

E:\139780\_Neshaminy Trail Phase\_3\PI\Traffic\Sign\_Strip\Lenape\_to\_UpperState\01-NT3-LUS-SPM\_Detail 101.dgn 18-JUL-2019

**GENERAL NOTES:**

1. CONSTRUCT THIS PROJECT IN ACCORDANCE WITH PENNDOT PUBLICATION 408 DATED 2016, AND ALL SUPPLEMENTS AND SPECIFICATIONS
2. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.

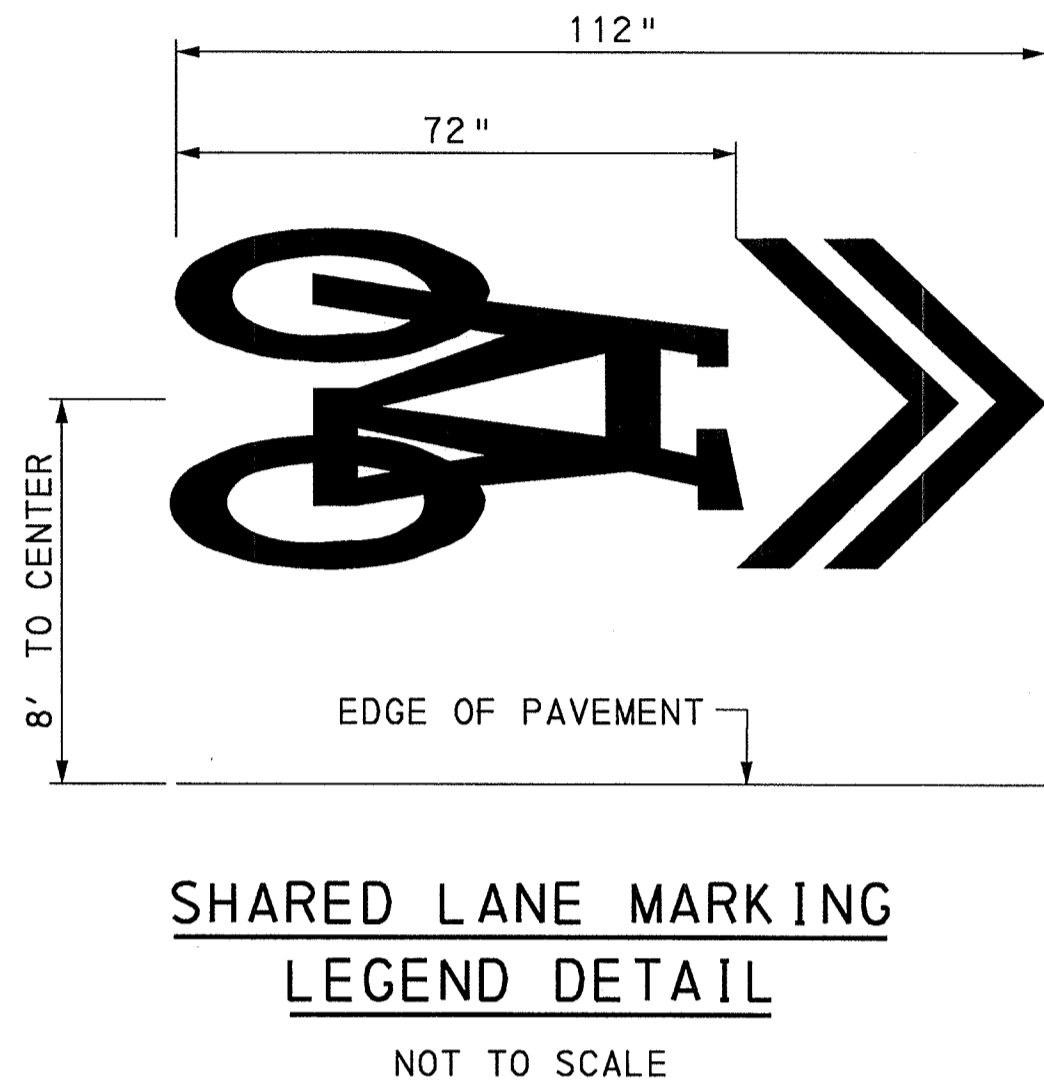
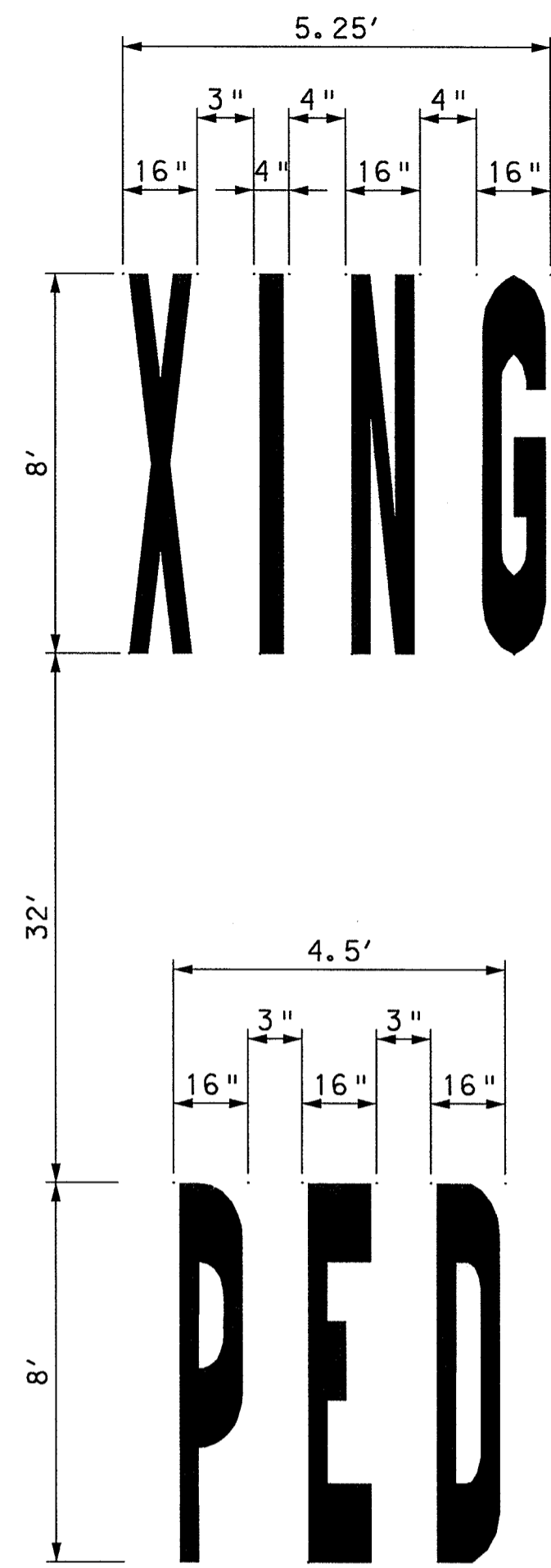
**SIGNING NOTES:**

1. FOR NAMES, ADDRESSES, AND LOCATIONS OF EXISTING UTILITY FACILITIES, SEE ROADWAY CONSTRUCTION PLAN.
2. THIS PROJECT HAS BEEN DESIGNED UNDER STANDARDS ESTABLISHED IN THE FEDERAL HIGHWAY ADMINISTRATION'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, DATED 2009, AND ALL APPLICABLE SUPPLEMENTS.
3. PLACE ALL SIGNS ENTIRELY WITHIN THE LEGAL RIGHT-OF-WAY.
4. WHENEVER AN EXISTING UNDERGROUND UTILITY IS SHOWN ON THE DRAWINGS TO BE LOCATED IN THE IMMEDIATE VICINITY OF PROPOSED CONSTRUCTION, ITS LOCATION IS APPROXIMATE, AND THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY AND REQUEST THAT THEY FIELD LOCATE THEIR FACILITY.
5. MOUNT ALL ROAD SIGNS AT A MINIMUM CLEARANCE HEIGHT OF 8.0 FEET.
6. MOUNT ALL TRAIL SIGNS AT HEIGHT OF 4 FEET TO BOTTOM OF SIGN AND 2 FEET MIN HORIZONTALLY FROM EDGE OF TRAIL.
7. ALL SIGNING MUST CONFORM TO PUB 236.

**PAVEMENT MARKING NOTES:**

1. INSTALL PAVEMENT MARKINGS IN ACCORDANCE WITH PENNDOT TC-8600 SERIES, PAVEMENT MARKING STANDARDS AND THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" FOR STREETS AND HIGHWAYS, DATED 2009 OR LATEST EDITION, AND ALL APPLICABLE SUPPLEMENTS, OR AS DIRECTED BY THE PENNSYLVANIA DEPT. OF TRANSPORTATION DISTRICT 6-0 ENGINEER.
2. APPLY ALL PAVEMENT MARKINGS AT THE WIDTH INDICATED.
3. ALL PAVEMENT MARKINGS AT LIMIT OF PAVING SHALL MEET EXISTING PAVEMENT MARKINGS WHERE APPLICABLE.
4. ALL PAVEMENT MARKINGS SHALL BE COMPRISED OF EPOXY PAVEMENT MARKING ON CONCRETE PAVEMENT AND HOT THERMOPLASTIC PAVEMENT MARKING ON BITUMINOUS PAVEMENT AREA PER PENNDOT PUBLICATION 408 / 2016 SECT. 964.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	1 OF 13
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



COLORS: BACKGROUND - GREEN (REFLECTORIZED)  
LEGEND AND BORDER - WHITE (REFLECTORIZED)

LETTER SPACINGS ARE TO START OF NEXT LETTER

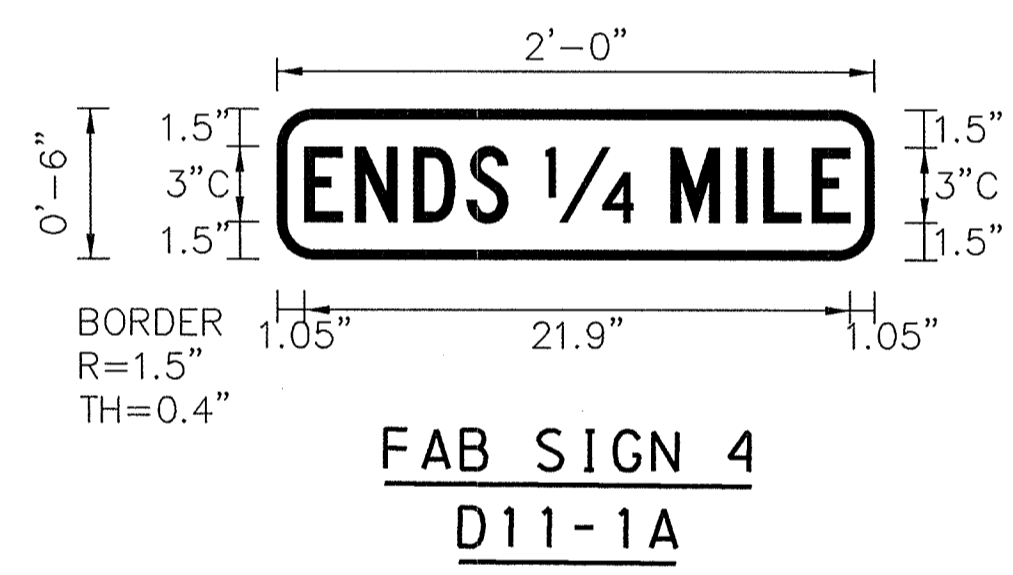
	B3	C3	B3	B3	B3
BIKE	5.75	2.2	6.6	1.5	10.2
ROUTE	18.5	1	1.8	7.2	1.8
NESHAMINY	5.75	1.3	1.3	21.3	1.3
TRAIL	30.0	1.4	1.4	30.0	1.4



COLORS: BACKGROUND - GREEN (REFLECTORIZED)  
LEGEND AND BORDER - WHITE (REFLECTORIZED)

LETTER SPACINGS ARE TO START OF NEXT LETTER

	B3	C3	B3	B3	B3
BIKE	5.75	2.2	1.5	21.3	1.5
ROUTE	18.5	1	1.8	7.2	1.8
NESHAMINY	5.75	1.3	1.3	15.3	1.3
TRAIL	30.0	1.4	1.4	30.0	1.4



COLORS: BACKGROUND - GREEN (REFLECTORIZED)  
LEGEND AND BORDER - WHITE (REFLECTORIZED)

LETTER SPACINGS ARE TO START OF NEXT LETTER

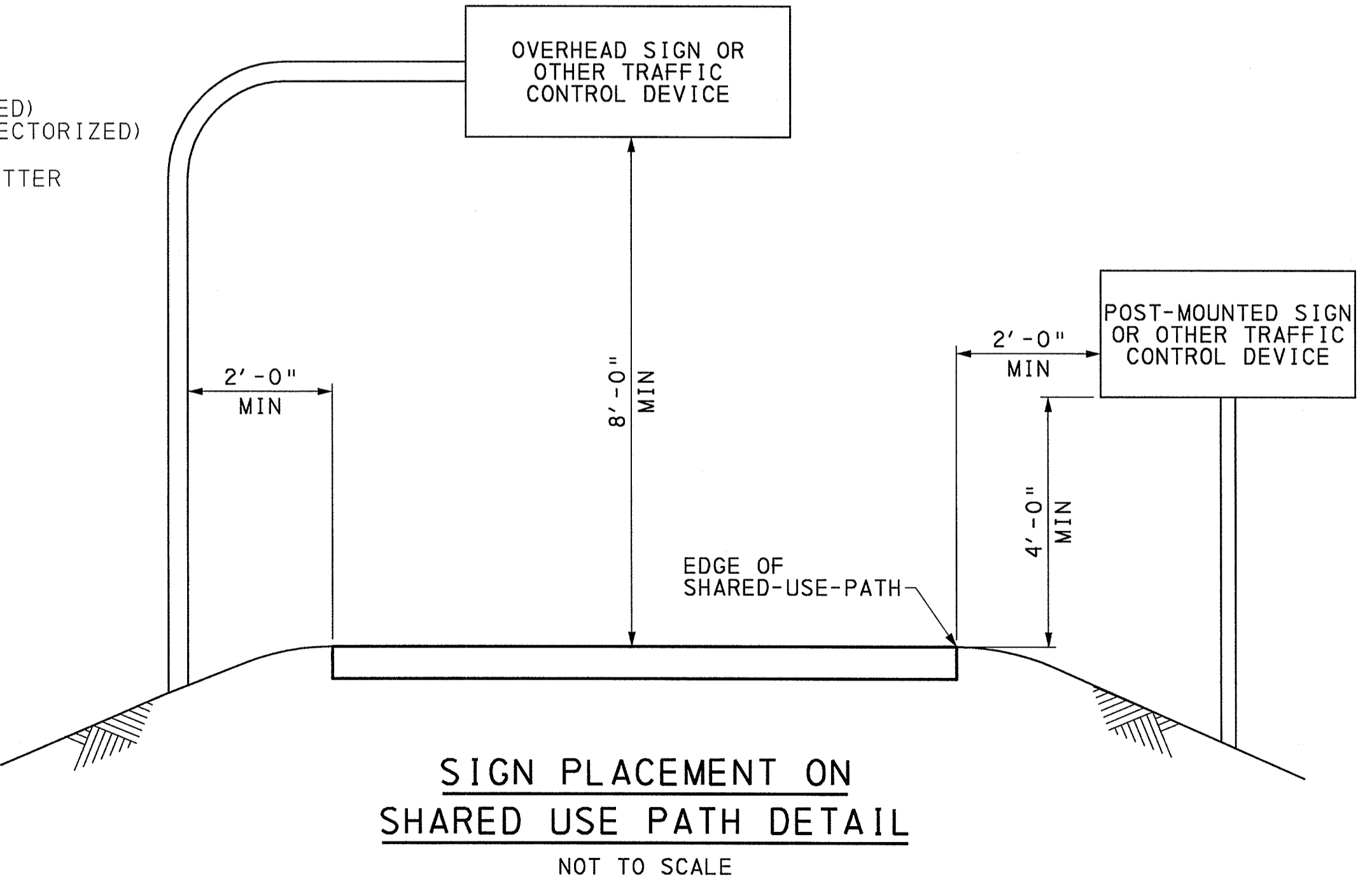
	C3
ENDS	1.05
1/4	2.0
MILE	2.3



COLORS: BACKGROUND - GREEN (REFLECTORIZED)  
LEGEND AND BORDER - WHITE (REFLECTORIZED)

LETTER SPACINGS ARE TO START OF NEXT LETTER

	B3	C3	B3	B3	B3
BIKE	5.75	2.2	9.8	2.0	8.3
ROUTE	18.5	1	1.8	4.8	1.8
NESHAMINY	5.75	1.3	1.3	23.2	1.3
TRAIL	30.0	1.4	1.4	30.0	1.4



- LEGEND:**
- ▬ -- SIGN LOCATION
  - ▬ -- EXISTING SIGN LOCATION
  - DY/4" -- DOUBLE YELLOW LINE / WIDTH
  - W/4" -- SOLID WHITE LINE / WIDTH
  - Y/4" -- SOLID YELLOW LINE / WIDTH
  - -- WHITE REFLECTIVE UNIT FOR GUIDE RAIL MOUNT (WHITE)
  - △ -- WHITE REFLECTIVE UNIT FOR BARRIER MOUNT (WHITE)

SHEET INDEX	SHEET NO
GENERAL NOTES AND DETAILS	1-2
QUANTITIES	3-4
PLAN SHEETS	5-13

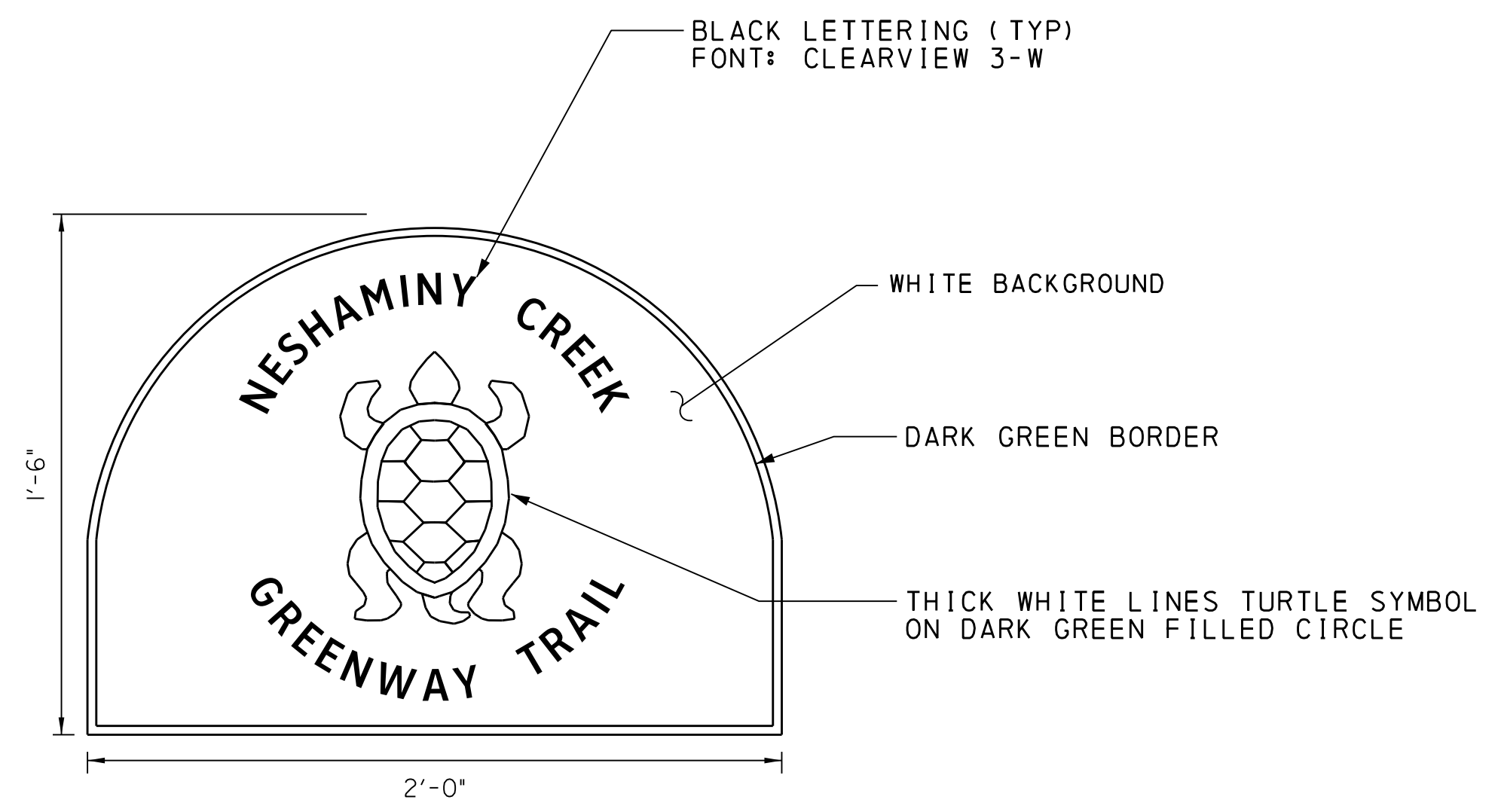
**SIGNING AND PAVEMENT MARKING PLAN GENERAL NOTES AND DETAILS**

**Michael Baker INTERNATIONAL**  
500 OFFICE CENTER DRIVE, SUITE 210  
FORT WASHINGTON, PA 19034-3234  
Phone: (215) 444-0888 • MBAKERINTL.COM

18-JUL-2019

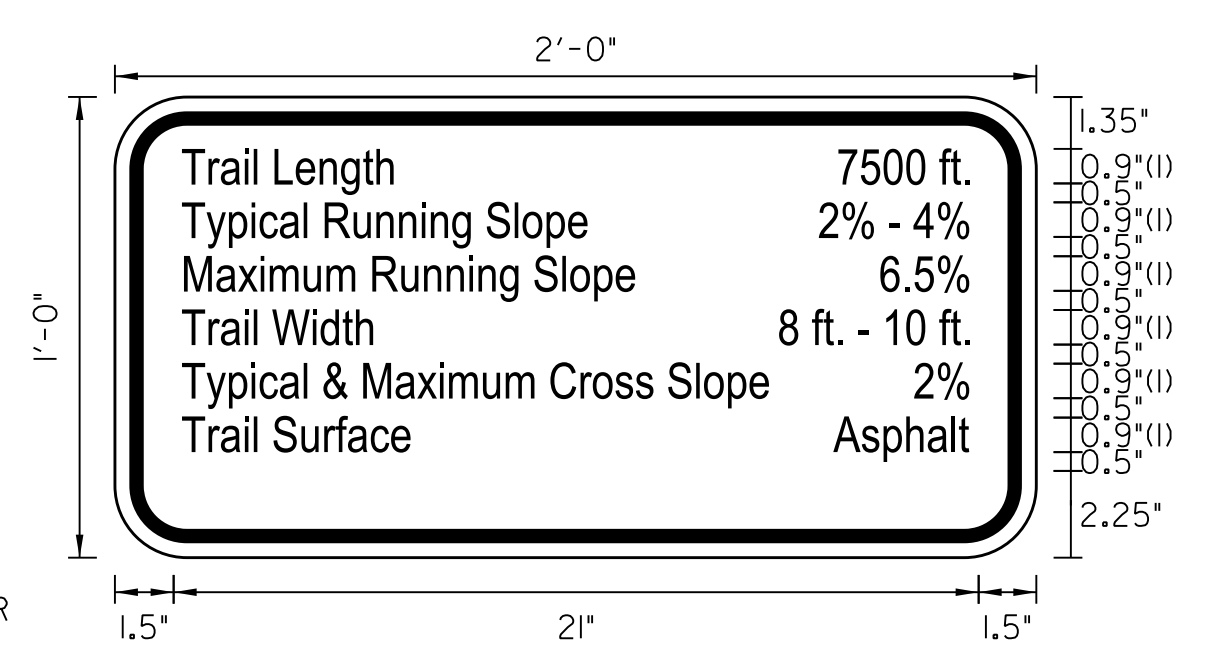
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	2 OF 13
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



BORDER  
R=1.5"  
TH=0.4"  
IN=0.4"

FONT:  
(1) Arial Narrow  
COLORS: LEGEND - WHITE (REFLECTIVE)  
BACKGROUND - GREEN



BORDER  
R=1.5"  
TH=0.4"  
IN=0.4"

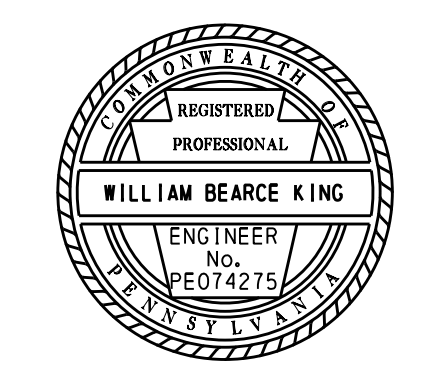
FONT:  
(1) Arial Narrow  
COLORS: LEGEND - WHITE (REFLECTIVE)  
BACKGROUND - GREEN

**SIGN DETAILS**  
NOT TO SCALE



**SPECIAL SIGN**  
NOT TO SCALE  
ITEM NO. 9000-0100

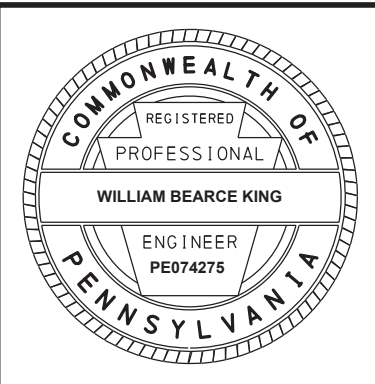
**SIGNING AND PAVEMENT MARKING PLAN**





# TABULATION OF QUANTITIES SIGNING AND PAVEMENT MARKING PLAN

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				06	BUCKS	0000	NGT	4 OF 13
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TWPS								



0931 0001 SF	0935 0001 SF	0941 0001 EACH	0960 0001 LF	0960 0002 LF	0960 0021 LF	0960 0111 EACH	0960 0112 EACH	0960 1121 EACH	9000 0100 EACH																ITEM NUMBER	UNIT	REMARKS	SIDE	STATIONS
4	2																									W11-15 (FYG) & W16-7P (FYG)	LT	210+86.00	
2.25																										R1-1	RT	210+94.00	
4	2																									W11-15 (FYG) & W16-2P (FYG)	LT	213+05.00	
			1028	1028																							LT / RT	218+00.00 to 225+00.00	
		1																								W16-101	RT	224+00.00	
116.75	18	3	3673	2312	655	4	4	14	1																				
<b>TOTALS</b>																													

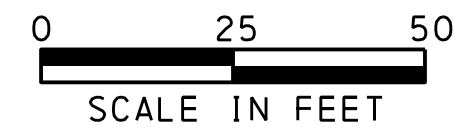
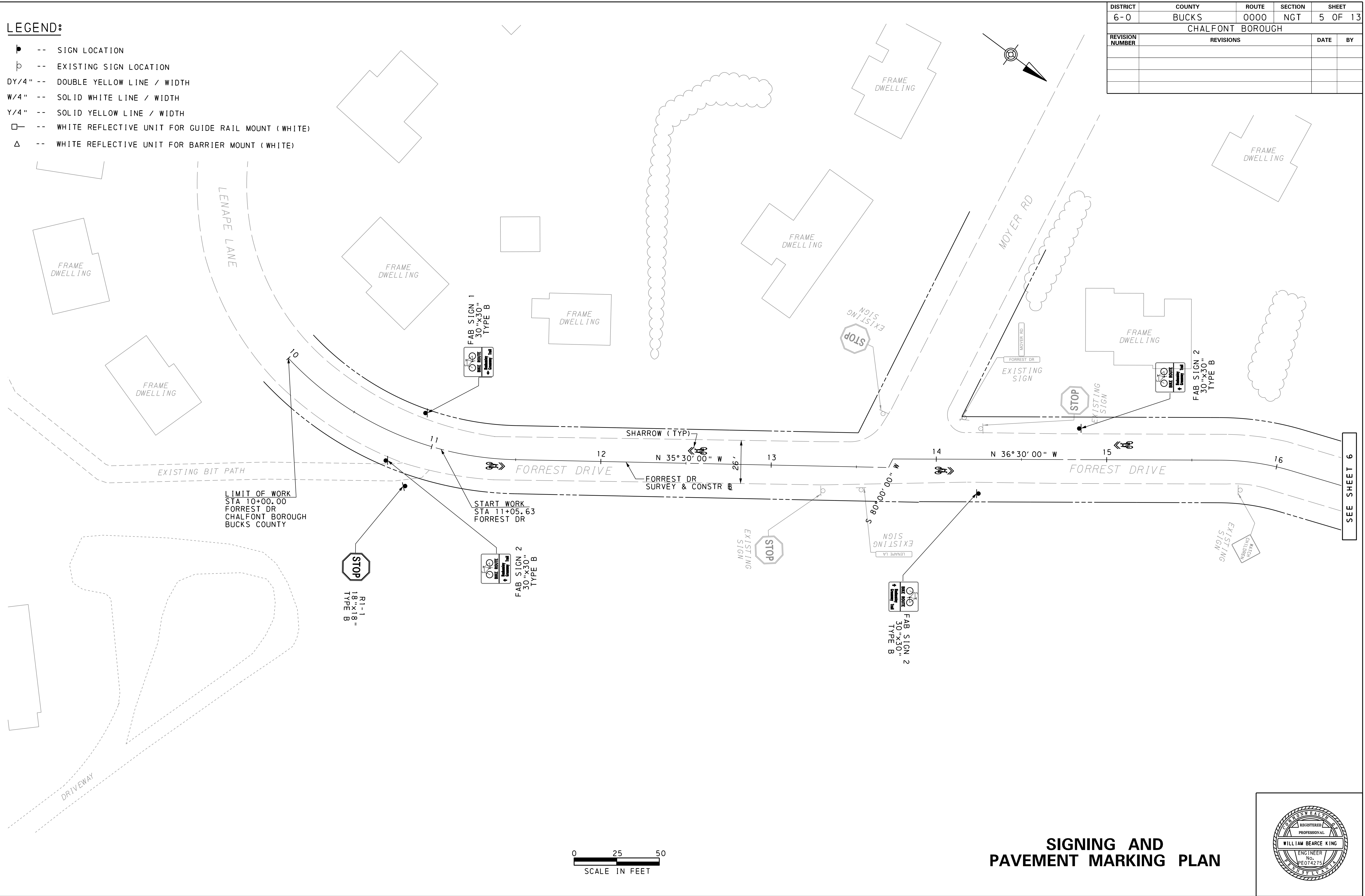
18-JUL-2019

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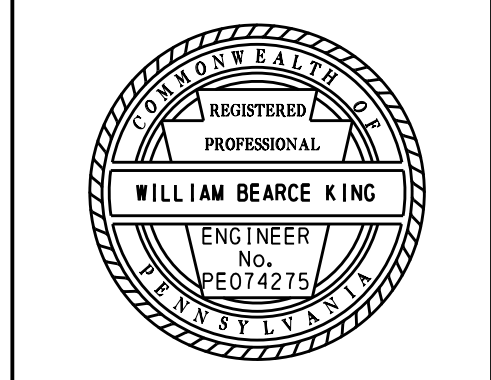
**LEGEND:**

- ▬ -- SIGN LOCATION
- ⊥ -- EXISTING SIGN LOCATION
- DY/4" -- DOUBLE YELLOW LINE / WIDTH
- W/4" -- SOLID WHITE LINE / WIDTH
- Y/4" -- SOLID YELLOW LINE / WIDTH
- -- WHITE REFLECTIVE UNIT FOR GUIDE RAIL MOUNT (WHITE)
- △ -- WHITE REFLECTIVE UNIT FOR BARRIER MOUNT (WHITE)

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	5 OF 13
CHALFONT BOROUGH				
REVISION NUMBER	REVISIONS	DATE	BY	



**SIGNING AND  
PAVEMENT MARKING PLAN**

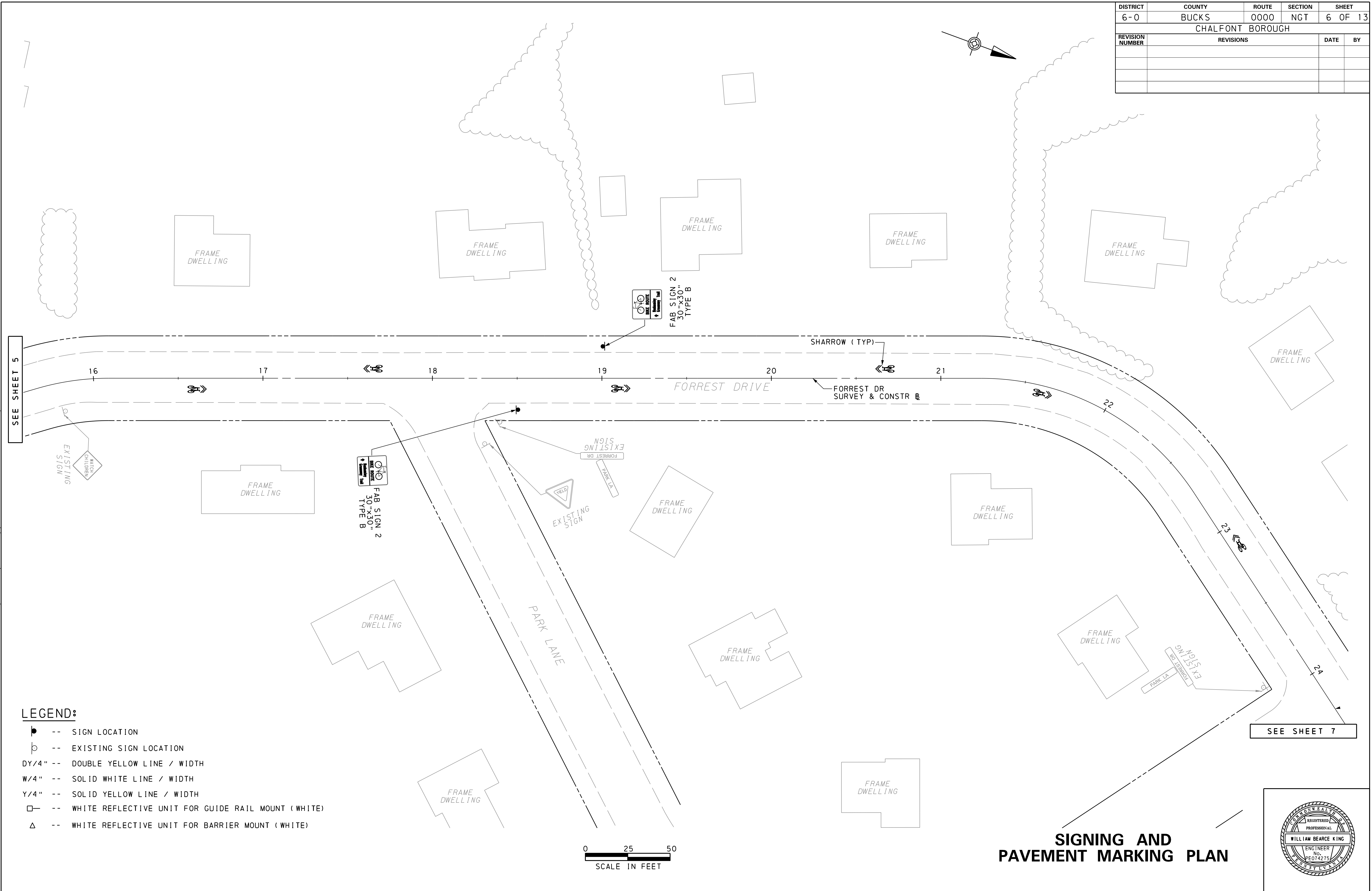
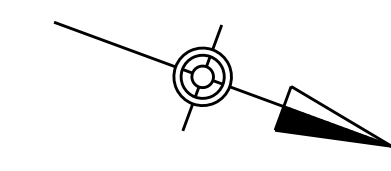


SEE SHEET 6

18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	6 OF 13
CHALFONT BOROUGH				
REVISION NUMBER	REVISIONS	DATE	BY	



SEE SHEET 5

SEE SHEET 7

- LEGEND:**
- -- SIGN LOCATION
  - ⊙ -- EXISTING SIGN LOCATION
  - DY/4" -- DOUBLE YELLOW LINE / WIDTH
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  - Y/4" -- SOLID YELLOW LINE / WIDTH
  - -- WHITE REFLECTIVE UNIT FOR GUIDE RAIL MOUNT (WHITE)
  - △ -- WHITE REFLECTIVE UNIT FOR BARRIER MOUNT (WHITE)

0 25 50  
SCALE IN FEET

**SIGNING AND PAVEMENT MARKING PLAN**



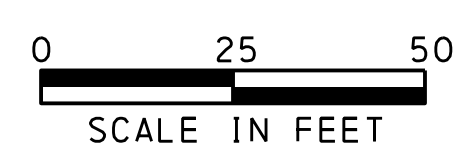
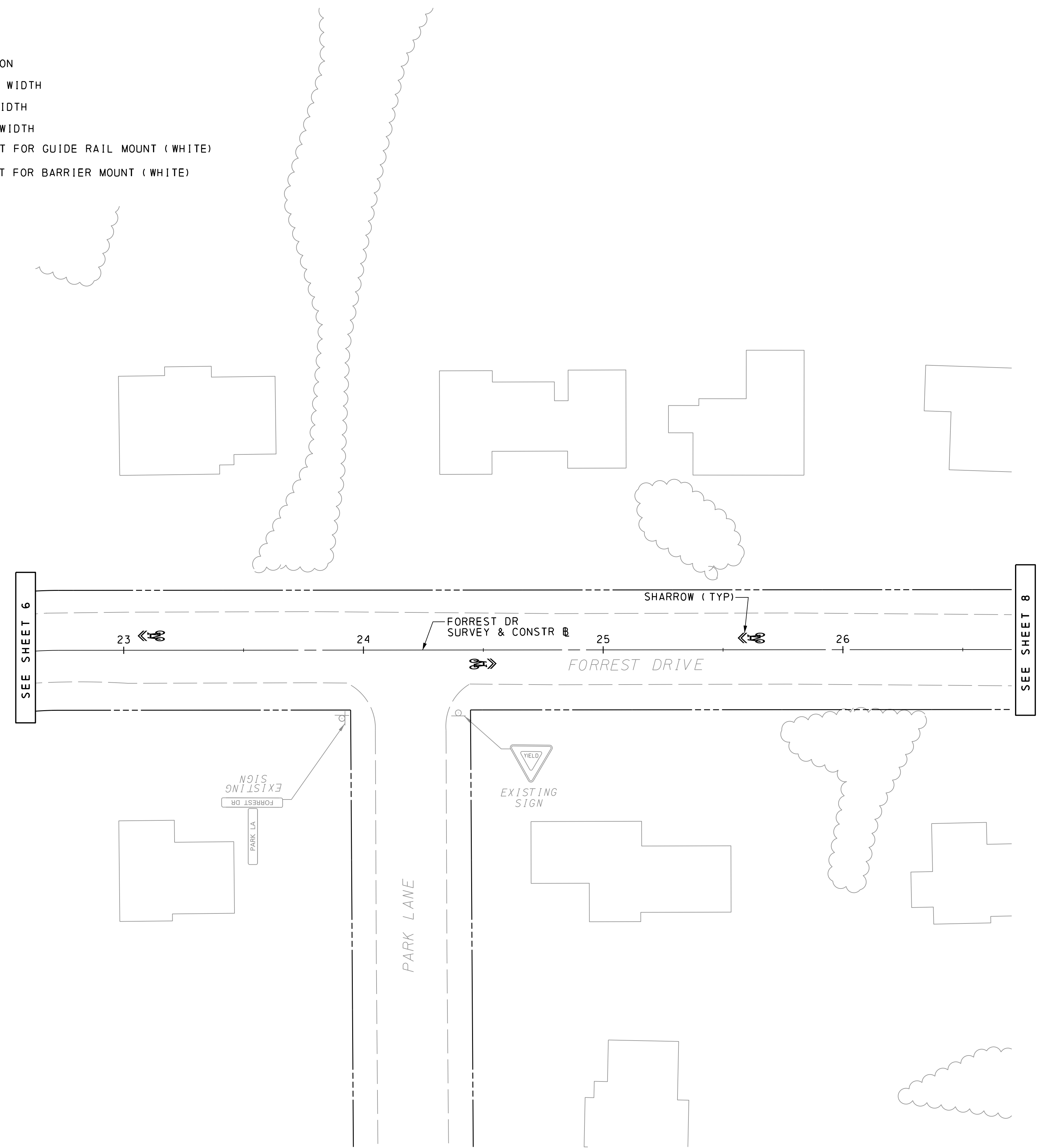
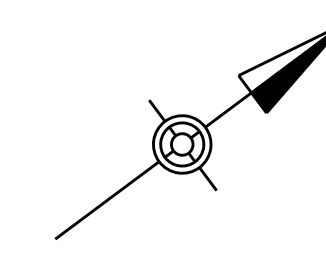
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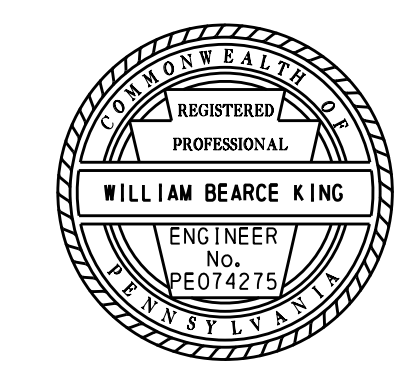
**LEGEND:**

- -- SIGN LOCATION
- ⊖ -- EXISTING SIGN LOCATION
- DY/4" -- DOUBLE YELLOW LINE / WIDTH
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	7 OF 13
CHALFONT BOROUGH				
REVISION NUMBER	REVISIONS	DATE	BY	



**SIGNING AND  
PAVEMENT MARKING PLAN**



18-JUL-2019

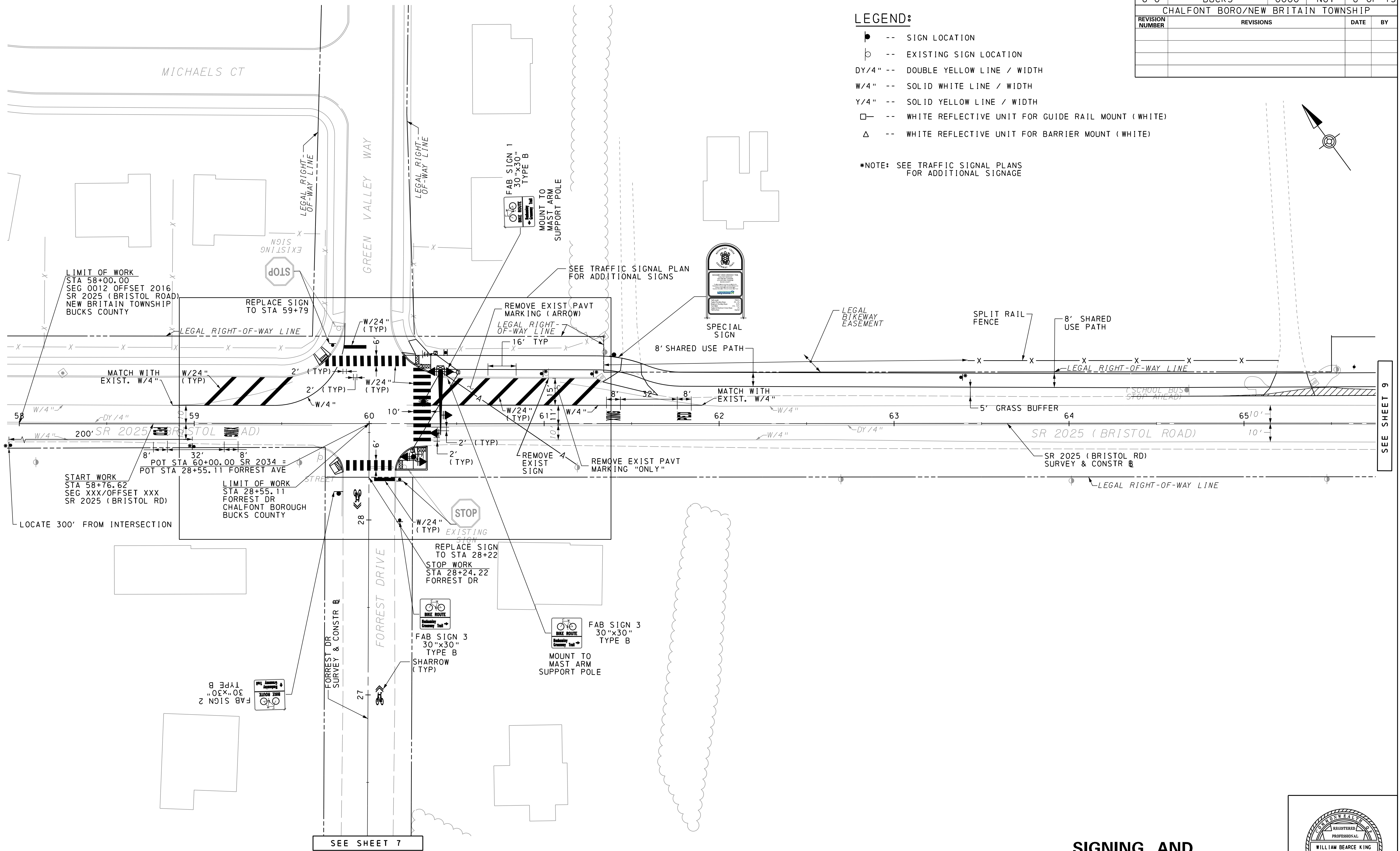
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	8 OF 13
CHALFONT BORO/NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	

**LEGEND:**

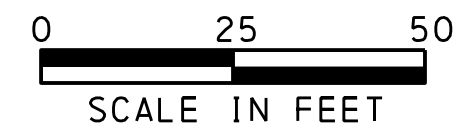
- -- SIGN LOCATION
- ⊖ -- EXISTING SIGN LOCATION
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- △ -- WHITE REFLECTIVE UNIT FOR BARRIER MOUNT (WHITE)

\*NOTE: SEE TRAFFIC SIGNAL PLANS FOR ADDITIONAL SIGNAGE

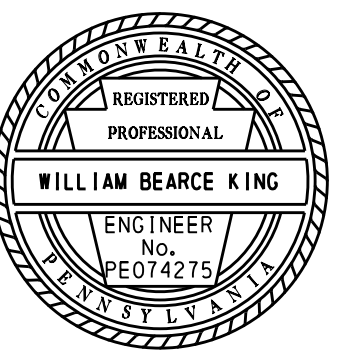


SEE SHEET 9

SEE SHEET 7



**SIGNING AND PAVEMENT MARKING PLAN**





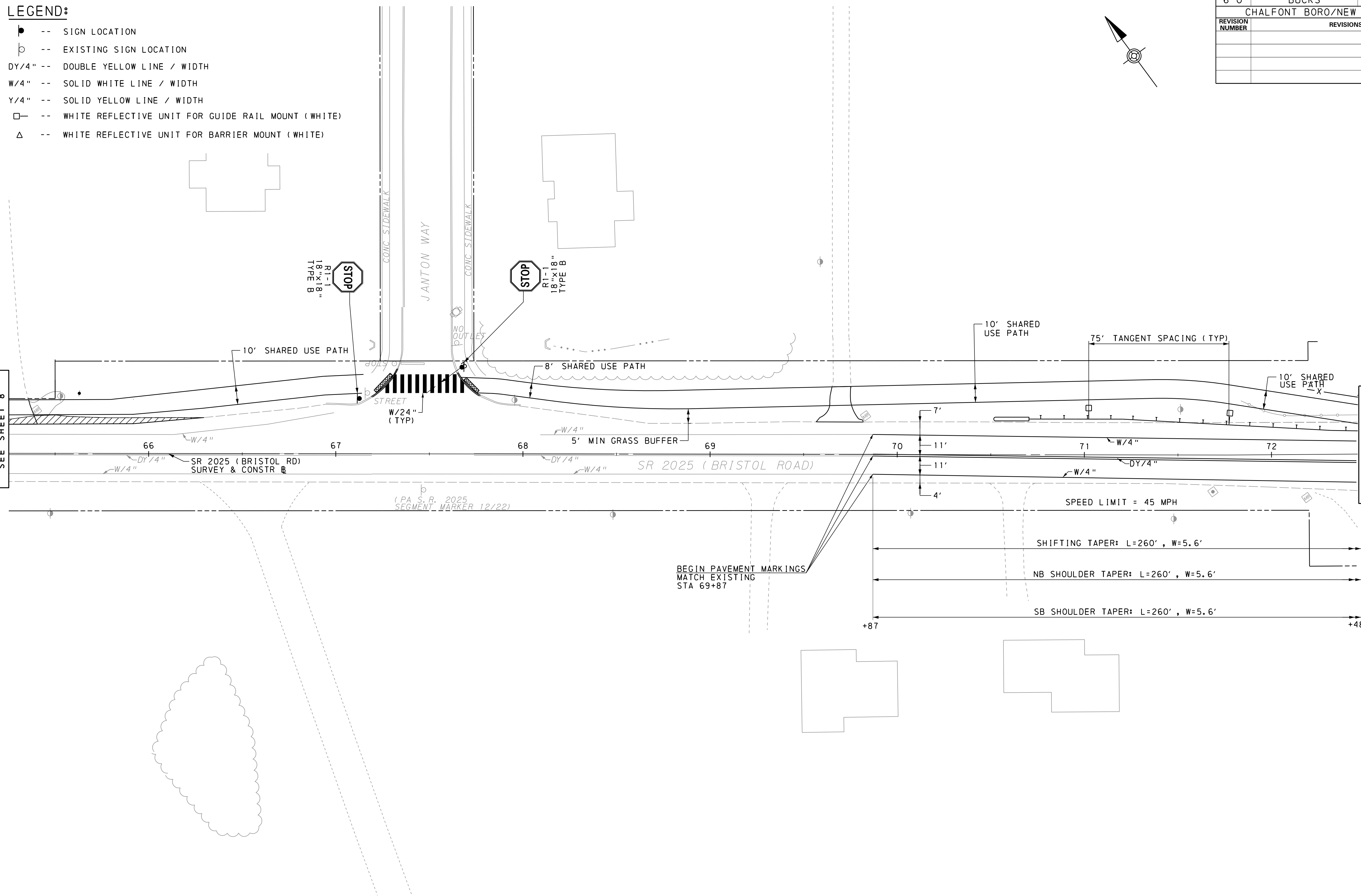
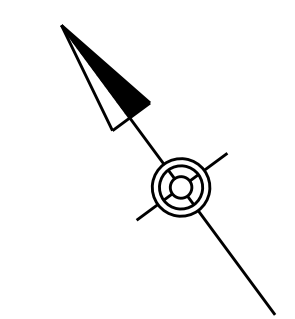
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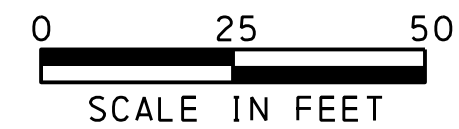
- -- SIGN LOCATION
- ⊖ -- EXISTING SIGN LOCATION
- DY/4" -- DOUBLE YELLOW LINE / WIDTH
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	9 OF 13
CHALFONT BORO/NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	

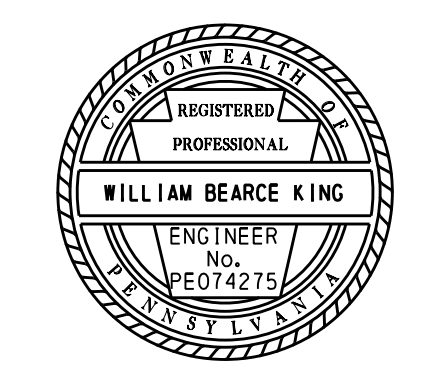


SEE SHEET 8

SEE SHEET 10



**SIGNING AND  
PAVEMENT MARKING PLAN**

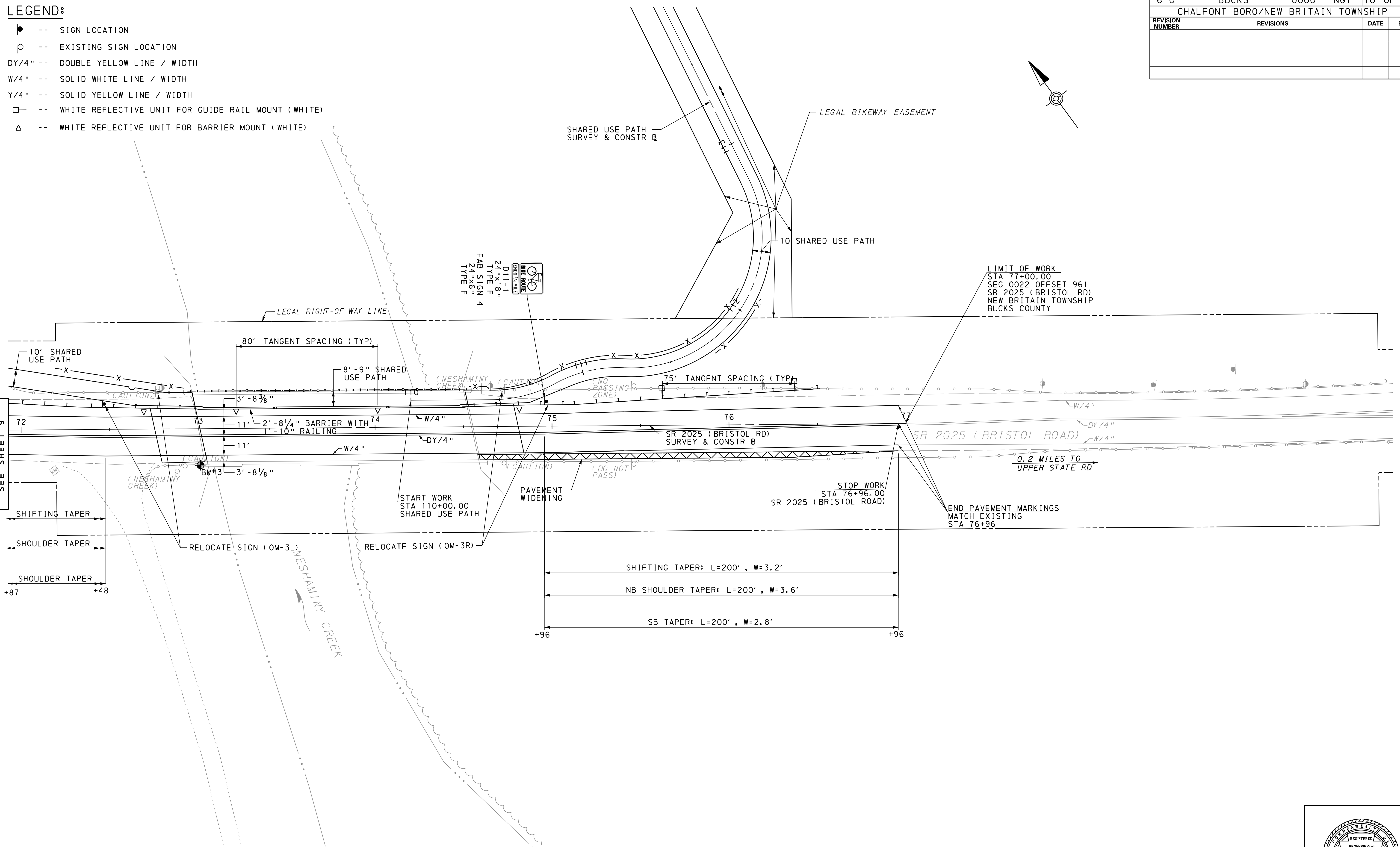
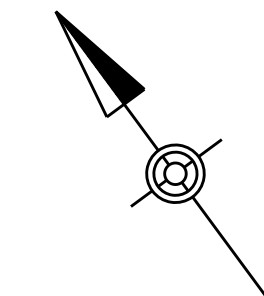


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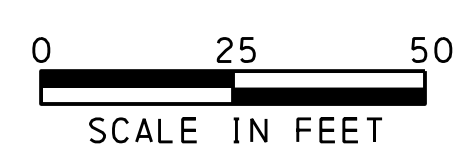
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	10 OF 13
CHALFONT BORO/NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	

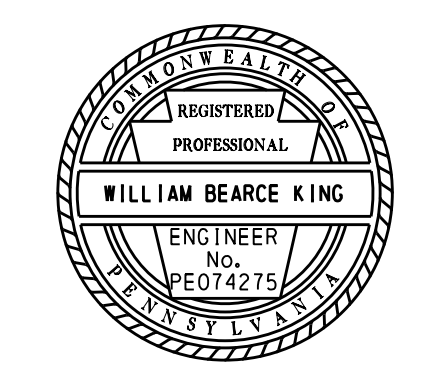
- LEGEND:**
- -- SIGN LOCATION
  - ⊖ -- EXISTING SIGN LOCATION
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  - △ -- WHITE REFLECTIVE UNIT FOR BARRIER MOUNT (WHITE)



SEE SHEET 9



**SIGNING AND PAVEMENT MARKING PLAN**



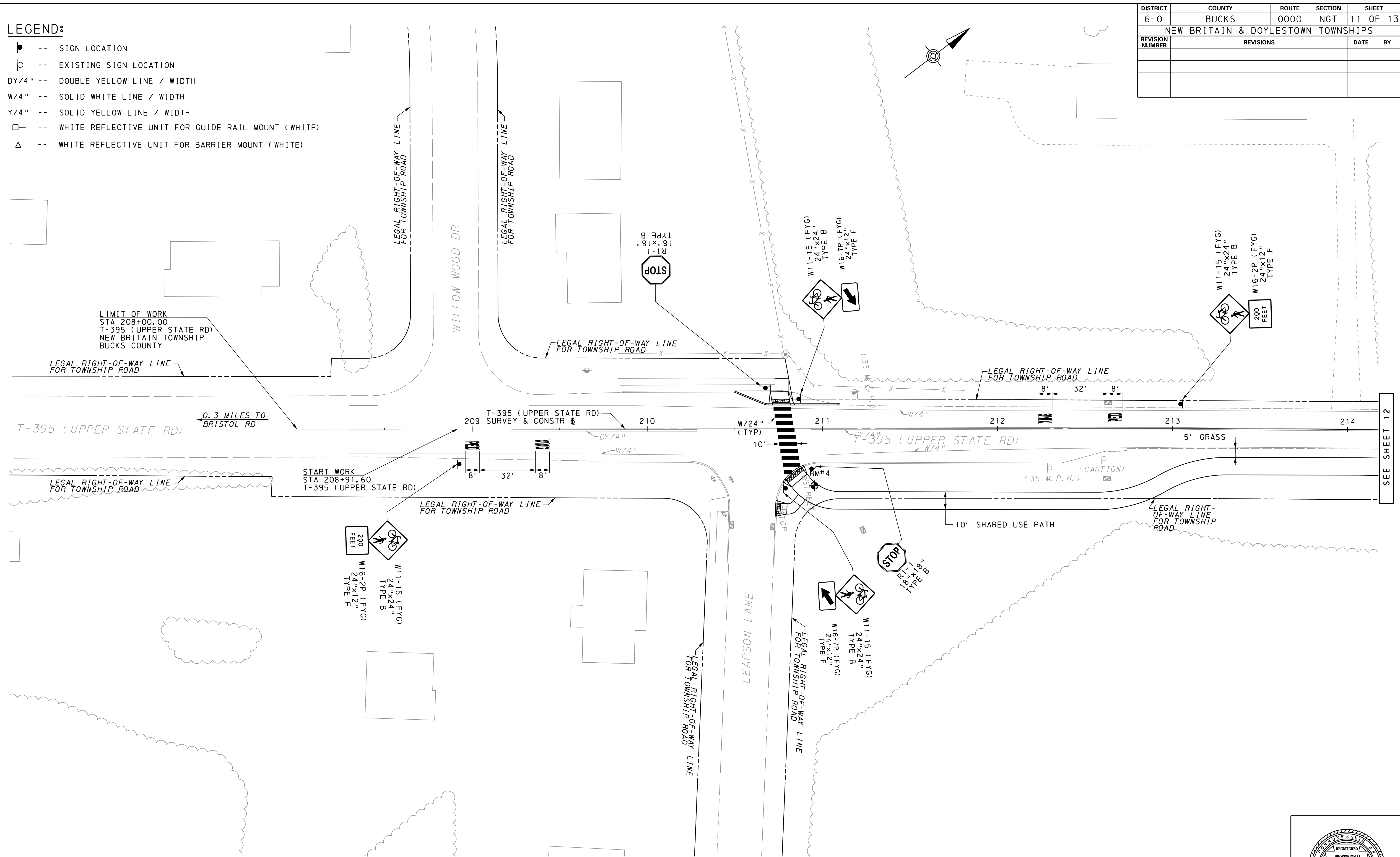
18-JUL-2019

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**LEGEND:**

- -- SIGN LOCATION
- ⊖ -- EXISTING SIGN LOCATION
- DY/4" -- DOUBLE YELLOW LINE / WIDTH
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- Y/4" -- SOLID YELLOW LINE / WIDTH
- -- WHITE REFLECTIVE UNIT FOR GUIDE RAIL MOUNT (WHITE)
- △ -- WHITE REFLECTIVE UNIT FOR BARRIER MOUNT (WHITE)

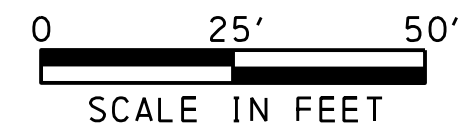
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	11 OF 13
NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



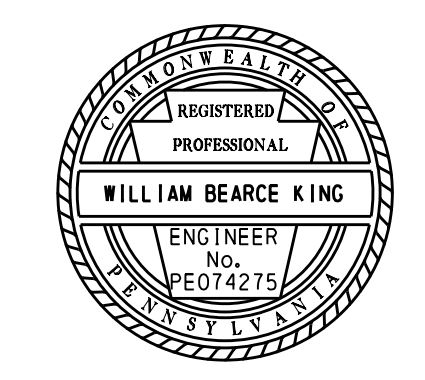
0.3 MILES TO BRISTOL RD

START WORK  
STA 208+91.60  
T-395 (UPPER STATE RD)

LIMIT OF WORK  
STA 208+00.00  
T-395 (UPPER STATE RD)  
NEW BRITAIN TOWNSHIP  
BUCKS COUNTY



**SIGNING AND PAVEMENT MARKING PLAN**

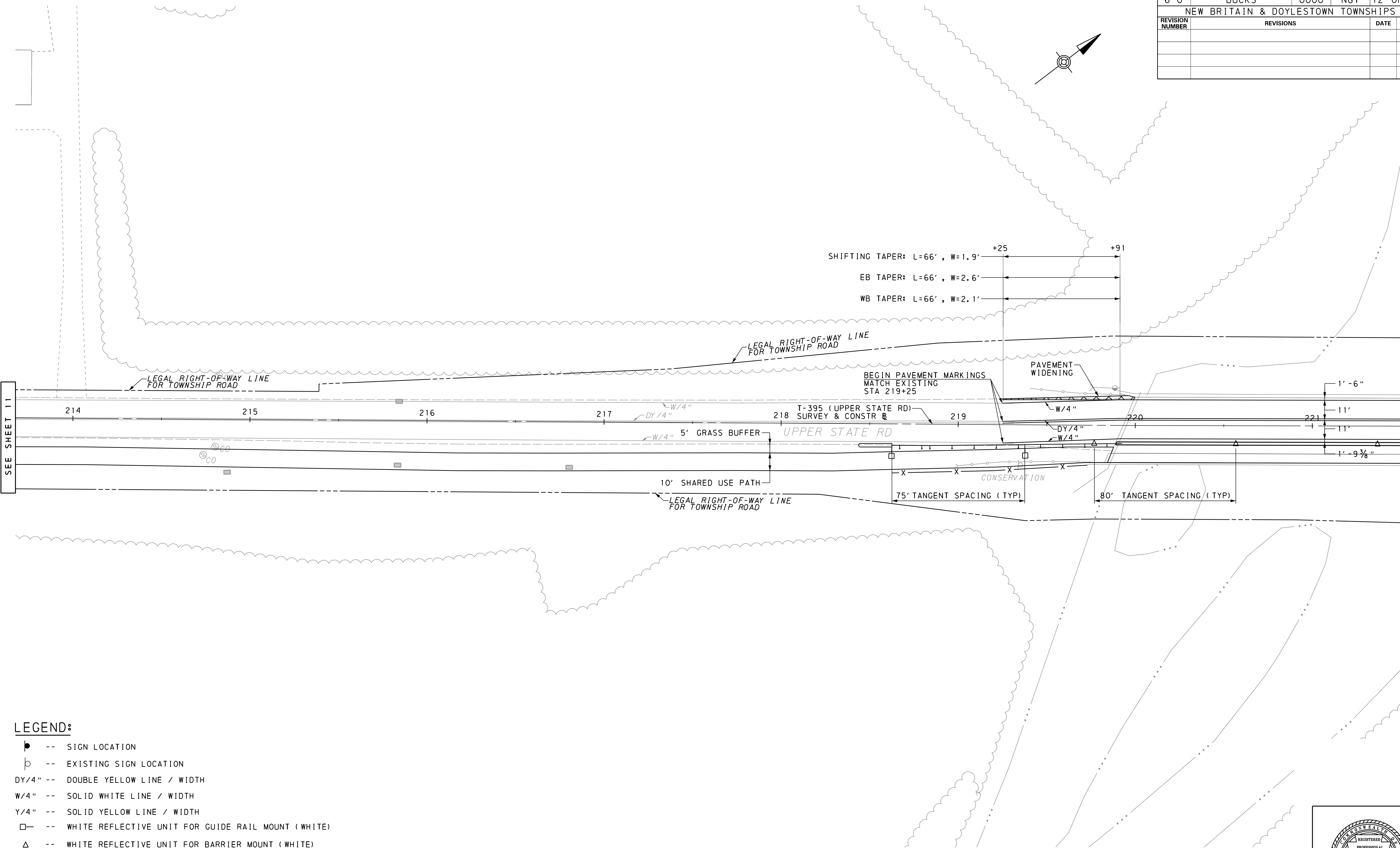
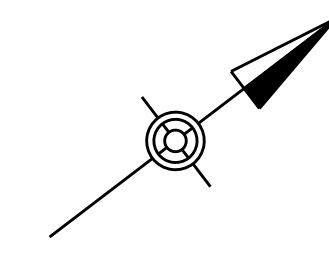


SEE SHEET 12

18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	12 OF 13
NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

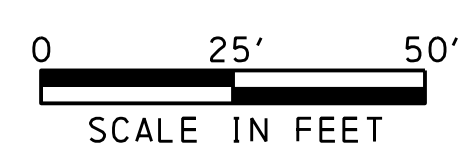


SEE SHEET 11

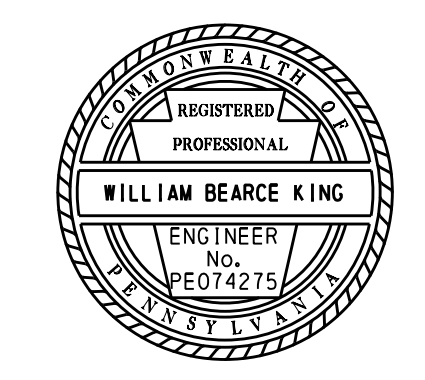
SEE SHEET 13

**LEGEND:**

- -- SIGN LOCATION
- ⊕ -- EXISTING SIGN LOCATION
- DY/4" -- DOUBLE YELLOW LINE / WIDTH
- W/4" -- SOLID WHITE LINE / WIDTH
- Y/4" -- SOLID YELLOW LINE / WIDTH
- -- WHITE REFLECTIVE UNIT FOR GUIDE RAIL MOUNT (WHITE)
- △ -- WHITE REFLECTIVE UNIT FOR BARRIER MOUNT (WHITE)



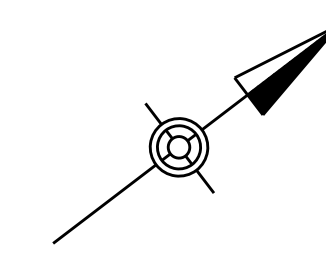
**SIGNING AND PAVEMENT MARKING PLAN**



18-JUL-2019

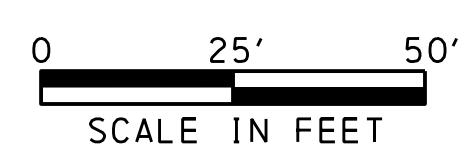
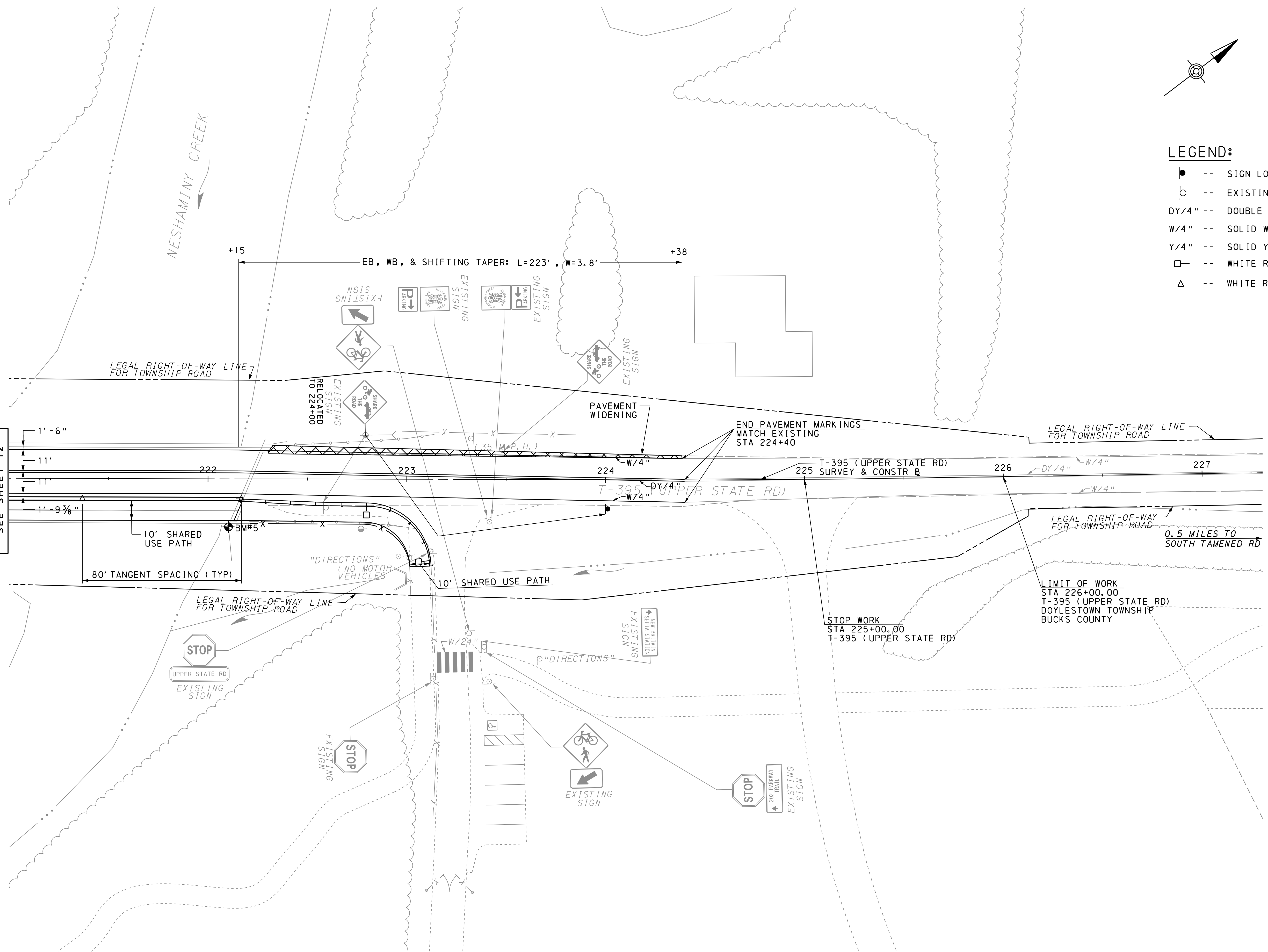
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	13 OF 13
NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

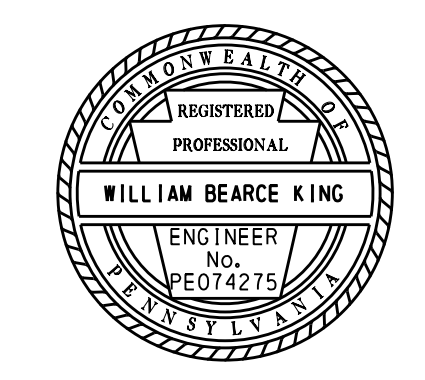


**LEGEND:**

- -- SIGN LOCATION
- ⊖ -- EXISTING SIGN LOCATION
- DY/4" -- DOUBLE YELLOW LINE / WIDTH
- W/4" -- SOLID WHITE LINE / WIDTH
- Y/4" -- SOLID YELLOW LINE / WIDTH
- -- WHITE REFLECTIVE UNIT FOR GUIDE RAIL MOUNT (WHITE)
- △ -- WHITE REFLECTIVE UNIT FOR BARRIER MOUNT (WHITE)



**SIGNING AND PAVEMENT MARKING PLAN**



11-APR-2019

E:\139780-Neshaminy Trail Phase-3\Project\Traffic\MPT\enaps\_to\_upperstate\01-NT3-LUS-MPT-Notes.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	1 OF 17
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

### NOTES:

THIS WORK CONSISTS OF THE MAINTENANCE OF TRAFFIC AND THE PROTECTION OF THE TRAVELING PUBLIC APPROACHING THE CONSTRUCTION AREA AND WITHIN THE LIMITS OF CONSTRUCTION.

THE SAFETY FOR PEDESTRIANS WILL ALSO BE MAINTAINED AT ALL TIMES WITHIN THE LIMITS OF CONSTRUCTION AND APPROACHING THE CONSTRUCTION AREA.

FURNISH, ERECT, PLACE AND MAINTAIN TRAFFIC CONTROL SIGNS AND DEVICES AND MAINTAIN TRAFFIC DURING THE HOURS OF CONSTRUCTION AND AT ALL OTHER TIMES IN ACCORDANCE WITH THE METHODS INDICATED ON THESE DRAWINGS AND:

1. THE SPECIAL PROVISIONS OF THE CONTRACT.
2. PUBLICATION 213, TEMPORARY TRAFFIC CONTROL GUIDELINES.
3. CHAPTER 212, OFFICIAL TRAFFIC CONTROL DEVICES.
4. PADOT PUB 35, APPROVED CONSTRUCTION MATERIALS (BULLETIN 15).
5. PADOT PUB 408, CURRENT VERSION, SPECIFICATIONS.
6. PADOT PUB 111, TRAFFIC CONTROL- PAVEMENT MARKING AND SIGNING STANDARDS.
7. PADOT PUB 236, HANDBOOK OF APPROVED SIGNS.
8. FHWA, MANUAL ON TRAFFIC CONTROL DEVICES, 2009 EDITION

ALL SIGNS TO BE IN NEW CONDITION AND MAINTAINED AS SUCH.

ALL SIGNS NOT IN USE ARE TO BE EITHER COVERED OR REMOVED FROM SIGHT. COVER ALL CONFLICTING EXISTING SIGNS.

ALL WORK IS TO BE PERFORMED WITHIN THE LEGAL RIGHT-OF-WAY AND ACQUIRED EASEMENTS.

THESE PLANS HAVE BEEN REVIEWED AND ARE IN COMPLIANCE WITH STANDARDS PRESCRIBED IN PUBLICATION 213, CHAPTER 212 OF THE 67 PA CODE AS CURRENTLY AMENDED. THE CONTRACTOR IS REMINDED THAT THIS APPROVAL IS NOT INTENDED TO RELIEVE HIM OF THE RESPONSIBILITY FOR THE PROTECTION OF THE PUBLIC AND THE CONSTRUCTION PERSONNEL. THE STANDARDS PRESCRIBED ARE MINIMUM AND ADDITIONAL PROTECTION MAY BE NEEDED IF PROBLEMS ARE ENCOUNTERED DURING THE TERM OF THE CONTRACT. CONSTANTLY REVIEW THIS PLAN FOR ADEQUACY AND TO RECOMMEND CHANGES FOR DEPARTMENT APPROVAL WHEN INADEQUACIES ARE DISCOVERED.

NOTIFY LOCAL EMERGENCY UNITS (POLICE, FIRE, MEDICAL, ETC.), BUSINESS, SCHOOL DISTRICT AND THE GENERAL PUBLIC AT LEAST TWO WEEKS PRIOR TO START OF WORK.

ALL LONG-TERM CONSTRUCTION SIGNING TO BE MOUNTED ON TYPE III BARRICADES UNLESS OTHERWISE NOTED.

IMMEDIATELY UPON COMPLETION OF THE WORK, REMOVE TRAFFIC CONTROL SIGNS AND DEVICES. FOR ALL TYPE "B" MOUNTED TRAFFIC CONTROL SIGNS, PULL ANCHOR POSTS. THE DEPARTMENT WILL REMOVE ANY TRAFFIC CONTROL DEVICES ERECTED BY THE DEPARTMENT FORCES.

ALL TRAFFIC CONTROL SIGNS AND DEVICES PLACED MUST BE INSPECTED BY THE DISTRICT CONSTRUCTION ENGINEER OR HIS REPRESENTATIVE BEFORE WORK BEGINS.

THIS TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY AS SPECIFIED IN SECTION 901.3 (c) OF PUBLICATION NO. 408.

INSTALL AND MAINTAIN THE TEMPORARY SIGNS AND TRAFFIC CONTROL DEVICES AS INDICATED ON THE TRAFFIC CONTROL PLAN AND IN ACCORDANCE WITH THE PROVISIONS OF PUBLICATION 213. ALL SIGNS ARE TO BE TYPE VII RETROREFLECTIVE SHEETING CONFORMING TO THE DEPARTMENT'S SPECIFICATION. REFLECTORIZE ALL DRUMS AND BARRICADES USED FOR TRAFFIC CONTROL USING TYPE III OR TYPE IV RETROREFLECTIVE SHEETING.

KEEP DRIVEWAYS ACCESSIBLE AT ALL TIMES. LOCATE ALL SIGNS SO THAT SIGHT DISTANCE IS NOT OBSTRUCTED AT DRIVEWAYS AND SIDE STREETS.

ALL ADVANCE WARNING SIGNS AND CHANNELIZING DEVICES MAY BE ADJUSTED BACK OR FORWARD DUE TO INTERSECTING STREETS, DRIVES, ETC. AND/OR AS FIELD CONDITIONS DICTATE.

REMOVE ALL CONFLICTING PAVEMENT MARKINGS (TEMPORARY AND EXISTING) IN A MANNER APPROVED BY THE ENGINEER AND REPLACE UPON COMPLETION OF THE PROJECT.

INSTALL AND UTILIZE ALL PROPOSED SIGNING AND PAVEMENT MARKINGS WHERE APPLICABLE.

PROVIDE INGRESS AND EGRESS ABILITIES TO ALL LOCAL ROADS AND DRIVEWAYS SITUATED ADJACENT TO CONSTRUCTION AREAS. TEMPORARY ADJUSTMENTS TO LOCAL ROADS AND DRIVEWAYS WILL BE INCIDENTAL TO ITEM NO. 0901-0001.

CONTRACTOR IS RESPONSIBLE FOR COORDINATING CONSTRUCTION ACTIVITIES AND MAINTENANCE AND PROTECTION OF TRAFFIC WITH ALL CONTRACTORS AND SUBCONTRACTORS OF ADJACENT CONSTRUCTION PROJECTS UNDER CONTRACT WITH THE DEPARTMENT. ALL COSTS ASSOCIATED WITH COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

LANE AND SHOULDER CLOSURES ARE NOT PERMITTED FROM 5:30 AM TO 9:00 AM AND FROM 3:00 PM TO 8:00 PM DAILY, MONDAY THRU FRIDAY, OR ON LEGAL HOLIDAYS.

INSTALL ALL E&S CONTROLS ACCORDING TO PLANS.

MAINTAIN 10' MINIMUM LANE WIDTH ON AT ALL TIMES.

REMOVE E&S CONTROLS ONCE THE AREA IS STABILIZED.

DO NOT OPEN TRAIL BEFORE APPROVED BY PENNDOT INSPECTOR.

SUBMIT A ROAD RESTRICTION FORM TO THE DISTRICT 6-0 PRESS OFFICE TWO WEEKS IN ADVANCE OF ANY DETOURS, LANE CLOSURES, OR RESTRICTIONS. THE FORM IS AVAILABLE ONLINE AT PENNDOT'S DISTRICT 6 WEBSITE UNDER CONTACT INFORMATION - "ALL CONTACTS" OR CONTACT THE PRESS OFFICE AT 610-205-6797 TO OBTAIN THE FORM.

NOTIFY THE DISTRICT 6-0 REGIONAL TRAFFIC MANAGEMENT CENTER (RTMC), 610-205-6934, FIFTEEN (15) MINUTES IN ADVANCE OF ANY PROPOSED LANE OR SHOULDER RESTRICTION, ROAD CLOSURE, OR ANY OPERATION IMPEDING THE FLOW OF TRAFFIC. NOTIFY THE RTMC WHEN THE ROAD IS RESTORED TO NORMAL OPERATION.

### PEDESTRIAN FACILITIES:

STAGE CONSTRUCTION TO MAINTAIN PEDESTRIAN WALKWAYS THROUGH WORK ZONES AT LOCATIONS SHOWN ON TRAFFIC CONTROL PLAN.

MAINTAIN ACCESS TO ALL BUILDING ENTRANCES AND DRIVEWAYS. MAINTAIN ACCESS TO ALL BUS STOPS.

NOTHING SHALL BE PERMITTED TO PROTRUDE INTO THE PEDESTRIAN WALKWAY.

PEDESTRIAN WALKWAYS MUST BE A MINIMUM OF 4-FT IN WIDTH. PROVIDE MINIMUM 5-FT WIDTH WHEREVER FEASIBLE. EVERY 200-FT A 5-FT WIDE X 5-FT LONG PASSING ZONE MUST BE PROVIDED UNLESS A 5-FT WIDE WALKWAY CAN BE PROVIDED THROUGHOUT THE LENGTH.

ALL PEDESTRIAN WALKWAYS MUST HAVE A MAXIMUM CROSS-SLOPE OF 2% AND A MAXIMUM GRADIENT OF 8.33% (12:1) INCLUDING RAMP AREAS TO ROADWAYS.

WALKWAY SURFACES MUST BE STABLE AND SLIP RESISTANT. INLET GRATES AND UTILITY CASTING ARE NOT PERMITTED IN THE WALKWAYS AND CROSSWALKS BUT MAY BE COVERED WITH A SUITABLE MATERIAL MEETING AMERICANS WITH DISABILITIES ACT (ADA) AND DEPARTMENT REQUIREMENTS.

MAINTAIN IN PLACE PEDESTRIAN FACILITIES UNTIL OPENING MODIFIED PEDESTRIAN PATTERNS.

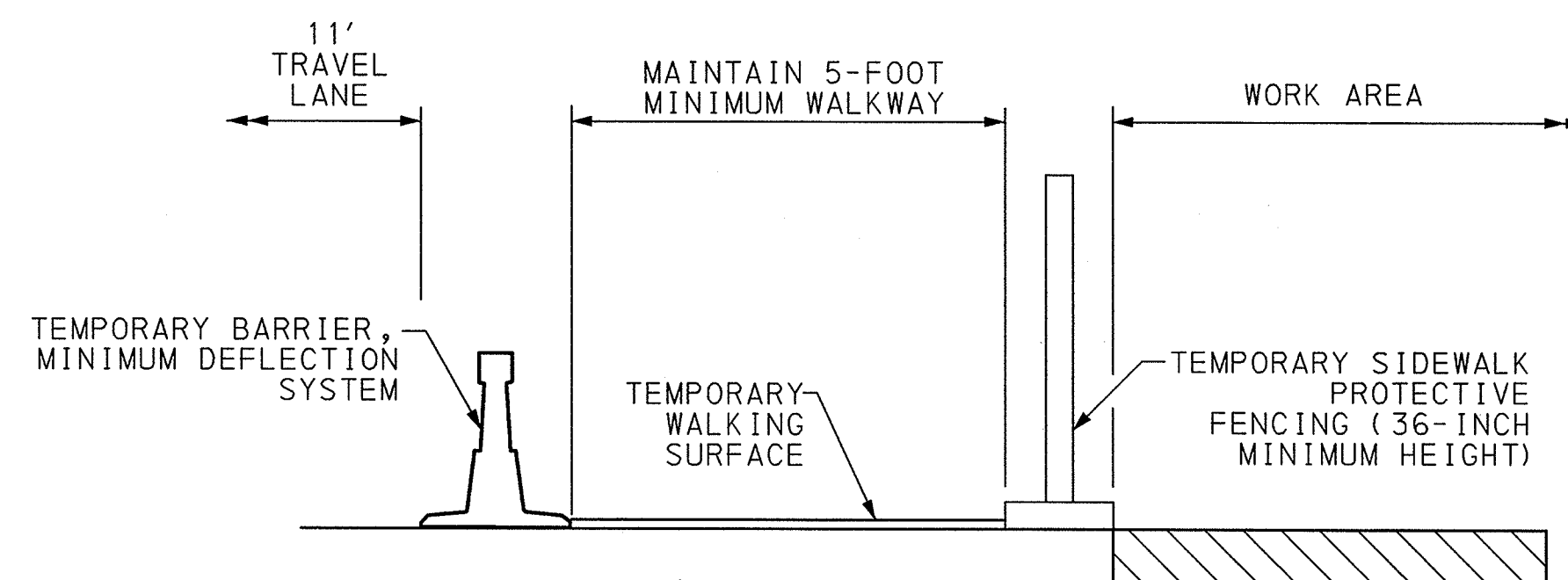
THE PEDESTRIAN BARRIERS SHALL BE CONTINUOUS, STABLE AND NON-FLEXIBLE WITH A DETECTABLE, CONTINUOUS BOTTOM EDGE 6 INCHES ABOVE THE WALKWAY SURFACE. THE PEDESTRIAN BARRIER SHALL ALSO PROVIDE A CONTINUOUS SURFACE OR UPPER RAIL AT A 36" MINIMUM HEIGHT ABOVE THE WALKWAY SURFACE. THE RESIDENT ENGINEER MUST APPROVE THE FENCE BARRIER DESIGN PRIOR TO INSTALLATION.

IF CONSTRUCTION MATERIALS ARE LIFTED OVER ACTIVE PEDESTRIAN FACILITIES THEN OVERHEAD PROTECTION APPROVED BY THE RESIDENT ENGINEER MUST BE IN PLACE.

CONSTRUCTION DETAILS OTHER THAN THOSE SHOWN ON THESE DRAWINGS TO CONFORM TO THE FOLLOWING STANDARD DRAWINGS:

RC-67M JUN 10, 2013  
TC-8716 JUN 13, 2013

CHANNELIZING DEVICES SHALL BE PLACED IN ACCORDANCE WITH PUBLICATION 213. MAX SPACING ON TANGENT AREAS SHALL BE EQUAL TO TWICE THE POSTED SPEED LIMIT. MAX SPACING ON TAPERS SHALL BE EQUAL TO THE POSTED SPEED LIMIT.



TEMPORARY PEDESTRIAN WALKWAY DETAIL - STAGE 4

NOT TO SCALE  
STA 219+70 TO 222+35

#### NOTES

REFER TO 0901-0001 SPECIFICATION FOR PEDESTRIAN WALKWAY REQUIREMENTS.

### SEQUENCE OF CONSTRUCTION

REFER TO THE 0901-0001 SPECIFICATION FOR A DETAILED SEQUENCE OF CONSTRUCTION.

#### STAGE 1:

PRIOR TO STAGE 1, CONSTRUCT TEMPORARY PAVEMENT BETWEEN APPROXIMATE STA 72+00 AND 72+95, AND REMOVE GUIDERAIL AND CONSTRUCT TEMPORARY PAVEMENT BETWEEN APPROXIMATE STA 74+55 AND STA 76+55. REFER TO PATA 101, 102, AND 103 FOR SHORT-TERM TRAFFIC CONTROL AND PATA 201, 202, AND 204 FOR LONG TERM TRAFFIC CONTROL.

INSTALL MINIMUM DEFLECTION TEMPORARY BARRIER FROM STA 72+60 TO STA 75+10. INSTALL TEMPORARY CONCRETE BARRIER FROM STA 74+55 TO STA 76+45 AND CONNECT TO BRIDGE PARAPET.

INSTALL BRISTOL ROAD SOUTH DIRECTIONAL DETOUR AS SHOWN ON DETOUR PLAN. DO NOT OVERLAP STAGE 1 WITH STAGES 3 AND 4.

REPAIR BRIDGE DECK AND JOINTS ON THE SOUTH SIDE OF THE BRIDGE.

#### STAGE 2:

REMOVE DETOUR AND MAINTAIN TWO LANES OF TRAVEL FOR THE FOLLOWING HOURS:  
5:30AM TO 9:00AM AND 3:00PM TO 8:00PM MONDAY THRU FRIDAY  
8:00PM FRIDAY TO 5:30AM MONDAY AS PER TRAFFIC CONTROL PLAN

REPAIR BRIDGE DECK AND JOINTS ON THE NORTH SIDE OF THE BRIDGE.

CONSTRUCT PROPOSED SHARED USE PATH (8'-0" WIDE) ACROSS THE BRIDGE.

INSTALL PERMANENT BARRIER AND HANDRAIL ON BRIDGE UTILIZING THE WORK AREA PROVIDED.

INSTALL PERMANENT PAVEMENT MARKINGS AND PERMANENT SIGNING.

REFER TO PATA 204 FOR LONG-TERM TRAFFIC CONTROL.

#### STAGE 3:

PRIOR TO STAGE 3, CONSTRUCT TEMPORARY PAVEMENT BETWEEN APPROXIMATE STA 218+75 AND 219+90, AND BETWEEN APPROXIMATE STA 222+25 AND STA 223+05. REFER TO PATA 101, 102, AND 103 FOR SHORT-TERM TRAFFIC CONTROL AND PATA 201, 202, AND 204 FOR LONG TERM TRAFFIC CONTROL.

INSTALL UPPER STATE ROAD EAST DIRECTIONAL DETOUR AS SHOWN ON DETOUR PLAN. DO NOT OVERLAP STAGES 3 AND 4 WITH STAGE 1

REPAIR BRIDGE DECK AND JOINTS ON WEST SIDE OF BRIDGE

#### STAGE 4:

MAINTAIN UPPER STATE ROAD EAST DIRECTIONAL DETOUR AS SHOWN ON DETOUR PLAN. DO NOT OVERLAP STAGES 3 AND 4 WITH STAGE 1.

REFER TO PATA 204 FOR LONG-TERM TRAFFIC CONTROL.

MAINTAIN TEMPORARY PEDESTRIAN WALKWAY AS SHOWN ON THE PLAN. REFER TO PATA 218 FOR PEDESTRIAN DIVERSION.

REMOVE THE EXISTING SIDEWALK LOCATED ON THE BRIDGE

REPAIR BRIDGE DECK AND JOINTS

CONSTRUCT PROPOSED SHARED USE PATH (10'-0 3/8" WIDE) ACROSS THE BRIDGE

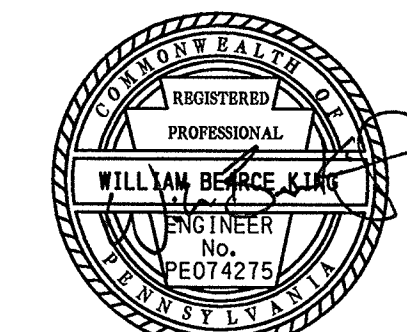
INSTALL PERMANENT BARRIER AND HANDRAIL ON BRIDGE UTILIZING THE WORK AREA PROVIDED

### INDEX OF SHEETS

GENERAL NOTES	SHEET 1
DETAILS	SHEET 2
TYPICAL SECTIONS	SHEET 3
ADVANCE SIGNING	SHEET 4
QUANTITIES	SHEETS 5-7
PLAN SHEETS	SHEETS 8-15
DETOUR PLANS	SHEETS 16-17

RECOMMENDED April 22, 2019  
*[Signature]*  
ASSISTANT DISTRICT EXECUTIVE - OPERATIONS

**Michael Baker**  
INTERNATIONAL  
500 OFFICE CENTER DRIVE, SUITE 210,  
FORT WASHINGTON, PA 19034-3234  
Phone: (215) 444-8888 - MBAKERINTL.COM



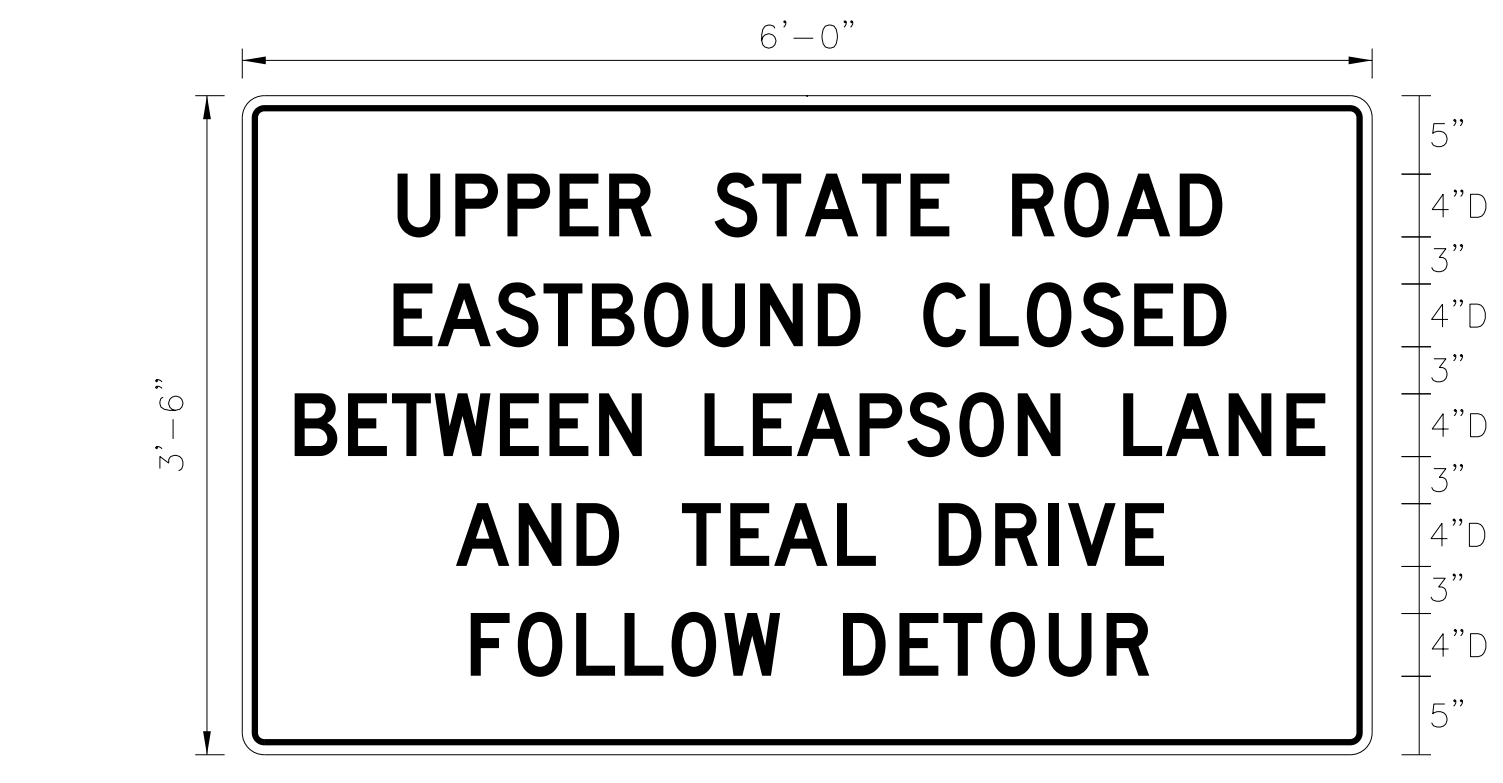
6/29/19

### TRAFFIC CONTROL PLAN

18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	2 OF 17
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

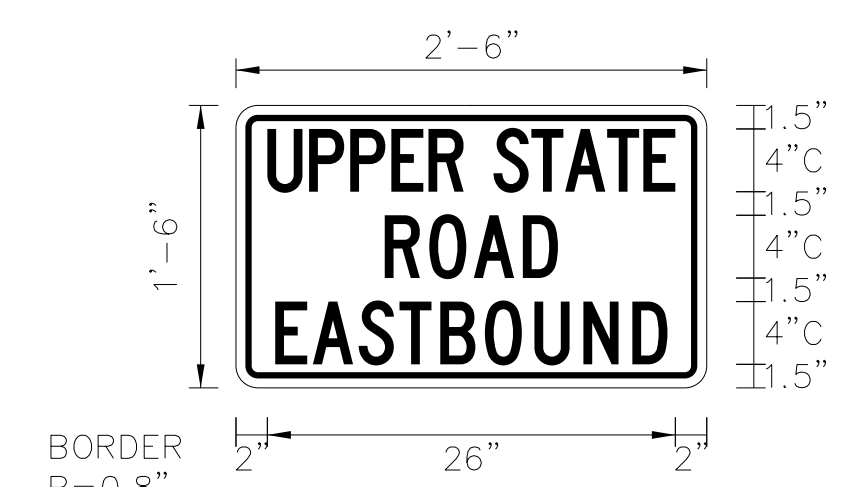


**FAB SIGN 1**

COLORS: BACKGROUND - ORANGE (REFLECTORIZED)  
LEGEND AND BORDER - BLACK (NON-REFLECTORIZED)

LETTER SPACINGS ARE TO START OF NEXT LETTER

U	9.7	E	9.5	B	3.2	A	13.4	F	14.4
P	3.7	A	2.8	E	3.4	N	4.0	O	3.0
P	3.3	S	3.7	T	2.7	D	2.8	L	3.1
E	3.3	T	3.1	W	4.2	L	4.0	O	3.0
R	2.7	B	3.3	E	3.2	T	3.1	W	3.4
S	4.0	O	3.7	E	3.2	E	2.8	W	3.6
T	3.0	U	3.7	N	2.7	A	4.0	D	4.0
T	2.7	N	3.7	L	4.0	L	2.5	D	3.6
A	3.6	D	2.7	L	3.1	R	3.4	E	2.8
T	3.1	C	4.0	E	2.8	D	3.6	T	3.0
E	2.5	L	3.6	A	4.0	R	3.4	O	3.7
O	4.0	L	3.0	P	3.0	I	1.2	O	3.7
A	3.3	O	3.4	S	3.3	V	3.6	R	2.7
O	3.4	S	3.4	O	3.7	E	2.5		
A	4.0	E	3.2	N	2.7	N	13.4		14.4
D	2.7	D	2.7	L	4.0		72		72
	9.7		9.5	L	2.7				
	72		72	A	4.0				
				N	3.7				
				E	2.5				
					3.2				
					72				

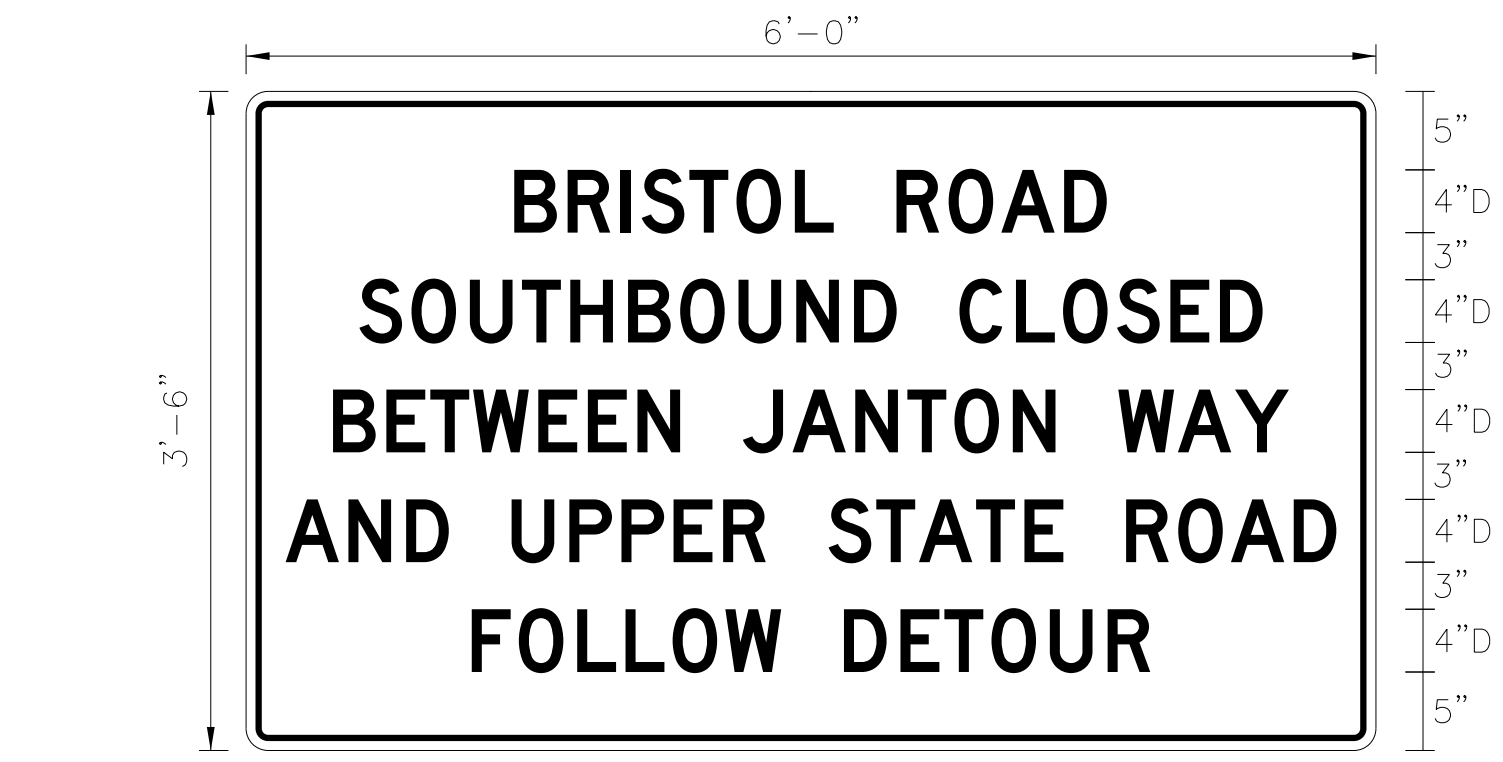


**FAB SIGN 2**

COLORS: BACKGROUND - ORANGE (REFLECTORIZED)  
LEGEND AND BORDER - BLACK (NON-REFLECTORIZED)

LETTER SPACINGS ARE TO START OF NEXT LETTER

U	2.0	R	9.5	E	2.5
P	2.7	O	2.8	A	2.4
P	2.6	A	3.1	S	2.9
E	2.6	D	2.3	T	2.6
R	2.2		9.5	B	2.8
S	1.9		30	O	3.2
T	2.4			U	3.1
A	2.2			N	3.1
T	2.7			D	2.3
E	2.3				2.5
	2.0				30
	2.0				
	30				



**FAB SIGN 3**

COLORS: BACKGROUND - ORANGE (REFLECTORIZED)  
LEGEND AND BORDER - BLACK (NON-REFLECTORIZED)

LETTER SPACINGS ARE TO START OF NEXT LETTER

B	17.1	S	7.2	B	5.5	A	2.5	F	14.4
R	3.4	O	3.3	E	2.8	N	4.0	O	3.0
I	1.3	U	3.3	T	2.7	D	2.7	L	3.1
S	3.0	T	3.2	W	4.2	L	4.0	L	3.0
T	3.0	H	3.7	E	3.2	U	3.7	W	3.4
O	3.7	B	3.3	E	3.2	P	3.3	O	3.6
L	2.5	O	3.7	N	2.7	P	3.3	D	4.0
	4.0	U	3.7	A	4.0	E	3.3	E	3.6
R	3.4	N	3.7	J	3.2	R	2.7	T	2.8
O	3.4	D	2.7	A	4.0	A	4.0	T	3.0
A	4.0	C	4.0	N	3.4	S	3.0	O	3.6
D	2.7	T	3.0	T	3.0	T	2.7	U	2.7
	17.1	L	3.0	O	3.7	A	3.6	R	2.7
	72	O	3.4	N	2.7	T	3.1		14.4
		S	3.4	4.0	4.0	E	2.5		72
		E	3.2	W	3.8	4.0	4.0		
		D	2.7	A	3.6	R	3.3		
			7.2	Y	3.4	O	3.4		
					5.5	A	4.0		
					72	D	2.7		
							2.5		
							72		

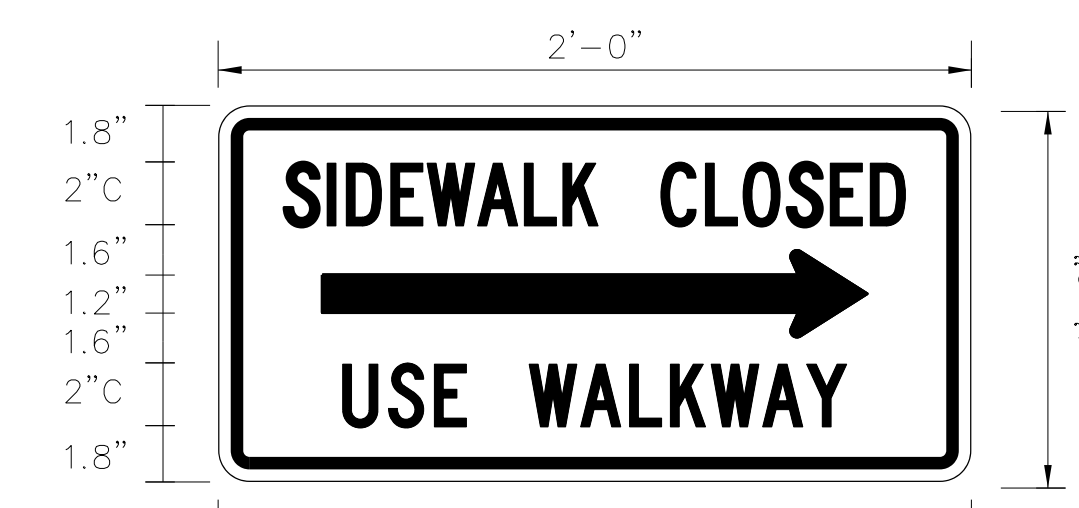


**FAB SIGN 4**

COLORS: BACKGROUND - ORANGE (REFLECTORIZED)  
LEGEND AND BORDER - BLACK (NON-REFLECTORIZED)

LETTER SPACINGS ARE TO START OF NEXT LETTER

B	1.6	S	1.6
R	2.5	O	2.6
I	0.8	U	2.6
S	2.5	T	2.4
T	2.2	H	2.8
O	2.7	B	2.8
L	2.0	O	2.9
	1.6	U	2.8
R	2.5	N	2.8
O	2.5	D	2.2
A	2.8		1.6
D	2.2		30
	1.6		
	30		

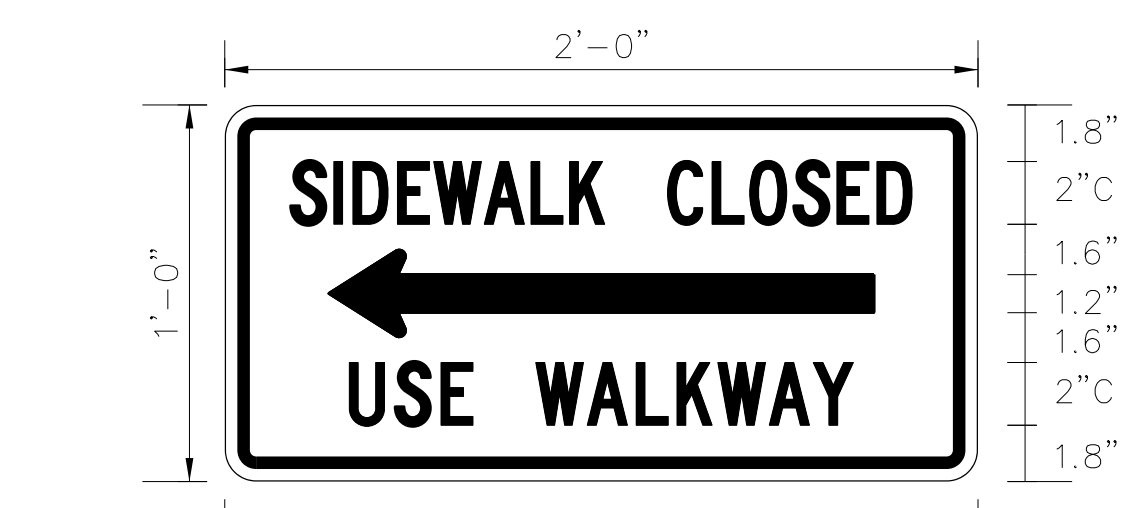


**FAB SIGN 5**

COLORS: BACKGROUND - GREEN (REFLECTORIZED)  
LEGEND AND BORDER - WHITE (REFLECTORIZED)

LETTER SPACINGS ARE TO START OF NEXT LETTER

S	2.1	U	4.0
I	1.4	S	1.5
D	1.4	E	1.0
E	1.2	W	2.0
W	1.6	→	17.6
A	1.5	→	3.2
L	1.2	→	3.2
K	1.1	→	24.0
	2.0		
C	1.4		
L	1.2		
O	1.4		
S	1.4		
E	1.3		
D	1.1		
	2.1		
	24.0		



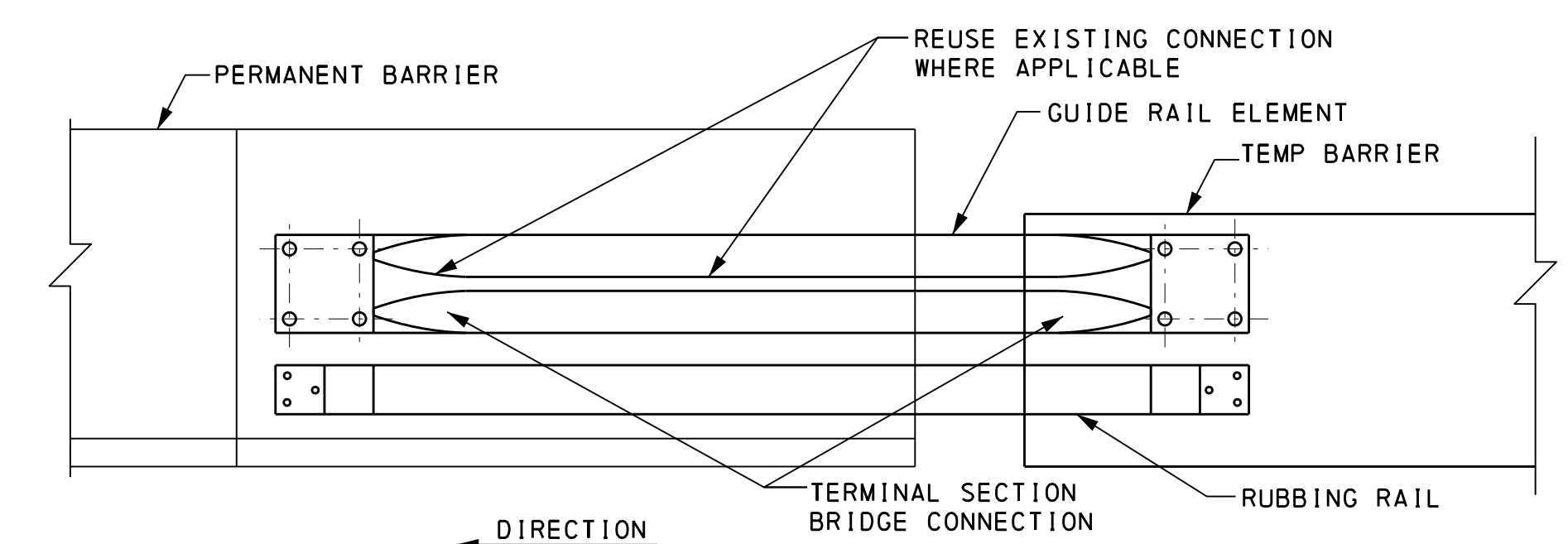
**FAB SIGN 6**

COLORS: BACKGROUND - GREEN (REFLECTORIZED)  
LEGEND AND BORDER - WHITE (REFLECTORIZED)

LETTER SPACINGS ARE TO START OF NEXT LETTER

S	2.1	U	4.0
I	1.4	S	1.5
D	1.4	E	1.0
E	1.2	W	2.0
W	1.6	←	17.6
A	1.5	←	3.2
L	1.2	←	3.2
K	1.1	←	24.0
	2.0		
C	1.4		
L	1.2		
O	1.4		
S	1.4		
E	1.3		
D	1.1		
	2.1		
	24.0		

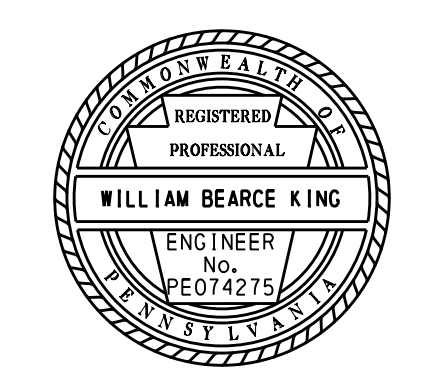
NOTE: FAB SIGNS 1, 3, 5 AND 6 TO BE MOUNTED ON TYPE III BARRICADES.



**TEMPORARY BARRIER CONNECTION DETAIL**

NOT TO SCALE

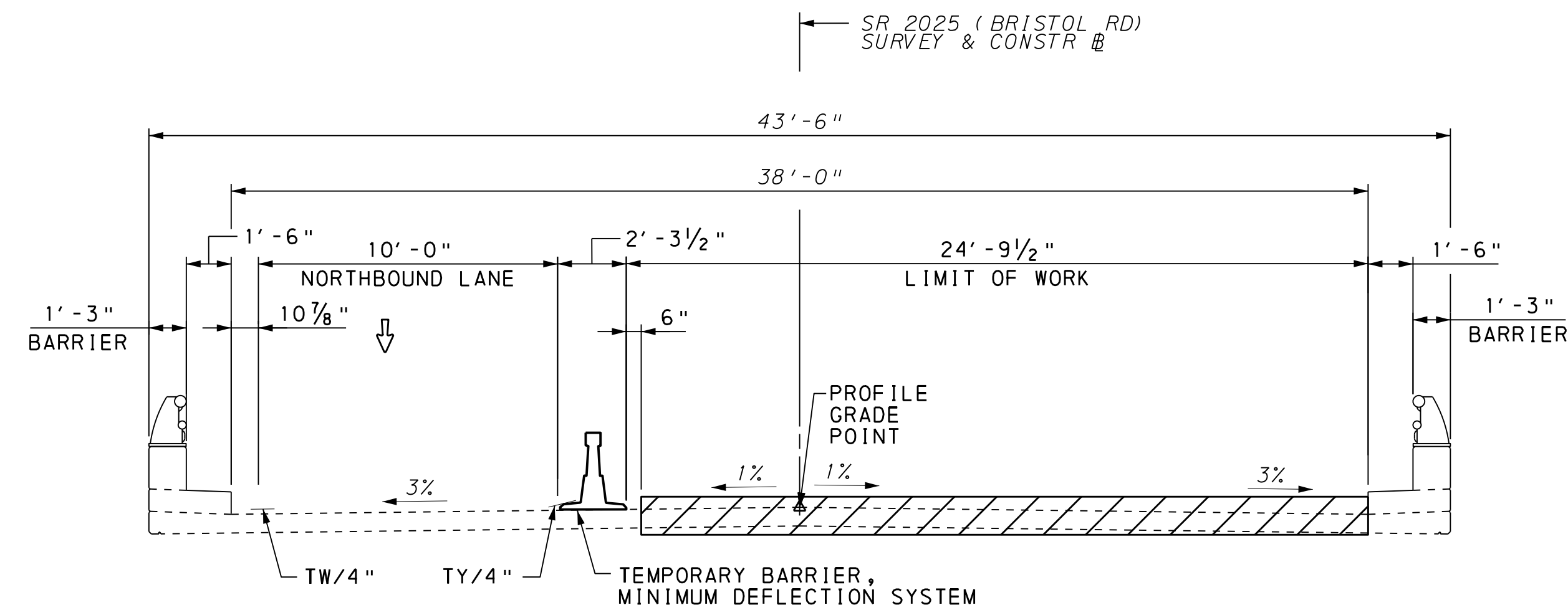
**TRAFFIC CONTROL PLAN  
DETAILS**



18-JUL-2019

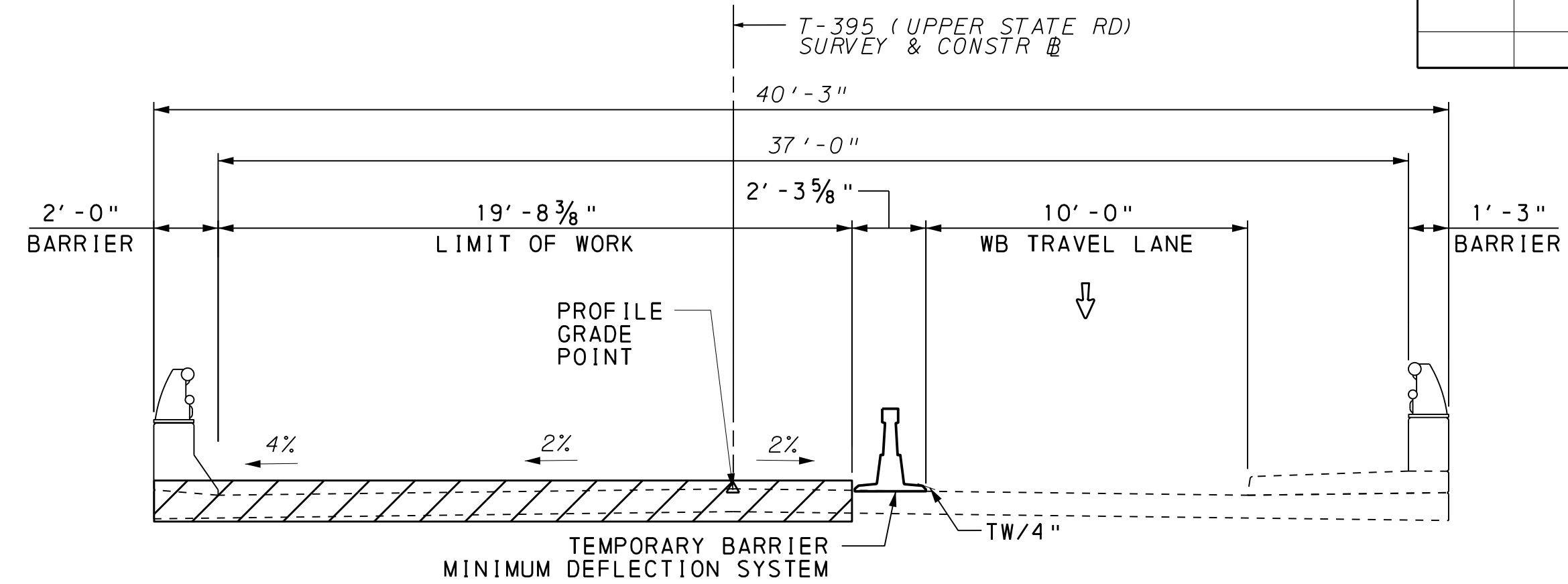
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	3 OF 17
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



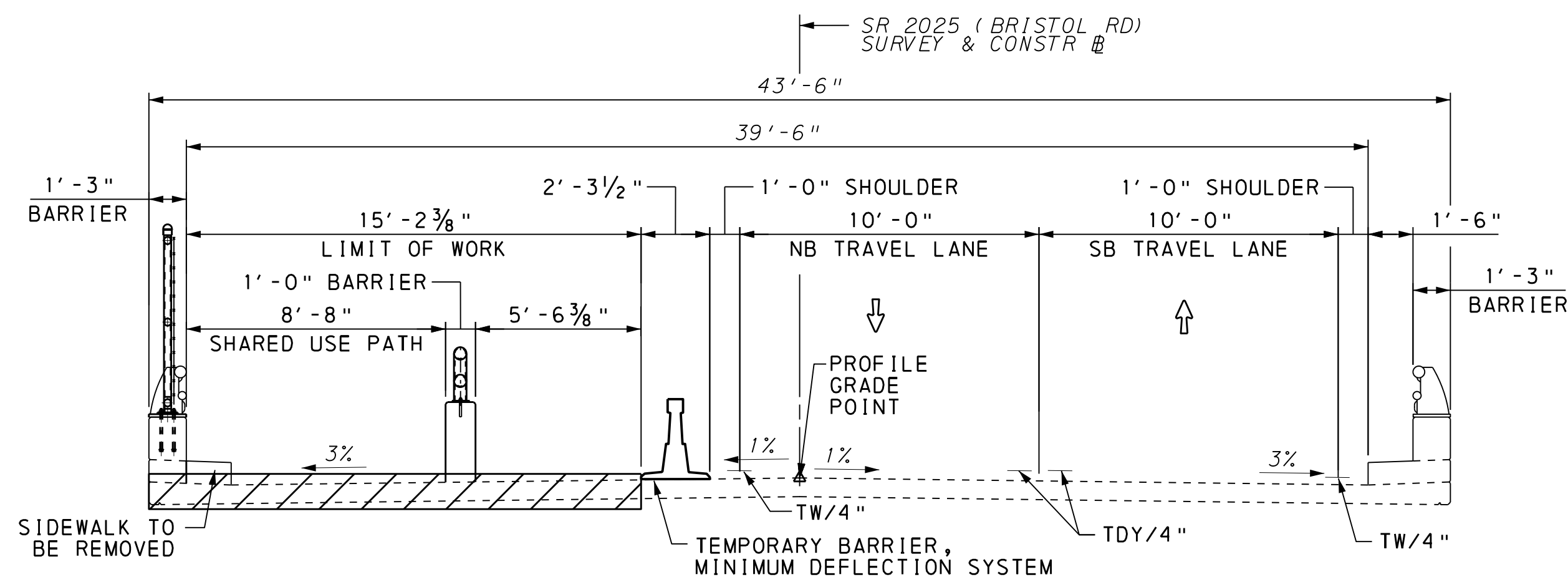
STAGE 1 (SR 2025 - BRISTOL ROAD)

NOT TO SCALE  
LOOKING AHEAD STATION



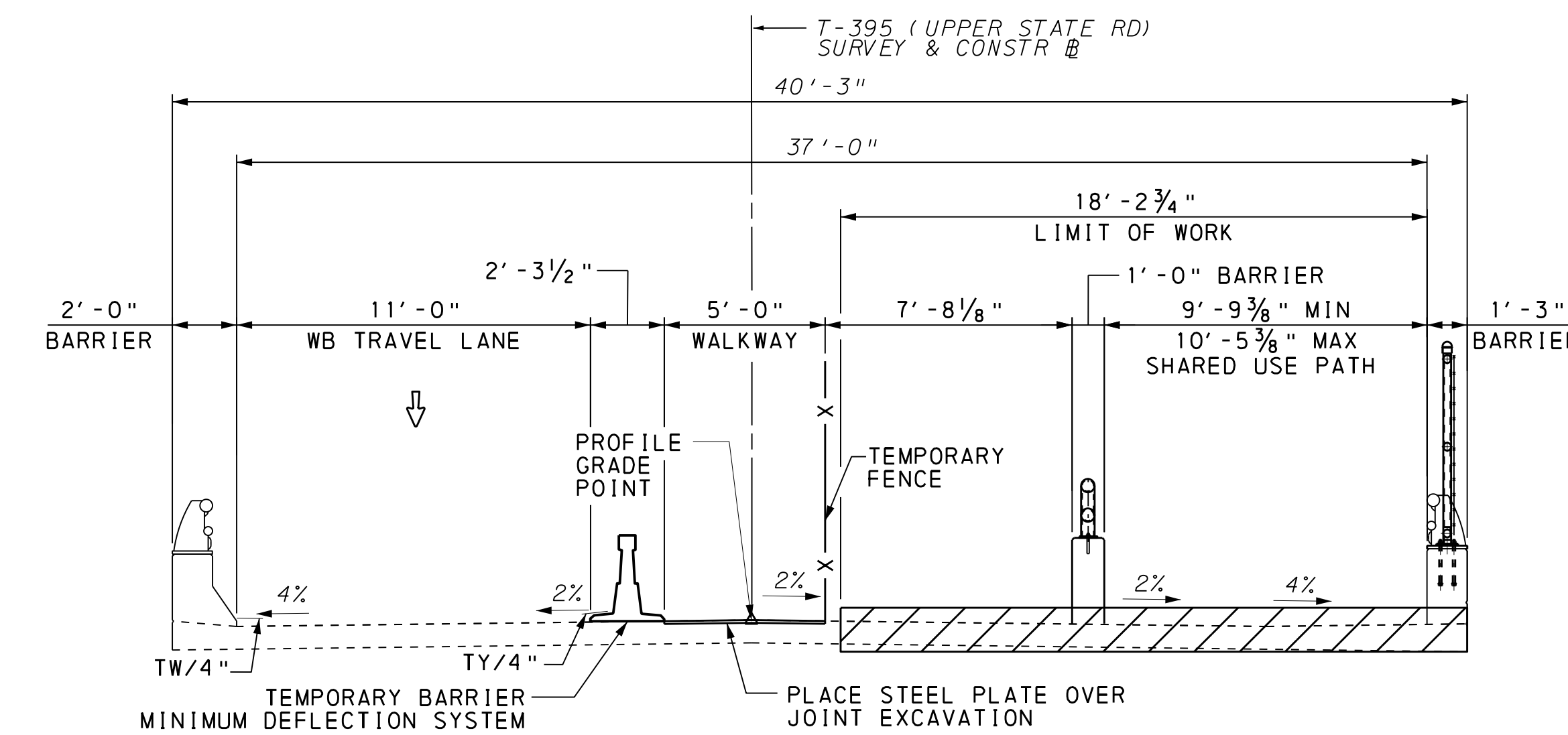
STAGE 3 T-395 (UPPER STATE ROAD)

NOT TO SCALE  
LOOKING AHEAD STATION



STAGE 2 (SR 2025 - BRISTOL ROAD)

NOT TO SCALE  
LOOKING AHEAD STATION



STAGE 4 T-395 (UPPER STATE ROAD)

NOT TO SCALE  
LOOKING AHEAD STATION

LEGEND:

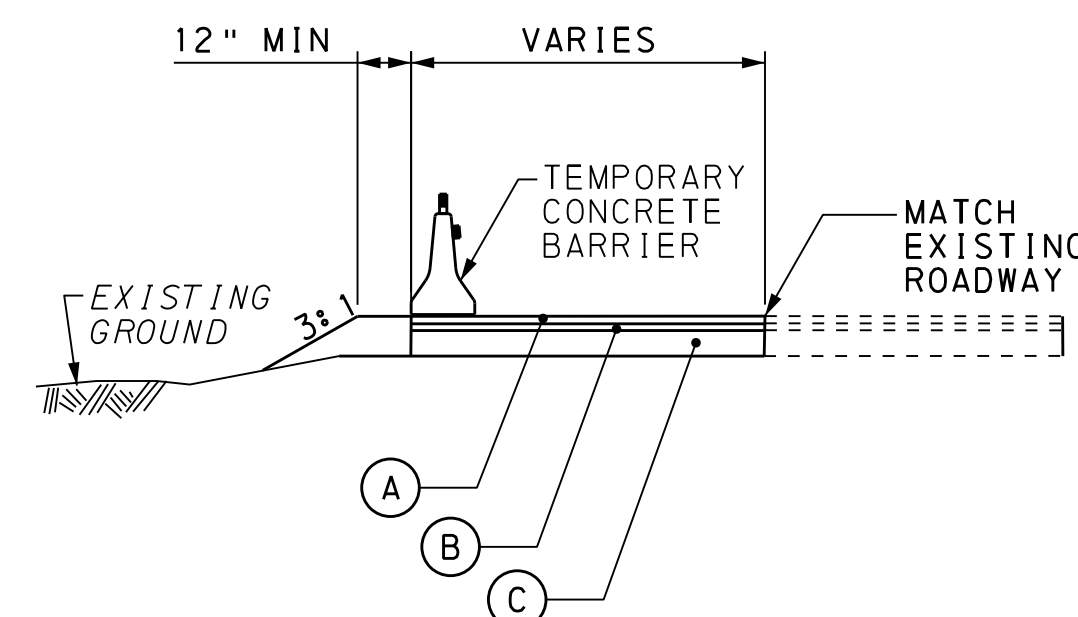
- CONSTRUCTION AREA

- TRAFFIC FLOW

(A) SUPERPAVE ASPHALT MIXTURE DESIGN, WMA WEARING COURSE, PG 64-22, 3 TO < 10 MILLION ESALS, 9.5 MM MIX, 1 1/2\"/>

(B) SUPERPAVE ASPHALT MIXTURE DESIGN, WMA BASE COURSE, PG 64-22, 3 TO < 10 MILLION ESALS, 37.5 MM MIX, 6\"/>

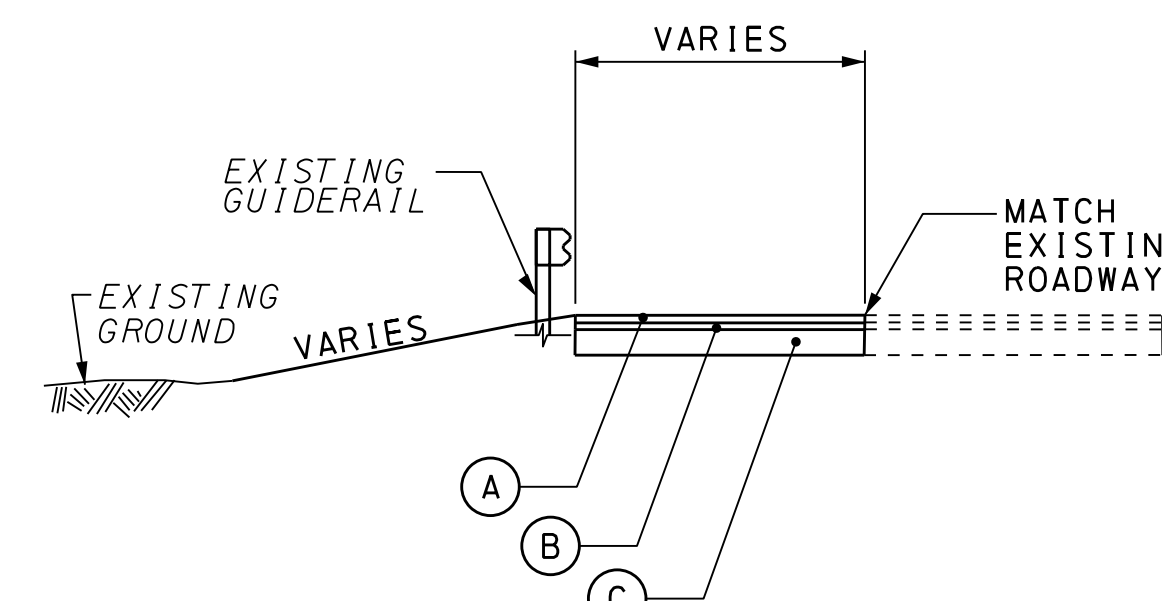
(C) SUBBASE 8\"/>



TEMPORARY PAVEMENT TYPICAL SECTION

TEMPORARY BARRIER SECTION

NOT TO SCALE

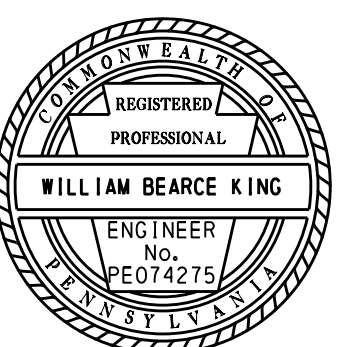


TEMPORARY PAVEMENT TYPICAL SECTION

GUIDERAIL SECTION

NOT TO SCALE

TRAFFIC CONTROL PLAN  
TYPICAL SECTIONS

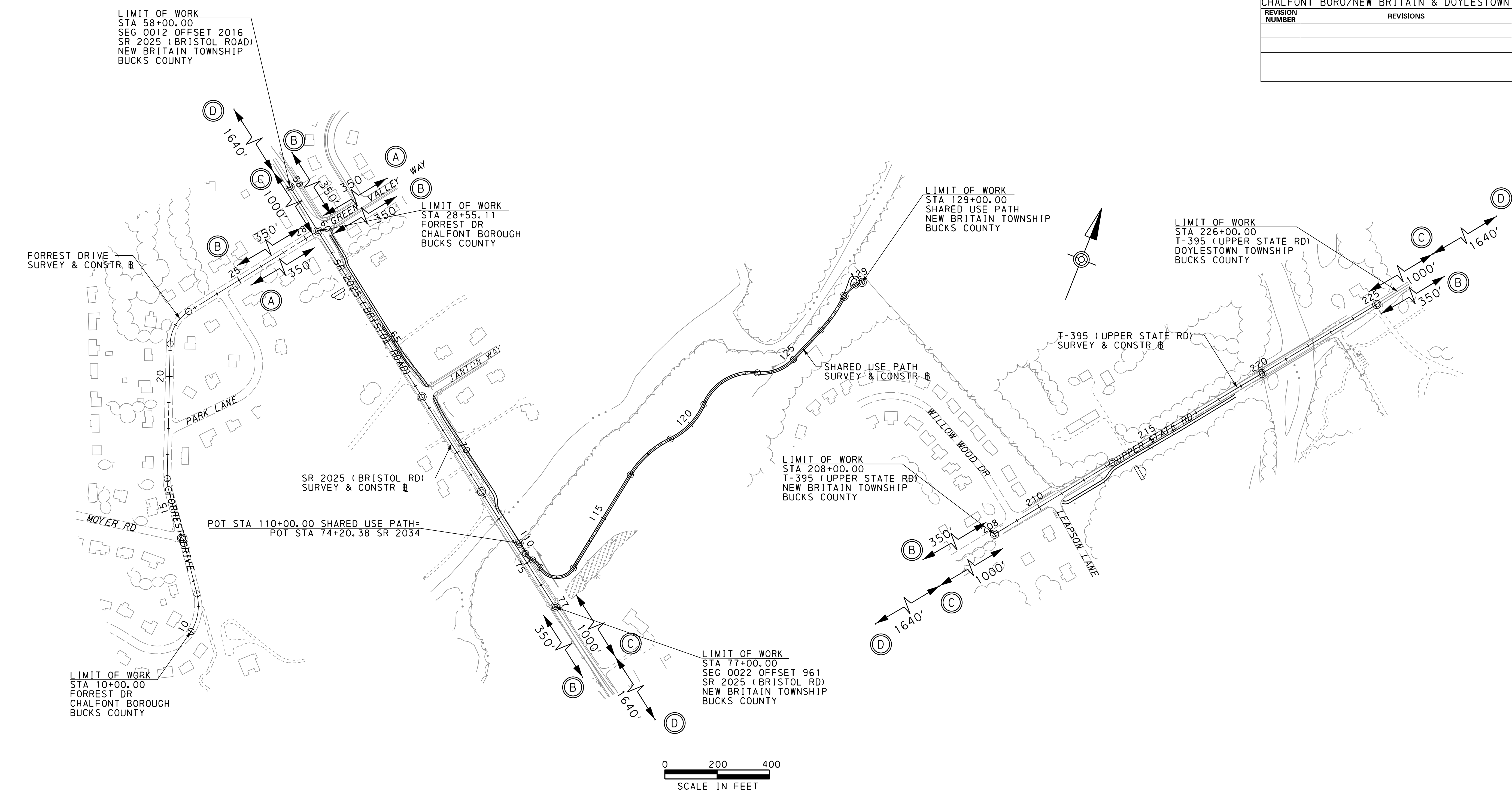




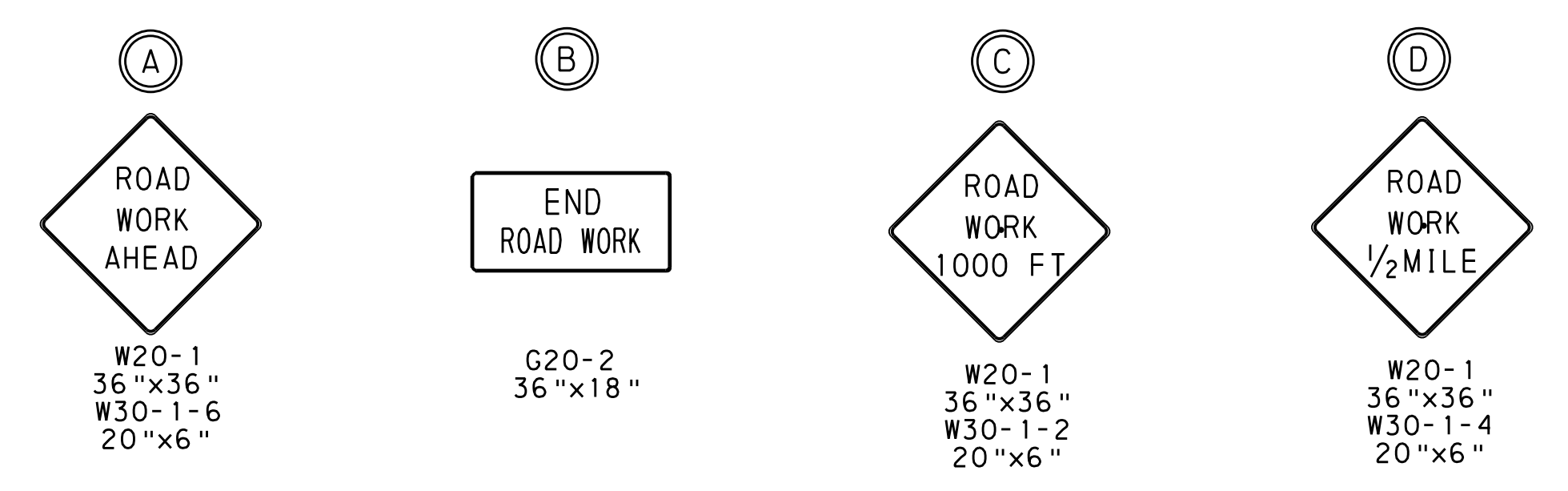
18-JUL-2019

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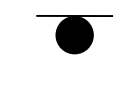
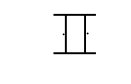
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	4 OF 17
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



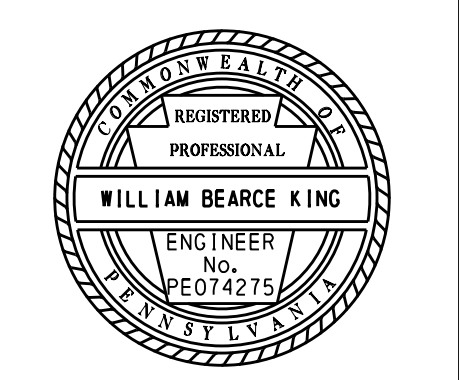
**SIGN LEGEND:**



**LEGEND:**

-  DYNAMIC MESSAGE SIGN - EXACT LOCATION AND MESSAGE TO BE DETERMINED DURING CONSTRUCTION
-  SIGN LOCATION
-  TYPE III BARRICADE

**TRAFFIC CONTROL PLAN  
ADVANCED SIGNING**



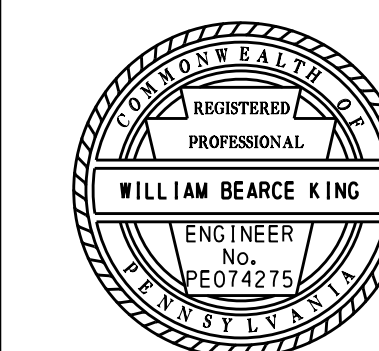
MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION  
ITEM NO 0901-0001 - L.S.  
TABULATION OF TRAFFIC CONTROL DEVICES  
(FOR INFORMATION ONLY)

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	5 OF 17
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS			DATE BY

SIGN NUMBER	SIZE ( IN)	DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	STAGE 4	ENTIRE PROJECT	MINIMUM	REMARKS
PLAN SHEETS									
FAB 5	24x12	SIDEWALK CLOSED - USE WALKWAY (RIGHT)				1	1	1	
FAB 6	24x12	SIDEWALK CLOSED - USE WALKWAY (LEFT)				1	1	1	
R3-1	30x30	NO RIGHT TURN	2				2	2	
R3-2	30x30	NO LEFT TURN	1		1	1	3	2	
R3-7-1L	48x48	ALL TRAFFIC MUST TURN LEFT	1				1	1	
R3-7-1R	48x48	ALL TRAFFIC MUST TURN RIGHT	1				1	1	
R5-1	30x30	DO NOT ENTER	6		4	4	14	10	
R5-1A	36x24	WRONG WAY SIGN	2		2	2	6	4	
R6-1L	54x18	HORIZONTAL LEFT ONE-WAY SIGN	3				3	3	
R6-1R	54x18	HORIZONTAL RIGHT ONE-WAY SIGN	3		1	1	5	4	
R6-6	48x36	BEGIN ONE WAY	1		1	1	3	2	
R6-7	48x36	END ONE WAY	1		1	1	3	2	
R9-9	24x12	SIDEWALK CLOSED	1	1			2	1	
R11-2	48x30	ROAD CLOSED			2	2	4	2	
R11-2-1	48x30	BRIDGE CLOSED	6	2	5	4	17	11	
W20-1	36x36	ROAD WORK	1	2	1	1	5	3	
W20-3	36x36	ROAD CLOSED	3		2	2	7	5	
W24-1L	36x36	SINGLE LANE DOUBLE REVERSE CURVE, LEFT		1	1		2	2	
W24-1R	36x36	SINGLE LANE DOUBLE REVERSE CURVE, RIGHT	1	1		1	3	2	
W30-1-1	21x6	DISTANCE (500 FT) AHEAD	1		1	1	3	2	
W30-1-2	23x6	DISTANCE (1000 FT) AHEAD	1		1	1	3	2	
W30-1-3	23x6	DISTANCE (1500 FT) AHEAD	1				1	1	
W30-1-6	20x6	DISTANCE (AHEAD) PANEL	2	4	2	2	10	6	
W5-5	20x6	LANE SHIFT AHEAD	1	2	1	1	5	3	
ADVANCE SIGNING									
G20-2	36x18	END ROAD WORK					6		
W20-1	36x36	ROAD WORK					10		
W30-1-2	20x6	DISTANCE (1000 FT) PANEL					4		
W30-1-4	20x6	DISTANCE (1/2 MILE) PANEL					4		
W30-1-6	20x6	DISTANCE (AHEAD) PANEL					2		
DETOUR PLANS									
M4-8A	24x18	END DETOUR	1		1		2		
M4-9L	30x24	DETOUR, LEFT	2		2		4		
M4-9R	30x24	DETOUR, RIGHT	1		3		4		
M4-9S	30x24	DETOUR, STRAIGHT	5		4		9		
M4-9SL	30x24	DETOUR, STRAIGHT LEFT	2		2		4		
M4-9SR	30x24	DETOUR, STRAIGHT RIGHT	1		3		4		
M4-10L	36x12	DETOUR SIGN, LEFT	5		2		7		
M4-10R	36x12	DETOUR SIGN, RIGHT	4		4		8		
R3-2	30x30	NO LEFT TURN	4		3		7		
R3-1	30x30	NO RIGHT TURN	3		2		5		
R11-3B	60x30	BRIDGE OUT - LOCAL TRAFFIC ONLY	1		1		2		
R11-4	60x30	ROAD CLOSED TO THRU TRAFFIC			2		2		
W14-2	30x30	NO OUTLET	1		3		4		
W20-2	36x36	ADVANCE DETOUR	10		9		19		
FAB NO. 1	72 x 42	UPPER STATE ROAD EASTBOUND CLOSED FOLLOW DETOUR			9		9		
FAB NO. 2	30 x 18	UPPER STATE ROAD EASTBOUND			23		23		
FAB NO. 3	72 x 42	BRISTOL ROAD SOUTHBOUND CLOSED FOLLOW DETOUR	9				9		
FAB NO. 4	30 x 18	BRISTOL ROAD SOUTHBOUND	21				21		
	EACH	TYPE III BARRICADE	17	3	17	8	45	36	
	EACH	TYPE B LIGHTS	44	4	43	8	99	87	
	EACH	DYNAMIC MESSAGE SIGN					2		

PEDESTRIAN FENCE AS NEEDED  
 FLAGGERS AS NEEDED  
 TYPE C LIGHTS AS NEEDED  
 NON-METALLIC CHANNELIZING DEVICE AS NEEDED  
 EXISTING TRAFFIC SIGNAL TIMING CHANGES AS NEEDED

**TRAFFIC CONTROL PLAN  
QUANTITIES**



18-JUL-2019

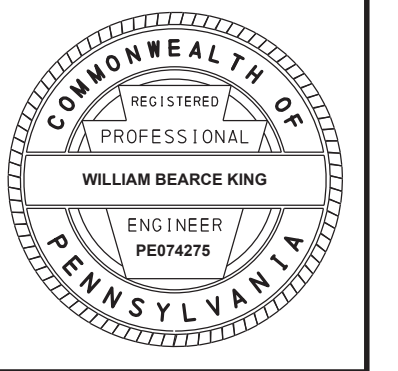
E:\139780\_Neshaminy Trail Phase\_3\Plot\Traffic\MPT\Lenape\_to\_UpperState\05-NT3-LUS-MPT\_QUANTITIES.dgn

# TABULATION OF QUANTITIES

## TRAFFIC CONTROL PLAN

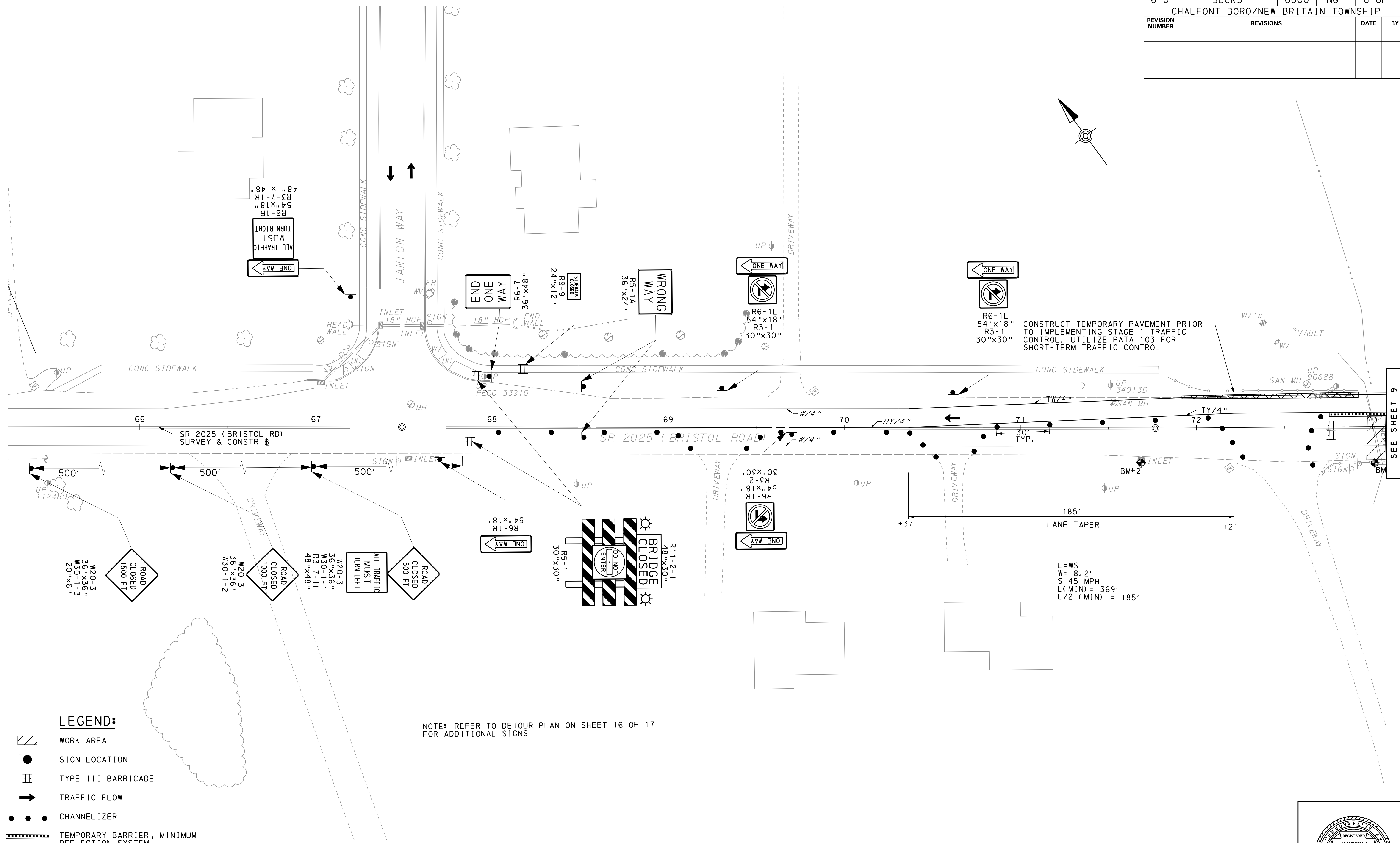
REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				06	BUCKS	0000	NGT	6 OF 17
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TWPS								

ITEM NUMBER	UNIT	QUANTITY	REMARKS	SIDE	STATIONS
			STAGE 1 - BRISTOL ROAD		
		225		LT	70+36.00 to 72+61.00
		417		LT	70+37.00 to 74+55.00
27	27	27	TEMPORARY PAVEMENT	LT	71+92.00 to 72+92.00
		250		LT	72+61.00 to 55+21.00
		180		LT	74+54.00 to 76+42.00
113	113	113	TEMPORARY PAVEMENT	LT	74+54.00 to 76+57.00
		198		LT	75+21.00 to 77+19.00
		1		LT	75+25.00
		183		LT	75+36.00 to 77+19.00
		1		LT	76+42.00
			STAGE 2 - BRISTOL ROAD		
		1344	1344	LT / RT	70+43.00 to 77+14.00
		1		LT	72+70.00
		250		LT	72+79.00 to 75+29.00
		1		LT	75+29.00
			STAGE 3 - UPPER STATE ROAD		
		271		LT / RT	217+12.00 to 219+81.00
		275		LT / RT	217+12.00 to 219+84.00
94	94	94	TEMPORARY PAVEMENT	RT	218+40.00 to 219+87.00
		25		RT	219+59.00 to 219+84.00
		300		RT	219+81.00 to 222+81.00
		265		LT / RT	222+14.00 to 224+75.00
		36		RT	222+16.00 to 222+52.00
84	84	84	TEMPORARY PAVEMENT	RT	222+26.00 to 223+67.00
		1		LT	222+81.00
		196		LT / RT	222+81.00 to 224+75.00
			STAGE 4 - UPPER STATE ROAD		





DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	8 OF 17
CHALFONT BORO/NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	



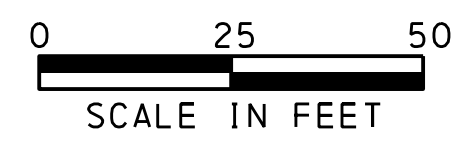
CONSTRUCT TEMPORARY PAVEMENT PRIOR TO IMPLEMENTING STAGE 1 TRAFFIC CONTROL. UTILIZE PATA 103 FOR SHORT-TERM TRAFFIC CONTROL

L=WS  
W= 8.2'  
S=45 MPH  
L(MIN)= 369'  
L/2 (MIN) = 185'

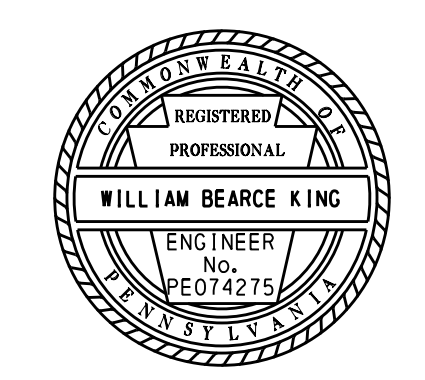
NOTE: REFER TO DETOUR PLAN ON SHEET 16 OF 17 FOR ADDITIONAL SIGNS

**LEGEND:**

- WORK AREA
- SIGN LOCATION
- TYPE III BARRICADE
- TRAFFIC FLOW
- CHANNELIZER
- TEMPORARY BARRIER, MINIMUM DEFLECTION SYSTEM
- TDY/4" TEMPORARY PAVEMENT MARKING/WIDTH
- PAVING AREA



**TRAFFIC CONTROL PLAN  
STAGE 1**

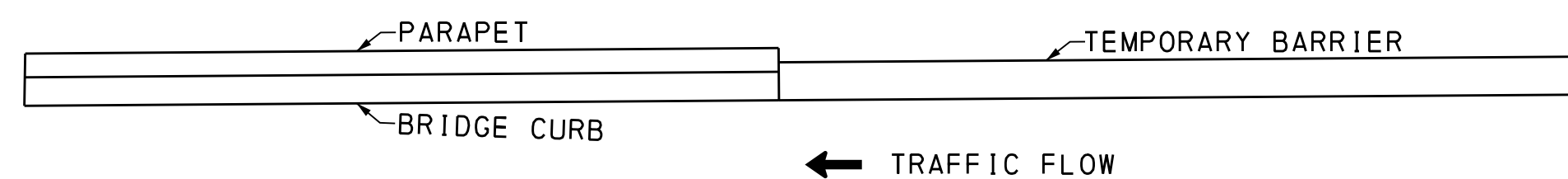


SEE SHEET 9

18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	9 OF 17
CHALFONT BORO/NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	



### BARRIER TIE-IN DETAIL

STA. 74+54  
NTS

REMOVE GUIDERAIL, CONSTRUCT TEMPORARY PAVEMENT AND PLACE TEMPORARY CONCRETE BARRIER PRIOR TO STAGE 1. UTILIZE PATA 103 FOR SHORT-TERM TRAFFIC CONTROL

TEMPORARY IMPACT ATTENUATOR TYPE V, TL 111

10' SHARED USE PATH  
PORTION OF TRAIL TO BE CONSTRUCTED AFTER STAGE 1 OF THE TRAFFIC CONTROL

TEMPORARY IMPACT ATTENUATOR TYPE V, TL 111

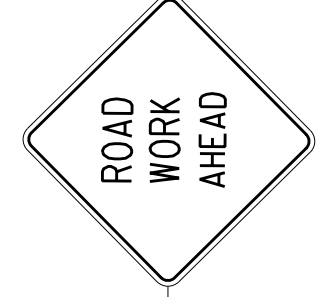
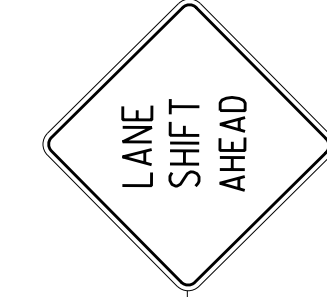
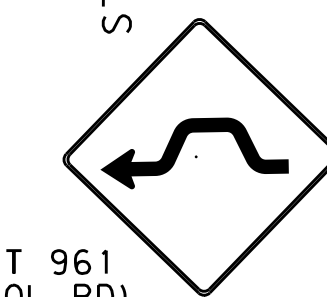
LIMIT OF WORK  
STA 77+00.00  
SEG 0022 OFFSET 961  
SR 2025 (BRISTOL RD)  
NEW BRITAIN TOWNSHIP  
BUCKS COUNTY

BEGIN ONE WAY  
R6-6  
36"x48"

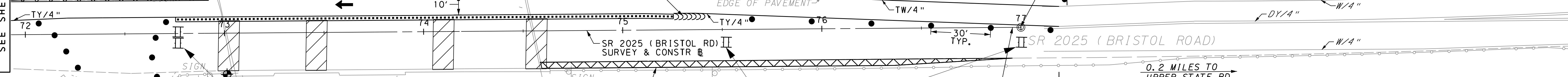
W24-IR  
36"x36"  
STA. 80+35

W5-5  
W30-1-6  
36"x36"

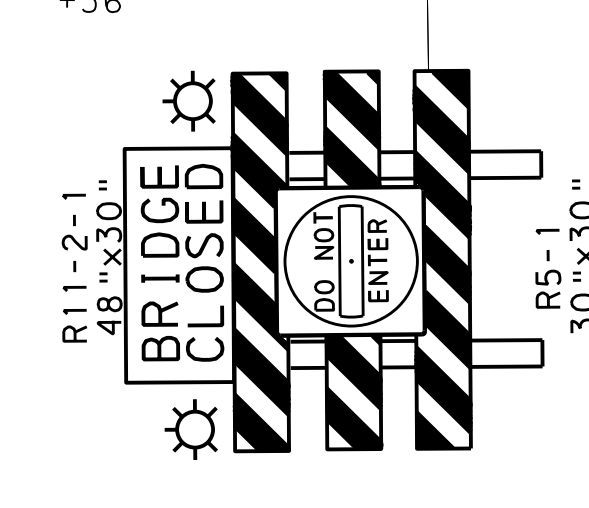
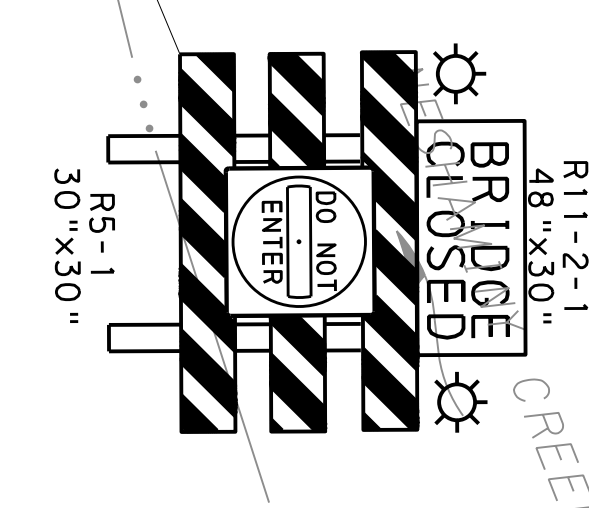
W20-1  
W30-1-6  
36"x36"



SEE SHEET 8

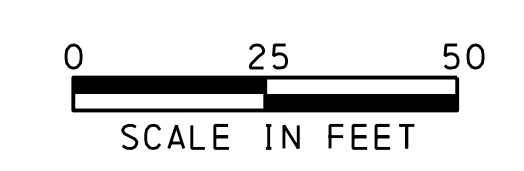


L=WS  
W= 8.1'  
S=45 MPH  
L(MIN) = 365'  
L/2 (MIN) = 183'

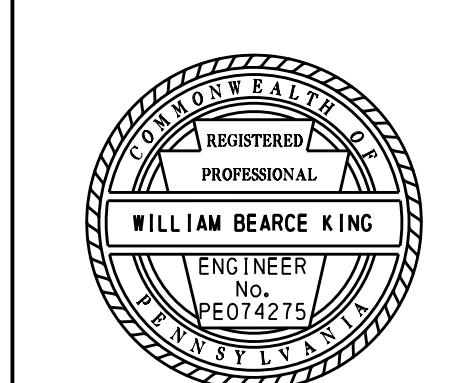


### LEGEND:

- WORK AREA
- SIGN LOCATION
- TYPE III BARRICADE
- TRAFFIC FLOW
- CHANNELIZER
- TEMPORARY BARRIER, MINIMUM DEFLECTION SYSTEM
- TEMPORARY PAVEMENT MARKING/WIDTH
- PAVING AREA
- TEMPORARY CONCRETE BARRIER (J-J-HOOK)



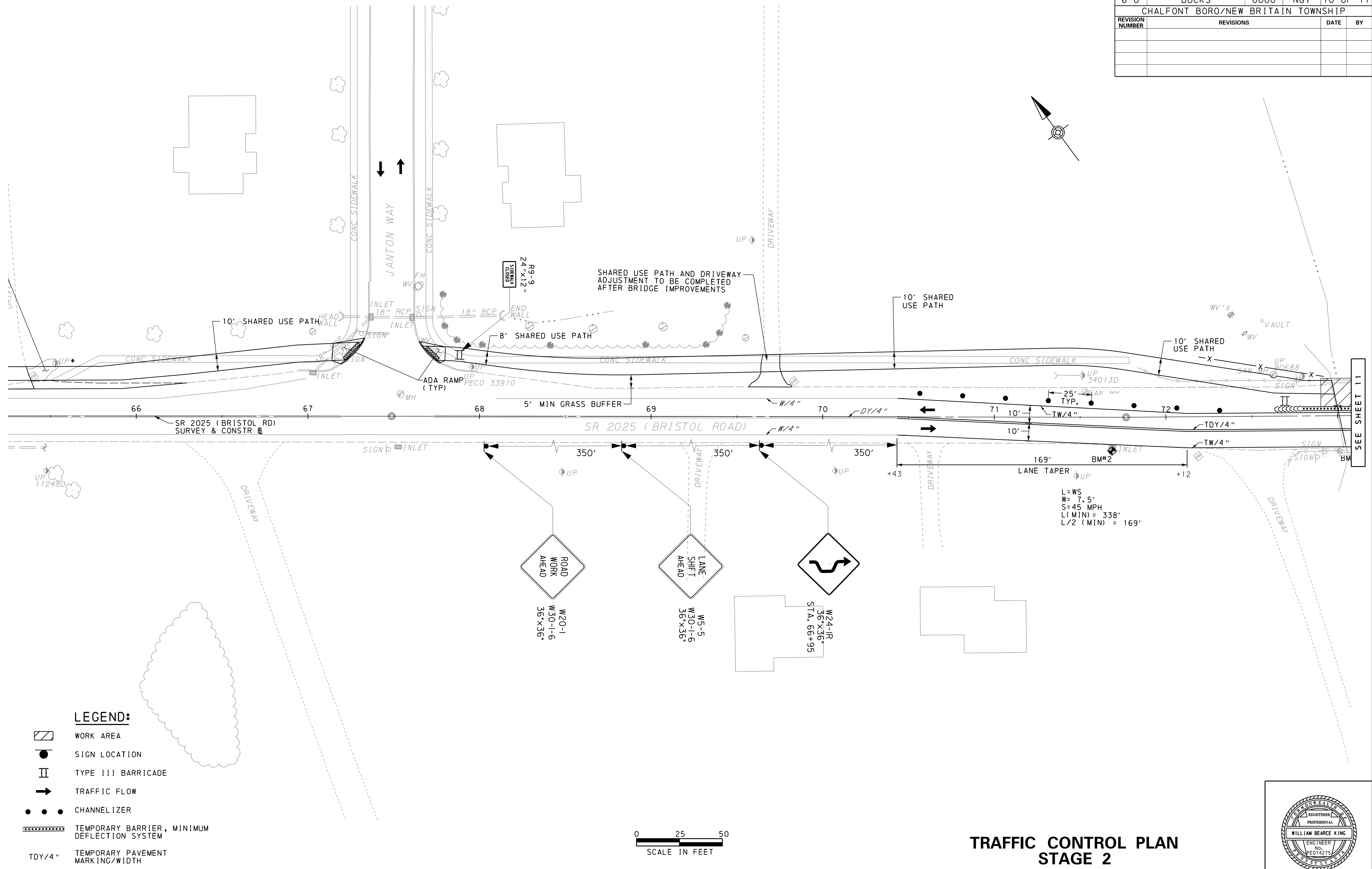
## TRAFFIC CONTROL PLAN STAGE 1



18-JUL-2019

E:\139780\_Neshaminy Trail Phase\_3\Plan\Traffic\MPT\Lenape\_to\_UpperState\10-NT3-LUS-MPT\_Plan03\_Br is to Stage2.dgn

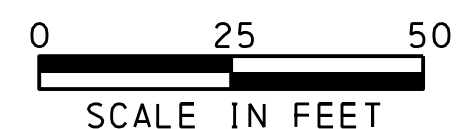
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	10 OF 17
CHALFONT BORO/NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	



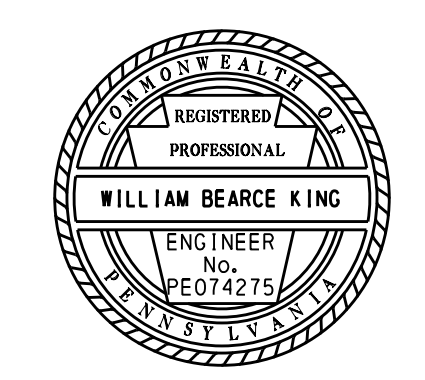
L = WS  
W = 7.5'  
S = 45 MPH  
L (MIN) = 338'  
L/2 (MIN) = 169'

**LEGEND:**

- WORK AREA
- SIGN LOCATION
- TYPE III BARRICADE
- TRAFFIC FLOW
- CHANNELIZER
- TEMPORARY BARRIER, MINIMUM DEFLECTION SYSTEM
- TDY/4" TEMPORARY PAVEMENT MARKING/WIDTH



**TRAFFIC CONTROL PLAN  
STAGE 2**

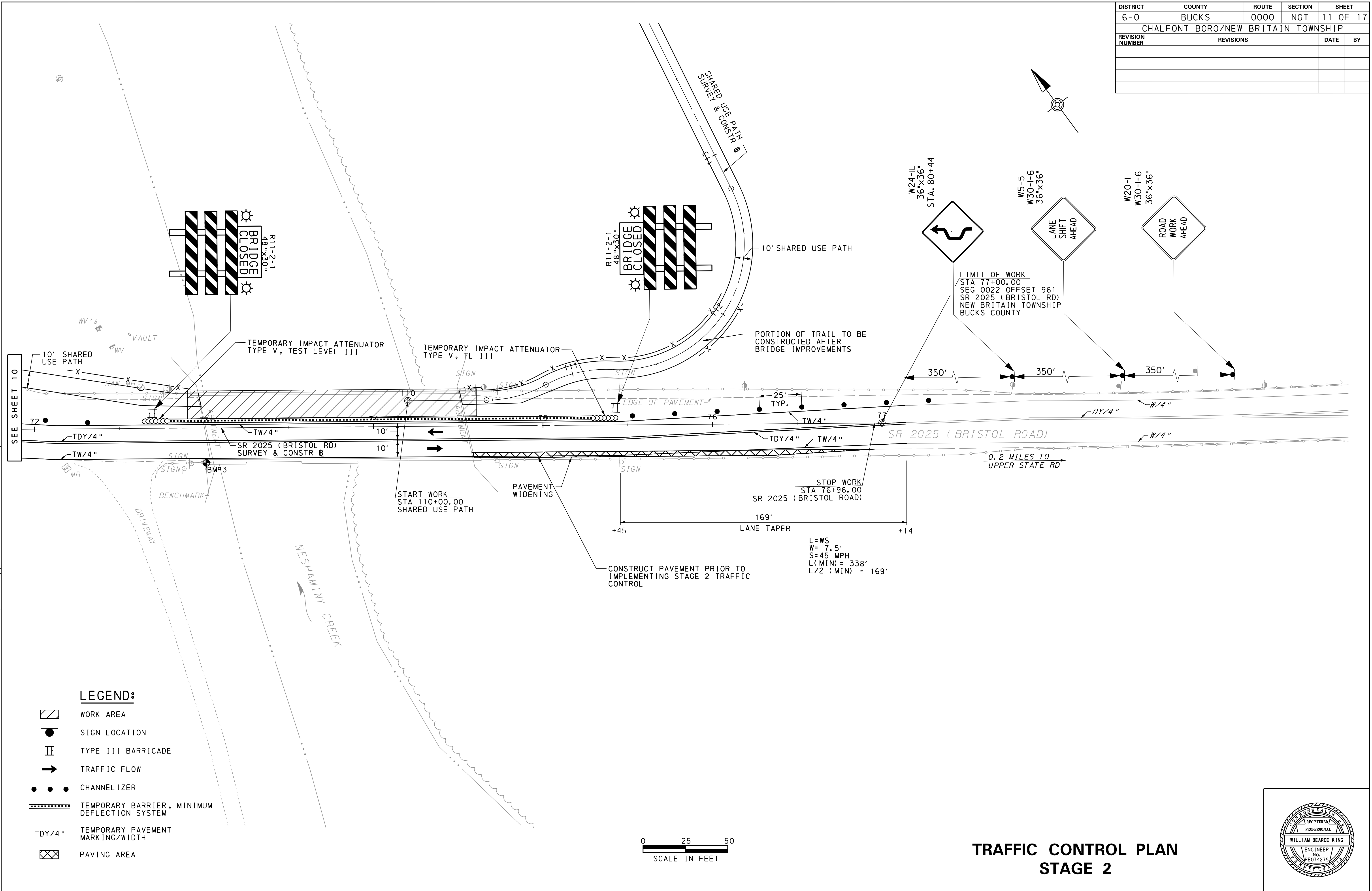
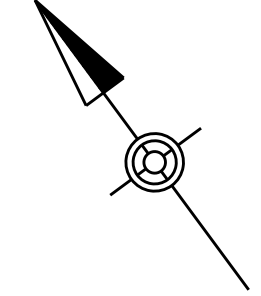


SEE SHEET 11

18-JUL-2019

E:\139780\_Neshaminy Trail Phase 3\Plan\Traffic\MPT\Lenape\_to\_UpperState\11-NT3-LUS-MPT\_Plan04\_Br is to Stage2.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	11 OF 17
CHALFONT BORO/NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	

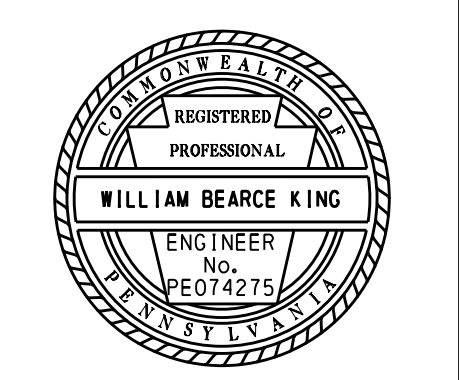


**LEGEND:**

- WORK AREA
- SIGN LOCATION
- TYPE III BARRICADE
- TRAFFIC FLOW
- CHANNELIZER
- TEMPORARY BARRIER, MINIMUM DEFLECTION SYSTEM
- TEMPORARY PAVEMENT MARKING/WIDTH
- PAVING AREA

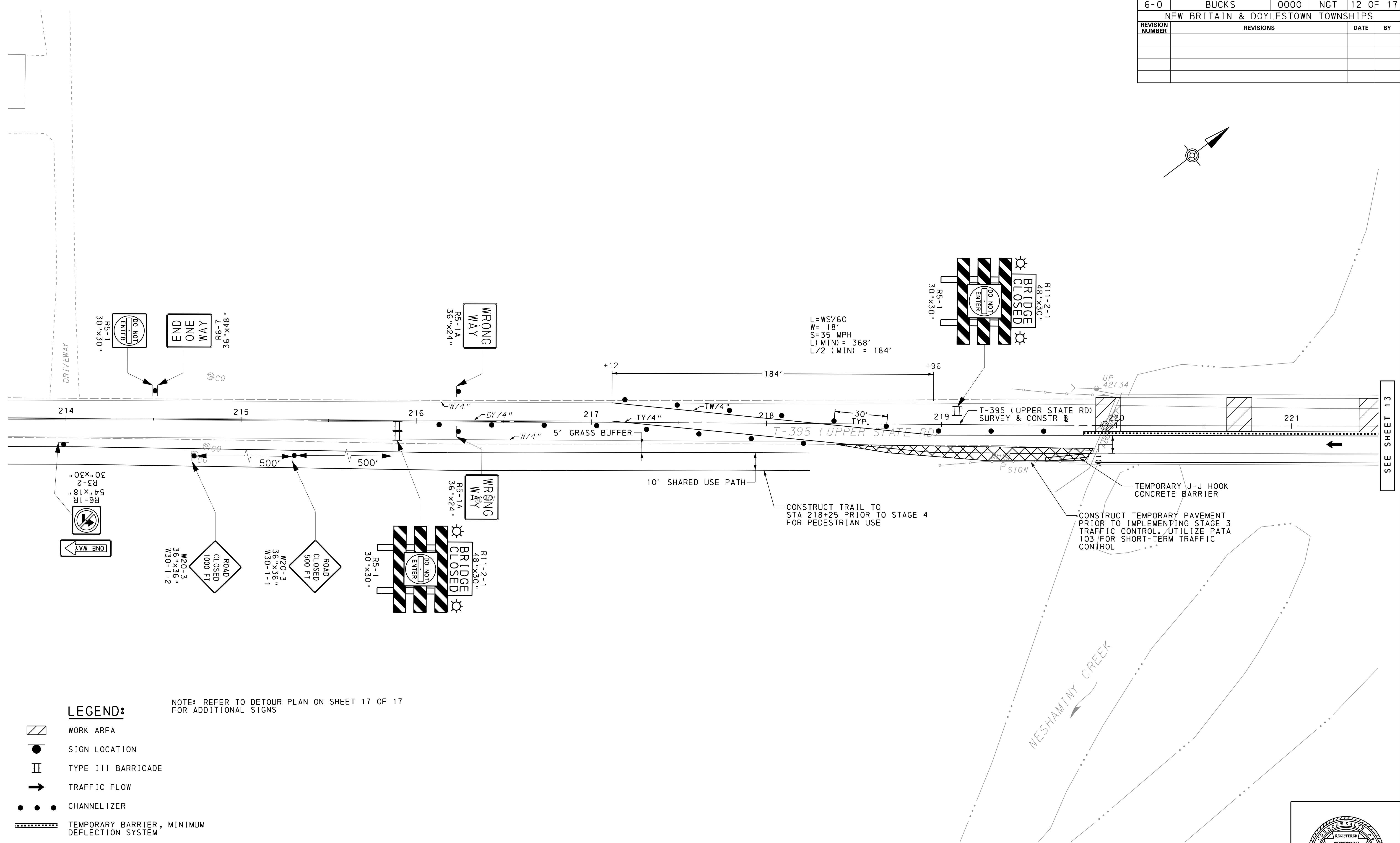
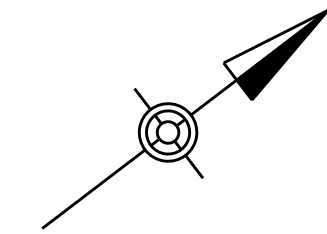
0 25 50  
SCALE IN FEET

**TRAFFIC CONTROL PLAN  
STAGE 2**





DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	12 OF 17
NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

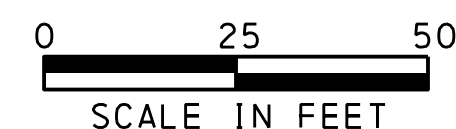


SEE SHEET 13

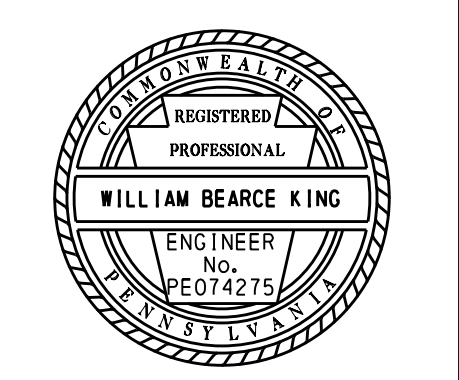
**LEGEND:**

- WORK AREA
- SIGN LOCATION
- TYPE III BARRICADE
- TRAFFIC FLOW
- CHANNELIZER
- TEMPORARY BARRIER, MINIMUM DEFLECTION SYSTEM
- TEMPORARY PAVEMENT MARKING/WIDTH
- PAVING AREA

NOTE: REFER TO DETOUR PLAN ON SHEET 17 OF 17 FOR ADDITIONAL SIGNS



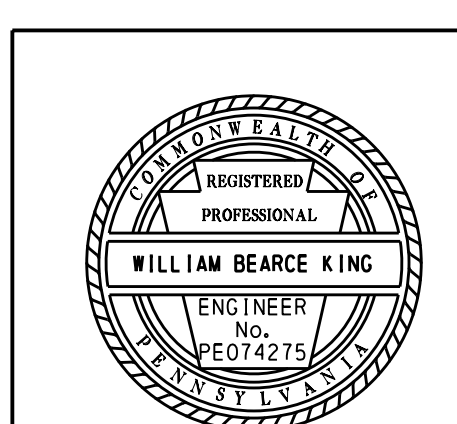
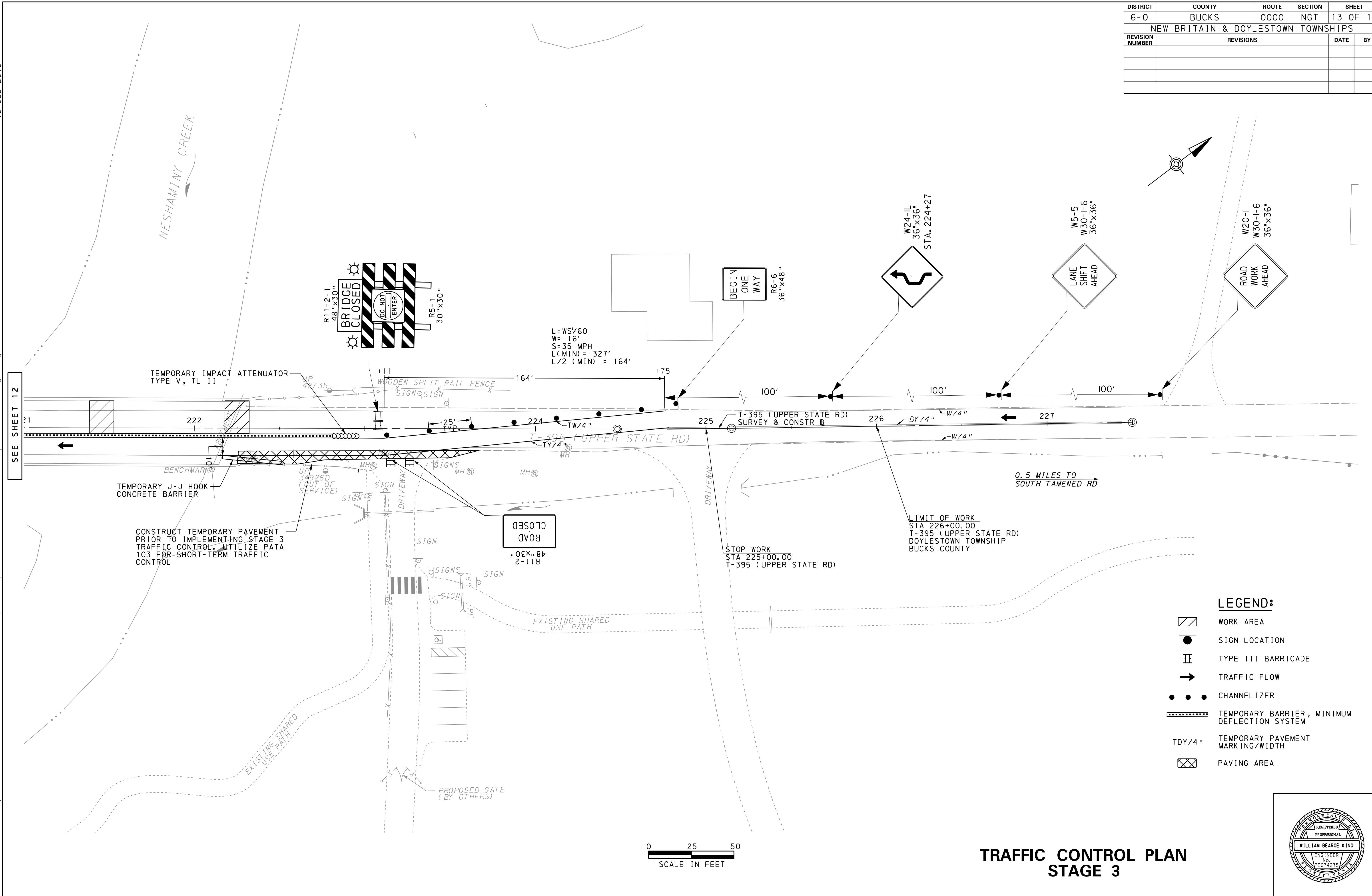
**TRAFFIC CONTROL PLAN  
STAGE 3**



18-JUL-2019

E:\139780\_Neshaminy Trail Phase\_3\Plan\Traffic\MPT\Lenape\_to\_UpperState\13-NT3-LUS-MPT-plan06\_USRS\stage3.dgn

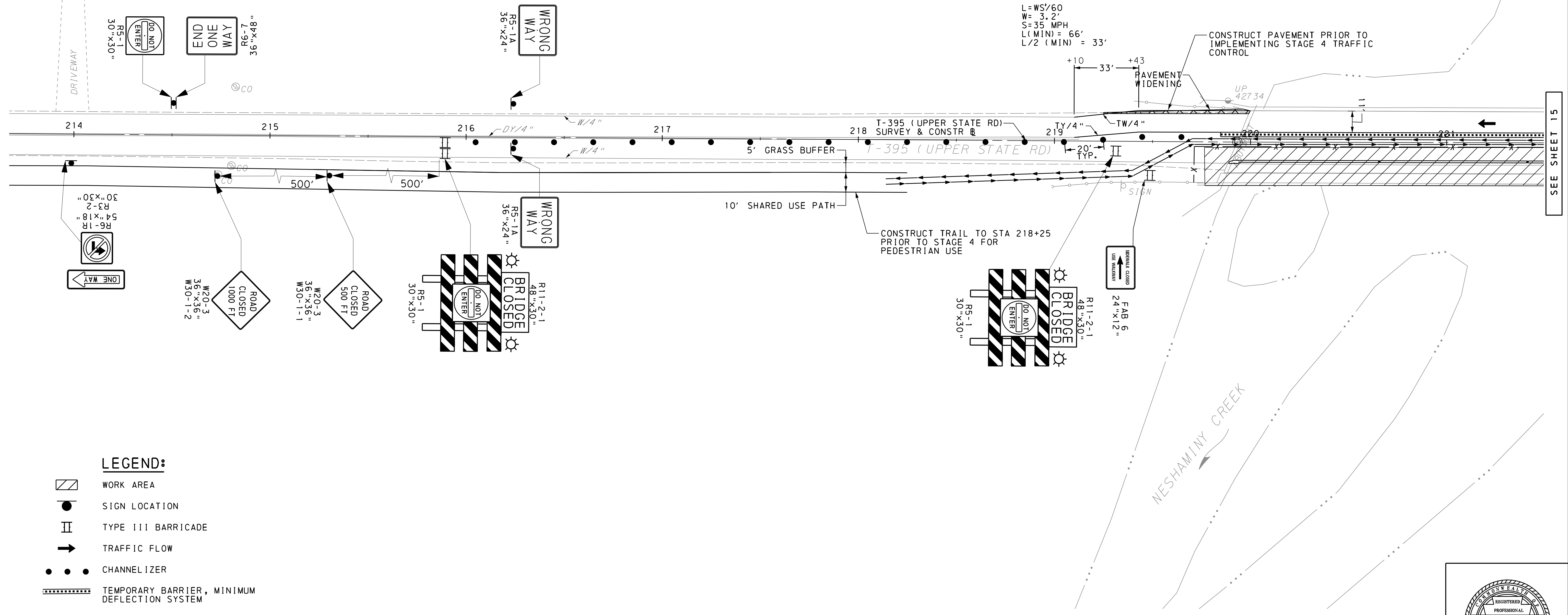
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	13 OF 17
NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



18-JUL-2019

E:\139780\_Neshaminy Trail Phase\_3\Plan\Traffic\MPT\Lenape\_to\_Upper State rd\14-NIT3-LUS-MPT-Plan07\_USRS stage4.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	14 OF 17
NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



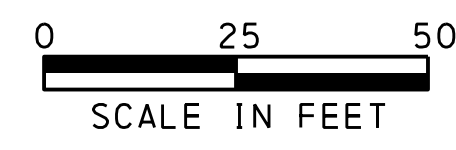
L=WS/60  
W= 3.2'  
S=35 MPH  
L(MIN)= 66'  
L/2 (MIN) = 33'

CONSTRUCT PAVEMENT PRIOR TO IMPLEMENTING STAGE 4 TRAFFIC CONTROL

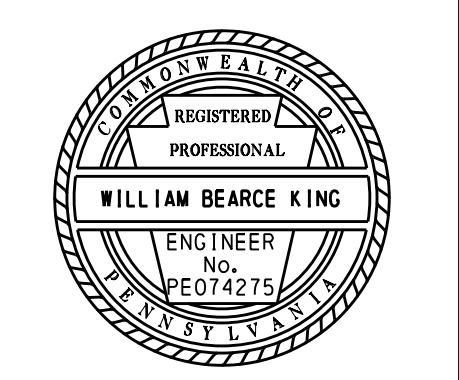
CONSTRUCT TRAIL TO STA 218+25 PRIOR TO STAGE 4 FOR PEDESTRIAN USE

SEE SHEET 15

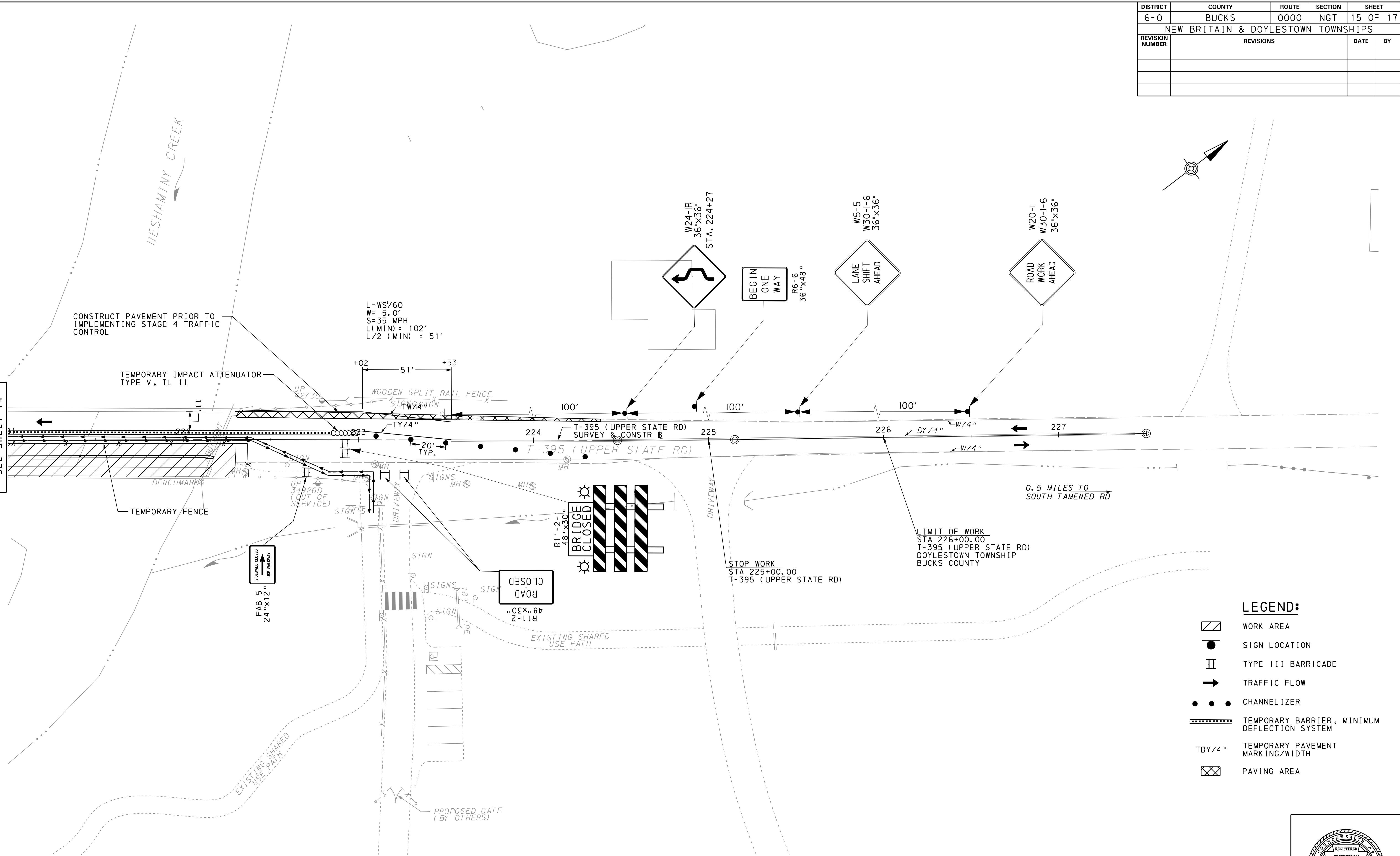
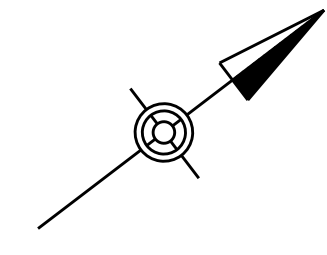
- LEGEND:**
- WORK AREA
  - SIGN LOCATION
  - TYPE III BARRICADE
  - TRAFFIC FLOW
  - CHANNELIZER
  - TEMPORARY BARRIER, MINIMUM DEFLECTION SYSTEM
  -



**TRAFFIC CONTROL PLAN  
STAGE 4**



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	15 OF 17
NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



L=WS'/60  
W= 5.0'  
S=35 MPH  
L(MIN)= 102'  
L/2 (MIN) = 51'

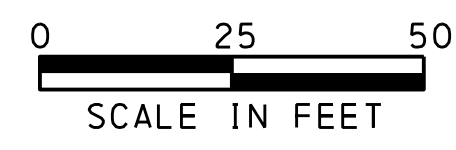
LIMIT OF WORK  
STA 226+00.00  
T-395 (UPPER STATE RD)  
DOYLESTOWN TOWNSHIP  
BUCKS COUNTY

STOP WORK  
STA 225+00.00  
T-395 (UPPER STATE RD)

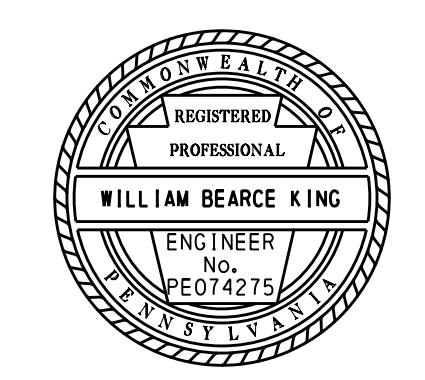
0.5 MILES TO  
SOUTH TAMENED RD

**LEGEND:**

- WORK AREA
- SIGN LOCATION
- TYPE III BARRICADE
- TRAFFIC FLOW
- CHANNELIZER
- TEMPORARY BARRIER, MINIMUM DEFLECTION SYSTEM
- 
- PAVING AREA



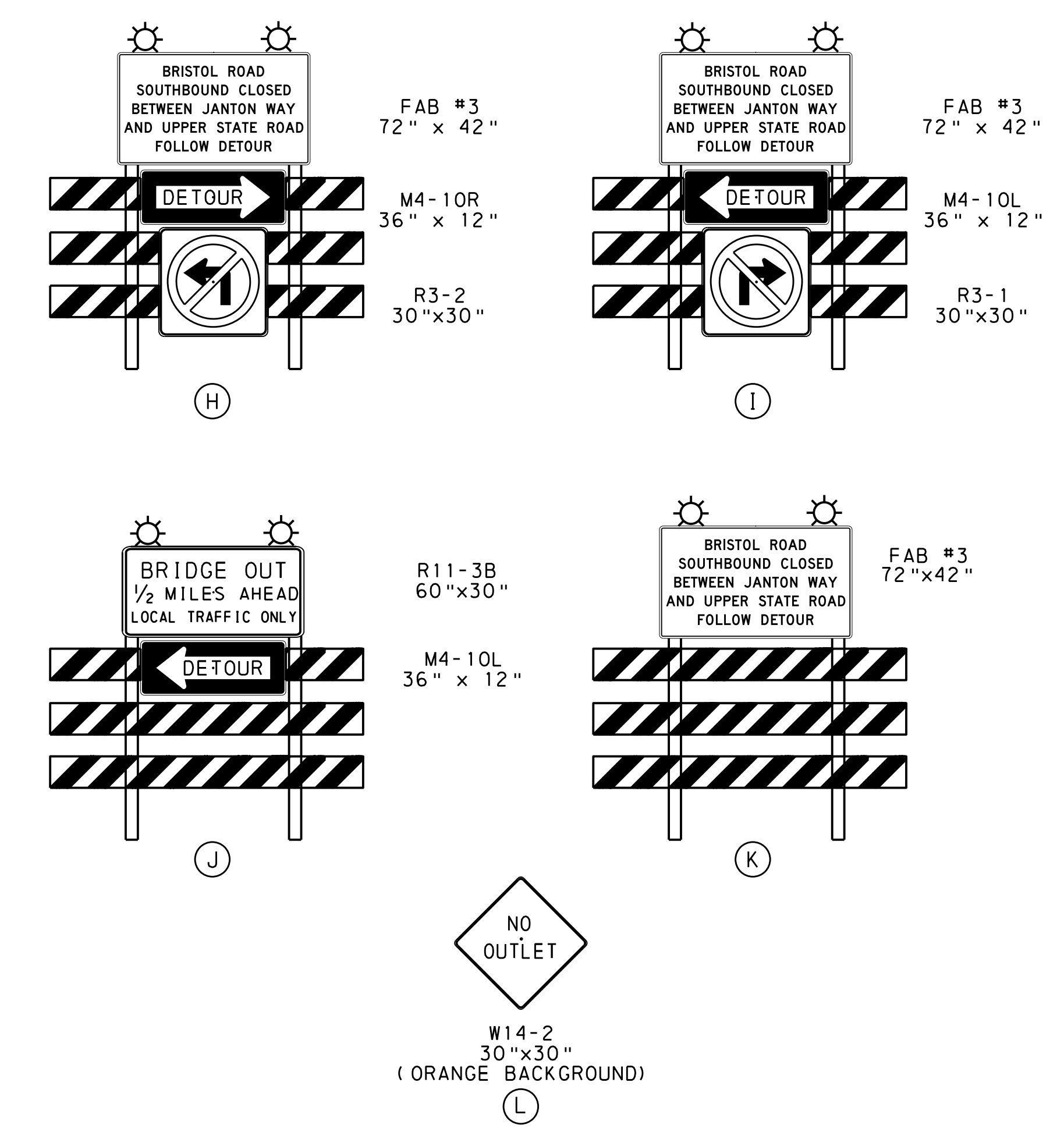
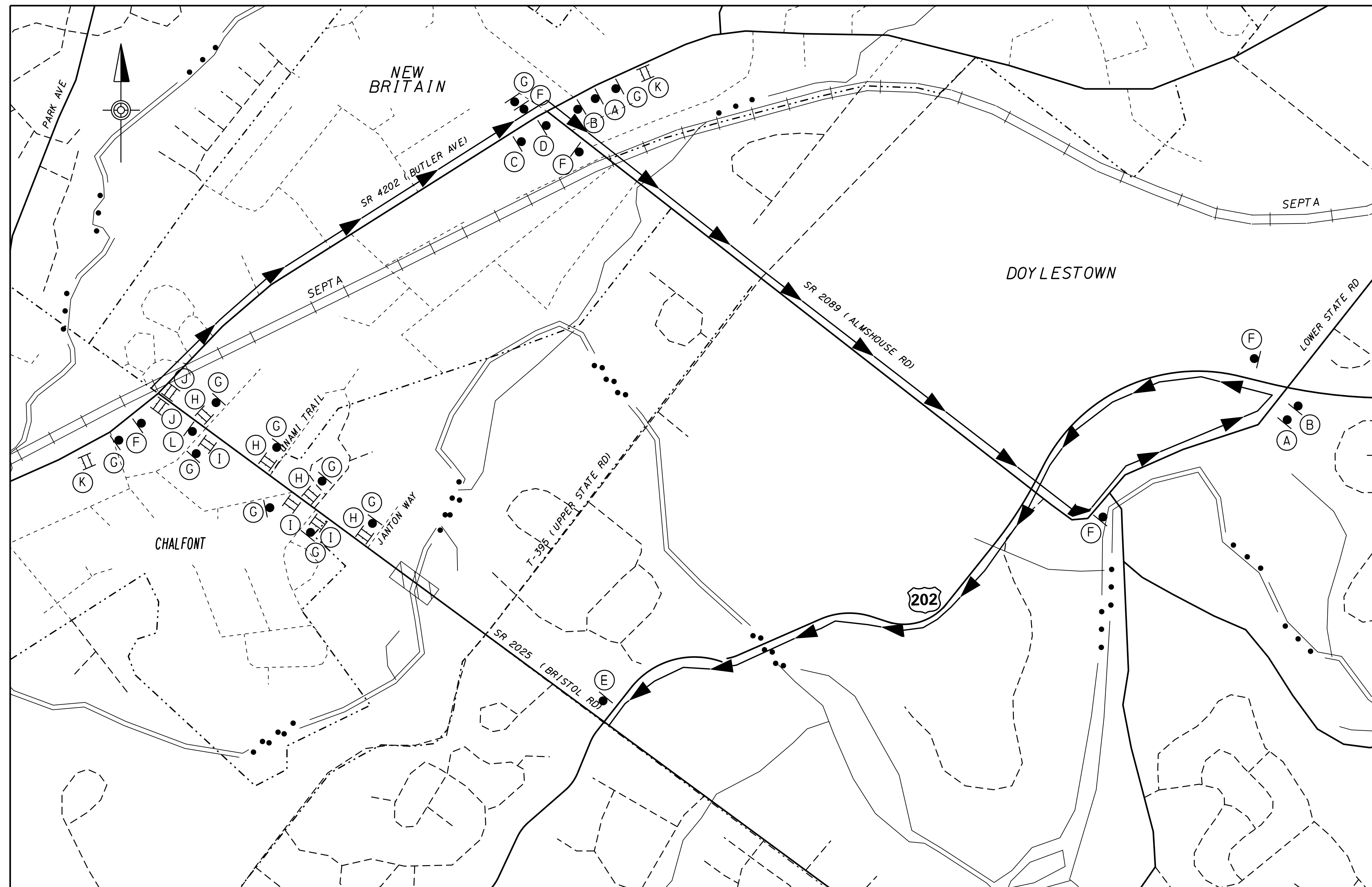
**TRAFFIC CONTROL PLAN  
STAGE 4**



18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	16 OF 17
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

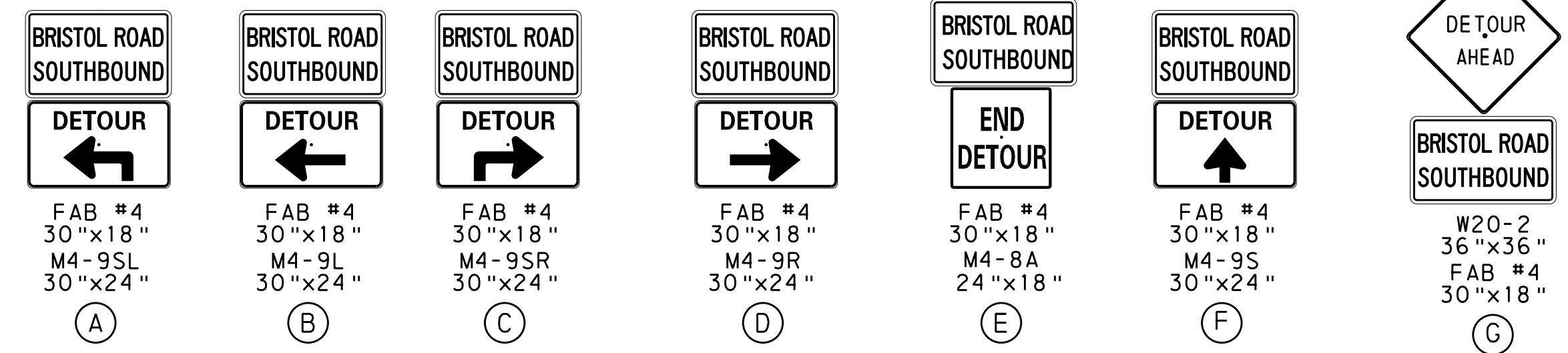


**LEGEND:**

- DETOUR
- SIGN LOCATION (TYPE H OR X BASE SIGN SUPPORT)
- SIGN DESIGNATION
- WORK AREA
- TYPE III BARRICADE

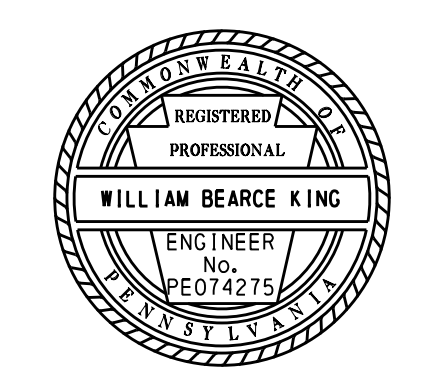
**BRISTOL ROAD SOUTHBOUND DETOUR PLAN**

NOT TO SCALE



NOTE: PLACE IN SOUTHBOUND LANE. NORTHBOUND LANE TO REMAIN OPEN.

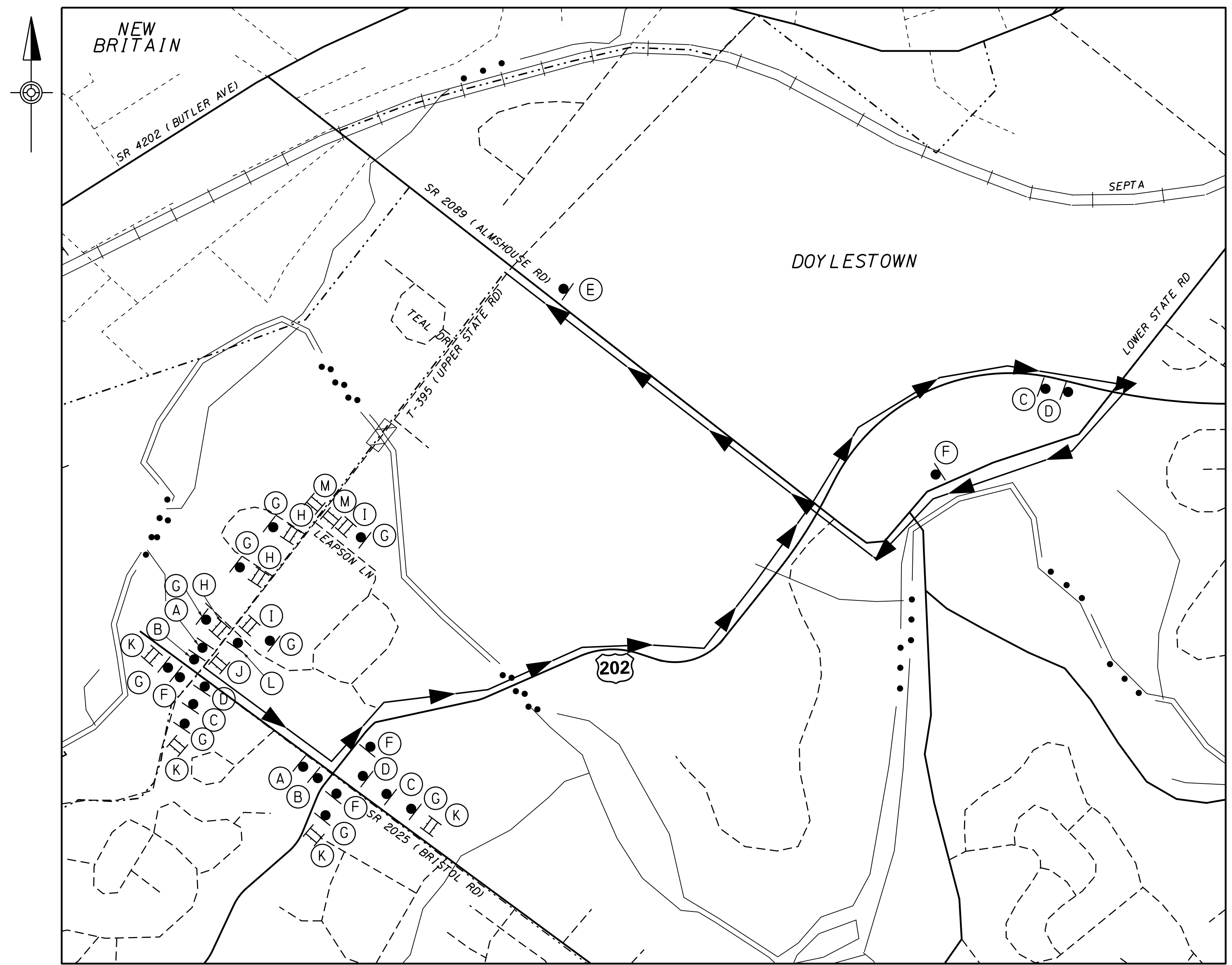
**TRAFFIC CONTROL PLAN  
VEHICLE DETOUR ROUTE  
STAGE 1**



18-JUL-2019

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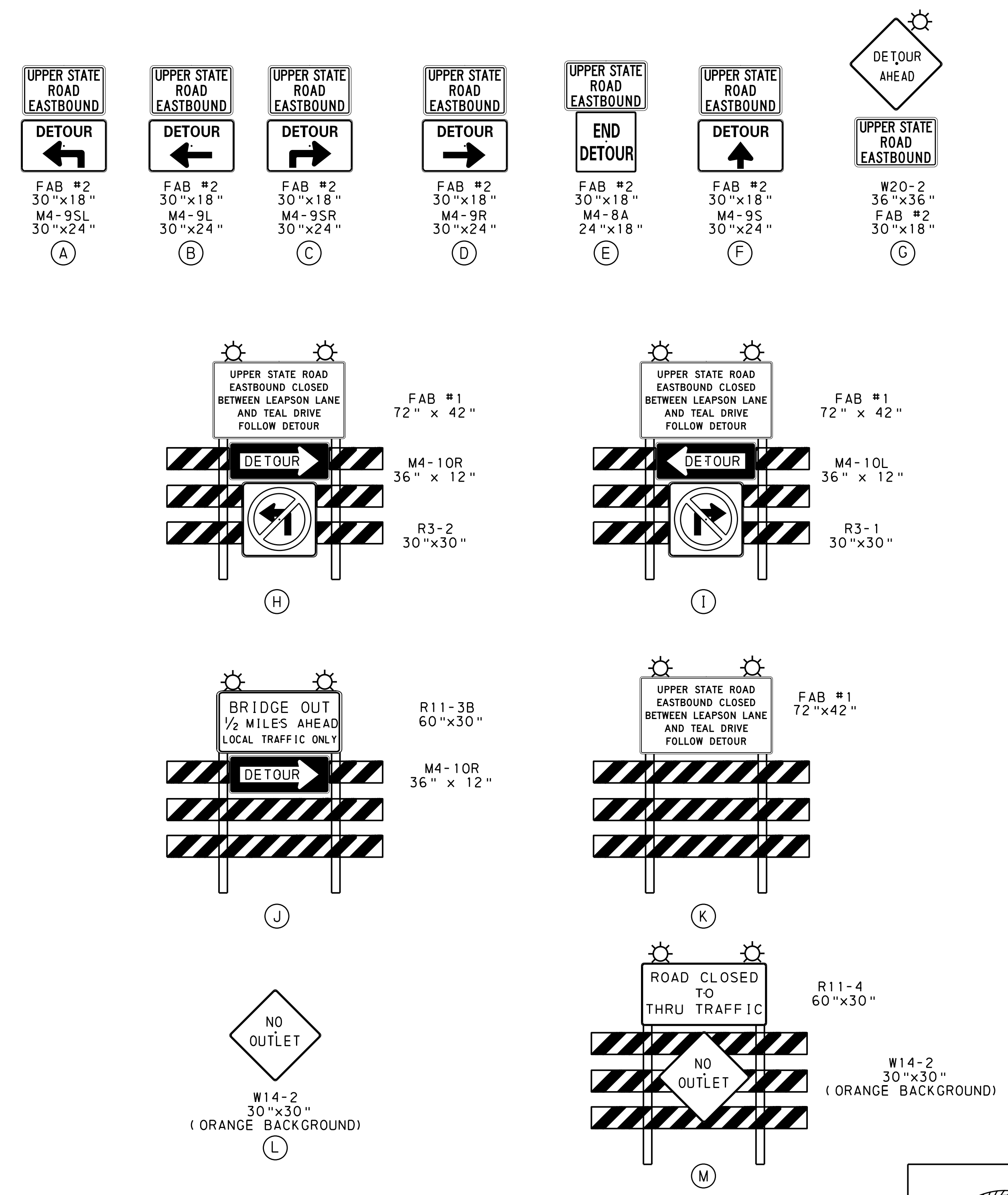
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	17 OF 17
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



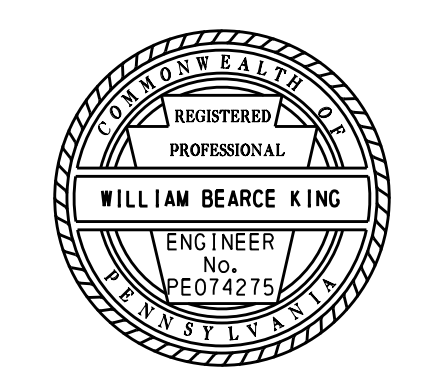
UPPER STATE ROAD EASTBOUND DETOUR PLAN  
NOT TO SCALE

- LEGEND:**
- DETOUR
  - SIGN LOCATION (TYPE H OR X BASE SIGN SUPPORT)
  - SIGN DESIGNATION
  - WORK AREA
  - TYPE III BARRICADE

NOTE: PLACE IN EASTBOUND LANE.  
WESTBOUND LANE TO REMAIN OPEN.



**TRAFFIC CONTROL PLAN  
VEHICLE DETOUR ROUTE  
STAGES 3 & 4**



	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECTION	TOTAL SHEETS
6-0	BUCKS	NEW BRITAIN/DOYLESTOWN	CHALFONT	0000	NGT	21

ECMS PROJECT NO. 102830

# NEW BRITAIN TOWNSHIP



## DRAWINGS FOR CONSTRUCTION OF

### NESHAMINY GREENWAY TRAIL BETWEEN LENAPE LANE AND UPPER STATE ROAD STATE ROUTE 0000 SECTION NGT (SHARED USE PATH) IN BUCKS COUNTY

FORREST DRIVE  
FROM STA 10+00.00 TO STA 28+55.11 LENGTH 1855.11 FT 0.351 MI

STATE ROUTE 2025 (BRISTOL ROAD)  
FROM STA 58+00.00 TO STA 77+00.00 LENGTH 1900.00 FT 0.360 MI  
 ▲ FROM SEG 0012 OFFSET 2016 TO SEG 0022 OFFSET 0961

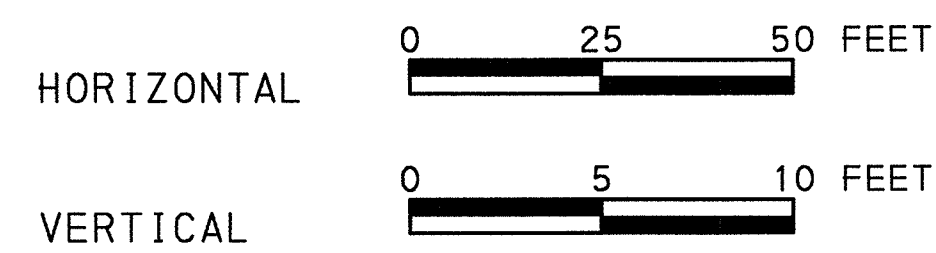
SHARED USE PATH  
FROM STA 110+00.00 TO STA 129+00.00 LENGTH 1900.00 FT 0.360 MI

T-395 (UPPER STATE ROAD)  
FROM STA 208+00.00 TO STA 226+00.00 LENGTH 1800.00 FT 0.341 MI

### ALSO INCLUDED

TRAFFIC CONTROL PLAN	17 SHEETS
SIGNING AND PAVEMENT MARKING PLAN	13 SHEETS
LANDSCAPING PLAN	1 SHEET
EROSION AND SEDIMENT POLLUTION CONTROL PLAN	15 SHEETS
TRAFFIC SIGNAL PLAN	2 SHEETS
STRUCTURE PLANS	
S-38178	10 SHEETS
BPAA-92816	10 SHEETS

### SCALE



### SHARED USE PATH DESIGN DESIGNATION

		TRAFFIC DATA	
HIGHWAY CLASSIFICATION	- SHARED USE PATH	CURRENT YEAR ADT	- N/A
DESIGN SPEED	- N/A	DESIGN YEAR ADT	- N/A
PAVEMENT WIDTH	- 8'-10'	DHV	- N/A
SHOULDER WIDTH	- 2'-0"	D	- N/A
MEDIAN WIDTH	- N/A	T	- N/A

### SR 2025 - BRISTOL ROAD DESIGN DESIGNATION

		TRAFFIC DATA	
HIGHWAY CLASSIFICATION	- SUBURBAN CORRIDOR COMMUNITY ARTERIAL	CURRENT YEAR ADT	- 5,854
DESIGN SPEED	- 45 MPH	DESIGN YEAR ADT	- 6,690
PAVEMENT WIDTH	- 22'	DHV	- 803
SHOULDER WIDTH	- 2' TO 8'	D	- 60
MEDIAN WIDTH	- N/A	T	- 4

### T-395 - UPPER STATE ROAD DESIGN DESIGNATION

		TRAFFIC DATA	
HIGHWAY CLASSIFICATION	- SUBURBAN CORRIDOR COMMUNITY COLLECTOR	CURRENT YEAR ADT	- 4,385
DESIGN SPEED	- 35 MPH	DESIGN YEAR ADT	- 5,012
PAVEMENT WIDTH	- 22'	DHV	- 601
SHOULDER WIDTH	- 2' TO 3'-4"	D	- 60
MEDIAN WIDTH	- N/A	T	- 4

REVISION NUMBER	REVISIONS	DATE	BY
1	ADDENDUM 1	08/29/19	EAR

PREPARED BY:  
**Michael Baker International**  
 500 OFFICE CENTER DRIVE, SUITE 210,  
 FORT WASHINGTON, PA 19004-3234  
 Phone: (215) 444-0888 • MBAKERINTL.COM

CHRISTOPHER S. STANFORD  
 ENGINEER  
 No. PE000326  
 PENNSYLVANIA

Christopher S. Stanford  
 PROJECT MANAGER  
 5-16-19  
 DATE

RECOMMENDED DATE: 5/28/19  

 DISTRICT EXECUTIVE

APPROVED DATE: 05/09/19  

 NEW BRITAIN TOWNSHIP

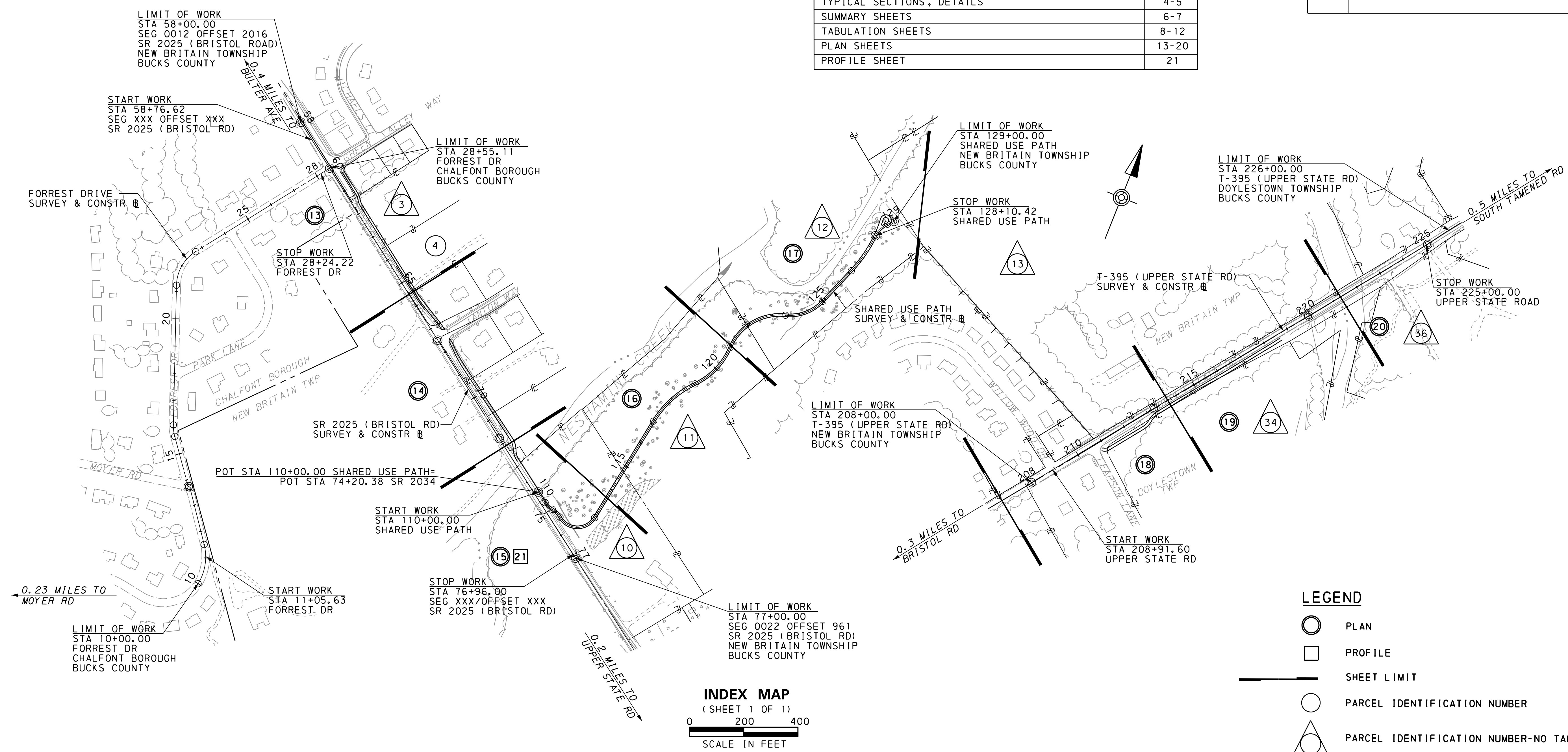
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18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	2 OF 21
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

SHEET INDEX BLOCK	
DESCRIPTION	SHEET
TITLE SHEET	1
INDEX MAP	2
LOCATION MAP, GENERAL NOTES	3
TYPICAL SECTIONS, DETAILS	4-5
SUMMARY SHEETS	6-7
TABULATION SHEETS	8-12
PLAN SHEETS	13-20
PROFILE SHEET	21



**LEGEND**

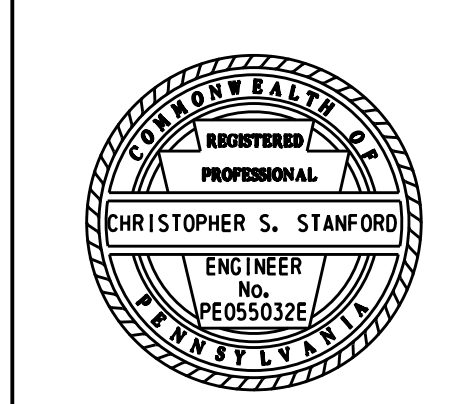
- PLAN
- PROFILE
- SHEET LIMIT
- PARCEL IDENTIFICATION NUMBER
- PARCEL IDENTIFICATION NUMBER-NO TAKE

**PROPERTY OWNERS:**

- DENNIS AND ANN KIEFER
- BILL COLEMAN
- BRIAN AND KIM CARDAMONE
- DOYLESTOWN TOWNSHIP
- RAYMOND R. ROCK AND PATRICIA A. ROCK
- CHALFONT NEW BRITAIN SEWER AUTHORITY
- NEW BRITAIN TOWNSHIP
- NEW BRITAIN TOWNSHIP

RECORD OF EXISTING TYPES OF ROADWAY PAVEMENT			
ROAD	FROM (STA)	TO (STA)	EXISTING PAVEMENT TYPE
FORREST DR	10+00	28+55	24' TO 37' OF 1.5" BIT SURF SUPERPAVE WEARING CRSE ON 2" BITUMINOUS WEARING CRSE ON 2" BINDER COURSE ON 6" SUBBASE
SR 2025 (BRISTOL RD)	58+00	77+00	24' TO 37' OF 1.5" BIT SURF SUPERPAVE WEARING CRSE ON 2" BITUMINOUS WEARING CRSE ON 2" BINDER COURSE ON 6" SUBBASE
UPPER STATE RD	208+00	225+00	24' TO 37' OF 1.5" BIT SURF SUPERPAVE WEARING CRSE ON 2" BITUMINOUS WEARING CRSE ON 2" BINDER COURSE ON 6" SUBBASE

NOTE: THE DEPTHS OF MATERIAL SHOWN ARE FOR DESIGN PURPOSES ONLY. ANY RISK OF UNANTICIPATED COSTS ASSOCIATED WITH DIFFERENCES BETWEEN THE LISTED DEPTHS AND THE ACTUAL DEPTHS SHALL BE ACCEPTED BY THE CONTRACTOR.





DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	3 OF 21
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

**LIST OF PUBLIC UTILITIES**

PECO ENERGY COMPANY  
400 PARK AVE  
WARMINSTER, PA 18974  
ATTN: BENJAMIN DUREY  
PHONE: 215-956-3073

VERIZON PENNSYLVANIA, LLC  
1050 VIRGINIA DRIVE, FLOOR 4  
FORT WASHINGTON, PA 19034  
ATTN: CHRIS ATKINSON  
PHONE: 215-478-2518

CHALFONT NEW BRITAIN TWP  
JOINT SEWER AUTHORITY  
1645 UPPER STATE RD  
DOYLESTOWN PA, 18901-2666  
ATTN: JOHN SCHMIDT  
PHONE: 215-345-1225

NORTH WALES WATER AUTHORITY  
200 W. WALNUT STREET  
NORTH WALES PA, 19454-0339  
ATTN: JOSEPH MURPHY  
PHONE: 215-699-4836

**LIST OF MUNICIPALITIES**

NEW BRITAIN TOWNSHIP  
207 PARK AVE  
CHALFONT, PA 18914  
ATTN: EILEEN BRADLEY  
PHONE: 215-822-1391

CHALFONT BOROUGH  
40 NORTH MAIN ST.  
CHALFONT, PA 18914  
ATTN: SANDRA ZADELL  
PHONE: 215-822-7295

DOYLESTOWN TOWNSHIP  
425 WELLS RD  
DOYLESTOWN, PA 18901  
ATTN: STEPHANIE MASON  
PHONE: 215-348-9915

**TABULATION OF OVERALL LENGTH**

STA 10+00.00 TO STA 32+01.96 = 2201.96 FT = 0.417 MI

**TABULATION OF CONSTRUCTION LENGTH**

FORREST DR - STA 11+05.63 TO STA 28+24.22 = 1718.59 FT = .325 MI  
STATE ROUTE 2025 (BRISTOL RD) - STA 58+76.62 TO STA 76+40.00 = 1763.38 FT = .334 MI  
SHARED USE PATH - STA 110+00.00 TO STA 128+10.42 = 1810.42 FT = .343 MI  
UPPER STATE RD - STA 208+91.60 TO STA 225+00.00 = 1608.40 FT 0.305 MI

**UTILITY NOTES**

EXISTING UTILITIES ARE SHOWN ON THE PLANS IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE AND ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CORRECTNESS AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED.

THE CONTRACTOR SHALL VERIFY THE INFORMATION AND SHALL TAKE ALL PRECAUTIONS TO FULLY PROTECT THE UTILITY AND SERVICE.

PRIOR TO ANY EXCAVATION, POST DRIVING OR DEMOLITION WORK IN THE VICINITY OF UNDERGROUND UTILITIES, THE CONTRACTOR MUST CONTACT THE PA "ONE CALL SYSTEM" AND COMPLY WITH PROVISIONS OF ACT 287 OF 1974 AND SUBSEQUENT AMENDMENTS. (ONE CALL NO. 1-800-242-1776)

IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL OVERHEAD LINES. NOTIFY THE UTILITY COMPANY AND COMPLY WITH THE UTILITY COMPANY'S SAFETY CLEARANCE REQUIREMENTS WHEN WORKING IN THE AREA OF THEIR FACILITIES.

**GENERAL NOTES**

THE LEGAL RIGHT-OF-WAY ON FORREST DRIVE (A CHALFONT BOROUGH STREET), FROM STATION 10+00 TO STATION 28+55, IS 50 FEET, AND HAS BEEN OPENED AND MAINTAINED FOR TWENTY-ONE (21) YEARS OR MORE BY CHALFONT BOROUGH, A HOME RULE MUNICIPALITY. THERE IS NO PUBLIC RECORD OF ANY OTHER WIDTH.

THE LEGAL RIGHT-OF-WAY FOR SR 2025, FORMERLY LR 09034, FROM STATION 58+00 TO STATION 77+00, VARIES BETWEEN 60 FEET AND 120 FEET BASED ON PLAN OF LR 1141, SECTION A10 R/W, SIGNED ON JUNE 24, 1966, AND RECORDED ON SEPTEMBER 9, 1966, IN THE BUCKS COUNTY RECORDER'S OFFICE IN STATE HIGHWAY PLAN BOOK NO. 28, PAGE 5.

THE LEGAL RIGHT-OF-WAY FOR UPPER STATE ROAD (NEW BRITAIN TOWNSHIP ROAD T-395), FROM STATION 208+00 TO STATION 210+80, IS 80 FEET BASED ON FINAL PLAN OF SUBDIVISION PREPARED FOR WILLOW WOOD ESTATES NOTARIZED MARCH 9, 1999.

THE LEGAL RIGHT-OF-WAY FOR UPPER STATE ROAD (NEW BRITAIN TOWNSHIP ROAD T-395), FROM STATION 210+80 TO STATION 215+40, IS 56.5 FEET BASED ON RECORD PLAN OF CEDARCREST FARM SUBDIVISION NOTARIZED JANUARY 20, 1999.

THE LEGAL RIGHT-OF-WAY FOR UPPER STATE ROAD (NEW BRITAIN TOWNSHIP ROAD T-395), FROM STATION 215+40 TO STATION 225+05, VARIES BETWEEN 40 FEET AND 120 FEET BASED ON PLANS FOR BUCKS COUNTY BRIDGE NO. 81 APPROVED BY BOARD OF COMMISSIONERS OF BUCKS COUNTY, JULY 17, 1971.

THIS IS A FEDERAL-AID PROJECT AND AS SUCH IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF THE FEDERAL HIGHWAY ADMINISTRATION AND THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

THREE WORKING DAYS PRIOR TO EXCAVATION THE CONTRACTOR MUST CONTACT THE PA ONE CALL SYSTEM, INC. PHONE 1-800-242-11776, SERIAL NO. [REDACTED] FOR CHALFONT BOROUGH, SERIAL NO. [REDACTED] FOR NEW BRITAIN TOWNSHIP, SERIAL NO. [REDACTED] FOR DOYLESTOWN TOWNSHIP

ALL CURVE DATA IS BASED ON THE ARC DEFINITION UNLESS OTHERWISE INDICATED.

ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

HORIZONTAL CONTROL IS BASED ON THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM SOUTH ZONE, NORTH AMERICAN DATUM (NAD) OF 1983.

AVERAGE COMBINED SCALE FACTOR OF 0.99997298 WAS USED FOR THIS PROJECT.

DO NOT INTERFERE WITH THE OPERATION OF ANY FIRE HYDRANT, FIRE CALL BOX OR POLICE BOX.

TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED. UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.

BIKEWAY EASEMENT: AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF A BIKEWAY. THE BIKEWAY IS FOR BICYCLISTS AND PEDESTRIANS ONLY. NO MOTORIZED VEHICLES ARE PERMITTED EXCEPT FOR MINIMAL CROSS OVERS BY MOTORISTS AT DRIVEWAY CROSSINGS. ALL CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION IS THE RESPONSIBILITY OF NEW BRITAIN TOWNSHIP. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO ITS USE FOR BIKEWAY PURPOSES AS LONG AS THE PROPERTY OWNER OBTAINS PRIOR APPROVAL FROM NEW BRITAIN TOWNSHIP.

**CALL BEFORE YOU DIG !**

PENNSYLVANIA LAW REQUIRES  
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE  
AND 10 WORKING DAYS IN DESIGN STAGE  
BEFORE YOU DIG CALL  
THE PA ONE CALL SYSTEM TELEPHONE NUMBER.



1-800-242-1776

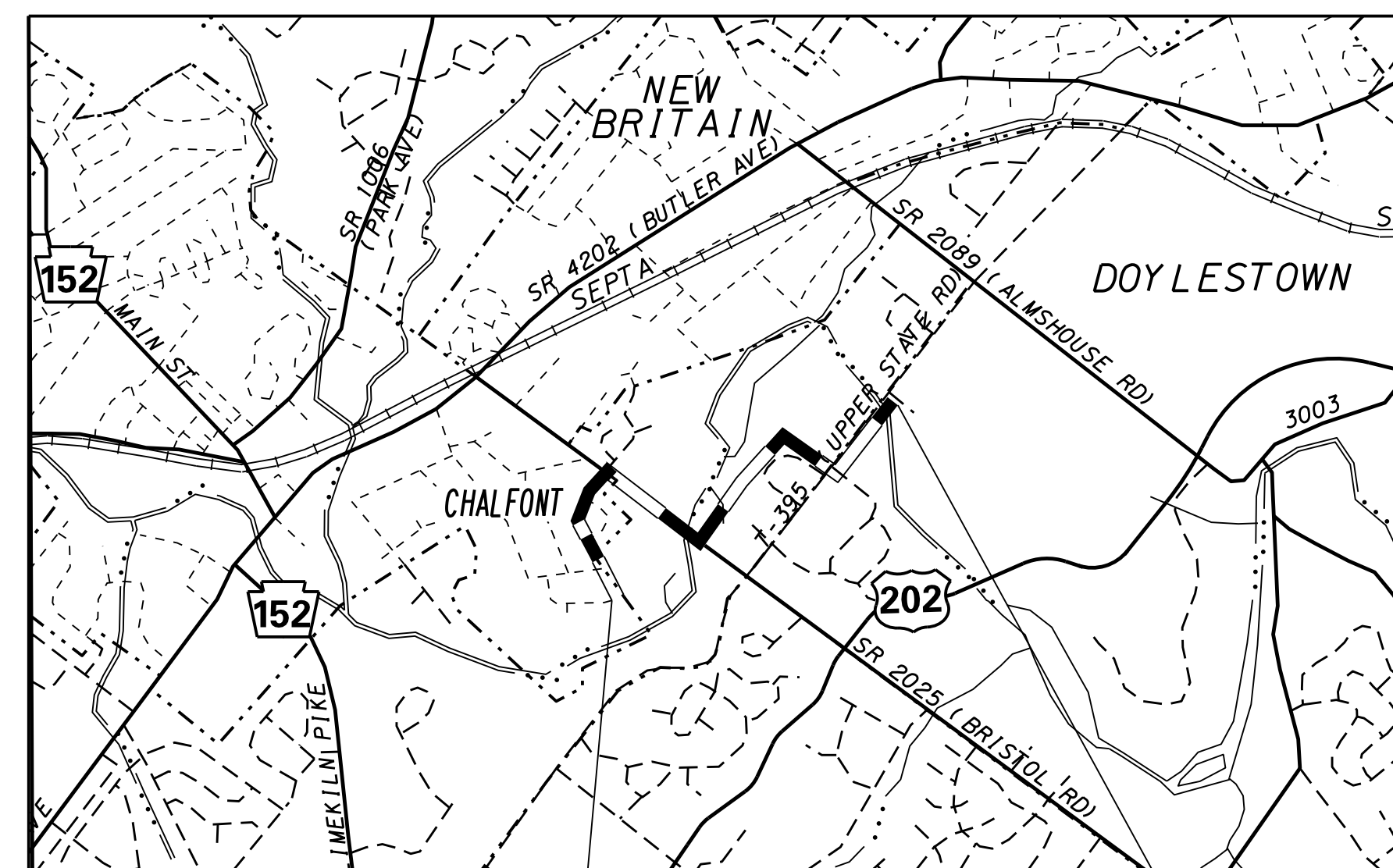
**PA ONE CALL SERIAL NUMBERS**

20153560405 NEW BRITAIN TOWNSHIP  
20153560400 NEW BRITAIN TOWNSHIP

**DETAILS, OTHER THAN THOSE INDICATED, ARE ON THE FOLLOWING STANDARD DRAWINGS.**

RC-10M	(1 SHEET)	JUN 1, 2010
RC-20M	(12 SHEETS)	SEPT 15, 2016
RC-30M	(5 SHEETS)	FEB 8, 2019
RC-45M	(20 SHEETS)	SEPT 15, 2016
RC-46M	(34 SHEETS)	SEPT 15, 2016
RC-50M	(18 SHEETS)	FEB 8, 2019
RC-64M	(1 SHEET)	JUN 1, 2010
RC-67M	(14 SHEETS)	JUN 1, 2013
RC-70M	(3 SHEETS)	FEB 8, 2019
RC-72M	(7 SHEETS)	FEB 8, 2019
RC-73M	(4 SHEETS)	FEB 8, 2019
RC-75M	(1 SHEET)	JUN 1, 2010
RC-77M	(1 SHEET)	JUN 1, 2010
RC-91M	(2 SHEETS)	JUN 1, 2010
TC-8600	(13 SHEETS)	JUN 13, 2013
TC-8604	(4 SHEETS)	JUN 13, 2013
TC-8702B	(9 SHEETS)	JUN 13, 2013
TC-8716	(1 SHEET)	JUN 13, 2013
TC-8717	(1 SHEET)	JUN 13, 2013
BC-701M	(3 SHEETS)	JAN 31, 2019
BC-718M	(1 SHEET)	SEPT 30, 2016
BC-736M	(3 SHEETS)	JAN 31, 2019
BC-739M	(2 SHEETS)	JAN 31, 2019
BC-751M	(7 SHEETS)	JAN 31, 2019
BC-752M	(2 SHEETS)	SEPT 30, 2016
BC-766M	(2 SHEETS)	JAN 31, 2019
BC-783M	(4 SHEETS)	JAN 31, 2019
BC-788M	(12 SHEETS)	JAN 31, 2019

**LOCATION MAP**

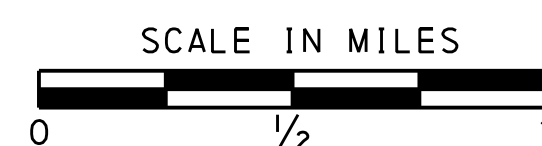


**LIMIT OF WORK**  
STA 10+00.00  
FORREST AVE  
CHALFONT BORO  
NEW BRITAIN TOWNSHIP  
BUCKS COUNTY

**LIMIT OF WORK**  
STA 225+00.00  
UPPER STATE RD  
DOYLESTOWN TOWNSHIP  
BUCKS COUNTY

**LEGEND**

- PROJECT
- STATE ROAD
- TOWNSHIP ROAD
- MUNICIPAL BOUNDARY
- RAILWAY
- WATERWAY



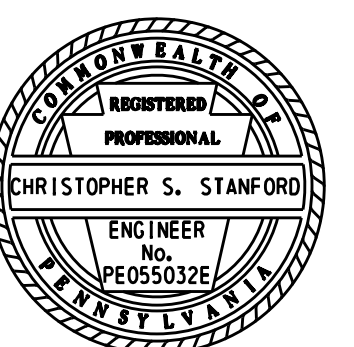
**EARTHWORK SUMMARY ENTIRE PROJECT**

THE INFORMATION ON ESTIMATED AMOUNTS OF EARTHWORK HAS BEEN USED IN THE PRELIMINARY ESTIMATE. DO NOT USE AS A WAIVER OF ANY PROVISIONS OF THE SPECIFICATIONS AND CONTRACTS.

CUBIC YARDS OF EXCAVATION						CUBIC YARDS OF COMPLETED EMBANKMENT	CUBIC YARDS OF BORROW EXCAVATION	CUBIC YARDS OF SELECT BORROW	CUBIC YARDS OF WASTE
CLASS 1	CLASS 1A	CLASS 1B	CLASS 2	CLASS 3	CLASS 4				
1654	--	--	--	--	71	1266	--	--	459

\* INCLUDES QUANTITIES UNDER LUMP SUM BID ITEMS, AND INCIDENTAL TO PAYMENT UNDER OTHER ITEMS

**LOCATION MAP AND GENERAL NOTES**

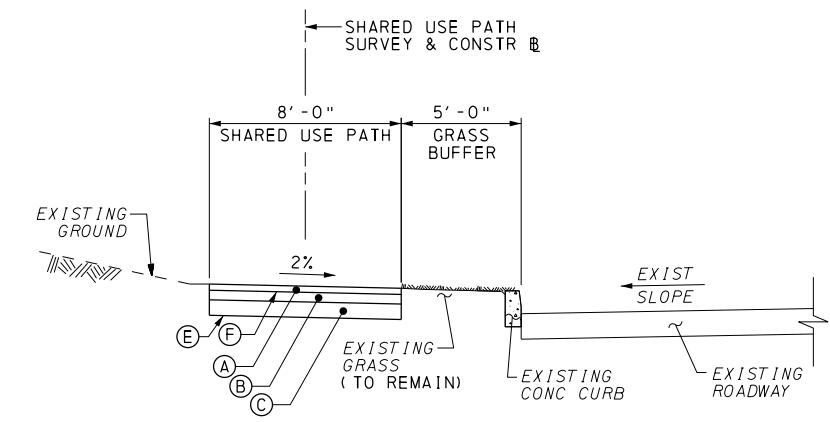


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02-AUG-2019

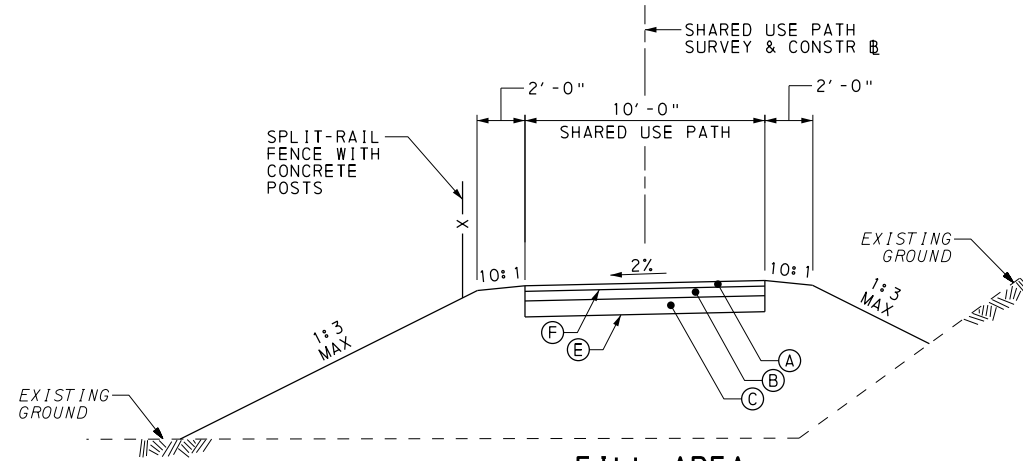
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	4 OF 21
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



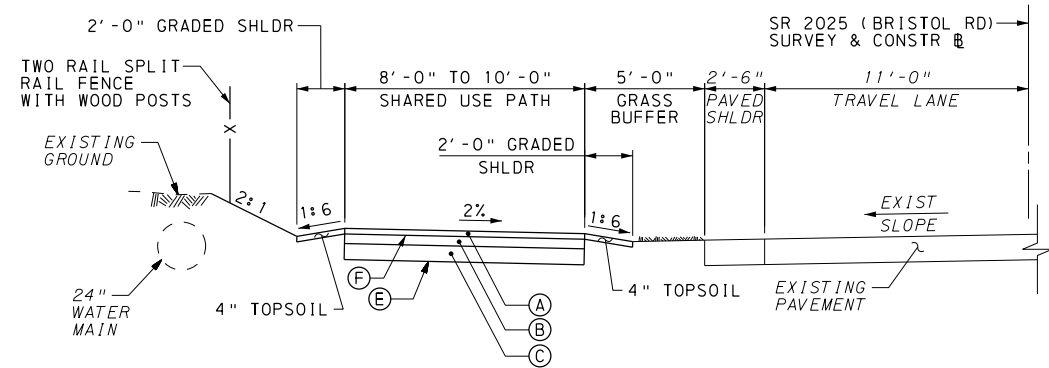
**AT GRADE AREAS  
TYPICAL SECTION - SR 2025 (BRISTOL ROAD)**

NOT TO SCALE  
STA 60+35 TO STA 61+30



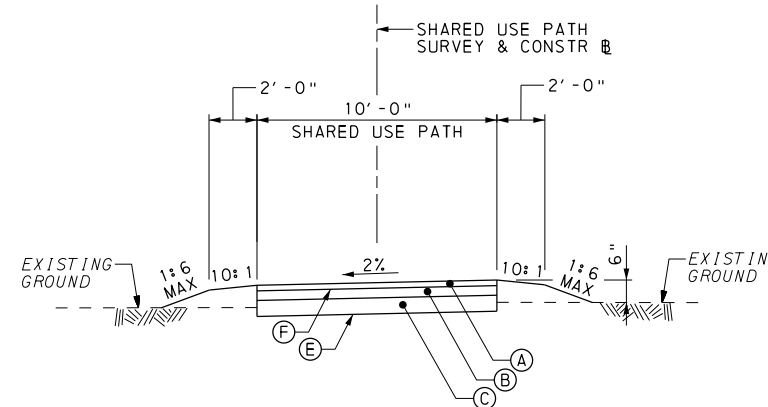
**FILL AREA  
TYPICAL SECTION - SHARED USE PATH**

NOT TO SCALE  
STA 110+58 TO STA 112+68



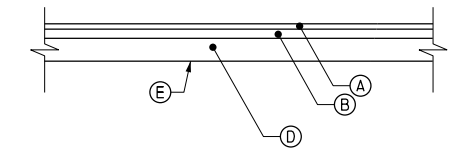
**SHARED USE PATH TYPICAL SECTION - SR 2025 (BRISTOL ROAD)**

NOT TO SCALE  
STA 61+30 TO STA 72+84



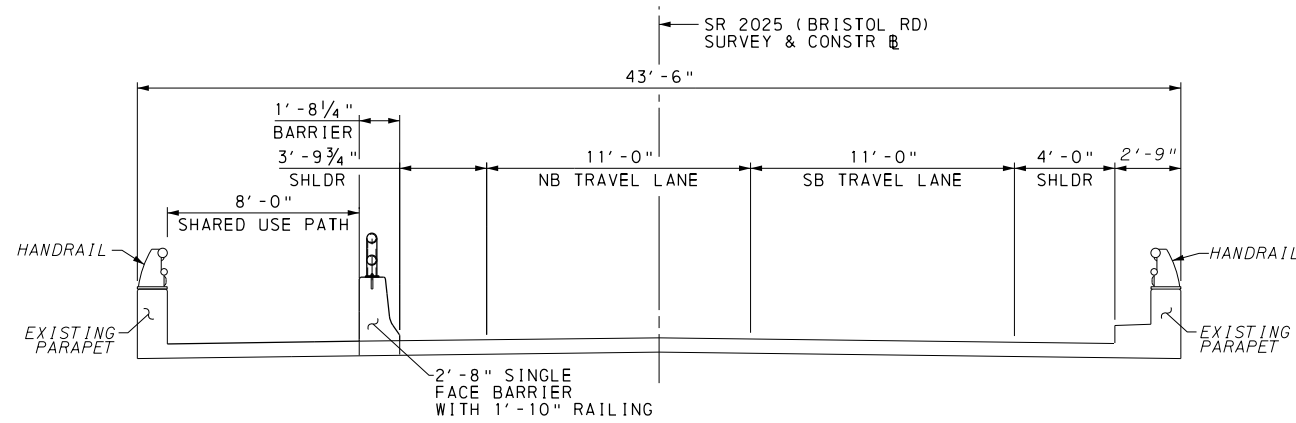
**AT GRADE AREAS  
TYPICAL SECTION - SHARED USE PATH**

NOT TO SCALE  
STA 112+68 TO STA 123+82  
STA 126+16 TO STA 128+75



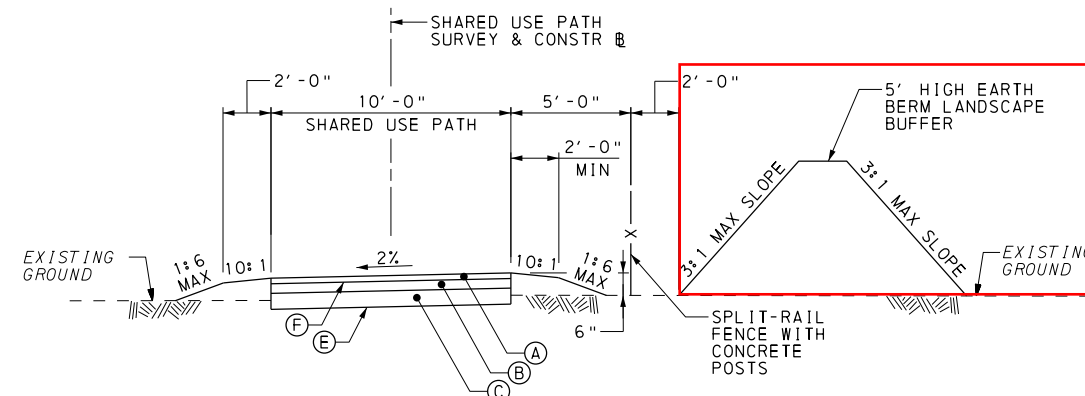
**DRIVEWAY AND DRIVEWAY APRON  
TYPICAL SECTION**

NOT TO SCALE  
STA 61+34 TO STA 61+65  
STA 65+10 TO STA 65+41  
STA 69+57 TO STA 69+82



**BRIDGE TYPICAL SECTION - SR 2025 (BRISTOL ROAD)**

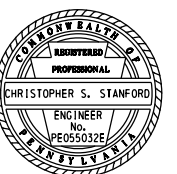
NOT TO SCALE  
STA 72+84 TO STA 74+96



**SHARED USE PATH WITH LANDSCAPE  
BUFFER TYPICAL SECTION**

NOT TO SCALE  
STA 123+82 TO STA 123+126+16

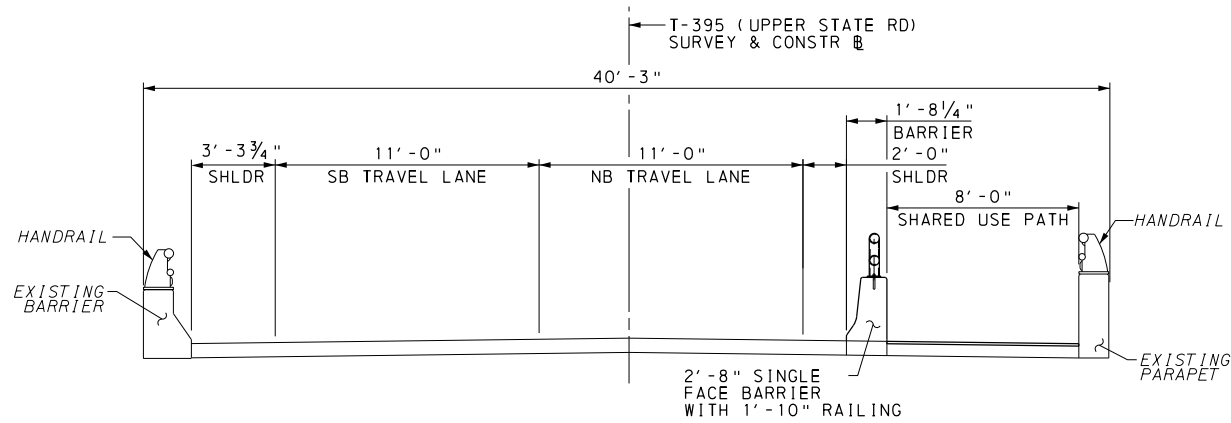
**TYPICAL SECTIONS**



02-AUG-2019

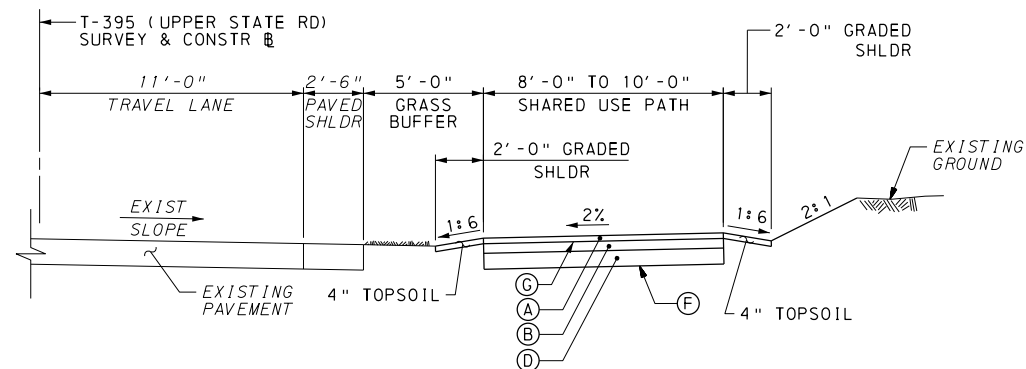
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	5 OF 21
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



**BRIDGE TYPICAL SECTION - T-395 (UPPER STATE RD)**

NOT TO SCALE  
STA 219+73 TO STA 222+21

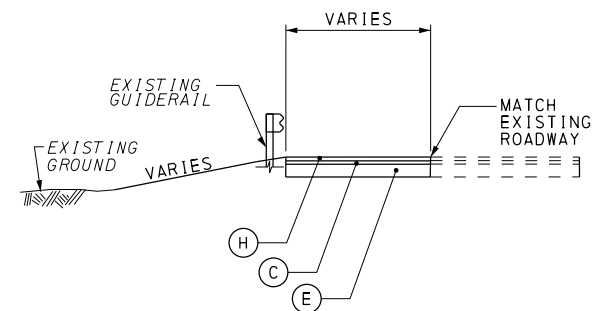


**SHARED USE PATH TYPICAL SECTION  
T-395 (UPPER STATE RD)**

NOT TO SCALE  
STA 210+82 TO STA 219+73  
STA 222+21 TO STA 223+10

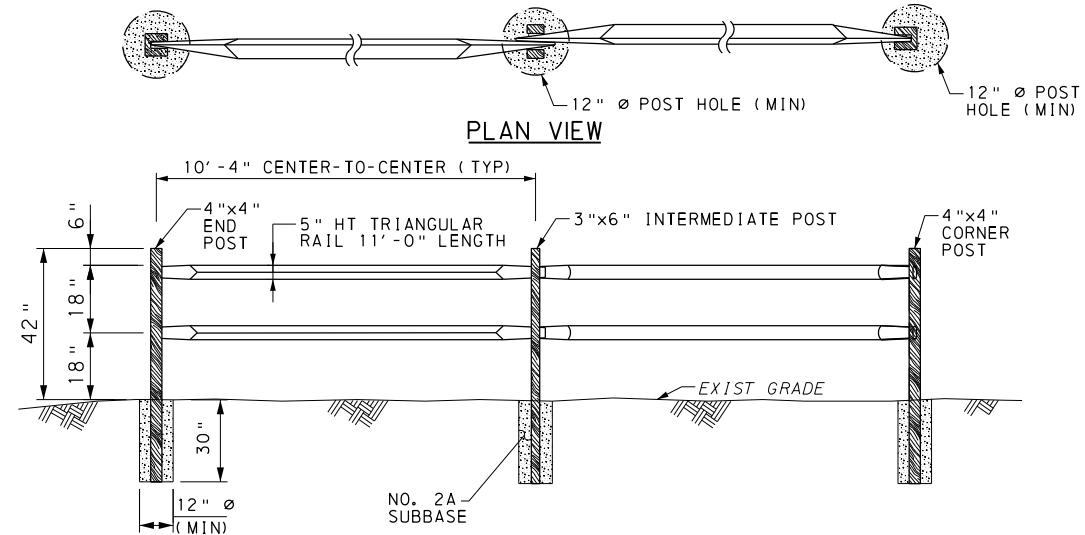
**LEGEND:**

- (A) SUPERPAVE ASPHALT MIXTURE DESIGN, WMA WEARING COURSE, PG 64-22, <0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H
- (B) SUPERPAVE ASPHALT MIXTURE DESIGN, WMA BASE COURSE, PG 64-22, <0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH
- (C) SUPERPAVE ASPHALT MIXTURE DESIGN, WMA BASE COURSE, PG 64-22, 3 TO < 10 MILLION ESALS, 37.5 MM MIX, 6" DEPTH
- (D) SUBBASE 6" DEPTH (NO. 2A)
- (E) SUBBASE 8" DEPTH (NO. 2A)
- (F) GEOTEXTILE, CLASS 4, TYPE A
- (G) BITUMINOUS TACK COAT
- (H) SUPERPAVE ASPHALT MIXTURE DESIGN, WMA WEARING COURSE, PG 64-22, 3 TO <10 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H



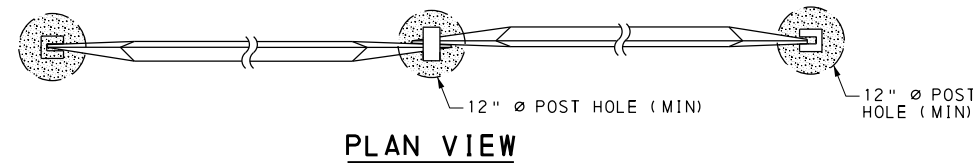
**PAVEMENT WIDENING TYPICAL SECTION**

NOT TO SCALE  
STA 74+59 TO STA 76+96  
STA 219+25 TO STA 220+00  
STA 222+30 TO STA 224+40

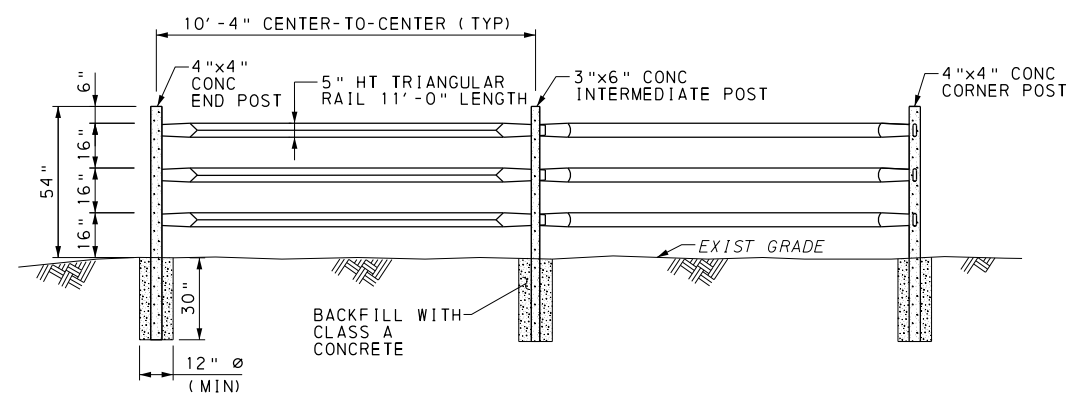


**TWO RAIL SPLIT RAIL FENCE WITH WOOD POSTS**

NOT TO SCALE  
ITEM #9000-0011  
STA 123+82 TO STA 126+16

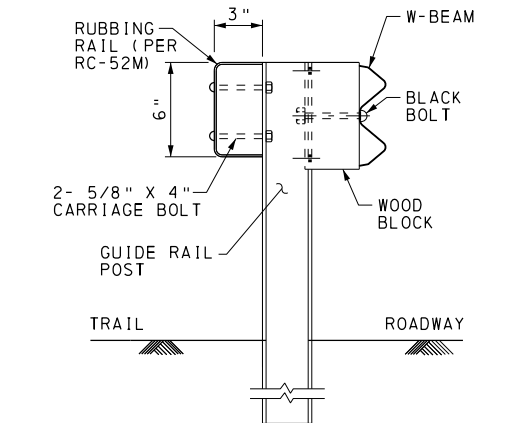


**PLAN VIEW**



**SPLIT RAIL FENCE WITH CONCRETE POSTS**

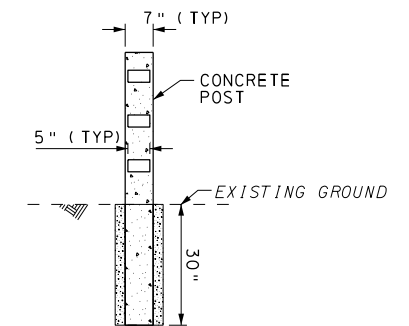
NOT TO SCALE  
ITEM #9000-0010  
STA 72+19 TO STA 72+93  
STA 110+33 TO STA 112+78  
STA 218+62 TO STA 219+73  
STA 222+21 TO STA 223+01



**GUIDE RAIL WITH RUB RAIL ON TRAIL SIDE**

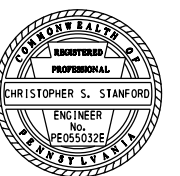
NOT TO SCALE

NOTES:  
- CONSTRUCT IN ACCORDANCE TO PENNDOT RC-52M.  
- DRILL HOLES IN POST AS REQUIRED, INCIDENTAL TO THIS ITEM.



**POST DETAIL**

**TYPICAL SECTIONS**

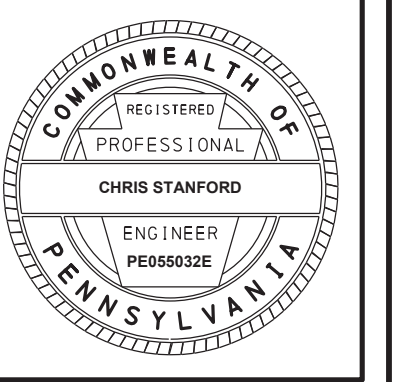


# SUMMARY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				06	BUCKS	0000	NGT	6 OF 21
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TWPS								

◆ - SEE SPECIAL PROVISIONS

QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
	UNIT					UNIT					UNIT					UNIT			
	0201 0001 LS	CLEARING AND GRUBBING		NO TAB	4	0620 0402 EACH	TERMINAL SECTION, BRIDGE CONNECTION		8-9	1247	0806 0113 SY	TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D		11-12	1	4951 4014 EACH	TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL POWDER COATED		TSP
1654	0203 0001 CY	CLASS 1 EXCAVATION		8-9	490	0620 0503 LF	REMOVE EXISTING GUIDE RAIL (CONTRACTOR'S PROPERTY)		8-9	4	4808 0100 EACH	TREE - EASTERN RED CEDAR (4'-0" HT.)		LAND	1	4951 4022 EACH	PEDESTRIAN STUB POLE, TYPE B POWDER COATED		TSP
71	0204 0150 CY	CLASS 4 EXCAVATION		10	384	0620 0585 LF	RUBBING RAIL		8-9	10	4808 0101 EACH	TREE - FRASER FIR (7'-0" HT.)		LAND	86	0954 0013 LF	3 INCH CONDUIT		TSP
4476	0212 0014 SY	GEOTEXTILE, CLASS 4, TYPE A		8-9, 11-12	680	0620 1075 LF	TYPE 2-S GUIDE RAIL		8-9	5	4808 0120 EACH	SHRUB - INKBERRY HOLLY (6'-0" HT.)		LAND	41	0954 0151 LF	TRENCH AND BACKFILL, TYPE I		TSP
4468	0311 0320 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WMA BASE COURSE, PG 64-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH		8-9	1	0620 1250 EACH	TYPE 2 STRONG POST END TREATMENT		8-9	10	4808 3761 EACH	AMERICAN HOLLY (FEMALE) -(36" HT. CONTAINER)		LAND	45	0954 0153 LF	TRENCH AND BACKFILL, TYPE III		TSP
467	0311 0504 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WMA BASE COURSE, PG 64-22, 3 TO < 10 MILLION ESALS, 37.5 MM MIX, 6" DEPTH	TCP	8-9	550	0627 3021 LF	TEMPORARY BARRIER, STEEL, ZONEGUARD MINIMUM DEFLECTION SYSTEM		TCP	3	0808 3844 EACH	WHITE PINE - (7' HT. B&B)		LAND	117	0954 0201 LF	SIGNAL CABLE, 14 AWG, 3 CONDUCTOR		TSP
4377	0350 0106 SY	SUBBASE 6" DEPTH (NO. 2A)		8-9	241	0627 3053 LF	TEMPORARY BARRIER, CONCRETE, J-J HOOK, F-SHAPE (EASI-SET INDUSTRIES)		TCP	4	4808 4744 EACH	MOUNTAIN LAUREL - (3' HT. B&B)		LAND	264	0954 0202 LF	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR		TSP
558	0350 0108 SY	SUBBASE 8" DEPTH (NO. 2A)	TCP	8-9	550	0628 3021 LF	RESET TEMPORARY BARRIER, STEEL, ZONEGUARD MINIMUM DEFLECTION SYSTEM		TCP	5	4808 4822 EACH	CATAWBA RHODODENDRON HYBRID - (2 1/2' HT. B&B)		LAND	3	0954 0302 EACH	JUNCTION BOX, JB-27		TSP
4468	0411 0382 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WMA WEARING COURSE, PG 64-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H		8-9	94	0630 0001 LF	PLAIN CEMENT CONCRETE CURB		8-9	50000	0845 0001 DOLLA	UNFORESEEN WATER POLLUTION CONTROL		NO TAB	1	0954 0402 EACH	ELECTRICAL SERVICE, TYPE B		TSP
176	0411 0551 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WMA WEARING COURSE, PG 64-22, 3 TO < 10 MILLION ESALS, 12.5 MM MIX, 2" DEPTH, SRL-E		8-9	131	4630 0010 LF	PLAIN CEMENT CONCRETE CURB, INCLUDING REMOVAL OF EXISTING CURB AND PAVEMENT RESTORATION		8-9	4	0849 0010 EACH	ROCK CONSTRUCTION ENTRANCE		11-12	3673	0960 0001 LF	4" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS		S & PMP
467	0411 0582 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WMA WEARING COURSE, PG 64-22, 3 TO < 10 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	TCP	8-9	106	4676 0001 SY	CEMENT CONCRETE SIDEWALK INCLUDING EXCAVATION AND ROADSIDE DEVELOPMENT		8-9	31	0851 0003 SY	ROCK APRON		11-12	2312	0960 0002 LF	4" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS		S & PMP
4644	0460 0001 SY	BITUMINOUS TACK COAT		8-9		0686 0030 LS	CONSTRUCTION SURVEYING, TYPE B, MODIFIED		NO TAB	2	0855 0003 EACH	PUMPED WATER FILTER BAG		11-12	655	0960 0021 LF	24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS		S & PMP
176	0491 0013 SY	MILLING OF BITUMINOUS PAVEMENT SURFACE, 2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR		8-9		0689 0001 LS	NARRATIVE SCHEDULE		NO TAB	3	4856 0001 EACH	ROCK BARRIER MODIFIED		11-12	4	0960 0111 EACH	WHITE HOT THERMOPLASTIC LEGEND, "X ING", 8' - 0"		S & PMP
50	0601 0333 LF	18" THERMOPLASTIC PIPE, GROUP II, 12'-1.5' FILL		10	6000	0690 0002 DOLLA	SEMI-FORMAL FACILITATION		NO TAB	2	0860 0000 EACH	INLET FILTER BAG FOR TYPE M INLET		11-12	4	0960 0112 EACH	WHITE HOT THERMOPLASTIC LEGEND, "PED", 8' - 0"		S & PMP
26	0601 0335 LF	24" THERMOPLASTIC PIPE, GROUP II, 12'-1.5' FILL		10	161	0695 0003 SF	DETECTABLE WARNING SURFACE, POLYMER CONCRETE		8-9	9	0860 0002 EACH	INLET FILTER BAG FOR TYPE C INLET		11-12	14	0960 1121 EACH	WHITE HOT THERMOPLASTIC LEGEND, SHARED LANE MARKING		S & PMP
8	0601 7014 LF	18" REINFORCED CONCRETE PIPE, TYPE A, 15' - 2' FILL, 100 YEAR DESIGN LIFE		10	1	0696 0600 EACH	TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 2		TCP	5	0860 0010 EACH	CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET		11-12	2625	0962 1000 LF	4" WHITE WATERBORNE PAVEMENT MARKINGS		TCP
2	0605 2731 SET	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		10	3	0696 0639 EACH	TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD) TEST LEVEL 3		TCP	3498	0867 0012 LF	COMPOST FILTER SOCK, 12" DIAMETER		11-12	2475	0962 1005 LF	4" YELLOW WATERBORNE PAVEMENT MARKINGS		TCP
2	4605 2731 SET	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE		10	1	0697 0600 EACH	RESET TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 2		TCP	211	0867 0022 LF	COMPOST FILTER SOCK, 24" DIAMETER		11-12	40	1001 0001 CY	CLASS AA CEMENT CONCRETE		STR
1	0605 2850 EACH	STANDARD INLET BOX, HEIGHT <= 10'		10	1	0697 0610 EACH	RESET TEMPORARY IMPACT ATTENUATING DEVICE, TYPE V (STANDARD), TEST LEVEL 3		TCP		0901 0001 LS	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION		NO TAB	39	1001 0960 CY	CLASS AAAP CEMENT CONCRETE		STR
2	4607 0001 EACH	REBUILT INLET BOX WITH MANHOLE TOP		10	650	0802 0001 CY	TOPSOIL FURNISHED AND PLACED		11-12	117	0931 0001 SF	POST MOUNTED SIGNS, TYPE B		S & PMP	7397	1002 0053 LB	REINFORCEMENT BARS, EPOXY COATED		STR
	0608 0001 LS	MOBILIZATION		NO TAB	196	0804 0011 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA B		11-12	18	0935 0001 SF	POST MOUNTED SIGNS, TYPE F		S & PMP	413	5016 0006 LF	BARRIER PROTECTIVE FENCE, VINYL-COATED STEEL MODIFIED		STR
2	0616 1252 EACH	THERMOPLASTIC END SECTION FOR 18" PIPE		10	59	0804 0014 LB	SEEDING - FORMULA E		11-12	3	0936 0200 SF	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS		TSP					
2	0616 1254 EACH	THERMOPLASTIC END SECTION FOR 24" PIPE		10	83	0804 0020 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA L		11-12	3	0941 0001 EACH	RESET POST MOUNTED SIGNS, TYPE B		S & PMP					
2	0619 0470 EACH	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (ENERGY ABSORBING TERMINALS, TANGENT)		8-9	4	0805 0022 TON	MULCHING - STRAW		11-12	1	4951 2135 EACH	TRAFFIC SIGNAL SUPPORT, 35' MAST ARM WITH LUMINAIRE ARM (30' MOUNTING HEIGHT) POWDER COATED		TSP					

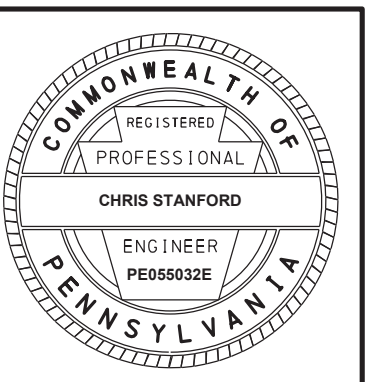


# SUMMARY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				06	BUCKS	0000	NGT	7 OF 21
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TWPS								

◆ - SEE SPECIAL PROVISIONS

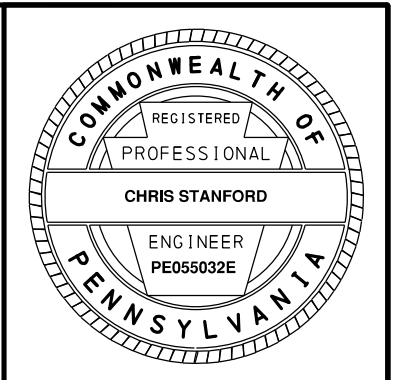
QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	DESIGN NO	FOR TAB SEE SHEET
	UNIT					UNIT					UNIT					UNIT			
	1018 0050 LS	REMOVAL OF PORTION OF EXISTING BRIDGE		STR															
	1018 0051 LS	REMOVAL OF PORTION OF EXISTING BRIDGE		STR															
271	1019 0050 SY	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE)		STR															
378	5022 0001 LF	STEEL BRIDGE HAND RAILING MODIFIED		STR															
485	1041 0001 SY	SCARIFICATION		STR															
248	1042 0001 SY	LATEX MODIFIED CONCRETE WEARING SURFACE, 1 1/4" DEPTH		STR															
1	5042 0100 CY	LATEX MODIFIED CONCRETE WEARING SURFACE, VARIABLE DEPTH FOR HYDRODEMOLITION		STR															
5000	1091 0335 DOLLA	EPOXY INJECTION CRACK SEAL		STR															
2	9000 0001 EACH	CONCRETE WASHOUT		11-12															
1	9000 0003 EACH	DOGHOUSE INLET BOX		10															
749	9000 0010 LF	SPLIT RAIL FENCE WITH CONCRETE POSTS		8-9															
180	9000 0011 LF	TWO RAIL SPLIT RAIL FENCE WITH WOOD POSTS		8-9															
6	9000 0030 EACH	RECTANGULAR RAPID FLASHING BEACON ASSEMBLY		TSP															
1	9000 0031 EACH	LED LUMINAIRE, ARM MOUNT		TSP															
2	9000 0032 EACH	PEDESTRIAN PUSH BUTTON WITH LATCHING LED AND TONE		TSP															
2	9000 0040 EACH	REMOVE AND REPLACE LANDSCAPE BED		LAND															
248	9000 0041 SY	CONCRETE BRIDGE DECK SURFACE PREPARATION, HYDRODEMOLITION		STR															
248	9000 0042 LF	INVERTED 'V' TYPE PREFORMED SILICONE JOINT SEALING SYSTEM		STR															
41	9000 0090 SF	REPAIR BARRIER CONCRETE		STR															
280	9000 0091 SF	REINFORCED CONCRETE REPAIR, TYPE 2, S-38178		STR															
12	9000 0092 SF	REINFORCED CONCRETE REPAIR, TYPE 2, BPAA-92816		STR															
1	9000 0100 EACH	SPECIAL SIGN		S & PMP															
11	9694 6002 EACH	DESIGN OF CONCRETE CURB RAMPS, DISTRICT 6		8-9															





# TABULATION OF QUANTITIES ROADWAY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				06	BUCKS	0000	NGT	9 OF 21
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TWPS								



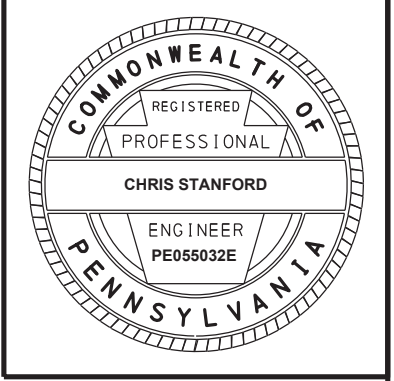
CLASS 1 EXCAVATION		REMARKS												SIDE	STATIONS																					
0203 0001 CY	0212 0014 SY	0311 0320 SY	0311 0504 SY	0350 0106 SY	0350 0108 SY	0411 0382 SY	0411 0551 SY	0411 0582 SY	0460 0001 SY	0491 0013 SY	0619 0470 EACH	0620 0402 EACH	0620 0503 LF	0620 0585 LF	0620 1075 LF	0620 1250 EACH	0630 0001 LF	4630 0010 LF	4676 0001 SY	0695 0003 SF	9000 0010 LF	9000 0011 LF	9694 6002 EACH	ITEM NUMBER	UNIT											
556	1890	1890		1890		1890			1890																									LT / RT	110+92.00 to 128+10.00	
																						241												RT	123+82.00 to 126+16.00	
55																																		LT / RT	124+75.00 to 125+75.00	
54	184	184		184		184			184																									LT / RT	128+10.00 to 128+94.00	
UPPER STATE ROAD																																				
																	62		18	20					1								LT	210+50.00 to 211+10.00		
																		9	9	12					1								RT	210+73.00 to 210+90.00		
																		16	12	24					1								RT	210+77.00 to 210+91.00		
294	998	998		998		998			998																									RT	210+82.00 to 219+89.00	
											1																							RT	218+44.00	
																						112												RT	218+62.00 to 219+73.00	
												166	238	245								90												RT	218+63.00 to 223+12.00	
			12		12			12																										LT	219+25.00 to 220+00.00	
										1																								RT	219+93.00	
31	104	104		104		104			104																									RT	222+14.00 to 223+12.00	
																																		RT	222+15.00	
			65		65			65																										LT	222+30.00 to 224+40.00	
															1																			RT	223+12.00	
1654	4468	4468	149	4377	240	4468	176	149	4644	176	2	4	490	384	680	1	94	131	106	161	749	180	11													<b>TOTALS</b>





TABULATION OF QUANTITIES  
EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				06	BUCKS	0000	NGT	11 OF 21
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TWPS								

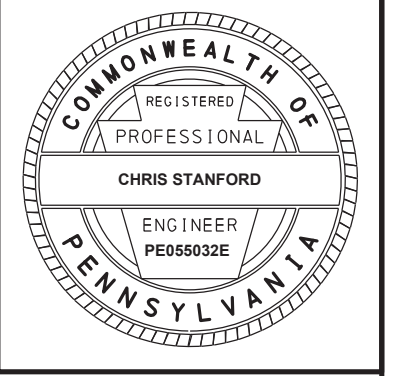


0212 0014 SY	0802 0001 CY	0804 0011 LB	0804 0014 LB	0804 0020 LB	0805 0022 TON	0806 0113 SY	0849 0010 EACH	0851 0003 SY	0855 0003 EACH	4856 0001 EACH	0860 0000 EACH	0860 0002 EACH	0860 0010 EACH	0867 0012 LF	0867 0022 LF	9000 0001 EACH	ITEM NUMBER	UNIT	REMARKS	SIDE	STATIONS	
																			ENTIRE PROJECT			
	650	196	59	83	3.7				2											LT / RT	0+00.00 to 225+00.00	
																					BRISTOL RD	
												1								LT	59+55.00	
												1								RT	59+90.00	
							1													LT	60+45.00	
												1								LT	62+30.00	
												1								LT	65+05.00	
												1								LT	67+00.00	
												1								LT	67+30.00	
												1								LT	67+55.00	
							1													LT	67+90.00	
													373							LT	68+01.00 to 72+05.00	
																1				LT	72+00.00	
													96							LT	72+06.00 to 72+96.00	
							1													LT	75+10.00	
																					OFF-ROAD TRAIL	
													115							LT	110+36.00 to 111+64.00	
						397														LT	110+40.00 to 112+40.00	
						119														RT	111+30.00 to 112+40.00	
									2											LT / RT	111+75.00	
												2913								LT / RT	111+80.00 to 128+80.00	
8							8													ROCK APRON	112+00.00 to 112+00.00	
																				LT	123+75.00 to 126+10.00	
						122														RT	123+75.00 to 126+10.00	
0								23												ROCK APRON	124+20.00 to 124+45.00	
									1											LT	124+50.00	
						474														RT	124+70.00 to 125+85.00	

# TABULATION OF QUANTITIES

## EROSION AND SEDIMENT POLLUTION CONTROL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				06	BUCKS	0000	NGT	12 OF 21
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TWPS								



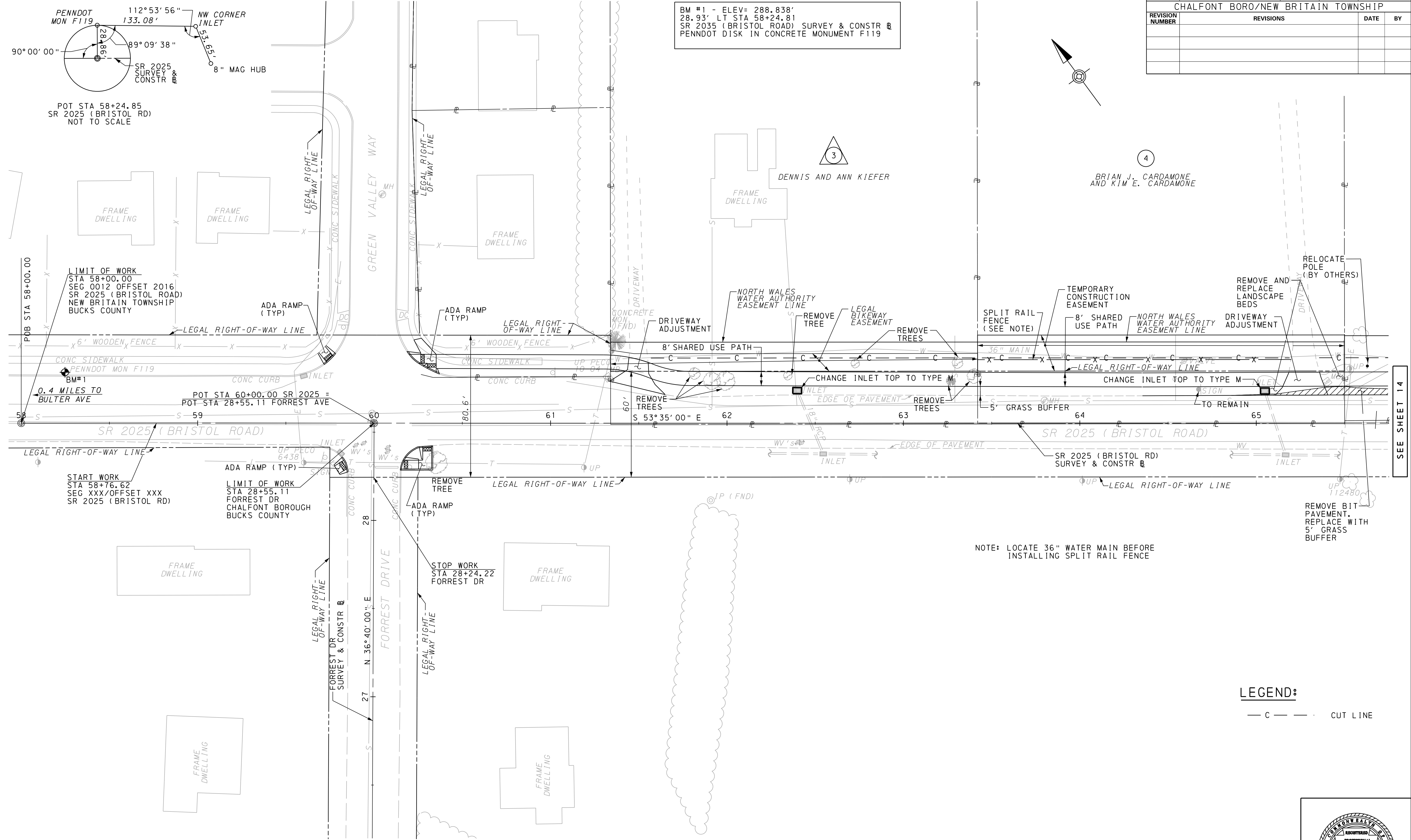
GEOTEXTILE, CLASS 4, TYPE A		TOPSOIL FURNISHED AND PLACED		SEEDING AND SOIL SUPPLEMENTS - FORMULA B		SEEDING - FORMULA E		SEEDING AND SOIL SUPPLEMENTS - FORMULA L		MULCHING - STRAW		TEMPORARY SHORT-TERM, ROLLED EROSION CONTROL PRODUCT, TYPE 2D		ROCK CONSTRUCTION ENTRANCE		ROCK APRON		PUMPED WATER FILTER BAG		ROCK BARRIER MODIFIED		INLET FILTER BAG FOR TYPE M INLET		INLET FILTER BAG FOR TYPE C INLET		CONCRETE BLOCK/GRAVEL INLET PROTECTION FOR TYPE M INLET		COMPOST FILTER SOCK, 12" DIAMETER		COMPOST FILTER SOCK, 24" DIAMETER		CONCRETE WASHOUT		REMARKS	SIDE	STATIONS												
0212	0014	0802	0001	0804	0011	0804	0014	0804	0020	0805	0022	0806	0113	0849	0010	0851	0003	0855	0003	4886	0001	0860	0000	0860	0002	0860	0010	0867	0012	0867	0022	9000	0001															
SY	CY	LB	LB	LB	TON	SY	EACH	SY	EACH	SY	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LF	LF	EACH	EACH																
														1																									UPPER STATE RD									
																									1																RT	210+50.00						
																									1																RT	210+70.00						
														1																											RT	210+80.00						
																										1																RT	211+25.00					
																													1													RT	211+90.00					
																										1																RT	212+60.00					
																										1																RT	214+90.00					
																										1																RT	215+90.00					
																								1																		RT	215+90.00					
																									1																	RT	216+90.00					
																											1																RT	216+90.00				
																												212															RT	218+66.00 to 223+02.00				
8	650	196	59	83	3.7	1247	4	31	2	3	2	9	5	3498	211	2																																
																												<b>TOTALS</b>																				

19-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	13 OF 21
CHALFONT BORO/NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	

BM #1 - ELEV= 288.838'  
 28.93' LT STA 58+24.81  
 SR 2035 (BRISTOL ROAD) SURVEY & CONSTR  
 PENNDOT DISK IN CONCRETE MONUMENT F119



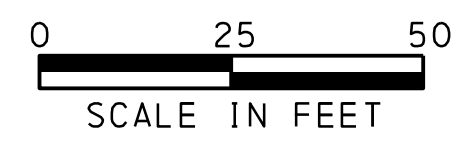
LIMIT OF WORK  
 STA 58+00.00  
 SEG 0012 OFFSET 2016  
 SR 2025 (BRISTOL ROAD)  
 NEW BRITAIN TOWNSHIP  
 BUCKS COUNTY

START WORK  
 STA 58+76.62  
 SEG XXX/OFFSET XXX  
 SR 2025 (BRISTOL RD)

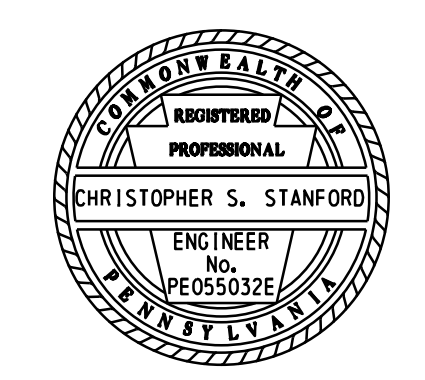
LIMIT OF WORK  
 STA 28+55.11  
 FORREST DR  
 CHALFONT BOROUGH  
 BUCKS COUNTY

STOP WORK  
 STA 28+24.22  
 FORREST DR

NOTE: LOCATE 36" WATER MAIN BEFORE  
 INSTALLING SPLIT RAIL FENCE



LEGEND:  
 — C — CUT LINE



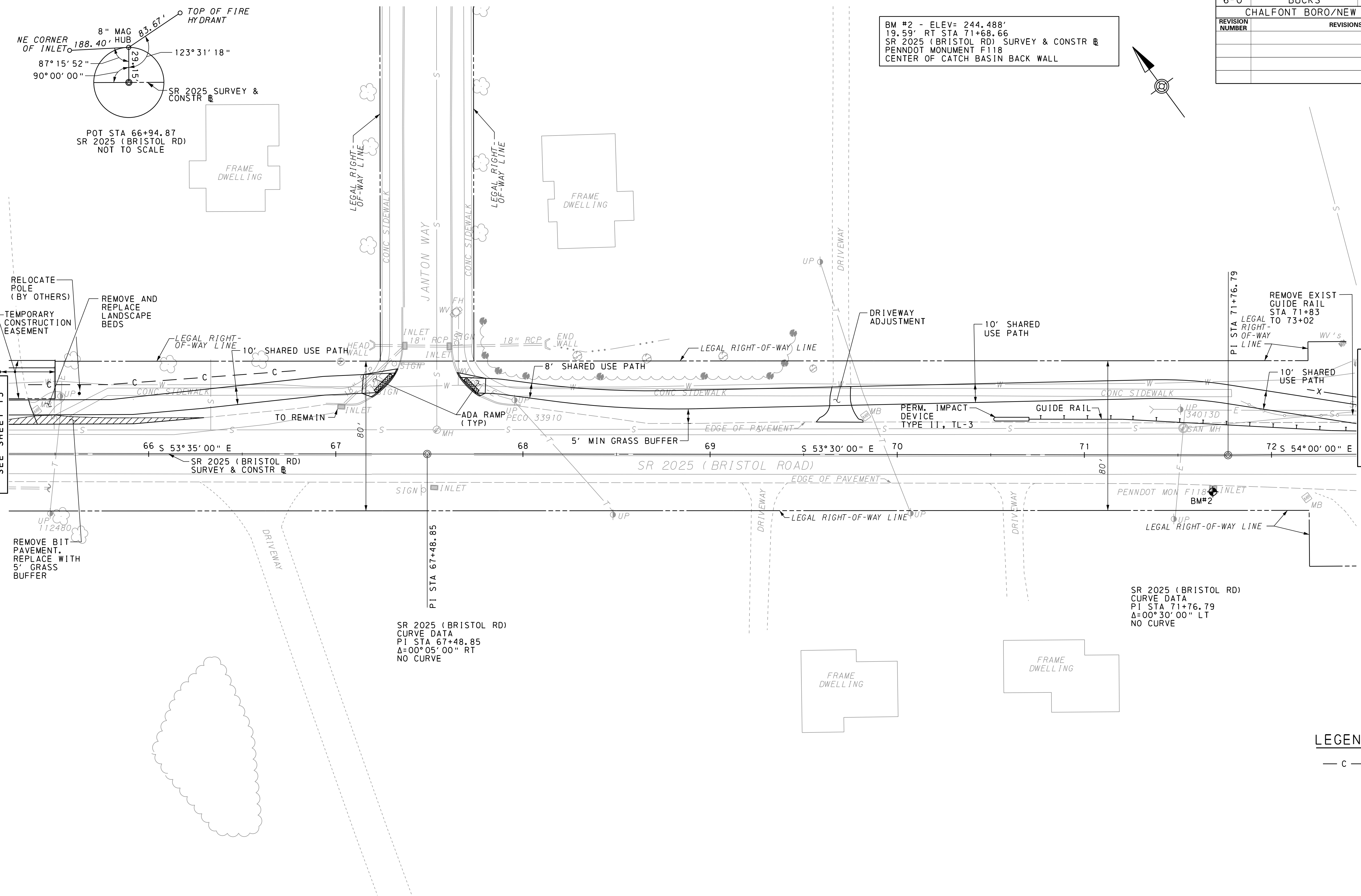
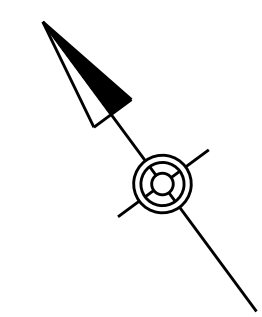
SEE SHEET 14

18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	14 OF 21
CHALFONT BORO/NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	

BM #2 - ELEV= 244.488'  
 19.59' RT STA 71+68.66  
 SR 2025 (BRISTOL RD) SURVEY & CONSTR  
 PENNDOT MONUMENT F118  
 CENTER OF CATCH BASIN BACK WALL



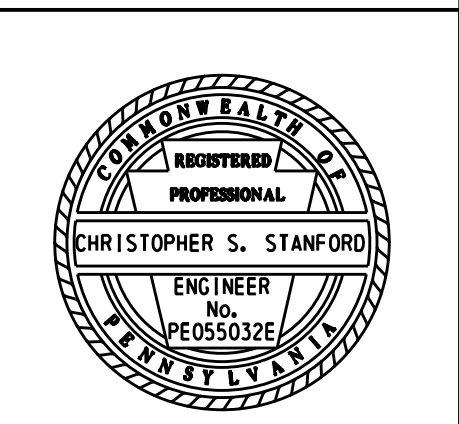
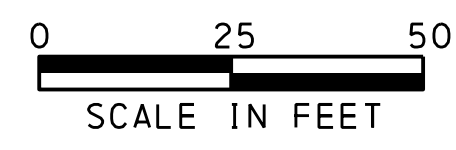
SEE SHEET 13

SEE SHEET 15

SR 2025 (BRISTOL RD)  
 CURVE DATA  
 PI STA 67+48.85  
 $\Delta=00^{\circ}05'00''$  RT  
 NO CURVE

SR 2025 (BRISTOL RD)  
 CURVE DATA  
 PI STA 71+76.79  
 $\Delta=00^{\circ}30'00''$  LT  
 NO CURVE

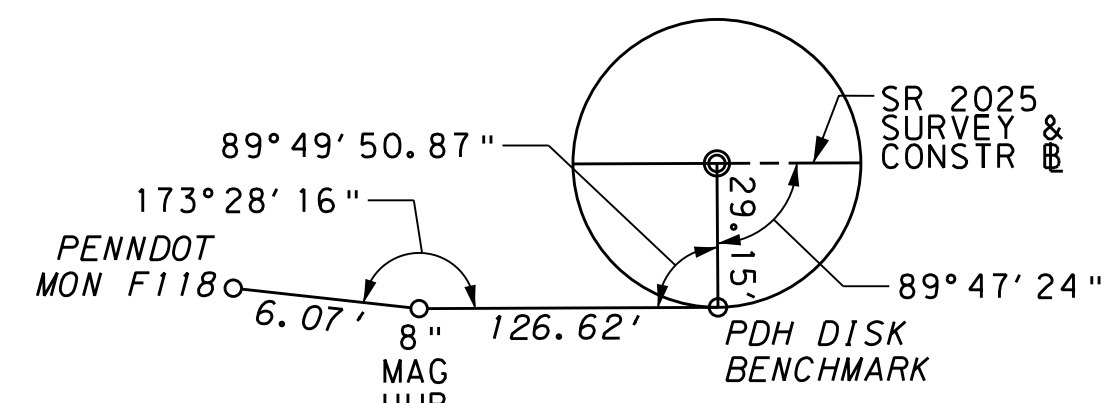
**LEGEND:**  
 — C — CUT LINE



18-JUL-2019

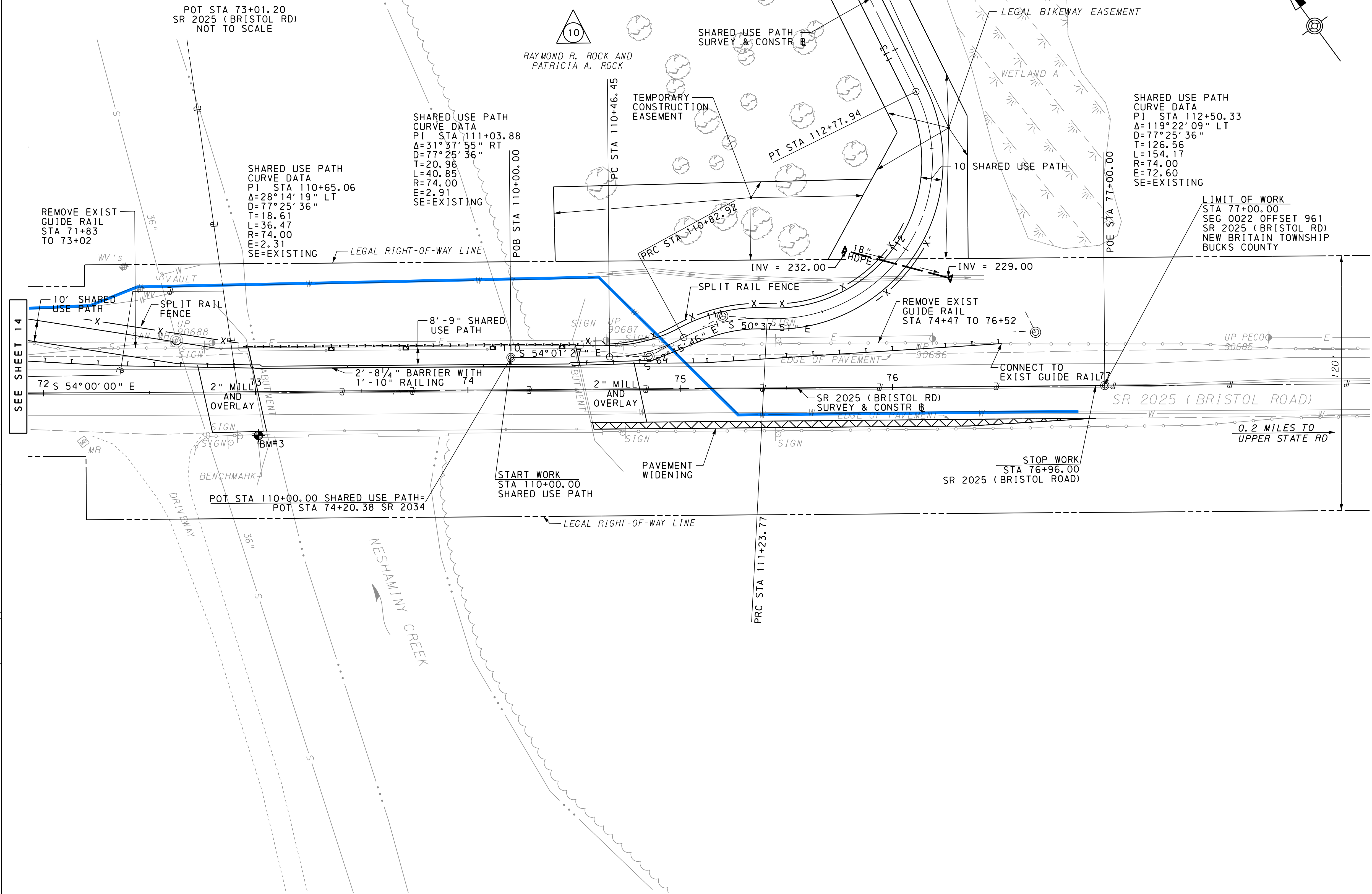
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	15 OF 21
CHALFONT BORO/NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	



BM #3 - ELEV= 245.39'  
 20.63' RT STA 73+01.20  
 SR 2025 (BRISTOL RD) SURVEY & CONSTR  
 PDH DISK - TOP OF PARAPET  
 SOUTHWEST END OF SOUTHWEST PARAPET

SEE SHEET 16



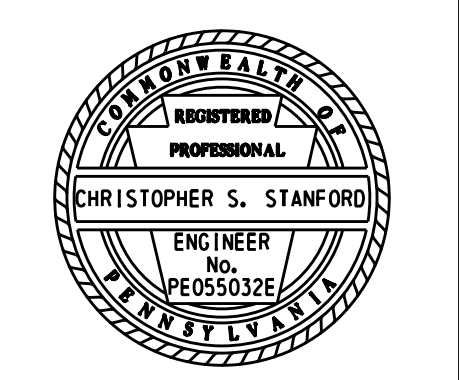
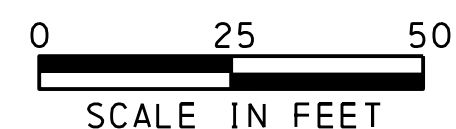
SHARED USE PATH  
 CURVE DATA  
 PI STA 111+03.88  
 $\Delta=31^{\circ}37'55''$  RT  
 $D=77^{\circ}25'36''$   
 T=20.96  
 L=40.85  
 R=74.00  
 E=2.91  
 SE=EXISTING

SHARED USE PATH  
 CURVE DATA  
 PI STA 110+65.06  
 $\Delta=28^{\circ}14'19''$  LT  
 $D=77^{\circ}25'36''$   
 T=18.61  
 L=36.47  
 R=74.00  
 E=2.31  
 SE=EXISTING

SHARED USE PATH  
 CURVE DATA  
 PI STA 112+50.33  
 $\Delta=119^{\circ}22'09''$  LT  
 $D=77^{\circ}25'36''$   
 T=126.56  
 L=154.17  
 R=74.00  
 E=72.60  
 SE=EXISTING

LIMIT OF WORK  
 STA 77+00.00  
 SEG 0022 OFFSET 961  
 SR 2025 (BRISTOL RD)  
 NEW BRITAIN TOWNSHIP  
 BUCKS COUNTY

STOP WORK  
 STA 76+96.00  
 SR 2025 (BRISTOL ROAD)

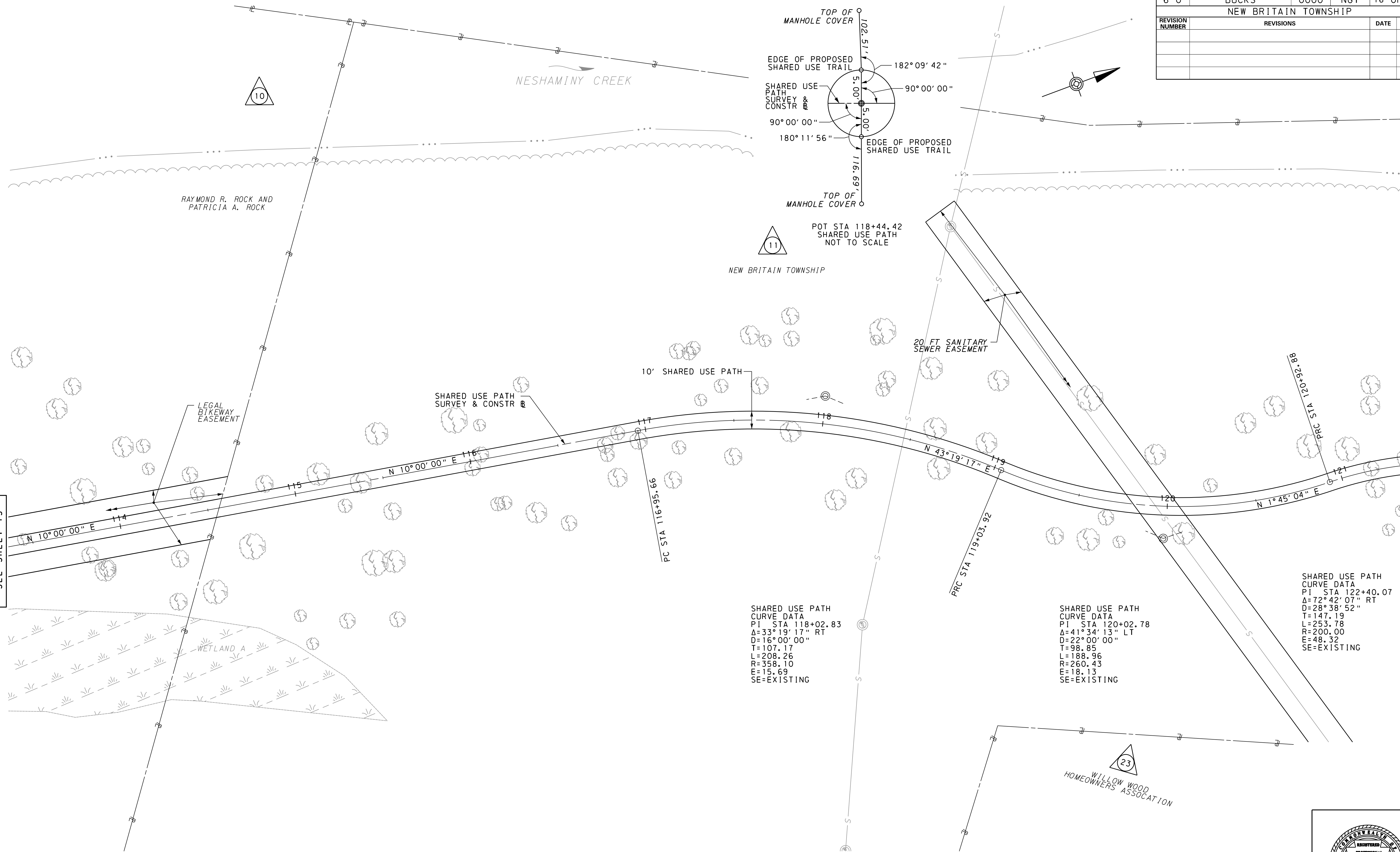


FOR PROFILE, SEE SHEET 21

18-JUL-2019

E:\139780\_Neshaminy Trail Phase\_3\Plan\Lenape\_to\_UpperStare\16-NT3\_LUS\_p.lan07.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	16 OF 21
NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	



TOP OF MANHOLE COVER  
102.51'  
EDGE OF PROPOSED SHARED USE TRAIL  
182°09'42"  
90°00'00"  
5.00'  
5.00'  
90°00'00"  
180°11'56"  
EDGE OF PROPOSED SHARED USE TRAIL  
116.69'  
TOP OF MANHOLE COVER

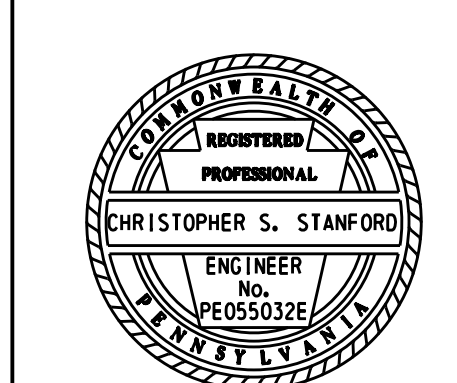
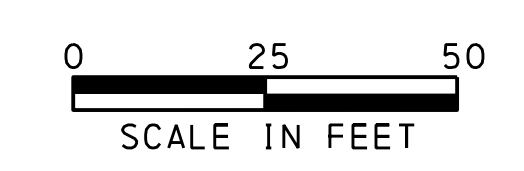
POT STA 118+44.42  
SHARED USE PATH  
NOT TO SCALE

NEW BRITAIN TOWNSHIP

SHARED USE PATH  
CURVE DATA  
PI STA 118+02.83  
 $\Delta=33^{\circ}19'17'' RT$   
 $D=16^{\circ}00'00''$   
 $T=107.17$   
 $L=208.26$   
 $R=358.10$   
 $E=15.69$   
SE=EXISTING

SHARED USE PATH  
CURVE DATA  
PI STA 120+02.78  
 $\Delta=41^{\circ}34'13'' LT$   
 $D=22^{\circ}00'00''$   
 $T=98.85$   
 $L=188.96$   
 $R=260.43$   
 $E=18.13$   
SE=EXISTING

SHARED USE PATH  
CURVE DATA  
PI STA 122+40.07  
 $\Delta=72^{\circ}42'07'' RT$   
 $D=28^{\circ}38'52''$   
 $T=147.19$   
 $L=253.78$   
 $R=200.00$   
 $E=48.32$   
SE=EXISTING



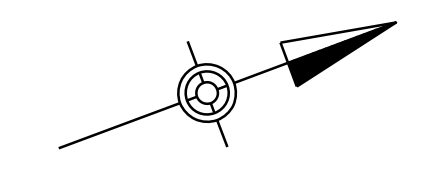
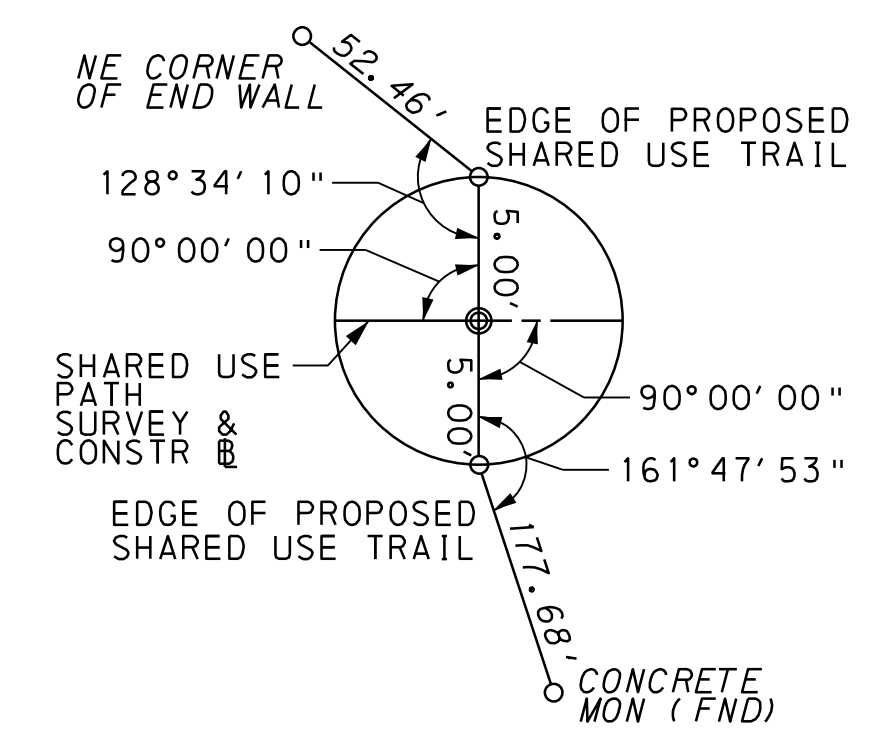
SEE SHEET 15

SEE SHEET 17

19-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	17 OF 21
NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	



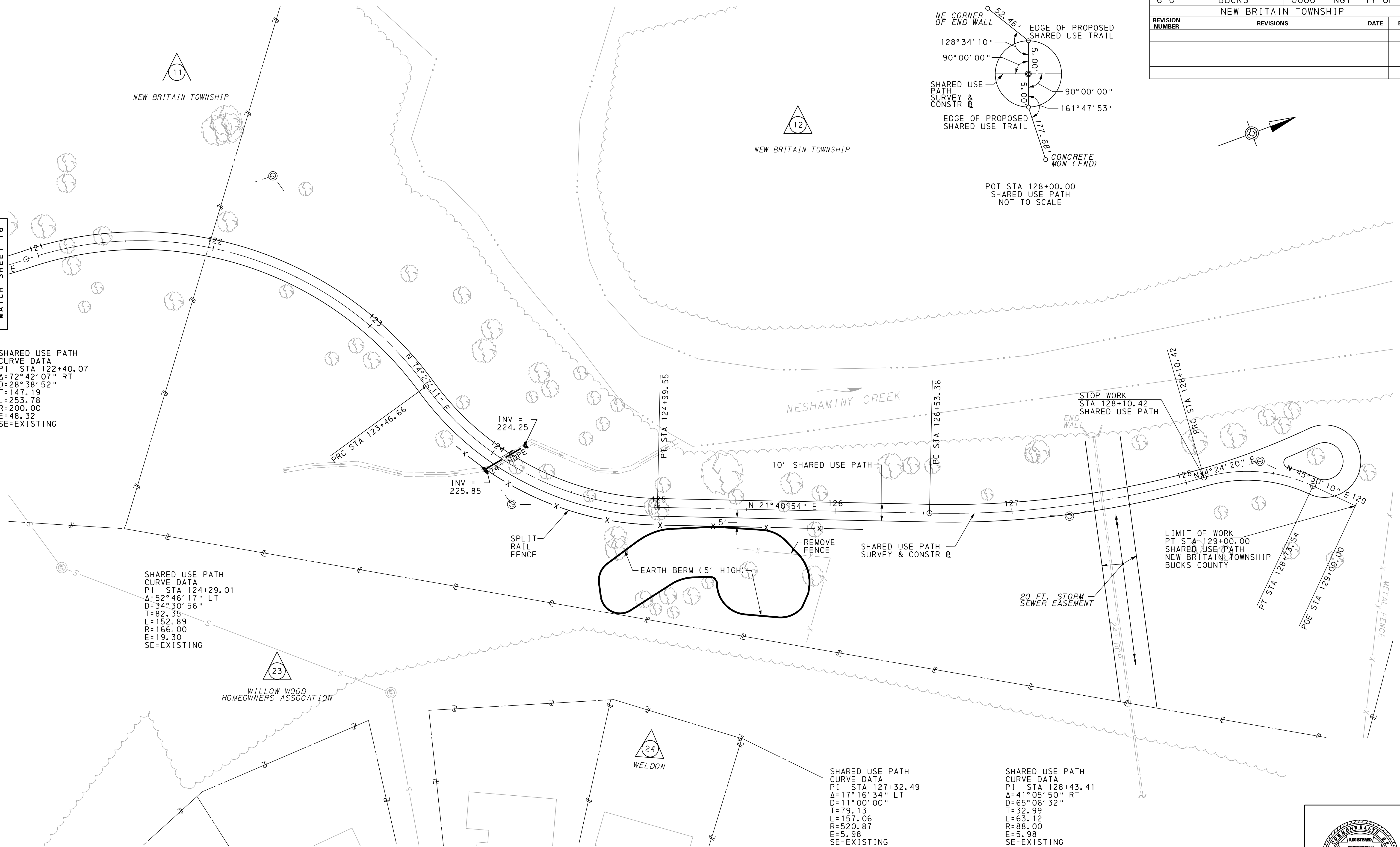
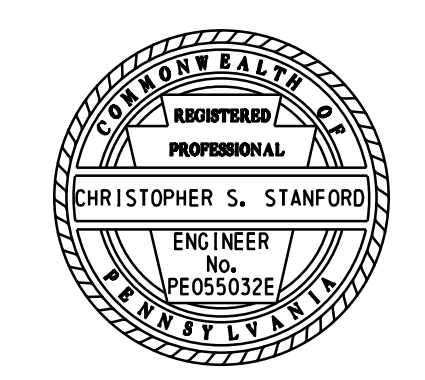
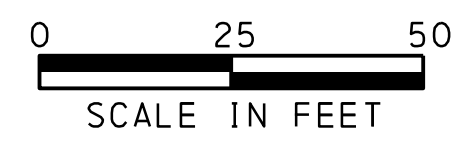
MATCH SHEET 16

SHARED USE PATH  
 CURVE DATA  
 PI STA 122+40.07  
 $\Delta=72^\circ 42' 07''$  RT  
 $D=28^\circ 38' 52''$   
 $T=147.19$   
 $L=253.78$   
 $R=200.00$   
 $E=48.32$   
 SE=EXISTING

SHARED USE PATH  
 CURVE DATA  
 PI STA 124+29.01  
 $\Delta=52^\circ 46' 17''$  LT  
 $D=34^\circ 30' 56''$   
 $T=82.35$   
 $L=152.89$   
 $R=166.00$   
 $E=19.30$   
 SE=EXISTING

SHARED USE PATH  
 CURVE DATA  
 PI STA 127+32.49  
 $\Delta=17^\circ 16' 34''$  LT  
 $D=11^\circ 00' 00''$   
 $T=79.13$   
 $L=157.06$   
 $R=520.87$   
 $E=5.98$   
 SE=EXISTING

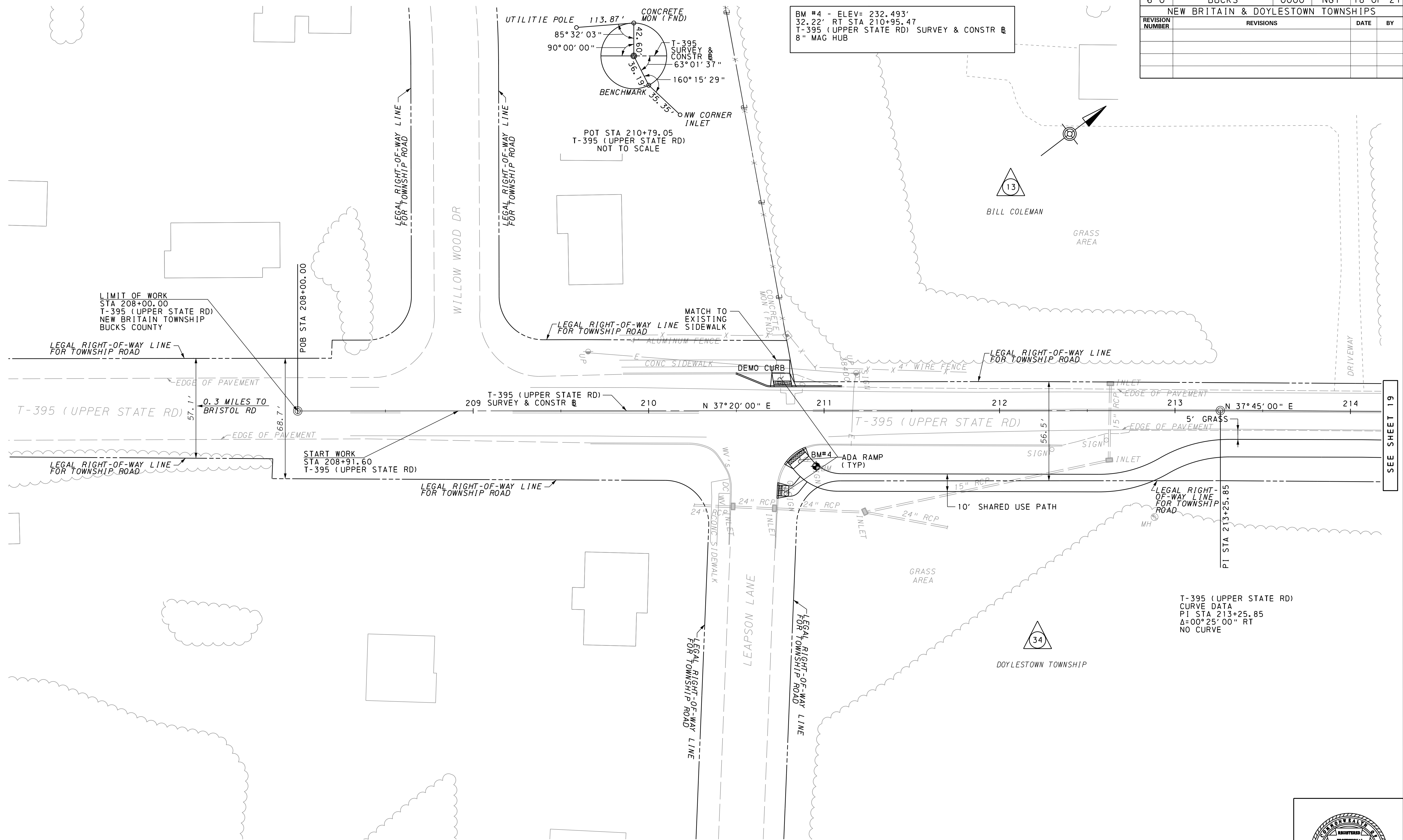
SHARED USE PATH  
 CURVE DATA  
 PI STA 128+43.41  
 $\Delta=41^\circ 05' 50''$  RT  
 $D=65^\circ 06' 32''$   
 $T=32.99$   
 $L=63.12$   
 $R=88.00$   
 $E=5.98$   
 SE=EXISTING



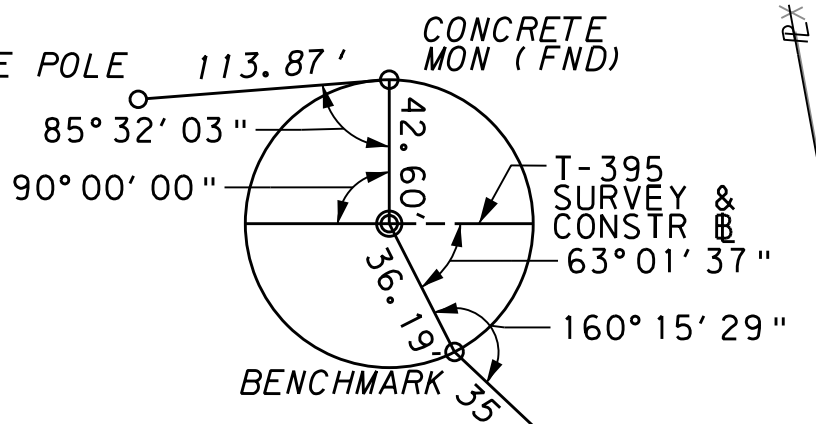
18-JUL-2019

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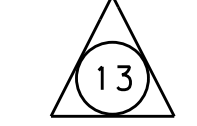
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	18 OF 21
NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



BM #4 - ELEV= 232.493'  
 32.22' RT STA 210+95.47  
 T-395 (UPPER STATE RD) SURVEY & CONSTR  
 8" MAG HUB



POT STA 210+79.05  
 T-395 (UPPER STATE RD)  
 NOT TO SCALE



BILL COLEMAN

GRASS AREA

LIMIT OF WORK  
 STA 208+00.00  
 T-395 (UPPER STATE RD)  
 NEW BRITAIN TOWNSHIP  
 BUCKS COUNTY

POB STA 208+00.00

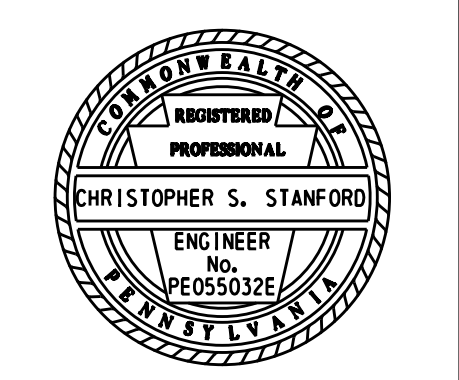
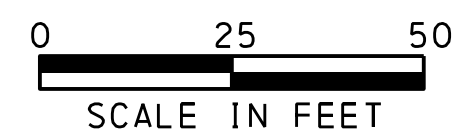
START WORK  
 STA 208+91.60  
 T-395 (UPPER STATE RD)

WILLOW WOOD DR

LEAPSON LANE

T-395 (UPPER STATE RD)  
 CURVE DATA  
 P1 STA 213+25.85  
 Δ=00°25'00" RT  
 NO CURVE

SEE SHEET 19

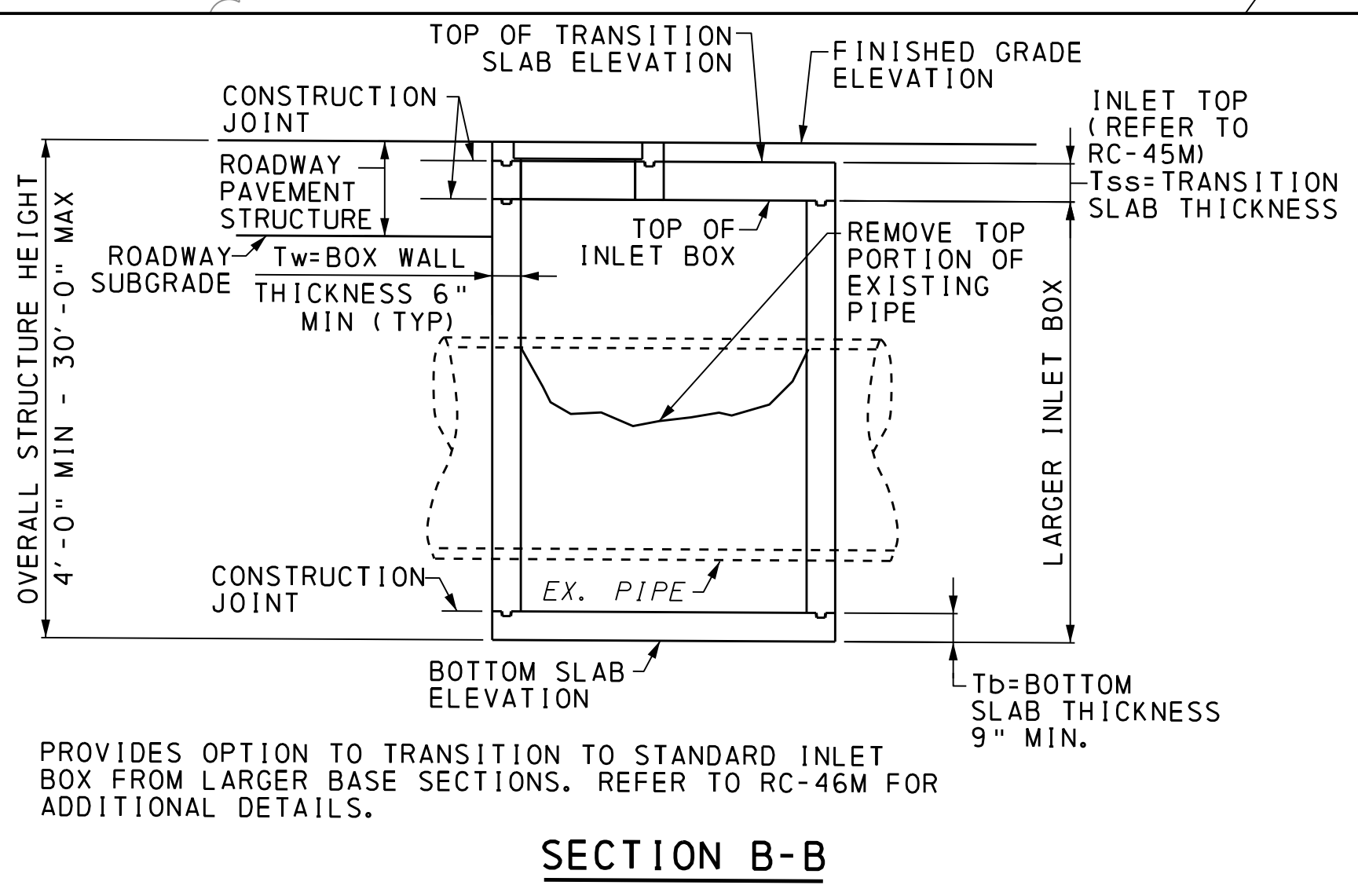
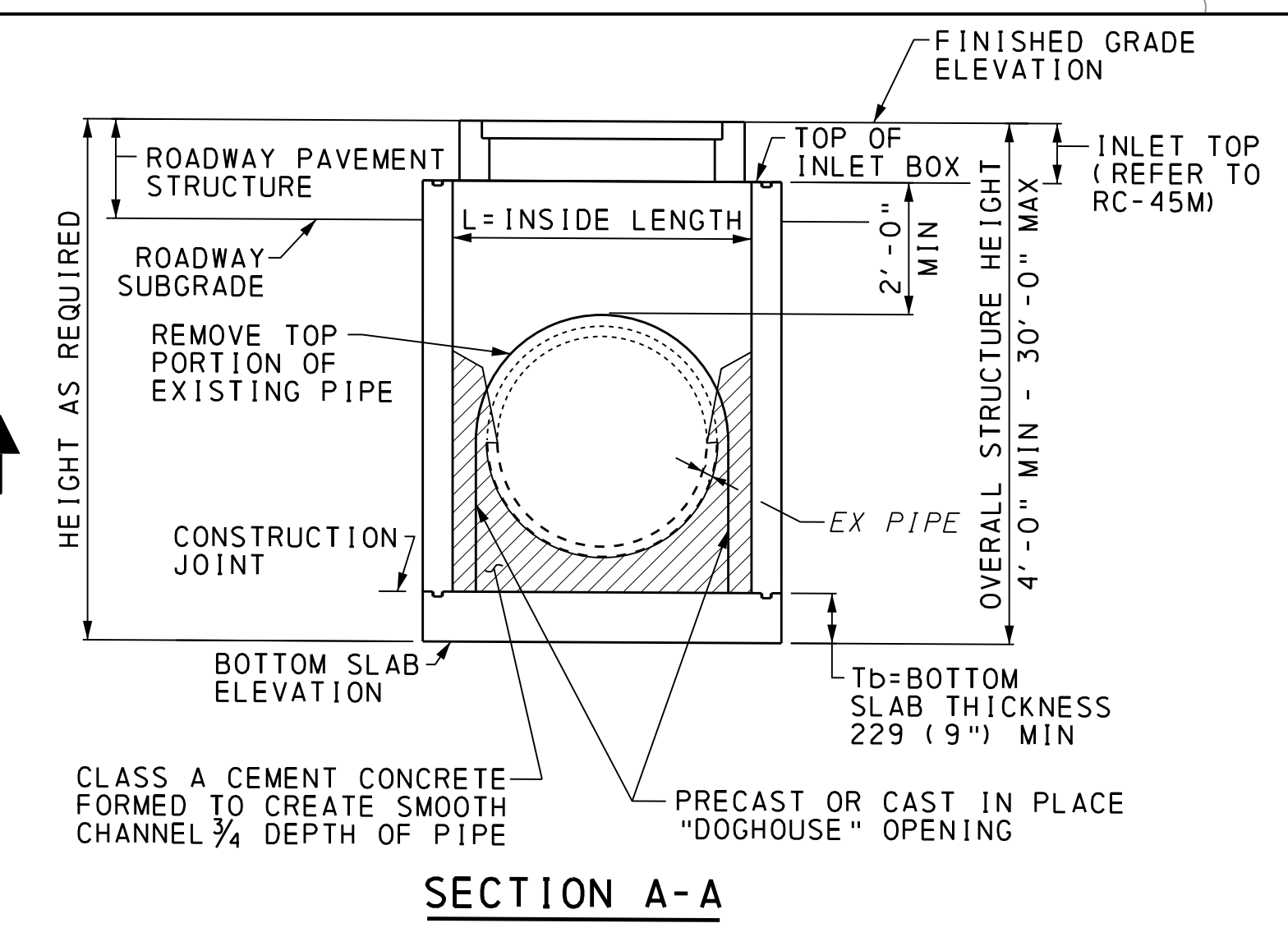
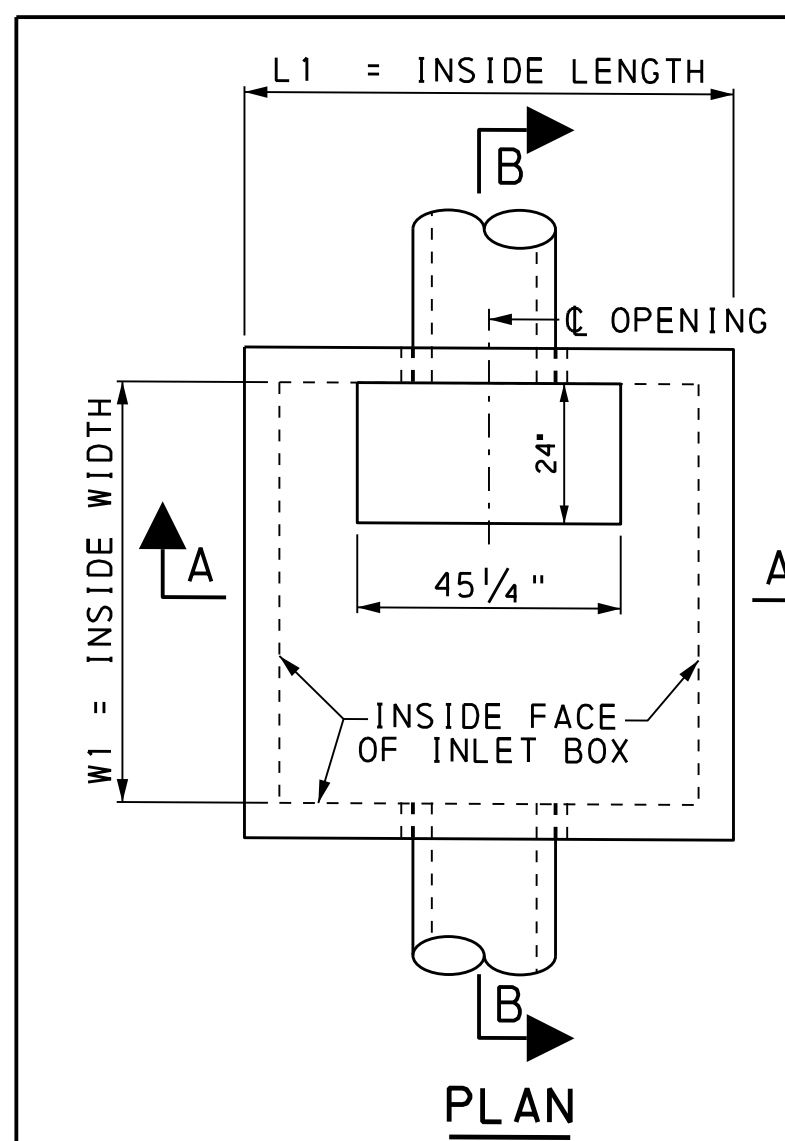
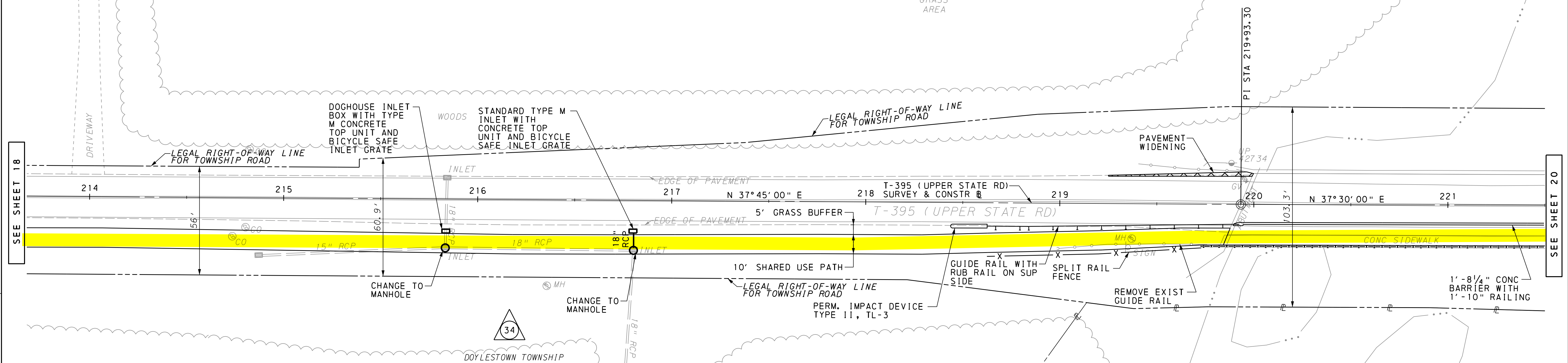
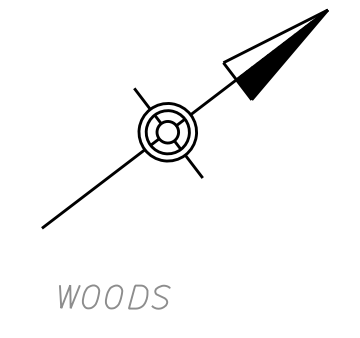
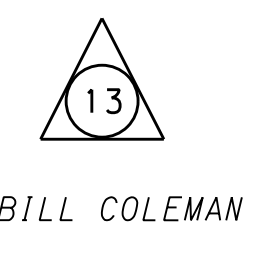
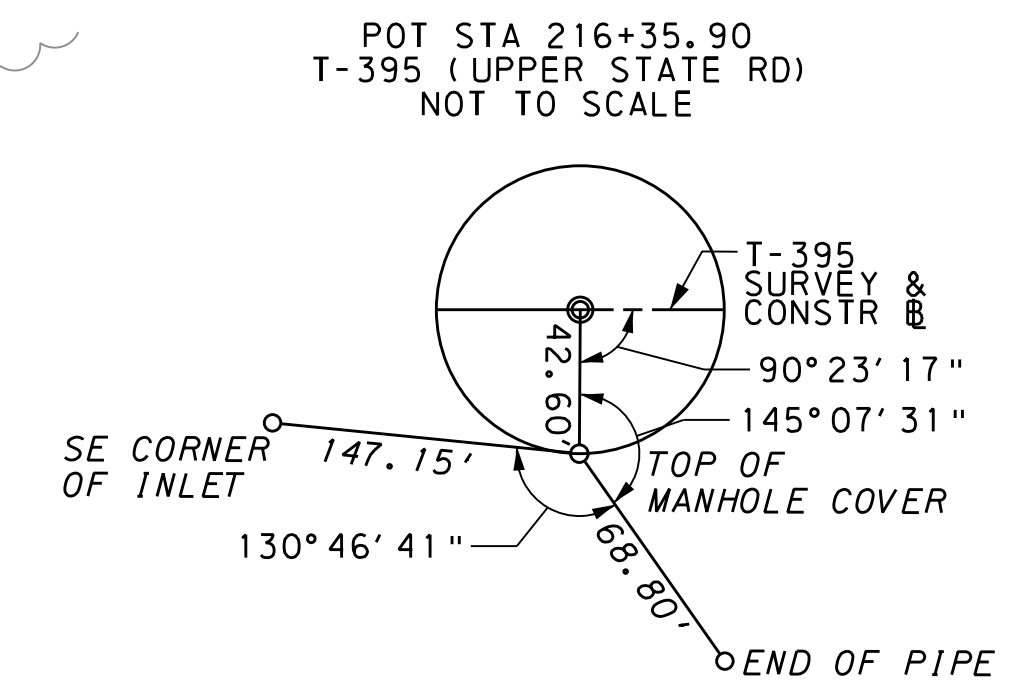




18-JUL-2019

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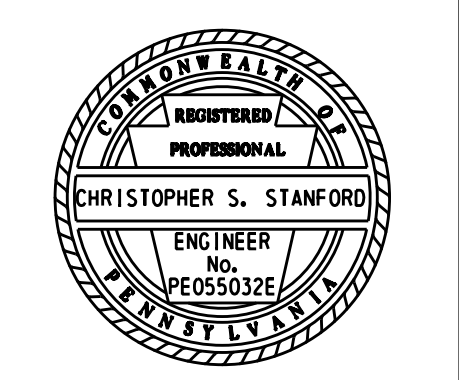
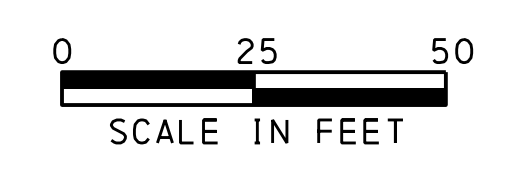
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	19 OF 21
NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



**DOGHOUSE INLET BOX**  
NOT TO SCALE  
ITEM 9000-0003

T-395 (UPPER STATE RD)  
CURVE DATA  
PI STA 219+93.30  
Δ=00°15'00" LT  
NO CURVE

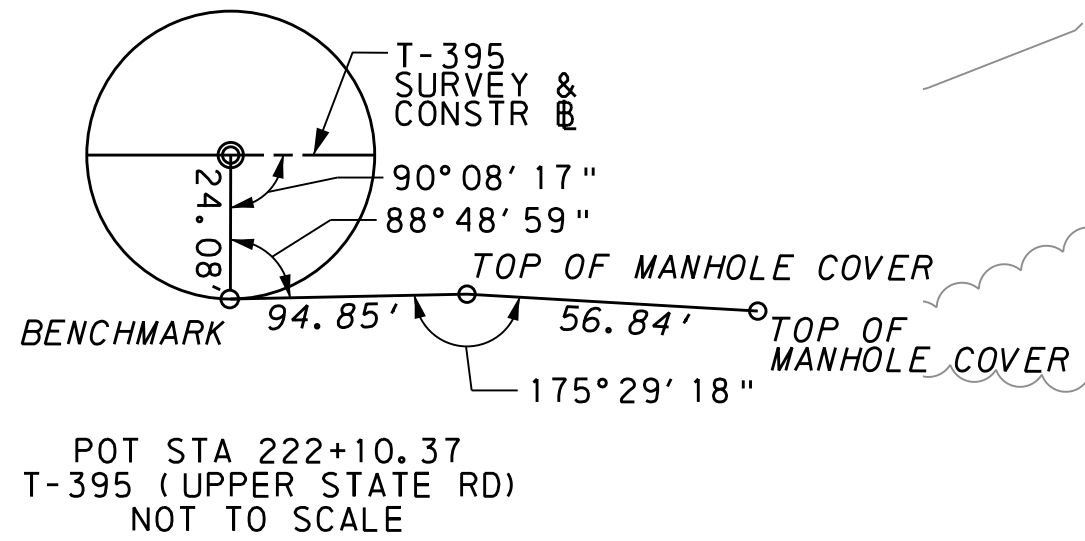
NESHAMINY CREEK



18-JUL-2019

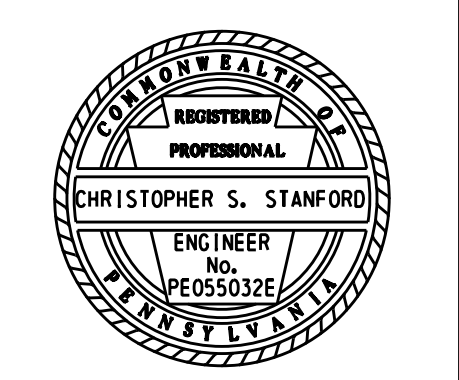
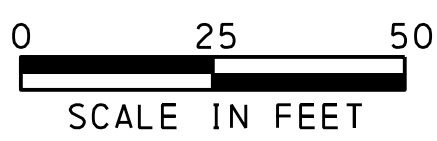
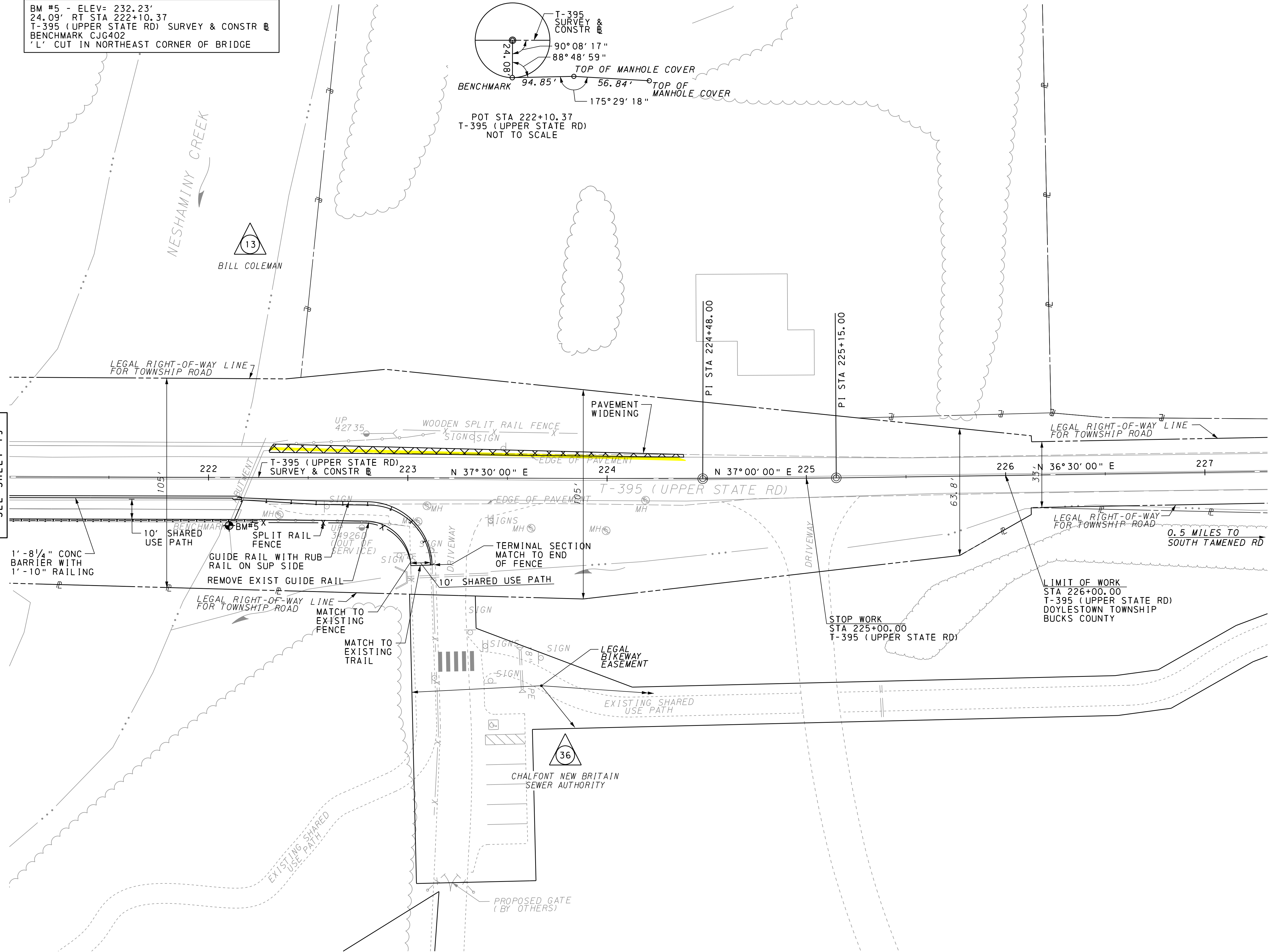
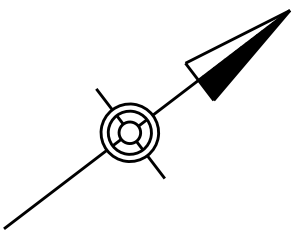
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BM #5 - ELEV= 232.23'  
24.09' RT STA 222+10.37  
T-395 (UPPER STATE RD) SURVEY & CONSTR  
BENCHMARK CJK402  
'L' CUT IN NORTHEAST CORNER OF BRIDGE



POT STA 222+10.37  
T-395 (UPPER STATE RD)  
NOT TO SCALE

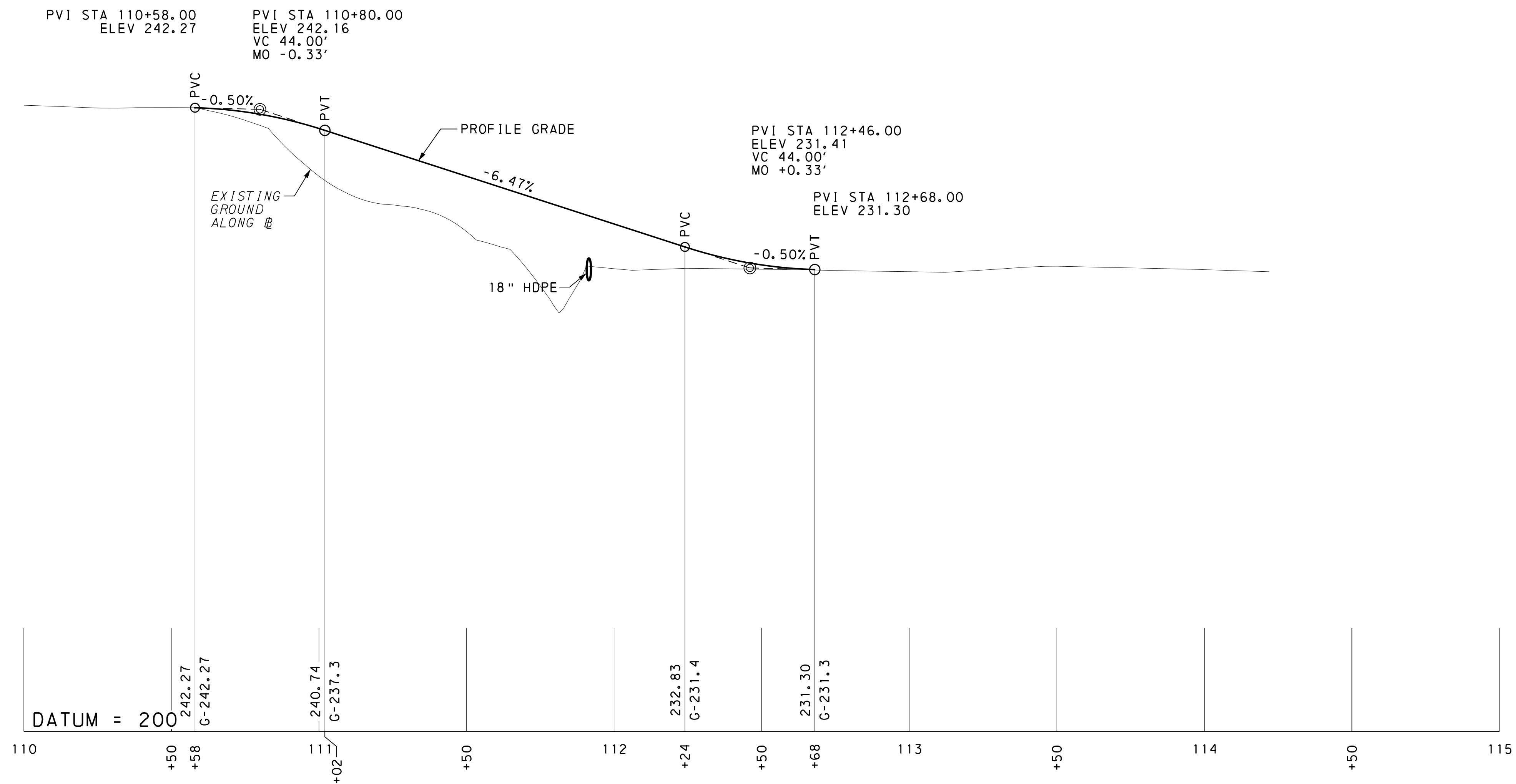
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	20 OF 21
NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	



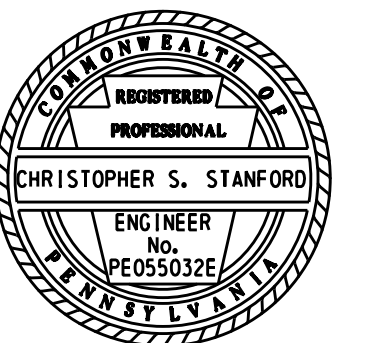
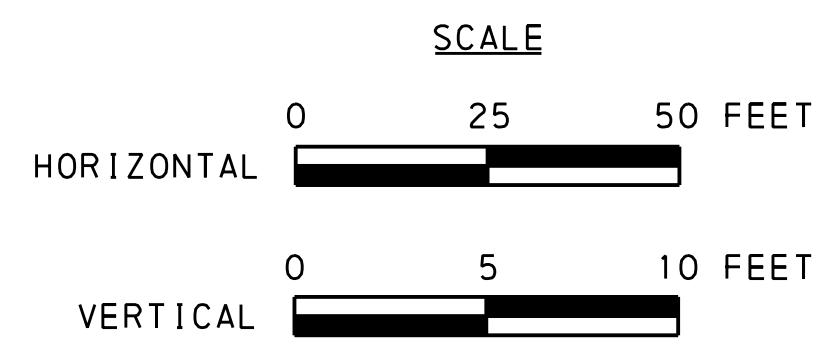
18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	21 OF 21
NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	

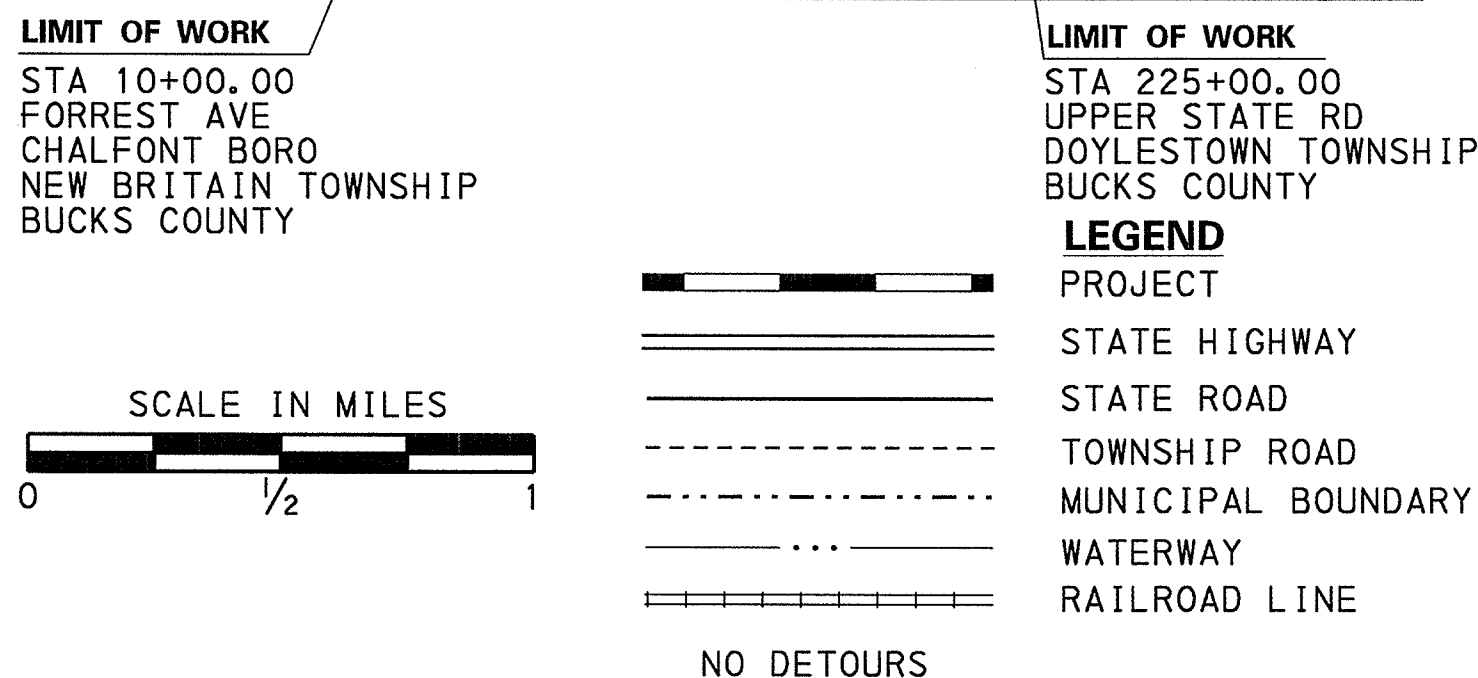
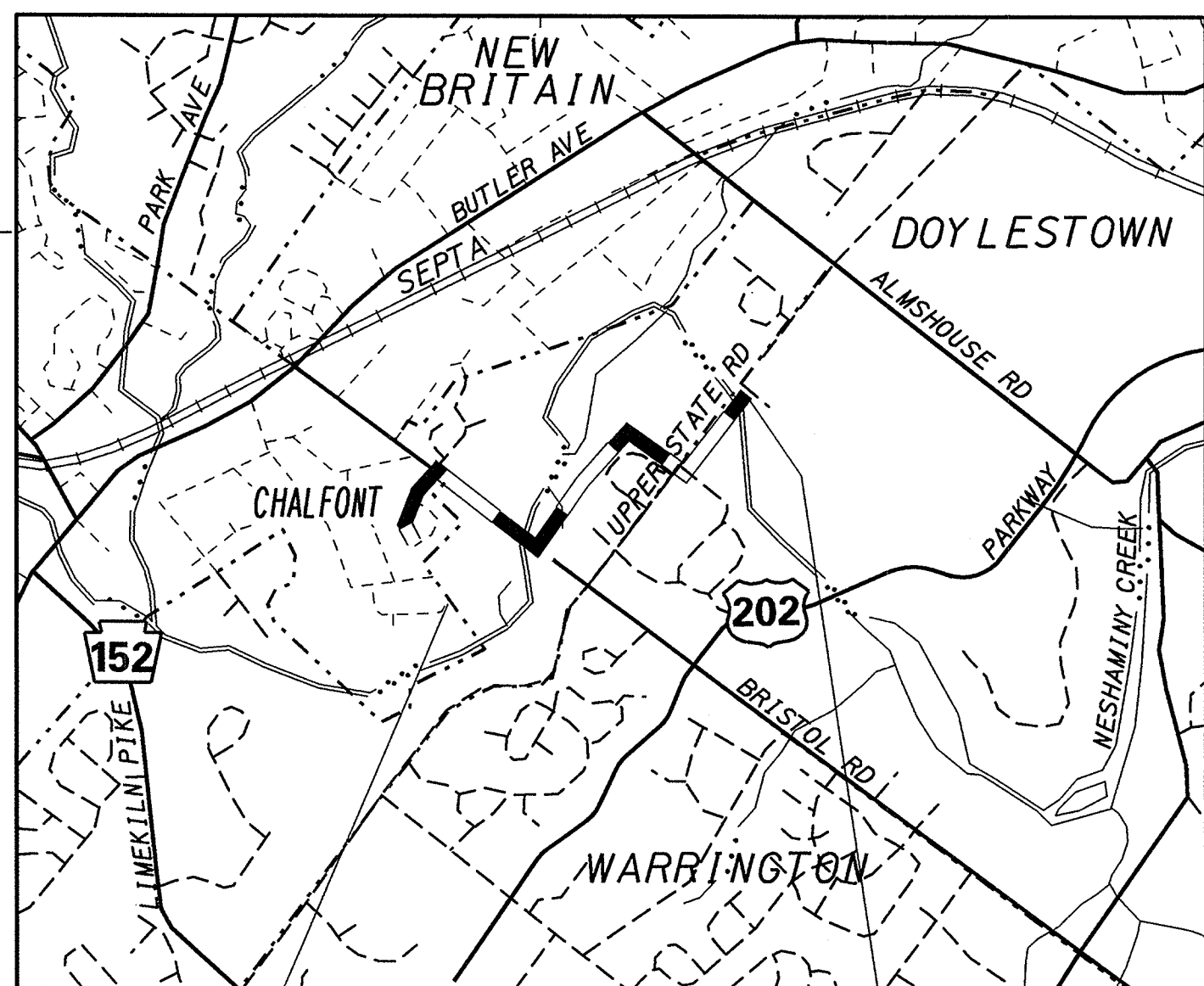


**SHARED USE PATH**



FOR PLAN, SEE SHEET 15

**LOCATION PLAN**



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	1 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.

**GENERAL NOTES:**

- THIS PROJECT HAS UNDER 1 ACRE OF DISTURBANCE; THEREFORE, AN NPDES PERMIT IS NOT REQUIRED.  
CH. 102 LIMIT OF DISTURBANCE = 0.572 ACRES  
ROADWAY MAINTENANCE LIMIT OF DISTURBANCE = 0.285 ACRES  
CH. 105/106 LIMIT OF DISTURBANCE = 1.360 ACRES
- RUNOFF FROM THIS PROJECT DRAINS DIRECTLY TO THE NESHAMINY CREEK. THE NESHAMINY CREEK IS CLASSIFIED AS A TROUT STOCKED FISHERY AND MIGRATORY FISHERY (TSF, MF) UNDER PA CODE, CHAPTER 93, WATER QUALITY STANDARDS.
- NO WORK IS TO OCCUR WITHIN THE NESHAMINY CREEK. INSTALL TRAIL CULVERT PIPES DURING DRY WEATHER CONDITIONS.
- THERE ARE NO NATURAL GEOLOGIC FORMATIONS LOCATED WITHIN THE PROJECT AREA WHICH HAVE THE POTENTIAL TO CAUSE EROSION DUE TO THE PROPOSED CONSTRUCTION ACTIVITIES. (102.4(B)(5)(XII))
- THE PROPOSED CONSTRUCTION ACTIVITIES WILL NOT ALTER THE EXISTING DRAINAGE PATTERNS OR CAUSE A CHANGE IN THE TEMPERATURE OF SURFACE RUNOFF DISCHARGING TO THE WATERS OF THE COMMONWEALTH. THERMAL IMPACTS ARE NOT ANTICIPATED. (102.4(B)(5)(XIII))
- REGULATED STREAMS OR WATERWAYS PRESENT WITHIN THE PROPOSED PROJECT AREA ARE NOT DESIGNATED AS HIGH QUALITY OR EXCEPTIONAL VALUE; THEREFORE A RIPARIAN BUFFER PLAN IS NOT APPLICABLE UNDER PA CODE TITLE 25, CHAPTER 102.14. EXISTING VEGETATED AREAS DISTURBED DURING CONSTRUCTION WILL BE RESTORED AS INDICATED ON THE E&S PLANS. 102.4(B)(5)(XV)
- THIS PROJECT DOES NOT DISCHARGE TO A HIGH QUALITY OR EXCEPTIONAL VALUE STREAM, OR EXCEPTIONAL VALUE WETLANDS; THEREFORE AN ANTI-DEGRADATION ANALYSIS IS NOT REQUIRED. NON DISCHARGE BMP'S HAVE BEEN IMPLEMENTED TO THE GREATEST EXTENT PRACTICABLE FOR THE PROJECT
- STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2:1.
- THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE BUCKS COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR LOCATIONS.
- ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER UNDISTURBED AREAS.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.
- EROSION AND SEDIMENT BMP'S MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMP'S.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMP'S MUST BE STABILIZED IMMEDIATELY.
- AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER AND THE BUCKS COUNTY CONSERVATION DISTRICT TO A PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. AT 1-800-242-1776 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.
- DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% (PERCENT) VEGETATIVE OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- AT STREAM CROSSING, A 50-FOOT BUFFER SHALL BE MAINTAINED. ON BUFFERS, CLEARINGS, SOD DISTURBANCES AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITY SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES.
- UNTIL A SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.
- SEDIMENT REMOVED FROM BMP'S SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.
- ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.), AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.

- CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE). 102.4(B)(5)(XI)
- CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL". 102.4(B)(5)(XI)
- ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST PRODUCE DOCUMENTATION TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. 102.4(B)(5)(XI)
- ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECT TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING WILL BE PERFORMED IN ACCORDANCE WITH DEP POLICY. 102.4(B)(5)(XI)
- FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THESE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM 102.4(B)(5)(XI)
- PERFORM CONCRETE WASHOUT AT THE SOURCE OF CONCRETE IF A SUITABLE CONCRETE WASHOUT LOCATION CAN NOT BE FOUND ON SITE.

**CALL BEFORE YOU DIG !**

PENNSYLVANIA LAW REQUIRES  
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE  
AND 10 WORKING DAYS IN DESIGN STAGE  
BEFORE YOU DIG CALL  
THE PA ONE CALL SYSTEM TELEPHONE NUMBER.



1-800-242-1776

**PA ONE CALL SERIAL NUMBERS**

20153560405 - NEW BRITAIN TOWNSHIP  
20153560400 - NEW BRITAIN TOWNSHIP

**LEGEND:**

- 255--- EXISTING CONTOUR
- 255— PROPOSED CONTOUR
- FS — COMPOST FILTER SOCK
- LOD — LIMIT OF DISTURBANCE LINE
- 100 YEAR FLOODPLAIN
- - - - - DRAINAGE AREA BOUNDARY
- P — PROPOSED STORM DRAINAGE PIPE
- PROPOSED MANHOLE
- PROPOSED INLET
- (Ua) — SOIL DIVIDES AND SOIL TYPE
- (MB) — EROSION CONTROL MULCH BLANKET (ECMB)
- (RCE) — ROCK CONSTRUCTION ENTRANCE
- (IP1) (IP2) (IP3) — INLET PROTECTION TYPE 1, TYPE 2, TYPE 3

**BUCKS COUNTY CONSERVATION DISTRICT**

1456 FERRY ROAD, SUITE 704  
DOYLESTOWN, PA 18901  
(215) 345-7577

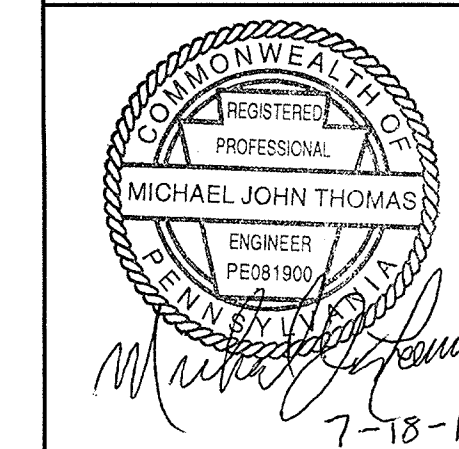
**SHEET INDEX**

DESCRIPTION	SHEET NO.
LOCATION MAP AND GENERAL NOTES	1
CONSTRUCTION DETAILS AND NOTES	2-6
PLAN SHEETS	7-14
PPC PLAN / MAINTENANCE PROGRAM	15

**EROSION & SEDIMENT  
POLLUTION CONTROL PLAN  
GENERAL NOTES**

**Michael Baker**

**INTERNATIONAL**  
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FORT WASHINGTON, PA 19034-3234  
Phone: (215) 444-0888 • M.BAKER@INTL.COM



7-18-19

E:\139780\_Neshaminy Trail Phase\_3\PI\ot\E&S\Lenape\_to\_UpperState\01-NT3-LUS-E&S-Log\epub\019

**SEEDING CHART**

FORMULA AND SPECIES	MINIMUM %			SEEDING LBS PER 1000 SY	SOIL SUPPLEMENTS		MULCHING TONS PER AC
	PURITY	GERMINATION	PURE LIVE SEED		LIMESTONE	10-20-20 FERTILIZER	
					LBS PER 1000 SY	LBS PER 1000 SY	
FORMULA B: PERENNIAL RYEGRASS MIXTURE - CREEPING RED FESCUE OR CHEWINGS FESCUE & KENTUCKY BLUEGRASS MIXTURE	97	80-90	78-88	42	800	140	3.0
FORMULA E: ANNUAL RYEGRASS	95	90	86	10.0	800	140	3.0
FORMULA L: HARD FESCUE MIXTURE, CREEPING RED FESCUE, AND ANNUAL RYEGRASS	95-97	85-90	81-87	48	800	140	3.0
FORMULA D: TALL FESCUE, CREEPING RED FESCUE OR CHEWINGS FESCUE, AND ANNUAL RYEGRASS	95-97	85-90	81-87	50	800	140	3.0

FORMULA L NOT CONSIDERED STABILIZED UNTIL IT GERMINATES.  
 ITEM 0804-0011 - SEEDING AND SOIL SUPPLEMENTS - FORMULA B  
 ITEM 0804-0014 - SEEDING AND SOIL SUPPLEMENTS - FORMULA E  
 ITEM 0804-0020 - SEEDING AND SOIL SUPPLEMENTS - FORMULA L  
 ITEM 0804-0013 - SEEDING AND SOIL SUPPLEMENTS - FORMULA D  
 ITEM 0805-0022 - MULCHING - STRAW

- PLACE ALL SEEDING, SOIL SUPPLEMENTS AND MULCHING ITEMS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MOST RECENT VERSION OF PENNDOT PUBLICATION 408, SECTIONS 804 AND 805 INCLUDED IN APPENDIX C OF THIS REPORT.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- SPREAD SEEDS AT THE RATES SPECIFIED WITHIN THE FOLLOWING DATES:  
 FORMULA E - MARCH 15 TO OCTOBER 15  
 FORMULA B, FORMULA L, FORMULA D - MARCH 15 TO JUNE 1 AND AUGUST 1 TO OCTOBER 15
- SEED AND MULCH STOCKPILES IMMEDIATELY.
- UPON CESSATION OR TEMPORARY CESSATION OF EARTH DISTURBANCE ACTIVITIES, OR ANY STAGE THEREOF, THE PROJECT MUST BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.

**SEQUENCE OF CONSTRUCTION:**

ALL EARTH DISTURBANCE ACTIVITIES WILL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE OF CONSTRUCTION. ANY SECTION OF THE PROJECT MAY BE COMPLETED AT ANYTIME. REFER TO THE TRAFFIC CONTROL PLAN FOR BRIDGE CONSTRUCTION STAGING. FACILITIES ARE INSTALLED BEGINNING AT THE DOWNSTREAM END AND WORKING UPSTREAM. COMPLETE ALL EARTH DISTURBANCE ACTIVITIES IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. DEVIATION FROM THIS SEQUENCE MUST BE APPROVED IN WRITING FROM BUCKS COUNTY CONSERVATION DISTRICT OR BY PADEP PRIOR TO IMPLEMENTATION. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES MUST NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.

- PLACE ANY ADVANCE ROADWAY WARNING SIGNS AND TRAFFIC CONTROL DEVICES FOR TRAIL CONSTRUCTION.
- ACCESS SITE AS SHOWN ON THE E&S PLANS. INSTALL E&S CONTROLS AND ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE E&S PLANS. STAKE THE LIMIT OF DISTURBANCE BOUNDARY PRIOR TO ANY CLEARING AND GRUBBING.
- CLEAR AND GRUB WITHIN THE LIMIT OF DISTURBANCE TO THE MINIMUM EXTENT POSSIBLE AND ONLY AS REQUIRED FOR THE CONSTRUCTION OF THE SHARED USE PATH, AND ADA COMPLIANT CURB RAMPS. ONLY GRUB PORTIONS OF LAND THAT CAN BE STABILIZED THE SAME DAY.
- EXCAVATE AS NEEDED AND INSTALL RIPRAP APRONS, END SECTIONS, AND TRAIL CROSS PIPES AT STATIONS 111+91 AND 124+07 AS SHOWN ON THE E&S CONTROL PLANS. CONSTRUCT BEGINNING AT THE DOWNSTREAM END AND WORKING UPSTREAM, INCLUDING RIPRAP APRONS AND PIPES. ONLY EXCAVATE TRENCH FOR LENGTH OF PIPE WHICH CAN BE INSTALLED IN ONE DAY. DEWATER WORK AREAS AS NEEDED USING A PUMPED WATER FILTER BAG, IF REQUIRED. SEED AND INSTALL EROSION CONTROL MULCH BLANKET AND/OR RIPRAP AS INDICATED ON THE E&S PLANS.
- CONSTRUCT PROPOSED DRAINAGE ALONG UPPER STATE ROAD AS SHOWN ON THE CONSTRUCTION PLANS.
- CONSTRUCT SHARED USE PATH AND ADA COMPLIANT CURB RAMPS AS SHOWN ON THE CONSTRUCTION PLANS. ONLY EXCAVATE SHARED USE PATH AND ADA COMPLIANT CURB RAMP AREAS THAT CAN BE STABILIZED WITH CRUSHED STONE THE SAME DAY. INSTALL SPLIT RAIL FENCING AND PROPOSED SIGNS AS DIRECTED ON THE CONSTRUCTION AND SIGNING AND PAVEMENT MARKING PLANS. DO NOT EXPOSE SOIL OUTSIDE OF THE LIMIT OF DISTURBANCE. IMMEDIATELY STABILIZE ALL DISTURBED AREAS ACCORDING TO THE E&S PLAN STABILIZATION NOTES.
- FINAL STABILIZE THIS SECTION AS OUTLINED IN THE STABILIZATION NOTES AS SHOWN ON THE E&S PLANS.
- UPON FINAL STABILIZATION OF WORK AND STABILIZATION OF UPSTREAM DRAINAGE AREAS, REMOVE TEMPORARY E&S CONTROLS. AN AREA WILL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- REMOVE TEMPORARY TRAFFIC CONTROL DEVICES.

**STABILIZATION NOTES:**

- PLACE ALL SEEDING, SOIL SUPPLEMENTS AND MULCHING ITEMS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MOST RECENT VERSION OF PADOT PUBLICATION 408, SECTIONS 804 AND 805 OR OTHER APPROVED SPECIAL PROVISIONS.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE O/RP MUST STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS. DURING NON-GERMINATING PERIODS (OCTOBER 15 TO MARCH 15), MULCH MUST BE APPLIED AT THE SPECIFIED RATES.
- SPREAD SEEDS AT THE RATES SPECIFIED WITHIN THE FOLLOWING DATES:  
 FORMULA E - MARCH 15 TO OCTOBER 15  
 FORMULA B, FORMULA L- MARCH 15 TO JUNE 1 AND AUGUST 1 TO OCTOBER 15.
- SEED AND MULCH STOCKPILES IMMEDIATELY.
- UPON CESSATION OR TEMPORARY CESSATION OF EARTH DISTURBANCE ACTIVITIES, OR ANY STAGE THEREOF, THE PROJECT MUST BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
- AN AREA WILL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

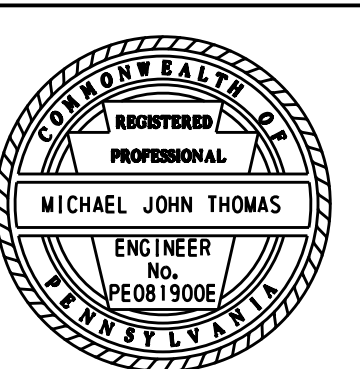
**E&S SEQUENCE OF CONSTRUCTION GENERAL NOTES:**

- LIMIT EARTH DISTURBANCE FOR TRAIL CONSTRUCTION TO AREAS WHICH CAN BE GRADED AND STABILIZED WITH STONE IN THE SAME WORKING DAY. IMPLEMENT DAILY STABILIZATION ACTIVITIES FOR ALL DISTURBED AREAS (STONE OR SEEDING) PER THE E&S PLAN. CLEARING ACTIVITIES MAY PROCEED IN ADVANCE IF PREFERRED.
- PRIOR TO ANY EARTH MOVING ACTIVITIES, PROPER TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL FACILITIES WILL BE INSTALLED.
- COMPLETE TRAIL CONSTRUCTION USING LOW LOAD BEARING EQUIPMENT TO MINIMIZE SOIL COMPACTION.
- THE E&S BMP'S INSTALLED IN THE FOLLOWING SEQUENCE WILL REMAIN IN PLACE UNTIL THE ENTIRE TRIBUTARY AREA TO EACH BMP HAS ACHIEVED 70% UNIFORM VEGETATIVE COVER, OR HAS BEEN STABILIZED SUFFICIENTLY TO RESIST EROSION. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR WILL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES.
- UPON STABILIZATION OF THE TRIBUTARY AREA OF EACH E&S BMP, REMOVE THE BMP AND PERMANENTLY STABILIZE THE AREA WHERE THE BMP WAS LOCATED.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0000	NGT	2 OF 15	
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS					
REVISION NUMBER	REVISIONS			DATE	BY

\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.

**EROSION & SEDIMENT POLLUTION CONTROL PLAN DETAILS-1**



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	3 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.

SOIL TYPE	NAME AND TEXTURE	HYDRO. GROUP	DEPTH TO WATER TABLE ( IN. )	DEPTH TO BEDROCK ( IN. )	SLOPE (%)	CONSTRUCTION LIMITATIONS
AbB	ABBOTTSTOWN SILT LOAM	D	6-18	40-60	3-8	EASILY ERODIBLE, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST, SUBJECT TO WETNESS
BeB	BEDINGTON CHANNERY SILT LOAM	B	>80	60-80	3-8	SUBJECT TO DROUGHT, EASILY ERODIBLE, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST ACTION
Bo	BOWMANSVILLE-KNAUERS SILT LOAMS	C/D	0-18	72-99	0-3	SUBJECT TO FLOODING, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST ACTION, SUBJECT TO PONDING, SUBJECT TO WETNESS
BwB	BUCKINGHAM SILT LOAM	C/D	6-18	80-99	3-8	EASILY ERODIBLE, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST, SUBJECT TO WETNESS
CbB	CHALFONT SILT LOAM	D	6-18	42-99	3-8	EASILY ERODIBLE, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST, SUBJECT TO PONDING, SUBJECT TO WETNESS
CyB	CULLEOKA-WEIKERT CHANNERY SILT LOAMS	B	>80	20-40	3-8	SUBJECT TO DROUGHT, EASILY ERODIBLE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST,
CyC	CULLEOKA-WEIKERT CHANNERY SILT LOAMS	B	>80	20-40	8-15	SUBJECT TO DROUGHT, EASILY ERODIBLE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST,
DdA	DOYLESTOWN SILT LOAM	C/D	0-6	60-72	0-3	SUBJECT TO DROUGHT, EASILY ERODIBLE, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST, SUBJECT TO WETNESS
DdB	DOYLESTOWN SILT LOAM	C/D	0-6	60-72	3-8	SUBJECT TO DROUGHT, EASILY ERODIBLE, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST, SUBJECT TO WETNESS
LgB	LANSDALE LOAM	B	>80	42-60	3-8	SUBJECT TO DROUGHT, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST ACTION
LKA	LAWRENCEVILLE SILT LOAM	C	18-36	48-99	0-3	EASILY ERODIBLE, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, SUBJECT TO FROST, SUBJECT TO WETNESS
LKB	LAWRENCEVILLE SILT LOAM	C	18-36	48-99	3-8	EASILY ERODIBLE, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, SUBJECT TO FROST, SUBJECT TO WETNESS
PIE	PENN-KLINESVILLE CHANNERY SILT LOAMS, EXTREMELY STONY	B	>80	10-20	25-45	SUBJECT TO DROUGHT, EASILY ERODIBLE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST
PnC	PENN-LANSDALE COMPLEX	B	>80	20-40	8-15	SUBJECT TO DROUGHT, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST ACTION
PnD	PENN-LANSDALE COMPLEX	B	>80	20-40	15-25	SUBJECT TO DROUGHT, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST ACTION
ReB	READINGTON SILT LOAM	C	18-36	40-60	3-8	EASILY ERODIBLE, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST, SUBJECT TO WETNESS
Ro	ROWLAND SILT LOAM	C	12-36	60-99	0-3	EASILY ERODIBLE, SUBJECT TO FLOODING, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, POOR SOURCE OF TOPSOIL, SUBJECT TO FROST, SUBJECT TO WETNESS
UfuB	URBAN LAND	-	>80	10-99	0-8	SHALLOW DEPTH TO SATURATED ZONE, SUBJECT TO FROST
UsB	URBAN LAND- LAWRENCEVILLE COMPLEX	-	>80	10-99	0-8	EASILY ERODIBLE, SHALLOW DEPTH TO SATURATED ZONE, LOW STRENGTH, SUBJECT TO FROST, SUBJECT TO WETNESS

SOURCE: NRCS WEB SOIL SURVEY

**HYDRIC SOILS:**

ACCORDING TO THE SOIL REPORT AND MAP (REPORT APPENDIX B), A PORTION OF THE PROJECT SITE IS MADE UP OF SOILS THAT ARE RATED AS SLIGHTLY HYDRIC: ABBOTTSTOWN SILT LOAM, KNAUERS SILT LOAM, BUCKINGHAM SILT LOAM, PENN-KLINESVILLE CHANNERY SILT LOAM, AND PENN-LANSDALE COMPLEX, AND ONE SOIL RATED AS HYDRIC: DOYLESTOWN SILT LOAM. THE REMAINDER OF SOILS ARE RATED AS NONHYDRIC. EARTH DISTURBANCE IN HYDRIC SOIL AREAS WILL BE MINIMIZED.

**SOIL CONSTRUCTION RESOLUTIONS:**

**STONINESS / SHALLOW BEDROCK:**

1. WHEN PERIMETER CONTROLS CANNOT BE PROPERLY ANCHORED IN STONY SOILS, ALTERNATE SEDIMENT BARRIERS INCLUDING STRAW BALES OR ROCK BERMS WILL BE UTILIZED. ALTERNATE CONTROLS WILL BE INSTALLED IN ACCORDANCE WITH THE PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.
2. WHEN VERY STONY SOILS ARE ENCOUNTERED IN THE CONSTRUCTION OF GRASSED CONVEYANCE FACILITIES, SEDIMENT REMOVAL FACILITIES, OR LAWN AREAS, THE LARGE STONES WILL BE REMOVED AND REPLACED WITH TOPSOIL CAPABLE OF SUSTAINING EROSION RESISTANT VEGETATION AS SPECIFIED.

**ACIDIC SOILS:**

1. IF DETERMINED THAT VEGETATION CANNOT GROW DUE TO ACIDIC SOILS, A SOIL TEST WILL BE PERFORMED TO DETERMINE A NEW SEED MIX FOR THE GIVEN CONDITION AND PROPOSED USE. SOIL AMENDMENT WITH LIME WILL BE PERFORMED AND THE LIME RATE WILL BE SPECIFIED BASED ON THE SOIL TEST.

**LOW MOISTURE HOLDING CAPACITY:**

1. AN APPROPRIATE SEED MIX, TOLERANT TO DRY CONDITIONS WILL BE SPECIFIED FOR THESE SOILS. SOILS WILL BE IRRIGATED AS REQUIRED TO ACHIEVE INITIAL VEGETATIVE COVER.

**HIGH WATER TABLE:**

1. AS NECESSARY, IN SOILS WITH A HIGH WATER TABLE, TEMPORARY DEWATERING FACILITIES MAY BE REQUIRED FOR EXCAVATION AREAS. CONTRACTOR TO PROVIDE AN APPROVED METHOD TO PROPERLY DEWATER EXCAVATION AREAS.
2. EXCAVATION OF SOILS WITH A HIGH WATER TABLE WILL BE LIMITED TO THE ANNUAL DRY SEASON IF NECESSARY.

**SHALLOW RESTRICTIVE FEATURE:**

1. WHERE NECESSARY IN SOILS WITH A SHALLOW DEPTH TO A RESTRICTIVE FEATURE, ALTERNATE EXCAVATION TECHNIQUES MAY BE REQUIRED SUCH AS, BUT NOT LIMITED TO, DRILLING, HAMMERING, OR BLASTING OF THE EXISTING SOIL TO GET THE REQUIRED EXCAVATION DEPTH. NOTIFY PROJECT ENGINEER IF ALTERNATIVE METHODS ARE REQUIRED FOR EXCAVATION.

**EROSION HAZARD:**

1. WHERE NECESSARY IN SOILS WITH HIGH EROSION HAZARD RATINGS, TEMPORARY STABILIZATION METHODS WILL BE IMPLEMENTED, INCLUDING BUT NOT LIMITED TO ROCK, SLOPE REINFORCEMENTS, MULCH BLANKETS, STRAW BALES, OR ROCK BERMS. ALL SEDIMENT MUST REMAIN WITHIN THE PROJECT AREA AND ALTERNATE CONTROLS WILL BE INSTALLED IN ACCORDANCE WITH THE PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.

**STEEP SLOPES:**

1. CONTRACTOR TO TRACK SLOPE PERPENDICULAR TO FLOW DIRECTION TO BREAK UP CONCENTRATED FLOW PRIOR TO THE STABILIZATION OF STEEP SLOPES. ROCK, TURF REINFORCEMENT MATTING OR OTHER FORMS SLOPE REINFORCEMENT MAY BE REQUIRED FOR SLOPE STABILIZATION.

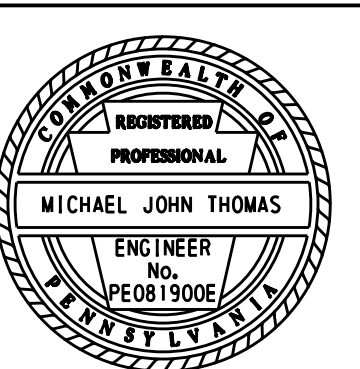
**PONDING:**

1. PONDED AREAS WHICH WILL REQUIRE PUMPING / DEWATERING MUST BE PUMPED THROUGH A PUMPED WATER FILTER BAG OR OTHER APPROVED FILTRATION DEVICE. PUMPED WATER FILTER BAGS TO BE INSTALLED PER E&S PLAN DETAILS AND DISCHARGE TO AN APPROVED LOCATION.

**SOIL COMPACTION:**

1. CONTRACTOR TO MINIMIZE SOIL COMPACTION IN DISTURBED AREAS BY UTILIZING LOW-LOAD BEARING, RUBBER TRACKED EQUIPMENT WHEREVER POSSIBLE. CONTRACTOR TO REMAIN WITHIN PROTECTIVE FENCE LIMITS. LARGE CLEARED AREAS AND STOCKPILING OF TOPSOIL SHOULD BE MINIMIZED.

**EROSION & SEDIMENT POLLUTION CONTROL PLAN DETAILS-2**

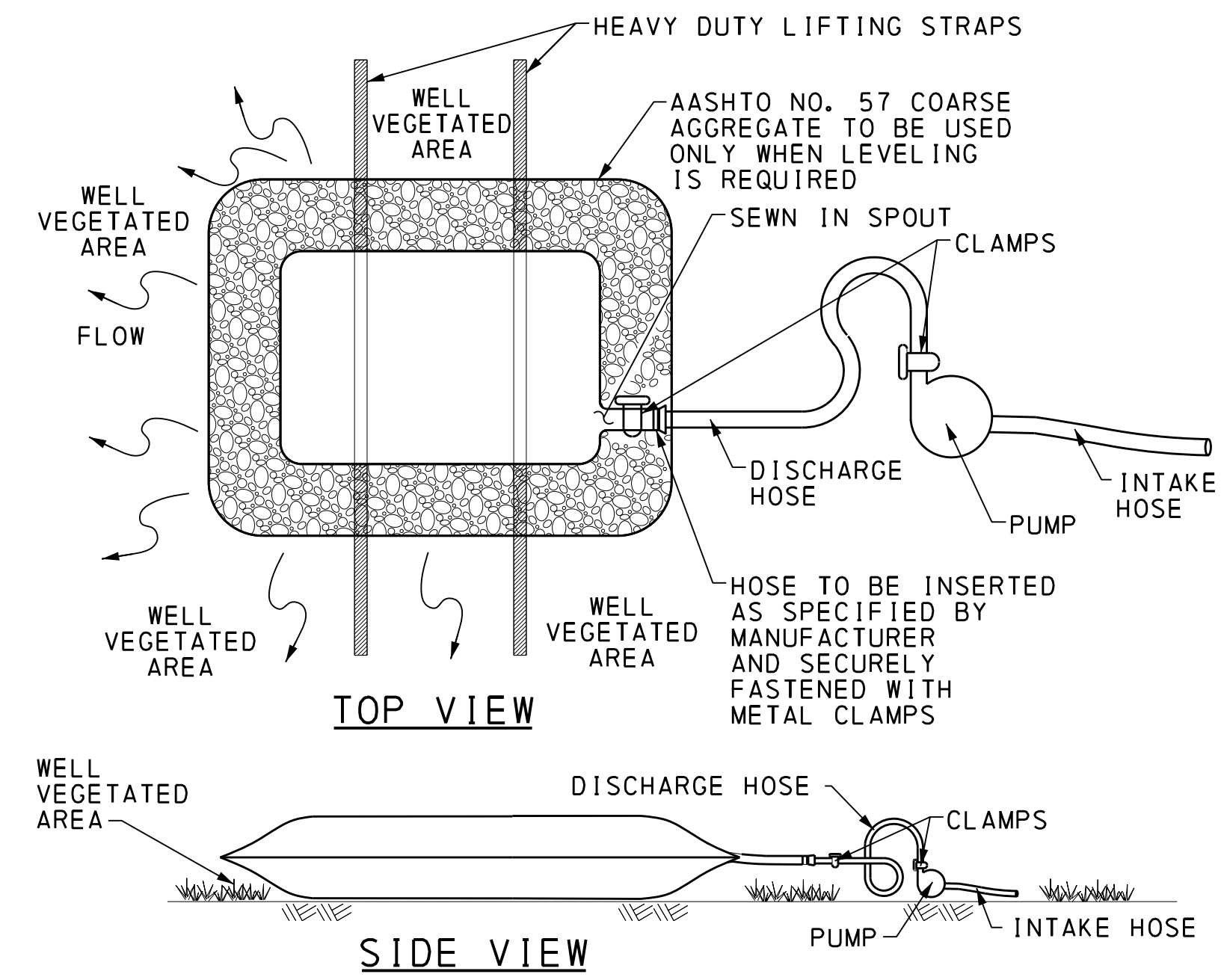


18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	4 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.

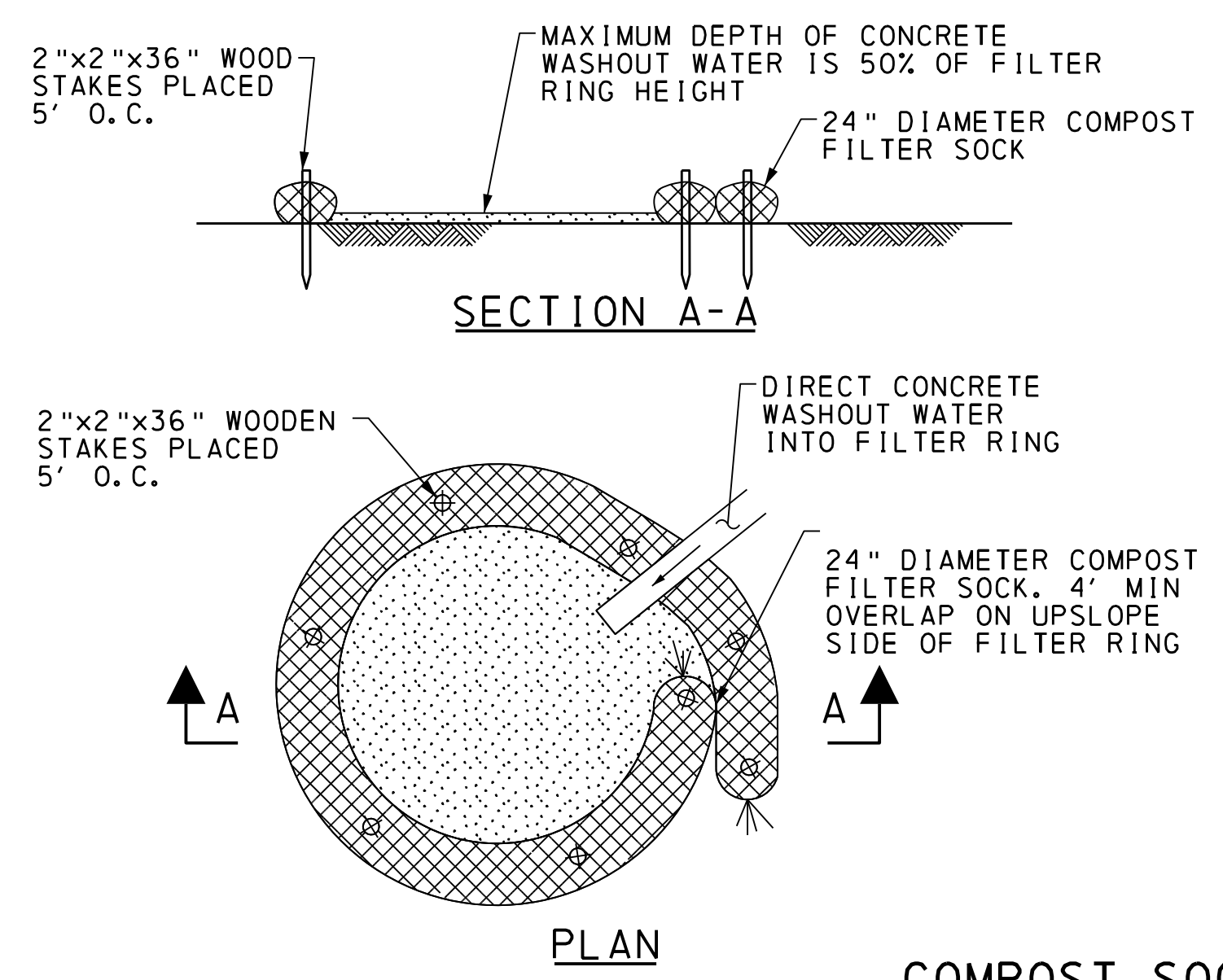


**PUMPED WATER FILTER BAG**

NOT TO SCALE  
ITEM: 0855-0003  
PLAN SYMBOL:

**PUMPED WATER FILTER BAG NOTES**

1. LOCATE BAG IN LEVEL AREAS (LESS THAN 5% GRADE). WHEN LEVEL AREAS ARE NOT AVAILABLE, PLACE NO. 57 COARSE AGGREGATE TO LEVEL THE BAG.
2. LOCATE BAG IN A WELL VEGETATED AREA. DISCHARGE ONTO A STABLE, EROSION RESISTANT AREA. WHEN VEGETATED AREA IS NOT AVAILABLE, PROVIDE A GEOTEXTILE (CLASS 4, TYPE A) LINED FLOW PATH TO A STABLE EROSION RESISTANT RECEIVING WATER COURSE OR A WELL VEGETATED AREA.
3. LOCATE BAG IN AN AREA ACCESSIBLE BY EQUIPMENT FOR MAINTENANCE AND REMOVAL PURPOSES.
4. DO NOT INSERT MORE THAN ONE HOSE INTO A BAG.
5. REMOVE AND PROPERLY DISPOSE OF THE PUMPED WATER FILTER BAGS. RESTORE THE AREA IN ACCORDANCE WITH THE SPECIFICATIONS IN PUBLICATION 408. DO NOT CUT FILTER BAG OR DISTRIBUTE AND SEED SEDIMENT.
6. DO NOT PERMIT DISCHARGE FROM THE BAG TO DRAIN BACK INTO WORK OR ACCESS AREAS OF THE PROJECT.

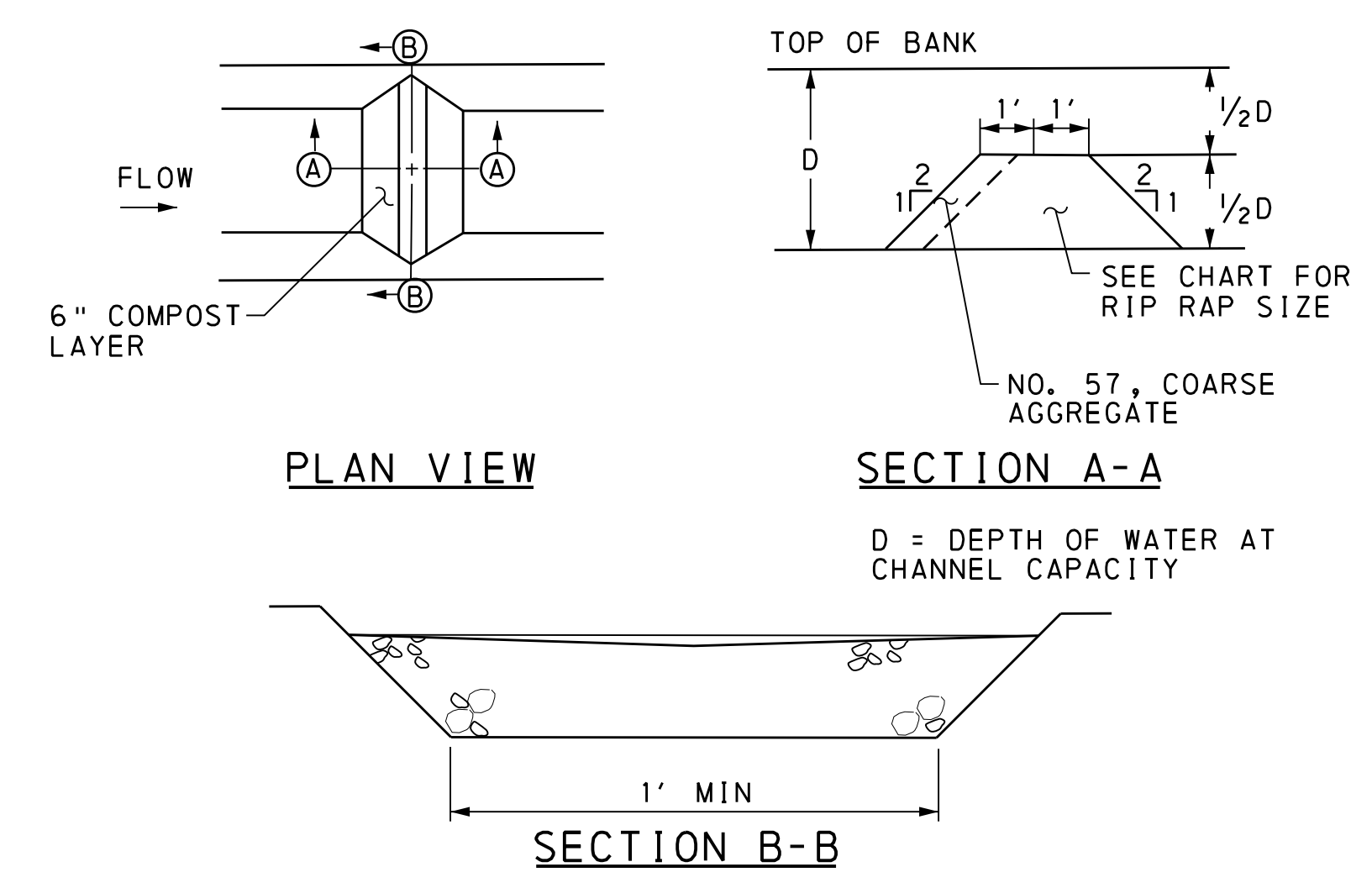


**COMPOST SOCK WASHOUT INSTALLATION**

NOT TO SCALE  
ITEM 9000-0001

**NOTES:**

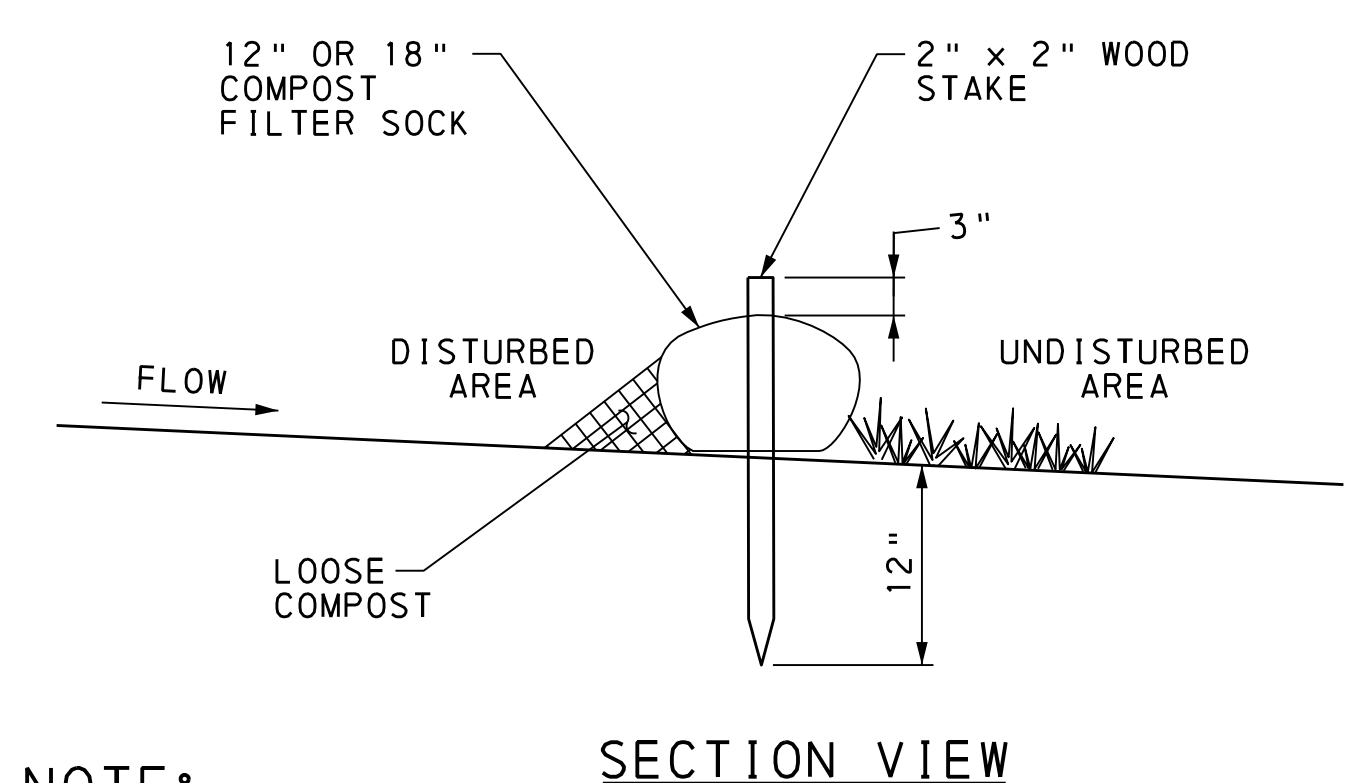
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
3. DO NOT PLACE UPSTREAM OF BASINS, INLETS, TRAPS, OR OTHER DRAINAGE FEATURES.
4. SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING STOCKS.



**ROCK FILTER (RF)**

NOT TO SCALE  
PLAN SYMBOL:

ROCK FILTER ID	D (Ft)	RIPRAP SIZE
ROCK FILTER #1	2	R-3
ROCK FILTER #2	2	R-3
ROCK FILTER #3	3	R-3

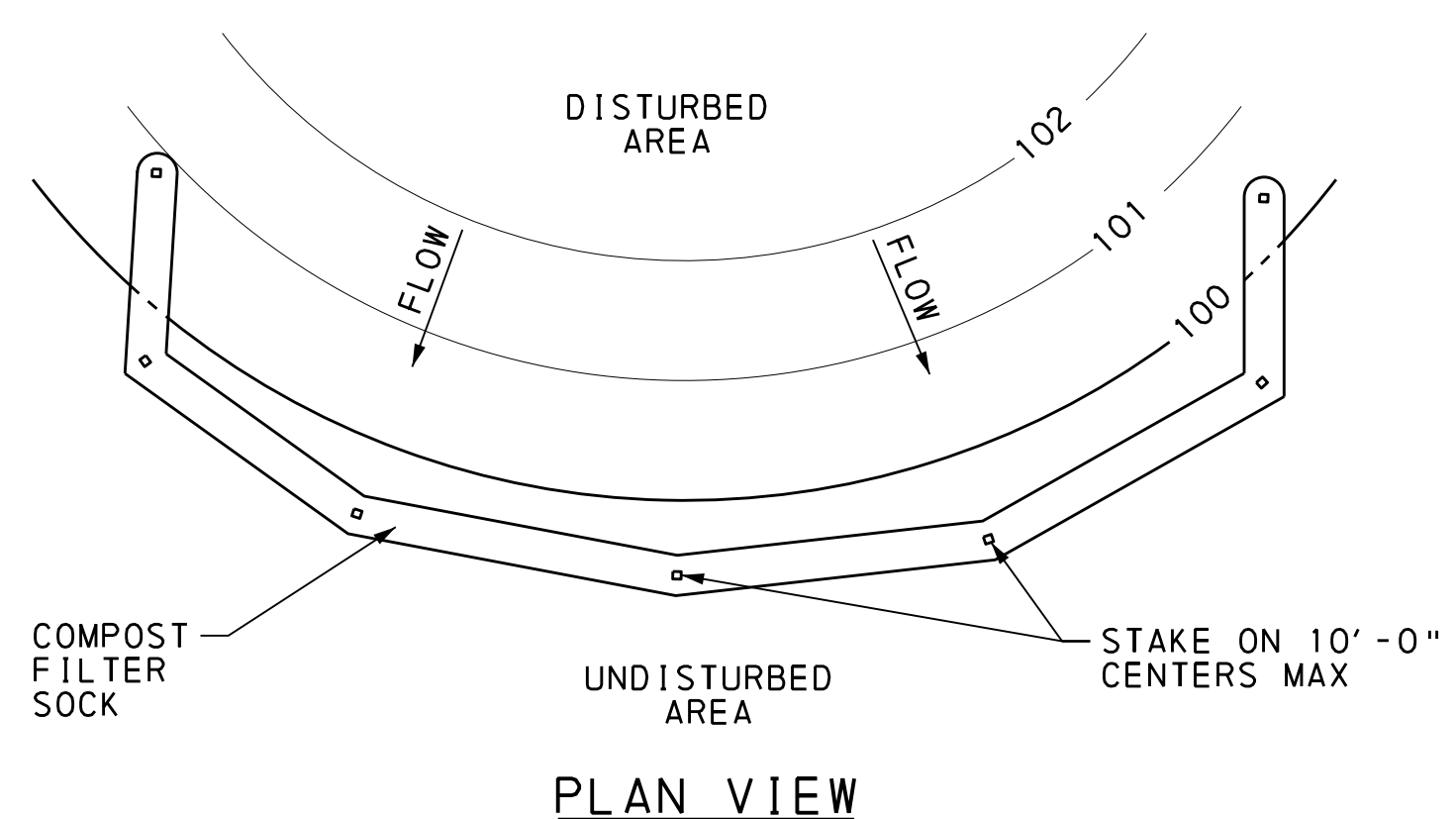


**NOTE:**

1. PLACE COMPOST FILTER SOCK/BERM ON LEVEL GRADE. EXTEND BOTH ENDS OF THE COMPOST FILTER SOCK/BERM AT LEAST 2400 (8'-0") UPSLOPE AT 45 DEGREES TO THE MAIN ALIGNMENT.

**COMPOST FILTER SOCK**

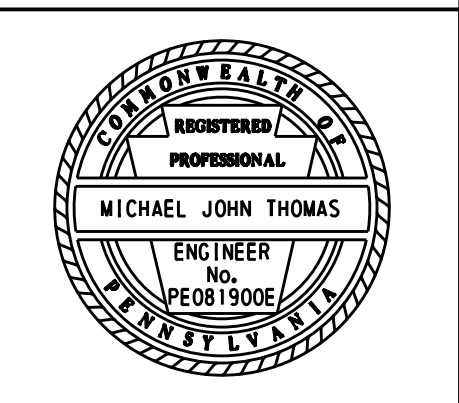
NOT TO SCALE  
PLAN SYMBOL:



**PLAN VIEW**

FROM STA	TO STA	SIDE	FILTER SOCK DIAMETER (IN)
68+01	68+14	LT	12
68+14	68+47	LT	12
68+46	68+73	LT	12
68+72	69+06	LT	12
69+06	69+53	LT	12
69+55	69+87	LT	12
69+91	17+13	LT	12
70+20	70+45	LT	12
70+52	70+72	LT	12
70+78	70+99	LT	12
71+04	71+28	LT	12
71+30	71+63	LT	12
71+66	72+05	LT	12
72+06	72+96	LT	24
110+36	111+64	LT	24
111+80	112+43	LT	12
111+90	123+97	RT	12
112+43	124+03	LT	12
124+20	124+60	LT	12
124+59	124+87	LT	12
124+87	125+12	LT	12
125+13	125+38	LT	12
125+40	125+77	LT	12
125+77	125+93	LT	12
125+92	128+80	LT	12
218+66	219+83	RT	12
222+21	223+02	RT	12

**EROSION & SEDIMENT POLLUTION CONTROL PLAN DETAILS-3**

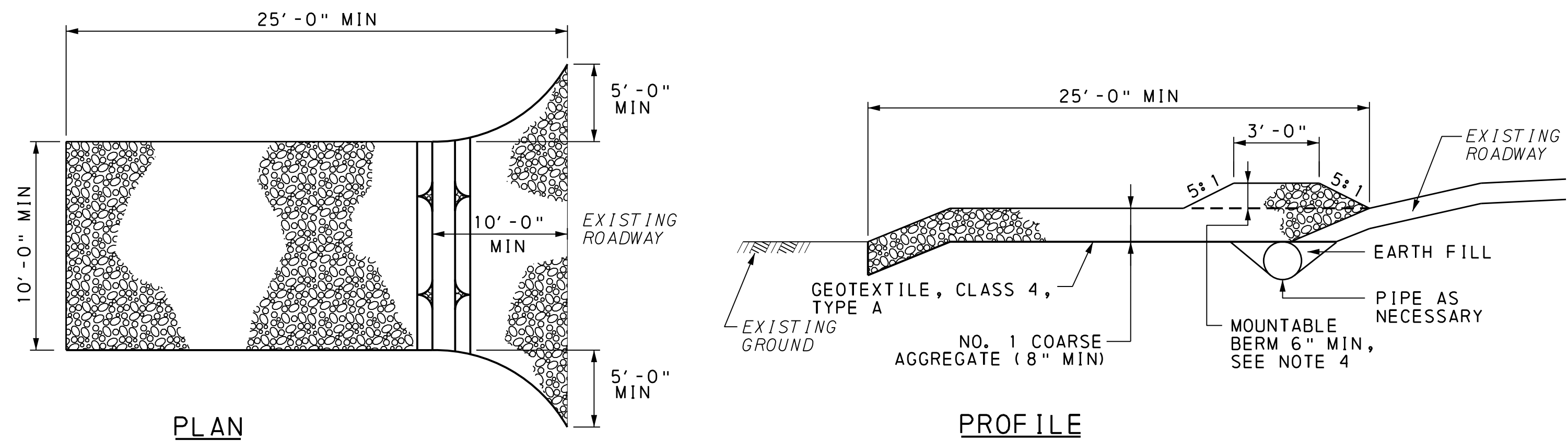


18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	5 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.

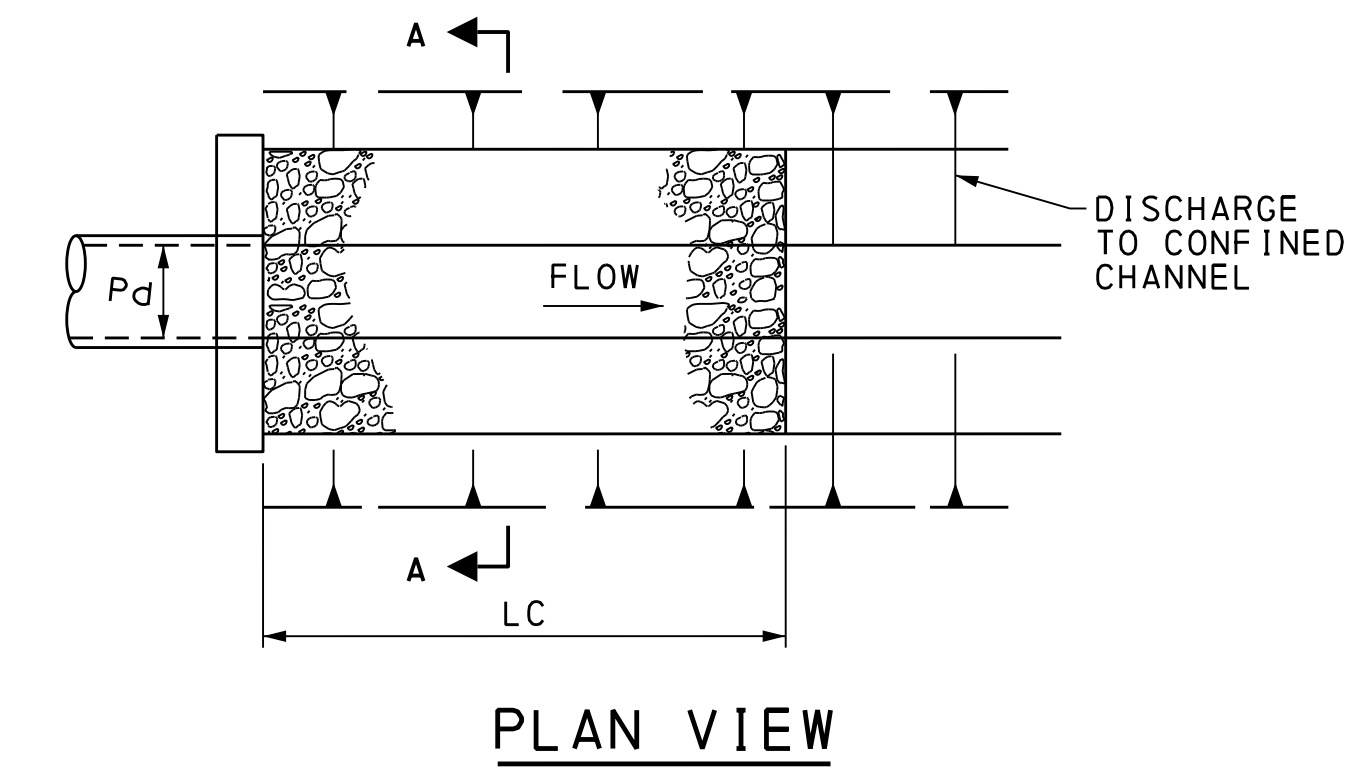


**ROCK CONSTRUCTION ENTRANCE**

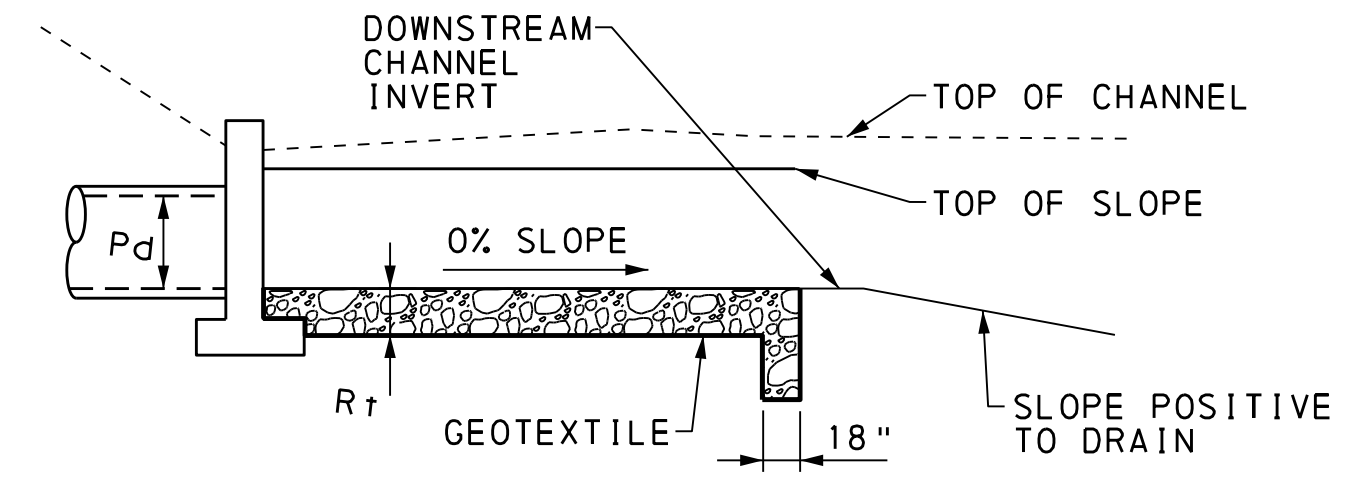
NOT TO SCALE  
PLAN SYMBOL:

**ROCK CONSTRUCTION ENTRANCE NOTES:**

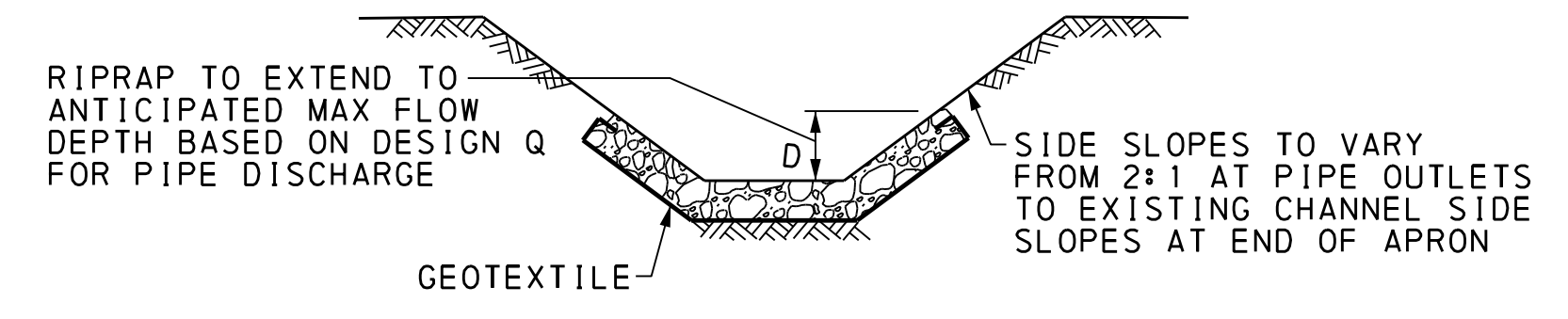
1. INSPECT THE ENTRANCE DAILY. REMOVE ALL SEDIMENT DEPOSITED ON THE PUBLIC ROADWAYS AND RETURN TO THE CONSTRUCTION SITE. WASHING OF THE ROADWAY WILL NOT BE PERMITTED.
2. MAINTAIN THE SPECIFIED ROCK CONSTRUCTION ENTRANCE THICKNESS. PLACE ADDITIONAL ROCK WHENEVER ROCK BECOMES CLOGGED WITH SEDIMENT.
3. MAINTAIN STOCKPILE OF NO.1 COARSE AGGREGATE.
4. CONSTRUCT A MOUNTABLE BERM ONLY WHEN 6" MIN COVER CANNOT BE PROVIDED OVER THE PIPE.
5. SATISFACTORILY REMOVE MATERIALS AS PER SPECIFICATION IN PUBLICATION 408, SECTION 849 WHEN ROCK CONSTRUCTION ENTRANCE IS NO LONGER NEEDED.
6. PROVIDE GEOTEXTILE MATERIAL MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 735. FURNISH AND INSTALL IN ACCORDANCE WITH PUBLICATION 408, SECTION 212. PROVIDE GEOTEXTILE ALONG ALL INTERFACE AREAS WITH GROUND CONTACT.
7. CONSTRUCT ROCK CONSTRUCTION ENTRANCE WITHIN THE RIGHT-OF-WAY OR EASEMENT AREAS. ENTRANCE MAY BE CONSTRUCTED ON A SKEW IF ADEQUATE PULL OUT SIGHT DISTANCE IS AVAILABLE.



**PLAN VIEW**



**ELEVATION**



**SECTION A-A**

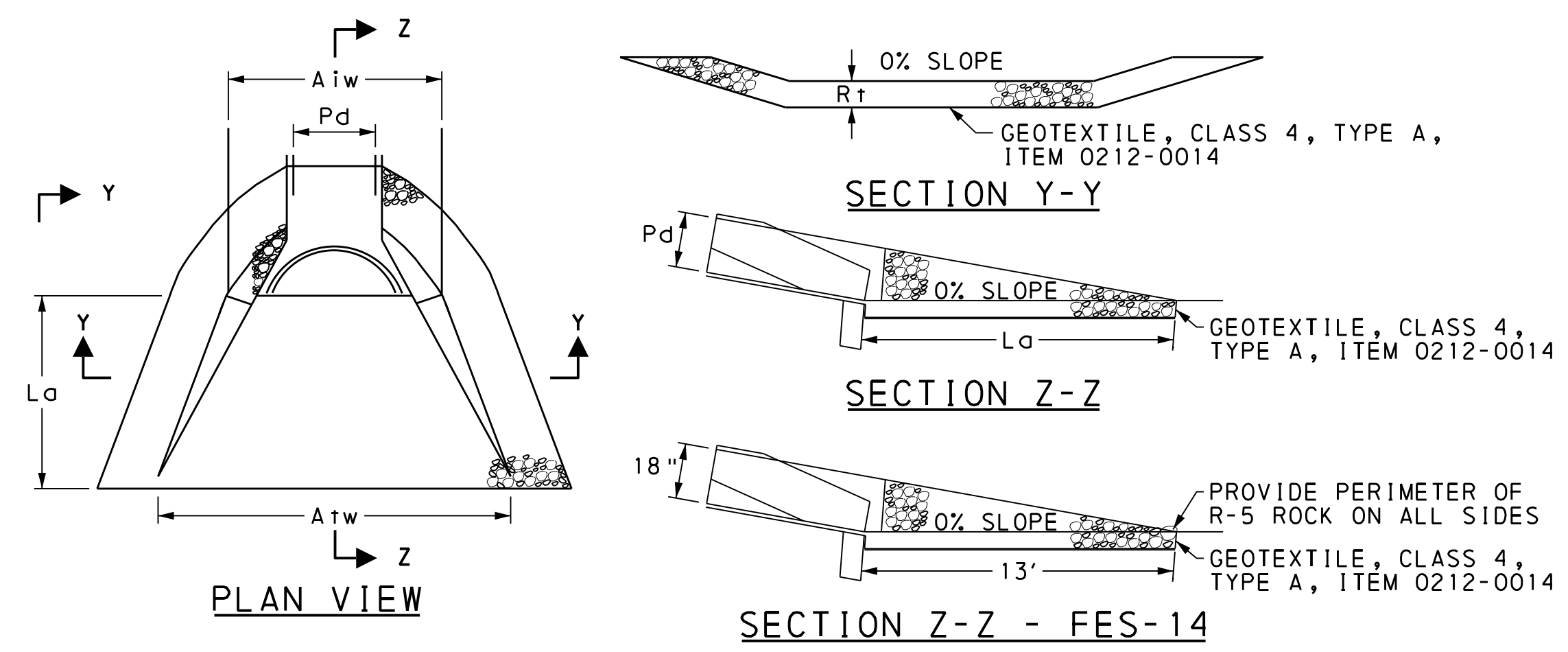
**RIPRAP APRON AT PIPE OUTLET TO AN EXISTING CHANNEL**

NOT TO SCALE

OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP			APRON				
		SIZE (R-...)	THICK RT (IN)	LENGTH LC (FT)	INITIAL BOTTOM WIDTH (AT ENDWALL) (FT)	END WIDTH (FT)	INITIAL TOP WIDTH (AT ENDWALL) (FT)	END TOP WIDTH (FT)	SIDE SLOPES H:V
CP-2	24"	6	24	24	6	MATCH EXISTING			

**NOTES:**

1. ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
2. ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACE RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.



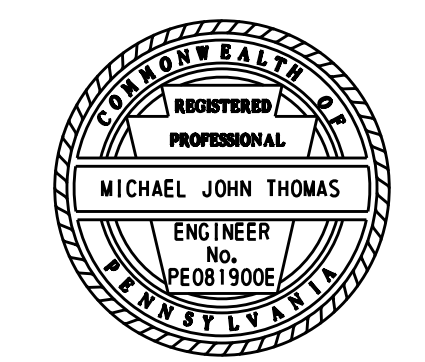
**RIPRAP APRONS AT PIPE OUTLETS OR END WALLS**

NOT TO SCALE  
PLAN SYMBOL:

OUTLET NO.	PIPE DIA (IN)	RIP RAP			APRON	
		SIZE (R-...)	THICK (RT) (IN)	LENGTH (Lo) (FT)	INITIAL WIDTH (Aiw) (FT)	TERMINAL WIDTH (Atw) (FT)
CP-1	18"	3	6	8	4.5	12.5*

\*AS CHANNEL WIDTH ALLOWS

**EROSION & SEDIMENT POLLUTION CONTROL PLAN DETAILS-4**



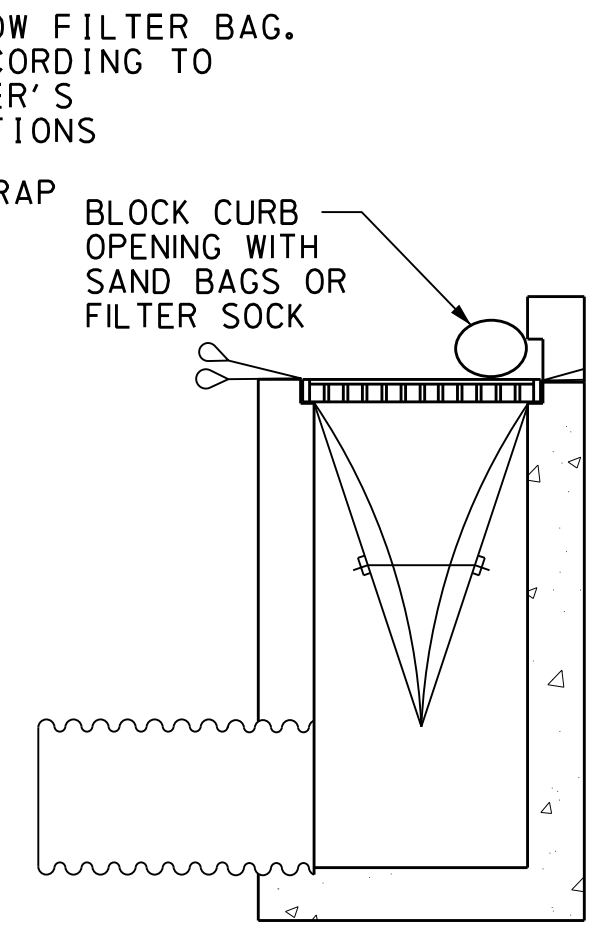
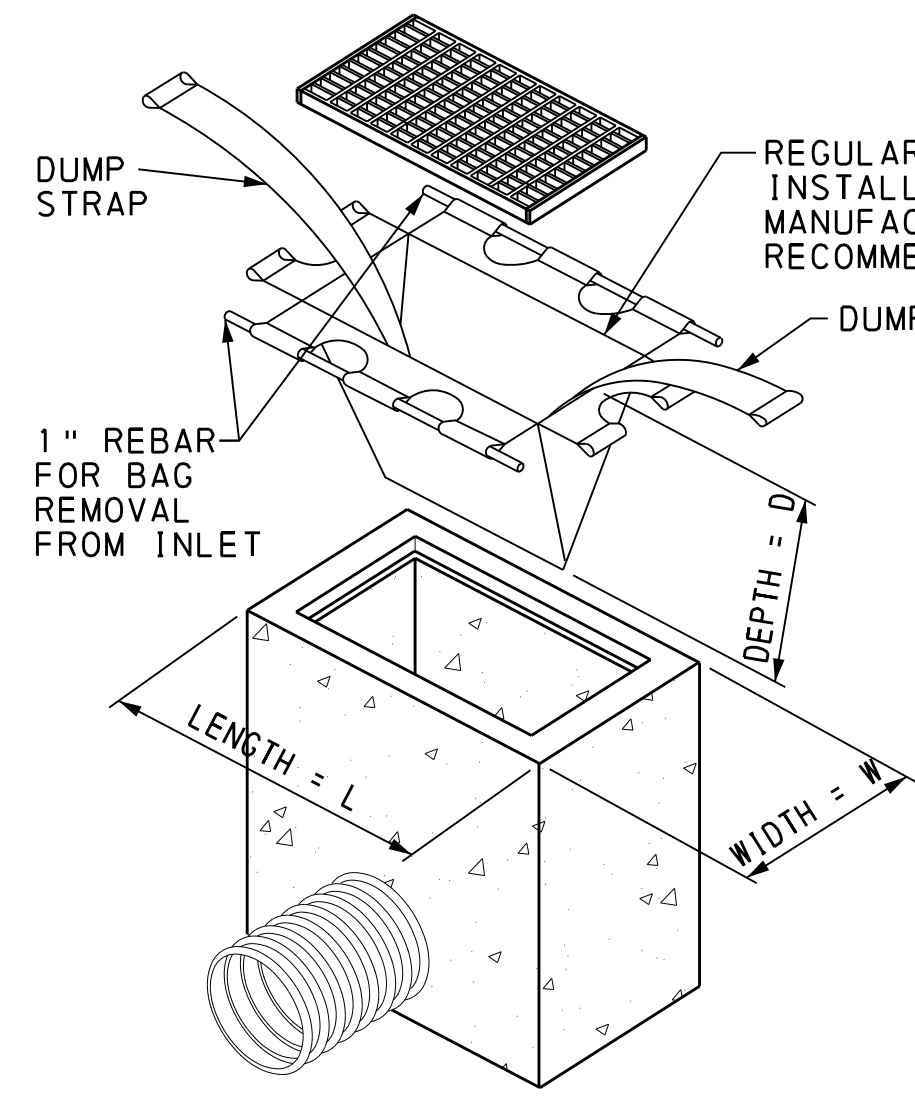


18-JUL-2019

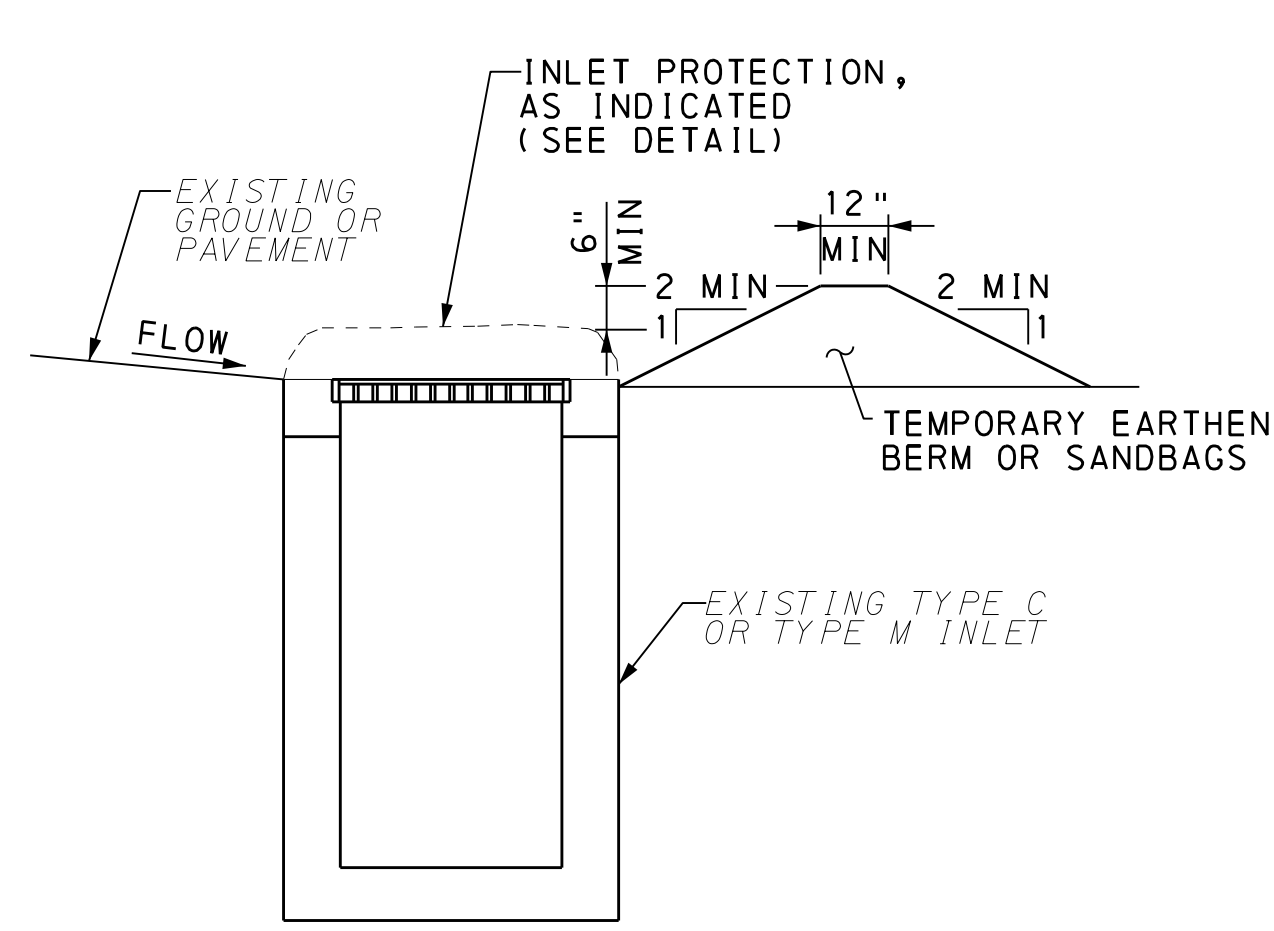
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	6 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.



INSTALLATION DETAIL

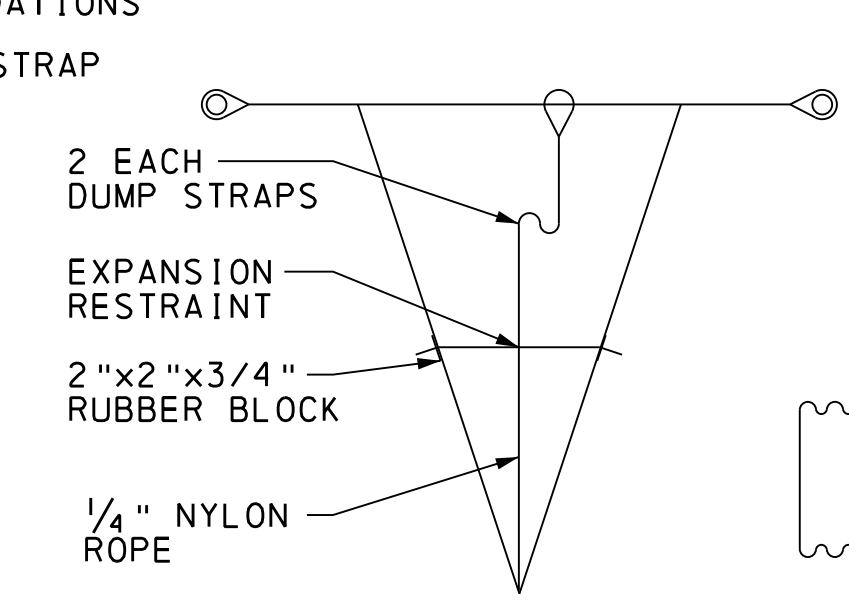
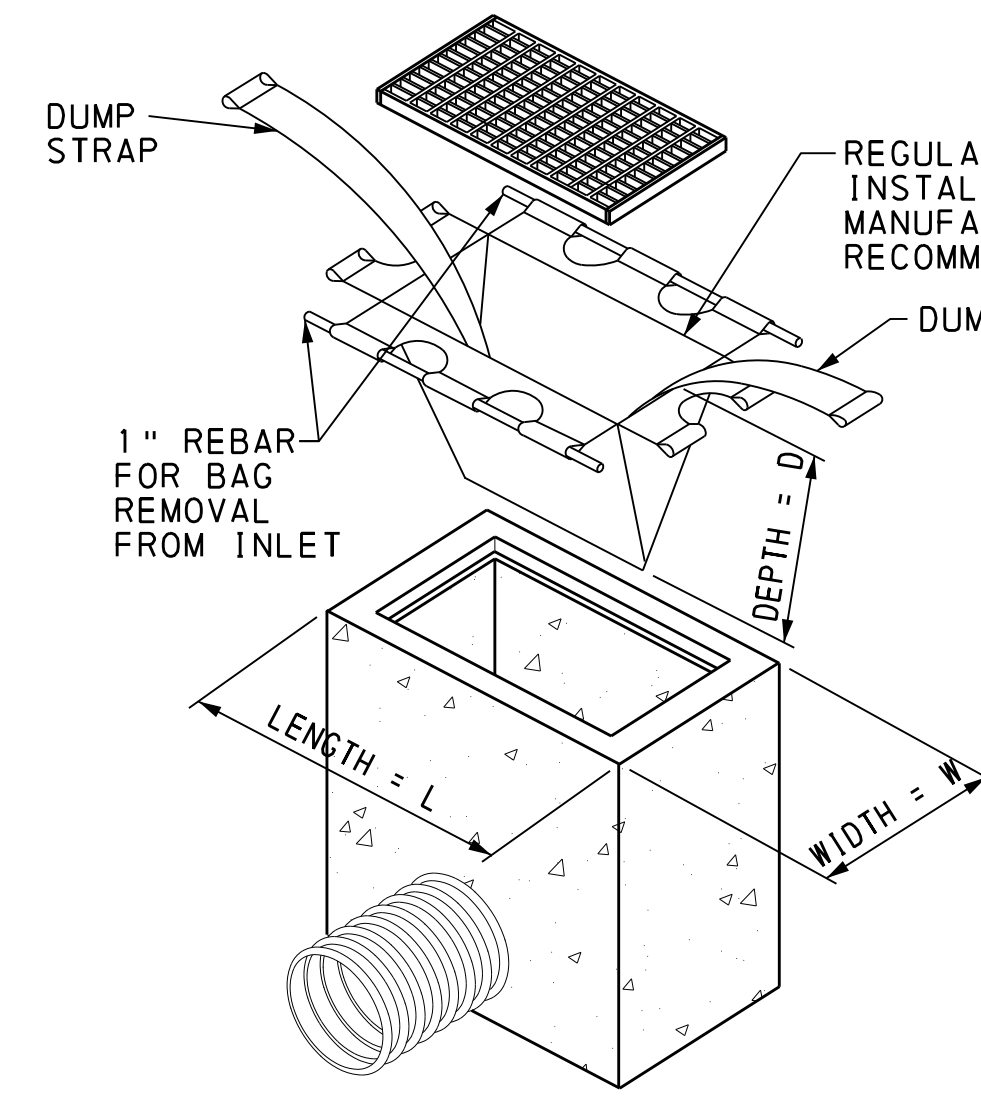


INLET PROTECTION SIDE VIEW

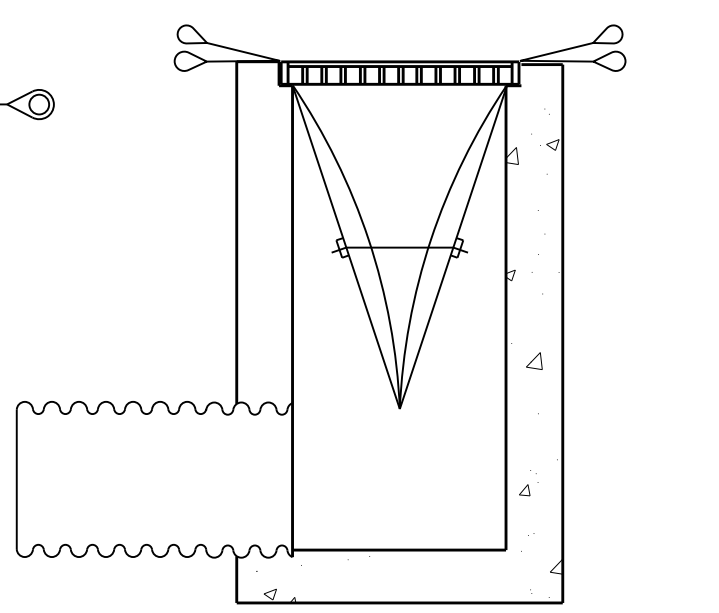
- NOTES:
- DOWN GRADIENT BERM TO BE INSTALLED PRIOR TO PAVING TO MAINTAIN DRAINAGE. REFER TO PA-DEP E&S MANUAL AND RC-72M FOR DETAILS.
  - DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

**INLET FILTER BAG FOR TYPE C INLET (IP1)**

NOT TO SCALE  
ITEM 0860-0002  
PLAN SYMBOL: (IP1)



BAG DETAIL

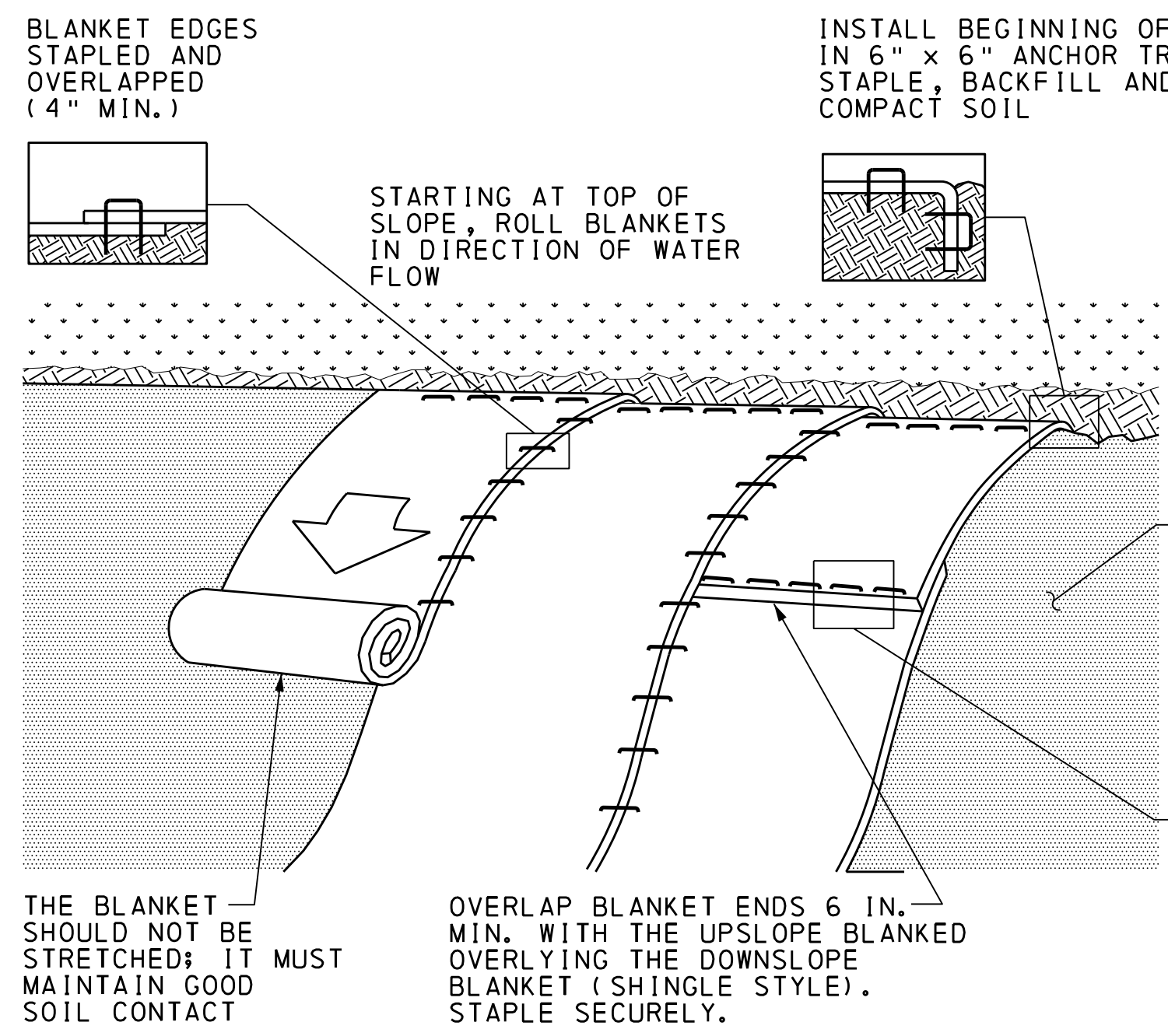


INSTALLATION DETAIL

**INLET FILTER BAG FOR TYPE M INLET (IP2)**

NOT TO SCALE  
ITEM 0860-0000  
PLAN SYMBOL: (IP2)

NOTE: REFER TO INLET FILTER BAG INLET TYPE C PROTECTION (IP1) DETAIL FOR THE INLET PROTECTION SIDE VIEW.

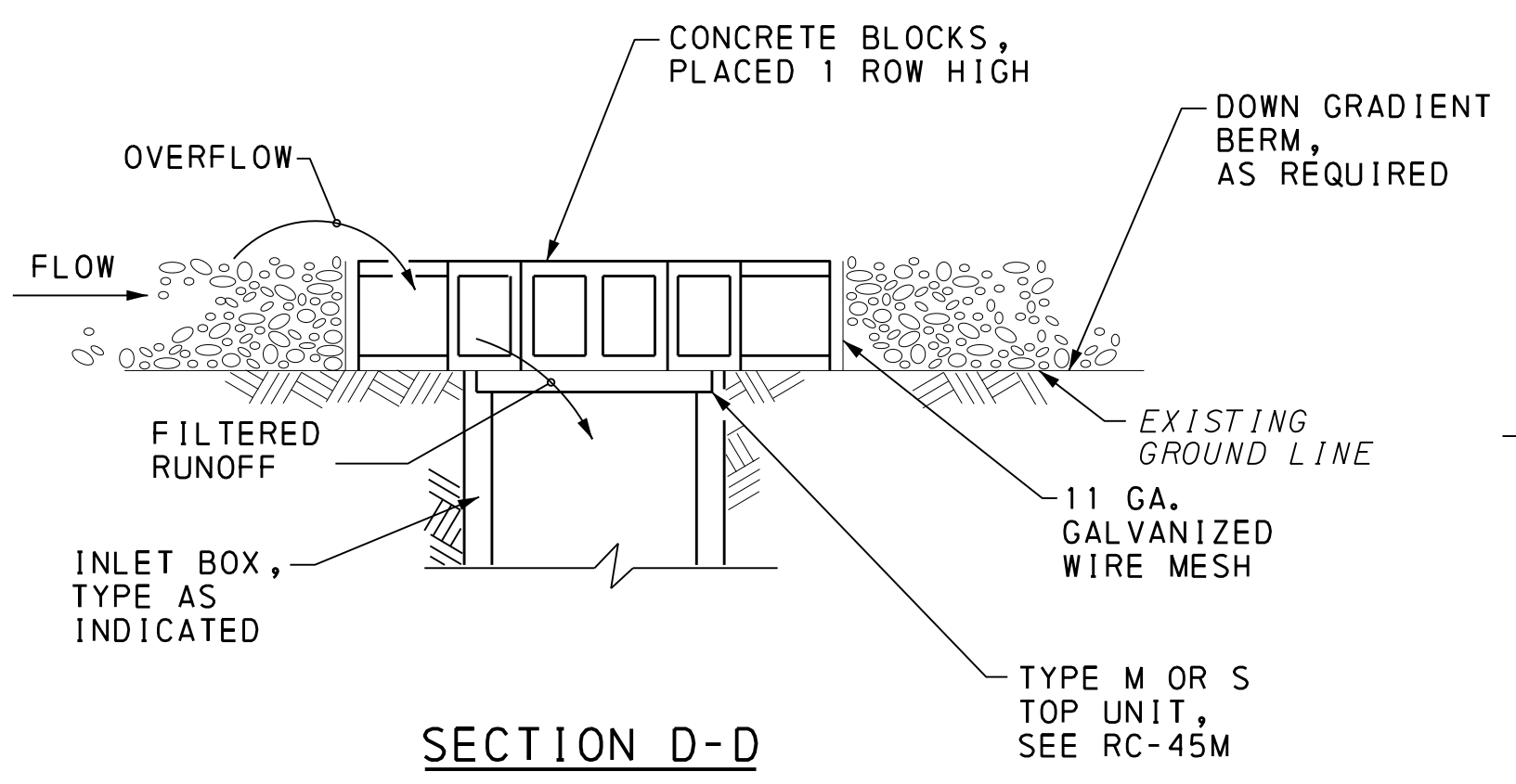


**ROLLED EROSION CONTROL PRODUCTS**

INSTALLATION DETAIL

NOT TO SCALE PLAN SYMBOL: — PF —  
EROSION CONTROL MULCH BLANKET (ECMB)  
PLAN SYMBOL: (MB)

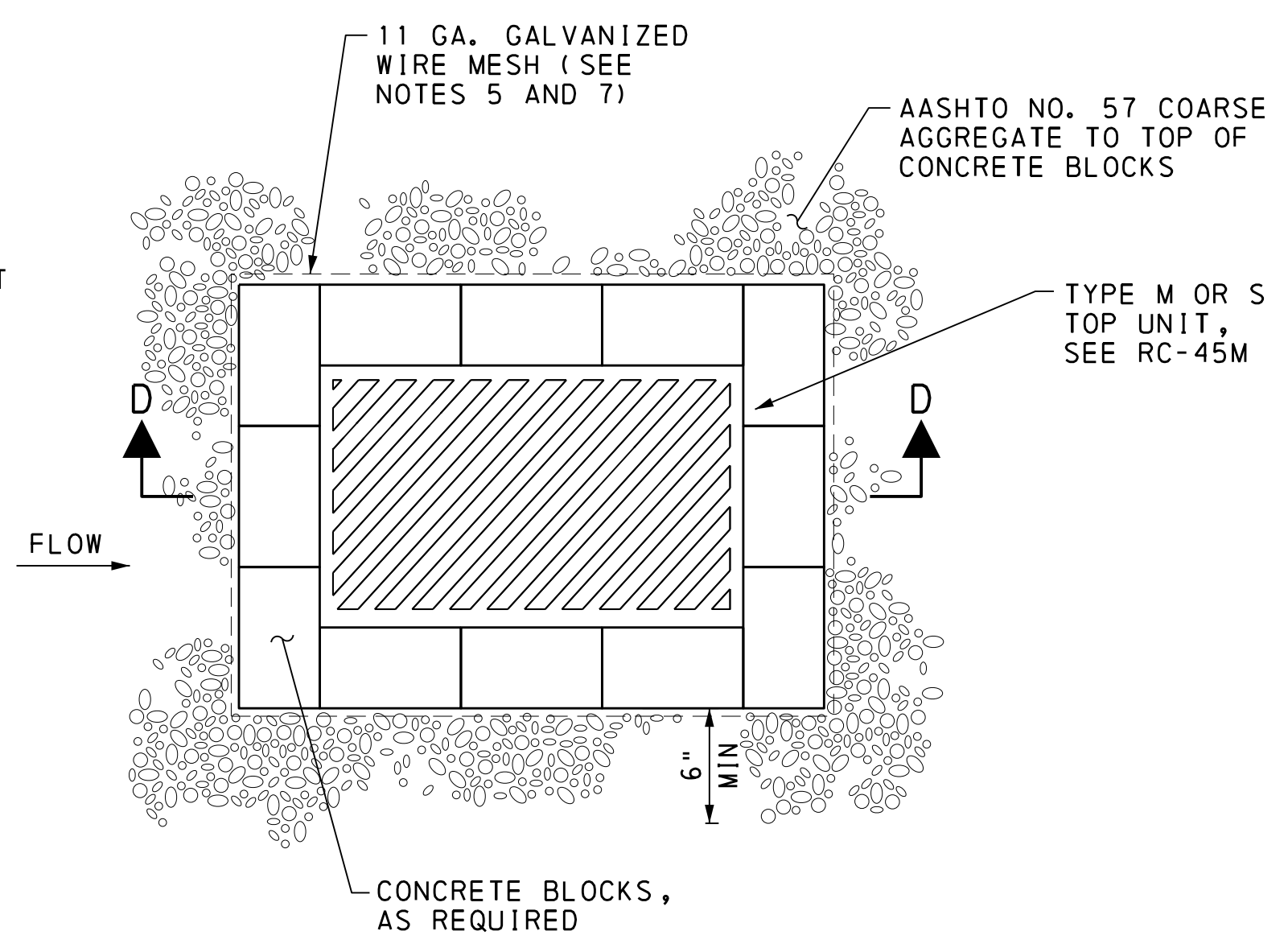
- NOTES:
- REFER TO E&S PLAN FOR EROSION CONTROL MULCH BLANKET LOCATIONS



SECTION D-D

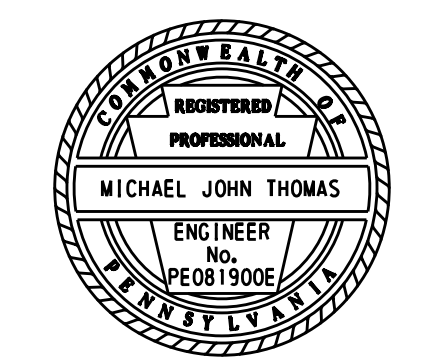
**CONCRETE BLOCK/GRAVEL INLET PROTECTION (TYPE M OR TYPE S INLETS)**

NOT TO SCALE  
ITEM 0860-0010  
PLAN SYMBOL: (IP3)



PLAN

**EROSION & SEDIMENT POLLUTION CONTROL PLAN DETAILS-5**



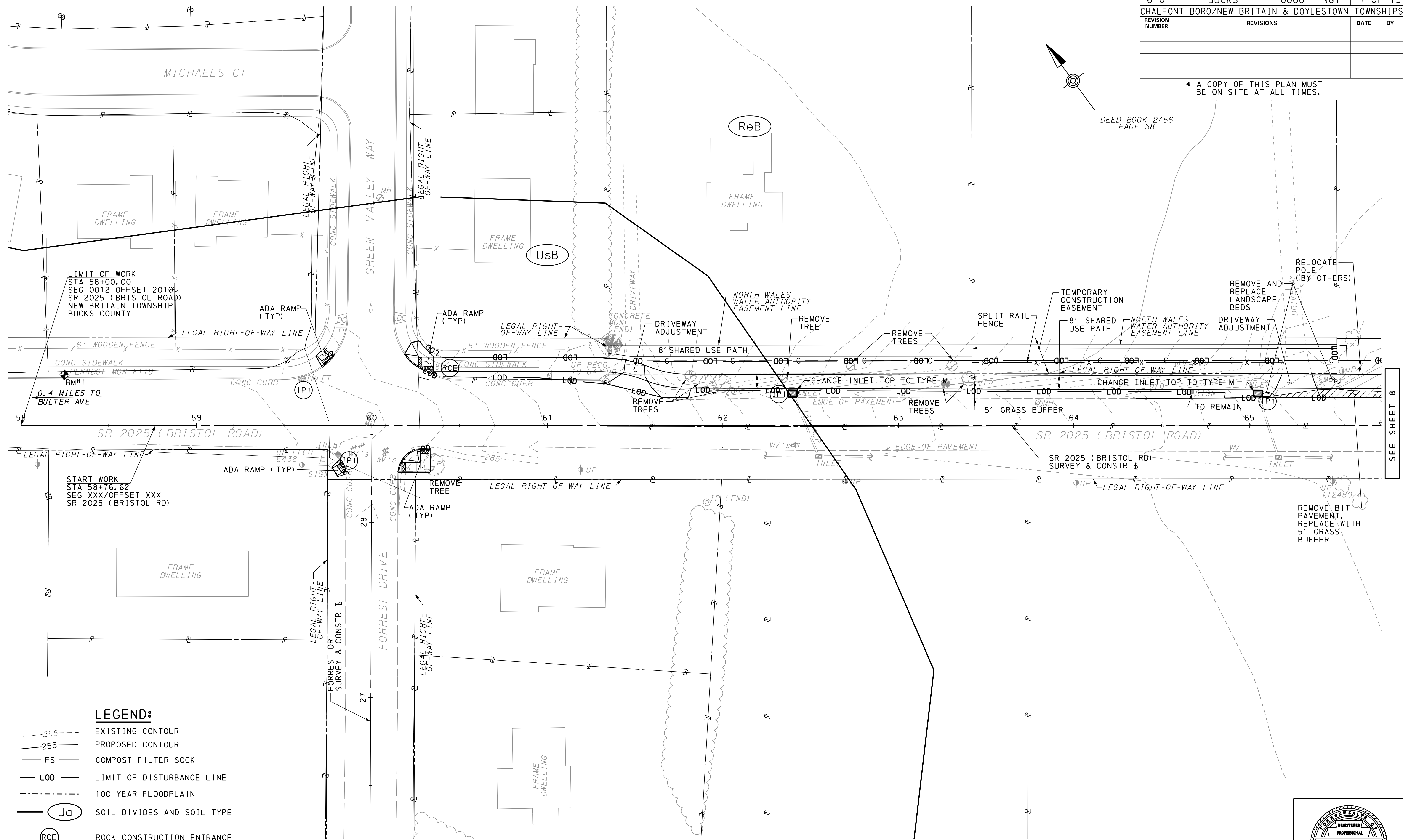
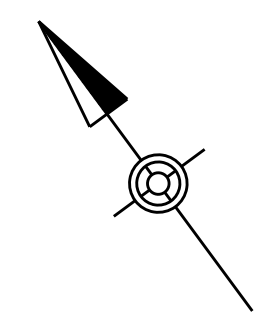
18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	7 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

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DEED BOOK 2756  
PAGE 58

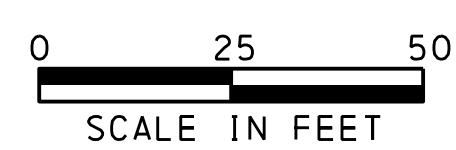


**LIMIT OF WORK**  
 STA 58+00.00  
 SEG 0012 OFFSET 2016  
 SR 2025 (BRISTOL ROAD)  
 NEW BRITAIN TOWNSHIP  
 BUCKS COUNTY

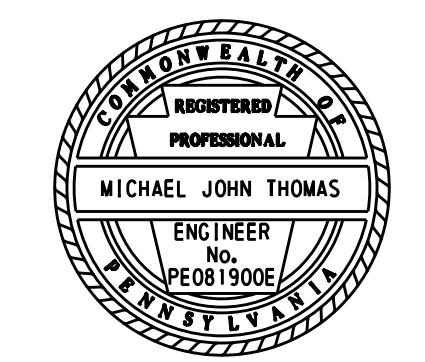
**START WORK**  
 STA 58+76.62  
 SEG XXX/OFFSET XXX  
 SR 2025 (BRISTOL RD)

**LEGEND:**

- 255- EXISTING CONTOUR
- 255 PROPOSED CONTOUR
- FS COMPOST FILTER SOCK
- LOD LIMIT OF DISTURBANCE LINE
- 100 YEAR FLOODPLAIN
- Ua SOIL DIVIDES AND SOIL TYPE
- RCE ROCK CONSTRUCTION ENTRANCE
- IP1 INLET PROTECTION, TYPE 1



**EROSION & SEDIMENT  
POLLUTION CONTROL PLAN**



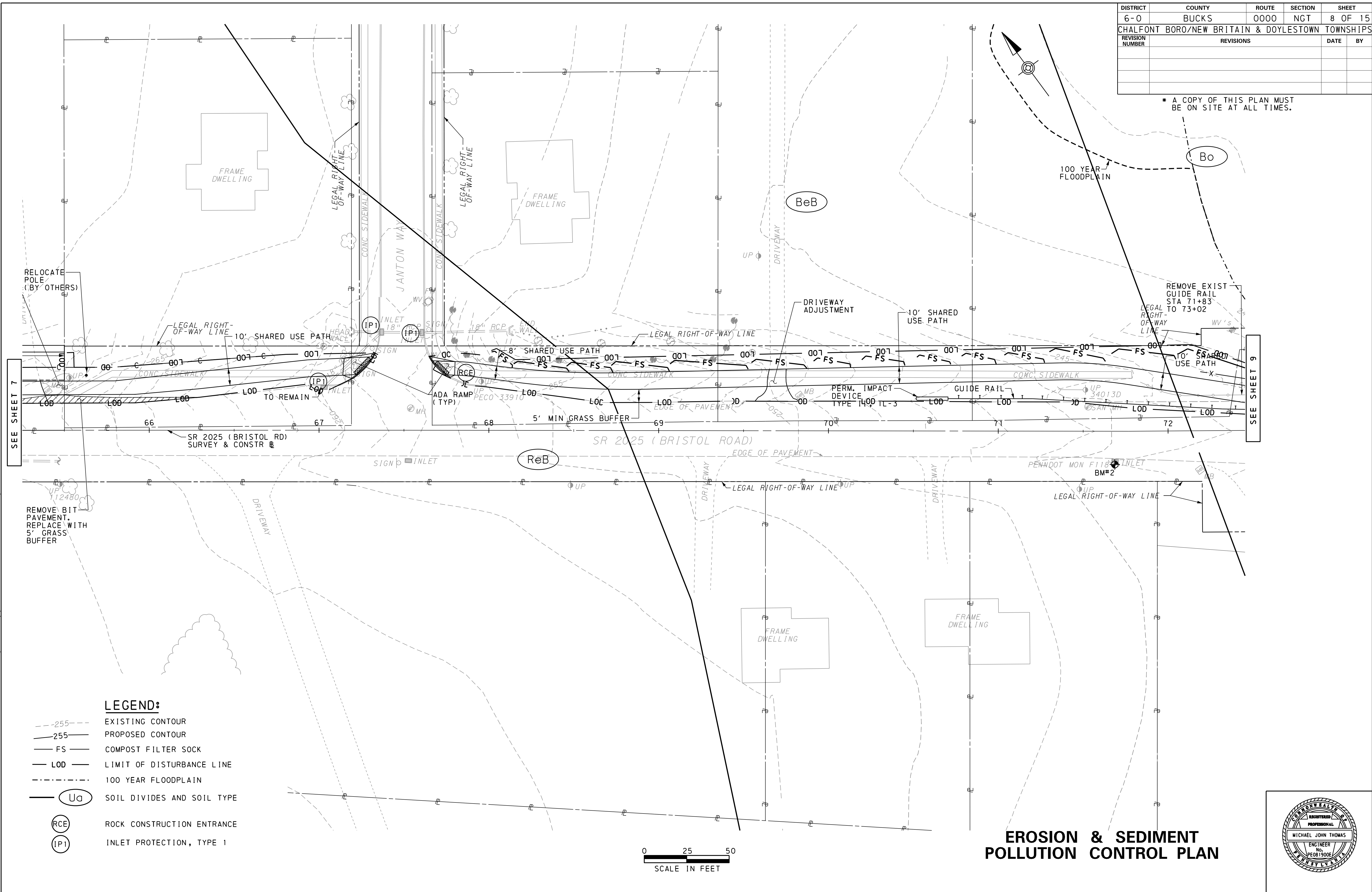
SEE SHEET 8

18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	8 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

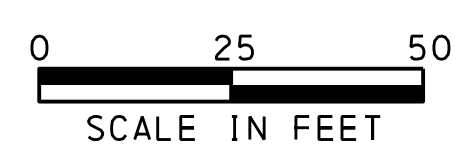
\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.



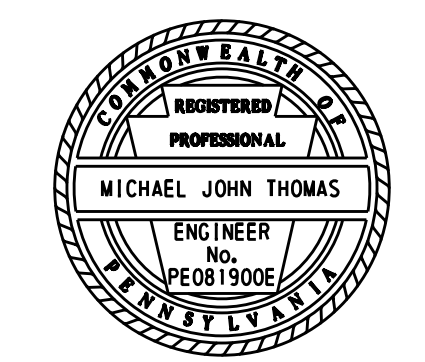
SEE SHEET 7

SEE SHEET 9

- LEGEND:**
- - - 255 - - - EXISTING CONTOUR
  - 255 — PROPOSED CONTOUR
  - FS — COMPOST FILTER SOCK
  - LOD — LIMIT OF DISTURBANCE LINE
  - - - - - 100 YEAR FLOODPLAIN
  - Ua ○ SOIL DIVIDES AND SOIL TYPE
  - RCE ○ ROCK CONSTRUCTION ENTRANCE
  - IP1 ○ INLET PROTECTION, TYPE 1



**EROSION & SEDIMENT  
POLLUTION CONTROL PLAN**

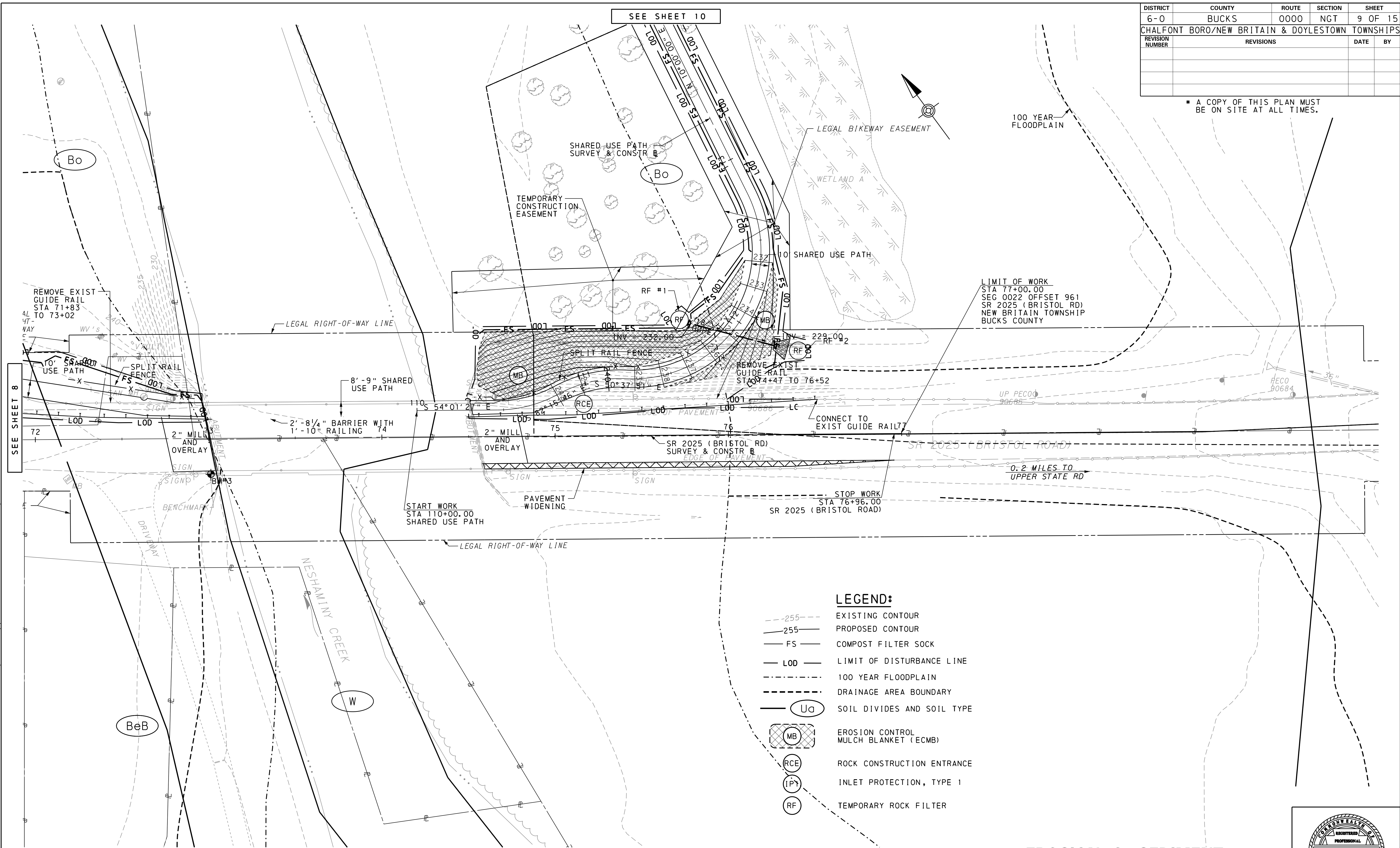


18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	9 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

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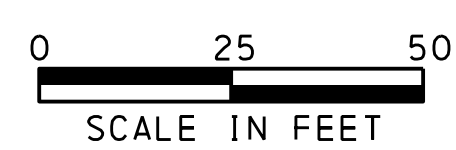


SEE SHEET 10

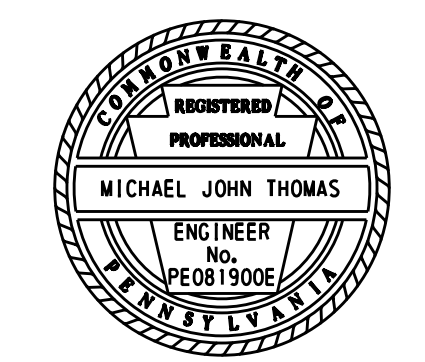
SEE SHEET 8

**LEGEND:**

- - - 255 - - - EXISTING CONTOUR
- - - 255 - - - PROPOSED CONTOUR
- - - FS - - - COMPOST FILTER SOCK
- - - LOD - - - LIMIT OF DISTURBANCE LINE
- - - 100 YEAR FLOODPLAIN
- - - DRAINAGE AREA BOUNDARY
- - - (Ua) - - - SOIL DIVIDES AND SOIL TYPE
- (MB) - - - EROSION CONTROL MULCH BLANKET (ECMB)
- (RCE) - - - ROCK CONSTRUCTION ENTRANCE
- (IP1) - - - INLET PROTECTION, TYPE 1
- (RF) - - - TEMPORARY ROCK FILTER



**EROSION & SEDIMENT POLLUTION CONTROL PLAN**



18-JUL-2019

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**LEGEND:**

- - -255- - - EXISTING CONTOUR
- - -255- - - PROPOSED CONTOUR
- FS - COMPOST FILTER SOCK
- LOD - LIMIT OF DISTURBANCE LINE
- - - DRAINAGE AREA BOUNDARY
- - - 100 YEAR FLOODPLAIN
- Ua ○ SOIL DIVIDES AND SOIL TYPE

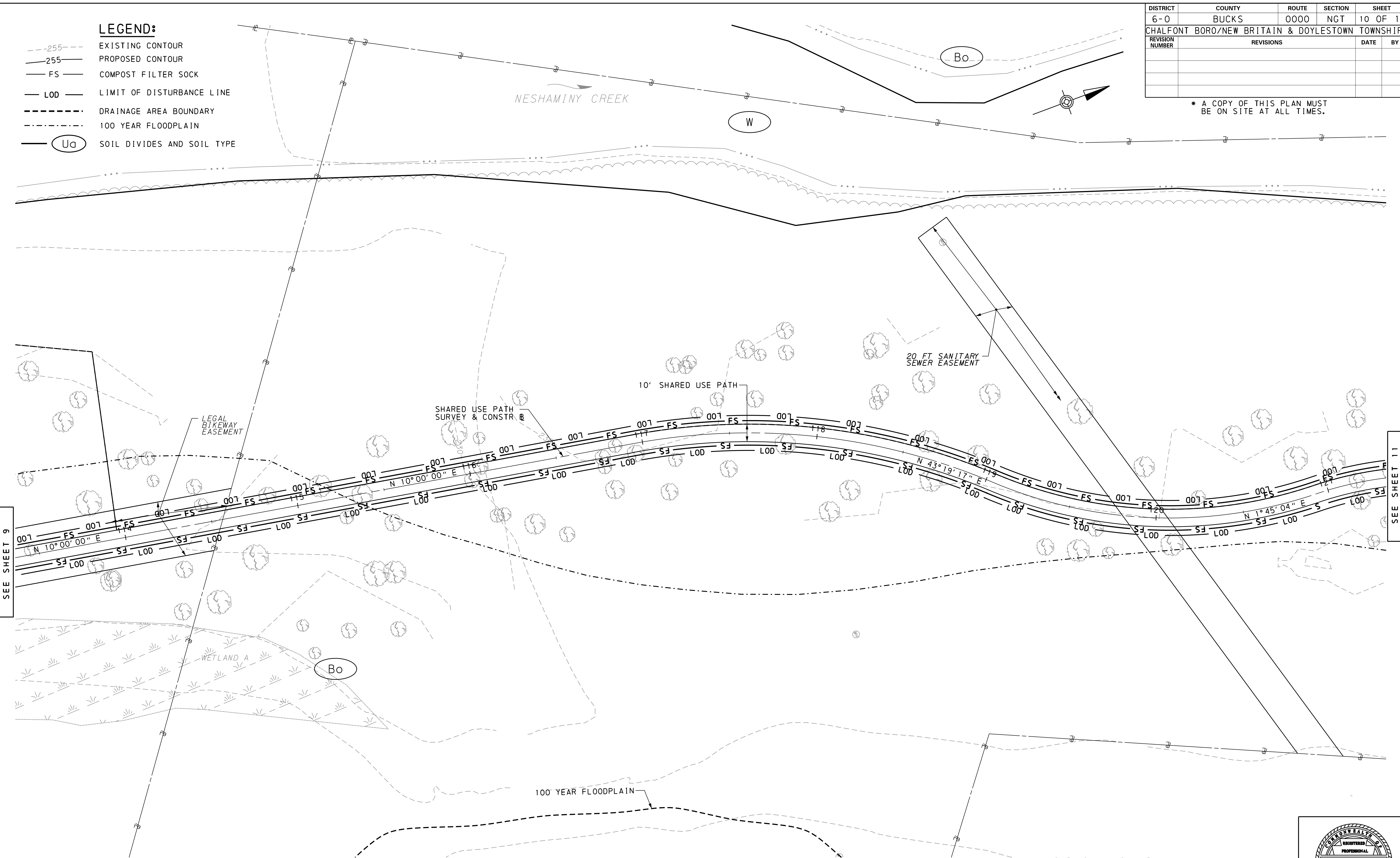
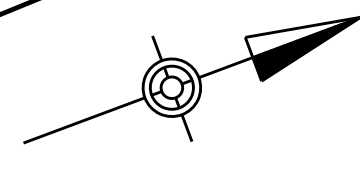
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	10 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

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NESHAMINY CREEK

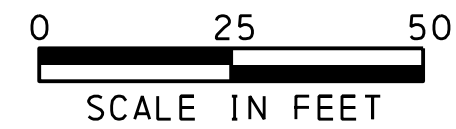
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W

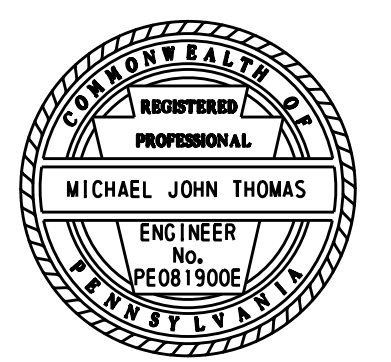


SEE SHEET 9

SEE SHEET 11



**EROSION & SEDIMENT POLLUTION CONTROL PLAN**

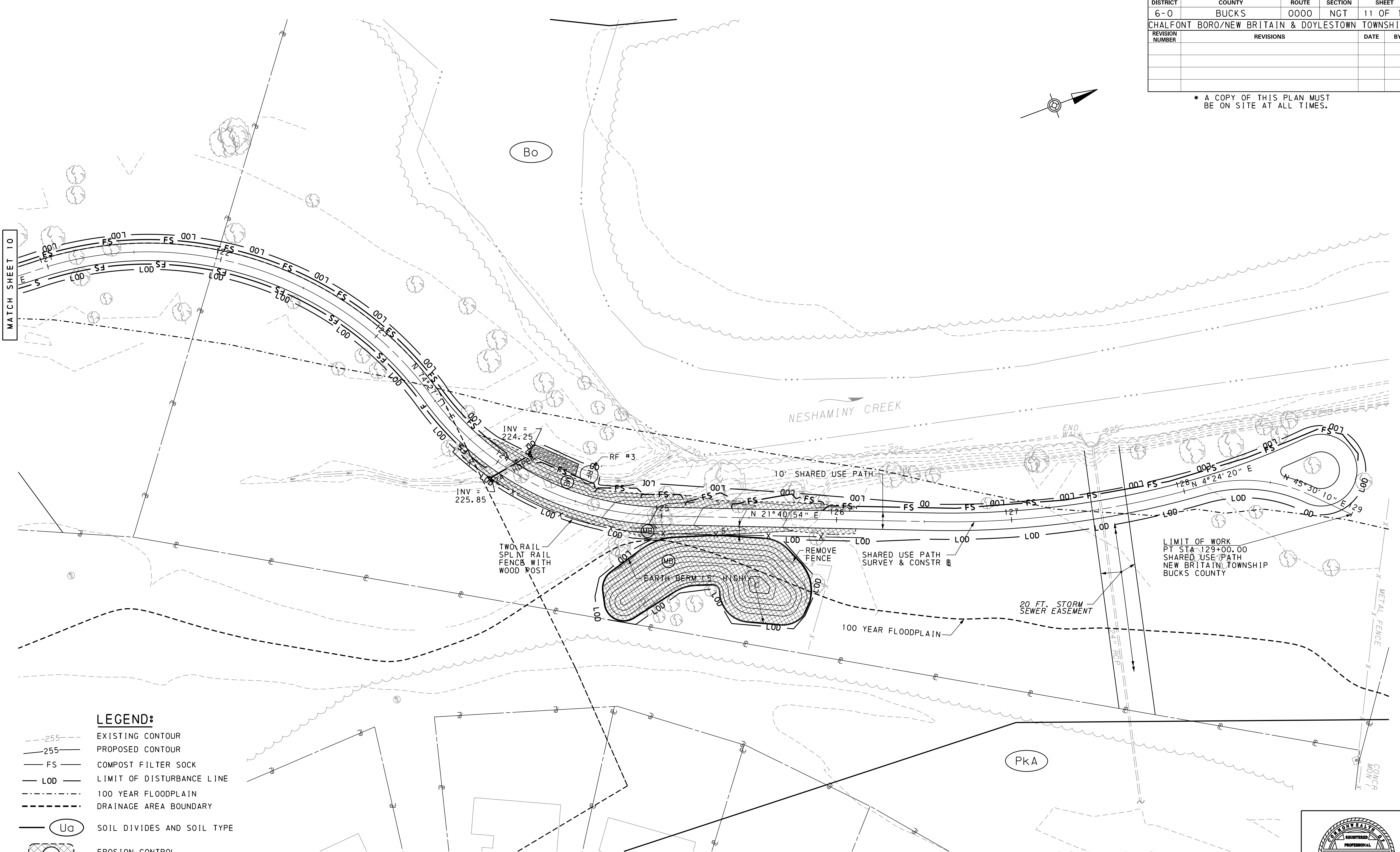
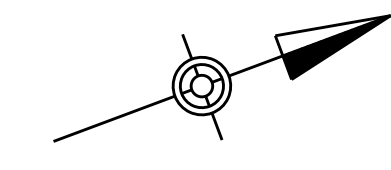


18-JUL-2019

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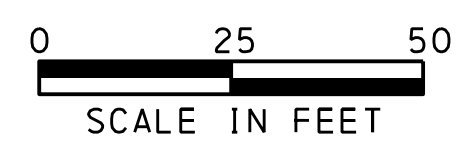
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	11 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.



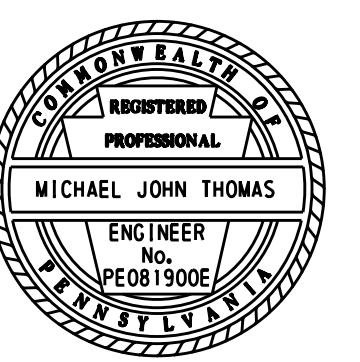
**LEGEND:**

- 255 EXISTING CONTOUR
- 255 PROPOSED CONTOUR
- FS COMPOST FILTER SOCK
- LOD LIMIT OF DISTURBANCE LINE
- 100 YEAR FLOODPLAIN
- DRAINAGE AREA BOUNDARY
- Ua SOIL DIVIDES AND SOIL TYPE
- MB EROSION CONTROL MULCH BLANKET (ECMB)
- RF TEMPORARY ROCK FILTER



PKA

**EROSION & SEDIMENT POLLUTION CONTROL PLAN**

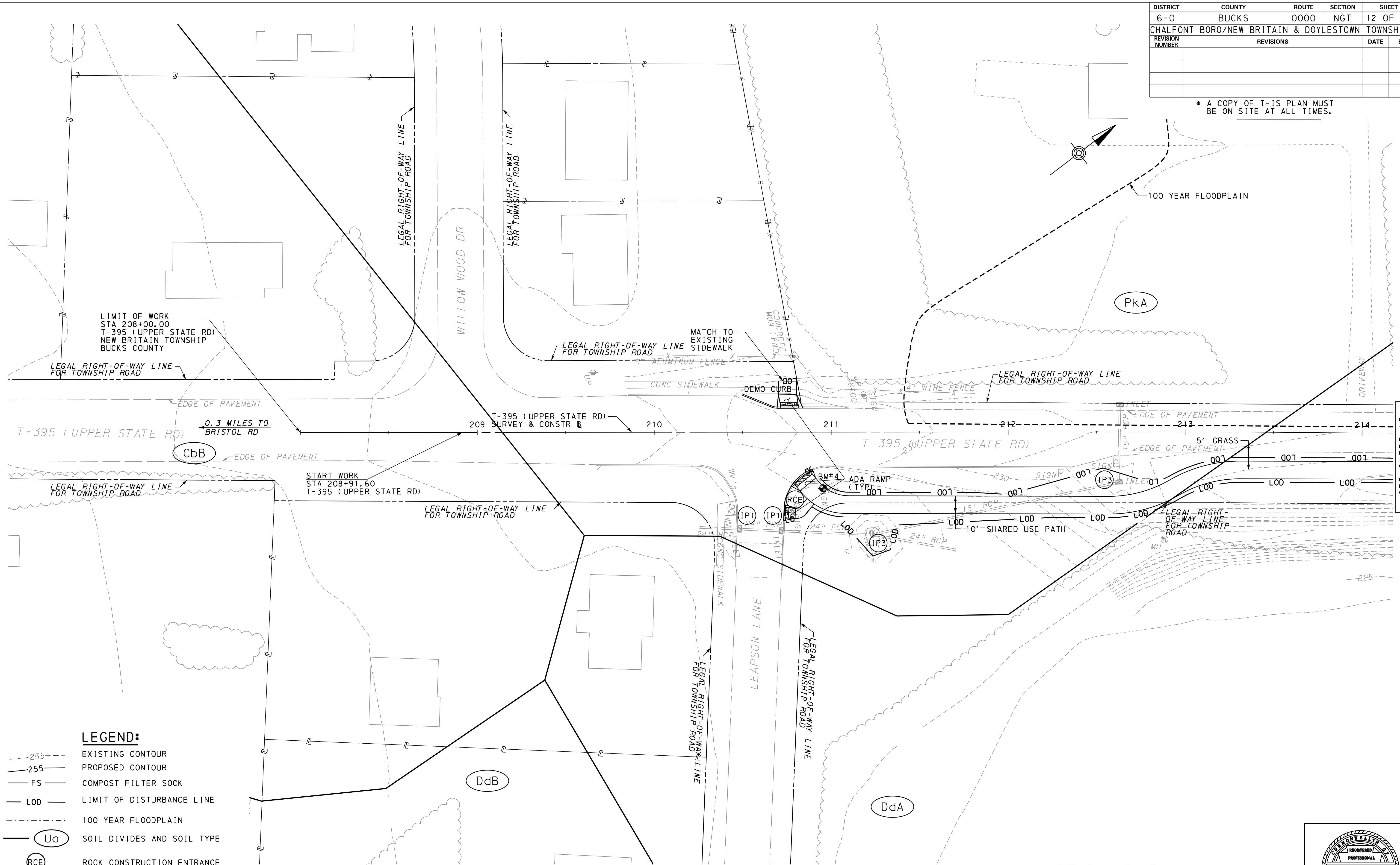


18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	12 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

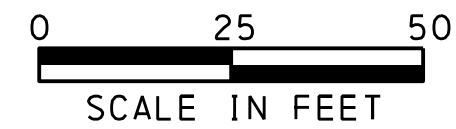
\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.



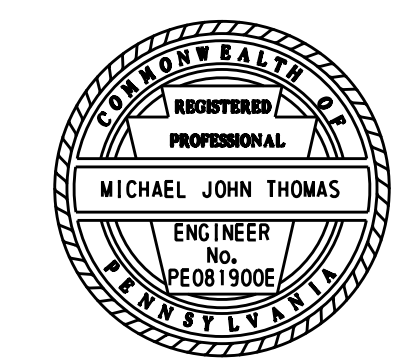
LIMIT OF WORK  
 STA 208+00.00  
 T-395 (UPPER STATE RD)  
 NEW BRITAIN TOWNSHIP  
 BUCKS COUNTY

START WORK  
 STA 208+91.60  
 T-395 (UPPER STATE RD)

- LEGEND:**
- 255- - EXISTING CONTOUR
  - 255- - PROPOSED CONTOUR
  - FS - COMPOST FILTER SOCK
  - LOD - LIMIT OF DISTURBANCE LINE
  - - - 100 YEAR FLOODPLAIN
  - Ua - SOIL DIVIDES AND SOIL TYPE
  - RCE - ROCK CONSTRUCTION ENTRANCE
  - IP1, IP3 - INLET PROTECTION TYPE 1, TYPE 3



**EROSION & SEDIMENT  
 POLLUTION CONTROL PLAN**



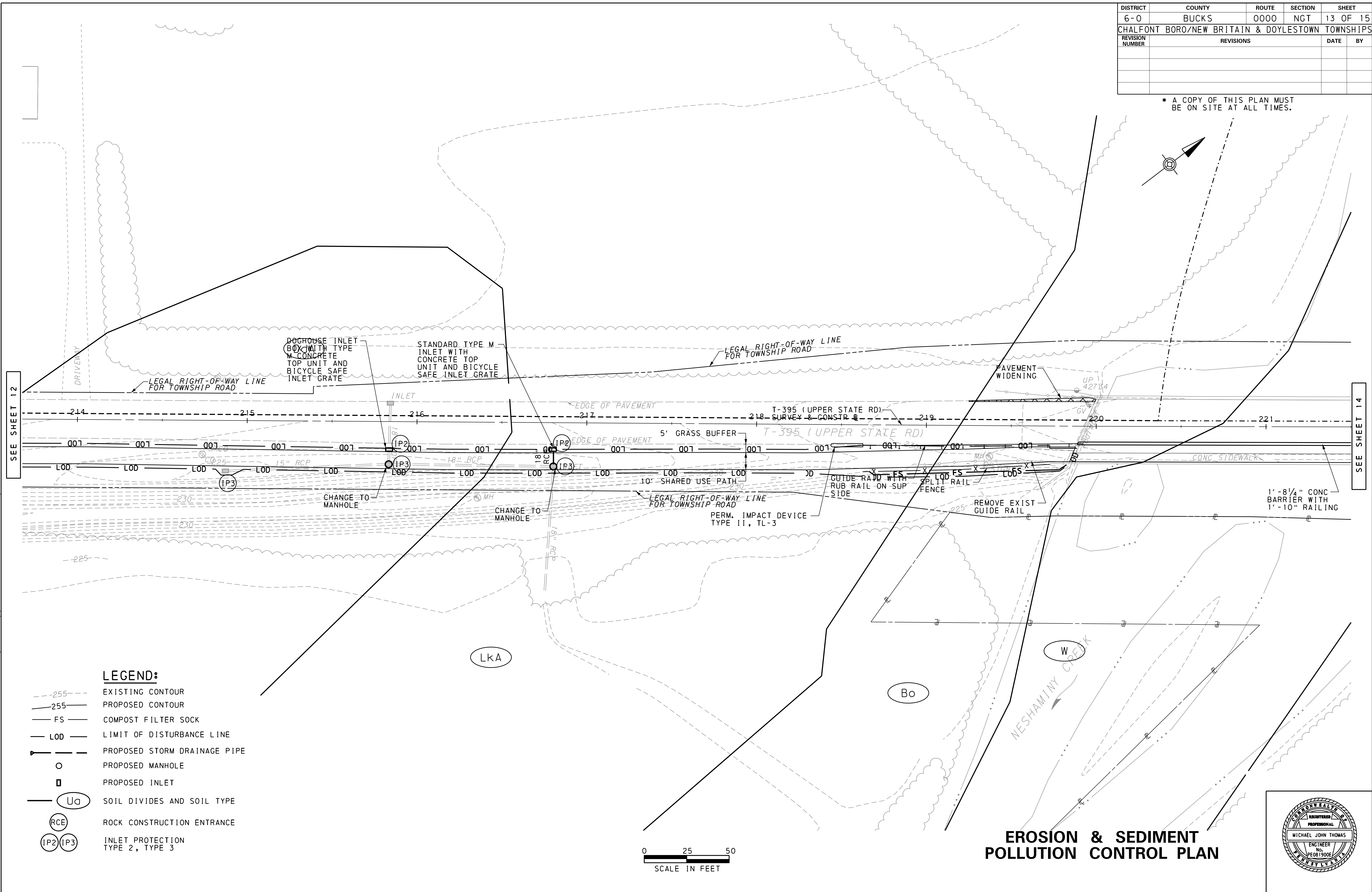
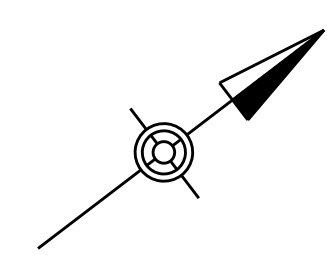
SEE SHEET 13

18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	13 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.

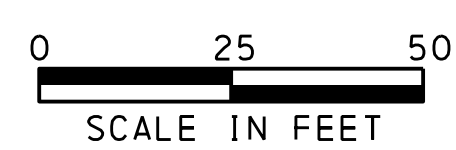


SEE SHEET 12

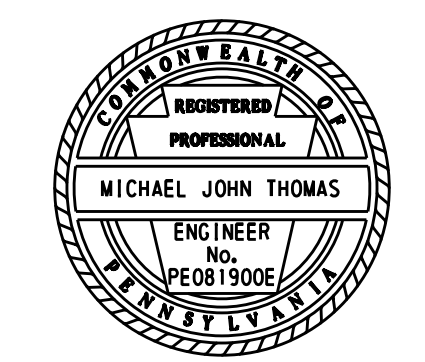
SEE SHEET 14

**LEGEND:**

- - -255- - - EXISTING CONTOUR
- - -255- - - PROPOSED CONTOUR
- FS - COMPOST FILTER SOCK
- LOD - LIMIT OF DISTURBANCE LINE
- - - PROPOSED STORM DRAINAGE PIPE
- PROPOSED MANHOLE
- PROPOSED INLET
- Ua SOIL DIVIDES AND SOIL TYPE
- RCE ROCK CONSTRUCTION ENTRANCE
- IP2 IP3 INLET PROTECTION TYPE 2, TYPE 3



**EROSION & SEDIMENT POLLUTION CONTROL PLAN**



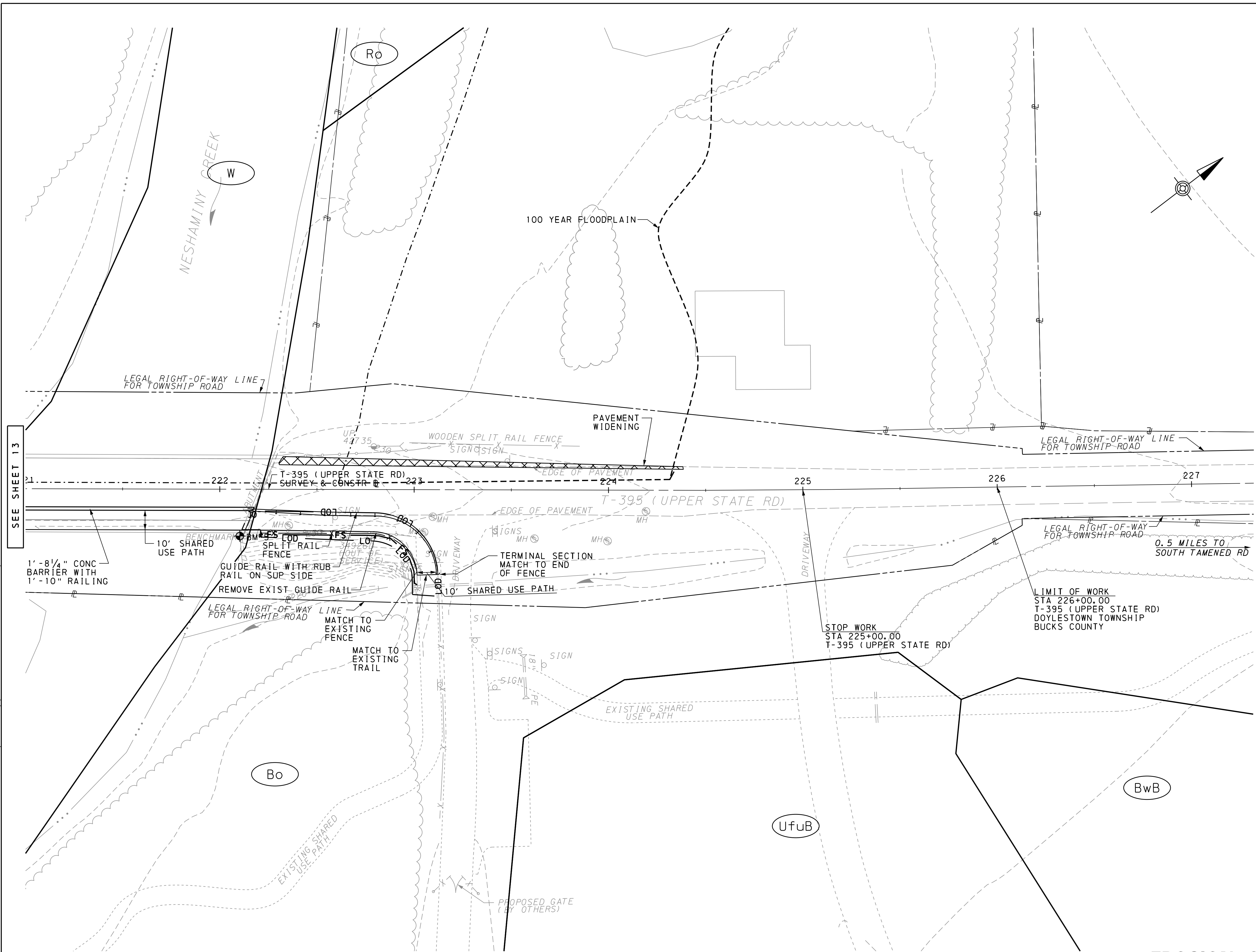


18-JUL-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	14 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

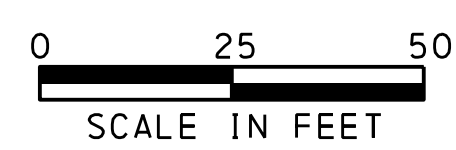
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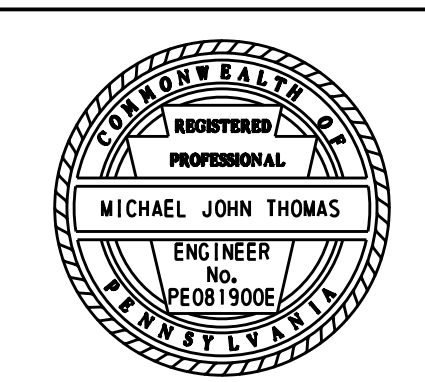
SEE SHEET 13

**LEGEND:**

- - - 255 - - - EXISTING CONTOUR
- 255 — PROPOSED CONTOUR
- FS — COMPOST FILTER SOCK
- LOD — LIMIT OF DISTURBANCE LINE
- - - 100 YEAR FLOODPLAIN
- (Ua) — SOIL DIVIDES AND SOIL TYPE



**EROSION & SEDIMENT POLLUTION CONTROL PLAN**



PREPAREDNESS, PREVENTION AND CONTINGENCY PLAN

GENERAL NOTES:

IF REQUIRED BY PADEP

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREPARE A "PREPAREDNESS, PREVENTION AND CONTINGENCY (PPC) PLAN" FOR THE PROPOSED CONSTRUCTION ACTIVITIES TO CONTROL THE POTENTIAL DISCHARGE OF POLLUTANTS CARRIED IN STORMWATER.
  2. BOTH THE E & S PLAN AND THE PPC PLAN ARE TO BE MAINTAINED ON-SITE FOR THE DURATION OF THE PERMIT.
  3. A PPC PLAN IS REQUIRED IF CHEMICALS, SOLVENTS, HAZARDOUS WASTES, OR ANY MATERIAL WITH THE POTENTIAL FOR CAUSING ACCIDENTAL POLLUTION OF AIR, LAND, OR WATER, ARE STORED OR UTILIZED ON THE SITE.
  4. FOLLOW THIS FORMAT AND INCLUDE THESE ELEMENTS FOR THE PPC PLAN:
    - A. GENERAL DESCRIPTION FOR THE CONSTRUCTION ACTIVITY
      - INCLUDE DRAWINGS SHOWING GENERAL LAYOUT OF SITE, PROPERTY BOUNDARIES, MATERIALS IN STORAGE AREAS, LOADING AND UNLOADING OPERATION SITES, TRUCK WASHING AREAS, IN ADDITION TO THE FEATURES OF THE E & S PLANS.
    - B. EMERGENCY RESPONSE PROGRAM
      - DESCRIBE THE ORGANIZATIONAL STRUCTURE, CHAIN OF COMMAND, EMERGENCY COORDINATORS AND CONTACTS. INCLUDE DESCRIPTIONS OF EACH INDIVIDUAL'S DUTIES AND RESPONSIBILITIES WITHIN THE CHAIN OF COMMAND FOR IMPLEMENTATION OF THE PPC PLAN.
      - IDENTIFY ON THE ORGANIZATIONAL CHART A LIST OF EMERGENCY COORDINATORS THAT MUST BE CONTACTED IN THE EVENT OF AN EMERGENCY OR SPILL.
      - DESCRIBE THE DUTIES AND RESPONSIBILITIES OF THE EMERGENCY COORDINATOR SPECIFIC TO THE SITE OR ACTIVITY IN THE EVENT OF AN EMINENT OR ACTUAL EMERGENCY.
      - INCLUDE ON THE ORGANIZATIONAL CHART OR ON AN ATTACHMENT, A LIST OF AGENCIES AND PHONE NUMBERS THAT MUST BE CONTACTED IN THE EVENT OF AN EMERGENCY OR SPILL.
- SUCH A LIST INCLUDES AS APPLICABLE:  
 PADEP  
 PA EMERGENCY MANAGEMENT AGENCY  
 COUNTY HEALTH DEPARTMENT  
 PA FISH COMMISSION  
 THE NATIONAL RESPONSE CENTER (U.S. EPA AND U.S. COAST GUARD)  
 LOCAL POLICE AND FIRE DEPARTMENTS  
 LOCAL SEWAGE TREATMENT PLANT  
 DOWN STREAM PUBLIC WATER SUPPLIES  
 INDUSTRIAL WATER USERS  
 RECREATION AREAS
- INTERNAL AND EXTERNAL COMMUNICATIONS AND ALARM SYSTEMS
  - EMPLOYEE TRAINING PROGRAM
  - LIST OF EMERGENCY EQUIPMENT. INCLUDE THE LOCATION, PHYSICAL DESCRIPTION, INTENDED USE AND CAPABILITIES OF EACH ITEM.

- MAINTENANCE PROCEDURES AND DECONTAMINATION PROCEDURES OF EMERGENCY EQUIPMENT
- EVACUATION PLAN FOR INSTALLATION PERSONNEL (IF DEEMED NECESSARY)
- ARRANGEMENTS WITH EMERGENCY RESPONSE CONTRACTORS. PROVIDE LIST WITH PHONE NUMBERS AND THE SERVICES EACH CONTRACTOR WILL PROVIDE.
- INFORM LOCAL EMERGENCY RESPONSE AGENCIES AND HOSPITALS CONCERNING THE TYPE OF POTENTIAL EMERGENCIES THAT MAY OCCUR AND THE NEED FOR SERVICES.
- FAMILIARIZE LOCAL POLICE, FIRE DEPARTMENTS, EMERGENCY RESPONSE TEAMS AND THE COUNTY EMERGENCY MANAGEMENT COORDINATOR WITH THE LAYOUT OF THE CONSTRUCTION SITE, THE PROPERTIES AND DANGERS ASSOCIATED WITH THE HAZARDOUS MATERIALS (IF ANY) HANDLED, PLACES WHERE PERSONNEL WOULD BE NORMALLY WORKING, ENTRANCES TO ACCESS ROADS INSIDE THE FACILITY, AND ANY POSSIBLE EVACUATION ROUTES.
- C. MATERIAL AND WASTE INVENTORY
  - IDENTIFY BY COMMON CHEMICAL NAME AND TRADE NAME TO INCLUDE LOCATIONS, SOURCES, AND QUANTITIES USED OR STORED ON THE SITE.
  - FOR EACH HAZARDOUS CHEMICAL STORED AT THE CONSTRUCTION SITE, THE LOCATION MATERIAL SAFETY DATA SHEET OR SIMILAR INFORMATION IS TO BE CLEARLY CITED IN THE PPC PLAN.
- D. SPILL AND LEAK PREVENTION AND RESPONSE
  - DESCRIBE THE SOURCE AND AREAS FOR POTENTIAL LEAKS AND SPILLS, THE PROBABLE DIRECTION OF FLOW OF SPILLED MATERIALS AND THE POLLUTION INCIDENT MEASURE SPECIFIC TO THE SOURCE OR AREA.
  - PROVIDE SEPARATE DRAWINGS OR PLOT PLANS TO SUPPLEMENT THE ABOVE.
- E. INSPECTION PROGRAM
  - DESCRIBE THE INSPECTION PROGRAM AND MONITORING PROCEDURES TO ASSESS THE INTEGRITY OF EQUIPMENT, STORAGE AREAS AND SIMILAR AREAS.
- F. HOUSEKEEPING PROGRAM
  - IDENTIFY THE AREAS AND THE ASSOCIATED TYPE OF HOUSEKEEPING PRACTICES TO MINIMIZE THE POSSIBILITY OF ACCIDENTAL SPILLS AND SAFETY HAZARDS TO PERSONNEL.
- G. SECURITY MEASURES
  - IN A VIOLATION OF DEPARTMENTAL REGULATIONS, AND/OR INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.
- H. EXTERNAL FACTORS
  - DESCRIBE THE POSSIBLE AFFECTS OF EXTERNAL FACTORS SUCH AS POWER OUTAGES, STRIKES, FLOODS, SNOWSTORMS ETC. AND ANY ACTION TO BE TAKEN TO ALLEVIATE ANY RESULTING EFFECTS TO PUBLIC HEALTH, SAFETY OR THE ENVIRONMENT.

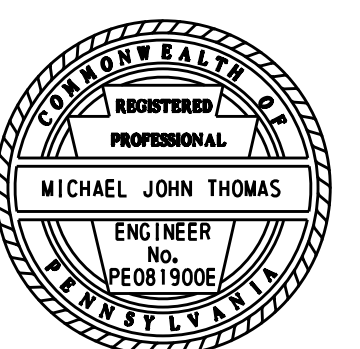
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	15 OF 15
CHALFONT BORO/NEW BRITAIN & DOYLESTOWN TOWNSHIPS				
REVISION NUMBER	REVISIONS	DATE	BY	

\* A COPY OF THIS PLAN MUST BE ON SITE AT ALL TIMES.

EROSION & SEDIMENT CONTROL MAINTENANCE PROGRAM

CONTROL MEASURE	PROBLEMS TO LOOK FOR:	REMEDIES:
VEGETATION	RILLS OR GULLIES FORMING	CHECK FOR TOP-OF-SLOPE DIVERSION AND INSTALL IF NEEDED.
COMPOST FILTER SOCK	UNDERCUTTING OF FILTER SOCK FILTER SOCK RIPPING FLATENED FILTER SOCK OVER TOPPING OF FILTER SOCK SEDIMENT > 1/3 SOCK HEIGHT REPLACEMENT	REPLACE AREA WITH SILT FENCE. REPLACE DAMAGED SECTION OR INSTALL ROCK FILTER OUTLET. STACK A SECOND FILTER SOCK ON TOP OF EXISTING SOCK TO CREATE ADEQUATE FILTER SOCK HEIGHT STACK A SECOND FILTER SOCK ON TOP OF EXISTING SOCK TO CREATE ADEQUATE FILTER SOCK HEIGHT. REMOVE SEDIMENT FROM FILTER SOCK. REPLACE BIODEGRADABLE FILTER SOCK AFTER 6 MONTHS; PHOTODEGRADABLE AFTER 12 MONTHS.
INLET PROTECTION	OBSTRUCTED OUTLET SEDIMENT > 1/2 SOCK HEIGHT SEDIMENT TO CLEAN OUT LEVEL RIPPED FILTER SOCK REPLACEMENT	REMOVE SEDIMENT FROM INLET. REMOVE SEDIMENT FROM INLET PROTECTION AFTER EACH RAINFALL EVENT REMOVE SEDIMENT FROM FILTER SOCK REMOVE FULL FILTER BAG FROM INLET AND REPLACE WITH CLEAN FILTER BAG REPLACE DAMAGED FILTER SECTION OR INSTALL ADDITIONAL SOCK REPLACE BIODEGRADABLE FILTER SOCK AFTER 6 MONTHS; PHOTODEGRADABLE AFTER 12 MONTHS
PUMPED WATER FILTER BAG	SEDIMENT TO CLEAN OUT LEVEL/ BAG FAILURE CLAMP FAILS NON-LEVEL FILTER BAG	REPLACE BAG WITH NEW CLEAN BAG WHEN SEDIMENT REACHES 50% OF CAPACITY. REPLACE CLAMP WITH PROPERLY FUNCTIONING CLAMP. REMOVE BAG, RE-LEVEL STONE, REPLACE BAG.
ROCK CONSTRUCTION ENTRANCE	DISLODGED STONES	REPLACE STONES TO ENSURE MINIMUM DEPTH IS MAINTAINED.
MULCH BLANKET	RILLS OR GULLIES FORMING	SEED AND MULCH SWALE AND ANCHOR WITH NETTING, OR LINE SWALE WITH CRUSHED ROCK.
OUTLET PROTECTION OR ROCK FILTER OUTLET	DISLODGED STONES EROSION BELOW OUTLET OUTLET SCOUR	REPLACE WITH LARGER STONES. ENLARGE RIPRAP APRON; OR LINE RECEIVING CHANNEL BELOW OUTLET. INSTALL PROPER FILTER FABRIC OR GRADED BEDDING BENEATH RIPRAP ARPON.

EROSION & SEDIMENT POLLUTION CONTROL PLAN  
PPC PLAN\MAINTENANCE PROGRAM



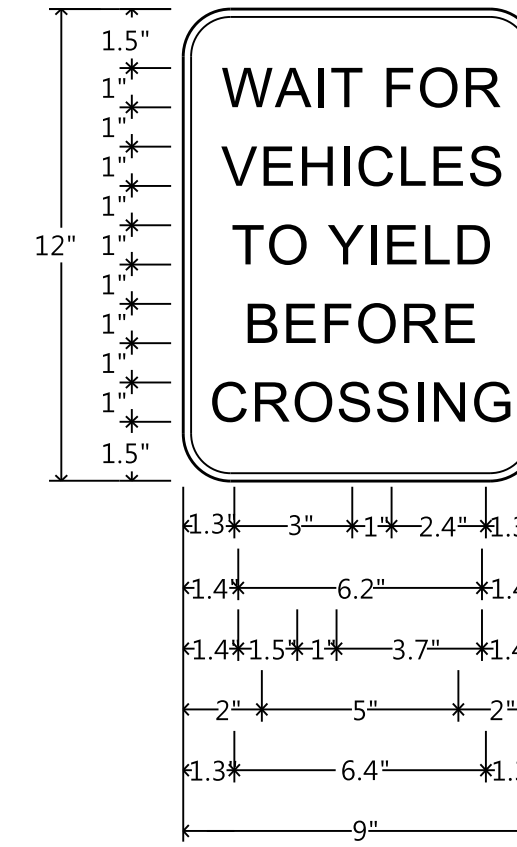
SIGN TABULATION			
PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	W11-15#	36"X36"	COMBINED BICYCLE/PEDESTRIAN SIGN WITH FLASHER
B	W11-15#	36"X36"	COMBINED BICYCLE/PEDESTRIAN SIGN
C	W16-7P#	24"X12"	DIAGONAL DOWNWARD POINTING ARROW
D	R1-1	18"X18"	STOP
E	R5-3	24"X24"	NO MOTOR VEHICLES
F	W16-2AP#	24"X12"	300 FEET
G	R10-25	9"X12"	PUSH BUTTON TO TURN ON WARNING LIGHTS
H	SPECIAL	9"X12"	WAIT FOR VEHICLES TO YIELD BEFORE CROSSING
I	R1-1	24"X24"	STOP (REPLACE EXISTING)
J	W16-9P	24"X12"	AHEAD
K	R4-107	30"X30"	KEEP OFF SHOULDER

CALL BEFORE YOU DIG !

PENNSYLVANIA LAW REQUIRES  
3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE  
AND 10 WORKING DAYS IN DESIGN STAGE  
BEFORE YOU DIG CALL  
THE PA ONE CALL SYSTEM TELEPHONE NUMBER.



1-800-242-1776



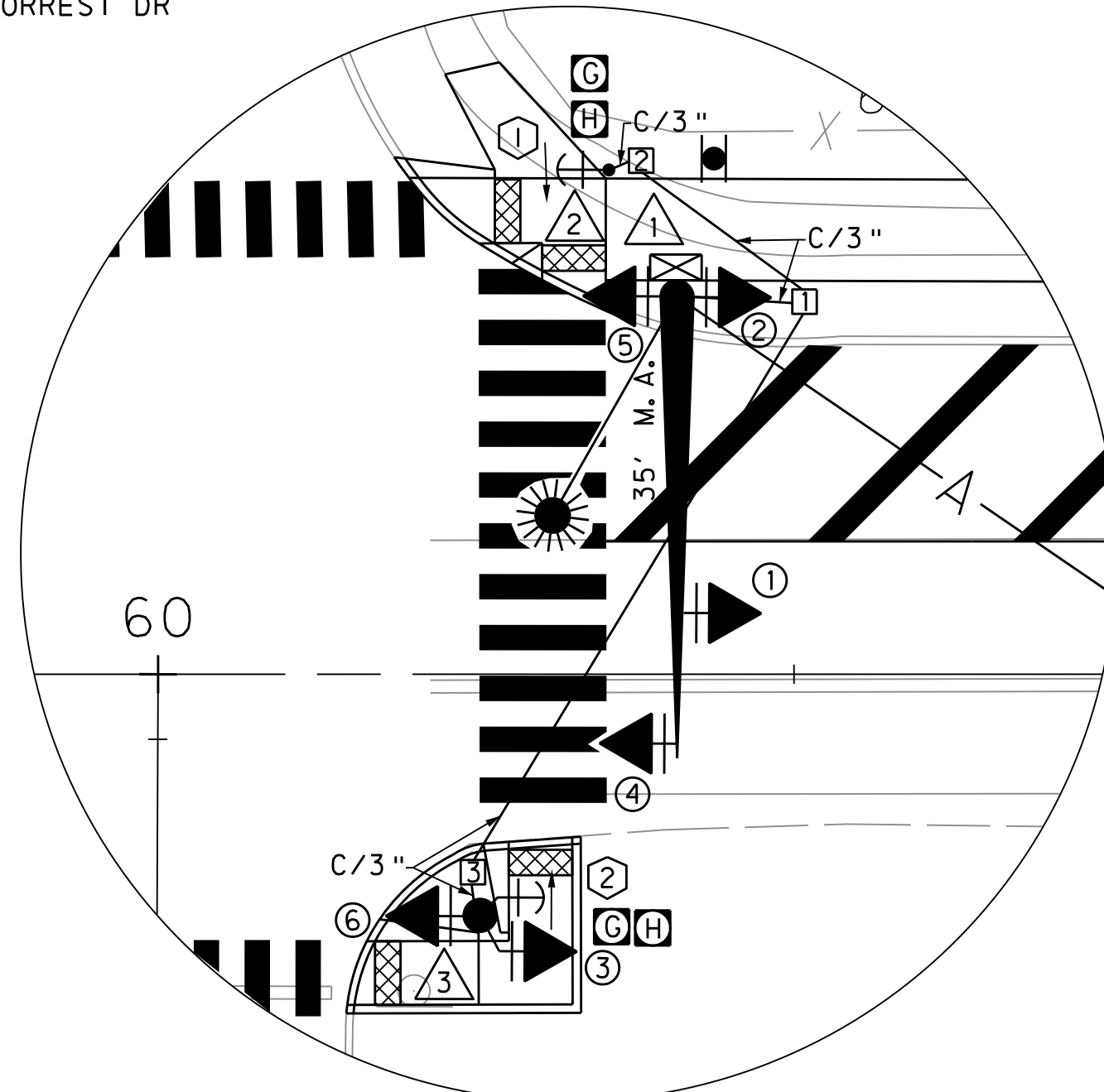
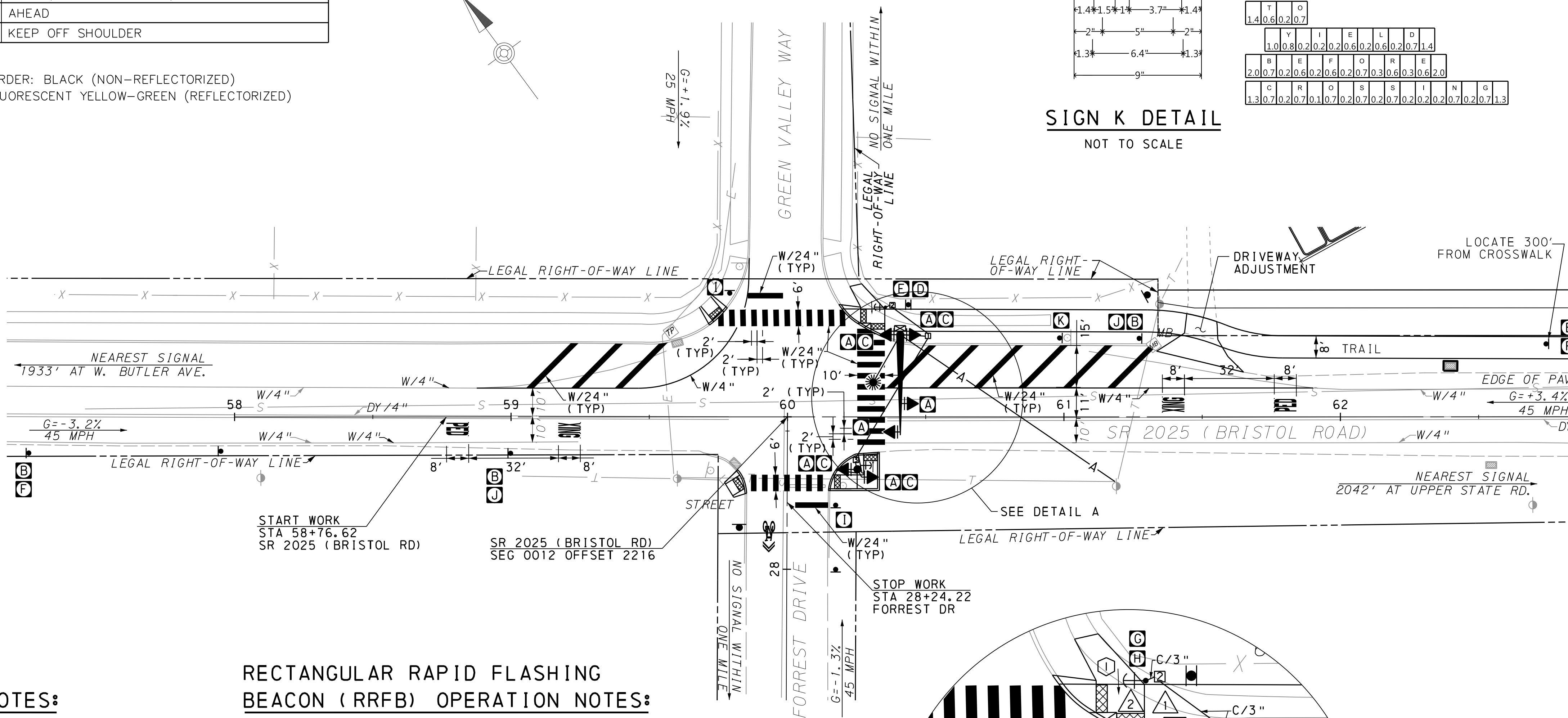
SIGN K DETAIL  
NOT TO SCALE

0.4" Radius, 0.4" Border, Black on White;  
"WAIT FOR" D; "VEHICLES" D;  
"TO YIELD" D; "BEFORE" D;  
"CROSSING" D;

Table of Widths and Spaces

W	A	I	T
1.3	0.9	0.1	0.8
F O R			
1.0	0.6	0.2	0.7
V E H I C L E S			
1.4	0.8	0.2	0.6
T O			
1.4	0.6	0.2	0.7
Y I E L D			
1.0	0.8	0.2	0.6
B E F O R E			
2.0	0.7	0.2	0.6
C R O S S I N G			
1.3	0.7	0.2	0.7

#SIGN COLOR - SYMBOL AND BORDER: BLACK (NON-REFLECTORIZED)  
BACKGROUND: FLUORESCENT YELLOW-GREEN (REFLECTORIZED)



DETAIL A  
0 10 20 FEET

CONSTRUCTION NOTES:

- INSTALL NEW MAST ARM 1 WITH RECTANGULAR RAPID FLASHING BEACONS 1, 2, 4 AND 5. INSTALL POLE-MOUNTED CONTROLLER AND CABINET ON MAST ARM 1.
- INSTALL LED LUMINAIRE ON MAST ARM 1.
- INSTALL PEDESTRIAN PUSHBUTTON 2 ON STUB POLE 2. CONNECT POLE 2 UNDERGROUND TO JUNCTION BOX 2 AND THEN TO JUNCTION BOX 1 AND THEN TO CONTROLLER ON POLE 1.
- INSTALL RECTANGULAR RAPID FLASHING WARNING BEACONS 3 AND 6 AND PEDESTRIAN PUSHBUTTON 2 ON POLE 3. CONNECT POLE 2 UNDERGROUND TO JUNCTION BOX 3 AND THEN TO JUNCTION BOX 1 AND THEN TO CONTROLLER ON POLE 1.
- PUSHBUTTONS SHALL BE 2 INCH ADA WITH LED LATCHING TONE.
- CONNECT ELECTRICAL SERVICE AERIALY FROM POLE 1 TO SERVICE POLE UTILIZING TYPE B SERVICE CONNECTION.
- ALL SIGNAL POLES AND EQUIPMENT SHALL BE PAINTED BLACK.
- INSTALL SIGNS AND PAVEMENT MARKINGS ACCORDING TO THE PLAN. REMOVE ANY CONFLICTING PAVEMENT MARKINGS.

RECTANGULAR RAPID FLASHING BEACON (RRFB) OPERATION NOTES:

- RRFB SHALL CONFORM TO THE FEDERAL HIGHWAY ADMINISTRATIONS' (FHWA) INTERIM APPROVAL OF RRFB (1A-21)
- RRFB SHALL DISPLAY A FLASHING YELLOW SIGNAL INDICATION UPON ACTUATION
- EACH OF THE YELLOW INDICATIONS SHALL HAVE 70 TO 80 PERIODS OF FLASHING PER MINUTE AND SHALL HAVE ALTERNATING BUT APPROXIMATELY EQUAL PERIODS OF RAPID PULSATING LIGHT EMISSIONS AND DARK OPERATION. DURING EACH OF ITS 70 TO 80 FLASHING PERIODS PER MINUTE, ONE OF THE YELLOW INDICATIONS SHALL EMIT TWO RAPID PULSES OF LIGHT AND THE OTHER YELLOW INDICATION SHALL EMIT THREE RAPID PULSES OF LIGHT.
- RRFB SIGNALS TO BE DARK UNLESS ACTIVATED BY PUSH BUTTON. PUSH BUTTON TO BE EQUIPPED WITH LATCHING CONFIRMATION LED AND TONE.
- UPON PUSH BUTTON ACTIVATION, THE RRFB SHALL FLASH FOR A PERIOD OF 30 SECONDS. THE TIMER SHALL RESET UPON EACH NEW PUSH BUTTON ACTIVATION.
- SIDE LIGHT FOR PEDESTRIANS TO ILLUMINATE WHEN RRFB DEVICE IS ACTIVE. SIDE LIGHTS SHALL BE ADJUSTED SO THEY ARE VISIBLE TO TRAIL USERS.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	2025	NGT	1 OF 2
CHALFONT BOROUGH				
REVISION NUMBER	REVISIONS	DATE	BY	
<p><b>TRAFFIC SIGNAL NOTES</b></p> <p>DO NOT MODIFY INSTALLATION WITHOUT PRIOR WRITTEN APPROVAL.</p> <p>ALL SIGNS AND PAVEMENT MARKINGS INDICATED ARE PART OF THE PERMIT. INSTALL AND MAINTAIN IN ACCORDANCE WITH PUBLICATION 212.</p> <p>ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING PENNDOT PUBLICATIONS: PUB 408/2011, SPECIFICATIONS PUB 148, TRAFFIC STANDARDS - SIGNALS, TC-8800 SERIES PUB 149, TRAFFIC SIGNAL DESIGN HANDBOOK PUB 236M, HANDBOOK OF APPROVED SIGNS</p> <p>POST MOUNTED SIGNALS: INSTALL WITH A CLEARANCE OF 2 FEET BEHIND FACE OF CURB OR EDGE OF SHOULDER, AND 8 FEET ABOVE SIDEWALK OR PAVEMENT GRADE.</p> <p>OVERHEAD SIGNALS: PROVIDE A MINIMUM SIGNAL HEAD CLEARANCE OF 16 FEET ABOVE THE ROADWAY, RIGIDLY MOUNT TOP AND BOTTOM, AND EQUIP WITH BACKPLATES. PROVIDE A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN SIGNALS AS MEASURED AT RIGHT ANGLES TO THE APPROACH.</p> <p>DETERMINE WITH A PENNDOT REPRESENTATIVE, THE EXACT LOCATION OF DETECTORS PRIOR TO INSTALLATION.</p> <p>CONSULT WITH LOCAL OFFICIALS AND UTILITIES TO RESOLVE CONFLICTS PRIOR TO CONSTRUCTION.</p> <p>COMPLY WITH PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.</p>				
<p><b>LEGEND</b></p> <p>EXISTING      PROPOSED</p> <p>25'      25'      MAST ARM/LENGTH/SUPPORT NUMBER</p> <p>○      ●      PEDESTAL/STRAIN POLE/POLE NUMBER</p> <p>②      ②      SIGNAL HEAD/BACKPLATE/VISORS/DIRECTIONAL ARROW/IDENTIFYING NUMBER</p> <p>②      ②      PEDESTRIAN SIGNAL HEAD/IDENTIFYING NUMBER</p> <p>②      ②      VIDEO CAMERA/IDENTIFYING NUMBER</p> <p>20'      20'      LUMINAIRE/ARM LENGTH</p> <p>A      A      SIGN/IDENTIFYING LETTER</p> <p>A      A      EMERGENCY PRE-EMPTION FLASHING BEACON/IDENTIFYING CODE</p> <p>A      A      PRE-EMPTION DETECTOR/IDENTIFYING CODE</p> <p>②      ②      JUNCTION BOX/IDENTIFYING NUMBER</p> <p>②      ②      PEDESTRIAN PUSH BUTTON/SIGN/IDENTIFYING NUMBER</p> <p>6'x6'      6'x6'      VIDEO DETECTION ZONE/IDENTIFYING NUMBER/ZONE DIMENSIONS</p> <p>⑤      ⑤      LOOP DETECTION ZONE/IDENTIFYING NUMBER/ZONE DIMENSIONS</p> <p>②      ②      PHASE NUMBER</p> <p>-A-      -A-      AERIAL WIRE</p> <p>-C/I-      -C/I-      CONDUIT/SIZE</p> <p>⊗      ⊗      CONTROLLER</p> <p>W/4"      W/4"      SOLID WHITE LINE/WIDTH</p> <p>AW/6"      AW/6"      AUXILIARY WHITE LINE/WIDTH</p> <p>BW/6"      BW/6"      BROKEN WHITE LINE/WIDTH</p> <p>BY/4"      BY/4"      BROKEN YELLOW LINE/WIDTH</p> <p>Y/4"      Y/4"      SOLID YELLOW LINE/WIDTH</p> <p>DY/4"      DY/4"      SOLID DOUBLE YELLOW LINE/WIDTH</p>				
<p>PENNSYLVANIA DEPARTMENT OF TRANSPORTATION ENGINEERING DISTRICT 6-0</p> <p>COUNTY: BUCKS</p> <p>MUNICIPALITY: NEW BRITAIN TOWNSHIP</p> <p>INTERSECTION: FORREST DRIVE/GREEN VALLEY WAY AND BRISTOL ROAD (SR 2025)</p>				
<p>REVIEWED: <i>ELLEN M. BRADLEY</i> DATE: 7/14/18</p> <p>MUNICIPAL OFFICIAL: <i>[Signature]</i> DATE: 7/23/18</p> <p>RECOMMENDED: <i>[Signature]</i> DATE: 7/23/18</p> <p>DATE: April 2, 2018</p>				
<p>SCALE: 0 25' 50'</p>				

FLASHER # W-6140-01

**Michael Baker**  
INTERNATIONAL  
500 OFFICE CENTER DRIVE, SUITE 210,  
FORT WASHINGTON, PA 19034-3234  
Phone: (215) 444-0888 • MBAKERINTL.COM

REGISTERED PROFESSIONAL ENGINEER  
WILLIAM BEARCE KING  
PE074275  
PENNSYLVANIA

DATE: April 2, 2018

E:\139780\_Neshaminy Trail Phase 3\p\Traffic\Signal\NT3\_RRFB\_signal.dgn

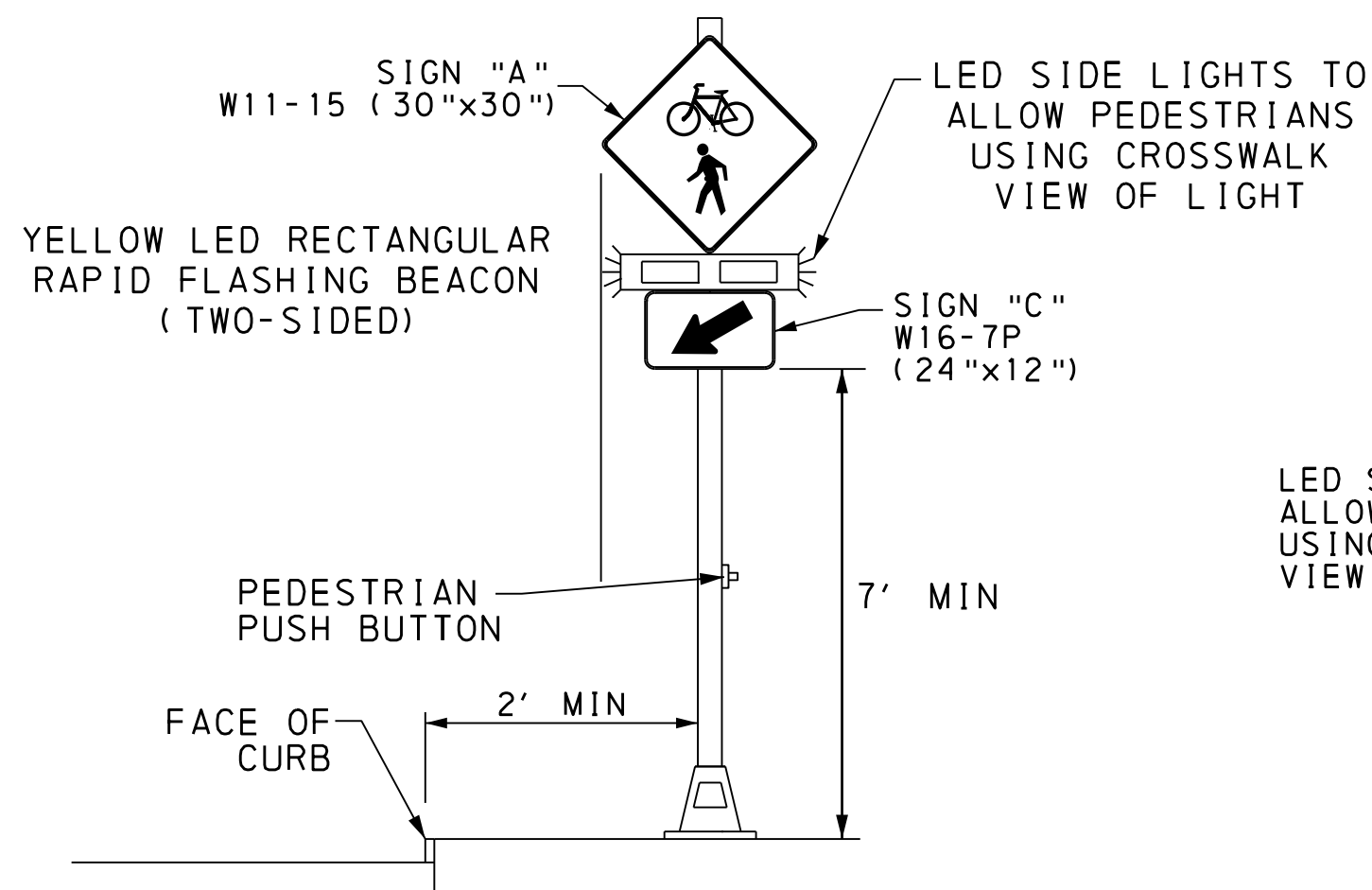
TRAFFIC SIGNAL SUPPORTS

STRUCTURE NUMBER	ITEM #			ROUTE	STATION **	SIDE	OFF-SET **	MAST ARM															PEDESTAL																					
	4951-2135	4951-4014	4951-4022					H	K	ARM 'A'					W	ARM 'C'					H	M	N																					
										M	N	O	P	R		S	T	U	L	X				Z																				
1				SR 2025	60+41	LT	29.8	17'	8'	35'	36'	26'																																
2				SR 2025	60+36	LT	39.7																																	5'				
3				SR 2025	60+26	RT	19.0																																		14'	8'		
TOTALS	1	1	1																																									

NOTES:  
ALL POLES ARE TO BE PAINTED WITH BLACK POWDER COAT.  
\*\* EXACT LOCATION OF THE SUPPORTS TO BE DETERMINED BY A PENNDOT REPRESENTATIVE.

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

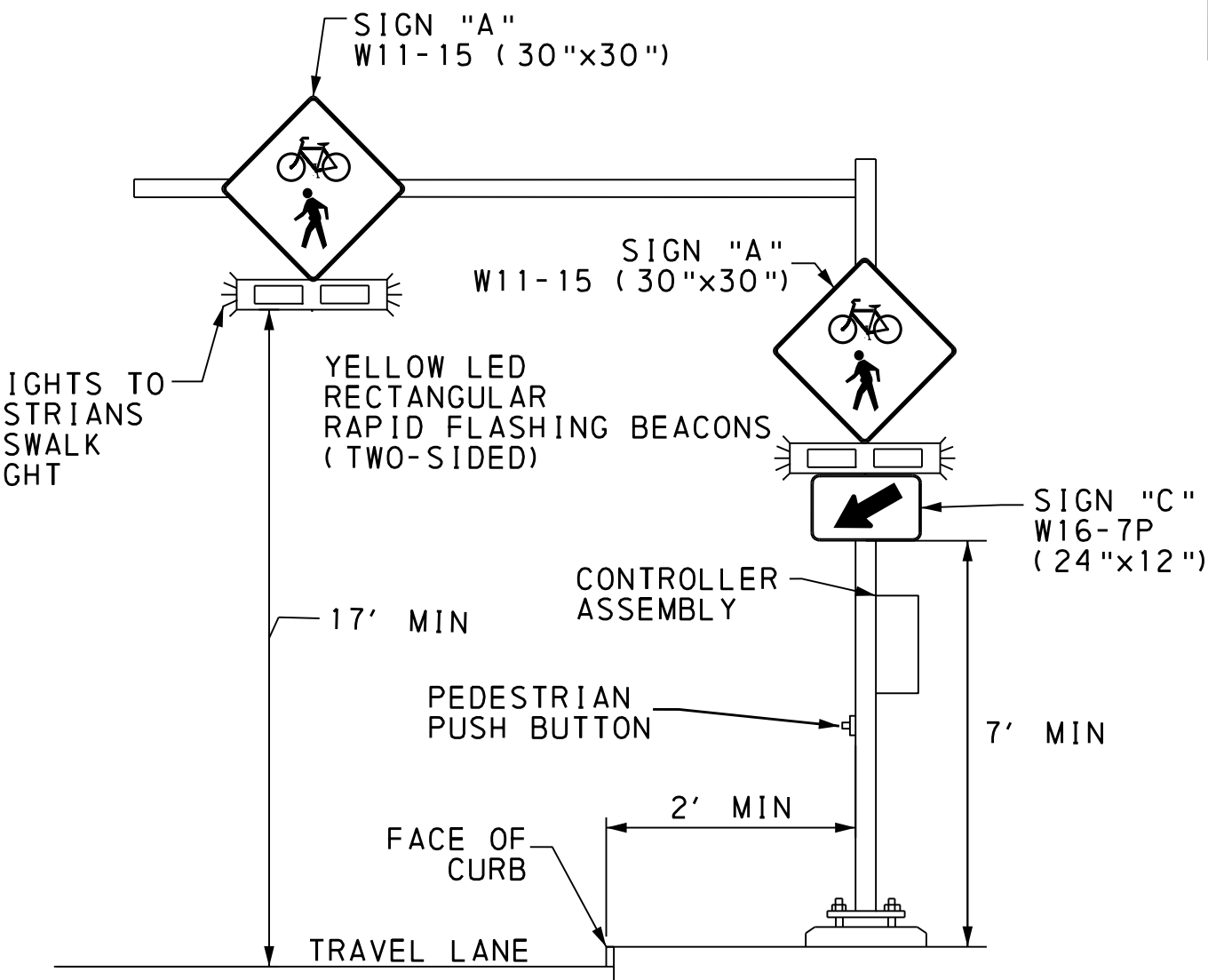
DESCRIPTION	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE 1	TRENCH AND BACKFILL, TYPE 11	SIGNAL CABLE, 3 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	JUNCTION BOX, JB-27	ELECTRICAL SERVICE, TYPE B
ITEM NUMBER	0954 0013	0954 0151	0954 0153	0954 0201	0954 0202	0954 0302	0954 0402
UNIT	LF	LF	LF	LF	LF	EACH	EACH
POLE 3 TO JB 3	4	4					1
JB 3 TO JB 1	52	7	45				1
POLE 2 TO JB 2	3	3					1
JB 2 TO JB 1	17	17					
POLE 1 TO JB 1	10	10					
ENTIRE INTERSECTION				117	264		1
TOTALS	86	41	45	117	264	3	1



\*REFER TO TC-8804 FOR SERVICE DISCONNECT DETAILS

POLE MOUNTED FLASHING WARNING DEVICE SUPPORT DETAIL

NOT TO SCALE



MAST ARM MOUNTED FLASHING WARNING DEVICE SUPPORT DETAIL A

NOT TO SCALE

ITEM 4951-4022: MODIFIED PEDESTRIAN STUB POLE, TYPE B DETAIL

NOT TO SCALE

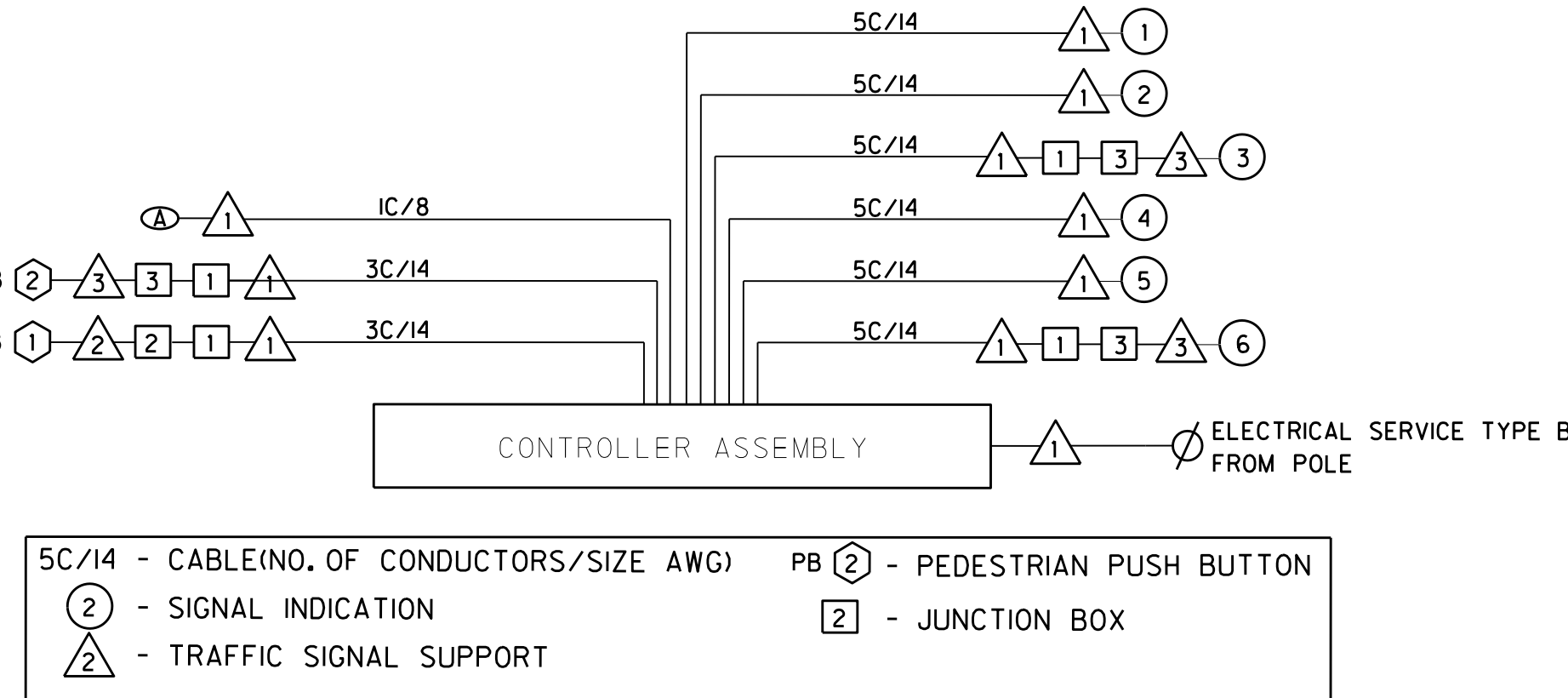
MISCELLANEOUS ITEMS

ITEM NUMBER	QUANTITY	UNIT	DESCRIPTION	LOCATION
9000-0030	6	EACH	RECTANGULAR RAPID FLASHING BEACON ASSEMBLY	△ △
9000-0031	1	EACH	LED LUMINAIRE, ARM MOUNT	△
9000-0032	2	EACH	PEDESTRIAN PUSHBUTTON WITH LATCHING LED AND TONE	△ △

FLAT SHEET ALUMINUM SIGN TABULATION

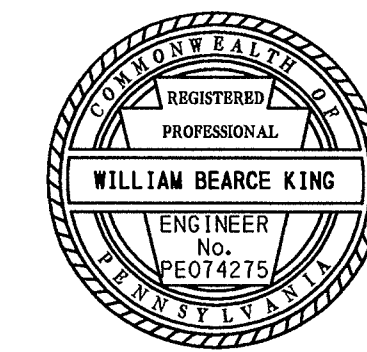
PLAN SYMBOL	SERIES NUMBER	SIZE	AREA (SF)	REMARKS	ITEM NUMBER					
					POST MOUNTED	POLE MOUNTED	POST MOUNTED TYPE B	POST MOUNTED TYPE F	STRUCTURE MOUNTED	
					0931 0001	0935 0001	0936 0200			
A	W11-15 #	36"x36"	9.00	COMBINED BICYCLE/PEDESTRIAN SIGN WITH FLASHER		4				
B	W11-15 #	36"x36"	9.00	COMBINED BICYCLE/PEDESTRIAN SIGN	2					
C	W16-7P #	24"x12"	4.00	DIAGONAL DOWNWARD POINTING ARROW		4				
D	R1-1 #	18"x18"	2.25	STOP	1					
E	R5-3 #	24"x24"	4.00	NO MOTOR VEHICLES	1					
F	W16-2AP #	24"x12"	2.00	300 FEET	2					
G	R10-25	9"x12"	0.75	PUSH BUTTON TO TURN ON WARNING LIGHTS		2			1.50	
H	SPECIAL	9"x12"	0.75	WAIT FOR VEHICLES TO YIELD BEFORE CROSSING		2			1.50	
I	R1-1 #	24"x24"	4.00	STOP (REPLACE EXISTING)	2					
J	W16-9P #	24"x12"	2.00	AHEAD	2					
K	R4-107 #	30"x30"	6.25	KEEP OFF SHOULDER	1					
				TOTAL						3.00

\* SIGN INCIDENTAL TO ITEM 9000-0030  
# SIGN TABULATED IN SIGNING & PAVEMENT MARKING PLAN

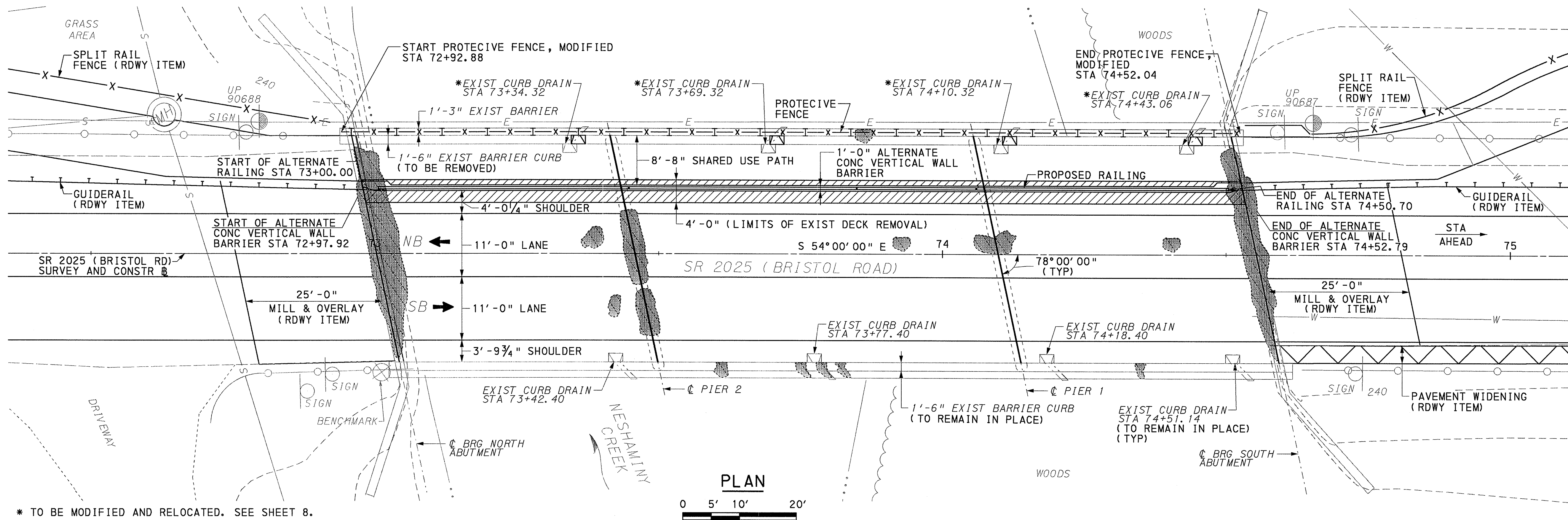


WIRING DIAGRAM

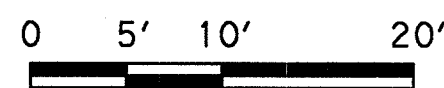
**Michael Baker INTERNATIONAL**  
500 OFFICE CENTER DRIVE, SUITE 210,  
FORT WASHINGTON, PA 19034-3234  
Phone: (215) 444-0888 - MBAKERINTL.COM



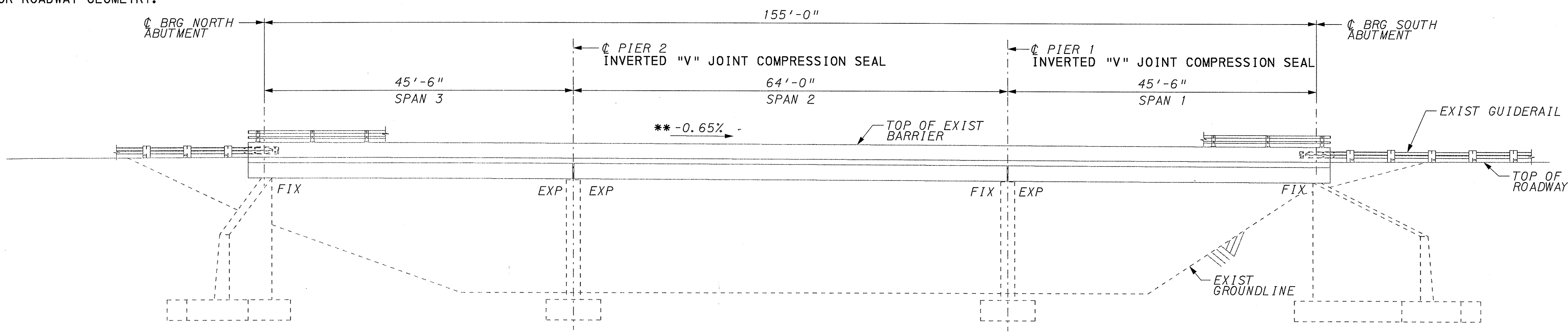
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	2025	NGT	2 OF 2
CHALFONT BOROUGH				
REVISION NUMBER	REVISIONS	DATE	BY	
<b>TRAFFIC SIGNAL NOTES</b>				
DO NOT MODIFY INSTALLATION WITHOUT PRIOR WRITTEN APPROVAL.				
ALL SIGNS AND PAVEMENT MARKINGS INDICATED ARE PART OF THE PERMIT. INSTALL AND MAINTAIN IN ACCORDANCE WITH PUBLICATION 212.				
ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING PENNDOT PUBLICATIONS: PUB 408/2011, SPECIFICATIONS PUB 148, TRAFFIC STANDARDS - SIGNALS, TC-8800 SERIES PUB 149, TRAFFIC SIGNAL DESIGN HANDBOOK PUB 236M, HANDBOOK OF APPROVED SIGNS				
POST MOUNTED SIGNALS: INSTALL WITH A CLEARANCE OF 2 FEET BEHIND FACE OF CURB OR EDGE OF SHOULDER, AND 8 FEET ABOVE SIDEWALK OR PAVEMENT GRADE.				
OVERHEAD SIGNALS: PROVIDE A MINIMUM SIGNAL HEAD CLEARANCE OF 16 FEET ABOVE THE ROADWAY; RIGIDLY MOUNT TOP AND BOTTOM; AND EQUIP WITH BACKPLATES. PROVIDE A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN SIGNALS AS MEASURED AT RIGHT ANGLES TO THE APPROACH.				
DETERMINE WITH A PENNDOT REPRESENTATIVE, THE EXACT LOCATION OF DETECTORS PRIOR TO INSTALLATION.				
CONSULT WITH LOCAL OFFICIALS AND UTILITIES TO RESOLVE CONFLICTS PRIOR TO CONSTRUCTION.				
COMPLY WITH PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.				
<b>LEGEND</b>				
EXISTING	PROPOSED			
		MAST ARM/LENGTH/SUPPORT NUMBER		
		PEDESTAL/STRAIN POLE/POLE NUMBER		
		SIGN HEAD/BACKPLATE/VISORS/DIRECTIONAL ARROW/IDENTIFYING NUMBER		
		PEDESTRIAN SIGNAL HEAD/IDENTIFYING NUMBER		
		VIDEO CAMERA/IDENTIFYING NUMBER		
		LUMINAIRE/ARM LENGTH		
		SIGN/IDENTIFYING LETTER		
		EMERGENCY PRE-EMPTION FLASHING BEACON/IDENTIFYING CODE		
		PRE-EMPTION DETECTOR/IDENTIFYING CODE		
		JUNCTION BOX/IDENTIFYING NUMBER		
		PEDESTRIAN PUSH BUTTON/SIGN/IDENTIFYING NUMBER		
		VIDEO DETECTION ZONE/IDENTIFYING NUMBER/ZONE DIMENSIONS		
		LOOP DETECTION ZONE/IDENTIFYING NUMBER/ZONE DIMENSIONS		
		PHASE NUMBER		
		AERIAL WIRE		
		CONDUIT/SIZE		
		CONTROLLER		
		SOLID WHITE LINE/WIDTH		
		AUXILIARY WHITE LINE/WIDTH		
		BROKEN WHITE LINE/WIDTH		
		BROKEN YELLOW LINE/WIDTH		
		SOLID YELLOW LINE/WIDTH		
		SOLID DOUBLE YELLOW LINE/WIDTH		
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION ENGINEERING DISTRICT 6-0				
COUNTY: <u>BUCKS</u>				
MUNICIPALITY: <u>NEW BRITAIN TOWNSHIP</u>				
INTERSECTION: <u>FORREST DRIVE/GREEN VALLEY WAY AND BRISTOL ROAD (SR 2025)</u>				
REVIEWED:				DATE
MUNICIPAL OFFICIAL:				7/4/18 DATE
RECOMMENDED:				7/3/2018 DATE
MADE - TRANSPORTATION OPERATIONS:				7/22/18 DATE
SCALE:	0 25' 50'			



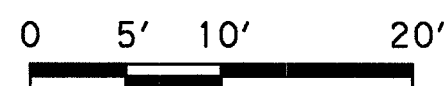
PLAN



- \* TO BE MODIFIED AND RELOCATED. SEE SHEET 8.
- \*\* REFERENCED FROM EXISTING DRAWINGS. SEE S-6935A DRAWINGS FOR ROADWAY GEOMETRY.



ELEVATION



LEGEND:

- TRAFFIC DIRECTION
- STREAM LINE
- - - 255 - - - EXISTING CONTOUR
- E - ELECTRICAL LINE
- W - WATER LINE
- S - SEWER LINE
- I - x - I - x - I - PROTECTIVE FENCE
- X - X - SPLIT RAIL FENCE
- ▨ REMOVAL OF EXISTING DECK
- CONCRETE DECK DETERIORATION. TYPE OF REPAIR TO BE DETERMINED BY REPRESENTATIVE IN FIELD.

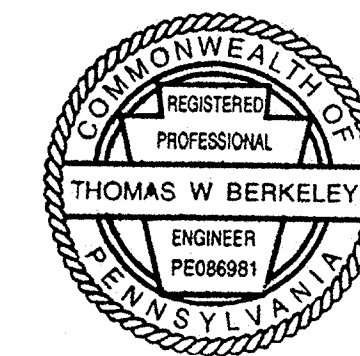
DATUM: 210

SCOPE OF WORK:

1. INSTALL NEW INVERTED "V" TYPE PREFORMED SILICONE JOINTS AT PIER 1 AND PIER 2. FLARE JOINT MATERIAL UP INTO CURB ON SOUTHBOUND SIDE AND PARAPET ON NORTHBOUND SIDE.
2. REMOVE NORTH SIDE BARRIER CURB AND PORTIONS OF CURB DRAINS.
3. REMOVE 4'-0" OF EXISTING BRIDGE DECK FOR INTEGRAL PLACEMENT OF BARRIER BARS. MAINTAIN EXISTING DECK REINFORCEMENT.
4. PLACE ALTERNATE BARRIER REBAR AND CAST-IN-PLACE BARRIER WITH RAILING PER BC-718M AS SHOWN ON THIS CONTRACT DRAWING.
5. REMOVE EXISTING RAILING ON EXISTING BARRIER ON NORTHERN SIDE.
6. PLACE PROTECTIVE FENCE PER BC-701M ON EXISTING BARRIER ON NORTH SIDE.
7. REMOVE BITUMINOUS PATCHES AND DETERIORATED CONCRETE ON THE DECK AND EXISTING BARRIERS AS DIRECTED BY THE FIELD REPRESENTATIVE.
8. PERFORM DECK REPAIRS PER BC-783M AND PUB 408 SECTION 1040 AS DIRECTED BY REPRESENTATIVE IN FIELD.
9. REMOVE OVERRUN BITUMINOUS MATERIAL ON TOP OF DECK CONCRETE AT EACH END OF THE BRIDGE FROM PREVIOUS APPROACH PAVING.

PREPARED BY:  
**Michael Baker**  
 INTERNATIONAL  
 500 OFFICE CENTER DRIVE, SUITE 210  
 FORT WASHINGTON, PA 19034-3234  
 Phone: (215) 444-0888 · MBAKERINTL.COM

*Thomas W. Berkey*  
 REGISTERED PROFESSIONAL ENGINEER  
 DATE: 11-5-18



Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

**COMMONWEALTH OF PENNSYLVANIA**  
 DEPARTMENT OF TRANSPORTATION

**BUCKS COUNTY**  
 PENNDOT DISTRICT 6-0  
 SR 205 (BRISTOL ROAD) SEG 0022 OFFSET 0556  
 OVER NESHAMINY CREEK  
 PROTECTIVE BARRIER RETROFIT  
 GENERAL PLAN AND ELEVATION

RECOMMENDED **11/20 2018**  
*Henry M. Berman*  
 DISTRICT BRIDGE ENGINEER

SHEET 1 OF 10  
 & SUPPLEMENTAL  
 DRAWINGS  
 S-38178

BRIDGE LOAD RATINGS WITHOUT FWS									
SPAN 1 & 3 - GIRDER 4									
		EXISTING				PROPOSED			
LOADING		H-20	HS-20	ML-80	TK527	H-20	HS-20	ML-80	TK527
INVENTORY RATING (IR)	RATING FACTOR	0.648	0.480	0.380	0.406	0.871	0.645	0.511	0.545
	LOCATION (FT)	22.750	22.750	22.750	22.750	22.750	22.750	22.750	22.750
	LIMIT STATE	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT
	TONS	12.96	17.27	13.92	16.22	17.42	23.21	18.71	21.80
OPERATING RATING (OR)	RATING FACTOR	2.138	1.510	1.279	1.346	1.899	1.342	1.175	1.195
	LOCATION (FT)	1.458	1.458	22.750	1.458	1.458	1.458	22.750	1.458
	LIMIT STATE	SHEAR	SHEAR	MOMENT	SHEAR	SHEAR	SHEAR	MOMENT	SHEAR
	TONS	42.75	54.38	46.86	53.83	37.98	48.30	43.05	47.81

BRIDGE LOAD RATINGS WITHOUT FWS									
SPAN 2 - GIRDER 4									
		EXISTING				PROPOSED			
LOADING		H-20	HS-20	ML-80	TK527	H-20	HS-20	ML-80	TK527
INVENTORY RATING (IR)	RATING FACTOR	0.633	0.447	0.378	0.394	0.687	0.485	0.411	0.428
	LOCATION (FT)	32.000	32.000	32.000	32.000	32.000	32.000	32.000	32.000
	LIMIT STATE	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT
	TONS	12.65	16.08	13.86	15.76	13.75	17.47	15.06	17.12
OPERATING RATING (OR)	RATING FACTOR	2.484	1.753	1.485	1.542	2.158	1.524	1.291	1.339
	LOCATION (FT)	32.000	32.000	32.000	28.800	32.000	32.000	32.000	28.800
	LIMIT STATE	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT
	TONS	49.67	63.13	54.42	61.69	43.16	54.85	47.29	53.57

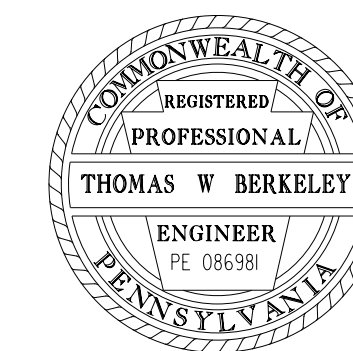
INDEX OF DRAWINGS	
SHEET NO	TITLE
1	GENERAL PLAN AND ELEVATION
2	INDEX, RATINGS AND SUPPLEMENTAL DWGS
3	GENERAL NOTES
4	QUANTITIES
5	STAGED CONSTRUCTION SECTIONS
6	REMOVAL PLAN
7	BARRIER PLAN - 1
8	BARRIER PLAN - 2
9	JOINT DETAILS
10	REINFORCEMENT BAR SCHEDULE

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

CONCRETE PAVEMENT JOINTS	RC-20M	9-15-16
ALTERNATE CONCRETE BRIDGE BARRIER	RC-50M	2-8-19
PROTECTIVE FENCE	BC-701M	1-31-19
ALTERNATE RAILING DETAILS	BC-718M	9-30-16
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	1-31-19
BRIDGE BARRIER TO GUIDE RAIL TRANSITION	BC-739M	1-31-19
BRIDGE DRAINAGE	BC-751M	1-31-19
CONCRETE DECK SLAB DETAILS	BC-752M	9-30-16
PREFORMED NEOPRENE COMPRESSION SEAL JOINT FOR APPROACH SLABS	BC-766M	1-31-19
REINFORCED CONCRETE REPAIR	BC-783M	1-31-19
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	1-31-19
DESCRIPTION	DWG. NO.	APP. DATE

SUPPLEMENTAL DRAWINGS

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
 500 OFFICE CENTER DRIVE, SUITE 210  
 FORT WASHINGTON, PA 19034-3234



<b>COMMONWEALTH OF PENNSYLVANIA</b> DEPARTMENT OF TRANSPORTATION	
BUCKS COUNTY PENNDOT DISTRICT 6-0 SR 2025 (BRISTOL ROAD) SEG 0022 OFFSET 0556 OVER NESHAMINY CREEK PROTECTIVE BARRIER RETROFIT INDEX, RATINGS AND SUPP DWGS	
RECOMMENDED <u>                    AUG 05 2019                    </u>	SHEET <u>  2  </u> OF <u>  10  </u>
<b>S-38178</b>	

**GENERAL NOTES:**

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS PUBLICATION 408/2016 (INCLUDING SUPPLEMENTS), AASHTO/AWS/D1.5 BRIDGE WELDING CODE 2008, (USE AASHTO/AWS/D1.1-2008 FOR WELDING NOT COVERED IN AASHTO/AWS/D1.5-2008), AND THE CONTRACT SPECIAL PROVISIONS.

**DESIGN SPECIFICATIONS:**

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION.

- LIVE LOAD DISTRIBUTION TO GIRDERS IS BASED UPON DM-4 DISTRIBUTION FACTOR METHOD.

DESIGN IS IN ACCORDANCE WITH THE LFD METHOD.

**ORIGINAL DESIGN LIVE LOADS:**

HS20-44

**PROPOSED DESIGN LIVE LOADS:**

HS20, H20, TK527 AND ML80

ADT - 6,690 (2037), ADTT - 268 (2037)

**DEAD LOADS:**

INCLUDES A SURFACE AREA DENSITY OF 30 LB/FT<sup>2</sup> FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

INCLUDES A SURFACE AREA DENSITY OF 15 LB/FT<sup>2</sup> FOR PERMANENT METAL DECK FORMS WHICH TAKES INTO ACCOUNT THE WEIGHT OF THE FORM, PLUS THE WEIGHT OF THE CONCRETE IN THE VALLEYS OF THE FORMS.

**GENERAL:**

STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE NOTED.

PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

USE CLASS AAAP CEMENT CONCRETE IN: DECK SLAB AND CURBS

USE CLASS AA CEMENT CONCRETE IN: BARRIERS

A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/A 615M, A 996/A 996M, OR A 706/A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/A 996M REINFORCEMENT BARS IN BRIDGE ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

VERIFY ALL DIMENSIONS, ELEVATIONS AND GEOMETRY OF THE EXISTING STRUCTURE IN THE FIELD AS NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION.

USE CARE WHEN REMOVING PORTIONS OF THE EXISTING BRIDGE SO AS TO NOT DAMAGE OTHER REMAINING PARTS OF THE STRUCTURE, OR REMAINING REINFORCEMENT BARS. REPLACE ALL PARTS OF THE STRUCTURE WHICH ARE DESIGNATED TO REMAIN AND ARE DAMAGED DURING THE REMOVAL OPERATIONS AT NO COST TO THE DEPARTMENT.

USE EPOXY-COATED REINFORCEMENT BARS IN: DECK AND BARRIERS

WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.

GALVANIZED REINFORCEMENT BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCEMENT BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CHAMFER EXPOSED CONCRETE EDGES 1 IN BY 1 IN, EXCEPT AS NOTED.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES F.

PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

BRIDGE IS NOT WEIGHT RESTRICTED. SEE PUBLICATION 408, SECTION 105.17 FOR CONSTRUCTION LOADING LIMITS.

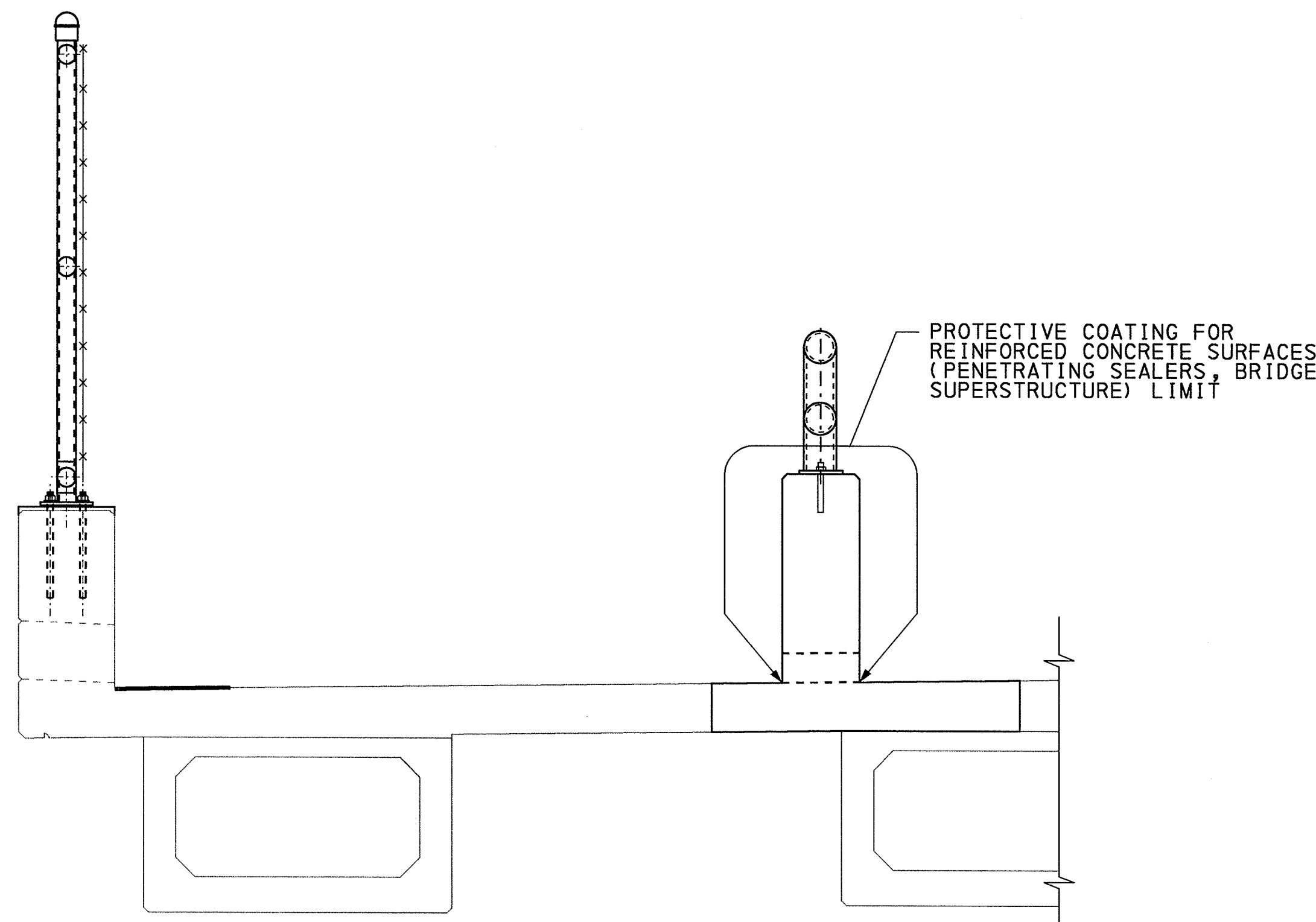
CONTRACTOR TO ENSURE STRUCTURAL ADEQUACY FOR CONSTRUCTION LOADING AFTER FULL DEPTH REMOVAL OF EXISTING DECK.

**UTILITY NOTES:**

- COORDINATE, LOCATE, AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408/2016, SECTIONS 105.06 AND 107.12.
- VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK; CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED, AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE TOWNSHIP DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISION, OR LIABILITY FOR ACCURACY OF TYPE, SIZE AND LOCATION OF ANY UTILITY.

**EXISTING STRUCTURE PLANS:**

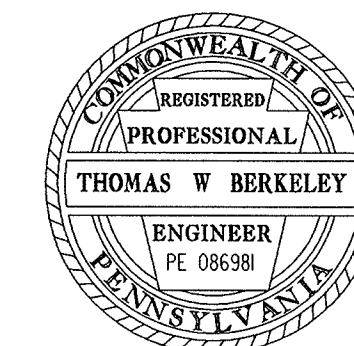
- DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTER IN THE FIELD.
- THE INFORMATION SHOWN ON THE PLANS FOR THE EXISTING BRIDGE IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT AND IS NOT TO BE CONSIDERED A BASIS FOR COMPUTATION OF THE UNIT PRICES USED FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION, BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING THE COST AND/OR QUANTITIES OF WORK TO BE PERFORMED MAY DIFFER FROM THOSE INDICATED.



**PROTECTIVE COATING ON ALTERNATE CONC VERTICAL WALL BARRIER**

NOT TO SCALE

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
500 OFFICE CENTER DRIVE, SUITE 210  
FORT WASHINGTON, PA 19034-3234



Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION**

**BUCKS COUNTY**  
PENNDOT DISTRICT 6-0  
SR 2025 (BRISTOL ROAD) SEG 0022 OFFSET 0556  
OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT  
GENERAL NOTES**

RECOMMENDED NOV 20 2018 SHEET 3 OF 10

**S-38178**

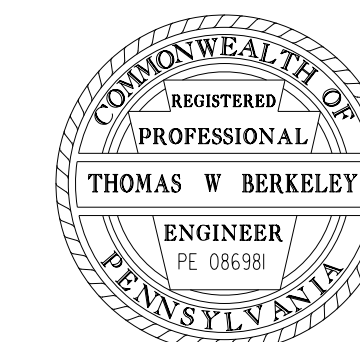
APPROXIMATE QUANTITIES - BRIDGE STRUCTURE DESIGNED

ITEM NUMBER	DESCRIPTION	UNIT	SUPER	DECK	TOTAL
1001-0001	CLASS AA CEMENT CONCRETE ( 3)	CY	16	---	16
1001-0960	CLASS AAAP CEMENT CONCRETE ( 2)	CY	---	15	15
1002-0053	REINFORCEMENT BARS, EPOXY COATED	LB	---	3053	3053
1018-0050	REMOVAL OF PORTION OF EXISTING BRIDGE ( 4)	LS	1	---	1
1019-0050	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES ( PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE)	SY	110	---	110
1091-0335	EPOXY INJECTION CRACK SEAL	DOLLA	---	2500	2500
5016-0006	BARRIER PROTECTIVE FENCE, VINYL-COATED STEEL MODIFIED ( 1)	LF	160	---	160
5022-0001	STEEL BRIDGE HAND RAILING MODIFIED ( 1)	LF	155	---	155
9000-0042	INVERTED 'V' TYPE PREFORMED SILICONE JOINT SEALING SYSTEM ( 1)	LF	---	84	84
9000-0090	REPAIR BARRIER CONCRETE ( 1)	SF	15	---	15
9000-0091	REINFORCED CONCRETE REPAIR, TYPE 2, S-38178 ( 1)	SF	---	280	280

- (1) SEE SPECIAL PROVISIONS.
- (2) INCLUDES CLASS AAAP CEMENT CONCRETE QUANTITY IN DECK SLAB AT MEDIAN BARRIER PLACEMENT.
- (3) INCLUDES CLASS AA CEMENT CONCRETE QUANTITY IN BARRIER.
- (4) INCLUDES REMOVAL OF EXTERIOR BARRIER CURB, DECK FOR MEDIAN BARRIER PLACEMENT AND REMOVAL OF RAILING ON EXTERIOR BARRIER. REMOVAL OF EXPOSED CURB REBAR IS INCIDENTAL TO REMOVAL.  
REMOVE SIP FORMS AT NO ADDITIONAL COST TO DEPARTMENT IF SIP FORMS DISLodge DURING DECK REMOVAL. PROVIDE FORMWORK FOR DECK PLACEMENT IN THE EVENT THE SIP FORMS ARE DISLODGED AT NO ADDITIONAL COST TO THE DEPARTMENT.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
 500 OFFICE CENTER DRIVE, SUITE 210  
 FORT WASHINGTON, PA 19034-3234



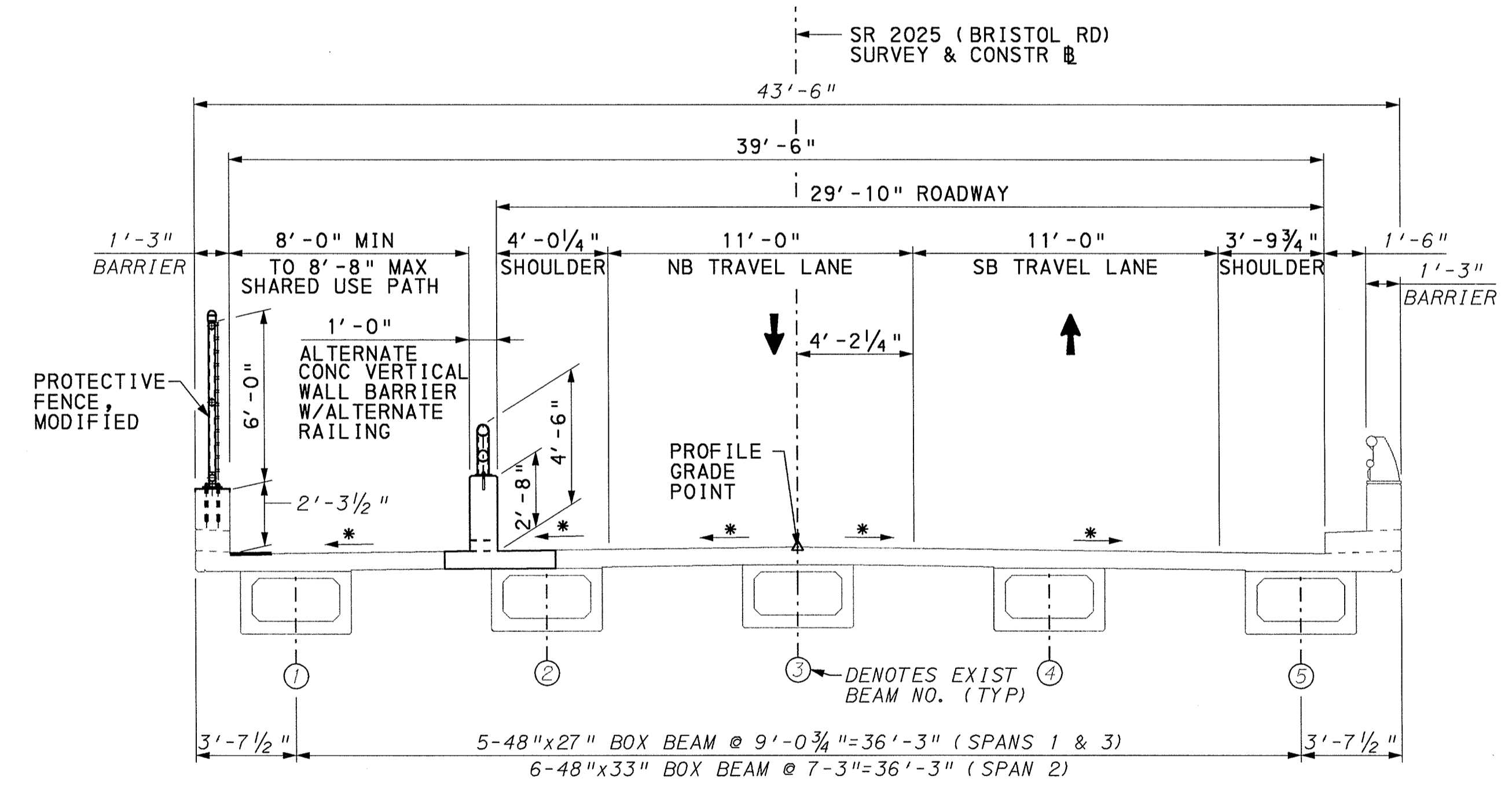
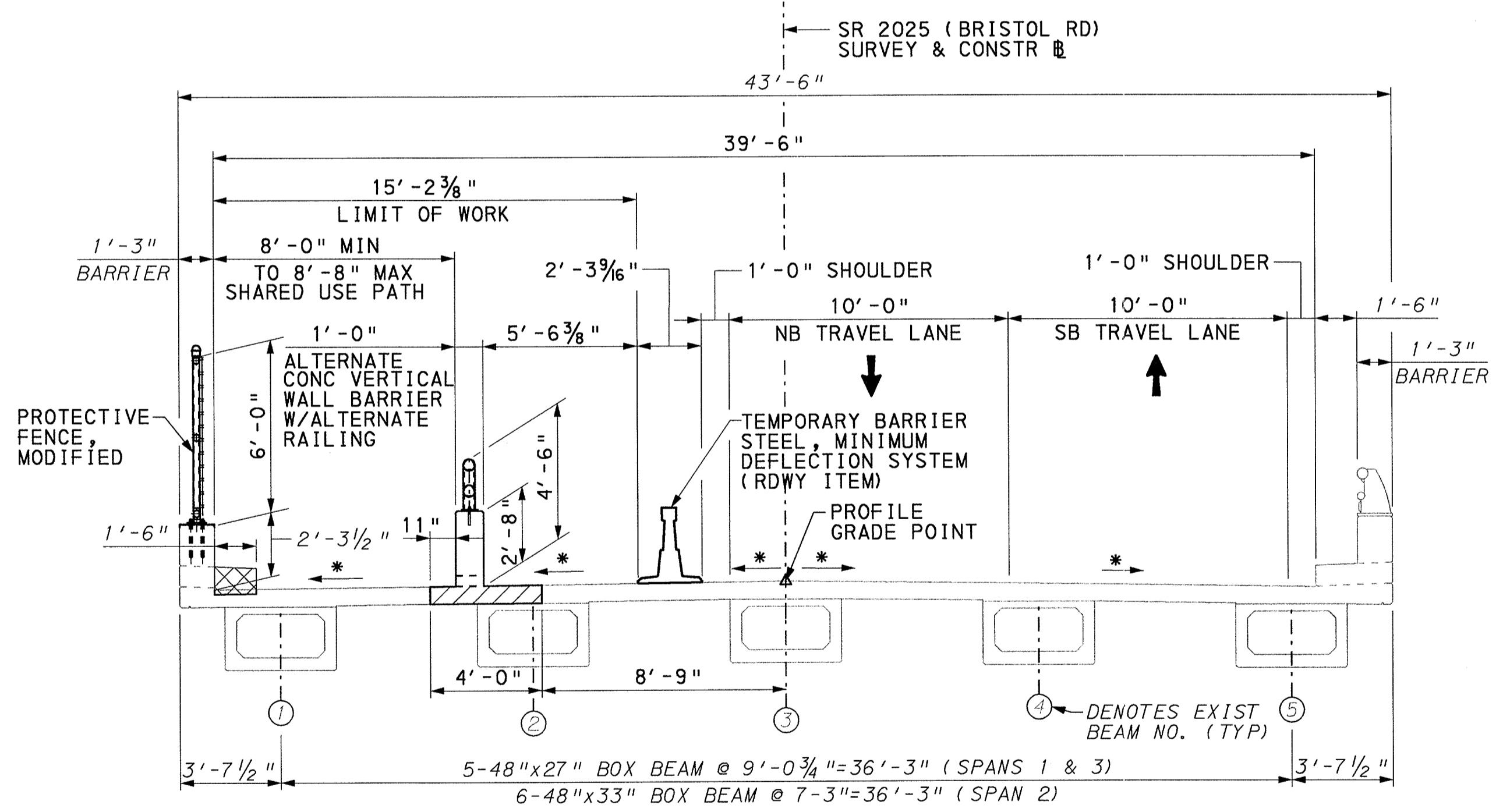
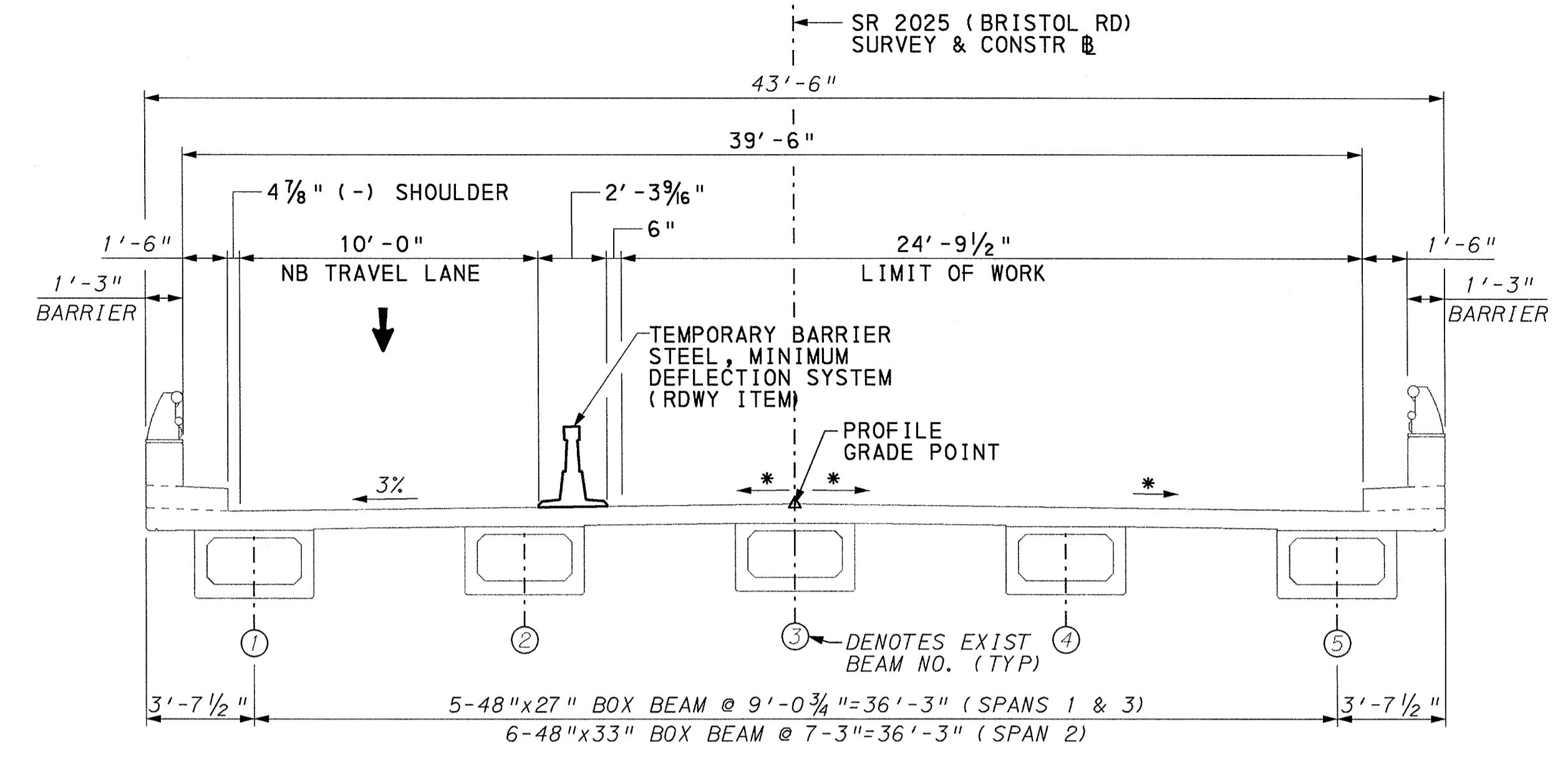
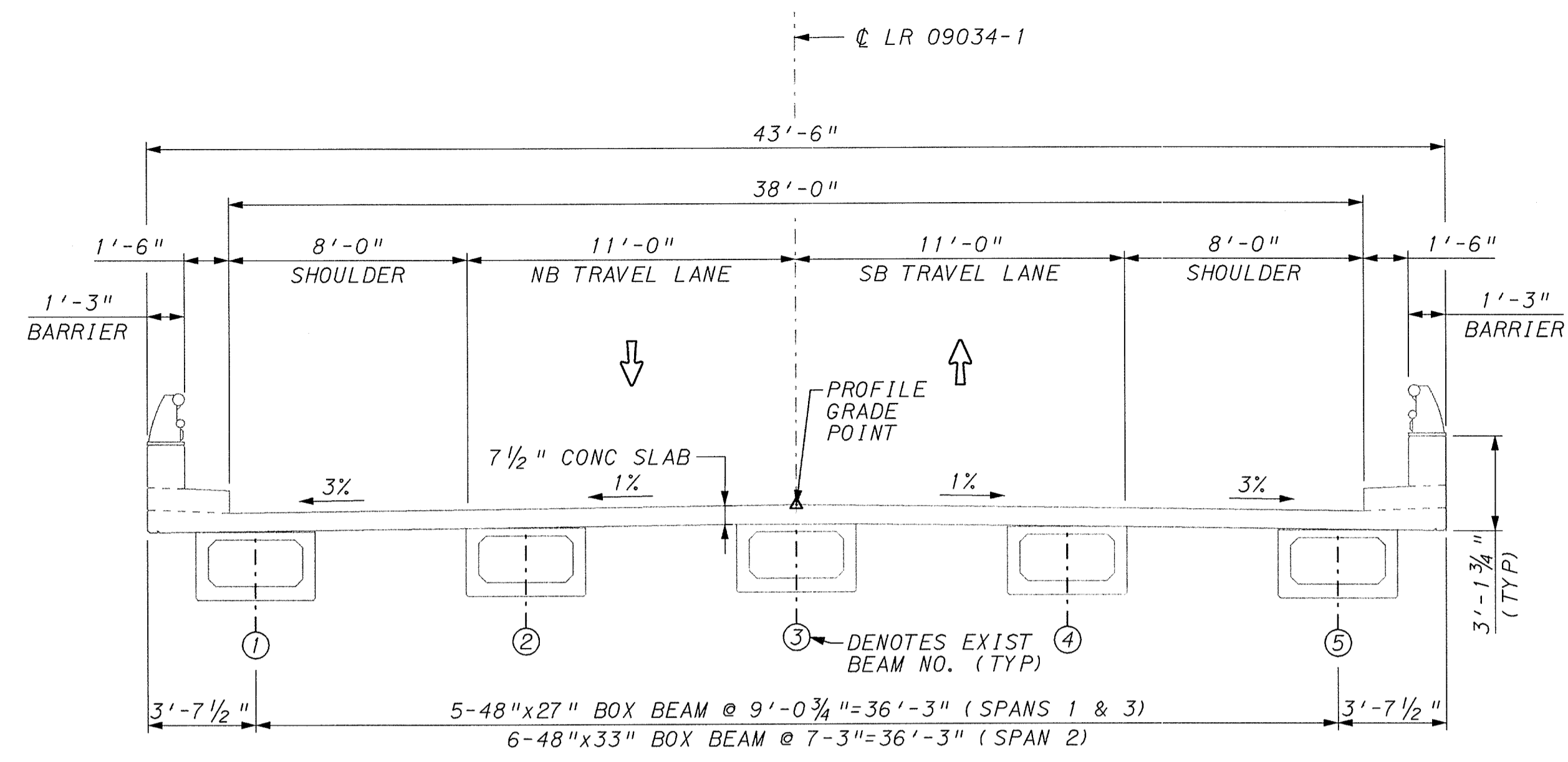
**COMMONWEALTH OF PENNSYLVANIA**  
 DEPARTMENT OF TRANSPORTATION

**BUCKS COUNTY**  
 PENNDOT DISTRICT 6-0  
 SR 2025 (BRISTOL ROAD) SEG 0022 OFFSET 0556  
 OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT**  
**QUANTITIES**

RECOMMENDED           AUG 06 2019           SHEET   4   OF   10  

**S-38178**





\* MATCH EXISTING CROSS SLOPES

**LEGEND:**

- FULL DEPTH REMOVAL OF EXISTING DECK
- REMOVAL OF EXISTING BARRIER CURB

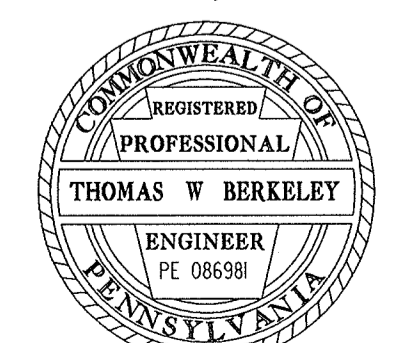
**REFERENCES:**

1. LIST OF SUPPLEMENTAL DRAWINGS
2. GENERAL NOTES

**SHEET:**

- 2
- 3

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**MICHAEL BAKER INTERNATIONAL**  
500 OFFICE CENTER DRIVE, SUITE 210  
FORT WASHINGTON, PA 19034-3234



Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

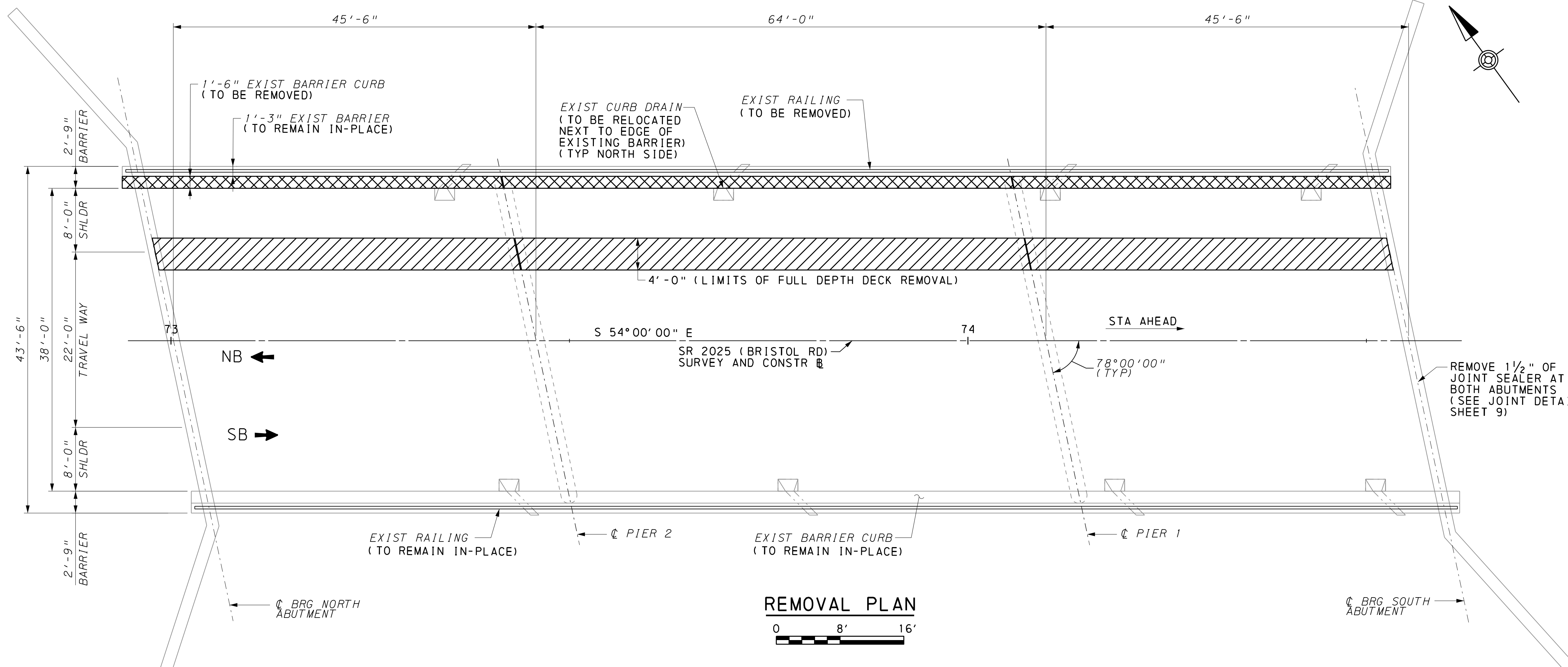
**COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF TRANSPORTATION**

**BUCKS COUNTY**  
PENNDOT DISTRICT 6-0  
SR 2025 (BRISTOL ROAD) SEG 0022 OFFSET 0556  
OVER NESHAMINY CREEK

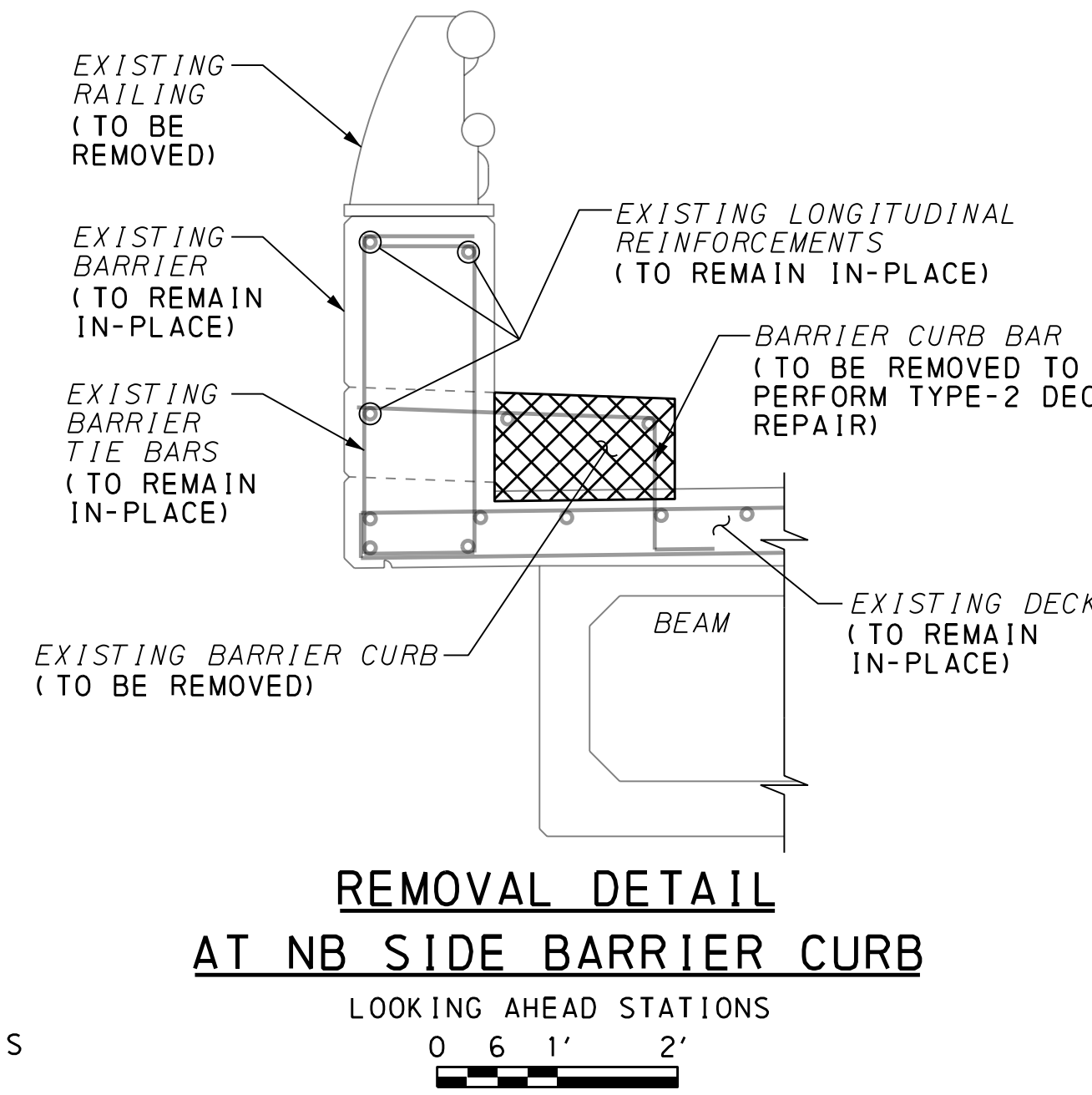
**PROTECTIVE BARRIER RETROFIT  
STAGED CONSTRUCTION SECTIONS**

RECOMMENDED NOV 20 2018 SHEET 5 OF 10

**S-38178**



**REMOVAL PLAN**  
0 8' 16'

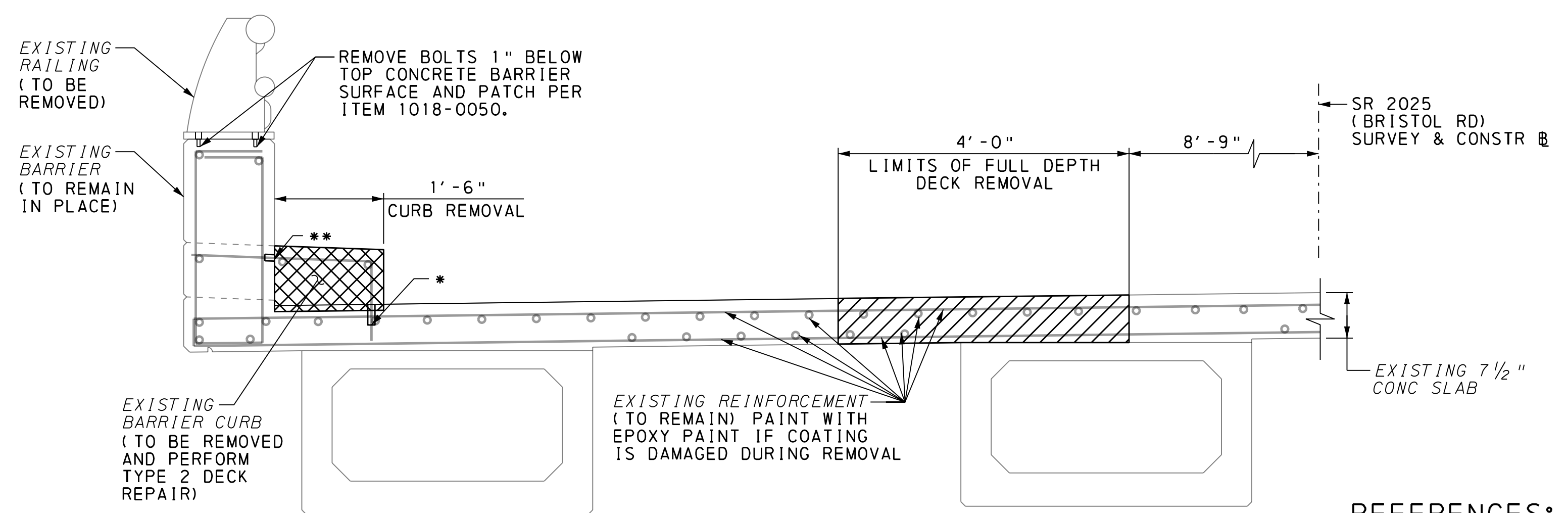


REMOVE 1 1/2" OF  
JOINT SEALER AT  
BOTH ABUTMENTS  
(SEE JOINT DETAILS  
SHEET 9)

**LEGEND:**

- TRAFFIC DIRECTION
- REMOVAL OF EXISTING DECK
- REMOVAL OF EXISTING BARRIER CURB

- \* PRIOR TO TYPE 2 DECK REPAIR REMOVE ANY EXPOSED EXISTING CURB REBAR TO A MINIMUM DEPTH OF 2" BELOW TOP OF DECK.
- \*\* REMOVE ANY EXPOSED EXISTING CURB REBAR ON BARRIER FACE TO A MINIMUM DEPTH OF 1", REMOVE CONCRETE A MINIMUM 2" CLEAR AROUND EXISTING REBAR AND REPAIR PER ITEM 9000-0090.



**REMOVAL DETAIL**  
LOOKING AHEAD STATIONS  
0 6 1' 2'

**NOTES:**

1. REMOVAL OF EXISTING CONCRETE AND REBAR (TO LIMITS SHOWN ON THIS SHEET) AND THE EPOXY COATING OF EXISTING REINFORCEMENT ARE INCIDENTAL TO REMOVAL OF PORTION OF EXISTING BRIDGE.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

- REFERENCES:**
1. LIST OF SUPPLEMENTAL DRAWINGS
  2. GENERAL NOTES
  3. BARRIER PLAN - 1 & 2
  4. JOINT DETAILS

- SHEET:**
- 2
  - 3
  - 7-8
  - 9

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
500 OFFICE CENTER DRIVE, SUITE 210  
FORT WASHINGTON, PA 19034-3234

REGISTERED PROFESSIONAL ENGINEER  
**THOMAS W. BERKELEY**  
PE 086588  
PENNSYLVANIA

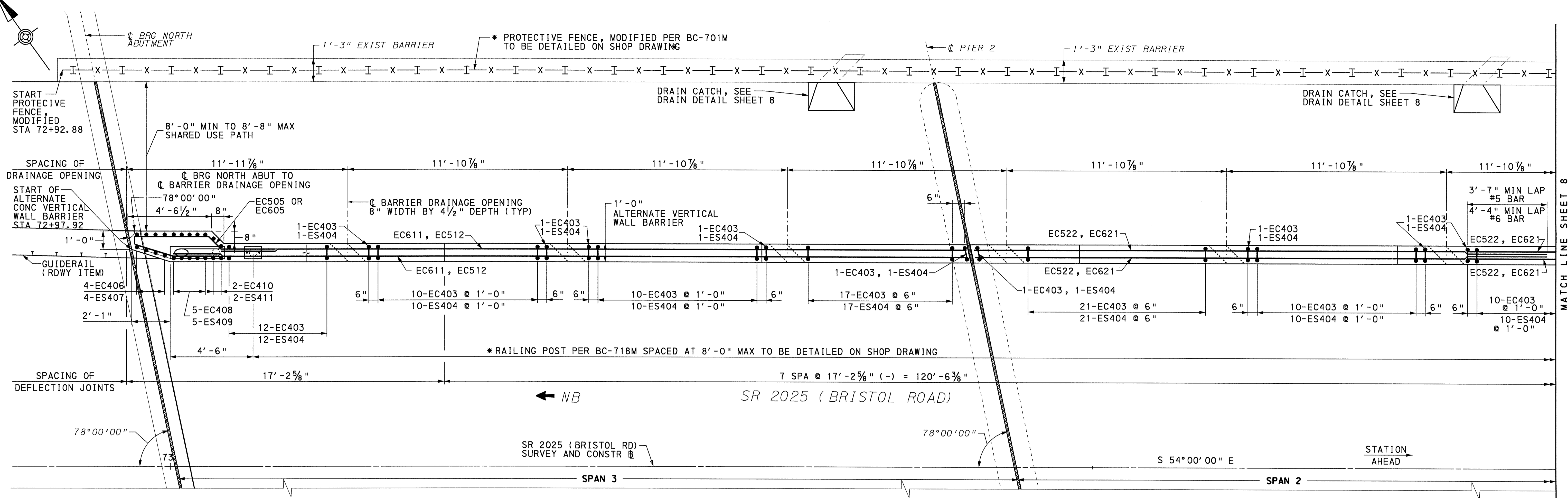
**COMMONWEALTH OF PENNSYLVANIA**  
DEPARTMENT OF TRANSPORTATION

**BUCKS COUNTY**  
PENNDOT DISTRICT 6-0  
SR 2025 (BRISTOL ROAD) SEG 0022 OFFSET 0556  
OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT  
REMOVAL PLAN**

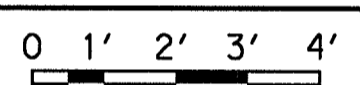
RECOMMENDED AUG 05 2019 SHEET 6 OF 10  
S-38178

05-NOV-2018

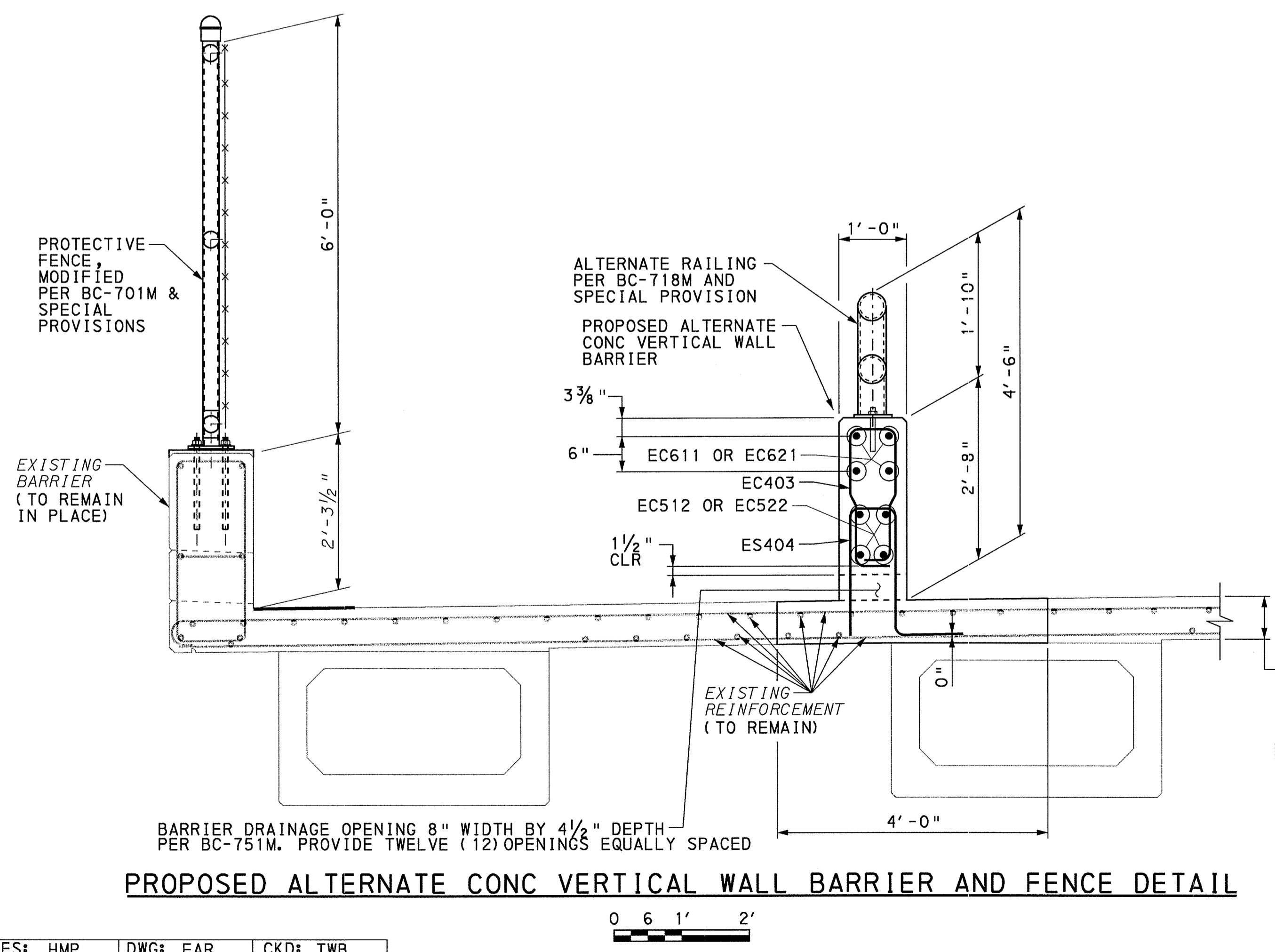
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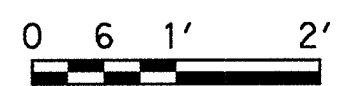
### BARRIER AND RAILING PLAN - 1



\* RAILING AND PROTECTIVE FENCE POST ANCHORAGE PLACEMENT TO BE COORDINATED WITH RAILING SHOP DRAWING. DETAIL TO AVOID PLACEMENT OF POST ON BARRIER JOINT.



### PROPOSED ALTERNATE CONC VERTICAL WALL BARRIER AND FENCE DETAIL



### NOTES:

1. RAILING NOT SHOWN FOR CLARITY.
2. EPOXY COAT ANY EXPOSED EXISTING REINFORCEMENT TO REMAIN.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

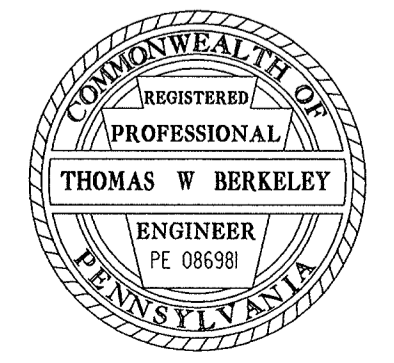
### REFERENCES:

1. LIST OF SUPPLEMENTAL DRAWINGS
2. GENERAL NOTES
3. STAGED CONSTRUCTION SECTIONS
4. BARRIER PLAN - 2
5. JOINT DETAILS
6. REINFORCEMENT BAR SCHEDULE

### SHEET:

- 2
- 3
- 5
- 8
- 9
- 10

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
 500 OFFICE CENTER DRIVE, SUITE 210  
 FORT WASHINGTON, PA 19034-3234

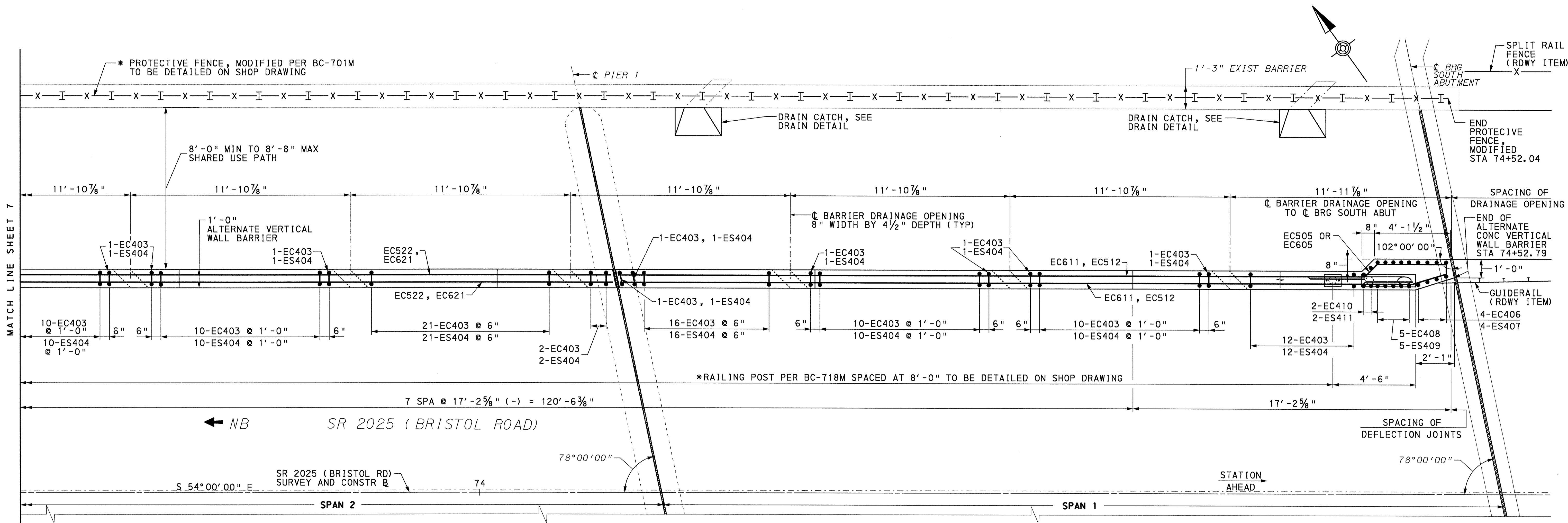


**COMMONWEALTH OF PENNSYLVANIA**  
 DEPARTMENT OF TRANSPORTATION

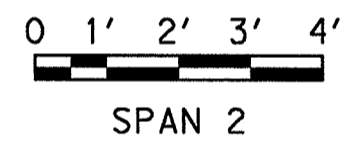
**BUCKS COUNTY**  
 PENNDOT DISTRICT 6-0  
 SR 205 (BRISTOL ROAD) SEG 0022 OFFSET 0556  
 OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT**  
**BARRIER PLAN - 1**

RECOMMENDED NOV 20 2018 SHEET 7 OF 10

**S-38178**



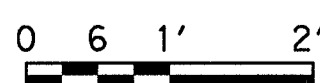
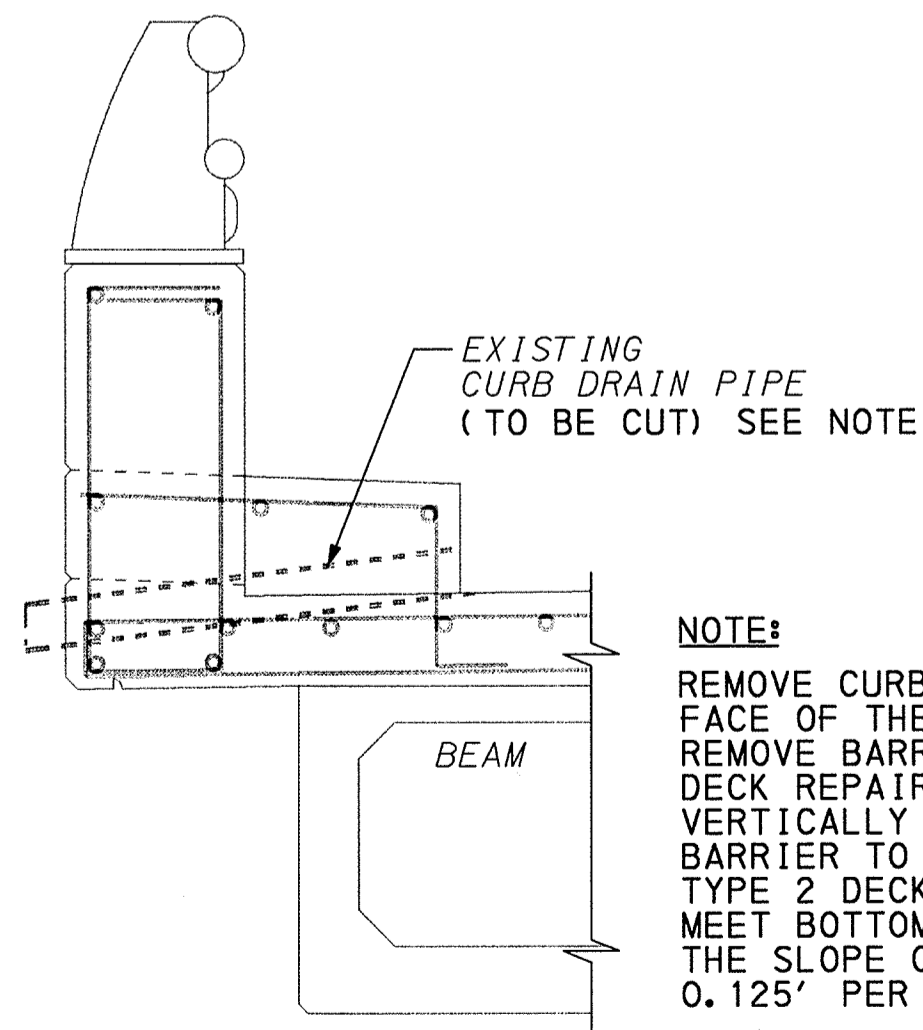
### BARRIER AND RAILING PLAN - 2



\* RAILING AND PROTECTIVE FENCE, MODIFIED POST ANCHORAGE PLACEMENT TO BE COORDINATED WITH RAILING SHOP DRAWING. DETAIL TO AVOID PLACEMENT OF POST ON BARRIER JOINT.

#### NOTES:

1. RAILING NOT SHOWN FOR CLARITY.
2. EPOXY COAT ANY EXPOSED EXISTING REINFORCEMENT TO REMAIN.



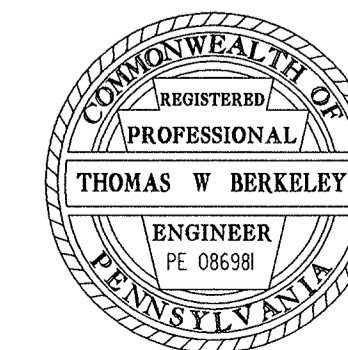
#### REFERENCES:

1. LIST OF SUPPLEMENTAL DRAWINGS
2. GENERAL NOTES
3. STAGED CONSTRUCTION SECTIONS
4. BARRIER PLAN - 1
5. JOINT DETAILS
6. REINFORCEMENT BAR SCHEDULE

#### SHEET:

- 2
- 3
- 5
- 7
- 9
- 10

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
500 OFFICE CENTER DRIVE, SUITE 210  
FORT WASHINGTON, PA 19034-3234



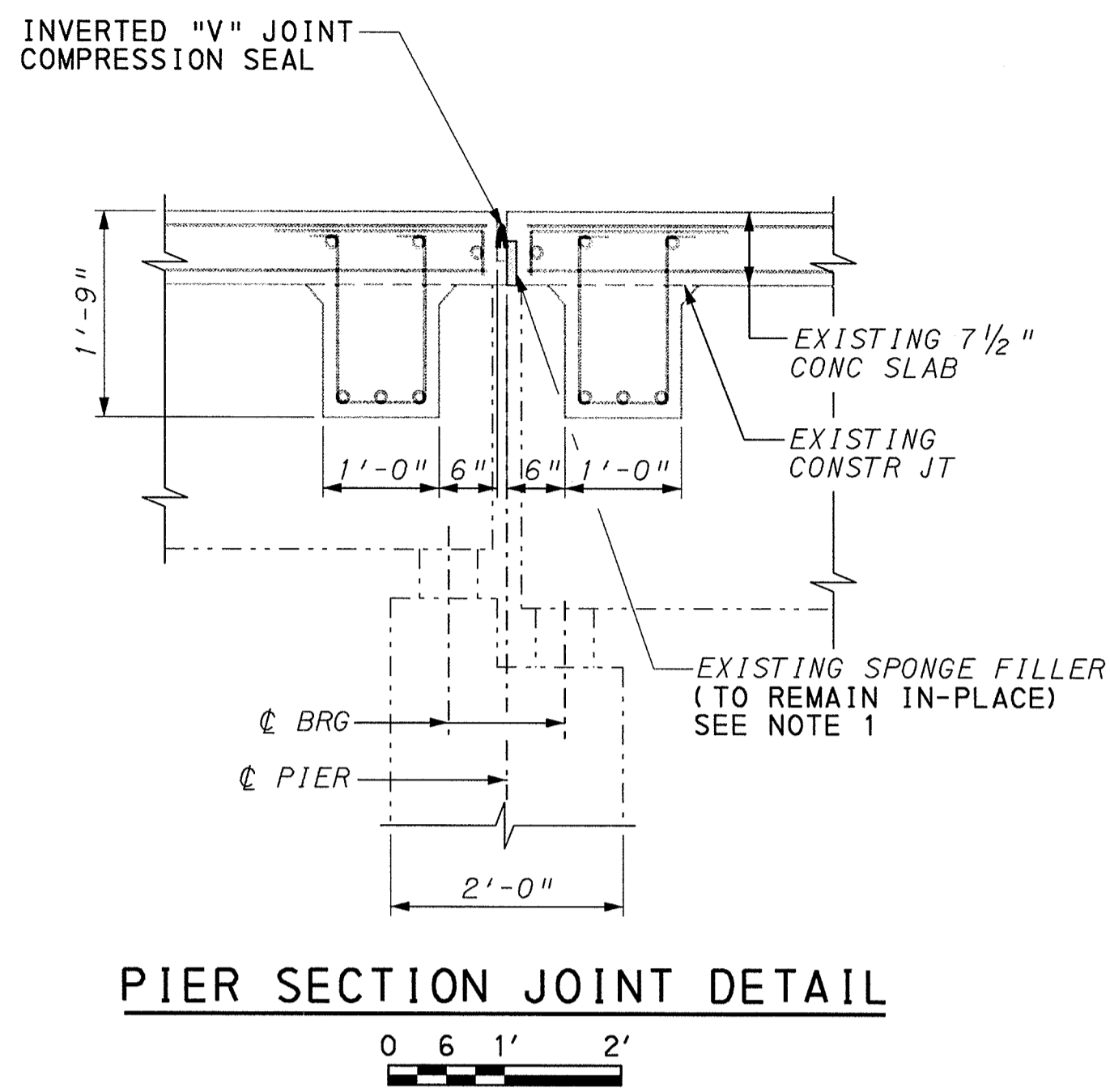
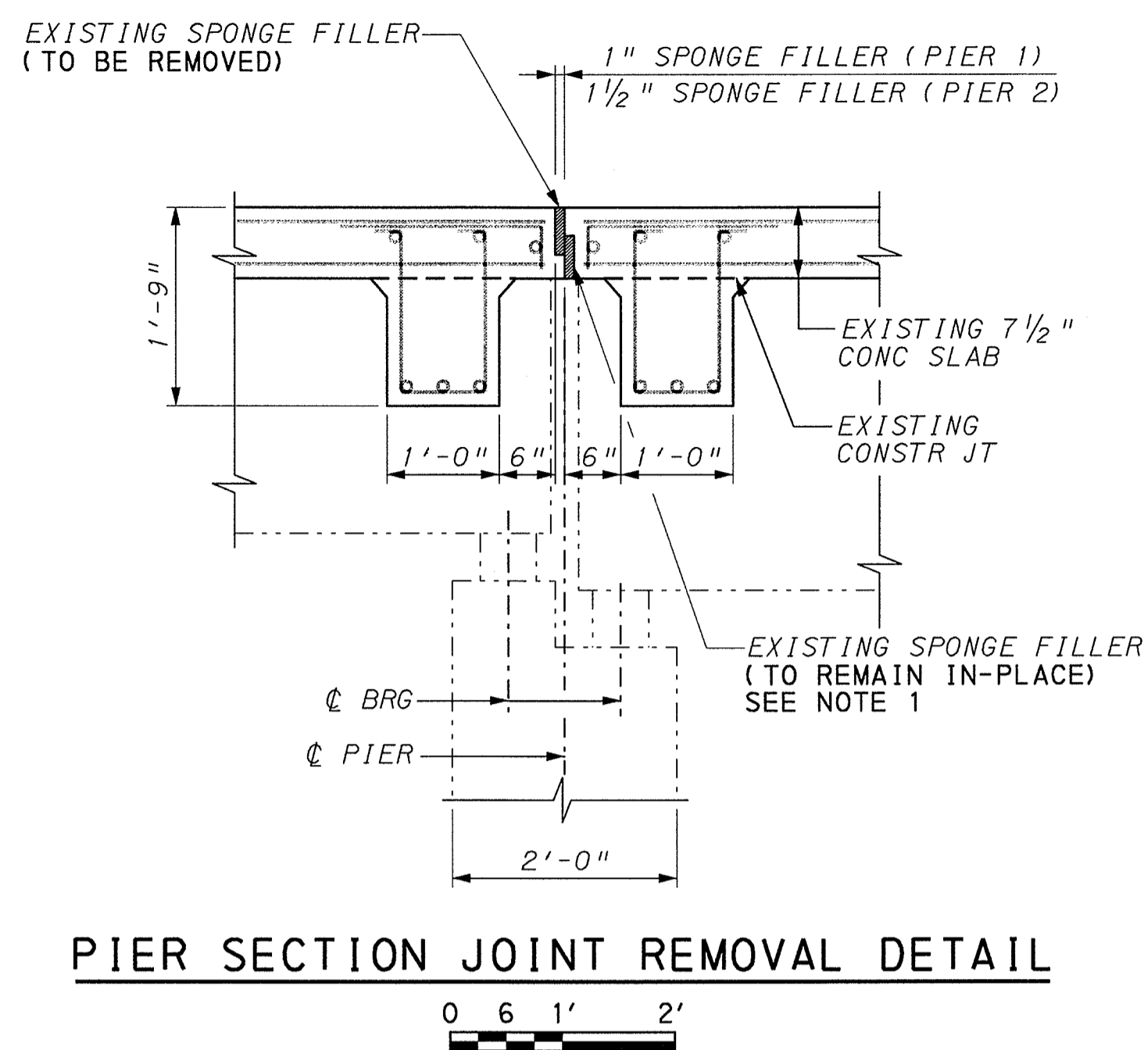
Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

**COMMONWEALTH OF PENNSYLVANIA**  
DEPARTMENT OF TRANSPORTATION

**BUCKS COUNTY**  
PENNDOT DISTRICT 6-0  
SR 2025 (BRISTOL ROAD) SEG 0022 OFFSET 0556  
OVER NESHAMINY CREEK  
PROTECTIVE BARRIER RETROFIT  
BARRIER PLAN - 2

RECOMMENDED NOV 20 2018 SHEET 8 OF 10

S-38178

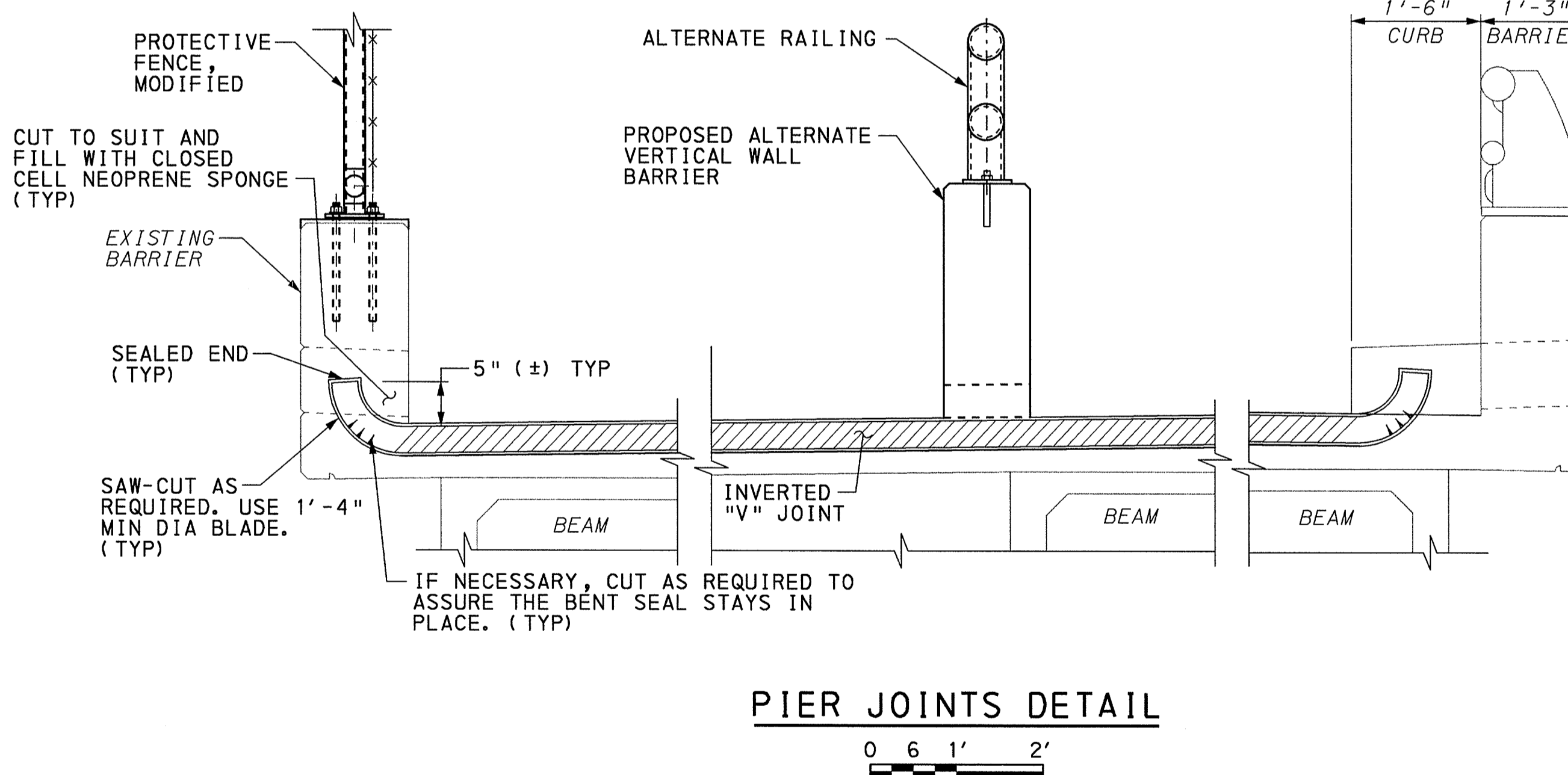
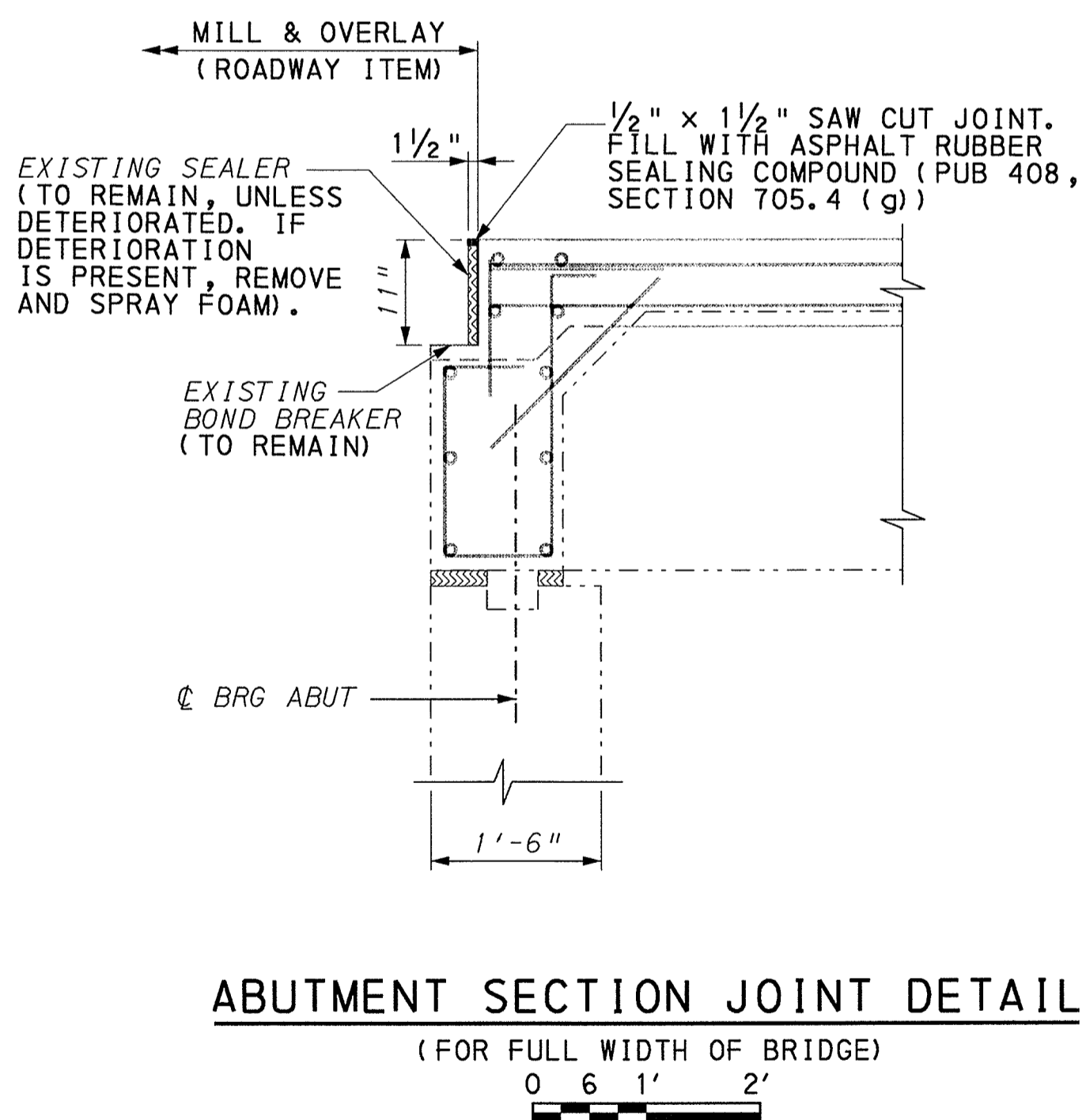


**NOTES:**

- IF SPONGE FILLER DESINTEGRATES UPON REMOVAL OF ADJACENT SPONGE FILLER, REPLACE WITH CLOSED CELL NEOPRENE.

**JOINT PREPARATION NOTES:**

- REMOVE THE EXISTING JOINT SPONGE FILLER IN THE PIER JOINTS AS SHOWN ON PLANS. BY THE BARRIER AND CURB, THE JOINT OPENING IS TO BE FORMED BY A TWO STAGE SAWING OPERATION. THE FIRST SAW CUT IS DESIGNED TO CONTROL CRACKING. THE SECOND SAW CUT IS MADE USING A DOUBLE-BLADED WATER-COOLED SAW CAPABLE OF HOLDING A TOLERANCE OF  $\pm 1/16$ " TO CREATE THE PROPER OPENING FOR THE PREFORMED NEOPRENE COMPRESSION SEAL OR INVERTED V JOINT SEAL.
- WATER BLAST OPENING IMMEDIATELY FOLLOWING SAW CUTTING OPERATION TO REMOVE ANY RESIDUAL SLURRY BEFORE IT DRIES.
- THE DEPTH OF THE JOINT OPENING EQUALS THE HEIGHT OF THE SEAL PLUS 1". THE WIDTH OF THE SECOND SAW CUT SHOULD BE ADJUSTED TO ACCOUNT FOR THE CONCRETE SURFACE TEMPERATURE AT THE TIME OF SAWING, SEE MANUFACTURER'S PRODUCT INFORMATION.
- BEFORE INSTALLING THE SEAL, ABRASIVE BLAST THE BONDING SURFACES TO THOROUGHLY CLEAN THE JOINT OPENING AND REMOVE FOREIGN MATERIAL, INCLUDING BROKEN CONCRETE. USE WATER AND OIL FREE COMPRESSED AIR TO BLOW OUT RESIDUE FROM THE SEAL GROOVE OPENING.
- PREPARE BONDING SURFACES AND INSTALL JOINT SEAL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- DO NOT EXCEED 3% ELONGATION OF THE SEAL, IF STRETCHING OCCURS.



Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

**REFERENCES:**

- LIST OF SUPPLEMENTAL DRAWINGS
- GENERAL NOTES
- STAGED CONSTRUCTION SECTIONS
- REMOVAL PLAN
- BARRIER PLAN - 1 & 2
- REINFORCEMENT BAR SCHEDULE

**SHEET:**

- 2
- 3
- 5
- 6
- 7 - 8
- 10

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
 500 OFFICE CENTER DRIVE, SUITE 210  
 FORT WASHINGTON, PA 19034-3234

**COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF TRANSPORTATION**

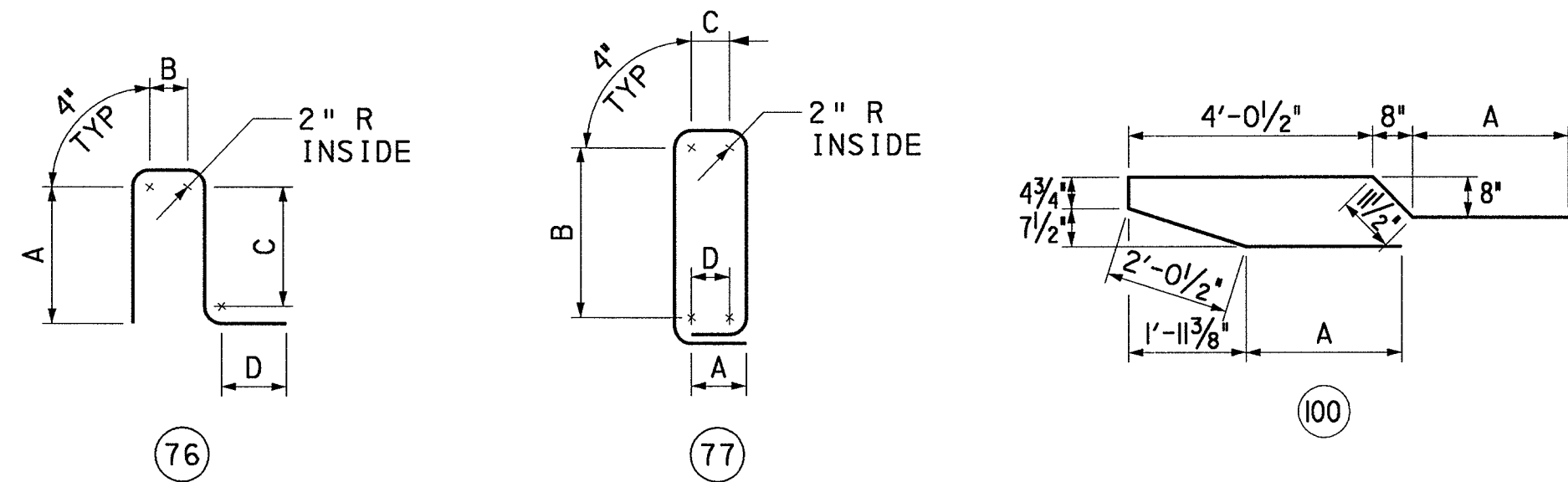
**BUCKS COUNTY**  
 PENNDOT DISTRICT 6-0  
 SR 2025 (BRISTOL ROAD) SEG 0022 OFFSET 0556  
 OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT**  
**JOINT DETAILS**

RECOMMENDED NOV 20 2018 SHEET 9 OF 10

**S-38178**

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EC611	6	8	42' - 10"	STR							
EC512	5	8	42' - 10"	STR							
EC621	6	8	34' - 0"	STR							
EC522	5	8	33' - 8"	STR							
EC403	4	189	4' - 0 1/2"	77	5 1/2"	1' - 9"	3"	3"			
ES404	4	189	5' - 4 1/2"	76	1' - 8"	3"	1' - 5 1/2"	1' - 0"			
EC505	5	4	13' - 1 3/4"	100	2' - 7"						
EC605	6	4	13' - 7 3/4"	100	3' - 1"						
EC406	4	8	4' - 1 1/2" TO 5' - 7 1/2"	77	5 1/2" TO 11 1/2"	1' - 9"	4" TO 10"	3" TO 9"			VARY "A", "C", "D" 4 EA BY 2"
ES407	4	8	5' - 4 1/2" TO 6' - 0"	76	1' - 8"	3" TO 10 1/2"	1' - 5 1/2"	1' - 0"			VARY "B" 4 EA BY 2 1/2"
EC408	4	10	6' - 0 1/2"	77	1' - 1 1/2"	1' - 9"	11"	11"			
ES409	4	10	6' - 0 1/2"	76	1' - 8"	11"	1' - 5 1/2"	1' - 0"			
EC410	4	4	4' - 0 1/2" TO 5' - 10 1/4"	77	5 1/2" TO 1' - 0 3/4"	1' - 9"	3" TO 10 1/4"	3" TO 10 1/4"			VARY "A", "C" & "D" 2 EA BY 7 1/4"
ES411	4	4	5' - 4 1/2" TO 5' - 11 3/4"	76	1' - 8"	3" TO 10 1/4"	1' - 5 1/2"	1' - 0"			VARY "B" 2 EA BY 7 1/4"



NOTES:

- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- FIGURES IN CIRCLES SHOW TYPES.
- "E" PREFIX OF BAR MARKS INDICATES EPOXY COATED BARS.
- FOR ALL BAR DIMENSIONS, A-E, LENGTH MEASUREMENTS ARE OUT-TO-OUT OF BAR.
- RADIUS, R, IS TO THE INSIDE OF THE BAR, UNLESS OTHERWISE NOTED.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

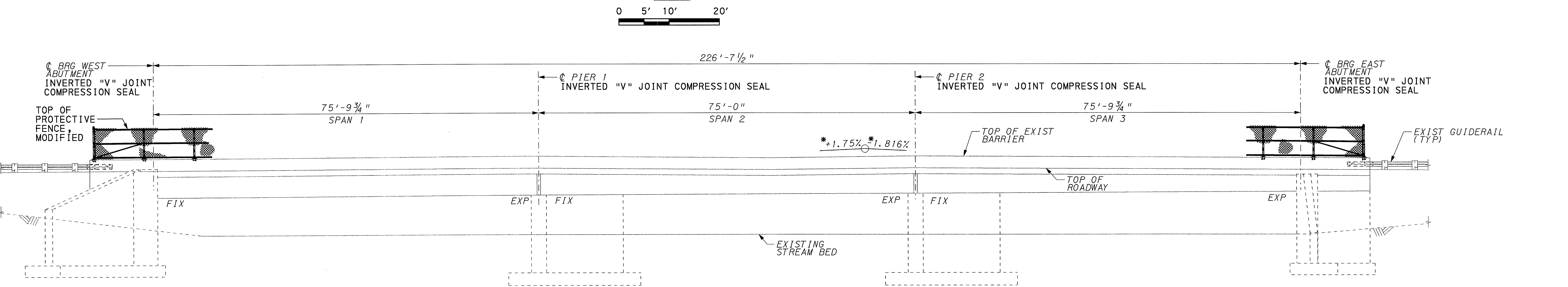
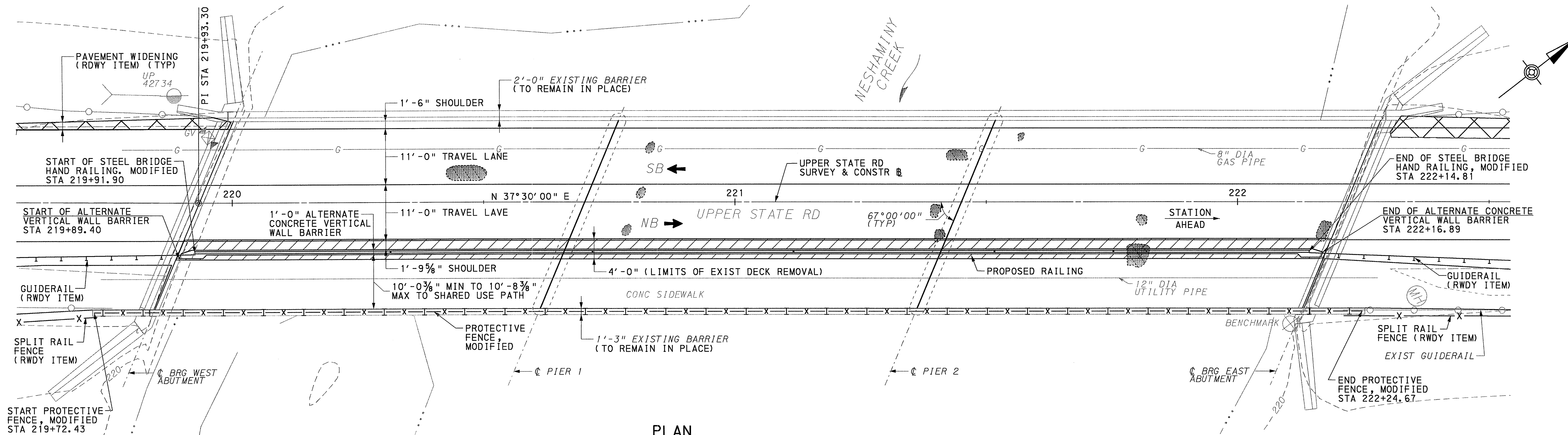
**COMMONWEALTH OF PENNSYLVANIA**  
DEPARTMENT OF TRANSPORTATION

**BUCKS COUNTY**  
PENNDOT DISTRICT 6-0  
SR 2025 (BRISTOL ROAD) SEG 0022 OFFSET 0556  
OVER NESHAMINY CREEK  
PROTECTIVE BARRIER RETROFIT  
REINFORCEMENT BAR SCHEDULE

RECOMMENDED NOV 20 2018 SHEET 10 OF 10

**S-38178**

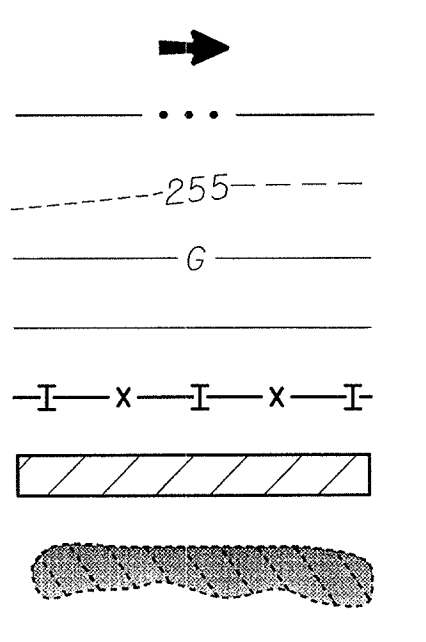
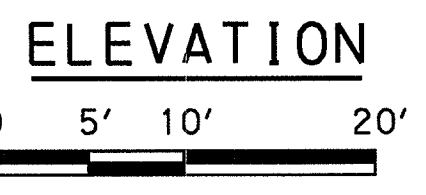
PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
500 OFFICE CENTER DRIVE, SUITE 210  
FORT WASHINGTON, PA 19034-3234



DATUM: 200

SCOPE OF WORK:

1. INSTALL NEW INVERTED "V" TYPE PREFORMED SILICONE JOINTS AT PIERS AND ABUTMENTS. FLARE JOINT MATERIAL UP INTO PARAPETS.
2. REMOVE SIDEWALK, INCLUDING 1 1/2" DEPTH FOR LMC PLACEMENT.
3. REMOVE 1 1/4" MINIMUM OF DECK FOR LMC OVERLAY OF THE PROPOSED TRAIL WIDTH. REQUIRES 1" MINIMUM SCARIFICATION AND 1/4" OF HYDRODEMOLITION.
4. REMOVE 4'-0" OF EXISTING BRIDGE DECK FOR INTEGRAL PLACEMENT OF BARRIER BARS. MAINTAIN EXISTING DECK REINFORCEMENT.
5. PLACE ALTERNATE BARRIER REBARS AND CAST-IN-PLACE BARRIER WITH RAILING PER BC-718M AS SHOWN ON THIS CONTRACT DRAWING.
6. PLACE LMC OVERLAY ON SHARED USE PATH.
7. REMOVE EXISTING RAILING ON EXISTING EXTERIOR BARRIER ON SOUTH SIDE.
8. PLACE PROTECTIVE FENCE, MODIFIED PER BC-701M ON EXISTING BARRIER ON SOUTH SIDE.
9. REMOVE BITUMINOUS PATCHES AND DETERIORATED CONCRETE ON THE DECK AND EXISTING BARRIERS AS DIRECTED BY THE FIELD REPRESENTATIVE.
10. PERFORM DECK REPAIRS PER BC-783M AND PUB 408 SECTION 1040, AS DIRECTED BY REPRESENTATIVE IN FIELD.



\* REFERENCED FROM EXISTING DRAWINGS. SEE BPAA #090440 DRAWINGS FOR ROADWAY GEOMETRY

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

**COMMONWEALTH OF PENNSYLVANIA**  
DEPARTMENT OF TRANSPORTATION

**BUCKS COUNTY**  
PENNDOT DISTRICT 6-0  
BUCKS COUNTY BRIDGE #81  
UPPER STATE ROAD SEG 0395 OFFSET 0081  
OVER NESHAMINY CREEK  
PROTECTIVE BARRIER RETROFIT  
GENERAL PLAN AND ELEVATION

RECOMMENDED **11/20 2018**  
**Henry M. Berman**  
DISTRICT BRIDGE ENGINEER

SHEET 1 OF 10  
& SUPPLEMENTAL  
DRAWINGS  
BPAA-92816

PREPARED BY:  
**Michael Baker INTERNATIONAL**  
500 OFFICE CENTER DRIVE, SUITE 210,  
FORT WASHINGTON, PA 19034-3234  
Phone: (215) 444-0888 - M.BAKERINTL.COM

*Thomas W. Berkeley*  
REGISTERED PROFESSIONAL ENGINEER  
DATE: **11-5-18**

BRIDGE LOAD RATINGS WITHOUT FWS									
SPAN 1 & 3 INTERIOR - GIRDER 2									
		EXISTING				PROPOSED			
LOADING		H-20	HS-20	ML-80	TK527	H-20	HS-20	ML-80	TK527
INVENTORY RATING (IR)	RATING FACTOR	0.963	0.709	0.613	0.624	0.855	0.630	0.545	0.554
	LOCATION (FT)	37.535	37.535	37.535	37.535	37.535	37.535	37.535	37.535
	LIMIT STATE	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT
	TONS	19.26	25.52	22.47	24.97	17.10	22.66	19.95	22.17
OPERATING RATING (OR)	RATING FACTOR	3.379	2.527	2.186	2.223	2.860	2.145	1.855	1.887
	LOCATION (FT)	2.500	37.535	37.535	33.781	2.500	37.535	37.535	33.781
	LIMIT STATE	SHEAR	MOMENT	MOMENT	MOMENT	SHEAR	MOMENT	MOMENT	MOMENT
	TONS	67.57	90.97	80.09	88.93	57.19	77.22	67.99	75.47

BRIDGE LOAD RATINGS WITHOUT FWS									
SPAN 2 INTERIOR - GIRDER 2									
		EXISTING				PROPOSED			
LOADING		H-20	HS-20	ML-80	TK527	H-20	HS-20	ML-80	TK527
INVENTORY RATING (IR)	RATING FACTOR	1.186	0.873	0.755	0.769	0.860	0.633	0.548	0.557
	LOCATION (FT)	37.535	37.535	37.535	37.535	37.500	37.500	37.500	37.500
	LIMIT STATE	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT	MOMENT
	TONS	23.72	31.43	27.67	30.74	17.21	22.80	20.07	22.30
OPERATING RATING (OR)	RATING FACTOR	3.363	2.636	2.399	2.330	2.862	2.204	1.914	1.916
	LOCATION (FT)	2.500	7.507	7.507	7.507	2.500	7.500	37.500	18.750
	LIMIT STATE	SHEAR	SHEAR	SHEAR	SHEAR	SHEAR	SHEAR	MOMENT	SHEAR
	TONS	67.25	94.88	87.89	93.18	57.24	79.35	70.12	76.63

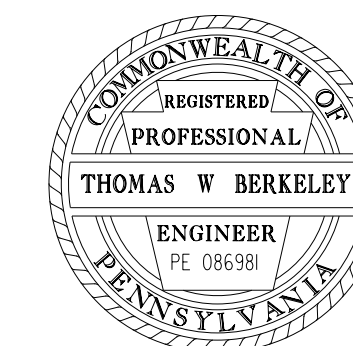
INDEX OF DRAWINGS	
SHEET NO	TITLE
1	GENERAL PLAN AND ELEVATION
2	INDEX, RATINGS AND SUPPLEMENTAL DWGS
3	GENERAL NOTES
4	QUANTITIES
5	STAGED CONSTRUCTION SECTIONS
6	REMOVAL PLAN
7	BARRIER PLAN - 1
8	BARRIER PLAN - 2
9	JOINT DETAILS
10	REINFORCEMENT BAR SCHEDULE

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

CONCRETE PAVEMENT JOINTS	RC-20M	9-15-16
ALTERNATE CONCRETE BRIDGE BARRIER	RC-50M	2-8-19
PROTECTIVE FENCE	BC-701M	1-31-19
ALTERNATE RAILING DETAILS	BC-718M	9-30-16
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	1-31-19
BRIDGE BARRIER TO GUIDE RAIL TRANSITION	BC-739M	1-31-19
BRIDGE DRAINAGE	BC-751M	1-31-19
CONCRETE DECK SLAB DETAILS	BC-752M	9-30-16
PREFORMED NEOPRENE COMPRESSION SEAL JOINT FOR APPROACH SLABS	BC-766M	1-31-19
REINFORCED CONCRETE REPAIR	BC-783M	1-31-19
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	1-31-19
DESCRIPTION	DWG. NO.	APP. DATE

SUPPLEMENTAL DRAWINGS

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
 500 OFFICE CENTER DRIVE, SUITE 210,  
 FORT WASHINGTON, PA 19034-3234



**COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF TRANSPORTATION**

**BUCKS COUNTY**  
 PENNDOT DISTRICT 6-0  
 BUCKS COUNTY BRIDGE #81  
 UPPER STATE ROAD SEG 0395 OFFSET 0081  
 OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT**  
**INDEX, RATINGS AND SUPP DWGS**

RECOMMENDED            **AUG 05 2019**

SHEET 2 OF 10

**BPAA-92816**



**GENERAL NOTES:**

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS PUBLICATION 408/2016 (INCLUDING SUPPLEMENTS), AASHTO/AWS/D1.5 BRIDGE WELDING CODE 2008, (USE AASHTO/AWS/D1.1-2008 FOR WELDING NOT COVERED IN AASHTO/AWS/D1.5-2008), AND THE CONTRACT SPECIAL PROVISIONS.

**DESIGN SPECIFICATIONS:**

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION.

- LIVE LOAD DISTRIBUTION TO GIRDERS IS BASED UPON DM-4 DISTRIBUTION FACTOR METHOD.

DESIGN IS IN ACCORDANCE WITH THE LFD METHOD.

**ORIGINAL DESIGN LIVE LOADS:**

HS20-44

FATIGUE DESIGN IS BASED ON AN ADTT OF LESS THAN 2,500 WITH TRUCK LOADING CYCLES OF 500,000 & LANE LOADING CYCLES OF 100,000 FOR MAIN LOAD CARRYING MEMBERS (AASHTO CASE 11 ROADWAY).

**PROPOSED DESIGN LIVE LOADS:**

HS20, H20, TK527 AND ML80

ADT - 5,012 (2037), ADTT - 201 (2037)

**DEAD LOADS:**

INCLUDES A SURFACE AREA DENSITY OF 30 LB/FT<sup>2</sup> FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

INCLUDES A SURFACE AREA DENSITY OF 15 LB/FT<sup>2</sup> FOR PERMANENT METAL DECK FORMS WHICH TAKES INTO ACCOUNT THE WEIGHT OF THE FORM, PLUS THE WEIGHT OF THE CONCRETE IN THE VALLEYS OF THE FORMS.

**GENERAL:**

STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE NOTED.

PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

USE CLASS AA CEMENT CONCRETE IN: BARRIERS

USE AAAP CEMENT CONCRETE IN: DECK SLAB

A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/A 615M, A 996/A 996M, OR A 706/A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/A 996M REINFORCEMENT BARS IN BRIDGE ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.

VERIFY ALL DIMENSIONS, ELEVATIONS AND GEOMETRY OF THE EXISTING STRUCTURE IN THE FIELD AS NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION.

USE CARE WHEN REMOVING PORTIONS OF THE EXISTING BRIDGE SO AS TO NOT DAMAGE OTHER REMAINING PARTS OF THE STRUCTURE, OR REMAINING REINFORCEMENT BARS. REPLACE ALL PARTS OF THE STRUCTURE WHICH ARE DESIGNATED TO REMAIN AND ARE DAMAGED DURING THE REMOVAL OPERATIONS AT NO COST TO THE DEPARTMENT.

USE EPOXY-COATED REINFORCEMENT BARS IN: BARRIERS DECK SLAB

WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.

GALVANIZED REINFORCEMENT BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCEMENT BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.

RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CHAMFER EXPOSED CONCRETE EDGES 1 IN BY 1 IN, EXCEPT AS NOTED.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES F.

PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.

BRIDGE IS NOT WEIGHT RESTRICTED. SEE PUBLICATION 408, SECTION 105.17 FOR CONSTRUCTION LOADING LIMITS.

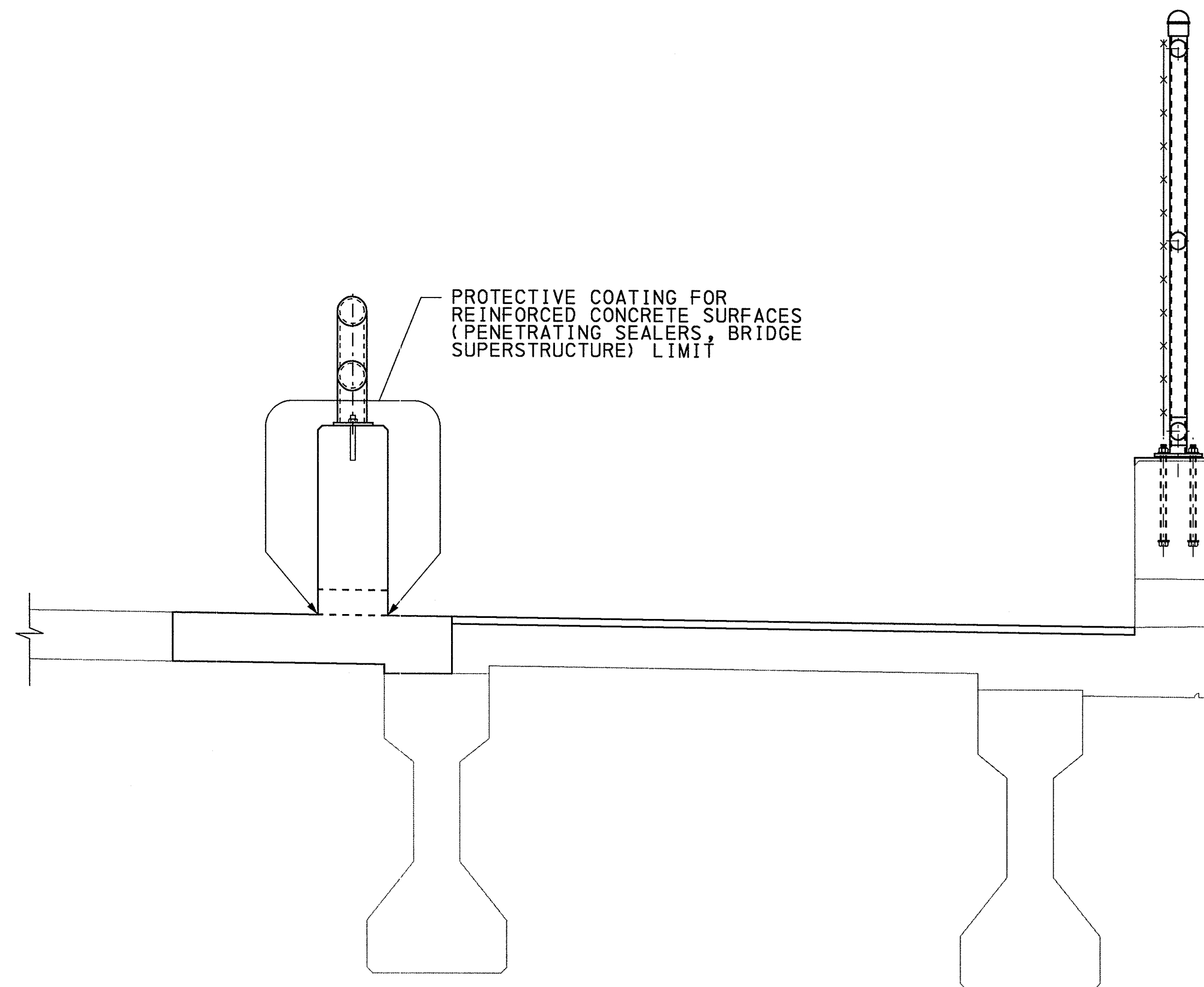
CONTRACTOR TO ENSURE STRUCTURAL ADEQUACY FOR CONSTRUCTION LOADING AFTER FULL DEPTH REMOVAL OF EXISTING DECK.

**UTILITY NOTES:**

1. COORDINATE, LOCATE, AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408/2016, SECTIONS 105.06 AND 107.12.
2. VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK; CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED, AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE TOWNSHIP DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISION, OR LIABILITY FOR ACCURACY OF TYPE, SIZE AND LOCATION OF ANY UTILITY.

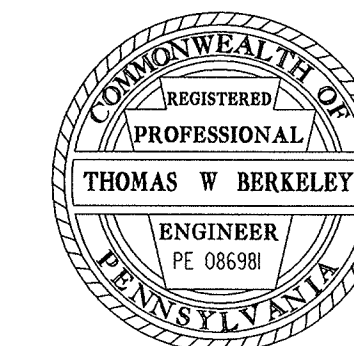
**EXISTING STRUCTURE PLANS:**

1. DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTER IN THE FIELD.
2. THE INFORMATION SHOWN ON THE PLANS FOR THE EXISTING BRIDGE IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT AND IS NOT TO BE CONSIDERED A BASIS FOR COMPUTATION OF THE UNIT PRICES USED FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION, BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING THE COST AND/OR QUANTITIES OF WORK TO BE PERFORMED MAY DIFFER FROM THOSE INDICATED.



**PROTECTIVE COATING ON ALTERNATE  
CONC VERTICAL WALL BARRIER**  
NOT TO SCALE

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
500 OFFICE CENTER DRIVE, SUITE 210,  
FORT WASHINGTON, PA 19034-3234



Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

**COMMONWEALTH OF PENNSYLVANIA**  
DEPARTMENT OF TRANSPORTATION

**BUCKS COUNTY**  
PENNDOT DISTRICT 6-0  
BUCKS COUNTY BRIDGE #81  
UPPER STATE ROAD SEG 0395 OFFSET 0081  
OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT**  
**GENERAL NOTES**

RECOMMENDED NOV 20 2018 SHEET 3 OF 10

**BPAA-92816**

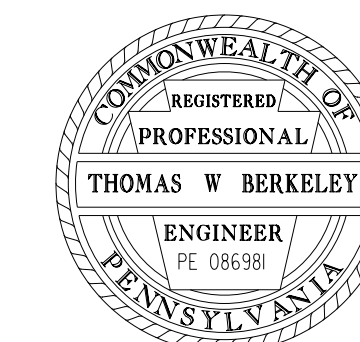
APPROXIMATE QUANTITIES - BRIDGE STRUCTURE DESIGNED

ITEM NUMBER	DESCRIPTION	UNIT	SUPER	DECK	TOTAL
1001-0001	CLASS AA CEMENT CONCRETE (3)	CY	24	---	24
1001-0960	CLASS AAAP CEMENT CONCRETE (2)	CY	---	24	24
1002-0053	REINFORCEMENT BARS, EPOXY COATED	LB	---	4344	4344
1018-0051	REMOVAL PORTION OF EXISTING BRIDGE (4)	LS	1	---	1
1019-0050	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE)	SY	161	---	161
1091-0335	EPOXY INJECTION CRACK SEAL	DOLLA	---	2500	2500
1041-0001	SCARIFICATION (5)	SY	---	485	485
1042-0001	LATEX MODIFIED CONCRETE WEARING SURFACE, 1 1/4" DEPTH	SY	---	248	248
5016-0006	BARRIER ROTECTIVE FENCE, VINYL-COATED STEEL MODIFIED (1)	LF	253	---	253
5022-0001	STEEL BRIDGE HAND RAILING MODIFIED (1)	LF	223	---	223
5042-0100	LATEX MODIFIED CONCRETE WEARING SURFACE, VARIABLE DEPTH FOR HYDRODEMOLITION (1)	CY	---	1	1
9000-0041	CONCRETE BRIDGE DECK SURFACE PREPARATION, HYDRODEMOLITION (1)	SY	---	248	248
9000-0042	INVERTED 'V' TYPE PREFORMED SILICONE JOINT SEALING SYSTEM (1)	LF	---	164	164
9000-0090	REPAIR BARRIER CONCRETE (1)	SF	26	---	26
9000-0092	REINFORCED CONCRETE REPAIR TYPE 2, BPAA-92816 (1)	SF	---	12	12

- (1) SEE SPECIAL PROVISIONS.
- (2) INCLUDES CLASS AAAP CEMENT CONCRETE QUANTITY IN DECK SLAB AT MEDIAN BARRIER PLACEMENT.
- (3) INCLUDES CLASS AA CEMENT CONCRETE QUANTITY IN BARRIER.
- (4) INCLUDES REMOVAL OF DECK FOR MEDIAN BARRIER PLACEMENT, SIDEWALK REMOVAL AND REMOVAL OF RAILING ON EXTERIOR BARRIER. REMOVAL OF EXPOSED SIDEWALK REBARS IS INCIDENTAL TO REMOVAL. REMOVE SIP FORMS AT NO ADDITIONAL COST TO DEPARTMENT IF SIP FORMS DISLodge DURING DECK REMOVAL. PROVIDE FORMWORK FOR DECK PLACEMENT IN THE EVENT THE SIP FORMS ARE DISLODGED AT NO ADDITIONAL COST TO THE DEPARTMENT.
- (5) INCLUDES FOUR (4) 1/4" PASSES.

Mark	Description	By	Chk'd.	App'd.	Date
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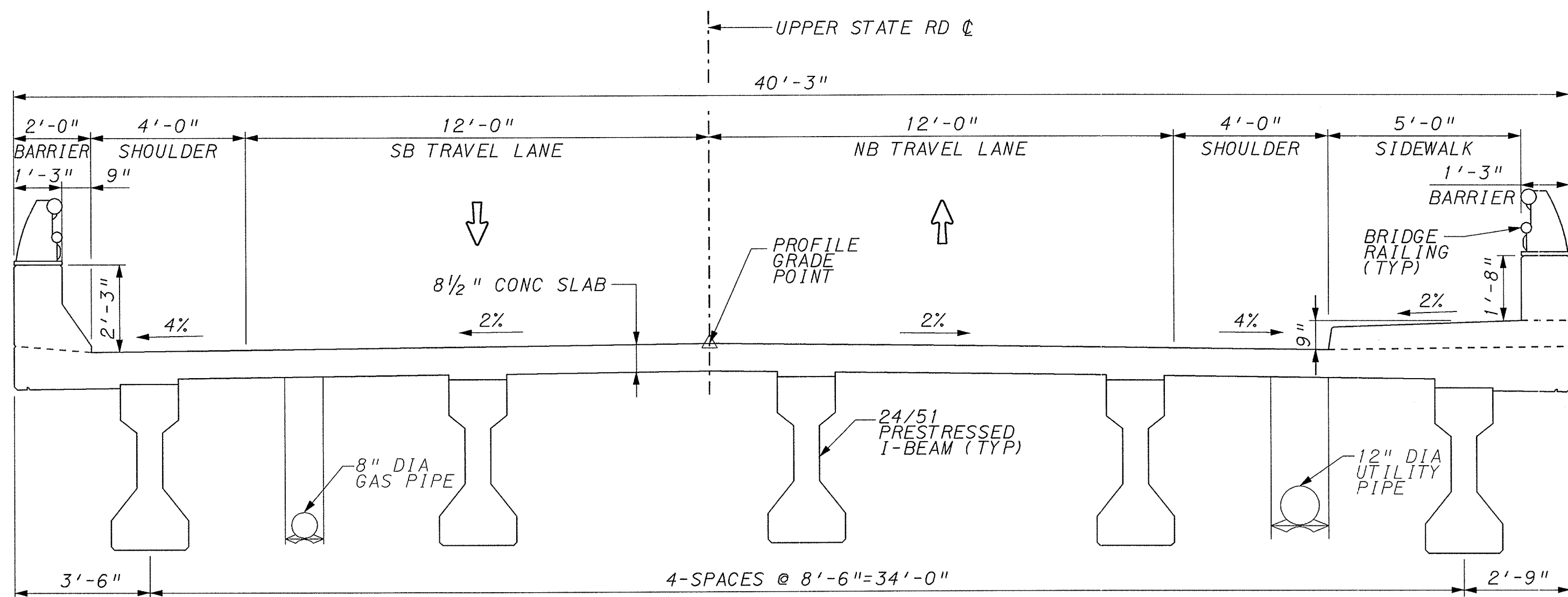
**COMMONWEALTH OF PENNSYLVANIA**  
 DEPARTMENT OF TRANSPORTATION

**BUCKS COUNTY**  
 PENNDOT DISTRICT 6-0  
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 UPPER STATE ROAD SEG 0395 OFFSET 0081  
 OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT  
 QUANTITIES**

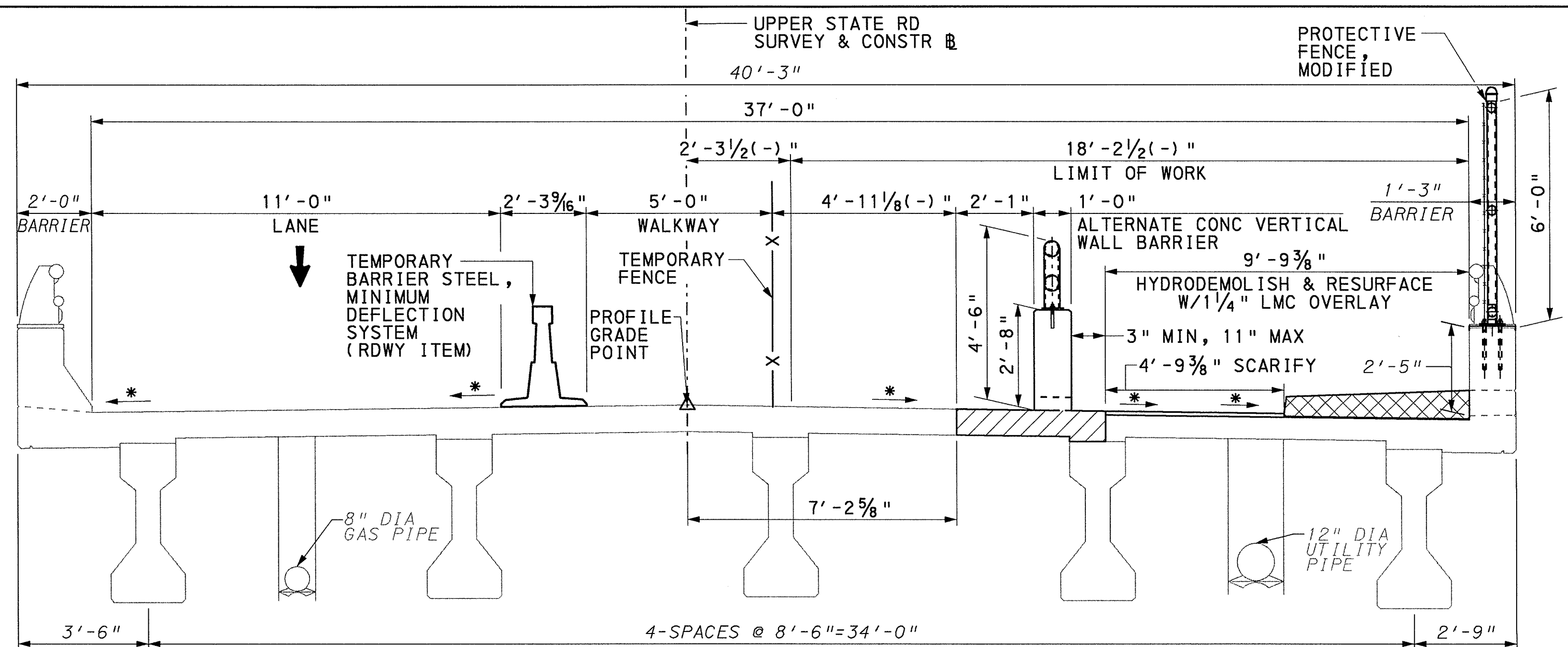
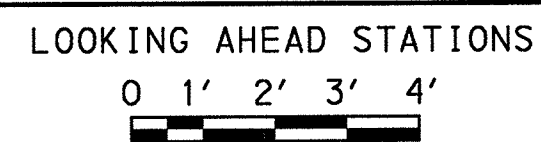
RECOMMENDED           AUG 06 2019          

SHEET   4   OF   10  

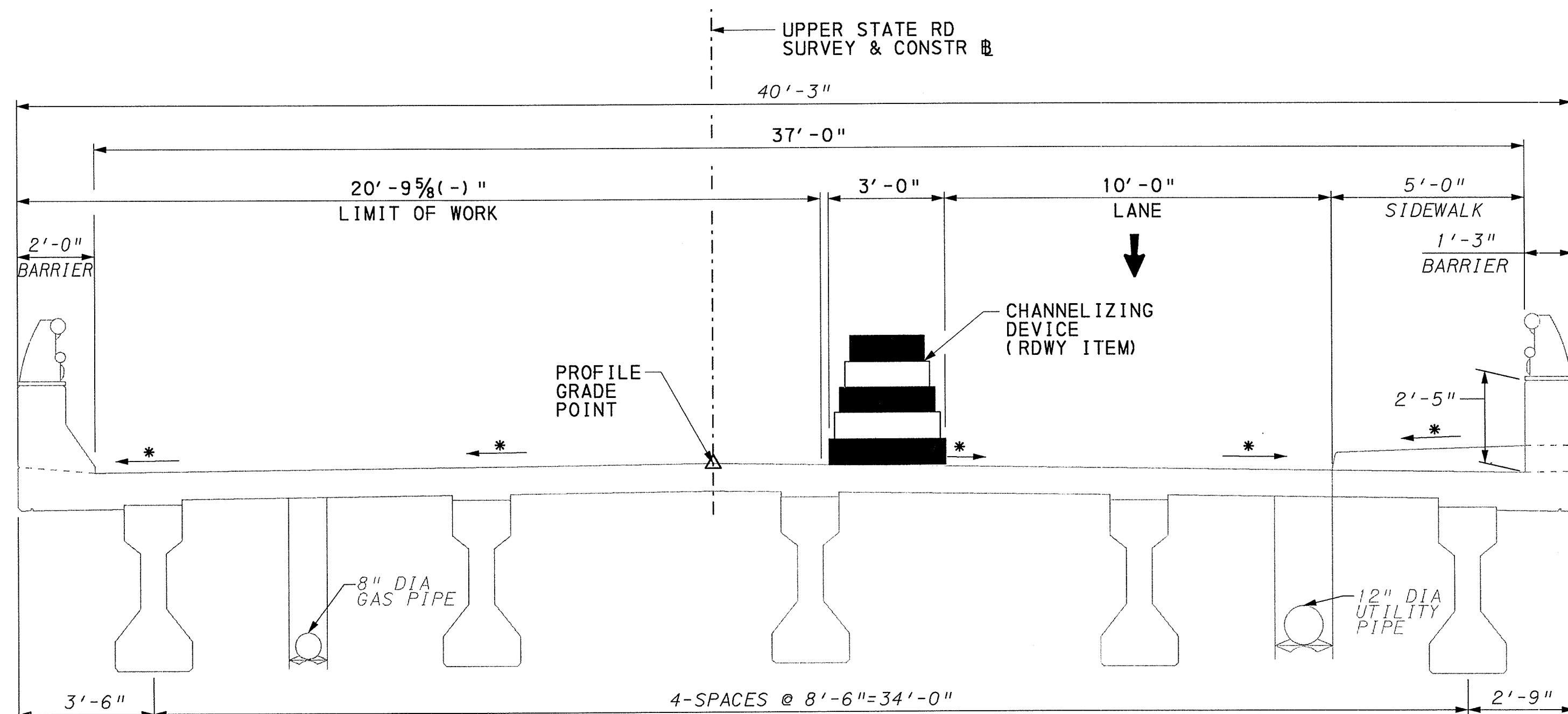
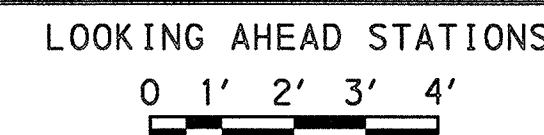
**BPAA-92816**



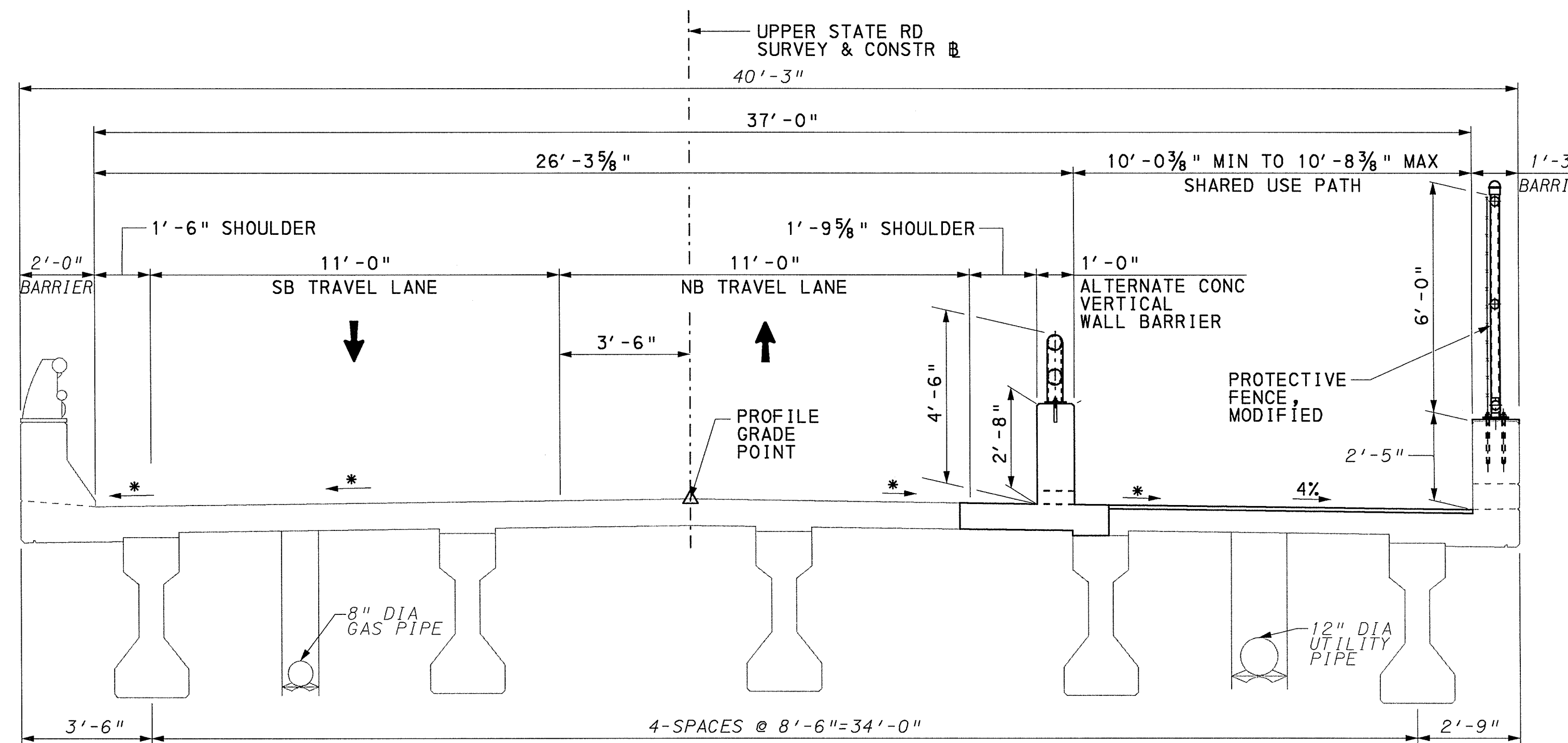
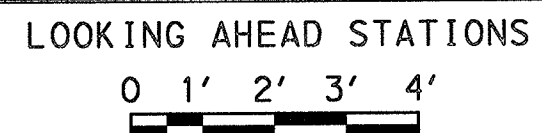
EXISTING TYPICAL SECTION



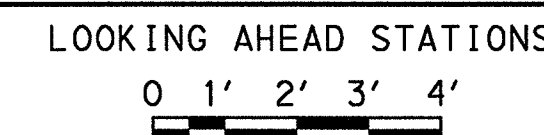
\*\* STAGE 4 TYPICAL SECTION



\*\* STAGE 3 TYPICAL SECTION



PROPOSED TYPICAL SECTION



\* MATCH EXISTING CROSS SLOPES.

\*\* AS PART OF THE NESHAMINY GREENWAY TRAIL NETWORK EXTENSION PROJECT, STATE ROUTE 2025 OVER NESHAMINY CREEK (BMS NUMBER 09 2025 0022 0556) IS BEING REHABILITATED IN ADDITION TO THIS STRUCTURE, AND INCLUDES CONSTRUCTION STAGES 1 AND 2.

LEGEND:

- FULL DEPTH REMOVAL OF EXISTING DECK
- REMOVAL OF EXISTING SIDEWALK

REFERENCES:

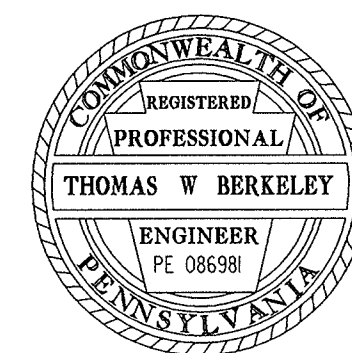
1. LIST OF SUPPLEMENTAL DRAWINGS
2. GENERAL NOTES

SHEET:

- 2
- 3

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

PREPARED BY:  
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 500 OFFICE CENTER DRIVE, SUITE 210,  
 FORT WASHINGTON, PA 19034-3234



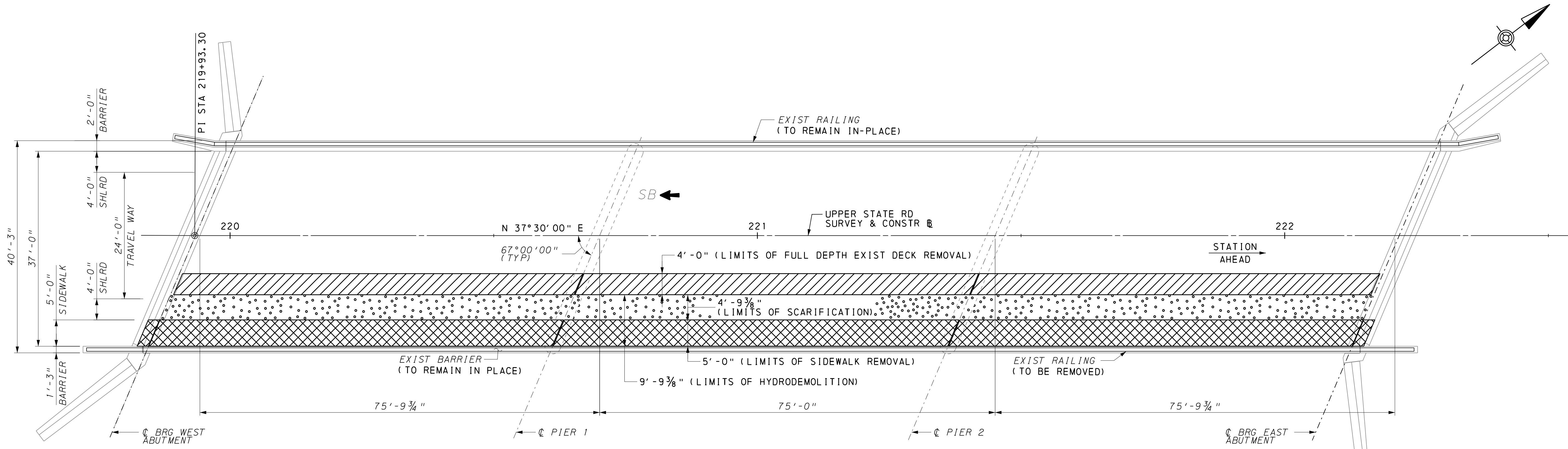
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 DEPARTMENT OF TRANSPORTATION

**BUCKS COUNTY**  
 PENNDOT DISTRICT 6-0  
 BUCKS COUNTY BRIDGE #81  
 UPPER STATE ROAD SEG 0395 OFFSET 0081  
 OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT  
 STAGED CONSTRUCTION SECTIONS**

RECOMMENDED NOV 20 2018

SHEET 5 OF 10

BPAA-92816



**REMOVAL PLAN**  
0 5' 10' 20'

**LEGEND:**

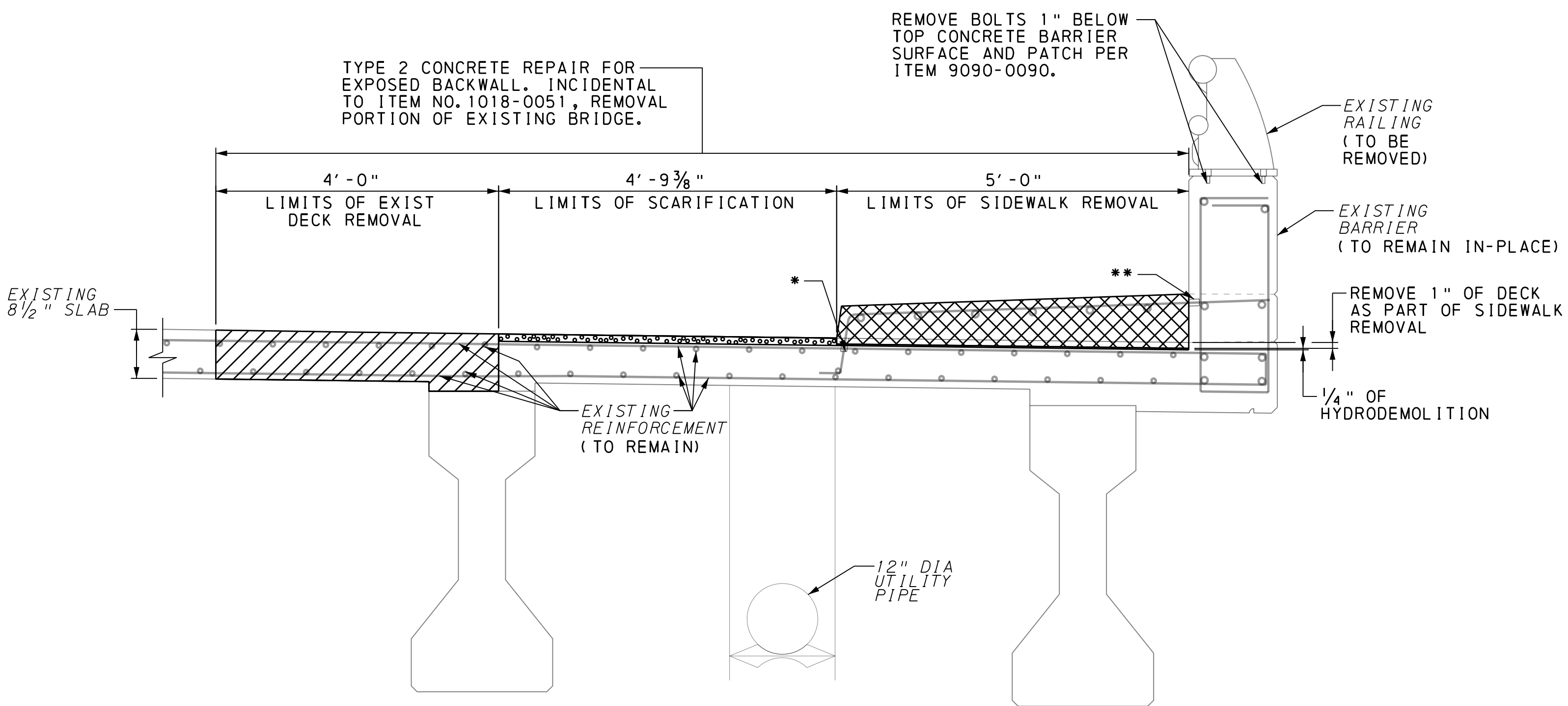
- ← TRAFFIC DIRECTION
- REMOVAL OF EXISTING DECK
- REMOVAL OF EXISTING SIDEWALK
- LIMITS OF SCARIFICATION

**REFERENCES:**

1. LIST OF SUPPLEMENTAL DRAWINGS
2. GENERAL NOTES
3. BARRIER PLAN - 1 & 2
4. JOINT DETAILS

**SHEET:**

- 2
- 3
- 7-8
- 9



**REMOVAL DETAIL**  
0 6 1' 2'

**NOTES:**

1. REMOVAL OF EXISTING CONCRETE AND REBAR (TO LIMITS SHOWN ON THIS SHEET) AND THE EPOXY COATING OF ANY EXPOSED REINFORCEMENT ARE INCIDENTAL TO REMOVAL OF PORTION OF EXISTING BRIDGE.

- \* PRIOR TO LMC OVERLAY PLACEMENT, REMOVE ANY EXPOSED EXISTING SIDEWALK REBAR TO A MINIMUM DEPTH OF 2" BELOW TOP OF DECK.
- \*\* REMOVE ANY EXPOSED EXISTING SIDEWALK REBAR ON BARRIER FACE TO A MINIMUM DEPTH OF 1", REMOVE CONCRETE A MINIMUM 2" CLEAR AROUND EXISTING REBAR AND REPAIR PER ITEM 9000-0090.

PREPARED BY:  
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Mark	Description	By	Chk'd.	App'd.	Date
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**COMMONWEALTH OF PENNSYLVANIA**  
DEPARTMENT OF TRANSPORTATION

**BUCKS COUNTY**  
PENNDOT DISTRICT 6-0  
BUCKS COUNTY BRIDGE #81  
UPPER STATE ROAD SEG 0395 OFFSET 0081  
OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT  
REMOVAL PLAN**

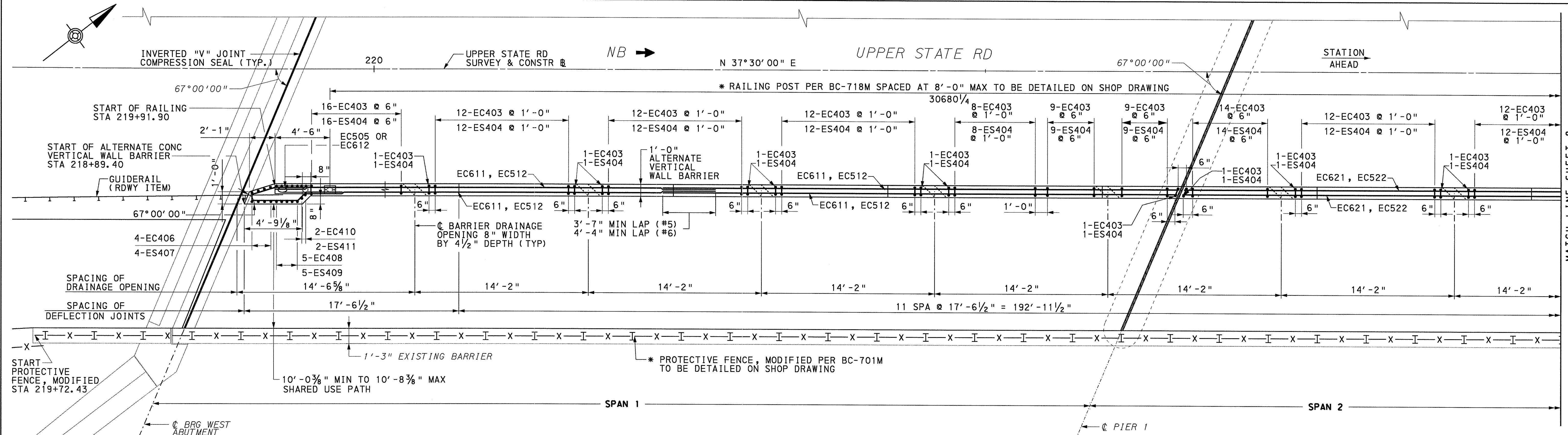
RECOMMENDED                      **AUG 05 2019**

SHEET 6 OF 10

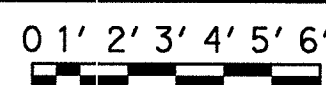
**BPAA-92816**

05-NOV-2018

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BARRIER AND RAILING PLAN - 1

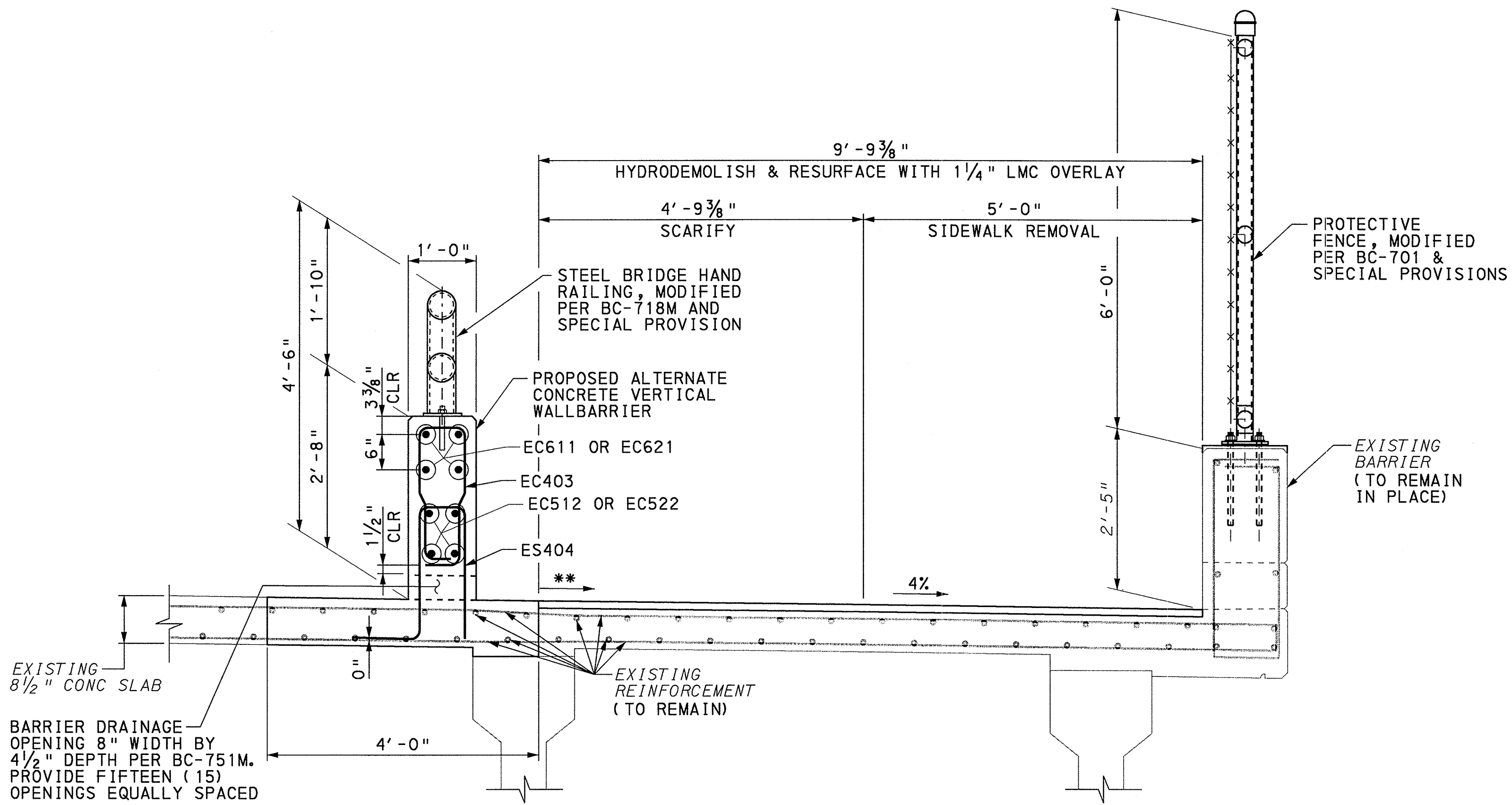


\* RAILING AND PROTECTIVE FENCE POST ANCHORAGE PLACEMENT TO BE COORDINATED WITH RAILING SHOP DRAWINGS. DETAIL TO AVOID PLACEMENT OF POST ON BARRIER JOINT.

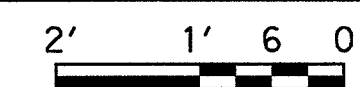
\*\* MATCH EXISTING CROSS-SLOPE.

NOTES:

1. RAILING NOT SHOWN FOR CLARITY.
2. EPOXY COAT ANY EXPOSED EXISTING REINFORCEMENT TO REMAIN.



PROPOSED ALTERNATE CONC VERTICAL WALL BARRIER AND FENCE DETAIL



REFERENCES:

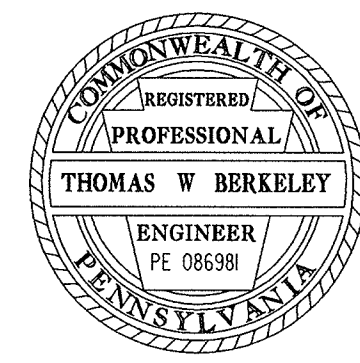
1. LIST OF SUPPLEMENTAL DRAWINGS
2. GENERAL NOTES
3. STAGED CONSTRUCTION SECTIONS
4. BARRIER PLAN - 2
5. JOINT DETAILS
6. REINFORCEMENT BAR SCHEDULE

SHEET:

- 2
- 3
- 5
- 8
- 9
- 10

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
 500 OFFICE CENTER DRIVE, SUITE 210,  
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**COMMONWEALTH OF PENNSYLVANIA**  
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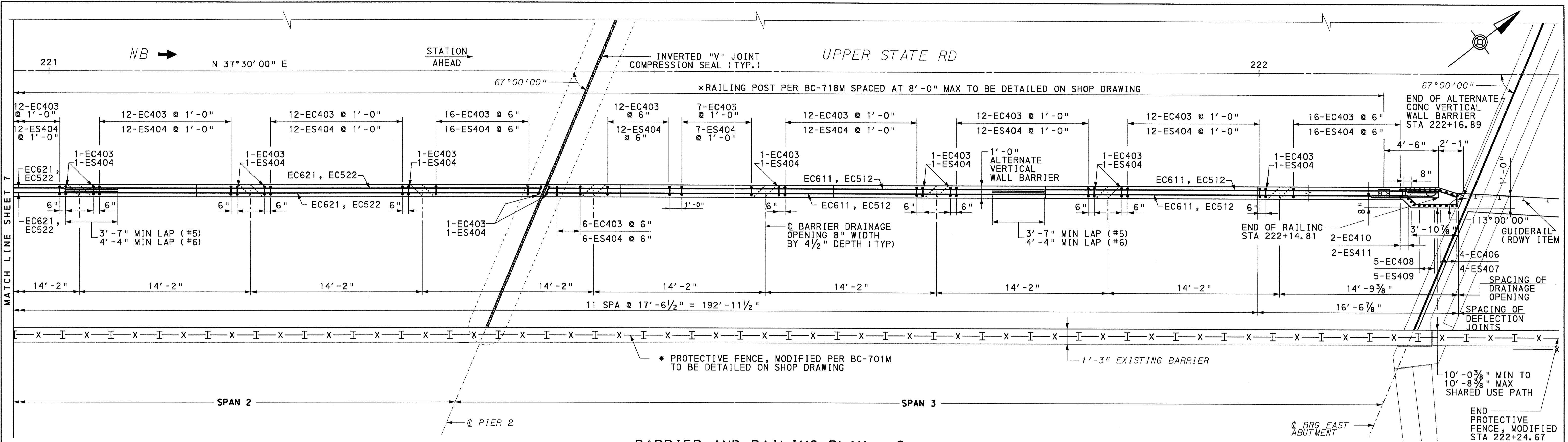
**BUCKS COUNTY**  
 PENNDOT DISTRICT 6-0  
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 OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT**  
**BARRIER PLAN - 1**

RECOMMENDED NOV 20 2018 SHEET 7 OF 10

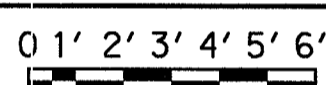
BPAA-92816

05-NOV-2018

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### BARRIER AND RAILING PLAN - 2



\* RAILING AND PROTECTIVE FENCE, MODIFIED POST ANCHORAGE PLACEMENT TO BE COORDINATED WITH RAILING SHOP DRAWING. DETAIL TO AVOID PLACEMENT OF POST ON BARRIER JOINT.

#### REFERENCES:

1. LIST OF SUPPLEMENTAL DRAWINGS
2. GENERAL NOTES
3. STAGED CONSTRUCTION SECTIONS
4. BARRIER PLAN - 1
5. JOINT DETAILS
6. REINFORCEMENT BAR SCHEDULE

#### SHEET:

- 2
- 3
- 5
- 7
- 9
- 10

PREPARED BY:  
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 500 OFFICE CENTER DRIVE, SUITE 210,  
 FORT WASHINGTON, PA 19034-3234

#### NOTES:

1. RAILING NOT SHOWN FOR CLARITY.
2. EPOXY COAT ANY EXPOSED EXISTING REINFORCEMENT TO REMAIN.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

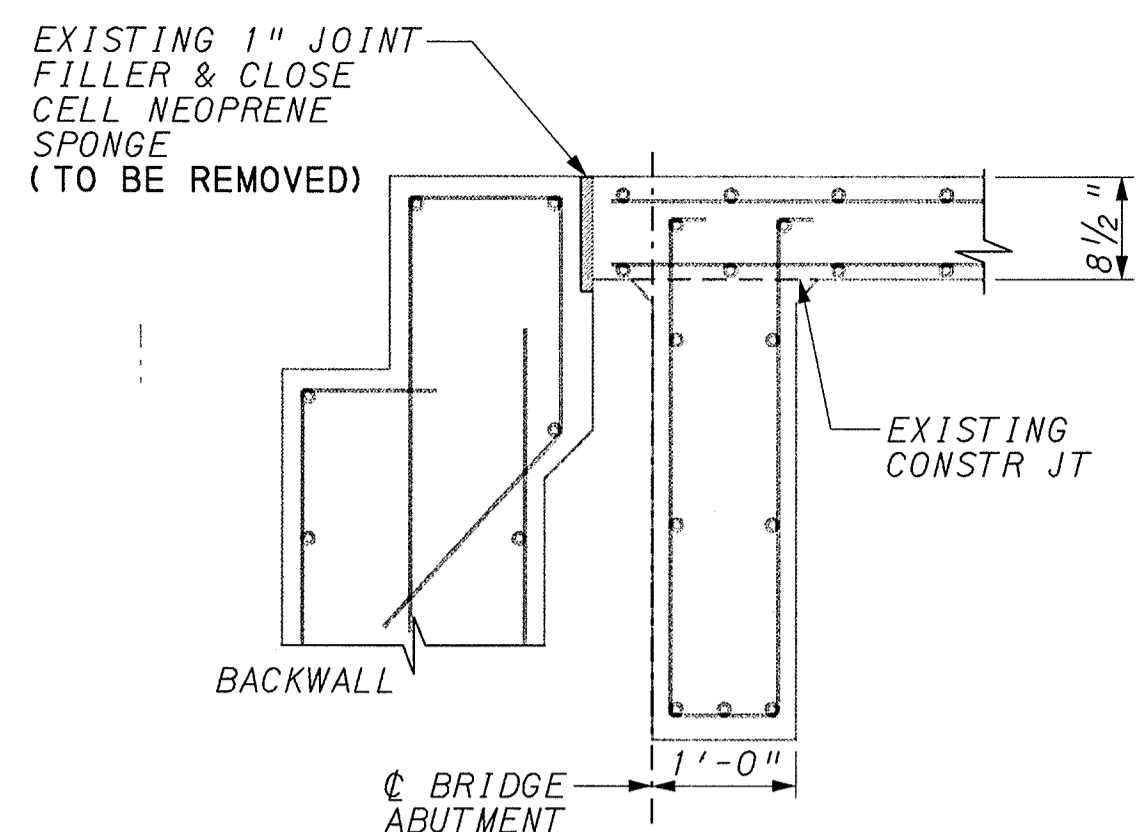
**COMMONWEALTH OF PENNSYLVANIA**  
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 OVER NESHAMINY CREEK  
**PROTECTIVE BARRIER RETROFIT**  
**BARRIER PLAN - 2**

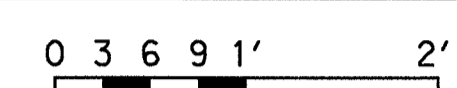
RECOMMENDED NOV 20 2018

SHEET 8 OF 10

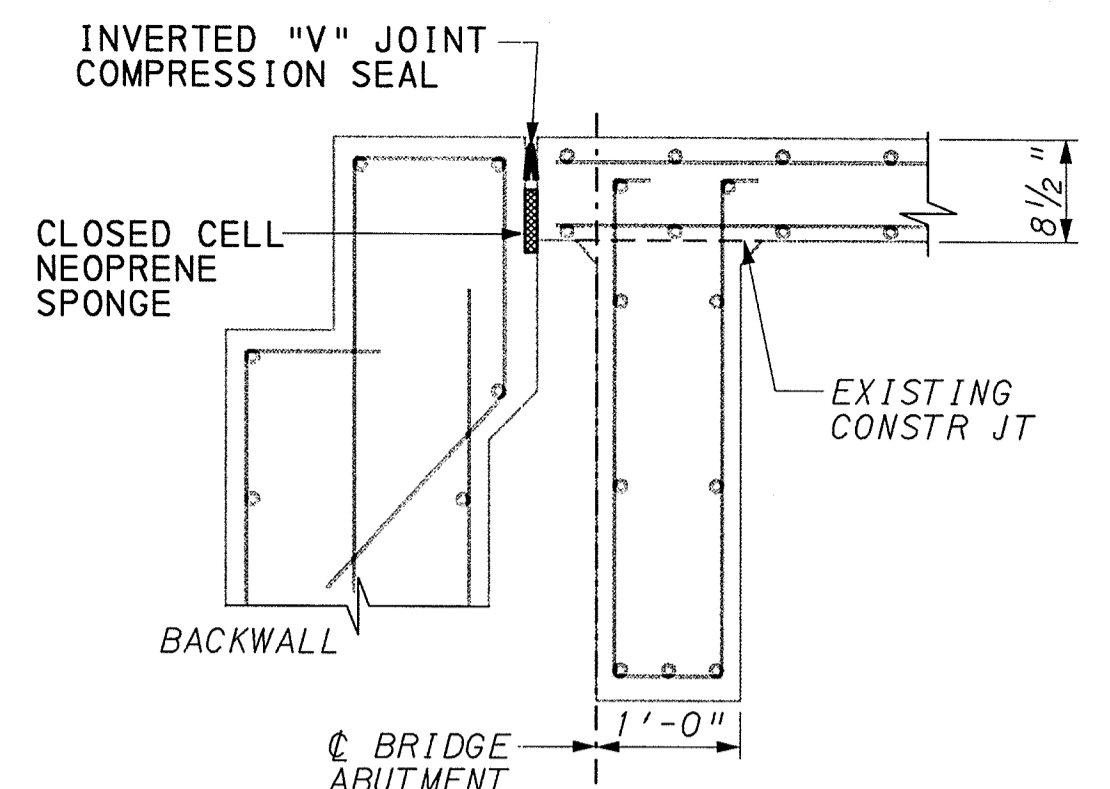
**BPAA-92816**



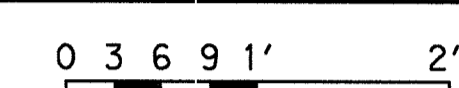
ABUTMENT SECTION JOINT REMOVAL DETAIL



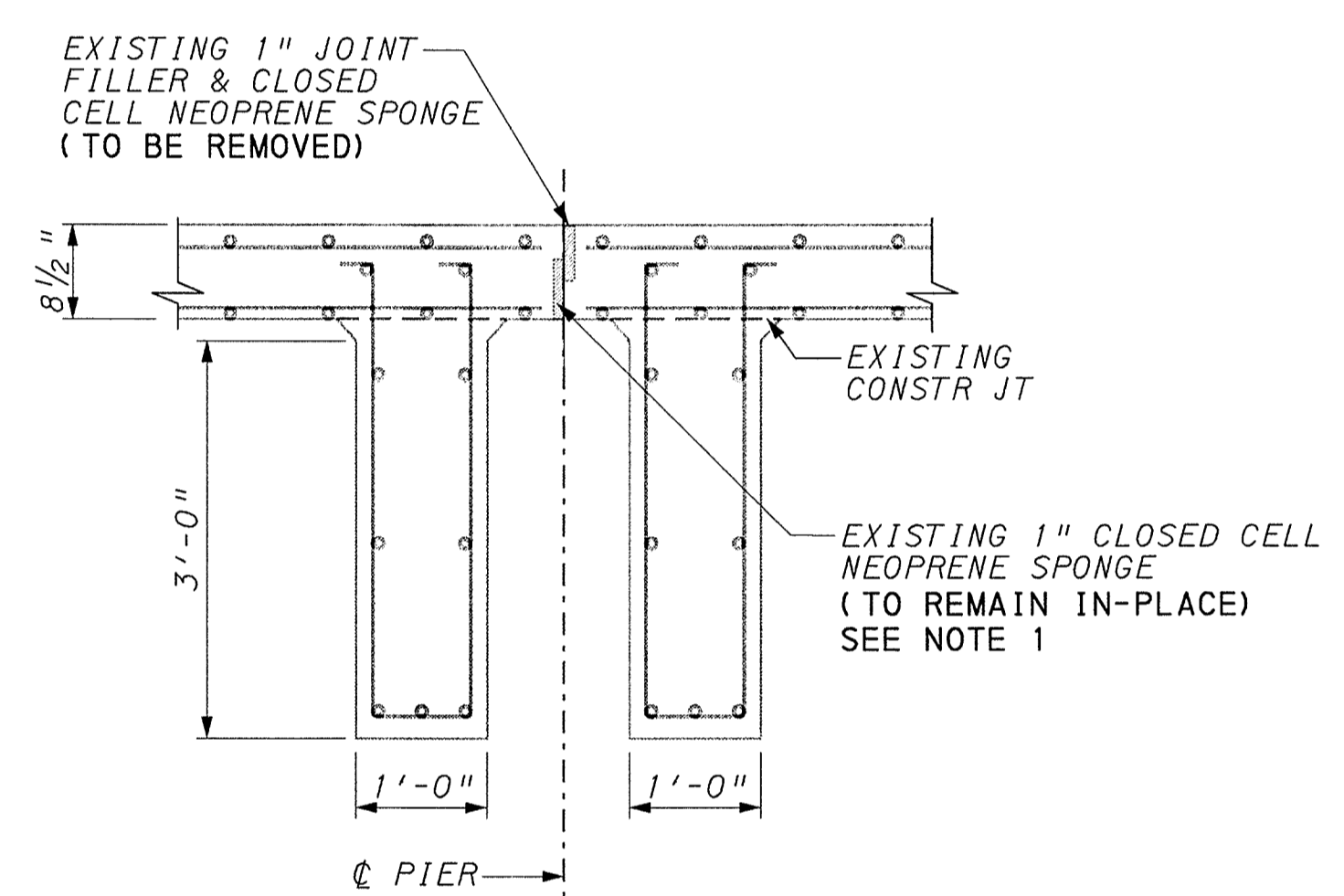
WEST ABUTMENT SHOWN, EAST ABUTMENT SIMILAR



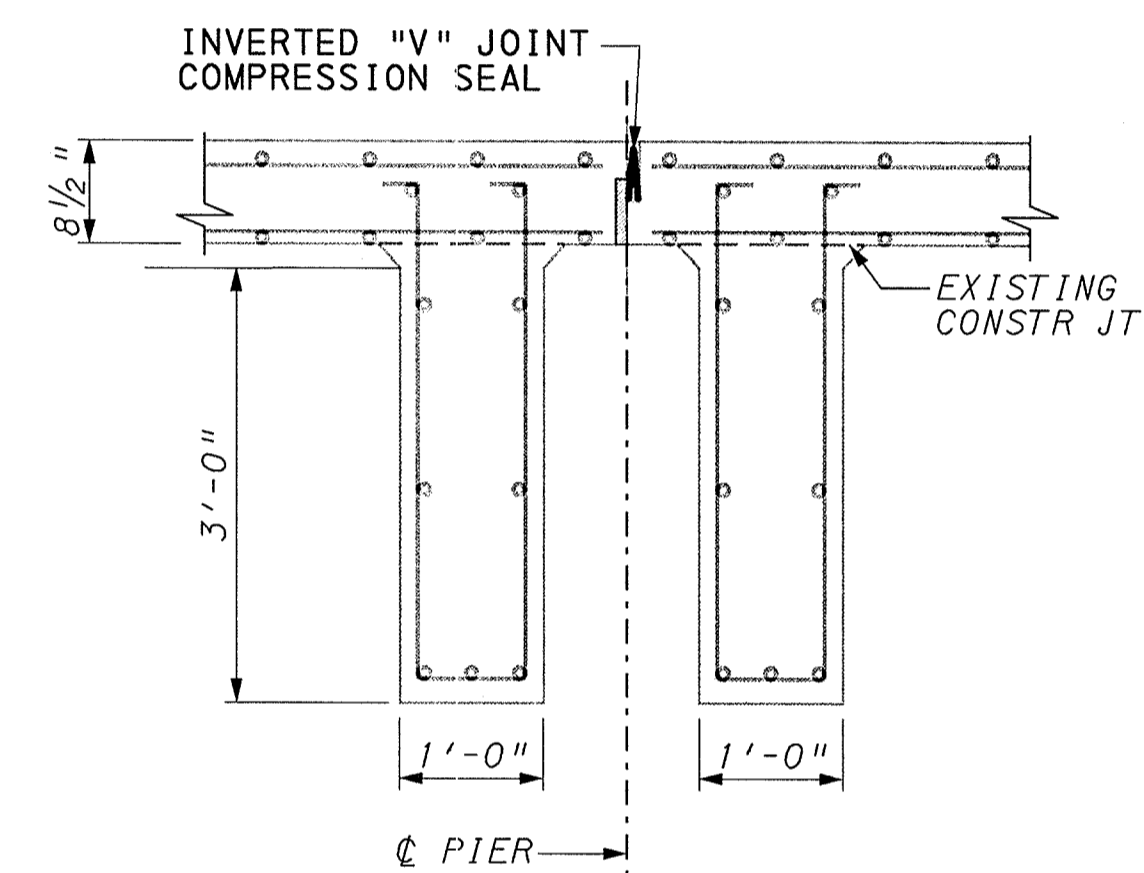
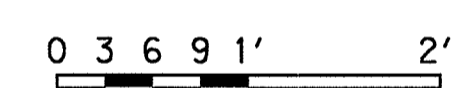
ABUTMENT SECTION JOINT DETAIL



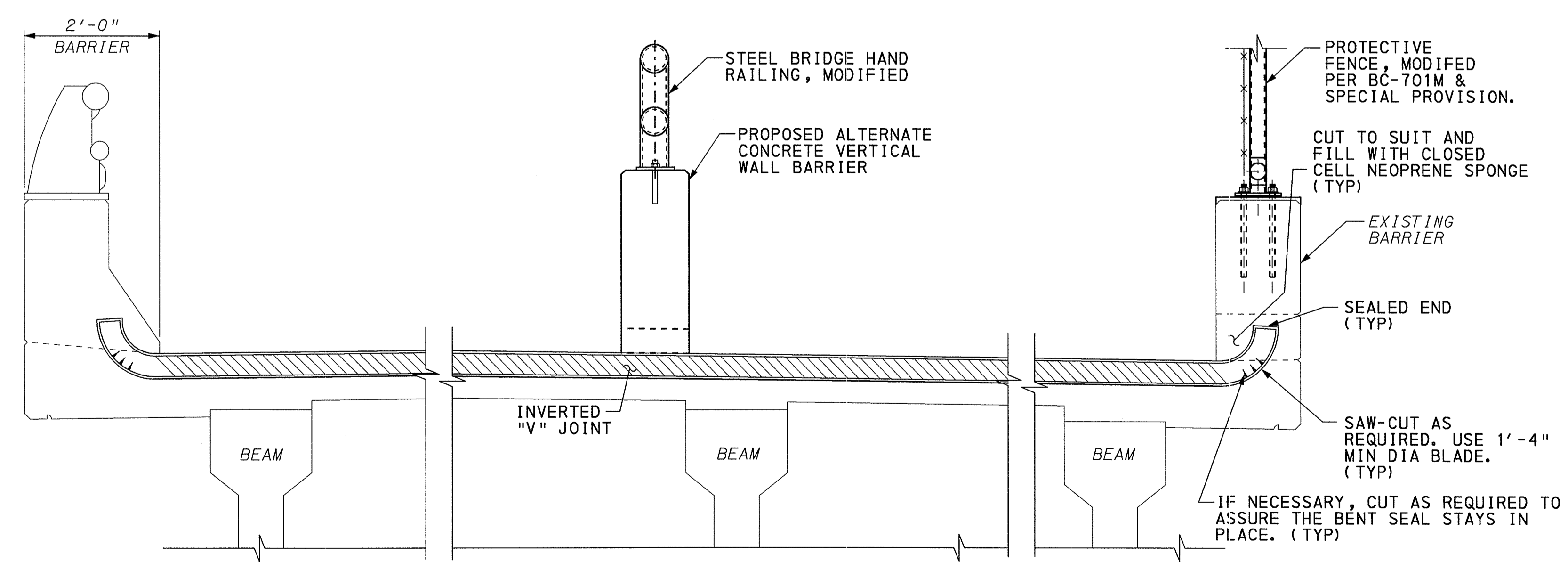
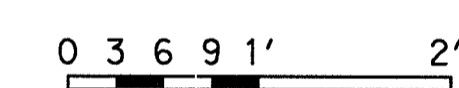
WEST ABUTMENT SHOWN, EAST ABUTMENT SIMILAR



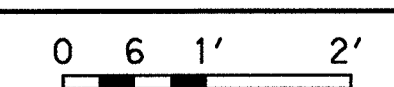
PIER SECTION JOINT REMOVAL DETAIL



PIER SECTION JOINT DETAIL



PIER & ABUTMENT JOINTS DETAIL



NOTES:

- IF SPONGE FILLER DESINTEGRATES UPON REMOVAL OF ADJACENT SPONGE FILLER, REPLACE WITH CLOSED CELL NEOPRENE.

JOINT PREPARATION NOTES:

- REMOVE THE EXISTING JOINT SPONGE FILLER IN THE PIER & ABUTMENT JOINTS AS SHOWN ON PLANS. BY THE BARRIERS, THE JOINT OPENING IS TO BE FORMED BY A TWO STAGE SAWING OPERATION. THE FIRST SAW CUT IS DESIGNED TO CONTROL CRACKING. THE SECOND SAW CUT IS MADE USING A DOUBLE-BLADED WATER-COOLED SAW CAPABLE OF HOLDING A TOLERANCE OF  $\pm 1/16$ " TO CREATE THE PROPER OPENING FOR THE PREFORMED NEOPRENE COMPRESSION SEAL OR INVERTED V JOINT SEAL.
- WATER BLAST OPENING IMMEDIATELY FOLLOWING SAW CUTTING OPERATION TO REMOVE ANY RESIDUAL SLURRY BEFORE IT DRIES.
- THE DEPTH OF THE JOINT OPENING EQUALS THE HEIGHT OF THE SEAL PLUS 1". THE WIDTH OF THE SECOND SAW CUT SHOULD BE ADJUSTED TO ACCOUNT FOR THE CONCRETE SURFACE TEMPERATURE AT THE TIME OF SAWING, SEE MANUFACTURER'S PRODUCT INFORMATION.
- BEFORE INSTALLING THE SEAL, ABRASIVE BLAST THE BONDING SURFACES TO THOROUGHLY CLEAN THE JOINT OPENING AND REMOVE FOREIGN MATERIAL, INCLUDING BROKEN CONCRETE. USE WATER AND OIL FREE COMPRESSED AIR TO BLOW OUT RESIDUE FROM THE SEAL GROOVE OPENING.
- PREPARE BONDING SURFACES AND INSTALL JOINT SEAL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- DO NOT EXCEED 3% ELONGATION OF THE SEAL, IF STRETCHING OCCURS.

REFERENCES:

- LIST OF SUPPLEMENTAL DRAWINGS
- GENERAL NOTES
- STAGED CONSTRUCTION SECTIONS
- REMOVAL PLAN
- BARRIER PLAN - 1 & 2
- REINFORCEMENT BAR SCHEDULE

SHEET:

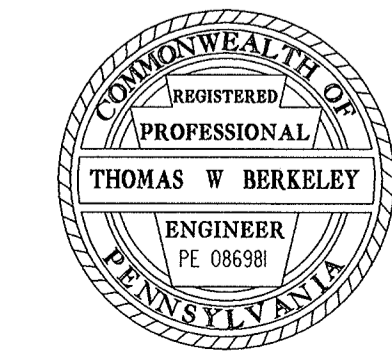
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Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

**COMMONWEALTH OF PENNSYLVANIA**  
DEPARTMENT OF TRANSPORTATION

BUCKS COUNTY  
PENNDOT DISTRICT 6-0  
BUCKS COUNTY BRIDGE #81  
UPPER STATE ROAD SEG 0395 OFFSET 0081  
OVER NESHAMINY CREEK  
PROTECTIVE BARRIER RETROFIT  
JOINT DETAILS

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
500 OFFICE CENTER DRIVE, SUITE 210,  
FORT WASHINGTON, PA 19034-3234

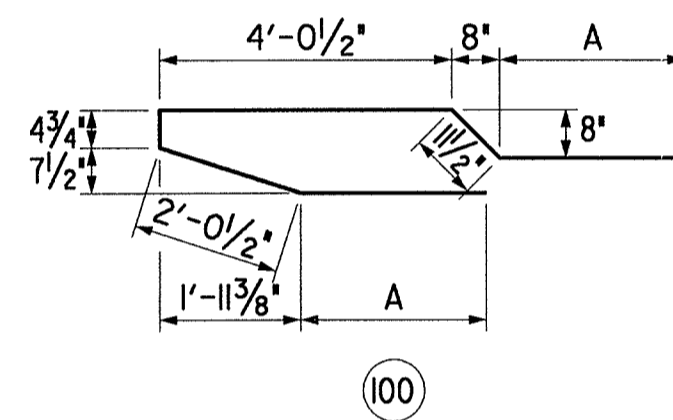
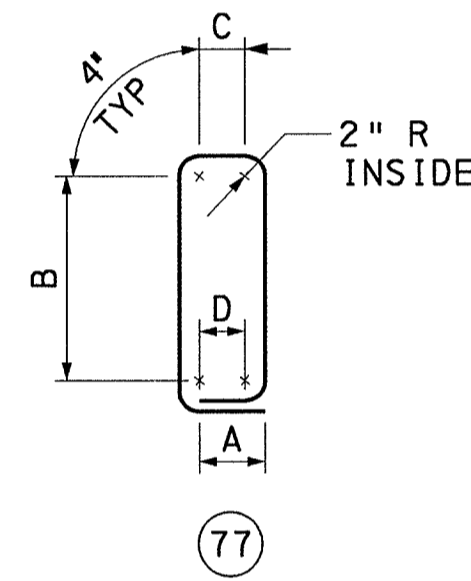
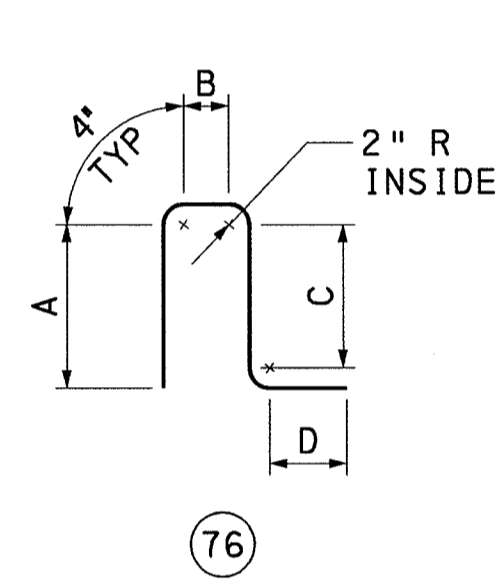


RECOMMENDED NOV 20 2013 SHEET 9 OF 10

BPAA-92816

DECK BAR SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
EC611	6	16	39'-2"	STR							
EC512	5	16	38'-10"	STR							
EC621	6	8	39'-6"	STR							
EC522	5	8	38'-9"	STR							
EC403	4	258	4'-0 1/2"	77	5 1/2"	1'-9"	3"	3"			
ES404	4	258	5'-6 1/2"	76	1'-9"	3"	1'-6 1/2"	1'-0"			
EC505	5	4	13'-1 3/4"	100	2'-7"						
EC406	4	8	4'-1 1/2" TO 5'-7 1/2"	77	5 1/2" TO 11 1/2"	1'-9"	4" TO 10"	3" TO 9"			VARY "A", "C", "D" 4 EA BY 2"
ES407	4	8	5'-6 1/2" TO 6'-2"	76	1'-9"	3" TO 10 1/2"	1'-6 1/2"	1'-0"			VARY "B" 4 EA BY 2 1/2"
EC408	4	10	6'-0 1/2"	77	1'-1 1/2"	1'-9"	11"	11"			
ES409	4	10	6'-2 1/2"	76	1'-9"	11"	1'-6 1/2"	1'-0"			
EC410	4	4	4'-0 1/2" TO 5'-10 1/4"	77	5 1/2" TO 1'-0 3/4"	1'-9"	3" TO 10 1/4"	3" TO 10 1/4"			VARY "A", "C" & "D" 2 EA BY 7 1/4"
ES411	4	4	5'-6 1/2" TO 6'-1 3/4"	76	1'-9"	3" TO 10 1/4"	1'-6 1/2"	1'-0"			VARY "B" 2 EA BY 7 1/4"
EC612	6	4	13'-7 3/4"	100	3'-1"						

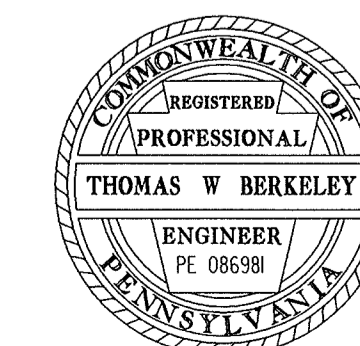


NOTES:

- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- FIGURES IN CIRCLES SHOW TYPES.
- "E" PREFIX OF BAR MARKS INDICATES EPOXY COATED BARS.
- FOR ALL BAR DIMENSIONS, A-E, LENGTH MEASUREMENTS ARE OUT-TO-OUT OF BAR.
- RADIUS, R, IS TO THE INSIDE OF THE BAR, UNLESS OTHERWISE NOTED.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

PREPARED BY:  
**MICHAEL BAKER INTERNATIONAL**  
 500 OFFICE CENTER DRIVE, SUITE 210,  
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**COMMONWEALTH OF PENNSYLVANIA**  
 DEPARTMENT OF TRANSPORTATION

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RECOMMENDED NOV 20 2018 SHEET 10 OF 10

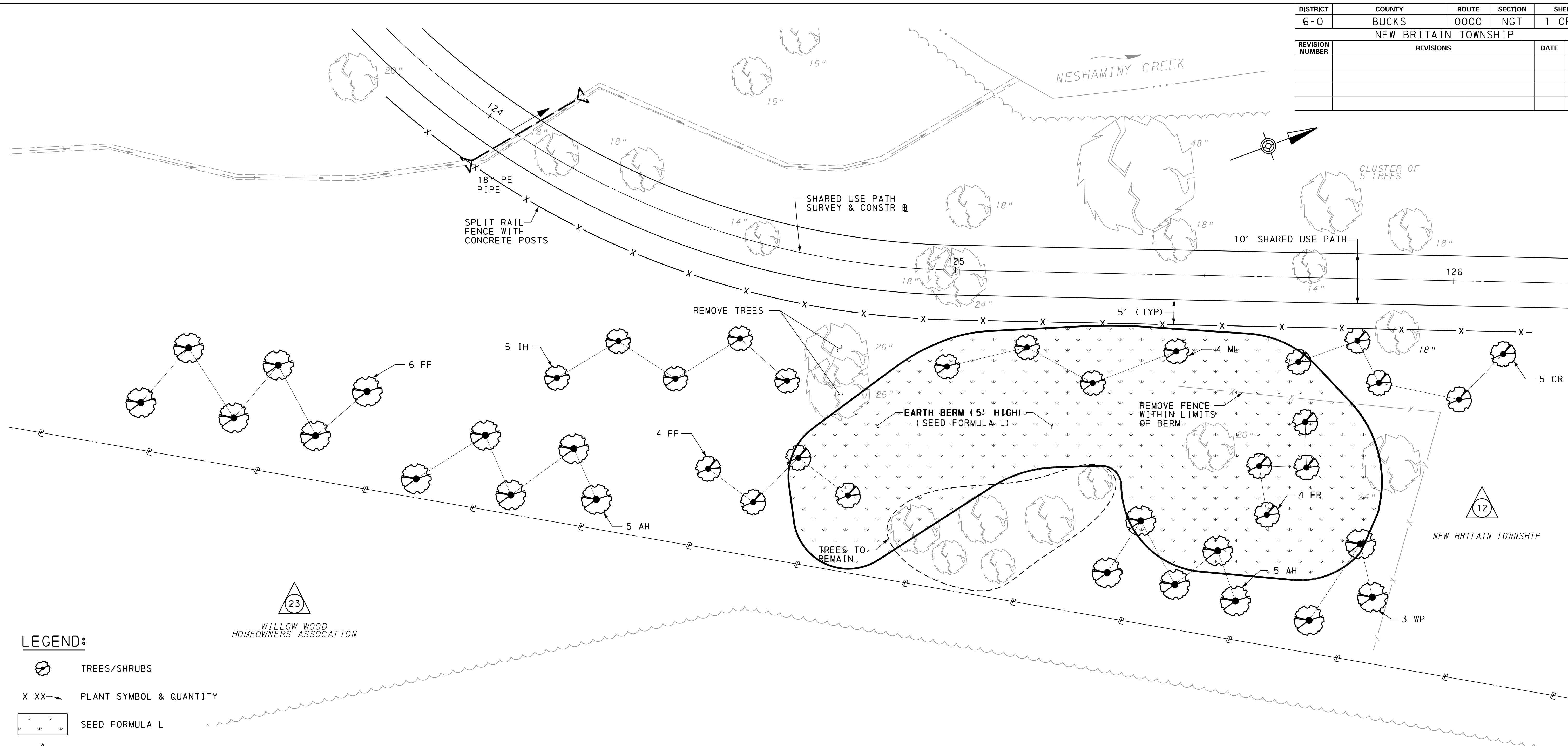
BPAA-92816



07-AUG-2019

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0000	NGT	1 OF 1
NEW BRITAIN TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	



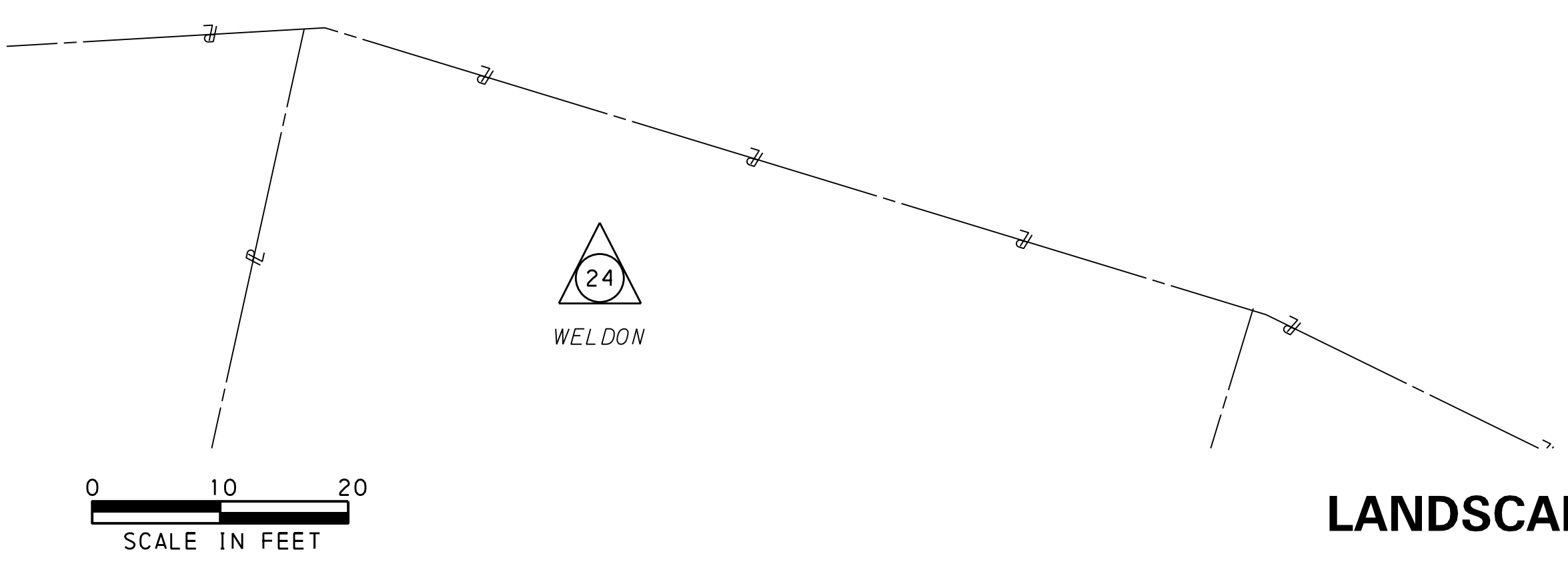
**LEGEND:**

- TREES/SHRUBS
- X XX → PLANT SYMBOL & QUANTITY
- SEED FORMULA L
- PROPERTY OWNER/PARCEL NO

**PLANT LIST**

KEY	QTY	ITEM NUMBER	SCIENTIFIC NAME	SIZE	REMARKS
CR	5	4808-4822	RHODODENDRON CATAWBIENSE	3'-0" HT	B&B
ER	4	4808-0100	"BLUE MOUNTAIN" JUNIPERUS VIRGINIANA	4'-0" HT	B&B
FF	10	4808-0101	ABIES FRASERI	7'-0" HT	B&B
WP	3	0808-3844	PINUS STOBUS	7'-0" HT	B&B
AH	10	4808-3761	ILEX OPACA	6'-0" HT	B&B
IH	5	4808-0120	ILEX GLABRA	3'-0" HT	B&B
ML	4	4808-4744	KALMIA LATIFOLIA	4'-0" HT	B&B

ITEM NUMBER	DESCRIPTION	UNIT
9000-0093	PERIOD OF PLANT ESTABLISHMENT	LS



**LANDSCAPING PLAN**

**Michael Baker INTERNATIONAL**  
 500 OFFICE CENTER DRIVE, SUITE 210,  
 FORT WASHINGTON, PA 19034-3234  
 Phone: (215) 444-0888 - MBAKERINTL.COM

