

# APPLICATION FOR AQUATIC RESOURCE ALTERATION PERMIT

Pleasant Grove Farms - Utility Crossing Reach 3  
Pleasant Grove Rd, Westmoreland, TN 37186  
Sumner County



OWNER / DEVELOPER:

## 5D Land LLC

Jeremy Riggs Developer

880-B GreenLea Boulevard Gallatin TN 37066

615-961-2116 jrbuilders01@gmail.com

SOS NUMBER: 001186874

PREPARED BY:

## GreenLID Design

114 West Main Street, Suite B, Gallatin, TN 37066

TEL: 615.230.7269 | office@greenliddesign.com | greenliddesign.com



Date: 03/29/2023

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# ARAP COVER LETTER

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February 27, 2023

Tennessee Department of Environment and Conservation  
Attention: ARAP Processing  
Nashville Environment Assistance Center  
711 R.S. Gass Blvd.  
Nashville, Tennessee 37216

**Re: General ARAP Application  
Pleasant Grove Farms - Utility Crossing Reach 3  
Pleasant Grove Road  
Westmoreland, Sumner County, Tennessee 37186**

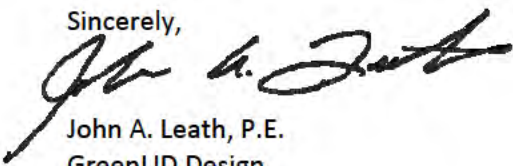
EFO:

We have submitted the Application for Aquatic Resource Alteration Permit for the above noted project. This will require open trenching and installation of two 8" gravity sewer mains, one 8" water main, and an 18" RCP culvert under a tributary to Little Trammel Creek. Little Trammel Creek is not considered exceptional or impaired.

The required fee of \$500.00 is attached.

If our office can be of further assistance to you on this project, please contact us at your convenience.

Sincerely,



John A. Leath, P.E.  
GreenLID Design

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# TDEC APPLICATION

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**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION**  
 Division of Water Resources  
 William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor,  
 Nashville, Tennessee, 37243  
 1-888-891-8332 (TDEC)

**Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Certification**

<b>OFFICIAL STATE USE ONLY</b>	Site #:	Permit #:
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**Section 1. Applicant Information** *(individual responsible for site, signs certification below)*

Applicant Name (company or individual): 5D Land LLC		SOS #: 001186874		Status:
Primary Contact/Signatory: Jeremy Riggs		Signatory's Title or Position: Developer		
Mailing Address: 880-B GreenLea Boulevard		City: Gallatin	State: TN	Zip: 37066
Phone: 615-961-2116	Fax:	E-mail: jrbuilders01@gmail.com		

**Section 2. Alternate Contact/Consultant Information** *(a consultant is not required)*

Alternate Contact Name: Andy Leath				
Company: GreenLID Design		Title or Position: Engineer		
Mailing Address: 114B West Main Street		City: Gallatin	State: TN	Zip: 37066
Phone: 615-230-7269	Fax:	E-mail: office@greenliddesign.com		

**Section 3. Fee** *(Application will be incomplete until fee is received)*

No Fee                       Fee Submitted with Application                      Amount Submitted: \$ 500.00

Current application fee schedules can be found at the Division of Water Resources webpage at:  
<https://www.tn.gov/environment/permit-permits/water-permits/1/aquatic-resource-alteration-permit--arap-.html>  
 or by calling (615) 532-0625. Please make checks payable to "Treasurer, State of Tennessee".

Billing Contact Name (if different from Applicant):      Name: Andy Leath                      Email: office@greenliddesign.com

Address: 114 West Main Street, Suite B, Gallatin, TN 37066                      Phone: 615-230-7269

**Section 4. Project Details** *(fill in information and check appropriate boxes)*

Site or Project Name: Pleasant Grove Farms - Utility Crossing Reach 3		Nearest City, Town or Major Landmark: Westmoreland, TN		
Street Address or Location (include Zip): Pleasant Grove Rd, Westmoreland, TN 37186				
County(ies): Sumner County		MS4 Jurisdiction: Sumner County	Latitude (dd.dddd): 36.5799	
			Longitude (dd.dddd): -86.2480	
Resource Proposed for Alteration: <input checked="" type="checkbox"/> Stream / River <input type="checkbox"/> Wetland <input type="checkbox"/> Reservoir				
Name of Water Resource (for more information, access <a href="http://tdeconline.tn.gov/dwr">http://tdeconline.tn.gov/dwr</a> ): Misc. Tributary Little Trammel Creek				
Brief Project Description (a more detailed description is required under Section 8): Project will consist of the installation of 2 new 8" sewer gravity mains, one 8" water main, and one 18" RCP across existing stream				
Does the proposed activity require approval from the U.S. Army Corps of Engineers, the Tennessee Valley Authority, or any other federal, state, or local government agency? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If Yes, provide the permit reference numbers:				
Is the proposed activity associated with a larger common plan of development: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
If Yes, submit site plans and identify the location and overall scope of the common plan of development.				
Plans attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
If applicable, indicate any other federal, state, or local permits that are associated with the overall project site (common plan of development) that have been obtained in the past (e.g., construction general permit and/or other ARAP):				

## Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

<b>Section 5. Project Schedule</b> <i>(fill in information and check appropriate boxes)</i>	
Proposed Start Date: March 2023	Estimated End Date: March 2024
Is any portion of the activity complete now? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
If yes, describe the extent of the completed portion:	

**The required information in Sections 6-11 must be submitted on a separate sheet(s) and submitted in the same numbered format as presented below. If any question is not applicable, state the reason why it is not applicable.**

Section 6. Description		Attached	
		Yes	No
6.1	A narrative description of the scope of the project	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.2	USGS topographic map indicating the exact location of the project <i>(can be a photographic copy)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.3	Photographs of the resource(s) proposed for alteration with location description <i>(photo locations should be noted on map)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.4	A narrative description of the <b>existing</b> stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.5	A narrative description of the <b>proposed</b> stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.6	In the case of wetlands, include a wetland delineation with delineation forms and site map denoting location of data points	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.7	A copy of all hydrologic or jurisdictional determination documents issued for water resources on the project site	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Section 7. Project Rationale	Attached	
	Yes	No
Descr be the need for the proposed activity, including, but not limited to, the purpose, alternatives considered, and what will be done to avoid or minimize impacts to water resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Section 8. Technical Information		Attached	
		Yes	No
8.1	Detailed plans, specifications, blueprints, or legible sketches of present site conditions and the proposed activity. Plans must be 8.5 x 11 inches. Additional larger plans may also be submitted to aid in application review. The detailed plans should be superimposed on existing and new conditions <i>(e.g., stream cross sections where road crossings are proposed)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.2	For both the proposed activity and compensatory mitigation, provide a discussion regarding the sequencing of events and construction methods	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.3	Depiction and narrative on the location and type of erosion prevention and sediment control (EPSC) measures for the proposed alterations	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>Section 9. Water Resources Degradation (degree of proposed impact)</b> <i>Note that in most cases, activities that exceed the scope of the General Permit limitations are considered greater than de minimis degradation to water quality.</i>	
Please provide your basis for concluding the proposed activity will cause one of the following levels of water quality degradation:	
a.	<input checked="" type="checkbox"/> De minimis degradation
b.	<input type="checkbox"/> Greater than de minimis degradation (if greater than de minimis complete Sections 10-11)
For information and guidance on the definition of de minimis and degradation, refer to the Antidegradation Statement in Chapter 0400-40-03-.06 of the Tennessee Water Quality Criteria Rule at: <a href="http://publications.tnsosfiles.com/rules/0400/0400-40/0400-40.htm">http://publications.tnsosfiles.com/rules/0400/0400-40/0400-40.htm</a>	
For information on specifics on what General Permits can cover, refer to the Natural Resources Unit webpage at: <a href="http://www.tn.gov/environment/permit-permits/water-permits/1/aquatic-resource-alteration-permit--arap-/permit-water-aquatic-resource-alteration-list-of-general-permits.html">http://www.tn.gov/environment/permit-permits/water-permits/1/aquatic-resource-alteration-permit--arap-/permit-water-aquatic-resource-alteration-list-of-general-permits.html</a>	

## Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

Section 10. Detailed Alternatives Analysis		Attached	
		Yes	No
10.1	Analyze all reasonable alternatives and describe the level of degradation caused by each of the feasible alternatives	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.2	Discuss the social and economic consequences of each alternative	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.3	Demonstrate that the degradation associated with the preferred alternative will not violate water quality criteria for uses designated in the receiving waters, and is necessary to accommodate important economic and social development in the area	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Section 11. Compensatory Mitigation		Attached	
		Yes	No
11.1	A detailed discussion of the proposed compensatory mitigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.2	Describe how the compensatory mitigation would result in no net loss of resource value	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.3	Provide a detailed monitoring plan for the compensatory mitigation site	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.4	Describe the long-term protection measures for the compensatory mitigation site (e.g., deed restrictions, conservation easement)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Certification and Signature			
<p>An application submitted by a corporation must be signed by a principal executive officer; from a partnership or proprietorship, by the partner or proprietor respectively; from a municipal, state, federal or other public agency or facility, the application must be signed by either a principal executive officer, ranking elected official, or other duly authorized employee.</p> <p><i>I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.</i></p>			
 Printed Name	 Official Title	 Signature	 Date

Submitting the form and obtaining more information. Note that this form must be signed by the principal executive officer, partner or proprietor, or a ranking elected official in the case of a municipality; for details see **Certification and Signature** statement above. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed ARAP Application form (keep a copy for your records) to the appropriate EFO for the county(ies) where the ARAP activity is located, addressed to **Attention: ARAP Processing**. You may also electronically submit the complete application and all associated attachments to [water.permits@tn.gov](mailto:water.permits@tn.gov).

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Pkwy., Ste. 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



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# ARAP NARRATIVE

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## **Section 6: Project Description**

### **6.1**

This project consists of the construction of 79 residential dwellings, one family detached, with all required appurtenances on 142.21 ± acres of land along Pleasant Grove Road in Westmoreland, TN. The ARAP is required for 4 utility crossings on the same reach.

### **6.2**

Provided as an attachment to this submittal.

### **6.3**

Provided as an attachment to this submittal.

### **6.4**

Little Trammel Creek has been assessed by TDEC's dataviewers online and is not impaired. At the proposed location of the sewer force main crossing, the stream was measured to be approximately 2 feet wide. A depth of 2 feet deep from the bottom of bank to the top of bank. Near the proposed stream crossing the tributary's bank is close to a 1:1 slope.

### **6.5**

There are a total of 4 utility crossings contained in this ARAP, all of them are to be installed with an open cut across the stream. The first crossing is for the installation of 60 LF of 8" PVC water main. There are two 60 LF 8" PVC sewer main crossings. And the final crossing is 60 LF of 18" RCP storm sewer culvert that eventually leads to a proposed detention pond. The overall characteristics of the stream shall not be altered during the installation of the 4 crossings.

### **6.6**

This area is not listed as a wetland.

### **6.7**

A hydrologic determination has been provided.

## **Section 7: Project Rationale**

### **7.0**

The purpose of this activity is to install an 8" water main and an 8" gravity sewer main, which crosses the stream twice, to allow utility services for single family lots. There is also a 18" RCP storm sewer culvert that crosses that connects to a proposed detention pond to control the outflow of storm runoff. The crossing are all to maintain a minimum of 3' of cover to prevent any obstruction to stream flow.

## **Section 8: Technical Information**

### **8.1**

An exhibit is attached to this package.

### **8.2**

The following is a sequence of events for the constructed stream crossing.

1. Excavate trench to install the utilities on the dry side of the stream.
2. Backfill trench.

3. Use a sandbag assembly to divert flow to the dry side.
4. Excavate trench to install sewer force main on the side that flow was diverted from
5. Backfill trench.
6. Install NAG SC250 or equivalent on 3:1 slopes or steeper on north and south channel/stream banks.
7. All work to be done within a 24-hour period.

### **8.3**

Erosion Prevention and Sediment Control measures are to include matting with permanent grass seed mix matting on the stream banks to allow for stabilization. Utilize Class C Rip Rap to stabilize slopes on any finished grades or stream banks that are steeper than or equal to 3:1 slope, and Filtrexx Silt Soxx to prevent soil eroding into the stream.

## **Section 9: Water Resources Degradation**

### **9.0**

Construction activities will not cause measurable degradation in water quality.

## **Section 10: Detailed Alternative Analysis**

### **10.0**

N/A

## **Section 11: Compensatory Mitigation**

### **11.0**

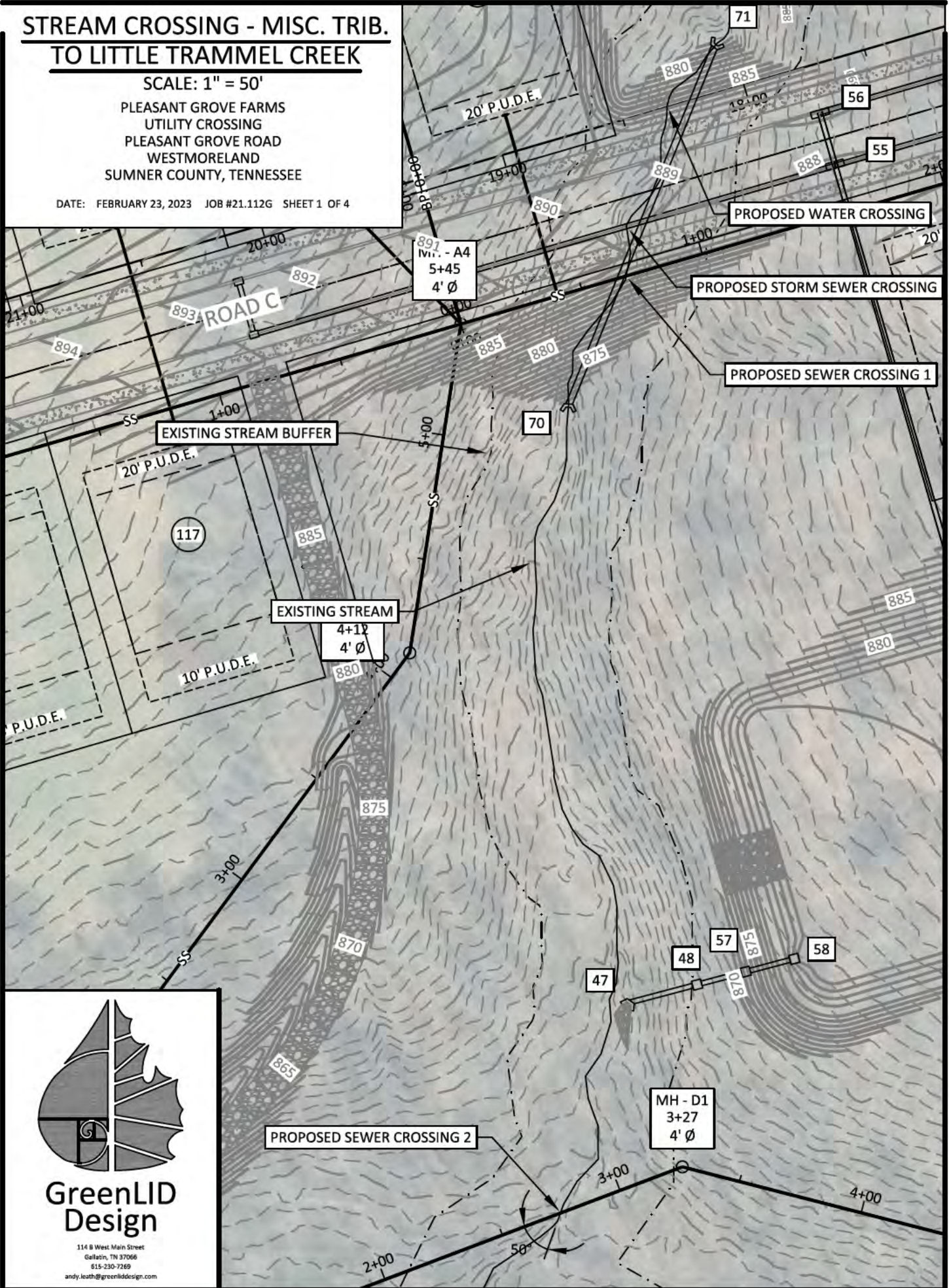
N/A

# STREAM CROSSING - MISC. TRIB. TO LITTLE TRAMMEL CREEK

SCALE: 1" = 50'

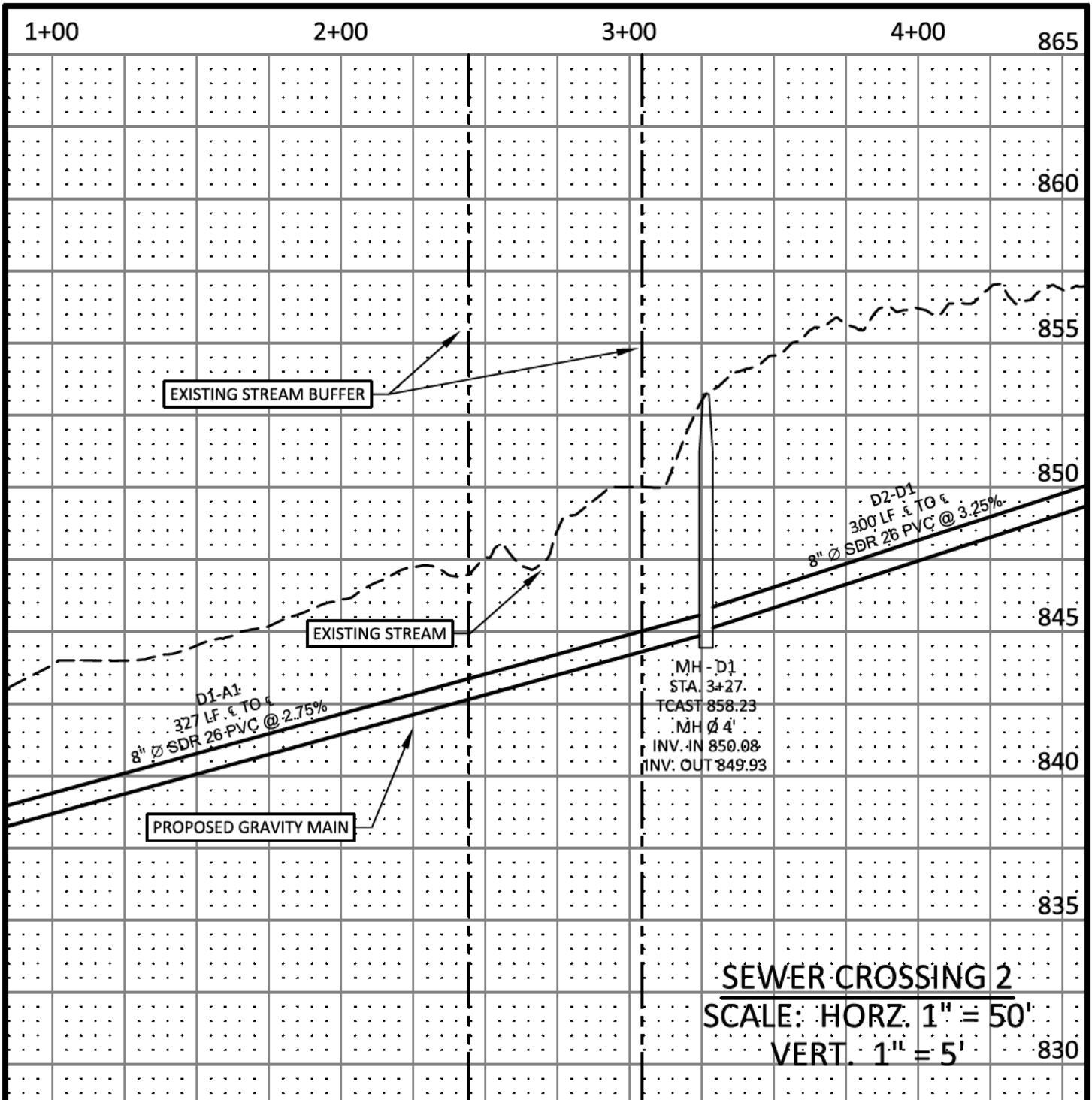
PLEASANT GROVE FARMS  
UTILITY CROSSING  
PLEASANT GROVE ROAD  
WESTMORELAND  
SUMNER COUNTY, TENNESSEE

DATE: FEBRUARY 23, 2023 JOB #21.112G SHEET 1 OF 4



**GreenLID  
Design**

114 B West Main Street  
Gallatin, TN 37066  
615-230-7269  
andy.leath@greenliddesign.com



**GreenLID  
Design**

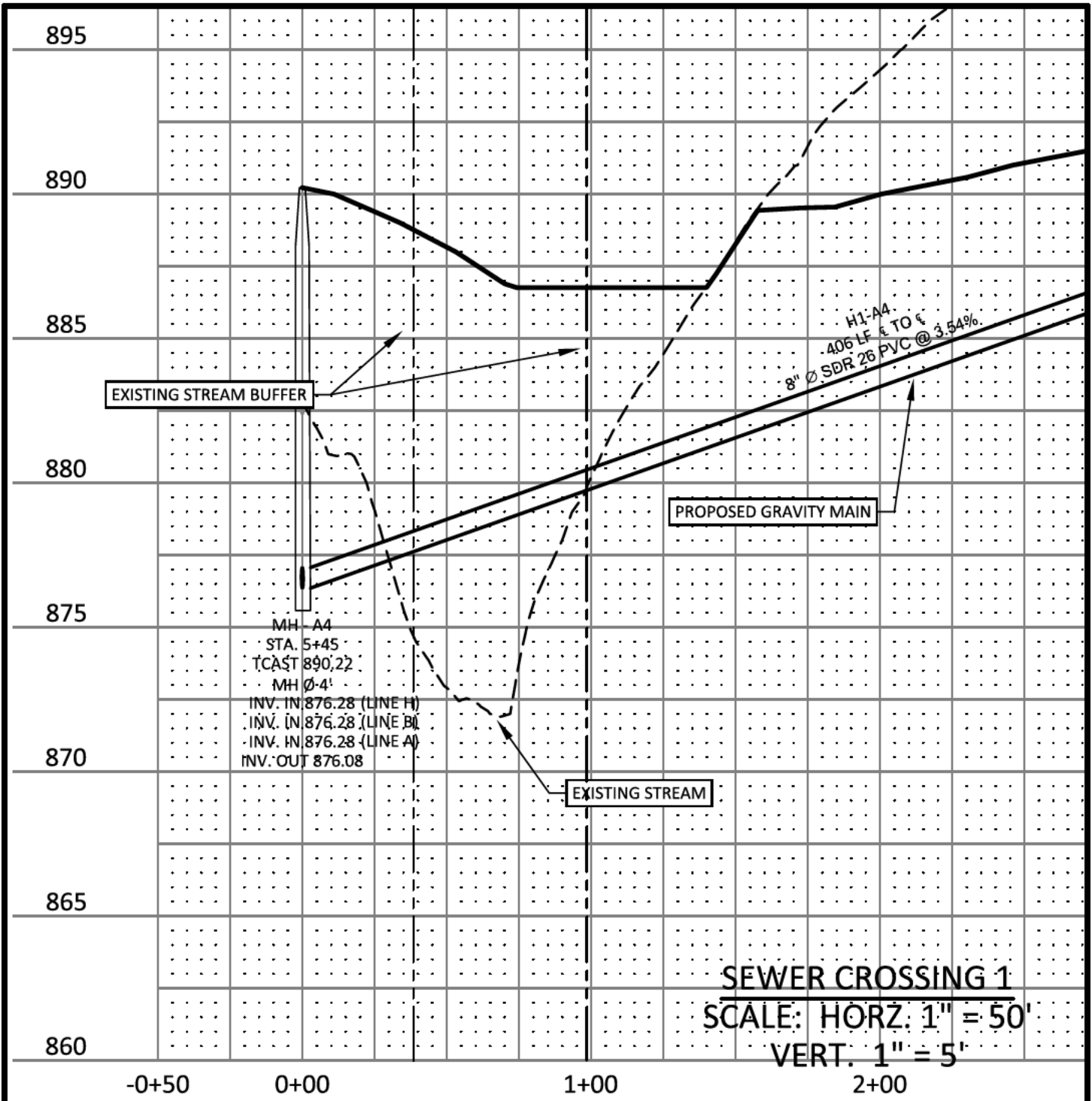
114 B West Main Street  
Gallatin, TN 37066  
615-230-7269  
andy.leath@greenliddesign.com

**STREAM CROSSING - MISC. TRIB. TO LITTLE TRAMMEL CREEK**

SCALE: HORZ. 1" = 50'  
VERT. 1" = 5'

PLEASANT GROVE FARMS  
UTILITY CROSSING  
PLEASANT GROVE ROAD  
WESTMORELAND  
SUMNER COUNTY, TENNESSEE

DATE: FEBRUARY 23, 2023    JOB #21.112G    SHEET 2 OF 4



**GreenLID  
Design**

114 B West Main Street  
Gallatin, TN 37066  
615-230-7269  
andy.leath@greenliddesign.com

**STREAM CROSSING - MISC. TRIB. TO LITTLE TRAMMEL CREEK**

SCALE: HORZ. 1" = 50'  
VERT. 1" = 5'

PLEASANT GROVE FARMS  
UTILITY CROSSING  
PLEASANT GROVE ROAD  
WESTMORELAND  
SUMNER COUNTY, TENNESSEE

DATE: FEBRUARY 23, 2023    JOB #21.112G    SHEET 3 OF 4

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# SITE LOCATION MAP

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**27 min (20.6 miles)**

via US-31E N

Fastest route, the usual traffic



**Gallatin**

Tennessee 37066

↑ Head east on W Main St toward Old State Hwy 109/N Water Ave

0.6 mi

↶ Turn left onto E Main St

1.6 mi

↷ Turn right onto US-31E N/E Broadway/Gallatin Pike/Scottsville Pike

📍 Continue to follow US-31E N

16.7 mi

↷ Turn right onto Pleasant Grove Rd

0.6 mi

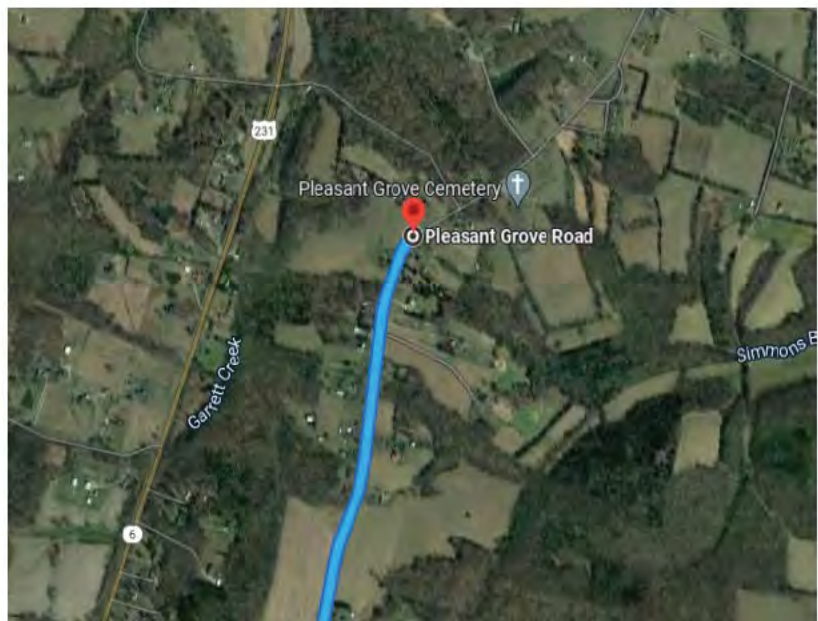
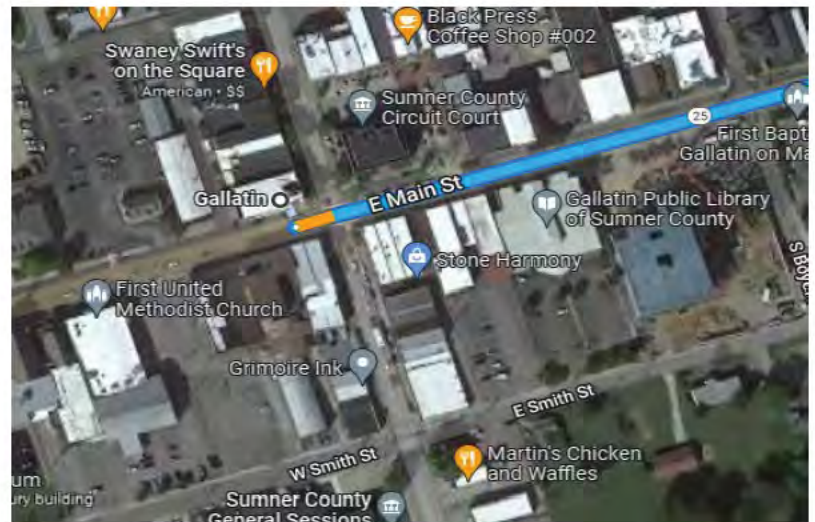
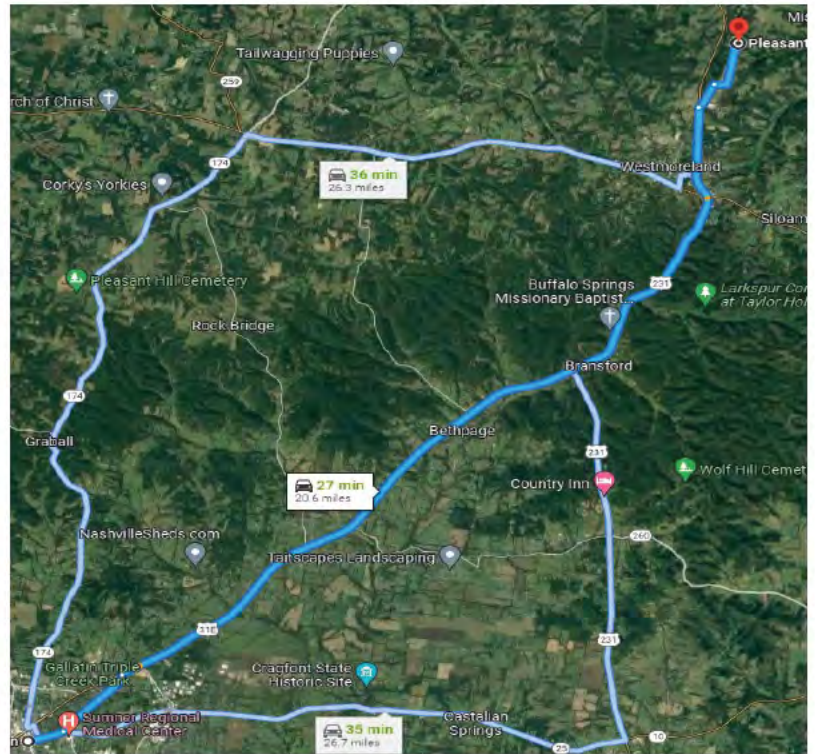
↷ Turn right to stay on Pleasant Grove Rd

1.1 mi

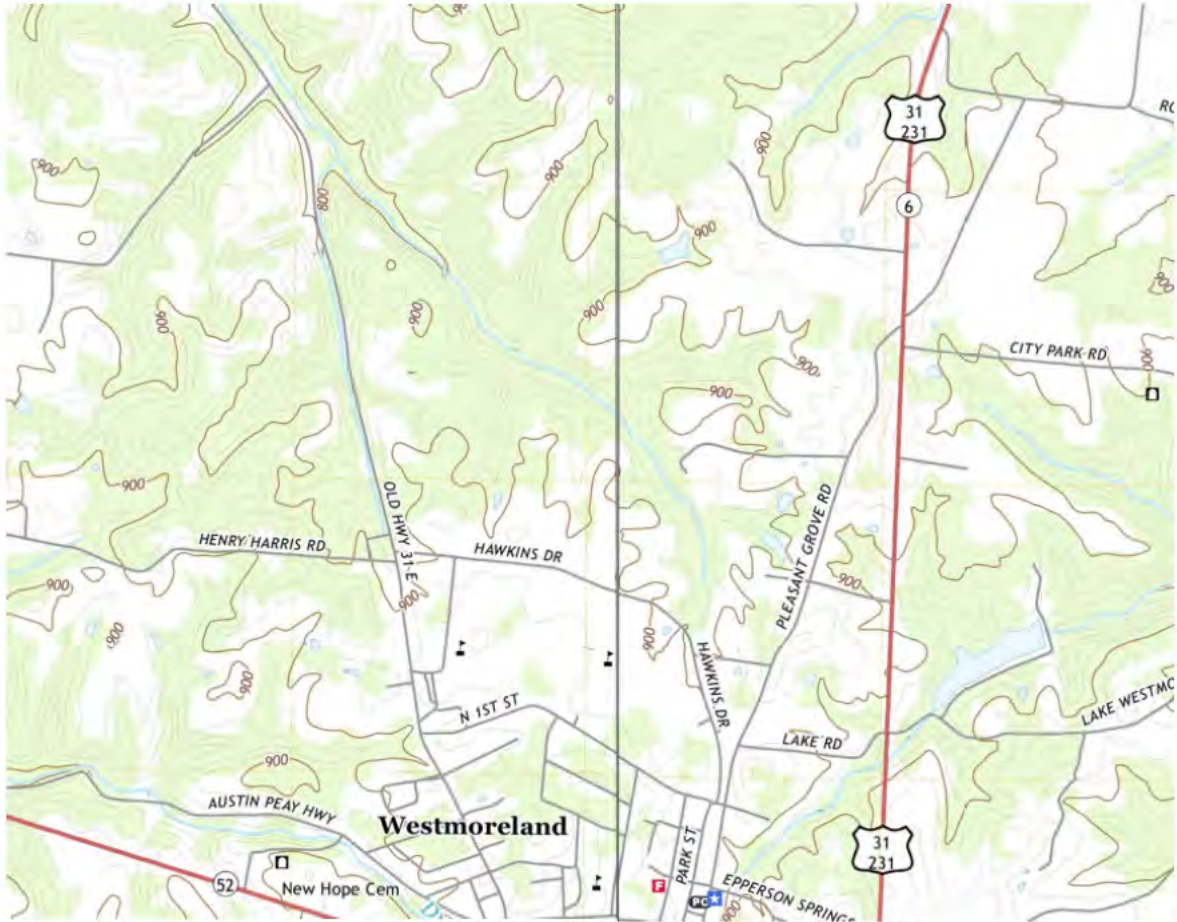
**Pleasant Grove Rd**

Tennessee 37186

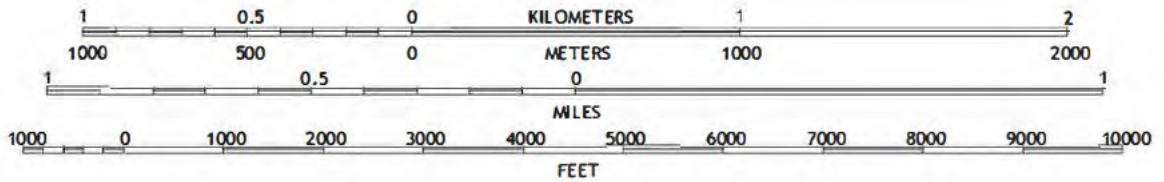
These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.



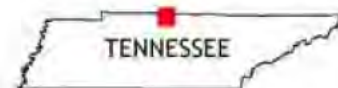
Pleasant Grove Rd • USGS MAP



SCALE 1:24 000



**TURNERS STATION, TN**  
2019





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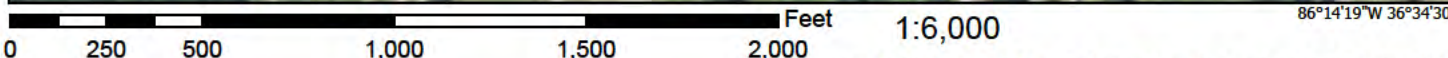
# FEMA MAP

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# National Flood Hazard Layer FIRMeTte



86°14'56"W 36°34'59"N



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

<p><b>SPECIAL FLOOD HAZARD AREAS</b></p>	<p> Without Base Flood Elevation (BFE) Zone A, V, A99</p> <p> With BFE or Depth Zone AE, AO, AH, VE, AR</p> <p> Regulatory Floodway</p>
<p><b>OTHER AREAS OF FLOOD HAZARD</b></p>	<p> 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X</p> <p> Future Conditions 1% Annual Chance Flood Hazard Zone X</p> <p> Area with Reduced Flood Risk due to Levee. See Notes. Zone X</p> <p> Area with Flood Risk due to Levee Zone D</p>
<p><b>OTHER AREAS</b></p>	<p> NO SCREEN Area of Minimal Flood Hazard Zone X</p> <p> Effective LOMRs</p> <p> Area of Undetermined Flood Hazard Zone D</p>
<p><b>GENERAL STRUCTURES</b></p>	<p> Channel, Culvert, or Storm Sewer</p> <p> Levee, Dike, or Floodwall</p>
<p><b>OTHER FEATURES</b></p>	<p> <b>20.2</b> Cross Sections with 1% Annual Chance <b>17.5</b> Water Surface Elevation</p> <p> Coastal Transect</p> <p> Base Flood Elevation Line (BFE)</p> <p> Limit of Study</p> <p> Jurisdiction Boundary</p> <p> Coastal Transect Baseline</p> <p> Profile Baseline</p> <p> Hydrographic Feature</p>
<p><b>MAP PANELS</b></p>	<p> Digital Data Available</p> <p> No Digital Data Available</p> <p> Unmapped</p>

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

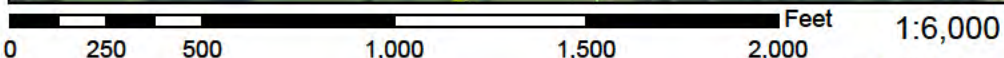
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **3/2/2022 at 4:21 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# National Flood Hazard Layer FIRMette



86°15'15"W 36°34'59"N



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



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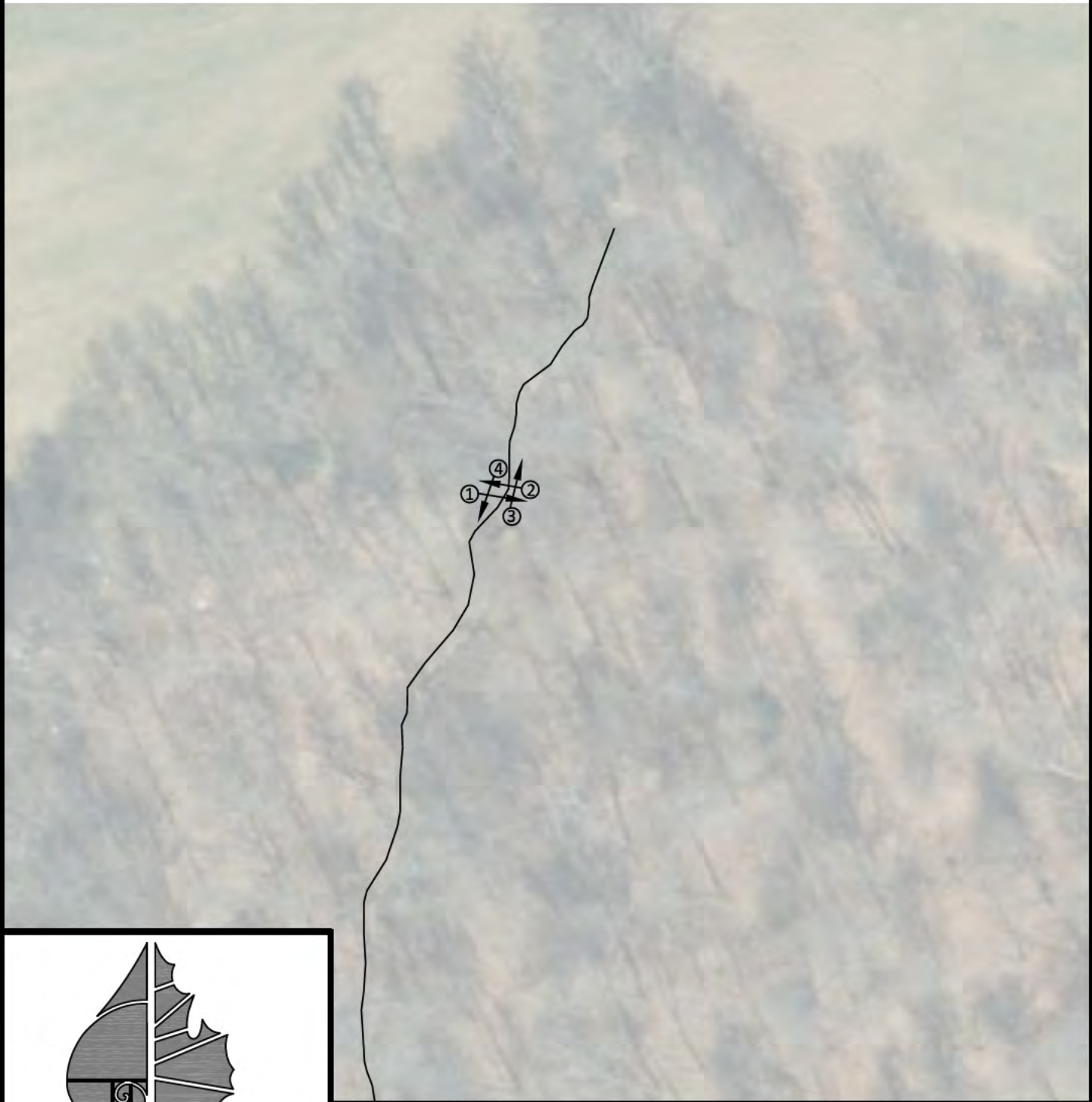
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# ARAP PHOTO JOURNAL

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# = PICTURE NUMBER  
AND APPROXIMATE  
LOCATION WHEN PICTURE  
WAS TAKEN, THE ARROW  
INDICATES THE DIRECTION  
THE CAMERA WAS AIMED.



**GreenLID  
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PLEASANT GROVE FARMS  
UTILITY CROSSING  
PLEASANT GROVE ROAD  
WESTMORELAND  
SUMNER COUNTY, TENNESSEE

DATE: FEBRUARY 23, 2023 JOB #21.112G SHEET 4 OF 4

## PHOTOGRAPHIC JOURNAL - PLEASANT GROVE FARMS



East across bank



West across bank

## PHOTOGRAPHIC JOURNAL - PLEASANT GROVE FARMS



Upstream



Downstream

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# SITE PLAN

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**GENERAL NOTES:**

- THIS CONSTRUCTION PROJECT SHALL AT ALL TIMES AND IN ALL SITUATIONS PROCEED IN A MANNER CONSISTENT WITH THE CITY OF WESTMORELAND SUBDIVISION REGULATIONS, AND ALL OTHER APPLICABLE RULES, REGULATIONS AND LAWS OF ANY OTHER AUTHORITY WITH JURISDICTION TO GOVERN SUCH CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR UNDERTAKING SUCH CONSTRUCTION ACTIVITIES TO INSURE FULL COMPLIANCE AT ALL TIMES.
- THE CONTRACTOR SHALL KEEP A COPY OF THE CURRENT CITY OF WESTMORELAND SUBDIVISION REGULATIONS (INCLUDING SPECIFICATIONS FOR PUBLIC WORKS PROJECTS) ON THE CONSTRUCTION PROJECT AT ALL TIMES, AND REFERENCE SHALL BE MADE TO THEM FOR PROPER MATERIALS, METHODS, ETC. REGARDING CONSTRUCTION IMPROVEMENTS.
- THE CONTRACTOR SHALL CHECK AND VERIFY ALL ELEVATIONS, DISTANCES, AND DIRECTIONS BEFORE STARTING WORK ON ANY SEGMENT OF THE PROJECT. IF THE CONTRACTOR HAS ANY QUESTIONS OR SUSPECTS THERE IS AN ERROR OR OMISSION WITHIN THE PLANS OR CONSTRUCTION STAKES, HE SHALL NOT PROCEED UNTIL THE ENGINEER OR HIS REPRESENTATIVE HAS BEEN FULLY NOTIFIED, HAS RESPONDED, AND HAS SPECIFICALLY STATED THE CONTRACTOR MAY PROCEED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SURVEYING REFERENCE POINTS, HUBS, AND LOT CORNERS DURING THE CONSTRUCTION PROCESS AND SHALL BEAR THE EXPENSE FOR REPLACING ANY SUCH OBJECTS DAMAGED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY NOTICES, OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES ASSOCIATED WITH SUCCESSFULLY COMPLETING THE CONSTRUCTION PROCESS, INCLUDING ALL PUBLIC INSPECTION FEES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THIS OR ADJACENT PROPERTY, AND FOR INJURY TO ANY PERSON OCCURRING DURING OR AS A RESULT OF THE CONSTRUCTION PROCESS, WHETHER SUCH DAMAGE OR INJURY RESULTS FROM ANY ACTION OR LACK OF ACTION BY PRINCIPALS OF THE COMPANY, EMPLOYEES, SUBCONTRACTORS, OR SUPPLIERS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY TEMPORARY SAFETY DEVICES AND FOLLOW ALL ADVISABLE SAFETY PRACTICES NECESSARY TO INSURE THE SAFETY OF ALL PERSONS DURING THE CONSTRUCTION PROCESS. NEITHER THE OWNER NOR THE ENGINEER ASSUME ANY LIABILITY FOR MATTERS RELATING TO SAFETY AT THE CONSTRUCTION SITE.
- ANY DAMAGE TO IMPROVEMENTS PRIOR TO FINAL PROJECT ACCEPTANCE BY THE CITY OF WESTMORELAND OR THE OWNER SHALL BE REPAIRED OR REPLACED AS NECESSARY TO MEET CURRENT SPECIFICATIONS. ALL EXPENSES ASSOCIATED WITH SUCH REPAIR OR REPLACEMENT SHALL BE PAID BY THE APPROPRIATE CONTRACTOR.
- LOCATION OF EXISTING UTILITIES INDICATED ON THESE PLANS MUST BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION IN THE VICINITY OF ANY SUCH UTILITIES. THE CONTRACTOR IS FURTHER RESPONSIBLE FOR LOCATING ALL UTILITIES THAT MAY BE IN EXISTENCE ON THE PROJECT SITE BUT WHICH ARE UNKNOWN TO THE ENGINEER. ALL UTILITY LOCATION ACTIVITIES SHALL BE AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND REPLACEMENT (AS DIRECTED) TO ANY UTILITIES DAMAGED DURING CONSTRUCTION. BEFORE ANY EXCAVATION HAS BEGUN ON THIS SITE CALL 1-800-351-1111 FOR UNDERGROUND UTILITY LOCATIONS.
- EROSION CONTROL SHALL BE MAINTAINED THROUGHOUT THE PROJECT IN ACCORDANCE WITH THE TENNESSEE GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES STORM WATER DISCHARGE. INSPECTION AND MAINTENANCE SHALL BE PERFORMED BY THE CONTRACTOR ON A REGULAR BASIS IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN.
- BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY RICHARD D. GRAVES LAND SURVEYING.
- A TITLE SEARCH NOR TITLE POLICY WAS PROVIDED. THEREFORE, THIS SURVEY IS SUBJECTED TO THE FINDINGS OF AN ACCURATE TITLE SEARCH. ONLY DOCUMENTS NOTED HEREON WERE SUPPLIED TO THIS SURVEYOR. THERE MAY EXIST OTHER DOCUMENTS THAT WOULD AFFECT THE SUBJECT PROPERTY. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH.
- ELEVATIONS AND CONTOURS WERE DERIVED USING DIGITAL TERRAIN MODELING. CONTOUR INTERVALS ARE ONE (1) FOOT.
- BEARINGS SHOWN ARE BASED ON TENNESSEE STATE PLAN COORDINATE SYSTEM (NAD 1983).
- A REVIEW OF THE F.E.M.A. FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 47155C02006 & 47155C02256, EFFECTIVE DATE APRIL 17, 2012, SHOWS THIS PROPERTY NOT TO BE IN ZONE X AND NOT A SPECIAL FLOOD HAZARD AREA.
- SUBSURFACE AND/OR ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SITE PLAN.
- ALL BUILDINGS, SURFACE IMPROVEMENTS, AND SUBSURFACE IMPROVEMENTS ON AND ADJACENT TO THIS SITE ARE NOT NECESSARILY SHOWN HEREON.
- NO GEOTECHNICAL ENGINEERING REPORT WAS PROVIDED FOR THE PREPARATION OF THIS SITE PLAN.
- PERFORMANCE STANDARD COMPLIANCE  
ALL CONSTRUCTION AND USE OF THE PROPOSED FACILITY TO MEET THE APPLICABLE PERFORMANCE STANDARDS AS SET FORTH IN THE CITY OF WESTMORELAND ZONING ORDINANCE, SECTION 13.02.
- ADDITIONAL DESIGN STANDARDS  
THIS DEVELOPMENT SHALL BE DESIGNED AND DEVELOPED TO COMPLY WITH THE STANDARDS OF THE CITY OF WESTMORELAND ZONING ORDINANCE.
- INDUSTRIAL PRETREATMENT  
THE PROPOSED PROJECT SHALL COMPLY WITH ALL APPLICABLE CROSS-CONNECTION CONTROL AND SEWER USE REGULATIONS.
- SIGNAGE  
NO SIGNAGE IS BEING PROPOSED AT THIS TIME. SIGNAGE WILL BE PROPOSED AT A LATER DATE WITH FMPD AND A SIGNAGE PLAN MUST BE SUBMITTED, REVIEWED, AND APPROVED PRIOR TO INSTALLATION.
- WASTE COLLECTION  
THIS DEVELOPMENT WILL UTILIZE THE CITY OF WESTMORELAND TRASH WASTE DISPOSAL SERVICE.
- PHOTOMETRIC PLAN  
OUTDOOR LIGHTING SHALL COMPLY WITH THE CITY OF WESTMORELAND ZONING ORDINANCE.
- ARCHITECTURE

**PAVING AND DRAINAGE NOTES:**

- DRAINAGE SYSTEM RIP-RAP SHALL BE PLACED IN SUCH A MANNER AS TO ACHIEVE MAXIMUM INTERLOCKING TIGHTNESS.
- DURING CONSTRUCTION EXPOSE THE MINIMUM AREA OF SOIL FOR THE MINIMUM TIME POSSIBLE. CONTROL DUST BY WATERING OR OTHER METHOD APPROVED BY THE CITY OF WESTMORELAND.
- EROSION SHALL BE CONTROLLED IN ACCORDANCE WITH THE GENERAL NPDES PERMIT FOR DISCHARGES OF STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (PERMIT NO. TNR100000). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL EROSION FROM STORM WATER RUNOFF.
- ALL STUMPS, LARGE ROCK, CONCRETE, SCRAP MATERIALS, TRASH AND OTHER DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
- COMPACTION REQUIREMENTS FOR ROADWAYS AND PAVEMENT - ALL FILL MATERIAL TO BE PLACED EVENLY AND IN A UNIFORM MANNER AT A MAXIMUM OF 8" LIFTS AND COMPACTED TO 95% STD PROCTOR ON ALL LIFTS. MOISTURE TO BE WITHIN 2% OF OPTIMUM DURING COMPACTION.  
COMPACTION REQUIREMENTS FOR BUILDING PADS - ALL FILL MATERIAL TO BE PLACED EVENLY AND IN A UNIFORM MANNER AT A MAXIMUM OF 8" LIFTS AND COMPACTED WITH SHEEPS-FOOT VIBRATORY COMPACTOR TO 98% STD PROCTOR ON ALL LIFTS. MOISTURE TO BE WITHIN 2% OF OPTIMUM DURING COMPACTION.
- PROJECT BENCHMARK, AS SHOWN ON PLANS
- ALL DRAINAGE PIPE BELOW ROADWAYS TO BE:  
CLASS III RCP ( REINFORCED CONCRETE PIPE ) WITH CLASS "B" BEDDING ( COMPACTED PUG TO SPRINGLINE ). TRENCH FILL TO BE PUG.  
DRAINAGE PIPE BELOW PAVE AREAS TO BE:  
( 1 ) CLASS III RCP ( REINFORCED CONCRETE PIPE ) WITH CLASS "B" BEDDING ( COMPACTED PUG TO SPRINGLINE ), TRENCH FILL TO BE PUG.  
( 2 ) CMP ( CORRUGATED METAL PIPE ) WITH CLASS "B" BEDDING ( COMPACTED PUG TO SPRINGLINE ). TRENCH FILL TO BE PUG.  
DRAINAGE PIPE OUTSIDE OF ROADWAY TO BE:  
( 1 ) CLASS I OR CLASS III RCP WITH CLASS "B" BEDDING ( COMPACTED PUG TO SPRINGLINE ). TRENCH FILL TO BE NATIVE SOIL COMPACTED.  
( 2 ) OR HDPE ( SMOOTH INSIDE BORE ) WITH 6" STONE BEDDING AND BACKFILLED TO THE SPRINGLINE WITH PUG IN 4" LIFTS COMPACTED TO 95% STD PROCTOR. PUG THEN TO BE PLACED IN 6" LAYERS AND LIGHTLY TAMPED TO 12" ABOVE THE TOP OF THE PIPE CORRUGATION. REMAINDER OR BACKFILL TO BE NATIVE SOIL COMPACTED.  
( 3 ) CMP WITH CLASS "B" BEDDING ( COMPACTED PUG TO SPRINGLINE ). TRENCH FILL TO BE PUG TO ONE FOOT ABOVE PIPE THE REMAINDER TO BE NATIVE SOIL COMPACTED.
- ALL DITCHES TO RECEIVE COVER TREATMENT AS SHOWN ON PLANS.
- THE PAVING TRANSITION AT EXISTING STREETS SHALL BE SMOOTH IN BOTH HORIZONTAL AND VERTICAL ALIGNMENT. FIELD ADJUST AS NECESSARY.
- CONTRACTOR SHALL SUBMIT A TDEC NOC AND OBTAIN A LAND DISTURBANCE PERMIT FROM THE CITY OF WESTMORELAND ENGINEERING DIVISION PRIOR TO GRADING.
- REFER TO "GENERAL NOTES" FOR ADDITIONAL INFORMATION RELATING TO THIS CONSTRUCTION PROJECT.

**UTILITY NOTES**

- ALL WATER MAINS SHALL BE CLASS 200, SDR-21, PVC PIPE OR CLASS 350 DUCTILE IRON PIPE. ALL WATERLINE FITTINGS ARE MECHANICAL JOINT UNLESS NOTED OTHERWISE. MECHANICAL JOINT RESTRAINTS, MEGALUG OR EQUAL, SHALL BE REQUIRED WITH ALL MECHANICAL JOINT FITTINGS.
- ALL WATER MAINS UNDER PROPOSED AND/OR FUTURE ROADS SHALL BE CL 350 DUCTILE IRON.
- ALL SANITARY SEWER MAINS SHALL BE SDR-26 PVC OR CLASS 350 DUCTILE IRON PIPE. ALL SEWER SERVICE LINES TO BE 6" DIAMETER, CONNECTING TO THE MAINS WITH A "T-WYE".
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSPECTIONS BY THE CITY OF WESTMORELAND AND ALL OTHER AUTHORITIES INVOLVED WITH UTILITY CONSTRUCTION INSPECTION.
- WHETHER OR NOT INDICATED ON THE PLANS, THE CONTRACTOR SHALL UNCOVER ALL EXISTING BURIED UTILITIES (TO VERIFY CLEARANCE AND AVOID DAMAGE) PRIOR TO PROCEEDING. ALL CONFLICTS SHALL BE REPORTED TO THE ENGINEER AS DESCRIBED IN THE GENERAL NOTES.
- MAINTAIN 30" MINIMUM COVER ON ALL WATER MAINS AND 36" COVER OVER ALL SEWER MAINS (OVER HUB MEASUREMENTS)
- CONTRACTOR TO SEED AND MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH EROSION PREVENTION AND SEDIMENT CONTROL PLANS.
- ELEVATIONS SHOWN FOR TOP-OF-MANHOLE SHALL BE FIELD ADJUSTED AS REQUIRED TO PROVIDE THE BEST ELEVATION. PLAN ELEVATIONS ARE IN UNITS OF FEET.
- ENGINEER SHALL SUBMIT THE CONSTRUCTION START NOTIFICATION FORM TO THE CITY OF WESTMORELAND & TDEC PRIOR TO ANY INSTALLATION OF THE WATER AND SEWER MAINS.
- CONTRACTOR TO ADJUST EXISTING MANHOLE CASTINGS AND WATER VALVES TO FINISH ELEVATIONS.
- A ROW EXCAVATION PERMIT WILL BE REQUIRED FROM THE CITY OF WESTMORELAND FOR ALL WORK DONE IN THE RIGHT OF WAY OF THE CITY OF WESTMORELAND.
- NO WORK SHALL BEGIN ON THE STATE RIGHT-OF-WAY UNTIL ALL REQUIRED TDOT PERMITS ARE OBTAINED.
- VALVES, HYDRANTS, AND FITTINGS ARE NOT SHOWN TO SCALE FOR CLARITY. ALL WORK SHALL BE PERFORMED WITHIN EXISTING EASEMENTS AND RIGHT-OF-WAYS.
- IT SHALL BE THE DEVELOPER'S RESPONSIBILITY TO OBTAIN ALL EASEMENTS AND PROPERTY REQUIRED FOR CONSTRUCTION ON BEHALF OF THE CITY OF WESTMORELAND.

**STATEMENT OF FINANCIAL RESPONSIBILITY:**

THE DEVELOPER, JAMES & TERESA ROARK, WILL BE FINANCIALLY RESPONSIBLE FOR THE DEVELOPMENT OF THIS PROJECT.

**OWNERSHIP AND MAINTENANCE PROVISIONS:**

JAMES & TERESA ROARK WILL PROVIDE MAINTENANCE OF SAID PROJECT INFRASTRUCTURE UNTIL COMPLETED. AT THAT TIME AND WITH THE ACCEPTANCE OF THE PROJECT BY THE OWNER, MAINTENANCE WILL TRANSFER PERPETUALLY TO THE OWNERS.

**PROJECT DESCRIPTION:**

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF PHASE 2 OR PLEASANT GROVE FARMS CONSISTING OF 71 RESIDENTIAL DWELLINGS, ONE FAMILY DETACHED, WITH ALL REQUIRED APPURTENANCES ON 142.21 ± ACRES OF LAND.

**SIGNAGE:**

- ALL SIGNAGE AND PAVEMENT MARKERS TO BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES ( CURRENT ED ).
- CONTRACTOR SHALL COORDINATE WITH CITY OF WESTMORELAND ENGINEERING DIVISION AND DEPARTMENT OF BENCHWORKS FOR SIGN INSTALLATION.

**STREET SIGNAGE**

STOP SIGN = R-1-1  
NO OUTLET = W-14-2  
STREET SIGNAGE = PER CITY OF WESTMORELAND PUBLIC WORKS, MOUNTED ON STOP SIGNS

**ESTIMATED CONSTRUCTION SCHEDULE:**

BEGIN: JUNE 2023  
END: JUNE 2024

**TRAFFIC VOLUME ESTIMATE:**

USE AS SINGLE FAMILY 10 TRIPS / RESIDENCE  
10 TRIPS / RESIDENCE = 10 X 71 = 710 TRIPS  
LANE WIDTH - 11'  
OFF STREET PARKING 2 SP / DWELLING

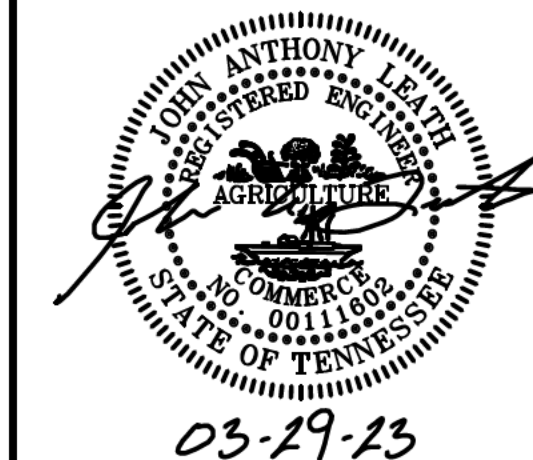
SITE DATA TABLE	
OWNER/DEVELOPER	JAMES & TERESA ROARK 1213 HANESTOWN ROAD LAFAYETTE, TN 37083
SITE LOCATION	PLEASANT GROVE ROAD
TAX MAP	028
PARCEL	P/O 047.00, 047.04, 048.00; RB 4285, PG 358, R.O.S.C. TN
ACREAGE	142.21 ±
ZONE	LOW DENSITY RESIDENTIAL
EXISTING USE	AGRICULTURE - VACANT
PROPOSED USE	RESIDENTIAL DWELLING, SINGLE-FAMILY ATTACHED & DETACHED, APARTMENTS

R1 BULK AND AREA REGULATIONS (RESIDENTIAL)			
	ORDINANCE	PROVIDED	
MINIMUM LOT SIZE	10,000 SF	10,000 SF	
DENSITY PERMITTED	DETERMINED BY MINIMUM LOT SIZE		
MINIMUM LOT WIDTH	80 FEET	80 FEET	
MINIMUM REQUIRED BUILDING SETBACK:			
FRONT YARD	30 FEET	30 FEET	
SIDE YARD	10 FEET	10 FEET	
REAR YARD	30 FEET	30 FEET	
MAXIMUM LOT COVERAGE	35%	<35%	
MAXIMUM BUILDING HEIGHT	35 FEET	<35 FEET	

STREET	MANHOLE		CASTING ELEVATIONS		LENGTH FT	UNITS SERVED	TOTAL UNITS SERVED	AVG. FLOW GPD	AVG. FLOW CFS	MAX FLOW CFS	PIPE DIAM. IN	INVERT ELEVATIONS		SEWER GRADE %	SEWER FALL FT	FULL FLOW VELOCITY FPS	FULL FLOW CAPACITY CFS	ACTUAL DEPTH IN	
	FROM	TO	UPPER MH	LOWER MH								UPPER MH	LOWER MH						
	Road C	D15	D14	941.88								922.84	300						0
Road C	D14	D13	922.84	919.94	300	2	2	200	0.000	0.002	8	915.80	913.55	0.75	2.25	3.58	1.22	0.25	
Road C	D13	D12	919.94	917.33	233	6	8	800	0.002	0.007	8	913.35	911.60	0.75	1.75	3.59	1.22	0.50	
Road C	D12	D11	917.33	914.09	233	5	13	1300	0.003	0.011	8	911.40	907.91	1.50	3.49	5.07	1.73	0.54	
Road C	D11	D10	914.09	910.09	177	3	16	1600	0.003	0.014	8	907.71	905.49	1.25	2.22	4.63	1.58	0.60	
Road C	D10	D9	910.09	904.19	125	1	17	1700	0.004	0.015	8	905.29	898.44	5.50	6.85	9.70	3.31	0.49	
Road C	D9	D8	904.19	897.65	169	0	17	1700	0.004	0.015	8	898.24	890.20	4.75	8.04	9.01	3.07	0.49	
Road C	D8	D7	897.65	884.96	170	0	17	1700	0.004	0.015	8	890.00	877.30	7.47	12.70	11.31	3.85	0.48	
Road C	D7	D6	884.96	881.12	238	0	17	1700	0.004	0.015	8	877.10	874.12	1.25	2.98	4.63	1.58	0.60	
Road C	D6	D5	881.12	878.62	111	0	17	1700	0.004	0.015	8	873.92	871.70	2.00	2.22	5.85	1.99	0.60	
Road C	D5	D4	878.62	876.41	234	0	32	3200	0.007	0.028	8	871.50	866.61	2.09	4.89	5.98	2.04	0.74	
Road C	D4	D3	876.41	865.64	230	0	32	3200	0.007	0.028	8	866.41	861.23	2.25	5.18	6.21	2.12	0.72	
Road C	D3	D2	865.64	866.02	200	0	32	3200	0.007	0.028	8	861.04	860.03	0.50	1.01	2.94	1.00	1.02	
Road C	D2	D1	910.21	858.23	300	0	41	4100	0.008	0.035	8	859.83	849.16	3.56	10.67	7.81	2.66	0.36	
Road C	D1	A1	858.23	846.45	327	0	41	4100	0.008	0.035	8	848.96	842.43	2.00	6.53	5.85	1.99	0.48	
Road C	E3	E2	908.02	898.80	231	7	7	700	0.001	0.006	8	903.75	892.19	5.00	11.56	9.25	3.15	0.36	
Road C	E2	E1	898.80	899.25	300	0	15	1500	0.003	0.013	8	891.99	882.69	3.10	9.30	7.28	2.48	0.48	
Road C	E1	D5	899.25	878.62	144	0	15	1500	0.003	0.013	8	882.49	871.70	7.49	10.79	11.32	3.86	0.48	
Road C	F1	E2	900.22	898.80	264	8	8	800	0.002	0.007	8	895.48	892.19	1.25	3.29	4.62	1.57	0.60	
Road C	G2	G1	899.90	884.98	293	9	9	900	0.002	0.008	8	893.06	871.10	7.50	21.96	11.33	3.86	0.60	
Road C	G1	D2	884.98	866.02	145	1	10	1000	0.002	0.009	8	870.90	860.03	7.50	10.87	11.33	3.86	0.60	
Road C	H1	A4	899.17	890.22	406	9	9	900	0.002	0.008	8	890.65	876.28	3.54	14.37	7.78	2.65	0.60	

TOTAL EQUIVALENT UNIT CALCULATIONS BELOW AS USED IN CHART ABOVE  
 FLOW PARAMETERS \* MANNING n = 0.012  
 \* MINIMUM PIPE SIZE = 8"  
 \* RESIDENTIAL USE : 100 GPCD  
 \* SINGLE FAMILY UNITS = 3.5 PEOPLE / FAMILY UNIT  
 \* AVERAGE FLOW PER UNIT = (100 GPCD x 3.5 PEOPLE) = 350 GPD  
 \* RESIDENTIAL LOTS = 51  
 \* P=(POPULATION IN THOUSANDS) = 0.1785  
 \* FS = (18 + P\*(1/2)) / (4 + P\*(1/2)) = 4.17  
 \* TOTAL AVERAGE FLOW (350 GPD X 74 LOTS) = 17,850 GPD  
 \* TOTAL PEAK FLOW = (TOTAL AVERAGE FLOW x FS) = 74356.6 GPD = 0.153 CFS  
 NOTES:  
 \* DESIGN CHARTS: MANNING AND HYDRAULIC ELEMENTS  
 \* DESIGN IS BASED ON AN 18 HR DAY

**GreenLID Design**  
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 615-230-7269  
 andy.leath@greendesign.com



PLEASANT GROVE FARMS, PHASE 2  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

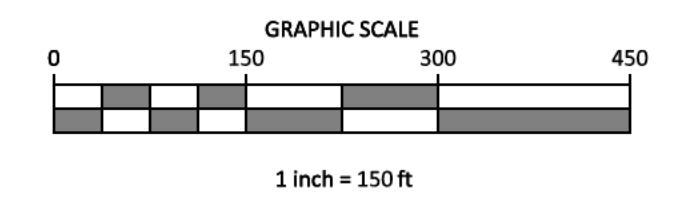
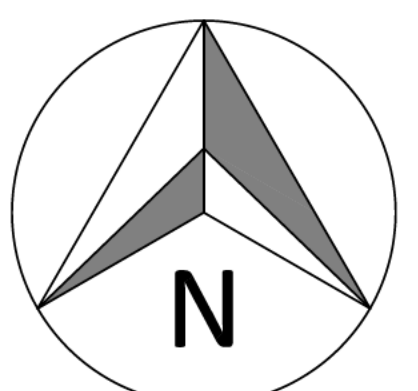
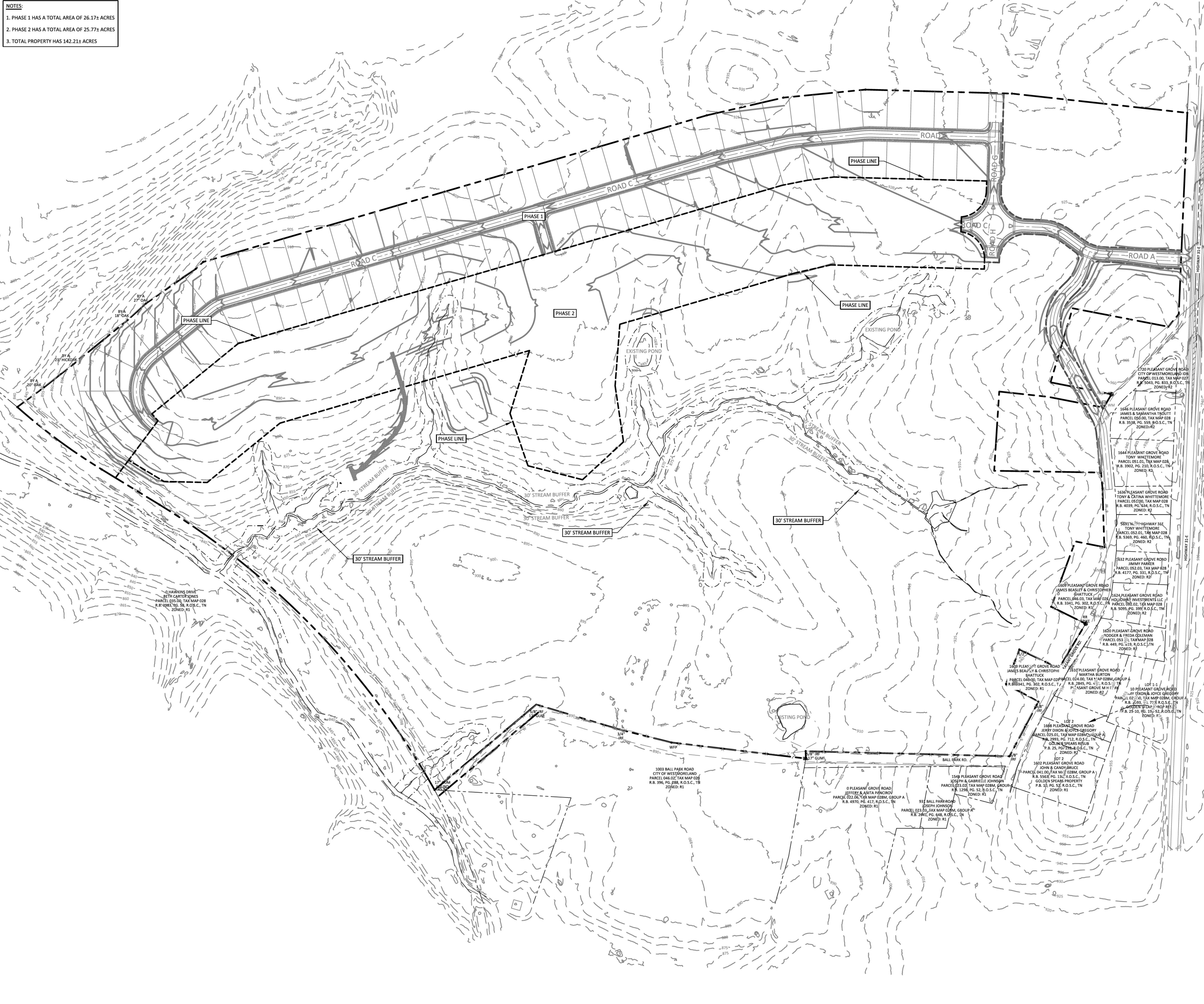
PROJECT NOTES

NO.	DATE	REVISION
1	10-25-2022	PER CITY COMMENTS
2	03-07-2023	PER CITY COMMENTS
3	03-27-2023	PER CITY COMMENTS

SHEET NO.  
**C 1.2**  
SHEET 2 OF 40

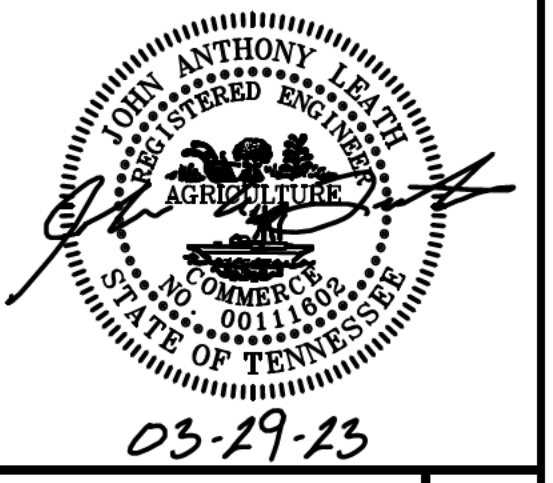
JOB# 21.112G 23 MARCH 2022

**NOTES:**  
 1. PHASE 1 HAS A TOTAL AREA OF 26.17± ACRES  
 2. PHASE 2 HAS A TOTAL AREA OF 25.77± ACRES  
 3. TOTAL PROPERTY HAS 142.21± ACRES



- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - - - BUFFER
  - - - - - SETBACK / YARD
  - ⋯ PUDE
  - SS — SANITARY SEWER LINE
  - FM — SANITARY FORCE MAIN
  - W — WATER LINE
  - S — STORM SEWER
  - G — GAS LINE
  - OHE — OVERHEAD UTILITY LINE
  - UGT — UNDERGROUND UTILITY LINE
  - FENCE
  - TREE LINE
  - UTILITY POLE
  - UTILITY POLE W/ LIGHT
  - GUY ANCHOR
  - TELEPHONE MANHOLE
  - ELECTRIC JUNCTION BOX
  - CABLE PEDESTAL
  - SANITARY SEWER MANHOLE
  - WATER METER
  - WATER VALVE
  - BLOW OFF VALVE
  - AIR RELEASE ASSEMBLY
  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
  - A/C PAD

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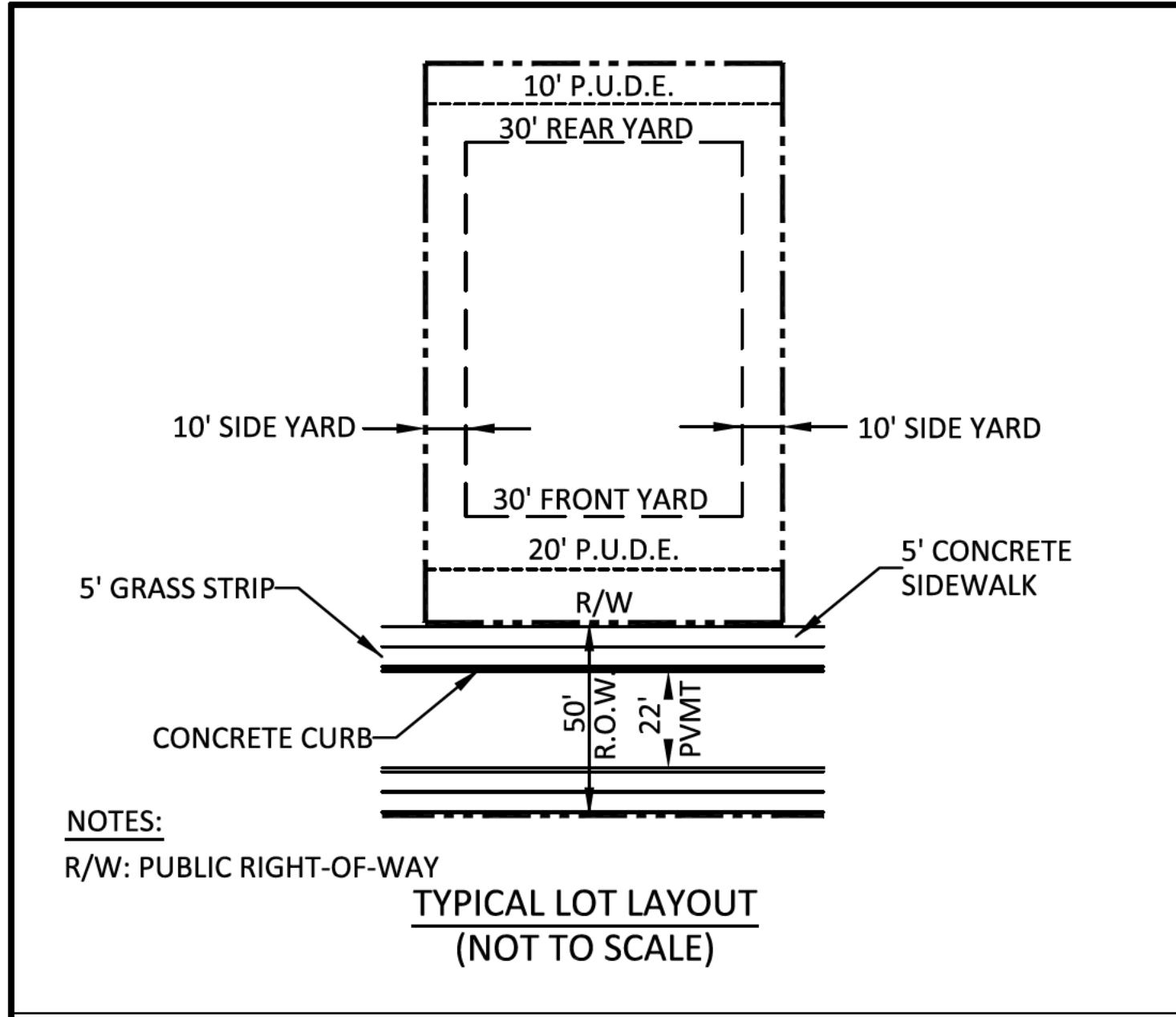


**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

**EXISTING CONDITIONS**

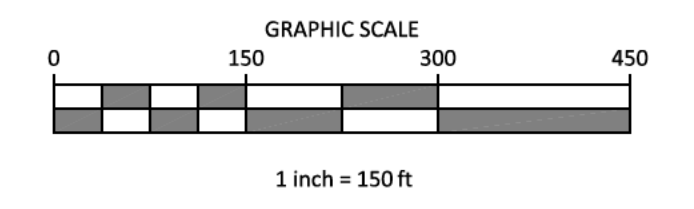
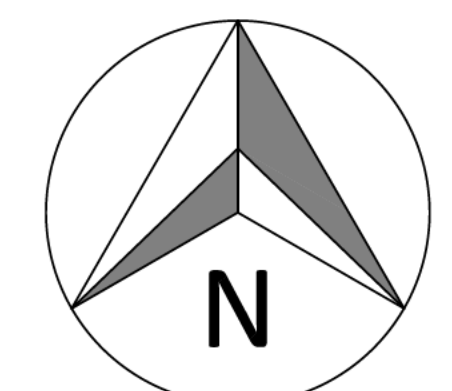
NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
3	03-27-2023		

**SHEET NO.**  
**C 2.0**  
 SHEET 3 OF 40

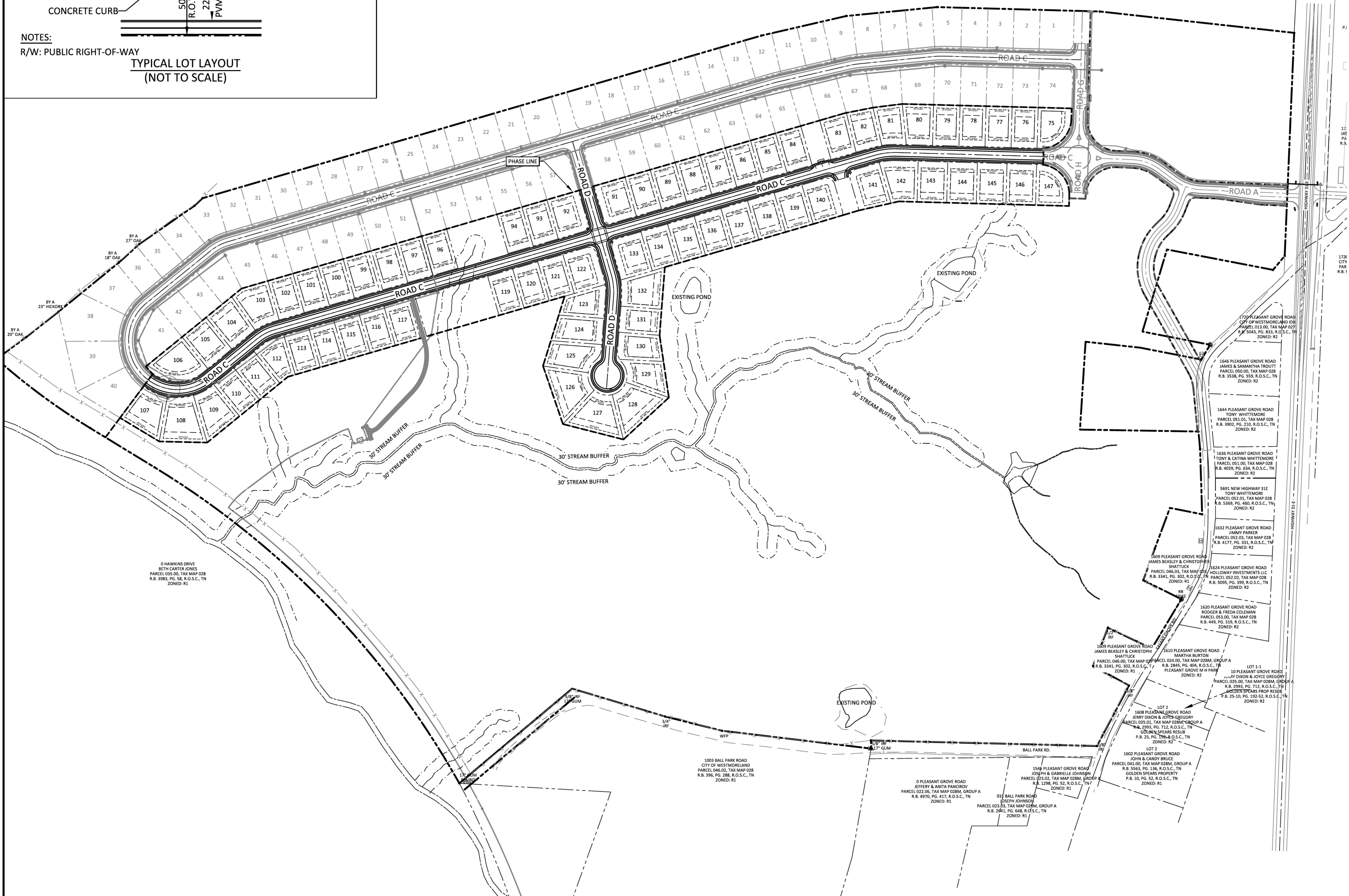


NOTES:  
1. 71 TOTAL LOTS IN PHASE 2.

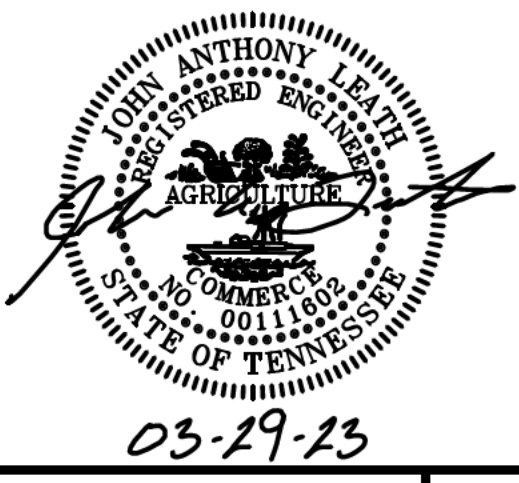
LOTS	18.15± ACRES
OPEN SPACE	1.39± ACRES
RIGHT-OF-WAY	4.29± ACRES



- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - - - BUFFER
  - - - - - SETBACK / YARD
  - - - - - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
  - FM SANITARY FORCE MAIN
  - W WATER LINE
  - STORM SEWER
  - G GAS LINE
  - OHE OVERHEAD UTILITY LINE
  - UGT UNDERGROUND UTILITY LINE
  - FENCE
  - TREE LINE
  - UTILITY POLE
  - UTILITY POLE W/ LIGHT
  - GUY ANCHOR
  - TELEPHONE MANHOLE
  - ELECTRIC JUNCTION BOX
  - CABLE PEDESTAL
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  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
  - A/C PAD



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**PLEASANT GROVE FARMS, PHASE 2**  
CONSTRUCTION PLANS  
PLEASANT GROVE ROAD  
CITY OF WESTMORELAND  
SUMNER COUNTY, TENNESSEE

**OVERALL SITE LAYOUT**

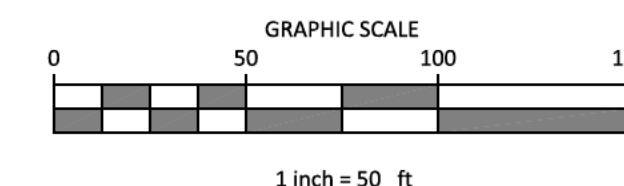
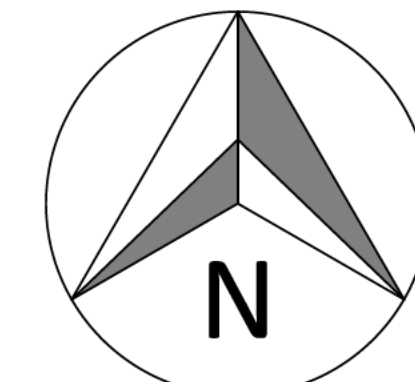
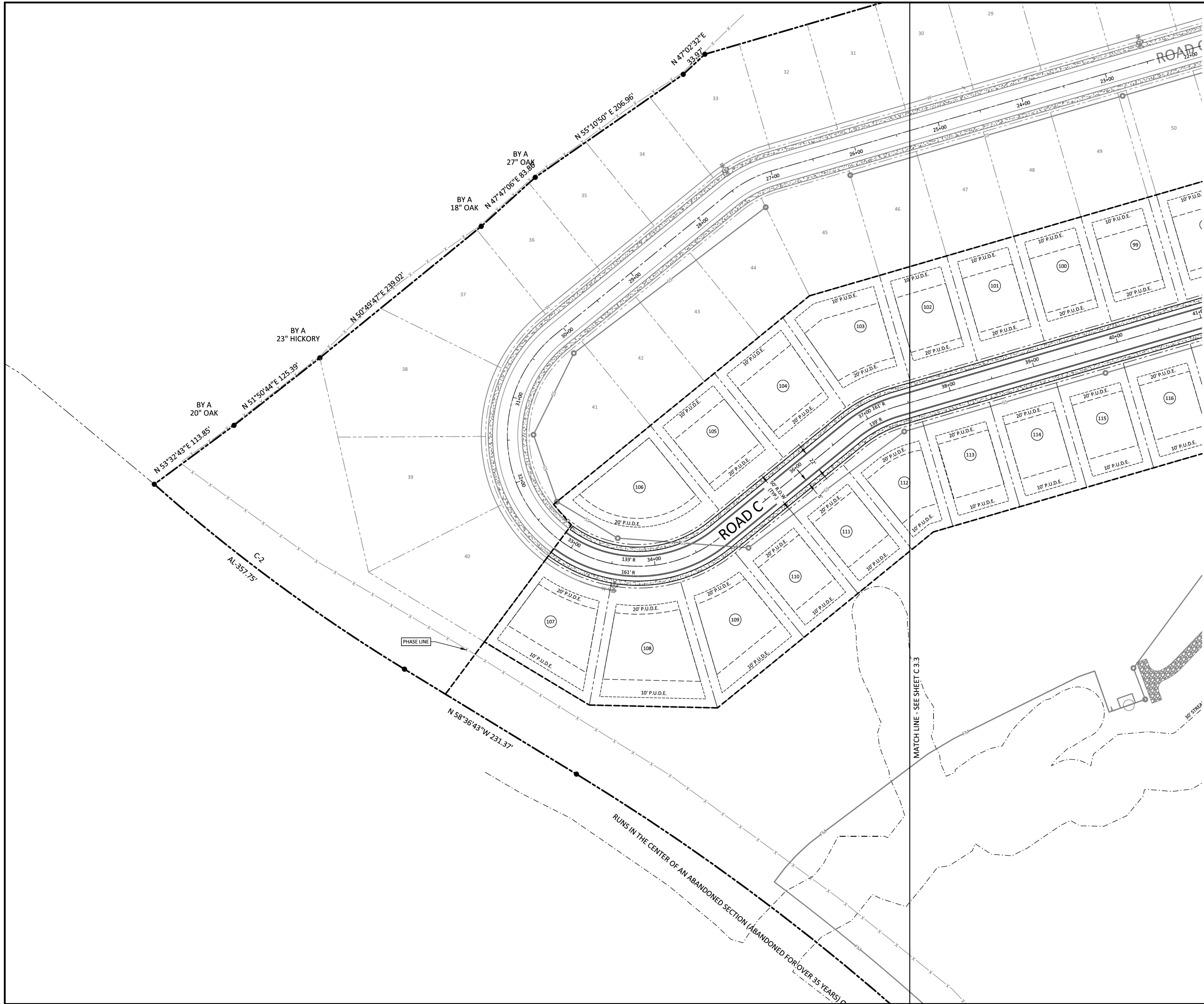
NO.	DATE	REVISION	PER CITY COMMENTS
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2	03-07-2023		
3	03-27-2023		

**SHEET NO.  
C 3.1**  
SHEET 4 OF 40

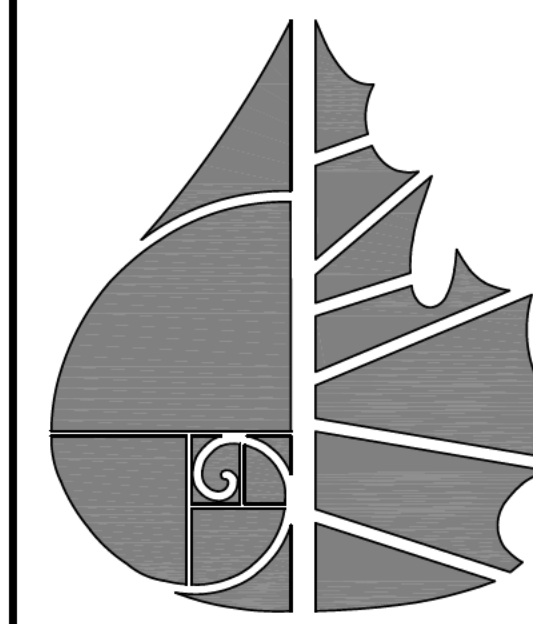
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TENNESSEE ONE CALL IT'S THE LAW







- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - - - BUFFER
  - - - - - SETBACK / YARD
  - - - - - P.U.D.E.
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
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03-29-23

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PLEASANT GROVE ROAD  
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SUMNER COUNTY, TENNESSEE

SITE LAYOUT

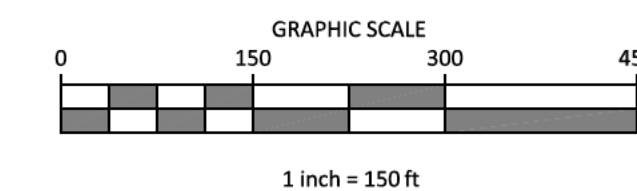
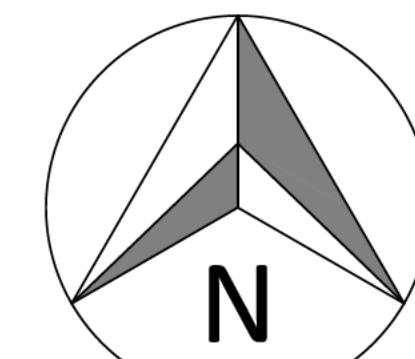
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SHEET NO.  
**C 3.4**

SHEET 7 OF 40

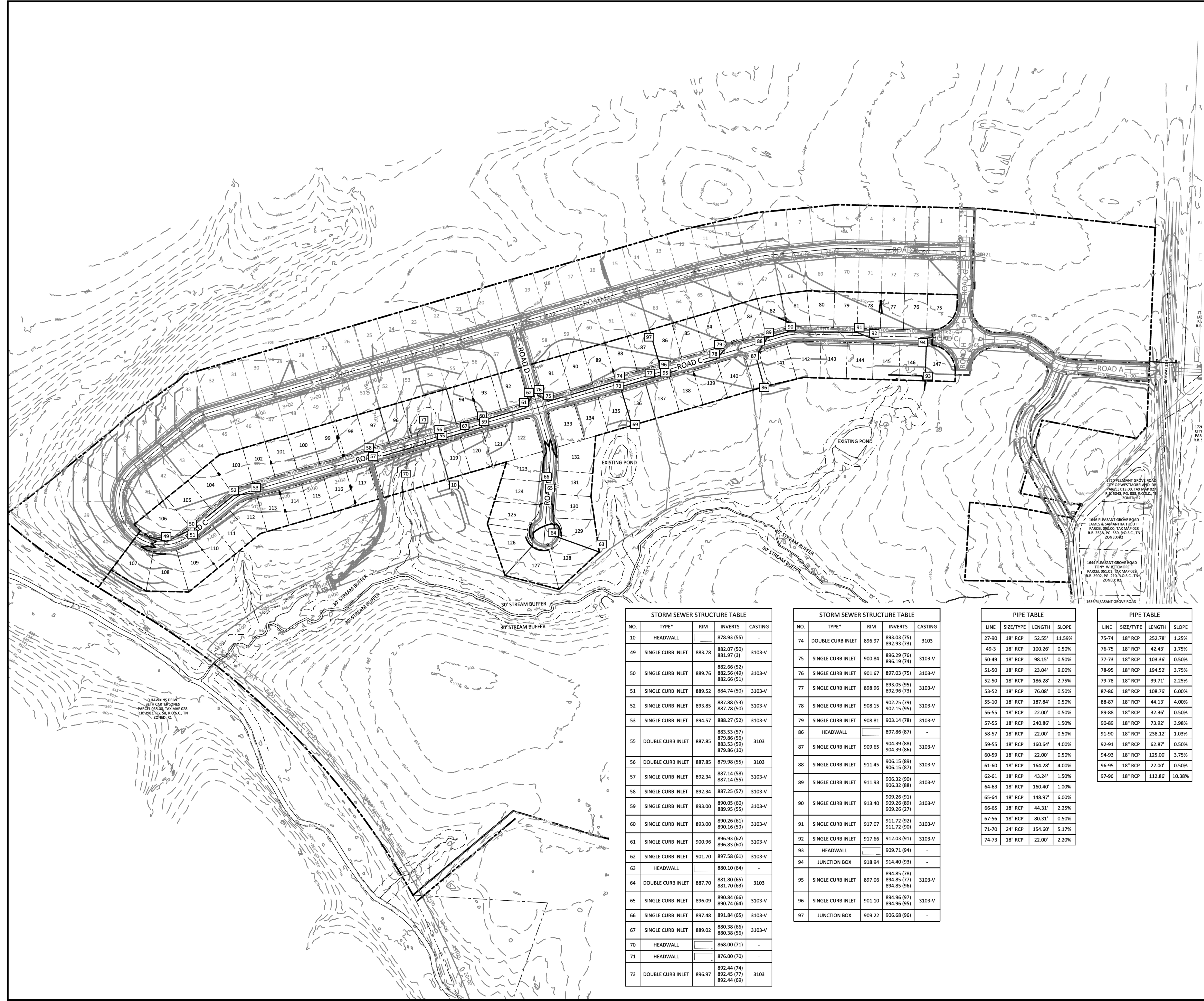


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STORM SEWER STRUCTURE TABLE				
NO.	TYPE*	RIM	INVERTS	CASTING
10	HEADWALL	878.93	(55)	-
49	SINGLE CURB INLET	883.78	882.07 (50) 881.97 (3)	3103-V
50	SINGLE CURB INLET	889.76	882.66 (52) 882.56 (49) 882.66 (51)	3103-V
51	SINGLE CURB INLET	889.52	884.74 (50)	3103-V
52	SINGLE CURB INLET	893.85	887.88 (53) 887.78 (50)	3103-V
53	SINGLE CURB INLET	894.57	888.27 (52)	3103-V
55	DOUBLE CURB INLET	887.85	883.53 (57) 879.86 (56) 883.53 (59) 879.86 (10)	3103
56	DOUBLE CURB INLET	887.85	879.98 (55)	3103
57	SINGLE CURB INLET	892.34	887.14 (58) 887.14 (55)	3103-V
58	SINGLE CURB INLET	892.34	887.25 (57)	3103-V
59	SINGLE CURB INLET	893.00	890.05 (60) 889.95 (55)	3103-V
60	SINGLE CURB INLET	893.00	890.26 (61) 890.16 (59)	3103-V
61	SINGLE CURB INLET	900.96	896.93 (62) 896.83 (60)	3103-V
62	SINGLE CURB INLET	901.70	897.58 (61)	3103-V
63	HEADWALL	880.10	(64)	-
64	DOUBLE CURB INLET	887.70	881.80 (65) 881.70 (63)	3103
65	SINGLE CURB INLET	896.09	890.84 (66) 890.74 (64)	3103-V
66	SINGLE CURB INLET	897.48	891.84 (65)	3103-V
67	SINGLE CURB INLET	889.02	880.38 (66) 880.38 (56)	3103-V
70	HEADWALL	868.00	(71)	-
71	HEADWALL	876.00	(70)	-
73	DOUBLE CURB INLET	896.97	892.44 (74) 892.45 (77) 892.44 (59)	3103

STORM SEWER STRUCTURE TABLE				
NO.	TYPE*	RIM	INVERTS	CASTING
74	DOUBLE CURB INLET	896.97	893.03 (75) 892.93 (73)	3103
75	SINGLE CURB INLET	900.84	896.29 (76) 896.19 (74)	3103-V
76	SINGLE CURB INLET	901.67	897.03 (75)	3103-V
77	SINGLE CURB INLET	898.96	893.05 (95) 892.96 (73)	3103-V
78	SINGLE CURB INLET	908.15	902.25 (79) 902.15 (95)	3103-V
79	SINGLE CURB INLET	908.81	903.14 (78)	3103-V
86	HEADWALL	897.86	(87)	-
87	SINGLE CURB INLET	909.65	904.39 (88) 904.39 (86)	3103-V
88	SINGLE CURB INLET	911.45	906.15 (89) 906.15 (87)	3103-V
89	SINGLE CURB INLET	911.93	906.32 (90) 906.32 (88)	3103-V
90	SINGLE CURB INLET	913.40	909.26 (91) 909.26 (89) 909.26 (27)	3103-V
91	SINGLE CURB INLET	917.07	911.72 (92) 911.72 (90)	3103-V
92	SINGLE CURB INLET	917.66	912.03 (91)	3103-V
93	HEADWALL	909.71	(94)	-
94	JUNCTION BOX	918.94	914.40 (93)	-
95	SINGLE CURB INLET	897.06	894.85 (78) 894.85 (77) 894.85 (96)	3103-V
96	SINGLE CURB INLET	901.10	894.96 (97) 894.96 (95)	3103-V
97	JUNCTION BOX	909.22	906.68 (96)	-

PIPE TABLE				
LINE	SIZE/TYP	LENGTH	SLOPE	
27-90	18" RCP	52.55'	11.59%	
49-3	18" RCP	100.26'	0.50%	
50-49	18" RCP	98.15'	0.50%	
51-50	18" RCP	23.04'	9.00%	
52-50	18" RCP	186.28'	2.75%	
53-52	18" RCP	76.08'	0.50%	
55-10	18" RCP	187.84'	0.50%	
56-55	18" RCP	22.00'	0.50%	
57-55	18" RCP	240.86'	1.50%	
58-57	18" RCP	22.00'	0.50%	
59-55	18" RCP	160.64'	4.00%	
60-59	18" RCP	22.00'	0.50%	
61-60	18" RCP	164.28'	4.00%	
62-61	18" RCP	43.24'	1.50%	
64-63	18" RCP	160.40'	1.00%	
65-64	18" RCP	148.97'	6.00%	
66-65	18" RCP	44.31'	2.25%	
67-66	18" RCP	80.31'	0.50%	
71-70	24" RCP	154.60'	5.17%	
74-73	18" RCP	22.00'	2.20%	

PIPE TABLE				
LINE	SIZE/TYP	LENGTH	SLOPE	
75-74	18" RCP	252.78'	1.25%	
76-75	18" RCP	42.43'	1.75%	
77-73	18" RCP	103.36'	0.50%	
78-95	18" RCP	194.52'	3.75%	
79-78	18" RCP	39.71'	2.25%	
87-86	18" RCP	108.76'	6.00%	
88-87	18" RCP	44.13'	4.00%	
89-88	18" RCP	32.36'	0.50%	
90-89	18" RCP	73.92'	3.98%	
91-90	18" RCP	238.12'	1.03%	
92-91	18" RCP	62.87'	0.50%	
94-93	18" RCP	125.00'	3.75%	
96-95	18" RCP	22.00'	0.50%	
97-96	18" RCP	112.86'	10.38%	

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 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
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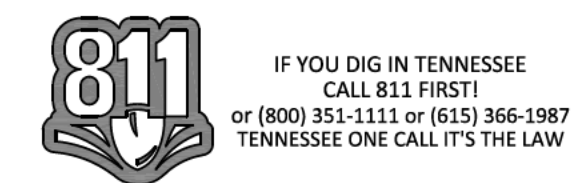
**OVERALL GRADING PLAN**

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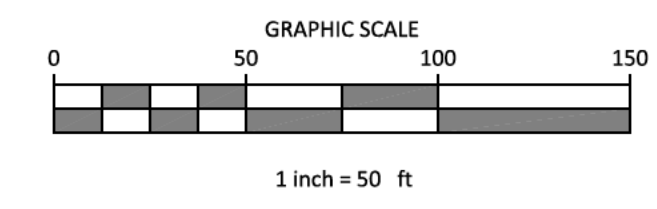
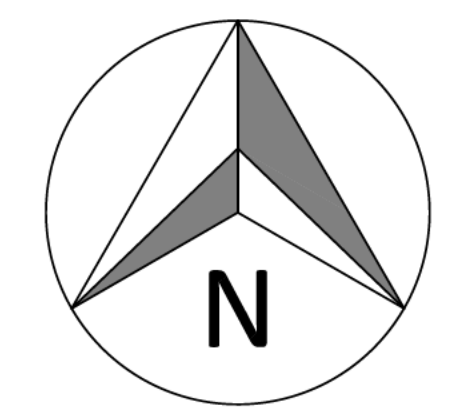
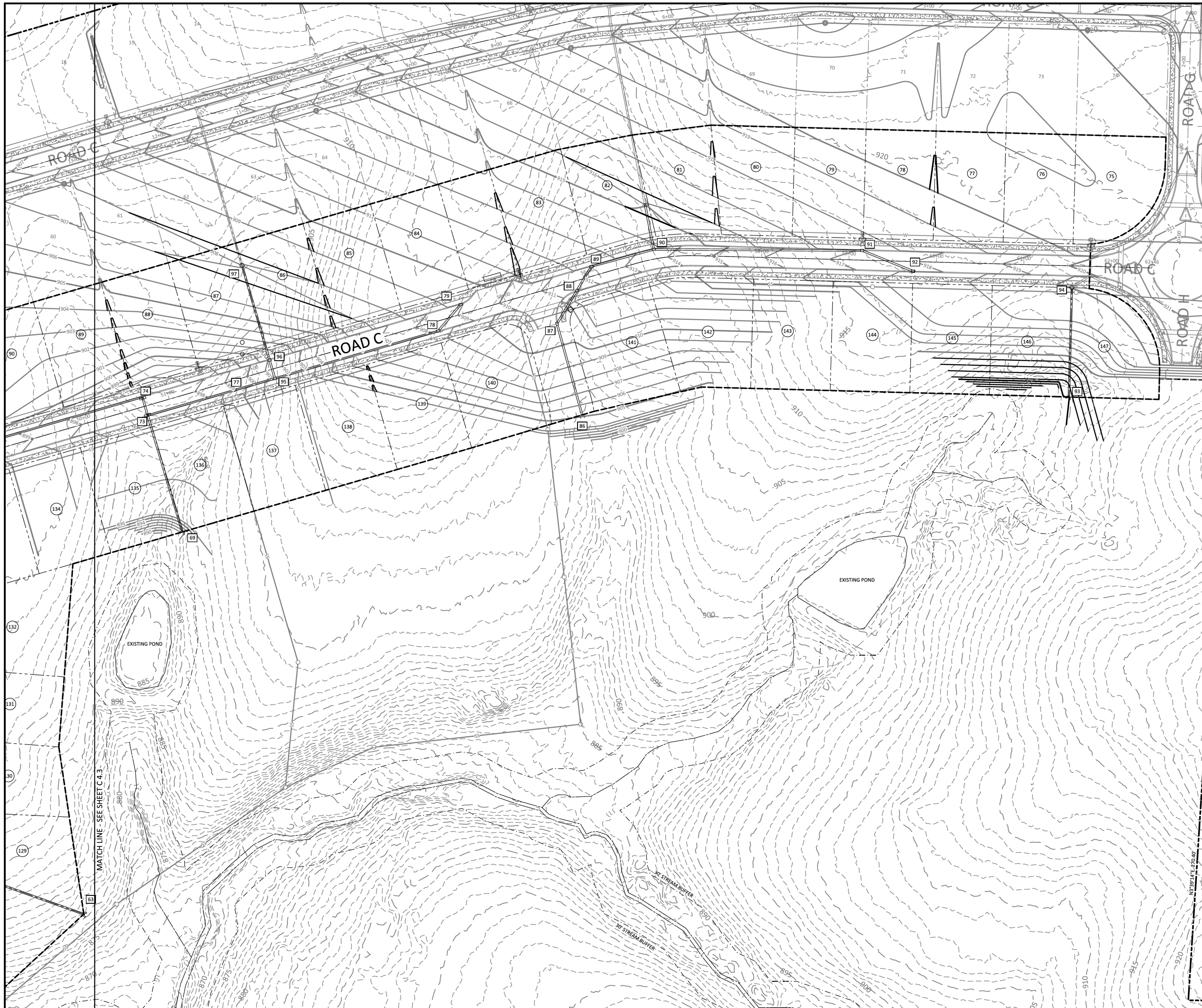
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SHEET 8 OF 40

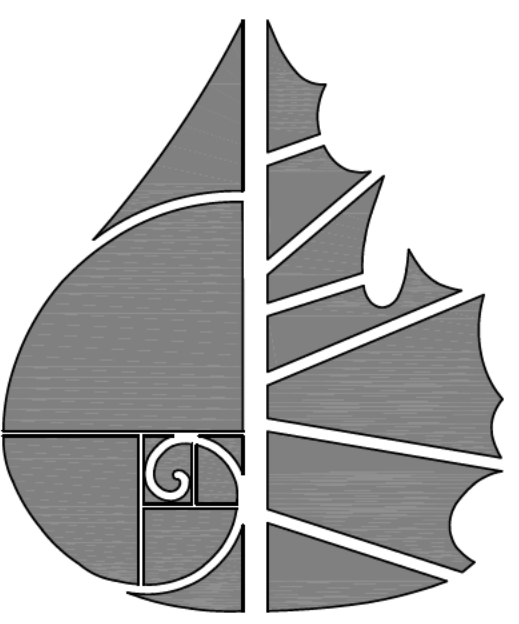
JOB# 21.112G 23 MARCH 2022







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 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

**OVERALL GRADING PLAN**

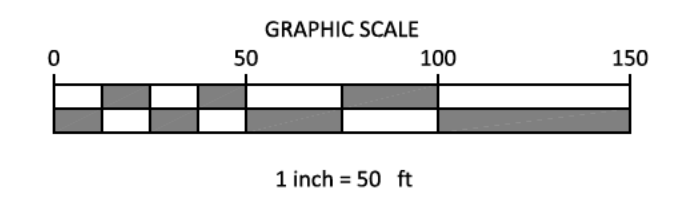
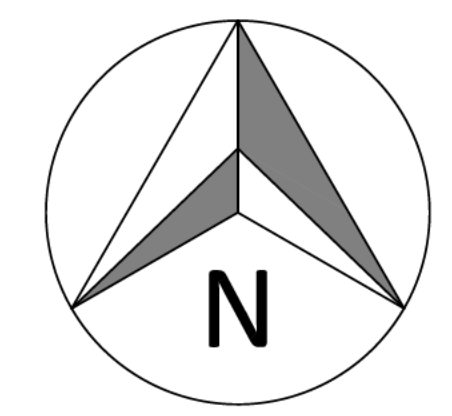
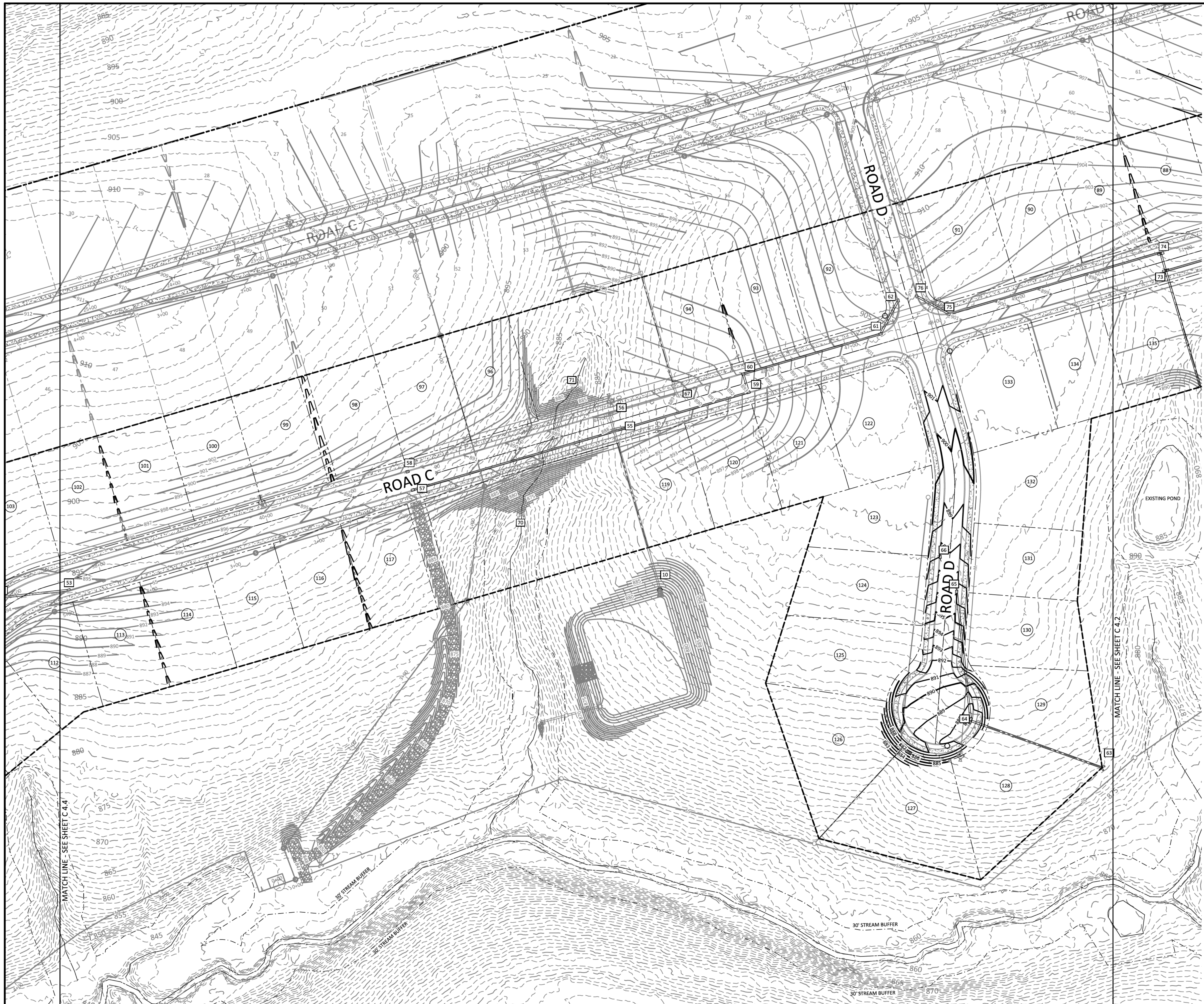
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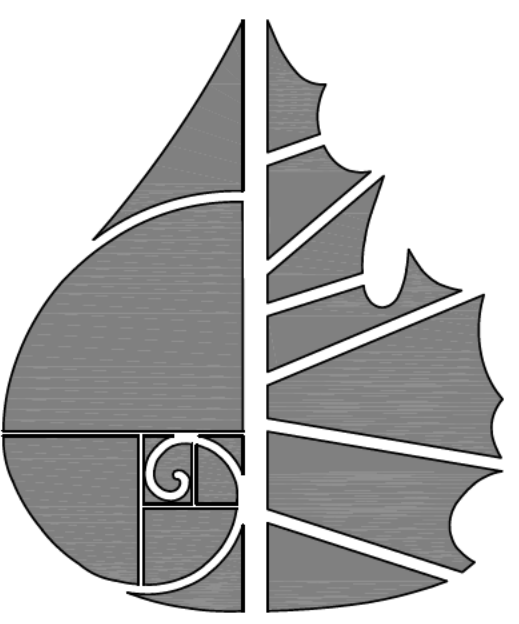
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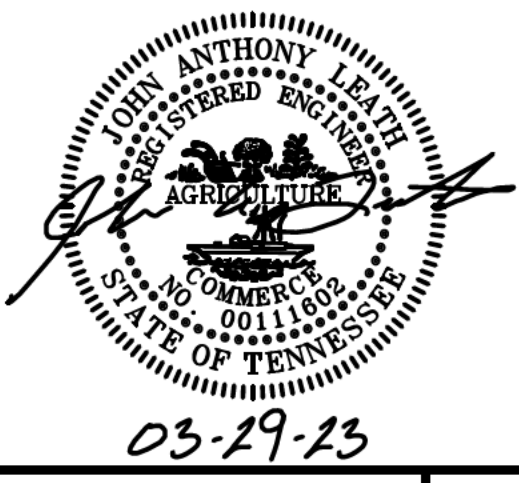
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**C 4.2**  
 SHEET 9 OF 40  
 JOB# 21.112G 23 MARCH 2023



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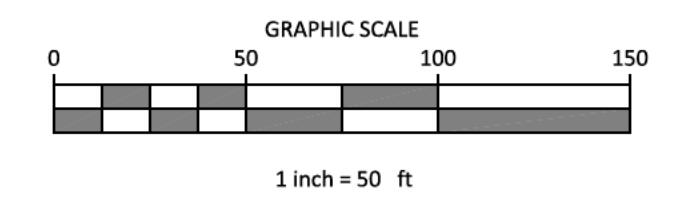
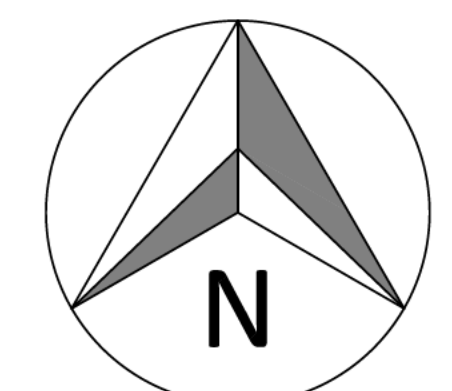
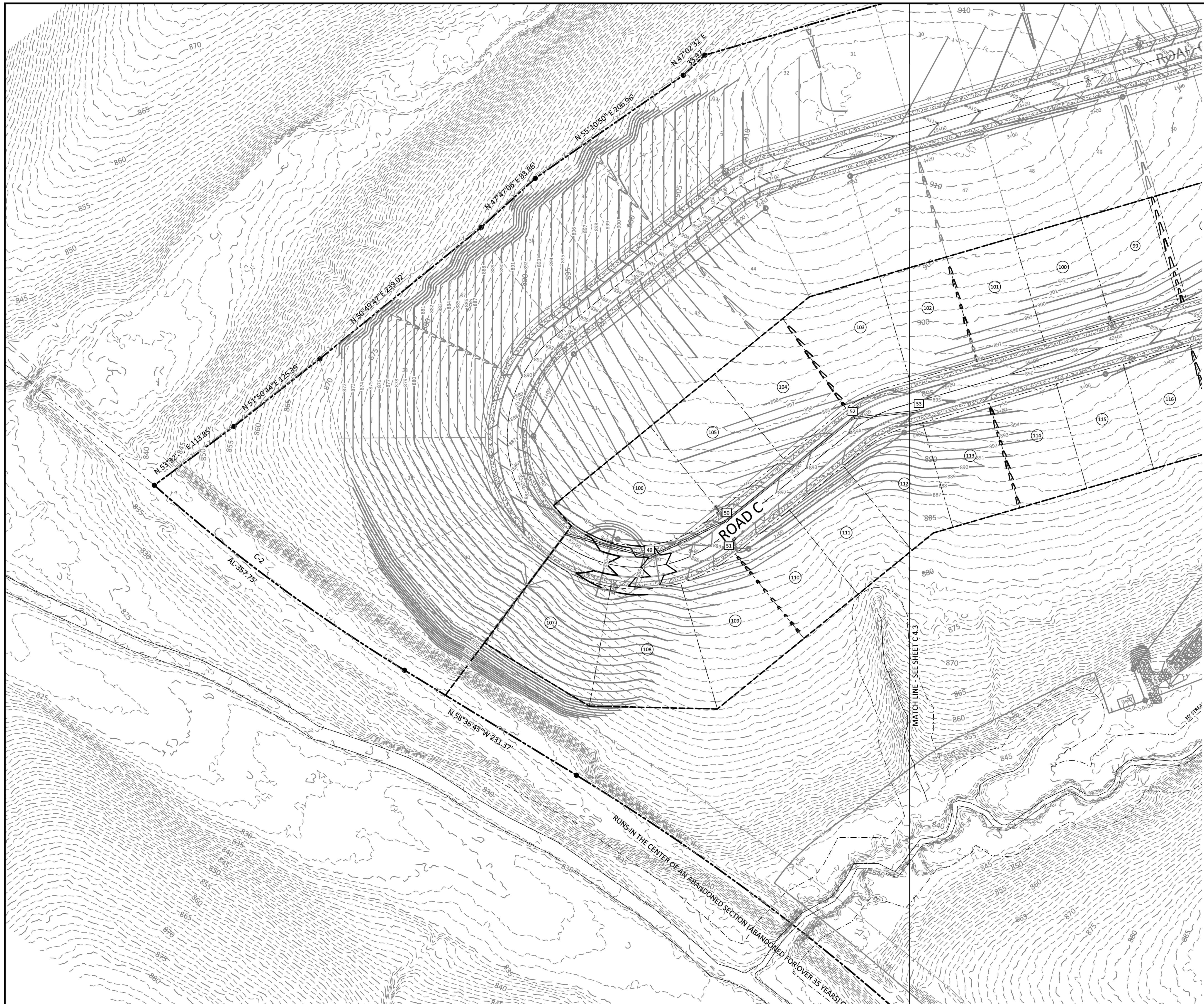
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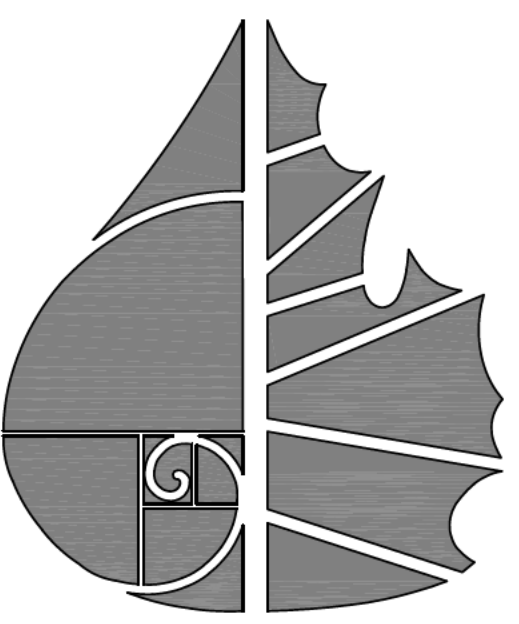
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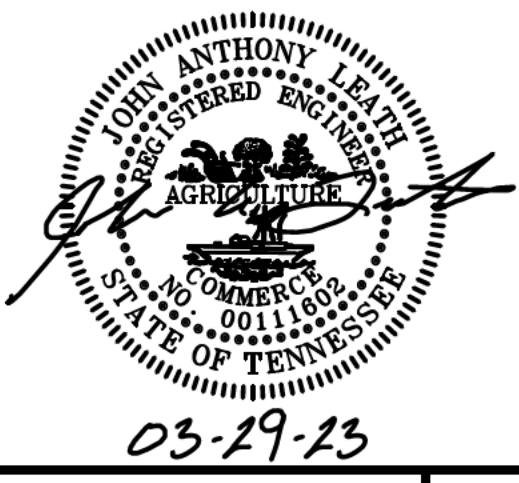
**SHEET NO.**  
**C 4.3**  
 SHEET 10 OF 40



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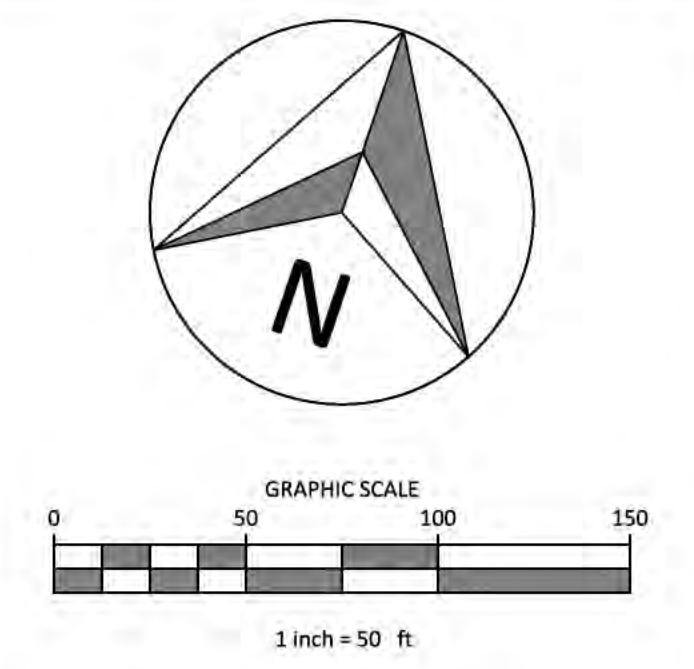
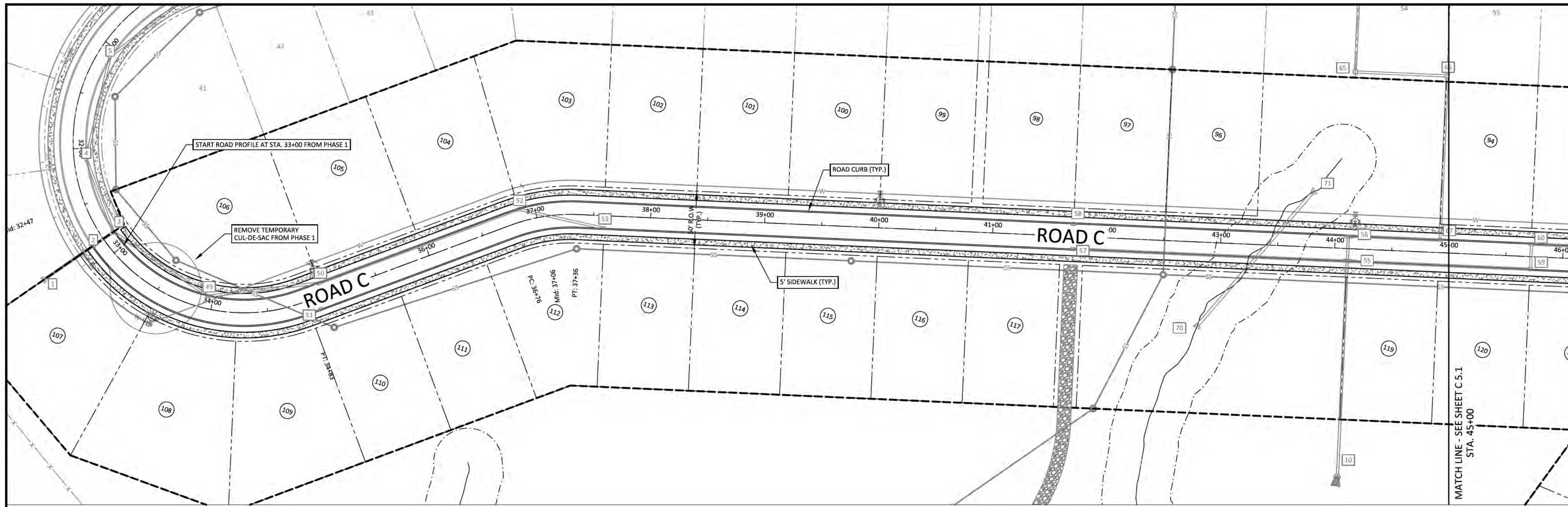
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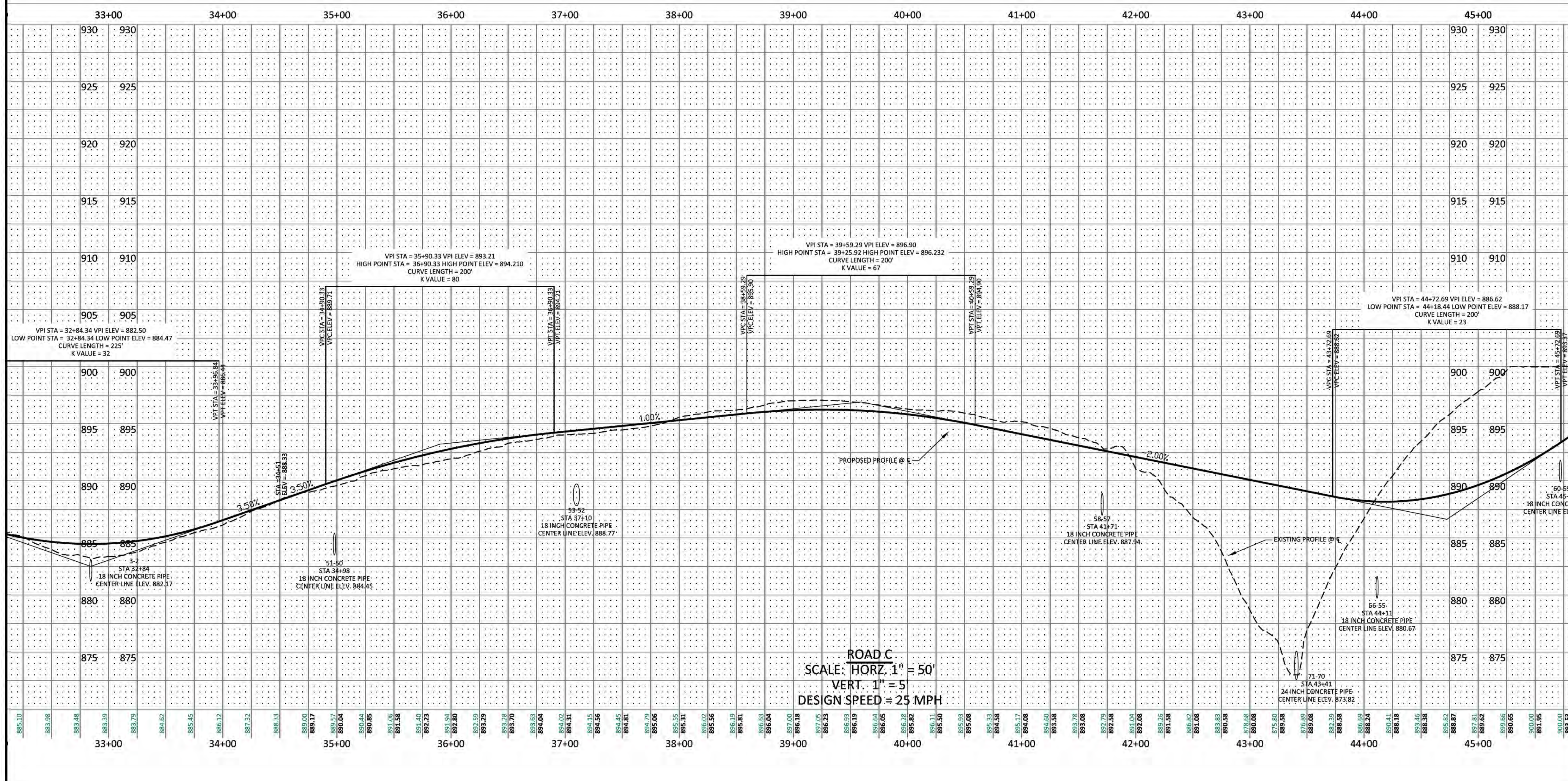


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**SHEET NO.**  
**C 4.4**  
 SHEET 11 OF 40



- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - - - BUFFER
  - - - - - SETBACK / YARD
  - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
  - FM SANITARY FORCE MAIN
  - W WATER LINE
  - STORM SEWER
  - G GAS LINE
  - OHE OVERHEAD UTILITY LINE
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  - FENCE
  - TREE LINE
  - UTILITY POLE
  - UTILITY POLE W/ LIGHT
  - GUY ANCHOR
  - TELEPHONE MANHOLE
  - ELECTRIC JUNCTION BOX
  - CABLE PEDESTAL
  - SANITARY SEWER MANHOLE
  - WATER METER
  - WATER VALVE
  - BLOW OFF VALVE
  - AIR RELEASE ASSEMBLY
  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
  - A/C PAD



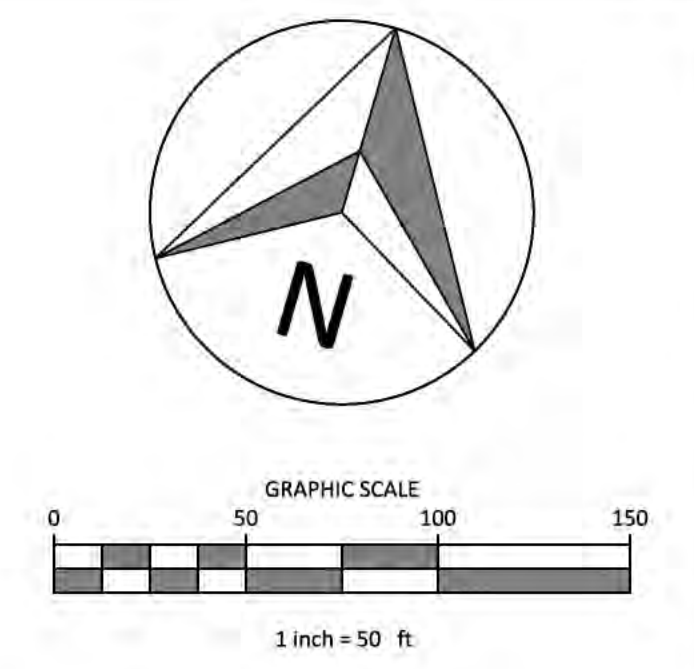
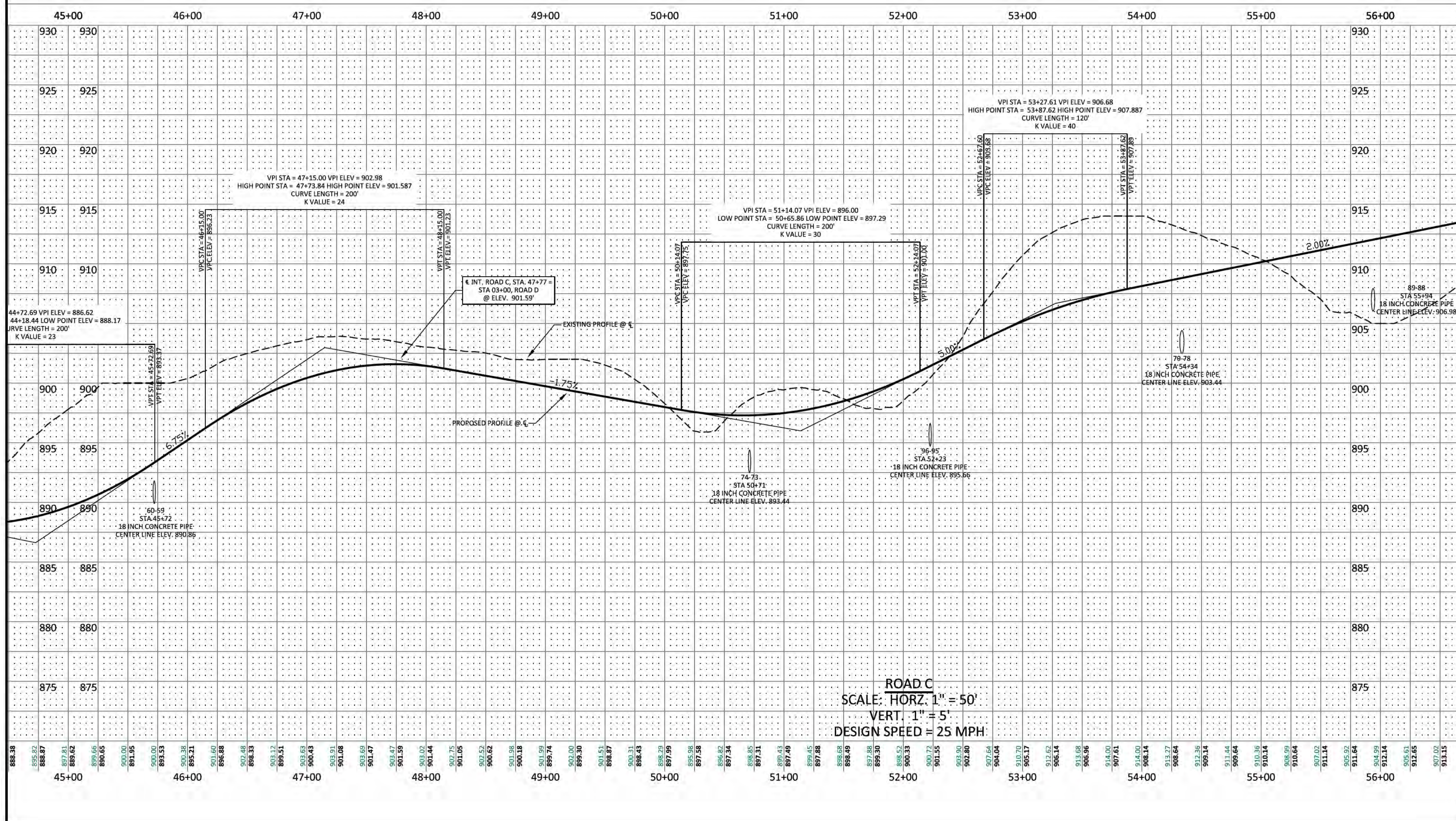
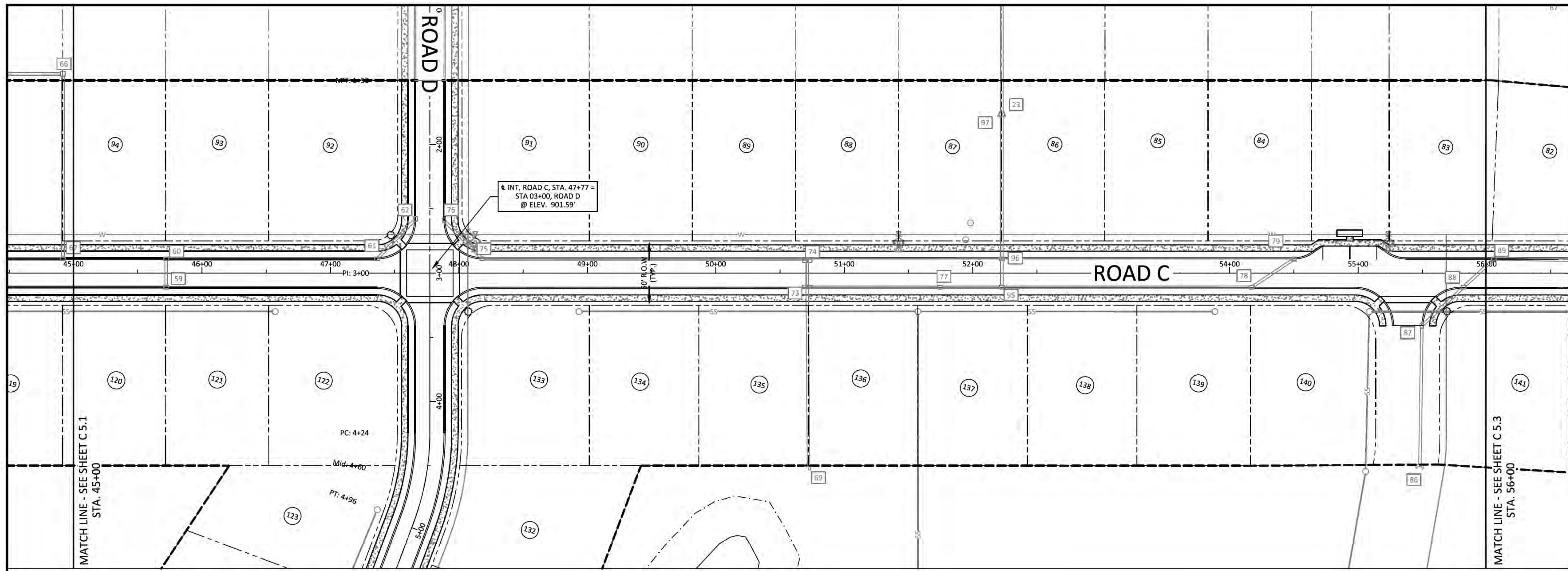
**GreenLID Design**  
114 B West Main Street  
Gallatin, TN 37066  
615-230-7269  
andy.leath@greendesign.com

**PLEASANT GROVE FARMS, PHASE 2**  
CONSTRUCTION PLANS  
PLEASANT GROVE ROAD  
CITY OF WESTMORELAND  
SUMNER COUNTY, TENNESSEE

NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
3	03-27-2023		

**SHEET NO.**  
**C 5.1**  
SHEET 12 OF 40

JOB# 21.112G      23 MARCH 2022



- LEGEND**
- CONCRETE MONUMENT (OLD)
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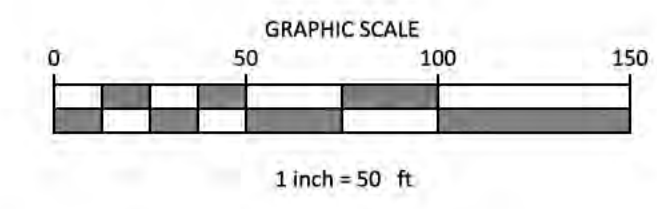
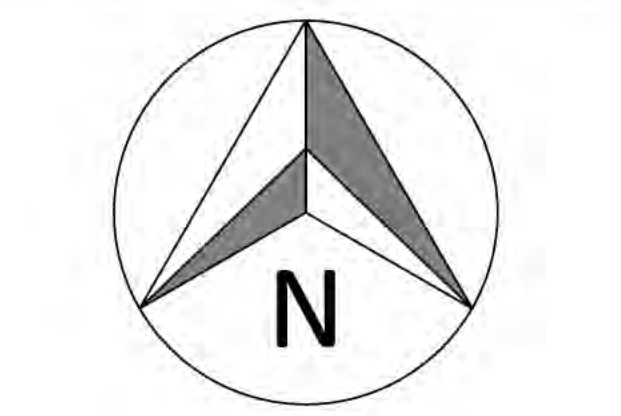
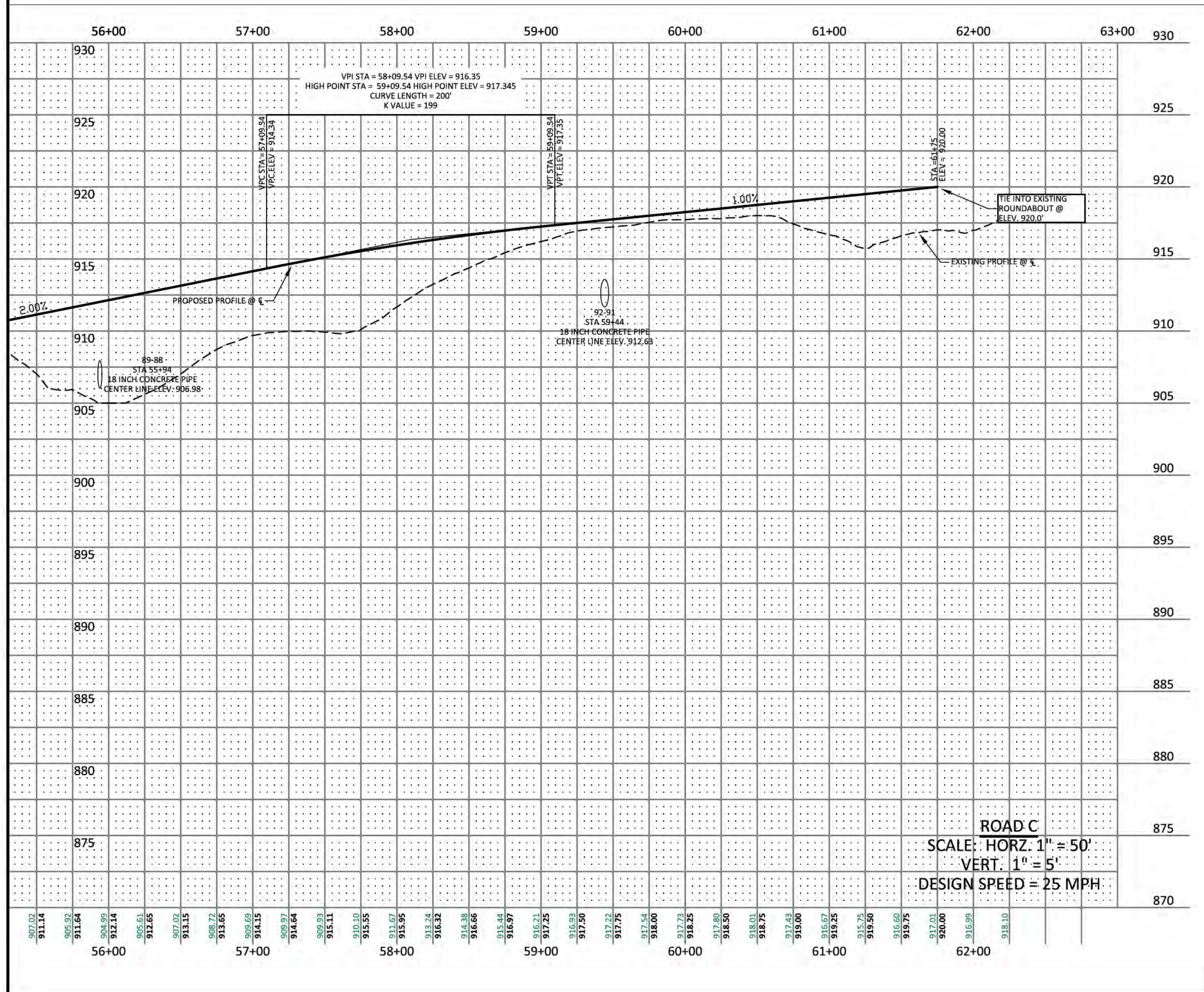
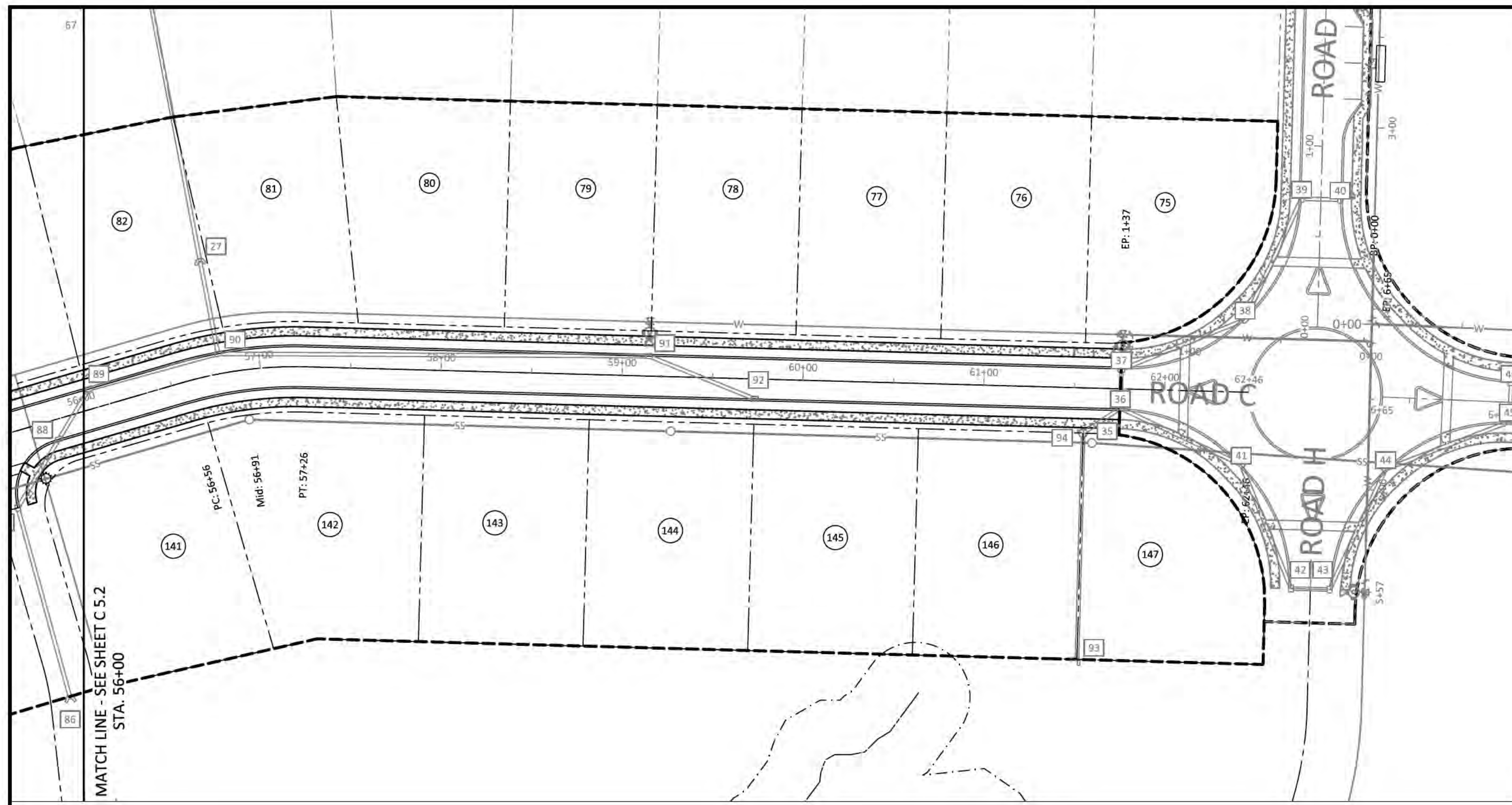
JOHN ANTHONY LEATH  
 REGISTERED ENGINEER  
 AGRICULTURE  
 NO. 00111660  
 COMMERCIAL  
 STATE OF TENNESSEE  
 03-29-23

PLEASANT GROVE FARMS, PHASE 2  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

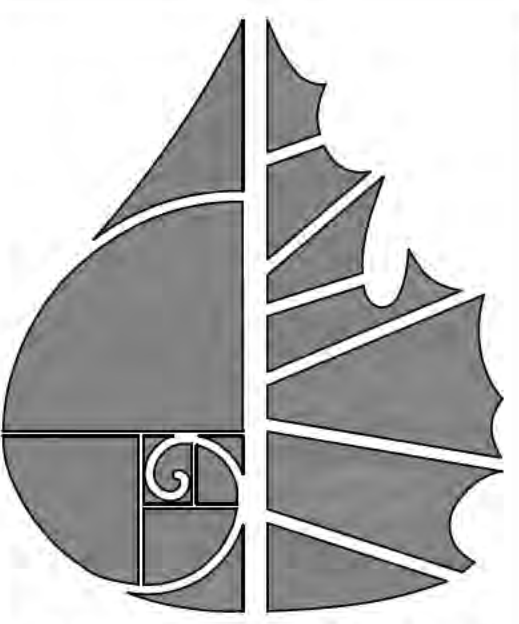
NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		PER CITY COMMENTS
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3	03-27-2023		PER CITY COMMENTS

**SHEET NO. C5.2**  
 SHEET 13 OF 40  
 JOB# 21.112G 23 MARCH 2022





- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
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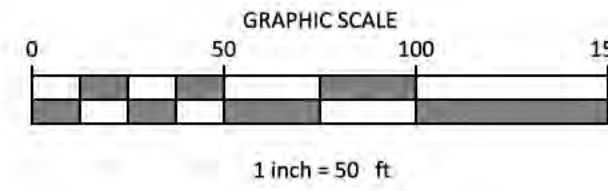
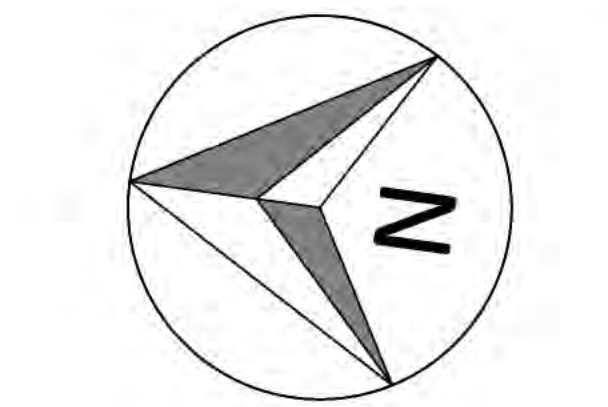


**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

NO.	DATE	REVISION
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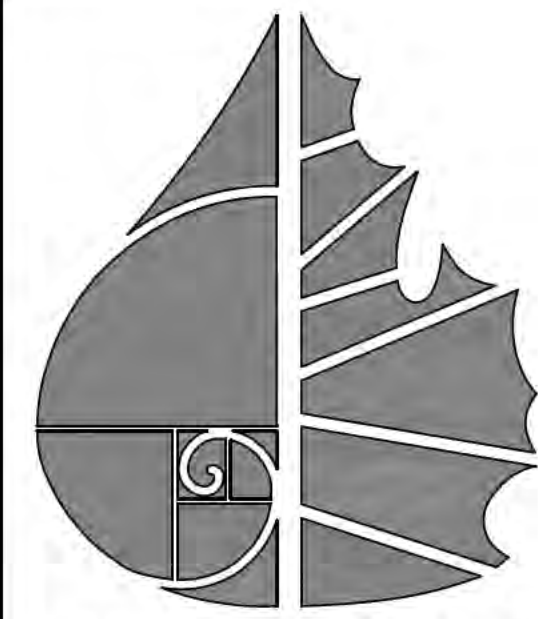
**SHEET NO. C 5.3**  
 SHEET 14 OF 40  
 JOB# 21.112G 23 MARCH 2022





**LEGEND**

- CONCRETE MONUMENT (OLD)
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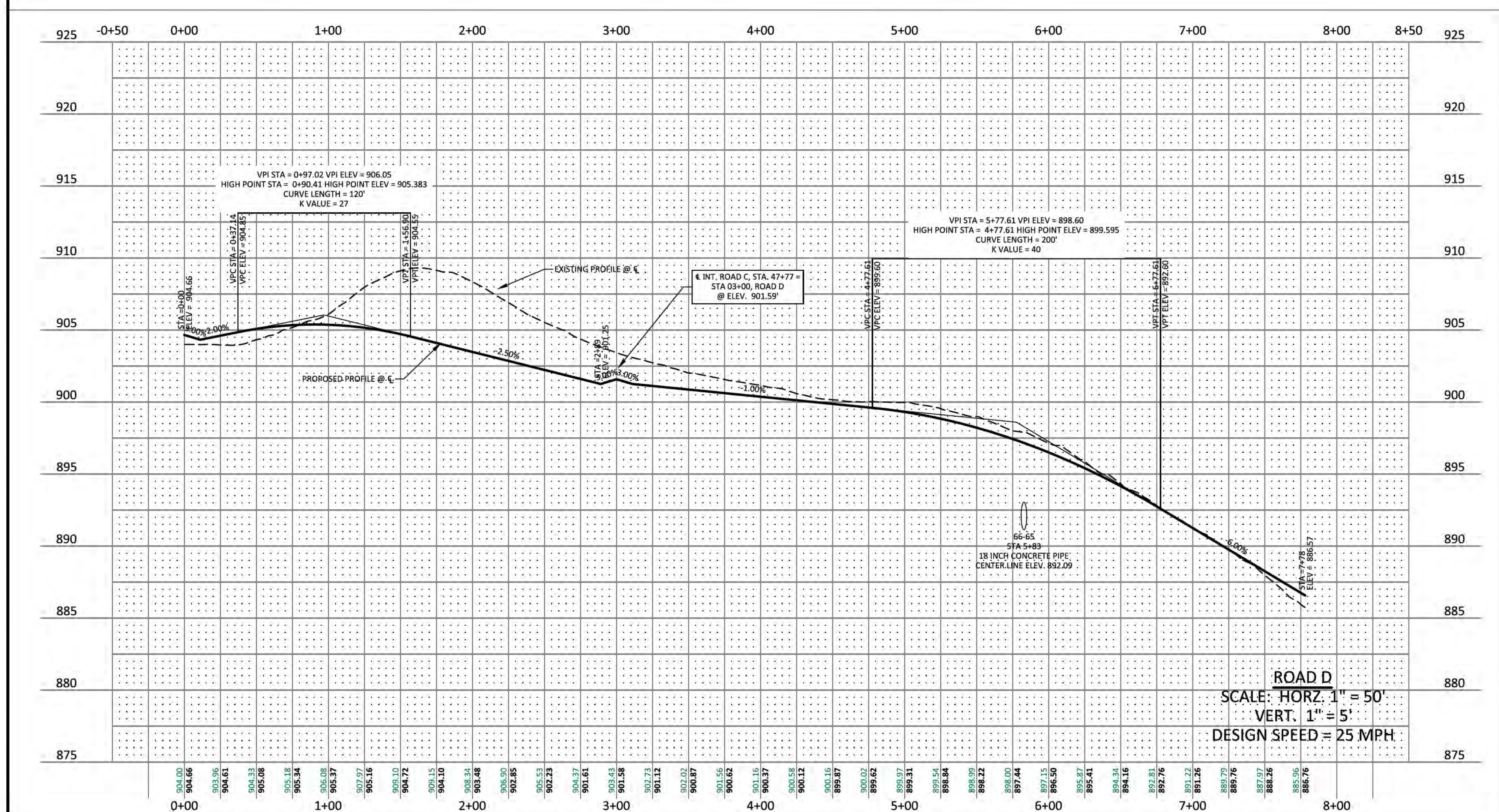
114 B West Main Street  
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03-29-23

**PLEASANT GROVE FARMS, PHASE 2**  
CONSTRUCTION PLANS  
PLEASANT GROVE ROAD  
CITY OF WESTMORELAND  
SUMNER COUNTY, TENNESSEE

ROAD D PROFILE

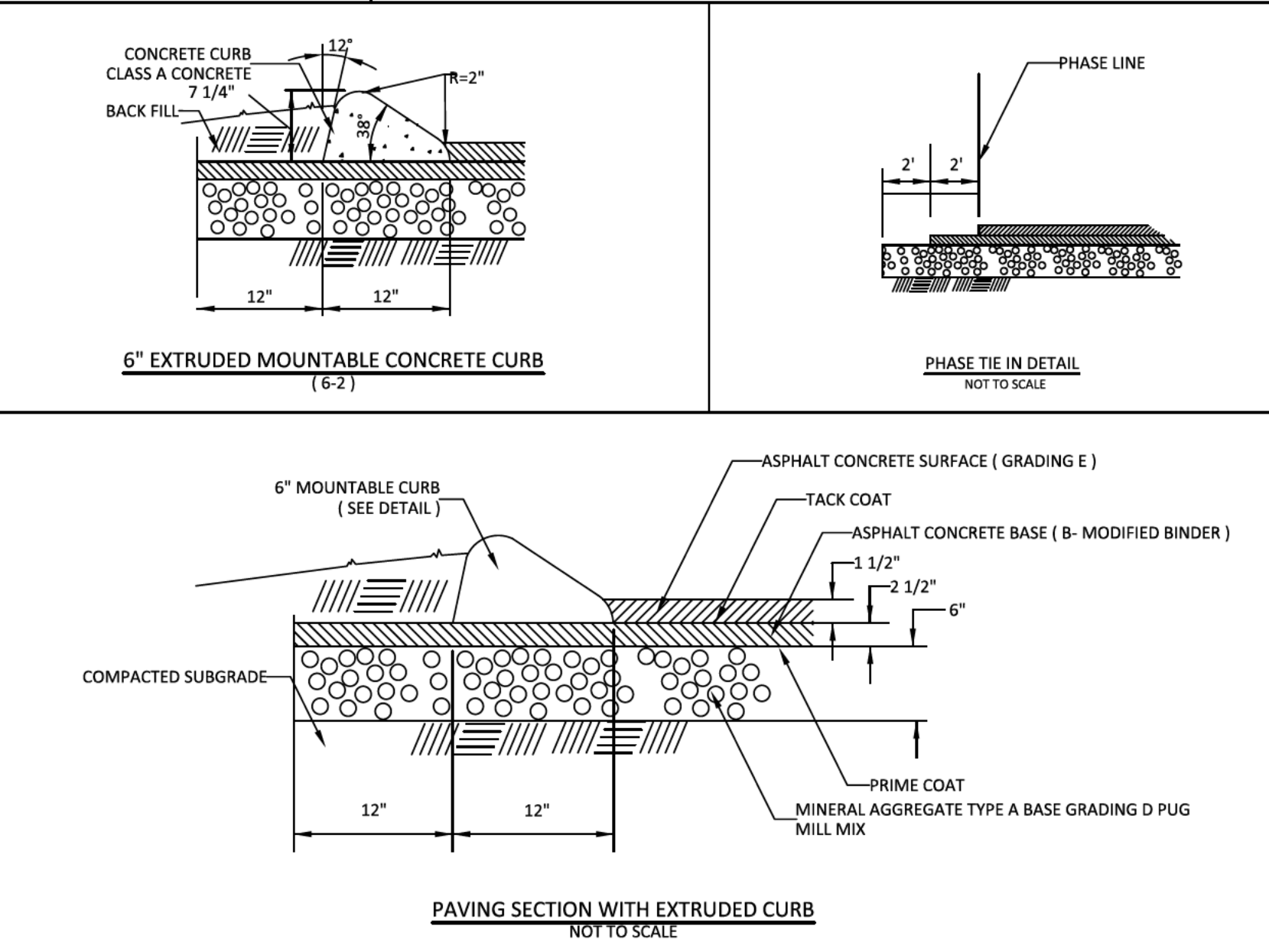
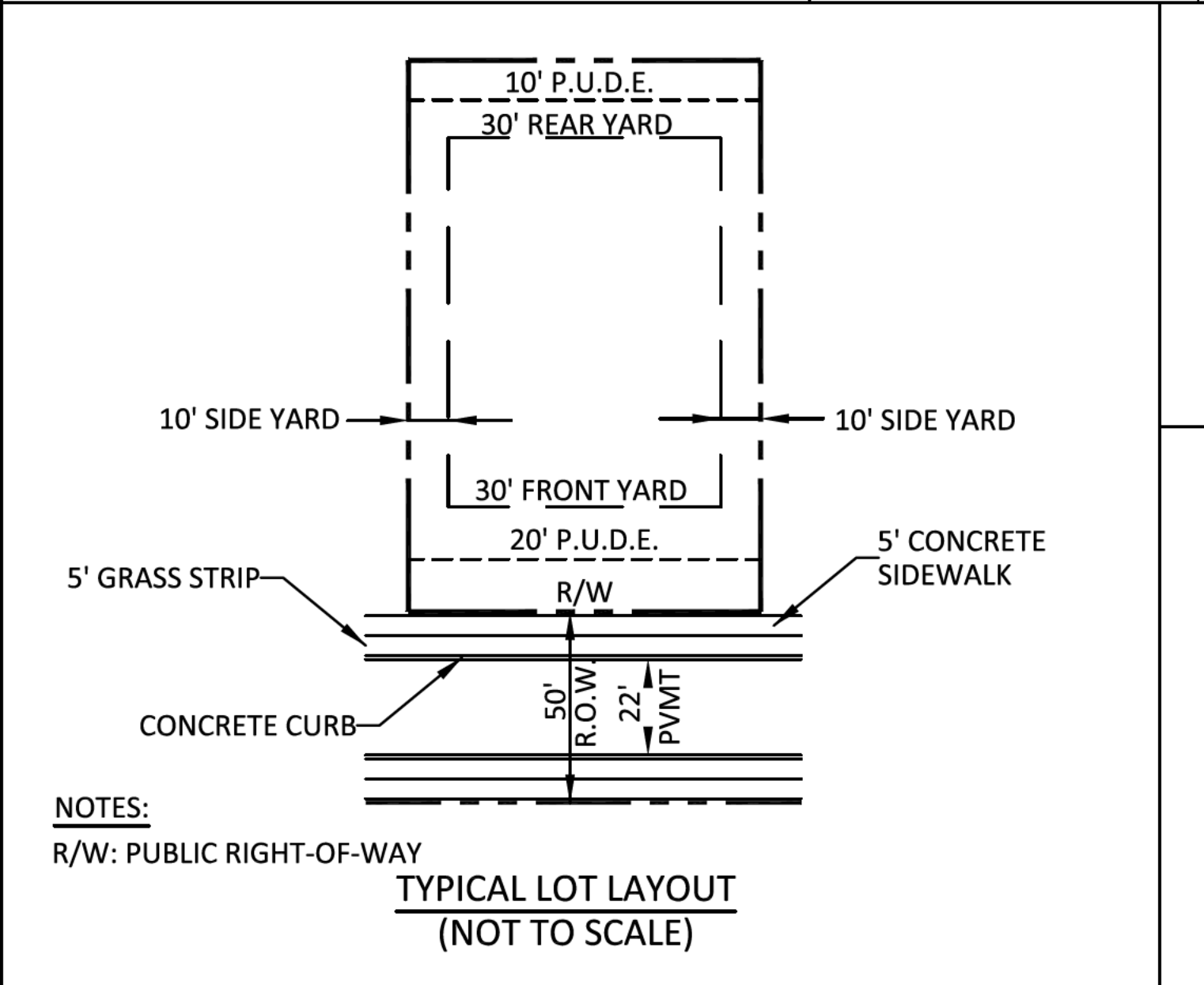
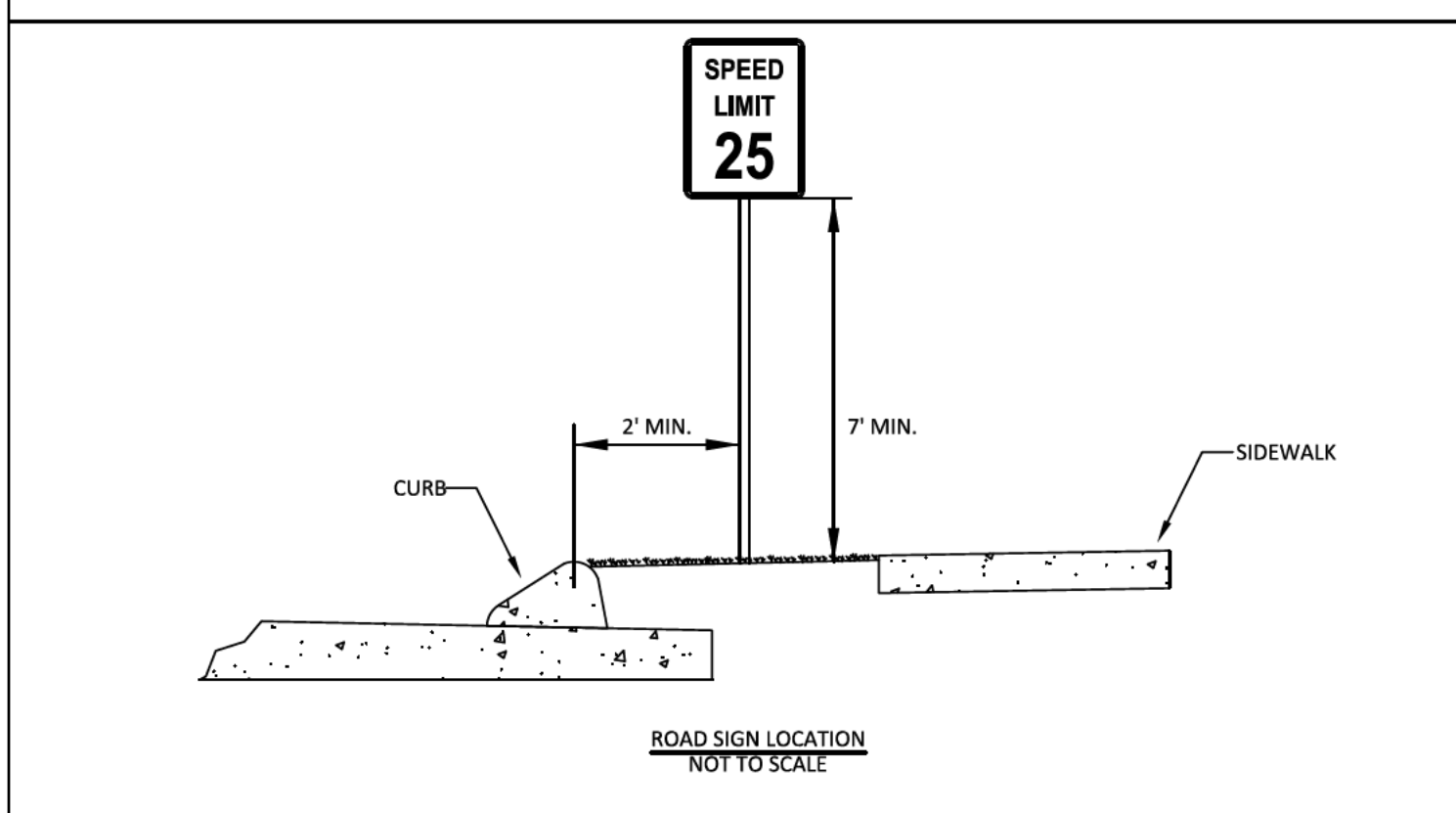
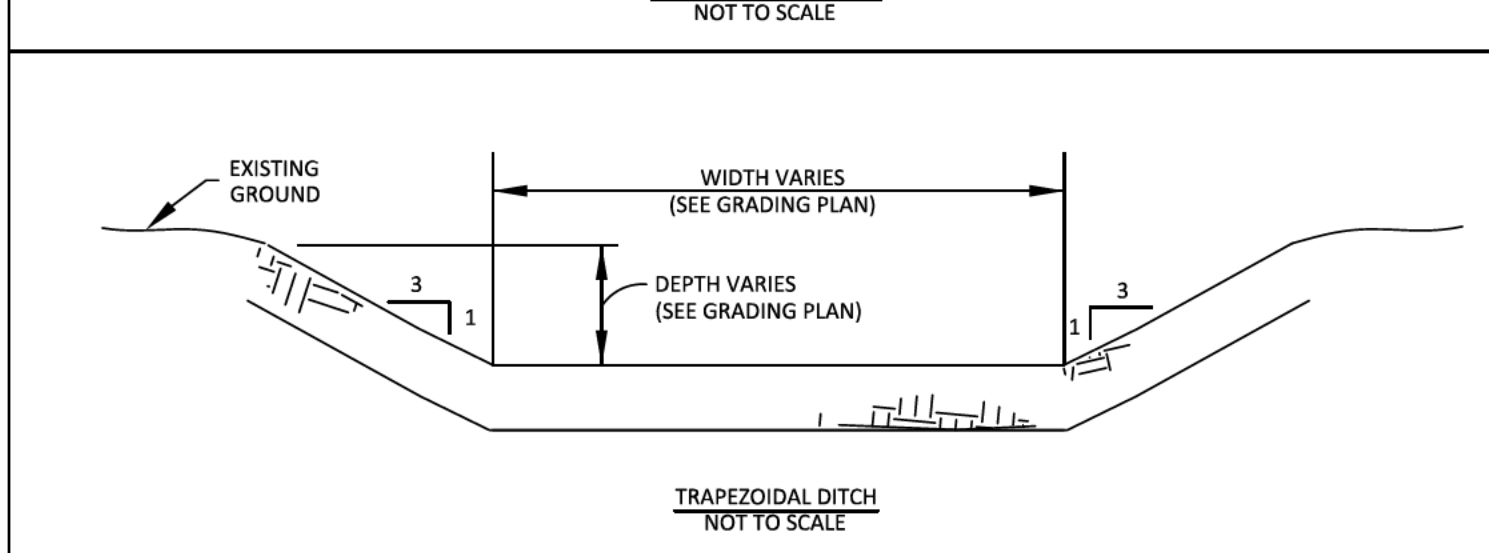
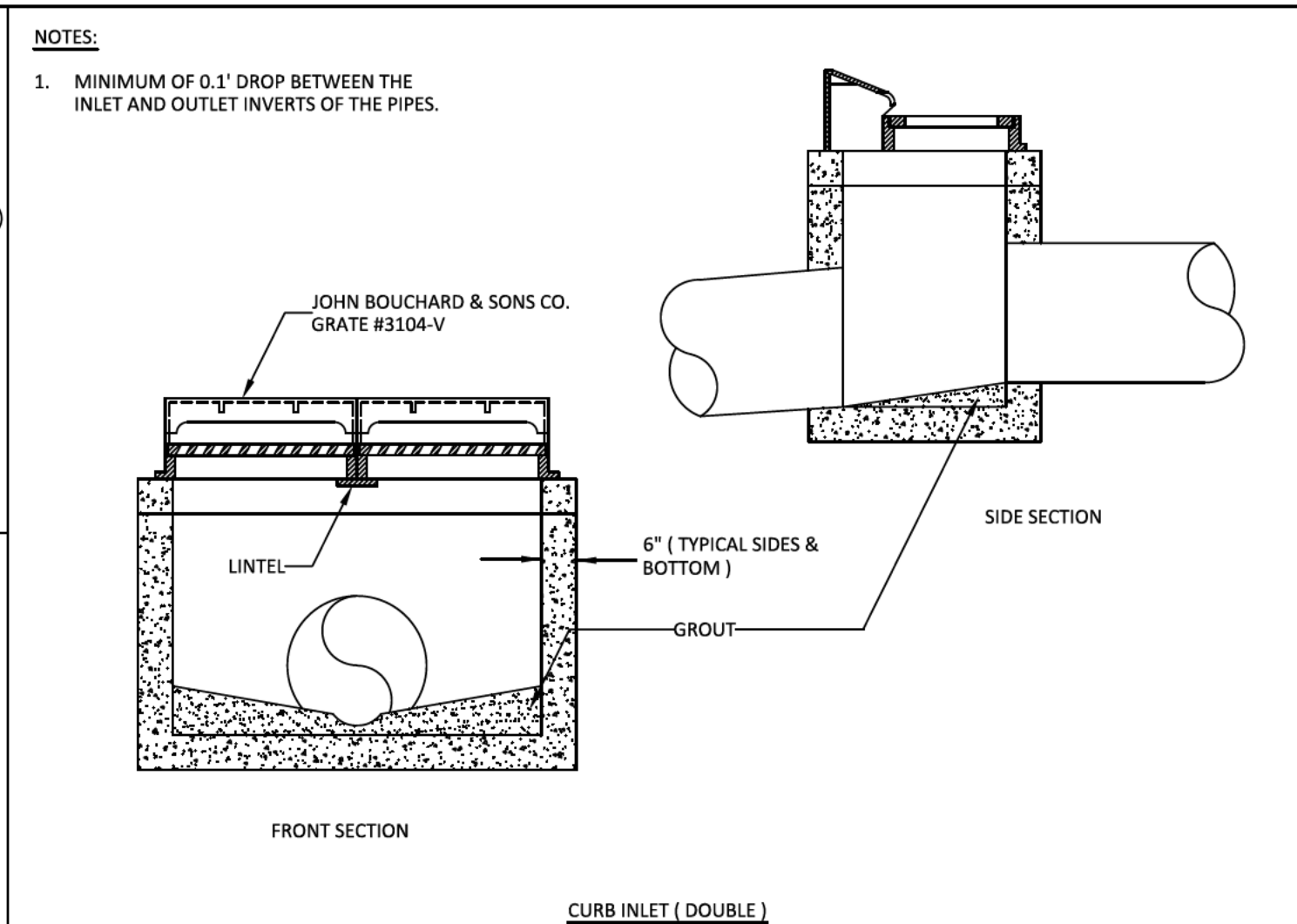
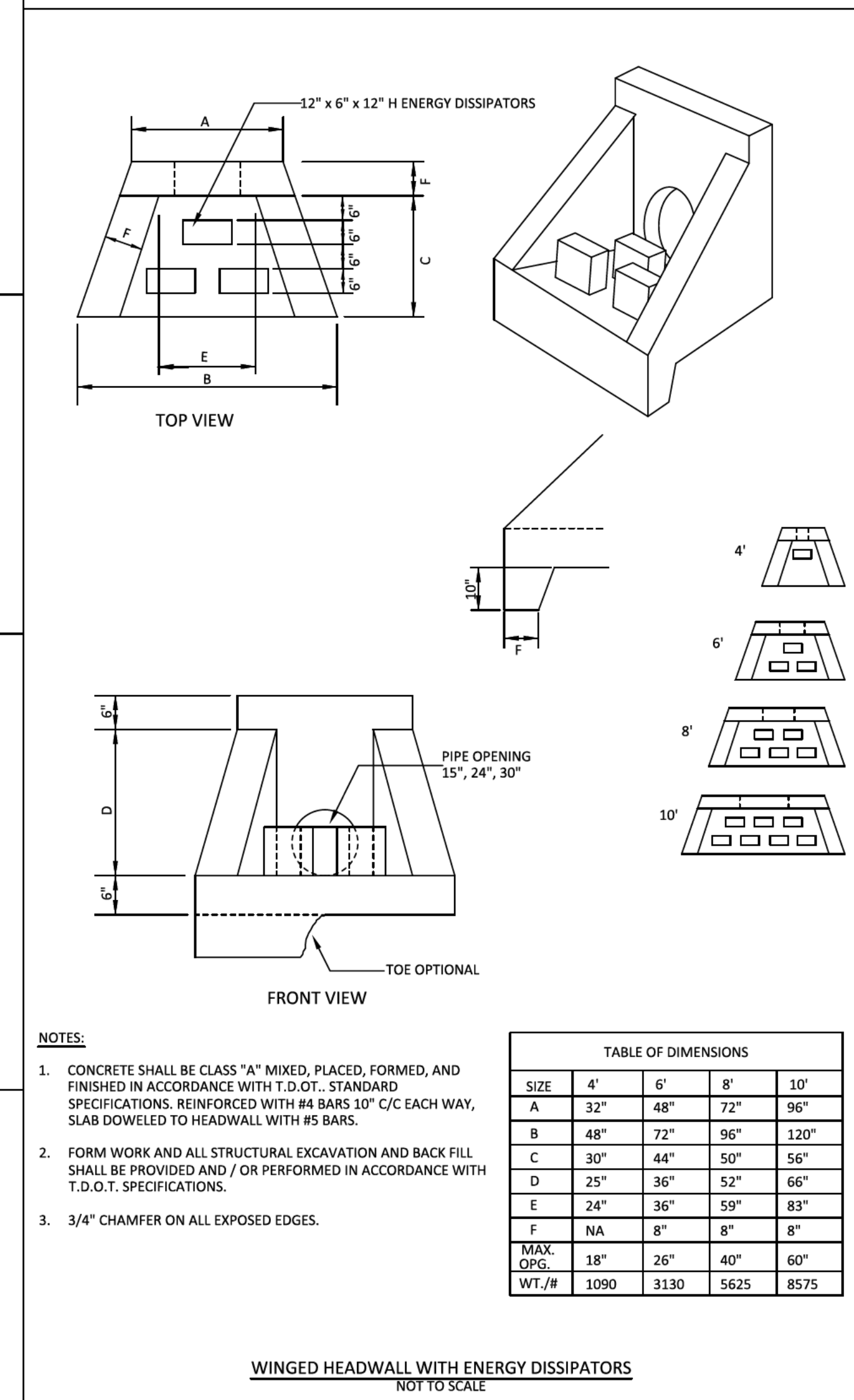
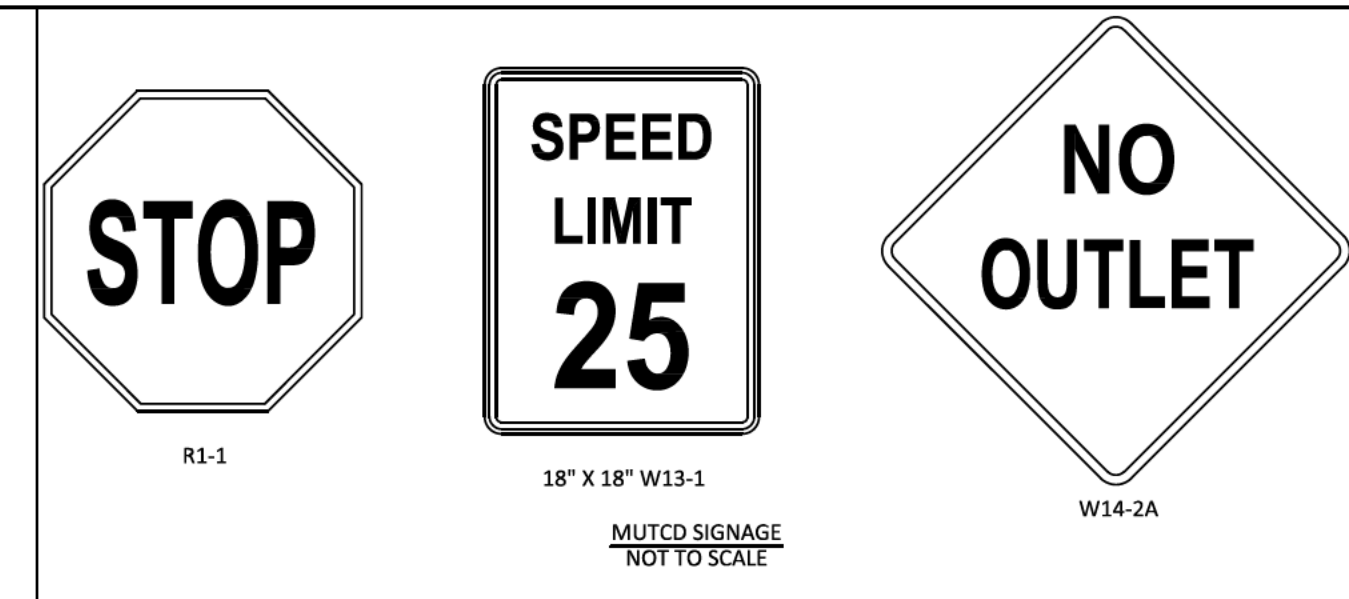
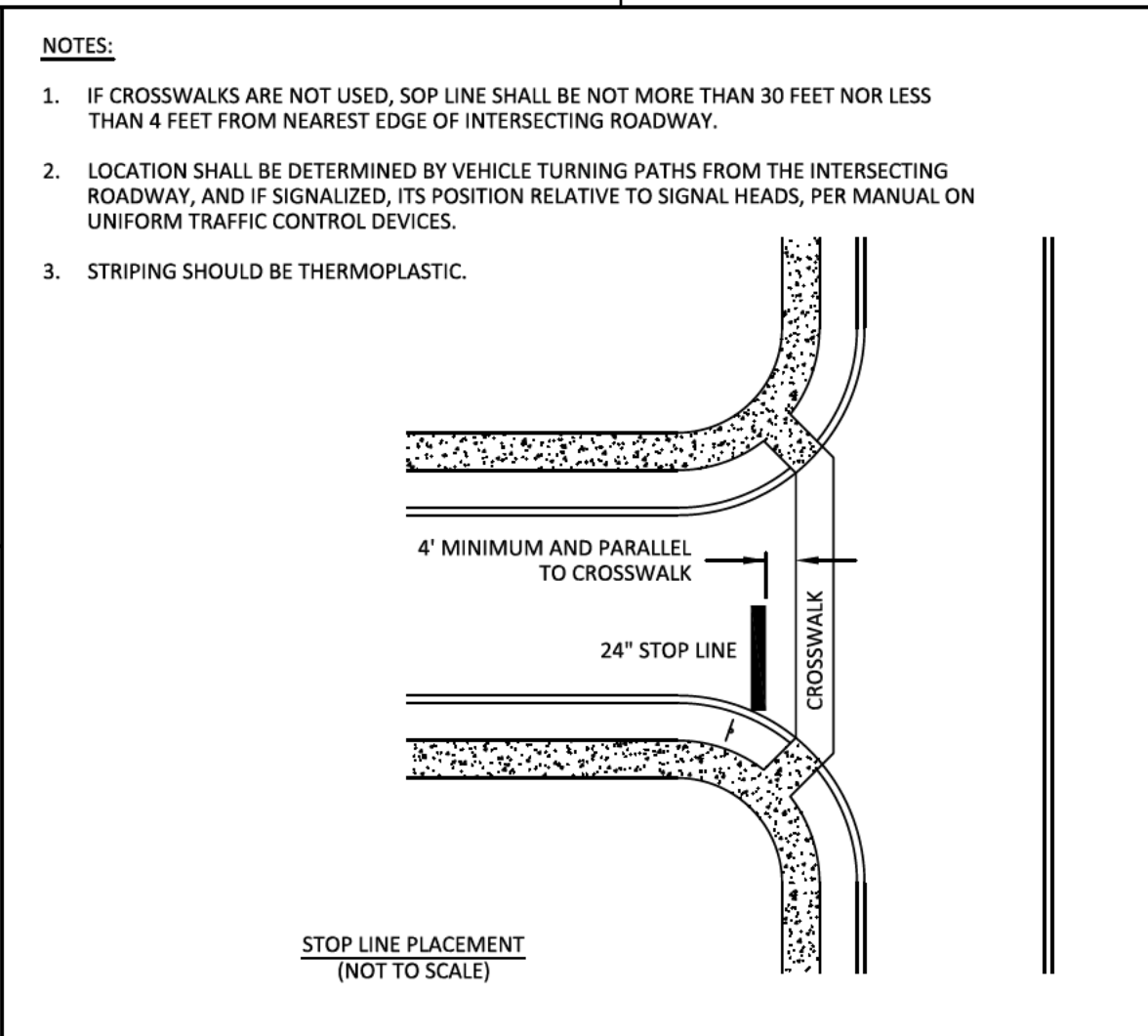
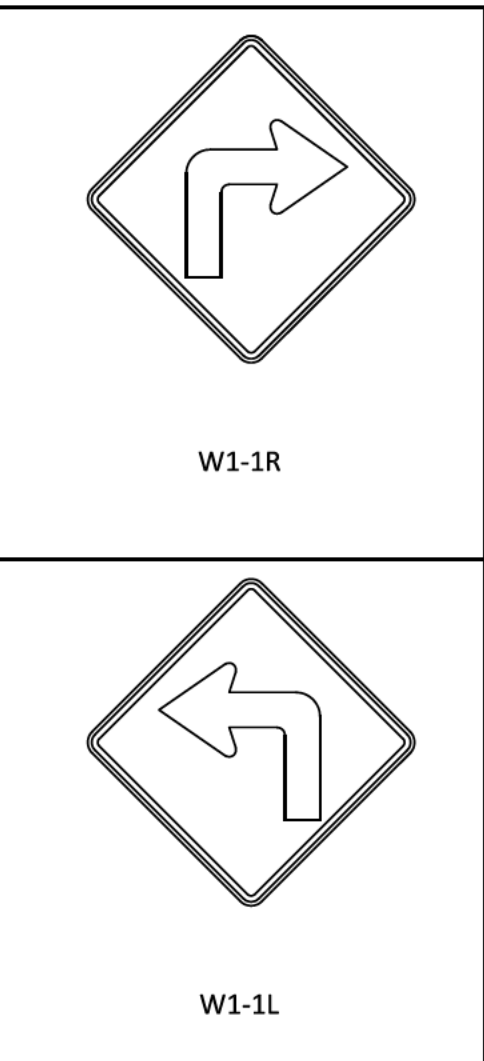
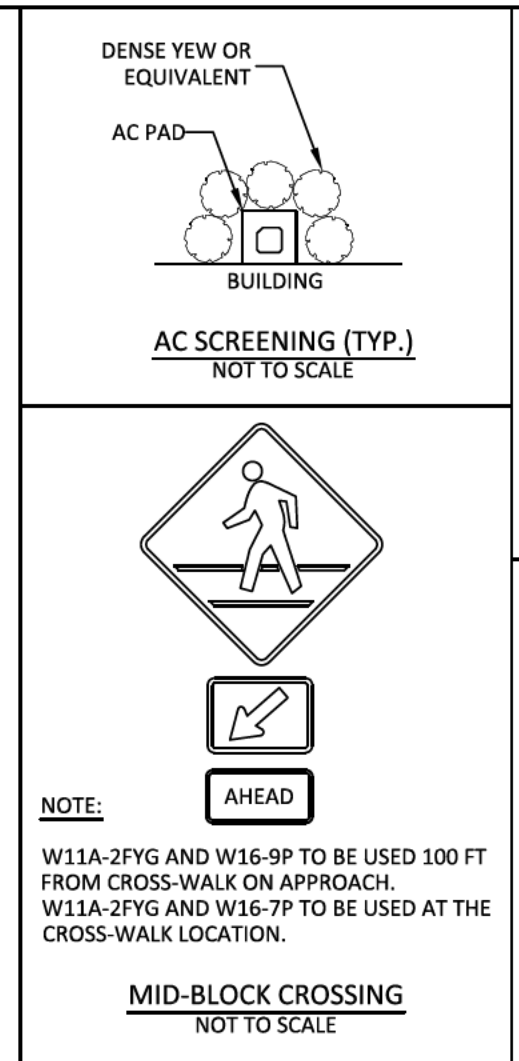
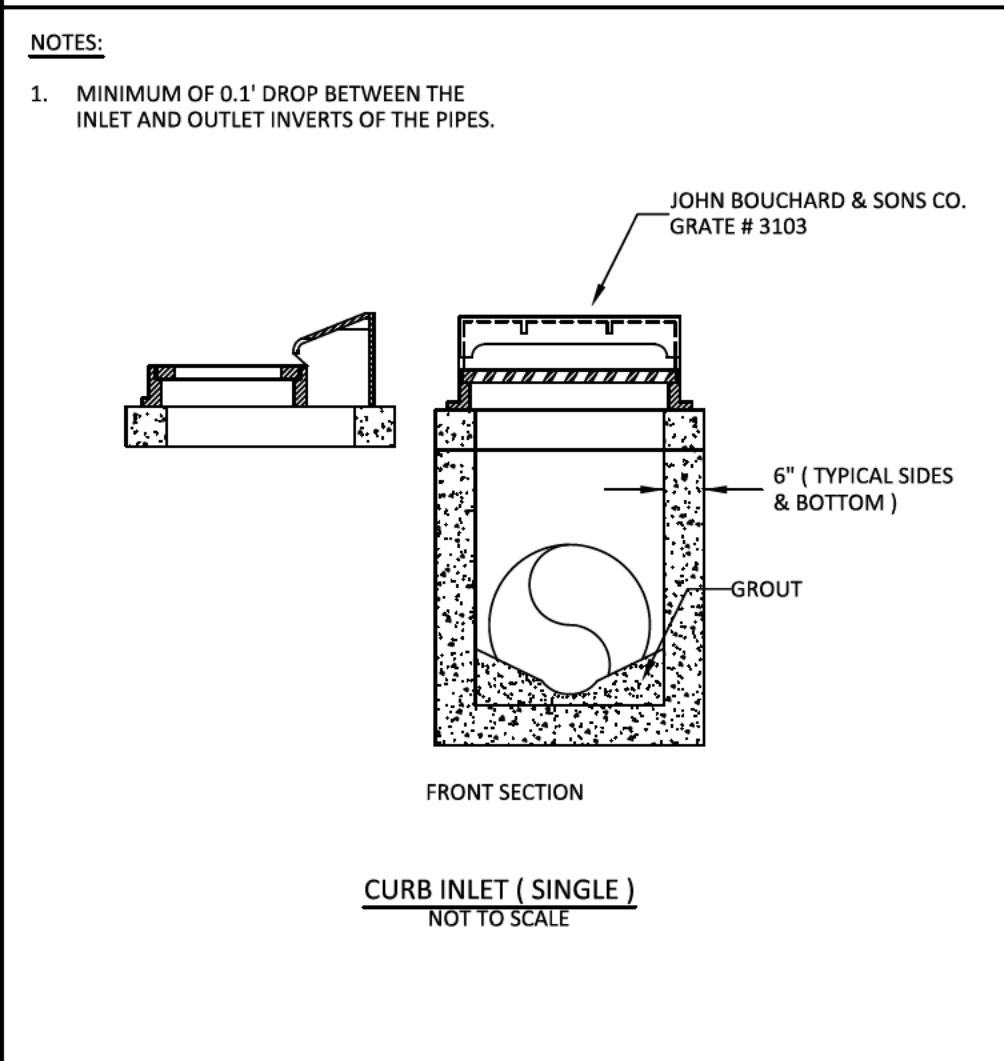
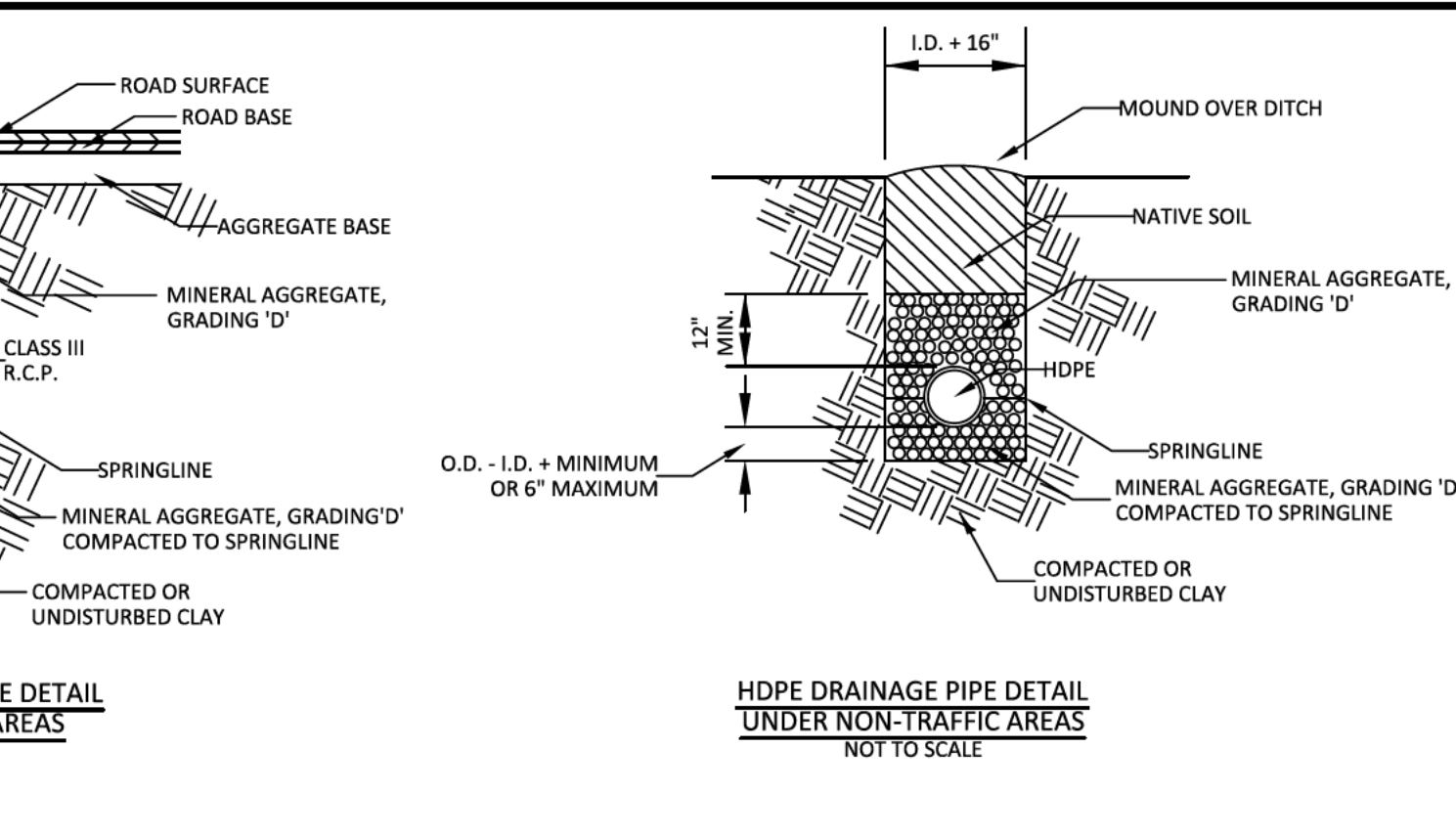
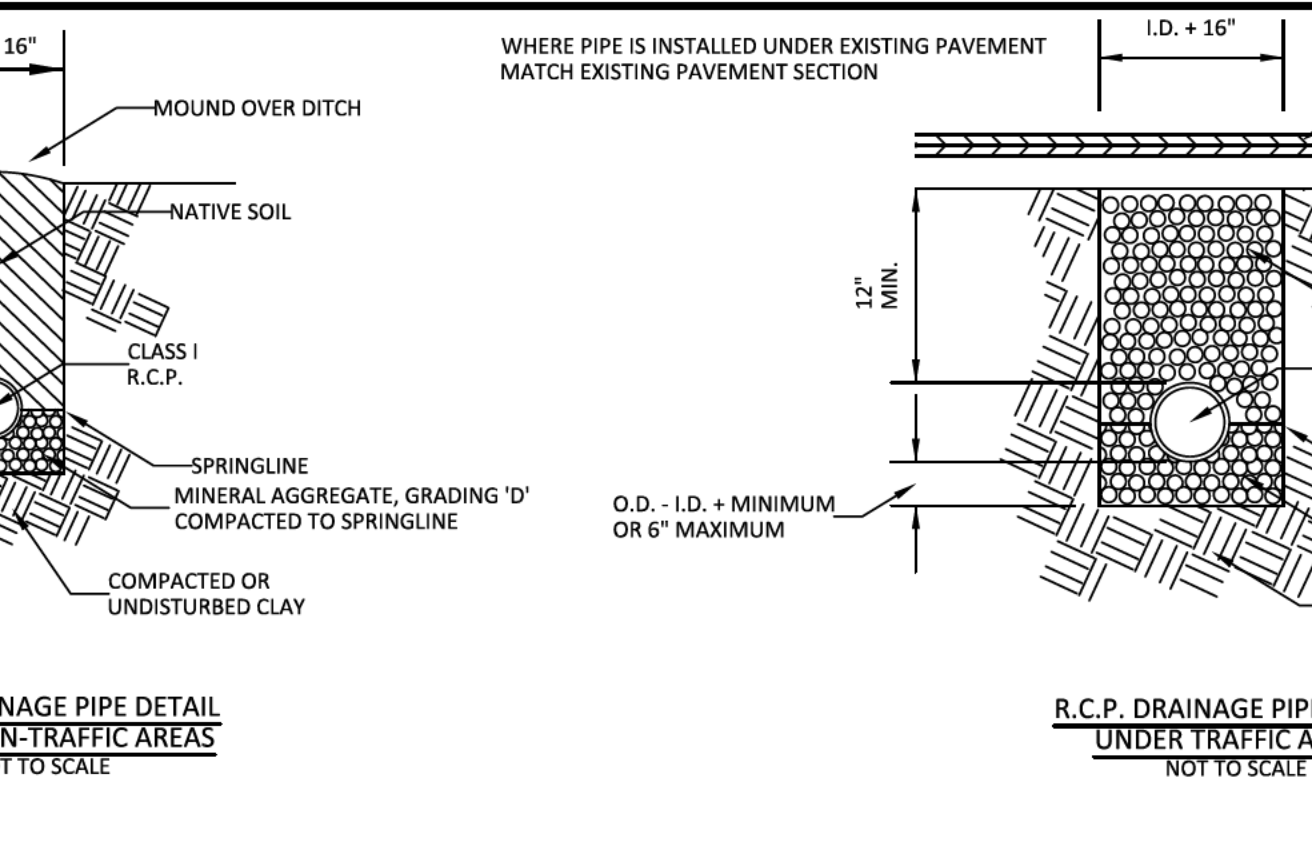
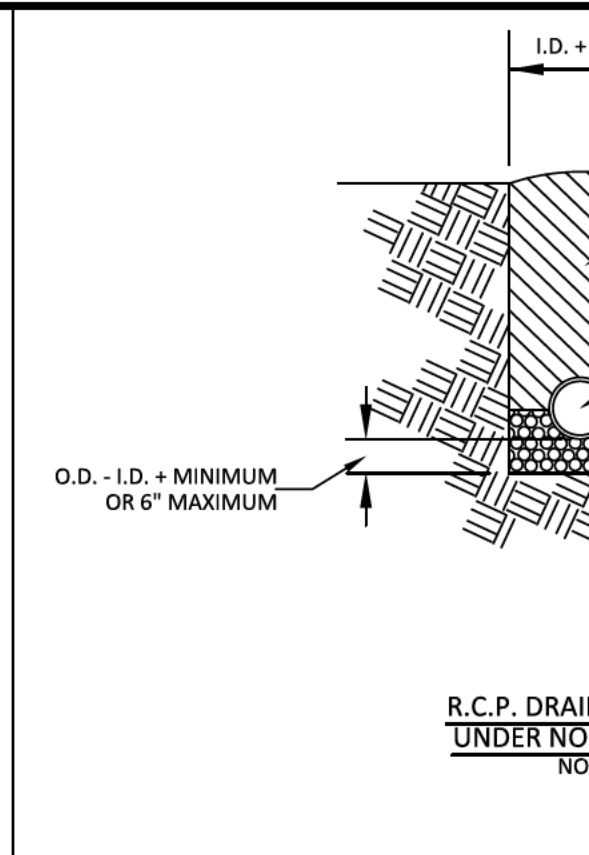
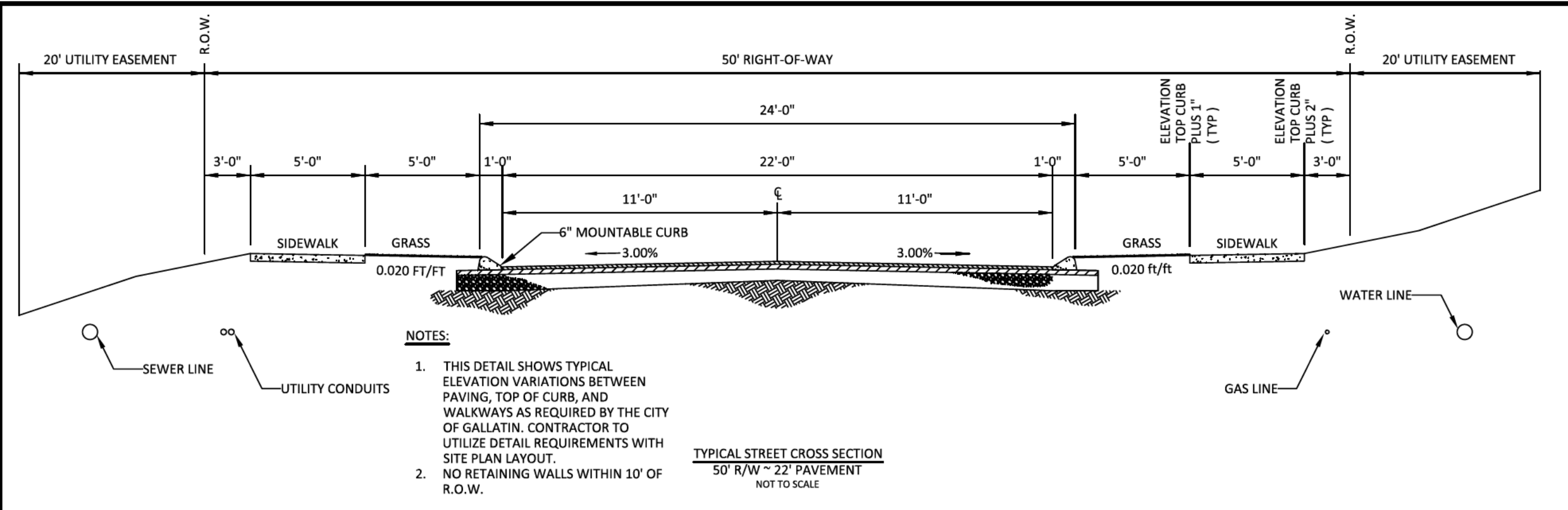


INSTALLATION OF THE UTILITIES SHOWN HEREON WILL REQUIRE AN EXCAVATION PERMIT WITH THE CITY ENGINEERING DEPARTMENT TO WORK WITHIN PUBLIC RIGHT-OF-WAY. PAVEMENT SHALL BE REPAIRED AS PER THE STANDARD ROAD TRENCH/PAVEMENT REPAIR DETAIL.

**811** IF YOU DIG IN TENNESSEE CALL 811 FIRST! or (800) 351-1111 or (615) 366-1987 TENNESSEE ONE CALL IT'S THE LAW

NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
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**SHEET NO. C5.4**  
SHEET 15 OF 40  
JOB# 21.112G 23 MARCH 2023



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03-29-23

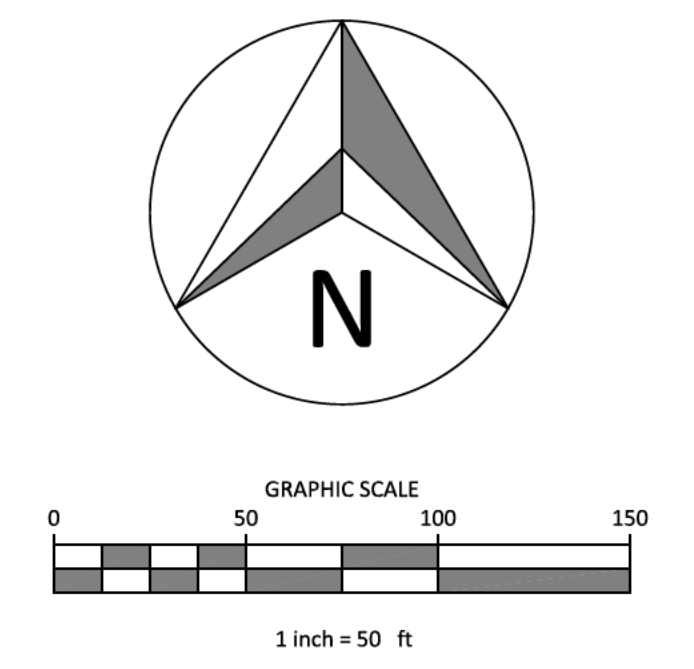
PLEASANT GROVE FARMS, PHASE 2  
CONSTRUCTION PLANS  
PLEASANT GROVE ROAD  
CITY OF WESTMORELAND  
SUMNER COUNTY, TENNESSEE

PAVING & DRAINAGE DETAILS

NO.	DATE	REVISION
1	10-25-2022	PER CITY COMMENTS
2	03-07-2023	PER CITY COMMENTS
3	03-27-2023	PER CITY COMMENTS

SHEET NO.  
**C 6.0**  
SHEET 16 OF 40  
JOB# 21.112G 23 MARCH 2022





- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
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EROSION CONTROL MEASURES SHOWN ON ALL PHASE 1 EROSION CONTROL PLANS IN THIS PLAN SET MUST BE INSTALLED AND STABILIZED PRIOR TO THE CITY OF WESTMORELAND ENGINEERING DIVISION RELEASING THE FULL LAND DISTURBANCE PERMIT (LDP) FOR THE SITE.

**NAG DESIGNATIONS:**  
**NAG A** NAG S150 STAPLE "D"  
 ALL DITCHES TO BE LINED WITH NAG S150 TEMPORARY MATTING IMMEDIATELY UPON FINAL GRADING UNLESS OTHERWISE NOTED.  
 ALL 3:1 SLOPES TO BE STABILIZED WITH NAG S150 TEMPORARY MATTING.

- EROSION CONTROL LEGEND:**
- IP - INLET PROTECTION
  - SF - SILT FENCE
  - SFB - SILT FENCE WITH BACKING
  - RC - ROCK CHECK
  - CE - CONSTRUCTION EXIT
  - FR - FILTER RING
  - NAG - NORTH AMERICAN GREEN OR EQUAL

**TEMPORARY SEEDING NOTES**  
 1. SEED AND STRAW REQUIRED AS FOLLOWS;  
 STRAW: 75 LBS PER 1,000 SQ. FT.  
 10-10-10 FERTILIZER: 200 LBS PER ACRE  
 SEED: 100 LBS PER ACRE  
 AGR LIMC: 75 LBS PER 1,000 SQ. FT.

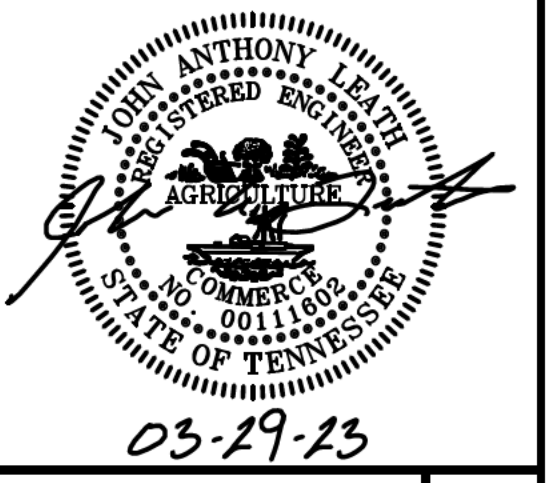
**TEMPORARY COVER SEEDING MIXTURES**

SEEDING DATE	GRASS SEED
JANUARY 1 TO MAY 1	ITALIAN RYE KOREAN LESPEDEZA SUMMER OATS
MAY 1 TO JULY 15	SUDAN - SORGHUM STARBU MILLET
MAY 1 TO JULY 15	SALICORN RYE
JULY 15 TO JANUARY 1	ITALIAN RYE

**OUTFALL CHARACTERISTICS:**

OUTFALL	ACREAGE	SLOPE %
1	2,476	VARIES
2	4,360	VARIES
3	4,440	VARIES
4	4,980	VARIES
5	4,550	VARIES
6	4,945	VARIES

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**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

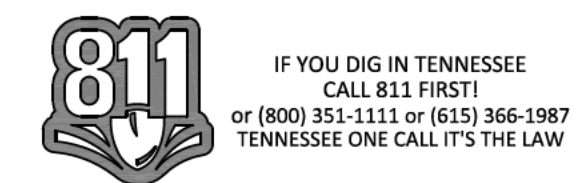
**EROSION CONTROL A**

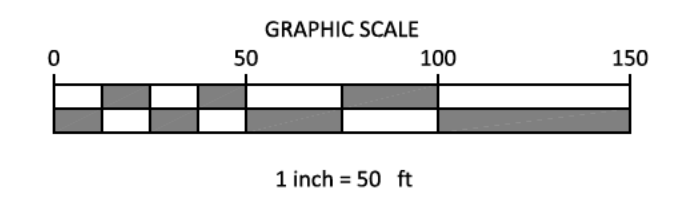
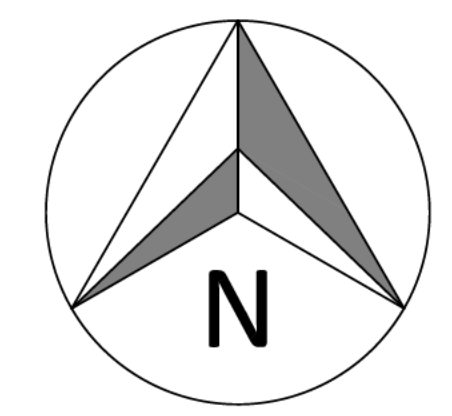
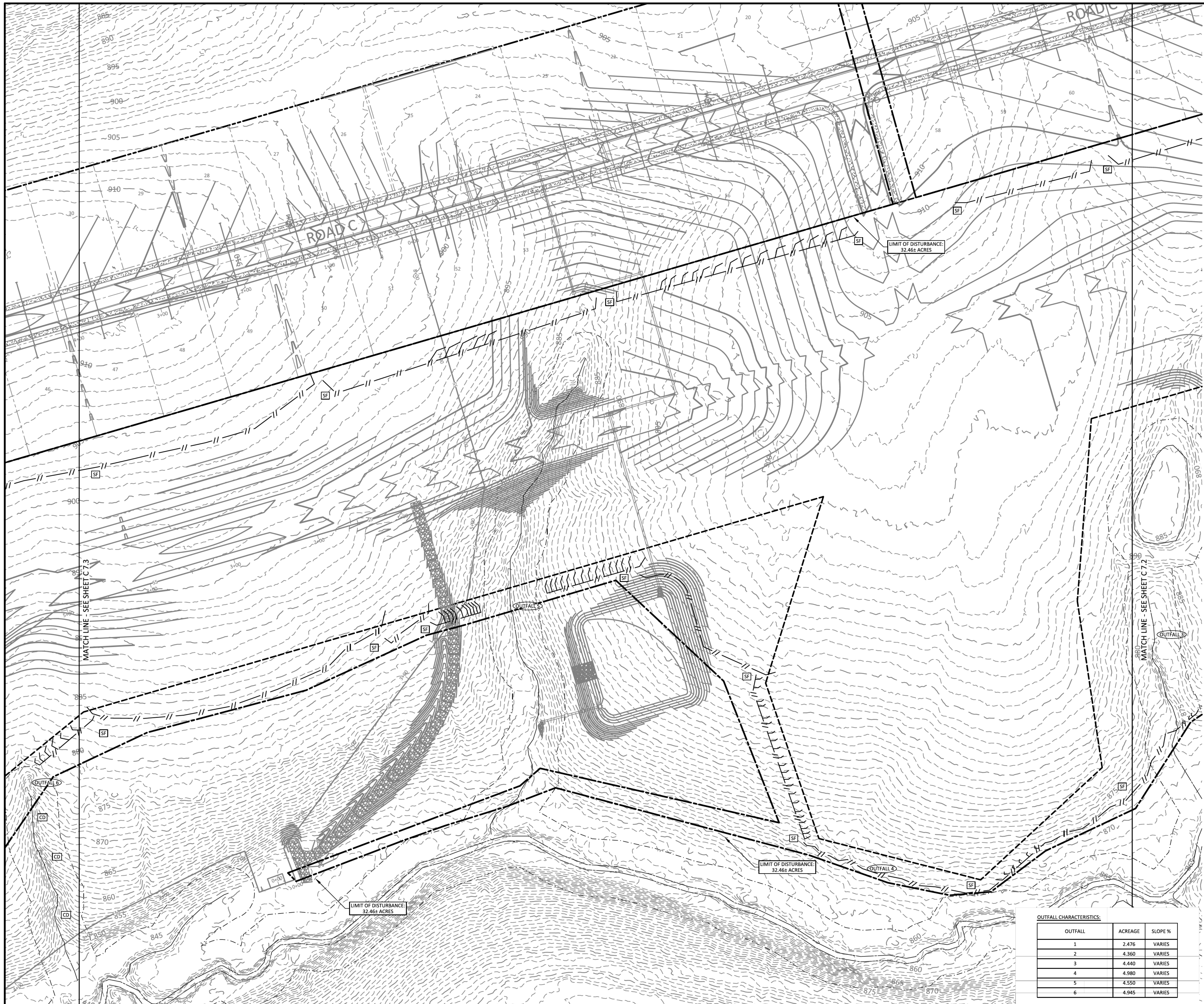
NO.	DATE	REVISION	PER CITY COMMENTS
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**SHEET NO.**  
**C 7.1**

SHEET 17 OF 40

JOB# 21.112G 23 MARCH 2022





- LEGEND**
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EROSION CONTROL MEASURES SHOWN ON ALL PHASE 2 EROSION CONTROL PLANS IN THIS PLAN SET MUST BE INSTALLED AND STABILIZED PRIOR TO THE CITY OF WESTMORELAND ENGINEERING DIVISION RELEASING THE FULL LAND DISTURBANCE PERMIT (LDP) FOR THE SITE.

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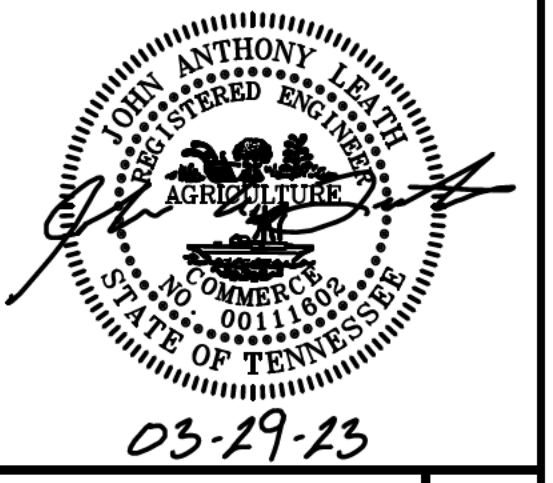
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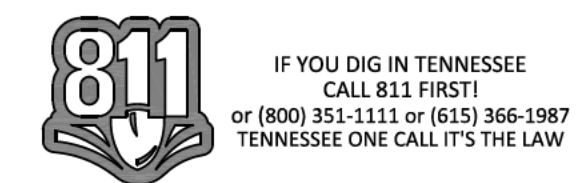
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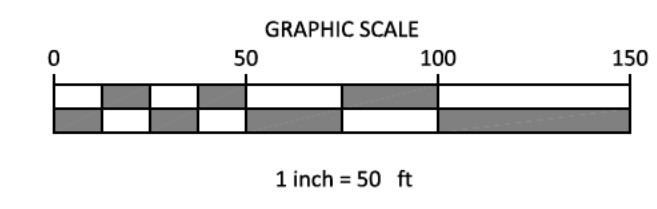
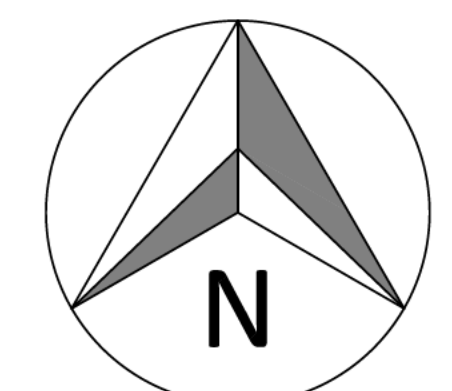
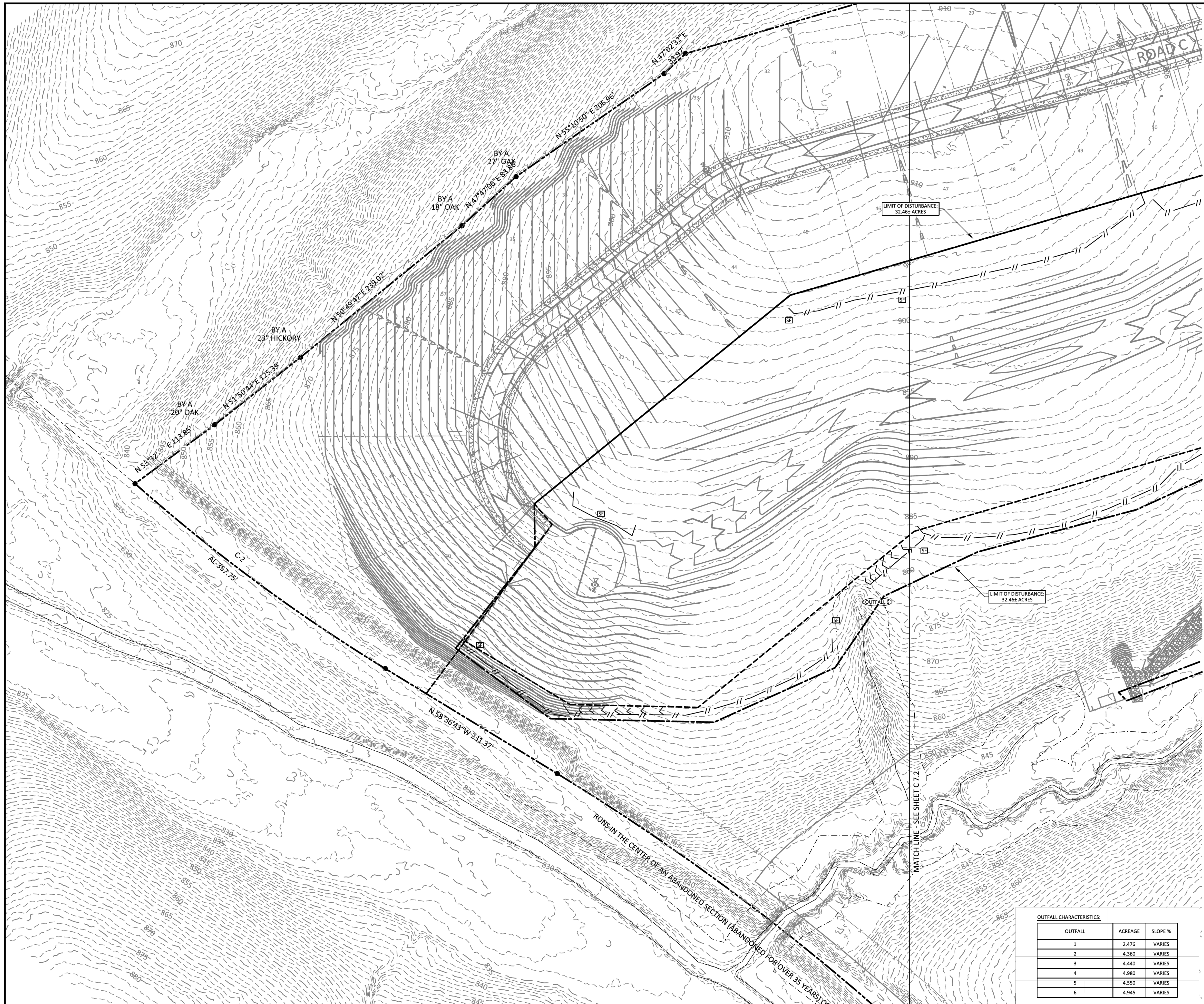
NO.	DATE	REVISION	PER CITY COMMENTS
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3	03-27-2023		

**SHEET NO. C7.2**

SHEET 18 OF 40

JOB# 21.112G 23 MARCH 2022





- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
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  - - - BUFFER
  - - - SETBACK / YARD
  - - - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
  - FM SANITARY FORCE MAIN
  - W WATER LINE
  - STORM SEWER
  - - - G GAS LINE
  - OHE OVERHEAD UTILITY LINE
  - UGT UNDERGROUND UTILITY LINE
  - FENCE
  - TREE LINE
  - UTILITY POLE
  - UTILITY POLE W/ LIGHT
  - ⊕ GUY ANCHOR
  - ⊕ TELEPHONE MANHOLE
  - ELECTRIC JUNCTION BOX
  - CABLE PEDESTAL
  - SANITARY SEWER MANHOLE
  - WATER METER
  - WATER VALVE
  - BLOW OFF VALVE
  - AIR RELEASE ASSEMBLY
  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
  - A/C PAD

EROSION CONTROL MEASURES SHOWN ON ALL PHASE 2 EROSION CONTROL PLANS IN THIS PLAN SET MUST BE INSTALLED AND STABILIZED PRIOR TO THE CITY OF WESTMORELAND ENGINEERING DIVISION RELEASING THE FULL LAND DISTURBANCE PERMIT (LDP) FOR THE SITE.

**NAG DESIGNATIONS:**  
**[NAG A]** NAG S150 STAPLE "D"  
 ALL DITCHES TO BE LINED WITH NAG S150 TEMPORARY MATTING IMMEDIATELY UPON FINAL GRADING UNLESS OTHERWISE NOTED.  
 ALL 3:1 SLOPES TO BE STABILIZED WITH NAG S150 TEMPORARY MATTING.

- EROSION CONTROL LEGEND:**
- [IP] - INLET PROTECTION
  - [SF] - SILT FENCE
  - [SFB] - SILT FENCE WITH BACKING
  - [RC] - ROCK CHECK
  - [CE] - CONSTRUCTION EXIT
  - [FR] - FILTER RING
  - [NAG] - NORTH AMERICAN GREEN OR EQUAL

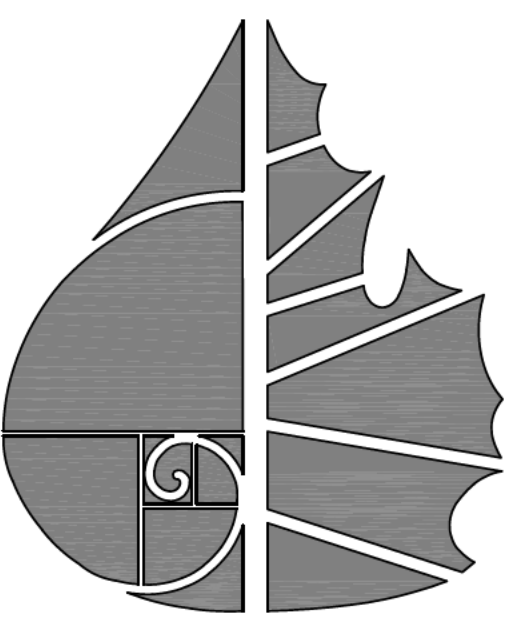
**TEMPORARY SEEDING NOTES**  
 1. SEED AND STRAW REQUIRED AS FOLLOWS;  
 STRAW: 75 LBS PER 1,000 SQ. FT.  
 10-10-10 FERTILIZER: 200 LBS PER ACRE  
 SEED: 100 LBS PER ACRE  
 AGR LIMC: 75 LBS PER 1,000 SQ. FT.

**TEMPORARY COVER SEEDING MIXTURES**

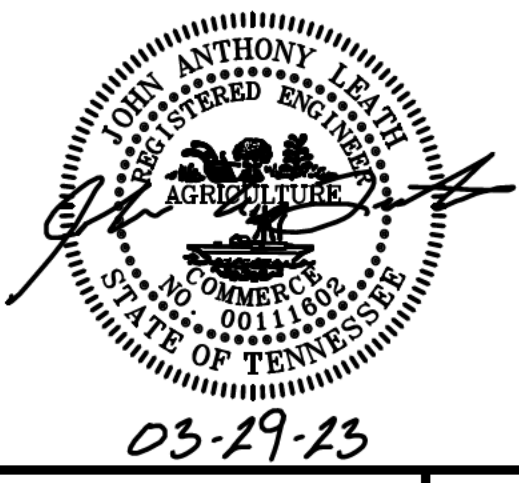
SEEDING DATE	GRASS SEED
JANUARY 1 TO MAY 1	ITALIAN RYE KOREAN LESPEDEZA SUMMER OATS
MAY 1 TO JULY 15	SUDAN - SORGHUM STARBU MILLET BALCH RYE
JULY 15 TO JANUARY 1	ITALIAN RYE

**OUTFALL CHARACTERISTICS:**

OUTFALL	ACREAGE	SLOPE %
1	2,476	VARIES
2	4,360	VARIES
3	4,440	VARIES
4	4,980	VARIES
5	4,550	VARIES
6	4,945	VARIES



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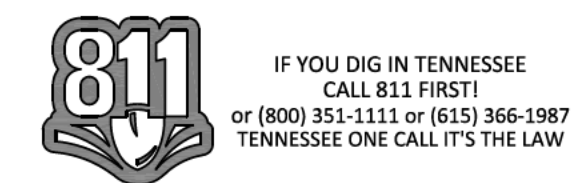


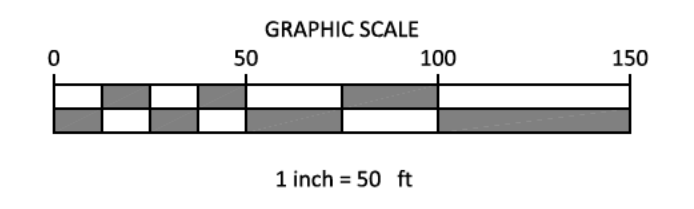
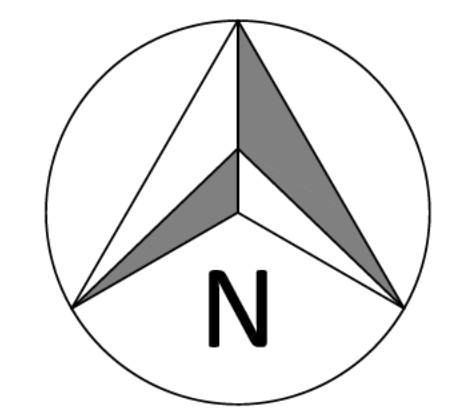
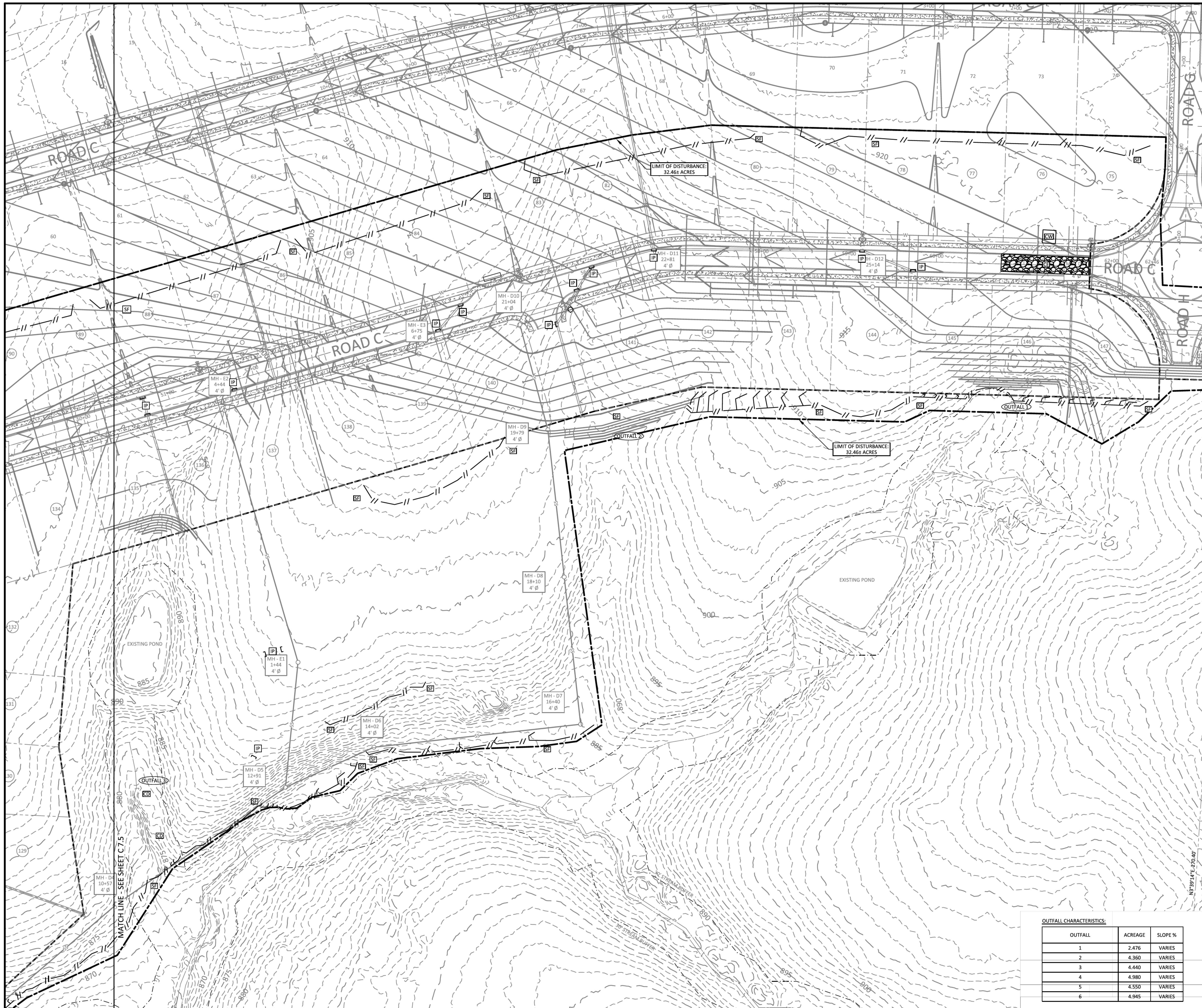
**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

**EROSION CONTROL A**

NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
3	03-27-2023		

**SHEET NO. C 7.3**  
 SHEET 19 OF 40  
 JOB# 21.112G 23 MARCH 2022





- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - - - BUFFER
  - - - - - SETBACK / YARD
  - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
  - FM SANITARY FORCE MAIN
  - W WATER LINE
  - STORM SEWER
  - G GAS LINE
  - OHE OVERHEAD UTILITY LINE
  - UGT UNDERGROUND UTILITY LINE
  - FENCE
  - TREE LINE
  - UTILITY POLE
  - UTILITY POLE W/ LIGHT
  - GUY ANCHOR
  - TELEPHONE MANHOLE
  - ELECTRIC JUNCTION BOX
  - CABLE PEDESTAL
  - SANITARY SEWER MANHOLE
  - WATER METER
  - WATER VALVE
  - BLOW OFF VALVE
  - AIR RELEASE ASSEMBLY
  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
  - A/C PAD

EROSION CONTROL MEASURES SHOWN ON ALL PHASE 2 EROSION CONTROL PLANS IN THIS PLAN SET MUST BE INSTALLED AND STABILIZED PRIOR TO THE CITY OF WESTMORELAND ENGINEERING DIVISION RELEASING THE FULL LAND DISTURBANCE PERMIT (LDP) FOR THE SITE.

**NAG DESIGNATIONS:**  
**NAG A** NAG S150 STAPLE "D"  
 ALL DITCHES TO BE LINED WITH NAG S150 TEMPORARY MATTING IMMEDIATELY UPON FINAL GRADING UNLESS OTHERWISE NOTED.  
 ALL 3:1 SLOPES TO BE STABILIZED WITH NAG S150 TEMPORARY MATTING.

- EROSION CONTROL LEGEND:**
- IP - INLET PROTECTION
  - SF - SILT FENCE
  - SFB - SILT FENCE WITH BACKING
  - RC - ROCK CHECK
  - CE - CONSTRUCTION EXIT
  - FR - FILTER RING
  - NAG - NORTH AMERICAN GREEN OR EQUAL

**TEMPORARY SEEDING NOTES**  
 1. SEED AND STRAW REQUIRED AS FOLLOWS:  
 STRAW: 75 LBS PER 1,000 SQ. FT.  
 10-10-10 FERTILIZER: 200 LBS PER ACRE  
 SEED: 100 LBS PER ACRE  
 AGR LIMC: 75 LBS PER 1,000 SQ. FT.

**TEMPORARY COVER SEEDING MIXTURES**

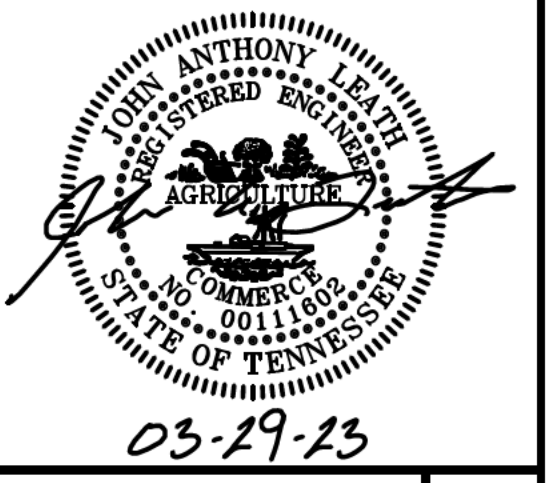
SEEDING DATE	GRASS SEED
JANUARY 1 TO MAY 1	ITALIAN RYE KOREAN LESPEDEZA SUMMER OATS
MAY 1 TO JULY 15	SUDAN - SORGHUM STARBU MILLET
JULY 15 TO JANUARY 1	SALICORN RYE ITALIAN RYE

**OUTFALL CHARACTERISTICS:**

OUTFALL	ACREAGE	SLOPE %
1	2,476	VARIES
2	4,360	VARIES
3	4,440	VARIES
4	4,980	VARIES
5	4,550	VARIES
6	4,945	VARIES



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**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

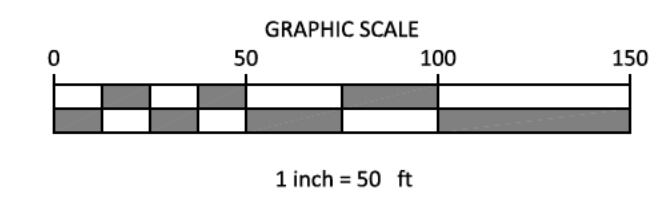
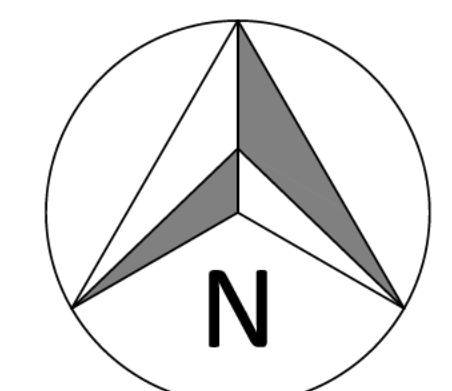
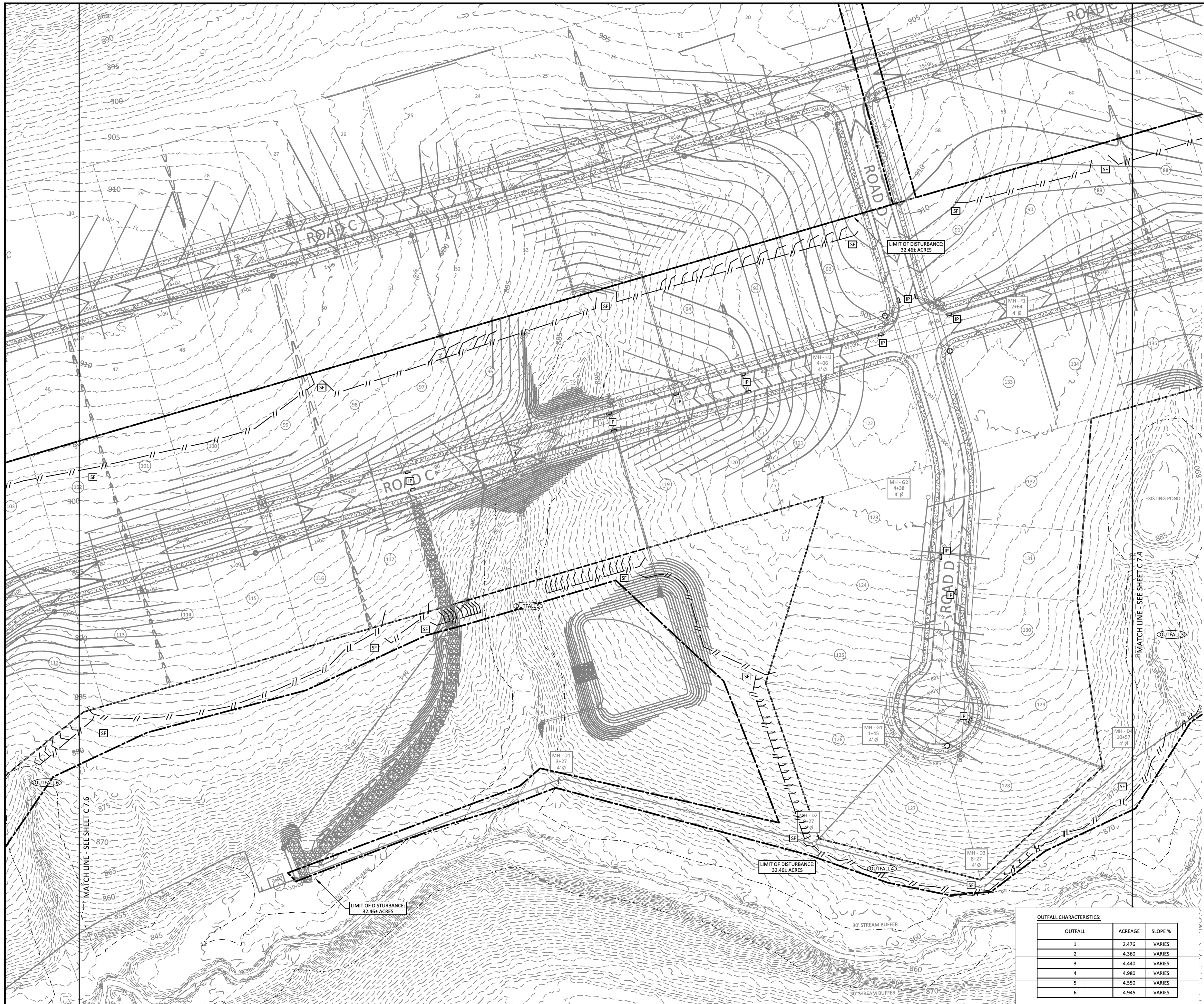
**EROSION CONTROL B**

NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
3	03-27-2023		

**SHEET NO. C7.4**

SHEET 20 OF 40

JOB# 21.112G 23 MARCH 2022



- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - BUFFER
  - SETBACK / YARD
  - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
  - FM SANITARY FORCE MAIN
  - W WATER LINE
  - STORM SEWER
  - G GAS LINE
  - OHE OVERHEAD UTILITY LINE
  - UGT UNDERGROUND UTILITY LINE
  - FENCE
  - TREE LINE
  - UTILITY POLE
  - UTILITY POLE W/ LIGHT
  - GUY ANCHOR
  - TELEPHONE MANHOLE
  - ELECTRIC JUNCTION BOX
  - CABLE PEDESTAL
  - SANITARY SEWER MANHOLE
  - WATER METER
  - WATER VALVE
  - BLOW OFF VALVE
  - AIR RELEASE ASSEMBLY
  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
  - A/C PAD

EROSION CONTROL MEASURES SHOWN ON ALL PHASE 2 EROSION CONTROL PLANS IN THIS PLAN SET MUST BE INSTALLED AND STABILIZED PRIOR TO THE CITY OF WESTMORELAND ENGINEERING DIVISION RELEASING THE FULL LAND DISTURBANCE PERMIT (LDP) FOR THE SITE.

**NAG DESIGNATIONS:**  
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**OUTFALL CHARACTERISTICS:**

OUTFALL	ACREAGE	SLOPE %
1	2,476	VARIES
2	4,360	VARIES
3	4,440	VARIES
4	4,980	VARIES
5	4,550	VARIES
6	4,945	VARIES

- EROSION CONTROL LEGEND:**
- IP - INLET PROTECTION
  - SF - SILT FENCE
  - SFB - SILT FENCE WITH BACKING
  - RC - ROCK CHECK
  - CE - CONSTRUCTION EXIT
  - FR - FILTER RING
  - NAG - NORTH AMERICAN GREEN OR EQUAL

**TEMPORARY SEEDING NOTES**

- SEED AND STRAW REQUIRED AS FOLLOWS:  
 STRAW: 75 LBS PER 1,000 SQ. FT.  
 10-10-10 FERTILIZER: 200 LBS PER ACRE  
 SEED: 100 LBS PER ACRE  
 AGR LIME: 75 LBS PER 1,000 SQ. FT.

**TEMPORARY COVER SEEDING MIXTURES**

SEEDING DATE	GRASS SEED
JANUARY 1 TO MAY 1	ITALIAN RYE KOREAN LESPEDEZA SUMMER OATS
MAY 1 TO JULY 15	SUDAN - SORGHUM STARBU MILLET
MAY 1 TO JULY 15	SALICORN RYE
JULY 15 TO JANUARY 1	ITALIAN RYE



IF YOU DIG IN TENNESSEE  
 CALL 811 FIRST!  
 OR (800) 851-1111 OR (615) 366-1987  
 TENNESSEE ONE CALL IT'S THE LAW

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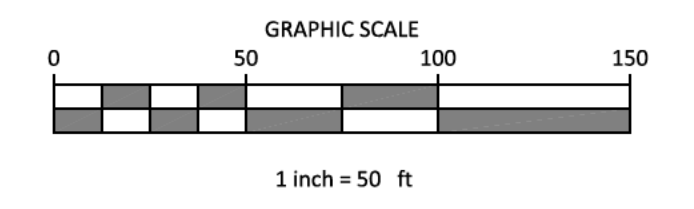
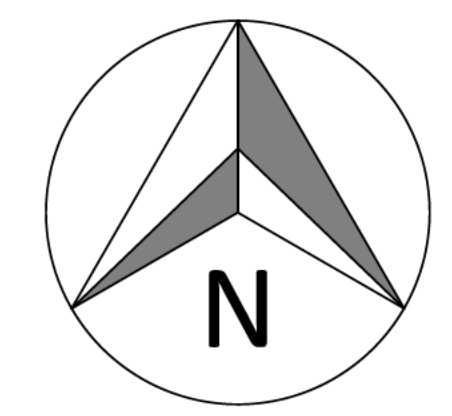
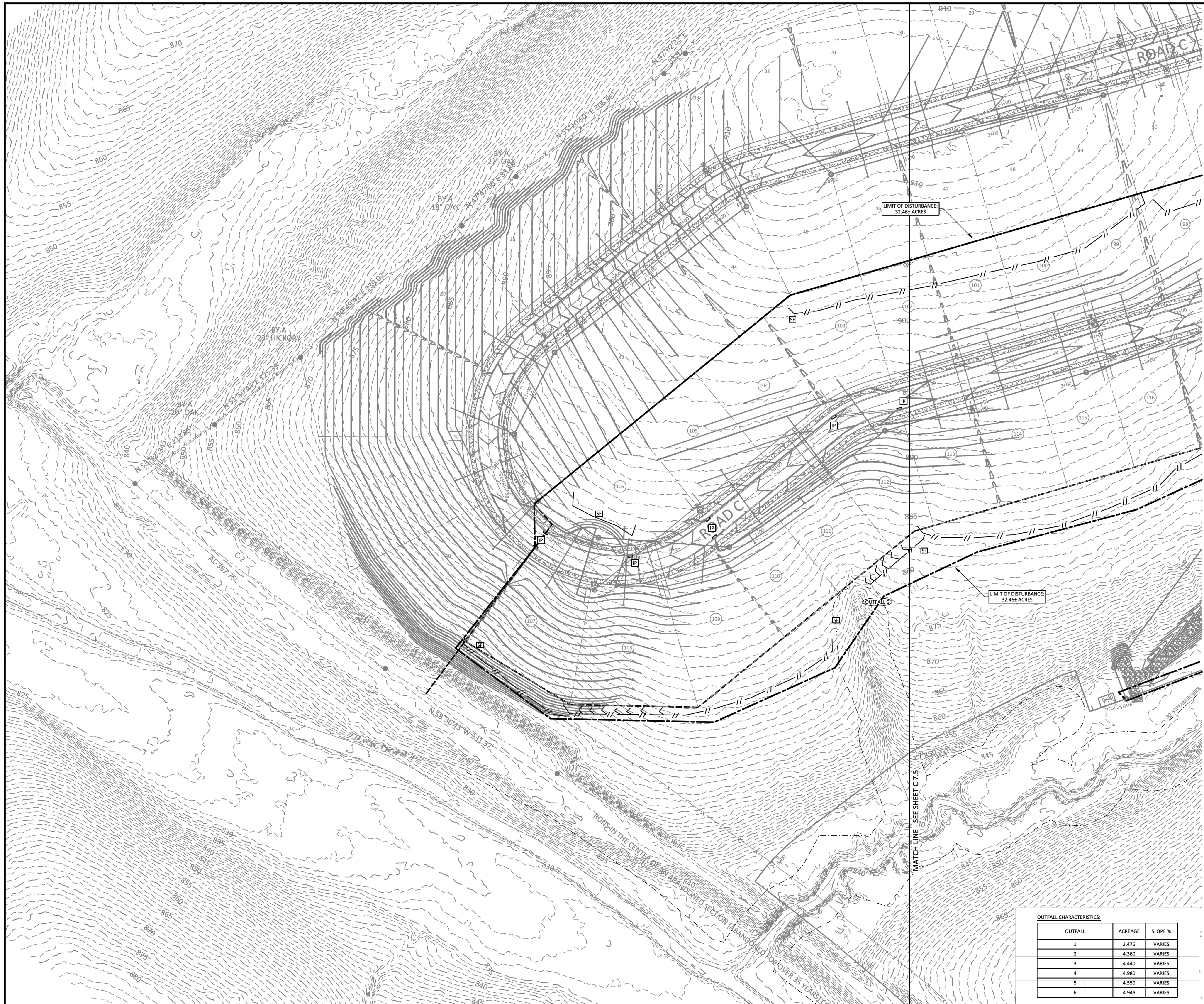
**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

**EROSION CONTROL B**

NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
3	03-27-2023		

**SHEET NO. C7.5**  
 SHEET 21 OF 40

JOB# 21.112G 23 MARCH 2022



- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - - - BUFFER
  - - - - - SETBACK / YARD
  - - - - - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
  - FM SANITARY FORCE MAIN
  - W WATER LINE
  - - - - - STORM SEWER
  - - - - - GAS LINE
  - OHE OVERHEAD UTILITY LINE
  - UGT UNDERGROUND UTILITY LINE
  - FENCE
  - TREE LINE
  - UTILITY POLE
  - UTILITY POLE W/ LIGHT
  - GUY ANCHOR
  - TELEPHONE MANHOLE
  - ELECTRIC JUNCTION BOX
  - CABLE PEDESTAL
  - SANITARY SEWER MANHOLE
  - WATER METER
  - WATER VALVE
  - BLOW OFF VALVE
  - AIR RELEASE ASSEMBLY
  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
  - A/C PAD

EROSION CONTROL MEASURES SHOWN ON ALL PHASE 2 EROSION CONTROL PLANS IN THIS PLAN SET MUST BE INSTALLED AND STABILIZED PRIOR TO THE CITY OF WESTMORELAND ENGINEERING DIVISION RELEASING THE FULL LAND DISTURBANCE PERMIT (LDP) FOR THE SITE.

**NAG DESIGNATIONS:**  
**NAG A** NAG S150 STAPLE "D"  
 ALL DITCHES TO BE LINED WITH NAG S150 TEMPORARY MATTING IMMEDIATELY UPON FINAL GRADING UNLESS OTHERWISE NOTED.  
 ALL 3:1 SLOPES TO BE STABILIZED WITH NAG S150 TEMPORARY MATTING.

- EROSION CONTROL LEGEND:**
- IP - INLET PROTECTION
  - SF - SILT FENCE
  - SFB - SILT FENCE WITH BACKING
  - RC - ROCK CHECK
  - CE - CONSTRUCTION EXIT
  - FR - FILTER RING
  - NAG - NORTH AMERICAN GREEN OR EQUAL

**TEMPORARY SEEDING NOTES**

- SEED AND STRAW REQUIRED AS FOLLOWS:  
 STRAW: 75 LBS PER 1,000 SQ. FT.  
 10-10-10 FERTILIZER: 200 LBS PER ACRE  
 SEED: 100 LBS PER ACRE  
 AGR LIMC: 75 LBS PER 1,000 SQ. FT.

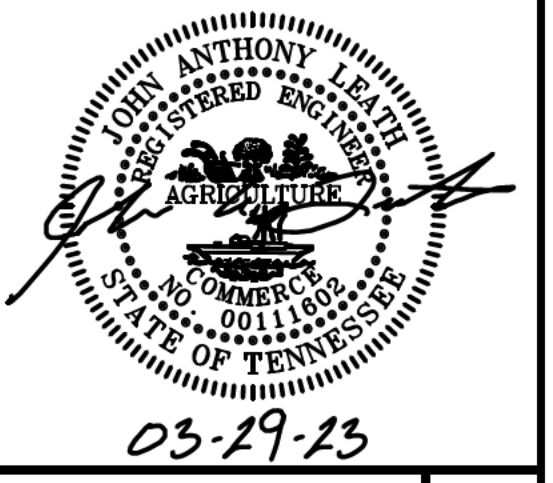
**TEMPORARY COVER SEEDING MIXTURES**

SEEDING DATE	GRASS SEED
JANUARY 1 TO MAY 1	ITALIAN RYE KOREAN LESPEDEZA SUMMER OATS
MAY 1 TO JULY 15	SUDAN - SORGHUM STARBU MILLET BALCH RYE
JULY 15 TO JANUARY 1	ITALIAN RYE

**OUTFALL CHARACTERISTICS:**

OUTFALL	ACREAGE	SLOPE %
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**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
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**EROSION CONTROL B**

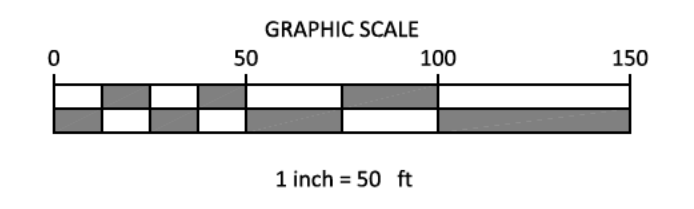
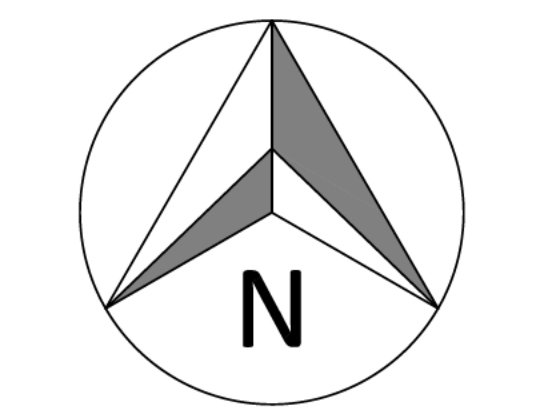
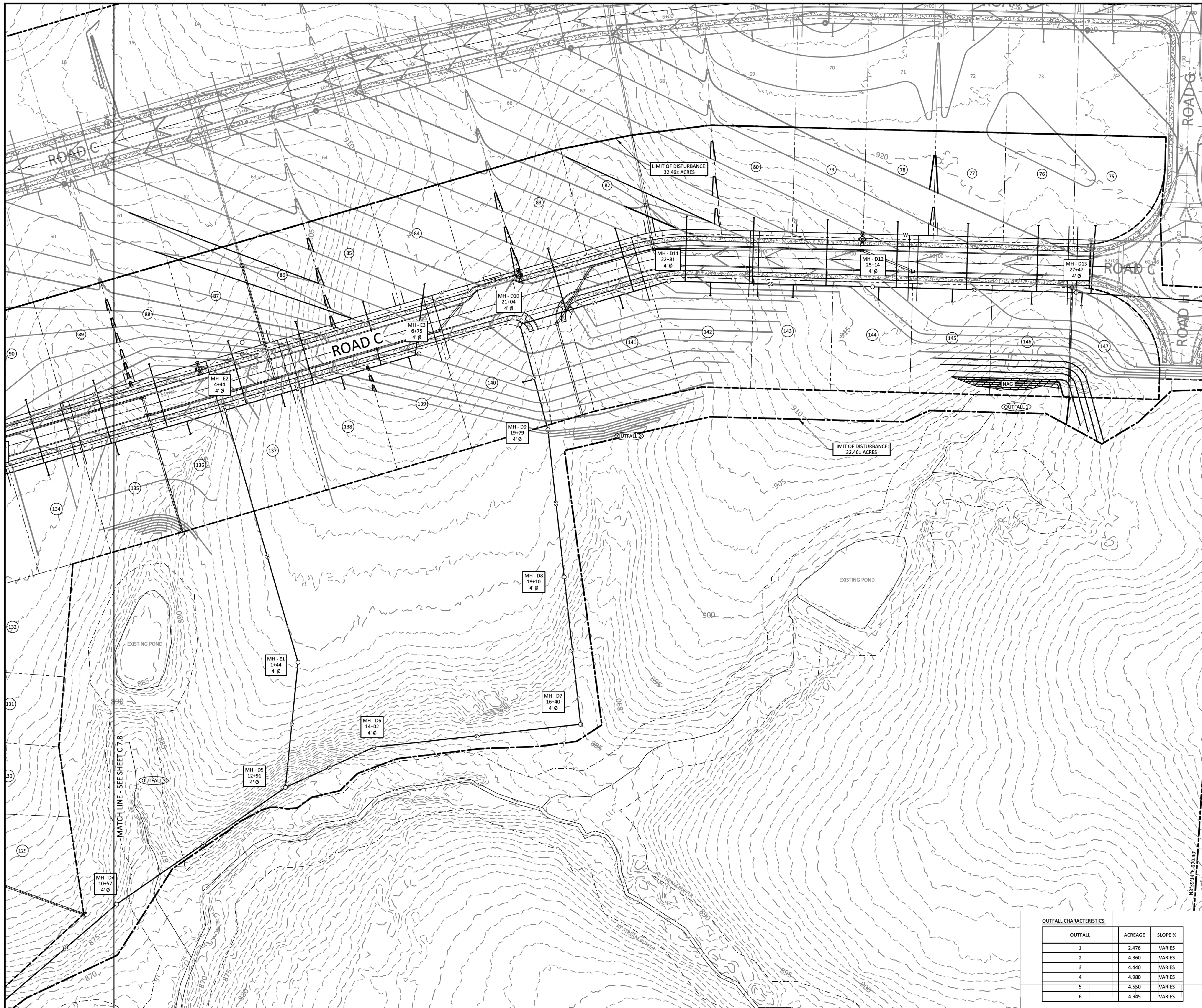
NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
3	03-27-2023		

**SHEET NO. C 7.6**

SHEET 22 OF 40

JOB# 21.112G 23 MARCH 2022

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 TENNESSEE ONE CALL IT'S THE LAW



- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - BUFFER
  - - - SETBACK / YARD
  - - - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
  - FM SANITARY FORCE MAIN
  - W WATER LINE
  - STORM SEWER
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  - TELEPHONE MANHOLE
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  - CABLE PEDESTAL
  - SANITARY SEWER MANHOLE
  - WATER METER
  - WATER VALVE
  - BLOW OFF VALVE
  - AIR RELEASE ASSEMBLY
  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
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EROSION CONTROL MEASURES SHOWN ON ALL PHASE 2 EROSION CONTROL PLANS IN THIS PLAN SET MUST BE INSTALLED AND STABILIZED PRIOR TO THE CITY OF WESTMORELAND ENGINEERING DIVISION RELEASING THE FULL LAND DISTURBANCE PERMIT (LDP) FOR THE SITE.

**NAG DESIGNATIONS:**  
**NAG A** NAG S150 STAPLE "D"  
 ALL DITCHES TO BE LINED WITH NAG S150 TEMPORARY MATTING IMMEDIATELY UPON FINAL GRADING UNLESS OTHERWISE NOTED.  
 ALL 3:1 SLOPES TO BE STABILIZED WITH NAG S150 TEMPORARY MATTING.  
 TOTAL NAG SF ON THIS PAGE: 1,159 SF

- EROSION CONTROL LEGEND:**
- IP - INLET PROTECTION
  - SF - SILT FENCE
  - SFB - SILT FENCE WITH BACKING
  - RC - ROCK CHECK
  - CE - CONSTRUCTION EXIT
  - FR - FILTER RING
  - NAG - NORTH AMERICAN GREEN OR EQUAL

**TEMPORARY SEEDING NOTES**  
 1. SEED AND STRAW REQUIRED AS FOLLOWS;  
 STRAW: 75 LBS PER 1,000 SQ. FT.  
 10-10-10 FERTILIZER: 200 LBS PER ACRE  
 SEED: 100 LBS PER ACRE  
 AGR LIMC: 75 LBS PER 1,000 SQ. FT.

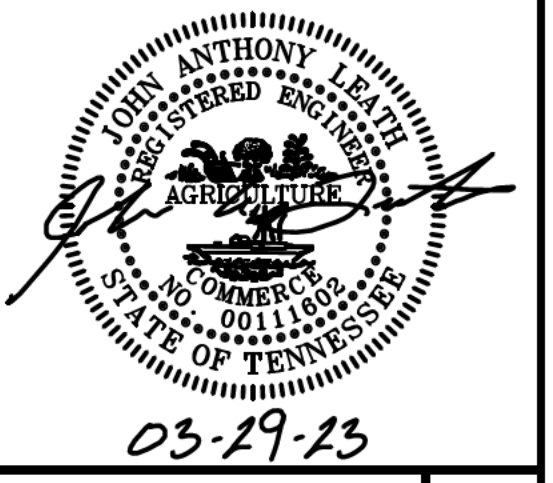
**TEMPORARY COVER SEEDING MIXTURES**

SEEDING DATE	GRASS SEED
JANUARY 1 TO MAY 1	ITALIAN RYE KOREAN LESPEDEZA SUMMER OATS
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**PLEASANT GROVE FARMS, PHASE 2**  
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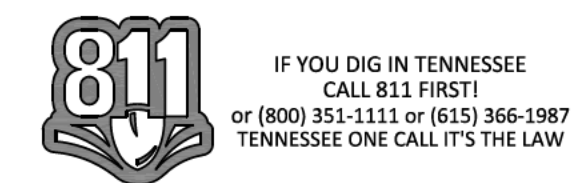
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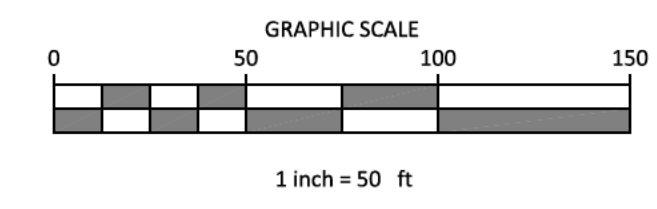
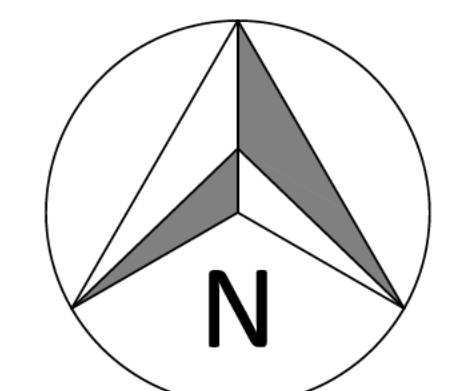
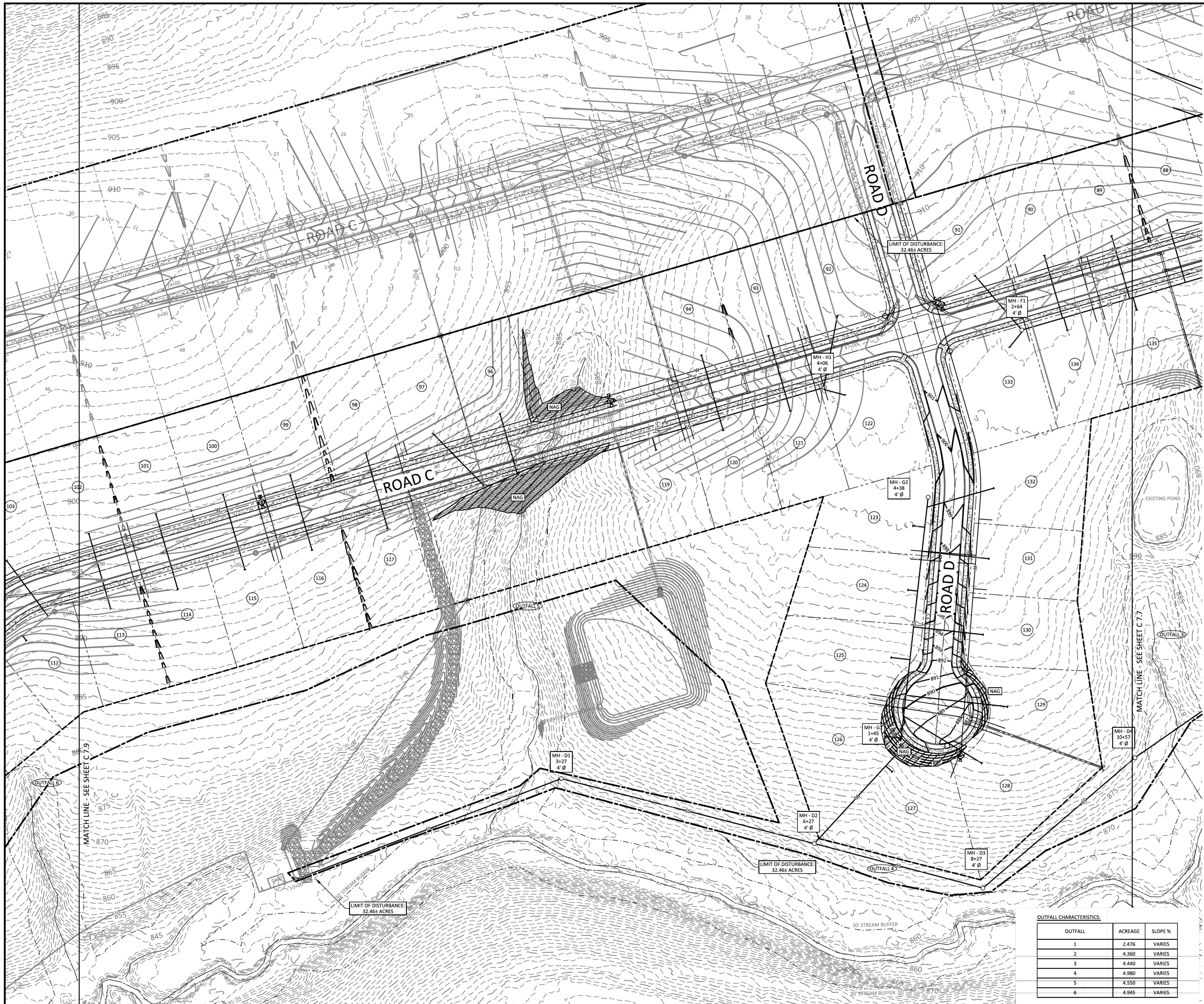
NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
3	03-27-2023		

**SHEET NO. C7.7**

SHEET 23 OF 40

JOB# 21.112G 23 MARCH 2022





- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - - - BUFFER
  - - - - - SETBACK / YARD
  - - - - - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
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 TOTAL NAG SF ON THIS PAGE: 10,428 SF

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- IP - INLET PROTECTION
  - SF - SILT FENCE
  - SFB - SILT FENCE WITH BACKING
  - RC - ROCK CHECK
  - CE - CONSTRUCTION EXIT
  - FR - FILTER RING
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- SEED AND STRAW REQUIRED AS FOLLOWS:  
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 SEED: 100 LBS PER ACRE  
 AGR LIME: 75 LBS PER 1,000 SQ. FT.

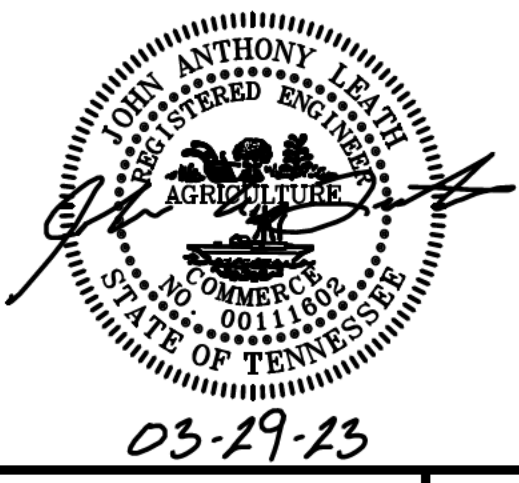
**TEMPORARY COVER SEEDING MIXTURES**

SEEDING DATE	GRASS SEED
JANUARY 1 TO MAY 1	ITALIAN RYE KOREAN LESPEDEZA SUMMER OATS
MAY 1 TO JULY 15	SUDAN - SORGHUM
MAY 1 TO JULY 15	STARBU MILLET
JULY 15 TO JANUARY 1	SALICORN RYE ITALIAN RYE

**OUTFALL CHARACTERISTICS:**

OUTFALL	ACREAGE	SLOPE %
1	2.476	VARIES
2	4.360	VARIES
3	4.440	VARIES
4	4.980	VARIES
5	4.550	VARIES
6	4.945	VARIES

**GreenLID Design**  
 114 B West Main Street  
 Gallatin, TN 37066  
 615-230-7269  
 andy.leath@greenliddesign.com



**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

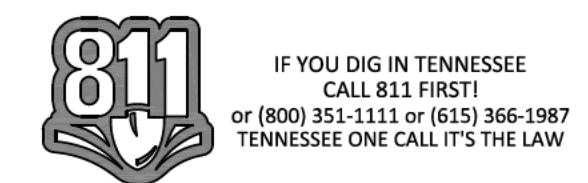
**EROSION CONTROL C**

NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
3	03-27-2023		

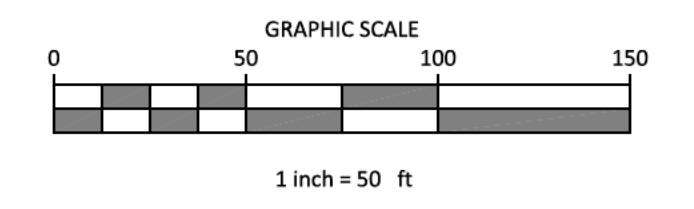
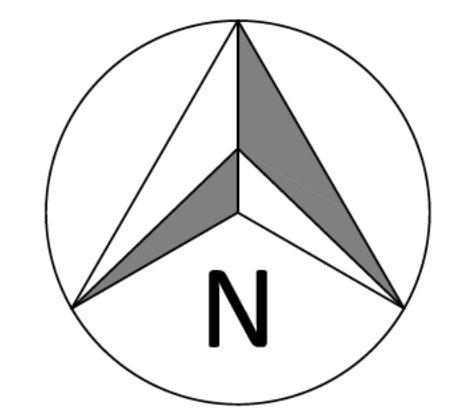
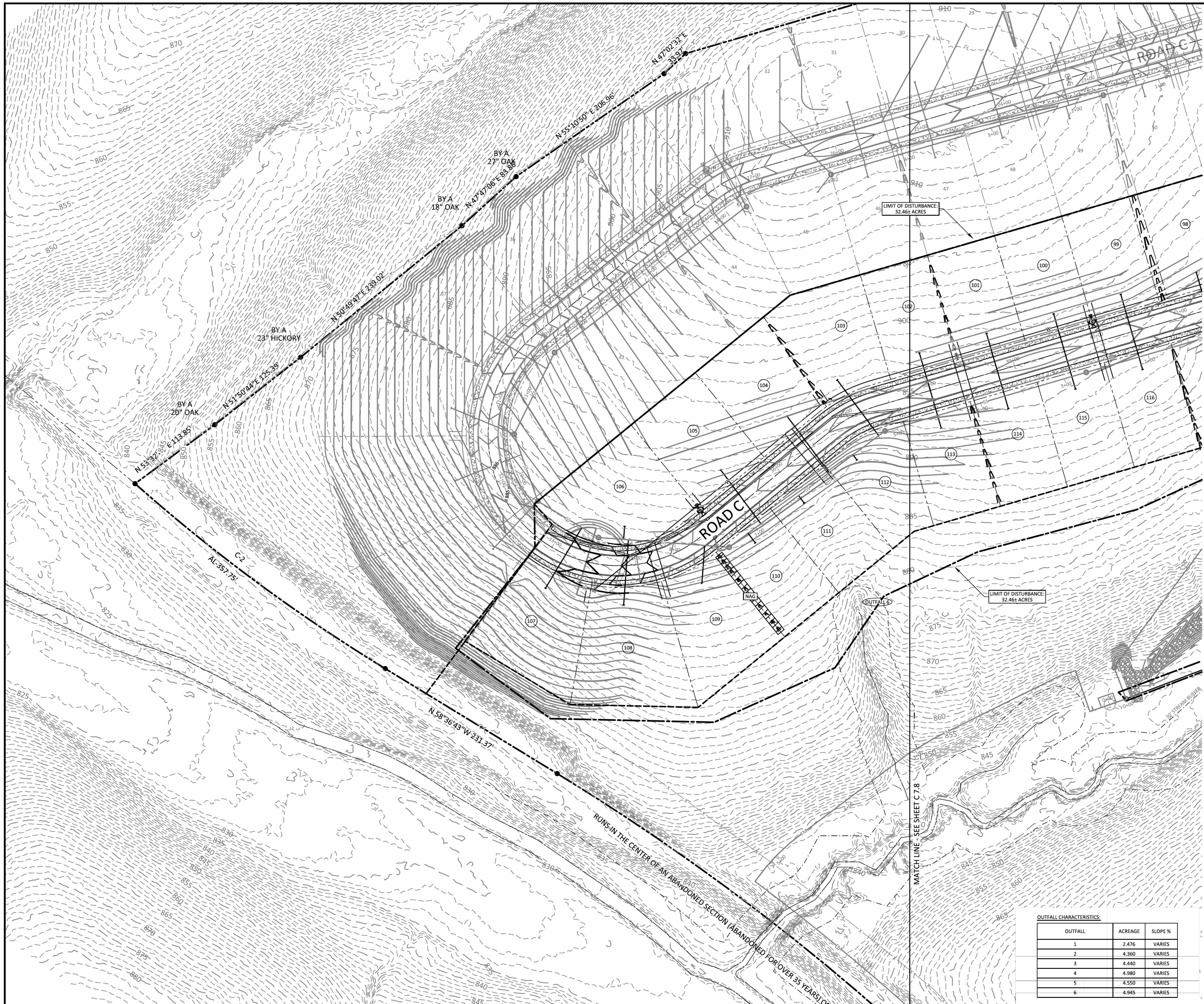
**SHEET NO. C7.8**

SHEET 24 OF 40

JOB# 21.112G 23 MARCH 2022







- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - - - BUFFER
  - - - - - SETBACK / YARD
  - - - - - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
  - FM SANITARY FORCE MAIN
  - W WATER LINE
  - - - - - STORM SEWER
  - - - - - GAS LINE
  - OHE OVERHEAD UTILITY LINE
  - UGT UNDERGROUND UTILITY LINE
  - FENCE
  - TREE LINE
  - UTILITY POLE
  - UTILITY POLE W/ LIGHT
  - GUY ANCHOR
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  - WATER METER
  - WATER VALVE
  - BLOW OFF VALVE
  - AIR RELEASE ASSEMBLY
  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
  - A/C PAD

EROSION CONTROL MEASURES SHOWN ON ALL PHASE 2 EROSION CONTROL PLANS IN THIS PLAN SET MUST BE INSTALLED AND STABILIZED PRIOR TO THE CITY OF WESTMORELAND ENGINEERING DIVISION RELEASING THE FULL LAND DISTURBANCE PERMIT (LDP) FOR THE SITE.

**NAG DESIGNATIONS:**  
**NAG A** NAG S150 STAPLE "D"  
 ALL DITCHES TO BE LINED WITH NAG S150 TEMPORARY MATTING IMMEDIATELY UPON FINAL GRADING UNLESS OTHERWISE NOTED.  
 ALL 3:1 SLOPES TO BE STABILIZED WITH NAG S150 TEMPORARY MATTING.  
 TOTAL NAG SF ON THIS PAGE: 1,040 SF

- EROSION CONTROL LEGEND:**
- IP - INLET PROTECTION
  - SF - SILT FENCE
  - SFB - SILT FENCE WITH BACKING
  - RC - ROCK CHECK
  - CE - CONSTRUCTION EXIT
  - FR - FILTER RING
  - NAG - NORTH AMERICAN GREEN OR EQUAL

**TEMPORARY SEEDING NOTES**  
 1. SEED AND STRAW REQUIRED AS FOLLOWS:  
 STRAW: 75 LBS PER 1,000 SQ. FT.  
 10-10-10 FERTILIZER: 200 LBS PER ACRE  
 SEED: 100 LBS PER ACRE  
 AGR LIMC: 75 LBS PER 1,000 SQ. FT.

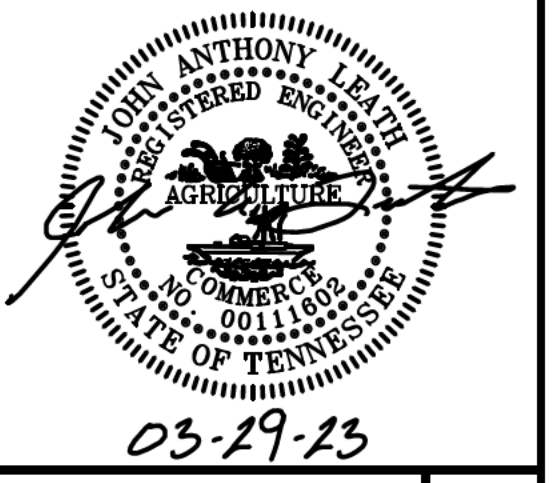
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**OUTFALL CHARACTERISTICS:**

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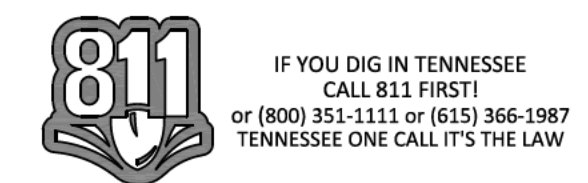
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**SHEET NO. C 7.9**  
 SHEET 25 OF 40

JOB# 21.112G 23 MARCH 2022



**EROSION AND SEDIMENT CONTROL NOTES:**

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**

THIS PROJECT WILL DISTURB MORE THAN 1 ACRE. A SWPPP IS REQUIRED FOR THIS PROJECT.

**EXISTING SITE CONDITIONS**

THE EXISTING LOT IS CURRENTLY UNDEVELOPED. STORM WATER RUNOFF FROM THIS SITE DRAINS SOUTHWEST TO LITTLE TRAMMEL CREEK.

**PROPOSED SITE CONDITIONS (NPDES PERMIT SECTION 3.5.1.a)**

THIS PROJECT PROPOSES THE DEVELOPMENT OF 79 SINGLE FAMILY DETACHED RESIDENTIAL LOTS ON APPROXIMATELY 142.21 ACRES WITH ALL REQUIRED APPURTENANCES.

**303(d) SPECIAL REQUIREMENTS**

THE RECEIVING WATERS ARE NOT ON THE 303d LISTING AS A SILT IMPAIRED STREAM AND HABITAT IMPAIRED STREAM.

**DEVELOPMENT CONDITIONS**

POST-DEVELOPED DRAINAGE WILL CONTINUE TO FOLLOW THE PRE-DEVELOPED DRAINAGE PATHS. SEDIMENT CONTROL WILL BE BY BEST MANAGEMENT PRACTICES SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS.

IF THE CONTROLS ARE INSTALLED AND MAINTAINED CORRECTLY BUT ARE FOUND TO PROVIDE AN INADEQUATE LEVEL OF PROTECTION, GREENLID DESIGN, LLC WILL MAKE REVISIONS TO THIS PLAN AND THESE REVISIONS WILL BE IMPLEMENTED BY THE CONTRACTOR.

**SWPPP NOTES**

1. ALL BEST MANAGEMENT PRACTICES ARE TO BE ADHERED TO THROUGHOUT THE LIFE OF THE PROJECT.
2. QUALITY ASSURANCE OF EPSC MEASURES SHALL BE CONDUCTED BY QUALIFIED PERSONNEL WITHIN A MONTH OF CONSTRUCTION COMMENCING PER NPDES PERMIT SECTION 3.1.2.
3. A COPY OF THE SWPPP IS TO BE MAINTAINED ON THE SITE AT ALL TIMES ALONG WITH RECORDS OF EROSION CONTROL INSPECTIONS PER NPDES PERMIT SECTION 3.3.3.
4. CONSTRUCTION ACTIVITIES (NPDES PERMIT SECTION 3.5.1.a) CONSTRUCTION ACTIVITIES ON THIS SITE INCLUDE: MASS GRADING, EXCAVATION OF SEDIMENT TRAPS AND ROADWAYS, INSTALLATION OF STORM STRUCTURES, PIPES, AND UTILITIES, CONSTRUCTION OF ROADWAYS INCLUDING BASE STONE AND PAVING, AND INSTALLATIONS OF UTILITY SERVICES.
5. DISTURBED AREA (NPDES PERMIT SECTION 3.5.1.c) SITE AREA = 142.21 ± AC DISTURBED AREA = 32.46 ± AC
6. EXISTING SITE SOILS (NPDES PERMIT SECTION 3.5.1.f)

**DKB2 - DICKSON SILT LOAM, 2 TO 5% SLOPES, ERODED HYDROLOGIC GROUP C**  
THIS SOIL IS VERY DEEP, MODERATELY WELL DRAINED, AND HAS A FRAGIPAN IN THE SUBSOIL. IT IS ON GENTLY SLOPING HILLSLOPES IN THE UPLANDS. THE SURFACE LAYER IS BROWN SILT LOAM ABOUT 11 INCHES THICK. THE UPPER PART OF THE SUBSOIL TO A DEPTH OF 20 INCHES IS LIGHT OLIVE BROWN SILT LOAM. THE FRAGIPAN EXTENDS FROM A DEPTH OF 20 TO 47 INCHES. IT IS YELLOWISH BROWN SILT LOAM THAT HAS REDDISH, BROWNISH, AND GRAYISH MOTTLES. BELOW THIS TO A DEPTH OF ABOUT 60 INCHES, THE SUBSOIL IS RED GRAVELLY SILTY CLAY LOAM THAT HAS BROWNISH AND GRAYISH MOTTLES. PERMEABILITY IS MODERATE ABOVE THE FRAGIPAN, SLOW IN THE FRAGIPAN, AND MODERATELY SLOW BELOW THE FRAGIPAN. THE AVAILABLE WATER CAPACITY IS MODERATE. THE ROOT ZONE IS VERY DEEP BUT IS SOMEWHAT RESTRICTED BY THE FRAGIPAN. INCLUDED WITH THIS SOIL MAPPINGS ARE A FEW SMALL AREAS OF WELL DRAINED SOILS THAT DO NOT HAVE A FRAGIPAN. THESE ARE TYPICALLY FOUND NARROW BANDS AROUND THE OUTER EDGES OF MAPPED AREAS OR ON SHALLOW SLOPES IN THE INTERIOR. ALSO INCLUDED ARE A FEW SMALL AREAS OF SOMEWHAT POORLY DRAINED SOILS IN DEPRESSIONS.

**SGC2-SUGARGROVE GRAVELLY SILT LOAM, 12 TO 20 PERCENT SLOPES, ERODED HYDROLOGIC GROUP A**  
THIS SOIL IS DEEP AND WELL DRAINED. IT IS COMMONLY FOUND ON NARROW, WINDING SHOULDERS BELOW THE NEARLY LEVEL HILLSLOPES OF HILLY UPLANDS. THE SURFACE LAYER IS BROWN GRAVELLY SILT LOAM ABOUT 7 INCHES THICK. THE UPPER PART OF THE SUBSOIL TO A DEPTH OF ABOUT 13 INCHES IS YELLOWISH BROWN GRAVELLY SILT LOAM. THE NEXT PART TO A DEPTH OF ABOUT 17 INCHES IS YELLOWISH BROWN GRAVELLY SILTY CLAY LOAM. THE NEXT PART TO A DEPTH OF ABOUT 32 INCHES IS YELLOWISH BROWN GRAVELLY SILTY CLAY LOAM THAT HAS BROWNISH MOTTLES. BELOW THIS TO A DEPTH OF ABOUT 41 INCHES IS YELLOWISH BROWN VERY GRAVELLY SILTY CLAY THAT HAS MOTTLES. THE SUBSTRATUM TO A DEPTH OF ABOUT 49 INCHES IS FRACTURED AND WEATHERED BEDROCK. HARD BEDROCK IS AT A DEPTH OF ABOUT 49 INCHES. PERMEABILITY IS MODERATE OR MODERATELY RAPID, AND THE AVAILABLE WATER CAPACITY IS LOW. THE ROOT ZONE IS MODERATELY DEEP AND IS EASILY PENETRATED BY PLANT ROOTS. WATER MOVES ALONG THE SURFACE OF THE BEDROCK DURING WET SEASONS.

**SGD2-SUGARGROVE GRAVELLY SILT LOAM, 12 TO 20 PERCENT SLOPES, ERODED HYDROLOGIC GROUP A**  
THIS SOIL IS DEEP AND WELL DRAINED. IT IS COMMONLY FOUND ON NARROW, WINDING SHOULDERS BELOW THE NEARLY LEVEL HILLSLOPES OF HILLY UPLANDS. THE SURFACE LAYER IS BROWN GRAVELLY SILT LOAM ABOUT 7 INCHES THICK. THE UPPER PART OF THE SUBSOIL TO A DEPTH OF ABOUT 13 INCHES IS YELLOWISH BROWN GRAVELLY SILT LOAM. THE NEXT PART TO A DEPTH OF ABOUT 17 INCHES IS YELLOWISH BROWN GRAVELLY SILTY CLAY LOAM. THE NEXT PART TO A DEPTH OF ABOUT 32 INCHES IS YELLOWISH BROWN GRAVELLY SILTY CLAY LOAM THAT HAS BROWNISH MOTTLES. BELOW THIS TO A DEPTH OF ABOUT 41 INCHES IS YELLOWISH BROWN VERY GRAVELLY SILTY CLAY THAT HAS MOTTLES. THE SUBSTRATUM TO A DEPTH OF ABOUT 49 INCHES IS FRACTURED AND WEATHERED BEDROCK. HARD BEDROCK IS AT A DEPTH OF ABOUT 49 INCHES. PERMEABILITY IS MODERATE OR MODERATELY RAPID, AND THE AVAILABLE WATER CAPACITY IS LOW. THE ROOT ZONE IS MODERATELY DEEP AND IS EASILY PENETRATED BY PLANT ROOTS. WATER MOVES ALONG THE SURFACE OF THE BEDROCK DURING WET SEASONS.

7. THIS PROJECT WILL DISTURB LESS THAN 50 AC. CONSTRUCTION PHASING IS NOT REQUIRED PER NPDES PERMIT SECTION 3.5.1.n.
8. THE PRIMARY CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF ALL EPSC MEASURES (NPDES PERMIT SECTION 3.5.2).
9. SEDIMENT IS TO BE REMOVED AS REQUIRED OR WHEN MEASURES ARE AT 50% CAPACITY PER NPDES PERMIT SECTION 3.5.3.1.e.
10. EPSC MEASURES SHOWN ON EROSION PLAN "A" MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD PER NPDES SECTION 3.5.3.1.f.
11. A STABILIZED CONSTRUCTION ACCESS SHALL BE IMPLEMENTED TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES PER NPDES PERMIT SECTION 3.5.3.1.g.
12. TEMPORARY OR PERMANENT STABILIZATION SHALL BE WITHIN 14 DAYS (7 DAYS FOR > 35% SLOPES) ON PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED PER NPDES PERMIT SECTION 3.5.3.2.
13. EPSC MEASURES HAVE BEEN DESIGNED TO CONTROL THE RAINFALL AND RUNOFF FROM A 5-YEAR, 24-HOUR STORM EVENT PER NPDES PERMIT SECTION 3.5.3.3.
14. FOR AN ON-SITE OUTFALL THAT RECEIVES DRAINAGE FROM 10 OR MORE ACRES, A SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE PER NPDES PERMIT SECTION 3.5.3.3.
15. EPSC MEASURES PLACED AT DISCHARGE LOCATIONS AND ALONG THE LENGTH OF ANY OUTFALL CHANNEL ARE INTENDED TO DISSIPATE ENERGY AND SLOW THE VELOCITY OF RUNOFF FLOW FROM THE SITE PER NPDES PERMIT SECTION 3.5.4.
16. MAINTENANCE NEEDS IDENTIFIED IN INSPECTIONS OR BY OTHER MEANS SHALL BE ACCOMPLISHED BEFORE THE NEXT STORM EVENT, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE NEED IS IDENTIFIED PER NPDES PERMIT SECTION 3.5.7.
17. ALL SEDIMENT CONTROL TO BE INSPECTED AT LEAST TWICE PER WEEK AND INSPECTIONS ARE TO BE PERFORMED AT LEAST 72 HOURS APART PER NPDES PERMIT SECTION 3.5.8.2.a.
18. EROSION PREVENTION AND SEDIMENT CONTROL MUST BE IN PLACE AND INSPECTED BY THE CITY OF GALLATIN STORMWATER INSPECTOR PRIOR TO GRADING AS SHOWN ON THESE PLANS AND CONTAINED IN THIS SWPPP.
19. A LAND DISTURBANCE PERMIT IS TO BE OBTAINED FROM THE CITY OF WESTMORELAND STORMWATER DEPARTMENT PRIOR TO GRADING.
20. TOPSOIL IS TO BE STRIPPED AND STORED. COMPACT SITE TOPSOIL PILES BY WALKING DOZIER (D-6 OR GREATER) UNTIL TOTAL TOPSOIL STOCKPILE IS IN PLACE. TEMPORARY SEED TOPSOIL STOCKPILE WITHIN 14 DAYS AFTER STOCKPILE IS COMPLETE.

**SWPPP CONSTRUCTION SEQUENCING OF WORK (NPDES PERMIT SECTION 3.5.1.b)**

(ALTERNATE SEQUENCING MAY BE PROPOSED IF APPROVED BY THE CITY OF GALLATIN STORMWATER INSPECTOR.)

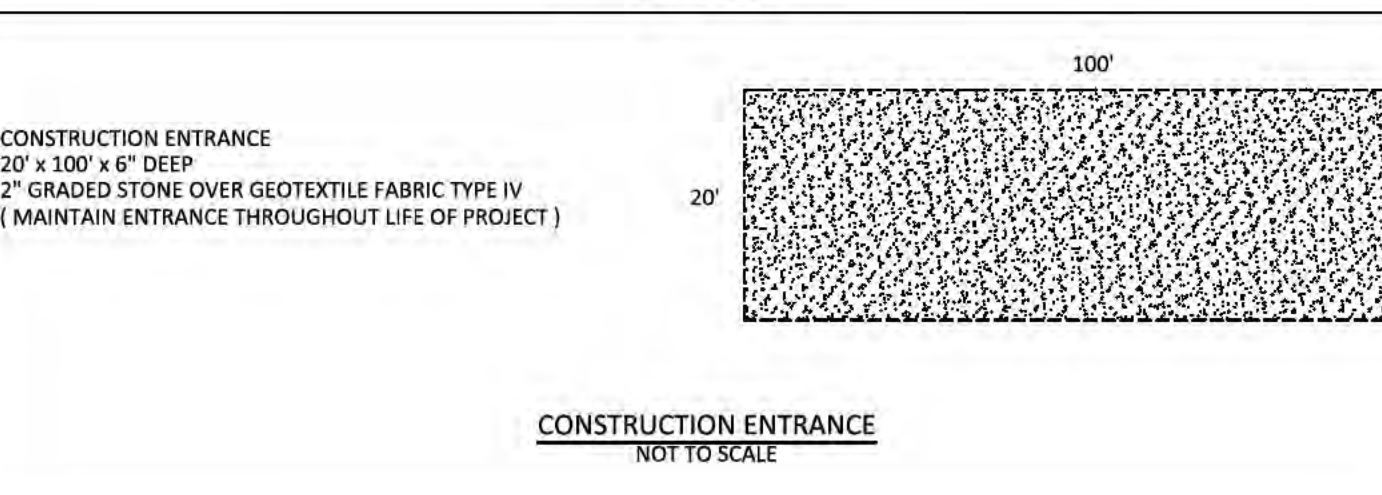
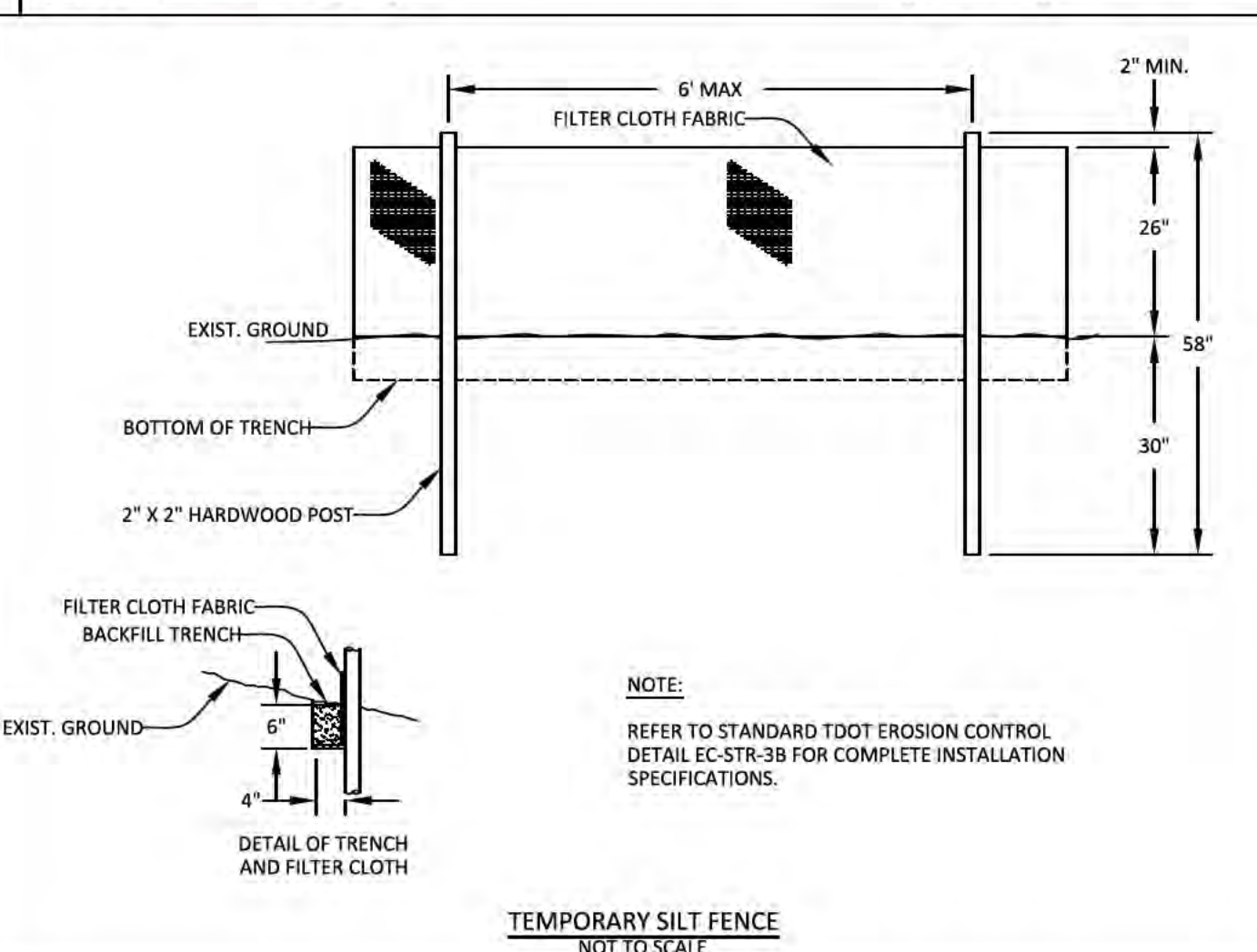
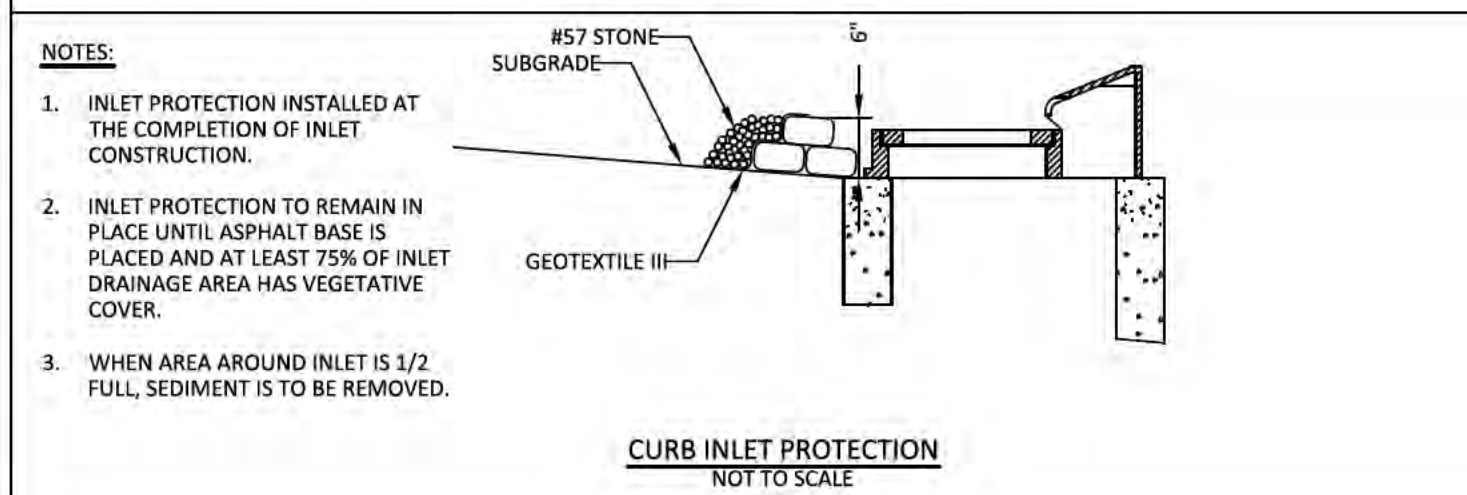
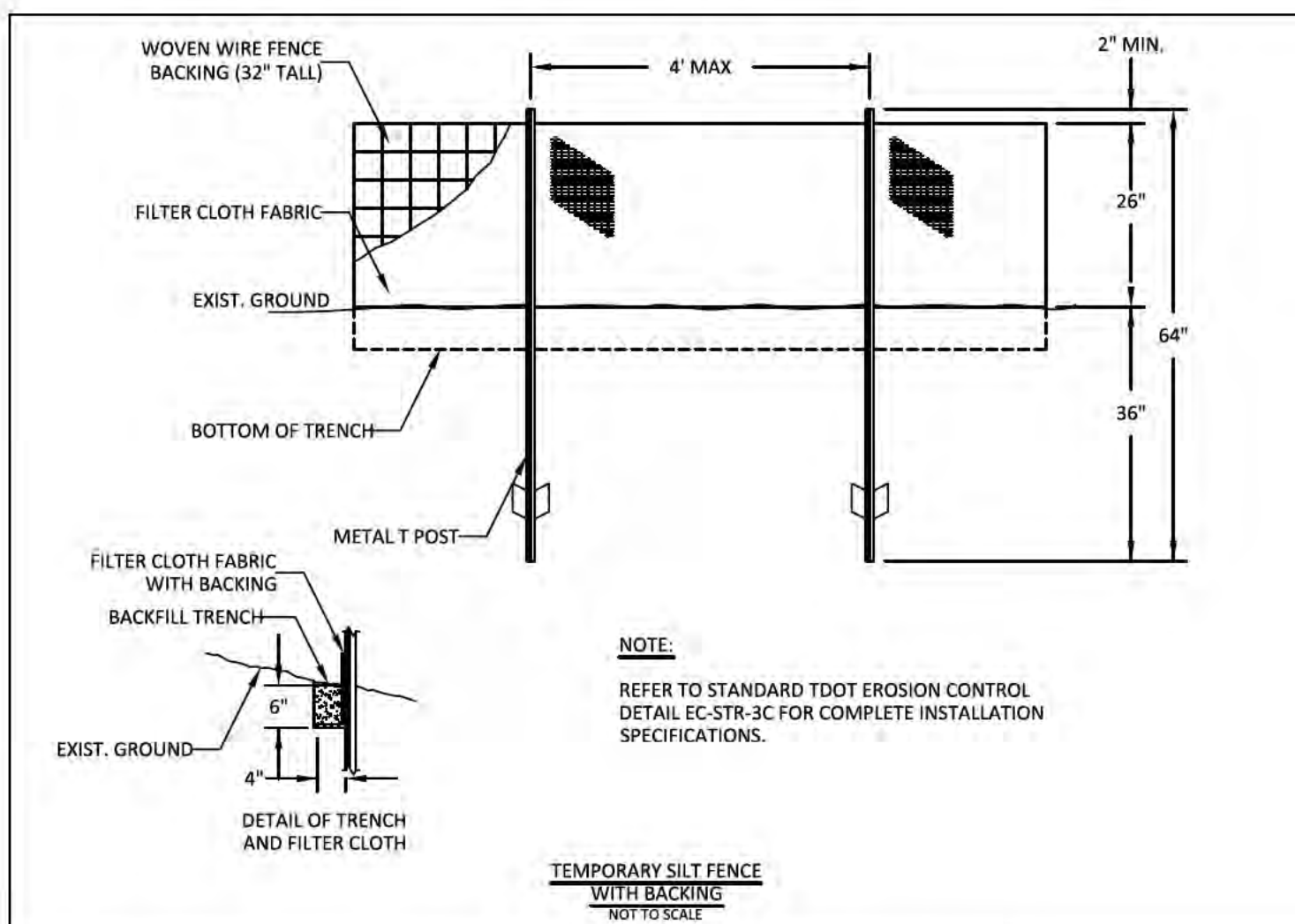
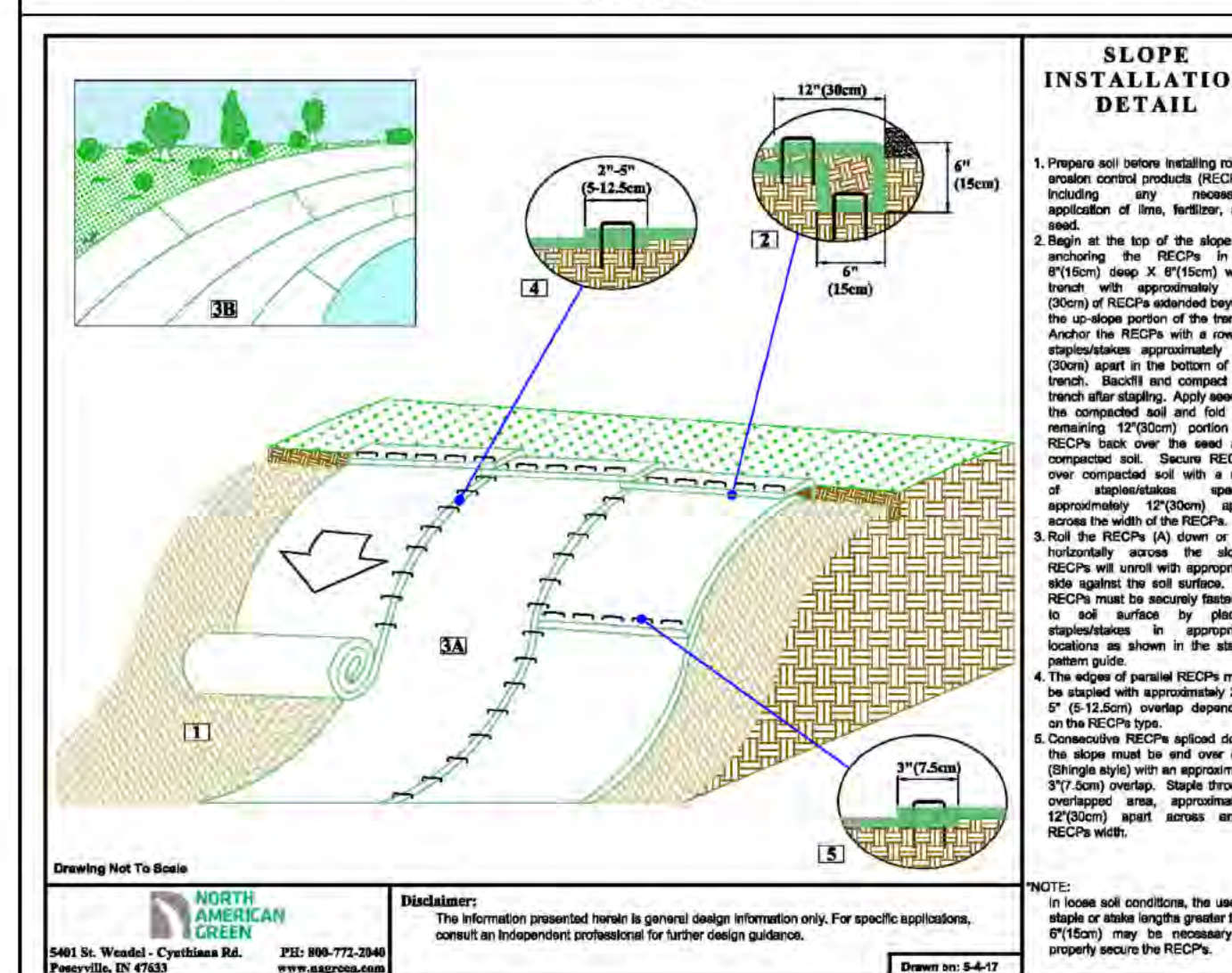
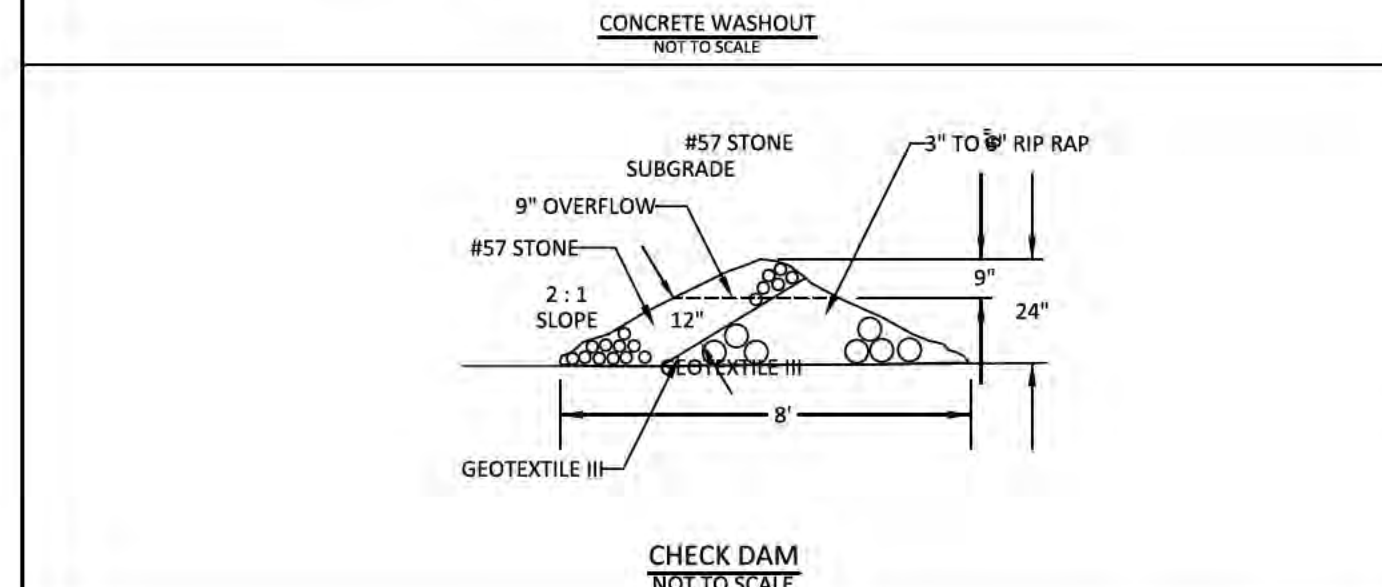
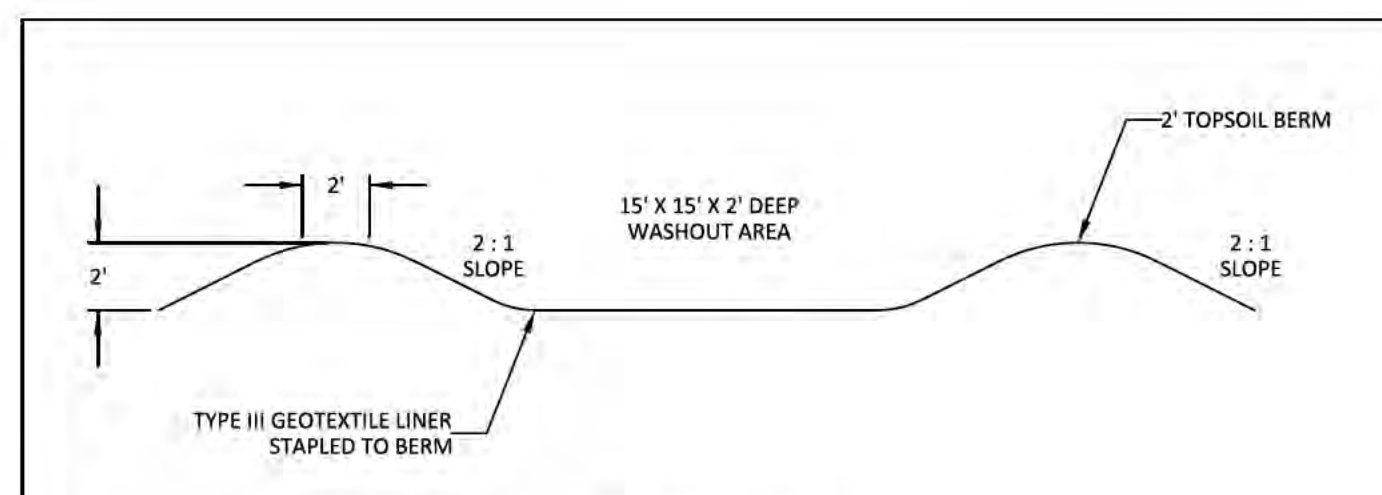
**LIMITATION OF CONSTRUCTION DISTURBED AREA**

FIELD STAKE CONSTRUCTION LIMITS BEFORE COMMENCING WORK IN ORDER TO VERIFY THE DISTURBED AREA LIMITS FOR THE CONTRACTOR.

1. INSTALL INITIAL EPSC MEASURES INCLUDING SEDIMENT TRAPS, CONSTRUCTION EXIT, AND TEMPORARY SILT FENCE.
2. CLEAR AND GRUBB AS REQUIRED.
3. STRIP TOPSOIL IN ROADWAYS, DITCHES, AND POND. STORE TOPSOIL IN DESIGNATED AREA.
4. EXCAVATE DETENTION POND, INSTALL POND OUTLET STRUCTURE, PIPES, AND ENDWALLS.
5. PERMANENTLY STABILIZE POND AREA IMMEDIATELY UPON COMPLETION OF GRADING AND STRUCTURE INSTALLATION AND INSTALL FILTER RING AT POND OUTLET STRUCTURE.
6. DO NOT GRADE OUTSIDE OF DRAINAGE PATH LINE TO ENSURE NO UNNECESSARY RUNOFF DRAINS TO CONSTRUCTION SITE AND ENSURES CLEAN WATER BYPASSES THE SITE ON ITS NATURAL DRAINAGE PATH.
7. MASS GRADE ROADWAY.
8. INSTALL ROCK CHECKS IN DITCHES AND PERMANENTLY STABILIZE.
9. INSTALL STORM STRUCTURES AND PIPES AND ASSOCIATED EPSC MEASURES.
10. GRADE LOTS AS NECESSARY AND PERMANENTLY STABILIZE.
11. FILL IN SEDIMENT TRAPS AND STABILIZE.
12. CONSTRUCT UTILITY MAINS AND SERVICES.
13. FINAL GRADE ROADWAYS AND INSTALL BASE STONE AND BINDER.
14. INSTALL EXTRUDED CURB.
15. FINISH GRADE BEHIND CURBS WITH TOPSOIL.
16. STABILIZE ANY REMAINING DISTURBED AREAS.
17. REMOVE TEMPORARY MEASURES ONCE A GOOD STAND OF GRASS IS ESTABLISHED (>70% OF SURFACES UNIFORMLY COVERED WITH GRASS). SEED AND MATT LAWN AREAS AND ANY REMAINING DISTURBED AREAS.

**SPILLS AND NON-STORMWATER CONTINGENCIES**

1. ALL FUELING OF EQUIPMENT AND VEHICLES ON SITE WILL BE CONDUCTED NEAR THE STAGING AREA. ANY SPILLAGE WILL BE REMOVED IMMEDIATELY. CONTAMINATED SOILS WILL BE PLACED ON HEAVY PLASTIC AND COVERED OR PLACED IN APPROVED CONTAINERS TO PREVENT CONTACT WITH STORM WATER.
2. ALL FUEL TANKS WILL BE IN THE CONTAINMENT AREA.
3. OILS, OTHER VEHICLE FLUIDS, PAINTS, AND SOLVENTS WILL BE STORED IN THE CONSTRUCTION TRAILER.
4. EQUIPMENT FUEL OR MAINTENANCE SPILLS OF 2 GALLONS OR MORE WILL BE REPORTED IMMEDIATELY TO A REPRESENTATIVE OF THE PRIMARY CONTRACTOR.
5. IF A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTING QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24-HOUR PERIOD, THE CONTRACTOR WILL IMMEDIATELY NOTIFY THE PERMITTEE WHO SHALL THEN DO THE FOLLOWING: NOTIFY THE NATIONAL RESPONSE CENTER (NRC) (800-424-8802) AND THE TENNESSEE EMERGENCY MANAGEMENT AGENCY (TEMA) (EMERGENCIES: 800-262-3300; NON-EMERGENCIES: 800-262-3400); AS WELL AS THE LOCAL ENVIRONMENTAL ASSISTANCE CENTER. ALSO, GREENLID DESIGN, LLC WILL PREPARE A REVISION OF THIS DOCUMENT TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES.
6. CONCRETE TRUCKS WILL WASH OUT AT THE DESIGNATED AREA NEAR THE STAGING AREA.
7. EACH CONTRACTOR IS RESPONSIBLE TO PROVIDE LITTER CONTROL FOR TRASH GENERATED BY HIS CREW. A DUMPSTER FOR GARBAGE WILL BE LOCATED NEAR THE CONSTRUCTION TRAILER AND IS LIMITED TO GARBAGE AND PAPER TRASH ONLY.
8. PAINT CANS, OIL CANS, USED OIL, AND FILTERS WILL BE CONTAINED AND DISPOSED OF BY THE CONTRACTOR BY TAKING THEM TO THE SUMNER COUNTY RESOURCE AUTHORITY AT 625 RAPPAHANNOCK WIRE ROAD, GALLATIN, TN 37066.



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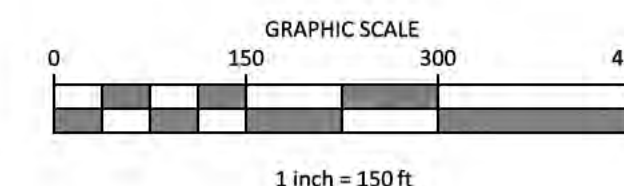
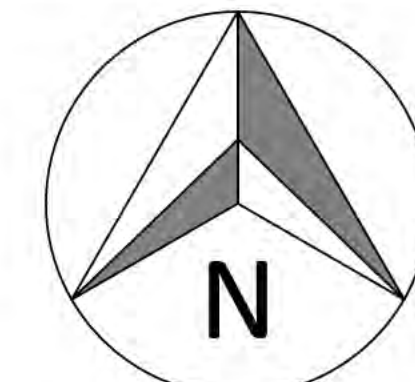
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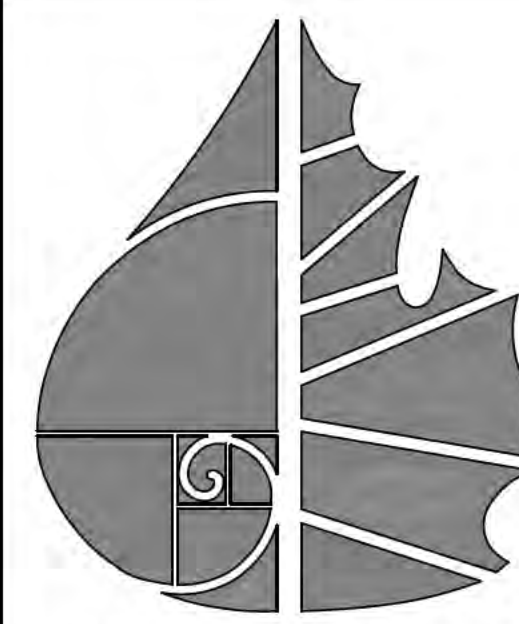
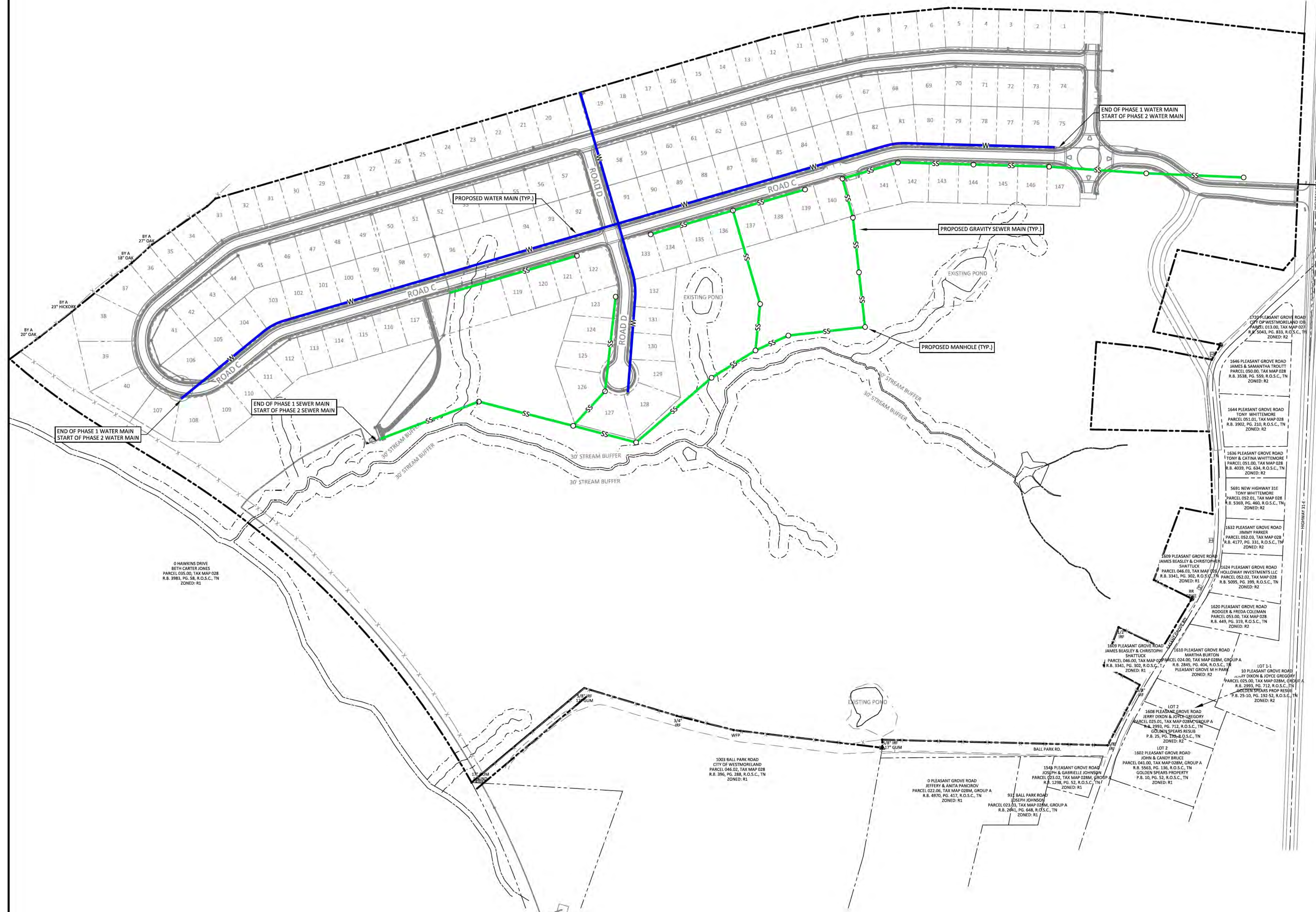
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**SHEET NO. C 8.0**  
SHEET 26 OF 40  
JOB# 21.112G 23 MARCH 2022



- LEGEND**
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  - G GAS LINE
  - OHE OVERHEAD UTILITY LINE
  - UGT UNDERGROUND UTILITY LINE
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  - UTILITY POLE
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  - ELECTRIC JUNCTION BOX
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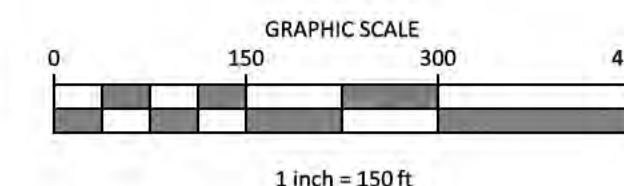
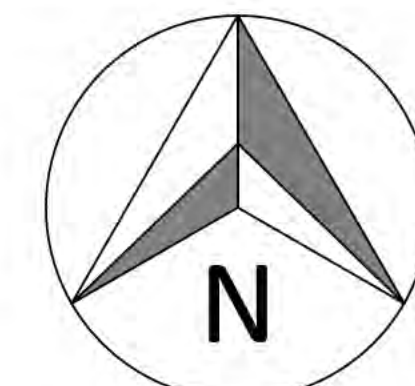
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OVERALL LAYOUT

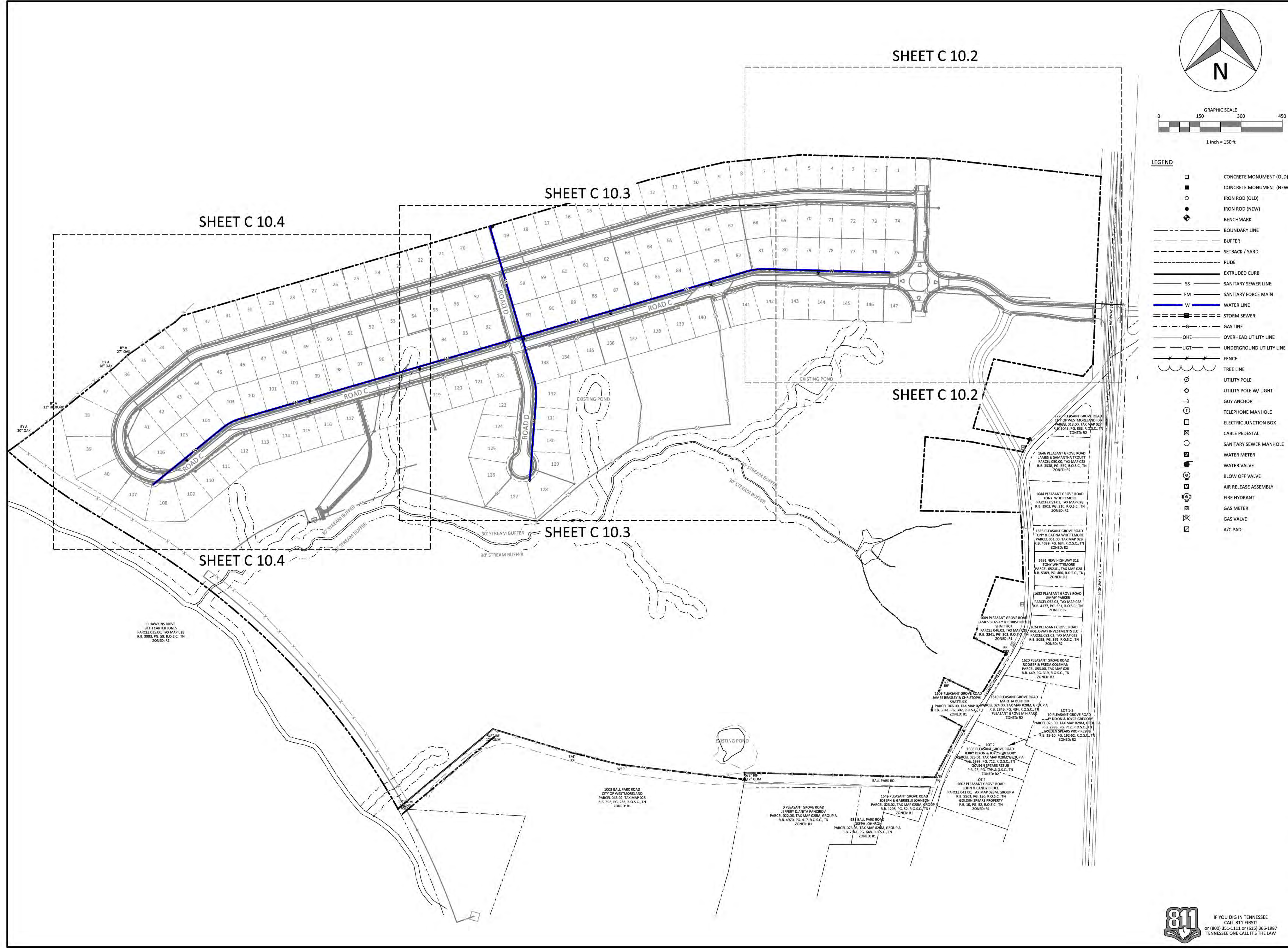
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3	03-27-2023		

**SHEET NO.**  
**C 9.0**  
 SHEET 27 OF 40





- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - - - BUFFER
  - - - - - SETBACK / YARD
  - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
  - FM SANITARY FORCE MAIN
  - W WATER LINE
  - S STORM SEWER
  - G GAS LINE
  - OHE OVERHEAD UTILITY LINE
  - UGT UNDERGROUND UTILITY LINE
  - FENCE
  - TREE LINE
  - UTILITY POLE
  - UTILITY POLE W/ LIGHT
  - GUY ANCHOR
  - TELEPHONE MANHOLE
  - ELECTRIC JUNCTION BOX
  - CABLE PEDESTAL
  - SANITARY SEWER MANHOLE
  - WATER METER
  - WATER VALVE
  - BLOW OFF VALVE
  - AIR RELEASE ASSEMBLY
  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
  - A/C PAD



**GreenLID Design**  
 114 B West Main Street  
 Gallatin, TN 37066  
 615-230-7269  
 andy.leath@greenliddesign.com



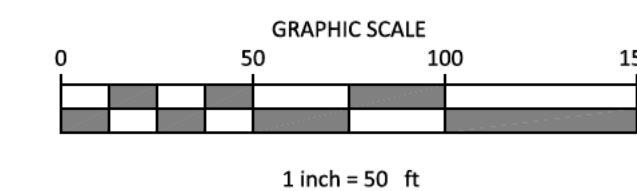
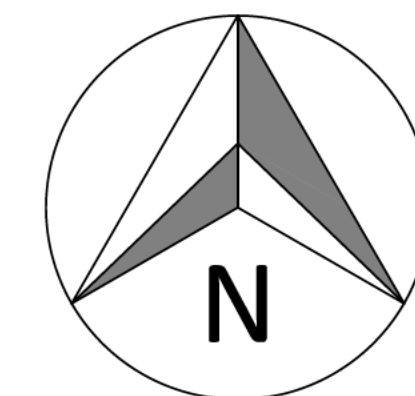
**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

**OVERALL WATER DISTRIBUTION**

NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
3	03-27-2023		

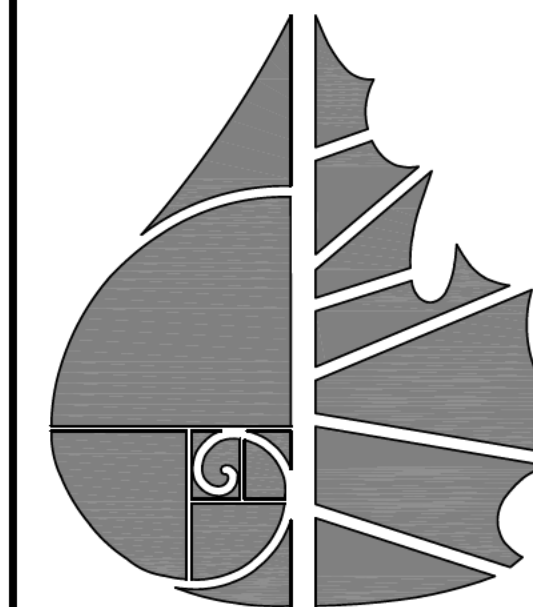
**SHEET NO.**  
**C 10.1**  
 SHEET 28 OF 40





LEGEND

- CONCRETE MONUMENT (OLD)
- CONCRETE MONUMENT (NEW)
- IRON ROD (OLD)
- IRON ROD (NEW)
- ⊕ BENCHMARK
- BOUNDARY LINE
- - - - - BUFFER
- - - - - SETBACK / YARD
- - - - - PUDE
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- WATER VALVE
- BLOW OFF VALVE
- AIR RELEASE ASSEMBLY
- FIRE HYDRANT
- GAS METER
- GAS VALVE
- A/C PAD



**GreenLID Design**

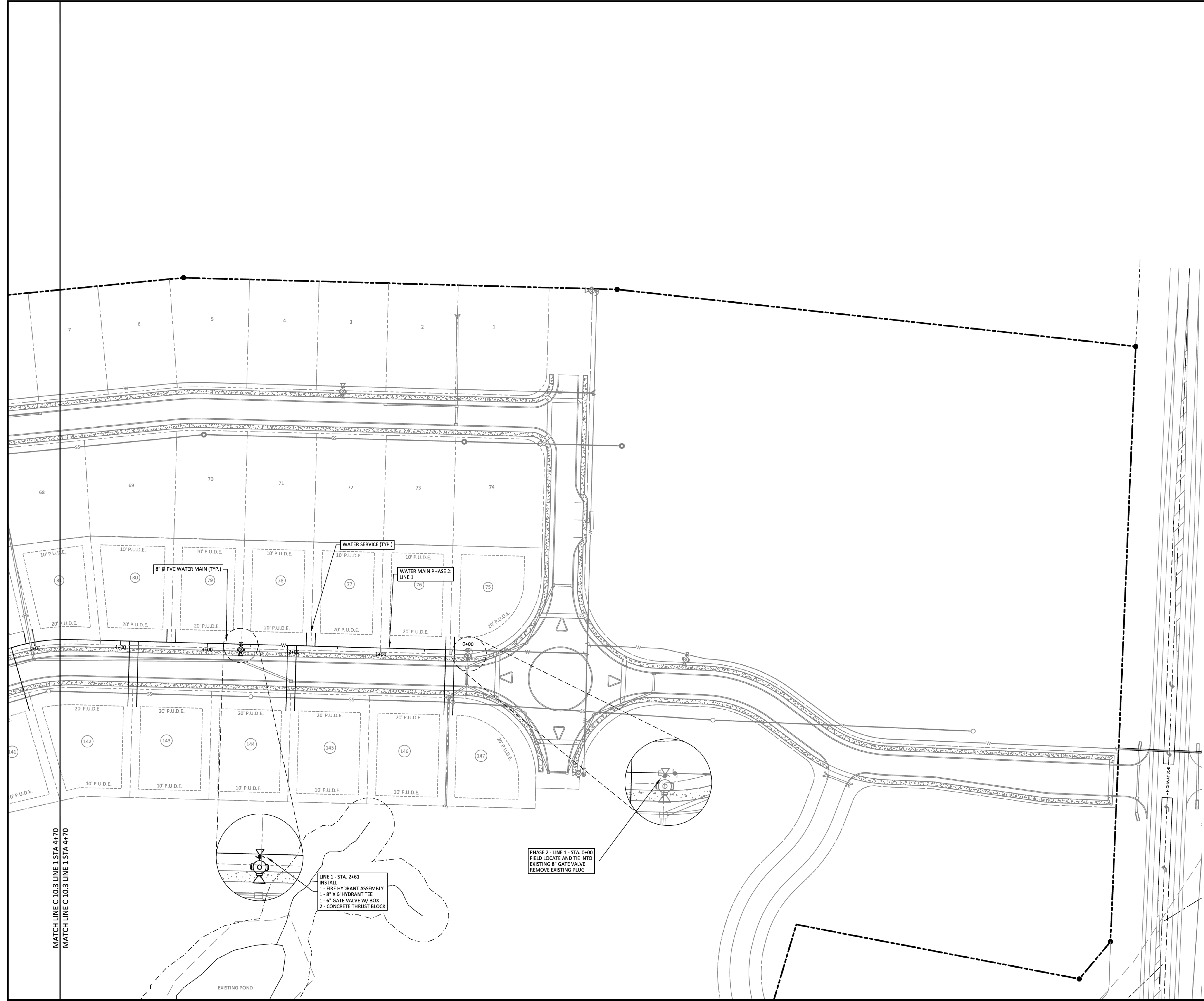
114 B West Main Street  
Gallatin, TN 37066  
615-230-7269  
andy.leath@greenliddesign.com



03-29-23

PLEASANT GROVE FARMS, PHASE 2  
CONSTRUCTION PLANS  
PLEASANT GROVE ROAD  
CITY OF WESTMORELAND  
SUMNER COUNTY, TENNESSEE

WATER DISTRIBUTION



MATCH LINE C 10.3 LINE 1 STA 4+70  
MATCH LINE C 10.3 LINE 1 STA 4+70

LINE 1 - STA. 2+61  
INSTALL  
1 - FIRE HYDRANT ASSEMBLY  
1 - 8" X 6" HYDRANT TEE  
1 - 6" GATE VALVE W/ BOX  
2 - CONCRETE THRUST BLOCK

PHASE 2 - LINE 1 - STA. 0+00  
FIELD LOCATE AND TIE INTO  
EXISTING 8" GATE VALVE  
REMOVE EXISTING PLUG



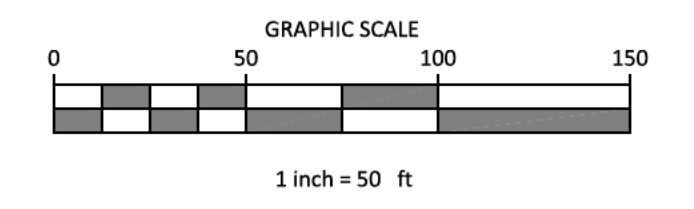
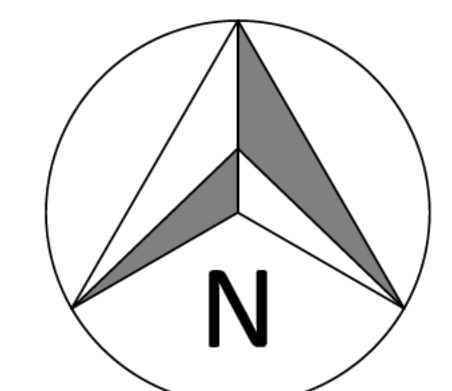
IF YOU DIG IN TENNESSEE  
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TENNESSEE ONE CALL IT'S THE LAW

NO.	DATE	REVISION
1	10-25-2022	PER CITY COMMENTS
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3	03-27-2023	PER CITY COMMENTS

SHEET NO.  
**C 10.2**

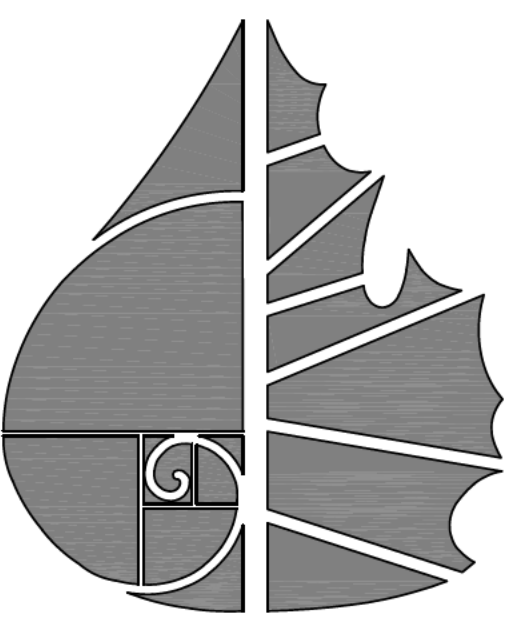
SHEET 29 OF 40

JOB# 21.112G 23 MARCH 2023

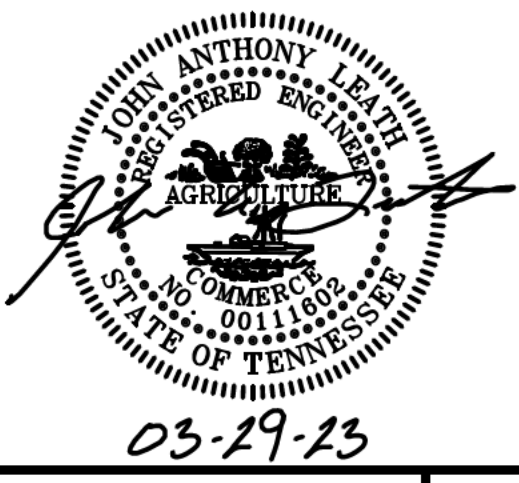


**LEGEND**

□	CONCRETE MONUMENT (OLD)
■	CONCRETE MONUMENT (NEW)
○	IRON ROD (OLD)
●	IRON ROD (NEW)
⊕	BENCHMARK
---	BOUNDARY LINE
- - -	BUFFER
- - -	SETBACK / YARD
- - -	P.U.D.E.
---	EXTRUDED CURB
SS	SANITARY SEWER LINE
FM	SANITARY FORCE MAIN
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□	CABLE PEDESTAL
□	SANITARY SEWER MANHOLE
□	WATER METER
□	WATER VALVE
□	BLOW OFF VALVE
□	AIR RELEASE ASSEMBLY
□	FIRE HYDRANT
□	GAS METER
□	GAS VALVE
□	A/C PAD



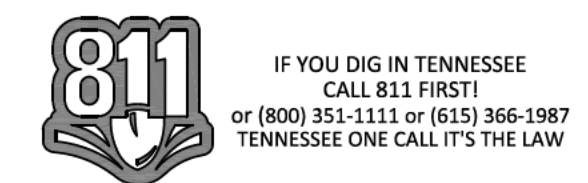
**GreenLID Design**  
 114 B West Main Street  
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 andy.leath@greendesign.com

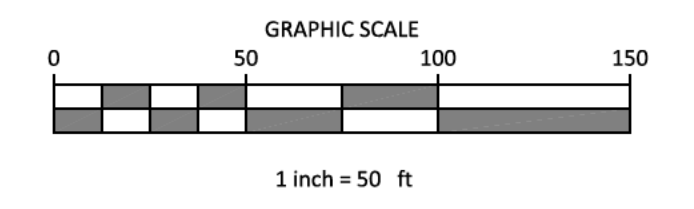
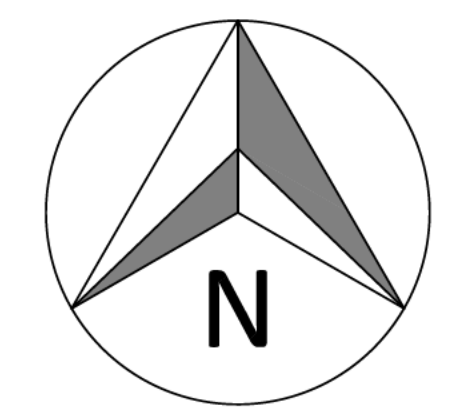
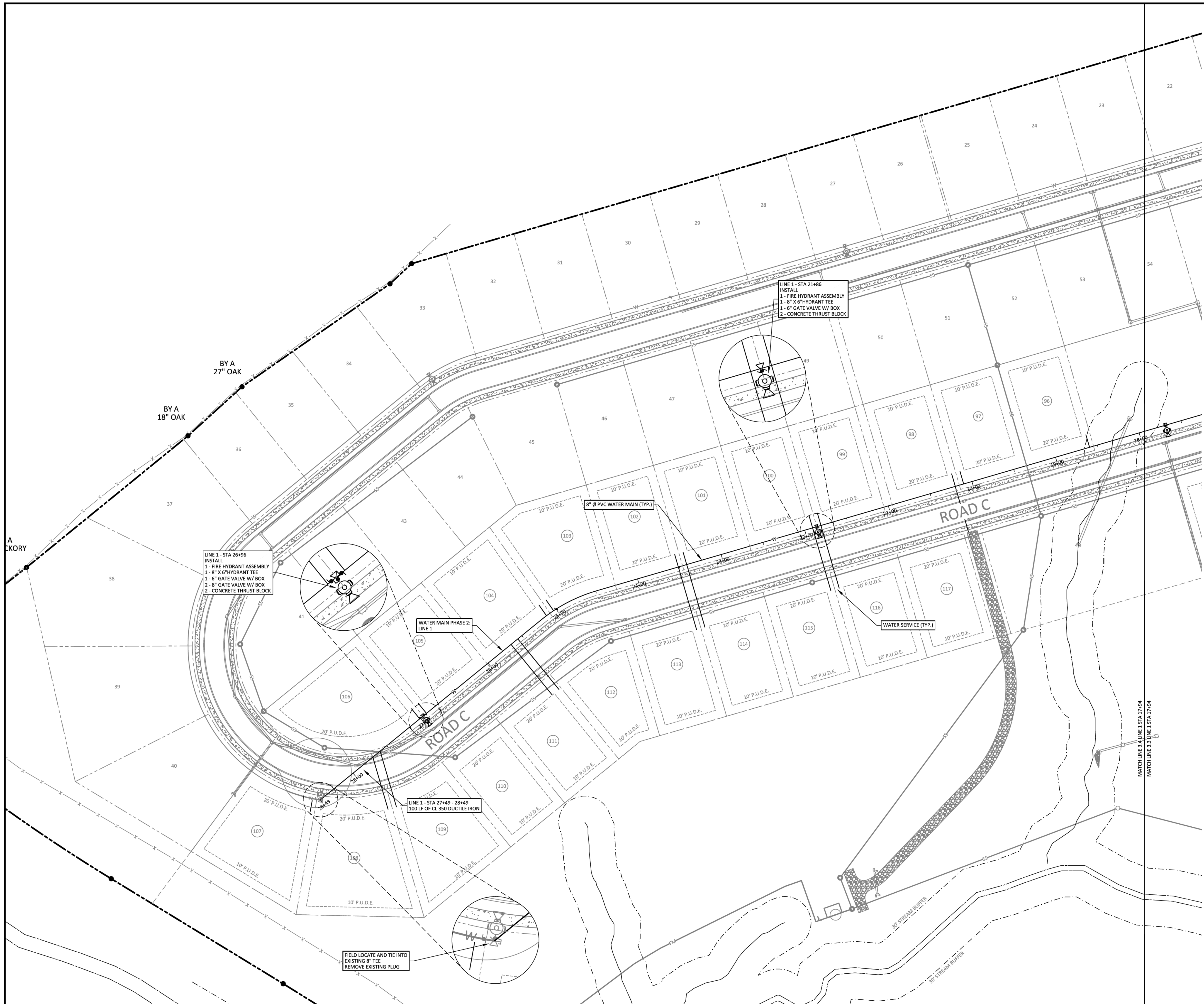


**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

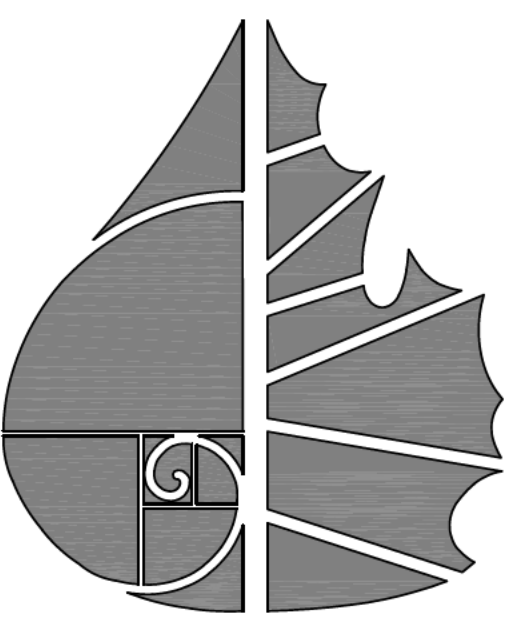
NO.	DATE	REVISION
1	10-25-2022	PER CITY COMMENTS
2	03-07-2023	PER CITY COMMENTS
3	03-27-2023	PER CITY COMMENTS

**SHEET NO.**  
**C 10.3**  
 SHEET 30 OF 40



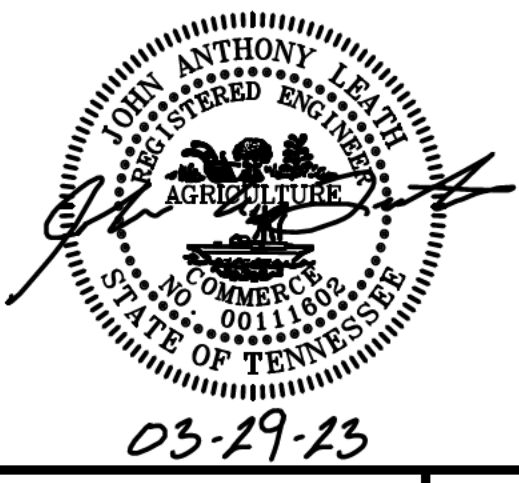


- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ◆ BENCHMARK
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  - - - - - BUFFER
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**GreenLID Design**

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**PLEASANT GROVE FARMS, PHASE 2**  
CONSTRUCTION PLANS  
PLEASANT GROVE ROAD  
CITY OF WESTMORELAND  
SUMNER COUNTY, TENNESSEE

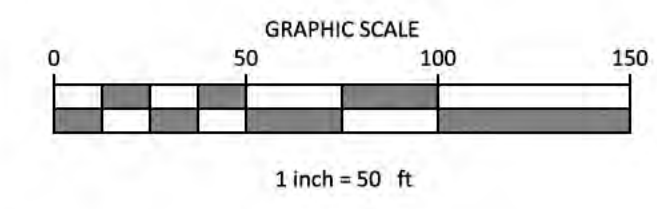
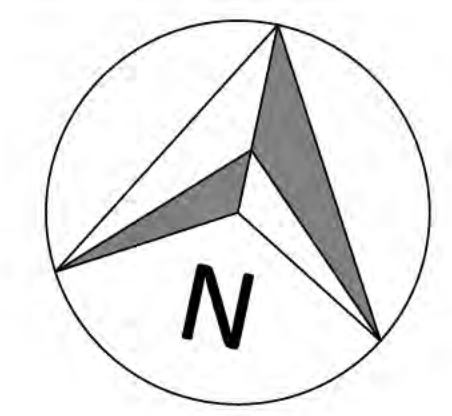
**WATER DISTRIBUTION PLAN**

NO.	DATE	REVISION
1	10-25-2022	PER CITY COMMENTS
2	03-07-2023	PER CITY COMMENTS
3	03-27-2023	PER CITY COMMENTS

**SHEET NO.**  
**C 10.4**  
SHEET 31 OF 40



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CALL 811 FIRST!  
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TENNESSEE ONE CALL IT'S THE LAW



- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
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**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

**SEWER PROFILE**

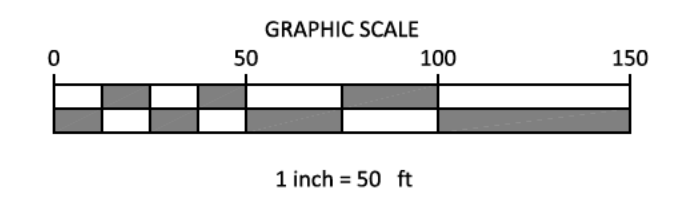
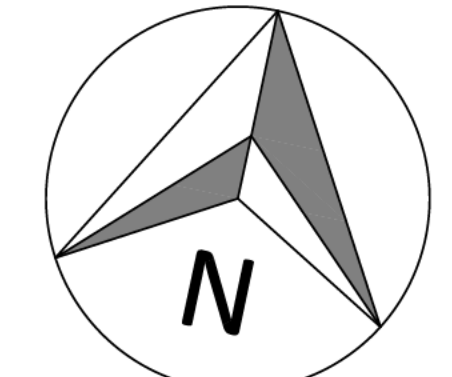
NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
2	03-07-2023		
3	03-27-2023		

**SHEET NO.**  
**C 11.1**  
 SHEET 32 OF 40

**811**  
 IF YOU DIG IN TENNESSEE  
 CALL 811 FIRST!  
 (800) 851-1111 or (615) 366-1987  
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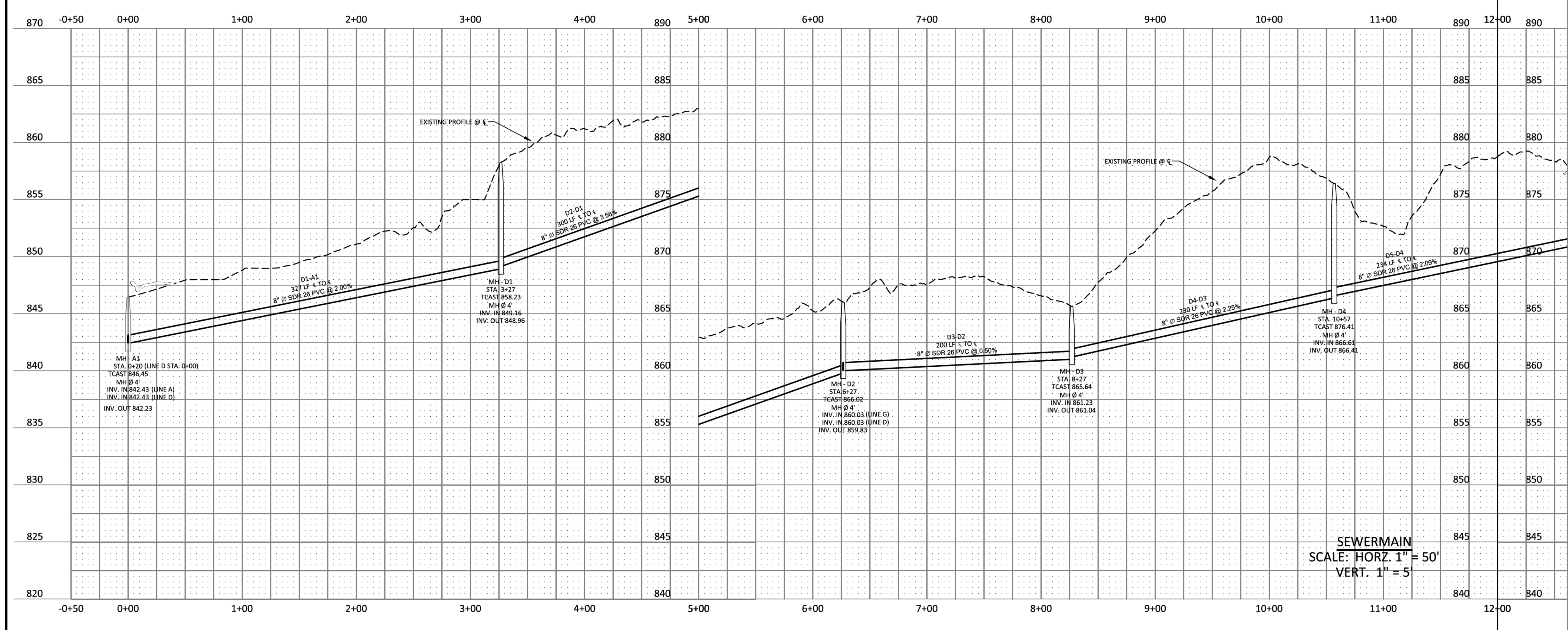


NOTE:  
1. TRENCH PLUGS WILL BE PLACED THROUGHOUT ANY TRENCH RUNNING PARALLEL WITHIN 50 FEET OF A STREAM CHANNEL. REFER TO "TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION GENERAL AQUATIC RESOURCE ALTERATION PERMIT FOR UTILITY LINE CROSSINGS" FOR REQUIREMENTS



- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
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  - GAS METER
  - GAS VALVE
  - A/C PAD

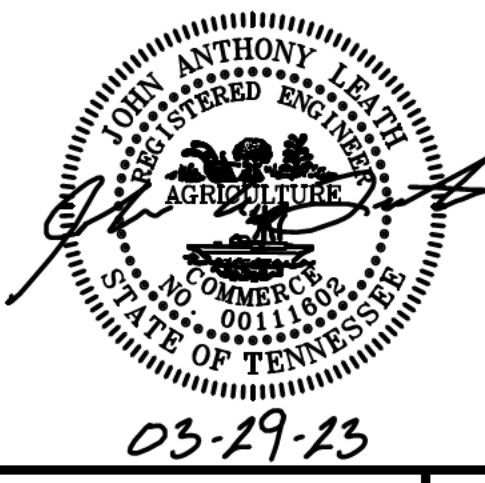
MATCHLINE STA. 12+00 SHEET C 11.2  
MATCHLINE STA. 12+00 SHEET C 11.3



SEWERMAIN  
SCALE: HORIZ. 1" = 50'  
VERT. 1" = 5'



114 B West Main Street  
Gallatin, TN 37066  
615-230-7269  
andy.leath@greenlid.com



PLEASANT GROVE FARMS, PHASE 2  
CONSTRUCTION PLANS  
PLEASANT GROVE ROAD  
CITY OF WESTMORELAND  
SUMNER COUNTY, TENNESSEE

SEWER PROFILE

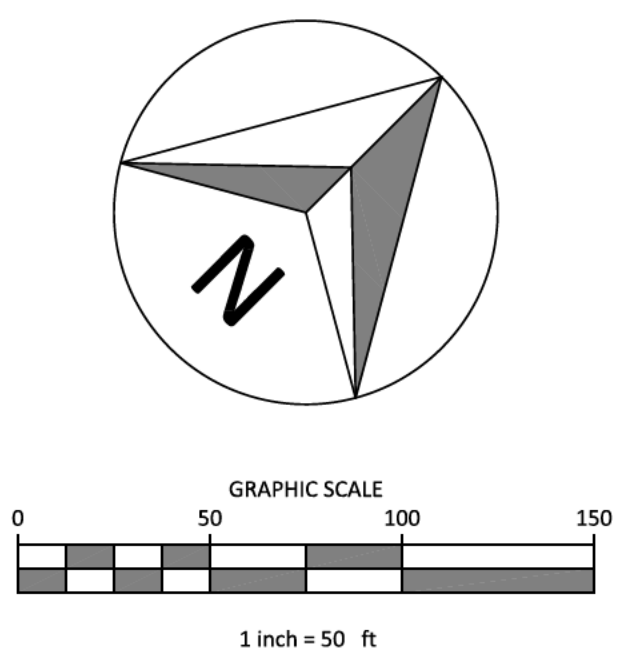
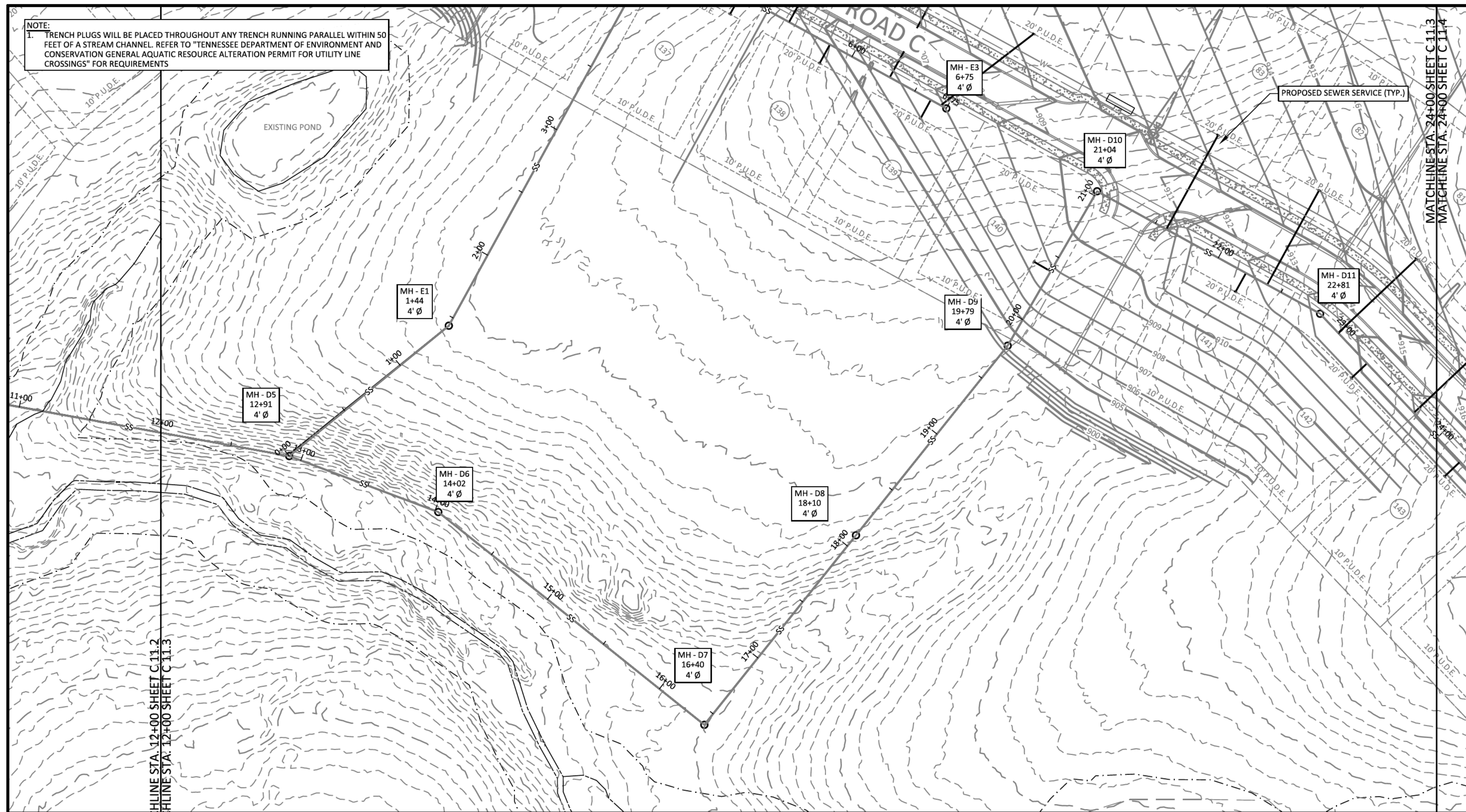
NO.	DATE	REVISION	PER CITY COMMENTS
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3	03-27-2023		PER CITY COMMENTS

**SHEET NO.**  
**C 11.2**  
SHEET 33 OF 40

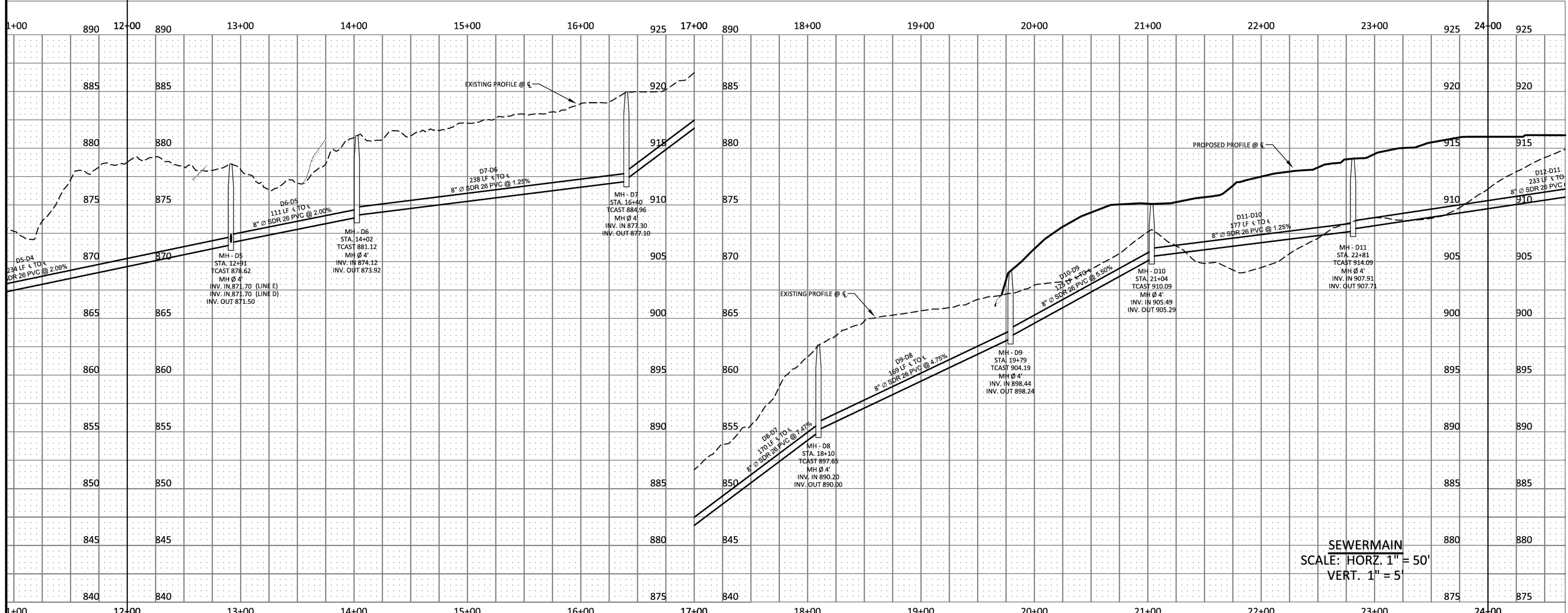


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  - GAS VALVE
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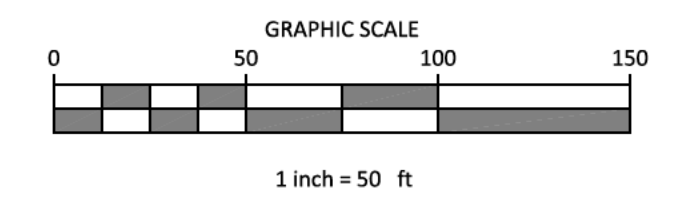
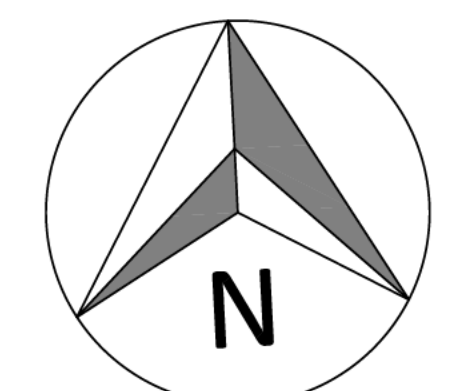
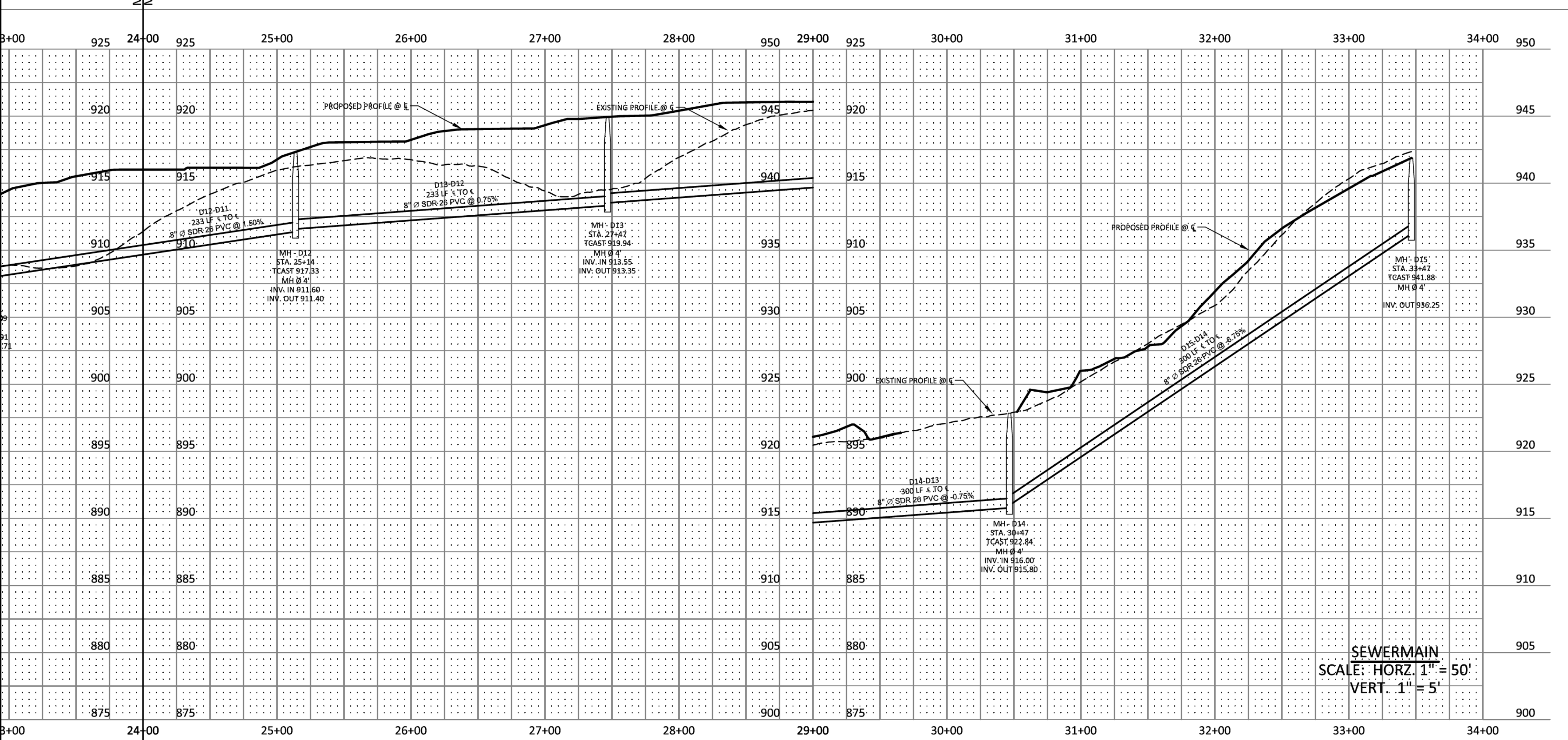
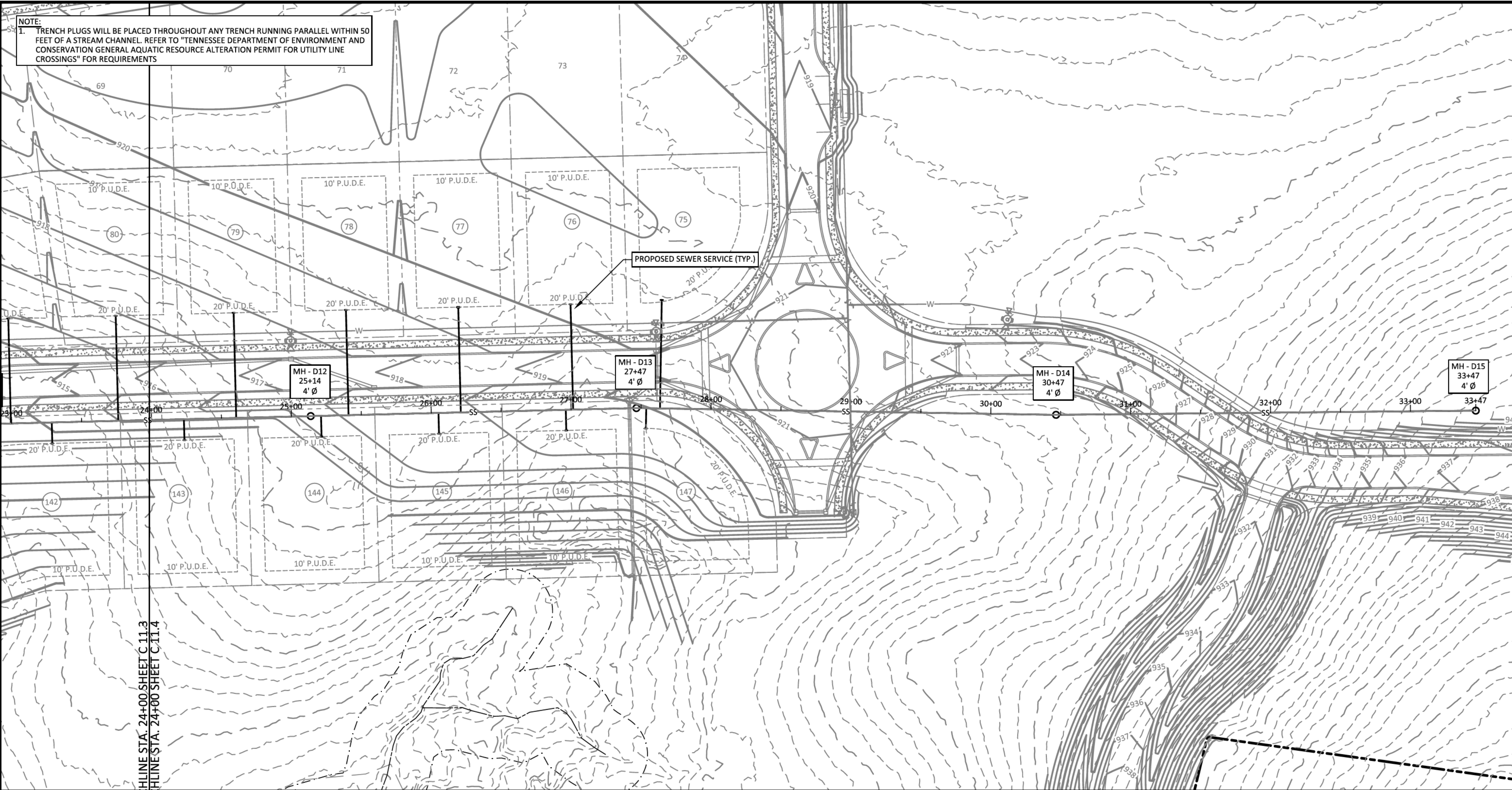
SEWERMAIN  
SCALE: HORZ. 1" = 50'  
VERT. 1" = 5'

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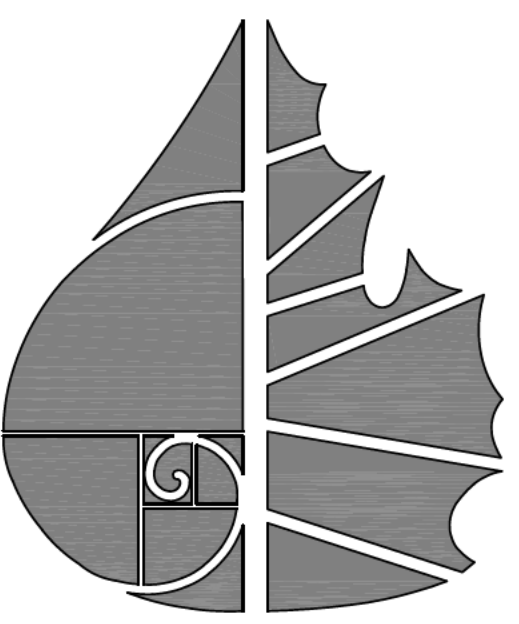
**PLEASANT GROVE FARMS, PHASE 2**  
CONSTRUCTION PLANS  
PLEASANT GROVE ROAD  
CITY OF WESTMORELAND  
SUMNER COUNTY, TENNESSEE

NO.	DATE	REVISION	PER CITY COMMENTS
1	10-25-2022		
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**SHEET NO. C 11.3**  
SHEET 34 OF 40



- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
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  - ⊕ BENCHMARK
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03-29-23

**PLEASANT GROVE FARMS, PHASE 2**  
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PLEASANT GROVE ROAD  
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SEWER PROFILE

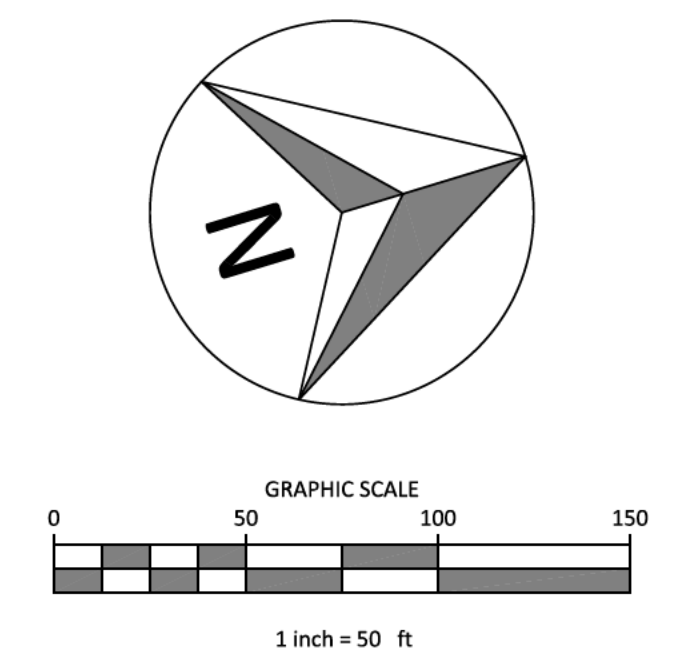
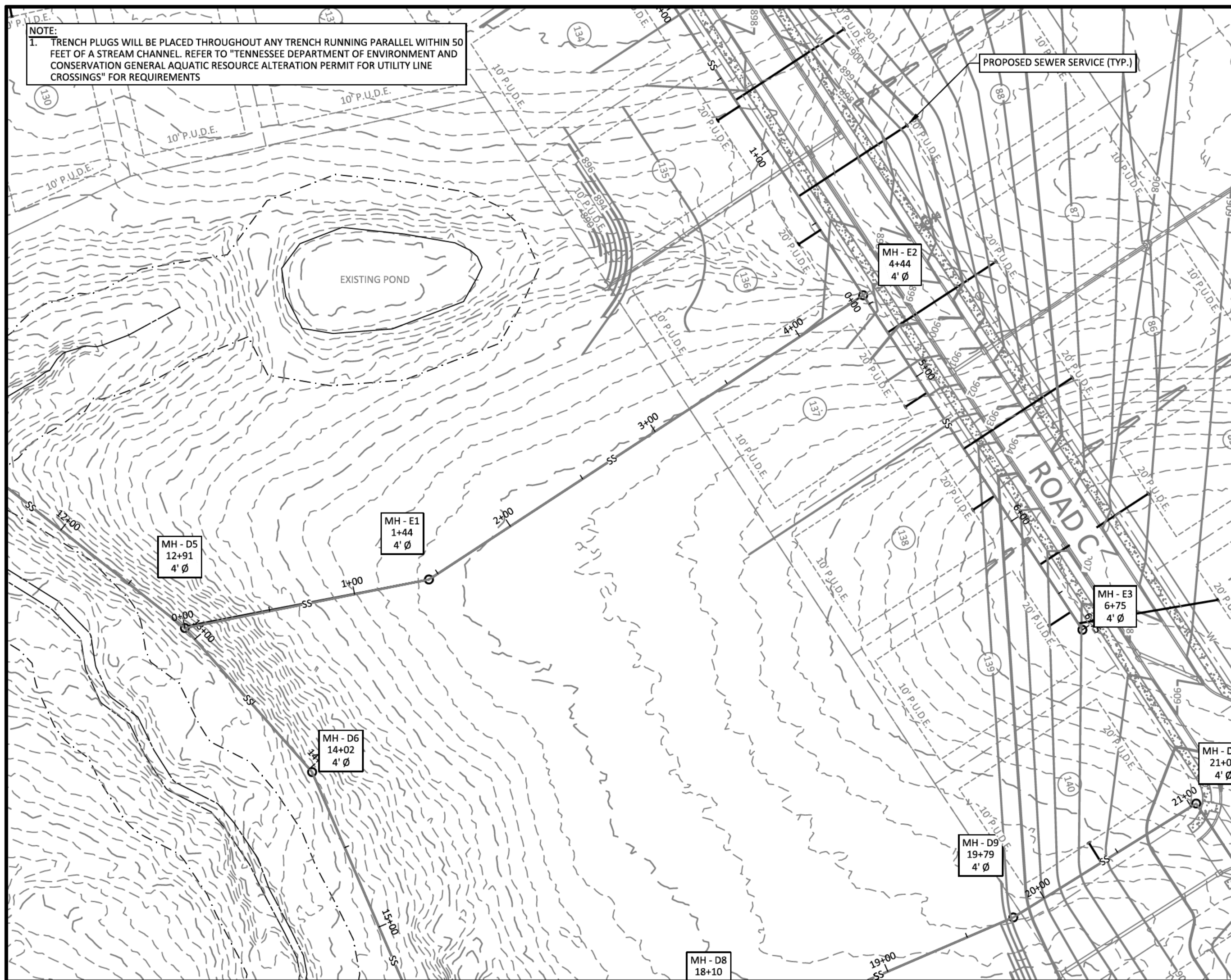
NO.	DATE	REVISION	PER CITY COMMENTS
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3	03-27-2023		

**SHEET NO. C 11.4**

SHEET 35 OF 40



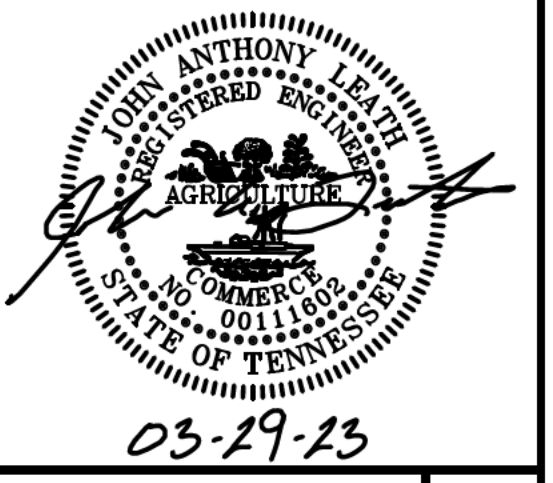
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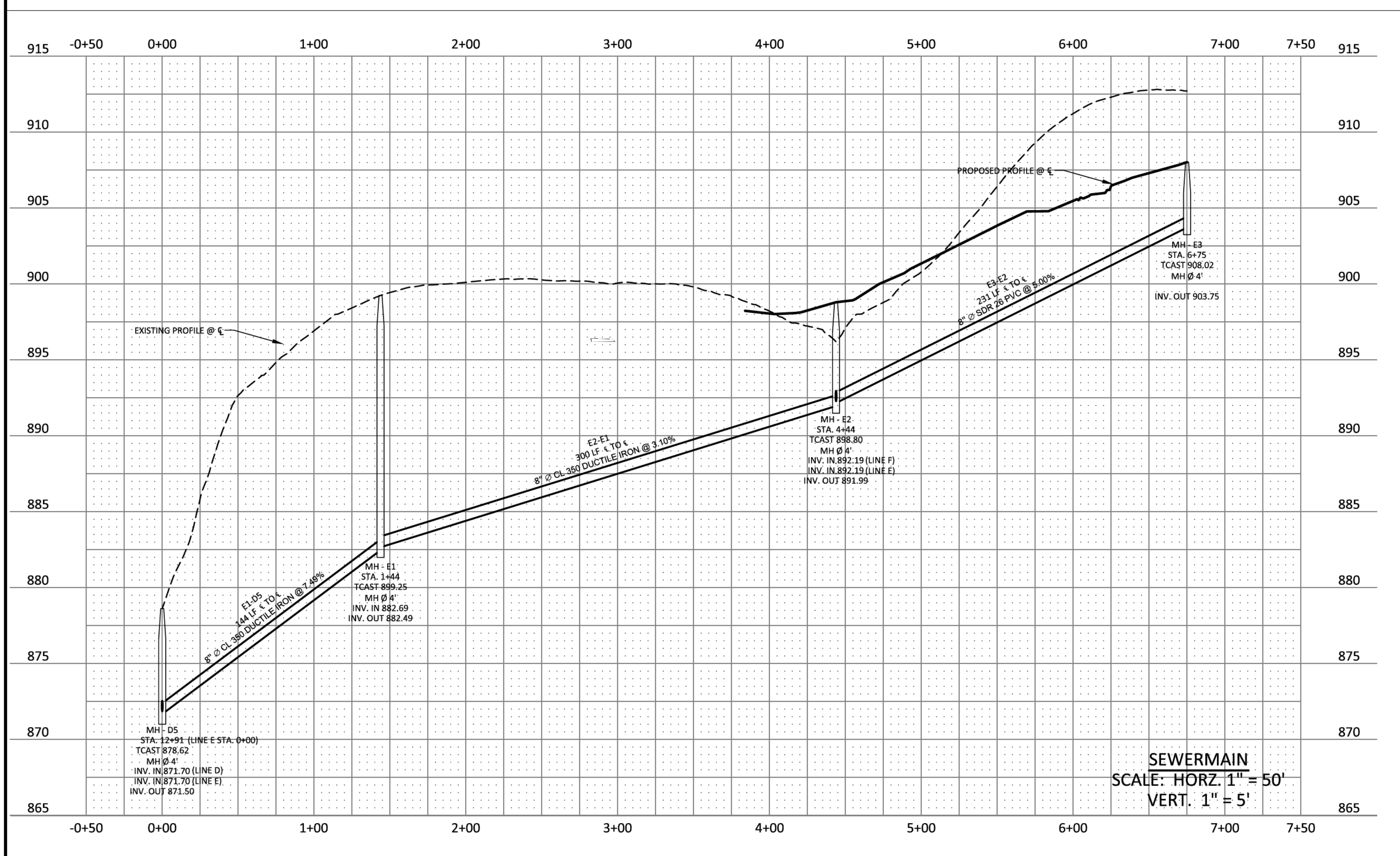
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PLEASANT GROVE FARMS, PHASE 2  
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CITY OF WESTMORELAND  
SUMNER COUNTY, TENNESSEE

SEWER PROFILE

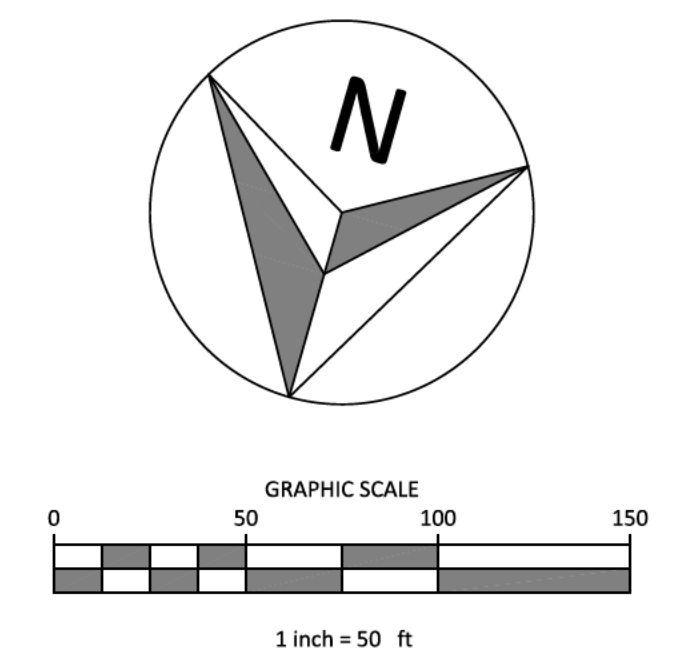
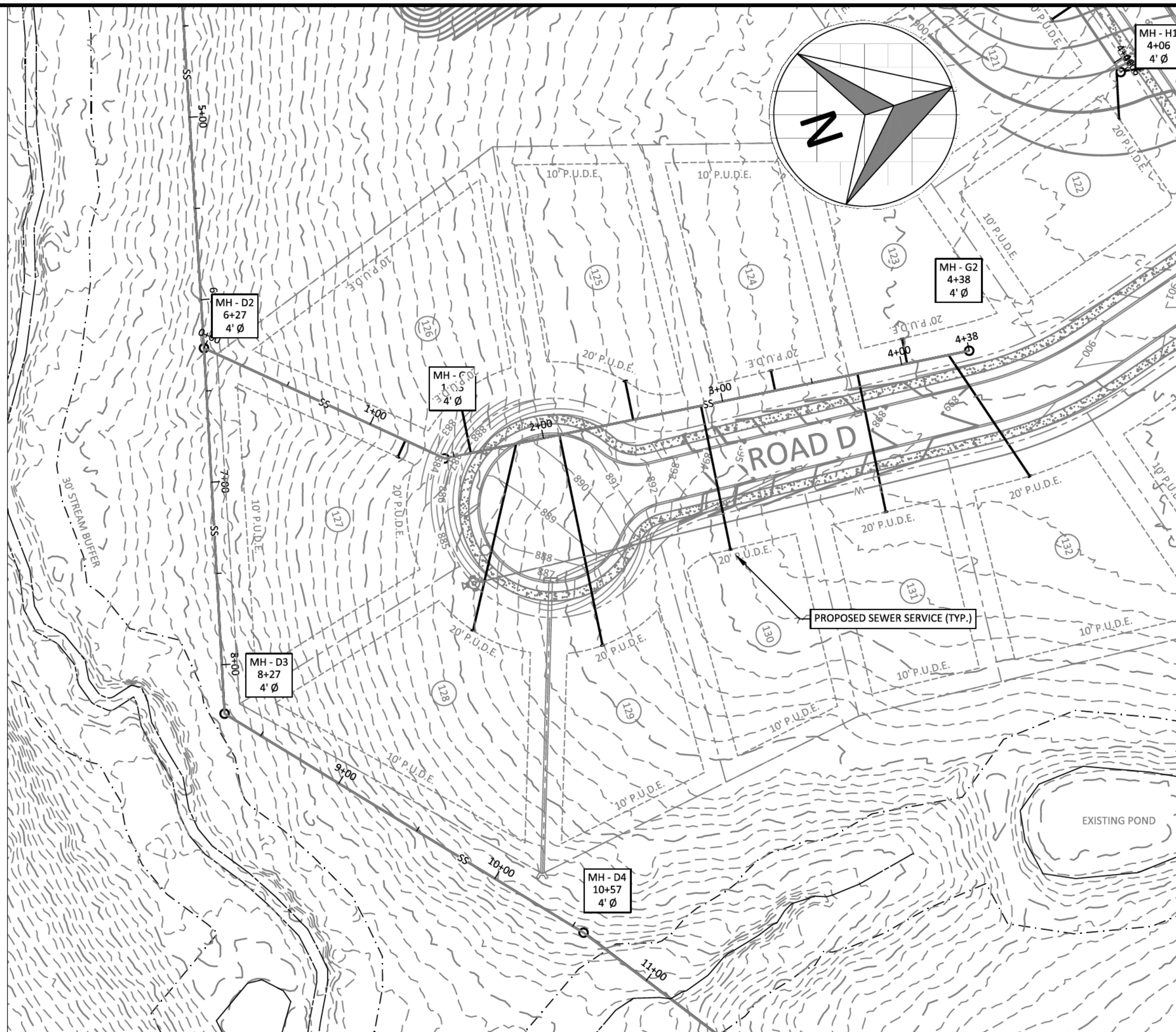
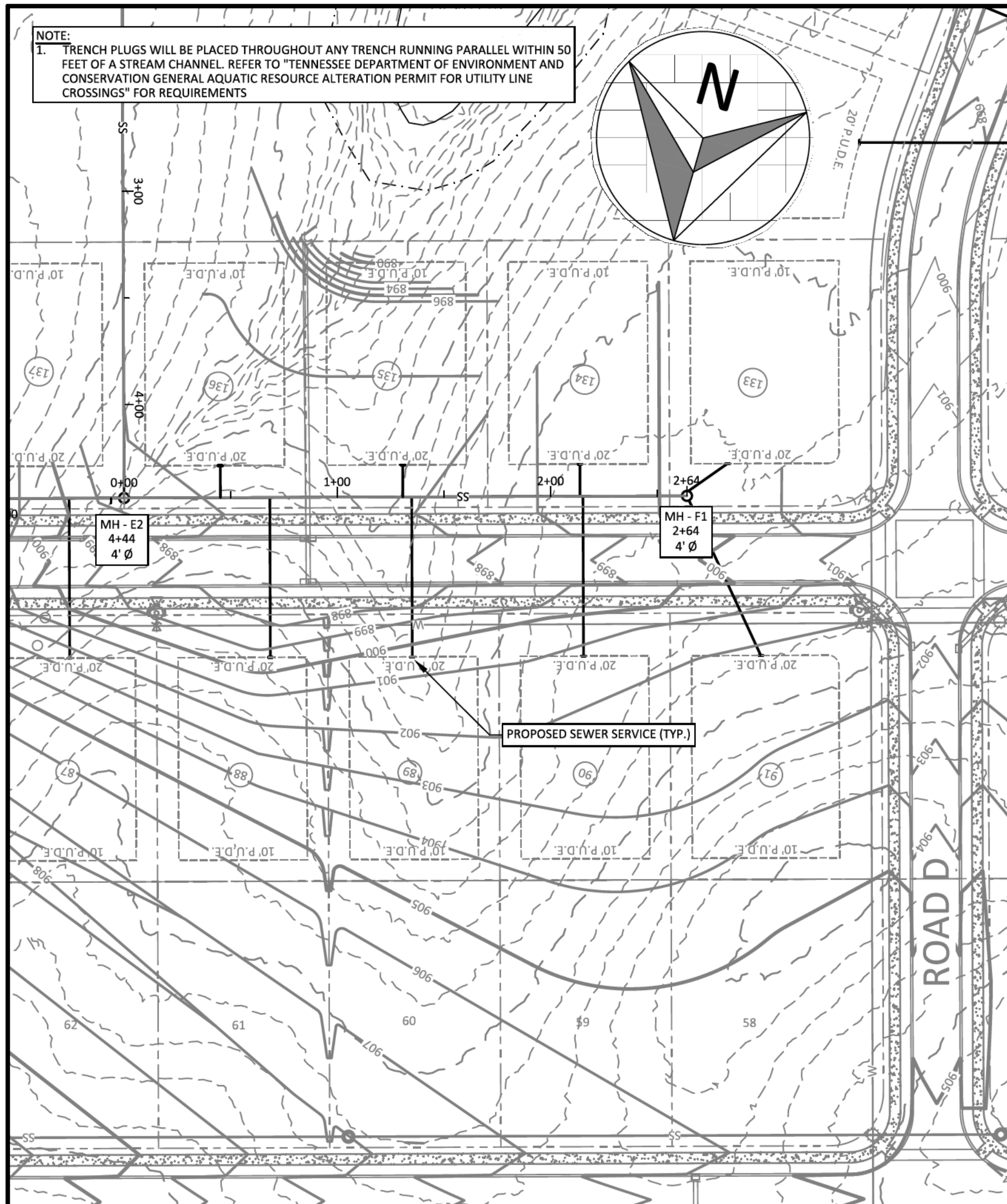


NO.	DATE	REVISION	PER CITY COMMENTS
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SHEET NO.  
**C 11.5**

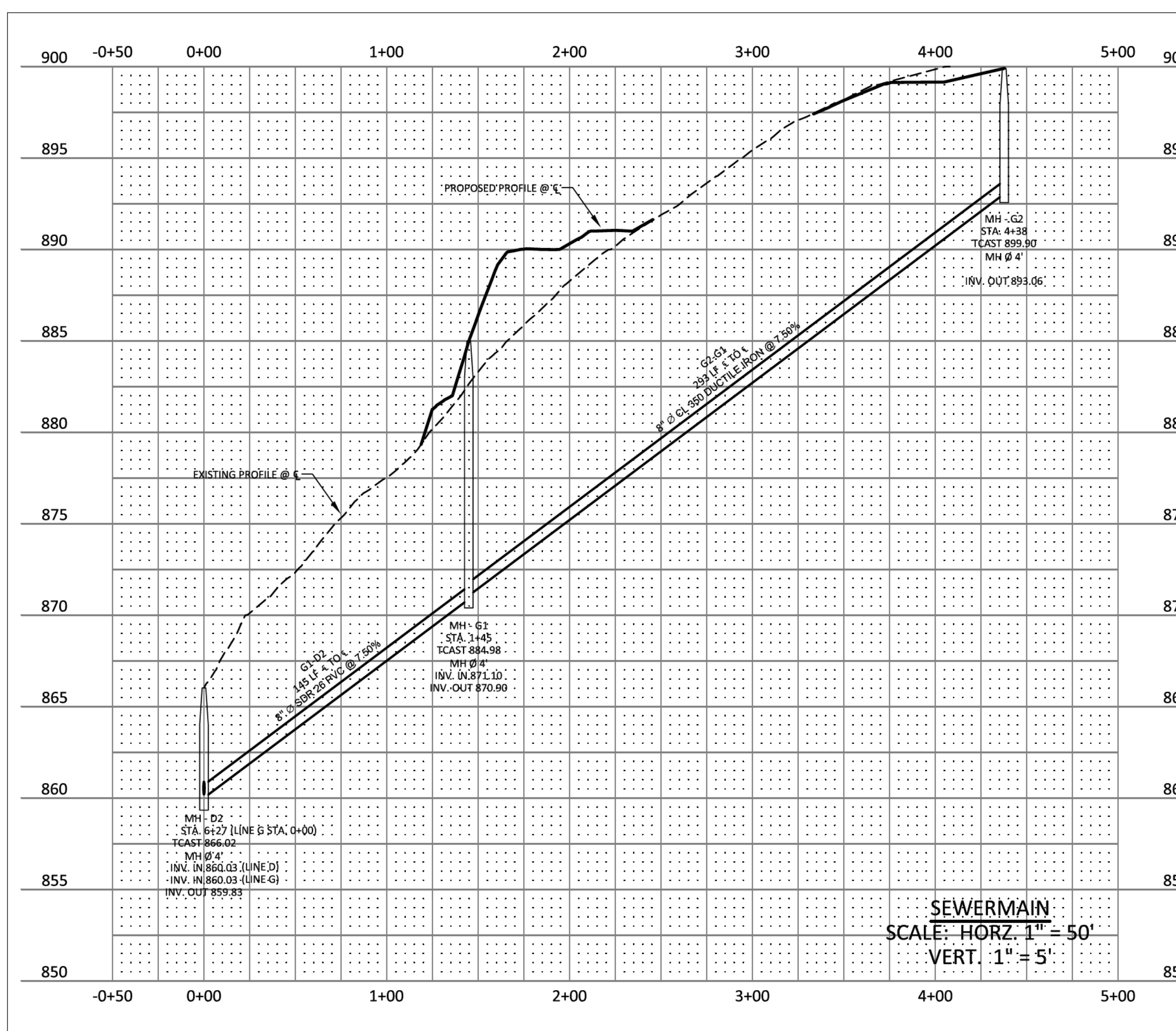
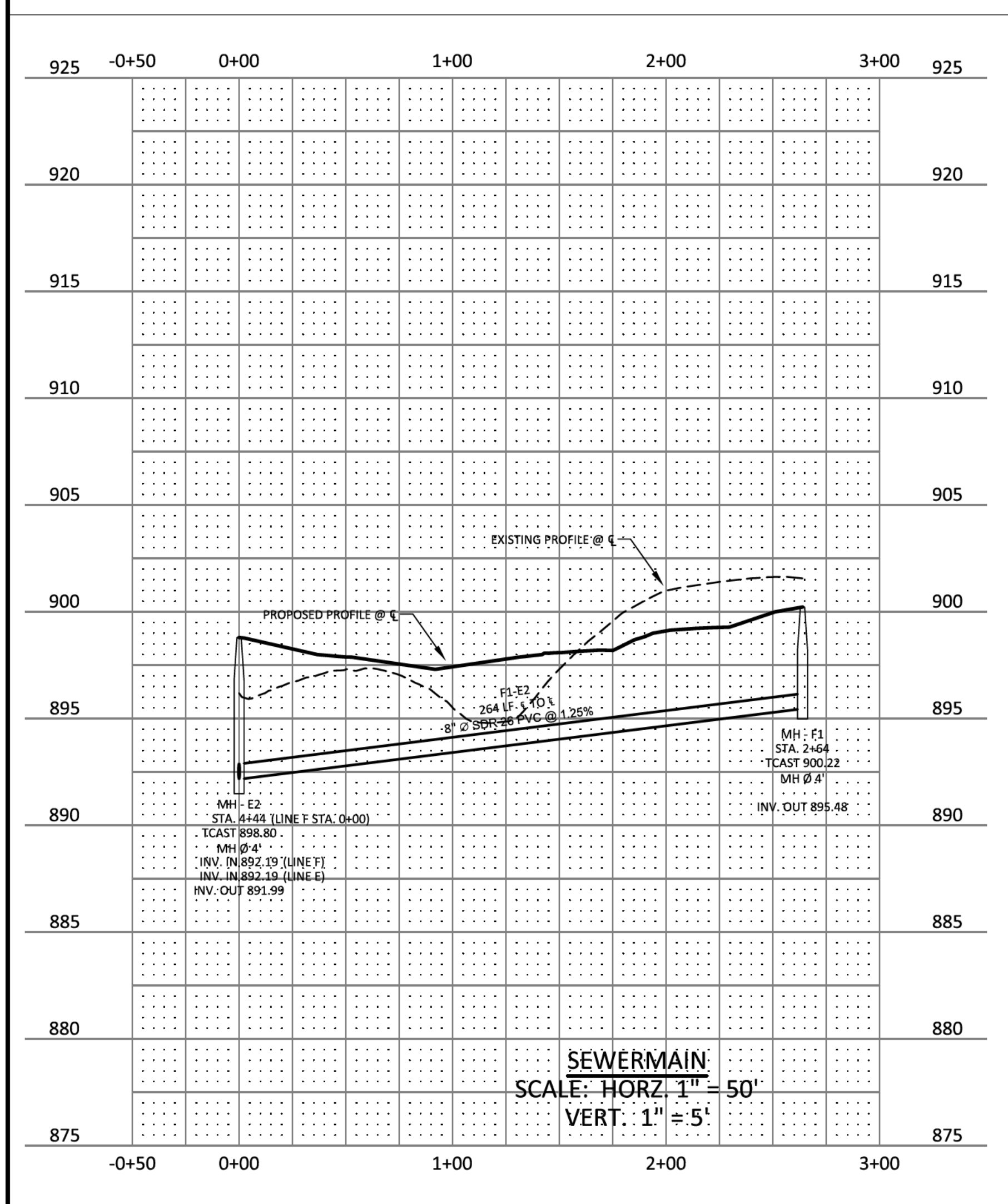
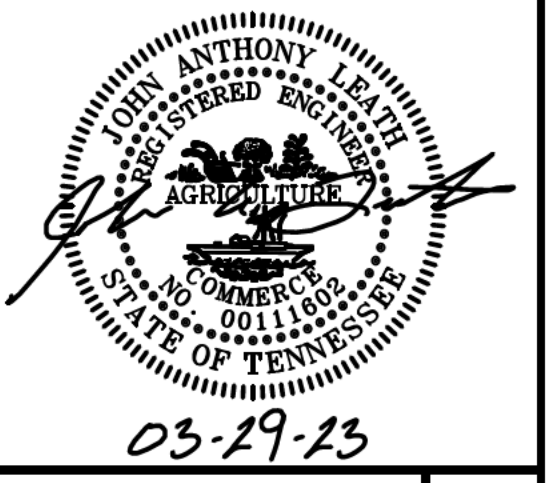
IF YOU DIG IN TENNESSEE  
CALL 811 FIRST!  
or (800) 351-1111 or (615) 366-1987  
TENNESSEE ONE CALL IT'S THE LAW

JOB# 21.112G 23 MARCH 2022



- LEGEND**
- CONCRETE MONUMENT (OLD)
  - CONCRETE MONUMENT (NEW)
  - IRON ROD (OLD)
  - IRON ROD (NEW)
  - ⊕ BENCHMARK
  - BOUNDARY LINE
  - - - - - BUFFER
  - - - - - SETBACK / YARD
  - - - - - PUDE
  - EXTRUDED CURB
  - SS SANITARY SEWER LINE
  - FM SANITARY FORCE MAIN
  - W WATER LINE
  - STORM SEWER
  - - - - - GAS LINE
  - OHE OVERHEAD UTILITY LINE
  - UGT UNDERGROUND UTILITY LINE
  - FENCE
  - TREE LINE
  - UTILITY POLE
  - UTILITY POLE W/ LIGHT
  - GUY ANCHOR
  - TELEPHONE MANHOLE
  - ELECTRIC JUNCTION BOX
  - CABLE PEDESTAL
  - SANITARY SEWER MANHOLE
  - WATER METER
  - WATER VALVE
  - BLOW OFF VALVE
  - AIR RELEASE ASSEMBLY
  - FIRE HYDRANT
  - GAS METER
  - GAS VALVE
  - A/C PAD

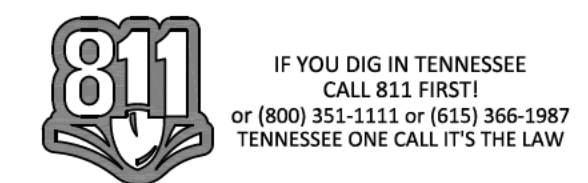
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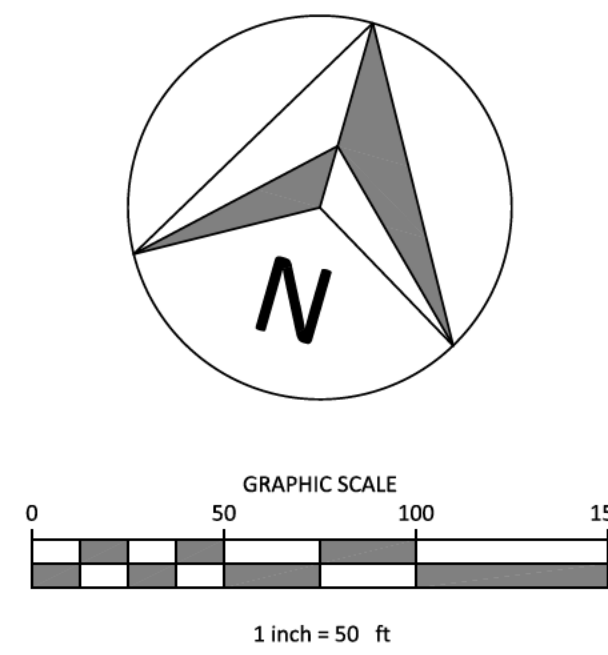
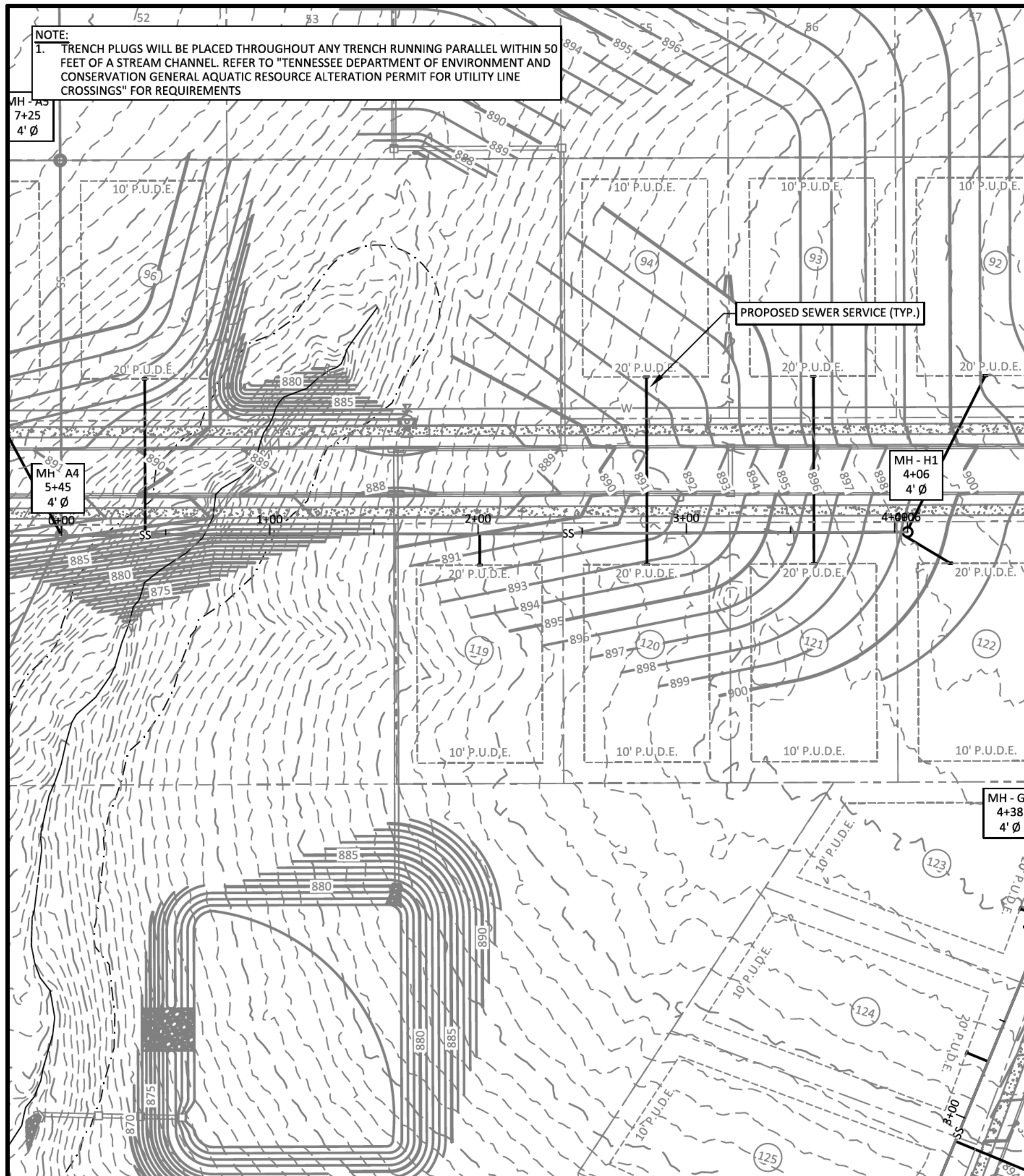


**PLEASANT GROVE FARMS, PHASE 2**  
CONSTRUCTION PLANS  
PLEASANT GROVE ROAD  
CITY OF WESTMORELAND  
SUMNER COUNTY, TENNESSEE

NO.	DATE	REVISION	PER CITY COMMENTS
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**SHEET NO. C 11.6**  
SHEET 37 OF 40  
JOB# 21.112G 23 MARCH 2022

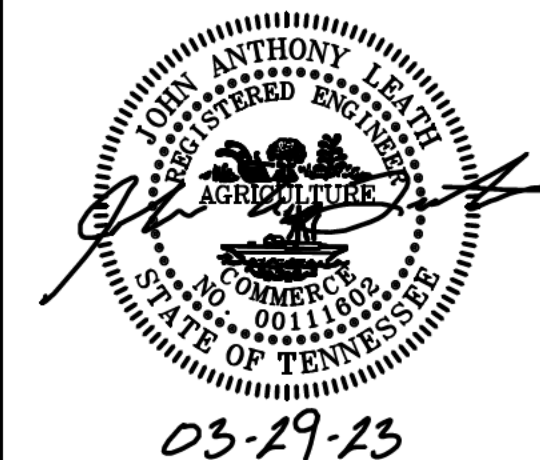




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  - IRON ROD (OLD)
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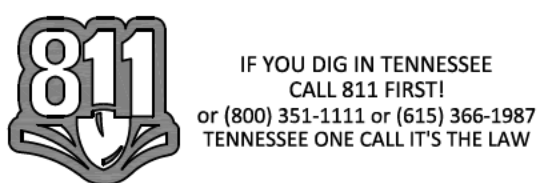
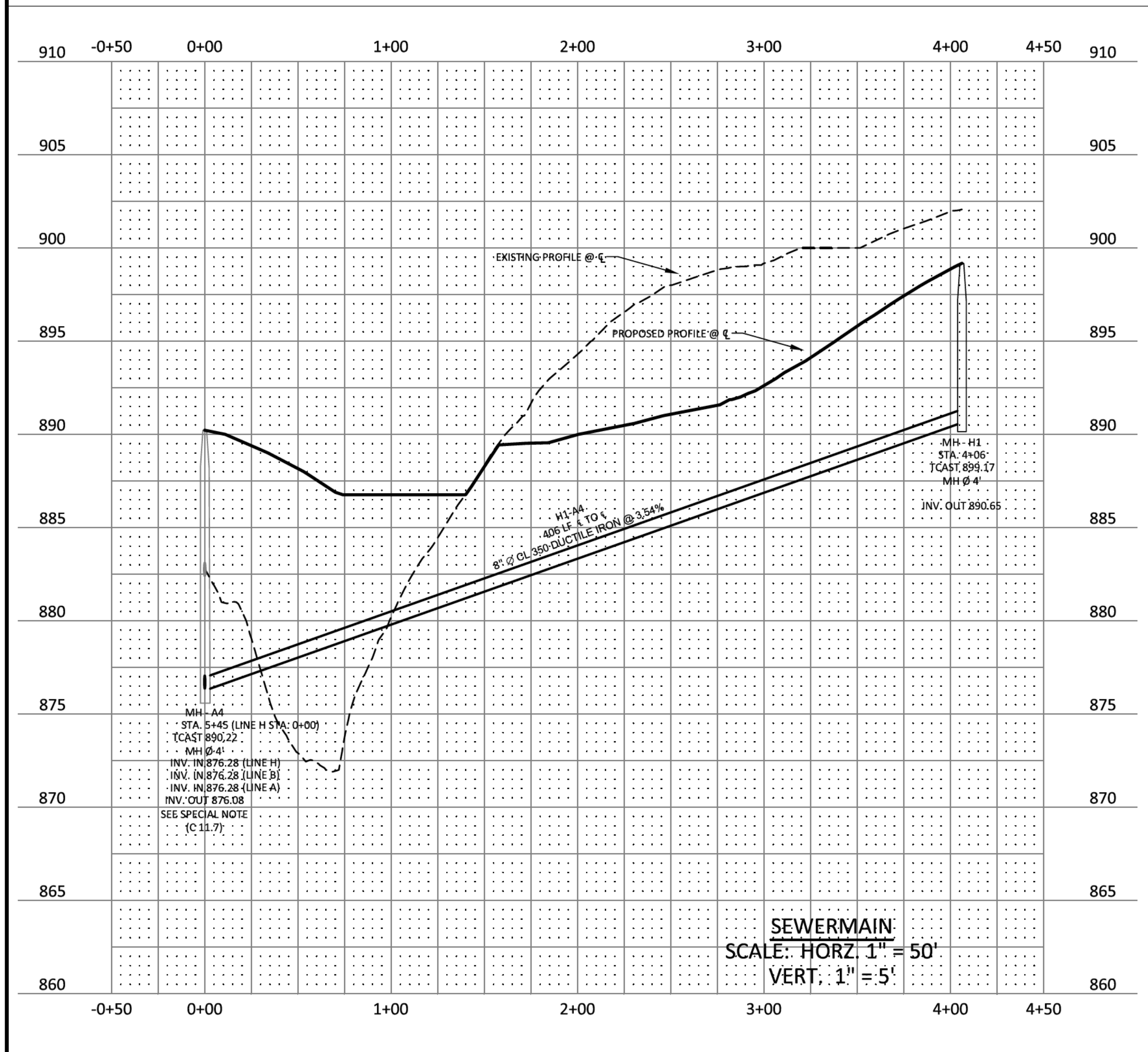
**SPECIAL NOTE:**  
 1. EXISTING MH-A4 SHALL BE CORED IN THE FIELD AT INVERT ELEVATION 876.28' FOR LINE H

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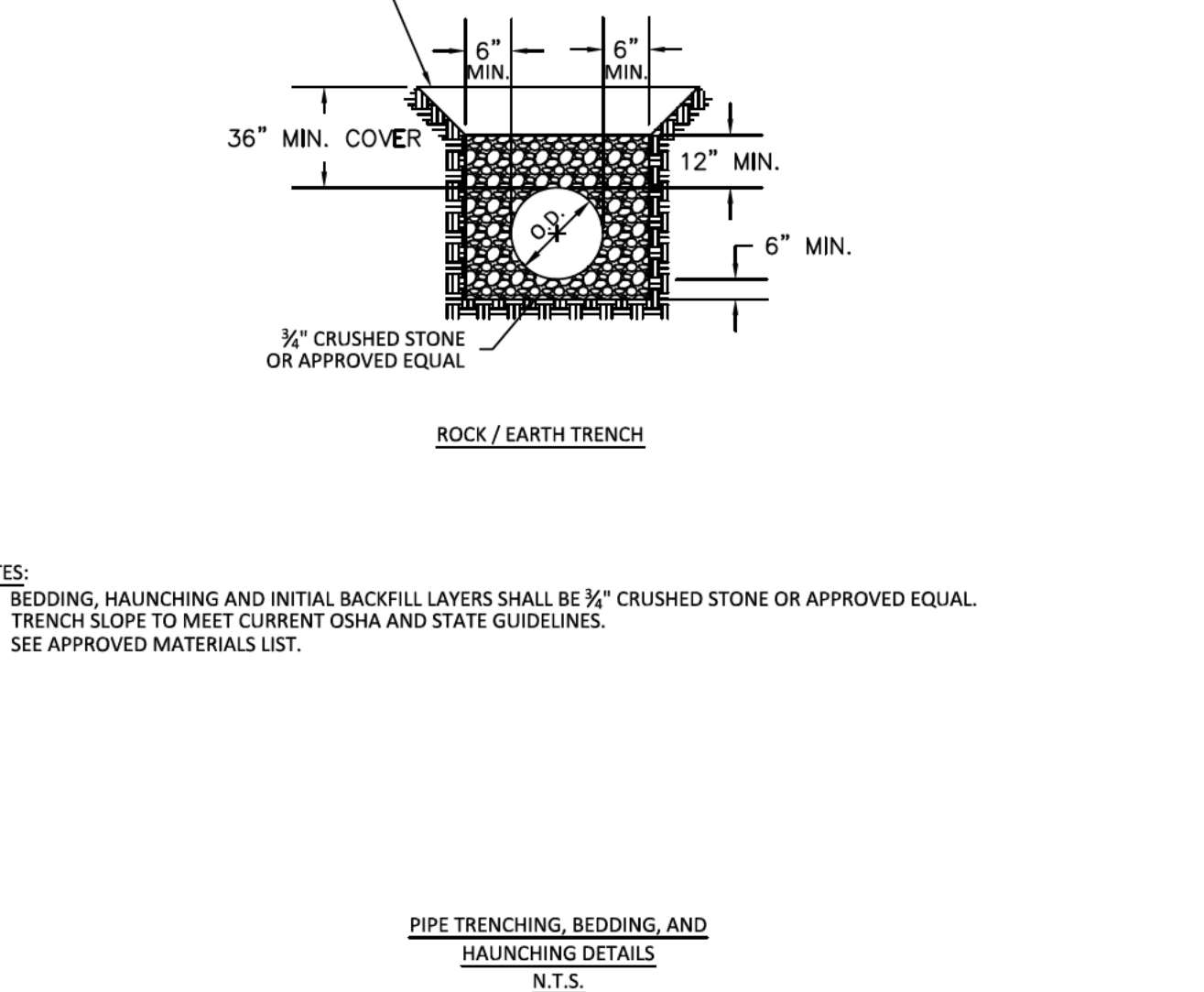
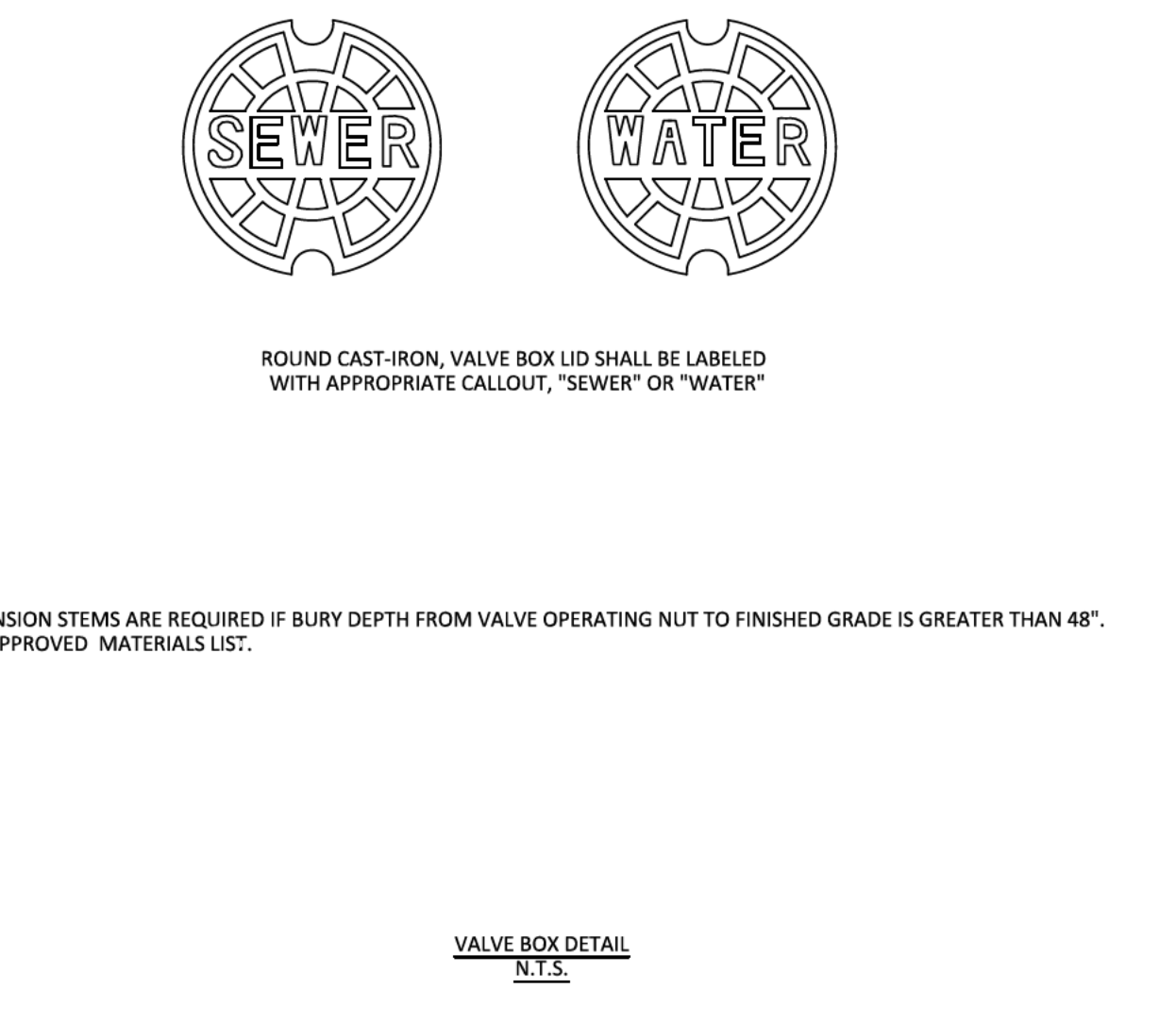
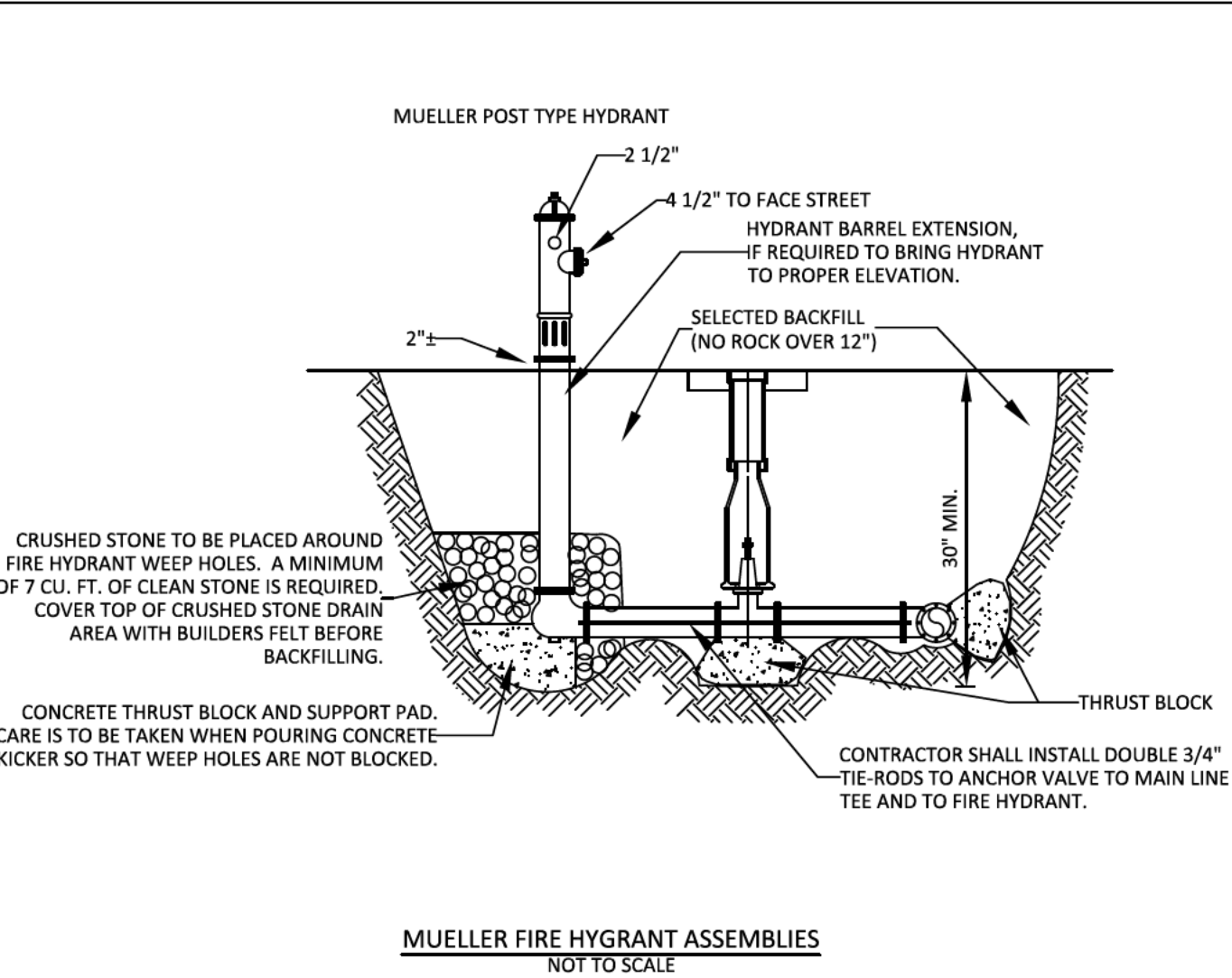
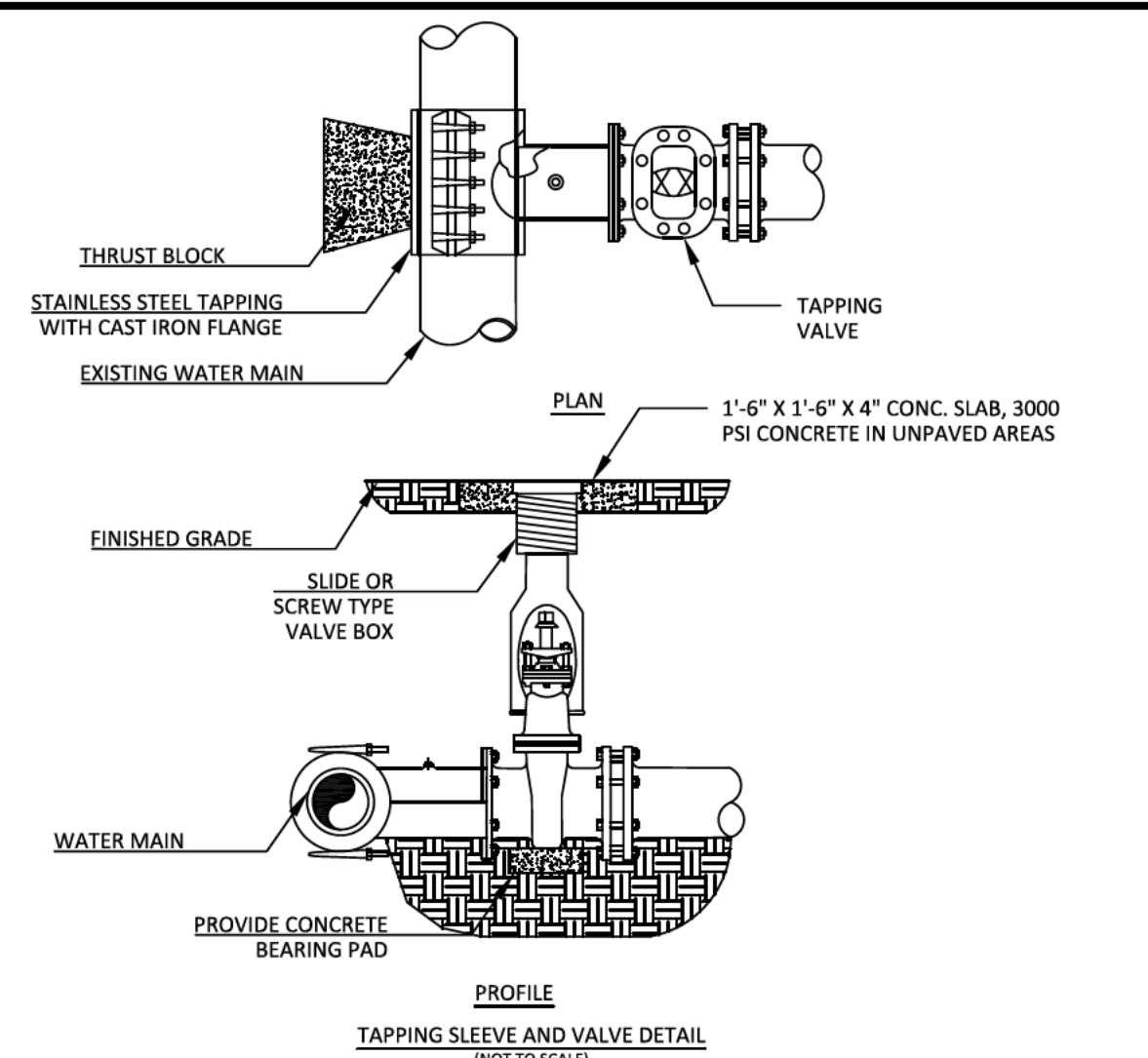
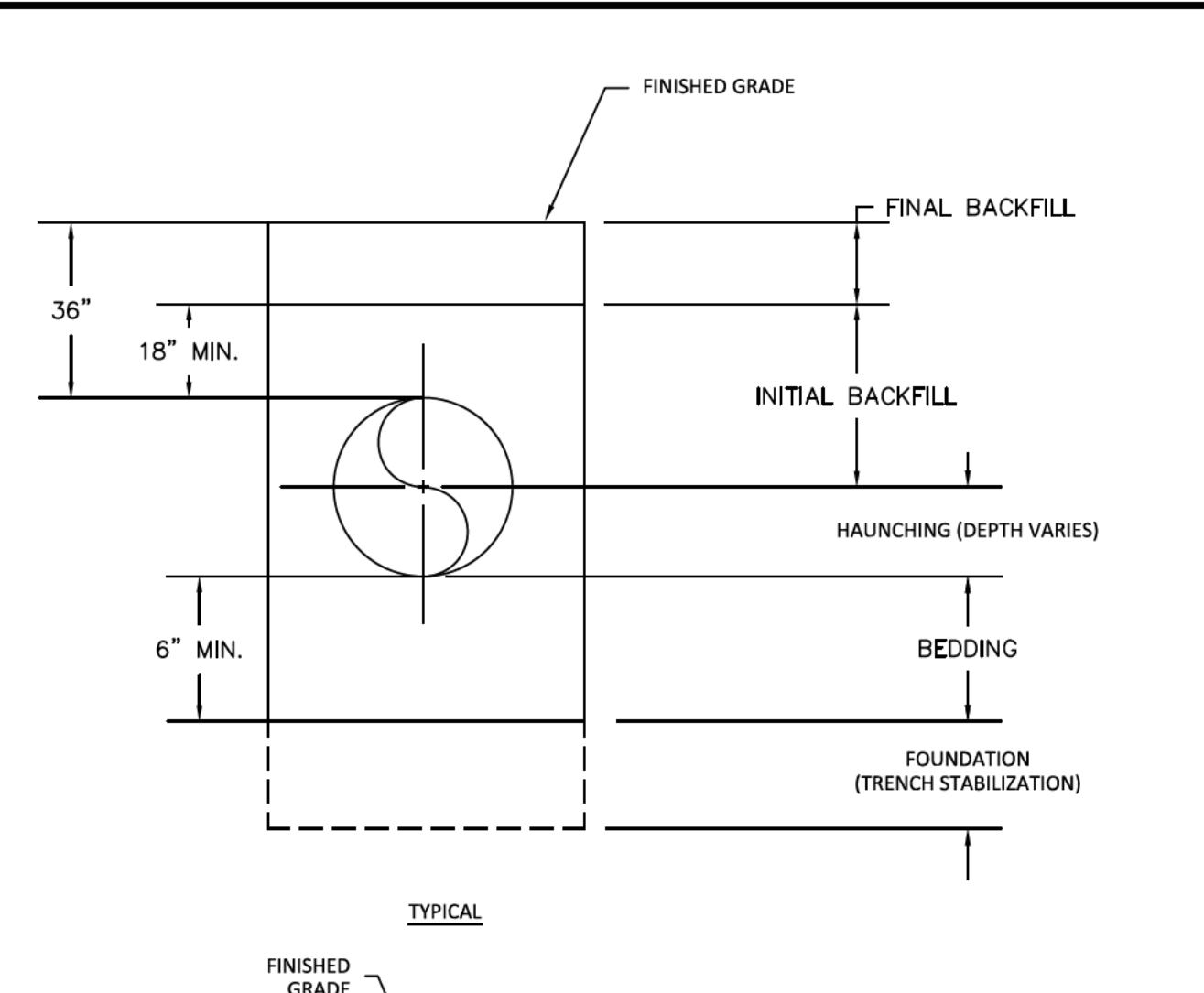
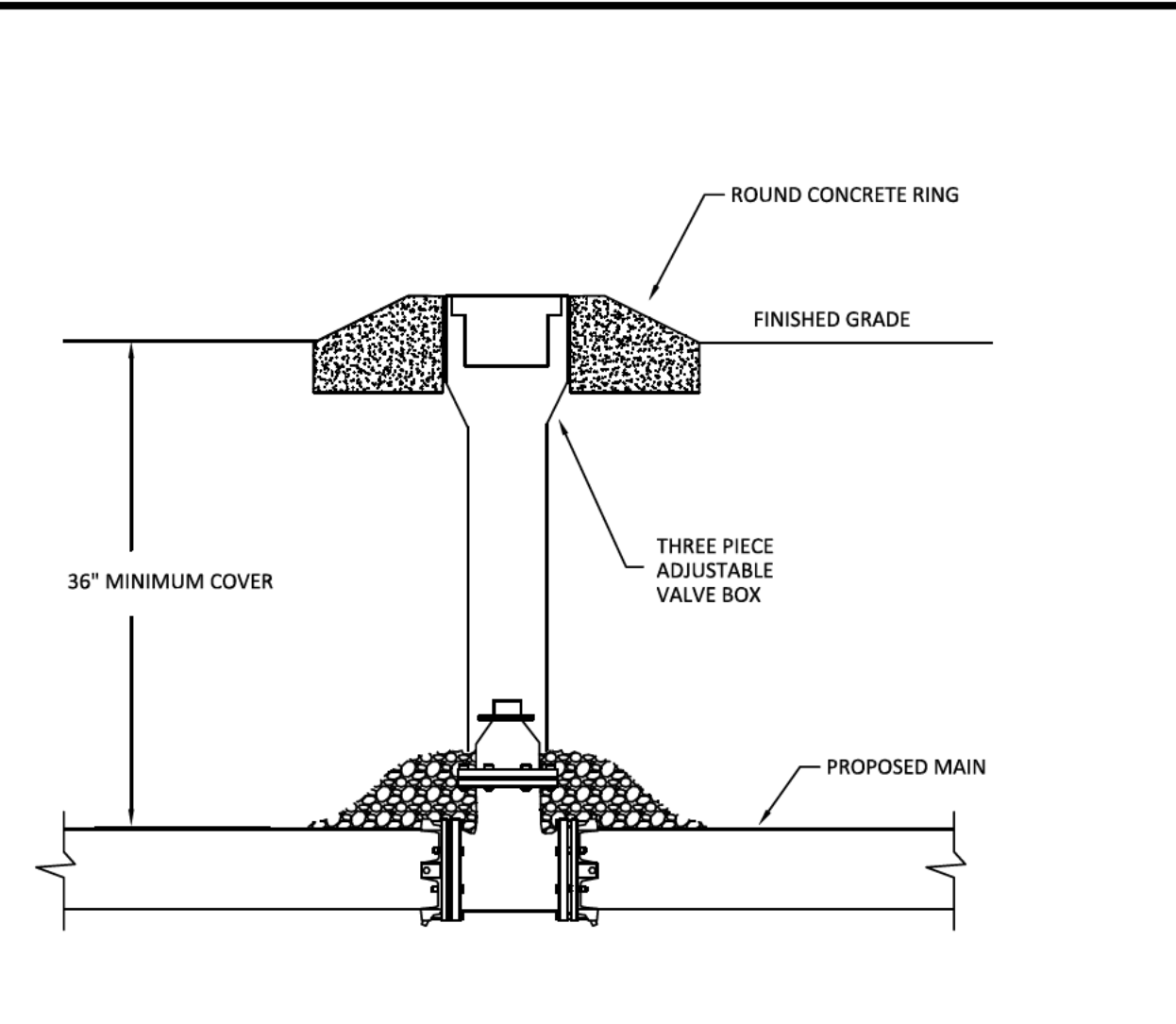
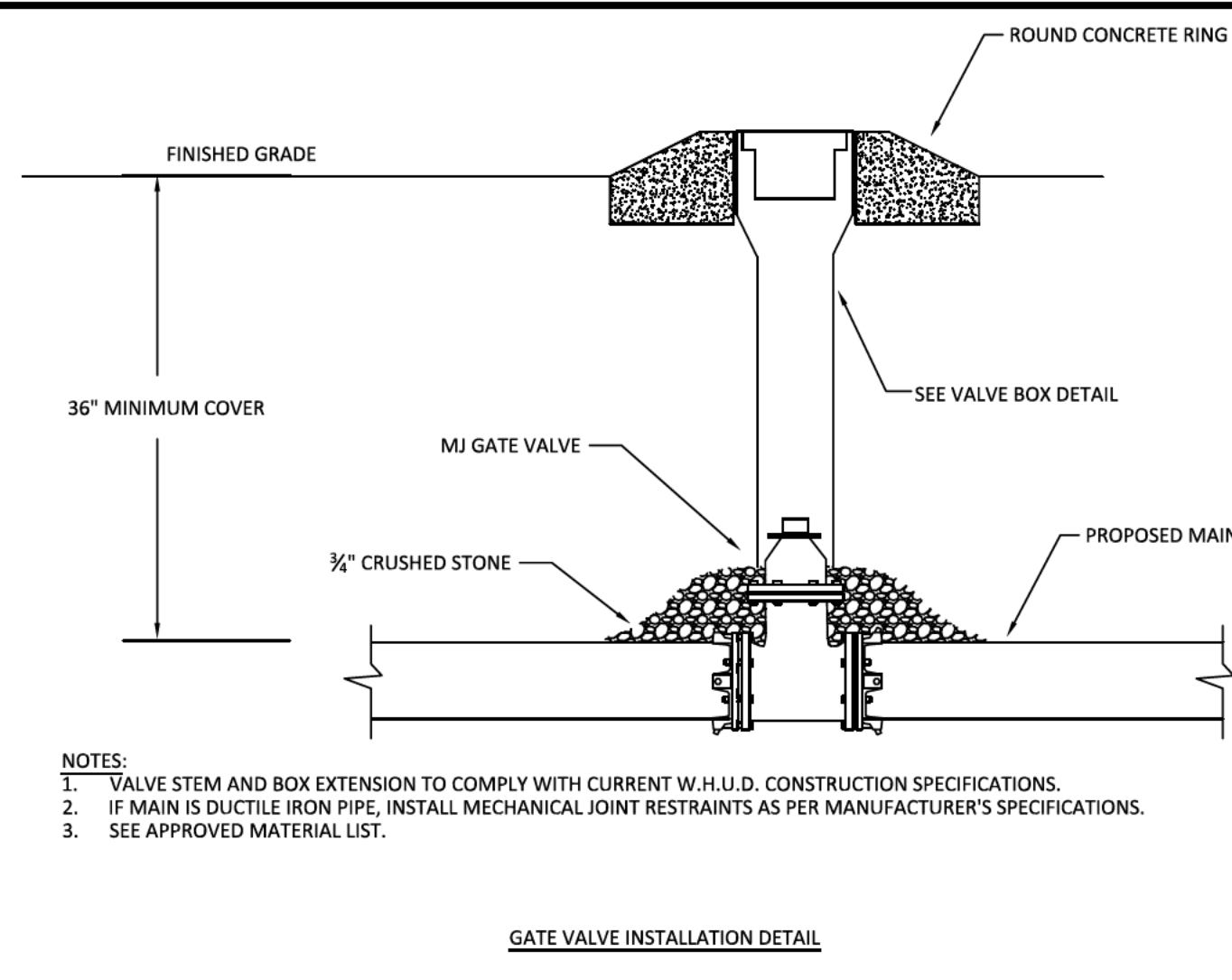
**PLEASANT GROVE FARMS, PHASE 2**  
 CONSTRUCTION PLANS  
 PLEASANT GROVE ROAD  
 CITY OF WESTMORELAND  
 SUMNER COUNTY, TENNESSEE

SEWER PROFILE



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**SHEET NO.**  
**C 11.7**  
 SHEET 38 OF 40  
 JOB# 21.112G 23 MARCH 2022



**SCHEDULE OF MINIMUM BEARING AREA REQUIRED BASED ON 200 PSI INTERNAL PRESSURE AND 4000 PSF SOIL BEARING CAPACITY\***

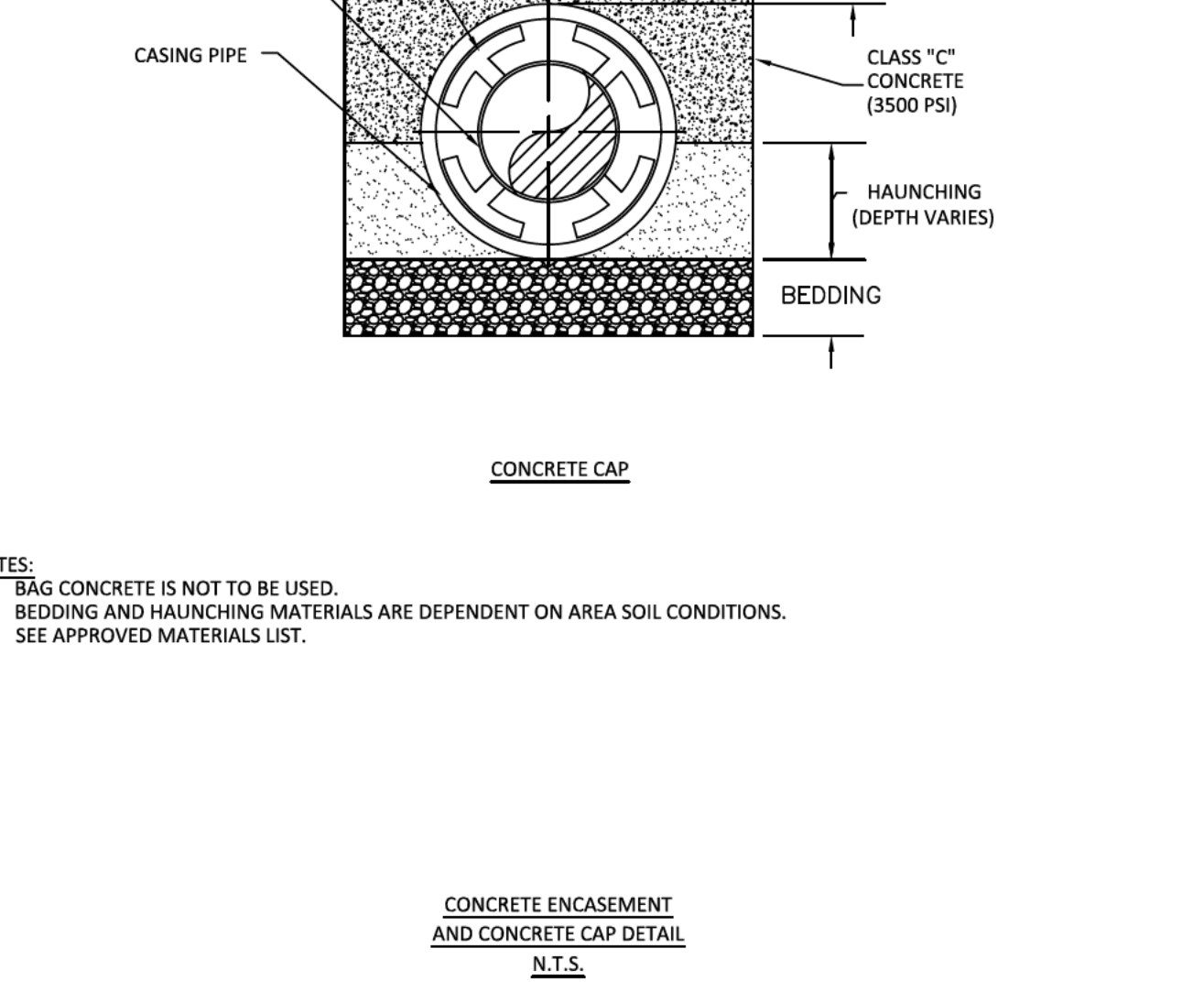
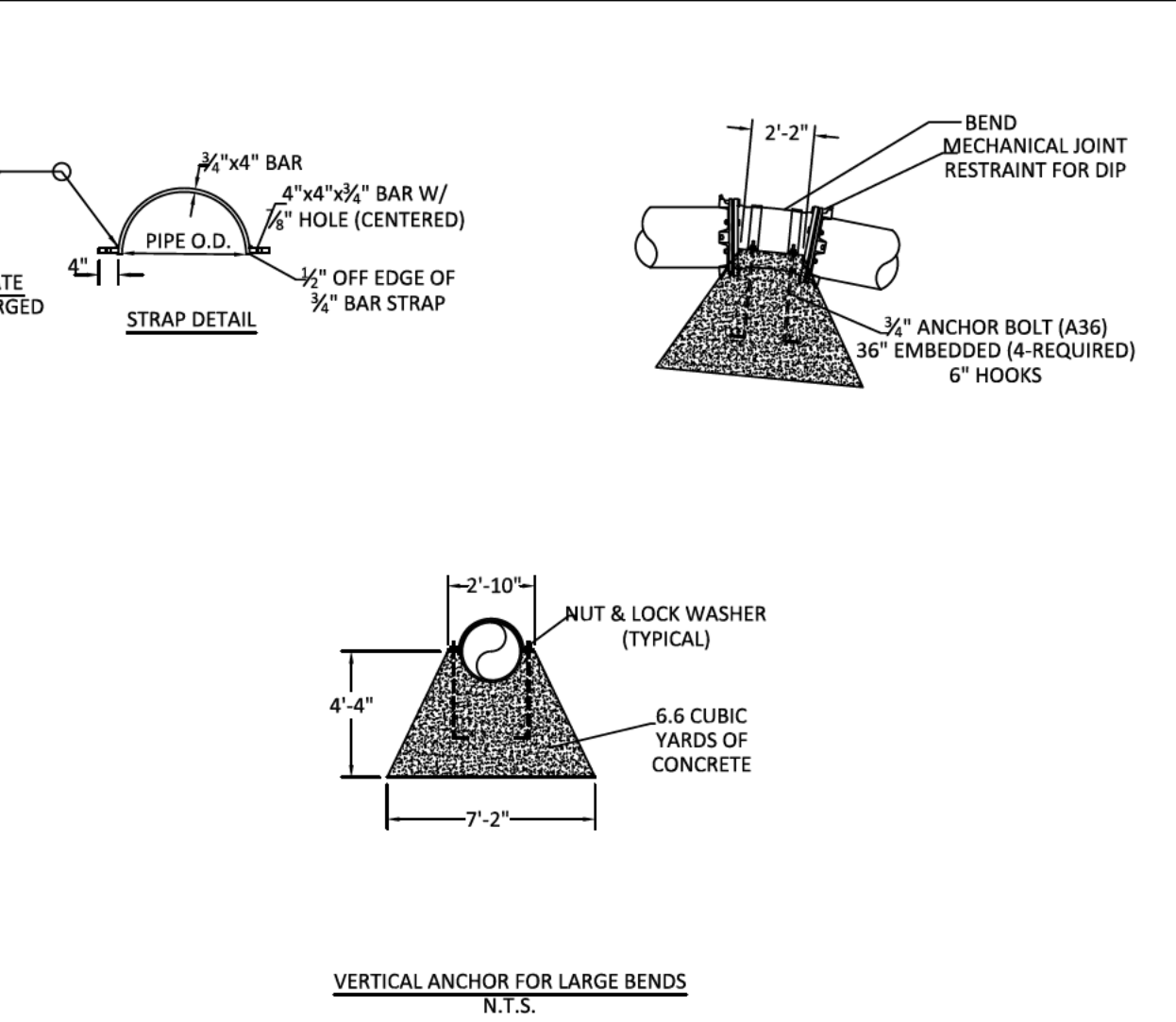
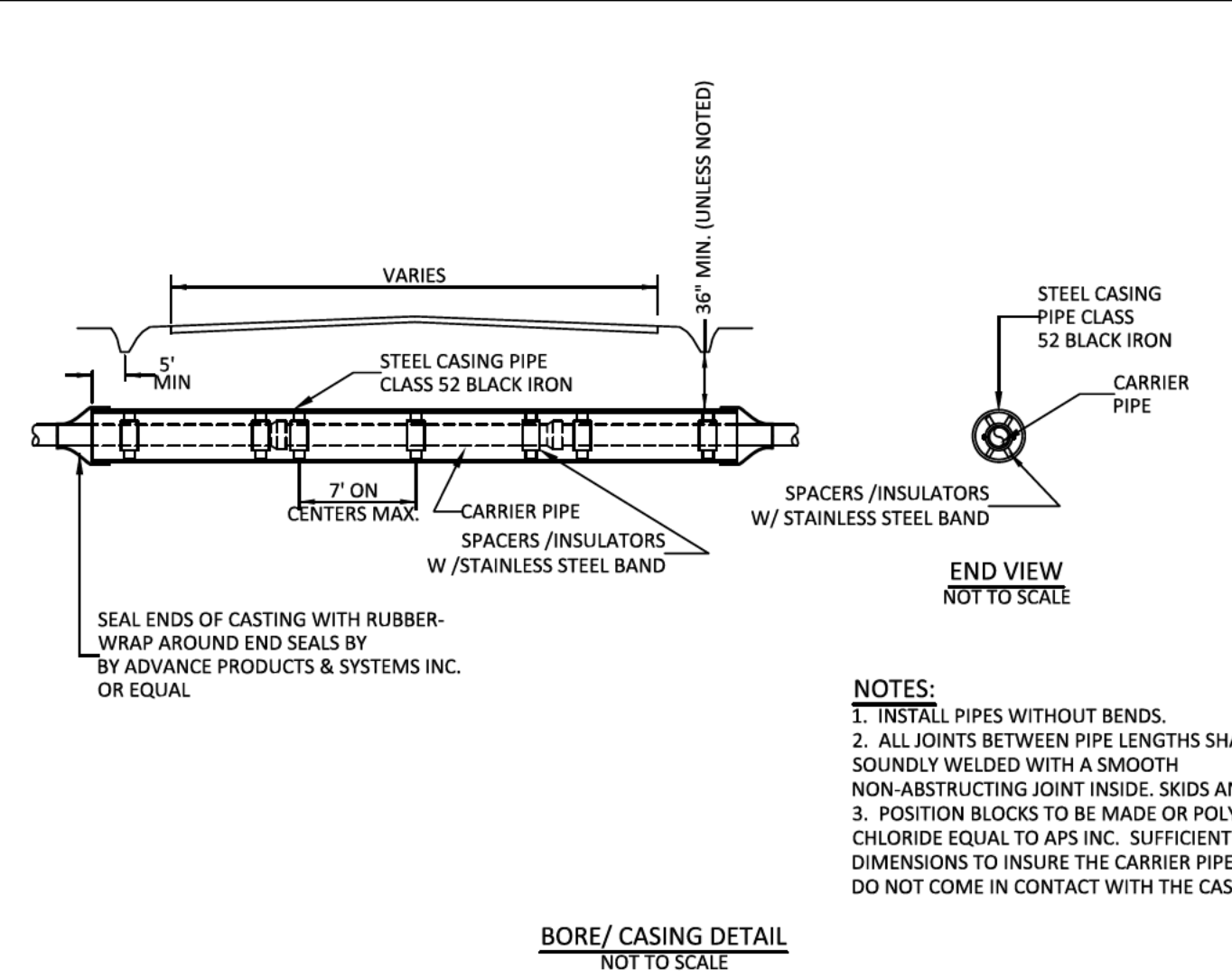
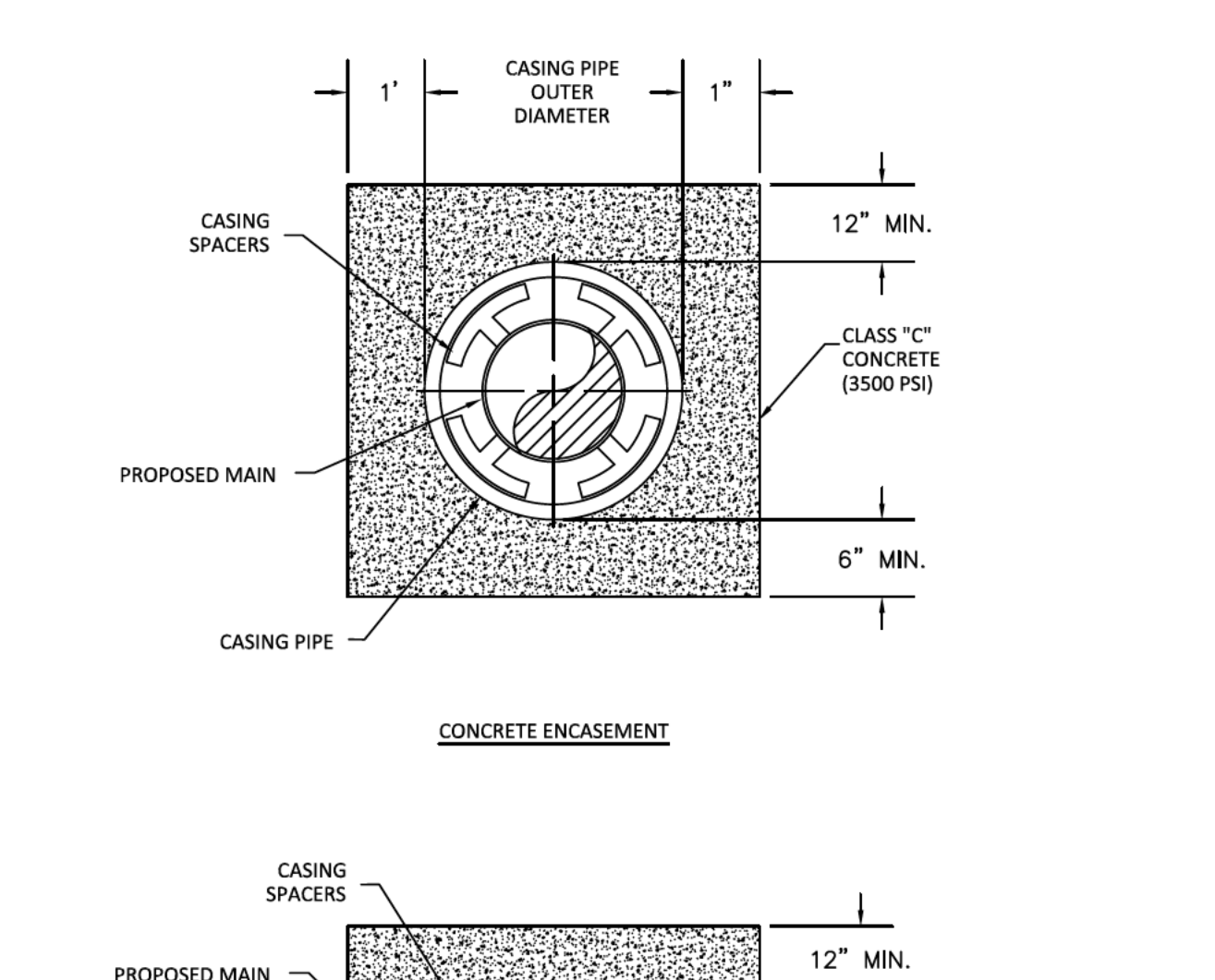
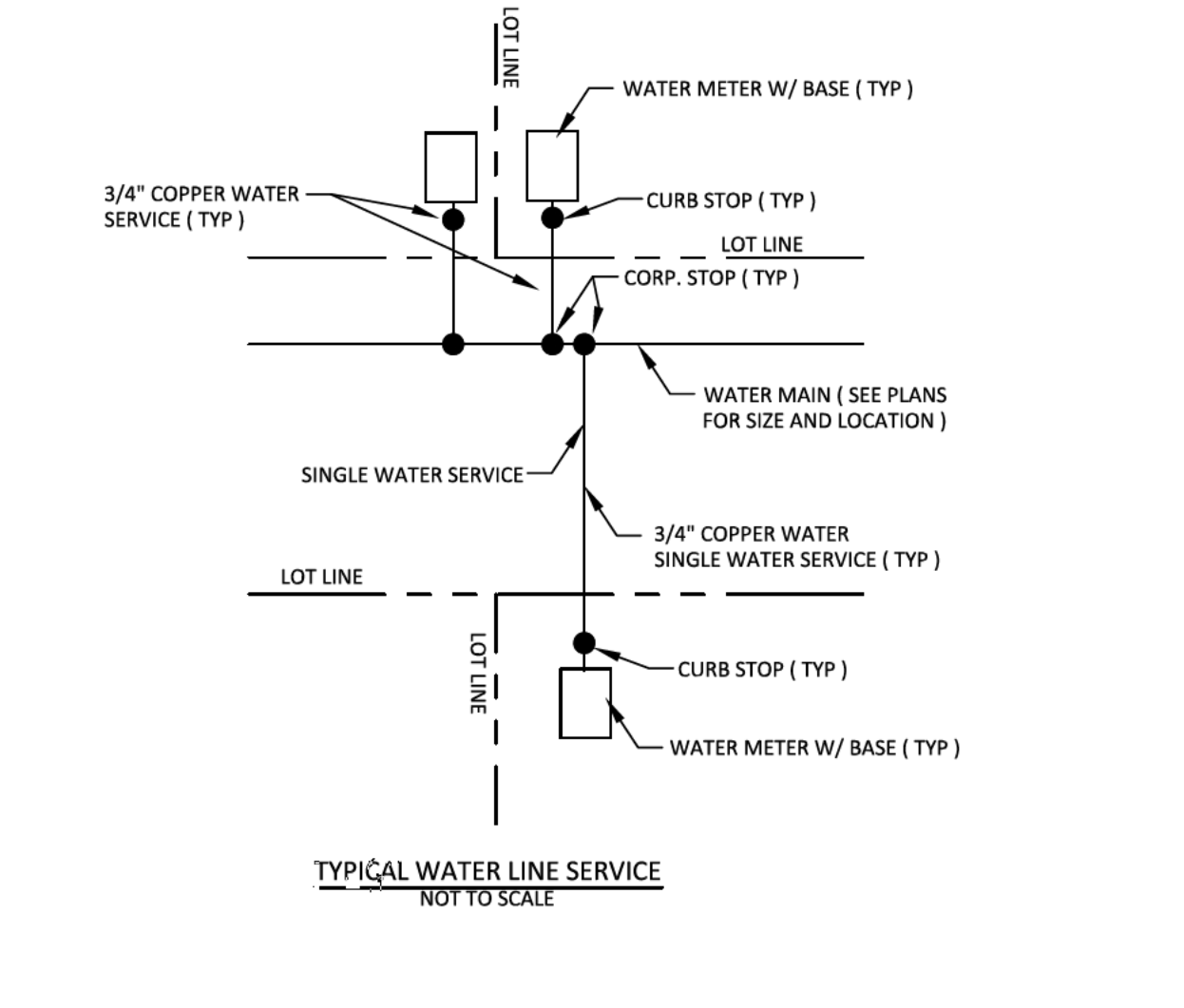
PIPE SIZE	TEE OR DEAD END	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4"	1.0	1.5	1.0	1.0	1.0
6"	2.5	3.0	2.0	1.0	1.0
8"	4.0	5.5	3.0	1.5	1.0
10"	6.0	8.5	4.5	2.5	1.5
12"	8.5	12.0	6.5	3.0	2.0
16"	15.0	21.5	11.5	6.0	3.0

VALUES ARE TABULATED IN SQUARE FEET

\* ENGINEER TO CONFIRM ACTUAL REQUIRED DIMENSIONS BEFORE CONSTRUCTION OF THE THRUST BLOCK.  
 BEARING AREA ( SQUARE FEET ) = A ( feet ) X B ( feet )

NOTES:  
 1. CONCRETE TO BE CLASS "C" 2,500 PSI OR STRONGER  
 2. DIMENSIONS AS SHOWN ARE APPROXIMATE - SUBJECT TO CHANGE AT DIRECTION OF OR APPROVAL OF ENGINEER.  
 3. KEEP CONCRETE CLEAR OF ANY PIPE JOINT, GLAND BOLTS, ETC.  
 4. CONCRETE TO BEAR AGAINST UNDISTURBED EARTH WITH BEARING AREA EQUIVALENT TO AT LEAST A X B.

PLAN: 90° BEND NOT TO SCALE



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03-29-23

**PLEASANT GROVE FARMS, PHASE 2**  
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 PLEASANT GROVE ROAD  
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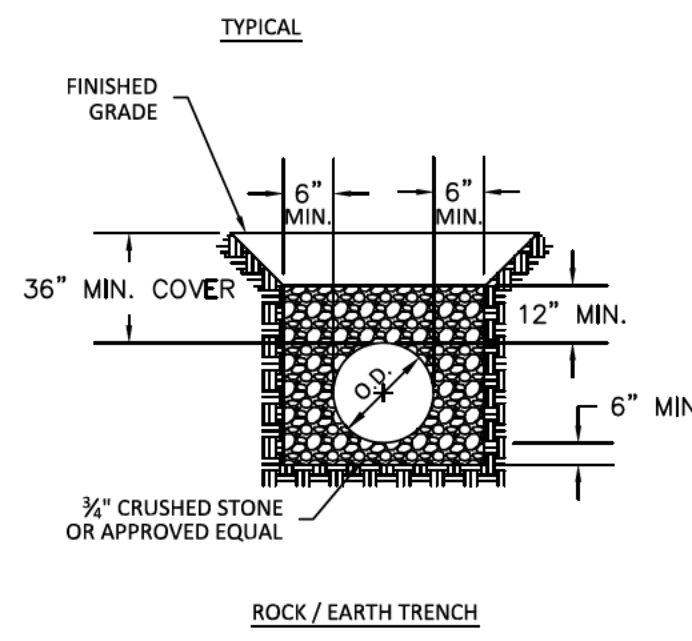
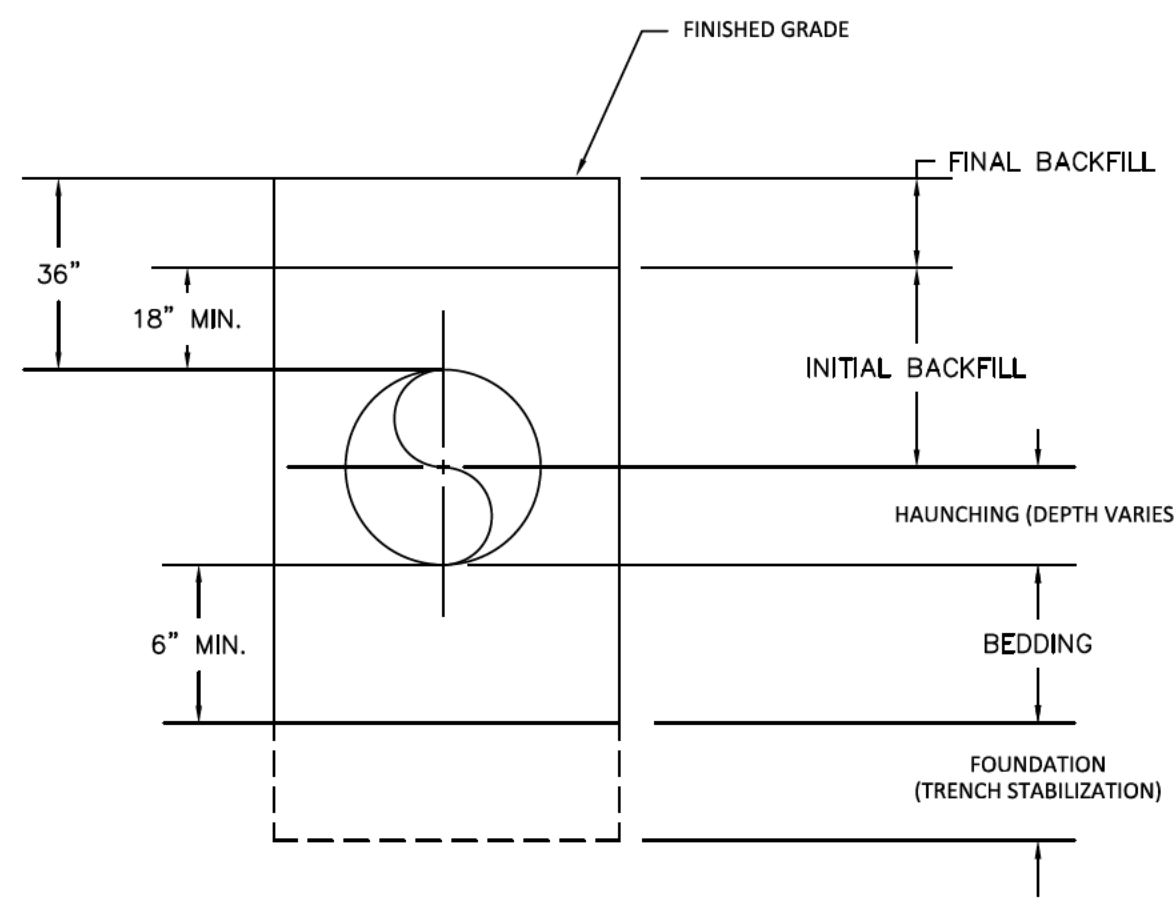
WATER DETAILS

NO.	DATE	REVISION
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**SHEET NO. C 12.1**

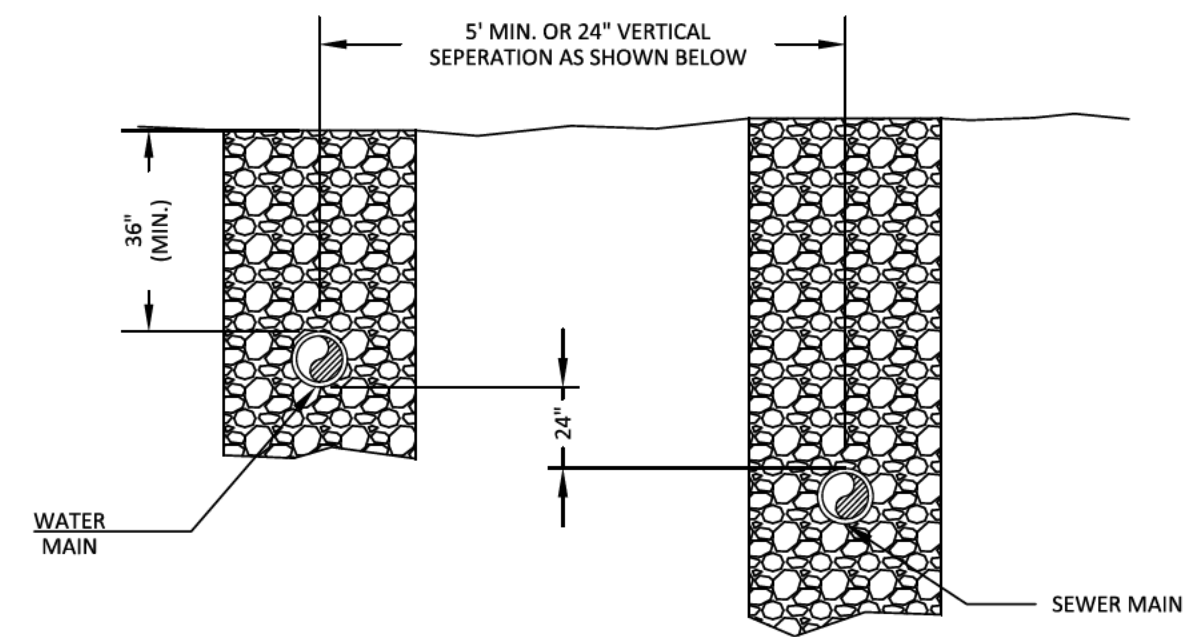
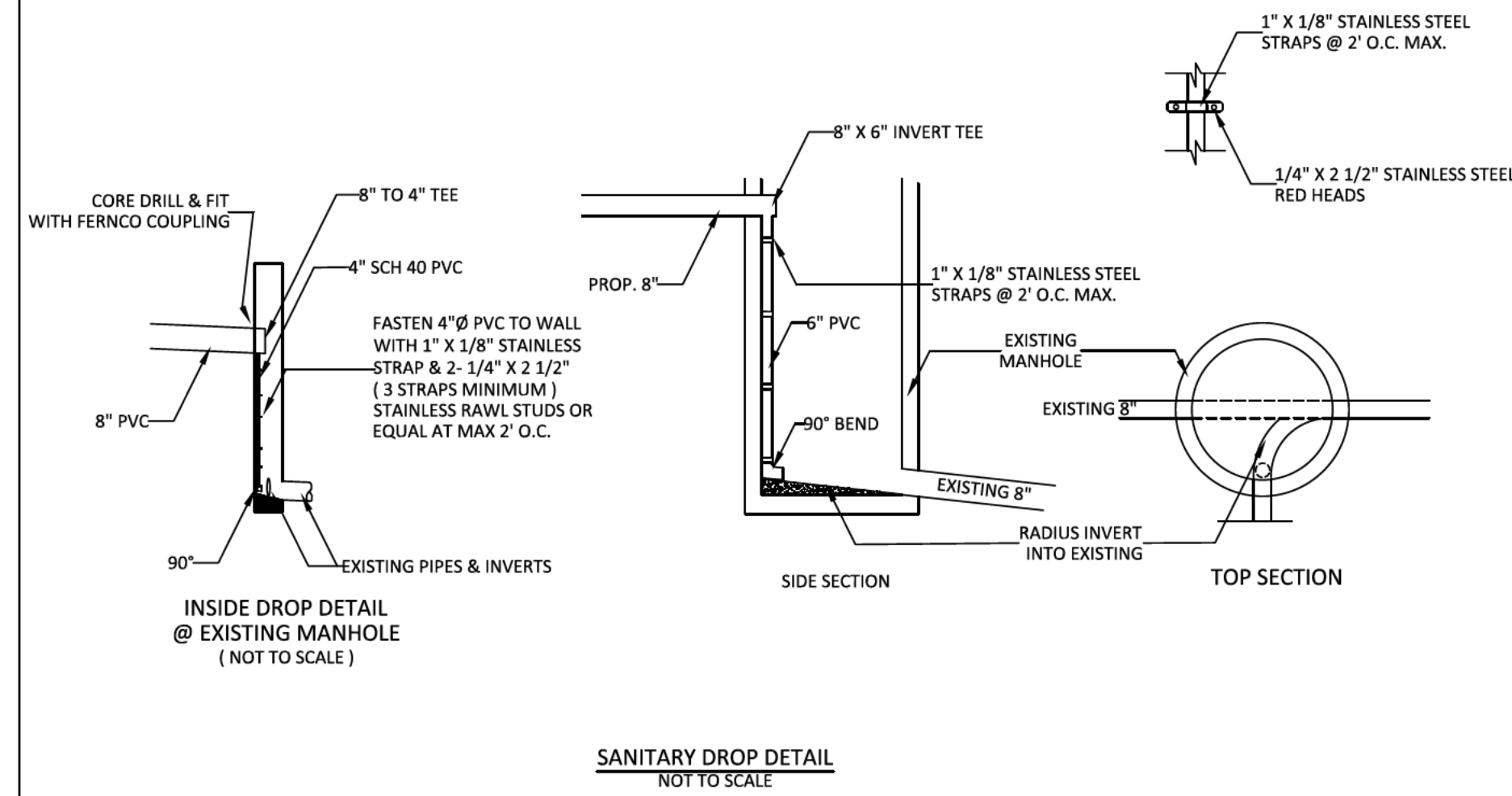
SHEET 39 OF 40

JOB# 21.112G 23 MARCH 2022

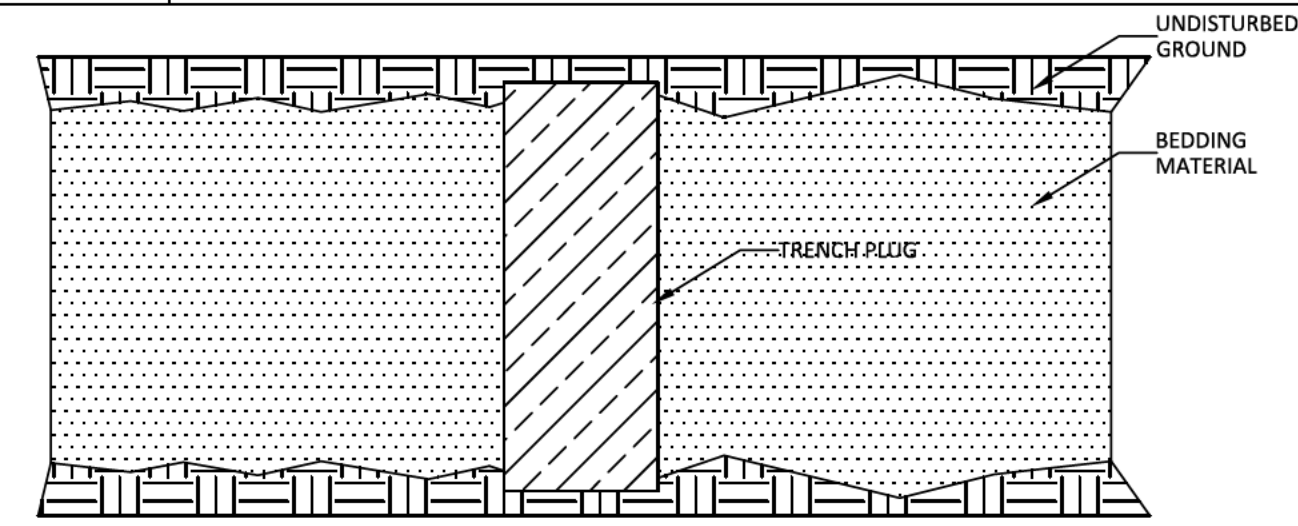


- NOTES:
- BEDDING, HAUNCHING AND INITIAL BACKFILL LAYERS SHALL BE 1/2" CRUSHED STONE OR APPROVED EQUAL.
  - TRENCH SLOPE TO MEET CURRENT OSHA AND STATE GUIDELINES.
  - SEE APPROVED MATERIALS LIST.

PIPE TRENCHING, BEDDING, AND HAUNCHING DETAILS

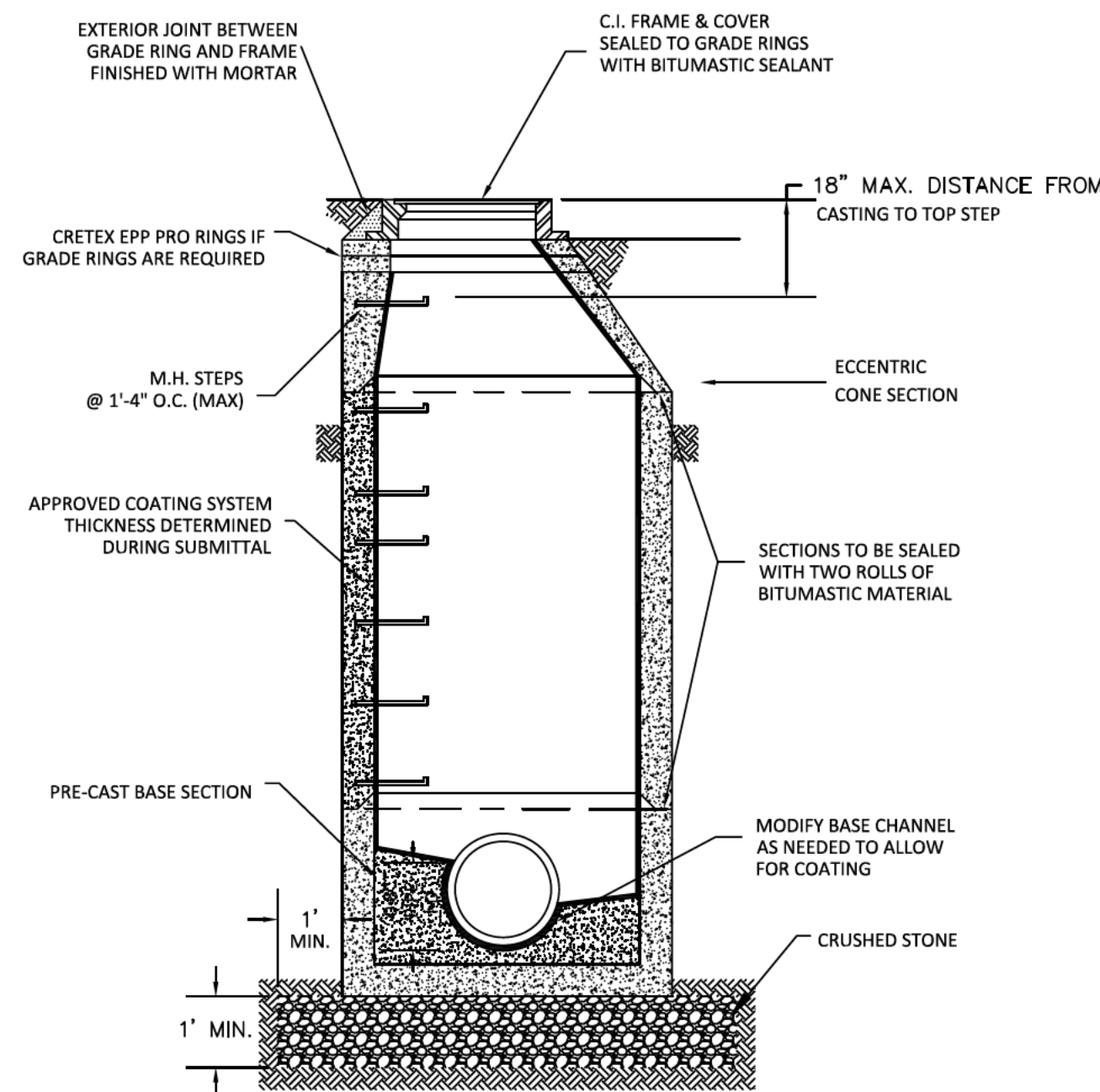


WATER AND SEWER SEPARATION DETAIL (NOT TO SCALE)



- NOTES:
- TRENCH PLUGS ARE BARRIERS PLACED WITHIN AN OPEN PIPELINE EXCAVATION IN ORDER TO SLOW FLOW AND REDUCE EROSION IN THE TRENCH AND ALSO TO PREVENT THE TRENCH FROM BECOMING A SUBSURFACE DRAINAGE PATH. SINCE THE BEDDING AND EMBEDMENT ARE CONSTRUCTED USING COHESIONLESS, FREE-DRAINING SOILS, A PATH IS CREATED FOR WATER TO FLOW EASILY (FRENCH DRAIN EFFECT) ALONGSIDE THE PIPE. IN AREAS WHERE THERE IS HIGH GROUNDWATER, WHERE THE PIPELINE CROSSES STREAMS OR AQUIFERS, OR WHERE THE NATURAL GROUNDWATER FLOW WOULD BE AFFECTED OR EVEN DIVERTED BY THE SELECT MATERIAL, TRENCH PLUGS OF COMPACTED, COHESIVE, SOILS OR IMPERVIOUS MATERIALS SHOULD BE CONSTRUCTED AT INTERVALS ALONG THE PIPELINE.
  - THE TRENCH PLUG AREA WILL HAVE A BEDDING OF COMPACTED, COHESIVE SOILS OR IMPERVIOUS MATERIALS (SUCH AS CONCRETE OR CONTROLLED LOW STRENGTH MATERIALS A.K.A. FLOWABLE FILL), WHEREAS THE BEDDING ON BOTH SIDES OF THE TRENCH PLUG WILL HAVE A BEDDING OF UNCOMPACTED, COHESIONLESS SOIL. TRENCH PLUGS MUST HAVE LOWER PERMEABILITY THAN THE SURROUNDING NATIVE SOIL.
  - LOCATION AND SPACING OF TRENCH PLUGS:
    - MINIMUM OF ONE TRENCH PLUG BETWEEN MANHOLES, AND ONE TRENCH PLUG AT EACH END OF THE STREAM CROSSING OR WETLAND.
    - THE TRENCH PLUGS BETWEEN MANHOLES SHALL BE LOCATED NEAR THE UPSTREAM MANHOLE.
  - REFER TO TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION GENERAL AQUATIC RESOURCE ALTERATION PERMIT FOR UTILITY LINE CROSSINGS FOR FURTHER INFORMATION.

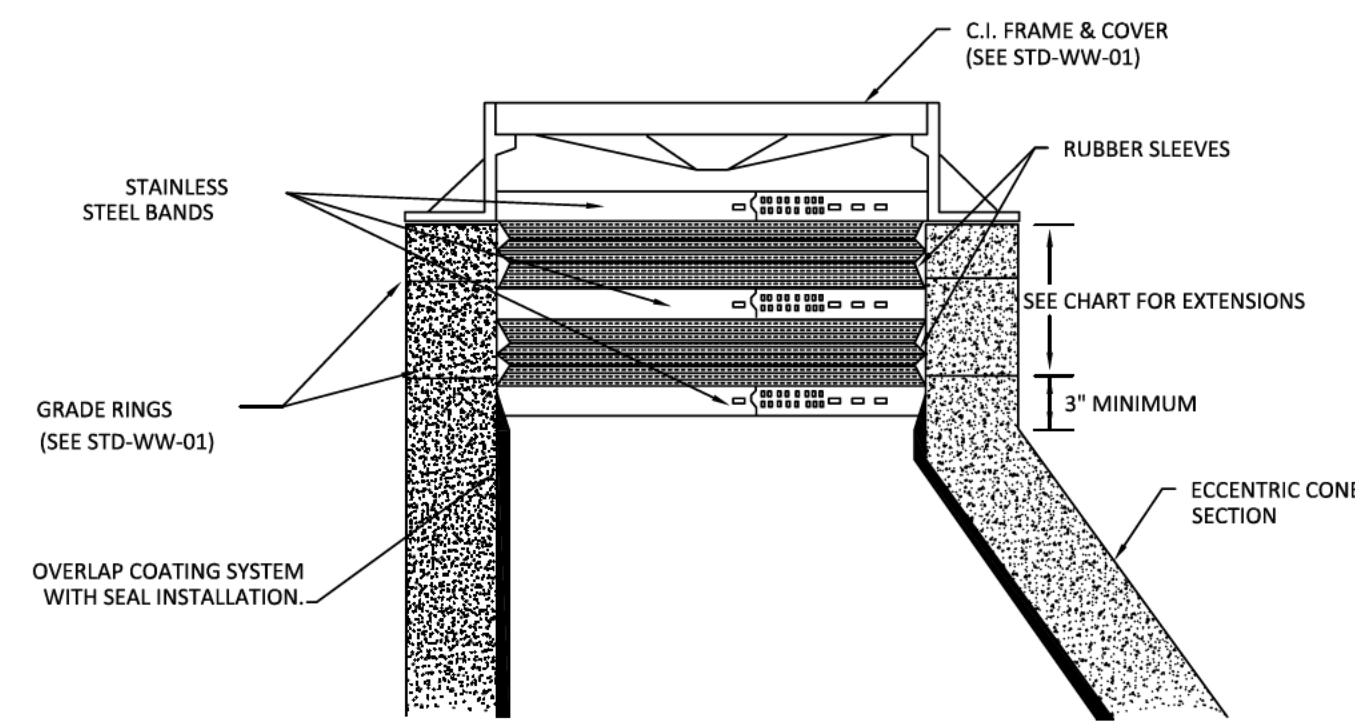
TRENCH PLUG (NOT TO SCALE)



STANDARD MANHOLE

- NOTES:
- FRAME AND COVER MUST BE TRAFFIC RATED.
  - FOR WATERTIGHT INSTALLATIONS USE APPROVED WATER TIGHT INSERTS.
  - CRUSHED STONE MAY BE #5, #57, OR #67 STONE UPON APPROVAL BY W.H.U.D..
  - CONNECTIONS TO MANHOLE TO BE MADE WITH WATERTIGHT FLEXIBLE KOR-N-SEAL BOOT OR APPROVED EQUAL.
  - SEE APPROVED MATERIALS LIST.

PRE-CAST CONCRETE MANHOLE DETAIL (NOT TO SCALE)



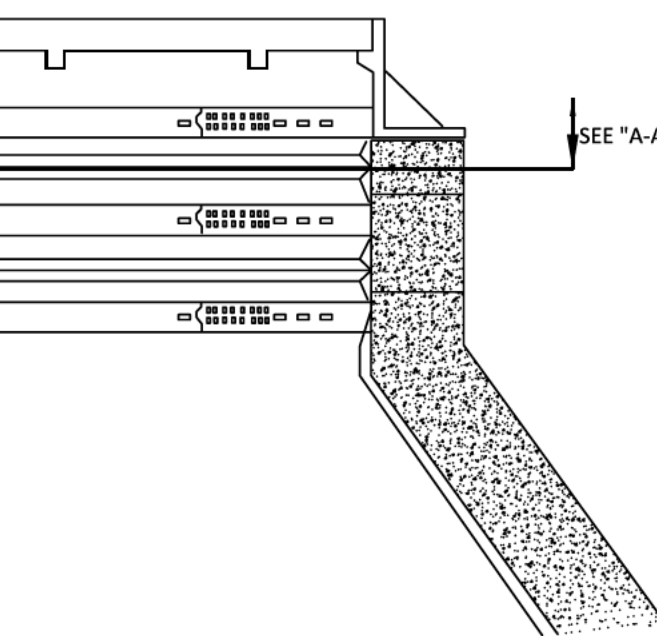
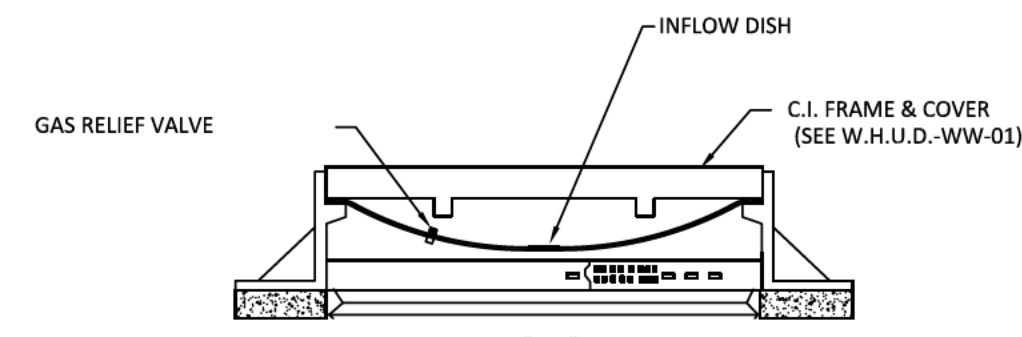
PRE-CAST CONE AND CHIMNEY

COMBINATIONS OF SEALS AND EXTENSIONS	TO SPAN HEIGHT OF:		
	W/ STANDARD SEAL	W/ WIDE SEAL	W/ EXTRA WIDE SEAL
SEAL ONLY	0"-4.5"	2"-7.5"	6"-12"
SEAL & 7" EXTENSION	OVER 4.5"-10.5"	OVER 7.5"-13.5"	OVER 12"-18"
SEAL & 10" EXTENSION	OVER 10.5"-13"	OVER 13.5"-16"	OVER 18"-20.5"
SEAL & MAX EXTENSION	OVER 13"	OVER 16"	OVER 20.5"

ADD 6" OF COVERAGE FOR EACH ADDITIONAL 7" EXTENSION.  
ADD 8.5" OF COVERAGE FOR EACH ADDITIONAL 10" EXTENSION.

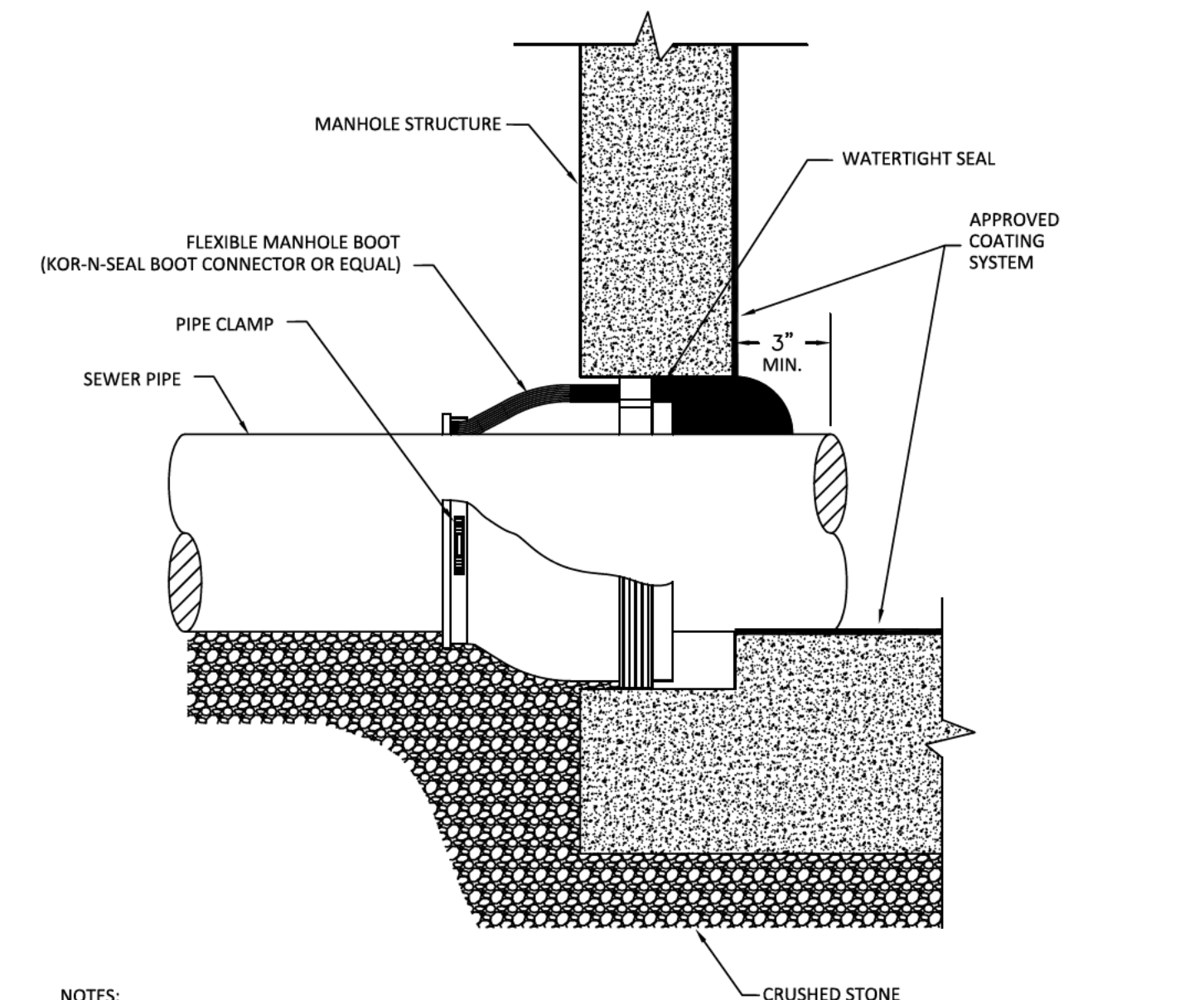
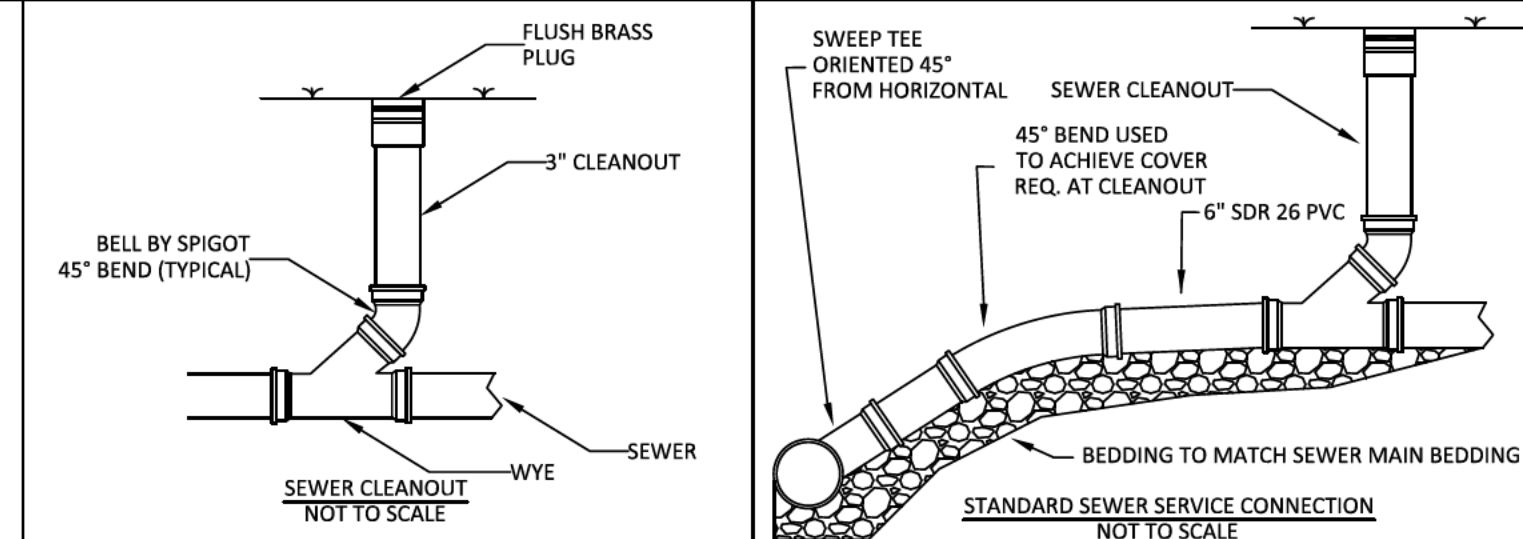
- NOTES:
- THE RUBBER SLEEVE IS AVAILABLE IN 3 SIZES, 8.5" 10" AND 13". THE SAME EXPANSION BANDS ARE USED ON ALL THREE.
  - SEE THE CHIMNEY HEIGHT TABLE FOR SEAL EXTENSION COMBINATIONS NEEDED TO SPAN FROM THE FRAME TO THE TOP OF THE CONE ON MANHOLES WITH VARIOUS CHIMNEY HEIGHTS.
  - THE TOP OF THE CONE MUST HAVE A MINIMUM OF 3" HIGH VERTICAL SURFACE THAT IS SMOOTH AND FREE OF ANY FORM OFFSETS OR EXCESSIVE HONEYCOMB.
  - SEE APPROVED APPROVED MATERIALS LIST.

INSTALLATION OF CHIMNEY SEAL DETAIL (NOT TO SCALE)



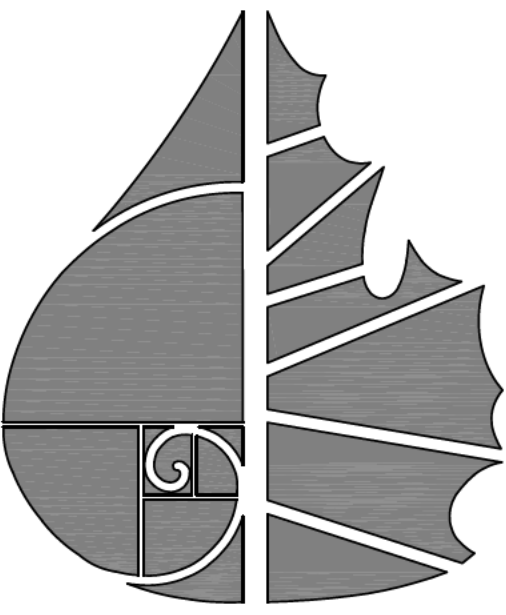
- NOTES:
- WATERTIGHT INSERT MUST BE EQUIPPED WITH A GAS RELIEF VALVE, TWO NYLON LIFTING STRAPS, AND A CLOSED CELL NEOPRENE GASKET UNDER THE INSERT BODY RIM.
  - SEE APPROVED MATERIALS LIST.

MANHOLE WATERTIGHT INSERT DETAIL (NOT TO SCALE)



- NOTES:
- SEE APPROVED PLANS FOR CONNECTION ELEVATION.

PRE-CAST CONCRETE MANHOLE CONNECTION DETAIL



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03-29-23

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SHEET 40 OF 40

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