (FND)

LIMIT OF VERNAL POOL

WOODED AREA

ROCKS AND BOULDERS

EXISTING ROCK/OUTCROP (TYP.)

LIMIT OF DETAILED SURVEY SEE SHEET V0802

PARCEL B
ASSESSOR'S MAP R-20 LOT 75
656,984 SF±
15.08 AC±

BORDERING VEGETATED WETLAND WITH INTERMITTENT STREAM (38,200± SF)

BORDERING VEGETATED WETLAND (23,412± SF)

ESTIMATED LIMIT OF HISTORIC FILL
1,565 SF

ESTIMATED ON-SITE LIMIT OF HISTORIC FILL
475 SF

55 PEARSON DR
ASSESSOR'S MAP R-20 LOT 75
55,973 SF±
1.28 AC±

EXISTING RETAINING/BOULDER WALL

EXISTING BUILDING

EXISTING TREELINE

EXISTING FIRE HYDRANT

EXIST. BUILDING

10' WIDE PEDESTRIAN EASEMENT

L=142.76'
L=140.00'
R=190.00'

ISOLATED WETLAND (23,515± SF) WITH A ISOLATED LAND SUBJECT TO FLOODING WITHIN ITS BOUNDARY.

LIMIT OF ISOLATED LAND SUBJECT TO FLOODING BASED UPON MAXIMUM ELEVATION OF FLOODING

LIMIT OF OFF-SITE ISOLATED LAND SUBJECT TO FLOODING 1,495 SF± AT A DEPTH OF 12 INCHES±

MAXIMUM ELEVATION OF FLOODING 54.3 LOWEST POINT OF OUTLET

ISOLATED WETLAND (NON JURISDICTIONAL)

ESTIMATED HISTORIC TOPOGRAPHY FROM ORIGINAL SUBDIVISION PLAN OF PEARSON DRIVE (PLAN BOOK 152 PLAN 63)

EXISTING 8" DUCTILE IRON WATER MAIN, INSTALLED 1980

PEARSON DRIVE
(50' WIDE - PUBLIC)

MAP R-20 LOT 74
N/F
GRAHAM, DONALD P. & DIANE A.

MAP R-20 LOT 76
N/F
SHORT, BRIAN T. & JOANNE

MAP R-20 LOT 77
N/F
MOSER, RUSSELL N., JR. & REBECCA A.

MAP R-20 LOT 78
N/F
CAROL K. GARGAN REVOCABLE TRUST

MAP R-20 LOT 79
N/F
DUBE, TAD R.

MAP R-20 LOT 80
N/F
DUNFEE, ALBERT H. & KATHRYN M.

MAP R-20 LOT 81
N/F
COSTA, JONATHAN & FORCIER, JESSIE

MAP R-20 LOT 82
N/F
BOULEY, ROBERT A. & JILL E.

MATCH LINE - SEE SHEET CS0201

MATCH LINE - SEE SHEET CS0202

0 40' 80'

NOT FOR CONSTRUCTION

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COMMONWEALTH OF MASSACHUSETTS
BENJAMIN C. OSGOOD, JR.
CIVIL
NO. 43561
REGISTERED PROFESSIONAL ENGINEER
8/10/20

THE VILLAGE AT CRICKET LANE
GYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

EXISTING CONDITIONS PLAN

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

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PROJECT	15-1516
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APPROVED BY	BCO

CS0201
SHEET 3 OF 19

PROJECT STATUS: —
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PLAN BOOK 396 PLAN 15

VERNAL POOL AREA SUMMARY	
'A' SERIES WETLAND	
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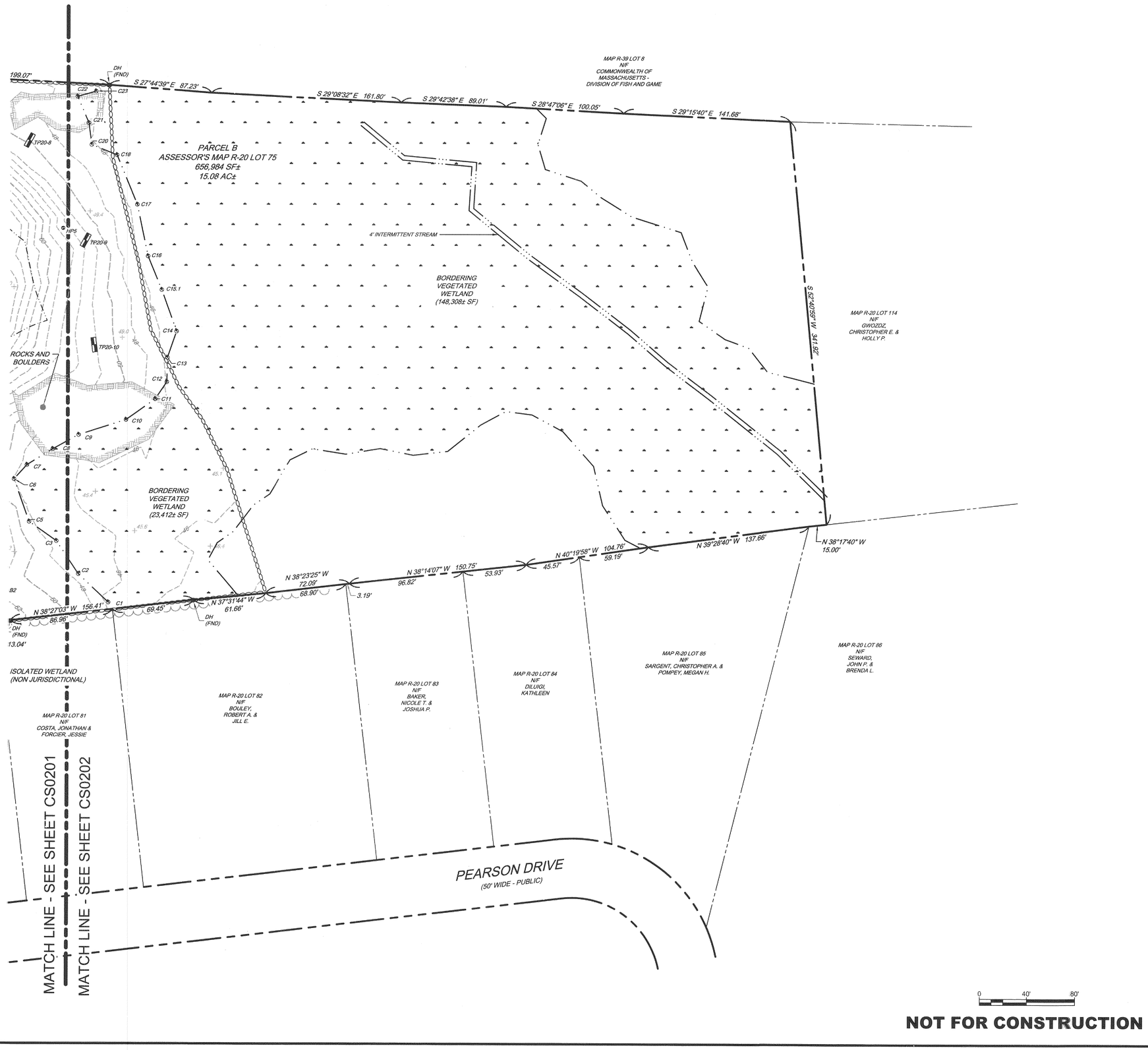

0 40' 80'

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COMMONWEALTH OF MASSACHUSETTS
BENJAMIN C. OSCOCO, JR.
CIVIL
No. 45831
REGISTERED PROFESSIONAL ENGINEER
8/17/20

THE VILLAGE AT CRICKET LANE

BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

EXISTING CONDITIONS PLAN

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92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

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APPROVED BY	BCO

CS0202

SHEET 4 OF 19

PROJECT STATUS: —
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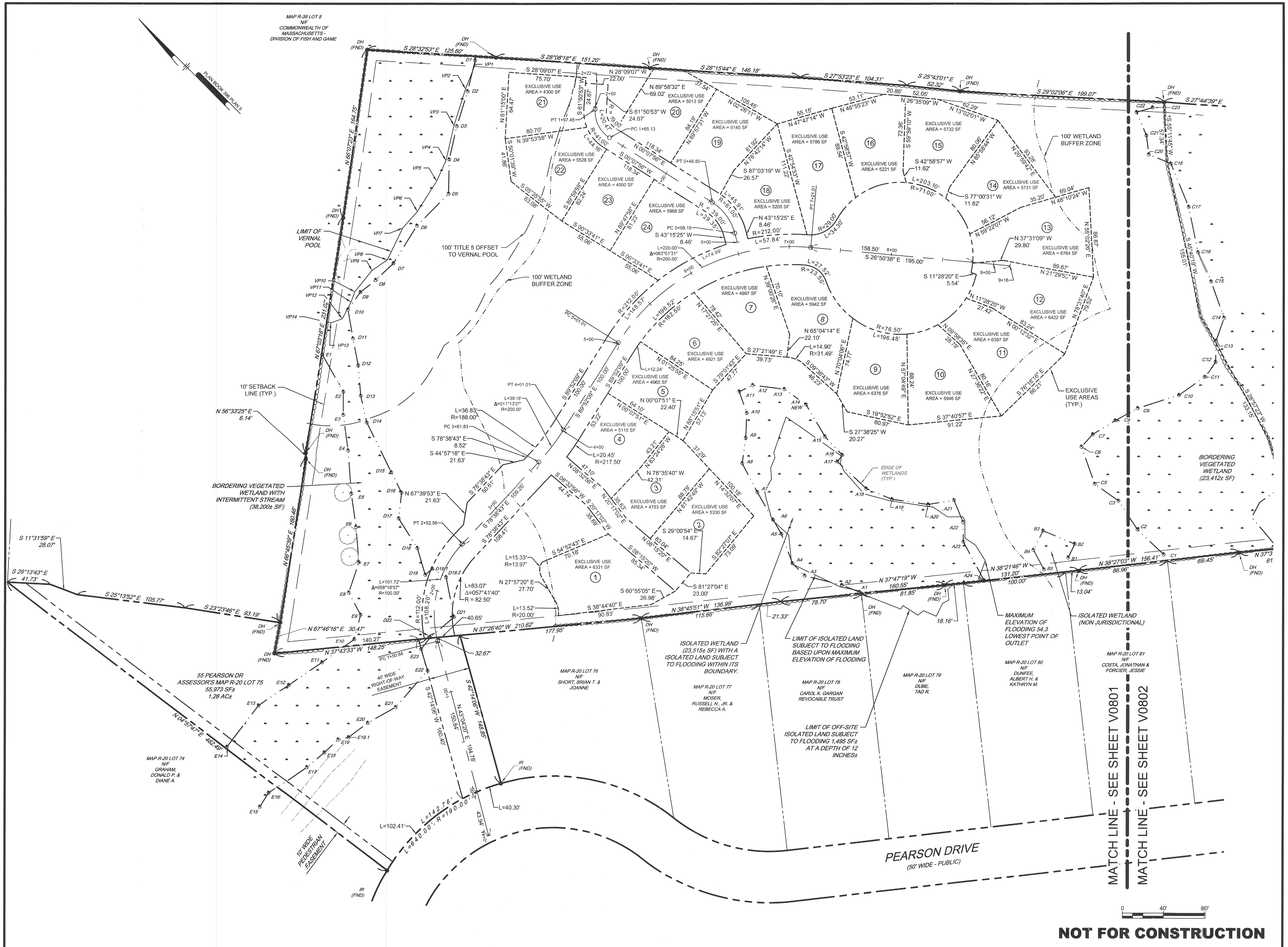

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COMMONWEALTH OF MASSACHUSETTS
BENJAMIN C. OSGOOD JR. CIVIL No. 45891
REGISTERED PROFESSIONAL ENGINEER
9/10/20

THE VILLAGE AT CRICKET LANE

BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

ROADWAY LAYOUT AND PROPERTY LINE PLAN

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

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COMMONWEALTH OF MASSACHUSETTS
TIMOTHY J. WININGS No. 45099
PROFESSIONAL LAND SURVEYOR

PROJECT	15-1516
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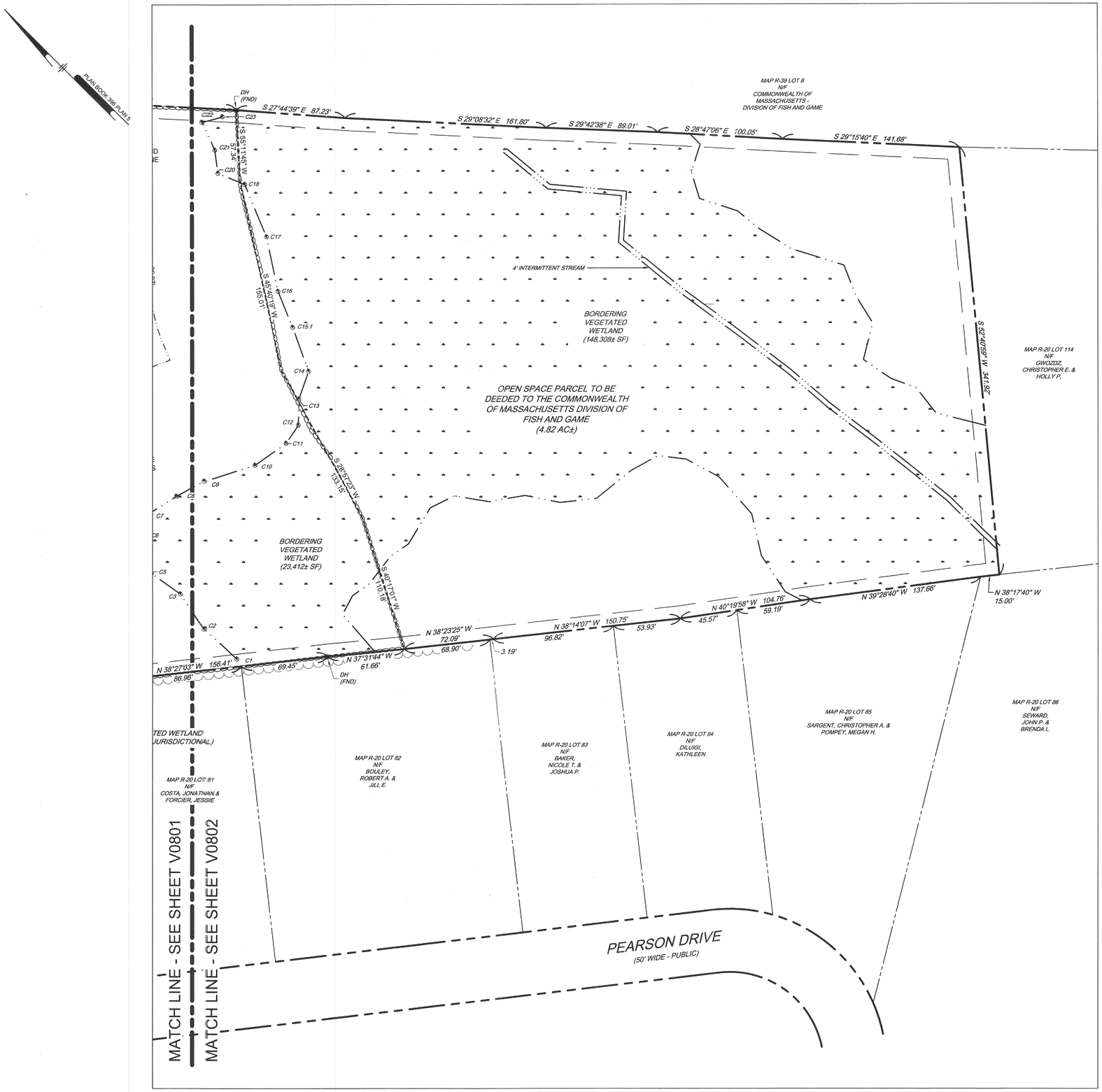
V0801



0 40' 80'

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Tel: 978-208-1762
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COMMONWEALTH OF MASSACHUSETTS
BENJAMIN C. OSGOOD, JR.
CIVIL
No. 45911
REGISTERED PROFESSIONAL ENGINEER

8/10/20

THE VILLAGE AT CRICKET LANE

BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

ROADWAY LAYOUT AND PROPERTY LINE PLAN

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO
1	06/26/2020	REVIEW COMMENT REVISIONS	BCO

COMMONWEALTH OF MASSACHUSETTS
TIMOTHY J. WININGS
No. 45099
PROFESSIONAL LAND SURVEYOR

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

V0802

SHEET 6 OF 19

G:\R\PROJECTS\CRICKET DEVELOPMENT\DESIGN_PUBLISH\V0801 - 0802.dwg PLOTTED: 8/17/2020 11:50 AM, BY: Olin Richter PLOTSTYLE: TTI Env MCS.stb PROJECT STATUS: —

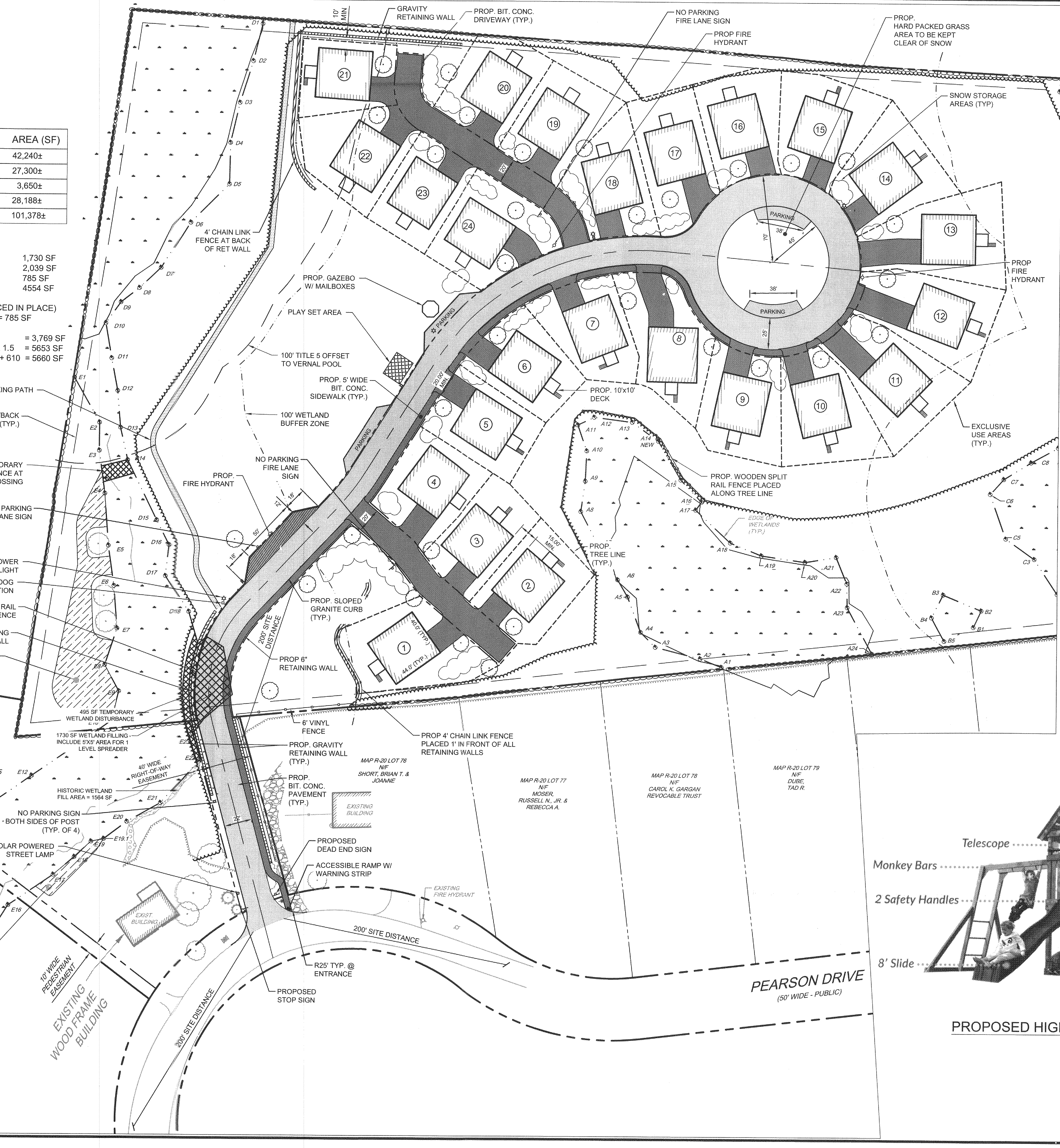
IMPERVIOUS AREAS	AREA (SF)
BUILDING AREA	42,240±
ROADWAY AREA	27,300±
SIDEWALK AREA	3,650±
DRIVEWAY AREA	28,188±
TOTAL	101,378±

WETLAND DISTURBANCE:

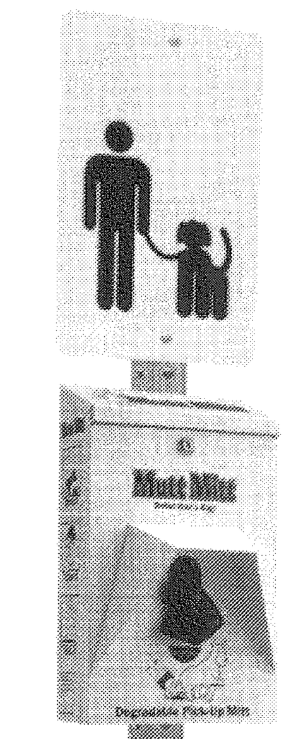
WETLAND FILL AREA:	1,730 SF
HISTORIC FILL AREA:	2,039 SF
TEMPORARY DISTURBANCE:	785 SF
TOTAL WETLANDS ALTERED:	4554 SF

WETLAND REPLACEMENT: (REPLACED IN PLACE)
TEMPORARY DISTURBANCE AREA = 785 SF

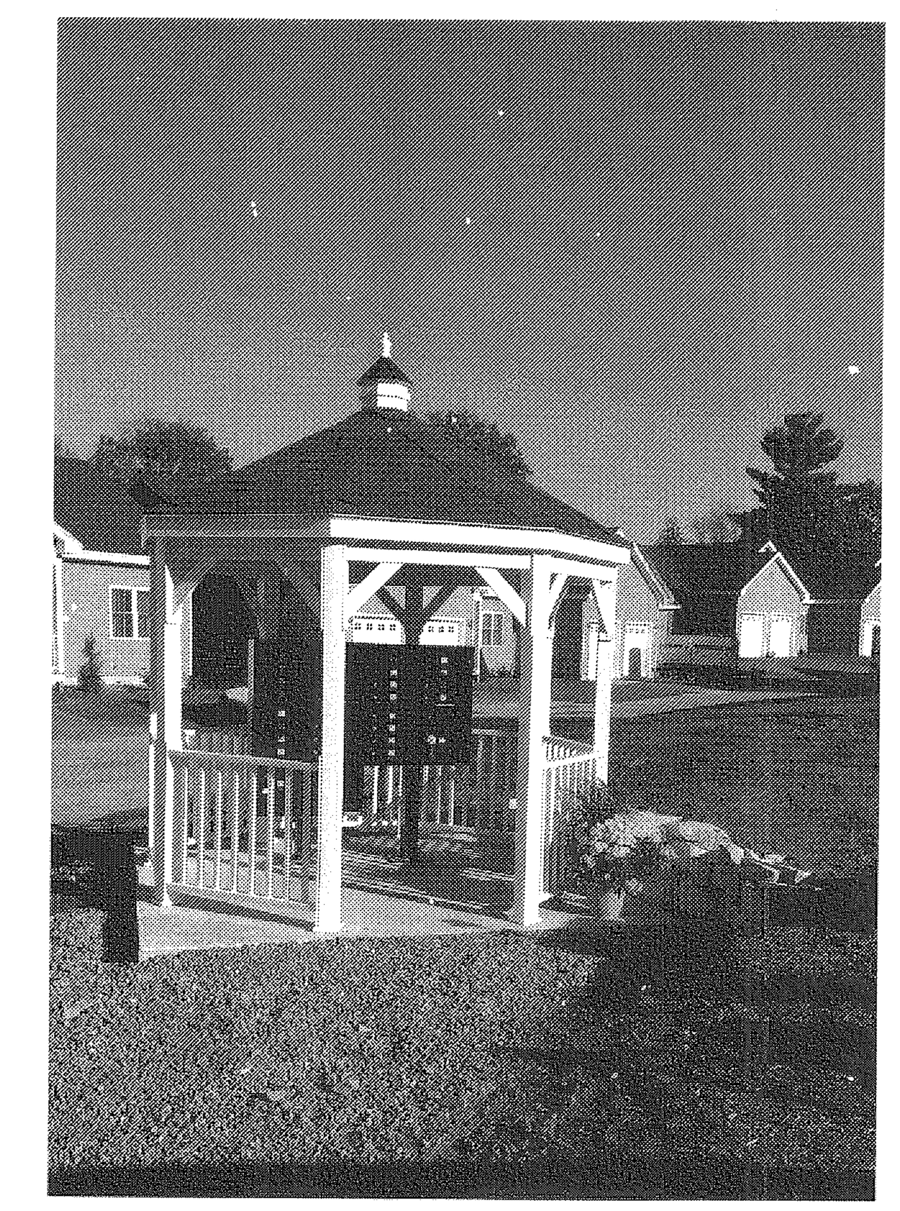
WETLAND FILL & HISTORIC FILL = 3,769 SF
REQUIRED REPLACEMENT = 3,769 x 1.5 = 5653 SF
PROPOSED REPLACEMENT = 5,050 + 610 = 5660 SF



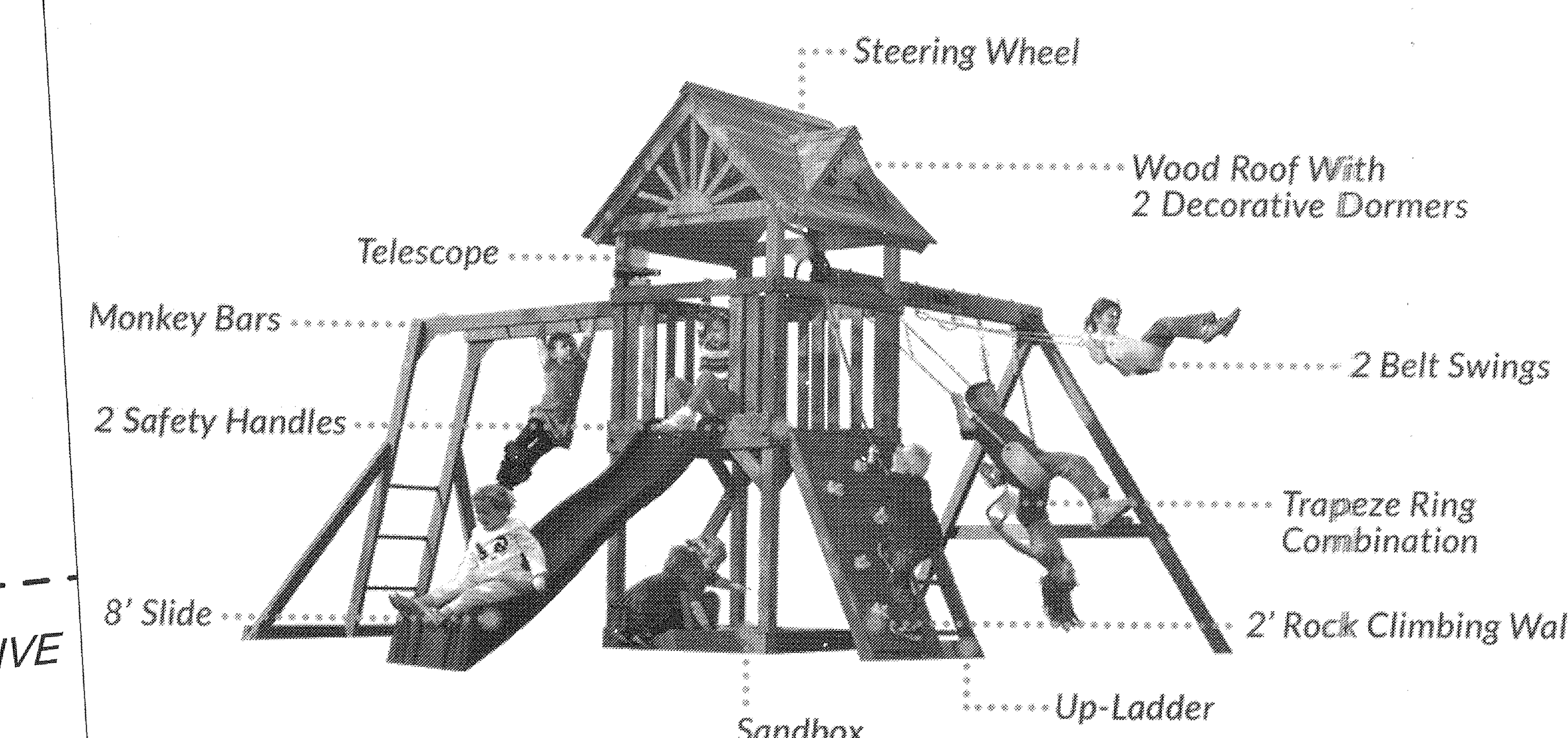
PLAN BOOK 398 PLAN 8
GRAVITY RETAINING WALL
PROP. BIT. CONC. DRIVEWAY (TYP.)
NO PARKING FIRE LANE SIGN
PROP FIRE HYDRANT
PROP. HARD PACKED GRASS AREA TO BE KEPT CLEAR OF SNOW
SNOW STORAGE AREAS (TYP)
PROP FIRE HYDRANT
PARKING
4' CHAIN LINK FENCE AT BACK OF RET WALL
PROP. GAZEBO W/ MAILBOXES
PLAY SET AREA
100' TITLE 5 OFFSET TO VERNAL POOL
PROP. 5' WIDE BIT. CONC. SIDEWALK (TYP.)
100' WETLAND BUFFER ZONE
PROP. 10'x10' DECK
EXCLUSIVE USE AREAS (TYP.)
PROPOSED WALKING PATH
10' SETBACK LINE (TYP.)
290 SF TEMPORARY WETLAND DISTURBANCE AT WETLAND CROSSING
NO PARKING FIRE LANE SIGN
PROP. FIRE HYDRANT
PROP. WOODEN SPLIT RAIL FENCE PLACED ALONG TREE LINE
EDGE OF WETLANDS (TYP.)
PROP NO PARKING FIRE LANE SIGN
SOLAR POWER STREET LIGHT
PROP. MUTT MITT DOG WASTE STATION
PROP GUARD RAIL WITH 4' CHAIN LINK FENCE
PROP RETAINING WALL
PROPOSED WETLAND REPLACEMENT 5050 SF
PROP. TREE LINE (TYP.)
PROP. SLOPED GRANITE CURB (TYP.)
200' SITE DISTANCE
PROP 6" RETAINING WALL
495 SF TEMPORARY WETLAND DISTURBANCE
1730 SF WETLAND FILLING INCLUDE 5'X5' AREA FOR 1 LEVEL SPREADER
6' VINYL FENCE
PROP 4' CHAIN LINK FENCE PLACED 1' IN FRONT OF ALL RETAINING WALLS
PROP. GRAVITY RETAINING WALL (TYP.)
PROP. BIT. CONC. PAVEMENT (TYP.)
55 PEARSON DR ASSESSOR'S MAP R-20 LOT 75 55,973 SF± 1.28 AC±
40' WIDE RIGHT-OF-WAY EASEMENT
HISTORIC WETLAND FILL AREA = 1564 SF
NO PARKING SIGN BOTH SIDES OF POST (TYP. OF 4)
SOLAR POWERED STREET LAMP
MAP R-20 LOT 76 N/F SHORT, BRIAN T. & JOANNE
MAP R-20 LOT 77 N/F MOSER, RUSSELL N., JR. & REBECCA A.
MAP R-20 LOT 78 N/F CAROL K. GARGAN REVOCABLE TRUST
MAP R-20 LOT 79 N/F DUBE, TAD R.
EXISTING BUILDING
PROPOSED DEAD END SIGN
ACCESSIBLE RAMP W/ WARNING STRIP
EXISTING FIRE HYDRANT
MAP R-20 LOT 74 N/F GRAHAM, DONALD F. & DIANE A.
EXIST. BUILDING
PROPOSED WETLAND REPLACEMENT 610 SF
10' WIDE PEDESTRIAN EASEMENT
EXISTING WOOD FRAME BUILDING
R25' TYP. @ ENTRANCE
PROPOSED STOP SIGN
200' SITE DISTANCE
PEARSON DRIVE
(50' WIDE - PUBLIC)



MUTT MITT STATION



PROPOSED GAZEBO WITH MAILBOXES



PROPOSED HIGH FLYER DELUXE PLAYGROUND SET

0 40' 80'

NOT FOR CONSTRUCTION

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COMMONWEALTH OF MASSACHUSETTS — BENJAMIN C. OSGOOD JR. CIVIL No. 41831 — REGISTERED PROFESSIONAL ENGINEER
8/17/20

THE VILLAGE AT CRICKET LANE
BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

LAYOUT AND MATERIALS PLAN

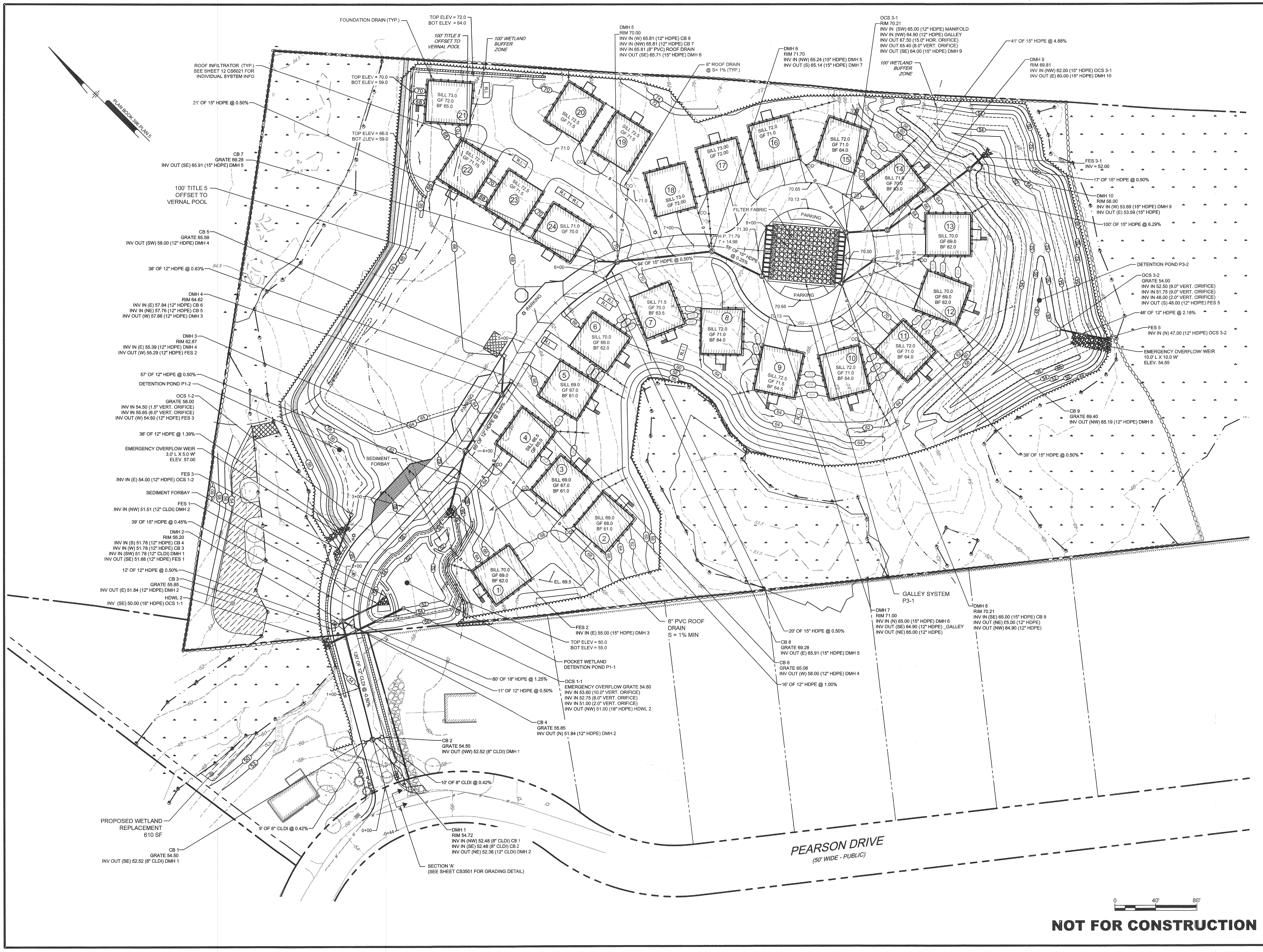
CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

DATE	NO.	REVISIONS	BY
08/17/2020	2	REVIEW COMMENT REVISIONS	BCO
06/26/2020	1	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS1001

SHEET 7 OF 19



FOUNDATION DRAIN (TYP.)
TOP ELEV = 72.0
BOT ELEV = 64.0
100' TITLE 5 OFFSET TO VERNAL POOL
100' WETLAND BUFFER ZONE
ROOF INFILTRATOR (TYP.) SEE SHEET 12 CS6021 FOR INDIVIDUAL SYSTEM INFO
TOP ELEV = 70.0
BOT ELEV = 59.0
21' OF 15" HDPE @ 0.50%
TOP ELEV = 66.0
BOT ELEV = 59.0
CB 7
GRATE 69.28
INV OUT (SE) 65.91 (15" HDPE) DMH 5
100' TITLE 5 OFFSET TO VERNAL POOL
CB 5
GRATE 65.59
INV OUT (SW) 58.00 (12" HDPE) DMH 4
38' OF 12" HDPE @ 0.63%
DMH 4
RIM 64.62
INV IN (E) 57.84 (12" HDPE) CB 6
INV IN (NE) 57.76 (12" HDPE) CB 5
INV OUT (W) 57.66 (12" HDPE) DMH 3
DMH 3
RIM 62.67
INV IN (E) 55.39 (12" HDPE) DMH 4
INV OUT (W) 55.29 (12" HDPE) FES 2
57' OF 12" HDPE @ 0.50%
DETENTION POND P1-2
OCS 1-2
GRATE 58.00
INV IN 54.50 (1.5" VERT. ORIFICE)
INV IN 55.65 (6.0" VERT. ORIFICE)
INV OUT (W) 54.50 (12" HDPE) FES 3
36' OF 12" HDPE @ 1.39%
EMERGENCY OVERFLOW WEIR
3.0' L X 5.0' W
ELEV. 57.00
FES 3
INV IN (E) 54.00 (12" HDPE) OCS 1-2
SEDIMENT FORBAY
FES 1
INV IN (NW) 51.51 (12" CLDI) DMH 2
39' OF 15" HDPE @ 0.45%
DMH 2
RIM 56.20
INV IN (S) 51.78 (12" HDPE) CB 4
INV IN (W) 51.78 (12" HDPE) CB 3
INV IN (SW) 51.78 (12" CLDI) DMH 1
INV OUT (SE) 51.68 (12" HDPE) FES 1
12' OF 12" HDPE @ 0.50%
CB 3
GRATE 55.85
INV OUT (E) 51.84 (12" HDPE) DMH 2
HDWL 2
INV (SE) 50.00 (18" HDPE) OCS 1-1
PROPOSED WETLAND REPLACEMENT 610 SF
CB 1
GRATE 54.50
INV OUT (SE) 52.52 (8" CLDI) DMH 1
9' OF 8" CLDI @ 0.42%
DMH 5
RIM 70.00
INV IN (W) 65.81 (12" HDPE) CB 8
INV IN (NW) 65.81 (12" HDPE) CB 7
INV IN 65.81 (8" PVC) ROOF DRAIN
INV OUT (SE) 65.71 (15" HDPE) DMH 6
8" ROOF DRAIN @ S= 1% (TYP.)
DMH 6
RIM 71.70
INV IN (NW) 65.24 (15" HDPE) DMH 5
INV OUT (S) 65.14 (15" HDPE) DMH 7
100' WETLAND BUFFER ZONE
OCS 3-1
RIM 70.21
INV IN (SW) 65.00 (12" HDPE) MANIFOLD
INV IN (NW) 64.90 (12" HDPE) GALLEY
INV OUT 67.50 (15.0" HOR. ORIFICE)
INV OUT 65.40 (8.0" VERT. ORIFICE)
INV OUT (SE) 64.00 (15" HDPE) DMH 9
41' OF 15" HDPE @ 4.88%
DMH 9
RIM 69.81
INV IN (NW) 62.00 (15" HDPE) OCS 3-1
INV OUT (E) 60.00 (15" HDPE) DMH 10
FES 3-1
INV = 52.00
17' OF 15" HDPE @ 0.50%
DMH 10
RIM 58.00
INV IN (W) 53.69 (15" HDPE) DMH 9
INV OUT (E) 53.59 (15" HDPE)
100' OF 15" HDPE @ 6.29%
DETENTION POND P3-2
OCS 3-2
GRATE 54.00
INV IN 52.50 (8.0" VERT. ORIFICE)
INV IN 51.75 (9.0" VERT. ORIFICE)
INV IN 48.00 (2.0" VERT. ORIFICE)
INV OUT (S) 48.00 (12" HDPE) FES 5
46' OF 12" HDPE @ 2.18%
FES 5
INV IN (N) 47.00 (12" HDPE) OCS 3-2
EMERGENCY OVERFLOW WEIR
10.0' L X 10.0' W
ELEV. 54.55
CB 9
GRATE 69.40
INV OUT (NW) 65.19 (12" HDPE) DMH 8
39' OF 15" HDPE @ 0.50%
GALLEY SYSTEM P3-1
DMH 7
RIM 71.00
INV IN (N) 65.00 (15" HDPE) DMH 6
INV OUT (SE) 64.90 (12" HDPE) GALLEY
INV OUT (NE) 65.00 (12" HDPE)
DMH 8
RIM 70.21
INV IN (SE) 65.00 (15" HDPE) CB 9
INV OUT (NE) 65.00 (12" HDPE)
INV OUT (NW) 64.90 (12" HDPE)
20' OF 15" HDPE @ 0.50%
CB 8
GRATE 69.28
INV OUT (E) 65.91 (15" HDPE) DMH 5
CB 6
GRATE 65.08
INV OUT (W) 58.00 (12" HDPE) DMH 4
16' OF 12" HDPE @ 1.00%
FES 2
INV IN (E) 55.00 (15" HDPE) DMH 3
8" PVC ROOF DRAIN S = 1% MIN
TOP ELEV = 60.0
BOT ELEV = 55.0
POCKET WETLAND DETENTION POND P1-1
80' OF 18" HDPE @ 1.25%
11' OF 12" HDPE @ 0.50%
OCS 1-1
EMERGENCY OVERFLOW GRATE 54.60
INV IN 53.60 (10.0" VERT. ORIFICE)
INV IN 52.75 (8.0" VERT. ORIFICE)
INV IN 51.00 (2.0" VERT. ORIFICE)
INV OUT (NW) 51.00 (18" HDPE) HDWL 2
CB 4
GRATE 55.85
INV OUT (N) 51.84 (12" HDPE) DMH 2
CB 2
GRATE 54.50
INV OUT (NW) 52.52 (8" CLDI) DMH 1
10' OF 8" CLDI @ 0.42%
DMH 1
RIM 54.72
INV IN (NW) 52.48 (8" CLDI) CB 1
INV IN (SE) 52.48 (8" CLDI) CB 2
INV OUT (NE) 52.38 (12" CLDI) DMH 2
SECTION 'A' (SEE SHEET CS3501 FOR GRADING DETAIL)
120' OF 12" CLDI @ 0.50%
PEARSON DRIVE
(50' WIDE - PUBLIC)
PLAN BOOK 396 PLAN 5
SEDIMENT FORBAY
PARKING
FILTER FABRIC
H.P. 71.79
EL. 69.5
SILL 73.0 GF 72.0 BF 65.0 (21)
SILL 72.5 GF 71.5 (20)
SILL 72.5 GF 71.5 (19)
SILL 71.75 GF 71.75 (22)
SILL 72.5 GF 71.5 (23)
SILL 71.0 GF 70.0 (24)
SILL 73.0 GF 72.00 (18)
SILL 73.00 GF 72.00 (17)
SILL 72.0 GF 71.0 (16)
SILL 72.0 GF 71.0 BF 64.0 (15)
SILL 71.0 GF 70.0 BF 63.0 (14)
SILL 70.0 GF 69.0 BF 62.0 (13)
SILL 70.0 GF 69.0 BF 62.0 (12)
SILL 72.0 GF 71.0 BF 64.0 (11)
SILL 72.0 GF 71.0 BF 64.0 (10)
SILL 72.5 GF 71.5 BF 64.5 (9)
SILL 72.0 GF 71.0 BF 64.0 (8)
SILL 71.5 GF 70.0 BF 63.5 (7)
SILL 70.0 GF 68.0 BF 62.0 (6)
SILL 69.0 GF 67.0 BF 61.0 (5)
SILL 66.5 GF 65.0 (4)
SILL 69.0 GF 67.0 BF 61.0 (3)
SILL 69.0 GF 68.0 BF 61.0 (2)
SILL 70.0 GF 69.0 BF 62.0 (1)
0 40' 80'

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THE VILLAGE AT CRICKET LANE

BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

GRADING AND DRAINAGE PLAN

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

DATE	NO.	REVISIONS	BY
08/17/2020	2	REVIEW COMMENT REVISIONS	BCO
06/26/2020	1	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS1501

SHEET 8 OF 19

PLAN BOOK 398 PLAN 5

NOTES:

1. INSULATION SHALL BE PROVIDED OVER SEWER PIPES WITH LESS THAN 4 FEET OF COVER.
2. SEE SHEETS CS4501-CS4507 FOR DETAILS AND PROFILES ON PROPOSED SEPTIC SYSTEMS.

LEACHING AREA (SYSTEM 3)

SMH 1-2
RIM 69.17
INV IN 61.44 (8" SDR-35) (SMH 1-3)
INV IN 61.44 (8" SDR-35) (SMH 2-2)
INV OUT 61.34 (8" SDR-35) (SMH 1-1)

LEACHING AREA (SYSTEM 2)

LEACHING AREA (SYSTEM 1)

SMH 1-1A
RIM = 65.75
INV IN = 60.50
INV OUT = 60.40

SMH 1-1
RIM 65.25
INV IN (S) 60.72 (8" SDR-35) SMH 1-6
INV IN (E) 60.72 (8" SDR-35) SMH 1-2
INV OUT (NE) 60.62 (8" SDR-35)

FIRE HYDRANT

PROPOSED WETLAND REPLACEMENT 5050 SF

PROPOSED WETLAND REPLACEMENT 610 SF

10' WIDE PEDESTRIAN EASEMENT

100' TITLE 5 OFFSET TO VERNAL POOL

100' WETLAND BUFFER ZONE

4" CLDI WATER LINE WITH BLOW OFF VALVE

SMH 2-4
RIM 71.47
INV IN 66.50 (6" SDR-35) (MH-45 (4))
INV OUT 66.40 (8" SDR-35) (SMH 2-2)

SMH 2-2
RIM 70.59
INV IN 65.52 (8" SDR-35) (SMH 2-4)
INV IN 65.52 (8" SDR-35) (SMH 2-3)
INV OUT 65.42 (8" SDR-35) (SMH 1-2)

SMH 2-3
RIM 70.50
INV IN (SE) 66.62 (8" SDR-35)
INV IN (NE) 66.62 (8" SDR-35)
INV IN (S) 66.62 (8" SDR-35)
INV OUT 66.52 (8" SDR-35) (SMH 2-2)

FIRE HYDRANT

8" x 4" TEE W/ 4" GATE VALVE

100' WETLAND BUFFER ZONE

8" CLDI CLASS 52 WATER LINE

FIRE HYDRANT

FILTER FABRIC

8" x 4" TEE W/ 4" GATE VALVE

PROP. GRAVITY RETAINING WALL (TYP.)

SMH 1-7
RIM 66.00
INV IN (S) 61.67 (8" SDR-35) (SMH 1-8)
INV OUT 61.57 (8" SDR-35) (SMH 1-6)

SMH 1-8
RIM 69.00
INV IN 63.74 (8" SDR-35)
INV IN 63.74 (8" SDR-35)
INV OUT 62.27 (8" SDR-35)

4" CLDI WATER LINE WITH BLOW OFF VALVE

SMH 1-6 48" MH
RIM 63.90
INV IN (W) 61.09 (8" SDR-35) SMH 1-7
INV OUT (N) 60.99 (8" SDR-35) SMH 1-1

SMH 1-3
RIM 71.03
INV IN (SW) 63.45 (8" SDR-35)
INV IN (S) 61.92 (8" SDR-35) SMH 1-4
INV OUT 61.82 (8" SDR-35) (SMH 1-2)

SMH 1-4
RIM 70.40
INV IN 62.78 (8" SDR-35) (SMH 1-5)
INV OUT 62.68 (8" SDR-35) (SMH 1-3)

SMH 1-5
RIM 69.71
INV OUT 63.23 (8" SDR-35) (SMH 1-4)
INV OUT 65.48 (8" SDR-35) ()

EXISTING BUILDING

8" CLDI CLASS 52 WATER LINE

EXISTING FIRE HYDRANT

EXIST. BUILDING

8" X 8" TEE

8" GATE VALVE (TYP. OF 3)

EXISTING 8" DUCTILE IRON WATER MAIN, INSTALLED 1980

PEARSON DRIVE
(50' WIDE - PUBLIC)

0 40' 80'

NOT FOR CONSTRUCTION

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COMMONWEALTH OF MASSACHUSETTS
BENJAMIN C. OSGOOD JR.
CIVIL
No. 45891
REGISTERED PROFESSIONAL ENGINEER
8/19/20

THE VILLAGE AT CRICKET LANE

BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

UTILITY PLAN

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO
1	06/26/2020	REVIEW COMMENT REVISIONS	BJO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS1701

SHEET 9 OF 19

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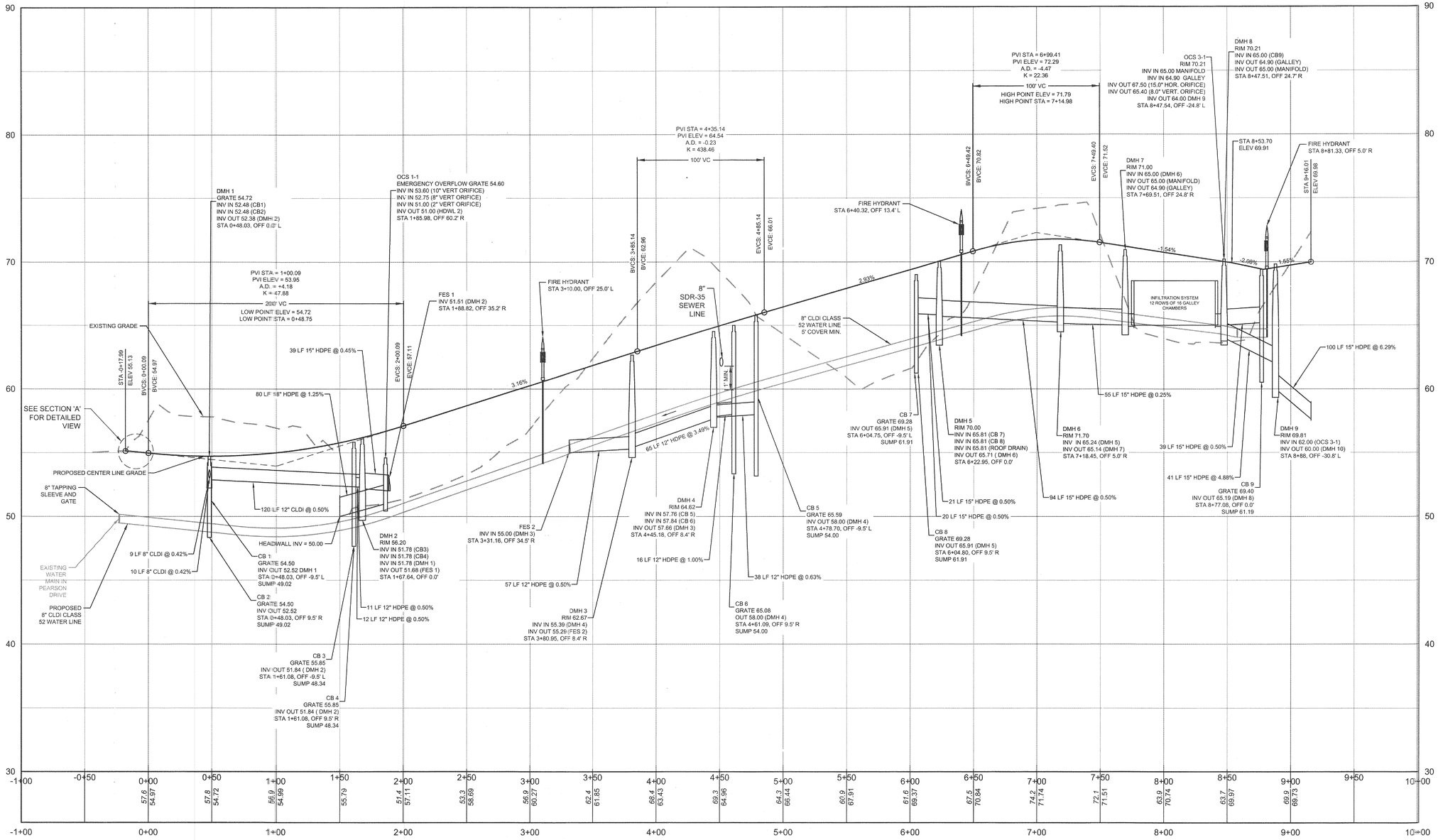
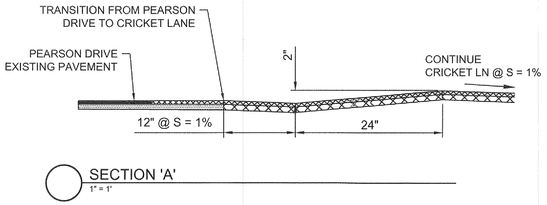


ROAD PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



NOTES:

SEE SEPTIC SYSTEM DESIGN PLANS SHEETS CS4501-CS4507. PLANS TO BE SUBMITTED TO THE BOARD OF HEALTH FOR DETAILS AND PROFILES FOR PROPOSED SEPTIC SYSTEMS.

0 40' 80'

NOT FOR CONSTRUCTION

Ranger Engineering Group, Inc.
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COMMONWEALTH OF MASSACHUSETTS
BENJAMIN C. CIOCCO JR.
No. 45631
REGISTERED PROFESSIONAL ENGINEER
9/17/20

THE VILLAGE AT CRICKET LANE
BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

ROAD PROFILE

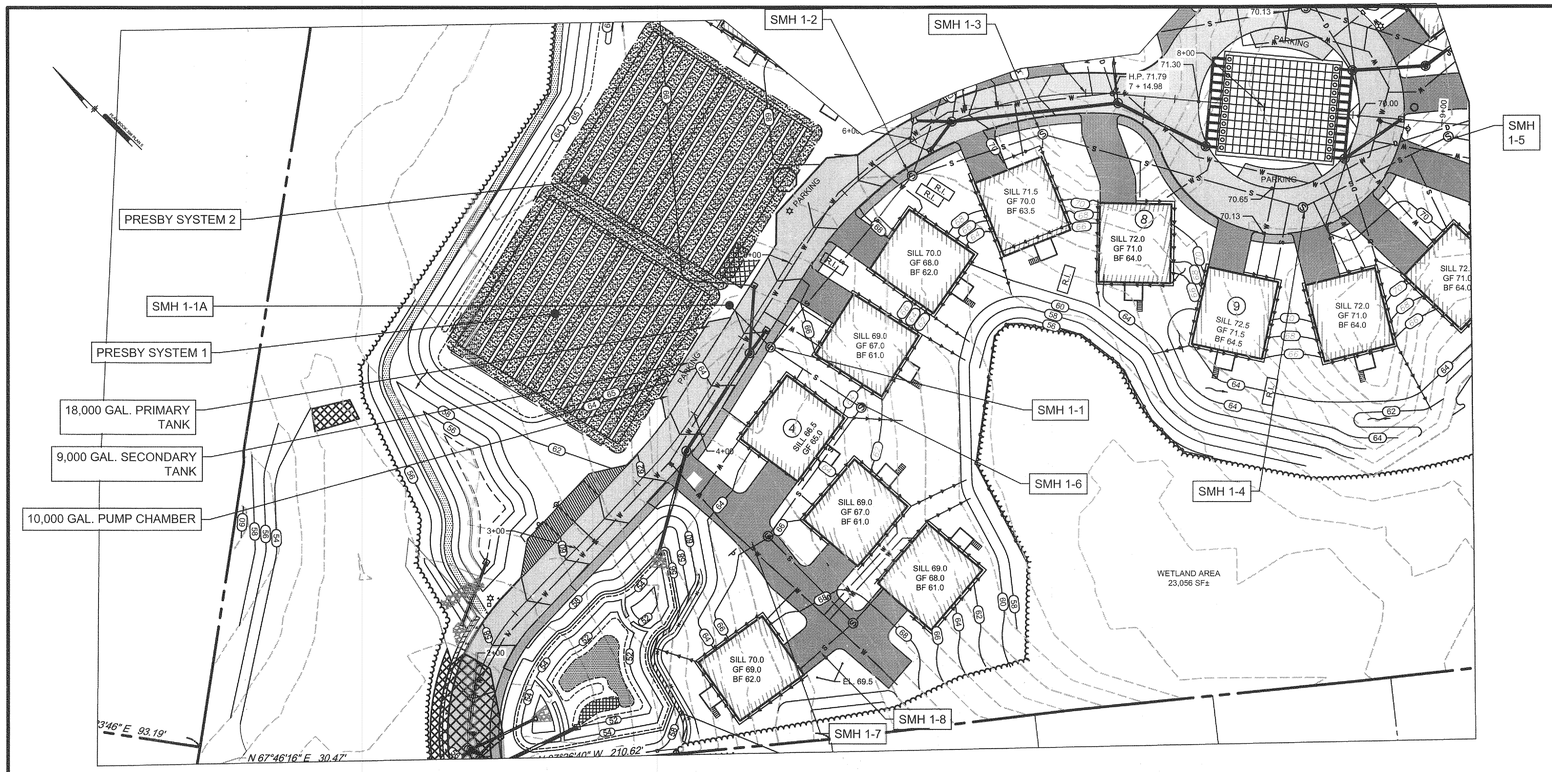
CRICKET ROAD DEVELOPMENT, LLC
82 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO
1	06/26/2020	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS3501

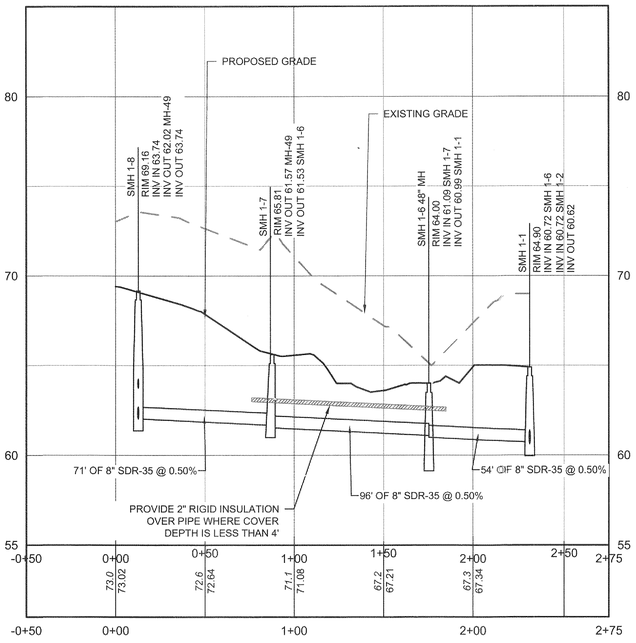
SHEET 10 OF 19



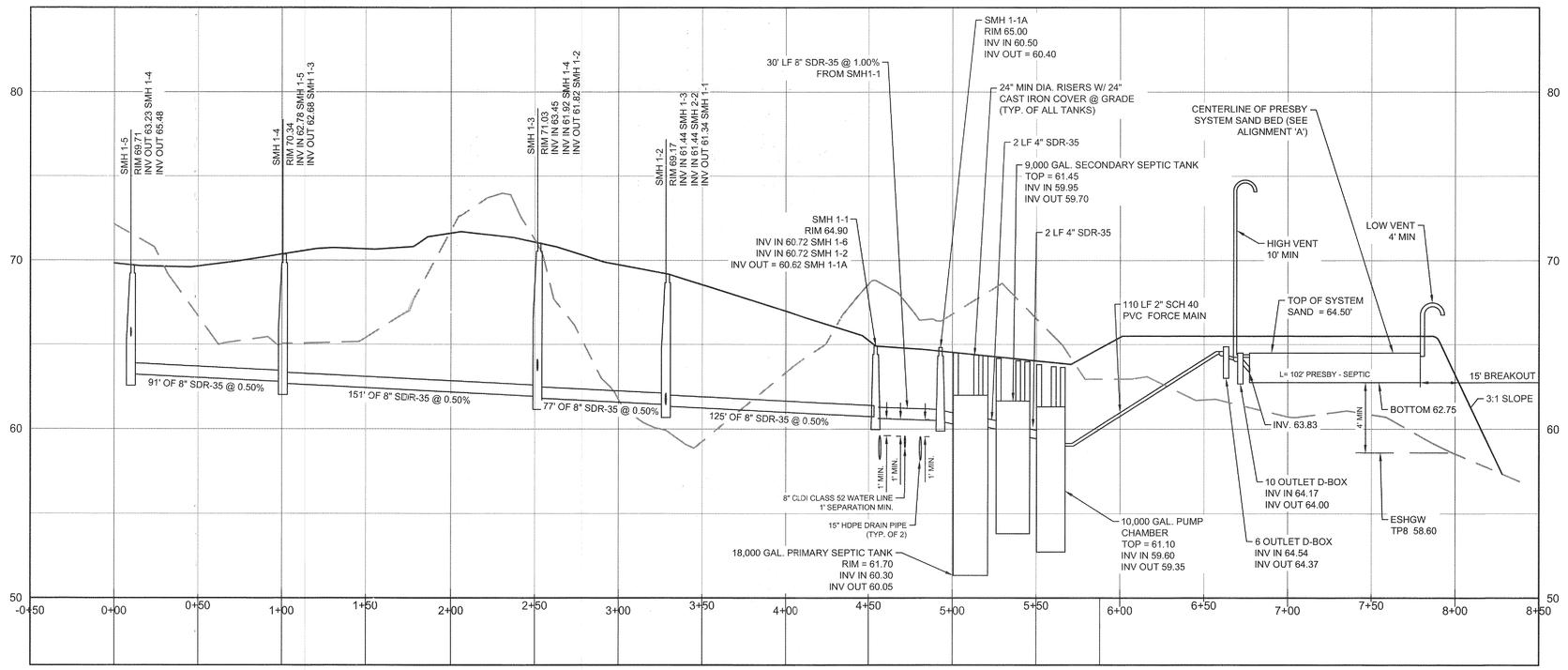
LOCUS MAP

0 40' 80'

SCALE 1" = 40'



SMH 1-8 TO SMH 1-1 5+00
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



SMH 1-5 TO SMH 1-1 10+00
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

NOTE:

1. REFER TO SEPTIC SYSTEM PLAN FOR FULL DESIGN.

0 40' 80'

NOT FOR CONSTRUCTION

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13 Branch Street, Suite 101
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Tel: 978-208-1762
rangereng.com

BENJAMIN C. OSGOOD JR. No. 45691 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS
8/17/20

THE VILLAGE AT CRICKET LANE

BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

SEWER PROFILE

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
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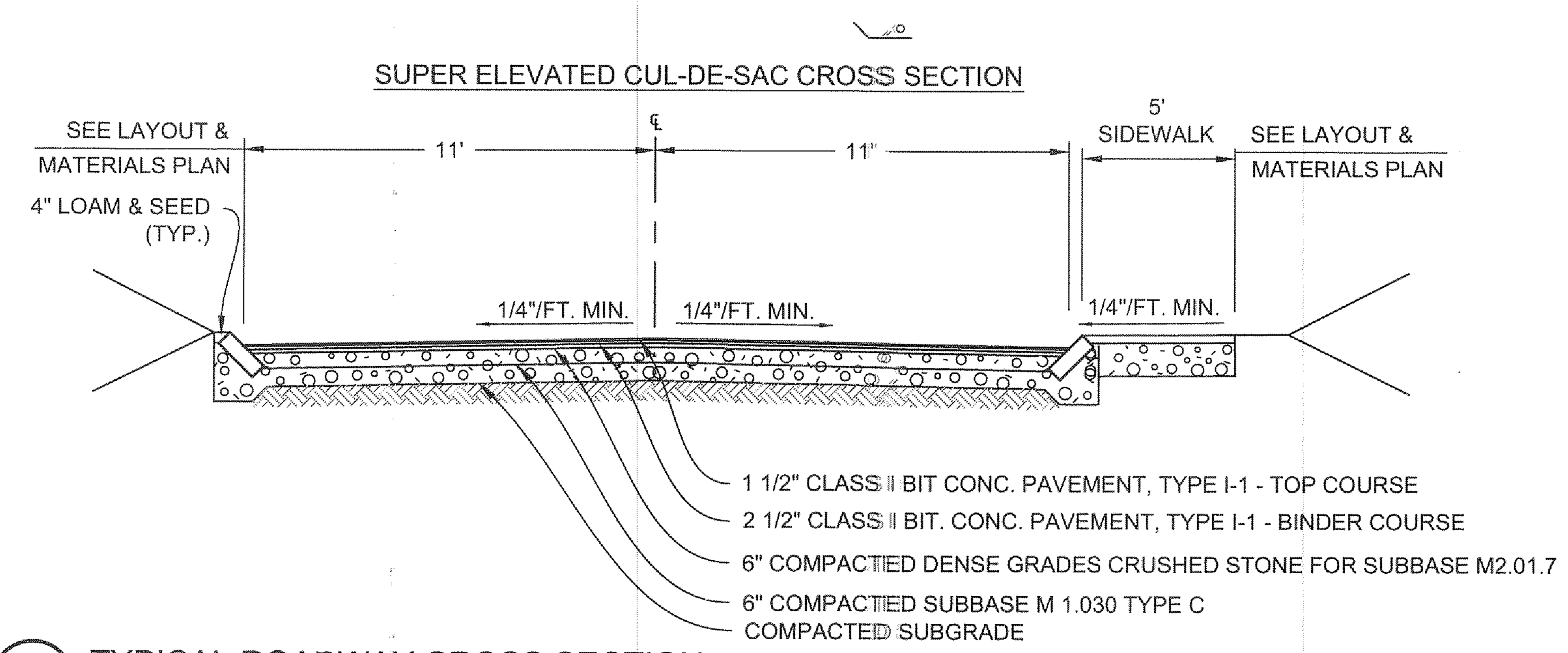
1	06/26/2020	REVIEW COMMENT REVISIONS	BCO

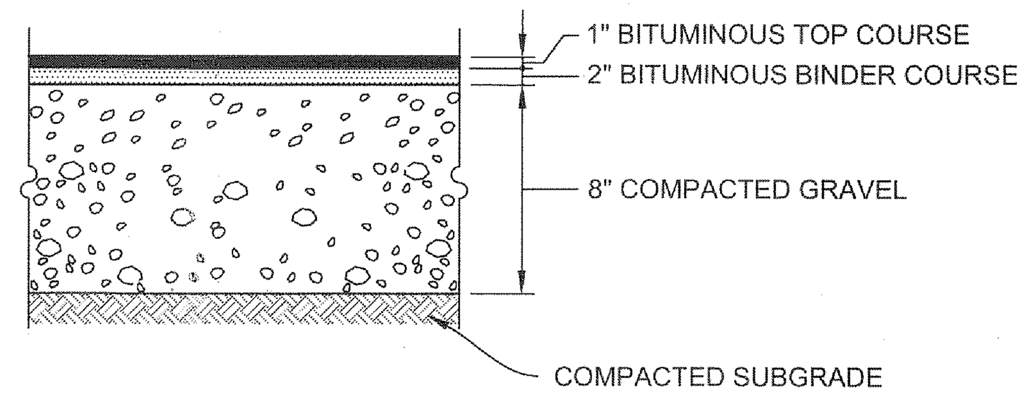
PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS3502

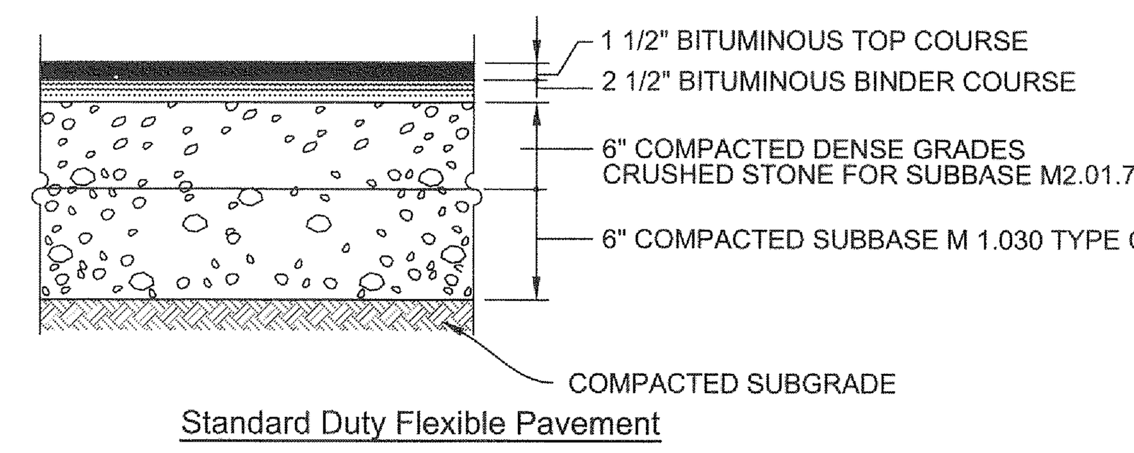
SHEET 11 OF 19



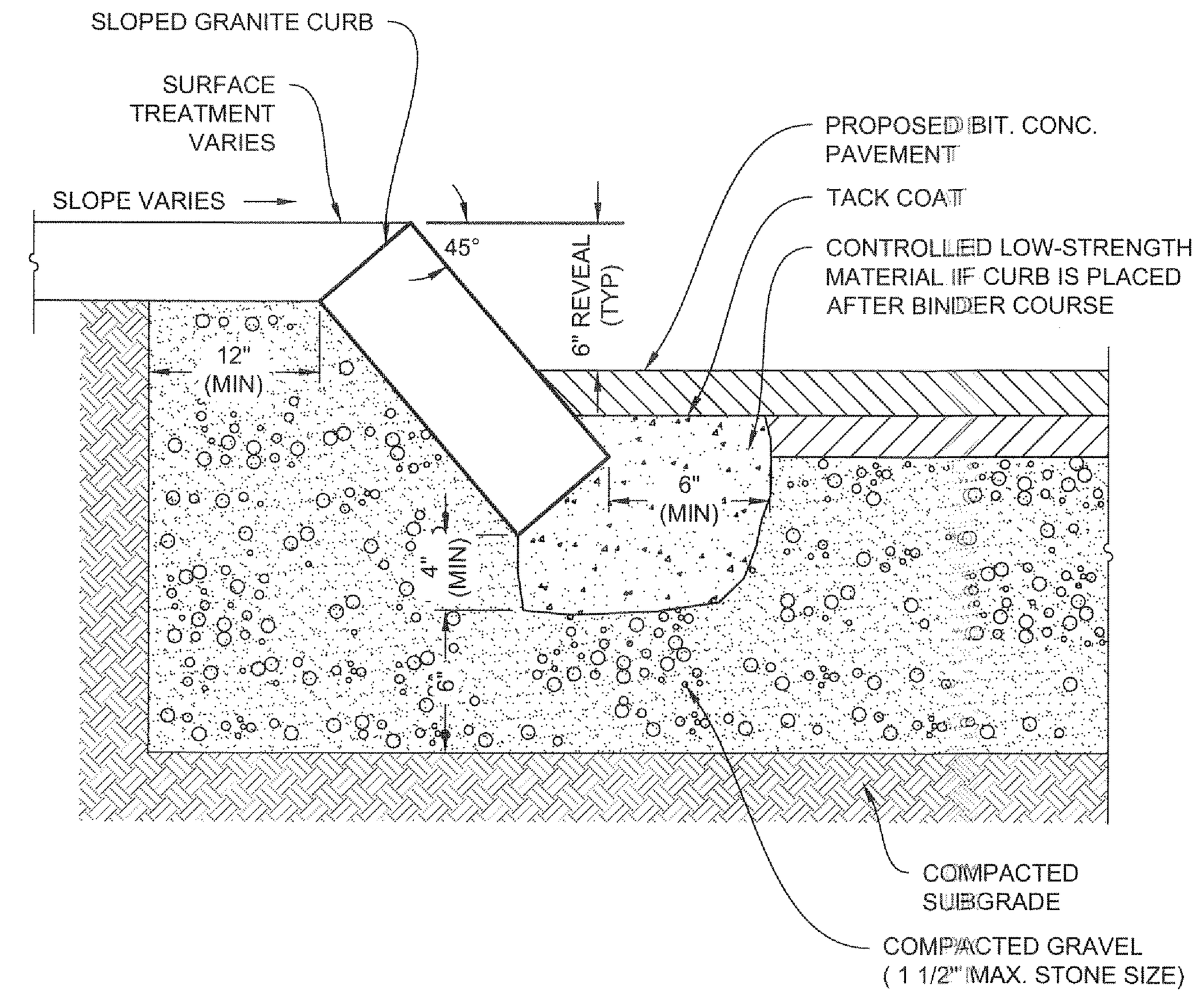
1 CS6001 TYPICAL ROADWAY CROSS SECTION
NOT TO SCALE



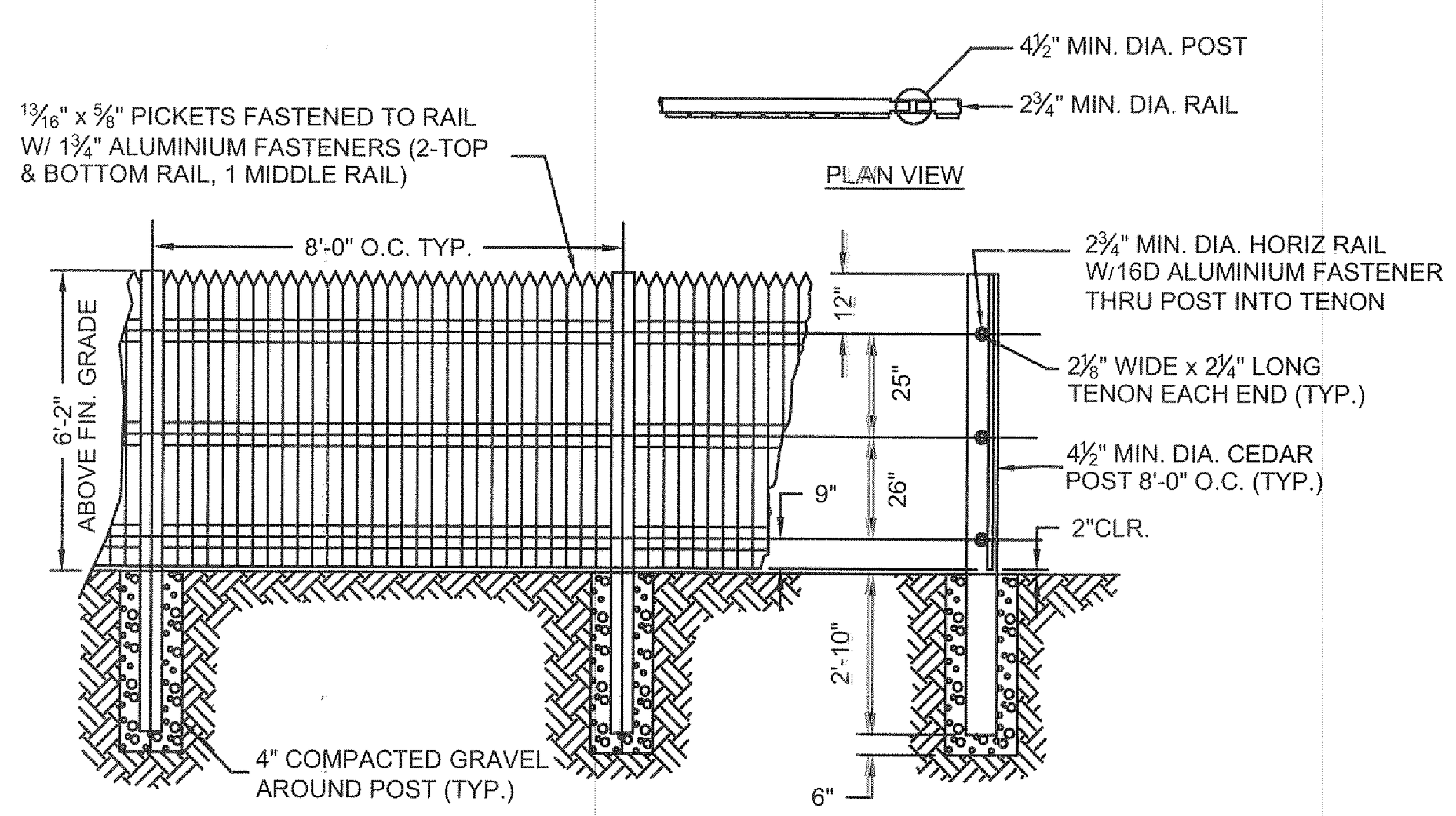
PARKING & RESIDENTIAL DRIVEWAYS
2 CS6001 BIT. CONC. PAVEMENT SECTIONS
NOT TO SCALE



3 CS6001 BIT. CONC. PAVE. SECTIONS - ROADWAY
NOT TO SCALE



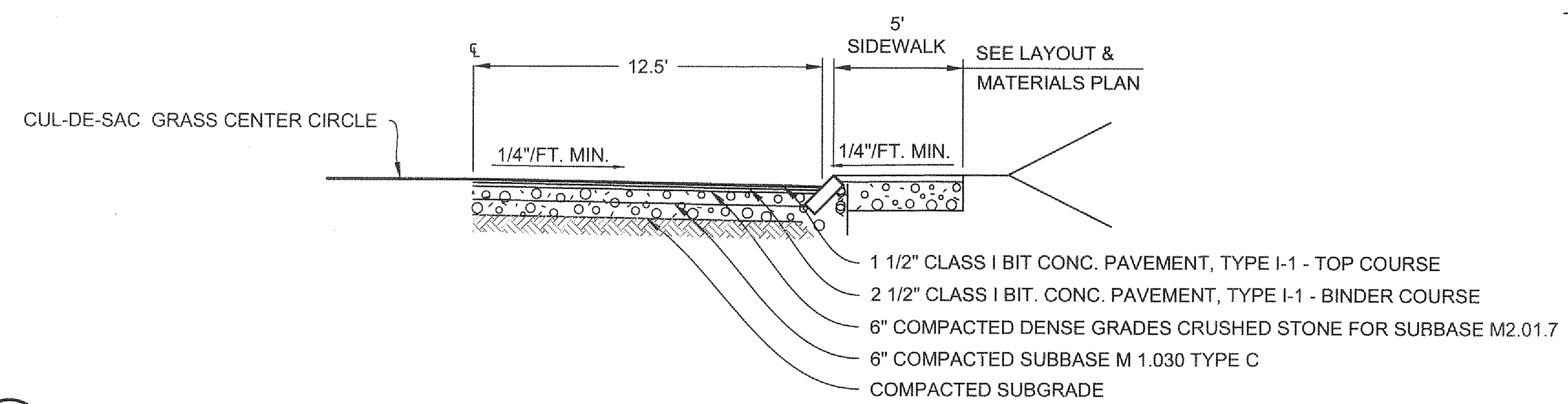
4 CS6001 SLOPED GRANITE CURB (SGC)
NOT TO SCALE



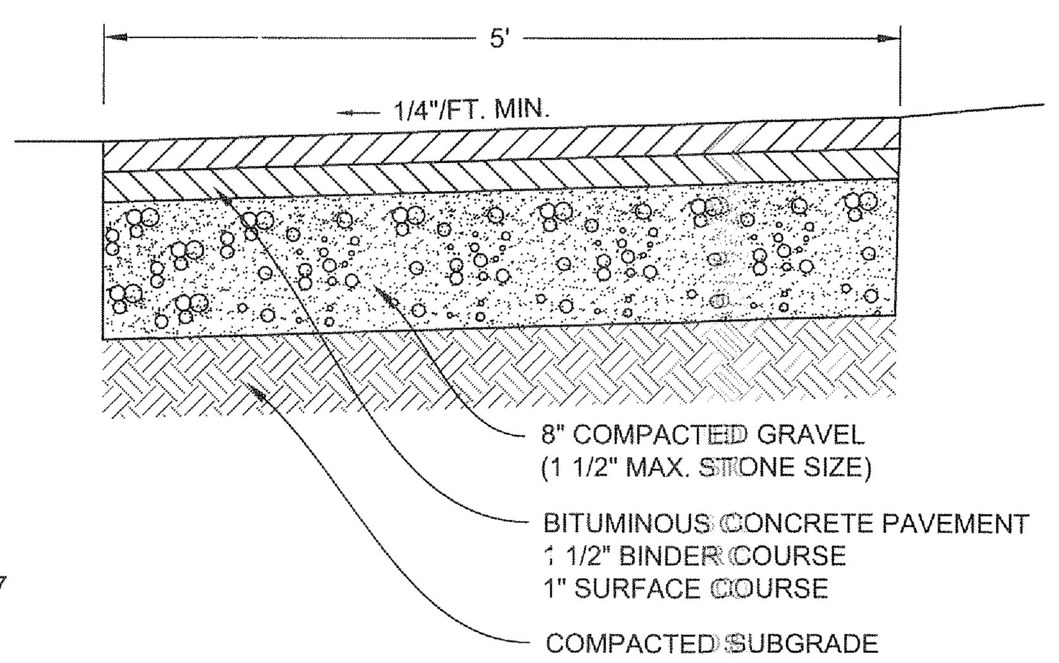
NOTES:

1. ALL FENCING MATERIAL SHALL BE NORTHERN WHITE CEDAR, SHOWN TO THE DIMENSIONS SHOWN ON THE DRAWING.
2. ALL FENCE POSTS SHALL BE TREATED WITH PRESERVATIVE PER MANUFACTURER'S RECOMMENDATION ON ALL SIDES FOR A DIMENSION OF 3'-0" FROM BUTT OF POST.
3. POSTS SHALL MAINTAIN A DEPTH OF 2'-10" IN GROUND AND SHALL NOT BE RACKED TO ACCOMODATE CHANGES IN GRADE.
4. LINE OF FENCE TOP AND BOTTOM SHALL BE INSTALLED STRAIGHT AND TRUE. POSTS AND PICKETS SHALL BE INSTALLED PARALLEL AND PLUMB. RAILS SHALL BE INSTALLED PARALLEL TO GROUND SURFACE AND EACH OTHER.
5. GATE HARDWARE SHALL BE DOUBLE DIP HOT GALVANIZED. THE CONTRACTOR SHALL SUBMIT GATE AND FENCE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW.

5 CS6001 6' STOCKADE FENCE
NOT TO SCALE



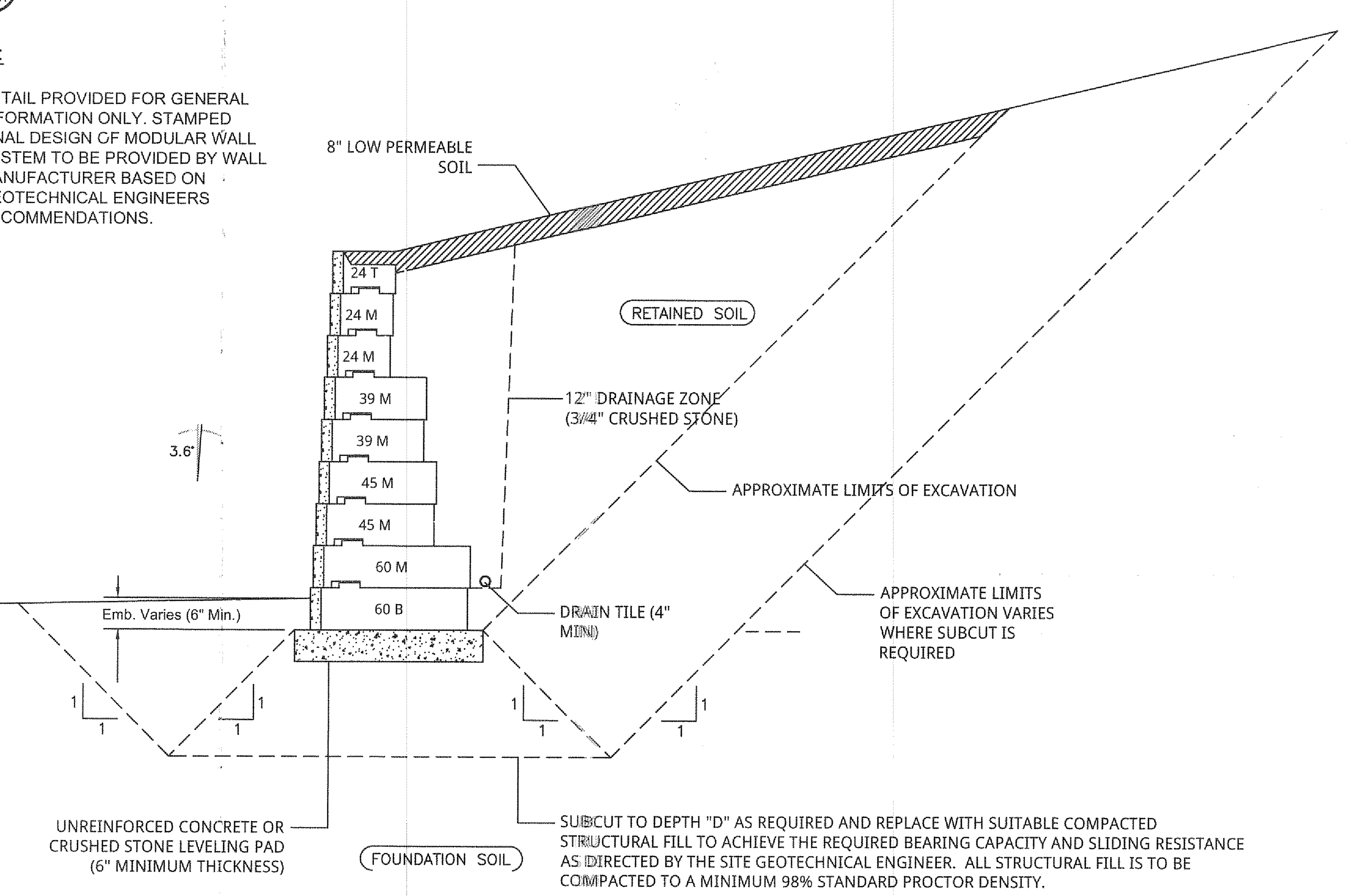
6 CS6001 TYPICAL CUL-DE-SAC CROSS SECTION
NOT TO SCALE



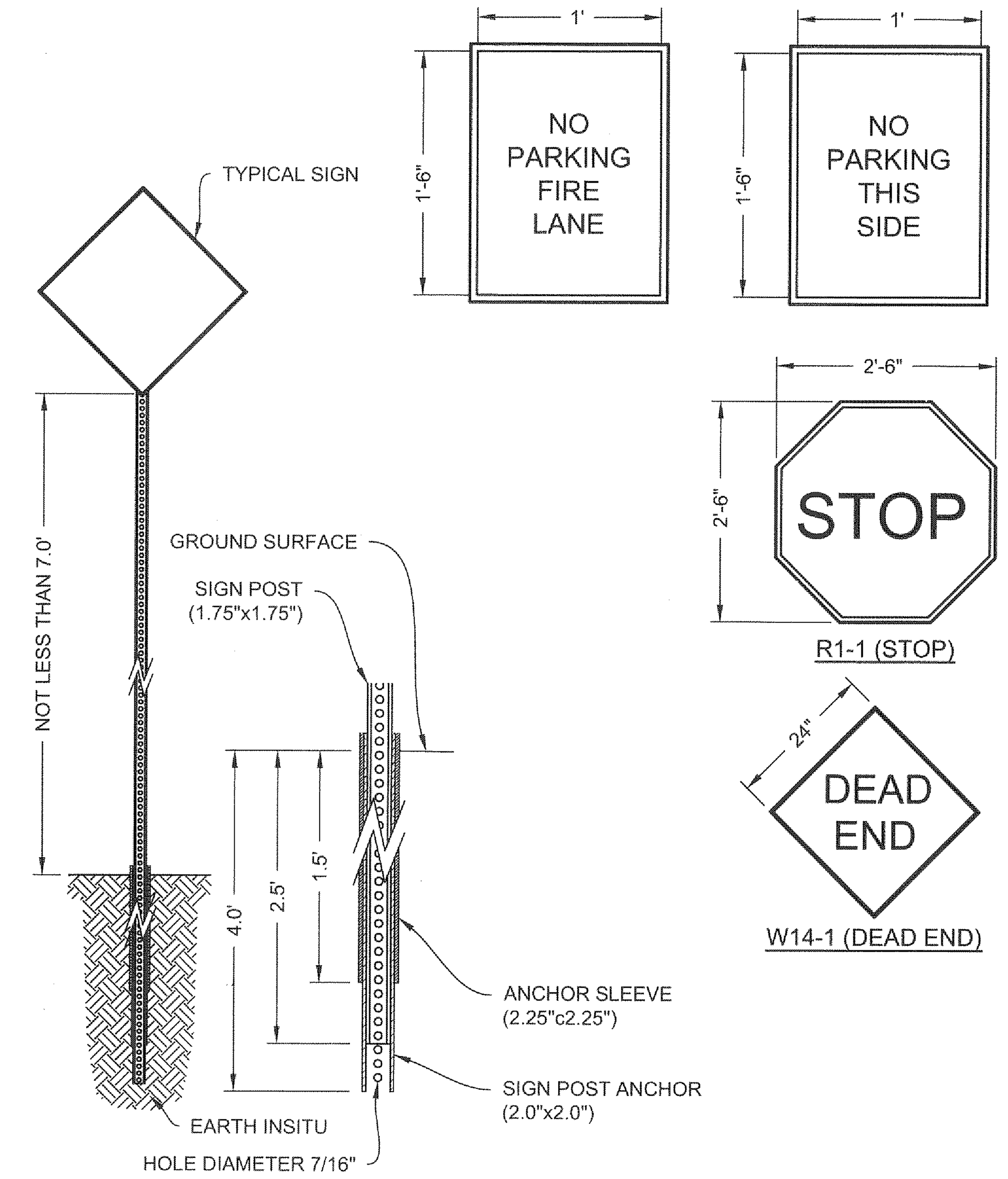
7 CS6001 TYPICAL SIDEWALK SECTION
NOT TO SCALE

NOTE:

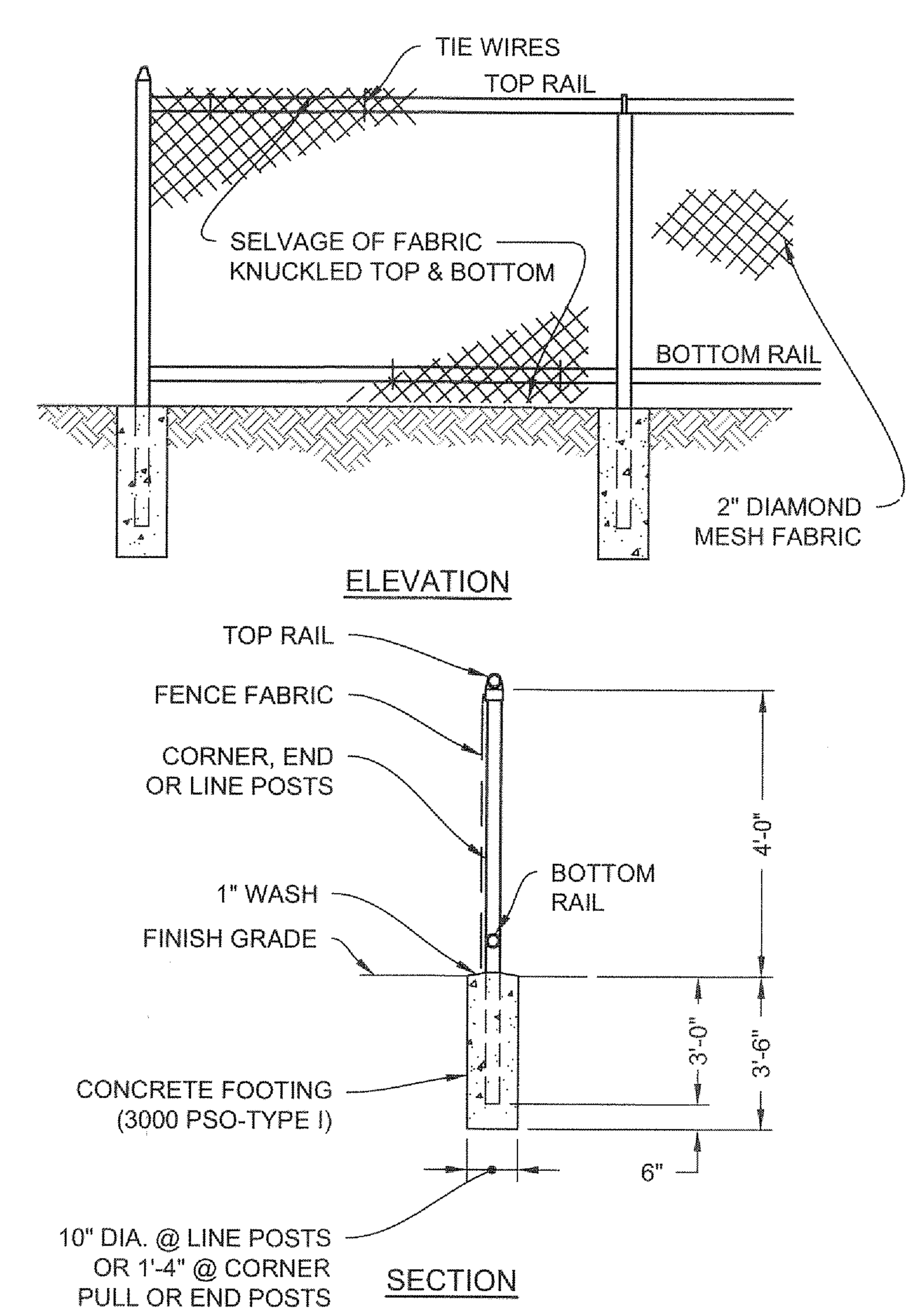
1. DETAIL PROVIDED FOR GENERAL INFORMATION ONLY. STAMPED FINAL DESIGN OF MODULAR WALL SYSTEM TO BE PROVIDED BY WALL MANUFACTURER BASED ON GEOTECHNICAL ENGINEERS RECOMMENDATIONS.



8 CS6001 BIG BLOCK GRAVITY RETAINING WALL- SHEA CONCRETE
NOT TO SCALE



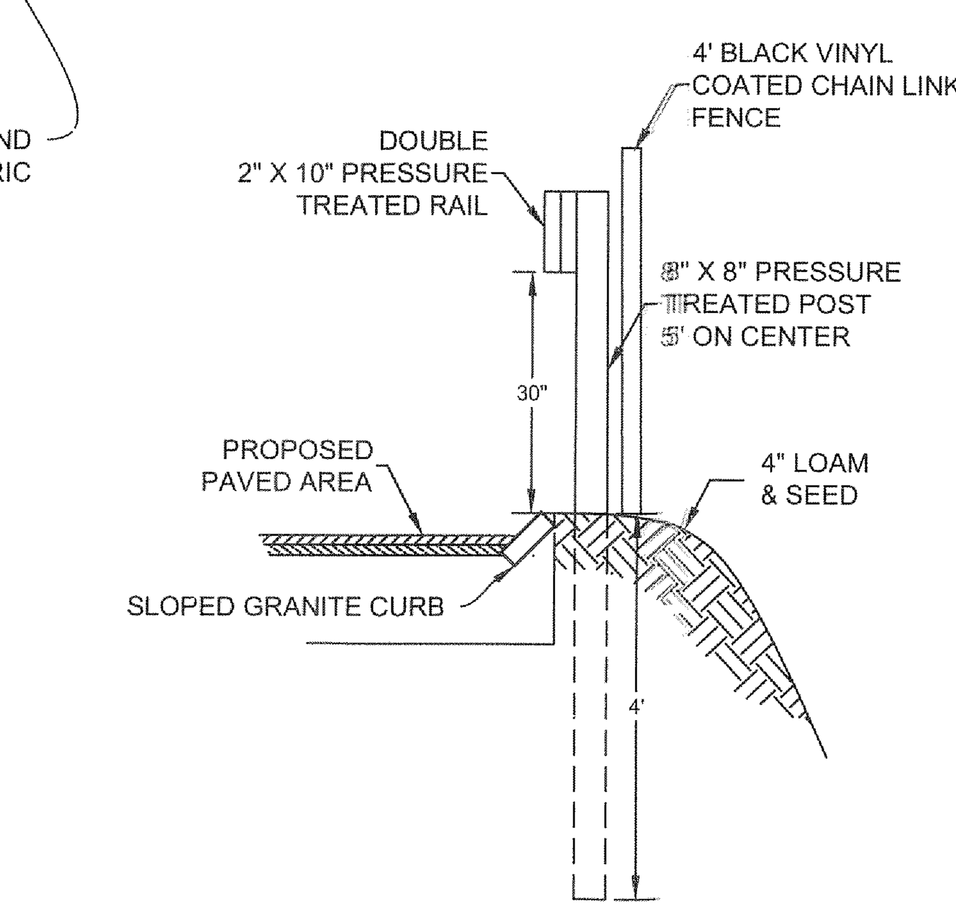
9 CS6001 SIGN POST DETAIL
NOT TO SCALE



NOTE:

1. GATES AND HARDWARE TO BE AS PER MANUFACTURER'S SPECIFICATION. SUBMIT MANUFACTURER'S LITERATURE FOR APPROVAL.

10 CS6001 CHAIN LINK FENCE UP TO 6'
NOT TO SCALE



NOTES:

1. FACE OF GUARD RAIL SHALL BE SET BACK 12" FROM EDGE OF PAVEMENT AT BASE OF SLOPED GRANITE CURB.
2. DOUBLE 2" x10" PRESSURE TREATED RAIL SHALL BE BOLTED @ 2' ON CENTER WITH TWO (2) 3/8" CARRIAGE BOLTS.

9 CS6001 WOOD BEAM GUARD RAIL WITH WOOD POST
NOT TO SCALE

NOT FOR CONSTRUCTION

Ranger Engineering Group, Inc.
13 Branch Street, Suite 101
Methuen MA, 01844
Tel: 978-208-1762
rangereng.com

COMMONWEALTH OF MASSACHUSETTS BENJAMIN C. OSGOOD JR. CIVIL No. 45621 REGISTERED PROFESSIONAL ENGINEER 8/17/20

THE VILLAGE AT CRICKET LANE
BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

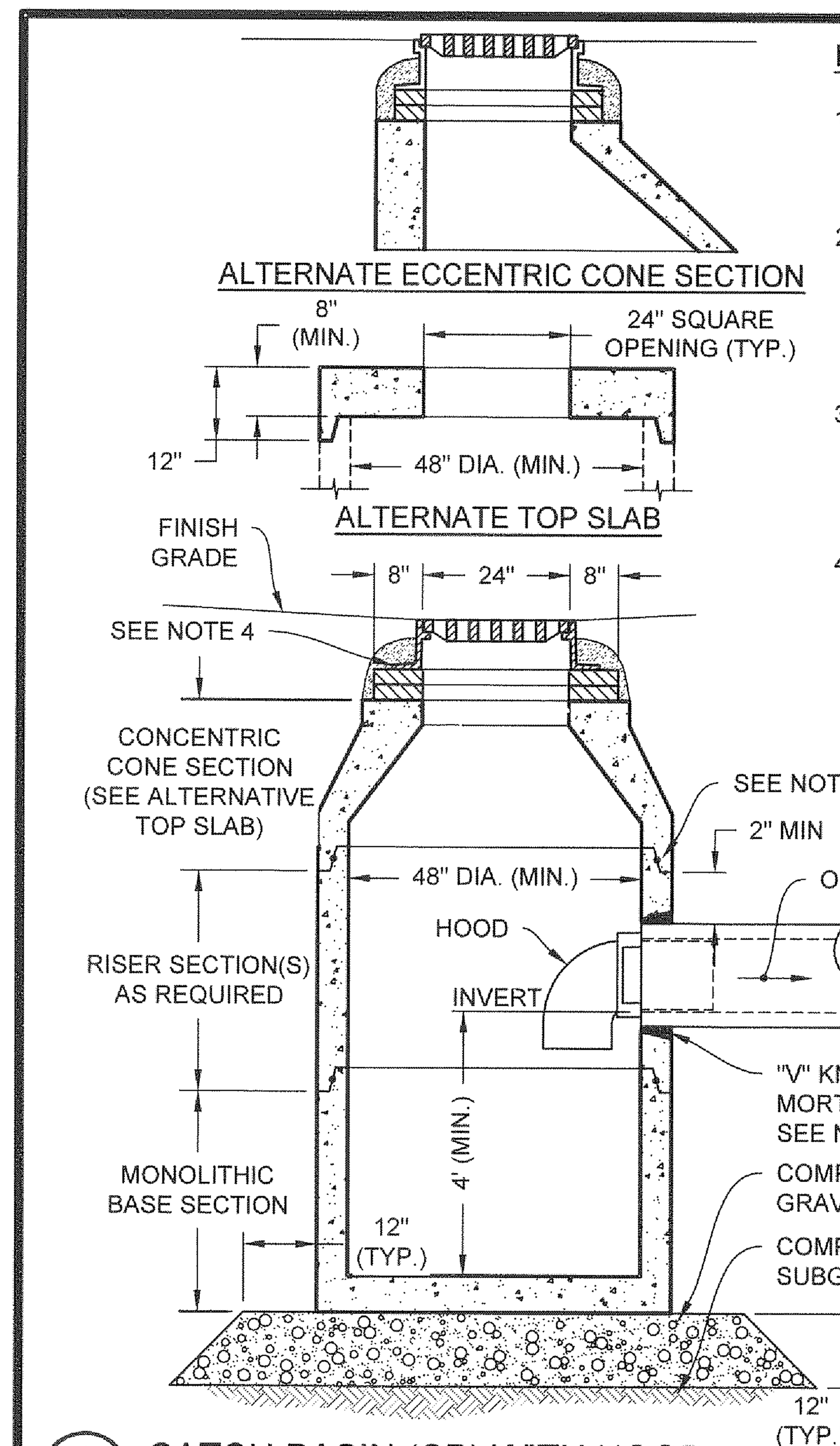
SITE DETAILS

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

DATE	NO.	REVISIONS	BY
08/17/2020	2	REVIEW COMMENT REVISIONS	BCO
06/26/2020	1	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

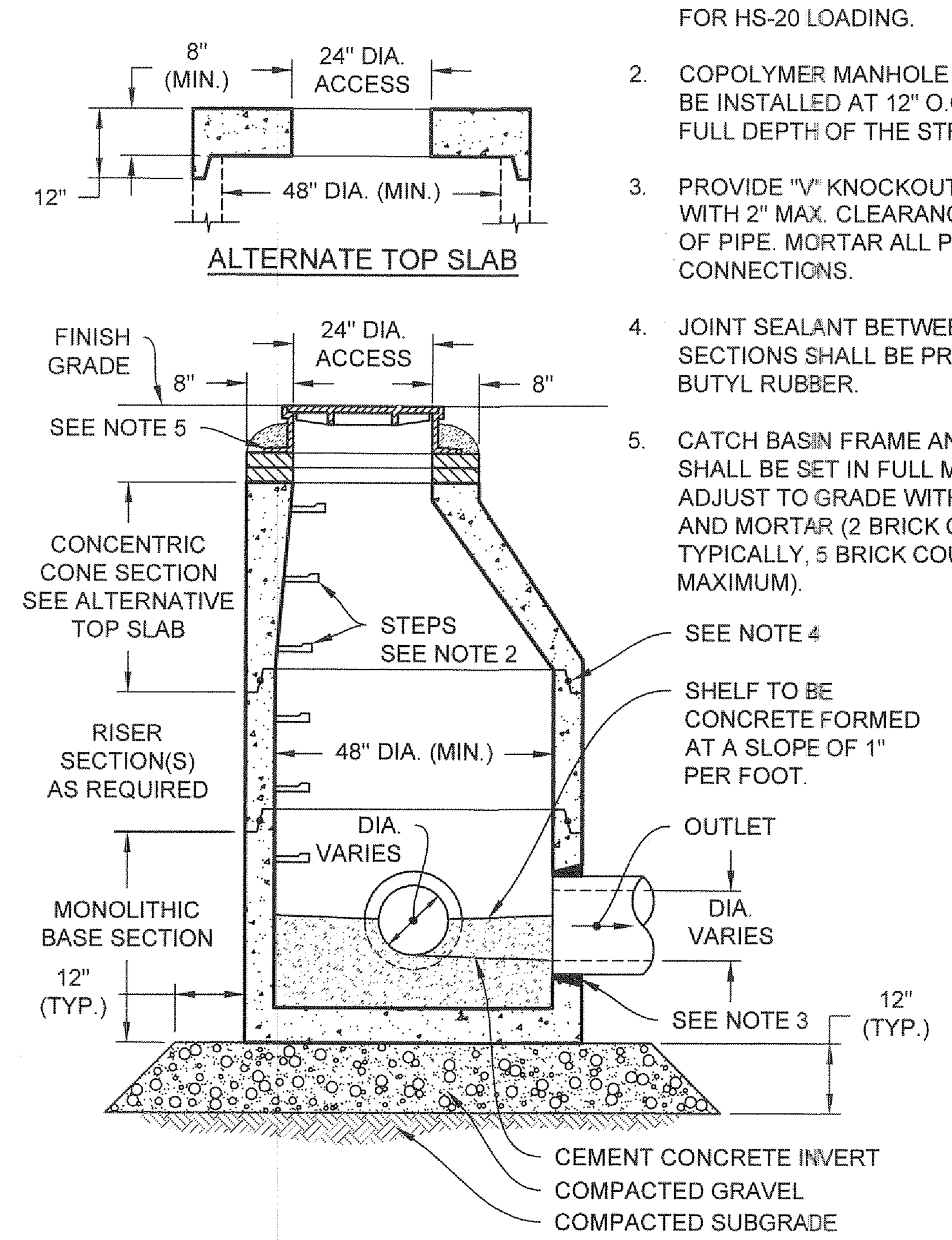
CS6001



NOTES:

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

1 CS6021 CATCH BASIN (CB) WITH HOOD
NOT TO SCALE

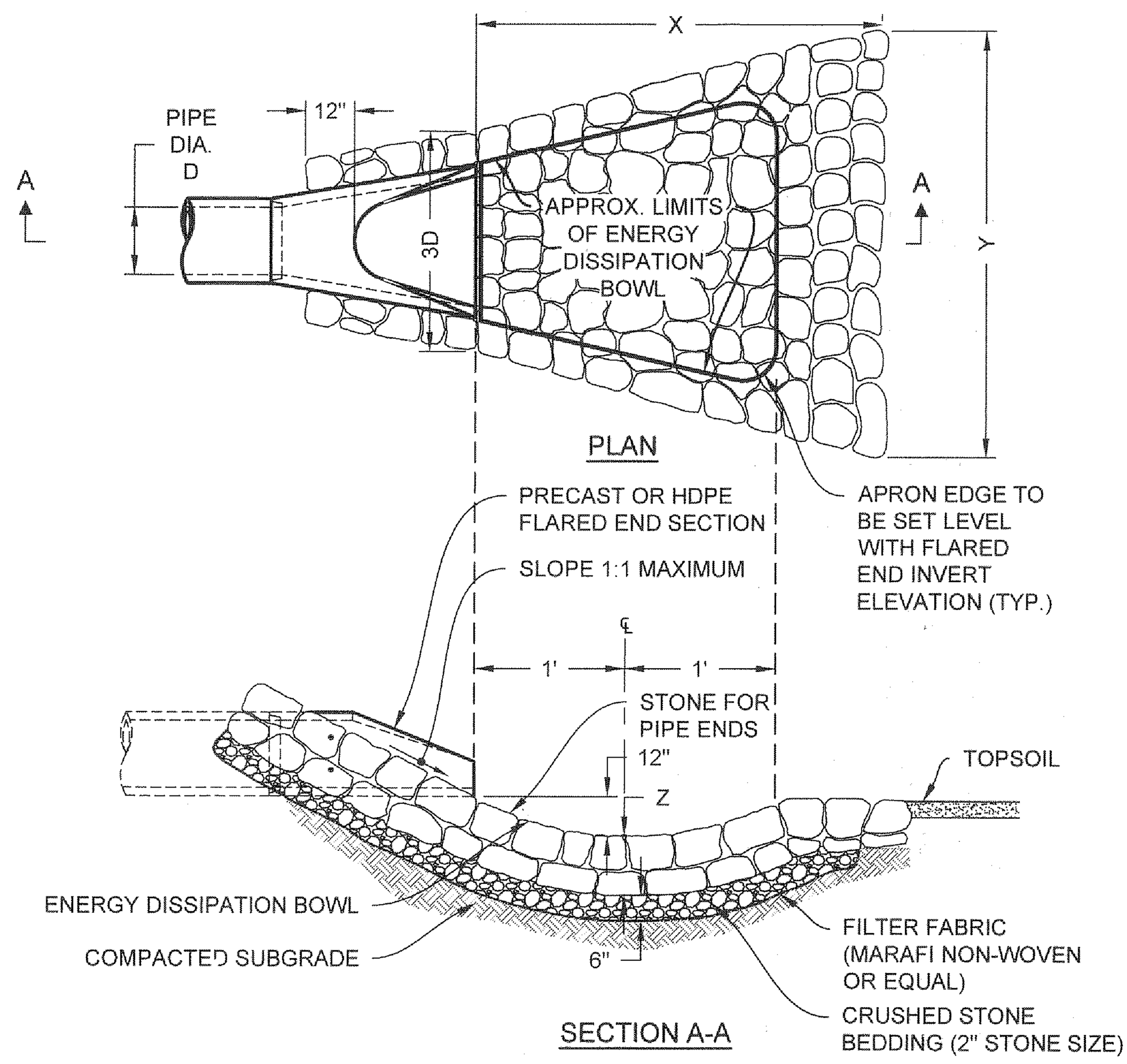


NOTES:

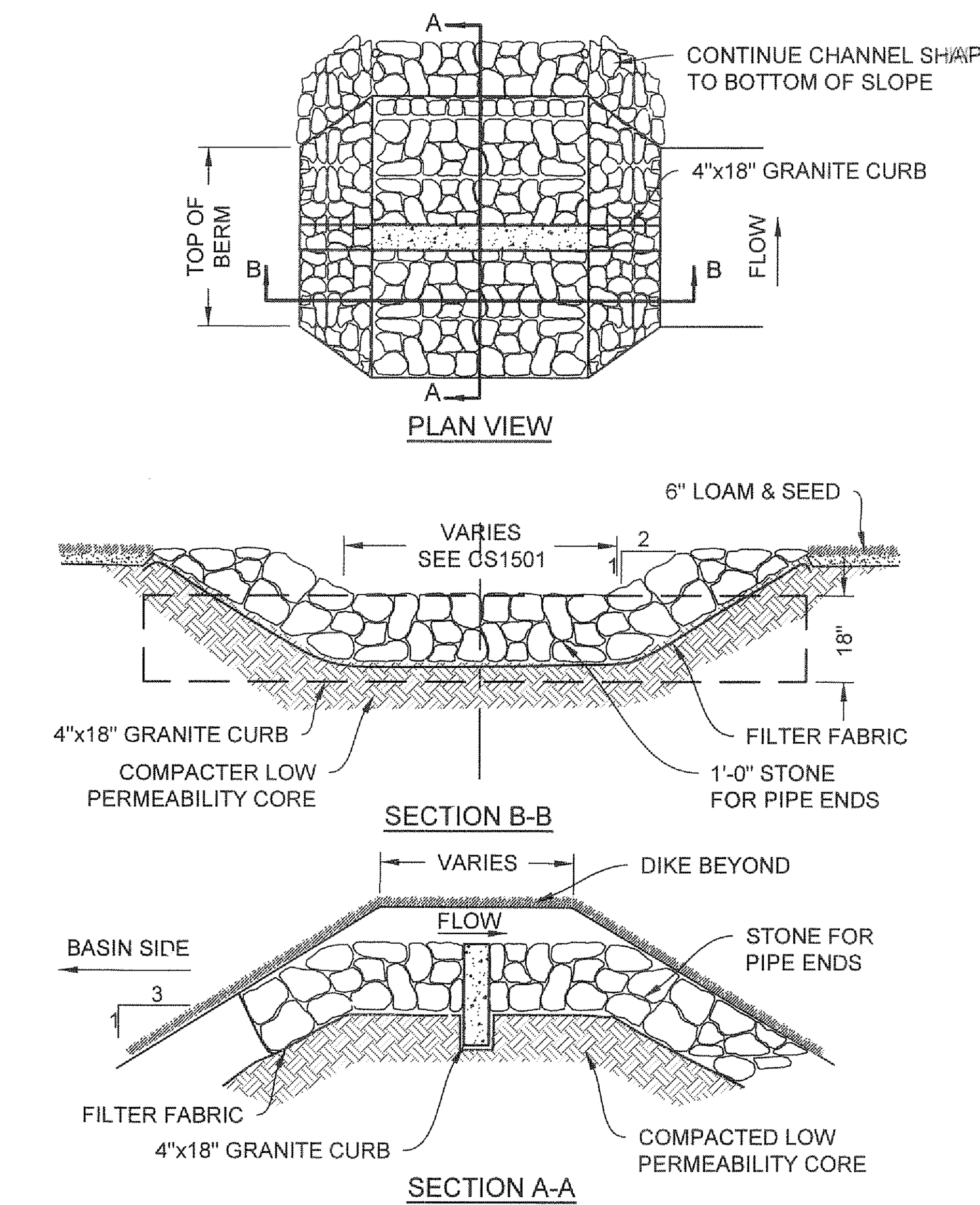
1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
3. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
5. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

2 CS6021 DRAIN MANHOLE (DMH)
NOT TO SCALE

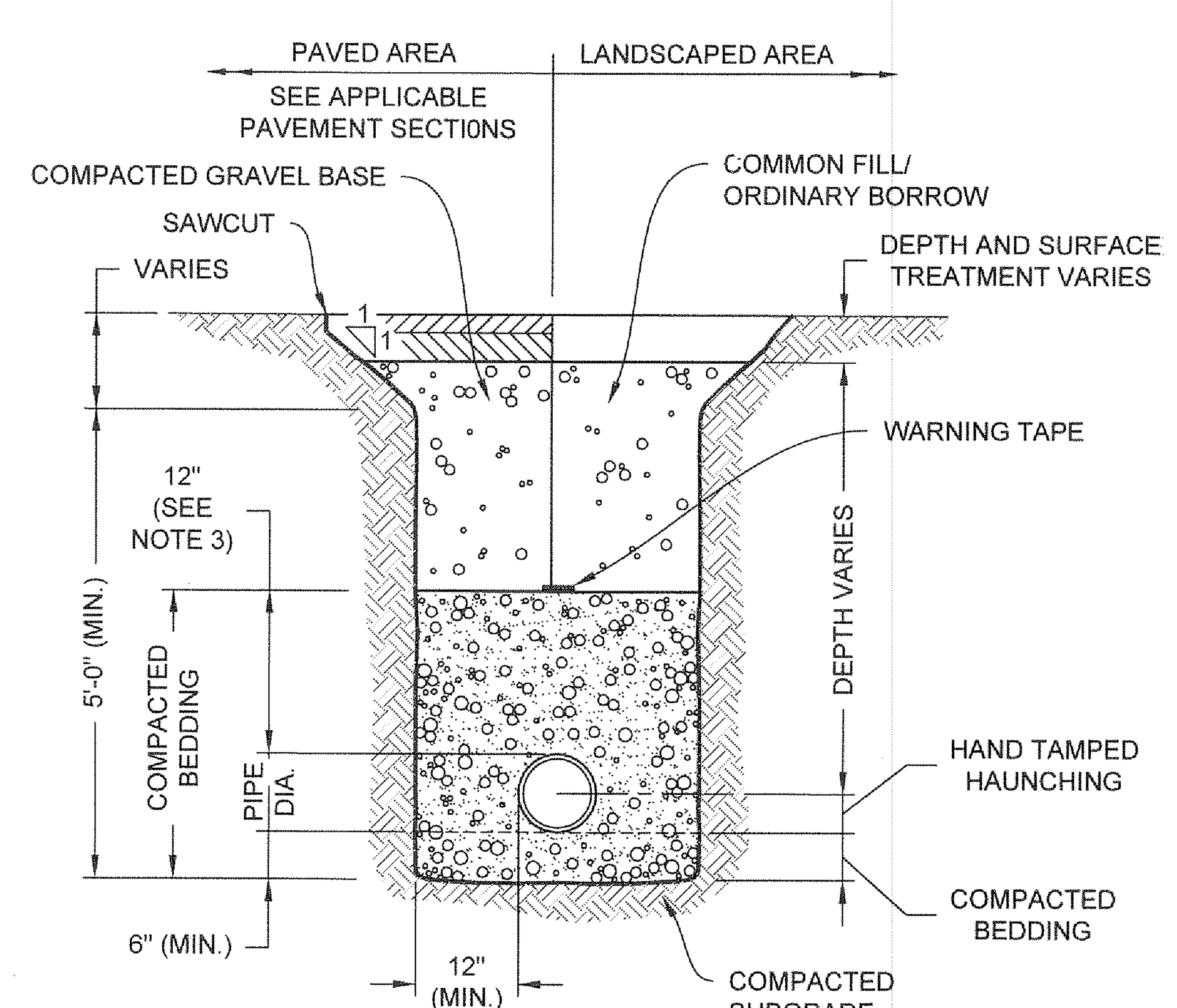
FES NO.	X	Y	Z	STONE DIA. (D_{50})
1-5	6'	8'	1	6-8"



3 CS6021 FLARED END SECTION (FES) WITH STONE PROTECTION
NOT TO SCALE



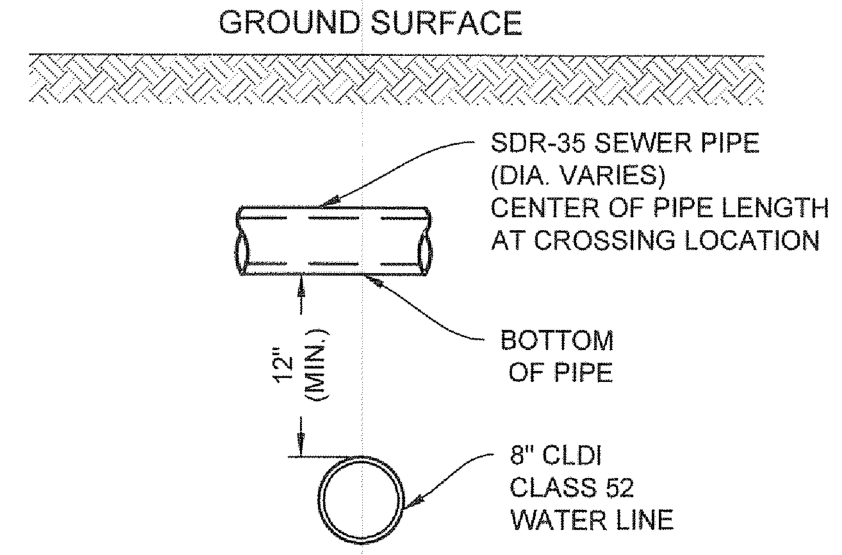
4 CS6021 SPILLWAY TYPICAL DETAIL
NOT TO SCALE



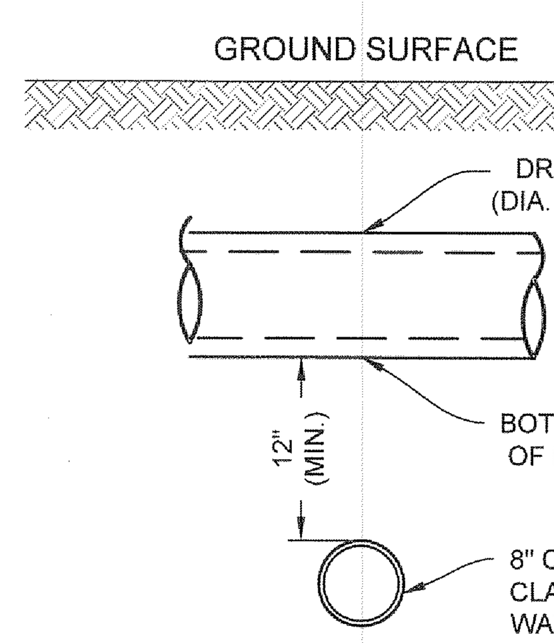
NOTES:

1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.

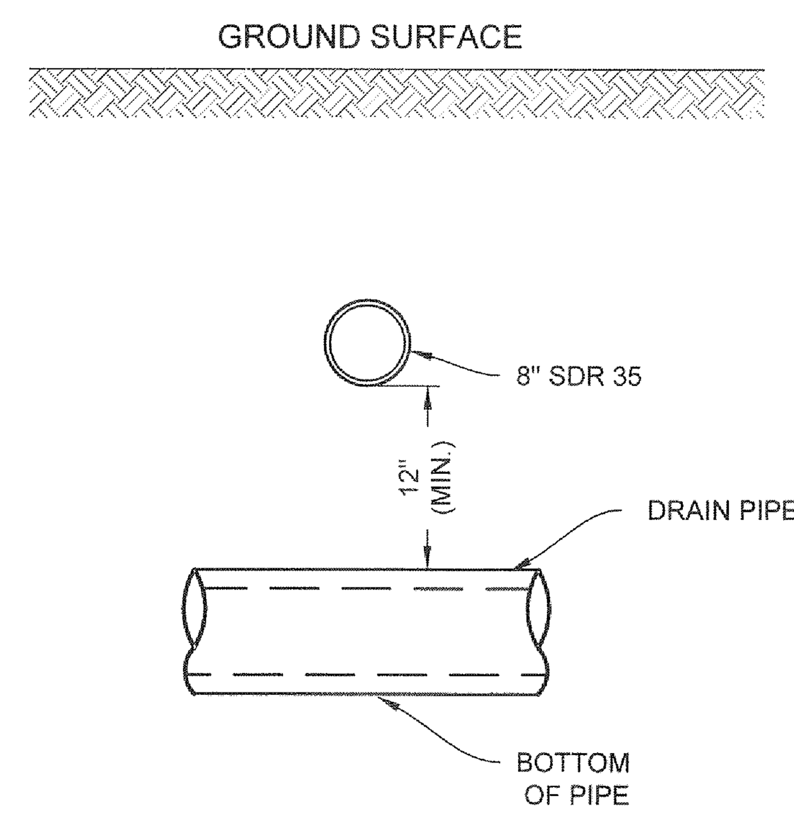
5 CS6021 DRAINAGE TRENCH
NOT TO SCALE



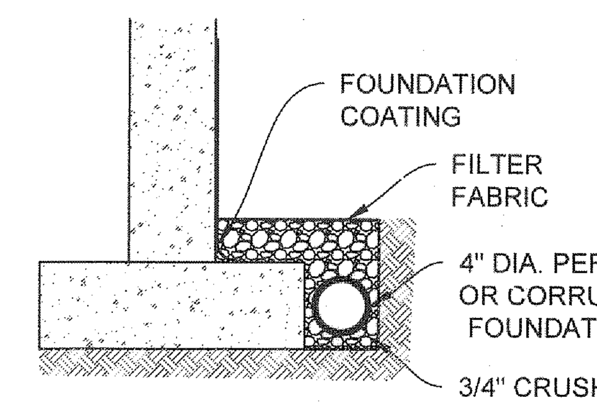
7 CS6021 SEWER PIPE AND WATER PIPE CROSSING
NOT TO SCALE



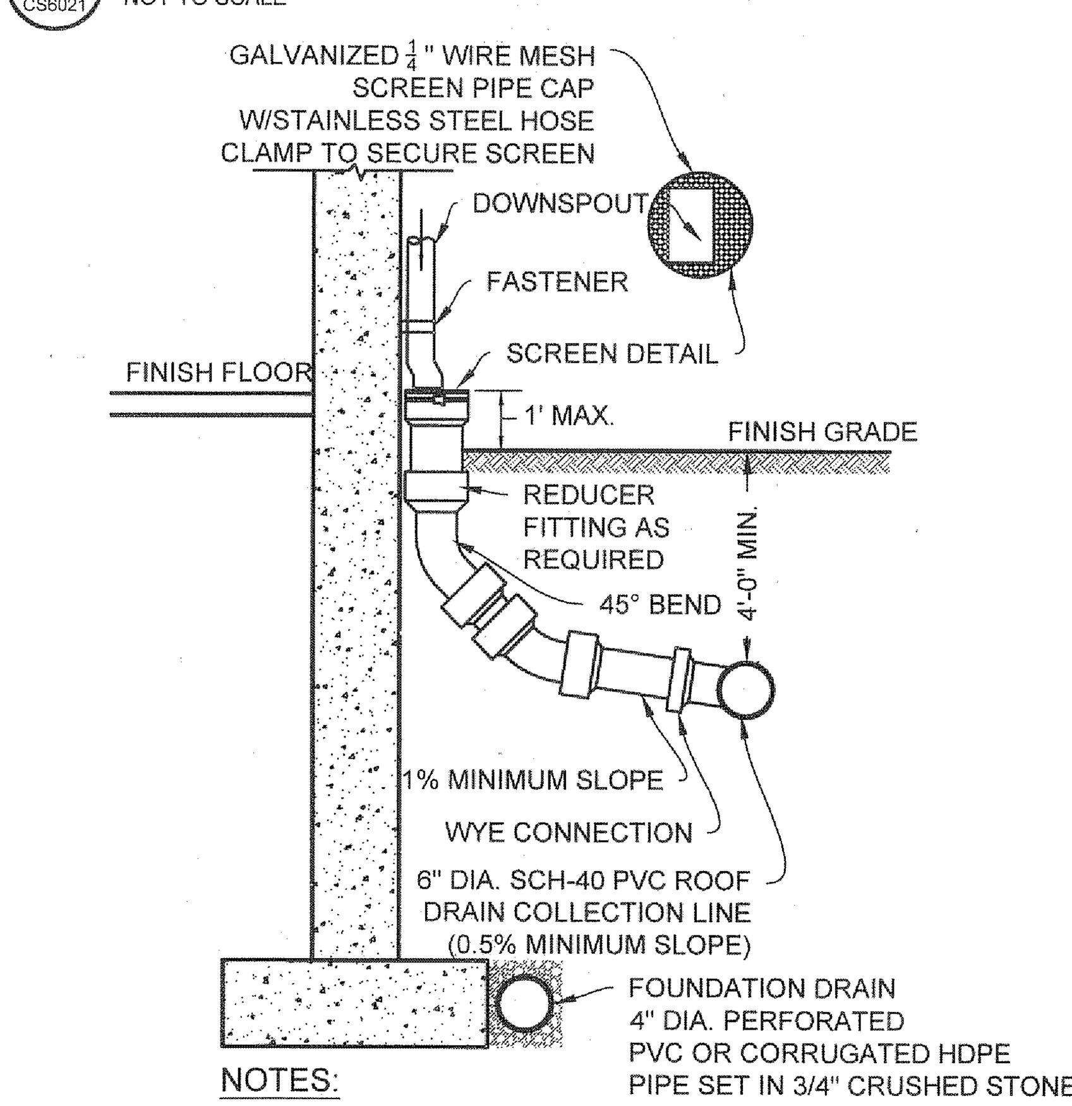
6 CS6021 DRAIN PIPE AND WATER PIPE CROSSING
NOT TO SCALE



8 CS6021 DRAIN PIPE AND SEWER PIPE CROSSING
NOT TO SCALE



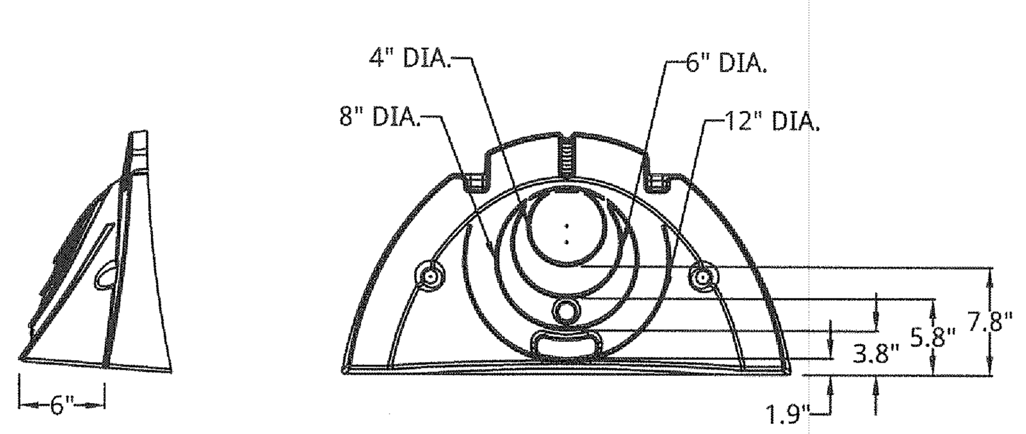
9 CS6021 FOUNDATION DRAIN DETAIL
NOT TO SCALE



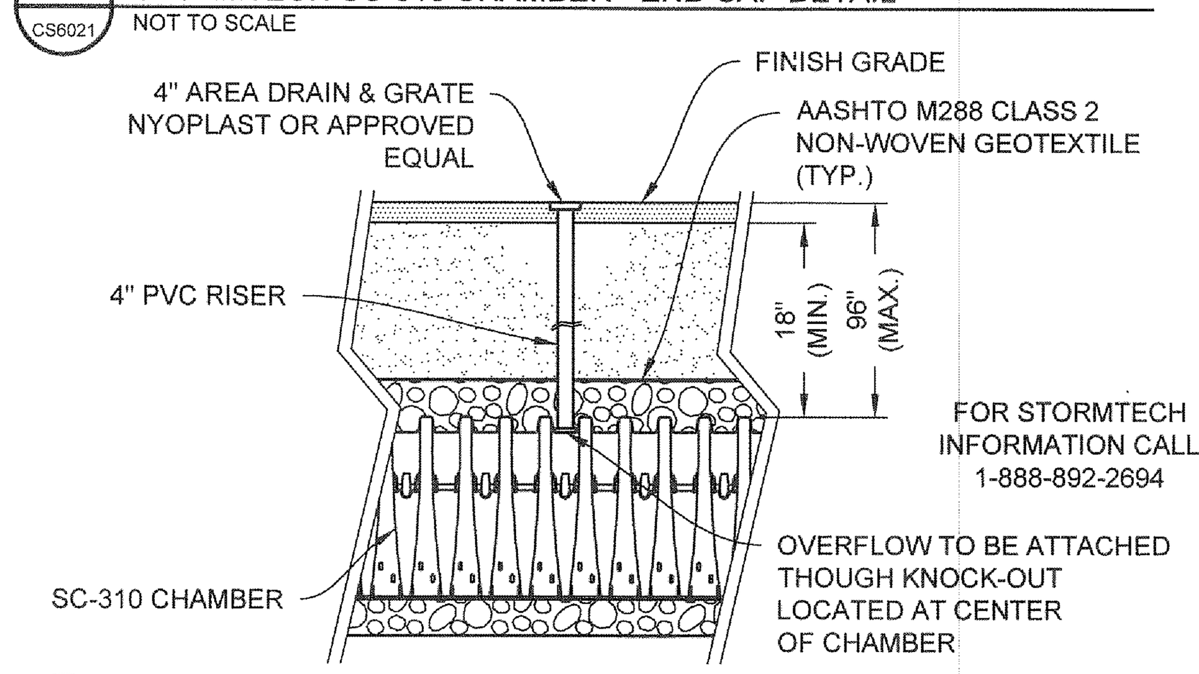
NOTES:

1. ROOF AND FOUNDATION DRAIN DISCHARGE IN SEPARATE PIPES IN LOCATIONS SHOWN ON SHEET CS1501

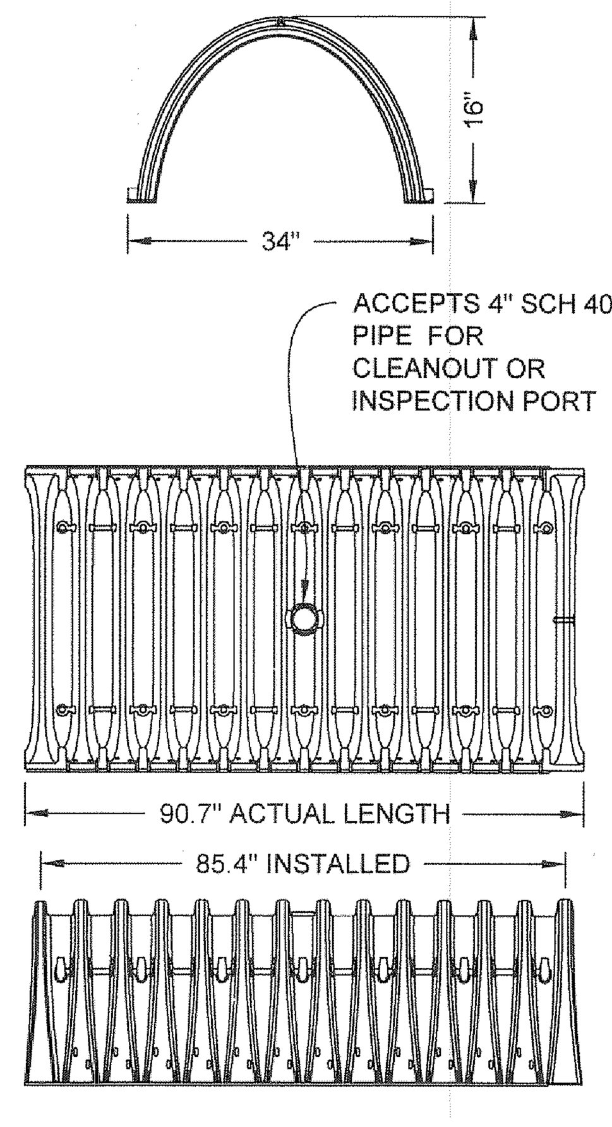
10 CS6021 ROOF/FOUNDATION DRAIN COLLECTOR LINE
NOT TO SCALE



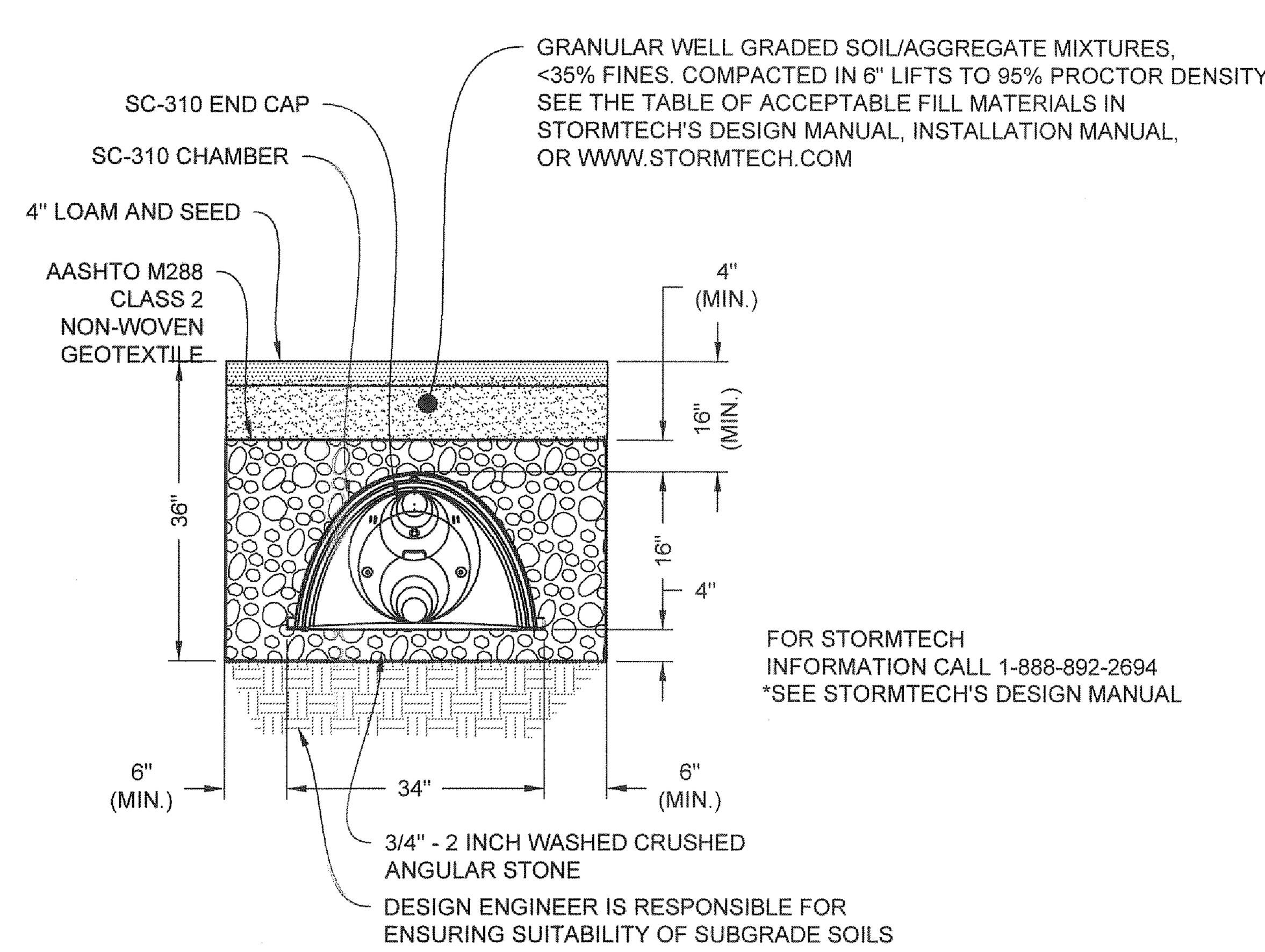
11 CS6021 STORMTECH SC-310 CHAMBER - END CAP DETAIL
NOT TO SCALE



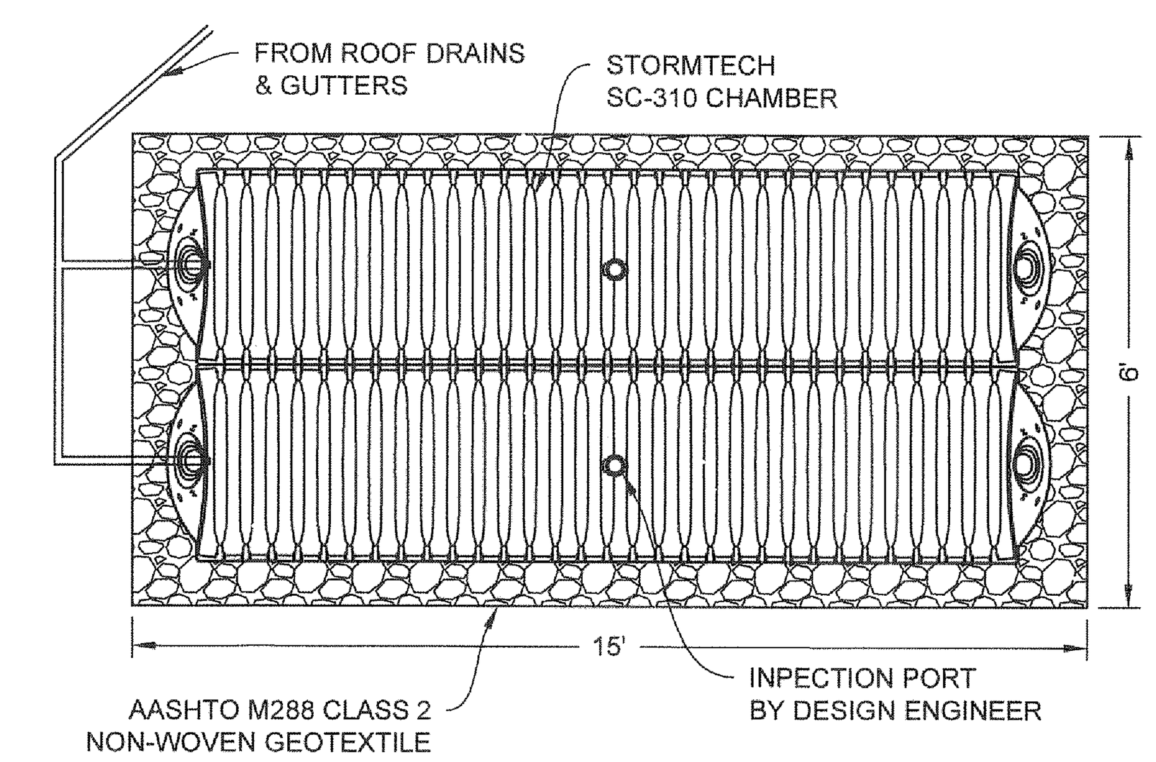
12 CS6021 STORMTECH SC-310 CHAMBER - OVERFLOW DETAIL
NOT TO SCALE



13 CS6021 STORMTECH SC-310 CHAMBER DETAIL
NOT TO SCALE



14 CS6021 STORMTECH SC-310 CHAMBER SYSTEM - TYPICAL CROSS SECTION DETAIL
NOT TO SCALE



15 CS6021 STORMTECH SC-310 CHAMBER DETAIL (PLAN VIEW)
NOT TO SCALE

ROOF INFILTRATOR DATA

UNIT #	EXSIT. GRADE	ESHGW	PROP. GRADE	BOT. OF SYSTEM
5	63.0	61.0	67.0	64.0
6	59.5	57.5	68.25	65.0
7	59.75	57.75	68.25	65.0
8	58.0	56.0	62.25	59.0
9	62.0	60.0	64.0	61.0
21	65.0	63.0	72.0	65.0
22	66.0	64.0	68.25	65.0
23	66.0	64.0	68.25	65.0
24	66.0	64.0	68.5	65.0

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13 Branch Street, Suite 101
Methuen MA, 01844
Tel: 978-208-1762
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COMMONWEALTH OF MASSACHUSETTS BENJAMIN C. OSGOOD JR. CIVIL No. 45891 REGISTERED PROFESSIONAL ENGINEER
8/17/20

THE VILLAGE AT CRICKET LANE
BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

DRAINAGE DETAILS

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

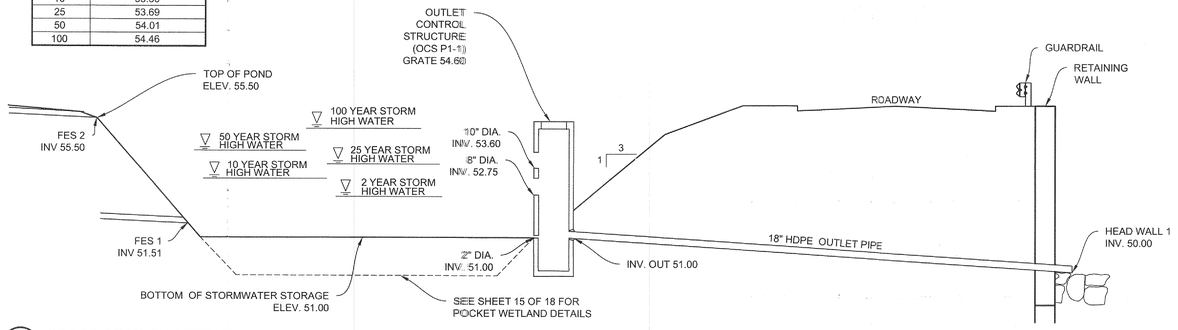
NO.	DATE	REVISIONS	BY
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO
1	06/26/2020	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

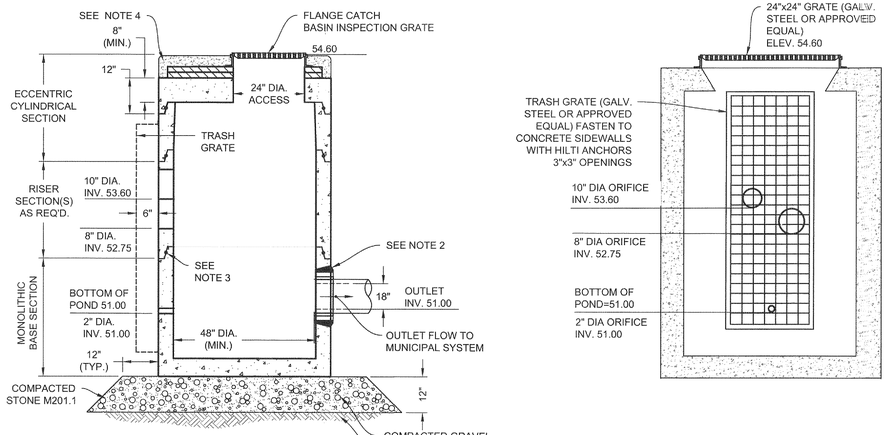
CS6021
SHEET 13 OF 19

PLOTTED: 8/17/2020 12:19 PM BY: Olin Richter PLOTSTYLE: T11 Env NCS.ctb PROJECT STATUS: —
O:\K\PROJECTS\CRICKET DEVELOPMENT\DESIGN_PUBLISH\CS6021 - CS6023.dwg

STORM	HIGH WATER ELEV.
2	52.72
10	53.30
25	53.69
50	54.01
100	54.46

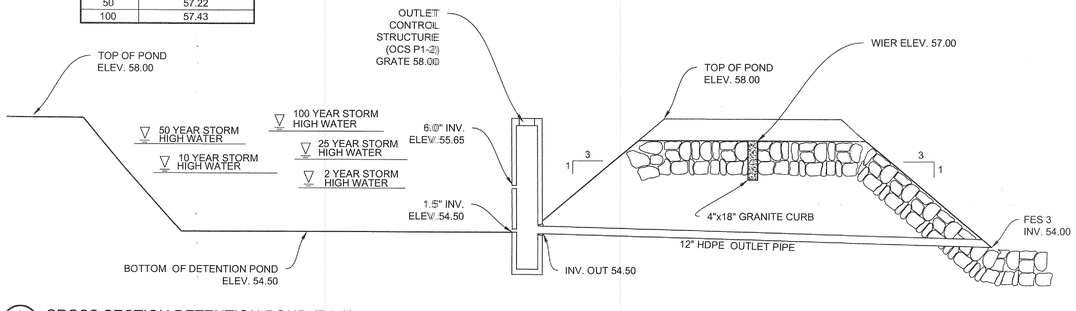


1 CS6022 CROSS SECTION DETENTION POND (P1-1) - POCKET WETLAND
NOT TO SCALE

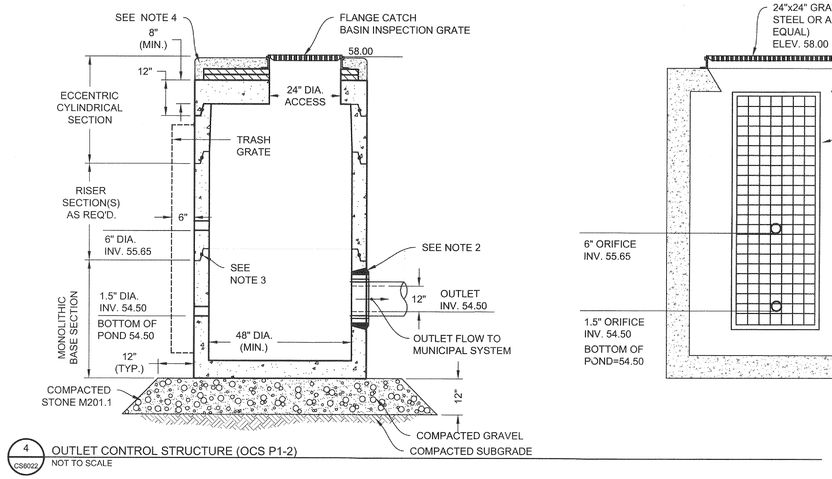


2 CS6022 OUTLET CONTROL STRUCTURE (OCS P1-1)
NOT TO SCALE

STORM	HIGH WATER ELEV.
2	55.57
10	56.30
25	56.94
50	57.22
100	57.43



3 CS6022 CROSS SECTION DETENTION POND (P1-2)
NOT TO SCALE



4 CS6022 OUTLET CONTROL STRUCTURE (OCS P1-2)
NOT TO SCALE

NOT FOR CONSTRUCTION

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13 Branch Street, Suite 101
Methuen MA, 01844
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COMMONWEALTH OF MASSACHUSETTS
BENJAMIN C. OSGOOD JR.
No. 49891
REGISTERED PROFESSIONAL ENGINEER
8/19/20

THE VILLAGE AT CRICKET LANE

BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

DRAINAGE DETAILS

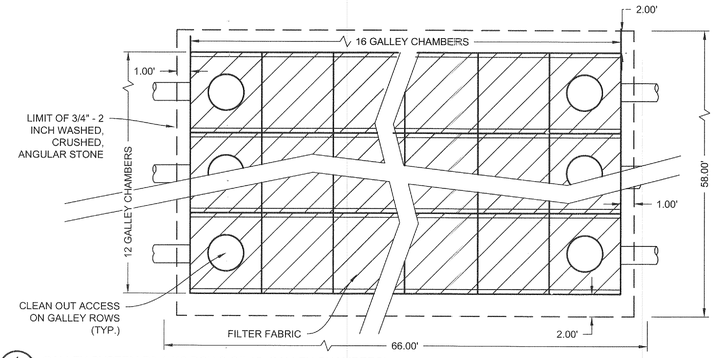
CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO
1	06/26/2020	REVIEW COMMENT REVISIONS	BCO

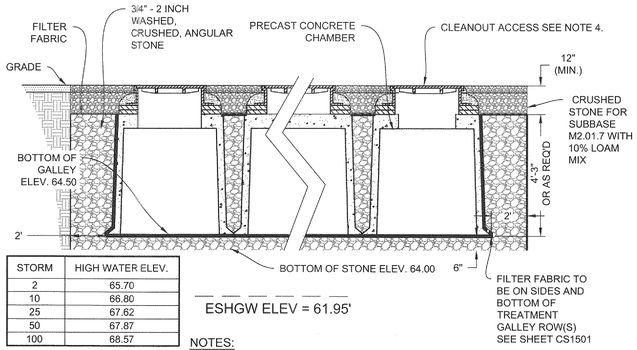
PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS6022

SHEET 14 OF 19



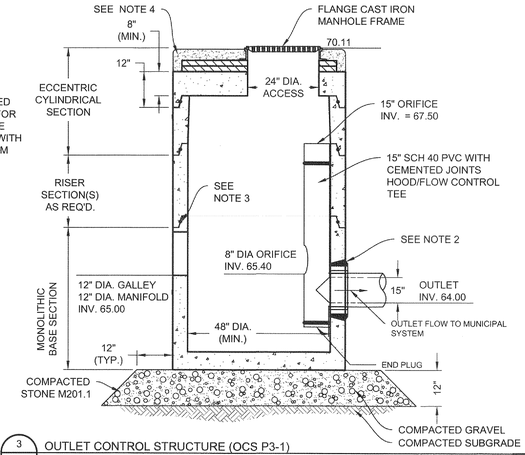
1 CS6023 GALLEY SYSTEM P3-1 (12 ROWS OF 16 GALLEY CHAMBERS)
NOT TO SCALE



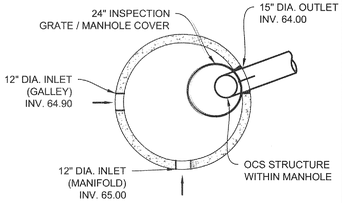
STORM	HIGH WATER ELEV.
2	65.70
10	66.80
25	67.62
50	67.87
100	68.57

NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGNED FOR H-20 LOADING.
3. GALLEY AVAILABLE IN BOTH END AND CENTER SECTIONS. CENTER SECTIONS HAVE LARGE OPENING IN BOTH THE BACK AND FRONT SIDES.
4. CLEAN OUT ACCESS SHALL BE A 24" CAST IRON MANHOLE FRAMES SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR

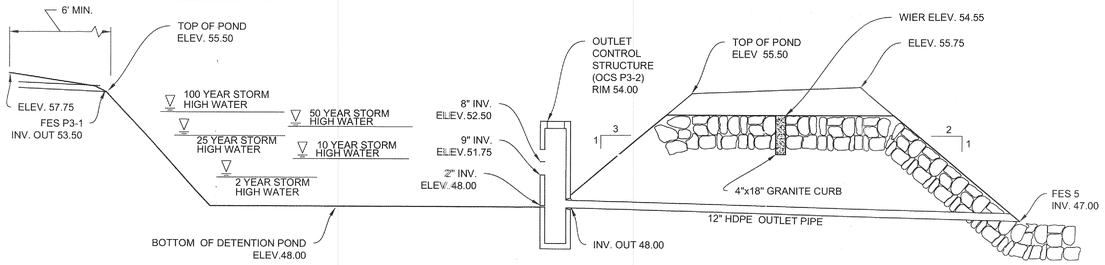
2 CS6023 TYPICAL 4 X 4 GALLEY CROSS SECTION DETAIL
NOT TO SCALE



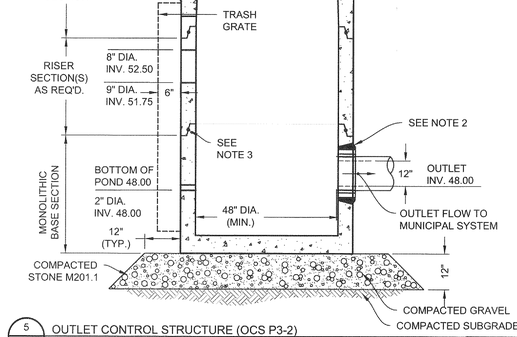
3 CS6023 OUTLET CONTROL STRUCTURE (OCS P3-1)
NOT TO SCALE



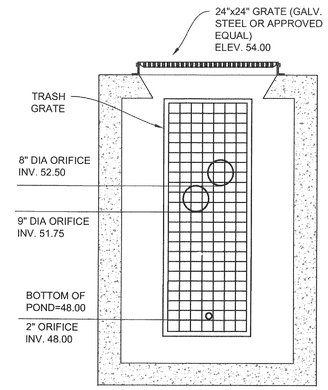
STORM	HIGH WATER ELEV.
2	51.79
10	52.52
25	52.93
50	53.37
100	54.11



4 CS6023 CROSS SECTION DETENTION POND (P3-2)
NOT TO SCALE



5 CS6023 OUTLET CONTROL STRUCTURE (OCS P3-2)
NOT TO SCALE



OUTLET CONTROL NOTES:

1. ALL SECTIONS SHALL BE DESIGNED FOR H-20 LOADING.
2. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)
5. INSTALL ANTI-SEEPAGE COLLARS AT ALL DISCHARGE PIPE LOCATIONS (E.G. DRAINAGE SOLUTIONS, INC. OR APPROVED EQUAL) AT 2' FROM OUTSIDE OF STRUCTURE (MAX.)

DETENTION POND NOTES:

1. DETENTION / INFILTRATION BERMS SHALL BE CONSTRUCTED USING ORDINARY BORROW (MASSACHUSETTS HIGHWAY DEPT. STANDARDS SPECIFICATION M1.01.0), CONTAINING BETWEEN 20% AND 30% OF MATERIAL WHICH PASSES A #200 SIEVE. MATERIAL SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO A DRY DENSITY OF 95% OF MODIFIED PROCTOR TEST.

NOT FOR CONSTRUCTION

Ranger Engineering Group, Inc.
13 Branch Street, Suite 101
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COMMONWEALTH OF MASSACHUSETTS
BENJAMIN C. OSBORN JR.
CIVIL
No. 45611
REGISTERED PROFESSIONAL ENGINEER
8/17/20

THE VILLAGE AT CRICKET LANE
BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

DRAINAGE DETAILS

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO
1	06/26/2020	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS6023

SHEET 15 OF 19

PROJECT STATUS: —
PLOTTED: 8/17/2020 11:07 AM, BY: Olin Richter PLOTSTYLE: TTI Env NCS.stb
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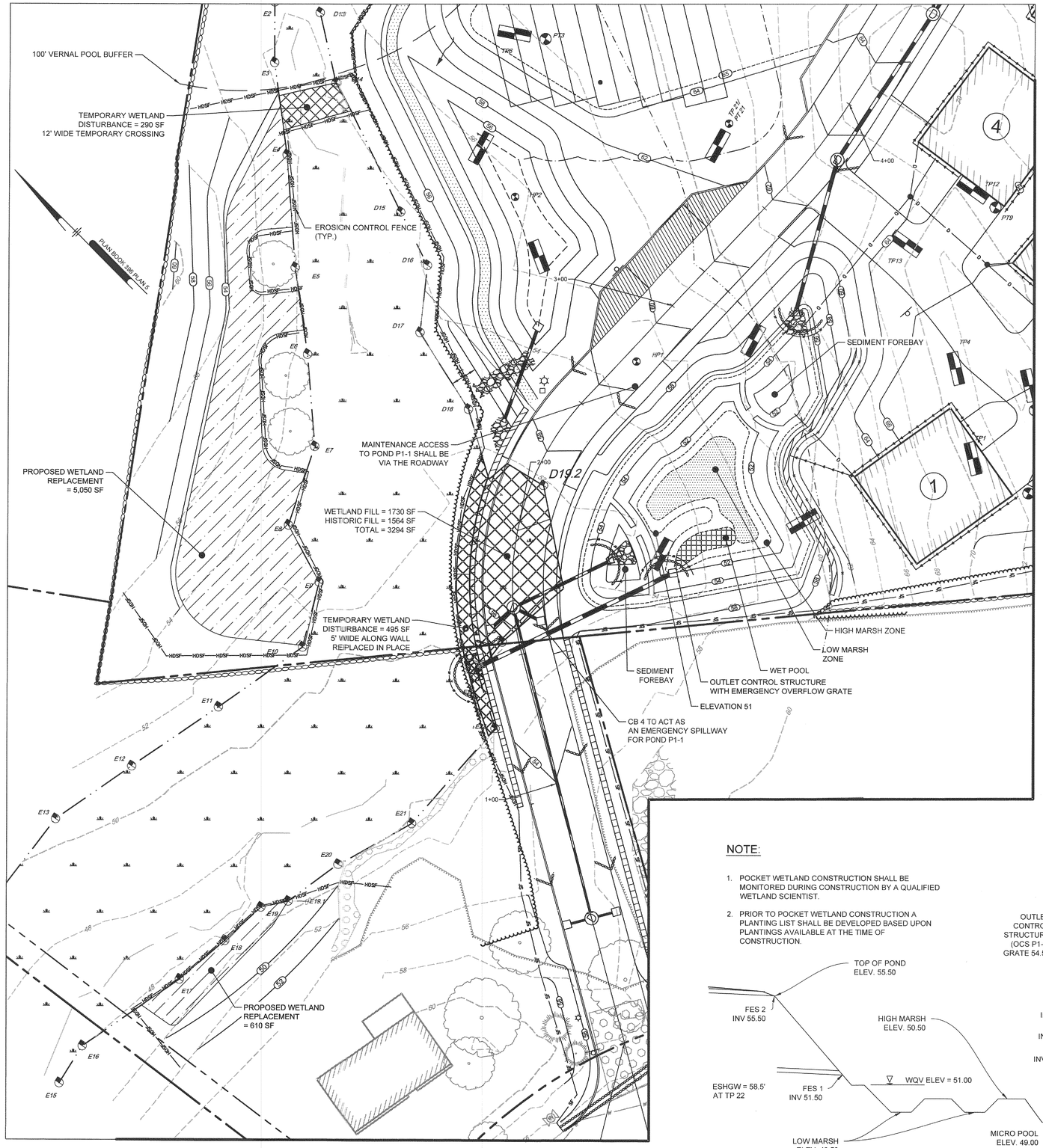


POCKET WETLAND DESIGN	
DRAINAGE AREA	62,234 SF
WETLAND AREA	1,570 SF
SURFACE TO WATERSHED RATIO	.03
LENGTH	90 '
WIDTH	10 '
L TO W RATIO	9:1
SURFACE AREA ALLOCATION	
WET POOL	165 SF (10.5%)
LOW MARSH	710 SF (45.2%)
HIGH MARSH	695 SF (44.3%)
WATER QUALITY VOLUME ALLOCATION	
WET POOL	330 CF (18.9%)
LOW MARSH	347.5 CF (19.9%)
HIGH MARSH	1065 CF (61.1%)
ESHGW	53.0'

WETLAND SEED MIX		
COMMON NAME	AMOUNT	SUPPLIER
NEW ENGLAND WETMIX	1.0 LB./2500 S.F.	NEW ENGLAND WETLAND PLANTS, INC
NEW ENGLAND LOGGING ROAD MIX	1.0 LB./2200 S.F.	NEW ENGLAND WETLAND PLANTS, INC

ACCEPTABLE WETLAND REPLACEMENT PLANTINGS		
	SCIENTIFIC NAME	COMMON NAME
	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY
	ILEX VERTICILLATA	WINTERBERRY
	CLETHRA ALNIFOLIA	SWEET PEPPER BUSH
	ACER RUBRUM	RED MAPLE
	QUERCUS RUBRA	RED OAK
	QUERCUS ALBA	WHITE OAK
	PINUS STROBUS	WHITE PINE
	TSUGA CANADENSIS	EASTERN HEMLOCK

WETLAND REPLACEMENT NOTES:

WETLAND FILL AREA:	1,730 SF
HISTORIC FILL AREA:	2,039 SF
TEMPORARY DISTURBANCE:	785 SF
TOTAL REQUIRED REPLICATION AREA:	4554 SF
PROPOSED REPLACEMENT AREA (x1.5):	3,769 (5653) SF

PLANTING NOTE:

1. NEW ENGLAND WETMIX TO BE USED WITHIN WETLAND REPLACEMENT / RESTORATION AREA.
2. NEW ENGLAND LOGGING ROAD MIX TO BE USED FOR UPLAND AREAS.
3. MULCH WITH STRAW IF SEEDING PERFORMED AFTER JUNE 15TH.
4. PLANTS TO BE 2'-3' TALL, 1.5" CALIPER CONTAINER GROWN (MIN. 5 GAL.)

PERFORMANCE SPECIFICATIONS

1. Erosion Control Location and Delineation of Work Areas

   A silt fence shall remain as the lower limit of work until the restored area is stabilized. The upper limit of restoration shall be marked with stakes 20 feet apart prior to performing restoration activities.

2. Excavation and Stockpiling of Mineral Soil from Wetland Replication Area

   From the Wetland Replication Area as marked, all existing vegetation, with particular focus on invasive species, shall be cleared except for the individual species which are noted on sheet 15 and other native species. Existing vegetation to remain shall be protected by encircling with silt fence. All mineral soil shall be excavated to subgrade elevation, or as otherwise directed in the field. Excavated mineral soil may be stockpiled onsite. No heavy equipment shall pass the line of erosion control during this work.

3. Excavation of Topsoil from Wetland Crossing Area

   From the Wetland Crossing Area, all topsoil shall be excavated down to the elevation of the topsoil-subsoil boundary as determined in the field. All remaining vegetation shall be excavated with the topsoil. No heavy equipment shall pass the line of staked erosion control during this work. Topsoil removed from the wetland crossing area shall be reused in the wetland replication area.

4. Placement and Grading of Topsoil in Wetland Replication Area.

   The topsoil in the wetland replication area shall be graded roughly to the elevation of the adjacent wetland. Topsoil shall be finish graded by hand to elevations as shown on the sheet 15, or as otherwise directed in the field.

6. Revegetation with Indigenous Wetland Plant Species

   The excavated topsoil placed in the wetland replication area contains dormant seeds, roots and rhizomes of indigenous vegetation. When this soil is relocated and finish graded, germination and growth of the plant material within will result. In order expedite this natural process, container-grown wetland plant stock will be planted in the wetland replication area according to the plant list provided. Following planting of container grown stock, the wetland replication area will be seeded with a mixture of herbaceous wetland plant species to augment development of wetland vegetation and provide initial vegetative stabilization for erosion control. A light mulch of clean, weed free straw shall be spread on the surface of the seeded area to allow erosion control during the establishment period.

7. Relocation of erosion control
   Following planting and seeding of the wetland replication area, a second line of silt fencing with compost filter tubes shall be installed along the new limit of work. This work is intended to reduce or prevent erosion of the newly-planted replacement wetland. Upon installation of a second erosion control line, remove initial erosion control along wetland replication area perimeter.

8. Onsite Supervision

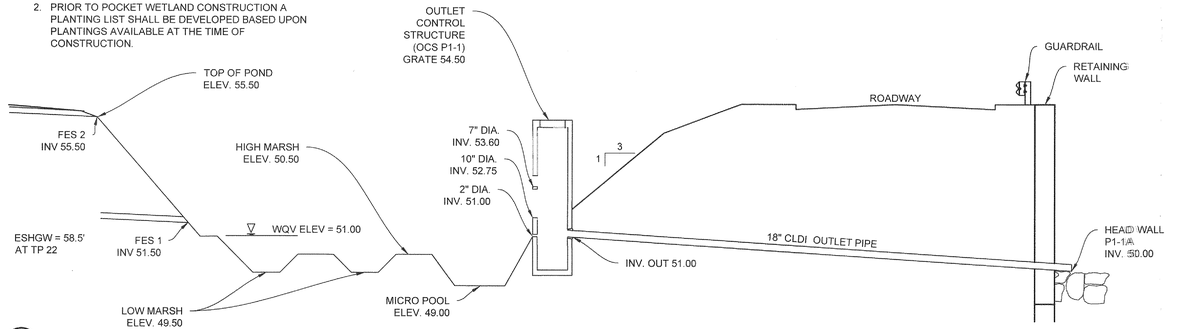
   During construction of the wetland replication area and the fill area, the work will be under the direct supervision of a registered professional engineer or wetland specialist.

9. Replacement of Unsatisfactory Plantings

   75% healthy foliage shall be assumed satisfactory evidence of growth after two growing seasons. All dead or unsatisfactory plants shall be removed and replaced in kind and size by the contractor with plants as originally established under this specification and planting plan. Any substitutions of plant material which may be necessary or desirable after the first growing season must be approved by the permit-issuing authority prior to replacement.

NOTE:

1. POCKET WETLAND CONSTRUCTION SHALL BE MONITORED DURING CONSTRUCTION BY A QUALIFIED WETLAND SCIENTIST.
2. PRIOR TO POCKET WETLAND CONSTRUCTION A PLANTING LIST SHALL BE DEVELOPED BASED UPON PLANTINGS AVAILABLE AT THE TIME OF CONSTRUCTION.



1 CROSS SECTION DETENTION POND (P1-1) - POCKET WETLAND
NOT TO SCALE

NOT FOR CONSTRUCTION

Ranger Engineering Group, Inc.
13 Branch Street, Suite 101
Methuen MA, 01844
Tel: 978-208-1762
rangereng.com

BENJAMIN C. OSGOOD JR. CIVIL No. 45691 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS
2/19/20

THE VILLAGE AT CRICKET LANE
BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

WETLAND DETAILS

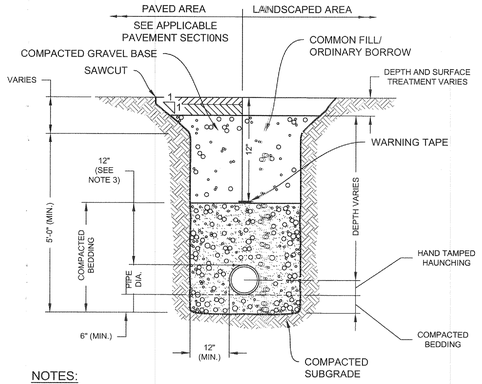
CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO
1	06/26/2020	REVIEW COMMENT REVISIONS	BJO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS6031

SHEET 16 OF 19



NOTES:

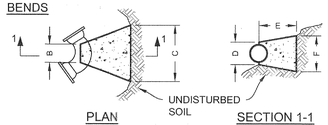
1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.

1 CS6051 WATER TRENCH
NOT TO SCALE

TABLE OF DIMENSIONS

BENDS		B	C	D	E	F	BENDS		B	C	D	E	F
6"	111/4°	8"	15"	12"	24"	12"	6"	45°	8"	30"	12"	24"	14"
6"	221/2°	"	19"	"	"	13"	6"	90°	"	30"	"	"	27"
8"	111/4°	"	20"	"	"	12"	8"	45°	"	30"	"	"	24"
8"	221/2°	"	22"	"	"	17"	8"	90°	"	38"	"	"	36"
12"	111/4°	"	30"	"	"	15"	12"	45°	"	40"	"	"	40"
12"	221/2°	"	35"	"	"	25"	12"	90°	"	60"	"	"	52"

BENDS

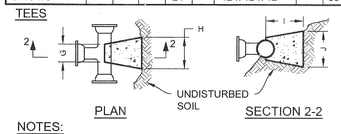


PLAN SECTION 1-1

TABLE OF DIMENSIONS

TEES	G	H	I	J	TEES	G	H	I	J
6"x 6"x 6"	12"	24"	24"	18"	12"x 12"x 6"	12"	24"	24"	18"
8"x 8"x 6"	"	"	"	"	12"x 12"x 8"	"	"	"	24"
8"x 8"x 8"	"	"	"	24"	12"x 12"x 12"	"	36"	"	36"

TEES

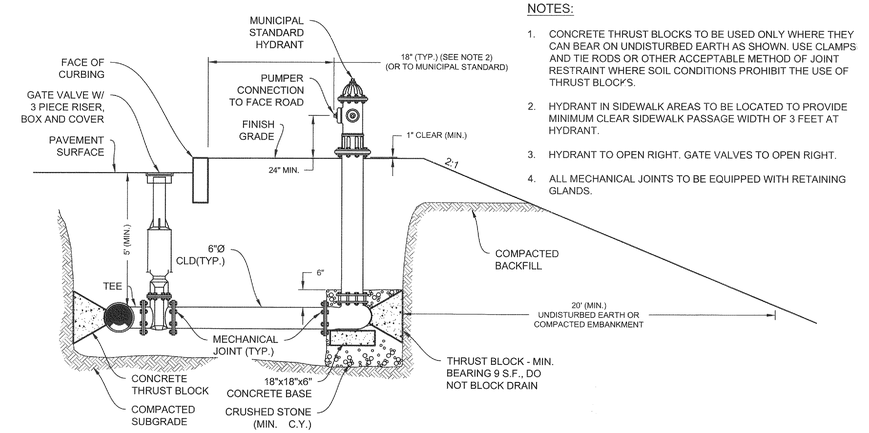


PLAN SECTION 2-2

NOTES:

1. PROVIDE BLOCKS FOR TAPPING SLEEVES, DEAD ENDS, GATE VALVES, AND VERTICAL BENDS (SAME SIZE AS REQUIRED FOR TEES). PROVIDE ANCHOR RODS AT VERTICAL BENDS AND GATE VALVES.
2. CONCRETE SHALL NOT BE PLACED AGAINST PIPE BEYOND FITTING.
3. CONCRETE SHALL BE 3000 PSI-TYPE I.

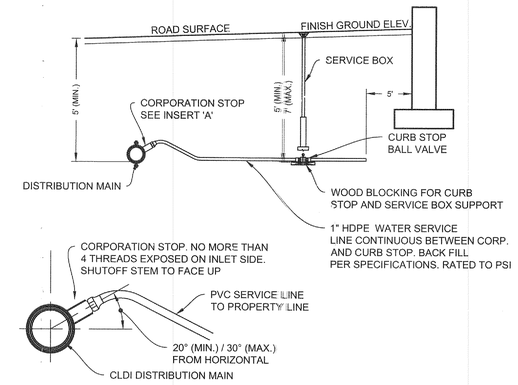
2 CS6051 CONCRETE THRUST BLOCK
NOT TO SCALE



NOTES:

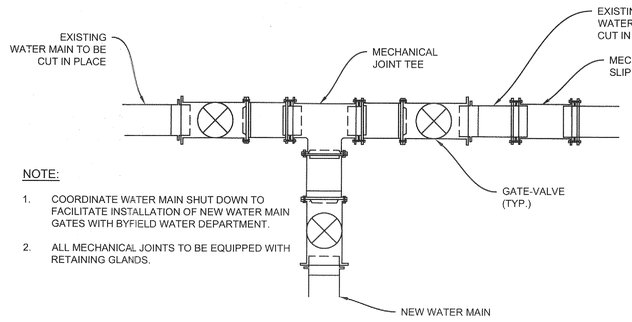
1. CONCRETE THRUST BLOCKS TO BE USED ONLY WHERE THEY CAN BEAR ON UNDISTURBED EARTH AS SHOWN. USE CLAMPS AND TIE RODS OR OTHER ACCEPTABLE METHOD OF JOINT RESTRAINT WHERE SOIL CONDITIONS PROHIBIT THE USE OF THRUST BLOCK'S.
2. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF 3 FEET AT HYDRANT.
3. HYDRANT TO OPEN RIGHT. GATE VALVES TO OPEN RIGHT.
4. ALL MECHANICAL JOINTS TO BE EQUIPPED WITH RETAINING GLANDS.

3 CS6051 HYDRANT CONNECTION
NOT TO SCALE



INSERT 'A'

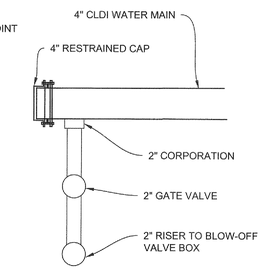
4 CS6051 WATER SERVICE INSTALLATION
NOT TO SCALE



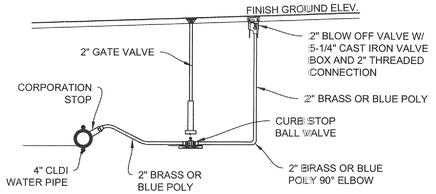
NOTE:

1. COORDINATE WATER MAIN SHUT DOWN TO FACILITATE INSTALLATION OF NEW WATER MAIN GATES WITH BYFIELD WATER DEPARTMENT.
2. ALL MECHANICAL JOINTS TO BE EQUIPPED WITH RETAINING GLANDS.

5 CS6051 WATER MAIN TAP
NOT TO SCALE



PLAN VIEW



PROFILE VIEW

6 CS6051 BLOW OFF DETAIL
NOT TO SCALE

NOT FOR CONSTRUCTION

Ranger Engineering Group, Inc.
13 Branch Street, Suite 101
Methuen MA, 01844
Tel: 978-208-1762
rangereng.com

BENJAMIN C. OSGOOD JR. CIVIL No. 45631 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

8/17/20

THE VILLAGE AT CRICKET LANE
BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

UTILITY DETAILS

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO
1	06/26/2020	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS6051

SHEET 17 OF 19

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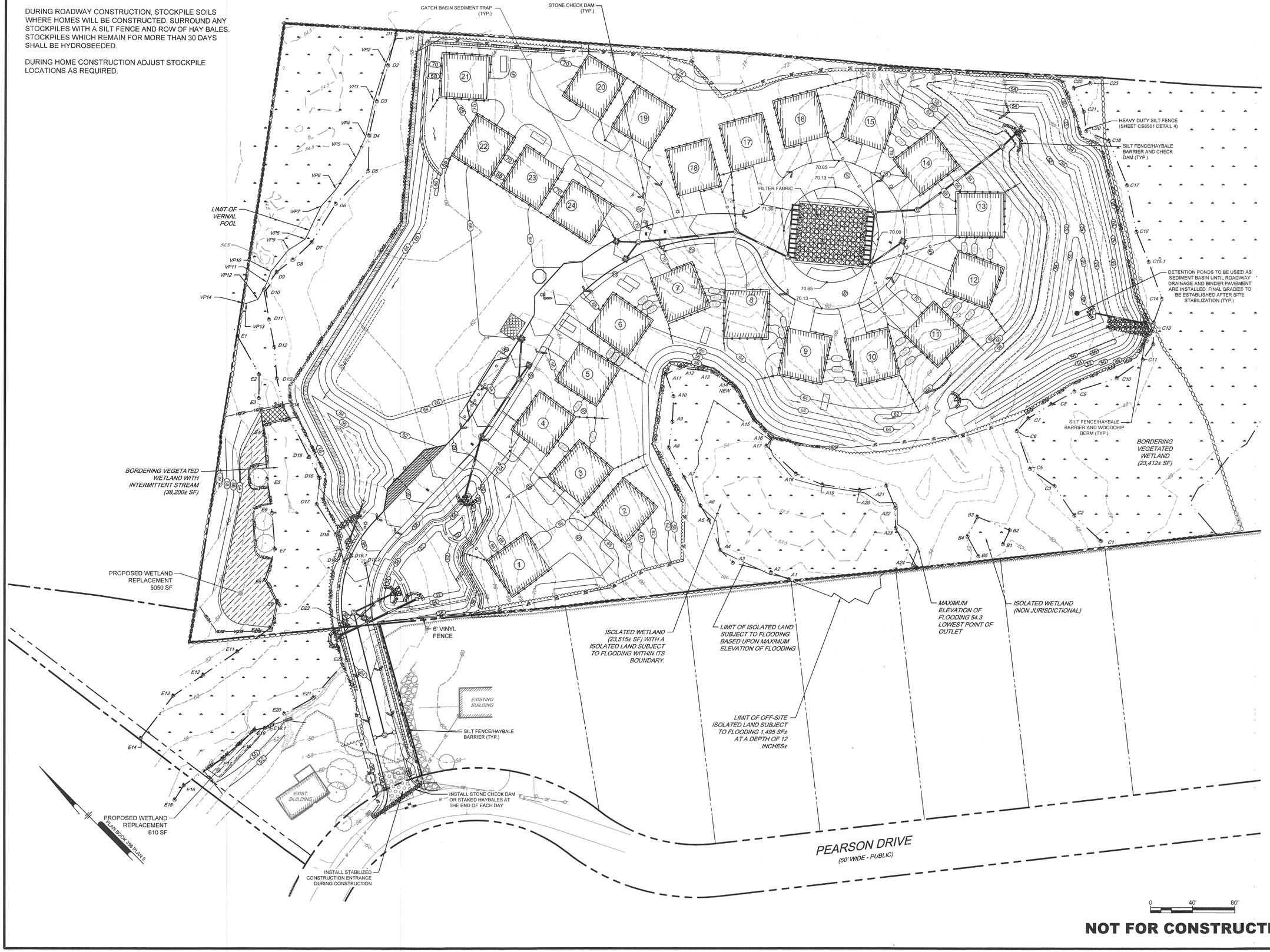
SOIL STOCKPILE NOTE:

DURING ROADWAY CONSTRUCTION, STOCKPILE SOILS WHERE HOMES WILL BE CONSTRUCTED. SURROUND ANY STOCKPILES WITH A SILT FENCE AND ROW OF HAY BALES. STOCKPILES WHICH REMAIN FOR MORE THAN 30 DAYS SHALL BE HYDROSEEDED.

DURING HOME CONSTRUCTION ADJUST STOCKPILE LOCATIONS AS REQUIRED.



NOT FOR CONSTRUCTION

Ranger Engineering Group, Inc.
13 Branch Street, Suite 101
Methuen MA, 01844
Tel: 978-208-1762
rangereng.com

BENJAMIN C. OSGOOD JR. CIVIL No 45891 REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
8/18/20

THE VILLAGE AT CRICKET LANE

BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

EROSION AND SEDIMENTATION CONTROL PLAN

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

NO.	DATE	REVISIONS	BY
1	06/26/2020	REVIEW COMMENT REVISIONS	BCO
2	08/17/2020	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS8001

SHEET 18 OF 19

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EROSION CONTROL NOTES (DURING CONSTRUCTION)

1. THE CONTRACTOR MUST INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND IN THE DETAILS PRIOR TO STARTING ANY OTHER WORK ON THE SITE. EROSION CONTROL MUST BE INSTALLED AT EVERY INLET STRUCTURE (EXISTING AND PROPOSED) AND MAINTAINED FOR THE DURATION OF THE PROJECT.
2. THE CONTRACTOR SHALL CHECK THE CONDITION OF EROSION CONTROLS DAILY TO KEEP THEM IN GOOD OPERATING CONDITION. EROSION CONTROLS SHALL ALSO BE INSPECTED, REPAIRED AND MAINTAINED BY THE CONTRACTOR WITHIN 12 HOURS OF ANY STORM EVENT PRODUCING 1/2 INCH OF RAINFALL OR MORE. EROSION CONTROLS SHALL BE REPLACED WHEN DETERIORATED, OR WHEN ORDERED BY THE ENGINEER. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH A DEPTH OF 6 INCHES.
3. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH A DEPTH OF 6 INCHES.
4. SEDIMENT SHALL BE CONTAINED WITHIN THE CONSTRUCTION SITE, AWAY FROM DRAINAGE STRUCTURES.
5. STABILIZE SLOPES STEEPER THAN 3:1 (HORIZONTAL TO VERTICAL) WITH SEED, SECURED GEOTEXTILE FABRIC, OR ROCK RIP-RAP AS REQUIRED TO PREVENT EROSION DURING CONSTRUCTION.
6. CLEAN OUT ALL CATCH BASINS, DRAIN MANHOLES, AND STORM DRAIN PIPES AFTER COMPLETION OF CONSTRUCTION.
7. LOAM AND SEED ALL DISTURBED AREAS.
8. UPON ESTABLISHMENT OF PERMANENT VEGETATION OVER DISTURBED AREAS, REMOVE AND DISPOSE OF HAYBALES, STAKES, AND SILT FENCE.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND SUPPLEMENT THE SPECIFIED SEDIMENTATION CONTROLS AS NECESSARY TO PREVENT SEDIMENTATION OF OFF-SITE AREAS AND/OR ANY REGULATED RESOURCE AREAS. FAILURE BY THE CONTRACTOR TO CONTROL EROSION, POLLUTION, AND/OR SILTATION SHALL BE CAUSE FOR THE OWNER TO EMPLOY OUTSIDE ASSISTANCE OR TO USE HIS OWN MEANS TO PROVIDE THE NECESSARY CORRECTIVE MEASURE. THE COST OF SUCH ASSISTANCE PLUS PROJECT ENGINEERING COSTS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
10. IN ADDITION TO THOSE LOCATIONS SHOWN ON THIS PLAN AND ON THE GRADING AND DRAINAGE PLANS, EROSION CONTROLS SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS: TOE OF SLOPE OF EMBANKMENT CONSTRUCTION, TOE OF TEMPORARY EARTHWORK STOCKPILES.
11. EROSION AND SEDIMENTATION CONTROL SHALL BE IN COMPLIANCE WITH MASSACHUSETTS STORMWATER POLICY.

CONSTRUCTION SEQUENCE NOTES:

1. INSTALL EROSION AND SEDIMENT CONTROLS AS SHOWN ON PLAN.
2. COMMENCE CLEARING, GRUBBING, AND EARTHWORK.
3. PERFORM EARTHWORK OPERATIONS. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS AFTER BEING CONSTRUCTED. TEMPORARY GRADED AREAS SHOULD BE STABILIZED WITH MULCH BY OCTOBER 1ST, SO AS NOT TO BE LEFT EXPOSED DURING WINTER CONDITIONS.
4. INSTALL SITE DRAINAGE AND UTILITIES.
5. STABILIZE SIDE SLOPES. SIDE SLOPES MUST BE FULLY STABILIZED BEFORE ANY STORMWATER DISCHARGE.
6. INSTALLATION OF UNDERGROUND UTILITIES AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT IN ACCORDANCE WITH THE PLANS. THE CONTROLS SHALL REMAIN UNTIL THE SITE IS SUFFICIENTLY STABILIZED. ALL PERMANENT STORMWATER MANAGEMENT MEASURES SHALL HAVE A HEALTHY STAND OF VEGETATION ESTABLISHED PRIOR TO DIRECTING RUNOFF INTO THEM.
7. AS THE BUILDING(S) ARE COMPLETED, ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 72 HOURS.
8. FINAL PAVING OF ROADWAY AND DRIVEWAYS.
9. INSPECT ALL SEDIMENT AND EROSION CONTROL MEASURES.
10. AFTER ALL SEEDED AREAS HAVE ESTABLISHED STABLE GROWTH, ALL TEMPORARY EROSION CONTROL CAN BE REMOVED.
11. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH ALL AUTHORITIES RESPONSIBLE FOR INSPECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL REQUIRED INSPECTION SIGN-OFFS.

FOR A MORE COMPLETE DESCRIPTION OF CONSTRUCTION PHASING AND EROSION CONTROL SEE PROJECT STORMWATER REPORT AND SWPPP.

OPERATION AND MAINTENANCE:

CONSTRUCTION PHASE

THE BMPS ASSOCIATED WITH THIS PROJECT WILL BE OWNED BY THE PROJECT DEVELOPER, WHO WILL BE RESPONSIBLE FOR INSPECTION, OPERATION AND MAINTENANCE DURING THE CONSTRUCTION PHASE.

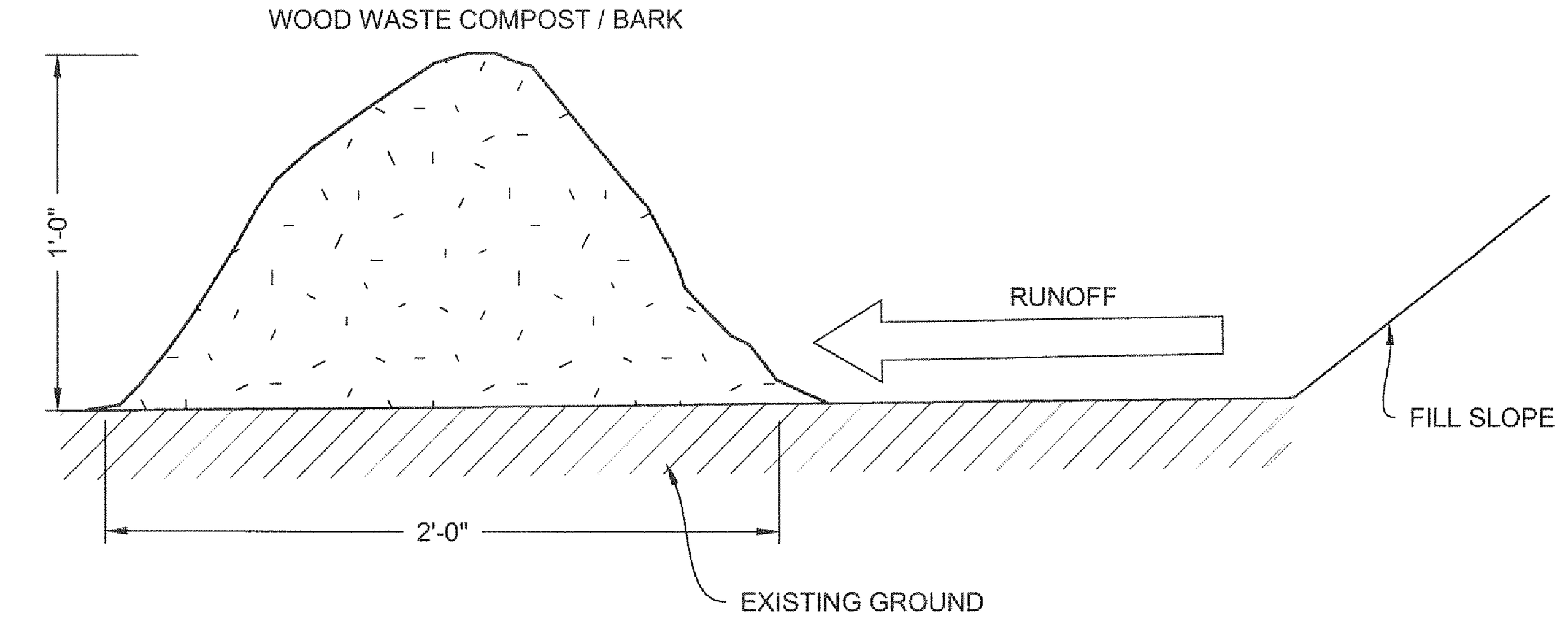
1. THE CONTRACTOR IS TO INSTALL AND MAINTAIN DRAINAGE FACILITIES AS SHOWN ON PLAN (BY RANGER ENGINEERING GROUP, INC).
2. PRIOR TO CONSTRUCTION, ALL EROSION/SILTATION CONTROL DEVICES SHOWN ON ABOVE PLAN ARE TO BE INSTALLED. TO PREVENT SILT INTRUSION INTO THE DRAINAGE SYSTEM DURING CONSTRUCTION, THE CONTRACTOR IS TO INSTALL AND MAINTAIN INLET PROTECTION AT ALL CATCH BASINS, AND SET A SILT FENCE AND HAY BALES AT ALL SLOPES WHICH MAY ERODE IN THE DIRECTION OF ANY OPEN DRAINAGE FACILITIES. SUCH PREVENTIVE MEASURES ARE TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
3. ALL CONSTRUCTION OF DRAINAGE FACILITIES IS TO BE INSPECTED BY RANGER ENGINEERING GROUP, INC. TO VERIFY CONFORMANCE TO THE DESIGN PLAN.
4. THE SEQUENCE OF DRAINAGE CONSTRUCTION SHALL BE AS FOLLOWS:
   A. CLEAR, GRUB, EXCAVATE AREAS FOR DRAINAGE SYSTEMS.
   B. TRENCH AND INSTALL PIPES, CATCH BASINS MANHOLES
   C. INSTALL INLET PROTECTION.
5. EROSION CONTROLS ARE TO BE INSPECTED AND MAINTAINED ON A WEEKLY BASIS. UPON DISCOVERY OF SILT BUILD-UP IN ANY CATCH BASIN SUMPS,OR ANY OTHER STRUCTURES, THEY ARE TO BE CLEANED.
6. ALL EXPOSED SOILS SHALL BE IMMEDIATELY STABILIZED WITH A LAYER OF MULCH HAY OR JUTE BLANKETS-AS NEEDED FOR SLOPES STEEPER THAN 3:1.
7. UPON INSTALLATION OF CATCH BASINS, INLET PROTECTION-AS DESCRIBED ON SITE PLANS- SHALL BE INSTALLED AND MAINTAINED UNTIL READY FOR PAVING.
8. PRIOR TO CONSTRUCTION OF IMPERVIOUS AREAS, ALL DRAINAGE STRUCTURES AND PIPES SHALL BE INSTALLED AND INSPECTED FOR PROPER FUNCTION. DURING CONSTRUCTION OF OTHER SITE FEATURES, ALL DRAINAGE FACILITIES SHALL BE INSPECTED ON A WEEKLY BASIS AND CLEANED/REPAIRED IMMEDIATELY UPON DISCOVERY OF SEDIMENT BUILD-UP OR DAMAGE.
9. AFTER PAVING IS INSTALLED, IT SHALL BE SWEPT CLEAN ON A REGULAR BASIS.
10. THE ENTIRE DRAINAGE SYSTEM MUST BE VACUUMED OUT BEFORE THE ISSUANCE OF THE LAST CERTIFICATE OF OCCUPANCY.

POST-DEVELOPMENT PHASE

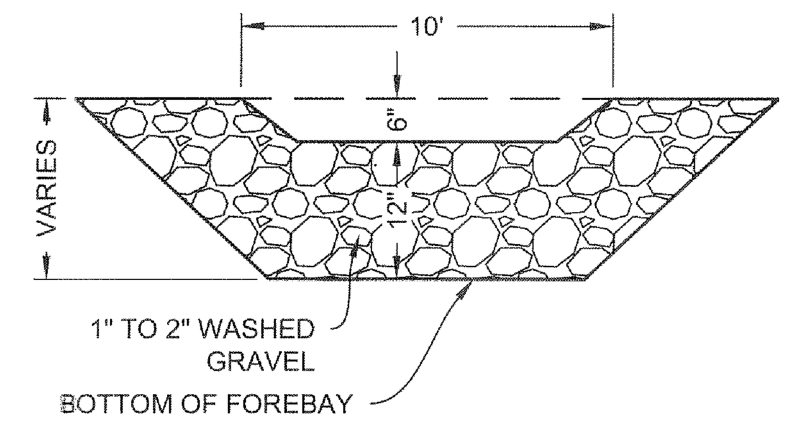
THE OWNER/OCCUPANT IS TO BE RESPONSIBLE FOR MAINTENANCE OF ALL DRAINAGE STRUCTURES IN THE PROJECT - INCLUDING ROOF DRAINS, AND DRAIN PIPES. THE FUTURE OWNER IS EXPECTED TO BE THE PROJECT ASSOCIATION, WHO WILL ULTIMATELY BE RESPONSIBLE FOR COMPLIANCE WITH THE PLAN. IN THE EVENT OF CHANGE OF OWNERSHIP, THE O & M PLAN SHALL BE TRANSFERRED TO THE NEW OWNER.

REGULAR MAINTENANCE IS TO INCLUDE THE FOLLOWING:

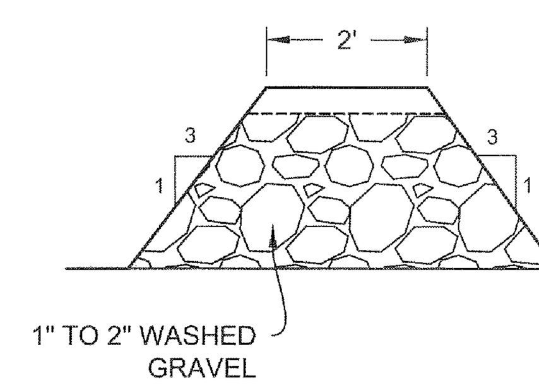
1. INSPECTION OF ALL DRAINAGE FACILITIES (CATCH BASINS, PIPES AND DETENTION BASINS. EVERY THREE MONTHS. DURING THESE INSPECTIONS, THE INSPECTOR (A REGISTERED PROFESSIONAL CIVIL ENGINEER QUALIFIED IN DRAINAGE SYSTEMS AS DESIGNATED BY THE PROJECT ASSOCIATION) SHALL LOOK FOR EVIDENCE OF THE FOLLOWING: STRUCTURAL DAMAGE, SILT ACCUMULATION (NEAR INLET INVERTS ON CATCH BASINS, INFILTRATORS), AND IMPROPER FUNCTION. A REPORT ON THE SYSTEM SHALL BE DELIVERED TO THE PROJECT ASSOCIATION, WITH A COPY DELIVERED TO THE TOWN ENGINEER.
2. AFTER INSPECTION, IF ANY OF THE ABOVE CONDITIONS EXIST, THE INSPECTOR SHALL NOTIFY THE PROJECT ASSOCIATION. WHO SHALL IMMEDIATELY ARRANGE FOR ALL NECESSARY REPAIRS AND/OR SEDIMENT REMOVAL.
3. THE ROAD WAY IS TO BE SWEPT CLEAN, AS REQUIRED (I.E., VISUALLY NOTICEABLE DEBRIS BUILD-UP). A MINIMUM OF ONCE PER YEAR.
4. ALL GRADED SLOPES SHALL BE INSPECTED EVERY SPRING FOR EROSION. UPON DISCOVERY OF ANY FAILURE (IE. EROSION), LOAM AND SEED SHALL BE PUT IN PLACE AND NURTURED.
5. ALL SNOW IS TO BE STORED IN THE DESIGNATED SNOW STORAGE AREAS AS DEPICTED ON SHEET 7 CS1001.



1 CS8501 WOODCHIP BERM
NOT TO SCALE

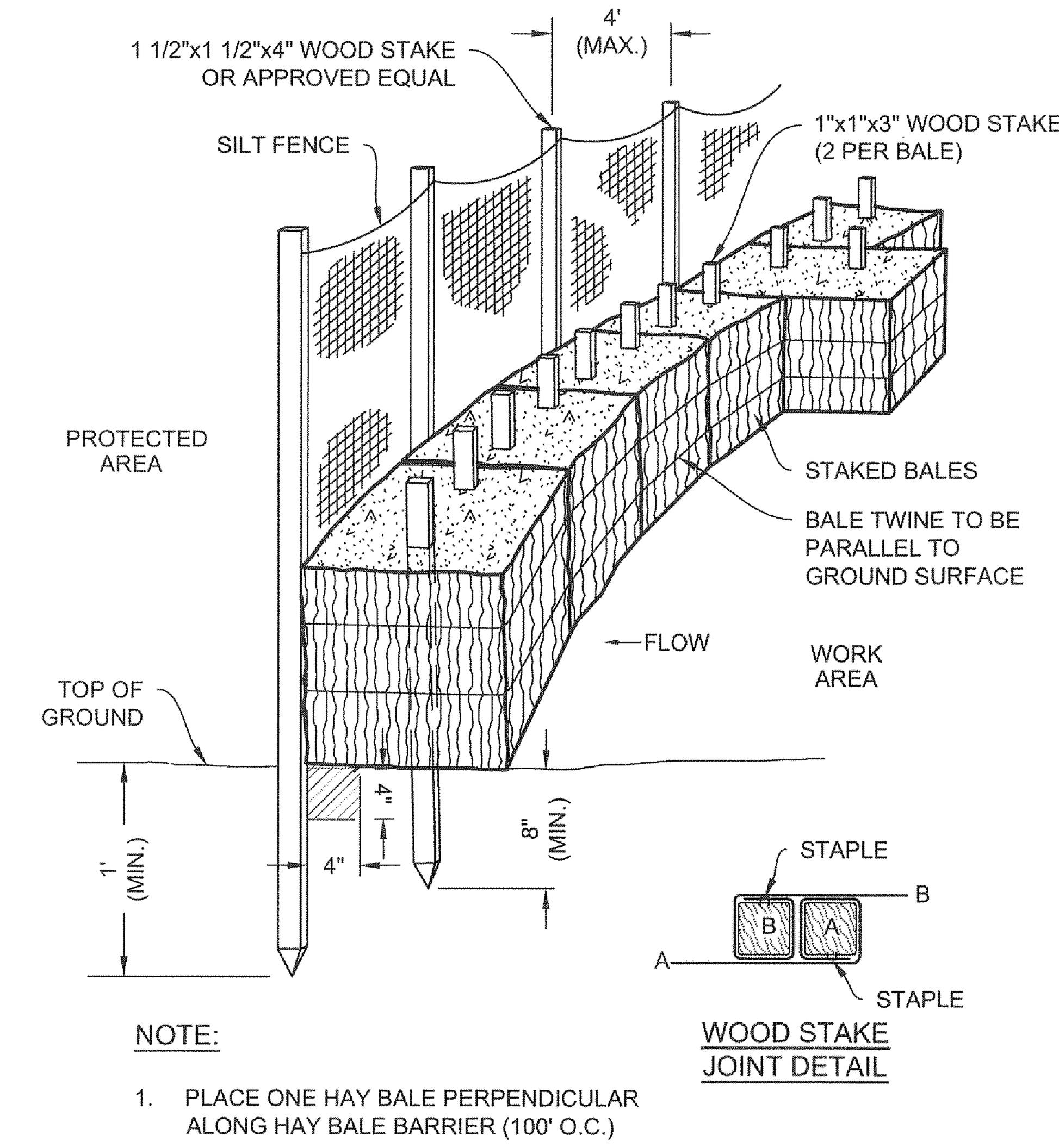


END VIEW



SECTION VIEW

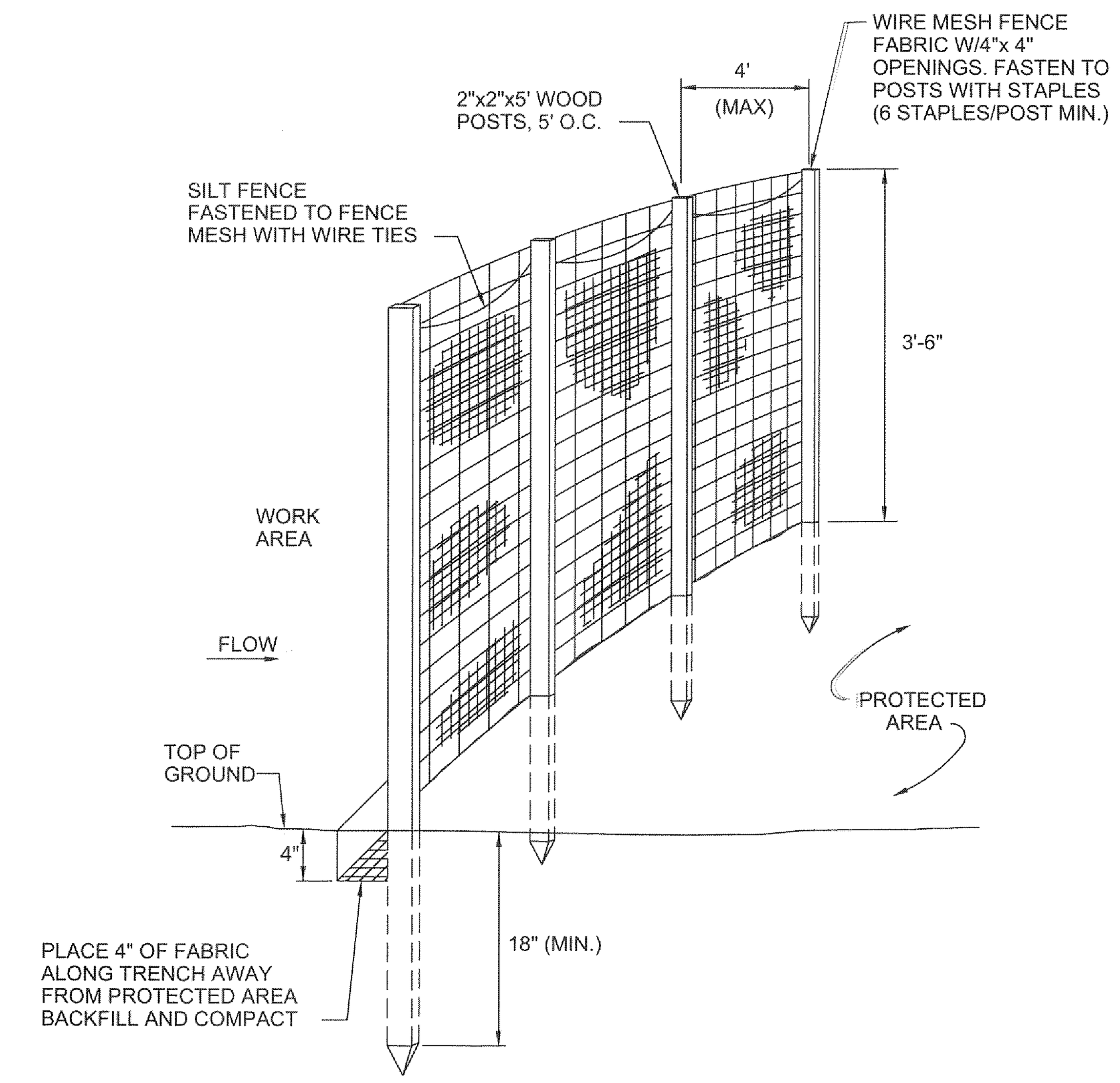
2 CS8501 TEMPORARY CHECK DAM DETAIL
NOT TO SCALE



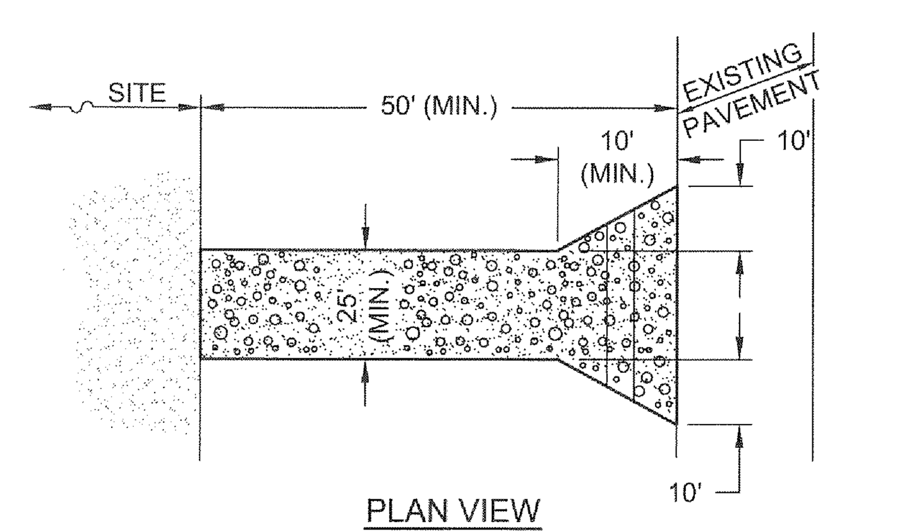
WOOD STAKE JOINT DETAIL

NOTE:
1. PLACE ONE HAY BALE PERPENDICULAR ALONG HAY BALE BARRIER (100' O.C.)

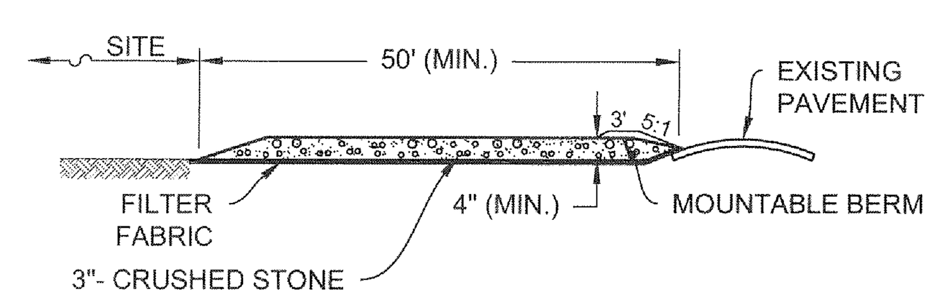
3 CS8501 SILT FENCE / HAY BALE BARRIER
NOT TO SCALE



4 CS8501 HEAVY DUTY SILT FENCE BARRIER



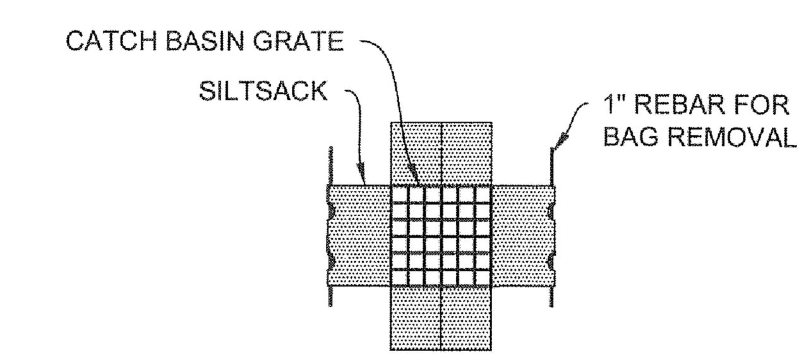
PLAN VIEW



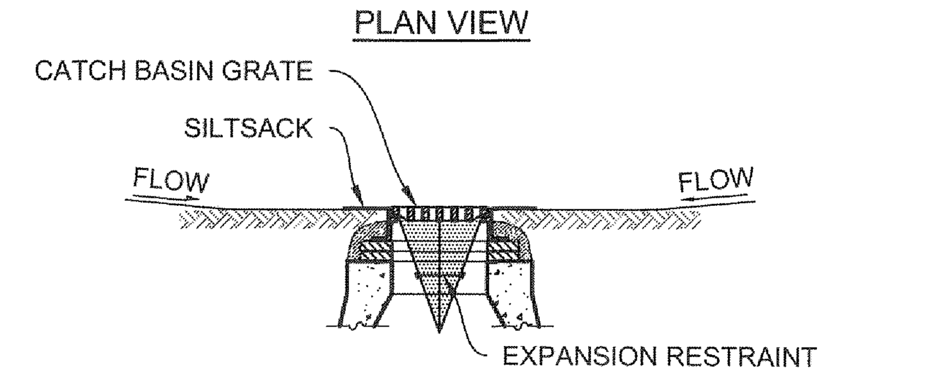
CROSS SECTION

NOTES:
1. ENTRANCE WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.

5 CS8501 STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



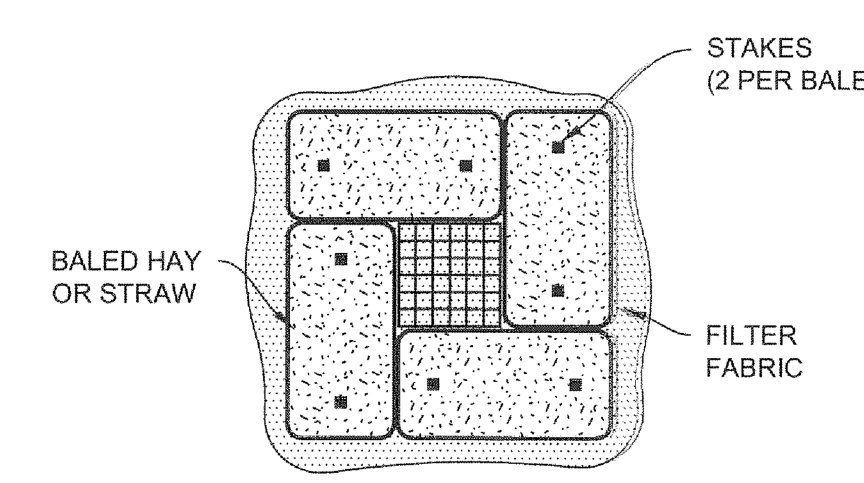
PLAN VIEW



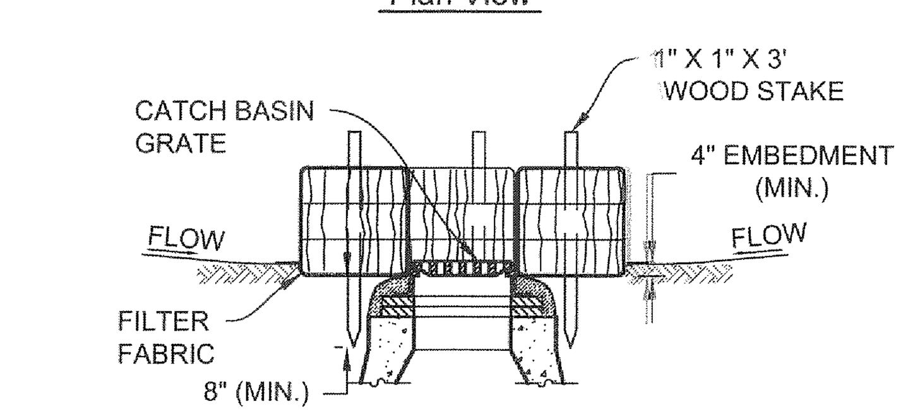
SECTION VIEW

NOTES:
1. INSTALL SILTSACK IN ALL CATCH BASINS WHERE INDICATED ON THE PLANE BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER BINDER COURSE ID PLACED AND HAY BALES HAVE BEEN REMOVED.
2. GRATE TO BE PLACED OVER SILTSACK.
3. SILTSACK SHALL BE INSPECTED WEEKLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED.
4. SILTSACKS SHALL NOT BE INSTALLED WITHIN PARK ST. DURING THE WINTER MONTHS.

6 CS8501 SILTSACK SEDIMENT TRAP
NOT TO SCALE



Plan View



Section View

NOTES:
1. ENCLOSE STRUCTURE WITH HAYBALES IMMEDIATELY AFTER CATCH BASIN CONSTRUCTION. MAINTAIN UNTIL PAVING BINDER COURSE IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. IF GRATE IS AGAINST EXISTING CURB THEN HAY BALES ARE TO BE PLACED AROUND THREE SIDES OF GRATE ONLY.
3. GRATE TO BE PLACED OVER FILTER FABRIC.
4. BALES SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS. REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

7 CS8501 CATCH BASIN SEDIMENT TRAP
NOT TO SCALE

NOT FOR CONSTRUCTION

Ranger Engineering Group, Inc.
13 Branch Street, Suite 101
Methuen MA, 01844
Tel: 978-208-1762
rangereng.com

THE VILLAGE AT CRICKET LANE

BYFIELD (NEWBURY), MA 01922
ASSESSOR'S MAP R-20 LOT 75

EROSION AND SEDIMENTATION CONTROL NOTES

CRICKET ROAD DEVELOPMENT, LLC
92 MIDDLESEX ROAD
TYNGSBOROUGH, MA 01879

DATE	NO.	REVISIONS	BY
08/17/2020	2	REVIEW COMMENT REVISIONS	BCO
06/26/2020	1	REVIEW COMMENT REVISIONS	BCO

PROJECT	15-1516
DATE	2020-08-10
DRAWING SCALE	AS NOTED
DRAWN BY	OMR
APPROVED BY	BCO

CS8501