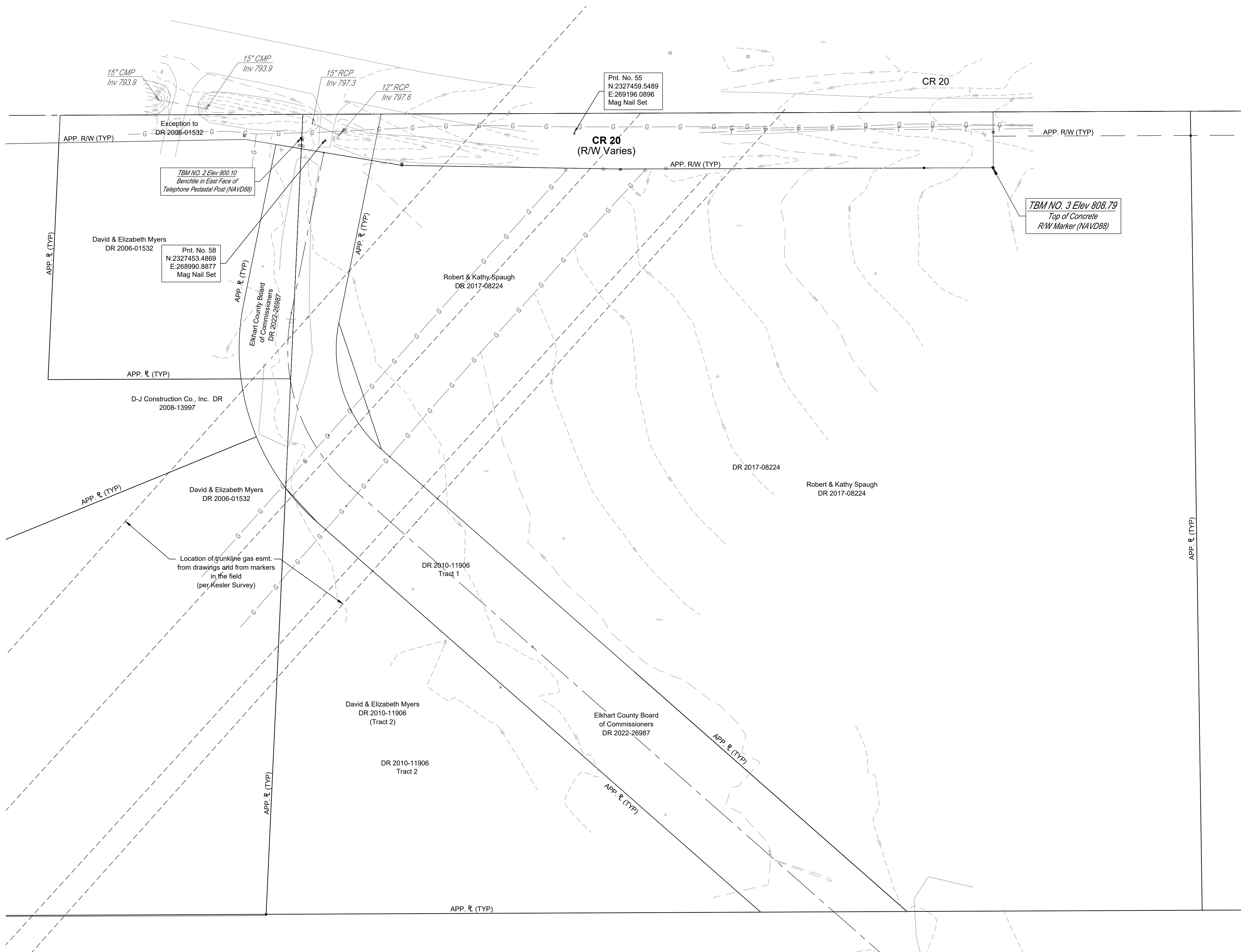


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Topographic Survey Notes
 This topographic survey was performed in June, 2024.

This is not a boundary survey. Right-of-way lines and property lines are based on limited field evidence and limited research. All right-of-way and property lines shown are apparent.

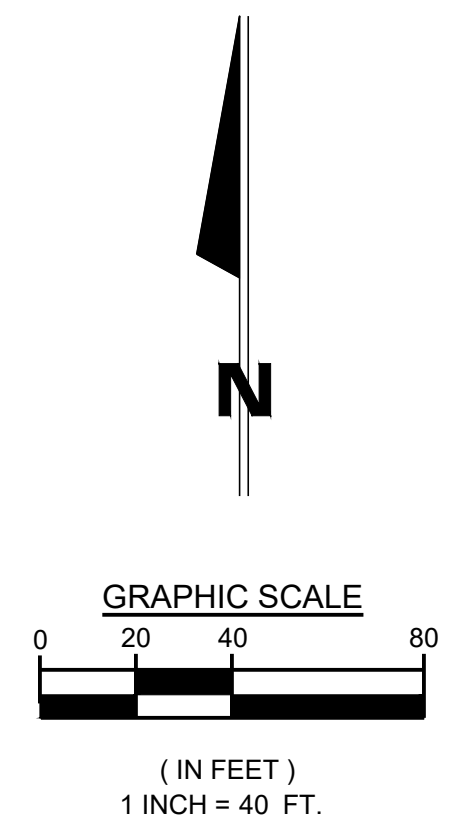
Horizontal datum is based upon the Indiana State Plane Coordinate System, East Zone, GPS derived utilizing the INCORS Network.

Basis of Elevation is GPS derived utilizing the INCORS Network, NAVD88 datum.

The gas trunkline easement description is included in the project specifications.

Utility Notes
 Locations of existing underground utilities shown on this drawing are based on evidence of above ground features, locations marked in the field by others or based on record information provided by the utility company. No excavation should occur without notification of appropriate agencies and utility companies.

Utility locates were requested on 06/11/2024 utilizing the "Call Before You Dig" 811, utility locating service. The following ticket number was assigned for this project: 2406114534



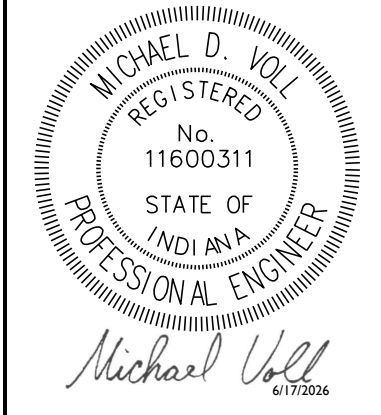
Legend

●	Existing Monument (Origin Unknown Unless Otherwise Noted)
⊕	Bench Mark
⊙	R/W Monument
⊠	Control Point
⊞	Control Cabinet
⊞	Gas Marker
⊞	Telephone Pedestal
⊞	Mailbox
⊞	Rocks/Boulders
⊞	Post
⊞	Soil Boring
⊞	Sign
— G —	Gas Line
— T —	Telephone Line
— ST —	Storm Line
~~~~~	Treeline

REV	DESCRIPTION	BY	DATE

**JONES  
PETRIE  
RAFINSKI**

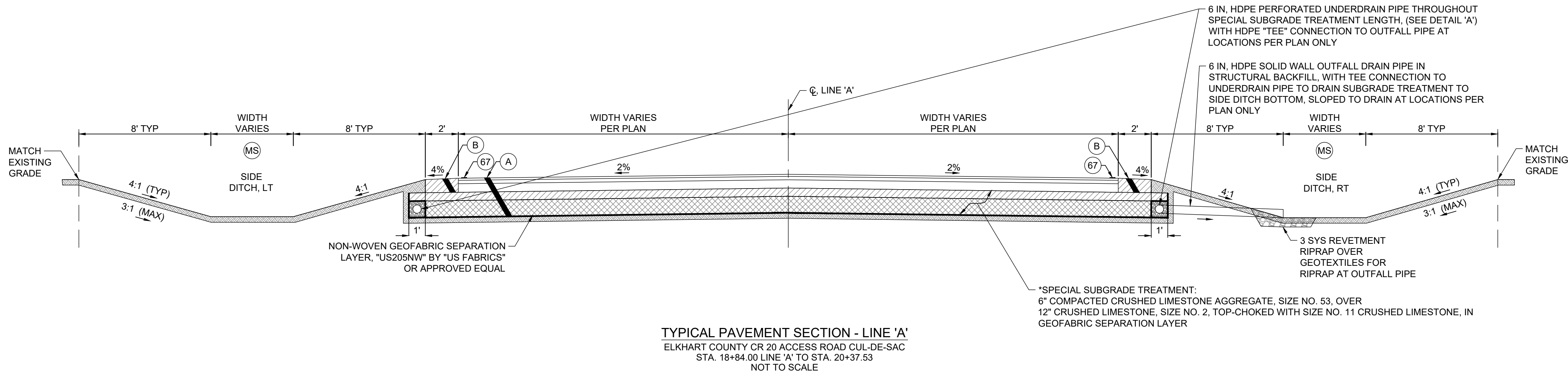
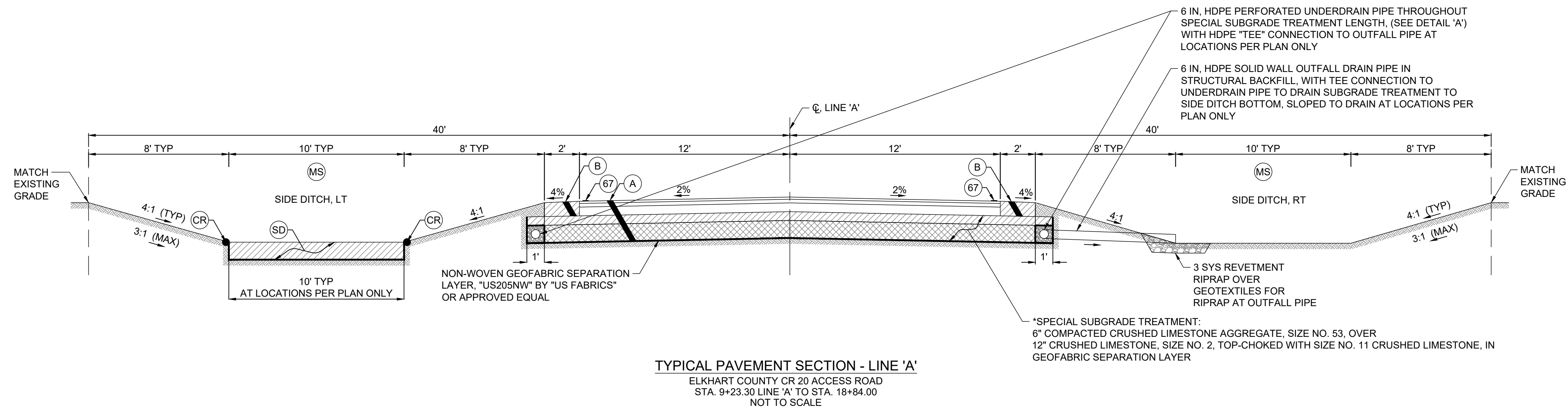
South Bend, IN  
 Fort Wayne, IN  
 Goshen, IN  
 p: 574.232.4388 p: 260.422.2522



CR 20 ACCESS ROAD  
 ELKHART COUNTY  
 610 STEURY AVE  
 GOSHEN, IN 46528  
**TOPOGRAPHIC SURVEY**

DESIGNED BY: MV
REVIEWED BY: MEW
DRAWN BY: DK
REVIEWED BY: MV
DATE: JULY 2024
JOB NUMBER: 2024-01266
HORIZ. SCALE: 1" = 40'
VERTICAL SCALE: NONE
<b>C100</b>

J:\Projects\2024\Projects\2024-01266\07_Design\ENG\Plans\C101 - Typical Sections.dwg hblack 2025-05-17 3:12 PM

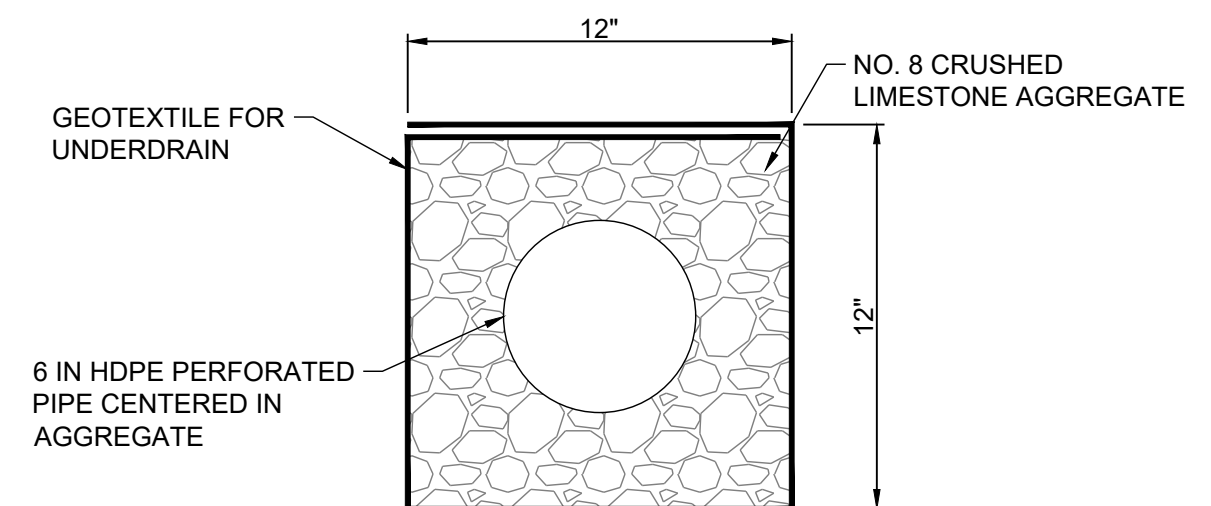


**LEGEND**

- (A) FULL DEPTH BITUMINOUS PAVEMENT:  
1 1/2" (165#/SYD) HMA SURFACE, TYPE 'B', ON TACK COAT, OVER  
2" (220#/SYD) HMA INTERMEDIATE, TYPE 'B', OVER  
3" (330#/SYD) HMA BASE, TYPE 'B', OVER  
SPECIAL SUBGRADE TREATMENT*
- (B) 6 1/2" COMPACTED CRUSHED LIMESTONE SHOULDER AGGREGATE, SIZE NO. 53
- (SD) SUBSURFACE DRAIN:  
12" SIZE NO. 2 CRUSHED LIMESTONE AGGREGATE, IN  
GEOTEXTILE SEPARATION LAYER
- (CR) EROSION CONTROL COIR ROLL, 12" DIA,  
CONTINUOUSLY STITCHED & STAKED INTO  
PLACE TO REMAIN, HALF EMBEDDED
- (MS) MULCHED SEEDING, TYPE 'R' ON TYPICAL 4" TOPSOIL
- (67) LINE, PAINT, SOLID WHITE, 4"

**NOTES:**

1. THE CONTRACTOR SHALL STOCKPILE EXISTING TOPSOIL SEPARATELY FROM OTHER SITE GRADING SOILS FOR EXISTING TOPSOIL TO BE PLACED AT PROPOSED MULCHED SEEDING AREAS AT TYPICAL 4" DEPTH.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROL FOR ESTABLISHING NEW GRASS GROWTH, INCLUDING ANY NECESSARY CLEAN-UP, RE-GRADING, AND RE-SEEDING.
3. THE CONTRACTOR MAY SUBMIT ALTERNATE CRUSHED CONCRETE OR CRUSHED SLAG AGGREGATE, SIZE NO. 53 AND/OR NO. 2 SAMPLE TO THE ENGINEER FOR REVIEW PRIOR TO THE SUBGRADE TREATMENT WORK. CRUSHED CONCRETE AGGREGATE, IF APPROVED, SHALL BE USED UNIFORMLY THROUGHOUT THE SUBGRADE TREATMENT. CRUSHED LIMESTONE, SIZE NO. 53 SHALL BE USED TO CONSTRUCT SHOULDER (B).
4. THE CONTRACTOR SHALL AVOID SEDIMENTATION AND EXCESSIVE TOPSOIL THICKNESS PLACEMENT WITHIN ROADWAY SIDE DITCHES. AS NECESSARY, THE CONTRACTOR SHALL REMOVE SEDIMENTATION AND EXCESS TOPSOIL THICKNESS FROM ROADWAY SIDE DITCHES IN ORDER TO PROVIDE OPTIMUM AVAILABLE SOIL PERCOLATION.
5. TOP-CHOKING LAYER OF SIZE NO. 11 CRUSHED LIMESTONE OVER SIZE NO. 2 CRUSHED AGGREGATE SHALL BE INCLUDED IN THE COST OF THE ESTABLISHED PAY ITEM FOR SIZE NO. 2 CRUSHED AGGREGATE AS BID.

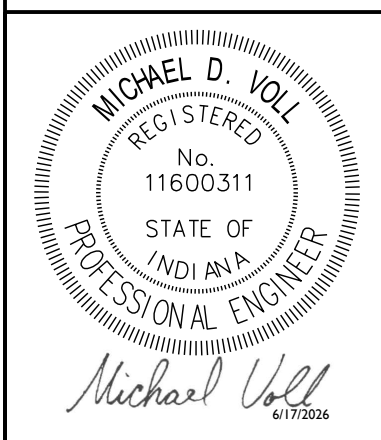


**DETAIL 'A'**  
6 IN HDPE PERFORATED UNDERDRAIN PIPE  
NOT TO SCALE

REV	DESCRIPTION	BY	DATE

**JONES  
PETRIE  
RAFINSKI**

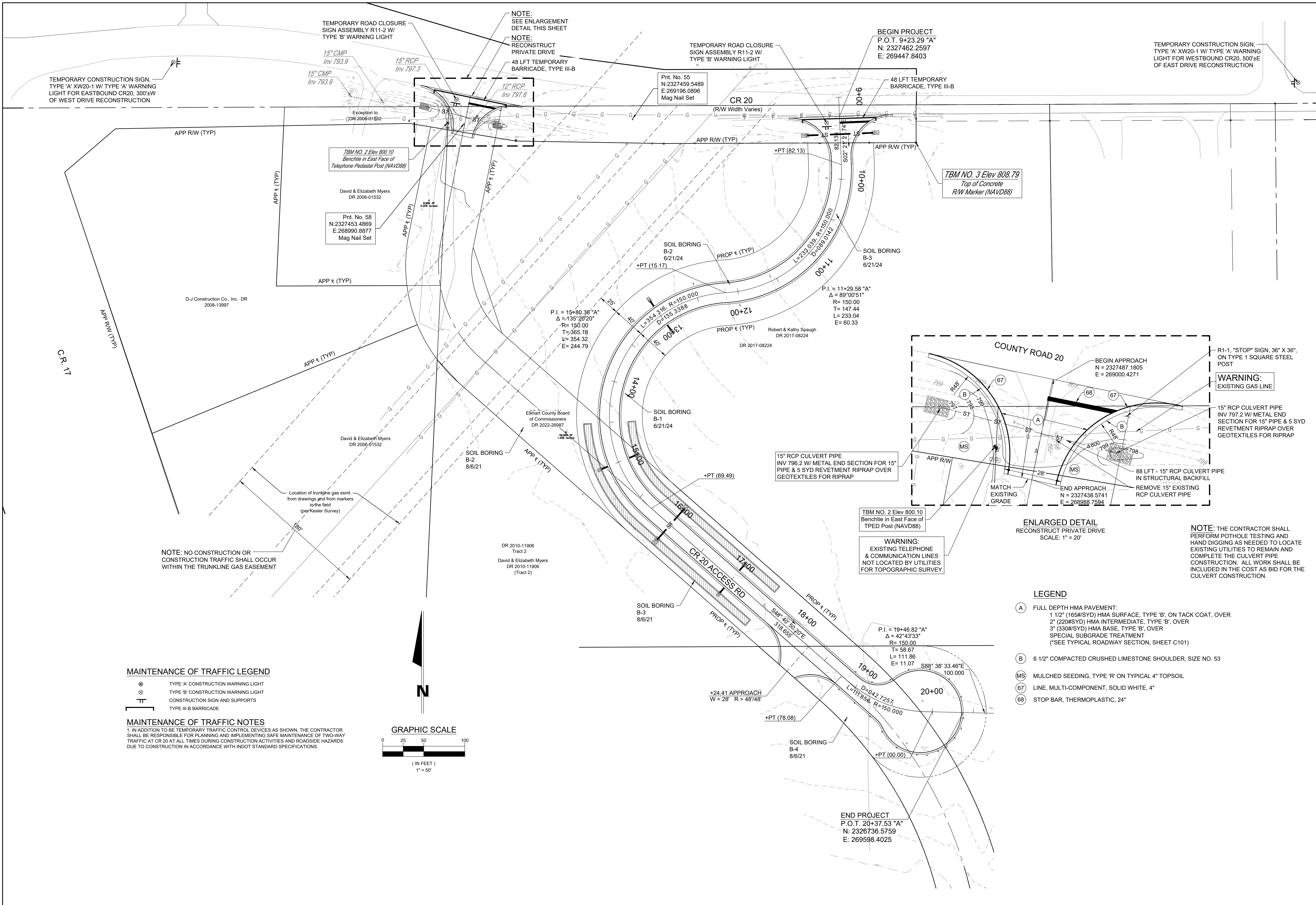
Fort Wayne, IN  
Goshen, IN  
South Bend, IN  
p. 574.232.4388  
p. 574.232.4388  
p. 260.422.2522



CR 20 ACCESS ROAD  
ELKHART COUNTY  
610 STEURY AVE  
GOSHEN, IN 46528  
TYPICAL ROADWAY SECTIONS

DESIGNED BY: MV	REVIEWED BY: MEW
DRAWN BY: DK	REVIEWED BY: MV
DATE: JULY 2024	
JOB NUMBER: 2024-01266	
HORIZ. SCALE: NONE	
VERTICAL SCALE: NONE	
<b>C101</b>	

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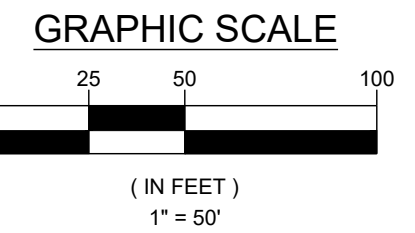


**MAINTENANCE OF TRAFFIC LEGEND**

- ⊙ TYPE 'A' CONSTRUCTION WARNING LIGHT
- ⊗ TYPE 'B' CONSTRUCTION WARNING LIGHT
- TT CONSTRUCTION SIGN AND SUPPORTS
- TT TYPE III-B BARRICADE

**MAINTENANCE OF TRAFFIC NOTES**

1. IN ADDITION TO BE TEMPORARY TRAFFIC CONTROL DEVICES AS SHOWN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANNING AND IMPLEMENTING SAFE MAINTENANCE OF TWO-WAY TRAFFIC AT CR 20 AT ALL TIMES DURING CONSTRUCTION ACTIVITIES AND ROADSIDE HAZARDS DUE TO CONSTRUCTION IN ACCORDANCE WITH INDOT STANDARD SPECIFICATIONS.



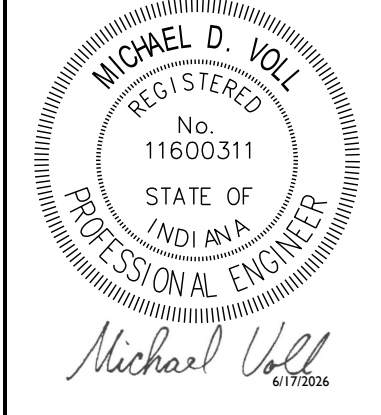
**LEGEND**

- (A) FULL DEPTH HMA PAVEMENT:  
1 1/2" (165#/SYD) HMA SURFACE, TYPE 'B', ON TACK COAT, OVER  
2" (220#/SYD) HMA INTERMEDIATE, TYPE 'B', OVER  
3" (330#/SYD) HMA BASE, TYPE 'B', OVER  
SPECIAL SUBGRADE TREATMENT  
(*SEE TYPICAL ROADWAY SECTION, SHEET C101)
- (B) 6 1/2" COMPACTED CRUSHED LIMESTONE SHOULDER, SIZE NO. 53
- (MS) MULCHED SEEDING, TYPE 'R' ON TYPICAL 4" TOPSOIL
- (67) LINE, MULTI-COMPONENT, SOLID WHITE, 4"
- (68) STOP BAR, THERMOPLASTIC, 24"

REV	DESCRIPTION	BY	DATE

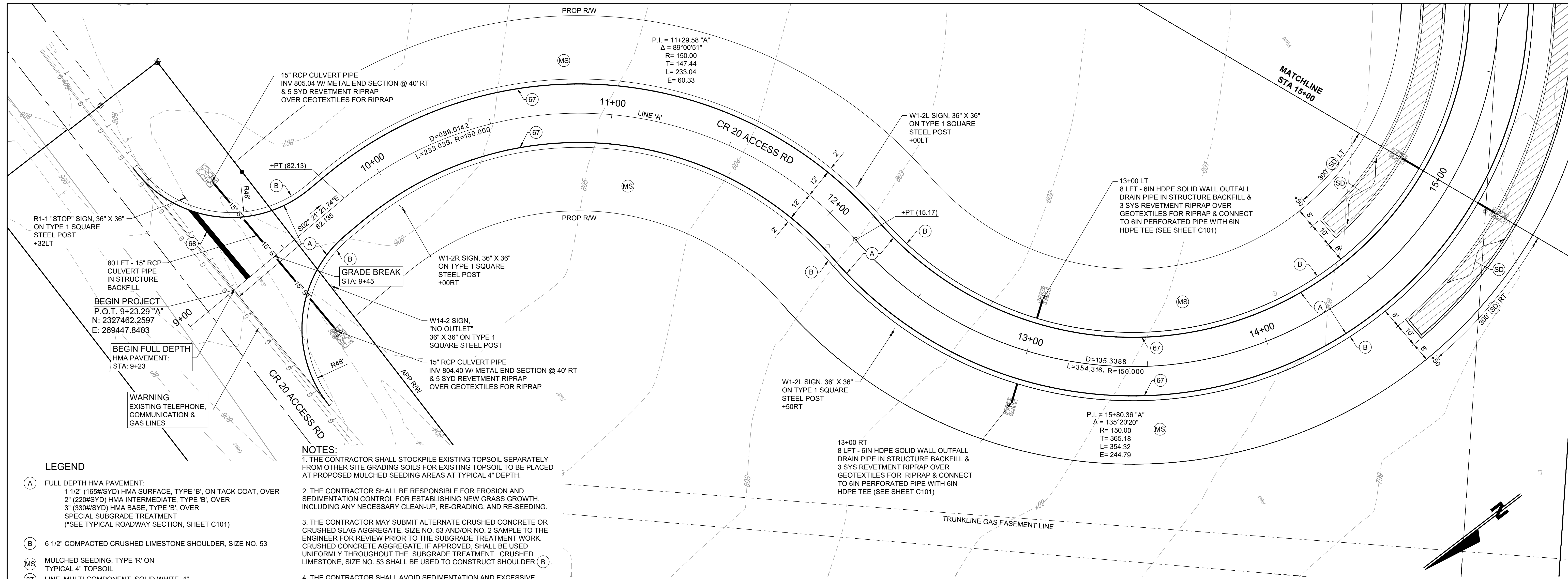
**JONES  
PETRIE  
RAFINSKI**

South Bend, IN  
Goshen, IN  
Fort Wayne, IN  
p. 574.232.4388  
p. 260.422.2522



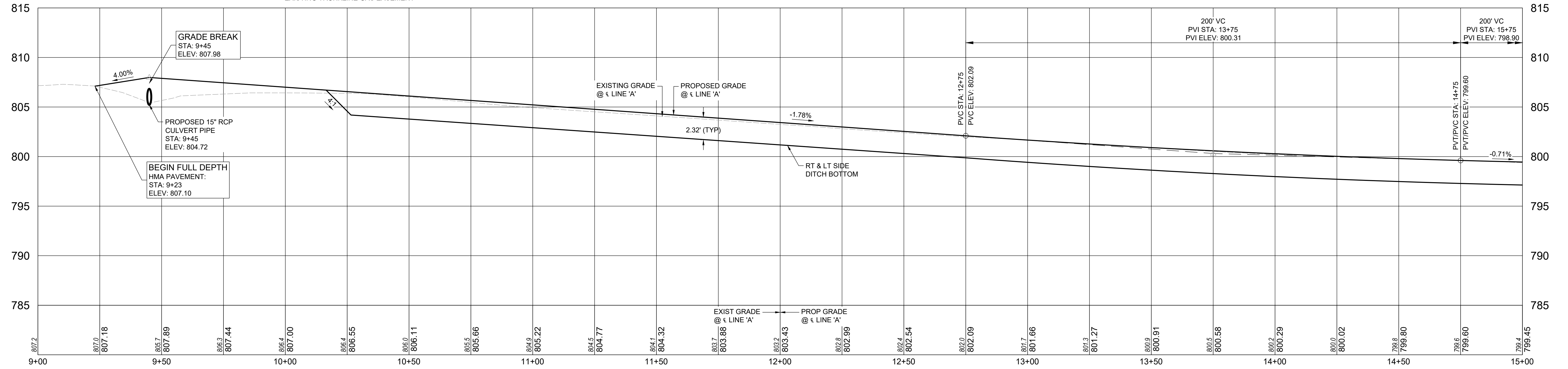
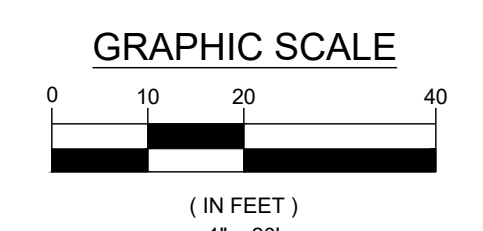
CR 20 ACCESS ROAD	GOSHEN, IN 46528
ELKHART COUNTY	610 STEURY AVE
OVERALL SITE PLAN	DESIGNED BY: MV REVIEWED BY: MEW
& MAINTENANCE OF TRAFFIC DETAILS	DRAWN BY: DK REVIEWED BY: MV
	DATE: JULY 2024
	JOB NUMBER: 2024-01266
	HORIZ SCALE: AS SHOWN
	VERTICAL SCALE: NONE
	C102

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- NOTES:**
1. THE CONTRACTOR SHALL STOCKPILE EXISTING TOPSOIL SEPARATELY FROM OTHER SITE GRADING SOILS FOR EXISTING TOPSOIL TO BE PLACED AT PROPOSED MULCHED SEEDING AREAS AT TYPICAL 4" DEPTH.
  2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROL FOR ESTABLISHING NEW GRASS GROWTH, INCLUDING ANY NECESSARY CLEAN-UP, RE-GRADING, AND RE-SEEDING.
  3. THE CONTRACTOR MAY SUBMIT ALTERNATE CRUSHED CONCRETE OR CRUSHED SLAG AGGREGATE, SIZE NO. 53 AND/OR NO. 2 SAMPLE TO THE ENGINEER FOR REVIEW PRIOR TO THE SUBGRADE TREATMENT WORK. CRUSHED CONCRETE AGGREGATE, IF APPROVED, SHALL BE USED UNIFORMLY THROUGHOUT THE SUBGRADE TREATMENT. CRUSHED LIMESTONE, SIZE NO. 53 SHALL BE USED TO CONSTRUCT SHOULDER (B).
  4. THE CONTRACTOR SHALL AVOID SEDIMENTATION AND EXCESSIVE TOPSOIL THICKNESS PLACEMENT WITHIN ROADWAY SIDE DITCHES. AS NECESSARY, THE CONTRACTOR SHALL REMOVE SEDIMENTATION AND EXCESS TOPSOIL THICKNESS FROM ROADWAY SIDE DITCHES IN ORDER TO PROVIDE OPTIMUM AVAILABLE SOIL PERCOLATION.
  5. TOP-CHOKING LAYER OF SIZE NO. 11 CRUSHED LIMESTONE OVER SIZE NO. 2 CRUSHED AGGREGATE SHALL BE INCLUDED IN THE COST OF THE ESTABLISHED PAY ITEM FOR SIZE NO. 2 CRUSHED AGGREGATE AS BID.
  6. NO WORK OR CONSTRUCTION TRAFFIC SHALL OCCUR WITHIN THE EXISTING TRUNKLINE GAS EASEMENT

- LEGEND**
- (A) FULL DEPTH HMA PAVEMENT:  
1 1/2" (165#/SYD) HMA SURFACE, TYPE 'B', ON TACK COAT, OVER 2" (220#/SYD) HMA INTERMEDIATE, TYPE 'B', OVER 3" (330#/SYD) HMA BASE, TYPE 'B', OVER SPECIAL SUBGRADE TREATMENT (*SEE TYPICAL ROADWAY SECTION, SHEET C101)
  - (B) 6 1/2" COMPACTED CRUSHED LIMESTONE SHOULDER, SIZE NO. 53
  - (MS) MULCHED SEEDING, TYPE 'R' ON TYPICAL 4" TOPSOIL
  - (67) LINE, MULTI-COMPONENT, SOLID WHITE, 4"
  - (68) STOP BAR, THERMOPLASTIC, 24"
  - (R) REMOVE
  - (SD) SUBSURFACE DRAIN (SEE SHEET C101)

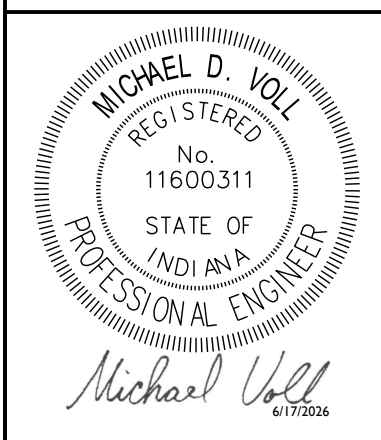


REV	DESCRIPTION	BY	DATE

**JONES PETRIE RAFINSKI**

Fort Wayne, IN  
Goshen, IN  
South Bend, IN

p. 260.422.2522  
p. 574.232.4388  
p. 574.232.4388

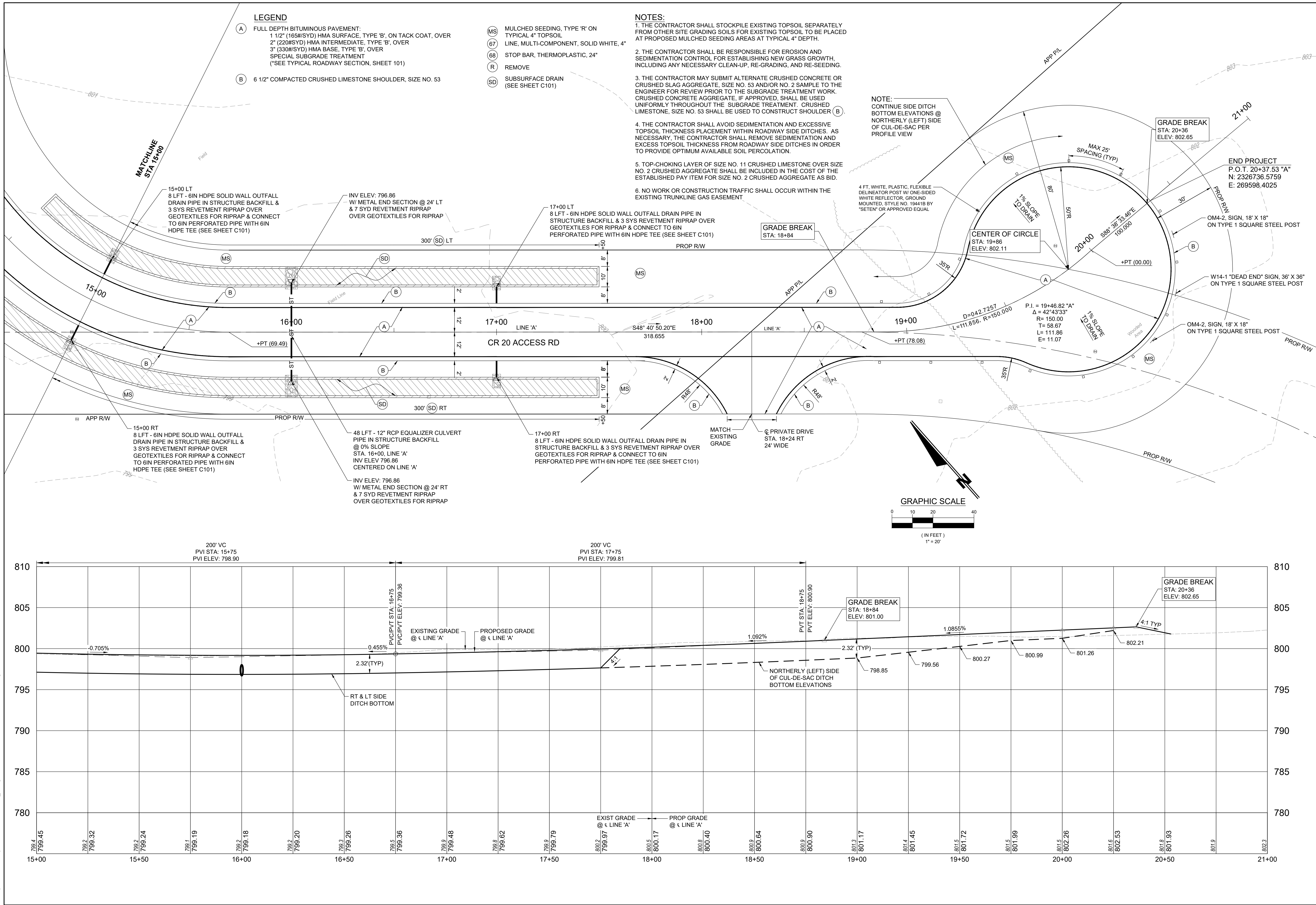


CR 20 ACCESS ROAD  
ELKHART COUNTY  
610 STEURY AVE  
GOSHEN, IN 46528

**PLAN & PROFILE - CR20 ACCESS RD  
STA. 9+00 TO STA. 15+00 - LINE 'A'**

DESIGNED BY: MV	REVIEWED BY: MEW
DRAWN BY: DK	REVIEWED BY: MV
DATE: JULY 2024	
JOB NUMBER: 2024-01266	
HORIZ. SCALE: 1" = 20'	
VERTICAL SCALE: 1" = 5'	
<b>C201</b>	

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DESIGNED BY: MV	REVIEWED BY: MEW
DRAWN BY: DK	REVIEWED BY: MV
DATE: JULY 2024	
JOB NUMBER: 2024-01266	
HORIZ. SCALE: 1" = 20'	
VERTICAL SCALE: 1" = 5'	
<b>C202</b>	

CR 20 ACCESS ROAD	ELKHART COUNTY
610 STEURY AVE	GOSHEN, IN 46528
<b>PLAN &amp; PROFILE - CR20 ACCESS RD</b>	
STA. 15+00 TO STA. 21+00 - LINE 'A'	

	<b>JONES</b> <b>PETRIE</b> <b>RAFINSKI</b> 
Michael D. Volz Registered Professional Engineer No. 11600311 State of Indiana	Fort Wayne, IN Goshen, IN South Bend, IN p. 260.422.2522 p. 574.232.4388 p. 574.232.4388

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- SOILS LEGEND**
- BuuA BROOKSTON LOAM, 0 TO 1% SLOPES
  - CvdA CROSIER LOAM, 0 TO 1% SLOPES
  - CvdB CROSIER LOAM, 1 TO 4% SLOPES
- EROSION CONTROL LEGEND**
- SUBSURFACE DRAIN (SEE SHEET C101)
  - MULCHED SEEDING, TYPE R ON TYPICAL 4" TOPSOIL
  - SILT FENCE
  - STANDARD EROSION CONTROL GRAVEL ENTRANCE PAD

D-J Construction Co., Inc. DR 2006-13997

Pnt. No. 55  
N:2327459.5489  
E:269196.0896  
Mag Nail Set

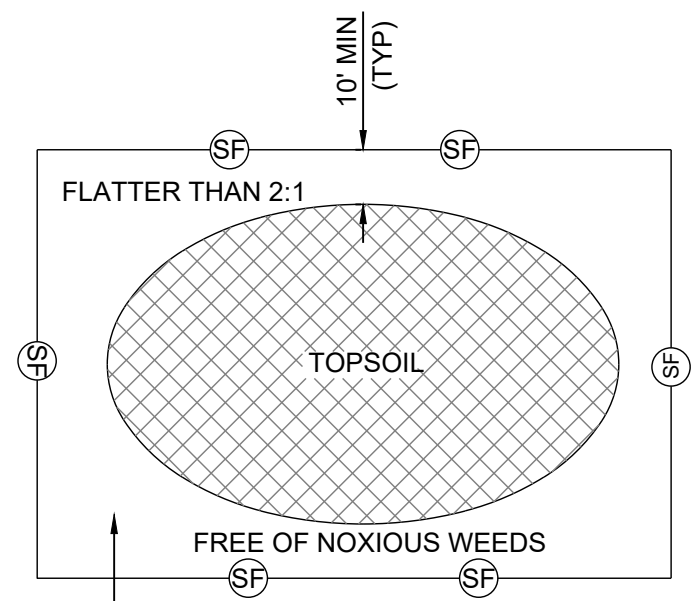
Pnt. No. 58  
N:2327453.4869  
E:268990.8877  
Mag Nail Set

NO WORK OR CONSTRUCTION TRAFFIC SHALL OCCUR WITHIN THE EXISTING TRUNKLINE GAS EASEMENT

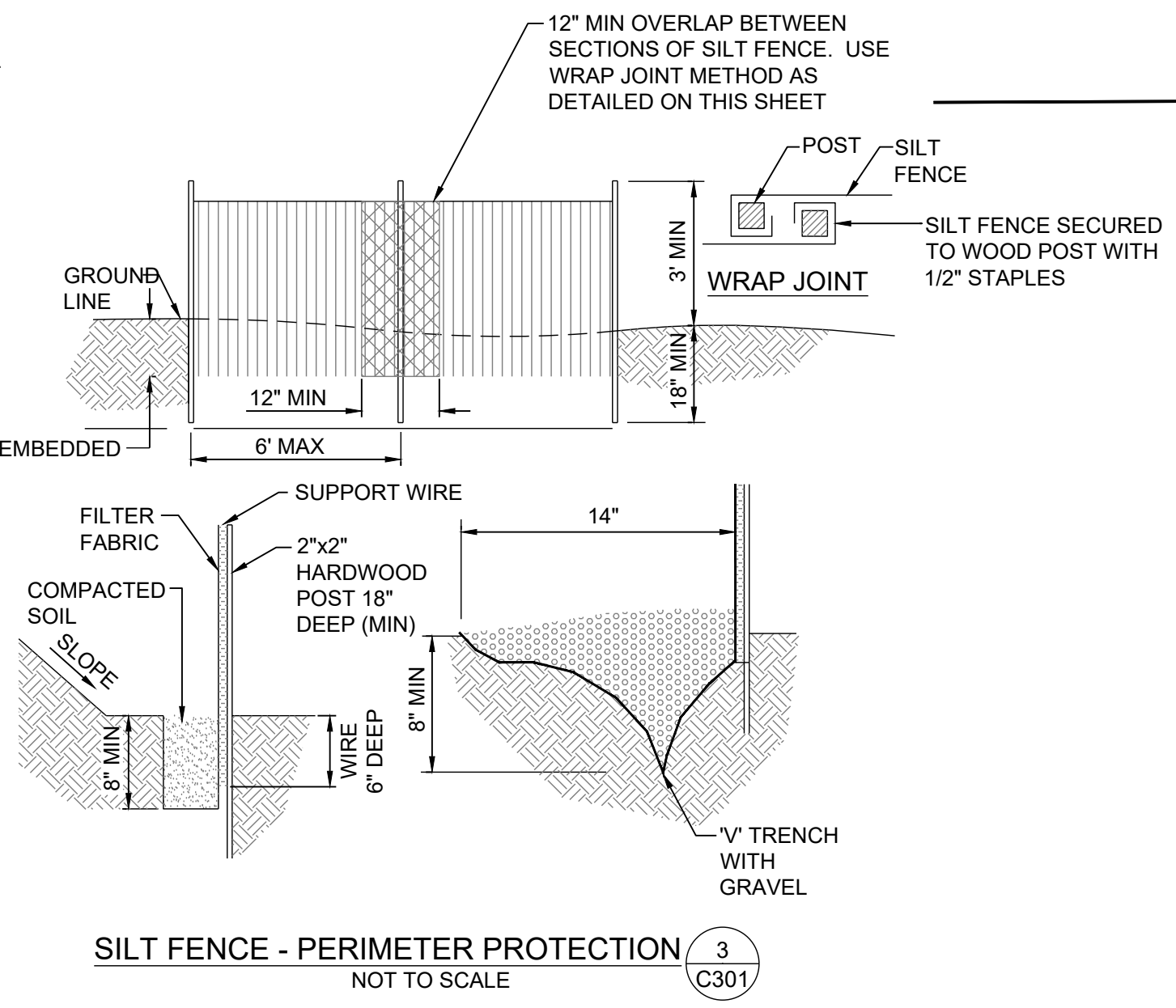
Elkhart County Board of Commissioners DR 2022-26987

David & Elizabeth Myers DR 2010-11906 (Tract 2)

Robert & Kathy Spaugh DR 2017-08224



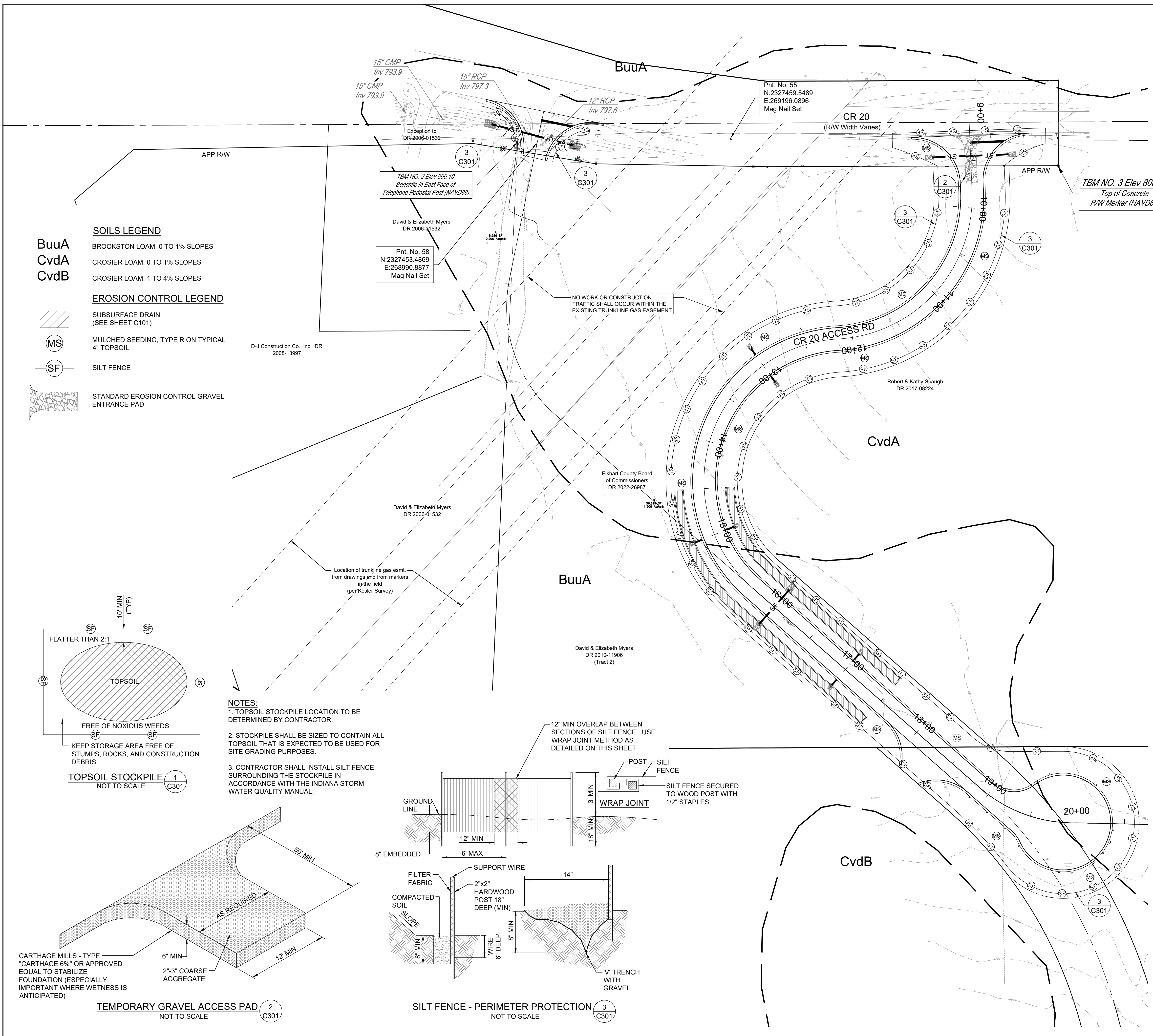
- NOTES:**
- TOPSOIL STOCKPILE LOCATION TO BE DETERMINED BY CONTRACTOR.
  - STOCKPILE SHALL BE SIZED TO CONTAIN ALL TOPSOIL THAT IS EXPECTED TO BE USED FOR SITE GRADING PURPOSES.
  - CONTRACTOR SHALL INSTALL SILT FENCE SURROUNDING THE STOCKPILE IN ACCORDANCE WITH THE INDIANA STORM WATER QUALITY MANUAL.



CARTHAGE MILLS - TYPE "CARTHAGE 6%" OR APPROVED EQUAL TO STABILIZE FOUNDATION (ESPECIALLY IMPORTANT WHERE WETNESS IS ANTICIPATED)

**TEMPORARY GRAVEL ACCESS PAD** (2) NOT TO SCALE

**SILT FENCE - PERIMETER PROTECTION** (3) NOT TO SCALE



**100-YEAR REQUIRED RETENTION VOLUME**  
Side-Ditch

County: Elkhart Date: 2026-04-28  
City/Town: Elkhart Job No.: 2024-01266  
Project Manager: Mike Voll, PE

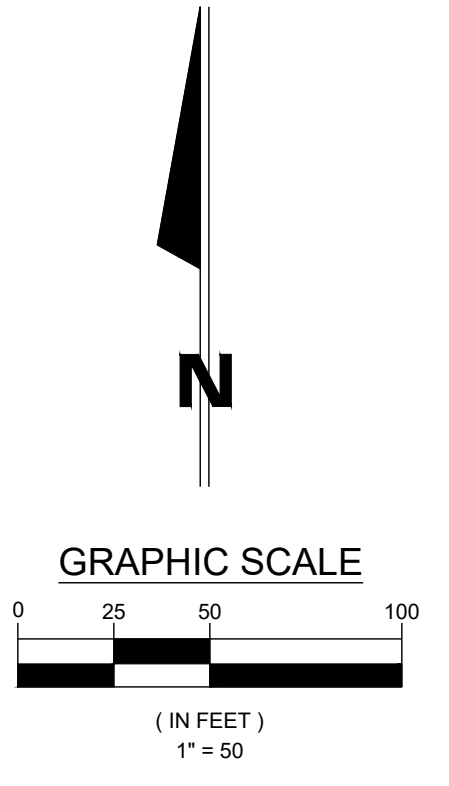
Surface	Runoff Coefficient	Area (SFT) Developed	Area (SFT) Undeveloped
Permeable Surface	0.3	66,031	
Impermeable Surface	0.9	40,691	
<b>TOTAL</b>	<b>0.63</b>	<b>106,722</b>	

Storm Sewer Outfall	Outflow Rate (cfs)	Storage Rate ΔS = I - O (cfs)	Required Storage (Acre-feet) (ΔS)T _r
0.083	6.96	9.61	12.55
0.167	5.37	7.24	9.46
0.25	4.40	5.99	7.82
0.5	3.06	4.33	5.66
1	1.95	2.89	3.78
2	1.16	1.80	2.35
3	0.829	1.29	1.69
6	0.493	0.781	1.02
12	0.28	0.443	0.58
24	0.16	0.246	0.32

**Side Ditch Retention Storage Required** 0.6427 Acre-ft  
27,996 CFT

**CR 20 ACCESS ROAD STORM WATER RETENTION VOLUME PROVIDED AT COMBINED SIDE DITCHES**

STATION LINE 'A'	STORM WATER DEPTH (FT)	STORM WATER AREA (SFT)	AVERAGE STORM WATER AREA (SFT)	STORM WATER VOLUME (CFT)
13+13	0.0	0.00	7.44	275
13+50	0.6	14.88	25.20	1,260
14+00	1.2	35.52	46.32	2,316
14+50	1.7	57.12	64.56	3,228
15+00	2.0	72.00	72.00	3,600
15+50	2.2	72.00	72.00	3,600
16+00	2.3	72.00	72.00	3,600
16+50	2.2	72.00	72.00	3,600
17+00	2.1	72.00	66.96	3,348
17+50	1.8	61.92	54.96	2,748
18+00	1.5	48.00	34.56	1,728
18+50	0.8	21.12	13.92	696
19+00	0.3	6.72	3.36	168
19+50	0.0	0.00		
<b>MAXIMUM RETENTION VOLUME AT WATER SURFACE ELEVATION 798.96 =</b>				<b>30,167</b>
<b>EXCESS RETENTION VOLUME PROVIDED:</b>				<b>30,167 CFT - 26,136 = 4,031 CFT</b>



DESIGNED BY: MV	REVIEWED BY: MEW
DRAWN BY: DK	REVIEWED BY: MV
DATE: JULY 2024	
JOB NUMBER: 2024-01266	
HORIZ. SCALE: 1" = 50'	
VERTICAL SCALE: NONE	
<b>C301</b>	

610 STEURY AVE  
ELKHART COUNTY  
GOSHEN, IN 46528

Michael D. Voll  
Professional Engineer

**JONES**  
**PETRIE**  
**RAFINSKI**

Fort Wayne, IN  
Goshen, IN  
South Bend, IN  
P: 574.232.4388  
P: 260.422.2522

