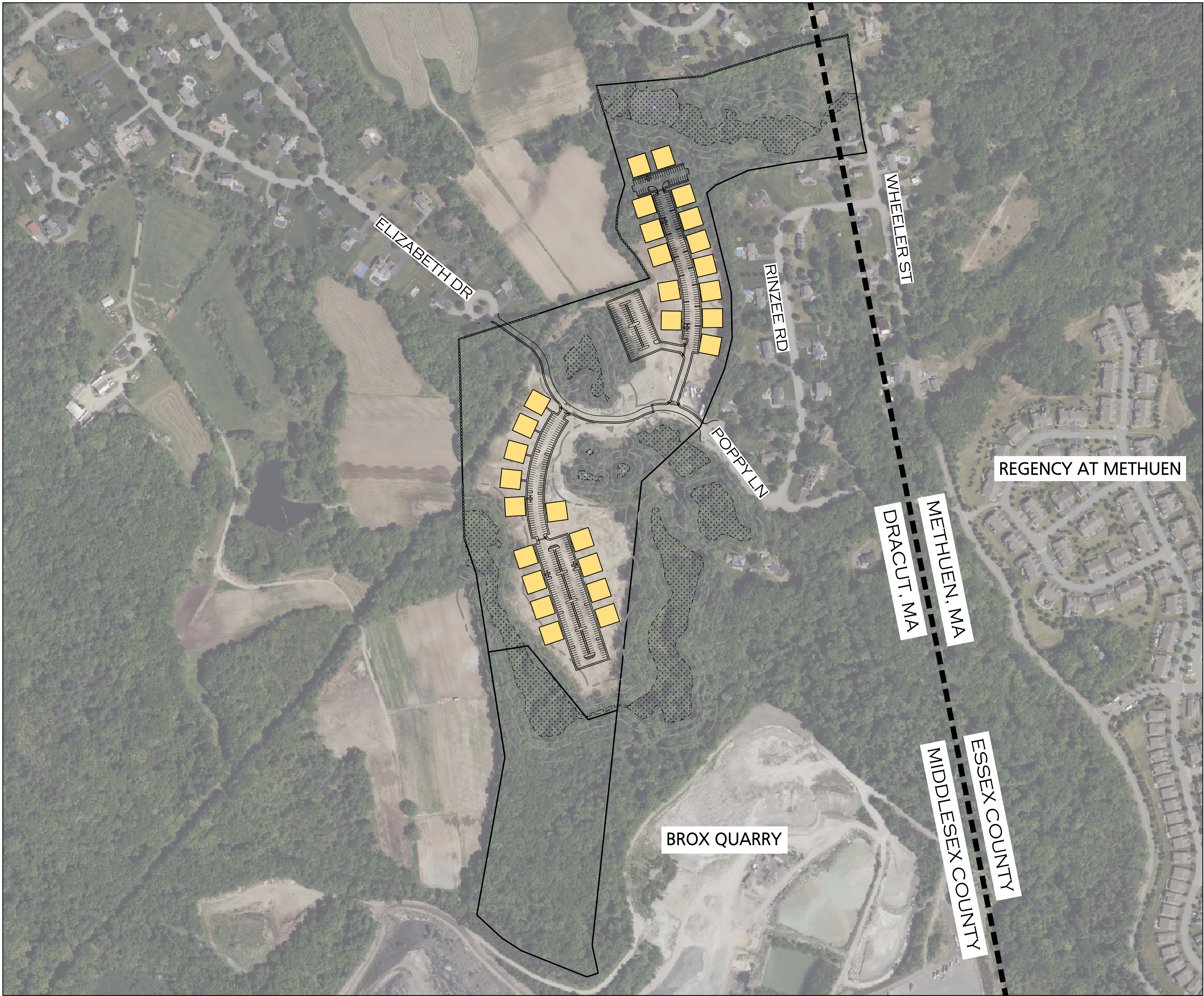


COMPREHENSIVE PERMIT SITE PLAN

FOR MURPHY'S FARM

231 WHEELER STREET
(MAP 22 / LOT 53) &
(MAP 39 / BLOCK 53 / LOTS 1-23)
DRACUT, MASSACHUSETTS 01826



LAND USE TABLE		
LOCATION:	MAP 22 / LOT 53 & MAP 39 / BLOCK 53 / LOTS 1-23	
ZONE:	RESIDENTIAL 1 (R-1)	
USE:	MULTI-FAMILY RESIDENTIAL	
ITEM	REQUIRED	PROVIDED
MINIMUM LOT AREA	40,000-SF	33.30-AC
MINIMUM LOT FRONTAGE	175-FT	60-FT (ELIZABETH DR) 52-FT (POPPY LN)
MINIMUM FRONT SETBACK	30-FT	>30-FT
MINIMUM SIDE SETBACK	15-FT	35.1-FT
MINIMUM REAR SETBACK	35-FT	35.1-FT (TBD)
MINIMUM LOT WIDTH	50-FT	>50-FT
MAXIMUM BUILDING HEIGHT	35-FT	32-FT
MAXIMUM LOT COVERAGE	30%	29.6%
PARKING CALCULATIONS:		
MULTIFAMILY RESIDENTIAL :	268 X (2 SPACE / UNIT)	536-SPACES REQUIRED
		549-SPACE PROVIDED
		12 ACCESSIBLE SPACES PROVIDED

AREA SUMMARY:	
-TOTAL LOT AREA:	33.30-AC
-TOTAL WETLAND AREA:	3.04-AC
-TOTAL UPLAND AREA:	30.26-AC
DEVELOPMENT SUMMARY:	
-TOTAL ROADWAY LENGTH:	3,050-FT
-NUMBER OF BUILDINGS:	28
-NUMBER OF UNITS:	268
-NUMBER OF BEDROOMS:	563

- PROJECT NOTES:
- LOCATION:

231 WHEELER STREET
(PARCEL ID: 22-53)
15 MURPHY WAY
(PARCEL ID: 39-53-1)
21 MURPHY WAY
(PARCEL ID: 39-53-2)
25 MURPHY WAY
(PARCEL ID: 39-53-3)
28 MURPHY WAY
(PARCEL ID: 39-53-4)
22 MURPHY WAY
(PARCEL ID: 39-53-5)
16 MURPHY WAY
(PARCEL ID: 39-53-6)
10 MURPHY WAY
(PARCEL ID: 39-53-7)
4 MURPHY WAY
(PARCEL ID: 39-53-8)
40 ELIZABETH DRIVE
(PARCEL ID: 39-53-9)
34 ELIZABETH DRIVE
(PARCEL ID: 39-53-10)
29 ELIZABETH DRIVE
(PARCEL ID: 39-53-11)
35 ELIZABETH DRIVE
(PARCEL ID: 39-53-12)
41 ELIZABETH DRIVE
(PARCEL ID: 39-53-13)
47 ELIZABETH DRIVE
(PARCEL ID: 39-53-14)
53 ELIZABETH DRIVE
(PARCEL ID: 39-53-15)
59 ELIZABETH DRIVE
(PARCEL ID: 39-53-16)
16 MURPHY WAY
(PARCEL ID: 39-53-17)
58 ELIZABETH DRIVE
(PARCEL ID: 39-53-18)
52 ELIZABETH DRIVE
(PARCEL ID: 39-53-19)
46 ELIZABETH DRIVE
(PARCEL ID: 39-53-20)
34 ELIZABETH DRIVE
(PARCEL ID: 39-53-21)
29 ELIZABETH DRIVE
(PARCEL ID: 39-53-22)
70 ELIZABETH DRIVE
(PARCEL ID: 39-53-23)
 - DEED:

NORTH MIDDLESEX REGISTRY
OF DEEDS BOOK 31624 PAGE 254
 - ZONE:

RESIDENTIAL 1 (R-1)
 - USE:

MULTI FAMILY RESIDENTIAL
 - APPLICANT:

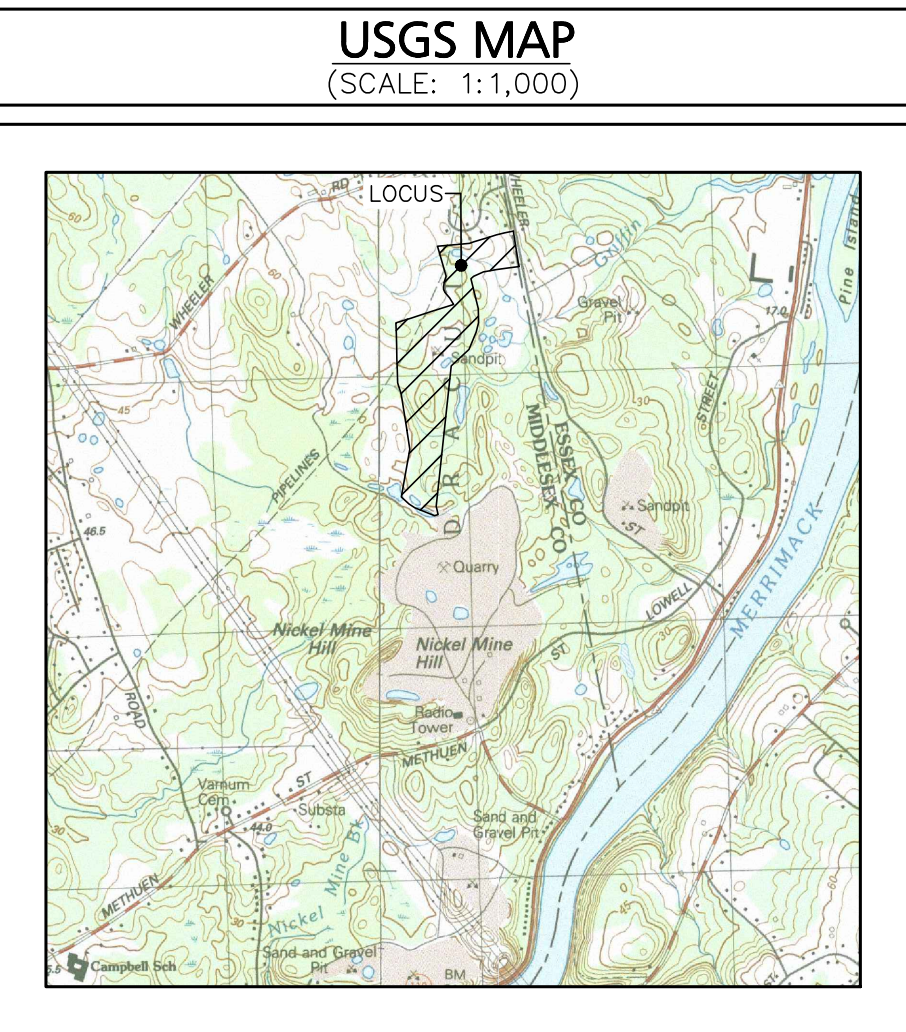
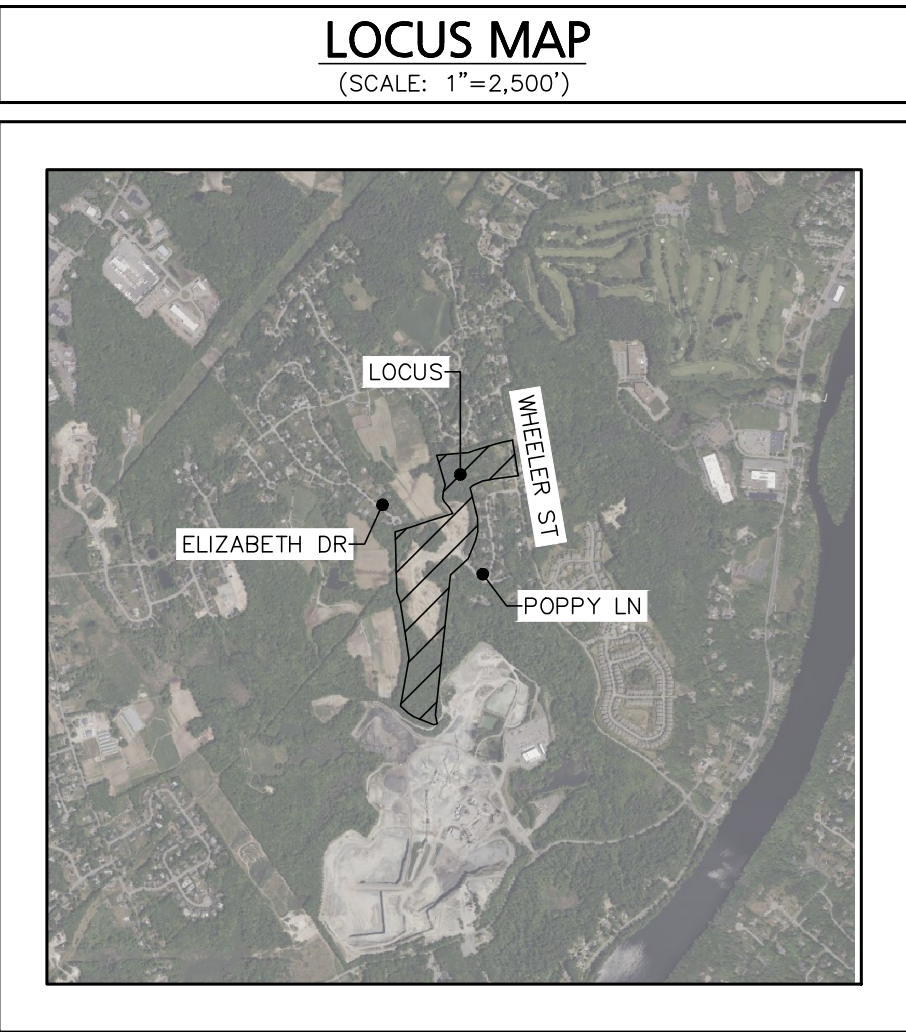
THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810
 - OWNER:

O'BRIEN HOMES, INC
18 CASSIMERE STREET
ANDOVER, MA 01810
 - SOILS / WETLANDS:

NORSE ENVIRONMENTAL
SERVICES, INC.
2100 LAKEVIEW AVENUE, UNIT 3A
DRACUT, MA 01826
 - EXISTING CONDITIONS INFORMATION GENERATED FROM RECORD DOCUMENTS AS WELL AS AN ON GROUND SURVEY AND AERIAL SURVEY BY CIVIL DESIGN CONSULTANTS, INC. IN DECEMBER OF 2023 AND JANUARY OF 2024.
 - ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM (NAV88).
 - TEMPORARY BENCH MARKS SET:

-TBM 1: SPIKE IN U-POLE#6 ON POPPY LANE. ELEV.=135.29'
-TBM 1: X-OUT IN CB ON ELIZABETH DRIVE. ELEV.=168.41'
-TBM 2: SPIKE IN TREE 620+/- EAST OF TBM 1. ELEV.=159.52'
-TBM 3: SPIKE IN U-POLE#5 ON POPPY LANE. ELEV.=134.80'
 - PLAN BEARINGS ARE BASED UPON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD83), MAINLAND ZONE.
 - THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS DEPICTED BY THE FLOOD INSURANCE RATE MAPS FOR MIDDLESEX COUNTY, MASSACHUSETTS MAP #25017C0153C (EFFECTIVE DATE JUNE 4, 2010) AND MAP #25017C0161E (EFFECTIVE DATE JUNE 4, 2010).
 - WETLANDS WERE DELINEATED BY NORSE ENVIRONMENTAL SERVICES, INC. OF DRACUT IN AUGUST, 2015.
 - THE INTENT OF THIS PLAN SET IS TO MEET THE PRELIMINARY PLAN CONTENT REQUIREMENTS TO ALLOW FOR INITIAL REVIEW OF THE PROPOSED 408 DEVELOPMENT. ADDITIONAL DETAIL MAY BE REQUIRED PRIOR TO ANY CONSTRUCTION.
 - NO BUILDING OR STRUCTURE SHALL BE BUILT OR PLACED WITHOUT A PERMIT FROM THE HEALTH DEPARTMENT IF SUCH A PERMIT IS REQUIRED.

REFERENCE PLANS:		
PLANS ON FILE AT THE NORTH MIDDLESEX COUNTY REGISTRY OF DEEDS.		
PLAN BOOK 118	PLAN 100	
PLAN BOOK 145	PLAN 56	
PLAN BOOK 159	PLAN 132	
PLAN BOOK 161	PLAN 136	
PLAN BOOK 165	PLAN 53	
PLAN BOOK 174	PLAN 5	
PLAN BOOK 206	PLAN 26	
PLAN BOOK 235	PLAN 67	
PLAN BOOK 244	PLAN 26	



LEGEND	
PROPERTY LINE	---
BUILDING SETBACK	---
CENTERLINE	0+50 1+00
PROPOSED STRUCTURE	=====
PROPOSED CURB	=====
PROPOSED PAVEMENT	=====
PROPOSED CONCRETE	=====
PROPOSED CONTOUR	113.8
PROPOSED SPOT GRADE	113.8
PROPOSED SPOT GRADE (TW/8W)	113.8
PROPOSED DRAIN	=====
PROPOSED CATCH BASIN	⊙
PROPOSED DRAIN MANHOLE	⊙
PROPOSED UNDERDRAIN	=====
PROPOSED ROCK RIP-RAP	=====
PROPOSED SILT FENCE	=====
PROPOSED RETAINING WALL	=====
PROPOSED TIMBER GUARDRAIL	=====
PROPOSED CHAINLINK FENCE	=====
PROPOSED STOCKADE FENCE	=====
PROPOSED TREE LINE	=====
PROPOSED LANDSCAPE AREA	=====
PROPOSED WATER	=====
PROPOSED GATE VALVE	=====
PROPOSED HYDRANT	=====
PROPOSED SEWER	=====
PROPOSED SEWER MANHOLE	⊙
PROPOSED ELECTRIC/TELEPHONE/CABLE	-----
PROPOSED LIGHTING	⊙
PROPOSED EASEMENT	=====
PROPOSED STRIPING	=====
PROPOSED PARKING COUNT	⊙
PROPOSED HANDICAP SPACE	=====
PROPOSED TRAFFIC ARROW	=====
PROPOSED SIGN	=====
PROPOSED LIMIT OF WORK	=====

PLAN INDEX:		
TITLE		LAST REVISED
C-1	COVER SHEET	10/02/25
C-2A	EXISTING CONDITIONS PLAN	10/02/25
C-2B	EXISTING CONDITIONS PLAN	10/02/25
C-3	LAYOUT & MATERIALS PLAN	10/02/25
C-4A	GRADING, DRAINAGE & UTILITIES PLAN	10/02/25
C-4B	GRADING, SEWER & UTILITIES PLAN	10/02/25
C-4C	GRADING & UTILITIES OVERALL PLAN	10/02/25
C-5A	PLAN & PROFILE	10/02/25
C-5B	PLAN & PROFILE	10/02/25
C-5C	PLAN & PROFILE	10/02/25
C-6	EROSION CONTROL PLAN	10/02/25
C-7	FIRE TRUCK TURNING PLAN	10/02/25
C-8	ANR PLAN	09/15/25
D-1	CONSTRUCTION DETAILS	10/02/25
D-2	CONSTRUCTION DETAILS	10/02/25
D-3	CONSTRUCTION DETAILS	10/02/25
D-4	CONSTRUCTION DETAILS	10/02/25
D-5	CONSTRUCTION DETAILS	10/02/25
D-6	CONSTRUCTION DETAILS	10/02/25

10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
05/09/25	REVISED LAYOUT
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	

APPLICANT:
**THE HOMES AT
MURPHY'S FARM LLC**
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED: APRIL 22, 2024
PROJECT #: 23-10524
PREPARED BY: TWS

JAMES E. HANLEY
CIVIL
No. 47708
PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

CIVIL
DESIGN
CONSULTANTS, INC.
344 North Main Street | Andover, MA 01810
(978) 461-0502 | www.civil-design.com

DRAWING TITLE:
COVER SHEET

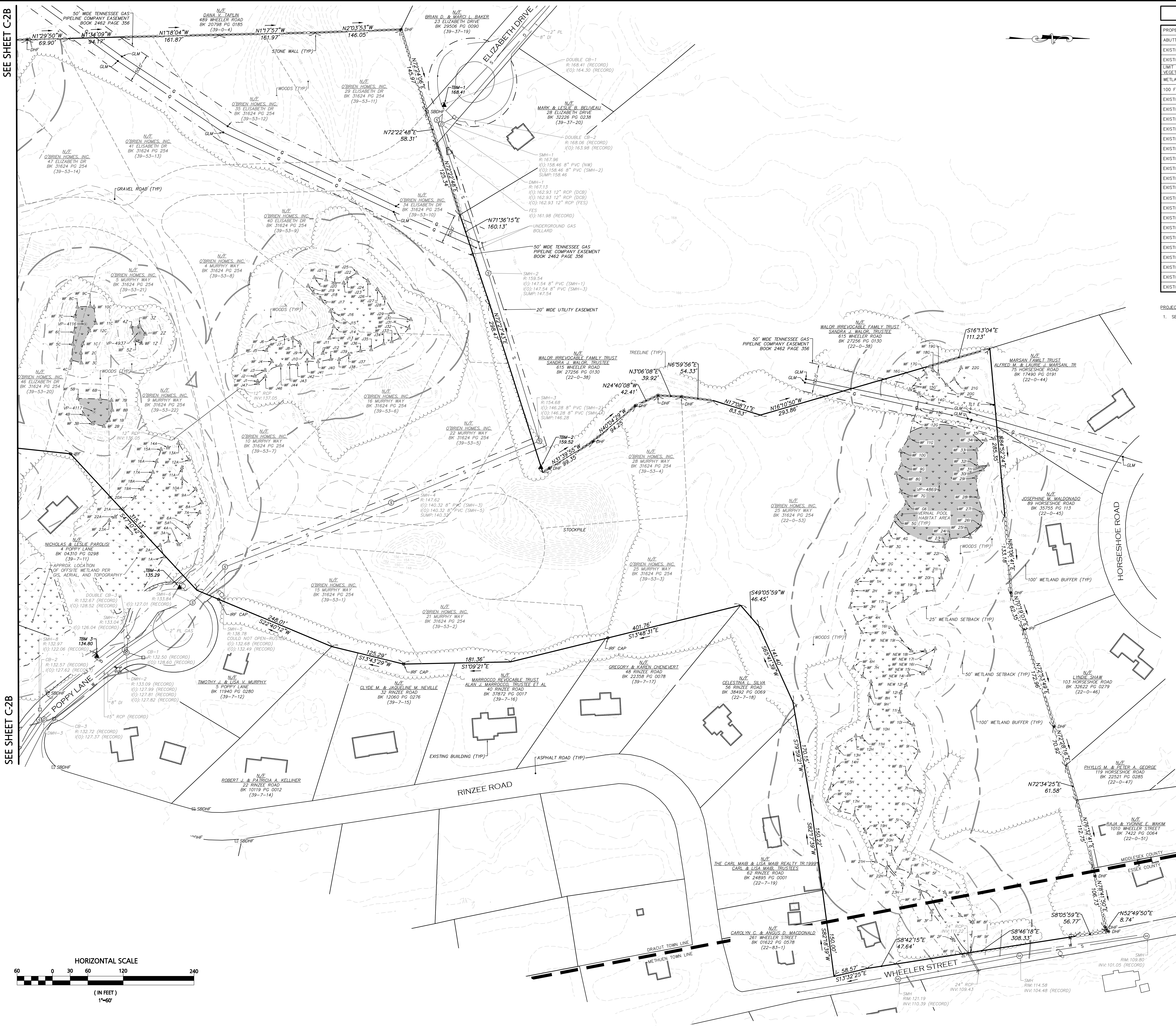
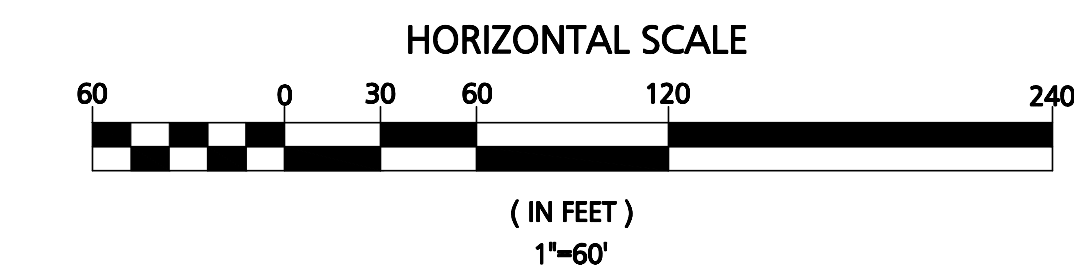
DRAWING #:

C-1

ISSUED FOR REVIEW: OCTOBER 2, 2025

SEE SHEET C-2B

SEE SHEET C-2B



LEGEND

PROPERTY LINE	---
ABUTTERS PROPERTY LINE	---
EXISTING EDGE OF PAVEMENT	---
EXISTING EDGE OF GRAVEL	---
LIMIT OF BORDERING VEGETATED WETLAND (BWV)	---
WETLAND	---
100 FT BUFFER TO BWV	---
EXISTING WETLAND FLAG	△
EXISTING VERNAL POOL	○
EXISTING CONTOUR	---
EXISTING EASEMENT	---
EXISTING TREE LINE	---
EXISTING STONE WALL	---
EXISTING UTILITY POLE	---
EXISTING DRAIN MANHOLE	⊙
EXISTING DRAIN	---
EXISTING CATCHBASIN	⊠
EXISTING FLARED END SECTION	---
EXISTING SEWER MANHOLE	⊙
EXISTING WATER	---
EXISTING SEWER	---
EXISTING HYDRANT	⊠
EXISTING GAS	---
EXISTING GAS BOLLARD	○
EXISTING IRON PIN	○
EXISTING BOUND	---
EXISTING BENCHMARK	▲

PROJECT NOTES:

- SEE SHEET C-1 FOR FULL PROJECT NOTES

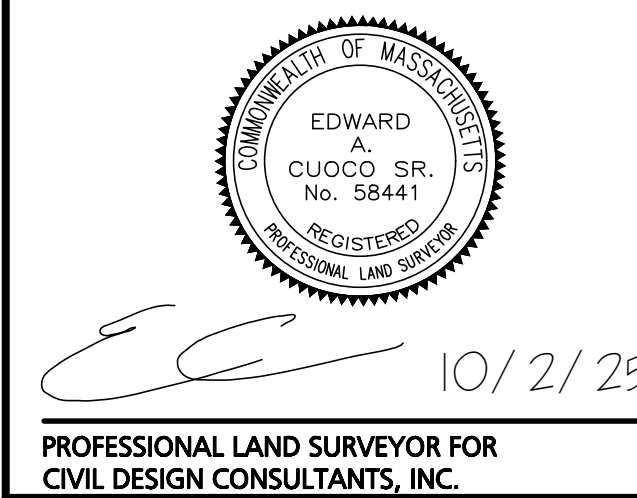
10/2/25	REV. PER PEER REVIEW COMMENTS
05/09/25	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION

REVISIONS

OWNER / APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED:	OCTOBER 2, 2025
PROJECT #:	23-10524
PREPARED BY:	MEY/EAC



10/2/25

PROFESSIONAL LAND SURVEYOR FOR
CIVIL DESIGN CONSULTANTS, INC.

CIVIL DESIGN
CONSULTANTS, INC.
344 North Main Street | Andover, MA 01810
(978) 456-0000 | www.civil-design.com

DRAWING TITLE:
**EXISTING
CONDITIONS PLAN**

DRAWING #:

C-2A



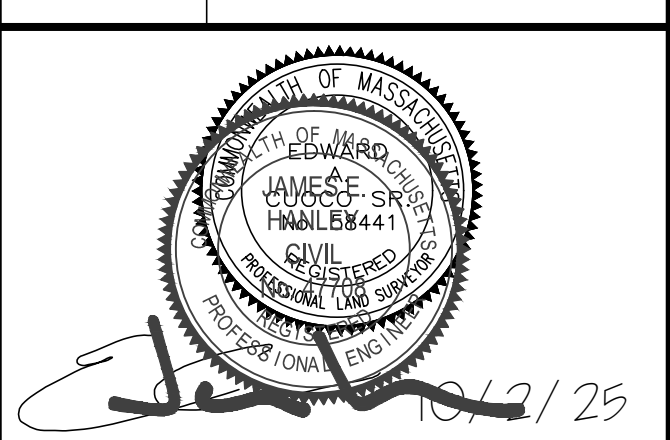
PROJECT NOTES:
1. SEE SHEET C-1 FOR FULL PROJECT NOTES

10/2/25	REV. PER PEER REVIEW COMMENTS
05/09/25	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	

OWNER / APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED:	OCTOBER 2, 2025
PROJECT #:	23-10524
PREPARED BY:	MEY/EAC



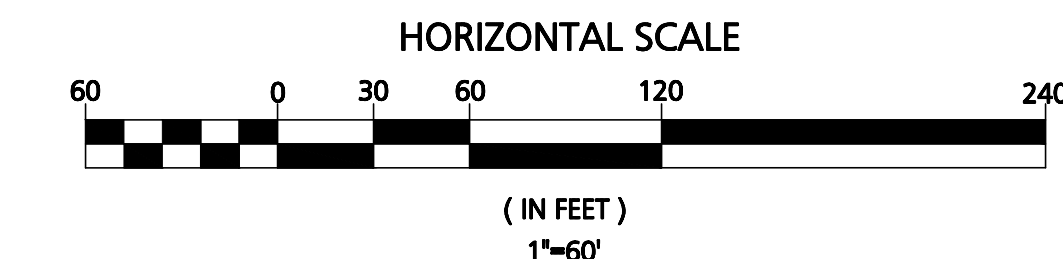
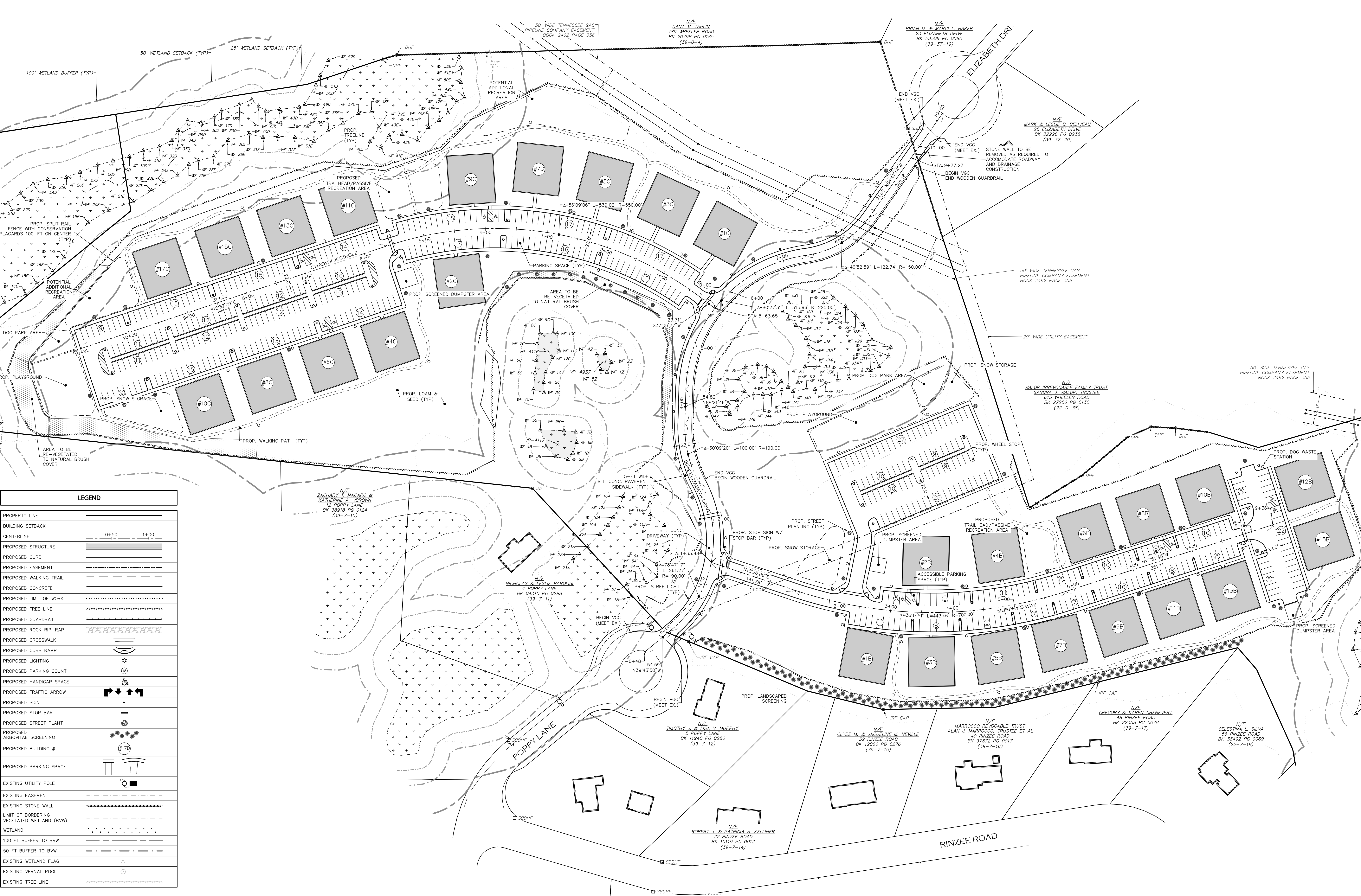
PROFESSIONAL LAND SURVEYOR FOR
CIVIL DESIGN CONSULTANTS, INC.



DRAWING TITLE:
EXISTING CONDITIONS PLAN

DRAWING #:
C-2B

NAD83



DATE	REVISIONS
10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
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10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION

APPLICANT:
**THE HOMES AT
MURPHY'S FARM LLC**
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED: APRIL 22, 2024

PROJECT #: 23-10524

PREPARED BY: TWS



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

**CIVIL
DESIGN**
CONSULTANTS, INC.

344 North Main Street | Andover, MA 01810
(978) 468-0503 | www.civil-design.com

DRAWING TITLE:
**LAYOUT &
MATERIALS PLAN**

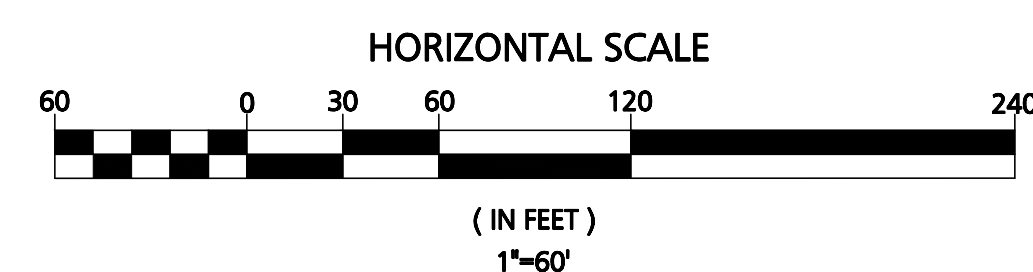
DRAWING #:

C-3



PROJECT NOTES:

1. SEE SHEET C-1 FOR FULL PROJECT NOTES
2. SEE CONSTRUCTION SEQUENCING NOTES ON SHEET D-1.
3. CONTRACTOR IS TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF THE EXISTING SEWER AND WATER PRIOR TO CONSTRUCTION.
4. PROPOSED WATER AND SEWER MAINS TO MAINTAIN 10-FT OF HORIZONTAL SEPARATION, WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND SEWER SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
5. PROPOSED GAS AND ELECTRIC SERVICE LOCATIONS TO BE CONFIRMED BY THE UTILITY COMPANY.
6. DOWNSPOUT/GUTTER LOCATIONS TO BE COORDINATED WITH ARCHITECT



DATE	REVISIONS
10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION

APPLICANT:

**THE HOMES AT
MURPHY'S FARM LLC**
18 CASSIMERE STREET
ANDOVER, MA 01810

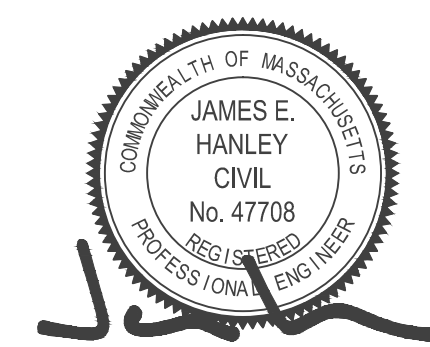
PROJECT:

MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED: APRIL 22, 2024

PROJECT #: 23-10524

PREPARED BY: TWS



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

**CIVIL
DESIGN**
CONSULTANTS, INC.

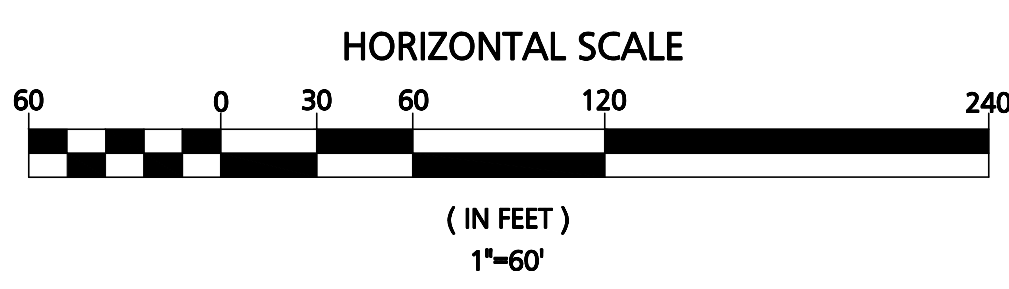
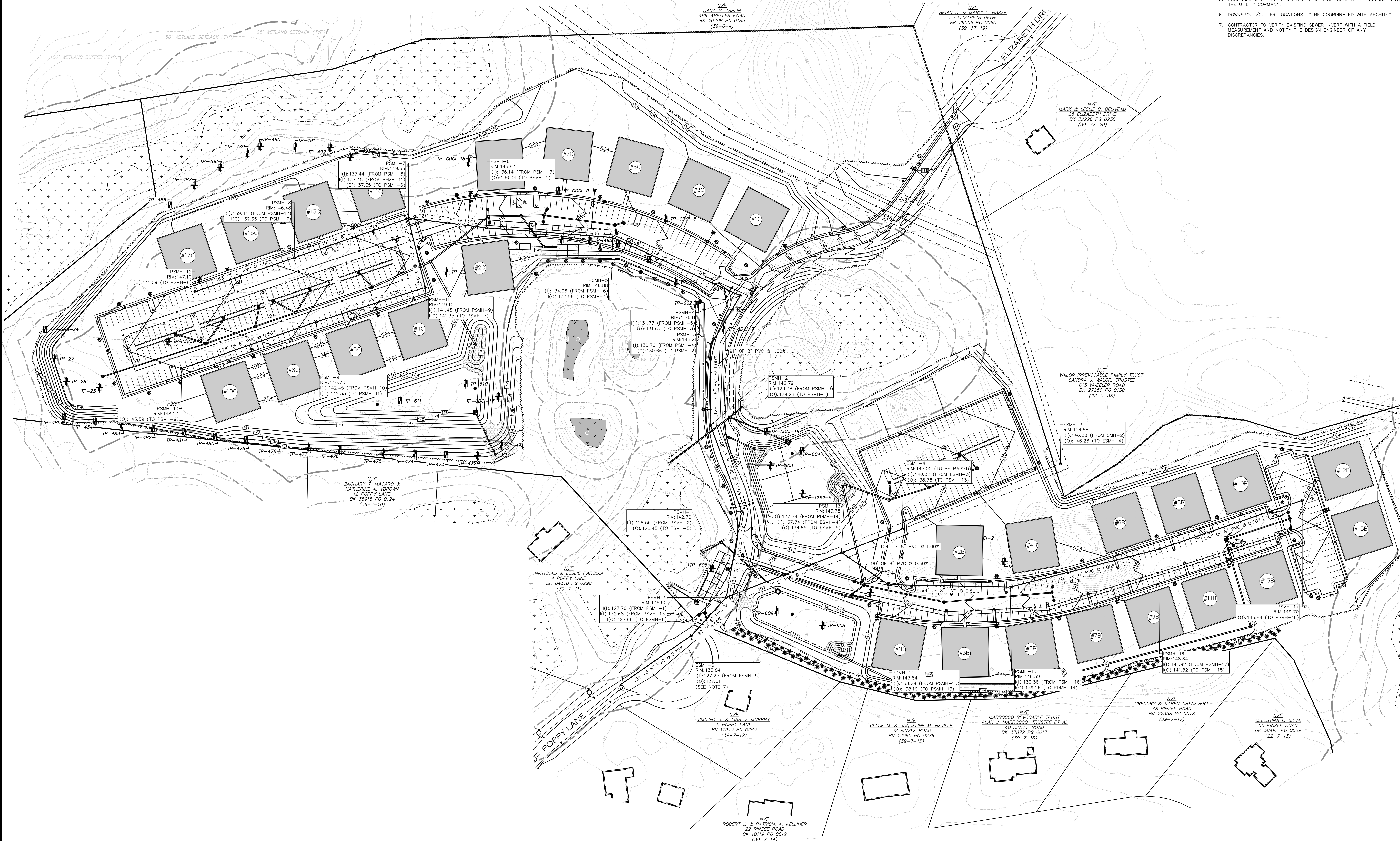
344 North Main Street | Andover, MA 01820
(978) 446-0502 | www.civil505.com

DRAWING TITLE:

**GRADING, DRAINAGE
& UTILITIES PLAN**

DRAWING #:

C-4A



PROJECT NOTES:

1. SEE SHEET C-1 FOR FULL PROJECT NOTES
2. SEE CONSTRUCTION SEQUENCING NOTES ON SHEET D-1.
3. CONTRACTOR IS TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF THE EXISTING SEWER AND WATER PRIOR TO CONSTRUCTION.
4. PROPOSED WATER AND SEWER MAINS TO MAINTAIN 10'-FT OF HORIZONTAL SEPARATION, WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND SEWER SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
5. PROPOSED GAS AND ELECTRIC SERVICE LOCATIONS TO BE CONFIRMED BY THE UTILITY COMPANY.
6. DOWNSPOUT/GUTTER LOCATIONS TO BE COORDINATED WITH ARCHITECT.
7. CONTRACTOR TO VERIFY EXISTING SEWER INVERT WITH A FIELD MEASUREMENT AND NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES.

DATE	DESCRIPTION
10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS

APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
 18 CASSIMERE STREET
 ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
 DRACUT, MA 01826

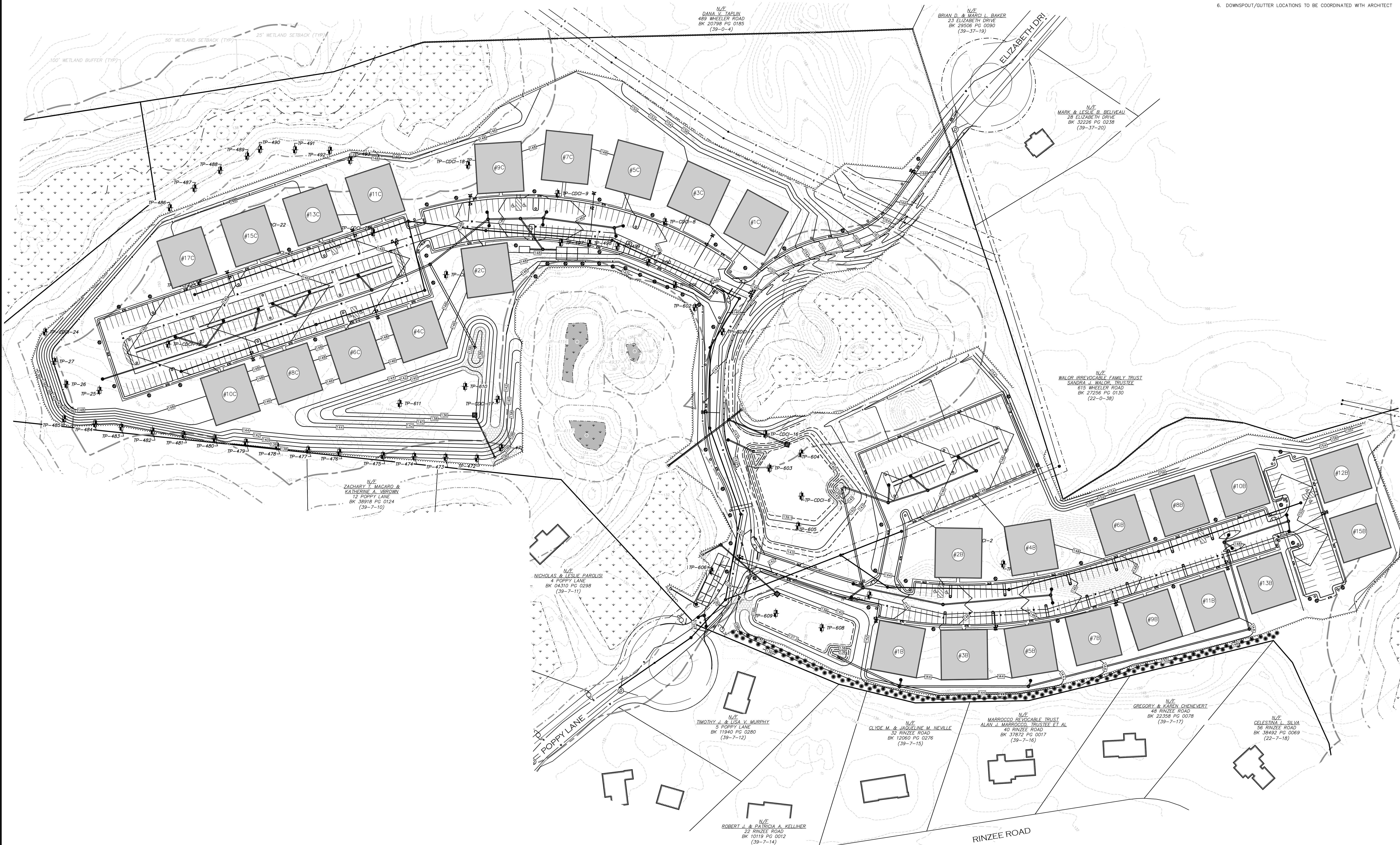
DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS

PROFESSIONAL ENGINEER FOR CIVIL DESIGN
 CONSULTANTS, INC.

CIVIL DESIGN
 CONSULTANTS, INC.

DRAWING TITLE:
GRADING, SEWER & UTILITIES PLAN

DRAWING #:
C-4B



PROJECT NOTES:

1. SEE SHEET C-1 FOR FULL PROJECT NOTES
2. SEE CONSTRUCTION SEQUENCING NOTES ON SHEET D-1.
3. CONTRACTOR IS TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF THE EXISTING SEWER AND WATER PRIOR TO CONSTRUCTION.
4. PROPOSED WATER AND SEWER MAINS TO MAINTAIN 10'-FT OF HORIZONTAL SEPARATION. WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND SEWER SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
5. PROPOSED GAS AND ELECTRIC SERVICE LOCATIONS TO BE CONFIRMED BY THE UTILITY COMPANY.
6. DOWNSPOUT/GUTTER LOCATIONS TO BE COORDINATED WITH ARCHITECT

DATE	DESCRIPTION
10/2/25	REV. PER PEER REVIEW COMMENTS
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12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS

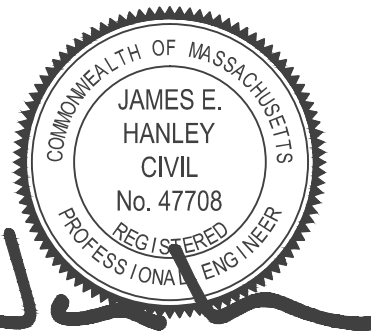
APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
 18 CASSIMERE STREET
 ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
 DRACUT, MA 01826

DATE ISSUED: APRIL 22, 2024

PROJECT #: 23-10524

PREPARED BY: TWS



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
 CONSULTANTS, INC.

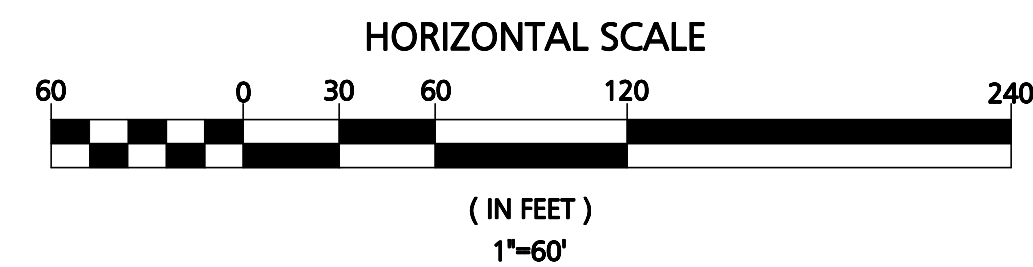


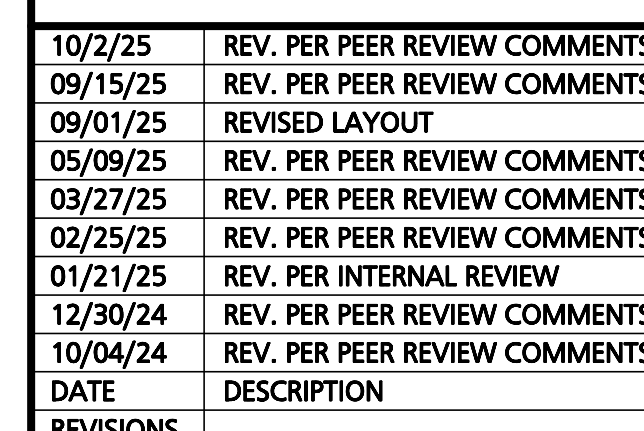
344 North Main Street | Andover, MA 01810
 (978) 466-0800 | www.cdci85.com

DRAWING TITLE:
OVERALL GRADING & UTILITIES PLAN

DRAWING #:

C-4C





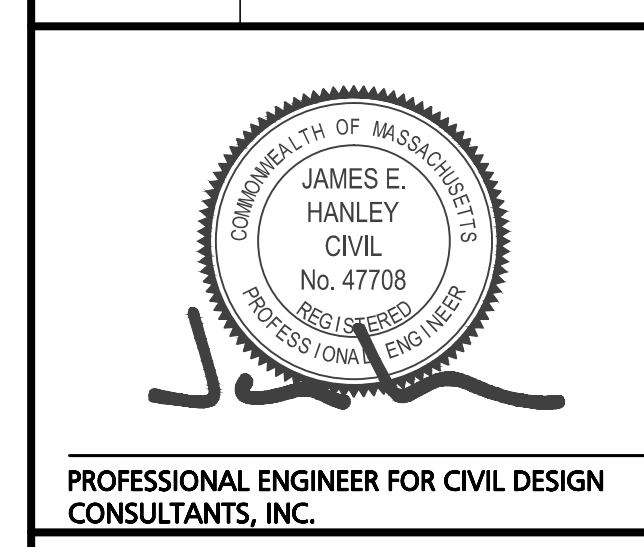
APPLICANT:
THE HOMES AT
MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:

MURPHY'S FARM

DRACUT, MA 01826

DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS



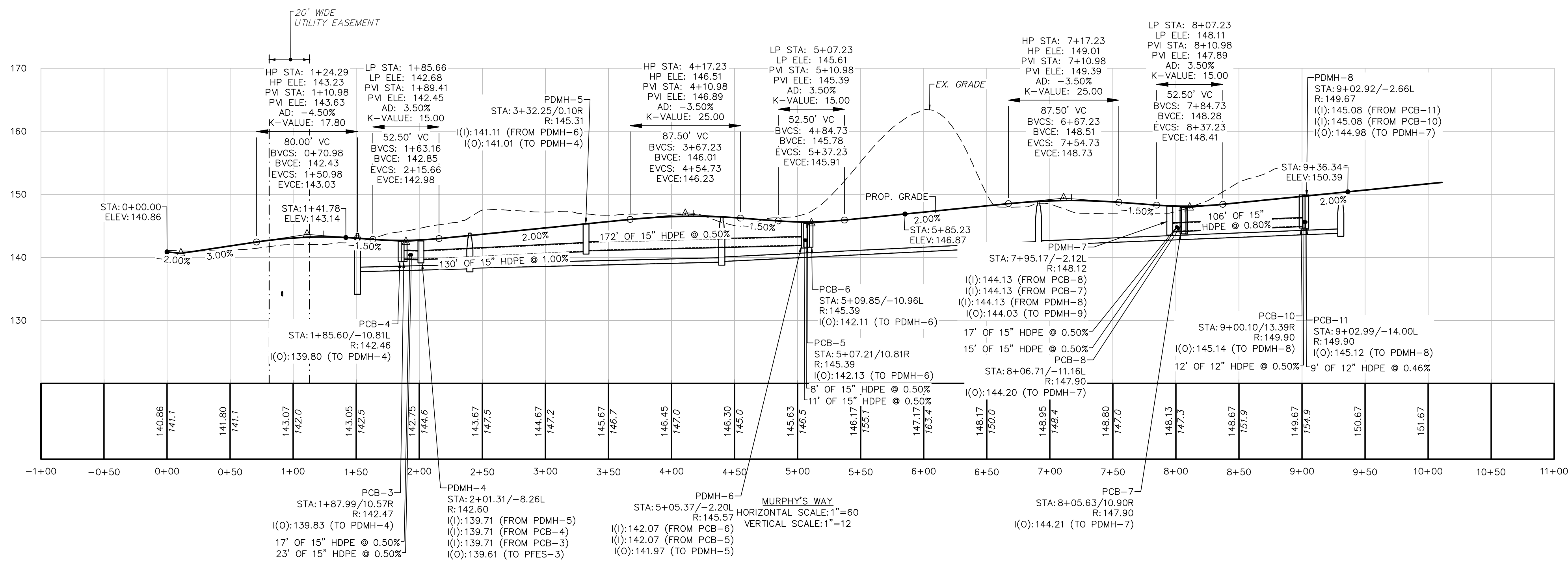
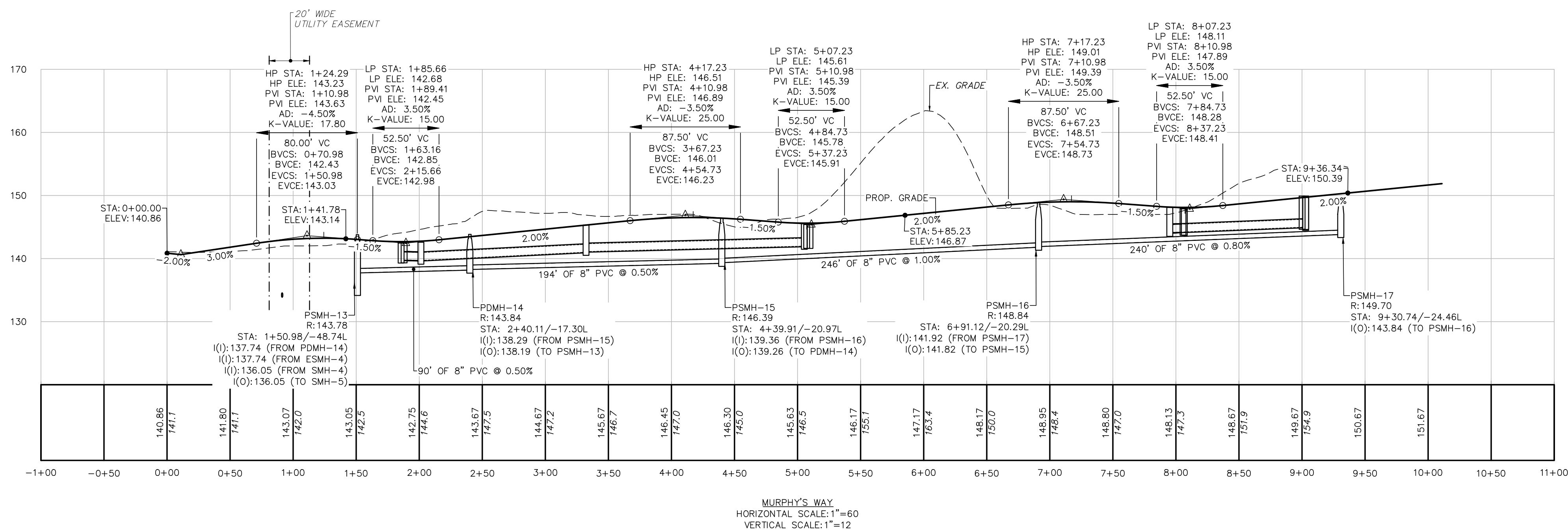
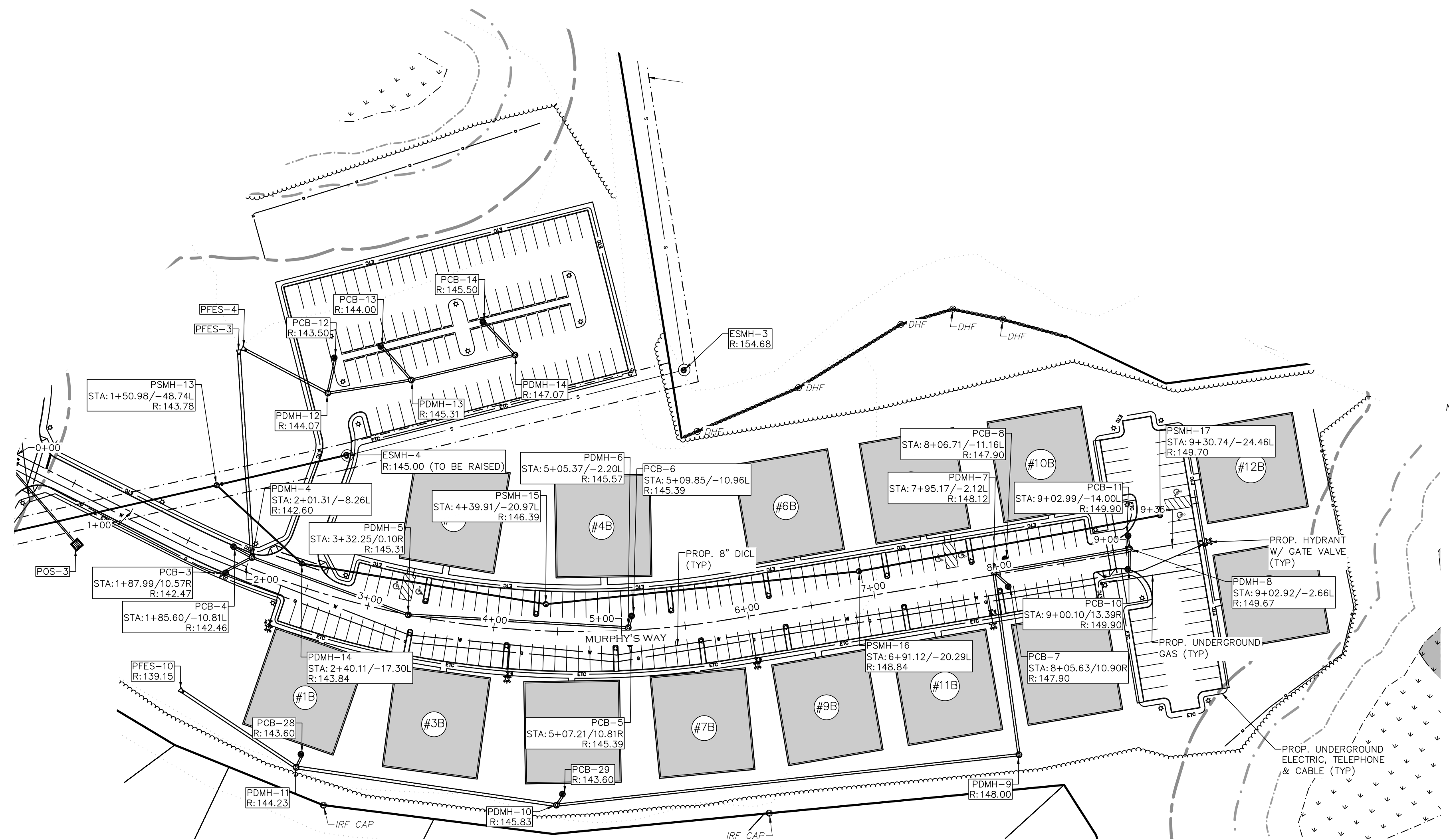
**CIVIL
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(978) 416-0920 | www.civilri.com

DRAWING TITLE:
PLAN & PROFILE

DRAWING #:

C-5A



DATE	DESCRIPTION
10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS

APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

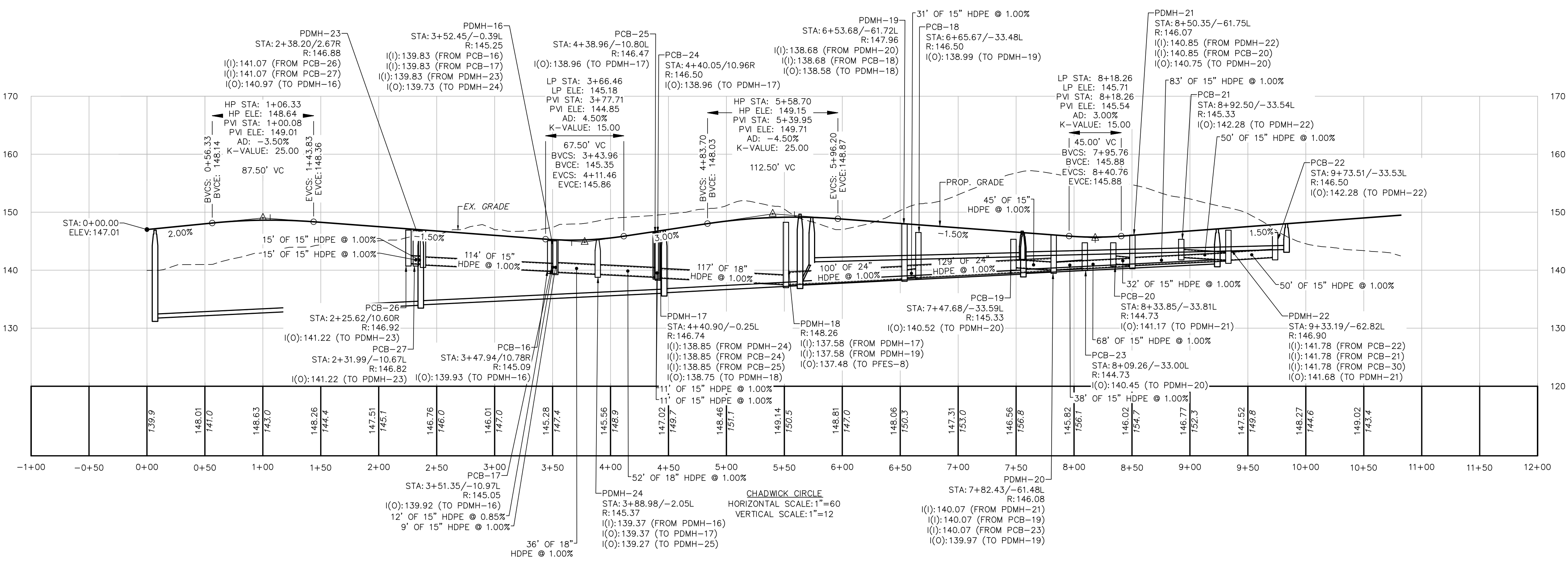
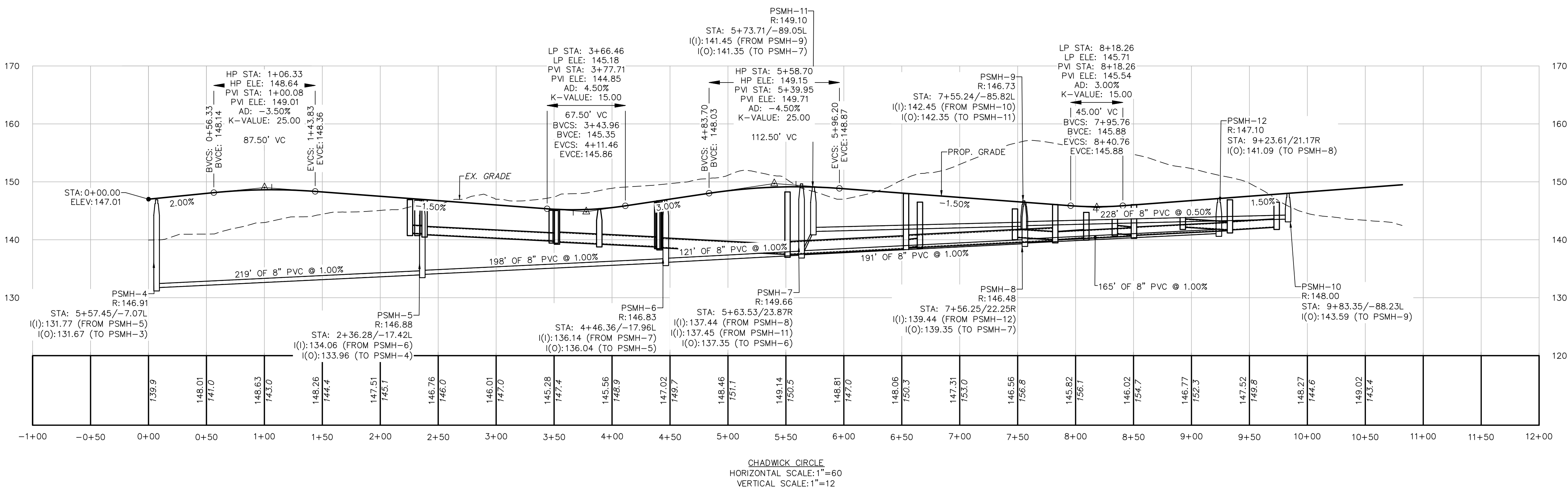
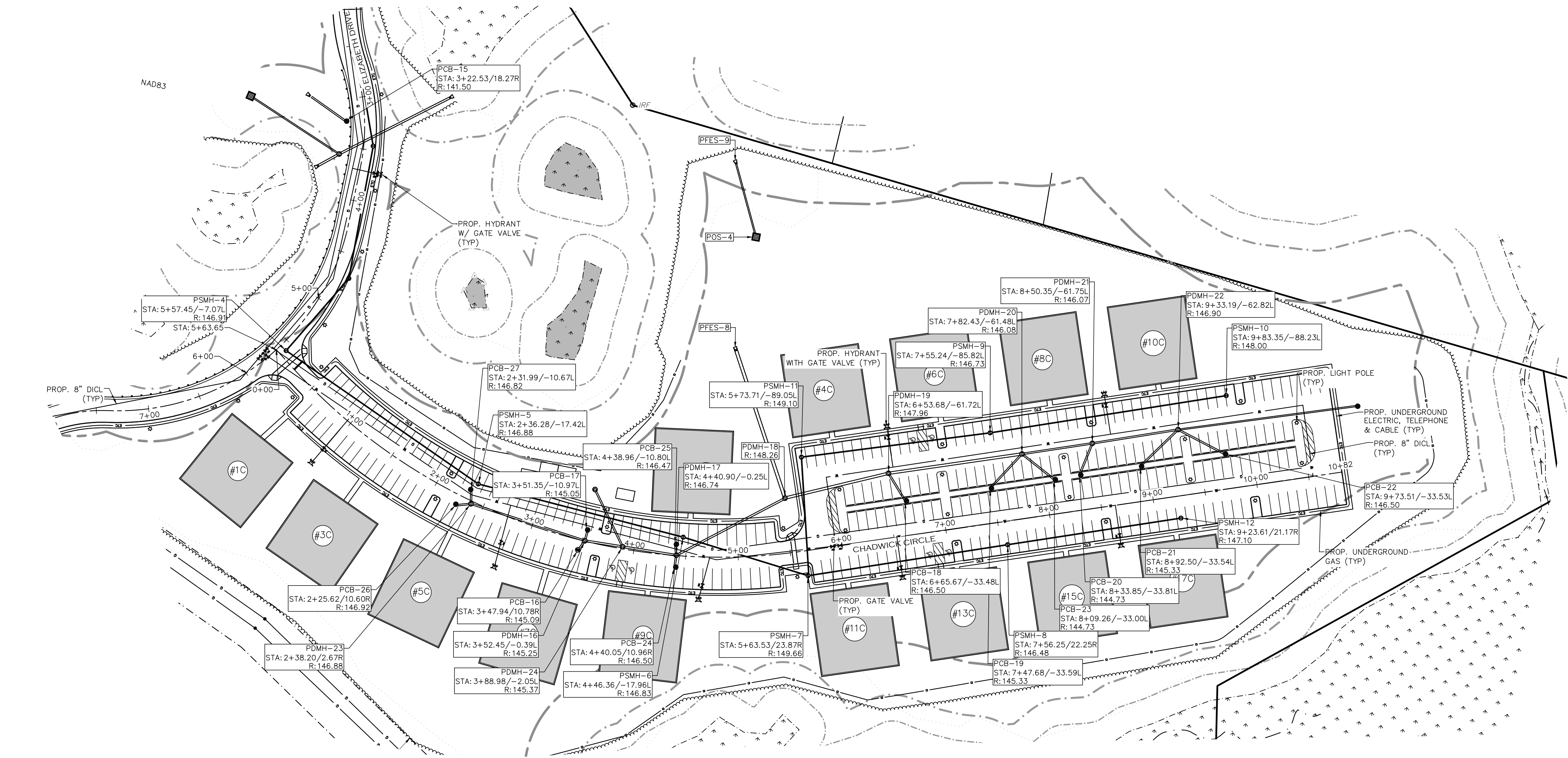
DATE ISSUED: APRIL 22, 2024
PROJECT #: 23-10524
PREPARED BY: TWS

PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

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DRAWING TITLE:
PLAN & PROFILE

DRAWING #:
C-5B

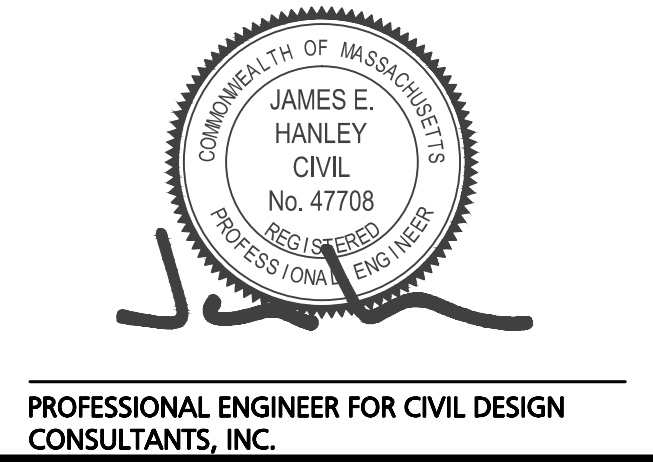


10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION

APPLICANT:
**THE HOMES AT
MURPHY'S FARM LLC**
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS



DRAWING TITLE:
PLAN & PROFILE

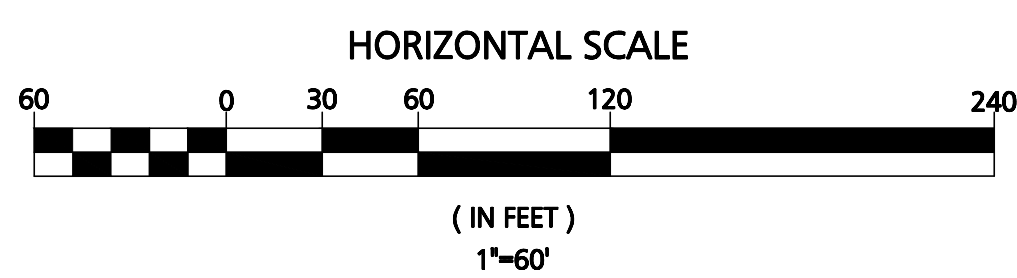
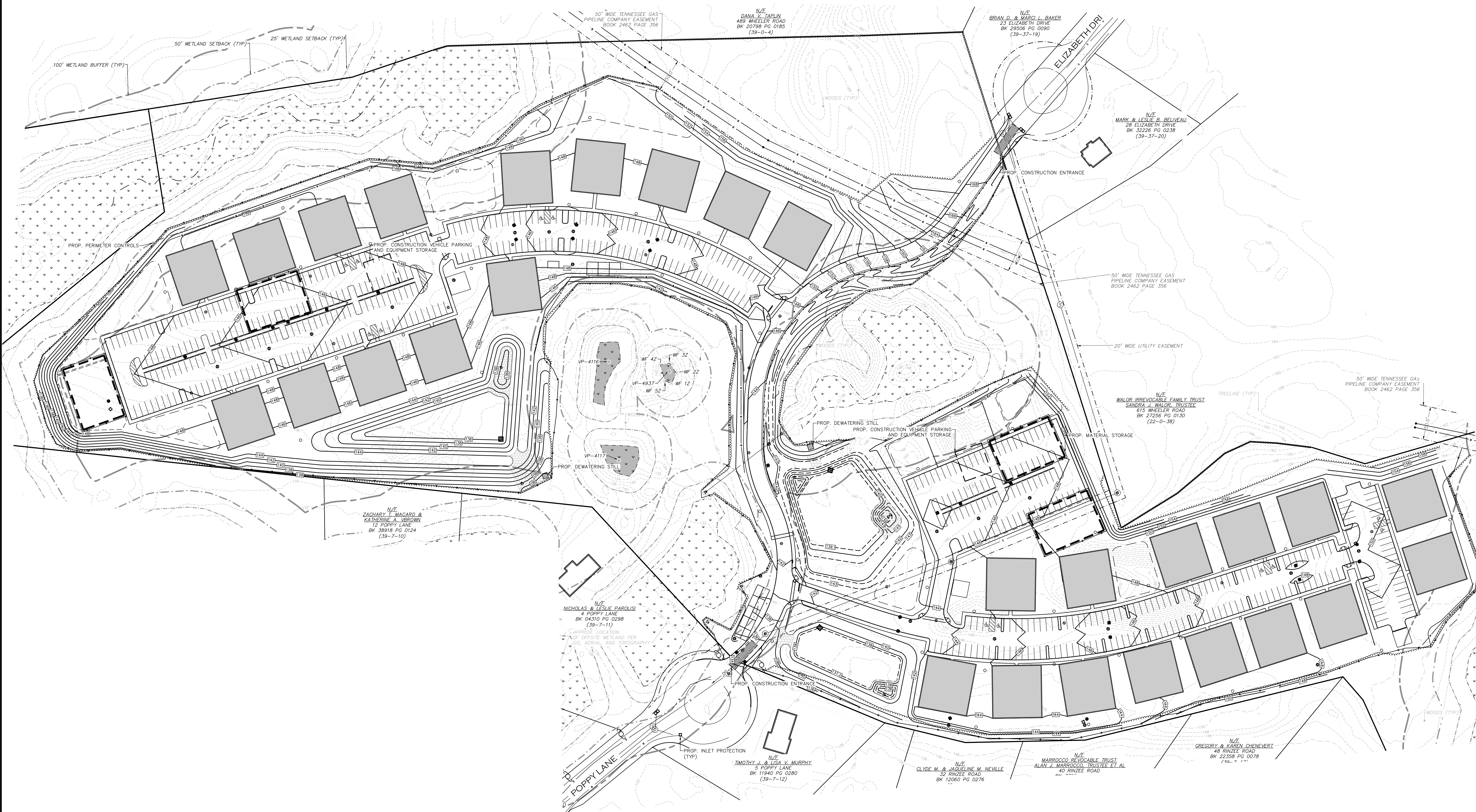
DRAWING #:
C-5C

NAD83



PROJECT NOTES:

1. SEE SHEET C-1 FOR FULL PROJECT NOTES
2. SEE EROSION CONTROL NOTES ON SHEET D-2.



DATE	REVISIONS
10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
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01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS

APPLICANT:
THE HOMES AT MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:
MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED:	APRIL 22, 2024
PROJECT #:	23-10524
PREPARED BY:	TWS



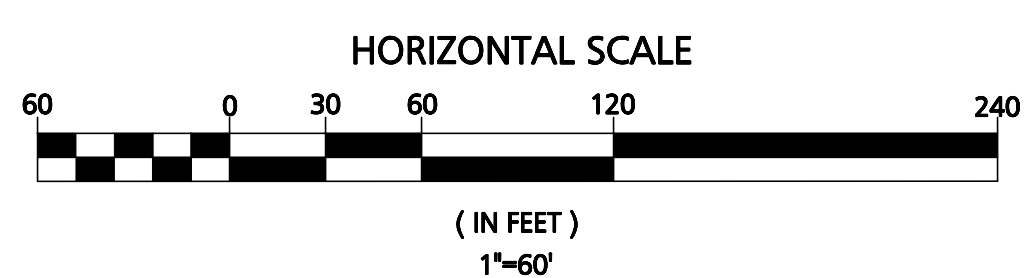
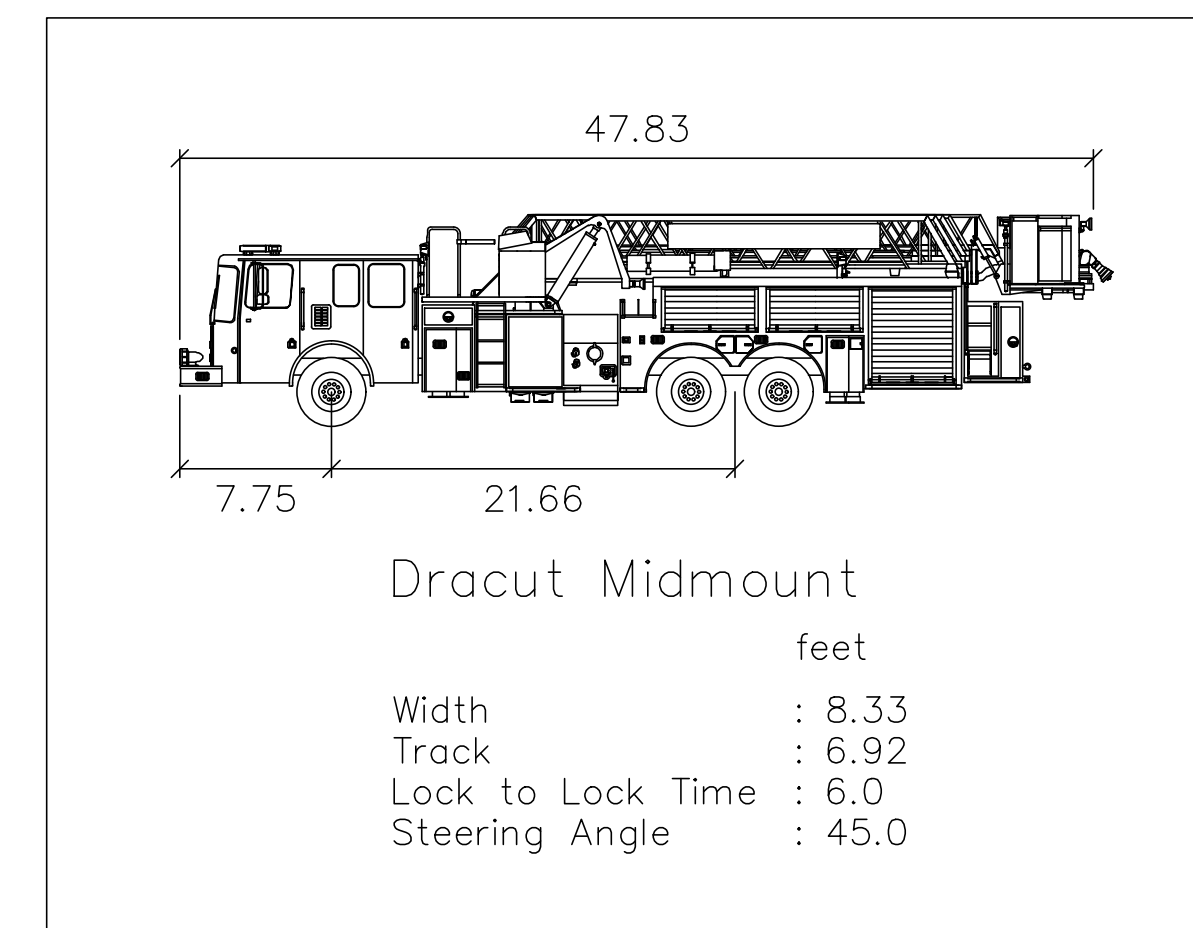
PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.



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DRAWING TITLE:
EROSION CONTROL PLAN

DRAWING #:
C-6



N/E
NICHOLAS & LESLIE PAROLISI
4 POPPY LANE
BK 04310 PG 0298
(39-7-11)

APPROX. LOCATION
OF OFFSITE WETLAND PER
GIS, AERIAL AND TOPOGRAPHY

TBM-3
124.90

N/E
TIMOTHY J. & LISA V. MURPHY
3 POPPY LANE
BK 11940 PG 0280
(39-7-12)

N/E
CLYDE M. & JARLENE M. NEVILLE
32 RINZEE ROAD
BK 12060 PG 0276

N/E
MARROCCO REVOCABLE TRUST
ALAN J. MARROCCO, TRUSTEE ET AL
40 RINZEE ROAD

N/E
GREGORY & KAREN CHENEVERT
48 RINZEE ROAD
BK 22358 PG 0078
(19-7-11)

DATE	DESCRIPTION
10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS

APPLICANT:

THE HOMES AT
MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01820

PROJECT:

MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED: APRIL 22, 2024

PROJECT #: 23-10524

PREPARED BY: TWS



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

CIVIL
DESIGN
CONSULTANTS, INC.

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DRAWING TITLE:

FIRE TRUCK TURNING
PLAN

DRAWING #:

C-7

Q:\Projects\33-1024\Murphy\2-LOT ARI-4mg_Sep 15, 2025 - 8:14am GREEN BARBER

LAND USE TABLE			
LOCATION:	231 WHEELER STREET, DRACUT, MA 01826		
ZONE:	RESIDENTIAL 1 (R-1)		
USE:	RESIDENTIAL	PROPOSED	
	REQUIRED	LOT Y-1	LOT Y-2
MINIMUM LOT AREA (SF)	40,000	193,287	274,520
MINIMUM LOT FRONTAGE (FT)	175	N/A	471.31
MINIMUM LOT WIDTH (FT)	50	>50	>50
MINIMUM FRONT SETBACK (FT)	30	N/A(1)	—
MINIMUM SIDE SETBACK (FT)	15	N/A(1)	—
MINIMUM REAR SETBACK (FT)	35	N/A(1)	—
MAX. BUILDING COVERAGE	30%	N/A(1)	—
MAX. BUILDING HEIGHT (FT)	36	N/A(1)	—

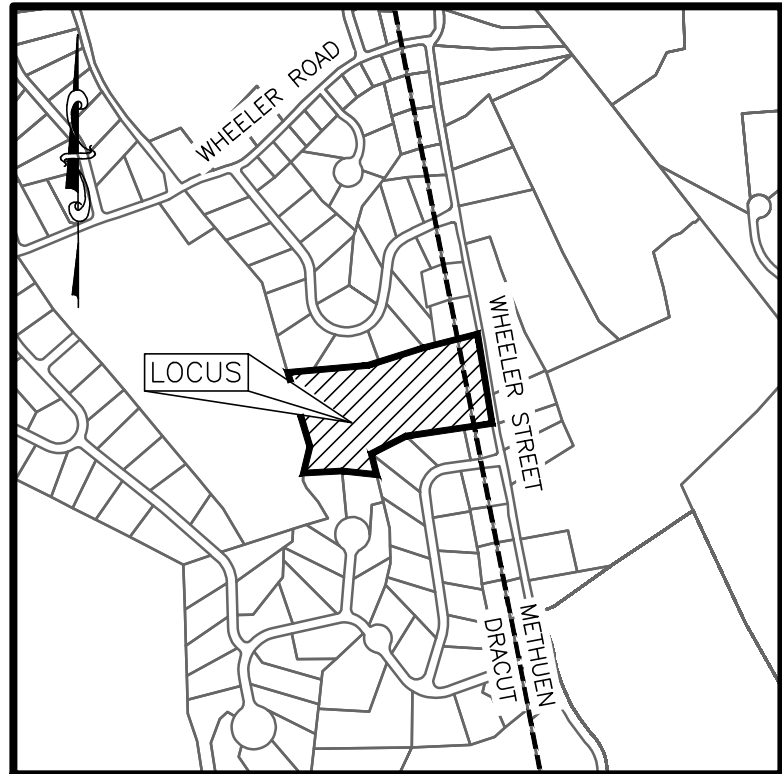
1. LOT 1 AS SHOWN IS NOT A BUILDABLE LOT.

APPROVAL NOT REQUIRED UNDER THE
SUBDIVISION CONTROL LAW, DRACUT
ZONING BOARD OF APPEALS ACTING ON
BEHALF OF THE DRACUT PLANNING BOARD
PURSUANT TO ITS AUTHORITY UNDER THE
COMPREHENSIVE PERMIT STATUTE

DATE OF ENDORSEMENT

LOCUS MAP

(SCALE: 1:1000)



FOR REGISTRY USE ONLY

THIS PLAN WAS PREPARED IN
ACCORDANCE WITH THE RULES AND
REGULATIONS FOR RECORDING ADOPTED
BY THE REGISTERS OF DEEDS IN 1978
AND AMENDED JANUARY 12, 1988.

9/15/25
SURVEYOR DATE

NOTES:

- LOCATION: 231 WHEELER STREET
(PARCEL ID: 22-0-53)
- DEED: MIDDLESEX NORTH REGISTRY OF DEEDS
BOOK 31624 PAGE 254
- ZONE: RESIDENTIAL 1 (R-1)
- USE: RESIDENTIAL
- OWNER: O'BRIEN HOMES, INC.
18 CASSIMERE STREET
ANDOVER, MA 01810
- SOILS / WETLANDS: NORSE ENVIRONMENTAL SERVICES, INC.
2100 LAKEVIEW AVENUE, UNIT 3A
DRACUT, MA 01826
- EXISTING CONDITIONS INFORMATION GENERATED FROM RECORD
DOCUMENTS, READILY AVAILABLE INFORMATION AS WELL AS AN
ON THE GROUND SURVEY PERFORMED IN 2024.
- PLAN BEARINGS ARE BASED UPON THE MASSACHUSETTS STATE
PLANE COORDINATE SYSTEM (NAD83) – MAINLAND ZONE, PER
GPS OBSERVATIONS.
- PROPERTY IS NOT LOCATED WITHIN A DESIGNATED FLOOD HAZARD
AREA PER FLOOD INSURANCE RATE MAP NUMBER 25017C0161F
DATED JULY 8, 2025.
- THE INTENT OF THIS PLAN IS TO MEET THE FILING REQUIREMENTS
OF THE RULES AND REGULATIONS GOVERNING SUBDIVISION OF
LAND IN DRACUT, MASSACHUSETTS FOR A PLAN BELIEVED TO
NOT REQUIRE APPROVAL.
- THIS PLAN IS NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF
PROPERTIES.
- THE PREPARATION OF THIS PLAN IS NOT A DETERMINATION OF
COMPLIANCE WITH THE TOWN OF DRACUT ZONING BY-LAW.

REFERENCES

ESSEX NORTH COUNTY REGISTRY OF DEEDS

PLAN NO.6829
PLAN NO.7024
PLAN NO.15747 (TOWN LINE)
PLAN NO.16175
PLAN NO.16176
PLAN NO.16177
PLAN NO.16826

MIDDLESEX NORTH COUNTY REGISTRY OF DEEDS

PLAN BOOK 66 PLAN 85
PLAN BOOK 139 PLAN 61
PLAN BOOK 145 PLAN 56 (LOCUS)
PLAN BOOK 151 PLAN 62
PLAN BOOK 155 PLAN 87
PLAN BOOK 156 PLAN 81
PLAN BOOK 159 PLAN 132
PLAN BOOK 161 PLAN 136
PLAN BOOK 165 PLAN 93
PLAN BOOK 174 PLAN 5
PLAN BOOK 175 PLAN 4 (TOWN LINE)
PLAN BOOK 196 PLAN 55
PLAN BOOK 206 PLAN 26
PLAN BOOK 208 PLAN 103
PLAN BOOK 216 PLAN 21
PLAN BOOK 216 PLAN 111(TOWN LINE)
PLAN BOOK 231 PLAN 110
PLAN BOOK 231 PLAN 142
PLAN BOOK 235 PLAN 67 (LOCUS)
PLAN BOOK 244 PLAN 26 (LOCUS)
PLAN BOOK 249 PLAN 74
PLAN BOOK 249 PLAN 75
PLAN BOOK 257 PLAN 24

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

LO #1425
LO #1426
LO #2141
LO #2226
LO #3143
LO #3265

COMMONWEALTH OF MASSACHUSETTS HARBOR AND LAND
COMMISSION.

ATLAS OF THE BOUNDARIES OF THE TOWNS OF
DRACUT, MIDDLESEX COUNTY AND METHUEN, ESSEX
COUNTY. 1906.



THE PROPERTY LINES SHOWN ARE THE LINES DIVIDING
EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND
WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS
OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW
LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW
WAYS ARE SHOWN.
CHAPTER 41, SECTION 81X

9/15/25
EDWARD A. CUOCO SR., P.L.S. #584411 DATE

DATE	DESCRIPTION
REVISIONS	

APPLICANT:

O'BRIEN HOMES INC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:

231 WHEELER STREET
DRACUT, MA 01826

DATE ISSUED: SEPTEMBER 15, 2025

PROJECT #: 23-10524

PREPARED BY: GBB



9/15/25
PROFESSIONAL LAND SURVEYOR FOR
CIVIL DESIGN CONSULTANTS, INC.

**CIVIL
DESIGN**
CONSULTANTS, INC.

344 North Main Street | Andover - MA 01810
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DRAWING TITLE:

**APPROVAL NOT
REQUIRED PLAN**

DRAWING #:

C-8

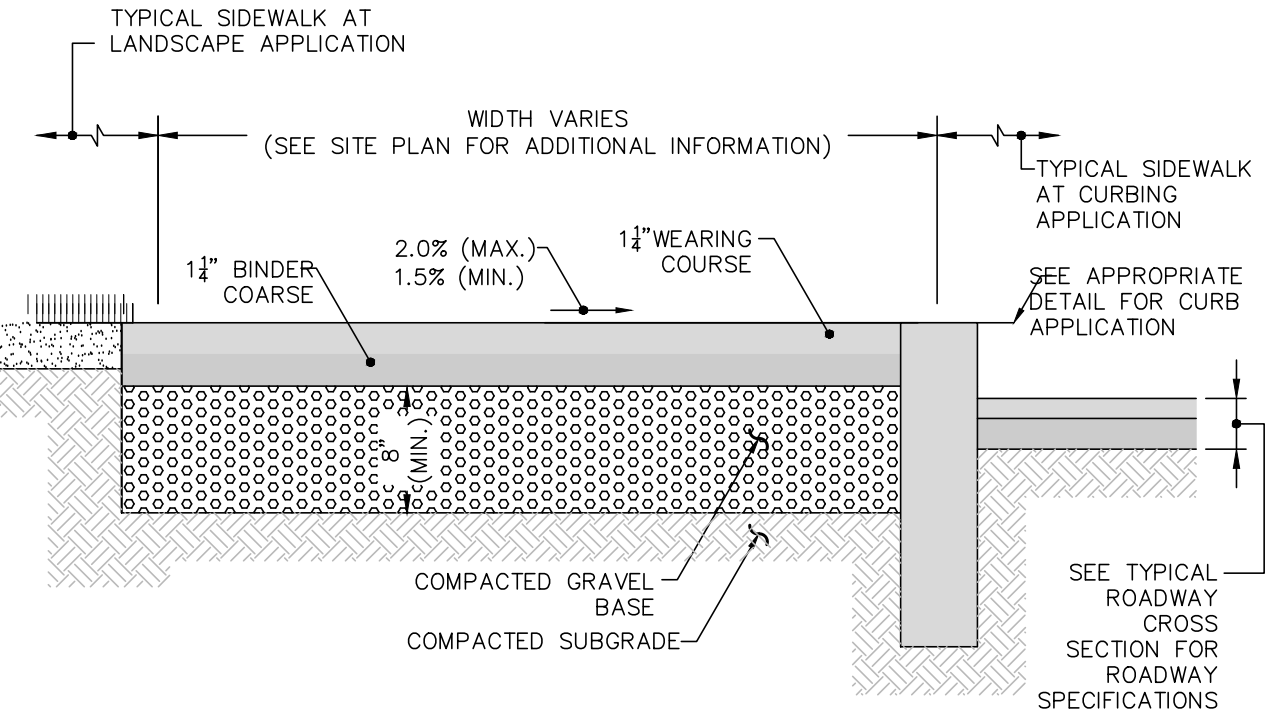
GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INSPECTIONS, BONDS, ETC. AND OTHER APPROVAL RELATED ITEMS. NO CONSTRUCTION SHALL COMMENCE UNTIL SUCH PERMITS HAVE BEEN SECURED.
3. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE MASSDOT AND THE LOCAL SUBDIVISION REGULATIONS.
4. CONTRACTOR TO CONFIRM AND VERIFY THE VALIDITY, LOCATION, MATERIAL, AND AVAILABILITY TO USE EXISTING UTILITIES ON OR NEAR THE PROJECT SITE PROPERTY. CONTRACTOR TO LOCATE EXISTING UTILITIES AND CONFIRM SAID UTILITIES WITH ALL APPLICABLE MUNICIPALITIES AND UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. ONCE UTILITIES HAVE BEEN CONFIRMED IN THE FIELD BY CONTRACTOR AND VERIFIED BY APPLICABLE MUNICIPALITY AND UTILITY COMPANY AND CONNECTION HAS BEEN APPROVED BY ENTITY, ONLY THEN SHALL THE CONTRACTOR CONSTRUCT AND UTILIZE THESE UTILITIES. CONTRACTOR TO IMMEDIATELY INFORM THE ENGINEER OF RECORD OF ANY DEVIATIONS TO PLANS.
5. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE ANY EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION, TO PERMIT REVISIONS TO PLANS IF NECESSARY. THE EXISTENCE AND/OR LOCATION OF UTILITIES SHOWN ON THESE PLANS MAY BE ONLY APPROXIMATELY CORRECT AND THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST THREE WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. ALL WATER, GAS, SEWER AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
7. RELOCATION OF ANY UTILITIES SHALL BE AT THE OWNERS EXPENSE AND COMPLETED WITH THE UTILITY WORK. THE OWNER SHALL BE NOTIFIED AS TO THE RELOCATIONS REQUIRED PRIOR TO THE START OF CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, WALKS, CURBS, ETC. THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
9. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.
10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE DOCUMENTS AND SUBSEQUENT ISSUED PLAN REVISIONS. ANY DEVIATIONS FROM THESE DOCUMENTS SHALL REQUIRE NOTIFICATION TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTING ANY CHANGE. THE CONTRACTOR WILL BE WORKING AT HIS OR HER OWN RISK.
11. ALL WATER AND SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN OF DRACUT RULES AND REGULATIONS

GENERAL CONSTRUCTION SEQUENCING

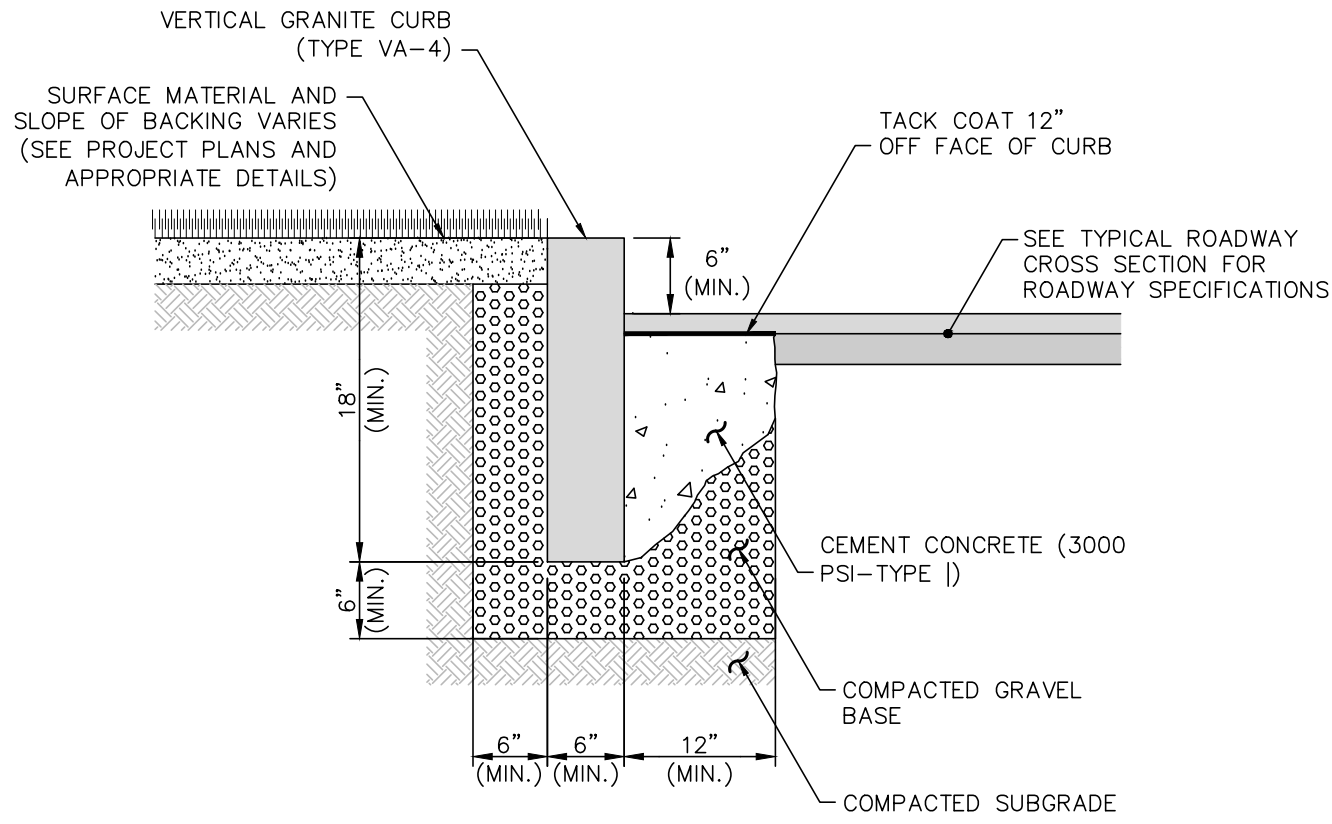
DESCRIBED BELOW ARE THE MAJOR CONSTRUCTION ACTIVITIES. THEY ARE PRESENTED IN THE ORDER (OR SEQUENCE) THEY ARE EXPECTED TO BEGIN, BUT EACH ACTIVITY WILL NOT NECESSARILY BE COMPLETED BEFORE THE NEXT BEGINS. ALSO, THESE ACTIVITIES COULD OCCUR IN A DIFFERENT ORDER IF NECESSARY TO MAINTAIN ADEQUATE EROSION AND SEDIMENTATION CONTROL. ALL ACTIVITIES AND THE TIMEFRAME (BEGINNING AND ENDING DATES) SHALL BE RECORDED BY THE GENERAL CONTRACTOR:

1. CONTRACTOR TO REVIEW ALL LOCAL, STATE AND FEDERAL PERMITS.
2. REVIEW AND CERTIFY THE STORMWATER POLLUTION PREVENTION PLAN.
3. DELINEATE THE LIMIT OF THE TREE CLEARING OPERATIONS.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
5. CUT AND CLEAR TREES WITHIN THE AREA OF DISTURBANCE.
6. PLACE REMAINING EROSION CONTROL MEASURES PRIOR TO ANY EARTH MOVING OPERATIONS.
7. CONSTRUCT BASINS. LIMIT EXCAVATION TO WITHIN 1'-FT OF BASIN BOTTOM TO PREVENT SEDIMENT ACCUMULATION IN FINISHED BASIN BOTTOM. NO MATERIAL OR VEHICLE STORAGE SHOULD OCCUR OVER PROPOSED BASIN LOCATIONS, WHERE APPROPRIATE AND/OR AS-NEEDED, ADDITIONAL SILTATION FENCES, SEDIMENT TRAPS, OR STONE CHECKDAMS SHOULD BE CONSTRUCTED.
8. BEGIN ROUGH GRADING AND EARTHWORK OPERATIONS.
9. CONSTRUCT REMAINING DRAINAGE IMPROVEMENTS. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED NO LATER THAN 72-HOURS AFTER CONSTRUCTION ACTIVITIES CEASE. IF EARTHWORK TEMPORARILY CEASES ON A PORTION OF OR ON THE ENTIRE SITE, AND WILL NOT RESUME WITHIN 21-DAYS, THE AREA SHALL BE STABILIZED. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL, SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED; OR
D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
10. AFTER CONTRIBUTING AREAS HAVE BEEN STABILIZED BUT PRIOR TO BASINS RECEIVING RUNOFF, BASINS ARE TO BE BROUGHT TO FINAL GRADE. CONSTRUCTION VEHICLES SHOULD AVOID TRAVERSING THE BASIN BOTTOM TO PREVENT UNWANTED COMPACTION.
11. INSTALL ALL UNDERGROUND UTILITIES.
12. CONSTRUCT ROADWAYS ACCORDING TO THE PLAN. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
13. CONSTRUCT RESIDENCES AND ASSOCIATED INFRASTRUCTURE.
12. SURFACE TREATMENT OF ALL DISTURBED AREAS NOT PAVED OR OTHERWISE LANDSCAPED SHALL BE TREATED WITH 4" OF LOAM AND SEED.
13. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES CONSISTENT WITH THE PROCEDURE AND SCHEDULE OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN.
14. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
15. REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE ALL AREAS ARE STABILIZED WITH A SUITABLE STAND OF GRASS, PAVEMENT OR COMPACTED GRAVELS.



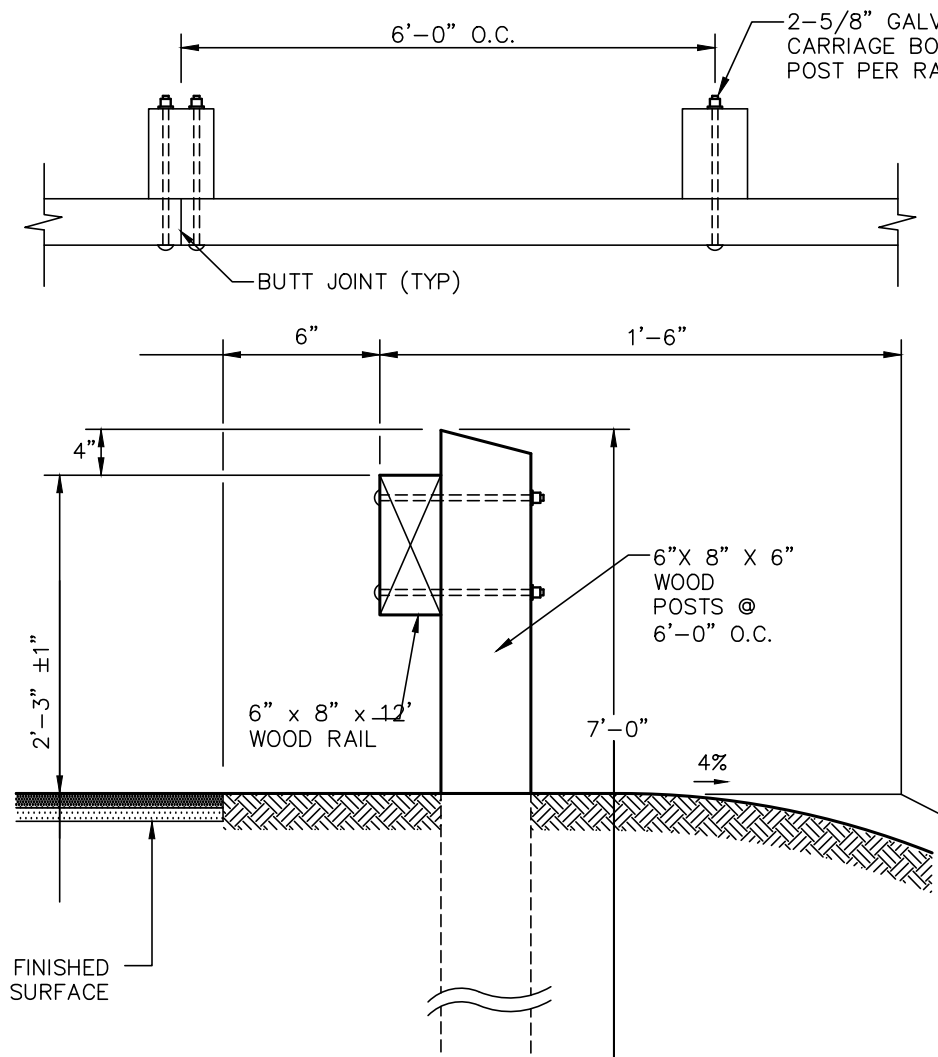
TYPICAL BITUMINOUS CONCRETE SIDEWALK

NOT TO SCALE



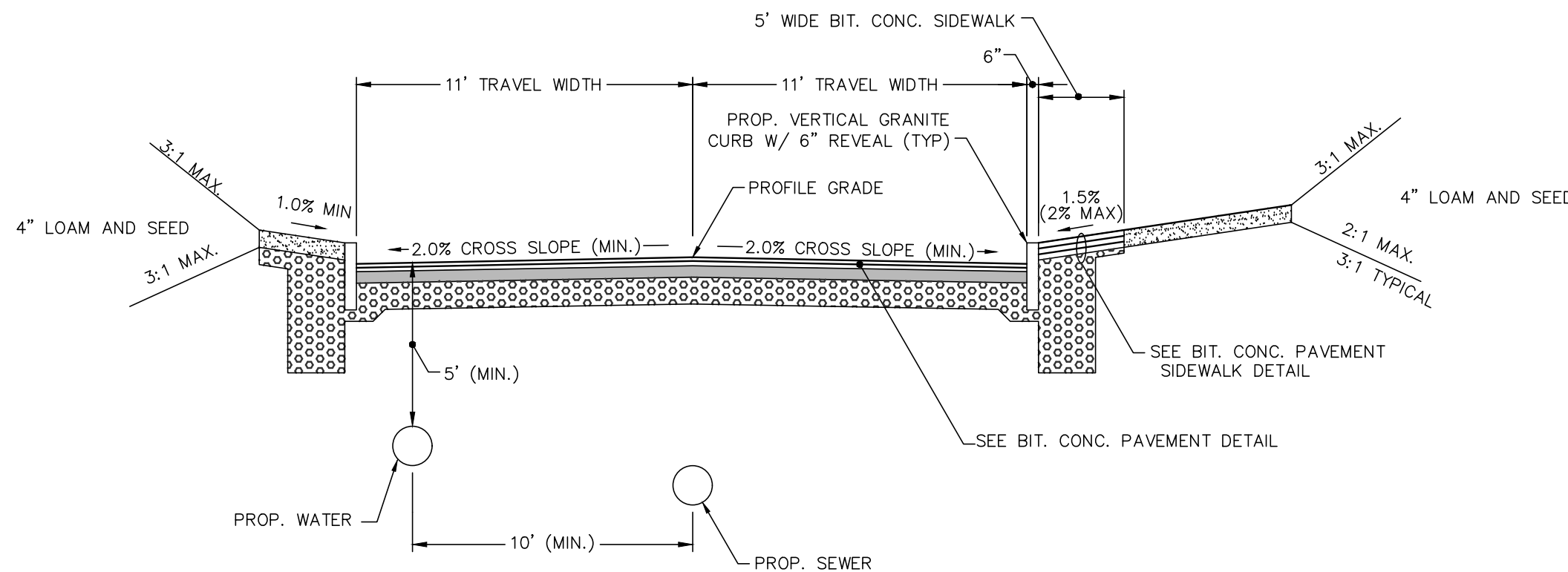
VERTICAL GRANITE CURB

NOT TO SCALE



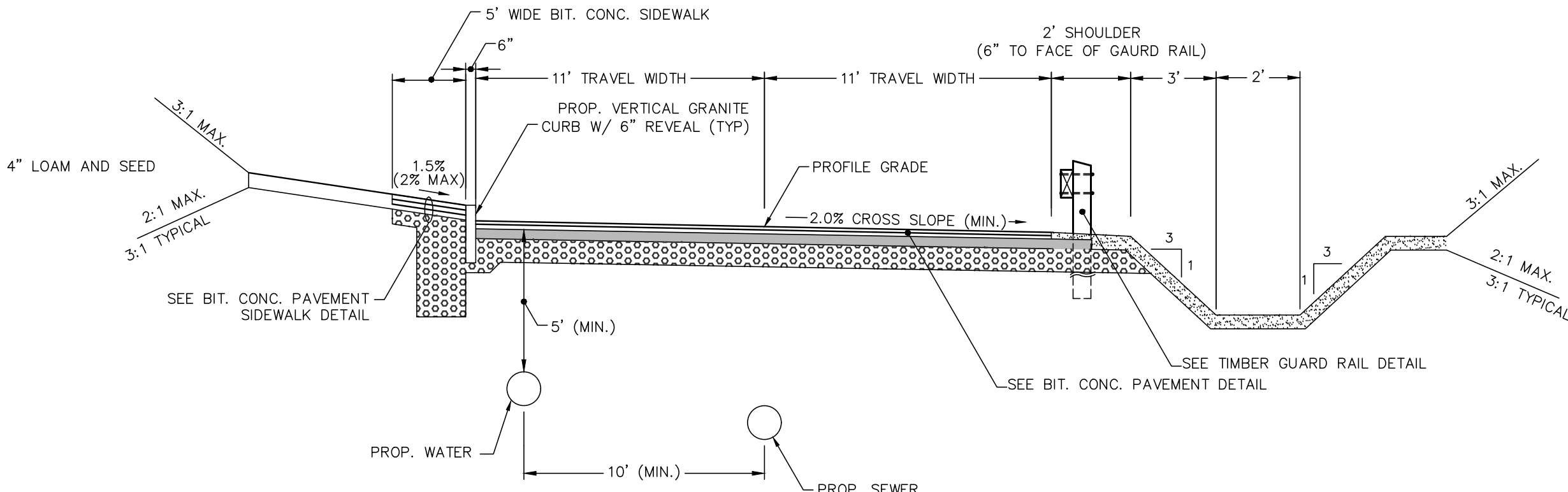
TIMBER GUARDRAIL

NOT TO SCALE



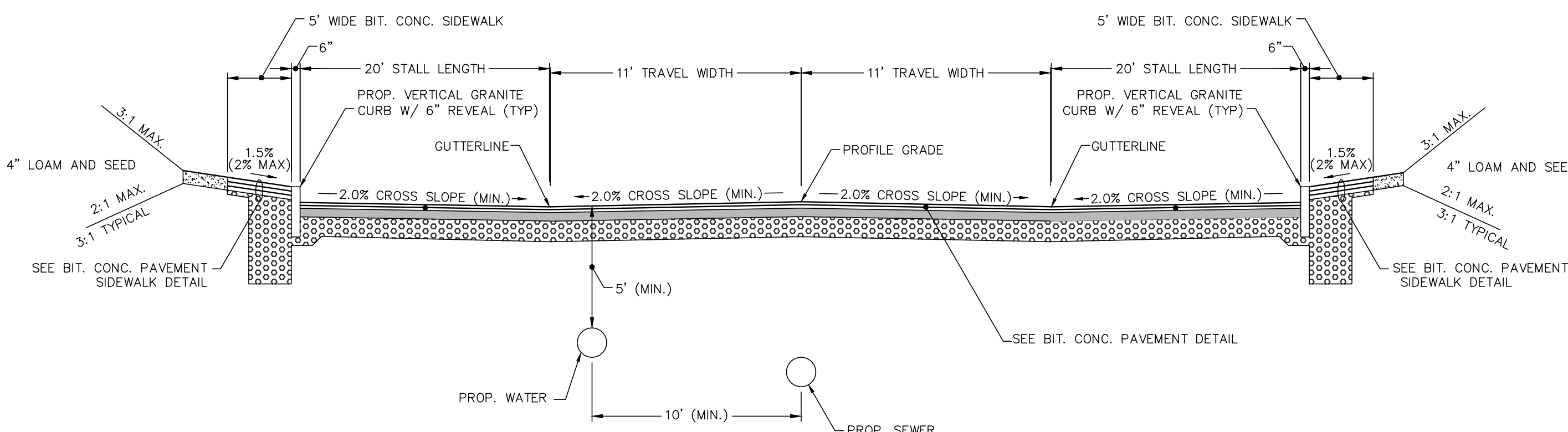
TYPICAL ROADWAY CROSS SECTION (CURBED W/ SIDEWALK)

NOT TO SCALE



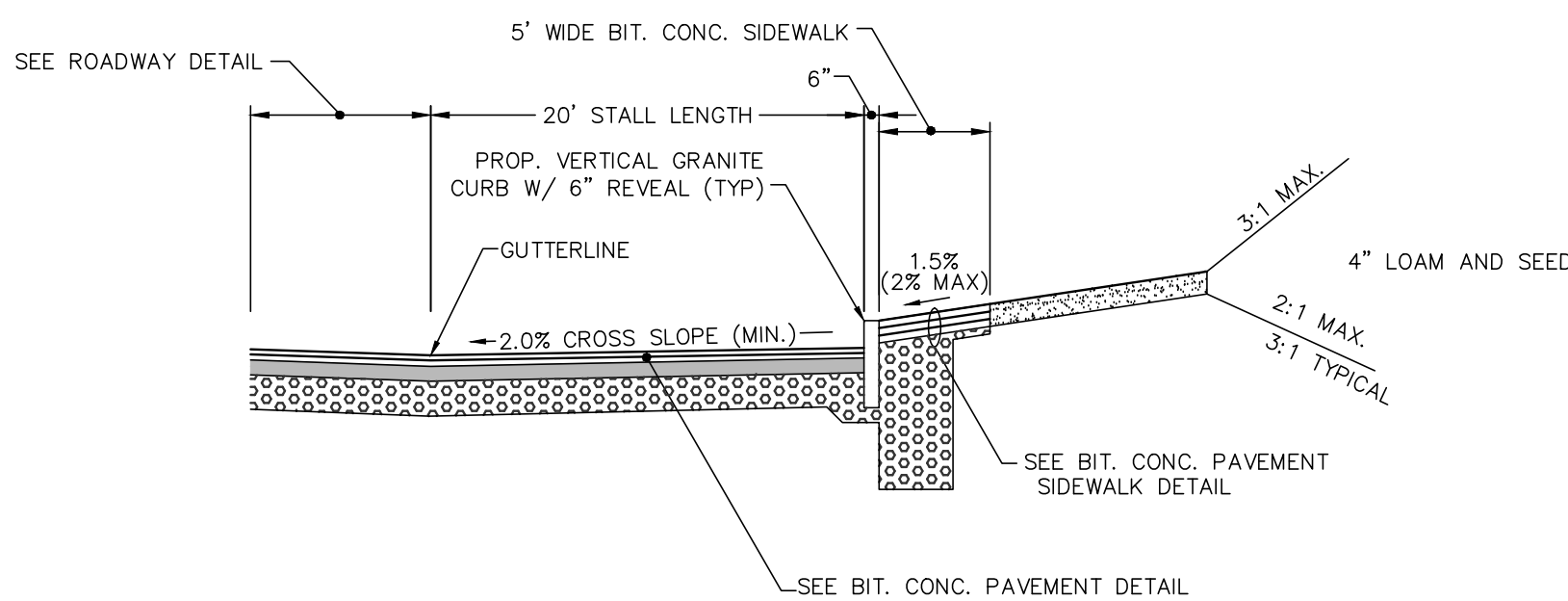
TYPICAL ROADWAY CROSS SECTION (HALF-CURB/HALF-SWALE)

NOT TO SCALE



TYPICAL ROADWAY CROSS SECTION (PARKING BOTH SIDES)

NOT TO SCALE



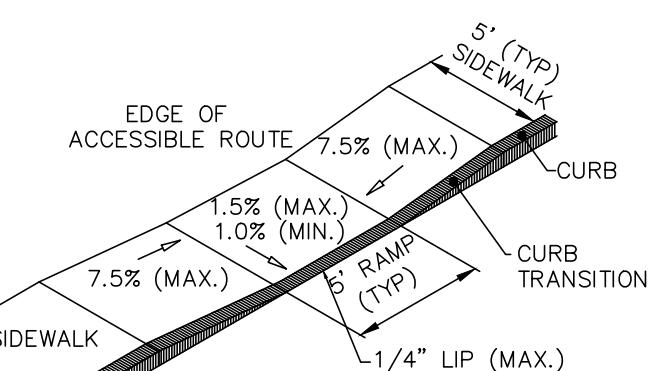
TYPICAL PARKING STALL CROSS SECTION

NOT TO SCALE

- NOTES:
1. THE SUBGRADE SHALL BE EXCAVATED OF ALL FROST SUSCEPTIBLE MATERIAL, LOAM, MUCK, OR OTHER SOFT MATERIAL TO HARD BOTTOM—FROM WITHIN THE LIMITS OF THE PROPOSED STREET FOR ITS FULL LENGTH AND WIDTH OR AS OTHERWISE APPROVED BY THE BOARD. SUBGRADE SOILS CONTAINING 35% OR MORE SILT (35% PASSING #200 SIEVE) SHALL BE REMOVED TO A MINIMUM DEPTH OF FOUR FEET AND BACKFILLED WITH WELL GRADED BANK GRAVEL WITH NO STONE LARGER THAN EIGHT (8) INCHES DIAMETER.
 2. SEE PROJECT PLANS FOR ROADWAY CURBING APPLICATIONS.
 3. INDIVIDUAL VGC SEGMENTS SHALL BE 6' IN LENGTH EXCEPT ALONG THE PINEDALE AVENUE CURB RETURN WHERE THE SEGMENTS SHALL BE 4'-6" IN LENGTH.
 4. GRANITE TRANSITION STONES SHALL BE PROVIDED AT ALL LOCATIONS WHERE CURBING TRANSITIONS FROM VGC TO BIT. CONC. CAPE COD BERM.

TYPICAL ROADWAY CROSS SECTIONS

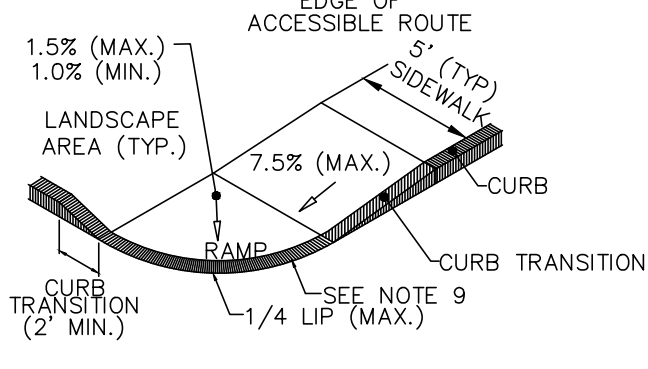
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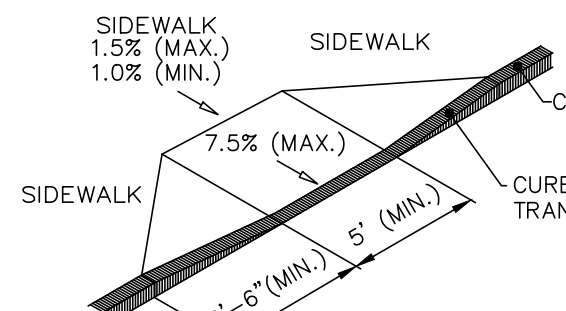
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ACCESSIBLE CURB RAMP

(ACR) TYPE 'C'

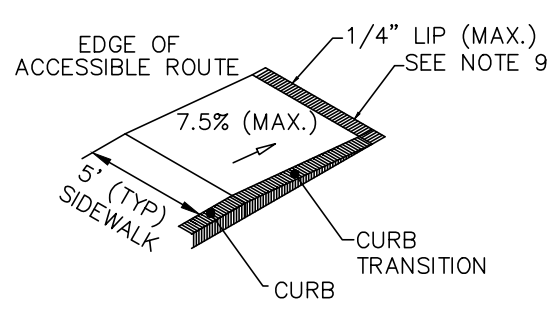
NOT TO SCALE



ACCESSIBLE CURB RAMP

(ACR) TYPE 'D'

NOT TO SCALE



ACCESSIBLE CURB RAMP

(ACR) TYPE 'E'

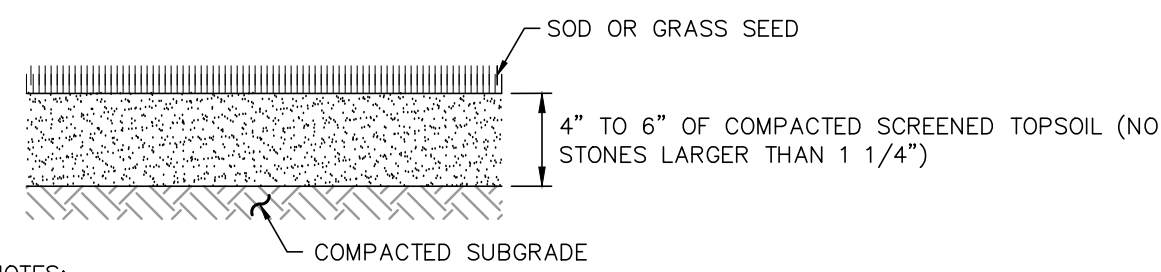
NOT TO SCALE

ACCESSIBLE CURB RAMP NOTES:

1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1.5% (1% MIN.).
2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMP SHALL BE 5%.
3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE CURB RAMP SHALL BE 7.5%.
4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.)
5. CURB TREATMENT VARIES. SEE PLANS FOR CURB TYPE.
6. BASE OF RAMP SHALL BE GRADED TO PREVENT PONDING.
7. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5' x 5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
9. ELIMINATE ALL CURBING AT RAMP (OTHER THAN VERTICAL CURBING, WHICH SHALL BE SET FLUSH) WHERE IT ABUTS ROADWAY.

ADA COMPLIANT ACCESSIBLE CURB RAMP DETAIL

NOT TO SCALE



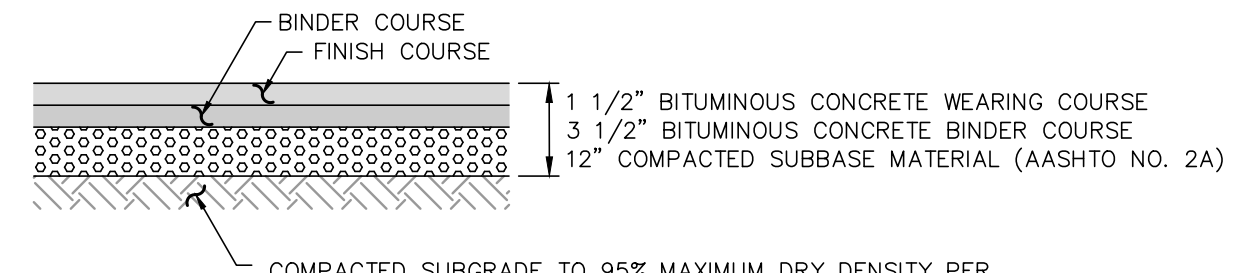
NOTES:

1. TOP OF LOAM (TOPSOIL) IS FINISHED GRADE.
2. TOPSOIL SHALL CONTAIN BETWEEN 35% AND 12% ORGANIC MATTER AND SHALL HAVE A MAXIMUM STONE SIZE OF 1 1/4" AND SHALL CONFORM TO THE FOLLOWING GRADATION:

SIEVE	% PASSING
1 1/4 INCH	100
No.40	85-100
No.100	60-85
No.200	38-60
	28-40

LANDSCAPED AREA CROSS SECTION

NOT TO SCALE



BITUMINOUS CONCRETE PAVEMENT

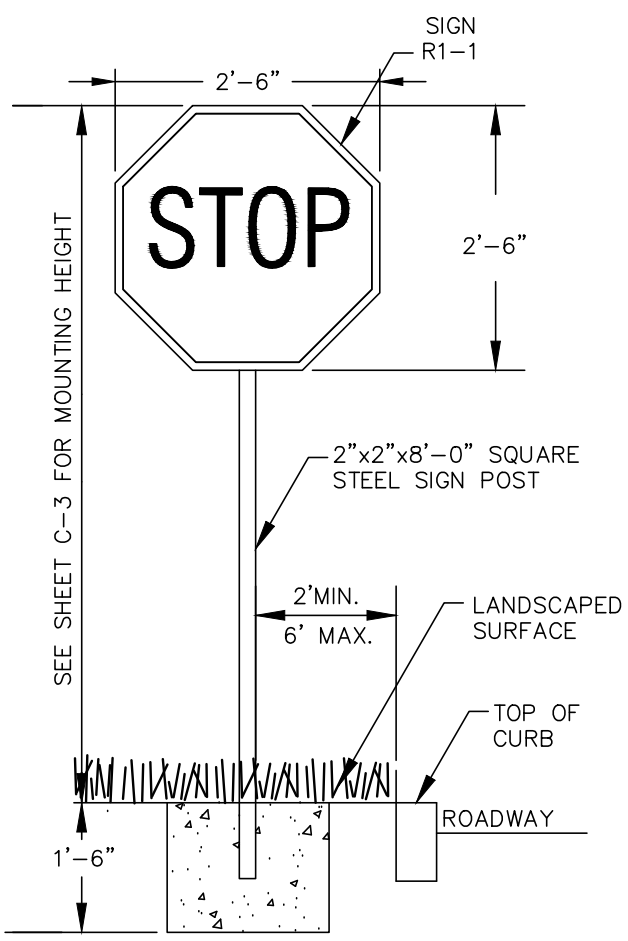
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NOTES:

1. OWNER'S ENGINEER RESERVES THE RIGHT TO REQUEST COMPACTION TESTS AND/OR CORE SAMPLES. IF TESTS ARE BEYOND THOSE REQUIRED BY THE SPECIFICATIONS AND PROVE CORRECT, PER ABOVE SPECIFICATION, TESTS WILL BE AT THE EXPENSE OF THE OWNER. OTHERWISE THE CONTRACTOR WILL BE RESPONSIBLE FOR TESTING COST.
2. PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

TYPICAL SURFACE TREATMENT CROSS SECTIONS

NOT TO SCALE



TYPICAL SIGN DETAIL

NOT TO SCALE

10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	

APPLICANT:

THE HOMES AT
MURPHY'S FARM LLC
18 CASSIMERE STREET
ANDOVER, MA 01810

PROJECT:

MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED:

APRIL 22, 2024

PROJECT #:

23-10524

PREPARED BY:

TWS



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.



DRAWING TITLE:

CONSTRUCTION
DETAILS

DRAWING #:

D-1



N.T.S



- NOTES:**
1. STONE CHECK DAMS SHOULD BE MAINTAINED CONSISTENT WITH THE PROCEDURE AND SCHEDULE OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN.
 2. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
 3. STRUCTURES SHALL BE REMOVED FROM UPON SITE STABILIZATION.

NOT TO SCALE



1. COIR LOGS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, REPLACE PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

NOT TO SCALE



1. USE 2" DIAMETER STONE RECLAIMED/RECYCLED CONCRETE EQUIVALENT.
2. RECOMMENDED LENGTH GREATER THAN 50 FEET WHERE PRACTICAL.
3. COMPRESS NOT LESS THAN 6 INCHES.
4. 10-FOOT MINIMUM WIDTH, BUT NOT LESS THAN FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS ARE REQUIRED.
5. FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. STONE SHALL BE PLACED IN LAYERS NOT EXCEEDING 6" IN THICKNESS. IT SHALL BE PILED AROUND THE ENTRANCE IF PILING IS IMPRACTICAL. A MOUNTABLE BERM WILL BE PERMITTED.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING PAVEMENT. ALLOWING OF SEDIMENT ON PUBLIC RIGHTS-OF-WAY, THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS SEDIMENT ACCUMULATES.
8. STONE, WHEN DROPPED, OR TRACKED ON PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING PAVEMENT.

NOT TO SCALE



- NOTES:
1. NUMBER OF BALES MAY VARY DEPENDING ON SITE CONDITIONS.
 2. BASIN TO BE SIZED TO PREVENT DISCHARGE WATER FROM OVERTOPPING BASIN

NOT TO SCALE



1. PREPARE SOIL BY REMOVING INSTALLED EROSION CONTROL PRODUCTS (REPCS) TYPE P300 PERMANENT TURF TILES, TYPE P300 EROSION CONTROL MATS, TYPE P300 EROSION CONTROL MATS AND ANY NEEDED APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY UNROLLING THE REPCS IN A 6" DEEP 6" WIDE TRENCH. ANCHOR THE REPCS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. REMAINING 12" PORTION OF REPCS BACK OVER SEED AND COMPACTED SOIL. SECURE REPCS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE SLOPE.
3. ROLL THE REPCS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. REPCS WILL UNROLL WITH SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE PATTERN PLATE. REMAINING 12" PORTION OF REPCS BACK OVER SEED AND COMPACTED SOIL. PLACE THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL REPCS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON SLOPE.
5. CONSECUTIVE REPCS SPPLIED DOWN THE SLOPE MUST BE PLACED END OVER (SHINGLE STYLE) WITH APPROXIMATELY 12" OVERLAP. STAPLE THROUGH OVERLAPPED AREA. APPROXIMATELY 12" APART WITHIN ENTIRE REPCS' WIDTH.

NOT TO SCALE



1. INSTALL CATCH BASIN FILTER PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. EMPTY OR REMOVE SEDIMENT FROM FILTER BAG WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE, AND REPLACE AS NEEDED.
2. CATCH BASIN FILTER TO BE INSTALLED DURING CONSTRUCTION OPERATIONS WHEN THE POTENTIAL FOR SEDIMENT TO ENTER EXISTING & NEWLY CONSTRUCTED BASINS EXISTS AS SHOWN ON THE PLANS.

NOT TO SCALE



- | | |
|---|--|
| VOLUME TWO OF THE MASSACHUSETTS STORM WATER MANAGEMENT HANDBOOK. | |
| 4. WASTE DISPOSAL: MATERIALS WHICH COULD BE A POTENTIAL SOURCE OF STORM WATER POLLUTION SUCH AS USED MOTOR OIL, DIESEL OIL, AND OTHER FLUIDS SHALL BE STORED IN EACH DAY IN A STORAGE TRAILER OR LOCATED LOCATION AND TAKEN OFF-SITE AND PROPERLY DISPOSED OF. ALL TYPES OF WASTE GENERATED AT THIS SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND/OR REGULATIONS. | 1. SELECT A SEED MIXTURE IN TABLE 4-2 THAT IS APPROPRIATE FOR THE SOIL TYPE AND MOISTURE CONTENT AS FOUND AT THE SITE, FOR THE AMOUNT OF SUN EXPOSURE AND FOR LEVEL OF USE. SELECT SEED FROM RECOMMENDATIONS IN TABLE 4-3. |
| 5. GOOD HOUSEKEEPING: THE PROJECT SITE SHALL PROVIDE FOR THE MINIMIZATION OF EXPOSURE OF CONSTRUCTION DEBRIS (INCLUDING, BUT NOT LIMITED TO, INSULATION, WRAP, PAINTS AND PAINT CANS, SOLVENTS, WALL BOARD, ETC.) TO PRECIPITATION BY MEANS OF DISPOSAL AND/OR PROPER SHELTER OR COVER. IN ADDITION, CONSTRUCTION WASTE MUST BE DISPOSED OF IN ORDER TO PREVENT IT FROM EXPOSURE TO PRECIPITATION AT THE END OF EACH WORKING DAY. | 2. INOCULATE ALL LEGUME SEED WITH THE CORRECT TYPE AND AMOUNT OF INOCULANT. |
| 6. NO DUST WILL BE ALLOWED ON OR OFF WORK SITE. CONTRACTOR MUST CONDUCT CONTINUOUS EFFORT TO CONTROL DUST, LACK OF DUST CONTROL COULD CAUSE THE PROJECT TO BE STOPPED UNTIL ISSUES ARE RESOLVED. | 3. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (WHICH MAY INCLUDE FERTILIZER APPLICATION). SEEDING OPERATIONS SHOULD BE DONE IN A MANNER THAT INCLUDES MULCHING MAY BE LEFT ON SOIL SURFACE. SEEDING OPERATIONS SHOULD BE ON THE CONTOUR. |
| 7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTROL DUST AND TAKE ALL NECESSARY MEASURES TO ENSURE ALL ROADS ARE MAINTAINED IN A DUST FREE CONDITION AT ALL TIMES THROUGHOUT THE LIFE OF THE CONTRACT. REPETITIVE TREATMENTS SHOULD BE APPLIED AS NECESSARY. | 4. WHERE FEASIBLE, EXCEPT WHEN EITHER A CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEED SHOULD BE SEED FOLLOWING SEEDING OPERATIONS WITH A ROLL OR LIGHT TIRE TRACK. |
| 8. REPAIRS OR REPLACEMENT OF DRAINAGE STRUCTURES, RIP RAP CHANNELS, OR OTHER ELEMENTS OF THE FACILITY SHOULD BE DONE WITHIN 14 DAYS OF DEFICIENCY REPORTS. IF EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS. | 5. SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHOULD BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST. WHEN GROWN VETCH IS SEEDS IN LATER SUMMER, AT LEAST 35% OF THE SEED SHOULD BE HARD SEED (UNSCARIFIED), IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIC MULCH JUDGING TO THE TEMPORARY AND PERMANENT MULCHING PRACTICE, AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD. |
| 9. IMMEDIATELY PRIOR TO THE END OF CONSTRUCTION OR ACCEPTANCE BY THE OWNER, THE CONTRACTOR SHALL INSPECT ALL ON-SITE STORMWATER MANAGEMENT FACILITIES AND CLEAN AND FLUSH AS NECESSARY. | 6. TEMPORARY SEEDING SHOULD THYPPICALLY OCCUR PRIOR TO 09SEPTEMBER 15TH.
7. AREAS SEED BETWEEN MAY 15TH AND AUGUST 15TH SHOULD OORE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE TEMPORARY AND PERMANENT MULCHING PRACTICE. |
| | 8. VEGETATED GROUND COVERING AT LEAST 85% OF THE DISTURBED AREA SHOULD BE ACHIEVED PRIOR TO OCTOBER 15TH. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT TEMPORARY STABILIZATION MEASURES FOR OVERWINTER PROTECTION, AND COMPLETE PERMANENT SEED STABILIZATION DURING THE NEXT GROWING SEASON. |

HYDROSEEDING:

1. WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND TO REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.
2. SLOPES MUST BE NO STEEPER THAN 2 TO 1 (2 FEET HORIZONTALLY TO 1 -FOOT VERTICALLY).
3. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS SEED, STRAW OR HAY). BETTER PROTECTION CAN BE OBTAINED USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH.
4. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING.

USE	MIX	SOIL DRAINAGE			
		BROUGHT	WELL DRAINED	MOD. WELL DRAINED	POORLY DRAINED
STEEP CUTS & FILLS BORROW & DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	EXCELLENT	FAIR
	C	POOR	FAIR	EXCELLENT	POOR
	D	FAIR	FAIR	GOOD	EXCEL
	E	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, & FLOW CHANNELS W/ OTHER WATER	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, GOLF AREAS, UNIMED LANDS, & LOW INTENSITY USE RECREATIONAL SITES	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	POOR	FAIR
	C	FAIR	EXCELLENT	EXCELLENT	FAIR
	D	GOOD	GOOD	GOOD	EXCEL
PLAY AREAS & ATHLETIC FIELDS (TOPSOIL IS ESSENTIAL FOR GOOD TURF)	F	FAIR	EXCELLENT	EXCELLENT	(SEE
	G	FAIR	EXCELLENT	EXCELLENT	SEE)

MATURE SPECIES	POUND/ACRE	POUND / 1000-SF
A		
TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
REDTOP	50	1.15
TOTAL	42	0.95
B(3)		
TALL FESCUE	15	0.35
CREeping RED FESCUE	10	0.25
CROWN VETCH	15	0.35
OR		
FLATLEAF	30	0.75
	40 OR 55	0.95 OR 1.35
C(3)		
TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
BIRDSTOCK TREFOIL	48	1.10
TOTAL	88	1.10
D(3)		
BIRDSTOCK TREFOIL	10	0.25
REDTOP	5	0.10
REED CANARYGRASS(1)	15	0.35
TOTAL	30	0.70
E		
TALL FESCUE	20	0.45
FLATLEAF	50	1.20
TOTAL	50	1.20
F		
CREeping RED FESCUE(2)	50	1.15
KENTUCKY BLUEGRASS(2)	50	1.15
TOTAL	100	2.30

- | | | | |
|---|----------------|-----|------|
| G | TALL FESCUE(2) | 150 | 3.60 |
|---|----------------|-----|------|
- NOTES:
1. REED CANARYGRASS IS ON THE INVASIVE SPECIES WATCH LIST DUE TO ITS RAPID, AGGRESSIVE GROWTH AND ITS ABILITY TO MOVE INTO WETLANDS AND OUT-COMPETE OTHER DESIRABLE WETLAND PLANTS. CAUTION SHOULD BE USED WHEN PLANTED NEAR WETLANDS.
 2. FOR HEAVY USE ATHLETIC FIELDS, CONSULT THE UHNI COOP. EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.
 3. THE UHNI COOP. EXTENSION RECOMMENDS RED CLOVER TO SUBSTITUTE FOR CROWN VETCH OR BIRDFOOT TREFOIL IF THEY ARE GOING TO BE MOVED TO A HEIGHT OF 4" OR LESS, RED CLOVER WILL BE MORE SUITABLE FOR HEAVY TRAFFIC.

10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION

APPLICANT:

**THE HOMES AT
MURPHY'S FARM LLC**
18 CASSIMERE STREET
ANDOVER, MA 01810

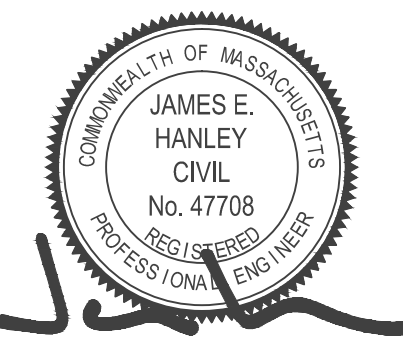
PROJECT:

MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED:	APRIL 22, 2024
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PROJECT #:	23-10524
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PREPARED BY:	TWS
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PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

CIVIL—
DESIGN
CONSULTANTS, INC.

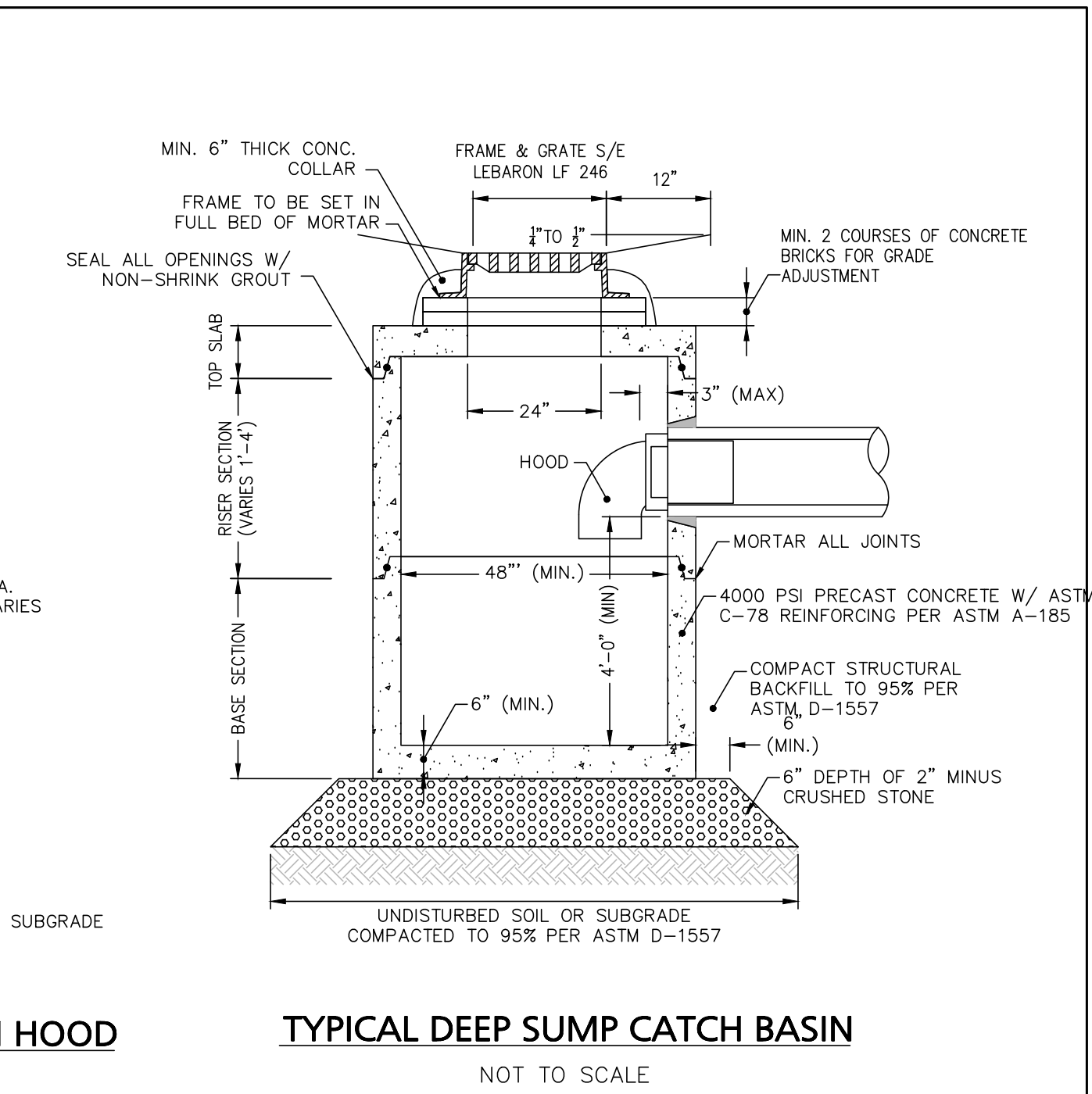
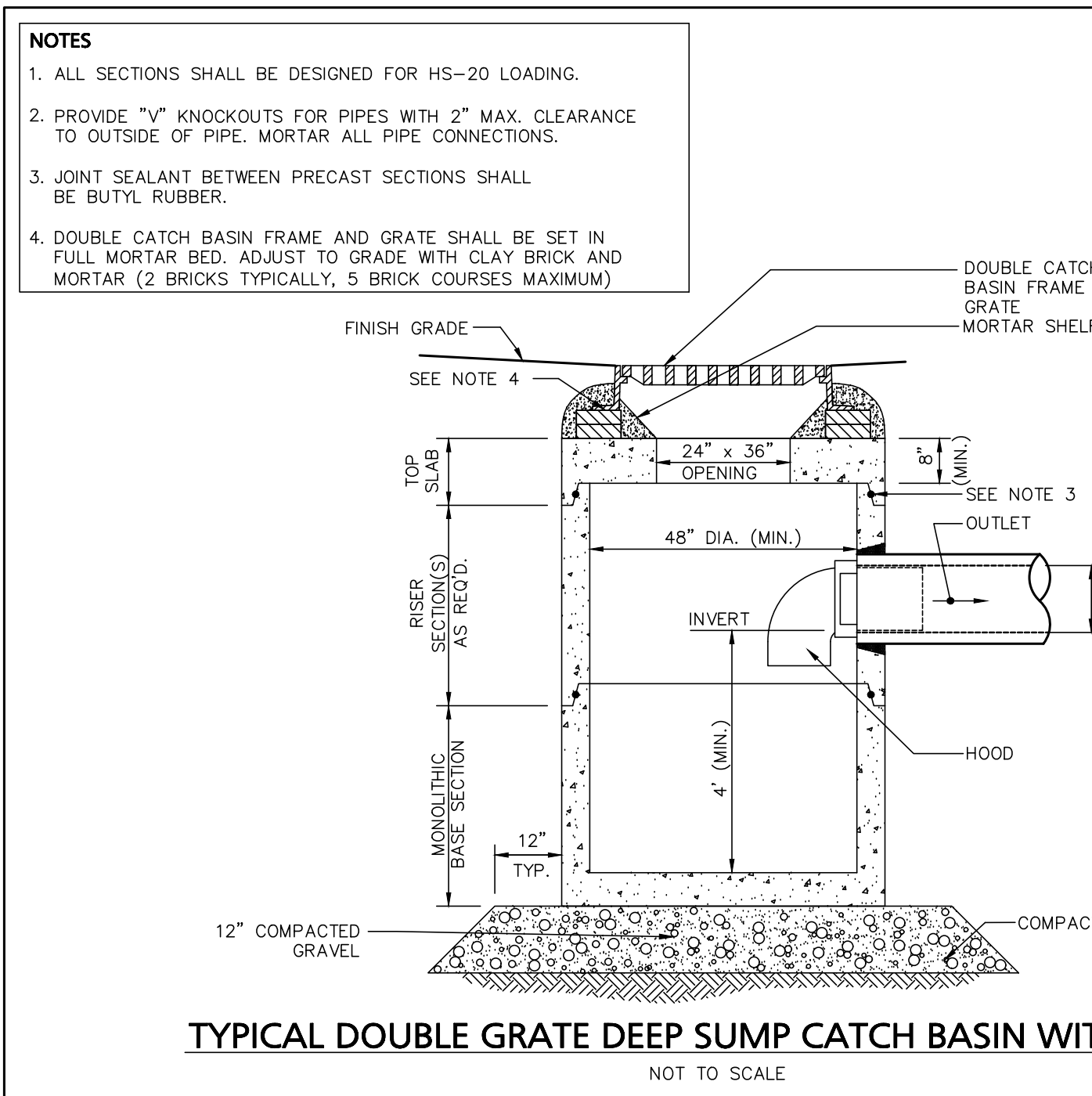
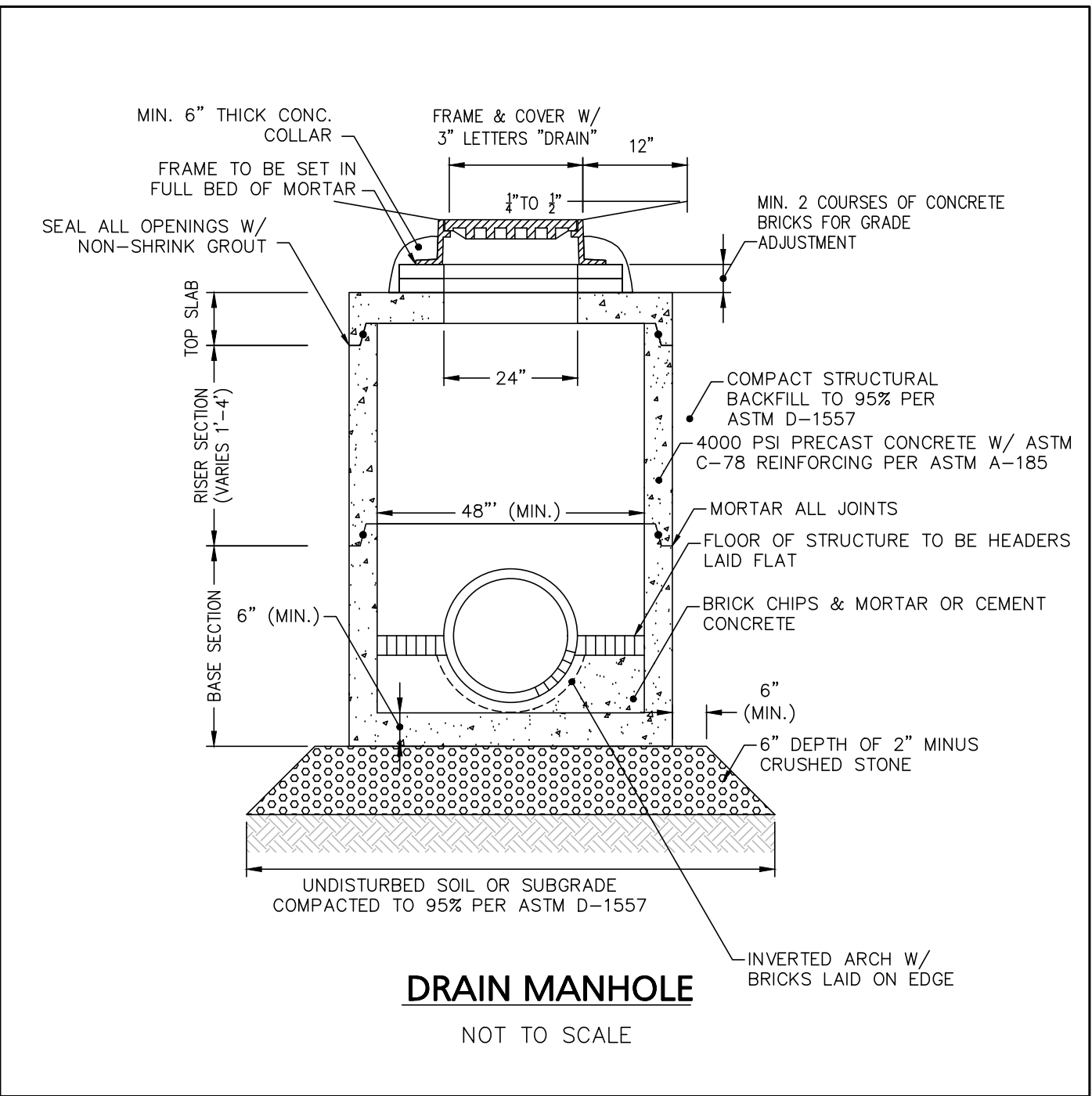
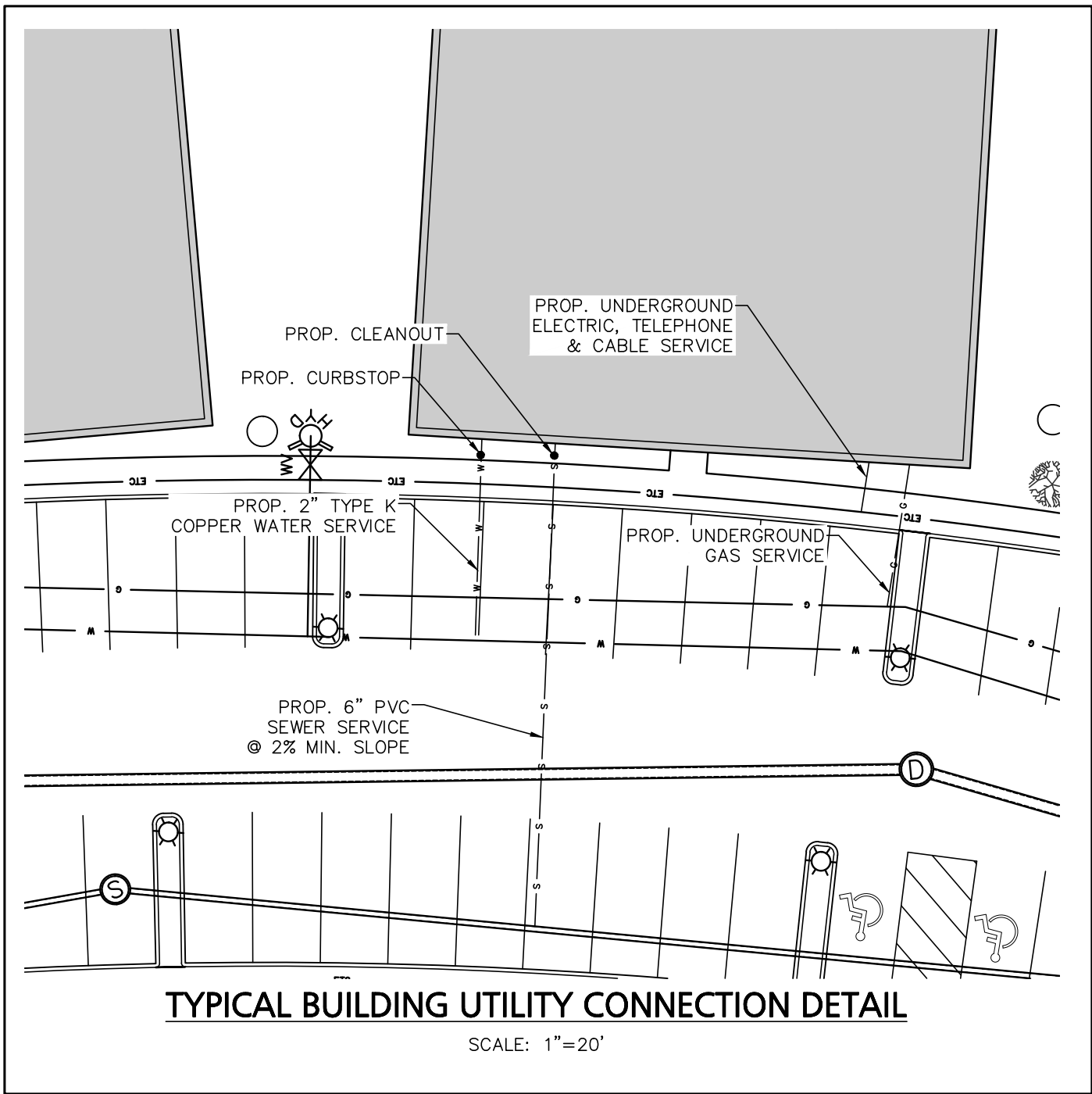
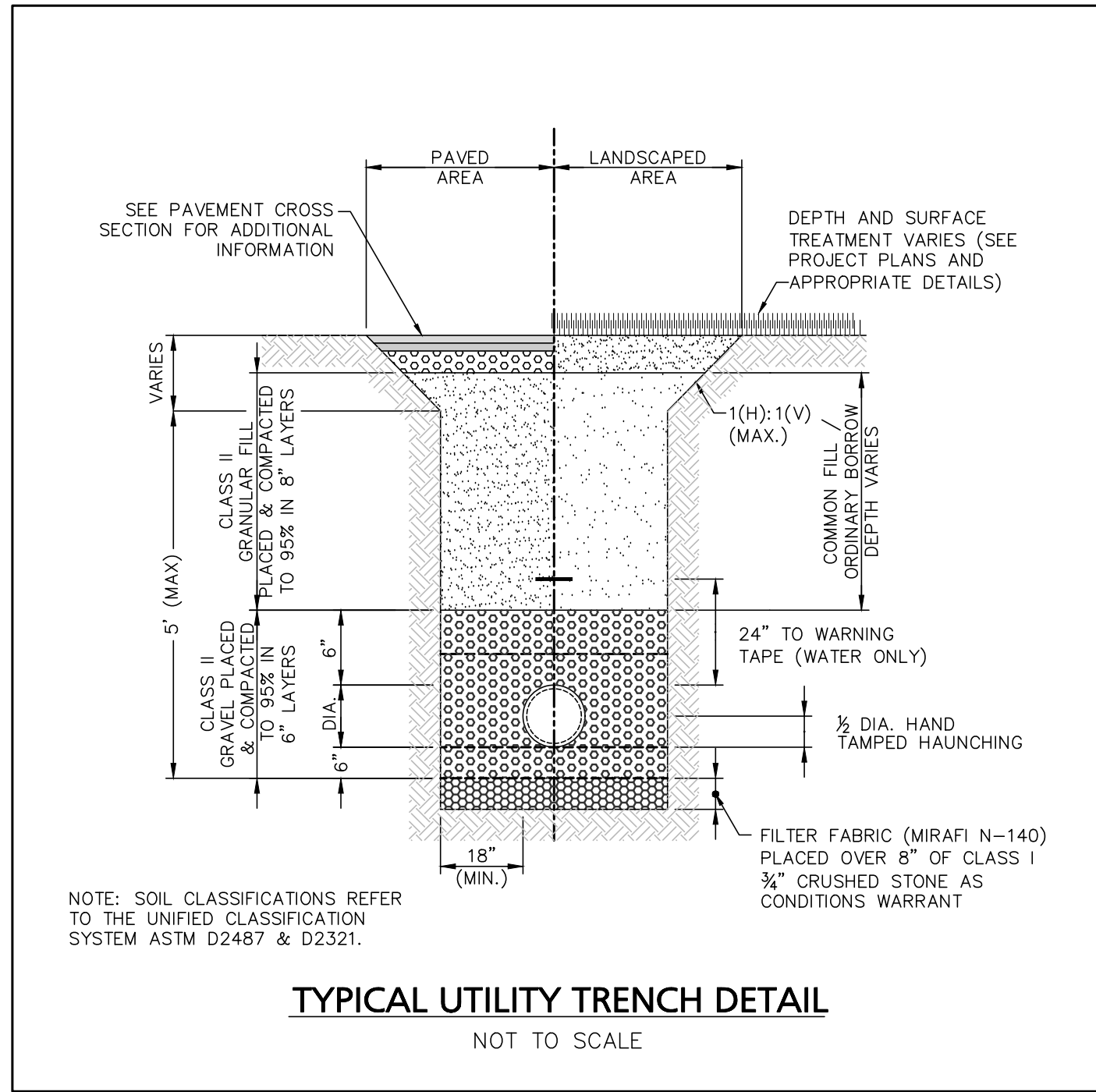
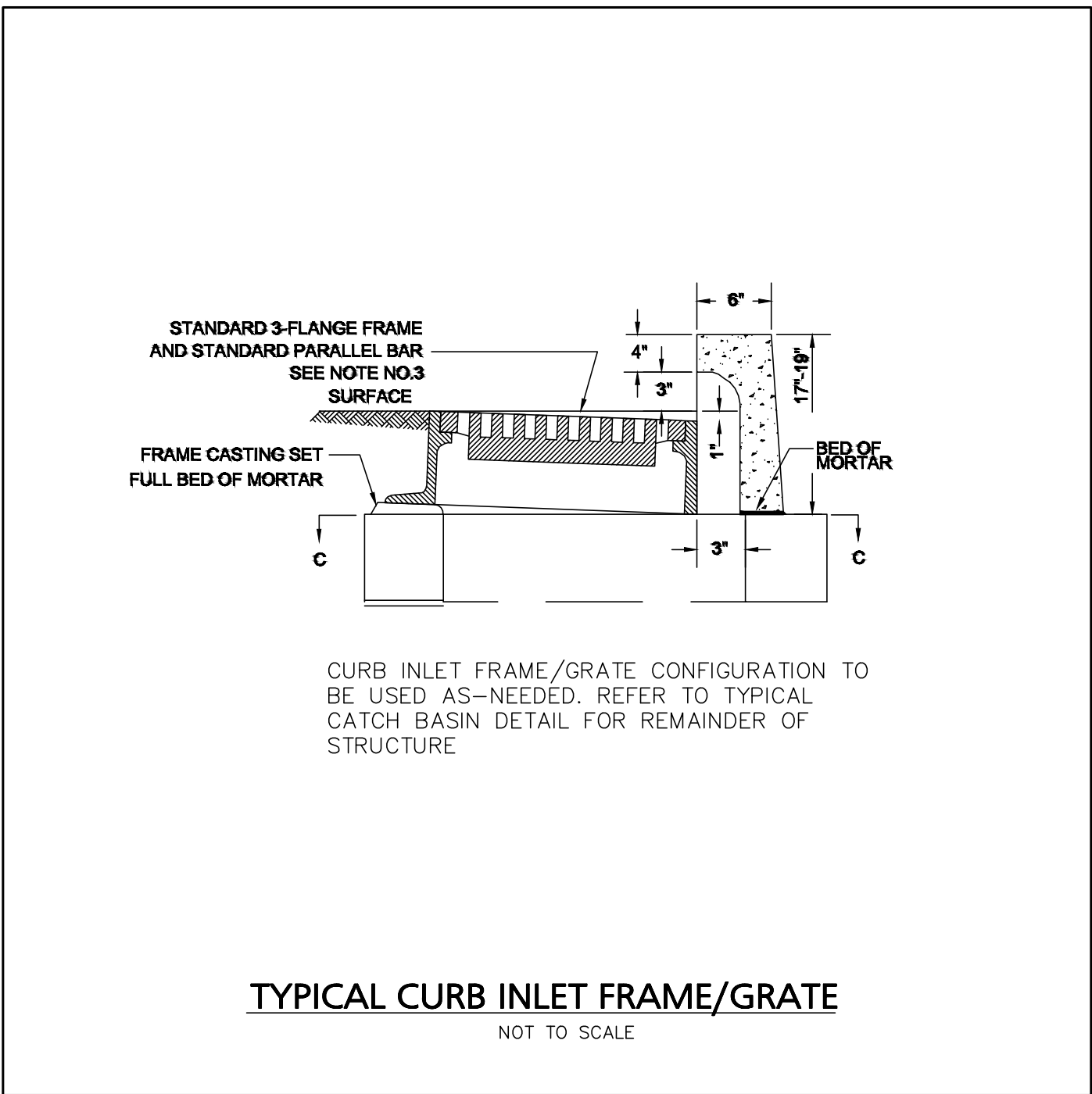
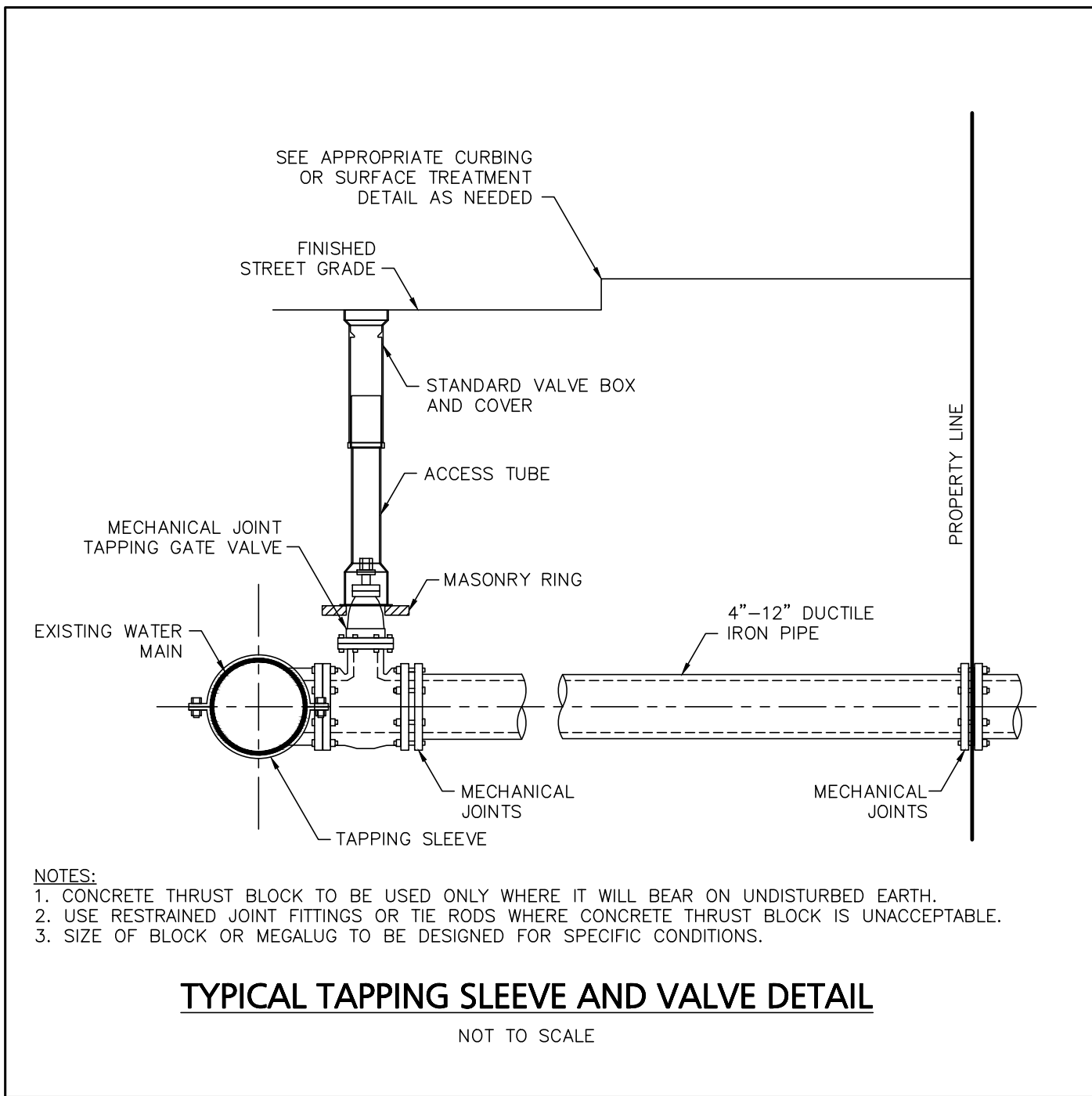
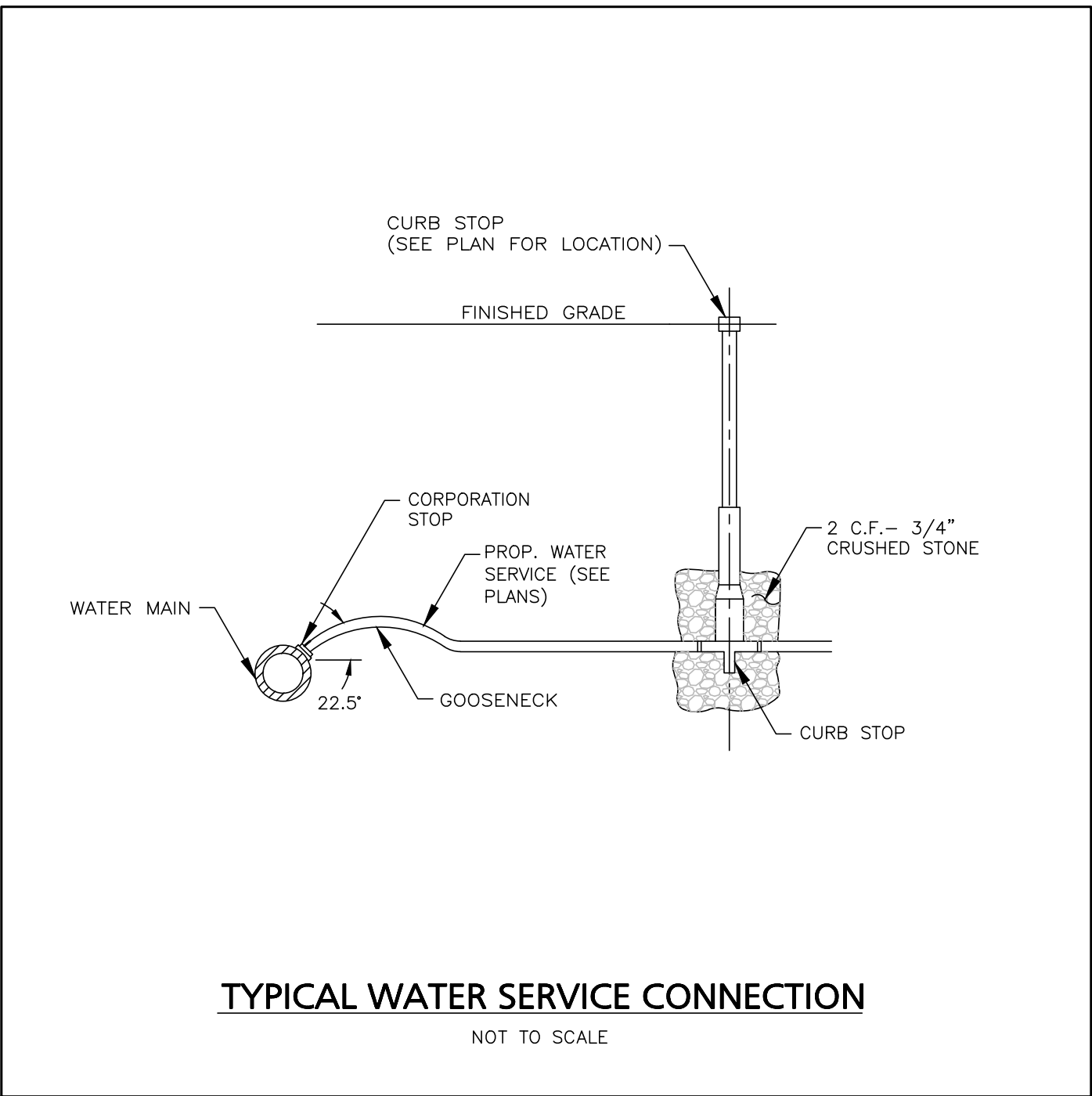
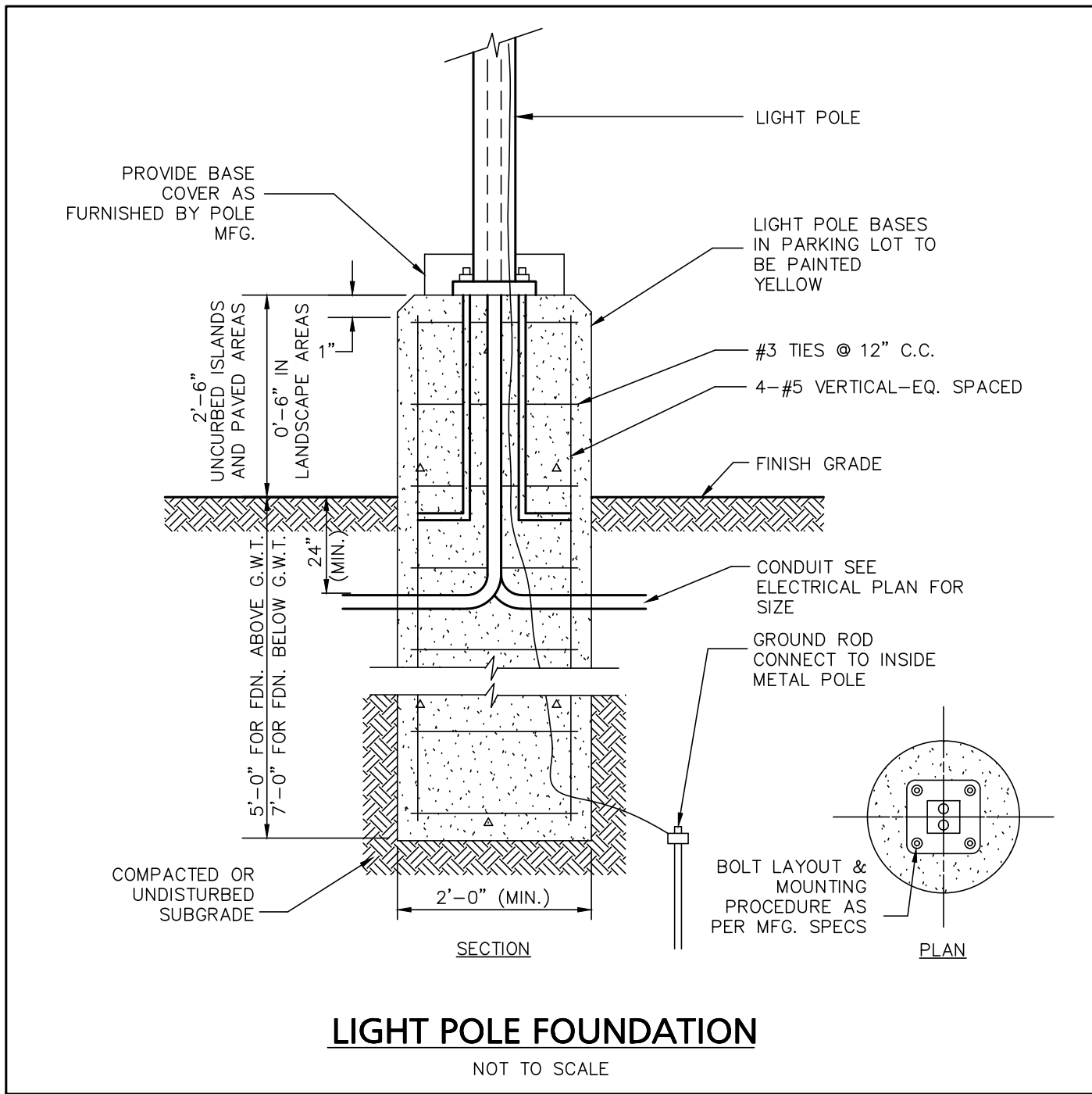
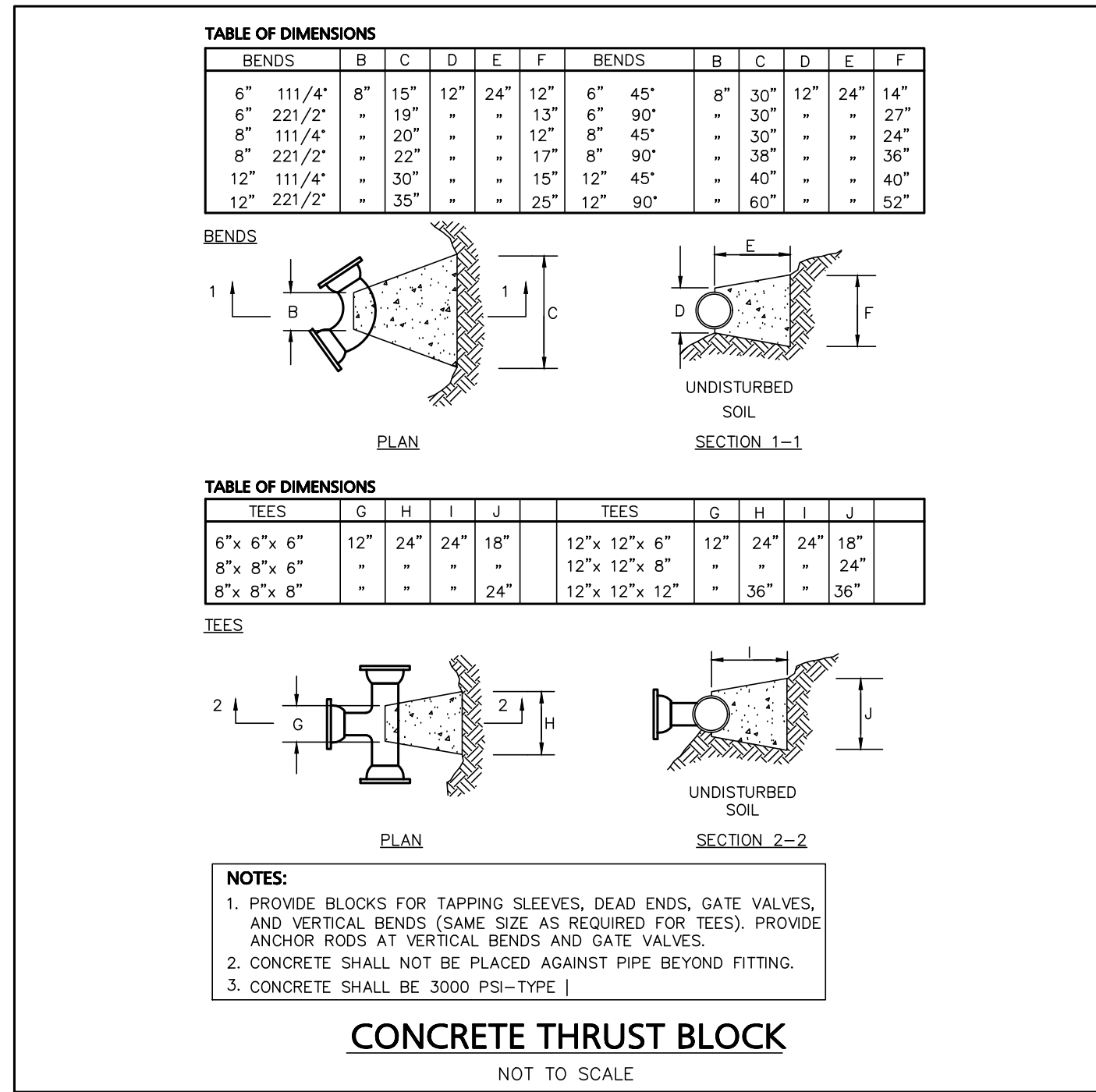
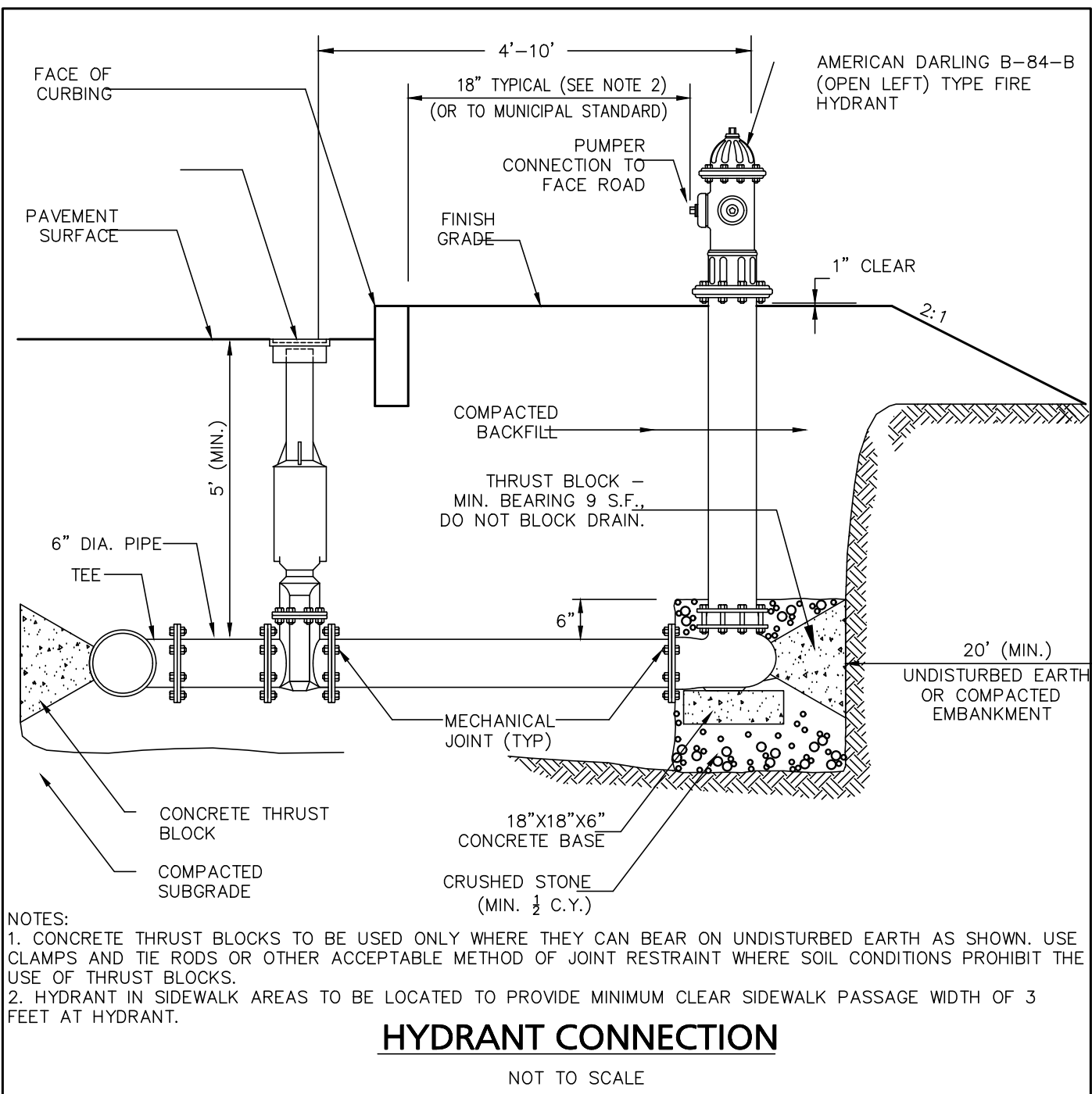
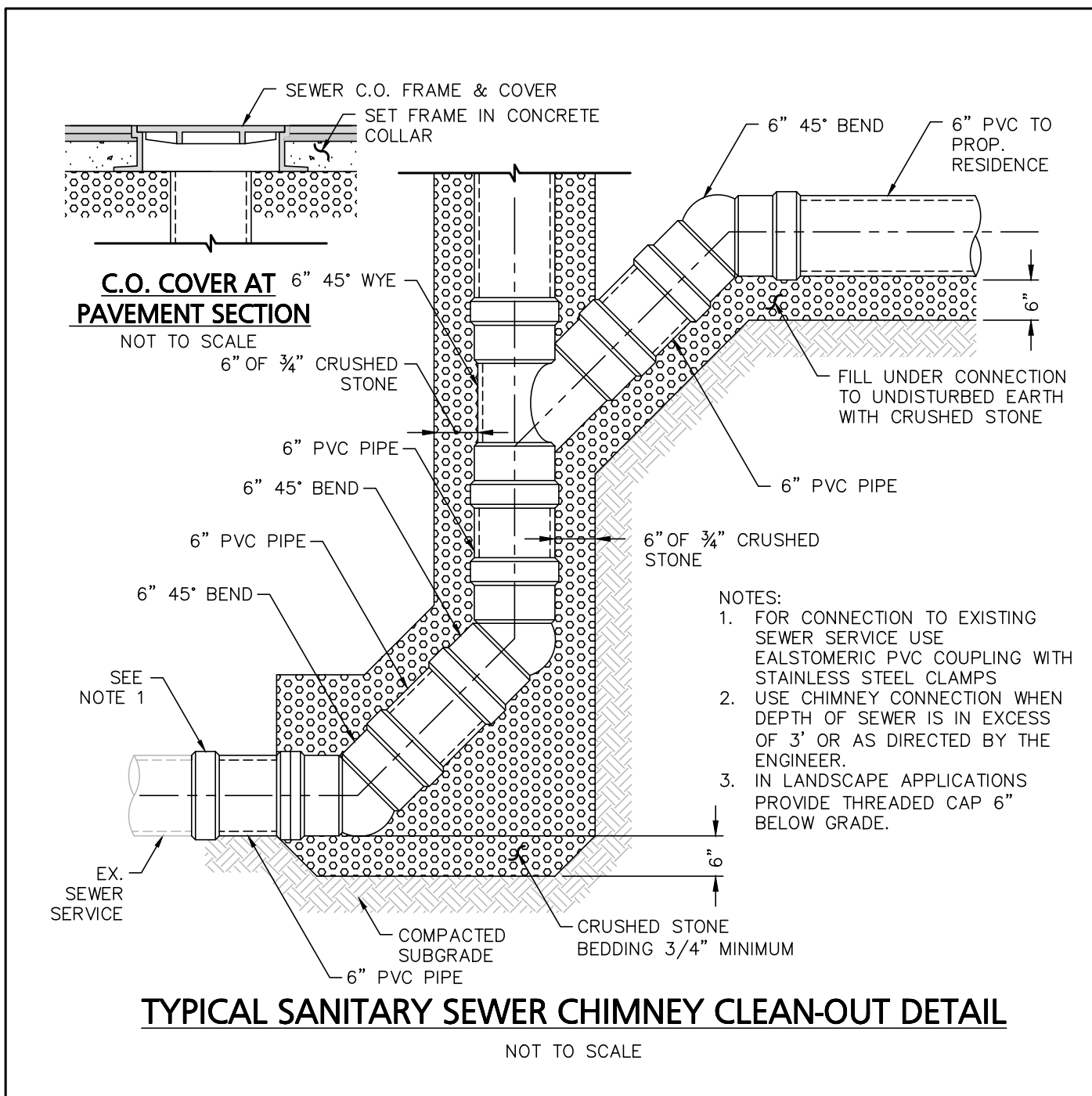
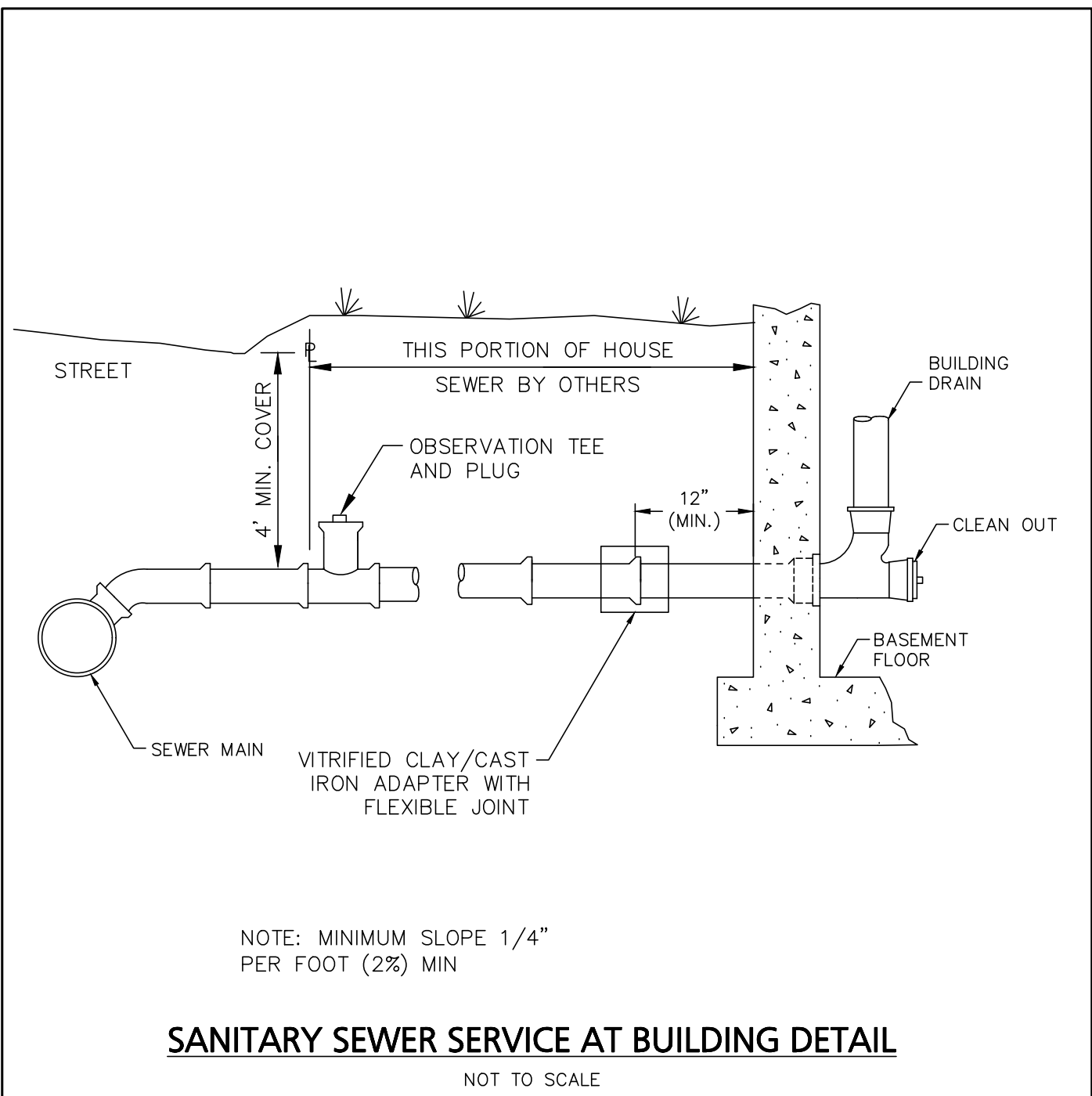
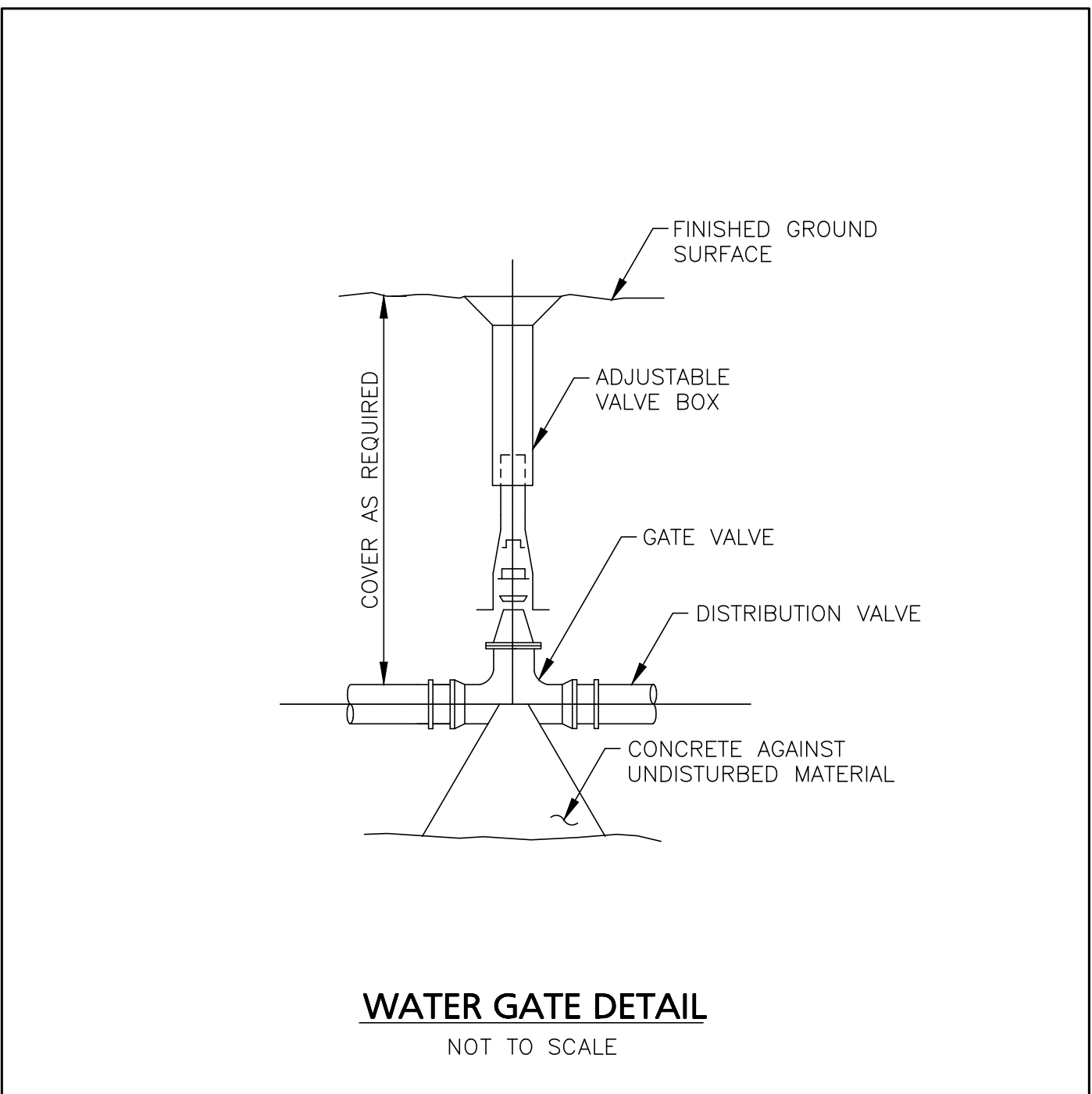
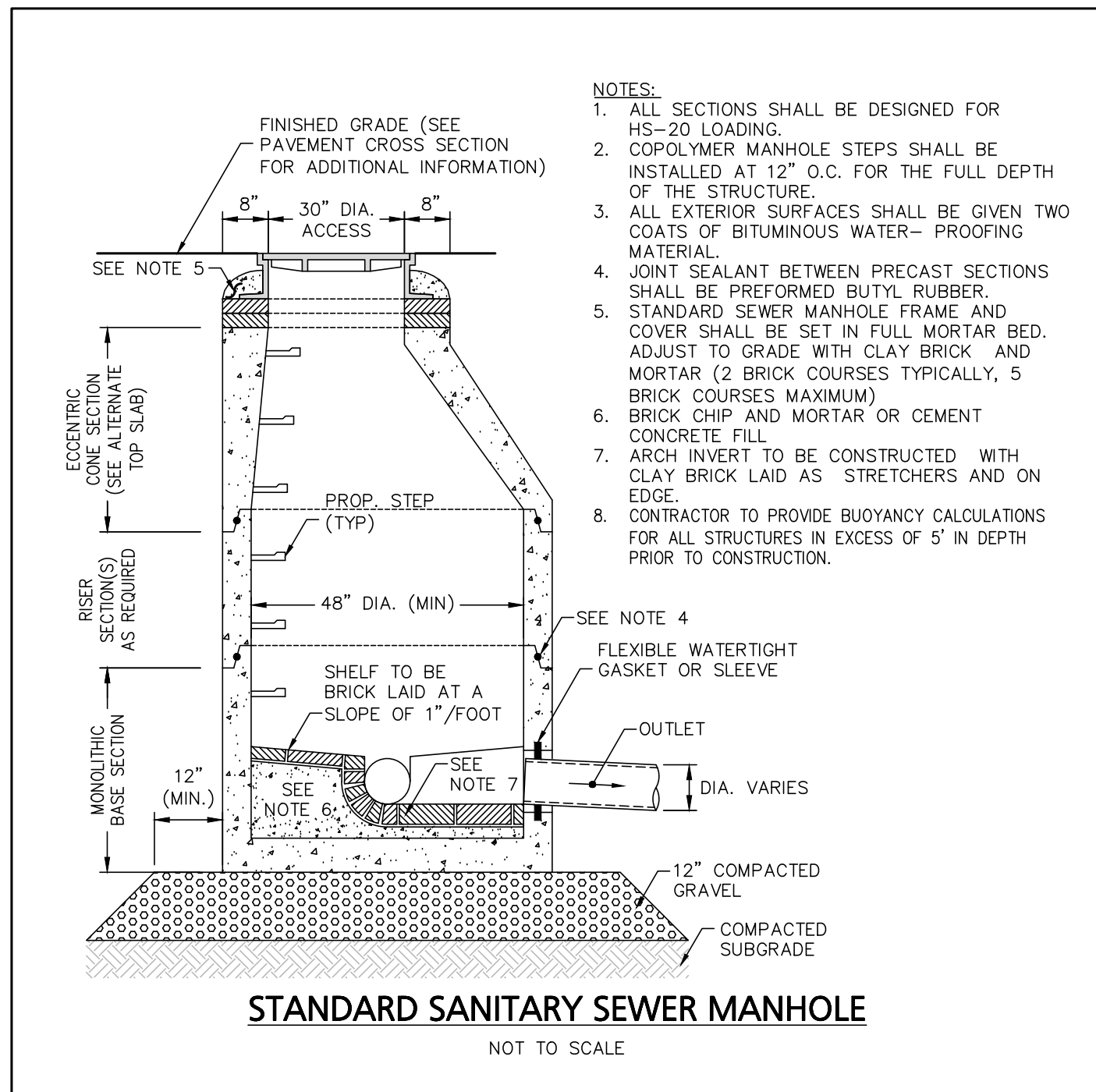
344 North Main Street | Andover - MA 01810
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DRAWING TITLE:

CONSTRUCTION DETAILS

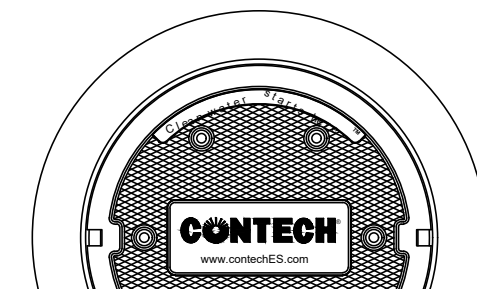
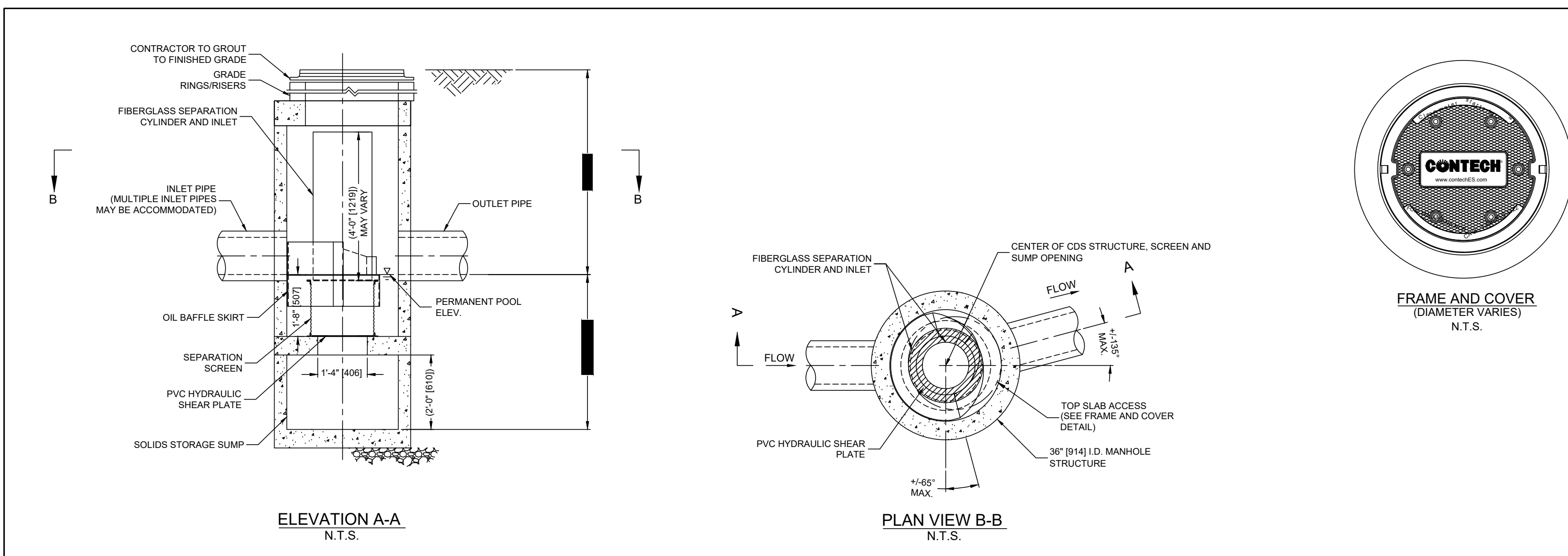
DRAWING #

D-2



GENERAL UTILITY NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
- WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
- ALL UTILITY WORK PERFORMED WITHIN RIGHT-OF-WAY SHALL BE PERFORMED BY A CONTRACTOR LICENSED BY THE DPW AND OBTAIN A PERMIT FOR SUCH WORK FROM THE DPW, IF NEEDED.
- ALL DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
- A DUST EMISSION CONTROL PLAN SHALL BE DEVELOPED AND IMPLEMENTED BY THE CONTRACTOR IF CONDITIONS WARRANT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL UTILITIES AS SHOWN ON THESE PLANS IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY. ALL UTILITY CONSTRUCTION SHALL CONFORM TO THE APPROPRIATE UTILITY COMPANY STANDARDS FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SPECIFICATIONS OF MATERIALS AND INSTALLATION PROCEDURES AND INSTALL IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE TO CONTACT AND DETERMINE, COORDINATE AND SCHEDULE ALL NECESSARY INSPECTIONS AND MONITORING WITH ALL APPROPRIATE UTILITY COMPANIES.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO PERFORM THE WORK.
- ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE PROJECT BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION AND CLEAN UP UPON COMPLETION OF THE PROJECT.
- WATER AND SEWER TESTING TO CONFORM TO LOCAL DPW REGULATIONS.
- ALL MECHANICAL JOINTS TO BE MEGALUG SERIES 1100 INSTALLED IN ACCORDING WITH MANUFACTURER RECOMMENDATIONS OR APPROVED EQUAL.
- ALL SEWER SYSTEM MAINS, STRUCTURES, AND CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL REGULATIONS.
- CONTRACTOR TO COORDINATE ALL BUILDING PENETRATIONS AND ROOF LEADER LOCATIONS WITH ARCHITECTURAL DOCUMENTS PRIOR TO CONSTRUCTION.



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

CDS1515-3-C DESIGN NOTES

CDS1515-3-C RATED TREATMENT CAPACITY IS 1.0 GFS. OR PER LOCAL REGULATIONS.
THE STANDARD CDS1515-3-C CONFIGURATION IS SHOWN.

- GENERAL NOTES**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.conteches.com
 - CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
 - STRUCTURE SHALL MEET AASHTO H20D100 LOAD RATING, ASSUMING EARTH COVER OF 0'-2" AND GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M200 AND BE CAST WITH THE CONTECH LOGO.
 - IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
 - CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

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

CONTECH
ENGINEERED SOLUTIONS LLC
www.conteches.com
8025 Centre Pointe Way, Suite 400, West Chester, OH 45380
603-338-1122 513-645-7000 513-646-7993 FAX

CDS1515-3-C
ONLINE CDS
STANDARD DETAIL

10/2/25	REV. PER PEER REVIEW COMMENTS
09/15/25	REV. PER PEER REVIEW COMMENTS
09/01/25	REVISED LAYOUT
05/09/25	REV. PER PEER REVIEW COMMENTS
03/27/25	REV. PER PEER REVIEW COMMENTS
02/25/25	REV. PER PEER REVIEW COMMENTS
01/21/25	REV. PER INTERNAL REVIEW
12/30/24	REV. PER PEER REVIEW COMMENTS
10/04/24	REV. PER PEER REVIEW COMMENTS
DATE	DESCRIPTION
REVISIONS	

APPLICANT:

**THE HOMES AT
MURPHY'S FARM LLC**
18 CASSIMERE STREET
ANDOVER, MA 01810

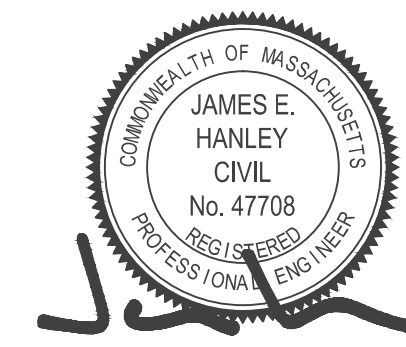
PROJECT:

MURPHY'S FARM
DRACUT, MA 01826

DATE ISSUED: APRIL 22, 2024

PROJECT #: 23-10524

PREPARED BY: TWS



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

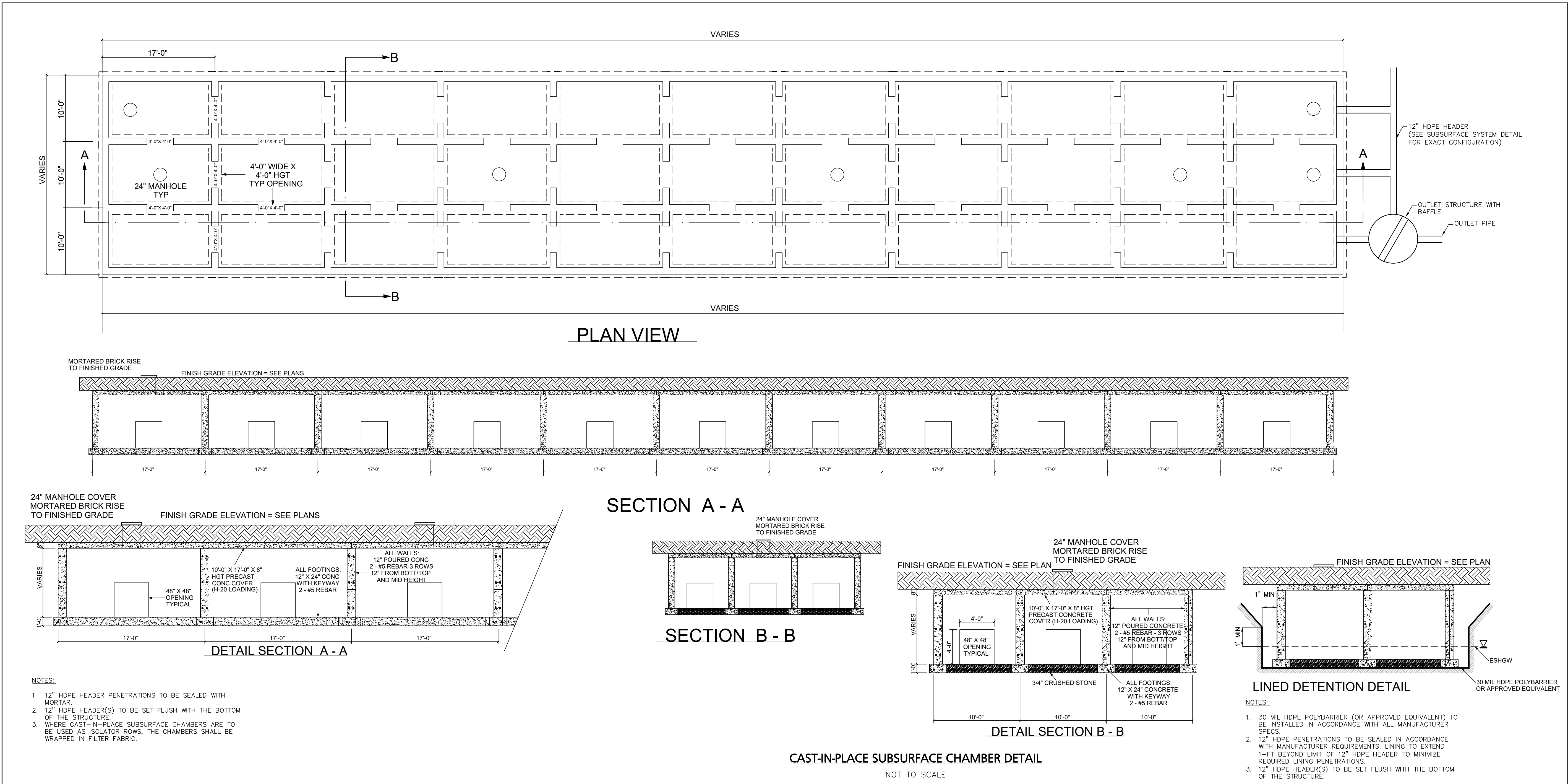
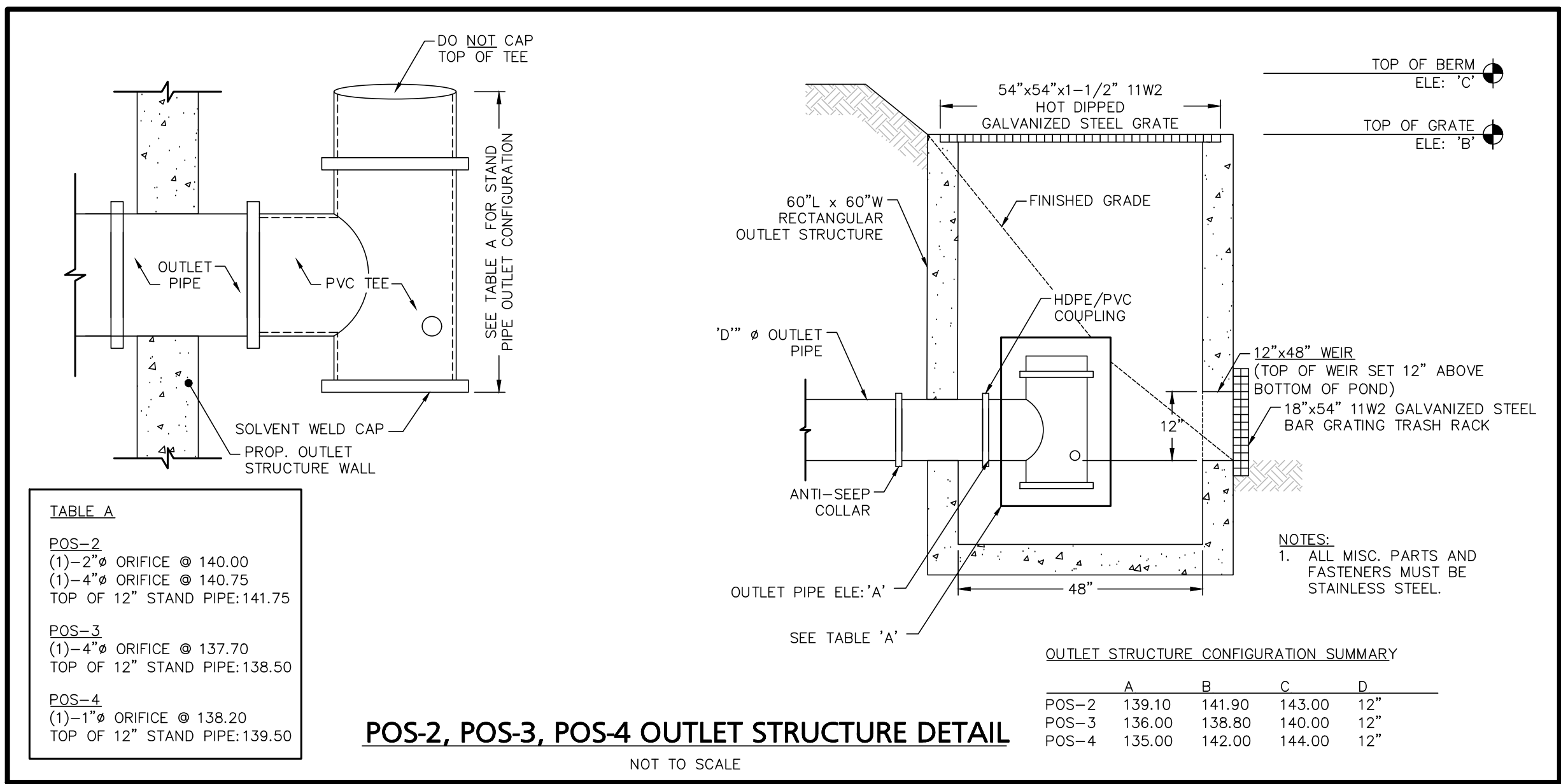
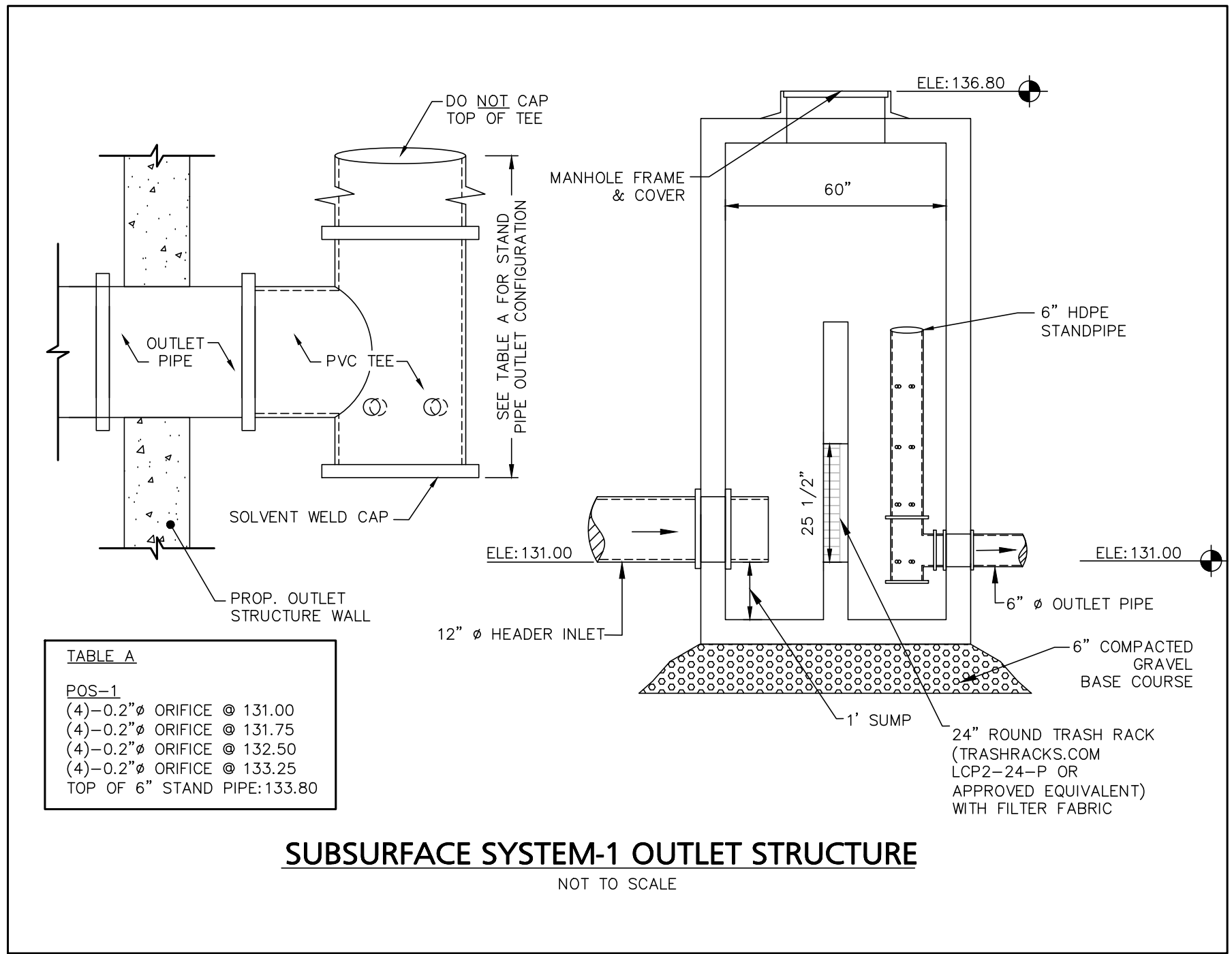
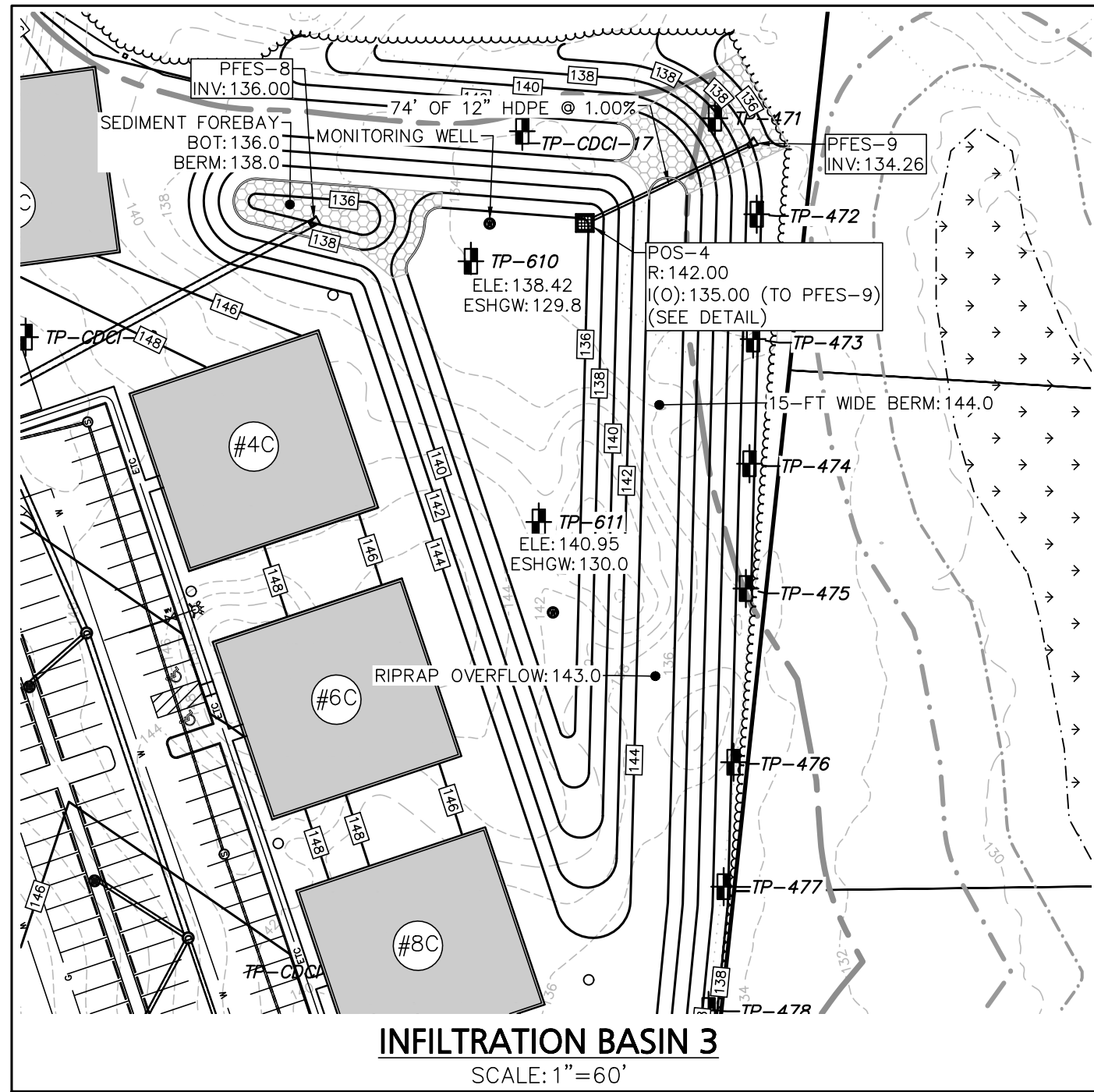
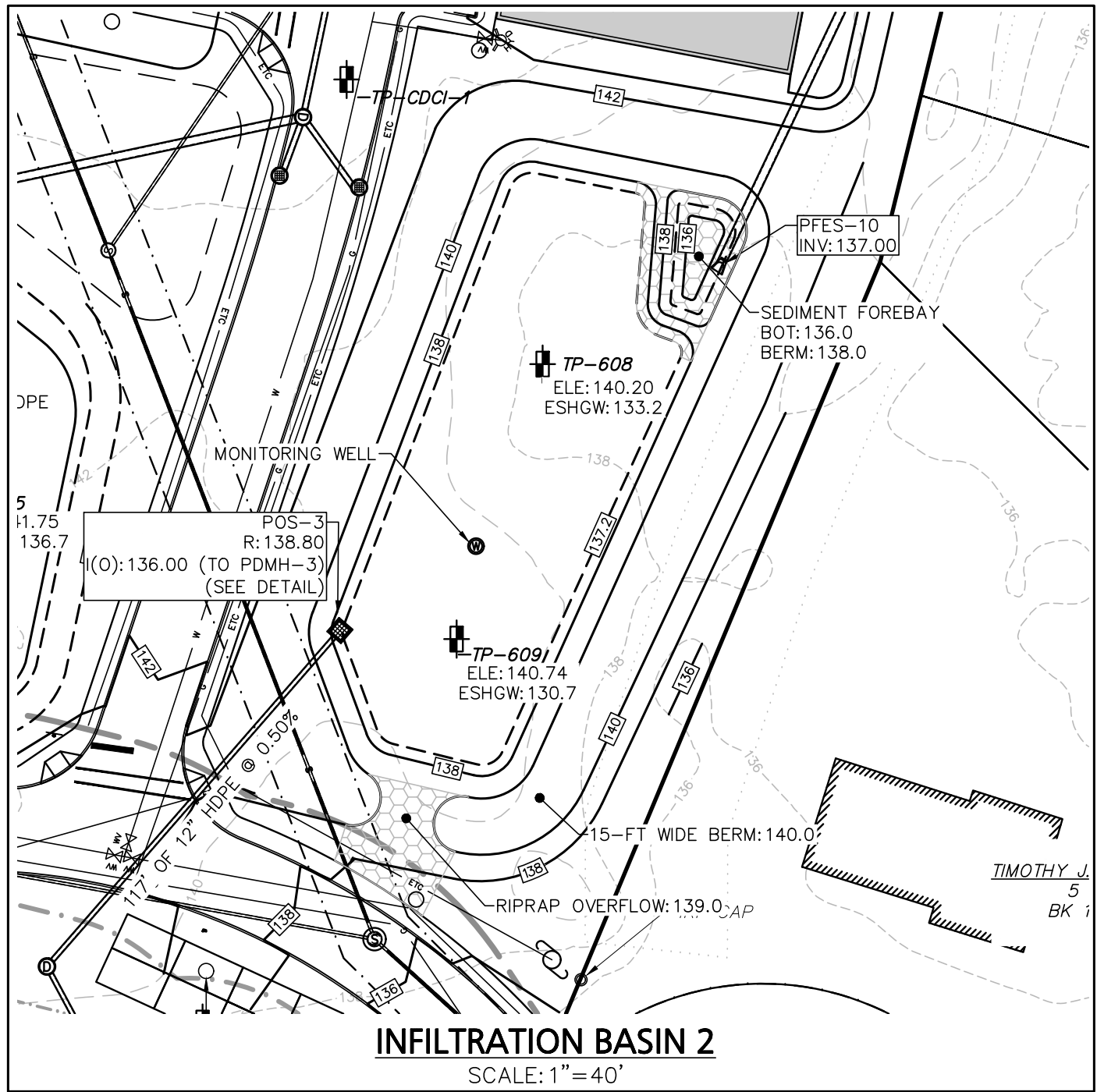
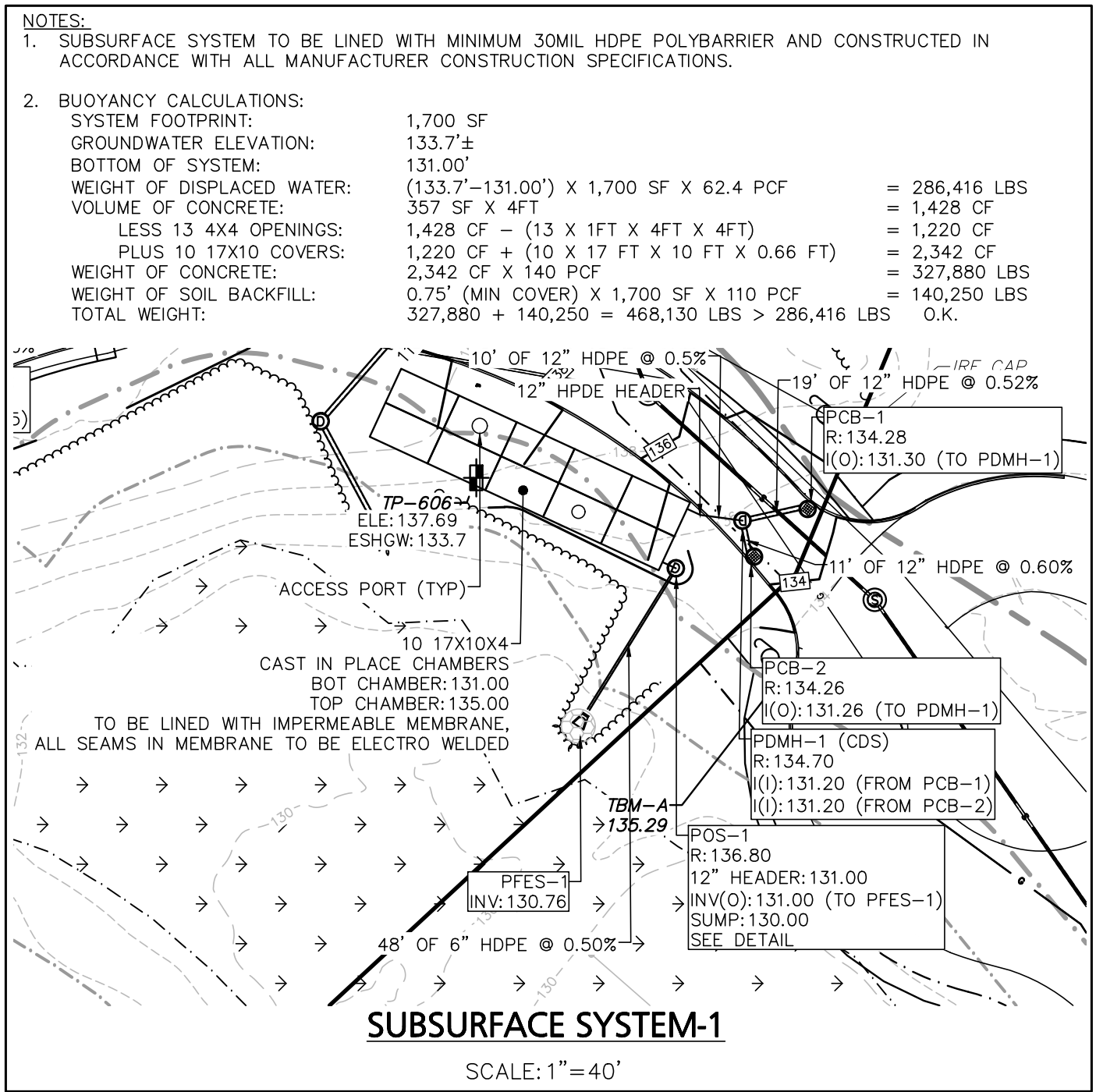
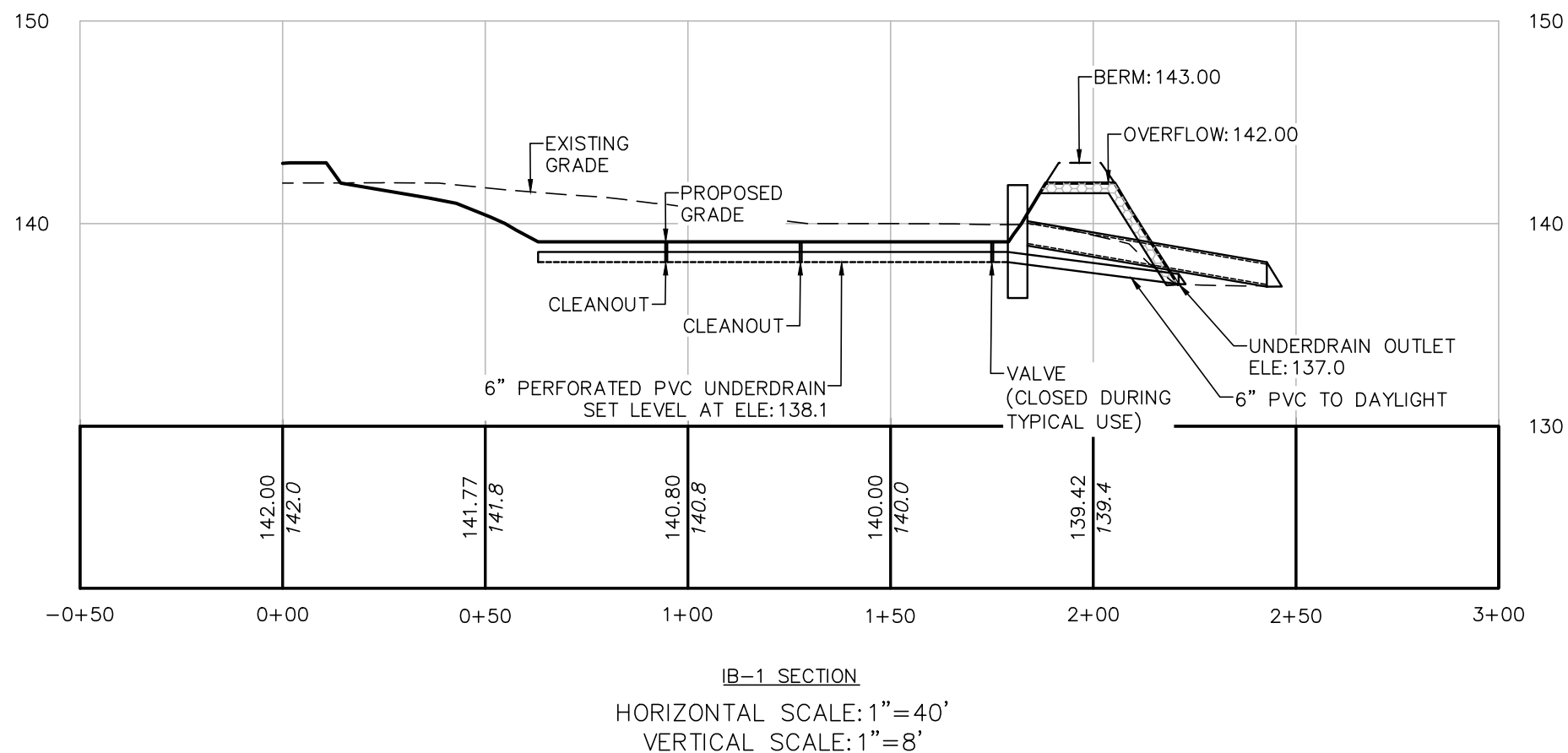
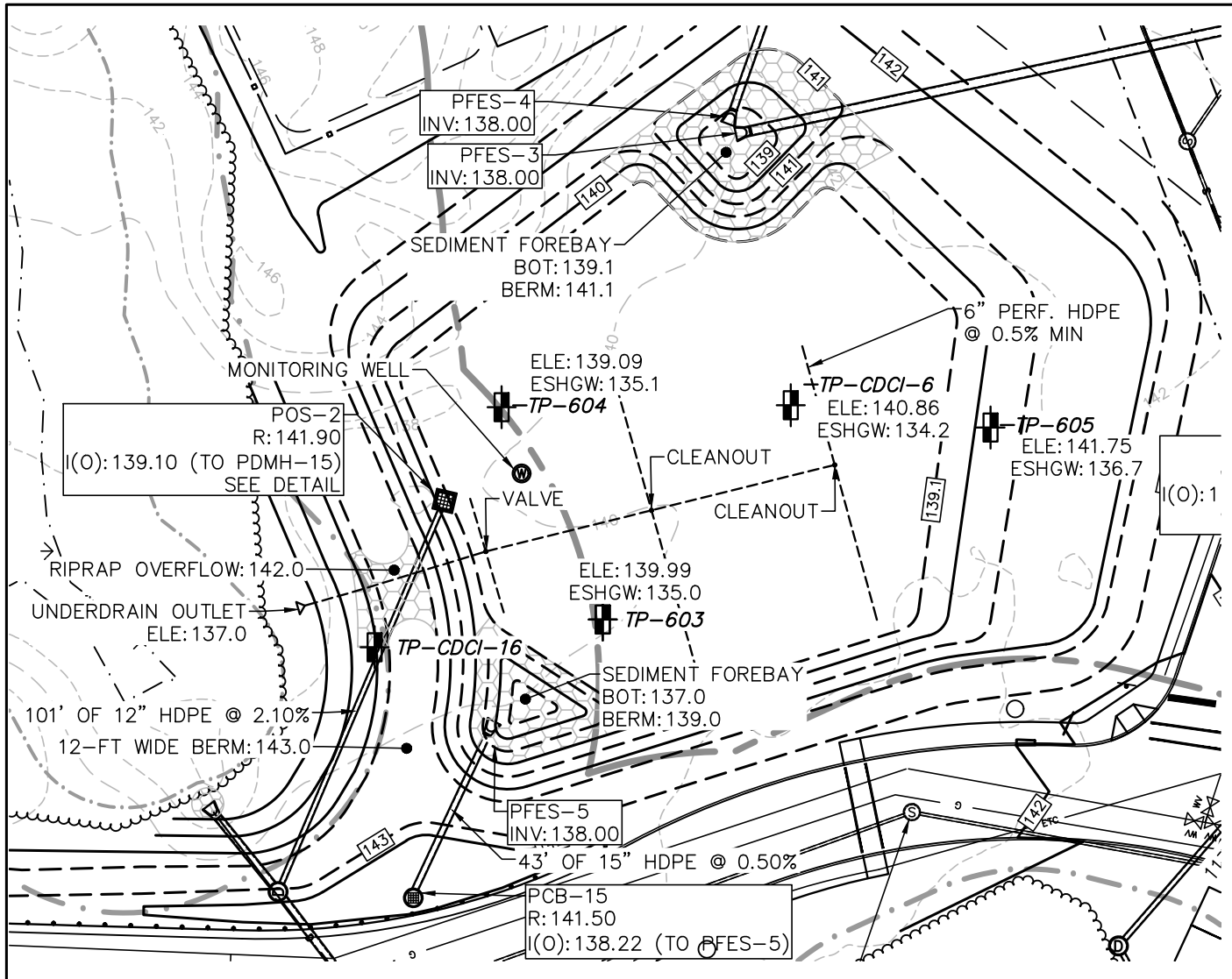


DRAWING TITLE:

**CONSTRUCTION
DETAILS**

DRAWING #:

D-3

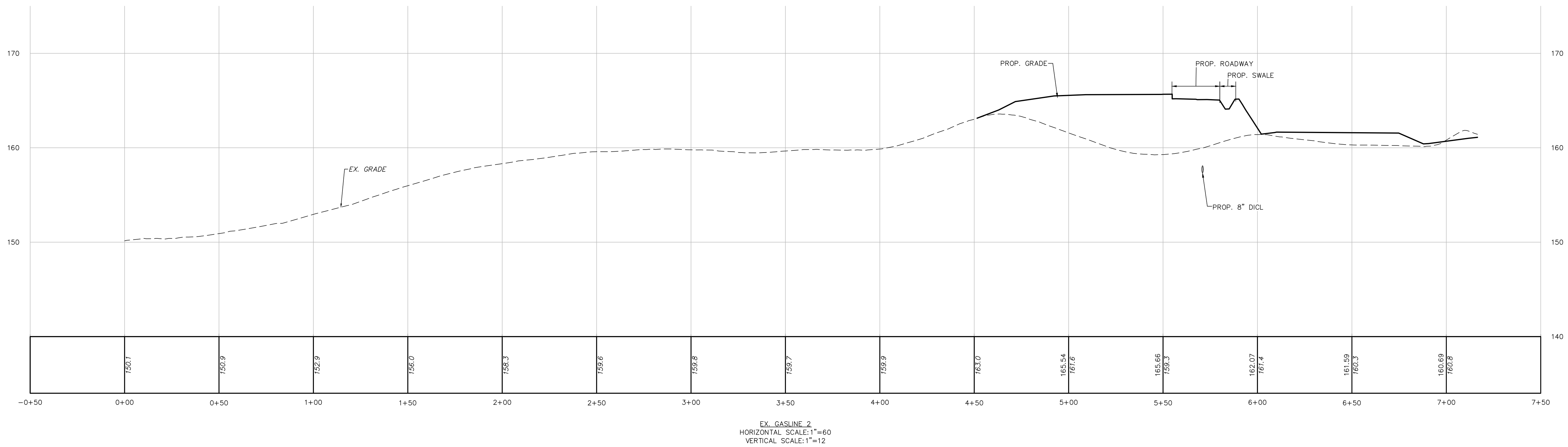
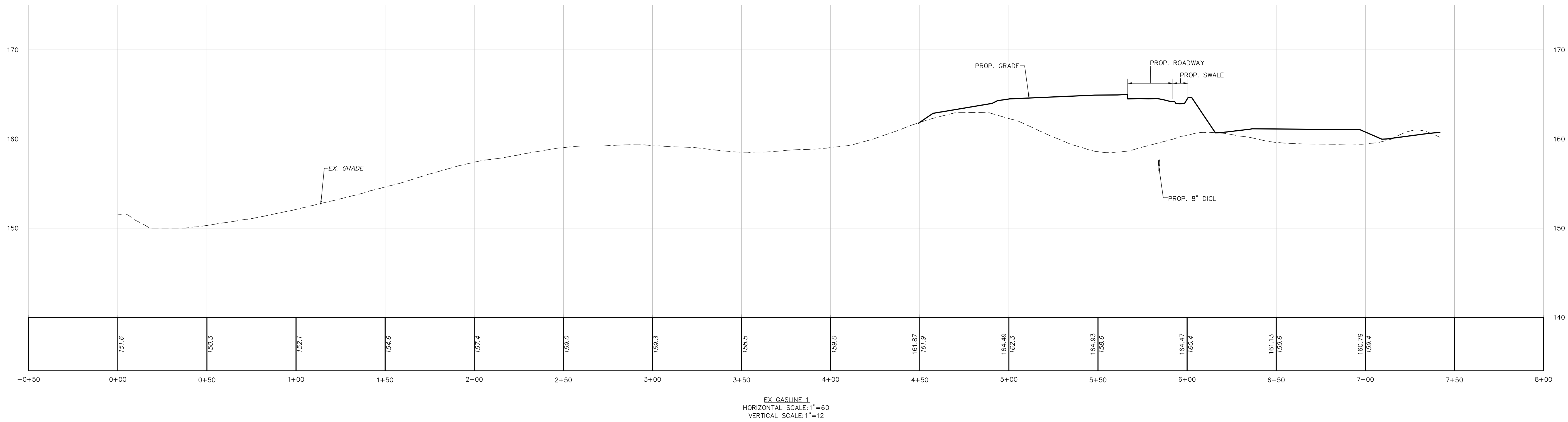
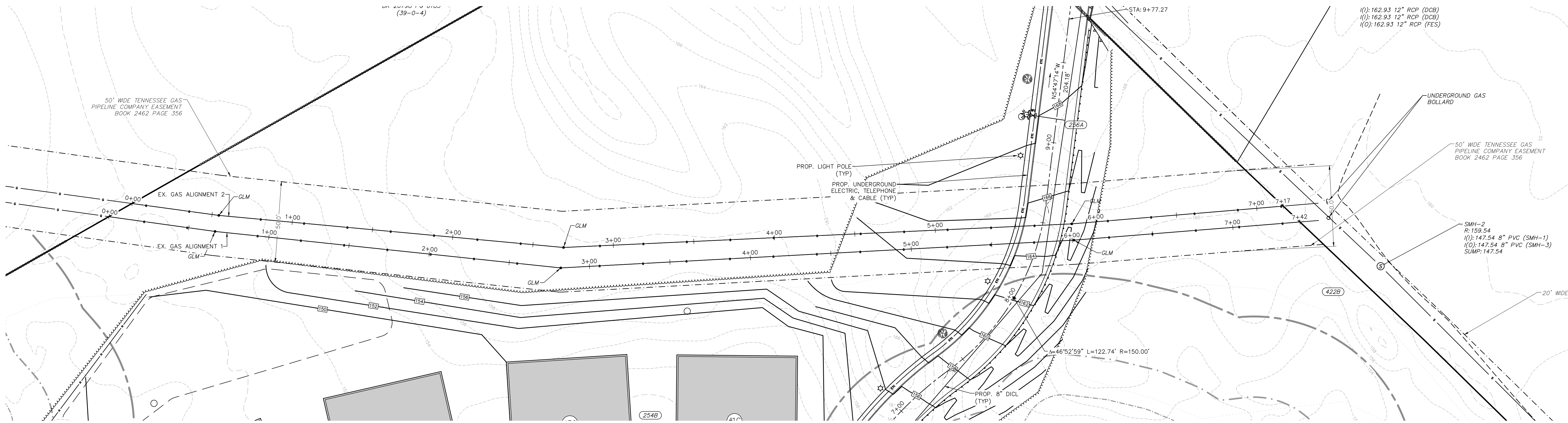


10/2/25	REV. PER PEER REVIEW COMMENTS
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REVISIONS	
APPLICANT:	
THE HOMES AT MURPHY'S FARM LLC	
18 CASSIMERE STREET ANDOVER, MA 01810	
PROJECT:	
MURPHY'S FARM	
DRACUT, MA 01826	
DATE ISSUED: APRIL 22, 2024	
PROJECT #: 23-10524	
PREPARED BY: TWS	
PROFESSIONAL ENGINEER FOR CIVIL DESIGN CONSULTANTS, INC.	
DRAWING TITLE:	
CONSTRUCTION DETAILS	
DRAWING #:	

TEST PIT LOGS			
Address: Murphy's Farm, Dracut, MA			
Date: 12/7/2023			
S.E.: William Hall			
Witness: Tina Rivard			
Note: Areas where test pits were performed have been stripped of top and subsoil.			
CDCI-1			
Depth	Horizon	Color	Texture
0-120	C	10YR5/4	Coarse Sand
Many cobbles and stones			
Not mottling observed			
No water observed			
CDCI-3			
Depth	Horizon	Color	Texture
0-156	C	10YR5/4	Coarse Sand
Many cobbles and stones			
Not mottling observed			
No water observed			
CDCI-5			
Depth	Horizon	Color	Texture
0-116	C	10YR5/4	Coarse Sand
Many cobbles and stones			
Not mottling observed			
No water observed			
CDCI-7			
Depth	Horizon	Color	Texture
0-72	Sandy Fill	----	----
Not mottling observed			
No water observed			
Ledge encountered at 72"			
CDCI-9			
Depth	Horizon	Color	Texture
0-102	C1	10YR5/4	Coarse Sand
102-144	C2	10YR6/3	Loamy Sand
Many cobbles and stones in C1 layer			
Not mottling observed			
No water observed			
CDCI-11			
Depth	Horizon	Color	Texture
0-90	C1	10YR5/4	Coarse Sand
90-166	C2	10YR6/3	F. Loamy Sand
Many cobbles and stones in C1 layer			
Mottling @ 128"			
Weeping @ 160"			

Address: Murphy's Farm, Dracut, MA			
Date: 4/2/2024			
S.E.: Thomas Schomburg			
Witness: N/A			
Note: Test pits CDCI-14 - CDCI-23 performed in areas that have been stripped of top and subsoil. Soil has begun to weather.			
CDCI-13			
Depth	Horizon	Color	Texture
0-16	A	10YR3/2	Sandy Loam
16-36	B	10YR5/6	Sandy Loam
36-80	C	10YR5/3	Sandy Loam
Mottling @ 32"			
Water @ 40"			
CDCI-15			
Depth	Horizon	Color	Texture
0-12	A	10YR3/2	Sandy Loam
12-32	B	10YR5/6	Sandy Loam
32-96	C	10YR5/3	Sandy Loam
Mottling @ 30"			
Water @ 30"			
CDCI-17			
Depth	Horizon	Color	Texture
0-16	B	10YR5/6	Fine Sand
16-80	C	10YR5/3	Fine Sand
80-108	C2	10YR5/3	Gravelly Sand
Many cobbles and stones in C Layer			
C2 Layer primarily gravel			
Mottling @ 24"			
Water @ 80"			
CDCI-19			
Depth	Horizon	Color	Texture
0-12	B	10YR5/6	Sand
12-120	C	10YR5/3	Gravelly Sand
Many cobbles and stones in C Layer			
Mottling @ 60"			
Water @ 90"			
CDCI-21			
Depth	Horizon	Color	Texture
0-24	B	10YR5/6	Sand
24-48	C	10YR5/6	Gravelly Sand
48-80	2C	10YR5/3	F. Loamy Sand
Many cobbles and stones in C Layer			
No mottling observed			
No water observed			
Ledge encountered at 80"			
CDCI-23			
Depth	Horizon	Color	Texture
0-16	B	10YR5/6	Sand
16-54	C	10YR5/6	Gravelly Sand
Many cobbles and stones in C Layer			
No mottling observed			
No water observed			
Ledge encountered at 54"			

Address: Murphy's Farm, Dracut, MA			
Date: 12/4/2024			
S.E.: Thomas Schomburg & Steven Cummings			
Witness: N/A			
Note: Test pits CDCI-25 - CDCI-608 performed in areas that have been stripped of top and subsoil. Soil has begun to weather.			
CDCI-25			
Depth	Horizon	Color	Texture
0-30	B	10YR6/6	Loamy Sand
30-120	C	10YR6/4	Gravelly Sand
Mottling @ 72"			
No water observed			
TP-27			
Depth	Horizon	Color	Texture
0-66	B	10YR6/6	Gravelly Sand
66-120	C	10YR6/1	Sand
Mottling @ 66"			
No water observed			
TP-471			
Depth	Horizon	Color	Texture
0-12	A	10YR3/3	Loamy Sand
12-24	B	10YR5/6	Loamy Sand
24-80	C	10YR7/3	Fine Sand
No mottling observed			
No water observed			
TP-473			
Depth	Horizon	Color	Texture
0-8	A	10YR3/3	Sandy Loam
8-18	B	10YR5/6	Loamy Sand
18-72	C	10YR7/3	Fine Sand
No mottling observed			
No water observed			
TP-475			
Depth	Horizon	Color	Texture
0-8	A	10YR3/2	Loamy Sand
8-18	B	10YR3/6	Loamy Sand
18-72	C	10YR6/4	Medium Sand
No mottling observed			
No water observed			
TP-477			
Depth	Horizon	Color	Texture
0-6	A	10YR3/3	Sandy Loam
6-28	B	10YR5/4	Loamy Sand
28-72	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-479			
Depth	Horizon	Color	Texture
0-10	A	10YR3/2	Loamy Sand
10-22	B	10YR5/4	Loamy Sand
22-80	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-481			
Depth	Horizon	Color	Texture
0-8	A	10YR3/2	Loamy Sand
8-16	B	10YR5/4	Loamy Sand
16-80	C	10YR7/3	Medium Sand
Mottling @ 48"			
No water observed			
TP-482			
Depth	Horizon	Color	Texture
0-8	A	10YR3/3	Sandy Loam
8-28	B	10YR5/6	Loamy Sand
28-78	C	10YR7/3	Medium Sand
Mottling @ 48"			
No water observed			
TP-484			
Depth	Horizon	Color	Texture
0-10	A	10YR3/3	Sandy Loam
10-24	B	10YR5/8	Loamy Sand
24-78	C	10YR8/3	Medium Sand
Mottling @ 36"			
No water observed			
TP-486			
Depth	Horizon	Color	Texture
0-6	A	10YR3/3	Sandy Loam
6-24	B	10YR5/8	Loamy Sand
24-72	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-488			
Depth	Horizon	Color	Texture
0-8	A	10YR3/2	Loamy Sand
8-20	B	10YR5/8	Loamy Sand
20-72	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-490			
Depth	Horizon	Color	Texture
0-6	A	10YR3/2	Loamy Sand
6-16	B	10YR5/8	Loamy Sand
16-48	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-492			
Depth	Horizon	Color	Texture
0-12	A	10YR3/2	Loamy Sand
12-24	B	10YR5/6	Loamy Sand
24-72	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-494			
Depth	Horizon	Color	Texture
0-30	B	10YR5/6	Loamy Sand
30-84	A	10YR6/4	Gravelly Sand
84-120	C	10YR6/1	Sand
Mottling @ 84"			
No water observed			
CDCI-26			
Depth	Horizon	Color	Texture
0-24	B	10YR6/6	Loamy Sand
24-72	C	10YR6/4	Gravelly Sand
72-120	C	10YR6/2	Sand
Mottling @ 72"			
No water observed			
TP-470			
Depth	Horizon	Color	Texture
0-10	A	10YR3/3	Sandy Loam
10-26	B	10YR5/6	Loamy Sand
26-78	C	10YR7/3	Fine Sand
No mottling observed			
No water observed			
TP-472			
Depth	Horizon	Color	Texture
0-12	A	10YR5/6	Loamy Sand
12-24	B	10YR5/3	Loamy Sand
24-72	C	10YR7/3	Fine Sand
No mottling observed			
No water observed			
TP-474			
Depth	Horizon	Color	Texture
0-8	A	10YR3/3	Sandy Loam
8-20	B	10YR5/6	Loamy Sand
20-72	C	10YR6/4	Medium Sand
No mottling observed			
No water observed			
TP-476			
Depth	Horizon	Color	Texture
0-16	A	10YR3/2	Loamy Sand
16-28	B	10YR3/4	Loamy Sand
28-72	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-478			
Depth	Horizon	Color	Texture
0-6	A	10YR3/3	Sandy Loam
6-26	B	10YR5/4	Loamy Sand
26-72	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-480			
Depth	Horizon	Color	Texture
0-6	A	10YR3/3	Sandy Loam
6-18	B	10YR5/6	Loamy Sand
18-72	C	10YR7/3	Sand
No mottling observed			
No water observed			
TP-482			
Depth	Horizon	Color	Texture
0-16	A	10YR5/2	Loamy Sand
16-24	B	10YR5/4	Loamy Sand
24-74	C	10YR7/3	Fine Sand
Mottling @ 36"			
No water observed			
TP-485			
Depth	Horizon	Color	Texture
0-10	A	10YR5/2	Loamy Sand
10-32	B	10YR5/4	Loamy Sand
32-84	C	10YR7/3	Fine Sand
Mottling @ 36"			
No water observed			
TP-487			
Depth	Horizon	Color	Texture
0-8	A	10YR3/2	Loamy Sand
8-24	B	10YR5/8	Loamy Sand
24-72	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-489			
Depth	Horizon	Color	Texture
0-6	A	10YR3/3	Sandy Loam
6-22	B	10YR5/8	Loamy Sand
22-72	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-491			
Depth	Horizon	Color	Texture
0-8	A	10YR3/3	Sandy Loam
8-28	B	10YR5/8	Loamy Sand
28-74	C	10YR7/4	Medium Sand
Mottling @ 60"			
No water observed			
TP-493			
Depth	Horizon	Color	Texture
0-8	A	10YR3/3	Sandy Loam
8-24	B	10YR6/6	Loamy Sand
24-78	C	10YR7/4	Medium Sand
No mottling observed			
No water observed			
TP-495			
Depth	Horizon	Color	Texture
0-72	C2	10YR7/4	Medium Sand
72-132	C2	10YR7/4	Fine Sand
Mottling @ 84"			
No water observed			



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DRACUT, MA 01826

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CONSULTANTS, INC.

CIVIL
DESIGN
CONSULTANTS, INC.
344 North Main Street | Andover, MA 01810
(978) 486-0920 | www.civil80.com

DRAWING TITLE:
**CONSTRUCTION
DETAILS**

DRAWING #:

D-6