

ZONING:

ZONING DISTRICT: S-20
 MIN. LOT AREA: 20,000 S.F.
 MIN. LOT FRONTAGE: 120 FEET
 MIN. LOT WIDTH: 80 FEET
 MIN. FRONT YARD: 20 FEET
 MIN. SIDE YARD: 15 FEET
 MIN. REAR YARD: 20 FEET
 MAX. LOT COVERAGE: 25%

**LIST OF WAIVERS REQUESTED FROM
 THE TOWN OF READING SUBDIVISION REGULATIONS**

- 1. SECTION 6.1.1.b.10 - REQUIRING TOPOGRAPHY BE SHOWN WITHIN 100 FEET OF LOCUS
- 2. SECTION 6.1.1.b.23 - REQUIRING DELINEATED BOUNDS OF ANY WETLAND RESOURCE AREAS ON THE PROPERTY OR WITHIN 200 FEET OF ANY PORTION OF THE PROPERTY.
- 3. SECTION 6.1.1.d.3 - REQUIRING A FULL TRAFFIC REPORT/STUDY
- 4. SECTION 6.1.1.d.4 - REQUIRING AN ENVIRONMENTAL IMPACT REPORT
- 5. SECTION 6.1.1.d.7(c) - REQUIRING ELECTRICAL SERVICE AND STREET LIGHTING
- 6. SECTION 7.1(d) - REQUIRING ALL ROADWAYS TO BE DESIGNED IN ACCORDANCE WITH AASHTO RECOMMENDATIONS
- 7. SECTION 7.1.1(a) - REQUIRING THE WIDTH OF STREET RIGHT OF WAYS TO BE SIXTY FEET AND CUL-DE-SAC TERMINATIONS OF STREET RIGHT-OF-WAY CIRCLE WITH A RADIUS OF 60 FEET.
- 8. SECTION 7.1.2(c) - REQUIRING THAT CHANGES IN GRADE OR VERTICAL CURVES OF STREETS BE DESIGNED IN ACCORDANCE WITH AASHTO BASED ON A DESIGN SPEED OF 30 MPH FOR SECONDARY STREETS.
- 9. SECTION 7.1.3 - REQUIRING A 30 FOOT MINIMUM PAVED WAY (24 FEET PROPOSED)
- 10. SECTION 7.1.5(a) - REQUIRING MAXIMUM DEAD END ROADWAY LENGTH OF 500 FEET (730.91 FEET PROPOSED...SIDELINE TO END OF HAMMERHEAD)
- 11. SECTION 7.2 - REQUIRING SIDEWALKS ALONG BOTH SIDES OF ROADWAY.
- 12. SECTION 7.1.7 - REQUIRING GRANITE CURBING TO BE INSTALLED (ASPHALT BERM PROPOSED).

**"SMALL LANE EXTENSION"
 DEFINITIVE SUBDIVISION PLAN
 PLAN OF LAND**

LOCATED IN
READING, MASSACHUSETTS
 (MIDDLESEX COUNTY)

PREPARED BY
**SULLIVAN ENGINEERING
 GROUP, LLC**
 P.O. BOX 2004
 WOBURN, MA 01888
 (781) 854-8644

DATE: SEPT. 21, 2025
 REVISED: OCT. 29, 2025
 REVISED: NOV. 6, 2025

PREPARED FOR
JOSEPH MARINO
 127 VEST WAY
 NORTH ANDOVER, MA 01845

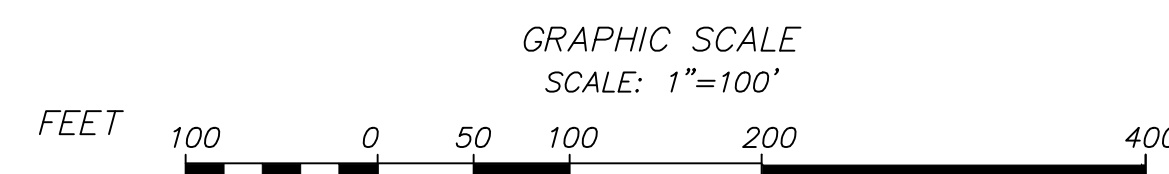
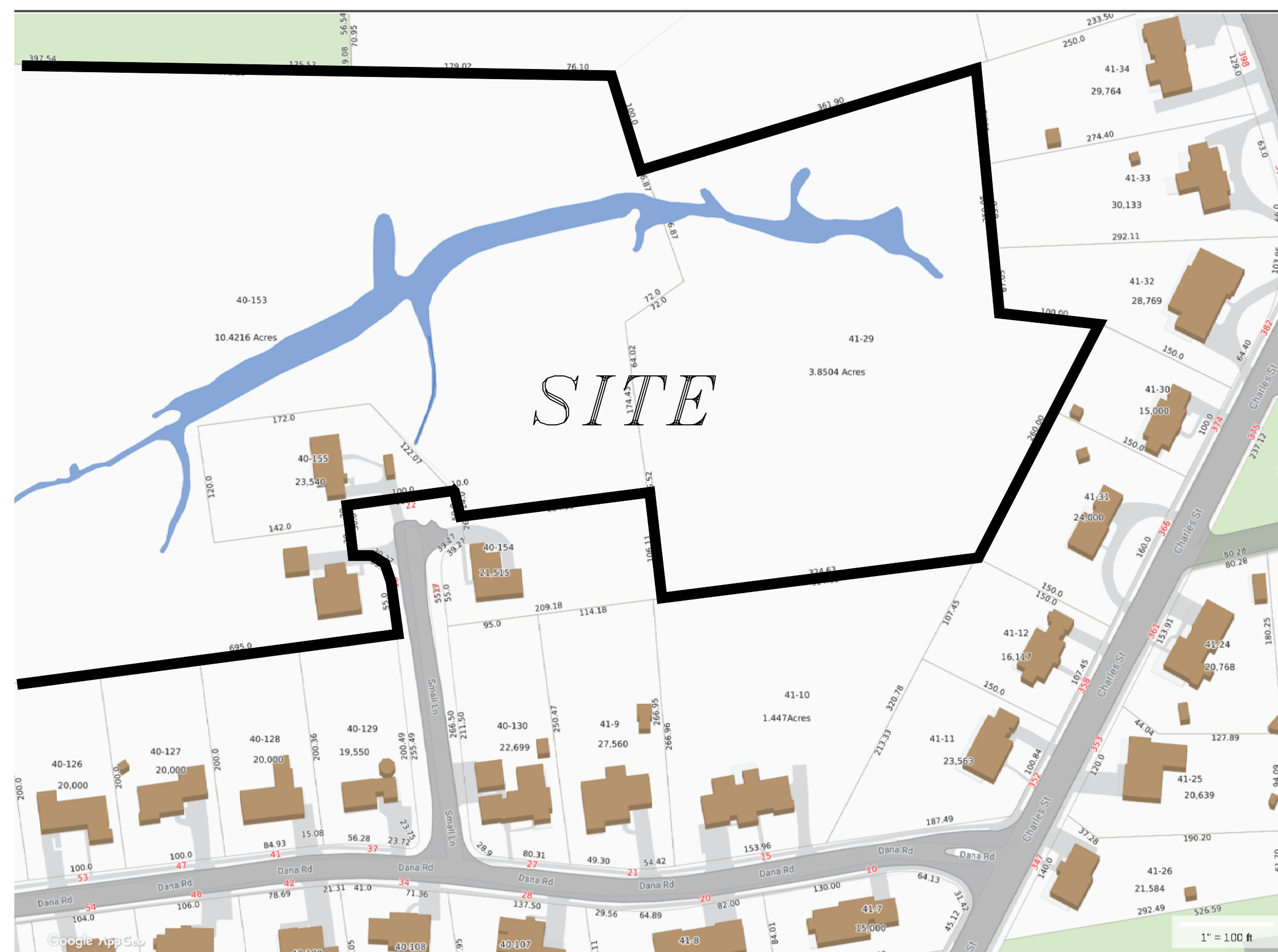
READING COMMUNITY PLANNING
 & DEVELOPMENT COMMISSION

APPROVED _____, 20__

SHEET INDEX:

- 1 COVER SHEET
- 2 LOT PLAN
- 3 EXISTING CONDITIONS PLAN
- 4 SITE, GRADING, & UTILITY PLAN
- 5 ROADWAY PLAN & PROFILE
- 6 CONSTRUCTION DETAILS
- 7 CONSTRUCTION DETAILS
- 8 WETLAND REPLICATION & CROSSING PLAN
- 9 PROOF PLAN

FOR REGISTRY OF DEEDS USE ONLY



RECORD OWNERS:

MAP 40 LOT 153	MAP 41 LOT 29	MAP 40 LOT 155
ERIC & BETH HUGHES 18 SMALL LANE READING, MA 01867 DEED: 50276 PAGE: 514	JOAN M. PERRY 81 WEBBER ROAD GEORGETOWN, ME 04548	CHOUNG TRAN 22 SMALL LANE READING, MA 01867

I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.



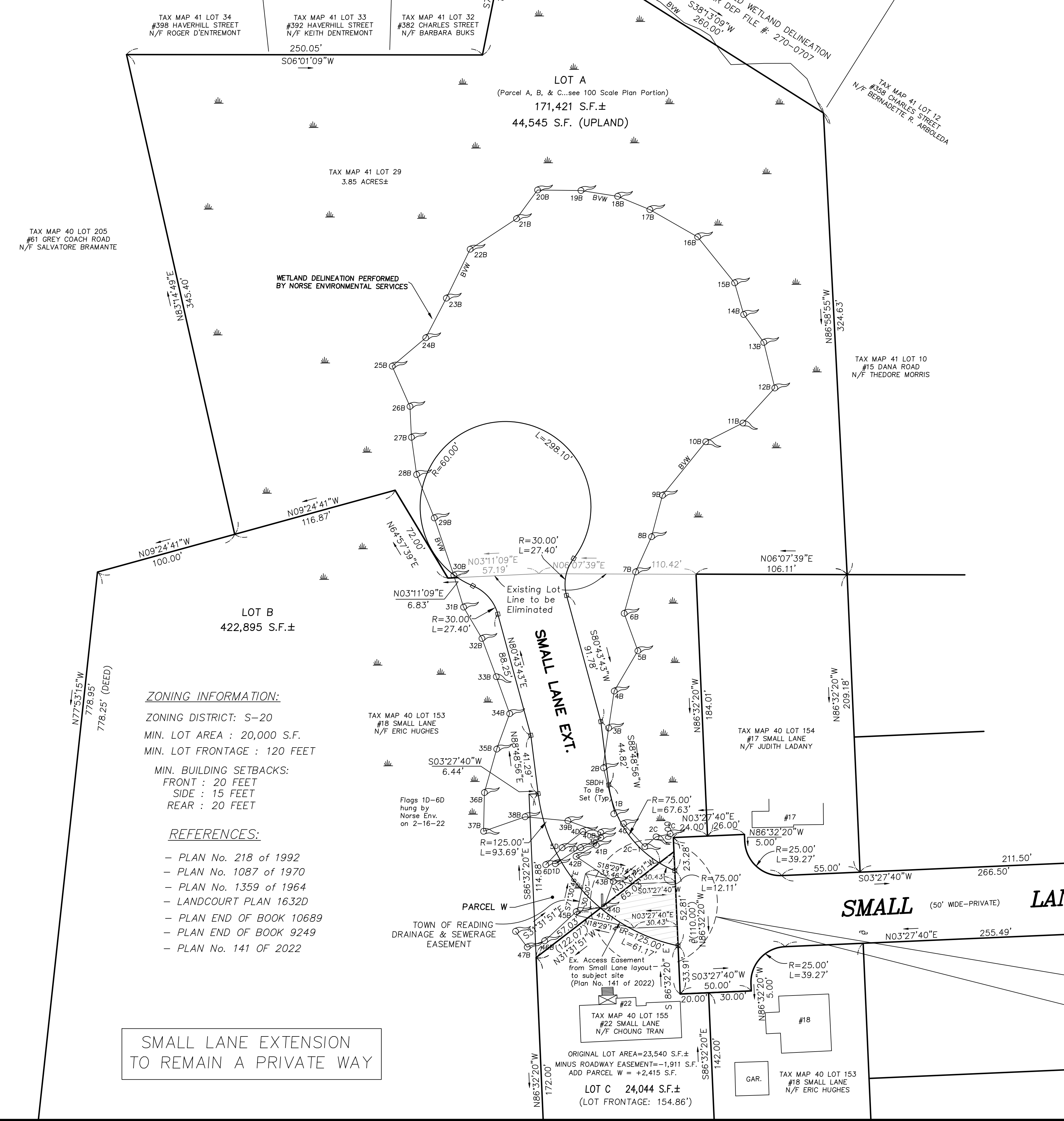
JOHN D. SULLIVAN III, P.E. 11-6-2025
 DATE

TOWN CLERK OF THE TOWN OF READING, MASSACHUSETTS HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE READING COMMUNITY PLANNING & DEVELOPMENT HAS BEEN RECEIVED AND RECORDED AT THIS OFFICE AND NO NOTICE OF APPEAL WAS RECEIVED DURING THE TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDING OF SAID NOTICE.

TOWN CLERK _____ DATE _____

LOTTING INFORMATION:

LOT A	REQUIRED:	PROPOSED:
LOT AREA:	20,000 S.F.	171,421 S.F.
LOT FRONTAGE:	120 FEET	541.84 FEET

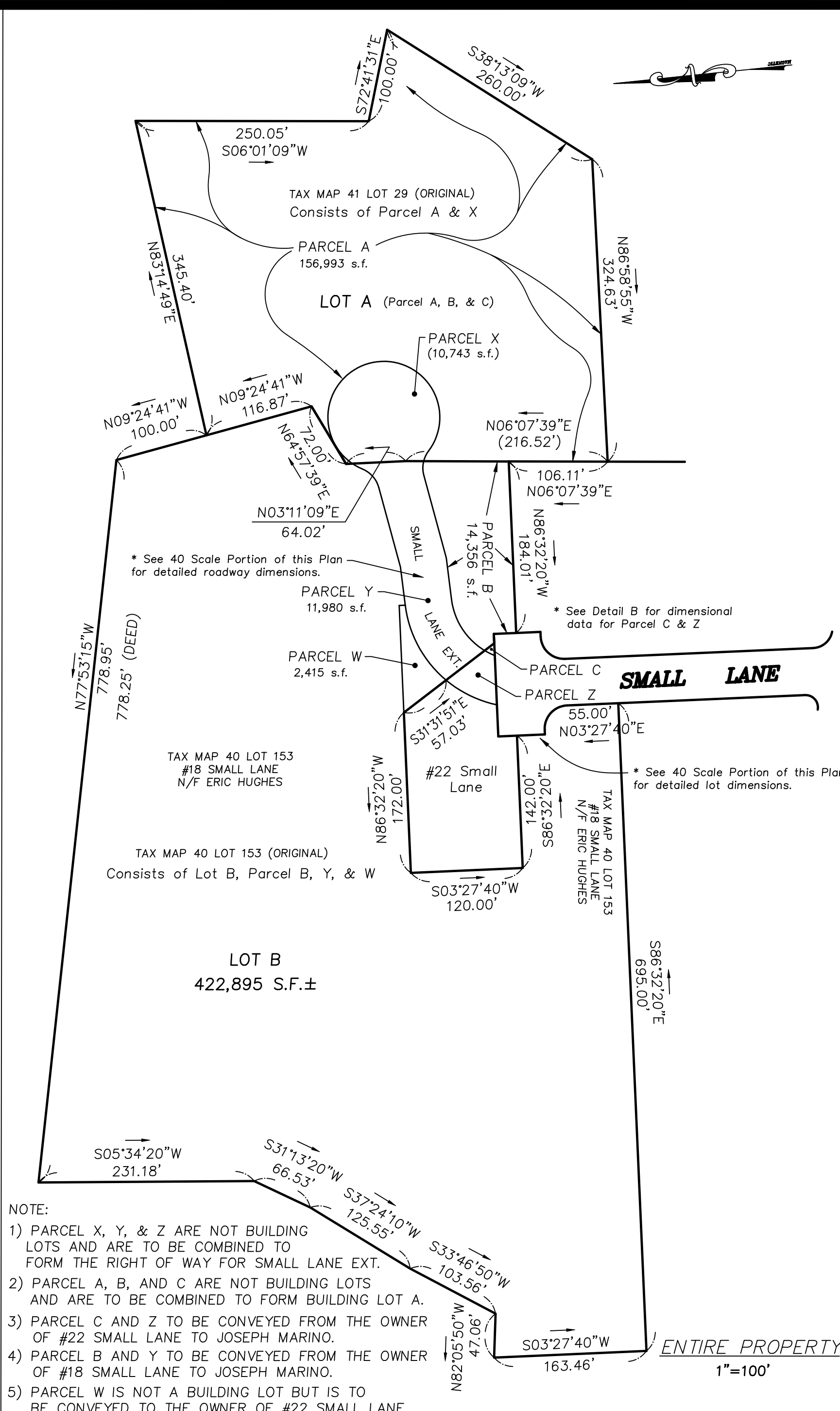


ZONING INFORMATION:
 ZONING DISTRICT: S-20
 MIN. LOT AREA : 20,000 S.F.
 MIN. LOT FRONTAGE : 120 FEET
 MIN. BUILDING SETBACKS:
 FRONT : 20 FEET
 SIDE : 15 FEET
 REAR : 20 FEET

REFERENCES:

- PLAN No. 218 of 1992
- PLAN No. 1087 of 1970
- PLAN No. 1359 of 1964
- LANDCOURT PLAN 1632D
- PLAN END OF BOOK 10689
- PLAN END OF BOOK 9249
- PLAN No. 141 OF 2022

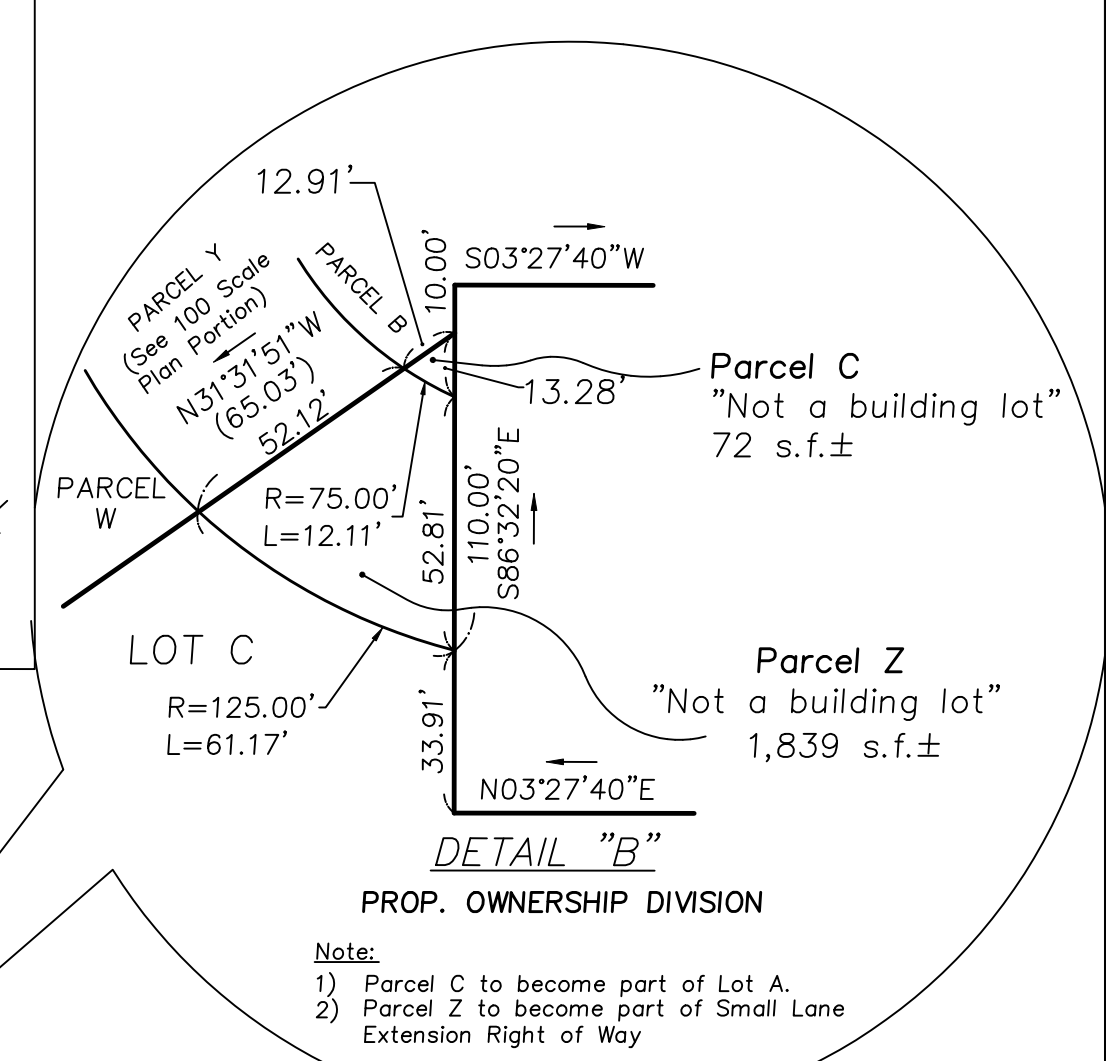
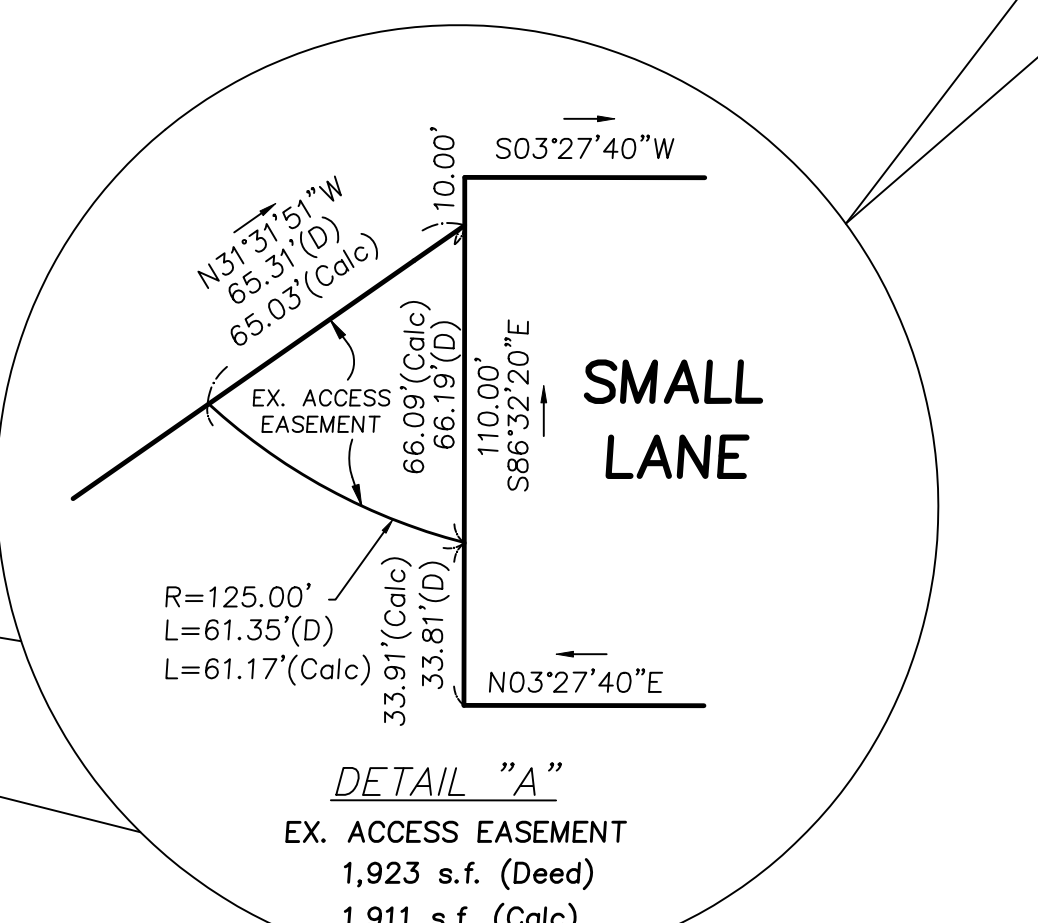
SMALL LANE EXTENSION TO REMAIN A PRIVATE WAY



- NOTE:
- 1) PARCEL X, Y, & Z ARE NOT BUILDING LOTS AND ARE TO BE COMBINED TO FORM THE RIGHT OF WAY FOR SMALL LANE EXT.
 - 2) PARCEL A, B, AND C ARE NOT BUILDING LOTS AND ARE TO BE COMBINED TO FORM BUILDING LOT A.
 - 3) PARCEL C AND Z TO BE CONVEYED FROM THE OWNER OF #22 SMALL LANE TO JOSEPH MARINO.
 - 4) PARCEL B AND Y TO BE CONVEYED FROM THE OWNER OF #18 SMALL LANE TO JOSEPH MARINO.
 - 5) PARCEL W IS NOT A BUILDING LOT BUT IS TO BE CONVEYED TO THE OWNER OF #22 SMALL LANE.

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK'D
2	11/6/25	ADD PARCEL W	JDS	JDS
1	10/29/25	HAMMERHEAD TURNAROUND	JDS	JDS



SMALL LANE EXTENSION
LOT PLAN OF LAND
 LOCATED IN
READING, MASSACHUSETTS
 (MIDDLESEX COUNTY)

PREPARED FOR
JOSEPH MARINO
 SCALE: 1" = 40' DATE: SEPT. 21, 2025
 PREPARED BY
SULLIVAN ENGINEERING GROUP, LLC
 P.O. BOX 2004
 WOBURN, MA 01888
 (781) 854-8644

FOR REGISTRY OF DEEDS USE ONLY
 I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.



PAUL FINOCCHIO, PLS DATE 11-6-2025

READING COMMUNITY PLANNING & DEVELOPMENT COMMISSION

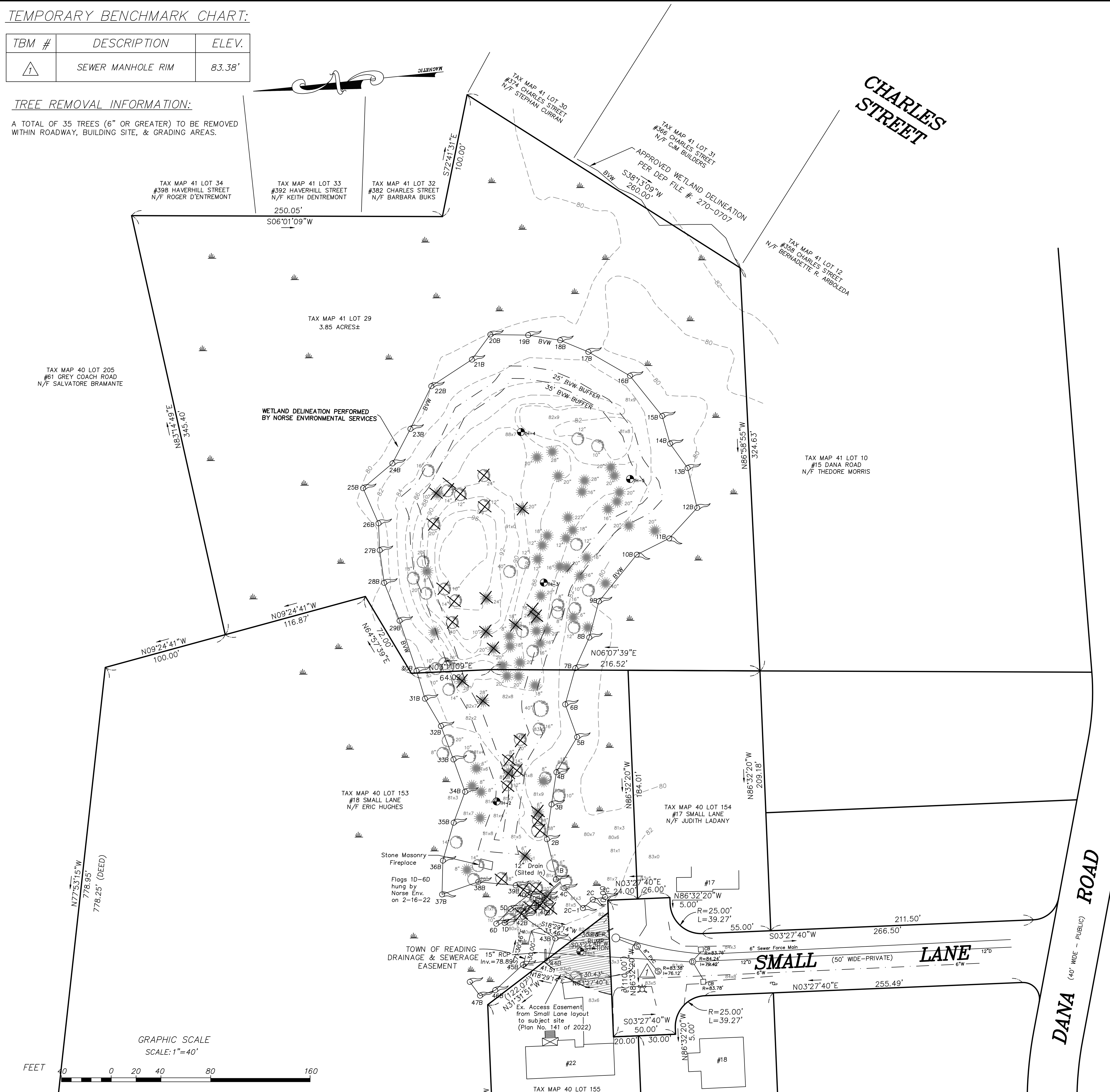
APPROVED _____, 20__

TEMPORARY BENCHMARK CHART:

TBM #	DESCRIPTION	ELEV.
1	SEWER MANHOLE RIM	83.38'

TREE REMOVAL INFORMATION:

A TOTAL OF 35 TREES (6" OR GREATER) TO BE REMOVED WITHIN ROADWAY, BUILDING SITE, & GRADING AREAS.



LEGEND:

- 248--- TWO FOOT CONTOUR
- DECIDUOUS TREE (> 6" DIA.)
- EVERGREEN TREE (> 6" DIA.)
- ⊕ UTILITY POLE
- ⊙ SEWER MANHOLE
- S— SEWER MAIN
- W— COMPILED WATER MAIN
- CB □ CATCHBASIN
- D— DRAIN LINE
- BIT. BITUMINOUS
- CONC. CONCRETE
- EOP EDGE OF PAVEMENT
- TH ⊙ TEST PIT
- 248x0 SPOT GRADE
- ⊗ PROP. TREE REMOVAL

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PAUL FINOCCHIO, PLS DATE

READING COMMUNITY PLANNING & DEVELOPMENT COMMISSION

SOILS INFORMATION:

TEST PIT WAS PERFORMED BY JOHN D. SULLIVAN III, P.E., C.S.E. ON 11/5/19

TEST PIT: TH-1
ELEV=82.9'
MOTTLING @ 28" (ELEV=80.5')
0"-4" HORIZON A: SANDY LOAM 10 YR 3/3
4"-13" HORIZON Bw: LOAMY SAND 10 YR 6/B
13"-50" C-LAYER: LOAMY SAND 2.5 Y 5/4
WATER STANDING @ 43"

TEST PIT: TH-2
ELEV=81.5'
MOTTLING @ 24" (ELEV=79.5')
0"-6" HORIZON A: SANDY LOAM 10 YR 3/3
6"-15" HORIZON Bw: LOAMY SAND 10 YR 6/B
15"-55" C-LAYER: M-C SAND 2.5 Y 5/4
WATER STANDING @ 28"

TEST PIT: TH-3
ELEV=85.2'
MOTTLING @ 38" (ELEV=82.0')
0"-5" HORIZON A: SANDY LOAM 10 YR 3/3
5"-14" HORIZON Bw: LOAMY SAND 10 YR 6/B
14"-67" C-LAYER: M-C SAND 2.5 Y 5/4
WATER STANDING @ 48"

TEST PIT: TH-4
ELEV=86.1'
MOTTLING @ NONE
0"-4" HORIZON A: SANDY LOAM 10 YR 3/3
4"-15" HORIZON Bw: LOAMY SAND 10 YR 6/B
15"-80" C-LAYER: M-C SAND 2.5 Y 5/4
WATER STANDING @ 72" (ELEV=80.1')

TEST PIT: TH-5
ELEV=84.3'
MOTTLING @ NONE
0"-4" HORIZON A: SANDY LOAM 10 YR 3/3
4"-13" HORIZON Bw: LOAMY SAND 10 YR 6/B
13"-68" C-LAYER: M-C SAND 2.5 Y 5/4
WATER STANDING @ 55" (ELEV=79.7')

NOTES:

- THE TOPOGRAPHY, SITE DETAIL & SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM A PARTIAL FIELD SURVEY CONDUCTED ON OCT. 1-3, 2019 BY SULLIVAN ENGINEERING GROUP, LLC.
- THE LOCUS PROPERTY DEPICTED IS LOCATED IN ZONING DISTRICT S-20.
- THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED UPON A PARTIAL FIELD SURVEY AND COMPILATION OF PLANS OF RECORD. THE DESIGN ENGINEER DOES NOT WARRANT NOR GUARANTEE THE LOCATION OF ALL UTILITIES DEPICTED OR NOT DEPICTED. THE CONTRACTOR, PRIOR TO COMMENCEMENT OF CONSTRUCTION, SHALL VERIFY THE LOCATION OF ALL UTILITIES AND CONTACT DIG SAFE AT 1-888-344-7233.
- THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT, VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
- THE ELEVATIONS DEPICTED HEREON WERE BASED UPON THE 1929 NGVD DATUM.
- THE LOCUS PROPERTY IS NOT LOCATED WITHIN A FLOOD ZONE AS DEPICTED ON THE LATEST FLOOD INSURANCE RATE MAP.

REVISIONS

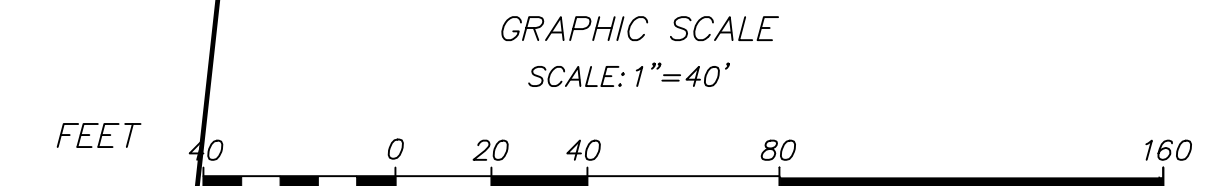
NO.	DATE	DESCRIPTION	BY	CHK'D
2	11/6/25	ADD RETAIN-IT DETAILS	JDS	JDS
1	10/29/25	HAMMERHEAD TURNAROUND	JDS	JDS



**SMALL LANE EXTENSION
EXISTING CONDITIONS PLAN
LOCATED IN
READING, MASSACHUSETTS
(MIDDLESEX COUNTY)**

PREPARED FOR
JOSEPH MARINO
SCALE: 1" = 40' DATE: SEPT. 21, 2025

PREPARED BY
SULLIVAN ENGINEERING GROUP, LLC
P.O. BOX 2004
WOBURN, MA 01888
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PREVIOUS VARIANCES AND/OR SPECIAL PERMITS:

THERE ARE NO KNOWN VARIANCES OR SPECIAL PERMITS ISSUED FROM ANY REGULATORY BOARD OR COMMISSION WITHIN THE TOWN OF READING FOR THE SUBJECT SITE.

TEMPORARY BENCHMARK CHART:

TBM #	DESCRIPTION	ELEV.
△	SMH RIM	83.38'

NOTES:

- 1) THE SEWER CONNECTION 1/1 FEE IS REQUIRED FOR THE NEW HOUSE PRIOR TO OCCUPANCY.
- 2) ENGINEERING DIVISION SHALL BE NOTIFIED 72 HOURS IN ADVANCE TO MARK OUT TOWN UTILITIES.
- 3) ALL WATER, SEWER, CURBCUT, STREET OPENING, & JACKIE'S LAW EXCAVATION PERMITS SHALL BE OBTAINED AT THE ENGINEERING DIVISION PRIOR TO ANY EXCAVATION.
- 4) ALL UTILITY WORK, INCLUDING DRAINAGE INSTALLATION SHALL BE INSPECTED BY THE ENGINEERING DIVISION.
- 5) THE DEVELOPER OR OWNER SHALL SUBMIT A CONSTRUCTION SCHEDULE OF PROPOSED WORK.
- 6) ALL INSPECTIONS SHALL BE SCHEDULED 24 HOURS IN ADVANCE.
- 7) AN APPROVED SITE AS-BUILT PLAN SHALL BE SUBMITTED TO THE ENGINEERING DIVISION WITHIN 60 DAYS OF CERTIFICATE OF OCCUPANCY. THE AS-BUILT SHALL BE PROVIDED ON PAPER COPY AND ELECTRONIC AUTOCAD FORMAT.

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JOHN D. SULLIVAN III, PE DATE

READING COMMUNITY PLANNING & DEVELOPMENT COMMISSION

STREAM CROSSING "OPENNESS" CALCULATIONS:

BANKFULL WIDTH = 10' (WIDEST WIDTH)
MINIMUM SPAN = 1.2 x BANKFULL WIDTH = 12'
PROPOSED SPAN = 17'

OPENNESS > 0.82 = CULVERT AREA/PIPE LENGTH
= 2' x 17' / 33'
= 1.03 > 0.82 (MEETS STANDARD)

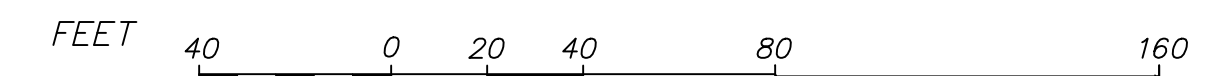
MIN. OPENNESS HEIGHT = 2 FEET
PROPOSED OPENNESS HEIGHT = 2' (MEETS STANDARD)

WETLAND REPLICATION & CROSSING

SEE SHEET 8 OF 9

APPROVED _____, 20__

GRAPHIC SCALE
SCALE: 1"=40'



REVISIONS

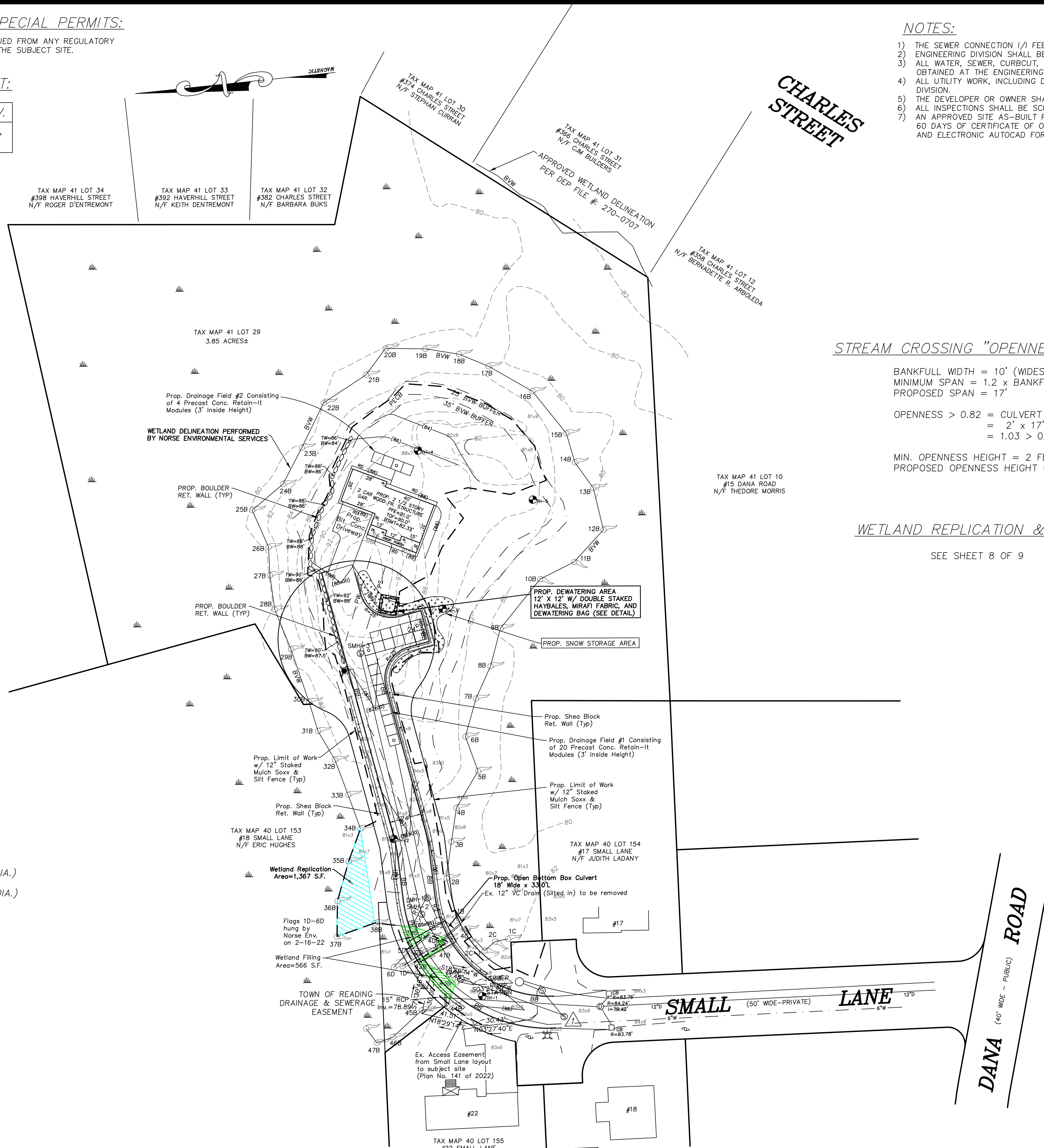
NO.	DATE	DESCRIPTION	BY	CHK'D
2	11/6/25	ADD RETAIN-IT DETAILS	JDS	JDS
1	10/29/25	HAMMERHEAD TURNAROUND	JDS	JDS

SMALL LANE EXTENSION

SITE, GRADING, & UTILITY PLAN
LOCATED IN
READING, MASSACHUSETTS
(MIDDLESEX COUNTY)

PREPARED FOR
JOSEPH MARINO
SCALE: 1"= 40' DATE: SEPT. 21, 2025

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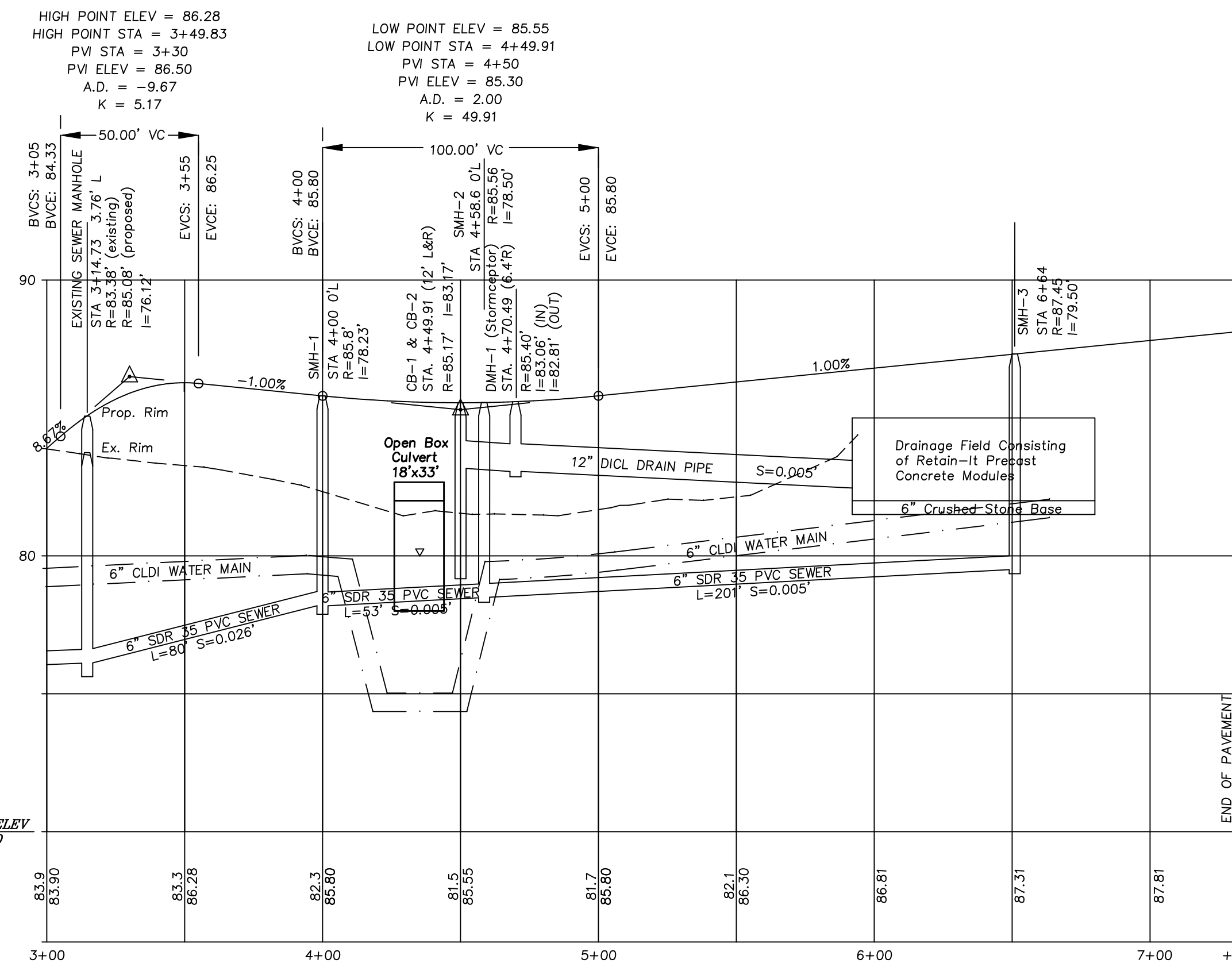
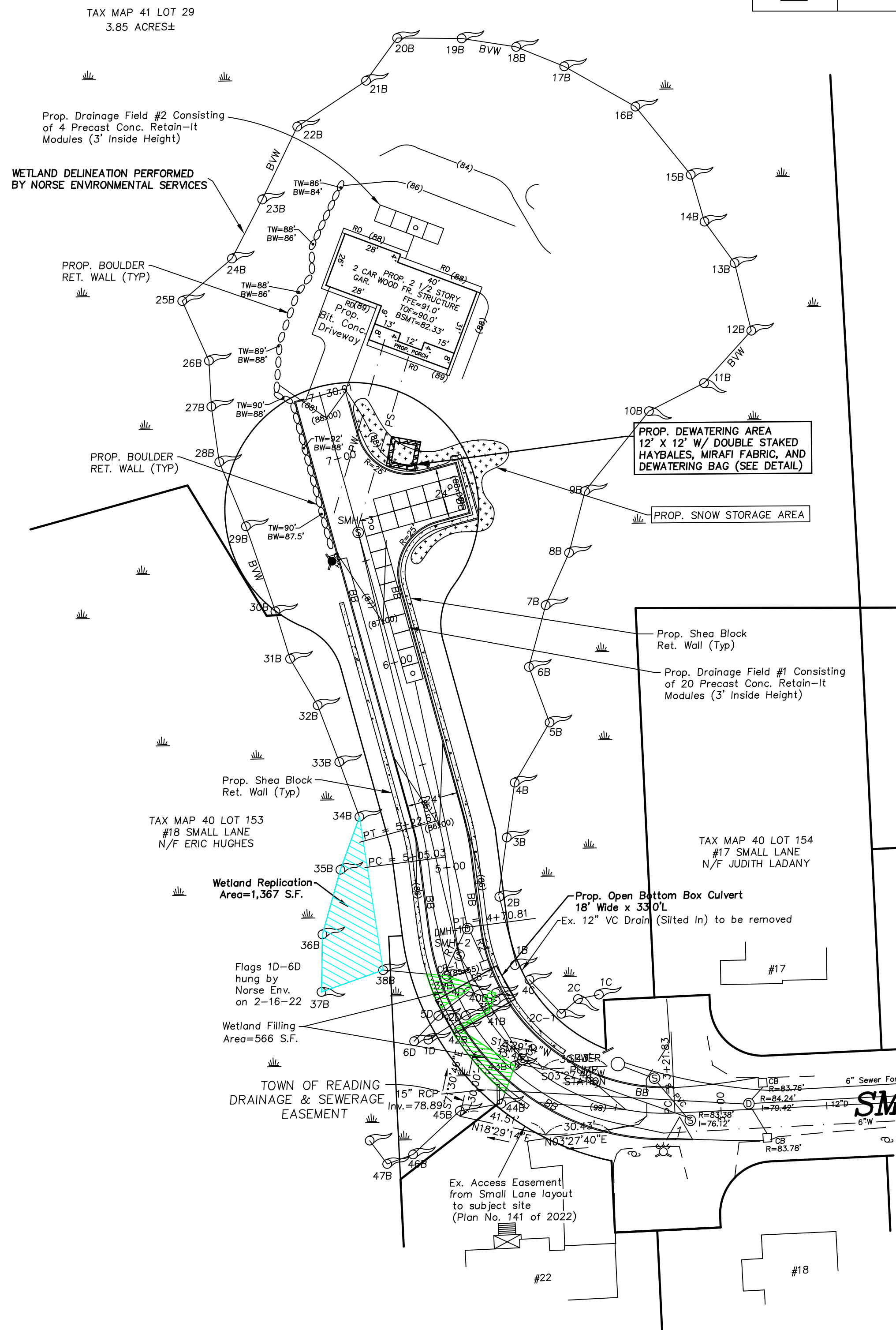


LEGEND:

- 248--- TWO FOOT CONTOUR
- DECIDUOUS TREE (> 6" DIA.)
- ⊗ EVERGREEN TREE (> 6" DIA.)
- ⊕ UTILITY POLE
- ⊙ SEWER MANHOLE
- S— SEWER MAIN
- W— COMPILED WATER MAIN
- CB □ CATCHBASIN
- D— DRAIN LINE
- BIT. BITUMINOUS
- CONC. CONCRETE
- EOP EDGE OF PAVEMENT
- TH ⊙ TEST PIT
- (100)— PROP. CONTOUR

TEMPORARY BENCHMARK CHART:

TBM #	DESCRIPTION	ELEV.
△	SEWER MANHOLE RIM	83.38



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PAUL FINOCCHIO, PLS DATE

READING COMMUNITY PLANNING & DEVELOPMENT COMMISSION

APPROVED _____, 20__

DRAINAGE STRUCTURE CHART:

STRUCTURE	RIM	INV. IN (SIZE/TYPE)	INV. OUT (SIZE/TYPE)
CB-1	85.17'	N/A	83.17' 12" DICL
CB-2	85.17'	N/A	83.17' 12" DICL
DMH-1 *	85.40'	83.06' 12" DICL	82.81' 12" DICL

* Stormceptor

REACH CHART:

REACH	LENGTH	SIZE	MATERIAL	SLOPE	BEG INV.	END INV.
R1	22'	12"	DICL	0.005	83.17'	83.06'
R2	16'	12"	DICL	0.007	83.17'	83.06'
R3	117'	12"	DICL	0.005	82.81'	82.22'

LEGEND:

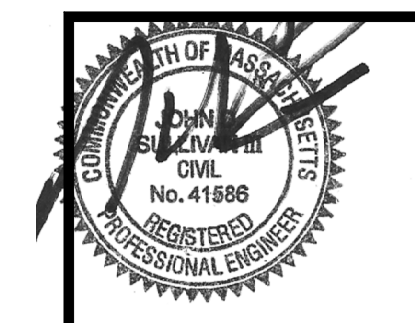
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GRAPHIC SCALE
SCALE: 1"=40'



REVISIONS

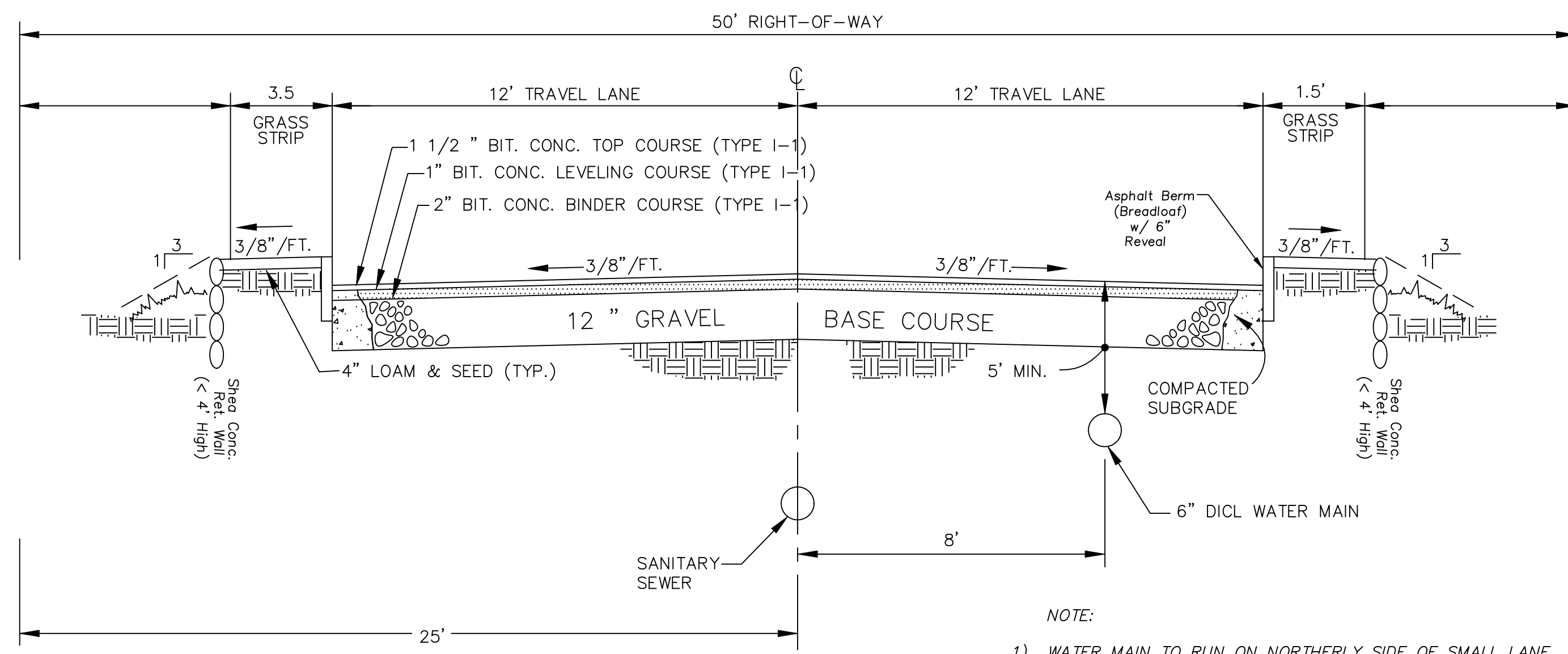
NO.	DATE	DESCRIPTION	BY	CHK'D
2	11/6/25	REVISE DRAINAGE	JDS	JDS
1	10/29/25	HAMMERHEAD TURNAROUND	JDS	JDS
NO.	DATE	DESCRIPTION	BY	CHK'D



SMALL LANE EXTENSION
ROADWAY PLAN & PROFILE
LOCATED IN
READING, MASSACHUSETTS
(MIDDLESEX COUNTY)

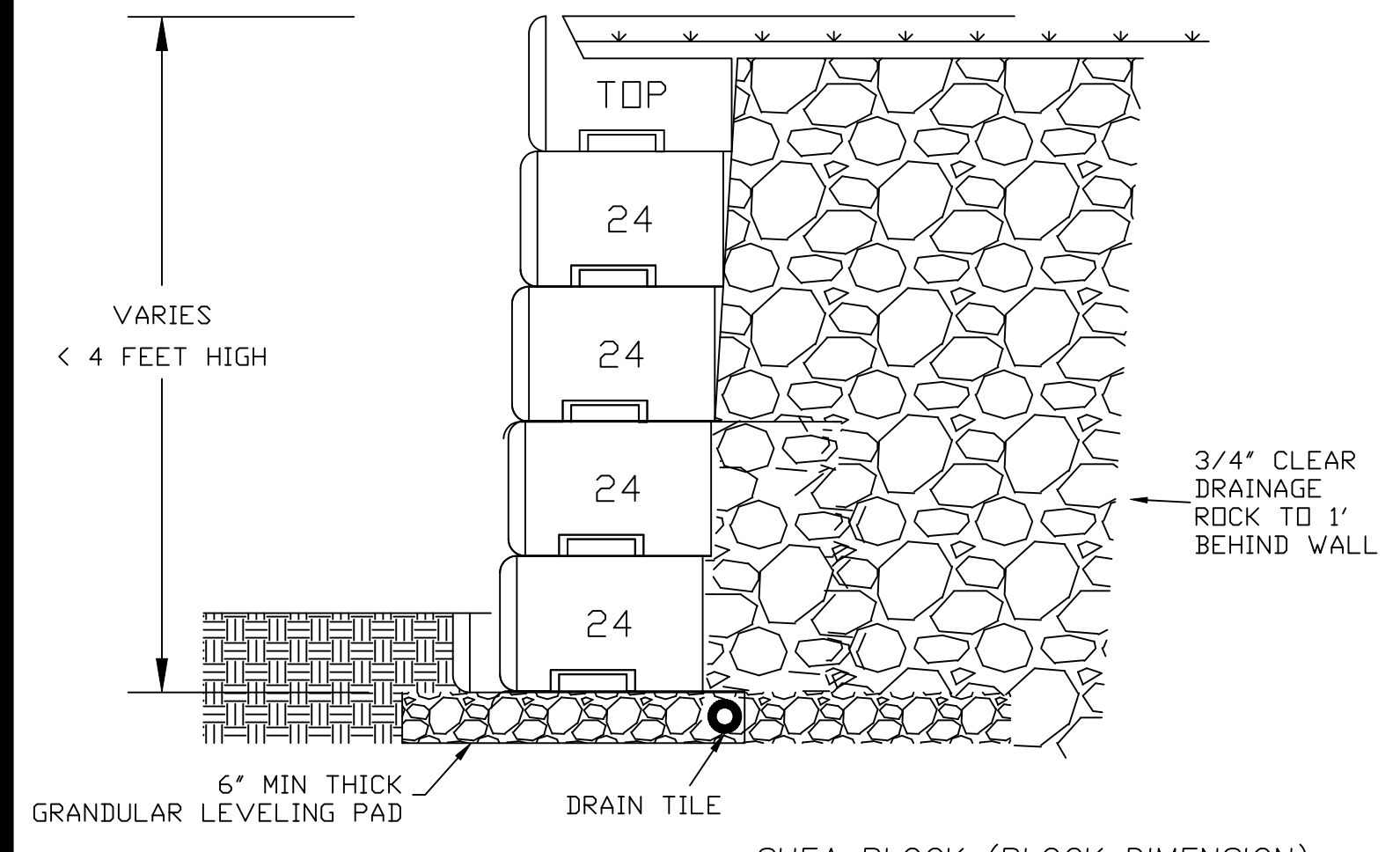
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STANDARD CROSS-SECTION FOR STREET CONSTRUCTION (NOT TO SCALE)

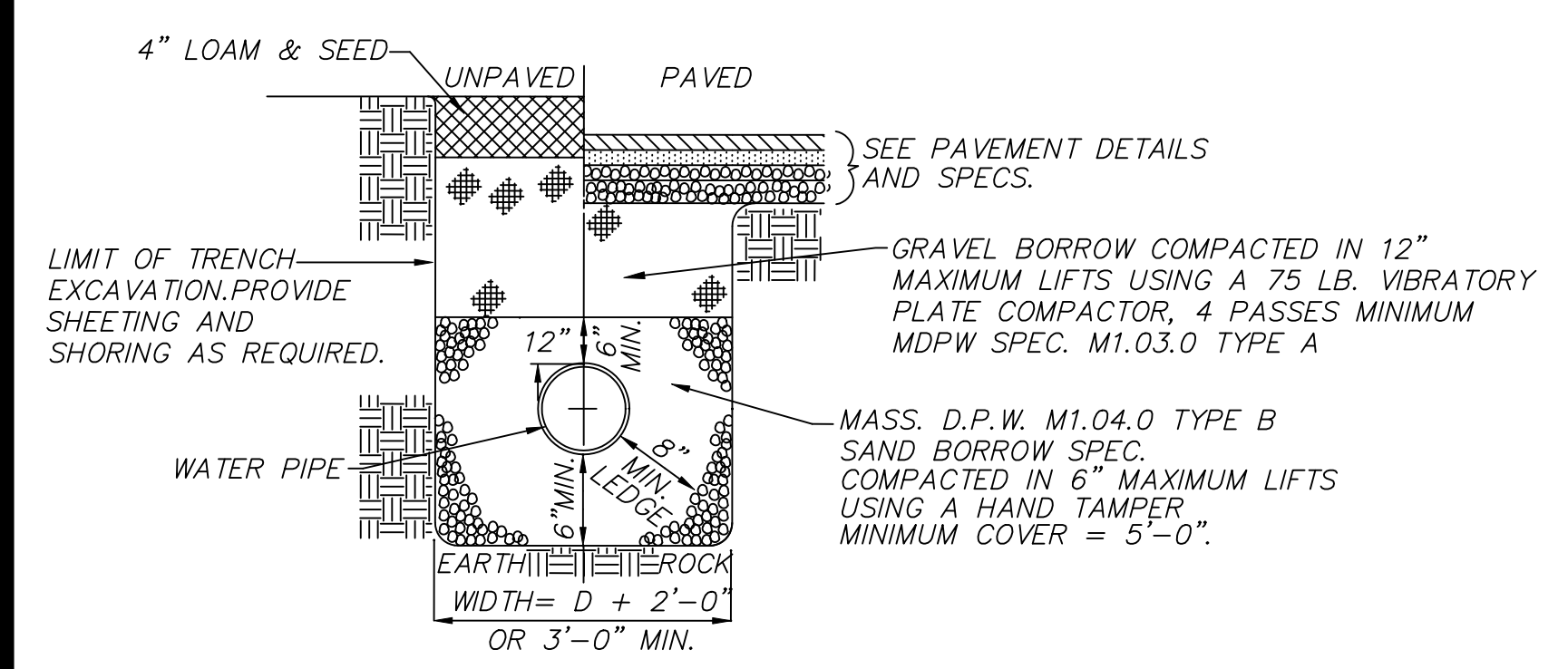
- NOTE:
- 1) WATER MAIN TO RUN ON NORTHERLY SIDE OF SMALL LANE
 - 2) UNDERGROUND E, C, & T LOCATION TO BE COORDINATED WITH UTILITY COMPANIES.



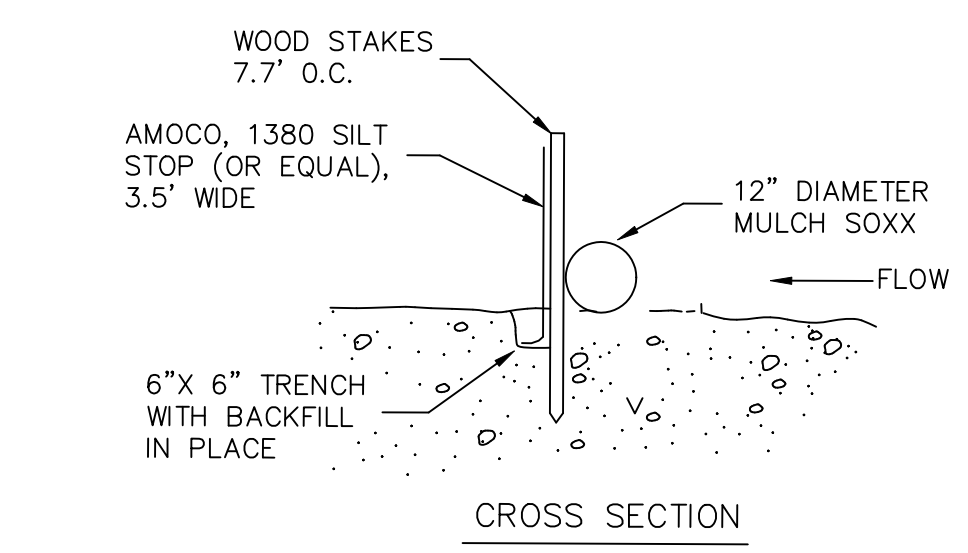
- KEY ASSUMPTIONS AND NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
 2. STANDARD FACE TEXTURE: NORTH SHORE GRANITE OR AVAILABLE BY SPECIAL ORDER: RUSTIC, LIMESTONE, OLD WORLD.
 3. MINIMUM TURNING RADIUS 15 FEET.
 4. 1' SETBACK PER ROW ON A STRAIGHT WALL (ANGLE OF BATTER 3.6°) CURVED WALL 1-2.7° PER ROW.

SHEA WALL SYSTEM TYPICAL WALL CROSS SECTION (NOT TO SCALE)

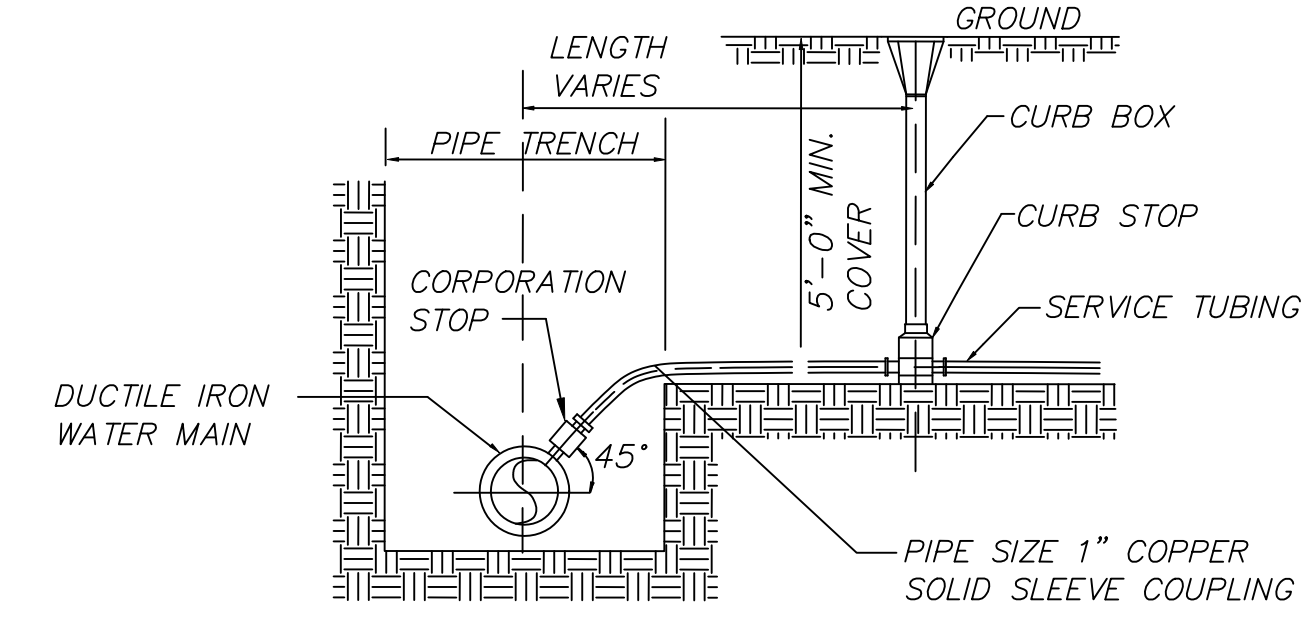
UNDERGROUND TELEPHONE, ELECTRIC, AND CABLE TO MEET DETAILS AND SPECIFICATIONS OF THE RESPECTIVE UTILITY COMPANY.



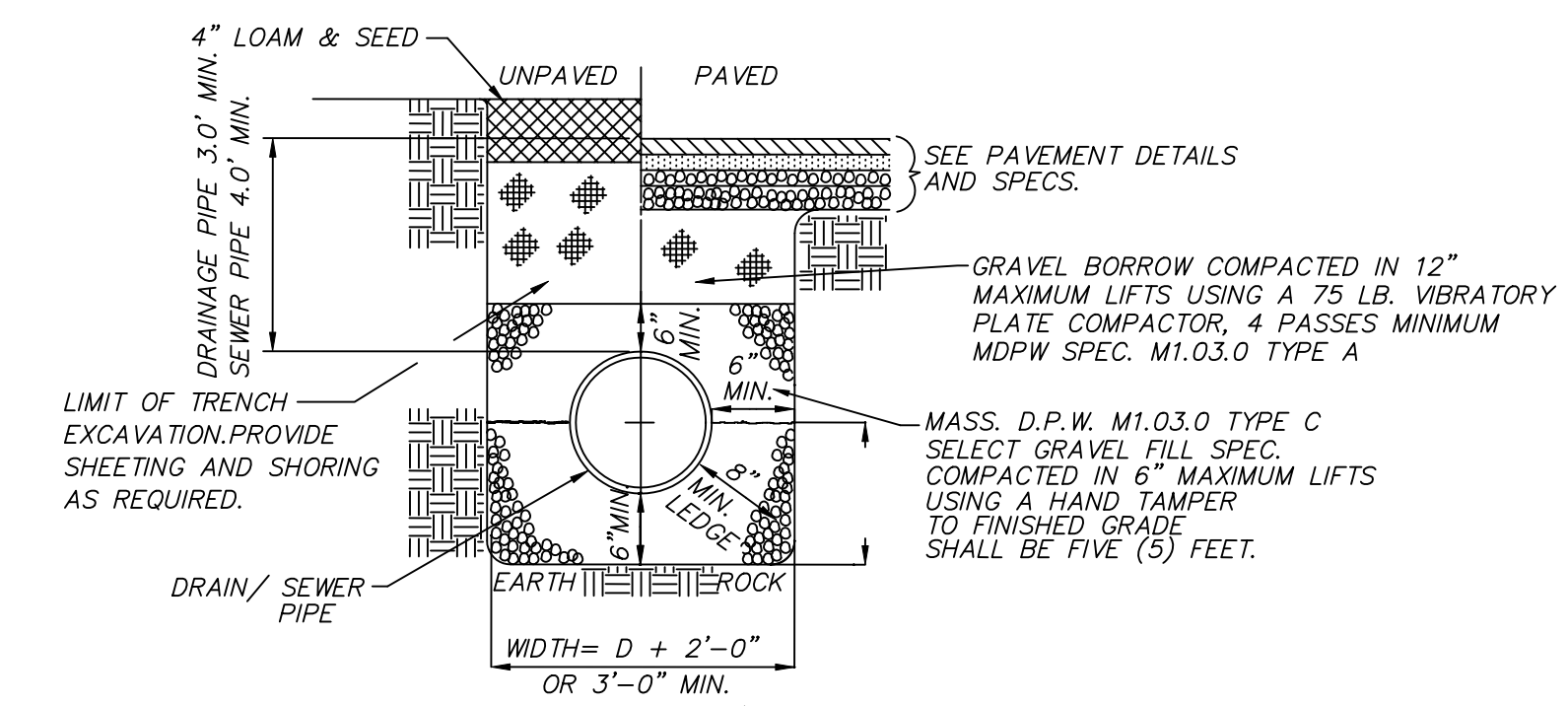
WATER TRENCH (NOT TO SCALE)



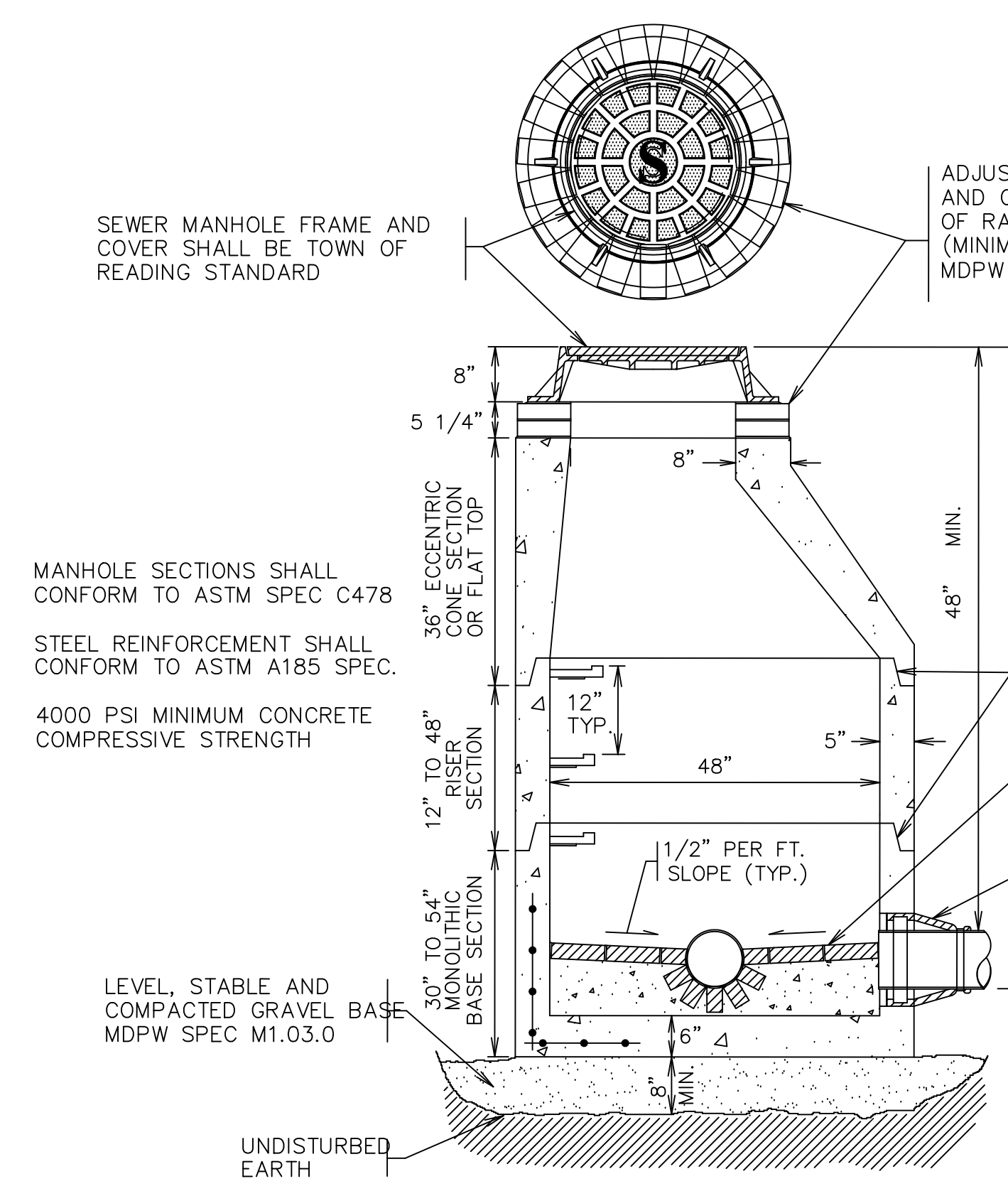
EROSION CONTROL BARRIER (NOT TO SCALE)



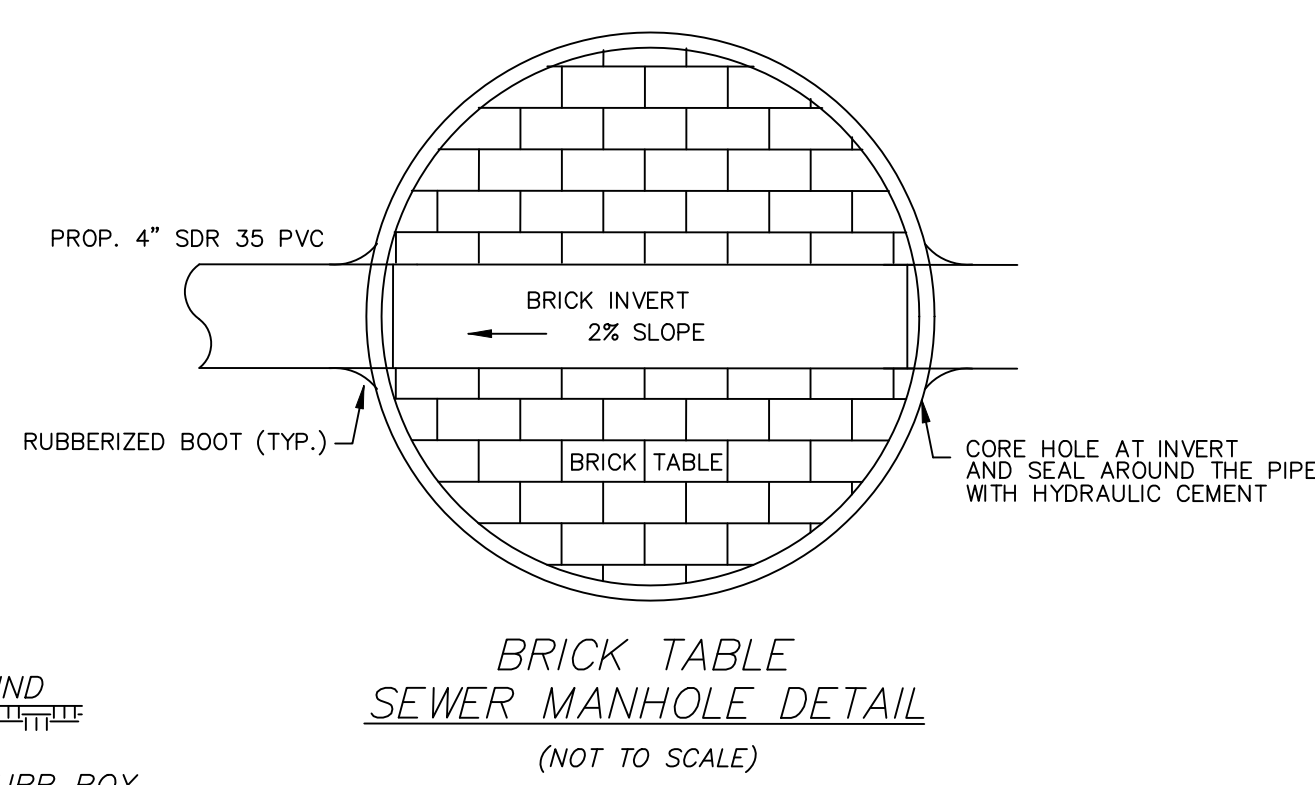
TYPICAL WATER SERVICE (NOT TO SCALE)



STORM DRAIN/SEWER TRENCH DETAIL (NOT TO SCALE)



TYPICAL SEWER MANHOLE DETAIL (NOT TO SCALE)



BRICK TABLE SEWER MANHOLE DETAIL (NOT TO SCALE)

ADJUST RIM TO MATCH ROADWAY GRADE AND CROSS SLOPE WITH TWO (2) COURSES OF RADIALLY PLACED RED BRICK AND PORTLAND CEMENT CONCRETE (MINIMUM 2 COURSES, MAXIMUM 5 COURSES) MDPW SPEC M4.05.2 (RED BRICK)

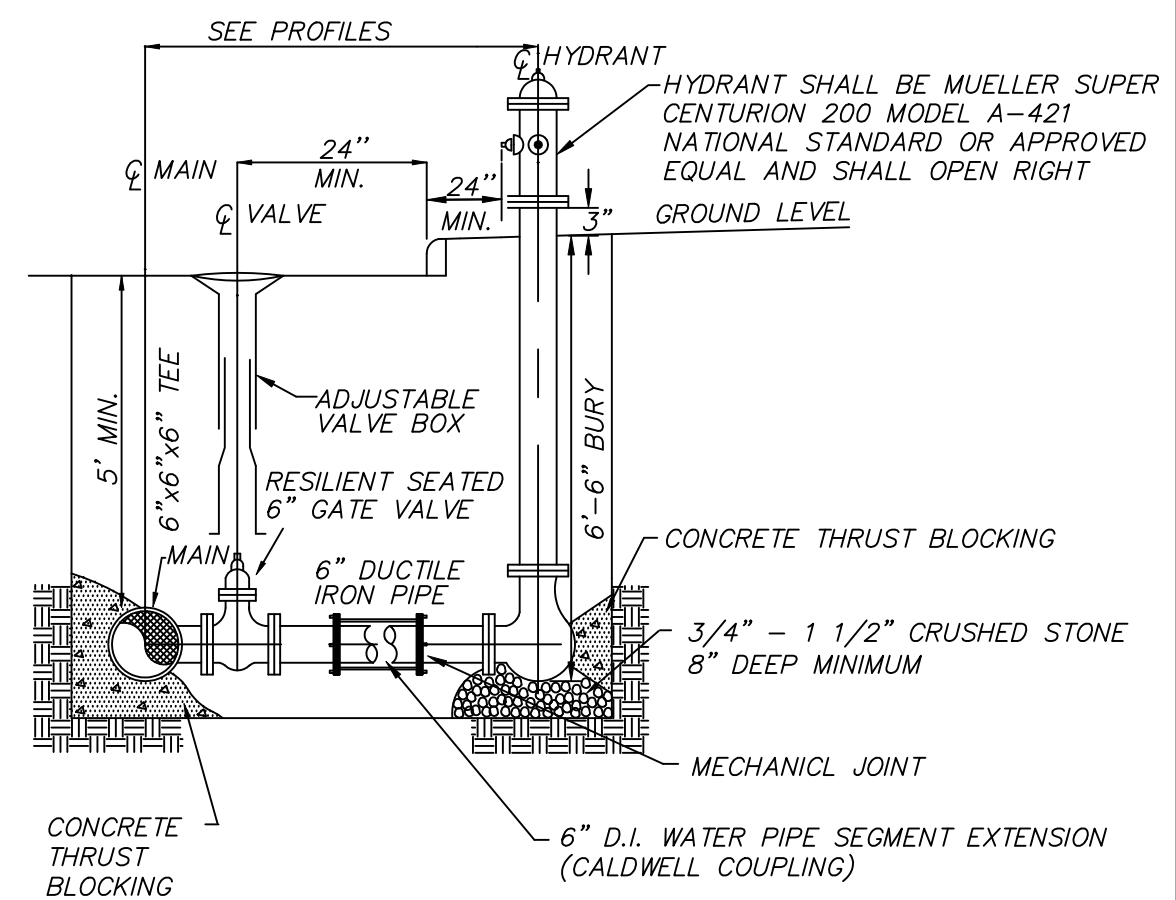
THE OUTLET INVERT SHALL BE AT LEAST 2" BELOW THE INLET INVERT

THE CROWNS OF THE INLET PIPE AND OUTLET PIPE SHALL MATCH UNLESS THE REQUIRED 2" MINIMUM DROP BETWEEN INLET AND OUTLET INVERTS REQUIRES THAT THE OUTLET CROWN BE INSTALLED LOWER

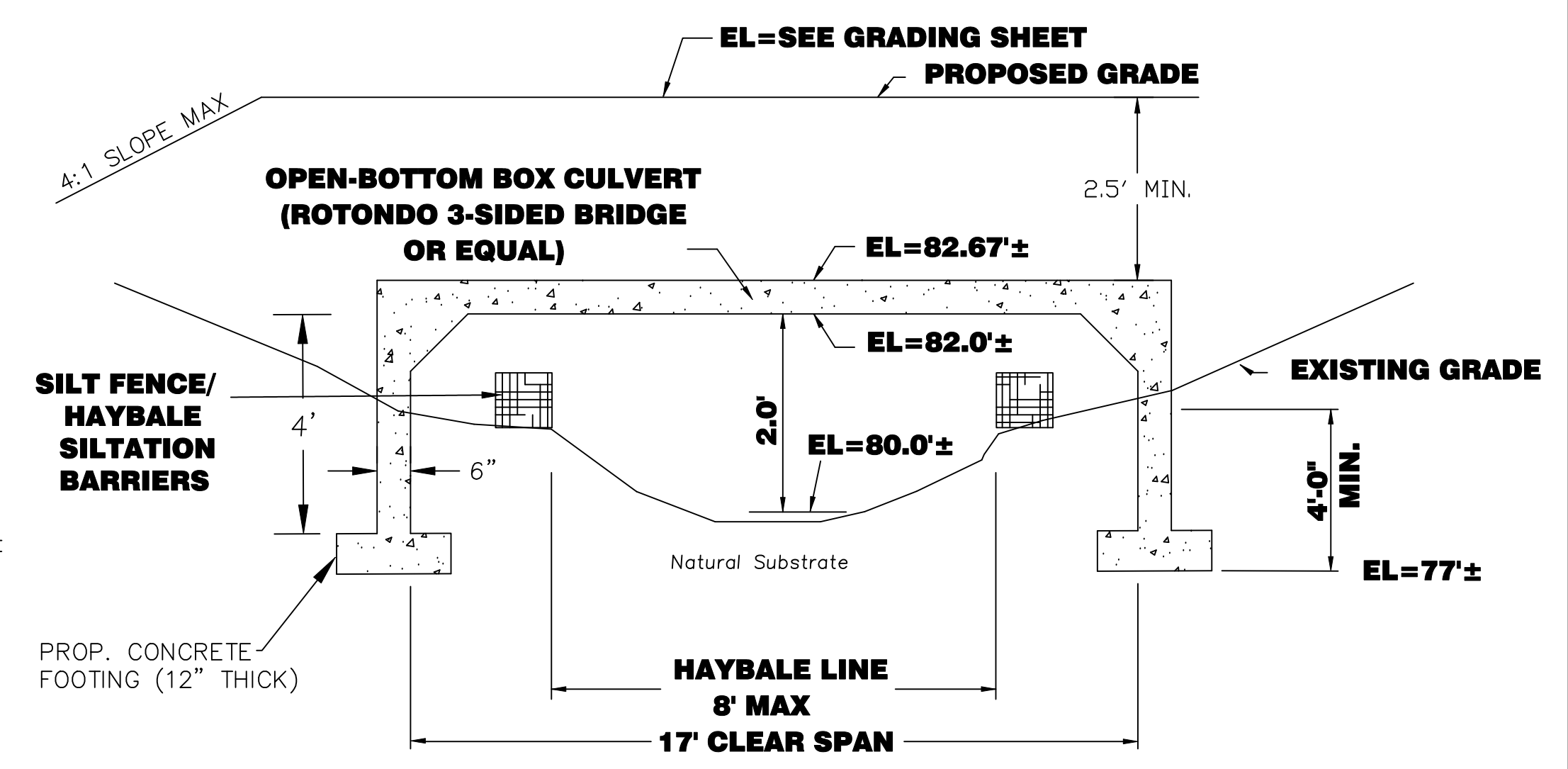
JOINTS SHALL BE SEALED WITH BUTYL RUBBER OR NEOPRENE RINGS AND PORTLAND TYPE II CEMENT CONCRETE

TABLE AND INVERT SHALL BE FORMED OF RED SEWER BRICK AND 4000 PSI TYPE II PORTLAND CEMENT CONCRETE MDPW SPEC M4.05.2 (RED BRICK) MDPW SPEC M4.02.00 et seq. (CEMENT CONCRETE)

PIPE TO MANHOLE CONNECTIONS SHALL BE MADE WITH CAST-IN FLEXIBLE SLEEVES (RUBBERIZED BOOTS)

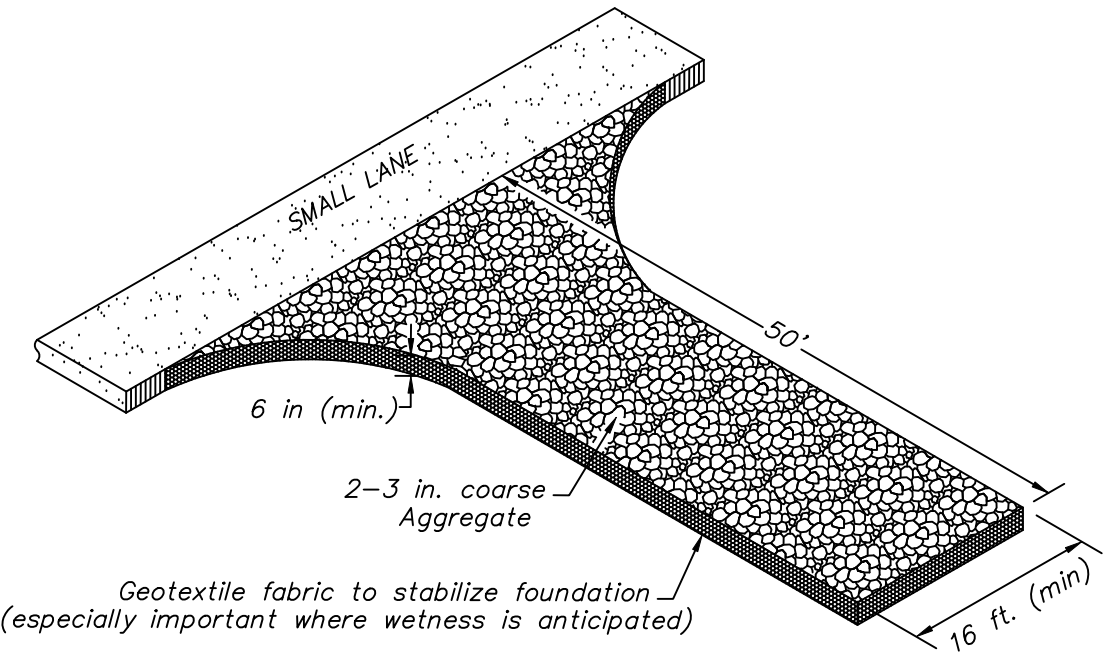


HYDRANT AND GATE VALVE DETAIL W/ MECHANICAL JOINT COUPLING (NOT TO SCALE)



NOTE: EXCAVATION FOR FOOTINGS SHALL BE OUTSIDE OF THE BANK AREAS AND SILTATION BARRIERS. NO BANK AREA SHALL BE DISTURBED FOR THIS PROJECT.

OPEN BOTTOM BOX CULVERT NOT TO SCALE



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT PAD (NOT TO SCALE)

NOTE: CONSTRUCT "TEMPORARY CONSTRUCTION ENTRANCE" AS SHOWN ON DETAIL PLAN PRIOR TO THE BEGINNING OF ANY CONSTRUCTION ACTIVITIES. ALL CONSTRUCTION VEHICLES SHALL EXIT THE SITE OVER THIS "TEMPORARY CONSTRUCTION ENTRANCE". THE CONTRACTOR SHALL USE THIS AREA TO REMOVE SOIL FROM THE TIRES OF CONSTRUCTION VEHICLES. "TEMPORARY CONSTRUCTION ENTRANCE" TO CONSIST OF SIX TO TWELVE INCHES OF TWO TO THREE INCH STONE.

REVISIONS

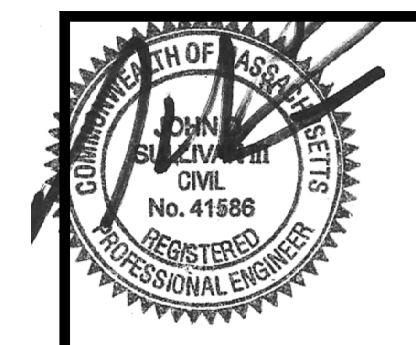
NO.	DATE	DESCRIPTION	BY	CHK'D
2	11/6/25	ADD RETAIN-IT DETAILS	JDS	JDS
1	10/29/25	HAMMERHEAD TURNAROUND	JDS	JDS

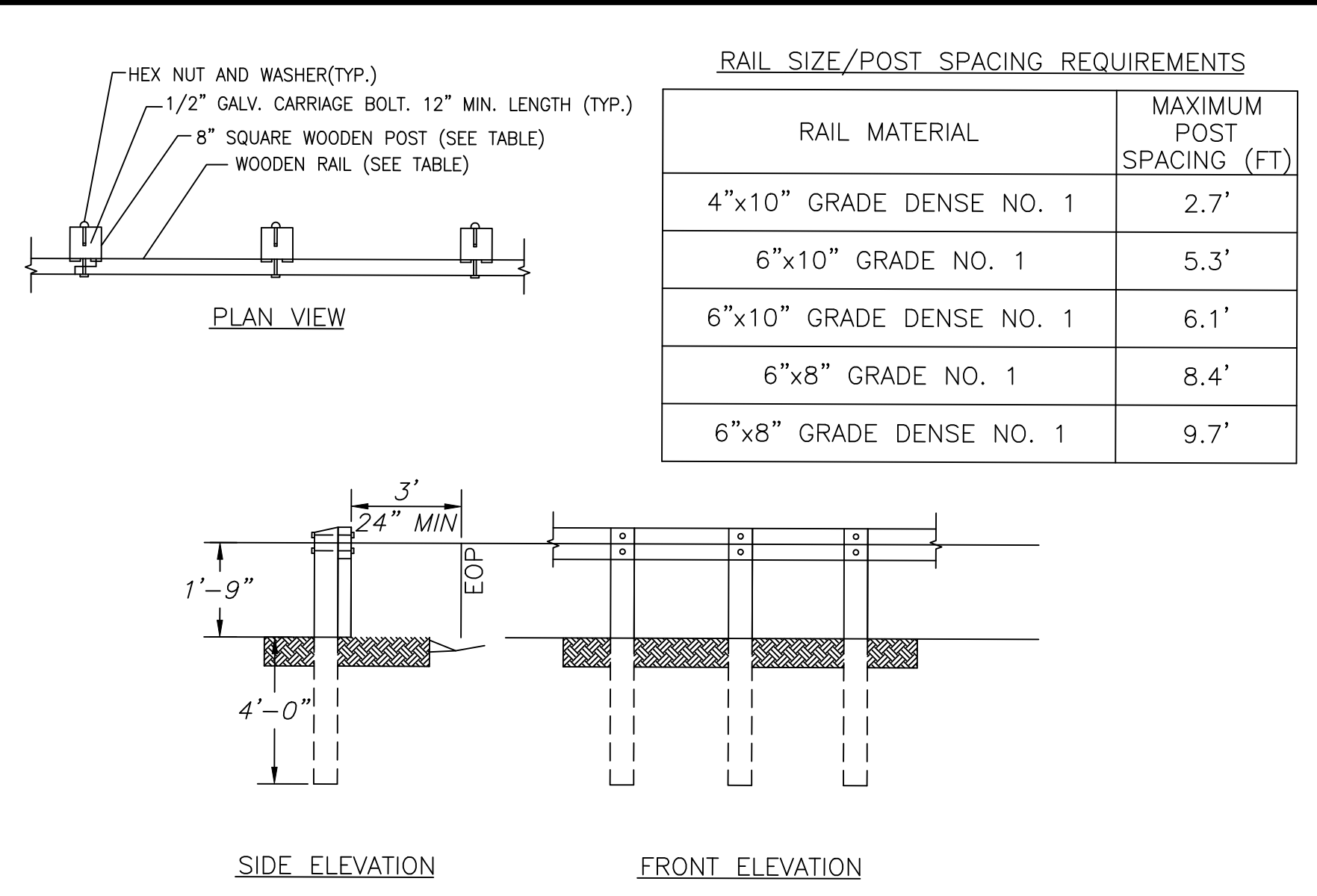
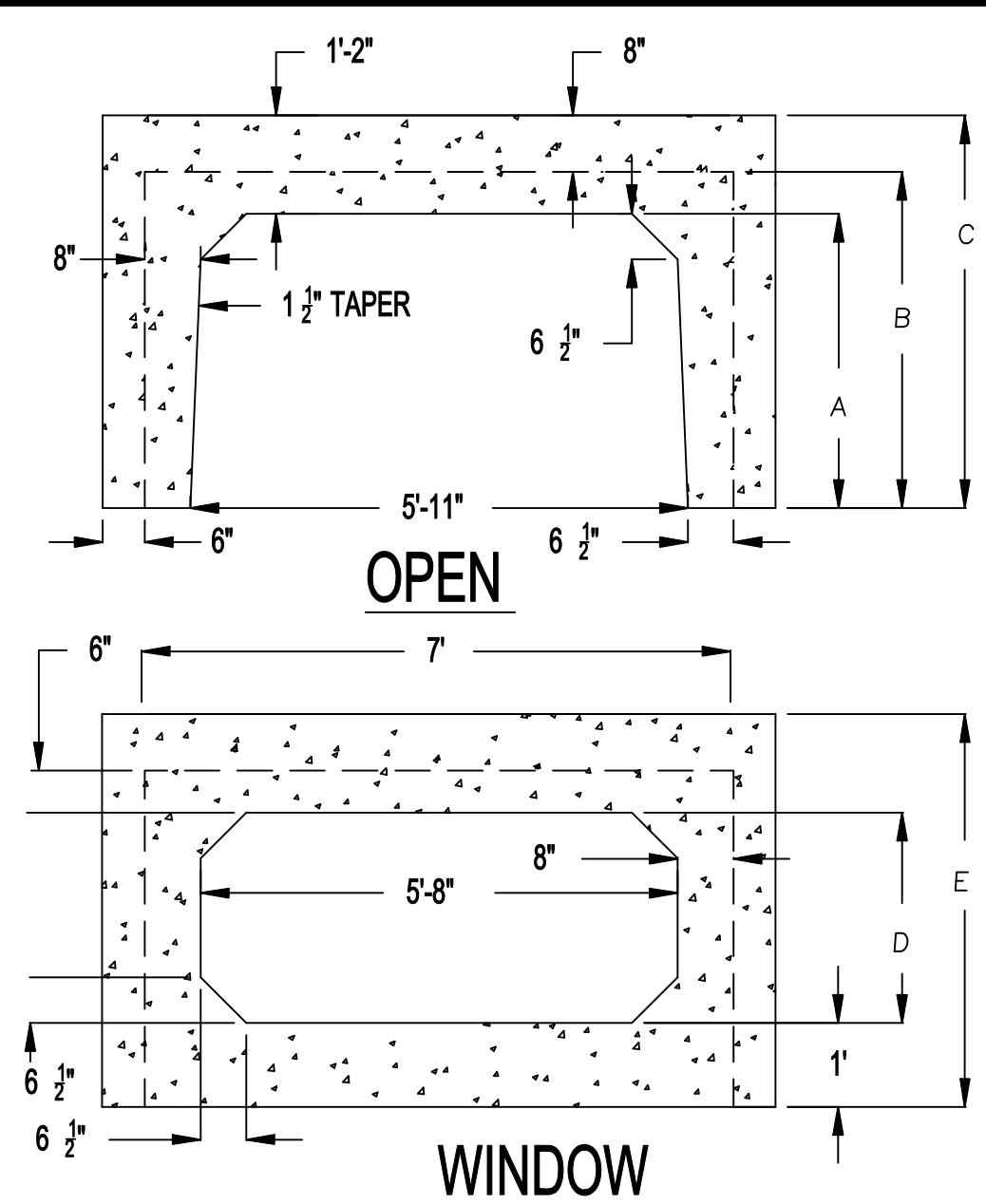
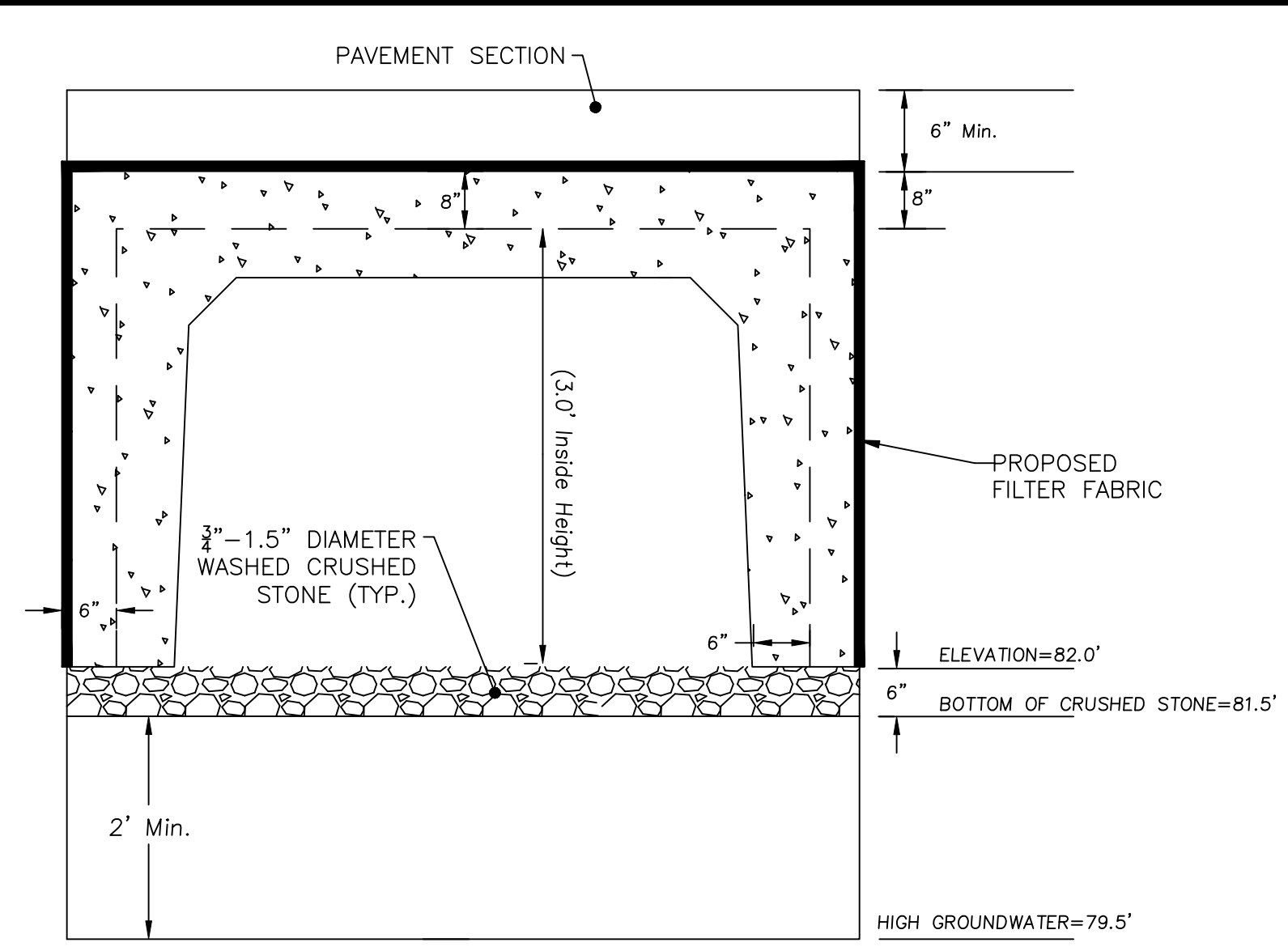
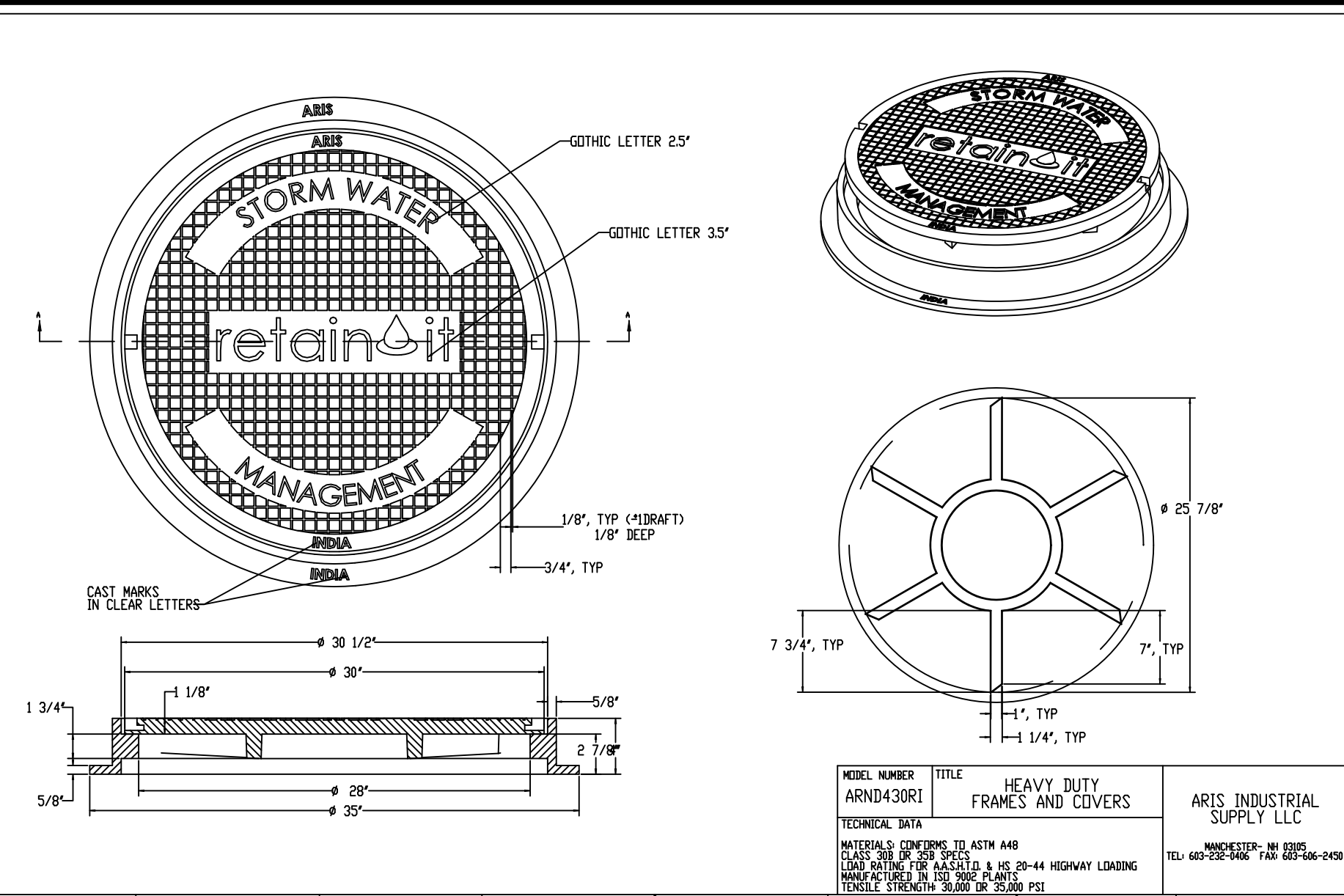
SMALL LANE EXTENSION

CONSTRUCTION DETAILS LOCATED IN READING, MASSACHUSETTS (MIDDLESEX COUNTY)

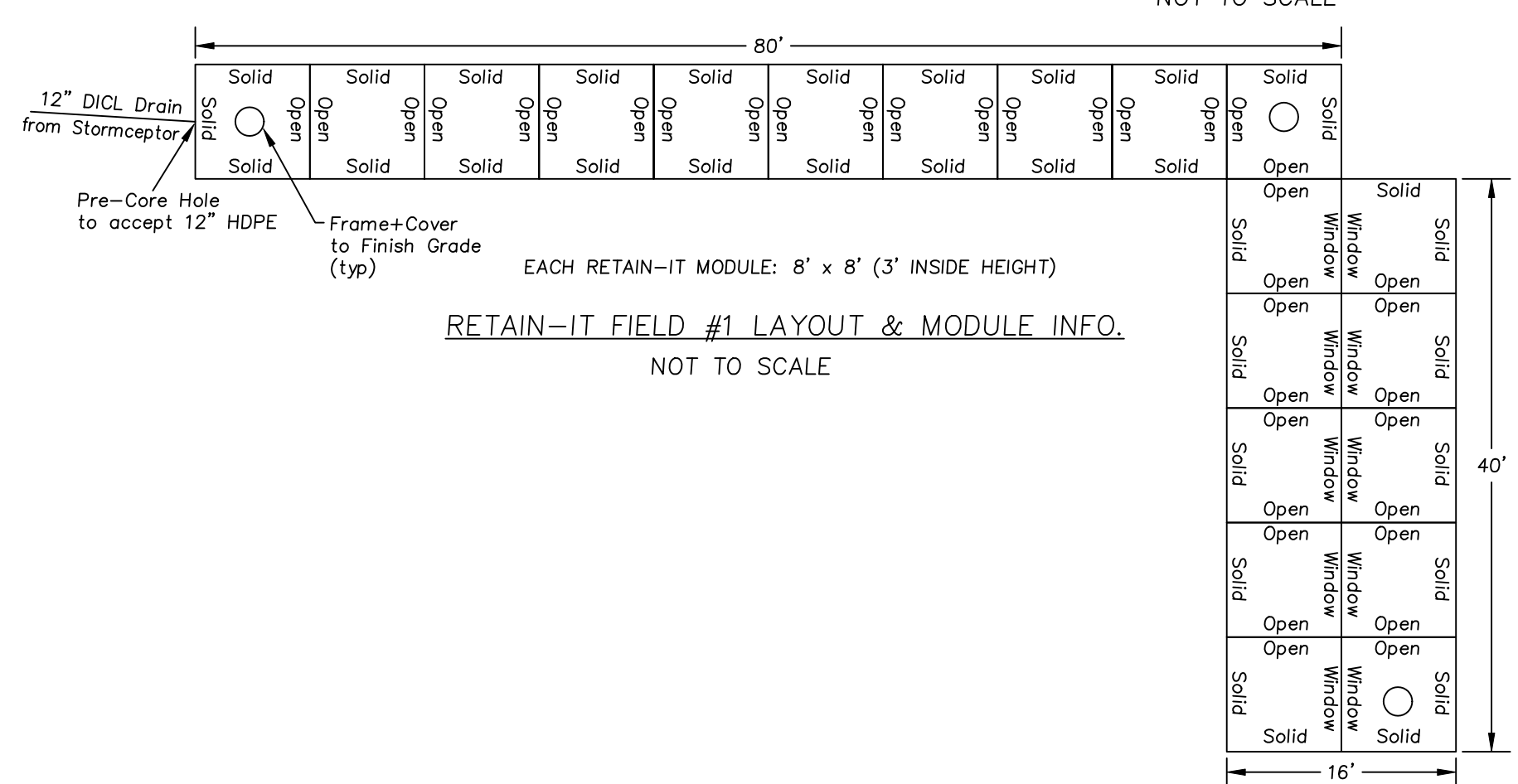
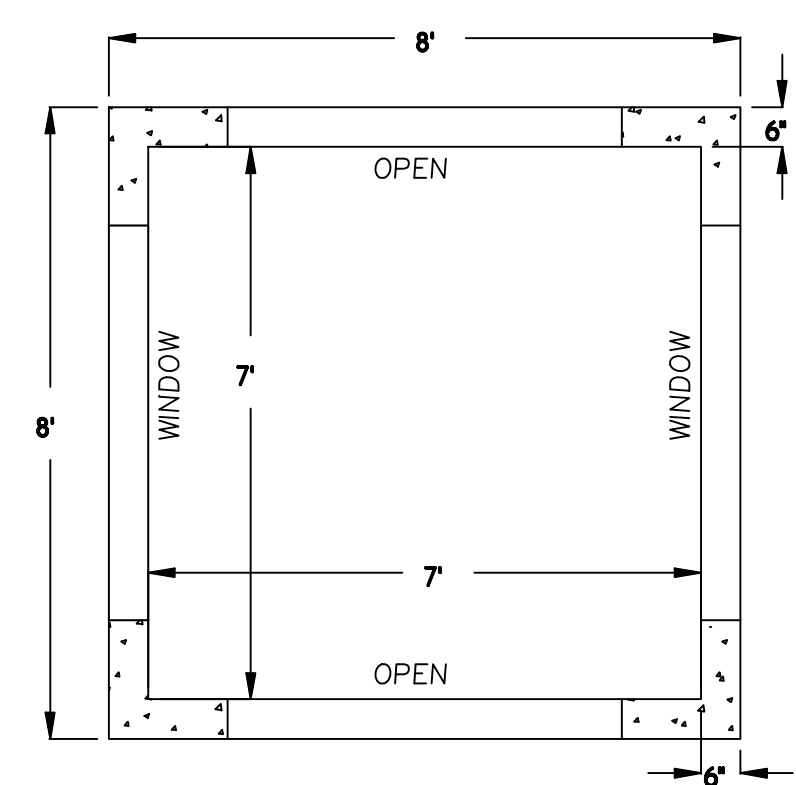
PREPARED FOR JOSEPH MARINO
SCALE: N.T.S. DATE: SEPT. 21, 2025

PREPARED BY SULLIVAN ENGINEERING GROUP, LLC
P.O. BOX 2004 WOBURN, MA 01888 (781) 854-8644





NOTES:
 1. POSTS SHALL BE 8" SQUARE PRESSURE TREATED DOUGLAS FIR, OR APPROVED EQUAL.
 2. RAILS SHALL BE PRESSURE DOUGLAS FIR OR APPROVED EQUAL, JOINTED AT POSTS.

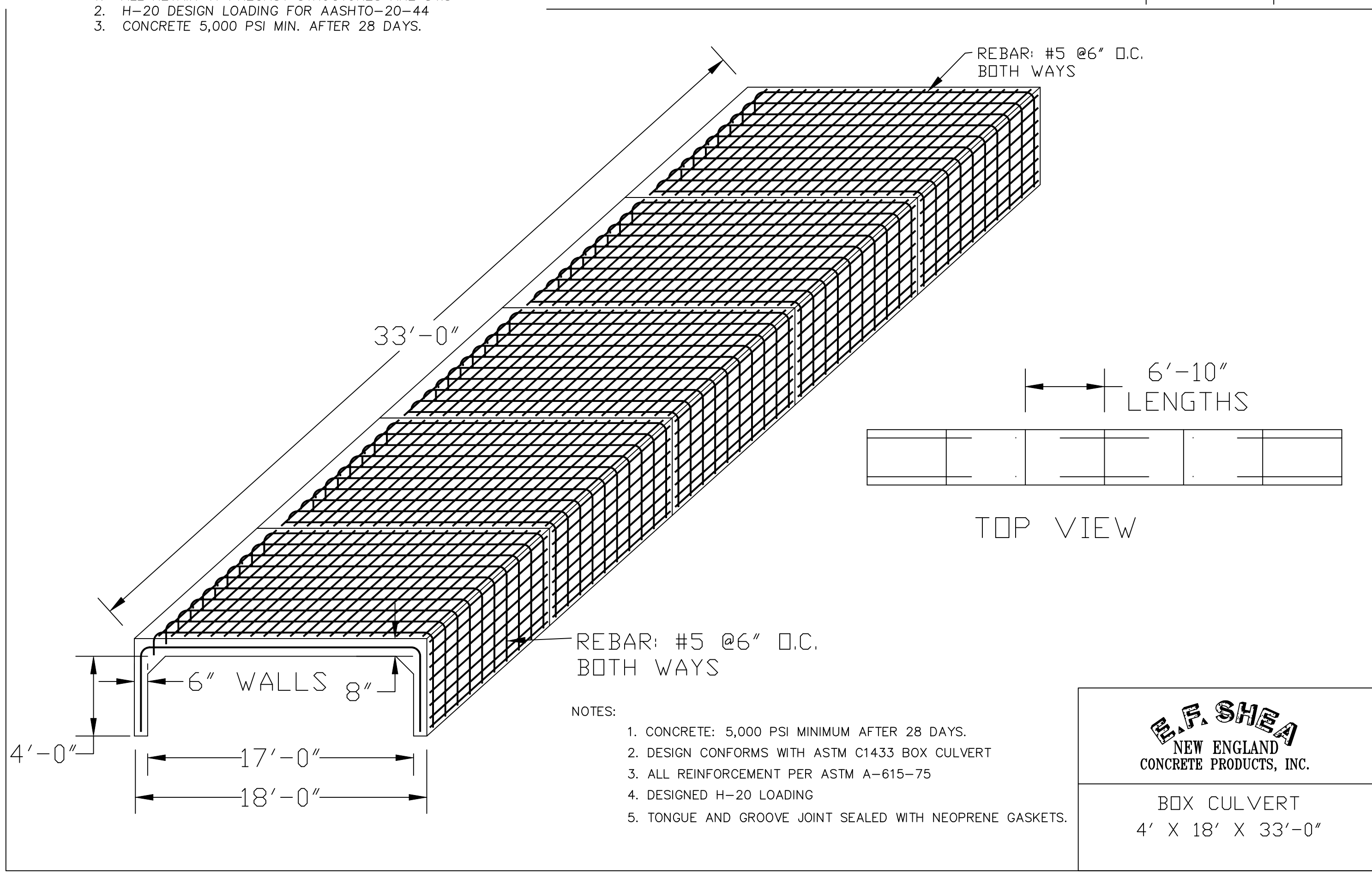


TYPICAL RETAIN-IT MODULE DIMENSIONS
NOT TO SCALE

INSIDE MODULE HT	DIMENSION				
	A	B	C	D	E
3.0'	2.5'	3.0'	3.67'	1.5'	3.67'

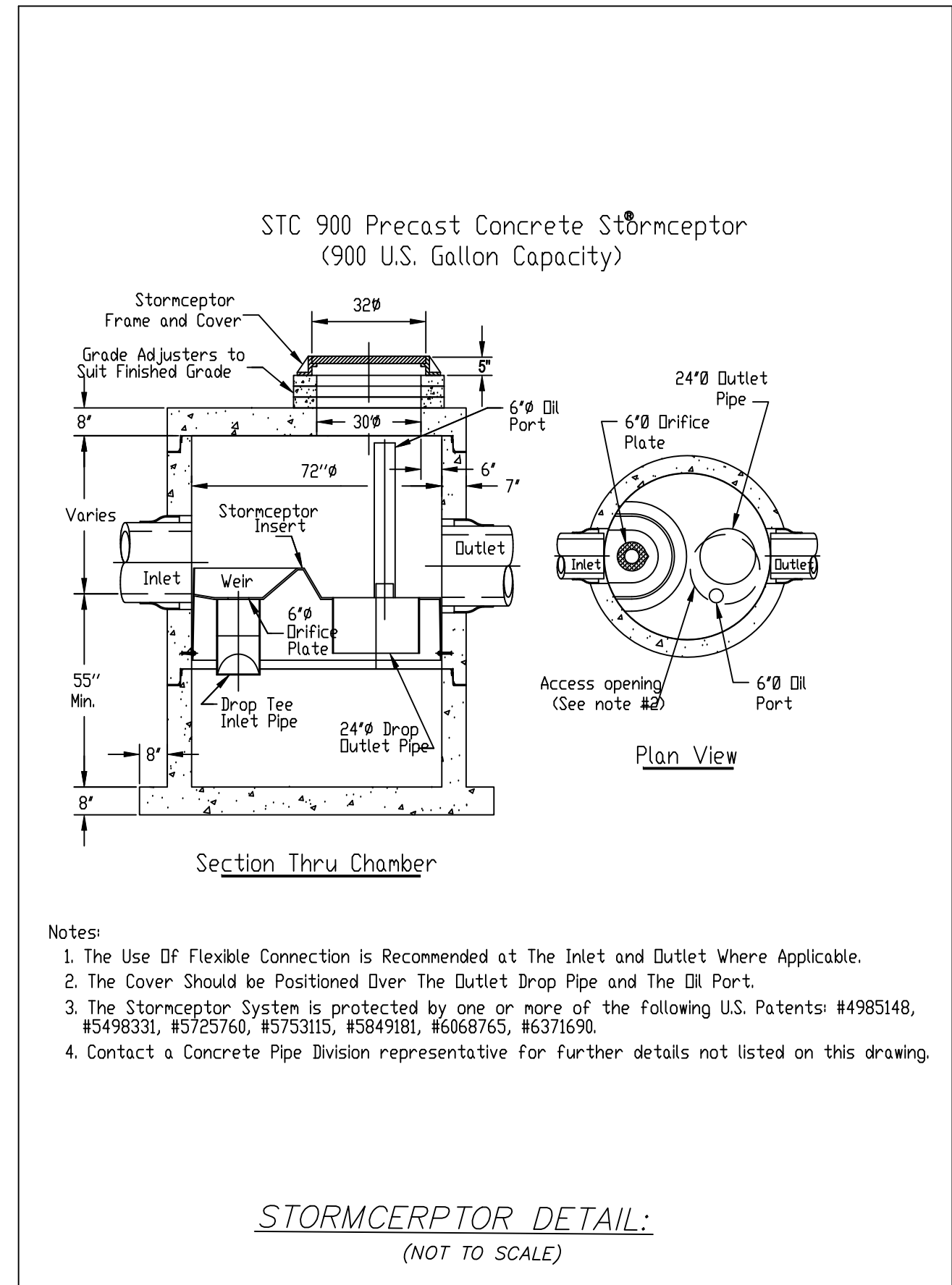
RETAIN-IT MODULE SCHEMATIC - INTERIOR UNIT
NOT TO SCALE

NOTES:
 1. ALL RETAIN-IT PRECAST STRUCTURES ARE 8'x8'
 2. H-20 DESIGN LOADING FOR AASHTO-20-44
 3. CONCRETE 5,000 PSI MIN. AFTER 28 DAYS.

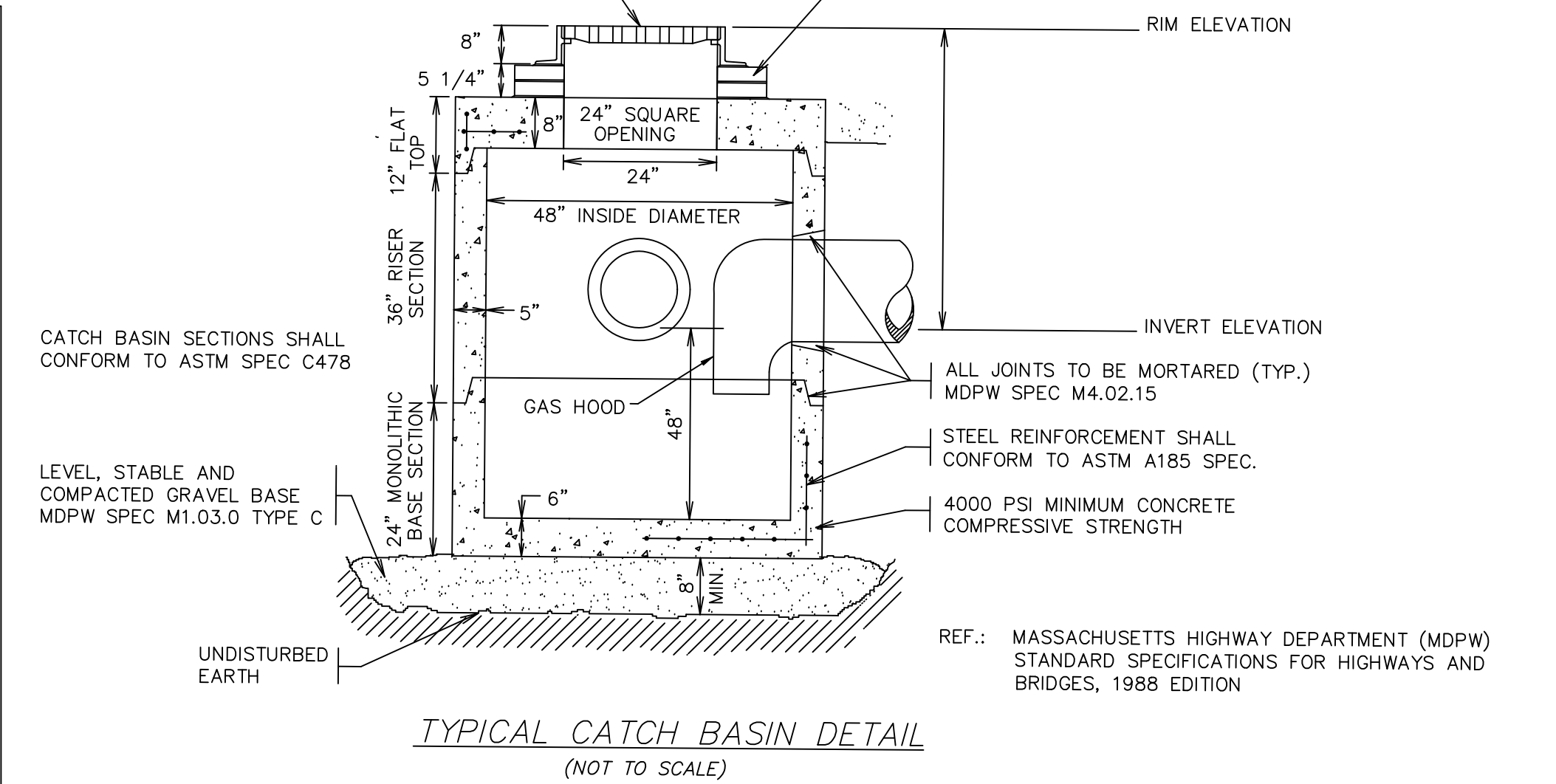


E.F. SHEA
 NEW ENGLAND
 CONCRETE PRODUCTS, INC.

BOX CULVERT
 4' X 18' X 33'-0"



Notes:
 1. The Use of Flexible Connection is Recommended at the Inlet and Outlet Where Applicable.
 2. The Cover Should be Positioned Over the Outlet Drop Pipe and the DI Port.
 3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
 4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.



SMALL LANE EXTENSION
 CONSTRUCTION DETAILS
 LOCATED IN
 READING, MASSACHUSETTS
 (MIDDLESEX COUNTY)

PREPARED FOR
 JOSEPH MARINO

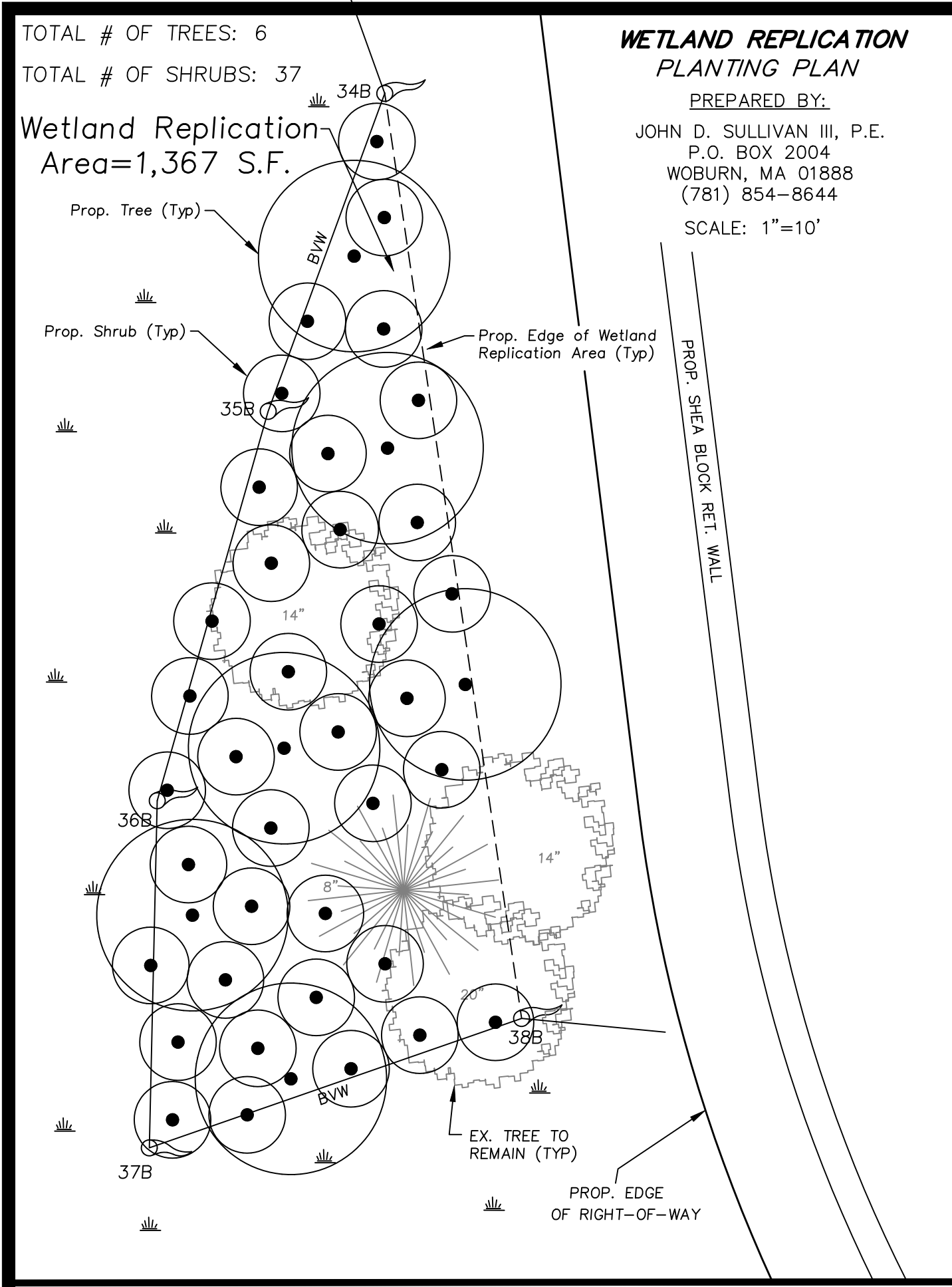
SCALE: N.T.S. DATE: SEPT. 21, 2025

PREPARED BY
SULLIVAN ENGINEERING GROUP, LLC
 P.O. BOX 2004
 WOBURN, MA 01888
 (781) 854-8644

SHEET No. 7 OF 9

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK'D
2	11/6/25	ADD RETAIN-IT DETAILS	JDS	JDS
1	10/29/25	HAMMERHEAD TURNAROUND	JDS	JDS



TEMPORARY BENCHMARK CHART:

TBM #	DESCRIPTION	ELEV.
△	SMH RIM	83.38'

READING COMMUNITY PLANNING & DEVELOPMENT COMMISSION

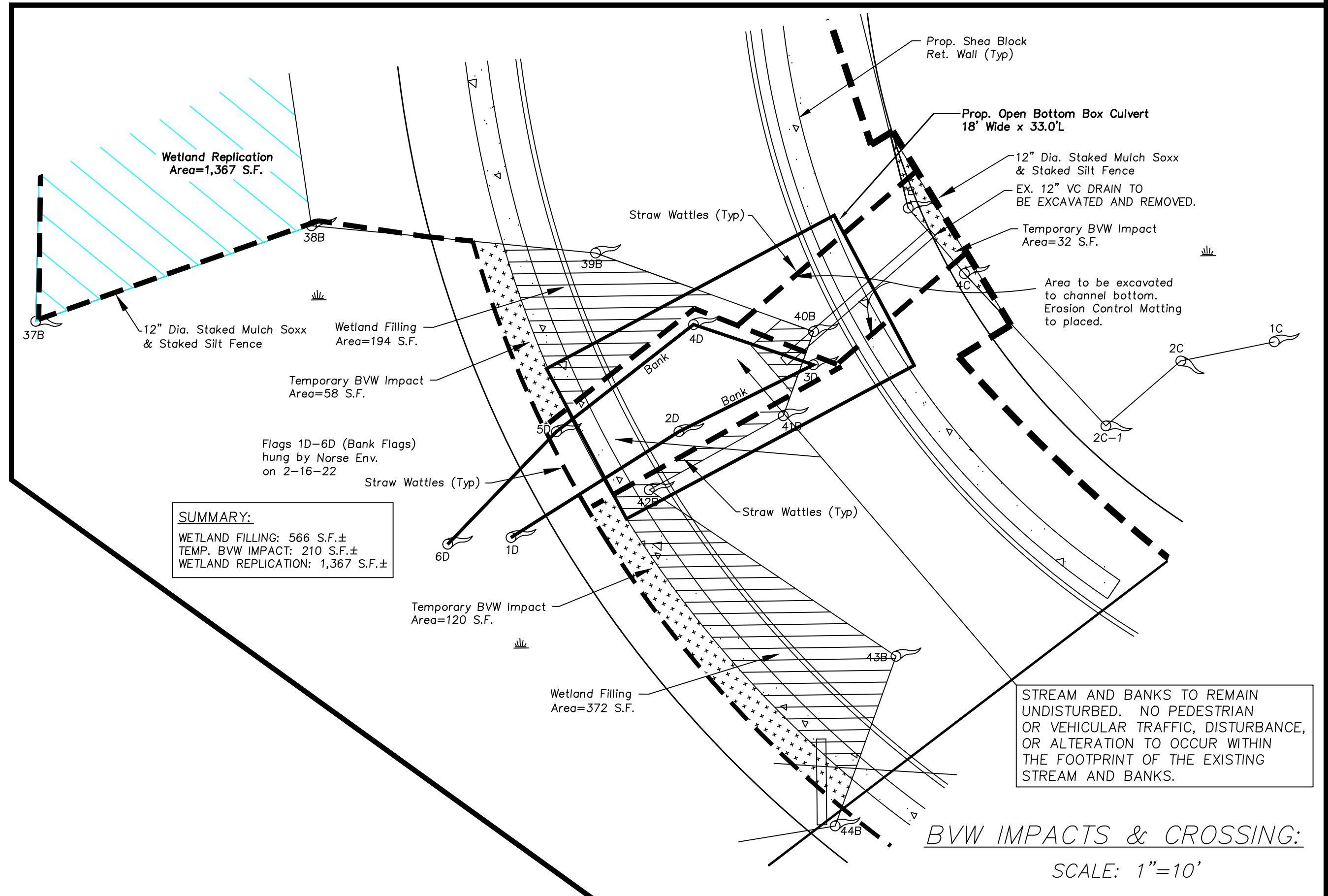
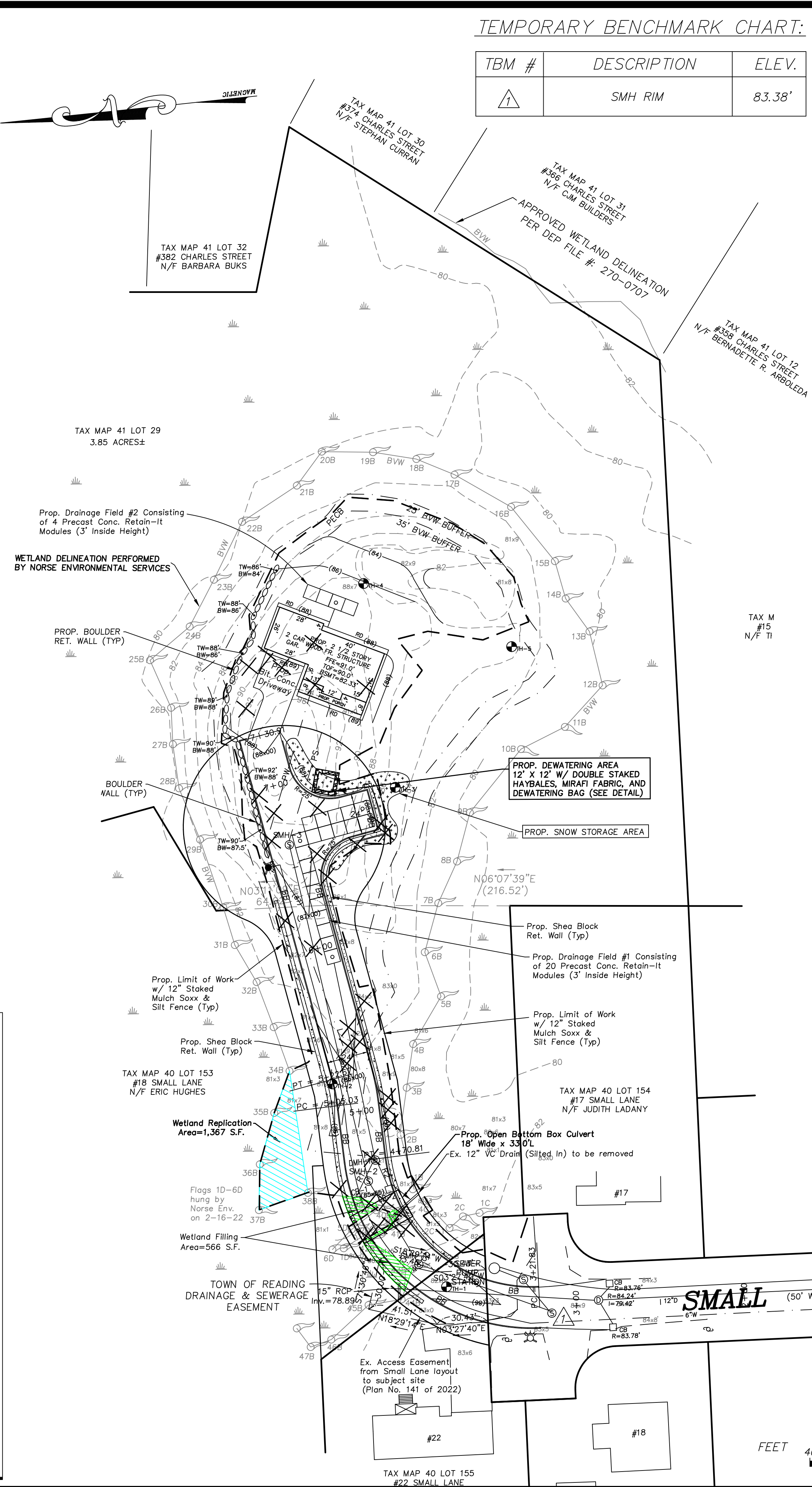
APPROVED _____, 20__

LEGEND:

- 248--- TWO FOOT CONTOUR
- DECIDUOUS TREE (> 6" DIA.)
- EVERGREEN TREE (> 6" DIA.)
- UTILITY POLE
- ⊙ SEWER MANHOLE
- S— SEWER MAIN
- W— COMPILED WATER MAIN
- CB □ CATCHBASIN
- D— DRAIN LINE
- BIT. BITUMINOUS
- CONC. CONCRETE
- EOP EDGE OF PAVEMENT
- TH ⊙ TEST PIT
- (100)— PROP. CONTOUR

FOR REGISTRY OF DEEDS USE ONLY
I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

JOHN D. SULLIVAN III, PE DATE



WETLAND REPLICATION PLANTINGS/SEED MIX

THE APPLICANT SHALL PLANT THE FOLLOWING TREE & SHRUB SPECIES IN THE 1,367 S.F. WETLAND REPLICATION AREA BETWEEN WETLAND FLAGS 34B-38B. THE TREES SHALL BE PLANTED 15 FEET ON CENTER AND SHRUBS NO GREATER THAN 6 FEET ON CENTER.

A mixture of all the trees and a minimum of (4) different shrubs shall be planted. Species selection shall be based on cost and availability.

Common Name	Latin Name	Wildlife Benefits Food, Cover & Nesting
Trees:		
Red Maple	Acer rubrum	American robin, prairie warbler, American goldfinch, cardinal, grosbeaks, squirrels, chipmunk.
American Elm	Ulmus americana	Wild turkey, ruffed grouse, pheasant, sparrow, cardinal, American goldfinch, woodpeckers, American robin.
Gray Birch	Betula populifolia	Wild turkey, ruffed grouse, pheasant, chickadee, squirrels, titmouse.

Common Name	Latin Name	Wildlife Benefits Food, Cover & Nesting
Shrubs:		
Arrow-wood	Viburnum dentatum	Ruffed grouse, brown thrasher, American robin, eastern bluebird & gray catbird.
Sweet Pepperbush	Clethra alnifolia	Songbirds, waterfowl, upland gamebirds, small mammals.
Silky Dogwood	Cornus amomum	Wild turkey, white tailed deer, & gray catbird.
Spicebush	Lindera benzoin	Veery, ruffed grouse, American robin, gray catbird, wild turkey, thrushes, white tailed deer.
High bush blueberry	Vaccinium corymbosum	Blue jay, chickadee, titmouse, thrasher, eastern bluebird, ruffed grouse, American robin, mourning dove.
Common Winterberry	Ilex verticillata	Red-winged blackbird, American crow, American robin, rabbit, squirrel.

In addition, the applicant shall apply a New England Wetmix to the replication area. The New England Wetmix can be purchased at New England Wetland Plants, Inc. www.newp.com.

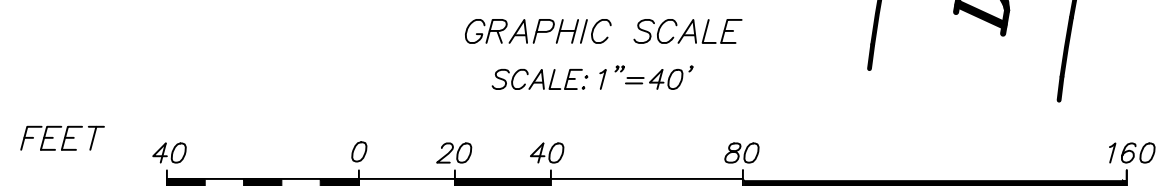
REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK'D
2	11/6/25	REVISE DRAINAGE	JDS	JDS
1	10/29/25	HAMMERHEAD TURNAROUND	JDS	JDS

**SMALL LANE EXTENSION
WETLAND REPLICATION & CROSSING**
LOCATED IN
READING, MASSACHUSETTS
(MIDDLESEX COUNTY)

PREPARED FOR
JOSEPH MARINO
SCALE: 1" = 40' DATE: SEPT. 21, 2025

PREPARED BY
SULLIVAN ENGINEERING GROUP, LLC
P.O. BOX 2004
WOBURN, MA 01888
(781) 854-8644



LOTING INFORMATION:

LOT A		
REQUIRED:	PROPOSED:	
LOT AREA:	20,000 S.F.	174,369 S.F.
LOT FRONTAGE:	120 FEET	416.48 FEET

ZONING INFORMATION:

ZONING DISTRICT: S-20
 MIN. LOT AREA : 20,000 S.F.
 MIN. LOT FRONTAGE : 120 FEET
 MIN. BUILDING SETBACKS:
 FRONT : 20 FEET
 SIDE : 15 FEET
 REAR : 20 FEET

REFERENCES:

- PLAN No. 218 of 1992
- PLAN No. 1087 of 1970
- PLAN No. 1359 of 1964
- LANDCOURT PLAN 16.32D
- PLAN END OF BOOK 10689
- PLAN END OF BOOK 9249
- PLAN No. 141 OF 2022

FOR REGISTRY OF DEEDS USE ONLY
 I DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.



PAUL FINOCCHIO, PLS

11-6-2025
DATE

READING COMMUNITY PLANNING & DEVELOPMENT COMMISSION

APPROVED _____, 20__

SMALL LANE EXTENSION
TO REMAIN A PRIVATE WAY

NOT FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK'D
2	11/6/25	NO CHANGE THIS SHEET	JDS	JDS
1	10/29/25	HAMMERHEAD TURNAROUND	JDS	JDS

SMALL LANE EXTENSION

PROOF PLAN
 LOCATED IN
 READING, MASSACHUSETTS
 (MIDDLESEX COUNTY)

PREPARED FOR
 JOSEPH MARINO
 SCALE: 1" = 40' DATE: SEPT. 21, 2025

PREPARED BY
SULLIVAN ENGINEERING GROUP, LLC
 P.O. BOX 2004
 WOBURN, MA 01888
 (781) 854-8644

SHEET No. 9 OF 9

