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"EXHIBIT E"

ENGINEERING IMPROVEMENT PLANS
FOR
SANDHILL

BEING A SUBDIVISION OF PART OF THE NE 1/4 AND SE 1/4 OF THE SE 1/4 OF SECTION 25 TOWNSHIP 8 NORTH, RANGE 18 EAST VILLAGE OF HARTLAND, WAUKESHA COUNTY, WISCONSIN

PLANS PREPARED FOR

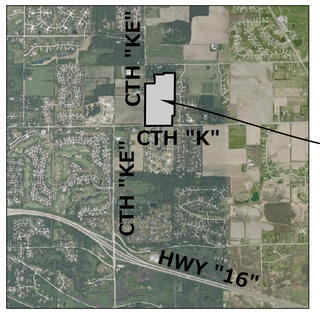
LONGMEADOW DEVELOPMENT LLC
ATTN: JIM SIEPMANN
W240 N1221 PEWAUKEE ROAD
WAUKESHA, WI 53188
TELE.(262) 650-9700
jim@siepmannrealty.com

LEGEND

	EXISTING	PROPOSED
SANITARY SEWER MANHOLE	◎	◉
STORM SEWER MANHOLE	◎	◉
STORM SEWER CATCH BASIN (ROUND CASTING)	○	●
STORM SEWER CATCH BASIN (RECTANGULAR CASTING)	□	■
PRECAST FLARED END SECTION	◁	◀
VALVE BOX	⊞	⊞
FIRE HYDRANT		
CLEANOUT	◎	◉
SANITARY SEWER		
STORM SEWER		
WATER MAIN	W	W
ELECTRICAL CABLE	E	E
GAS MAIN	G	G
TELEPHONE LINE	T	T
UTILITY CROSSING		X
LIGHTING		
ELECTRICAL TRANSFORMER OR PEDESTAL	E	
POWER POLE		
POWER POLE WITH LIGHT		
GUY WIRE		
STREET SIGN		
CONTOUR	749	749
SPOT ELEVATION	×750.00	+750.00
WETLANDS	WET	WET
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	6" 6"	
SOIL BORING	B-#	B-#
TOPSOIL PROBE	T-#	T-#
FENCE LINE, TEMPORARY SILT	SF	SF
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		

ABBREVIATIONS

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



PROJECT LOCATION

LOCATION MAP
NOT TO SCALE

NORTH

INDEX OF SHEETS

C-1	COVER SHEET
C-2	PROPOSED SITE PLAN
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C-21 - C-24	COUNTY CROSS SECTIONS C.T.H. KE
C-25 - C-30	INTERIM GRADING & EROSION CONTROL PLANS
C-31 - C-34	CONSTRUCTION DETAILS
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C-36 - C-41	MASTER GRADING PLANS
C-42	LANDSCAPE PLAN

GENERAL NOTES

1. 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.
2. 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.
3. THE CONTRACTOR SHALL PROMPTLY REPORT ANY ERRORS OR AMBIGUITIES LEARNED AS PART OF THEIR REVIEW OF PLANS, SPECIFICATIONS, REPORTS AND FIELD INVESTIGATIONS.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. THE CONTRACTOR SHALL NOTIFY ALL INTERESTED GOVERNING AGENCIES, UTILITY COMPANIES AFFECTED BY THIS CONSTRUCTION PROJECT, AND DIGGER'S HOTLINE IN ADVANCE OF CONSTRUCTION TO COMPLY WITH ALL JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., PERMIT STIPULATIONS, AND OTHER APPLICABLE STANDARDS.
11. 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.
12. 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."
13. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, ENGINEER, AND THEIR AGENTS FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.

CIVIL ENGINEERING CONTACTS

ANTHONY S. ZANON, P.E.
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888

FOR REVIEW

WISCONSIN
ANTHONY S. ZANON
E-33708
WAUKESHA, WI
PROFESSIONAL ENGINEER

EXPIRATION DATE: JULY 31st, 2022

DIGGERS HOTLINE
Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

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.

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SANDHILL
VILLAGE OF HARTLAND, WI

COVER SHEET

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE

SHEET
C-1
C-42

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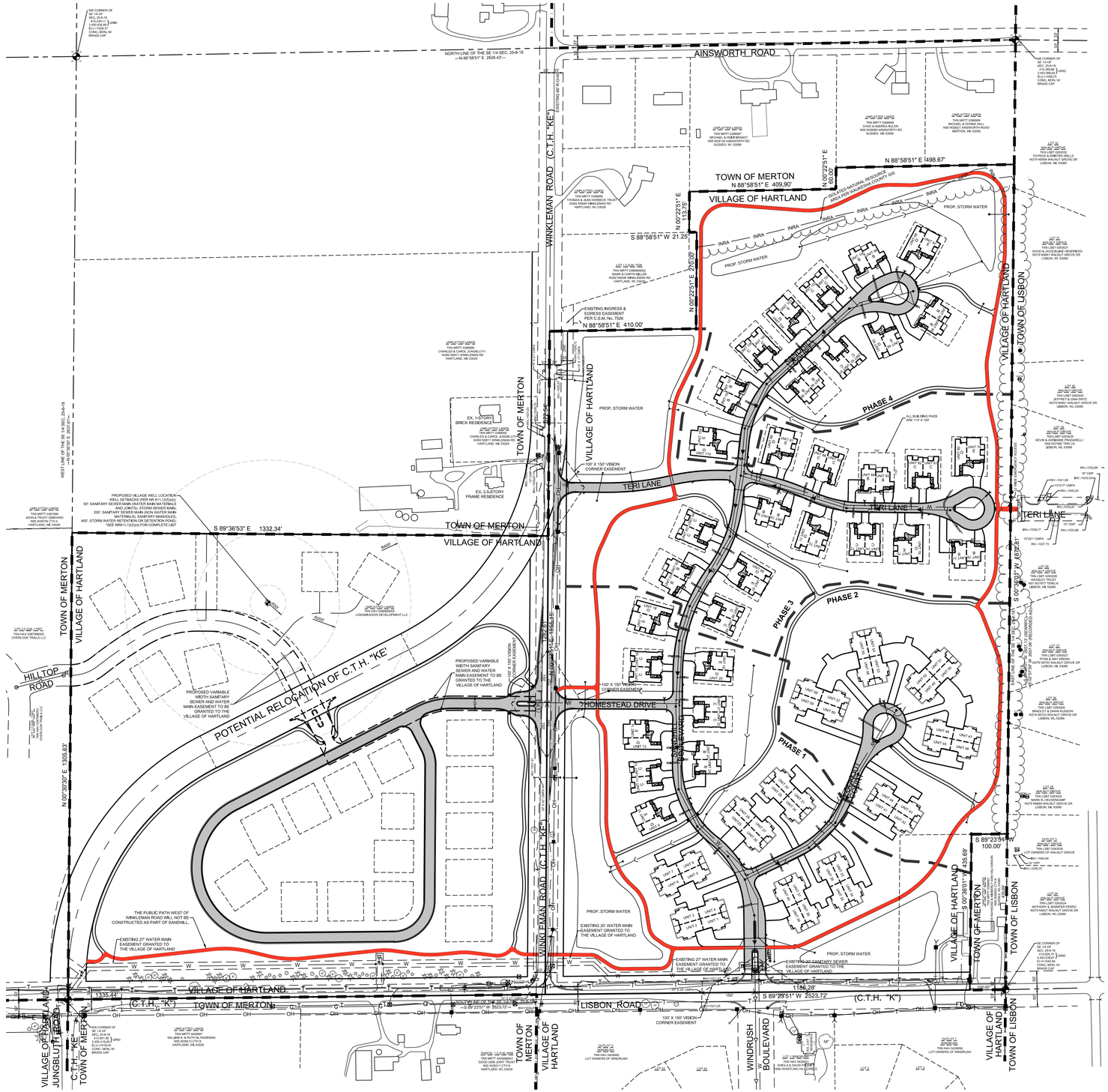

Legal Description:
All that part of the Northeast Quarter (NE ¼) and Southeast Quarter (SE ¼) of the Southeast Quarter (SE ¼) of Section 25, Town 8 North, Range 18 East, Village of Hartland, Waukesha County, Wisconsin bounded and described as follows: Commencing at the southeast corner of said Southeast Quarter (SE ¼); thence South 89°23'51" West along the south line of said Southeast Quarter (SE ¼) and the centerline of Lisbon Road (CTH K) 100.00 feet to the place of beginning of the land hereinafter to be described; thence continuing South 89°23'51" West along said south line and centerline 1188.28 feet to the centerline of Winkleman Road (CTH KE); thence North 00°22'51" East along said centerline 1855.15 feet; thence North 88°58'51" East 410.00 feet; thence North 00°22'51" East 270.00 feet; thence South 88°58'51" West 21.25 feet; thence North 00°22'51" East 113.75 feet; thence North 88°58'51" East 409.90 feet; thence North 00°22'51" East 60.00 feet; thence North 88°58'51" East 498.67 feet to the east line of said Southeast Quarter (SE ¼) and the west subdivision line of Walnut Grove, a recorded subdivision; thence South 00°36'01" West (recorded as South 02°07'39" West) along said east line and subdivision line 1872.81 feet; thence South 89°23'51" West 100.00 feet; thence South 00°36'01" West 435.69 feet to the place of beginning. Reserving right-of-way for existing Lisbon Road (CTH K) and Winkleman Road (CTH KE). Containing a gross area of 2,731,092 square feet (62.6972 acres) and a net area of 2,581,407 square feet (59.2610 acres) of land.



LOCATION MAP
SE, 1/4 SEC.25-8-18
SCALE: 1"=1320'

NORTH
GRAPHICAL SCALE (FEET)
0 1" = 150' 300'

LEGEND:

- EX. MONUMENT
- EX. IRON PIPE
- EX. IRON ROD
- EX. HYDRANT
- EX. WATER VALVE
- EX. SANITARY MANHOLE
- EX. CATCH BASIN
- EX. WOOD POST
- EX. POST
- EX. GAS METER
- EX. GAS VALVE
- EX. WELL LOCATION
- EX. CLEANOUT
- EX. SEPTIC COVER
- EX. VENT
- EX. ELECTRIC PEDESTAL
- EX. PEDESTAL
- EX. ELECTRIC METER
- EX. AIRCONDITIONER UNIT
- EX. POWER POLE
- EX. GUY WIRE
- EX. LIGHT POLE
- EX. SIGN
- EX. MAILBOX
- EX. DECIDUOUS TREE
- EX. CONIFEROUS TREE
- EX. SANITARY SEWER
- EX. WATER MAIN
- EX. STORM SEWER
- EX. FENCE LINE
- EX. OVERHEAD WIRE
- EX. GAS MAIN
- EX. TELEPHONE
- EX. ELECTRIC
- EX. FIBER OPTIC
- EX. TREE LINE
- EX. DITCH LINE
- EX. ISOLATED NATURAL RESOURCE AREA
- EX. SOIL LINE
- EX. 2-FOOT CONTOURS
- EX. 10-FOOT CONTOURS

ANY OF THE TWO FAMILY BUILDINGS FIT INTO THE BUILDING PAD. IF A BUILDING DOES NOT HAVE THE DASHED BUILDING PAD, THAT SPECIFIC BUILDING NEEDS TO BE CONSTRUCTED IN THAT LOCATION DUE TO SETBACKS AND SPACING BETWEEN BUILDINGS.

PUBLIC PATHS AREA RED, ALL OTHER PATHS ARE PRIVATE. PUBLIC PATHS TO BE COVERED BY A 12' WIDE PUBLIC ACCESS PATH EASEMENT GRANTED TO THE VILLAGE OF HARTLAND.

SANDHILL EAST MULTI-FAMILY DATA TABLE:
PROPERTY AREA = 59.26 AC (DOES NOT INCLUDE 50' ROW FOR CTH KE & CTH K)

33 TWO-FAMILY BUILDINGS (66 UNITS)
11 FOUR-FAMILY BUILDINGS (44 UNITS)
44 TOTAL BUILDINGS (110 UNITS)

DENSITY = 110 UNITS / 59.26 ACRE = 1.86 UNITS/ACRE

TOTAL LENGTH OF PROPOSED ROAD = 4,448 LF (ROAD WIDTH = 24' ASPHALT, 27' BACK OF CURB TO BACK OF CURB)
TOTAL LENGTH OF PROPOSED PATH = 9,313 LF (PATH WIDTH = 8')

BUILDING SETBACKS:
ALL BUILDINGS ARE AT LEAST 30' FROM THE BACK OF CURB
ALL BUILDINGS ARE AT LEAST 25' APART

AREA CALCULATION:
TOTAL SITE = 59.26 ACRES
IMPERVIOUS AREA = 18.75 ACRES (31.6%)
GREEN SPACE = 40.51 ACRES (68.4%)

NOTE: The location and size of the underground structures and utilities shown hereon have been located to a reasonable degree of accuracy, but the Engineer and/or Surveyor does not guarantee their exact location or the location of others not shown.
Contact Diggers Hotline, Inc., Etc.

TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

WIS STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

MILW. AREA 259-1181

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SANDHILL
VILLAGE OF HARTLAND, WI

PROPOSED SITE PLAN

REVISIONS

1	VILLAGE COMMENTS	03-31-21
2	VILLAGE COMMENTS	04-12-21

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 150'

SHEET
C-2
C-42

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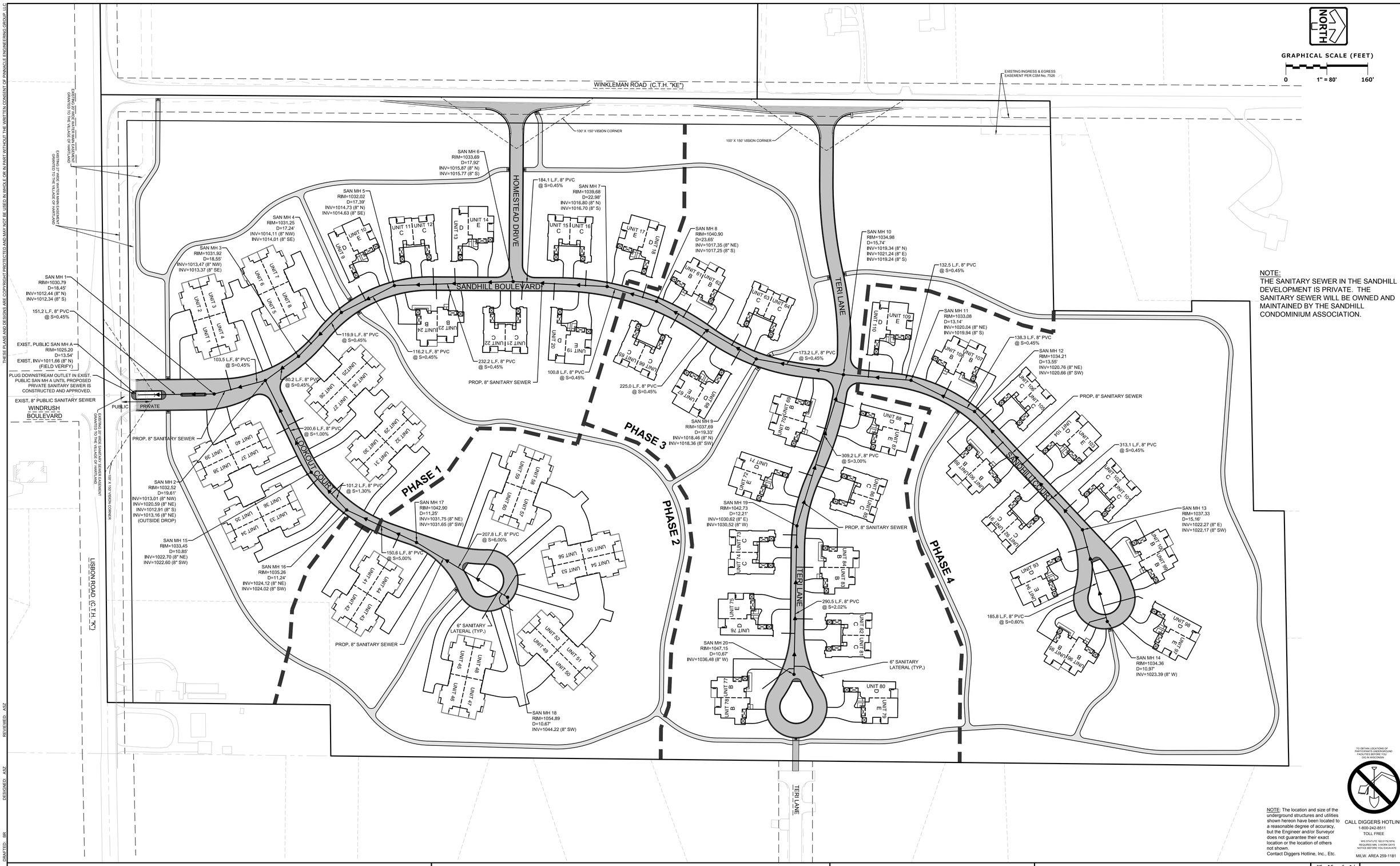

NOTE:
THE SANITARY SEWER IN THE SANDHILL DEVELOPMENT IS PRIVATE. THE SANITARY SEWER WILL BE OWNED AND MAINTAINED BY THE SANDHILL CONDOMINIUM ASSOCIATION.

NOTE: The location and size of the underground structures and utilities shown hereon have been located to a reasonable degree of accuracy, but the Engineer and/or Surveyor does not guarantee their exact location or the location of others not shown.
Contact Diggers Hotline, Inc., Etc.

TO OBTAIN LOCATIONS OF PARTICIPANTS' UNDERGROUND FACILITIES (UTILITIES) CALL BY WISCONSIN LAW

CALL DIGGERS HOTLINE
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SANDHILL
VILLAGE OF HARTLAND, WI

SANITARY SEWER SYSTEM PLAN

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM. ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-3
C-42

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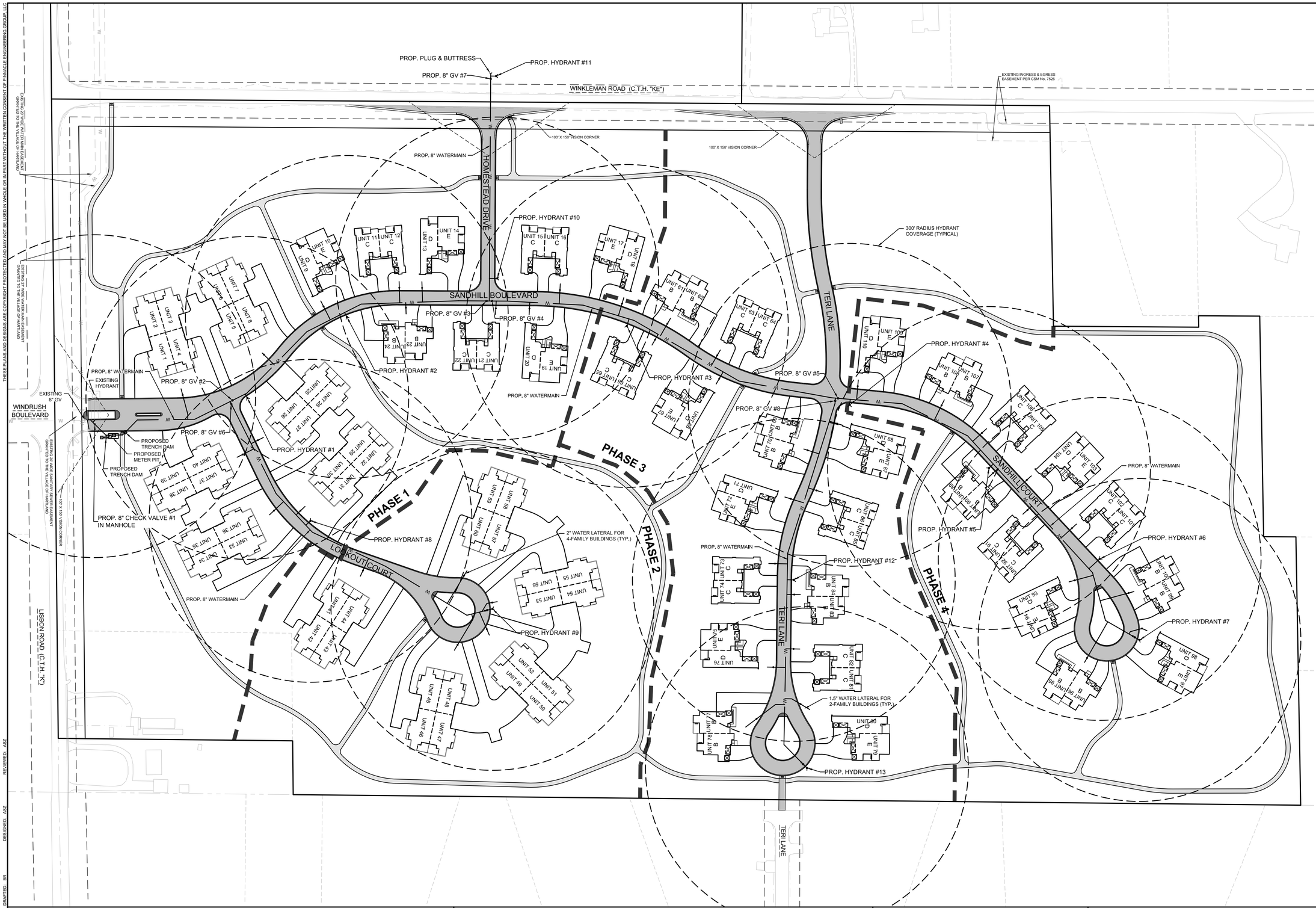

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 80' 160'

NOTES:

1. THE WATER MAIN IN THE SANDHILL DEVELOPMENT IS PRIVATE. THE WATER MAIN WILL BE OWNED AND MAINTAINED BY THE SANDHILL CONDOMINIUM ASSOCIATION.
2. PUBLIC WATER METER IS IN THE METER PIT LOCATED ON THE EAST SIDE OF SANDHILL BLVD. AT LISBON ROAD (C.T.H. "K"). AT A MINIMUM EACH BUILDING WILL HAVE ONE PRIVATE WATER METER. DEVELOPER MAY CHOSE TO INSTALL A WATER METER IN EACH UNIT.

NOTE: The location and size of the underground structures and utilities shown hereon have been located to a reasonable degree of accuracy, but the Engineer and/or Surveyor does not guarantee their exact location or the location of others not shown.
Contact Diggers Hotline, Inc., Etc.

TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES (UTILITY) CALL IN WISCONSIN

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SANDHILL
VILLAGE OF HARTLAND, WI

WATER MAIN SYSTEM PLAN

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM. ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-4
C-42

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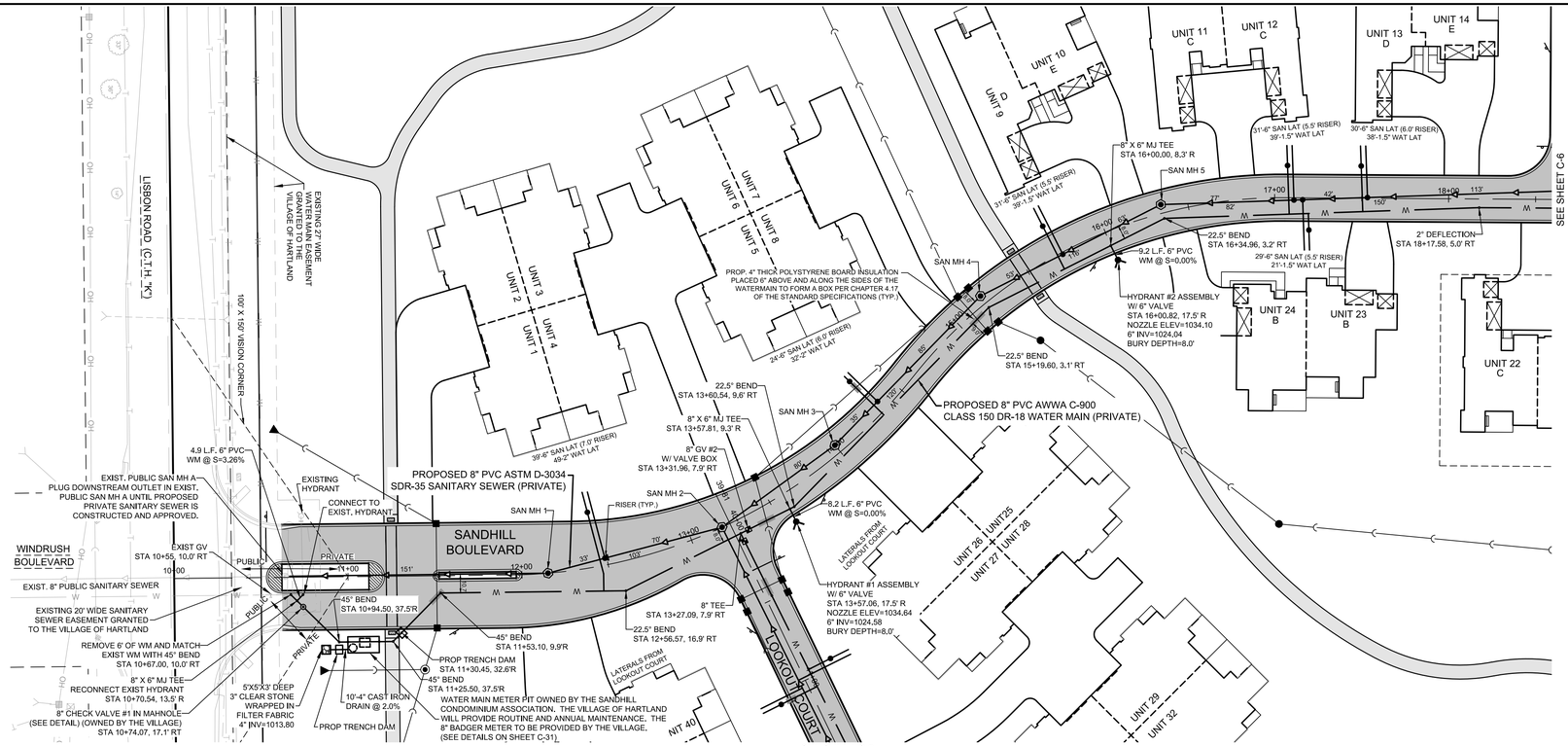

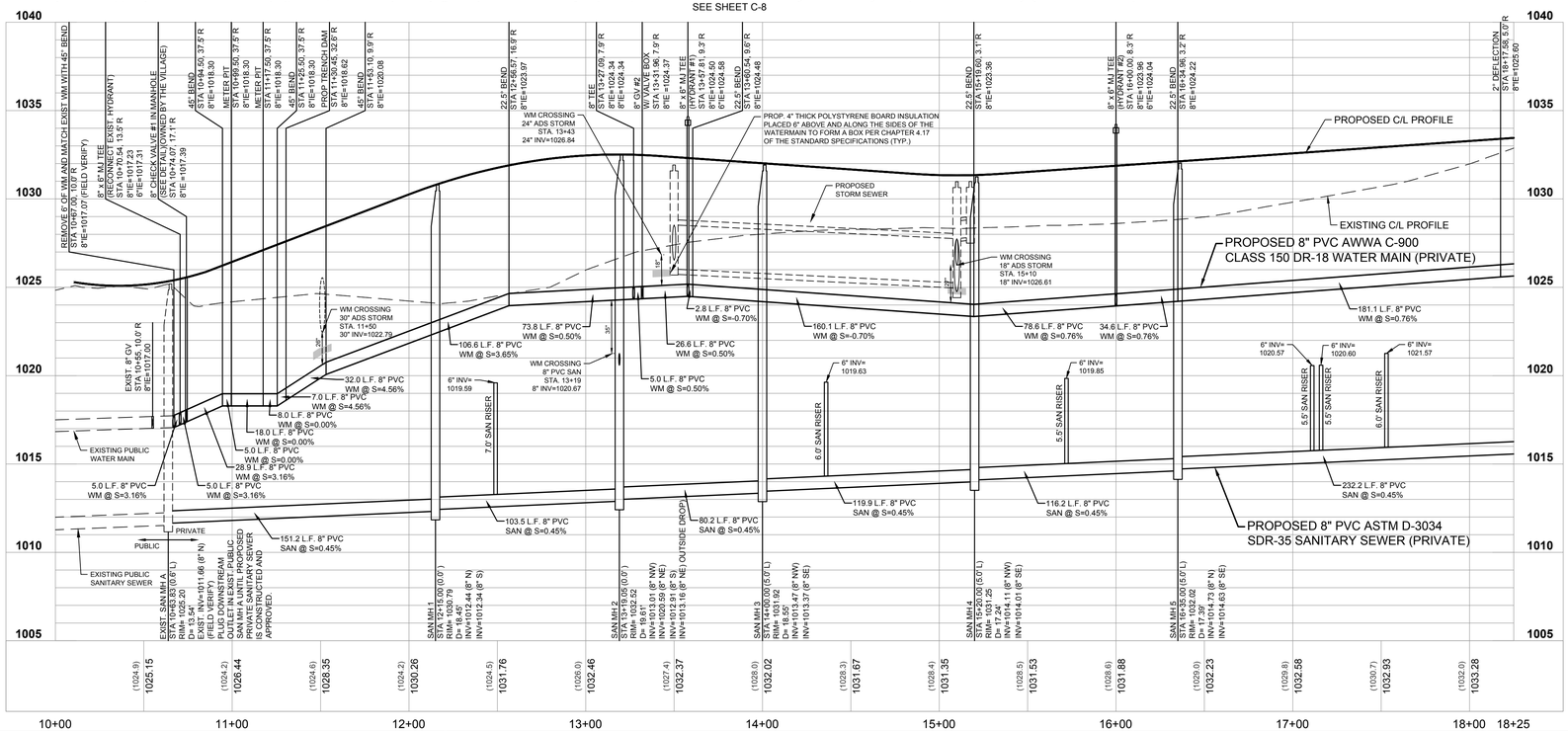

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 40' 80'

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NOTES:

1. THE SANITARY SEWER AND WATER MAIN IN THE SANDHILL DEVELOPMENT IS PRIVATE. THE SANITARY SEWER AND WATER MAIN WILL BE OWNED AND MAINTAINED BY THE SANDHILL CONDOMINIUM ASSOCIATION.
2. PUBLIC WATER METER IS IN THE METER PIT LOCATED ON THE EAST SIDE OF SANDHILL BLVD. AT LISBON ROAD (C.T.H. "K"). AT A MINIMUM EACH BUILDING WILL HAVE ONE PRIVATE WATER METER. DEVELOPER MAY CHOSE TO INSTALL A WATER METER IN EACH UNIT.
3. SEE UTILITY NOTES AND DETAILS ON THE CONSTRUCTION DETAIL SHEET.

1" = 4'
0
1" = 40'

NOTE: The location and size of the underground structures and utilities shown hereon have been located to a reasonable degree of accuracy, but the Engineer and/or Surveyor does not guarantee their exact location or the location of others not shown. Contact Diggers Hotline, Inc., Etc.

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SANDHILL
VILLAGE OF HARTLAND, WI

PROPOSED SANITARY SEWER AND WATER MAIN PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21	
2	VILLAGE COMMENTS	04-12-21	

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-5
C-42

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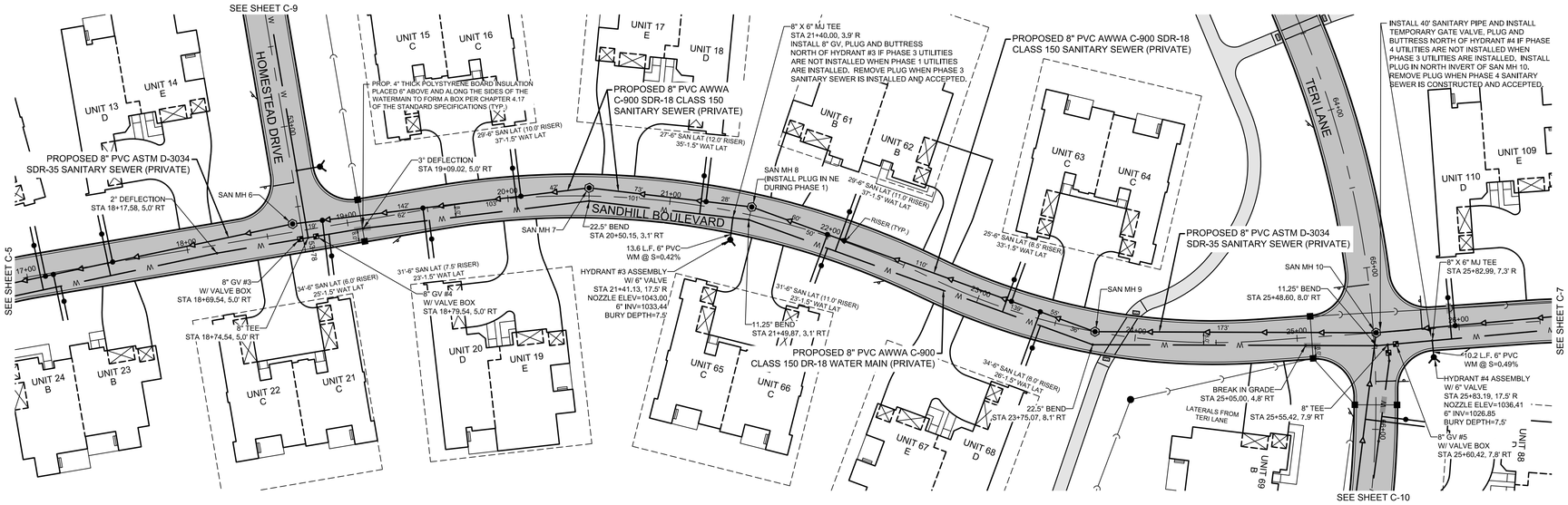

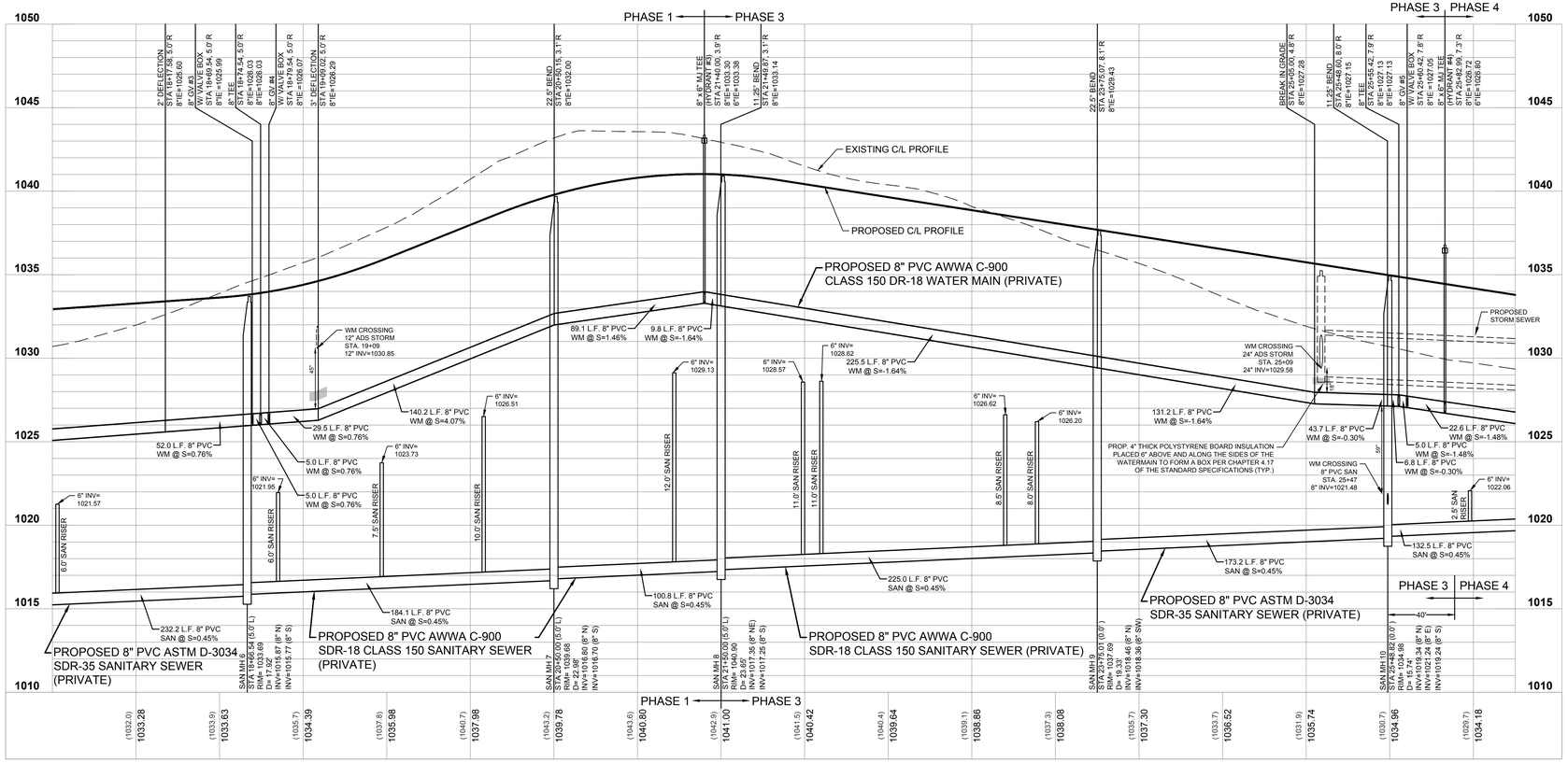

NOTES:
1. THE SANITARY SEWER AND WATER MAIN IN THE SANDHILL DEVELOPMENT IS PRIVATE. THE SANITARY SEWER AND WATER MAIN WILL BE OWNED AND MAINTAINED BY THE SANDHILL CONDOMINIUM ASSOCIATION.
2. PUBLIC WATER METER IS IN THE METER PIT LOCATED ON THE EAST SIDE OF SANDHILL BLVD. AT LISBON ROAD (C.T.H. "K"). AT A MINIMUM EACH BUILDING WILL HAVE ONE PRIVATE WATER METER. DEVELOPER MAY CHOSE TO INSTALL A WATER METER IN EACH UNIT.
3. SEE UTILITY NOTES AND DETAILS ON THE CONSTRUCTION DETAIL SHEET.

NORTH

GRAPHICAL SCALE (FEET)
0 1" = 40' 80'

1" = 4'
0
0 1" = 40'

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SANDHILL
VILLAGE OF HARTLAND, WI

PROPOSED SANITARY SEWER AND WATER MAIN PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21	
2	VILLAGE COMMENTS	04-12-21	

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET C-6 of C-42

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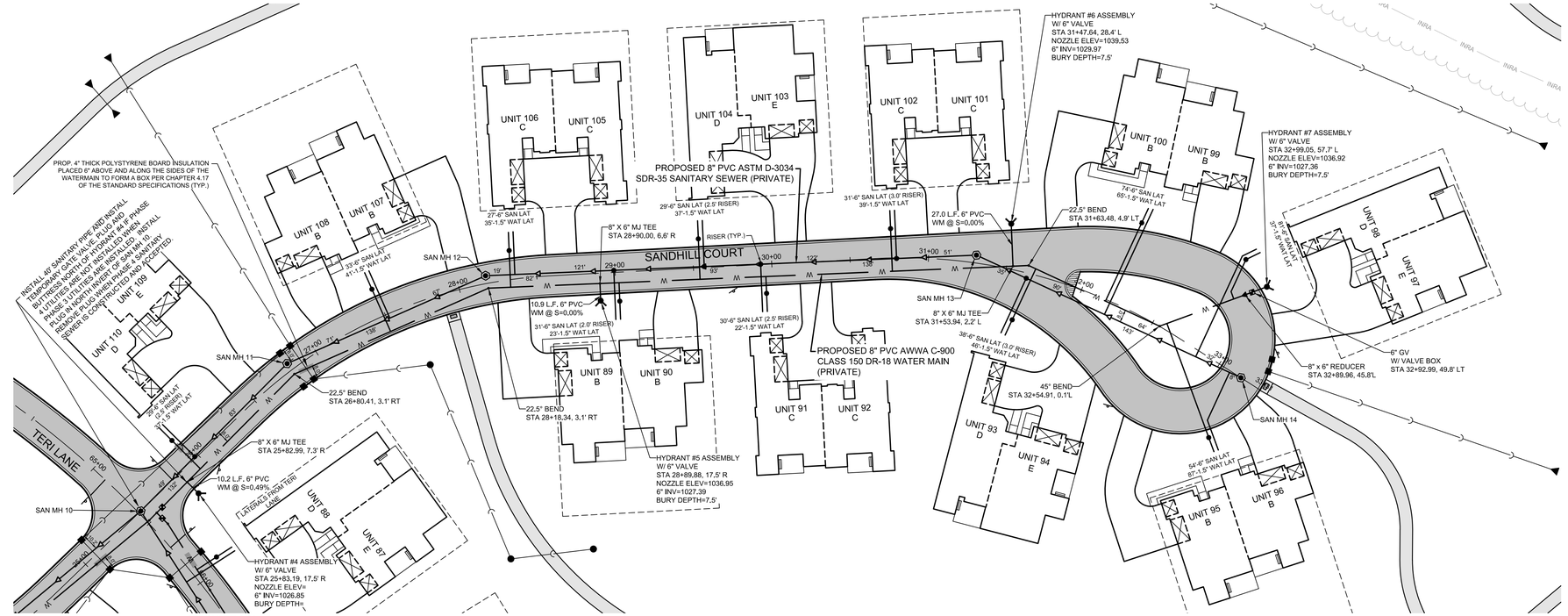

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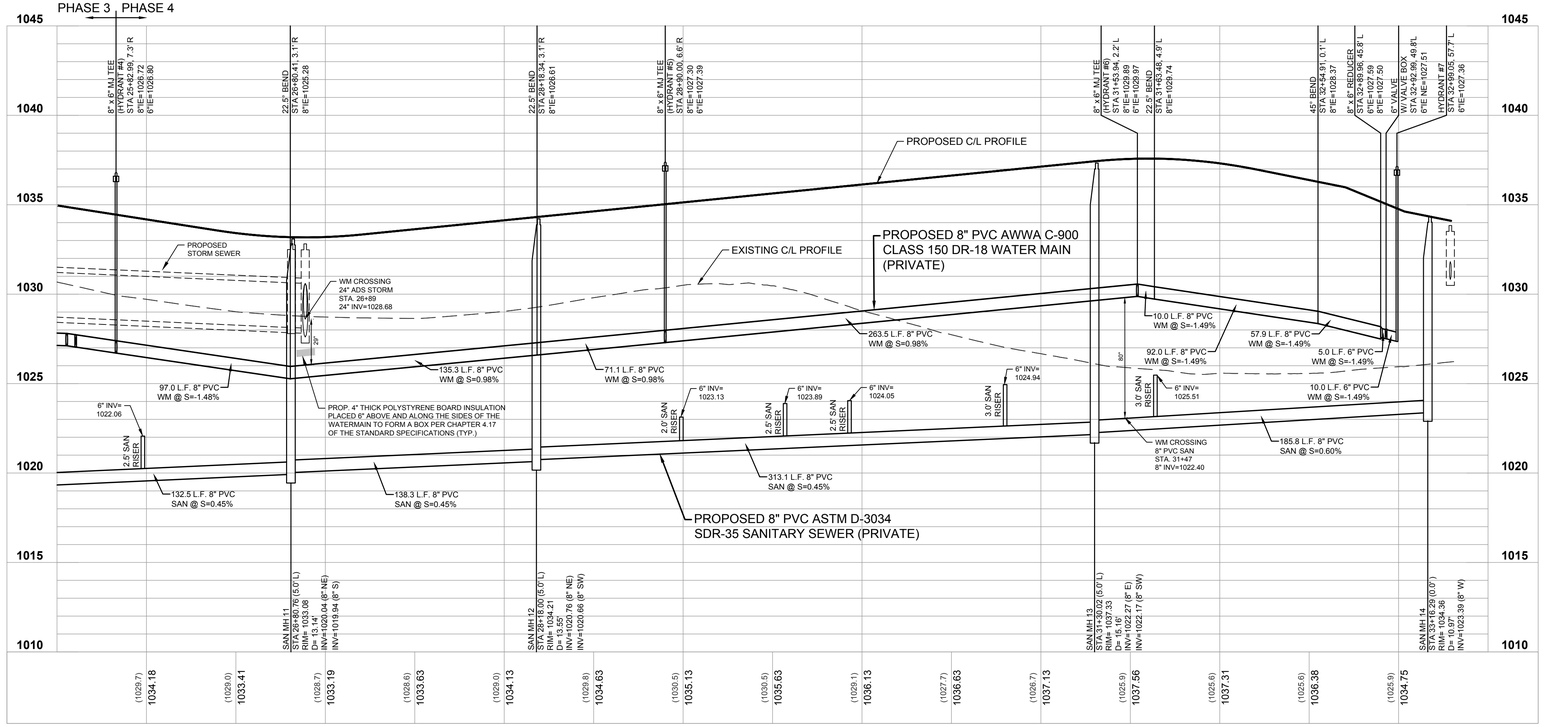

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PROPOSED SANITARY SEWER AND WATER MAIN PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI | ASZ
PEG PM
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-7
C-42

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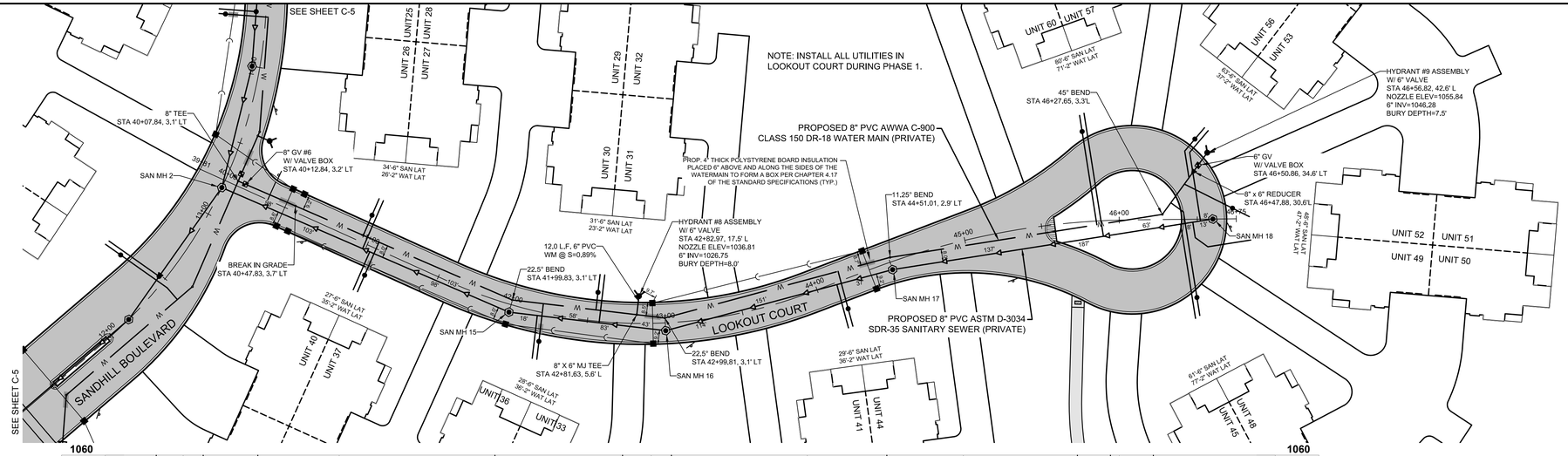

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PROPOSED SANITARY SEWER AND WATER MAIN PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI ASZ
PEG PM
START DATE 02-19-21
SCALE 1" = 80'

SHEET
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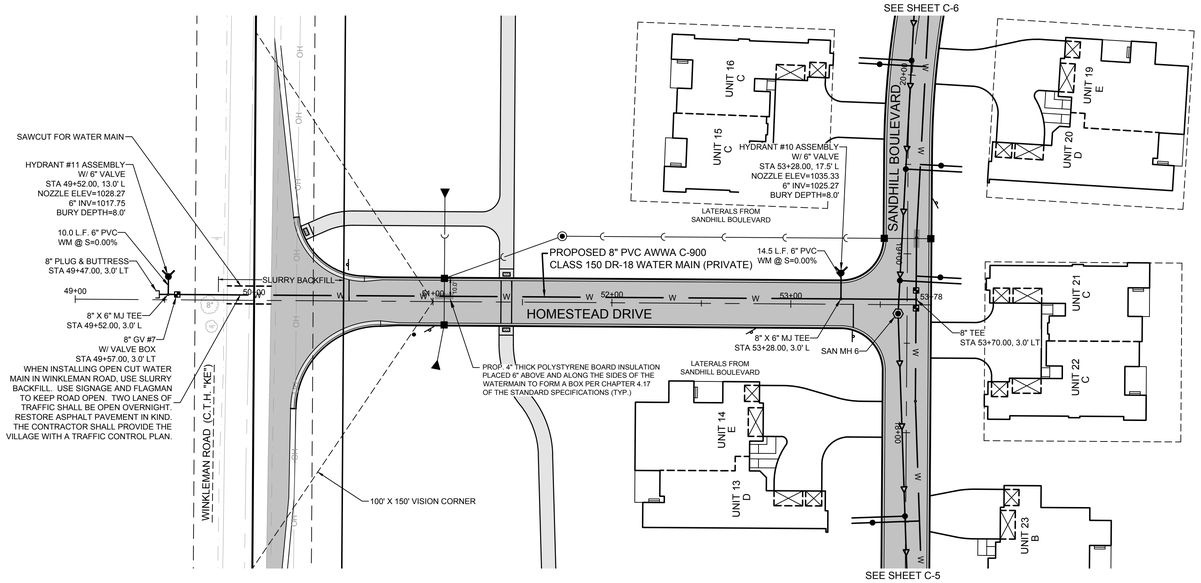

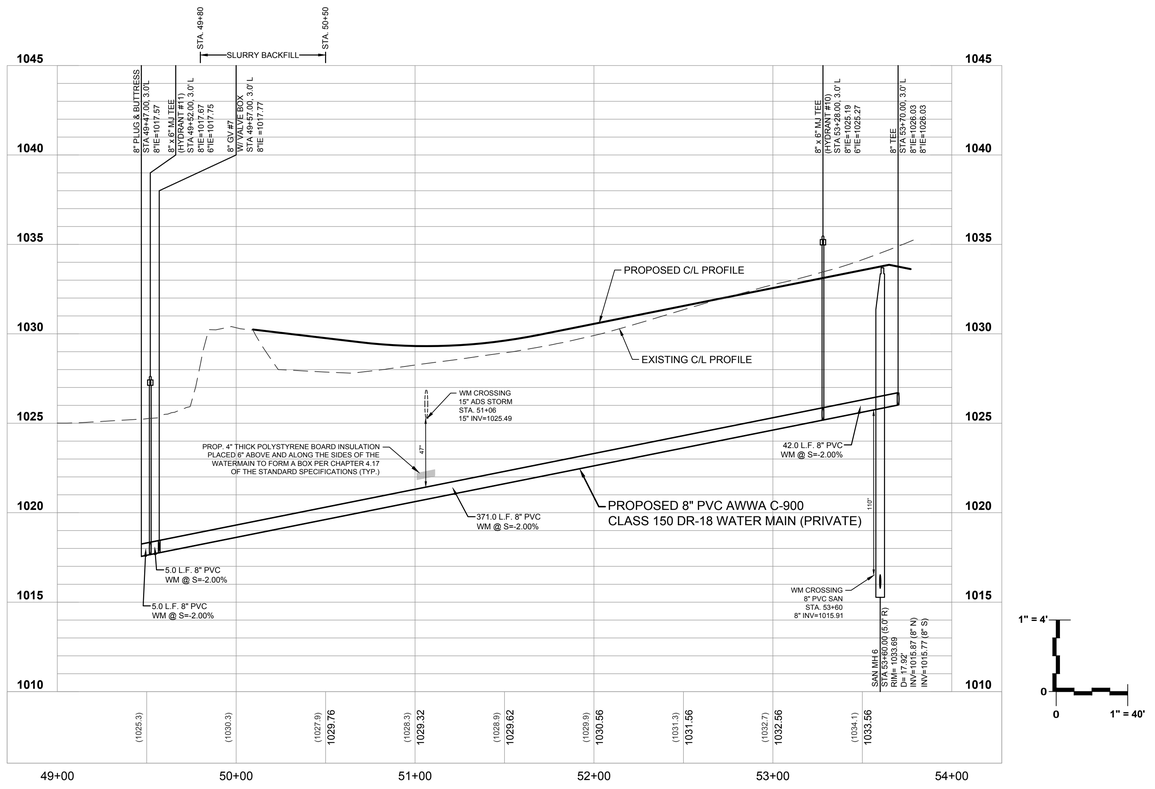

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 40' 80'

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PROPOSED SANITARY SEWER AND WATER MAIN PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-9
C-42

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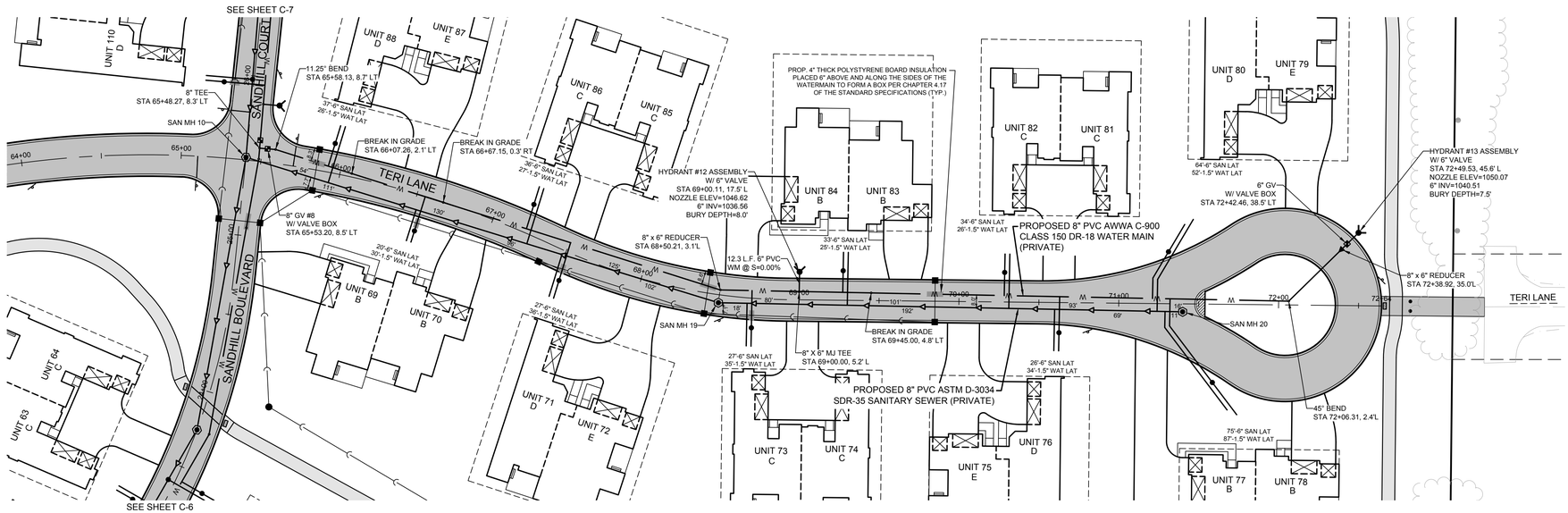

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 40' 80'

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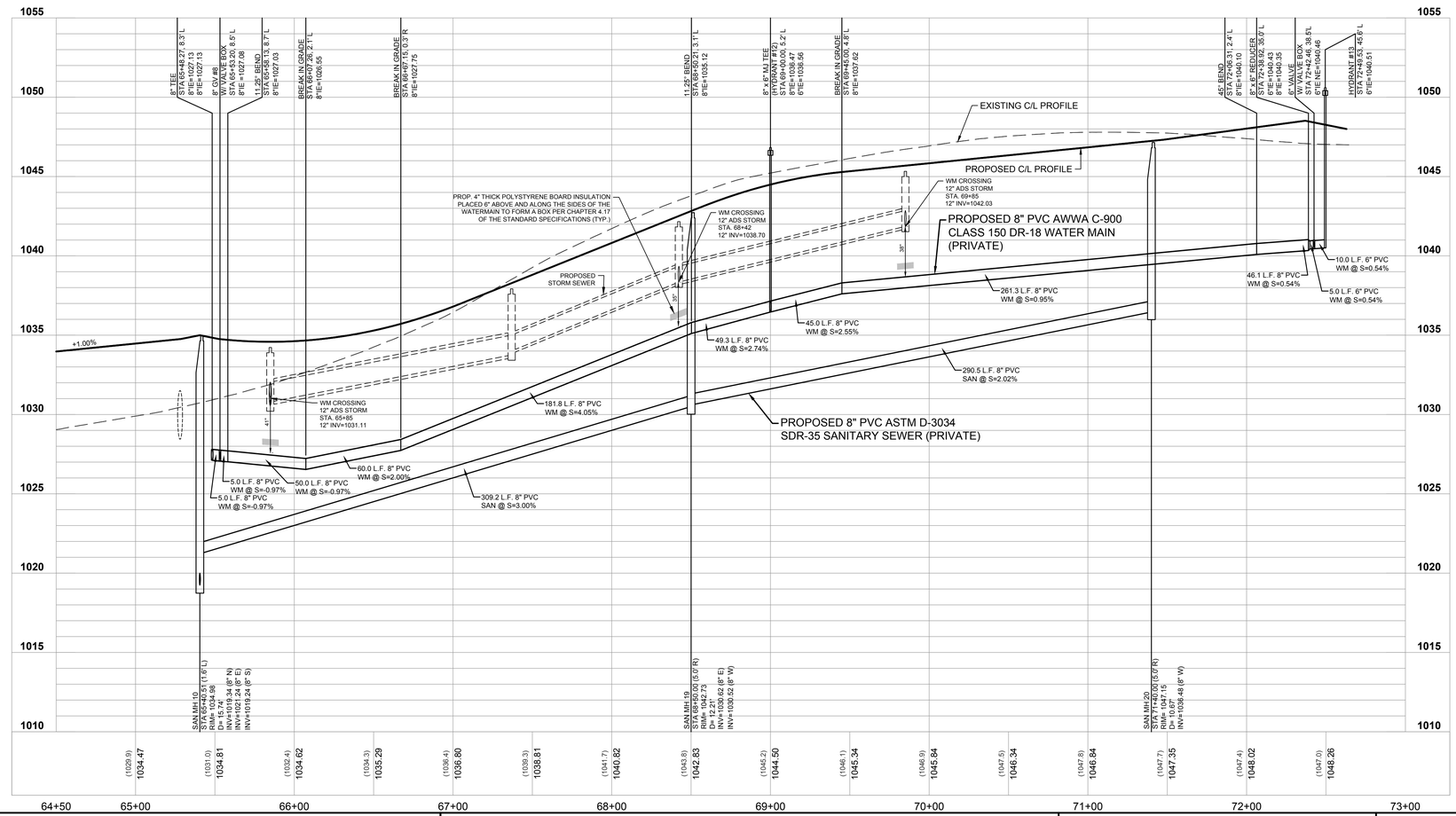

1" = 4'

0 1" = 40'

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PROPOSED SANITARY SEWER AND WATER MAIN PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI ASZ
PEG PM.
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-10
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NORTH

GRAPHICAL SCALE (FEET)

0 1" = 80' 160'

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NOTE:
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SANDHILL
VILLAGE OF HARTLAND, WI

STORM SEWER SYSTEM PLAN

REVISIONS

1	VILLAGE COMMENTS	03-31-21	
2	VILLAGE COMMENTS	04-12-21	

PEG JOB No. 767.00-WI
PEG PM. ASZ
START DATE 02-19-21
SCALE 1" = 80'

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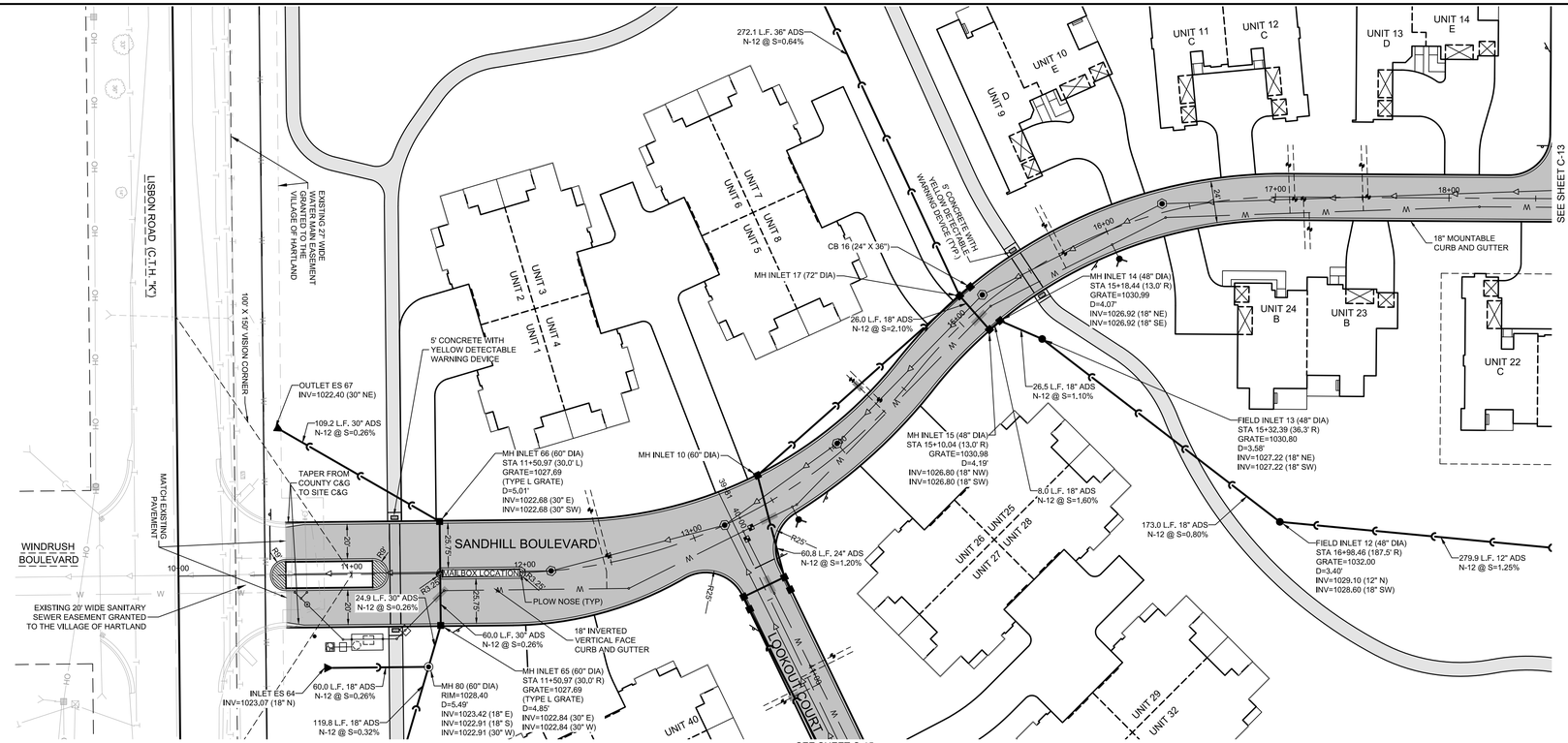

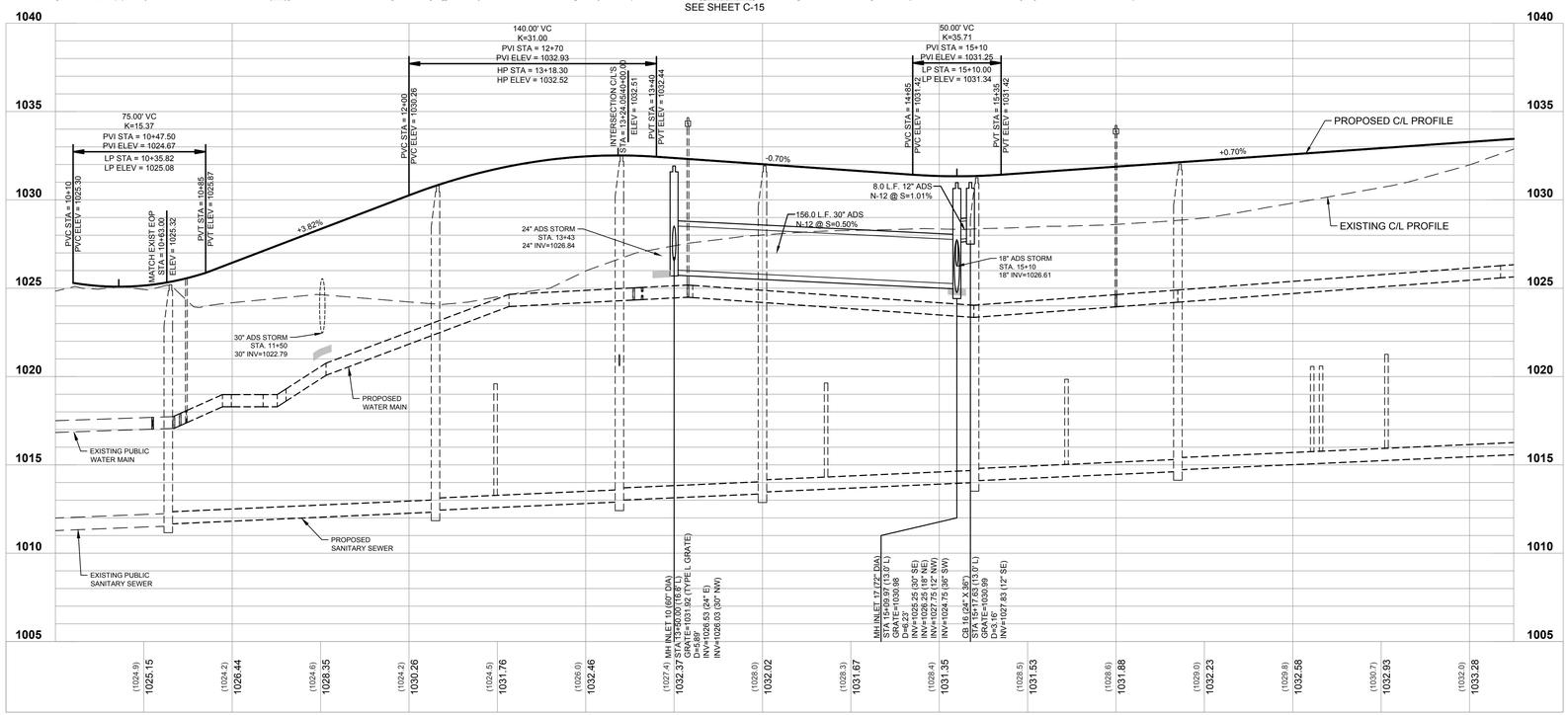

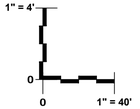



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PROPOSED PAVING AND STORM SEWER PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI ASZ
PEG PM: ASZ
START DATE: 02-19-21
SCALE: 1" = 80'

SHEET
C-12
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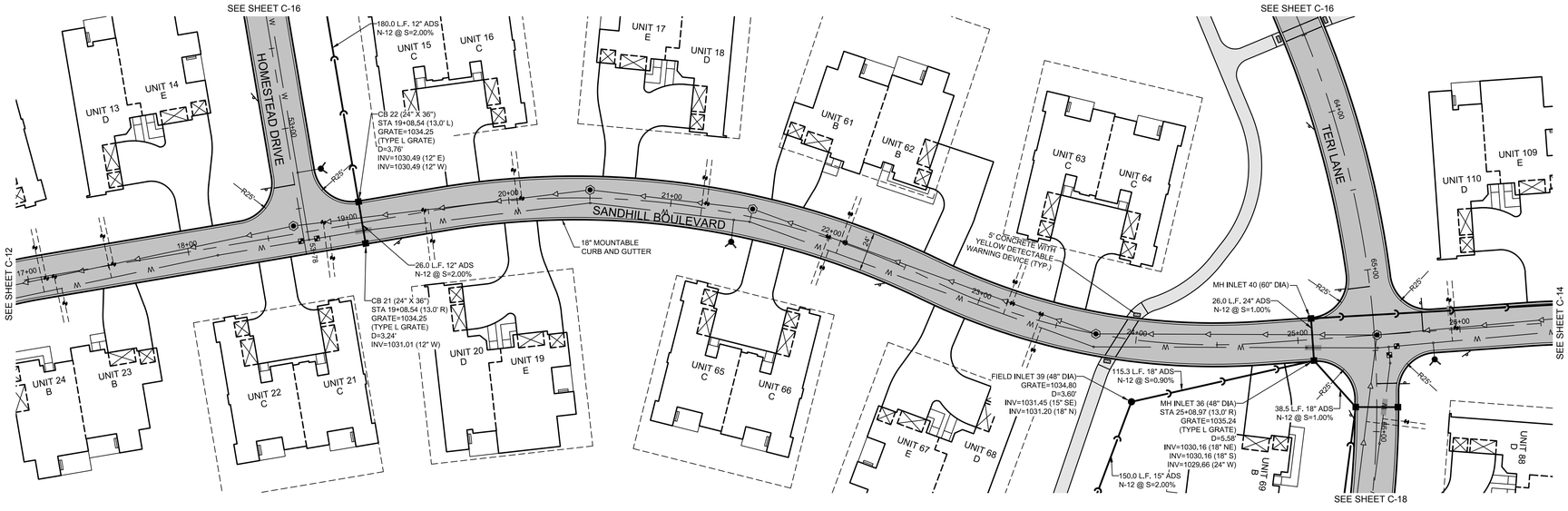

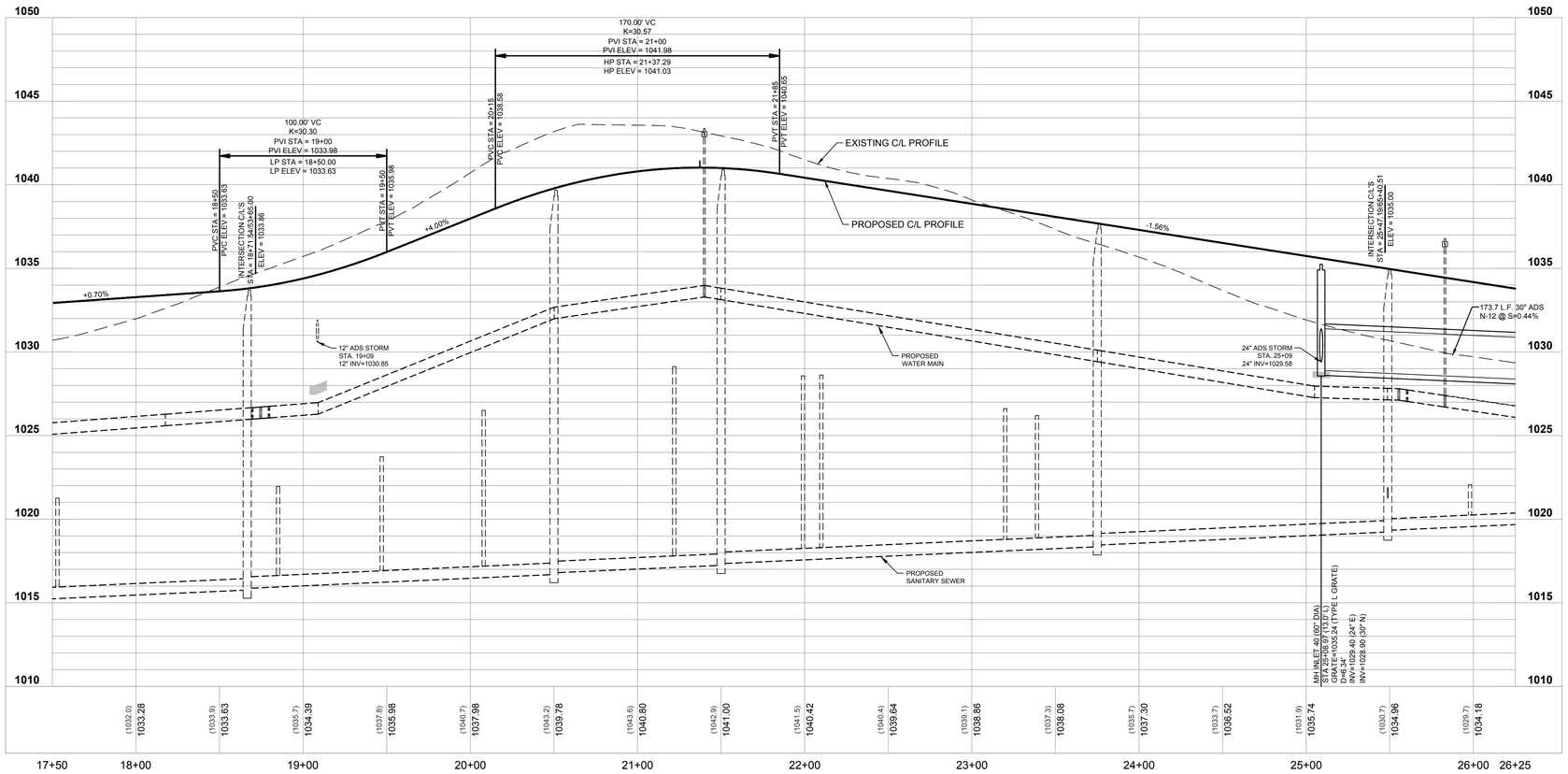





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PROPOSED PAVING AND STORM SEWER PLAN & PROFILE

REVISIONS

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2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-13
C-42

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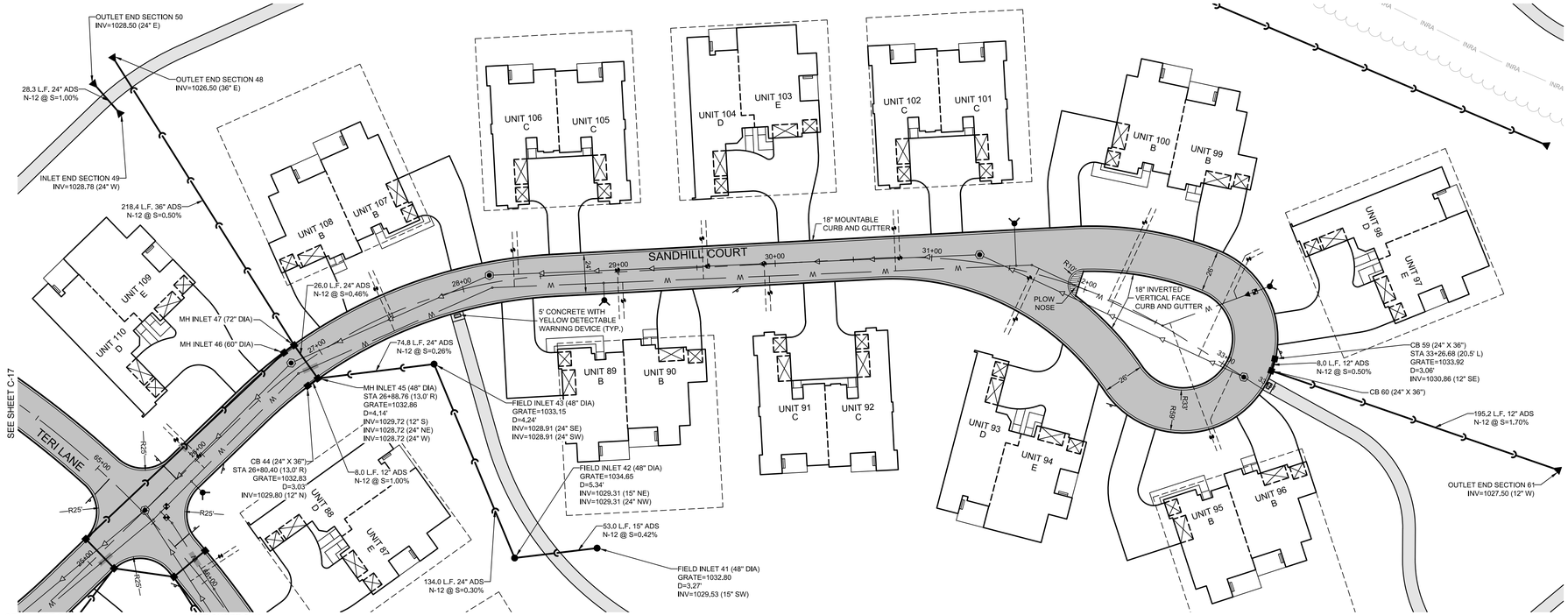

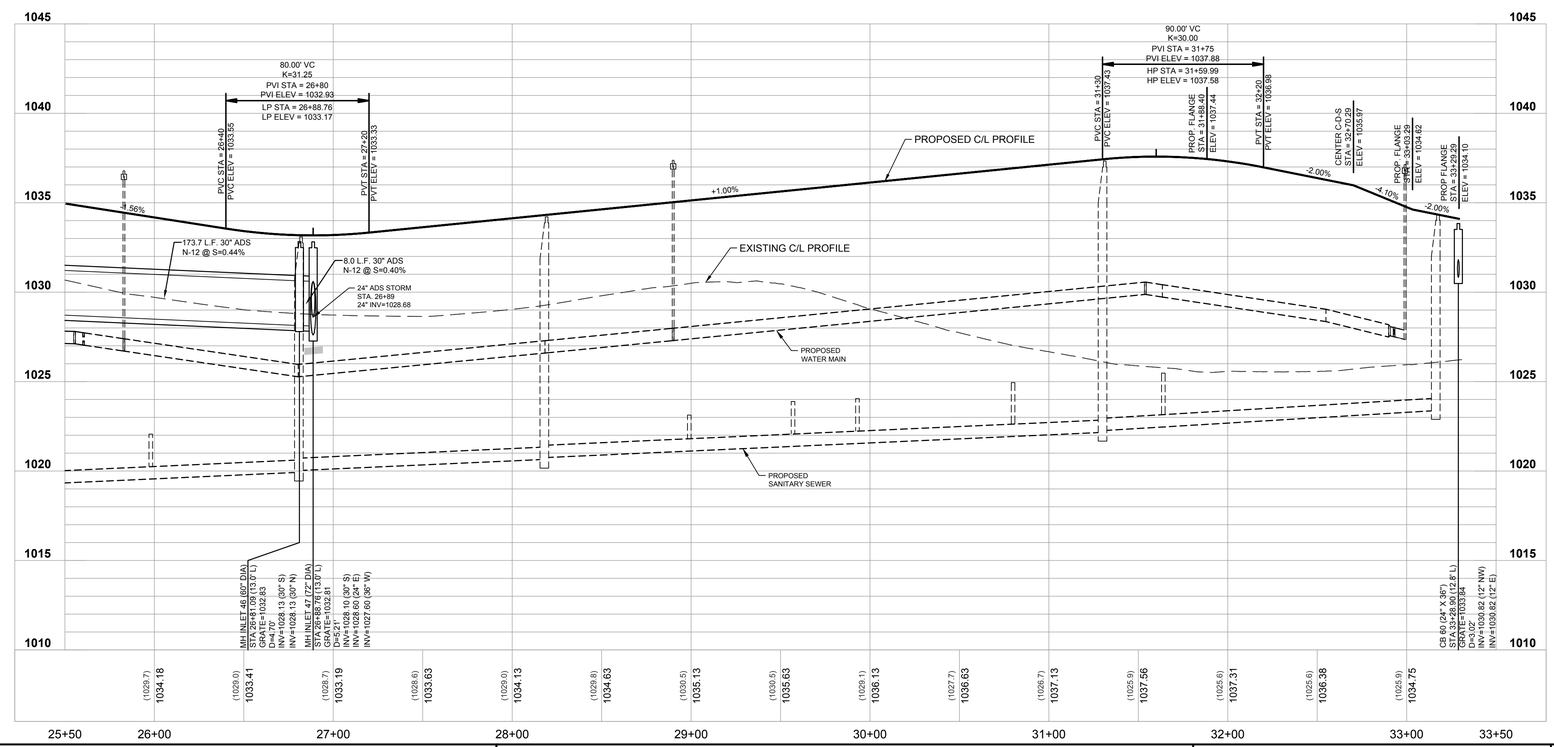

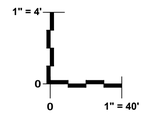



GRAPHICAL SCALE (FEET)

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CHICAGO | MILWAUKEE : NATIONWIDE

SANDHILL
VILLAGE OF HARTLAND, WI

PROPOSED PAVING AND STORM SEWER PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI ASZ
PEG PM: ASZ
START DATE: 02-19-21
SCALE: 1" = 80'

SHEET
C-14
C-42

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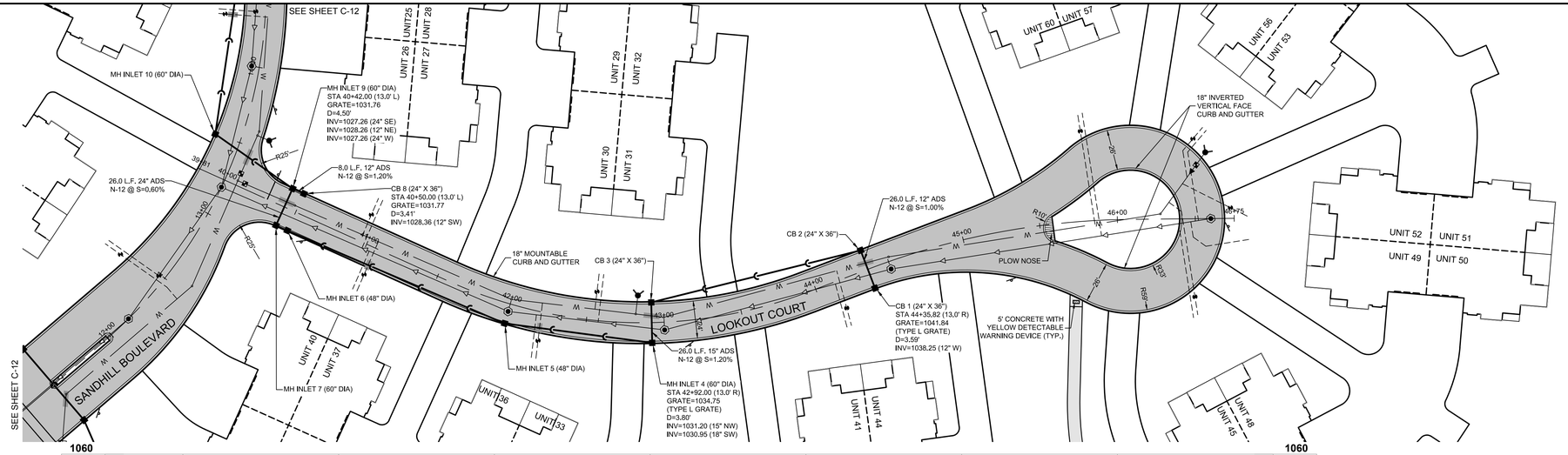

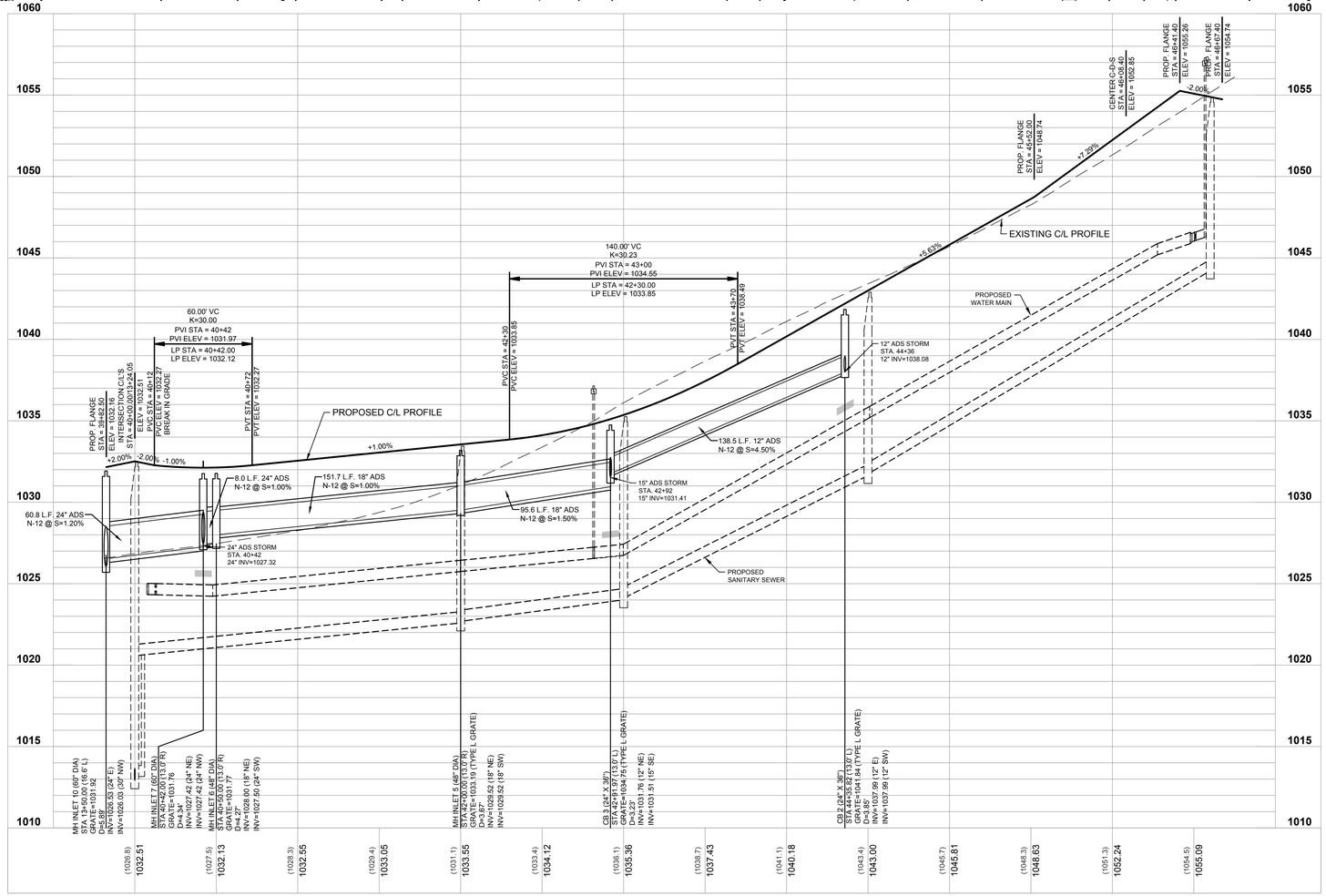

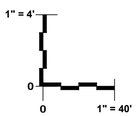

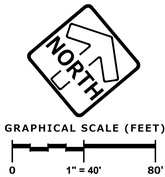

NOTES:
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PROPOSED PAVING AND STORM SEWER PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
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PEG PM ASZ
START DATE 02-19-21
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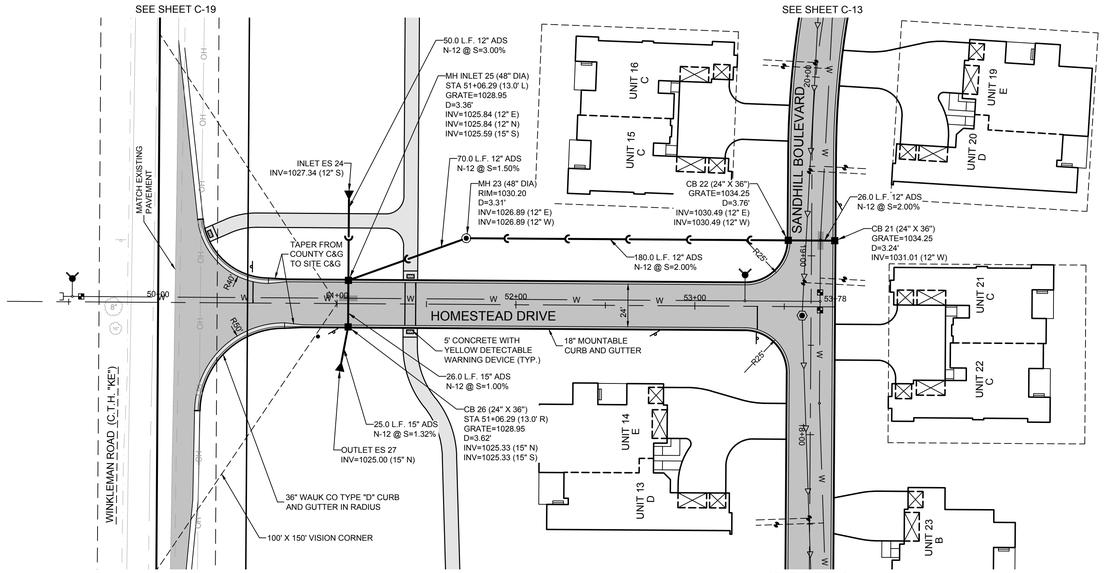

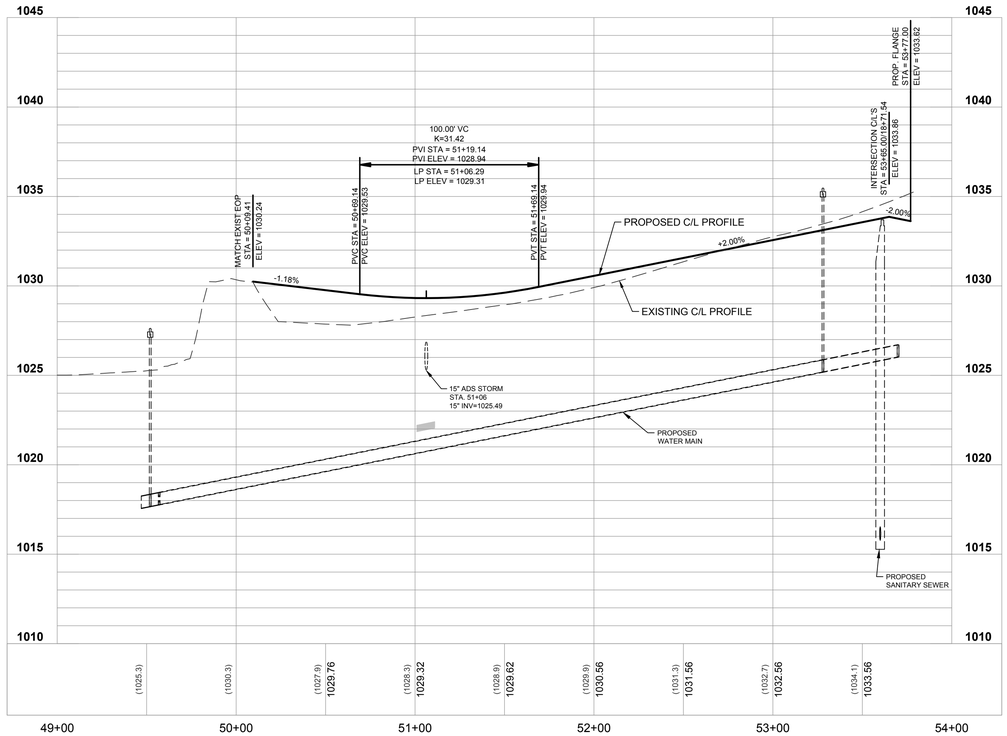

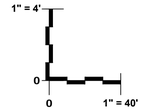

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 40' 80'

NOTES:

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PROPOSED PAVING AND STORM SEWER PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI ASZ
PEG PM: ASZ
START DATE: 02-19-21
SCALE: 1" = 80'

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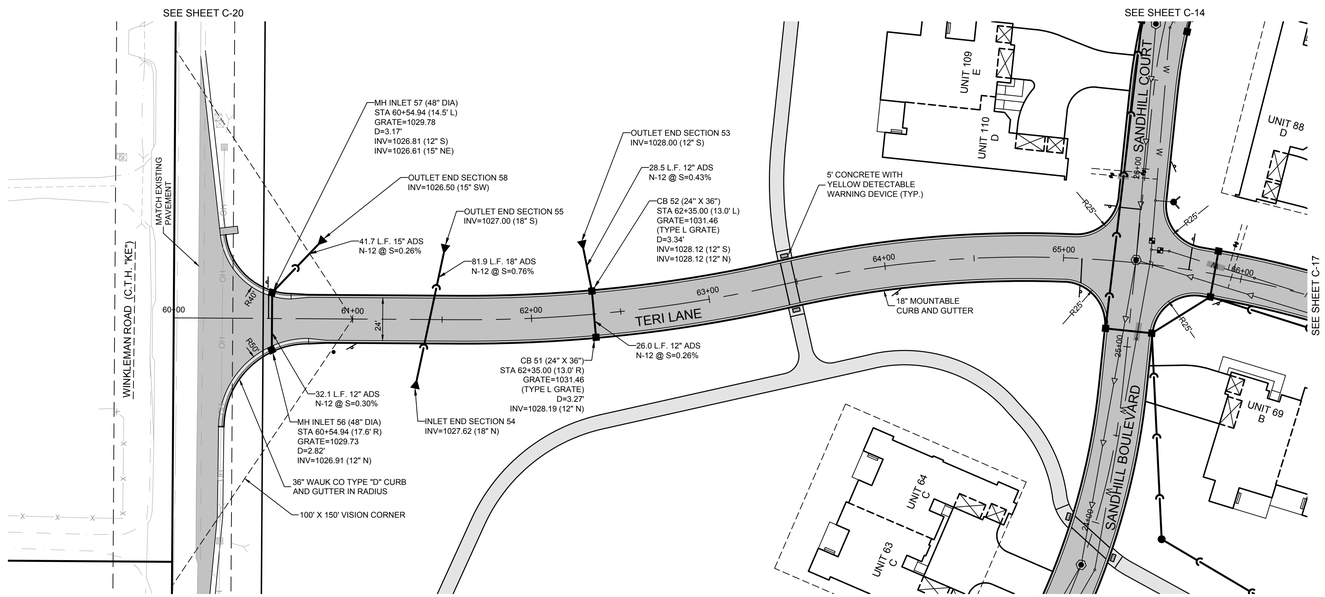

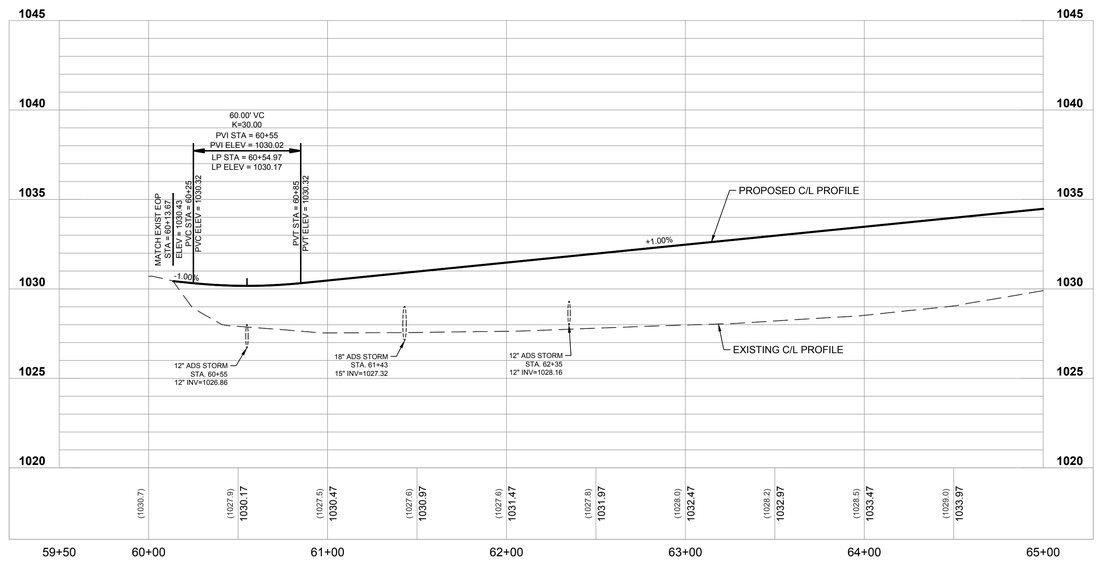

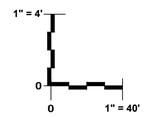



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PROPOSED PAVING AND STORM SEWER PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
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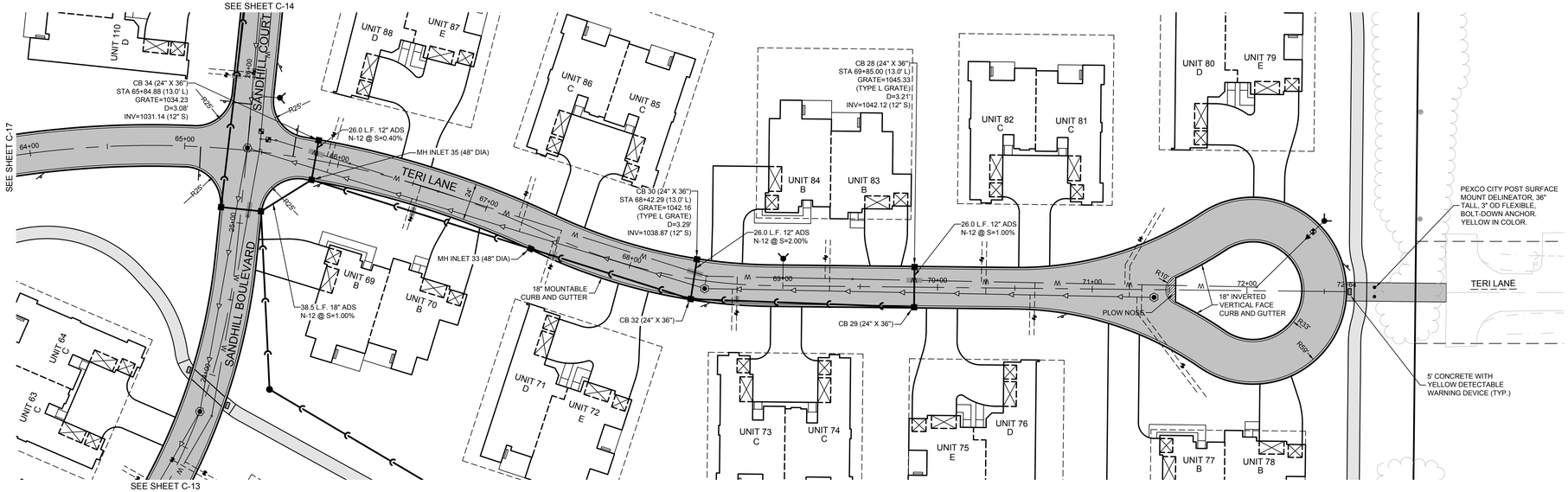

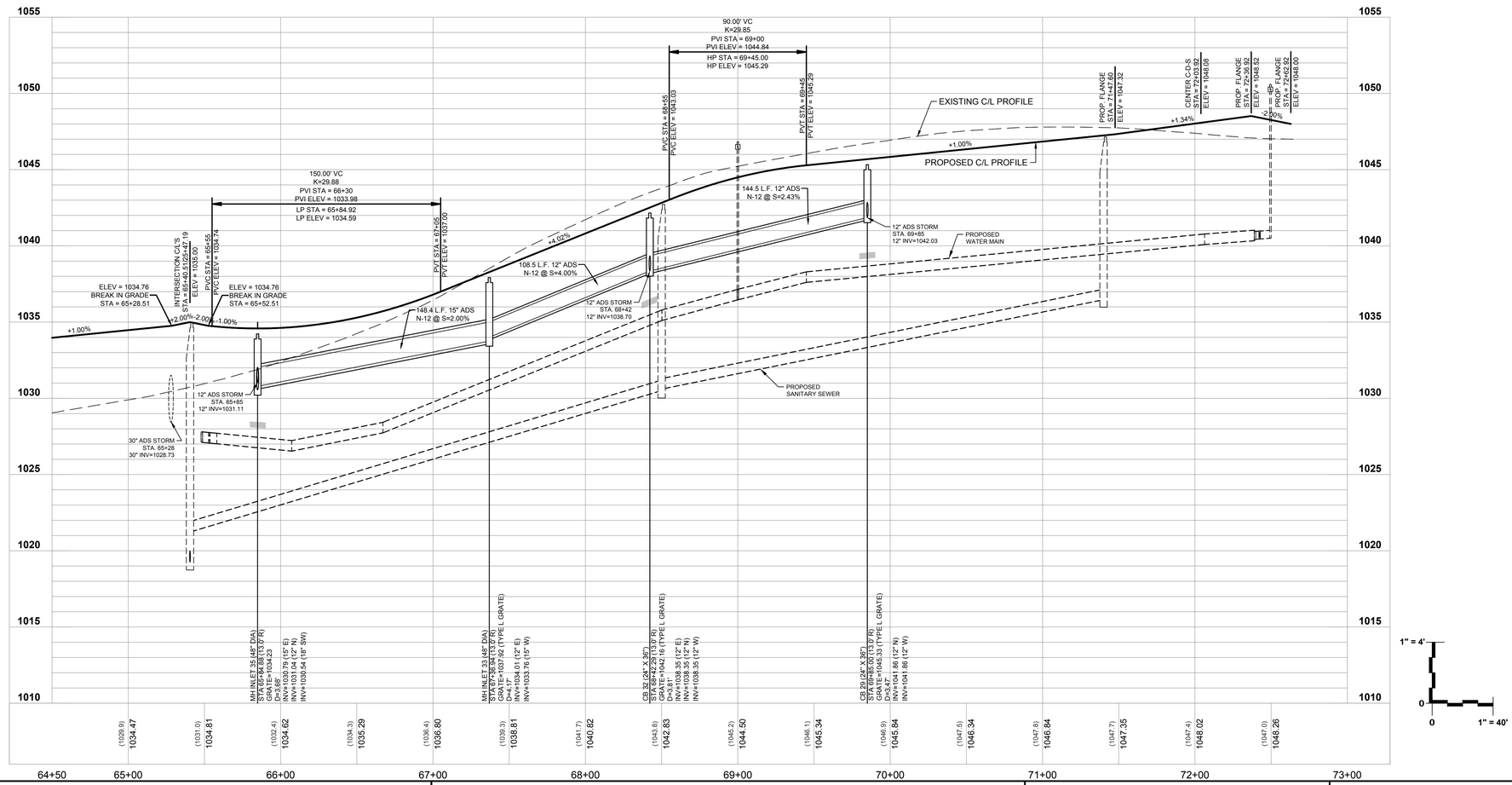

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NORTH

GRAPHICAL SCALE (FEET)
0 1" = 40' 80'

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PROPOSED PAVING AND STORM SEWER PLAN & PROFILE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 80'

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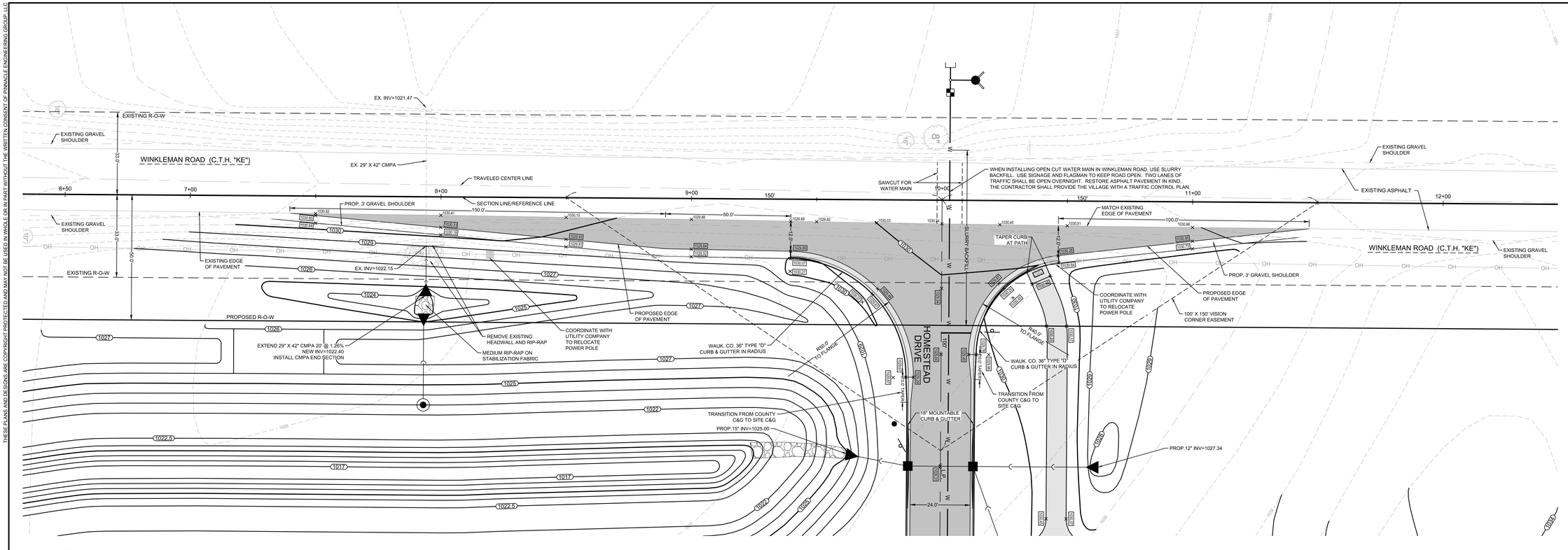
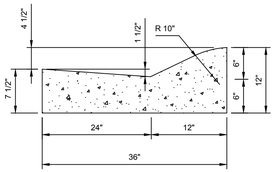


GRAPHICAL SCALE (FEET)

0 1" = 20' 40'

LEGEND:

- EX. PEDESTAL
- EX. POWER POLE
- EX. GUY WIRE
- EX. SIGN
- EX. DECIDUOUS TREE
- EX. CONIFEROUS TREE
- EX. STORM CULVERT
- EX. FENCE LINE
- EX. OVERHEAD WIRE
- EX. TREE LINE
- EX. DITCH LINE
- 1028 EX. 2-FOOT CONTOURS
- 1030 EX. 10-FOOT CONTOURS
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- PROP CONC FLARED END SECTION
- 870 PROPOSED CONTOUR
- X 857.3 EXISTING SPOT ELEVATION
- X 870.4 PROPOSED SPOT ELEVATIONS



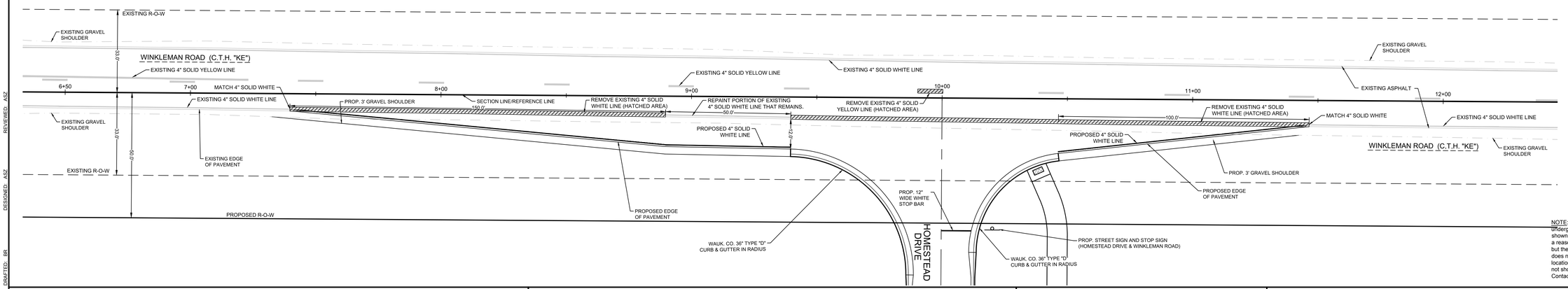
STANDARD CONCRETE C. & G., 36", TYPE D
BY: WAUKESHA COUNTY HIGHWAY DEPT.

NOT TO SCALE

CURB DETAIL IS FOR RADIUS ONTO C.T.H. "KE".

NOTES:

1. Utilities shown are by field inspection. Contact Digger's Hotline prior to construction. Contractor shall review all work with the utility companies to avoid any conflicts with any existing utility lines. Utility companies should determine if any utility lines need to be relocated.
2. C.T.H. "KE" (Winkleman Road) shall be open to traffic at all times. Signs and flagman shall be used during construction. Two lanes of traffic shall be open during overnight hours.
3. All construction practices shall comply with the Wisconsin DNR Technical Standards and the requirements of the Waukesha County Department of Public Works.
4. All disturbed areas are to be topsoiled, seeded and stabilized with Wis DOT Class I, type B erosion mat. Seed shall be State of Wisconsin DOT seed mix No. 40 with a seeding rate of 3 lbs/1000 sf.
5. Contractor to install silt fence prior to any work. Contractor to remove and dispose of the silt fence upon the disturbed areas being revegetated.
6. All public roads are to be kept clean at all times. Sweep streets on an as needed basis.
7. Striping removals to be done by water blasting. Grinding is not allowed.



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INTERSECTION PLANS
C.T.H. KE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
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PEG JOB No. 767.00-WI
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START DATE 02-19-21
SCALE 1" = 20'

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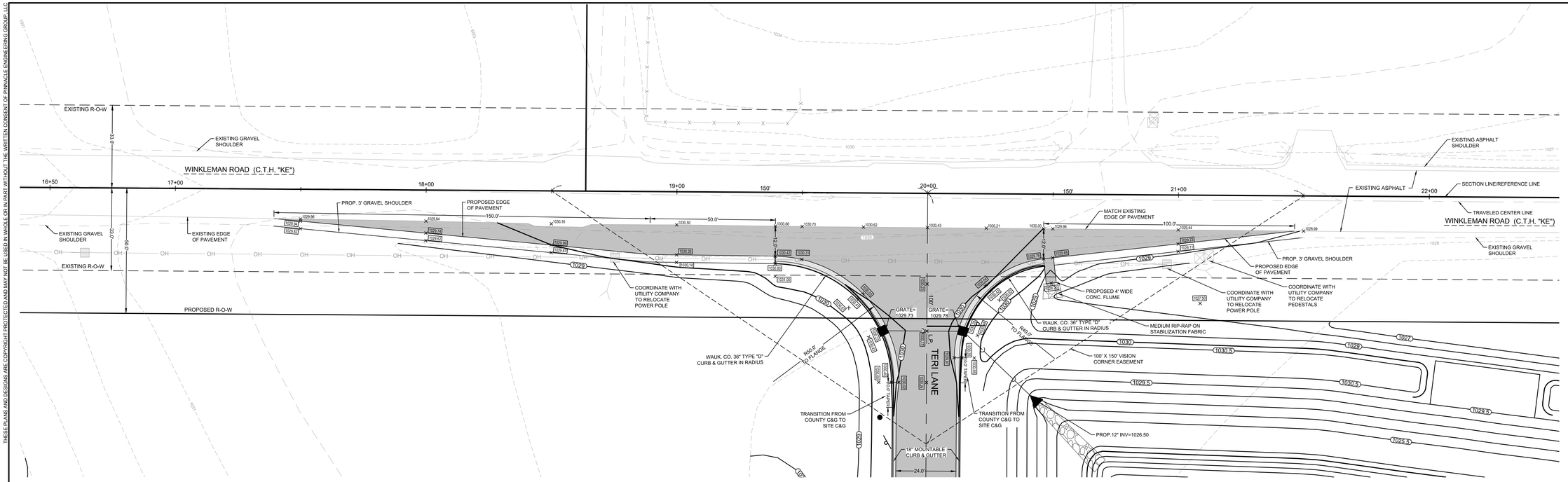

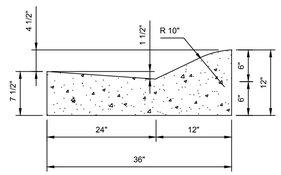

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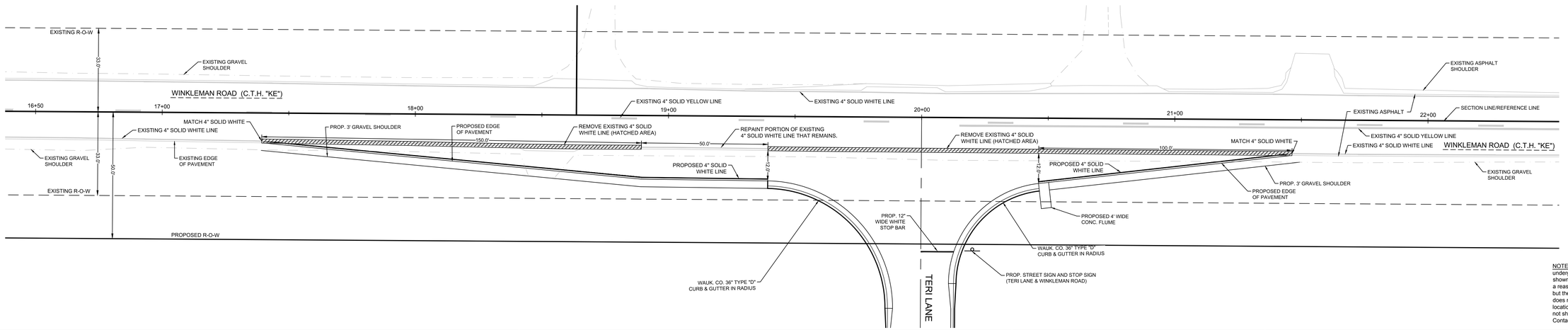

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C.T.H. KE

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PEG PM | 02-19-21
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SCALE

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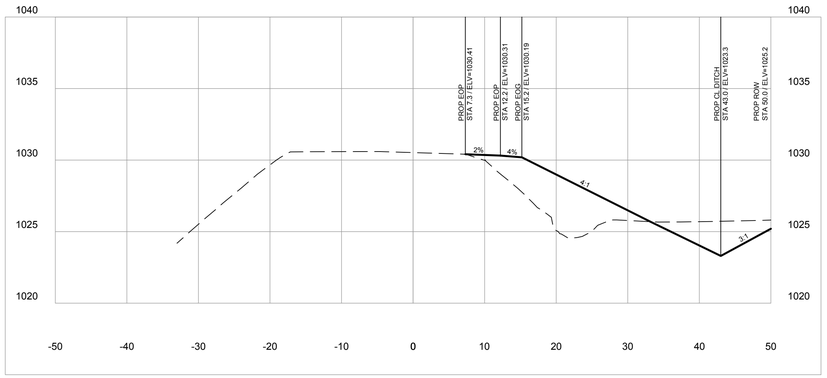

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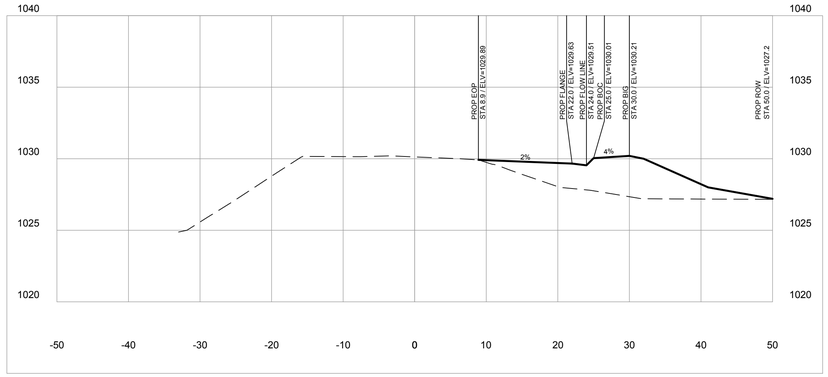

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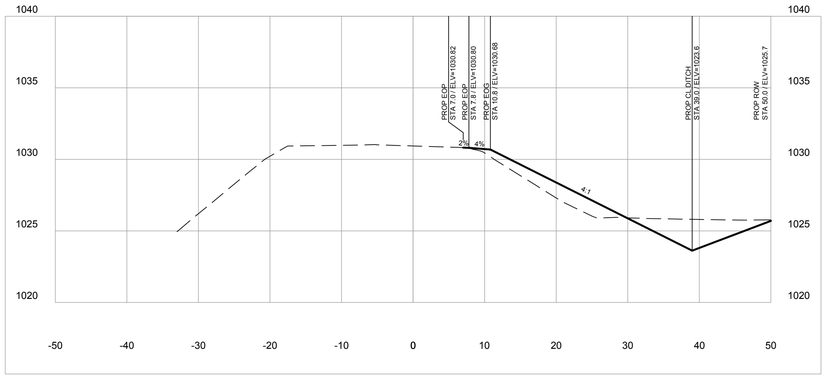

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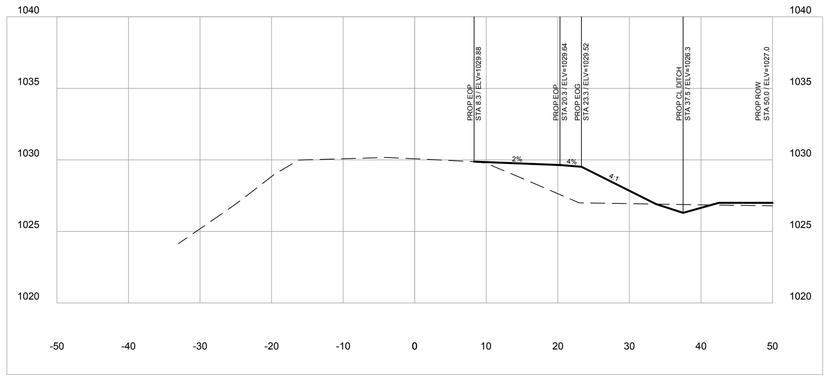

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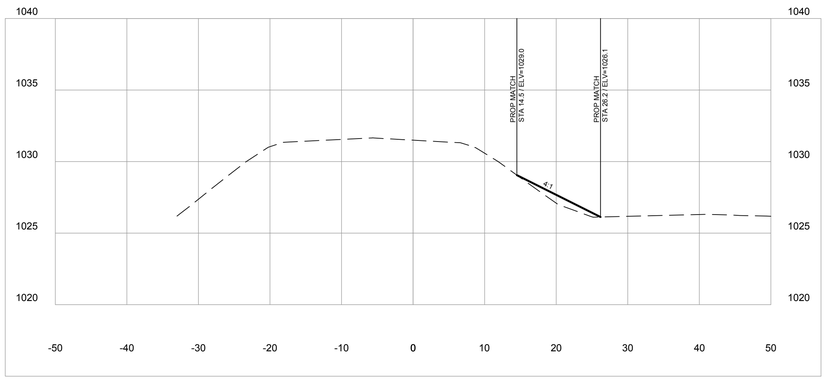

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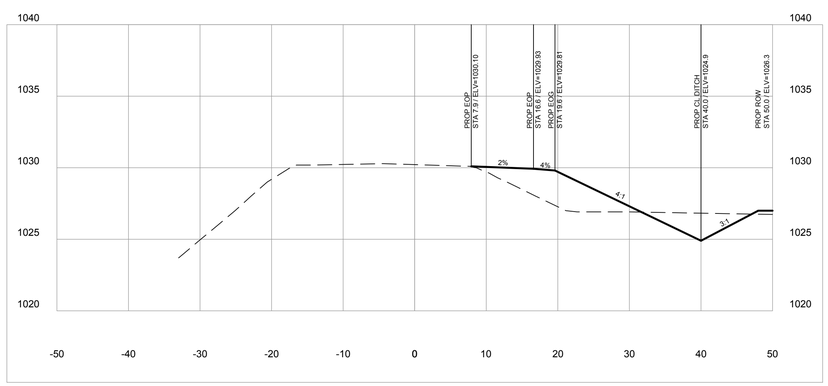

8+50

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2. IN ANY FILL SECTIONS, PLACE AND COMPACT STRUCTURAL BACKFILL TO SUBGRADE.

SCALE:
1" = 10' HORIZONTAL
1" = 5' VERTICAL

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DESIGNED: ASZ
REVIEWED: ASZ

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SANDHILL
VILLAGE OF HARTLAND, WI

COUNTY CROSS SECTIONS
C.T.H. KE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 10'

SHEET
C-21
C-42

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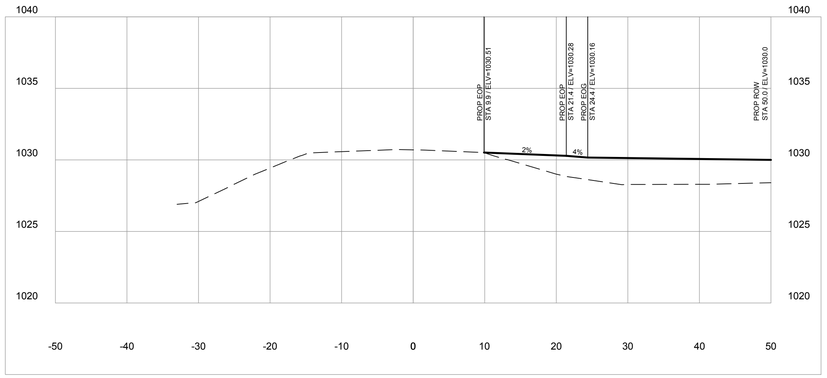

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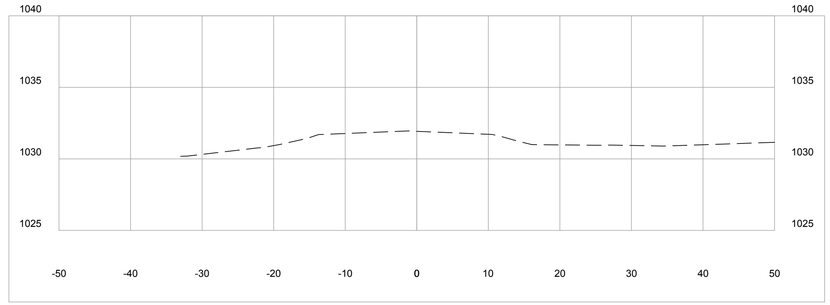

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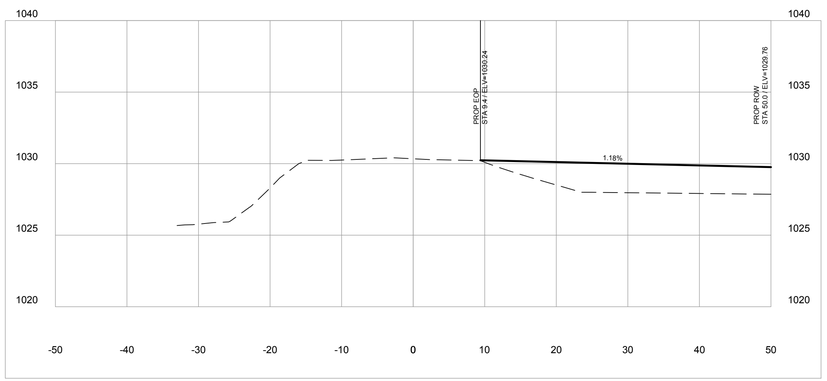

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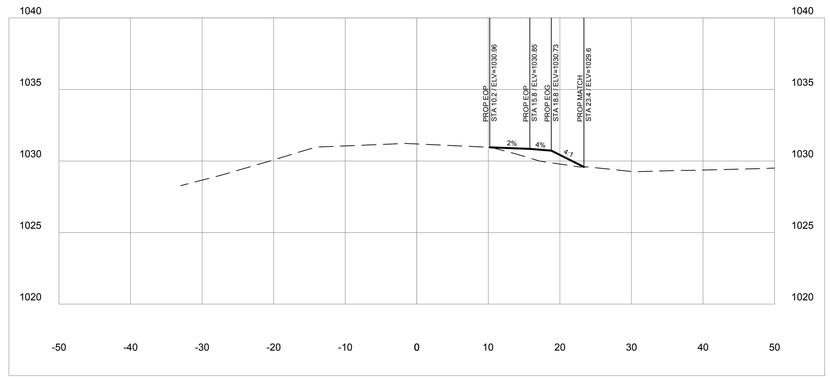

11+00

SCALE:
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COUNTY CROSS SECTIONS
C.T.H. KE

REVISIONS

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START DATE 02-19-21
SCALE 1" = 10'

SHEET
C-22
C-42

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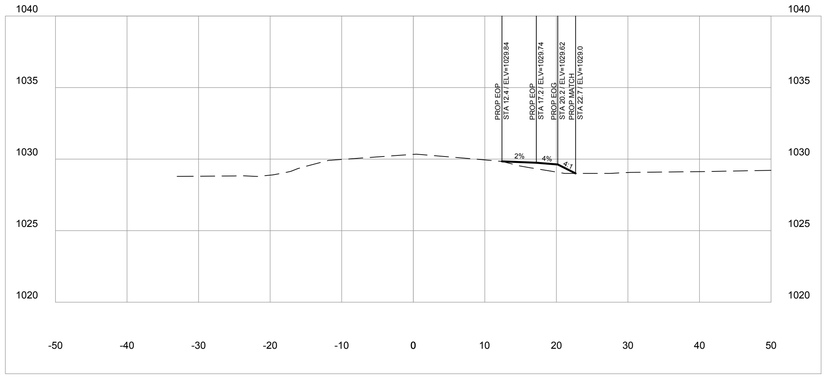

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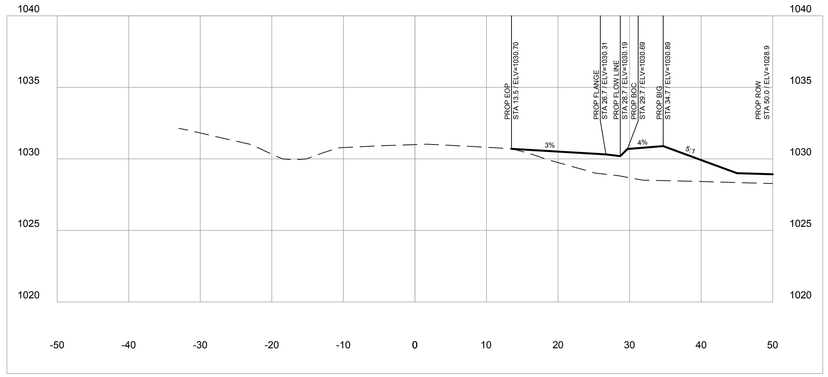

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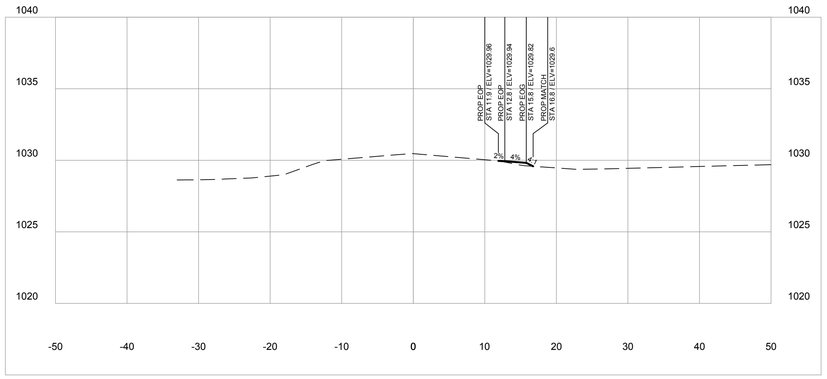

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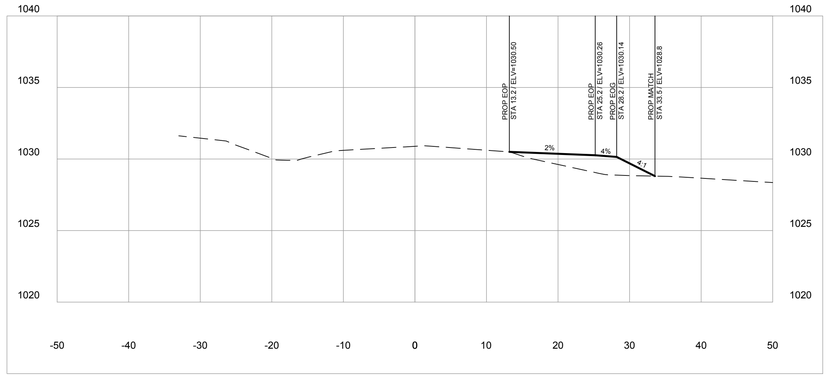

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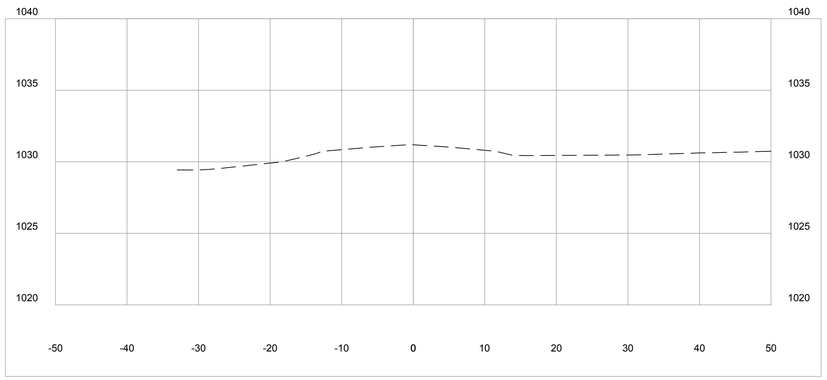

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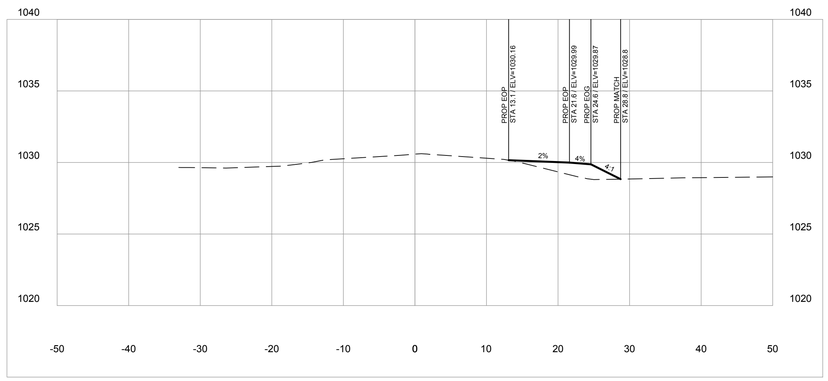

18+50

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COUNTY CROSS SECTIONS
C.T.H. KE

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI | ASZ
PEG PM. | START DATE 02-19-21
SCALE 1" = 10'

SHEET
C-23
C-42

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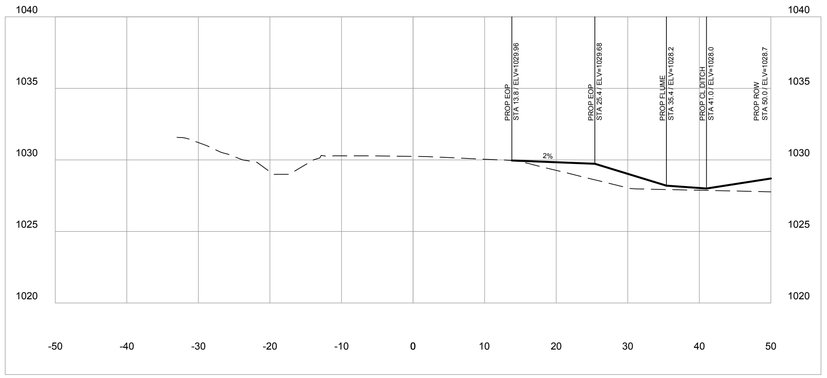

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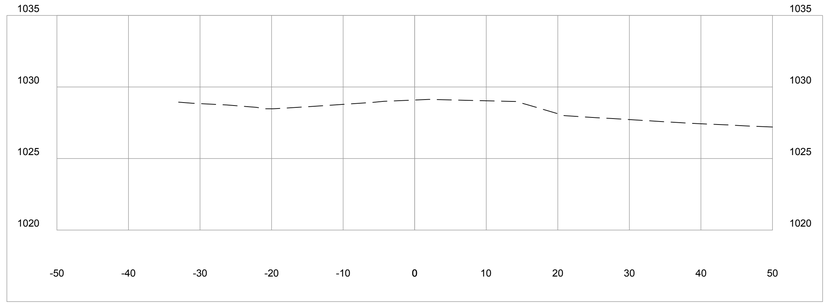

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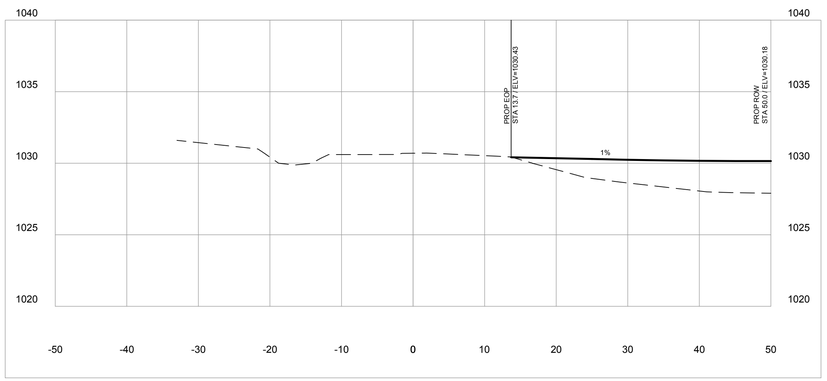

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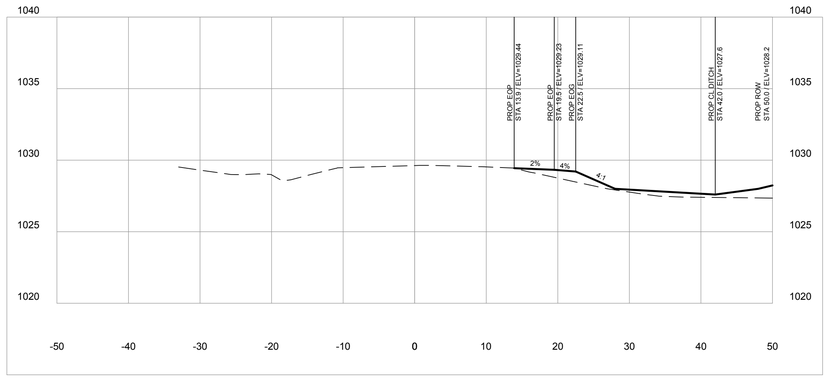

21+00

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SANDHILL
VILLAGE OF HARTLAND, WI

COUNTY CROSS SECTIONS
C.T.H. KE

REVISIONS

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2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 10'

SHEET
C-24
C-42

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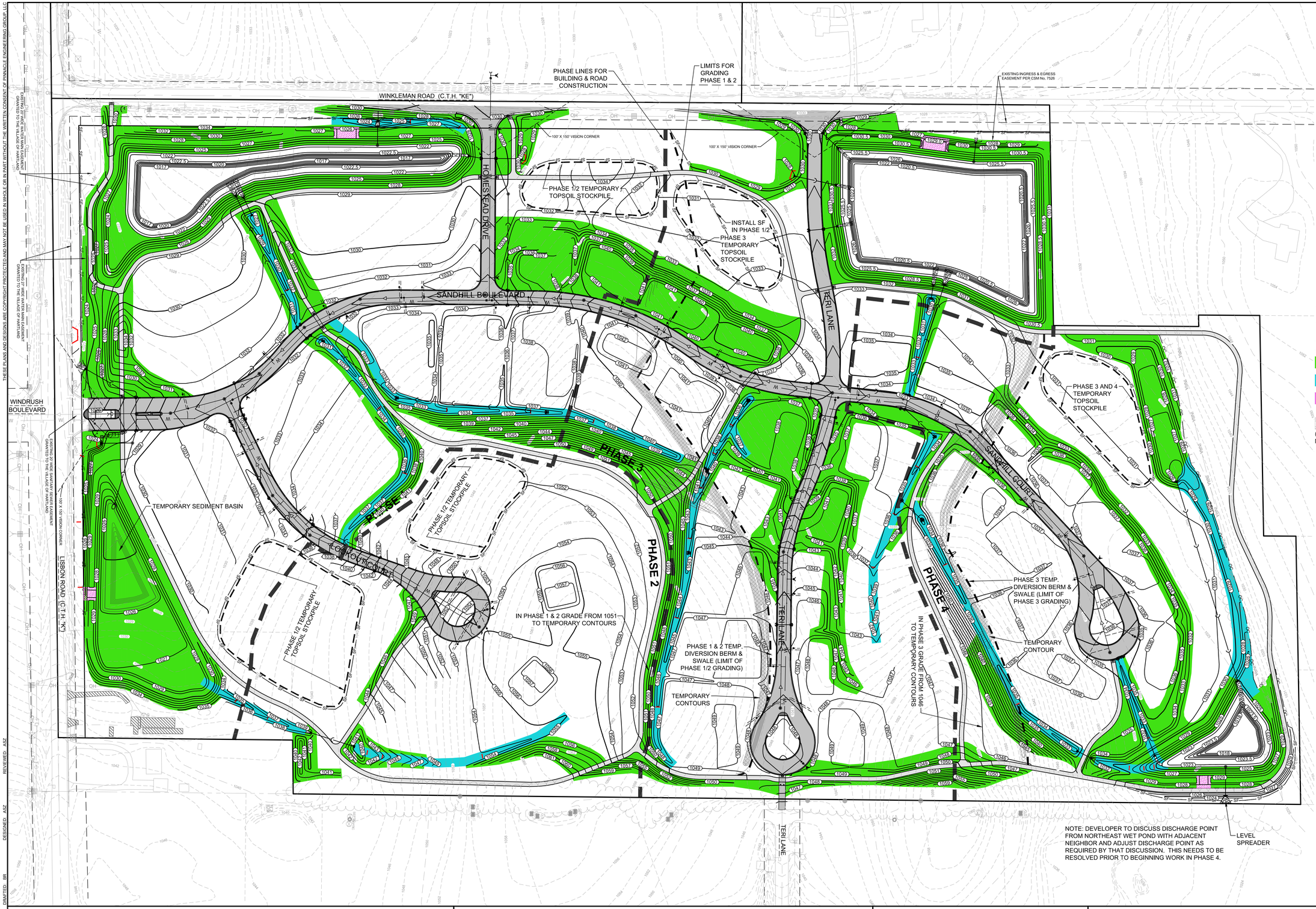

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 80' 160'

NOTE:
SEE ADDITIONAL NOTES AND DETAILS ON SHEETS C-26 THROUGH C-30 AND THE CONSTRUCTION DETAIL SHEETS.

INLET PROTECTION:
TYPE D INLET PROTECTION SHALL BE USED FOR INLETS AT DEAD LOW POINTS WITHIN THE ROADWAYS. OTHER ROADWAY INLET PROTECTION IS TYPE B. FIELD INLETS ARE TYPE A. THIS IS SPECIFICALLY NOTED ON SHEETS C-26 THROUGH C-30.

WDNR TECHNIAL PRACTICE STANDARD (FOR REFERENCE):
1052 - NON-CHANNEL EROSION MAT
1053 - CHANNEL EROSION MAT
1055 - SEDIMENT BALE BARRIER (NON-CHANNEL)
1056 - SILT FENCE
1057 - STONE TRACKING PAD & TIRE WASHING
1058 - MULCHING FOR CONSTRUCTION SITES
1059 - TEMPORARY SEEDING
1060 - STORM INLET PROTECTION FOR CONSTRUCTION SITES
1061 - DE-WATERING IF NECESSARY
1062 - DITCH CHECKS

LEGEND:

- PROPOSED RIP-RAP
- PROPOSED TRACKING PAD
- PROPOSED INLET PROTECTION
- SF — SF — PROPOSED SILT FENCE
- OC — OC — ORANGE CONSTRUCTION FENCE
- TEMP. EROSION MATTING NAG S75BN (DOT CLASS I, TYPE B)
- CHANNEL EROSION MATTING KEP C100 NATURAL (DOT CLASS II, TYPE C)
- OVERFLOW SPILLWAY MATTING (SEE POND DETAILS) NAG 350
- STRAW WATTLE
- TEMP. DIVERSION BERM & SWALE (STABILIZE WITH TOPSOIL, TEMP. SEED AND EROSION MATTING, NAG S75BN (DOT CLASS I, TYPE B))

NOTE: The location and size of the underground structures and utilities shown hereon have been located to a reasonable degree of accuracy, but the Engineer and/or Surveyor does not guarantee their exact location or the location of others not shown.
Contact Diggers Hotline, Inc., Etc.

TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

WIS STATUTE 182.0175(1974M) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

MILW. AREA 259-1181

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OVERALL INTERIM GRADING & EROSION CONTROL PLAN

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-25
C-42

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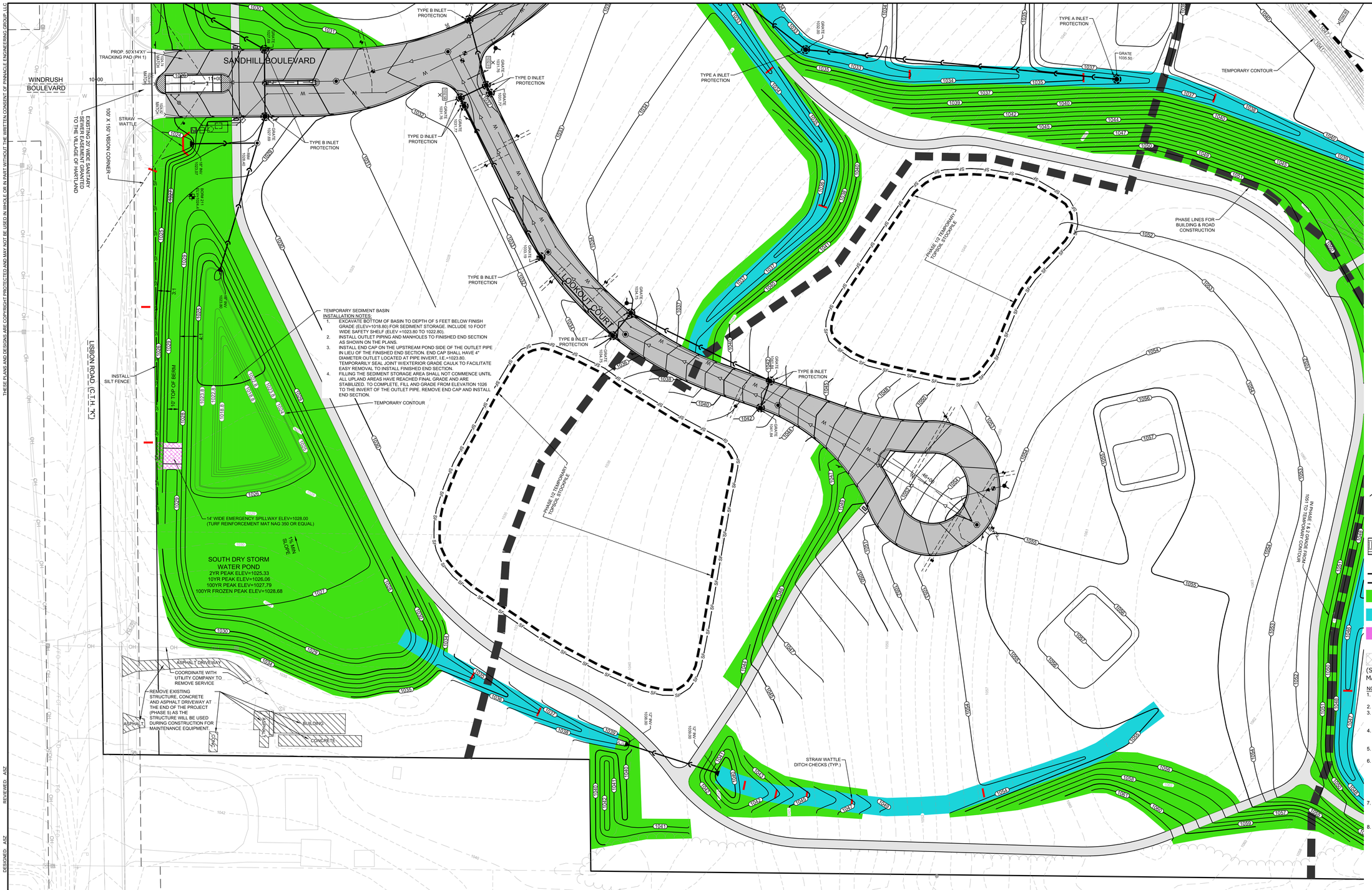
SANDHILL BOULEVARD
WINDRUSH BOULEVARD
LISBON ROAD (C.T.H. "K")
LOKOUL COURT
TYPE B INLET PROTECTION
TYPE D INLET PROTECTION
TYPE A INLET PROTECTION
PROP. 50'X14'X1' TRACKING PAD (PH 1)
STRAW WATTLE
100' X 150' VISION CORNER
EXISTING PAVEMENT SANITARY SEWER EASEMENT TRANSFERRED TO THE VILLAGE OF HARTLAND
INSTALL SILT FENCE
10' TOP OF BERM
TEMPORARY CONTOUR
TEMPORARY SEDIMENT BASIN INSTALLATION NOTES:
1. EXCAVATE BOTTOM OF BASIN TO DEPTH OF 5 FEET BELOW FINISH GRADE (ELEV=1018.80) FOR SEDIMENT STORAGE. INCLUDE 10 FOOT WIDE SAFETY SHELF (ELEV =1023.80 TO 1022.80).
2. INSTALL OUTLET PIPING AND MANHOLES TO FINISHED END SECTION AS SHOWN ON THE PLANS.
3. INSTALL END CAP ON THE UPSTREAM POND SIDE OF THE OUTLET PIPE IN LIEU OF THE FINISHED END SECTION. END CAP SHALL HAVE 4" DIAMETER OUTLET LOCATED AT PIPE INVERT, I.E.=1023.80. TEMPORARILY SEAL JOINT W/EXTERIOR GRADE CAULK TO FACILITATE EASY REMOVAL TO INSTALL FINISHED END SECTION.
4. FILLING THE SEDIMENT STORAGE AREA SHALL NOT COMMENCE UNTIL ALL UPLAND AREAS HAVE REACHED FINAL GRADE AND ARE STABILIZED. TO COMPLETE, FILL AND GRADE FROM ELEVATION 1026 TO THE INVERT OF THE OUTLET PIPE. REMOVE END CAP AND INSTALL END SECTION.
14' WIDE EMERGENCY SPILLWAY ELEV=1028.00 (TURF REINFORCEMENT MAT NAG 350 OR EQUAL)
SOUTH DRY STORM WATER POND
2YR PEAK ELEV=1025.33
10YR PEAK ELEV=1026.06
100YR PEAK ELEV=1027.79
100YR FROZEN PEAK ELEV=1028.68
3:1 MIN SLOPE
ASPHALT DRIVEWAY
COORDINATE WITH UTILITY COMPANY TO REMOVE SERVICE
REMOVE EXISTING STRUCTURE, CONCRETE AND ASPHALT DRIVEWAY AT THE END OF THE PROJECT (PHASE 5) AS THE STRUCTURE WILL BE USED DURING CONSTRUCTION FOR MAINTENANCE EQUIPMENT.
BUILDING
CONCRETE
STRAW WATTLE DITCH CHECKS (TYP.)
PHASE I ET TEMPORARY TOPSOIL STOCKPILE
PHASE I ET TEMPORARY TOPSOIL STOCKPILE
PHASE LINES FOR BUILDING & ROAD CONSTRUCTION
TEMPORARY CONTOUR
INSTALL 2 GRADE RINGS TO TEMPORARY CONTOUR
GRATE 1035.50
GRATE 1033.19
GRATE 1034.71
GRATE 1032.77
GRATE 1031.78
GRATE 1032.00
GRATE 1031.94
GRATE 1032.00
GRATE 1032.00
GRATE 1031.21
GRATE 1031.21
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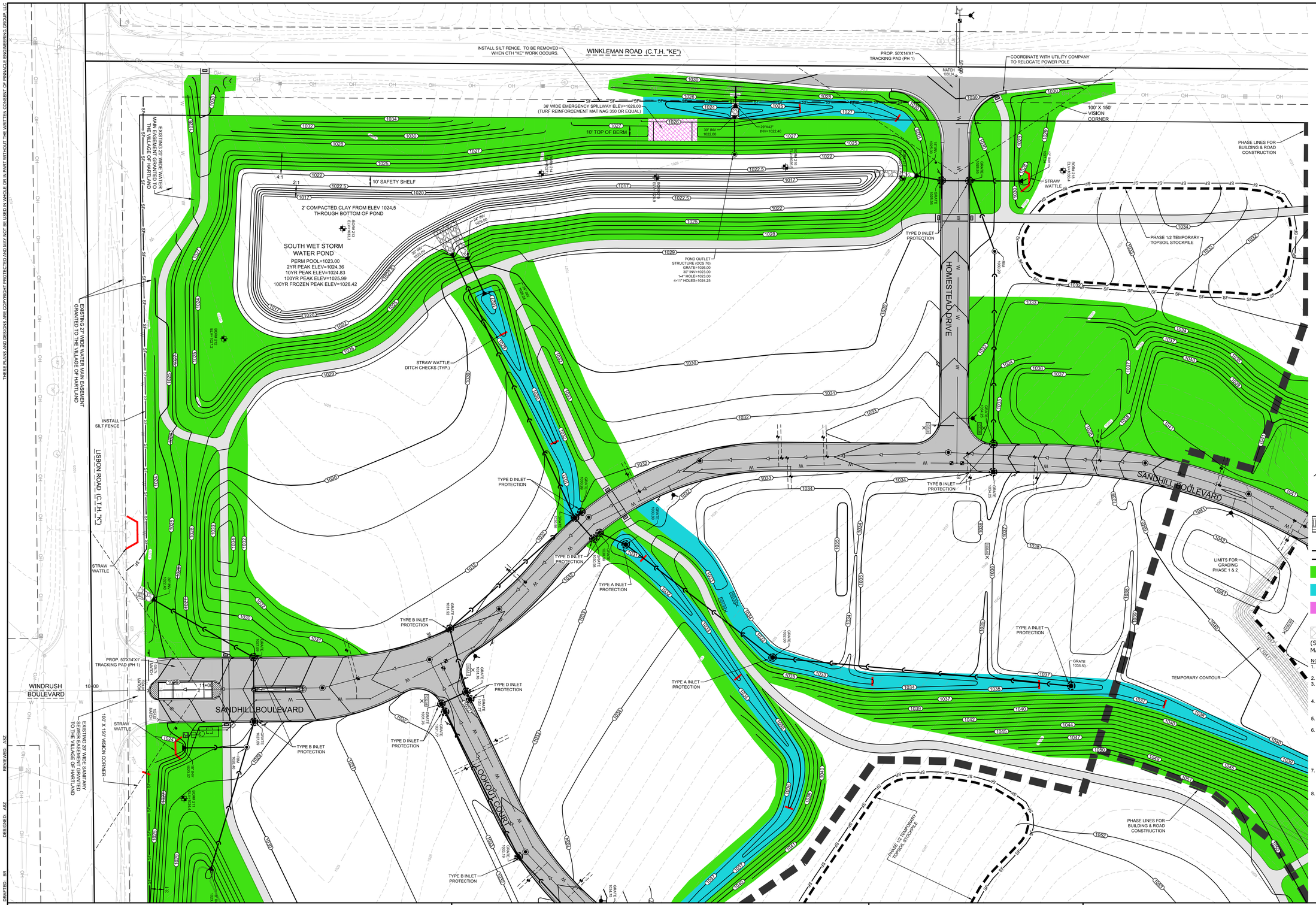

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 40' 80'

LEGEND:

- EX. HYDRANT
- EX. WATER VALVE
- EX. SANITARY MANHOLE
- EX. CATCH BASIN
- EX. WOOD POST
- EX. POST
- EX. GAS METER
- EX. GAS VALVE
- EX. WELL LOCATION
- EX. CLEANOUT
- EX. SEPTIC COVER
- EX. VENT
- EX. ELECTRIC PEDESTAL
- EX. PEDESTAL
- EX. ELECTRIC METER
- EX. AIRCONDITIONER UNIT
- EX. POWER POLE
- EX. GUY WIRE
- EX. LIGHT POLE
- EX. SIGN
- EX. MAILBOX
- EX. DECIDUOUS TREE
- EX. CONIFEROUS TREE
- EX. SANITARY SEWER
- EX. WATER MAIN
- EX. STORM SEWER
- EX. FENCE LINE
- EX. OVERHEAD WIRE
- EX. GAS MAIN
- EX. TELEPHONE
- EX. ELECTRIC
- EX. FIBER OPTIC
- EX. TREE LINE
- EX. DITCH LINE
- EX. ISOLATED NATURAL RESOURCE AREA
- EX. SOIL LINE
- 1028 EX. 2-FOOT CONTOURS
- 1030 EX. 10-FOOT CONTOURS
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- PROP CONC FLARED END SECTION
- 870 PROPOSED CONTOUR
- X 857.3 EXISTING SPOT ELEVATION
- X 870.4 PROPOSED SPOT ELEVATIONS
- PROPOSED RIP-RAP
- PROPOSED TRACKING PAD
- PROPOSED INLET PROTECTION
- SF SF PROPOSED SILT FENCE
- OC OC ORANGE CONSTRUCTION FENCE
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- STRAW WATTLE
- TEMP. DIVERSION BERM & SWALE (STABILIZE WITH TOPSOIL, TEMP. SEED AND EROSION MATTING, NAG S75BN (DOT CLASS I, TYPE B))

NOTES:

1. SEE NOTES AND DETAILS ON THE CONSTRUCTION DETAIL SHEETS.
2. KEEP PUBLIC ROADS CLEAN AT ALL TIMES.
3. THE INTERIM GRADING PLAN WAS DESIGNED TO KEEP THE BUILDING PADS LOW SO THAT BASEMENT SPOIL CAN BE USED TO BACKFILL THE BUILDING.
4. WHEN FILLING STRUCTURAL MATERIAL SHALL BE PLACED AT A POINT STARTING 25' INTO FROM THE BACK OF CURB TO A POINT 135' FROM THE BACK OF CURB.
5. TOPSOIL, SEED AND MULCH ALL DISTURBED AREAS UNLESS NOTED TO BE MATTED.
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7. TYPE D INLET PROTECTION SHALL BE USED FOR INLETS AT DEAD LOW POINTS WITHIN THE ROADWAYS. OTHER ROADWAY INLET PROTECTION IS TYPE B. FIELD INLETS ARE TYPE A.
8. SEE SHEET C-25 FOR ADDITIONAL NOTES AND DETAILS.

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SANDHILL
VILLAGE OF HARTLAND, WI

INTERIM GRADING & EROSION CONTROL PLAN

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-27
C-42

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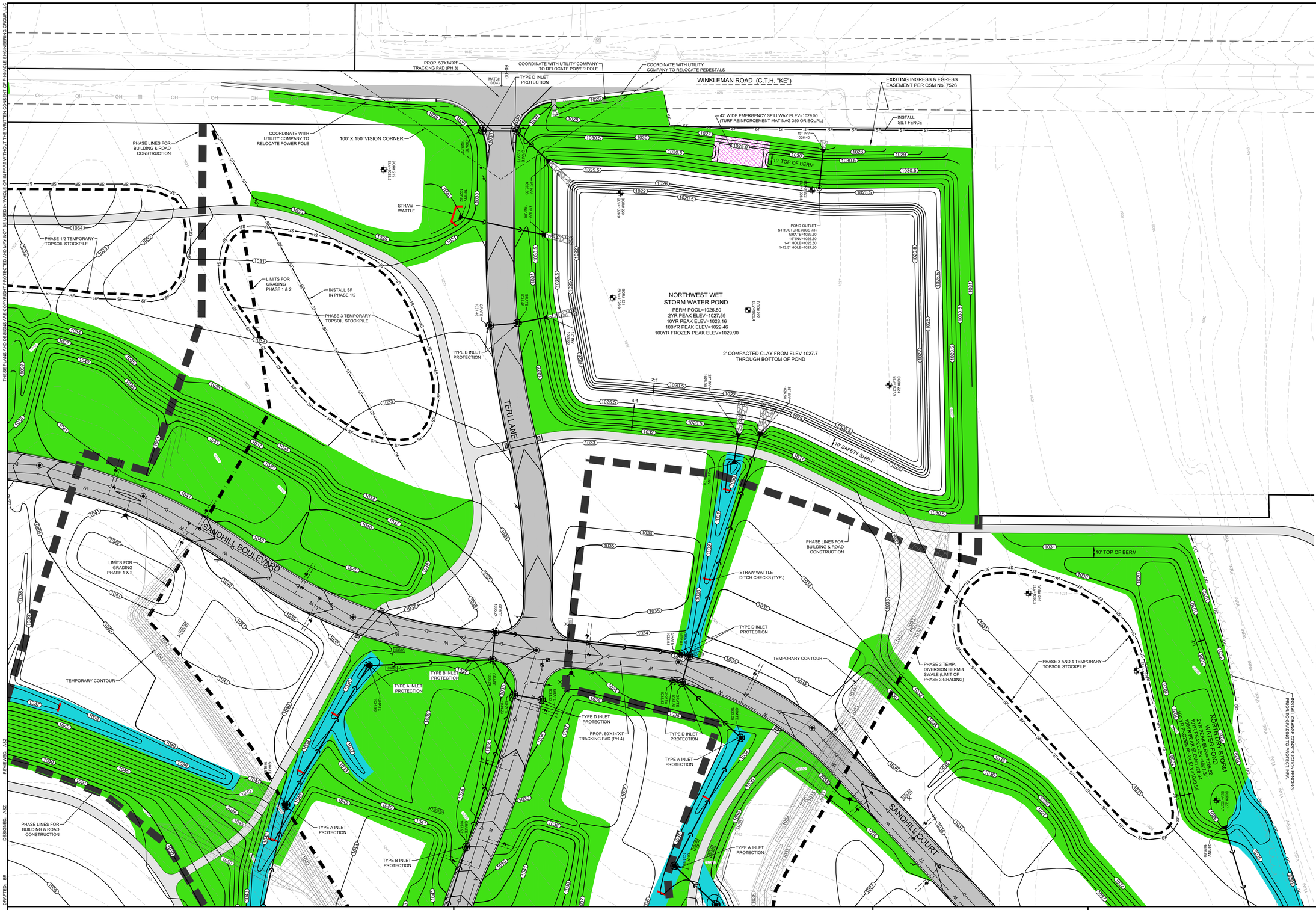

GRAPHICAL SCALE (FEET)

0 — 1" = 40' — 80'

LEGEND:

- EX. HYDRANT
- EX. WATER VALVE
- EX. SANITARY MANHOLE
- EX. CATCH BASIN
- EX. WOOD POST
- EX. POST
- EX. GAS METER
- EX. GAS VALVE
- EX. WELL LOCATION
- EX. CLEANOUT
- EX. SEPTIC COVER
- EX. VENT
- EX. ELECTRIC PEDESTAL
- EX. PEDESTAL
- EX. ELECTRIC METER
- EX. AIRCONDITIONER UNIT
- EX. POWER POLE
- EX. GUY WIRE
- EX. LIGHT POLE
- EX. SIGN
- EX. MAILBOX
- EX. DECIDUOUS TREE
- EX. CONIFEROUS TREE
- EX. SANITARY SEWER
- EX. WATER MAIN
- EX. STORM SEWER
- EX. FENCE LINE
- EX. OVERHEAD WIRE
- EX. GAS MAIN
- EX. TELEPHONE
- EX. ELECTRIC
- EX. FIBER OPTIC
- EX. TREE LINE
- EX. DITCH LINE
- EX. ISOLATED NATURAL RESOURCE AREA
- EX. SOIL LINE
- EX. 2-FOOT CONTOURS
- EX. 10-FOOT CONTOURS
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- PROP CONC FLARED END SECTION
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATIONS
- PROPOSED RIP-RAP
- PROPOSED TRACKING PAD
- PROPOSED INLET PROTECTION
- PROPOSED SILT FENCE
- ORANGE CONSTRUCTION FENCE
- TEMP. EROSION MATTING NAG S75BN (DOT CLASS I, TYPE B)
- CHANNEL EROSION MATTING KEP C100 NATURAL (DOT CLASS II, TYPE C)
- OVERFLOW SPILLWAY MATTING (SEE POND DETAILS) NAG 350
- STRAW WATTLE
- TEMP. DIVERSION BERM & SWALE

(STABILIZE WITH TOPSOIL, TEMP. SEED AND EROSION MATTING, NAG S75BN (DOT CLASS I, TYPE B))

NOTES:

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PEC JOB No. 767.00-WI ASZ
PEC PM 02-19-21
START DATE
SCALE 1" = 80'

SHEET
C-28
C-42

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C-29
C-42

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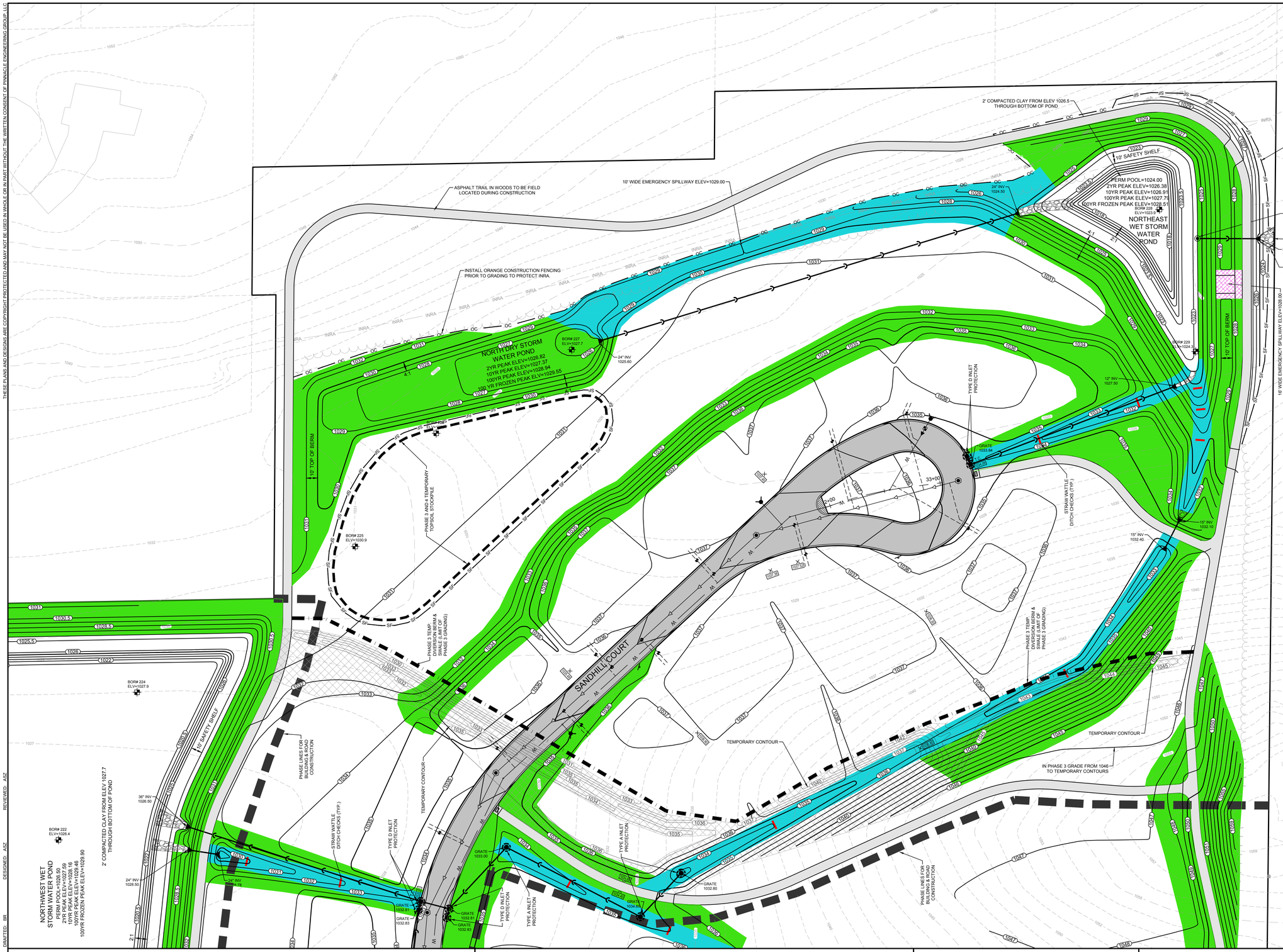

NORTH

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0 1" = 40' 80'

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- EX. CATCH BASIN
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- EX. POST
- EX. GAS METER
- EX. GAS VALVE
- EX. WELL LOCATION
- EX. CLEANOUT
- EX. SEPTIC COVER
- EX. VENT
- EX. ELECTRIC PEDESTAL
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- EX. ELECTRIC METER
- EX. AIRCONDITIONER UNIT
- EX. POWER POLE
- EX. GUY WIRE
- EX. LIGHT POLE
- EX. SIGN
- EX. MAILBOX
- EX. DECIDUOUS TREE
- EX. CONIFEROUS TREE
- EX. SANITARY SEWER
- EX. WATER MAIN
- EX. STORM SEWER
- EX. FENCE LINE
- EX. OVERHEAD WIRE
- EX. GAS MAIN
- EX. TELEPHONE
- EX. ELECTRIC
- EX. FIBER OPTIC
- EX. TREE LINE
- EX. DITCH LINE
- EX. ISOLATED NATURAL RESOURCE AREA
- EX. SOIL LINE
- 1028 EX. 2-FOOT CONTOURS
- 1030 EX. 10-FOOT CONTOURS
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- PROP CONC FLARED END SECTION
- 870 PROPOSED CONTOUR
- X 857.3 EXISTING SPOT ELEVATION
- X 870.4 PROPOSED SPOT ELEVATIONS
- PROPOSED RIP-RAP
- PROPOSED TRACKING PAD
- PROPOSED INLET PROTECTION
- SF PROPOSED SILT FENCE
- OC ORANGE CONSTRUCTION FENCE
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PEG JOB No. 767.00-WI ASZ
PEG PM. START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-30
C-42

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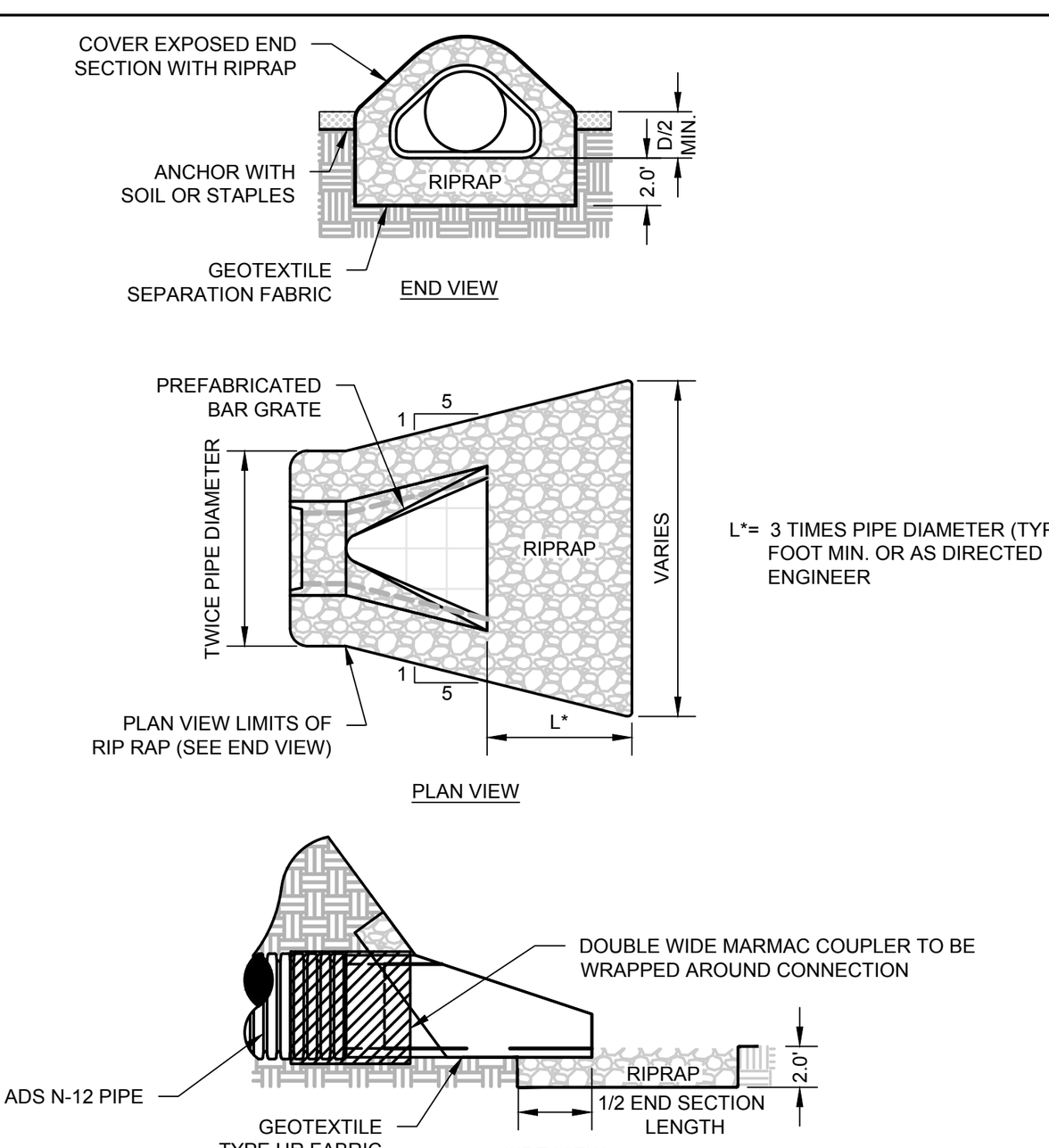
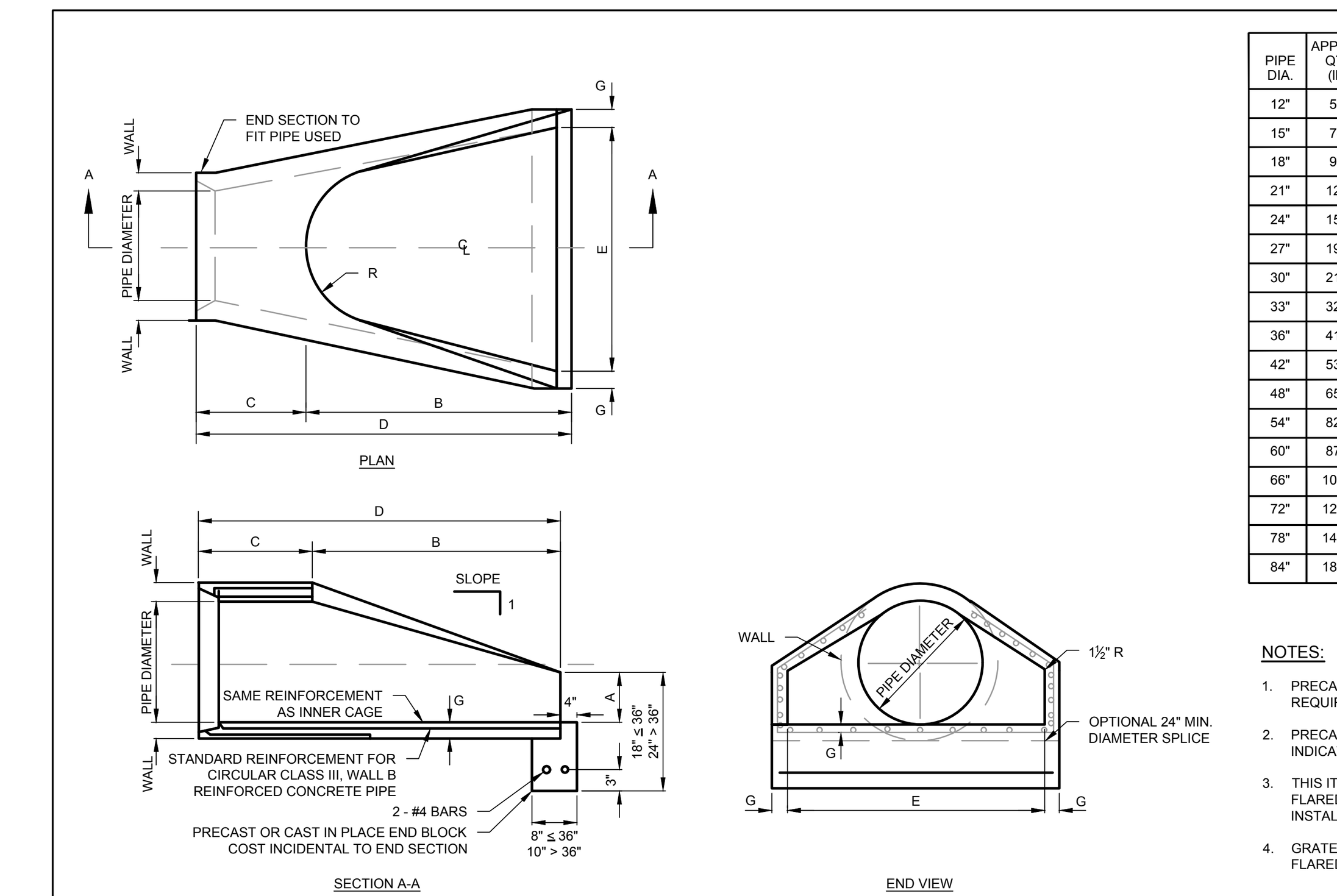


NOTES:

1. RIP RAP AND GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS FOR STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

RIP RAP AT END SECTIONS

#124A 12/26/12



PIPE DIA.	APPROX. QTY. (lbs)	WALL (in)	A (in)	B (in)	C (in)	D (in)	E (in)	G (in)	R (in)	APPROX. SLOPE
12"	530	2	4	24	4'-0 7/8"	6'-0 7/8"	24	2	9	1:2.4
15"	740	2 1/4	6	27	3'-10"	6'-1"	30	2 1/4"	11	1:2.4
18"	990	2 1/2	9	27	3'-10"	6'-1"	36	2 1/2	12	1:2.4
21"	1280	2 3/4	9	35	38	6'-1"	3'-6"	2 3/4	13	1:2.4
24"	1520	3	9 1/2	3'-7 1/2"	30	6'-1 1/2"	4'-0"	3	14	1:2.5
27"	1930	3 1/4	10 1/2	4'-0"	25 1/2	6'-1 1/2"	4'-6"	3 1/4	14 1/2	1:2.4
30"	2190	3 1/2	12	4'-6"	19 3/4	6'-1 3/4"	5'-0"	3 1/2	15	1:2.5
33"	3200	3 3/4	13 1/2	4'-10 1/2"	39 1/4	8'-1 3/4"	5'-6"	3 3/4	17 1/2	1:2.5
36"	4100	4	15	5'-3"	34 3/4	8'-1 3/4"	6'-0"	4	20	1:2.5
42"	5380	4 1/2	21	5'-3"	35	8'-2"	6'-6"	4 1/2	22	1:2.5
48"	6550	5	24	6'-0"	26	8'-2"	7'-0"	5	22	1:2.5
54"	8240	5 1/2	27	5'-5"	35	8'-4"	7'-6"	5 1/2	24	1:2.0
60"	8730	6	35	5'-0"	39	8'-3"	8'-0"	5	*	1:1.9
66"	10710	6 1/2	30	6'-0"	27	8'-3"	8'-6"	5 1/2	*	1:1.7
72"	12520	7	36	6'-6"	21	8'-3"	9'-0"	6	*	1:1.8
78"	14770	7 1/2	36	7'-6"	21	9'-3"	9'-6"	6 1/2	*	1:1.8
84"	18160	8	36	7'-6 1/2"	21	9'-3 1/2"	10'-0"	6 1/2	*	1:1.6

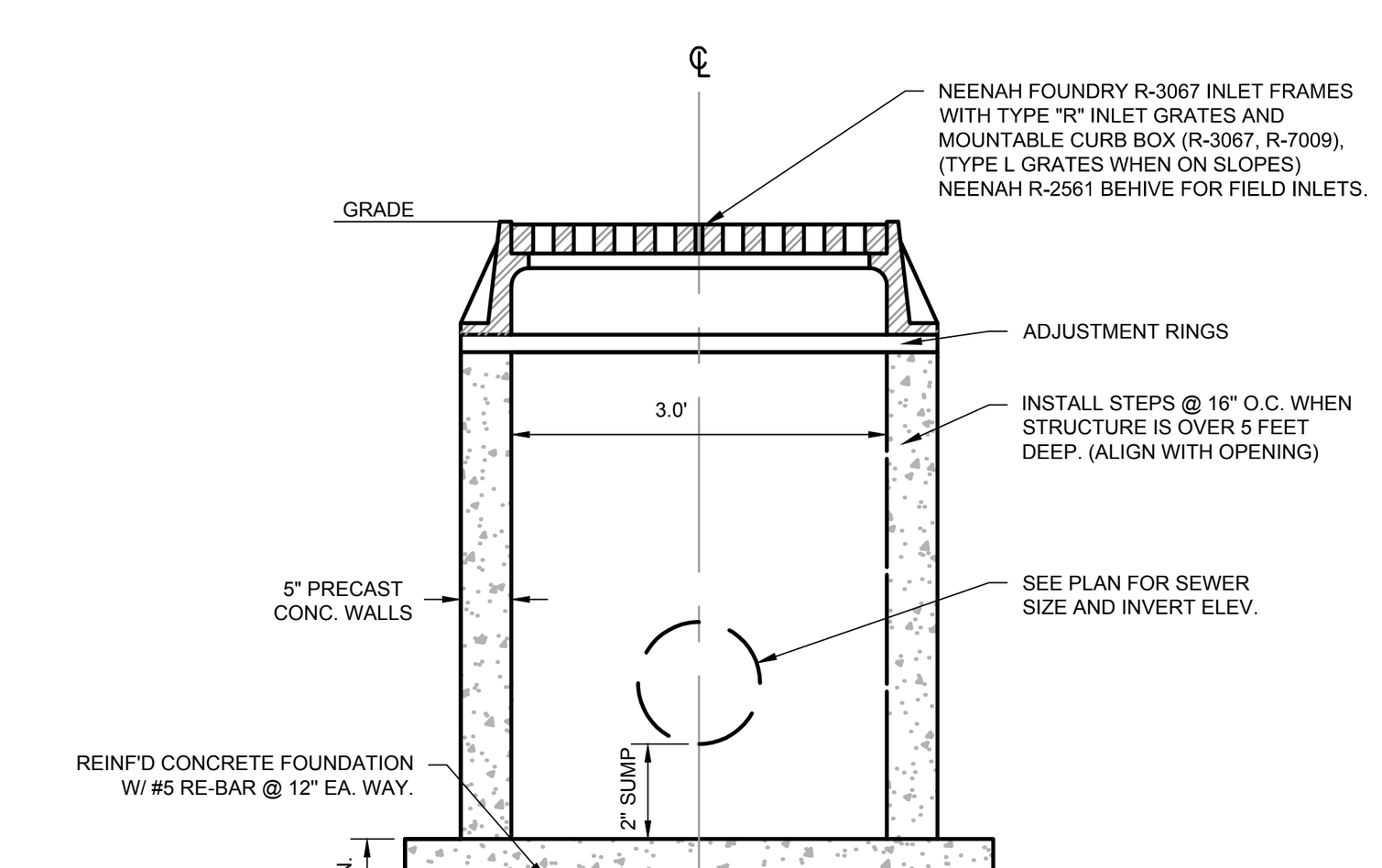
* RADIUS AS FURNISHED BY MANUFACTURER

NOTES:

1. PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-170 CLASS 3, WALL B REINFORCED CONCRETE PIPE.
2. PRECAST CONCRETE FLARED END SECTIONS FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.
3. THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR PRECAST CONCRETE FLARED END SECTION OF THE DIAMETER SPECIFIED WHICH PRICE INCLUDES PROVIDING AND INSTALLATION OF EACH END SECTION SPECIFIED.
4. GRATES, WHERE SPECIFIED, SHALL BE PROVIDED FOR ALL PRECAST REINFORCED CONCRETE FLARED END SECTIONS.

PRECAST FLARED END SECTIONS

#312-A 6/19/13

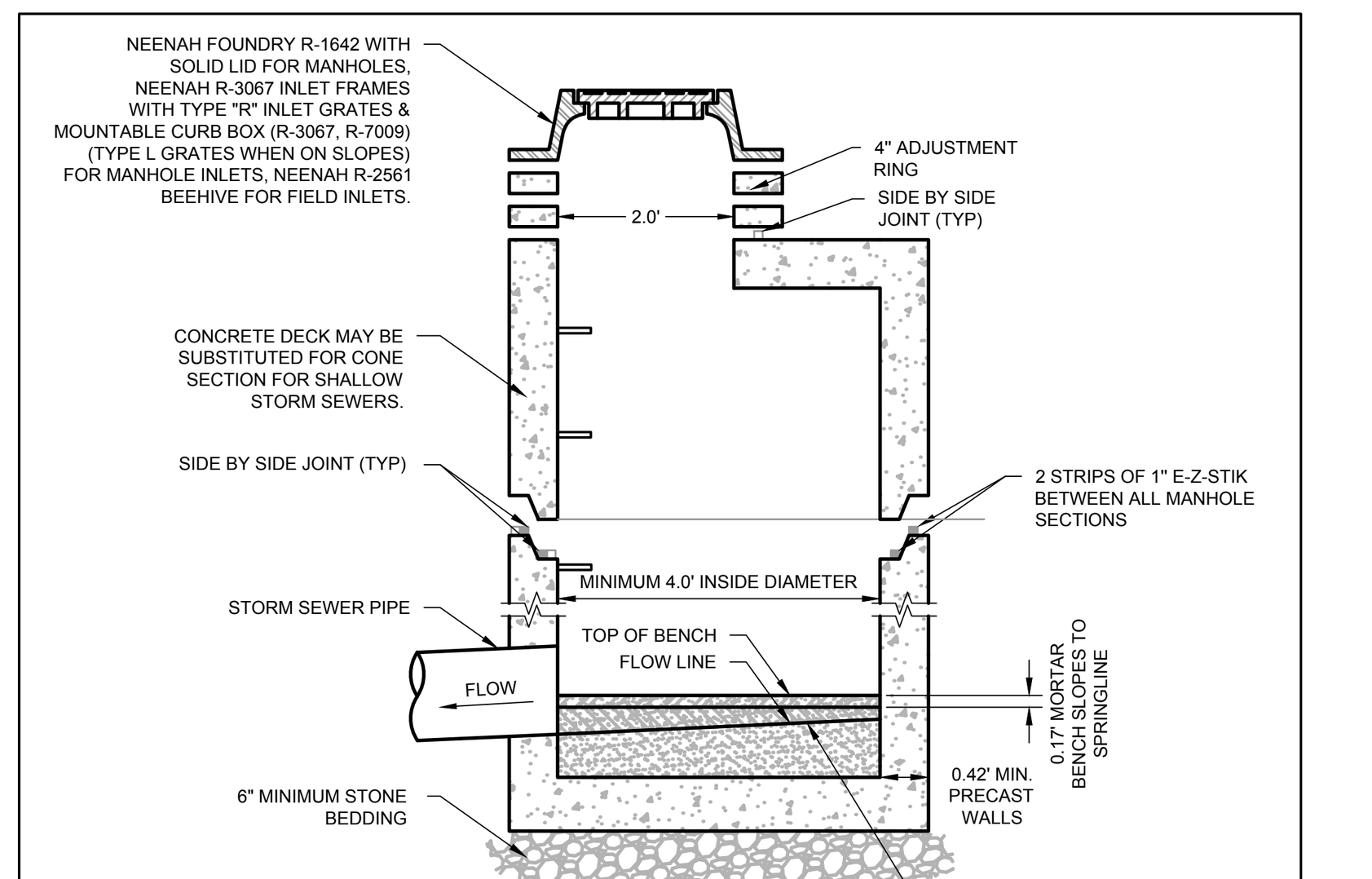


NOTES:

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. TWO FOOT SUMPS.

2' x 3' CATCH BASIN

#306 06/04/14



NOTES:

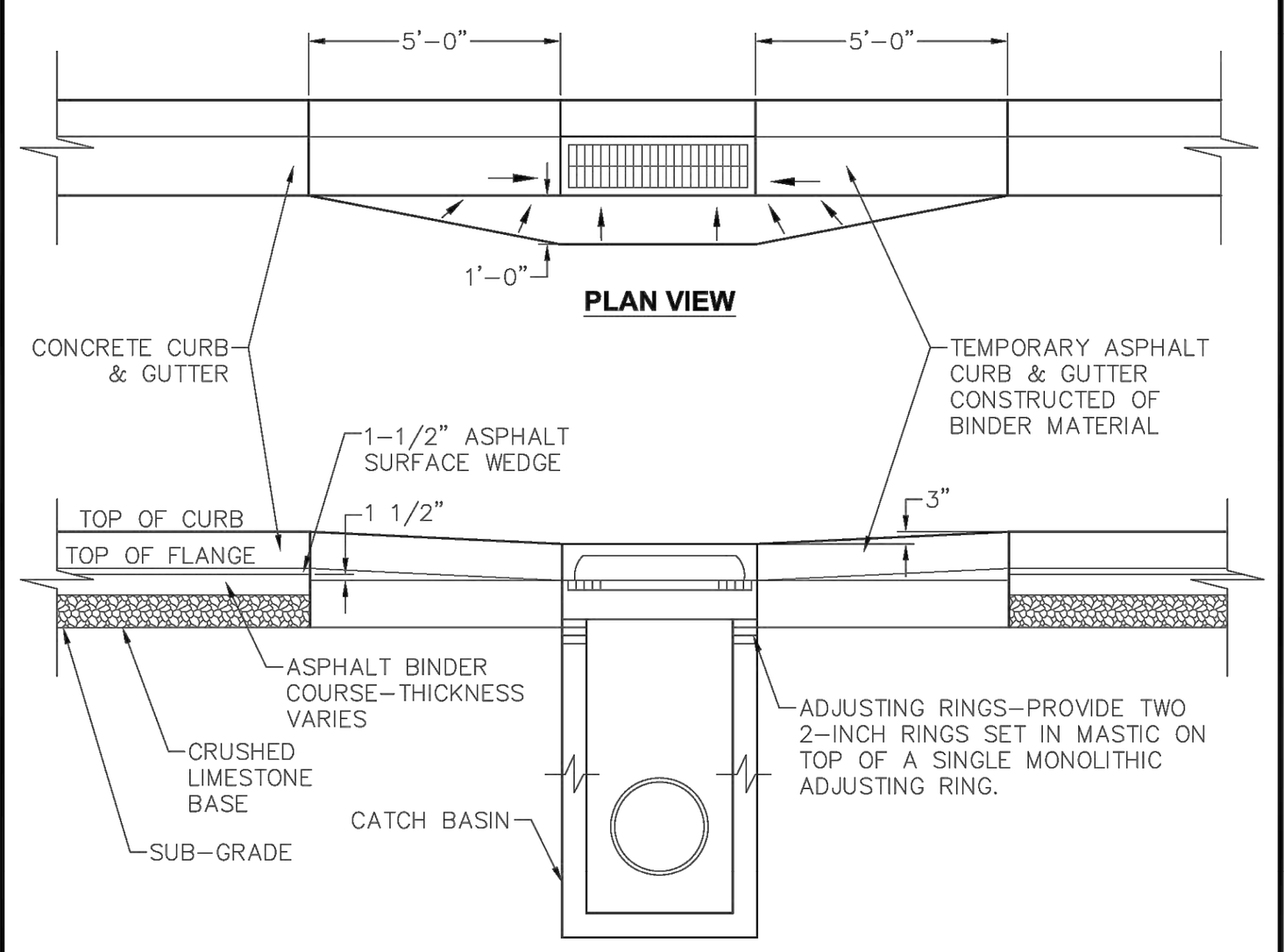
1. CLEAN UNDERSIDE OF ADJUSTING RING OR CAST IRON FRAME AND SET IN PLACE.
2. TUCK POINT MORTAR INTO ANNULAR CRACK AND BACKPLASTERED INSIDE AND OUTSIDE OF ALL JOINTS.
3. THE FLAT TOP MAY BE USED IN LIEU OF THE TAPERED TOP WHEN FIELD CONDITIONS PROHIBIT THE USE OF A FLAT TAPERED TOP.
4. MANHOLE CONSTRUCTION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

STORM SEWER MH, MH INLETS & FIELD INLETS

#301 04/26/13

RM811PB

INTERIM INLETS:
MH IN 6, 7, 9, 14, 15, 17, 25, 35, 45, 46, 47, 56, 57
CB 8, 16, 26, 34, 44, 59, 60



NOTE:
TEMPORARY ASPHALT CURB AND GUTTER (BINDER) TO REMAIN IN PLACE UNTIL FINISHED ASPHALT SURFACE COURSE IS SCHEDULED. PRIOR TO REPLACEMENT OF ASPHALT SURFACE COURSE, CONTRACTOR TO REMOVE TEMPORARY ASPHALT BINDER, CURB AND GUTTER, ADJUST FRAME TO PROPER GRADE AND POUR CONCRETE CURB AND GUTTER.

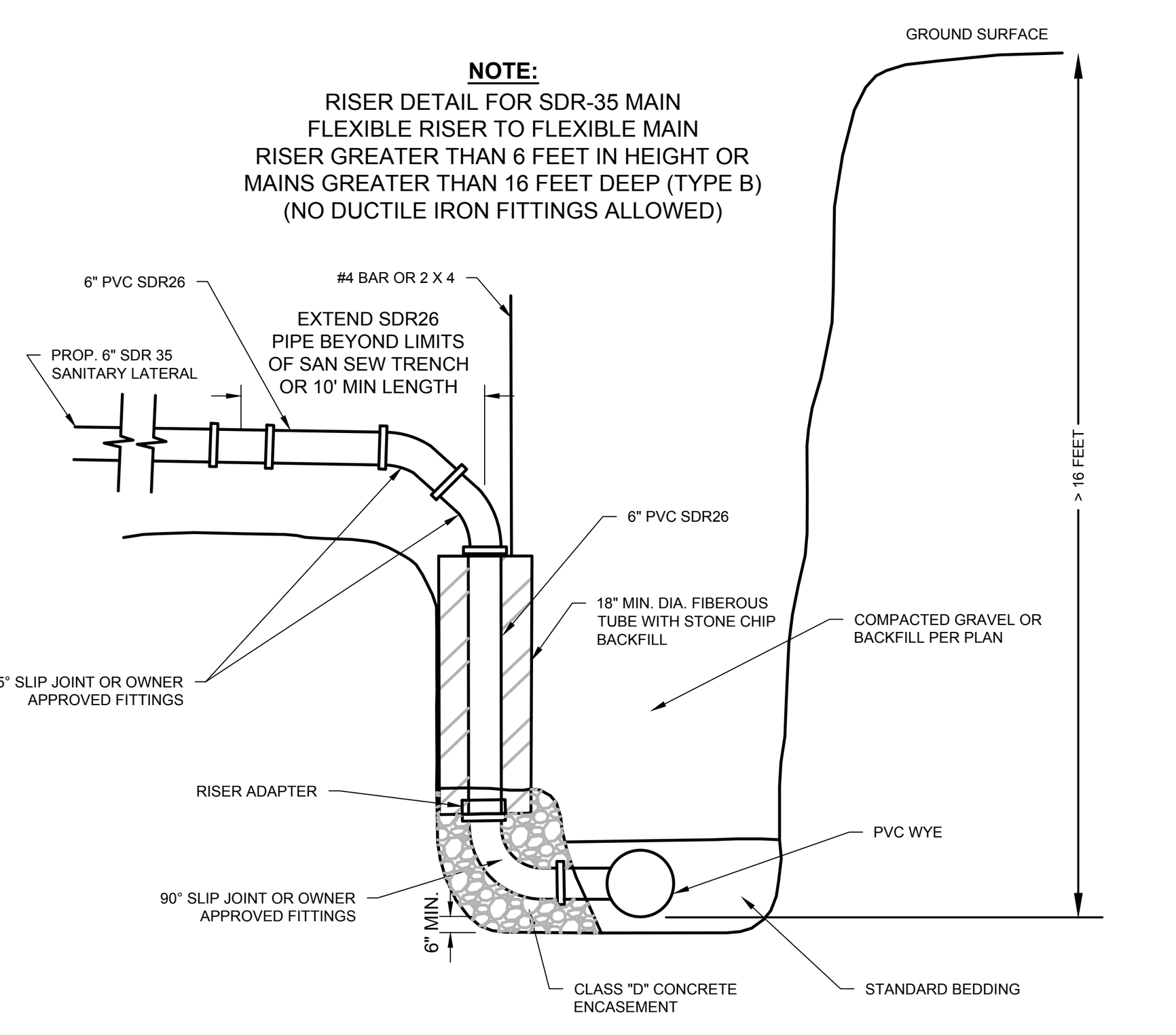
TEMPORARY ASPHALT WEDGES SHALL BE INSTALLED ALONG CURB FLANGE LINES. STRUCTURES SHALL HAVE TEMPORARY ASPHALT RAMPS. REMOVE TEMPORARY ASPHALT PRIOR TO SURFACE PAVING.

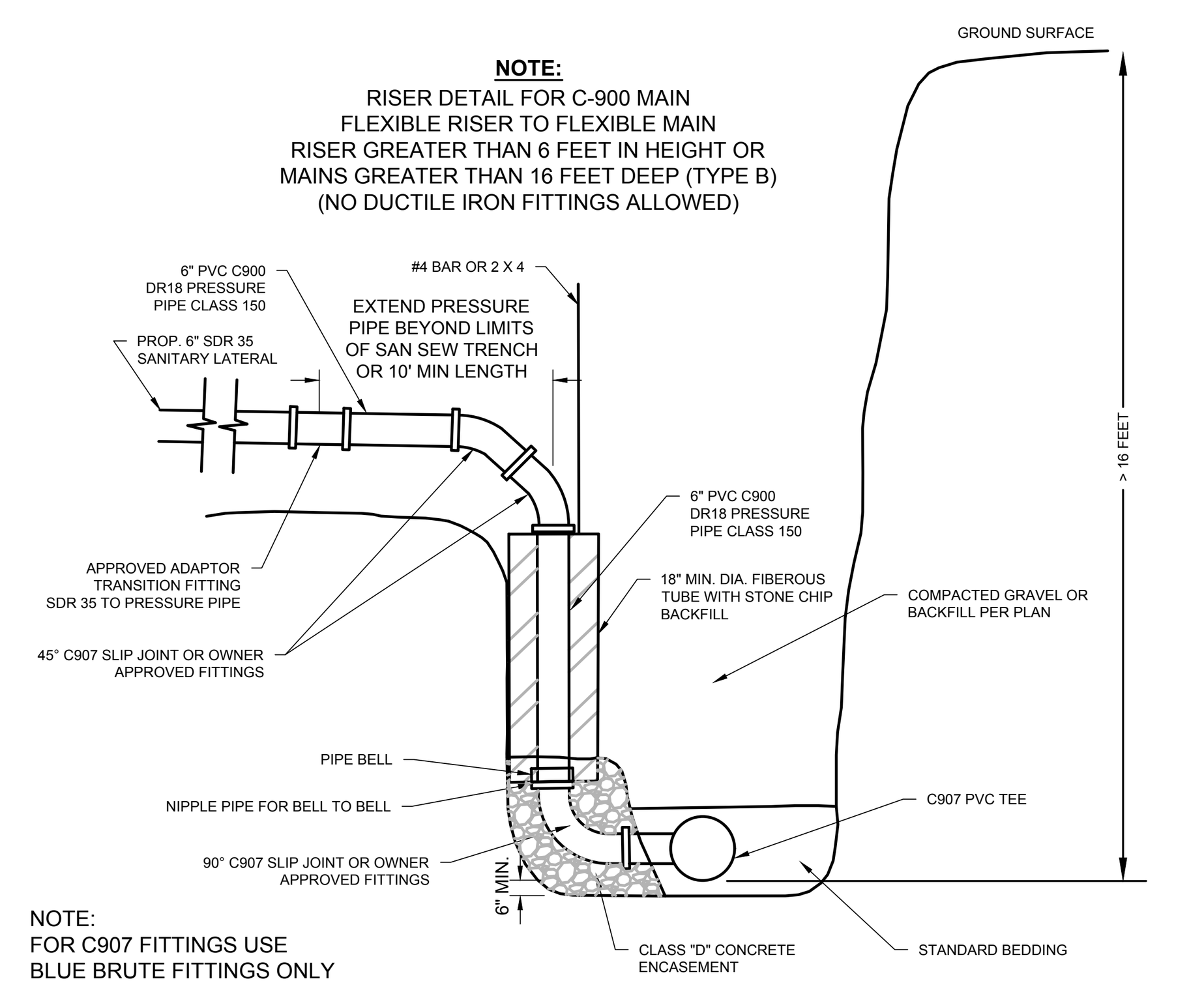
INTERIM CATCH BASIN NO SCALE

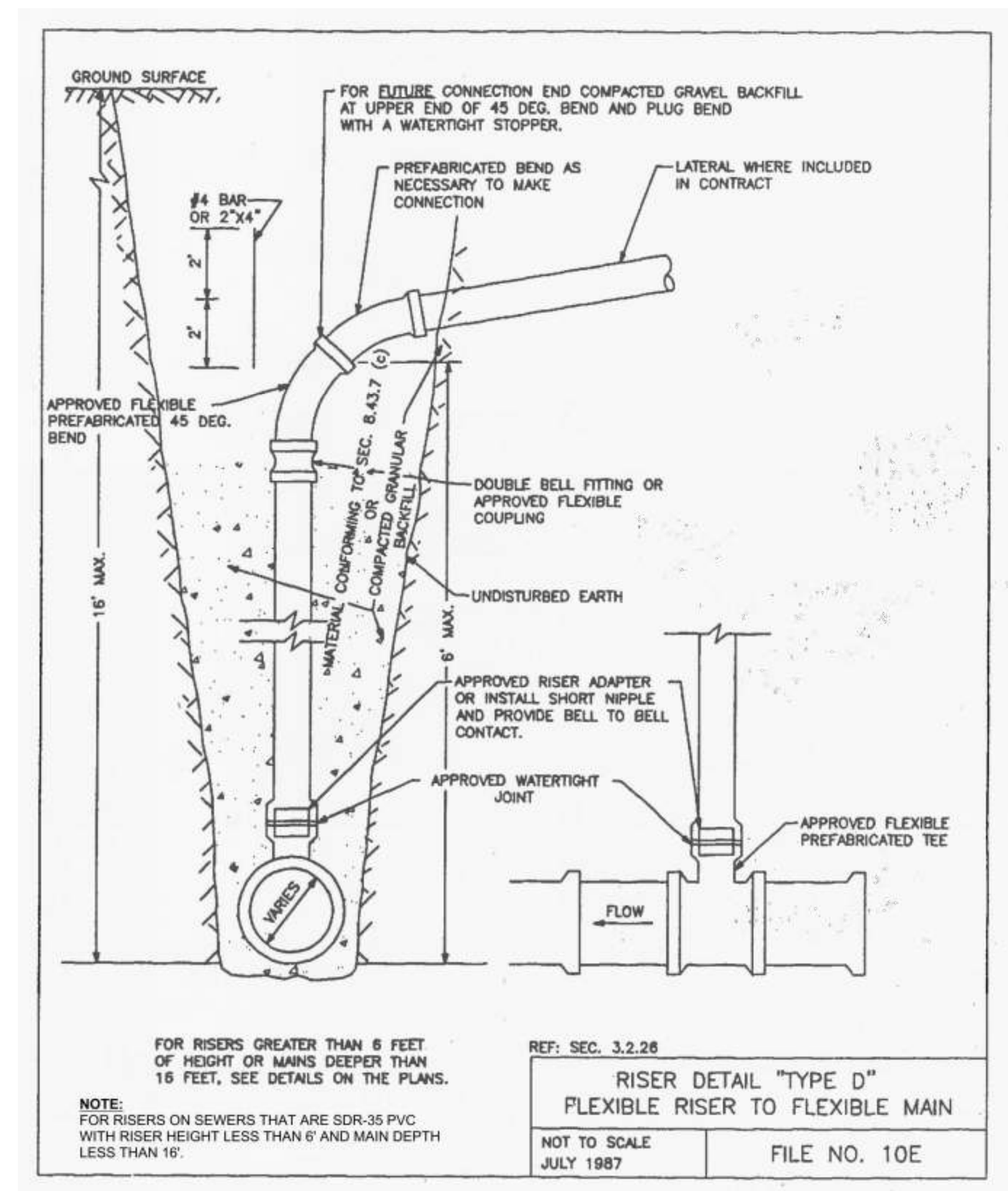
STO-CB-07 32

Jul 29, 2015 10:56am
T:\cmm\Hartland\DWG's\Z-000-STO-05_Interim Catch Basin.dwg Model
IMAGES: G:\SHT\RMGrphic.jpg; G:\SHT\RMGrphic.jpg
XREFS: T:\cmm\Hartland\STO-CB-07.dwg

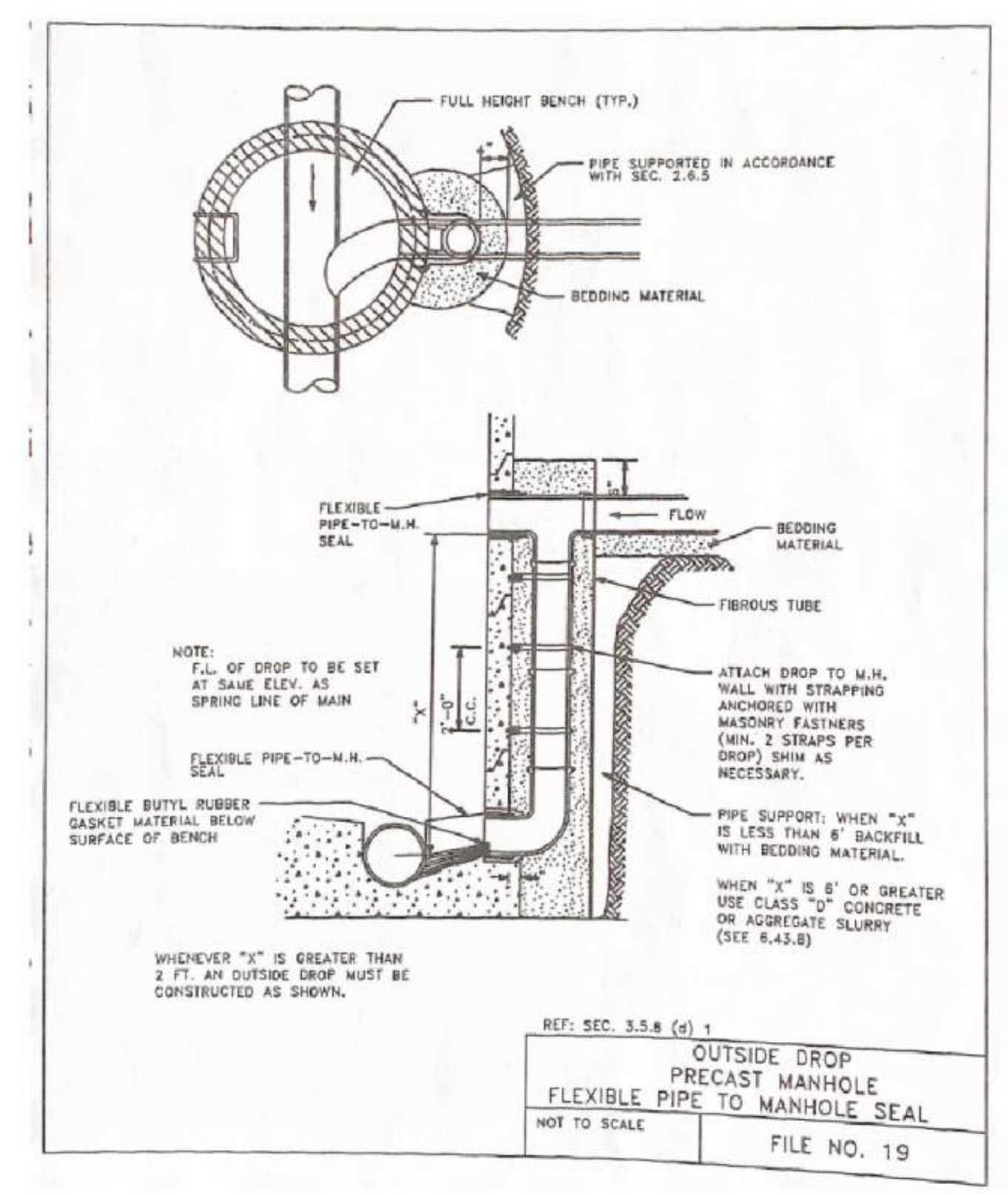
EXHIBIT STO-05

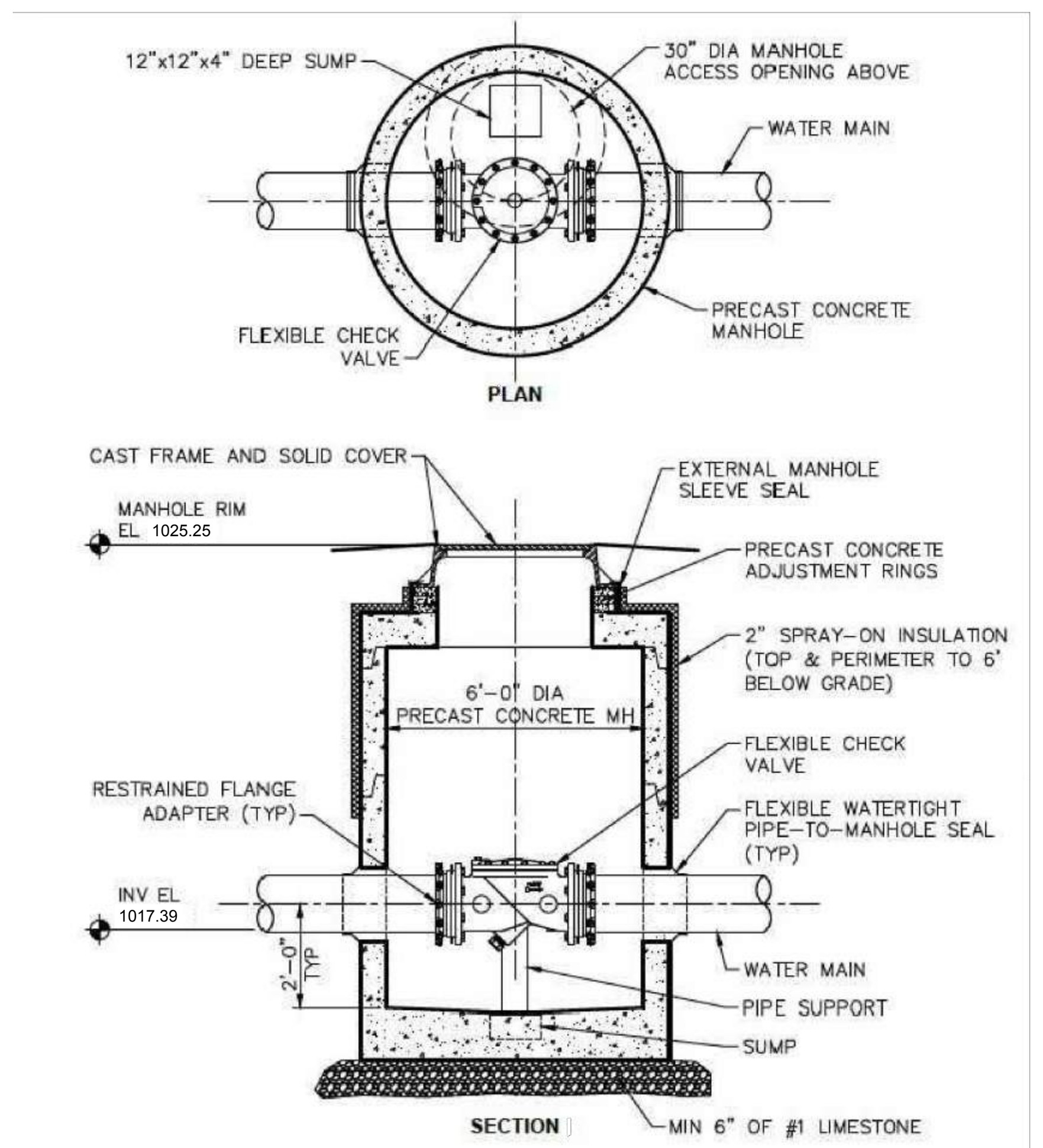






NOTE: RISERS ON SDR-35 MAIN LESS THAN 6'



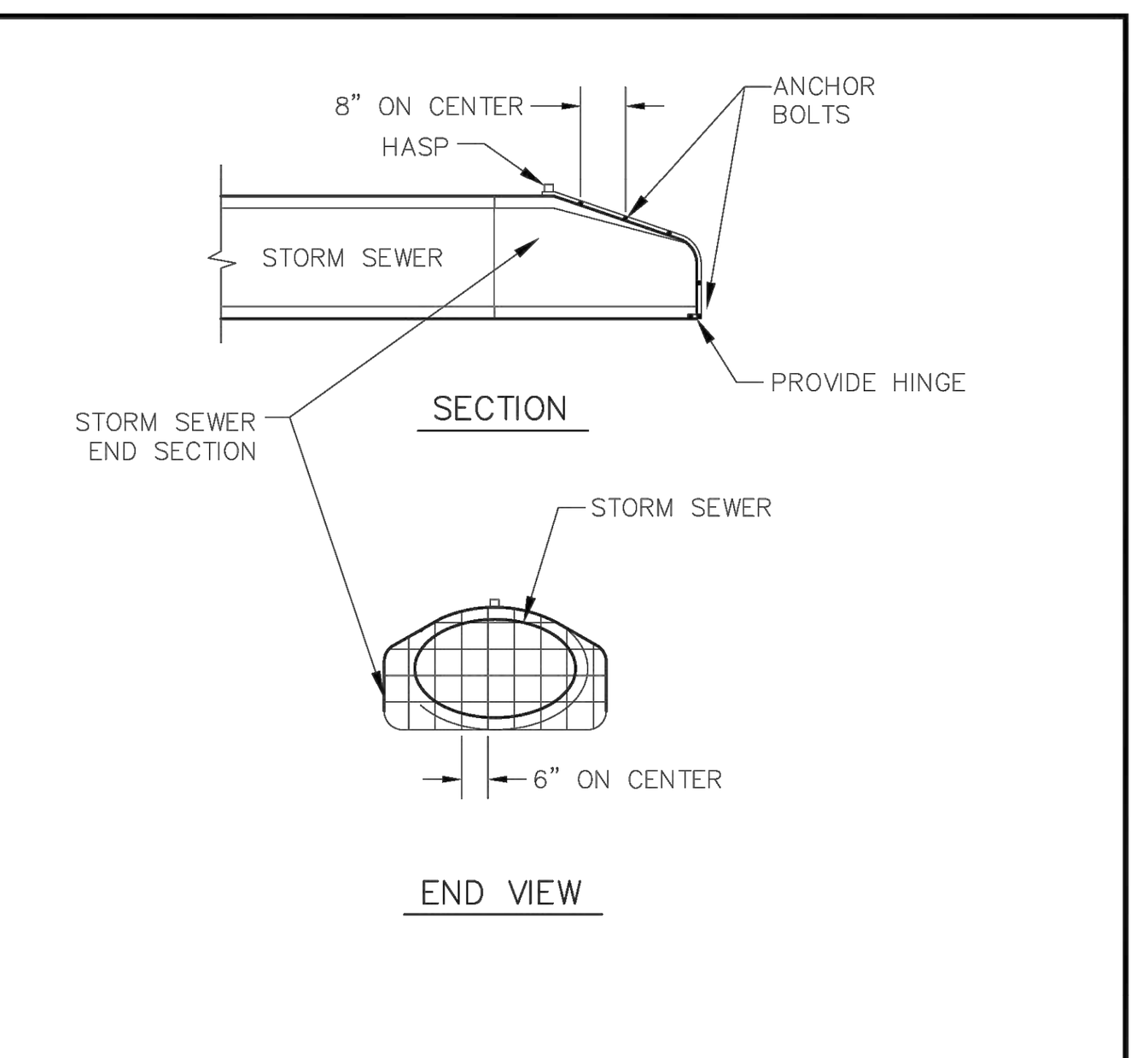


INTEGRAL BASE (SHOWN) IS ACCEPTABLE PROVIDED EQUIVALENT PROTECTION FROM HYDROSTATIC UPLIFT IS PROVIDED.

B / 1C02 **CHECK VALVE MANHOLE** NO SCALE

Sdt-Check Valve MH 24

RM811PB



NOTES:

1) TRASH RACK BARS TO BE GALVANIZED.

2) CONNECTOR PLATE WITH BOLT ATTACHED AT THREE POINTS TO ENDWALL.

3) PLANT FIT TRASH RACK CONFIGURATION TO FIT RELATIVE END SECTION.

TRASH RACK NO SCALE

STO-GRATE-04 96

Mar 03, 2017 7:44am
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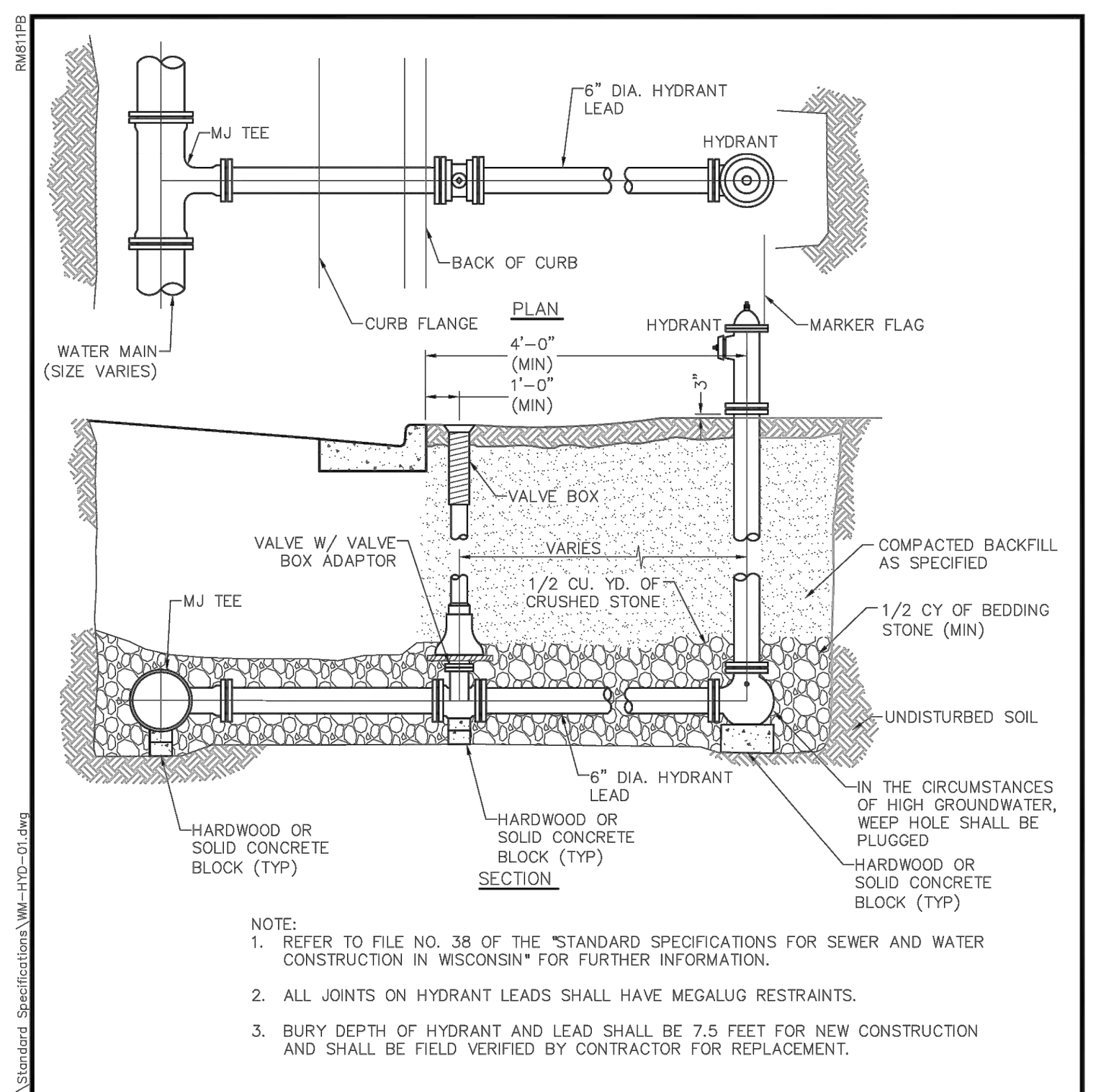
EXHIBIT STO-04

RM811PB



NOTE:
1. REFER TO FILE NO. 38 OF THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN" FOR FURTHER INFORMATION.
2. ALL JOINTS ON HYDRANT LEADS SHALL HAVE MEGALUG RESTRAINTS.
3. BURY DEPTH OF HYDRANT AND LEAD SHALL BE 7.5 FEET FOR NEW CONSTRUCTION AND SHALL BE FIELD VERIFIED BY CONTRACTOR FOR REPLACEMENT.

HYDRANT SETTING DETAIL NO SCALE

WM-HYD-01 24

4. HYDRANTS SHALL BE RED WITH FACTORY INSTALLED STORZ NOZZLE AND FACTORY PAINTED WHITE CAPS.
5. SEE TRACER WIRE REQUIREMENTS ON SHEET 32.

Mar 03, 2017 7:45am
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EXHIBIT WM-01

RM811PB

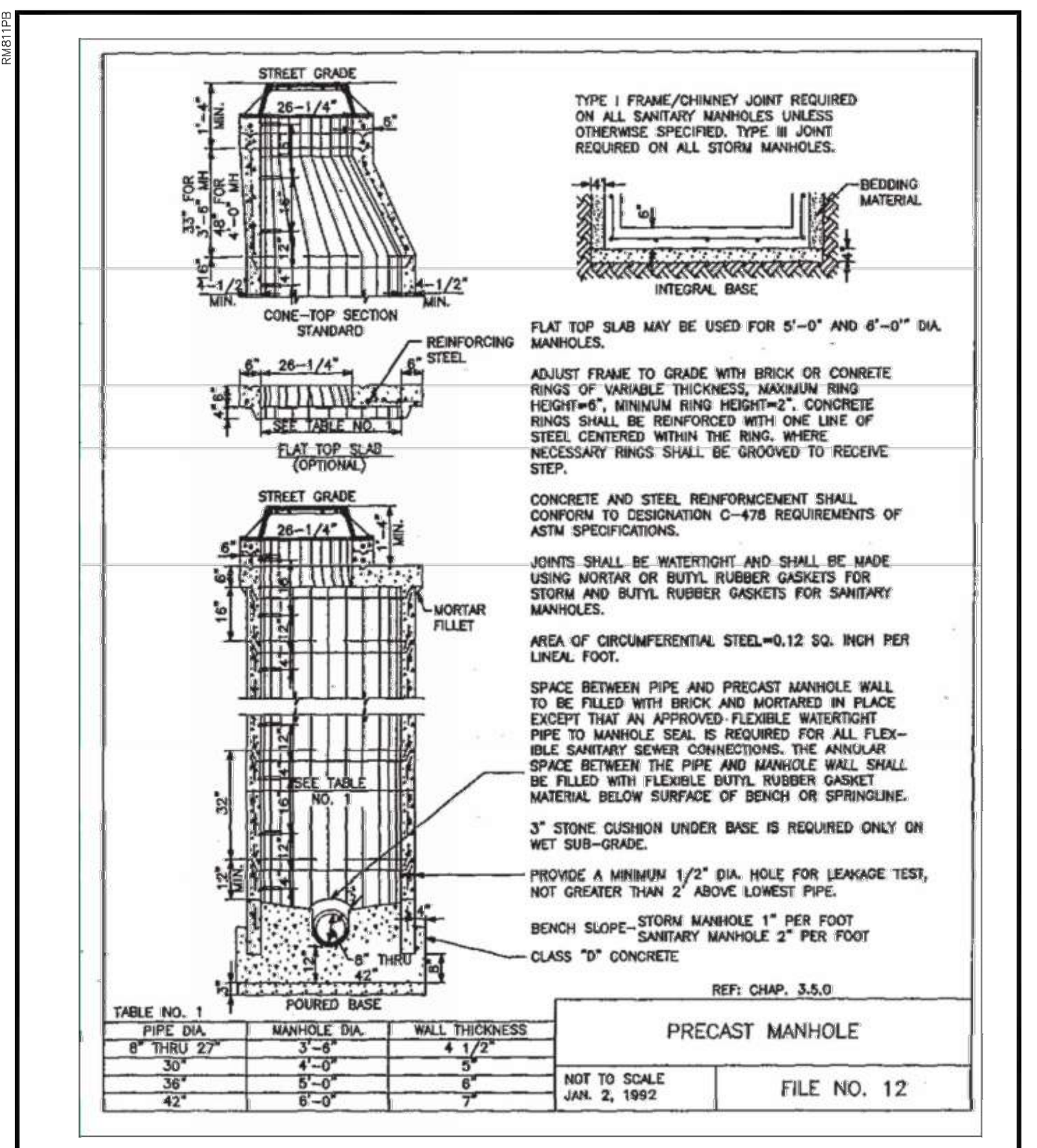


TABLE NO. 1

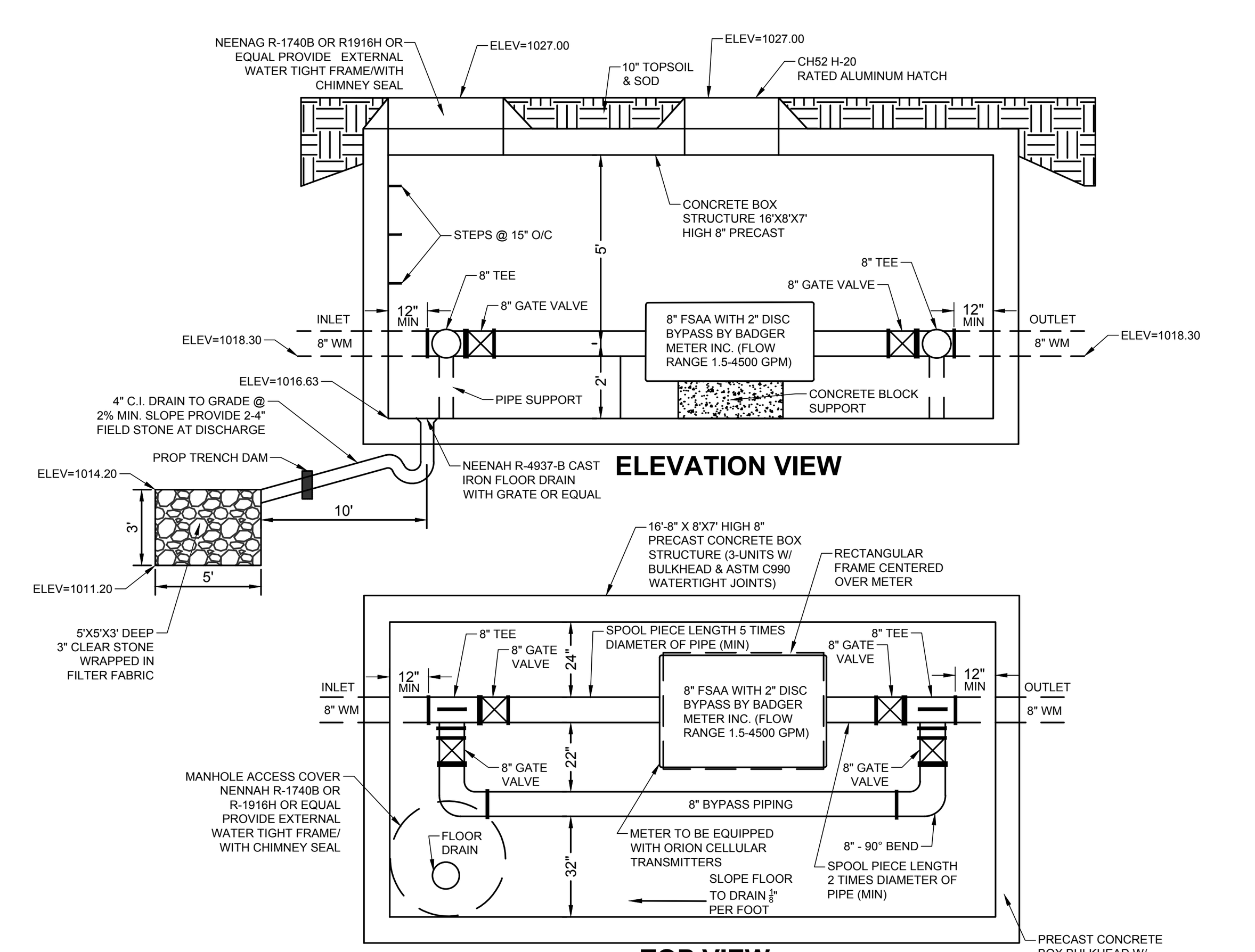
PIPE DIA.	MANHOLE DIA.	WALL THICKNESS
8" THRU 27"	3'-6"	4 1/2"
30"	4'-0"	5"
36"	5'-0"	6"
42"	6'-0"	7"

NOTE:
1. USE SINGLE LAYER MONOLITHIC RING AND TWO 2-INCH ADJUSTING RINGS IN CHIMNEY.
2. NO STEPS ALLOWED IN TOP FIVE FEET OF MANHOLE, MEASURED FROM RIM ELEVATION DOWN.
3. SET ADJUSTING RINGS AND FRAME IN MASTIC.
4. BACKPLASTER OUTSIDE OF STRUCTURE, NO BACKPLASTER ALLOWED INSIDE MANHOLE.

Jul 29, 2015 10:50am
T:\cmm\Hartland\DWG's\Z-000-SAN-01-Precast Manhole-File No 12.dwg Model
IMAGES: G:\SHT\RMGrphic.jpg;
XREFS:

EXHIBIT SAN-01

5. GROUT: IPATOP PENNGROUT, NON-SHRINK CEMENTITIOUS GROUT BY IPA SYSTEMS.



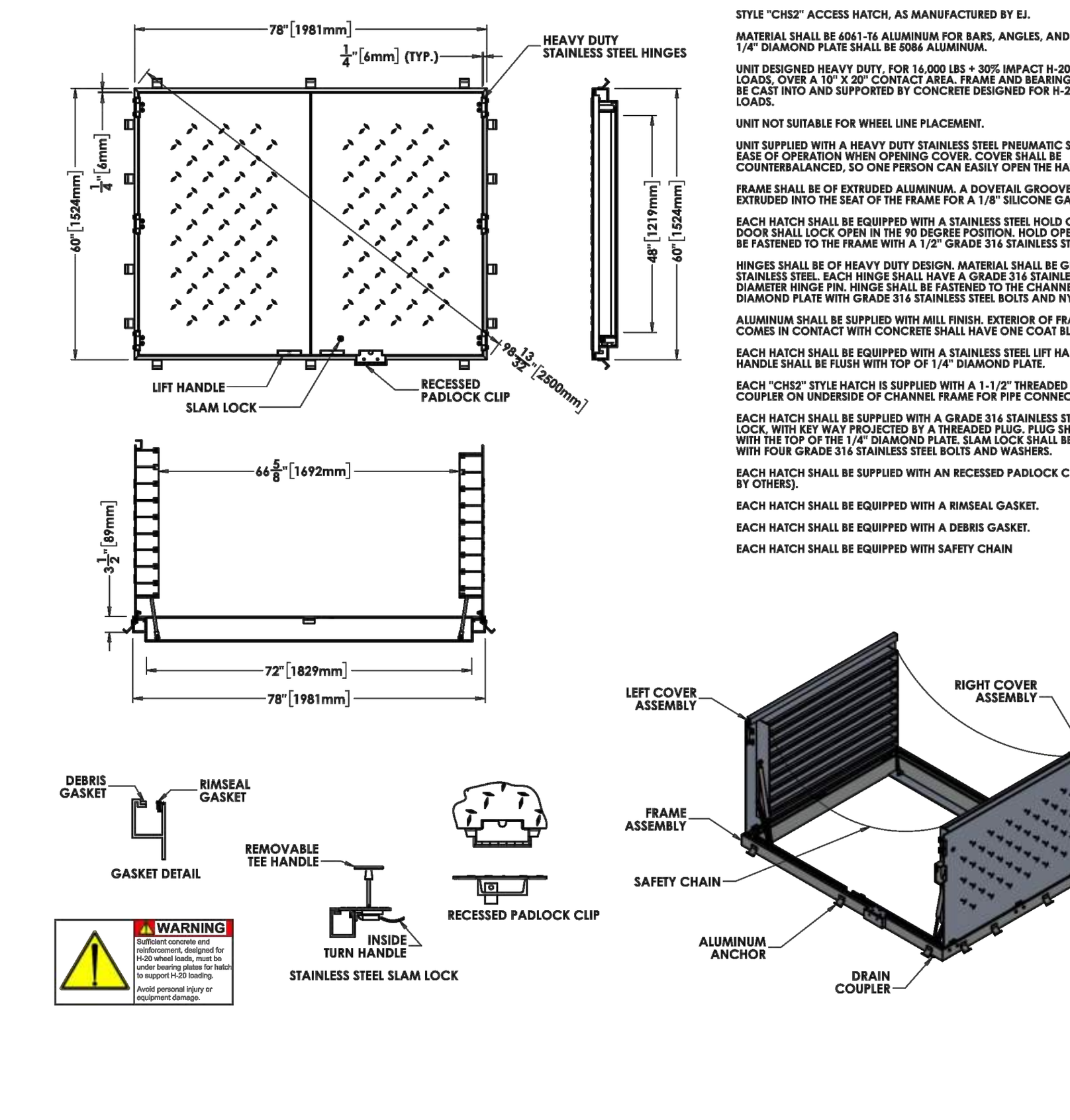
WATER MAIN MONITORING METER VAULT DETAIL

NO SCALE SHOP DRAWING TO BE REVIEWD & APPROVED BY VILLAGE PROOR TO ORDERING MATERIALS.

NOTES:

1. VILLAGE WILL PROVIDE THE PHYSICAL METER FOR METER PIT. ALL OTHER METER PIT RELATED MATERIALS/EQUIPMENT TO BE PROVIDED BY THE DEVELOPER/CONTRACTOR.
2. ALL VALVES IN THE METER PIT SHALL BE AMERICAN FLOW CONTROL SERIES 2500 RESILIENT WEDGE GATE VALVE RWGV1 WITH HAND WHEEL.

CHS2 H-20 Rated Aluminum Hatch



STYLE "CHS2" ACCESS HATCH, AS MANUFACTURED BY EJ.

MATERIAL SHALL BE 6061-T6 ALUMINUM FOR BARS, ANGLES, AND EXTRUSIONS. 1/4" DIAMOND PLATE SHALL BE 5086 ALUMINUM.

UNIT DESIGNED HEAVY DUTY, FOR 16,000 LBS + 30% IMPACT H-20 WHEEL LOADS, OVER A 10" X 20" CONTACT AREA. FRAME AND BEARING PLATE MUST BE CAST INTO AND SUPPORTED BY CONCRETE DESIGNED FOR H-20 WHEEL LOADS.

UNIT NOT SUITABLE FOR WHEEL LINE PLACEMENT.

UNIT SUPPLIED WITH A HEAVY DUTY STAINLESS STEEL PNEUMATIC SPRING, FOR EASE OF OPERATION WHEN OPENING COVER. COVER SHALL BE COUNTERBALANCED, SO ONE PERSON CAN EASILY OPEN THE HATCH DOOR.

FRAME SHALL BE OF EXTRUDED ALUMINUM. A DOVETAIL GROOVE SHALL BE EXTRUDED INTO THE SEAT OF THE FRAME FOR A 1/8" SILICONE GASKET.

EACH HATCH SHALL BE EQUIPPED WITH A STAINLESS STEEL HOLD OPEN ARM. DOOR SHALL LOCK OPEN IN THE 90 DEGREE POSITION. HOLD OPEN ARM SHALL BE FASTENED TO THE FRAME WITH A 1/2" GRADE 316 STAINLESS STEEL BOLT.

HINGES SHALL BE OF HEAVY DUTY DESIGN. MATERIAL SHALL BE GRADE 316 STAINLESS STEEL. EACH HINGE SHALL HAVE A GRADE 316 STAINLESS STEEL, 3/8" DIAMETER HINGE PIN. HINGE SHALL BE FASTENED TO THE CHANNEL FRAME AND DIAMOND PLATE WITH GRADE 316 STAINLESS STEEL BOLTS AND NY-LOCK NUTS.

ALUMINUM SHALL BE SUPPLIED WITH MILL FINISH. EXTERIOR OF FRAME WHICH COMES IN CONTACT WITH CONCRETE SHALL HAVE ONE COAT BLACK PRIMER.

EACH HATCH SHALL BE EQUIPPED WITH A STAINLESS STEEL LIFT HANDLE. LIFT HANDLE SHALL BE FLUSH WITH TOP OF 1/4" DIAMOND PLATE.

EACH "CHS2" STYLE HATCH IS SUPPLIED WITH A 1-1/2" THREADED DRAIN COUPLER ON UNDERSIDE OF CHANNEL FRAME FOR PIPE CONNECTION.

EACH HATCH SHALL BE SUPPLIED WITH A GRADE 316 STAINLESS STEEL SLAM LOCK, WITH KEY WAY PROJECTED BY A THREADED PLUG. PLUG SHALL BE FLUSH WITH THE TOP OF THE 1/4" DIAMOND PLATE. SLAM LOCK SHALL BE FASTENED WITH FOUR GRADE 316 STAINLESS STEEL BOLTS AND WASHERS.

EACH HATCH SHALL BE SUPPLIED WITH AN RECESSED PADLOCK CLIP (PADLOCK BY OTHERS).

EACH HATCH SHALL BE EQUIPPED WITH A RIMSEAL GASKET.

EACH HATCH SHALL BE EQUIPPED WITH A DEBRIS GASKET.

EACH HATCH SHALL BE EQUIPPED WITH SAFETY CHAIN

ej

Product Number
H48721914

Design Features
-Materials
Aluminum
-Design Load
Heavy Duty (Not in Driving Lane)
-Open Area

-Coating
Mill Finish
-√ Designates Machined Surface

Certification
- WT 428 lbs
- Country of Origin: USA

Drawing Revision
9/27/2018 Designer: RJM
Revised By:

Disclaimer
Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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DRAFTED: BR DESIGNED: ASZ REVIEWED: ASZ

PLAN I DESIGN I DELIVER
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PINNACLE ENGINEERING GROUP
ENGINEERING I NATURAL RESOURCES I SURVEYING

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

SANDHILL
VILLAGE OF HARTLAND, WI

CONSTRUCTION DETAILS

REVISIONS

No.	Description	Date
1	VILLAGE COMMENTS	03-31-21
2	VILLAGE COMMENTS	04-12-21

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE

SHEET
C-31
C-42

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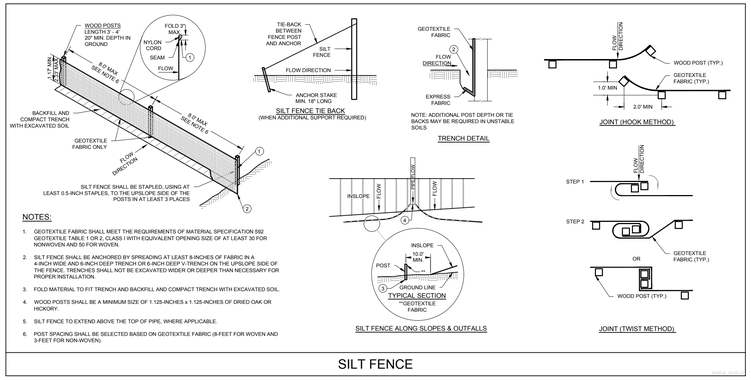
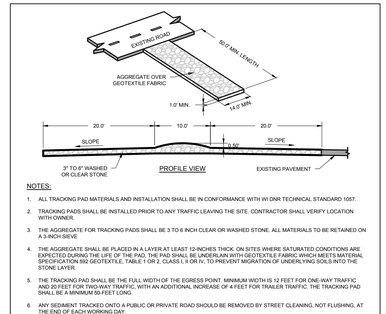


NOTES:

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS I WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
2. SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8-INCHES OF FABRIC IN A 4-INCH WIDE AND 6-INCH DEEP TRENCH OR 6-INCH DEEP V-TRENCH ON THE UPSLOPE SIDE OF THE FENCE. TRENCHES SHALL NOT BE EXCAVATED WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION.
3. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
4. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1.125-INCHES x 1.125-INCHES OF DRIED OAK OR HICKORY.
5. SILT FENCE TO EXTEND ABOVE THE TOP OF PIPE, WHERE APPLICABLE.
6. POST SPACING SHALL BE SELECTED BASED ON GEOTEXTILE FABRIC (8-FEET FOR WOVEN AND 3-FEET FOR NON-WOVEN).

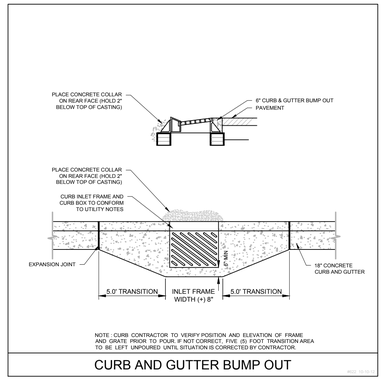
SILT FENCE



NOTES:

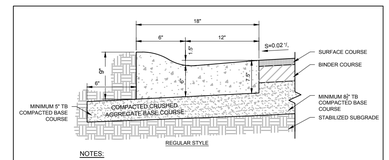
1. ALL TRACKING PAD MATERIALS AND INSTALLATION SHALL BE IN CONFORMANCE WITH WI DNR TECHNICAL STANDARD 1057.
2. TRACKING PADS SHALL BE INSTALLED PRIOR TO ANY TRAFFIC LEAVING THE SITE. CONTRACTOR SHALL VERIFY LOCATION WITH OWNER.
3. THE AGGREGATE FOR TRACKING PADS SHALL BE 3 TO 6 INCH CLEAR OR WASHED STONE. ALL MATERIALS TO BE RETAINED ON A 3-INCH SIEVE.
4. THE AGGREGATE SHALL BE PLACED IN A LAYER AT LEAST 12-INCHES THICK. ON SITES WHERE SATURATED CONDITIONS ARE EXPECTED DURING THE LIFE OF THE PAD, THE PAD SHALL BE UNDERLAIN WITH GEOTEXTILE FABRIC WHICH MEETS MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS I, II OR IV, TO PREVENT MIGRATION OF UNDERLYING SOILS INTO THE STONE LAYER.
5. THE TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT. MINIMUM WIDTH IS 12 FEET FOR ONE-WAY TRAFFIC AND 20 FEET FOR TWO-WAY TRAFFIC WITH AN ADDITIONAL INCREASE OF 4 FEET FOR TRAILER TRAFFIC. THE TRACKING PAD SHALL BE A MINIMUM 50 FEET LONG.
6. ANY SEDIMENT TRACKED ONTO A PUBLIC OR PRIVATE ROAD SHOULD BE REMOVED BY STREET CLEANING, NOT FLUSHING, AT THE END OF EACH WORKING DAY.
7. TRACKING PADS 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.
8. THE TRACKING PAD PERFORMANCE SHALL BE MAINTAINED BY SCRAPING OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.

CONSTRUCTION ENTRANCE



NOTE: CURB CONTRACTOR TO VERIFY POSITION AND ELEVATION OF FRAME AND GRATE PRIOR TO POUR IF NOT CORRECT, FIVE (5) FOOT TRANSITION AREA TO BE LEFT UNPOURED UNTIL SITUATION IS CORRECTED BY CONTRACTOR.

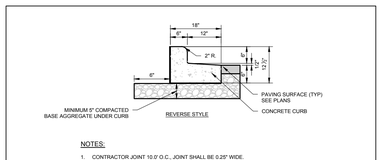
CURB AND GUTTER BUMP OUT



NOTES:

1. CONTRACTOR JOINT 10.0' O.C., JOINT SHALL BE 0.25" WIDE.
2. A 0.75" TO 1" EXPANSION JOINT (FELT) SHALL BE CONSTRUCTED NOT MORE THAN 300 FEET APART, AT P.C. POINTS AND 5.0' EITHER SIDE OF INLET STRUCTURES.
3. WHERE NEW CONCRETE MEETS WITH EXISTING CONCRETE 0.75" EXPANSION JOINT (FELT) SHALL SEPARATE THE TWO.

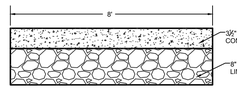
18" MOUNTABLE CURB & GUTTER



NOTES:

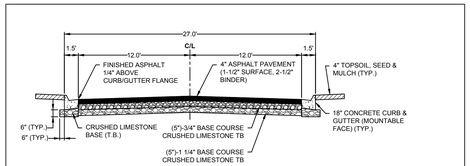
1. CONTRACTOR JOINT 10.0' O.C., JOINT SHALL BE 0.25" WIDE.
2. A 0.75" TO 1" EXPANSION JOINT (FELT) SHALL BE CONSTRUCTED NOT MORE THAN 300 FEET APART, AT P.C. POINTS AND 5.0' EITHER SIDE OF INLET STRUCTURES.
3. REVERSE STYLE CURB LOCATIONS ARE NOTED ON THE PLANS

18" INVERTED VERTICAL FACE CURB



PEDESTRIAN PATH DETAIL

(NOT TO SCALE)



NOTES:

1. ADJUST MH FRAMES, AND VALVE BOXES TO 1/4-INCH TO 1/2-INCH LOWER THAN FINISH GRADE.
2. BINDER COURSE: 3LT 58-28S
3. SURFACE COURSE: 5LT 58-28S

PRIVATE ROAD CROSS SECTION (NOT TO SCALE)

CONSTRUCTION SEQUENCE:

PHASE 1 AND 2:

1. INSTALL TRACKING PAD AND SILT FENCE. CONTINUOUS INSPECTION OF EROSION CONTROL MEASURES THROUGHOUT THE PROJECT. THE GRADING CONTRACTOR SHALL INSPECT EROSION AND SEDIMENT CONTROL PRACTICES WEEKLY, AND WITHIN 24 HOURS AFTER EVERY RAIN EVENT THAT PRODUCES 0.5 INCHES OF RAIN OR MORE IN A 24 HOUR PERIOD. WRITTEN DOCUMENTATION OF EACH INSPECTION SHALL BE MAINTAINED ONLINE AND/OR AT THE CONSTRUCTION SITE AND SHALL INCLUDE THE TIME, DATE AND LOCATION OF INSPECTION, THE PHASE OF LAND DISTURBANCE AT THE CONSTRUCTION SITE, PERSON CONDUCTING THE INSPECTION, ASSESSMENT OF CONTROL PRACTICES, AND DESCRIPTION OF ANY EROSION OR SEDIMENT CONTROL MEASURE INSTALLATION OR MAINTENANCE PERFORMED IN RESPONSE TO THE INSPECTION.
2. STRIP TOPSOIL IN THE SOUTH WET STORM WATER POND, THE SOUTH DRY STORM WATER POND AND THE AREAS IMMEDIATELY ADJACENT TO THESE POND AREAS. CONSTRUCT THE PONDS INCLUDING THE TEMPORARY SEDIMENT BASIN WITHIN THE SOUTH DRY POND AND FILL ADJACENT AREAS WITH THE EXCESS MATERIAL. IMMEDIATELY RESTORE THE POND AREAS (THE ADJACENT AREAS WILL CONTINUE TO BE GRADED UNTIL THEY REACH SUBGRADE). THE POND AREAS SHALL BE COMPLETED PRIOR TO STRIPPING THE REMAINDER OF THE SITE AND ROUGH GRADING. AS-BUILT THE STORM WATER PONDS TO INSURE THE PONDS MEET THE ORIGINAL GRADES.
3. STRIP TOPSOIL, SEED AND STABILIZE STOCKPILES WITHIN SEVEN DAYS OF LAYUP.
4. CONSTRUCT DIVERSION BERM AND SWALE TO DIRECT RUNOFF TO WET POND. IMMEDIATELY RESTORE THE DIVERSION BERM AND SWALE.
5. ROUGH GRADE ROAD CENTERLINE TO SUBGRADE AND BEGIN MASS GRADING. MASS GRADING WILL CONTINUE THROUGH PHASE 3 INSTALLATION.
6. INSTALL SANITARY SEWER AND WATER MAIN. COMPLETE ALL TESTING AND CONTACT THE VILLAGE PRIOR TO CONNECTING TO THE EXISTING MAINS. NOTE THAT THIS STEP MAY BE CONCURRENT WITH ROUGH GRADING ONCE THE UTILITY AREAS HAVE BEEN GRADED TO SUBGRADE.
7. INSTALL STORM SEWER AND INLET PROTECTION. NOTE THIS STEP MAY OCCUR CONCURRENT WITH THE SANITARY SEWER AND WATER MAIN INSTALLATION.
8. FINISH GRADE ROAD AND COORDINATE THE ELECTRIC, GAS, CABLE AND TELEPHONE CROSSINGS. ONCE GAS AND ELECTRIC ROUTES ARE TO SUBGRADE, INSTALL ELECTRIC TRANSFORMERS. RESPREAD TOPSOIL AND PLACE SEED, MULCH, MATTING AND OTHER SITE STABILIZERS AS NEEDED. THIS CAN BE CONCURRENT WITH GRADING AND ROAD CONSTRUCTION AS AREAS ARE COMPLETED.
9. PERFORM CTH KE WORK.
10. INSTALL STONE BASE, CONSTRUCT CURB AND GUTTER AND PLACE BINDER COARSE ON SANDHILL BOULEVARD AND THE PHASE 1 PORTION OF LOOKOUT COURT. THE PHASE 2 PORTION OF LOOKOUT COURT WILL BE COMPLETED AFTER ONE SEASON TO ALLOW FOR ANY POTENTIAL SETTLING OF THE ROAD. THIS ROAD WORK MAY OCCUR CONCURRENT WITH FINISH GRADING.
11. WINDROW TOPSOIL ALONG PATH LOCATIONS ON DOWNSLOPE SIDE OF PATH. INSTALL STONE BASE, PLACE BINDER COURSE ON EACH SECTION BY PHASE. RESPREAD TOPSOIL AND IMMEDIATELY RESTORE DISTURBED AREAS.
12. RESTORE ANY REMAINING DISTURBED AREAS.
13. FILL THE TEMPORARY SEDIMENT BASIN TO FINAL SOUTH DRY POND GRADES WHEN ALL UPLAND AREAS HAVE REACHED FINAL GRADE AND ARE STABILIZED (80% REVEGETATED).
14. REMOVE CONSTRUCTION EROSION CONTROL MEASURES AFTER ENTIRE SITE IS STABILIZED (80% REVEGETATED) AND ALL CONSTRUCTION IS COMPLETE.

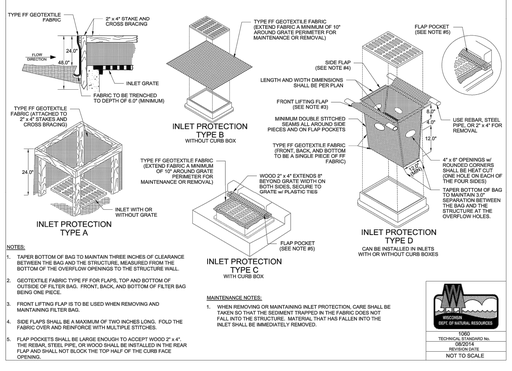
ESTIMATED START DATE: MAY 2021
ESTIMATED COMPLETION DATE: SEPTEMBER 2021
ESTIMATED DISTURBED AREA: 29.06 ACRES

FOLLOW SAME CONSTRUCTION SEQUENCE FOR PHASES 3 AND 4.
THE ESTIMATED START AND COMPLETION DATES FOR THOSE PHASES ARE TO BE DETERMINED.
ESTIMATED DISTURBED AREA IN PHASE 3: 16.96 ACRES
ESTIMATED DISTURBED AREA IN PHASE 4: 11.74 ACRES

GRADING & EROSION CONTROL NOTES:

A. ALL CONSTRUCTION PRACTICES TO COMPLY WITH THE VILLAGE OF HARTLAND, WISCONSIN DNR AND THE WISCONSIN DNR TECHNICAL STANDARDS.
B. ALL DISTURBED AREAS ON SITE SHALL BE TOPSOILED (4" THICK), SEEDED AND MULCHED. AREAS SO DESIGNATED SHALL BE TOPSOILED (4" THICK), SEEDED AND STABILIZED WITH EROSION MAT (WISDOT CLASS 1, TYPE B) PER WISCONSIN DNR TECHNICAL STANDARD 1052. SEPTEMBER 15TH IS THE DEADLINE FOR PERMANENT SEED. ANY AREAS EXPOSED AFTER SEPTEMBER 15TH AND BEFORE OCTOBER 15TH SHALL BE TEMPORARY SEEDED WITH WINTER WHEAT AT THE RATE OF 3 LBS/1000 S.F. THIS TEMPORARY COVER SHALL BE FERTILIZED AT SAME RATE & MIXTURE AS PERMANENT SEED. ANY DISTURBED AREAS NOT STABILIZED BY OCTOBER 15TH SHOULD BE STABILIZED BY PLACING TOPSOIL, SEED AND TYPE A SOIL STABILIZER BY NOVEMBER 15TH. THE APPROVED SOIL STABILIZERS ARE IDENTIFIED IN THE WISCONSIN DOT PAL LIST. THE PLACEMENT OF THE SOIL STABILIZER SHALL MEET THE REQUIREMENTS IN THE PAL LIST AND PER WISCONSIN DNR TECHNICAL STANDARD 1050.
C. TEMPORARY STABILIZATION IS REQUIRED FOR ANY AREA LEFT INACTIVE FOR MORE THAN SEVEN DAYS. TOPSOIL AND SPOIL STOCKPILES SHALL BE SEEDED AND MULCHED WITHIN 7 DAYS OF LAYUP USING AGRICULTURAL RYE WITH A SEEDING RATE OF 3 LBS/1000 SQUARE FEET. INSTALL SILT FENCE ON THE DOWNSLOPE SIDE OF THE PILE TO REDUCE SEDIMENT RUNOFF.
D. TREES SHALL ONLY BE REMOVED TO COMPLETE THE INTERIM GRADING AS SHOWN. NO OTHER TREES SHALL BE REMOVED. COORDINATE TREE REMOVAL WITH THE OWNER PRIOR TO ANY TREE REMOVAL WORK.
E. ALL CONSTRUCTION TRAFFIC IS TO ENTER/EXIT THE SITE OVER THE TRACKING PAD FROM LISBON ROAD (C.T.H. K) AND WINKLEMAN ROAD (C.T.H. KE). THE TRACKING PAD IS PER WISCONSIN DNR TECHNICAL STANDARD 1057. ALL PRIVATE AND PUBLIC STREETS ARE TO BE KEPT CLEAN AT ALL TIMES. NO CONSTRUCTION ACCESS FROM ANY OTHER PUBLIC ROADS.
F. THE PERMANENT SEED MIXTURE SHALL BE WISCONSIN DOT SEED MIXTURE NO. 40 AND SOWN AT THE RATE OF 4 LBS/1000 SQ. FT. SEED MIXTURE NO. 40 CONSISTS OF 35% KENTUCKY BLUEGRASS, 20% RED FESCUE, 20% HARD FESCUE AND 25% IMPROVED FINE PERENNIAL RYEGRASS. THE TEMPORARY SEED MIX SHALL BE WINTER WHEAT. THE SEED MIXTURE FOR THE WET PONDS FROM WATERS EDGE TO TOP OF BANK TO BE A WET MESIC PRAIRIE MIX.
G. FERTILIZE SOIL WITH 10 LBS/1000 SQ. FT. OF 20-0-10 FERTILIZER.
H. ANY DEWATERING THAT MAYBE REQUIRED DUE TO CONSTRUCTION SHALL BE COMPLETED SO THAT THE WATER IS PUMPED INTO A TYPE II GEOTEXTILE BAG ON THE UPSLOPE SIDE OF THE SILT FENCE. THE GEOTEXTILE BAG SHOULD BE PLACED IN A LOCATION THAT ALLOWS THE DISCHARGED WATER TO FLOW OVER A VEGETATIVE COVER. FOLLOW WISCONSIN DNR TECHNICAL STANDARD 1061.
I. ALL BUILDING AND WASTE MATERIAL SHALL BE DISPOSED OF OFF SITE TO PREVENT RUNOFF OF MATERIAL.
J. DUST CONTROL SHOULD BE ADDRESSED PER WISCONSIN DNR TECHNICAL STANDARD 1068. AT A MINIMUM USE WATER. USE POLYMERS, TACKIFIER AND SOIL STABILIZERS IF NEEDED. INSPECT DAILY TO DETERMINE THE NEED TO IMPLEMENT A CONTROL.
K. CONCRETE TRUCKS, IF NEEDED, ARE TO BE WASHED OUT IN PAVEMENT SUB-BASE AREAS.

FIGURE 1. INLET PROTECTION TYPES A, B, C AND D



NOTES:

1. TAPER BOTTOM OF BAG TO MAINTAIN THREE INCHES OF CLEARANCE BETWEEN THE BAG AND THE STRUCTURE, MEASURED FROM THE BOTTOM OF THE OVERFLOW OPENINGS TO THE STRUCTURE WALL.
2. GEOTEXTILE FABRIC TYPE FF FOR FLAPS, TOP AND BOTTOM OF OUTSIDE OF FILTER BAG. FRONT, BACK, AND BOTTOM OF FILTER BAG BEING ONE PIECE.
3. FRONT LIFTING FLAP IS TO BE USED WHEN REMOVING AND MAINTAINING FILTER BAG.
4. SIDE FLAPS SHALL BE A MAXIMUM OF TWO INCHES LONG. FOLD THE FABRIC OVER AND REINFORCE WITH MULTIPLE STITCHES.
5. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2" x 4" FLAP BRACE, STEEL PIPE, OR WOOD SHALL BE INSTALLED IN THE REAR FLAP AND SHALL NOT BLOCK THE TOP HALF OF THE CURB FACE OPENING.

MAINTENANCE NOTES:

1. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED IN THE FABRIC DOES NOT FALL INTO THE STRUCTURE. MATERIAL THAT HAD FALLEN INTO THE INLET SHALL BE IMMEDIATELY REMOVED.

WISCONSIN DEPT. OF NATURAL RESOURCES

1060
TECHNICAL STANDARD No.
06/2006
REVISION DATE
NOT TO SCALE

NOTES

1. CONTRACTOR SHALL VERIFY ALL GRADES, ENSURE ALL AREAS DRAIN PROPERLY AND REPORT ANY DISCREPANCIES TO PINNACLE ENGINEERING GROUP PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.
2. ALL EXISTING CONTOURS REPRESENT EXISTING SURFACE GRADES UNLESS OTHERWISE NOTED. ALL PROPOSED GRADES SHOWN ARE FINISH SURFACE GRADES UNLESS OTHERWISE NOTED.
3. SPOT ELEVATIONS REPRESENT THE GRADE ALONG THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
4. ALL EXCAVATIONS AND MATERIAL PLACEMENT SHALL BE COMPLETED TO DESIGN ELEVATIONS AS DEPICTED IN THE PLANS.

   CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATION(S) OF ALL GRADING QUANTITIES. WHILE PEG ATTEMPTS TO PROVIDE A COST EFFECTIVE APPROACH TO BALANCE EARTHWORK, GRADING DESIGN IS BASED ON MANY FACTORS, INCLUDING SAFETY, AESTHETICS, AND COMMON ENGINEERING STANDARD OF CARE, THEREFORE NO GUARANTEE CAN BE MADE FOR A BALANCED SITE.

   THE CONTRACTOR MAY SOLICIT APPROVAL FROM ENGINEER/OWNER TO ADJUST FINAL GRADES FROM DESIGN GRADES TO PROVIDE AN OVERALL SITE BALANCE AS A RESULT OF FIELD CONDITIONS.
5. GRADING ACTIVITIES SHALL BE IN A MANNER TO ALLOW POSITIVE DRAINAGE ACROSS DISTURBED SOILS, WHICH MAY INCLUDE EXCAVATION OF TEMPORARY DITCHES TO PREVENT PONDING, AND IF NECESSARY PUMPING TO ALLEVIATE PONDING. CONTRACTOR SHALL PREVENT SURFACE WATER FROM ENTERING INTO EXCAVATIONS. IN NO WAY SHALL OWNER BE RESPONSIBLE FOR REMEDIATION OF UNSUITABLE SOILS CREATED/ORIGINATED AS A RESULT OF IMPROPER SITE GRADING OR SEQUENCING. CONTRACTOR SHALL SEQUENCE GRADING ACTIVITIES TO LIMIT EXPOSURE OF DISTURBED SOILS DUE TO WEATHER.
6. THE CONTRACTOR IS RESPONSIBLE FOR MEETING MINIMUM COMPACTION STANDARDS OF 95% STANDARD PROCTOR DENSITY. THE CONTRACTOR SHALL NOTIFY ENGINEER/OWNER IF PROPER COMPACTION CANNOT BE OBTAINED. THE PROJECT'S GEOTECHNICAL CONSULTANT SHALL DETERMINE WHICH IN-SITU SOILS ARE TO BE CONSIDERED UNSUITABLE SOILS. THE ENGINEER/OWNER AND GEOTECHNICAL TESTING CONSULTANT WILL DETERMINE IF REMEDIAL MEASURES WILL BE NECESSARY.
7. IN THE EVENT THAT ANY MOISTURE-DENSITY TEST(S) FAIL TO MEET SPECIFICATION REQUIREMENTS, THE CONTRACTOR SHALL PERFORM CORRECTIVE WORK AS NECESSARY TO BRING THE MATERIAL INTO COMPLIANCE AND RETEST THE FAILED AREA AT NO COST TO THE OWNER.
8. WITH THE AUTHORIZATION OF THE ENGINEER/OWNER, MATERIAL THAT IS TOO WET TO PERMIT PROPER COMPACTION MAY BE SPREAD ON FILL AREAS IN AN EFFORT TO DRY. CONTRACTOR SHALL CLEARLY FIELD MARK THE EXTERIOR LIMITS OF SPREAD MATERIAL WITH PAINTED LATH AND SUBMIT A PLAN TO THE ENGINEER/OWNER THAT IDENTIFIES THE LIMITS. UNDER NO CONDITION SHALL THE SPREAD MATERIAL DEPTH EXCEED THE MOST RESTRICTIVE OF: THE EFFECTIVE TREATMENT DEPTH OF MACHINERY THAT WILL BE USED TO TURNOVER THE SPREAD MATERIAL; OR THE MAXIMUM COMPACTION LIFT DEPTH.
9. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER/OWNER IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION.
10. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ADEQUATE AND SAFE TEMPORARY SHORING, BRACING, RETENTION STRUCTURES, AND EXCAVATIONS.
11. THE SITE SHALL BE COMPLETED TO WITHIN 0.10-FT (+/-) OF THE PROPOSED GRADES AS INDICATED WITHIN THE PLANS PRIOR TO PLACEMENT OF TOPSOIL OR STONE. CONTRACTOR IS ENCOURAGED TO SEQUENCE CONSTRUCTION SUCH THAT THE SITE IS DIVIDED INTO SMALLER AREAS TO ALLOW STABILIZATION OF DISTURBED SOILS IMMEDIATELY UPON COMPLETION OF INDIVIDUAL SMALLER AREAS.
12. CONTRACTOR SHALL CONTACT "DIGGER'S HOTLINE" FOR LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR PROTECTING SAID UTILITIES FROM ANY DAMAGE DURING CONSTRUCTION.
13. CONTRACTOR SHALL PROTECT INLETS AND ADJACENT PROPERTIES WITH SILT FENCING OR APPROVED EROSION CONTROL METHODS UNTIL CONSTRUCTION IS COMPLETED. CONTRACTOR SHALL PLACE SILT FENCING AT DOWN SLOPE SIDE OF GRADING LIMITS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING FACILITIES OR UTILITIES. ANY DAMAGE SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE EXPENSE OF THE CONTRACTOR.
15. WORK WITHIN ANY ROADWAY RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPAL OFFICIAL PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FEES. GRADING WITHIN RIGHT-OF-WAY IS SUBJECT TO APPROVAL BY SAID OFFICIALS. RESTORATION OF RIGHT-OF-WAY IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE COST OF GRADING. RESTORATION SHALL INCLUDE ALL ITEMS NECESSARY TO RESTORE RIGHT-OF-WAY IN-KIND INCLUDING LANDSCAPING.
16. CONTRACTOR SHALL COMPLY WITH ALL VILLAGE OF HARTLAND AND WDNR CONSTRUCTION STANDARDS/ORDINANCES.
17. LANDSCAPE AND TURF AREAS SHALL HAVE A MINIMUM OF 4-INCH TOPSOIL REPLACEMENT.
18. TOPSOIL BERMING SHALL ACHIEVE 90% STANDARD PROCTOR DENSITY AT 3%(±) OPTIMUM MOISTURE CONTENT.
19. SURVEY BENCHMARKS AND MAPPING HAS BEEN PROVIDED BY PEG. IN NO WAY DOES PEG WARRANT THE BASEMAP IS ALL INCLUSIVE OR REPRESENTATIVE OF ACTUAL CONDITIONS. CONTRACTOR SHALL PROVIDE CHECKS AS NECESSARY TO VERIFY THE BASEMAP CONTENT AND ACCURACY.

UTILITY NOTES

UTILITY NOTES:

1. GENERAL
   A. ALL WORK SHALL CONFORM TO THE VILLAGE OF HARTLAND STANDARD SPECIFICATIONS, THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, CURRENT EDITION, AND SPS 382 AND 384
   B. THE CONTRACTOR SHALL CONTACT DIGGERS HOTLINE A MINIMUM OF 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR ANY REMOVAL OR RELOCATIONS OF EXISTING SERVICES.
   C. ALL UTILITY WORK SHALL BE COORDINATED WITH THE GRADING CONTRACTOR. UTILITY CONTRACTOR IS RESPONSIBLE FOR LEVELING THE EXCESS SPOIL MATERIAL FROM THE TRENCH UNLESS OTHERWISE COORDINATED WITH THE GRADING CONTRACTOR.
   D. ALL BEDDING MATERIAL SHALL BE CRUSHED STONE CHIPS PER STANDARD SPEC SECTION 8.43.2(A). ONSITE MATERIAL MAY BE USED AS GRANULAR BACKFILL WITH PROPER SIEVING/PROCESSING TO MEET COMPACTION REQUIREMENTS OF STANDARD SPEC SECTION 2.6.14(b) AND (b)1. COMPACTION SHALL RESULT AT A MINIMUM OF 95% STANDARD PROCTOR DENSITY. MAXIMUM PARTICLE SIZE SHALL BE CAPABLE OF PASSING A 6-INCH SIEVE. IF IN AN EXISTING ROADWAY, USE SLURRY BACKFILL PER SECTION 8.43.8. IN AREAS FIVE FEET OUTSIDE OF PAVED AREAS, SPOIL BACKFILL MEETING SECTION 8.43.5 CAN BE USED.
   E. CONTRACTOR TO PROVIDE FLAGMAN AND SIGNAGE FOR WORK IN THE CTH KE RIGHT-OF-WAY. SIGNAGE SHALL MEET THE CURRENT MUTCD. THE ROAD SHALL BE OPEN TO TRAFFIC AT ALL TIMES.
2. SANITARY SEWER
   A. THE SANITARY SEWER PIPE AND SANITARY LATERALS SHALL BE PVC ASTM D3034 SDR 35. ELASTOMERIC JOINTS SHALL BE A BELL AND SPIGOT JOINT CONFORMING TO ASTM D3212 SEALED BY A RUBBER GASKET CONFORMING TO ASTM F477. SANITARY SEWER MAIN DEEPER THAN 20 FEET SHALL BE PVC AWWA C-900 CLASS 150 (DR18).
   B. ALL MANHOLES SHALL BE PRECAST REINFORCED CONCRETE AND HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES. MINIMUM WALL THICKNESS SHALL BE PER TABLE NO. 1 IN FILE NO. 12 OF THE STANDARD SPECIFICATIONS. PRECAST CONCRETE MANHOLE BASE, BARREL RISERS, CONE SECTION AND ADJUSTING RINGS SHALL MEET THE REQUIREMENTS OF ASTM C-478. MANHOLES SHALL BE CONSTRUCTED PER DRAWING FILE NO. 12 OF THE STANDARD SPECIFICATIONS AND VACUUM TESTED IN ACCORDANCE WITH SECTION 3.7.6 OF THE STANDARD SPECIFICATIONS.
   C. MANHOLE FRAMES AND COVERS SUPPLIED BY THE CONTRACTOR SHALL BE NEENAH R-1661-B SELF SEALING, CONCEALED PICK HOLE, NO VENTS.
   D. MANHOLE RIM ELEVATIONS SHALL BE SET TO 1/4" BELOW FINISHED ASPHALT SURFACE. THE RIMS SHOWN ON THE PLANS ARE THE FINAL RIM ELEVATIONS.
   E. LATERALS SHALL BE 6" IN DIAMETER AND INSTALLED AT A QUARTER INCH PER FOOT (2%) GRADIENT. A MARLEHEART SHALL BE INSTALLED AT THE END OF ALL LATERALS, AND THE TOP 12" SHALL BE PAINTED GREEN UPON COMPLETION OF THE LATERAL INSTALLATION.
   F. BEFORE STARTING, BULKHEAD AND/OR PLUG THE CONNECTION TO THE EXISTING SEWER. LEAVE IN PLACE UNTIL NEW SEWER HAS BEEN CLEANED AND ACCEPTED.
   G. SANITARY RISERS AND OUTSIDE DROP SHALL BE INSTALLED PER THE DETAILS SHOWN ON THIS PLAN SET.
   H. CONTRACTOR SHALL CLEAN AND TELEVISE THE ENTIRE SANITARY SEWER SYSTEM PRIOR TO ACCEPTANCE.
3. WATER MAIN

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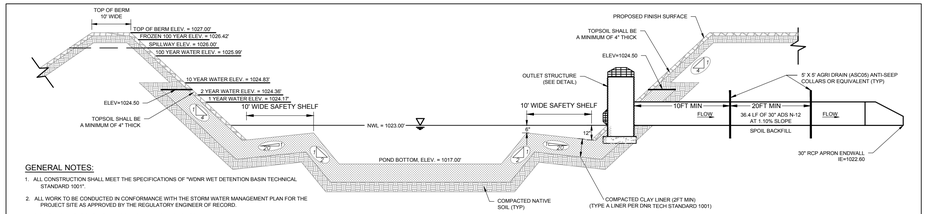
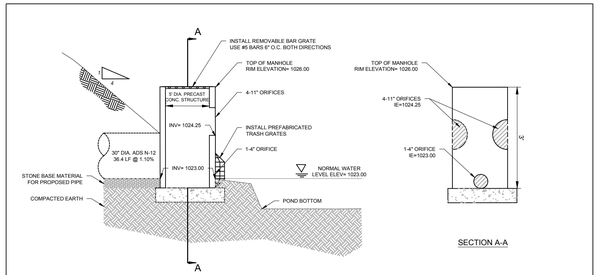


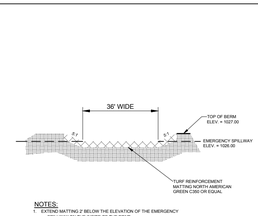
GENERAL NOTES:

1. ALL CONSTRUCTION SHALL MEET THE SPECIFICATIONS OF "WDNR WET DETENTION BASIN TECHNICAL STANDARD 1001".
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. PIPING WITHIN THE BASIN SHALL BE ADS N-12 WITH WT JOINTS.
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 ±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
7. SEED MIXTURE FROM WATERS EDGE TO TOP OF BANK TO BE A WET MESIC PRAIRIE MIX.

SOUTH WET POND CROSS SECTION



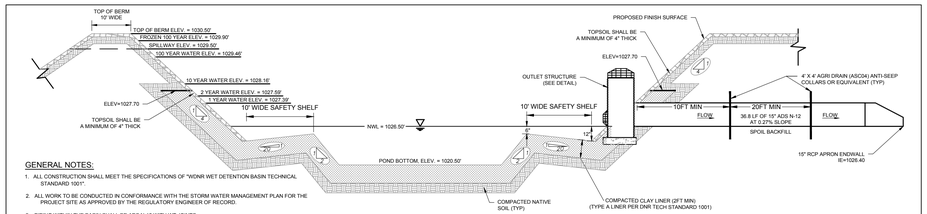
SOUTH WET POND OUTLET STRUCTURE (OCS 70)



NOTES:

1. EXTEND MATTING 2' BELOW THE ELEVATION OF THE EMERGENCY SPILLWAY ON THE INSIDE OF THE POND.
2. EXTEND MATTING TO TOE OF SLOPE ON THE OUTSIDE OF THE POND.
3. MATTING SHALL BE INSTALLED IN ACCORDANCE WITH WDNR TECH STANDARD 1052.

SOUTH WET POND EMERGENCY SPILLWAY



GENERAL NOTES:

1. ALL CONSTRUCTION SHALL MEET THE SPECIFICATIONS OF "WDNR WET DETENTION BASIN TECHNICAL STANDARD 1001".
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. PIPING WITHIN THE BASIN SHALL BE ADS N-12 WITH WT JOINTS.
4. OWNER OR CONTRACTOR MUST CONSULT LANDSCAPE ARCHITECT OR ECOLOGICAL PLANNING AGENCY FOR APPROPRIATE PLANTS AND PLANTING CONFIGURATIONS.
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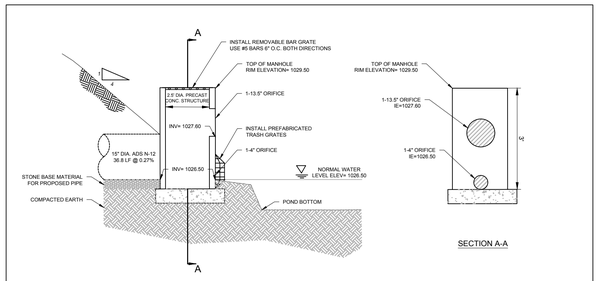
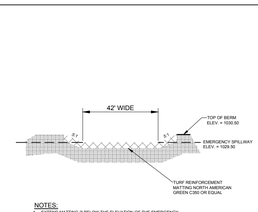
6. FOR CONSTRUCTED EMBANKMENTS WHERE THE PERMANENT POOL IS PONDED 3-FEET OR MORE AGAINST THE EMBANKMENT, THERE SHALL BE A CORE TRENCH OR KEYWAY ALONG THE CENTERLINE OF THE EMBANKMENT UP TO THE PERMANENT POOL ELEVATION. THE CORE TRENCH OR KEYWAY SHALL BE A MINIMUM OF 2-FEET DEEP AND 8-FEET WIDE WITH A SIDE SLOPE OF 1:1 OR FLATTER.
7. SEED MIXTURE FROM WATERS EDGE TO TOP OF BANK TO BE A WET MESIC PRAIRIE MIX.

NORTHWEST WET POND CROSS SECTION



NORTHWEST WET POND OUTLET STRUCTURE (OCS 73)



NOTES:

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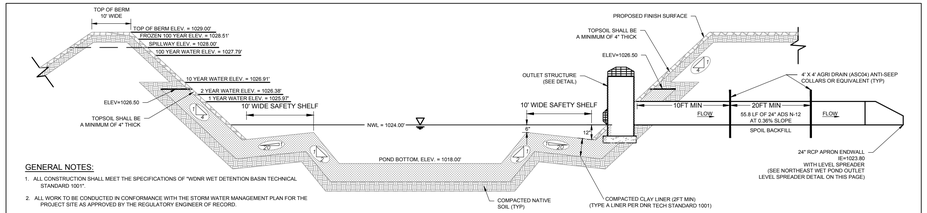
2. EXTEND MATTING TO TOE OF SLOPE ON THE OUTSIDE OF THE POND.
3. MATTING SHALL BE INSTALLED IN ACCORDANCE WITH WDNR TECH STANDARD 1052.

NORTHWEST WET POND EMERGENCY SPILLWAY



GENERAL NOTES:

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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.
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4. OWNER OR CONTRACTOR MUST CONSULT LANDSCAPE ARCHITECT OR ECOLOGICAL PLANNING AGENCY FOR APPROPRIATE PLANTS AND PLANTING CONFIGURATIONS.
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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
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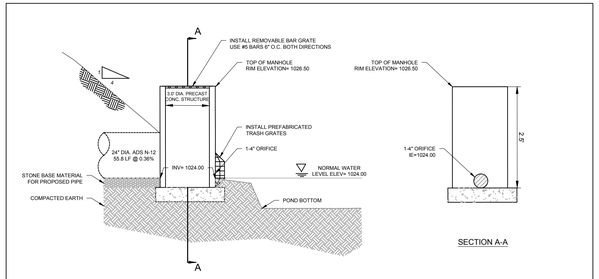
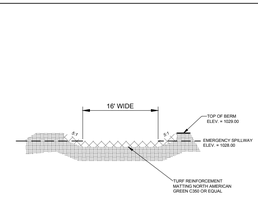
NORTHEAST WET POND CROSS SECTION



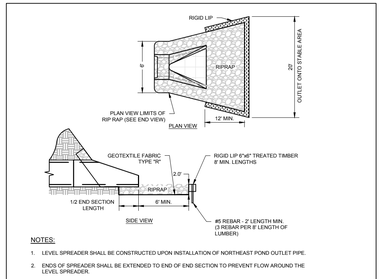
NORTHEAST WET POND OUTLET STRUCTURE (OCS 78)



NOTES:

1. EXTEND MATTING 2' BELOW THE ELEVATION OF THE EMERGENCY SPILLWAY ON THE INSIDE OF THE POND.
2. EXTEND MATTING TO TOE OF SLOPE ON THE OUTSIDE OF THE POND.
3. MATTING SHALL BE INSTALLED IN ACCORDANCE WITH WDNR TECH STANDARD 1052.

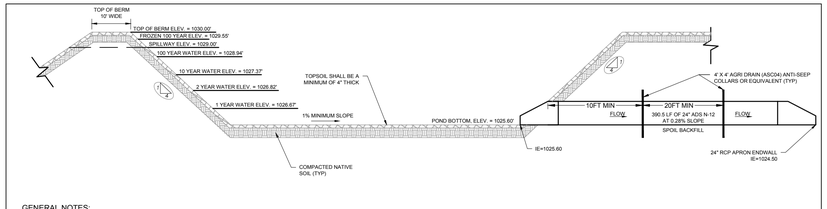
NORTHEAST WET POND EMERGENCY SPILLWAY



NOTES:

1. LEVEL SPREADER SHALL BE CONSTRUCTED UPON INSTALLATION OF NORTHEAST POND OUTLET PIPE.
2. ENDS OF SPREADER SHALL BE EXTENDED TO END OF END SECTION TO PREVENT FLOW AROUND THE LEVEL SPREADER.

NORTHEAST WET POND OUTLET LEVEL SPREADER



GENERAL NOTES:

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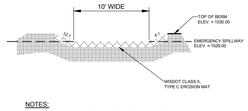
NORTH DRY POND CROSS SECTION



NOTES:

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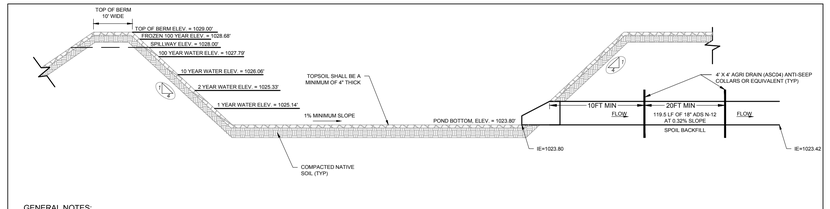
NORTH DRY POND EMERGENCY SPILLWAY



GENERAL NOTES:

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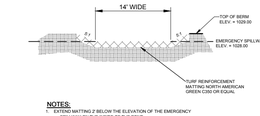
SOUTH DRY POND CROSS SECTION



NOTES:

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3. MATTING SHALL BE INSTALLED IN ACCORDANCE WITH WDNR TECH STANDARD 1052.

SOUTH DRY POND EMERGENCY SPILLWAY

DRAFTED: BR
DESIGNED: ASZ
REVIEWED: ASZ

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PINNACLE ENGINEERING GROUP
ENGINEERING I NATURAL RESOURCES I SURVEYING

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

SANDHILL
VILLAGE OF HARTLAND, WI

CONSTRUCTION DETAILS

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE

SHEET
C-33
C-42

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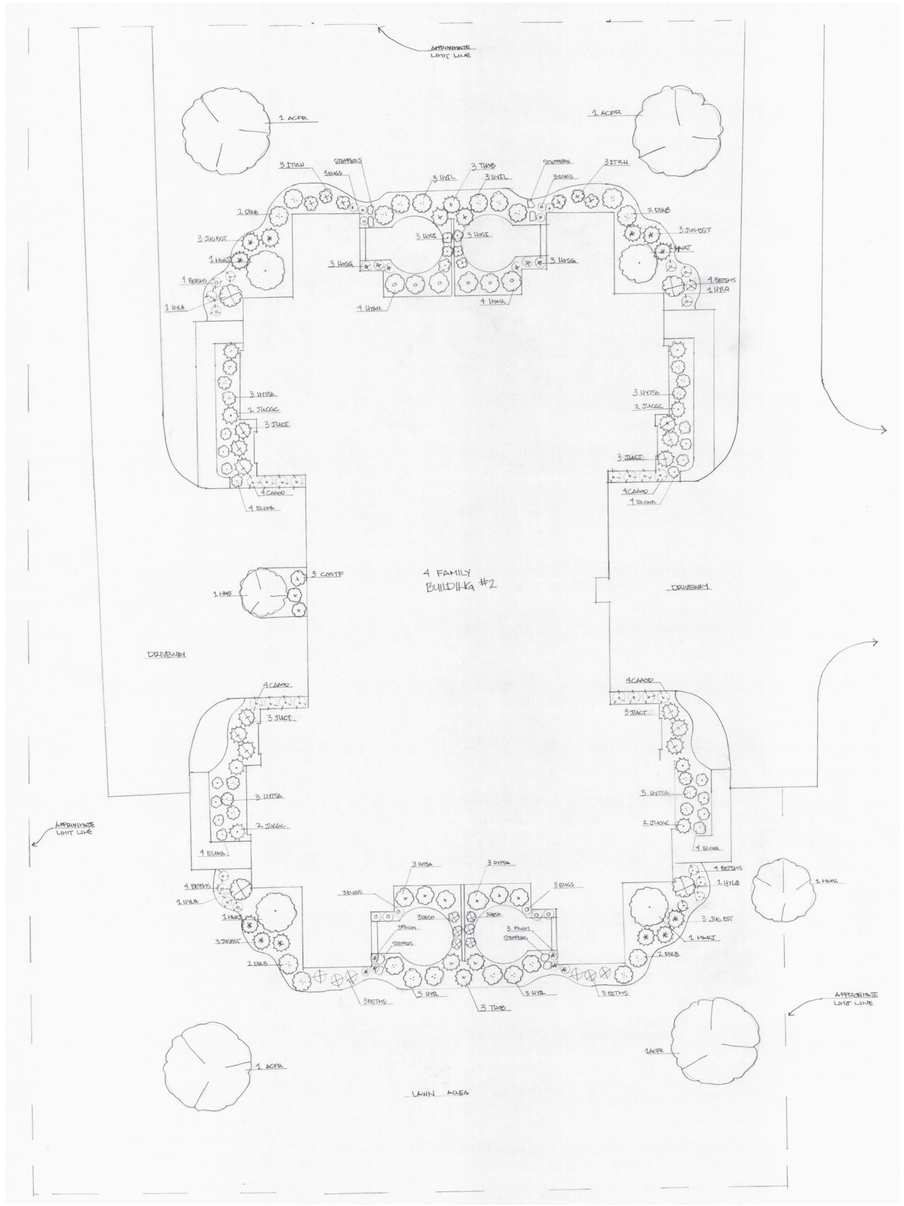


TYPICAL BUILDING LANDSCAPING (4-FAMILY)
(not to scale)



BOLLARD DETAIL
(NOT TO SCALE)



R7-53D
18"X24"



R7-52R
18"X24"



R1-1
30" X 30"

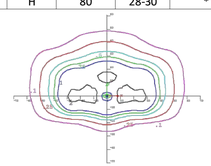
SIGN DETAILS
(NOT TO SCALE)

LED POST TOP FIXTURES



Coach Fixture
Available in Black

COACH						
Lumen Output	Fixture Class	Rated Watts	Billed kWh	Installation Charge	Monthly Rate <84 months	Monthly Rate >84 months
MED 3000°K	H	80	28-30	*	$12.56	$11.74



C.T.H. INTERSECTION DETAIL
(NOT TO SCALE)

City Post SM
Installation Procedures

A) Important Notice
Follow all instructions on this page and those included with the Hilti HCA anchor bolts carefully. Failure to do so may reduce anchor performance and result in premature failure in the field.

B) Tools Needed
1) SDS Hammer Drill
2) Suitable power source for the drill
3) Hilti 3/8" diameter Masonry drill bit (3/8-6 Part #435006)
4) Air Source for cleaning holes and possibly powering impact wrench
5) Impact Wrench or socket set for tightening bolts
6) Hammer

C) Positioning post for installation:
There is no wrong or right position of the bolt holes as the post is cylindrical, it has been tested in all orientations and no performance differences can be found.
- Recommended practice – position the bolt holes so that two bolts on each side when lined up run parallel to flow of traffic. This will ensure future developments to the product line can be used with these holes.
  - Quick visual check the CITY POST logo on the base can be positioned at 0°, 90°, 180° or 270° to the flow of traffic for the recommended practice.

D) HILTI HCA Coil Anchor Bolts
1) Position the post assembly over the intended installation point.
2) Carefully drill through one bolt hole to establish the first anchor point
3) Drilling to a depth of ½" beyond the length of the bolt, remove drill bit from hole
4) Using an air source clean out the hole
5) Taking a bolt assembly, ensure the coil is on the tip; a washer is on the bolt then insert that through one of the openings on the base.
6) Using a hammer tap the bolt/washer/coil assembly into the hole till it bottoms, it should stop about ¾" above the base.
   NOTE: Make sure the tip of the coil makes contact with the bottom of the hole. If it does not it will not lock up and will pull right out.
7) Tighten the bolt down with an impact wrench or socket wrench.
8) Repeat steps 1 -5 for the remaining 3 bolts until all four bolts are installed.

E) Important Notice To Purchaser
NOTE: The Hilti HCA Coil Anchor Bolts is the only approved anchor for the City Post SM Surface Mount post. The use of any other anchor bolt will void all relevant product warranties.
The following is made in lieu of all warranties, expressed or implied, including the implied warranties of merchantability and fitness for purpose: Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Before using, user shall determine the suitability of the product for it's intended use, and user assumes all risk and liability whatsoever in connection therewith. Neither manufacturer nor seller shall be liable either in tort or in contract for any loss or damage, direct, incidental, or consequential, arising out of the use of or the inability to use the product.

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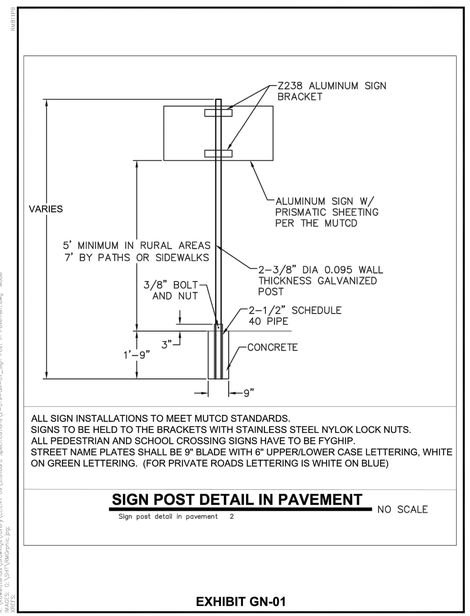

EXHIBIT GN-01

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SANDHILL
VILLAGE OF HARTLAND, WI

CONSTRUCTION DETAILS

REVISIONS
1 VILLAGE COMMENTS 03-31-21
2 VILLAGE COMMENTS 04-12-21

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE

SHEET
C-34
C-42

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NORTH

GRAPHICAL SCALE (FEET)

0 1" = 80' 160'

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WINKLEMAN ROAD (C.T.H. "KE")

HOMESTEAD DRIVE

SANDHILL BOULEVARD

TERI LANE

SANDHILL COURT

LOOKOUT COURT

WINDRUSH BOULEVARD

LISBON ROAD (C.T.H. "K")

EXISTING 20' WIDE WATER MAIN EASEMENT GRANTED TO THE VILLAGE OF HARTLAND

EXISTING 12' WIDE WATER MAIN EASEMENT GRANTED TO THE VILLAGE OF HARTLAND

EXISTING INGRESS & EGRESS EASEMENT PER CSM No. 7526

PROP. 12" WIDE WHITE STOP BAR

PROPOSED LIGHT POLE

PROPOSED NO PARKING SIGN (R7-53D)

100' X 150' VISION CORNER

PROP. STREET SIGN AND STOP SIGN (HOMESTEAD DRIVE & WINKLEMAN ROAD)

PROP. STREET SIGN AND STOP SIGN (TERI LANE & WINKLEMAN ROAD)

PROP. WHITE PAINTED CROSSWALK (6" LINES, 6' APART)

PROP. STREET SIGN AND STOP SIGN (HOMESTEAD DRIVE & SANDHILL BOULEVARD)

PROP. STREET SIGN AND STOP SIGN (SANDHILL BOULEVARD & LISBON ROAD)

PROP. STREET SIGN AND STOP SIGN (TERI LANE & SANDHILL BOULEVARD)

PROP. STREET SIGN AND STOP SIGN (TERI LANE & SANDHILL COURT)

PROP. STREET SIGN AND STOP SIGN (LOOKOUT COURT & SANDHILL BOULEVARD)

PROP. STOP SIGN

NOTES:

1. USE EPOXY PAINT FOR PAVEMENT STRIPING.
2. ALL SIGNS SHALL BE HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING.
3. STREET LIGHTING WITHIN THE DEVELOPMENT INCLUDES ONE STREET LIGHT AT THE THREE INTERSECTIONS TO THE C.T.H.'S (LOCATION ON THESE PLANS) AND A STREET LIGHT AT EVERY DRIVEWAY. THE DRIVEWAY STREET LIGHTS TO BE PLACED WHEN THE INDIVIDUAL BUILDINGS ARE CONSTRUCTED.
4. INSTALL NO PARKING SIGNS SO THAT THE SIGN IS AT A 30-40 DEGREE ANGLE TO THE CENTERLINE OF THE ROAD.
5. SEE DETAILS ON SHEET C-34.

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MILW. AREA 259-1181

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SANDHILL

VILLAGE OF HARTLAND, WI

SIGNAGE, LIGHTING & PAVEMENT MARKING PLAN

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-35
C-42

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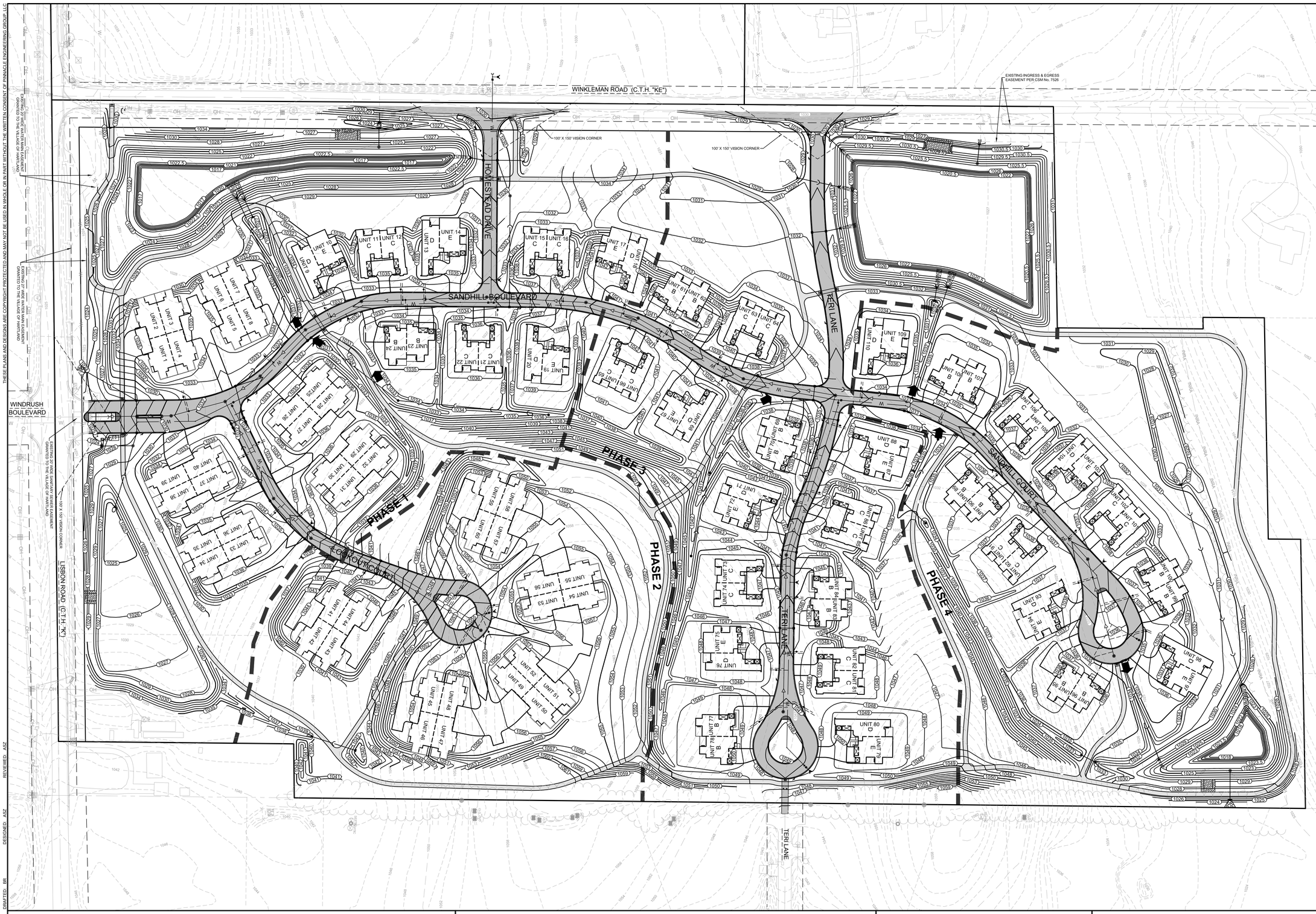

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 80' 160'

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LEGEND

100-YEAR OVERLAND FLOW PATH

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SANDHILL
VILLAGE OF HARTLAND, WI

OVERALL MASTER GRADING PLAN

REVISIONS

1	VILLAGE COMMENTS	03-31-21	
2	VILLAGE COMMENTS	04-12-21	

PEG JOB No. 767.00-WI
PEG PM ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-36
C-42

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SANDHILL BOULEVARD

WINDRUSH BOULEVARD

LOOKOUT COURT

LISBON ROAD (C.T.H. "K")

100' X 150' VISION CORNER

EXISTING PAVEMENT SANITARY SEWER TO BE REMOVED AND DISPOSED OF BY THE VILLAGE OF HARTLAND

10' TOP OF BERM

14' WIDE EMERGENCY SPILLWAY ELEV=1028.00
(TURF REINFORCEMENT MAT NAG 350 OR EQUAL)

SOUTH DRY STORM
WATER POND
2YR PEAK ELEV=1026.33
10YR PEAK ELEV=1026.06
100YR PEAK ELEV=1027.79
100YR FROZEN PEAK ELEV=1028.68

3:1

4:1

3% MIN SLOPE

6.7%

4.5%

4.0%

45.0%

46.0%

UNIT 25 G=1056.83 Y=1056.20
UNIT 26 G=1056.83 Y=1056.20
UNIT 27 G=1056.83 Y=1056.20
UNIT 28
UNIT 29 G=1056.83 Y=1056.20
UNIT 30 G=1056.83 Y=1056.20
UNIT 31 G=1056.83 Y=1056.20
UNIT 32
UNIT 33 G=1056.83 Y=1056.20
UNIT 34 G=1056.83 Y=1056.20
UNIT 35 LO=1030.20
UNIT 36 G=1056.83 Y=1056.20
UNIT 37 G=1056.83 Y=1056.20
UNIT 38 LO=1030.20
UNIT 39 LO=1030.20
UNIT 40 G=1056.83 Y=1056.20
UNIT 41 G=1056.83 Y=1056.20
UNIT 42 LO=1039.20
UNIT 43 LO=1041.70
UNIT 44 G=1056.20 Y=1056.70
UNIT 45 G=1054.50 Y=1054.50
UNIT 46 LO=1049.00
UNIT 47 LO=1051.50
UNIT 48 G=1056.83 Y=1056.50
UNIT 49 G=1056.73 Y=1056.40
UNIT 50
UNIT 51
UNIT 52 G=1056.73 Y=1057.40
UNIT 53 G=1057.73 Y=1057.40
UNIT 54
UNIT 55
UNIT 56 G=1055.73 Y=1055.40
UNIT 57 G=1056.60 Y=1056.60
UNIT 58 LO=1048.60
UNIT 59 LO=1050.60
UNIT 60 G=1053.83 Y=1053.80
G=1042.73 Y=1042.40

GRATE 1035.50
GRATE 1035.19
GRATE 1034.74
GRATE 1034.70
GRATE 1043.19
GRATE 1046.18
GRATE 1046.68
GRATE 1047.18
GRATE 1047.68
GRATE 1048.18
GRATE 1048.68
GRATE 1049.18
GRATE 1049.68
GRATE 1050.18
GRATE 1050.68
GRATE 1051.18
GRATE 1051.68
GRATE 1052.18
GRATE 1052.68
GRATE 1053.18
GRATE 1053.68
GRATE 1054.18
GRATE 1054.68
GRATE 1055.18
GRATE 1055.68
GRATE

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WINKLEMAN ROAD (C.T.H. "KE")

LISBON ROAD (C.T.H. "K")

EXISTING 20' WIDE WATER MAIN EASEMENT GRANTED TO THE VILLAGE OF HARTLAND

EXISTING 20' WIDE WATER MAIN EASEMENT GRANTED TO THE VILLAGE OF HARTLAND

EXISTING 20' WIDE SANITARY SEWER EASEMENT GRANTED TO THE VILLAGE OF HARTLAND

36' WIDE EMERGENCY SPILLWAY ELEV=1026.00 (TURF REINFORCEMENT MAT NAG S50 OR EQUAL)

10' TOP OF BERM

4:1

2:1

10' SAFETY SHELF

2' COMPACTED CLAY FROM ELEV 1024.5 THROUGH BOTTOM OF POND

SOUTH WET STORM WATER POND

PERM POOL=1023.00
2YR PEAK ELEV=1024.36
10YR PEAK ELEV=1024.83
100YR PEAK ELEV=1025.99
100YR FROZEN PEAK ELEV=1026.42

POND OUTLET STRUCTURE (OCS 70)
GRATE=1026.00
30" INV=1023.00
1-4" HOLE=1023.00
4-11" HOLES=1024.25

HOMESTEAD DRIVE

SANDHILL BOULEVARD

WINDRUSH BOULEVARD

LOOKOUT COURT

100' X 150' VISION CORNER

UNIT 1 C, UNIT 2 C, UNIT 3 C, UNIT 4 E, UNIT 5 D, UNIT 6 C, UNIT 7 C, UNIT 8 E, UNIT 9 D, UNIT 10 E, UNIT 11 C, UNIT 12 C, UNIT 13 D, UNIT 14 E, UNIT 15 C, UNIT 16 C, UNIT 17 E, UNIT 18 D, UNIT 19 E, UNIT 20 D, UNIT 21 C, UNIT 22 C, UNIT 23 B, UNIT 24 B, UNIT 25 C, UNIT 26 C, UNIT 27 C, UNIT 28 C, UNIT 29 C, UNIT 30 C, UNIT 31 C, UNIT 32 C, UNIT 37 C, UNIT 38 C, UNIT 39 C, UNIT 40 C, UNIT 59 C, UNIT 63 C, UNIT 65 C, UNIT 66 C

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 40' 80'

LEGEND:

- EX. HYDRANT
- EX. WATER VALVE
- EX. SANITARY MANHOLE
- EX. CATCH BASIN
- EX. WOOD POST
- EX. POST
- EX. GAS METER
- EX. GAS VALVE
- EX. WELL LOCATION
- EX. CLEANOUT
- EX. SEPTIC COVER
- EX. VENT
- EX. ELECTRIC PEDESTAL
- EX. PEDESTAL
- EX. ELECTRIC METER
- EX. AIRCONDITIONER UNIT
- EX. POWER POLE
- EX. GUY WIRE
- EX. LIGHT POLE
- EX. SIGN
- EX. MAILBOX
- EX. DECIDUOUS TREE
- EX. CONIFEROUS TREE
- EX. SANITARY SEWER
- EX. WATER MAIN
- EX. STORM SEWER
- EX. FENCE LINE
- EX. OVERHEAD WIRE
- EX. GAS MAIN
- EX. TELEPHONE
- EX. ELECTRIC
- EX. FIBER OPTIC
- EX. TREE LINE
- EX. DITCH LINE
- EX. ISOLATED NATURAL RESOURCE AREA
- EX. SOIL LINE
- 1028 EX. 2-FOOT CONTOURS
- 1030 EX. 10-FOOT CONTOURS
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- PROP CONC FLARED END SECTION
- 870 PROPOSED CONTOUR
- X 857.3 EXISTING SPOT ELEVATION
- X 870.4 PROPOSED SPOT ELEVATIONS
- G=1056.83 GARAGE ELEVATION
- Y=1056.50 FINISHED YARD GRADE
- LO=1051.50 PROP. LOOKOUT ELEVATION
- 3.4% DRIVEWAY SLOPE
- PROPOSED RIP-RAP

ANY OF THE TWO FAMILY BUILDINGS FIT INTO THE BUILDING PAD. IF A BUILDING DOES NOT HAVE THE DASHED BUILDING PAD, THAT SPECIFIC BUILDING NEEDS TO BE CONSTRUCTED IN THAT LOCATION DUE TO SETBACKS AND SPACING BETWEEN BUILDINGS.

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SANDHILL

VILLAGE OF HARTLAND, WI

MASTER GRADING PLAN

REVISIONS

1	VILLAGE COMMENTS	03-31-21			
2	VILLAGE COMMENTS	04-12-21			

PEG JOB No. 767.00-WI | ASZ
PEG PM | START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-38
C-42

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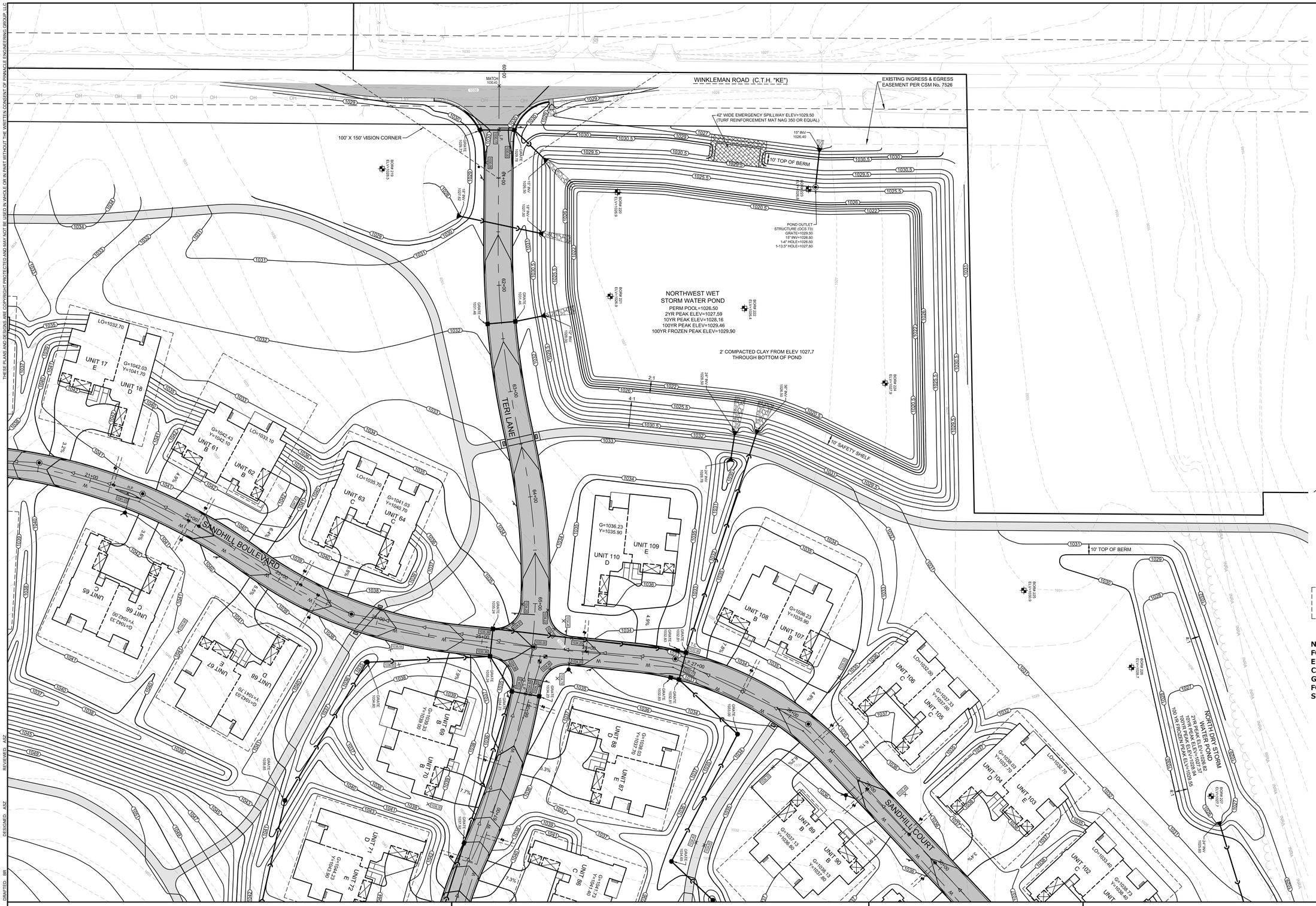

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 40' 80'

LEGEND:

- EX. HYDRANT
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- EX. POST
- EX. GAS METER
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- EX. SOIL LINE
- EX. 2-FOOT CONTOURS
- EX. 10-FOOT CONTOURS
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- PROP CONC FLARED END SECTION
- PROPOSED CONTOUR
- X 857.3 EXISTING SPOT ELEVATION
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SANDHILL
VILLAGE OF HARTLAND, WI

MASTER GRADING PLAN

REVISIONS

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2	VILLAGE COMMENTS	04-12-21	

PEC JOB No. 767.00-WI
PEC PM ASZ
START DATE 02-19-21
SCALE 1" = 80'

SHEET
C-39
C-42

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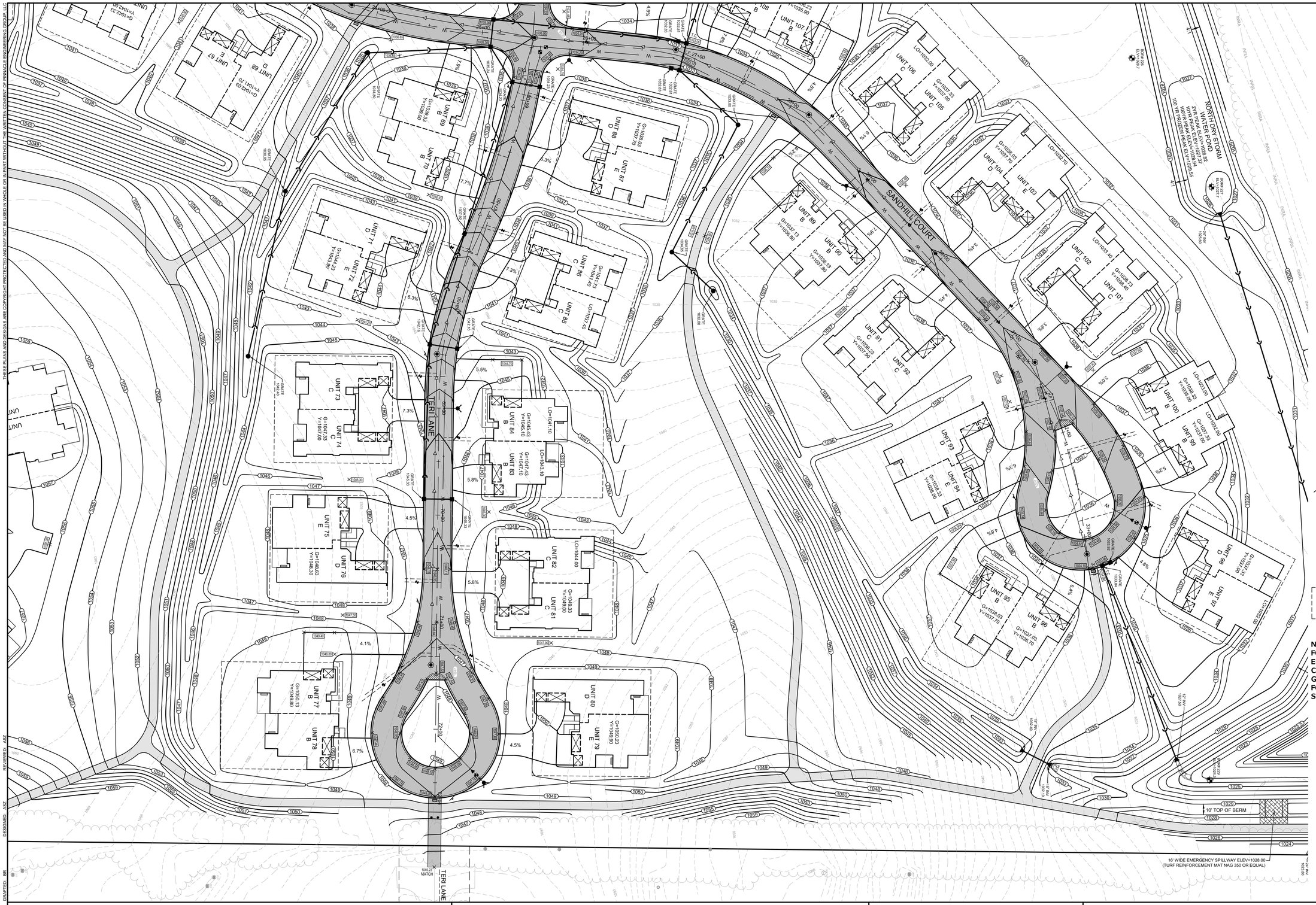

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NORTH

GRAPHICAL SCALE (FEET)

0 1" = 40' 80'

LEGEND:

- EX. HYDRANT
- EX. WATER VALVE
- EX. SANITARY MANHOLE
- EX. CATCH BASIN
- EX. WOOD POST
- EX. POST
- EX. GAS METER
- EX. GAS VALVE
- EX. WELL LOCATION
- EX. CLEANOUT
- EX. SEPTIC COVER
- EX. VENT
- EX. ELECTRIC PEDESTAL
- EX. PEDESTAL
- EX. ELECTRIC METER
- EX. AIRCONDITIONER UNIT
- EX. POWER POLE
- EX. GUY WIRE
- EX. LIGHT POLE
- EX. SIGN
- EX. MAILBOX
- EX. DECIDUOUS TREE
- EX. CONIFEROUS TREE
- EX. SANITARY SEWER
- W EX. WATER MAIN
- EX. STORM SEWER
- X X X EX. FENCE LINE
- OH EX. OVERHEAD WIRE
- G EX. GAS MAIN
- T EX. TELEPHONE
- E EX. ELECTRIC
- FO EX. FIBER OPTIC
- EX. TREE LINE
- EX. DITCH LINE
- INRA EX. ISOLATED NATURAL RESOURCE AREA
- EX. SOIL LINE
- 1028 EX. 2-FOOT CONTOURS
- 1030 EX. 10-FOOT CONTOURS
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- PROP CONC FLARED END SECTION
- 870 PROPOSED CONTOUR
- X 857.3 EXISTING SPOT ELEVATION
- X 870.4 PROPOSED SPOT ELEVATIONS
- G=1056.83 GARAGE ELEVATION
- Y=1056.50 FINISHED YARD GRADE
- LO=1051.50 PROP. LOOKOUT ELEVATION
- 3.4% DRIVEWAY SLOPE
- PROPOSED RIP-RAP

ANY OF THE TWO FAMILY BUILDINGS FIT INTO THE BUILDING PAD. IF A BUILDING DOES NOT HAVE THE DASHED BUILDING PAD, THAT SPECIFIC BUILDING NEEDS TO BE CONSTRUCTED IN THAT LOCATION DUE TO SETBACKS AND SPACING BETWEEN BUILDINGS.

NOTE: THE MASTER GRADING PLANS ARE FOR THE BUILDER TO IDENTIFY BUILDING ELEVATIONS AT THE TIME OF BUILDING CONSTRUCTION. USE THE INTERIM GRADING AND EROSION CONTROL PLANS FOR THE CONSTRUCTION OF THE SUBDIVISION.

TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE
WIS STATUTE 182.0175(1974)
REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

MILW. AREA 259-1181

NOTE: The location and size of the underground structures and utilities shown hereon have been located to a reasonable degree of accuracy, but the Engineer and/or Surveyor does not guarantee their exact location or the location of others not shown. Contact Diggers Hotline, Inc., Etc.

DRAFTED: BR DESIGNED: ASZ REVIEWED: ASZ

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(262) 754-8888
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SANDHILL

VILLAGE OF HARTLAND, WI

MASTER GRADING PLAN

REVISIONS

1	VILLAGE COMMENTS	03-31-21
2	VILLAGE COMMENTS	04-12-21

PEG JOB No. 767.00-WI ASZ
PEG PM
START DATE: 02-19-21
SCALE 1" = 80'

SHEET C-41 C-42

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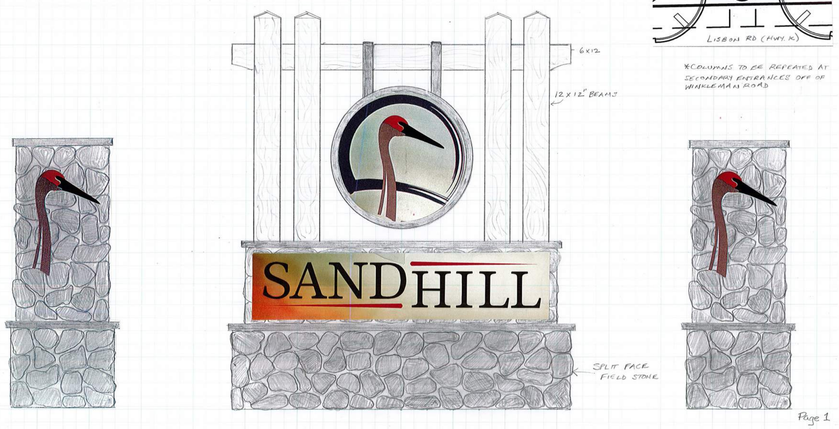
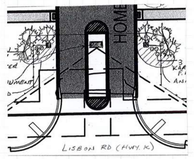
SANDHILL ENTRY MONUMENTS

SCALE ½ INCH = 1 FOOT

DRAWN BY: KAREN A. SIEFMANN
FEBRUARY 15, 2021



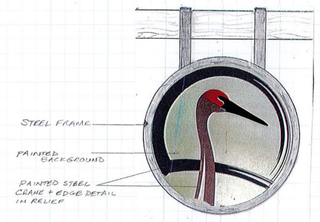


*COLUMNS TO BE REPEATED AT SECONDARY ENTRANCES OFF OF WARKLEMAN ROAD

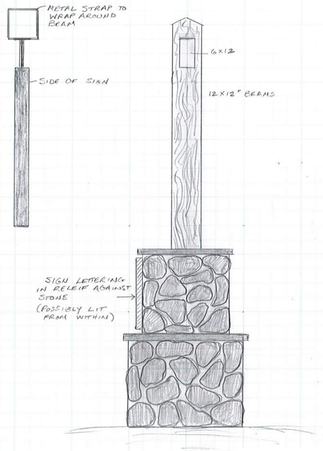
Page 1

SANDHILL ENTRY SIGN DETAILS

SCALE ½ INCH = 1 FOOT



BACK OF SIGN IN FRAME TO BE PAINTED



Sandhill Plant List

Deciduous Trees

Scientific Name	Common Name	Quantity	Size	Plan ID #
Acer miyabei	State Street Miyabei Maple	13	2 1/2 -3"	1
Acer x freemanii 'Autumn Fantasy'	Autumn Fantasy Maple	15	2 1/2 -3"	2
Amelanchier x grandiflora (multi-stem) Autumn Brilliance'	Autumn Brilliance Serviceberry	13	2 1/2 -3"	3
Betula nigra 'Heritage' (multi-stem)	Heritage River Birch (Multi-stem)	10	8'	4
Carpinus caroliniana 'JN Strain'	JN Strain Musclewood (Multi-stem)	4	2 1/2-3"	5
Gingko biloba 'Autumn Gold'	Autumn Gold Gingko	3	2 1/2 -3"	6
Gymnocladus dioica	Kentucky Coffeetree	4	2 1/2 -3"	7
Malus x 'Prairie Fire'	Prairie Fire Crabapple	2	2 1/2 -3"	8
Quercus x schuettei	Swamp x Bur Oak	10	2 1/2 -3"	9
Quercus robur	English Oak	5	2 1/2 -3"	10
Tilia cordata 'Greenspire'	Greenspire Linden	9	2 1/2 -3"	11

Decidous Shrubs

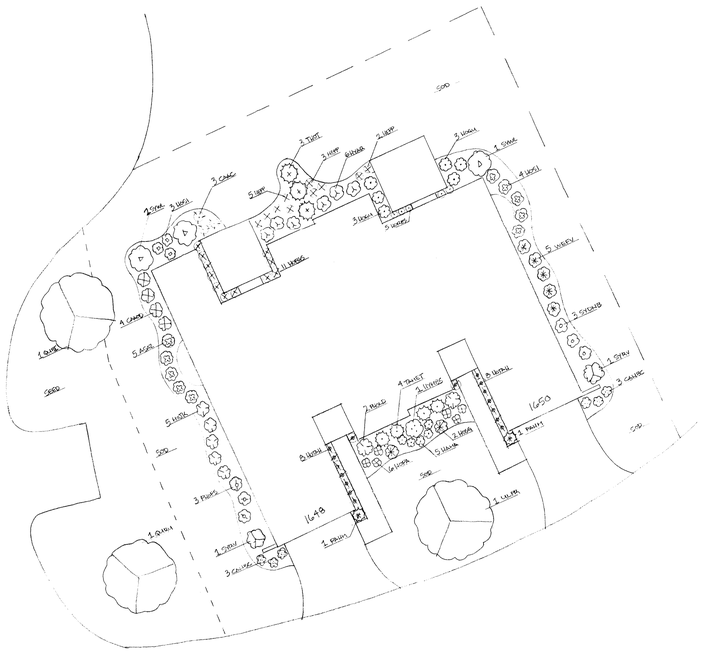
Cornus alba 'ByBoughan'	Neon Burst Dogwood	8	36"	12
Hydrangea paniculata 'ILVOBO'	Bobo Hydrangea	7	36-48"	13
Spiraea betulifolia 'Tor'	Tor Spiraea	51	18-24"	14

Evergreens

Abies concolor	Concolor Fir	2	6'	15
Abies concolor	Concolor Fir	5	8'	15
Abies concolor	Concolor Fir	2	10'	15
Juniperus chinensis 'Mountbatten'	Mountbatten Juniper	26	10-12"	16
Picea abies	Norway Spruce	5	6'	17
Picea abies	Norway Spruce	10	8'	17
Picea abies	Norway Spruce	4	10'	17
Picea glauca densata	Black Hill Spruce	3	6'	18
Picea glauca densata	Black Hill Spruce	17	8'	18
Picea glauca densata	Black Hill Spruce	7	10'	18
Pinus resinosa	Red Pine	3	6'	19
Pinus resinosa	Red Pine	3	8'	19
Pinus strobus	Eastern White Pine	10	6'	20
Pinus strobus	Eastern White Pine	13	8'	20
Pinus strobus	Eastern White Pine	4	10'	20

Perennials

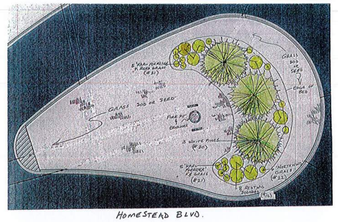
Calamagrostis x acutiflora Karl Foerster'	Karl Foerster Feather Reed Grass	39	1 gal.	21
Panicum virgatum 'Northwind'	Northwind Switchgrass	6	1 gal.	22



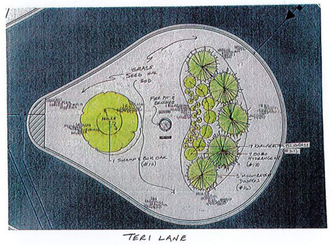
TYPICAL BUILDING LANDSCAPING (2-FAMILY)
(not to scale)

NOTE: SEE SHEET C-34 FOR THE TYPICAL BUILDING LANDSCAPING FOR THE 4-FAMILY BUILDINGS

SANDHILL COURT LANDSCAPING



HOMESTEAD BLVD.



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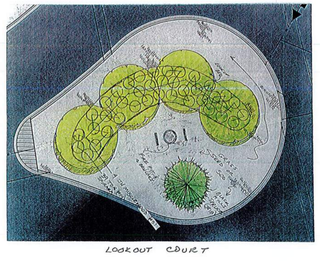
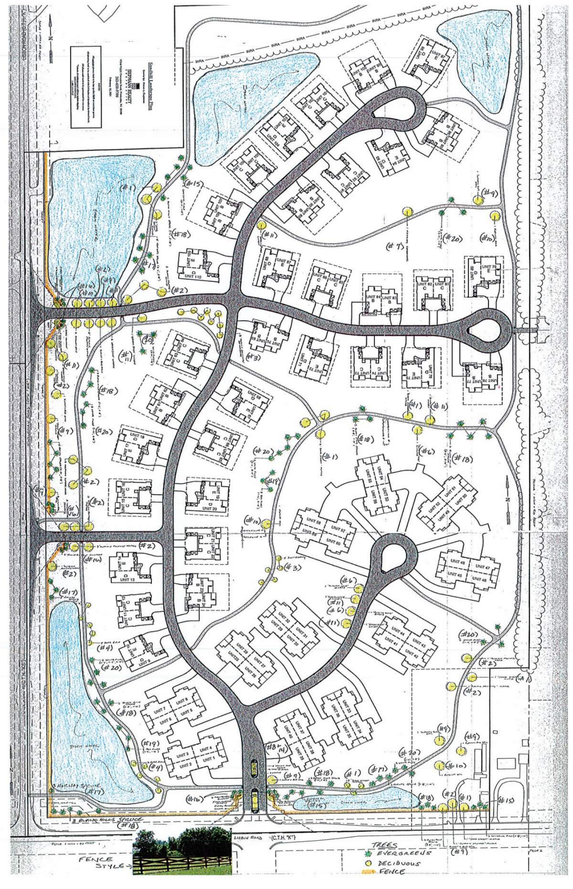


LOOKOUT COURT



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