

# SITE IMPROVEMENT PLAN

## NORTH WOODS VILLAGE

### PLANNED RESIDENTIAL DEVELOPMENT

25 COLONIAL DRIVE  
KILLINGLY, CONNECTICUT

PREPARED FOR  
**CANTERBURY HOLDINGS, LLC**  
18 GAVIN WAY  
LISBON, CONNECTICUT 06351

**PROPERTY**

25 COLONIAL DRIVE  
KILLINGLY, CT 06241  
PARCEL: #113-029-006  
MBL: 113-29.6

**ZONE**

LOW DENSITY RESIDENTIAL (LD)

**PROPERTY OWNER**

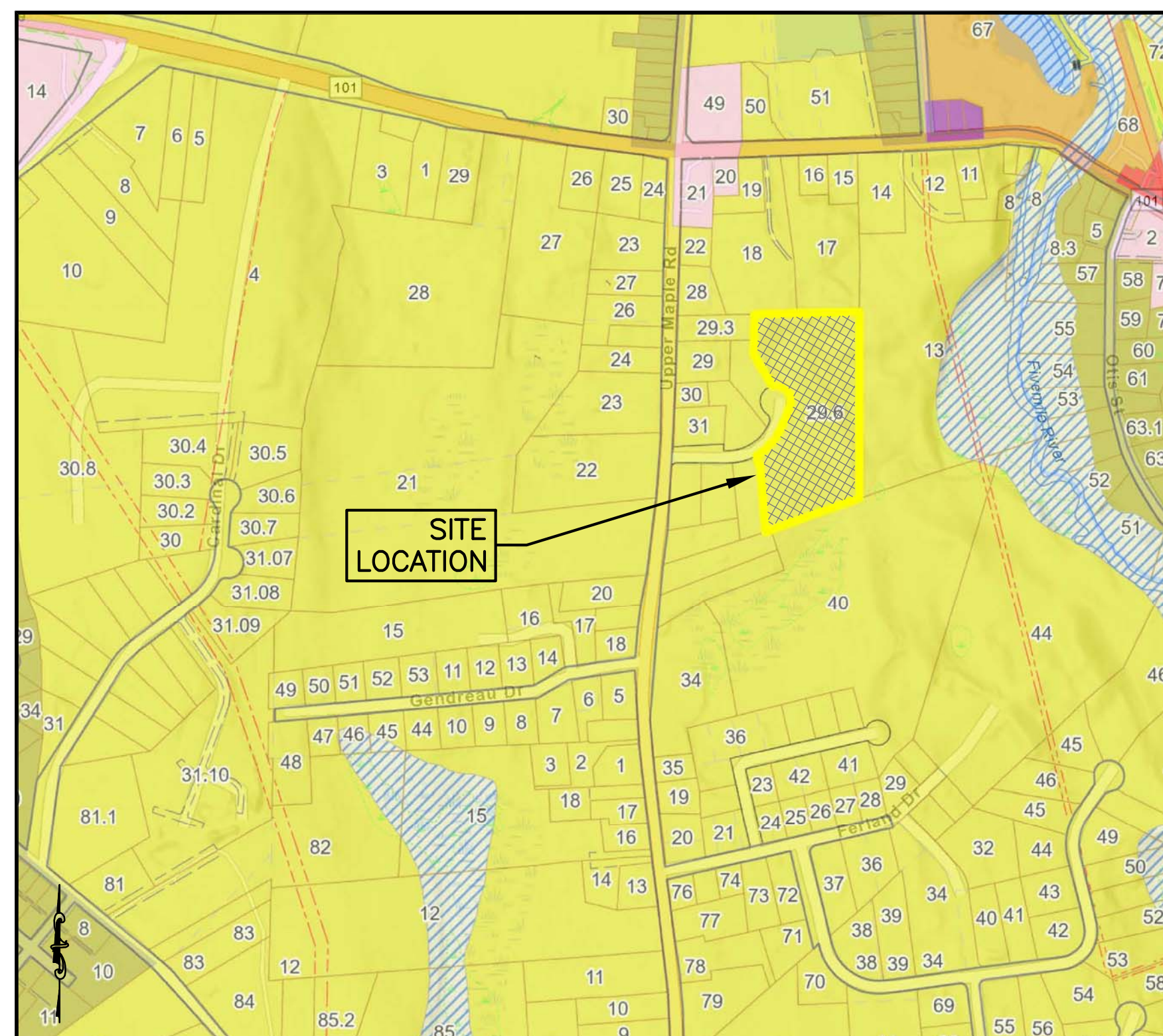
UPPER MAPLE LLC  
105 CENTER STREET  
THOMPSON, CT 06277

**APPLICANT**

CANTERBURY HOLDINGS LLC  
18 GAVIN WAY  
LISBON, CT 06351

**INDEX TO DRAWINGS**

DRAWING NO.	DESCRIPTION OF DRAWINGS
1	Boundary & Topographic Survey
2	Plan of Development
3-4	Site Plan
5-6	Grading, Drainage, and Utility Plan
7-8	Driveway Plan & Profile
9-10	Landscaping Plan
11	Erosion & Sedimentation Control and Stormwater Management Plan
12	Erosion & Sedimentation Control and Stormwater Management Details
13-16	Construction Details



**LOCATION & ZONING MAP**

SCALE: 1"=±500'

**LEGEND TO DRAWINGS**

EXISTING		PROPOSED
---	PROPERTY LINE	---
---	BUILDING SETBACK LINE	---
---	CATCH BASIN & CULVERT	---
---	WATER	---
---	SEWER	---
---	SEWER FORCE MAIN	---
---	GAS	---
---	CONTOUR	---
124.2 x	SPOT ELEVATION	124.2 x
---	UTILITY POLE	---
---	ELECTRIC	---
---	TELEPHONE	---
---	ELECTRIC & TELECOM.	---
---	SILT FENCE	---
---	FENCE	---
---	RETAINING WALL	---
---	STONE WALL	---
---	TEST HOLE	---
---	TREE/SHRUB LINE	---

July 7, 2023

**CLA Engineers, Inc.**  
CIVIL · STRUCTURAL · SURVEYING

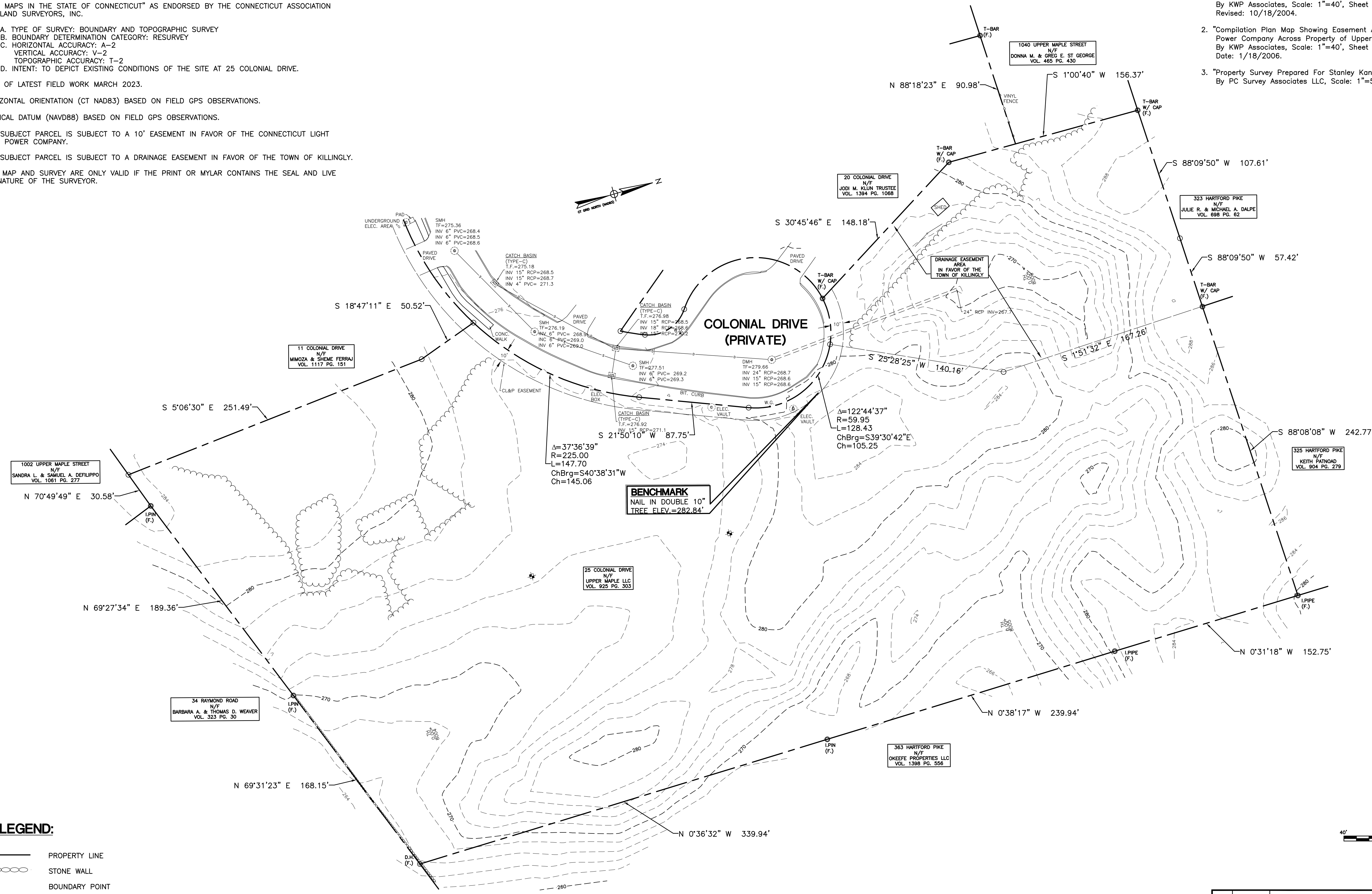
317 Main Street Norwich, CT 06360  
(860) 886-1966 Fax (860) 886-9165

**SURVEY NOTES**

- THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS FOR STATE AGENCIES "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.
  - TYPE OF SURVEY: BOUNDARY AND TOPOGRAPHIC SURVEY
  - BOUNDARY DETERMINATION CATEGORY: RESURVEY
  - HORIZONTAL ACCURACY: A-2
  - VERTICAL ACCURACY: V-2
  - TOPOGRAPHIC ACCURACY: T-2
  - INTENT: TO DEPICT EXISTING CONDITIONS OF THE SITE AT 25 COLONIAL DRIVE.
- DATE OF LATEST FIELD WORK MARCH 2023.
- HORIZONTAL ORIENTATION (CT NAD83) BASED ON FIELD GPS OBSERVATIONS.
- VERTICAL DATUM (NAVD88) BASED ON FIELD GPS OBSERVATIONS.
- THE SUBJECT PARCEL IS SUBJECT TO A 10' EASEMENT IN FAVOR OF THE CONNECTICUT LIGHT AND POWER COMPANY.
- THE SUBJECT PARCEL IS SUBJECT TO A DRAINAGE EASEMENT IN FAVOR OF THE TOWN OF KILLINGLY.
- THIS MAP AND SURVEY ARE ONLY VALID IF THE PRINT OR MYLAR CONTAINS THE SEAL AND LIVE SIGNATURE OF THE SURVEYOR.

**MAP REFERENCES**

- "Subdivision Plan Prepared For Upper Maple, LLC", Upper Maple Street Killingly, Connecticut, By KWP Associates, Scale: 1"=40', Sheet 2 of 6, Proj. No: 04011, Date: 4/12/2004, Revised: 10/18/2004.
- "Compilation Plan Map Showing Easement Area Granted to The Connecticut Light and Power Company Across Property of Upper Maple LLC", Upper Maple Street Killingly, Connecticut, By KWP Associates, Scale: 1"=40', Sheet 1 of 1, Proj. No: 04011, File No: E5387, Date: 1/18/2006.
- "Property Survey Prepared For Stanley Kania Living Trust", Upper Maple Street, Killingly, Connecticut, By PC Survey Associates LLC, Scale: 1"=50', Job No: 03030, Map No: A-456, Date: August 2003.

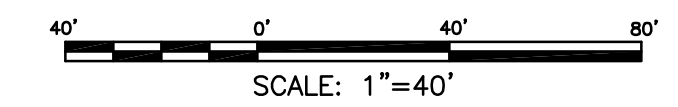


**LEGEND:**

- PROPERTY LINE
- ○ ○ ○ ○ STONE WALL
- BOUNDARY POINT
- ⊙ IRON PIN, IRON PIPE
- CHD, MON □ MONUMENT
- ⊙ SEWER MANHOLE
- ⊙ UTILITY POLE
- N/F NOW OR FORMERLY
- U.G. UNDER GROUND
- ☐ CATCH BASIN

TO MY KNOWLEDGE AND BELIEF THIS PLAN IS SUBSTANTIALLY CORRECT AS NOTED OR DEPICTED HEREON.

RYAN J. CHEVERIE, L.L.S. #70454 DATE



<p><b>CLA Engineers, Inc.</b> CIVIL · STRUCTURAL · SURVEYING</p> <p>317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165</p>		Project No. CLA-7283
		Proj. Surveyor R.J.C.
<p>25 Colonial Drive Killingly, Connecticut 06241</p> <p><b>Site Improvement Plan</b> North Woods Village Planned Residential Development</p> <p>Boundary / Existing Conditions Survey</p>		Date: 03/13/23
		Sheet No. <b>01</b>



**ZONING COMPLIANCE TABLE**

Zone: Low Density Residential (LD)		
ITEM	REQUIRED	PROVIDED
LOT AREA	30,000 S.F.	±286,131 S.F.
FRONTAGE	100 FT.	363 FT.
FRONT YARD SETBACK	40 FT.	44.7 FT.
SIDE YARD SETBACK	20 FT.	21.3 FT.
REAR YARD SETBACK	20 FT.	54.8 FT.
BUILDING HEIGHT	35 FT.	35 FT.
LOT COVERAGE	30%	26.1%
COMMON OPEN SPACE	20%	29.7%
WATER SUPPLY	MUNICIPAL	MUNICIPAL
SEWAGE DISPOSAL	MUNICIPAL	MUNICIPAL

**DENSITY CALCULATION:**  
 MAXIMUM 5 DWELLING UNITS PER ACRE = 32.8 DWELLING UNITS MAXIMUM  
 6.57 AC. x 5 UNITS/AC. = 32.85 DWELLING UNITS PROPOSED

**COVERAGE CALCULATION:**  
 IMPERVIOUS AREA: 74,650 S.F.  
 LOT AREA: 286,131 S.F.  
 COVERAGE = 74,650 S.F. / 286,131 S.F. = 26.1%

**COMMON OPEN SPACE CALCULATION:**  
 ACTIVE OPEN SPACE: 28,293 S.F.  
 PASSIVE OPEN SPACE: 56,673 S.F.  
 TOTAL OPEN SPACE: 84,966 S.F.

LOT AREA: 286,131 S.F.  
 COMMON OPEN SPACE = 84,966 S.F. / 286,131 S.F. = 29.7%

PERCENTAGE OF OPEN SPACE DESIGNATED ACTIVE  
 28,293 S.F. / 286,131 S.F. = 33.3%

**PARKING COUNT**

USE	QTY	UNIT	REQUIRED	SPACES
INDEPENDENT RESIDENTIAL LIVING	32	DWELLING	2.3 / DWELLING	73.6
			SPACES REQUIRED :	74
			SPACES PROVIDED AT EACH UNIT (1 GARAGE & 1 DRIVEWAY) :	64
			VISITOR PARKING PROVIDED :	11
			TOTAL PARKING SPACES PROVIDED :	75

ELECTRIC VEHICLE CHARGING SHALL BE PROVIDED WITHIN THE RESIDENTIAL GARAGES IN ACCORDANCE WITH STATE OF CONNECTICUT STATUTES

**PROPOSED DEVELOPMENT**

THE PROPOSED DEVELOPMENT INCLUDES THE CONSTRUCTION OF A 32 UNIT PLANNED RESIDENTIAL DEVELOPMENT (INDEPENDENT RESIDENTIAL LIVING) INCLUDING PRIVATE ACCESS DRIVES, UTILITIES, STORMWATER INFRASTRUCTURE, WITH ACTIVE AND PASSIVE OPEN SPACE AREAS. THE SITE WILL BE REGRADED AND IMPROVED AS SHOWN ON THE SITE DEVELOPMENT PLANS TO ACCOMMODATE THE PROPOSED USE. THE PROPOSED DEVELOPMENT WILL DISTURB APPROXIMATELY 5.6 ACRES.

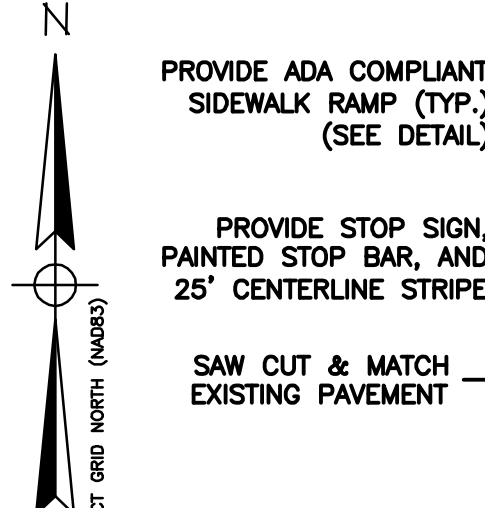
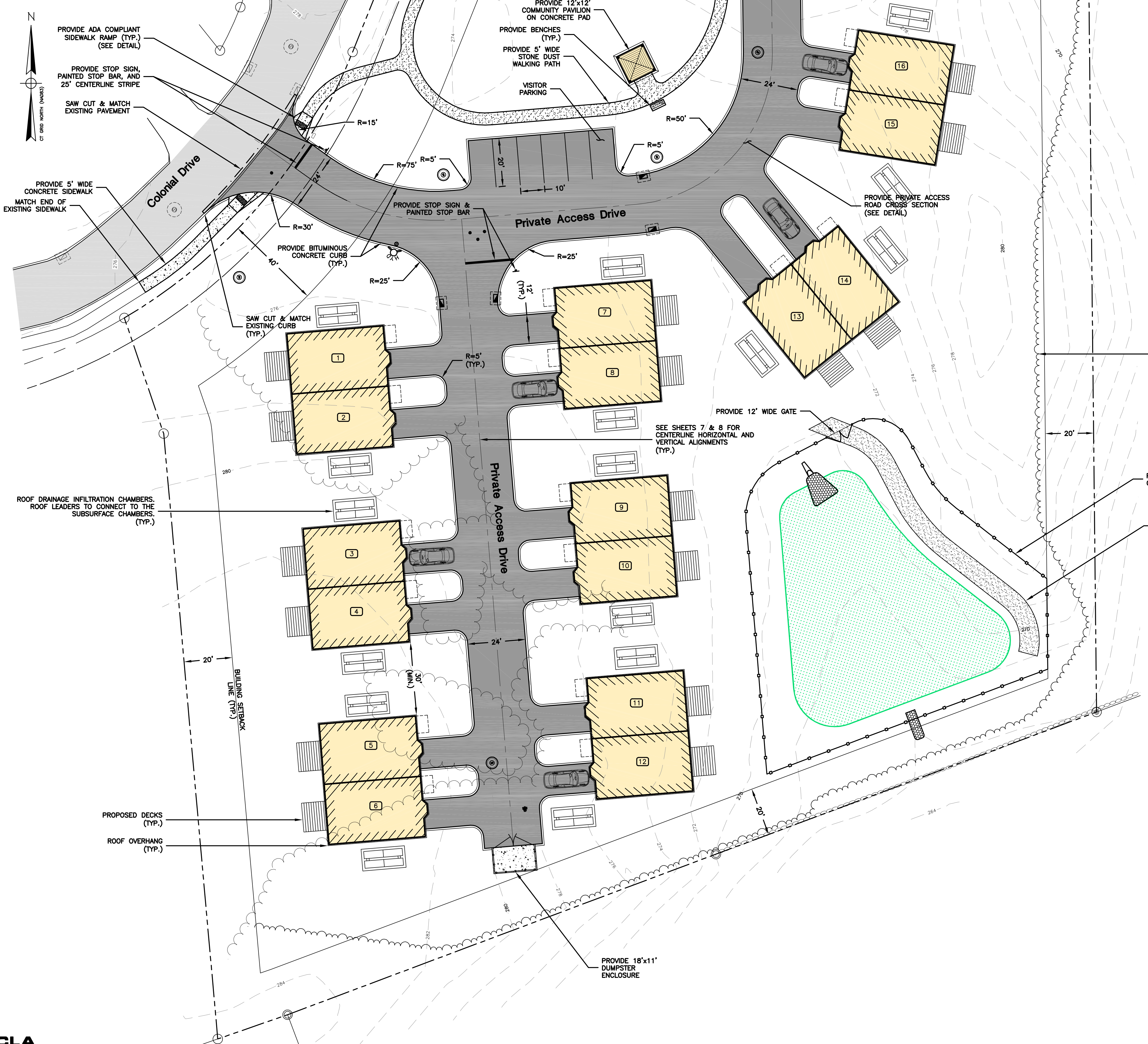
- NO PORTION OF THE SITE LIES WITHIN A 100-YEAR FLOOD PLAIN. (FIRM MAP #090136 0004 B, EFFECTIVE JANUARY 3, 1985)
- THERE ARE NO INLAND WETLANDS LOCATED ONSITE.
- NO PORTION OF THE LOT LIES WITHIN A CT DEEP NATURAL DIVERSITY DATABASE AREA.
- NO PORTION OF THE LOT LIES WITHIN THE COASTAL RESOURCE MANAGEMENT BOUNDARY.
- NO PORTION OF THE LOT LIES WITHIN THE AQUIFER PROTECTION, FLOOD HAZARD, ALEXANDER LAKE, OR FIVE MILE RIVER OVERLAY DISTRICTS.
- THE DEVELOPMENT WILL CONNECT TO THE MUNICIPAL SEWER SYSTEM.
- THE DEVELOPMENT WILL BE SERVED BY THE MUNICIPAL WATER SYSTEM.

**GENERAL NOTES**

- TOPOGRAPHY WAS ESTABLISHED BY CLA ENGINEERS, INC.
- THE SITE WAS REVIEWED FOR THE PRESENCE OF INLAND WETLANDS BY ROBERT RUSSO OF CLA ENGINEERS, INC. NO INLAND WETLANDS ARE LOCATED ONSITE.
- CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 811 AT LEAST 2 FULL WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
- INFORMATION SHOWN ON THE DRAWINGS RELATING TO MATERIALS, CONDITIONS, AND/OR LOCATIONS OF EXISTING STRUCTURES AND UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING FIELD SURVEY, UTILITY COMPANY AND TOWN RECORD MAPS AND DRAWINGS, AND IS NOT GUARANTEED ACCURATE OR COMPLETE.
- THE CONTRACTOR SHALL EXCAVATE TEST PITS AS NEEDED OR AS DIRECTED BY THE OWNER TO VERIFY UTILITY INFORMATION PRIOR TO THE START OF CONSTRUCTION.
- MAINTENANCE AND PROTECTION OF TRAFFIC:**
  - THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF TRAFFIC, TRAFFIC CONTROL, TEMPORARY SIGNING OR BARRICADES, AND TEMPORARY LANE CLOSURES AS NEEDED. CONTINUOUS ACCESS FOR BUSES AND EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.
  - PASSAGE OF TRAFFIC ON ROADWAYS: A MINIMUM OF ONE LANE FOR TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL PERFORM HIS OPERATIONS TO MINIMIZE DISRUPTIONS TO TRAFFIC WITHIN AND AROUND THE PROJECT SITE.
  - RESIDENTS OR BUSINESSES WITH DRIVES AFFECTED BY CONSTRUCTION SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST 48 HOURS BEFORE CONSTRUCTION BEGINS AND SHALL BE ALLOWED CONTINUOUS ACCESS TO THEIR PROPERTY. IF WORK IS PERFORMED DURING THE SCHOOL YEAR, THE CONTRACTOR SHALL PROVIDE NOTICE TO THE BUS COMPANIES (PUBLIC & PRIVATE) AT LEAST 48 HOURS BEFORE CONSTRUCTION BEGINS. THE CONTRACTOR SHALL PHASE HIS CONSTRUCTION OPERATIONS AS NEEDED TO ALLOW CONTINUOUS ACCESS TO ALL BUSINESSES WITHIN THE PROJECT AREA.
  - TEMPORARY MODIFICATIONS TO TRAFFIC PATTERNS ON PUBLIC ROADWAYS SHALL CONFORM TO THE REQUIREMENTS OF CTDOT AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)".
  - CONSTRUCTION SIGNS MUST CONFORM TO THE SIGNING REQUIREMENTS OUTLINED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)". ALL SIGN FACES SHALL BE REFLECTORIZED.
- THE CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES WITHIN THE STREET LINES, EASEMENTS AND PROPERTY AS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT, ROADWAY, SIDEWALKS, ETC., OUTSIDE OF THE WORK AREA AND SHALL REPAIR SUCH DAMAGE AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY AND PERMANENT SUPPORT OF ALL EXISTING UTILITY POLES IN AN ADJACENT TO THE CONSTRUCTION AREA AND SHALL COMPLY WITH ALL THE REQUIREMENTS AND SPECIAL DETAILS FOR THE SUPPORT OF UTILITIES REQUIRED BY UTILITY AGENCIES. ALL COSTS FOR TEMPORARILY SUPPORTING UTILITY POLES DURING CONSTRUCTION SHALL BE INCLUDED IN OTHER ITEMS.
- MATERIAL STOCKPILE AND STAGING AREAS: THE CONTRACTOR SHALL UTILIZE THE STOCKPILE, MATERIAL STORAGE AND EQUIPMENT STORAGE AREAS SHOWN ON THE PLANS. THE CONTRACTOR MAY ADJUST THE EXACT LOCATIONS IN THE FIELD AS NEEDED; IN NO CASE MAY THESE AREAS BE LOCATED CLOSER TO THE WETLANDS EDGE THAN SHOWN ON THE PLANS. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL IDENTIFY THESE AREAS AND PROVIDE EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED.
- BLASTING SHALL NOT BE PERFORMED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING TO GRADE ALL FRAMES, GRATES, COVERS, VALVE BOXES, ACCESS COVERS, AND ALL OTHER ITEMS WHICH NORMALLY MUST HAVE A FIXED RELATION TO FINISHED GRADE.
- ALL WORK TO CONFORM TO THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION FORM 818, DATED JANUARY 2023, AS REVISED.

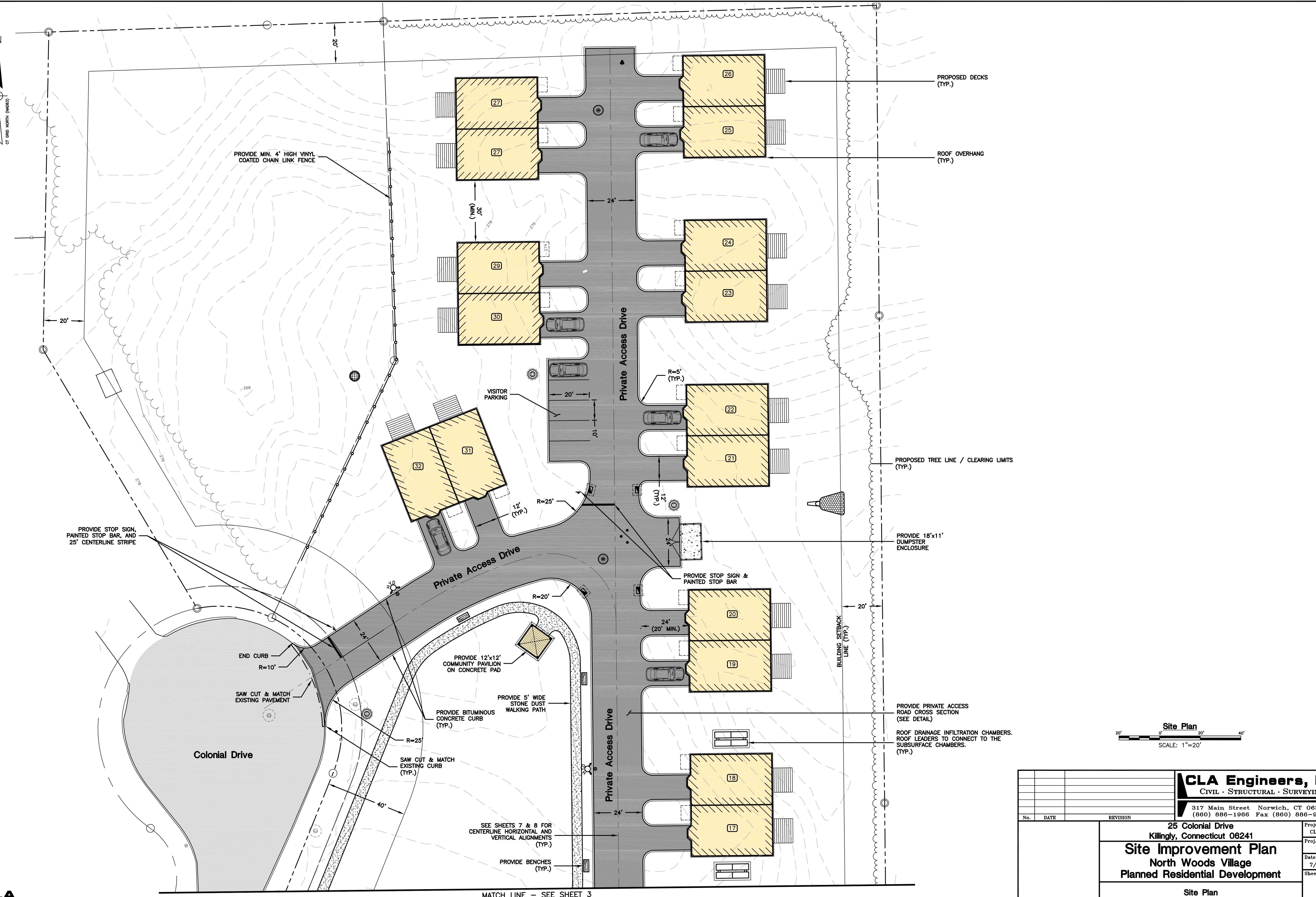
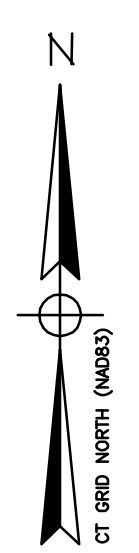
<p><b>CLA Engineers, Inc.</b>          CIVIL · STRUCTURAL · SURVEYING</p> <p>317 Main Street Norwich, CT 06360          (860) 886-1966 Fax (860) 886-9165</p>		Project No. CLA-7283
		Proj. Engineer K.J.H.
<p>25 Colonial Drive          Killingly, Connecticut 06241</p> <p><b>Site Improvement Plan</b>          North Woods Village          Planned Residential Development</p> <p>Plan of Development</p>		Date: 7/7/2023
<p>REVISION</p>		Sheet No. <b>2</b>

MATCH LINE - SEE SHEET 4



Site Plan  
SCALE: 1"=20'

		<b>CLA Engineers, Inc.</b> Civil · Structural · Surveying	
		317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165	
No.	DATE	REVISION	
25 Colonial Drive Killingly, Connecticut 06241			Project No. CLA-7283
<b>Site Improvement Plan</b>			Proj. Engineer K.J.H.
North Woods Village Planned Residential Development			Date: 7/7/2023
Site Plan			Sheet No. <b>3</b>



PROVIDE STOP SIGN, PAINTED STOP BAR, AND 25' CENTERLINE STRIPE

PROVIDE MIN. 4' HIGH VINYL COATED CHAIN LINK FENCE

SEE SHEETS 7 & 8 FOR CENTERLINE HORIZONTAL AND VERTICAL ALIGNMENTS (TYP.)

PROVIDE BENCHES (TYP.)

PROVIDE 12'x12' COMMUNITY PAVILION ON CONCRETE PAD

PROVIDE BITUMINOUS CONCRETE CURB (TYP.)

PROVIDE 5' WIDE STONE DUST WALKING PATH

END CURB R=10'

SAW CUT & MATCH EXISTING PAVEMENT

SAW CUT & MATCH EXISTING CURB (TYP.)

PROPOSED DECKS (TYP.)

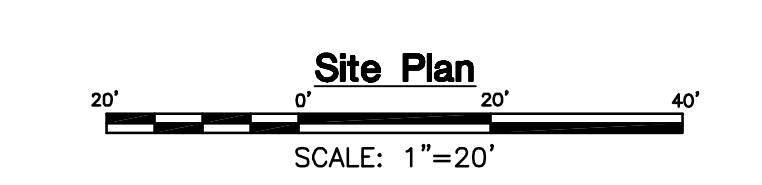
ROOF OVERHANG (TYP.)

PROPOSED TREE LINE / CLEARING LIMITS (TYP.)

PROVIDE 18'x11' DUMPSTER ENCLOSURE

PROVIDE PRIVATE ACCESS ROAD CROSS SECTION (SEE DETAIL)

ROOF DRAINAGE INFILTRATION CHAMBERS. ROOF LEADERS TO CONNECT TO THE SUBSURFACE CHAMBERS. (TYP.)

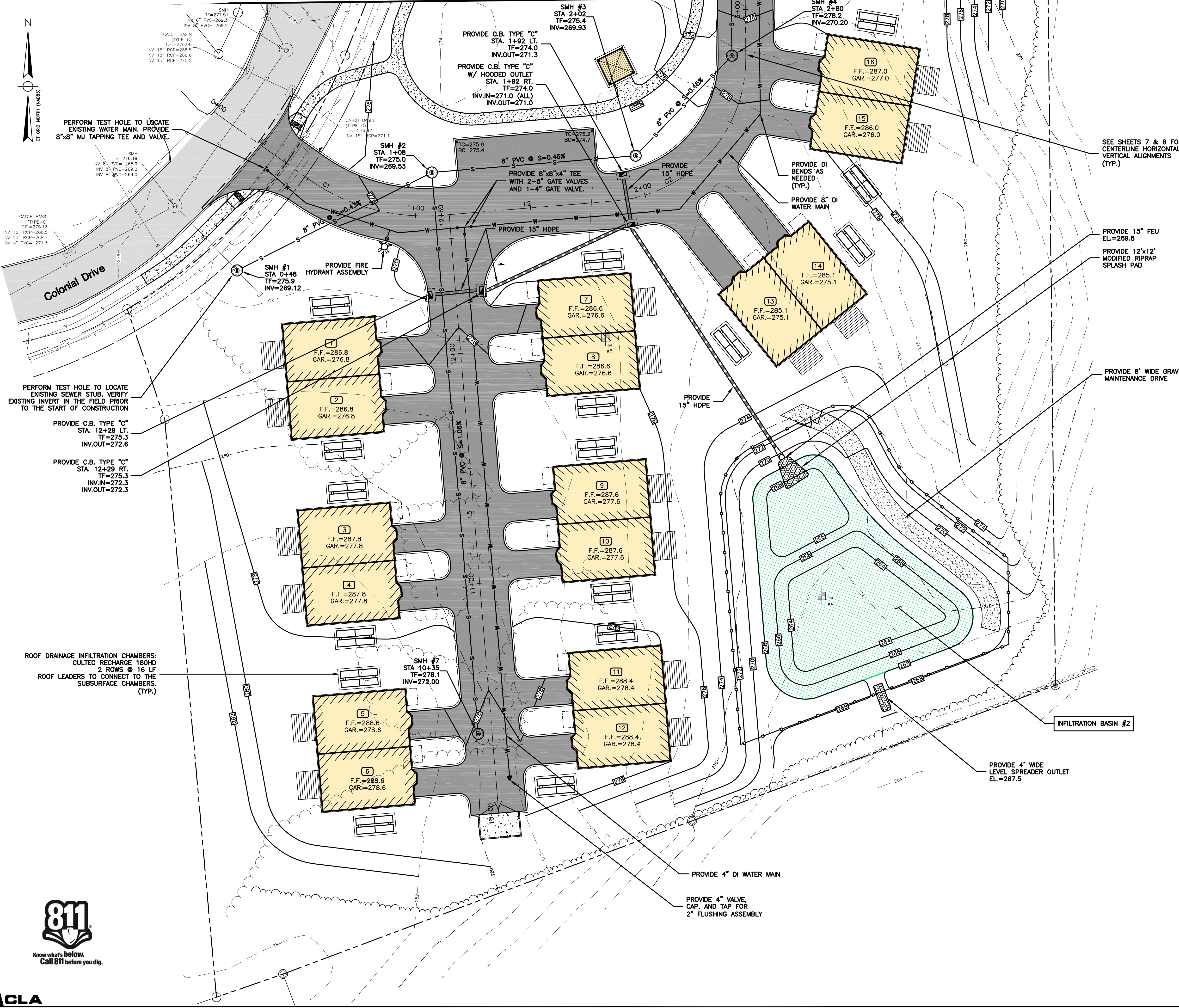
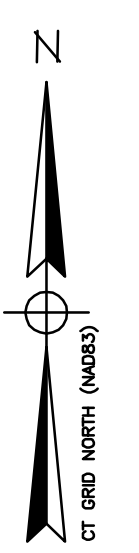


MATCH LINE - SEE SHEET 3

		<b>CLA Engineers, Inc.</b> CIVIL · STRUCTURAL · SURVEYING	
		317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165	
No.	DATE	REVISION	
25 Colonial Drive Killingly, Connecticut 06241			Project No. CLA-7283
<b>Site Improvement Plan</b>			Proj. Engineer K.J.H.
North Woods Village Planned Residential Development			Date: 7/7/2023
Site Plan			Sheet No. <b>4</b>

M:\7000\7200\7283 Brown Lot Investigation\Drawings\CLA-7283 - Planned Residential Development - Sheet 02-11 Site Plans.dwg

MATCH LINE - SEE SHEET 6



**TEST PIT LOGS**

TEST PITS WITNESSED BY CLA ENGINEERS ON 4/27/2023

**TP #4**  
0-18" TOPSOIL, DARK BROWN FINE SANDY LOAM  
18-34" SAND WITH SOME FINES  
34-78" FINE SAND  
78-96" MEDIUM SAND WITH SOME GRAVEL

**TP #5**  
0-12" TOPSOIL, DARK BROWN FINE SANDY LOAM  
12-24" BROWN COARSE SAND WITH GRAVEL  
24-75" GRAY SANDY GRAVEL WITH COBBLES  
75-98" LIGHT GRAY COARSE SAND AND GRAVEL

NO WATER  
NO MOTTLING  
NO LEDGE

NO WATER  
NO MOTTLING  
NO LEDGE

SEE SHEETS 7 & 8 FOR CENTERLINE HORIZONTAL AND VERTICAL ALIGNMENTS (TYP.)

PROVIDE 15" FEU EL.=269.8

PROVIDE 12'x12' MODIFIED RIPRAP SPLASH PAD

PROVIDE 8" WIDE GRAVEL MAINTENANCE DRIVE

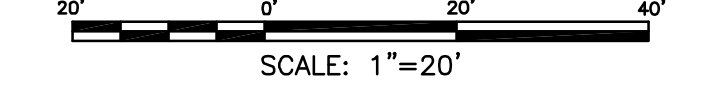
INFILTRATION BASIN #2

PROVIDE 4" WIDE LEVEL SPREADER OUTLET EL.=267.5

PROVIDE 4" DI WATER MAIN

PROVIDE 4" VALVE, CAP, AND TAP FOR 2" FLUSHING ASSEMBLY

**Grading, Drainage, and Utility Plan**

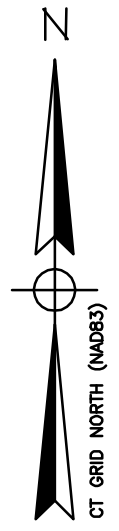


<p><b>CLA Engineers, Inc.</b> CIVIL · STRUCTURAL · SURVEYING</p> <p>317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165</p>		Project No. CLA-7283												
		Proj. Engineer K.J.H.												
<p>25 Colonial Drive Killingly, Connecticut 06241</p> <p><b>Site Improvement Plan</b> North Woods Village Planned Residential Development</p> <p>Grading, Drainage, and Utility Plan</p>		Date: 7/7/2023												
<table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		No.	DATE	REVISION										Sheet No. <b>5</b>
No.	DATE	REVISION												



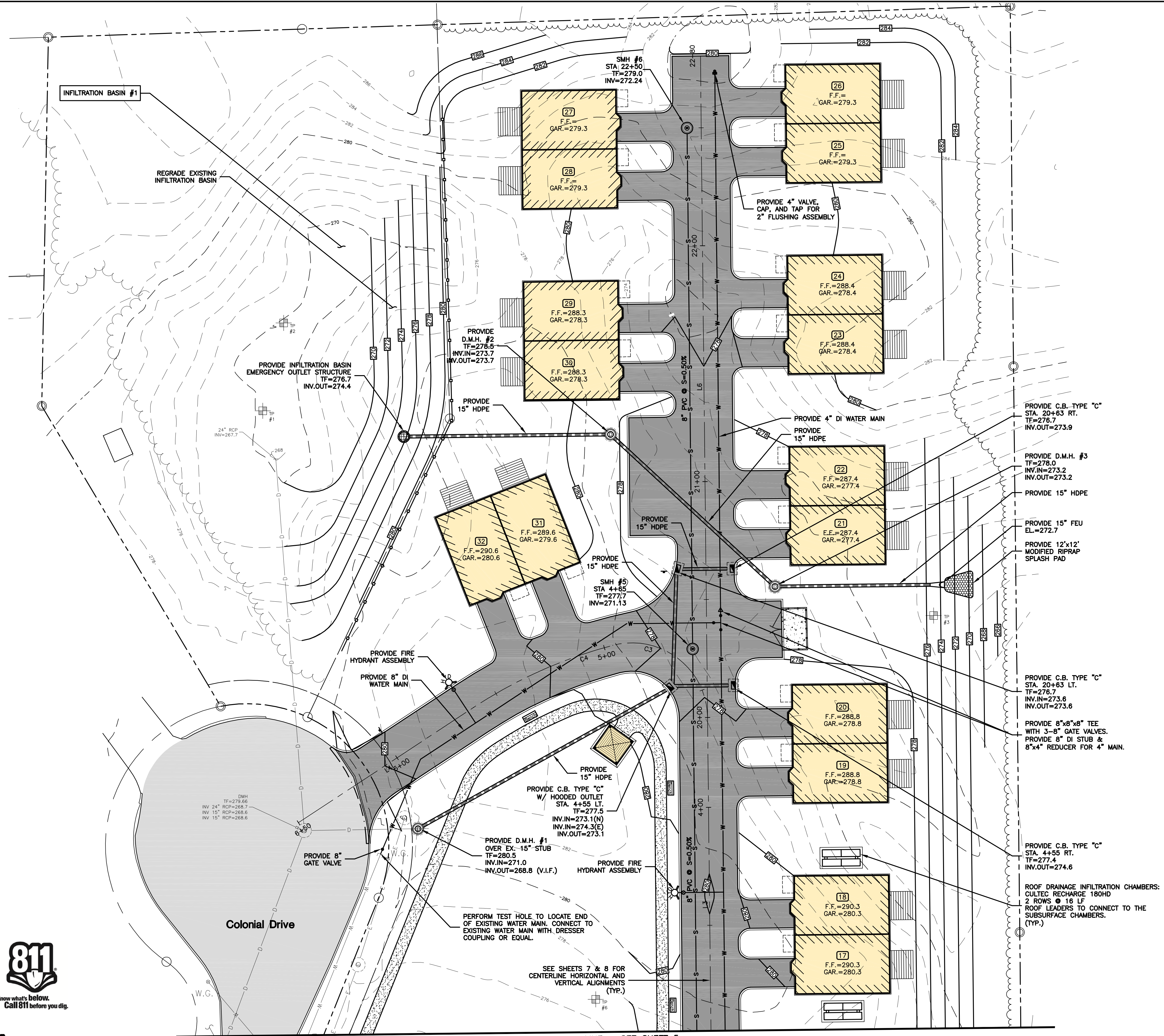
**CLA**

M:\7000\7200\7283 Brown Lot Investigation\Drawings\CLA-7283 - Planned Residential Development - Sheet 02-11 Site Plans.dwg



**TEST PIT LOGS**  
TEST PITS WITNESSED BY CLA ENGINEERS ON 4/27/2023

- TP #1**  
0-13" TOPSOIL, DARK BROWN FINE SANDY LOAM  
13-21" DARK BROWN GRAVELLY SAND  
21-102" GRAY BROWN COARSE SAND AND GRAVEL w/ COBBLES  
  
NO WATER  
NO MOTTLING  
NO LEDGE
- TP #2**  
0-28" TOPSOIL, DARK BROWN FINE SANDY LOAM  
28-52" BROWN COARSE SAND WITH GRAVEL, TRACE FINES  
52-106" BROWN GRAVEL AND SAND WITH COBBLES, FEW STONES  
  
NO WATER  
NO MOTTLING  
NO LEDGE
- TP #3**  
0-6" TOPSOIL, DARK BROWN FINE SANDY LOAM  
6-36" BROWN MEDIUM SAND  
36-58" COARSE SAND WITH GRAVEL  
58-100" GRAVEL AND COARSE SAND  
  
NO WATER  
NO MOTTLING  
NO LEDGE
- TP #6**  
0-9" TOPSOIL, DARK BROWN FINE SANDY LOAM  
9-28" BROWN MEDIUM SAND  
28-48" GRAY COARSE SANDY GRAVEL  
48-57" GRAY FINE SAND  
57-102" GRAVEL AND COARSE SAND, COMPACT  
  
NO WATER  
MOTTLING AT 57"  
NO LEDGE



**Grading, Drainage, and Utility Plan**  
SCALE: 1"=20'



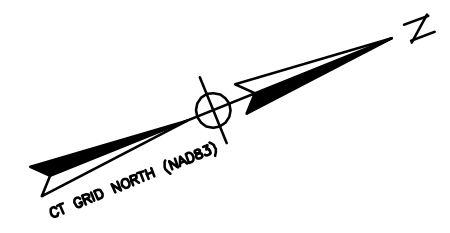
**CLA**

**CLA Engineers, Inc.**  
CIVIL · STRUCTURAL · SURVEYING  
317 Main Street Norwich, CT 06360  
(860) 886-1966 Fax (860) 886-9165

No.	DATE	REVISION

25 Colonial Drive Killingly, Connecticut 06241 <b>Site Improvement Plan</b> North Woods Village Planned Residential Development Grading, Drainage, and Utility Plan		Project No. CLA-7283 Proj. Engineer K.J.H. Date: 7/7/2023 Sheet No. <b>6</b>
--	--	---

M:\7000\7200\7283 Brown Lot Investigation\Drawings\CLA-7283 - Planned Residential Development - Sheet 02-11 Site Plans.dwg



PERFORM TEST HOLE TO LOCATE EXISTING SEWER STUB. VERIFY EXISTING INVERT IN THE FIELD PRIOR TO THE START OF CONSTRUCTION

SMH #1  
STA 0+48  
TF=275.9  
INV=269.12

SMH #2  
STA 1+08  
TF=275.0  
INV=269.53

PERFORM TEST HOLE TO LOCATE END OF EXISTING WATER MAIN. CONNECT TO EXISTING WATER MAIN WITH DRESSER COUPLING OR EQUAL.

PERFORM TEST HOLE TO LOCATE EXISTING WATER MAIN. PROVIDE 8"x8" MJ TAPPING TEE AND VALVE.

SMH #3  
STA 2+02  
TF=275.4  
INV=269.93

SMH #5  
STA 4+65  
TF=277.7  
INV=271.13

SMH #4  
STA 2+80  
TF=278.2  
INV=270.20

SMH #6  
STA 22+50  
TF=278.03  
INV=272.24

SMH #5  
STA 4+65  
TF=277.74  
INV=271.13

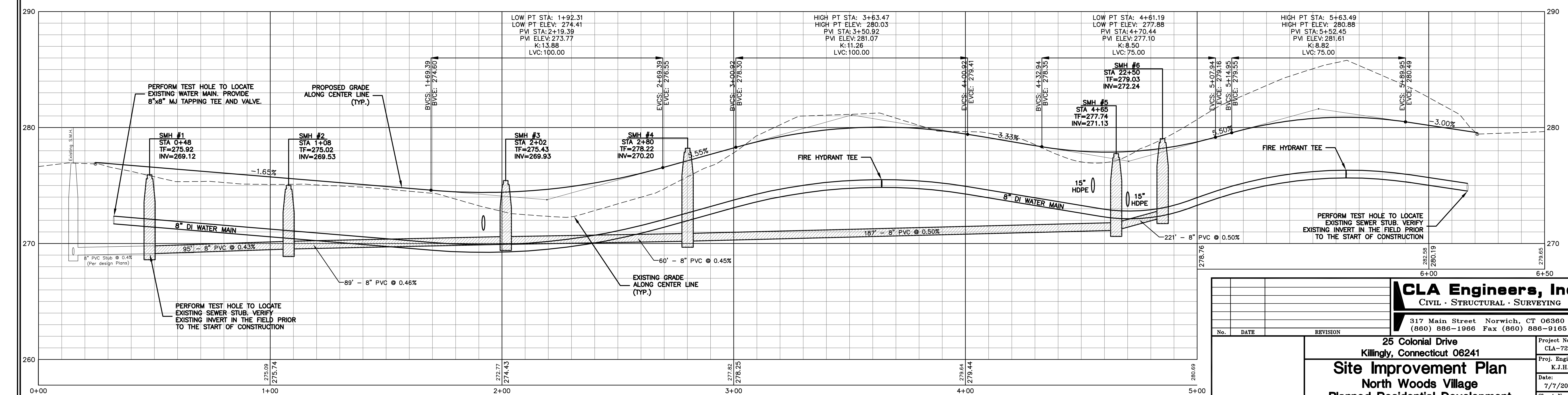
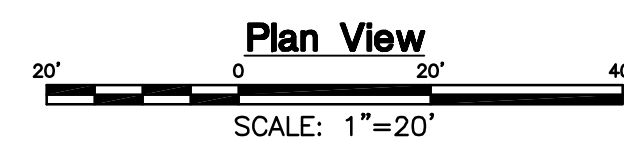
PERFORM TEST HOLE TO LOCATE EXISTING SEWER STUB. VERIFY EXISTING INVERT IN THE FIELD PRIOR TO THE START OF CONSTRUCTION

Line Table: Alignments

Line #	Length	Direction	Start Point	End Point
L5	260.37	N4° 43' 35.08"W	(1233369.17,869020.93)	(1233347.72,869280.41)
L6	280.48	N0° 37' 01.40"W	(1233474.61,869507.38)	(1233471.59,869787.84)
L1	50.00	S54° 32' 50.91"E	(1233245.75,869324.95)	(1233286.48,869295.95)
L2	75.57	N85° 16' 24.92"E	(1233344.11,869280.12)	(1233419.43,869286.34)
L3	158.59	N0° 37' 01.40"W	(1233476.31,869348.80)	(1233474.61,869507.38)
L4	88.78	S56° 38' 35.50"W	(1233375.41,869511.62)	(1233301.25,869462.80)

Curve Table: Alignments

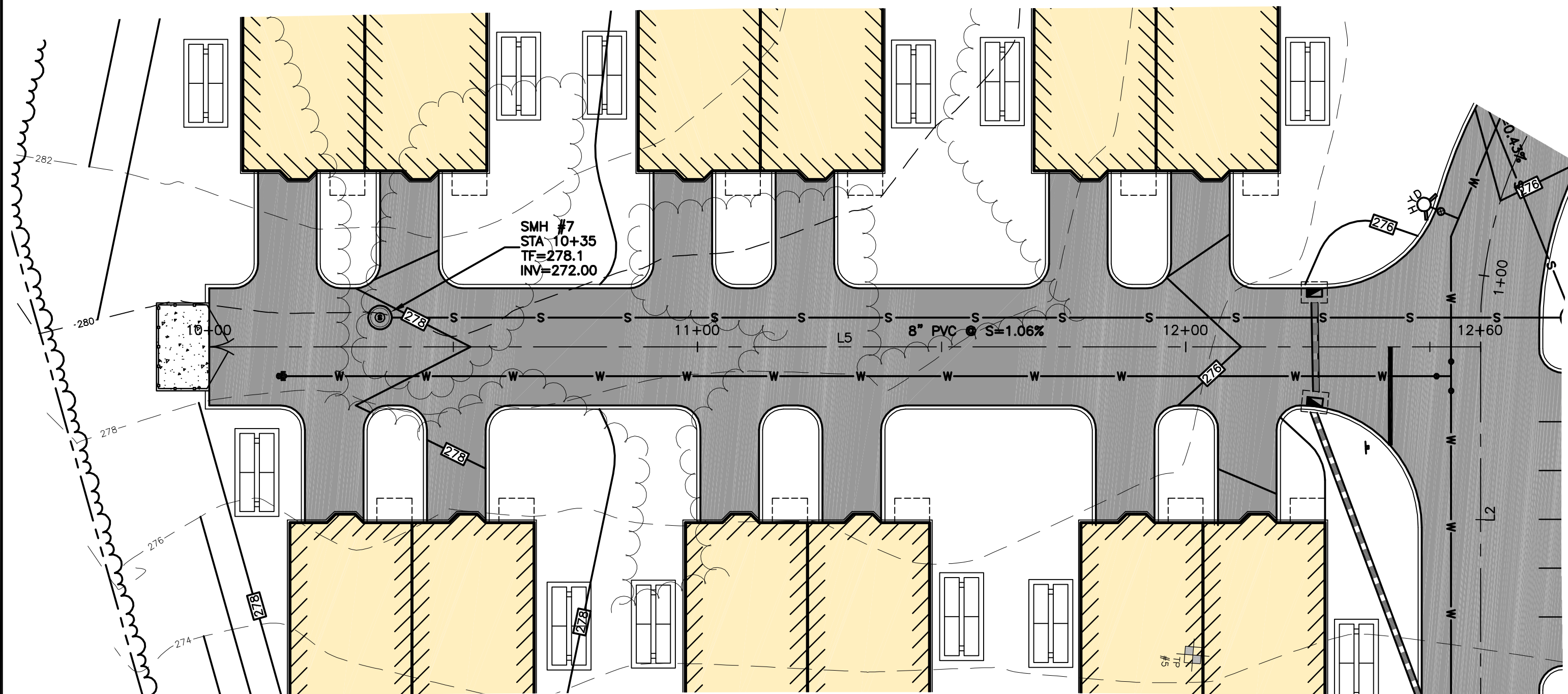
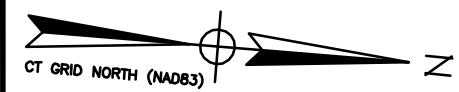
Curve #	Radius	Length	Chord Direction	Start Point	End Point
C1	87.00	61.01	S74° 38' 12.99"E	(1233286.48,869295.95)	(1233344.11,869280.12)
C2	62.00	92.94	N42° 19' 41.76"E	(1233419.43,869286.34)	(1233476.31,869348.80)
C3	32.00	58.16	N52° 41' 01.01"W	(1233474.61,869507.38)	(1233434.46,869537.98)
C4	200.00	64.95	S65° 56' 47.43"W	(1233434.46,869537.98)	(1233375.41,869511.62)



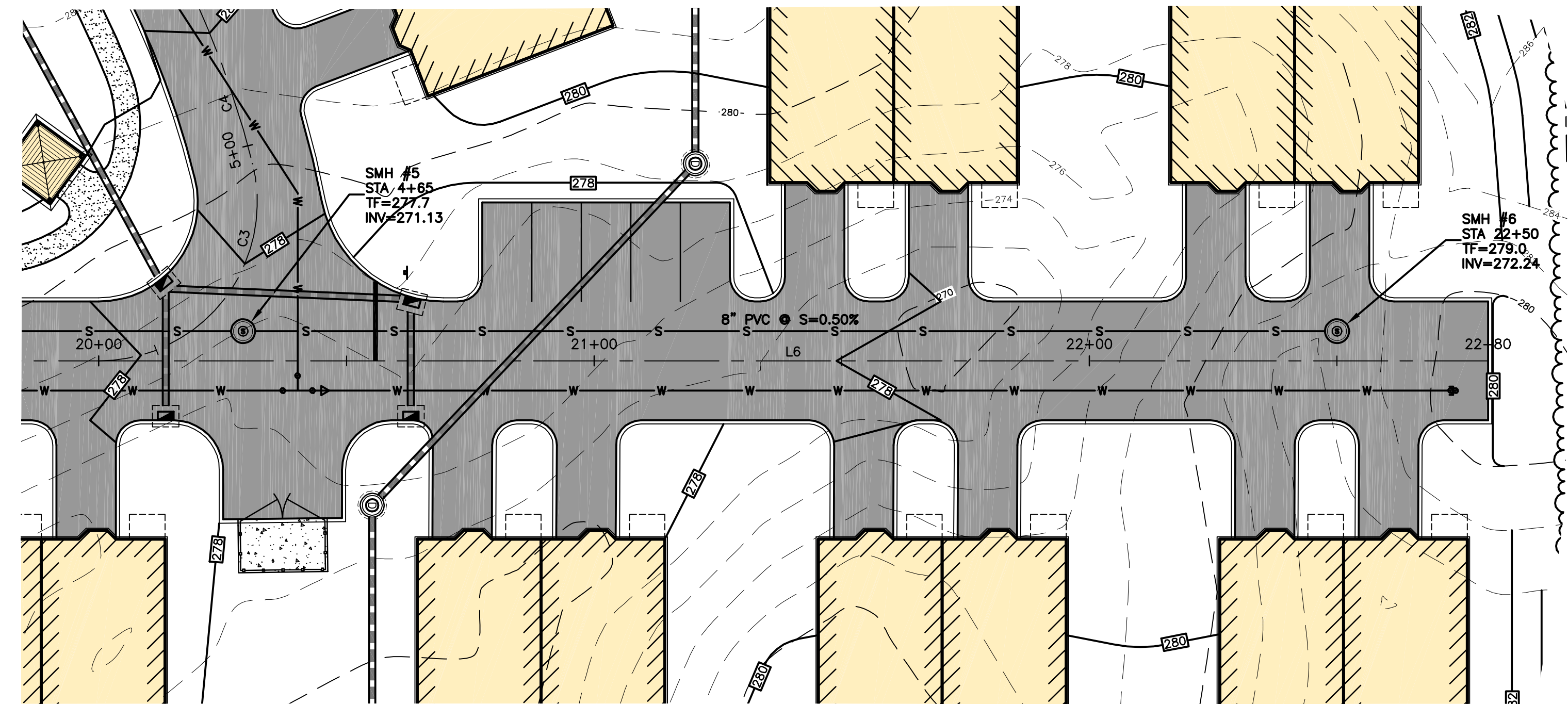
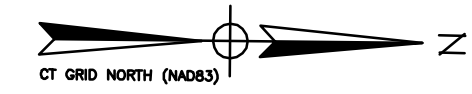
Profile View  
SCALE: HORIZ: 1"=20'  
VERT: 1"=4'

		Project No. CLA-7283
CIVIL · STRUCTURAL · SURVEYING		Proj. Engineer K.J.H.
317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165		Date: 7/7/2023
25 Colonial Drive Killingly, Connecticut 06241		Sheet No. <b>7</b>
<b>Site Improvement Plan</b> North Woods Village Planned Residential Development Driveway Plan & Profile		

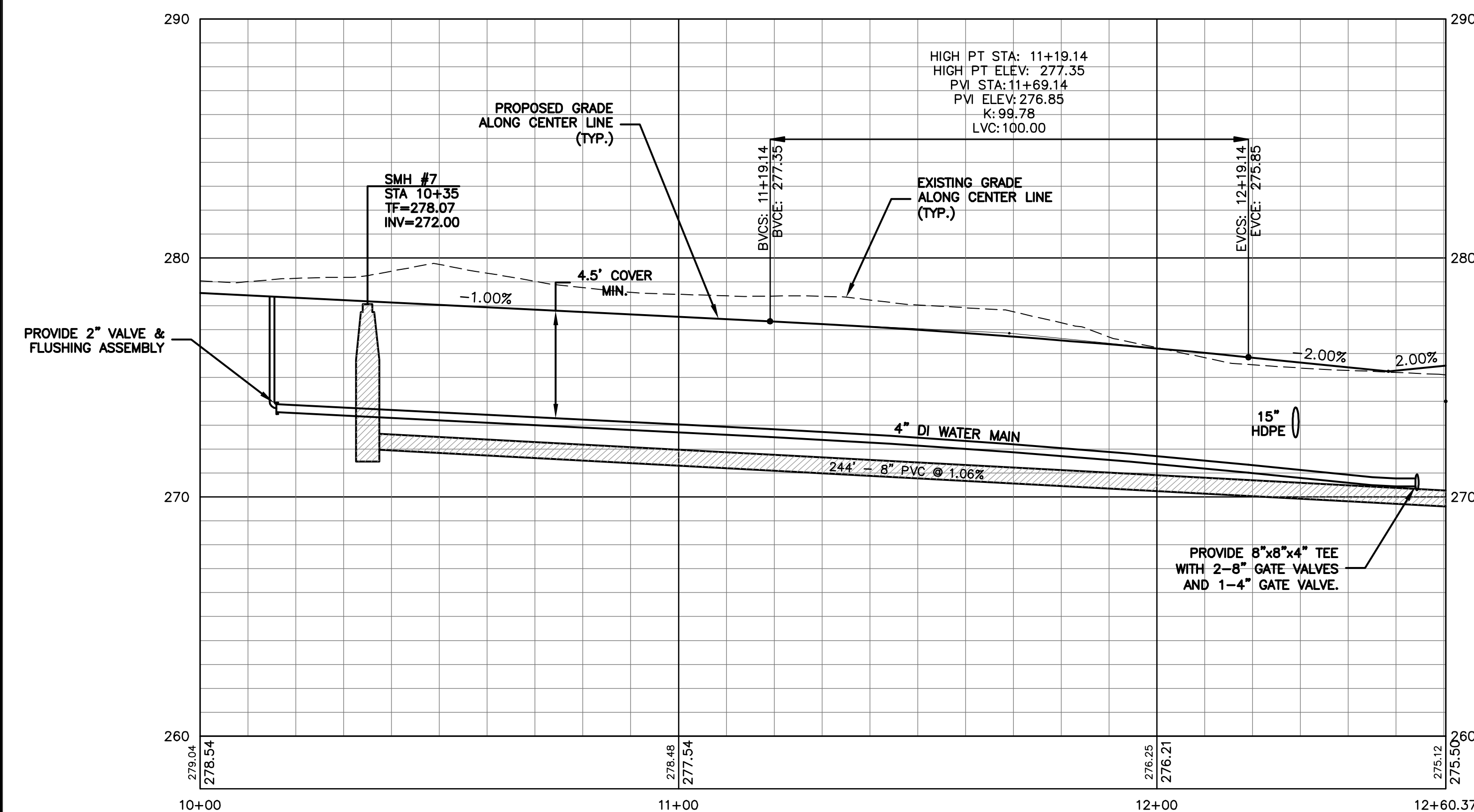




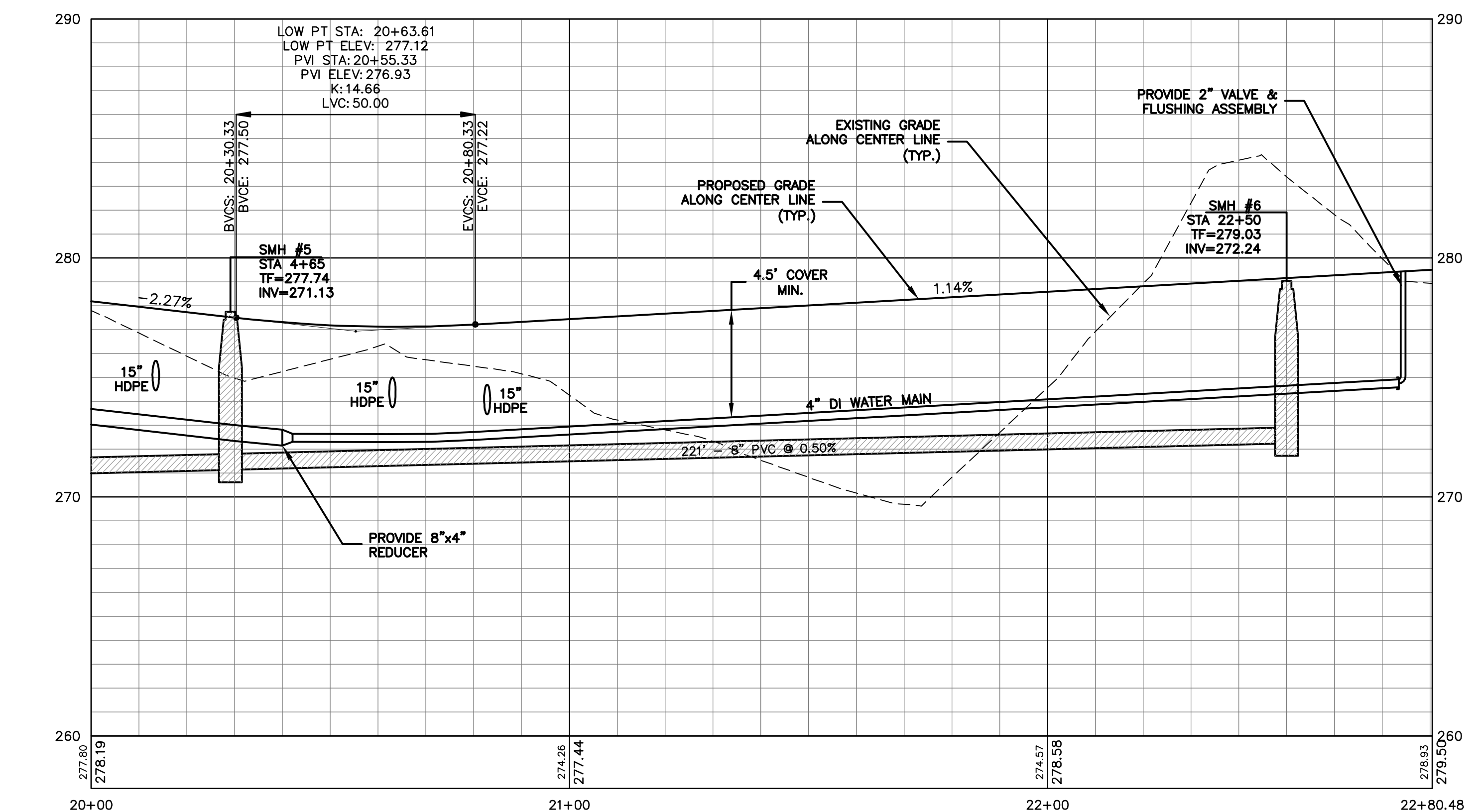
Plan View  
SCALE: 1"=20'



Plan View  
SCALE: 1"=20'



Profile View  
SCALE: HORIZ: 1"=20'  
VERT: 1"=4'



Profile View  
SCALE: HORIZ: 1"=20'  
VERT: 1"=4'



CLA

**CLA Engineers, Inc.**  
CIVIL · STRUCTURAL · SURVEYING

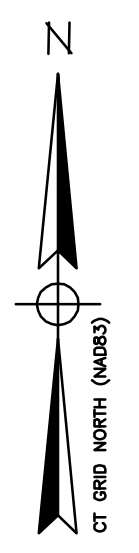
317 Main Street Norwich, CT 06360  
(860) 886-1966 Fax (860) 886-9165

No.	DATE	REVISION

Project No. CLA-7283	<b>25 Colonial Drive</b> <b>Killingly, Connecticut 06241</b> <b>Site Improvement Plan</b> <b>North Woods Village</b> <b>Planned Residential Development</b> <b>Driveway Plan &amp; Profile</b>	Project No. CLA-7283
Proj. Engineer K.J.H.		Proj. Engineer K.J.H.
Date: 7/7/2023		Date: 7/7/2023
Sheet No. <b>8</b>		Sheet No. <b>8</b>

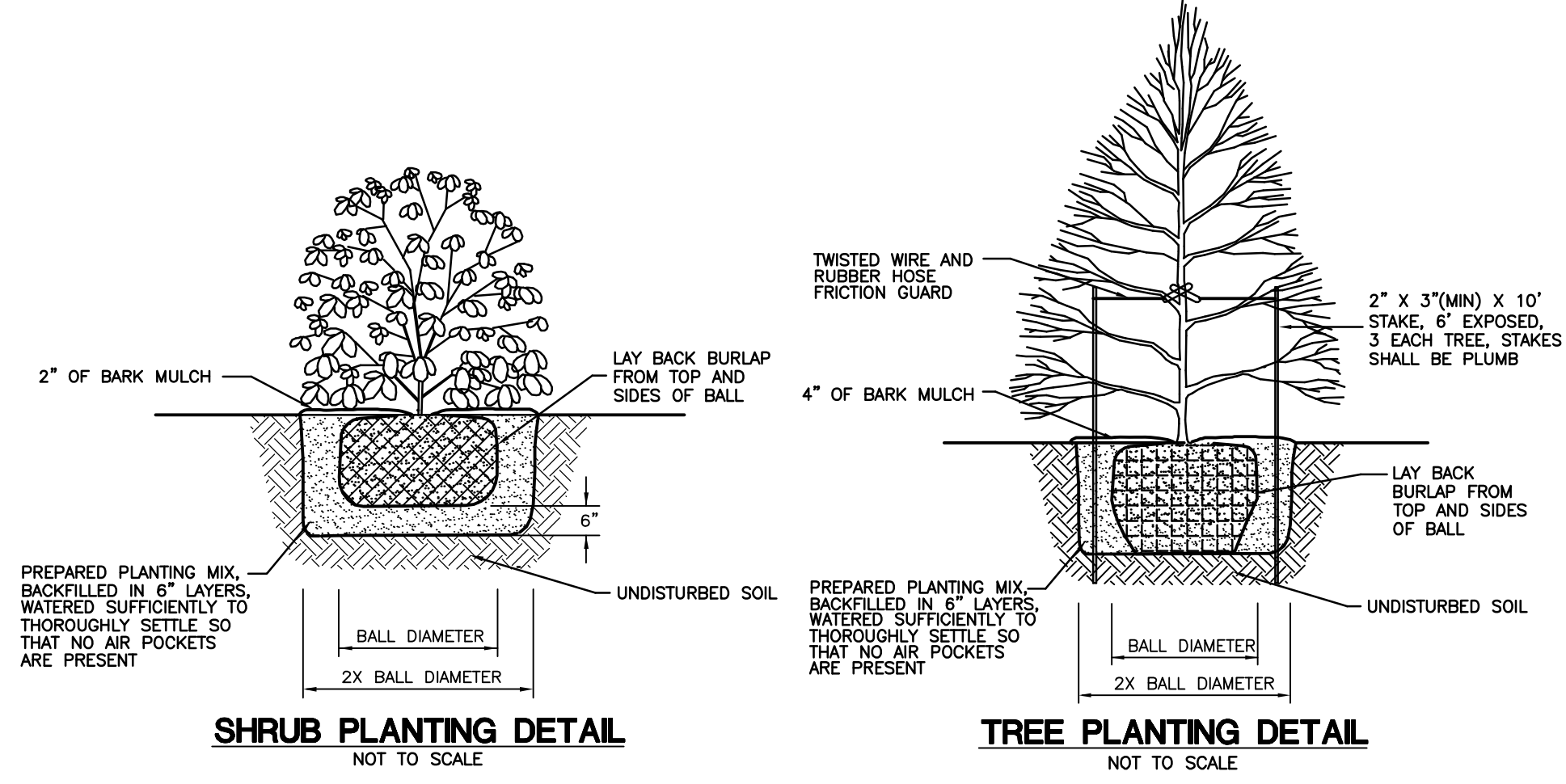
M:\7000\7200\7283 Brown Lot Investigation\Drawings\CLA-7283 - Planned Residential Development - Sheet 02-11 Site Plans.dwg

MATCH LINE - SEE SHEET 10



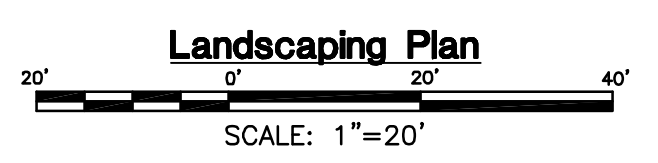
**LANDSCAPE NOTES**

1. ALL PLANTS SHALL BE NURSERY GROWN AND CONFORM TO THE LATEST EDITION OF ANSI Z60.1, AMERICAN STANDARD FOR NURSERY STOCK.
2. ALL SIZES NOTED IN THE LANDSCAPE SCHEDULE ARE MINIMUMS.
3. NO SUBSTITUTION OF PLANT MATERIALS SHALL BE ALLOWED WITHOUT THE PRIOR WRITTEN CONSENT OF THE PROJECT OWNER AND THE TOWN ZONING OFFICIAL.
4. PLANTING MIXTURE FOR TREES AND SHRUBS:
  - 1 PART DEHYDRATED COW MANURE OR COMPOSTED ORGANIC MATERIAL
  - 2 PARTS PEAT MOSS AND 5 PARTS TOPSOIL
5. FERTILIZER: TO BE COMPLETE PLANT FOOD WITH A GUARANTEED ANALYSIS OF 10-10-10 UNLESS OTHERWISE APPROVED BY THE OWNER. FERTILIZER SHALL CONTAIN 50% SLOW RELEASE NITROGEN AND 50% QUICK RELEASE.
6. ALL PLANT PITS MUST BE FREE DRAINING. BREAK UP THE BOTTOM OF THE HOLE BY FORK IF NECESSARY TO ENSURE PLANT HAS PROPER DRAINAGE.
7. SET ALL PLANTS IN CENTER OF PLANT PITS. PLUMB AND STRAIGHT AND AS DETAILED ON THE DRAWING. ALL PLANT MATERIAL SHALL BEAT THE SAME RELATIONSHIP TO FINISHED GRADE AS TO ORIGINAL PLANTING GRADE PRIOR TO DIGGING. TREES SHALL BE PLANTED WITH THE JUNCTION OF ROOTS AND STEM LEVEL WITH FINISHED GRADE.
8. HANDLE BALLED AND BURLAPPED PLANTS FROM THE BALL ONLY. ONCE POSITIONED IN THE HOLE, REMOVE THE TOP 1/3 OF THE BURLAP FROM THE ROOT BALL WITHOUT DISTURBING THE ROOTS.
9. FACE EACH PLANT TO GIVE THE BEST APPEARANCE.
10. FILL PLANT PITS 2/3 THEIR DEPTH WITH PREPARED PLANTING MIXTURE. WATER THOROUGHLY AND ALLOW TO SETTLE. COMPLETE BACK-FILLING. WATER THOROUGHLY TO ELIMINATE ANY VOIDS AND AIR POCKETS. PROVIDE ADDITIONAL BACK-FILL AS NECESSARY TO CONFORM TO REQUIRED ELEVATION AND AS DETAILED.
11. FORM SAUCER AND INSTALL MULCH OVER ENTIRE PLANT PIT AND SAUCER AREA AS DETAILED.
12. 4 INCHES SHREDDED HEMLOCK BARK MULCH OR EQUAL SHALL BE USED AROUND ALL TREES AND SHRUB PLANTINGS.
13. ALL PLANTS AND TREES SHALL BE GUARANTEED FOR A PERIOD OF ONE FULL YEAR AFTER INSPECTION AND ACCEPTANCE BY THE OWNER OR OWNER'S REPRESENTATIVE.
14. ALL DISTURBED AREAS SHALL BE LOAMED, SEED, FERTILIZED, AND MULCHED IN ACCORDANCE WITH THE SLOPE STABILIZATION DETAILS.
15. THE OWNER AND/OR CONTRACTOR SHALL ENSURE THAT ONLY CLEAN FILL/SOIL IS USED FOR THE SITE THAT IS FREE OF INVASIVE SPECIES.
16. NO PROPOSED PLANTINGS OR SUBSTITUTE PLANTINGS SHALL BE ALLOWED THAT ARE INCLUDED ON THE CONNECTICUT INVASIVE PLANT LIST PUBLISHED BY THE CT INVASIVE PLANTS COUNCIL (AS UPDATED).



**LANDSCAPE SCHEDULE (THIS SHEET)**

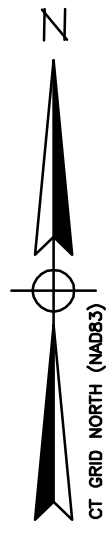
Key	Botanical Name	Common Name	Size	Quantity
<b>Evergreen Trees</b>				
Jv	Juniperus virg. 'Emerald Sentinel'	Emerald Sentinel Red Cedar	6' ht.	17
Tp	Thuja plicata 'Green Giant'	Giant Arborvitae	6' ht.	17
<b>Deciduous Trees</b>				
CcR	Cercis canadensis	Redbud	6' ht., 2" cal.	3
CcAH	Celtis occidentalis	American Hornbeam	6' ht., 2" cal.	3
Cf	Cornus 'florida'	Flowering Dogwood	6' ht., 2" cal.	4
Lt	Liriodendron tulipifera	Tulip Tree (yellow Poplar)	6' ht., 3" cal.	2
Ps	Prunus serotina	Black Cherry	6' ht., 3" cal.	1
Tc	Tilia cordata 'Greenspire'	Greenspire Linden	6' ht., 3" cal.	1
<b>Shrubs</b>				
Ki	Kalmia latifolia	Mountain Laurel	3 gal.	3
Sm	Syringa meyeri 'Palibin'	Dwarf Korean Lilac	3 gal.	2
Vd	Viburnum dentatum	Arrowwood	3 gal.	2



<p><b>CLA Engineers, Inc.</b> CIVIL · STRUCTURAL · SURVEYING</p> <p>317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165</p>		Project No. CLA-7283
		Proj. Engineer K.J.H.
<p>25 Colonial Drive Killingly, Connecticut 06241</p> <p><b>Site Improvement Plan</b> North Woods Village Planned Residential Development</p> <p>Landscaping Plan</p>		Date: 7/7/2023
<p>No. DATE REVISION</p>		Sheet No. <b>9</b>

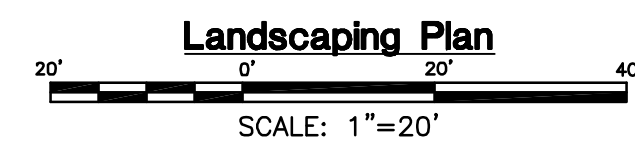
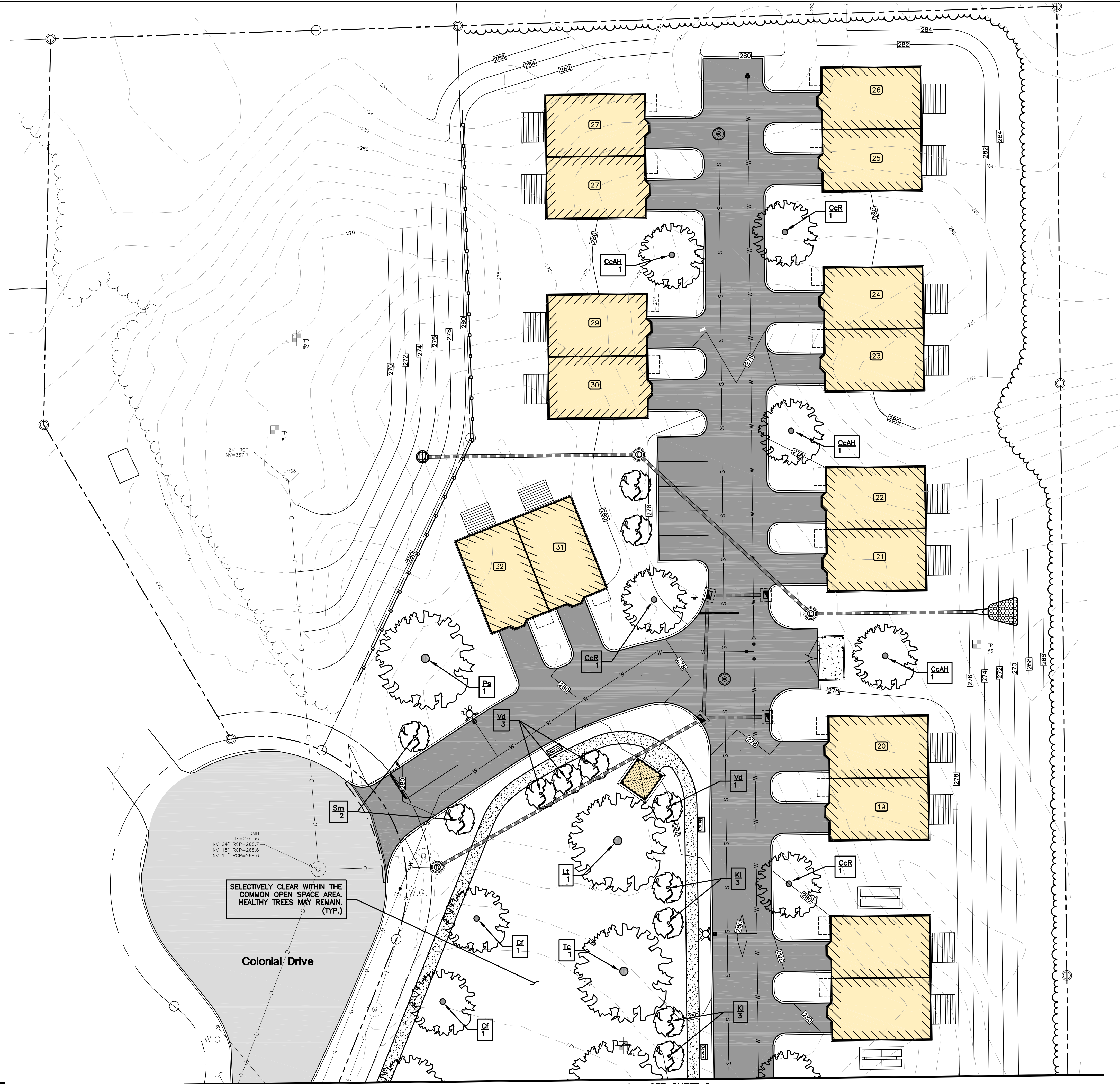
M:\7000\7200\7283 Brown Lot Investigation\Drawings\CLA-7283 - Planned Residential Development - Sheet 02-11 Site Plans.dwg





**LANDSCAPE SCHEDULE (THIS SHEET)**

Key	Botanical Name	Common Name	Size	Quantity
<b>Deciduous Trees</b>				
CcR	Cercis canadensis	Redbud	6' ht., 2" cal.	3
CcAH	Celtis occidentalis	American Hornbeam	6' ht., 2" cal.	3
Cf	Cornus 'florida'	Flowering Dogwood	6' ht., 2" cal.	2
Lt	Liriodendron tulipifera	Tulip Tree (Yellow Poplar)	6' ht., 3" cal.	1
Pa	Prunus serotina	Black Cherry	6' ht., 3" cal.	1
Tc	Tilia cordata 'Greenspire'	Greenspire Linden	6' ht., 3" cal.	1
<b>Shrubs</b>				
Kl	Kalmia latifolia	Mountain Laurel	3 gal.	4
Sm	Syringa meyeri 'Palibin'	Dwarf Korean Lilac	3 gal.	2
Vd	Viburnum dentatum	Arrowwood	3 gal.	4



SELECTIVELY CLEAR WITHIN THE COMMON OPEN SPACE AREA. HEALTHY TREES MAY REMAIN. (TYP.)

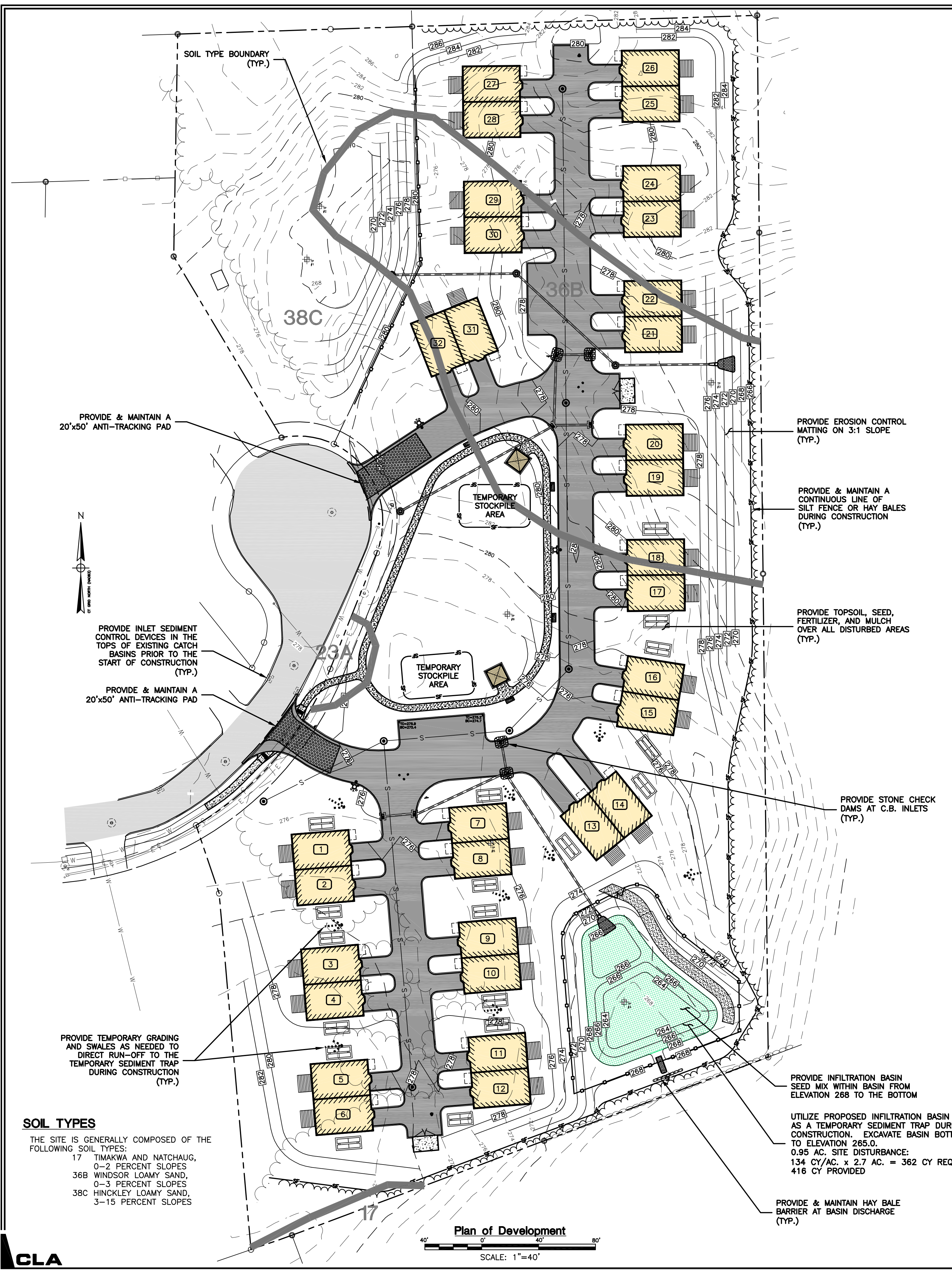
Colonial Drive

MATCH LINE - SEE SHEET 9

CLA

<p><b>CLA Engineers, Inc.</b> CIVIL · STRUCTURAL · SURVEYING</p> <p>317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165</p>		Project No. CLA-7283
		Proj. Engineer K.J.H.
<p>25 Colonial Drive Killingly, Connecticut 06241</p>		Date: 7/7/2023
<p><b>Site Improvement Plan</b> North Woods Village Planned Residential Development</p>		Sheet No. <b>10</b>
<p>Landscaping Plan</p>		

M:\7000\7200\7283 Brown Lot Investigation\Drawings\CLA-7283 - Planned Residential Development - Sheet 02-11 Site Plans.dwg



**EROSION & SEDIMENTATION CONTROL NARRATIVE**

1. THE EROSION & SEDIMENTATION CONTROL PLAN AND DETAILS HAVE BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEP.
2. THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL MEASURES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROVIDE SILT FENCE, STONE CHECK DAMS AND/OR OTHER EROSION CONTROL MEASURES AS NEEDED OR DIRECTED BY THE ENGINEER OR TOWN STAFF TO ADEQUATELY PREVENT SEDIMENT TRANSPORT.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE.
4. THE CONTRACTOR SHALL INSPECT, REPAIR AND/OR REPLACE EROSION CONTROL MEASURES EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED.
5. STAKED HAY BALE SILT BARRIERS OR SILT FENCE SHALL BE INSTALLED AROUND ANY TEMPORARY STOCKPILE AREAS. TEMPORARY VEGETATIVE COVER MAY BE REQUIRED (SEE NOTE).
6. CONTINUOUS DUST CONTROL USING WATER, CALCIUM CHLORIDE OR APPROVED EQUAL SHALL BE PROVIDED FOR ALL EARTH STOCKPILES, EARTH PILED ALONG EXCAVATIONS, SURFACES OF BACKFILLED TRENCHES AND GRAVELED ROADWAY SURFACES.
7. IF DEWATERING IS NECESSARY DURING ANY TIME OF CONSTRUCTION A CLEAR WATER DISCHARGE SHALL BE PROVIDED AS SHOWN IN THE HAY-BALE BARRIER DEWATERING DETAIL OR ALTERNATE METHOD PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER AND TOWN STAFF.
8. ALL DISTURBED AREAS SHALL BE RESTORED PER THE SLOPE STABILIZATION AND PERMANENT VEGETATION DETAILS. ALL DISTURBED AREAS THAT ARE SLOPED LESS THAN THREE HORIZONTAL TO ONE VERTICAL (3:1) SLOPE SHALL BE LOAMED, SEEDED, FERTILIZED AND MULCHED PER THE PERMANENT VEGETATIVE COVER SPECIFICATIONS. EROSION CONTROL MATTING SHALL BE PROVIDED ON ALL DISTURBED AREAS THAT ARE SLOPED MORE THAN THREE HORIZONTAL TO ONE VERTICAL (3:1).
9. IF FINAL SEEDING OF DISTURBED AREAS IS NOT TO BE COMPLETED BEFORE OCTOBER 15, THE CONTRACTOR SHALL PROVIDE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY PERMANENT SEEDING.
10. WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISHED GRADED SHALL BE COMPLETED TO OCTOBER 15.
11. ANY EROSION WHICH OCCURS WITHIN THE DISTURBED AREAS SHALL BE IMMEDIATELY REPAIRED AND STABILIZED. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT SHALL BE RETURNED TO THE SITE. POST SEEDING, INTERCEPTED SEDIMENT, IF ANY, SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE TOWN AND ENGINEER.
12. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL VEGETATION IS RE-ESTABLISHED OR SLOPES ARE STABILIZED AND REMOVAL IS APPROVED BY THE TOWN.
13. UNFORESEEN PROBLEMS WHICH ARE ENCOUNTERED IN THE FIELD SHALL BE SOLVED ACCORDING TO THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEP.
14. THE CONTRACTOR SHALL PROVIDE THE NAME AND EMERGENCY CONTACT INFORMATION FOR THE PROJECT PERSONNEL RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROLS PRIOR TO THE START OF CONSTRUCTION.
15. THE WETLANDS ENFORCEMENT OFFICER SHALL BE NOTIFIED AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION TO INSPECT EROSION CONTROLS.

NOTE: THE CONTRACTOR SHALL CONTINUALLY STORE THE FOLLOWING MATERIALS ON-SITE DURING CONSTRUCTION TO MEET UNEXPECTED EROSION NEEDS

- \* 100 LF OF SILT FENCE
- \* 10 HAY BALES
- \* 10 CY OF WOOD CHIPS OR CRUSHED STONE

**STORMWATER MANAGEMENT & POLLUTION PREVENTION PLAN**

- DURING CONSTRUCTION**
- POLLUTION PREVENTION TEAM:**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THE PROVISIONS OF THIS PLAN.
1. SWEEPING: IMPERVIOUS SURFACES BEYOND THE WORK SITE SHALL BE SWEEPED CLEAN OF SAND, SILT AND LITTER DAILY AT THE END OF THE WORK DAY.
  2. OUTSIDE STORAGE: ACCESSORIES OR EQUIPMENT STORED OUTSIDE SHALL BE COVERED OR MAINTAINED TO MINIMIZE POSSIBILITY OF THESE MATERIALS OR THEIR RESIDUE PASSING TO STORM WATER.
  3. WASHING: NO WASHING OF VEHICLES, ACCESSORIES, EQUIPMENT OR APPLIANCES IN WORK SITE.
  4. MAINTENANCE AND INSPECTION:
    - A. THE CONTRACTOR SHALL INSPECT, REPAIR AND/OR REPLACE EROSION CONTROL MEASURES EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT.
    - B. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
    - C. DAILY DUST CONTROL USING WATER, OR APPROVED EQUAL, SHALL BE PROVIDED FOR ALL EARTH STOCKPILES, EARTH PILED ALONG EXCAVATIONS, SURFACES OF BACKFILLED TRENCHES AND GRAVELED SURFACES.
  5. SPILLS OR ACCIDENTAL DISCHARGES:
    - A. COMPLY WITH STATE AND FEDERAL REGULATIONS TO CONTAIN AND CLEAN UP ANY SPILL OR DISCHARGE AND DISPOSE OF MATERIALS AT AN APPROVED FACILITY.
    - B. CONTACT CONNECTICUT DEEP OIL AND CHEMICAL SPILL RESPONSE DIVISION (860) 424-3338
    - C. THE FOLLOWING STEPS SHOULD BE PERFORMED AS SOON AS POSSIBLE:
      - a. STOP THE SOURCE OF THE SPILL
      - b. CONTAIN THE SPILL
      - c. COVER SPILL WITH ABSORBENT MATERIAL SUCH AS KITTY LITER, SAWDUST OR OIL ABSORBENT PADS. DO NOT USE STRAW.
      - d. DISPOSE OF ABSORBER IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
- POST CONSTRUCTION**
- POLLUTION PREVENTION TEAM:**  
THE PROPERTY OWNER WILL BE RESPONSIBLE FOR MAINTAINING THE STORMWATER MANAGEMENT SYSTEMS LOCATED ON THE PROPERTY AND CARRYING OUT THE PROVISIONS OF THIS PLAN.
1. SWEEPING: THE PRIVATE DRIVE SHALL BE SWEEPED CLEAN OF SAND AND LITTER AND ANY OTHER POLLUTANTS AT LEAST TWICE PER YEAR.
    - A. BETWEEN NOVEMBER 15 AND DECEMBER 15 (AFTER LEAF FALL)
    - B. DURING APRIL (AFTER SNOW MELT)
  2. OUTSIDE STORAGE: ACCESSORIES OR EQUIPMENT STORED OUTSIDE SHALL BE COVERED OR MAINTAINED TO MINIMIZE POSSIBILITY OF THESE MATERIALS OR THEIR RESIDUE PASSING TO STORM WATER.
  3. WASHING: NO WASHING OF VEHICLES, ACCESSORIES, EQUIPMENT OR APPLIANCES IN IMPERVIOUS AREAS.
  4. MAINTENANCE AND INSPECTION:
    - A. WATER QUALITY BASINS
      - a. INSPECT BASIN & SIDE SLOPES FOR INVASIVE VEGETATION - ANNUALLY
      - b. INSPECT FOR DAMAGED, UNDERCUT, OR ERODED AREAS - SEMI-ANNUALLY
      - c. CLEAN AND REMOVE DEBRIS FROM THE OUTLET, INSPECT AND CLEAN DEBRIS IN THE BASIN, MOW SIDE SLOPES - SEMI-ANNUALLY
      - d. REMOVE SEDIMENT AND DEBRIS FROM WATER QUALITY BASINS WHEN SEDIMENT ACCUMULATION REACHES 2/3 OF THE STORAGE VOLUME OF THE BASIN.
    - B. GRASS SWALES
      - a. MOW - AS NEEDED
      - b. REMOVE SEDIMENT AND LEAF LITTER - BETWEEN NOVEMBER 15 AND DECEMBER 15 (AFTER LEAF FALL) AND DURING APRIL (AFTER SNOW MELT)
    - C. RAIN GARDENS: SEE DETAIL
  5. SPILLS OR ACCIDENTAL DISCHARGES:
    - A. COMPLY WITH STATE AND FEDERAL REGULATIONS TO CONTAIN AND CLEAN UP ANY SPILL OR DISCHARGE AND DISPOSE OF MATERIALS AT AN APPROVED FACILITY.
    - B. CONTACT CONNECTICUT DEEP OIL AND CHEMICAL SPILL RESPONSE DIVISION (860) 424-3338
    - C. THE FOLLOWING STEPS SHOULD BE PERFORMED AS SOON AS POSSIBLE:
      - a. STOP THE SOURCE OF THE SPILL
      - b. CONTAIN THE SPILL
      - c. COVER SPILL WITH ABSORBENT MATERIAL SUCH AS KITTY LITER, SAWDUST OR OIL ABSORBENT PADS. DO NOT USE STRAW.
      - d. DISPOSE OF ABSORBER IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.

**STORMWATER SYSTEM OPERATIONS AND MAINTENANCE**

Maintenance Schedule for Infiltration Basins		Maintenance Schedule for Infiltration Chambers	
Activity	Schedule	Activity	Schedule
<ul style="list-style-type: none"> <li>Prior to new spring growth reaching a height of 2" (e.g., shortly after forsythia or redbud blooms), trim any material standing from the previous year close to the ground (approximately 2"). This will allow the soil to warm more quickly, which will stimulate the emergence and growth of native seedlings and reduce the likelihood of the meadow being invaded by shrubs.</li> <li>Problem weeds should be hand pulled or spot sprayed with an approved herbicide, such as Rodeo® or Garlon® 3A. If you did not plant vines or spiny plants as part of your mix, be vigilant about controlling them. These are more easily pulled when they are young rather than after they have had two to three months of growth. Examples include bindweed, blackberry, multiflora rose, mile-a-minute and Japanese hops. Be equally vigilant about controlling other invasive species, such as autumn olive and Japanese knotweed.</li> <li><b>Special Circumstances</b> If you notice a heavy infestation of ragweed or foxtail in the second growing season, trim the meadow to a height of 8". Trimming should cease by mid-September.</li> <li>For the basin and side slopes, inspect for invasive vegetation.</li> <li>Grassy weeds or persistent perennials can re-establish in these soils. Monitor and control weeds by hand pulling or spot spraying.</li> <li>Inspect for damage, undercut, or eroded area</li> <li>Monitor for sediment accumulation</li> <li>Repair undercut or eroded areas</li> <li>Clean and remove debris &amp; sediment from inlet and outlet structures</li> <li>Inspect and clean debris &amp; sediment in the basin</li> <li>Clean and remove debris from the plunge pools</li> <li>Mow side slopes. Close mowing throughout the regular growing season or extensive chemical use is not conducive to water quality improvement and wildlife habitat. Spring mowed vegetation can typically remain within basins providing cover for new emerging vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>Second growing season</li> <li>Monthly</li> <li>Semi-Annual inspection</li> <li>As needed maintenance</li> <li>Semi-annual</li> </ul>	<ul style="list-style-type: none"> <li>Inspect infiltrators through the inspection ports for accumulated sediment</li> <li>Remove sediment when depth exceeds 3". Jet the system clean with pressurized water through a culvert cleaning nozzle. Use a vac truck to remove sediment from the system.</li> </ul>	<ul style="list-style-type: none"> <li>Between November 15<sup>th</sup> and December 15<sup>th</sup> (after leaf fall)</li> <li>During April (after snow melt)</li> <li>As needed</li> </ul>
Maintenance Schedule for Catch Basins		Maintenance Schedule for Parking / Driveway Areas	
Activity	Schedule	Activity	Schedule
<ul style="list-style-type: none"> <li>Clean out sediment from catch basin and hydrodynamic separator</li> </ul>	<ul style="list-style-type: none"> <li>Between November 15<sup>th</sup> and December 15<sup>th</sup> (after leaf fall)</li> <li>During April (after snow melt)</li> </ul>	<ul style="list-style-type: none"> <li>Sweep impervious areas</li> <li>Remove and dispose of trash and debris onsite</li> </ul>	<ul style="list-style-type: none"> <li>Between November 15<sup>th</sup> and December 15<sup>th</sup> (after leaf fall)</li> <li>During April (after snow melt)</li> <li>Daily - As needed maintenance</li> </ul>

**SOIL TYPES**  
THE SITE IS GENERALLY COMPOSED OF THE FOLLOWING SOIL TYPES:  
17 TIMAKWA AND NATCHAUG, 0-2 PERCENT SLOPES  
36B WINDSOR LOAMY SAND, 0-3 PERCENT SLOPES  
38C HINCKLEY LOAMY SAND, 3-15 PERCENT SLOPES

PROVIDE INFILTRATION BASIN SEED MIX WITHIN BASIN FROM ELEVATION 265 TO THE BOTTOM  
UTILIZE PROPOSED INFILTRATION BASIN AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION. EXCAVATE BASIN BOTTOM TO ELEVATION 265.0.  
0.95 AC. SITE DISTURBANCE: 134 CY/AC. x 2.7 AC. = 362 CY REQ.  
416 CY PROVIDED

**CLA Engineers, Inc.**  
CIVIL · STRUCTURAL · SURVEYING  
317 Main Street Norwich, CT 06360  
(860) 886-1966 Fax (860) 886-9165

No.	DATE	REVISION

25 Colonial Drive  
Killingly, Connecticut 06241  
**Site Improvement Plan**  
North Woods Village  
Planned Residential Development  
Stormwater Management Plan and  
Erosion & Sedimentation Control Plan

Project No. CLA-7283  
Proj. Engineer K.J.H.  
Date: 7/7/2023  
Sheet No. **11**

**TEMPORARY VEGETATIVE COVER**

A TEMPORARY SEEDING OF RYE GRASS WILL BE COMPLETED WITHIN 15 DAYS OF THE FORMATION OF STOCKPILES. IF THE SOIL IN THE STOCKPILES HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS IT SHALL BE LOOSENED TO A DEPTH OF 2 INCHES BEFORE THE FERTILIZER, LIME AND SEED IS APPLIED. 10-10-10 FERTILIZER AT A RATE OF 7.5 POUNDS PER 1000 S.F. LESTONE AT A RATE OF 90 LBS. PER 1000 S.F. SHALL BE USED. RYE GRASS APPLIED AT A RATE OF 1 LB. PER 1000 S.F. SHALL PROVIDE THE TEMPORARY VEGETATIVE COVER. STRAW FREE FROM WEEDS AND COARSE MATTER SHALL BE USED AT A RATE OF 70-90 LBS. PER 1000 S.F. AS A TEMPORARY MULCH. APPLY MULCH AND DRIVE TRACKED EQUIPMENT UP AND DOWN SLOPE OVER ENTIRE SURFACE SO CLEAT MARKS ARE PARALLEL TO THE CONTOURS.

**PERMANENT VEGETATIVE COVER**

TOPSOIL WILL BE REPLACED ONCE THE EXCAVATIONS HAVE BEEN COMPLETED AND THE SLOPES ARE GRADED AS SHOWN ON THE PLANS. PROVIDE SLOPE PROTECTION AS CALLED FOR ON THE PLANS AND DETAILS. TOPSOIL SHALL BE SPREAD AT A MINIMUM COMPACTED DEPTH OF 6 INCHES. ONCE THE TOPSOIL HAS BEEN SPREAD, ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION WILL BE REMOVED AS WELL AS DEBRIS.

- APPLY AGRICULTURAL GROUND LESTONE AT THE RATE OF TWO TONS PER ACRE OR 100 LBS. PER 1000 S.F.
- APPLY 10-10-10 FERTILIZER OR EQUIVALENT AT A RATE OF 300 LBS. PER ACRE OR 7.5 LBS. PER 1000 S.F.
- WORK LESTONE AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4 INCHES.
- INSPECT SEEDBED BEFORE SEEDING.
- IF TRAFFIC HAS COMPACTED THE SOIL, RETILL COMPACTED AREAS.
- APPLY THE FOLLOWING GRASS SEED MIX:

**TYPICAL SEED MIXTURE**

ALL DISTURBED AREAS	LBS./ACRE	LBS./1000 S.F.
KENTUCKY BLUEGRASS	20	0.45
CREeping RED FESCUE	20	0.45
PERENNIAL RYEGRASS	5	0.10
	45	1.00

**TYPICAL SEED MIXTURE FOR NON-MOWED SLOPES (3:1 OR STEEPER)**

CT DEP SEED MIX NO. 26	LBS./ACRE	LBS./1000 S.F.
SWITCHGRASS (BLACKWELL, SHELTER, CAVE-IN-ROCK)	4.0	0.10
BIG BLUESTEM (NIAGRA, KAW)	4.0	0.10
LITTLE BLUESTEM (BLAZE, ALDOUS, CAMPER)	2.0	0.05
SAND LOVEGRASS (NE-27, BEND)	1.5	0.03
BIRD'S-FOOT TREFOLI (EMPIRE VIKING)	2.0	0.05
	13.5	0.33

THE RECOMMENDED SEEDING DATES ARE:  
APRIL 1 - JUNE 15 AND AUGUST 15 - OCTOBER 15

IMMEDIATELY FOLLOWING SEEDING, FIRM SEED BED WITH A ROLLER AND MULCH WITH WEED FREE STRAW. IF PERMANENT VEGETATIVE COVER IS HAS NOT BEEN ESTABLISHED BY OCTOBER 15, APPLY A TEMPORARY VEGETATIVE COVER ON THE TOPSOIL.

**VEGETATIVE COVER FOR WATER QUALITY BASIN**

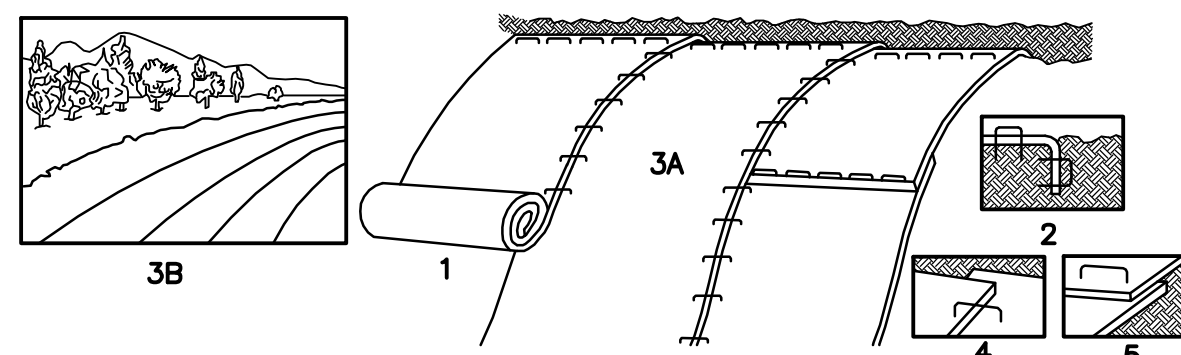
SEED MIXTURE FOR SETTLING BASINS SHALL BE THE "NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR MOIST SITES" FROM NEW ENGLAND WETLAND PLANTS, AMHERST, MA, TELEPHONE NO. 413-548-8000

THE BEST RESULTS ARE OBTAINED WITH A SPRING SEEDING. SUMMER AND FALL SEEDING REQUIRE A LIGHT MULCHING OF WEED FREE STRAW TO CONSERVE MOISTURE. LATE FALL AND WINTER DORMANT SEEDING REQUIRE A 10% INCREASE IN THE SEEDING RATE. FERTILIZATION IS NOT REQUIRED UNLESS THE SOILS ARE PARTICULARLY INFERTILE.

**RAIN GARDEN SEED MIXTURE**

NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES	LBS./ACRE	LBS./1000 S.F.
	35	0.80

SPECIES: Virginia Wild Rye, (Elymus virginicus), Creeping Red Fescue, (Festuca rubra), (Schizachyrium scoparium), Big Bluestem, (Andropogon gerardi), Fox Sedge, (Carex vulpinoidea), Switch Grass, (Panicum virgatum), Rough Bentgrass, (Agrostis scabra), New England Aster, (Aster novae-angliae), Boneset, (Eupatorium perfoliatum), Grass Leaved Goldenrod, (Euthamia graminifolia), Green Saurush, (Scirpus atrovirens), Blue Vervain, (Verbena hastata), Soft Rush, (Juncus effusus), Wool Grass, (Scirpus cyperinus)



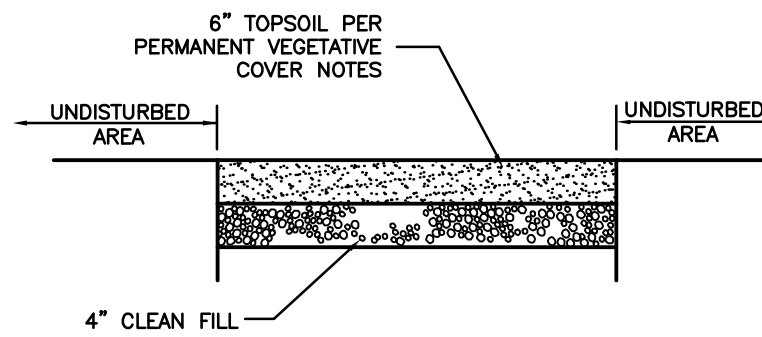
- INSTALLATION NOTES:**
1. PROVIDE 4" THICKNESS OF TOPSOIL OVER CLEAN FILL. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED MIX PER PERMANENT VEGETATIVE COVER NOTES. (SHALL BE PAID FOR AT THE UNIT PRICE FOR LOAM, SEED, FERTILIZER & MULCH)
  2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP x 6" WIDE TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
  3. ROLL THE BLANKET (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE.
  4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
  5. WHEN BLANKETS MUST BE SPICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA APPROXIMATELY 12" APART.

- PRODUCT NOTES:**
1. EROSION CONTROL MATTING MUST BE LISTED ON THE LATEST CT DOT QUALIFIED PRODUCTS LIST UNDER CLASS E SLOPE PROTECTION, TYPE D.

**EROSION CONTROL MATTING DETAIL (FOR 3:1 SLOPES OR STEEPER)**

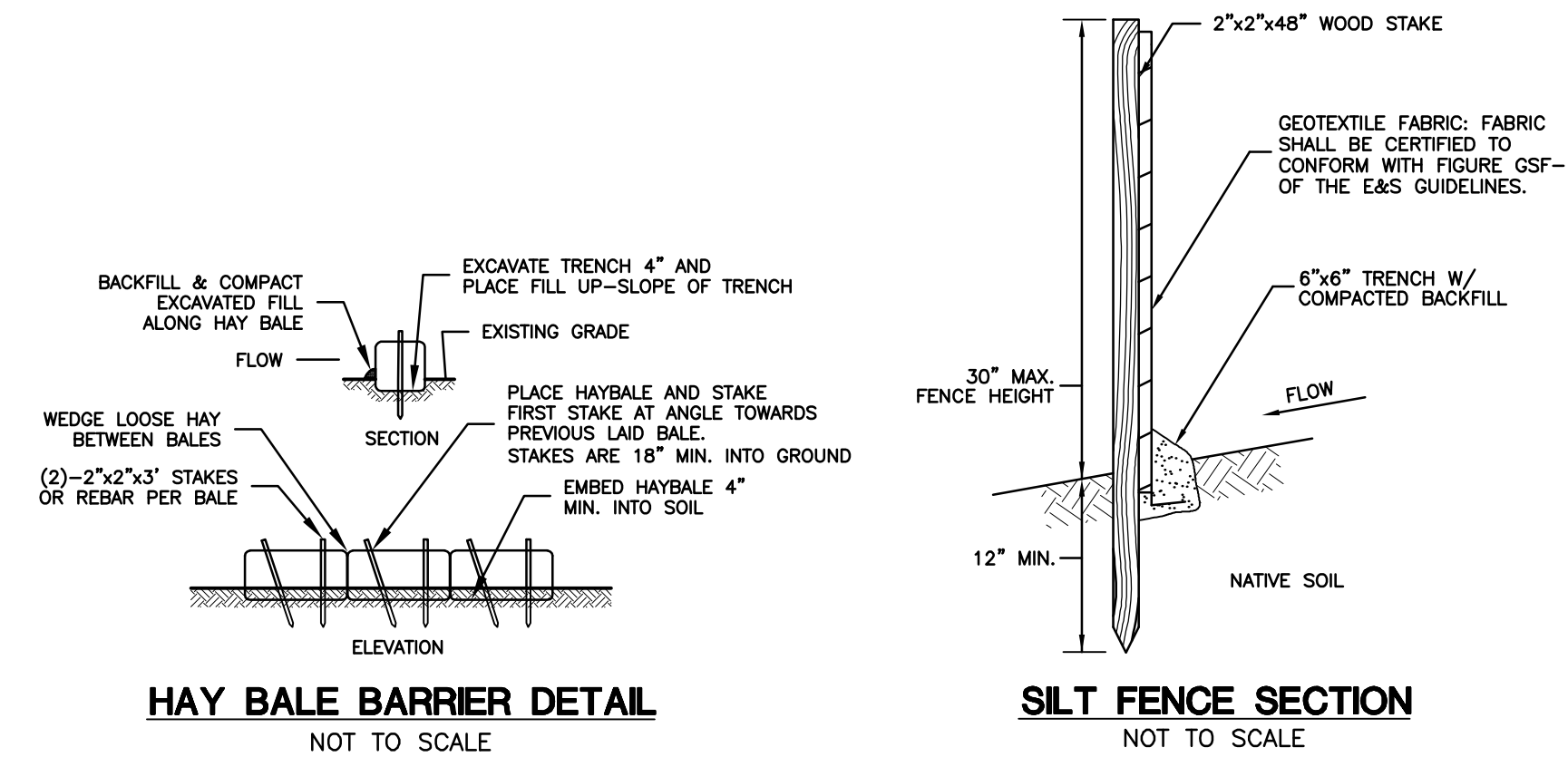
- NOTES:**
1. HYDROSEED SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 9.50.3.b OF DOT FORM 818.
  2. BONDED FIBER MATRIX (BFM) OR FLEXIBLE GROWTH MEDIUM (FGM) MUST BE INCLUDED IN THE HYDROSEED SLURRY. MIX RATE PERCENTAGES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS FOR THE FINISHED SLOPES. THE FOLLOWING ARE ACCEPTABLE PRODUCTS:
- A. PROFILE FLEXTERRA FGM
  - B. PROFILE HYDRO-BLANKET BONDED FIBER MATRIX
  - C. MAT, INC. SOIL GUARD BONDED FIBER MATRIX
  - D. NORTH AMERICAN GREEN HYDRA GT OR HYDRA CM
3. THE REQUIRED SEED MIX SHALL BE IN ACCORDANCE WITH THE PERMANENT VEGETATIVE COVER NOTES. ALL APPLICATION RATES SHALL BE INCREASED BY 10% FOR HYDROSEEDING.
  4. THE CONTRACTOR SHALL ENSURE 100% COVERAGE OF THE DISTURBED SOIL.

**HYDROSEED REQUIREMENTS (FOR 3:1 SLOPES OR STEEPER)**



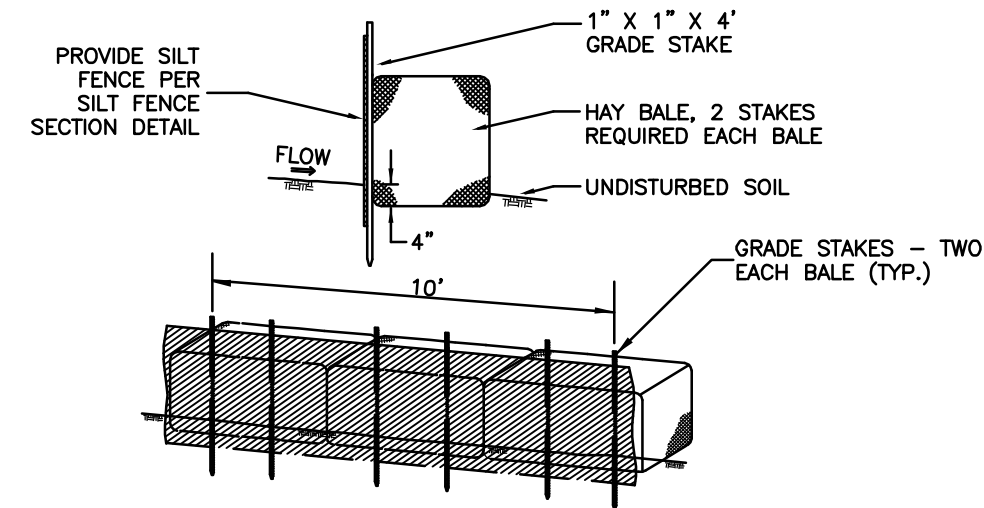
**TYPICAL LOAM & SEED SECTION DETAIL (FOR ALL DISTURBED AREAS)**

**SLOPE STABILIZATION DETAILS**



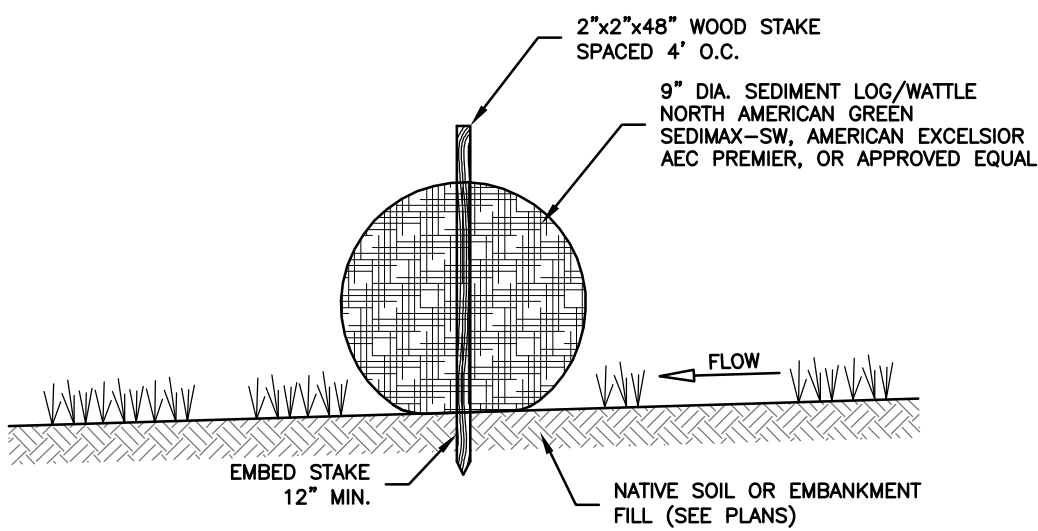
**HAY BALE BARRIER DETAIL**

**SILT FENCE SECTION**



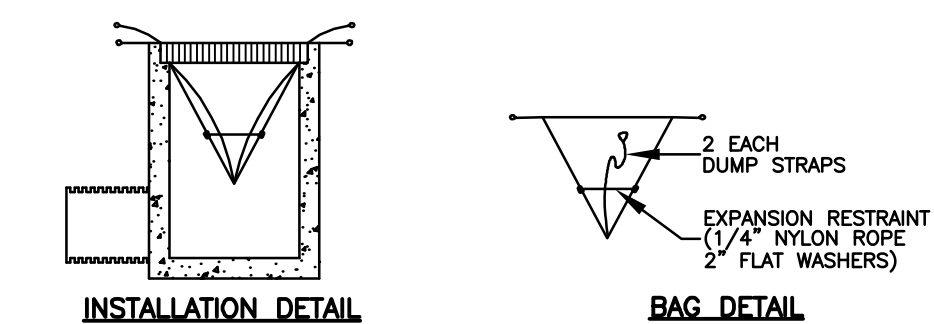
- CONSTRUCTION NOTES:**
1. SILT FENCE FILTER CLOTH TO BE SECURELY FASTENED TO GRADE STAKE WITH STAPLES, 6" ON CENTER.
  2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN ONE ANOTHER THEY SHALL OVERLAP BY 6" AND BE FOLDED.
  3. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.

**SILT FENCE BACKED BY HAY BALES DETAIL**



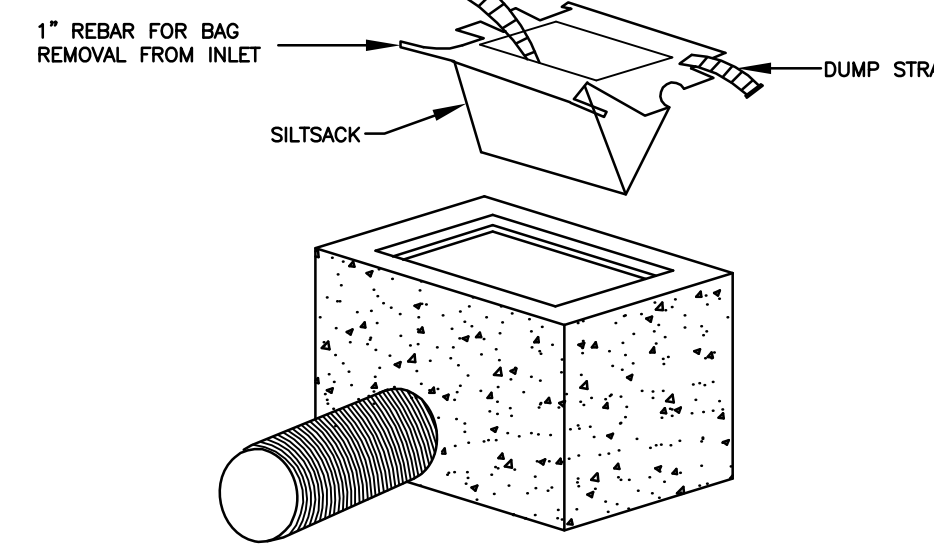
- NOTES:**
1. STORMWATER LOG ENDS SHALL BE TIED TOGETHER, OVERLAPPED AT LEAST 24" OR BE SECURED AS RECOMMENDED BY THE MANUFACTURER.

**STORMWATER SEDIMENT LOG (WATTLE) DETAIL**



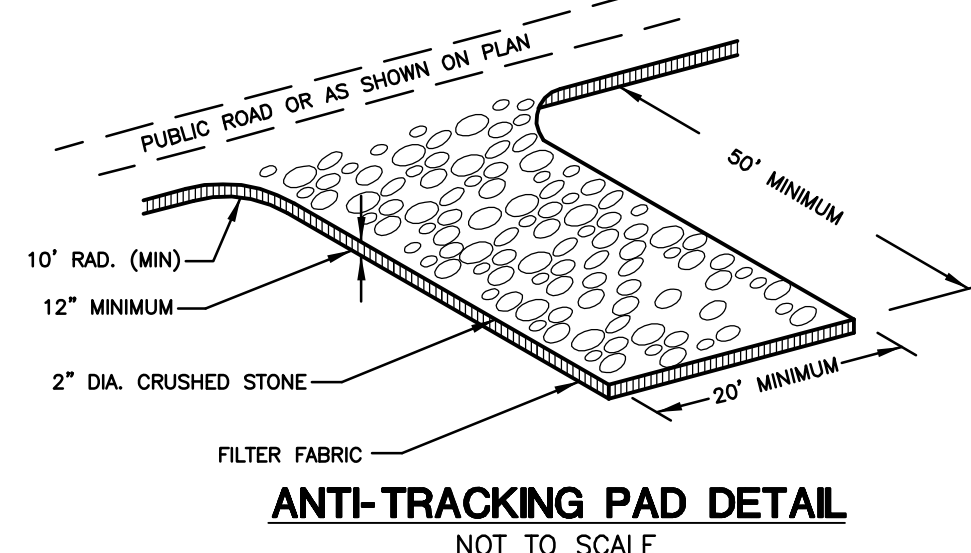
**INSTALLATION DETAIL**

**BAG DETAIL**

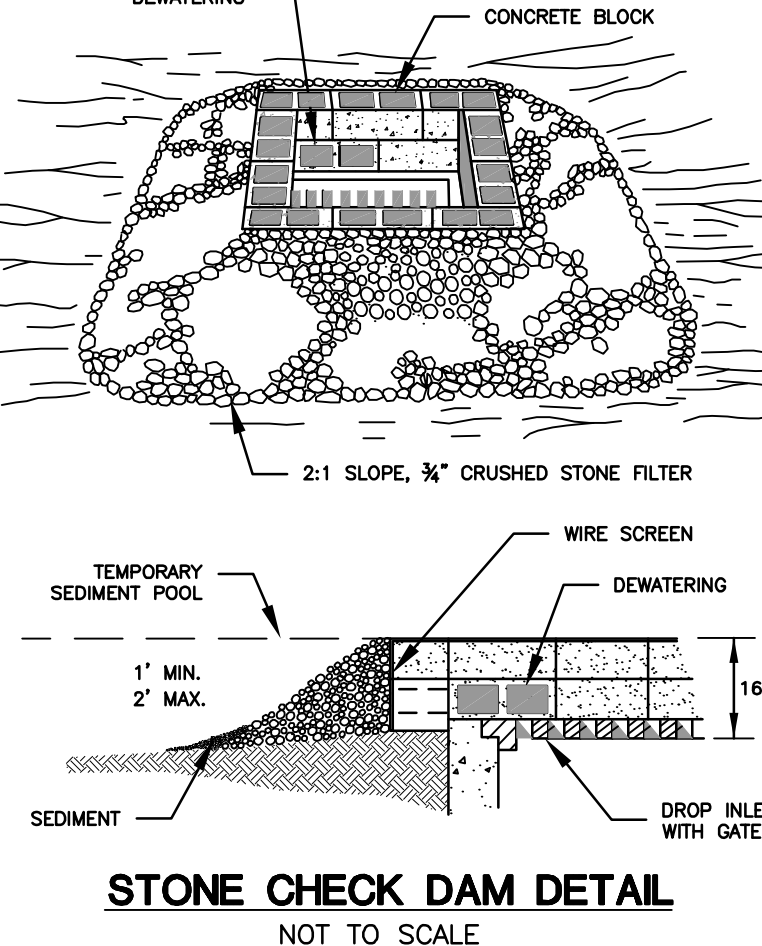


- NOTE:** TO BE PROVIDED IN ALL NEW CATCH BASINS AT THE TIME OF INSTALLATION AND WITHIN BASINS ADJACENT TO THE WORK AREA PRIOR TO THE START OF CONSTRUCTION

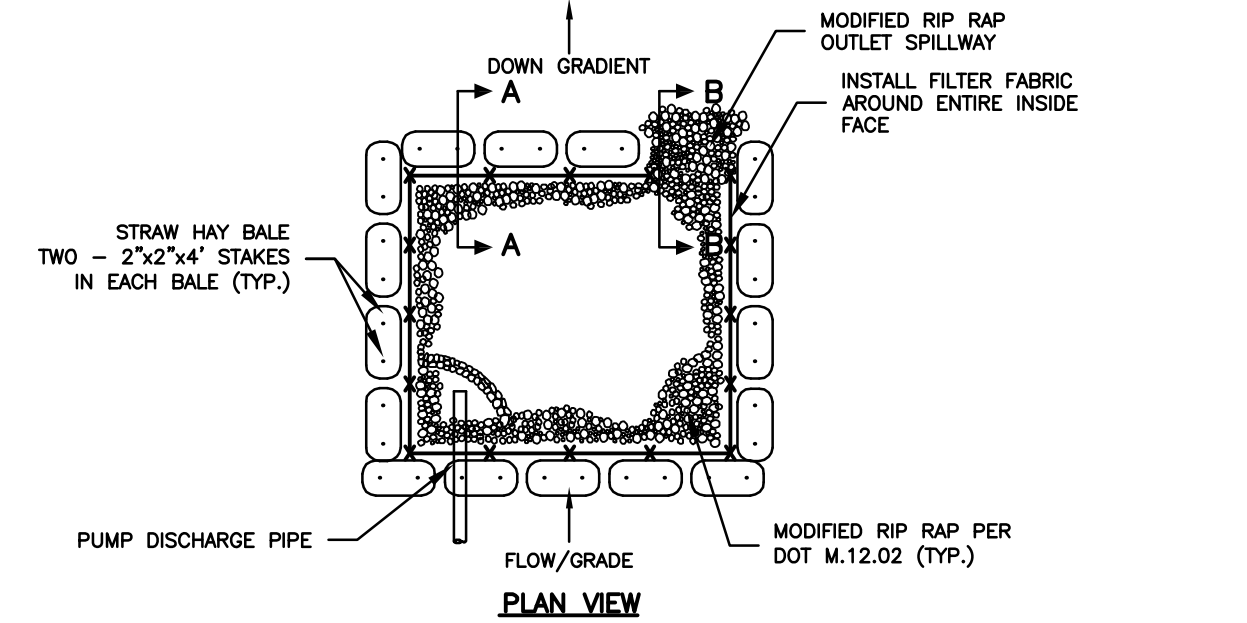
**INLET SEDIMENT CONTROL DEVICE DETAIL**



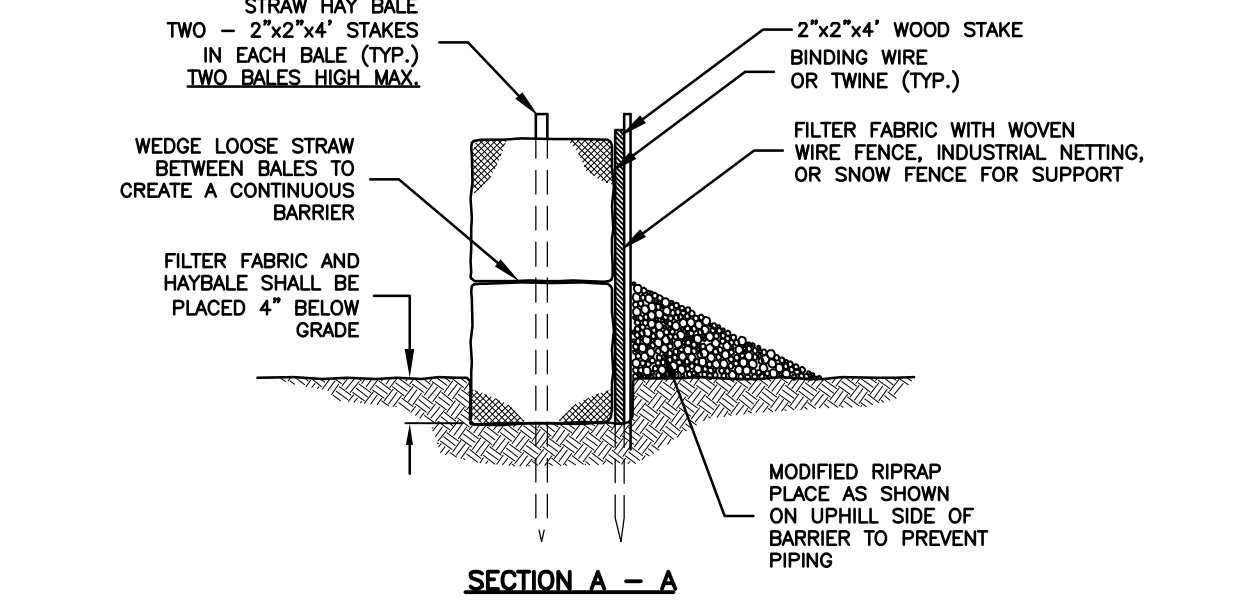
**ANTI-TRACKING PAD DETAIL**



**STONE CHECK DAM DETAIL**



**HAY BALE BARRIER DE-WATERING DETAIL**



**SECTION A - A**

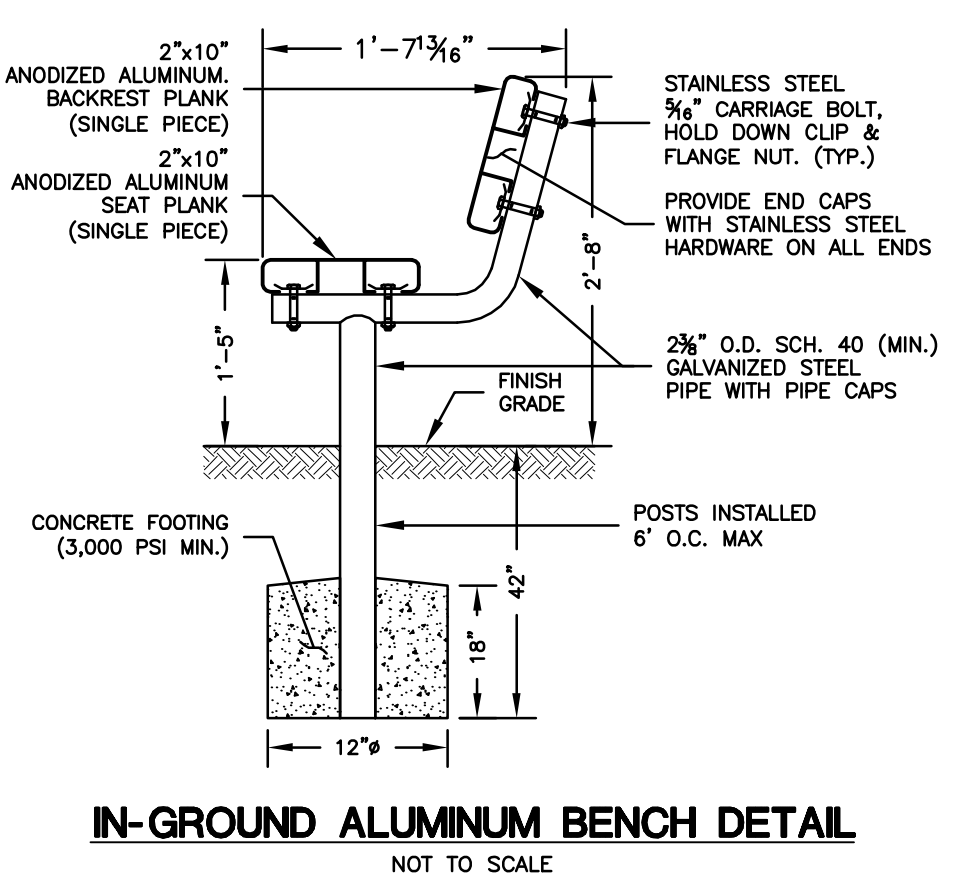
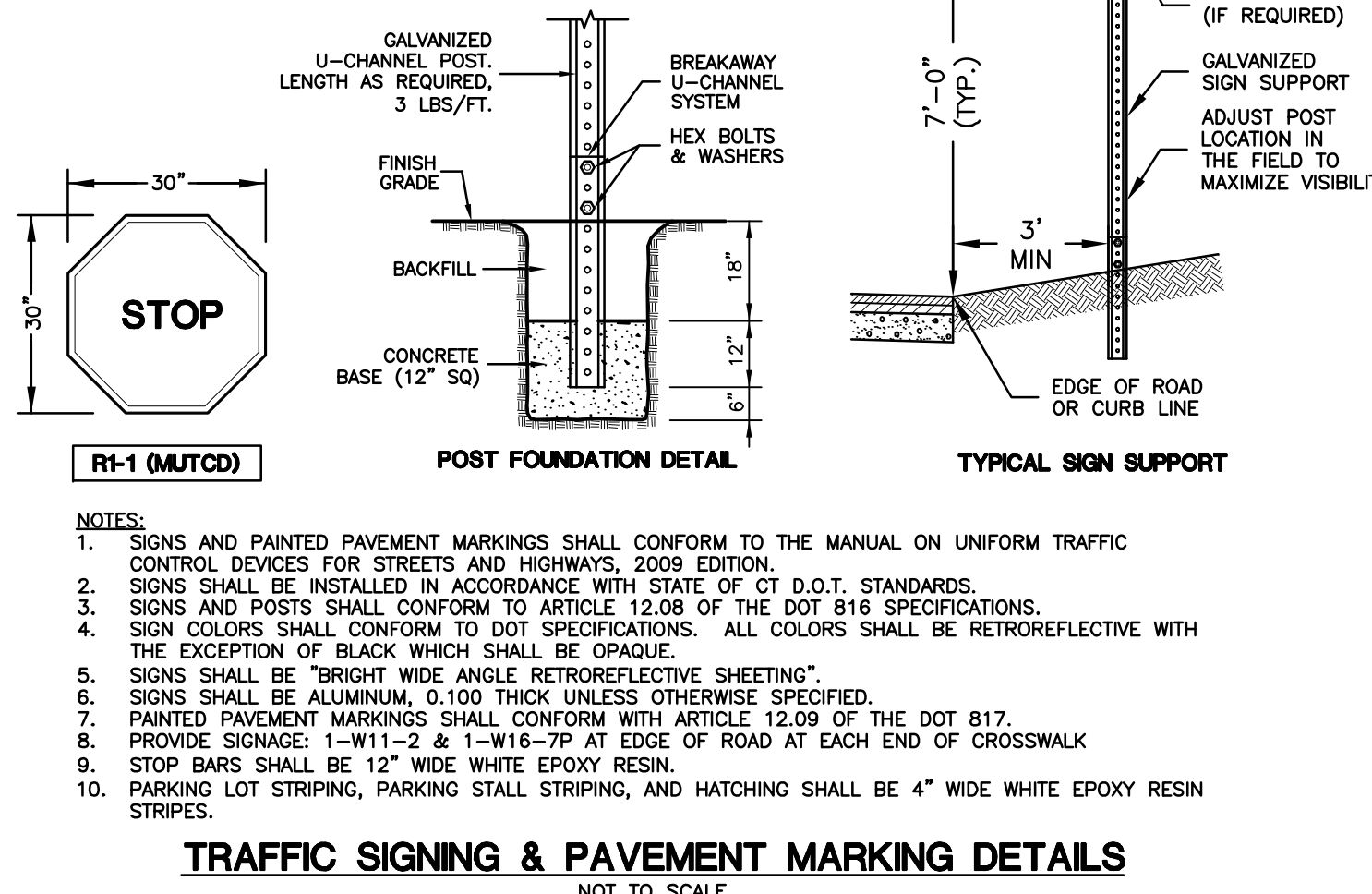
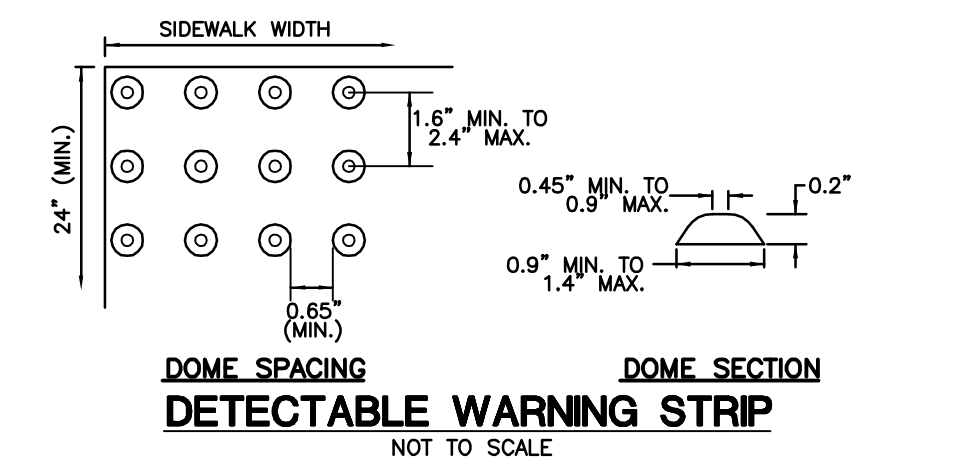
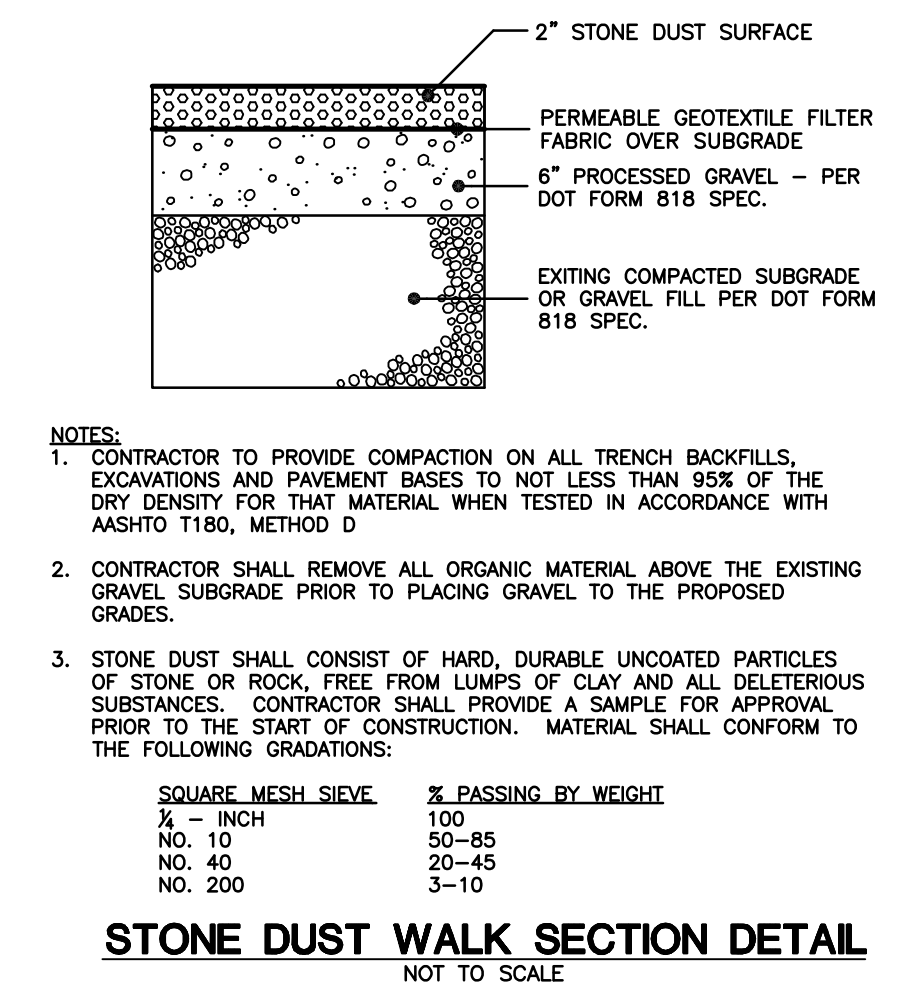
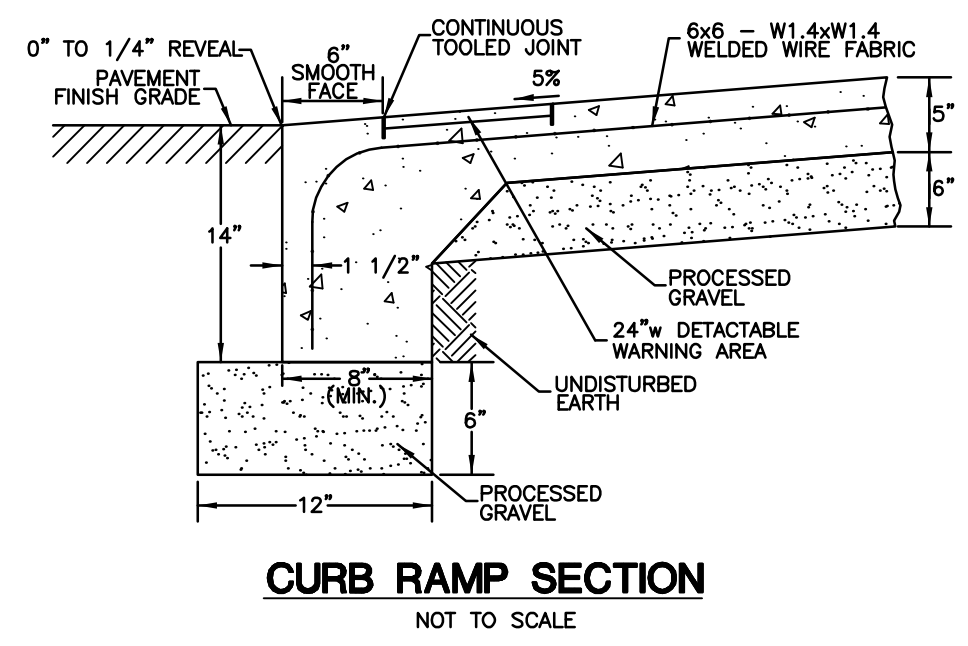
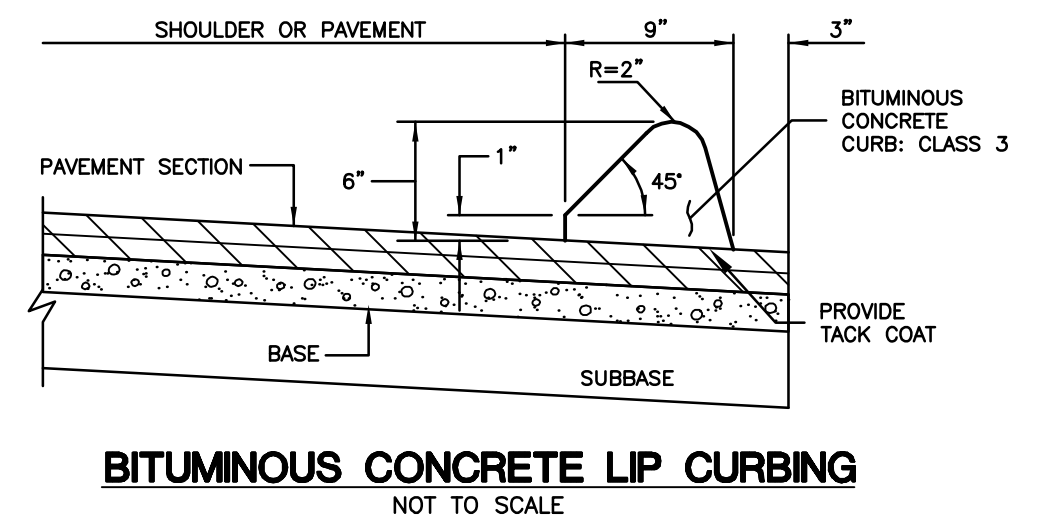
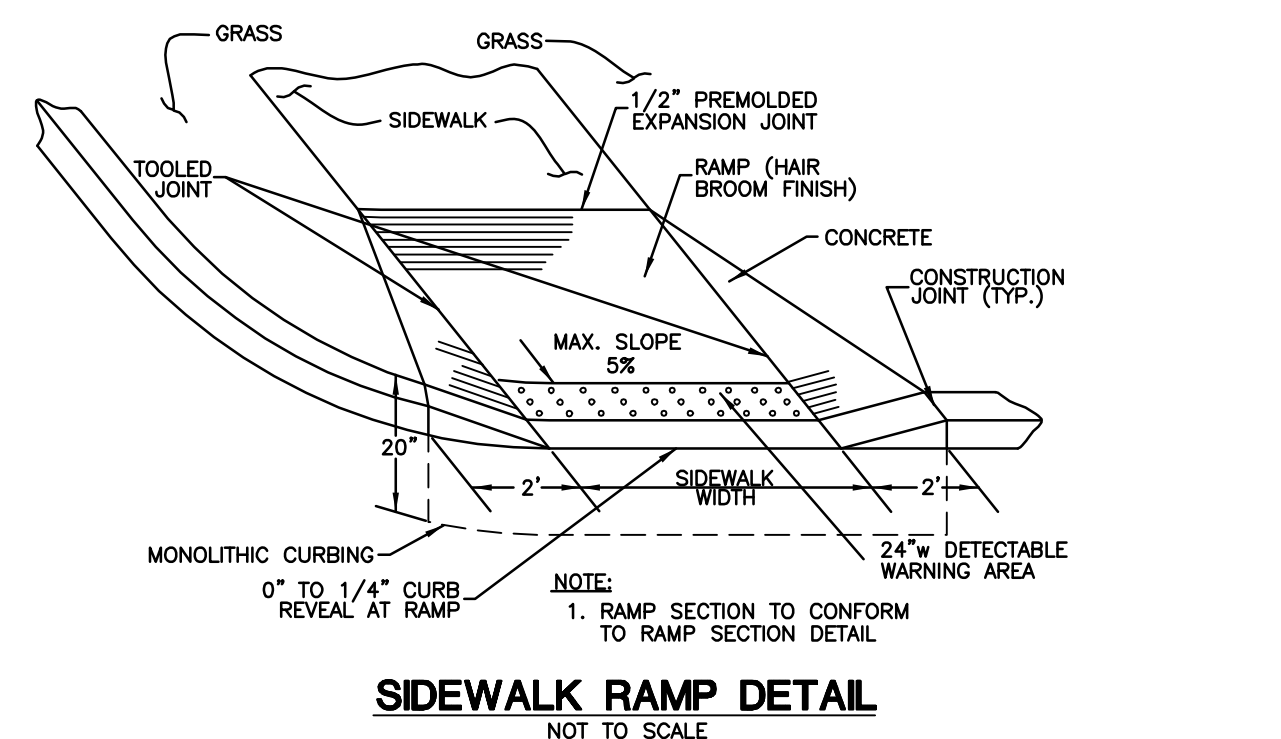
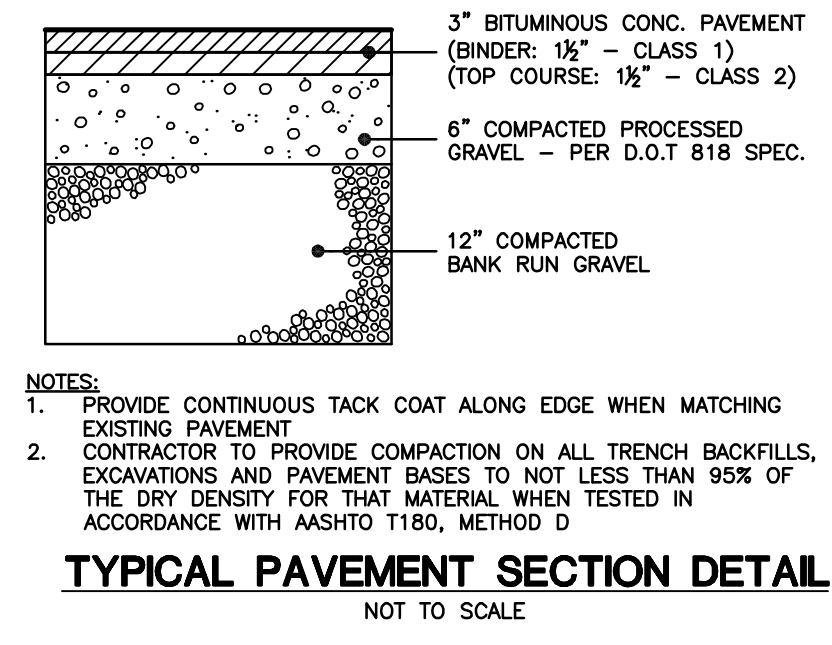
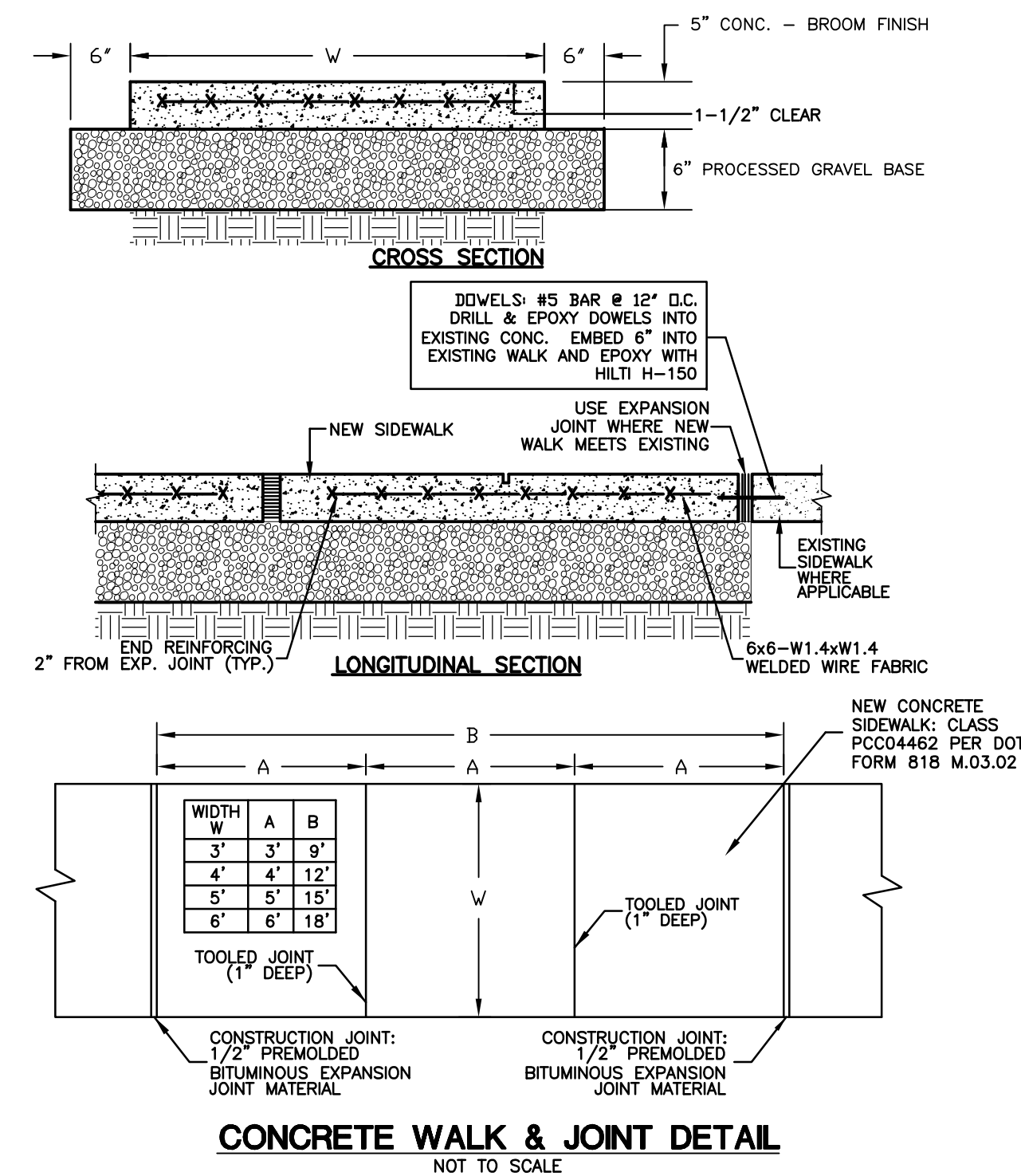
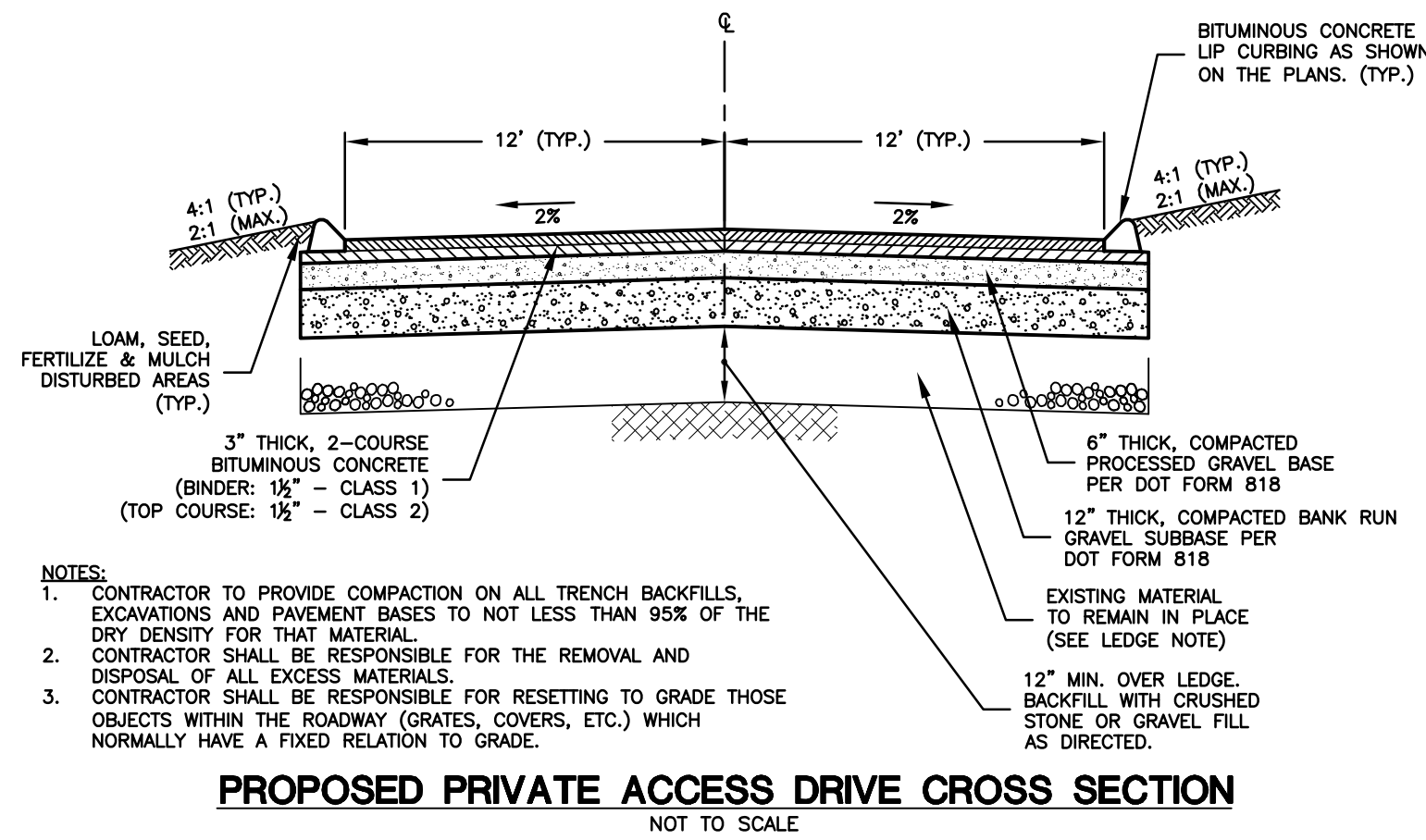
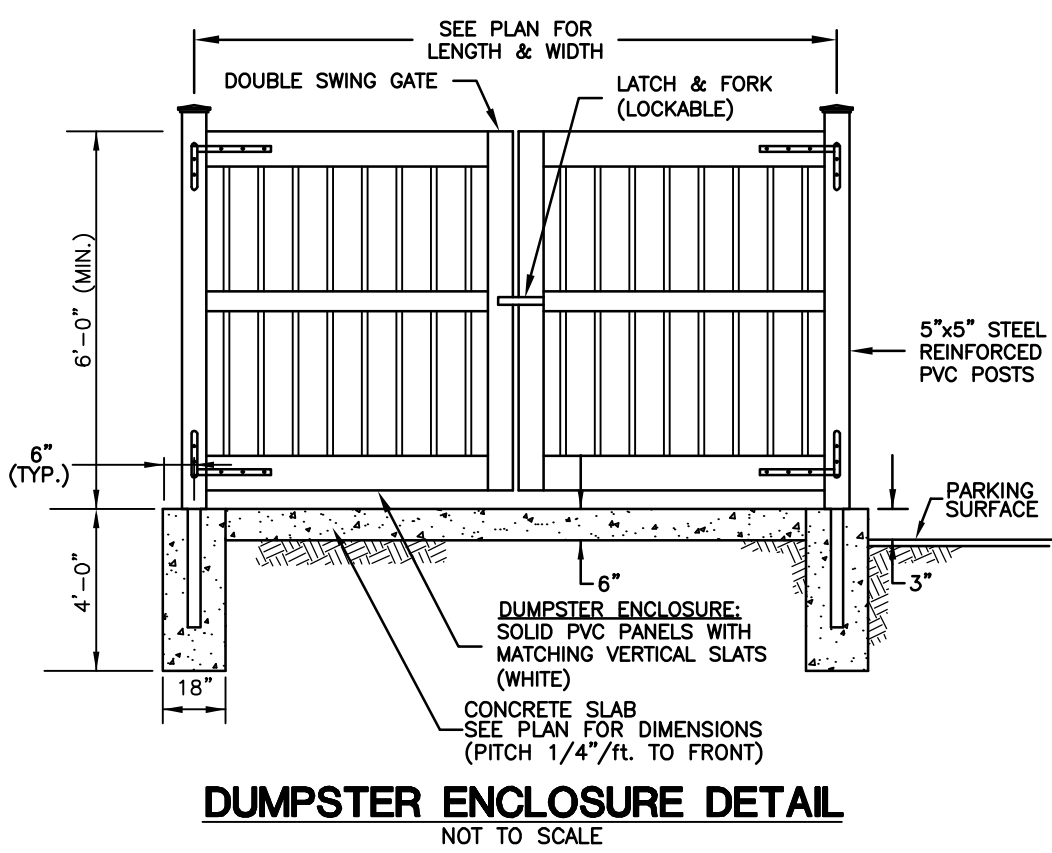
**SECTION B - B**

- CONSTRUCTION NOTES:**
1. SILT FENCE FILTER CLOTH TO BE SECURELY FASTENED TO GRADE STAKE WITH STAPLES, 6" ON CENTER.
  2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN ONE ANOTHER THEY SHALL OVERLAP BY 6" AND BE FOLDED.
  3. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.

- DEWATERING PLAN**
- A CLEAR WATER DISCHARGE SHALL BE PROVIDED AS FOLLOWS:
1. PUMP INLET SHALL BE PROTECTED WITH FILTER FABRIC & CRUSHED STONE.
  2. PUMP SHALL BE SITED OUTSIDE OF WETLANDS.
  3. THE WATER SHALL BE PUMPED TO A DEWATERING STRUCTURE WHICH SHALL BE LOCATED AT LEAST 50 FEET FROM ANY REGULATED WETLAND AREA OR AS SHOWN ON THE PLANS.
  4. THE DEWATERING STRUCTURE SHALL BE SIZED TO ACCOMMODATE PUMP DISCHARGE RATE.  $REQUIRED\ VOLUME\ (CF) = PUMP\ DISCHARGE\ (GPM) \times 18$
  5. THE DEWATERING STRUCTURE SHALL DISCHARGE TO A VEGETATED AREA.
  6. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN AND PROPERLY DISPOSED OF WHEN ACCUMULATION REACHES HALF OF THE REQUIRED STORAGE VOLUME.
  7. DEWATERING AREA SHALL BE RESTORED WITH NEW ENGLAND EROSION CONTROL SEED MIX.

**HAY BALE BARRIER DE-WATERING DETAIL**

<p><b>CLA Engineers, Inc.</b> CIVIL · STRUCTURAL · SURVEYING</p> <p>317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165</p>		Project No. CLA-7283
		Proj. Engineer K.J.H.
<p>25 Colonial Drive Killingly, Connecticut 06241</p>		Date: 7/7/2023
<p><b>Site Improvement Plan</b> North Woods Village Planned Residential Development</p>		Sheet No. <b>12</b>
<p>Stormwater Management Plan and Erosion &amp; Sedimentation Control Details</p>		



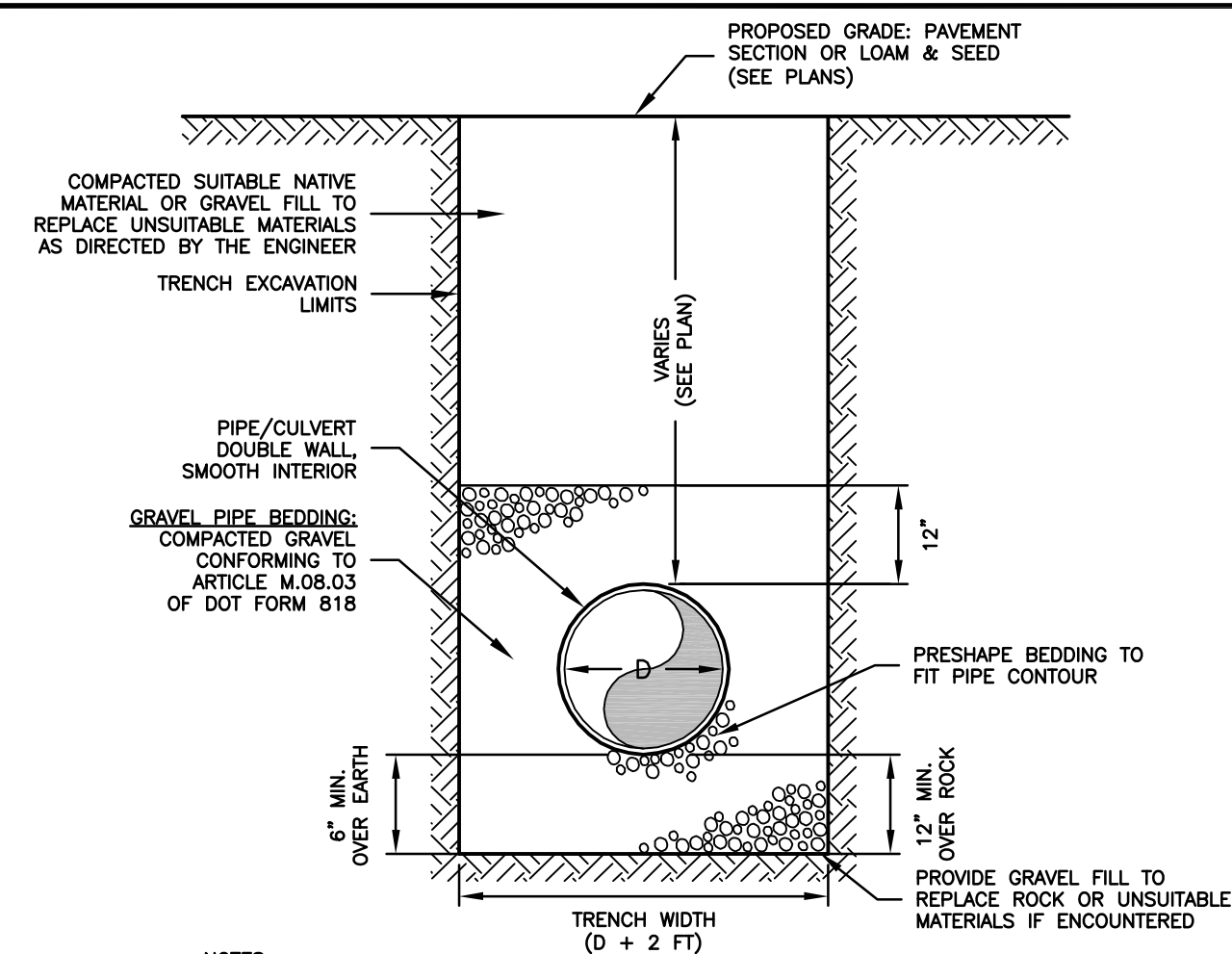
**CLA Engineers, Inc.**  
 CIVIL · STRUCTURAL · SURVEYING  
 317 Main Street Norwich, CT 06360  
 (860) 886-1966 Fax (860) 886-9165

No.	DATE	REVISION

25 Colonial Drive  
 Killingly, Connecticut 06241  
**Site Improvement Plan**  
 North Woods Village  
 Planned Residential Development  
 Construction Details

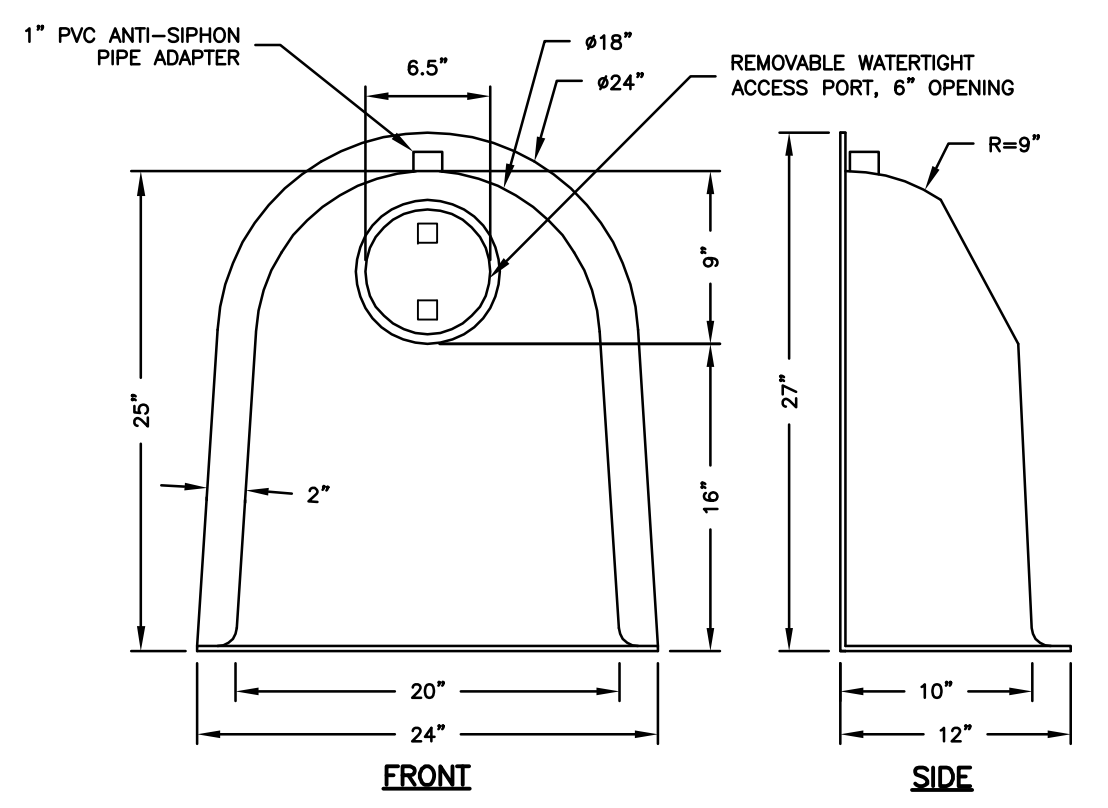
Project No. CLA-7283  
 Proj. Engineer K.J.H.  
 Date: 7/7/2023  
 Sheet No. **13**

M:\7000\7200\7283 Brown Lot Investigation\Drawings\CLA-7283 - Planned Residential Development - Sheet 12-16 Details.dwg



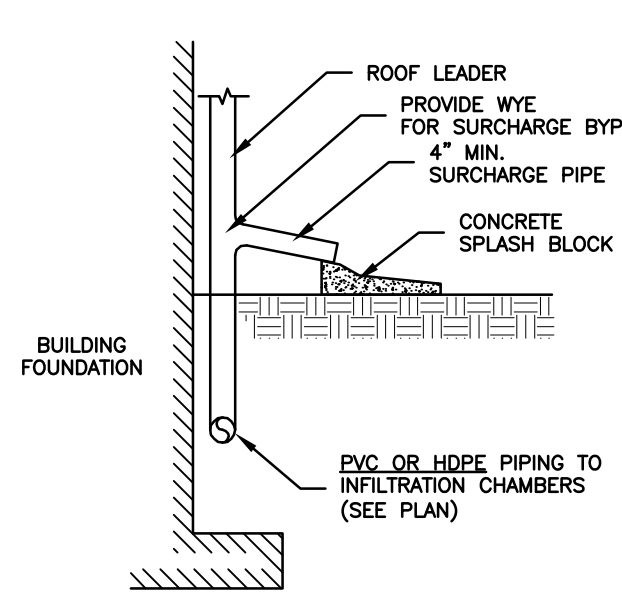
- NOTES:
1. D=INSIDE DIAMETER OF PIPE/CULVERT.
  2. TRENCH WIDTHS NOTED ARE SET TO ESTABLISH PAY LIMITS ONLY.
  3. ALL EXCAVATIONS MUST MEET OSHA STANDARDS.
  4. CONTRACTOR TO PROVIDE COMPACTION ON ALL TRENCH BACKFILLS, EXCAVATIONS AND PAVEMENT BASES TO NOT LESS THAN 95% OF THE DRY DENSITY FOR THAT MATERIAL.

**TRENCH DETAIL: DRAINAGE CULVERT**  
NOT TO SCALE

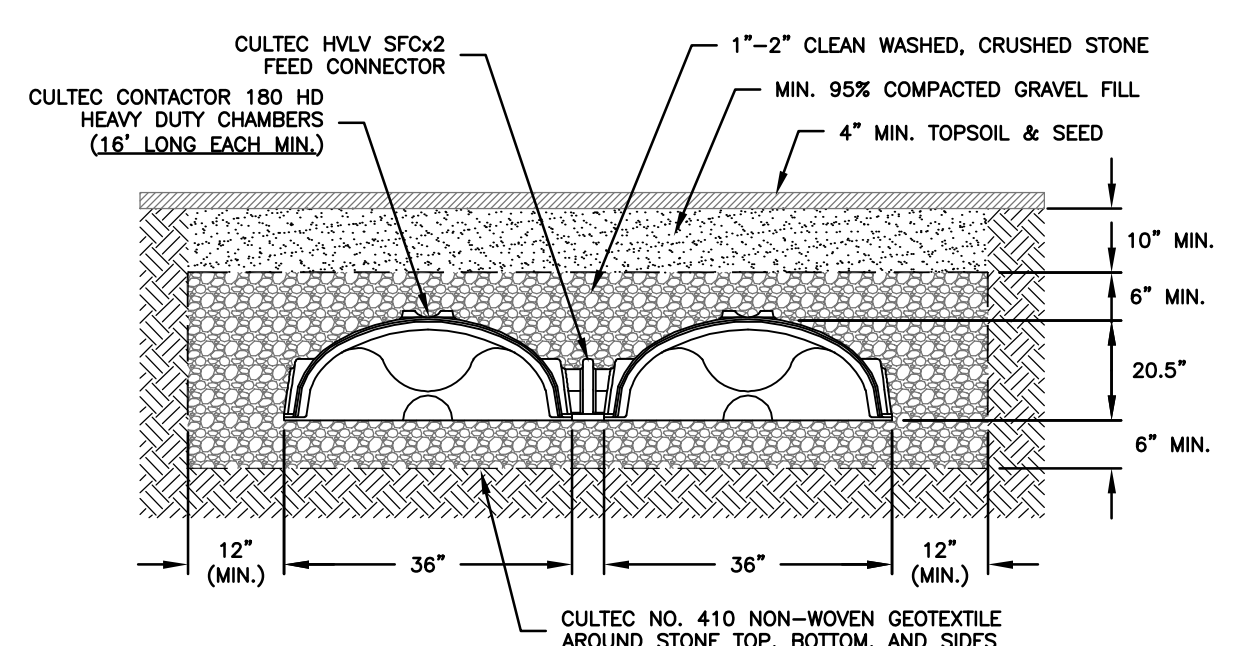


- NOTES:
1. UNIT TO BE MODEL 18E AS MANUFACTURED BY BMP, INC. 53 MT. ARCHER ROAD, LYME, CT OR APPROVED EQUAL.

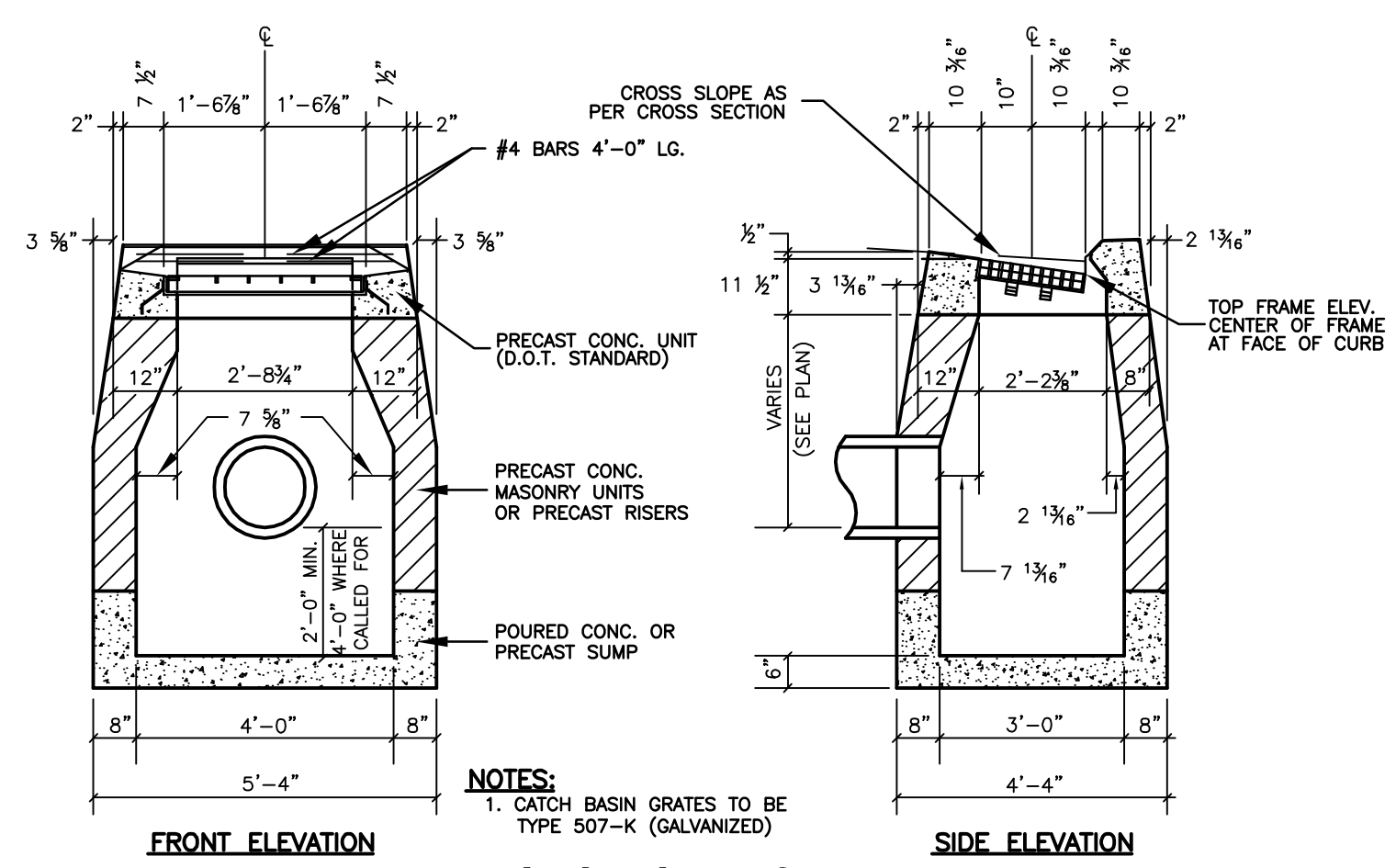
**BMP "SNOUT" CATCH BASIN HOOD DETAIL**  
NOT TO SCALE



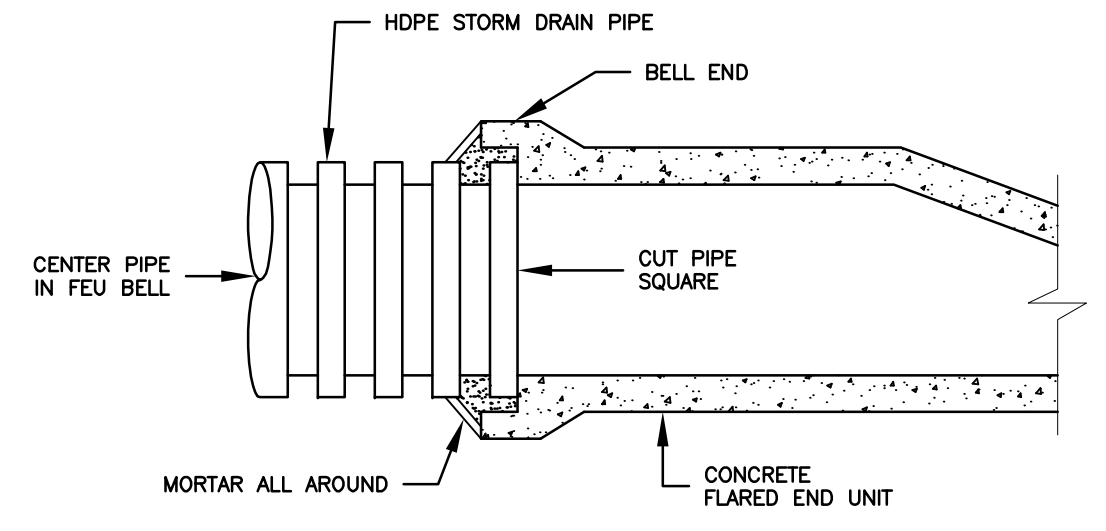
**ROOF LEADER DETAIL**  
NOT TO SCALE



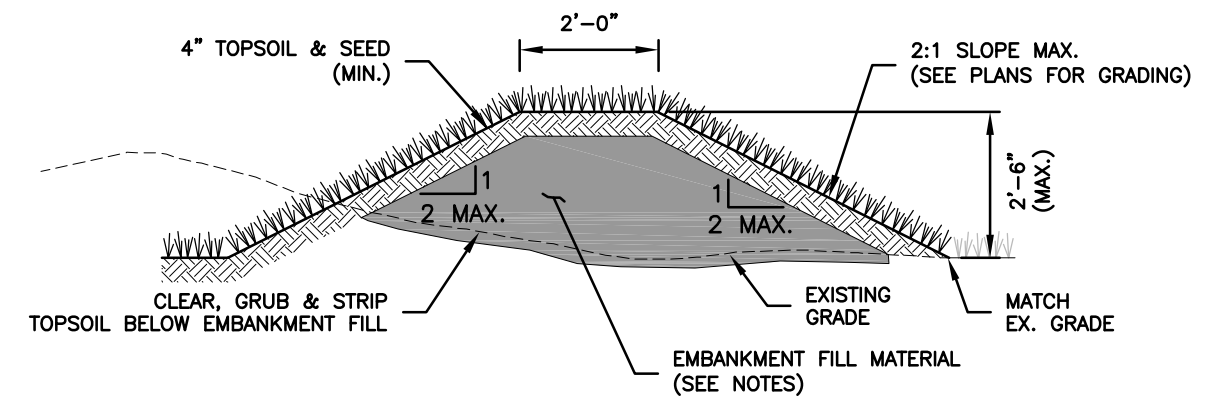
**ROOF INFILTRATION CHAMBER DETAIL**  
NOT TO SCALE



**TYPE "C" CATCH BASIN DETAIL**  
NOT TO SCALE

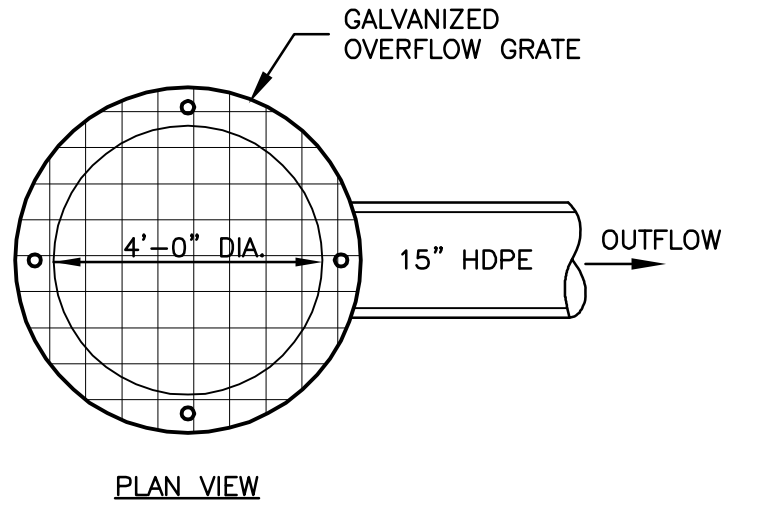


**FLARED END UNIT DETAIL**  
NOT TO SCALE

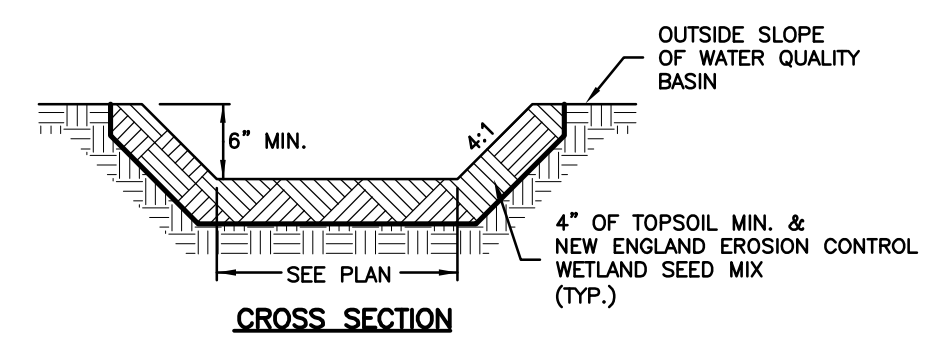


- NOTES:
1. EMBANKMENT FILL MATERIAL SHALL CONSIST OF THE FOLLOWING:
    - A. CLEAN MINERAL SOIL, FREE OF ROOTS, WOODY VEGETATION, STUMPS, SOD, OVERSIZED STONES, ROCKS, OR OTHER ORGANIC UNSUITABLE MATERIAL.
    - B. SHALL BE A NON-FREE DRAINING GLACIAL TILL.
    - C. MATERIAL SHALL CONTAIN AT LEAST 15% PASSING THE #200 SIEVE AND NOT MORE THAN 50% PASSING THE #100 SIEVE.
    - D. NO STONES LARGER THAN 6" SHALL BE ALLOWED WITHIN THE EMBANKMENT.
    - E. NO STONES LARGER THAN 3" SHALL BE ALLOWED WITHIN 2 FEET OF STRUCTURES.
  2. EMBANKMENT FILL SHALL BE PLACED IN MAXIMUM 9" LIFTS. THE EXISTING GRADE AND THE SURFACE OF EACH LIFT SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF THE NEXT LIFT.
  3. EMBANKMENT FILL SHALL BE COMPACTED TO 90%-95% STANDARD PROCTOR COMPACTION.

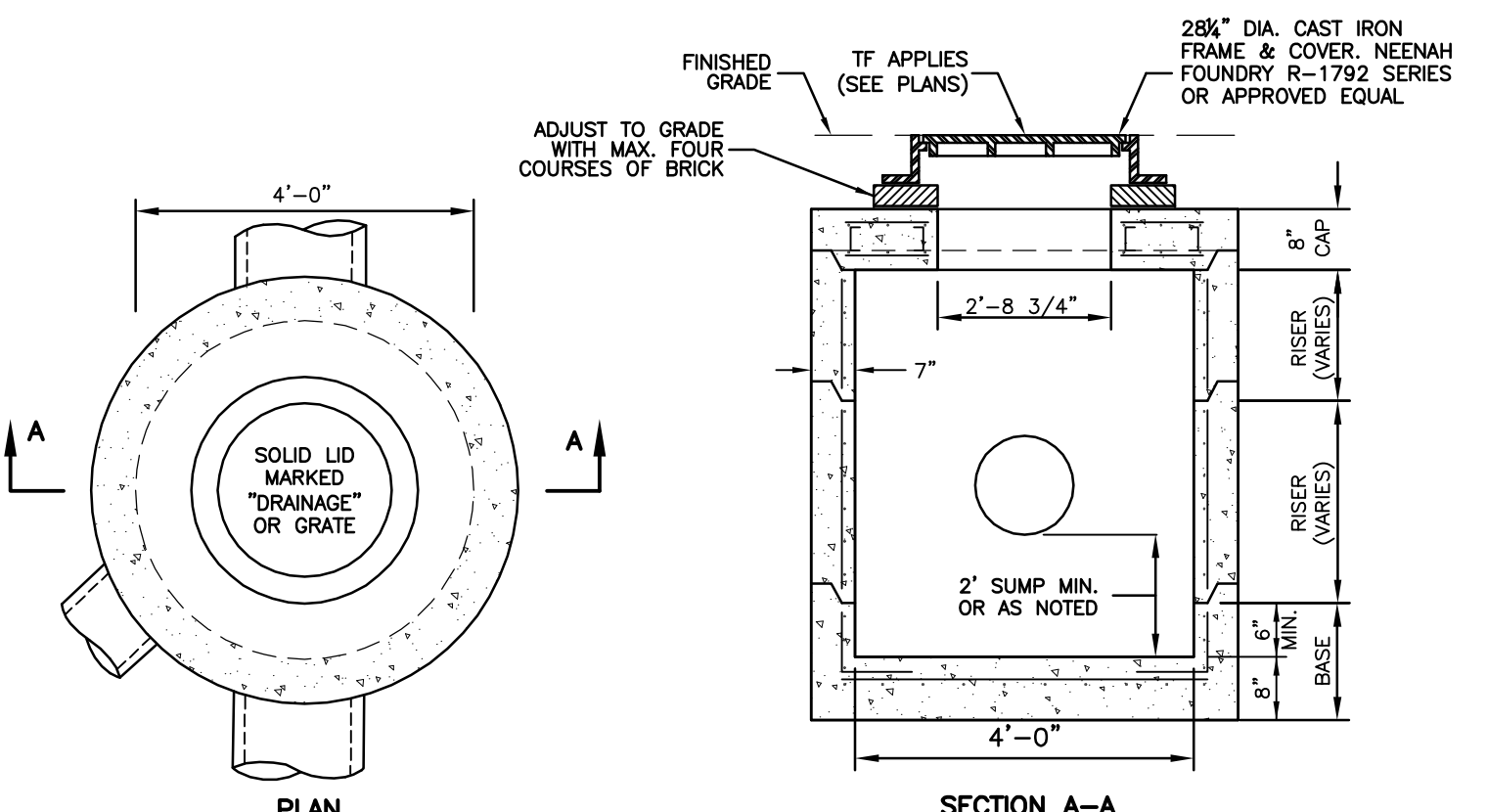
**EMBANKMENT FILL SECTION DETAIL**  
NOT TO SCALE



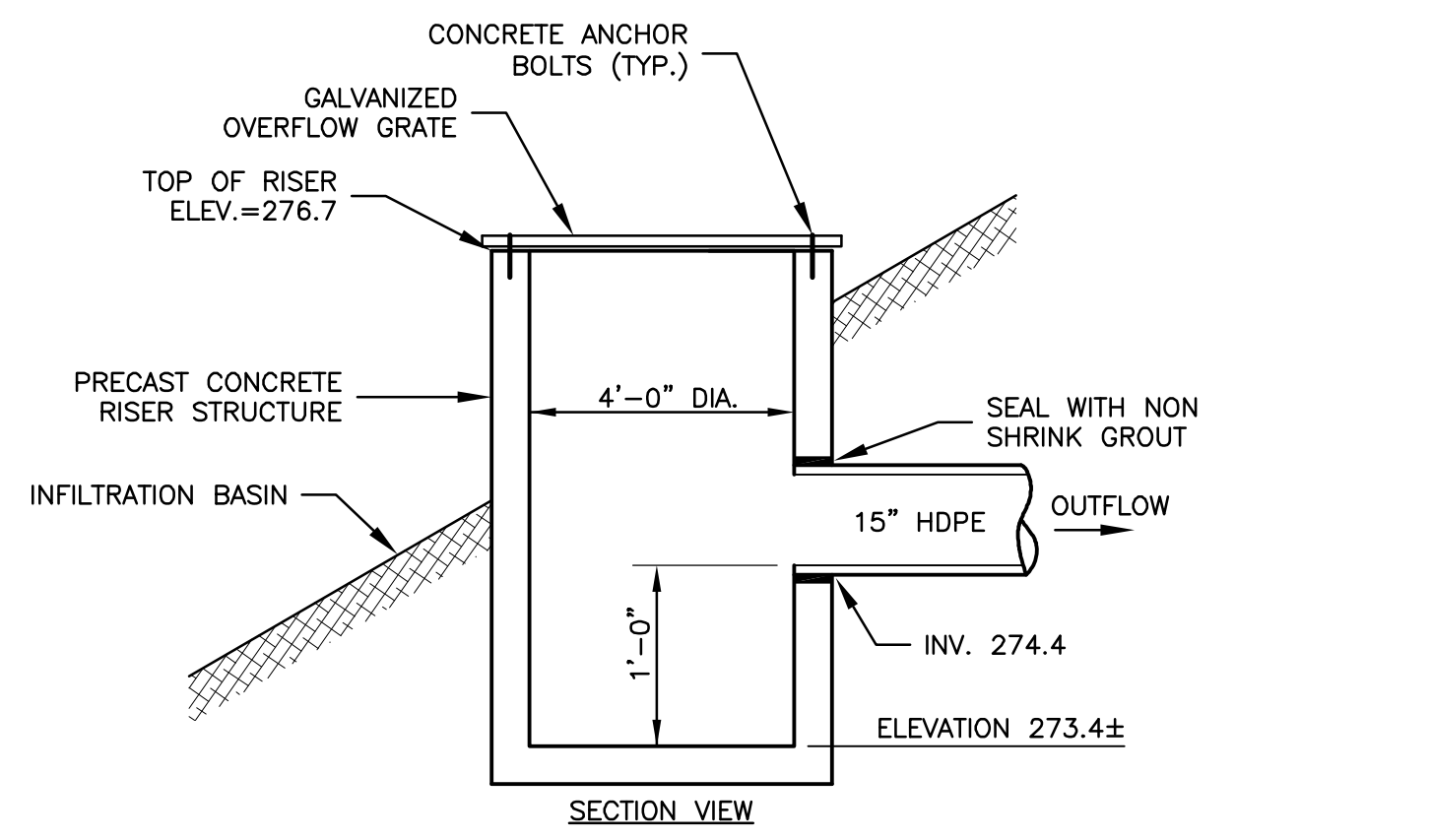
**PLAN VIEW**



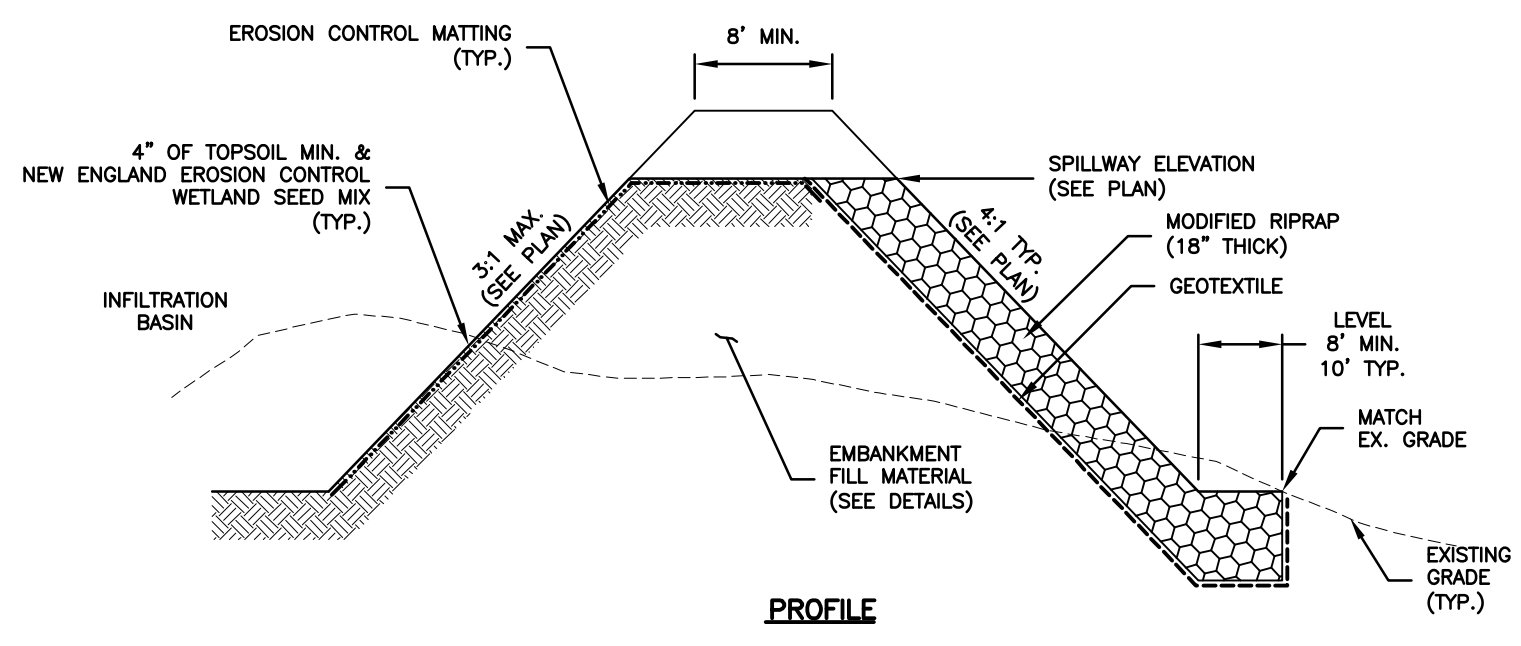
**CROSS SECTION**



**STANDARD DRAINAGE MANHOLE DETAIL**  
NOT TO SCALE



**INFILTRATION BASIN #1 EMERGENCY OVERFLOW STRUCTURE**  
NOT TO SCALE

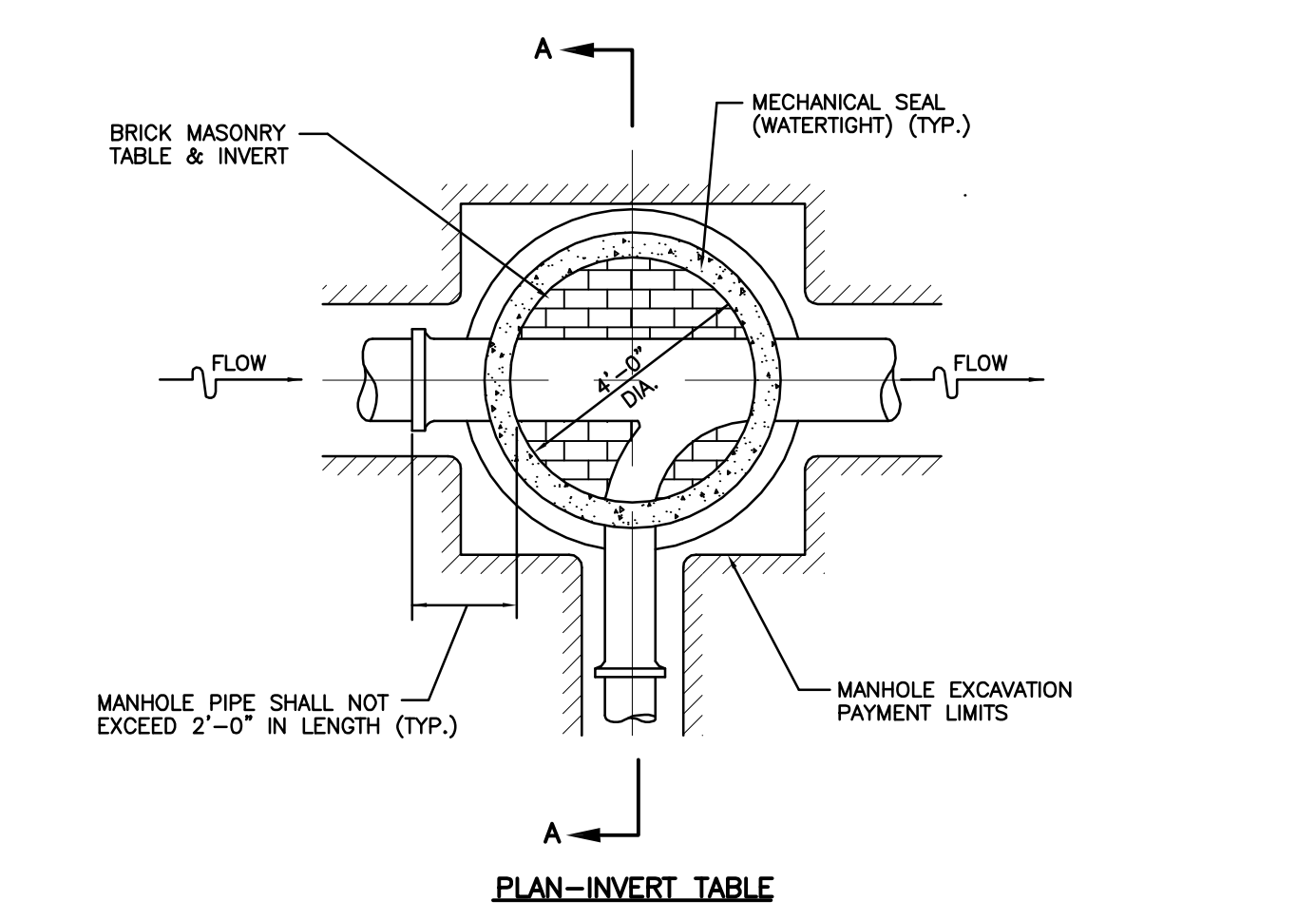
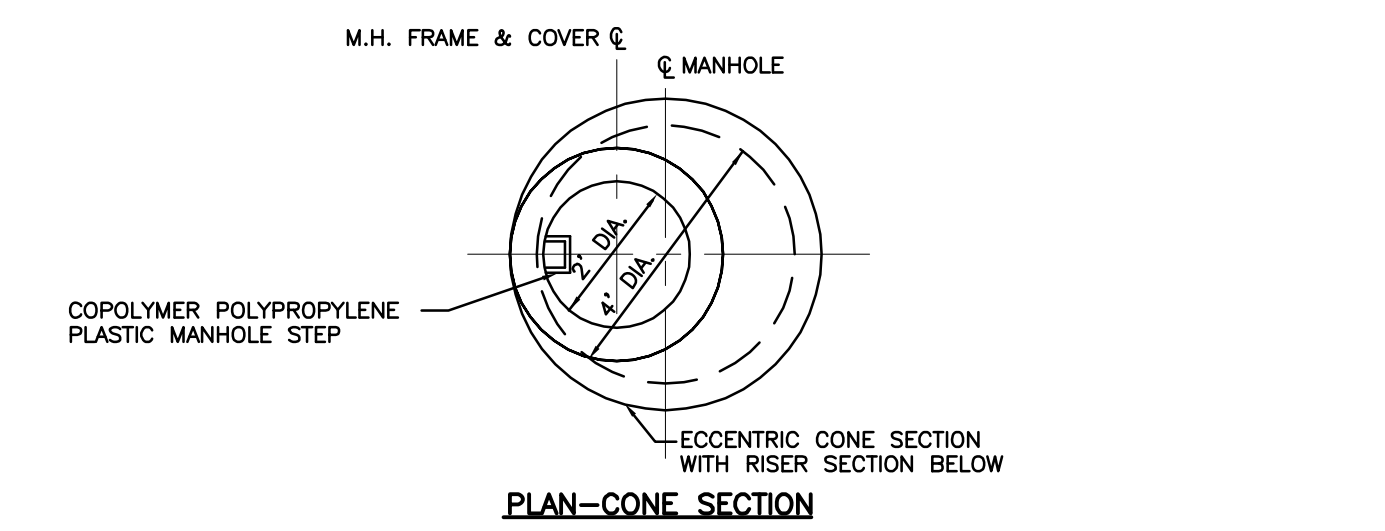
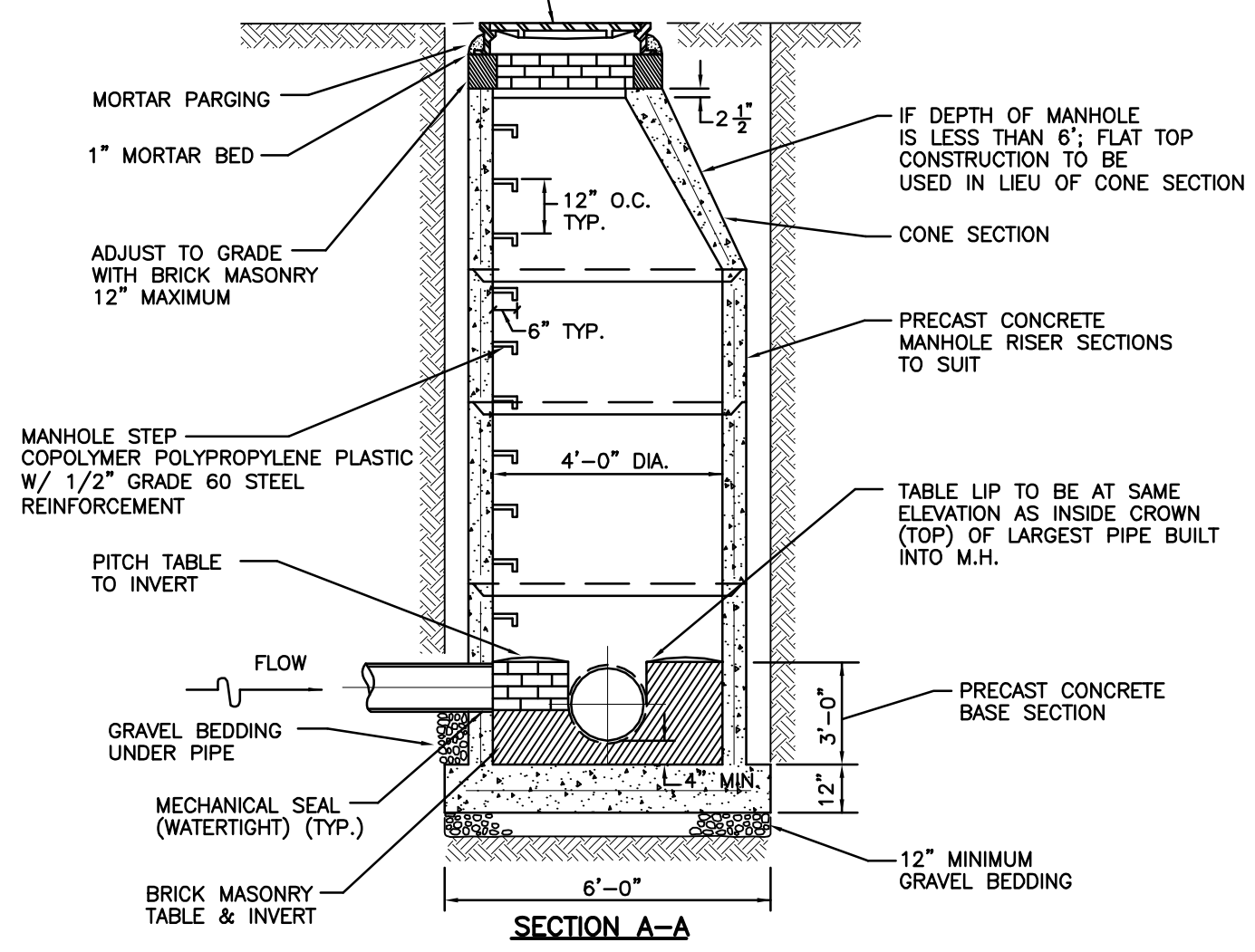


**INFILTRATION BASIN #2 OUTLET DETAIL**  
NOT TO SCALE

- NOTES:
1. EROSION CONTROL MATTING SHALL BE NORTH AMERICAN GREEN C125 OR APPROVED EQUAL. EROSION CONTROL MATTING MUST BE INCLUDED ON THE DOT QUALIFIED PRODUCT LIST. EROSION CONTROL MATTING SHALL BE LISTED UNDER CLASS I; SLOPE PROTECTION, TYPE D.
  2. GEOTEXTILE SHALL BE PROPEX GEOTEX 104 F OR APPROVED EQUAL. GEOTEXTILE MUST BE INCLUDED ON THE DOT QUALIFIED PRODUCT LIST. GEOTEXTILE SHALL BE LISTED UNDER EROSION CONTROL, CLASS A.

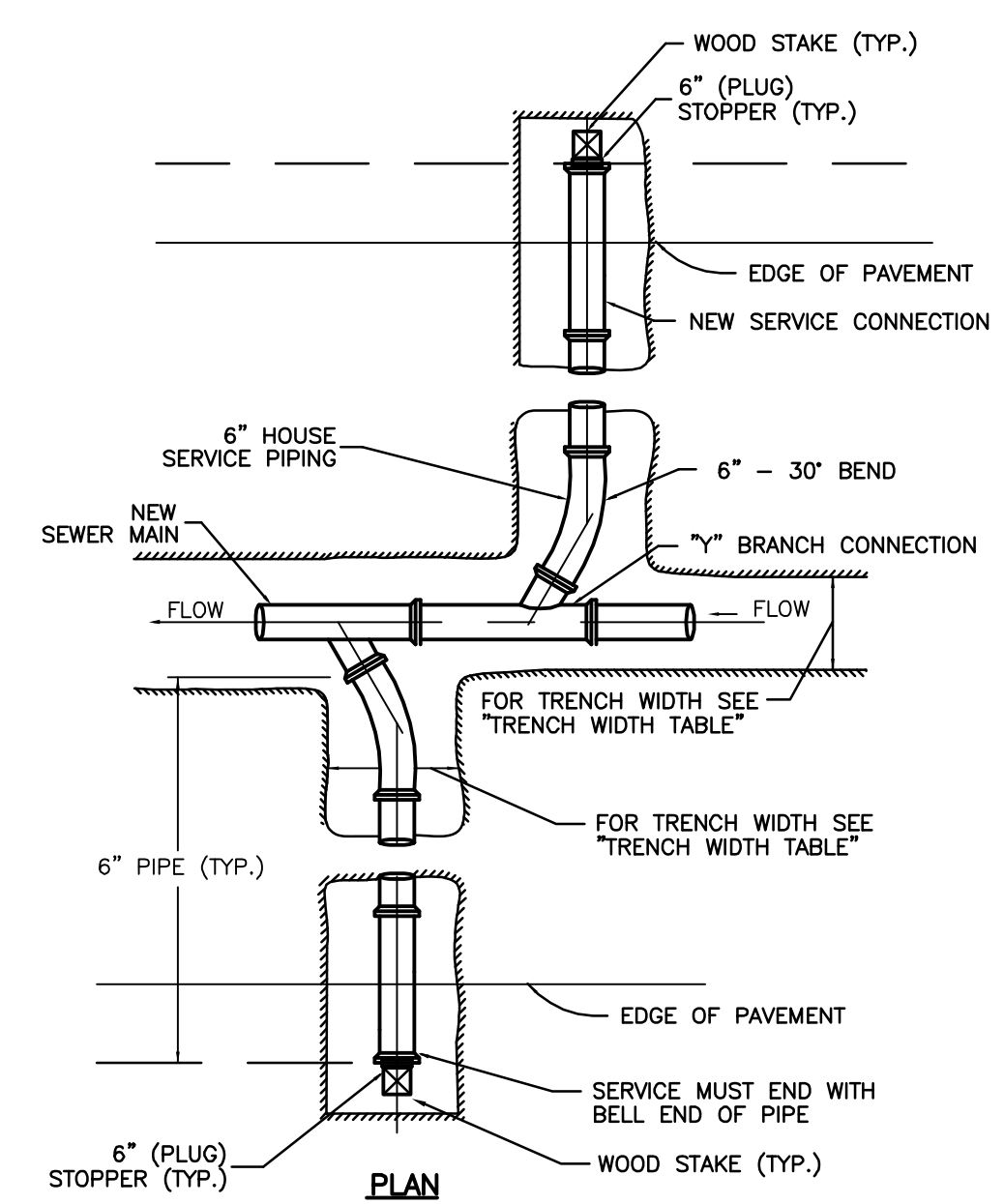
<p><b>CLA Engineers, Inc.</b> CIVIL · STRUCTURAL · SURVEYING</p> <p>317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165</p>			Project No. CLA-7283												
			Proj. Engineer K.J.H.												
<p>25 Colonial Drive Killingly, Connecticut 06241</p> <p><b>Site Improvement Plan</b> North Woods Village Planned Residential Development</p> <p>Construction Details</p>			Date: 7/7/2023												
<table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			No.	DATE	REVISION										Sheet No. <b>14</b>
No.	DATE	REVISION													

FRAME AND COVER SHALL BE "CAMBELL" MODEL NO. 10494502 (FRAME) AND 10495132 (COVER) AND SHALL HAVE 2 - 1" VENT HOLE AND EACH COVER SHALL BEAR THE WORDING "SEWER"

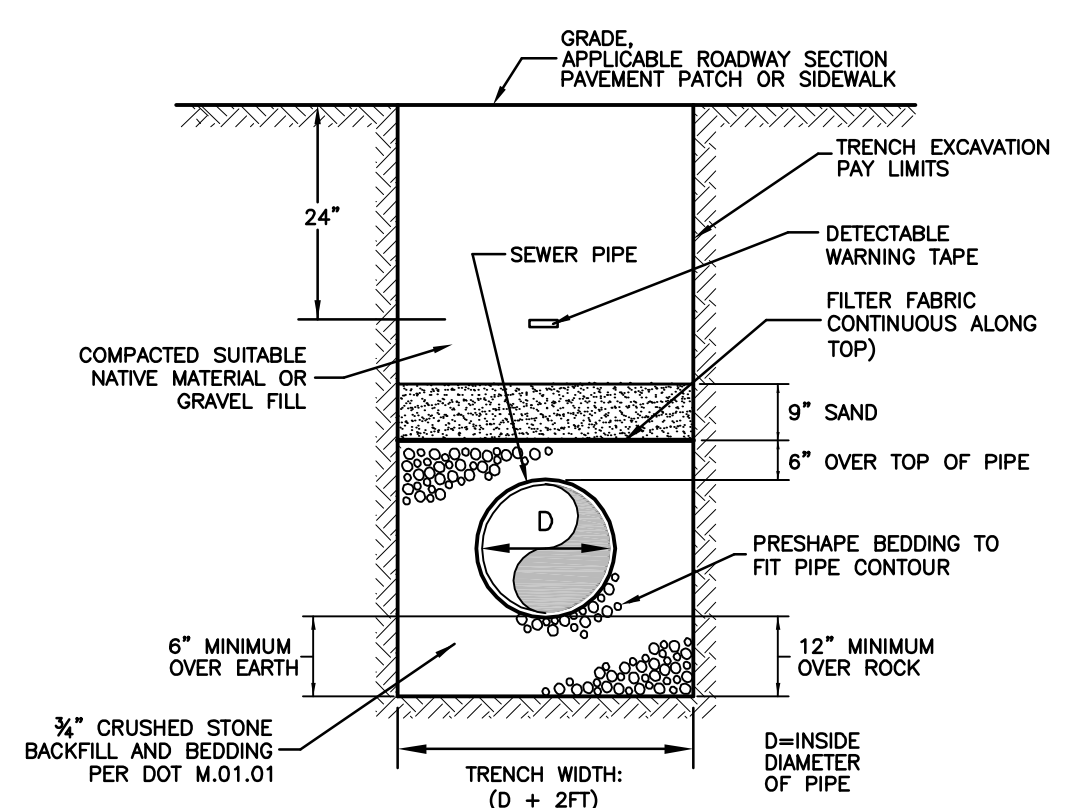


- NOTES**
1. ALL PIPES SHALL BE CUT FLUSH WITH INSIDE WALL OF STRUCTURE.
  2. CONTRACTOR SHALL MORTAR IN LIFTING HOLES.
  3. MANHOLE COVERS SHALL HAVE THE WORDS "SEWER" CAST INTO THE CENTER IN 3" LETTERS.
  4. THE OUTSIDE OF MANHOLE STRUCTURES SHALL BE PAINTED WITH 2 COATS OF BITUMINOUS MATERIAL.

**SANITARY MANHOLE DETAIL**  
NOT TO SCALE

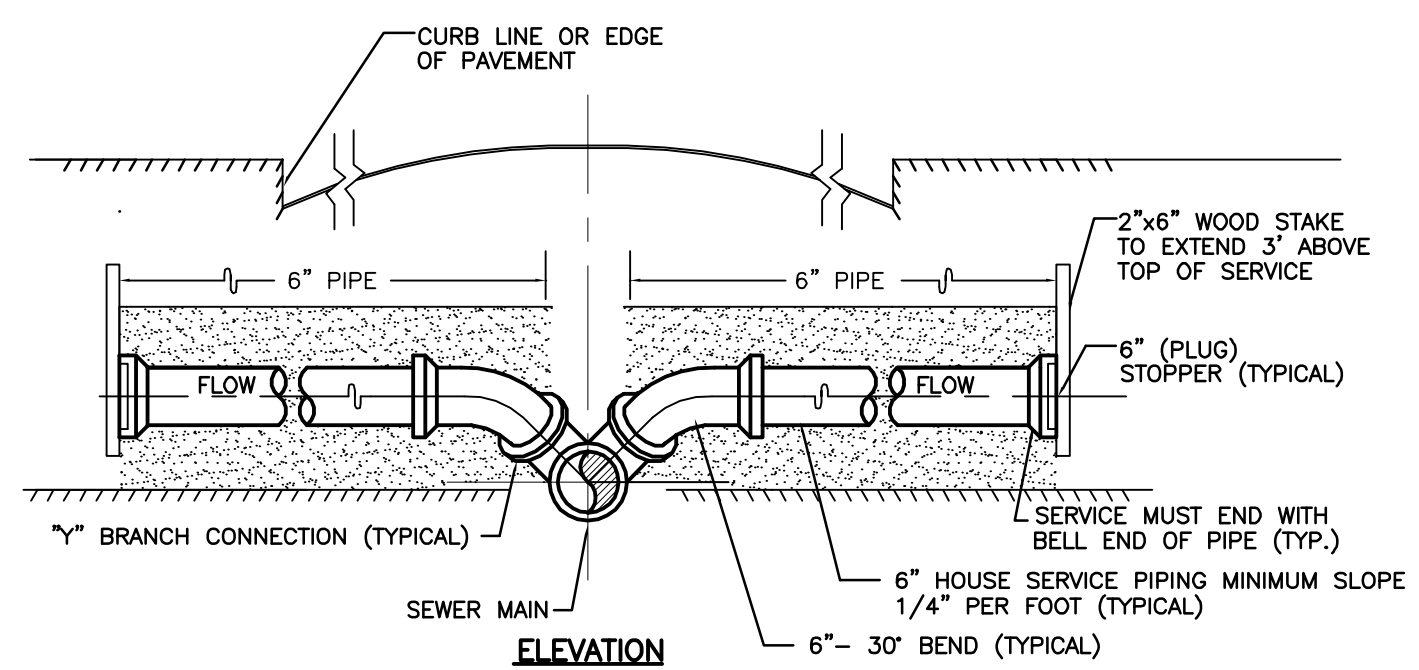


**SERVICE CONNECTION DETAIL**  
NOT TO SCALE

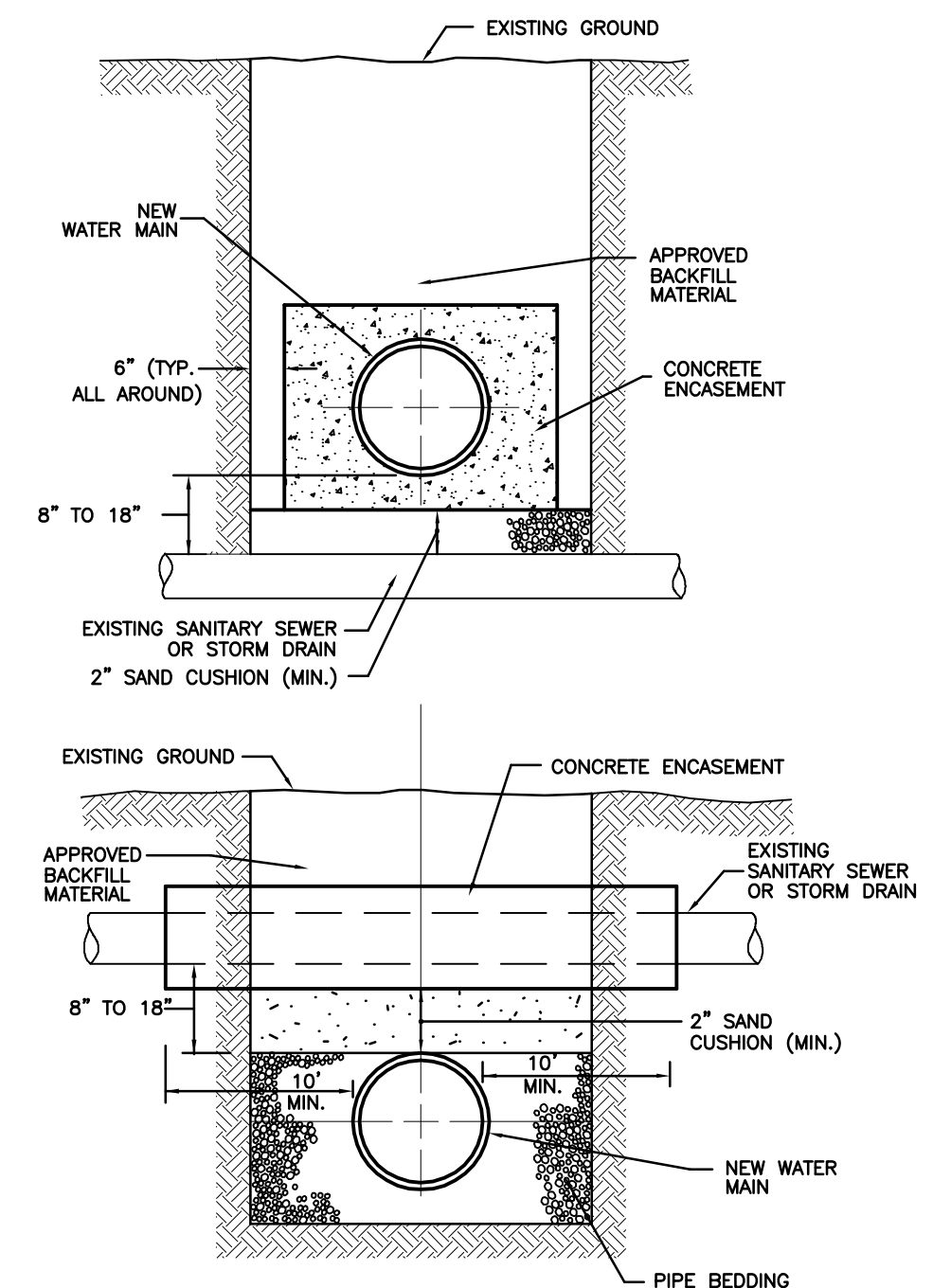


- NOTES**
1. D=INSIDE DIAMETER OF PIPE.
  2. TRENCH WIDTHS NOTED ARE SET TO ESTABLISH PAY LIMITS ONLY.
  3. ALL EXCAVATIONS MUST MEET OSHA STANDARDS.
  4. CONTRACTOR TO PROVIDE COMPACTION ON ALL TRENCH BACKFILLS, EXCAVATIONS AND PAVEMENT BASES TO NOT LESS THAN 95% OF THE DRY DENSITY FOR THAT MATERIAL.

**TRENCH DETAIL: SANITARY SEWER PIPE**  
NOT TO SCALE

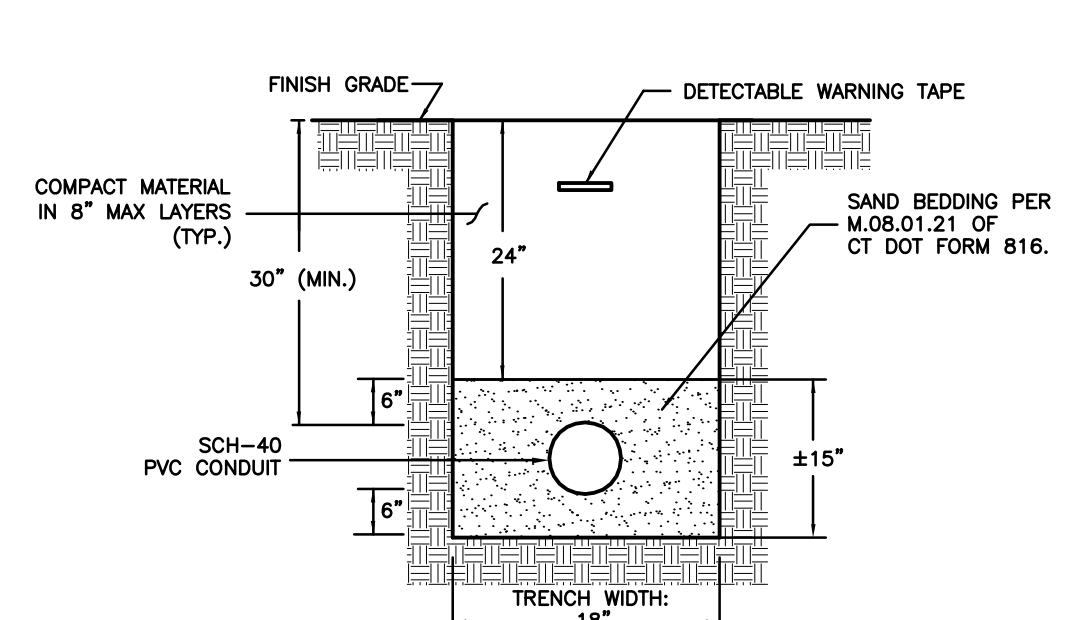


**HOUSE SERVICE CONNECTION DETAIL**  
NOT TO SCALE



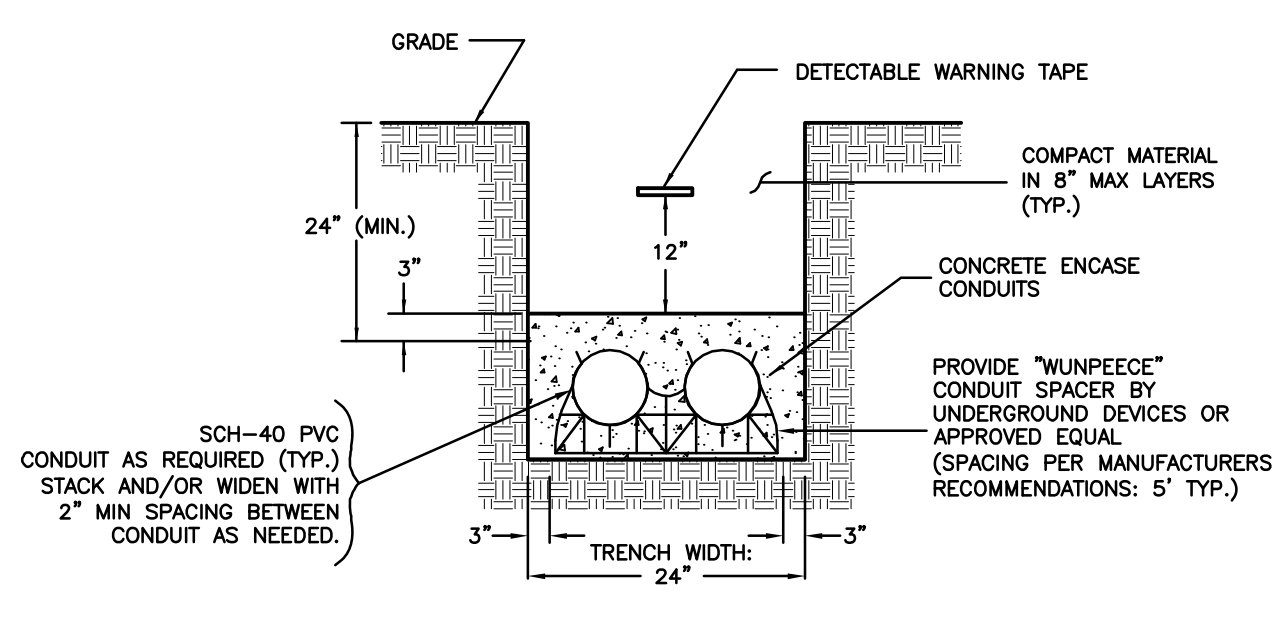
- NOTES**
1. WHERE VERTICAL SEPARATION BETWEEN THE WATER MAIN AND SANITARY SEWERS OR STORM DRAINS IS 18" OR LESS A 6" CONCRETE ENCASEMENT IS REQUIRED FOR A DISTANCE OF TEN FEET ON EACH SIDE OF THE CROSSING.
  2. A FULL LENGTH OF WATER MAIN SHALL BE CENTERED AT ALL SANITARY SEWER AND STORM DRAIN CROSSINGS.

**CONCRETE ENCASEMENT DETAIL**  
NOT TO SCALE



- NOTES**
1. TRENCH WIDTHS NOTED ARE SET TO ESTABLISH PAY LIMITS ONLY.
  2. ALL EXCAVATIONS MUST MEET OSHA STANDARDS.
  3. CONTRACTOR TO PROVIDE COMPACTION ON ALL TRENCH BACKFILLS, EXCAVATIONS AND PAVEMENT BASES TO NOT LESS THAN 95% OF THE DRY DENSITY FOR THAT MATERIAL.
  5. MAINTAIN 2" SEPARATION BETWEEN MULTIPLE CONDUIT TRENCHES.

**TYPICAL CONDUIT TRENCH DETAIL**  
NOT TO SCALE

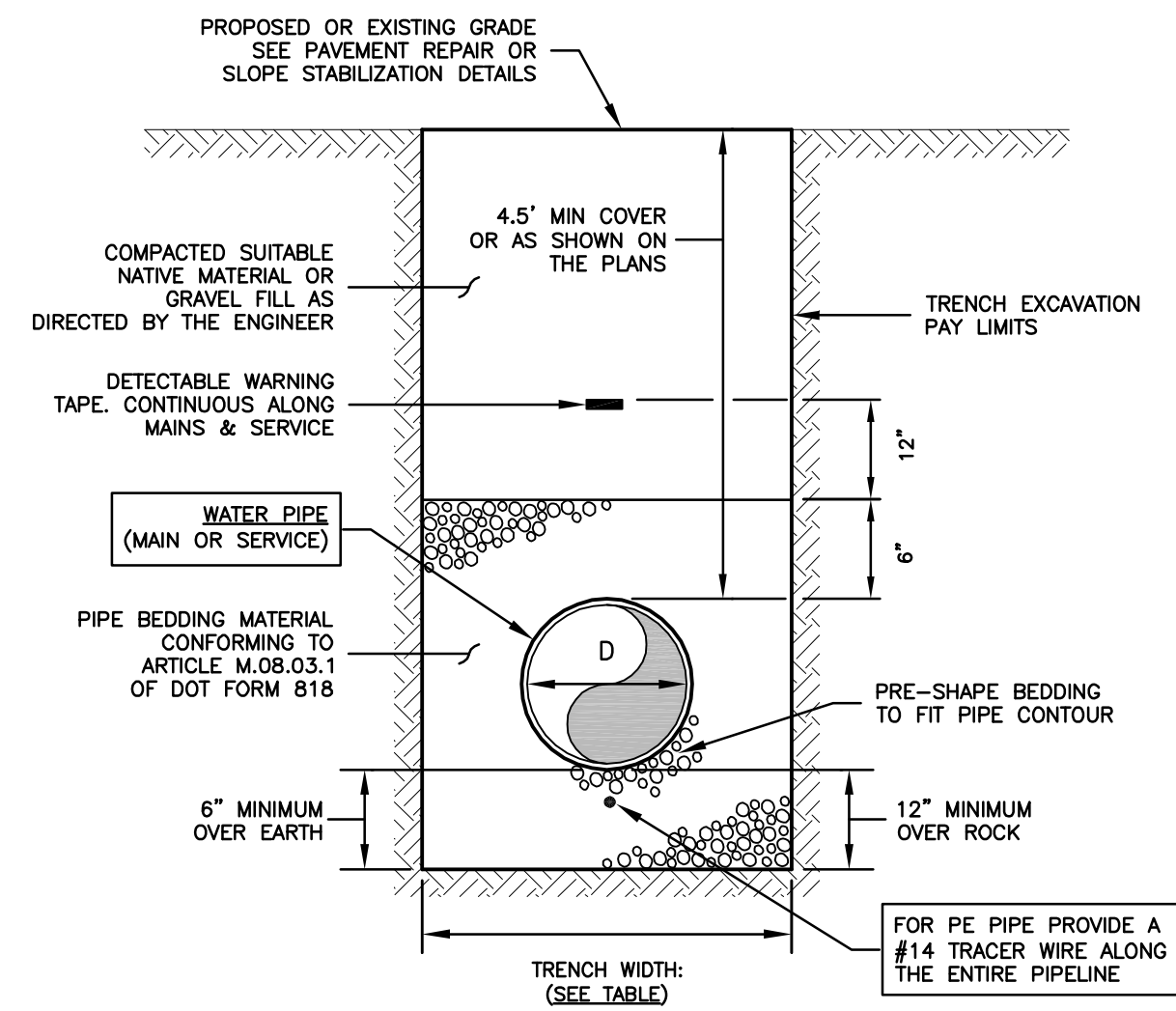


- NOTES**
1. TRENCH WIDTHS NOTED ARE SET TO ESTABLISH PAY LIMITS ONLY.
  2. ALL EXCAVATIONS MUST MEET OSHA STANDARDS.
  4. CONTRACTOR TO PROVIDE COMPACTION ON ALL TRENCH BACKFILLS, EXCAVATIONS AND PAVEMENT BASES TO NOT LESS THAN 95% OF THE DRY DENSITY FOR THAT MATERIAL.
  5. FOR USE WHERE THERE IS LESS THAN 30" OF COVER AVAILABLE.

**CONDUIT DUCT BANK (CONC. ENCASED) DETAIL**  
NOT TO SCALE

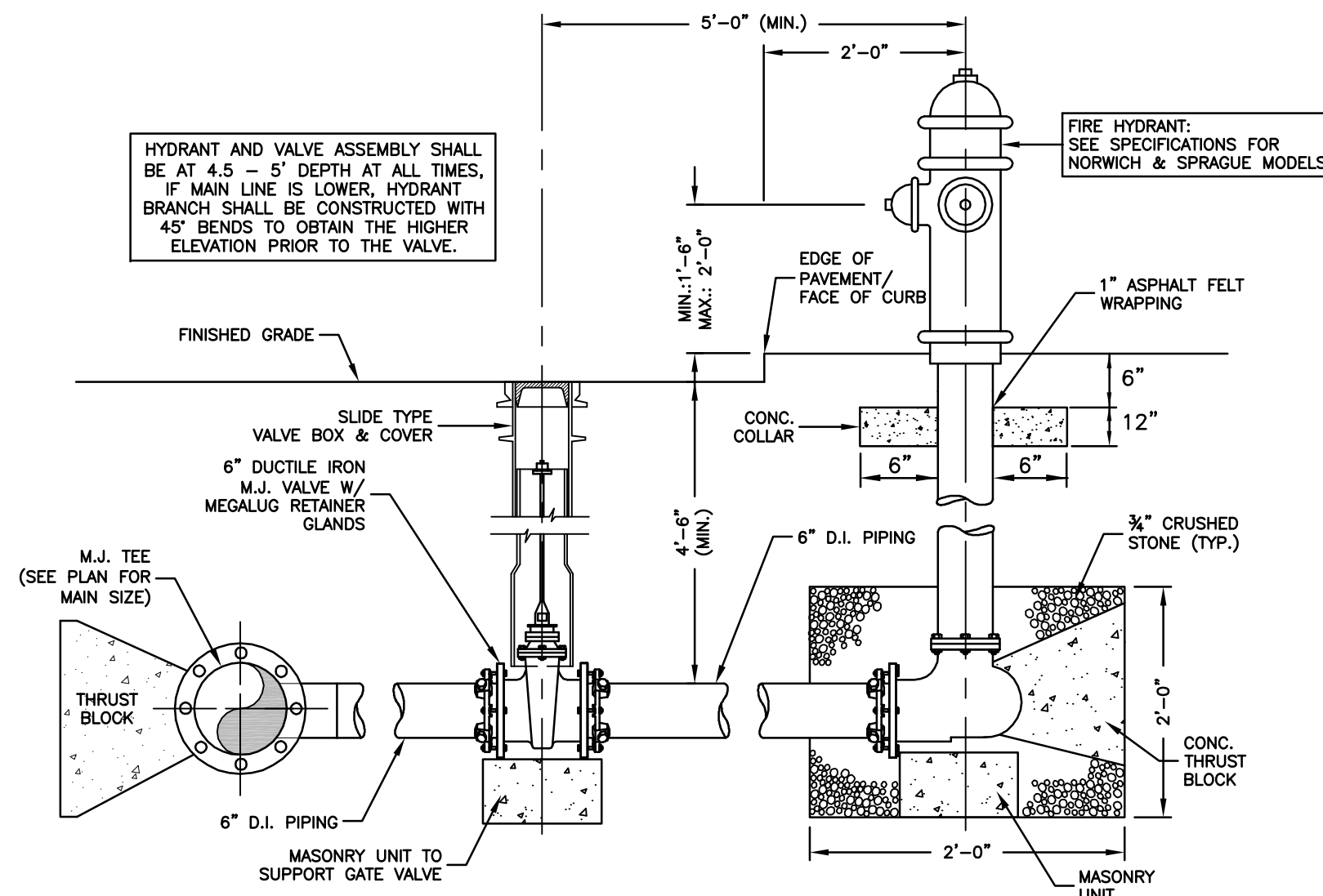
<p><b>CLA Engineers, Inc.</b> CIVIL · STRUCTURAL · SURVEYING</p> <p>317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165</p>		Project No. CLA-7283
		Proj. Engineer K.J.H.
<p>25 Colonial Drive Killingly, Connecticut 06241</p> <p><b>Site Improvement Plan</b> North Woods Village Planned Residential Development</p> <p>Construction Details</p>		Date: 7/7/2023
		Sheet No. <b>15</b>



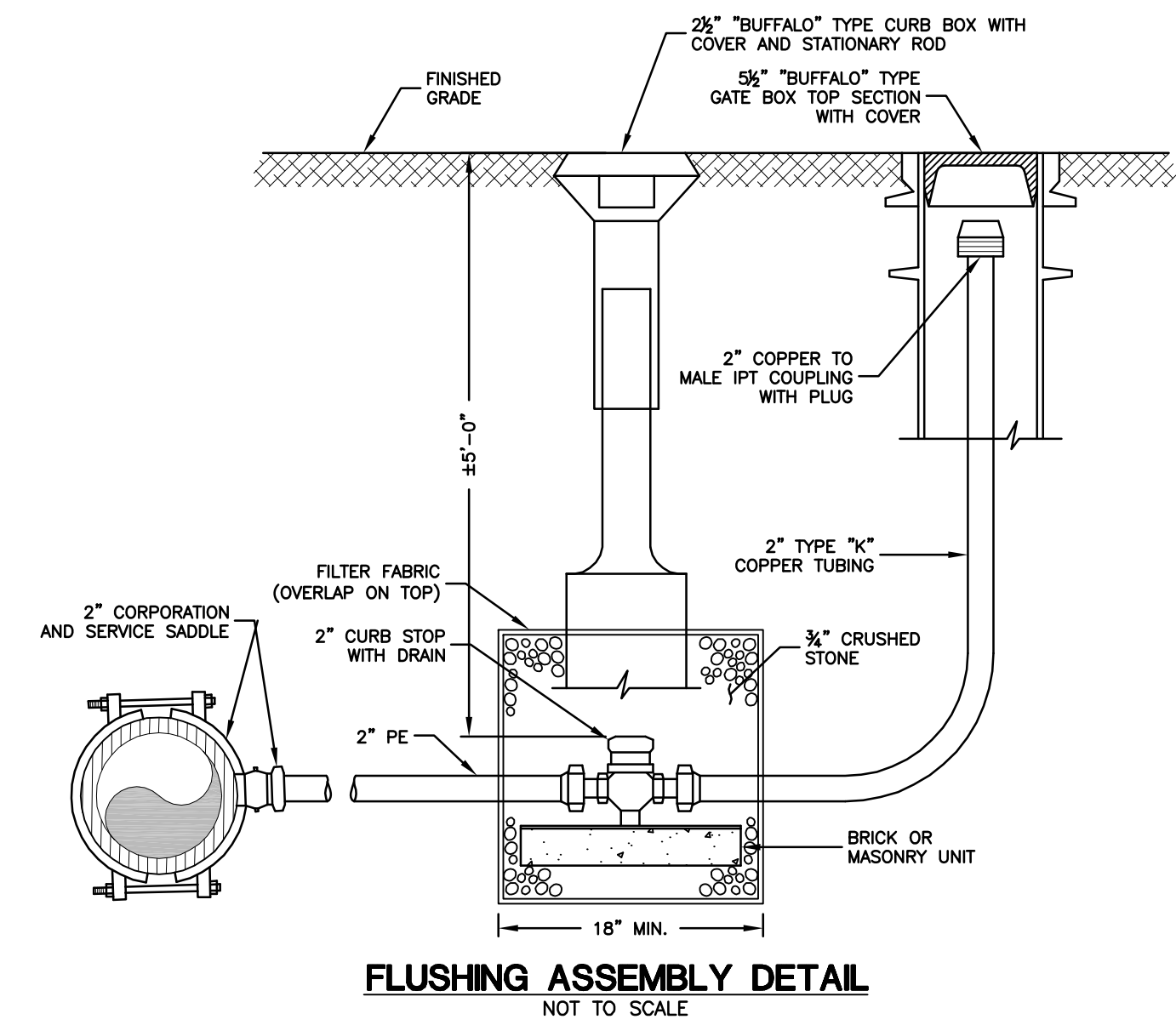


- NOTES:
1. D=INSIDE DIAMETER OF PIPE.
  2. TRENCH WIDTHS NOTED ARE SET TO ESTABLISH PAY LIMITS ONLY.
  3. ALL EXCAVATIONS MUST MEET OSHA STANDARDS.
  4. CONTRACTOR TO PROVIDE COMPACTION ON ALL TRENCH BACKFILLS, EXCAVATIONS AND PAVEMENT BASES TO NOT LESS THAN 95% OF THE DRY DENSITY FOR THAT MATERIAL.
  5. BEDDING MATERIAL TO CONFORM TO M.08.03.1 AS PER CT DOT FORM 818.

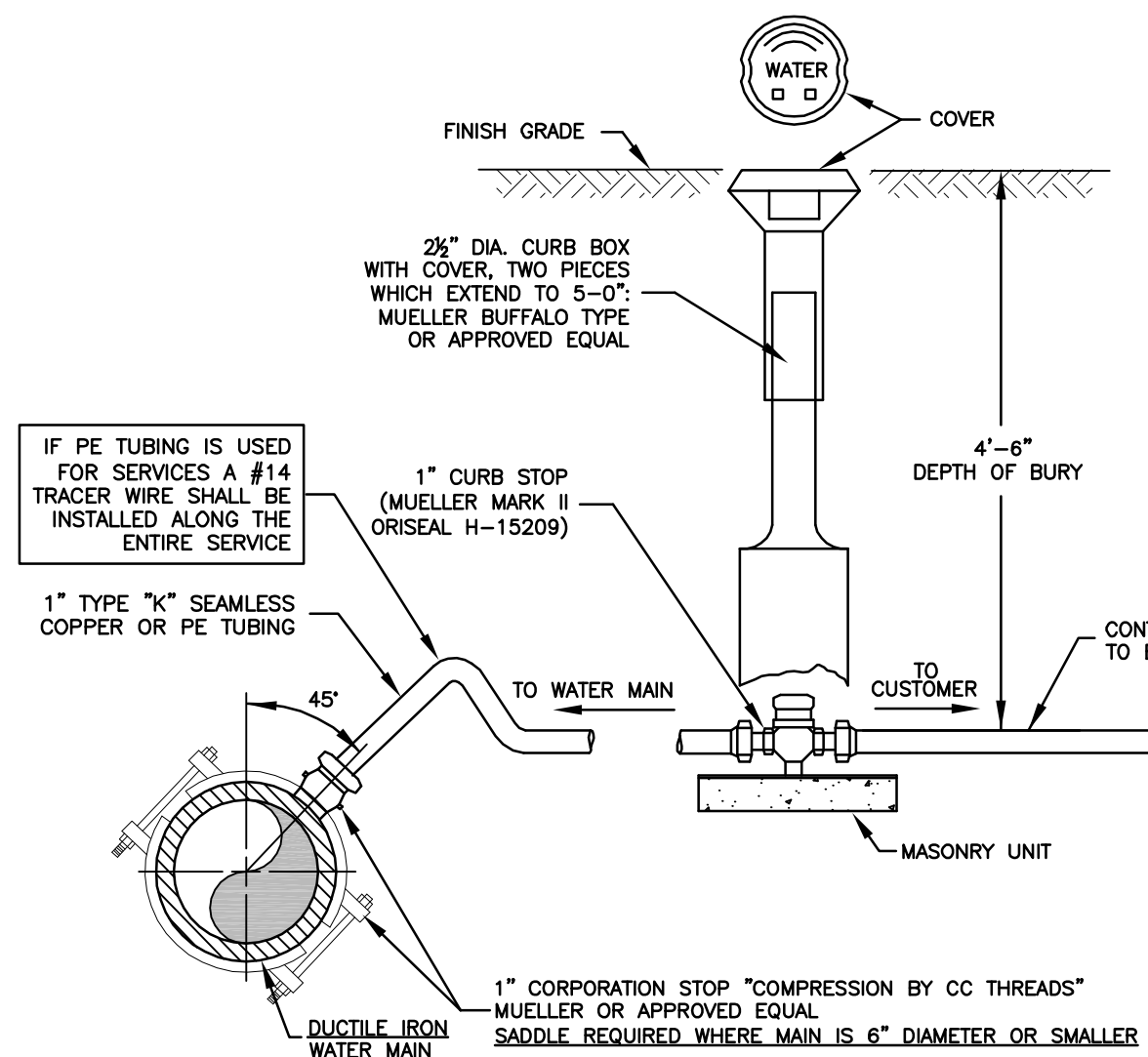
**TRENCH DETAIL: WATER MAIN & SERVICE**  
NOT TO SCALE



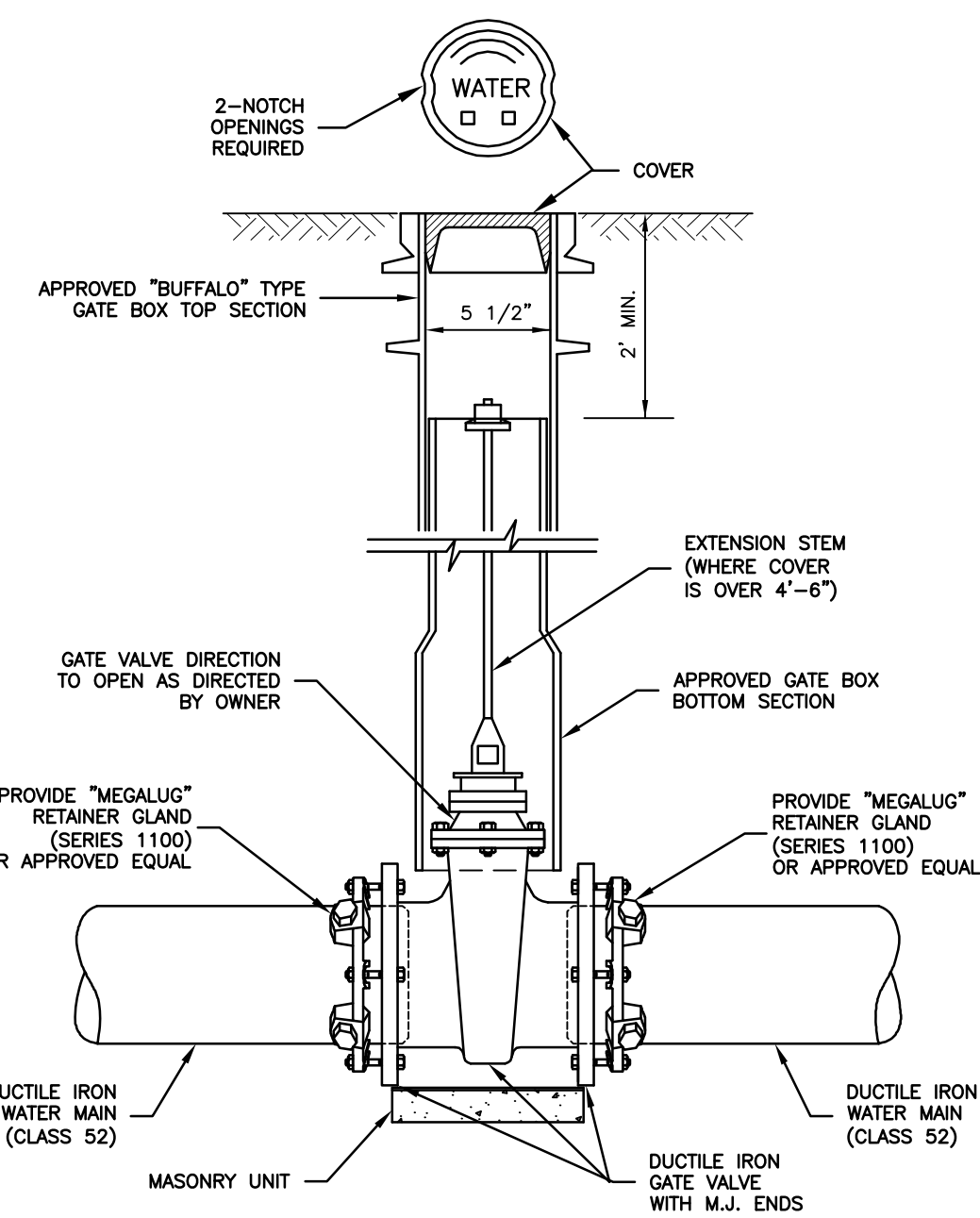
**FIRE HYDRANT ASSEMBLY DETAIL**  
NOT TO SCALE



**FLUSHING ASSEMBLY DETAIL**  
NOT TO SCALE



**WATER SERVICE CONNECTION DETAIL**  
NOT TO SCALE

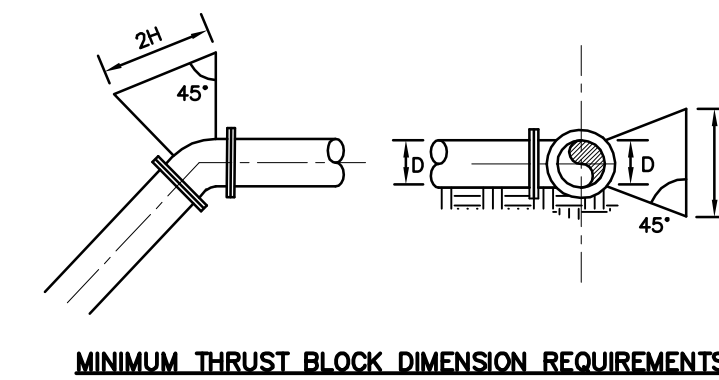


**12\"/> NOT TO SCALE**

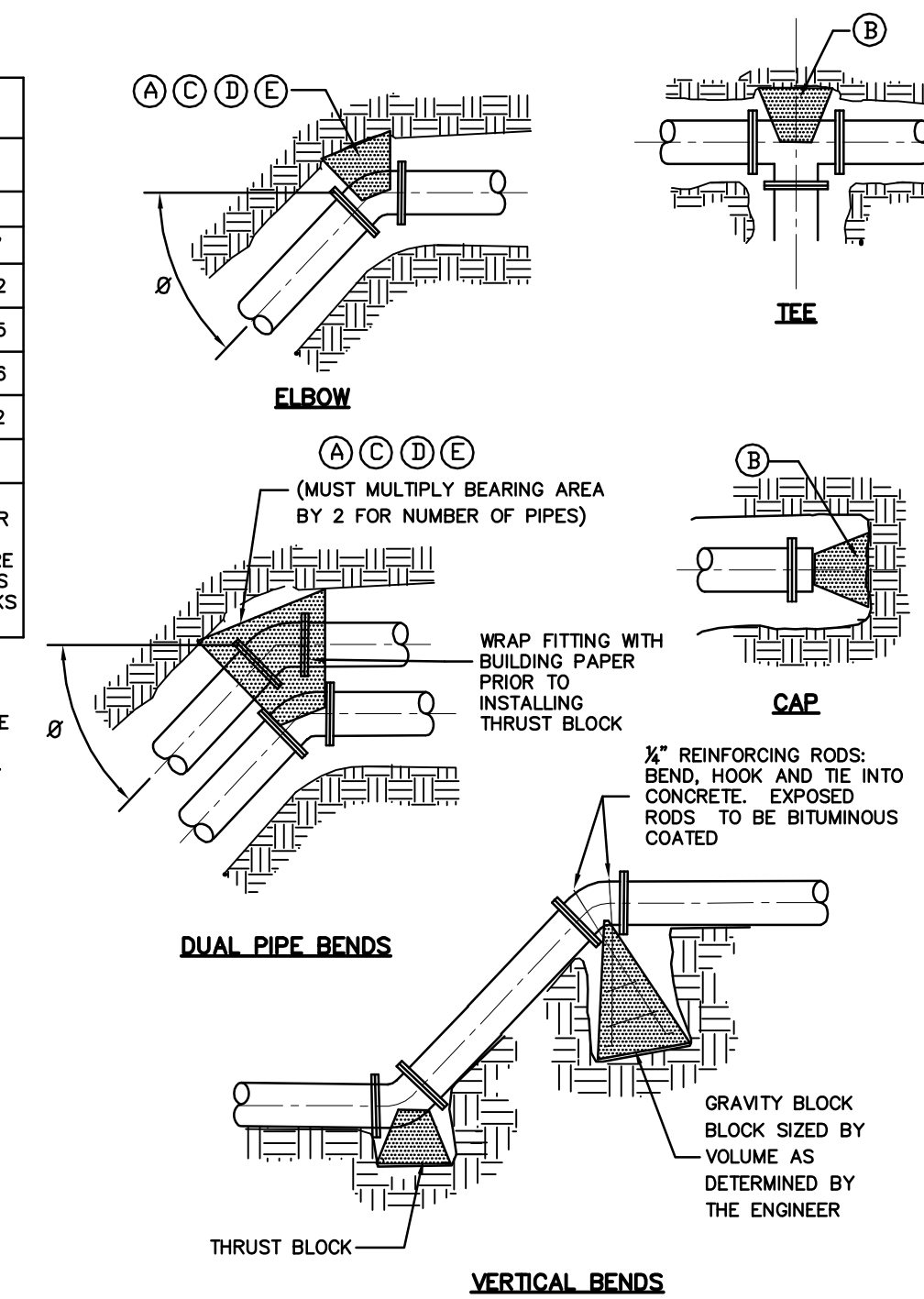
**SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL**  
(AREAS SHOWN ARE BASED ON 200 PSI TEST PRESSURE (SEE NOTE BELOW))

REACTION TYPE	PIPE SIZE							
	4"	6"	8"	10"	12"	16"	18"	24"
90° BEND	1.8	4.4	7.8	11.2	17.2	30.8	36.0	69.2
TEE OR CAP	1.4	3.2	5.6	8.4	12.2	21.8	27.8	49.5
45° BEND	1.0	2.4	4.2	6.0	9.4	16.6	19.4	37.6
22½° BEND	0.6	1.2	2.2	3.0	4.8	8.6	10.0	19.2
11¼° BEND	0.2	0.6	1.0	1.6	2.4	4.2	5.0	9.6

- NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
  2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
  3. PLACE BOARD IN FRONT OF ALL CAPS BEFORE POURING THRUST BLOCK.
  4. REQUIREMENTS OF THE ABOVE TABLE PRESUME MINIMUM SOIL BEARING OF ONE TON PER SQUARE FOOT, AND MAY BE VARIED BY THE ENGINEER TO MEET OTHER CONDITIONS ENCOUNTERED.
  5. TEST PRESSURE FOR WATER MAINS SHALL BE 200 PSI.



**MINIMUM THRUST BLOCK DIMENSION REQUIREMENTS**



**THRUST BLOCK DETAILS & DIMENSIONS**  
NOT TO SCALE

<p><b>CLA Engineers, Inc.</b> CIVIL · STRUCTURAL · SURVEYING</p> <p>317 Main Street Norwich, CT 06360 (860) 886-1966 Fax (860) 886-9165</p>			Project No. CLA-7283
			Proj. Engineer K.J.H.
<p>25 Colonial Drive Killingly, Connecticut 06241</p>			Date: 7/7/2023
<p><b>Site Improvement Plan</b> North Woods Village Planned Residential Development</p>			Sheet No. <b>16</b>
<p>Construction Details</p>			