

PERMIT
SITE
PLAN

259 & 267 Main Street
Reading, Massachusetts 01867

ASSESSORS:

MAP 12 PARCEL 39 & 40

PREPARED FOR:

Stonegate
Construction
Corp.

33 Bedford Street
Reading, Massachusetts 02180

HANCOCK
ASSOCIATES

Civil Engineers

Land Surveyors

Wetland Scientists

185 CENTRE STREET, DANVERS, MA 01923
VOICE (978) 777-3050, FAX (978) 774-7816
WWW.HANCOCKASSOCIATES.COM



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5.	RLG	JP	2/26/20	REV. PER CPDC COMMENTS
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1.	RLG	JP	12/2/19	ISSUED FOR SITE PLAN REVIEW
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DATE:		10/8/19	DESIGN BY:	RLG
SCALE:			DRAWN BY:	RLG
APPRVD. BY:			CHECK BY:	JP

TITLE
SHEET

PLOT DATE: May 01, 2020 12:01 pm
PATH: F:\VISA\GIS\3D Projects\21839 Finnegon-Reading\DWG\

DWG: 21839SP6-04302020.dwg

LAYOUT: 75

SHEET: 1 OF 15

PROJECT NO.: 21839

C1

SITE PLAN

259 & 267 MAIN STREET

READING, MA 01867

FOR

STONEGATE CONSTRUCTION CORP.

GENERAL NOTES

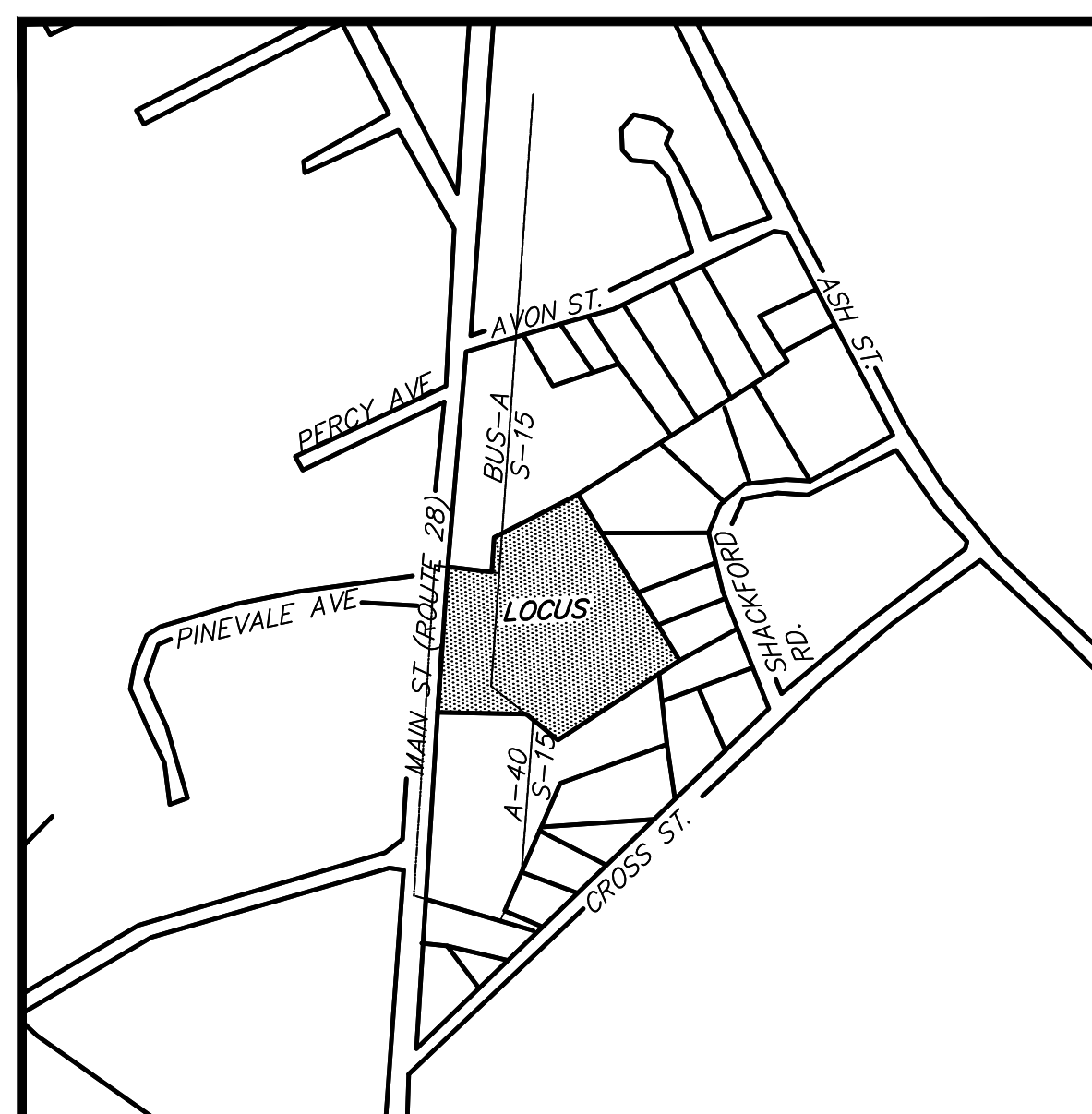
- LOCATIONS OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
- UNLESS OTHERWISE SHOWN, ALL NEW UTILITIES SHALL BE UNDERGROUND.
- CONTRACTOR SHALL FURNISH CONSTRUCTION LAYOUT OF BUILDING AND SITE IMPROVEMENTS. THIS WORK SHALL BE PERFORMED BY A PROFESSIONAL LAND SURVEYOR.
- SAFETY MEASURES, CONSTRUCTION METHODS AND CONTROL OF WORK SHALL BE RESPONSIBILITY OF CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION THAT ARE NOT DESIGNATED FOR DEMOLITION AND / OR REMOVAL HEREON. DAMAGED IMPROVEMENTS SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
- THIS PLAN IS NOT INTENDED TO SHOW AN ENGINEERED BUILDING FOUNDATION DESIGN, WHICH WOULD INCLUDE DETAILS AND FINAL ELEVATIONS OF FOOTINGS, WALLS AND SUBSURFACE DRAINAGE TO PREVENT INTERIOR FLOODING. SEE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS.
- ANY INTENDED REVISION OF THE HORIZONTAL AND/OR VERTICAL LOCATION OF IMPROVEMENTS TO BE CONSTRUCTED AS SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO IMPLEMENTATION.
- RIM ELEVATIONS SHOWN FOR NEW STRUCTURES ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR WITH MATERIAL TAKEOFFS. FINISH RIM ELEVATIONS SHOULD MATCH PAVEMENT, GRADING OR LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- WHERE EXISTING UTILITY LINES/STRUCTURES ARE TO BE CUT/BROKEN DOWN/ ABANDONED, LINES/STRUCTURES SHALL BE PLUGGED/CAPPED/FILLED IN ACCORDANCE WITH OWNER REQUIREMENTS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND RELATIVE ELEVATION OF BENCH MARKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
- PROPOSED BUILDING FOUNDATION CONFIGURATION AND LOCATION ON THE LOT AS SHOWN ARE CONCEPTUAL AND SHALL BE VERIFIED AS TO CONFORMANCE WITH FINAL ARCHITECTURAL PLANS AND ZONING ORDINANCES PRIOR TO CONSTRUCTION.

REGULATORY NOTES

- CONTRACTOR SHALL CONTACT DIG-SAFE FOR UNDERGROUND UTILITY MARKING AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.
- CONTRACTOR SHALL MAKE HIMSELF AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS, AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.
- ALL WORK OUTSIDE OF BUILDING THAT IS LESS THAN 10 FEET FROM THE INSIDE FACE OF BUILDING FOUNDATIONS SHALL CONFORM WITH THE UNIFORM STATE PLUMBING CODE OF MASSACHUSETTS, 248 CMR 2.00.
- IF DEWATERING IS REQUIRED THE CONTRACTOR SHALL PROVIDE A PLAN OF THE PROPOSED MEANS AND METHODS TO THE TOWN ENGINEER PRIOR TO THE START OF DEWATERING. ALL DEWATERING ACTIVITIES SHALL OCCUR ON THE UPGRADIENT SIDE OF THE EROSION CONTROL BARRIER.
- ALL STREET SIGNS AND MARKINGS TO BE PLACED WITHIN THE RIGHT OF WAY ARE REQUIRED TO MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES WITH THE APPROPRIATE MASSDOT AMENDMENTS.

LEGEND:

	EDGE OF PAVEMENT		DRILL HOLE
	CHAIN LINK FENCE WITH SIZE		DRILL HOLE IN STONE BOUND
	CURB WITH TOP AND BOTTOM ELEVATION AND TYPE		ESCUTCHEON PIN IN A LEAD PLUG
	RETAINING WALL WITH TYPE AND TOP AND BOTTOM ELEVATIONS		IRON ROD WITH CAP
	EDGE OF WOODED AREA		MAGNETIC NAIL
	RAILROAD TRACKS		MASS HIGHWAY BOUND
	SEWERLINE WITH PIPE SIZE, MATERIAL, FLOW DIRECTION AND CATCHBASIN.		FOUND
	LOW PRESSURE SEWER		CALCULATED
	WATER MANHOLE, WATER MAIN WITH SIZE, TEE, GATE VALVE & FIRE HYDRANT		RECORD
	GAS MAIN WITH SIZE & GATE VALVE		ABOVE GRADE
	EXISTING UTILITY POLE WITH DESIGNATION, OVERHEAD WIRES & GUY POLE		ACRES
	UNDERGROUND ELECTRIC LINES		FINISH FLOOR ELEVATION
	TELEPHONE MANHOLE & UNDERGROUND TELEPHONE/COMMUNICATIONS LINES		SQUARE FEET
	100-FOOT WETLAND BUFFER ZONE		SUBURBAN MIXED-USE DISTRICT
	25' RIVER FRONT BUFFER		AIR CONDITIONING
	ISOLATED VEGETATED WETLAND WITH FLAG NUMBER AND ELEVATION		ASBESTOS CLAY PIPE
	SURFACE CONTOUR		BITUMINOUS CONCRETE
	LIMIT OF ISOLATED LAND SUBJECT TO FLOODING (LSF)		CAST IRON PIPE
	AREA OF ACTIVITY AND USE LIMITATION (AUL)		CONCRETE
	ZONING DISTRICT LINE WITH DESIGNATION		CORRUGATED METAL PIPE
	PROMINENT DECIDUOUS TREE		FOUNDATION
	BUSH		INVERT ELEVATION
	WETLAND		LANDSCAPED AREA
	SPOT ELEVATION		REINFORCED CONCRETE PIPE
	BOLLARD		RETAINING
	MANHOLE (UNKNOWN UTILITY)		VERTICAL GRANITE CURB
	MONITORING WELL		VINYL SIDING
	SIGN		VITRIFIED CLAY
			TYPICAL
			PROPOSED
			CAPE COD BERM
			INTEGRATED CONCRETE CURB
			SOLID WHITE LINE PAINT MARK



LOCUS MAP

SCALE 1" = 400'

ASSESSORS:

MAP 12, LOTS 39 & 40

APPLICANT/OWNER

259-267 MAIN STREET LLC

REFERENCES:

DEED BOOK 47926, PAGE 241
PLAN BOOK 193, PLAN 21

CIVIL ENGINEER

HANCOCK ASSOCIATES
315 ELM STREET
MARLBOROUGH, MA 01752

RECORD OWNER:

259-267 MAIN STREET LLC

ZONING:

SINGLE FAMILY 15 (S-15)
APARTMENT 40 (A-40)

SHEET INDEX

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SHEET 3	LAYOUT PLAN
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SHEET 14	PHOTOMETRIC PLAN
SHEET 15	LIGHTING DETAILS

ZONING TABLE

ZONES	APARTMENT 40 DISTRICT (RESIDENCE)	SINGLE FAMILY 15 DISTRICT (RESIDENCE)*
USE	MULTIFAMILY DWELLING (APARTMENT BUILDING)	
REQUIREMENT	REQUIRED	PROPOSED
LOT AREA	40,000 SQ.FT.	189,526 SQ.FT.±
FRONTAGE	80'	329'
FRONT YARD	30'	32±
SIDE YARD	30'	65± AT N YARD 37± AT S YARD
REAR YARD	30'	289±
MAX. HEIGHT	40 FEET	40'***
MAX STORIES	4	4**
MAX LOT COVERAGE	25%	7.7%

PARKING REQUIRED:
1.5 SPACES x 24 UNITS** = 36 PARKING SPACES

PROVIDED:
SURFACE = 22 PARKING SPACES (1 VAN ACCESSIBLE)
GARAGE = 26 PARKING SPACES (1 ACCESSIBLE)
TOTAL = 48 PARKING SPACES (2 ACCESSIBLE TOTAL)

REQUIRED AISLE WIDTH = 26 FEET
PROVIDED AISLE WIDTH = 26 FEET
REQUIRED SURFACE PARKING SPACE SIZE = 9'X18'
PROVIDED SURFACE PARKING SPACE SIZE = 9'X18'
REQUIRED GARAGE PARKING SPACE SIZE = 8.5'X17'
PROVIDED GARAGE PARKING SPACE SIZE = 8.5'X17'

LOADING REQUIRED:
2 LOADING SPACES REQUIRED

PROVIDED:
SURFACE = 1 LOADING SPACE PROVIDED**

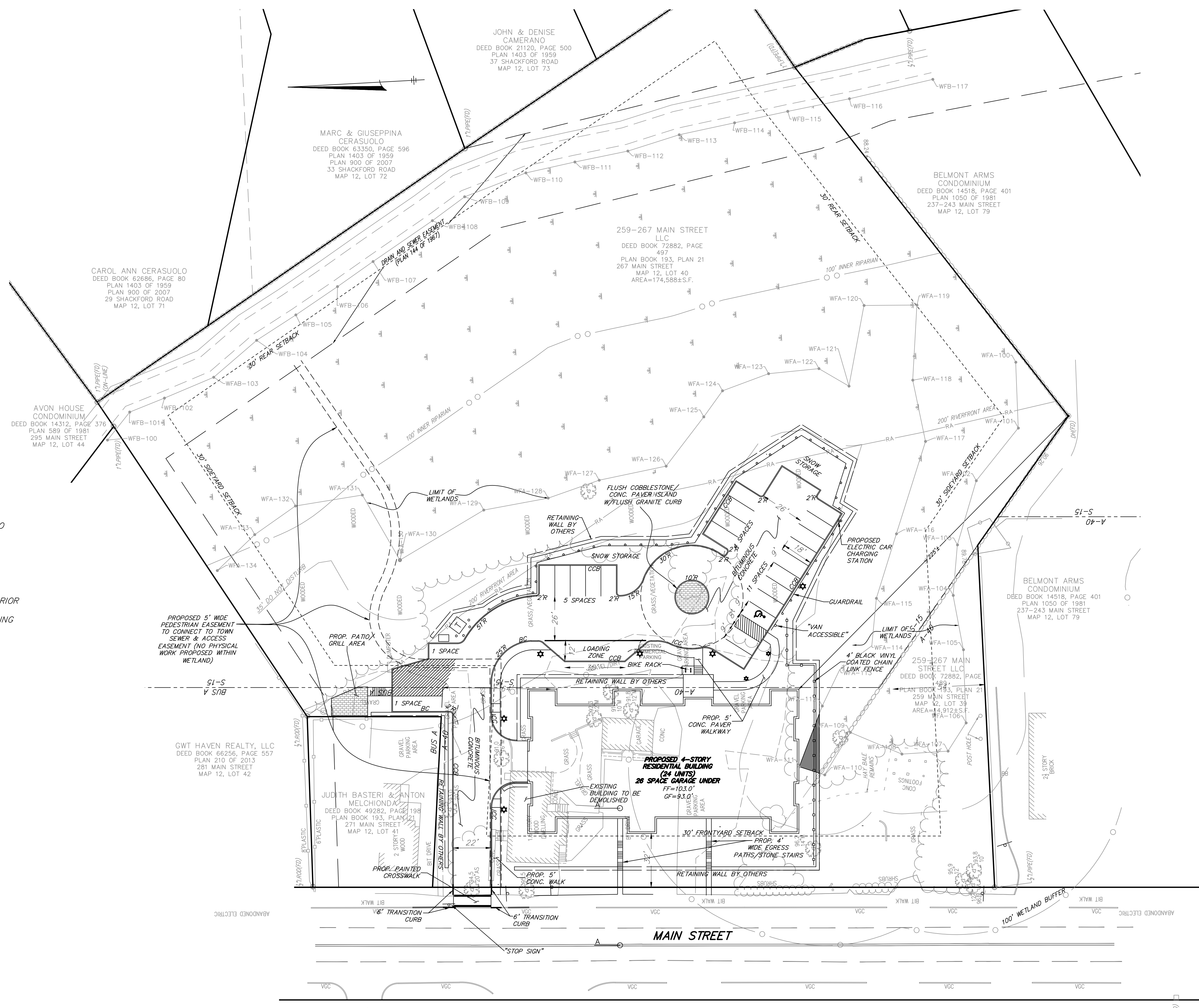
REQUIRED SURFACE LOADING SPACE SIZE = 12'X35'
PROVIDED SURFACE LOADING SPACE SIZE = 12'X35'

DRIVEWAY REQUIRED:
24' WIDE DRIVEWAY REQUIRED TO SERVE PARKING

PROVIDED:
22' WIDE PROVIDED***

- * ZONING RELIEF REQUIRED BY READING ZONING BOARD OF APPEALS TO ALLOW 21 SPACES WITHIN THE S-15 ZONE
- ** VARIANCE REQUIRED BY COMMUNITY PLANNING & DEVELOPMENT COMMISSION
- *** VARIANCE REQUIRED BY COMMUNITY PLANNING & DEVELOPMENT COMMISSION

- NOTES:**
- THE TWO LOTS WILL BE COMBINED VIA A LOT CONSOLIDATION PLAN PRIOR TO APPLICATION FOR A BUILDING PERMIT
 - BUILDING HEIGHT CALCULATED USING AVERAGE GRADE AROUND BUILDING (100.8±) TO BUILDING HEIGHT (139.25).



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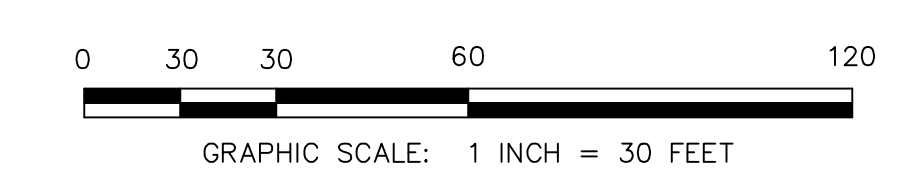
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DATE: 10/8/19 DESIGN BY: RLG
SCALE: DRAWN BY: RLG
APPRVD. BY: CHECK BY: JP

LAYOUT AND MATERIALS PLAN

PLOT DATE: May 06, 2020 9:57 am
PATH: F:\MSA\GIS\3D Projects\21839-Reading\DWG\

DWG: 21839SP6-04302020.dwg
LAYOUT: LM
SHEET: 3 OF 15
PROJECT NO.: 21839



C3

PERMIT SITE PLAN

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SCALE:		DRAWN BY:	JP
APPRVD. BY:		CHECK BY:	RLG

GRADING DRAINAGE AND UTILITIES PLAN

PLOT DATE: May 05, 2020 10:24 am
PATH: F:\VISA\GIS\3D Projects\21839\Finnegon-Reading\DWG\

DWG: 21839SP6-04302020.dwg

LAYOUT: GDU

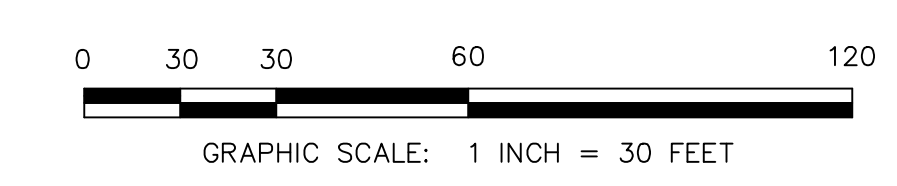
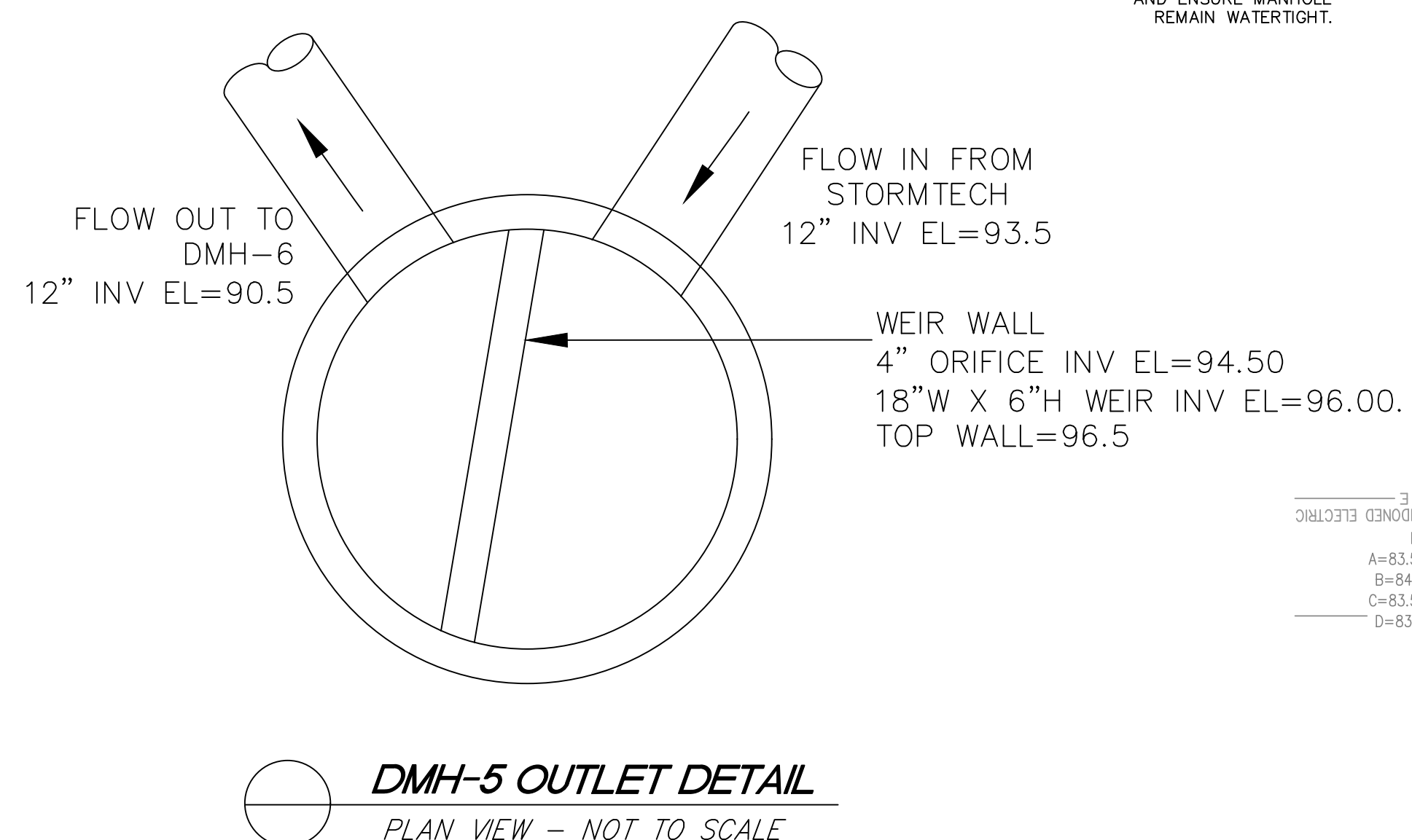
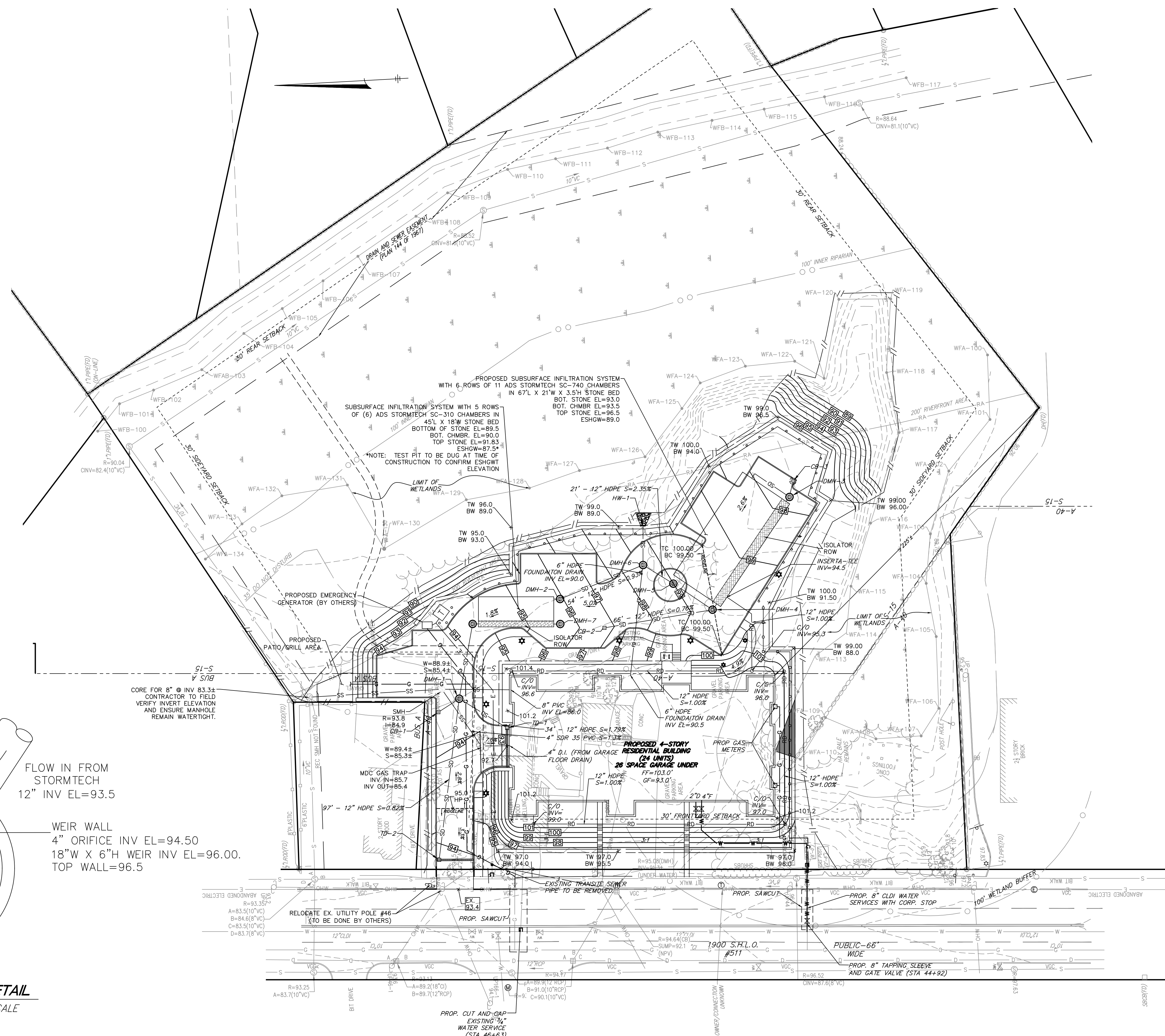
SHEET: 4 OF 15

PROJECT NO.: 21839

C4

STRUCTURE NAME:	DETAILS:
DMH-4	RIM = 99.10 INV IN = 94.00 CB-2 INV OUT = 93.90 ISO ROW INV OUT = 95.00 MANIFOLD-1
DMH-5	RIM = 99.00 INV IN = 93.50 INFIL INV OUT = 90.50 DMH-6 INV OUT = 96.00 WEIR
DMH-3	RIM = 98.50 INV IN = 94.80 CB-3 INV OUT = 94.70 ISO ROW INV OUT = 95.00 MANIFOLD-2
CB-3	RIM = 97.70 INV OUT = 95.00 DMH-3
CB-2	RIM = 97.20 INV OUT = 94.50 DMH-4
DMH-7	RIM = 95.75 INV IN = 89.55 ISO-ROW
DMH-2	RIM = 94.00 INV IN = 89.90 INV OUT = 90.50 DMH-6 INV OUT = 91.25 WEIR
TD-2	RIM = 93.90 INV OUT = 90.90 DMH-1
DMH-1	RIM = 93.79 INV IN = 90.10 TD-2 INV IN = 90.10 TD-1 INV IN = 90.00 CB-1 INV OUT = 89.90 DMH-1A
DMH-1A	RIM = 93.55 INV IN = 89.55 DMH-1 INV OUT = 89.55
DMH-6	RIM = 93.50 INV IN = 90.00 DMH-2 INV IN = 90.00 DMH-5 INV OUT = 89.80 HW-1
CB-1	RIM = 93.40 INV OUT = 90.20 DMH-1
TD-1	RIM = 92.70 INV OUT = 90.70 DMH-1
HW-1	INV IN = 89.70 DMH-6

**DMH-7 INTENDED TO PROVIDE ACCESS, MAINTENANCE, INSPECTION AND CLEANING POINT FOR ISOLATOR ROW



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APPRVD. BY: CHECK BY: JP

WETLAND RESTORATION AND REPLICATION PLAN

PLOT DATE: May 05, 2020 10:24 am
PATH: F:\MSA\GIS\3D Projects\21839 Reading-Reading\DWG\

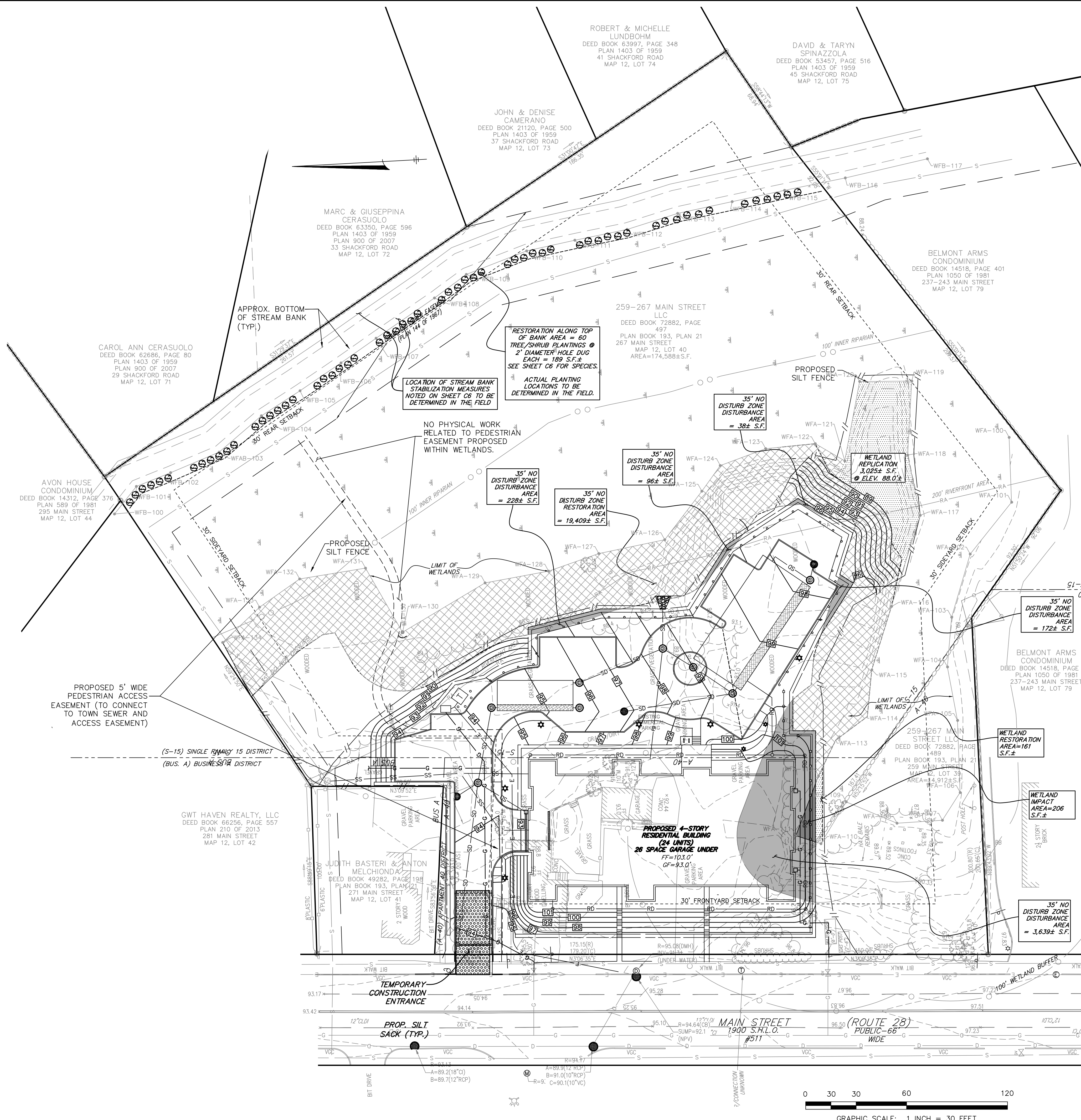
DWG: 21839SP6-04302020.dwg

LAYOUT: WZ

SHEET: 5 OF 15

PROJECT NO.: 21839

C5



259 and 267 Main Street, Reading Wetland Replication/Restoration Plan Construction Notes

General Notes

1. The Reading Conservation Commission shall be notified no less than one (1) week in advance of the initiation of any work within wetlands.
2. Prior to any work within wetlands a qualified wetland scientist will reflag the existing jurisdictional wetland boundary.
3. Prior to the initiation of any work within wetlands, survey shall locate and demarcate the limit of work for proposed alteration and the limit of the wetland replication area.
4. A qualified restoration ecologist or wetland scientist shall oversee all work performed by contractors in wetlands.
5. In the event that specified plantings are unavailable, suitable substitute species may be considered, however plant selection shall be limited to native species suitable to the growing conditions of the site. Any proposed deviation from this plan must be submitted to the Conservation Commission for review and approval prior to execution.
6. Due to the extent of invasive species onsite, no displaced soils generated onsite may be repurposed for placement within any wetland replication or restoration area. All topsoil or loam used in restoration must be clean organic rich material from offsite.

Wetland Replication Area (approximately 3,025 square feet)

7. Prior to any vegetation clearing or earth disturbance, sediment controls shall be installed along the limit of work line in accordance with all specifications. The Conservation Commission shall be notified upon completion of installation and afforded the opportunity to inspect all installed sediment controls prior to initiation of any work.
8. Following installation of sediment controls, contractors shall remove all vegetation within the proposed replication area.
9. Following vegetation clearing, the contractor shall reduce grades within the wetland replication area as detailed on this plan. To ensure that the replication area will maintain hydrologic connectivity to the existing wetland, grading must be monitoring by a qualified wetland scientist with authorization to make minor field changes to the depth of grades based on field observed soils and depth to water table.
10. Following grading, contractors shall apply a uniform layer of no greater than 6-inches of clean organic rich topsoil, screened loam, or compost to provide suitable growing substrate for native plantings and seed mixes.
11. Following application of organic topsoil, the contractor shall replant and seed the area in accordance with the following planting schedule:

Trees and Shrubs

 - a. Twenty (20) common winterberry (*Ilex verticillata* , FACW)
 - b. Twenty (20) gray dogwood (*Swida racemosa* , FAC)
 - c. Twenty (20) highbush blueberry (*Vaccinium corymbosum* , FACW)
 - d. Twenty (20) sweet pepperbush (*Clethra alnifolia* , FAC)
 - e. Five (5) American witch-hazel (*Hamamelis virginiana* , FACU)
 - f. Five (5) box elder (*Acer negundo* , FAC)

Herbaceous Plants

 - g. Fifty (50) sensitive fern (*Onoclea sensibilis* , FACW)
 - h. Fifty (50) cinnamon fern (*Osmundastrum cinnamomeum* , FACW)
 - i. Fifty (50) white meadowsweet (*Spiraea alba* , FACW)
 - j. Fifty (50) wrinkle-leaved goldenrod (*Solidago rugosa* , FAC)

Notes: All shrubs shall be no less than 2-3" at planting. All shrubs shall be planted at an off centering distance no less than 6" from other planted shrubs. Herbaceous plants shall be used to fill gaps between planted shrubs throughout restoration area.
12. Following installation of wetland plants, apply New England Wetland Seed Mix available from New England Wetland Plants, Inc. at a rate no less than 1 pound per 1250sf to all areas of disturbed soils around wetland plantings to fill gaps in vegetation and provide soil stability.
13. Following application of seed mix, apply a thin uniform layer of straw mulch to all seeded areas.

Wetland Restoration Area (approximately 161 square feet)

14. Upon completion of wetland fill and construction of the retaining wall, contractor shall restore all peripheral temporary impacts within the adjoining wetland.
15. Contractor shall remove any remaining invasive species within the wetland restoration area.
16. Contractor shall apply a uniform layer of no greater than 6-inches of clean organic rich topsoil, screened loam, or compost to provide suitable growing substrate for native plantings and seed mixes.
17. Following application of organic topsoil, the contractor shall replant and seed the area in accordance with the following planting schedule:

Shrubs

 - u. Three (3) highbush blueberry (*Vaccinium corymbosum* , FACW)
 - v. Three (3) sweet pepperbush (*Clethra alnifolia* , FAC)
 - w. Three (3) northern spicebush (*Lindera benzoin* , FACW)

Herbaceous Plants

 - x. Ten (10) sensitive fern (*Onoclea sensibilis* , FACW)
 - y. Ten (10) white meadowsweet (*Spiraea alba* , FACW)
 - z. Ten (10) wrinkle-leaved goldenrod (*Solidago rugosa* , FAC)
 - aa. Ten (10) jewelweed (*Impatiens capensis* , FACW)

Notes: All shrubs shall be no less than 2-3" (CAN WE REDUCE TO 1-3") at planting. All shrubs shall be planted at an off centering distance no less than 6" from other planted shrubs. Herbaceous plants shall be used to fill gaps between planted shrubs throughout restoration area.
18. Following installation of wetland plants, apply New England Wetland Seed Mix available from New England Wetland Plants, Inc. at a rate no less than 1 pound per 1250sf to all areas of disturbed soils around wetland plantings to fill gaps in vegetation and provide soil stability.
19. Following application of seed mix, apply a thin uniform layer of straw mulch to all seeded areas.

Inland Bank Restoration Area (80 trees in cluster of 4-6)

- Note: All passive stream bank restoration shall be performed during a low hydrologic period, such as late summer or early fall.*
20. The contractor shall remove all invasive species within a distance of 10-feet from the top of bank along the stream channel.
 21. The contractor shall install staked Premium Coir Logs (Sediment Retention Fiber Rolls) available from New England Wetland Plants, Inc. or approved equivalent beneath undercut stream banks. Approximately four areas, each 20-30 feet long.
 22. Following installation of Premium Coir Logs, the contractor shall install 2-inch herbaceous plugs within the coir logs at no less than 1-foot off centers. Suitable species for plugs include:
 - Swamp milkweed (*Asclepias incarnata* , OBL)
 - Woolgrass (*Scirpus cyperinus* , OBL)
 - Cardinal-flower (*Labelia cardinalis* , FACW)
 - Spotted joe-pye weed (*Eutrochium maculatum* , OBL)
 23. Following installation of coir logs and plugs, broadcast seed all exposed banks with New England Erosion Control/Restoration Mix for Moist Sites available from New England Wetland Plants, Inc. at a rate no less than 1 pound per 1,250sf.
 24. Following removal of invasive species, the contractor shall install native trees and shrubs in accordance with the following planting

schedule:

Trees and Shrubs

- bb. Fifteen (15) box elder (*Acer negundo* , FAC)
- cc. Fifteen (15) speckled alder (*Alnus incana* , FACW)
- dd. Fifteen (15) sweet pepperbush (*Clethra alnifolia* , FAC)
- ee. Fifteen (15) red maple (*Acer rubrum* , FAC)

Notes: All shrubs shall be no less than 2-3" at planting. All shrubs shall be planted in clusters of 4-6 in open areas along the top of bank taking care to not disturb existing trees and shrub vegetation.

25. Following installation of native plants, apply New England Conservation Wildlife Seed Mix available from New England Wetland Plants, Inc. at a rate no less than 1 pound per 875sf to all areas of disturbed soils around wetland plantings.
26. Following application of seed mix, apply a thin uniform layer of straw mulch to all seeded areas.

35-foot No Disturb Zone Restoration Area (approximately 19,169 square feet)

27. The contractor shall remove invasive species throughout the restoration area, to the maximum extent practicable, prior to soil amendments, live plantings, or native seed application. At the direction of the Reading Conservation Agent some mature Norway Maple trees may be retained. For each mature tree selected for retention two trees from the lower list may be eliminated.
28. Following removal of invasive species, the contractor shall apply no less than 6-inches of clean organic rich topsoil, screened loam, or compost to top dress any areas with less than 10-inches of native topsoil.
29. Following application of organic topsoil, the contractor shall replant and seed the area in accordance with the following planting schedule:

Trees and Shrubs

 - ff. Forty (40) red maple (*Acer rubrum* , FAC)
 - gg. Forty (40) box elder (*Acer negundo* , FAC)
 - hh. Forty (40) eastern shadbush (*Amelanchier canadensis* , FAC)
 - ii. Forty (40) American witch hazel (*Hamamelis virginiana* , FACU)
 - jj. Forty (40) mountain laurel (*Kalmia latifolia* , FACU)
 - kk. Forty (40) sweet pepperbush (*Clethra alnifolia* , FAC)

Notes: All shrubs shall be no less than 2-3" at planting. Shrubs and trees shall be used to fill vacancies left by removed invasive species. Herbaceous plants shall be used to fill gaps between planted trees and shrubs throughout restoration area.
30. Following installation of native plants, apply New England Erosion Control/Restoration Seed Mix for Dry Sites available from New England Wetland Plants, Inc. at a rate no less than 1 pound per 1,250sf to all areas of exposed soils around native plantings.
31. Supplement New England Control/Restoration Seed Mix for Dry Sites through applying no less than 1 pound per 1,900sf of New England Wildflower Seed Mix available from New England Wetland Plants throughout the restoration area.

Note: Erosion Control/Restoration Seed Mix and New England Wildflower Seed Mix may be blended at a 1:1 ratio and applied via hydroseed.
32. Following application of seed mix, apply a thin uniform layer of straw mulch to all seeded areas.

**PERMIT
SITE
PLAN**

259 & 267 Main Street
Reading, Massachusetts 01867

ASSESSORS:

MAP **PARCEL**
12 39 & 40

PREPARED FOR:

**Stonegate
Construction
Corp.**

33 Bedford Street
Reading, Massachusetts 02180

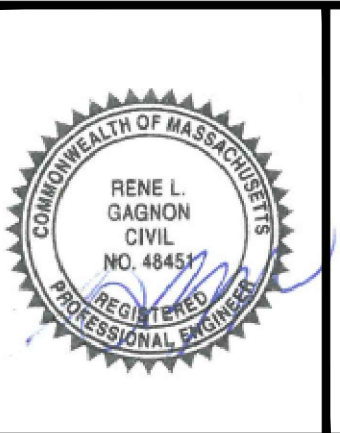
**HANCOCK
ASSOCIATES**

Civil Engineers

Land Surveyors

Wetland Scientists

185 CENTRE STREET, DANVERS, MA 01923
VOICE (978) 777-3050, FAX (978) 774-7816
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NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION
6.	RLG	JP	5/1/20	REV. PER CON COMM COMMENTS
5.	RLG	JP	2/26/20	REV. PER CPDC COMMENTS
4.	RLG	JP	2/10/20	REV. PER CPDC/ENG COMMENTS
3.	RLG	JP	1/29/20	REV. PER CPDC/ENG COMMENTS
2.	RLG	JP	12/30/19	REVISED PER RCC COMMENTS
1.	RLG	JP	12/2/19	ISSUED FOR SITE PLAN REVIEW

DATE:	10/8/19	DESIGN BY:	RLG
SCALE:		DRAWN BY:	RLG
APPRVD. BY:		CHECK BY:	JP

**WETLAND
REPLICATION AND
RESTORATION
NOTES**

PLOT DATE: May 01, 2020 4:02 pm
PATH: F:\HSA\GIS 3D Projects\21839-Finnegan-Reading\DWG\

DWG: 21839SP6-04302020.dwg
LAYOUT: ML-2
SHEET: 6 OF 15
PROJECT NO.: 21839

C6

PROJECT INFORMATION	
ENGINEER	EMA NUMBER
PRODUCT MANAGER	EPN NUMBER
SALES NAME	SALES NUMBER
SALES EMAIL	SALES EMAIL
PROJECT NO.	



259 MAIN STREET
READING, MA



SC-740 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a (POLYPROPYLENE) "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROVERS SHALL PROVIDE CONTINUOUS UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPED FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED BY THE AASHTO LIVE LOAD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.2.2 ARE MET FOR 1) LONG-DURATION LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND WIND LOADS, AS APPLICABLE.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2921, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (1 MIN) AASHTO DESIGN TRUCK (K) LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (24 HOURS) COVER LOAD 3) ALLOWABLE COVER WEIGHT WITH PARKED AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STANCHION LEGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 1/2" (12.7 mm).
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 12.2.2 OF ASTM F2921 SHALL BE GREATER THAN OR EQUAL TO 300 LB-IN. AND TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 22° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.60 FOR EACH LOAD CASE 1) 73° F (22° C) LOAD, THE MINIMUM REQUIRED IS 2.01 FOR EACH SECTION 12.2.2 OF THE AASHTO LIVE LOAD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DEVICE USED SHALL BE SPECIFIED IN ASTM F2921 AND SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-TON ROLLER USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

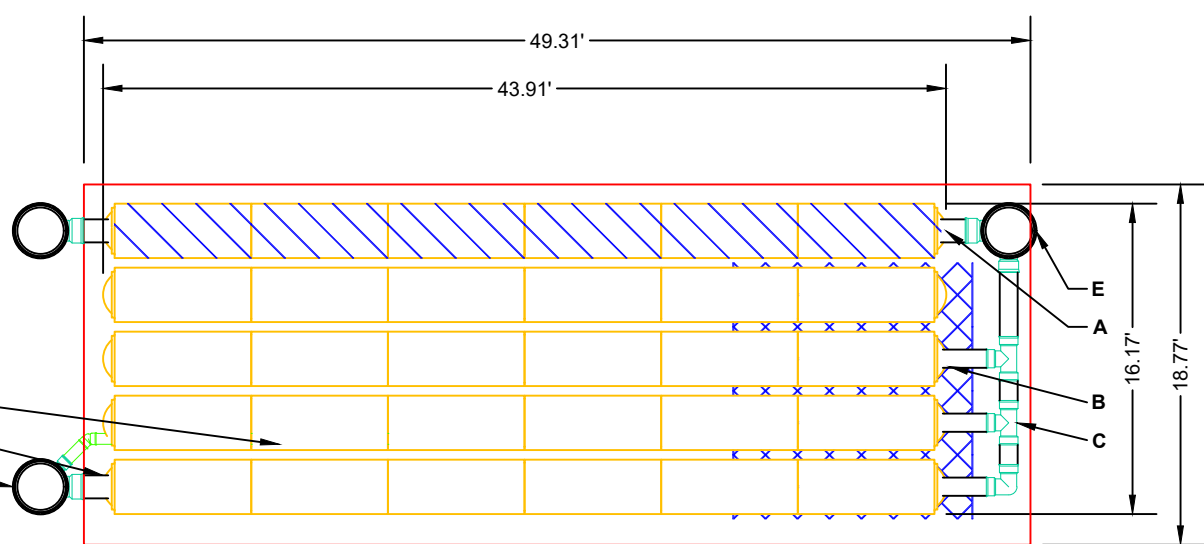
IMPORTANT NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

- STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLER.
- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.
 - STORMTECH RECOMMENDS BACKFILL METHODS:
 - STONEPOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT UP AND EXCAVATION ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LOW-BOTTOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELLED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEALED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM 4" (100 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE CLEAN, CRUSHED, ANGULAR STONE 3/4" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "SLUMP CATCH" IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

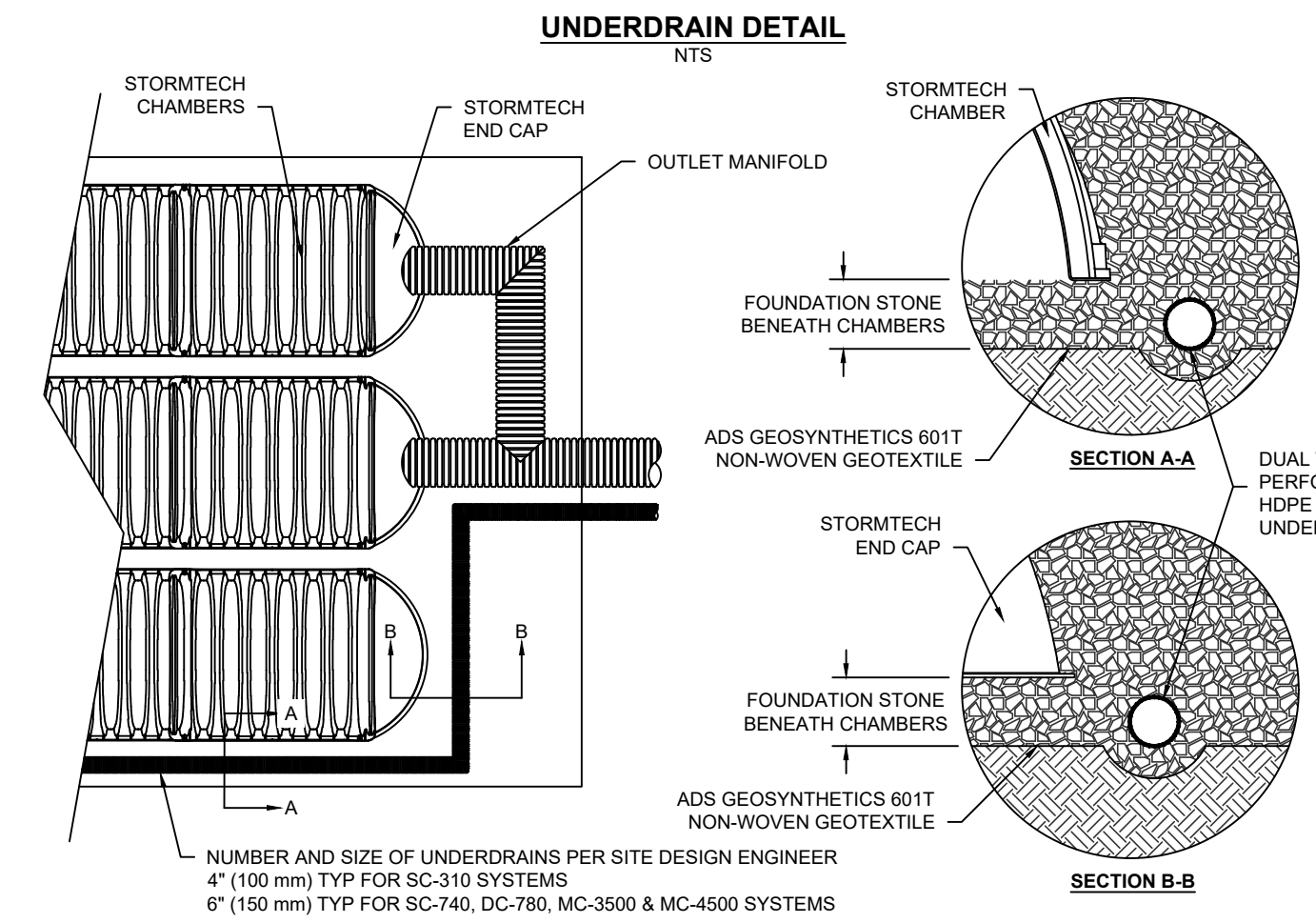
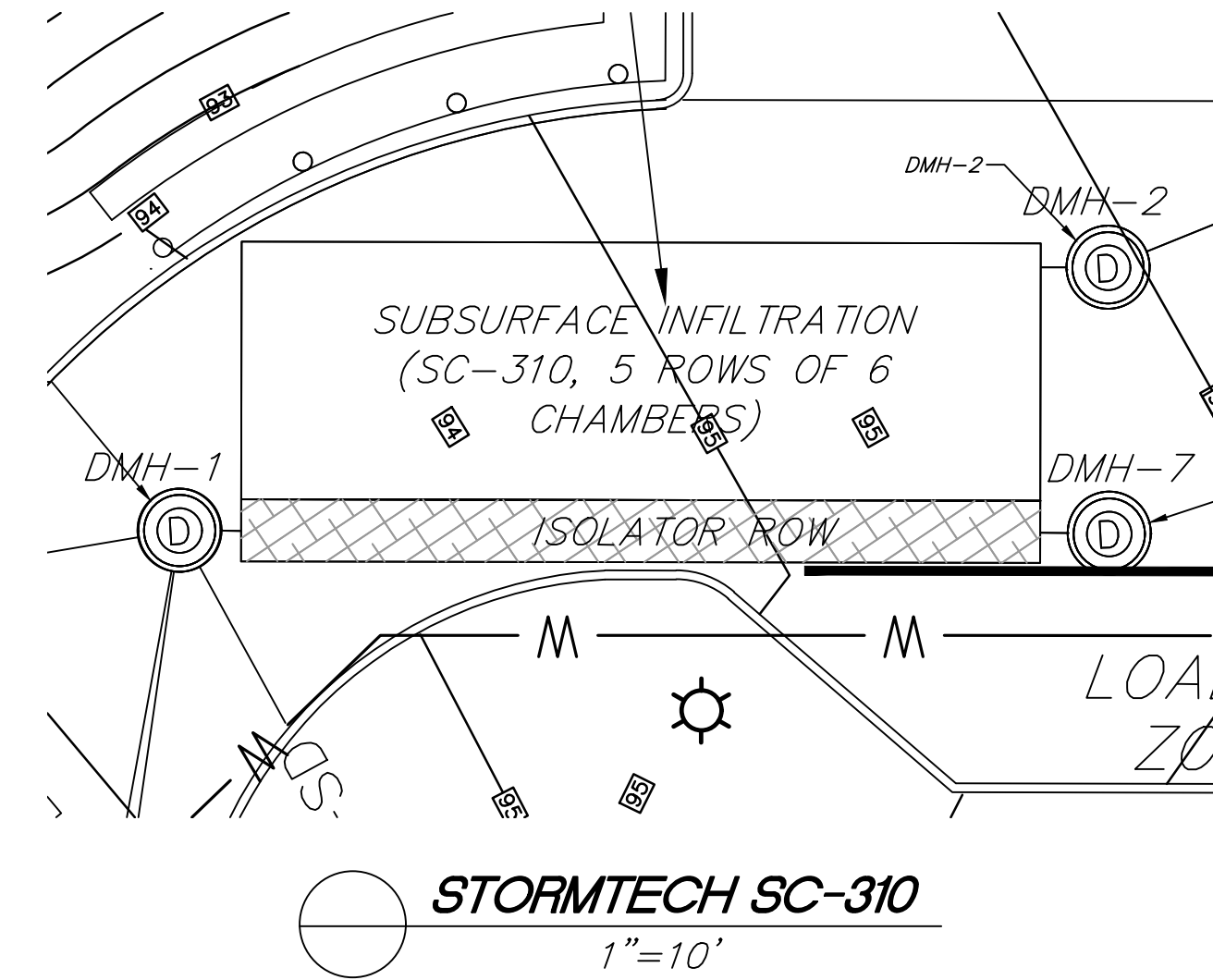
NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - NO CONSTRUCTION EQUIPMENT OVER 30" (760 mm) CHAMBERS IS LIMITED.
 - NO EQUIPMENT IS ALLOWED ON BASE CHAMBERS.
 - NO RUBBER TREAD LOADERS, DOZE TRUCKS, OR EXCAVATORS ARE ALLOWED UNLESS PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE.
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE.
- FULL 3P (300 mm) OF STABILIZED COVER MATERIAL OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING. USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DOZE AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
- CONTACT STORMTECH AT 1-888-892-2958 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

STORMTECH SC-310 SPECIFICATIONS
NTS



STORMTECH SC-740
NTS

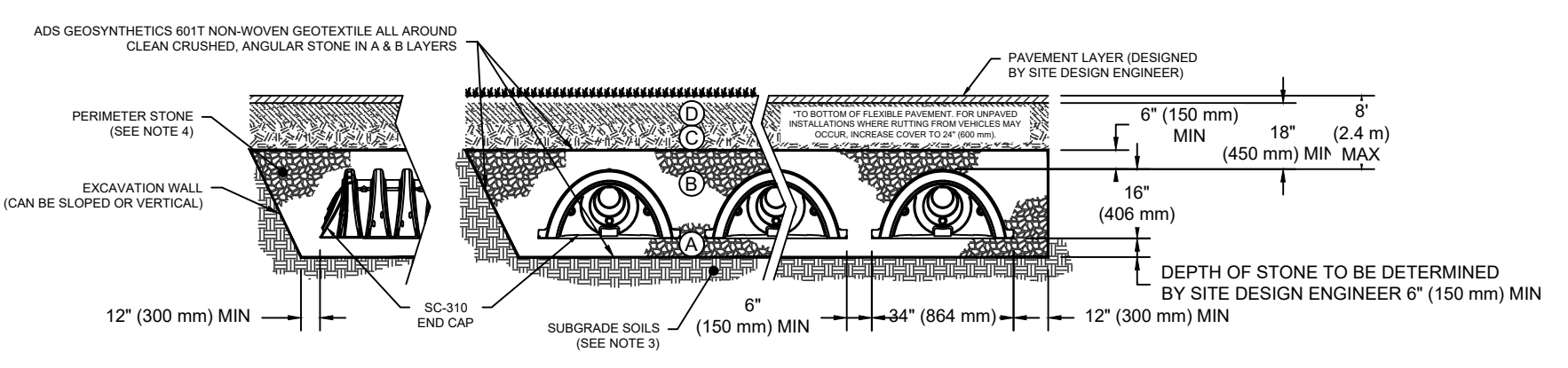


STORMTECH UNDERDRAIN
NTS

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL MATERIAL FOR LAYER D STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR IMPAVED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL FILL MATERIAL FOR LAYER C STARTS FROM THE TOP OF THE EMBEDMENT STONE BY LAYERS TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M149 A-1, A-2, A-3 OR AASHTO M47 3, 3S7, 4, 4S7, 5, 5E, 5F, 6, 6E, 6F, 6G, 7, 7R, 8, 8E, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. CONTACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 90% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 (53 kN), DYNAMIC FORCE NOT TO EXCEED 20,000 (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M47 3, 3S7, 4, 4S7, 5, 5E, 5F	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M47 3, 3S7, 4, 4S7, 5, 5E, 5F	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ¹⁾

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "20-40, CRUSHED, ANGULAR NO. 4 (AASHTO M47) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR A LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTION. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
3. WHERE THE INSTALLATION SURFACES MAY BE COMPROMISED BY CORROSION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTOR REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLYETHYLENE) OR ASTM F2418-16a (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2921 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STANCHION LEGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 1/2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 12.2.2 OF ASTM F2921 SHALL BE GREATER THAN OR EQUAL TO 400 LB-IN. AND TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 22° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

STORMTECH SC-310 FILL MATERIALS
NTS

INSPECTION & MAINTENANCE

- INSPECT ISOLATOR ROW FOR SEDIMENT:
 - INSPECTION PORTS (IF PRESENT).
 - REMOVE AND CLEAN FLEXFORM FILTER IF INSTALLED.
 - USING A LASER LIGHT AND STADIUM, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG.
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL).
- ALL ISOLATOR ROWS:
 - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW.
 - USING A LASER LIGHT, INSPECT FROM THE ISOLATOR ROW THROUGH OUTLET PIPE.
 - IMPROBES ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY.
 - FOLLOW OWN REGULATIONS FOR CONFINED SPACE ENTRY.
 - IF SEDIMENT IS AT OR ABOVE 7" (180 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- CLEAN OUT ISOLATOR ROW USING THE ATTAC PROCESS:
 - A FINE CLEANING NOZZLE WITH REAR FACING SPRAY OF 45° (1.1 m) OR MORE IS PREFERRED.
 - APPLY MULTIPLE PHASES OF 30-45 UNITS BACKFLOW WATER IS CLEAN.
 - VACUUM STRUCTURE SLUMP AS REQUIRED.
- REPLACE ALL COVERS, GRATES, FILTERS, AND LOGS. RECORD OBSERVATIONS AND ACTIONS.
- INSPECT AND CLEAN BARRIS AND MANHOLE UPSTREAM OF THE STORMTECH SYSTEM.

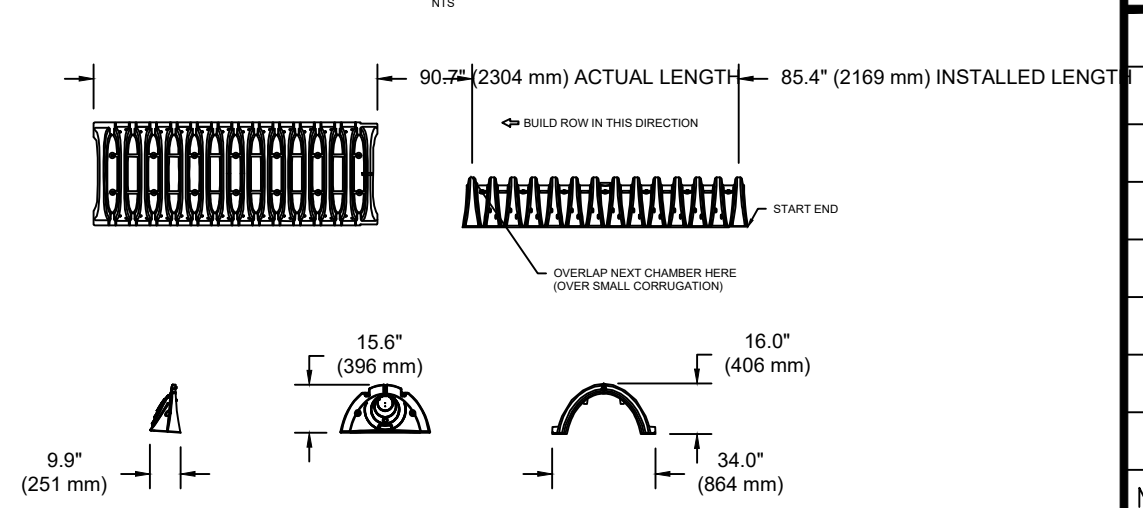
NOTES:

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



STORMTECH SC-310 ISOLATOR ROW
NTS

SC-310 TECHNICAL SPECIFICATION



NORMAL CHAMBER SPECIFICATIONS	9.9\"/>
CHAMBER STORAGE	34\"/>
MINIMUM INSTALLATION DEPTH	32\"/>
WEIGHT	35 lbs.

¹⁾ ALL DIMENSIONS ARE NOMINAL.
²⁾ FOR THE SC-310/740 THE 12\"/>

PART #	STUB	A	B	C
SC-310/740/DC-780/DC-780	12\"/>			
SC-310/740/DC-780/DC-780	12\"/>			
SC-310/740/DC-780/DC-780	12\"/>			
SC-310/740/DC-780/DC-780	12\"/>			
SC-310/740/DC-780/DC-780	12\"/>			
SC-310/740/DC-780/DC-780	12\"/>			
SC-310/740/DC-780/DC-780	12\"/>			

¹⁾ FOR THE SC-310/740 THE 12\"/>

SC-310 TECHNICAL SPECIFICATIONS
NTS

**PERMIT
SITE
PLAN**

259 & 267 Main Street
Reading, Massachusetts 01867

ASSESSORS:

MAP 12 PARCEL 39 & 40

PREPARED FOR:

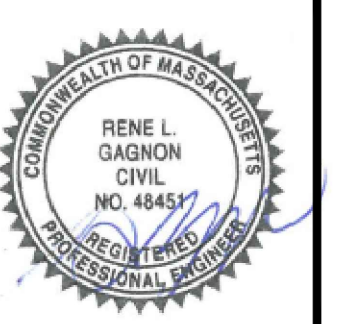
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DATE: 10/8/19 DESIGN BY: RLG
SCALE: DRAWN BY: RLG
APPROV. BY: CHECK BY: JP

DETAILS

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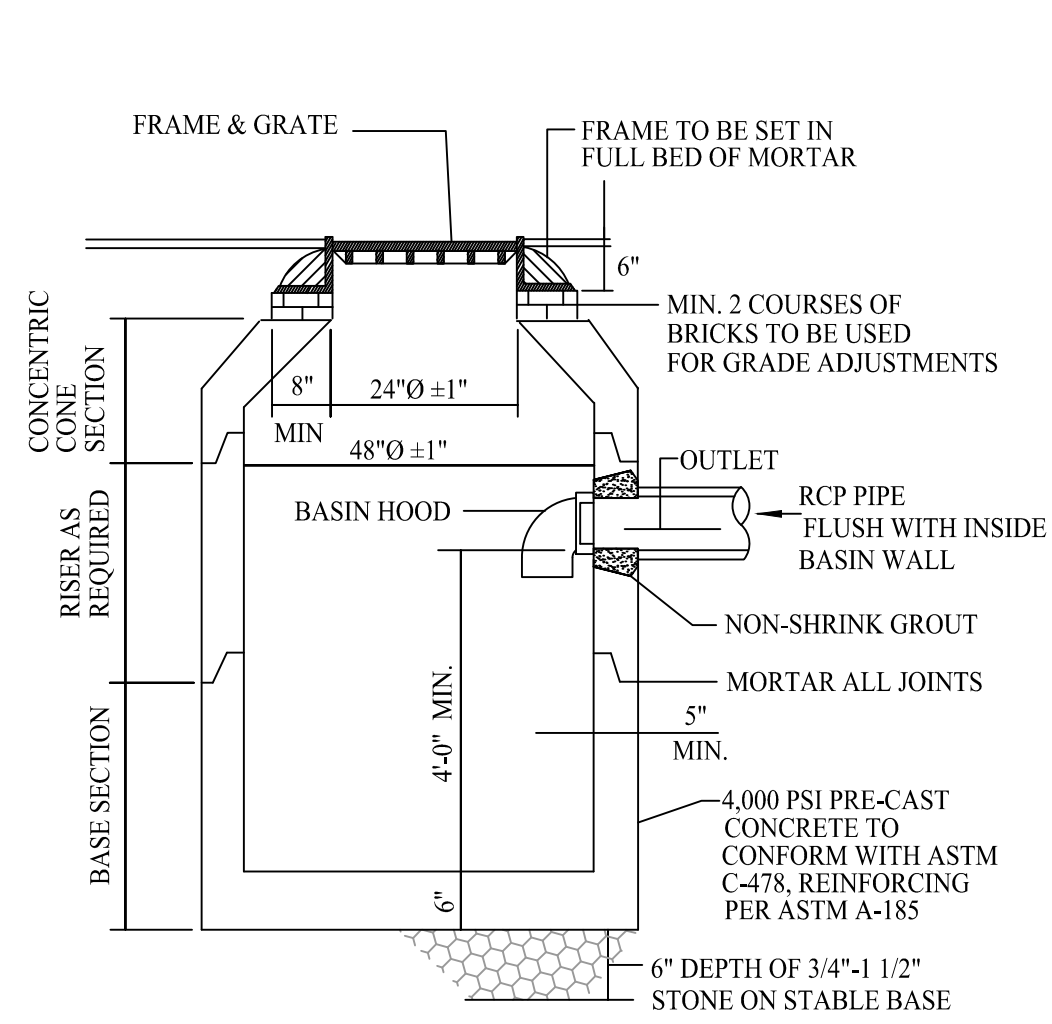
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LAYOUT: DETAILS 2

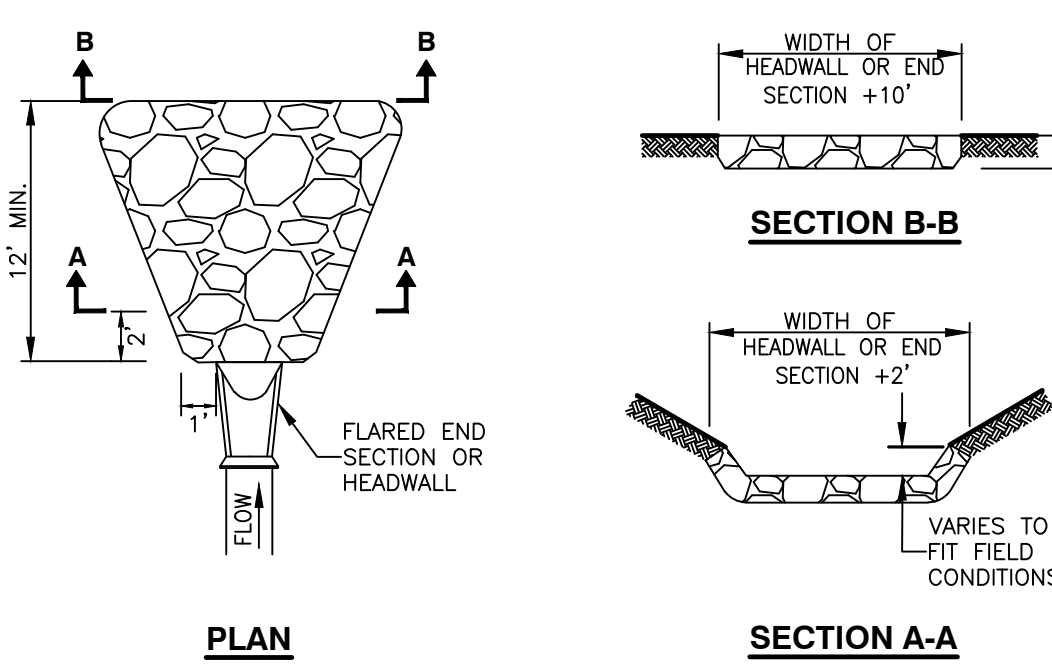
SHEET: 9 OF 15

PROJECT NO.: 21839





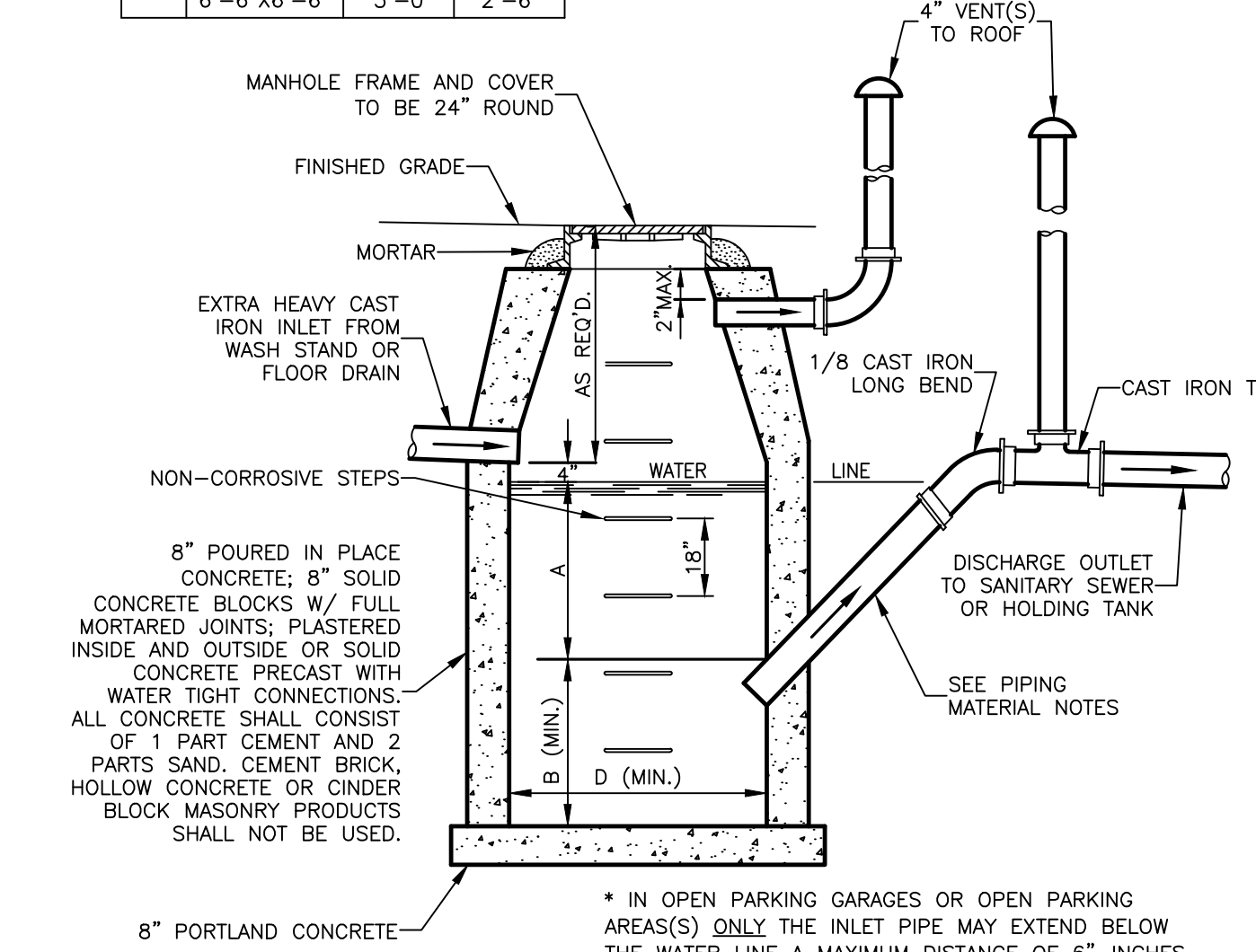
CATCH BASIN WITH HOOD
TYPICAL CROSS SECTION - NOT TO SCALE



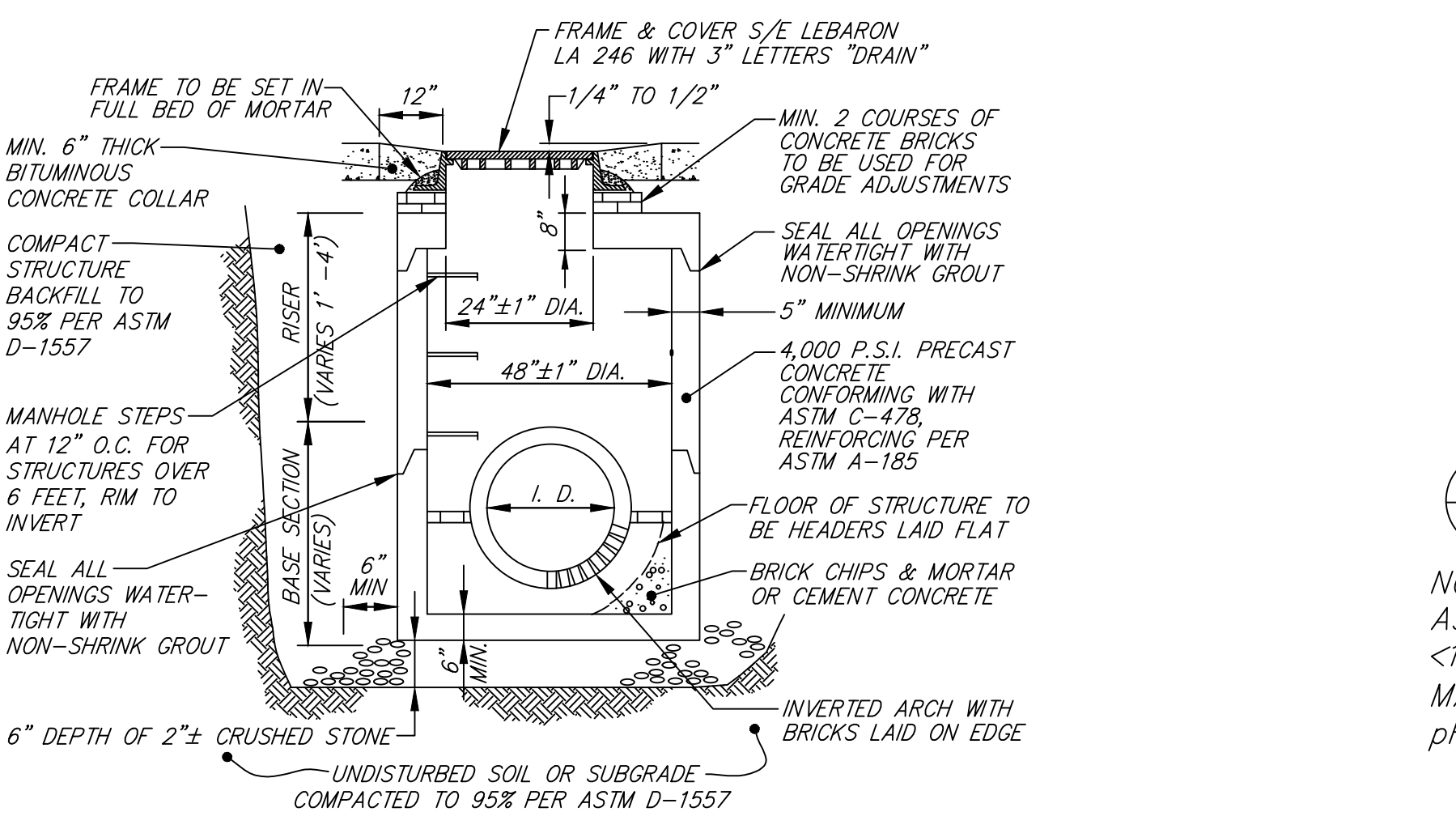
FLARED END SECTION AND RIP-RAP
(NOT TO SCALE)

INLET	D	A	B
4"	3'-6"	3'-0"	2'-6"
5"	3'-6"	4'-0"	4'-0"
5"	3'-6"x3'-6"	4'-0"	3'-0"
5"	4'-0"x4'-0"	3'-0"	2'-6"
5"	4'-0"x4'-0"	3'-0"	2'-6"
6"	4'-0"	5'-0"	4'-6"
6"	4'-0"x4'-0"	4'-0"	3'-6"
6"	4'-6"x4'-6"	3'-0"	3'-0"
6"	5'-0"	3'-6"	3'-0"
6"	5'-0"x5'-0"	3'-0"	2'-6"
8"	5'-0"	6'-0"	5'-0"
8"	5'-6"x5'-6"	4'-6"	4'-0"
8"	6'-0"	4'-0"	3'-6"
8"	6'-0"x6'-0"	3'-0"	2'-6"
8"	6'-6"	3'-6"	3'-0"
8"	6'-6"x6'-6"	3'-0"	2'-6"

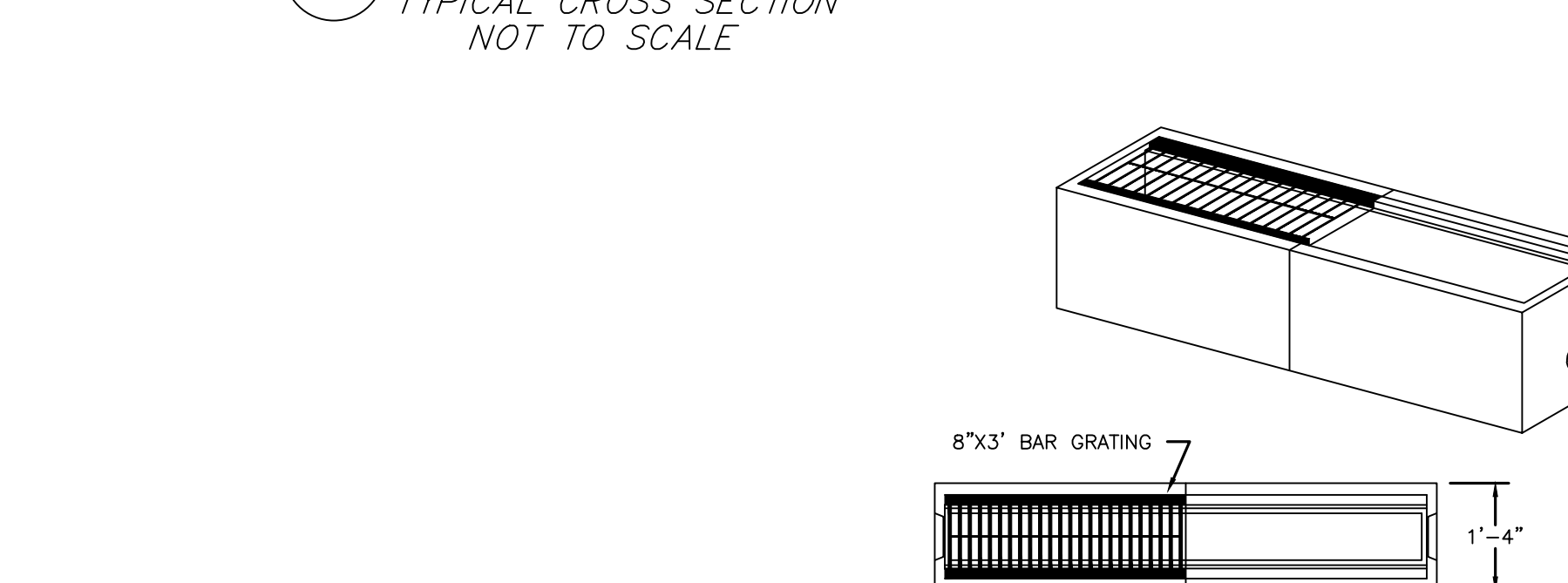
- PIPING MATERIAL NOTES:**
- NO-HUB CAST IRON WITH PRODUCT APPROVED STAINLESS STEEL CLAMPS.
 - SERVICE WEIGHT CAST IRON WITH PRODUCT APPROVED RESILIENT GASKETS OR LEAD AND OAKUM JOINTS.
 - EXTRA HEAVY CAST IRON WITH PRODUCT APPROVED RESILIENT GASKETS OR LEAD AND OAKUM JOINTS.



GASOLINE, OIL and SAND SEPARATOR
(NOT TO SCALE)

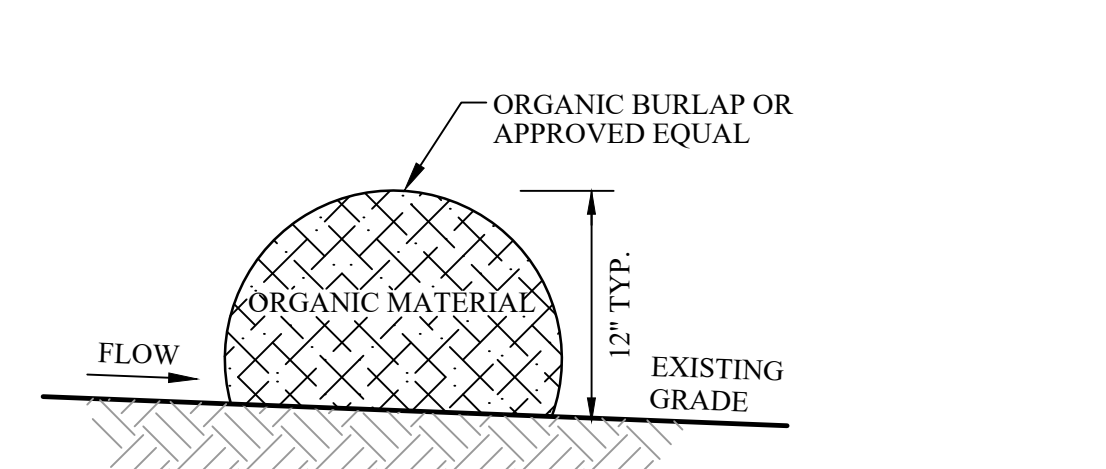


DRAIN MANHOLE
TYPICAL CROSS SECTION NOT TO SCALE



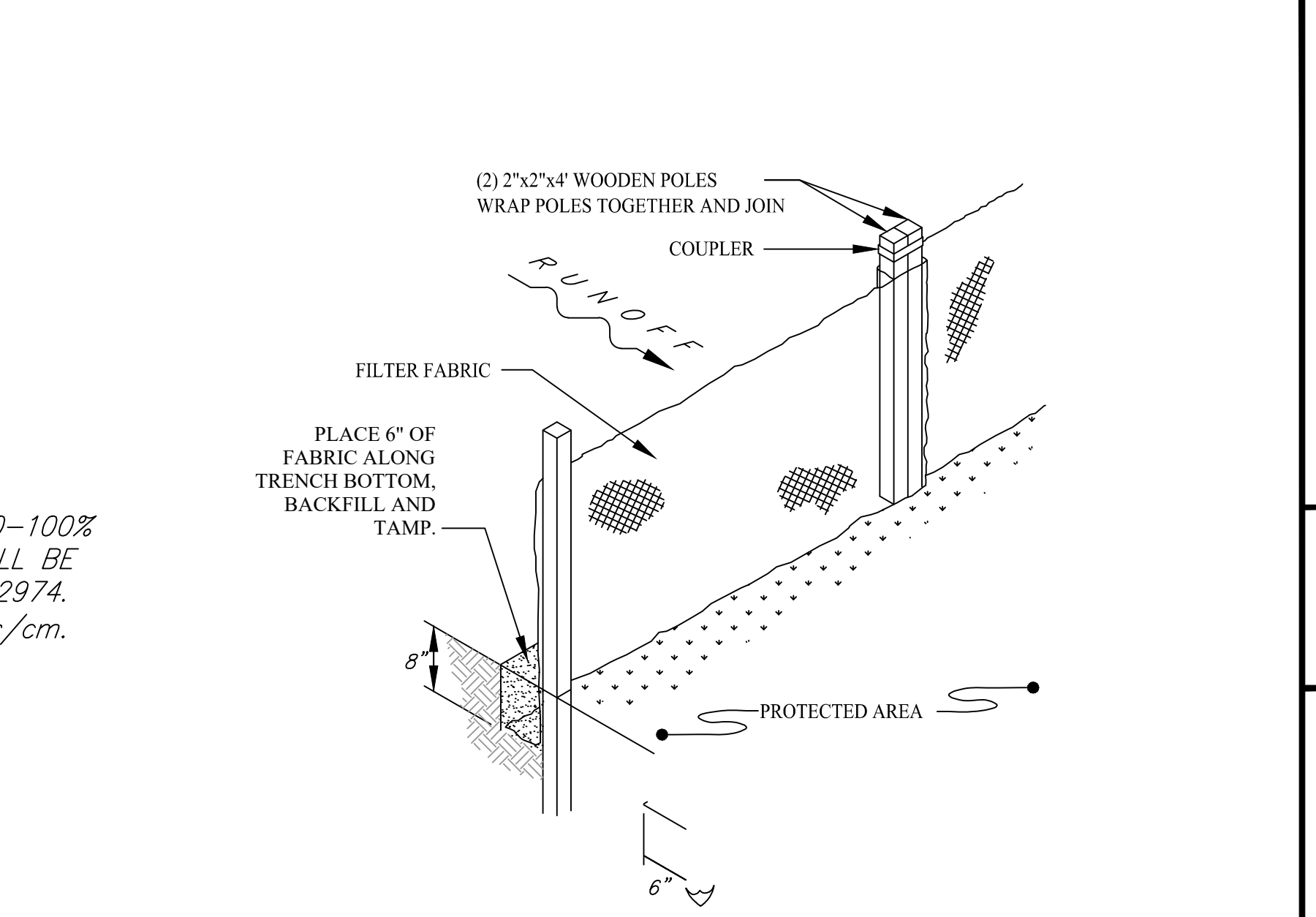
TRENCH DRAIN
(NOT TO SCALE)

- GENERAL CONSTRUCTION NOTES:**
- THE SEPARATOR IS TO BE LOCATED OUTSIDE OF A BUILDING WHERE POSSIBLE AND THE COVER IS TO INCORPORATE A CENTER-HOLE.
 - A SEALED TIGHT COVER IS TO BE USED IF THE SEPARATOR IS LOCATED INSIDE OF A BUILDING. THE COVER SHALL BE NO LESS THAN A 24" DIAMETER.
 - THE SEPARATOR SHALL BE LOCATED AND CONSTRUCTED TO PREVENT SURFACE OR SUB-SURFACE WATER FROM ENTERING.
 - THE INLET PIPE SHALL BE NO LESS THAN FOUR INCHES ABOVE THE WATER LINE LEVEL.
 - WHEN THE SEPARATOR IS SUBJECT TO FREEZING IT SHALL BE SET A MINIMUM OF THREE FEET BELOW GRADE.
 - THE SEPARATOR SHALL BE FILLED WITH WATER AND LEAK TESTED BEFORE BEING INTRODUCED INTO SERVICE.
 - THE NON-CORROSIVE STEPS SHALL BE SPACED AT 18"-INCHES APART.
 - THE CHAMBER VENT AND OUTLET VENT SHALL RETURN TO THE INSIDE OF THE BUILDING AND EXTEND THROUGH THE ROOF.
- GENERAL NOTES:**
- BASIN TO BE FILLED WITH CLEAN WATER BEFORE USING AND AFTER BEING EMPTIED FOR PERIODIC CLEANING.
 - ALL OIL AND GASOLINE MUST BE REMOVED BEFORE CLEANING AND MUST NOT DISCHARGE INTO SEWER SYSTEM.
 - BASIN AND APPURTENANCES MUST MEET MWRA AND MUNICIPAL PLUMBING INSPECTOR APPROVAL.
 - FOR INLET LARGER THAN 8" THE DESIGN AND DIMENSIONS WILL BE DETERMINED FOR EACH PARTICULAR CASE.
 - CIRCULAR BASINS ARE RECOMMENDED.

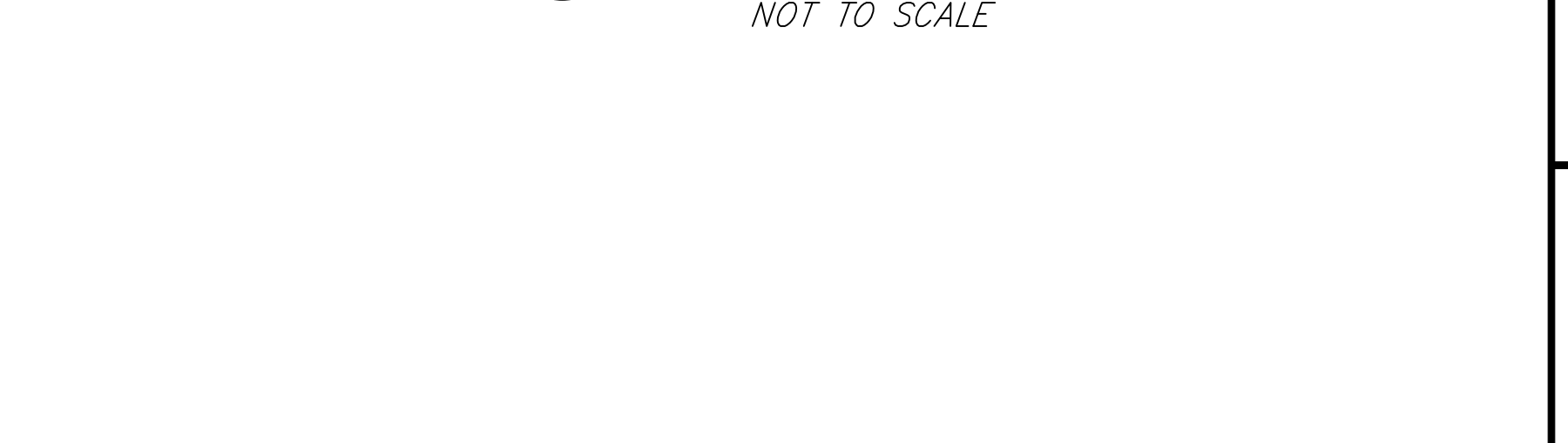


SILT SOCK
CROSS SECTION - NOT TO SCALE

NOTES: ORGANIC MATTER CONTENT SHALL BE BETWEEN 200-100% AS DETERMINED BY ASTM D2974. MOISTURE CONTENT SHALL BE <150% BY DRY WEIGHT AS MEASURED BY ASTM D2216 & D2974. MAXIMUM PARTICLE SIZE 150mm. SOLUBLE SALTS <5mmhos/cm. pH SHALL BE BETWEEN 5.5 AND 8.0.



SILT FENCE BARRIER
ISOMETRIC VIEW NOT TO SCALE



CONNECTION TO EXISTING SMH
NOT TO SCALE

- NOTES:**
- INVERT ELEVATION OF 12" LONG STUB AT THE INSIDE FACE OF MANHOLE TO BE 1 1/4" (MIN.) HIGHER THAN EXISTING OUTLET INVERT ELEVATION.
 - THE CORE CUT HOLE SHALL BE MADE WITH EQUIPMENT SPECIALLY DESIGNED TO CUT A SMOOTH HOLE WITHOUT SPALLING OR DAMAGE TO THE SHELL OR STRUCTURE.
 - PIPE CONNECTIONS THROUGH MH WALLS SHALL BE MADE W/ GROUTING RING (W/ WATERSTOP) AS MANUFACTURED BY PRESS-SEAL GASKET CORPORATION OR APPROVED EQUAL AND NON-SHRINK GROUT.
 - MH INVERT SHALL BE FORMED OUT OF MH BRICK. SHELF TO BE BUILT TO 0.8 OF THE DIAMETER OF PIPE EXTING THE MH.
 - CONTRACTOR SHALL ENSURE THAT EXISTING MANHOLE REMAIN WATERTIGHT SUBSEQUENT TO NEW CONNECTION INSTALLATION.

PERMIT SITE PLAN

259 & 267 Main Street
Reading, Massachusetts 01867

ASSESSORS:
MAP 12 PARCEL 39 & 40

PREPARED FOR:
Stonegate Construction Corp.
33 Bedford Street
Reading, Massachusetts 02180

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NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION
6.	RLG	JP	5/1/20	REV. PER CON COMM COMMENTS
5.	RLG	JP	2/26/20	REV. PER CPDC COMMENTS
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2.	RLG	JP	12/30/19	REVISED PER RCC COMMENTS
1.	RLG	JP	12/2/19	ISSUED FOR SITE PLAN REVIEW

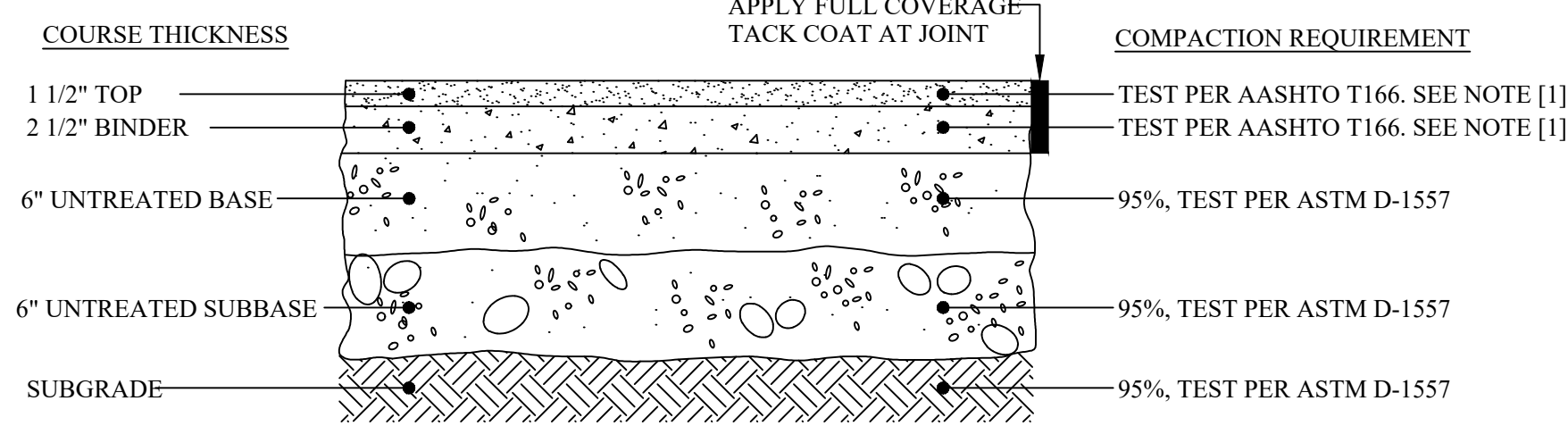
NO. BY APP DATE ISSUE/REVISION DESCRIPTION

DATE: 10/8/19 DESIGN BY: RLG
SCALE: DRAWN BY: RLG
APPRVD. BY: CHECK BY: JP

DETAILS

PLOT DATE: May 01, 2020 12:09 pm
PATH: F:\VISA\DWG 3D Projects\21839-Reading-Permit\DWG

DWG: 21839SP6-04302020.dwg
LAYOUT: DETAILS 3
SHEET: 10 OF 15
PROJECT NO.: 21839

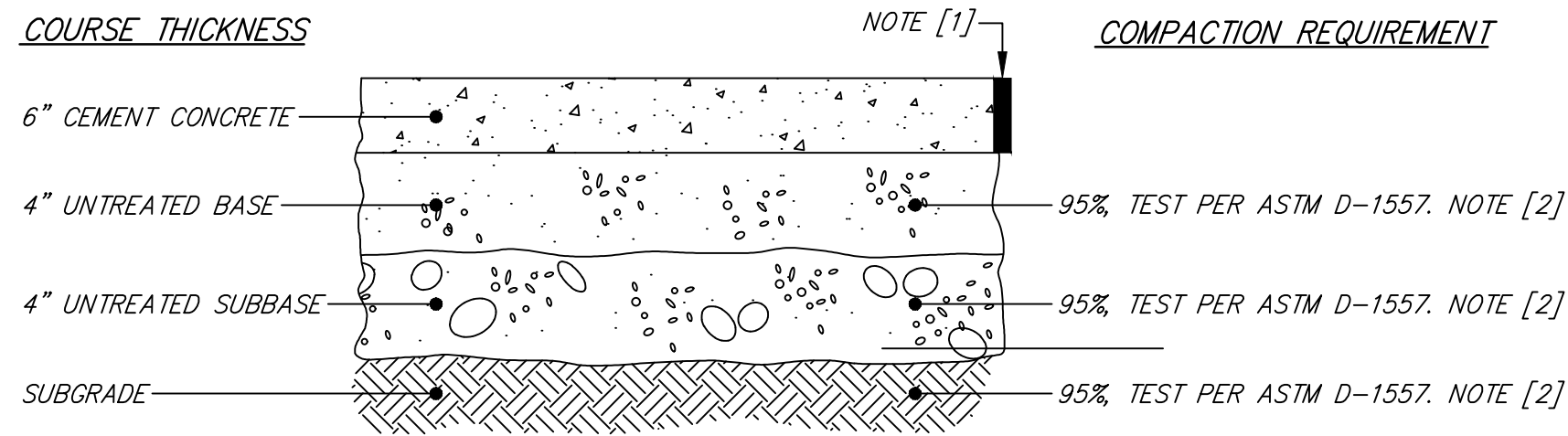


NOTES: [1] COMPACT TO TEST AVERAGE OF 96%, NO TEST LOWER THAN 94%

MATERIAL	SPECIFICATION	MAXIMUM AGGREGATE OR PARTICLE SIZE (IN.)
TOP - BITUMINOUS CONCRETE	MHD M3.11.03 CLASS I, TYPE I-1	1/2
BINDER - BITUMINOUS CONCRETE	MHD M3.11.03 CLASS I, TYPE I-1	1
BASE - GRAVEL BORROW	MHD M1.03.0 TYPE C	2
SUBBASE - GRAVEL BORROW	MHD M1.03.0 TYPE C	2
UNSUITABLE SUBGRADE - ORDINARY BORROW	MHD M1.01.0	12

BITUMINOUS CONCRETE PAVEMENT

TYPICAL CROSS SECTION-NOT TO SCALE

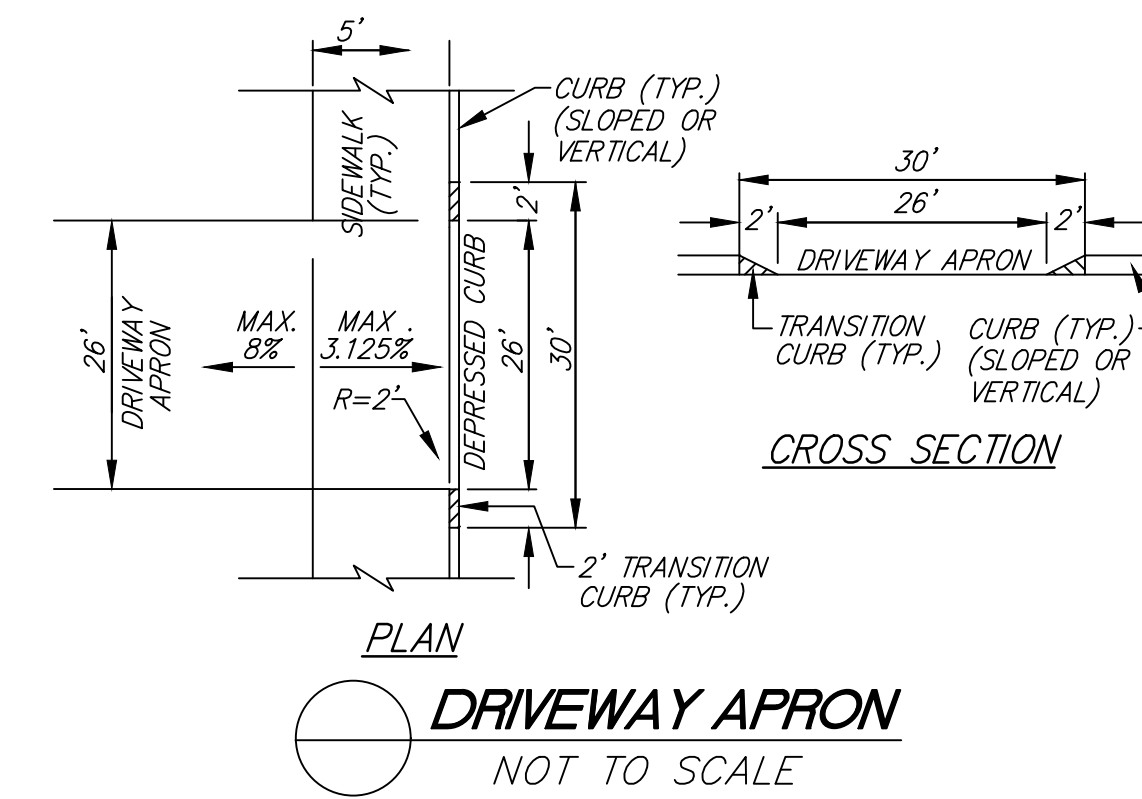


NOTES:
 [1] CONTROL JOINT EVERY 10 FEET, EXPANSION JOINT EVERY 50 FEET.
 [2] COMPACT TO TEST AVERAGE OF 95% NO TEST LOWER THAN 93%

MATERIAL	SPECIFICATION	MAXIMUM AGGREGATE OR PARTICLE SIZE (IN.)
TOP - CEMENT CONCRETE	MHD M4.02.00 4000 PSI AT 28 DAYS	3/4
BASE - SAND BORROW	MHD M1.04.0 TYPE b	3/8
SUBBASE - GRAVEL BORROW	MHD M1.03.0 TYPE c	2
UNSUITABLE SUBGRADE - ORDINARY BORROW	MHD M1.01.0	12

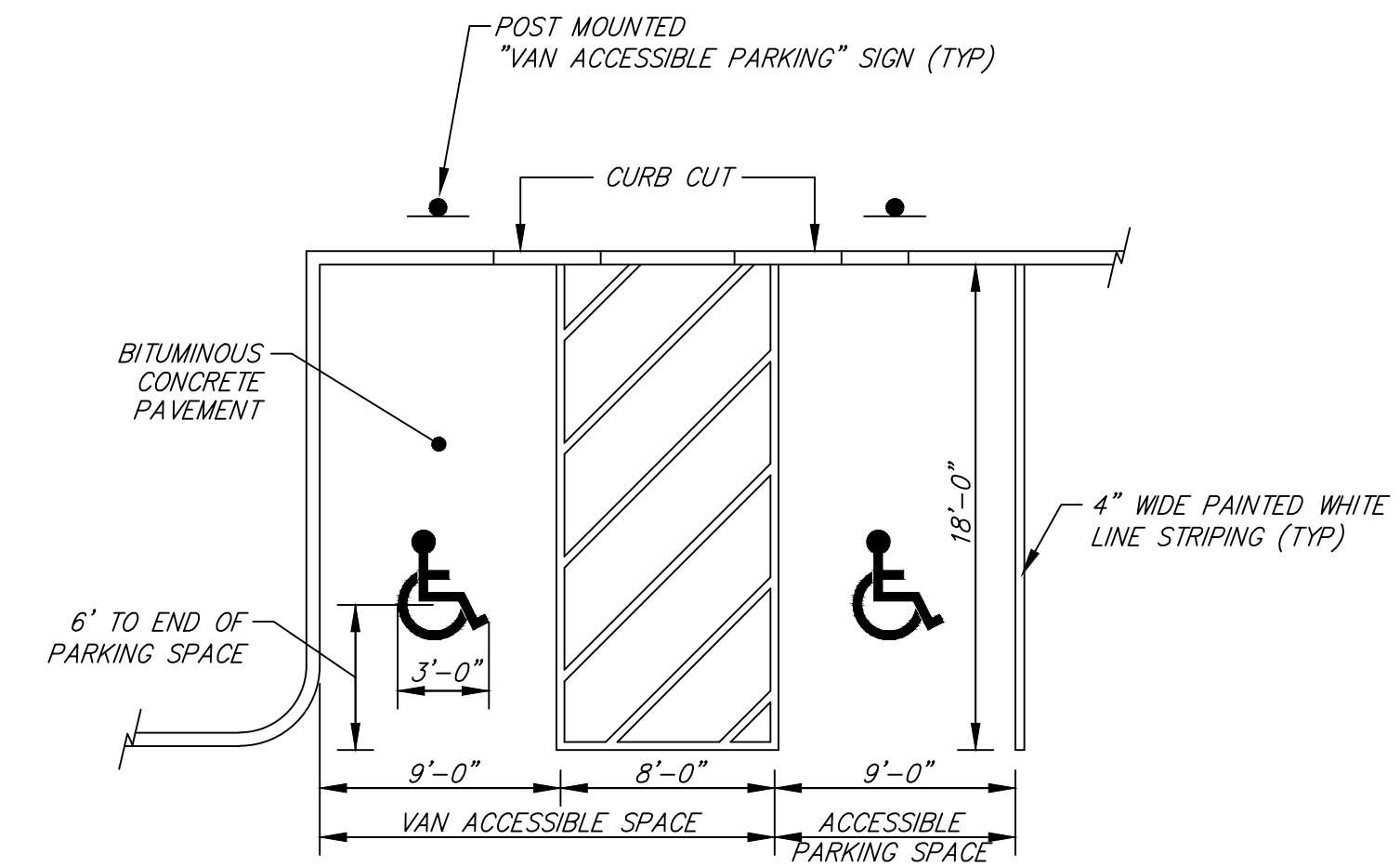
CEMENT CONCRETE PAVEMENT

TYPICAL CROSS SECTION NOT TO SCALE



DRIVEWAY APRON

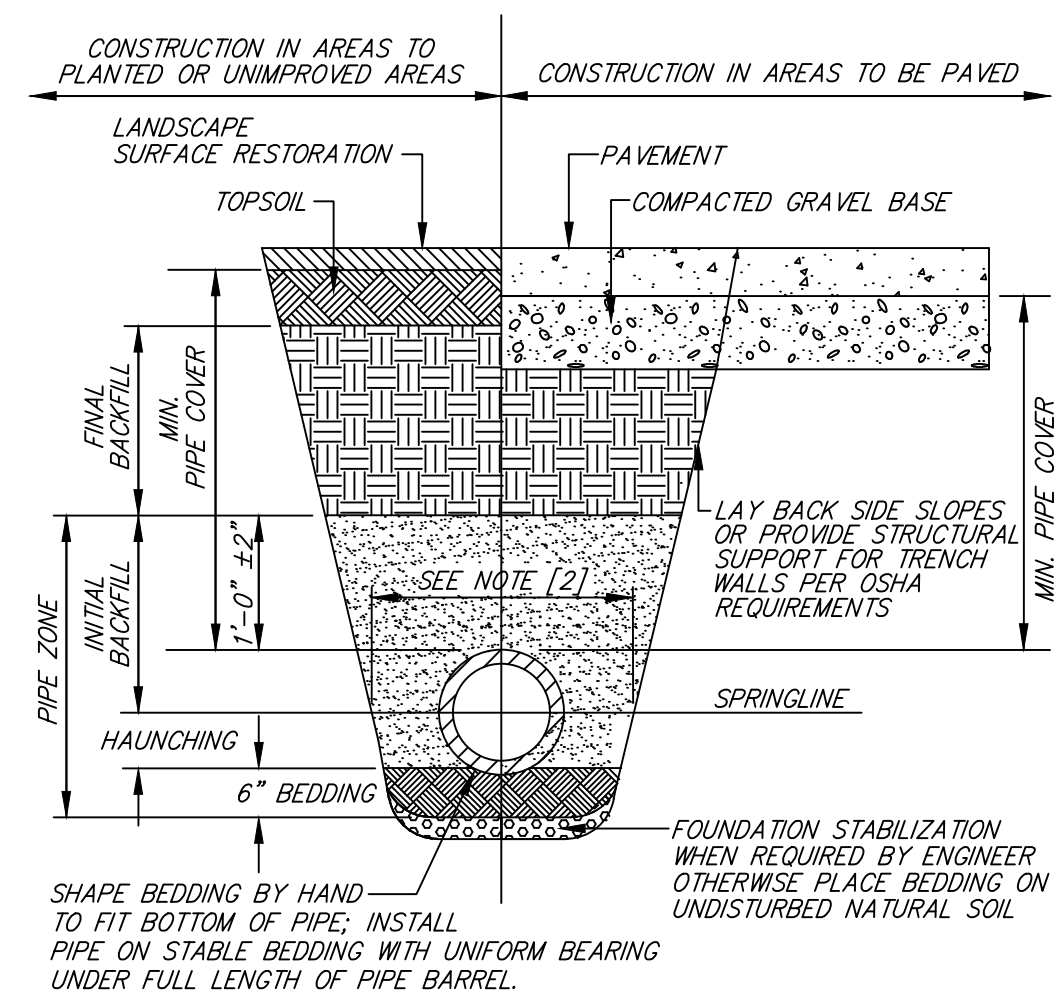
NOT TO SCALE



NOTES:
 1. MAXIMUM SLOPE 2% IN ANY DIRECTION.
 2. LOCATE SIGN WITHIN 10 FT OF ACCESSIBLE SPACE.
 3. PROVIDE AN ACCESSIBLE CURB CUT AT EACH ACCESS AISLE BETWEEN ACCESSIBLE SPACES.

ACCESSIBLE PARKING STALL DETAIL

NOT TO SCALE



NOTES:
 [1] PLACE 3/4"± GRADED GRANULAR BACKFILL AT OPTIMUM MOISTURE IN HORIZONTAL, 8"-DEEP, LOOSE LAYERS; COMPACT TO 95% PER ASTM D-1557.
 [2] MINIMUM WIDTH OF TRENCH MEASURED AT THE SPRINGLINE OF THE PIPE, INCLUDING ANY NECESSARY SHEATHING.

FOUNDATION, BEDDING, & BACKFILL MATERIALS		
PIPE MATERIAL	HDP, PVC	RC, DI
FOUNDATION STABILIZATION	[6]	[6]
BEDDING	[1]	[1]
HAUNCHING	[1]	[1]
INITIAL BACKFILL	[1]	[1]
FINAL BACKFILL	[4]	[4]
MIN. PIPE COVER	[5]	[5]

PIPE I.D.	WIDTH
LESS THAN 21"	O.D. + 12"
21" TO 42"	O.D. + 24"
GREATER THAN 42"	O.D. + 30"

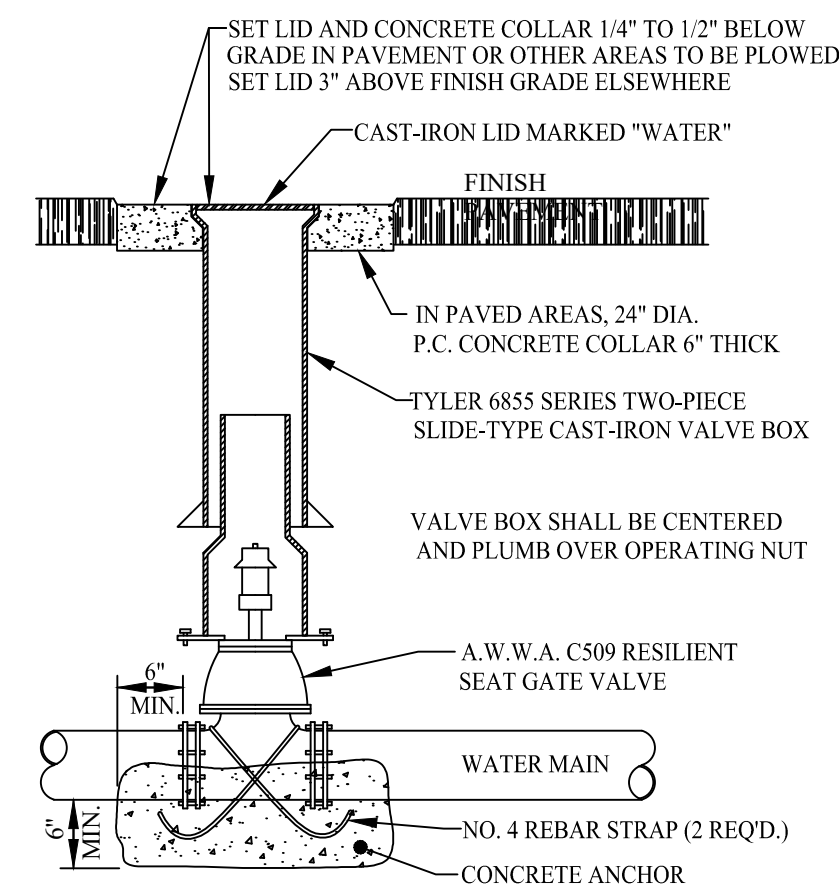
[3] INSTALL PIPE IN CENTER OF TRENCH.
 [4] IN PLANTED OR UNIMPROVED AREAS, USE ON-SITE EXCAVATED MATERIAL FOR FINAL BACKFILL. COMPACT TO 95% PER ASTM D-1557. IN PAVED AREAS, OBTAIN ENGINEER APPROVAL OF ON-SITE EXCAVATED MATERIALS FOR USE AS FINAL BACKFILL.
 [5] MINIMUM COVER OVER TOP OF PIPE.

PIPE MATERIAL	HDP, PVC	RC, DI
WATER	5'-0"	5'-0"
SEWER	4'-0"	4'-0"
DRAIN	1'-6"	1'-0"

[6] FOR FOUNDATION STABILIZATION, USE 2"± CRUSHED STONE.

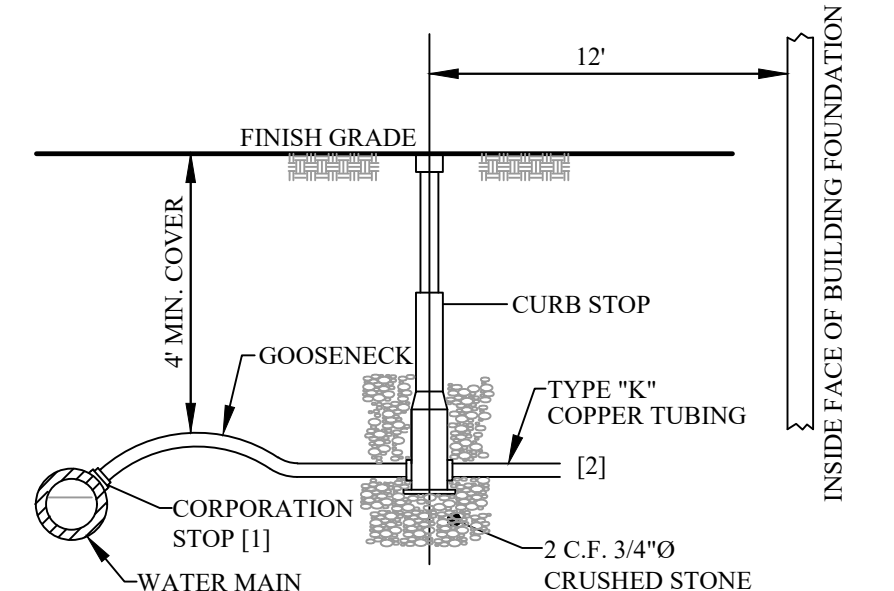
PIPE TRENCH

TYPICAL CROSS SECTION NOT TO SCALE



GATE VALVE

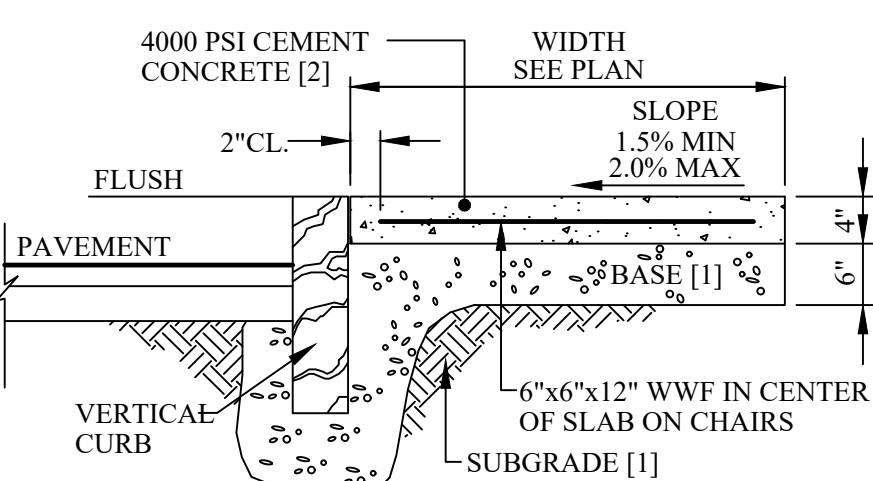
TYPICAL CROSS SECTION NOT TO SCALE



NOTES:
 [1] WATER SERVICES LARGER THAN ONE INCH ARE TO BE RESTRAINED TO MAIN WITH APPROVED SADDLE.
 [2] COORDINATE BUILDING CONNECTION WITH PLUMBING DRAWINGS.

WATER SERVICE

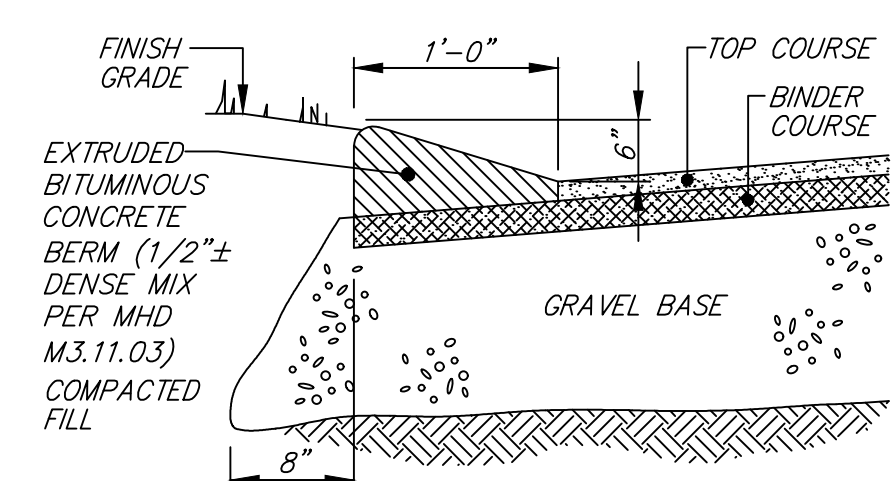
NOT TO SCALE



NOTES:
 [1] COMPACT TO 95% PER ASTM D-1557
 [2] CONTROL JOINT EVERY 5 LF, EXPANSION JOINT EVERY 50 LF.

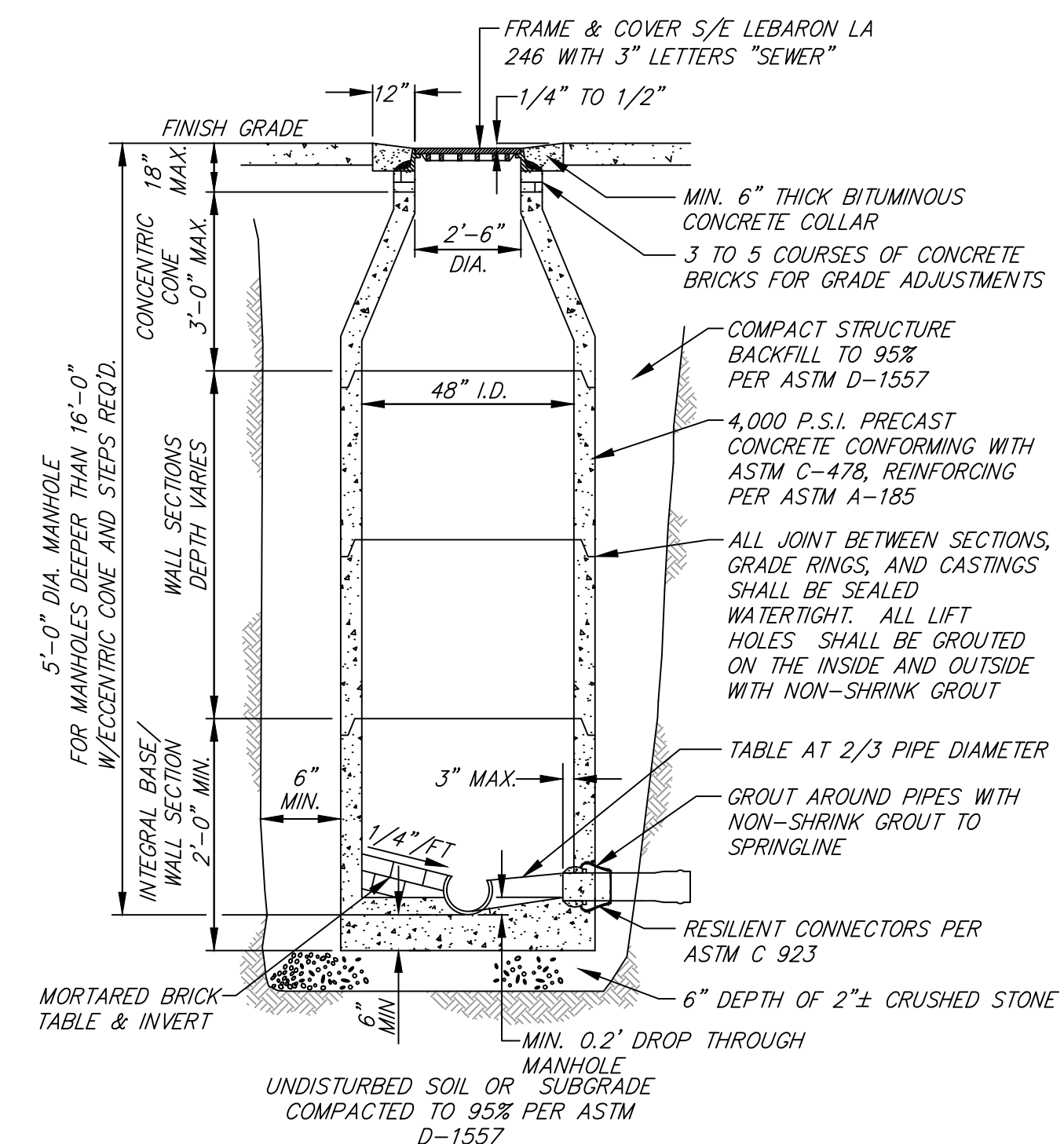
CEMENT CONCRETE WALK

CROSS SECTION-NOT TO SCALE



CAPE COD BERM

CROSS SECTION NOT TO SCALE



SEWER MANHOLE

TYPICAL CROSS SECTION NOT TO SCALE

PERMIT SITE PLAN

259 & 267 Main Street
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ASSESSORS:

MAP 12 PARCEL 39 & 40

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DATE: 10/8/19 DESIGN BY: RLG
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 APPROVD. BY: CHECK BY: JP

DETAILS

PLOT DATE: May 01, 2020 12:08 pm
 PATH: F:\VISA\DWG 3D Projects\21839-Reading-Permit\DWG

DWG: 21839SP6-04302020.dwg

LAYOUT: DETAILS 4

SHEET: 11 OF 15

PROJECT NO.:

21839

C12

PERMIT SITE PLAN

259 & 267 Main Street
Reading, Massachusetts 01867

ASSESSORS:

MAP 12 PARCEL 39 & 40

PREPARED FOR:

Stonegate
Construction
Corp.

33 Bedford Street
Reading, Massachusetts 02180

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DATE: 10/8/19 DESIGN BY: RLG
SCALE: DRAWN BY: RLG
APPRVD. BY: CHECK BY: JP

EMERGENCY ACCESS PLAN

PLOT DATE: May 01, 2020 2:11 pm
PATH: F:\MSA\DWG 3D Projects\21839\Finnegon-Reading\DWG

DWG: 21839SP6-04302020.dwg

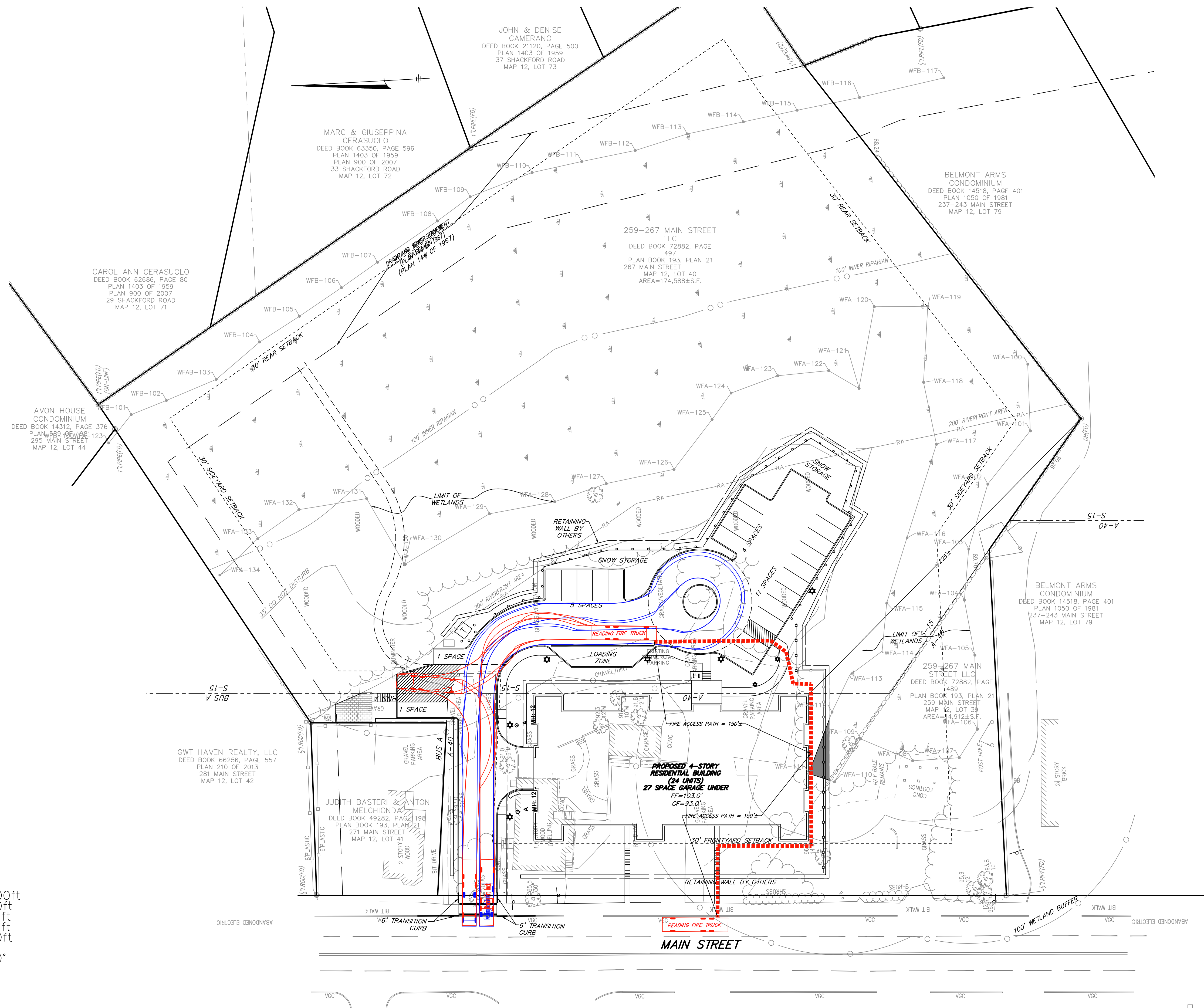
LAYOUT: EA

SHEET: 12 OF 15

PROJECT NO.:

C13

21839



Reading Fire Truck
Overall Length 38.000ft
Overall Width 8.000ft
Overall Body Height 7.471ft
Min Body Ground Clearance 0.721ft
Track Width 8.000ft
Lock-to-lock time 6.00s
Max Steering Angle (Virtual) 34.00°

Reading Ambulance
Overall Length 25.000ft
Overall Width 8.330ft
Overall Body Height 7.500ft
Min Body Ground Clearance 1.364ft
Track Width 8.167ft
Lock-to-lock time 5.00s
Curb to Curb Turning Radius 25.750ft

