

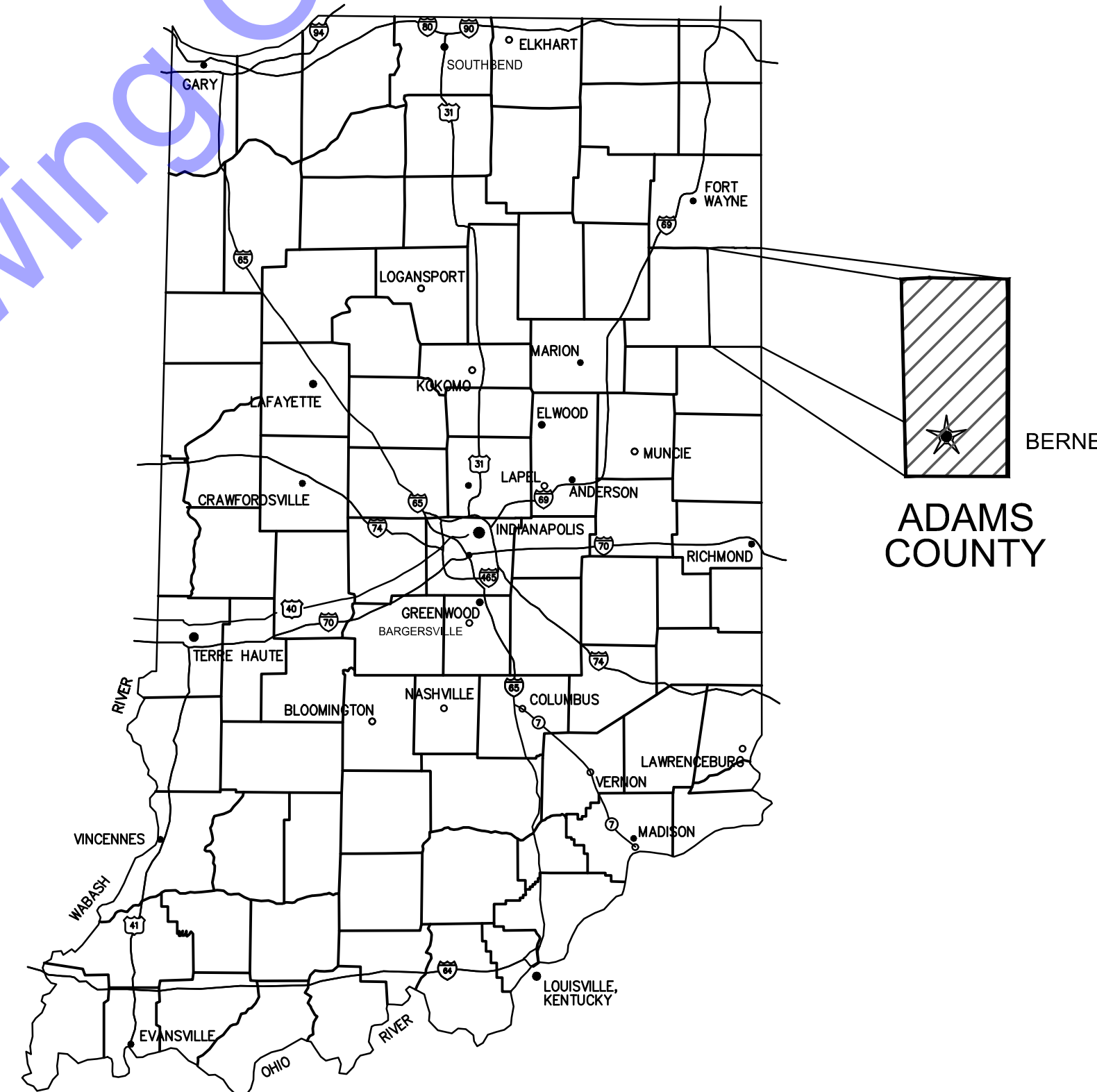
CITY OF BERNE ADAMS COUNTY, INDIANA

LTCP PHASE II COLLECTION SYSTEM IMPROVEMENTS CONTRACT B FEBRUARY, 2025

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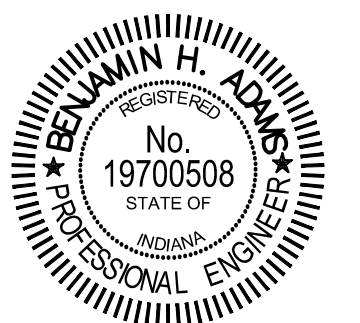


GENERAL LOCATION MAP

COMMONWEALTH ENGINEERS, INC.

QA/QC BY : NATALIE M. SCHELLING, PE 03/12/2025
DATE :

CERTIFIED BY : *Benjamin H. Adams* 03/12/2025
DATE :
BENJAMIN H. ADAMS
INDIANA PE No. 19700508



CONTRACT NO. : S24028

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GENERAL ABBREVIATIONS

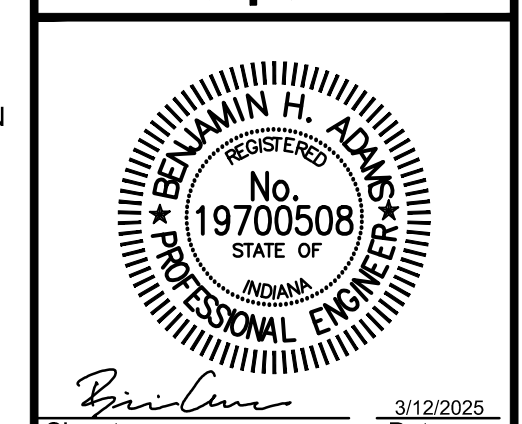
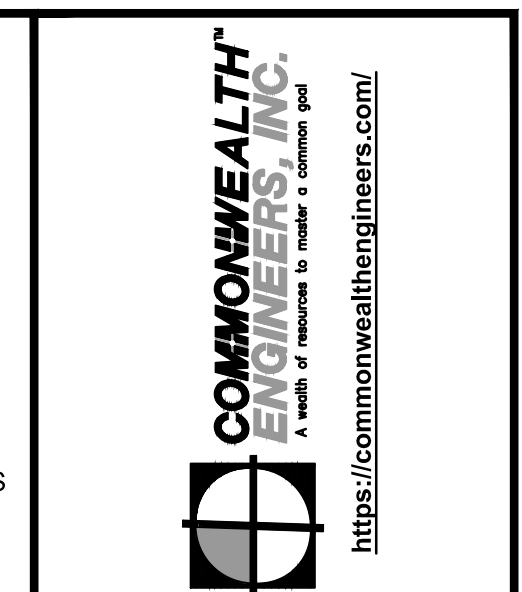
Table listing various abbreviations and their corresponding full names, such as AIR ANCHOR BOLT, GAS GALVANIZED, and SECTION SQUARE FEET.

GENERAL NOTES

- List of 16 general notes regarding construction requirements, including error handling, contractor responsibilities, and safety protocols.

EXISTING UTILITY NOTES

- List of 11 existing utility notes detailing requirements for utility verification, location accuracy, and protection of existing infrastructure.



Signature and Date fields for the professional engineer.

CITY OF BERNE, IN ADAMS COUNTY
LTCP PHASE II COLLECTION SYSTEM IMPROVEMENTS CONTRACT B

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Table with columns for No., Date, and By, used for revision tracking.

Designed By: BW, Drawn By: CH/BP, Checked By: BA
Issue Date: 03/2025, Project No: S24028, Scale: AS SHOWN

GENERAL NOTES, LEGEND, EXISTING UTILITY NOTES AND CONTACTS

Drawing No: G3
Sheet: 3 OF 37

UTILITY CONTACT INFORMATION

Table with columns for Utility Provider, Contact Name, Phone, and Address, listing providers like American Electric Power, Century Link, and Comcast.

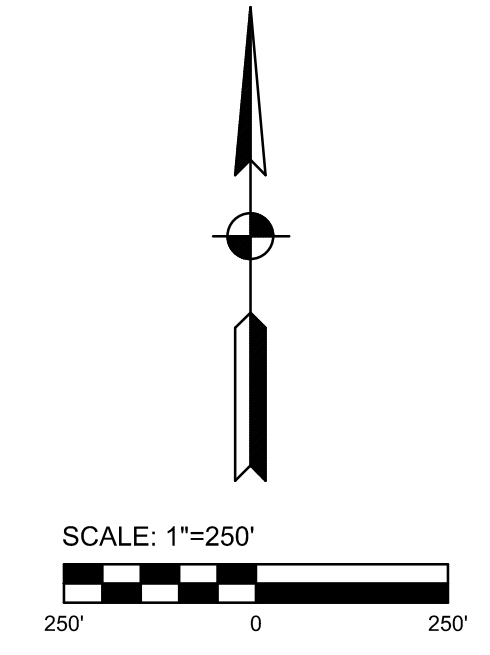
LEGEND section containing symbols and descriptions for various utility features such as easements, manholes, force mains, and existing structures.

File: Z:\SHARED\CLIENTS A-L\BERNE\S24028 2024 LTCP PHASE II COLLECTION SYSTEM IMPROVEMENTS\06 CAD\A CURRENT FILES\DRAWINGS\CONTRACT B -- GENERAL LOCATION PLAN.DWG
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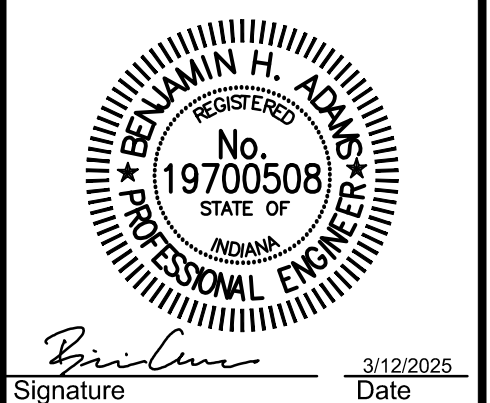
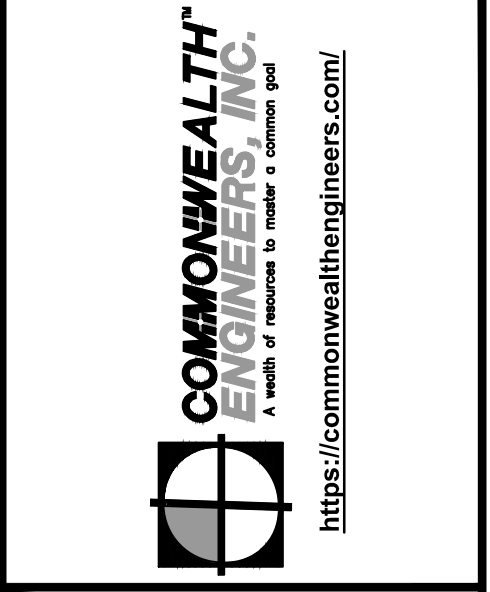


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SURVEY CONTROL PLAN
 SCALE: 1"=500'-0"

CONTROL SCHEDULE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
5501	1972665.68	529135.50		CP *MLS
5502	1973817.53	530577.00		CP *MLS
5503	1973917.38	530692.87		CP *MLS
7777			830.88	TBM *MUE*BB*LLER
7778			830.78	TBM *BT IN PWP AD358-101
7900			837.74	TBM *MUE*BB*LLER
7901			835.71	TBM *MUE*BB*LLER
7902			837.03	TBM *MUE*BB*LLER



Signature: *Benjamin H. Adams* Date: 3/12/2025

**CITY OF BERNE, IN
 ADAMS COUNTY**
**LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B**

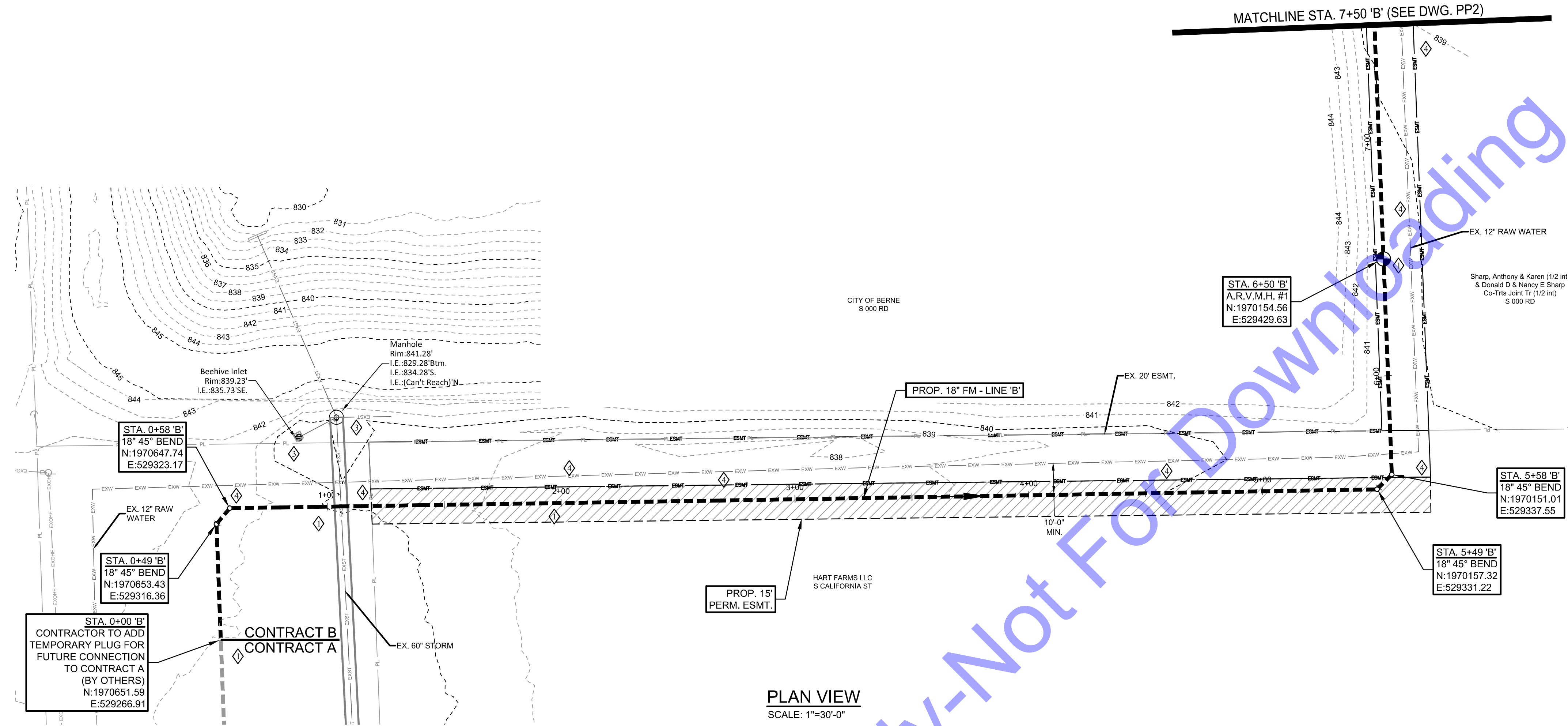
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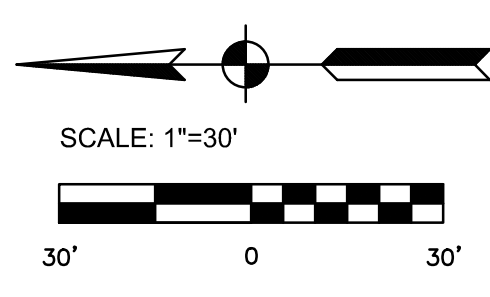
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CONTROL

Drawing No:
G5
 Sheet: 5 OF 37



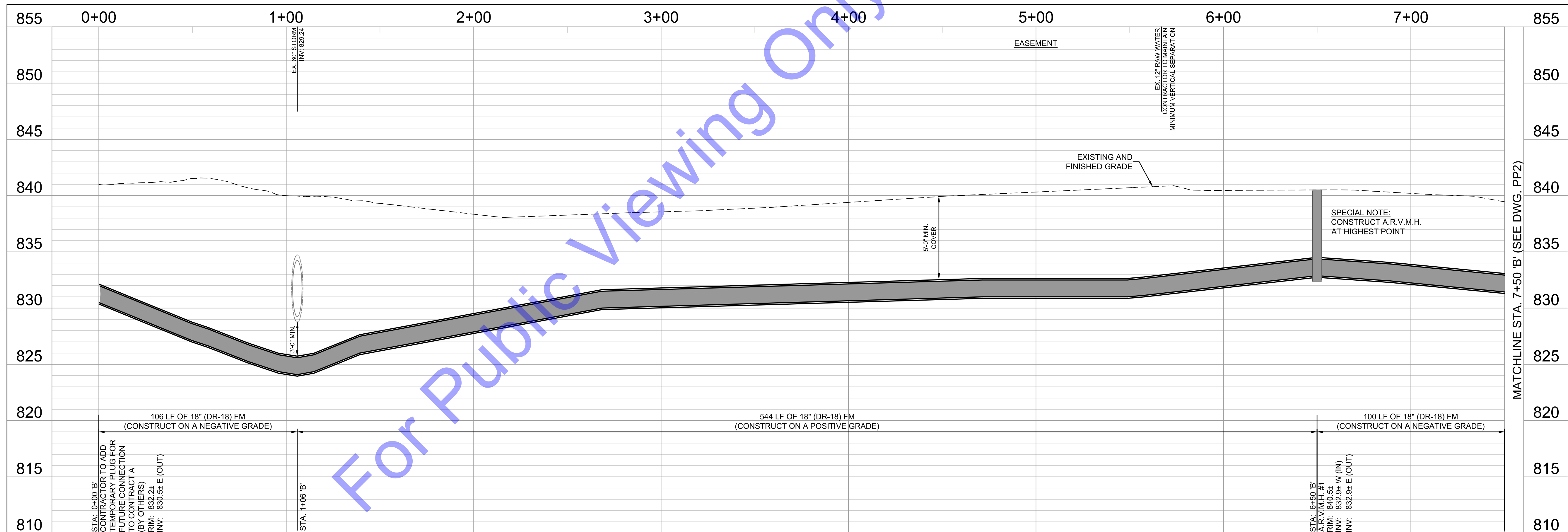
PLAN VIEW
SCALE: 1"=30'-0"



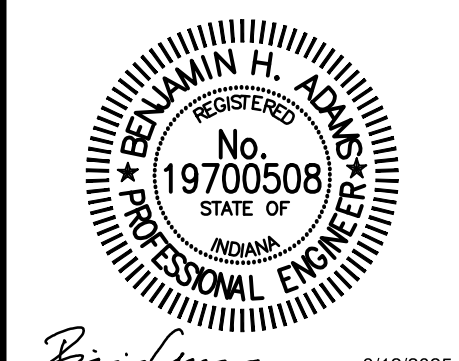
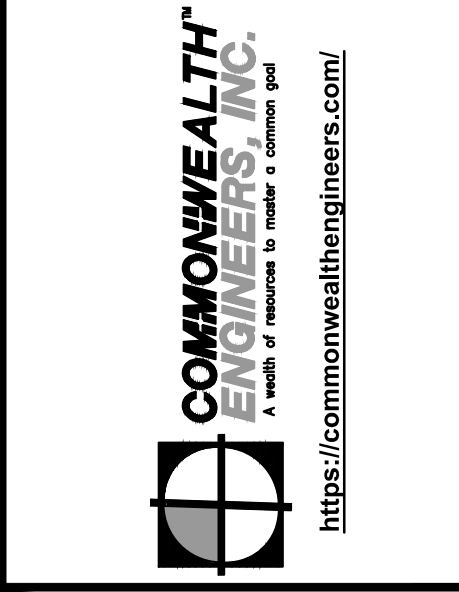
CODED NOTES

- ◆ SEE EC DRAWINGS FOR EROSION CONTROL MEASURES.
- ◆ CONTRACTOR TO VERIFY EX. UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION. IN THE EVENT OF UTILITY CONFLICTS, CONTRACTOR SHALL NOTIFY UTILITY TO RELOCATE TO AVOID CONFLICTS.
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NOTE:
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PROFILE - LINE 'B'
HORIZONTAL SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"



Signature: *Ben Adams* Date: 3/12/2025

CITY OF BERNE, IN
ADAMS COUNTY
LTCP PHASE II COLLECTION
SYSTEM IMPROVEMENTS
CONTRACT B

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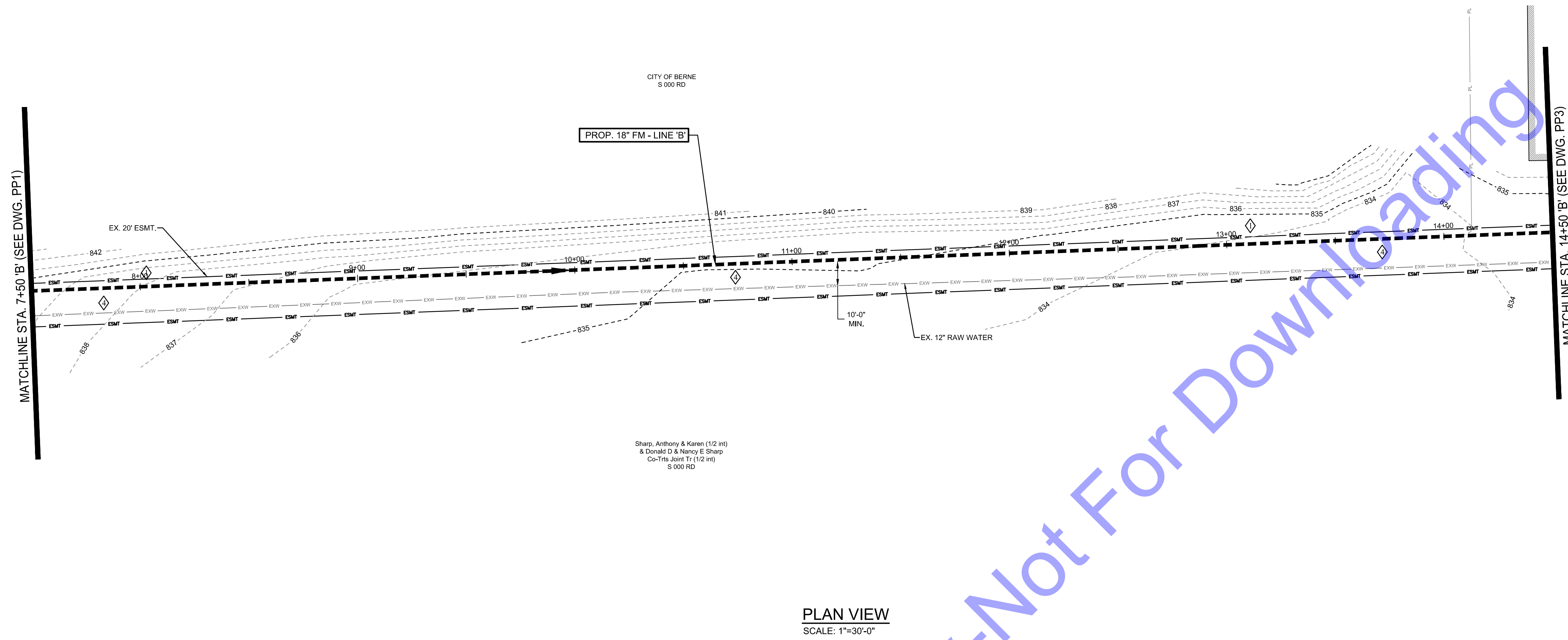
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Project No: S24028

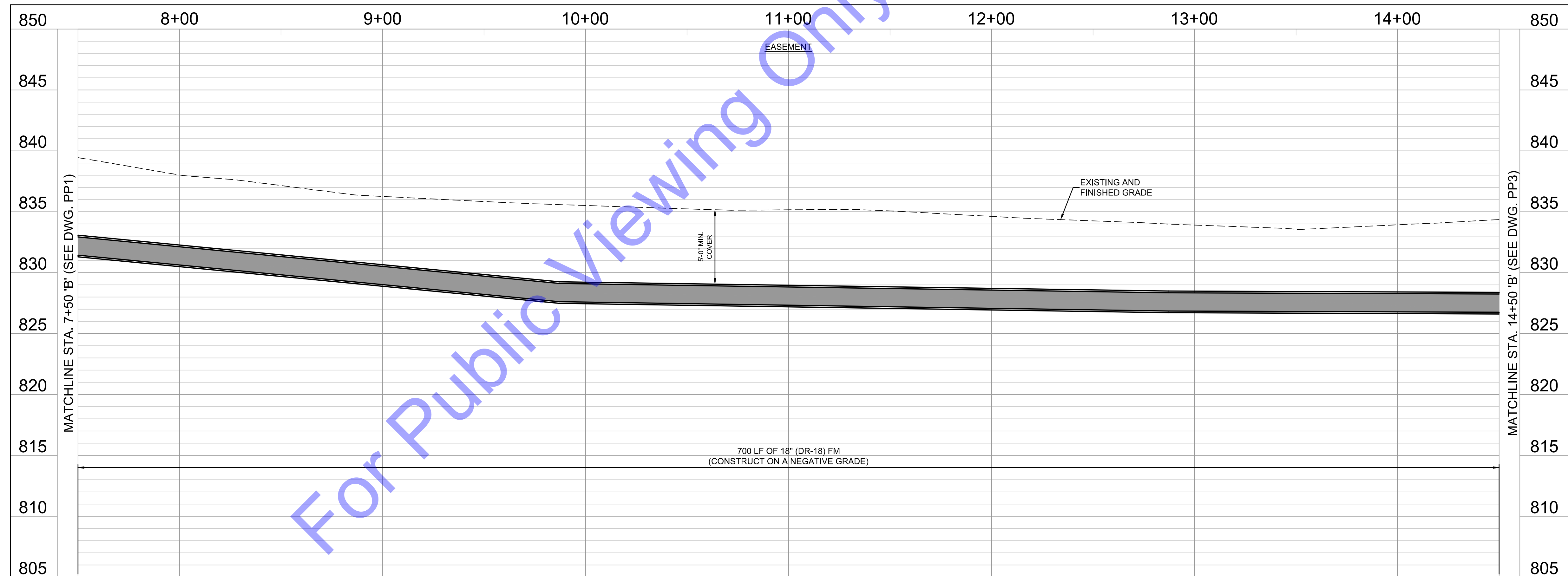
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PLAN & PROFILE -
LINE 'B' - STATION
0+00-7+50

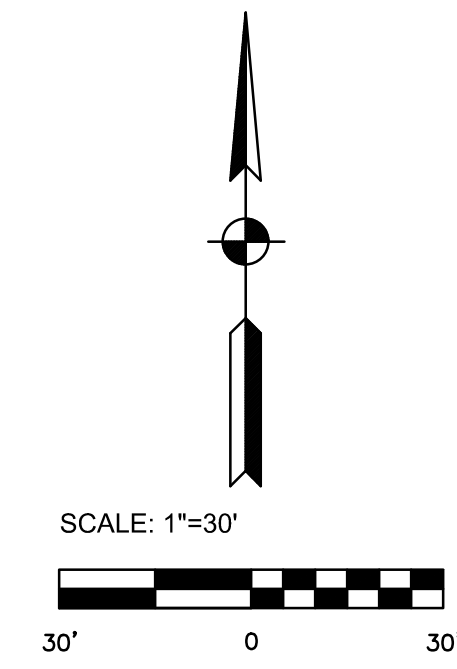
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PLAN VIEW
 SCALE: 1"=30'-0"

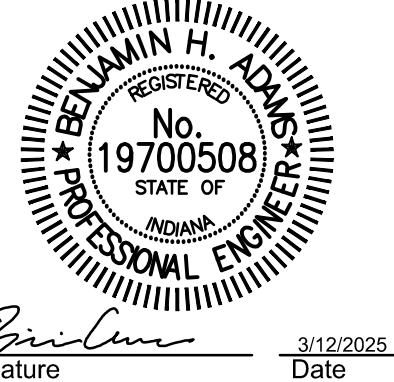


PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"



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Signature: *Benjamin H. Adams* Date: 3/12/2025

CITY OF BERNE, IN
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 LTCP PHASE II COLLECTION
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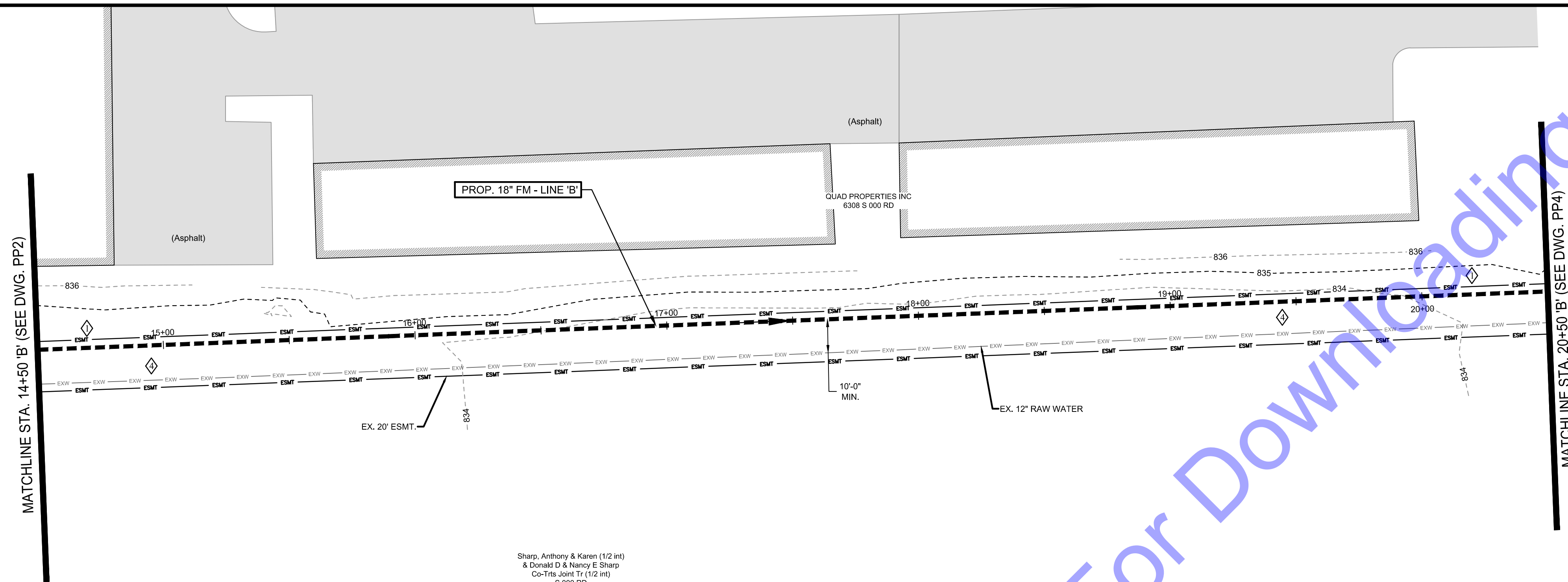
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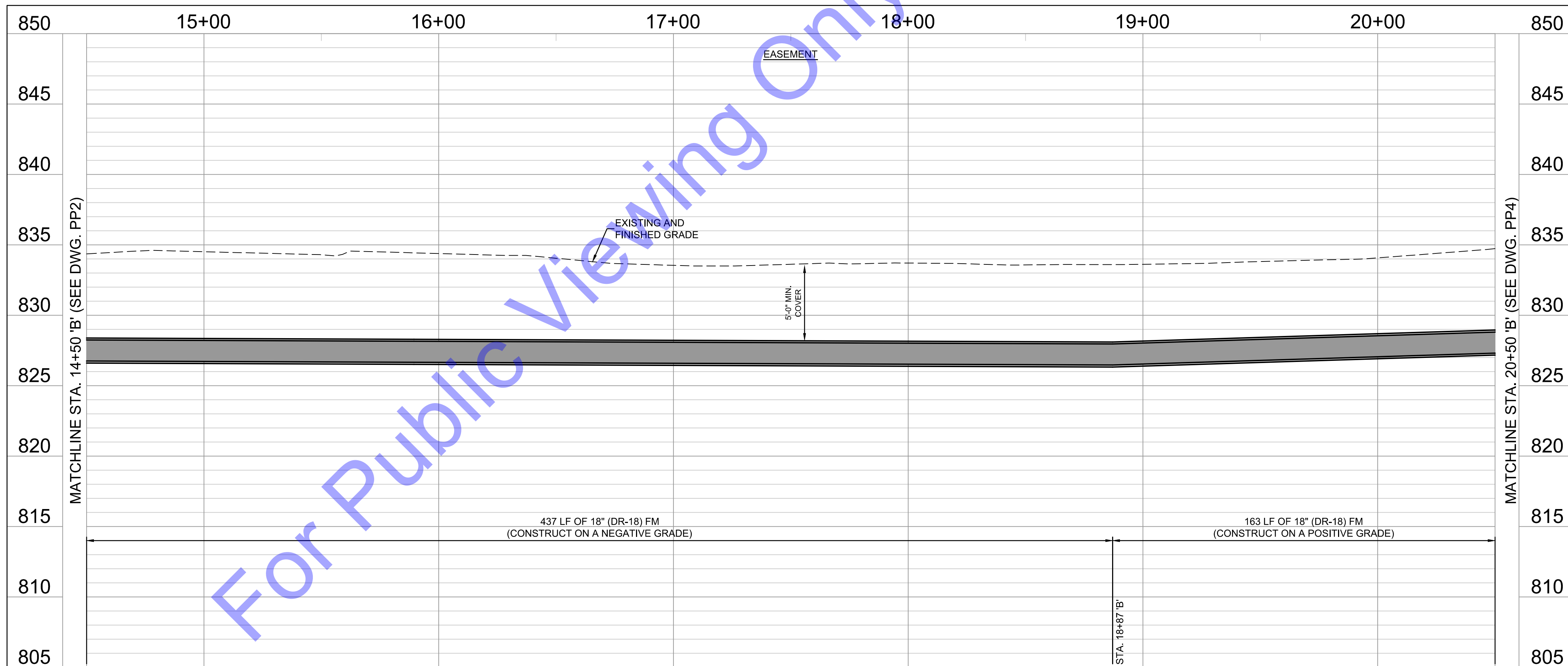
PLAN & PROFILE -
 LINE 'B' - STATION
 7+50-14+50

Drawing No:
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 Sheet: 7 OF 37

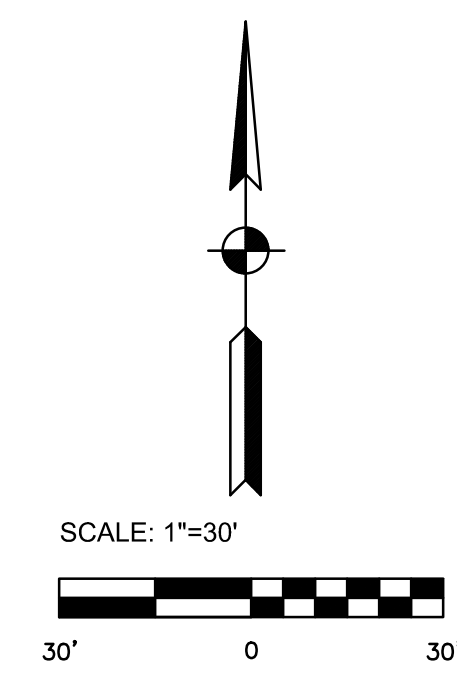
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PLAN VIEW
 SCALE: 1"=30'-0"



PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"



CODED NOTES

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Signature: *Benjamin H. Adams* Date: 3/12/2025

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**LTCP PHASE II COLLECTION
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 CONTRACT B**

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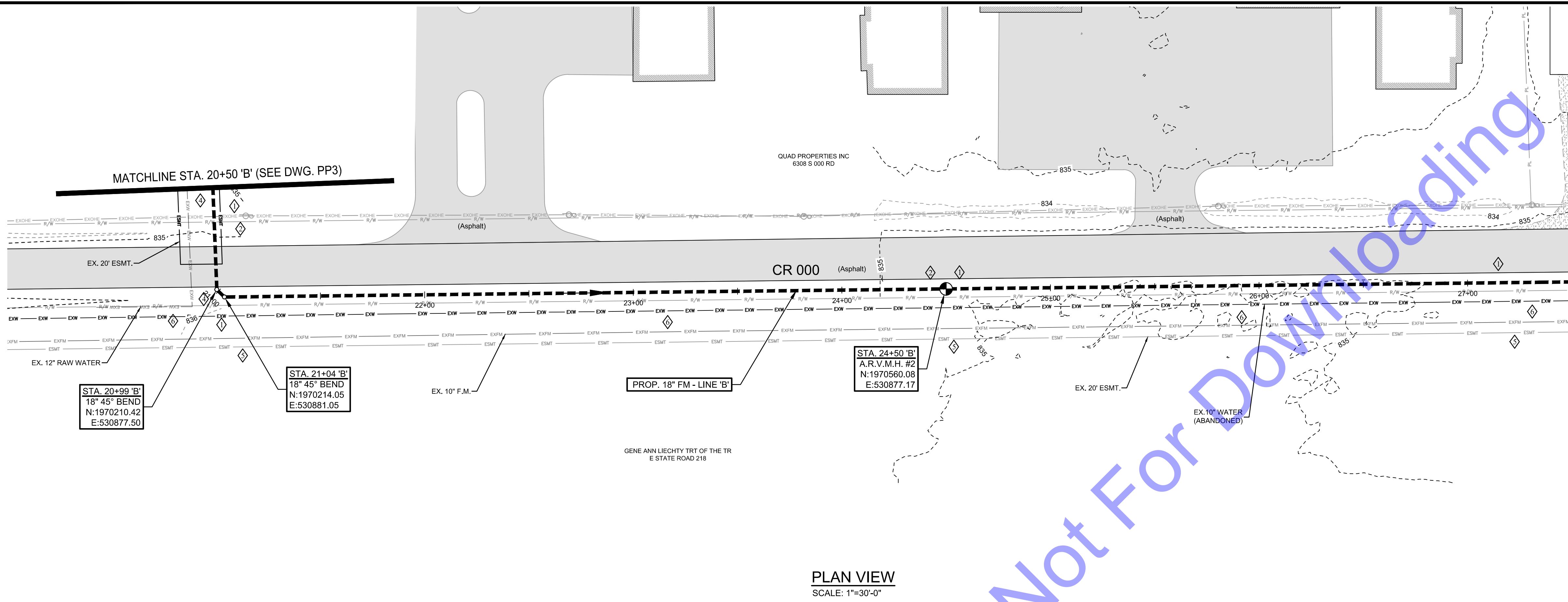
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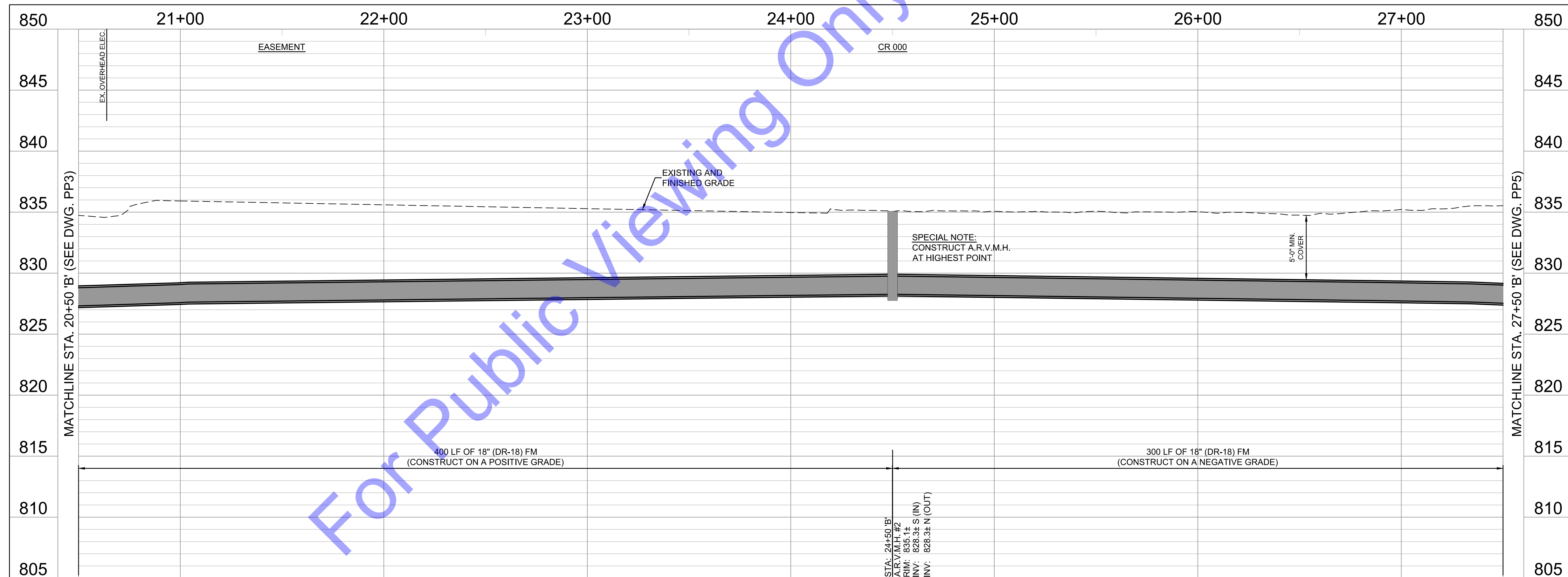
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 LINE 'B' - STATION
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 Sheet: 8 OF 37

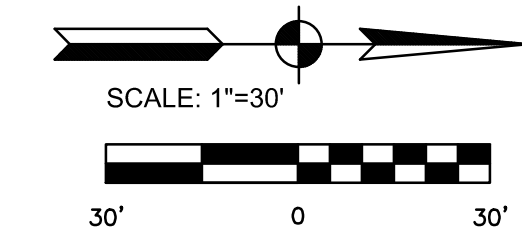
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PLAN VIEW
 SCALE: 1"=30'-0"



PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"



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Signature: *Benjamin H. Adams* Date: 3/12/2025

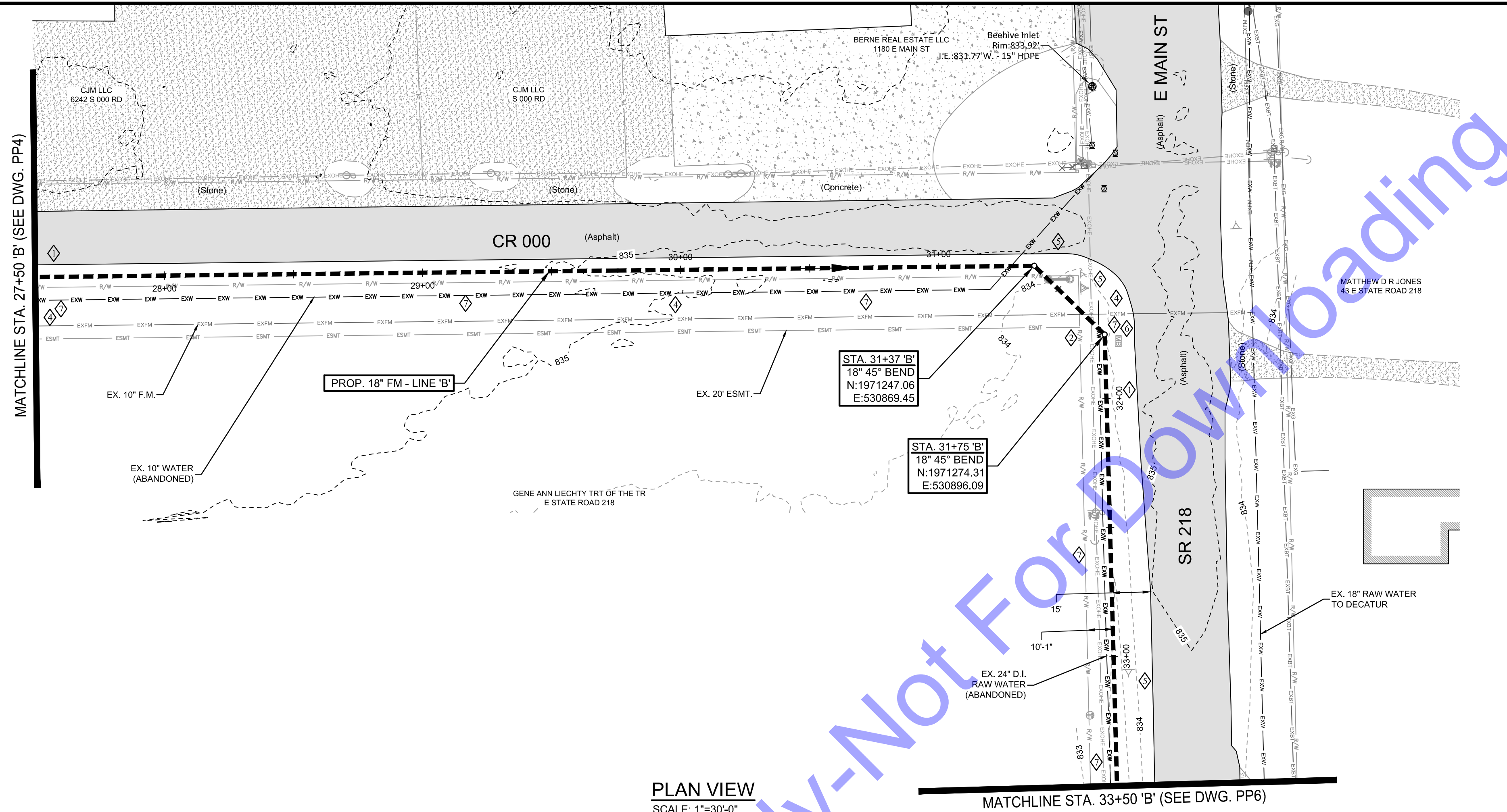
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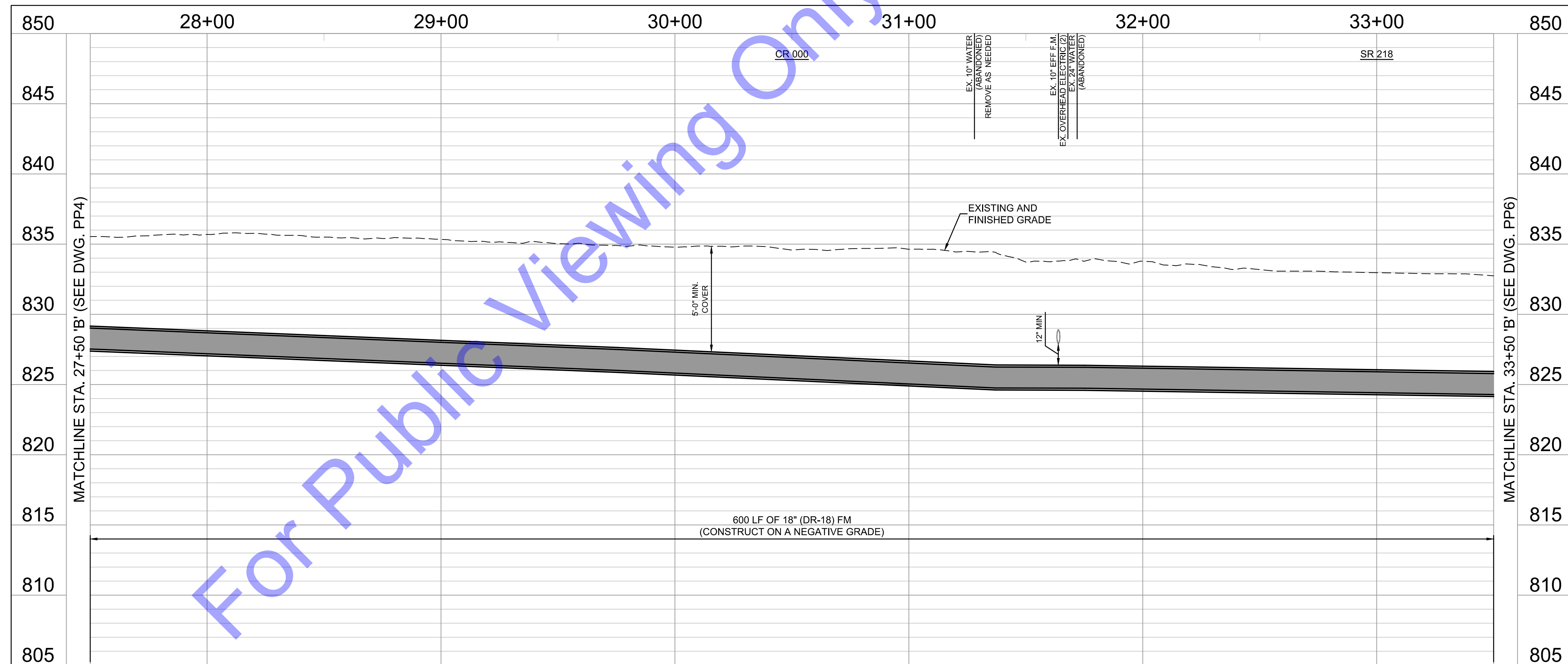
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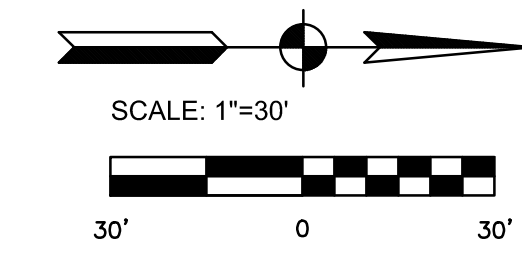
PLAN & PROFILE -
 LINE 'B' - STATION
 20+50-27+50



PLAN VIEW
 SCALE: 1"=30'-0"



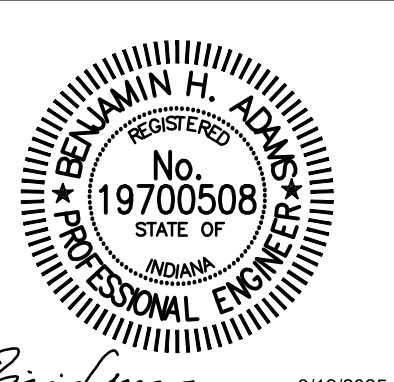
PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"



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Signature: *Benjamin H. Adams* Date: 3/12/2025

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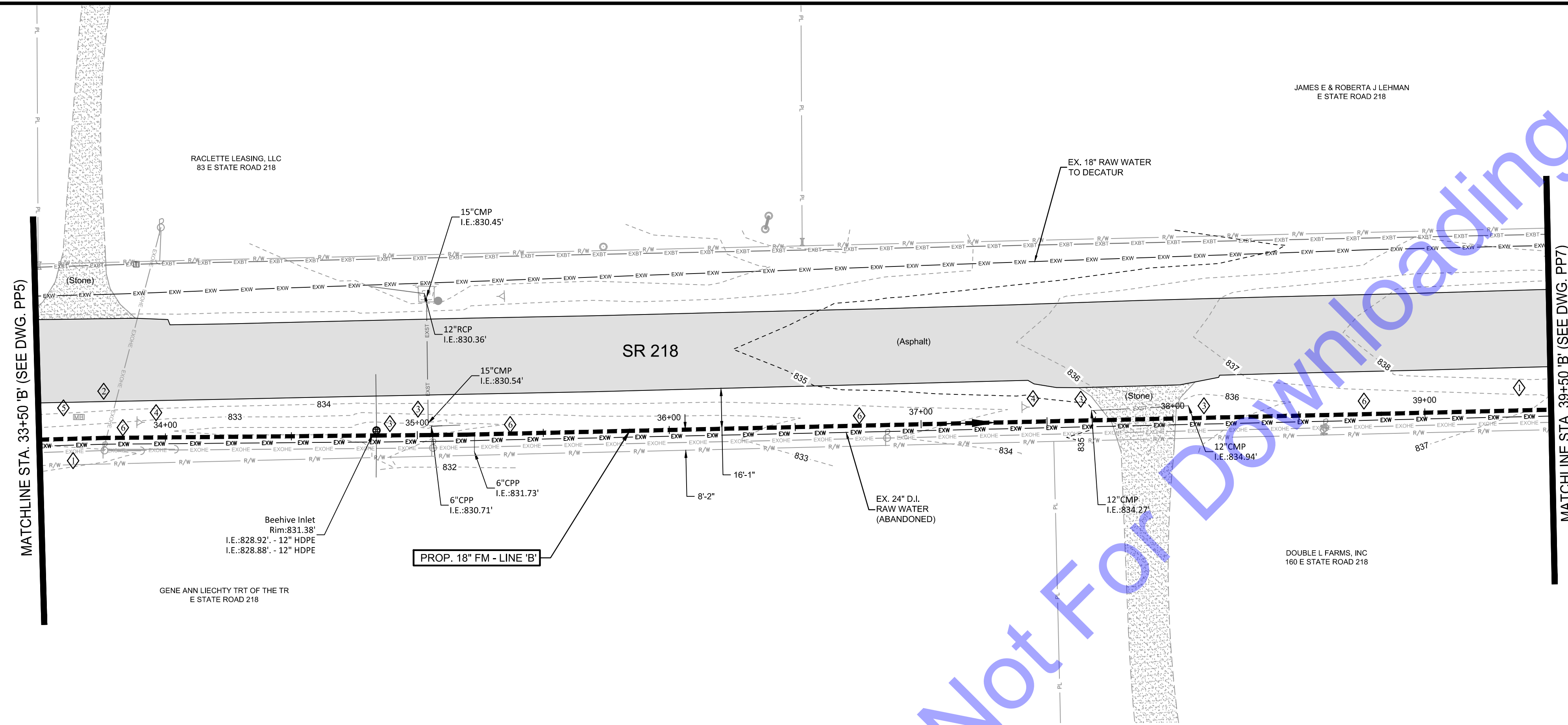
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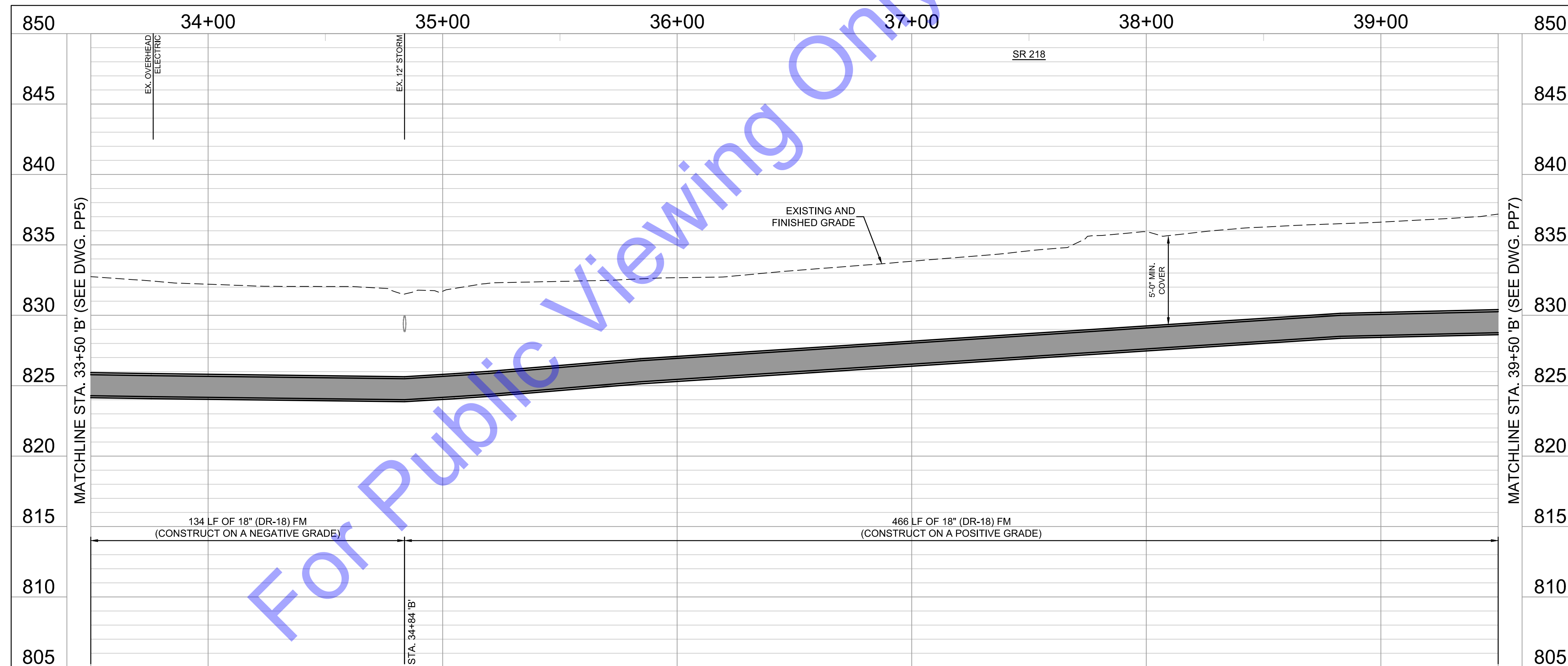
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PLAN & PROFILE -
 LINE 'B' - STATION
 27+50-33+50

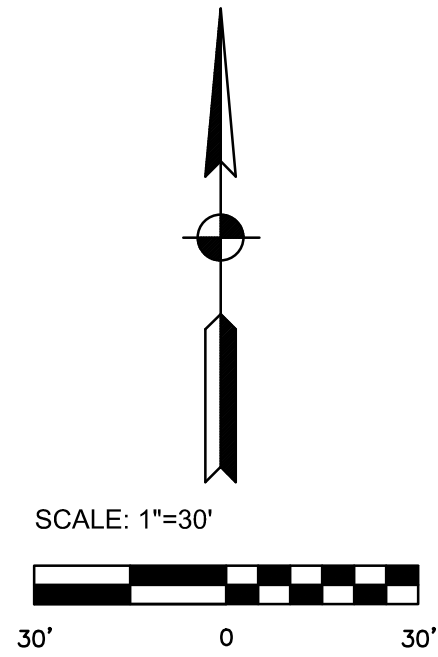
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PP5
 Sheet: 10 OF 37



PLAN VIEW
 SCALE: 1"=30'-0"



PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"



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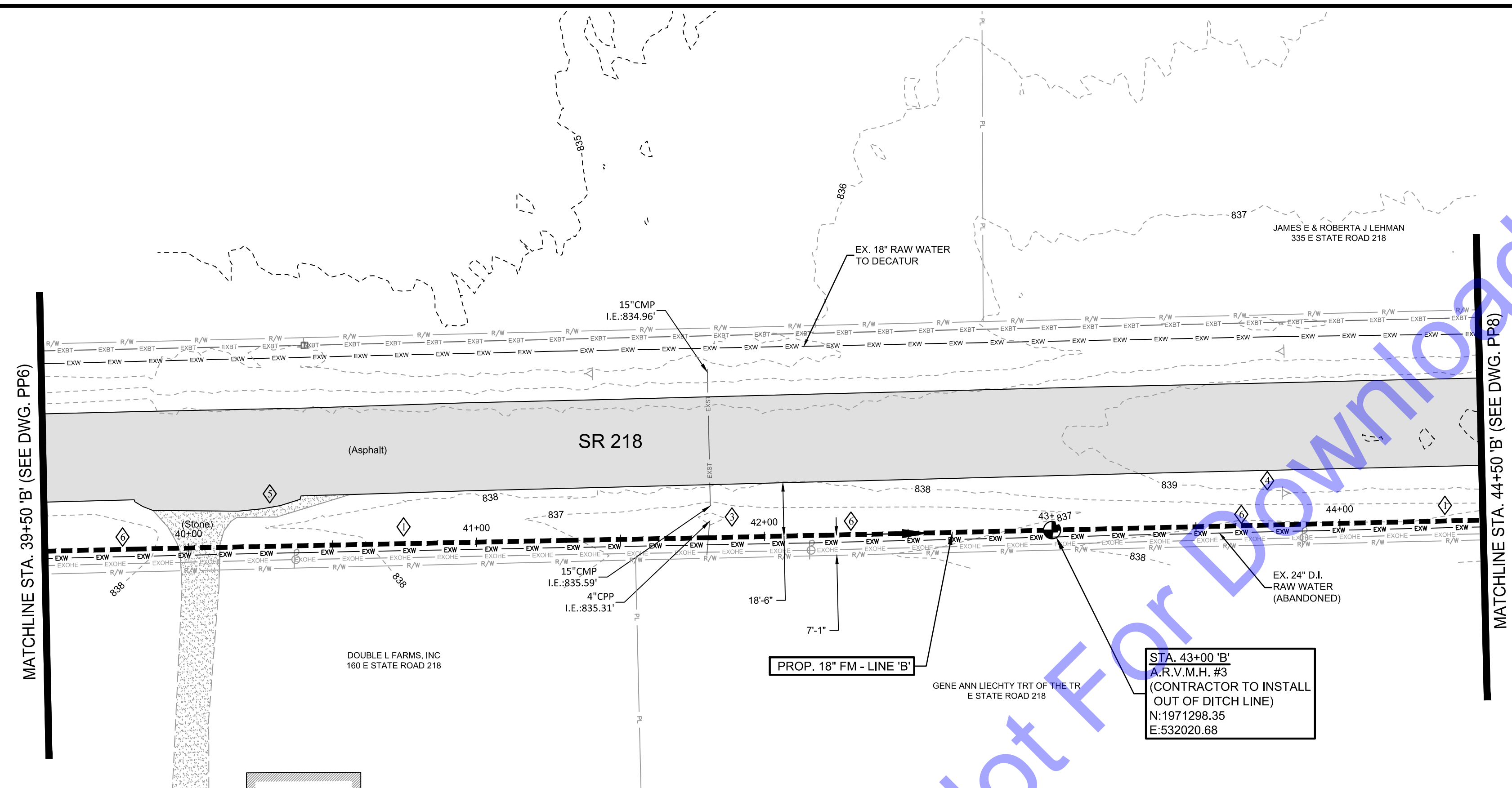
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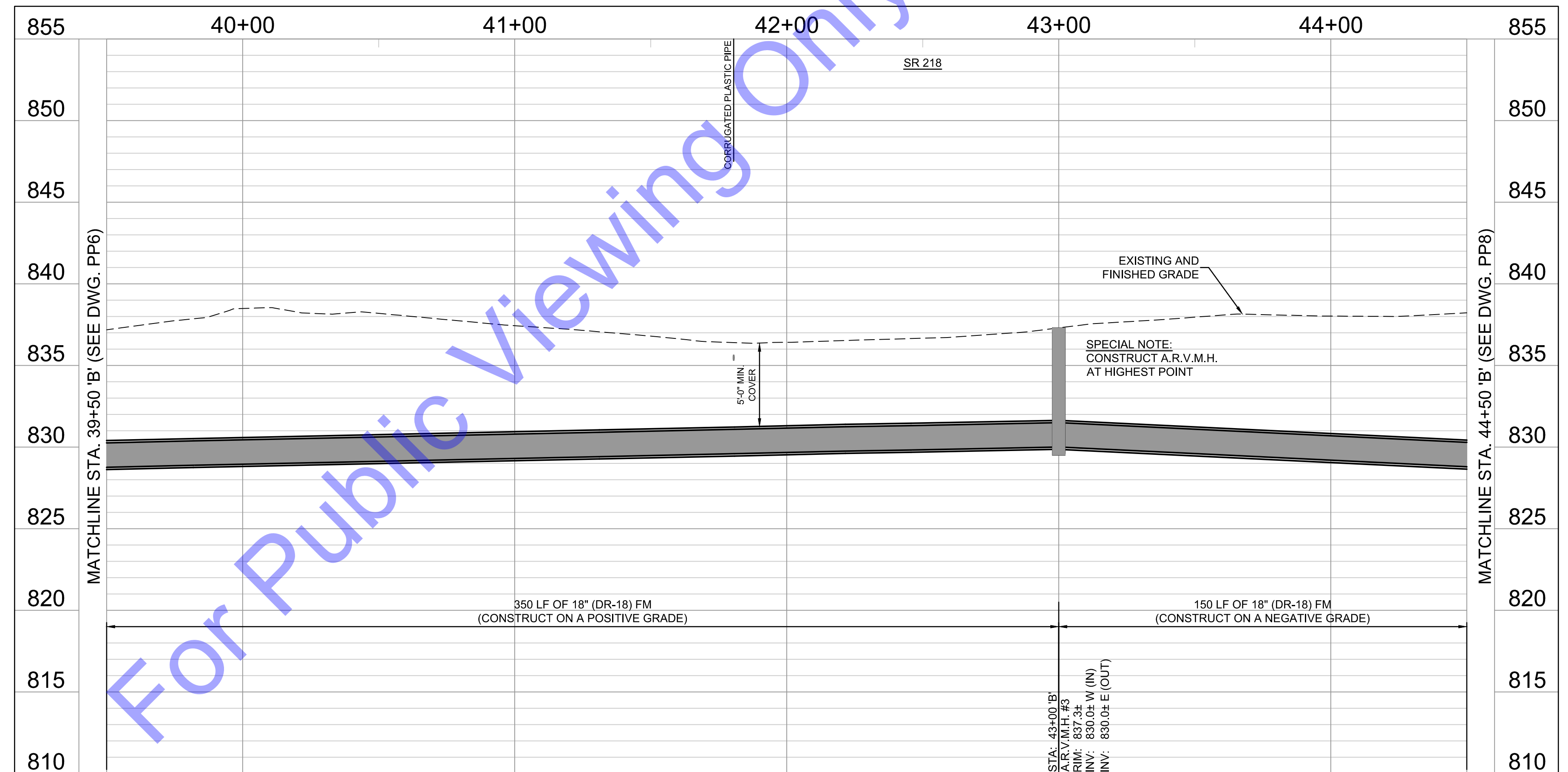
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 LINE 'B' - STATION
 33+50-39+50

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PP6
 Sheet: 11 OF 37

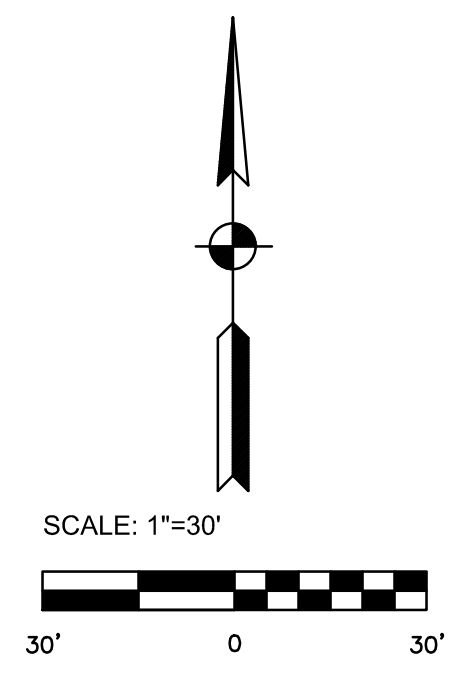
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 Saved: 3/13/2025 11:17:19 AM Plotted: 3/13/2025 1:24:03 PM Current User: Craig Higbie LastSavedBy: chgble



PLAN VIEW
 SCALE: 1"=30'-0"



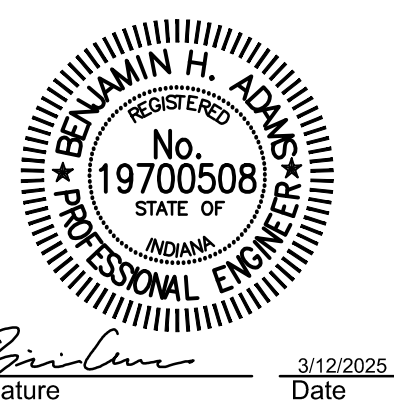
PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"



CODED NOTES

- 1 SEE EC DRAWINGS FOR EROSION CONTROL MEASURES.
- 2 CONTRACTOR TO VERIFY EX. UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION. IN THE EVENT OF UTILITY CONFLICTS, CONTRACTOR SHALL NOTIFY UTILITY TO RELOCATE TO AVOID CONFLICTS.
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- 4 DAMAGE TO SIGNS TO BE CONTRACTOR RESPONSIBILITY. REMOVAL AND REPLACEMENT OF SIGNS TO BE CONSIDERED INCIDENTAL TO PROJECT.
- 5 CONTRACTOR TO RE-SET MAILBOXES DISTURBED BY CONSTRUCTION.
- 6 CONTRACTOR TO FIELD VERIFY THE LOCATION AND DEPTH OF EXISTING RAW WATER MAIN PRIOR TO CONSTRUCTION.

NOTE:
 THE EXISTING AND PROPOSED PROFILE GRADES ARE BASED ON THE ELEVATIONS AT THE CENTERLINE OF THE PROPOSED SANITARY SEWER.



Signature: *Ben Adams* Date: 3/12/2025

CITY OF BERNE, IN
 ADAMS COUNTY
 LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B

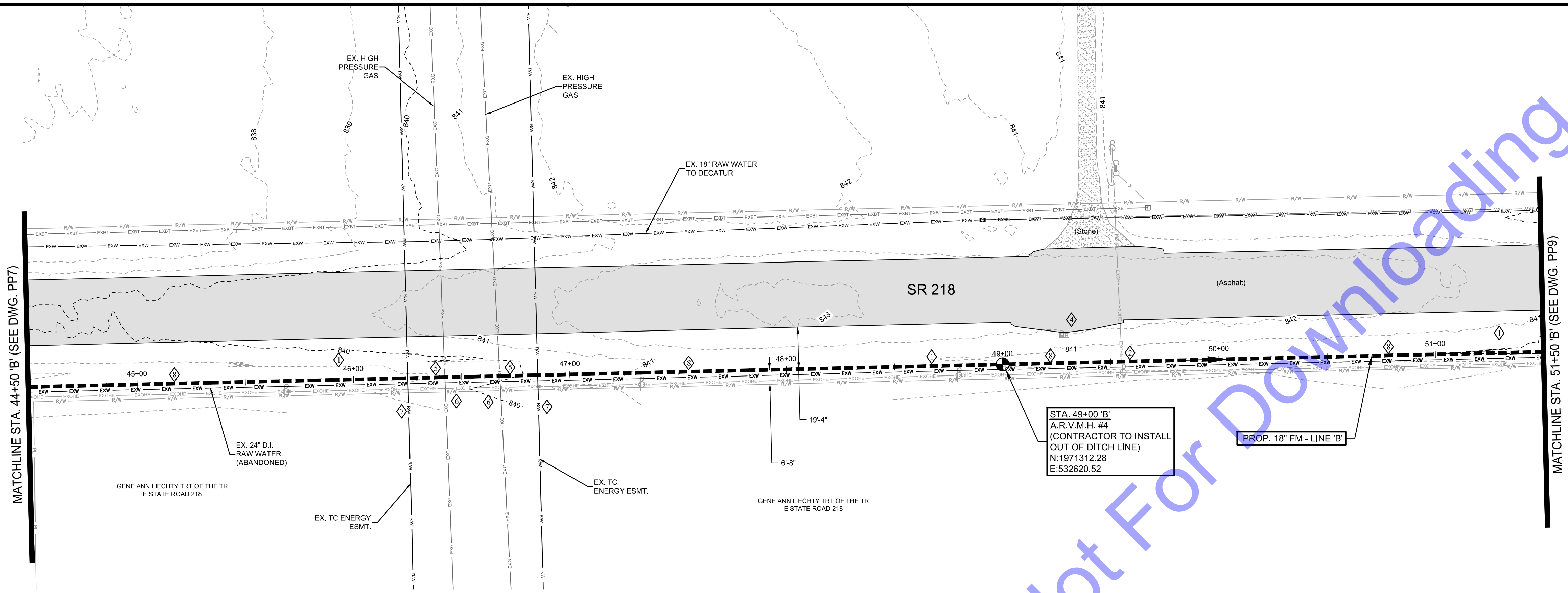
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No.	Submission / Revision	By	Date

Designed By: BW
 Drawn By: CH/BP
 Checked By: BA
 Issue Date: 03/2025
 Project No: S24028
 Scale: AS SHOWN

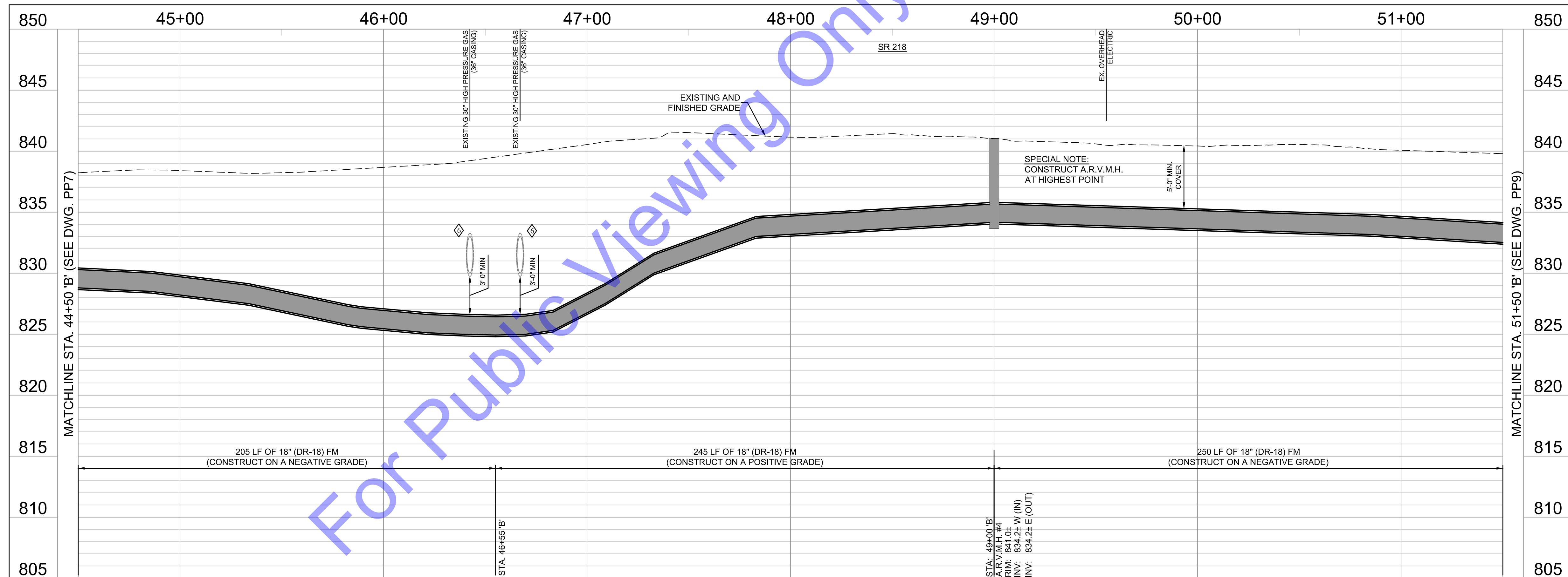
PLAN & PROFILE -
 LINE 'B' - STATION
 39+50-44+50

Drawing No:
PP7
 Sheet: 12 OF 37

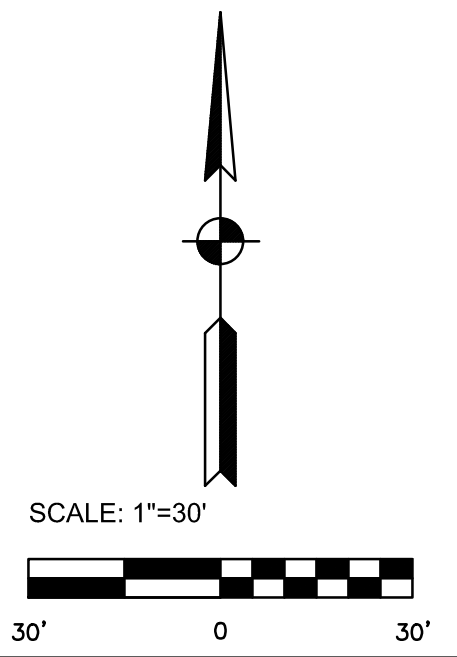


PLAN VIEW
SCALE: 1"=30'-0"

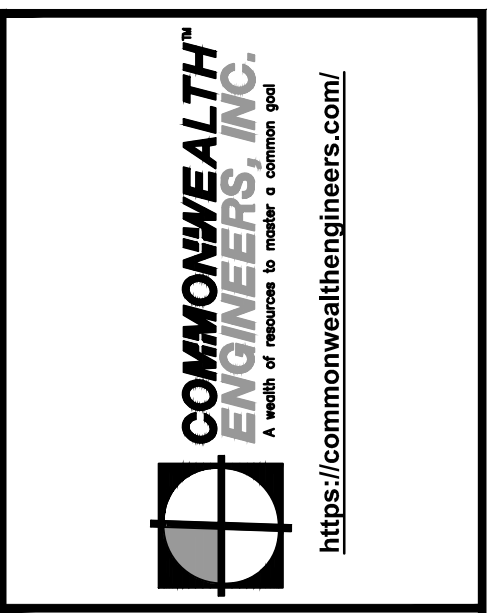
NOTE:
THE EXISTING AND PROPOSED PROFILE GRADES ARE BASED ON THE ELEVATIONS AT THE CENTERLINE OF THE PROPOSED SANITARY SEWER.



PROFILE - LINE 'B'
HORIZONTAL SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"



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 - ◇ CONTRACTOR TO VERIFY EX. UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION. IN THE EVENT OF UTILITY CONFLICTS, CONTRACTOR SHALL NOTIFY UTILITY TO RELOCATE TO AVOID CONFLICTS.
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 - ◇ TC ENERGY ROW TO BE VERIFIED BY CONTRACTOR PRIOR TO ANY CONSTRUCTION (SEE DS-4.4 ENERGY UTILITY CROSSING FOR UTILITY CROSSING SPECIFICATIONS)
 - ◇ CONTRACTOR TO FIELD VERIFY THE LOCATION AND DEPTH OF EXISTING RAW WATER MAIN PRIOR TO CONSTRUCTION.



Signature: *Ben Adams* Date: 3/12/2025

CITY OF BERNE, IN
ADAMS COUNTY
LTCP PHASE II COLLECTION SYSTEM IMPROVEMENTS
CONTRACT B

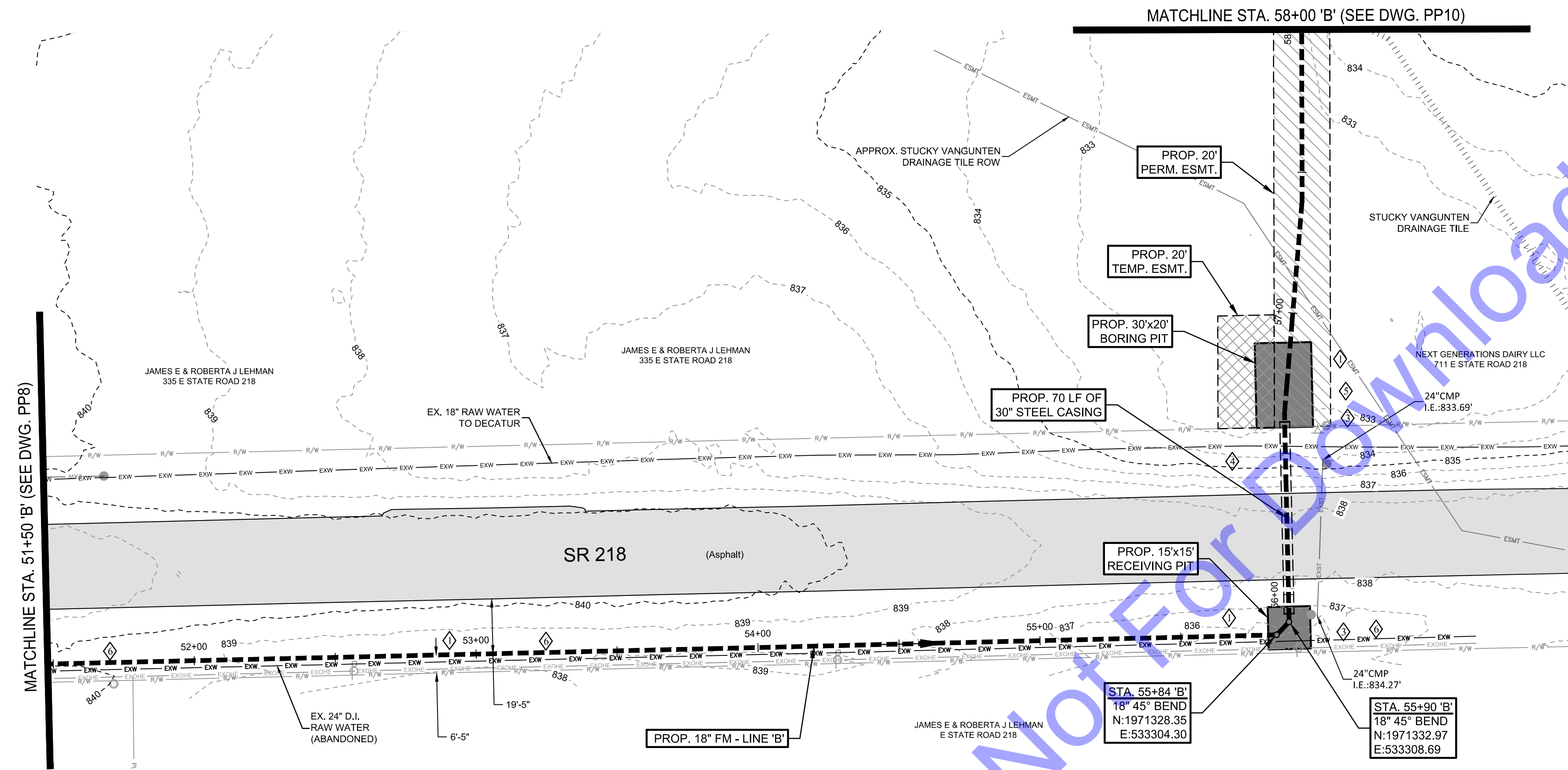
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Designed By: BW
 Drawn By: CH/BP
 Checked By: BA
 Issue Date: 03/2025
 Project No: S24028
 Scale: AS SHOWN

PLAN & PROFILE - LINE 'B' - STATION 44+50-51+50
 Drawing No: **PP8**
 Sheet: 13 OF 37

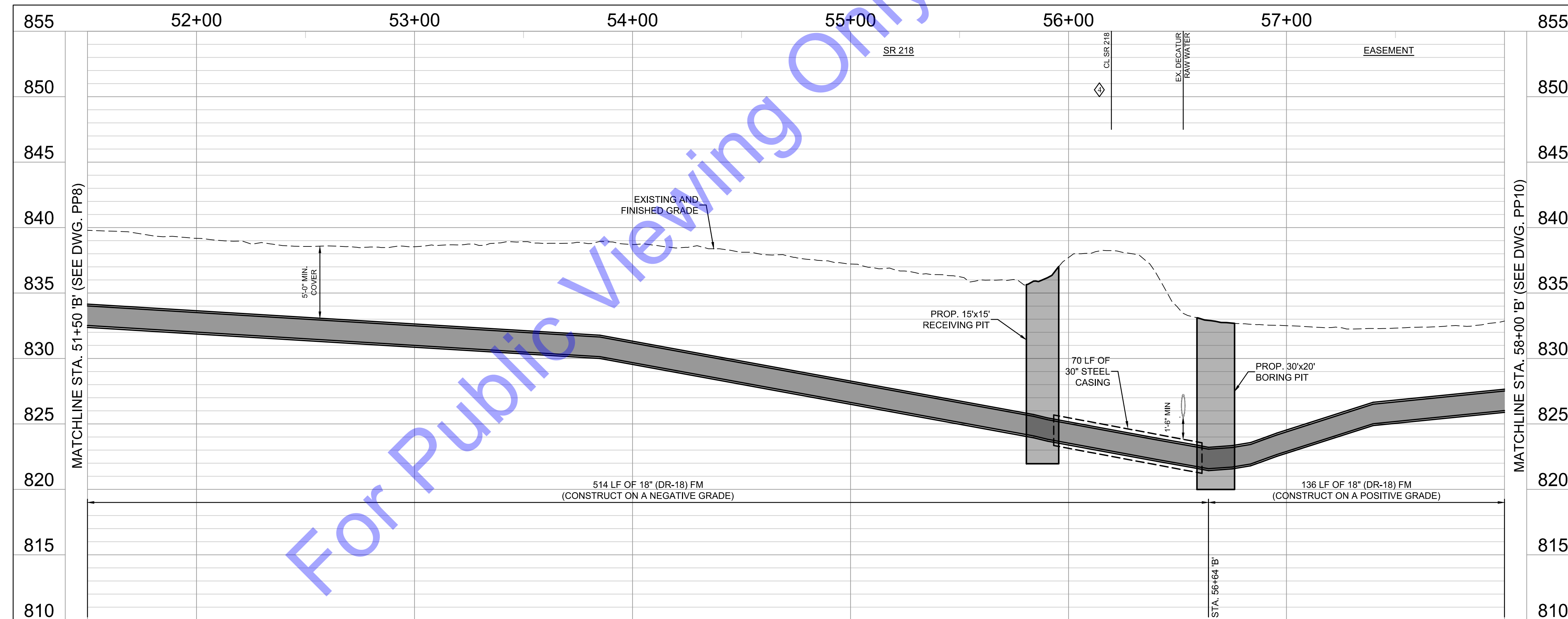
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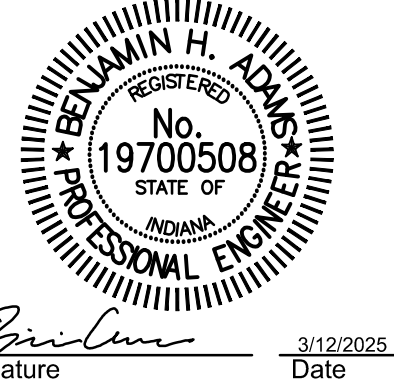
PLAN VIEW
 SCALE: 1"=30'-0"

- CODED NOTES**
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 - 5 DAMAGE TO SIGNS TO BE CONTRACTOR RESPONSIBILITY. REMOVAL AND REPLACEMENT OF SIGNS TO BE C.
 - 6 CONTRACTOR TO FIELD VERIFY THE LOCATION AND DEPTH OF EXISTING RAW WATER MAIN PRIOR TO CONSTRUCTION.

NOTE:
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PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"



Signature: *Benjamin H. Adams* Date: 3/12/2025

CITY OF BERNE, IN
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 LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B

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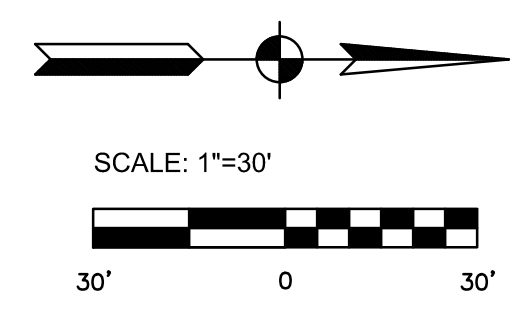
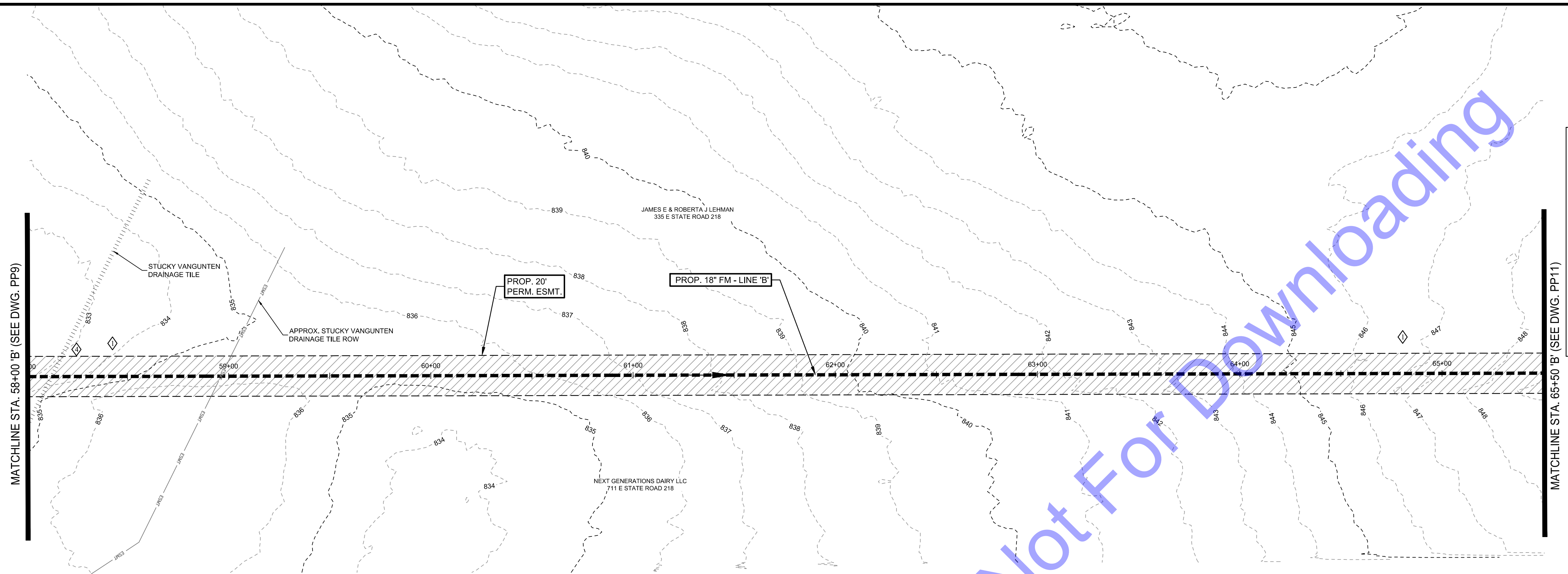
No.	Submission / Revision	By	Date

Designed By: BW
 Drawn By: CH/BP
 Checked By: BA
 Issue Date: 03/2025
 Project No: S24028
 Scale: AS SHOWN

PLAN & PROFILE -
 LINE 'B' - STATION
 51+50-58+00

Drawing No:
PP9
 Sheet: 14 OF 37

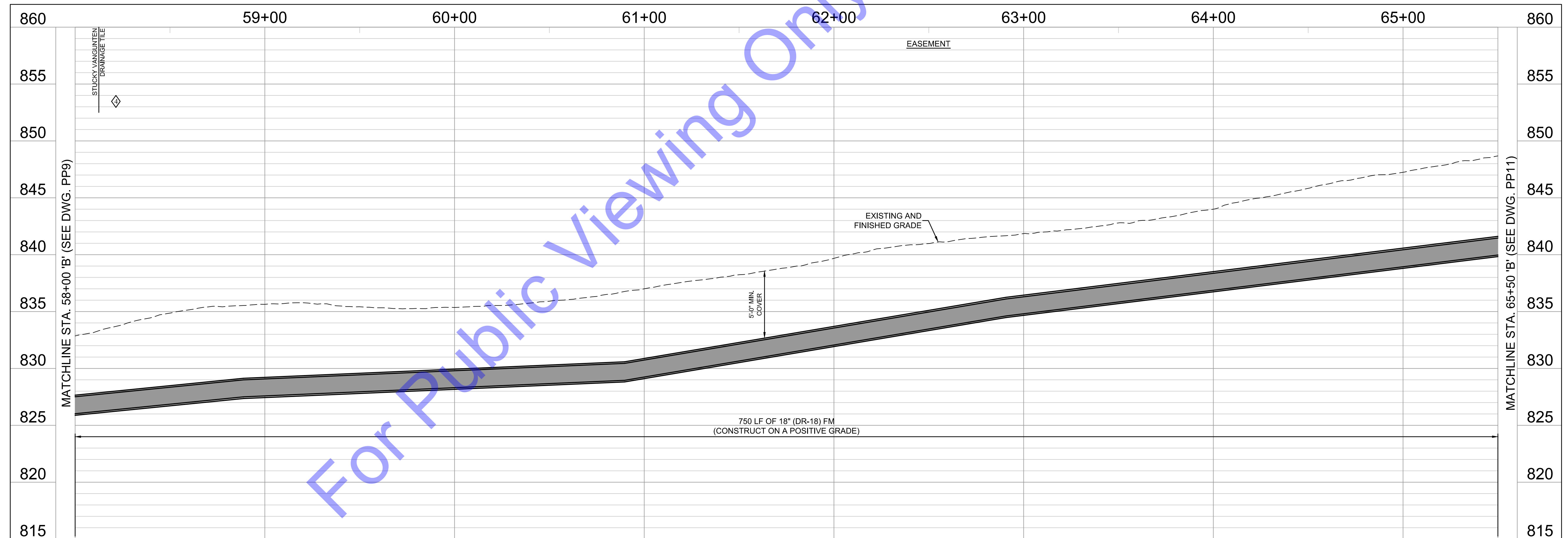
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 - ◊ CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND DEPTH OF EX. STUCKY VANGUNTEN DRAINAGE TILE PRIOR TO CONSTRUCTION. CONTRACTOR TO MAINTAIN A MINIMUM OF 5' VERTICAL SEPARATION FROM EX. STUCKY VANGUNTEN DRAINAGE TILE. CONTRACTOR TO PROVIDE GROUND AND INVERT ELEVATION TO ENGINEER.

NOTE:
 THE EXISTING AND PROPOSED PROFILE GRADES ARE BASED ON THE ELEVATIONS AT THE CENTERLINE OF THE PROPOSED SANITARY SEWER.

PLAN VIEW
 SCALE: 1"=30'-0"



PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"



Signature: *Benjamin H. Adams* Date: 3/12/2025

**CITY OF BERNE, IN
 ADAMS COUNTY**
**LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B**

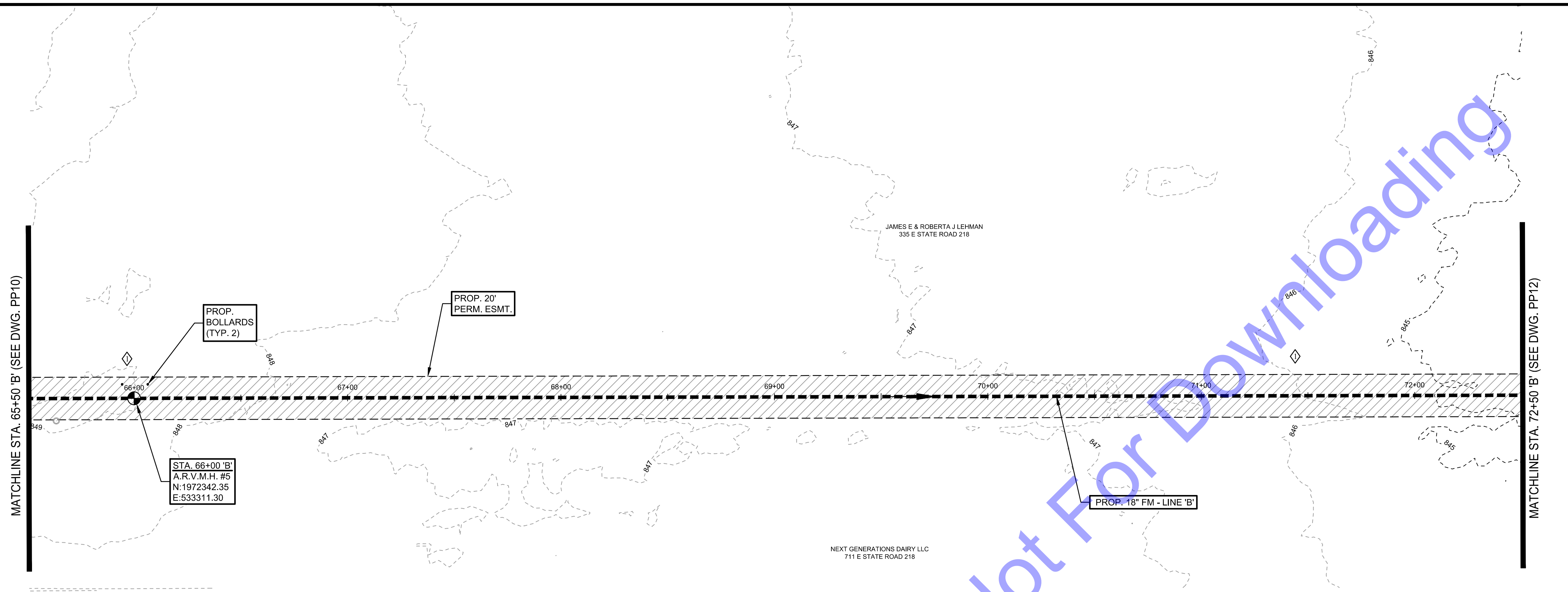
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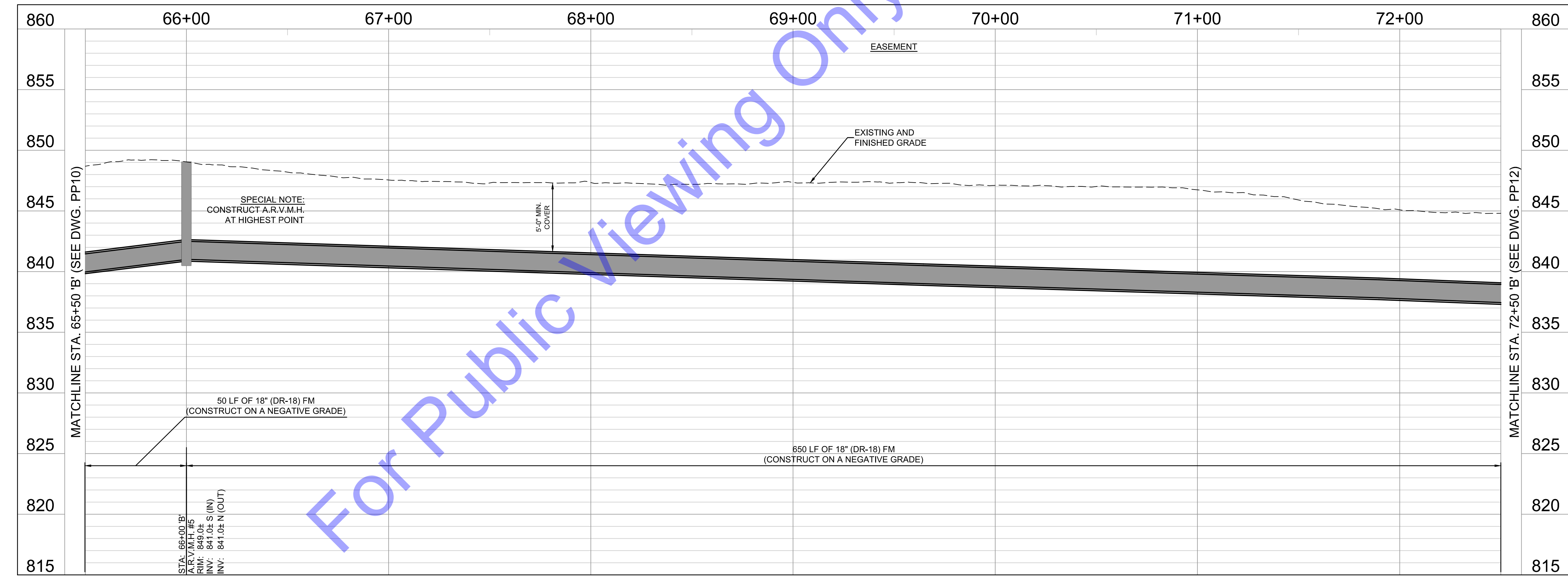
Designed By: BW	Drawn By: CH/BP	Checked By: BA
Issue Date: 03/2025	Project No: S24028	Scale: AS SHOWN

**PLAN & PROFILE -
 LINE 'B' - STATION
 58+00-65+50**

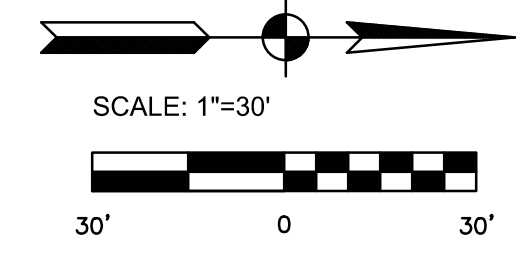
Drawing No:
PP10
 Sheet: 15 OF 37



PLAN VIEW
 SCALE: 1"=30'-0"

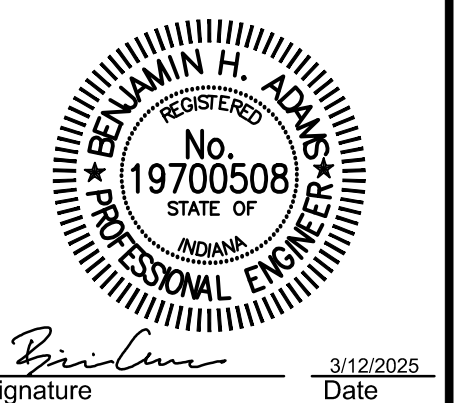
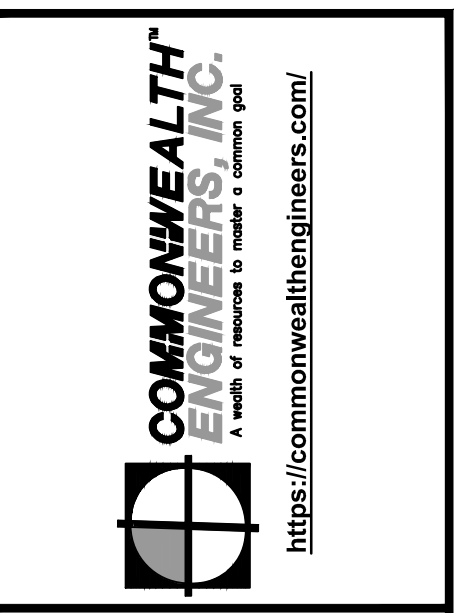


PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"



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Signature: *Ben Adams* Date: 3/12/2025

**CITY OF BERNE, IN
 ADAMS COUNTY**
**LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B**

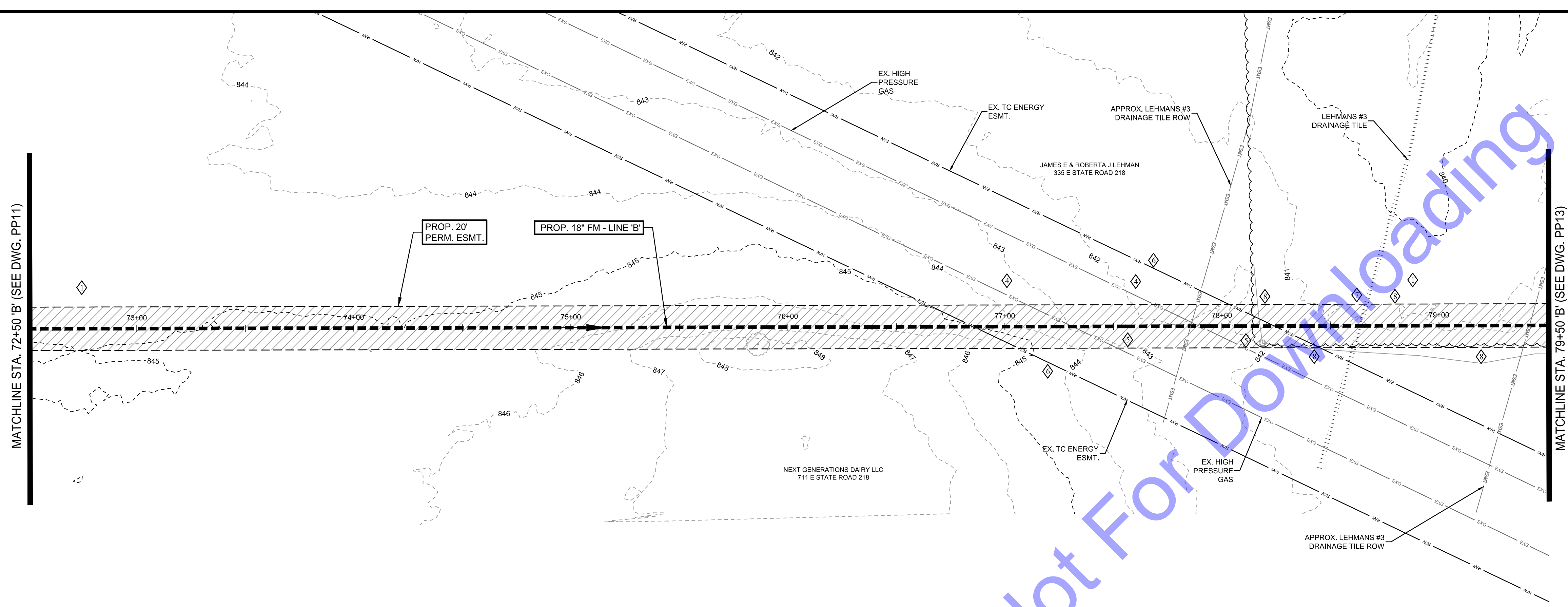
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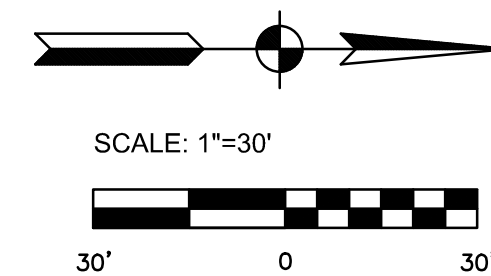
Designed By: BW
 Drawn By: CH/BP
 Issue Date: 03/2025
 Project No: S24028
 Checked By: BA
 Scale: AS SHOWN

**PLAN & PROFILE -
 LINE 'B' - STATION
 65+50-72+50**

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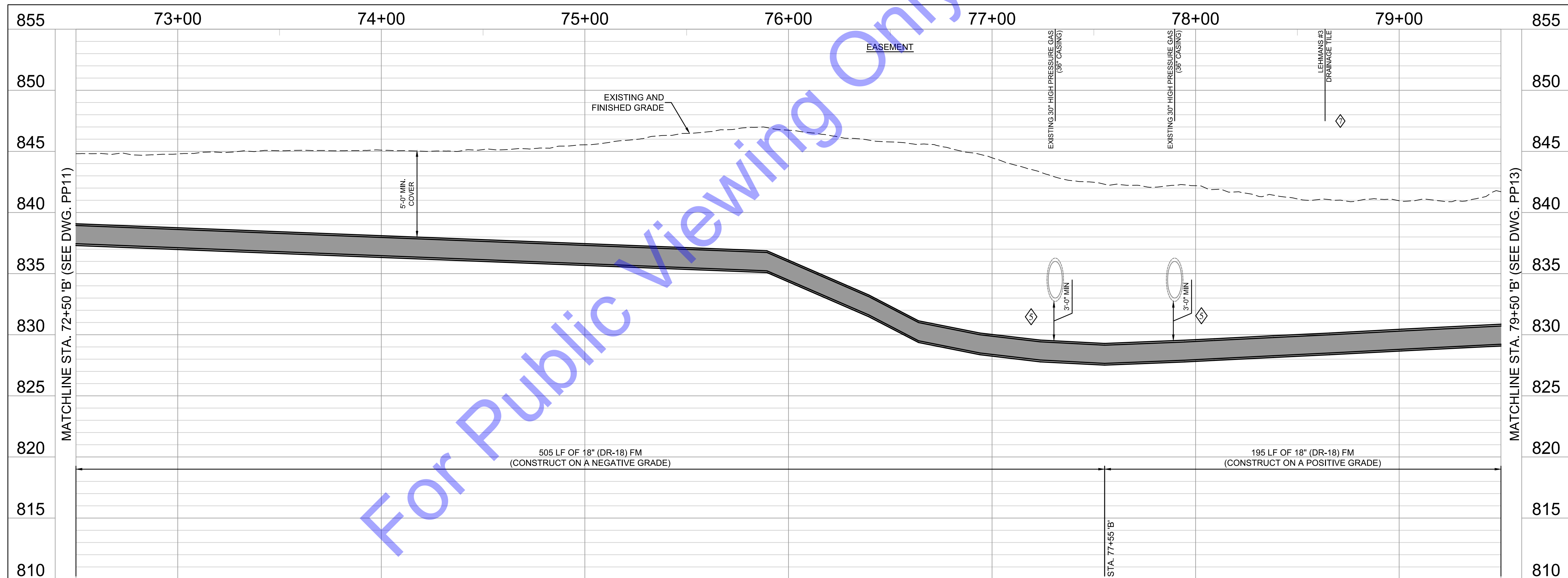


PLAN VIEW
 SCALE: 1"=30'-0"



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 - ◆ CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND DEPTH OF EX. LEHMANS #3 DRAINAGE TILE PRIOR TO CONSTRUCTION. CONTRACTOR TO MAINTAIN A MINIMUM OF 5' VERTICAL SEPARATION FROM EX. LEHMANS #3 DRAINAGE TILE. CONTRACTOR TO PROVIDE GROUND AND INVERT ELEVATION TO ENGINEER.
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NOTE:
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PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"

Signature: _____ Date: 3/12/2025

**CITY OF BERNE, IN
 ADAMS COUNTY**

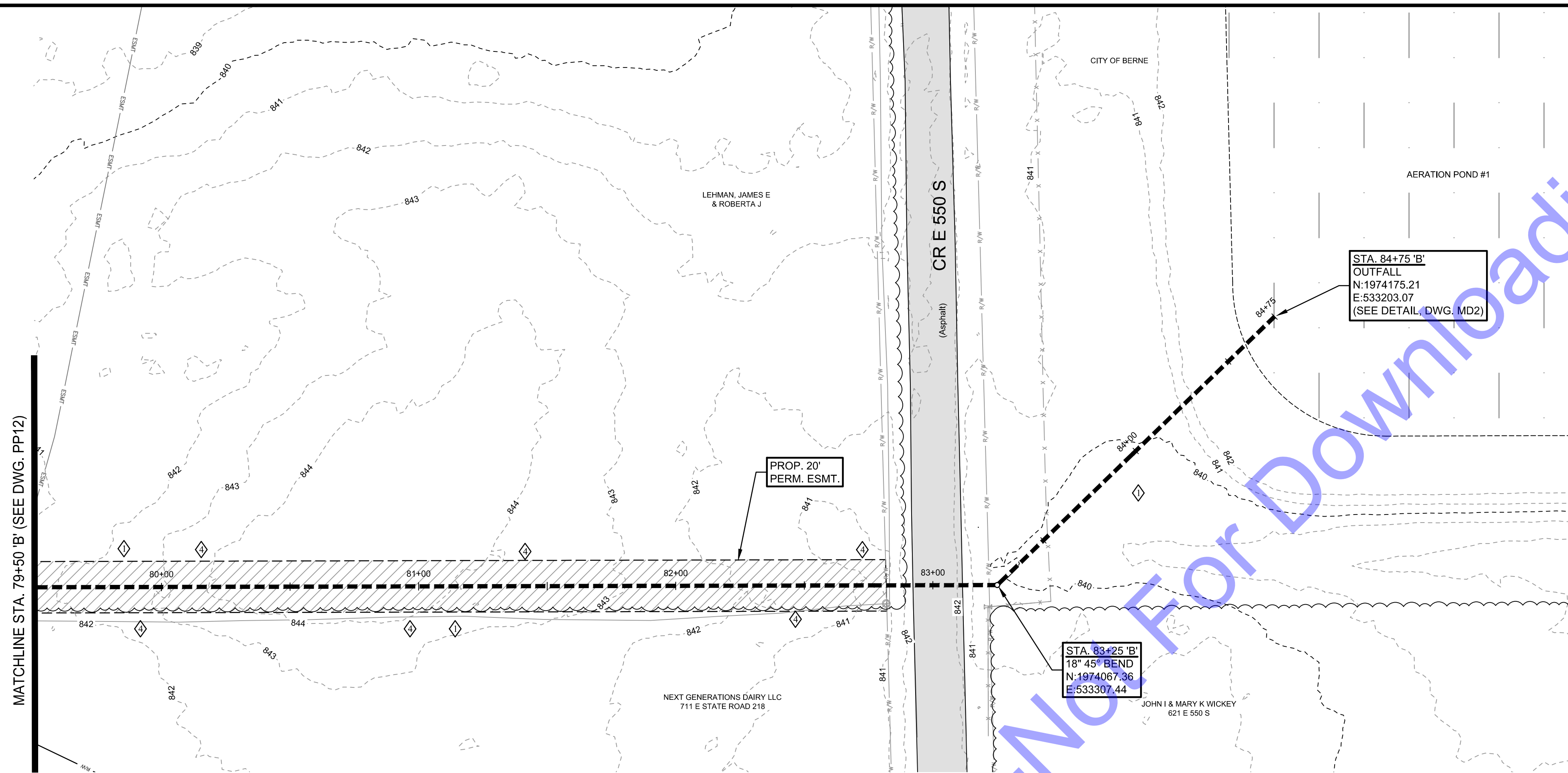
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 SYSTEM IMPROVEMENTS
 CONTRACT B**

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Drawn By: CH/BP Project No: S24028	Checked By: BA Scale: AS SHOWN

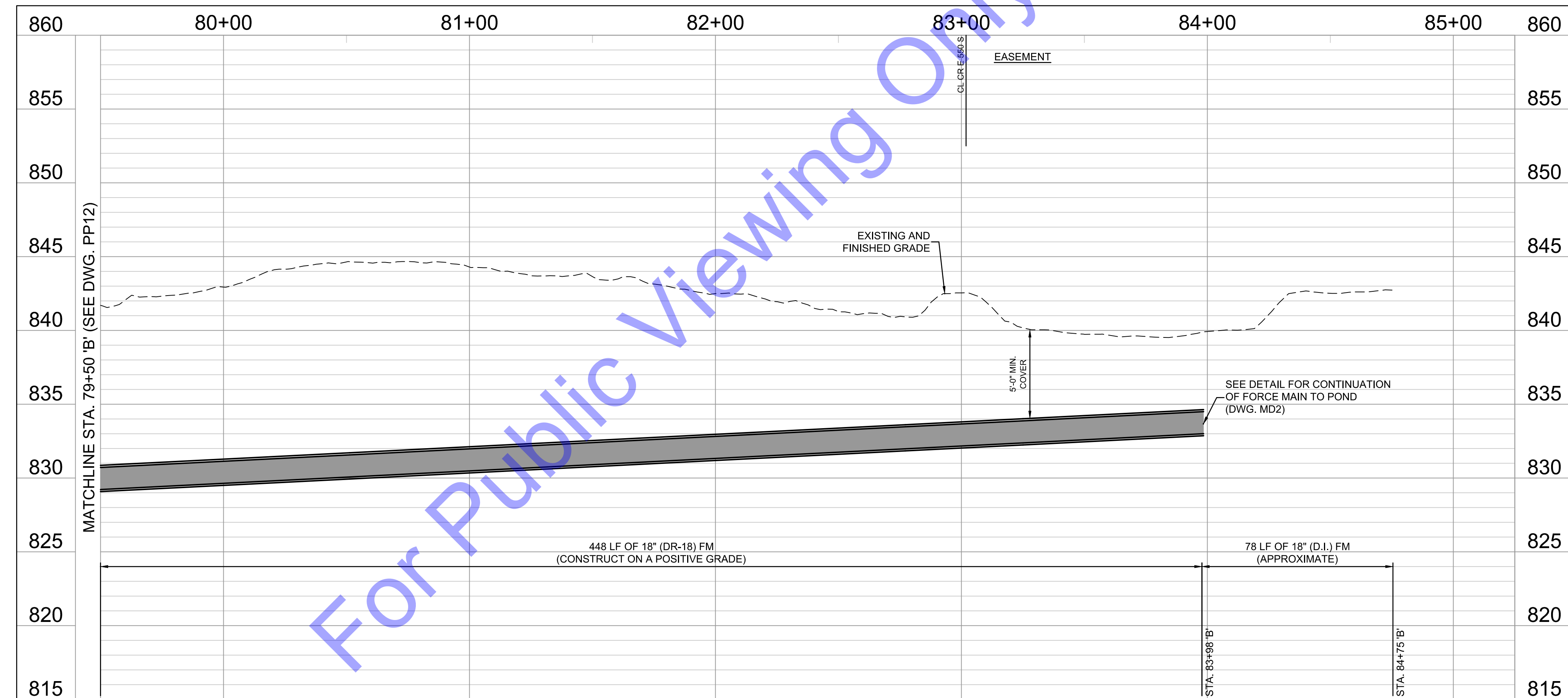
PLAN & PROFILE -
 LINE 'B' - STATION
 72+50-79+50

Drawing No:
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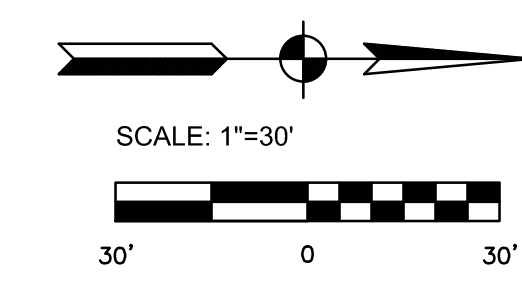
Sheet: 17 OF 37



PLAN VIEW
 SCALE: 1"=30'-0"



PROFILE - LINE 'B'
 HORIZONTAL SCALE: 1"=30'-0"
 VERTICAL SCALE: 1"=5'-0"



CODED NOTES

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Signature: *Benjamin H. Adams* Date: 3/12/2025

CITY OF BERNE, IN
 ADAMS COUNTY

LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B

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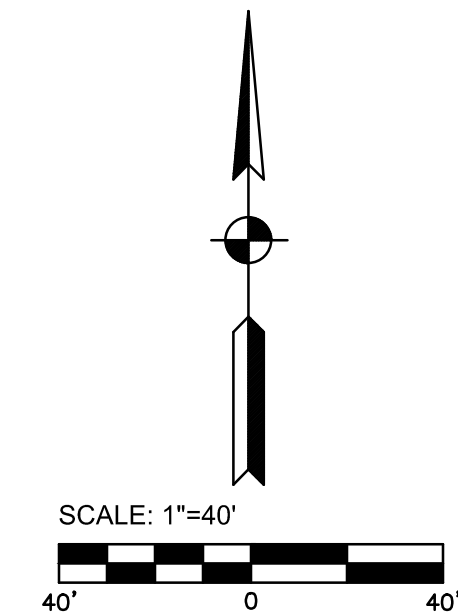
PLAN & PROFILE -
 LINE 'B' - STATION
 79+50-84+75

Drawing No:
PP13
 Sheet: 18 OF 37

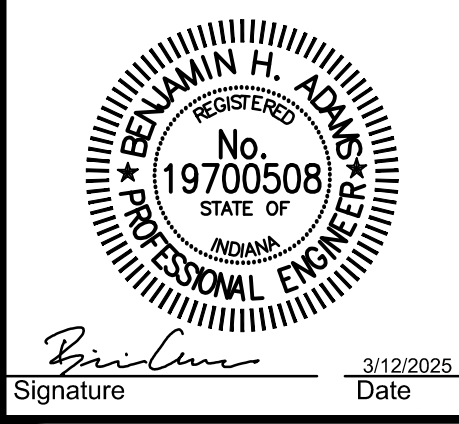
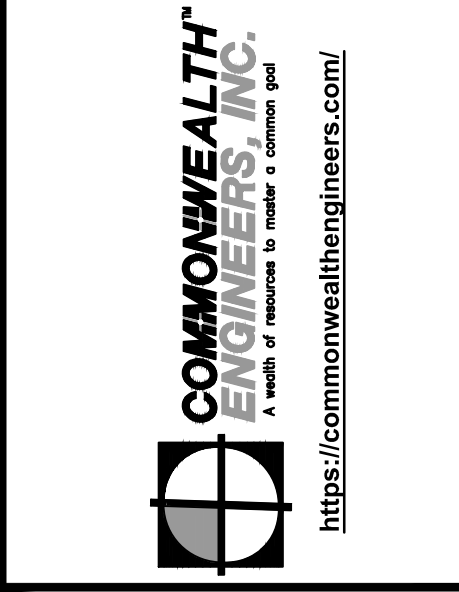
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OVERALL SITE PLAN
 SCALE: 1"=40'-0"



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 LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B

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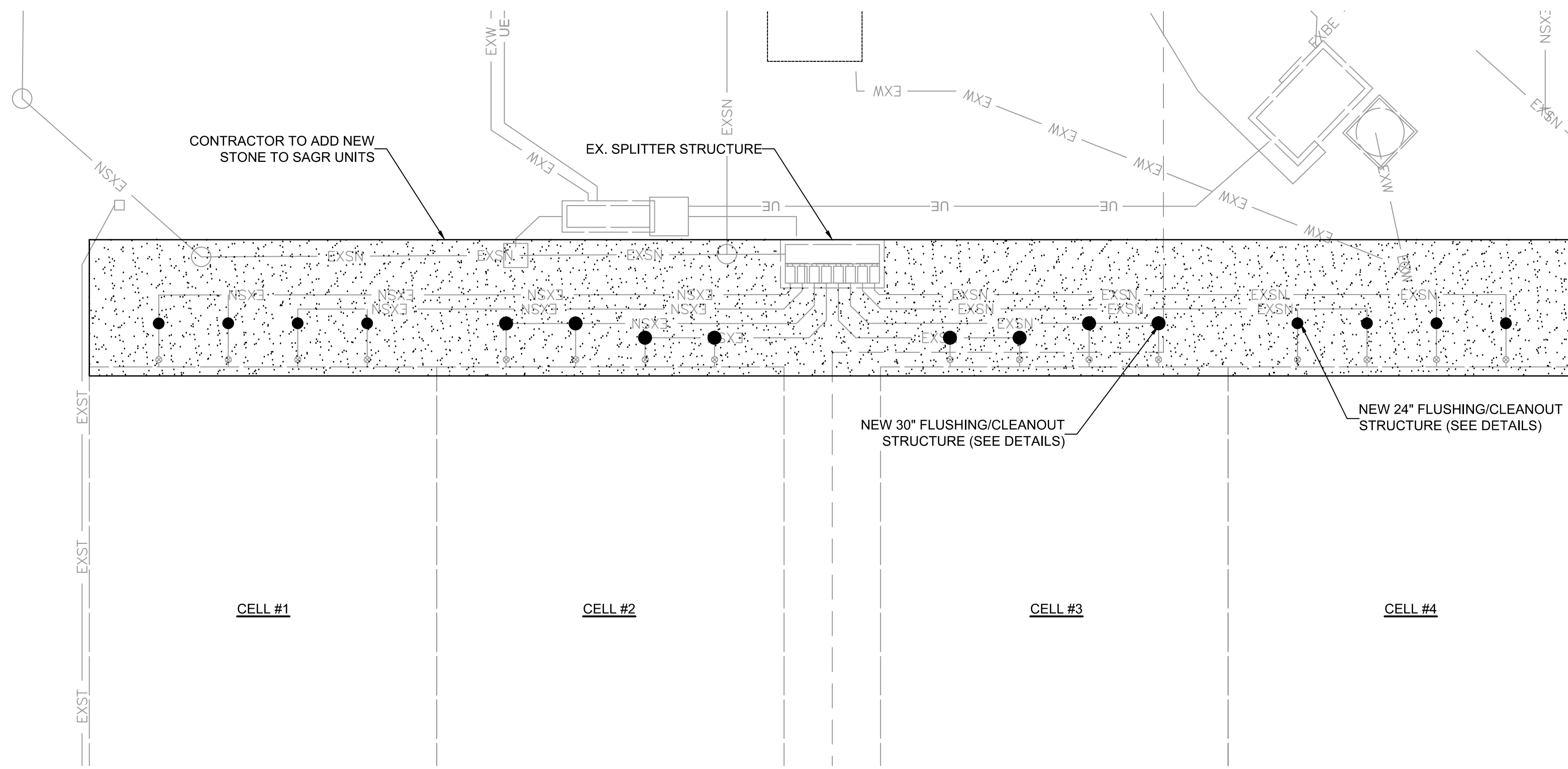
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Designed By: BW
 Drawn By: CH/BP
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 Project No: S24028
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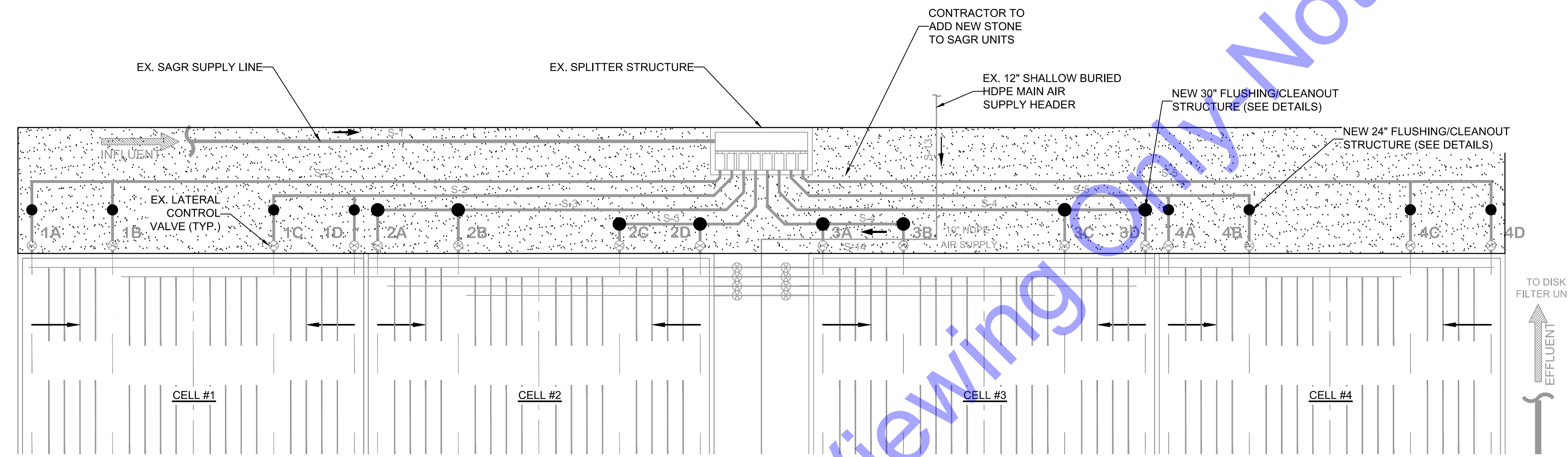
OVERALL SITE PLAN

Drawing No: **SPO**
 Sheet: 19 OF 37

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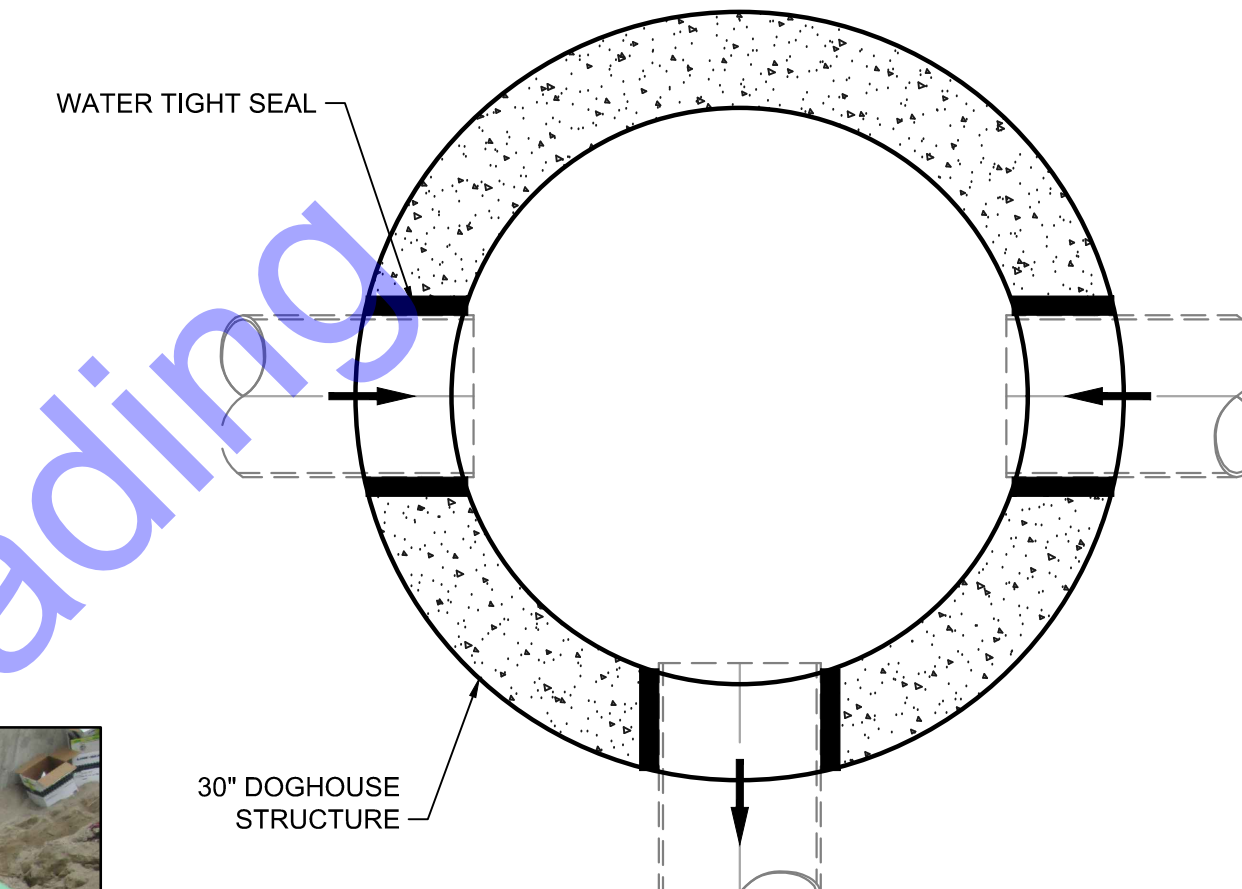
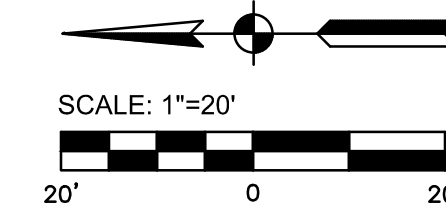
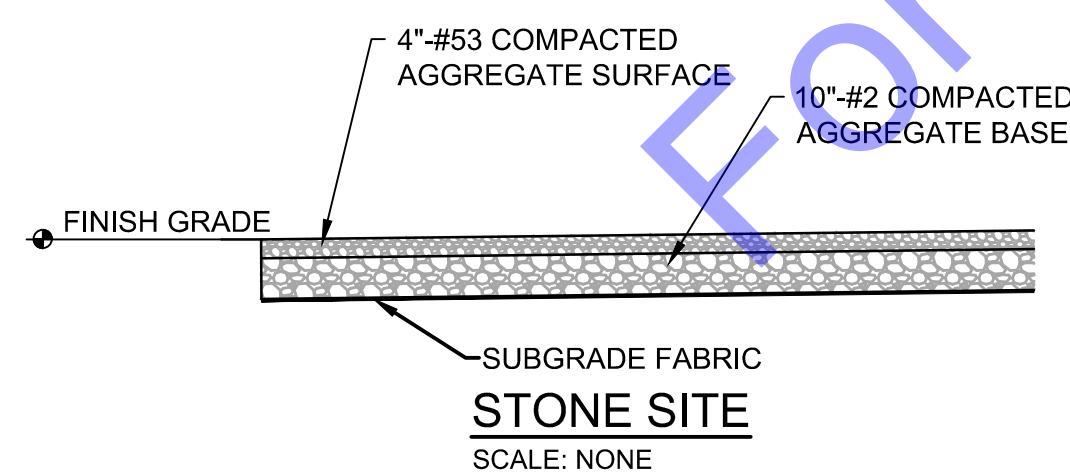
EXISTING SITE PLAN
SCALE: 1"=20'-0"



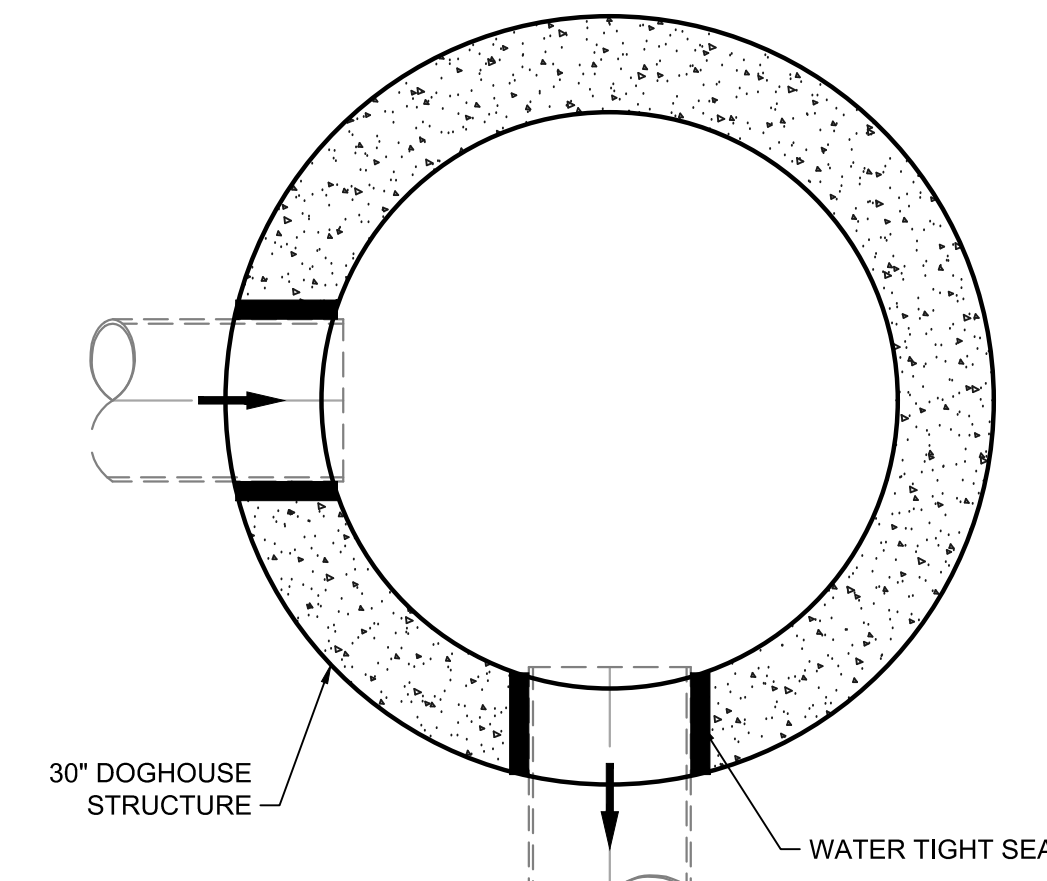
EXISTING PIPING PLAN
SCALE: NONE

EXISTING SAGR PIPING		
S-1	18"	SAGR SYSTEM SUPPLY LINE FROM MH#1400 TO NEW SPLITTER STR.
S-2	8"	DISCHARGE FROM SAGR SPLITTER STR. TO SAGR CELL#1 (2 LINES TOTAL)
S-3	8"	DISCHARGE FROM SAGR SPLITTER STR. TO SAGR CELL#2 (2 LINES TOTAL)
S-4	8"	DISCHARGE FROM SAGR SPLITTER STR. TO SAGR CELL#3 (2 LINES TOTAL)
S-5	8"	DISCHARGE FROM SAGR SPLITTER STR. TO SAGR CELL#4 (2 LINES TOTAL)
S-13	12"	LOW PRESSURE AIR HEADER FROM BLOWER BUILDING TO SAGR UNITS
S-14	10"	LOW PRESSURE AIR DISTRIBUTION HEADER FOR SAGR CELLS #1-#4

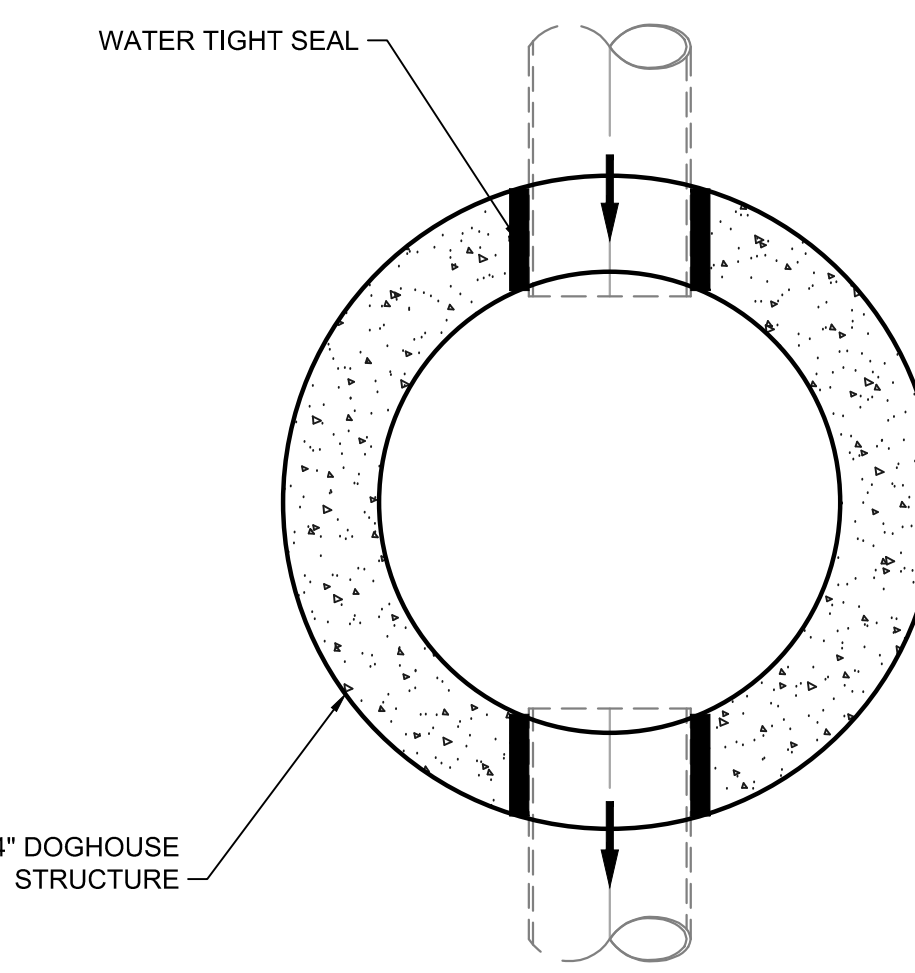
EXISTING VALVE OPERATION SCHEDULE		
OPERATION	VALVES OPEN	VALVES CLOSED
NORMAL OPERATION	1A, D & E, 2A, D & E, 3A, D & E, 4A, D & E	1B, & C, 2B, & C, 3B, & C, 4B, & C
SECONDARY FEED	1B, C & E, 2B, C & E, 3B, C & E, 4B, C & E	1A, & D, 2A, & D, 3A, & D, 4A, & D
BYPASS #1	2A, B, C, D & E 3A, B, C, D & E 4A, B, C, D & E	1A, B, C, D & E
BYPASS #2	1A, B, C, D & E 3A, B, C, D & E 4A, B, C, D & E	2A, B, C, D & E
BYPASS #3	1A, B, C, D & E 2A, B, C, D & E 4A, B, C, D & E	3A, B, C, D & E
BYPASS #4	1A, B, C, D & E 2A, B, C, D & E 3A, B, C, D & E	4A, B, C, D & E



NEW 30" CLEANOUT STRUCTURE FOR LOCATION 2B, 2D, 3A, 3C
SCALE: NONE

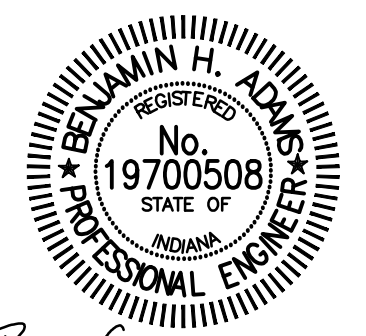
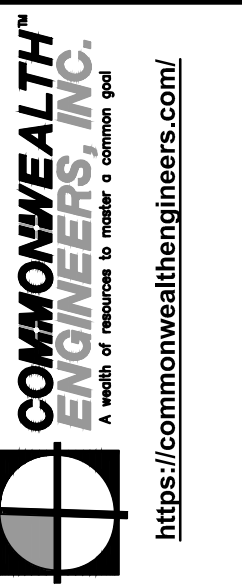


NEW 30" CLEANOUT STRUCTURE FOR LOCATION 2A, 2C, 3B, 3D (ORIENTATION OF 90° VARIES)
SCALE: NONE



NEW 24" CLEANOUT STRUCTURE FOR LOCATION 1A, 1B, 1C, 1D, 4A, 4B, 4C, 4D
SCALE: NONE

EAST JORDAN BOLT
DOWN FRAME W/
COMPOSITE LID
(SEE SPECIFICATIONS)



Signature: *Benjamin H. Adams* Date: 3/12/2025

**CITY OF BERNE, IN
ADAMS COUNTY**
**LTCP PHASE II COLLECTION
SYSTEM IMPROVEMENTS
CONTRACT B**

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No.	Submission / Revision	Date	By

Designed By: BW
 Drawn By: CH/BP
 Checked By: BA
 Issue Date: 03/2025
 Project No: S24028
 Scale: AS SHOWN

WWTP SITE PLAN

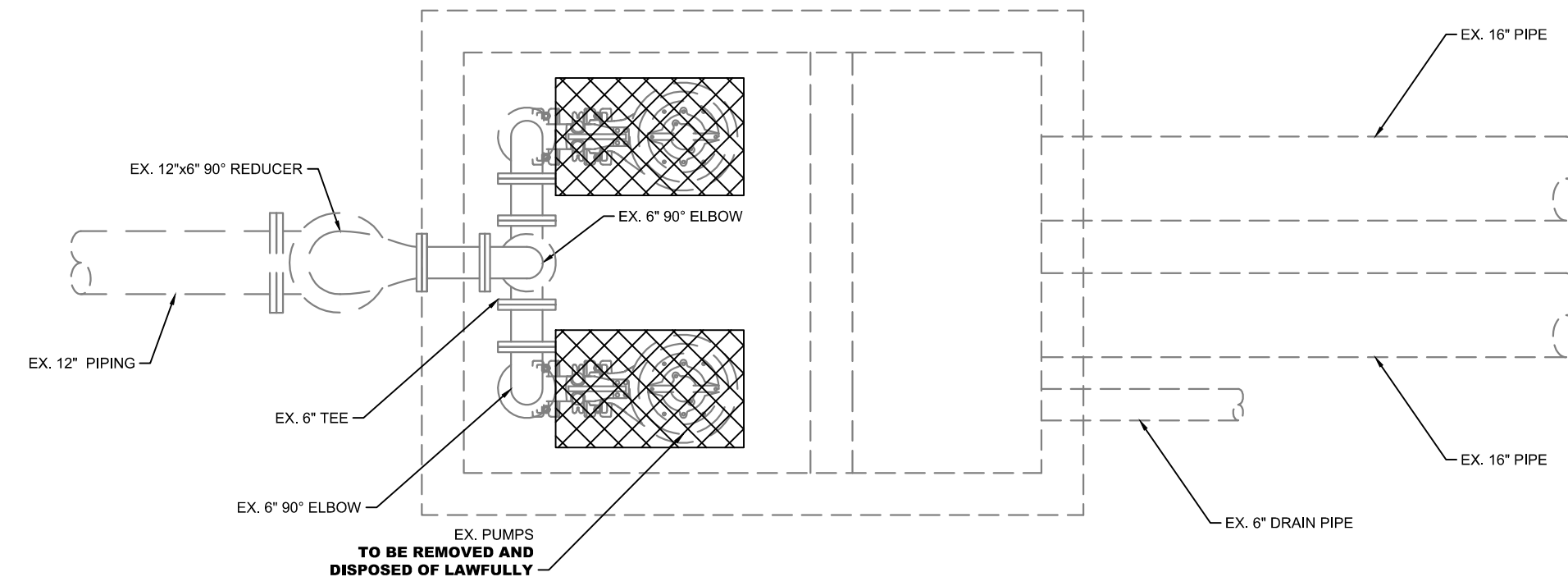
Drawing No:
SP1

Sheet: 20 OF 37

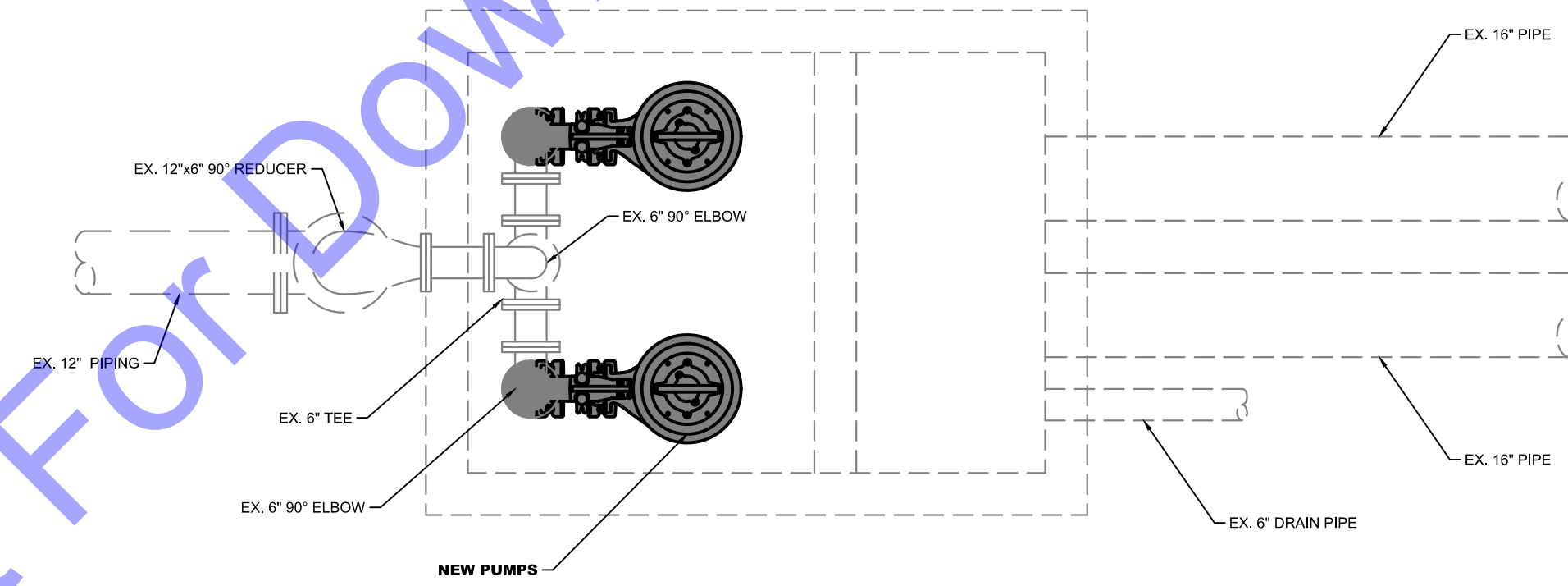
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 Saved: 3/13/2025 1:19:55 PM Plotted: 3/13/2025 1:25:21 PM Current User: Craig Higbie LastSavedBy: chigbie

LOCATION	GPM	TDH(ft.)	RPM	HP	MODEL
EXISTING POND OUTLET STRUCTURE	675	17.3'	1200	7.5	BARNES 6XESHDO

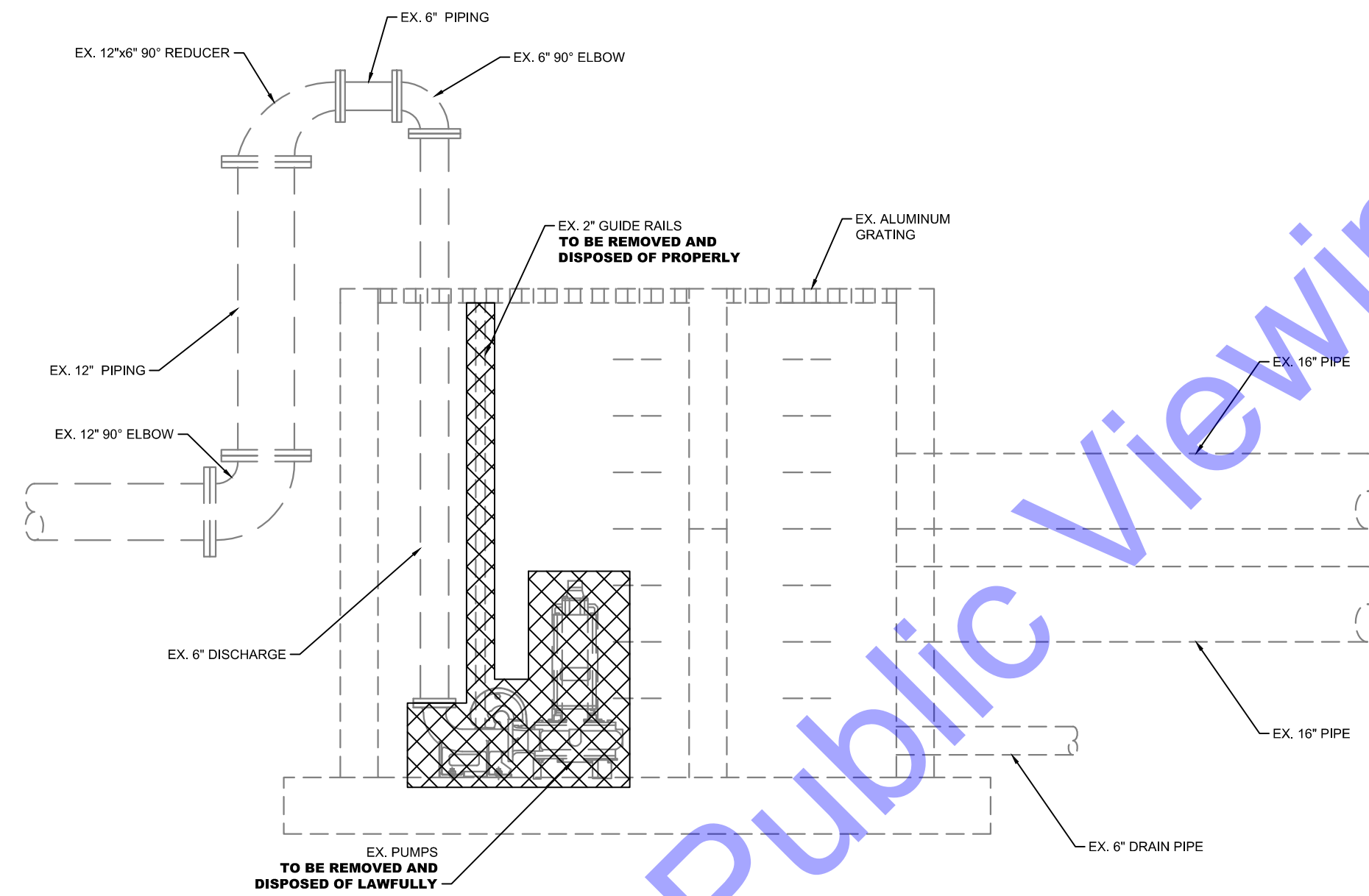
- NOTES:
- EFFLUENT PUMPS TO BE SUBMERSIBLE CENTRIFUGAL NON-CLOG PUMPS CAPABLE OF 675 GPM @ 17.3' TDH @ 1200 RPM TO BE FURNISHED WITH 7.5 HP, 240 V, 3Ø, 60 Hz, SUBMERSIBLE MOTORS CAPABLE OF CONTINUOUS OPERATION IF UNSUBMERGED.
 - ALL ELECTRICAL EQUIPMENT AND WIRING TO CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE. SEE THE CONTROL PANEL MANUFACTURER'S DRAWING AND DETAILS FOR POWER AND CONTROL WIRING CONNECTIONS TO THE PUMPS.
 - ALL NUTS AND BOLTS INSIDE LIFT STATION AND VALVE VAULT SHALL BE STAINLESS STEEL.
 - STAINLESS STEEL PIPE GUIDES, LIFTING CABLES & FLOAT CHAIN TO BE 316 S.S.



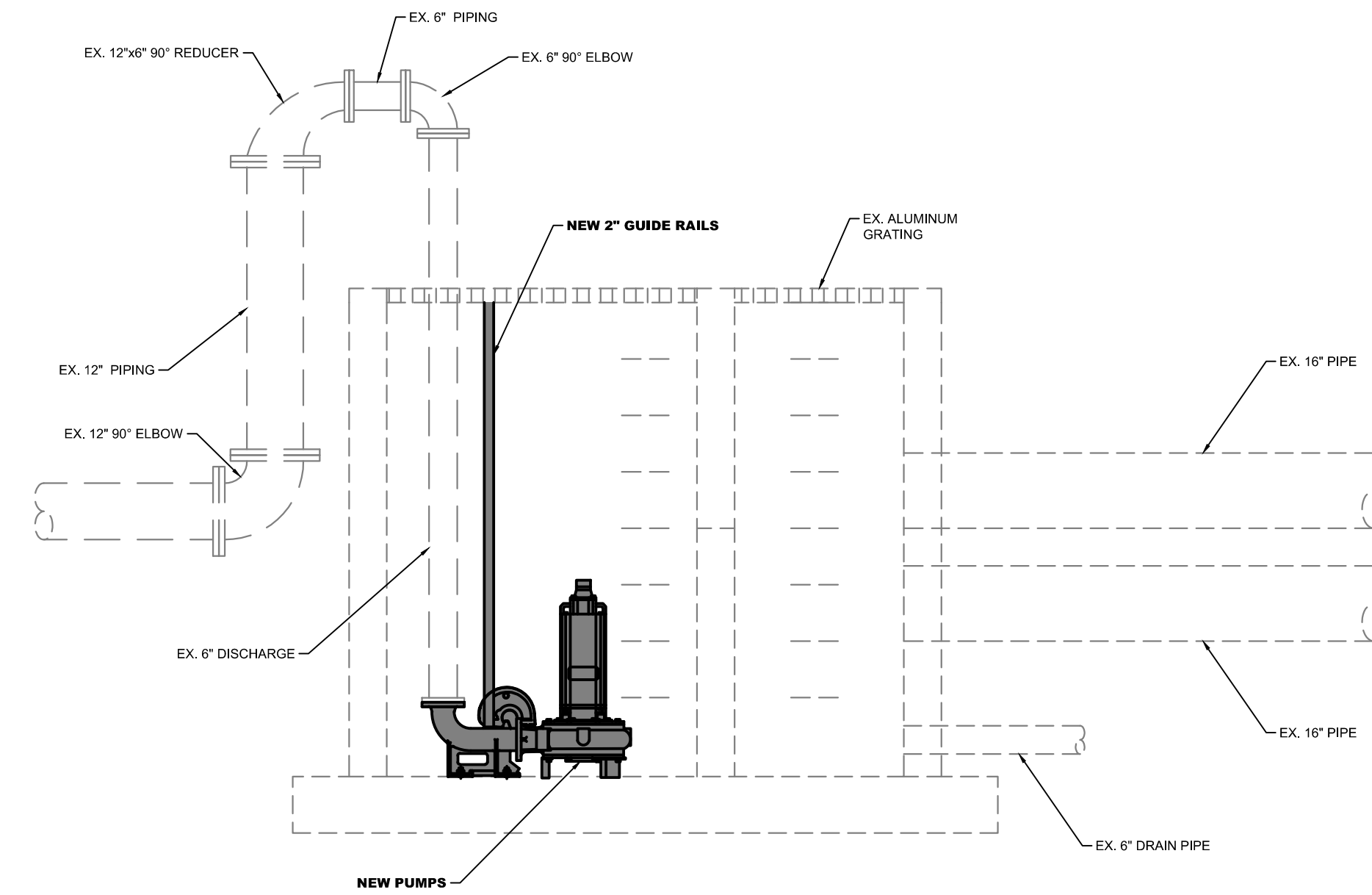
EXISTING POND OUTLET STRUCTURE DEMOLITION - PLAN
 SCALE: NONE



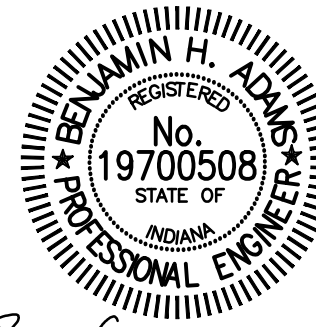
EXISTING POND OUTLET STRUCTURE MODIFICATION - PLAN
 SCALE: NONE



EXISTING POND OUTLET STRUCTURE DEMOLITION - SECTION
 SCALE: NONE



EXISTING POND OUTLET STRUCTURE MODIFICATION - SECTION
 SCALE: NONE



Signature: *Benjamin H. Adams* Date: 3/12/2025

CITY OF BERNE, IN
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 LTCP PHASE II COLLECTION
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No.	Submission / Revision	By	Date

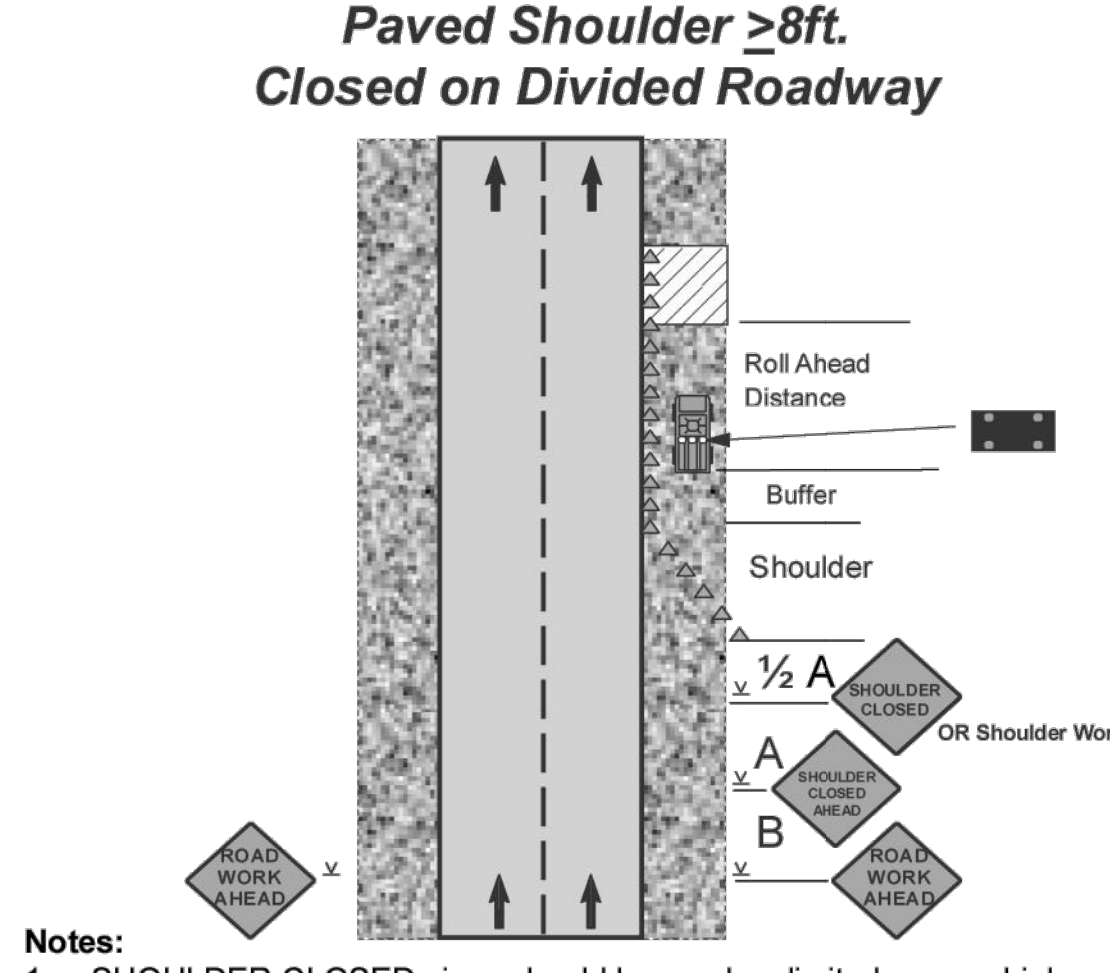
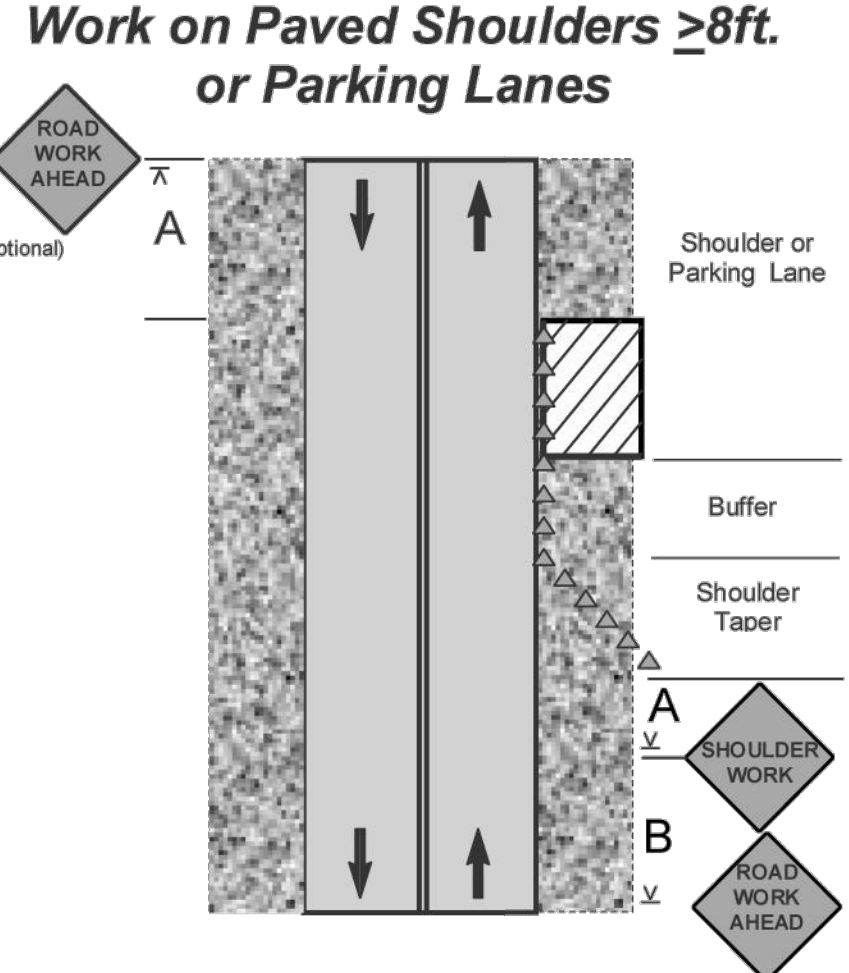
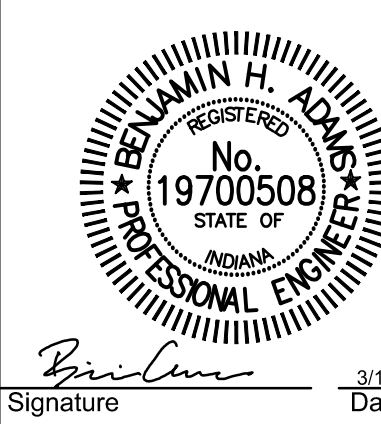
Designed By: BW
 Drawn By: CH/BP
 Checked By: BA
 Issue Date: 03/2025
 Project No: S24028
 Scale: AS SHOWN

OUTLET STRUCTURE MODIFICATIONS

Drawing No:
SP2
 Sheet: 21 OF 37

File: Z:\SHARED\CLIENTS\A-L\BERNE\S24028.LTCP PHASE II COLLECTION SYSTEM IMPROVEMENTS\06 CADVA CURRENT FILES\DRAWINGS\CONTRACT B\07 - S24028 - MAINTENANCE OF TRAFFIC PLANNING
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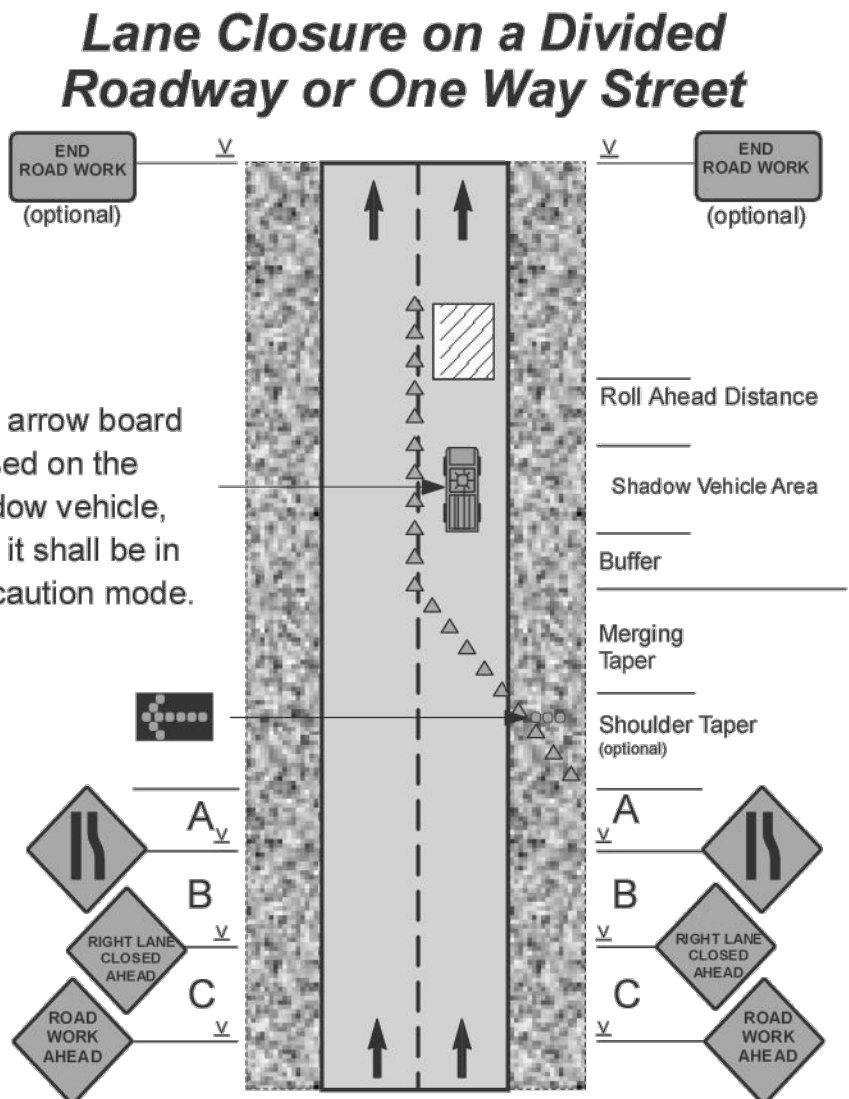
Indiana Department Of Transportation Permit Section Traffic Control Quick Reference Guide



- Notes:**
- SHOULDER CLOSED signs should be used on limited-access highways where there is no opportunity for disabled vehicles to pull off the traveled way.
 - UTILITY WORK AHEAD or WORKERS signs may be used instead of the ROAD WORK AHEAD sign.
 - Use of an arrow display is optional. If used, it shall be operated in the caution mode.
 - <40mph speed limit, shadow vehicle optional.

Note: WORKERS or UTILITY WORK AHEAD signs may be used instead of the SHOULDER WORK or ROAD WORK AHEAD signs.

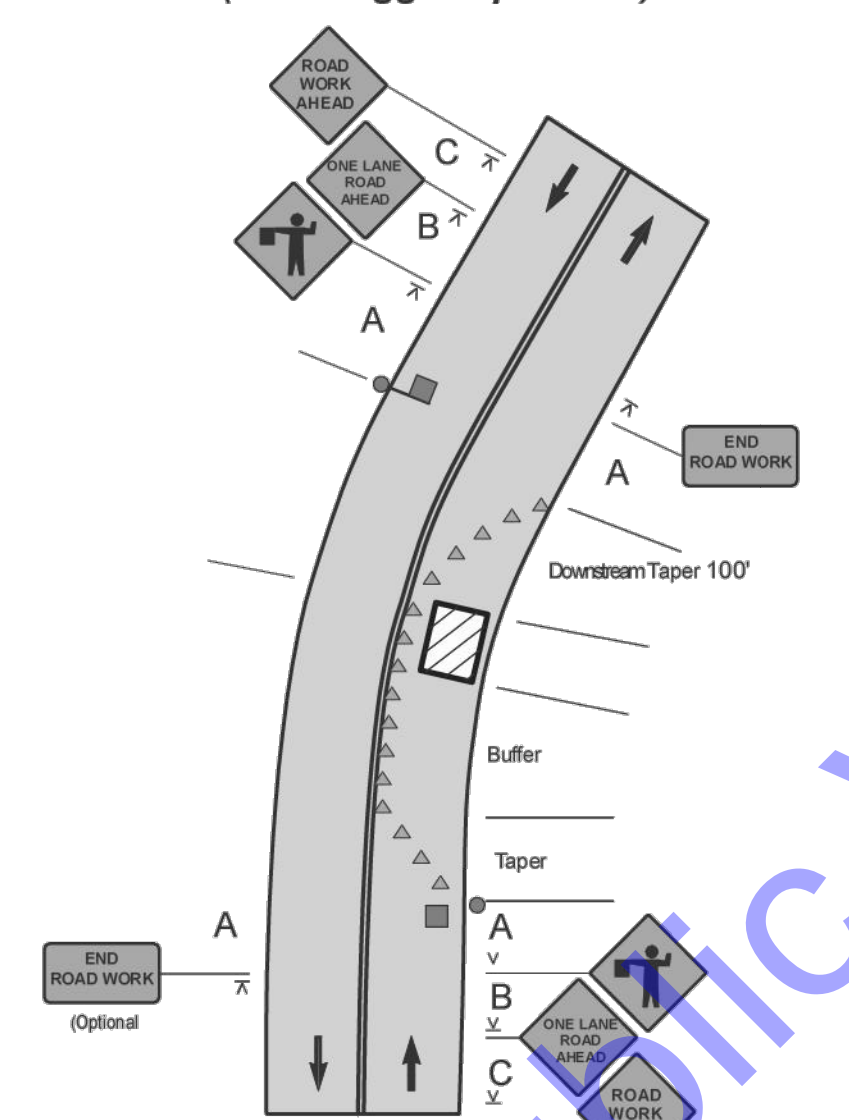
Shadow Vehicles **CANNOT** be used as work vehicles



If an arrow board is used on the shadow vehicle, then it shall be in the caution mode.

- Notes:**
- When a side road intersects the roadway within the work zone, additional devices shall be erected to channelize traffic to/from the side road, and a ROAD WORK AHEAD sign shall be placed on each side road approach.
 - On non-freeway multi-lane roads in urban areas, the sign spacing may be reduced.
 - <40mph speed limit, shadow vehicle optional.

Lane Closure on a Two-Lane Road (Two Flagger Operation)



- Notes:**
- The flagger or flaggers shall use approved flagging procedures according to the MUTCD. If there is a side road intersection within the work area, additional traffic control, such as flaggers and appropriate signage, may be needed on the side road approaches.

Legend

	Channelizing Device		Portable Sign Support		Work Area
	Arrow Board Display		Arrow Board Display Symbol		Warning Sign
	Flagger Symbol		Shadow Vehicle With Flashing Light		

Flagger Standards and Procedures

If flaggers are used they must be properly trained and equipped at all times.

Only 24" Diameter Stop/Slow paddles are allowed while flagging on State Right-Of-Way

Acceptable Channelizing Devices

- Stripes on barricade rails slope downward at an angle of 45 degrees toward the direction traffic is to pass.
- Barricade rail stripe widths shall be 6 inches except where rail lengths are less than 36 inches, then 4 inch wide stripes may be used.
- The sides of barricades facing traffic shall have retroreflective rail faces.
- All channelizing devices shall meet AASHTO Manual for Assessing Safety Hardware (MASH) Requirements.

Spacing
 On Tapers: The distance in feet equal to the speed limit in mph, Alongside the work area: The distance in feet equal to 2.0 times the speed limit in mph.

Alternatively, the spacing for straight-a-ways may be as follows:

- 20 to 40 mph: 1 cone for every 40' (every skip)
- 40 to 55 mph: 1 cone for every 80' (every other skip)
- 60 mph & above: 1 cone for every 120' (every 3 skips)

	Sign Spacing (feet)				
	25-30 mph	35-40 mph	45-55 mph	Multilane Divided 50 mph or higher	Expressway/ Freeway
A	100	350	500	1000	1000
B	100	350	500	1600	1600
C	100	350	500	2640	2640

Distances shown are approximate. Sign spacing should be adjusted for curves, hills, intersections, driveways, etc., to improve sign visibility.

OPTIONAL SKIPS BASED TAPERS (For a 12 Ft Wide Closure)												
Speed (MPH)	Shoulder Tapers				Shifting Tapers				Merging Tapers			
	L	#S	CS	#C	L	#S	CS	#C	L	#S	CS	#C
20	80	2	20	5	80	2	20	5	160	4	20	9
25	80	2	20	5	80	2	20	5	160	4	20	9
30	80	2	20	5	120	3	20	7	200	5	20	11
35	120	3	20	7	160	4	20	9	280	7	20	15
40	120	3	40	4	160	4	40	5	320	8	40	9
45	200	5	40	6	280	7	40	8	560	14	40	16
50	200	5	40	6	320	8	40	9	600	15	40	17
55	240	6	40	7	360	9	40	10	680	17	40	18
60	240	6	60	5	360	9	60	7	720	18	60	13
65	280	7	60	6	400	10	60	8	800	20	60	15
70	280	7	60	6	440	11	60	9	840	21	60	15

2-Way & Downstream Tapers are always 100/2.5/20/7

L = Length (ft) #S = Number of Skips CS = Cone Spacing (ft) #C = Number of Cones

Guidelines for Buffer Lengths and Distance of Flagger Station in Advance of the Workspace			
Speed (mph)	MUTCD Based Buffer Length (ft)	Optional Skips Based	
		Buffer Length (ft)	Number of Skips
20	115	120	3
25	155	160	4
30	200	200	5
35	250	280	7
40	305	320	8
45	360	360	9
50	425	440	11
55	495	520	13
60	570	600	15
65	645	680	17
70	730	760	19

Roll-ahead Distances		
Speed	Stationary	Mobile
≤ 45 mph	100 ft	150 ft
50 - 55 mph	150 ft	200 ft
60 - 65 mph	200 ft	275 ft
70 mph	225 ft	325 ft

CITY OF BERNE, IN
 ADAMS COUNTY
 LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B

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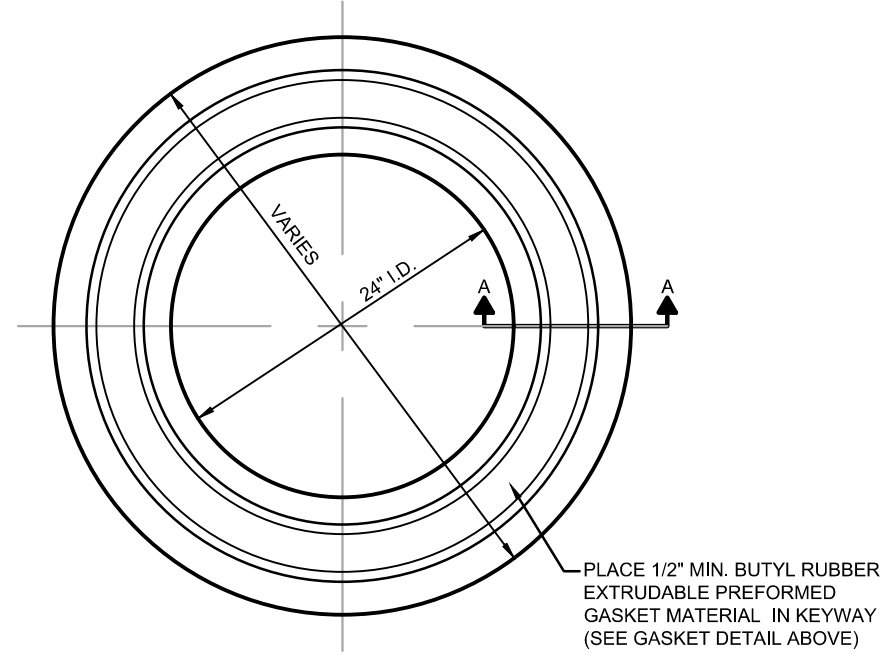
No.	Submit / Revision	Date	By

Designed By: BW
 Drawn By: CH/BP
 Checked By: BA
 Issue Date: 03/2025
 Project No: S24028
 Scale: AS SHOWN

MAINTENANCE OF TRAFFIC - DETAILS

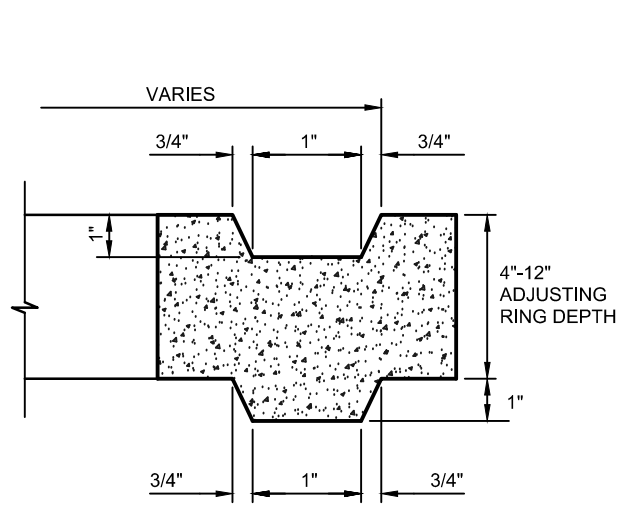
Drawing No:
MOT1
 Sheet: 22 OF 37

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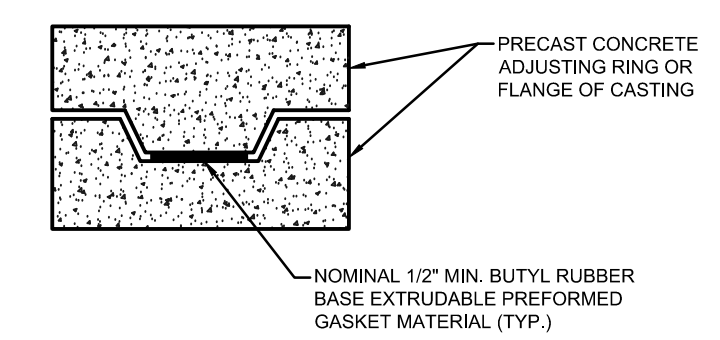


PLAN VIEW

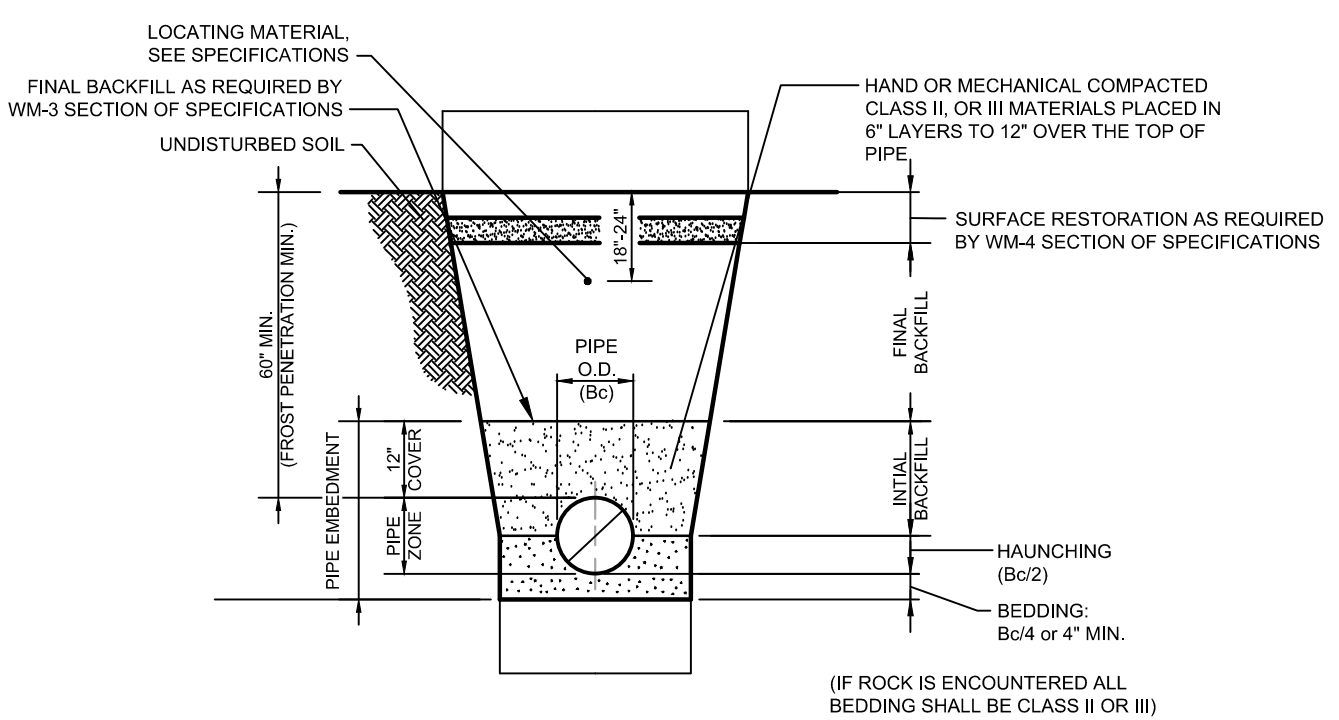
ADJUSTING RING DETAIL
NO SCALE



SECTION A



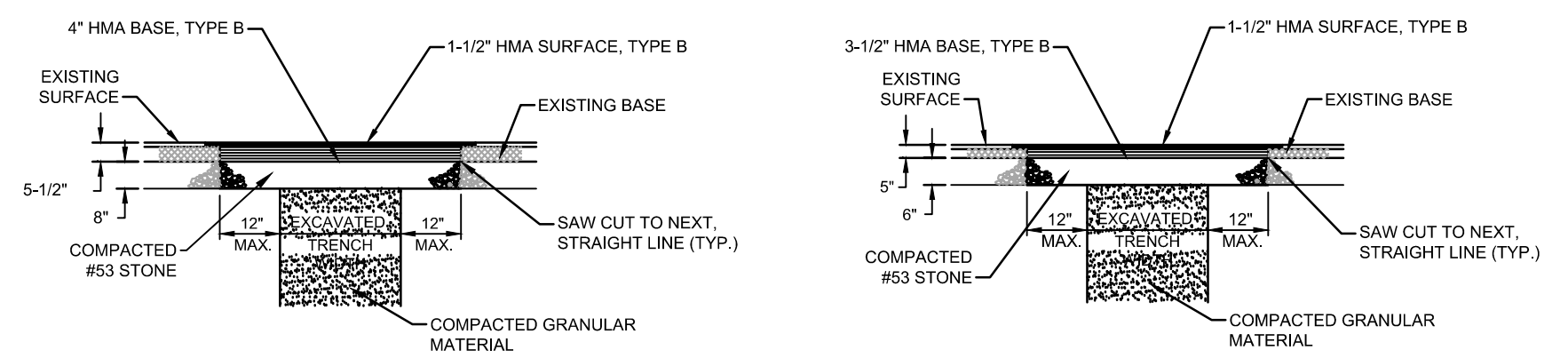
GASKET DETAIL



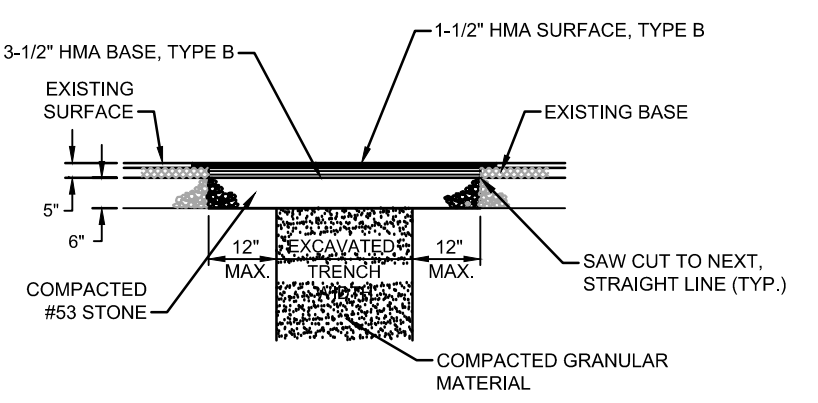
TRENCH DETAIL FOR WATER MAIN
NO SCALE

APPLICATION	BEDDING & HAUNCHING INITIAL BACKFILL	FINAL BACKFILL
GRASSY AREA OR NEW PAVED AREAS	CLASS I, OR II MATERIAL, PREFER TO WORKMANSHIP & MATERIALS SPECIFICATIONS	SELECTED EXCAVATED MATERIAL
PAVEMENT AREA OR ANY AREA SUBJECT TO VEHICULAR TRAFFIC	CLASS I, II, OR III MATERIAL (REFER TO WORKMANSHIP & MATERIALS SPECIFICATIONS)	COMPACTED GRANULAR MATERIAL

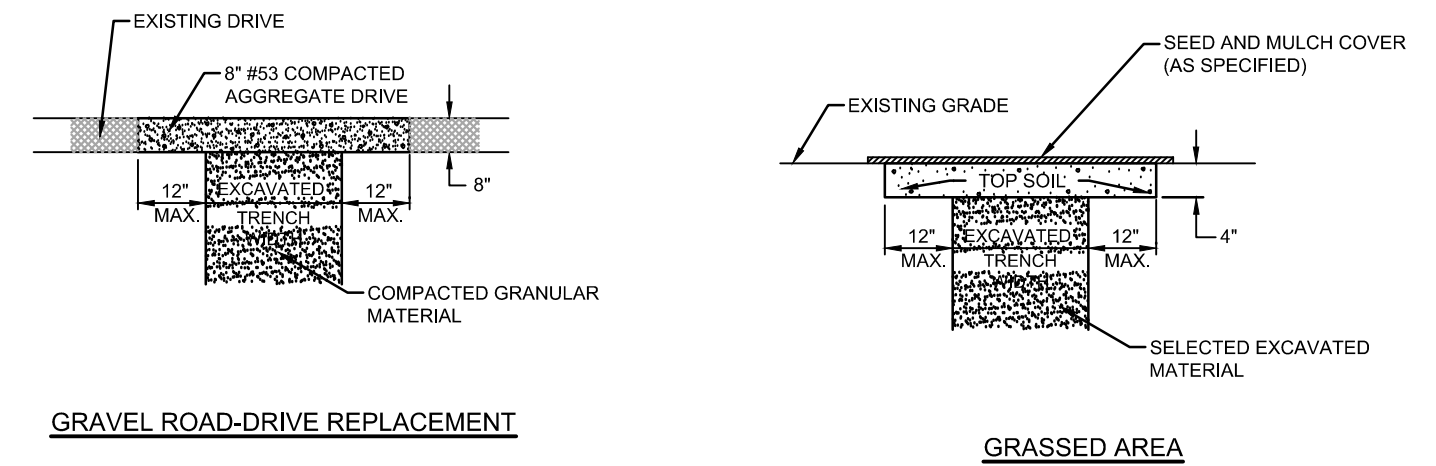
- NOTES:**
- INITIAL BACKFILL STOPS AT A POINT 12" ABOVE THE TOP OF THE PIPES BACKFILLING ABOVE THIS POINT SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND AS REQUIRED BY HEREIN
 - BEDDING, HAUNCHING, AND INITIAL BACKFILL SHALL BE CLASS I, II, OR III MATERIALS ACCORDING TO THE THE WORKMANSHIP AND MATERIALS SPECIFICATIONS
 - WORK FALLING UNDER THE JURISDICTION OF THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) SHALL UTILIZE COMPACTED GRANULAR BACKFILL MATERIAL FOR INITIAL AND FINAL BACKFILL ANYWHERE WITHIN 12 FEET OF THE EDGE OF PAVEMENT
 - WORK NOT FALLING UNDER THE JURISDICTION OF INDOT SHALL UTILIZE COMPACTED GRANULAR BACKFILL MATERIAL FOR INITIAL AND FINAL BACKFILL ANYWHERE WITHIN 5 FEET OF THE EDGE OF PAVEMENT



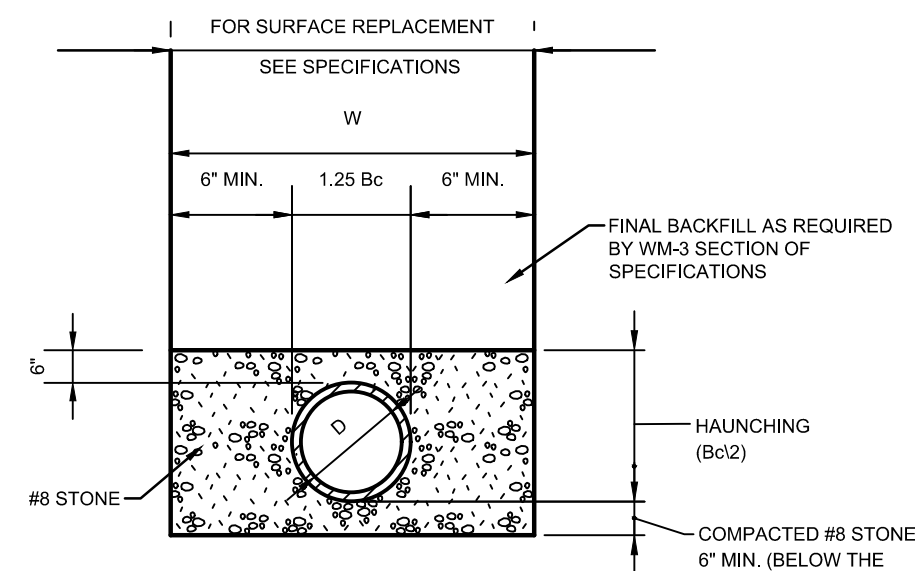
LOCAL ASPHALT PAVEMENTS - ROADS, DRIVES, ALLEYS, AND PARKING AREAS WITHIN PUBLIC RIGHT-OF-WAY



ASPHALT PAVEMENT-DRIVES AND PARKING AREAS OUTSIDE OF PUBLIC RIGHT-OF-WAY

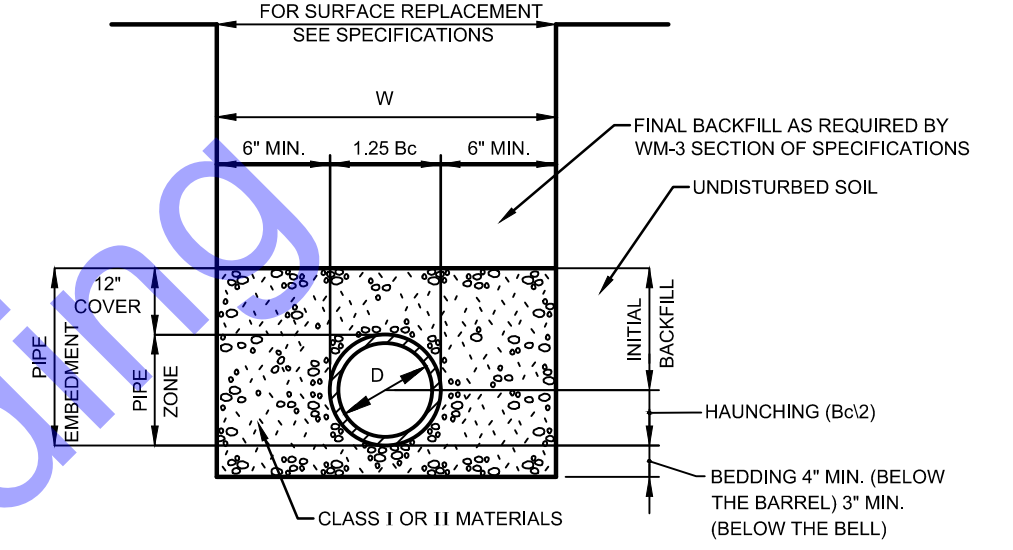


SURFACE REPLACEMENT DETAILS
NO SCALE



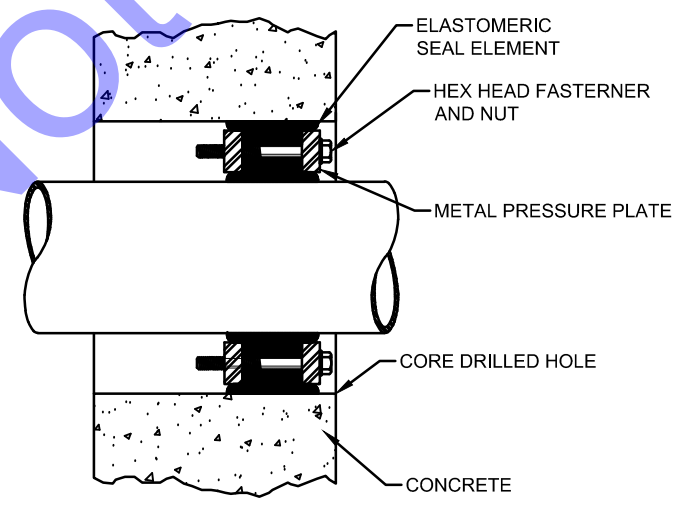
TRENCH DETAIL FOR RIGID CONDUITS
NO SCALE

- NOTES:**
- COMPACTED #8 STONE AND HAUNCHING STOP AT 6 INCHES ABOVE THE TOP OF THE PIPE. BACKFILLING ABOVE THIS POINT SHALL BE IN ACCORDANCE WITH THE DETAILED SPECIFICATIONS AND AS REQUIRED HEREIN.
 - WORK FALLING UNDER THE JURISDICTION OF THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) SHALL UTILIZE COMPACTED GRANULAR BACKFILL MATERIAL FOR INITIAL AND FINAL BACKFILL ANYWHERE WITHIN 12 FEET OF THE EDGE OF PAVEMENT. FOR ALL OTHER NON-INDOT PAVEMENT AREAS (INCLUDING BOTH HARD SURFACED AND COMPACTED AGGREGATE) COMPACTED GRANULAR BACKFILL MATERIAL SHALL BE USED WITHIN 5 FEET OF THE EDGE OF THE PAVEMENT.

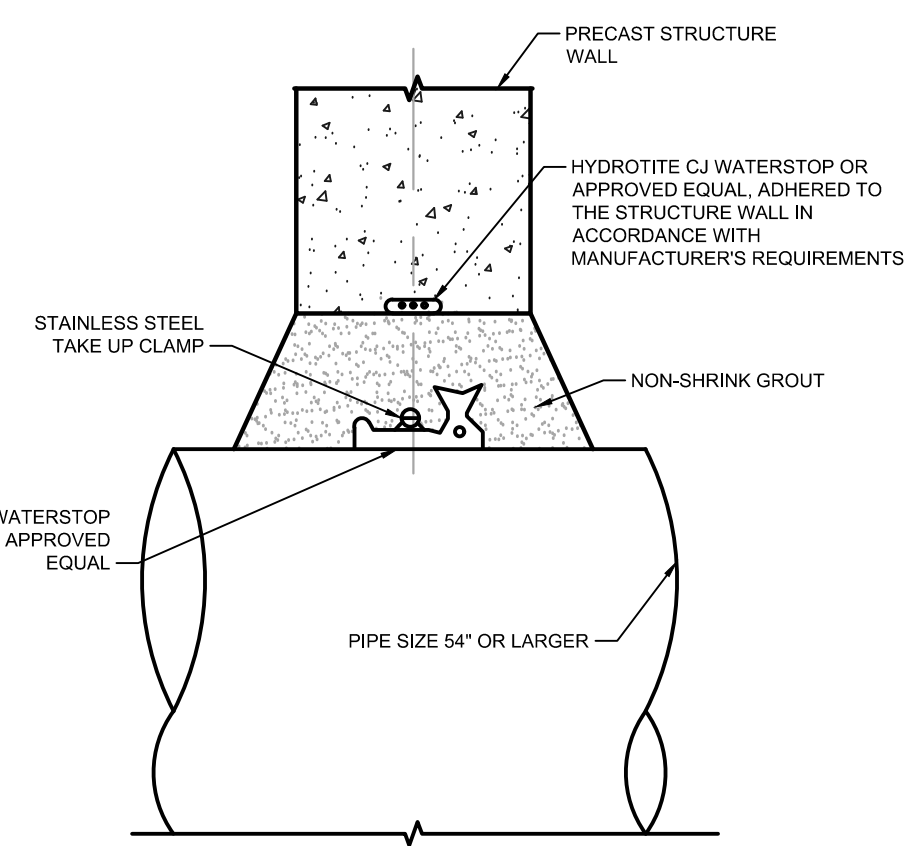


TRENCH DETAIL FOR FLEXIBLE CONDUITS
NO SCALE

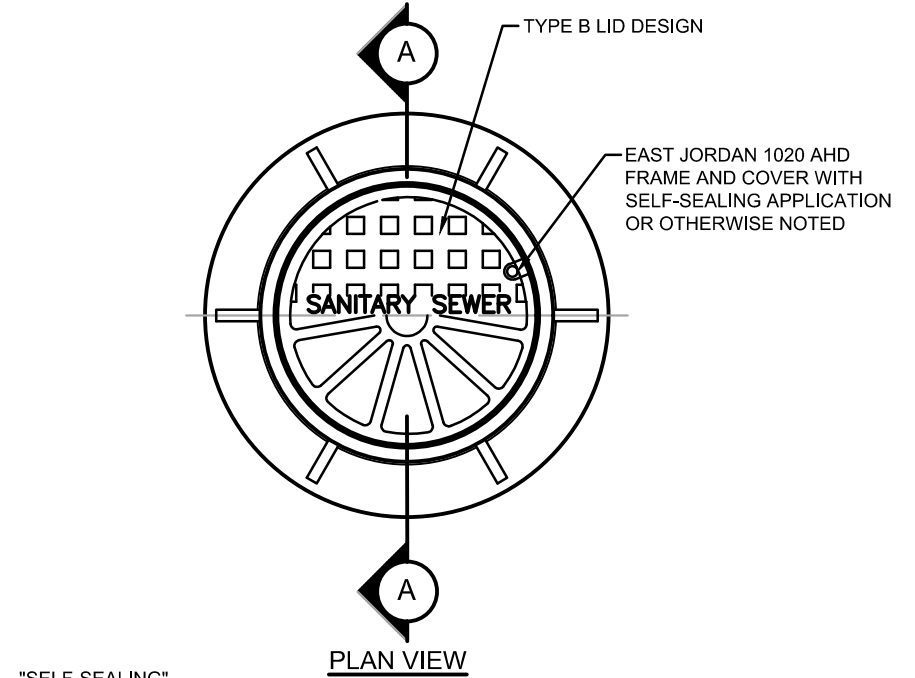
- NOTES:**
- COMPACTED INITIAL BACKFILL SHALL EXTEND A MINIMUM OF 12" ABOVE THE TOP OF THE PIPE. FINAL BACKFILL ABOVE THIS POINT SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND AS REQUIRED HEREIN.
 - WHEN CLASS I MATERIAL IS USED FOR BEDDING, HAUNCHING, AND INITIAL BACKFILL COMPACTION MAY BE ACCOMPLISHED BY HAND OR MECHANICAL TAMPING, OR BY WALKING TO A MINIMUM OF 85% STANDARD PROCTOR DENSITY.
 - WHEN CLASS II MATERIAL IS USED FOR BEDDING, HAUNCHING, AND INITIAL BACKFILL COMPACTION MAY BE ACCOMPLISHED BY HAND OR MECHANICAL TAMPING TO A MINIMUM OF 85% STANDARD PROCTOR DENSITY.
 - WORK FALLING UNDER THE JURISDICTION OF THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) SHALL UTILIZE COMPACTED GRANULAR BACKFILL MATERIAL FOR INITIAL AND FINAL BACKFILL ANYWHERE WITHIN 12 FEET OF THE EDGE OF PAVEMENT. FOR ALL OTHER NON-INDOT PAVEMENT AREAS (INCLUDING BOTH HARD SURFACED AND COMPACTED AGGREGATE) COMPACTED GRANULAR BACKFILL MATERIAL SHALL BE USED WITHIN 5 FEET OF THE EDGE OF THE PAVEMENT.



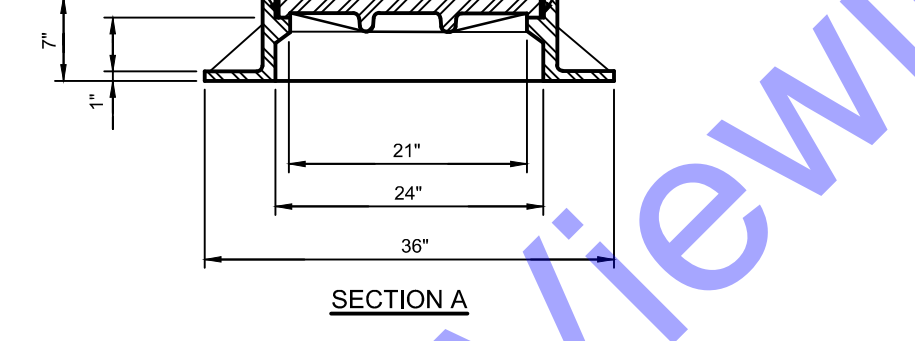
CORE DRILL/WATERTIGHT DETAIL
NO SCALE



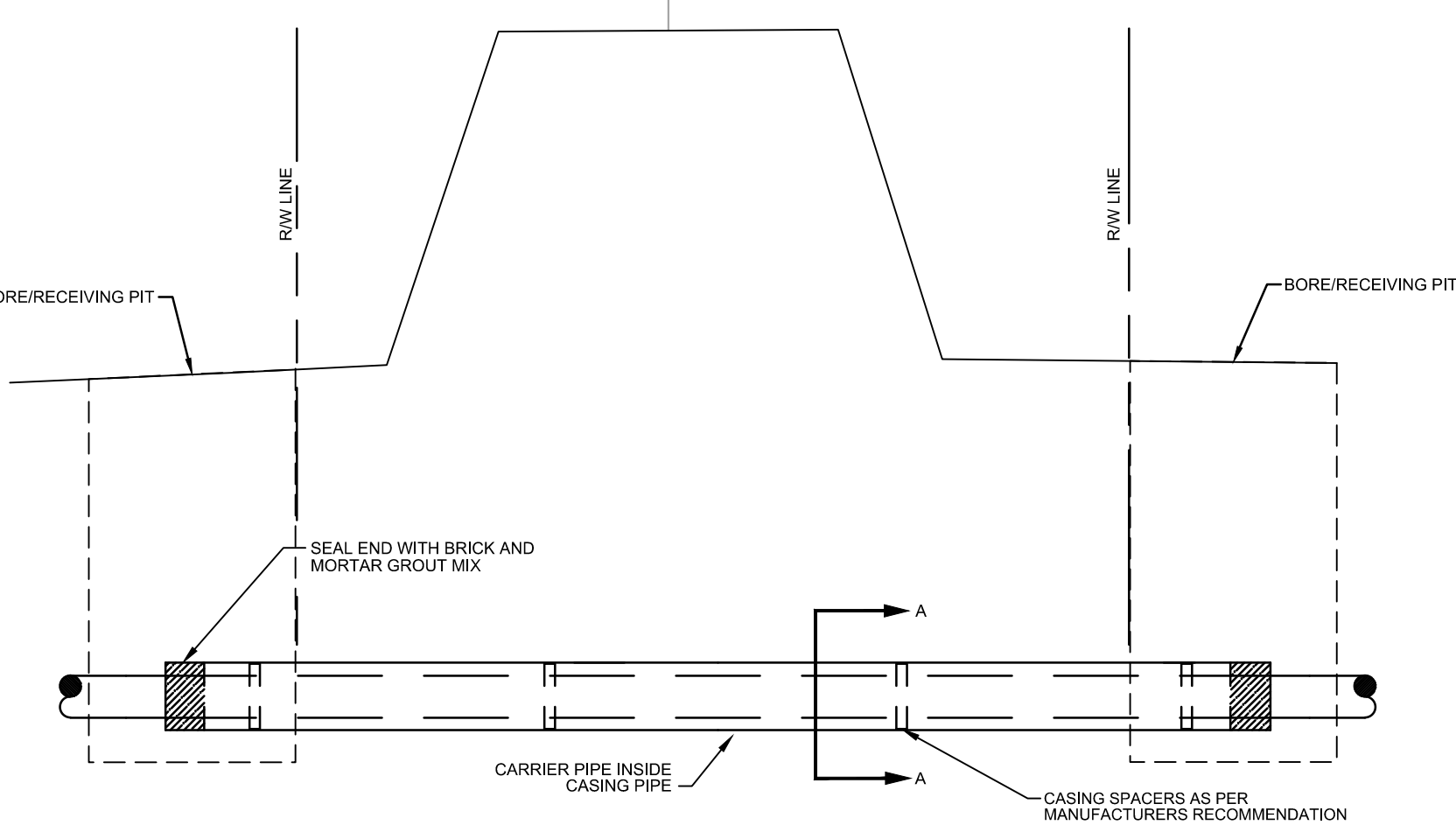
GROUTING RING DETAIL
NO SCALE



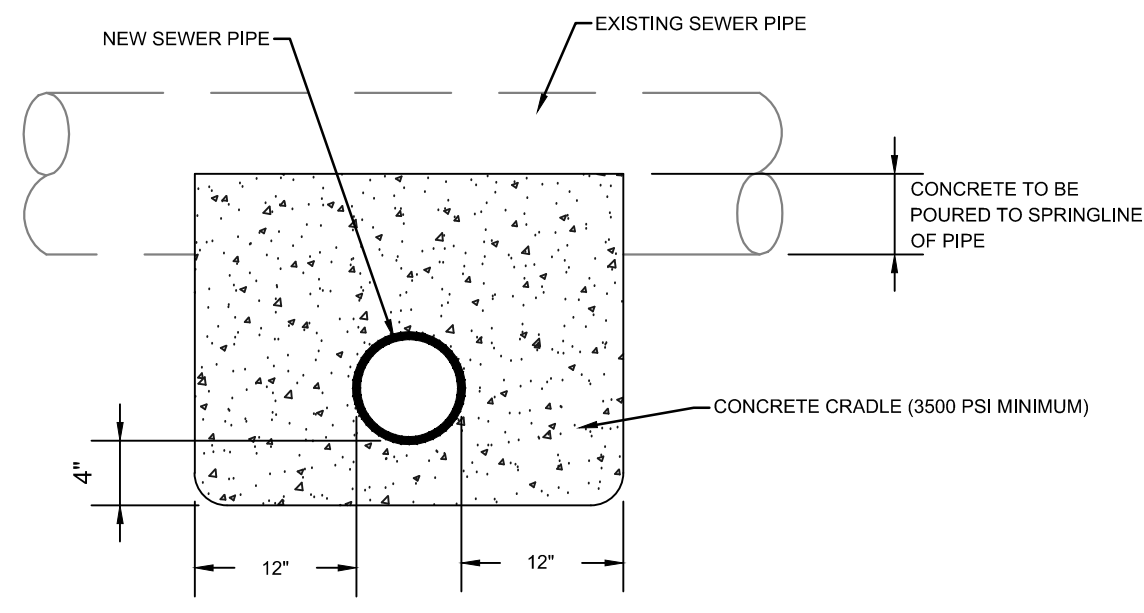
SANITARY SEWER MANHOLE
FRAME AND COVER - STANDARD MANHOLE
NO SCALE



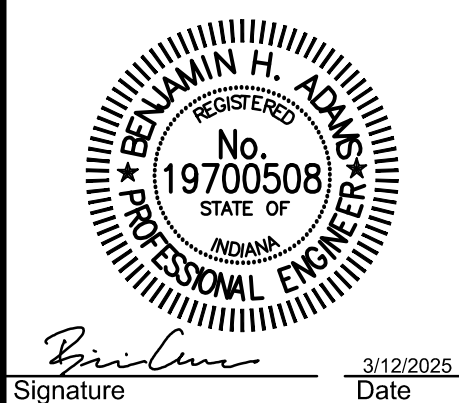
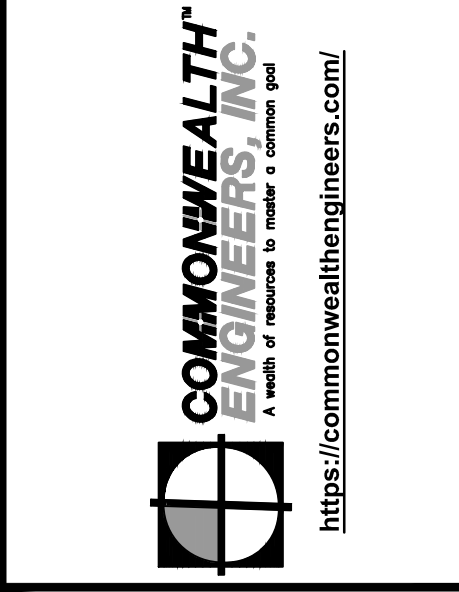
TYPICAL REINFORCED CONCRETE PIPE SUPPORT
NO SCALE



JACK AND BORE DETAIL
NO SCALE



CONCRETE CRADLE DETAIL
NO SCALE



Signature: *Benjamin H. Adams* Date: 3/12/2025

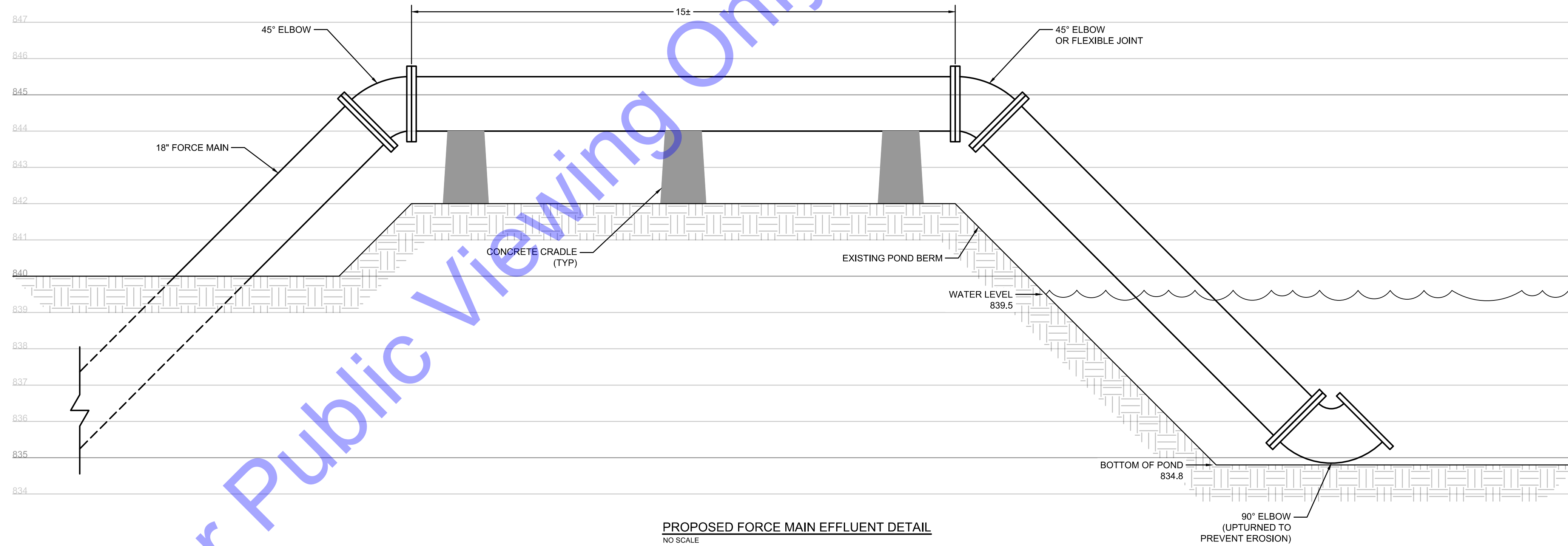
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No.	Submitted / Revision	Date	By

Designed By: BW
Drawn By: CH/BP
Checked By: BA
Issue Date: 03/2025
Project No: S24028
Scale: AS SHOWN

MISCELLANEOUS
DETAILS
Drawing No:
MD1
Sheet: 23 OF 37

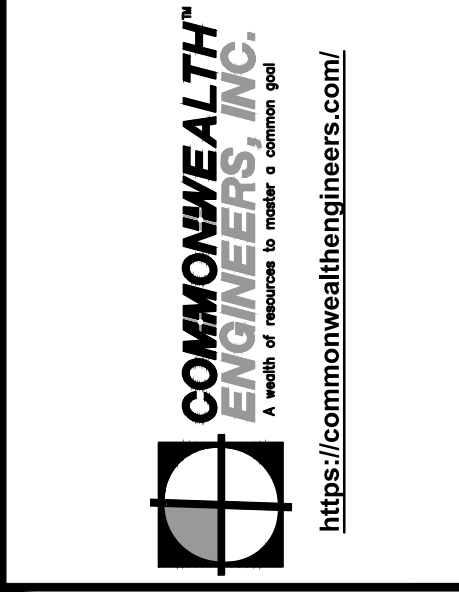


PROPOSED FORCE MAIN EFFLUENT DETAIL
 NO SCALE



EXISTING FORCE MAIN EFFLUENT DETAIL - REFERENCE PICTURE

For Public Viewing Only - Not For Downloading



REGISTERED PROFESSIONAL ENGINEER
 No. 19700508
 STATE OF INDIANA
 Signature: *Benjamin H. Adams* Date: 3/12/2025

**CITY OF BERNE, IN
 ADAMS COUNTY**
**LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B**

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Designed By: BW
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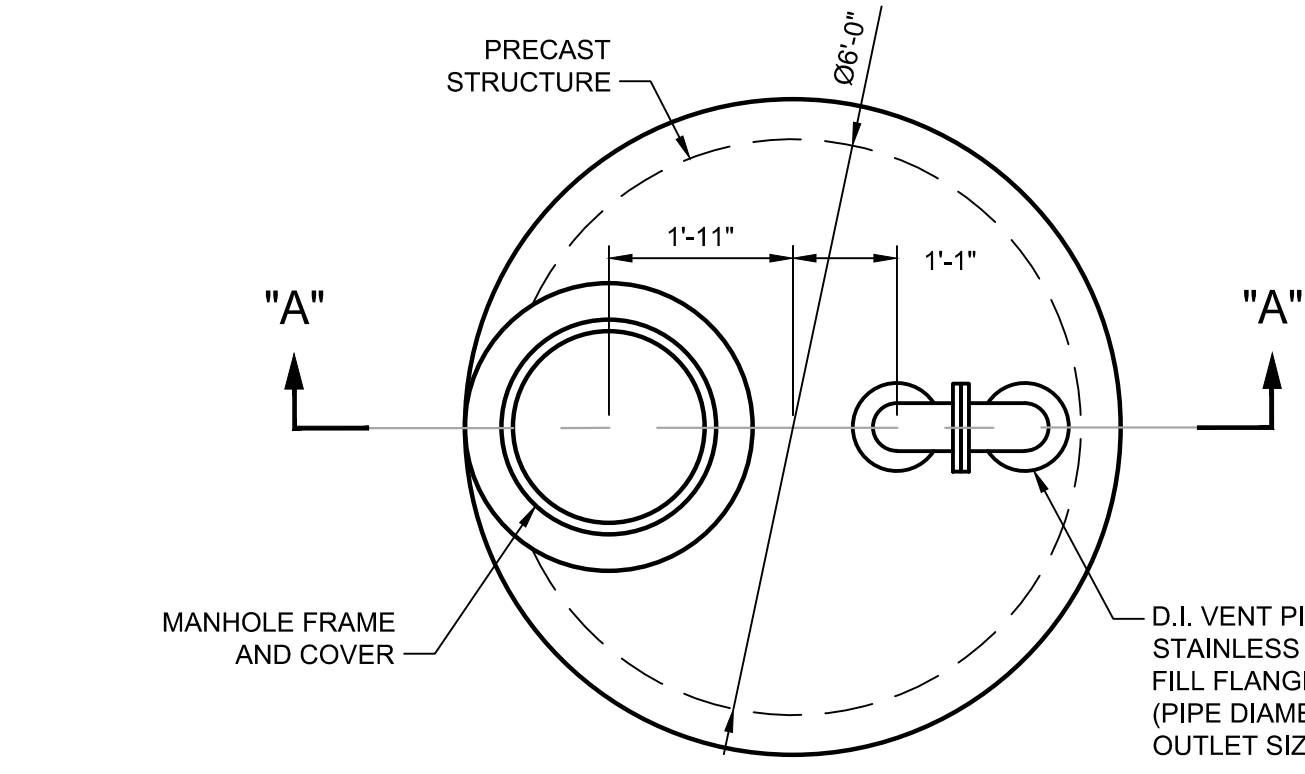
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Drawing No:
MD2
 Sheet: 24 OF 37

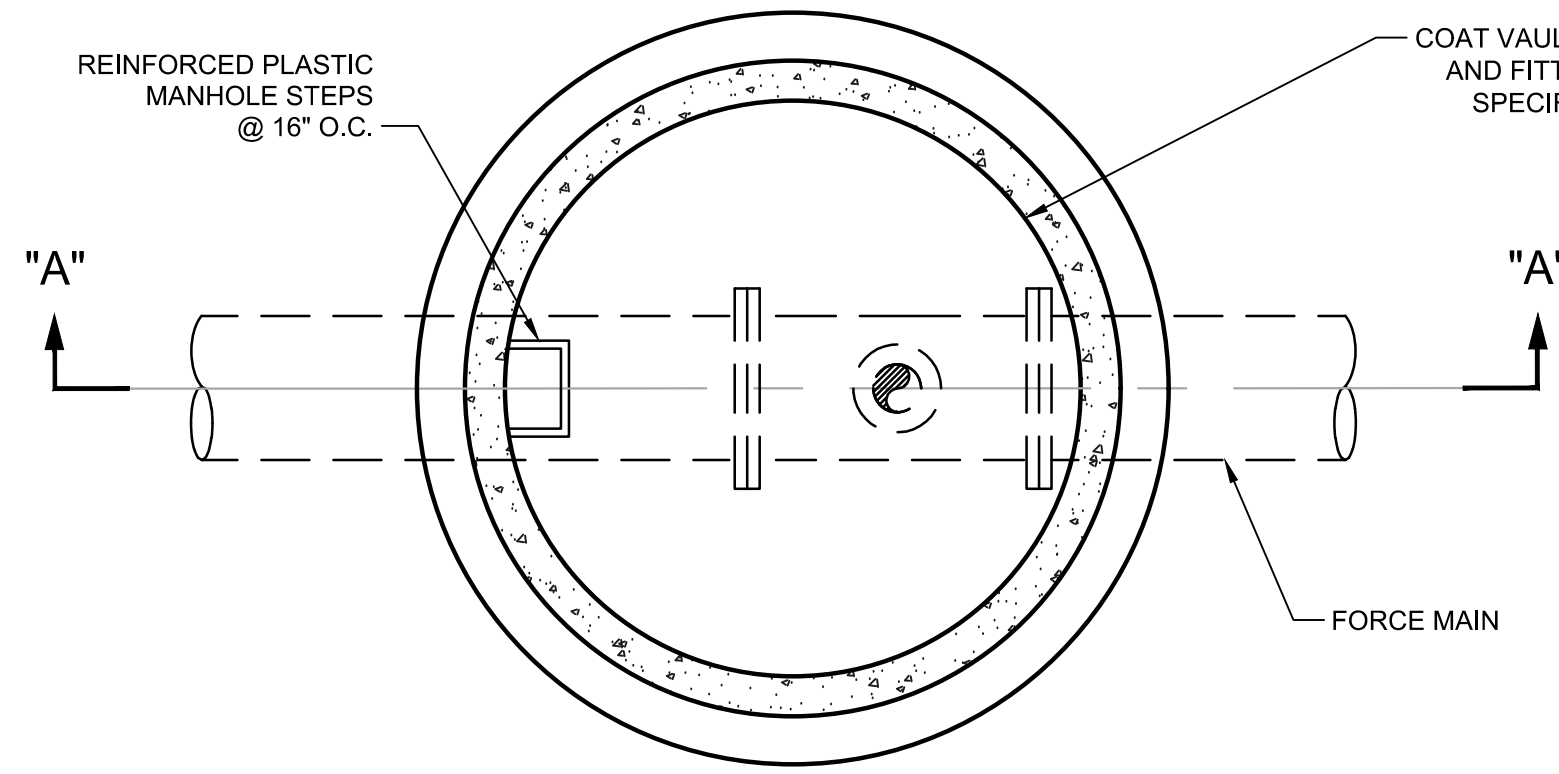
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GENERAL NOTES:

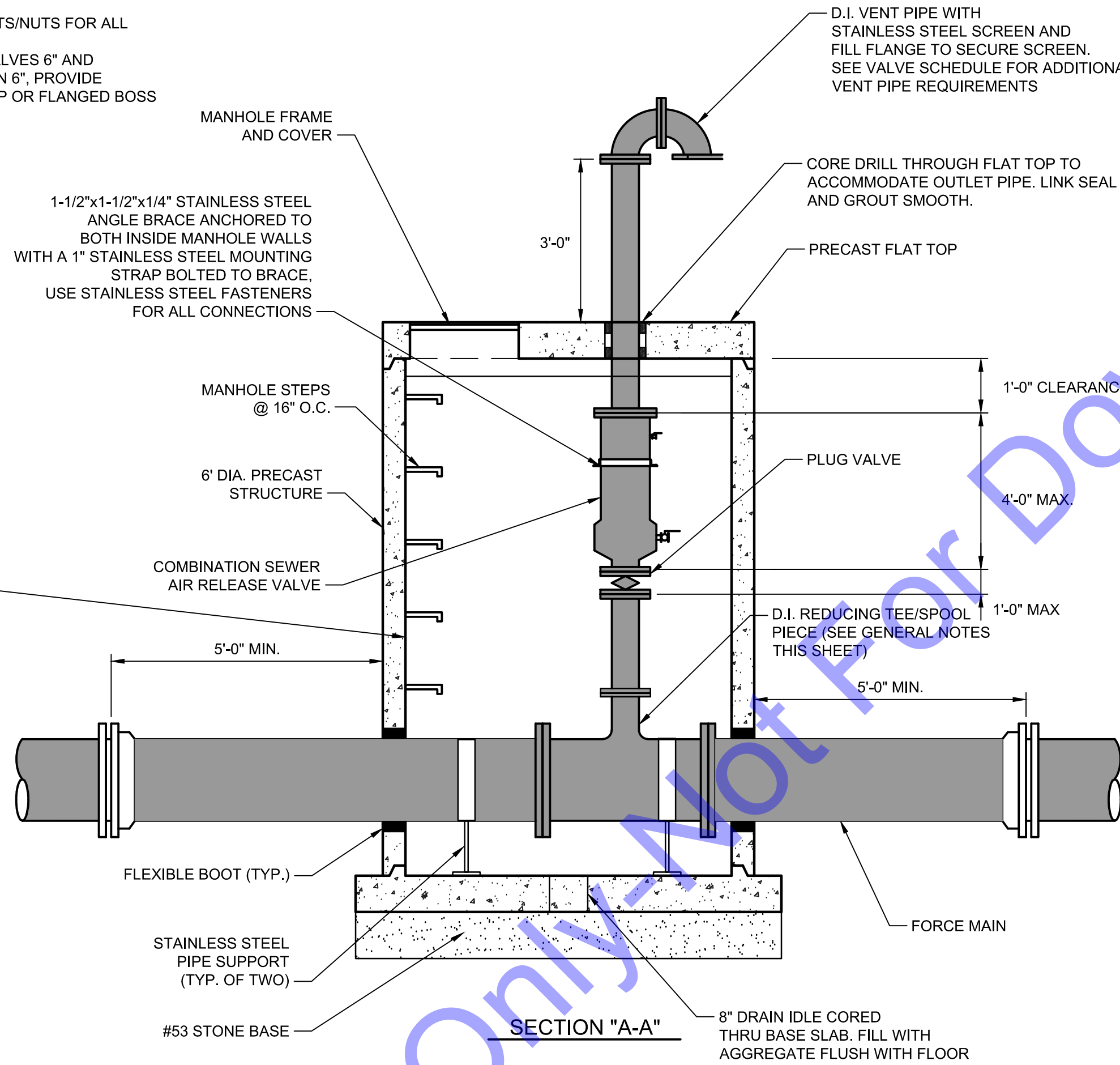
1. COMBINATION SEWER AIR RELEASE VALVES SHALL BE MODEL/TYPE/SIZE NOTED ON VALVE SCHEDULE. SEE DETAILED SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. EXPOSED D.I. FITTINGS/PIPE IN VAULTS SHALL BE FLANGED JOINTS IN ACCORDANCE WITH SPECIFICATIONS.
3. PROVIDE STAINLESS STEEL BOLTS/NUTS FOR ALL FLANGE CONNECTIONS.
4. PROVIDE REDUCING TEE FOR VALVES 6" AND LARGER. FOR VALVES LESS THAN 6", PROVIDE FLANGED SPOOL PIECE WITH TAP OR FLANGED BOSS CONNECTION.



UPPER PLAN VIEW



LOWER PLAN VIEW

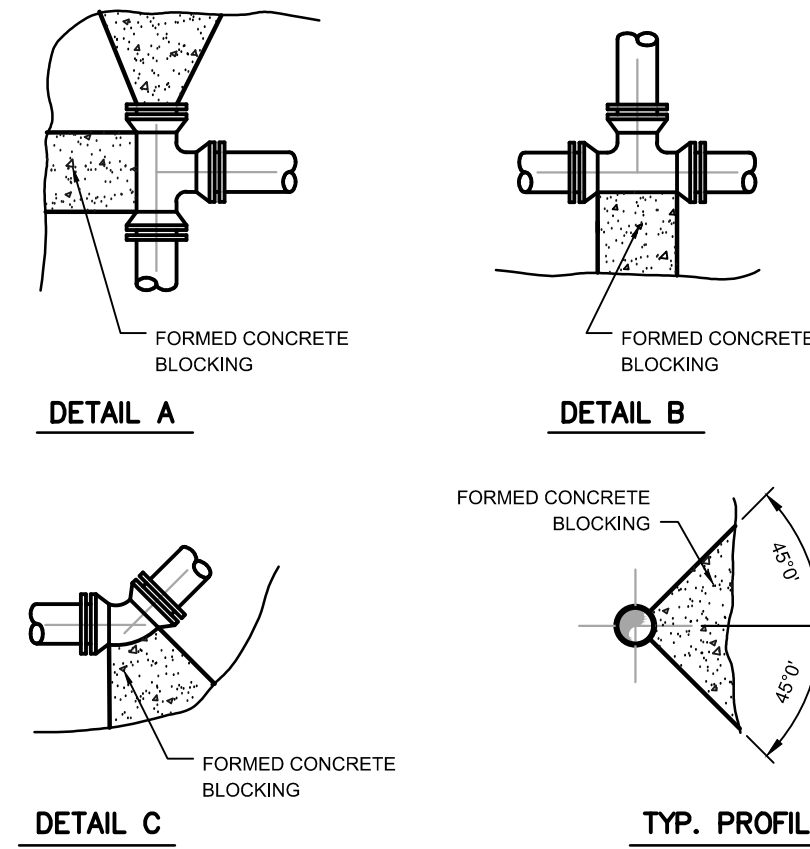


SECTION "A-A"

FORCE MAIN COMBINATION SEWER VALVE VAULT DETAIL
SCALE N.T.S.

VALVE SCHEDULE

LOCATION	DESCRIPTION	SIZE	OPERATING PRESSURE	COMMENTS
STA. 4+50 LINE 'B'	COMBINATION ARV. #1	3"	55 PSI (MAX)	SINGLE BODY SEWAGE COMBINATION AIR VALVE WITH DOUBLE ACTING THROTTLING DEVICE. APCO ASU W/DAT, OR EQUAL. FLANGED CONNECTIONS. ORIFICE SIZE IS 5/16". CONNECT VENT PIPING DIRECTLY TO VALVE OUTLET CONNECTION. PIPING SHALL MATCH VALVE OUTLET SIZE. RUN VENT PIPING TO EXTERIOR OF VAULT. PROVIDE FULL PORT ISOLATION PLUG VALVE.
STA. 22+50 LINE 'B'	COMBINATION ARV. #2	3"	55 PSI (MAX)	SINGLE BODY SEWAGE COMBINATION AIR VALVE WITH DOUBLE ACTING THROTTLING DEVICE. APCO ASU W/DAT, OR EQUAL. FLANGED CONNECTIONS. ORIFICE SIZE IS 5/16". CONNECT VENT PIPING DIRECTLY TO VALVE OUTLET CONNECTION. PIPING SHALL MATCH VALVE OUTLET SIZE. RUN VENT PIPING TO EXTERIOR OF VAULT. PROVIDE FULL PORT ISOLATION PLUG VALVE.
STA. 41+00 LINE 'B'	COMBINATION ARV. #3	4"	55 PSI (MAX)	SINGLE BODY SEWAGE COMBINATION AIR VALVE WITH DOUBLE ACTING THROTTLING DEVICE. APCO ASU W/DAT, OR EQUAL. THREADED CONNECTIONS. ORIFICE SIZE IS 5/16". CONNECT VENT PIPING DIRECTLY TO VALVE OUTLET CONNECTION. PIPING SHALL MATCH VALVE OUTLET SIZE. RUN VENT PIPING TO EXTERIOR OF VAULT. PROVIDE FULL PORT ISOLATION PLUG VALVE.
STA. 47+00 LINE 'B'	COMBINATION ARV. #4	6"	55 PSI (MAX)	SINGLE BODY SEWAGE COMBINATION AIR VALVE WITH DOUBLE ACTING THROTTLING DEVICE. APCO ASU W/DAT, OR EQUAL. THREADED CONNECTIONS. ORIFICE SIZE IS 5/16". CONNECT VENT PIPING DIRECTLY TO VALVE OUTLET CONNECTION. PIPING SHALL MATCH VALVE OUTLET SIZE. RUN VENT PIPING TO EXTERIOR OF VAULT. PROVIDE FULL PORT ISOLATION PLUG VALVE.
STA. 64+00 LINE 'B'	COMBINATION ARV. #5	4"	55 PSI (MAX)	SINGLE BODY SEWAGE COMBINATION AIR VALVE WITH DOUBLE ACTING THROTTLING DEVICE. APCO ASU W/DAT, OR EQUAL. THREADED CONNECTIONS. ORIFICE SIZE IS 5/16". CONNECT VENT PIPING DIRECTLY TO VALVE OUTLET CONNECTION. PIPING SHALL MATCH VALVE OUTLET SIZE. RUN VENT PIPING TO EXTERIOR OF VAULT. PROVIDE FULL PORT ISOLATION PLUG VALVE.



DETAIL A

DETAIL B

DETAIL C

TYP. PROFILE

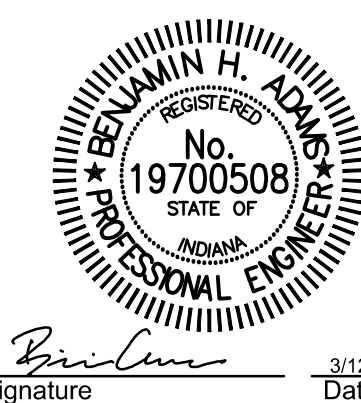
TABLE OF DIMENSION FOR CONCRETE BLOCKING

SIZE	TEE			PLUG			90° BEND			45° BEND			22½° BEND			11¼° BEND				
	L	T	W	L	T	W	L	T	W	L	T	W	L	T	W	L	T	W		
4"	18"	12"	12"	8"	18"	12"	18"	18"	24"	12"	24"	8"	18"	8"	12"	8"	15"	8"	12"	6"
6"	18"	12"	12"	8"	18"	12"	18"	24"	15"	24"	8"	18"	10"	12"	8"	18"	10"	18"	6"	6"
8"	30"	12"	24"	8"	30"	18"	30"	36"	16"	30"	8"	24"	12"	18"	8"	24"	12"	18"	8"	8"
10"	36"	18"	30"	10"	36"	18"	36"	48"	20"	36"	10"	30"	14"	24"	10"	30"	14"	24"	14"	8"
12"	48"	18"	36"	10"	42"	18"	42"	54"	24"	48"	10"	36"	16"	30"	10"	30"	16"	24"	14"	10"
14"	54"	24"	42"	12"	48"	18"	48"	60"	28"	60"	12"	42"	16"	42"	12"	42"	16"	42"	12"	12"
16"	60"	24"	48"	12"	54"	18"	54"	66"	32"	63"	12"	48"	18"	48"	12"	48"	18"	48"	12"	12"
18"	66"	30"	54"	14"	60"	24"	60"	72"	36"	66"	14"	54"	18"	54"	14"	54"	18"	54"	14"	14"
20"	72"	30"	60"	14"	66"	24"	66"	78"	40"	69"	14"	60"	20"	60"	14"	60"	20"	60"	14"	14"
24"	84"	36"	72"	18"	78"	30"	78"	96"	48"	75"	18"	72"	22"	72"	18"	72"	22"	72"	18"	18"

NOTES:

1. FOR TEE WITH BRANCH UNEQUAL TO RUN USE TEE TYPE KICKER WITH D. L. AND W DIMENSIONS THE SAME AS THOSE FOR PLUG WITH SAME DIAMETER AS BRANCH OF TEE. SELECT "T" DIMENSIONS FROM TEE TABLE UNDER COLUMN HEADED BY THE SIZE OF THE BRANCH.
2. IF EXACT SIZE PIPE BLOCKING IS NOT SHOWN USE NEXT LARGER SIZE.
3. DEPTH "D" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE. BLOCKING MUST BE PLACED AGAINST UNDISTURBED EARTH OR ROCK.
4. CONCRETE BLOCKING SHALL BE CLASS "B".

THRUST BLOCKING DETAIL
NO SCALE



CITY OF BERNE, IN
ADAMS COUNTY

LTCP PHASE II COLLECTION
SYSTEM IMPROVEMENTS
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Issue Date: 03/2025
 Project No: S24028
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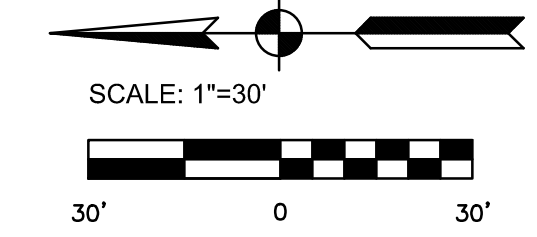
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DETAILS

Drawing No:
MD3
Sheet: 25 OF 37

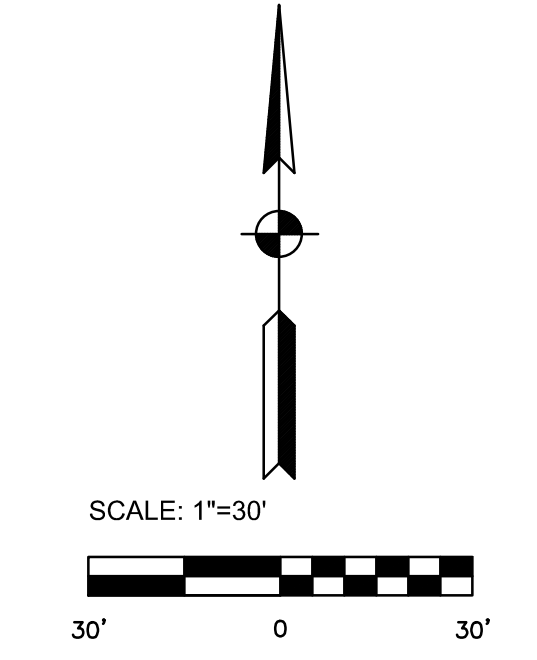
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EROSION CONTROL PLAN
 SCALE: 1"=30'-0"



EROSION CONTROL PLAN
 SCALE: 1"=30'-0"



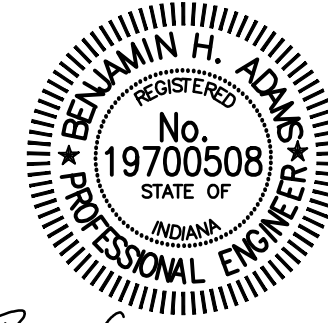
EROSION CONTROL LEGEND

—○—	(SF)	SILT FENCE
■	(CD)	ROCK CHECK DAM
▨	(EB)	EROSION CONTROL BLANKET
○	(IP)	INLET PROTECTION

FOR CONTINUATION (SEE BELOW LEFT)

CONTINUATION (SEE ABOVE RIGHT)

CONTINUATION (SEE DWG. EC2)



Signature: *Ben Adams* Date: 3/12/2025

CITY OF BERNE, IN
 ADAMS COUNTY

LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B

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EROSION CONTROL PLAN

Drawing No:
EC1
 Sheet: 26 OF 37

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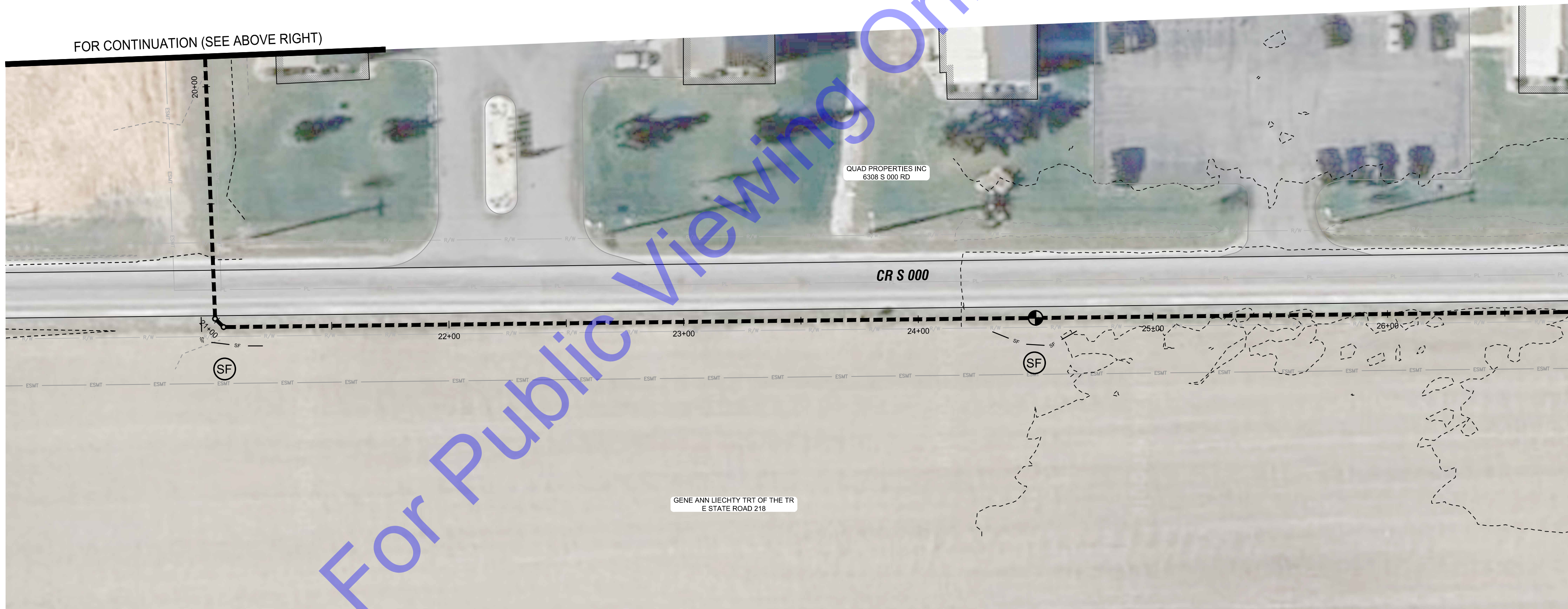
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EROSION CONTROL PLAN
 SCALE: 1"=30'-0"

FOR CONTINUATION (SEE BELOW LEFT)

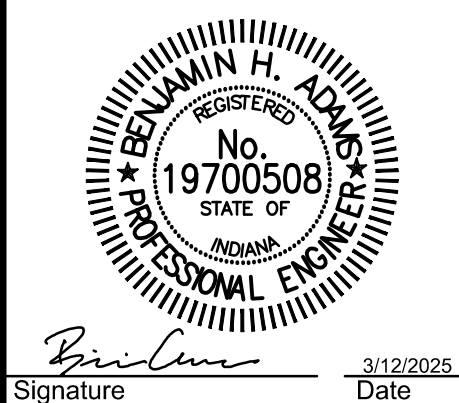
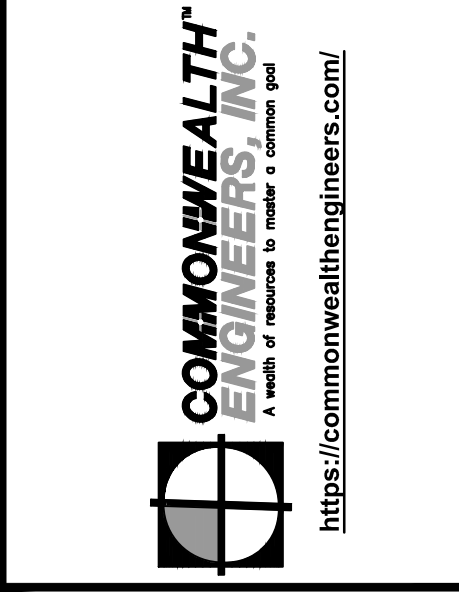
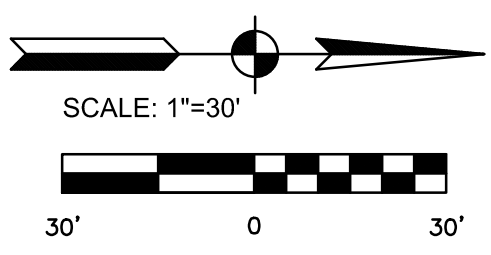
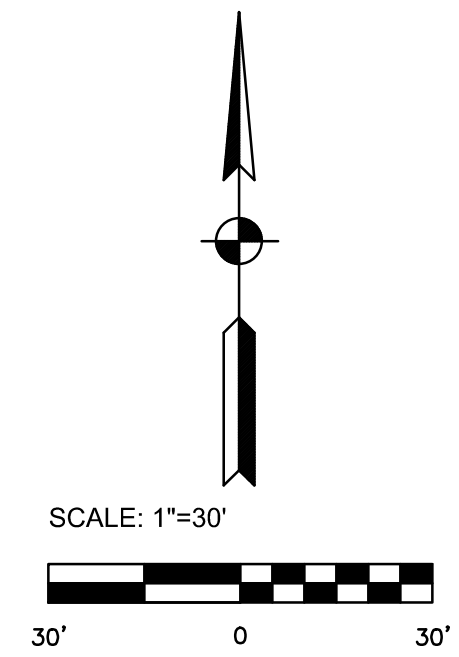
FOR CONTINUATION (SEE ABOVE RIGHT)



EROSION CONTROL PLAN
 SCALE: 1"=30'-0"

CONTINUATION (SEE DWG. EC3)

- EROSION CONTROL LEGEND**
- (SF) SILT FENCE
 - (CD) ROCK CHECK DAM
 - (EB) EROSION CONTROL BLANKET
 - (IP) INLET PROTECTION



Signature: *Ben Adams* Date: 3/12/2025

**CITY OF BERNE, IN
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**LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B**

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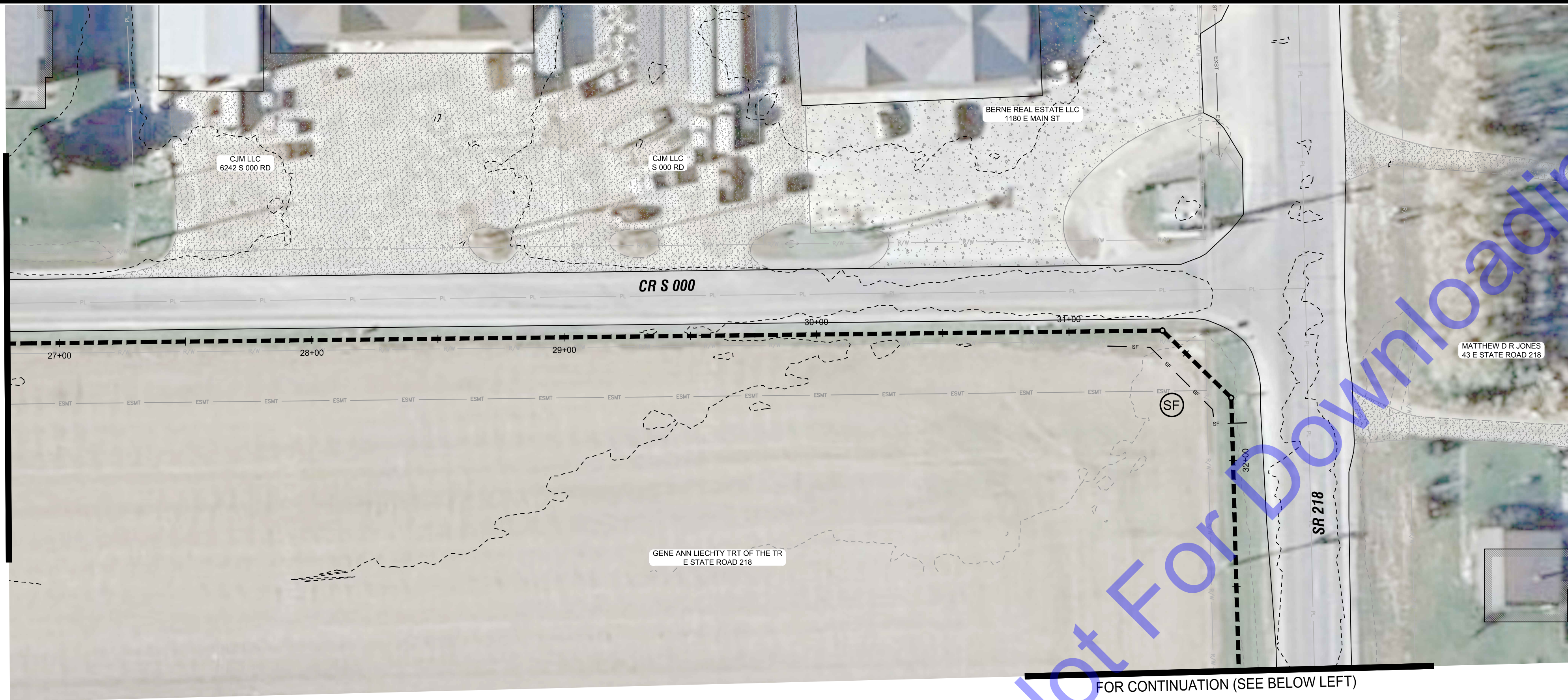
No.	Submittal / Revision	By	Date

Designed By: BW
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 Issue Date: 03/2025
 Project No: S24028
 Scale: AS SHOWN

EROSION CONTROL PLAN
 Drawing No: **EC2**
 Sheet: 27 OF 37

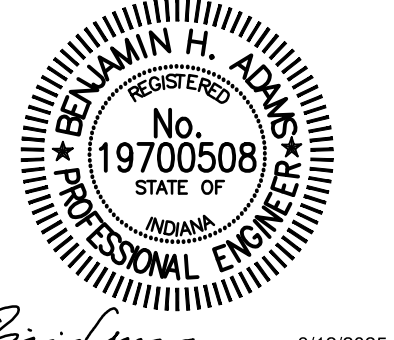
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FOR CONTINUATION (SEE DWG. EC2)



EROSION CONTROL PLAN
 SCALE: 1"=30'-0"

FOR CONTINUATION (SEE BELOW LEFT)



Signature: *Benjamin H. Adams* Date: 3/12/2025

**CITY OF BERNE, IN
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**LTCP PHASE II COLLECTION
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EROSION CONTROL PLAN

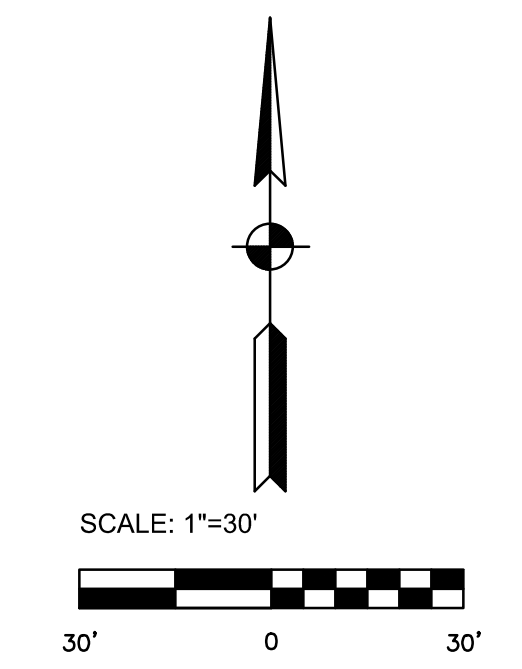
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 Sheet: 28 OF 37

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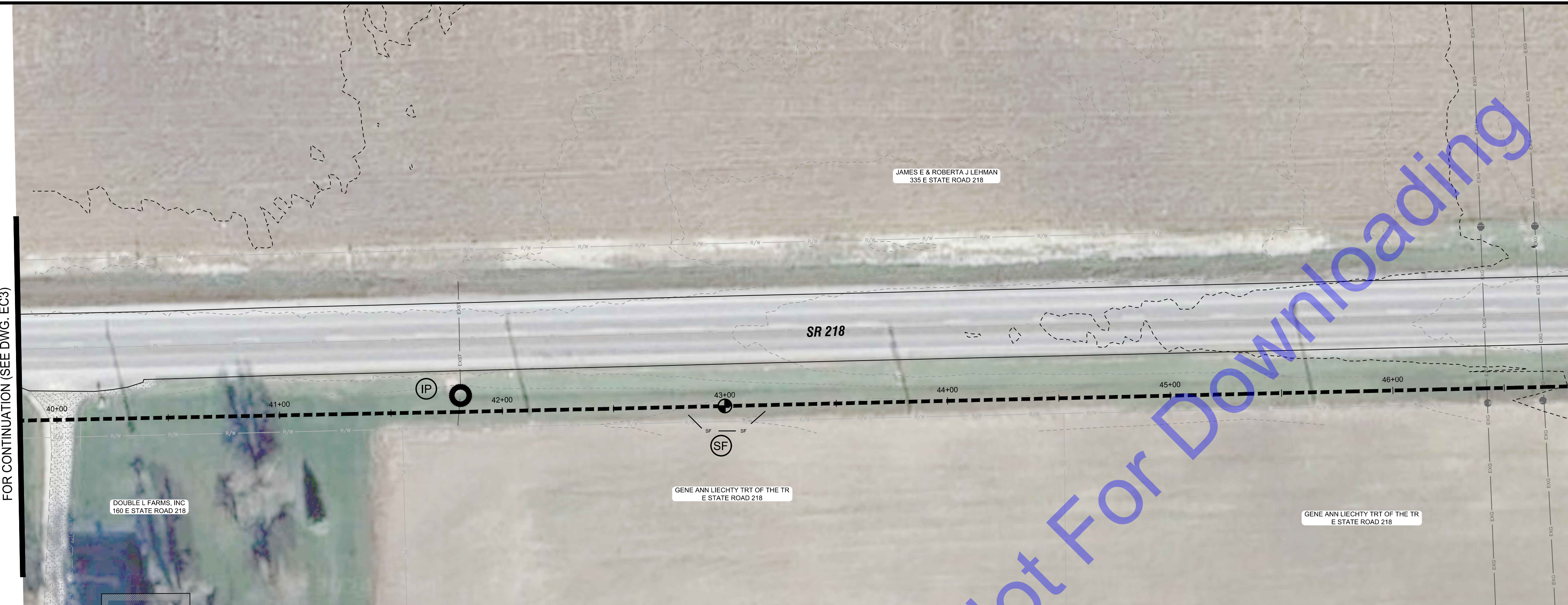


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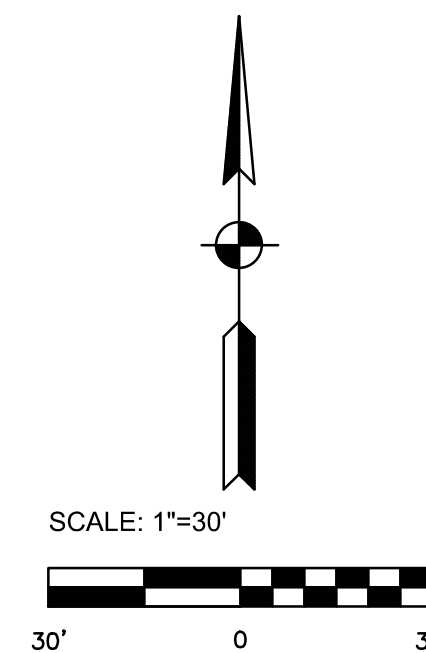
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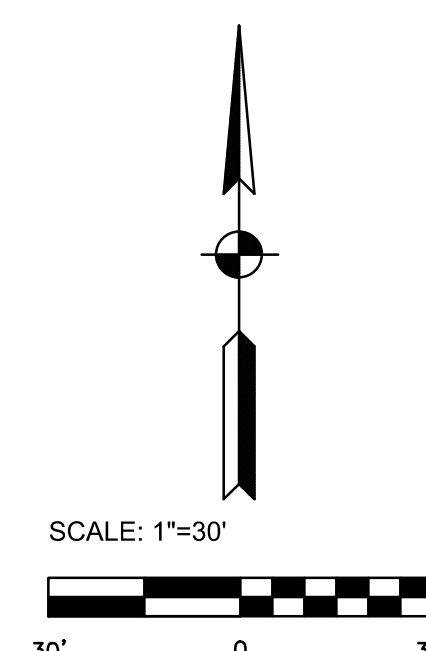
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- (SF) SILT FENCE
 - (CD) ROCK CHECK DAM
 - (EB) EROSION CONTROL BLANKET
 - (IP) INLET PROTECTION



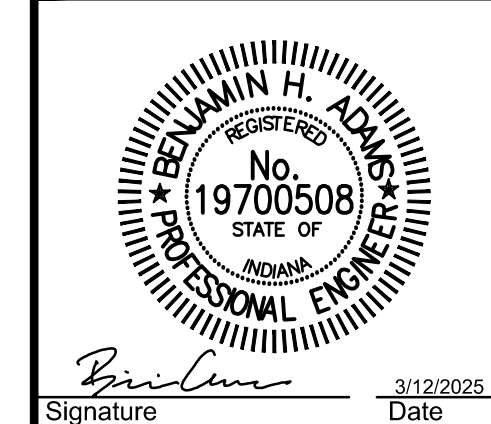
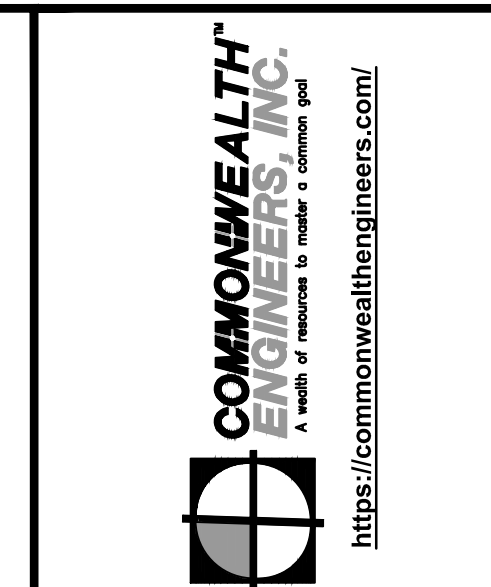
EROSION CONTROL PLAN
 SCALE: 1"=30'-0"



EROSION CONTROL PLAN
 SCALE: 1"=30'-0"



- EROSION CONTROL LEGEND**
- (SF) SILT FENCE
 - (CD) ROCK CHECK DAM
 - (EB) EROSION CONTROL BLANKET
 - (IP) INLET PROTECTION



Signature: *Benjamin H. Adams* Date: 3/12/2025

**CITY OF BERNE, IN
 ADAMS COUNTY**
**LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B**

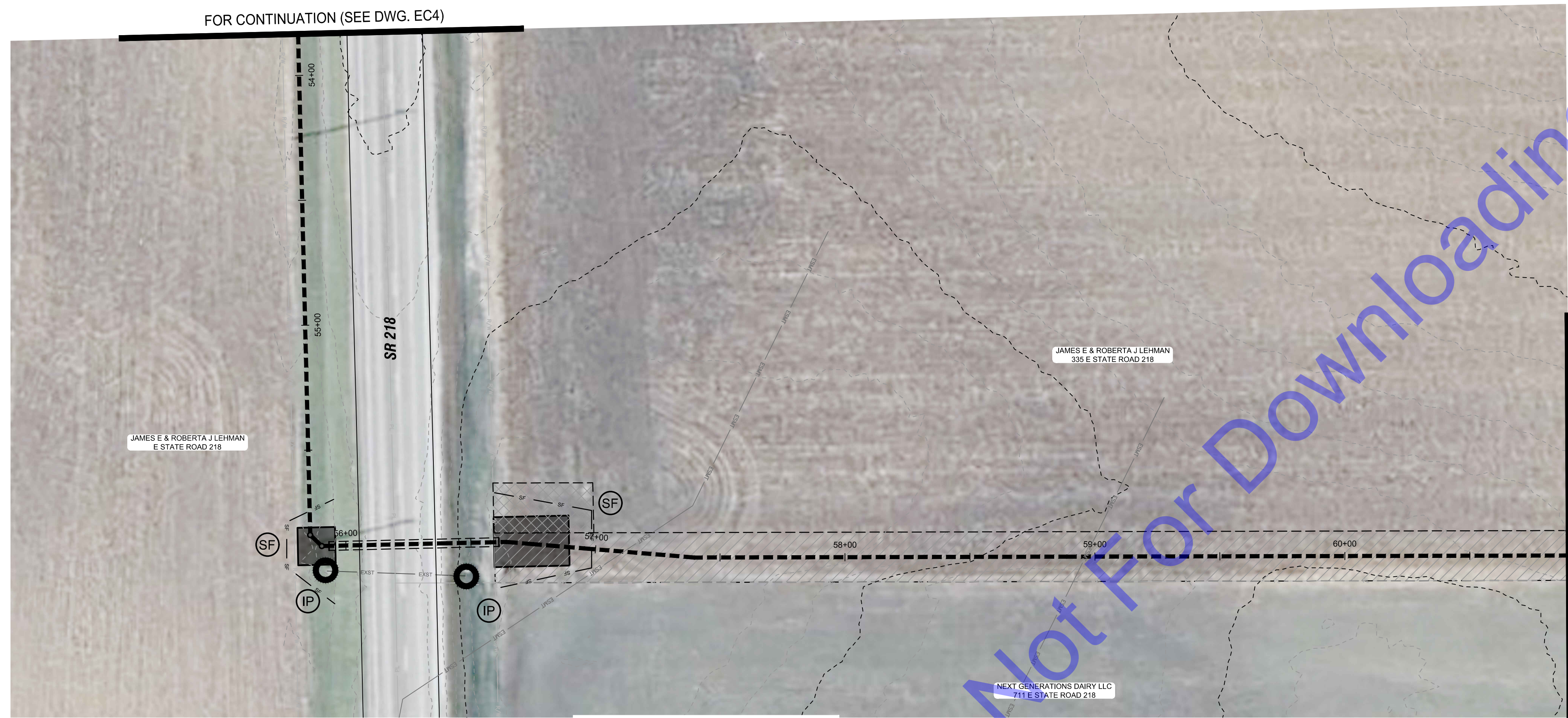
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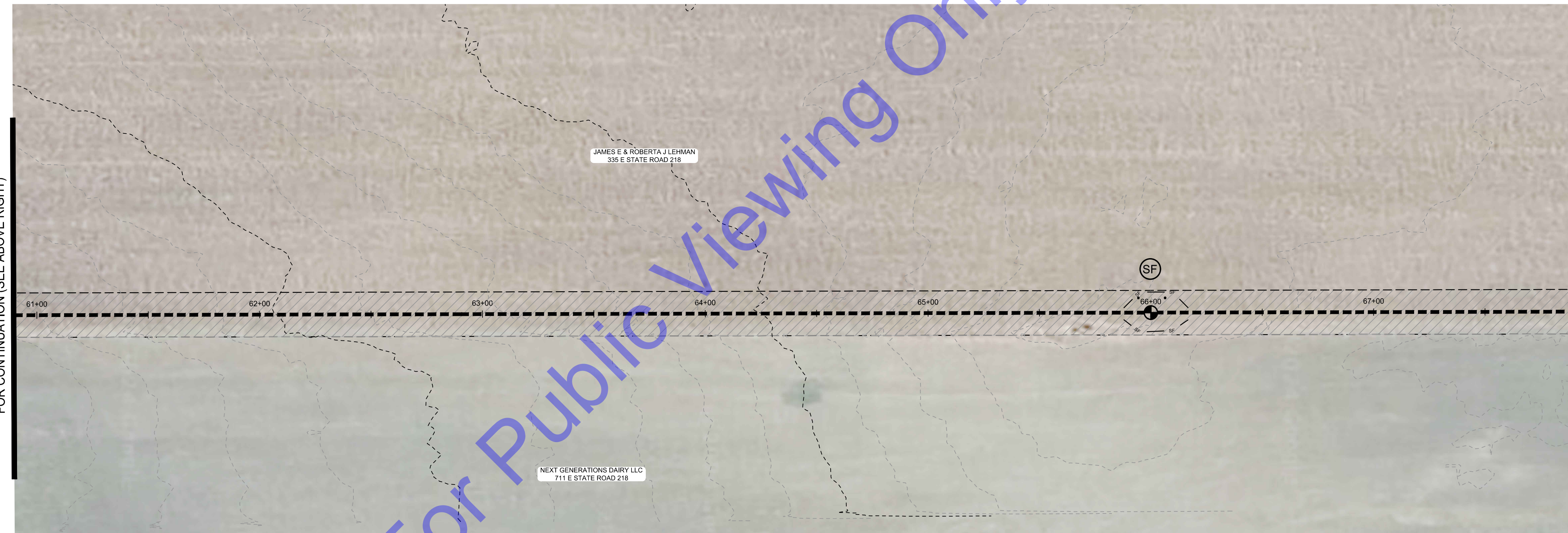
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EROSION CONTROL PLAN

Drawing No:
EC4
 Sheet: 29 OF 37



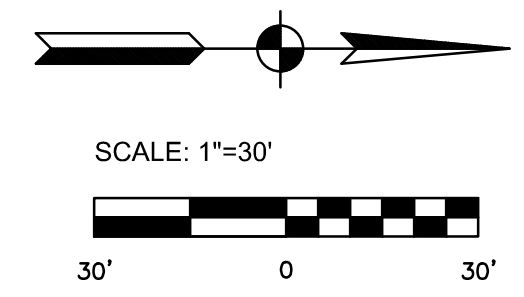
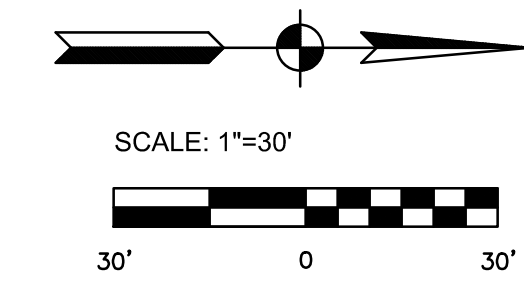
EROSION CONTROL PLAN
SCALE: 1"=30'-0"



EROSION CONTROL PLAN
SCALE: 1"=30'-0"

FOR CONTINUATION (SEE BELOW LEFT)

FOR CONTINUATION (SEE DWG. EC6)



- EROSION CONTROL LEGEND**
- SF SILT FENCE
 - CD ROCK CHECK DAM
 - EB EROSION CONTROL BLANKET
 - IP INLET PROTECTION

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BENJAMIN H. ADAMS
 REGISTERED PROFESSIONAL ENGINEER
 No. 19700508
 STATE OF INDIANA
 Signature: *Benjamin H. Adams* Date: 3/12/2025

CITY OF BERNE, IN
 ADAMS COUNTY

LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B

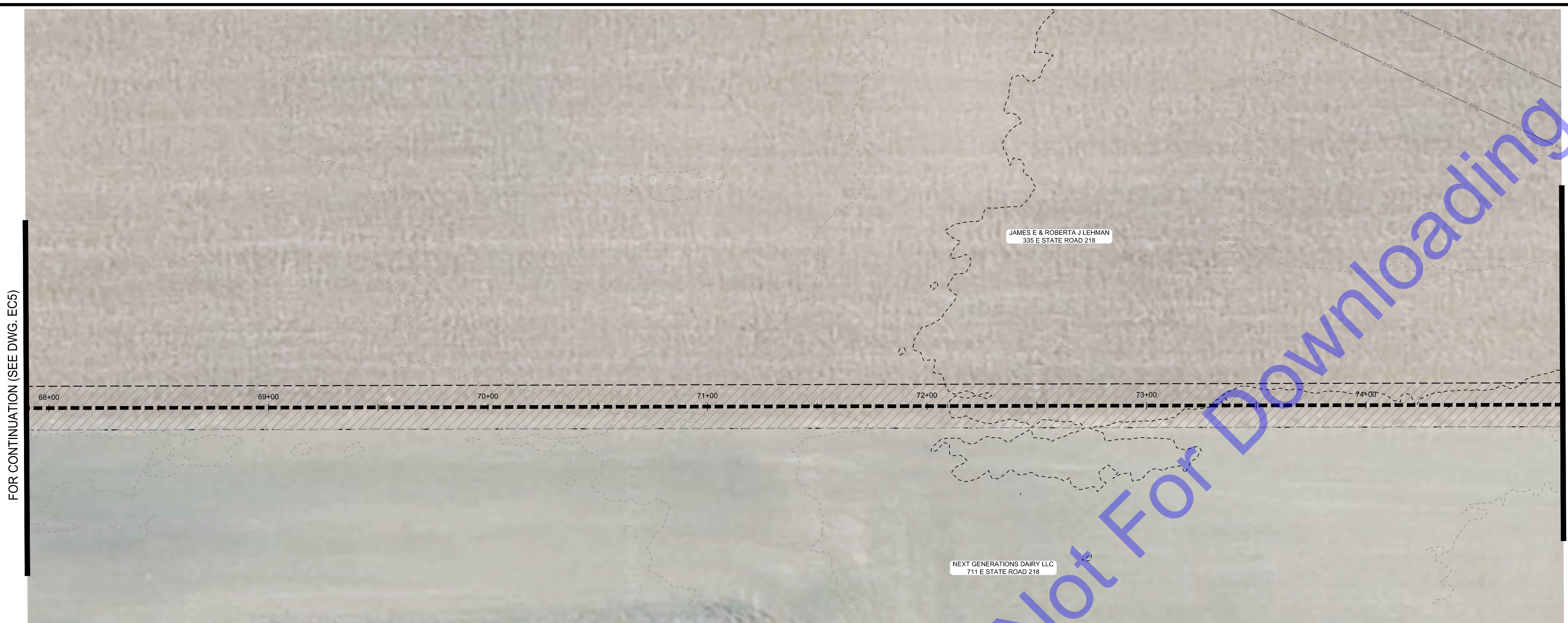
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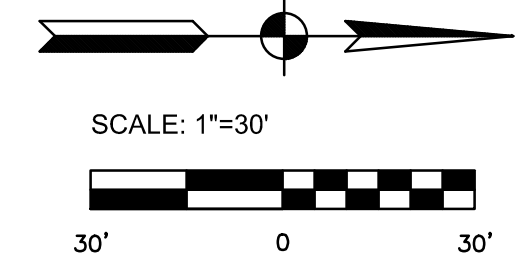
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EROSION CONTROL PLAN

Drawing No:
EC5
 Sheet: 30 OF 37



EROSION CONTROL PLAN
 SCALE: 1"=30'-0"



REGISTERED PROFESSIONAL ENGINEER
 No. 19700508
 STATE OF INDIANA
 Signature: [Signature] Date: 3/12/2025

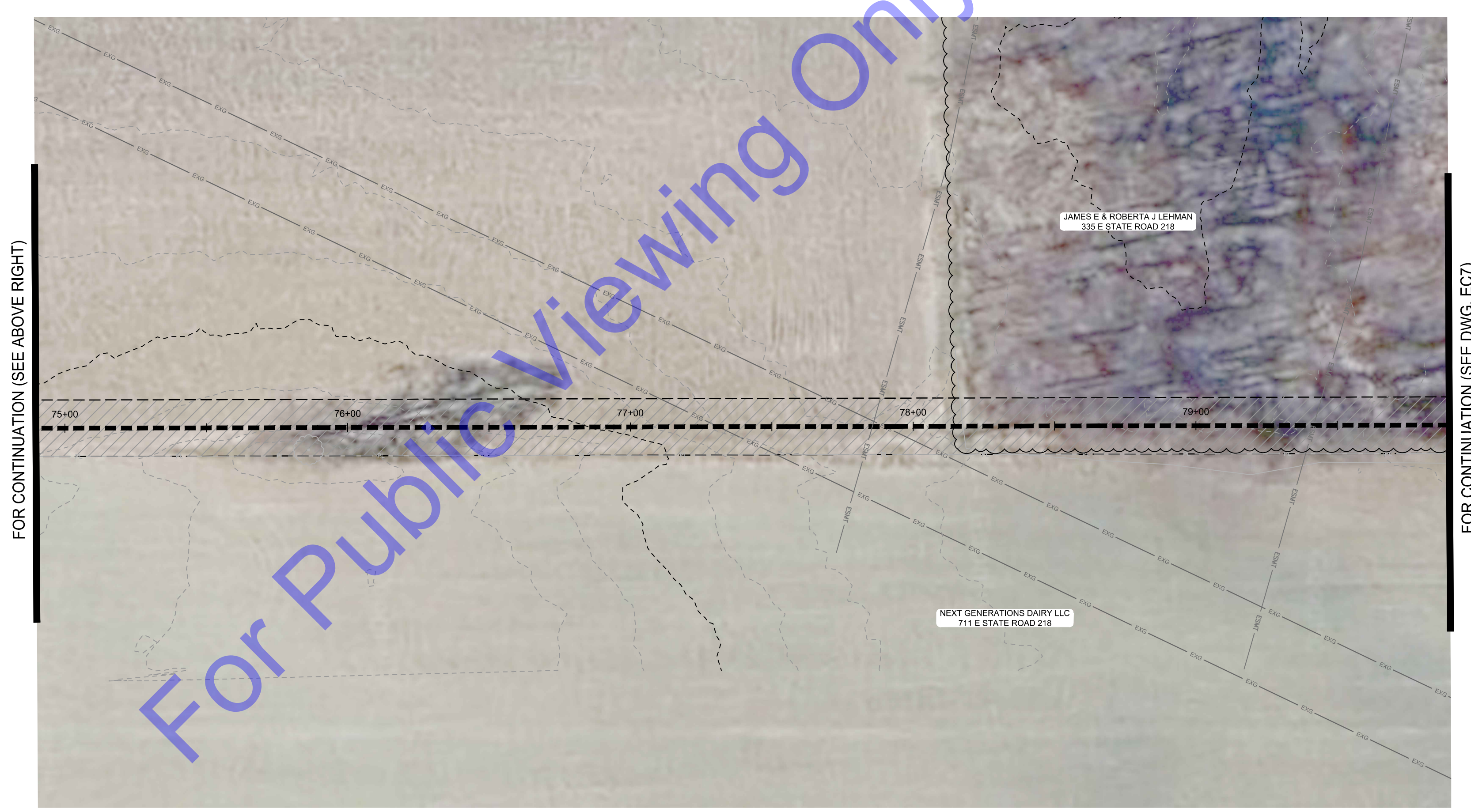
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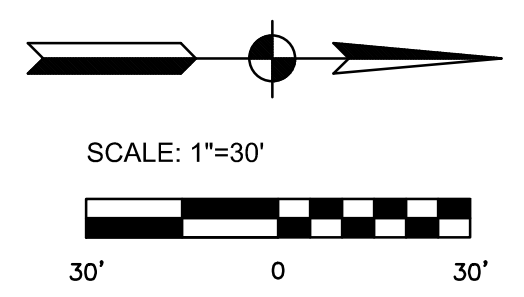
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EROSION CONTROL PLAN
 Drawing No:
EC6
 Sheet: 31 OF 37



EROSION CONTROL PLAN
 SCALE: 1"=30'-0"



- EROSION CONTROL LEGEND**
- (SF) SILT FENCE
 - (CD) ROCK CHECK DAM
 - (EB) EROSION CONTROL BLANKET
 - (IP) INLET PROTECTION

FOR CONTINUATION (SEE DWG. EC6)

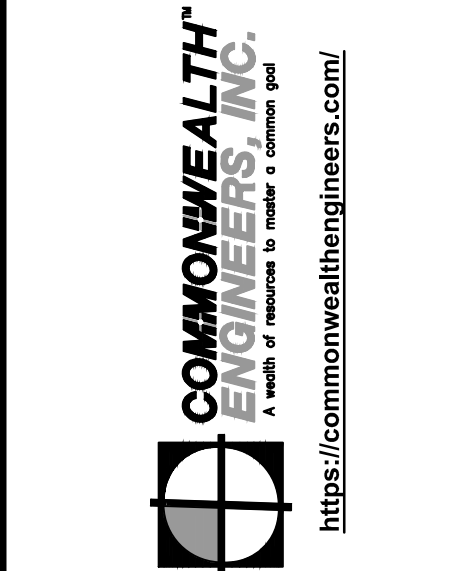
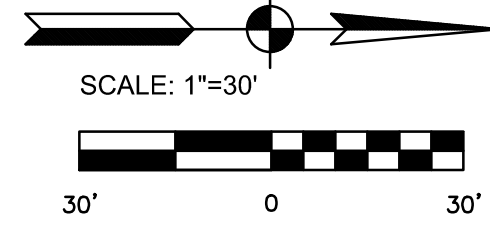


EROSION CONTROL PLAN
SCALE: 1"=30'-0"



EROSION CONTROL PLAN
SCALE: 1"=30'-0"

- EROSION CONTROL LEGEND**
- (SF) SILT FENCE
 - (CD) ROCK CHECK DAM
 - (EB) EROSION CONTROL BLANKET
 - (IP) INLET PROTECTION



REGISTERED PROFESSIONAL ENGINEER
 No. 19700508
 STATE OF INDIANA
 Signature: *Benjamin H. Adams* Date: 3/12/2025

CITY OF BERNE, IN
 ADAMS COUNTY
 LTCP PHASE II COLLECTION
 SYSTEM IMPROVEMENTS
 CONTRACT B

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No.	Submission / Revision	By	Date

Designed By: BW
 Drawn By: CH/BP
 Checked By: BA
 Issue Date: 03/2025
 Project No: S24028
 Scale: AS SHOWN

EROSION CONTROL PLAN
 Drawing No: **EC7**
 Sheet: 32 OF 37

File: Z:\SHARED\IN CLIENTS A-L\BERNE S24028 2024 LTCP PHASE II COLLECTION SYSTEM IMPROVEMENTS\DRAWINGS\CONTRACT B\08 - S24028 - EROSION CONTROL.DWG
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PROJECT NOTIFICATION

A. CONTRACTOR SHALL PROVIDE CONSTRUCTION SIGN AND NOTICE AT A PUBLICLY ACCESSIBLE LOCATION NEAR THE PROJECT THAT DISPLAYS THE FOLLOWING INFORMATION:

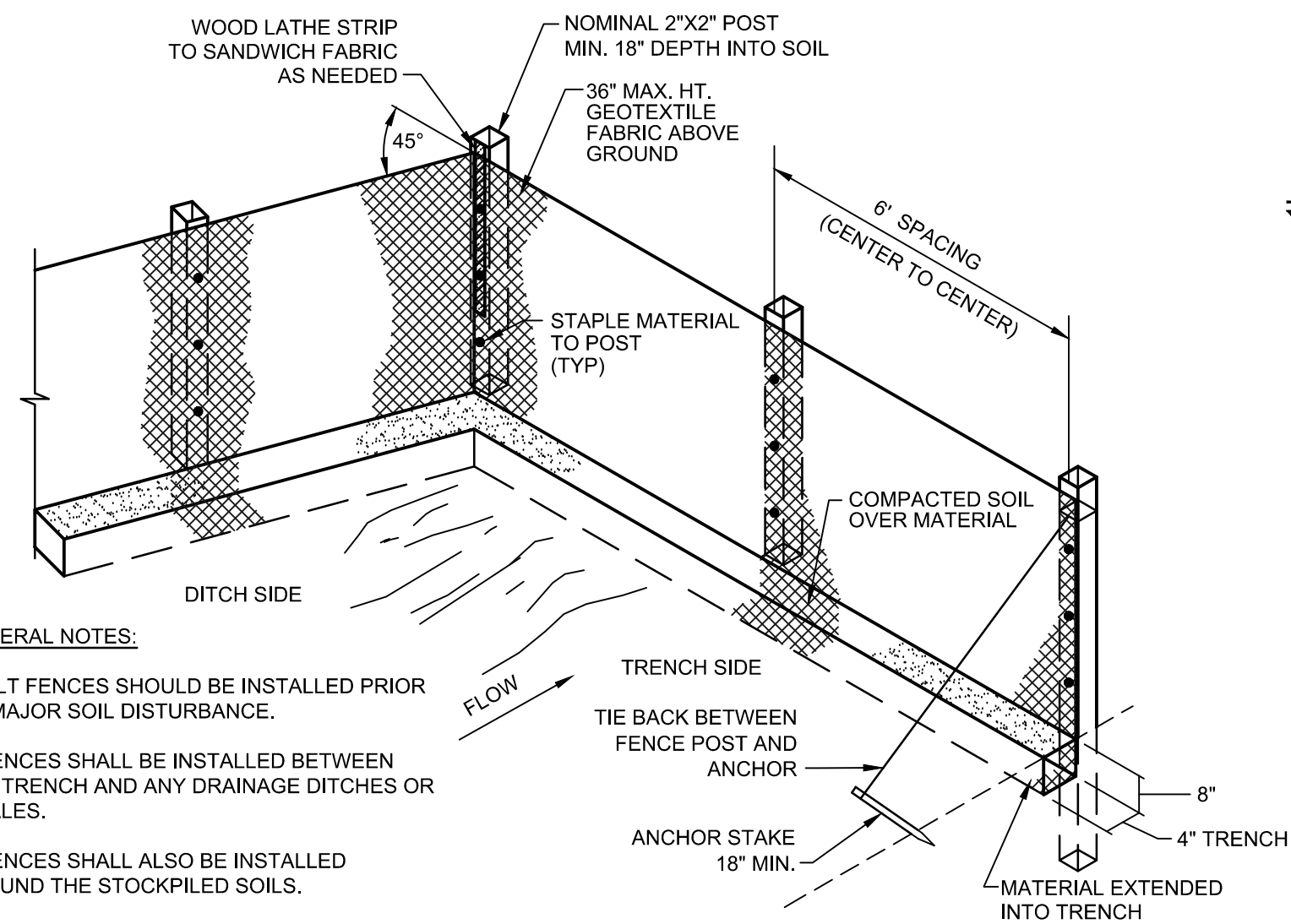
1. A COPY OF THE NOI LETTER AND THE NPDES NUMBER.
2. LOCATION OF THE CONSTRUCTION PLANS.
3. NAME, COMPANY NAME, TELEPHONE NUMBER, EMAIL ADDRESS (IF APPLICABLE) AND ADDRESS OF THE PROJECT SITE OWNER.
4. NAME OF THE CONSTRUCTION PROJECT AND AN ADDRESS OR GENERAL LOCATION OF THE PROJECT.
5. NAME OF THE RECEIVING WATER(S).
6. CONTACT INFORMATION (PHONE AND EMAIL) OF CONTRACTOR WHERE QUESTIONS MAY BE DIRECTED.
7. DATE THE NOTICE WAS POSTED.
8. BE LEGIBLE AND ON AN 8 1/2" X 11" SHEET AT A MINIMUM.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL SWCD, MS4 OR LOCAL JURISDICTION, PRIOR TO START OF CONSTRUCTION.

PROJECT DOCUMENTATION

B. CONTRACTOR SHALL MAINTAIN A PROJECT MANAGEMENT LOG THAT CONTAINS:

1. LOCATION OF EACH ACTIVITY RELATED TO ALL OFF-SITE BORROW SITES, DISPOSAL AREAS, AND STAGING AREAS THAT ARE OFF-SITE AND MEET CRITERIA NOTED IN CONSTRUCTION STORMWATER GENERAL PERMIT.
2. INFORMATION RELATED TO ALL PROJECT ACTIVITIES INCLUDING, BUT NOT LIMITED TO:
 - a. SELF-MONITORING PROGRAM (SMP) REPORTS
 - b. SMP REPORTS MUST BE COMPLETED BY A TRAINED INDIVIDUAL AS DESCRIBED IN THE CONSTRUCTION STORMWATER GENERAL PERMIT. CONTRACTOR SHALL RETAIN A COPY OF THE RESUME OF THE TRAINED INDIVIDUAL COMPLETING THE REPORTS WITHIN THE PROJECT MANAGEMENT LOG.
3. REGULATORY INSPECTIONS
4. RESPONSES TO A COMPLIANCE ACTION OR ENFORCEMENT ACTION.
5. RECORDS SHOWING THE DATES OF ALL STORMWATER POLLUTION PREVENTION PLAN (SWP3) MODIFICATIONS. THE RECORDS MUST INCLUDE THE NAME OF THE PERSON AUTHORIZING EACH CHANGE AND SEND A SUMMARY OF ALL CHANGES.

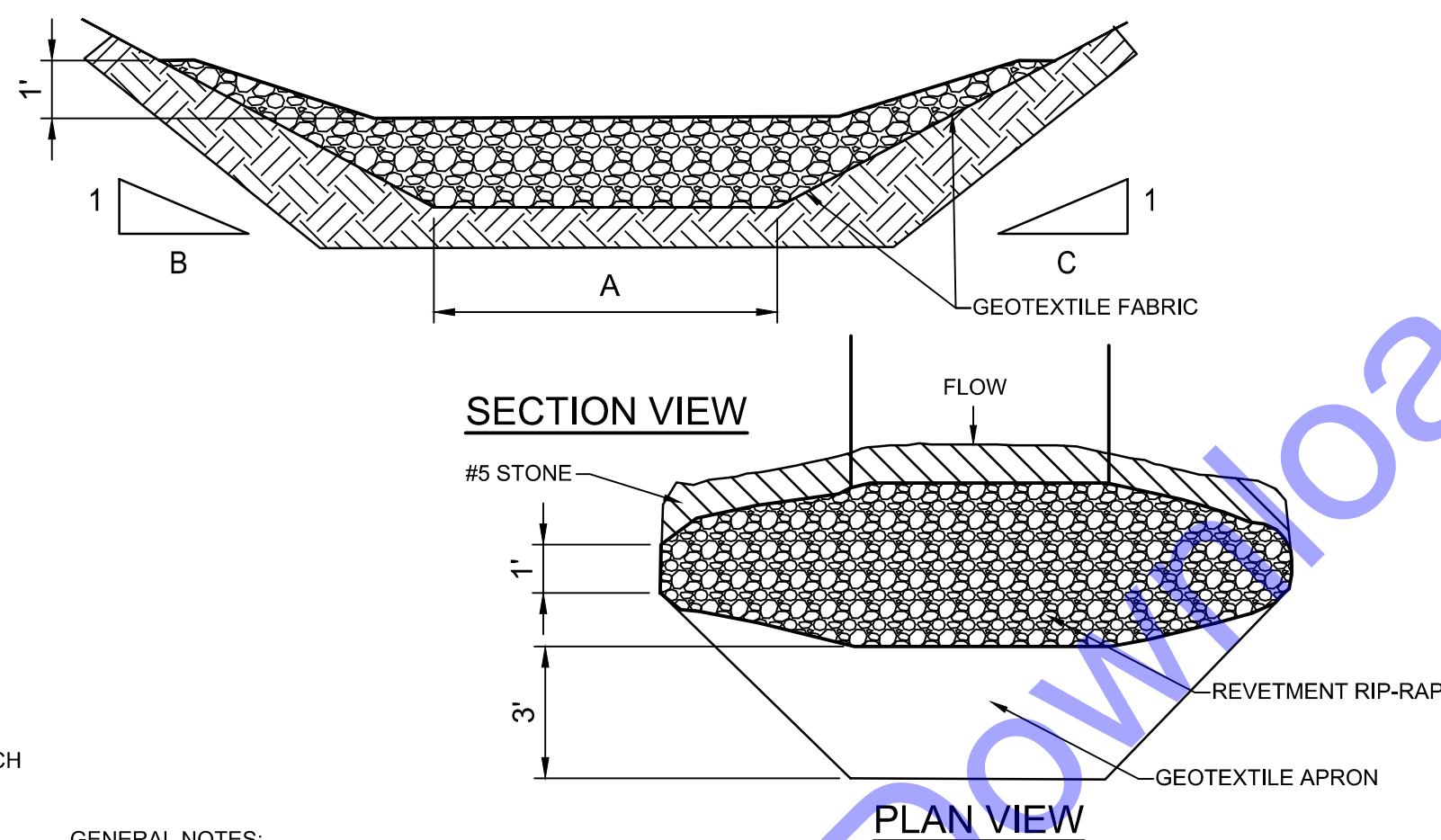
C. CONTRACTOR SHALL ENSURE SWP3 AND ALL SUPPORTING DOCUMENTATION ASSOCIATED WITH THE SMP AND PROJECT MANAGEMENT LOG ARE ACCESSIBLE AT THE PROJECT SITE OFFICE OR IN THE POSSESSION OF ON-SITE INDIVIDUALS WITH RESPONSIBILITY FOR THE OVERALL PROJECT MANAGEMENT OR ASSOCIATED WITH THE MANAGEMENT AND OPERATIONS OF CONSTRUCTION ACTIVITIES. ALL INFORMATION MUST BE PROVIDED TO IDEM OR THE INSPECTING AUTHORITY WITHIN 48 HOURS OF A REQUEST.



GENERAL NOTES:

1. SILT FENCES SHOULD BE INSTALLED PRIOR TO MAJOR SOIL DISTURBANCE.
2. FENCES SHALL BE INSTALLED BETWEEN THE TRENCH AND ANY DRAINAGE DITCHES OR SWALES.
3. FENCES SHALL ALSO BE INSTALLED AROUND THE STOCKPILED SOILS.
4. THE GEOTEXTILE SHALL BE FREE FROM DEFECTS, TEARS, PUNCTURES, FLAWS, DETERIORATION OR DAMAGE INCURRED DURING MANUFACTURE, TRANSPORTATION, STORAGE, OR INSTALLATION.
5. TIE BACKS SHALL BE PLACED AS REQUIRED.

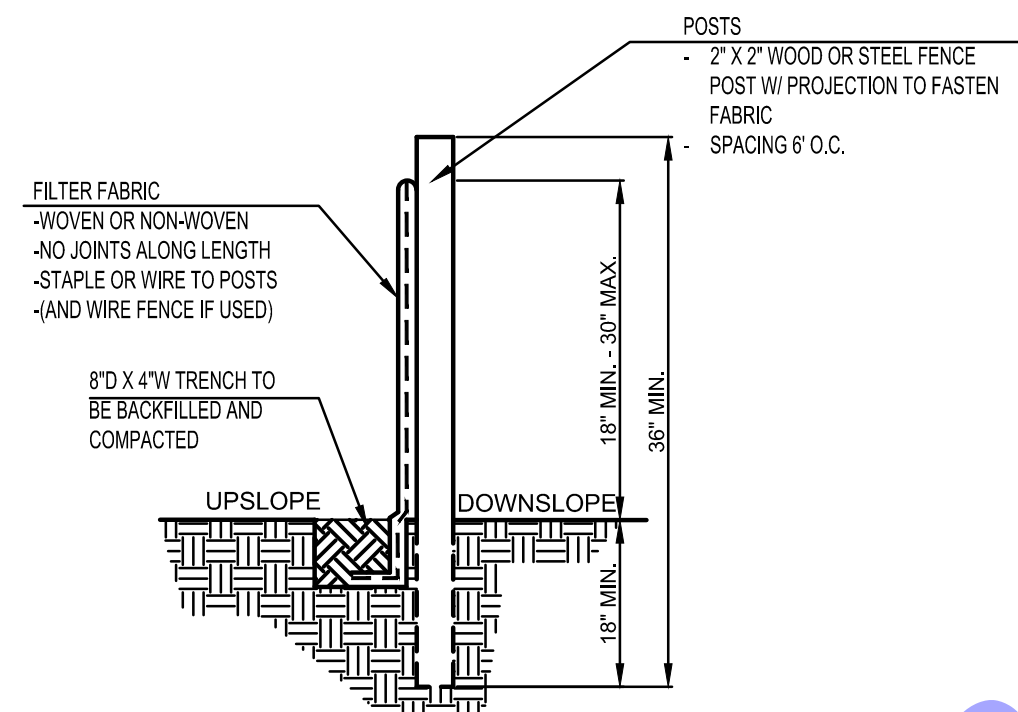
SILT FENCE
NO SCALE



GENERAL NOTES:

1. TO BE INSTALLED DOWNSTREAM OF ALL EXCAVATIONS ACROSS DITCHES.
2. AFTER COMPLETION OF CONTRACT, OR AS REQUESTED BY OWNER, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL ITEMS, REMOVE ALL ACCUMULATED DEPOSITS AND, AS REQUIRED, SEED AND MULCH OR SOD AS REQUIRED TO ESTABLISH AREA TO CONDITION PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL ASPECTS OF "327 IAC 15-5" AND THE INDIANA STORM WATER QUALITY MANUAL.

TEMPORARY RIP-RAP CHECK DAM DETAIL
NO SCALE



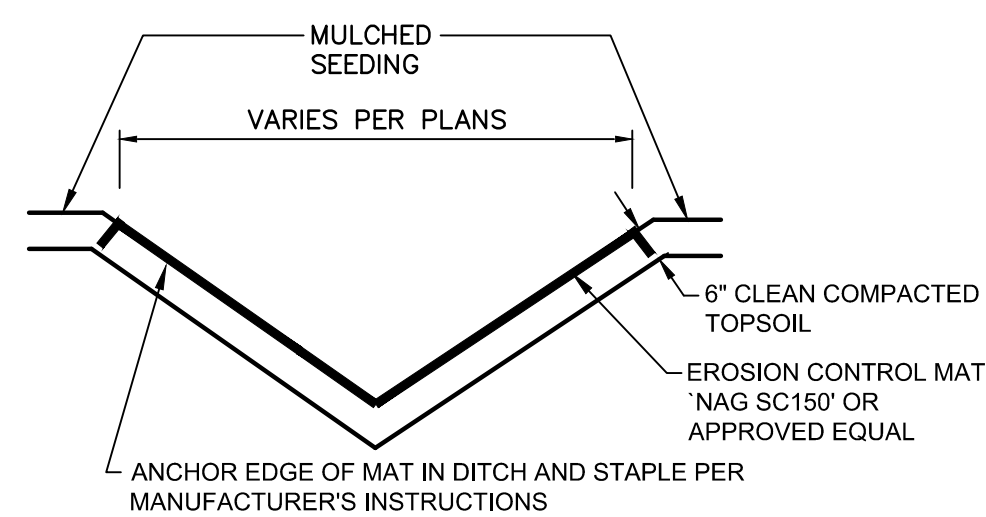
INSTALLATION:

1. THE BOTTOM 1" OF THE FENCE SHALL BE BURIED IN THE TRENCH ON THE UPSLOPE SIDE.
2. FENCE SHALL BE INSTALLED ALONG LEVEL GRADES, NOT ACROSS FLOW CHANNELS.
3. IF OPTIONAL SUPPORT WIRE FENCE IS USED, POST SPACING MAY BE EXTENDED TO 8' O.C.

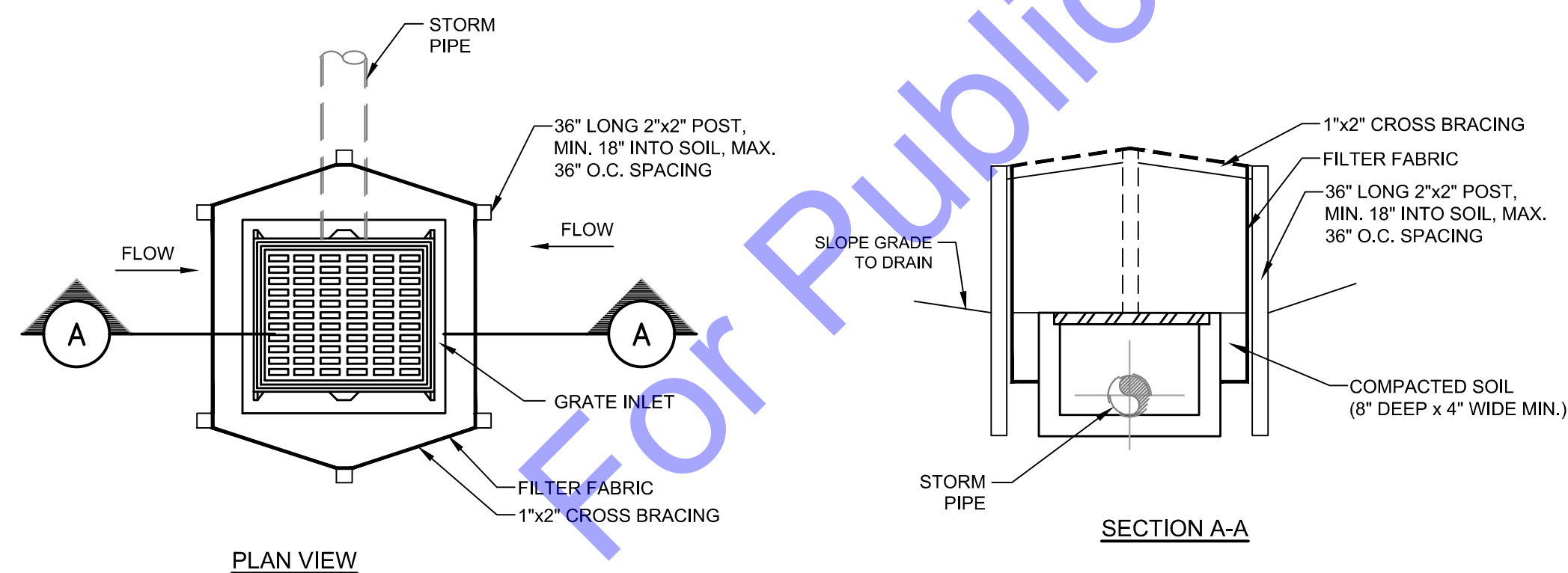
MAINTENANCE:

1. INSPECT SILT FENCE PERIODICALLY (WEEKLY) AND AFTER EACH STORM EVENT.
2. IF FABRIC IS TORN OR DAMAGED OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
3. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE, OR IT IS CAUSING THE FABRIC TO BULGE.
4. TAKE CARE NOT TO UNDERMINE THE FENCE DURING SEDIMENT REMOVAL.
5. AFTER THE CONTRIBUTING AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND REMAINING SEDIMENT, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.

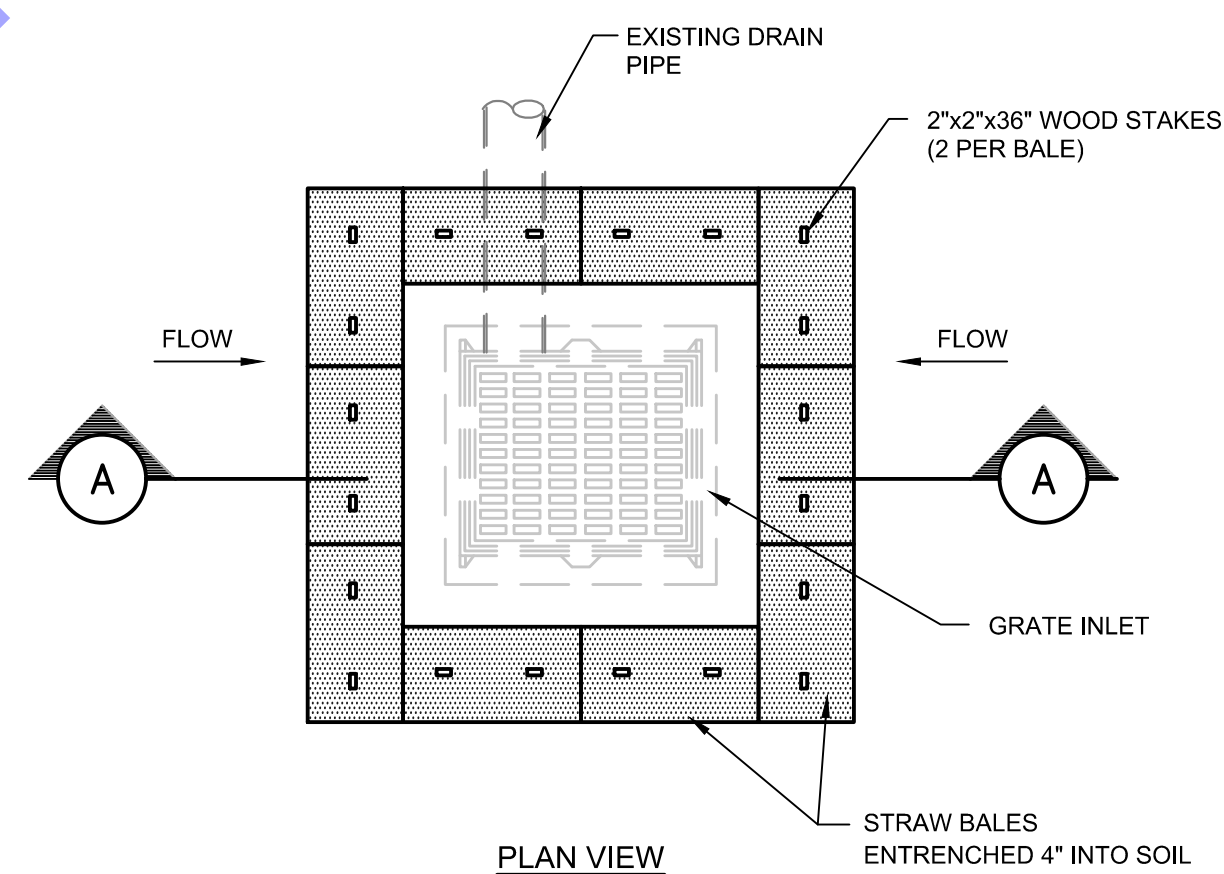
SILT FENCE SECTION
NO SCALE



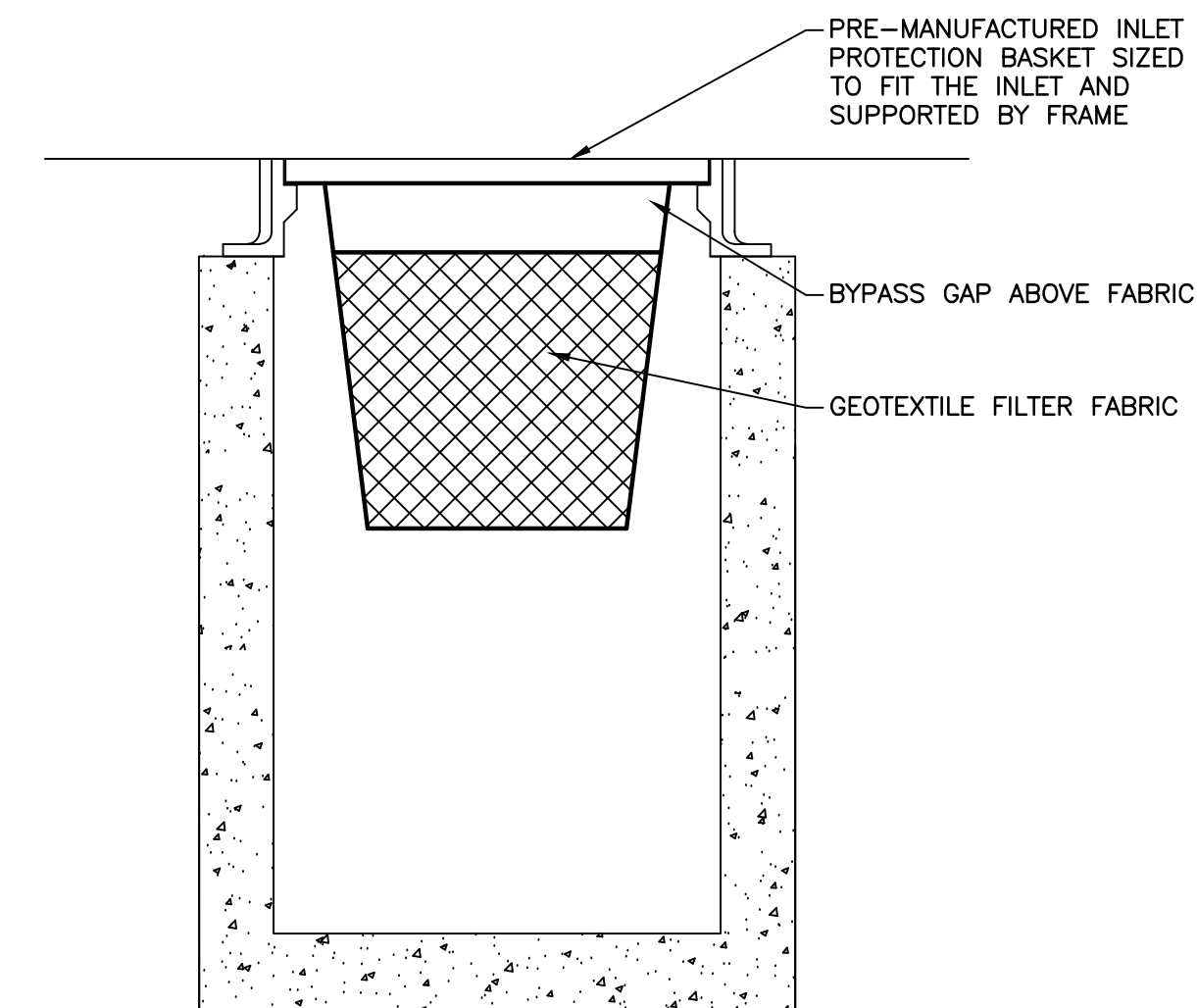
DITCH/SWALE RESTORATION DETAIL
N.T.S.



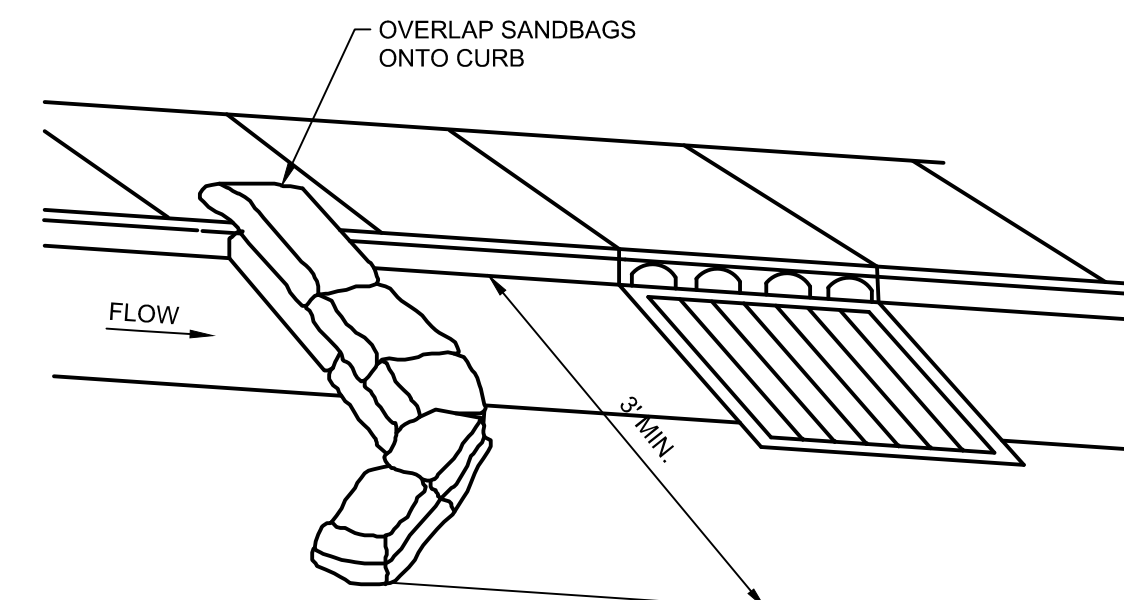
STORM INLET WITH SILT FENCE EROSION DETAIL



STORM INLET IN TURFED AREAS PROTECTION DETAILS
NO SCALE



INSERT (BASKET) INLET PROTECTION
N.T.S.



SANDBAG DIVERSION AT CURB INLET
NO SCALE

A. RESIDENTIAL/COMMERCIAL SEED MIXTURE

1. 35 PARTS KENTUCKY BLUEGRASS
2. 30 PARTS PERENNIAL RYE
3. 30 PARTS KENTUCKY FESCUE

B. MULCH

1. GOOD QUALITY DRY STORM
2. WOOD CELLULOSE OR CANE FIBER
3. MANUFACTURED EROSION CONTROL BRACKET NORTH AMERICA GREEN S-75 OR EQUAL

C. FERTILIZER AND LIME

1. AGRICULTURAL HYDRATED LIME
2. FERTILIZER 10-20-10

D. ROADSIDE BANK STABILIZATION MIXTURE (INDOT)


1. SEED MIXTURE CV WITH SUPPLEMENTAL
2. COLOR MIX PER INDOT SEED AND SODDING SPECIFICATION (LATEST EDITION)

NOTE: SEE DETAILED SPECIFICATION SECTION 12 - FINAL GRADING AND SEEDING FOR INSTALLATION REQUIREMENTS.

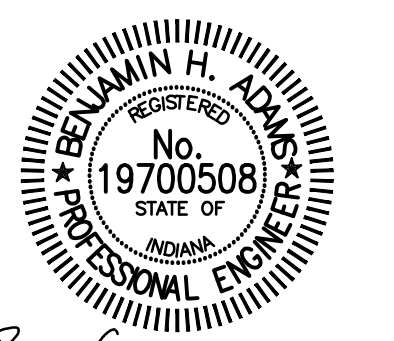
FINAL SEEDING AND GRADING

MAINTENANCE:

1. INSPECT DAILY, AND AFTER EACH STORM EVENT OR HEAVY USE.
2. RESHAPE AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN STONE AS REQUIRED, MAINTAIN MINIMUM DEPTH THROUGHOUT CONSTRUCTION.
4. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY SWEEPING OR BRUSHING. (DO NOT FLUSH AREA WITH WATER UNLESS WATER IS CONVEYED TO SEDIMENT TRAP.)
5. REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.



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Signature: *Benjamin H. Adams* Date: 3/12/2025

**CITY OF BERNE, IN
ADAMS COUNTY**

**LTCP PHASE II COLLECTION
SYSTEM IMPROVEMENTS
CONTRACT B**

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No.	Submission / Revision	Date

Designed By: BW	Drawn By: CH/BP	Checked By: BA
Issue Date: 03/2025	Project No: S24028	Scale: AS SHOWN

**EROSION CONTROL
DETAILS**

Drawing No:
EC8

Sheet: 33 OF 37

File: Z:\SHARE\IN CLIENTS A-L\BERNE\524028 LTCP PHASE II COLLECTION SYSTEM IMPROVEMENTS\06 CAD\K MECH-ELECT\DRAWINGS\CONTRACT B\ELECTRICAL DRAWINGS.DWG
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PROCESS AND INSTRUMENTATION DIAGRAM LEGEND

TAG FUNCTION ABBREVIATIONS

ALT ALTERNATE (CLOSED)	CM COMPUTER-MANUAL	DIFF DIFFERENCE OR DIFFERENTIAL	DO DISSOLVED OXYGEN	F FAIL	FIX CHARACTERIZED FOR: FORWARD-STOP/REVERSE(MAINTAINED CONTACT)	FSR FORWARD-STOP-REVERSE(MOMENTARY CONTACT)	HOA HAND-OFF-AUTOMATIC(MAINTAINED CONTACT)	HP HAND-OFF-REMOTE(MAINTAINED CONTACT)	II CURRENT TO CURRENT	IP CURRENT TO PNEUMATIC	LL LEAD-LAG(MAINTAINED CONTACT)	LOE LOSS OF ECHOULTRASONIC SENSOR FAILURE	LOR LOCAL-OFF-REMOTE(MAINTAINED CONTACT)	LOS LOCKOUT STOP/LOCKABLE IN "STOP" POSITION (MOMENTARY CONTACT)	L/R LOCAL-REMOTE(MAINTAINED CONTACT)	MA MANUAL-AUTOMATIC(MAINTAINED CONTACT)	MOA MANUAL-OFF-AUTOMATIC(MAINTAINED CONTACT)	O OPEN	OA OFF-AUTOMATIC	OCA OPEN-CLOSE-AUTOMATIC(MAINTAINED CONTACT)	OC OPEN-CLOSE(D)(MAINTAINED CONTACT)	OCS OPEN-STOP-CLOSE(MOMENTARY CONTACT SPRING RETURN TO CENTER POSITION)	OO ON-OFF(MAINTAINED CONTACT)	OOC ON-OFF-AUTOMATIC(MAINTAINED CONTACT)	OOR ON-OFF-REMOTE(MAINTAINED CONTACT)	R RUN	SBL SLUDGE BLANKET INTERFACE LEVEL	SP SPEED POT	SQR SQUARE ROOT	SS START-STOP	SSA START-STOP-AUTOMATIC	SSL START-STOP-LOCK	SRT START	SUM SUMMATION	VB VIBRATION	X MULTIPLY	FWD FORWARD	REV REVERSE	F/R FORWARD/REVERSE(MOTOR STARTER COILS)	ESTP ESTOP(EMERGENCY STOP)	SPO (SPEED POT)	SUSP SUSPEND	ALRT ALERT	RSET RESET	STRT START
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INSTRUMENT TAG IDENTIFICATION

AREA TAG FUNCTION TAG NUMBER (QUAN)

COMPONENT DESIGNATOR

AREA 035D: BUILDING OR PROCESS AREA NUMBER

TAG TYPE P: FIRST LETTER, SEE ISA TABLE BELOW
AH: SUCCEEDING LETTERS, SEE ISA TABLE BELOW

TAG NUMBER 12: P&ID NUMBER
3: LOOP NUMBER
4: EQUIPMENT NUMBER
A: DEVICE LETTER IF MULTIPLE DEVICES

TAG FUNCTION: HOA: TAG FUNCTION ABBREVIATION, SEE LISTING AT RIGHT

QUANTITY (2): TOTAL NUMBER OF DEVICES WHERE MORE THAN ONE DEVICE IS REQUIRED. DEVICE NUMBERS ARE SEQUENTIAL BEGINNING WITH THE TAG NUMBER SHOWN. IF QUANTITY IS NOT SHOWN, THEN ONE DEVICE ONLY IS REQUIRED.

COMPONENT DESIGNATOR: LISTING AT RIGHT

PLC POINT TYPE

ANALOG INPUT	↑
ANALOG OUTPUT	↓
DISCRETE INPUT	↑
DISCRETE OUTPUT	↓
NETWORK CONNECTION	↔

TAG SYMBOLS

HORIZONTAL BAR SYMBOLS FOR PHYSICAL MOUNTING OF DEVICE

- FIELD MOUNTED
- MAIN CONTROL ROOM PANEL NORMALLY ACCESSIBLE
- BEHIND MAIN CONTROL PANEL, NOT NORMALLY ACCESSIBLE
- LOCAL PANEL NORMALLY ACCESSIBLE
- LOCAL PANEL - NOT NORMALLY ACCESSIBLE

CONTROL AND I/O DEVICES DISPLAY

- NON-DISPLAYED CONFIGURABLE DEVICE (SEMI-PROGRAMMABLE)
- NON-DISPLAYED PROGRAMMABLE DEVICE (w/ PLC)
- DISPLAYED CONFIGURABLE DEVICE (SEMI-PROGRAMMABLE)
- DISPLAYED PROGRAMMABLE DEVICE
- DISPLAYED PROGRAMMABLE POINT (HMI TOUCH SCREEN OR SCADA SOFTWARE)

INSTRUMENT SOCIETY OF AMERICA TABLE

LETTER	FIRST LETTER(S)	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARMING (LOGGING)	ANNUNCIATE	
B	BURNER COMBUSTION		USERS CHOICE(1)	USERS CHOICE(1)	
C	USERS CHOICE(1)		CONTROL	CLOSE	
D	USERS CHOICE(1)	DIFFERENTIAL			
E	VOLTAJE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO		FEEDBACK	
G	USERS CHOICE(1)		GLASS		
H	HAND MANUAL		INDICATE		
I	CURRENT				
K	POWER	SCAN			
L	TIME OR SCHEDULE	TIME RATE OF CHANGE	KEYPAD(DATA ENTRY)	CONTROL STATION	
N	LEVEL		LIGHT(PILOT)		LOW MONITORING
O	USERS CHOICE(1)	MOMENTARY	USERS CHOICE(1)	USERS CHOICE(1)	
P	PRESSURE OR VACUUM		ORifice		
Q	QUANTITY	INTEGRATE	POINT TEST CONNECTION		
R	RADIATION	SAFETY	RECORD, TRENDS LOG		
S	SPEED OR FREQUENCY		SWITCH		
T	TEMPERATURE		TRANSMIT		
U	UNIVERSAL MULTIVARIABLE		MULTIFUNCTION(1)	MULTIFUNCTION(1)	
V	VIBRATION		VALVE	VALVE	
W	WEIGHT FORCE TORQUE				
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	
Y	EVENT STATE	Y AXIS	RELAY OR COMPUTER		
Z	POSITION, DIMENSION	Z AXIS	DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT		

(*) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL

SPECIAL CASES:
ETM - ELAPSED TIME METER
JBX - JUNCTION BOX
NDX - INDEX #
MS - MOTOR STARTER
MOR - MOTOR OVERLOAD RELAY
MPR - MOTOR PROTECTION RELAY

CONDUIT NOTES

PVC SCHEDULE 40 BELOW GRADE.

RIGID ALUMINUM OR PVC COATED RGS CONDUIT ABOVE GRADE OUTDOORS.

RIGID ALUMINUM OR PVC COATED RGS CONDUIT IN CLASSIFIED AND CORROSIVE SPACES.

NO CONDUIT SHALL BE RAN ON TOP OF A DECK, ON A WALKWAY, OR IN AN AREA THAT MAY POSE A TRIP HAZARD. NO CONDUIT SHALL BE RAN ABOVE A DECK ABOVE A WALKWAY, OR IN AN AREA THAT IS COMMONLY TRAVELED. ALL CONDUIT IN SUCH AREAS SHALL BE COORDINATED WITH THE OWNER/ENGINEER AND SHALL BE RAN BELOW GRADE OR IN THE CONCRETE DECKING OR PAD. CONDUIT RAN IN CONCRETE DECKING OR PAD SHALL BE AVOIDED WHEN POSSIBLE. IF CONDUIT IS TO BE ROUTED IN A STRUCTURAL CONCRETE DECK, PAD, WALL, ETC. IT SHALL BE COORDINATED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. CONDUIT RAN IN CONCRETE CAN IMPACT THE STRUCTURAL INTEGRITY OF CONCRETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFORM TO ANY REQUIREMENTS REQUIRED OF THE STRUCTURAL ENGINEER TO ACCOMMODATE THE INTEGRITY OF THE INSTALLATION AT NO COST TO THE OWNER. FOR A CONDUIT EMBEDDED IN CONCRETE TO BE CONSIDERED IT MUST BE THE ONLY REASONABLE SOLUTION AS DETERMINED BY THE ENGINEER. ALL PROPOSED INSTALLATIONS MUST COMPLY WITH ACI 318 AND BE ENGINEER APPROVED.

ALL UNDERGROUND CONDUITS SHALL BE SEALED AT BOTH ENDS.

NO CONDUIT PENETRATIONS ON THE TOP OF ANY OUTDOOR PANELS/ENCLOSURES.

CONTROL WIRING REQUIREMENTS

EACH ANALOG INPUT REQUIRES AN 182 TWISTED SHIELDED PAIR IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

EACH ANALOG OUTPUT REQUIRES AN 182 TWISTED SHIELDED PAIR IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

EACH DISCRETE INPUT REQUIRES 2 #14s IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

EACH DISCRETE OUTPUT REQUIRES 2 #14s IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.

CONTROL WIRING OF THE SAME TYPE MAY BE COMBINED INTO THE SAME CONDUIT. EXAMPLES: TWO 4-20MA ANALOG SIGNALS MAY BE COMBINED, TWO 24VDC DISCRETE SIGNALS MAY BE COMBINED, AND TWO 120VAC DISCRETE SIGNALS MAY BE COMBINED.

NOTE: INSTRUMENTS AND CABLE SHALL BE AS REQUIRED BY THE INSTRUMENT MANUFACTURER.

INSTRUMENT POWER

INSTRUMENTS REQUIRING 120 VAC:

- MAGNETIC FLOW METERS
- TURBIDITY TRANSMITTERS
- pH TRANSMITTERS
- ORP TRANSMITTERS
- DO TRANSMITTERS
- ULTRASONIC LEVEL TRANSMITTERS
- ULTRASONIC FLOW TRANSMITTERS
- INFLUENT AND EFFLUENT SAMPLERS

NOTE: THIS LIST IS PROVIDED AS A REFERENCE AND IS NOT ALL INCLUSIVE. COORDINATE WITH THE GENERAL CONTRACTOR AND THE EQUIPMENT SUPPLIERS FOR DETAILED WIRING REQUIREMENTS OF INSTRUMENTS, SENSORS, AND EQUIPMENT.

ELECTRICAL GENERAL NOTES

(GENERAL NOTES APPLICABLE TO ALL ELECTRICAL SHEETS)

- CONTRACTOR SHALL EXAMINE NOT ONLY PLANS AND SPECIFICATIONS FOR ELECTRICAL AND INSTRUMENTATION BUT ALSO PLANS AND SPECIFICATIONS FOR OTHER RELATED SECTIONS. VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS. EXECUTION OF CONTRACT IS EVIDENCE THAT CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. LATE CLAIMS FOR LABOR AND MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE WILL NOT BE RECOGNIZED.
- THE DRAWINGS ARE DIMENGRAMATIC AND ARE NOT INTENDED TO INCLUDE EVERY DETAIL OF REQUIRED CONSTRUCTION EQUIPMENT AND MATERIALS. PROVIDE ALL MATERIALS AND WORK NOT SPECIFICALLY MENTIONED, SHOWN, OR CAN BE REASONABLY INFERRED FROM THE DRAWINGS BUT WHICH ARE NECESSARY TO FULLY COMPLETE THE WORK.
- WHEN SUBSTITUTING OTHER EQUIPMENT, MATERIALS, AND PRODUCTS THAN SPECIFIED IN THE CONTRACT DOCUMENTS, INCLUDE IN PRICING ALL COSTS FOR OTHER DESIGN CHANGES TO THE PROJECT (ALL DIVISIONS) WHICH WILL RESULT FROM USE OF THE SUBSTITUTED ITEMS.
- REVIEW THE CONTRACT DOCUMENTS OF OTHER DIVISIONS, AND COORDINATE ELECTRICAL AND CONTROL WORK WITH THE WORK OF OTHER DISCIPLINES TO AVOID CONFLICTS AND INTERFERENCE.
- UPON COMPLETION OF THE WORK REQUIRED UNDER THIS CONTRACT, PROVIDE TYPED UPDATED DIRECTORY WITHIN DOOR OF EACH AFFECTED PANELBOARD. LEAVE "SPARE" BREAKERS IN "OFF" POSITION.
- ALL MOUNTING HEIGHTS INDICATED ON DRAWINGS ARE TO CENTERLINE, UNLESS OTHERWISE NOTED.
- PROVIDE LIGHTING FIXTURES COMPATIBLE WITH CEILING CONSTRUCTION. COORDINATE WITH ARCHITECTURAL ROOM FINISH SCHEDULES.
- IN AREAS HAVING FINISHED CEILINGS, LOCATE CEILING-MOUNTED ELECTRICAL DEVICES AND FIXTURES ACCORDING TO ARCHITECTURAL REFLECTED CEILING PLAN. DO NOT INSTALL CEILING-MOUNTED SMOKE DETECTORS WITHIN 4 FEET OF HVAC SUPPLY DIFFUSERS.
- IN ELECTRICAL AND MECHANICAL EQUIPMENT SPACES, COORDINATE EXACT LOCATIONS OF LIGHTING FIXTURES WITH CONDUIT BANS, SUCTHOOD, PIPING, STRUCTURE, SUPPORTS, AND OTHER OBSTRUCTIONS. LOCATE FIXTURES SUCH THAT DIMS, GAUGES, METERS, ETC. ARE PROPERLY ILLUMINATED.
- DO NOT USE ANY LIGHTING FIXTURE AS A RACEWAY FOR CONDUCTORS NOT SERVING THAT PARTICULAR FIXTURE.
- CONNECT BATTERY-OPERATED EMERGENCY LIGHTING UNITS AND EXIT SIGNS HAVING BATTERY BACKUP TO UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND NEMA SUCH THAT FAILURE OF CIRCUIT TRANSFERS UNIT FROM NORMAL TO EMERGENCY MODE, CAUSING LAMPS TO RE-ENERGIZE.
- DO NOT INSTALL OUTLET BOXES BACK-TO-BACK IN NON-RATED PARTITIONS, OFFSET AND SEAL SIMILAR TO REQUIREMENTS FOR RATED PARTITIONS. TO MINIMIZE SOUND TRANSMISSION.
- COORDINATE ROUTING OF ALL LARGE CONDUITS (2" DIA AND LARGER) AND PULL BOX LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION TO AVOID CONFLICTS AND TO GUARANTEE REQUIRED CLEARANCE AND ACCESSIBILITY OF ELECTRICAL AND OTHER SYSTEMS.
- COORDINATE WITH OWNER OR OWNER'S SELECTED VENDOR PRIOR TO ROUGH-IN FOR EXACT LOCATIONS OF SPECIAL PURPOSE OUTLETS DEDICATED TO SPECIFIC EQUIPMENT. VERIFY REQUIRED NEMA CONFIGURATION OF ALL SUCH OUTLETS.
- PROVIDE APPROPRIATE PULL WIRE IN EACH EMPTY SYSTEMS CONDUIT INCLUDED IN THIS PROJECT.
- INCLUDE GREEN INSULATED GROUNDING CONDUCTOR SIZED PER 2002 NEC TABLE 350-122 WITH ALL BRANCH CIRCUIT CONDUCTORS SERVING LIGHTING FIXTURES, RECEPTACLES, MOUNTING OR OTHER DEVICES INSTALLED AT OR BELOW 6'-0".
- MATCH ALL C.A.C. RATINGS AND OTHER CHARACTERISTICS OF EXISTING DEVICES IN PANELBOARD WHEN ADDING CONFORMERS TO EXISTING PANELBOARDS.
- ALL WORK SHALL BE IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE - LATEST EDITION ADOPTED BY INDIANA, THE INDIANA CODE AMENDMENT, LOCAL MUNICIPAL CODE, AND THE AUTHORITIES HAVING JURISDICTION.
- FEEDERS FROM PANELBOARDS BACK TO MAIN SWITCHBOARD, BETWEEN AUTO TRANSFER SWITCHES AND THEIR SUBDISCONNECTS, BETWEEN DRY TRANSFORMERS AND THEIR SUBDISCONNECTS ARE NOT INDICATED. FEEDERS ARE PART OF THE WORK, AND SHALL BE SIZED AS INDICATED ON THE LINE DIAGRAM.
- HOMERUNS SHALL NOT BE COMBINED IN A RACEWAY UNLESS SHOWN ON THE CONTRACT DRAWINGS. SINGLE PHASE BRANCH CIRCUIT HOMERUNS MAY BE COMBINED AT THE CONTRACTOR'S DISCRETION NOT GREATER THAN (3) PHASE CONDUCTORS, NEUTRAL CONDUCTORS, AND A GROUNDING CONDUCTOR.
- EACH SINGLE PHASE BRANCH CONDUCTOR SHALL HAVE A DEDICATED NEUTRAL BACK TO THE PANEL.
- ALL PENETRATIONS BELOW GRADE SHALL USE LINK SEALS.
- WHERE LOW VOLTAGE (CONTROL) CABLING IS ALLOWED TO BE INSTALLED WITHOUT A RACEWAY, IT SHALL BE SUPPORTED BY EXISTING INTERVALS OF 6'-0" AND NOT MORE THAN 6" FROM THE CABINETS, BOXES, FITTINGS, OUTLETS, RACKS, FRAMES AND TERMINALS.
- ALL MOUNTING HARDWARE INCLUDING NUTS, BOLTS, SCREWS, WASHERS, ETC. SHALL BE STAINLESS STEEL.
- MOUNT JUNCTION BOXES AND DISCONNECT SWITCHES ON STAINLESS STEEL UNISTRUT.
- ALL UNISTRUT, MOUNTING BRACKETS AND SUPPORTING STRUCTURES SHALL BE STAINLESS STEEL.
- DO NOT MIX CONTROL AND POWER CONDUCTORS IN THE SAME CONDUIT. DO NOT MIX DISCRETE AND ANALOG CONTROL CONDUCTORS IN THE SAME CONDUIT.
- ADJUSTABLE SPEED DRIVES (ASD) LINE AND LOAD WIRE SHALL BE RUN IN SEPARATE RACEWAYS.
- CONTRACTOR SHALL COORDINATE WITH HEAT TRACE MANUFACTURER DURING BIDDING AND CONSTRUCTION AND SHALL PROVIDE ALL CONDUIT, WIRING AND CIRCUITS AS REQUIRED. HEAT TRACE SHALL BE PROVIDED/INSTALLED COMPLETE. ALL HEAT TRACE IS REQUIRED TO BE GFI PROTECTED.

PUMP AND METER LEGEND

SYMBOL	DESCRIPTION
[Symbol]	MAGNETIC FLOW METER
[Symbol]	SONIC FLOW METER
[Symbol]	CENTRIFUGAL PUMP
[Symbol]	LOBE PUMP
[Symbol]	PERISTALTIC PUMP
[Symbol]	SUBMERSIBLE PUMP
[Symbol]	GRINDER PUMP

LIGHTING LEGEND

SYMBOL	DESCRIPTION
[Symbol]	FIXTURE WITH STANDARD BALLAST.
[Symbol]	FIXTURE WITH STANDARD BALLAST AND EMERGENCY BALLAST.

LEGEND

SYMBOL	DESCRIPTION	MTG HGT AFF TO CL UN
[Symbol]	OPEN LIGHTING FIXTURE SYMBOLOLOGY DENOTING FIXTURES CONNECTED TO NORMAL POWER. FIXTURE TYPE DETERMINES MOUNTING.	---
[Symbol]	SINGLE DIAGONAL LIGHTING FIXTURE SYMBOLOLOGY DENOTING FIXTURES CONNECTED TO CRITICAL OR EQUIPMENT BRANCH OR EMERGENCY POWER. UNIFORM FIXTURE TYPE DETERMINES MOUNTING.	---
[Symbol]	DOUBLE DIAGONAL LIGHTING FIXTURE SYMBOLOLOGY DENOTING FIXTURES CONNECTED TO LIFE SAFETY BRANCH (OR EMERGENCY POWER). UNIFORM FIXTURE TYPE DETERMINES MOUNTING.	---
[Symbol]	BATTERY POWERED EMERGENCY LIGHTING UNIT	7'-6"
[Symbol]	EXIT SIGN: ARROWS DENOTE DIRECTIONAL INDICATING CHEVRON ROUPTS. SHADING DENOTES FACE(S) ORIENTATION.	---
[Symbol]	WALL/WASH OR OTHER DIRECTIONALLY ADJUSTABLE/IMAINABLE FIXTURE. OPEN SIDE DENOTES ORIENTATION. TYPE DETERMINES MOUNTING.	---
[Symbol]	TRACK LIGHTING FIXTURE: TYPE DETERMINES MOUNTING.	---
[Symbol]	POLE-MOUNTED SITE LIGHTING FIXTURE: TYPE DETERMINES MTG.	---
[Symbol]	FLOOD LIGHTING FIXTURE: TYPE DETERMINES MOUNTING.	---
[Symbol]	PHOTO-CELL	---
[Symbol]	ALL FIXTURES IN THIS SPACE SHALL BE SAME TYPE INDICATED, U.G.N.	---
[Symbol]	S SINGLE-POLE TOGGLE SWITCH	3'-10"
[Symbol]	S SINGLE-POLE TOGGLE SWITCH: SLASH DENOTES ESSENTIAL POWER SYSTEM CONNECTION - TYPICAL FOR ALL SWITCHES.	3'-10"
[Symbol]	DUAL TECHNOLOGY WALL MNTD OCCUPANCY SENSOR WITH MANUAL OVERRIDE SWITCH	3'-10"
[Symbol]	DUAL TECHNOLOGY CEILING MNTD OCCUPANCY SENSOR WITH REMOTE MANUAL OVERRIDE SWITCH	3'-10"
[Symbol]	S SINGLE-POLE REMOTE CONTROL SWITCH FOR CEILING MNTD OCCUPANCY SENSOR	3'-10"
[Symbol]	DMMER SWITCH	3'-10"
[Symbol]	S THREE-WAY DIMMER SWITCH	3'-10"
[Symbol]	S SINGLE-POLE TOGGLE SWITCH WITH PILOT LIGHT	3'-10"
[Symbol]	S SINGLE-POLE MOTOR-RATED TOGGLE SWITCH DISCONNECT	3'-10"
[Symbol]	S SINGLE-POLE DOUBLE-POLE MANUAL MOTOR STARTER WITH MELTING ALLOY ELEMENTS FOR THERMAL OVERLOAD PROTECTION	3'-10"
[Symbol]	S OCCUPANCY SENSOR SWITCH	3'-10"
[Symbol]	S INTERVAL TIMER RESET AND CONTROL SWITCH	3'-10"
[Symbol]	S JOG SWITCH	3'-10"
[Symbol]	MUSHROOM HEAD TYPE PUSHBUTTON STATION	5'-0"
[Symbol]	P AUTO DOOR CONTROL PUSHPLATE	---
[Symbol]	V VARIABLE INTENSITY CONTROLLER INCLUDED WITH OWNER-FURNISHED-CONTRACTOR-INSTALLED SCROLLING LIGHTING FIXTURE	5'-0"
[Symbol]	LOW VOLTAGE CONTROL SWITCH	3'-10"
[Symbol]	F FACTORY SUPPLIED WALL CONTROLLER FOR CEILING MOUNTED LIGHTING-INSTALLED BY ELECTRICAL CONTRACTOR	3'-10"
[Symbol]	120V DUPLEX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
[Symbol]	120V DUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT	ABOVE COUNTER
[Symbol]	120V DUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT	ABOVE COUNTER
[Symbol]	120V QUADRIPLX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
[Symbol]	120V QUADRIPLX RECEPTACLE, SPECIAL MOUNTING HEIGHT	ABOVE COUNTER
[Symbol]	120V SINGLE RECEPTACLE, AMP RATING (IF OTHER THAN 20A) SHOWN. STANDARD MOUNTING HEIGHT, OR OTHER HEIGHT AS NOTED	1'-6", UNON
[Symbol]	120V GFCI DUPLEX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
[Symbol]	120V GFCI QUADRIPLX RECEPTACLE, SPECIAL MOUNTING HEIGHT	ABOVE COUNTER
[Symbol]	120V GFCI DUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT	ABOVE COUNTER
[Symbol]	SINGLE RECEPTACLE (OTHER THAN 120V), VOLTAGE, AMP RATING, NEMA CONFIGURATION, AND MOUNTING HEIGHT AS NOTED	---
[Symbol]	RECEPTACLE OR JBOX CONNECTION FOR X-RAY VIEWER. VERIFY CONNECTION ROOM'S WITH UNIT FURNISHED. PRIOR TO ROUGH-IN.	---
[Symbol]	120V DUPLEX RECEPTACLE IN FLUSH FLOOR-MOUNTED BOX	---
[Symbol]	TELE-POWER POLE	---
[Symbol]	HALON DUMP STATION	---
[Symbol]	FIRE ALARM MANUAL PULL STATION	3'-10"
[Symbol]	FIRE ALARM MANUAL PULL STATION, KEY-OPERATED	3'-10"
[Symbol]	FIRE ALARM CEILING-MOUNTED SMOKE DETECTOR	---
[Symbol]	FIRE ALARM CEILING-MOUNTED HEAT DETECTOR	---
[Symbol]	FIRE ALARM SUPPLY AIR DUCT-MOUNTED SMOKE DETECTOR	---
[Symbol]	FIRE ALARM RETURN AIR DUCT-MOUNTED SMOKE DETECTOR	---
[Symbol]	FIRE ALARM PROJECTED BEAM SMOKE DETECTOR - RECEIVER	AS NOTED
[Symbol]	FIRE ALARM PROJECTED BEAM SMOKE DETECTOR - TRANSMITTER	AS NOTED
[Symbol]	FIRE ALARM CONNECTION TO SPRINKLER SYSTEM VALVE STATUS SWITCH (TAMPER SWITCH)	---
[Symbol]	FIRE ALARM CONNECTION TO SPRINKLER SYSTEM WATER FLOW SWITCH	---
[Symbol]	FIRE ALARM AUDIOVISUAL NOTIFICATION DEVICE-CHIME & STROBE	6'-8"
[Symbol]	FIRE ALARM AUDIOVISUAL NOTIFICATION DEVICE-HORN & STROBE	6'-8"
[Symbol]	FIRE ALARM VISUAL ONLY NOTIFICATION DEVICE - STROBE LIGHT	6'-8"
[Symbol]	FIRE ALARM SPEAKER: CEILING-MOUNTED, WALL-MOUNTED	6'-8"
[Symbol]	FIRE ALARM HORN: WALL-MOUNTED	AS NOTED
[Symbol]	DUCT SMOKE DETECTOR ALARM REMOTE INDICATOR LIGHT.	6'-8"
[Symbol]	DUCT SMOKE DETECTOR ALARM REMOTE INDICATOR LIGHT AND TEST SWITCH. CEILING-MOUNTED, WALL-MOUNTED	6'-8"
[Symbol]	FIRE ALARM ZONE ADDRESSABLE MODULE	---
[Symbol]	FIRE ALARM INDIVIDUAL ADDRESSABLE MODULE	---
[Symbol]	FIRE ALARM ELECTRO-MAGNETIC DOOR HOLDER	6'-4"
[Symbol]	FIRE RELAY	---
[Symbol]	DESK MOUNTED INTERCOM	---
[Symbol]	WALL MOUNTED INTERCOM	---
[Symbol]	X EXPLOSION PROOF SWITCH	3'-10"
[Symbol]	3 WAY SWITCH	3'-10"
[Symbol]	4 WAY SWITCH	3'-10"
[Symbol]	NEMA 4X SWITCH	3'-10"

LEGEND

ABBREVIATIONS

ABBV	DESCRIPTION	IG	ISOLATED GROUND
ABV	ABOVE		
AFF	ABOVE FINISHED FLOOR	MON	MONITOR
ADC	ABOVE FINISHED CEILING	MTG	MOUNTING
BFC	BELOW FINISHED CEILING	MV	MULTI-VIEWER
C	CRITICAL BRANCH OR EMERG PWR-RED DEVICE & PLATE, UNON	MW	MICROWAVE OVEN
CL	CENTER-LINE	NEC	NATIONAL ELECTRICAL CODE
CLG	CEILING-MOUNTED	OCPD	OVERCURRENT PROTECTIVE DEVICE
COF	COFFEE MAKER	OFCI	OWNER-FURNISHED-CONTRACTOR-INSTALLED
COP	COPIER	OFE	OWNER-FURNISHED EQUIPMENT
CTR	COUNTER	PRF	PRINTER
ECB	ENCLOSED CIRCUIT BREAKER	PTS	PNEUMATIC TUBE STATION
EMER	EMERGENCY	Q	EQUIP BRANCH OR EMERG PWR-RED DEVICE & PLATE, UNON
EW	ELECTRIC WATER COOLER	REF	REFRIGERATOR
EWH	ELECTRIC WATER HEATER	REQMTS	REQUIREMENTS
FAX	FACSIMILE MACHINE	WP	WEATHERPROOF
FBO	FURNISHED BY OTHERS	T	TAMPERPROOF DEVICE
GFCI	GROUND FAULT INTERRUPTING - ING - PERSONNEL PROTECTION	UNON	UNLESS OTHERWISE NOTED
GFI	GROUND FAULT INTERRUPTING - EQUIPMENT PROTECTION	UCR	UNDER-COUNTER REFRIGERATOR
HGT	HEIGHT		
FPMR	FUSES PER MANUFACTURER'S RECOMMENDATIONS		

SYMBOL DESCRIPTION MTG HGT AFF TO CL UN

[Symbol]	EXPOSED RACEWAY	---
[Symbol]	RACEWAY CONCEALED IN OR ABOVE CEILINGS AND WITHIN WALLS	---
[Symbol]	BRANCH CIRCUIT RACEWAY CONCEALED IN OR BELOW FLOOR SLAB OR BELOW GRADE	---
[Symbol]	FEEDER RACEWAY CONCEALED BELOW FLOOR SLAB OR BELOW GRADE	---
[Symbol]	LIGHTNING PROTECTION CABLING	---
[Symbol]	HOMERUN RACEWAY: NUMBER OF ARROWHEADS DENOTES NUMBER OF CIRCUITS.	---
[Symbol]	RACEWAY TURNING UP AS VIEWED FROM THE LOAD	---
[Symbol]	RACEWAY TURNING DOWN AS VIEWED FROM THE LOAD	---
[Symbol]	RACEWAY VERTICAL RISER WITH HORIZONTAL CONTINUATION AT TWO LEVELS SHOWN	---
[Symbol]	CAPPED RACEWAY	---
[Symbol]	GENERAL LIGHTING OR OUTLET CIRCUIT - MAY BE DAISY CHAINED	---
[Symbol]	JUNCTION BOX	AS NOTED
[Symbol]	ENCLOSED BREAKER	---
[Symbol]	FUSIBLE SAFETY SWITCH (AMP RATING, POLES, FUSE SIZE, AND NEMA ENCLOSURE TYPE IF OTHER THAN 1 NOTED)	---
[Symbol]	NON-FUSIBLE SAFETY SWITCH (AMP RATING, POLES, AND NEMA ENCLOSURE TYPE IF OTHER THAN 1 NOTED)	---
[Symbol]	COMBINATION MAGNETIC CROSS-THE-LINE STARTER WITH MOTOR CIRCUIT PROTECTOR (NEMA STARTER SIZE NOTED)	---
[Symbol]	CONTROL PANEL FURNISHED INTEGRAL TO EQUIPMENT (SINGLE-POINT ELECTRICAL CONNECTION REQUIRED)	---
[Symbol]	MOTOR	---
[Symbol]	FLEXIBLE CONDUIT CONNECTION	---
[Symbol]	SURFACE-OR FLUSH-MOUNTED LIGHTING/RECEPTACLE PANELBOARD	---
[Symbol]	POWER DISTRIBUTION PANELBOARD	---
[Symbol]	DRY TYPE TRANSFORMER	---
[Symbol]	MISCELLANEOUS SYSTEMS PANEL OR CABINET: REFER TO ABBREVIATIONS.	---
[Symbol]	NOTE: IF ALL ABBREVIATIONS, NOTES, AND SYMBOLS SHOWN ON THIS DRAWING DO NOT NECESSARILY APPEAR IN THIS SET OF CONTRACT DOCUMENTS, REFER ONLY TO THOSE THAT APPLY.	---

ABBREVIATIONS

ABBREVIATIONS	MEANING
GFI	GROUND FAULT INTERRUPTER
WP	WEATHER PROOF
AFF	ABOVE FINISHED FLOOR
UNO	UNLESS NOTED OTHERWISE
FPMR	FUSE PER MANUFACTURERS RECOMMENDATIONS
IG	ISOLATED GROUND-ORANGE RECEPTACLE
M	MONITOR RECEPTACLE-CRITICAL POWER-RED RECEPTACLE - 60" A.F.F. (UNO) (UNLESS VENDOR DRAWINGS REQUIRE DIFFERENT HEIGHT)
TSP	TWISTED SHIELDED PAIR

MOTOR CONTROLLER LEGEND

SYMBOL	DESCRIPTION
[Symbol]	ACROSS THE LINE MOTOR STARTER
[Symbol]	SOFT STARTER
[Symbol]	VARIABLE FREQUENCY DRIVE
[Symbol]	ACROSS THE LINE MOTOR STARTER WITH INTEGRAL DISCONNECT
[Symbol]	SOFT STARTER WITH INTEGRAL DISCONNECT
[Symbol]	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECT

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No. 11300603
STATE OF INDIANA

Signature: _____ Date: 3/13/2025

**CITY OF BERNE, IN
ADAMS COUNTY**

**2024 LTCP PHASE II
COLLECTION SYSTEM
IMPROVEMENTS
CONTRACT B**

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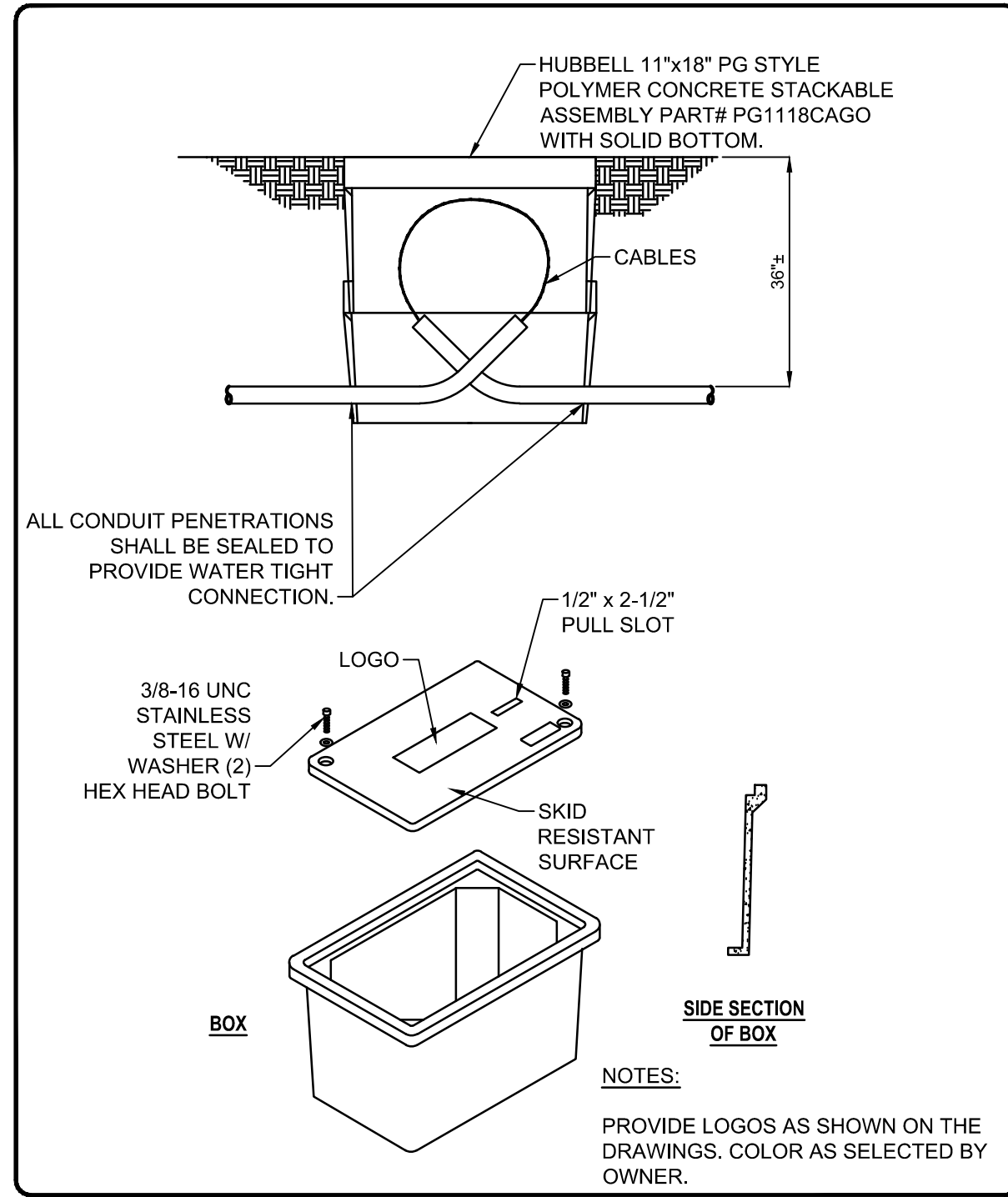
Designed By: DS | Drawn By: DS | Checked By: TLC

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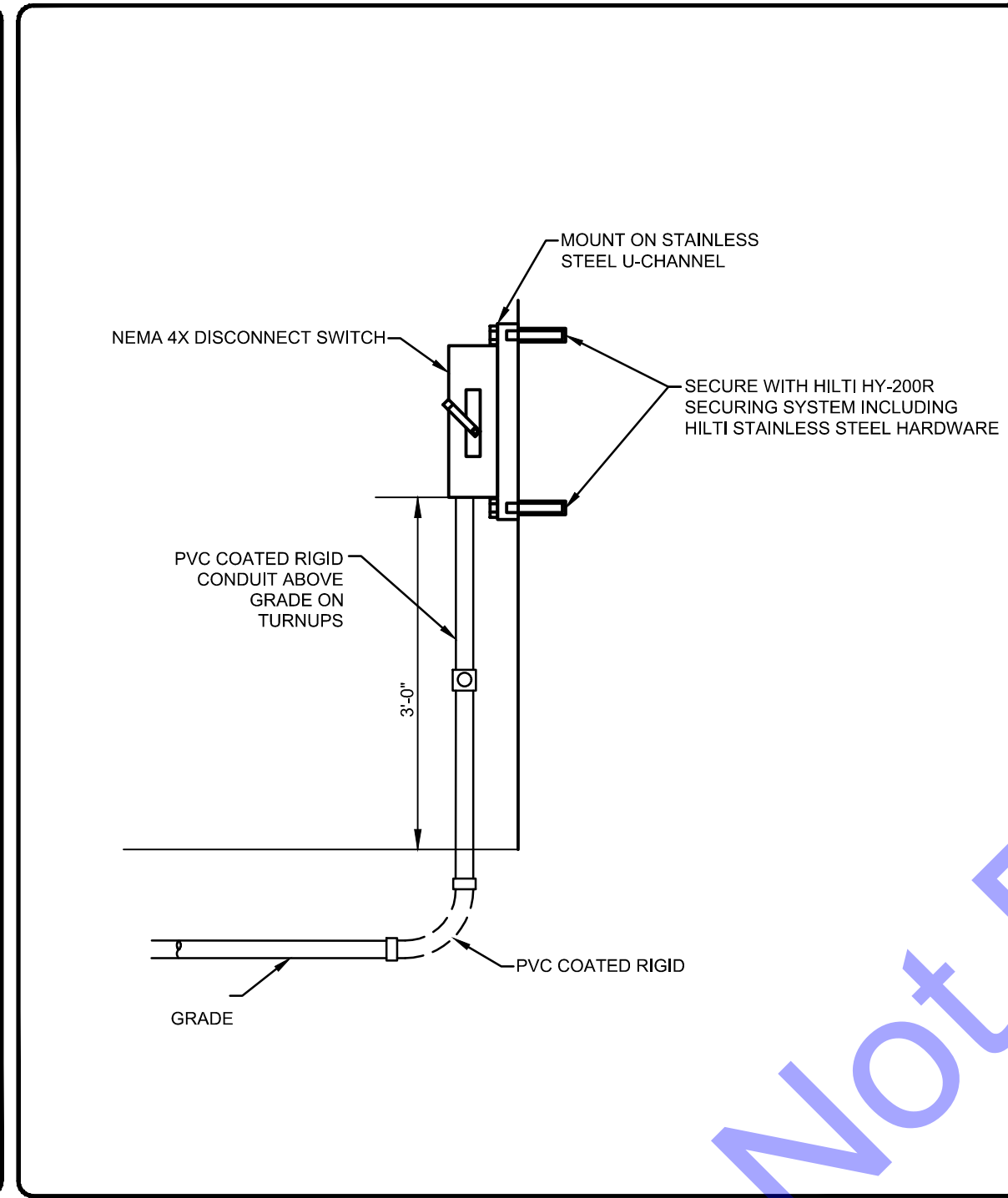
ELECTRICAL LEGENDS AND SCHEDULES

Drawing No: **E0-0**

Sheet: 34 OF 37

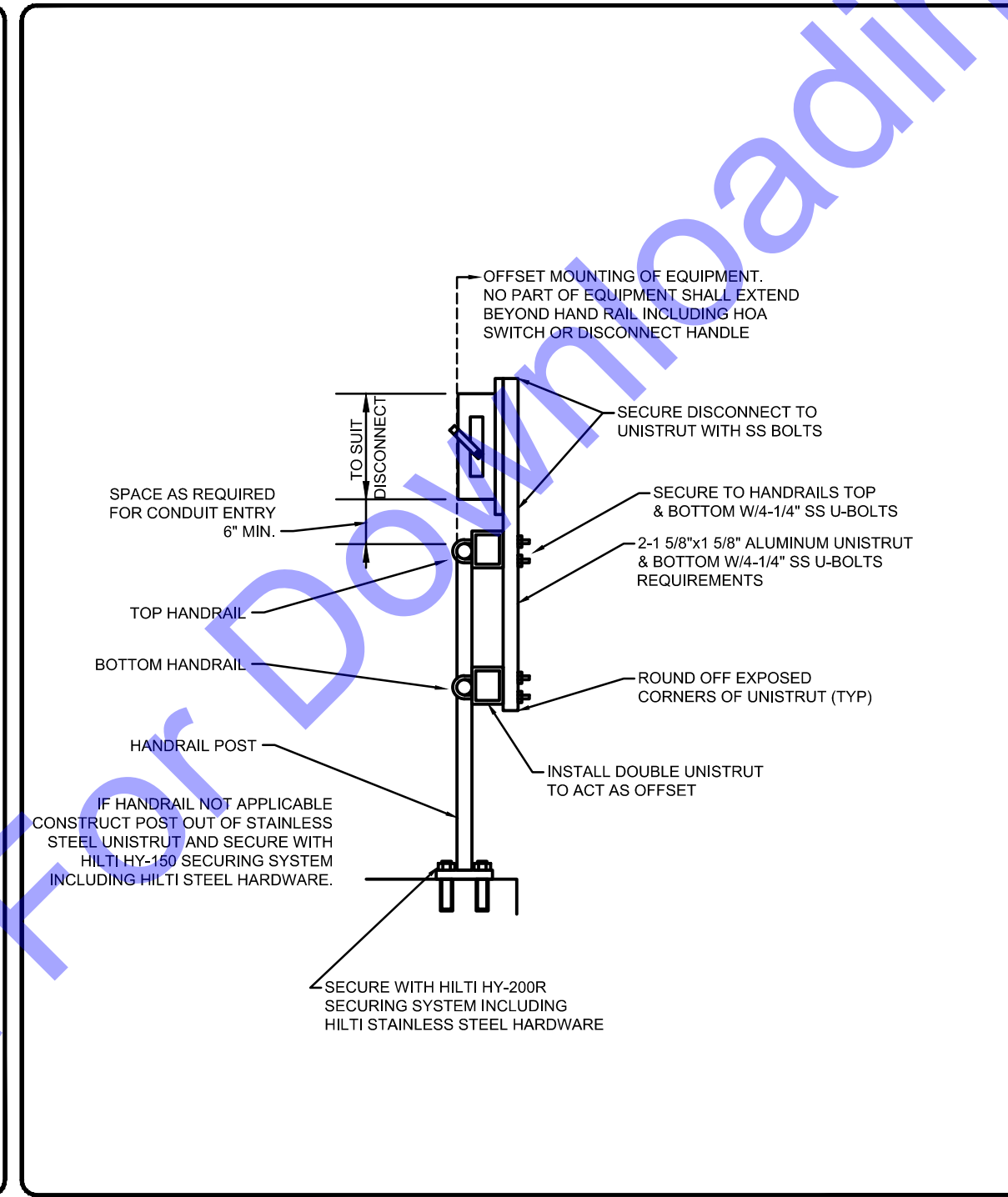


YARD PULL/JUNCTION BOX DETAIL



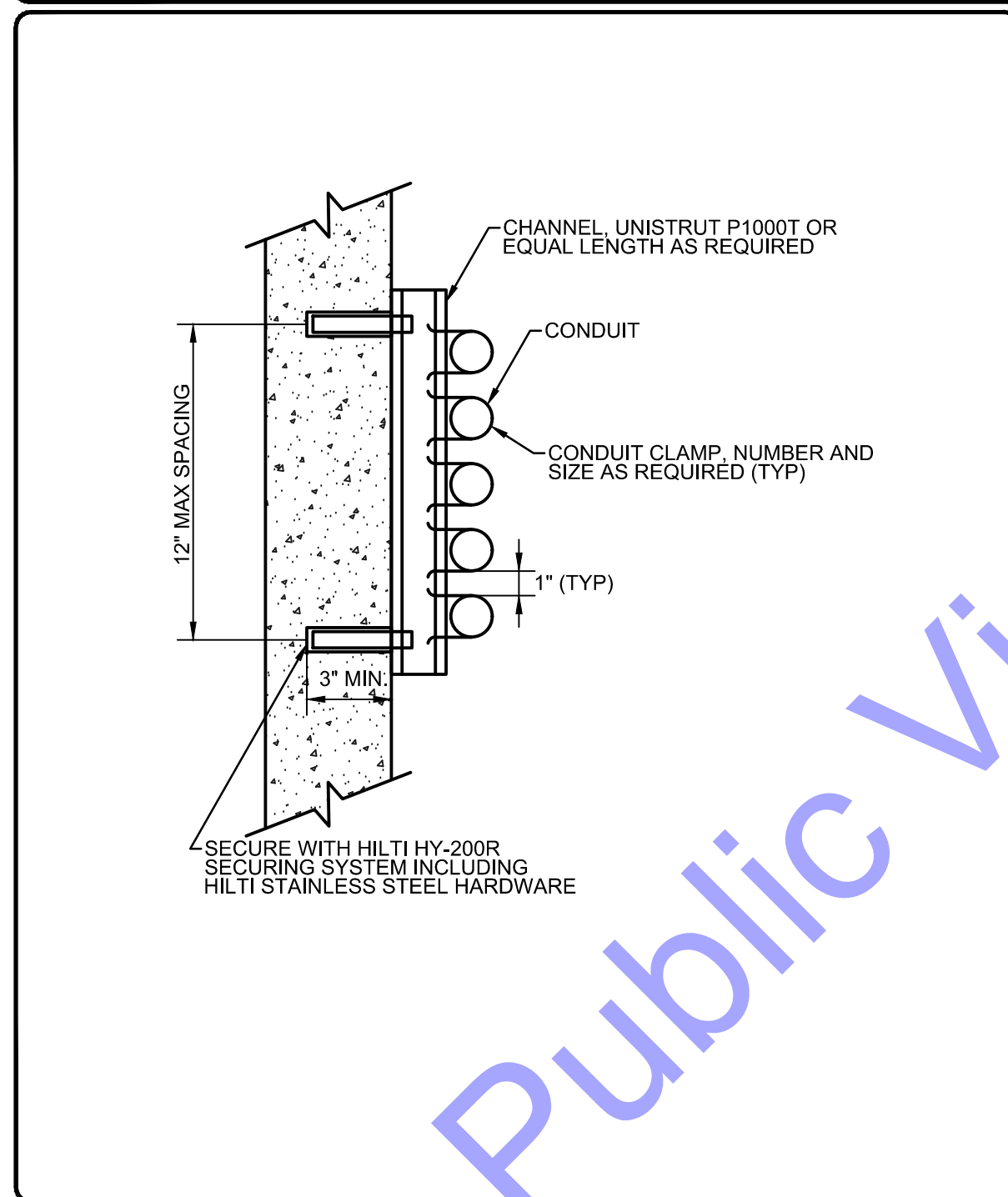
WALL MOUNT DISCONNECT SWITCH

NOT TO SCALE



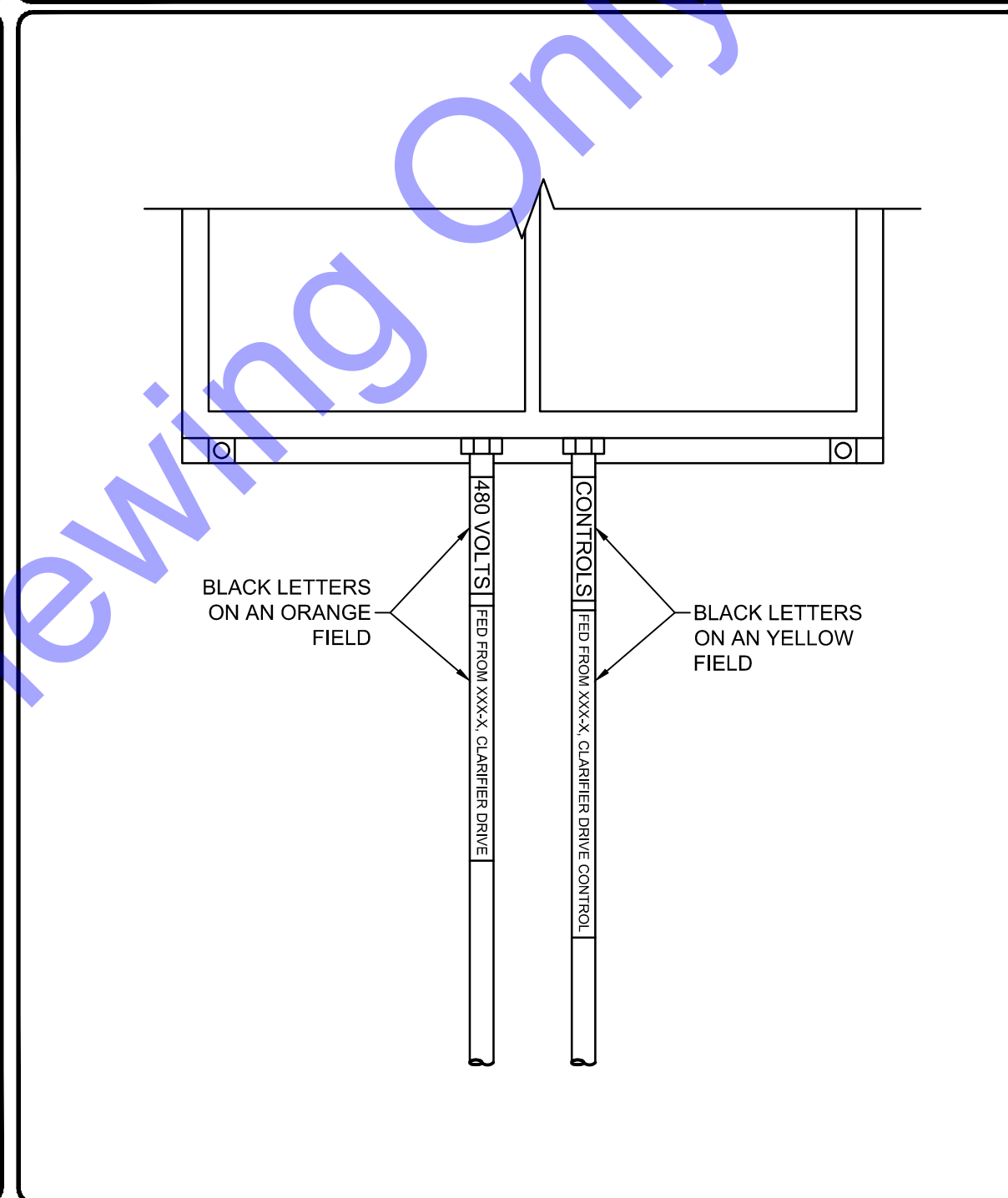
HANDRAIL MOUNT DISCONNECT

NOT TO SCALE



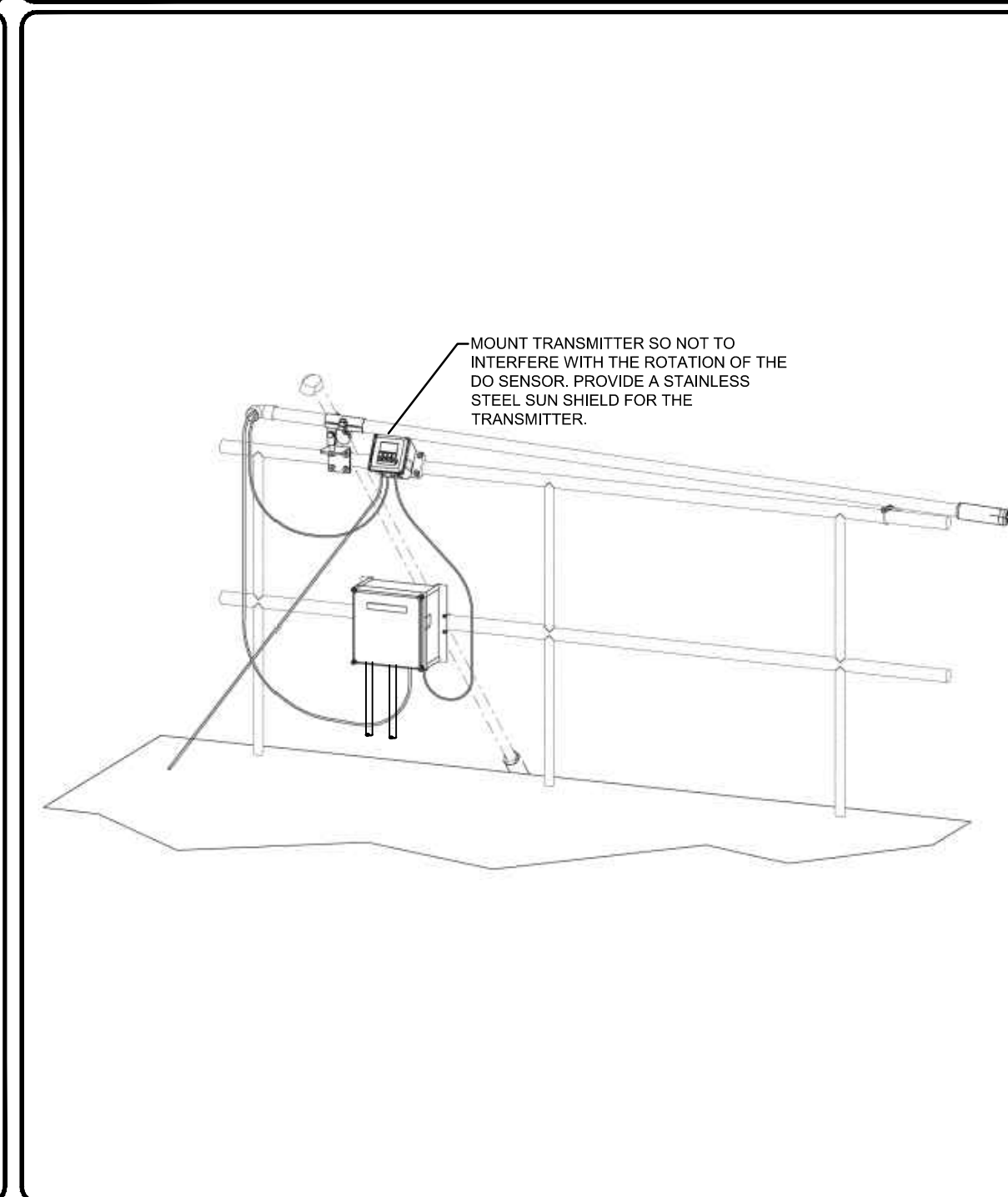
WALL MOUNTED CONDUIT RACK

NOT TO SCALE



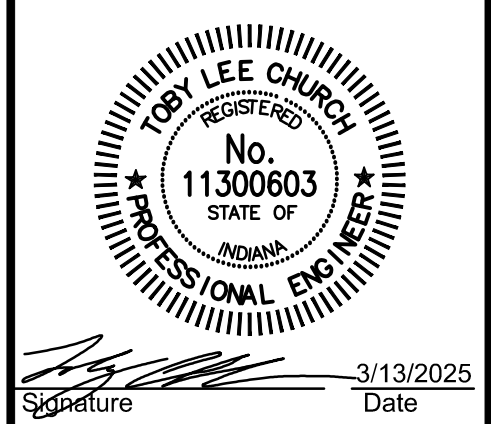
CONDUIT IDENTIFICATION

NOT TO SCALE



DO SENSOR AND TRANSMITTER HANDRAIL MOUNT DETAIL

NOT TO SCALE



Signature: _____ Date: 3/13/2025

CITY OF BERNE, IN
 ADAMS COUNTY
 2024 LTCP PHASE II
 COLLECTION SYSTEM
 IMPROVEMENTS
 CONTRACT B

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Designed By: DS Drawn By: DS Checked By: TLC
 Issue Date: 03/2025 Project No: S24028 Scale: AS SHOWN

ELECTRICAL DETAILS

Drawing No:
E3-0
 Sheet: 37 OF 37