

LOCATION MAP

LATITUDE: 41° 03' 43" LONGITUDE: 81° 30' 17"



PORTION TO BE IMPROVED	
INTERSTATE HIGHWAY	
FEDERAL ROUTES	
STATE ROUTES	
COUNTY & TOWNSHIP ROADS	
OTHER ROADS	

DESIGN DESIGNATIONS

SEE BU 19

DESIGN EXCEPTIONS

NUMBER	ROUTE	DESIGN FEATURE	APPROVAL DATES	SHEET NUMBERS
NONE				

**UNDERGROUND UTILITIES**  
Contact Two Working Days Before You Dig

**OHIO811.org**  
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764  
(Non-members must be called directly)

PLAN PREPARED BY:



ENGINEERS SEAL:

SIGNED:   
DATE: 9/24/21

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/17/20	MGS-3.2	1/18/13	800-2019 10/16/20	
		MGS-4.2	7/19/13	832 10/19/18	
BP-5.1	1/18/19	MGS-5.2	7/15/16		
		MGS-6.1	1/19/18		
CB-1.1	7/19/19	I-2.3	1/15/16		
CB-2.1	7/20/18				
CB-2.2	7/20/18	MH-1.2	1/15/16		
CB-3.3	1/15/16				
DM-1.1	7/17/20	RM-4.3	7/18/14		
DM-1.2	1/18/13	RM-4.4	7/19/19		
		RM-4.5	7/21/17		
MGS-1.1	1/19/18	RM-4.6	7/17/13		
MGS-2.1	1/19/18				
MGS-3.1	1/19/18				

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SEE BU-02A & BU-02B FOR MAINTENANCE OF TRAFFIC  
SEE BU-15 FOR STRUCTURES  
SEE BU-18 FOR LANE S / SB SR-8 RET. WALL  
SEE BU-19 FOR SCHEMATIC  
SEE BU-28B FOR SR-8 ROADWAY  
SEE BU-33A & BU-33B FOR CENTRAL INTERCHANGE ROADWAY  
SEE BU-36 FOR LIGHTING/ITS  
SEE BU-39 FOR TRAFFIC CONTROL  
SEE BU-42 FOR FENCING PLANS

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

SUM-76-8.24  
SUM-77-9.74  
SUM-8-0.00

CITY OF AKRON  
SUMMIT COUNTY

Released for Construction  
Thomas J Powell, PE  
09/28/2021

ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION

PROJECT DESCRIPTION

PAVEMENT REPLACEMENT OVER SUM - I.R. 76 FROM S.L.M. 8.24 TO 10.00, SUM - 77 FROM S.L.M. 9.74 TO 11.54, AND SUM - 8 FROM S.L.M. 0.00 TO 1.75. COVERS THE "SOUTH LEG" AND "WEST LEG", INCLUDES REHABILITATION OF SEVERAL STRUCTURES IN THE CITY OF AKRON, SUMMIT COUNTY, OHIO.

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

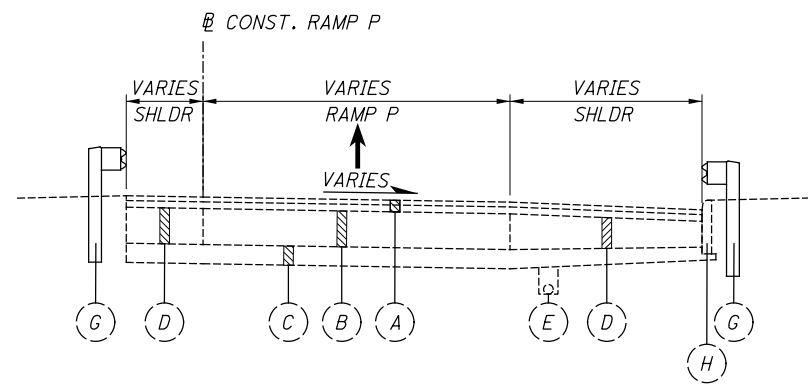
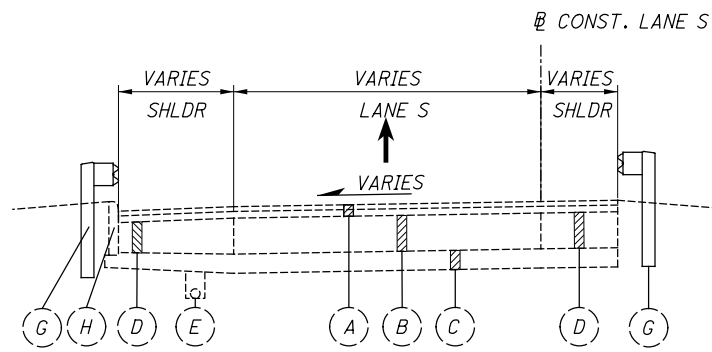
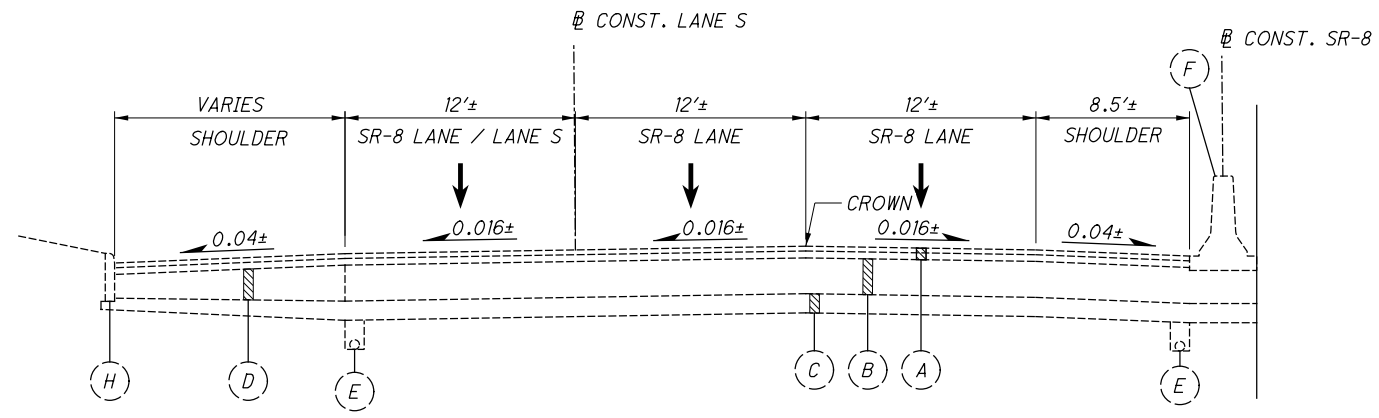
2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

FEDERAL PROJECT NO. E180(428)  
PID NO. 102329  
CONSTRUCTION PROJECT NO. 21-3000  
RAILROAD INVOLVEMENT NONE  
2021-09-24 - BU 29 - RFC  
SUM-76 / 8.24 / 9.74 / 0.00  
- 8 / 7 / 9.74 / 0.00  
1 / 34

**BU-29**  
**RESURFACING**  
&  
**WIDENING**  
Lane S /  
Ramp P  
**RFC PLANS**  
**SEPTEMBER 24, 2021**

ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION



**LEGEND - PROPOSED ITEMS**

- 1 ITEM 442 - 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN
- 2 ITEM 407 - NON-TRACKING TACK COAT
- 3 ITEM 442 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), AS PER PLAN
- 4 ITEM 302 - 8" ASPHALT CONCRETE BASE, PG 64-22 (TWO EQUAL LIFTS)
- 5 ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN
- 6 ITEM 204 - PROOF ROLLING
- 7 ITEM 206 - CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP
- 8 ITEM 606 - GUARDRAIL TYPE MGS
- 9 ITEM 659 - SEEDING AND MULCHING OR ITEM 670-EROSION CONTROL MAT, TYPE E (USED ON ALL 2:1 SLOPES)

- 10 ITEM 609 - CURB, TYPE 4-C, AS PER PLAN
- 11 ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)
- 12 ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 OR C1
- 13 NOT USED
- 14 ITEM 605 - 6" BASE PIPE UNDERDRAIN WITH GEOTEXTILE FILTER, 18"
- 15 NOT USED
- 16 ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D

**LEGEND - EXISTING ITEMS**

- (A) EX. VARIES 4"± - 5"± ASPHALT CONCRETE
- (B) EX. 10"± REINFORCED CONCRETE PAVEMENT
- (C) EX. 6"± SUBBASE
- (D) EX. 10"± AGGREGATE BASE
- (E) EX. UNDERDRAIN
- (F) EX. CONCRETE BARRIER
- (G) EX. GUARDRAIL
- (H) EX. CURB

2021-09-24 - BU 29 - RFC

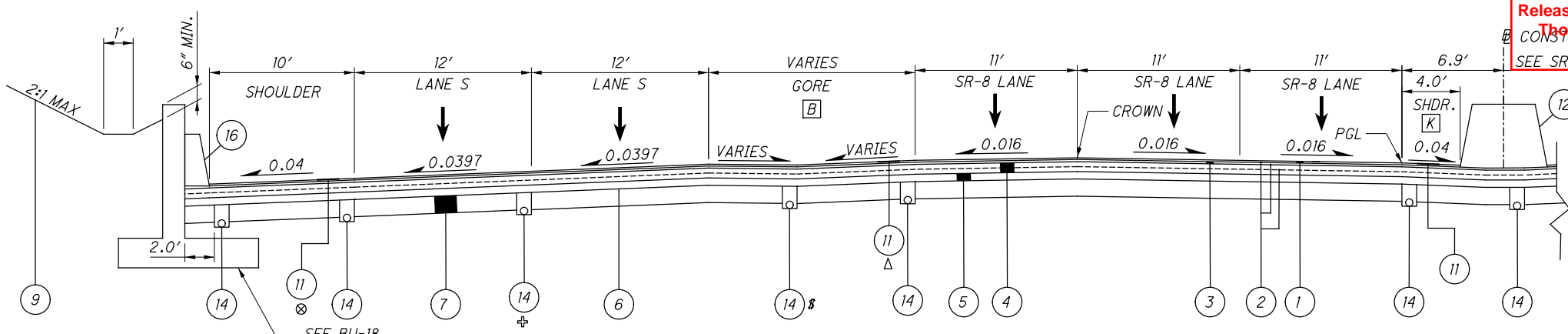
TYPICAL SECTIONS - EXISTING SR-8, LANE S, AND RAMP P

SUM-76/8.24/9.74/0.00  
 /8/77/96/4/0.00

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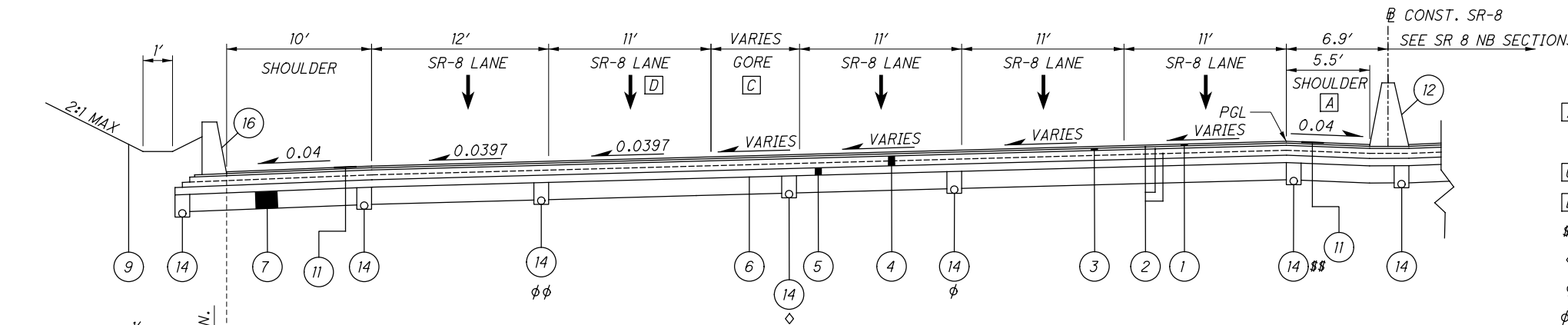
Released for Construction  
 Thomas J. Powell, PE  
 09/28/2021  
 SEE SR 8 NB SECTIONS

ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION



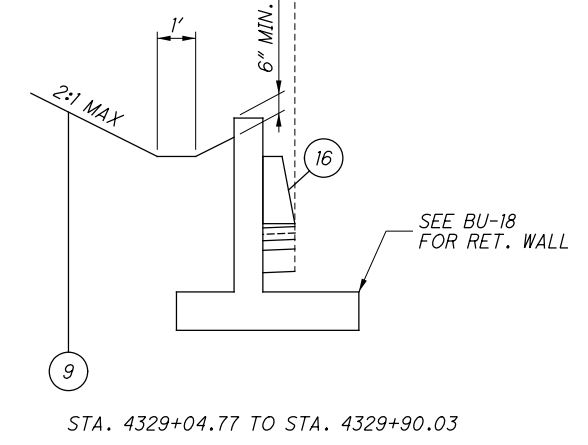
**NORMAL SECTION - SR-8 SB**  
 STA. 4327+57.04 TO STA. 4329+04.77

- [B] VARIES FROM 23.0' AT STA. 4327+57.04 TO 6.2' AT STA. 4329+04.77
- [K] VARIES FROM 4.0' AT STA. 4328+04.98 TO 5.5' AT STA. 4328+44.98  
 5.5' FROM STA. 4328+44.98 TO STA. 4329+04.77
- \$ CONSTRUCT UNDERDRAIN FROM STA. 4327+57.04 TO STA. 4328+32.91
- Δ CONSTRUCT RUMBLE STRIP FROM STA. 4327+57.04 TO STA. 4328+77.90
- ⊗ CONSTRUCT RUMBLE STRIP FROM STA. 4328+81.18 TO STA. 4329+04.77
- ⊕ CONSTRUCT UNDERDRAIN FROM STA. 4328+34.04 TO STA. 4329+04.77

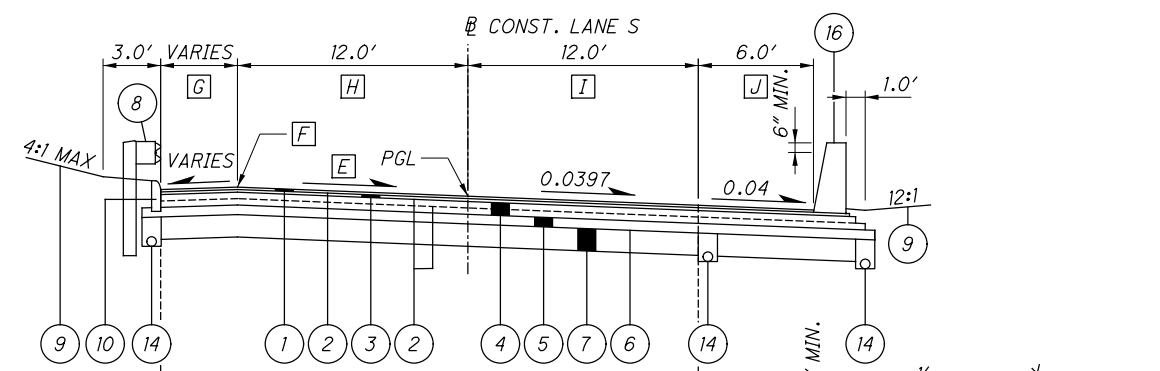


**SUPERELEVATED SECTION - SR-8 SB**  
 STA. 4329+04.77 TO STA. 327+39.78 (STA. EQ.: STA. 4330+75.71 BK = STA. 325+00.64 AH)

- [A] VARIES FROM 5.5' AT STA. 4329+34.63 TO 4.7' AT STA. 4329+74.63  
 4.7' FROM STA. 4329+74.63 TO STA. 4330+14.89
- [C] VARIES FROM 6.2' AT STA. 4329+04.77 TO 0.0' AT STA. 4329+82.16
- [D] VARIES FROM 12.0' AT STA. 4329+82.16 TO 0.0' AT STA. 327+39.78
- \$\$ CONSTRUCT UNDERDRAIN FROM STA. 4329+04.77 TO STA. 4329+72.58
- ◇ CONSTRUCT UNDERDRAIN FROM STA. 4329+04.77 TO STA. 4329+82.16
- φ CONSTRUCT UNDERDRAIN FROM STA. 4329+82.16 TO STA. 327+39.78
- φφ CONSTRUCT UNDERDRAIN FROM STA. 4329+04.77 TO STA. 326+46.44

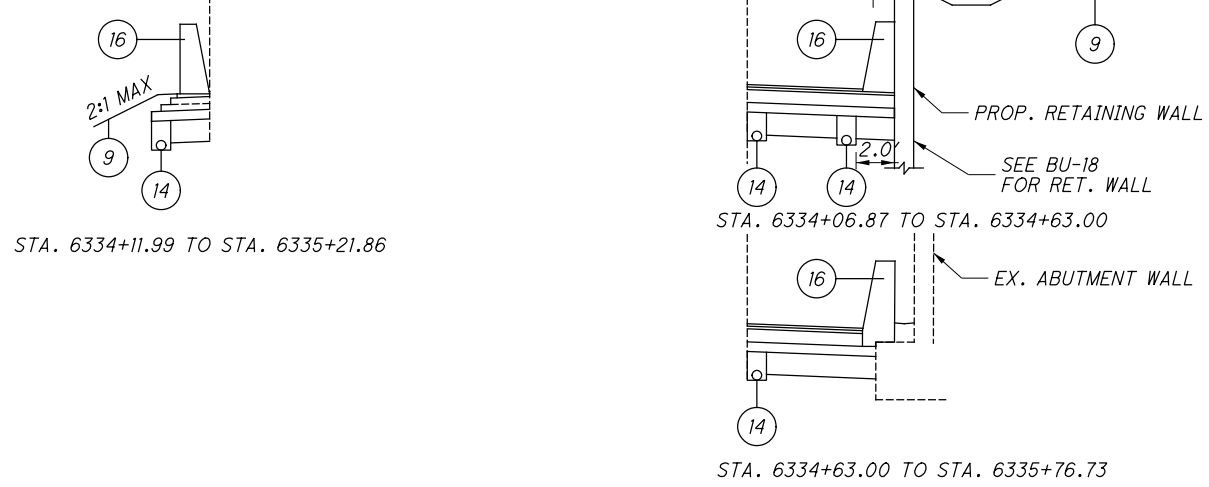


STA. 4329+04.77 TO STA. 4329+90.03

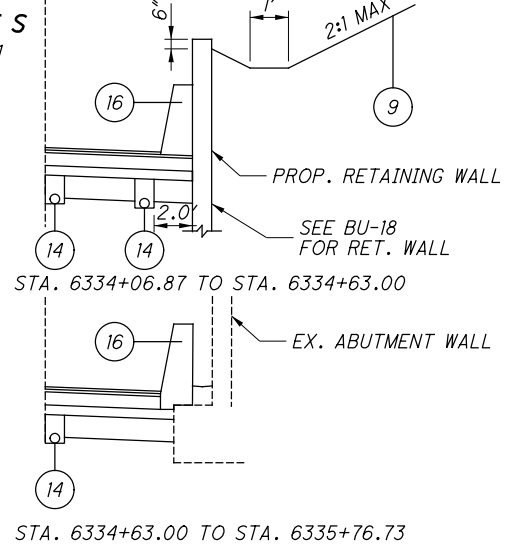


**SUPERELEVATED SECTION - LANE S**  
 STA. 6334+11.99 TO STA. 6336+19.91

- [E] +0.0397 '"/>, STA. 6334+11.99 TO STA. 6335+29.45  
 VARIES FROM +0.0397 '"/> AT STA. 6335+29.45  
 TO +0.0091 '"/> AT STA. 6336+19.91
- [F] MAXIMUM 7% GRADE BREAK
- [G] VARIES FROM 11.6' AT STA. 6334+11.99  
 TO 4.0' AT STA. 6336+00.93  
 4.0', STA. 6336+00.93 TO STA. 6336+19.91
- [H] VARIES FROM 12.0' AT STA. 6335+04.94  
 TO 13.6' AT STA. 6336+19.91
- [I] VARIES FROM 12.0' AT STA. 6335+16.18  
 TO 14.5' AT STA. 6336+19.91
- [J] VARIES FROM 8.6' AT STA. 6334+06.87  
 TO 6.0' AT STA. 6334+73.14



STA. 6334+11.99 TO STA. 6335+21.86



STA. 6334+06.87 TO STA. 6334+63.00

STA. 6334+63.00 TO STA. 6335+76.73

FOR LEGEND, SEE SHEET 2  
 FOR PROPOSED SR-8 TYPICAL, SEE BU-28B  
 FOR DETAILS, SEE SHEET 5  
 FOR DITCH AND GRADING INFORMATION, SEE CROSS SECTIONS

TYPICAL SECTIONS - LANE S AND RAMP P

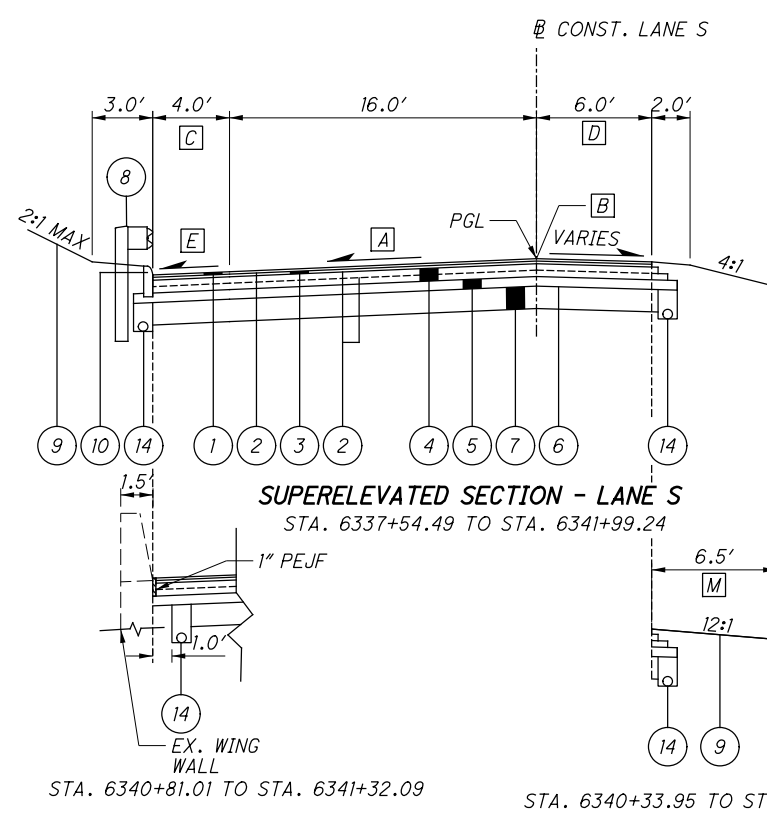
2021-09-24 - BU 29 - RFC

00' 0" / 4' 7" / 0.00  
 / 8' / 11' / 9.74 / 0.00  
 SUM - 76' 24" / 8.24

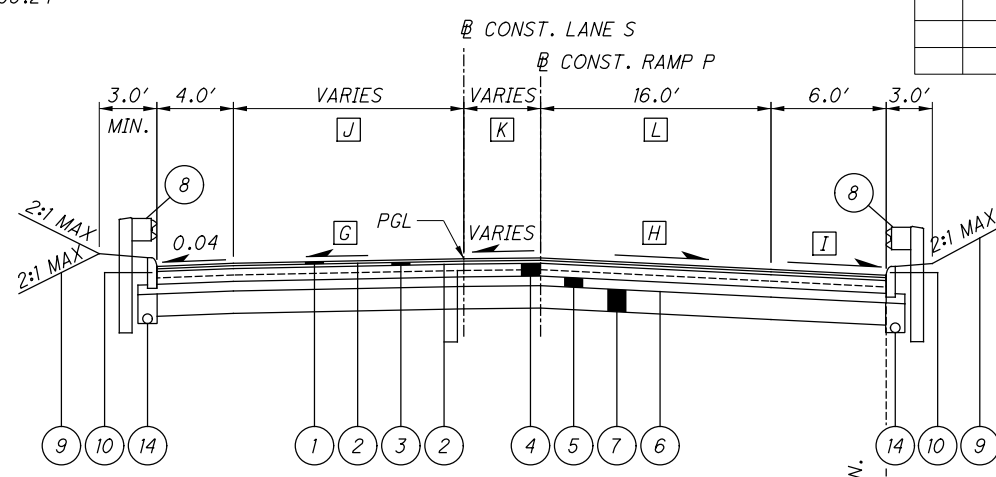
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 09/28/2021

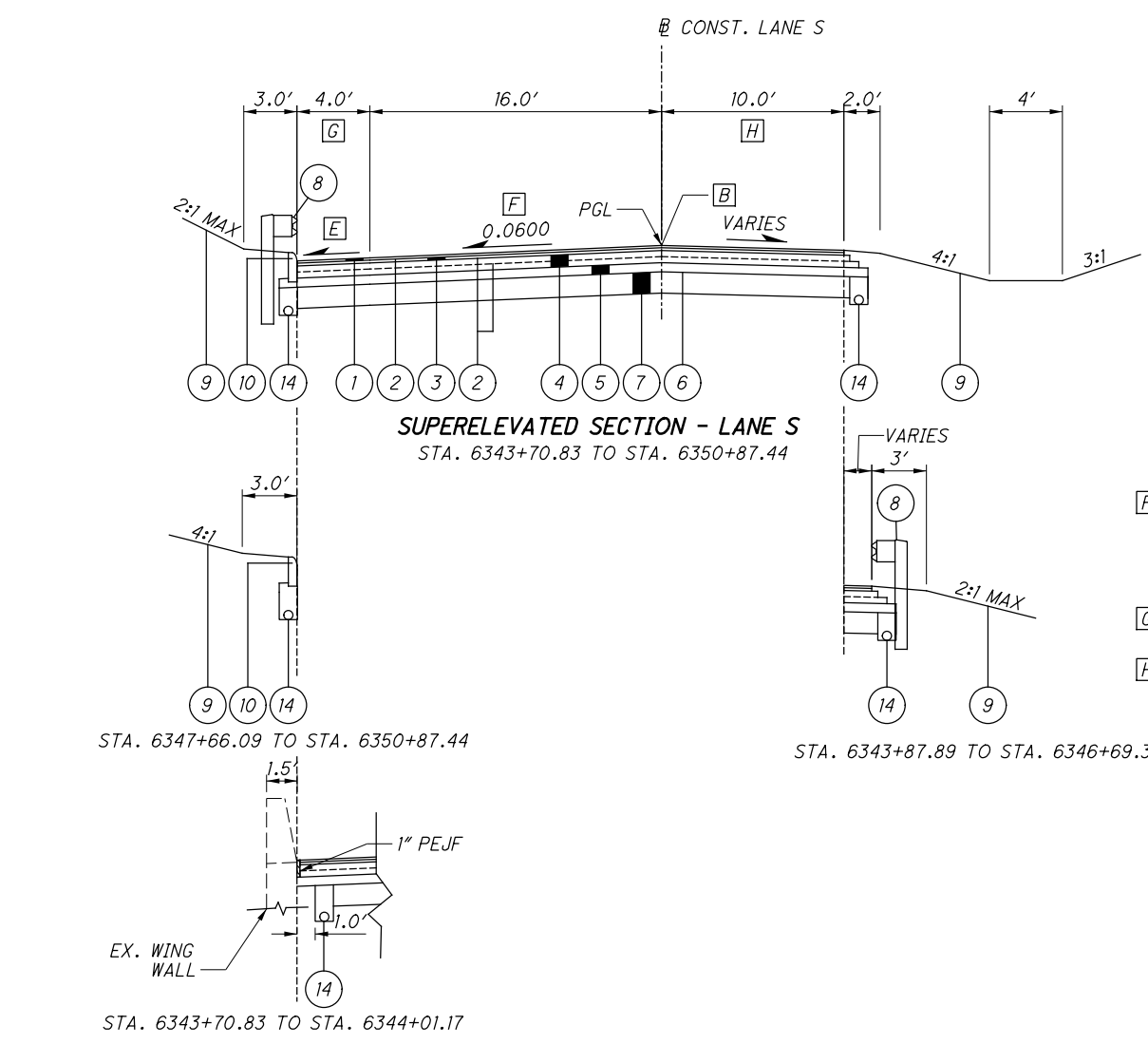
ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION



- A** VARIES FROM -0.0363'/' AT STA. 6337+54.49 TO -0.0600'/' AT STA. 6338+24.56  
 VARIES FROM -0.0600'/' AT STA. 6340+86.68 TO -0.0800'/' AT STA. 6341+45.88  
 -0.0800'/' FROM STA. 6341+45.88 TO STA. 6341+99.24
- B** MAXIMUM 7% GRADE BREAK
- C** VARIES FROM 4.0' AT STA. 6339+99.76 TO 6.5' AT STA. 6340+31.01  
 6.5' FROM STA. 6340+31.01 TO STA. 6340+81.01
- D** VARIES FROM 6.0' AT STA. 6341+57.78 TO 12.5' AT STA. 6341+90.28  
 12.5' FROM STA. 6341+90.28 TO STA. 6341+98.91
- E** SHOULDER CROSS SLOPE SHALL MATCH ADJACENT PAVEMENT CROSS SLOPE ONCE PAVEMENT CROSS SLOPE IS GREATER THAN 0.04'/'
- M** VARIES FROM 10.5' AT STA. 6340+33.95 TO 6.5' AT STA. 6340+59.95

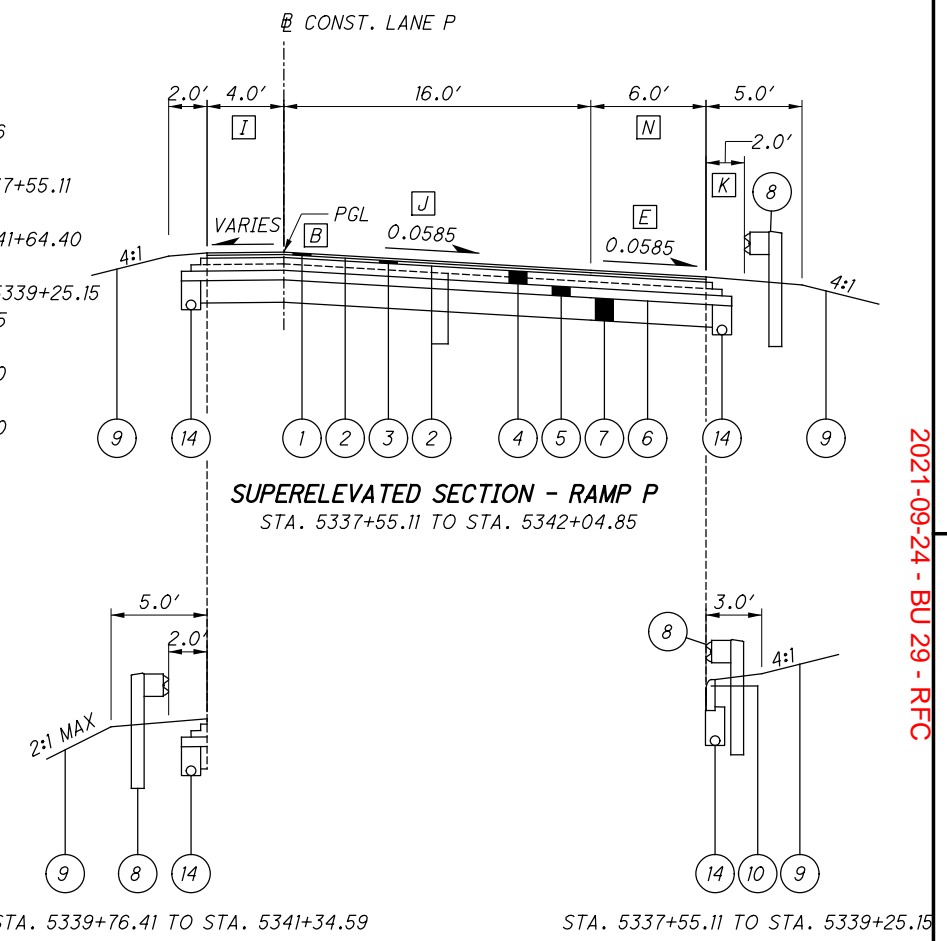


- G** VARIES FROM +0.0091'/' AT STA. 6336+19.91 TO -0.0363'/' AT STA. 6337+54.49
- H** -0.0397'/' AT STA. 5336+19.91 TO STA. 5337+19.77  
 VARIES FROM -0.0397'/' AT STA. 5337+19.77 TO -0.0516'/' AT STA. 5337+55.11
- I** SHOULDER CROSS SLOPE SHALL MATCH ADJACENT PAVEMENT CROSS SLOPE ONCE PAVEMENT CROSS SLOPE IS GREATER THAN 0.04'/'
- J** VARIES FROM 13.6' AT STA. 6336+19.91 TO 16.0' AT STA. 6337+48.64
- K** VARIES FROM 0.0' AT STA. 6336+19.91 TO 16.0' AT STA. 6337+54.49
- L** VARIES FROM 14.5' AT STA. 5336+19.91 TO 16.0' AT STA. 5336+74.33



- F** VARIES FROM -0.0800'/' AT STA. 6344+04.43 TO -0.0600'/' AT STA. 6344+63.63  
 VARIES FROM -0.0600'/' AT STA. 6349+74.96 TO -0.0220'/' AT STA. 6350+87.44
- G** VARIES FROM 8.6' AT STA. 6344+01.12 TO 4.0' AT STA. 6345+28.62
- H** 12.0' FROM STA. 6343+87.98 TO STA. 6344+12.36  
 VARIES FROM 12.0' AT STA. 6344+12.36 TO 10.0' AT STA. 6344+62.36

- I** VARIES FROM 4.0' AT STA. 5341+26.76 TO 9.4' AT STA. 5342+04.85
- J** VARIES FROM -0.0516'/' AT STA. 5337+55.11 TO -0.0585'/' AT STA. 5337+75.42  
 VARIES FROM -0.0585'/' AT STA. 5341+64.40 TO -0.0438'/' AT STA. 5342+04.85
- K** 0.0' FROM STA. 5337+55.11 TO STA. 5339+25.15  
 VARIES FROM 0.0' AT STA. 5339+25.15 TO 2.0' AT STA. 5339+50.15  
 VARIES FROM 2.0' AT STA. 5341+73.60 TO 3.1' AT STA. 5342+04.85
- N** VARIES FROM 6.0' AT STA. 5341+73.60 TO 7.5' AT STA. 5342+04.85



FOR LEGEND, SEE SHEET 2  
 FOR DETAILS, SEE SHEET 5  
 FOR DITCH AND GRADING INFORMATION, SEE CROSS SECTIONS  
 SUSPEND WORK ON LANE S AT EXISTING APPROACH SLAB, STA. 6341+99.24±  
 RESUME WORK ON LANE S AT EXISTING APPROACH SLAB, STA. 6343+70.83±

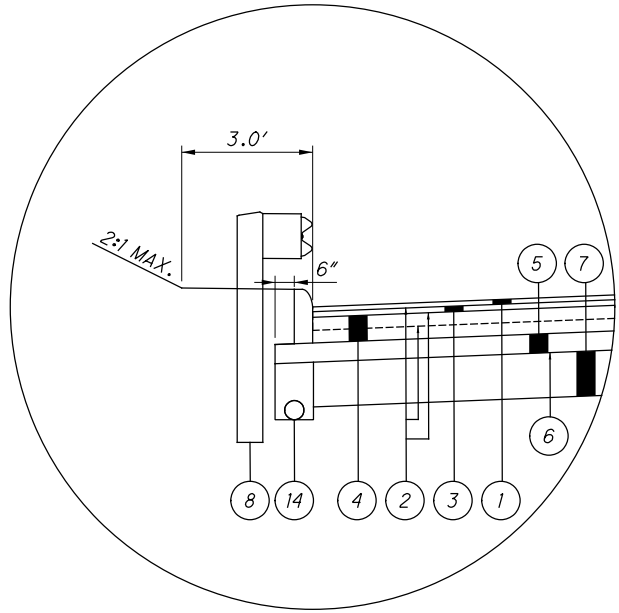
TYPICAL SECTIONS - LANE S AND RAMP P  
 2021-09-24 - BU 29 - RFC  
 SUM-76/4.7/0.00  
 /8/17/9.74/0.00  
 8.24/9.74/0.00  
 4/34

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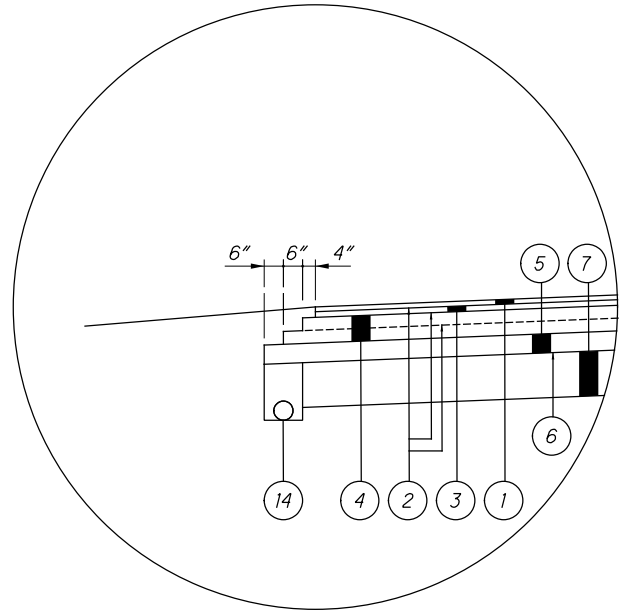
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ISSUE RECORD BU-29 ROADWAY

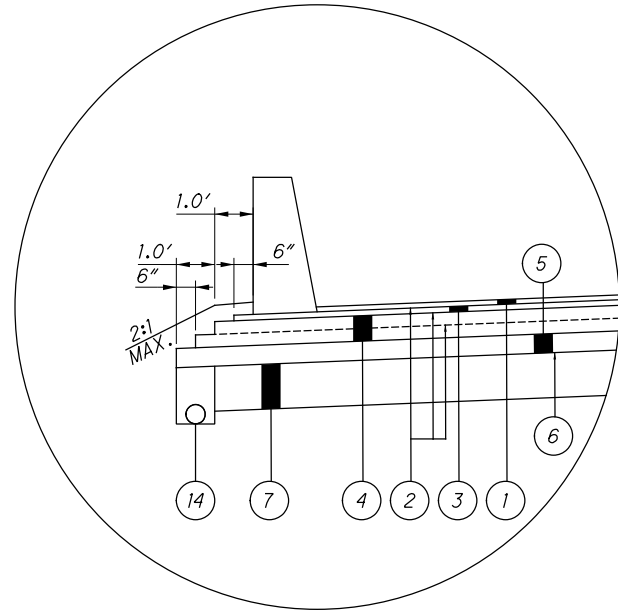
NO.	DATE	DESCRIPTION



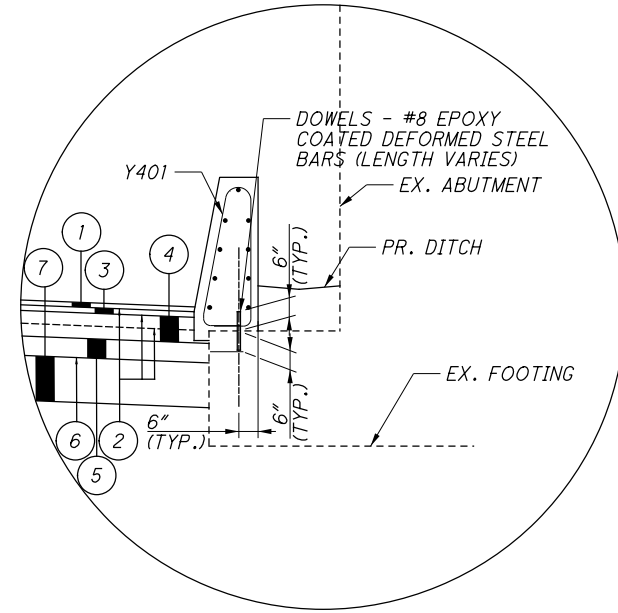
CURB AND GUARDRAIL DETAIL



PAVEMENT "STEP" DETAIL

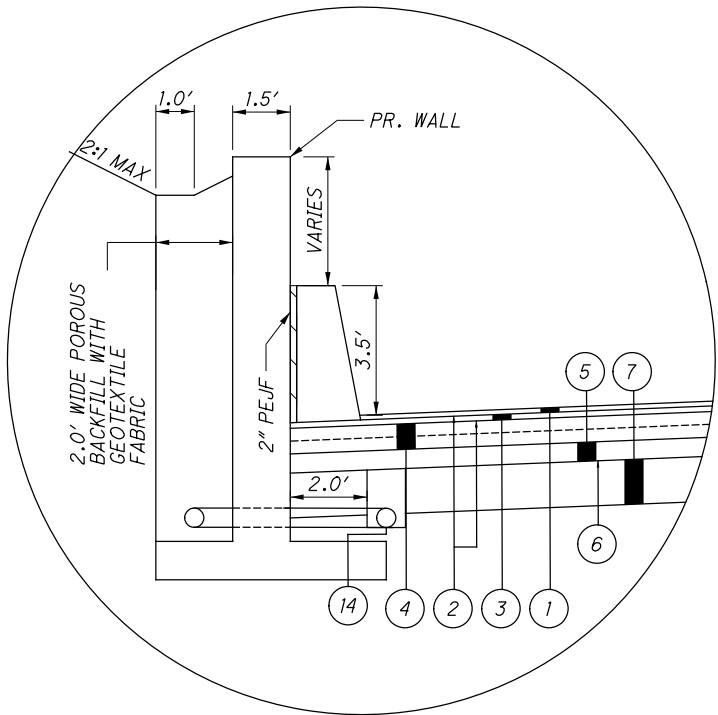


ITEM 622 - CONCRETE BARRIER, TYPE D

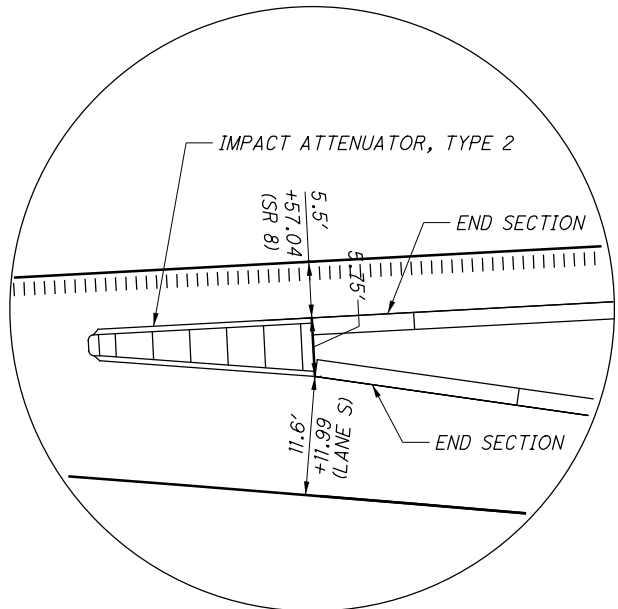


ITEM 622 - CONCRETE BARRIER, TYPE D DOWELING DETAIL

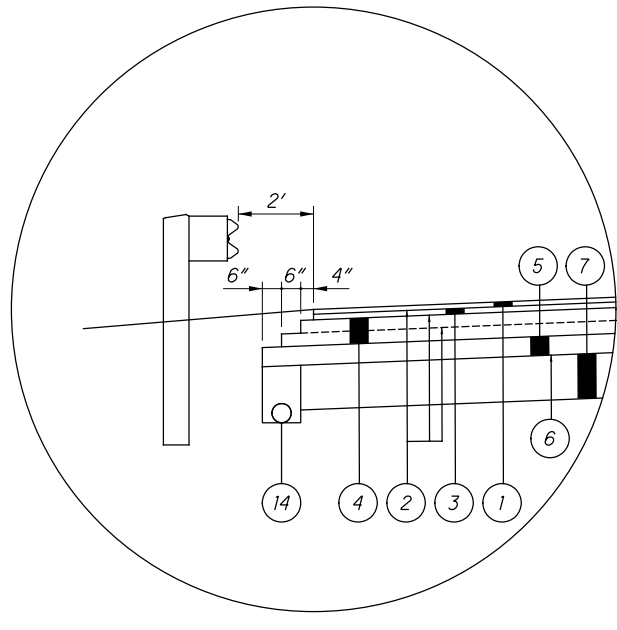
NOTES:  
 1. INSTALL ONE DOWEL 6" FROM THE BEGINNING AND END OF THE BARRIER. USE 4.0' MAX. LONGITUDINAL SPACING BETWEEN DOWELS FOR OVERALL LENGTHS LESS THAN 20.0'.  
 2. DISTANCE BETWEEN THE BOTTOM OF BARRIER AND EX. ABUTMENT VARIES. CONTRACTOR SHALL ENSURE 6" EMBEDMENT INTO BOTH PROPOSED BARRIER AND EX. FOOTING.



ITEM 622 - CONCRETE BARRIER, TYPE D



CONCRETE BARRIER/ATTENUATOR DETAIL



PAVEMENT "STEP" DETAIL WITH GUARDRAIL

2021-09-24 - BU 29 - RFC

TYPICAL SECTIONS - DETAILS

SUM-76 8.24 9.74 0.00  
 / 8 / 71 / 97 / 4

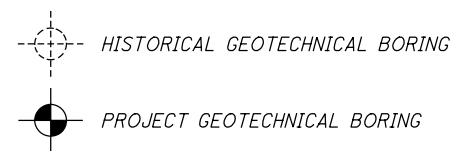
**PLAN ABBREVIATIONS**

THE FOLLOWING LIST OF ABBREVIATION DEFINITIONS IS USED FOR THIS PLAN SET:

ABBREVIATION	DESCRIPTION
ATG	ADJUSTED TO GRADE
AA	ANCHOR ASSEMBLY
APP	AS PER PLAN
ASPH.	ASPHALT
AVE.	AVENUE
B	BASELINE
BM	BENCH MARK
BLVD.	BOULEVARD
BTA	BRIDGE TERMINAL ASSEMBLY
CB	CATCH BASIN
C	CENTERLINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT'D	CONTINUED
CORP.	CORPORATION
CMP	CORRUGATED METAL PIPE
CU YD	CUBIC YARD
CI	CURB INLET
CS	COMBINED SEWER
DIST.	DISTANCE
DND	DO NOT DISTURB
DR.	DRIVE/DRIVEWAY
EA.	EACH
EDA	EARTH DISTURBED AREA
EB	EASTBOUND
EL	EDGE LINE
EOI	END OF INFORMATION
EORI	END OF RECORDED INFORMATION
EOP	EDGE OF PAVEMENT
EOS	EDGE OF SHOULDER
ELEC.	ELECTRIC
ELEV.	ELEVATION
EST.	ESTIMATE/ESTIMATED
EXC.	EXCAVATION
EX.	EXISTING
FT.	FEET
FH	FIRE HYDRANT
F	FLOW LINE
GR	GUARDRAIL
HW	HEADWALL
HWY.	HIGHWAY
IN.	INCHES
INT.	INTERSECTION
INV.	INVERT
IR	INTERSTATE ROUTE
ITS	INTELLIGENT TRANSPORTATION SYSTEMS
LIN.	LINEAR
MOT	MAINTENANCE OF TRAFFIC
MH	MANHOLE
MAX.	MAXIMUM
MGS	MIDWEST GUARDRAIL SYSTEM
MI.	MILE(S)
MIN.	MINIMUM
MO.	MONTH(S)
N	NORTH
NB	NORTHBOUND
NE	NORTHEAST
NW	NORTHWEST
NO.	NUMBER
N.T.S.	NOT TO SCALE
OVHD.	OVERHEAD
PVMT	PAVEMENT
PL.	PLACE
PCB	PORTABLE CONCRETE BARRIER
PG	PROFILE GRADE

**PLAN ABBREVIATIONS (CONT'D)**

ABBREVIATION	DESCRIPTION
PGL	PROFILE GRADE LINE
P	PROPERTY LINE
PROP.	PROPOSED
QL	(SUE) QUALITY LEVEL
RAD.	RADIUS
REF.	REFERENCE
REINF.	REINFORCED
RMVD.	REMOVED
RES.	RESIDENTIAL
RD.	ROAD
RCP	ROCK CHANNEL PROTECTION
RNDG.	ROUNDING
RTG	RECONSTRUCTED TO GRADE
SEC.	SECTION
SHT.	SHEET
SHLDR.	SHOULDER
S	SOUTH
SB	SOUTHBOUND
SE	SOUTHEAST
SW	SOUTHWEST
SQ FT	SQUARE FEET
SQ YD	SQUARE YARD
STD.	STANDARD
STA.	STATION
ST.	STREET
STRUCT.	STRUCTURE
TELE.	TELEPHONE
TEMP.	TEMPORARY
TBR	TO BE REMOVED
TBRR	TO BE REMOVED AND RELOCATED
TOT.	TOTAL
TWP.	TOWNSHIP
TYP.	TYPICAL
US	UNITED STATES ROUTE
VAR.	VARIABLE/VARIES
VC	VERTICAL CURVE
V.C.	VERTICAL CLEARANCE
Vdes	DESIGN SPEED
WM	WATER MAIN
WV	WATER VALVE
WB	WESTBOUND



**UTILITIES**

THE UNDERGROUND UTILITIES ON THIS PLAN HAVE BEEN LOCATED BY USING A SUBSURFACE UTILITY ENGINEERING COMPANY (SUE). IF THERE ARE ANY DISCREPANCIES BETWEEN FIELD MARKINGS AND WHAT THE PLAN INDICATES, PLEASE CONTACT MATTHEW STEELE (PHONE: 330-786-4832), DISTRICT UTILITY COORDINATOR, PRIOR TO ANY SUBSURFACE WORK BEING INITIATED. THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

LISTED BELOW ARE THE UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS

**CARGILL SALT**  
ATTN: KERRY MORGAN  
CELL (330) 780-6610  
2065 MANCHESTER RD.  
AKRON, OH 43082

**CITY OF AKRON BUREAU OF WATER SUPPLY (INSPECTION)**  
ATTN: TONY PUGLIA  
OFFICE (330) 375-2549  
1460 TRIPPLETT BLVD.  
AKRON, OH 44306

**GAS**  
DOMINION EAST OHIO  
ATTN: COREY ROLLINS  
OFFICE (330) 664-2754  
KEVIN BIRT  
OFFICE (330) 664-2409  
320 SPRINGSIDE DR.  
SUITE 320  
AKRON, OH 44333

**CITY OF AKRON UTILITY COORDINATOR**  
ATTN: JOSEPH KUNZLER  
OFFICE (330)-375-2217  
CELL (330)-690-0133  
166 S. HIGH ST. AKRON, OH 44308

**ELECTRIC**  
FIRST ENERGY  
ATTN: CRAIG BUTLER  
OFFICE (330) 436-4153  
ATTN: ROSS CATANESE  
OFFICE (330) 436-4177  
CELL (330) 807-0338  
ATTN: ERIC LIVESAY  
OFFICE (330) 294 6310  
CELL (330) 618-6903  
1910 W. MARKET ST.  
BLDG. 3  
AKRON, OH 44313

**CITY OF AKRON COMMUNICATIONS**  
ATTN: MALCOLM VALENTINE  
OFFICE (330) 375-2670  
FAX (330) 375-2996  
JOHN HEFFERNAN  
OFFICE (330) 375-2685

**CITY OF AKRON BUREAU OF WATER RECLAMATION**  
ATTN: BRIAN GRESSER  
OFFICE (330) 375-2963x7130  
2460 AKRON-PENINSULA RD.  
AKRON, OH 44313

**CITY OF AKRON TRAFFIC ENGINEERING**  
ATTN: MIKE LUPICA  
OFFICE (330) 375-2851  
FAX (330) 375-2307  
CELL (330) 812-7550

**ODOT OFFICE OF TECHNICAL SERVICES**  
ATTN: SANDRA MAPEL (FIELD OPERATIONS)  
OFFICE (614) 644-0291  
TRAFFIC MONITORING SECTION  
ODOT  
1980 WEST BROAD STREET  
COLUMBUS, OHIO 43223

**STRAWN OILFIELD SERVICE**  
ATTN: GEORGE STRAWN  
CELL (330) 727-1614  
29093 STATE ROUTE 62  
SALEM, OH 44460

**EVERFLOW EASTERN PARTNERS**  
OFFICE (330) 537-3863  
585 W MAIN ST.  
CANFIELD, OH 44406

**EXISTING UTILITIES AND SUBGRADE TREATMENT**

THE CONTRACTOR SHALL VERIFY THE DEPTH OF ALL EXISTING UNDERGROUND UTILITIES AND SEWERS WITHIN THE PROPOSED PAVEMENT LIMITS TO ENSURE NO UTILITIES OR SEWERS ARE IMPACTED OR DAMAGED DURING CEMENT STABILIZATION AND/OR UNDERCUT ACTIVITIES. THE CONTRACTOR SHALL LOCATE AND TAKE CARE TO FLAG ALL EXISTING UTILITIES WITHIN THE PROPOSED PAVEMENT LIMITS PRIOR TO PERFORMING CEMENT STABILIZATION OR UNDERCUT, AS DESIGNATED IN THE PLANS. SHOULD THE CONTRACTOR ENCOUNTER A POTENTIAL UTILITY CONFLICT, THE CONTRACTOR SHALL NOTIFY PROJECT ENGINEER AND STOP CEMENT STABILIZATION/UNDERCUT ACTIVITIES AT THE CONFLICT LOCATION IMMEDIATELY.

Released for Construction  
Thomas J Powell, PE

09/28/2021

**ISSUE RECORD - BU-29 ROADWAY**

NO.	DATE	DESCRIPTION

**ITEM 609 - CURB, TYPE 4-C, AS PER PLAN**

ALL REQUIREMENTS OF ODOT STANDARD ROADWAY CONSTRUCTION DRAWING BP 5.1 SHALL APPLY WITH THE FOLLOWING MODIFICATIONS: THE DEPTH OF THE CURB OR COMBINATION CURB AND GUTTER SHALL BE ADJUSTED SUCH THAT THE BOTTOM OF CURB RESTS DIRECTLY ON THE TOP OF THE AGGREGATE BASE LAYER. SEE TYPICAL SECTIONS FOR MORE INFORMATION.

**ITEM 511 WINGWALLS OR HEADWALLS FOR 611 ITEMS**

FOR ITEMS 706.05, 706.051, 706.052 AND 706.053 WITH A CAST-IN-PLACE WINGWALL OR HEADWALL A PRECAST ALTERNATIVE MAY BE FURNISHED PER 602.03. THE PRECAST ALTERNATIVE WILL MEET THE CAST-IN-PLACE STRUCTURAL DESIGN LOADINGS, DESIGN HEIGHT, AND DESIGN LENGTH DIMENSIONS.

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E, MASH**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

CALCULATED  
JTB  
CHECKED  
EAK

GENERAL NOTES

2021-09-24 - BU 29 - RFC

SUM - 76 / 8 / 77 / 97 / 0.00  
8.24 / 9.74

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**CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL**

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED.

**UNDERDRAIN CONNECTIONS AT SAWCUTS**

AT THE START, END OR WIDENING OF ALL FULL-DEPTH PAVEMENT SECTIONS SHOWN IN THE PLANS, CONTRACTOR SHALL CONNECT PROPOSED UNDERDRAINS TO EXISTING AND ENSURE POSITIVE DRAINAGE IS MAINTAINED.

**REVIEW OF DRAINAGE FACILITIES**

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING ALONG WITH PHOTOS BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

**EXISTING SUBSURFACE DRAINAGE**

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

**ITEM 304 - AGGREGATE BASE, AS PER PLAN**

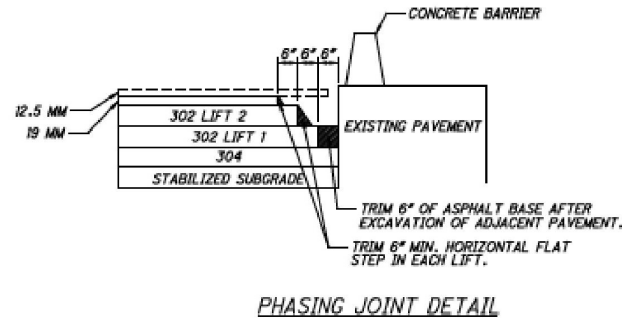
GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

**ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5mm, Type A (447), AS PER PLAN**

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

**PHASE JOINT FOR ASPHALT PAVEMENT**

PER THE PHASING JOINT DETAIL, BEFORE PAVING AGAINST THE PHASE JOINT, THE CONTRACTOR SHALL MILL OUT THE UNCONSOLIDATED EDGE OF EACH PAVEMENT COURSE TO PROVIDE THE APPROPRIATE STEPS INT PAVEMENT JOINT, WHILE REMOVING THE UNCONSOLIDATED MATERIAL, PER THE DETAIL SHOWN UPON COMPLETION OF THE MILLING, THE VERTICAL FACES SHALL BE SEALED WITH SUPPLEMENTAL SPECIFICATION 875.02 HOT APPLIED ASPHALT JOINT ADHESIVE TO PROVIDE 100% COVERAGE OF THE JOINTS. THE COST FOR THE MILLING AND SEALING SHALL BE INCIDENTAL TO THE COST OF THE PAVEMENT ITEMS.



**ITEM 442 - ANTI-SEGREGATION EQUIPMENT**

PROVIDE ANTI-SEGREGATION EQUIPMENT FOR ALL COURSES OF UNIFORM THICKNES IN ACCORDANCE WITH CMS 401.12.

**ITEM SPECIAL - MISC.: VERTICAL CLEARANCE**

BEFORE ANY CONSTRUCTION TAKES PLACE AND AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LICENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT ALL OF THE OVERHEAD STRUCTURES WITHIN THE PROJECT LIMITS.

**ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, AS PER PLAN**

ON THIS PROJECT SUPPLY A 19MM INTERMEDIATE COURSE MEETING THE REQUIREMENTS OF 442 EXCEPT AS MODIFIED BELOW. MODIFY TABLE 442.02-2 AS FOLLOWS:

Sieve Size	Total Percent Passing		
	9.5 mm mix	12.5 mm mix	19 mm mix
1/2 inch (38 mm)	-	-	100
3/4 inch (19 mm)	-	100	95 to 100
1/2 inch (12.5 mm)	100	95 to 100	90 to 100
3/8 inch (9.5 mm)	90 to 100	96 max	96 max
NO. 4 (4.75 mm)	70 max	52 to 65	60 max
NO. 8 (2.36 mm)	34 to 52	34 to 45	34 to 45
NO. 200 (75 um)	2 to 8	2 to 8	2 to 8

MODIFY TABLE 442.02-3 AS FOLLOWS:  
 -APPLY 14.0 FOR A VMA (PERCENT MINIMUM) FOR A 19MM MIX.  
 -APPLY 5.3 PERCENT FOR THE MINIMUM TOTAL ASPHALT BINDER CONTENT FOR A 19MM MIX.

MODIFY THE 442 INTERMEDIATE COURSE REQUIREMENTS OF TABLES 401.04-1 AND 401.04-2 AS FOLLOWS:  
 -APPLY 3.5 PERCENT FOR THE TOTAL VIRGIN ASPHALT BINDER CONTENT, MINIMUM.  
 -USE A PG 64-22 IF USING 25 PERCENT OR LESS RAP. USE PG 64-28 IF USING GREATER THAN 25 PERCENT RAP.

**COMMUNITY NOTIFICATION**

THE CONTRACTOR WILL ADVISE THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST ALSO PROVIDE NOTIFICATION TO THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO ANY LANE RESTRICTIONS. THE ODOT PROJECT ENGINEER WILL FORWARD THE INFORMATION TO THE ODOT, DISTRICT 4 OFFICE OF PUBLIC INFORMATION FOR USE TO NOTIFY EMERGENCY SERVICES AND THE COMMUNITY A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF PROJECT CONSTRUCTION. INCLUDED IN THIS NOTIFICATION WILL BE THE PROPOSED LANE RESTRICTIONS.

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT**

THE DBT SHALL SUBMIT TO THE ODOT PROJECT MANAGER THE TOTAL NUMBER OF ACRES OF EARTH DISTURBANCE ACTIVITIES FOR BOTH OFF PROJECT AND ON PROJECT WORK IN A TIMELY MANNER. THIS INFORMATION WILL BE USED TO DEVELOP THE NOI IF REQUIRED. THE NOI WILL BE SUBMITTED TO THE OEPA WITHIN 10 DAYS AFTER THIS INFORMATION IS RECEIVED FROM THE DBT. APPROVAL FROM THE OEPA TAKES 21 DAYS AND THE ODOT PROJECT MANAGER HAS 10 DAYS TO FILE THE NOI SO THESE 31 DAYS WILL BE COUNTED FOR IN THE PROJECT.

ALL TEMPORARY EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR EVEN IF A SWPPP IS NOT REQUIRED. EARTH DISTURBING ACTIVITY IS NOT PERMITTED PRIOR TO THE OEPA PERMIT APPROVAL. FOR PROJECTS THAT REQUIRE AN NOI, THE SWPPP MUST BE IN PLACE PRIOR TO THE INITIATION OF ANY EARTH DISTURBING ACTIVITY. ALL TEMPORARY EROSION CONTROL WORK AND THE SWPPP IF REQUIRED WILL BE PER SS832. FOR INFORMATION ABOUT OEPA'S NPDES PERMIT REQUIREMENTS SEE [HTTPS://WWW.EPA.OHIO.GOV/DSW/STORM/INDEX](https://www.epa.ohio.gov/dsw/storm/index)

ITEMS USED TO IMPLEMENT THE DBT'S EROSION CONTROL REQUIREMENTS ARE PAID FROM AN ENCUMBERED AMOUNT INCLUDED IN THE PROPOSAL AS A NON-BID REFERENCE NUMBER. THE PROPOSAL SPECIFIES THE UNIT PRICES FOR THE EROSION CONTROL ITEMS. PAYMENTS FOR EROSION CONTROL ITEMS THAT EXCEED THE ENCUMBERED AMOUNT WILL BE MADE BY AN EXTRA WORK CHANGE ORDER USING THE SPECIFIED UNIT PRICES. THE SPECIFIED UNIT PRICES ARE FIXED FOR THE CONTRACT AND MAY NOT BE NEGOTIATED OR ADJUSTED FOR INFLATION OR CLAIMED CHANGED CONDITION.

THE PREPARATION OF THE SWPPP, ALONG WITH ALL REQUIREMENTS OF SS832 FOR MAINTAINING, INSPECTING, MODIFYING AND UPDATING THE SWPPP ARE CONSIDERED INCIDENTAL TO THE PROJECT.

**REMOVAL OF TEMPORARY EROSION CONTROL ITEMS**

ALL TEMPORARY EROSION CONTROL ITEMS SHALL BE REMOVED BEFORE THE PROJECT IS ACCEPTED. REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE APPROPRIATE C&MS SPECIFICATIONS.

**WATERWAY PERMITS**

THE WATERWAY PERMITS WILL BE OBTAINED BY ODOT PRIOR TO CONSTRUCTION. THE PROJECT WILL BE COVERED UNDER ODOT REGIONAL GENERAL PERMIT - B.

**FLOODPLAIN COORDINATION**

FLOODPLAIN COORDINATION IS COMPLETE, AND NO FLOOD-PLAIN PERMIT IS NEEDED.

Released for Construction  
 Thomas J Powell, PE  
 09/28/2021

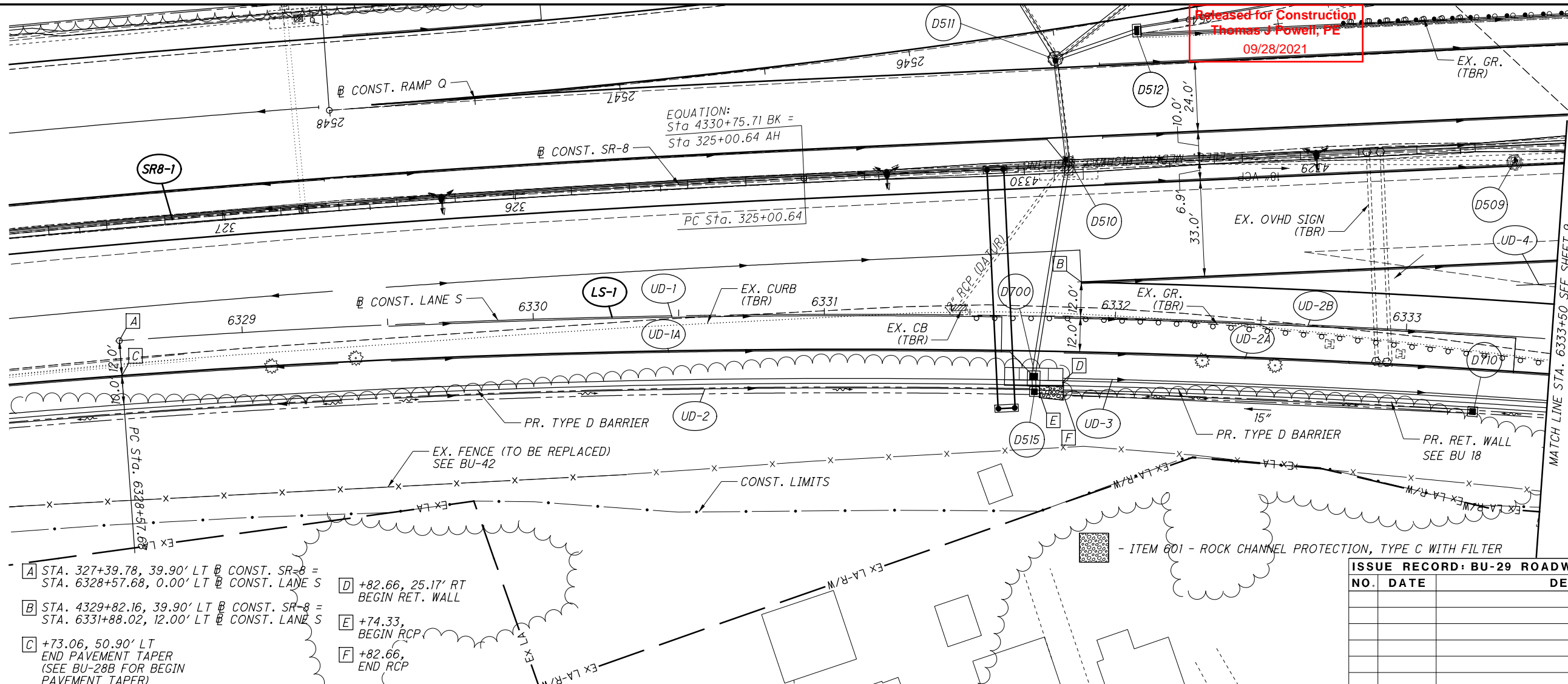
ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION

**ENDANGERED SPECIES HABITAT**

INDIANA BAT/NORTHERN LONG-EARED BAT: THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

CALCULATED: JTB, CHECKED: EAK  
**GENERAL NOTES**  
 2021-09-24 - BU 29 - RFC  
 SUM-76/97  
 8.24/9.74  
 00.0/47.0  
 /8/71/0.00  
 7  
 34

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 Thomas J Powell, PE  
 09/28/2021



**SR8-1**

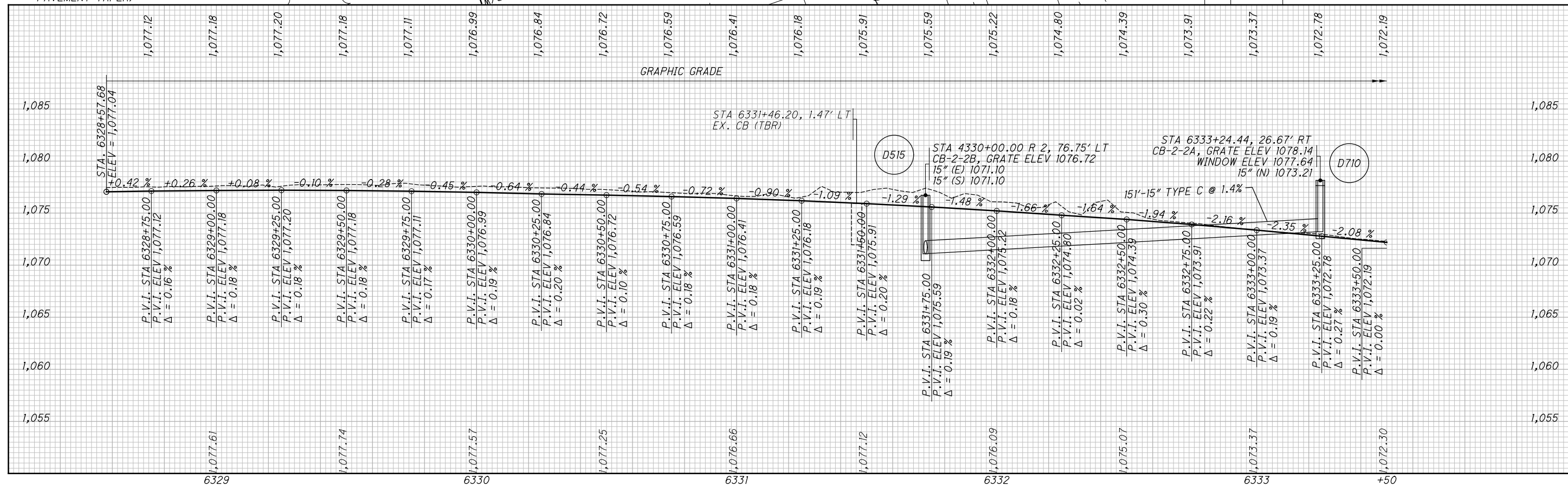
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$\Delta = 6^\circ 46' 35'' (LT)$
DC = 1° 00' 00"
R = 5,729.58'
T = 339.22'
L = 677.65'
E = 10.03'
eMAX = 0.0270
PC Sta. 325+00.64
PT Sta. 331+78.29
vDES = 60 MPH

**LS-1**

PI Sta. 6332+16.53
$\Delta = 11^\circ 52' 38'' (RT)$
DC = 1° 39' 39"
R = 3,449.75'
T = 358.85'
L = 715.13'
E = 18.61'
eMAX = 0.0397
PC Sta. 6328+57.68
PT Sta. 6335+72.81
vDES = 60 MPH

- A STA. 327+39.78, 39.90' LT @ CONST. SR-8 = STA. 6328+57.68, 0.00' LT @ CONST. LANE S
- B STA. 4329+82.16, 39.90' LT @ CONST. SR-8 = STA. 6331+88.02, 12.00' LT @ CONST. LANE S
- C +73.06, 50.90' LT END PAVEMENT TAPER (SEE BU-28B FOR BEGIN PAVEMENT TAPER)
- D +82.66, 25.17' RT BEGIN RET. WALL
- E +74.33, BEGIN RCP
- F +82.66, END RCP

ISSUE RECORD: BU-29 ROADWAY		
NO.	DATE	DESCRIPTION



**PLAN AND PROFILE - LANE S  
 STA. 6328+57.68 TO STA. 6333+50.00**

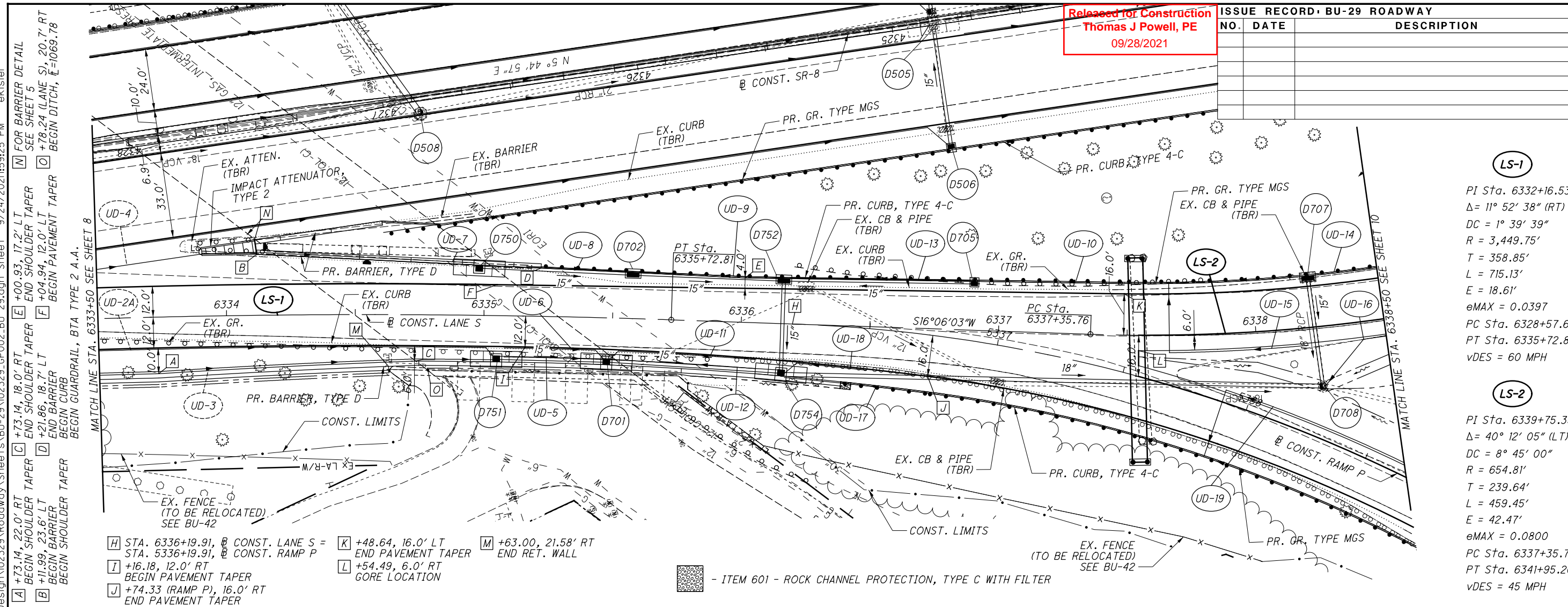
2021-09-24 - BU 29 - R/C

SUM-76 / 77 / 8 -  
 8.24 / 9.74 / 0.00



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Thomas J Powell, PE  
09/28/2021

ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION

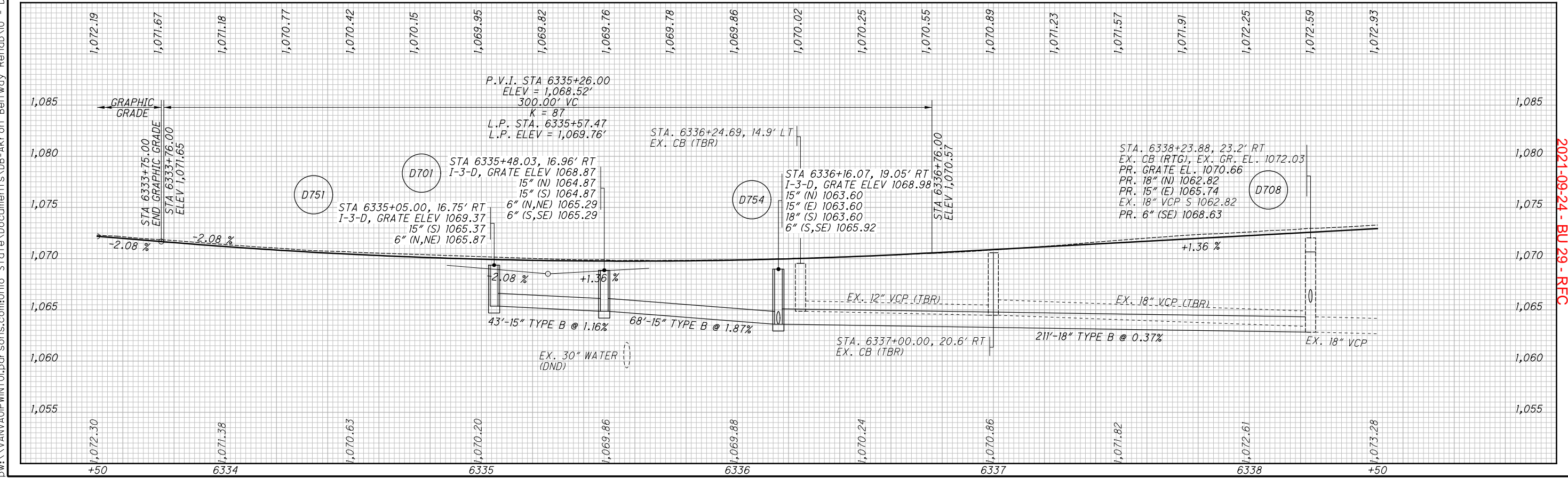


**LS-1**  
 PI Sta. 6332+16.53  
 $\Delta = 11^\circ 52' 38''$  (RT)  
 $DC = 1^\circ 39' 39''$   
 $R = 3,449.75'$   
 $T = 358.85'$   
 $L = 715.13'$   
 $E = 18.61'$   
 $eMAX = 0.0397$   
 PC Sta. 6328+57.68  
 PT Sta. 6335+72.81  
 $vDES = 60$  MPH

**LS-2**  
 PI Sta. 6339+75.39  
 $\Delta = 40^\circ 12' 05''$  (LT)  
 $DC = 8^\circ 45' 00''$   
 $R = 654.81'$   
 $T = 239.64'$   
 $L = 459.45'$   
 $E = 42.47'$   
 $eMAX = 0.0800$   
 PC Sta. 6337+35.76  
 PT Sta. 6341+95.20  
 $vDES = 45$  MPH

**H** STA. 6336+19.91, **B** CONST. LANE S = STA. 5336+19.91, **C** CONST. RAMP P  
**I** +16.18, 12.0' RT BEGIN PAVEMENT TAPER  
**J** +74.33 (RAMP P), 16.0' RT END PAVEMENT TAPER  
**K** +48.64, 16.0' LT END PAVEMENT TAPER  
**L** +54.49, 6.0' RT GORE LOCATION  
**M** +63.00, 21.58' RT END RET. WALL

- ITEM 601 - ROCK CHANNEL PROTECTION, TYPE C WITH FILTER  
 EX. FENCE (TO BE RELOCATED) SEE BU-42

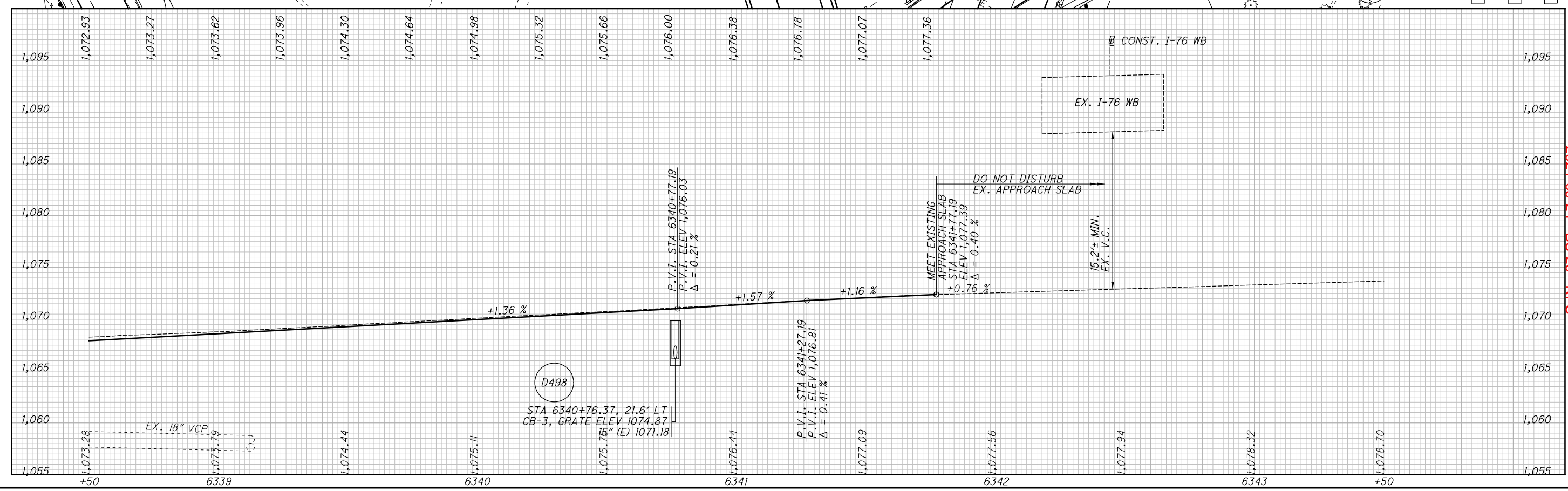
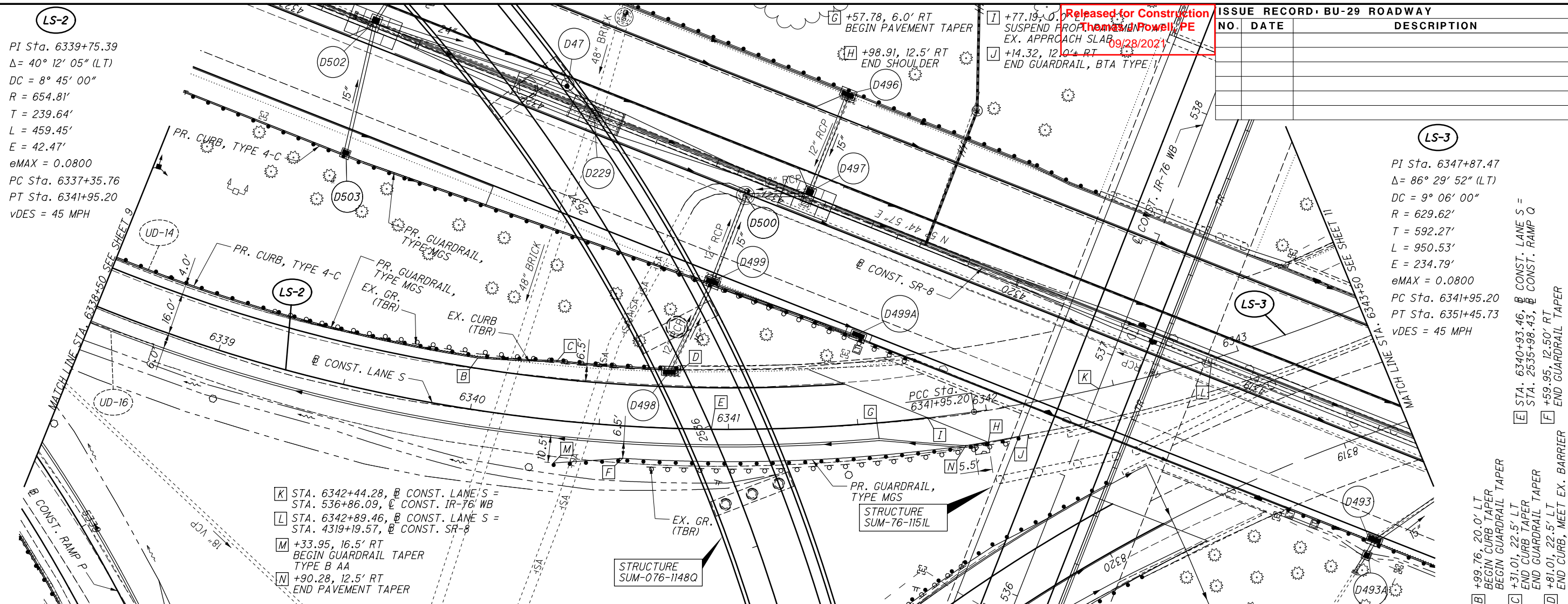


PLAN AND PROFILE - LANE S  
 STA. 6333+50.00 TO STA. 6338+50.00

SUM-76/77/8-8.24/9.74/0.00  
 2021-09-24 - BU 29 - RFC

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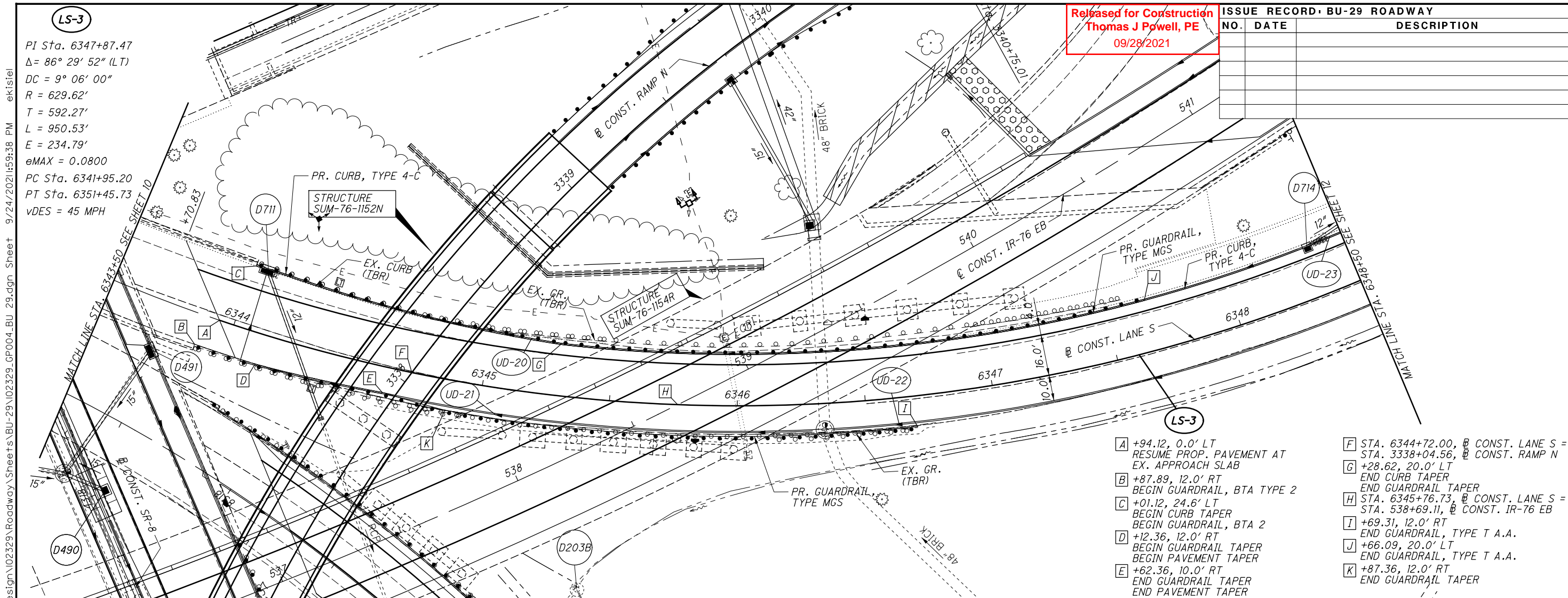
CALCULATED AA  
 CHECKED EAK  
 HORIZONTAL SCALE IN FEET  
 PLAN AND PROFILE - LANE S  
 STA. 6338+50.00 TO STA. 6343+50.00  
 2021-09-24 - BU 29 - RFC  
 SUM-76/77/8-8.24/9.74/0.00  
 10/34

LS-3

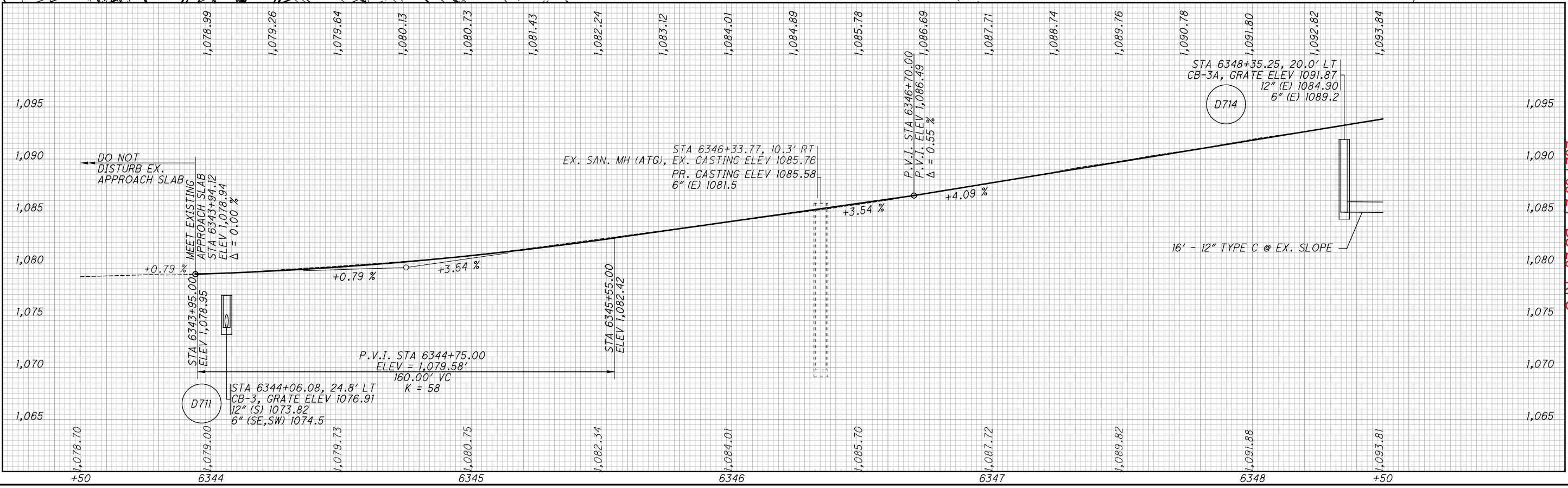
PI Sta. 6347+87.47  
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DC = 9° 06' 00"  
R = 629.62'  
T = 592.27'  
L = 950.53'  
E = 234.79'  
eMAX = 0.0800  
PC Sta. 6341+95.20  
PT Sta. 6351+45.73  
vDES = 45 MPH

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Thomas J Powell, PE  
09/28/2021

ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION



- A +94.12, 0.0' LT RESUME PROP. PAVEMENT AT EX. APPROACH SLAB
- B +87.89, 12.0' RT BEGIN GUARDRAIL, BTA TYPE 2
- C +01.12, 24.6' LT BEGIN CURB TAPER BEGIN GUARDRAIL, BTA 2
- D +12.36, 12.0' RT BEGIN GUARDRAIL TAPER BEGIN PAVEMENT TAPER
- E +62.36, 10.0' RT END GUARDRAIL TAPER END PAVEMENT TAPER
- F STA. 6344+72.00, B CONST. LANE S = STA. 3338+04.56, B CONST. RAMP N
- G +28.62, 20.0' LT END CURB TAPER END GUARDRAIL TAPER
- H STA. 6345+76.73, B CONST. LANE S = STA. 538+69.11, B CONST. IR-76 EB
- I +69.31, 12.0' RT END GUARDRAIL, TYPE T A.A.
- J +66.09, 20.0' LT END GUARDRAIL, TYPE T A.A.
- K +87.36, 12.0' RT END GUARDRAIL TAPER



PLAN AND PROFILE - LANE S  
STA. 6343+50.00 TO STA. 6348+50.00

2021-09-24 - BU 29 - RFC

SUM-76/77/8-  
8.24/9.74/0.00

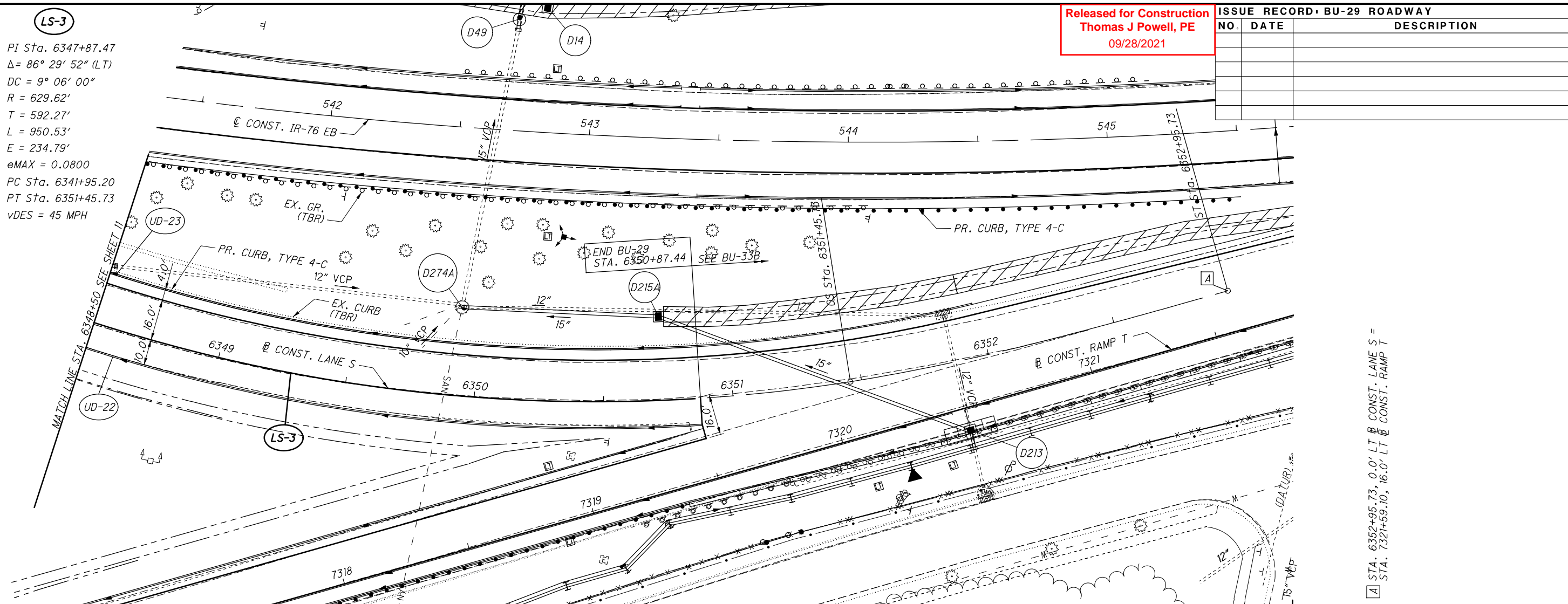
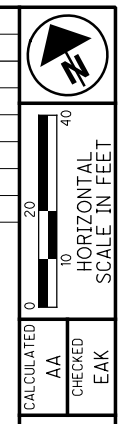
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**LS-3**

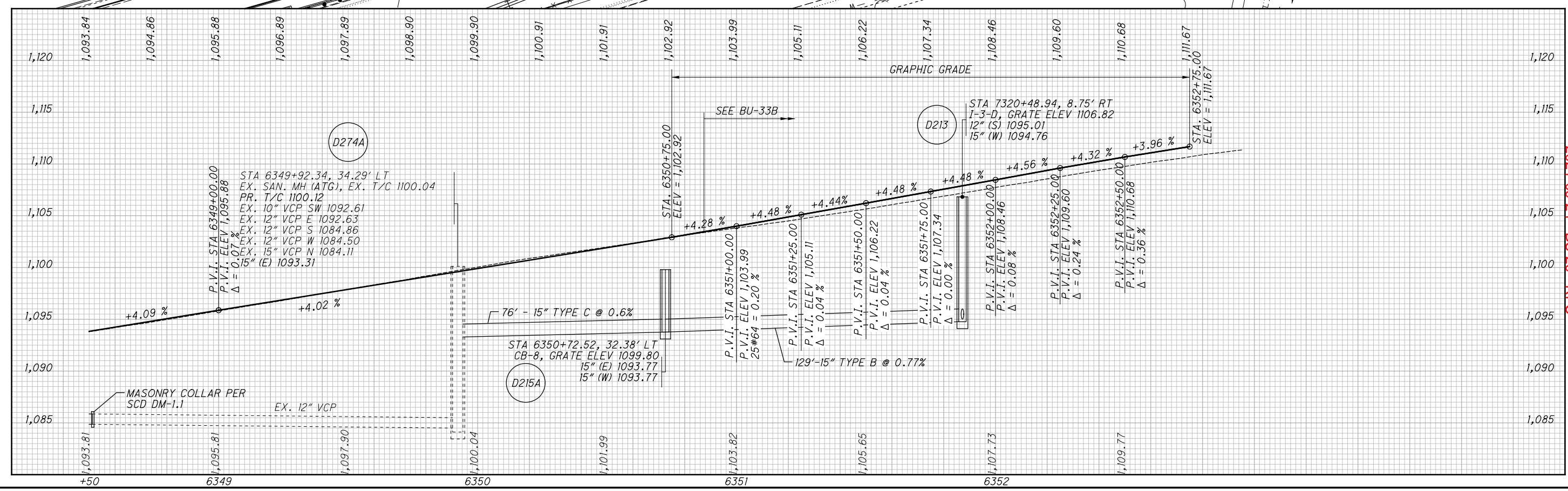
PI Sta. 6347+87.47  
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 $DC = 9^\circ 06' 00''$   
 $R = 629.62'$   
 $T = 592.27'$   
 $L = 950.53'$   
 $E = 234.79'$   
 $eMAX = 0.0800$   
 PC Sta. 6341+95.20  
 PT Sta. 6351+45.73  
 $vDES = 45$  MPH

Released for Construction  
 Thomas J Powell, PE  
 09/28/2021

ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION



[A] STA. 6352+95.73, 0.0' LT [B] CONST. LANE S =  
 STA. 7321+59.10, 16.0' LT [C] CONST. RAMP T



**PLAN AND PROFILE - LANE S**  
**STA. 6348+50.00 TO END**

2021-09-24 - BU 29 - R/C

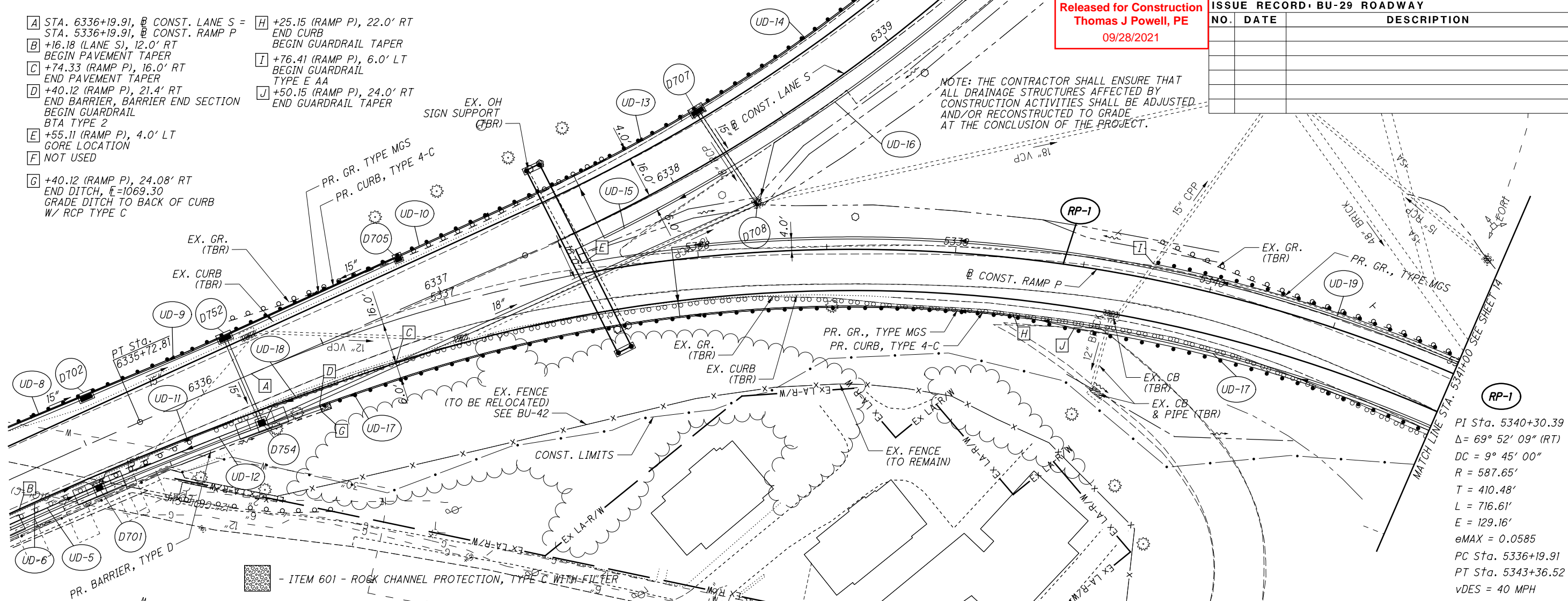
**SUM-76 / 77 / 8 -**  
**8.24 / 9.74 / 0.00**

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ISSUE RECORD - BU-29 ROADWAY

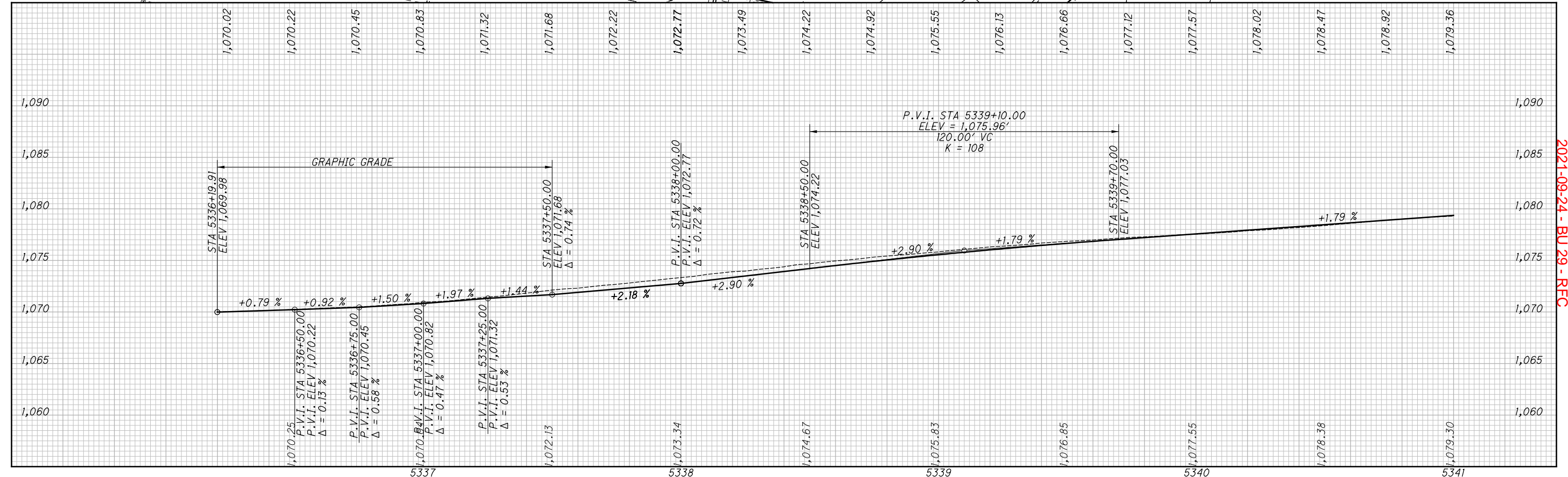
NO.	DATE	DESCRIPTION



NOTE: THE CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE ADJUSTED AND/OR RECONSTRUCTED TO GRADE AT THE CONCLUSION OF THE PROJECT.

- A STA. 6336+19.91, B CONST. LANE S = +16.18 (LANE S), 12.0' RT BEGIN PAVEMENT TAPER
- B +16.18 (LANE S), 12.0' RT BEGIN PAVEMENT TAPER
- C +74.33 (RAMP P), 16.0' RT END PAVEMENT TAPER
- D +40.12 (RAMP P), 21.4' RT END BARRIER, BARRIER END SECTION BEGIN GUARDRAIL BTA TYPE 2
- E +55.11 (RAMP P), 4.0' LT GORE LOCATION
- F NOT USED
- G +40.12 (RAMP P), 24.08' RT END DITCH,  $E=1069.30$  GRADE DITCH TO BACK OF CURB W/ RCP TYPE C
- H +25.15 (RAMP P), 22.0' RT END CURB BEGIN GUARDRAIL TAPER
- I +76.41 (RAMP P), 6.0' LT BEGIN GUARDRAIL TYPE E AA
- J +50.15 (RAMP P), 24.0' RT END GUARDRAIL TAPER

PI Sta. 5340+30.39  
 $\Delta = 69^\circ 52' 09''$  (RT)  
 DC =  $9^\circ 45' 00''$   
 R = 587.65'  
 T = 410.48'  
 L = 716.61'  
 E = 129.16'  
 eMAX = 0.0585  
 PC Sta. 5336+19.91  
 PT Sta. 5343+36.52  
 vDES = 40 MPH



PLAN AND PROFILE - RAMP P  
 STA. 5336+19.91 TO STA. 5341+00

2021-09-24 - BU 29 - R/C  
 SUM-76/77/8-8.24/9.74/0.00

Design: \\VANVAIPWINTO\parsons.com\Ohio State\Documents\B-DB-Akron Beltway Rehab\10 - Design\102329.Roadway\Sheets\BU-29\Roadway\Rehab\10 - Design\102329.GPI01.BU 29.dgn Sheet 9/24/2021 2:00:00 PM ek1s1el

- D** +73.60, 22.0' RT  
BEGIN SHOULDER TAPER
- E** +73.60, 24.0' RT  
BEGIN GUARDRAIL TAPER
- F** +04.85, 23.48' RT  
END SHOULDER TAPER
- G** +04.85, 26.60' RT  
END GUARDRAIL TAPER  
CONNECT TO EX. GUARDRAIL

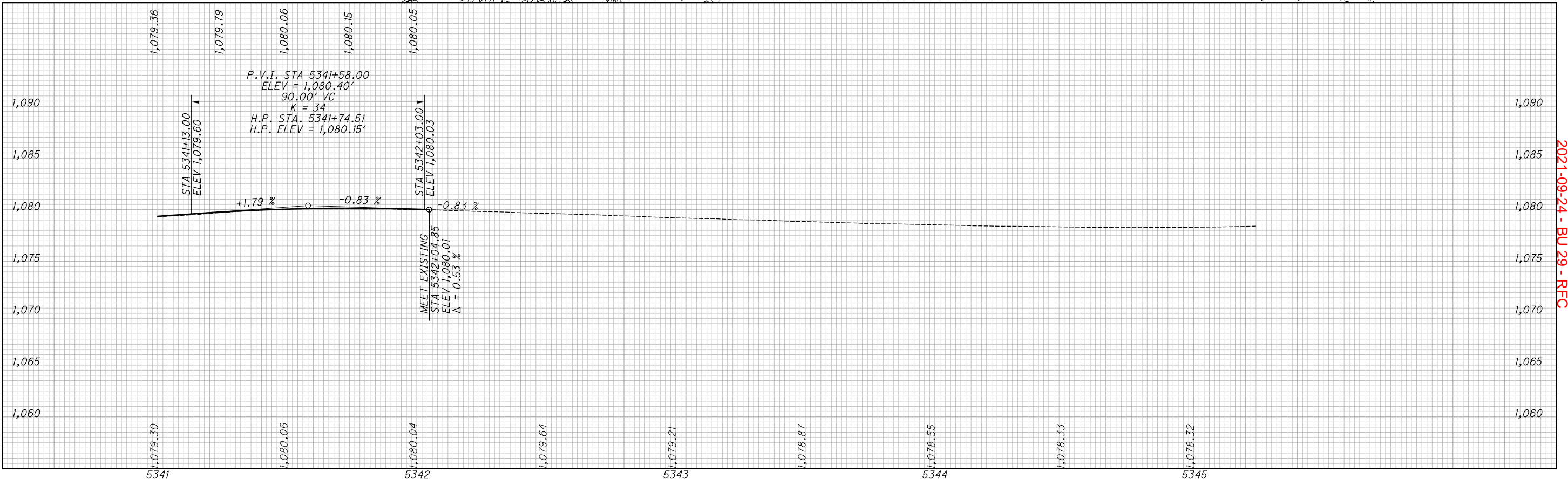
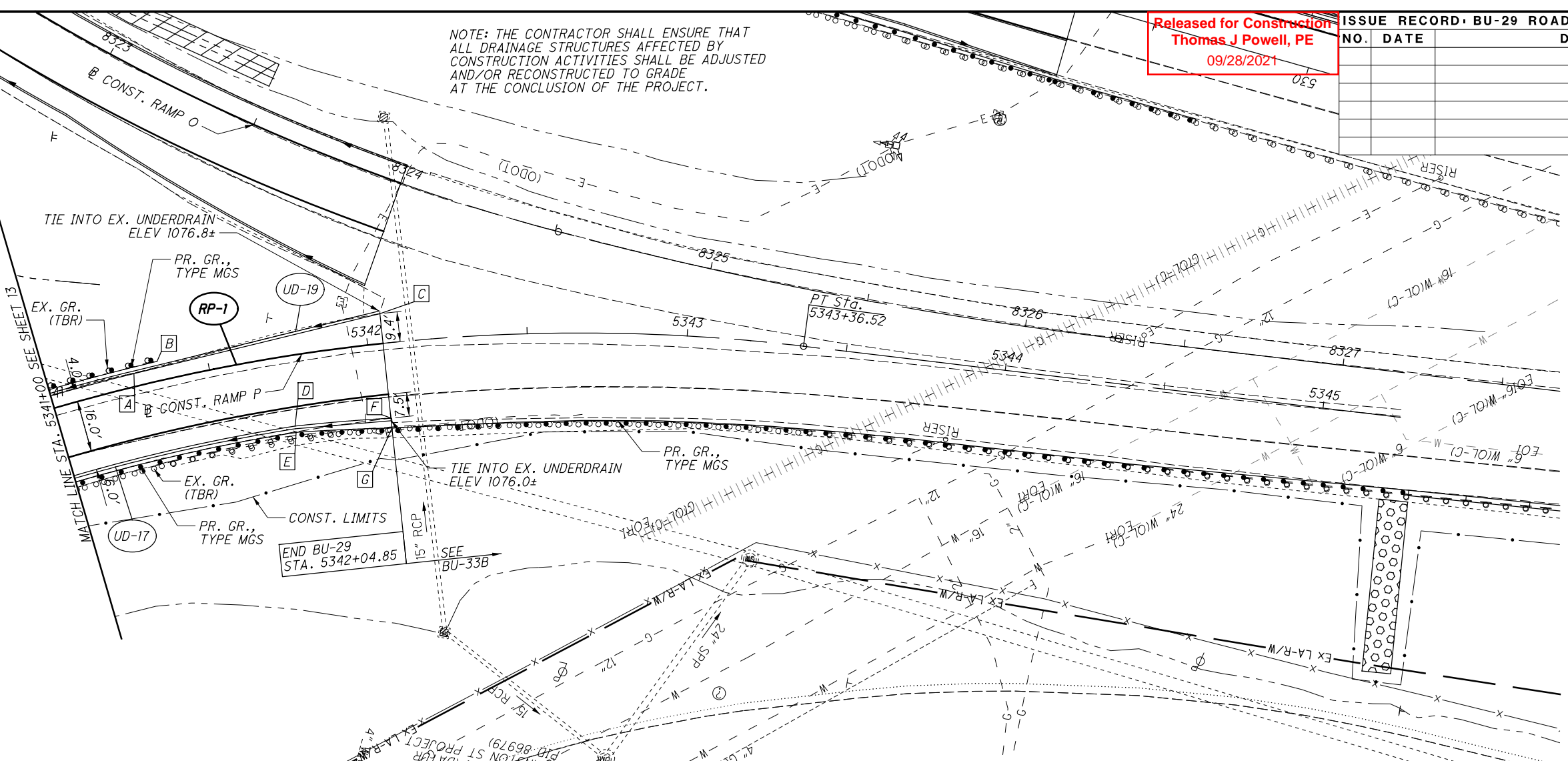
**RP-1**  
 PI Sta. 5340+30.39  
 $\Delta = 69^\circ 52' 09''$  (RT)  
 $DC = 9^\circ 45' 00''$   
 $R = 587.65'$   
 $T = 410.48'$   
 $L = 716.61'$   
 $E = 129.16'$   
 $e_{MAX} = 0.0585$   
 PC Sta. 5336+19.91  
 PT Sta. 5343+36.52  
 $v_{DES} = 40$  MPH

NOTE: THE CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE ADJUSTED AND/OR RECONSTRUCTED TO GRADE AT THE CONCLUSION OF THE PROJECT.

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ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION

CALCULATED AA  
 CHECKED EAK  
 HORIZONTAL SCALE IN FEET  
 0 20 40



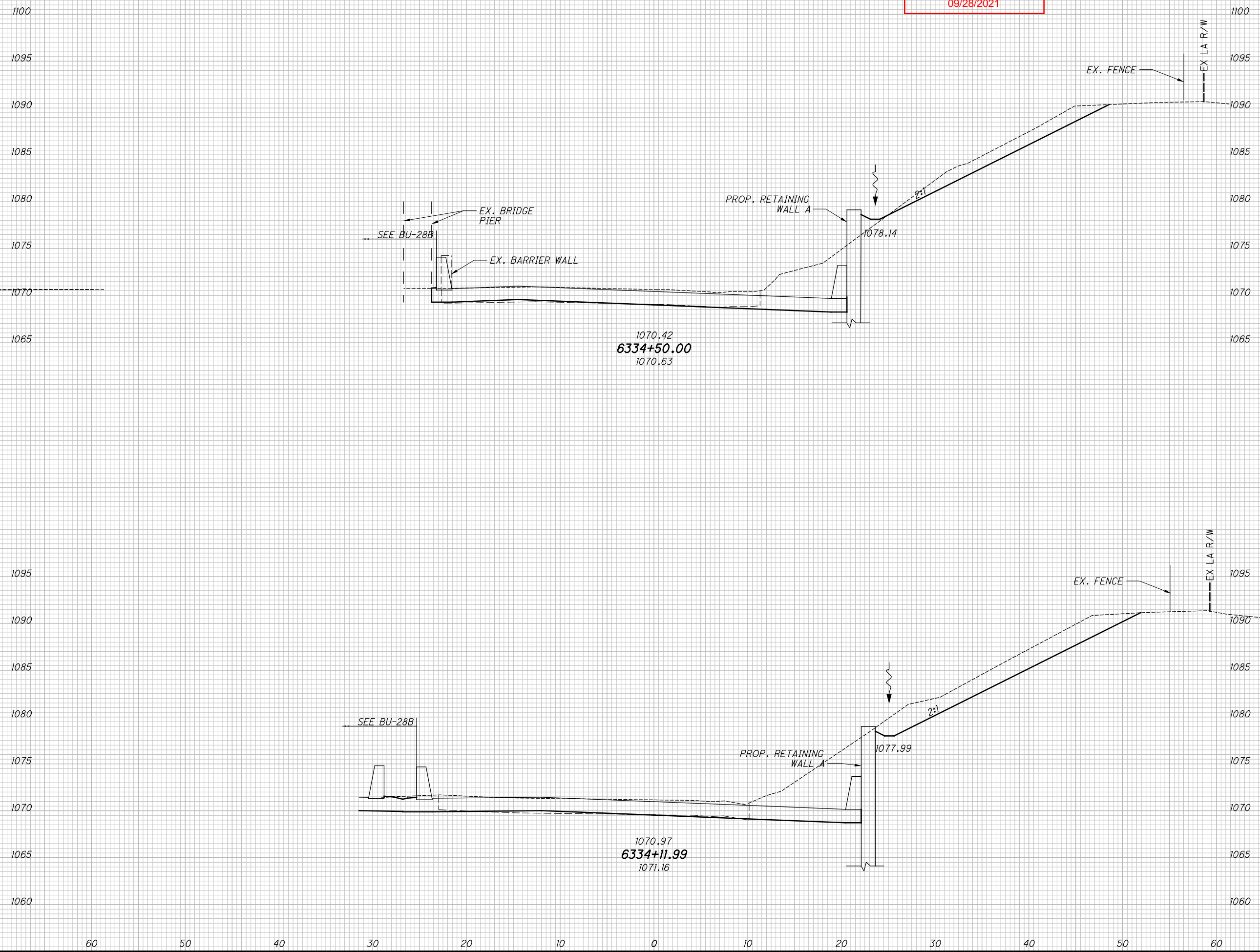
PLAN AND PROFILE - RAMP P  
 STA. 5341+00 TO STA. 5345+24.32

2021-09-24 - BU 29 - RFC  
 SUM-76/77/8-  
 8.24/9.74/0.00

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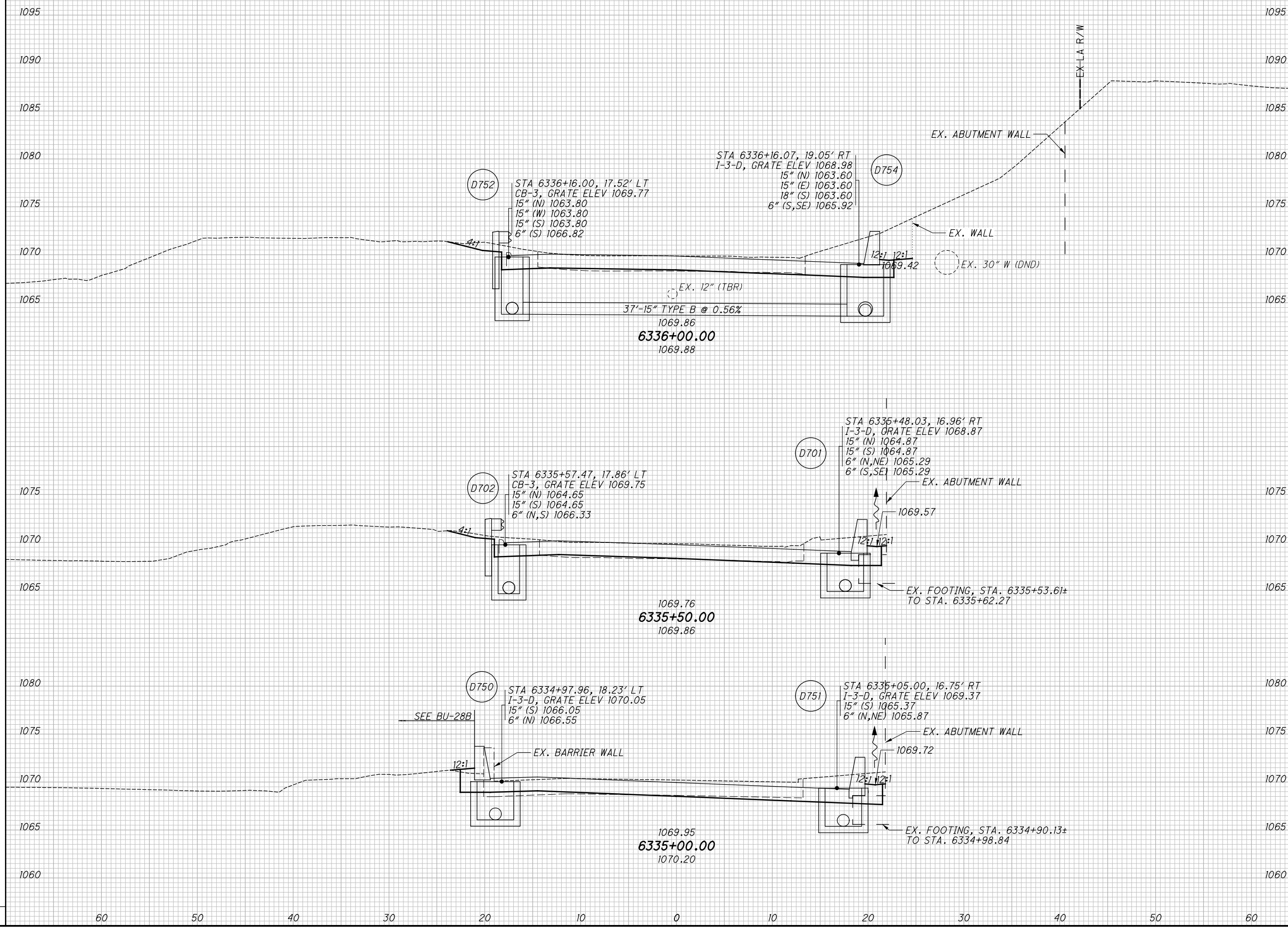
SEEDING		END AREA		VOLUME		CALCULATED		CHECKED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	JTB	EAK		
								<b>CROSS SECTIONS - LANE S</b> <b>STA. 6334+11.99 TO STA. 6334+50.00</b>	
								<b>SUM - 76.77 / 8 / 77 / 0.00</b> <b>8.24 / 9.74 / 0.00</b>	
								2021-09-24 - BU 29 - RFC	
								15 34	



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END AREA		VOLUME		CALCULATED	JTB	CHECKED	EAK
CUT	FILL	CUT	FILL				



**CROSS SECTIONS - LANE S**  
**STA. 6335+00.00 TO STA. 6336+00.00**

2021-09-24 - BU 29 - RFC

**SUM - 76 / 77 / 8**  
**8.24 / 9.74 / 0.00**

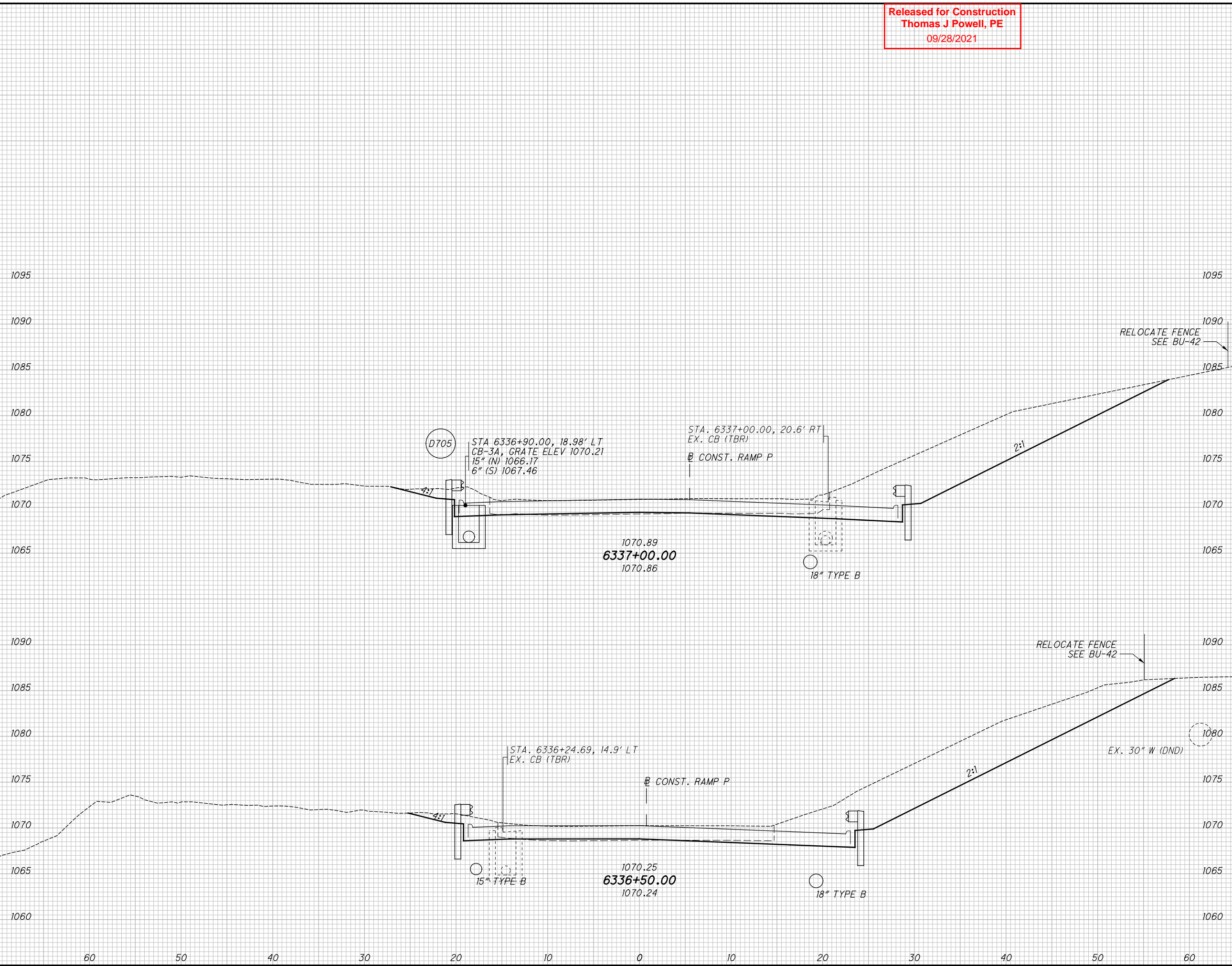


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SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	JTB	CHECKED



**CROSS SECTIONS - LANE S**  
**STA. 6336+50.00 TO STA. 6337+00.00**

2021-09-24 - BU 29 - RFC

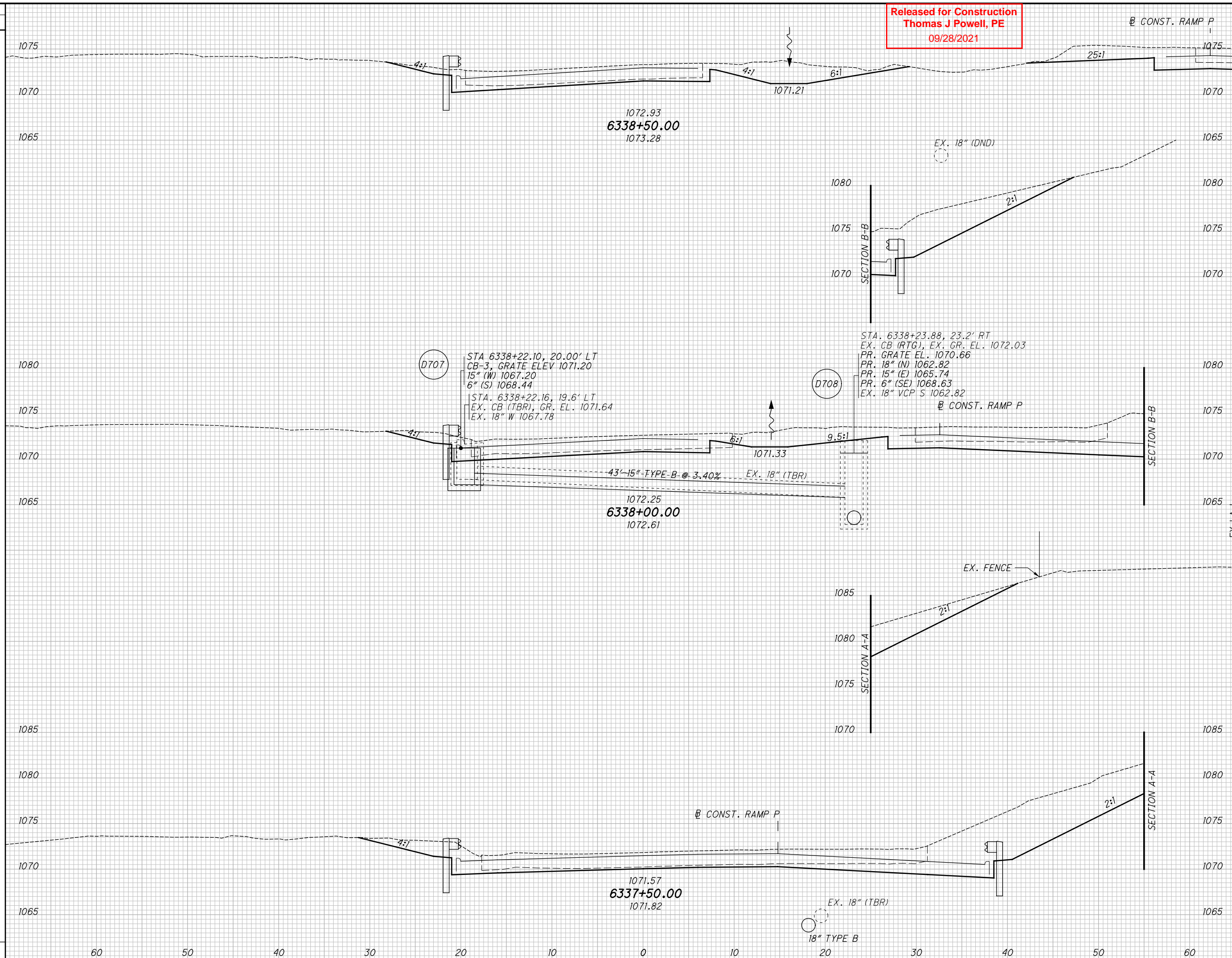
**SUM - 76.778 / 8 / 7.7 / 7.00**  
**8.24 / 9.74 / 0.00**

17  
34

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END AREA		VOLUME		CALCULATED	JTB	CHECKED	EAK
CUT	FILL	CUT	FILL				



**CROSS SECTIONS - LANE S**  
**STA. 6337+50.00 TO STA. 6338+50.00**

2021-09-24 - BU 29 - RFC

**SUM - 76 / 77 / 8 / 00.00 / 7.4 / 0.00**  
**8.24 / 9.74 / 0.00**

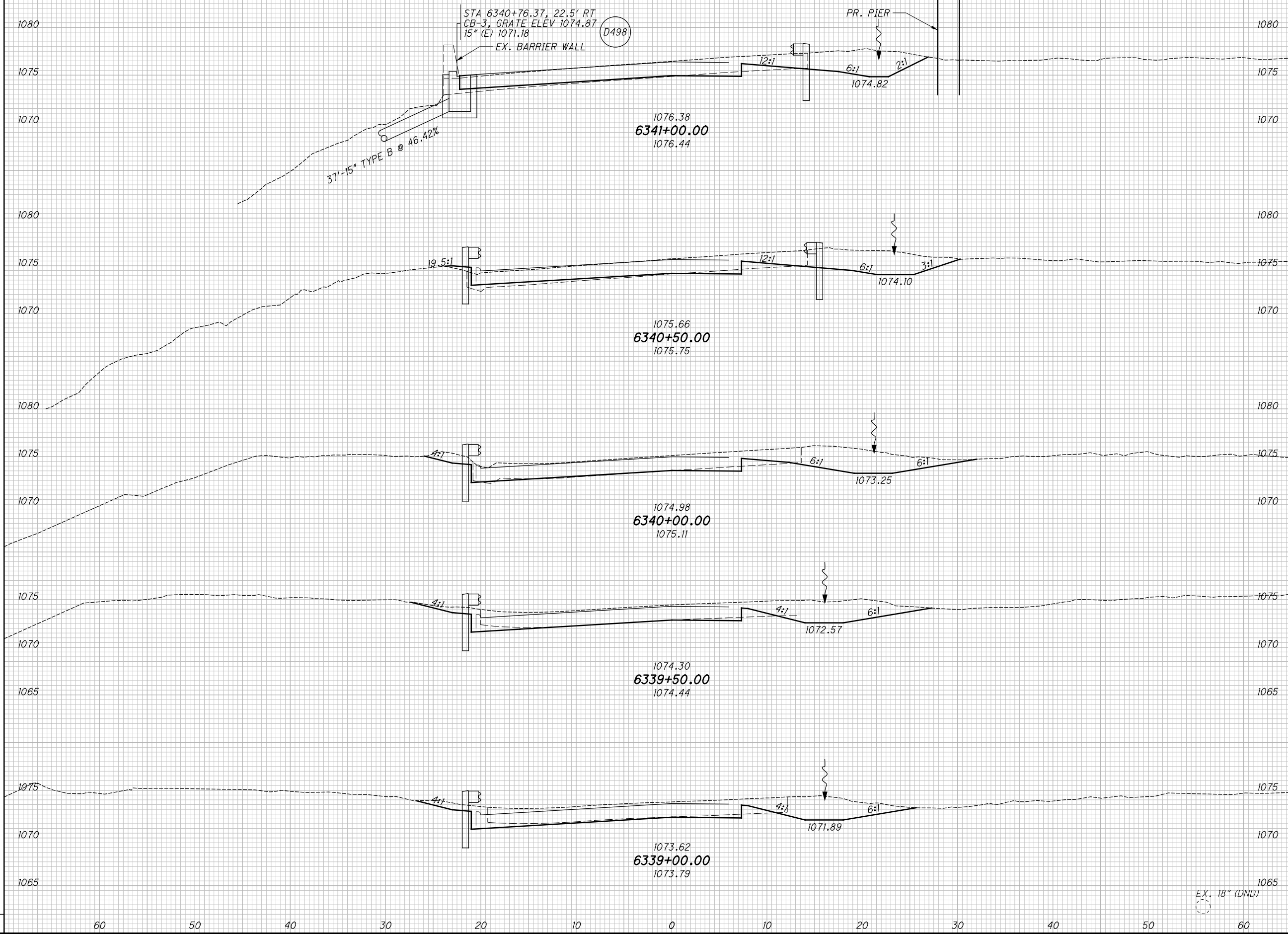
18  
34

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SEEDING	
END WIDTH	SO. YDS.

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END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	JTB	EAK



CROSS SECTIONS - LANE S  
 STA. 6339+00.00 TO STA. 6341+00.00

2021-09-24 - BU 29 - RFC

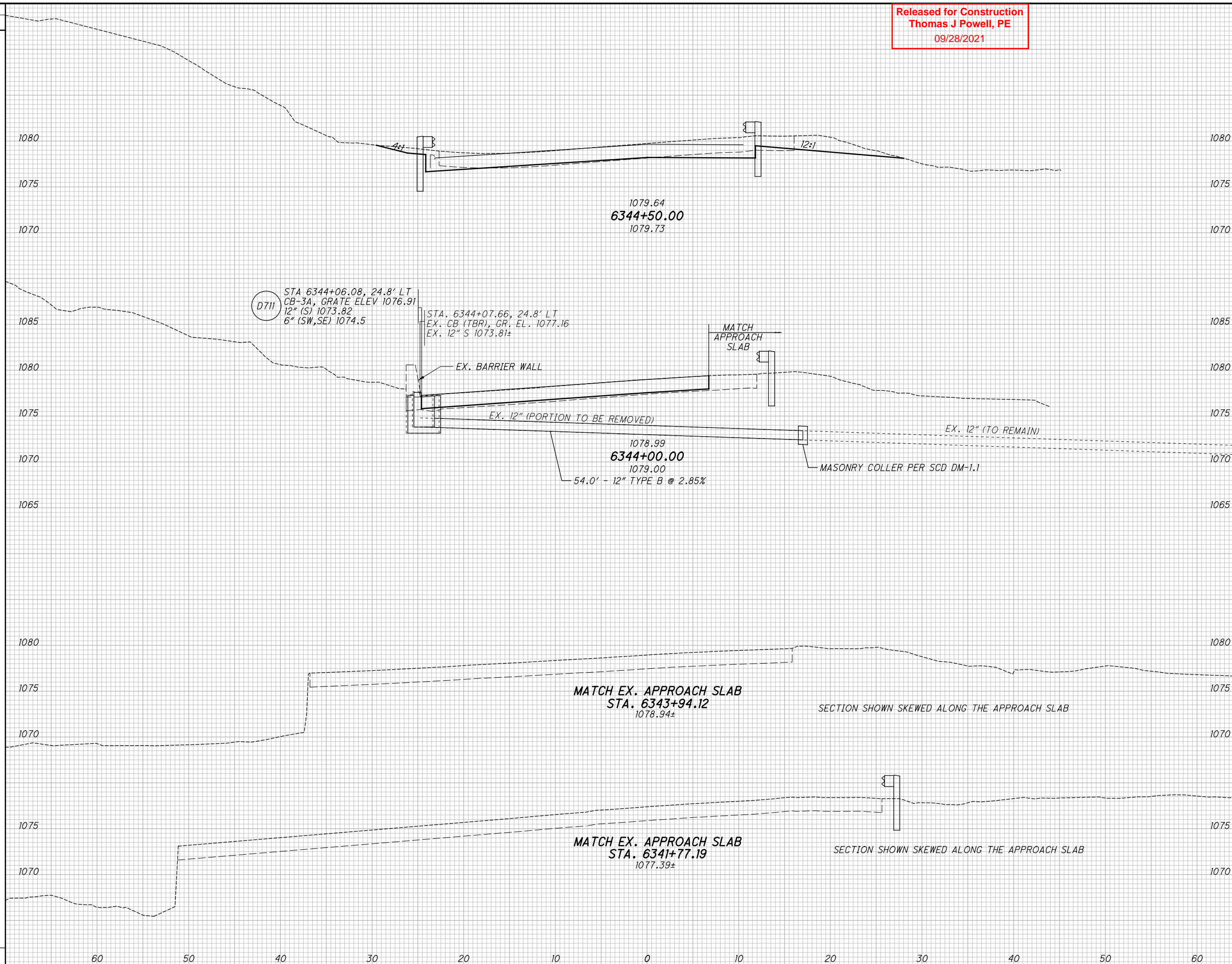
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19 / 34

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END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL		
				JTB	EAK



**CROSS SECTIONS - LANE S**  
**STA. 6341+77.19 TO STA. 6344+50.00**

2021-09-24 - BU 29 - RFC

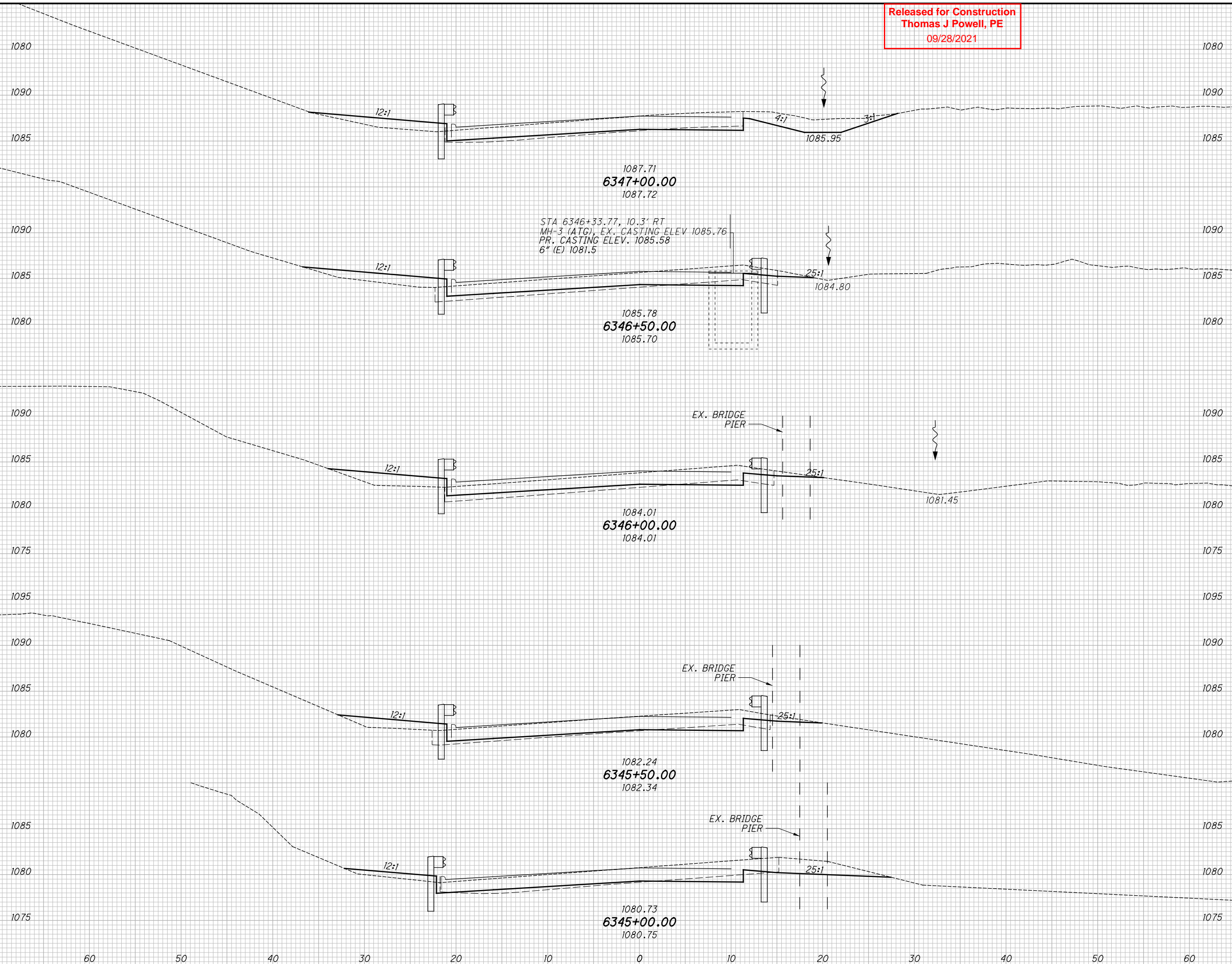
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**8.24 / 9.74 / 0.00**

20  
34

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SEEDING	
END WIDTH	SO. YDS.



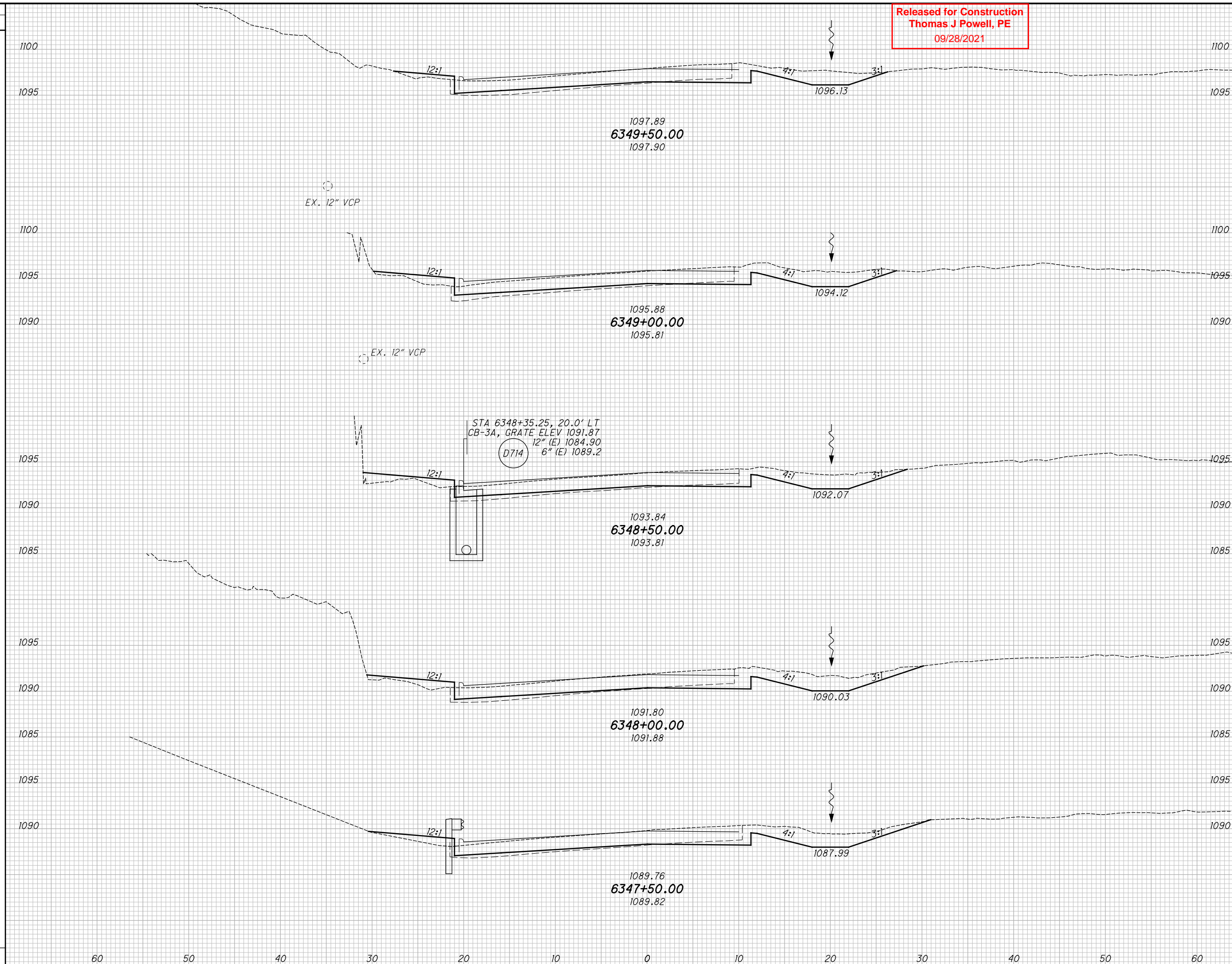
END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL	JTB	EAK

**CROSS SECTIONS - LANE S**  
**STA. 6345+00.00 TO STA. 6347+00.00**  
 2021-09-24 - BU 29 - RFC  
 SUM - 76.77 / 8 / 77 / 7 M  
 8.24 / 9.74 / 0.00  
 21 / 34

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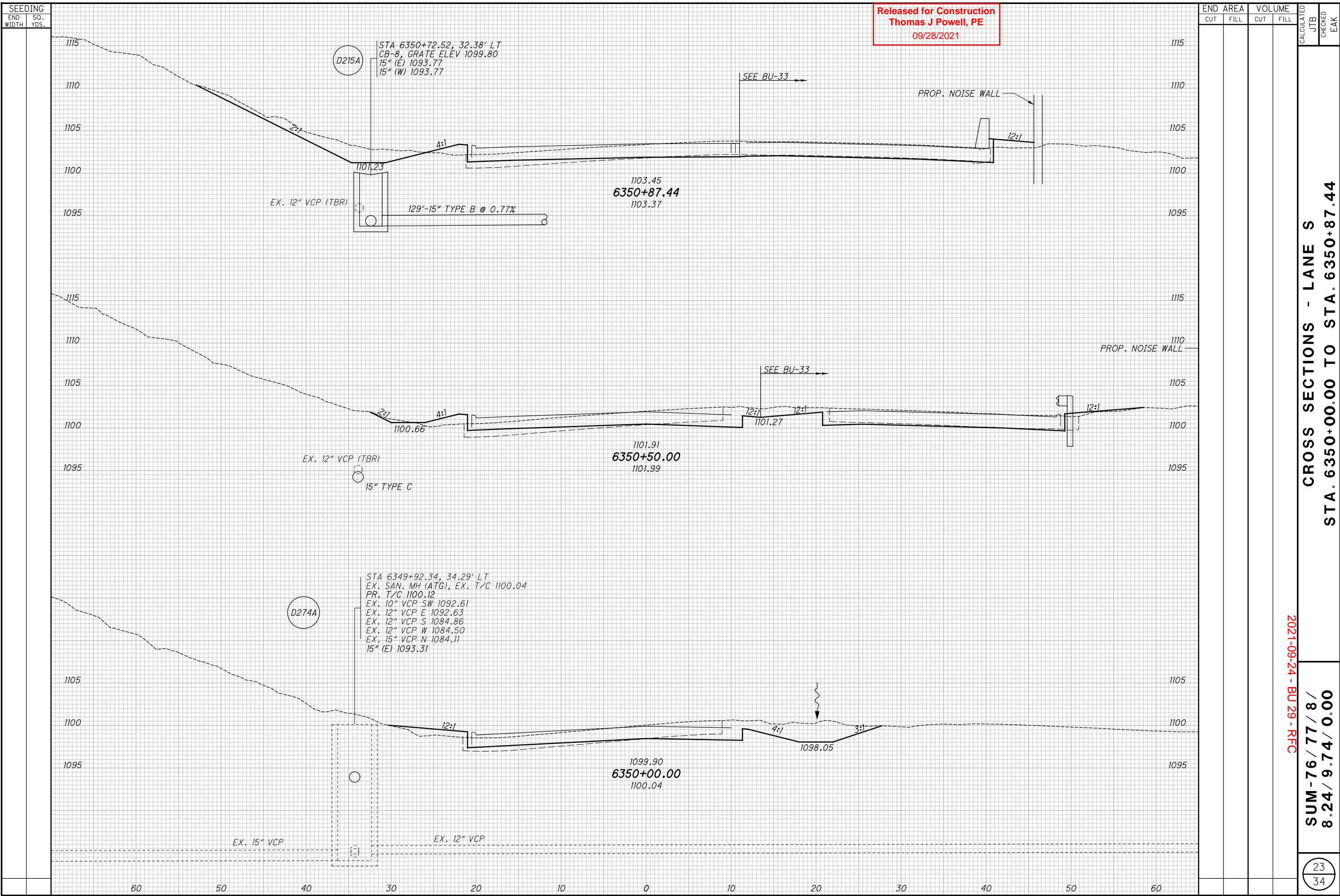
Released for Construction  
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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	JTB	EAK
						<b>CROSS SECTIONS - LANE S</b> <b>STA. 6347+50.00 TO STA. 6349+50.00</b>	
						<b>SUM - 76.77 / 8</b> <b>8.24 / 9.74 / 0.00</b>	
						22 34	



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D215A  
 STA 6350+72.52, 32.38' LT  
 CB-8, GRATE ELEV 1099.80  
 15" (E) 1093.77  
 15" (W) 1093.77

EX. 12" VCP (TBR)  
 129'-15" TYPE B @ 0.77%

1103.45  
**6350+87.44**  
 1103.37

EX. 12" VCP (TBR)  
 15" TYPE C

1101.91  
**6350+50.00**  
 1101.99

D274A  
 STA 6349+92.34, 34.29' LT  
 EX. SAN. MH (ATG), EX. T/C 1100.04  
 PR. T/C 1100.12  
 EX. 10" VCP SW 1092.61  
 EX. 12" VCP E 1092.63  
 EX. 12" VCP S 1084.86  
 EX. 12" VCP W 1084.50  
 EX. 15" VCP N 1084.11  
 15" (E) 1093.31

EX. 15" VCP  
 EX. 12" VCP

1099.90  
**6350+00.00**  
 1100.04

CROSS SECTIONS - LANE S  
 STA. 6350+00.00 TO STA. 6350+87.44

2021-09-24 - BU 29 - RFC

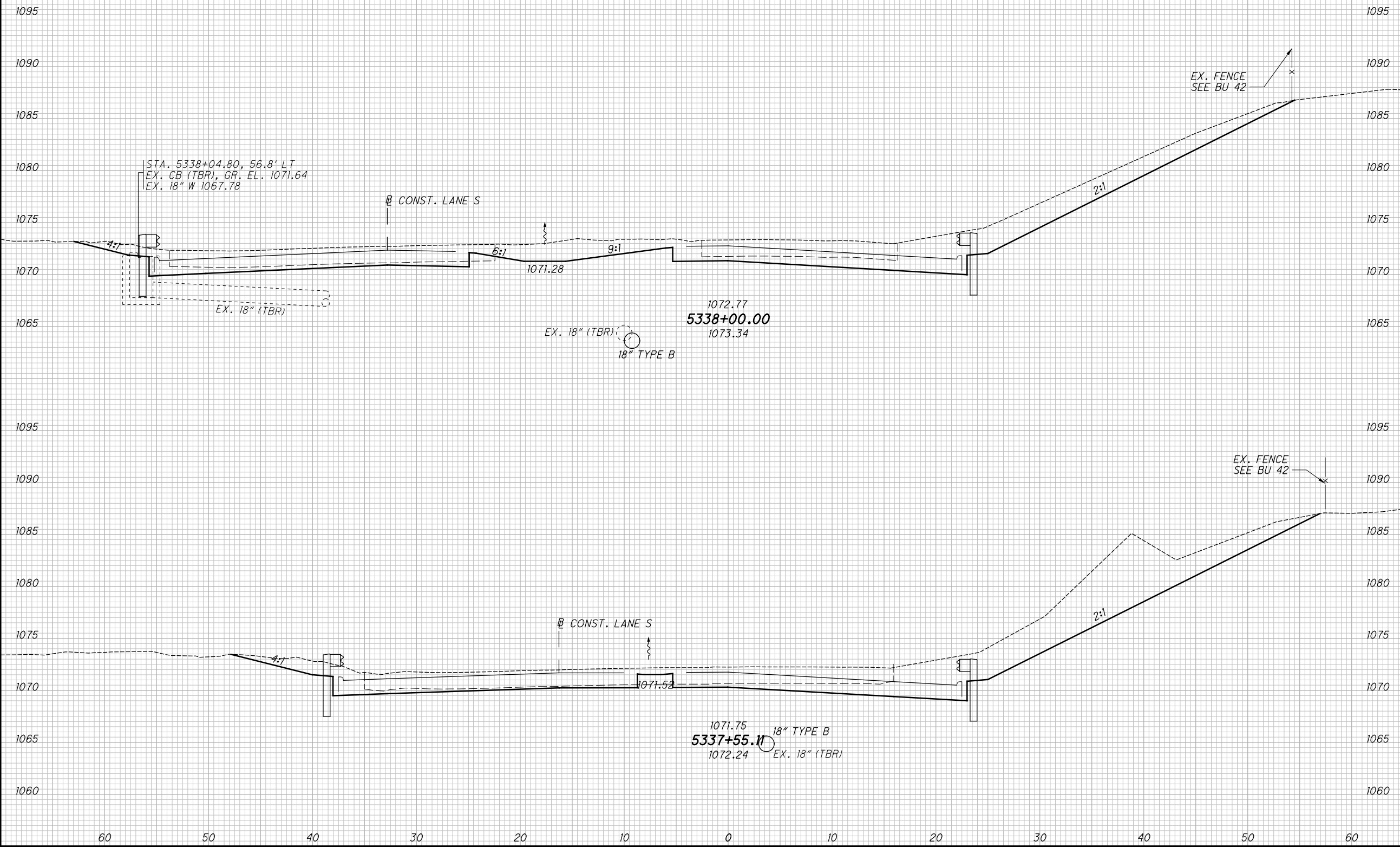
8.24 / 9.74 / 0.00  
 / 7.78 / 7.78

23  
 34

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END AREA		VOLUME		CALCULATED AA	CHECKED EAK
CUT	FILL	CUT	FILL		



CROSS SECTIONS - RAMP P  
STA. 5337+55.11 TO STA. 5338+00.00

2021-09-24 - BU 29 - RFC

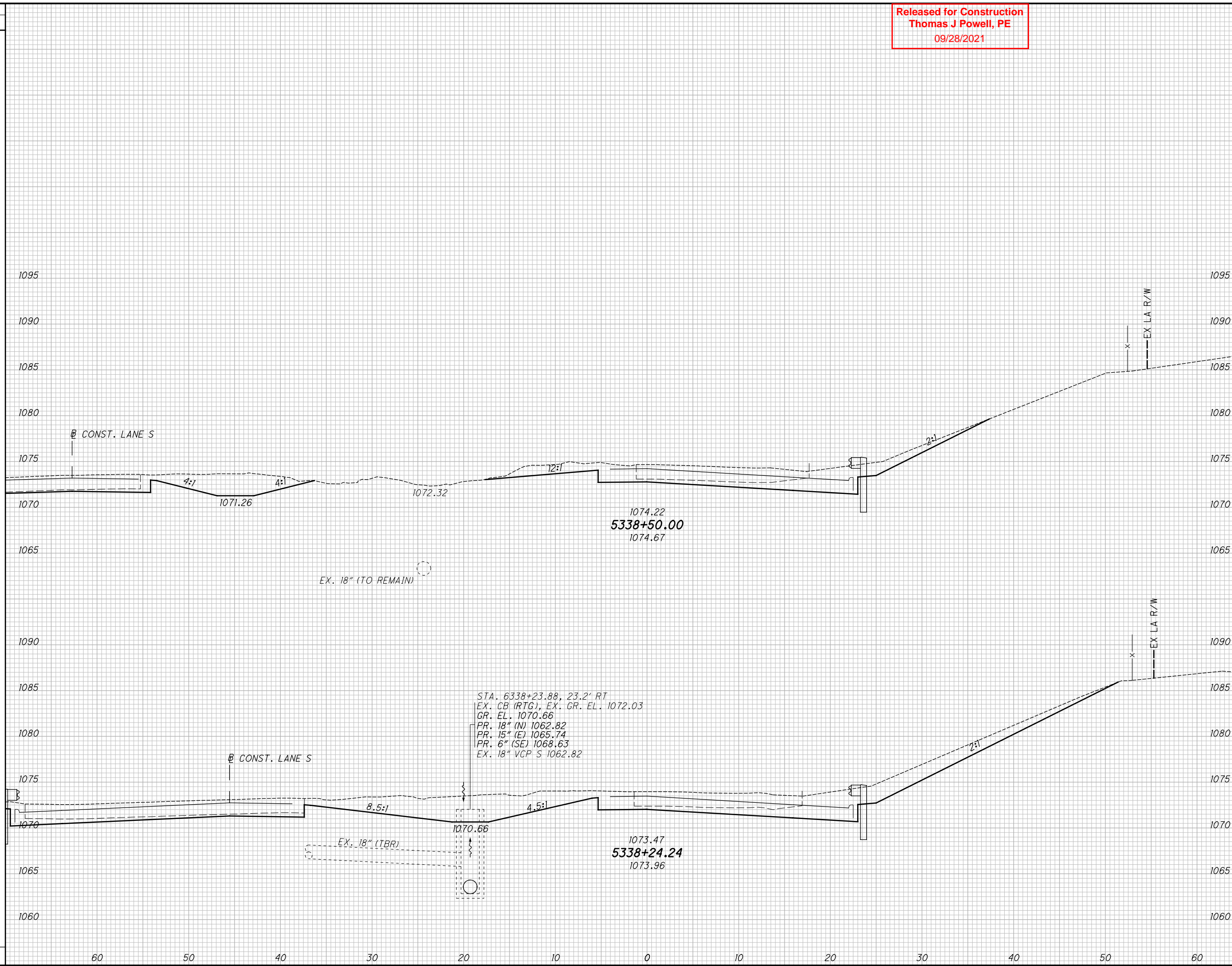
SUM - 76 / 77 / 8 / 24 / 9.74 / 0.00



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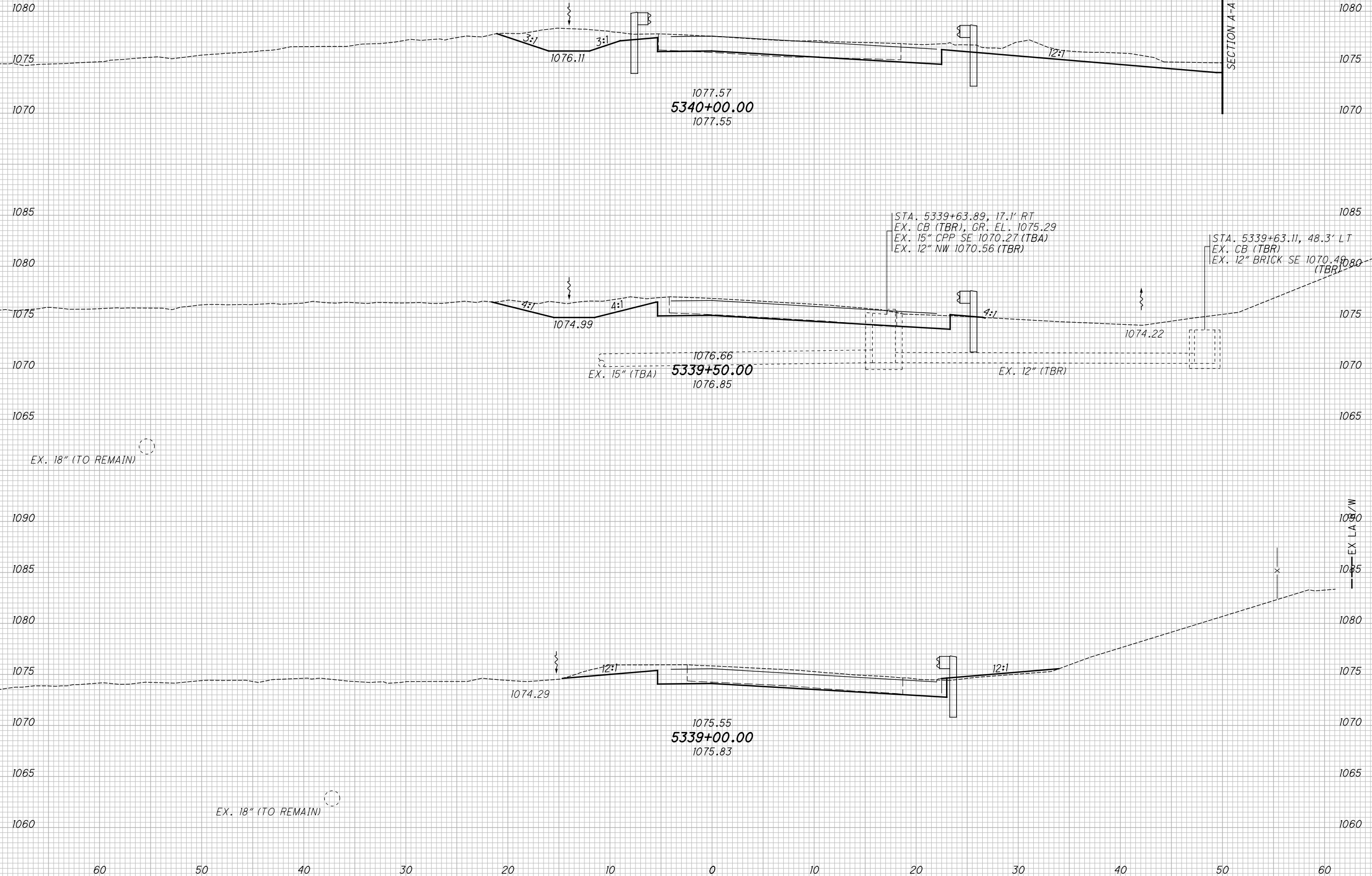
SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	AA	EAK
<b>CROSS SECTIONS - RAMP P</b> <b>STA. 5338+24.24 TO STA. 5338+50.00</b>							
<b>SUM-76.77</b> <b>8.24 / 9.74 / 0.00</b>							
2021-09-24 - BU 29 - RFC							
25 34							



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SEEDING		END AREA		VOLUME		CALCULATED		CHECKED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	AA	AA	EAK	EAK



CROSS SECTIONS - RAMP P  
STA. 5339+00.00 TO STA. 5340+00.00

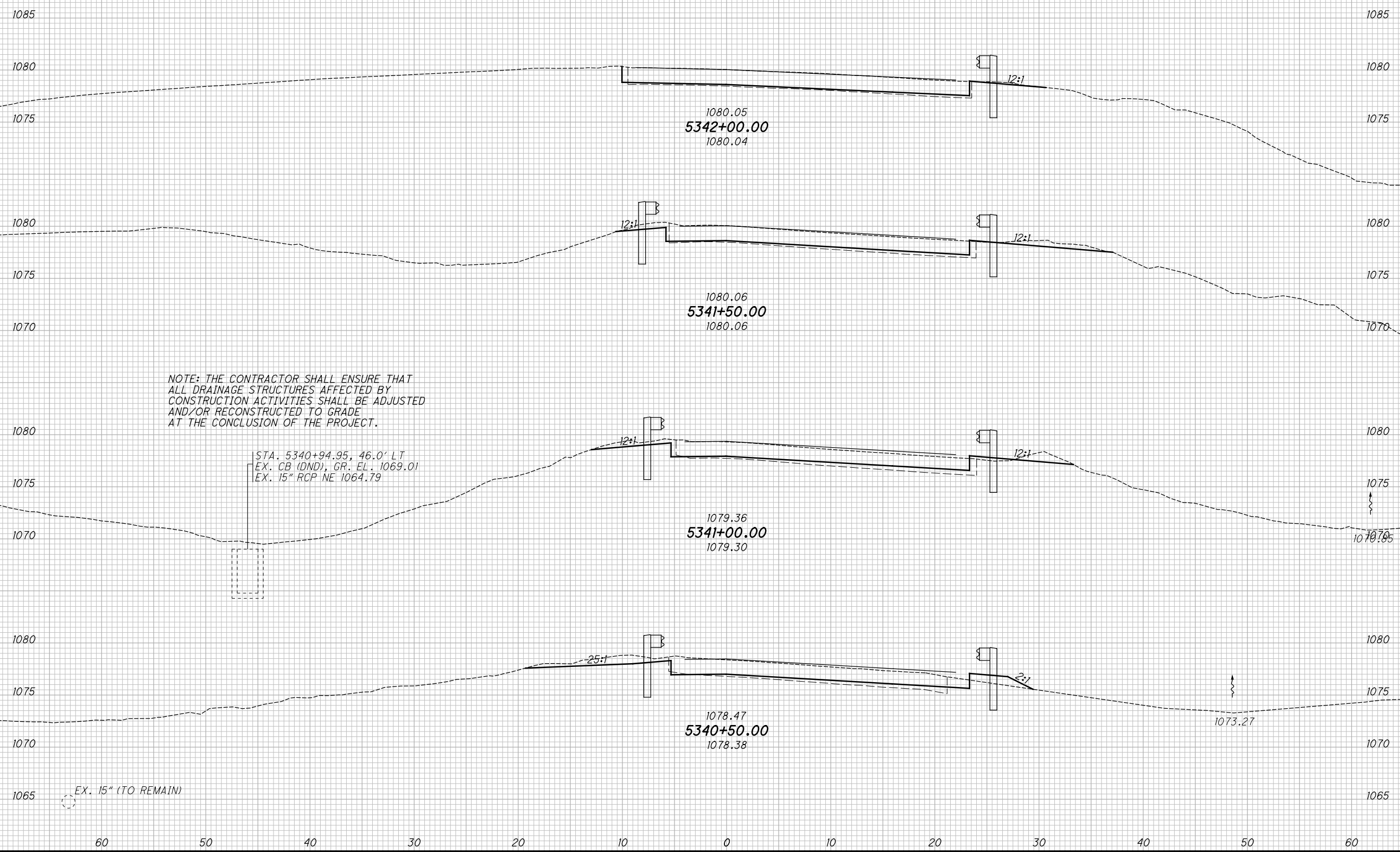
2021-09-24 - BU 29 - RFC

SUM - 76 / 77 / 0.00  
8.24 / 9.74 / 0.00

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SEEDING		END AREA		VOLUME		CALCULATED		CHECKED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	AA	AA	EAK	EAK
<b>CROSS SECTIONS - RAMP P</b> <b>STA. 5340+50.00 TO STA. 5342+00.00</b>									
<b>SUM - 76 / 77 / 0.00</b> <b>8.24 / 9.74 / 0.00</b>									
2021-09-24 - BU 29 - RFC									
27 / 34									



NOTE: THE CONTRACTOR SHALL ENSURE THAT ALL DRAINAGE STRUCTURES AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE ADJUSTED AND/OR RECONSTRUCTED TO GRADE AT THE CONCLUSION OF THE PROJECT.

STA. 5340+94.95, 46.0' LT  
EX. CB (DND), GR. EL. 1069.01  
EX. 15" RCP NE 1064.79

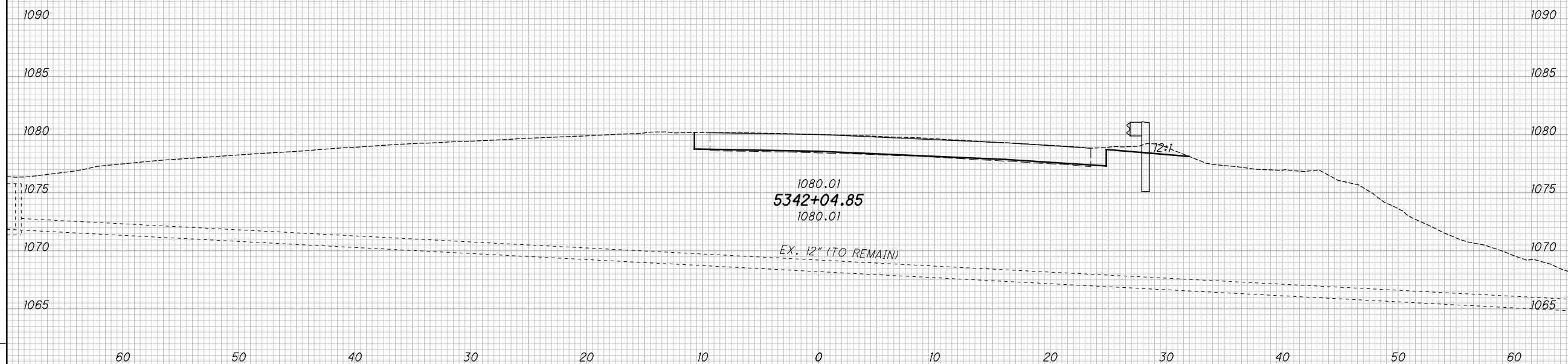
EX. 15" (TO REMAIN)

pw:\VANVAOP\WINTO\parsons.com\Ohio State\Documents\08-Akron Beltway Rehab\10 - Design\102329\Roadway\Sheets\BU-29\102329\_X5002\_BU29.dgn Sheet 9/24/2021 2:00:21 PM ekistiel

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SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED AA	CHECKED EAK
CUT	FILL	CUT	FILL		



CROSS SECTIONS - RAMP P  
STA. 5342+04.85

2021-09-24 - BU 29 - RFC

SUM - 76 / 77 / 00.0  
8 / 17 / 7 W  
8.24 / 9.74 / 0.00

28  
34

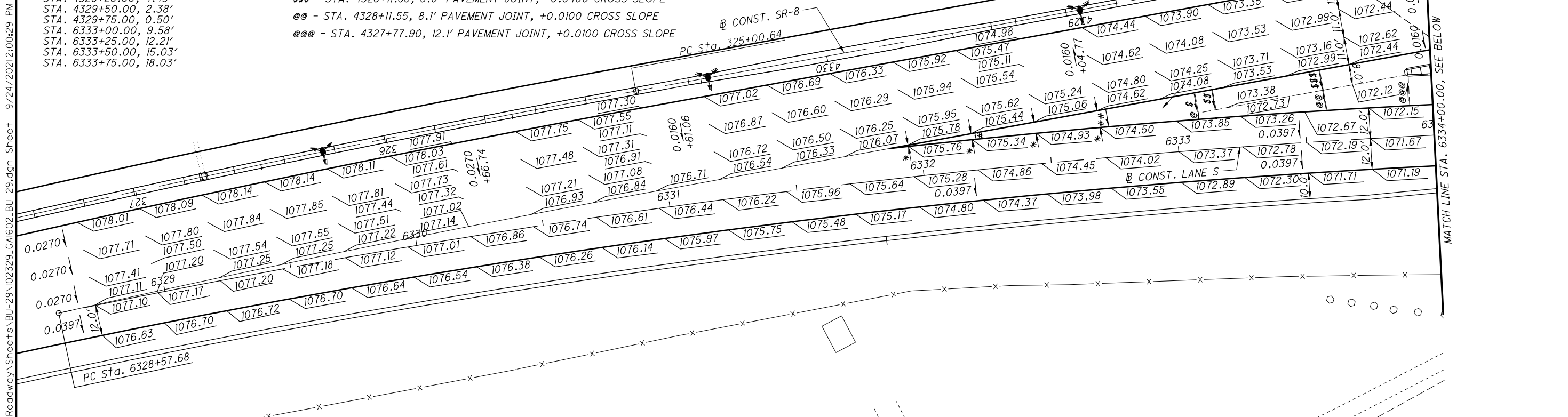
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STA. 6328+57.68 TO STA. 6331+88.02,  
 0.0397 '"/> FROM EDGE OF SB SR-8 LANE  
 TO @ CONST. LANE S

STA. 4329+00.00, 6.67'  
 STA. 4329+25.00, 4.43'  
 STA. 4329+50.00, 2.38'  
 STA. 4329+75.00, 0.50'  
 STA. 6333+00.00, 9.58'  
 STA. 6333+25.00, 12.21'  
 STA. 6333+50.00, 15.03'  
 STA. 6333+75.00, 18.03'

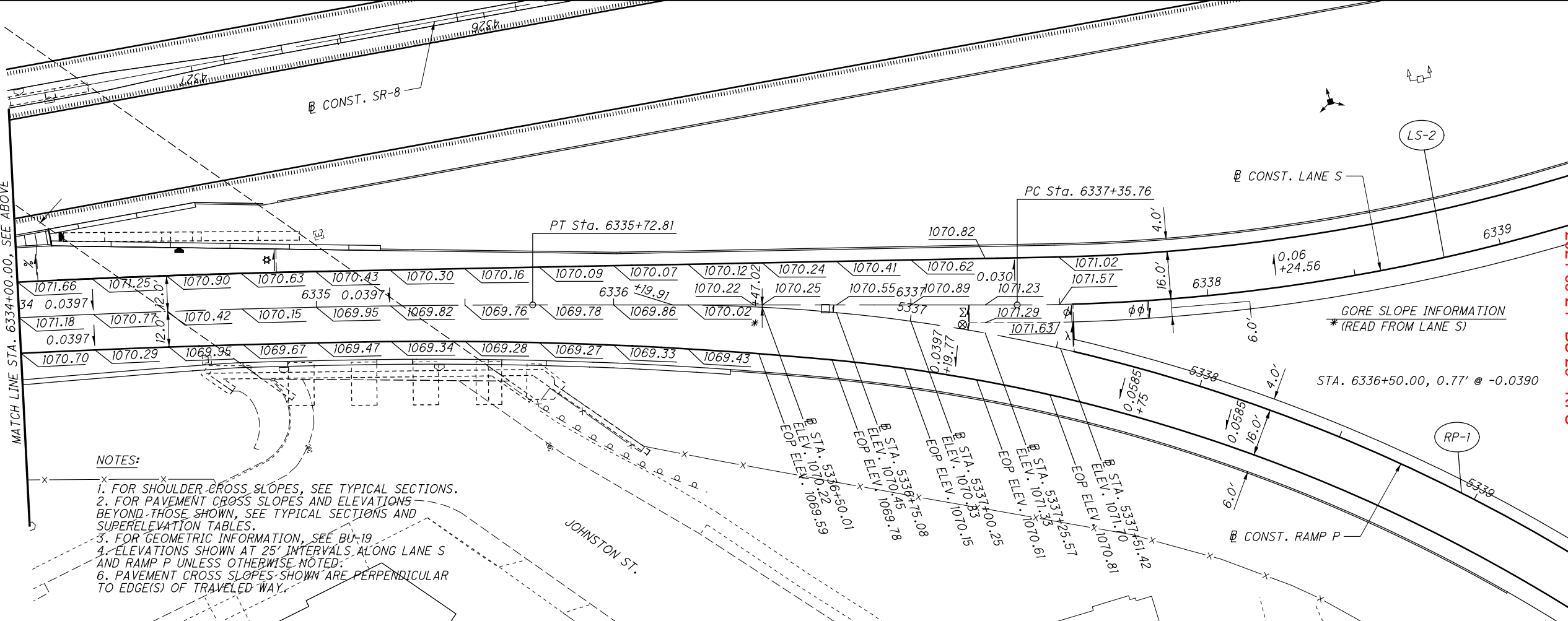
# - STA. 4329+48.44, 2.5' PAVEMENT JOINT, -0.0397 CROSS SLOPE  
 ## - STA. 4329+96.50, 7.0' PAVEMENT JOINT, -0.0160 CROSS SLOPE  
 \$ - STA. 4328+61.16, 8.0' PAVEMENT JOINT, -0.0160 CROSS SLOPE  
 @ - STA. 4328+61.16, 2.5' PAVEMENT JOINT, -0.0160 CROSS SLOPE  
 \$\$ - STA. 4328+54.18, 8.0' PAVEMENT JOINT, -0.0160 CROSS SLOPE  
 \$\$\$ - STA. 4328+11.55, 8.0' PAVEMENT JOINT, -0.0400 CROSS SLOPE  
 @ - STA. 4328+11.55, 8.1' PAVEMENT JOINT, +0.0100 CROSS SLOPE  
 @ - STA. 4327+77.90, 12.1' PAVEMENT JOINT, +0.0100 CROSS SLOPE



% - STA. 6334+06.87, 12.0' PAVEMENT JOINT, +0.0100 CROSS SLOPE  
 \* - STA. 6334+86.87, 7.9' PAVEMENT JOINT, -0.0303 CROSS SLOPE  
 □ - STA. 6336+74.18, 2.5' PAVEMENT JOINT, -0.0397 CROSS SLOPE  
 Σ - STA. 6337+19.72, 6.0' PAVEMENT JOINT, +0.0100 CROSS SLOPE  
 ⊗ - STA. 6337+19.72, 2.5' PAVEMENT JOINT, +0.0100 CROSS SLOPE  
 λ - STA. 6337+54.49, 10.0' PAVEMENT JOINT, +0.0070 CROSS SLOPE  
 φ - STA. 6337+54.49, 6.0' PAVEMENT JOINT, +0.0100 CROSS SLOPE  
 φφ - STA. 6337+79.49, 6.0' PAVEMENT JOINT, -0.0100 CROSS SLOPE

MATCH LINE STA. 6334+00.00, SEE ABOVE

NOTES:  
 1. FOR SHOULDER CROSS SLOPES, SEE TYPICAL SECTIONS.  
 2. FOR PAVEMENT CROSS SLOPES AND ELEVATIONS BEYOND THOSE SHOWN, SEE TYPICAL SECTIONS AND SUPERELEVATION TABLES.  
 3. FOR GEOMETRIC INFORMATION, SEE BU-19.  
 4. ELEVATIONS SHOWN AT 25' INTERVALS ALONG LANE S AND RAMP P UNLESS OTHERWISE NOTED.  
 6. PAVEMENT CROSS SLOPES SHOWN ARE PERPENDICULAR TO EDGE(S) OF TRAVELED WAY.



TERMINAL DETAIL  
 RAMP P & LANE S GORE

2021-09-24 - BU 29 - RFC

SUM-76 / 7.4 / 0.00  
 8.24 / 9.74 / 0.00

Design: I02329.Roadway\_Sheets\BU-29\I02329\_GA102.BU 29.dgn Sheet 9/24/2021 2:00:29 PM ek1s1el

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09/28/2021

ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION

CALCULATED	AA
CHECKED	EAK

**SUPERELEVATION TABLE**

P.I. Station 6339+75.39, 6347+87.47	Dc = 8° 45' 00", 9° 06' 00"
-------------------------------------	-----------------------------

REMARKS	INSIDE EDGE OF TRAVEL WAY					BASELINE CONTROL		OUTSIDE EDGE OF TRAVEL WAY					REMARKS
	ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	ELEVATION	
FS	1070.28		+0.48	+0.0397	12.09	6335+29.45	1069.80	12.04	-0.0397	-0.48		1069.33	
	1070.17		+0.40	+0.0328	12.30	6335+50.00	1069.76	12.23	-0.0397	-0.49		1069.28	
PT	1070.09		+0.32	+0.0251	12.67	6335+72.81	1069.77	12.65	-0.0397	-0.50		1069.27	
	1070.09		+0.31	+0.0243	12.71	6335+75.00	1069.78	12.70	-0.0397	-0.50		1069.27	
	1070.07		+0.21	+0.0159	13.21	6336+00.00	1069.86	13.53	-0.0397	-0.54		1069.33	
GORE	1070.10		+0.12	+0.0091	13.60	6336+19.91	1069.98	14.51	-0.0397	-0.58		1069.40	
	1070.12		+0.10	+0.0074	13.70	6336+25.00	1070.02						
FLAT	1070.22		+0.00	+0.0000	14.13	6336+46.96	1070.22						
	1070.24	185:1	-0.01	-0.0010	14.19	6336+50.00	1070.25						
	1070.41		-0.14	-0.0095	14.68	6336+75.00	1070.55						
	1070.62		-0.27	-0.0179	15.17	6337+00.00	1070.89						
	1070.82		-0.41	-0.0264	15.67	6337+25.00	1071.23						
PC	1070.90		-0.48	-0.0300	15.88	6337+35.76	1071.38						
	1071.02		-0.56	-0.0348	16.00	6337+50.00	1071.57						
	1071.22		-0.69	-0.0433	16.00	6337+75.00	1071.91						
	1071.43		-0.83	-0.0517	16.00	6338+00.00	1072.25						
FS	1071.63		-0.96	-0.0600	16.00	6338+24.56	1072.59						
FS	1075.22		-0.96	-0.0600	16.00	6340+86.68	1076.18						
	1075.35	185:1	-1.03	-0.0645	16.00	6341+00.00	1076.38						
	1075.61		-1.17	-0.0729	16.00	6341+25.00	1076.78						
FS	1075.75		-1.28	-0.0800	16.00	6341+45.88	1077.03						
FS	1077.75		-1.28	-0.0800	16.00	6344+04.43	1079.03						
	1078.10	185:1	-1.17	-0.0731	16.00	6344+25.00	1079.26						
	1078.61		-1.03	-0.0646	16.00	6344+50.00	1079.64						
FS	1078.94		-0.96	-0.0600	16.00	6344+63.63	1079.90						
FS	1097.94		-0.96	-0.0600	16.00	6349+74.96	1098.90						
	1099.08		-0.82	-0.0515	16.00	6350+00.00	1099.90						
	1100.22	185:1	-0.69	-0.0431	16.00	6350+25.00	1100.91						
	1101.36		-0.55	-0.0346	16.00	6350+50.00	1101.91						
	1102.50		-0.42	-0.0262	16.00	6350+75.00	1102.92						
GORE	1103.10		-0.35	-0.0220	16.00	6350+87.44	1103.45						

NOTE: SEE TERMINAL DETAILS FOR GORE SLOPES

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ISSUE RECORD - BU-29 ROADWAY	
NO.	DATE

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CHECKED
EAK

**SUPERELEVATION TABLE**

P.I. Station 5340+30.39	Dc = 9° 45' 00"
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ELEVATION	OUTSIDE EDGE OF TRAVEL WAY				BASELINE CONTROL		OUTSIDE EDGE OF TRAVEL WAY					REMARKS
	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	ELEVATION	
					5336+19.91	1069.98	14.49	-0.0397	-0.58		1069.41	PC
					5336+25.00	1070.02	14.75	-0.0397	-0.59		1069.44	
					5336+50.00	1070.22	15.69	-0.0397	-0.62		1069.60	
					5336+74.14	1070.44	16.00	-0.0397	-0.64		1069.81	
					5336+75.00	1070.45	16.00	-0.0397	-0.64		1069.81	
					5337+00.00	1070.83	16.00	-0.0397	-0.64		1070.19	
					5337+19.77	1071.21	16.00	-0.0397	-0.64		1070.58	
					5337+25.00	1071.32	16.00	-0.0415	-0.66	185:1	1070.65	
					5337+50.00	1071.68	16.00	-0.0499	-0.80		1070.88	
					5337+55.11	1071.79	16.00	-0.0516	-0.83		1070.96	GORE
					5337+75.42	1072.22	16.00	-0.0585	-0.94		1071.29	FS
					5341+64.40	1080.13	16.00	-0.0585	-0.94	172:1	1079.20	FS
					5341+75.00	1080.15	16.00	-0.0546	-0.87		1079.27	
					5342+00.00	1080.05	16.00	-0.0456	-0.73		1079.32	
					5342+04.85	1080.01	16.00	-0.0438	-0.70		1079.31	MATCH

**SUPERELEVATION TABLE - RAMP P**

2021-09-24 - BU 29 - RFC

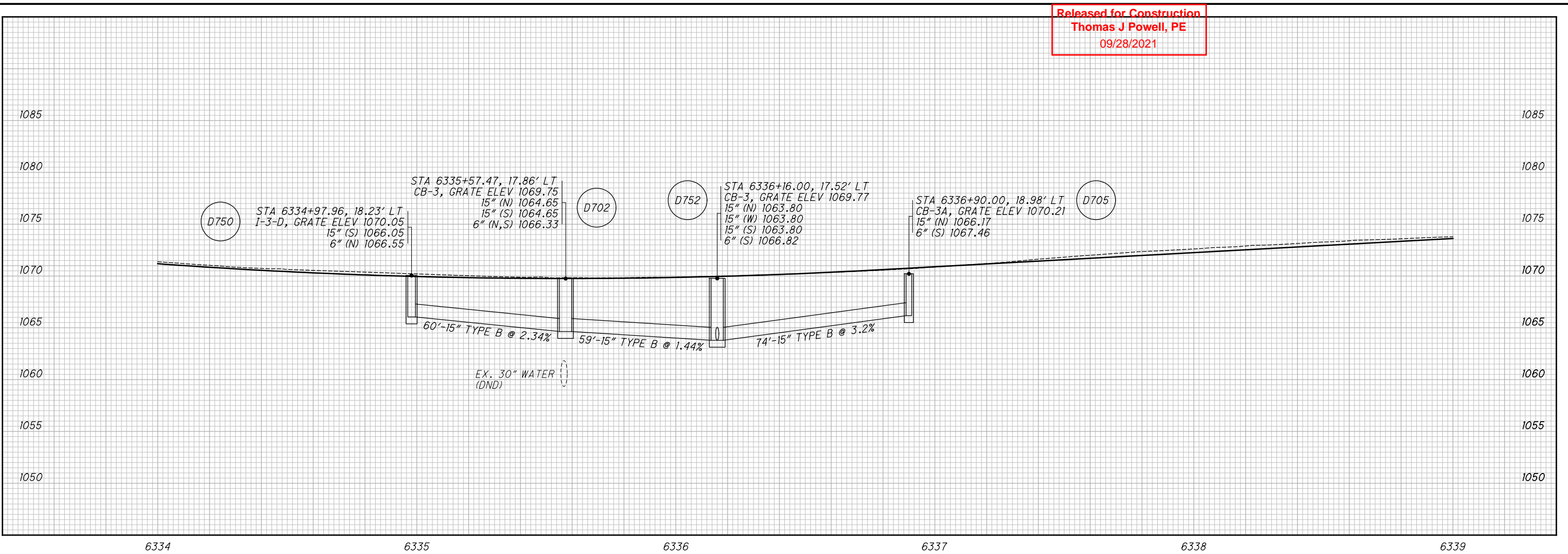
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31  
34

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ISSUE RECORD: BU-29 ROADWAY		
NO.	DATE	DESCRIPTION

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**STORM SEWER PROFILE - LANE S**  
**STA. 6334+00 TO STA. 6339+00**

2021-09-24 - BU 29 - RFC

SUM-76/77-8-  
8.24/9.74/0.00

32
34



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REF. NO.	SHEET NO.	STATION TO STATION		OUTLET TYPE	SIDE	UNDERDRAIN TYPE	OUTLET BOTTOM ELEVATION	UNDERDRAIN INVERT	BENDS & BRANCHES (for information only)						REMARKS	
		FROM	TO						CAP	TEE	45° WYE	45° BEND	90° BEND	CROSS		
		FT	FT						EA	EA	EA	EA	EA	EA		
UD-1	8	6329+50.00	6331+60.98		RT	BASE										TIE TO UD-1A, TYPE F REQUIRED TO CROSS LANE S LANE
UD-1A	8	6329+50.00	6331+72.31	I-3D	RT	BASE	1071.05	1073.68		1			1			OUTLET TO D-700, TYPE F REQUIRED TO CROSS LANE S SHOULDER TO D-700
UD-2	8	6329+50.00	6331+72.65	CB-2-2B	RT	BASE	1071.10	1071.75								OUTLET TO D-515, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-515
UD-2A	8-9	6331+82.66	6335+05.00	I-3D	RT	UNCLAS.	1065.37	1065.87				1				OUTLET TO D-751, TYPE F REQUIRED TO CROSS LANE S SHOULDER TO D-751
UD-2B	8	6331+79.10	6333+37.65		RT	BASE			1	1						TIE TO UD-2A, TYPE F REQUIRED TO CROSS LANE S LANE
UD-3	8-9	6331+82.66	6335+05.00	I-3D	RT	UNCLAS.	1065.37	1065.87					1			OUTLET TO D-751, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-751
UD-4	8-9	6333+37.65	6334+12.04		LT	BASE			1							TIE TO UD-7
UD-5	9	6335+08.06	6335+48.03	I-3D	RT	BASE	1064.87	1065.29								OUTLET TO D-701, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-701
UD-6	9	6335+08.06	6335+48.03	I-3D	RT	BASE	1064.87	1065.29				1				OUTLET TO D-701, TYPE F REQUIRED TO CROSS LANE S SHOULDER TO D-701
UD-7	9	6334+12.04	6334+97.96	I-3D	LT	UNCLAS.	1066.05	1066.55								OUTLET TO D-750, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-750
UD-8	9	6335+16.26	6335+57.47	CB-3	LT	BASE	1064.65	1066.33								OUTLET TO D-702, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-702
UD-9	9	6336+13.62	6335+57.47	CB-3	LT	BASE	1064.55	1066.33								OUTLET TO D-702, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-702
UD-10	9	6338+17.00	6336+90.00	CB-3	LT	BASE	1066.17	1067.46								OUTLET TO D-705, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-705
UD-11	9	6336+06.22	6335+48.03	I-3D	RT	BASE	1064.87	1065.29								OUTLET TO D-701, TYPE F REQUIRED TO CROSS LANE S SHOULDER TO D-701
UD-12	9	6336+06.22	6335+48.03	I-3D	RT	BASE	1064.87	1065.29								OUTLET TO D-701, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-701
UD-13	10	6336+87.56	6336+16.00	CB-3	LT	BASE	1063.80	1066.82	1							OUTLET TO D-752, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-752
UD-14	9-10	6340+70.44	6338+22.10	CB-3	LT	BASE	1067.78	1068.60								OUTLET TO D-707, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-707
UD-15	9	6338+19.78	6337+66.35		RT	BASE				1						TIE TO UD-10, TYPE F REQUIRED TO CROSS LANE S LANE AND SHOULDERS
UD-16	9-10	6341+99.24	6338+23.88	EX CB	RT	BASE	1062.82	1068.63								OUTLET TO D-708, TYPE F REQUIRED TO OUTLET TO D-708
UD-17	9, 13-14	5342+04.85 (RAMP P)	6336+16.07 (LANE S)	I-3D	RT	BASE	1063.60	1065.92								OUTLET TO D-754, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-754
UD-18	9	6336+49.16	6336+16.07 (LANE S)	I-3D	RT	BASE	1063.60	1065.92								OUTLET TO D-754, TYPE F REQUIRED TO CROSS RAMP P SHOULDER TO D-754
UD-19	9, 13-14	5342+04.75	5377+90.17		LT	BASE				1						(RAMP P) TIE TO UD-17, TYPE F REQUIRED TO CROSS RAMP P LANE AND SHOULDERS
UD-20	11	6348+31.39	6334+06.08	CB-3	LT	BASE	1073.82	1074.50								OUTLET TO D-711, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-711
UD-21	11	6346+28.90	6334+06.08	CB-3	RT	BASE	1073.82	1074.50								OUTLET TO D-711, TYPE F REQUIRED TO CROSS LANE S LANE AND SHOULDERS TO D-711
UD-22	11-12	6350+87.44	6346+33.77	MH	RT	BASE										OUTLET TO EX. SAN. MH, TYPE F REQUIRED FOR THE LAST 10 FT INTO EX. SAN. MH.
UD-23	11-12	6350+87.44	6348+35.25	CB-3A	LT	BASE	1084.90	1089.20								OUTLET TO D-714, TYPE F REQUIRED FOR THE LAST 10 FT INTO D-714

CALCULATED  
 AA  
 CHECKED  
 EAK

UNDERDRAIN OUTLET DETAILS

2021-09-24 - BU 29 - RFC

SUM - 76.77 / 4.00  
 - 8 / 77 / 97.4  
 8.24 / 9.74 / 0.00

ISSUE RECORD: BU-29 ROADWAY		
NO.	DATE	DESCRIPTION

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LEGEND

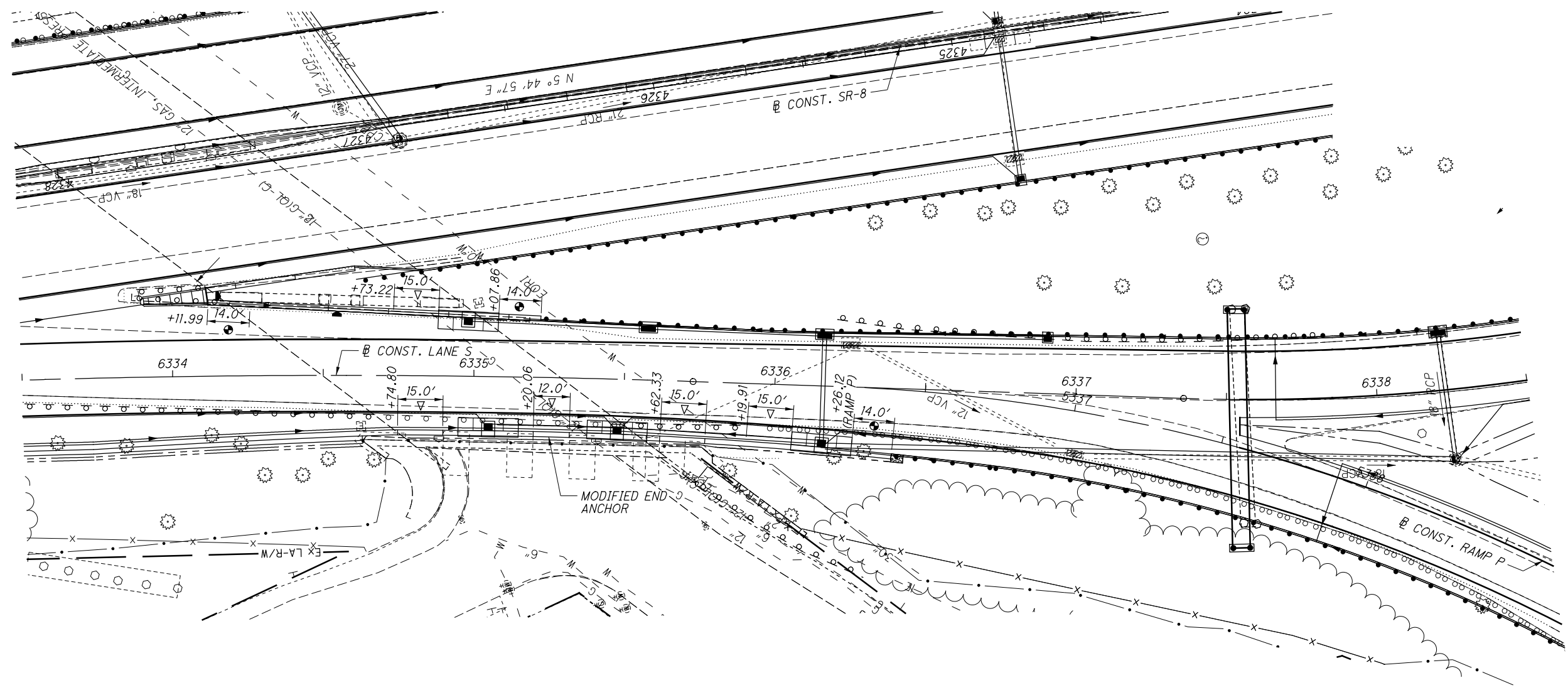
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- ▽ SS, TYPE D END ANCHOR (15'), SCD RM-4.5
- ◇ TYPE B END SECTION (30'), SCD RM-4.6
- TYPE D END SECTION (14'), SCD RM-4.6
- LIGHT POLE FOUNDATION (8'), SCD HL-20.13
- BARRIER INLET (20'), SCD I-2.1, I-2.2, I-2.3
- △△ SIGN FOUNDATION (10'), SCD TC-21.50, SINGLE POLE OR TRUSS
- (XX') DEDUCTED FROM BARRIER LENGTH

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ISSUE RECORD - BU-29 ROADWAY		
NO.	DATE	DESCRIPTION

CALCULATED AA  
CHECKED EAK

0 20 40  
HORIZONTAL SCALE IN FEET



BARRIER DETAILS

2021-09-24 - BU 29 - RFC

00° 0' / 47.6' / 0.0'  
- 8' / 77' / 92.8'  
8.24' / 9.74' / 0.0'