



DATE SUBMITTED: _____
FEE PAID: _____ BZC #: _____
BZC MTG. DATE: _____
TRUSTEE MTG. DATE: _____
NOTICES MAILED: _____
DATE PUBLISHED: _____

APPLICATION FOR PRELIMINARY & FINAL DEVELOPMENT PLAN (One Step Process)

Name of Owner: HILL FAMILY ENTERPRISES LTD
Mailing Address: PO BOX 302 SUNBURY, OH 43074-9751
Email Address: pete@hillsblacktop.com Phone Number: 614.419.1994
Developer: RISE Galena LLC
Developer Address: 5645 Castle Creek Pkwy Dr. N, Indianapolis, IN 46250
Developer Email Address: joel@rylinengineering.com
Developer Phone Number: (317) 983-1310
Address of Property: 320 S Three B's & K Rd, Galena, OH 43021
Parcel #(s): Listed in "Proposed Plan" below. Acreage: 10.28 Present Zoning: NCD
Subdivision Name: N/A Requested Zoning: PCD
Proposed Plan: _____
RISE Commercial District seeks approval for a multi-building co-warehousing
development in Berlin Township, providing secure, flexible workspace for small
businesses. The site will feature a gated facility with 24/7 access, shared office
and warehouse amenities, a full-time on-site manager, and minimal traffic impact.

Parcels: 418-140-01-062-000, 418-140-01-063-000, 418-140-01-064-000, 418-140-01-064-004,
and 2.5 acres of 418-140-01-064-002

The undersigned certifies that this application and the attachments thereto contain all information required by the Zoning Resolution and that all information contained herein is true and accurate and is submitted to induce the amendment of the zoning map. Applicant agrees to be bound by the provisions of the Zoning Resolution of Berlin Township, Delaware County, Ohio. Revised 2/3/2025

Date: 7/29/25 Agent/Applicant Signature: _____
Agent/Applicant Address: 5645 Castle Creek Pkwy Dr. N, Indianapolis, IN 46250
Phone: (317) 983-1310 Fax: _____
Email address: joel@rylinengineering.com
Date: _____ Zoning Inspector Signature: _____

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

REVIEWED: MAC

DESIGNED: PEM

DRAFTED: PEM

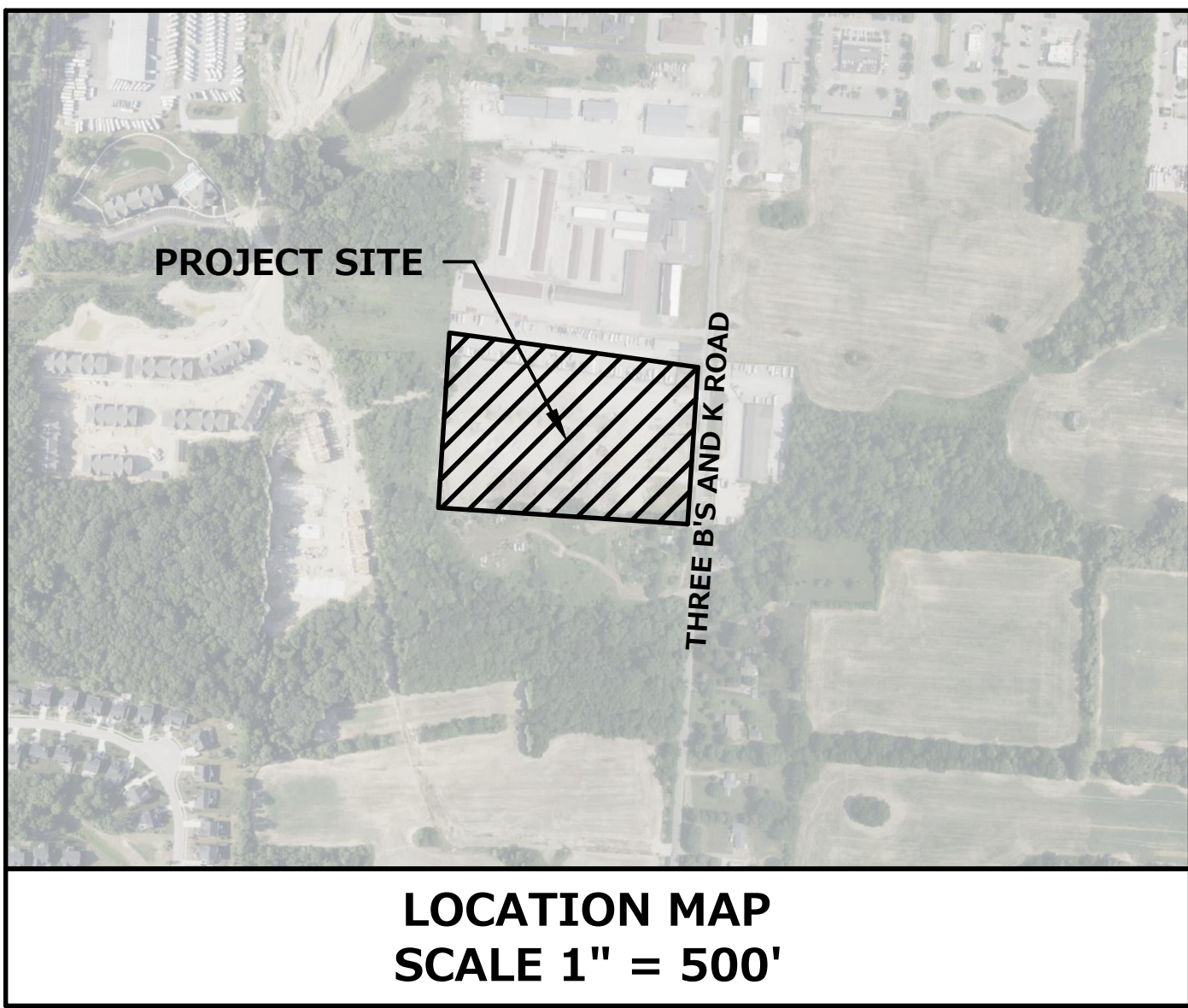
ONSITE CIVIL ENGINEERING INFRASTRUCTURE PLANS FOR RISE COMMERCIAL DISTRICT

GALENA, OH

PLANS PREPARED FOR



5645 CASTLE CREEK PARKWAY DR. N
INDIANAPOLIS, IN 46250



LEGEND		
	EXISTING	PROPOSED
SANITARY MANHOLE		
STORM MANHOLE		
CATCH BASIN		
INLET		
PRECAST FLARED END SECTION		
CONCRETE HEADWALL		
VALVE VAULT		
VALVE BOX		
FIRE HYDRANT		
BUFFALO BOX		
CLEANOUT		
SANITARY SEWER		
FORCE MAIN		
STORM SEWER		
WATER MAIN		
UTILITY CROSSING		
GRANULAR TRENCH BACKFILL		
LIGHTING		
ELECTRICAL CABLE		
ELECTRICAL TRANSFORMER OR PEDESTAL		
POWER POLE		
POWER POLE WITH LIGHT		
GUY WIRE		
STREET SIGN		
GAS MAIN		
TELEPHONE LINE		
CONTOUR		
SPOT ELEVATION		
WETLANDS		
FLOODWAY		
FLOODPLAIN		
HIGH WATER LEVEL (HWL)		
NORMAL WATER LEVEL (NWL)		
DIRECTION OF SURFACE FLOW		
DITCH OR SWALE		
DIVERSION SWALE		
OVERFLOW RELIEF ROUTING		
TREE WITH TRUNK SIZE		
SOIL BORING		
TOPSOIL PROBE		
FENCE LINE, TEMPORARY SILT		
FENCE LINE, WIRE		
FENCE LINE, CHAIN LINK OR IRON		
FENCE LINE, WOOD OR PLASTIC		
CONCRETE SIDEWALK		
CURB AND GUTTER		
DEPRESSED CURB		
REVERSE PITCH CURB & GUTTER		
EASEMENT LINE		
PROPERTY LINE		

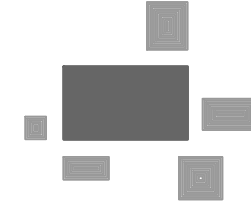
ABBREVIATIONS			
BL	BASE LINE	NSI	NATIVE SOIL INTERFACE
C	LONG CHORD OF CURVE	NWL	NORMAL WATER LEVEL
C & G	CURB AND GUTTER	PC	POINT OF CURVATURE
CB	CATCH BASIN	PT	POINT OF TANGENCY
CL	CENTERLINE	PVI	POINT OF VERTICAL INTERSECTION
D	DEGREE OF CURVE	R	RADIUS
EP	EDGE OF PAVEMENT	ROW	RIGHT-OF-WAY
FF	FINISHED FLOOR	SAN	SANITARY SEWER
FG	FINISHED GRADE	ST	STORM SEWER
FL	FLOW LINE	T	TANGENCY OF CURVE
FP	FLOODPLAIN	TB	TOP OF BANK
FR	FRAME	TC	TOP OF CURB
FW	FLOODWAY	TF	TOP OF FOUNDATION
HWL	HIGH WATER LEVEL	TS	TOP OF SIDEWALK
INV	INVERT	TW	TOP OF WALK
L	LENGTH OF CURVE	WM	WATER MAIN
MH	MANHOLE	Δ	INTERSECTION ANGLE

- ### GENERAL NOTES
- THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO SET FORTH PERFORMANCE AND CONSTRUCTION MATERIAL STANDARDS FOR THE PROPER EXECUTION OF WORK. ALL WORKS CONTAINED WITHIN THE PLANS AND SPECIFICATIONS SHALL BE COMPLETED IN ACCORDANCE WITH ALL REQUIREMENTS FROM LOCAL, STATE, FEDERAL OR OTHER GOVERNING AGENCY'S LAWS, REGULATIONS, JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., AND THE OWNER'S DIRECTION.
 - A GEOTECHNICAL REPORT FOR THIS SITE HAS NOT YET BEEN PREPARED. THE DATA ON SUB-SURFACE SOIL CONDITIONS IS NOT INTENDED AS A REPRESENTATION OR WARRANTY OF THE CONTINUITY OF SUCH CONDITIONS BETWEEN BORINGS OR INDICATED SAMPLING LOCATIONS. IT SHALL BE EXPRESSLY UNDERSTOOD THAT OWNER WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSIONS DRAWN THERE FROM BY THE CONTRACTOR. DATA IS MADE AVAILABLE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ANY ADDITIONAL SOILS INVESTIGATIONS THEY FEEL IS NECESSARY FOR THE PROPER EVALUATION OF THE SITE FOR PURPOSES OF PLANNING, BIDDING, OR CONSTRUCTING THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
 - THE CONTRACTOR IS RESPONSIBLE TO REVIEW AND UNDERSTAND ALL COMPONENTS OF THE PLANS AND SPECIFICATIONS, INCLUDING FIELD VERIFYING SOIL CONDITIONS, PRIOR TO SUBMISSION OF A BID PROPOSAL.
 - THE CONTRACTOR SHALL PROMPTLY REPORT ANY ERRORS OR AMBIGUITIES LEARNED AS PART OF THEIR REVIEW OF PLANS, SPECIFICATIONS, REPORTS AND FIELD INVESTIGATIONS.
 - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COMPUTATION OF QUANTITIES AND WORK REQUIRED TO COMPLETE THIS PROJECT. THE CONTRACTOR'S BID SHALL BE BASED ON ITS OWN COMPUTATIONS AND IN NO SUCH INSTANCE RELY ON THE ENGINEER'S ESTIMATE.
 - QUESTIONS/CLARIFICATIONS WILL BE INTERPRETED BY ENGINEER/OWNER PRIOR TO THE AWARD OF CONTRACT. ENGINEER/OWNER WILL SUBMIT OFFICIAL RESPONSES IN WRITING. INTERPRETATIONS PRESENTED IN OFFICIAL RESPONSES SHALL BE BINDING ON ALL PARTIES ASSOCIATED WITH THE CONTRACT. IN NO WAY SHALL WORD-OF-MOUTH DIALOG CONSTITUTE AN OFFICIAL RESPONSE.
 - PRIOR TO START OF WORK, CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH ALL CONDITIONS OF THE SITE, AND SHALL ACCOUNT FOR CONDITIONS THAT AFFECT, OR MAY AFFECT CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, LIMITATIONS OF WORK ACCESS, SPACE LIMITATIONS, OVERHEAD OBSTRUCTIONS, TRAFFIC PATTERNS, LOCAL REQUIREMENTS, ADJACENT ACTIVITIES, ETC. FAILURE TO CONSIDER SITE CONDITIONS SHALL NOT BE CAUSE FOR CLAIM OF JOB EXTRAS.
 - COMMENCEMENT OF CONSTRUCTION SHALL EXPLICITLY CONFIRM THAT THE CONTRACTOR HAS REVIEWED THE PLANS AND SPECIFICATIONS IN ENTIRETY AND CERTIFIES THAT THEIR SUBMITTED BID PROPOSAL CONTAINS PROVISIONS TO COMPLETE THE PROJECT, WITH THE EXCEPTION OF UNFORESEEN FIELD CONDITIONS. ALL APPLICABLE PERMITS HAVE BEEN OBTAINED; AND CONTRACTOR UNDERSTANDS ALL OF THE REQUIREMENTS OF THE PROJECT.
 - SHOULD ANY DISCREPANCIES OR CONFLICTS IN THE PLANS OR SPECIFICATIONS BE DISCOVERED AFTER THE AWARD OF CONTRACT, ENGINEER SHALL BE NOTIFIED IN WRITING IMMEDIATELY AND CONSTRUCTION OF ITEMS AFFECTED BY THE DISCREPANCIES/CONFLICTS SHALL NOT COMMENCE, OR CONTINUE, UNTIL A WRITTEN RESPONSE FROM ENGINEER/OWNER IS DISTRIBUTED. IN THE EVENT OF A CONFLICT BETWEEN REFERENCED CODES, STANDARDS, SPECIFICATIONS AND PLANS, THE ONE ESTABLISHING THE MOST STRINGENT REQUIREMENTS SHALL BE FOLLOWED.
 - THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS AND LICENSES TO COMPLETE THE PROJECT. OBTAINING PERMITS, OR DELAYS, IS NOT CAUSE FOR DELAY OF THE CONTRACT OR SCHEDULE. CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS.
 - THE CONTRACTOR SHALL NOTIFY ALL INTERESTED GOVERNING AGENCIES, UTILITY COMPANIES AFFECTED BY THIS CONSTRUCTION PROJECT, AND DIGGERS HOTLINE IN ADVANCE OF CONSTRUCTION TO COMPLY WITH ALL JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., PERMIT STIPULATIONS, AND OTHER APPLICABLE STANDARDS.
 - SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO INITIATE, INSTITUTE, ENFORCE, MAINTAIN, AND SUPERVISE ALL SAFETY PRECAUTIONS AND JOB SITE SAFETY PROGRAMS IN CONNECTION WITH THE WORK.
 - CONTRACTOR SHALL KEEP THE JOBSITE CLEAN AND ORDERLY AT ALL TIMES. ALL LOCATIONS OF THE SITE SHALL BE KEPT IN A WORKING MANNER SUCH THAT DEBRIS IS REMOVED CONTINUOUSLY AND ALL RESPECTIVE CONTRACTORS OPERATE UNDER GENERAL "GOOD HOUSEKEEPING."
 - THE CONTRACTOR SHALL INDEMNIFY THE MUNICIPALITY, TOWNSHIP ENGINEER, TOWNSHIP BUILDING INSPECTOR, OWNER, ENGINEER, AND THEIR AGENTS FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.
 - PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING MUST BE HELD AT THE TOWNSHIP OFFICES.

SHEET INDEX	
C-1	COVER SHEET
C-2	GENERAL NOTES
C-3	EXISTING CONDITIONS & DEMOLITION PLAN
C-4	SITE DIMENSIONAL & PAVING PLAN
C-5	GRADING PLAN
C-6	STORM SEWER PLAN
C-7	SANITARY SEWER PLAN
C-8	WATER MAIN PLAN
C-9	DRY UTILITY CONCEPT
C-10	SITE STABILIZATION PLAN
C-11 - C-17	CONSTRUCTION DETAILS
L-1 - L-6	LANDSCAPING PLANS
-SEPARATE CIVIL PLAN SET-	
C-1 - C-3	PUBLIC SANITARY SEWER EXTENSION PLANS

PROJECT TEAM CONTACTS	
CIVIL ENGINEER: MATT CAREY, P.E., PINNACLE ENGINEERING GROUP 20725 WATERTOWN ROAD, SUITE 100 BROOKFIELD, WI 53186 (262) 754-8888 Matt.Carey@pinnacle-engr.com	OWNER: JOEL BRUNS RISE COMMERCIAL DISTRICT 5645 CASTLE CREEK PARKWAY DR. N INDIANAPOLIS, IN 46250 (317) 527-4995 joel@risecommercialdistrict.com
SURVEYOR: ANDREW G. PLANET ROLLING & HOCEVAR, INC. 780 E. SMITH ROAD, SUITE B MEDINA, OH 44256 (330) 723-1828	

	800-362-2764 OUPS.ORG
PINNACLE ENGINEERING GROUP, LLC ENGINEER'S LIMITATION PINNACLE ENGINEERING GROUP, LLC AND THEIR CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED PRIOR TO BID SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT TO THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION. FURTHERMORE, PINNACLE ENGINEERING GROUP, LLC IS NOT RESPONSIBLE FOR CONSTRUCTION SAFETY OR THE MEANS AND METHODS OF CONSTRUCTION.	



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888

CHICAGO | MILWAUKEE | NATIONWIDE

**RISE COMMERCIAL
DISTRICT
GALENA, OH**

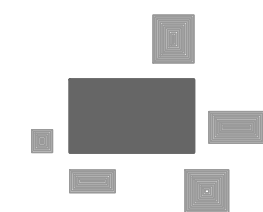
COVER SHEET

REVISIONS

REG JOB: NS-5854.00-01
REG PH: MAC
START DATE: 09/30/25
SCALE: AS SHOWN

SHEET
**C-1
OF
C-17**

© COPYRIGHT 2023



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888
CHICAGO | MILWAUKEE : NATIONWIDE

RISE COMMERCIAL DISTRICT GALENA, OH

EXISTING CONDITIONS & DEMOLITION PLAN

REVISIONS			

PEG JOB No **5854-00-OH**
 PEG PM: _____ MAC: _____
 START DATE **09/30/25**
 SCALE **1" = 40'**

SHEET
C-3
 OF
C-17

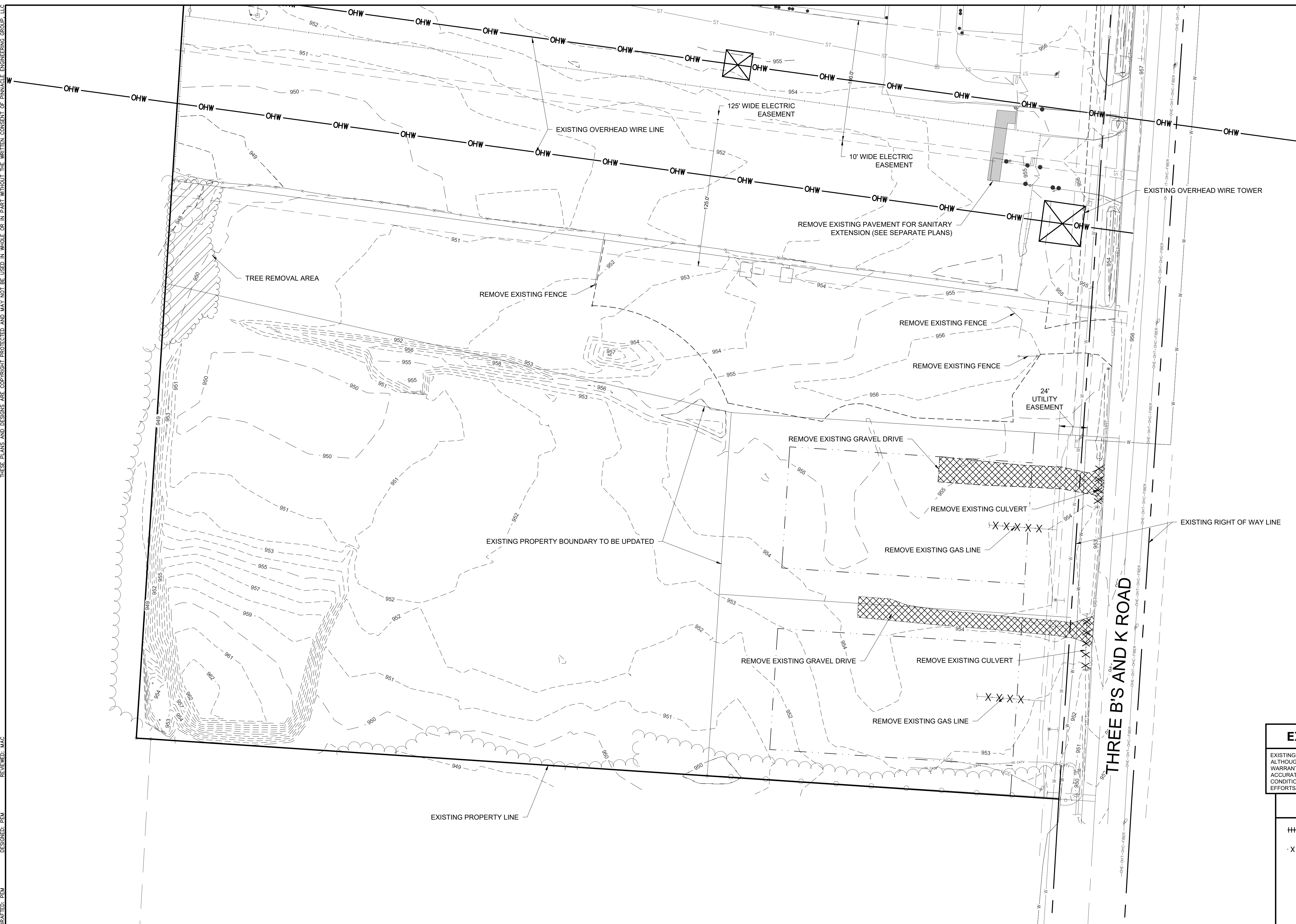
© COPYRIGHT 2023

6303 110111 100 00

EXISTING CONDITIONS & DEMOLITION PLAN

FOR REVIEW ONLY

 www.pinnacle-engr.com



EXISTING CONDITIONS SURVEY NOTE

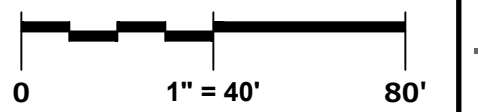
EXISTING CONDITIONS SURVEY PROVIDED BY ROLLING & HOCEVAR, INC. DATED JULY 9, 2024. ALTHOUGH PEG HAS NO REASON TO BELIEVE THE SURVEY IS INACCURATE, PEG MAKES NO WARRANTIES THAT EXISTING INFORMATION CONTAINED WITHIN THESE PLANS IS ALL-INCLUSIVE OR ACCURATE. CONTRACTOR SHALL UNDERTAKE NECESSARY EFFORTS TO VERIFY THE EXISTING CONDITIONS PRIOR TO THE START OF MATERIAL PROCUREMENT AND CONSTRUCTION EFFORTS/ACTIVITIES.

LEGEND

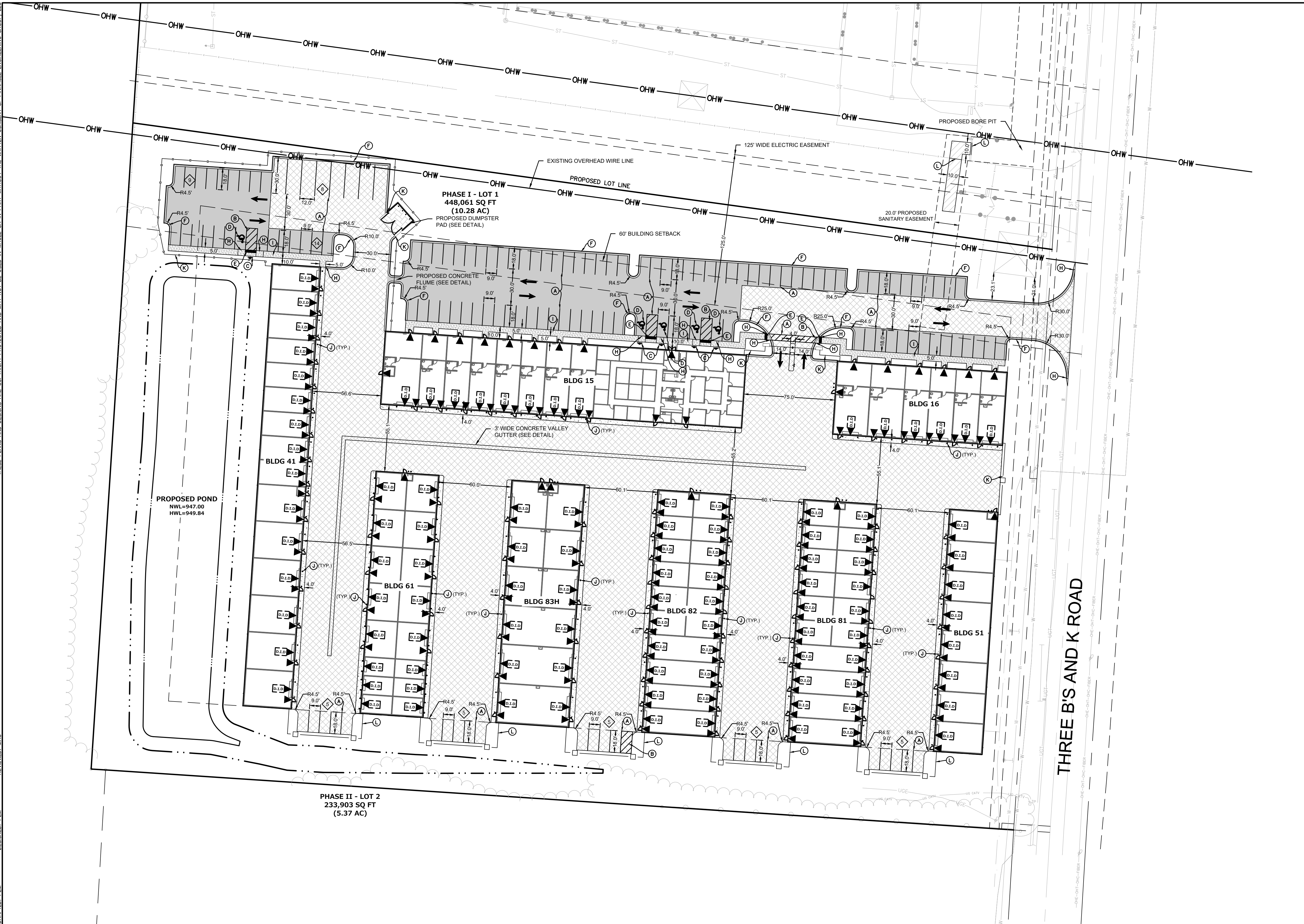
	REMOVE CONC. CURB & GUTTER
	REMOVE UTILITY (SEE DESCRIPTION ON PLANS)
	REMOVE GRAVEL
	CLEARING & GRUBBING



GRAPHICAL SCALE (FEET)

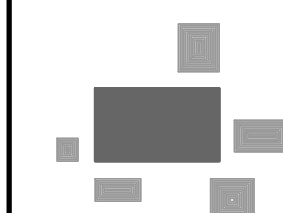


THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC
REVIEWED: MAC
DESIGNED: PEM
DRAFTED: PEM



SITE DATA TABLE	
BASE SITE AREA:	448,061 SF (10.28 AC)
PROPOSED BUILDINGS:	8 (95,819 SF)
PROPOSED IMPERVIOUS AREA:	331,941 SF (7.62 AC)
PROPOSED GREEN SPACE AREA:	116,120 SF (2.67 AC) (25.9%)
GREEN SPACE REQUIREMENT:	20%
ZONING DISTRICT:	PCD - PLANNED COMMERCIAL AND OFFICE DISTRICT
BUILDING SETBACKS:	FRONT - 30' SIDE - 60' REAR - 60' HIGHWAY/ROAD - 30'
REQUIRED CAR PARKING:	1 PER 300 SQ. FT • PROFESSIONAL OFFICE • WAREHOUSE • SELF-STORAGE
CAR PARKING PROVIDED:	118 SPACES (6 A.D.A.)

LEGEND	
*FINAL PAVEMENT SECTIONS TO BE PROVIDED BY GEOTECHNICAL ENGINEER	
	LIGHT DUTY PAVEMENT - 6" COMPACTED CA-6 AGGREGATE SUBBASE TYP B - 2.5" BIT. SURFACE COURSE, HMA MIX D, N50 9.5MM NOMINAL SIZE, PG64-22 (R.A.S. NOT PERMITTED) - 1.5" BIT. BINDER COURSE, HMA, IL-19, N50, 19.0MM NOMINAL SIZE, PG64-22 0.30 GAL/SY BITUMINOUS PRIME COAT (MC-30)
	HEAVY DUTY PAVEMENT - 10" COMPACTED CA-6 AGGREGATE SUBBASE TYP B - 2.5" BIT. SURFACE COURSE, HMA MIX D, N50 9.5MM NOMINAL SIZE, PG64-22 (R.A.S. NOT PERMITTED) - 2.0" BIT. BINDER COURSE, HMA, IL-19, N50, 19.0MM NOMINAL SIZE, PG64-22 0.30 GAL/SY BITUMINOUS PRIME COAT (MC-30)
	CONCRETE PAVEMENT (DUMPSTER PAD & VALLEY GUTTER) - 6" COMPACTED CA-6 AGGREGATE BASE COURSE, TYPE B - 8" PORTLAND CEMENT CONCRETE
	CONCRETE PAVEMENT (CONCRETE APRONS) - 4" COMPACTED CA-6 AGGREGATE BASE COURSE, TYPE B - 5" PORTLAND CEMENT CONCRETE
	CONCRETE SIDEWALK - 4" COMPACTED CA-6 AGGREGATE BASE COURSE, TYPE B - 4" PORTLAND CEMENT CONCRETE
	MATCH EXISTING PAVEMENT CROSS SECTION
	4" SOLID WHITE STRIPE
	4" DIAGONAL AT 45° SPACED 2' O.C.
	R7-8 HANDICAP PARKING SIGN (SEE DETAIL) BOLLARD TO BE USED WHEN PLACED IN PAVEMENT
	ADA STALL INSIGNIA
	DETECTABLE WARNING PLATES/ADA RAMP (SEE DETAIL)
	18" CURB & GUTTER (SEE DETAIL)
	18" REVERSE CURB & GUTTER (SEE DETAIL)
	TAPER CURB HEAD (SEE DETAIL)
	INTEGRAL CURB AND SIDEWALK (SEE DETAIL)
	BOLLARD
	SIMTEK 6" COMPOSITE PRIVACY FENCE
	6" CHAIN LINK FENCE
	PARKING COUNT (FOR INFORMATION ONLY, NOT TO BE PAINTED)
	MAN DOOR
	OVERHEAD DOOR (2% MAX SLOPE WITHIN DRIVE)



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888

CHICAGO | MILWAUKEE | NATIONWIDE

RISE COMMERCIAL DISTRICT
GALENA, OH

SITE DIMENSIONAL & PAVING PLAN

REVISIONS	

PEG JOB NO: 5854.00-01
PEG PM: MAC
START DATE: 09/30/25
SCALE: 1" = 40'

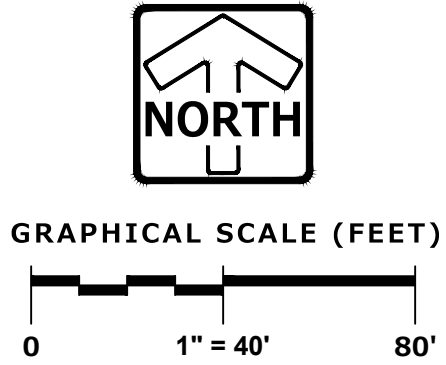
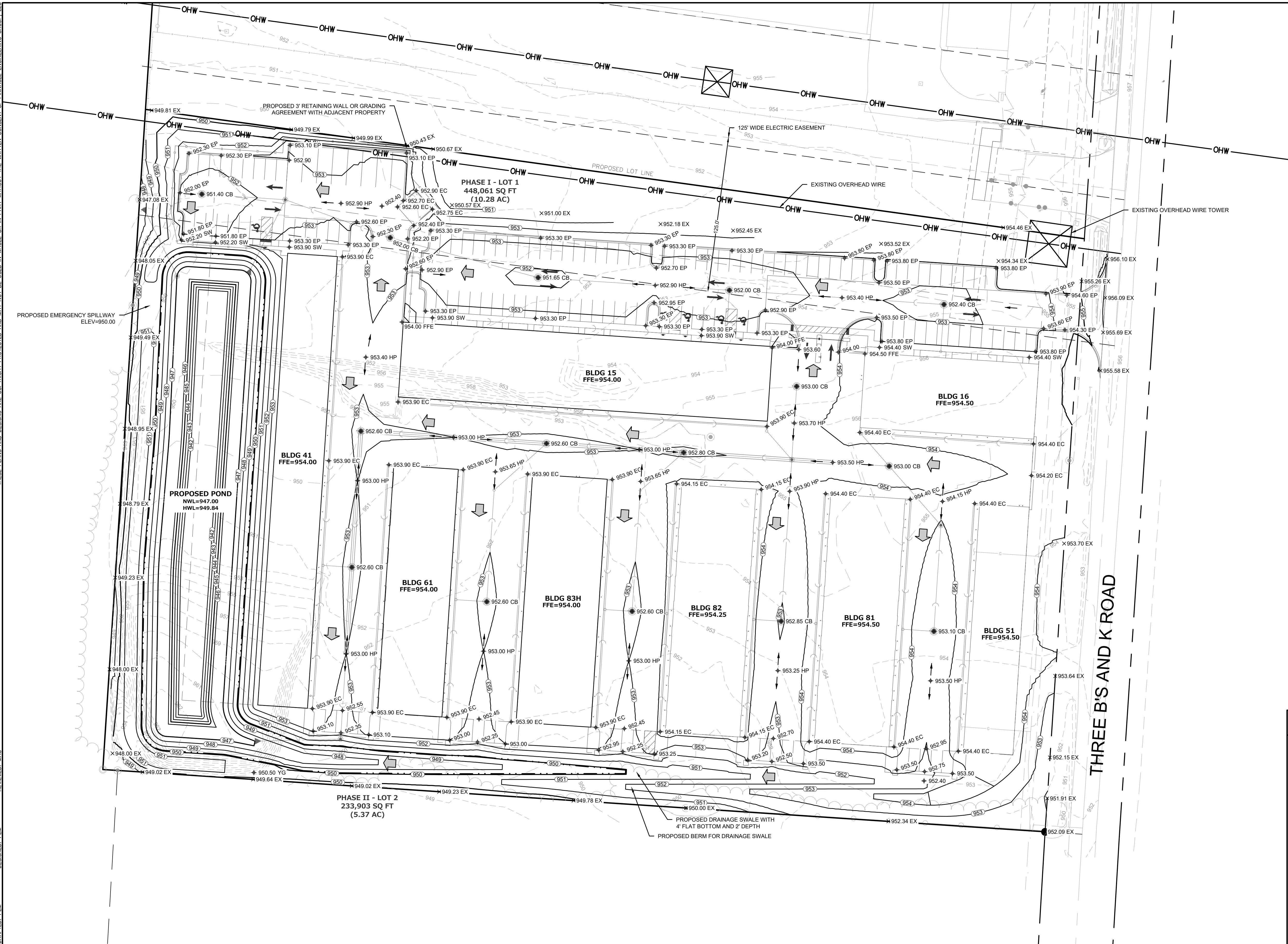
SHEET C-4 OF C-17
© COPYRIGHT 2023

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

REVIEWED: MAC

DESIGNED: PEM

DRAFTED: PEM



LEGEND	
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN- ROUND CASTING
	STORM SEWER CATCH BASIN- RECTANGULAR CASTING
	PROPOSED CONCRETE FLARED END SECTION
	PROPOSED CONTOUR
	SPOT ELEVATION
	DIRECTION OF SURFACE FLOW
	OVERFLOW RELIEF ROUTING
	FINISHED FLOOR ELEVATION
	STORM SEWER CATCH BASIN RIM ELEVATION
	EXISTING ELEVATION
	EDGE OF PAVEMENT
	EDGE OF CONCRETE
	HIGH POINT
	SIDEWALK
	YARD GRADE

PINNACLE ENGINEERING GROUP

ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER

www.pinnacle-engr.com

WISCONSIN OFFICE:

20725 WATERTOWN ROAD, SUITE 100

BROOKFIELD, WI 53186

(262) 754-8888

CHICAGO | MILWAUKEE | NATIONWIDE

RISE COMMERCIAL

DISTRICT

GALETA, OH

GRADING PLAN

REVISIONS

REG JOB N-5854-00-OH

REG PM MAC

START DATE 09/30/25

SCALE 1" = 40'

SHEET

C-5

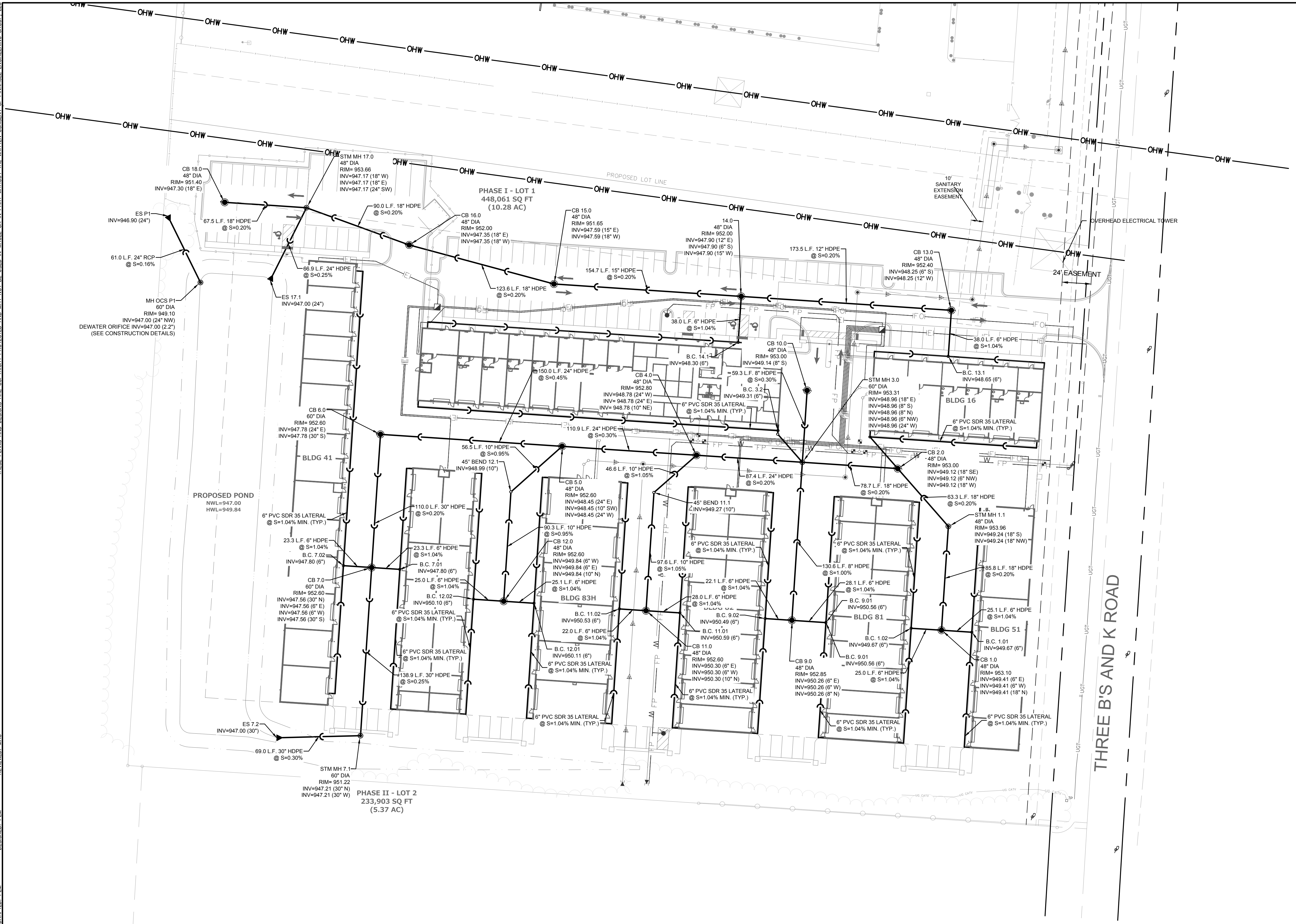
OF

C-17

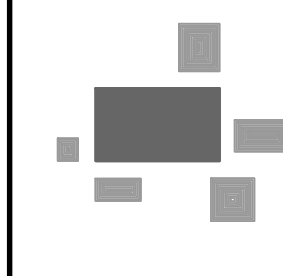
© COPYRIGHT 2023

Z:\PROJECTS\2024\5854.00-OH\CAD\SHEETS\GRADING PLAN.DWG

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC
DESIGNED: PEM
DRAWN: PEM
CHECKED: PEM
REVIEWED: MAC



LEGEND	
	SANITARY SEWER MANHOLE
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN (ROUND CASTING)
	STORM SEWER CATCH BASIN (RECTANGULAR CASTING)
	PRECAST CONCRETE FLARED END SECTION
	CLEANOUT
	VALVE BOX
	FIRE HYDRANT
	SANITARY SEWER
	FORCE MAIN
	STORM SEWER
	DRAIN TILE
	WATER MAIN / FIRE PROTECTION
	DOMESTIC WATER SERVICE
	UTILITY CROSSING
	ELECTRICAL CABLE
	GAS MAIN
	TELEPHONE LINE
	OVERHEAD WIRES
	LIGHTING
	ELECTRICAL TRANSFORMER OR PEDESTAL
	POWER POLE
	POWER POLE WITH LIGHTS
	STREET SIGN
	UTILITY TO BE REMOVED



PINNACLE ENGINEERING GROUP

ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER

www.pinnacle-engr.com

WISCONSIN OFFICE:

20725 WATERTOWN ROAD, SUITE 100

BROOKFIELD, WI 53186

(262) 754-8888

CHICAGO | MILWAUKEE | NATIONWIDE

RISE COMMERCIAL

DISTRICT

GALENA, OH

STORM SEWER PLAN

REVISIONS		SHEET
		C-6
		OF
		C-17

PEG JOB N25854.00-OH

PEG PM MAC

START DATE 09/30/25

SCALE 1" = 40'

© COPYRIGHT 2023

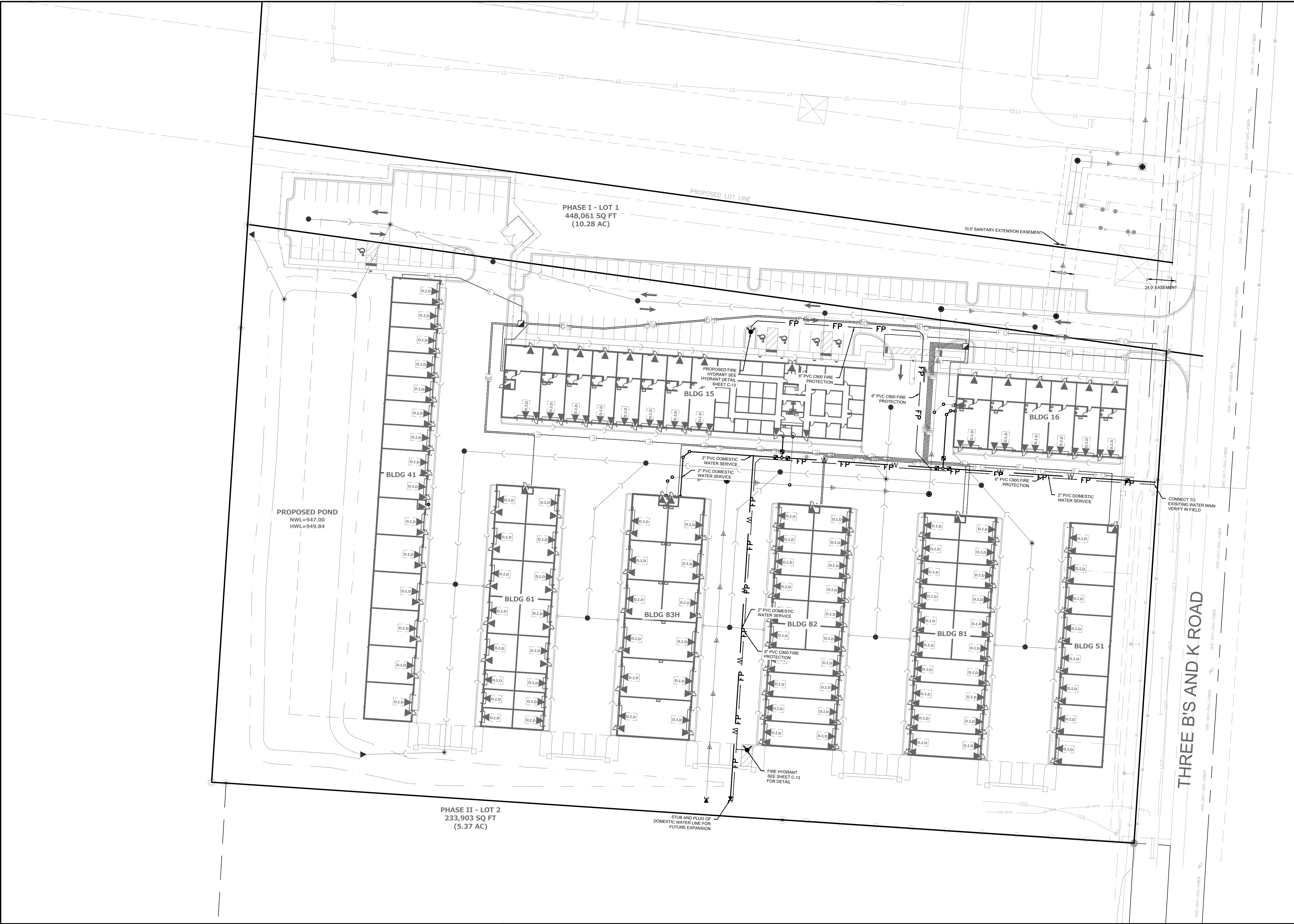


THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

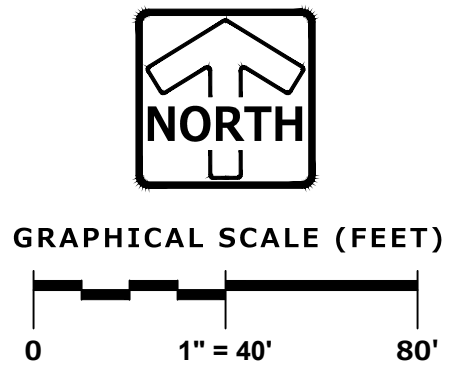
REVIEWED: MAC

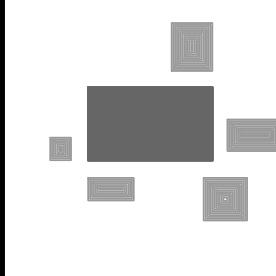
DESIGNED: PEM

DRAFTED: PEM



LEGEND	
	SANITARY SEWER MANHOLE
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN (ROUND CASTING)
	STORM SEWER CATCH BASIN (RECTANGULAR CASTING)
	PRECAST CONCRETE FLARED END SECTION
	CLEANOUT
	VALVE BOX
	FIRE HYDRANT
	SANITARY SEWER
	FORCE MAIN
	STORM SEWER
	DRAIN TILE
	WATER MAIN / FIRE PROTECTION
	DOMESTIC WATER LINE
	UTILITY CROSSING
	ELECTRICAL CABLE
	GAS MAIN
	TELEPHONE LINE
	OVERHEAD WIRES
	LIGHTING
	ELECTRICAL TRANSFORMER OR PEDESTAL
	POWER POLE
	POWER POLE WITH LIGHTS
	STREET SIGN
	UTILITY TO BE REMOVED





PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-6888

CHICAGO | MILWAUKEE | NATIONWIDE

**RISE COMMERCIAL
DISTRICT
GALETA, OH**

WATER MAIN PLAN

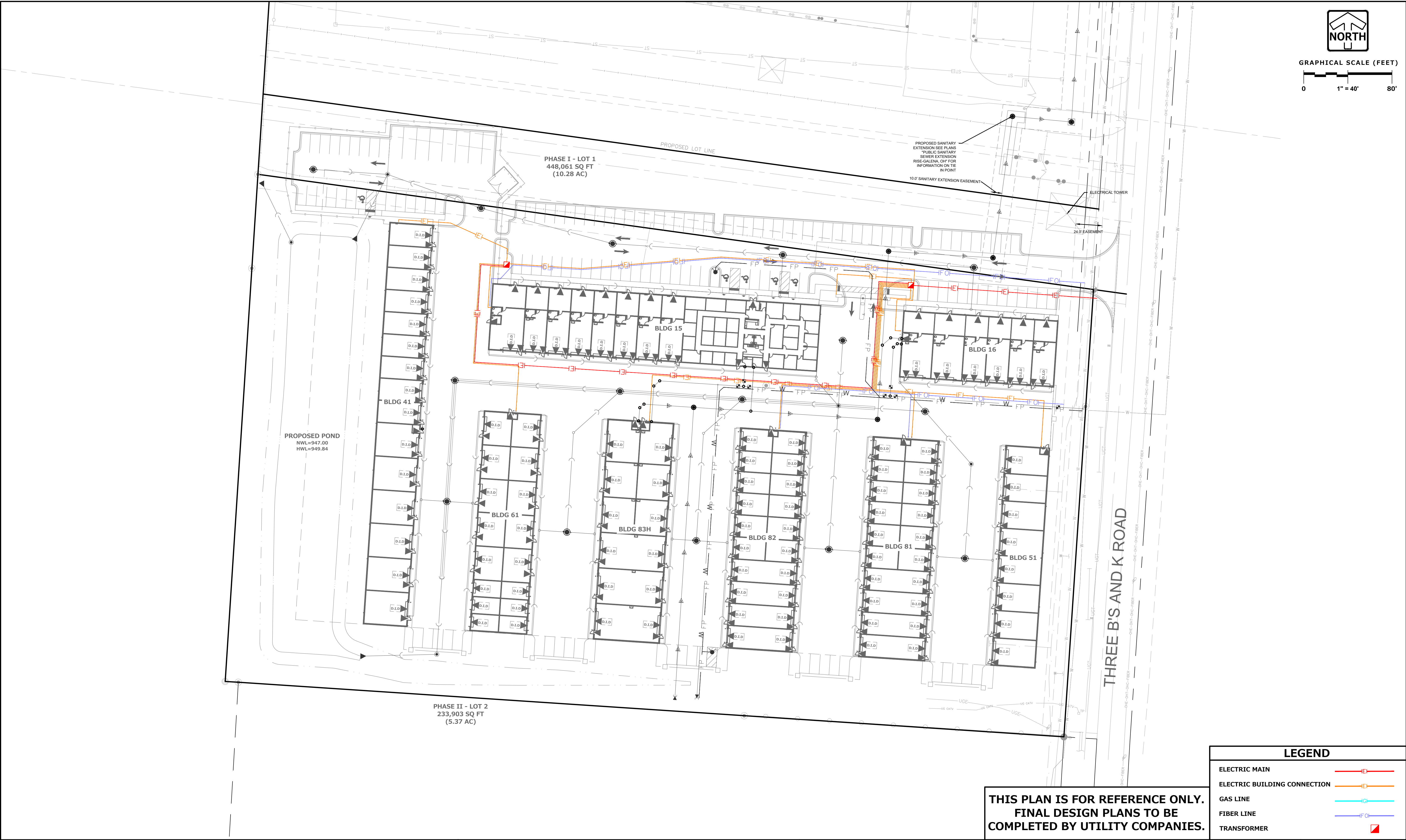
REVISIONS		SHEET C-8 OF C-17	© COPYRIGHT 2023

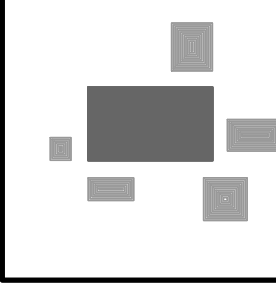
THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

REVIEWED: MAC

DESIGNED: PEM

DRAFTED: PEM





PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888

CHICAGO | MILWAUKEE | NATIONWIDE

RISE COMMERCIAL DISTRICT GALENA, OH

DRY UTILITY CONCEPT

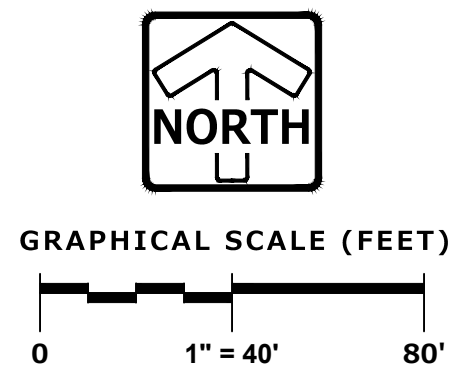
REVISIONS				SHEET	
				C-9 OF C-17	© COPYRIGHT 2023

REG JOB N5854.00-OH

REG PM MAC

START DATE 09/30/25

SCALE 1" = 40'



LEGEND	
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN- ROUND CASTING
	STORM SEWER CATCH BASIN- RECTANGULAR CASTING
	PROPOSED CONCRETE FLARED END SECTION
	PROPOSED CONTOUR
	SPOT ELEVATION
	DIRECTION OF SURFACE FLOW
	OVERFLOW RELIEF ROUTING
	SILT FENCE
	INLET PROTECTION
	HYDROSEEDING
	EROSION CONTROL BLANKET
	CONSTRUCTION ENTRANCE



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888

CHICAGO | MILWAUKEE | NATIONWIDE

**RISE COMMERCIAL
DISTRICT
GALENA, OH**

SITE STABLIZATION PLAN

REVISIONS			
—	—	—	—
—	—	—	—
—	—	—	—

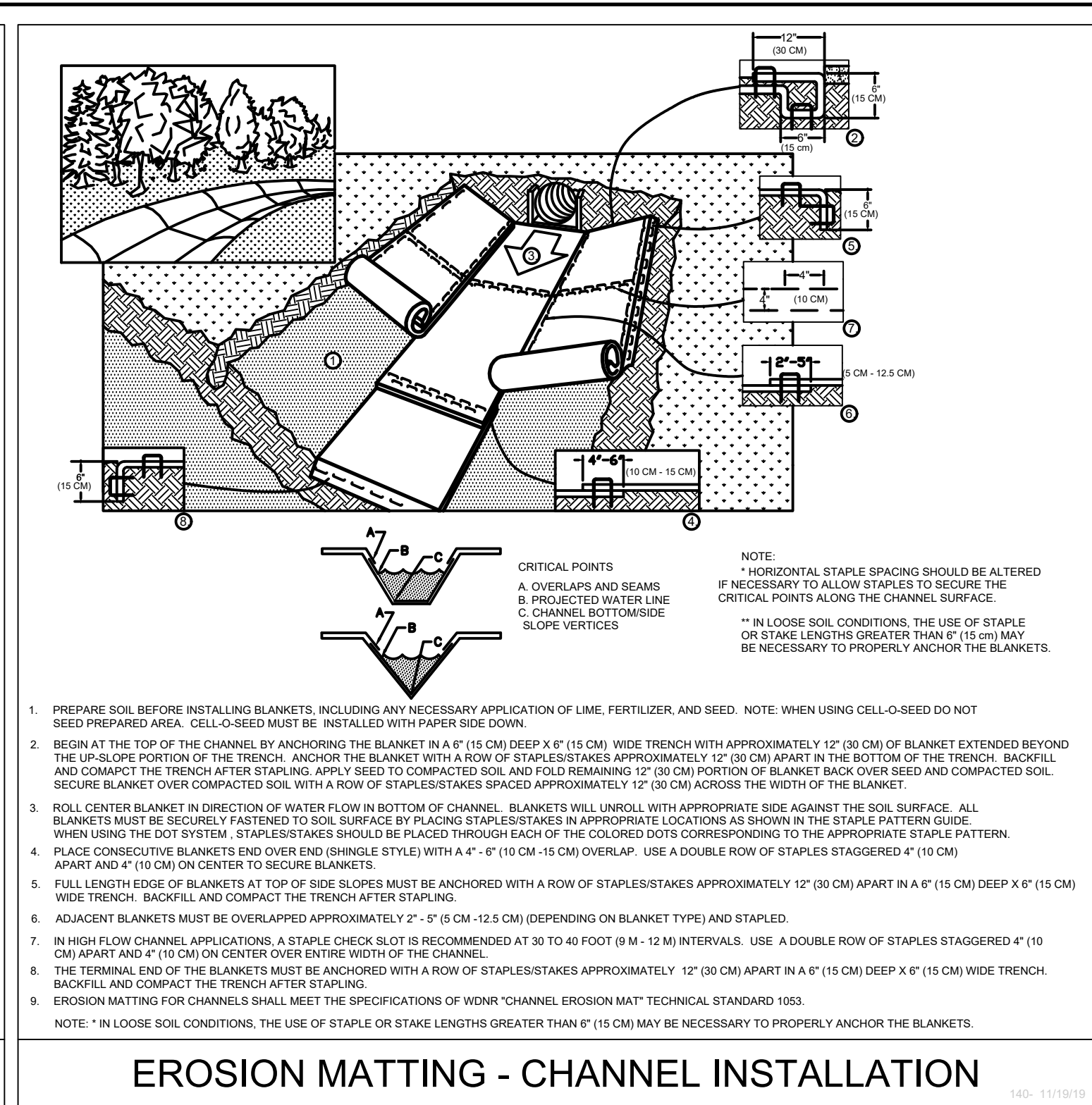
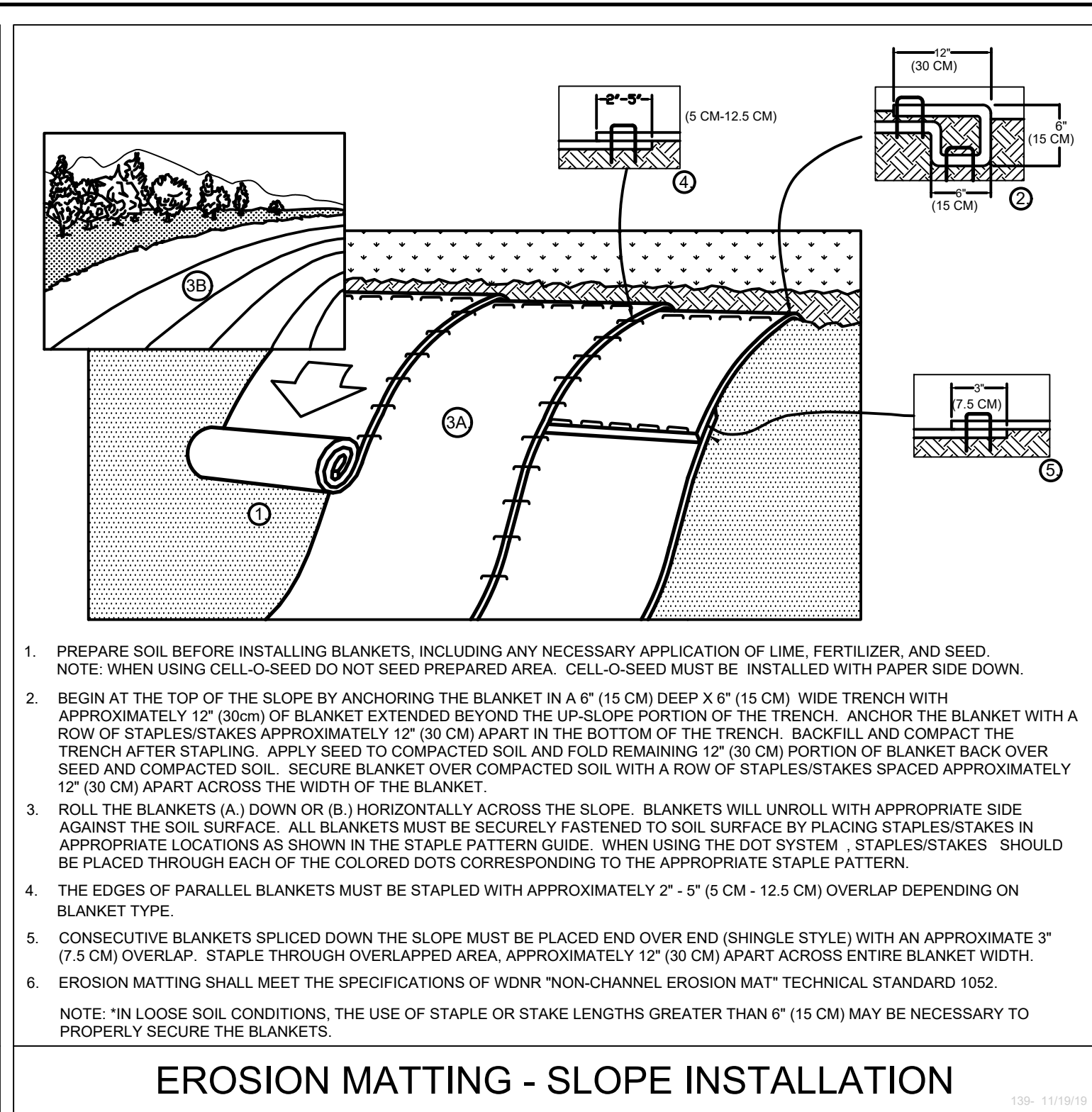
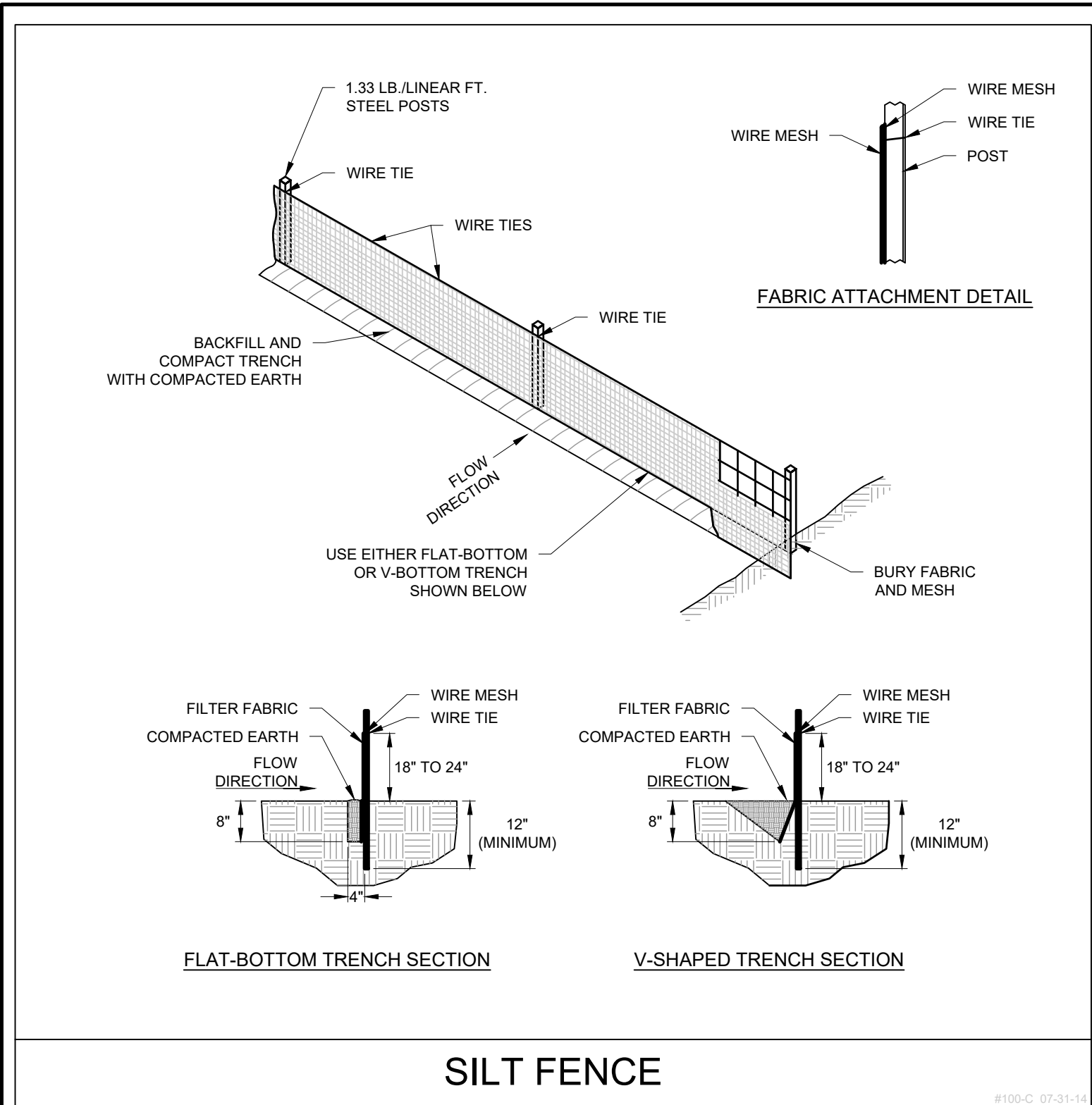
SHEET
C-10
 OF
C-17

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC.

REVIEWED: MAC

DESIGNED: PEM

DRAFTED: PEM



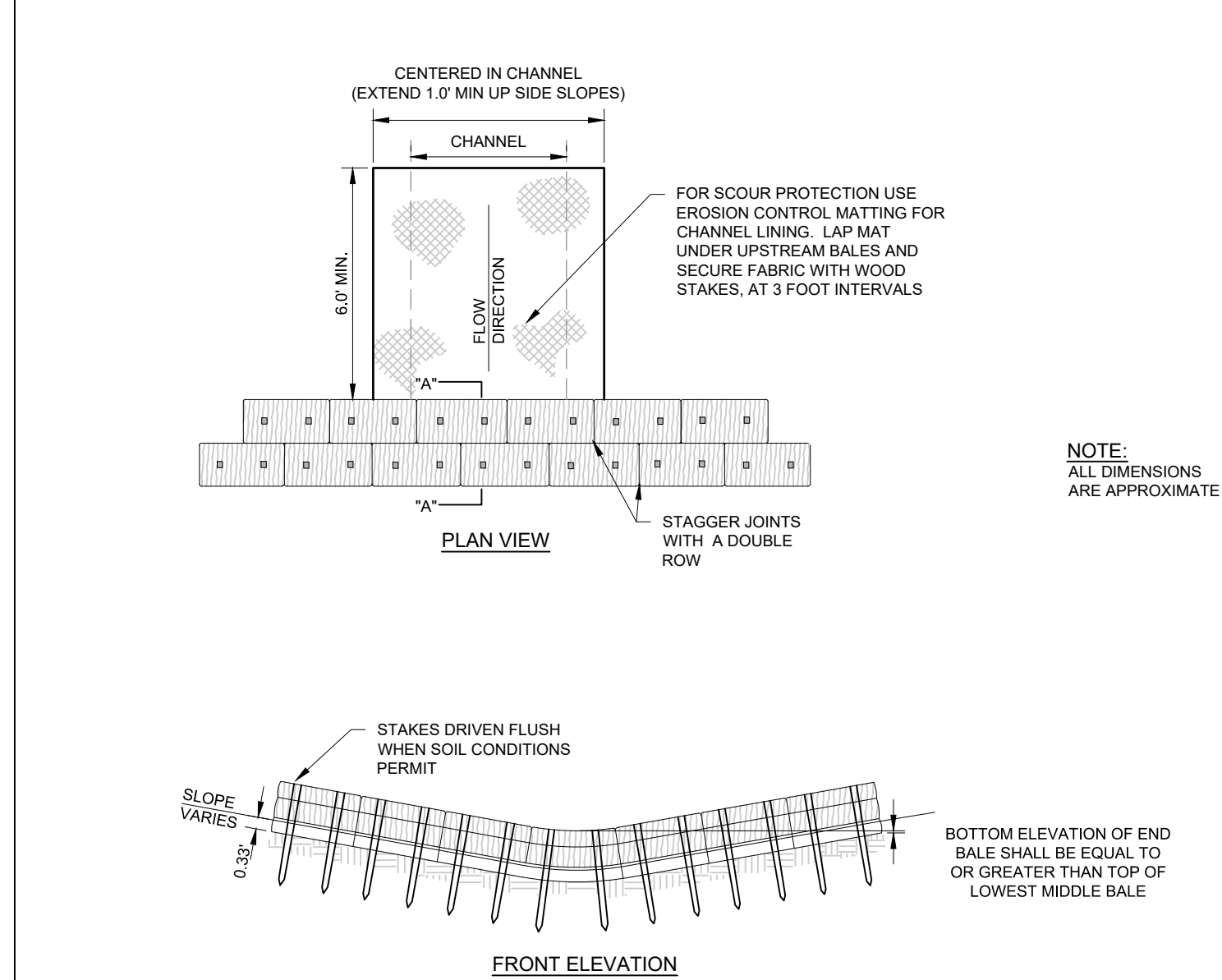
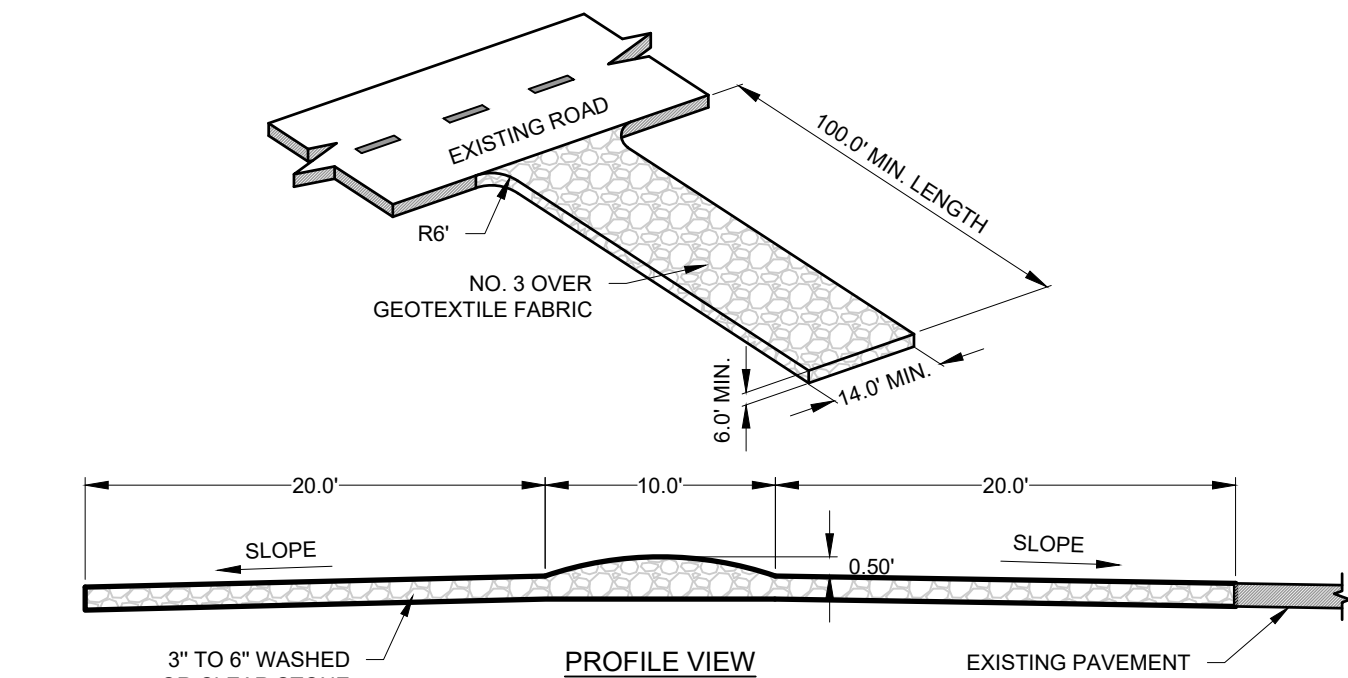
CONTROL MEASURE GROUP	CONTROL MEASURE	CONTROL MEASURE CHARACTERISTICS
VEGETATIVE SOIL COVER	TEMPORARY SEEDING	PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING IS NOT DESIRED OR TIME OF YEAR IS INAPPROPRIATE.
	PERMANENT SEEDING	PROVIDES PERMANENT VEGETATIVE COVER TO CONTROL EROSION, FILTERS SEDIMENT FROM WATER, MAY BE PART OF FINAL LANDSCAPE PLAN.
NON VEGETATIVE SOIL COVER	AGGREGATE COVER	PROVIDES TEMPORARY COVER ON ROADS AND PARKING LOTS AND AREAS WHERE VEGETATION CANNOT BE ESTABLISHED. PREVENTS MUD FROM BEING PICKED UP AND TRANSPORTED OFF-SITE.
	PAVING	PROVIDES PERMANENT COVER ON PARKING LOTS AND ROADS OR OTHER AREAS WHERE VEGETATION CANNOT BE ESTABLISHED.
DIVERSIONS	DIVERSION BERM / SWALE	DIVERTS RUNOFF TO A SEDIMENT TRAP OR OTHER CONTROL.
ENCLOSED DRAINAGE	STORM SEWER	CONVEYS SEDIMENT LADEN WATER TO A SEDIMENT BASIN.
OUTLETS	APRON ENDWALL OR RIPRAP	PROTECTS DOWNSTREAM CHANNEL FROM HIGH VELOCITY OF FLOW DISCHARGING FROM STRUCTURE.
SEDIMENT BASINS	TEMPORARY SEDIMENT TRAP	CONSTRUCTED TO REMOVE SILTATION FROM RUNOFF FROM SITE DIVERSION BERMS/SWALES AND IN OVERLAND FLOOD ROUTE. CAN BE CONVERTED TO PERMANENT SEDIMENT BASIN.
SEDIMENT FILTERS	SILT FENCE	PLACED DOWN SLOPE OF DISTURBED AREA TO KEEP RUNOFF CONTAINED ON-SITE.
	INLET PROTECTION	INSTALLED IN OPEN GRATE STRUCTURES TO COLLECT SEDIMENT.
	DITCH CHECK	PLACED IN DRAINAGE CHANNELS TO FILTER SEDIMENT FROM RUNOFF.
MUD AND DUST CONTROL	CONSTRUCTION ENTRANCE	REDUCES SOIL EROSION POLLUTANTS BEING TRANSPORTED OFF-SITE.
	STREET SWEEPING	REDUCES POLLUTANTS TRACKED FROM CONSTRUCTION SITE.
	DUST CONTROL	PREVENTS DUST FROM LEAVING CONSTRUCTION SITE.

STABILIZATION EFFECTIVENESS (TIME OF YEAR)

STABILIZATION TYPE	STABILIZATION UTILIZATION PERIODS											
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			*	*	*	*	*	*	*			
DORMANT SEEDING												
TEMPORARY SEEDING			C	*	*	*	*	*	*			
SODDING			E	*	*	*	*	*	*			

A. KENTUCKY BLUEGRASS 90 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE.
B. KENTUCKY BLUEGRASS 155 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE + 2 TONS STRAW MULCH/ACRE.
C. SPRING CATS 100 LBS/ACRE.
D. WHEAT OR CEREAL RYE 150 LBS/ACRE.
E. SOD.
F. STRAW MULCH 2 TONS/ACRE.

* IRRIGATION/WATERING REQUIRED TO SUPPORT ESTABLISHMENT AS NEEDED.



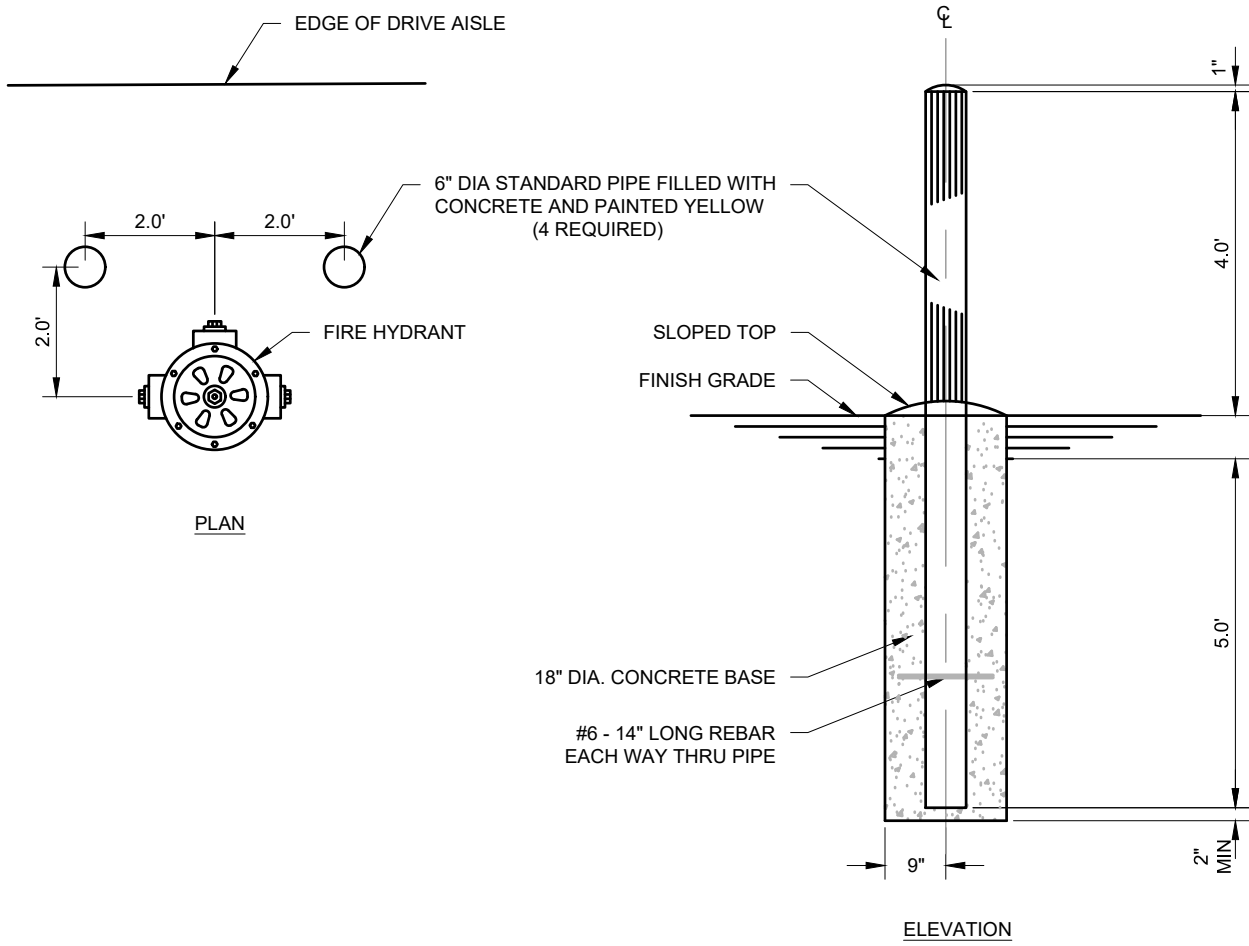
NOTES:

1. INSTALLED, THE MINIMUM HEIGHT OF DITCH CHECK SHALL BE 10-INCHES AND SHALL NOT EXCEED A MAXIMUM HEIGHT OF 18-INCHES FOR MANUFACTURED OR BIODEGRADABLE MATERIALS.
2. DITCH CHECK MUST BE INSTALLED WITH THE CENTER LOWER THAN THE SIDES FORMING A WEIR.
3. AT A MINIMUM, INSTALL ONE DITCH CHECK FOR EVERY TWO-FEET OF DROP IN THE CHANNEL.
4. DITCH CHECK SHALL, AT A MINIMUM, BE INSPECTED WEEKLY AND WITHIN 24-HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 0.5-INCHES OF RAIN OR MORE DURING A 24-HOUR PERIOD.
5. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN DEPOSITS REACH HALF OF THE HEIGHT OF THE LOWEST BALE.
6. DITCH CHECK SHALL BE UTILIZED DURING ROUGH GRADING AND SHALL BE REMOVED ONCE FINAL GRADING AND CHANNEL STABILIZATION IS APPLIED.
7. EROSION CONTROL MATTING FOR CHANNELS SHALL BE NORTH AMERICAN GREEN C125BN OR EQUAL.

REVISIONS

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

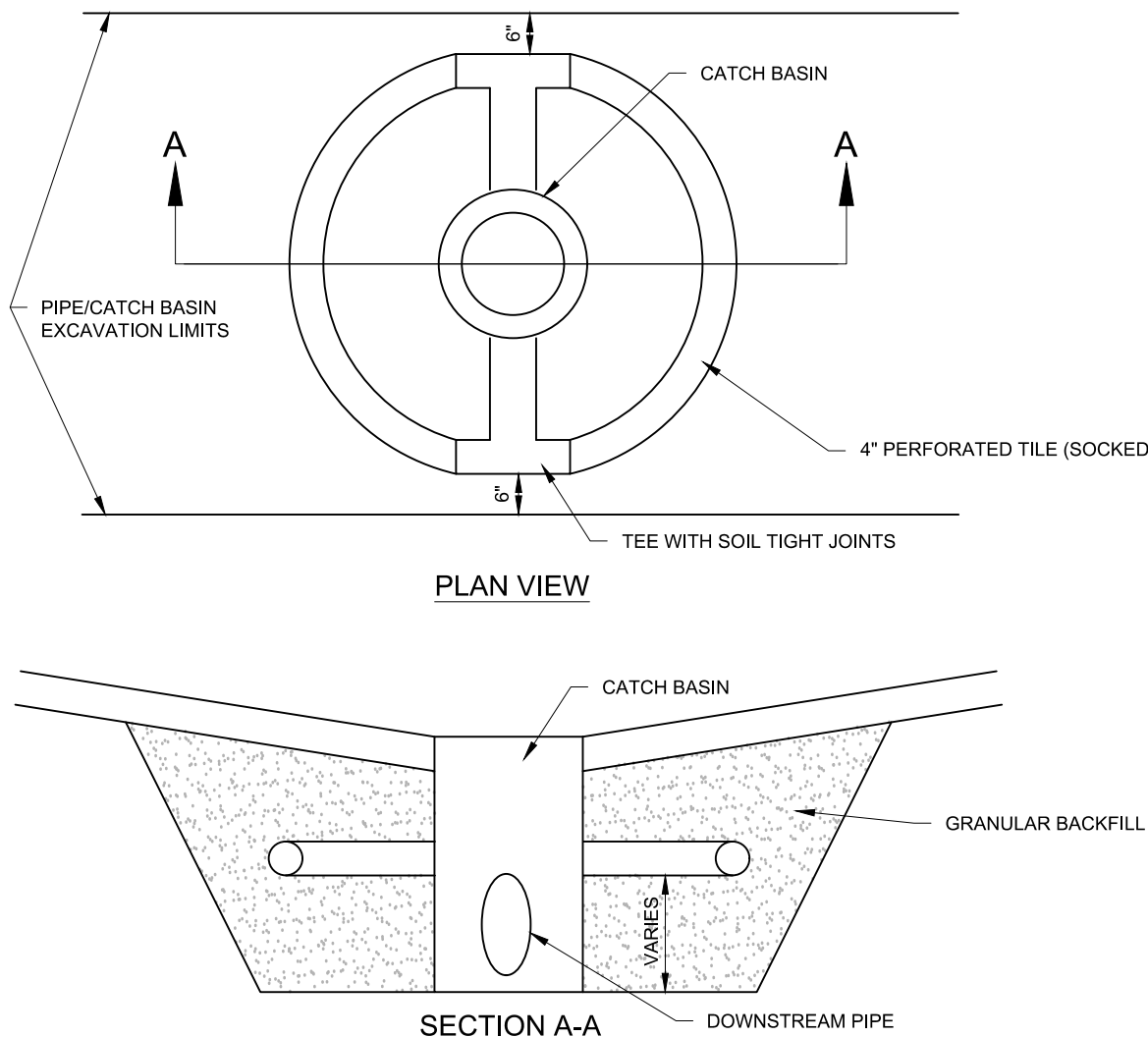
DESIGNED: PEM
REVIEWED: MAC
DRAFTED: PEM



- NOTES:**
1. USE WHERE HYDRANT IS LOCATED OUTSIDE PAVED AREAS, COST INCIDENTAL.

HYDRANT BOLLARD

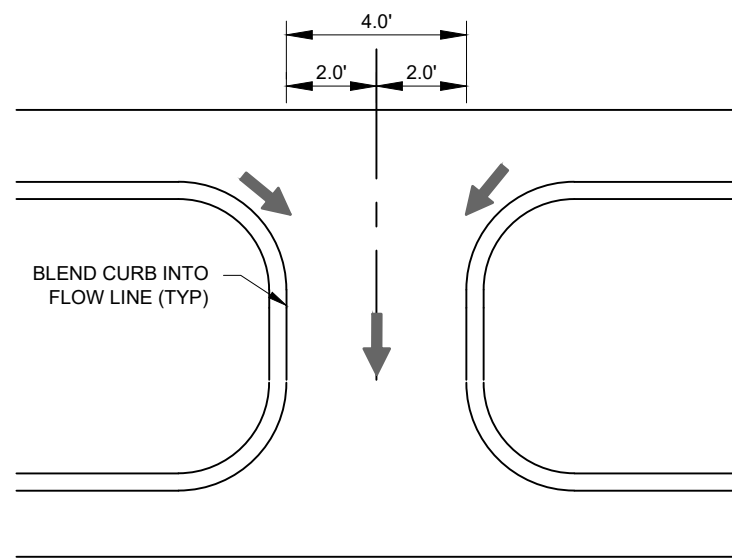
#509 10-03-12



- NOTES:**
1. DRAINTILE INVERTS SHALL BE PLACED AT OR ABOVE CROWN OF DOWNSTREAM PIPE.

CATCH BASIN - UNDERDRAIN

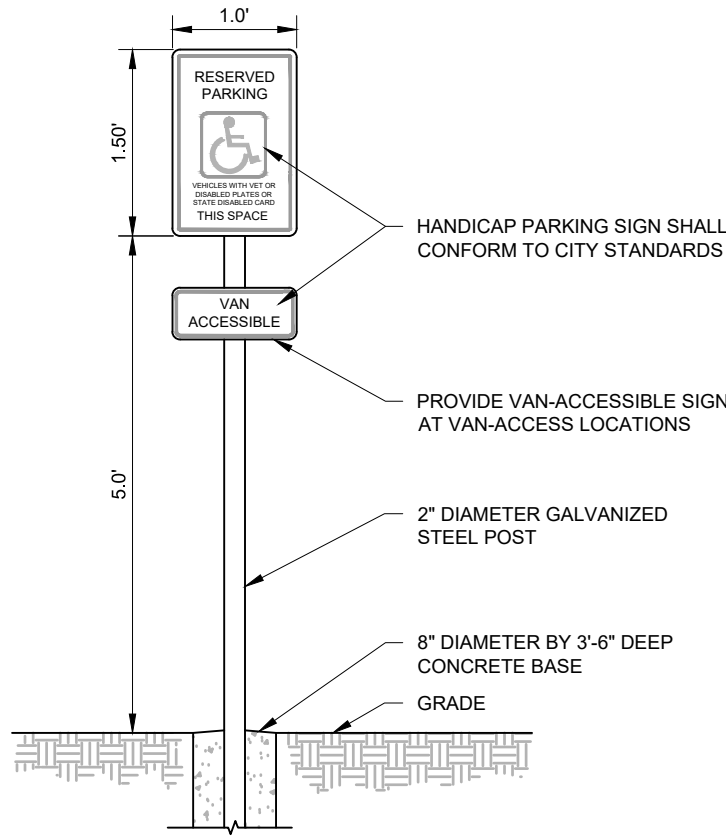
#318 09/28/24



- NOTES:**
1. PITCH CONCRETE AT 2% FROM FLOW LINE OF GUTTER SECTION TO C/L OF FLUME.

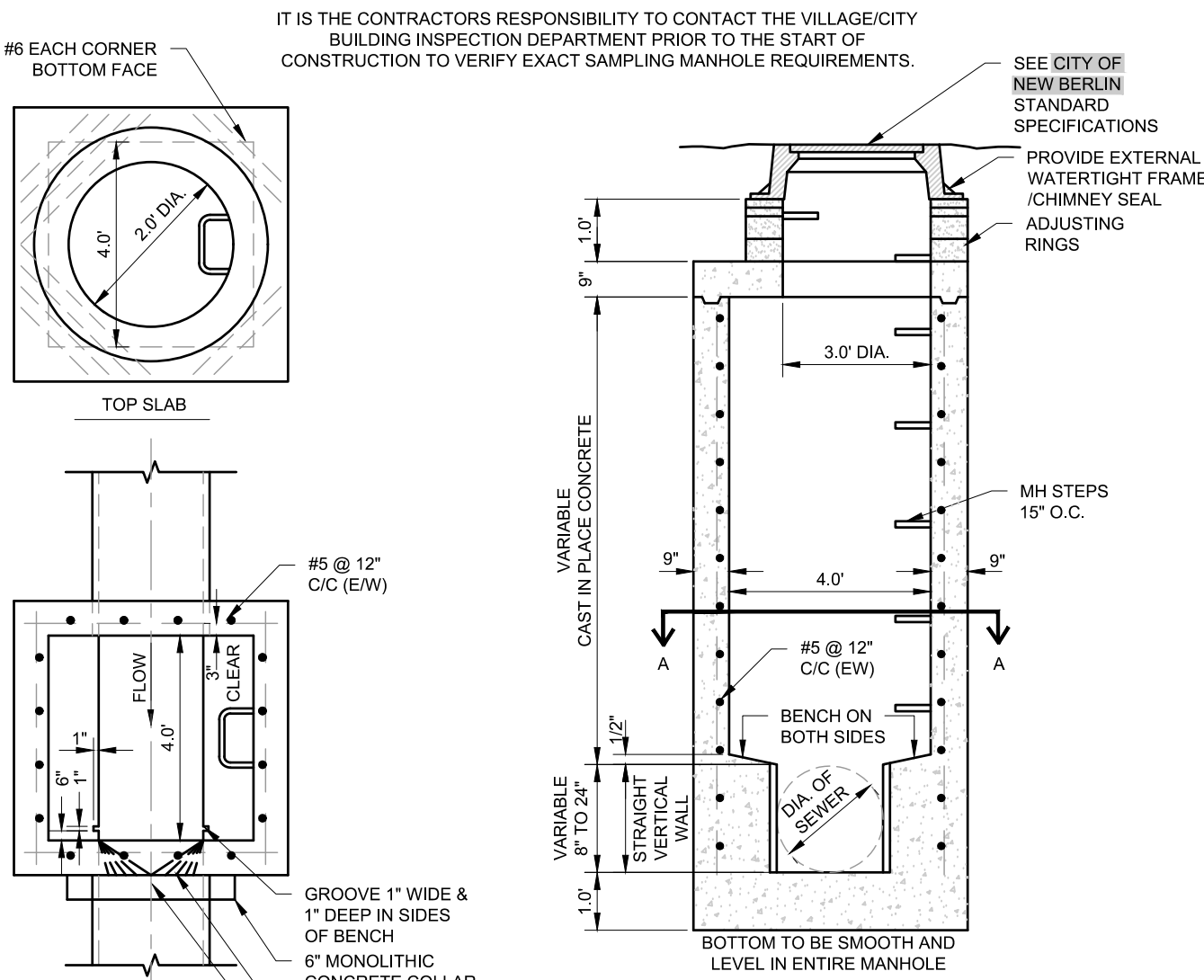
CONCRETE FLUME

#609 10/27/14



ADA SIGN

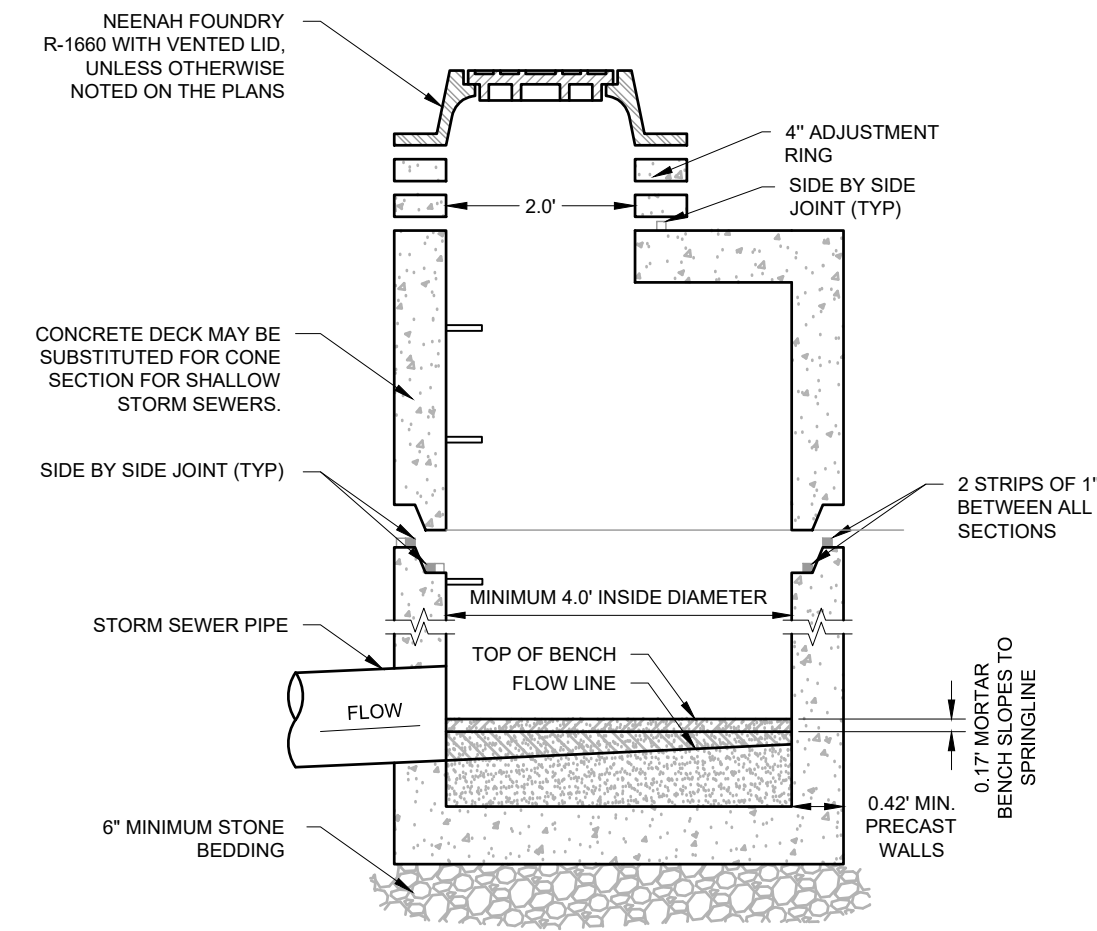
#707 10-11-14



- NOTES:**
1. 4'-0" I.D. PRECAST MAY BE SUBSTITUTED FOR SAMPLING M.H.'S ON BUILDING LATERAL
 2. 4'-0" I.D. MONOLITHIC MAY BE SUBSTITUTED FOR GAUGING M.H.'S ON MUNICIPAL SEWERS

SAMPLING AND GAUGING MANHOLE

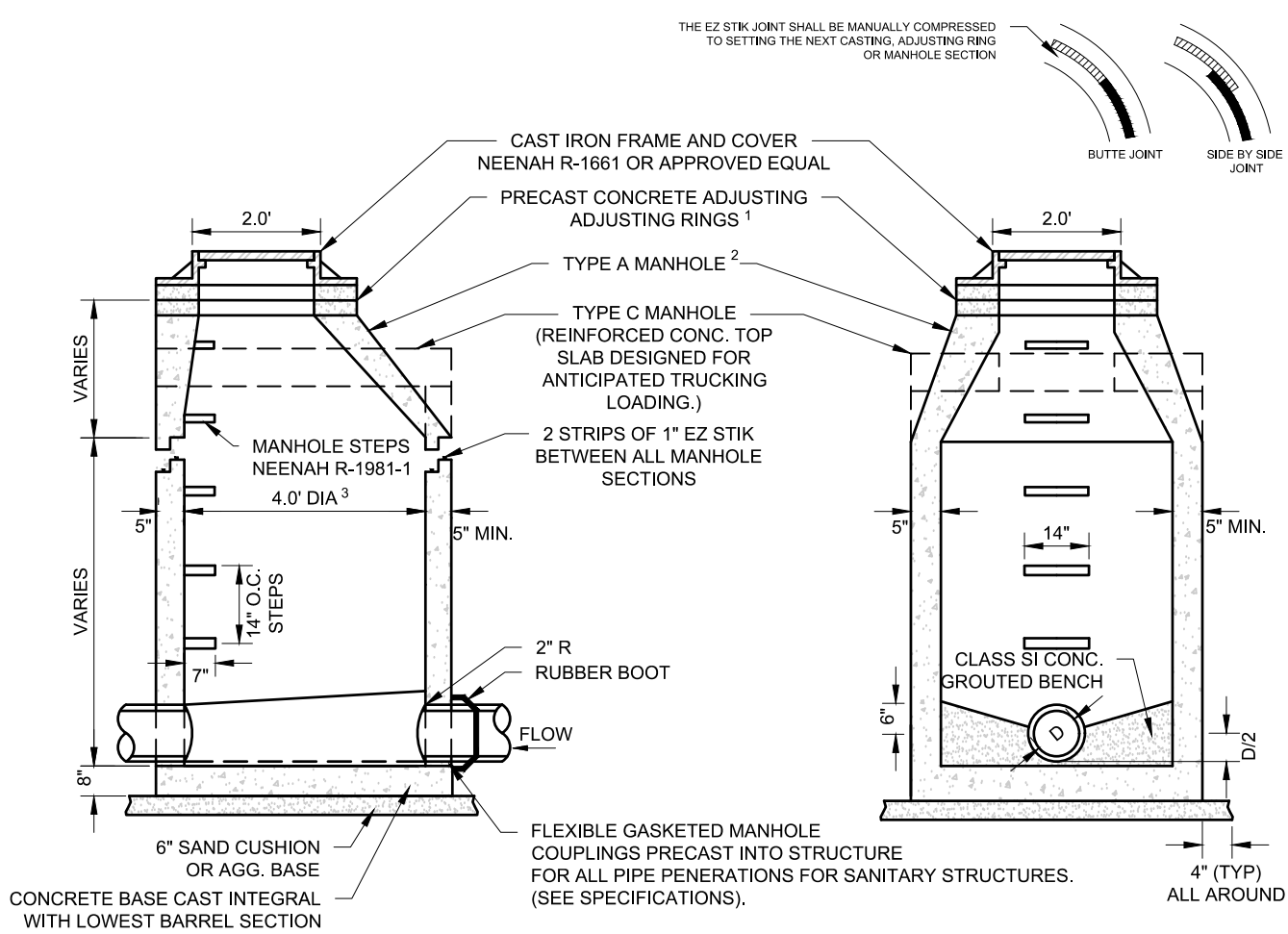
#400 01/28/11



- NOTES:**
1. CLEAN UNDERSIDE OF ADJUSTING RING OR CAST IRON FRAME AND SET IN PLACE.
 2. TUCK POINT MORTAR INTO ANNULAR CRACK AND BACKPLASTERED INSIDE AND OUTSIDE OF ALL JOINTS.
 3. THE FLAT TOP MAY BE USED IN LIEU OF THE TAPERED TOP WHEN FIELD CONDITIONS PROHIBIT THE USE OF A FLAT TAPERED TOP.
 4. MANHOLE CONSTRUCTION TO MEET REQUIREMENTS OF ASTM C478.
 5. ECCENTRIC CONE SECTION OF MANHOLE TO BE SET OUTSIDE OF VEHICULAR WHEEL PATH NEAR 1/4 OF ROADWAY.

STORM SEWER MANHOLE

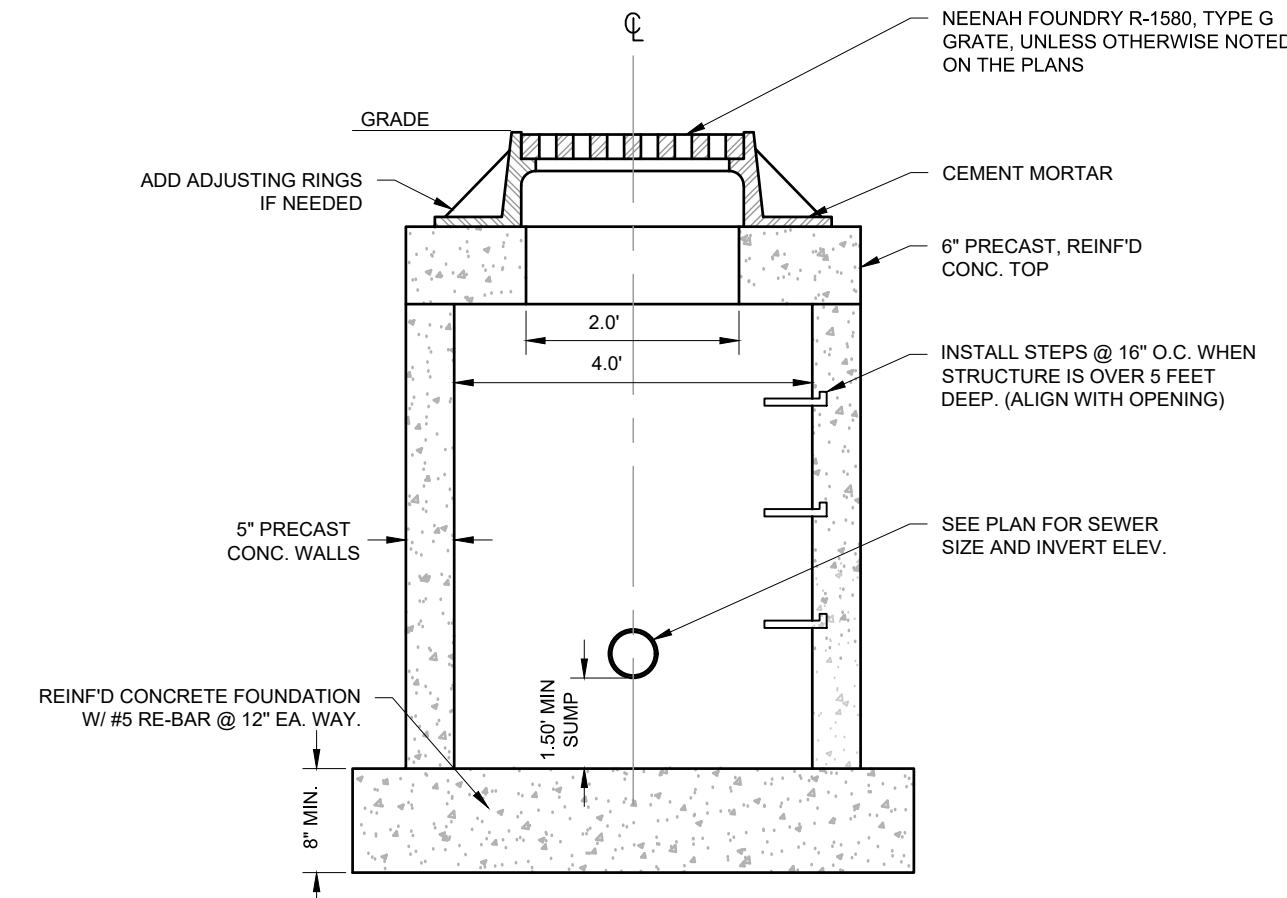
#301 04/28/13



- NOTES:**
1. 1" EZ STIKE BETWEEN ALL ADJUSTMENT RINGS, BETWEEN TOP ADJUSTMENT RINGS AND FRAME. USE INTERNAL ADAPTOR SEAL RING, ALL JOINTS MUST BE BACKPLASTERED INSIDE AND OUT.
 2. THE FLAT TOP MAYBE USED IN LIEU OF THE TAPERED TOP WHEN FIELD CONDITIONS PROHIBIT THE USE OF A TAPERED TOP.
 3. STRUCTURE TO BE 4'-0" DIA UNLESS OTHERWISE INDICATED ON THE PLANS.

SANITARY MANHOLE

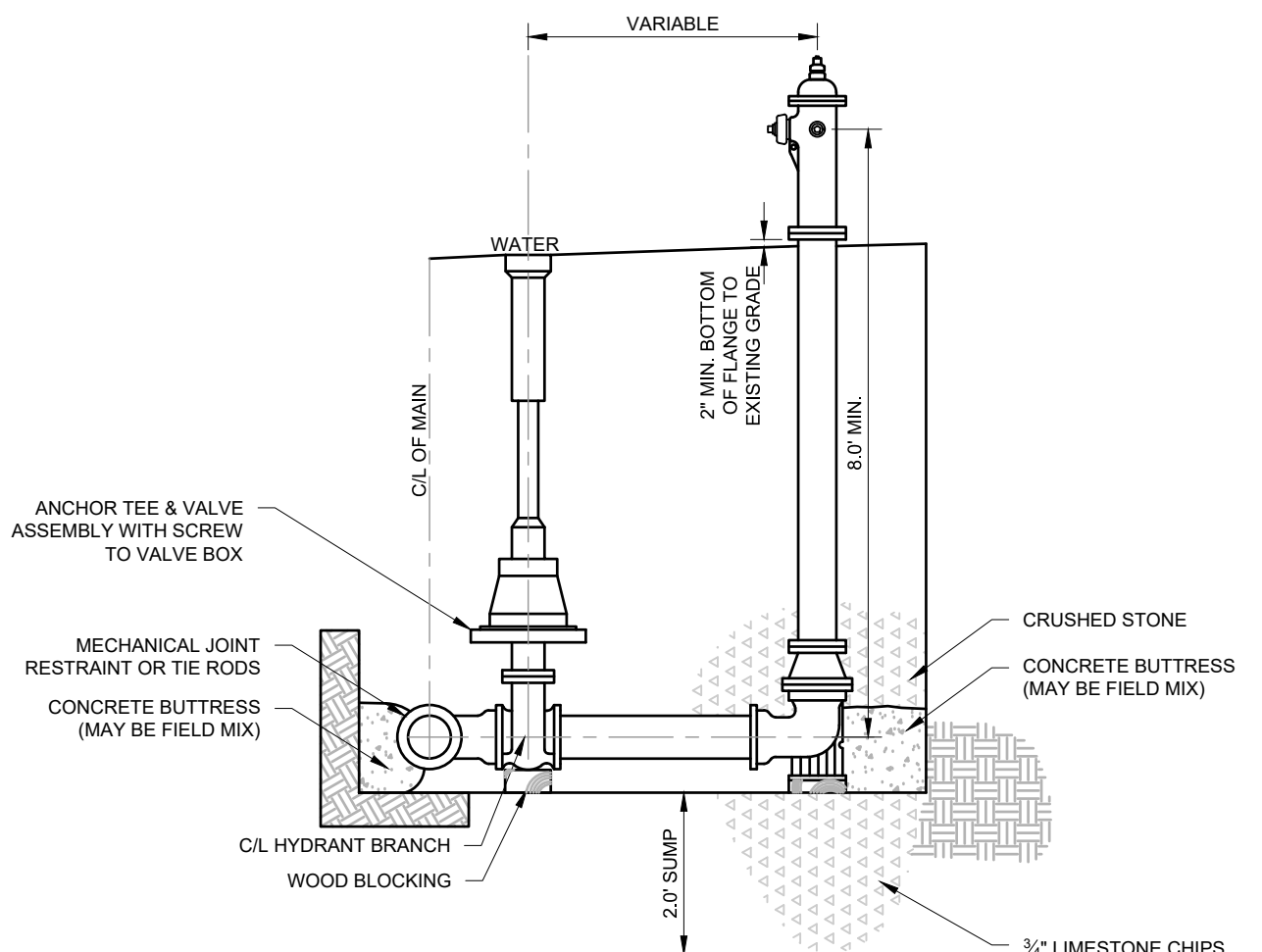
#400 10-10-12



- NOTES:**
1. EASY STICK, RUBBER GASKET OR APPROVED EQUIVALENT SHALL BE PLACED AT ALL JOINTS BETWEEN ADJUSTING RINGS FOR STORM CATCH BASINS.
 2. THE FLAT TOP MAY BE USED IN LIEU OF THE TAPERED TOP WHEN FIELD CONDITIONS PROHIBIT USE OF A TAPERED TOP.
 3. STRUCTURE TO BE 4.0' DIA. OR AS INDICATED ON THE PLANS.

CATCH BASIN

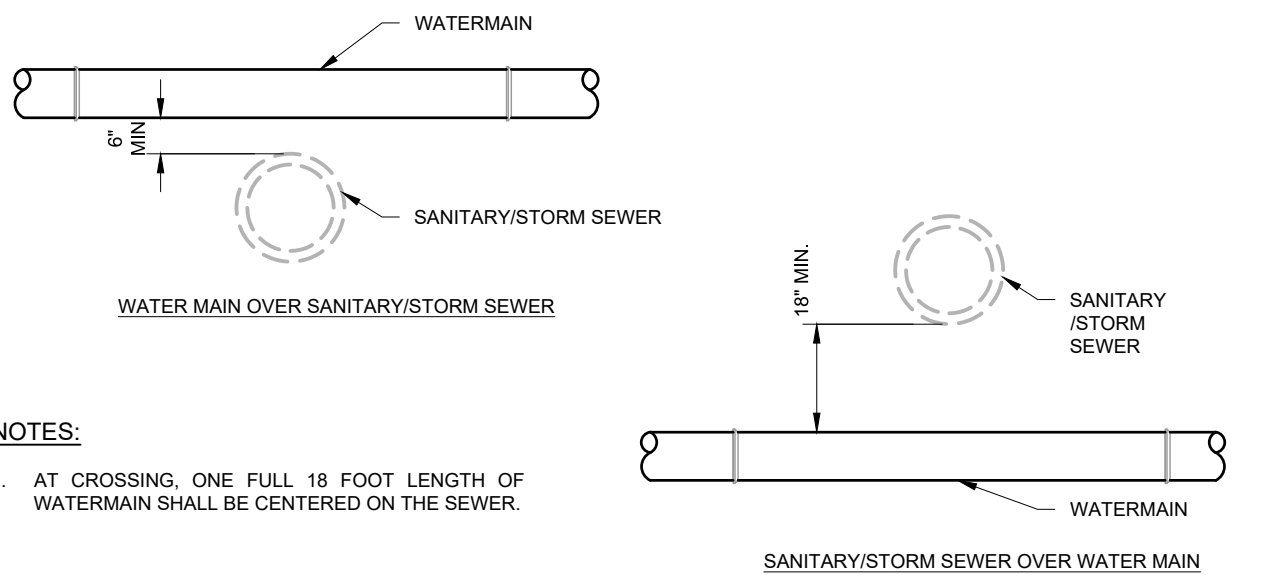
#302 10-04-12



- NOTES:**
1. MEGALUG RESTRAINING GLANDS ON ALL MECHANICAL JOINTS, THE BOLTS & NUTS ARE TO BE HIGH STRENGTH LOW ALLOY STEEL (CORTEN) AS PER SECTION 11.6.5 OF A.W.W.A. C-111.
 2. THE FOLLOWING HYDRANTS SHALL BE ALLOWED:
MUELLER SUPER CENTURION 250 3-WAY FIRE HYDRANT
U.S. PIPE METROPOLITAN / M-94 DUCTILE IRON FIRE HYDRANT
WATEROUS 5/2" PACER FIRE HYDRANT

FIRE HYDRANT

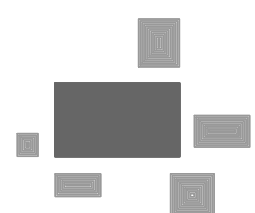
#501 10/05-12



- NOTES:**
1. AT CROSSING, ONE FULL 18 FOOT LENGTH OF WATERMAIN SHALL BE CENTERED ON THE SEWER.

UTILITY SEPARATION

#401 10-10-12



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-6888
CHICAGO | MILWAUKEE | NATIONWIDE

**RISE COMMERCIAL
DISTRICT
GALENA, OH**

CONSTRUCTION DETAILS

REVISIONS

REG JOB N-5854-00-00
REG PM: MAC
START DATE: 09/30/25
SCALE: 1" = 40'

SHEET
C-13
OF
C-17

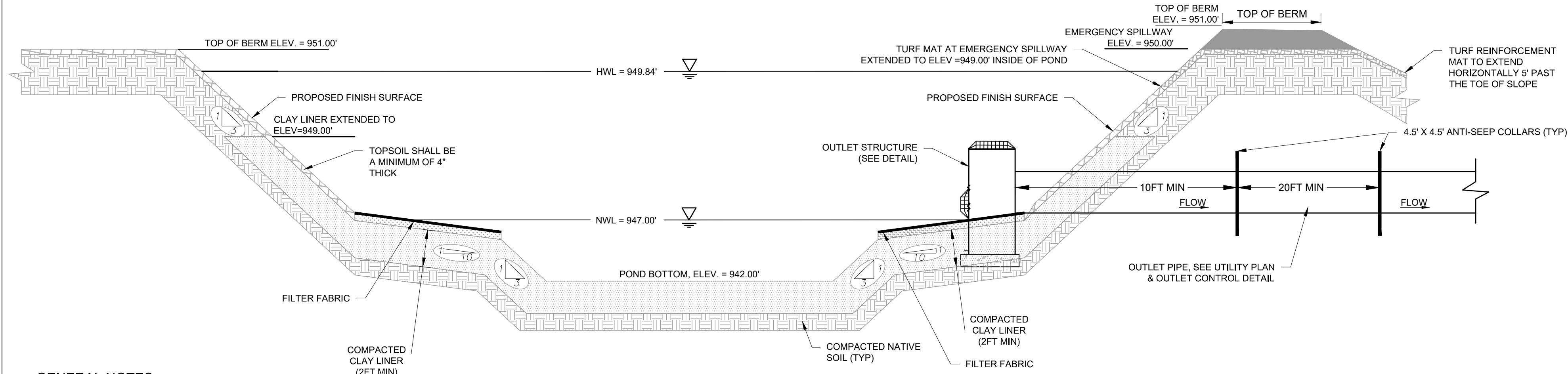
© COPYRIGHT 2023

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

REVIEWED: MAC

DESIGNED: PEM

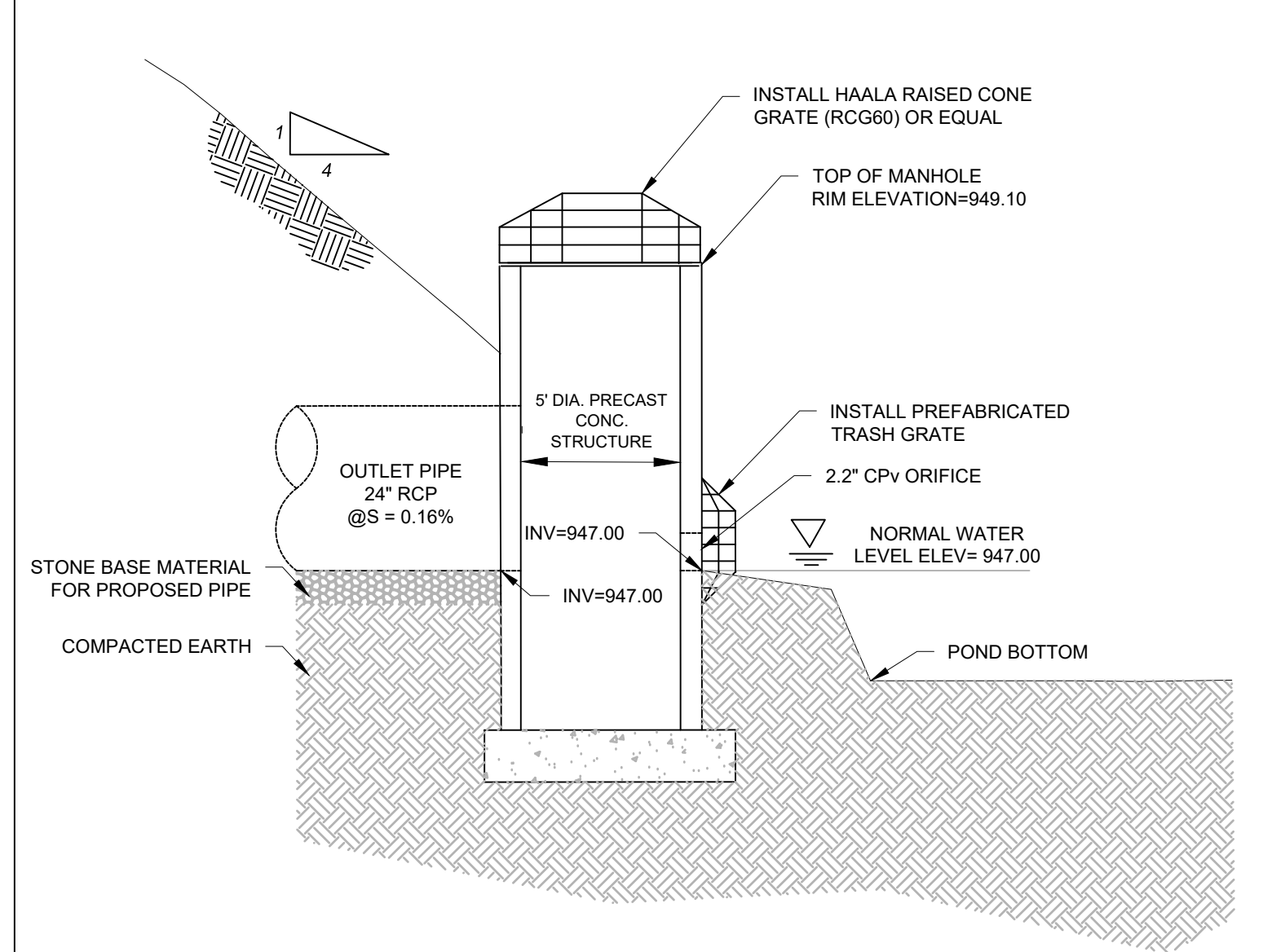
DRAFTED: PEM



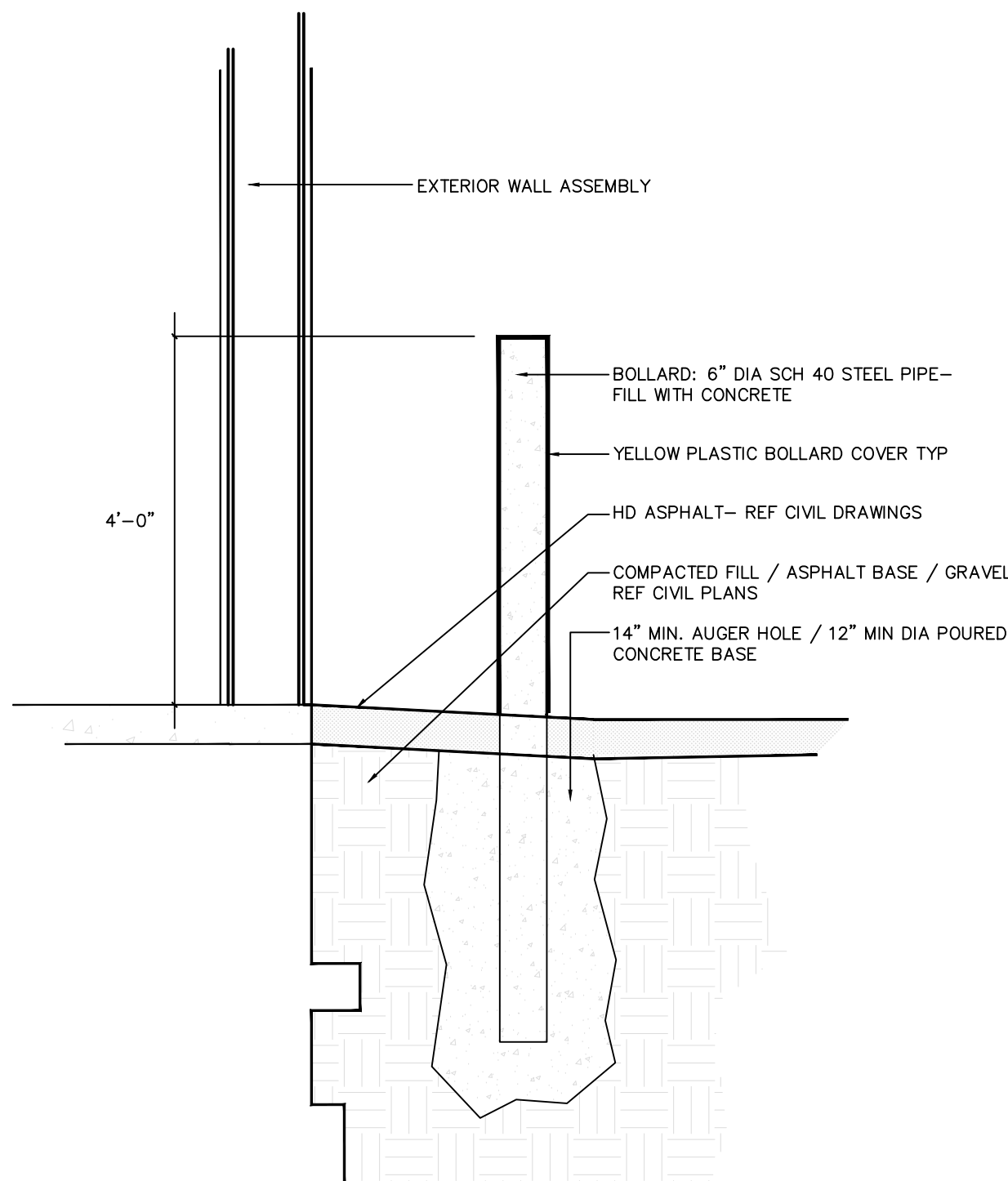
GENERAL NOTES:

1. ALL CONSTRUCTION SHALL MEET THE SPECIFICATIONS OF ARTICLE XII FOR DELAWARE CO, OHIO
2. ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH THE STORM WATER MANAGEMENT PLAN FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER OF RECORD.
3. RCP PIPING & INSTALLATION WITHIN THE BASIN SHALL HAVE RUBBER GASKETS
4. OWNER OR CONTRACTOR MUST CONSULT LANDSCAPE ARCHITECT OR ECOLOGICAL PLANNING AGENCY FOR APPROPRIATE PLANTS AND PLANTING CONFIGURATIONS.
5. CLAY LINER SHALL BE A MINIMUM OF 2-FEET THICK. CLAY SHALL BE COMPACTED AT $\pm 2.0\%$ OPTIMAL MOISTURE CONTENT TO 90% MODIFIED PROCTOR. MEDIUM STIFF TO STIFF CLAYS PRESENT IN-PLACE AT THE POND SIDE SLOPES OR OTHER ONSITE MEDIUM STIFF TO STIFF CLAYS MAY BE USED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER OF RECORD.
6. FOR CONSTRUCTED EMBANKMENTS WHERE THE PERMANENT POOL IS PONDED 3-FEET OR MORE AGAINST THE EMBANKMENT, THERE SHALL BE A CORE TRENCH OR KEYWAY ALONG THE CENTERLINE OF THE EMBANKMENT UP TO THE PERMANENT POOL ELEVATION. THE CORE TRENCH OR KEYWAY SHALL BE A MINIMUM OF 2-FEET DEEP AND 8-FEET WIDE WITH A SIDE SLOPE OF 1:1 OR FLATTER.

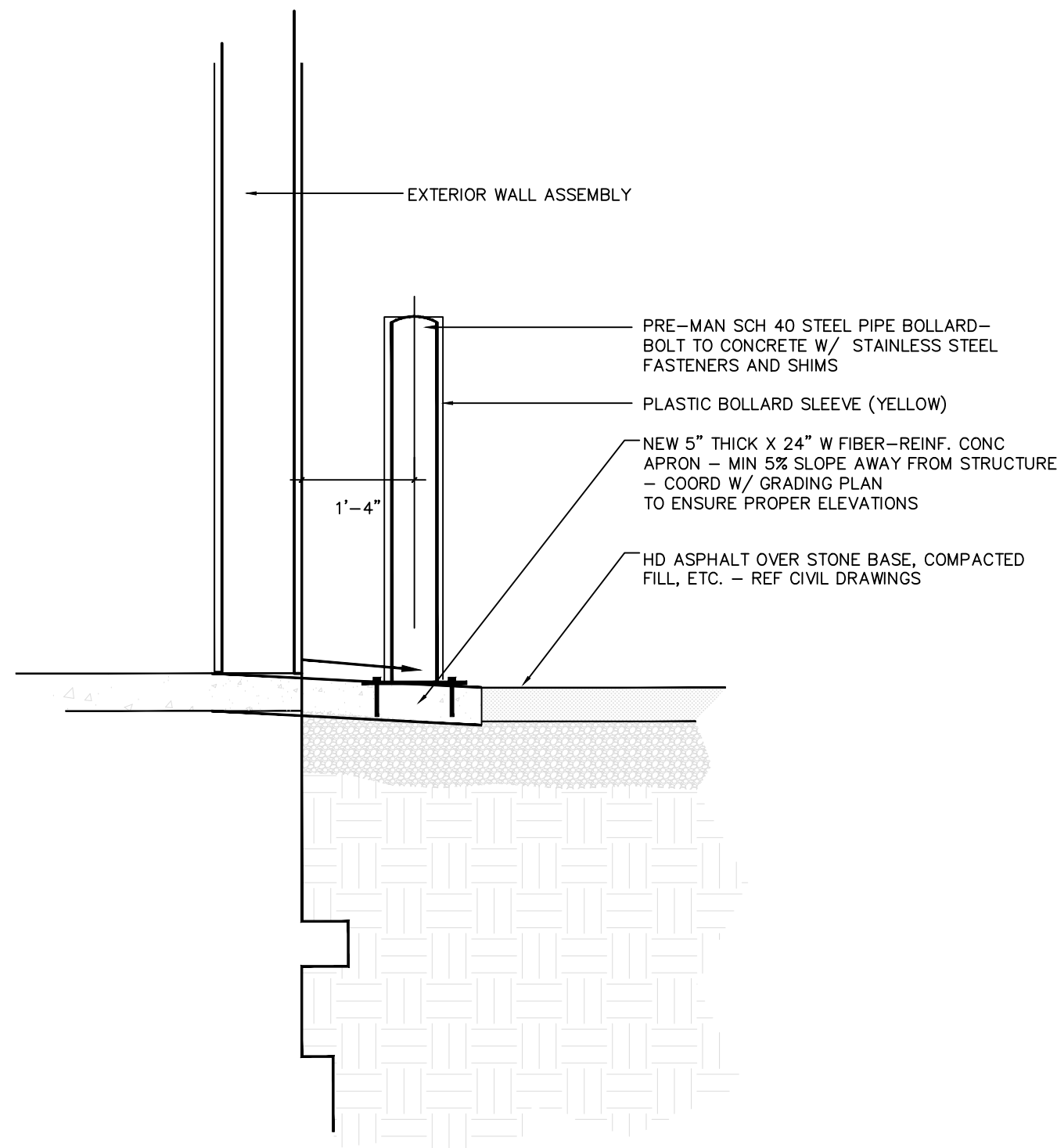
STORMWATER POND 1 CROSS SECTION



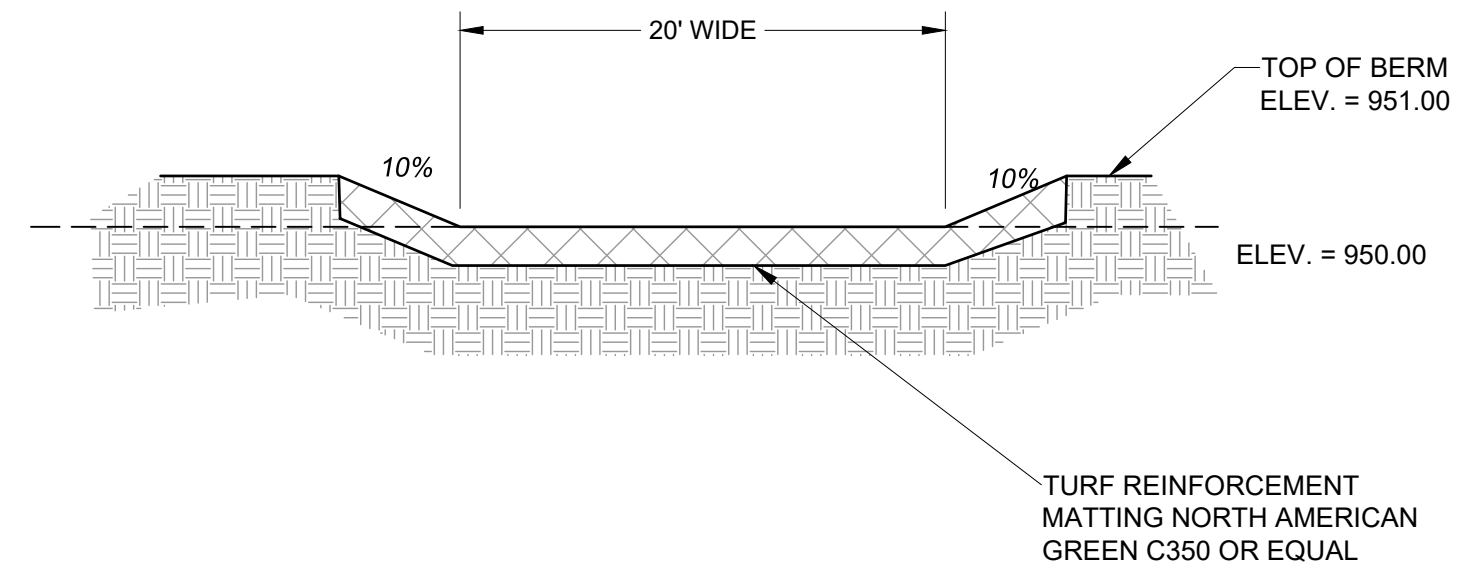
POND 1 OUTLET STRUCTURE



1 BOLLARD DETAIL AT ASPHALT
A7.3 SCALE: 1/2" = 1'-0"



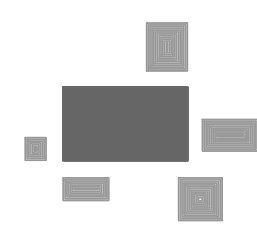
2 BOLLARD DETAIL @ CONC. APRON
A7.3 SCALE: 1/2" = 1'-0"



NOTES:

1. ON THE INSIDE OF THE POND, EXTEND TURF REINFORCEMENT MATTING 2' BELOW THE ELEVATION OF THE EMERGENCY SPILLWAY.
2. ON THE OUTSIDE OF THE POND, EXTEND TURF REINFORCEMENT MATTING 5' HORIZONTALLY PAST THE TOE OF SLOPE.

POND 1 EMERGENCY SPILLWAY



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-6888
CHICAGO | MILWAUKEE | NATIONWIDE

**RISE COMMERCIAL
DISTRICT
GALENA, OH**

CONSTRUCTION DETAILS

REVISIONS

==	==	==	==	==	==
==	==	==	==	==	==
==	==	==	==	==	==

REG JOB N-5854.00-01
REG PM: MAC
START DATE: 09/30/25
SCALE: 1" = 40'

SHEET
C-14
OF
C-17

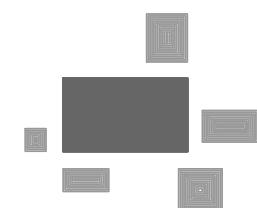
© COPYRIGHT 2023

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

REVIEWED: MAC

DESIGNED: PEM

DRAFTED: PEM



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-6888
CHICAGO | MILWAUKEE | NATIONWIDE

**RISE COMMERCIAL
DISTRICT
GALENA, OH**

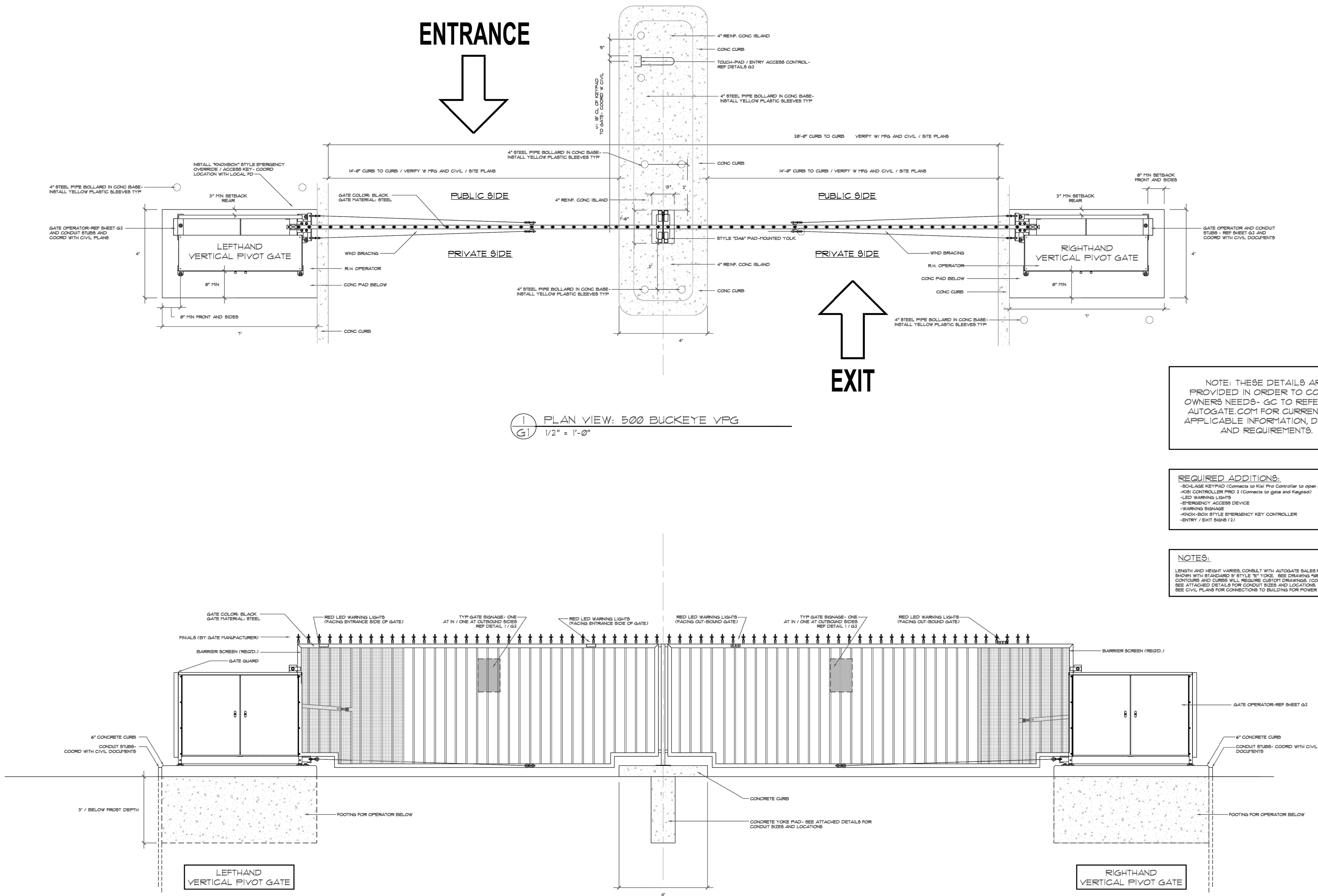
CONSTRUCTION DETAILS

REVISIONS

REG JOB N-5854.00-01
REG PM: MAC
START DATE: 09/30/25
SCALE: 1" = 40'

SHEET
**C-15
OF
C-17**

© COPYRIGHT 2023



1 PLAN VIEW: 500 BUCKEYE VPG
1/2" = 1'-0"

2 INSIDE ELEVATION: 500 BUCKEYE VPG
1/2" = 1'-0"

NOTE: THESE DETAILS ARE PROVIDED IN ORDER TO CONVEY OWNERS NEEDS- GC TO REFERENCE AUTOGATE.COM FOR CURRENT AND APPLICABLE INFORMATION, DETAILS AND REQUIREMENTS.

REQUIRED ADDITIONS:
-SCHLAGE KEYPAD (Connects to KIS Pro Controller to open gate)
-HISB CONTROLLER PRO 3 (Connects to gate and keypad)
-LED WARNING LIGHTS
-EMERGENCY ACCESS DEVICE
-WARNING SIGNAGE
-KNOX-BOX STYLE EMERGENCY KEY CONTROLLER
-ENTRY / EXIT SIGNS (2)

NOTES:
LENGTH AND HEIGHT VARIES, CONSULT WITH AUTOGATE SALES FOR MORE INFORMATION. SHOWN WITH STANDARD 2" STYLE 10" TUBES. SEE DRAWINGS FOR TUBE STYLES. CONTOURS AND CURBS WILL REQUIRE CUSTOM DRAWINGS. (CONSULT WITH AUTOGATE). SEE ATTACHED DETAILS FOR CONDUIT SIZES AND LOCATIONS. SEE CIVIL PLANS FOR CONNECTIONS TO BUILDING FOR POWER / LOW VOLTAGE.

SEAL:
OWNER REVIEW:
RELEASE DATE:
REVISIONS:
PROJECT #:
SHEET SCALE: As Noted
DRAWN BY: JP
APPROVED BY: JB/NW
RISE commercial district
FORGE ARCHITECTURE Forge Architecture, LLC 5325 E 82nd St. - Suite 242 Indianapolis, IN 46250 502.432.9951
LSE LEIBERBERG STRUCTURAL ENGINEERING Justin Leiberberg, PE, SE Leiberberg Structural Engineering 812.686.9440 www.lseee.com
PROJECT INFO:
RISE COMMERCIAL DISTRICT
SHEET # G1
DESIGNATION: AUTOGATE DETAILS

FOR REVIEW ONLY

CONSTRUCTION DETAILS

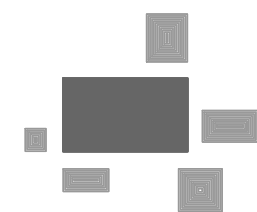
www.pinnacle-engr.com

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

REVIEWED: MAC

DESIGNED: PEM

DRAFTED: PEM



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-6888
CHICAGO | MILWAUKEE | NATIONWIDE

**RISE COMMERCIAL
DISTRICT
GALENA, OH**

CONSTRUCTION DETAILS

REVISIONS

==	==	==	==
==	==	==	==
==	==	==	==

REG JOB N-5854.00-01
REG PM: MAC
START DATE 09/30/25
SCALE 1" = 40'

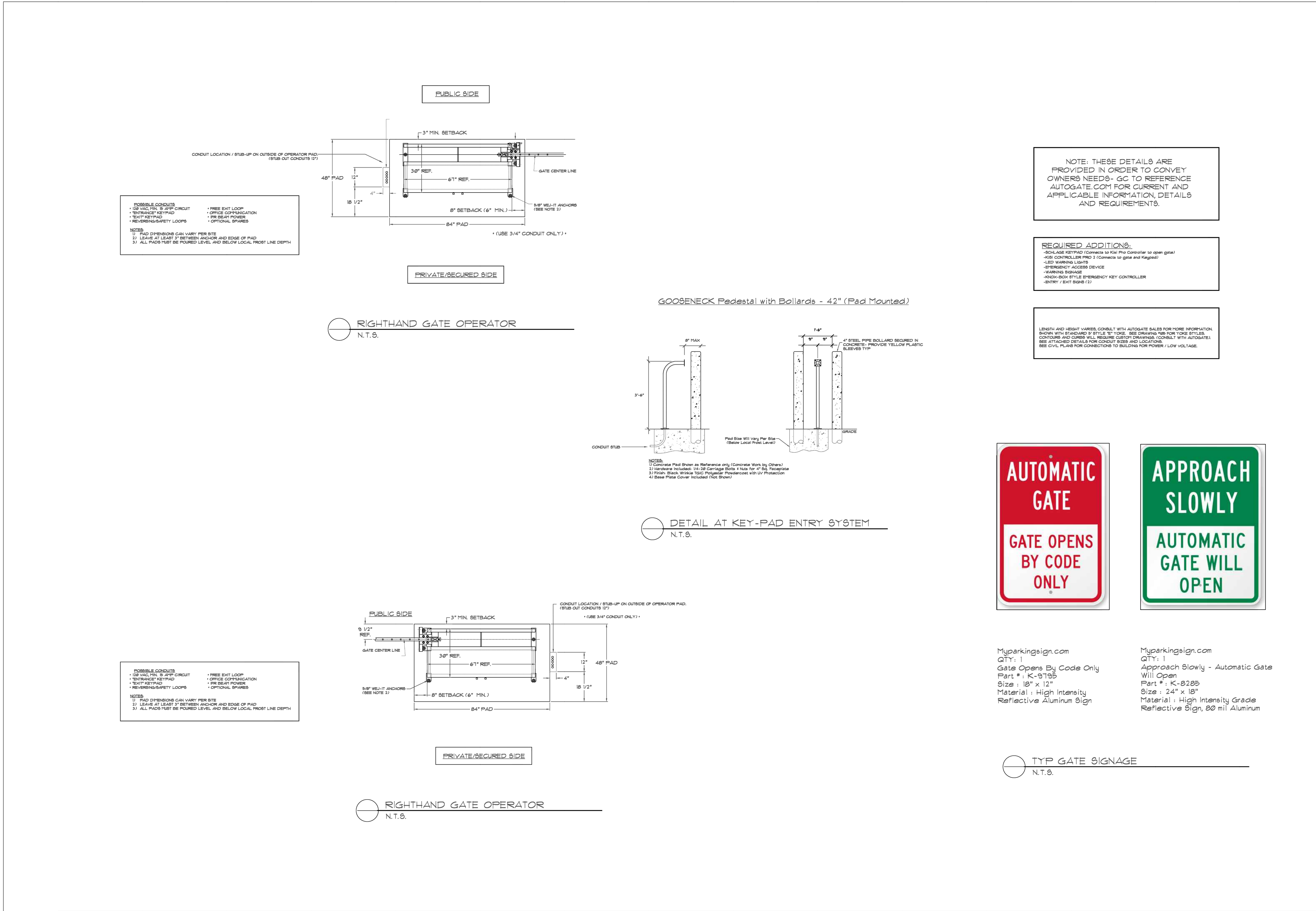
SHEET
C-16
OF
C-17

© COPYRIGHT 2023

CONSTRUCTION DETAILS

FOR REVIEW ONLY

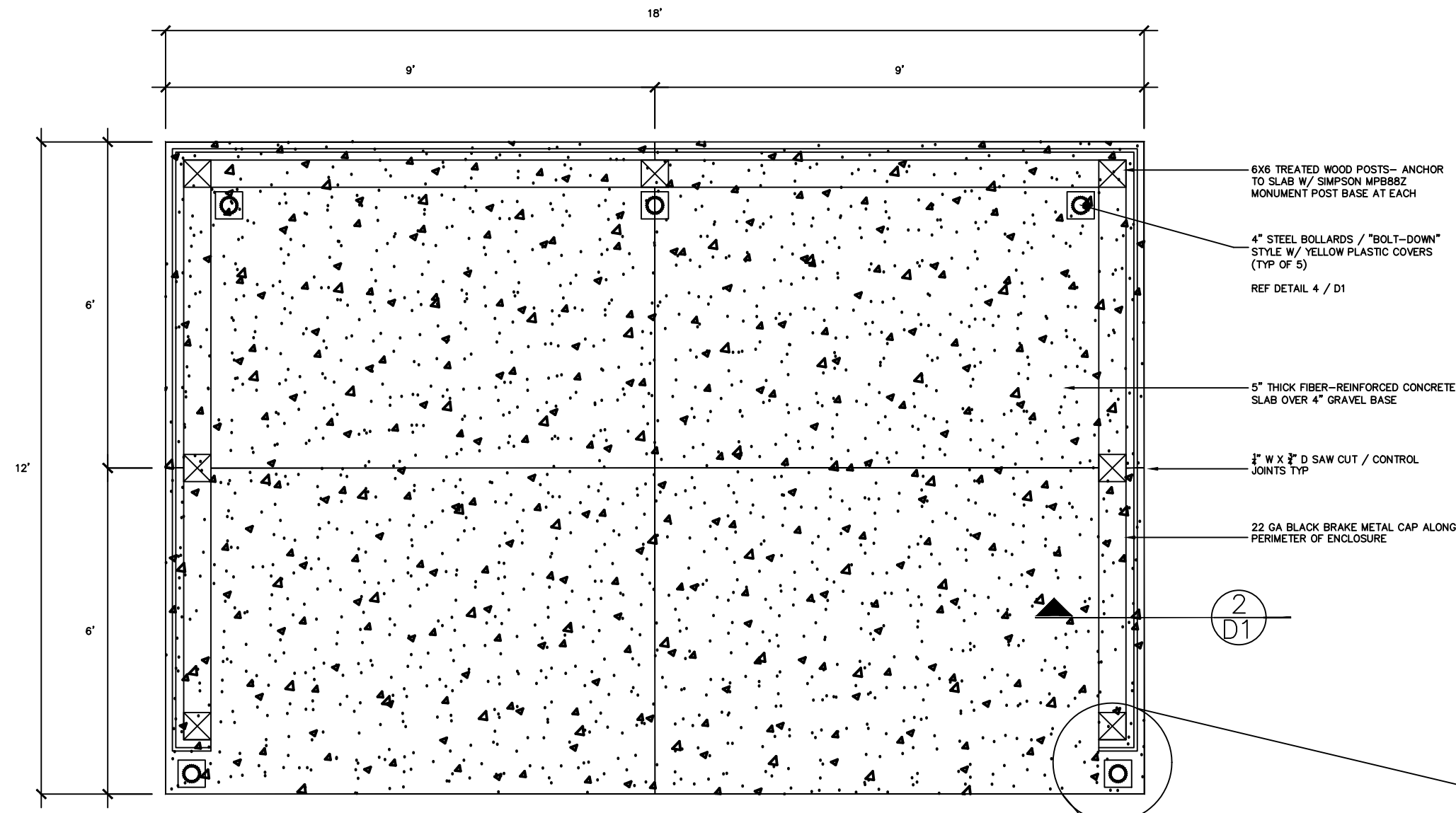
www.pinnacle-engr.com



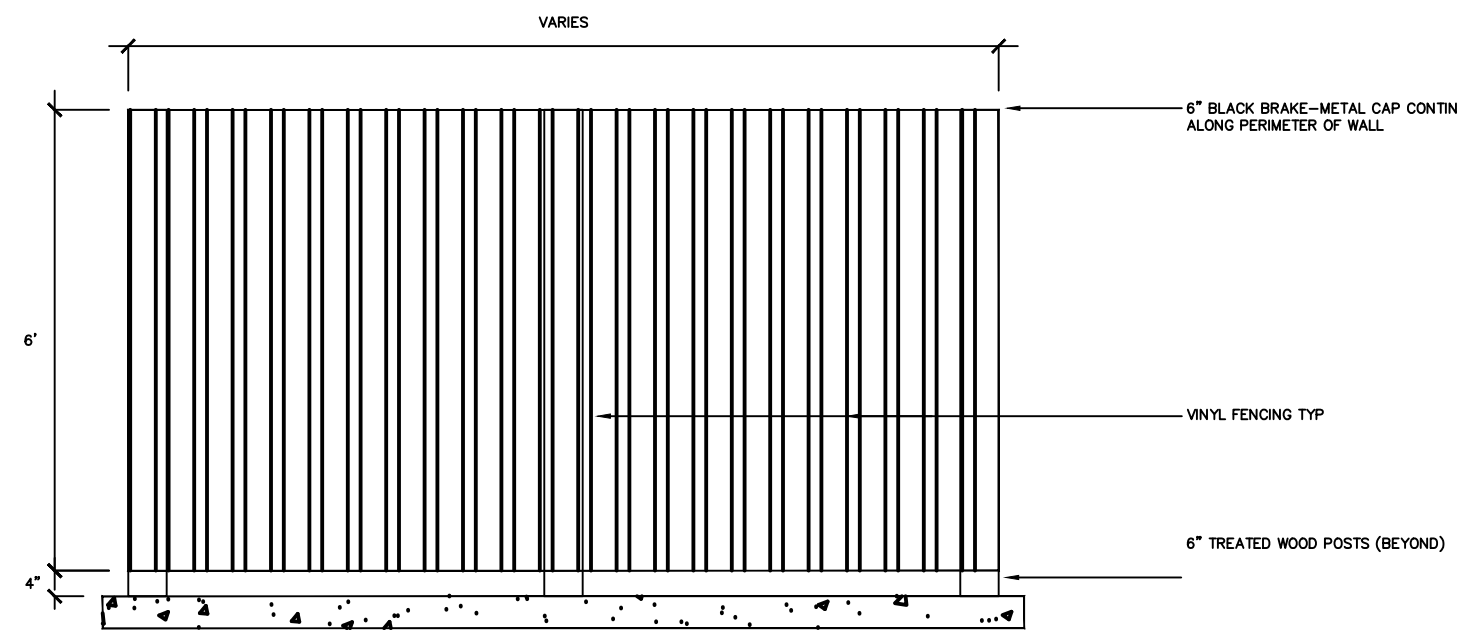
SEAL:
OWNER REVIEW:
RELEASE DATE:
REVISIONS:
PROJECT #:
SHEET SCALE: As Noted
DRAWN BY: JP
APPROVED BY: JB/NW
Forge Architecture, LLC 5325 E 82nd St. - Suite 242 Indianapolis, IN 46250 502.432.9951
Justin Leiberling, PE, SE Leiberling Structural Engineering 812.686.9440 www.lseinc.com
PROJECT INFO:
RISE COMMERCIAL DISTRICT
SHEET # G2
DESIGNATION: AUTOGATE DETAILS

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

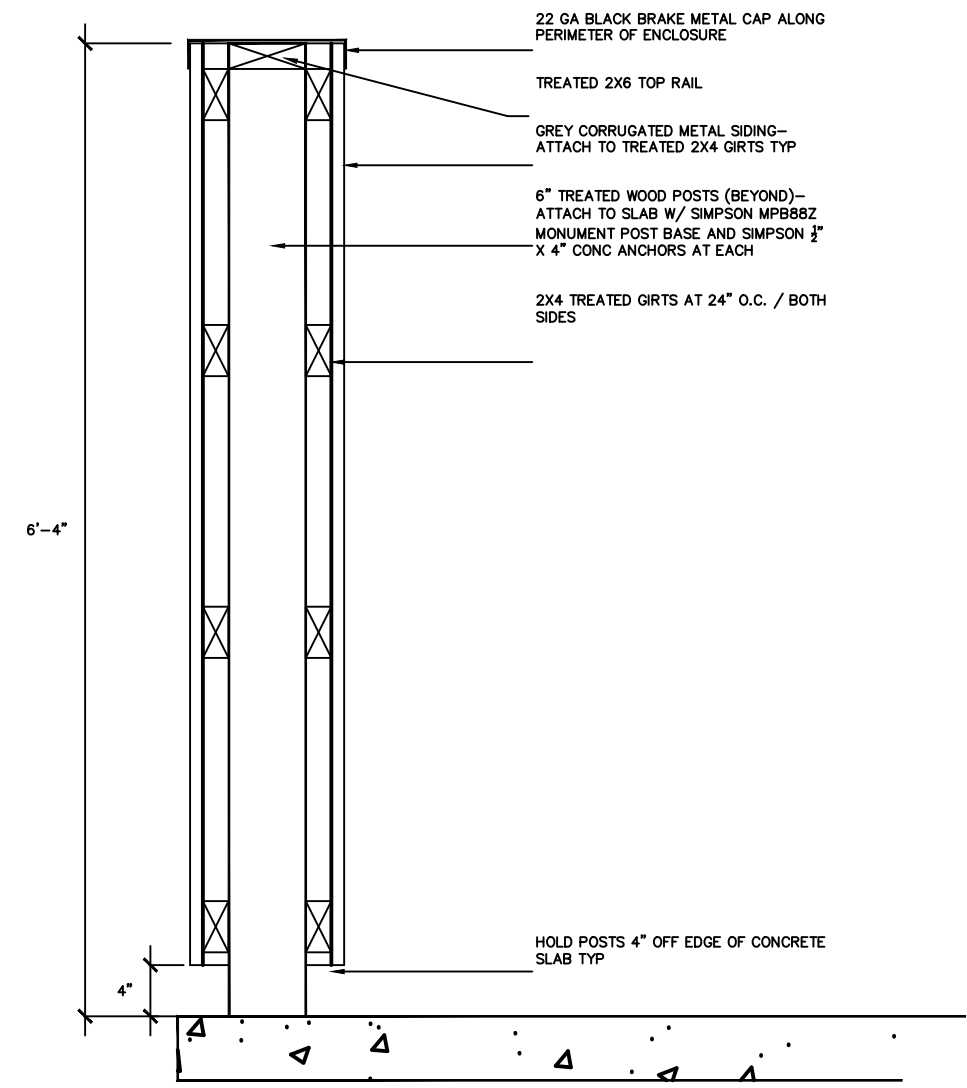
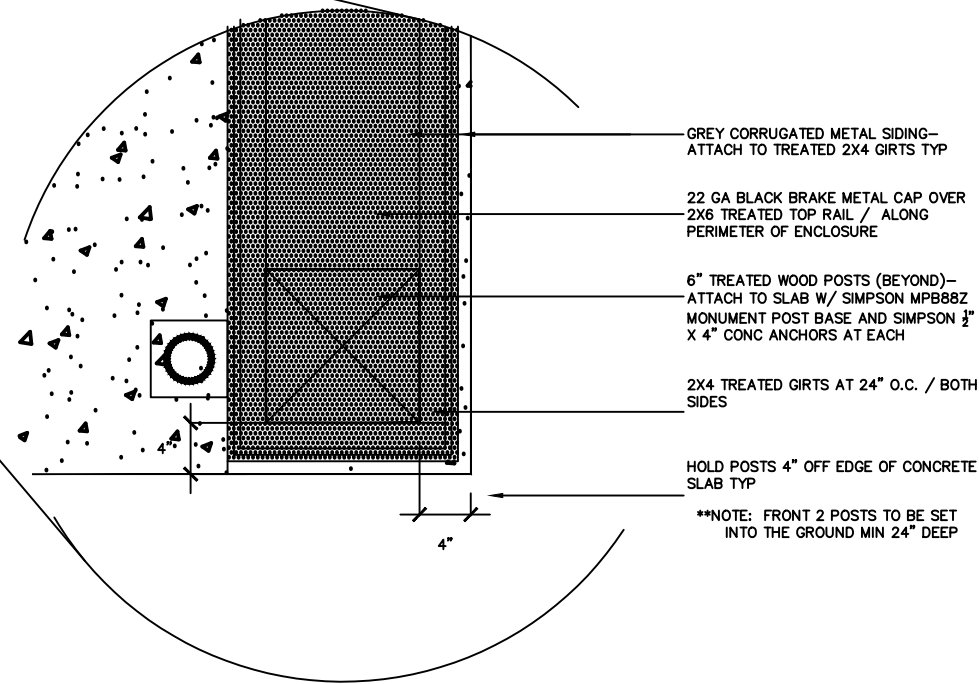
DESIGNED: PEM
DRAFTED: PEM
REVIEWED: MAC



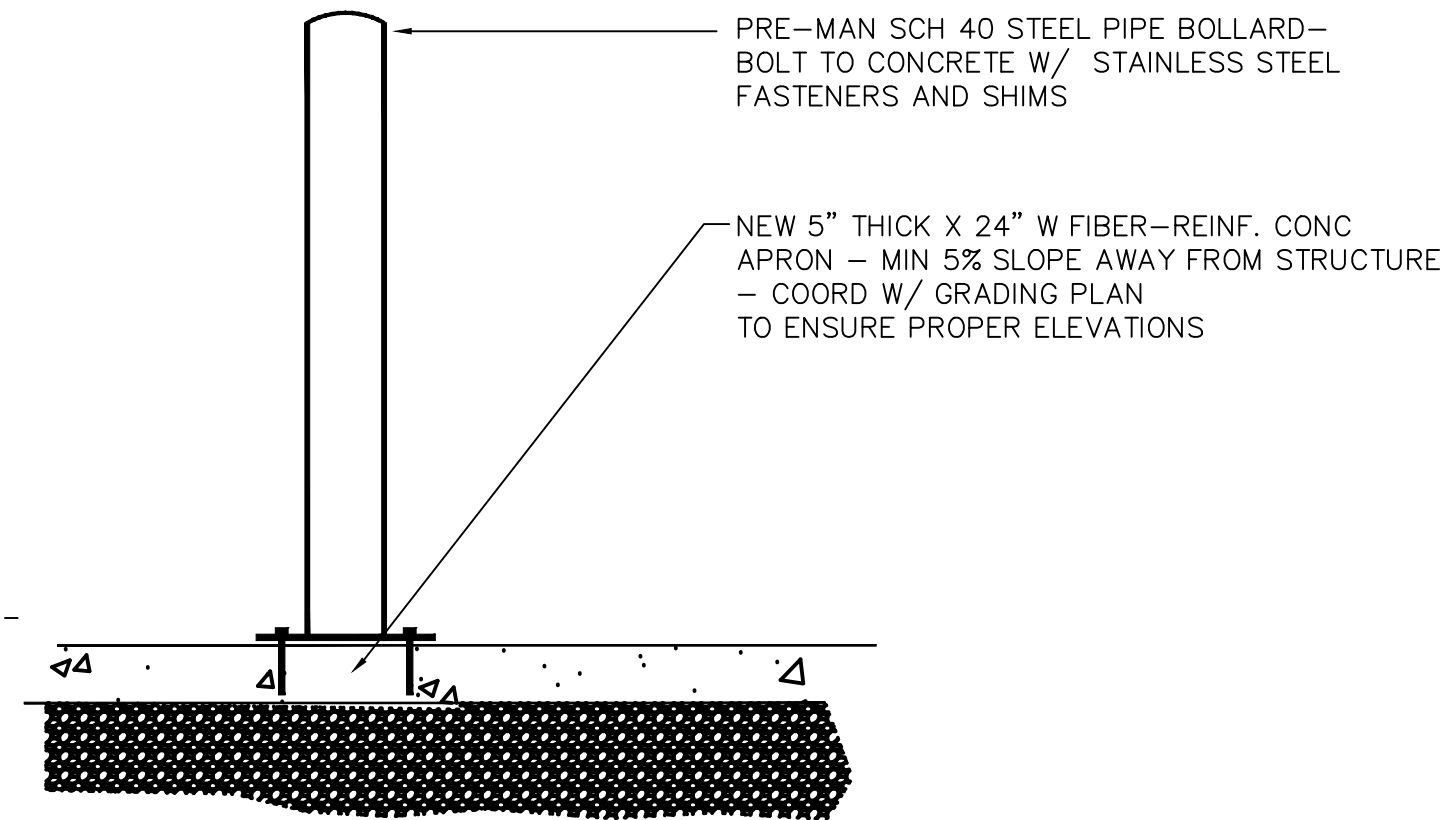
1 PLAN VIEW @ ENCLOSURE
D1 1/2" = 1'-0"



3 TYP WALL ELEVATION
D1 1/2" = 1'-0"



2 SECTION THRU WALL
D1 1" = 1'-0"

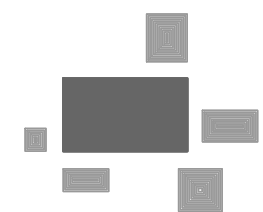


4 DETAIL @ BOLLARD
D1 1" = 1'-0"

RISE COMMERCIAL DISTRICT

D1

DUMPSTER
DETAILS



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-6888
CHICAGO | MILWAUKEE | NATIONWIDE

RISE COMMERCIAL
DISTRICT
GALENA, OH

CONSTRUCTION DETAILS

REVISIONS

==	=====	==	=====	==
==	=====	==	=====	==
==	=====	==	=====	==

REG JOB N-5854-00-01
REG PM: MAC
START DATE 09/30/25
SCALE

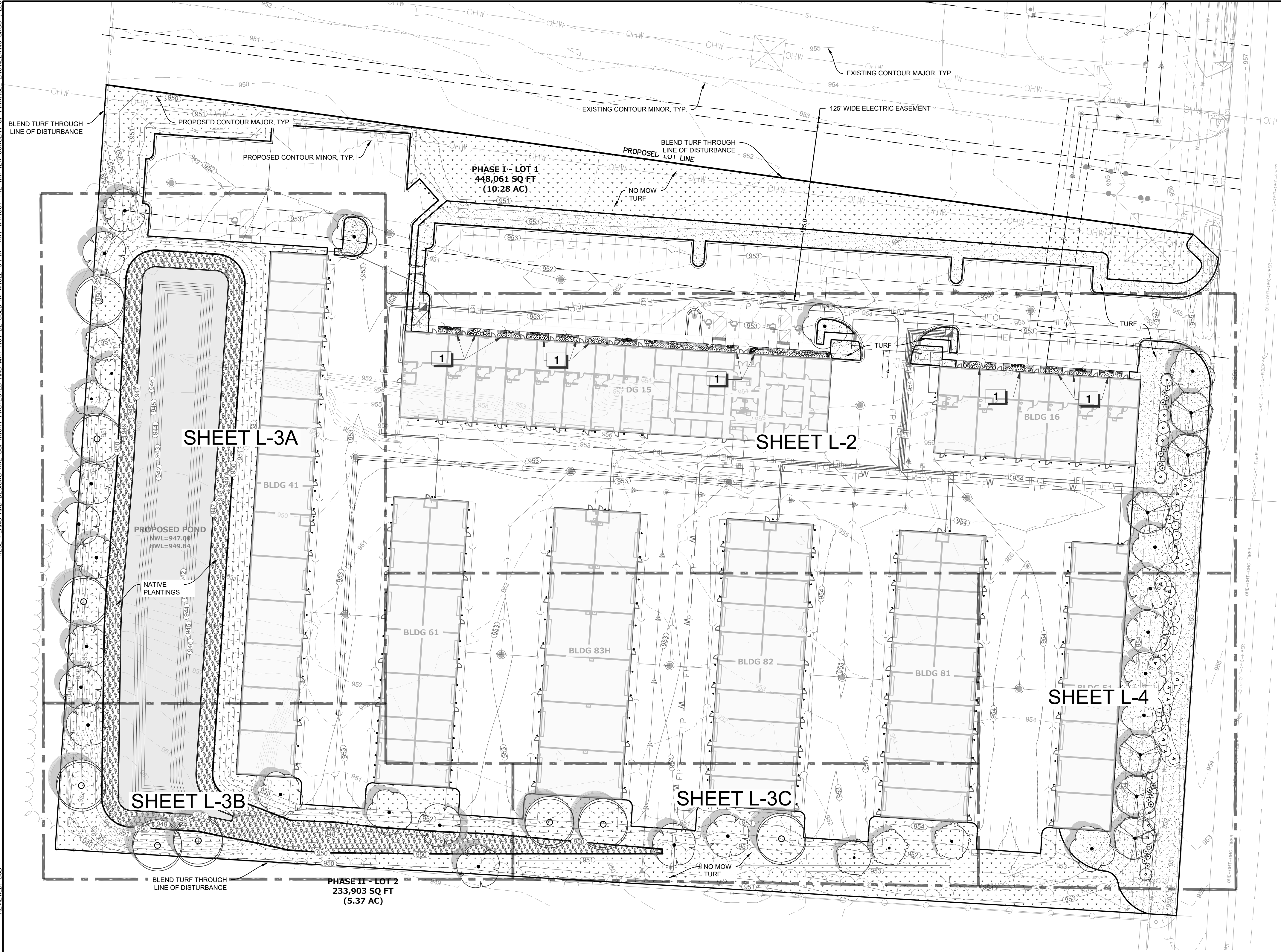
SHEET
C-17
OF
C-17
© COPYRIGHT 2023

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

REVIEWED: D.B

DESIGNED: SAT

DRAFTED: SAT



PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
TREES					
ANO	14	Acer rubrum 'Northwood'	Northwood Maple	2" Cal.	50' T x 35' W
GTIS	8	Gleditsia triacanthos inermis 'Sunburst'	Sunburst Common Honeylocust	2" Cal.	45' T x 35' W
GDE	6	Gymnocladus dioicus 'Espresso'	Espresso Kentucky Coffeetree	2" Cal.	50' T x 35' W
TRL	6	Tilia americana 'Redmond'	Redmond American Linden	2" Cal.	50' T x 35' W
UP2	9	Ulmus x 'Morton Glossy'	Triumph Elm	2" Cal.	55' T x 40' W

SHRUBS					
CA	22	Cornus sanguinea 'Cato'	Arctic Sun® Bloodtwig Dogwood	2' Ht.	3' T x 3' W
CCR	10	Cotinus coggygia 'Royal Purple'	Royal Purple Smokebush	3' Ht.	12' T x 12' W
DLR	8	Diervilla x 'G2X8544'	Kodiak Orange Diervilla	2' Ht.	4' T x 4' W
IV2	26	Itea virginica 'SMNIVDFC'	Scentlandia® Sweetspire	2' Ht.	3' T x 3' W
SVS	18	Syringa vulgaris 'Sensation'	Sensation Lilac	2' Ht.	11' T x 8' W

EVERGREEN SHRUBS					
JL2	20	Juniperus chinensis 'Iowa'	Iowa Juniper	4' Ht.	13' T x 5' W
JF	15	Juniperus chinensis 'Fairview'	Fairview Juniper	4' Ht.	7' W x 12' T
TG	26	Taxus x media 'SMNTHDB'	Stonehenge Dark Druid® Yew	2' Ht.	3' T x 3' W
TFC	12	Thuja occidentalis 'Corgabe'	Fire Chief Arborvitae	2' Ht.	3' T x 3' W

ORNAMENTAL GRASSES					
DP	23	Deschampsia cespitosa 'Pixie Fountain'	Pixie Fountain Tufted Hair Grass	1 gal.	18" T x 18" W
DS2	30	Deschampsia cespitosa 'Schottland'	Schottland Tufted Hair Grass	1 gal.	48" T x 32" W
HA2	34	Hakonechloa macra 'Aureola'	Golden Variegated Forest Grass	1 gal.	18" T x 24" W

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
PERENNIALS						
BY	76	Bergenia cordifolia 'Miss Piggy'	Miss Piggy Heartleaf Bergenia	4.5" Cont.	15" o.c.	15" T x 18" W
BL2	34	Brunnera macrophylla 'Looking Glass'	Siberian Bugloss	1 gal.	22" o.c.	24" T x 24" W
HP5	61	Heuchera micrantha 'Palace Purple'	Palace Purple Coral Bells	4.5" Cont.	15" o.c.	18" T x 18" W

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
--------	-----	----------------	-------------	---------

NATIVE		15,056 sf	Native Plantings	OPN SEED Rainwater Renewal Seed Mix
--------	--	-----------	------------------	-------------------------------------

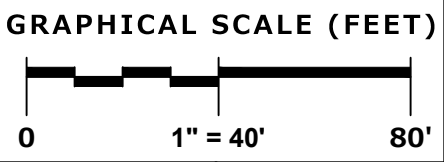
TURF		26,056 sf	Turf Hydroseed	Drought Tolerant Fescue Blend
		72,415 sf	Turf Hydroseed Low Grow	No Mow/Low Grow Mix

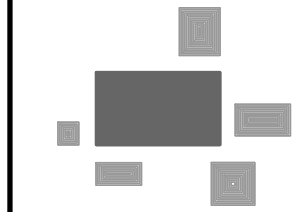
	LANDSCAPE IMPROVEMENT TABLE	REQUIRED	PROVIDED
SEC. 26.03(A)(1)(b)	• PROPERTY PERIMETER: CANOPY TREES @ 1/30' CONTINUOUS HEDGE	14 X	12 * X
SEC. 26.03(B)(1)	• INTERIOR FOR VEHICULAR USE AREAS: LANDSCAPE AREA	1,466 SF	1,611 SF
SEC. 26.03(B)(2)(b)	• INTERIOR FOR VEHICULAR USE AREAS: CANOPY TREES @ 2" CAL.	25	31
SEC. 26.03(D)(2)	• TREE PLANTING REQUIREMENTS 1" TREE SIZE / 1500SF OF BUILDING COVERAGE - 95,989 SF @ 2" CAL.	32	32

* UNABLE TO MEET DUE TO UTILITY & EASEMENT CONFLICTS

REFERENCE NOTES SCHEDULE

SYMBOL	CODE	DESCRIPTION	QTY
	1	STONE MULCH	1,611 sf





PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888

CHICAGO | MILWAUKEE | NATIONWIDE

RISE COMMERCIAL
DISTRICT
GALENA, OH

LANDSCAPE OVERVIEW

REVISIONS			

PEG JOB NO: 5854.00-OH

MAC

START DATE: 09/30/25

SCALE: 1" = 40'

SHEET

L-1

L-6

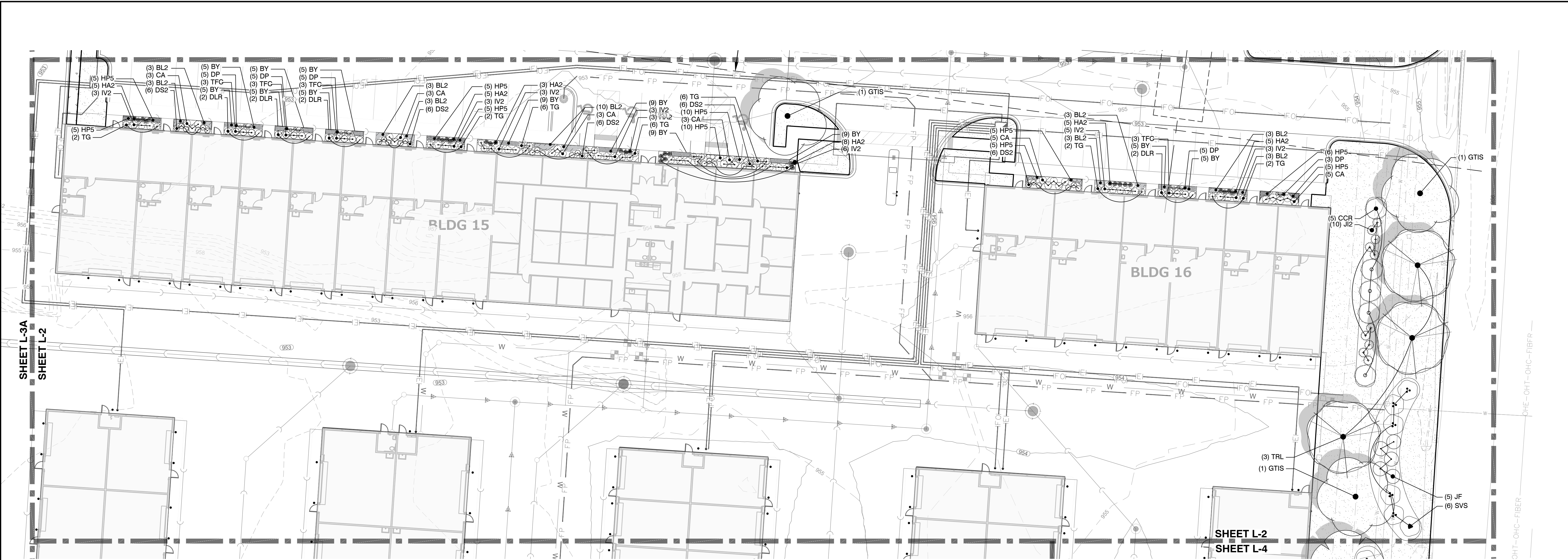
© COPYRIGHT 2023

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

REVIEWED: D.B.

DESIGNED: S.A.T.

DRAFTED: S.A.T.



PLANT KEY

CODE	BOTANICAL NAME	COMMON NAME
TREES		
ANO	Acer rubrum 'Northwood'	Northwood Maple
GTIS	Gleditsia triacanthos inermis 'Sunburst'	Sunburst Common Honeylocust
GDE	Gymnocladus dioicus 'Espresso'	Espresso Kentucky Coffeetree
TRL	Tilia americana 'Redmond'	Redmond American Linden
UP2	Ulmus x 'Morton Glossy'	Triumph Elm

CODE	BOTANICAL NAME	COMMON NAME
SHRUBS		
CA	Cornus sanguinea 'Cato'	Arctic Sun® Bloodtwig Dogwood
CCR	Cotinus coggygria 'Royal Purple'	Royal Purple Smokebush
DLR	Diervilla x 'G2X88544'	Kodiak Orange Diervilla
IV2	Itea virginica 'SMNIVDFC'	Scentlandia® Sweetspire
SVS	Syringa vulgaris 'Sensation'	Sensation Lilac

EVERGREEN SHRUBS		
J12	Juniperus chinensis 'Iowa'	Iowa Juniper
JF	Juniperus chinensis 'Fairview'	Fairview Juniper
TG	Taxus x media 'SMNTHDB'	Stonehenge Dark Druid® Yew
TFC	Thuja occidentalis 'Congabe'	Fire Chief Arborvitae

ORNAMENTAL GRASSES		
DP	Deschampsia cespitosa 'Pixie Fountain'	Pixie Fountain Tufted Hair Grass
DS2	Deschampsia cespitosa 'Schottland'	Schottland Tufted Hair Grass
HA2	Hakonechloa macra 'Aureola'	Golden Variegated Forest Grass

CODE	BOTANICAL NAME	COMMON NAME
PERENNIALS		
BY	Bergenia cordifolia 'Miss Piggy'	Miss Piggy Heartleaf Bergenia
BL2	Brunnera macrophylla 'Looking Glass'	Siberian Bugloss
HP5	Heuchera micrantha 'Palace Purple'	Palace Purple Coral Bells

SYMBOL	BOTANICAL NAME	COMMON NAME
--------	----------------	-------------

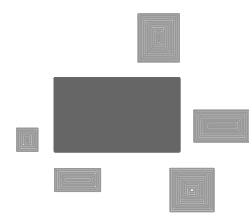
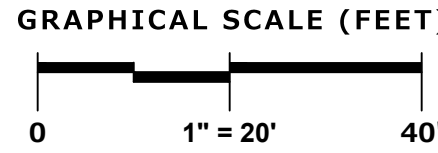
NATIVE		
	Native Plantings	OPN SEED Rainwater Renewal Seed Mix

TURF		
	Turf Hydroseed	Drought Tolerant Fescue Blend

	Turf Hydroseed Low Grow	No Mow/Low Grow Mix
--	-------------------------	---------------------

REFERENCE NOTES KEY

SYMBOL	CODE	DESCRIPTION
	1	STONE MULCH



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-6886
CHICAGO | MILWAUKEE | NATIONWIDE

**RISE COMMERCIAL
DISTRICT
GALENA, OH**

**LANDSCAPE
ENLARGEMENT**

REVISIONS

—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—

REG JOB N-5854.00-OH	MAC	SHEET
REG PM	09/30/25	L-2
START DATE	1 = 20'	L-6
SCALE		

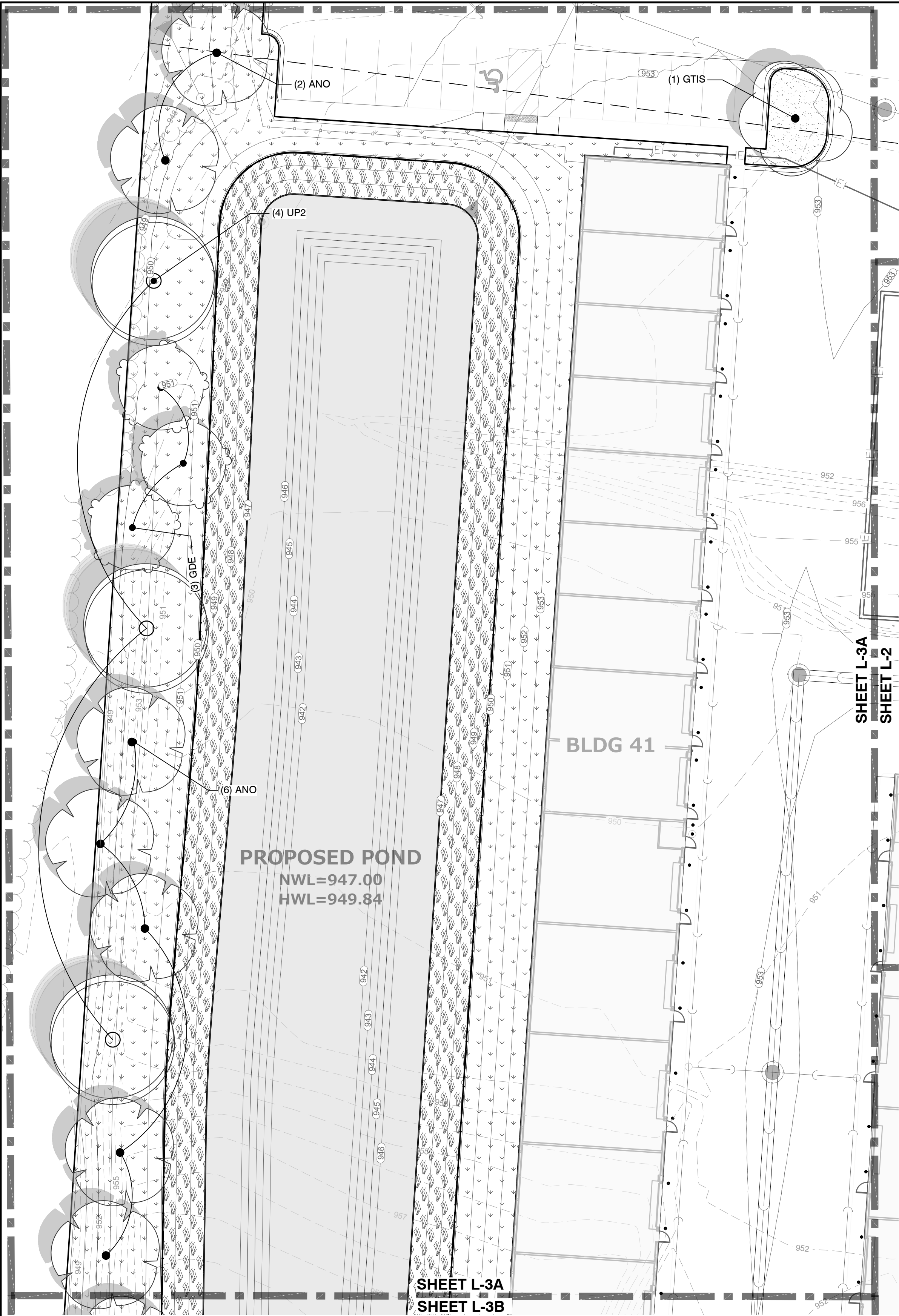
© COPYRIGHT 2023

FOR REVIEW ONLY

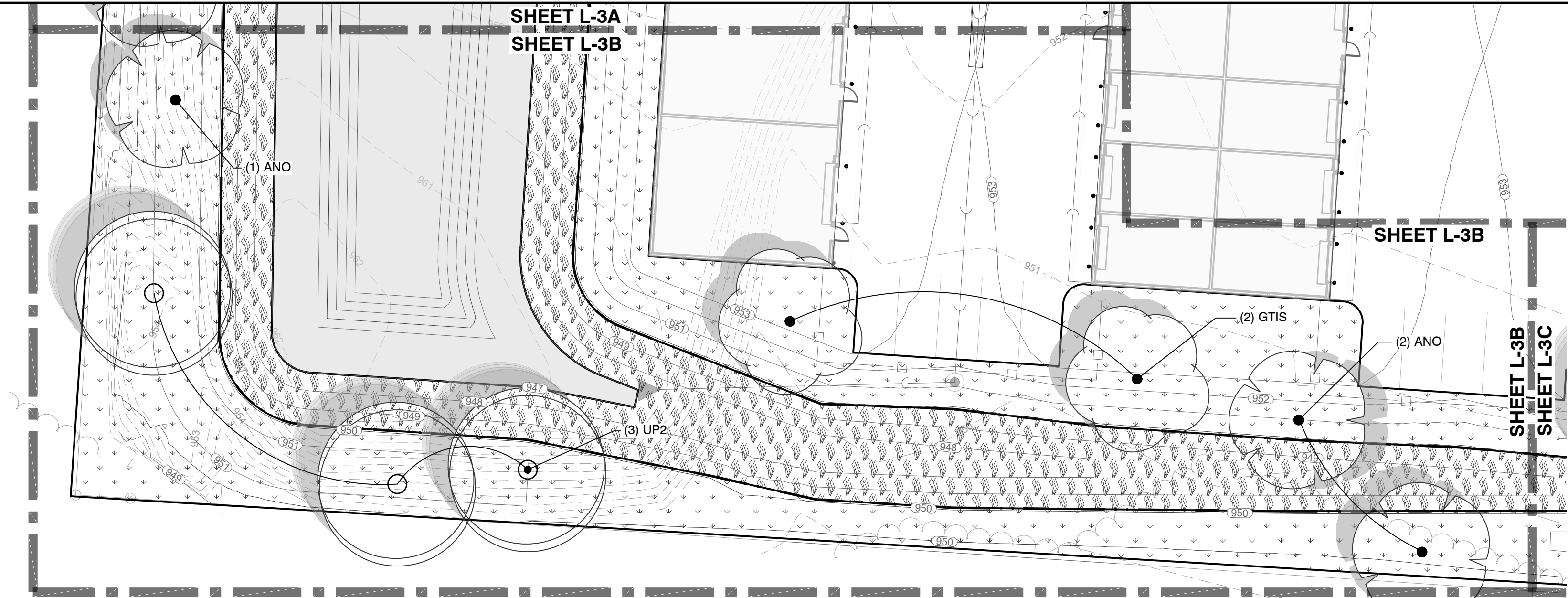
LANDSCAPE ENLARGEMENT

www.pinnacle-engr.com

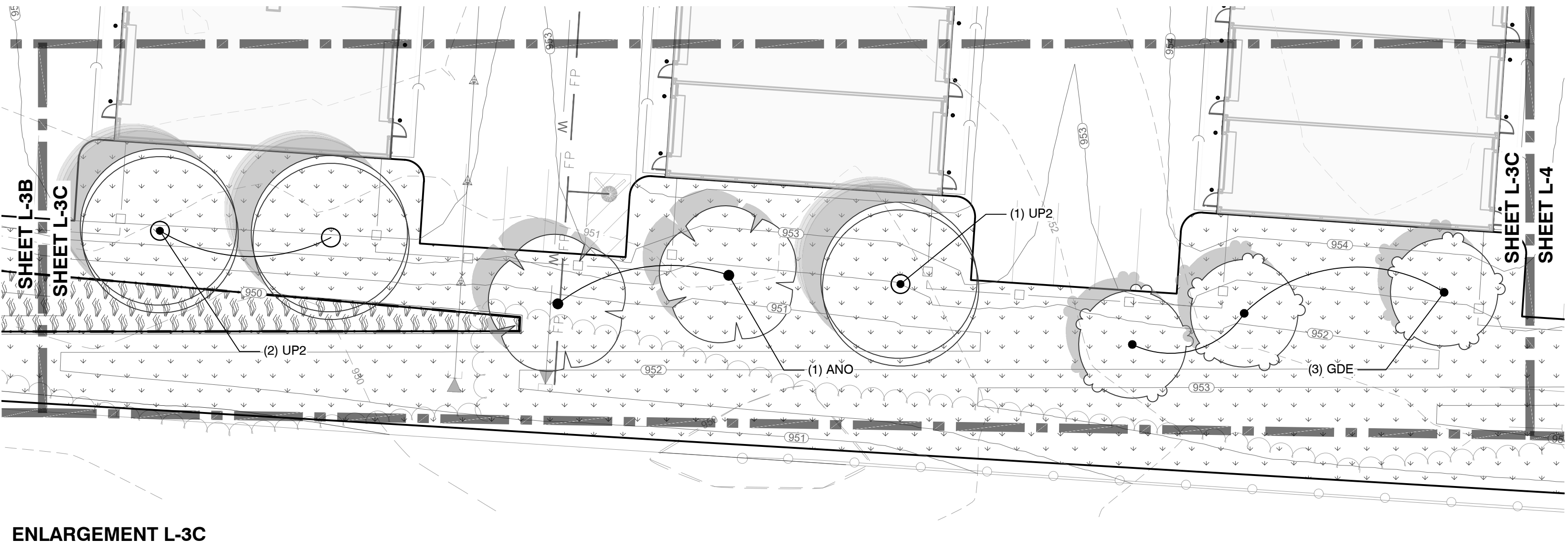
DESIGNED: SAT
DRAWN: SAT
REVIEWED: DB
THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC



ENLARGEMENT L-3A
SCALE: 1"=20'



ENLARGEMENT L-3B
SCALE: 1"=20'



ENLARGEMENT L-3C

SCALE: 1"=20'

PLANT KEY

CODE	BOTANICAL NAME	COMMON NAME
TREES		
ANO	Acer rubrum 'Northwood'	Northwood Maple
GTIS	Gleditsia triacanthos inermis 'Sunburst'	Sunburst Common Honeylocust
GDE	Gymnocladus dioica 'Espresso'	Espresso Kentucky Coffeetree
TRL	Tilia americana 'Redmond'	Redmond American Linden
UP2	Ulmus x Morton Glossy	Triumph Elm

CODE	BOTANICAL NAME	COMMON NAME
SHRUBS		
CA	Cornus sanguinea 'Cato'	Arctic Sun® Bloodtwig Dogwood
CCR	Cotinus coggygia 'Royal Purple'	Royal Purple Smokebush
DLR	Diervilla x 'G2X88544'	Kodiak Orange Diervilla
IV2	Itea virginica 'SMNIVDFC'	Scentlandia® Sweetspire
SVS	Syringa vulgaris 'Sensation'	Sensation Lilac

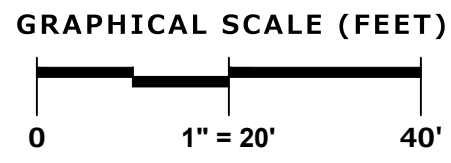
EVERGREEN SHRUBS		
J12	Juniperus chinensis 'Iowa'	Iowa Juniper
JF	Juniperus chinensis 'Fairview'	Fairview Juniper
TG	Taxus x media 'SMNTHDB'	Stonehenge Dark Druid® Yew
TFC	Thuja occidentalis 'Congabe'	Fire Chief Arborvitae

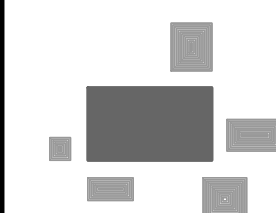
ORNAMENTAL GRASSES		
DP	Deschampsia cespitosa 'Pixie Fountain'	Pixie Fountain Tufted Hair Grass
DS2	Deschampsia cespitosa 'Schottland'	Schottland Tufted Hair Grass
HA2	Hakonechloa macra 'Aureola'	Golden Variegated Forest Grass

CODE	BOTANICAL NAME	COMMON NAME
PERENNIALS		
BY	Bergenia cordifolia 'Miss Piggy'	Miss Piggy Heartleaf Bergenia
BL2	Brunnera macrophylla 'Looking Glass'	Siberian Bugloss
HP5	Heuchera micrantha 'Palace Purple'	Palace Purple Coral Bells

SYMBOL	BOTANICAL NAME	COMMON NAME
NATIVE		
	Native Plantings	OPN SEED Rainwater Renewal Seed Mix
TURF		
	Turf Hydroseed	Drought Tolerant Fescue Blend
	Turf Hydroseed Low Grow	No Mow/Low Grow Mix

REFERENCE NOTES KEY		
SYMBOL	CODE	DESCRIPTION
	1	STONE MULCH





PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888

CHICAGO | MILWAUKEE | NATIONWIDE

RISE COMMERCIAL
DISTRICT
GALENA, OH

LANDSCAPE
ENLARGEMENT

REVISIONS

SHEET
L-3
L-6

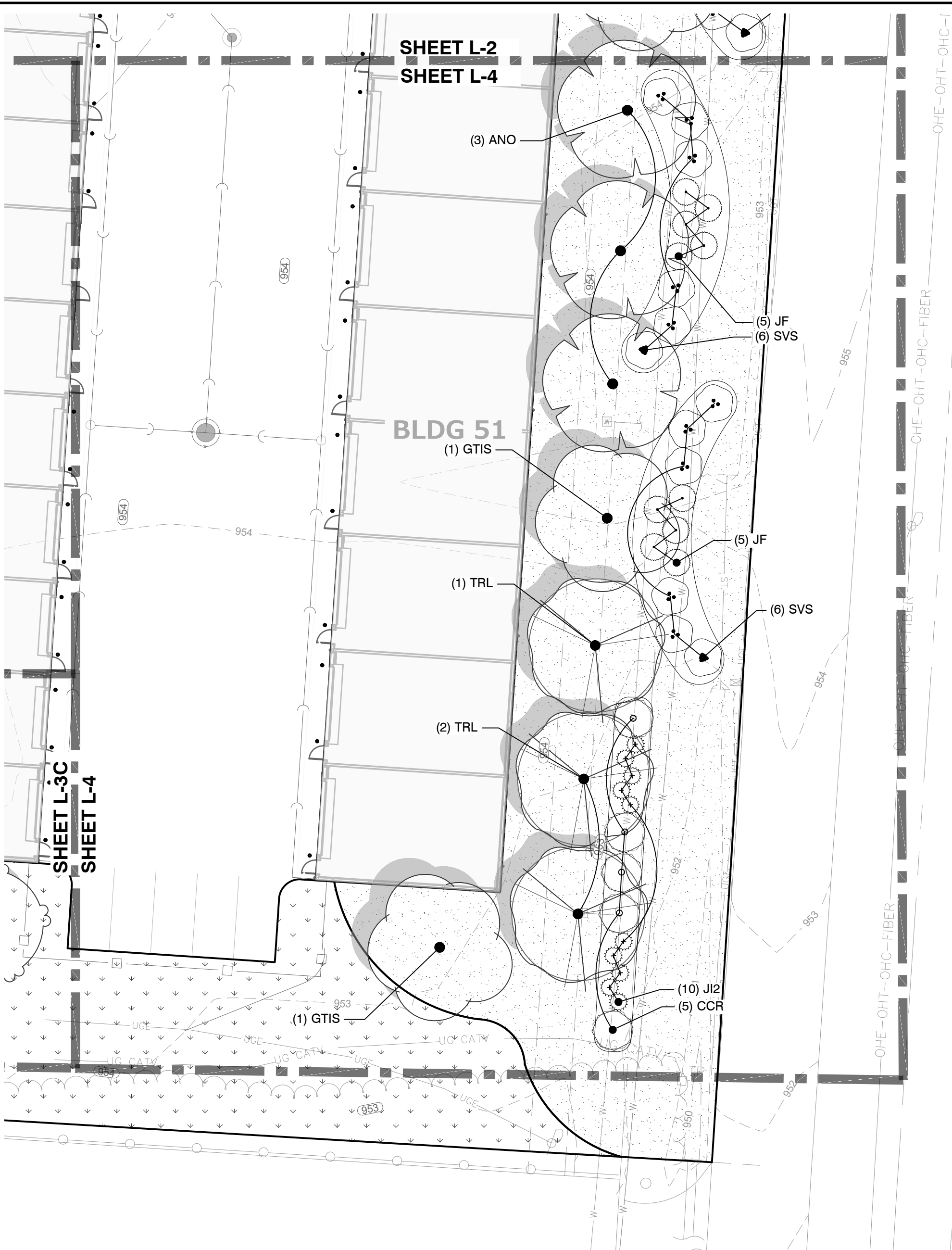
REG JOB N-5854.00-0H
MAC
START DATE 09/30/25
SCALE 1"=20'

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

DESIGNED: SAT

DRAFTED: SAT

REVIEWED: D.B

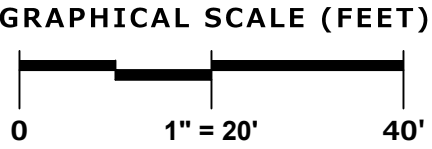


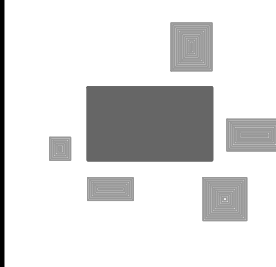
PLANT KEY

CODE	BOTANICAL NAME	COMMON NAME
TREES		
ANO	Acer rubrum 'Northwood'	Northwood Maple
GTIS	Gleditsia triacanthos inermis 'Sunburst'	Sunburst Common Honeylocust
GDE	Gymnocladus dioicus 'Espresso'	Espresso Kentucky Coffeetree
TRL	Tilia americana 'Redmond'	Redmond American Linden
UP2	Ulmus x 'Morton Glossy'	Triumph Elm
SHRUBS		
CA	Cornus sanguinea 'Cato'	Arctic Sun® Bloodtwig Dogwood
CCR	Cotinus coggygria 'Royal Purple'	Royal Purple Smokebush
DLR	Diervilla x 'G2X88544'	Kodiak Orange Diervilla
IV2	Itea virginica 'SMNIVDFC'	Scentlandia® Sweetspire
SVS	Syringa vulgaris 'Sensation'	Sensation Lilac
EVERGREEN SHRUBS		
JI2	Juniperus chinensis 'Iowa'	Iowa Juniper
JF	Juniperus chinensis 'Fairview'	Fairview Juniper
TG	Taxus x media 'SMNTHDB'	Stonehenge Dark Druid® Yew
TFC	Thuja occidentalis 'Congabe'	Fire Chief Arborvitae
ORNAMENTAL GRASSES		
DP	Deschampsia cespitosa 'Pixie Fountain'	Pixie Fountain Tufted Hair Grass
DS2	Deschampsia cespitosa 'Schottland'	Schottland Tufted Hair Grass
HA2	Hakonechloa macra 'Aureola'	Golden Variegated Forest Grass

CODE	BOTANICAL NAME	COMMON NAME
PERENNIALS		
BY	Bergenia cordifolia 'Miss Piggy'	Miss Piggy Heartleaf Bergenia
BL2	Brunnera macrophylla 'Looking Glass'	Siberian Bugloss
HP5	Heuchera micrantha 'Palace Purple'	Palace Purple Coral Bells
SYMBOL		
NATIVE		
	Native Plantings	OPN SEED Rainwater Renewal Seed Mix
TURF		
	Turf Hydroseed	Drought Tolerant Fescue Blend
	Turf Hydroseed Low Grow	No Mow/Low Grow Mix

REFERENCE NOTES KEY		
SYMBOL	CODE	DESCRIPTION
	1	STONE MULCH





PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-6888
CHICAGO | MILWAUKEE | NATIONWIDE

RISE COMMERCIAL
DISTRICT
GALENA, OH

LANDSCAPE
ENLARGEMENT

REVISIONS

—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—

SHEET

L-4

L-6

GENERAL PLANTING NOTES

1. THE LAYOUT OF ALL PLANTING BEDS AND INDIVIDUAL TREES AND SHRUBS SHALL BE STAKED BY THE CONTRACTOR IN ADVANCE OF INSTALLATION. FLAGGING, STAKES, OR PAINT MAY BE USED TO DELINEATE LOCATIONS AS SCALED FROM THE PLANS. AN APPROVED REPRESENTATIVE WILL REVIEW THESE LOCATIONS WITH THE CONTRACTOR AND MAKE MINOR ADJUSTMENTS AS NECESSARY. BED LAYOUT SHALL ALSO INCLUDE PERENNIAL GROUPINGS BY SPECIES.
 2. THE CONTRACTOR IS RESPONSIBLE FOR INDEPENDENTLY DETERMINING THE PLANT MATERIAL QUANTITIES REQUIRED BY THE LANDSCAPE PLANS. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT.
 3. NO PLANT MATERIAL OR PLANT SIZE SUBSTITUTIONS WILL BE ACCEPTED WITHOUT APPROVAL BY THE LANDSCAPE ARCHITECT. ANY CHANGES SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT IN WRITING PRIOR TO INSTALLATION.
 4. ALL BNB STOCK SHALL BE NURSERY GROWN IN A CLAY LOAM SOIL FOR A MINIMUM OF THREE GROWING SEASONS WITHIN 200 MILES OF PROJECT LOCATION, IN A ZONE COMPATIBLE WITH USDA HARDINESS ZONE 6A. SEED SHALL BE PROVIDED FROM A NURSERY (WITHIN 200 MILES) WITH A SIMILAR PLANT HARDINESS ZONE AS PROJECT LOCATION. EXISTING SOIL SHALL BE AMENDED PER SOIL ANALYSIS REPORT TO ENSURE A PROPER GROWING MEDIUM IS ACHIEVED.
 5. ALL PLANT MATERIAL SHALL COMPLY WITH STANDARDS DESCRIBED IN AMERICAN STANDARD OF NURSERY STOCK - 260.1 ANSI. LANDSCAPE ARCHITECT OR OWNERS AUTHORIZED REPRESENTATIVE RESERVES THE RIGHT TO INSPECT AND POTENTIALLY REJECT ANY PLANT MATERIAL DEEMED TO NOT MEET THE REQUIRED STANDARDS.
 6. ALL STOCK SHALL BE FREE OF DISEASES AND HARMFUL INSECTS, DAMAGE, DISORDERS AND DEFORMITIES.
 7. TREES SHALL HAVE SINGLE, STRAIGHT TRUNKS AND WELL BALANCED BRANCH SYSTEMS. MUTLI-STEM TREES SHALL HAVE 3-4 STRAIGHT TRUNKS AND WELL BALANCED BRANCH SYSTEMS. HEIGHT-TO-CALIPER RATIOS SHALL BE CONSISTENT WITH THE LATEST EDITION OF ANSI Z60.1.
 8. ROOT SYSTEMS SHALL BE LARGE ENOUGH TO ALLOW FOR FULL RECOVERY OF THE TREE, AND SHALL CONFORM TO STANDARDS AS THEY APPEAR IN THE MOST CURRENT REVISION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S AMERICAN STANDARD OF NURSERY STOCK ANSI Z60.1.
 9. BNB TREES SHALL BE DUG WITH A BALL OF SOIL, NOT SOFT BALLED OR POTTED AND SHALL BE FIRM IN THEIR ROOTBALL. ROOT BALL SHALL BE WRAPPED (WITH BIODEGRADABLE MATERIAL). THE TREE ROOT FLARE, OR COLLAR, SHALL BE AT OR WITHIN THE TOP THREE INCHES OF GRADE.
 10. ALL SPRING TREES MUST BE FRESHLY DUG IN THE MOST RECENT SPRING.
 11. ALL AUTUMN TREES MUST BE FRESHLY DUG IN THE MOST RECENT AUTUMN.
 12. TREES SHALL BE ALIVE, HEALTHY AND APPROPRIATELY MOIST. AT TIME OF DELIVERY. TREES SHALL BE SUBJECT TO INSPECTION FOR CONFORMITY TO SPECIFICATION REQUIREMENTS AND APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE. THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY TREES THAT DO NOT MEET THE SPECIFICATIONS OR THAT HAVE BEEN DAMAGED DURING SHIPMENT. THE LANDSCAPE INSTALLER MUST RECEIVE APPROVAL FROM LANDSCAPE ARCHITECT FOR ANY SUBSTITUTIONS OR ALTERATIONS.
 13. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH PLANTING DETAILS.
 14. ALL PLANTING BEDS SHALL HAVE A MINIMUM 10" DEPTH OF PREPARED SOIL. WITH APPROVAL, EXISTING SOIL MAY BE UTILIZED PROVIDED THE PROPER SOIL AMENDMENTS ARE TILLED THOROUGHLY INTO THE TOP 10" OF SOIL. REFER TO SOIL PLACEMENT NOTES.
 15. WHILE PLANTING TREES AND SHRUBS, BACKFILL $\frac{2}{3}$ OF PLANTING HOLE AND WATER TREE THOROUGHLY BEFORE INSTALLING THE REMAINDER OF SOIL MIXTURE. AFTER ALL SOIL HAS BEEN PLACED INTO THE PLANTING HOLE WATER THOROUGHLY AGAIN.
 16. THE CONTRACTOR MUST LABEL ALL TREES WITH THE COMMON AND BOTANICAL NAMES PRIOR TO FINAL INSPECTION.
 17. AREAS THAT CALL FOR STONE MULCH SHALL RECEIVE LANDSCAPE FABRIC WITH 2" DEEP STONE MULCH. CONTRACTOR TO PROVIDE LANDSCAPE FABRIC AND MULCH SPECIFICATIONS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. LANDSCAPE FABRIC SHALL BE INSTALLED TO COVER THE ENTIRE AREA TO RECEIVE STONE MULCH WITH EACH SEAM OVERLAPPING A MINIMUM OF 6" & STAPLED EVERY 12".
 18. ALL PLANTING BEDS SHALL BE MULCHED WITH 3" DEEP SHREDDED HARDWOOD MULCH, AND ALL TREES PLANTED IN TURF AREAS SHALL RECEIVE A 3" DEEP SHREDDED HARDWOOD MULCHED RING AS SHOWN IN PLANTING DETAILS.
 19. ALL PLANTING BEDS AND TREE RINGS SHALL HAVE A 4" DEEP TRENCHED BED EDGE CREATED BY EITHER A FLAT LANDSCAPE SPADE OR MECHANICAL EDGER. BED EDGES ARE TO BE CUT CLEAN AND SMOOTH AS SHOWN ON LANDSCAPE PLANS WITH A CLEAN DEFINITION BETWEEN TURF AND PLANTING AREAS.
 20. ALL TURF SEED AREAS SHALL RECEIVE A MINIMUM OF 6" DEPTH OF TOPSOIL. WITH APPROVAL, EXISTING SOIL MAY BE UTILIZED PROVIDED THE PROPER SOIL AMENDMENTS ARE TILLED THOROUGHLY INTO THE TOP 6" OF SOIL AS INDICATED IN THE SOIL PLACEMENT NOTES. REQUIRED AMENDMENTS SHALL BE DETERMINED BASED ON A SOIL ANALYSIS TO BE PERFORMED. ALL TOPSOIL AMENDMENT SHALL BE AGED WEED FREE MANURE OR CLASS 1 ORGANIC MATTER.
 21. FOR LAWN SEEDING, APPLY A STARTER FERTILIZER AND SEED UNIFORMLY AT THE RATE RECOMMENDED BY MANUFACTURER, AND PROVIDE A MULCH COVERING THAT IS SUITABLE TO PROMOTE SEED GERMINATION AND TURF ESTABLISHMENT. CONTRACTOR TO PROVIDE FERTILIZER, SEED, AND MULCH SPECIFICATIONS TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. EROSION CONTROL MEASURES ARE TO BE INSTALLED IN THOSE AREAS REQUIRING STABILIZATION (SWALES, SLOPES EXCEEDING 1:3, AND THOSE LOCATIONS INDICATED IN CIVIL DRAWINGS).
 22. THE CONTRACTOR TO ENSURE A SMOOTH, UNIFORM QUALITY TURF IS ACHIEVED WITH NO BARE SPOTS LARGER THAN 6" X 6". ANY BARE SPOTS LARGER THAN 6" X6" AT THE END OF ESTABLISHMENT PERIOD SHALL BE RESEEDD AT THE CONTRACTORS EXPENSE TO OBTAIN A DENSE, UNIFORM LAWN.
 23. ALL FINISH GRADING AND LAWN AREAS TO BE INSTALLED BY LANDSCAPE CONTRACTOR.
 24. ALL DISTURBED AREAS WITHIN THE PROJECT SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
 25. ALL DISTURBED AREAS OUTSIDE THE LIMITS OF WORK SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE OWNER.
 26. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, INCLUDING ANY IRRIGATION LINES, PRIOR TO DIGGING, CONSULT OHIO 811.
 27. TREES SHALL BE INSTALLED NO CLOSER THAN:
 - 10 FEET FROM ANY FIRE HYDRANT
 - 7 FEET FROM STORM SEWER, SANITARY SEWER LATERALS, AND WATER SERVICE
 28. THE CONTRACTOR SHALL ENSURE THAT SOIL CONDITIONS AND COMPACTION ARE ADEQUATE TO ALLOW FOR PROPER DRAINAGE AROUND THE CONSTRUCTION SITE. UNDESIRABLE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE PROPER SURFACE AND SUBSURFACE DRAINAGE IN ALL AREAS
 29. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, FEES, AND LICENSES NECESSARY FOR THE INSTALLATION OF THIS PLAN.
 30. THE CONTRACTOR IS TO REVIEW ALL SITE ENGINEERING DOCUMENTS PRIOR TO INSTALLATION. ANY CONFLICTS MUST BE REPORTED TO THE LANDSCAPE ARCHITECT. THESE LANDSCAPE DRAWINGS ARE FOR THE INSTALLATION OF PLANT MATERIALS ONLY UNLESS OTHERWISE STATED.
 31. THE CONTRACTOR SHALL PROVIDE WATERING AND MAINTENANCE SERVICES FOR A PERIOD OF 60 DAYS TO ENSURE VEGETATIVE ESTABLISHMENT. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL SUPPLY THE OWNER IN WRITING WITH ONGOING WATERING AND MAINTENANCE INSTRUCTIONS.
 32. PLANT MATERIALS SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM TIME OF OWNER ACCEPTANCE. ONLY ONE REPLACEMENT PER PLANT WILL BE REQUIRED DURING THE WARRANTY PERIOD EXCEPT IN THE EVENT OF FAILURE TO COMPLY WITH THE SPECIFIED REQUIREMENTS.
 33. THE CONTRACTOR IS RESPONSIBLE TO CONDUCT A FINAL WALK THROUGH WITH THE LANDSCAPE ARCHITECT AND OR OWNERS REPRESENTATIVE TO ANSWER QUESTIONS, PROVIDE INSTRUCTIONS, AND ENSURE THAT PROJECT REQUIREMENTS HAVE BEEN MET.

SOIL PLACEMENT NOTES

 1. LOOSEN SUBGRADE TO A MINIMUM DEPTH INDICATED IN PLANTING NOTES USING A CULTI-MULCHER OR SIMILAR EQUIPMENT, AND REMOVE STONES MEASURING OVER 1-1/2 INCHES IN ANY DIMENSION, STICKS, RUBBISH AND OTHER EXTRANEIOUS MATTER. AREAS ADJACENT TO WALKS AND PAVEMENT SHALL BE FREE OF EXCESS STONE AND PAVING MATERIALS SO AS TO PROVIDE AN UNINTERRUPTED CROSS SECTION OF SOIL. INTERNAL PARKING ISLANDS SHALL BE LOOSENED TO A DEPTH OF 30".
 2. THOROUGHLY BLEND PLANTING SOIL MIX FOR PLANTING BED AREAS. (1 PART EXISTING SOIL, 1 PART TOPSOIL, 1 PART ORGANIC SOIL AMENDMENT, 2.9 POUNDS PER CUBIC YARD OF 4-4-4 ANALYSIS SLOW-RELEASE FERTILIZER)
 3. TREE AND SHRUB HOLES SHALL BE FILLED WITH A PREPARED PLANTING MIXTURE OF 1 PART TOPSOIL, 2 PARTS PLANTING SOIL MIX.
 4. SPREAD SOIL AND SOIL AMENDMENTS TO DEPTH INDICATED ON DRAWINGS, BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT. (FINISH GRADE OF PLANTING BEDS SHALL BE 3" BELOW ALL ADJACENT SURFACES. FINISH GRADE OF TURF SEEDING AREAS SHALL BE 1" BELOW ALL ADJACENT HARD SURFACES, WALKS, AND CURBS.)
 5. PLACE APPROXIMATELY 1/2 OF TOTAL AMOUNT OF SOIL REQUIRED. WORK INTO TOP OF LOOSENED SUBGRADE TO CREATE A TRANSITION LAYER, THEN PLACE REMAINDER OF THE SOIL. SOIL TRANSITION LAYER SHALL BE TILLED TO A MINIMUM DEPTH OF 6" BELOW THE DEPTH OF NEWLY PLACED SOIL. PARKING LOT ISLANDS SHALL BE CROWNED TO A HEIGHT OF 6" TO PROVIDE PROPER DRAINAGE UNLESS OTHERWISE NOTED.
 6. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
 7. FINISH GRADING: GRADE SOIL TO A SMOOTH, UNIFORM SURFACE PLANE WITH A LOOSE, UNIFORMLY FINE TEXTURE.
 8. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES.
 9. RESTORE PLANTING BEDS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING AND BEFORE PLANTING.

SOIL PLACEMENT NOTES

1. LOOSEN SUBGRADE TO A MINIMUM DEPTH INDICATED IN PLANTING NOTES USING A CULTI-MULCHER OR SIMILAR EQUIPMENT. AND REMOVE STONES MEASURING OVER 1-1/2 INCHES IN ANY DIMENSION, STICKS, RUBBISH AND OTHER EXTRANEIOUS MATTER. AREAS ADJACENT TO WALKS AND PAVEMENT SHALL BE FREE OF EXCESS STONE AND PAVING MATERIALS SO AS TO PROVIDE AN UNINTERRUPTED CROSS SECTION OF SOIL. INTERNAL PARKING ISLANDS SHALL BE LOOSENED TO A DEPTH OF 30".
2. THOROUGHLY BLEND PLANTING SOIL MIX FOR PLANTING BED AREAS. (1 PART EXISTING SOIL, 1 PART TOPSOIL, 1 PART ORGANIC SOIL AMENDMENT, 2.9 POUNDS PER CUBIC YARD OF 4-4-4 ANALYSIS SLOW-RELEASE FERTILIZER)
3. TREE AND SHRUB HOLES SHALL BE FILLED WITH A PREPARED PLANTING MIXTURE OF 1 PART TOPSOIL, 2 PARTS PLANTING SOIL MIX.
4. SPREAD SOIL AND SOIL AMENDMENTS TO DEPTH INDICATED ON DRAWINGS, BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT. (FINISH GRADE OF PLANTING BEDS SHALL BE 3" BELOW ALL ADJACENT SURFACES. FINISH GRADE OF TURF SEEDING AREAS SHALL BE 1" BELOW ALL ADJACENT HARD SURFACES, WALKS, AND CURBS.)
5. PLACE APPROXIMATELY 1/2 OF TOTAL AMOUNT OF SOIL REQUIRED. WORK INTO TOP OF LOOSENED SUBGRADE TO CREATE A TRANSITION LAYER, THEN PLACE REMAINDER OF THE SOIL. SOIL TRANSITION LAYER SHALL BE TILLED TO A MINIMUM DEPTH OF 6" BELOW THE DEPTH OF NEWLY PLACED SOIL. PARKING LOT ISLANDS SHALL BE CROWNED TO A HEIGHT OF 6" TO PROVIDE PROPER DRAINAGE UNLESS OTHERWISE NOTED.
6. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
7. FINISH GRADING: GRADE SOIL TO A SMOOTH, UNIFORM SURFACE PLANE WITH A LOOSE, UNIFORMLY FINE TEXTURE.
8. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES.
9. RESTORE PLANTING BEDS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING AND BEFORE PLANTING.

NATIVE SEEDING

ESTABLISHMENT OF A VIABLE VEGETATION COMMUNITY WITHIN THE BIO INFILTRATION BASINS WILL BE COMPLETED BY HAND-BROADCASTING OF PRE-DESIGNED SEED MIXES TO CREATE A DYNAMIC PLANTING.

PRIOR TO SEEDING:

- A. ALL WEEDS AND EXISTING VEGETATION SHALL BE REMOVED. EXISTING VEGETATION SHALL BE TREATED WITH GLYPHOSATE OR SIMILAR HERBICIDE BY A LICENSED PROFESSIONAL. TREATMENT SHALL OCCUR A MINIMUM OF 10 DAYS PRIOR TO SEEDING. VEGETATION STILL ALIVE AFTER INITIAL HERBICIDE TREATMENT SHALL BE TREATED A SECOND TIME PRIOR TO TILLING INTO THE SOIL. TREATED VEGETATION SHALL BE TILLED INTO THE SOIL NO EARLIER THAN 1 DAY PRIOR TO SEEDING.
- B. PREPARATION OF SOIL PRIOR TO SEEDING
1. REFER TO CIVIL PLANS FOR SOIL MIXTURE.
 2. ALL FOREIGN MATERIALS LARGER THAN 1-INCH SHALL BE REMOVED FROM THE SOIL PRIOR TO SEEDING.
 3. AREA SHOULD BE FREE FROM UNSIGHTLY VARIATIONS, RIDGES, AND DEPRESSIONS.
 4. AVOID DRIVING OVER THE SPECIFIED AREA WITH MACHINERY.

SPECIFICATIONS FOR HAND BROADCASTING:

SEEDING SHALL BE CONDUCTED IN LATE FALL (SEPTEMBER 1- SOIL FREEZE) SO THAT SEEDS MAY LIE DORMANT DURING THE WINTER, ALLOWING FOR STRATIFICATION, OR SPRING (MARCH 1-JUNE 1) TO ALLOW A COMPLETE GROWING SEASON TO BECOME ESTABLISHED.

- A. COVER CROP:
1. ANNUAL RYE SHALL BE SPREAD AT A DENSITY OF 20 POUNDS PER ACRE DURING THE PLANTING OR SEEDING OF THE NATIVE PLANT SPECIES TO STABILIZE THE SOIL AND REDUCE THE GROWTH OF UNWANTED VEGETATION. THIS ANNUAL GRASS GROWS RAPIDLY WITHOUT COMPETING WITH THE WILDFLOWERS AND GRASSES THAT ARE PLANTED IN THE TARGET AREAS.
 2. WINTER WHEAT OR PERENNIAL RYE SHALL NOT BE USED AS A COVER CROP. THESE GRASSES MAY OUT COMPETE PRAIRIE SEEDLINGS, LEADING TO A REDUCTION IN THE SUCCESS OF THE PLANTINGS.
- B. SEED MIX:
1. MIX ALL NATIVE SEED WITH VERMICULITE ACCORDING TO SUPPLIERS RECOMMENDATIONS AND INSTALLATION GUIDELINES.
 2. BROADCAST HALF THE SEED OVER THE ENTIRE SITE OR TARGET AREA.
 3. BROADCAST THE OTHER HALF OF SEED PERPENDICULAR TO THE DIRECTION THAT THE FIRST HALF OF THE SEED WAS BROADCAST.
 4. COVER SEED WITH $\frac{1}{4}$ -INCH TO $\frac{1}{2}$ -INCH OF SOIL (USE ANY EXCESS SOIL FROM THE SITE) WITH RAKE OR DRAG.
 5. ROLL SITE TO ENSURE FIRM SEED-TO-GROUND CONTACT.
 6. KEEP SEED CONSTANTLY WET THROUGH GERMINATION PERIOD. GENERALLY 3 WEEKS.

ALL SEEDING SHALL BE COVERED WITH 1-INCH OF CLEAN, NON-INVASIVE STRAW (NO MARSH HAY, OR REED CANARY GRASS) WITHOUT SEEDS, WITHIN SEVEN DAYS. WHEAT, RYE, OATS, OR BARLEY ARE ACCEPTABLE FORMS OF STRAW. THOSE AREAS OF SLOPES STEEPER THAN 8:1 (EIGHT FEET HORIZONTAL TO ONE FOOT VERTICAL) SHALL BE PLANTED NO LATER THAN OCTOBER 1 AND STAKED WITH AN EROSION CONTROL BLANKET TO PREVENT EROSION.

NATIVE PLANTINGS:

WEED SUPPRESSION MEASURES:

1st YEAR - PERFORM SPOT SPRAY WITH HERBICIDE TO SUPPRESS WEEDS. THIS SHOULD OCCUR APPROXIMATELY EVERY MONTH OF THE GROWING SEASON AFTER NATIVE PLANTINGS HAVE BEEN ROUGH GRADED.

2nd YEAR - IN MAY/JUNE MOW NATIVE PLANTINGS AT 6" HEIGHT TO SUPPRESS THE WEEDS. PERFORM SPOT SPRAY WITH HERBICIDE TO SUPPRESS WEEDS. HAVE PROFESSIONAL ASSESS PLANTINGS. REPEAT MOWING NATIVE PLANTINGS AND SPOT-SPRAY IN EARLY JULY.

3rd YEAR - IN MAY/JUNE MOW NATIVE PLANTINGS AT 8" HEIGHT TO SUPPRESS THE WEEDS. PERFORM SPOT SPRAY WITH HERBICIDE TO SUPPRESS WEEDS.

4th YEAR - IN MAY PERFORM A PRESCRIBED BURN. IN JUNE HAVE A QUALIFIED PROFESSIONAL ASSESS PLANTINGS. IF A PRESCRIBED BURN CAN NOT BE UTILIZED, NATIVE PLANTINGS SHALL BE CUT TO THE GROUND AND ALL CUT MATERIAL SHALL BE REMOVED AND DISPOSED OF OFF SITE.



PINNACLE ENGINEERING GROUP

ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER

www.pinnacle-engr.com

RISE COMMERCIAL DISTRICT

GALENA, OH

LANDSCAPE GENERAL NOTES

REVISIONS	

PEG JOB NO: 5854-00-01
 PEG PW: MAC
 START DATE: 09/30/25
 SCALE: N/A

SHEET

L-5

L-6

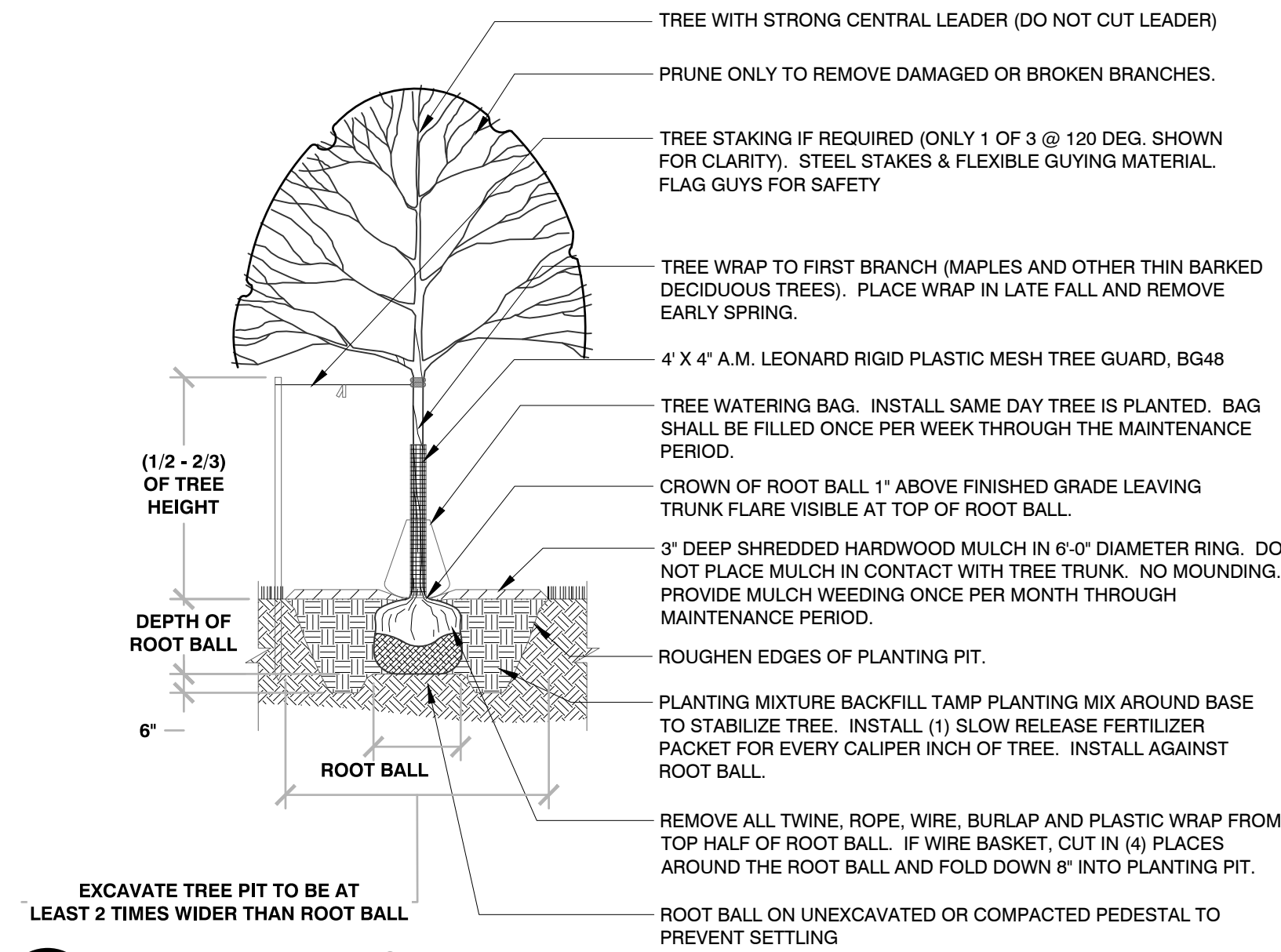
© COPYRIGHT 2023

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

REVIEWED: D.B

DESIGNED: SAT

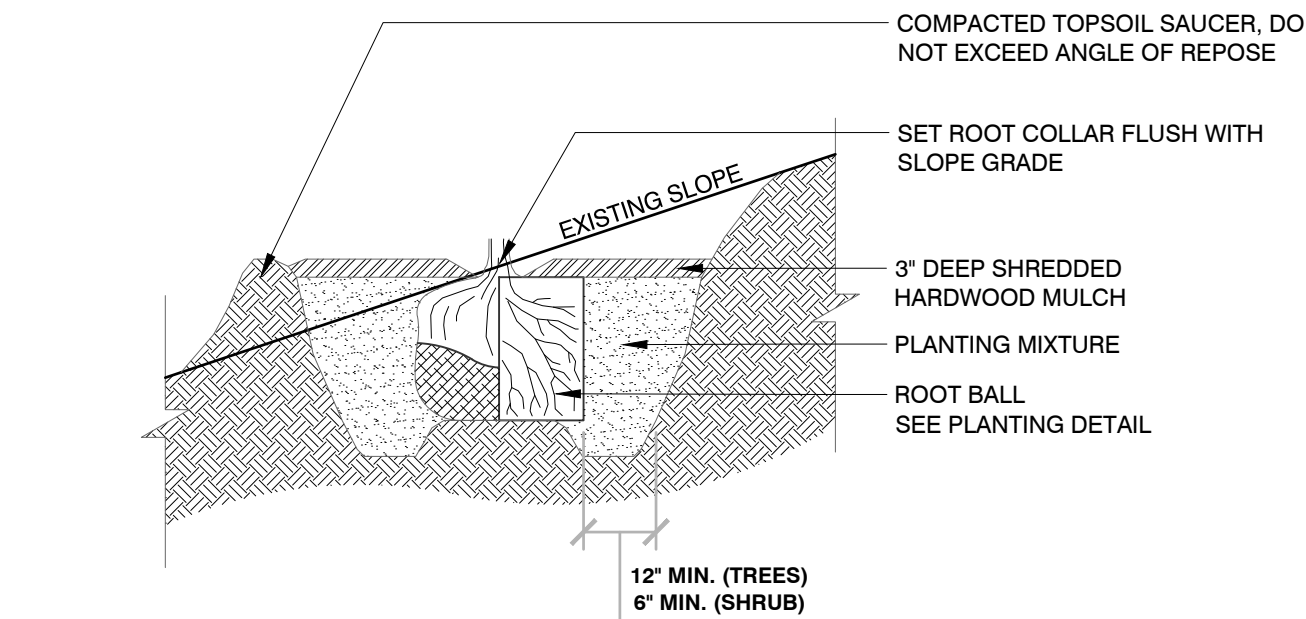
DRAFTED: SAT



1 TREE PLANTING

1/4" = 1'-0"

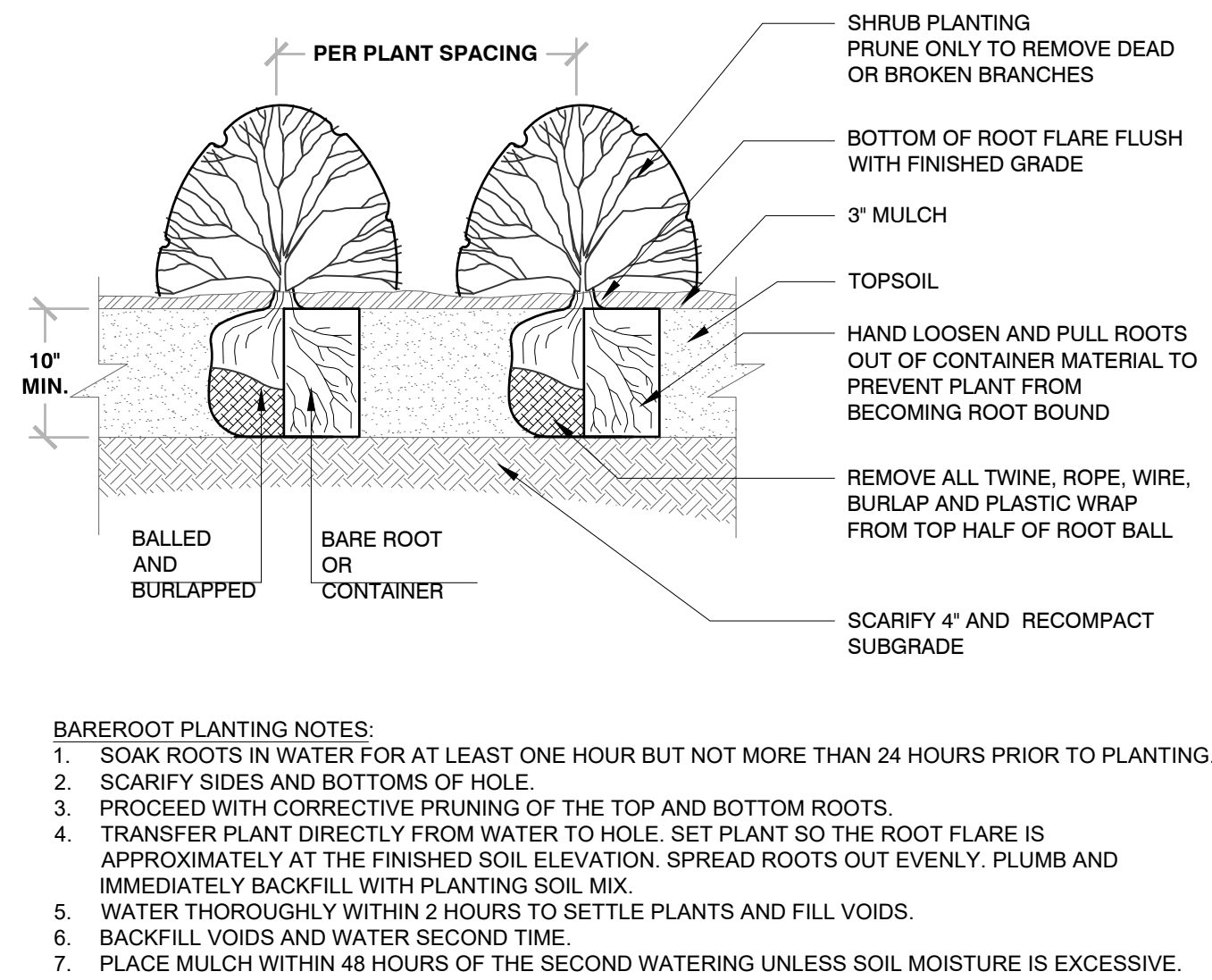
329343-01



2 TREE PLANTING ON SLOPE

3/8" = 1'-0"

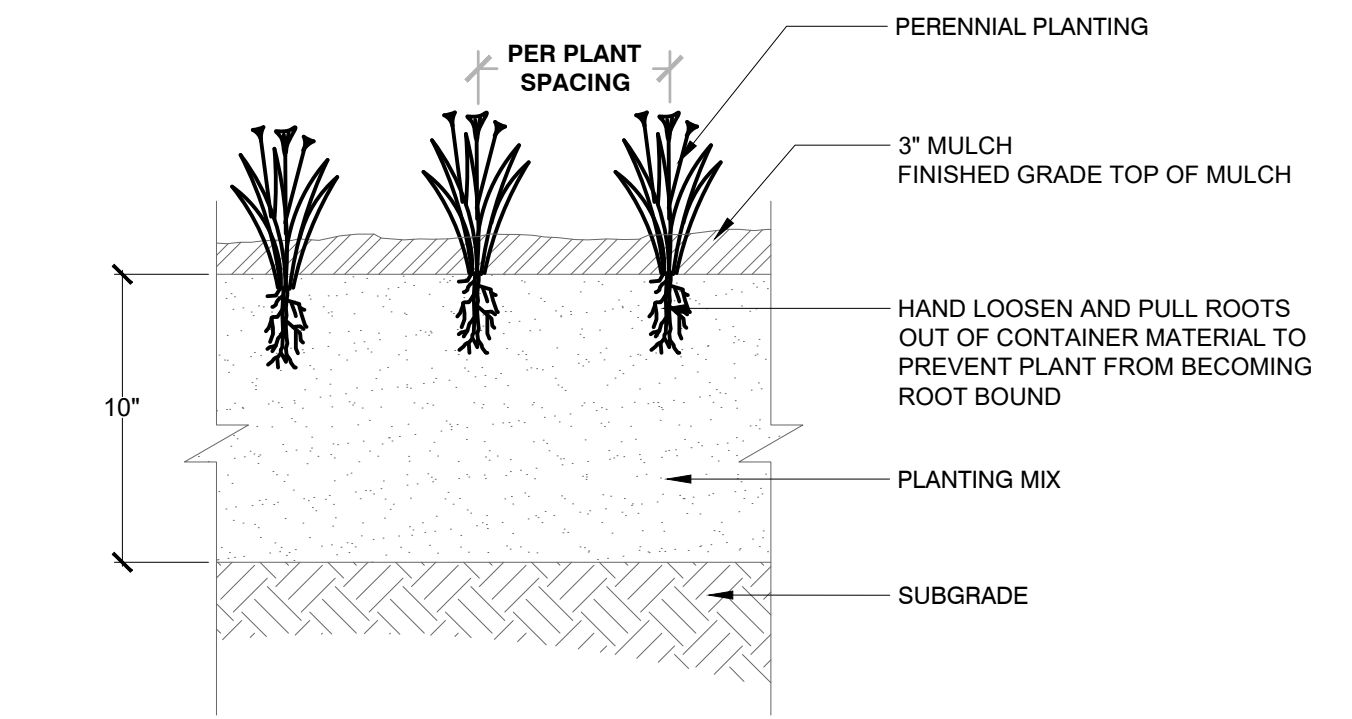
329343-02



3 SHRUB PLANTING

1/2" = 1'-0"

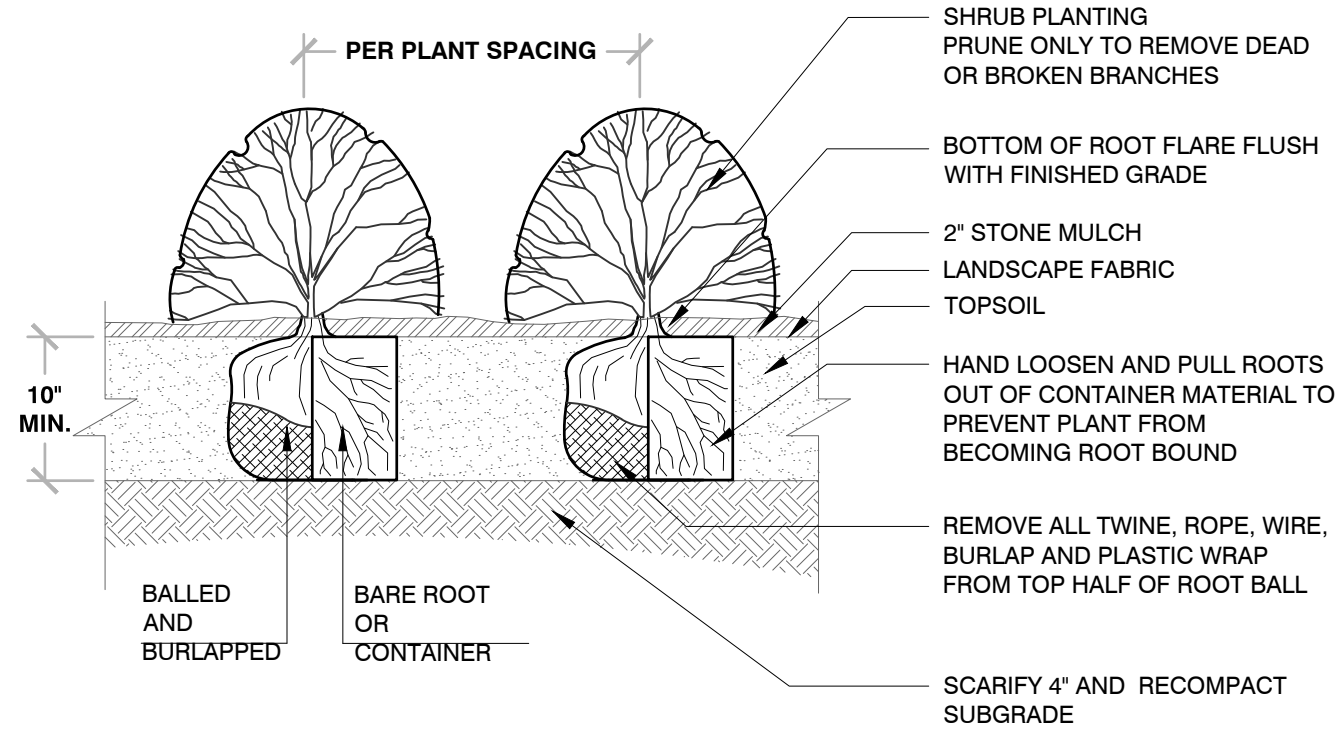
329333-02



4 PERENNIAL PLANTING

1" = 1'-0"

3293-01

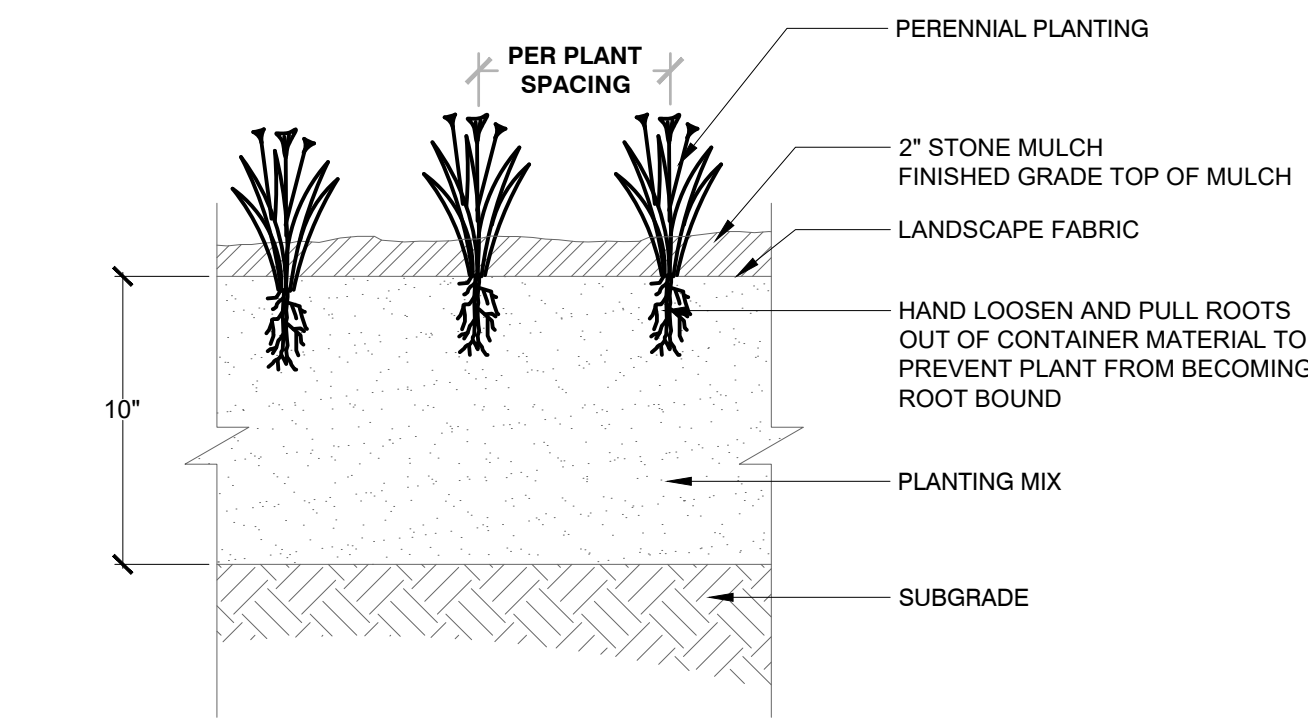


- BAREROOT PLANTING NOTES:
1. SOAK ROOTS IN WATER FOR AT LEAST ONE HOUR BUT NOT MORE THAN 24 HOURS PRIOR TO PLANTING.
 2. SCARIFY SIDES AND BOTTOMS OF HOLE.
 3. PROCEED WITH CORRECTIVE PRUNING OF THE TOP AND BOTTOM ROOTS.
 4. TRANSFER PLANT DIRECTLY FROM WATER TO HOLE. SET PLANT SO THE ROOT FLARE IS APPROXIMATELY AT THE FINISHED SOIL ELEVATION. SPREAD ROOTS OUT EVENLY. PLUMB AND IMMEDIATELY BACKFILL WITH PLANTING SOIL MIX.
 5. WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL VOIDS.
 6. BACKFILL VOIDS AND WATER SECOND TIME.
 7. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.

5 SHRUB PLANTING W/STONE MULCH

1/2" = 1'-0"

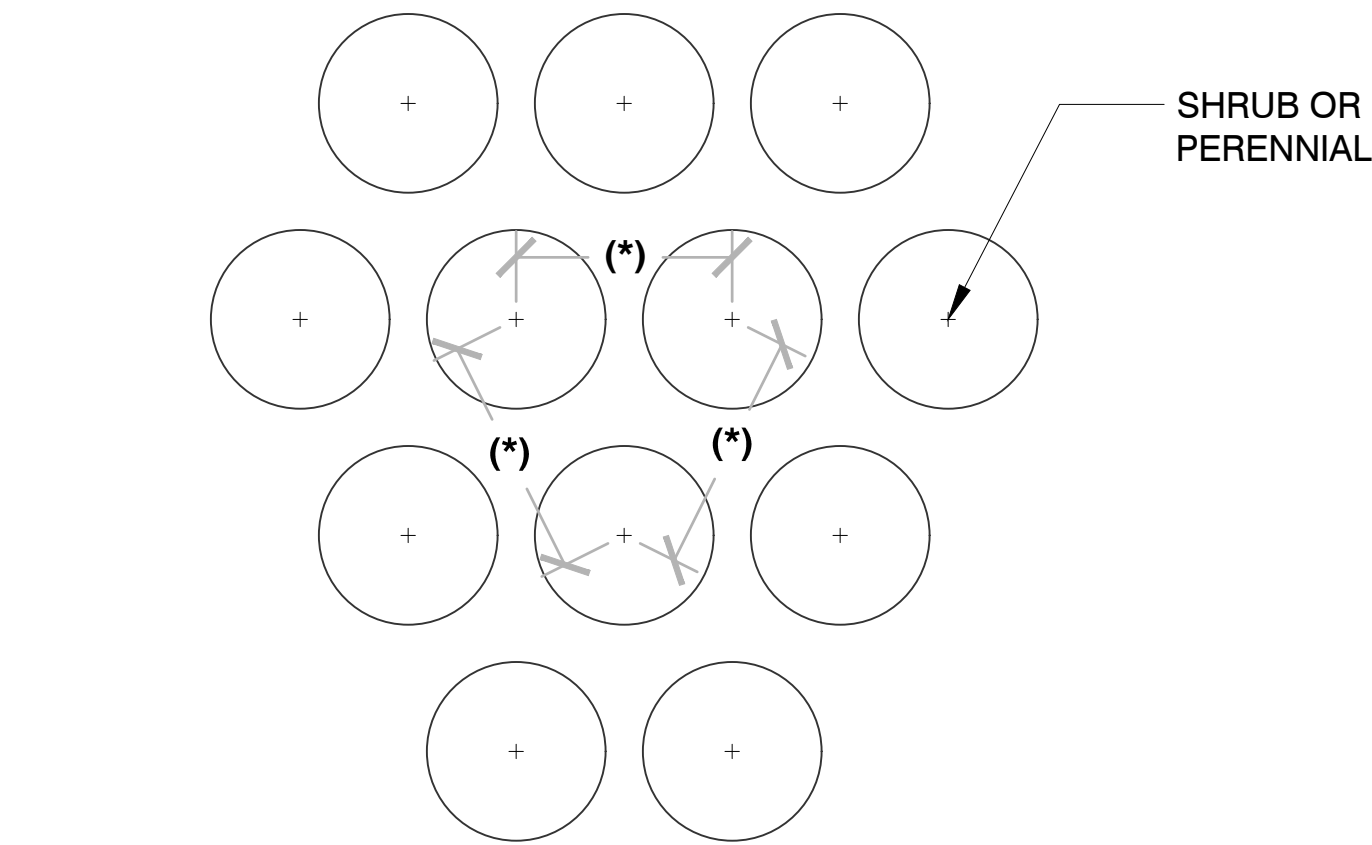
329333-06



6 PERENNIAL PLANTING W/STONE MULCH

1" = 1'-0"

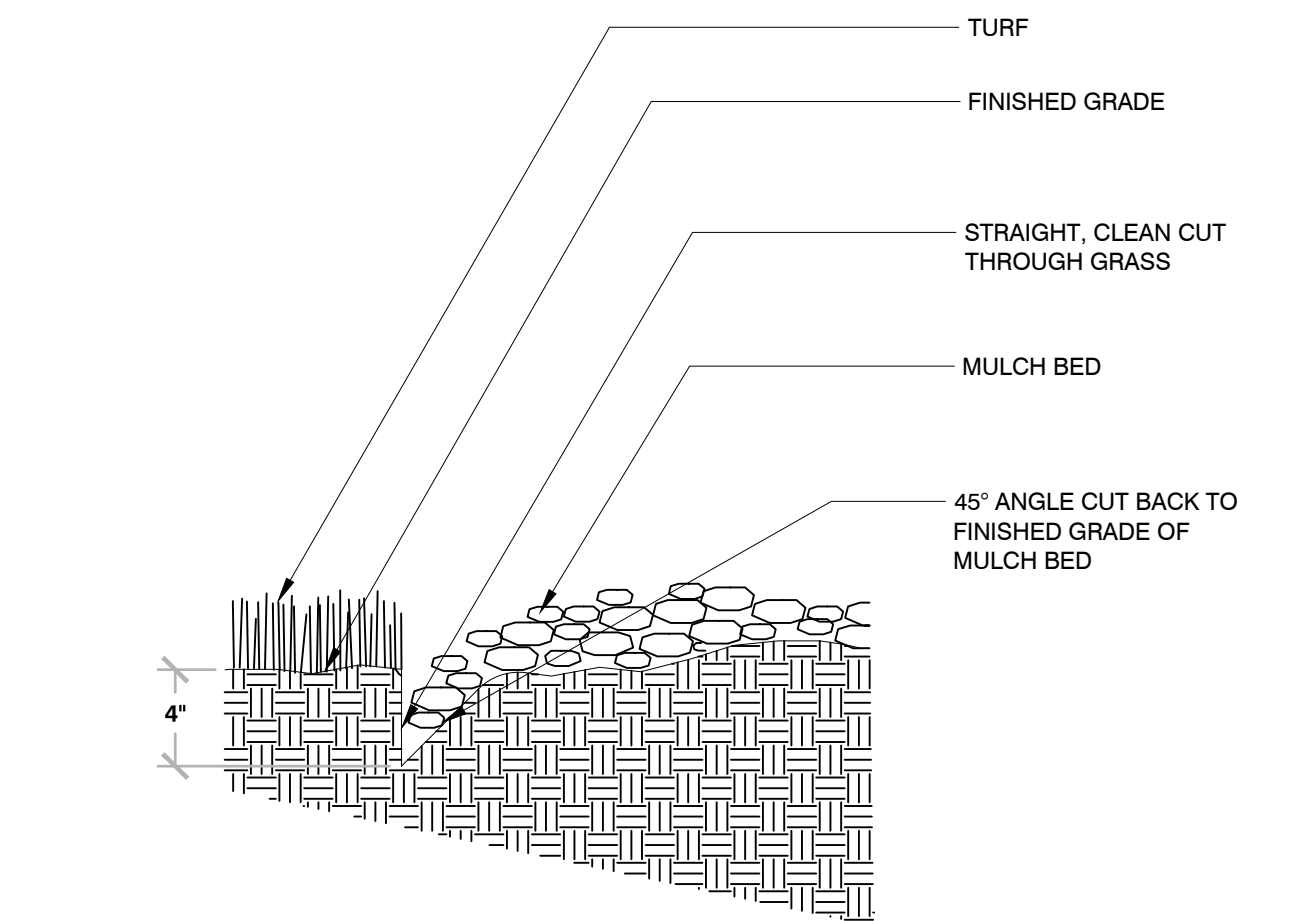
3293-11



7 PLANT SPACING

3/4" = 1'-0"

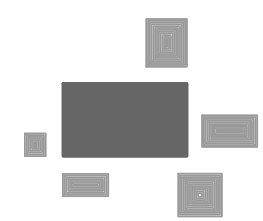
3293-02



8 TRENCHED BED EDGE

3/4" = 1'-0"

3293-03



PINNACLE ENGINEERING GROUP

ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-6886
CHICAGO | MILWAUKEE | NATIONWIDE

RISE COMMERCIAL
DISTRICT
GALENA, OH

LANDSCAPE DETAILS

REVISIONS

==	==	==	==	==
==	==	==	==	==
==	==	==	==	==

REG JOB N-5854.00-01
REG PM MAC
START DATE 09/30/25
SCALE VARIES

SHEET
L-6
L-6

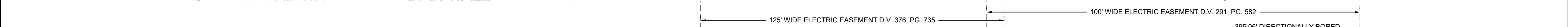
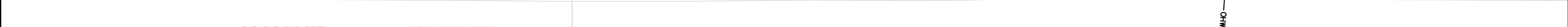
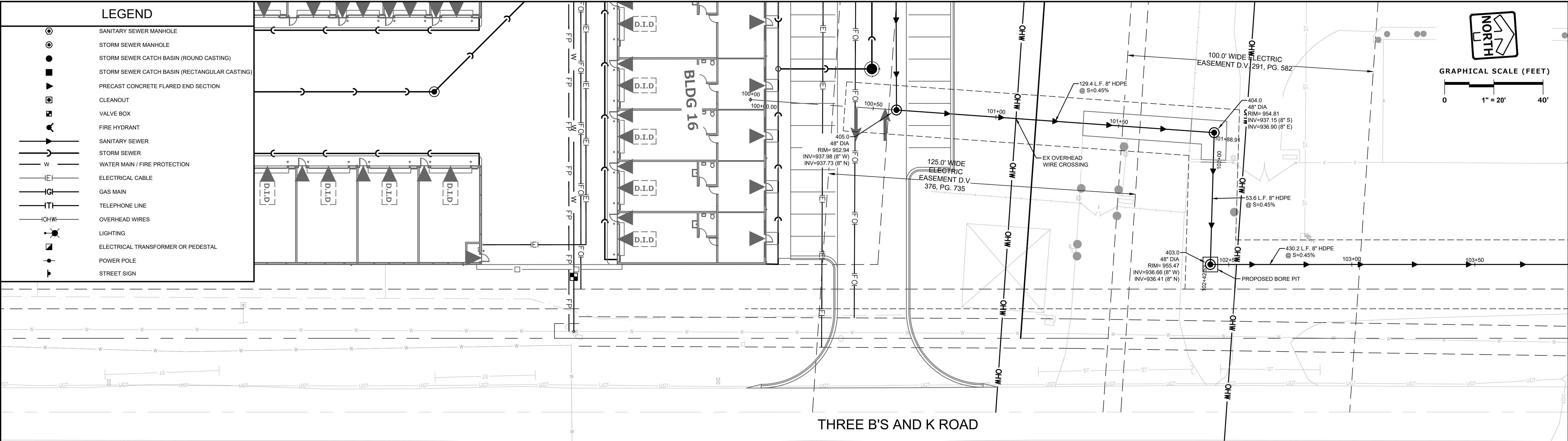
© COPYRIGHT 2023

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

REVIEWED: MAC

DESIGNED: PEM

DRAFTED: PEM



LEGEND

- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN (ROUND CASTING)
- STORM SEWER CATCH BASIN (RECTANGULAR CASTING)
- PRECAST CONCRETE FLARED END SECTION
- CLEANOUT
- VALVE BOX
- FIRE HYDRANT
- SANITARY SEWER
- STORM SEWER
- WATER MAIN / FIRE PROTECTION
- ELECTRICAL CABLE
- GAS MAIN
- TELEPHONE LINE
- OVERHEAD WIRES
- LIGHTING
- ELECTRICAL TRANSFORMER OR PEDESTAL
- POWER POLE
- STREET SIGN

NOTE:

CONTRACTOR TO REFERENCE DELAWARE COUNTY REGIONAL SEWER DISTRICT RULES AND REGULATIONS

INDEX OF SHEETS

- C-1 - C-2 PUBLIC SANITARY SEWER PLAN & PROFILE
- C-3 GENERAL NOTES & CONSTRUCTION DETAILS



800-362-2764
OUPS.ORG

PINNACLE ENGINEERING GROUP, LLC
ENGINEER'S LIMITATION

PINNACLE ENGINEERING GROUP, LLC AND THEIR CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED PRIOR TO BID SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT TO THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.

FURTHERMORE, PINNACLE ENGINEERING GROUP, LLC IS NOT RESPONSIBLE FOR CONSTRUCTION SAFETY OR THE MEANS AND METHODS OF CONSTRUCTION.

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888
CHICAGO | MILWAUKEE | NATIONWIDE

PUBLIC SANITARY SEWER
EXTENSION RISE - GALENA, OH
RISE - GALENA, OH

PUBLIC SANITARY
SEWER PLAN &
PROFILE

REVISIONS

REG JOB N-5854.00-01
REG PM: MAC
START DATE: 09/10/25
SCALE: 1" = 20'

SHEET
C-1
or
C-3

© COPYRIGHT 2023

FOR REVIEW ONLY

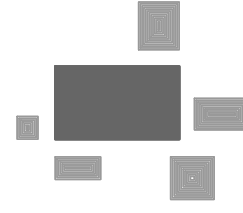
PUBLIC SANITARY SEWER PLAN & PROFILE

www.pinnacle-engr.com

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

DESIGNED: PEM

DRAFTED: PEM



PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-6888

CHICAGO | MILWAUKEE | NATIONWIDE

**PUBLIC SANITARY SEWER
EXTENSION RISE - GALENA, OH**
RISE - GALENA, OH

**PUBLIC SANITARY
SEWER PLAN &
PROFILE**

REVISIONS

REG JOB NO: NS5854.00-01

REG PM: MAC

START DATE: 09/10/25

SCALE: 1" = 20'

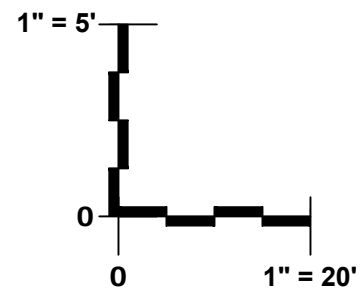
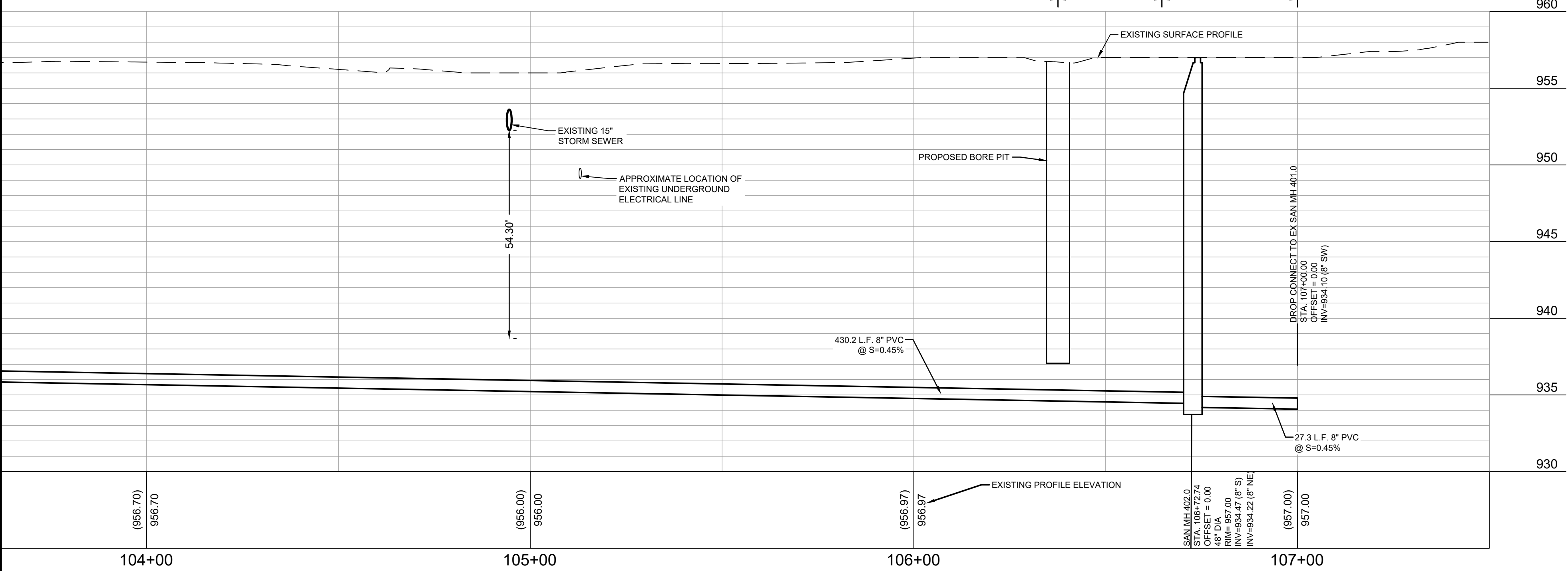
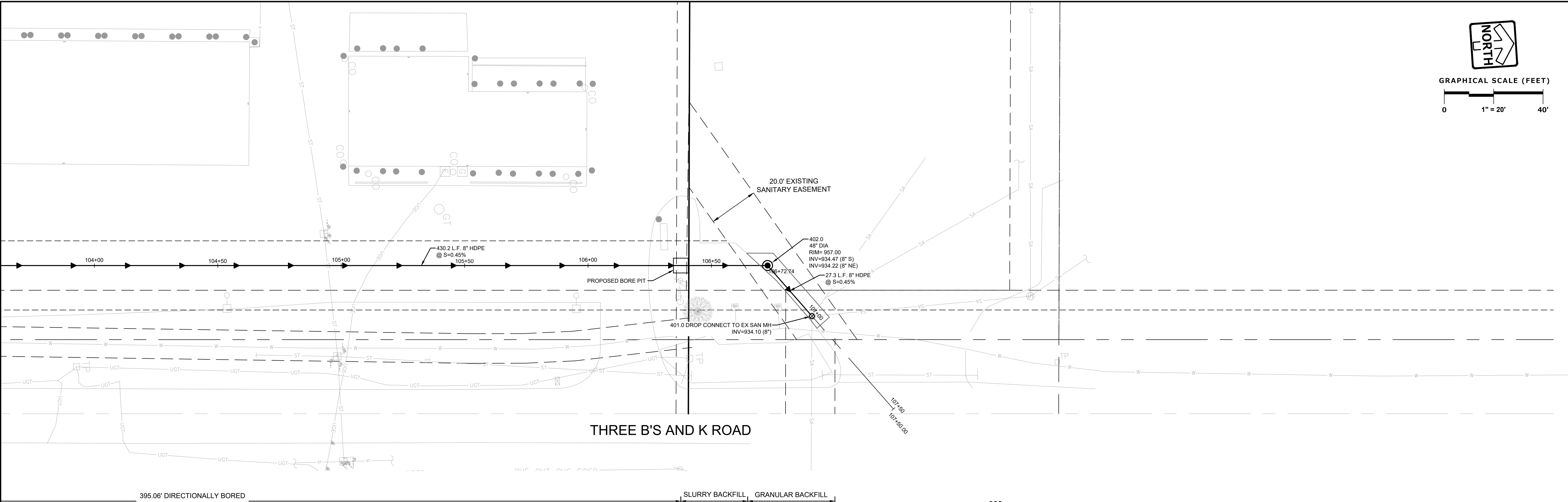
SHEET

C-2

OF

C-3

© COPYRIGHT 2023



NOTE:

CONTRACTOR TO REFERENCE DELAWARE COUNTY REGIONAL SEWER DISTRICT RULES AND REGULATIONS

LEGEND	
	SANITARY SEWER MANHOLE
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN (ROUND CASTING)
	STORM SEWER CATCH BASIN (RECTANGULAR CASTING)
	PRECAST CONCRETE FLARED END SECTION
	CLEANOUT
	VALVE BOX
	FIRE HYDRANT
	SANITARY SEWER
	STORM SEWER
	WATER MAIN / FIRE PROTECTION
	ELECTRICAL CABLE
	GAS MAIN
	TELEPHONE LINE
	OVERHEAD WIRES
	LIGHTING
	ELECTRICAL TRANSFORMER OR PEDESTAL
	POWER POLE
	STREET SIGN

STORMWATER MANAGEMENT PLAN



RISE Commercial Development
Berlin Township, Delaware County, Ohio
PEG Project Number: 5854.00-OH

Prepared for:



9/30/2025



PINNACLE ENGINEERING GROUP

15850 W. Bluemound Road | Suite 210 | Brookfield, WI 53005

www.pinnacle-engr.com

TABLE OF CONTENTS

INTRODUCTION	2
DESIGN CRITERIA	2
ANALYSIS METHODS	2
PRE-DEVELOPMENT CONDITIONS	2
POST-DEVELOPMENT CONDITIONS	3
<i>Pond Design, Outlet Control Structure and Emergency Spillway</i>	3
<i>Peak Runoff Rate Attenuation</i>	4
<i>Water Quality</i>	5
CONCLUSION	5

APPENDICES

APPENDIX 1 – MAPS

- Vicinity Map
- NRCS Web Soil Survey Map

APPENDIX 2 – PRE-DEVELOPMENT CONDITIONS

- Existing Conditions Survey
- Hydrology Exhibit – Existing Conditions

APPENDIX 3 – POST-DEVELOPMENT CONDITIONS

- Hydrology Exhibit – Proposed Conditions
- Hydrographs – Proposed Conditions

APPENDIX 4 – WATER QUALITY VOLUME

- WQv Calculations

Questions and comments can be directed to:

Dylan Crisp
 Senior Project Engineer
 Phone: 262.754.8888 | Fax: 262.754.8850
dylan.crisp@pinnacle-engr.com



20725 Watertown Road | Suite 100
 Brookfield, WI 53186
www.pinnacle-engr.com

INTRODUCTION

The proposed RISE Commercial development site represents the tract of land generally bound by Heinrich Ditch to the east, and an existing development to the north, located in Berlin Township, Delaware County, OH. A location map that illustrates the tract of land is included in **Appendix 1**.

The site is a 10 acre lot and the development includes the construction of multiple office and warehouse buildings along with the necessary infrastructure improvements, including access drives, parking, utilities, and stormwater management facility.

DESIGN CRITERIA

Delaware County: Article XII

Ohio EPA: Water Quality Volume Requirements

Water Quality: Water Quality volume (WQv) will be achieved in the proposed pond with orifice sizing per calculations.

Water Quantity: The proposed 100-yr 24-hr storm peak discharge for the proposed condition will be detained and reduced to the existing 2-yr 24-hr storm peak discharge. Additional storm events are included for typical pre to post control, per Delaware County requirements.

ANALYSIS METHODS

HydroCAD® (Version 10.00) software has been used to analyze stormwater characteristics for this stormwater management plan. HydroCAD uses the accepted TR-55 methodology for determining peak discharge runoff rates. Curve numbers are selected using the information in HydroCAD, incorporating the appropriate ground cover.

Stormwater modeling was conducted using rainfall data taken from the NOAA Atlas 14 Pt Precip website.

WQv and resulting dewater orifice size are calculated using equations from Delaware County Article XII.

PRE-DEVELOPMENT CONDITIONS

The existing site comprises of a gravel lot with driveways to 2 existing homes on the southeast corner of the site. The drainage for the site drains from east to west with some flow draining to the south. There are no wetlands present on the development site. The existing survey and existing drainage area map can be found in **Appendix 2**.

Based on the USDA NRCS Web Soil Survey Results, soils on the site are predominantly classified as Bennington silt loam (C/D) and Cardington silt loam (C/D). To be conservative, type D soils are used for the curve numbers in the hydrologic analysis. The Web Soil Survey results can be found in **Appendix 1**.

POST-DEVELOPMENT CONDITIONS

The drainage characteristics in the proposed condition will largely follow those in the existing condition. Onsite drainage areas in HydroCAD use actual SF values for roof & pavement, grass, etc to match the currently proposed development. Time of concentration values are calculated in HydroCAD using the Subcat Tc tab.

Site flow will be collected in proposed storm sewer and drainage swales and will be conveyed to a proposed wet pond at the west edge of the site. Flow will be detained and treated within the proposed pond and released to the existing low point on the site in the northwest corner. A contributing watershed map and supporting hydrologic modeling output for the proposed conditions is located in **Appendix 3**.

Pond Design, Outlet Control Device and Emergency Spillway

The onsite “wet” detention basin and its outlets will be designed to meet all requirements in the Delaware County Article XII. WQv will be achieved through the outlet control device and detention volume provided. Refer to **Appendix 4** for WQv and resulting orifice size calculations.

Post development peak runoff rate attenuation will be achieved through the outlet control device and available stormwater detention volume provided above the basin normal water level. The outlet control device will be a structure with an open top that accepts flow. The basin will be fitted with an emergency spillway set at an elevation higher than the 100-yr HWL when all contributing flow is modeled through the pond. The emergency spillway will act as a tertiary outlet to only discharge stormwater runoff in excess of the 100-yr storm. A HydroCAD summary for the emergency spillway design is included in **Appendix 3**.

Peak Runoff Rate Attenuation

Stormwater runoff peak rates will be controlled through the usage of the onsite “wet” detention basin. The basin is situated to collect all the onsite drainage. Design post-development release rates for the proposed development have been computed for the proposed watershed. Modeling includes onsite and offsite areas that will contribute to the proposed BMP. Presentation of pertinent values from the modeling is contained within the following tables:

SUMMARY OF PEAK DISCHARGE RELEASE RATES

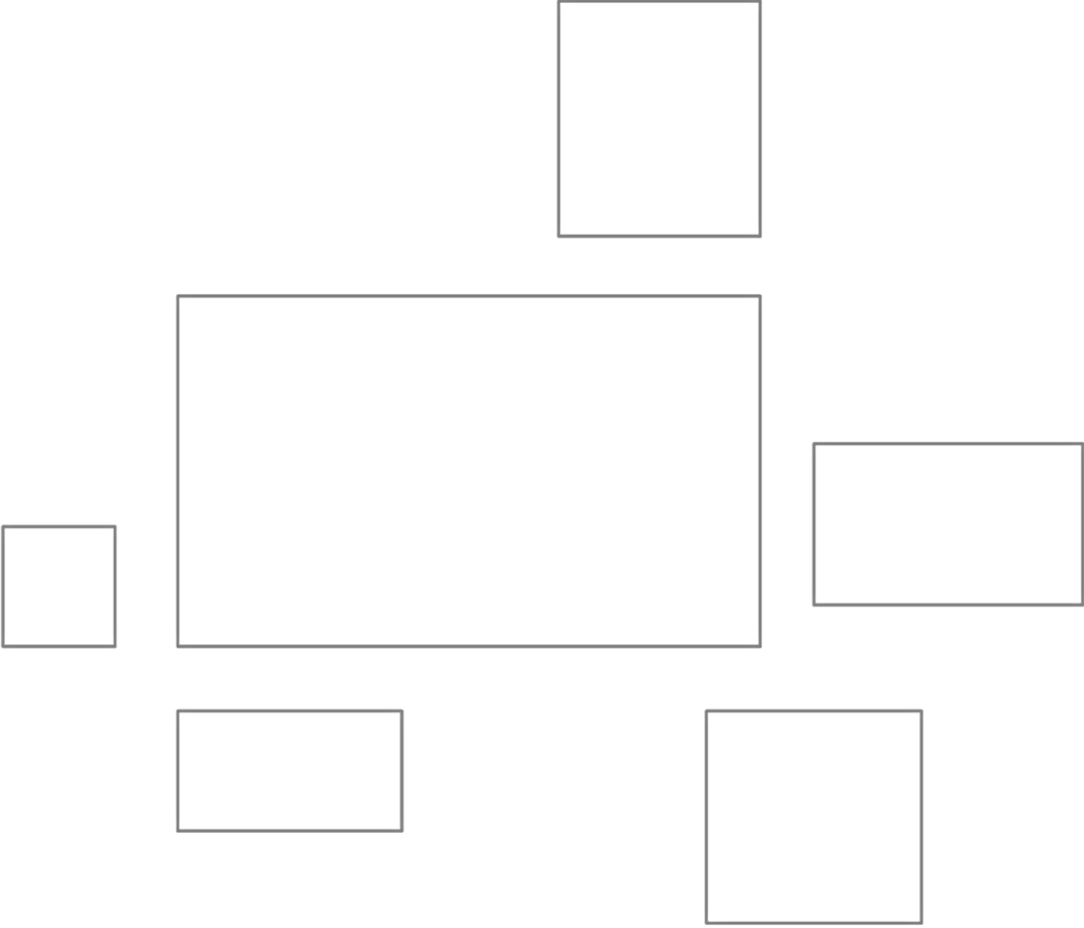
Design Storm	Existing Conditions Peak Flow (cfs)	Proposed Conditions Peak Flow (cfs)
1-year	13.62	0.16
2-year	17.60	0.18
5-year	23.37	1.00
10-year	28.10	2.84
25-year	34.77	9.54
50-year	40.17	15.09
100-year	45.84	16.70

As can be seen in the summary table, the proposed 100-yr 24-hr storm peak discharge is detained and reduced to less than the existing 2-yr 24-hr storm peak discharge. Details for proposed condition results can be found in **Appendix 3**. Existing drainage characteristics have not been calculated because they have no bearing on the peak discharge requirements for the development site.

CONCLUSION

The stormwater management features for the RISE Commercial development have been designed to comply with the Delaware County requirements. Proposed runoff rates will be reduced for 100-year proposed storm event to meet stormwater standards. Water Quality volume requirements are met for the development site per Ohio EPA requirements.

(Appendices Follow)





Soil Map—Delaware County, Ohio



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

6/18/2025
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Delaware County, Ohio

Survey Area Data: Version 23, Aug 27, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2024—Jul 1, 2024

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BeA	Bennington silt loam, 0 to 2 percent slopes	2.3	21.0%
BeB	Bennington silt loam, 2 to 6 percent slopes	5.5	50.2%
Crd1B1	Cardington silt loam, 2 to 6 percent slopes	3.2	28.8%
Totals for Area of Interest		10.9	100.0%

Report—Engineering Properties

Absence of an entry indicates that the data were not estimated. The asterisk "*" denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

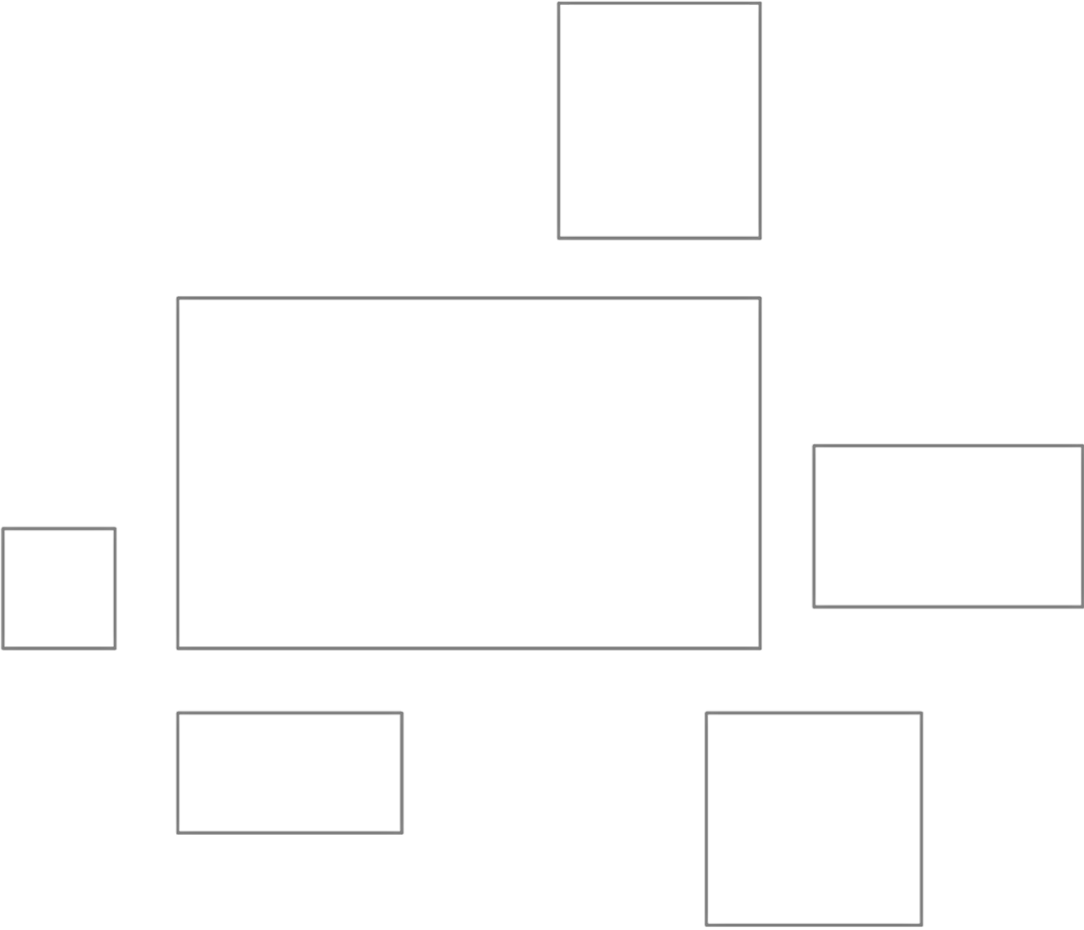
Engineering Properties—Delaware County, Ohio														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
BeA—Bennington silt loam, 0 to 2 percent slopes														
Bennington	85	C/D	0-10	Silt loam	ML, CL	A-4, A-6	0- 0- 0	0- 0- 2	95-98-100	85-92-100	75-90-100	65-78-90	25-35-40	3-12-15
			10-29	Silty clay, clay loam, silty clay loam	CH, CL	A-6, A-7	0- 0- 0	0- 0- 2	85-98-98	75-92-98	65-90-98	60-82-92	30-40-50	12-18-30
			29-42	Silt loam, loam, clay loam, silty clay loam	CL	A-6	0- 0- 2	0- 2- 2	85-95-98	75-90-98	65-90-98	55-80-90	30-35-45	12-15-25
			42-79	Loam, silty clay loam, silt loam, clay loam	CL-ML, CL	A-4, A-6	0- 0- 2	0- 2- 3	85-95-98	70-90-98	65-88-98	55-75-88	25-30-40	6-12-20

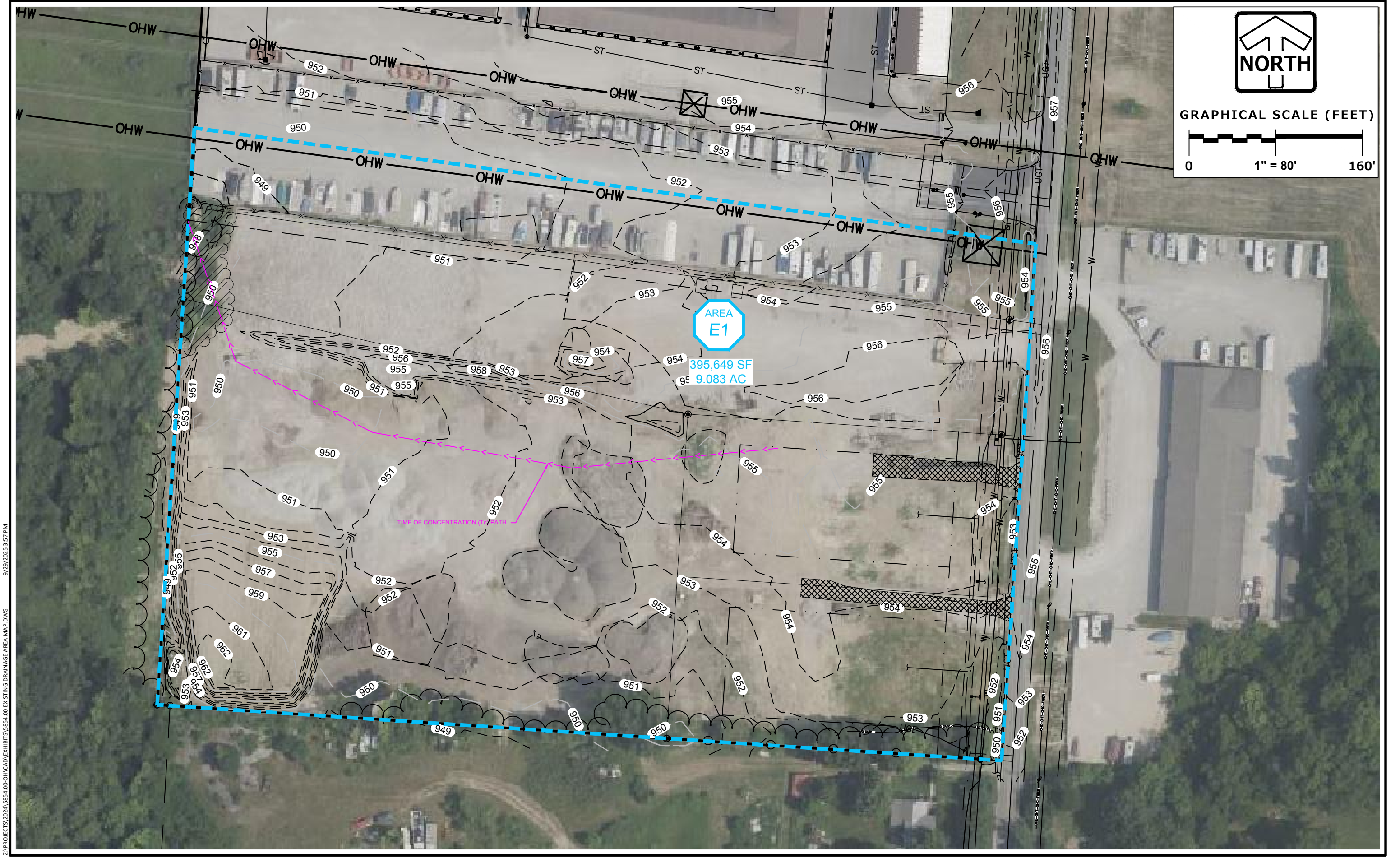
Engineering Properties--Delaware County, Ohio														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
BeB—Bennington silt loam, 2 to 6 percent slopes														
Bennington	85	C/D	0-9	Silt loam	CL, ML	A-4, A-6	0- 0- 0	0- 0- 2	95-98-100	85-92-100	75-90-100	65-78-90	25-35-40	3-12-15
			9-29	Silty clay, clay loam, silty clay loam	CL, CH	A-6, A-7	0- 0- 0	0- 0- 2	85-98-98	75-92-98	65-90-98	60-82-92	30-40-50	12-18-30
			29-40	Silt loam, loam, clay loam, silty clay loam	CL	A-6	0- 0- 2	0- 2- 2	85-95-98	75-90-98	65-90-98	55-80-90	30-35-45	12-15-25
			40-79	Silty clay loam, silt loam, loam, clay loam	CL, CL-ML	A-4, A-6	0- 0- 2	0- 2- 3	85-95-98	70-90-98	65-88-98	55-75-88	25-30-40	6-12-20
Crd1B1—Cardington silt loam, 2 to 6 percent slopes														
Cardington	85	C/D	0-9	Silt loam	CL-ML, ML, CL	A-4, A-6	0- 0- 0	0- 0- 1	95-98-100	88-96-100	76-91-100	65-78-91	20-30-40	4-10-15
			9-34	Silty clay loam, silty clay, clay loam	CH, CL	A-6, A-7	0- 0- 1	0- 0- 1	86-95-98	68-90-97	60-86-97	53-76-87	30-40-50	10-15-30
			34-42	Silty clay loam, silty clay, clay loam	CL	A-6, A-7	0- 0- 1	0- 1- 3	86-95-99	72-89-97	67-85-97	59-76-90	25-35-45	10-15-25
			42-79	Clay loam, silty clay loam, silt loam	CL-ML, ML, CL	A-4, A-6	0- 0- 1	0- 1- 4	86-94-99	72-87-97	63-80-94	53-67-80	22-31-40	3-12-20

Data Source Information

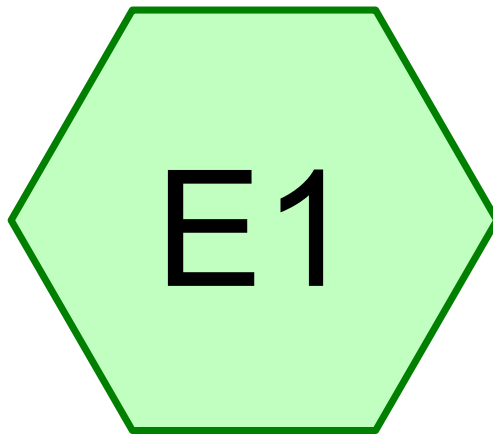
Soil Survey Area: Delaware County, Ohio
 Survey Area Data: Version 23, Aug 27, 2024



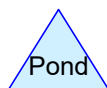
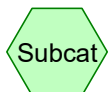




Z:\PROJECTS\2024\5854.00-OH\CAD\EXHIBITS\5854.00 EXISTING DRAINAGE AREA MAP.DWG 9/29/2025 3:57 PM



EXIST CONDITIONS



Routing Diagram for 5854.00 SWMP

Prepared by Pinnacle Engineering Group, Printed 10/1/2025
HydroCAD® 10.20-7a s/n 07894 © 2025 HydroCAD Software Solutions LLC

5854.00 SWMP

Prepared by Pinnacle Engineering Group

Printed 10/1/2025

HydroCAD® 10.20-7a s/n 07894 © 2025 HydroCAD Software Solutions LLC

Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.362	84	50-75% Grass cover, Fair, HSG D (E1)
4.478	96	Gravel surface, HSG D (E1)
0.072	98	Paved parking, HSG D (E1)
0.171	98	Roofs, HSG D (E1)
9.083	90	TOTAL AREA

5854.00 SWMP

Prepared by Pinnacle Engineering Group

HydroCAD® 10.20-7a s/n 07894 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 2-yr Rainfall=2.60"

Printed 10/1/2025

Page 3

Summary for Subcatchment E1: EXIST CONDITIONS

Runoff = 17.60 cfs @ 12.09 hrs, Volume= 1.227 af, Depth= 1.62"

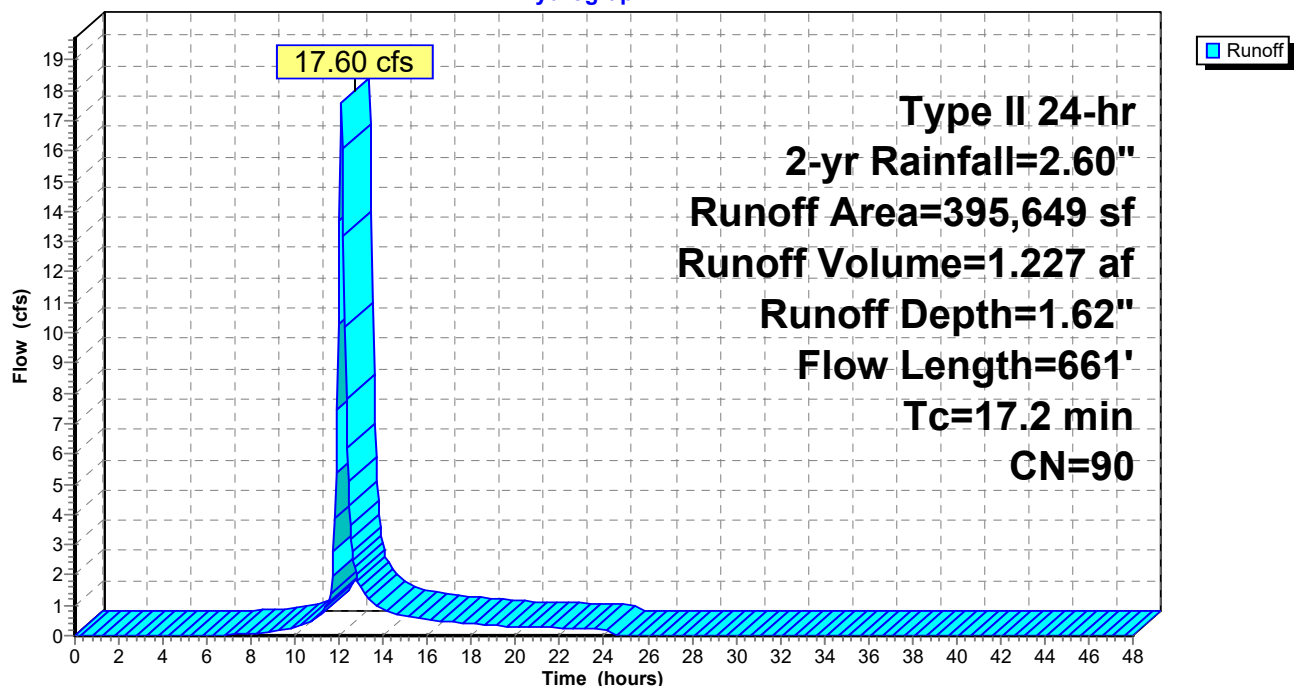
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (sf)	CN	Description
195,076	96	Gravel surface, HSG D
7,453	98	Roofs, HSG D
3,121	98	Paved parking, HSG D
189,999	84	50-75% Grass cover, Fair, HSG D
395,649	90	Weighted Average
385,075		97.33% Pervious Area
10,574		2.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0150	0.14		Sheet Flow, Grass Grass: Short n= 0.150 P2= 2.60"
1.3	231	0.0200	2.87		Shallow Concentrated Flow, Gravel Paved Kv= 20.3 fps
3.7	330	0.0100	1.50		Shallow Concentrated Flow, Grass Grassed Waterway Kv= 15.0 fps
17.2	661	Total			

Subcatchment E1: EXIST CONDITIONS

Hydrograph



5854.00 SWMP

Prepared by Pinnacle Engineering Group

HydroCAD® 10.20-7a s/n 07894 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 100-yr Rainfall=5.53"

Printed 10/1/2025

Page 4

Summary for Subcatchment E1: EXIST CONDITIONS

Runoff = 45.84 cfs @ 12.09 hrs, Volume= 3.322 af, Depth= 4.39"

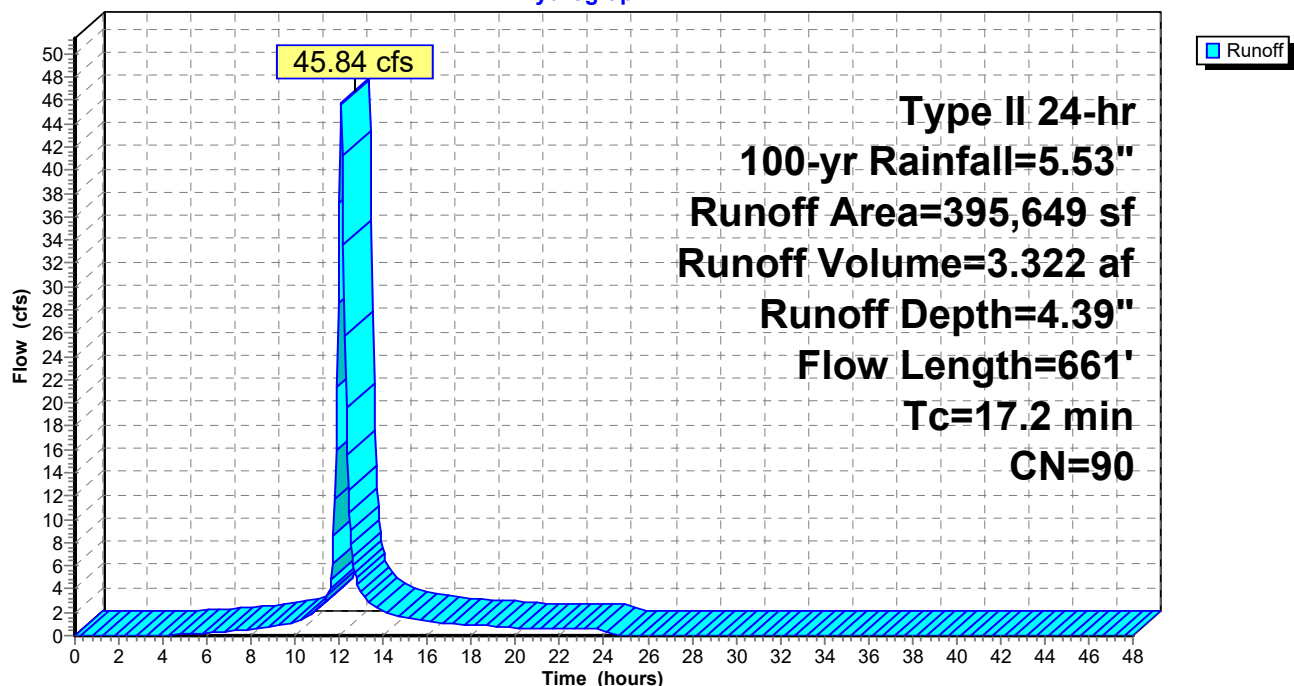
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.53"

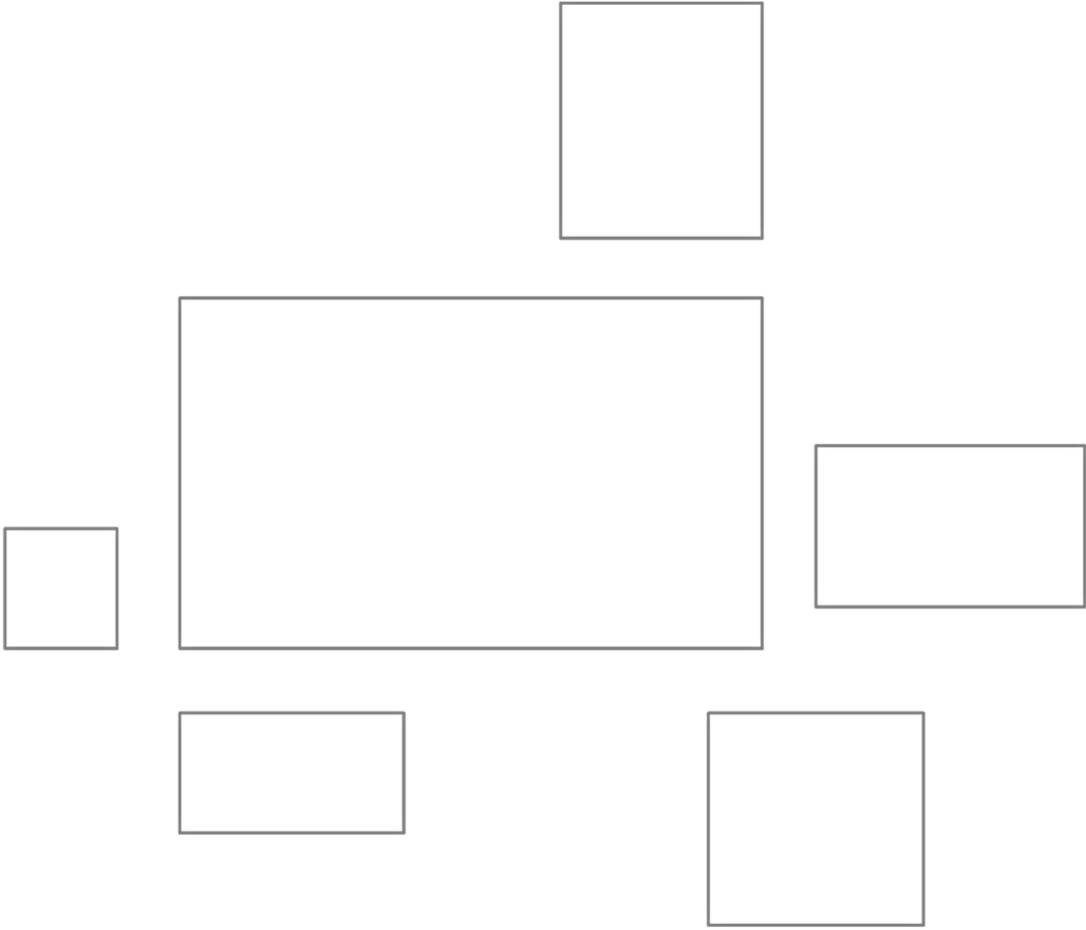
Area (sf)	CN	Description
195,076	96	Gravel surface, HSG D
7,453	98	Roofs, HSG D
3,121	98	Paved parking, HSG D
189,999	84	50-75% Grass cover, Fair, HSG D
395,649	90	Weighted Average
385,075		97.33% Pervious Area
10,574		2.67% Impervious Area

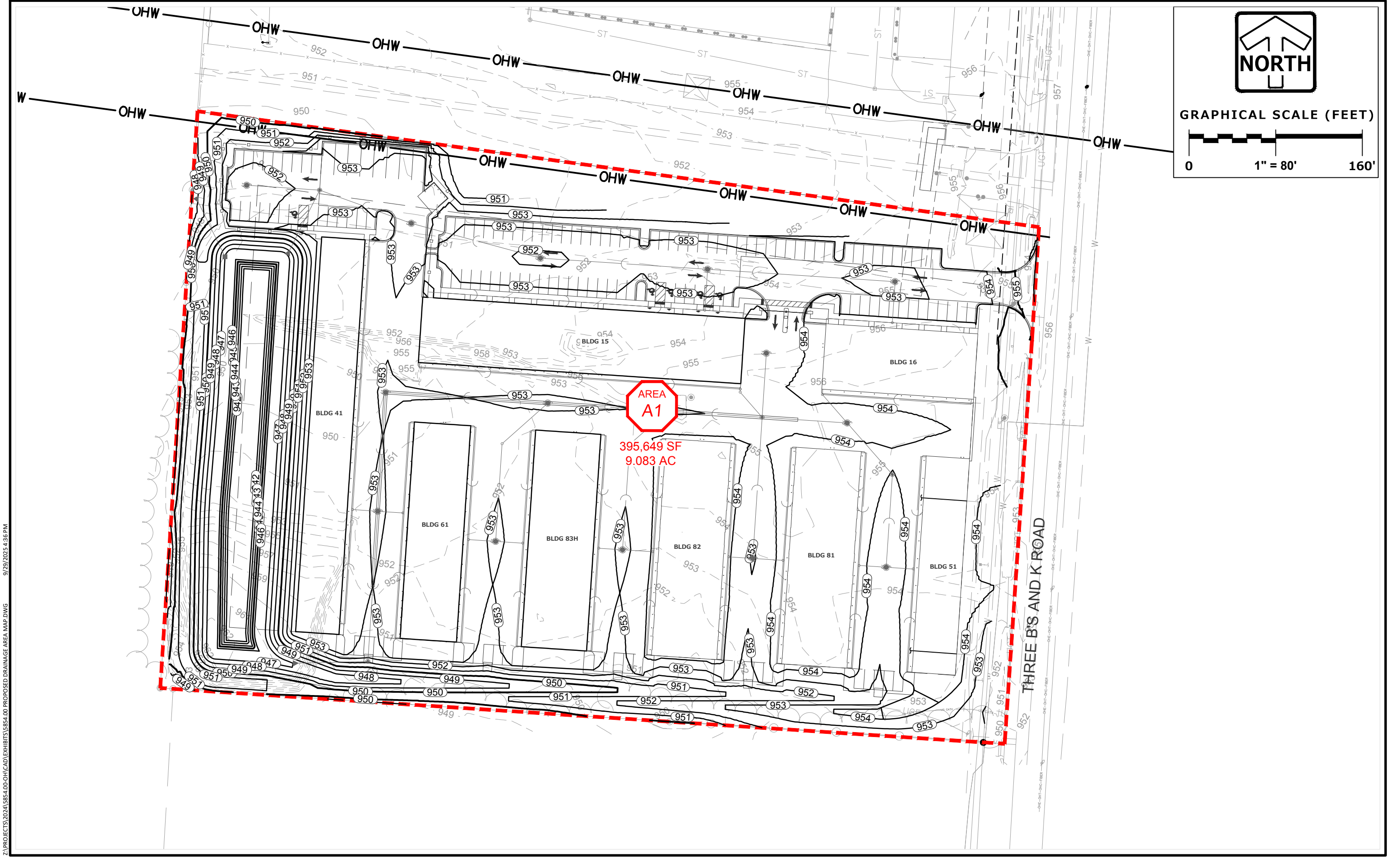
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0150	0.14		Sheet Flow, Grass Grass: Short n= 0.150 P2= 2.60"
1.3	231	0.0200	2.87		Shallow Concentrated Flow, Gravel Paved Kv= 20.3 fps
3.7	330	0.0100	1.50		Shallow Concentrated Flow, Grass Grassed Waterway Kv= 15.0 fps
17.2	661	Total			

Subcatchment E1: EXIST CONDITIONS

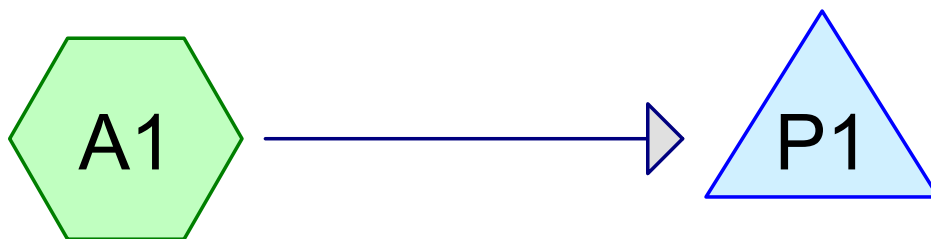
Hydrograph





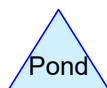
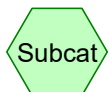


Z:\PROJECTS\2024\5854.00-OH\CAD\EXHIBITS\5854.00 PROPOSED DRAINAGE AREA MAP.DWG 9/29/2025 4:36 PM



PROP CONDITIONS

PROP POND



Routing Diagram for 5854.00 SWMP

Prepared by Pinnacle Engineering Group, Printed 10/1/2025
HydroCAD® 10.20-7a s/n 07894 © 2025 HydroCAD Software Solutions LLC

5854.00 SWMP

Prepared by Pinnacle Engineering Group

Printed 10/1/2025

HydroCAD® 10.20-7a s/n 07894 © 2025 HydroCAD Software Solutions LLC

Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.541	84	50-75% Grass cover, Fair, HSG D (A1)
3.306	98	Paved parking, HSG D (A1)
2.236	98	Roofs, HSG D (A1)

5854.00 SWMP

Prepared by Pinnacle Engineering Group

HydroCAD® 10.20-7a s/n 07894 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 2-yr Rainfall=2.60"

Printed 10/1/2025

Page 3

Summary for Subcatchment A1: PROP CONDITIONS

Runoff = 24.92 cfs @ 12.01 hrs, Volume= 1.418 af, Depth= 1.87"
Routed to Pond P1 : PROP POND

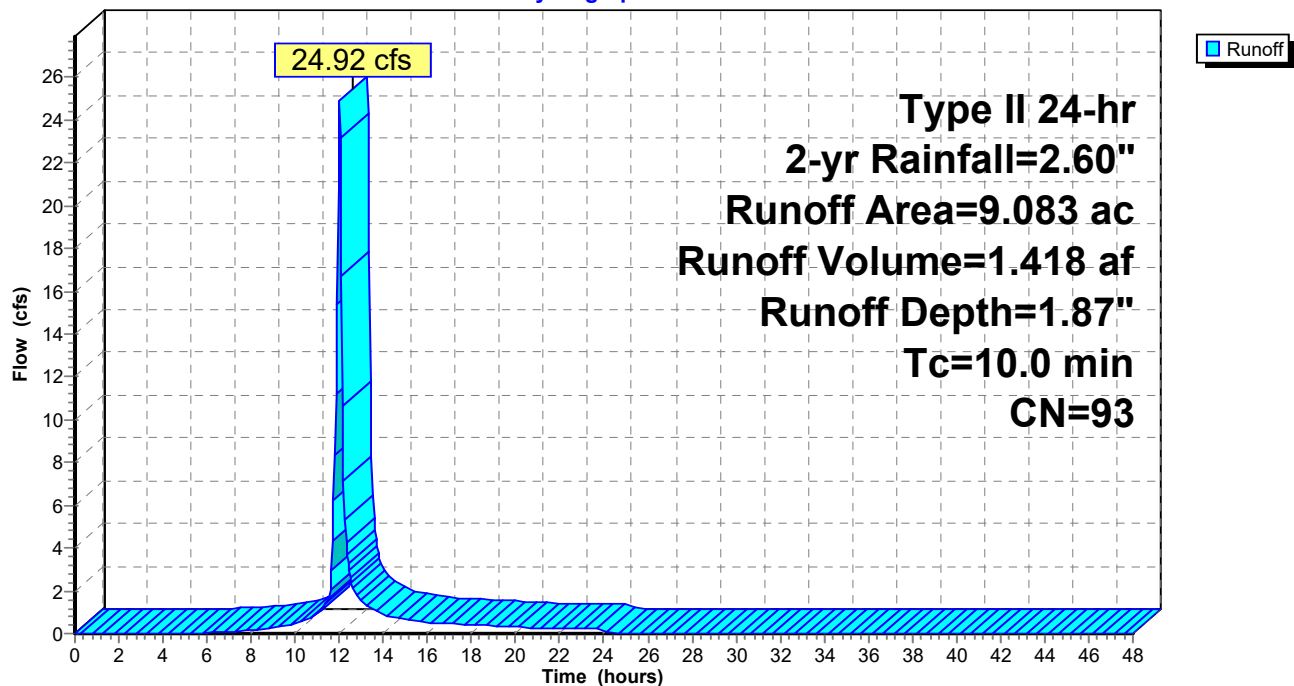
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
2.236	98	Roofs, HSG D
3.306	98	Paved parking, HSG D
3.541	84	50-75% Grass cover, Fair, HSG D
9.083	93	Weighted Average
3.541		38.98% Pervious Area
5.542		61.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Conservative Minimum

Subcatchment A1: PROP CONDITIONS

Hydrograph



5854.00 SWMP

Type II 24-hr 2-yr Rainfall=2.60"

Prepared by Pinnacle Engineering Group

Printed 10/1/2025

HydroCAD® 10.20-7a s/n 07894 © 2025 HydroCAD Software Solutions LLC

Page 4

Summary for Pond P1: PROP POND

Inflow Area = 9.083 ac, 61.02% Impervious, Inflow Depth = 1.87" for 2-yr event
 Inflow = 24.92 cfs @ 12.01 hrs, Volume= 1.418 af
 Outflow = 0.18 cfs @ 24.11 hrs, Volume= 0.506 af, Atten= 99%, Lag= 725.7 min
 Primary = 0.18 cfs @ 24.11 hrs, Volume= 0.506 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 949.01' @ 24.11 hrs Surf.Area= 31,831 sf Storage= 53,901 cf

Plug-Flow detention time= 1,089.3 min calculated for 0.505 af (36% of inflow)
 Center-of-Mass det. time= 963.1 min (1,763.7 - 800.6)

Volume	Invert	Avail.Storage	Storage Description
#1	947.00'	129,785 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
947.00	22,095	0	0
948.00	26,518	24,307	24,307
949.00	31,740	29,129	53,436
950.00	37,923	34,832	88,267
951.00	45,113	41,518	129,785

Device	Routing	Invert	Outlet Devices
#1	Primary	947.00'	24.0" Round Culvert L= 61.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 947.00' / 946.90' S= 0.0016 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	947.00'	2.2" Vert. Dewater - Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	949.10'	60.0" Horiz. Open Top - Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	950.00'	20.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

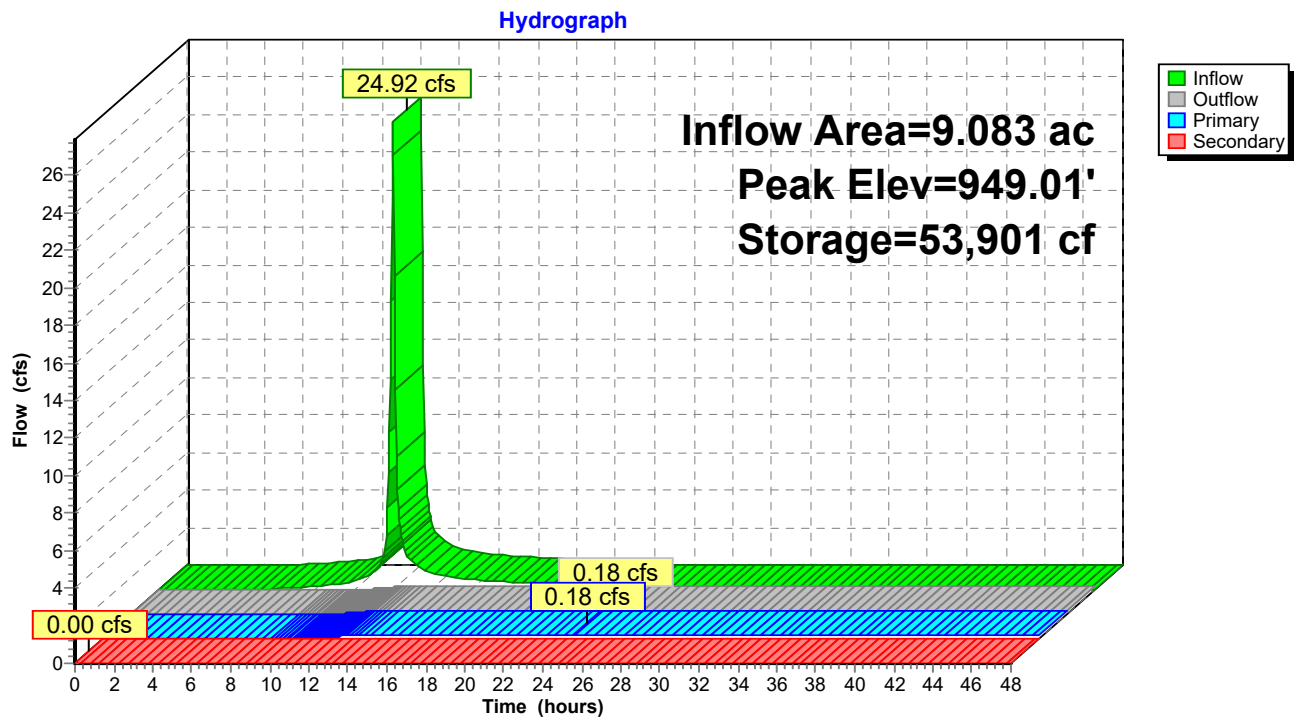
Primary OutFlow Max=0.18 cfs @ 24.11 hrs HW=949.01' (Free Discharge)

↑ **1=Culvert** (Passes 0.18 cfs of 11.22 cfs potential flow)
 ↑ **2=Dewater - Orifice/Grate** (Orifice Controls 0.18 cfs @ 6.68 fps)
 ↑ **3=Open Top - Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=947.00' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P1: PROP POND



5854.00 SWMP

Prepared by Pinnacle Engineering Group

HydroCAD® 10.20-7a s/n 07894 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 100-yr Rainfall=5.53"

Printed 10/1/2025

Page 6

Summary for Subcatchment A1: PROP CONDITIONS

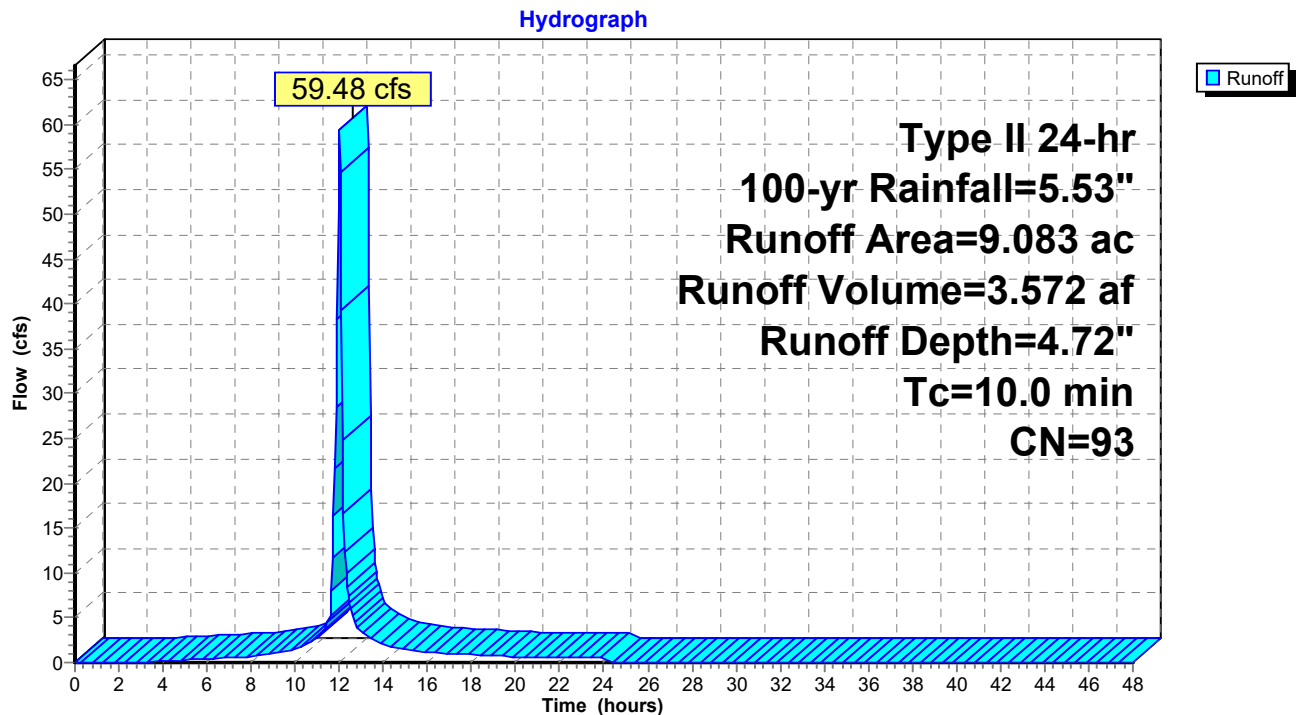
Runoff = 59.48 cfs @ 12.01 hrs, Volume= 3.572 af, Depth= 4.72"
Routed to Pond P1 : PROP POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.53"

Area (ac)	CN	Description
2.236	98	Roofs, HSG D
3.306	98	Paved parking, HSG D
3.541	84	50-75% Grass cover, Fair, HSG D
9.083	93	Weighted Average
3.541		38.98% Pervious Area
5.542		61.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Conservative Minimum

Subcatchment A1: PROP CONDITIONS



5854.00 SWMP

Prepared by Pinnacle Engineering Group

HydroCAD® 10.20-7a s/n 07894 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 100-yr Rainfall=5.53"

Printed 10/1/2025

Page 7

Summary for Pond P1: PROP POND

Inflow Area = 9.083 ac, 61.02% Impervious, Inflow Depth = 4.72" for 100-yr event
 Inflow = 59.48 cfs @ 12.01 hrs, Volume= 3.572 af
 Outflow = 16.70 cfs @ 12.21 hrs, Volume= 2.591 af, Atten= 72%, Lag= 12.0 min
 Primary = 16.70 cfs @ 12.21 hrs, Volume= 2.591 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 949.84' @ 12.21 hrs Surf.Area= 36,945 sf Storage= 82,348 cf

Plug-Flow detention time= 354.6 min calculated for 2.589 af (72% of inflow)
 Center-of-Mass det. time= 264.3 min (1,039.9 - 775.5)

Volume	Invert	Avail.Storage	Storage Description
#1	947.00'	129,785 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
947.00	22,095	0	0
948.00	26,518	24,307	24,307
949.00	31,740	29,129	53,436
950.00	37,923	34,832	88,267
951.00	45,113	41,518	129,785

Device	Routing	Invert	Outlet Devices
#1	Primary	947.00'	24.0" Round Culvert L= 61.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 947.00' / 946.90' S= 0.0016 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	947.00'	2.2" Vert. Dewater - Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	949.10'	60.0" Horiz. Open Top - Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	950.00'	20.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

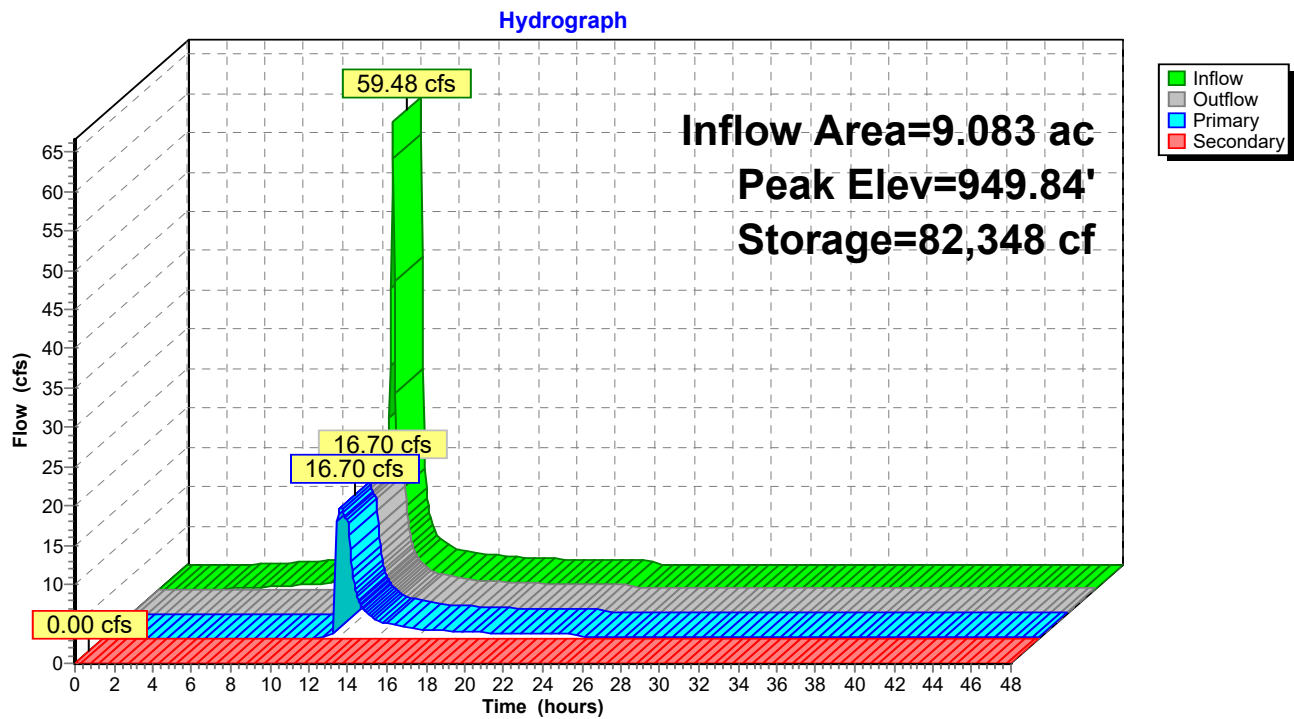
Primary OutFlow Max=16.68 cfs @ 12.21 hrs HW=949.84' (Free Discharge)

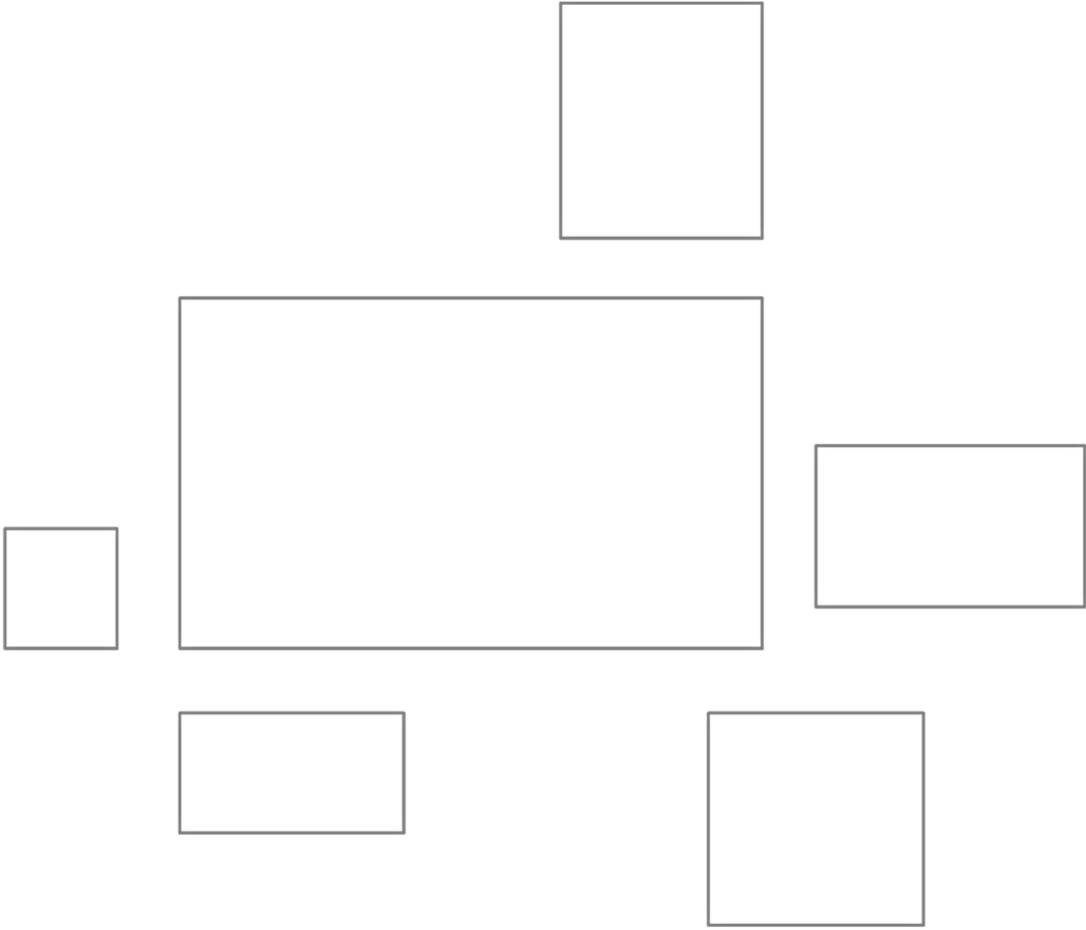
↑ **1=Culvert** (Barrel Controls 16.68 cfs @ 5.31 fps)
 ↑ **2=Dewater - Orifice/Grate** (Passes < 0.21 cfs potential flow)
 ↑ **3=Open Top - Orifice/Grate** (Passes < 32.70 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=947.00' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P1: PROP POND





--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

% Impervious 61.015 %

Drainage Area 9.083 ac

Havg 1.5 ft

WQv = 0.408146 ac-ft = 17778.82845 ft^3

Qavg = 0.205773 ft^3/sec

Aorif = 0.027029 ft^2

dorif = 0.185557 ft = 2.226686222 in



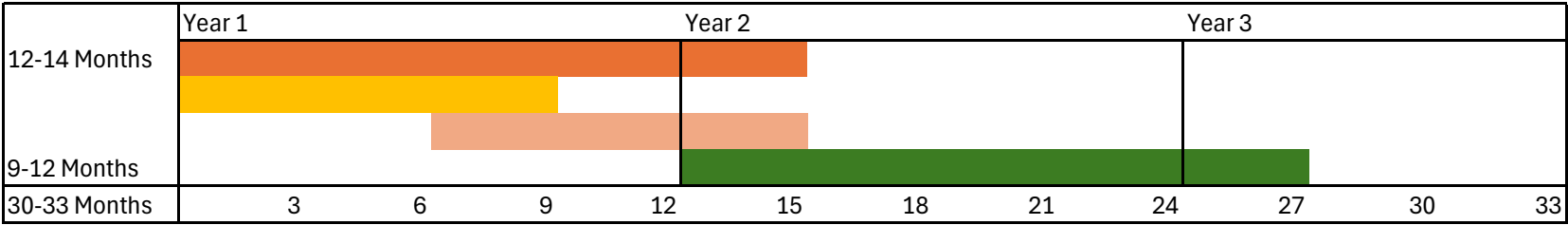
Date: [October 1, 2025](#)

Planned Construction

Start Date: [May 15, 2026](#)

May-2026 Aug-2026 Nov-2026 Feb-2027 May-2027 Aug-2027 Nov-2027 Feb-2028 May-2028 Aug-2028 Nov-2028

Phase I Construction
Earthwork / Horizontal
Vertical (Buildings)
Lease Up
Total # of Months:





Jeremy Haynes

Rylinn Engineering

5645 Castle Creek Pkwy Dr. N Indianapolis, IN 46250

01/22/2025

This correspondence is in response to your request confirming the availability of electric service at:

350 S Three B's & K Rd, Galena, OH 43021

American Electric Power will serve the needs of its customers as those needs occur. Any extension of our facilities to serve a customer will be made in compliance with all rules and regulations your state's utility commission. Any cost associated with providing service to the above addressed will be discussed prior to service being installed.

Before construction begins, please notify AEP's Customer Solutions Center at 1-888-710-4237 to make arrangements for service. We ask that you allow us as much notice as possible, so we can prevent any delays.

Please do not hesitate to contact us if you need any assistance or further information.

Sincerely,

American Electric Power
Business Operations

Officers

PAMALA L. HAWK
President
PERRY K. TUDOR
Vice President
ROBERT W. JENKINS
Secretary
G. MICHAEL DICKEY
Treasurer
GLENN MARZLUF
General Manager/CEO
BRIAN COGHLAN
Chief Operating Officer



6658 OLENTANGY RIVER ROAD

DELAWARE, OHIO 43015

www.delcowater.org

Phone (740) 548-7746 • (800) 521-6779

Directors

MARC A. ARMSTRONG

DAVID A. BENDER

DOUGLAS D. DAWSON

TIMOTHY D. MCNAMARA

MICHAEL (NICK) D. SHEETS

September 24, 2025

Zach Rodenbarger:

via email: zachr@rylinengineering.com

Dear Mr. Rodenbarger:

Please know that Del-Co Water can provide water service to the site described below upon payment of the required fees:

Proposed Land Use: Commercial, Parcels 418-140-01-062-000, 418-140-01-063-000, 418-140-01-064-000, 418-140-01-064-002, 418-140-01-064-004.

Location: 320 S Three B's & K Rd, Galena, OH 43021

Land Size: ±17.975 acres (combined)

This site can be served from an existing 6-inch waterline located along Three B's & K Road. An aerial map is attached to this letter.

This letter of water availability is valid for a period of one year from the date of this letter. Del-Co makes no guarantee of water availability beyond this period. Contact our Engineering Department if you have any questions on the plan review process, or our Customer Service Department for information on tap fees.

Sincerely,
DEL-CO WATER COMPANY, INC.

Cris Valenzuela
Engineer



Legend

- Flow Tests
- Flow Tests > 5 Years
- Parcel Point of Interest
- Water Service Point
 - <Null>,0
 - <Null>,1
 - Active,0
 - Active,1
 - Inactive,0
 - Inactive,1
- Water System Control Station
 - Booster Station
 - Booster/Valve Station
 - Valve Station
- Water MPRV
- Water Hydrants
 - Our Agency, Red
 - Our Agency, Yellow
 - Private
- Water Flushing Hydrants
 - Unlocked
 - Locked
- Water Treatment Plant
- Water Tank
 - Active
 - Inactive

Notes

730.8 0 365.40 730.8 Feet



Zach Rodenbarger <zachr@rylennengineering.com>

RISE Commercial Berlin Twp.

Brandon Conley <bconley@berlintwp.us>

Wed, Sep 24, 2025 at 2:13 PM

To: Zach Rodenbarger <zachr@rylennengineering.com>

Hello Zach,

The drawings you sent look good so far. I will be able to get a better feel when I get the full set. Just make sure Berlin Twp. Zoning and Delaware County Building are good on their end.

Thank You

[Quoted text hidden]

[Quoted text hidden]

C - (614)673-5893

bconley@berlintwp.us

www.berlintwp.us

