



April 18, 2024

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
400 North Street
Harrisburg, PA 17120

Application of the Department of Transportation of the Commonwealth of Pennsylvania for approval to modify the public above grade crossing by increasing the width of the structure from span 1 through span 7 to accommodate a turning lane for the south bound traffic where State Route 0378 crosses the track(s) of Norfolk Southern Railway Company, DOT Number 929 977 Y in the City of Bethlehem, Northampton County, and the allocation of costs incident thereto.

Dear Secretary Chiavetta:

Enclosed for filing, please find the Application of the Department of Transportation.

A copy of this Application and Exhibits has been served upon the parties in the Certificate of Service to the Application.

Sincerely,

A handwritten signature in black ink that reads "Rodney O. Rehnert". The signature is written in a cursive style.

Rodney O. Rehnert
District Grade Crossing Administrator
Engineering District 5-0
Department of Transportation

Attachments

cc: Parties of Record
Mark Chappell, PE., Chief, Right-of-Way, Utilities & Grade Crossing Division
Karen Cummings, Office of Chief Counsel
William Sinick, PE., Supervisor, Rail Safety Engineering Section PUC

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of the Department of Transportation of the Commonwealth of Pennsylvania for approval to modify the public above grade crossing by increasing the width of the structure from span 1 through span 7 to accommodate a turning lane for the south bound traffic where State Route 0378 crosses the track(s) of Norfolk Southern Railway Company, DOT Number 929 977 Y in the City of Bethlehem, Northampton County and the allocation of costs incident thereto.

Application
Docket No. _____

Electronically Filed

APPLICATION OF THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF
TRANSPORTATION

Applicant, Commonwealth of Pennsylvania, Department of Transportation, files this Application pursuant to the provisions of 66 Pa.C.S § 2702 and 52 Pa. Code § 5.13 for the modification of the public above grade crossing where State Route 0378 crosses tracks of Norfolk Southern Railway Company at DOT Number 929 977 Y in the City of Bethlehem, Northampton County as described below:

1. The name and address of Applicant are Commonwealth of Pennsylvania, Department of Transportation, Scott G. Vottero, P.E., Assistant District Executive, Engineering District 5-0, 1002 Hamilton Street, Allentown, PA 18101.

2. The name and address of the attorney for the Applicant are Caroline G. Robelen, Assistant Counsel, Commonwealth of Pennsylvania, Department of Transportation, Office of Chief Counsel, PO Box 8212, Harrisburg, PA 17105-8212.

3. The Applicant is an agency of Commonwealth of Pennsylvania, organized and existing under the Administrative Code of 1929, 71 P.S. § 511, et seq. and generally 36 P.S. § 670 - 401 et seq.

4. The names and addresses of the persons, parties and entities concerned in, or affected by the proposed construction, to the best of the Applicant's knowledge, are shown in the certificate of service. In addition to those served, the Applicant requests that the following also receive service of all documents in this matter:

Mark Chappell, PE., Chief
Right-of-Way, Utilities & Grade Crossing Division
Pennsylvania Department of Transportation
PO Box 3362
Harrisburg, PA 17105-3362
marchappel@pa.gov

Karen L. Cummings
Counsel for Applicant
Office of Chief of Counsel
Pennsylvania Department of Transportation
PO Box 8212
kcummings@pa.gov

5. The Applicant is seeking approval to modify the bridge and widen the structure from span 1 through span 7 to accommodate a turning lane for the south bound traffic on State Route 0378, Segment 0075, Offset 0191, over the track of Norfolk Southern Railway Company. A Location Map is attached hereto and marked as Exhibit "A".

6. The Applicant is aware of prior Public Utility Commission orders for these crossings at Docket Number(s): C-823022.

7. The average daily traffic for State Route 0378 at these crossings is 17,497 vehicles South Bound and 18,432 vehicles North Bound with 4% trucks.

8. The estimated total cost for the project subject to the application and described above is \$35,000,000.00. It is anticipated that the funding for the project will be 80% federal funds and 20% state funds.

9. This project is necessary and proper for the safety and convenience of the public.

10. A conference of all parties of interest should be held to discuss the proposed project.

Wherefore, Applicant respectfully requests that the Public Utility Commission approve this Application.

Respectfully Submitted:



Scott G. Vottero, P.E.
Assistant District Executive
Engineering District 5-0
Department of Transportation
1002 Hamilton Street
Allentown, PA 18101
Phone (610) 871-4550
Fax (610) 871-4124
Email: svottero@pa.gov

Dated: 4/18/2024

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of the Department of Transportation of the Commonwealth of Pennsylvania for approval to modify the public above grade crossing by increasing the width of the structure from span 1 through span 7 to accommodate a turning lane for the south bound traffic where State Route 0378 crosses the track(s) of Norfolk Southern Railway Company, DOT Number 929 977 Y in the City of Bethlehem, Northampton County and the allocation of costs incident thereto.

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VERIFICATION

I, Rodney O. Rehnert, District Grade Crossing Administrator, hereby state that the facts above set forth are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. §4904 (relating to unsworn falsification to authorities).

Date: April 18, 2024

Rodney O. Rehnert

Rodney O. Rehnert
District Grade Crossing Administrator

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of the Department of Transportation of the Commonwealth of Pennsylvania for approval to modify the public above grade crossing by increasing the width of the structure from span 1 through span 7 to accommodate a turning lane for the south bound traffic where State Route 0378 crosses the track(s) of Norfolk Southern Railway Company, DOT Number 929 977 Y in the City of Bethlehem, Northampton County and the allocation of costs incident thereto.

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the participants listed below, in accordance with the requirements of 52 Pa. Code § 1.54, by electronic mail:

Linda M. Zembo
Northampton County
669 Washington Street
Northampton County Courthouse
Easton, PA 18042-7475
LZembo@northamptoncounty.org

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Robert Taylor
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Bethlehem, PA 18018-6025
rtaylor@bethlehem-pa.gov

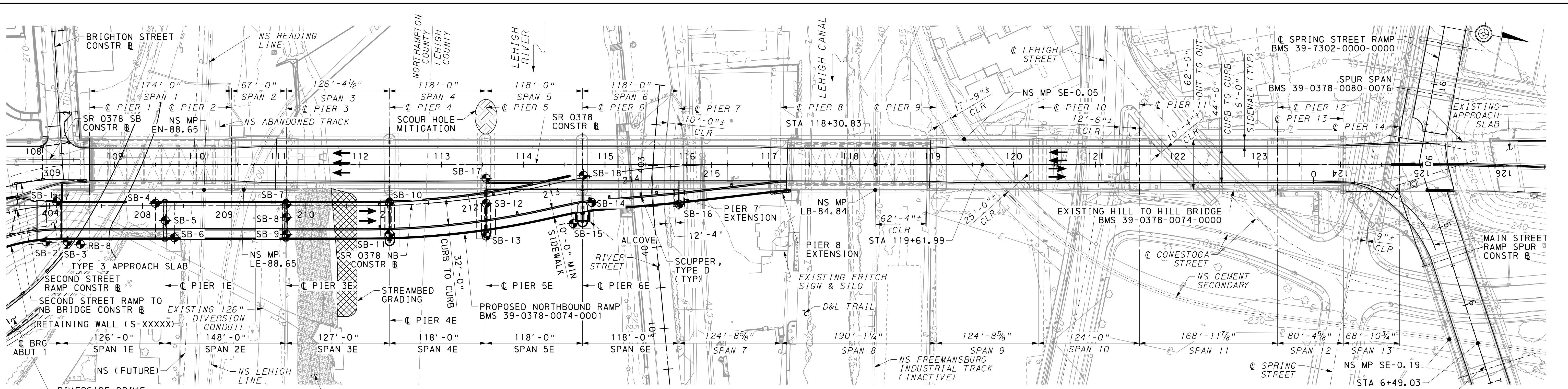
Scott Dreiling
XO Communications
1220 Broadcasting Rd.
Wyomissing, PA 19610-1229
scott.j.dreiling@verizon.com

Tim Steward
UGI Utilities, Inc.
2121 City Line Road
Bethlehem, PA 18017-2150
tsteward@ugi.com

Dated this 18th Day of April, 2024

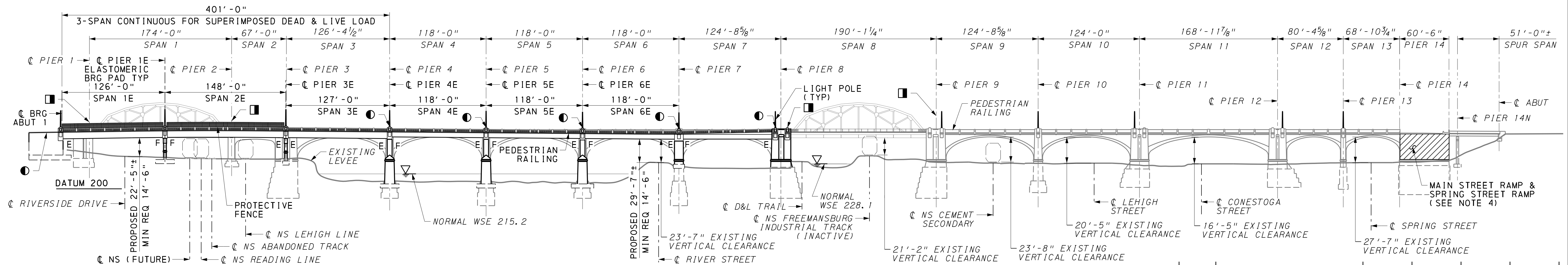
Rodney O. Rehnert

Rodney O. Rehnert
District Grade Crossing Admin.
1002 Hamilton Street
Allentown, PA 18101
(610) 871-4562
rrehnert@pa.gov



PLAN
30 0 30 60 FEET

REQUIRED HORIZONTAL RAILROAD CLEARANCE
 - 12'-0" PER PUBLIC UTILITY COMMISSION
 - 22'-0" WITHOUT ACCESS ROAD, 28'-0" WITH ACCESS ROAD (TYP NORFOLK SOUTHERN)



ELEVATION
30 0 30 60 FEET

REQUIRED VERTICAL RAILROAD CLEARANCE
 - 22'-0" PER PUBLIC UTILITY COMMISSION
 - 23'-6" (TYP NORFOLK SOUTHERN)

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					
	SR 0378 PREVIOUSLY KNOWN AS LR 297	MPMS/ECMS PROJ: 93630			
	BMS STR ID: 39-0378-0074-0001	BRKEY: TBD			
	BMS STR ID: 39-0378-0074-0000	BRKEY: 23182			
	BMS STR ID: 39-0378-0080-0076	BRKEY: 23184			
	BMS STR ID: 39-7302-0000-0102	BRKEY: 23518			
	BMS STR ID: 39-7302-0000-0000	BRKEY: 67426			

- LEGEND**
- REPLACEMENT NEOPRENE STRIP SEAL DAM, 3" MOVEMENT CLASS
 - NEOPRENE STRIP SEAL DAM, 3" MOVEMENT CLASS
 - DIRECTION OF TRAFFIC
 - PROPOSED BORING
 - PROPOSED TEST PIT
 - 200 PROPOSED CONTOUR
 - E/T/CTV— PROPOSED ELECTRIC, TELEPHONE, CABLE/TELEVISION
 - 200— EXISTING CONTOUR
 - FOU— LEGAL RIGHT-OF-WAY
 - FOU— EXISTING FIBER OPTIC UNDERGROUND
 - E— EXISTING ELECTRIC
 - W— EXISTING WATER
 - T— EXISTING TELEPHONE
 - G— EXISTING GAS
 - CTV— EXISTING CABLE/TELEVISION
 - X— EXISTING FENCE
 - S— EXISTING SANITARY SEWER

SUBSTRUCTURE LOCATIONS

LOCATION	STATION	SKEW ANGLE
BRG ABUT	207+01.50	90°00'00"
PIER 1E	208+27.50	90°00'00"
PIER 3E	209+75.50	90°00'00"
PIER 4E	211+02.50	88°14'43"
PIER 5E	212+21.05	81°27'11"
PIER 6E	213+41.25	79°38'48"
PIER 7	214+60.20	86°27'42"

STATIONS AND SKEW ANGLES MEASURED ALONG SR 0378 NB CONSTR

TEST BORING LOCATIONS

BORING NUMBER	STATION	OFFSET	BORING NUMBER	STATION	OFFSET
RB-8	207+24.00	47.00' RT	SB-10	211+03.00	4.00' LT
SB-1	206+95.00	5.00' LT	SB-11	211+01.00	35.00' RT
SB-2	206+82.00	44.00' RT	SB-12	212+20.00	8.00' RT
SB-3	207+08.00	44.00' RT	SB-13	212+14.00	48.00' RT
SB-4	208+16.00	3.00' LT	SB-14	213+47.00	32.00' RT
SB-5	208+28.00	18.00' RT	SB-15	213+19.00	53.00' RT
SB-6	208+39.00	39.00' RT	SB-16	214+57.00	46.00' RT
SB-7	209+76.00	2.00' LT	SB-17	212+24.00	22.00' LT
SB-8	209+76.00	14.00' RT	SB-18	213+42.00	3.00' LT

PROPOSED BORING LOCATION STATIONS MEASURED ALONG SR 0378 NB CONSTR

- NOTES:**
- FOR HORIZONTAL AND VERTICAL RAILROAD CLEARANCES AND HORIZONTAL ROADWAY CLEARANCES WITHIN SPANS 1 & 2, SEE "RAILROAD CLEARANCES" SHEET 6.
 - FOR PROPOSED REHABILITATION WORK ON THE EXISTING STRUCTURES, SEE "EXISTING STRUCTURE REHABILITATION" SHEETS 12 & 13.
 - THE PROPOSED SCOPE OF WORK IS SHOWN ON THE "GENERAL NOTES" SHEET 5.
 - FOR MAIN STREET RAMP GENERAL PLAN & ELEVATION, SEE SHEET 3. FOR SPRING STREET RAMP GENERAL PLAN & ELEVATION, SEE SHEET 4.
 - FOR HORIZONTAL AND VERTICAL ALIGNMENT DATA, SEE THE "GENERAL NOTES" SHEET 5.

HNTB

CONCEPTUAL

PREPARED BY:
 HNTB CORPORATION
 640 HAMILTON STREET
 SUITE 301
 ALLENTOWN, PA 18101

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION
 LEHIGH AND NORTHAMPTON COUNTIES
 SR 0378 SECTION 03B
 NB SEG 0074 OFFSET 0001 SB SEG 0075 OFFSET 0000
 SR 0378 NB STA 111+02.50 & SR 0378 SB STA 117+15.11
 OVER LEHIGH RIVER & CANAL, CITY STREETS,
 AND NORFOLK SOUTHERN RAILWAY COMPANY
 HILL TO HILL BRIDGE
 GENERAL PLAN & ELEVATION

RECOMMENDED _____ SHEET 1 OF 21
 EXHIBIT "B" Page 1 of 15 S-XXXX

GENERAL NOTES

DESIGN SPECIFICATIONS:

- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019.
 - LIVE LOAD DISTRIBUTION TO GIRDERS IS BASED UPON DM-4 DISTRIBUTION FACTORS.
 - DESIGN LIVE LOADS:
 - PHL-93, P-82 AND P2016-13
- DEAD LOADS:
- INCLUDES A SURFACE AREA DENSITY OF 0.030 KSF FOR FUTURE WEARING SURFACE ON THE DECK SLAB.
 - INCLUDES A SURFACE AREA DENSITY OF 0.015 KSF 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.

SCOPE OF WORK:

PROPOSED STRUCTURE

CONSTRUCT PROPOSED SUBSTRUCTURE UNITS:

- CONSTRUCT SOUTH ABUTMENT (DEEP FOUNDATION SPANNING DIVERSION CONDUIT)
- CONSTRUCT PIER 1E (ADJACENT TO NS TRACKS)
- CONSTRUCT PIER 3E (WALL PIER ABOVE EXISTING LEHIGH RIVER LEVEE)
- CONSTRUCT PIERS 4E, 5E, & 6E (WITHIN LEHIGH RIVER)
- CONSTRUCT THE PIERS 7 & 8 EXTENSIONS

CONSTRUCT PROPOSED SUPERSTRUCTURE ELEMENTS:

- CONSTRUCT SPANS 1E, 2E, & 3E (3-SPAN CONTINUOUS UNIT)
- CONSTRUCT SPANS 4E, 5E, & 6E (SIMPLE SPAN STRUCTURES)
- CONSTRUCT SPAN 7 WIDENING
- CONSTRUCT TYPE 3 APPROACH SLAB

REHABILITATION OF EXISTING STRUCTURES

HILL TO HILL BRIDGE:

- REPAIR TRUSSES AND SPOT PAINT (WHERE SECTION LOSS IS PRESENT)
- INSTALL TRUSS COLLISION PROTECTION PLATES (TBD IN FINAL DESIGN)
- REPAIR CONCRETE SPALLS IN SPAN 2 BEAMS
- REMOVE AND REPLACE ROADWAY IN SPANS 5-7 WITH PRECAST CONCRETE PANELS
- REPAIR CONCRETE ROADWAY (ACCELERATED) IN SPANS 2-4 & 9-13
- MILL CONCRETE ROADWAY & INSTALL PPC OVERLAY IN SPANS 1-13
- CLEAN AND WATERPROOF TRENCH DRAINS
- CLEAN/REPLACE DOWNSPOUTS/WEEPHOLES
- REPLACE STRUCTURE MOUNTED LIGHT POLES
- REPLACE NEOPRENE STRIP SEALS (NEW ARMOR AND CONCRETE HEAD RECONSTRUCTION) AT BOTH ENDS OF THE TRUSSES, BETWEEN SPAN 13 AND MAIN STREET RAMP, AND BETWEEN SPAN 13 AND SPRING STREET RAMP
- REPLACE PEDESTRIAN RAILING & ADJACENT SIDEWALK (SELECT LOCATIONS)
- REPAIR SIDEWALKS (SELECT LOCATIONS)
- REPAIR PIERS, ARCH UNDERSIDES, & SPANDREL WALLS (SELECT LOCATIONS)
- SOUTH BANK CHANNEL RE-GRADING
- SCOUR HOLE MITIGATION UPSTREAM OF PIER 5

SPUR SPAN:

- MILL DECK & INSTALL PPC OVERLAY
- REPLACE NEOPRENE STRIP SEALS
- STABILIZE ABUTMENT EMBANKMENT

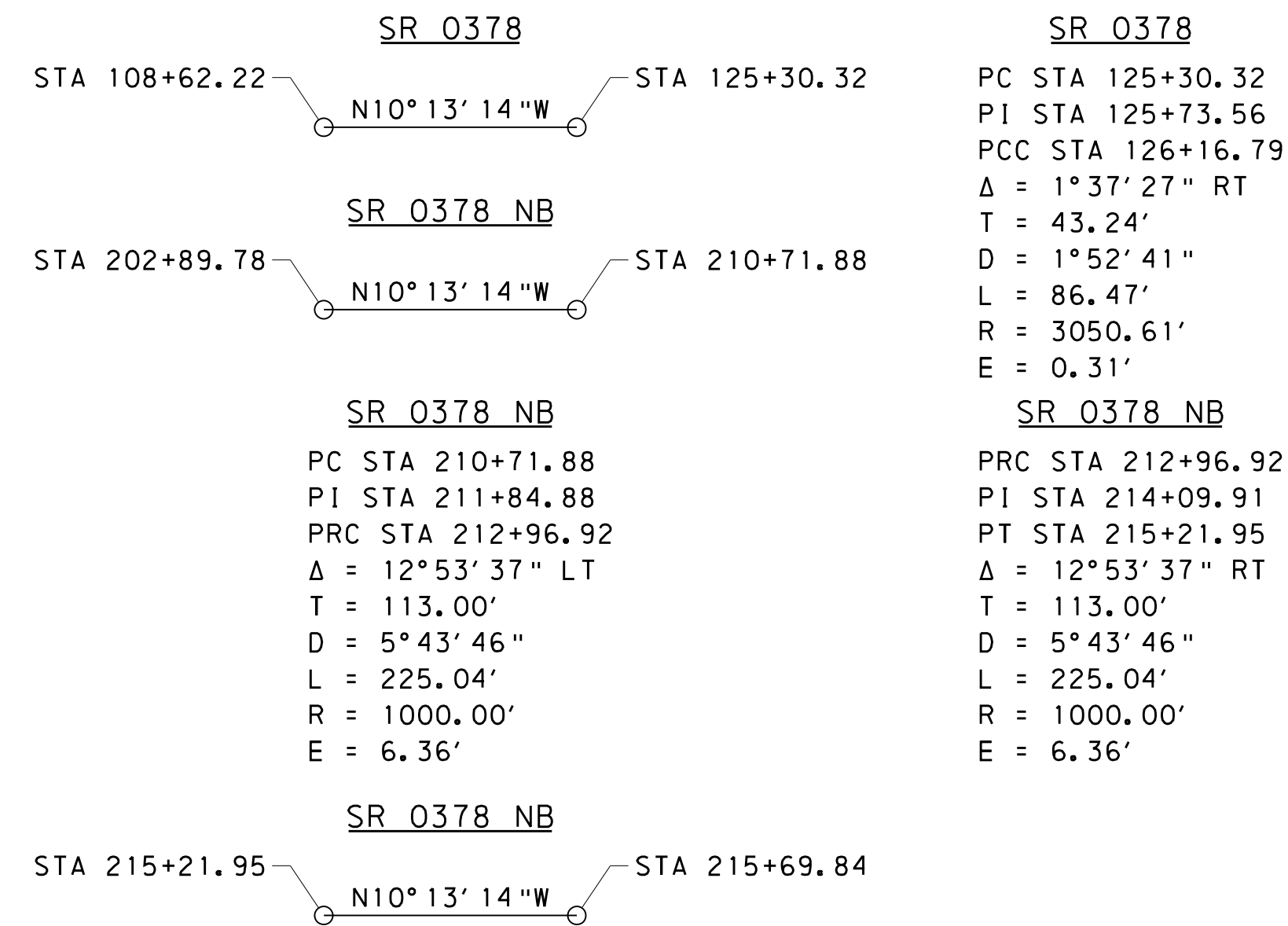
MAIN STREET RAMP:

- REPAIR CONCRETE ROADWAY IN SPANS 14-18 & ELEVATED ROADWAY
- MILL ROADWAY & INSTALL ASPHALT OVERLAY IN SPANS 15-18 & ELEVATED ROADWAY
- MILL CONCRETE ROADWAY & INSTALL PPC OVERLAY IN SPAN 14
- CLEAN AND WATERPROOF TRENCH DRAINS
- CLEAN/REPLACE DOWNSPOUTS/WEEPHOLES
- REPLACE NEOPRENE STRIP SEAL (NEW ARMOR AND CONCRETE HEAD RECONSTRUCTION) BETWEEN SPAN 13 & SPAN 14
- REPLACE PEDESTRIAN RAILING & ADJACENT SIDEWALK (SELECT LOCATIONS)
- REPAIR SIDEWALKS (SELECT LOCATIONS)
- REPAIR PIERS, ARCH UNDERSIDES, & SPANDREL WALLS (SELECT LOCATIONS)

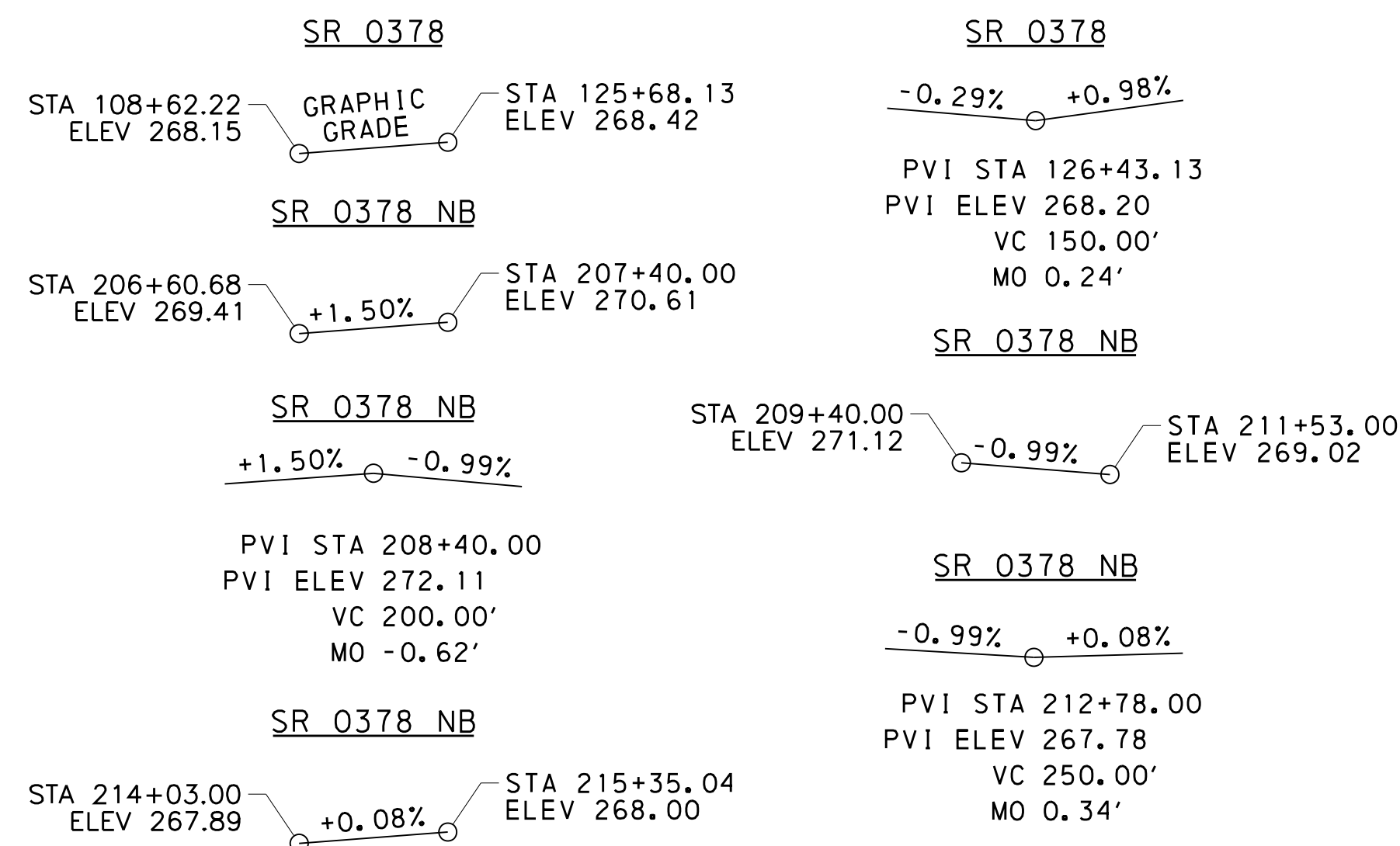
SPRING STREET RAMP:

- REPAIR CONCRETE ROADWAY IN SPANS 19-23 & ELEVATED ROADWAY
- MILL ROADWAY & INSTALL ASPHALT OVERLAY IN SPANS 19-23 & ELEVATED ROADWAY
- CLEAN/REPLACE DOWNSPOUTS/WEEPHOLES
- REPLACE NEOPRENE STRIP SEALS (NEW ARMOR AND CONCRETE HEAD RECONSTRUCTION) BETWEEN SPAN 13 & SPAN 19
- REPLACE PEDESTRIAN RAILING & ADJACENT SIDEWALK (SELECT LOCATIONS)
- REPAIR SIDEWALKS (SELECT LOCATIONS)
- REPAIR PIERS, ARCH UNDERSIDES, & SPANDREL WALLS (SELECT LOCATIONS)

HORIZONTAL ALIGNMENT AND CURVE DATA



VERTICAL ALIGNMENT AND CURVE DATA



INDEX OF DRAWINGS	
SHEET NO.	TITLE
1	GENERAL PLAN & ELEVATION
2	RETAINING WALL PLAN
3	MAIN STREET RAMP
4	SPRING STREET RAMP
5	GENERAL NOTES
6	RAILROAD CLEARANCES
7	TYPICAL SECTIONS 1
8	TYPICAL SECTIONS 2
9	TYPICAL SECTIONS 3
10	TYPICAL SECTIONS 4
11	TYPICAL SECTIONS 5
12	EXIST STRUCTURE REHABILITATION 1
13	EXIST STRUCTURE REHABILITATION 2
14	CONSTRUCTION STAGING 1
15	CONSTRUCTION STAGING 2
16	CONSTRUCTION STAGING 3
17	CONSTRUCTION STAGING 4
18	CONSTRUCTION STAGING 5
19	CONSTRUCTION STAGING 6
20	PIER ELEVATIONS 1
21	PIER ELEVATIONS 2

HYDRAULIC DATA				
DRAINAGE AREA: 1,220 SQUARE MILES				
FREQUENCY		MAGNITUDE	ELEVATION	VELOCITY
50 YEAR FLOOD-DESIGN	PROPOSED	69,600 CFS	233.61	7.4 F/S
	EXISTING	69,600 CFS	233.62	7.4 F/S
100 YEAR FLOOD	PROPOSED	79,730 CFS	235.19	7.6 F/S
	EXISTING	79,730 CFS	235.19	7.6 F/S
100 YEAR FLOOD-FEMA	PROPOSED	68,000 CFS	234.15	7.0 F/S
	EXISTING	68,000 CFS	234.16	6.9 F/S

NOTE: THE VELOCITY REPRESENTS THE INTERNAL BRIDGE VELOCITY AT THE UPSTREAM BRIDGE FACE.

FLOOD OF RECORD: 91,300 CFS (1955)

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0378 PREVIOUSLY KNOWN AS LR 297 MPMS/ECMS PROJ: 93630
 BMS STR ID: 39-0378-0074-0001 BRKEY: TBD
 BMS STR ID: 39-0378-0074-0000 BRKEY: 23182
 BMS STR ID: 39-0378-0080-0076 BRKEY: 23184
 BMS STR ID: 39-7302-0000-0102 BRKEY: 23518
 BMS STR ID: 39-7302-0000-0000 BRKEY: 67426

HNTB

CONCEPTUAL

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LEHIGH AND NORTHAMPTON COUNTIES
SR 0378 SECTION 03B

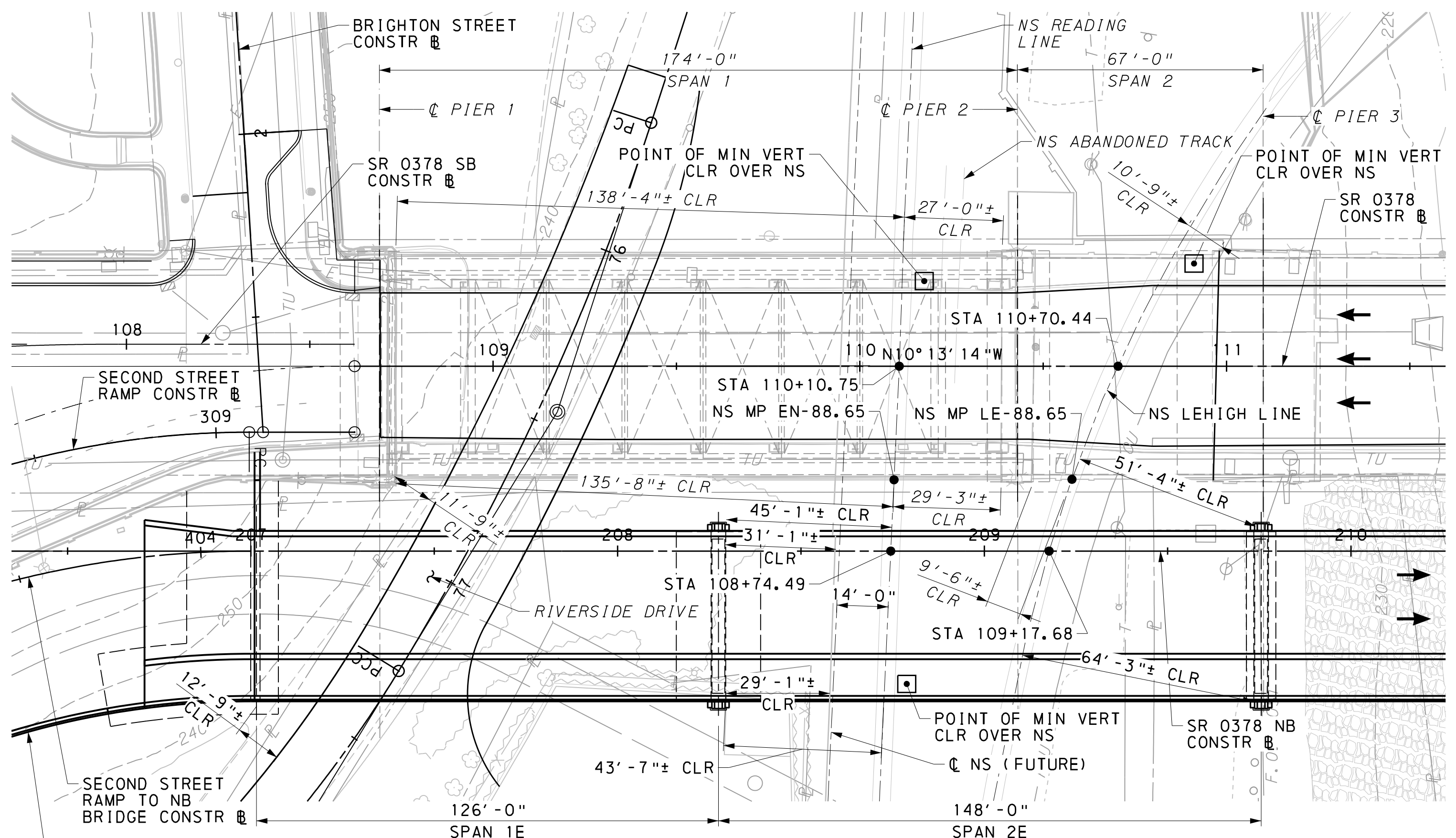
NB SEG 0074 OFFSET 0001 SB SEG 0075 OFFSET 0000
SR 0378 NB STA 111+02.50 & SR 0378 SB STA 117+15.11
OVER LEHIGH RIVER & CANAL, CITY STREETS,
AND NORFOLK SOUTHERN RAILWAY COMPANY

HILL TO HILL BRIDGE
GENERAL NOTES

PREPARED BY:
HNTB CORPORATION
640 HAMILTON STREET
SUITE 301
ALLENTOWN, PA 18101

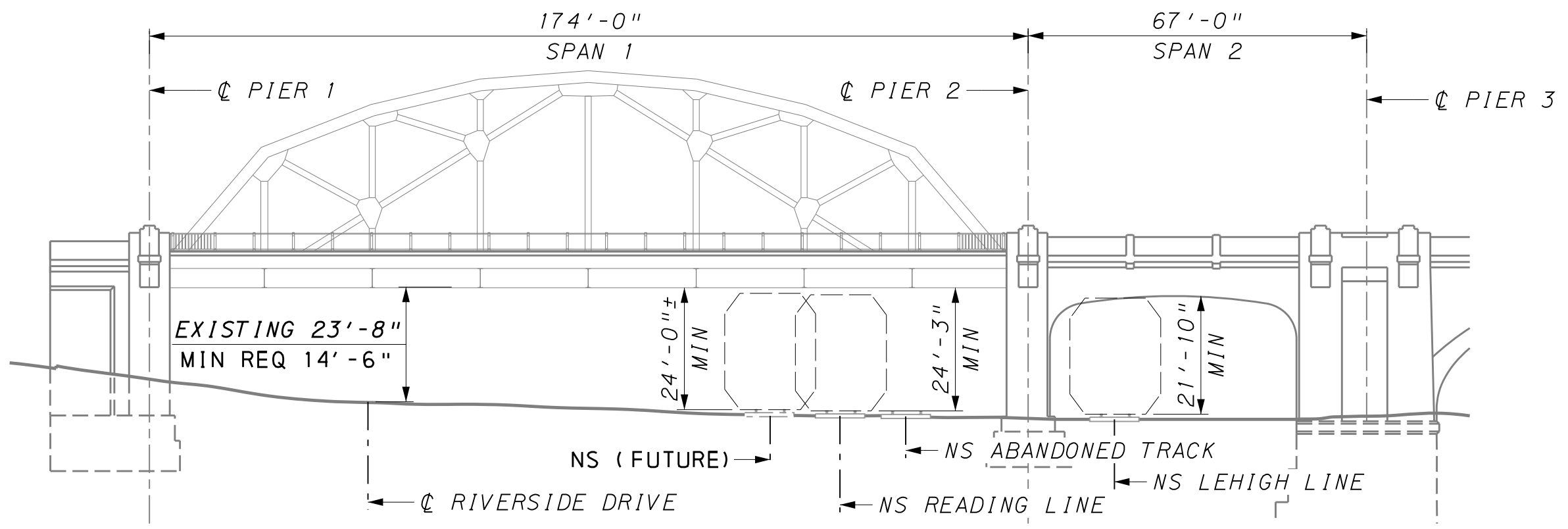
RECOMMENDED _____ SHEET 5 OF 21
EXHIBIT "B" Page 2 of 15 S-XXXX

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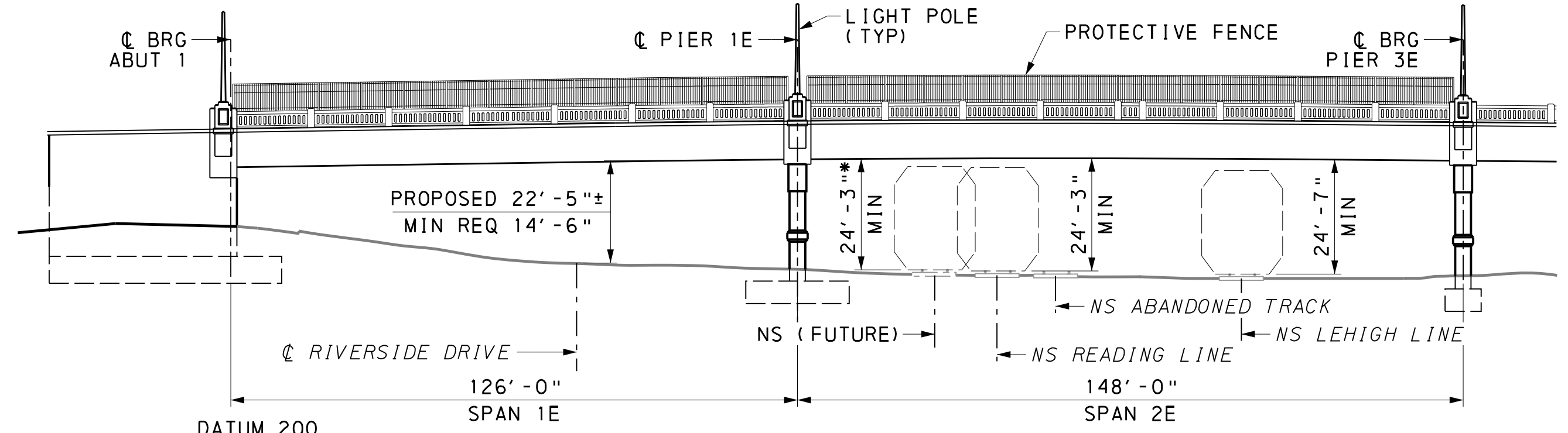
PLAN
25 0 25 FEET

REQUIRED HORIZONTAL RAILROAD CLEARANCE
 - 12'-0" PER PUBLIC UTILITY COMMISSION
 - 22'-0" WITHOUT ACCESS ROAD (TYP NORFOLK SOUTHERN)
 - 28'-0" WITH ACCESS ROAD (TYP NORFOLK SOUTHERN)



ELEVATION (SOUTHBOUND EXISTING)

DATUM 200
25 0 25 FEET



ELEVATION (NORTHBOUND PROPOSED)

DATUM 200
25 0 25 FEET

* VERTICAL CLEARANCE ASSUMES THE FUTURE TRACK ELEVATIONS ARE CONSISTENT WITH THE EXISTING ADJACENT TRACK TOP OF RAIL ELEVATIONS.

REQUIRED VERTICAL RAILROAD CLEARANCE
 - 22'-0" PER PUBLIC UTILITY COMMISSION
 - 23'-6" (TYP NORFOLK SOUTHERN)

RAILROAD NOTES:

- ALL WORK TO BE PERFORMED ON, OVER, UNDER, OR ADJACENT TO THE RAILROAD RIGHT-OF-WAY SHALL COMPLY WITH THE NORFOLK SOUTHERN RAILWAY COMPANY "RAILROAD", "NSR" OR "NS" PUBLIC PROJECTS MANUAL (APPENDIX E, SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS, AND APPENDIX H1, OVERHEAD GRADE SEPARATION DESIGN CRITERIA). WHEN IN CONFLICT WITH OTHER PROJECT SPECIFICATIONS, THE MOST STRINGENT ONE SHALL APPLY.
- "ONE CALL" SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATIONS LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE 2 DAYS IN ADVANCE OF WORK AT THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE THE RAILROAD'S UNDERGROUND FACILITIES. UPON REQUEST FROM THE CONTRACTOR OR SPONSOR, RAILROAD FORCES WILL LOCATE AND PAINT MARK OR FLAG THE RAILROAD'S UNDERGROUND FACILITIES. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE FACILITIES. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD FACILITY, THE CONTRACTOR SHALL COORDINATE WITH THE RAILROAD TO HAVE THE FACILITY POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION. THE FACILITY SHALL BE PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF THE RAILROAD'S REPRESENTATIVE. (SEE NS PUBLIC PROJECTS MANUAL, APPENDIX E, SECTION 3.D).
- ALL UTILITY INSTALLATIONS OR RELOCATIONS THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT PROVIDED THE CONSTRUCTION IS PERFORMED BY THE PROJECT CONTRACTOR OR PROJECT CONTRACTOR'S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATION TO AECOM FOR APPROPRIATE HANDLING FOR LICENSE AGREEMENT AND APPLICABLE FEES. FOR UTILITY APPLICATIONS GO TO: WWW.NSCORP.COM > REAL ESTATE > NS SERVICES > WIRE, PIPELINE, & FIBER OPTIC PROJECTS > AECOM. NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.
- THE CONTRACTOR SHALL NOT COMMENCE ANY WORK ON RAILROAD RIGHTS-OF-WAY UNTIL THEY HAVE COMPLIED WITH THE CONDITIONS PRESENTED IN NS PUBLIC PROJECTS MANUAL (SEE APPENDIX E, NORFOLK SOUTHERN - SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS).
- THE CONTRACTOR SHALL SO ARRANGE AND CONDUCT THEIR WORK SUCH THAT THERE WILL BE NO INTERFERENCE WITH THE RAILROAD'S OPERATIONS. WHENEVER WORK IS LIABLE TO AFFECT THE OPERATIONS OR SAFETY OF TRAINS, THE METHODS OF DOING SUCH WORK SHALL FIRST BE SUBMITTED TO THE RAILROAD ENGINEER FOR APPROVAL, BUT SUCH APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY.
- MATERIALS AND EQUIPMENT SHALL NOT BE STORED WHERE THEY WILL INTERFERE WITH RAILROAD OPERATIONS, NOR ON THE RIGHTS-OF-WAY OF THE RAILROAD WITHOUT FIRST HAVING OBTAINED PERMISSION FROM THE RAILROAD ENGINEER, AND SUCH PERMISSION WILL BE WITH THE UNDERSTANDING THAT THE RAILROAD WILL NOT BE LIABLE FOR DAMAGE TO SUCH MATERIAL AND EQUIPMENT FROM ANY CAUSE AND THAT THE RAILROAD ENGINEER MAY MOVE OR REQUIRE THE CONTRACTOR TO MOVE, AT THE CONTRACTOR'S EXPENSE, SUCH MATERIAL AND EQUIPMENT. (SEE NS PUBLIC PROJECTS MANUAL, APPENDIX E, SECTION 6K).
- THE PROPOSED PROJECT WILL NOT CHANGE THE QUANTITY AND/OR CHARACTER OF FLOW IN THE RAILWAY'S DITCHES AND/OR DRAINAGE STRUCTURES.
- TEMPORARY CLEARANCES OF 22'-0" VERTICAL ABOVE TOP OF HIGHEST RAIL AND 14'-0" HORIZONTAL FROM CENTERLINE OF TRACK ARE TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. EXISTING SUBSTANDARD CLEARANCES ARE NOT TO BE FURTHER REDUCED FOR THE TEMPORARY CONSTRUCTION CONDITION WITHOUT WRITTEN PERMISSION FROM NORFOLK SOUTHERN.
- CONTACT INFORMATION FOR THE RAILROAD IS AS FOLLOWS:
 MR. D. SHAWN STARLING, PE
 SENIOR ENGINEER PUBLIC IMPROVEMENTS
 ENGINEERING - DESIGN & CONSTRUCTION
 NORFOLK SOUTHERN RAILWAY COMPANY
 650 WEST PEACHTREE STREET NW - BOX 45
 ATLANTA, GA 30308
 TELEPHONE: (470) 463-6721
 EMAIL: DOUGLAS.STARLING@NSCORP.COM

NOTES:

- THE PURPOSE OF THIS SHEET IS TO PROVIDE A MORE DETAILED VIEW OF SPANS 1 & 2 OVER NORFOLK SOUTHERN RAILWAY PROPERTY.
- FOR GENERAL PLAN & ELEVATION, SEE SHEET 1.
- FOR SCOPE OF WORK, SEE "GENERAL NOTES" SHEET 5.
- THE ELEVATIONS OF THE EXISTING TOP OF RAIL SHALL BE VERIFIED BEFORE BEGINNING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF NORFOLK SOUTHERN PUBLIC IMPROVEMENTS ENGINEER.
- EXISTING TRACK PROFILES CAN BE FOUND IN APPENDIX K SECTION 4.0 OF THE HILL TO HILL BRIDGE REHABILITATION TS&L REPORT.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0378 PREVIOUSLY KNOWN AS LR 297 MPMS/ECMS PROJ: 93630
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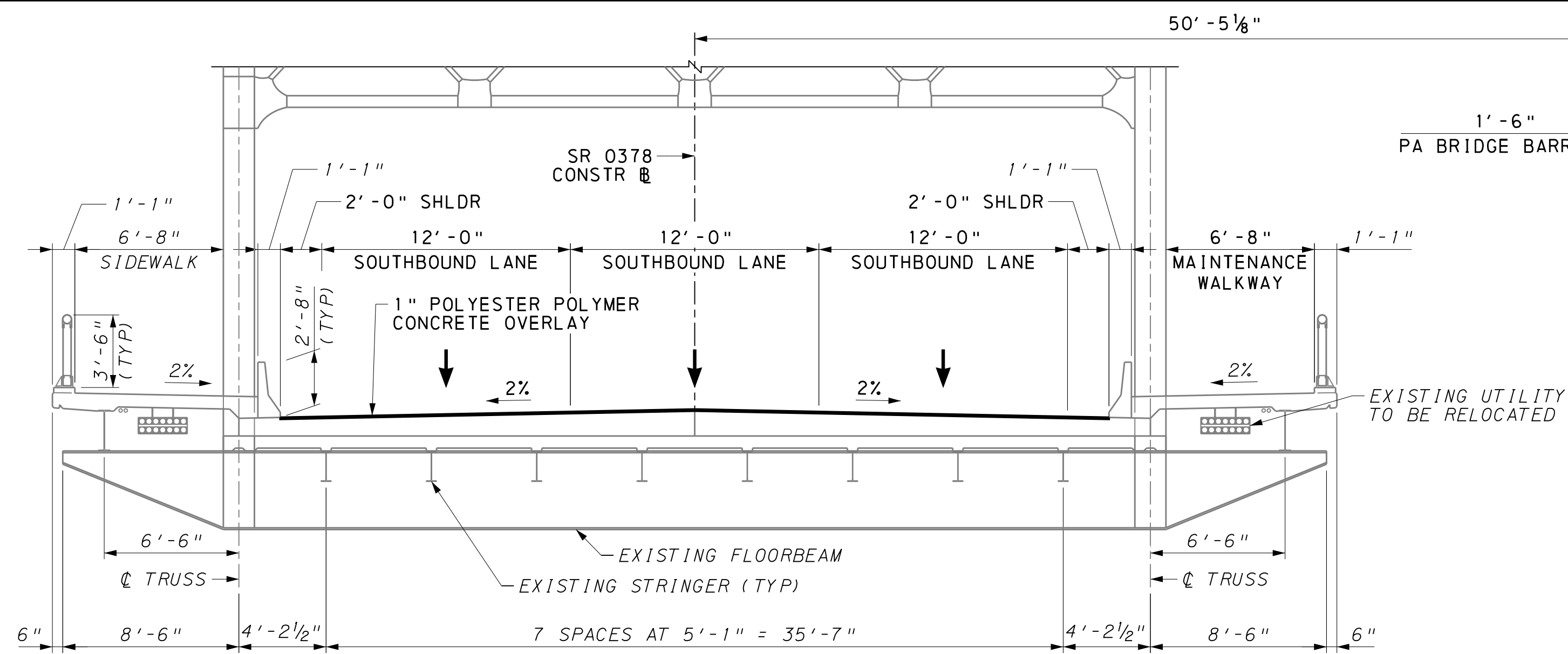
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COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION
LEHIGH AND NORTHAMPTON COUNTIES
 SR 0378 SECTION 03B
 NB SEG 0074 OFFSET 0001 SB SEG 0075 OFFSET 0000
 SR 0378 NB STA 111+02.50 & SR 0378 SB STA 117+15.11
 OVER LEHIGH RIVER & CANAL, CITY STREETS,
 AND NORFOLK SOUTHERN RAILWAY COMPANY
HILL TO HILL BRIDGE
RAILROAD CLEARANCES

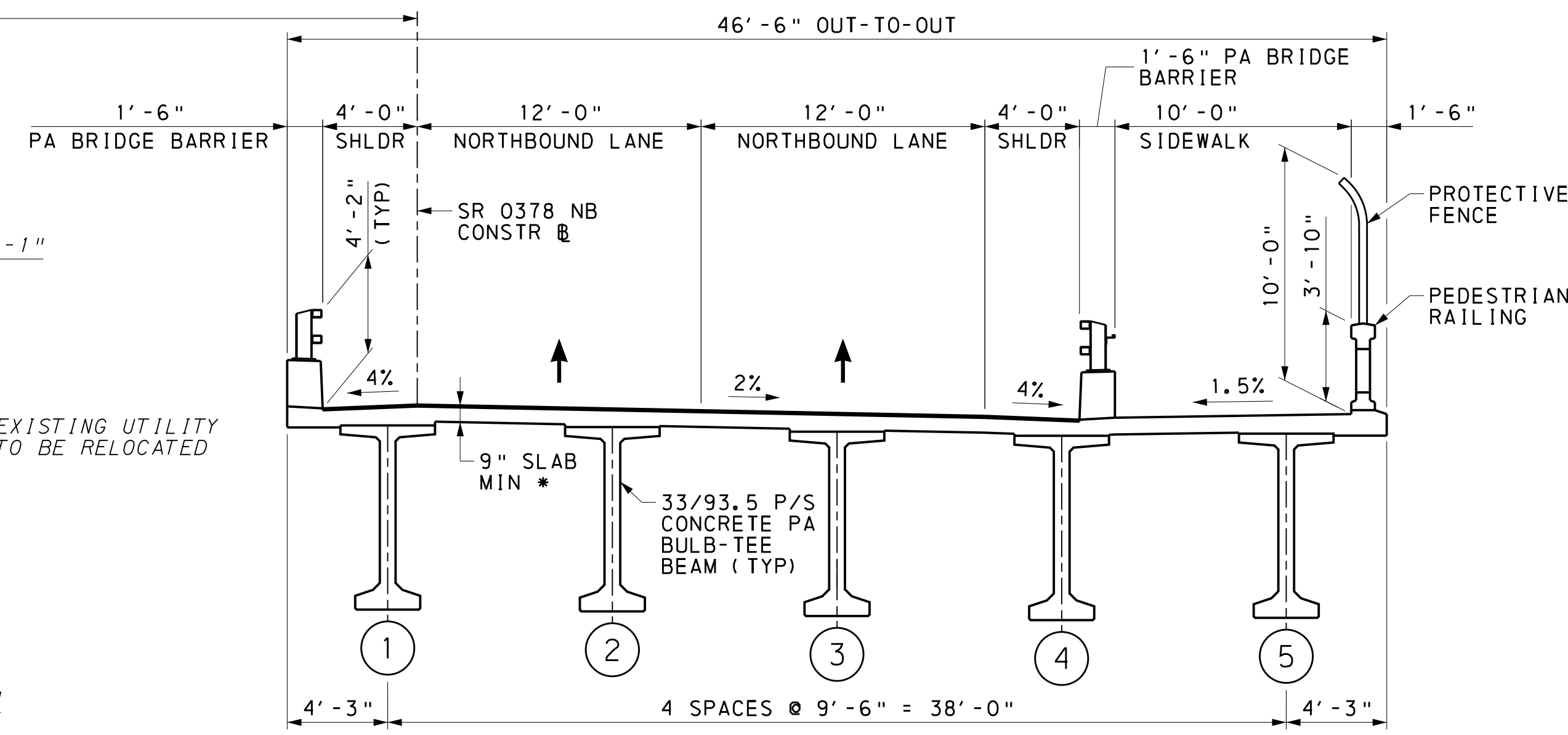
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 ALLENTOWN, PA 18101

RECOMMENDED _____ SHEET 6 OF 21
EXHIBIT "B" Page 3 of 15
 S-XXXX

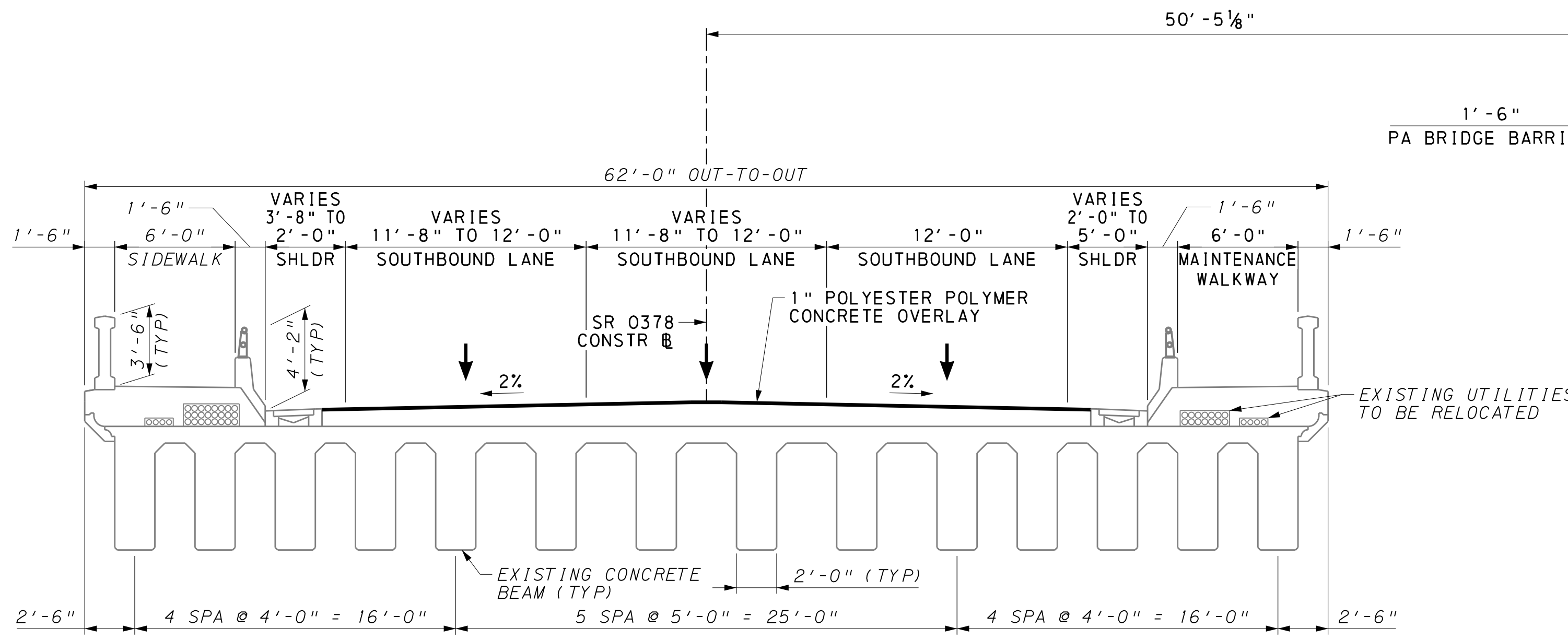
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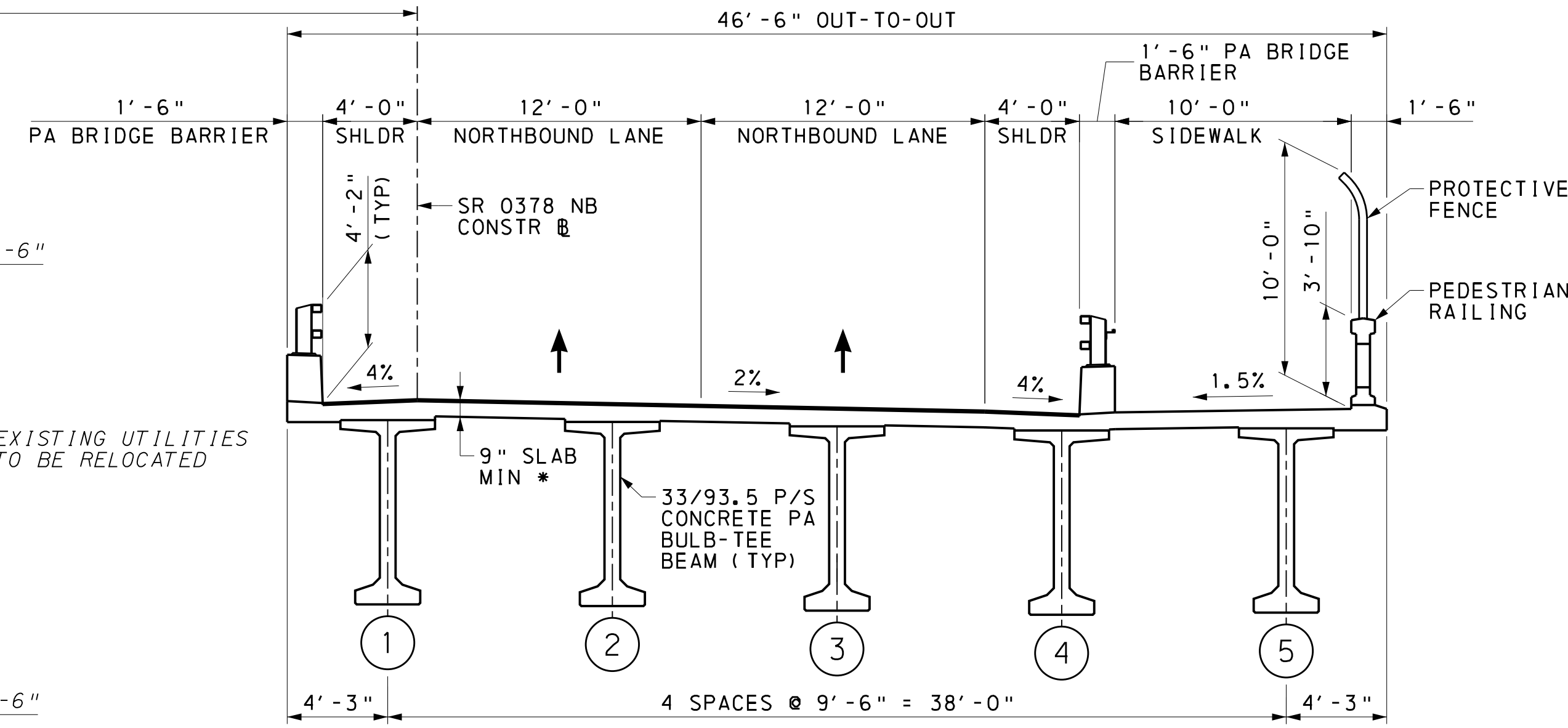
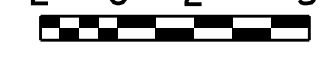
TYPICAL SECTION - SPAN 1
2 0 2 5 FEET



* - INCLUDES 1" POLYESTER POLYMER CONCRETE OVERLAY



TYPICAL SECTION - SPAN 2
2 0 2 5 FEET



* - INCLUDES 1" POLYESTER POLYMER CONCRETE OVERLAY

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 OVER LEHIGH RIVER & CANAL, CITY STREETS,
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HILL TO HILL BRIDGE
TYPICAL SECTIONS 1

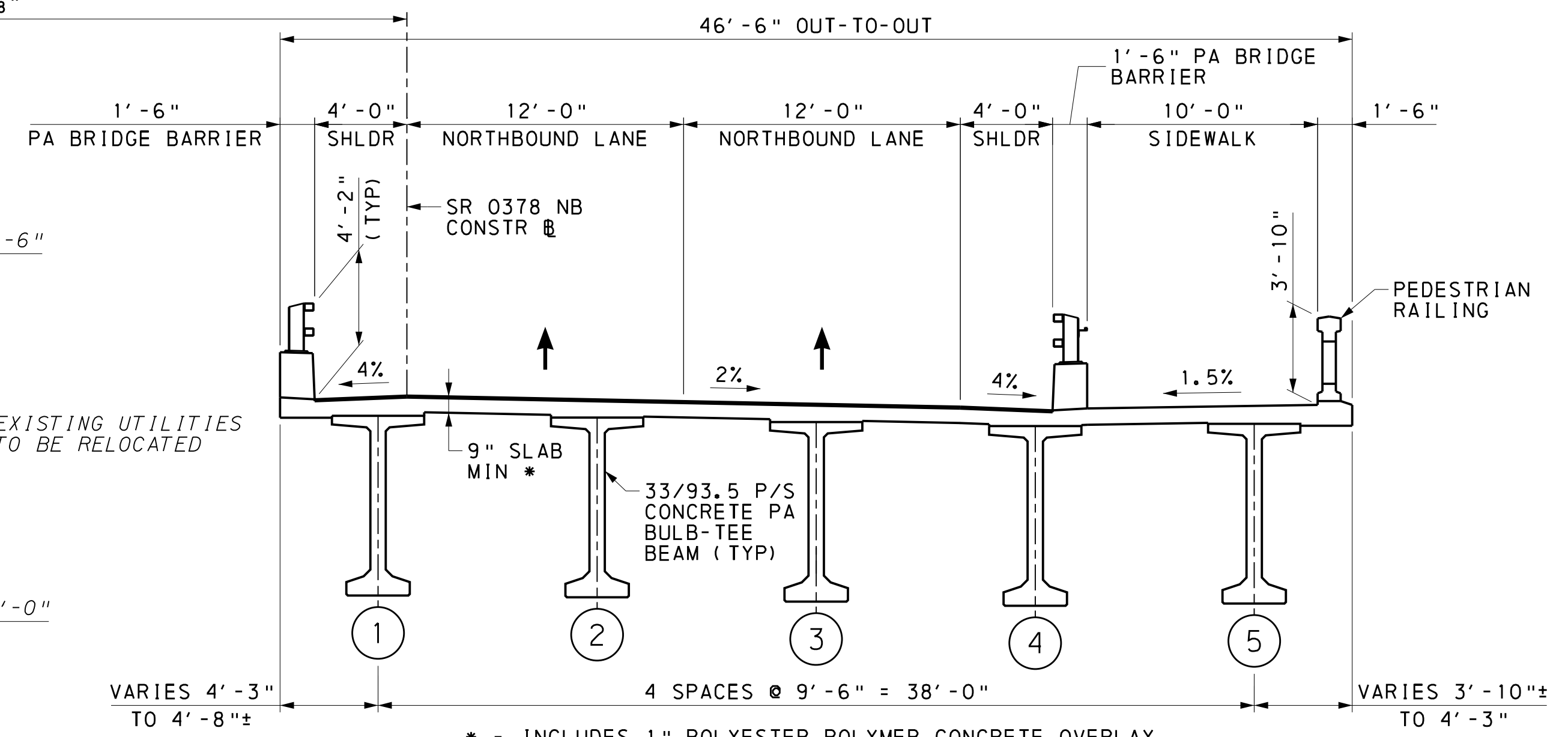
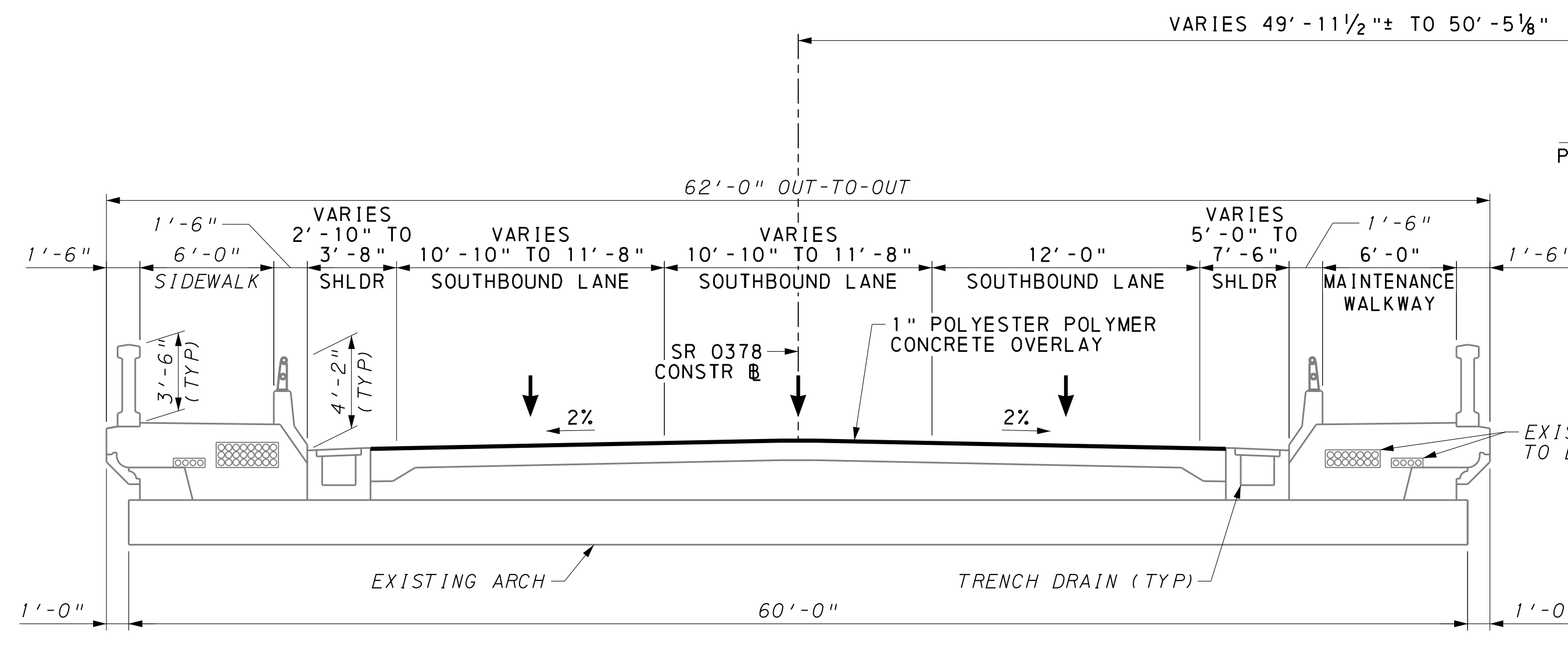
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ALLENTOWN, PA 18101

RECOMMENDED _____
SHEET 7 OF 21
EXHIBIT "B" Page 4 of 15
S-XXXX

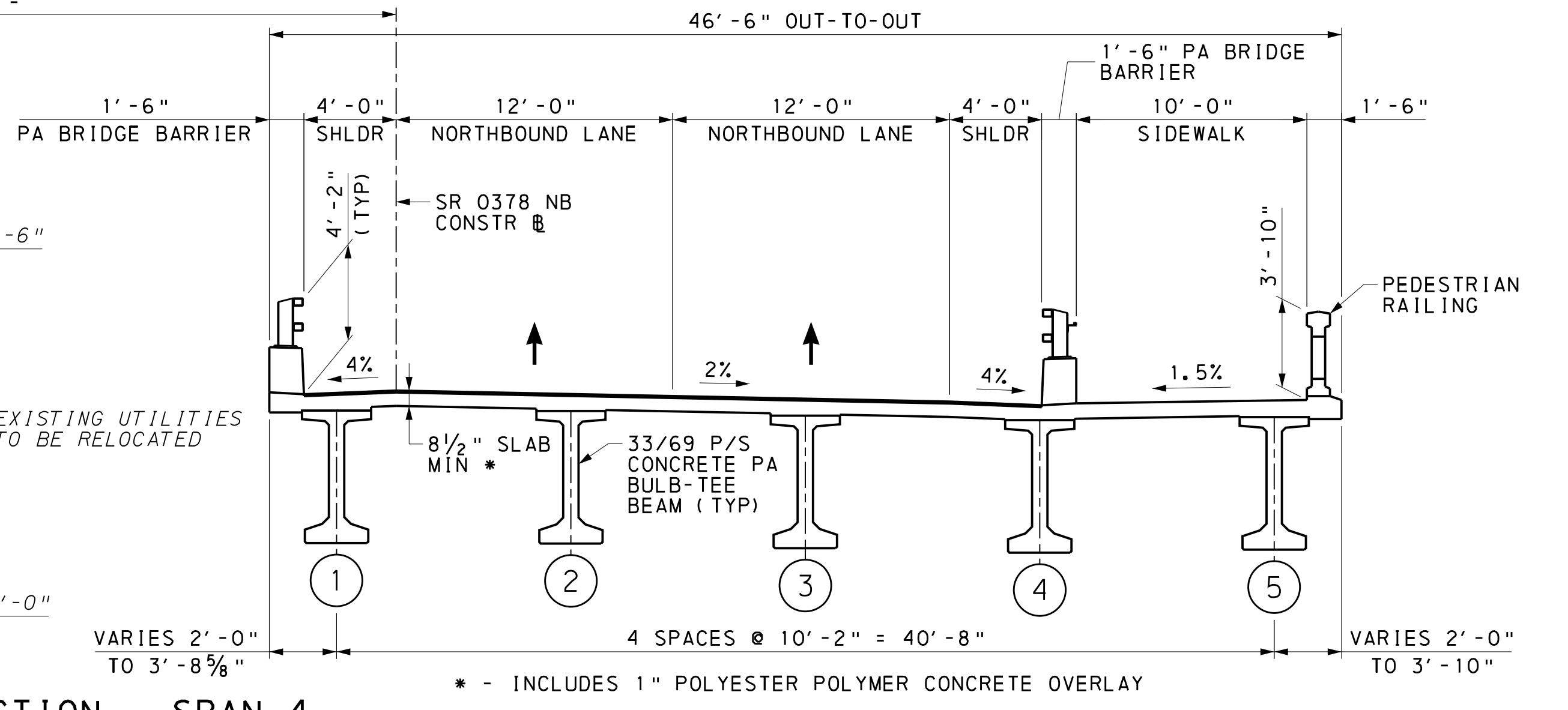
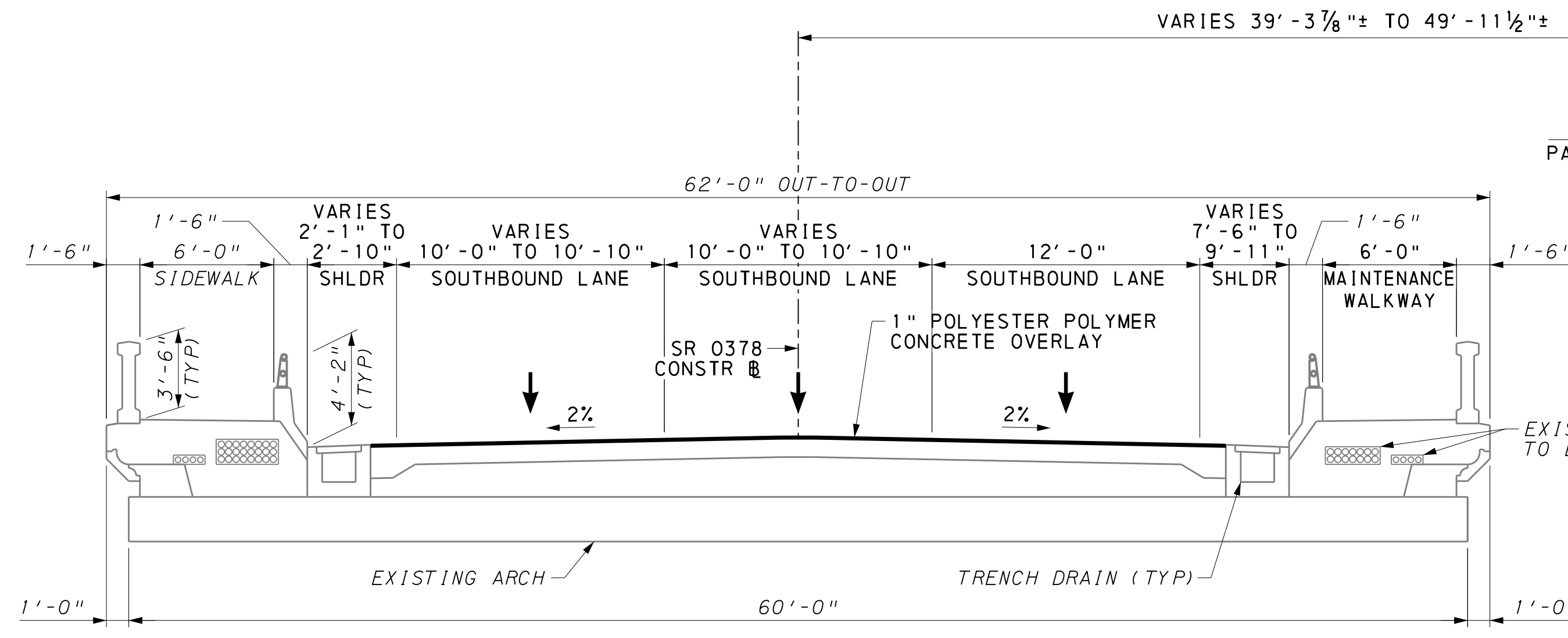
NOTES:

- FOR THE SCOPE OF WORK REGARDING THE EXISTING CONCRETE DECKS, ROADWAY, AND BEAMS, REFER TO THE "GENERAL NOTES" SHEET 5.

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TYPICAL SECTION - SPAN 3
2 0 2 5 FEET



TYPICAL SECTION - SPAN 4
2 0 2 5 FEET

NOTES:

- FOR THE SCOPE OF WORK REGARDING THE EXISTING CONCRETE ROADWAY, ARCHES, SPANDREL WALLS, SIDEWALKS AND RAILINGS, REFER TO THE "GENERAL NOTES" SHEET 5.

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DEPARTMENT OF TRANSPORTATION

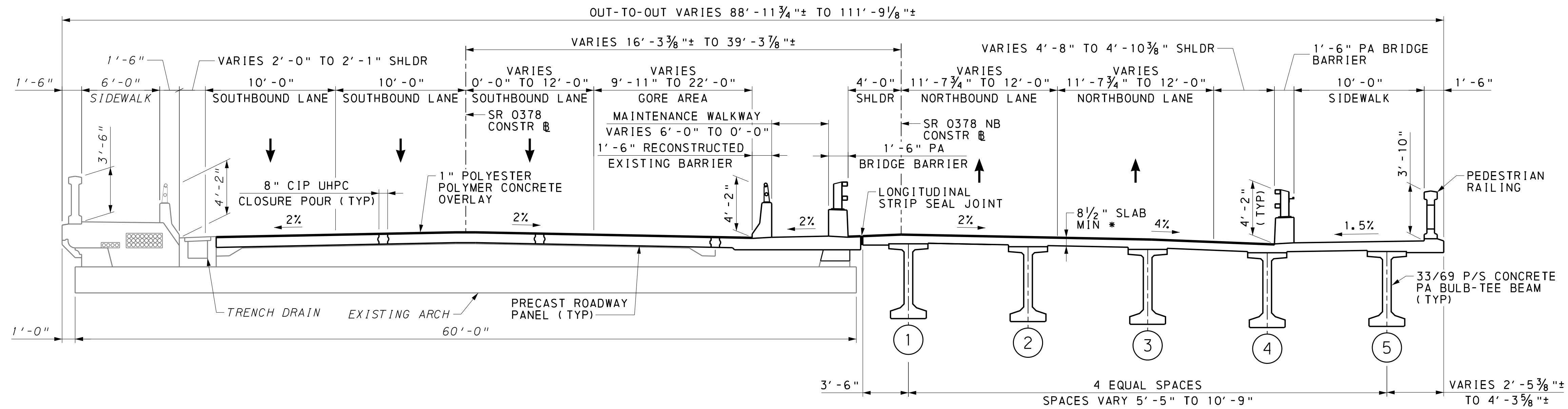
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LEHIGH AND NORTHAMPTON COUNTIES
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OVER LEHIGH RIVER & CANAL, CITY STREETS,
AND NORFOLK SOUTHERN RAILWAY COMPANY
HILL TO HILL BRIDGE
TYPICAL SECTIONS 2

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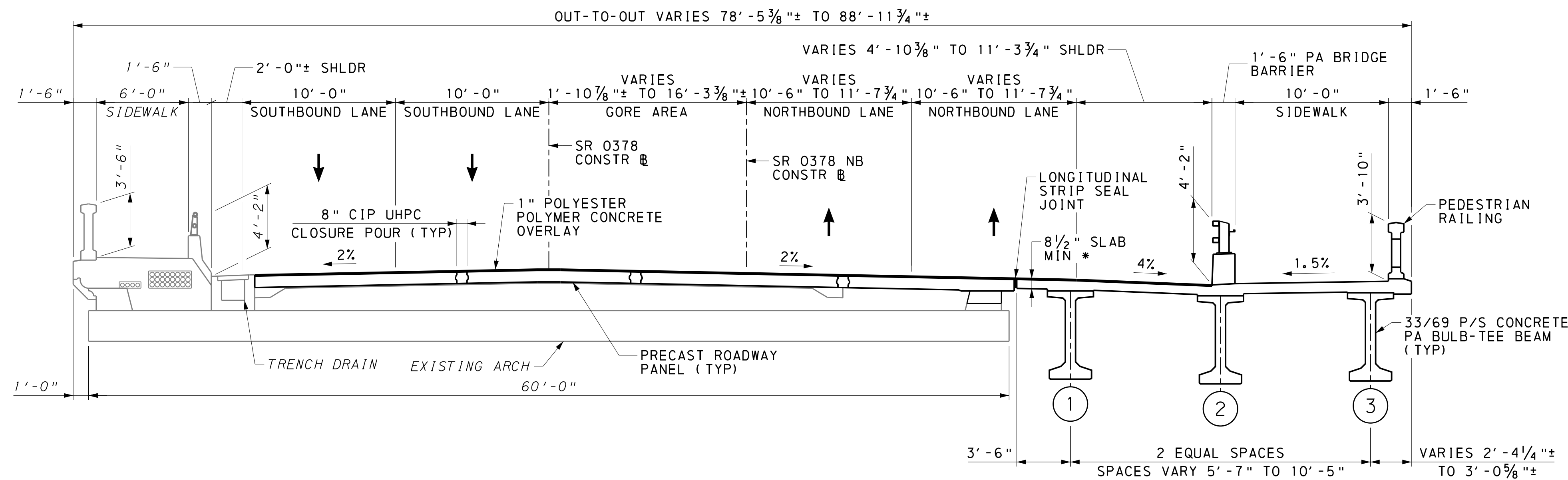
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EXHIBIT "B" Page 5 of 15 S-XXXX

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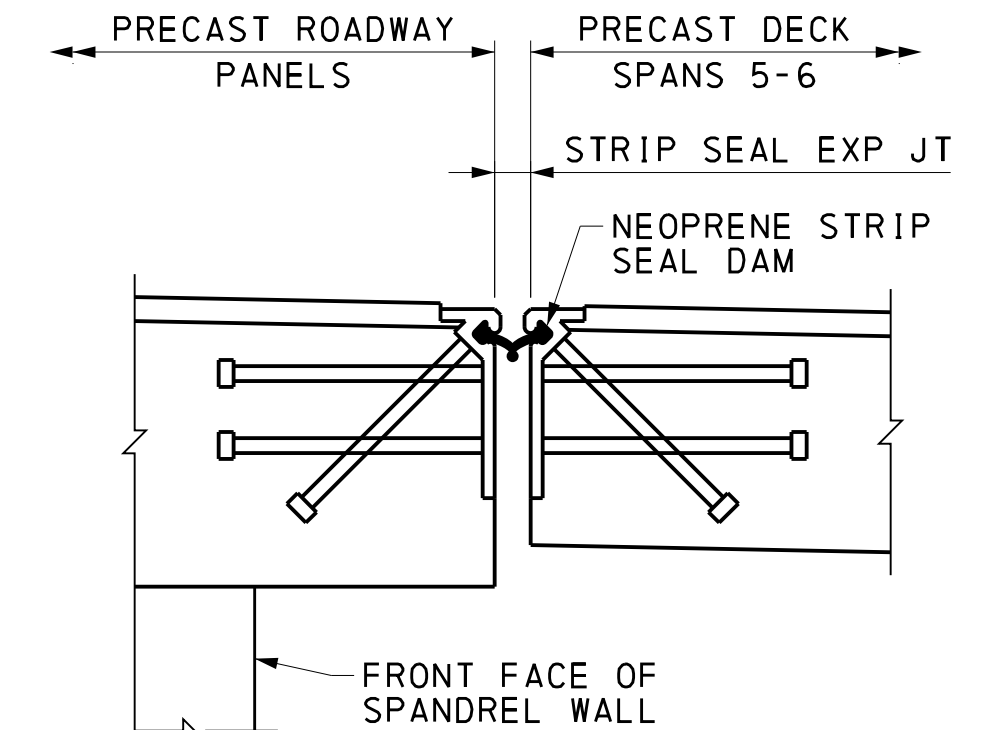
TYPICAL SECTION - SPAN 5
2 0 2 5 FEET

* - INCLUDES 1" POLYESTER POLYMER CONCRETE OVERLAY



TYPICAL SECTION - SPAN 6
2 0 2 5 FEET

* - INCLUDES 1" POLYESTER POLYMER CONCRETE OVERLAY



CONCEPTUAL LONGITUDINAL JOINT DETAIL
1 0 1 2 FEET

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LEHIGH AND NORTHAMPTON COUNTIES
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HILL TO HILL BRIDGE
TYPICAL SECTIONS 3

CONCEPTUAL

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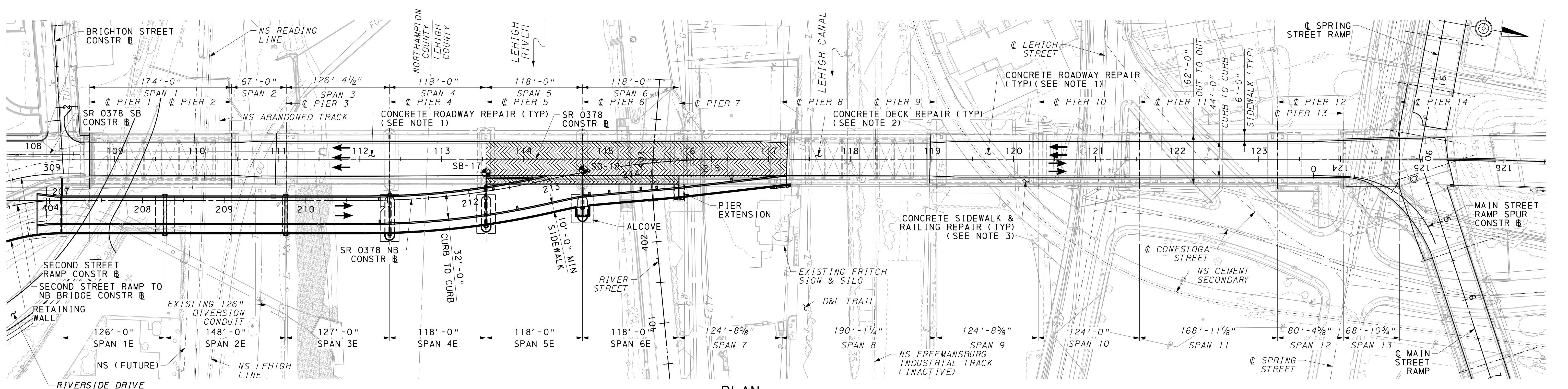
EXHIBIT "B" Page 6 of 15

S-XXXX

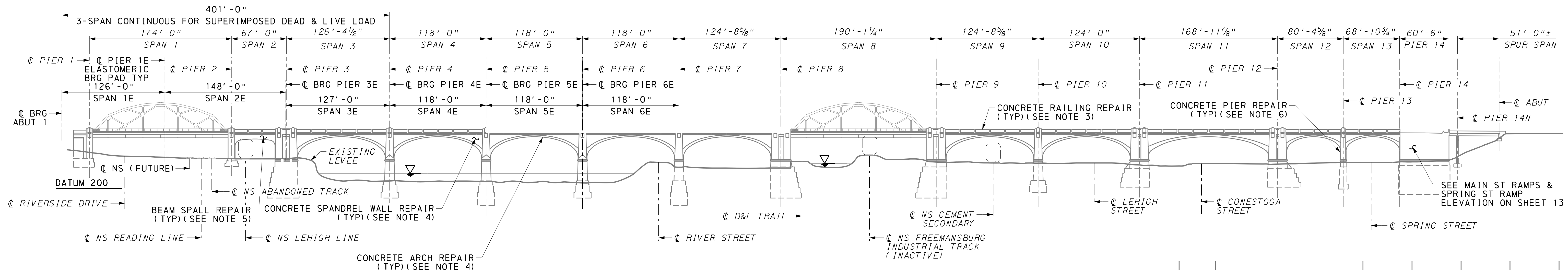
NOTES:

- FOR THE SCOPE OF WORK REGARDING THE EXISTING CONCRETE ROADWAY, ARCHES, SPANDREL WALLS, SIDEWALKS AND RAILINGS, REFER TO THE "GENERAL NOTES" SHEET 5.

2/14/2023 6:39:16 35-br-ty03.dgn



PLAN
30 0 30 60 FEET



ELEVATION
30 0 30 60 FEET

LEGEND

CONCRETE ROADWAY REPLACEMENT

NOTES:

1. THE CONCRETE ROADWAY ON THE ARCH SPANS IS TO BE REPAIRED AS REQUIRED BASED ON DETERIORATION AND MILLED AND OVERLAYED WITH PPC.
2. THE CONCRETE DECK ON THE TRUSS SPANS IS TO BE REPAIRED AS REQUIRED BASED ON DETERIORATION.
3. THE CONCRETE SIDEWALKS AND RAILINGS ON THE EXISTING HILL TO HILL BRIDGE ARE TO BE REPAIRED OR REPLACED AS REQUIRED BASED ON DETERIORATION.
4. THE CONCRETE ARCHES AND SPANDREL WALLS ARE TO BE REPAIRED AS REQUIRED BASED ON DETERIORATION.
5. THE CONCRETE BEAMS ARE TO BE REPAIRED AS REQUIRED BASED ON DETERIORATION.
6. THE CONCRETE PIERS ARE TO BE REPAIRED AS REQUIRED BASED ON DETERIORATION.
7. MORE DETAILED INFORMATION REGARDING REPAIR LOCATIONS WILL BE PROVIDED IN THE FINAL DESIGN CONTRACT DRAWINGS.
8. PROPOSED NORTHBOUND RAMP NOT SHOWN FOR CLARITY.
9. VERTICAL AND HORIZONTAL CLEARANCES ARE SHOWN ON THE GENERAL PLAN SHEETS AND THE RAILROAD CLEARANCE SHEET.
10. PROPOSED SCOPE OF WORK IS SHOWN ON THE GENERAL NOTES SHEET.

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DEPARTMENT OF TRANSPORTATION

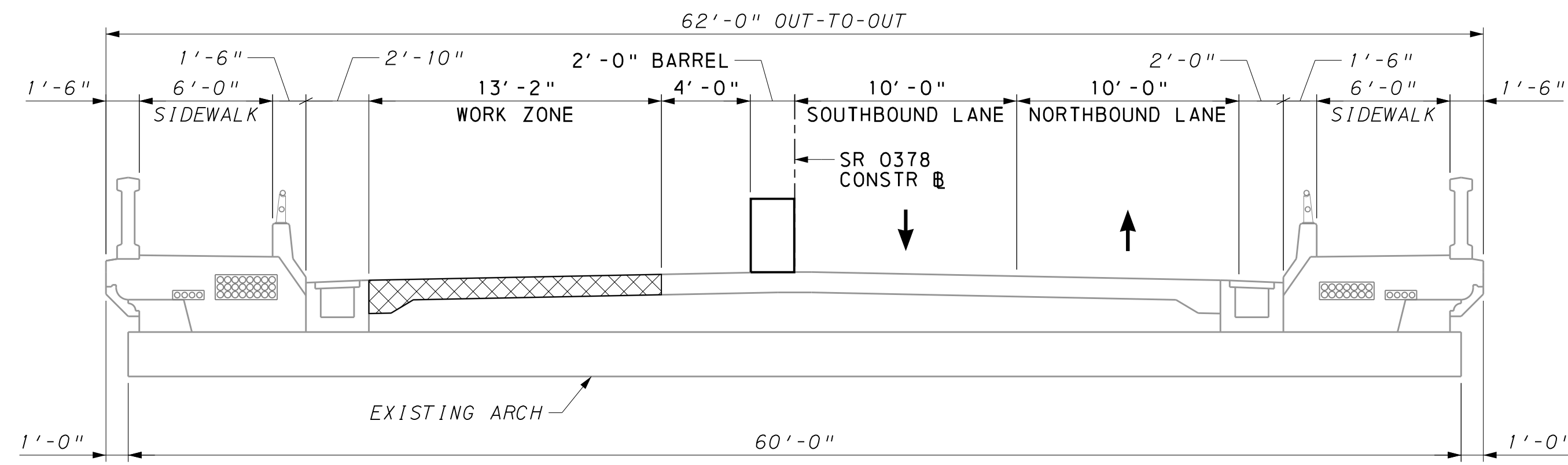
CONCEPTUAL

LEHIGH AND NORTHAMPTON COUNTIES
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OVER LEHIGH RIVER & CANAL, CITY STREETS,
AND NORFOLK SOUTHERN RAILWAY COMPANY
HILL TO HILL BRIDGE
EXIST STRUCTURE REHABILITATION 1

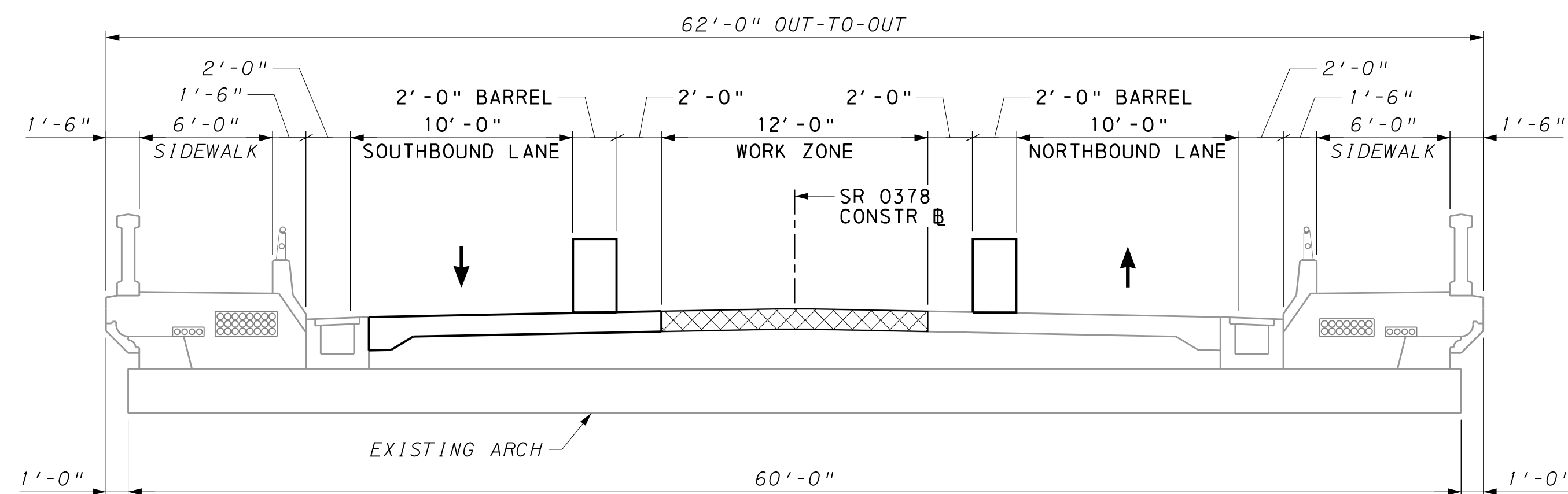
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ALLENTOWN, PA 18101

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EXHIBIT "B" Page 8 of 15 S-XXXX

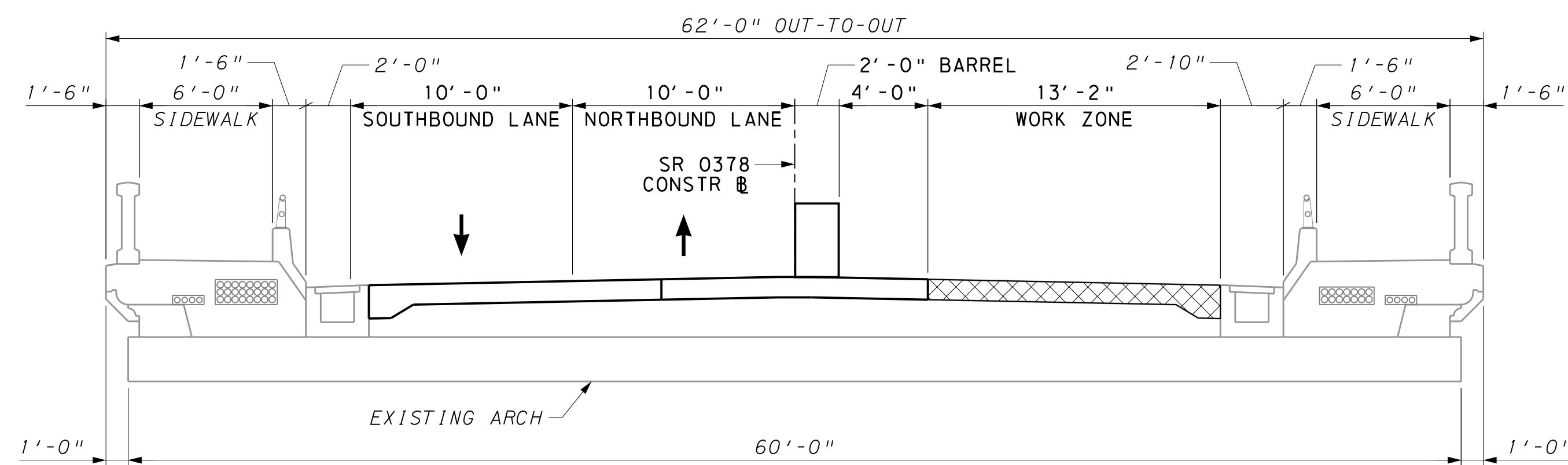
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STAGES 2A & 2B (SPANS 5, 6, & 7)
2 0 2 5 FEET



STAGES 2C & 2D (SPANS 5, 6, & 7)
2 0 2 5 FEET



STAGE 2E (SPANS 5, & 6)
2 0 2 5 FEET

SUGGESTED CONSTRUCTION STAGING SEQUENCE:

- STAGE 1A: CONSTRUCT NORTHERN CAUSEWAY.
- STAGE 1B: CONSTRUCT PIERS 5E TO 6E AND WIDEN PIERS 7 & 8. BEGIN CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 THROUGH 7.
- STAGE 2A: RECONSTRUCT WESTERN PORTION OF EXISTING ROADWAY IN SPANS 5 AND 6.
- STAGE 2B: RECONSTRUCT WESTERN PORTION OF EXISTING ROADWAY IN SPAN 7.
- STAGE 2C: RECONSTRUCT MIDDLE PORTION OF EXISTING ROADWAY IN SPAN 7.
- STAGE 2D: RECONSTRUCT MIDDLE PORTION OF EXISTING ROADWAY IN SPANS 5 AND 6.
- STAGE 2E: RECONSTRUCT EASTERN PORTION OF EXISTING ROADWAY IN SPANS 5 AND 6.
- STAGE 2F: RECONSTRUCT EASTERN PORTION OF EXISTING ROADWAY IN SPAN 7 AND INSTALL SPAN 7 BEAM.
- STAGE 3A: ERECT SPAN 7 DECK.
- STAGE 3B: REMOVE AND REPLACE EXISTING EASTERN SIDEWALK AND RAILINGS ON PIER 8.
- STAGE 3C: REMOVE EXISTING EASTERN SIDEWALK AND RAILINGS IN SPANS 5 AND 6 AND CONSTRUCT ROADWAY.
- STAGE 4: CONSTRUCT SPANS 5E AND 6E. COMPLETE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 & 6.
- STAGE 5A: REMOVE NORTHERN CAUSEWAY AND INSTALL SOUTHERN CAUSEWAY.
- STAGE 5B: CONSTRUCT ABUTMENT AND 2ND STREET RAMP RETAINING WALL. BEGIN CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 1 THROUGH 4.
- STAGE 5C: CONSTRUCT PIERS 1E, 3E, AND 4E.
- STAGE 6A: CONSTRUCT SPANS 1E TO 4E. COMPLETE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 3 AND 4.
- STAGE 6B: REMOVE SOUTHERN CAUSEWAY.
- STAGE 7A: REPAIR AND OVERLAY EASTERN PORTION OF EXISTING ROADWAY IN SPANS 1 TO 4.
- STAGE 7B: REPAIR AND OVERLAY WESTERN PORTION OF EXISTING ROADWAY IN SPANS 1 TO 4.
- STAGE 8A: REPAIR AND OVERLAY EASTERN PORTION OF EXISTING ROADWAY IN SPANS 8 TO SPUR SPAN. CONSTRUCT REMAINING PORTIONS OF PA BRIDGE BARRIER. BEGIN CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 8 THROUGH SPUR SPAN.
- STAGE 8B: REPAIR AND OVERLAY MIDDLE PORTION OF EXISTING ROADWAY IN SPANS 8 TO SPUR SPAN.
- STAGE 8C: REPAIR AND OVERLAY WESTERN PORTION OF EXISTING ROADWAY IN SPANS 8 TO SPUR SPAN.
- STAGE 9A: FINISH REPAIRING THE EXISTING EASTERN SIDEWALK/RAILINGS IN SPANS 8 TO 13.
- STAGE 9B: REPAIR THE EXISTING WESTERN SIDEWALK/RAILINGS IN SPANS 1 TO 13.
- STAGE 10: REPAIR AND OVERLAY EXISTING MAIN STREET RAMP ROADWAY. COMPLETE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 1, 2, 7, THROUGH SPUR SPAN.

NOTES:

1. TYPICAL SECTIONS ARE NOT SHOWN FOR ALL STAGES. STAGES THAT CONTAIN ACTIVITIES THAT DO NOT AFFECT TRAFFIC PATTERNS HAVE BEEN OMITTED. ADDITIONAL TYPICAL SECTIONS ARE NOT SHOWN FOR PERIODS IN BETWEEN INDIVIDUAL STAGES AS IT IS ASSUMED DURING THESE PERIODS TRAFFIC PATTERNS WOULD RETURN TO THE EXISTING CONFIGURATIONS.
2. IT IS ASSUMED THAT TRAFFIC LANES WIDER THAN AS SHOWN ARE NOT REQUIRED FOR WINTER MAINTENANCE EQUIPMENT AS THE CONTRACT DOCUMENT WILL NOT PERMIT THE LANE RESTRICTION DURING INCLEMENT WEATHER.
3. RECONSTRUCT THE CONCRETE ROADWAYS WITHIN SPANS 5 THROUGH 7 USING PRECAST CONCRETE PANELS AND UHPC CLOSURE POURS.
4. BETWEEN THE WEEKEND CONSTRUCTION STAGES, 2 LANES OF NORTHBOUND AND 2 LANES OF SOUTHBOUND TRAFFIC ARE TO BE MAINTAINED.
5. STAGES 2A & 2B AND 2C & 2D MAY BE COMBINED IF ADDITIONAL EQUIPMENT IS UTILIZED AND CLOSURE POURS CAN BE CURED WITHIN THE ALLOTTED WORK PERIOD.
6. CONSTRUCTION STAGING NOT SHOWN FOR CONCRETE REPAIRS OF THE MAIN STREET RAMP AND SPRING STREET RAMP AND THE OVERLAY OF THE SPRING STREET RAMP. THESE ACTIVITIES ARE EXPECTED TO BE COMPLETED USING STANDARD PATA DRAWINGS.
7. SPAN 7 DECK IS ANTICIPATED TO BE PRECAST, EITHER ON-SITE OR OFFSITE. THE BEAM TO SUPPORT THE DECK IS ASSUMED TO BE INSTALLED IN STAGE 2F.

STAGE 2A:

SPANS 5 & 6: DURING WEEKENDS, MAINTAIN 1 NORTHBOUND LANE AND 1 SOUTHBOUND LANE ON THE EAST SIDE OF THE EXISTING STRUCTURE. RECONSTRUCT WESTERN PORTION OF EXISTING ROADWAY. CONTINUE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 THROUGH 7.

STAGE 2B:

SPAN 7: DURING WEEKENDS, MAINTAIN 1 NORTHBOUND LANE AND 1 SOUTHBOUND LANE ON THE EAST SIDE OF THE EXISTING STRUCTURE. RECONSTRUCT WESTERN PORTION OF EXISTING ROADWAY. CONTINUE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 THROUGH 7.

STAGE 2C:

SPAN 7: DURING WEEKENDS, MAINTAIN 1 NORTHBOUND LANE ON THE EAST SIDE OF THE EXISTING STRUCTURE AND 1 SOUTHBOUND LANE ON THE WEST SIDE OF THE EXISTING STRUCTURE. RECONSTRUCT MIDDLE PORTION OF EXISTING ROADWAY. CONTINUE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 THROUGH 7.

STAGE 2D:

SPANS 5 & 6: DURING WEEKENDS, MAINTAIN 1 NORTHBOUND LANE ON THE EAST SIDE OF THE EXISTING STRUCTURE AND 1 SOUTHBOUND LANE ON THE WEST SIDE OF THE EXISTING STRUCTURE. RECONSTRUCT MIDDLE PORTION OF EXISTING ROADWAY. BEGIN CONSTRUCTING SPAN 7 DECK OFF OF THE STRUCTURE. CONTINUE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 THROUGH 7.

STAGE 2E:

SPANS 5 & 6: DURING WEEKENDS, MAINTAIN 1 NORTHBOUND LANE AND 1 SOUTHBOUND LANE ON THE WEST SIDE OF THE EXISTING STRUCTURE. RECONSTRUCT EASTERN PORTION OF EXISTING ROADWAY. CONTINUE CONSTRUCTING SPAN 7 DECK OFF OF THE STRUCTURE. CONTINUE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 THROUGH 7.

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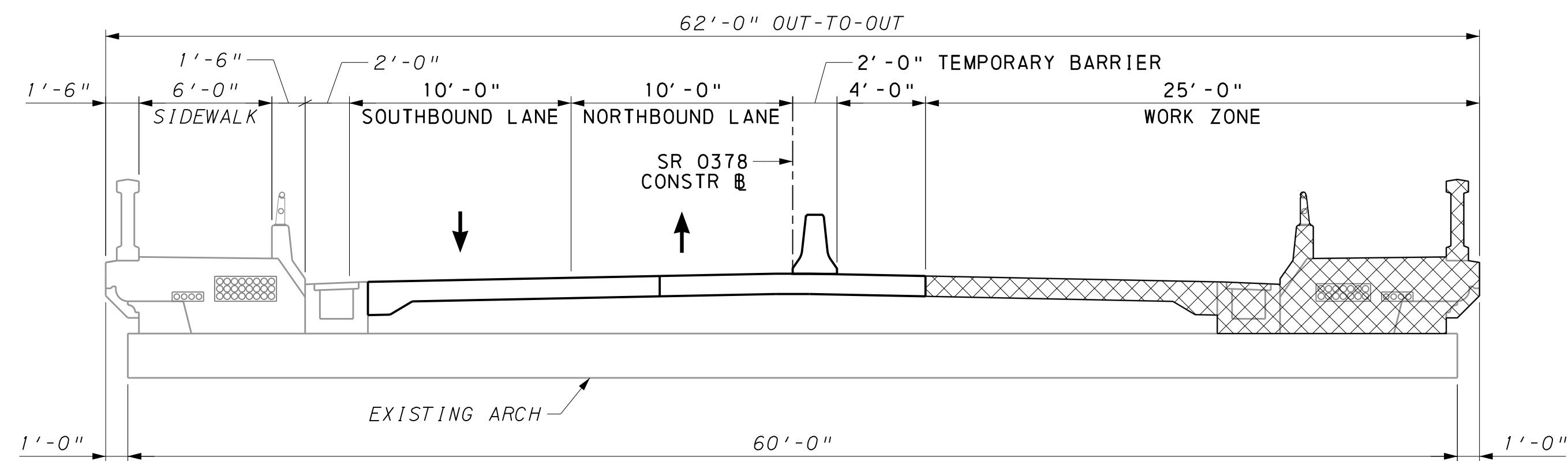
HILL TO HILL BRIDGE
CONSTRUCTION STAGING 1

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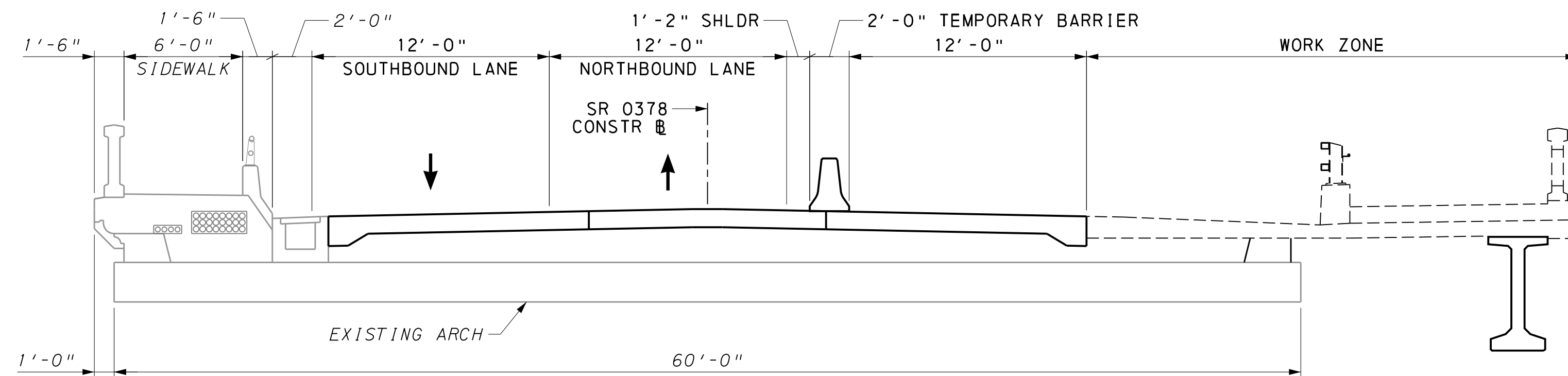
RECOMMENDED _____ SHEET 14 OF 21
EXHIBIT "B" Page 9 of 15 S-XXXX

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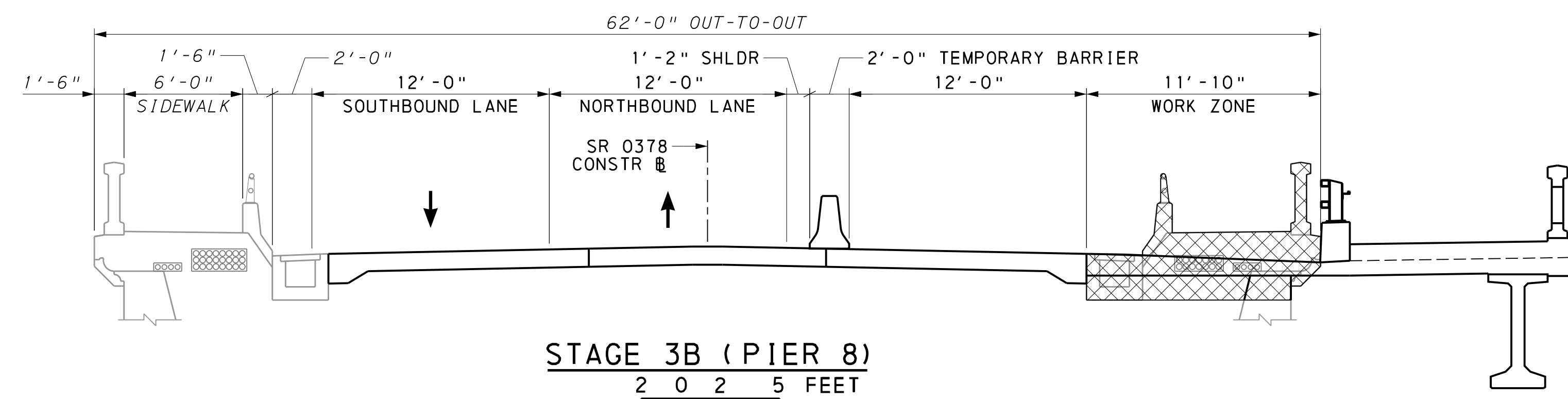
AREA OF REMOVAL CONCRETE ROADWAY REPLACEMENT



STAGE 2F (SPAN 7)
2 0 2 5 FEET



STAGE 3A (SPAN 7)
2 0 2 5 FEET



STAGE 3B (PIER 8)
2 0 2 5 FEET

LEGEND:
 AREA OF REMOVAL AND RECONSTRUCTION

STAGE 2F:
 SPAN 7: DURING WEEKENDS, MAINTAIN 1 NORTHBOUND LANE AND 1 SOUTHBOUND LANE ON THE WEST SIDE OF THE EXISTING STRUCTURE. CLOSE THE EXISTING EASTERN SIDEWALK. REMOVE EXISTING EASTERN SIDEWALK AND RAILINGS. ERECT SPAN 7 BEAM. RECONSTRUCT EASTERN PORTION OF EXISTING ROADWAY. CONTINUE CONSTRUCTING SPAN 7 DECK OFF OF THE STRUCTURE. CONTINUE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 THROUGH 7.

STAGE 3A:
 SPAN 7: DURING WEEKENDS, MAINTAIN 1 NORTHBOUND LANE AND 1 SOUTHBOUND LANE ON THE WEST SIDE OF THE EXISTING STRUCTURE. ERECT SPAN 7 DECK. CONTINUE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 THROUGH 7.

STAGE 3B:
 SPAN 7: DURING WEEKENDS, MAINTAIN 1 NORTHBOUND LANE AND 1 SOUTHBOUND LANE ON THE WEST SIDE OF THE EXISTING STRUCTURE. REMOVE AND REPLACE EXISTING EASTERN SIDEWALK AND RAILINGS ON PIER 8. CONTINUE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 THROUGH 7.

- NOTES:**
1. TYPICAL SECTIONS ARE NOT SHOWN FOR ALL STAGES. STAGES THAT CONTAIN ACTIVITIES THAT DO NOT AFFECT TRAFFIC PATTERNS HAVE BEEN OMITTED. ADDITIONAL TYPICAL SECTIONS ARE NOT SHOWN FOR PERIODS IN BETWEEN INDIVIDUAL STAGES AS IT IS ASSUMED DURING THESE PERIODS TRAFFIC PATTERNS WOULD RETURN TO THE EXISTING CONFIGURATIONS.
 2. IT IS ASSUMED THAT TRAFFIC LANES WIDER THAN AS SHOWN ARE NOT REQUIRED FOR WINTER MAINTENANCE EQUIPMENT AS THE CONTRACT DOCUMENT WILL NOT PERMIT THE LANE RESTRICTION DURING INCLEMENT WEATHER.
 3. RECONSTRUCT THE CONCRETE ROADWAYS WITHIN SPANS 5 THROUGH 7 USING PRECAST CONCRETE PANELS AND UHPC CLOSURE POURS.
 4. BETWEEN THE WEEKEND CONSTRUCTION STAGES, 2 LANES OF NORTHBOUND AND 2 LANES OF SOUTHBOUND TRAFFIC ARE TO BE MAINTAINED.
 5. STAGES 3A & 3B MAY BE COMBINED IF ADDITIONAL EQUIPMENT IS UTILIZED AND CLOSURE POURS CAN BE CURED WITHIN THE ALLOTTED WORK PERIOD.
 6. SPAN 7 DECK IS ANTICIPATED TO BE PRECAST, EITHER ON-SITE OR OFFSITE. THE BEAM TO SUPPORT THE DECK IS ASSUMED TO BE INSTALLED IN STAGE 2F.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					
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	BMS STR ID: 39-0378-0074-0001	BRKEY: TBD			
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	BMS STR ID: 39-7302-0000-0102	BRKEY: 23518			
	BMS STR ID: 39-7302-0000-0000	BRKEY: 67426			

HNTB

CONCEPTUAL

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LEHIGH AND NORTHAMPTON COUNTIES
SR 0378 SECTION 03B
NB SEG 0074 OFFSET 0001 SB SEG 0075 OFFSET 0000
SR 0378 NB STA 111+02.50 & SR 0378 SB STA 117+15.11
OVER LEHIGH RIVER & CANAL, CITY STREETS,
AND NORFOLK SOUTHERN RAILWAY COMPANY

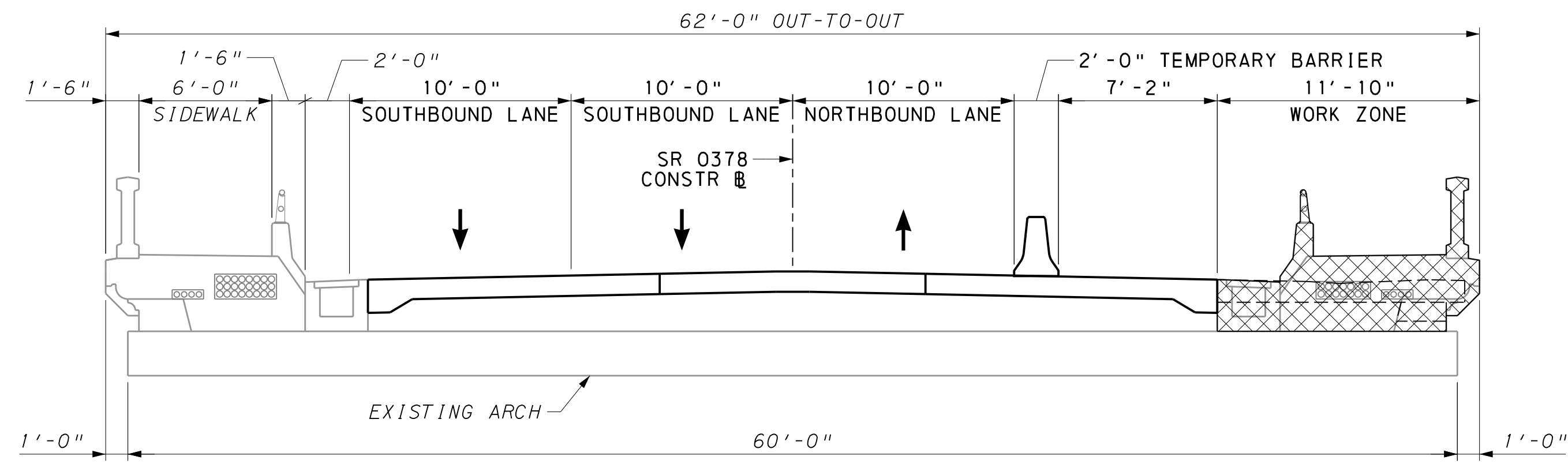
HILL TO HILL BRIDGE
CONSTRUCTION STAGING 2

PREPARED BY:
HNTB CORPORATION
640 HAMILTON STREET
SUITE 301
ALLENTOWN, PA 18101

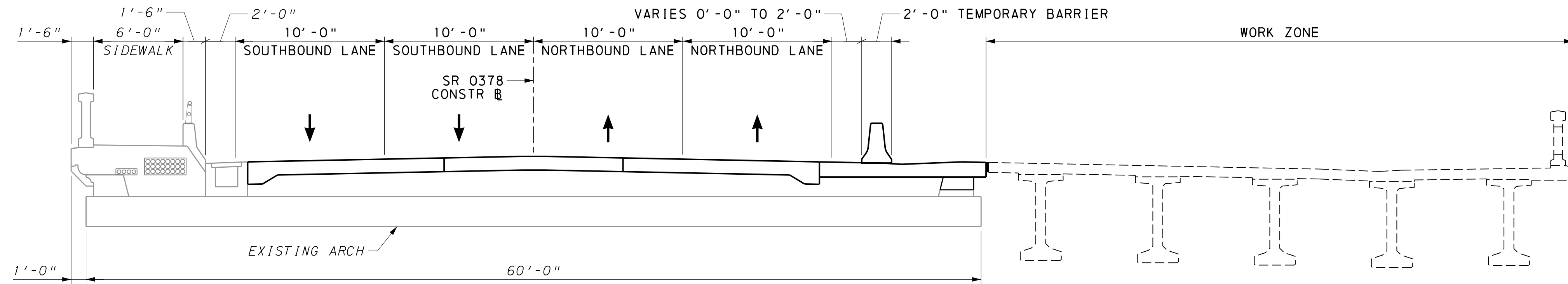
RECOMMENDED _____ SHEET 15 OF 21

EXHIBIT "B" Page 10 of 15 S-XXXX

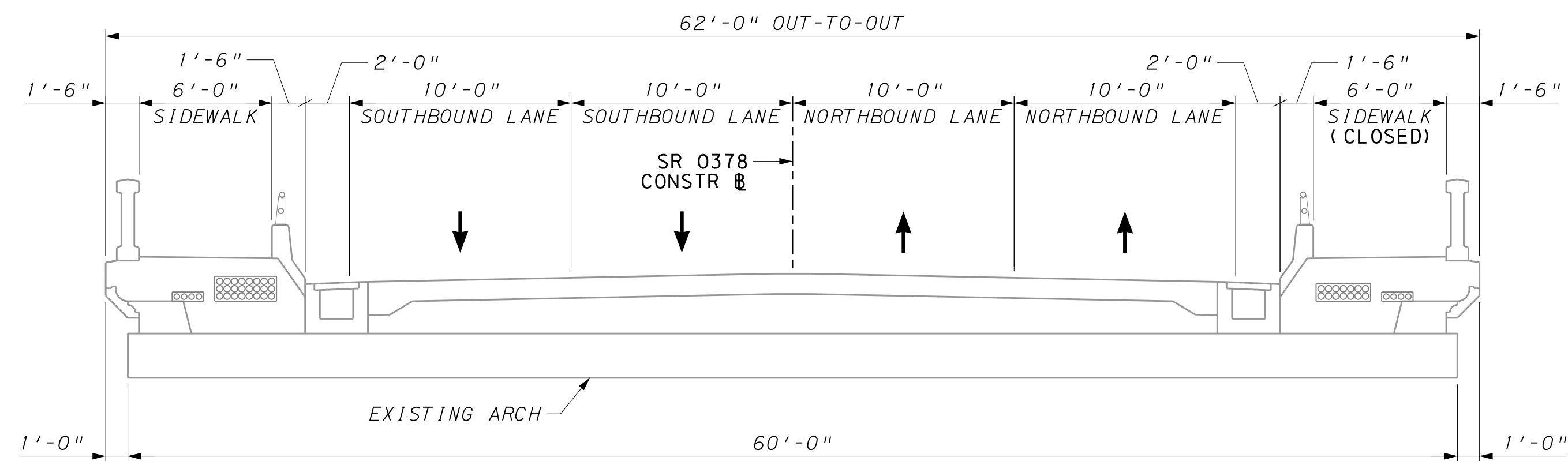
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STAGE 3C (SPANS 5 & 6)
2 0 2 5 FEET



STAGE 4 (SPANS 5E & 6E)
2 0 2 5 FEET



STAGES 5A THROUGH 6B (SPANS 1-4 & 8-14)
2 0 2 5 FEET

STAGE 3C:

SPANS 5 & 6: DURING A FULL WEEK, MAINTAIN 1 NORTHBOUND LANE AND 2 SOUTHBOUND LANES ON THE WEST SIDE OF THE EXISTING STRUCTURE. REMOVE EXISTING EASTERN SIDEWALK AND RAILINGS IN SPANS 5 AND 6 AND CONSTRUCT NEW ROADWAY. CONTINUE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 THROUGH 7.

STAGE 4:

SPANS 5 & 6: DURING A LONG TERM CONSTRUCTION PERIOD MAINTAIN 2 NORTHBOUND LANES AND 2 SOUTHBOUND LANES ON THE EXISTING STRUCTURE. CONSTRUCT SPANS 5E AND 6E. COMPLETE ARCH AND PIER REPAIRS IN SPANS 5 AND 6. COMPLETE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 5 AND 6.

STAGE 5A:

ALL SPANS: DURING A LONG TERM CONSTRUCTION PERIOD MAINTAIN 2 NORTHBOUND LANES AND 2 SOUTHBOUND LANES ON THE EXISTING STRUCTURE. REMOVE NORTH CAUSEWAY AND INSTALL SOUTH CAUSEWAY.

STAGE 5B:

ALL SPANS: DURING A LONG TERM CONSTRUCTION PERIOD MAINTAIN 2 NORTHBOUND LANES AND 2 SOUTHBOUND LANES ON THE EXISTING STRUCTURE. CONSTRUCT ABUTMENT AND 2ND STREET RAMP RETAINING WALL. BEGIN CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 1 THROUGH 4.

STAGE 5C:

ALL SPANS: DURING A LONG TERM CONSTRUCTION PERIOD MAINTAIN 2 NORTHBOUND LANES AND 2 SOUTHBOUND LANES ON THE EXISTING STRUCTURE. CONSTRUCT PIERS 1E, 3E, AND 4E. CONTINUE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 1 THROUGH 4.

STAGE 6A:

ALL SPANS: DURING A LONG TERM CONSTRUCTION PERIOD MAINTAIN 2 NORTHBOUND LANES AND 2 SOUTHBOUND LANES ON THE EXISTING STRUCTURE. CONSTRUCT SPANS 1E TO 4E. COMPLETE ARCH AND PIER REPAIRS IN SPANS 3 AND 4. COMPLETE CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 3 AND 4.

STAGE 6B:

ALL SPANS: DURING A LONG TERM CONSTRUCTION PERIOD MAINTAIN 2 NORTHBOUND LANES AND 2 SOUTHBOUND LANES ON THE EXISTING STRUCTURE. REMOVE SOUTH CAUSEWAY.

NOTES:

1. TYPICAL SECTIONS ARE NOT SHOWN FOR ALL STAGES. STAGES THAT CONTAIN ACTIVITIES THAT DO NOT AFFECT TRAFFIC PATTERNS HAVE BEEN OMITTED. ADDITIONAL TYPICAL SECTIONS ARE NOT SHOWN FOR PERIODS IN BETWEEN INDIVIDUAL STAGES AS IT IS ASSUMED DURING THESE PERIODS TRAFFIC PATTERNS WOULD RETURN TO THE EXISTING CONFIGURATIONS.
2. IT IS ASSUMED THAT TRAFFIC LANES WIDER THAN AS SHOWN ARE NOT REQUIRED FOR WINTER MAINTENANCE EQUIPMENT AS THE CONTRACT DOCUMENT WILL NOT PERMIT THE LANE RESTRICTION DURING INCLEMENT WEATHER.
3. RECONSTRUCT THE CONCRETE ROADWAYS WITHIN SPANS 5 THROUGH 7 USING PRECAST CONCRETE PANELS AND UHPC CLOSURE POURS.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

SR 0378 PREVIOUSLY KNOWN AS LR 297 MPMS/ECMS PROJ: 93630
 BMS STR ID: 39-0378-0074-0001 BRKEY: TBD
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 BMS STR ID: 39-0378-0080-0076 BRKEY: 23184
 BMS STR ID: 39-7302-0000-0102 BRKEY: 23518
 BMS STR ID: 39-7302-0000-0000 BRKEY: 67426

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CONCEPTUAL

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LEHIGH AND NORTHAMPTON COUNTIES
SR 0378 SECTION 03B
NB SEG 0074 OFFSET 0001 SB SEG 0075 OFFSET 0000
SR 0378 NB STA 111+02.50 & SR 0378 SB STA 117+15.11
OVER LEHIGH RIVER & CANAL, CITY STREETS,
AND NORFOLK SOUTHERN RAILWAY COMPANY

HILL TO HILL BRIDGE
CONSTRUCTION STAGING 3

PREPARED BY:
HNTB CORPORATION
640 HAMILTON STREET
SUITE 301
ALLENTOWN, PA 18101

RECOMMENDED _____ SHEET 16 OF 21
EXHIBIT "B" Page 11 of 15 S-XXXX

LEGEND:

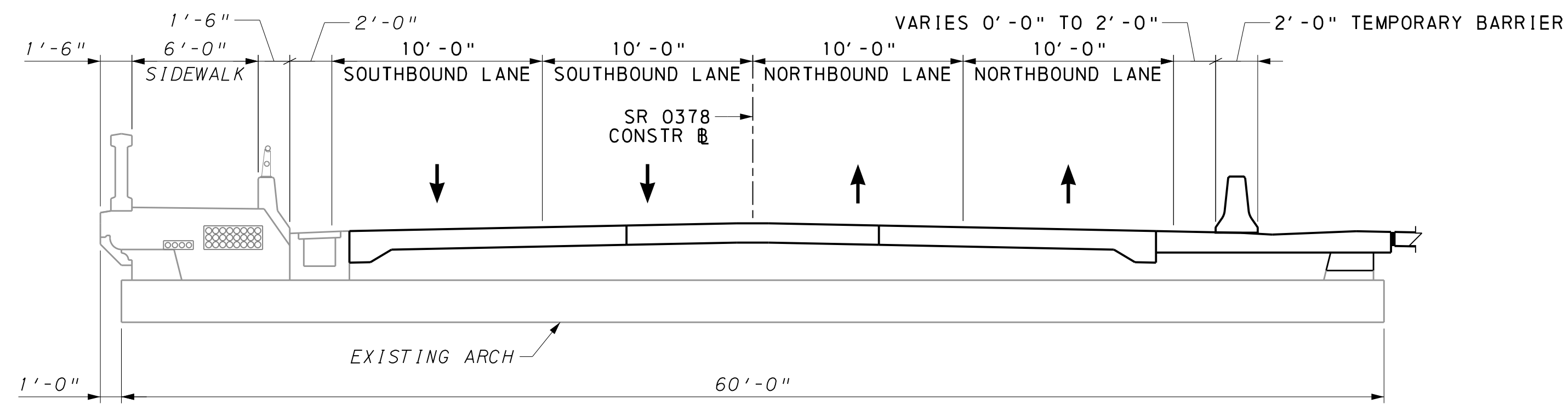
AREA OF REMOVAL AND RECONSTRUCTION

STAGE 7A:

SPANS 1 TO 4: DURING A LONG TERM CONSTRUCTION PERIOD MAINTAIN 1 SOUTHBOUND LANE ON THE WEST SIDE OF THE EXISTING STRUCTURE. PLACE 1 SOUTHBOUND LANE AND 2 NORTHBOUND LANES ON THE NEW STRUCTURE. REPAIR AND OVERLAY EASTERN PORTION OF EXISTING ROADWAY.

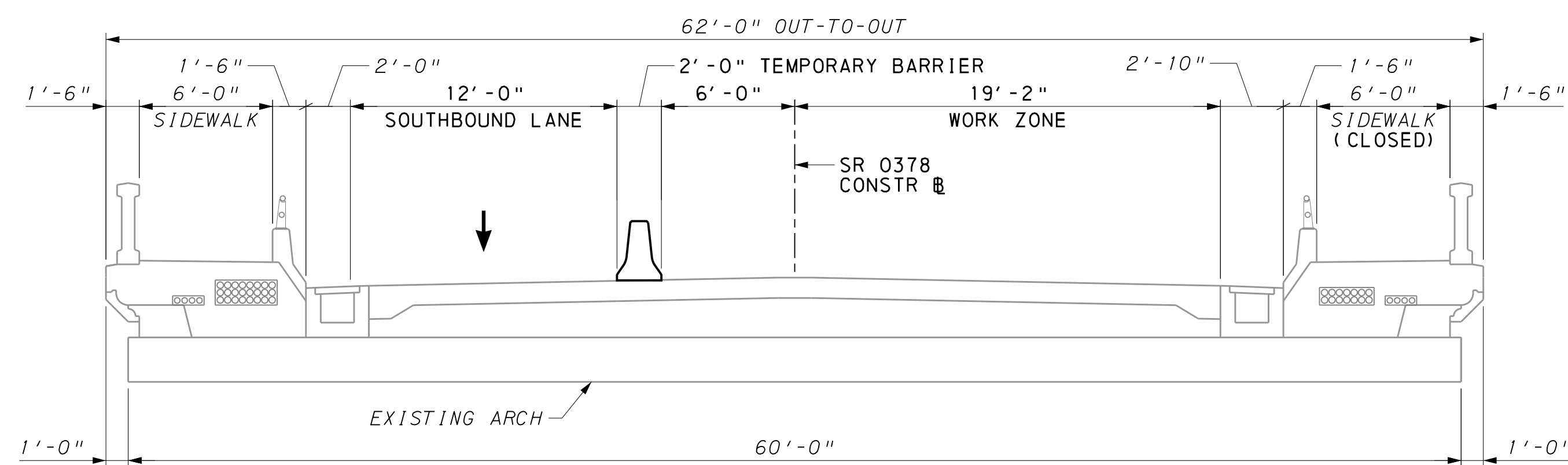
NOTES:

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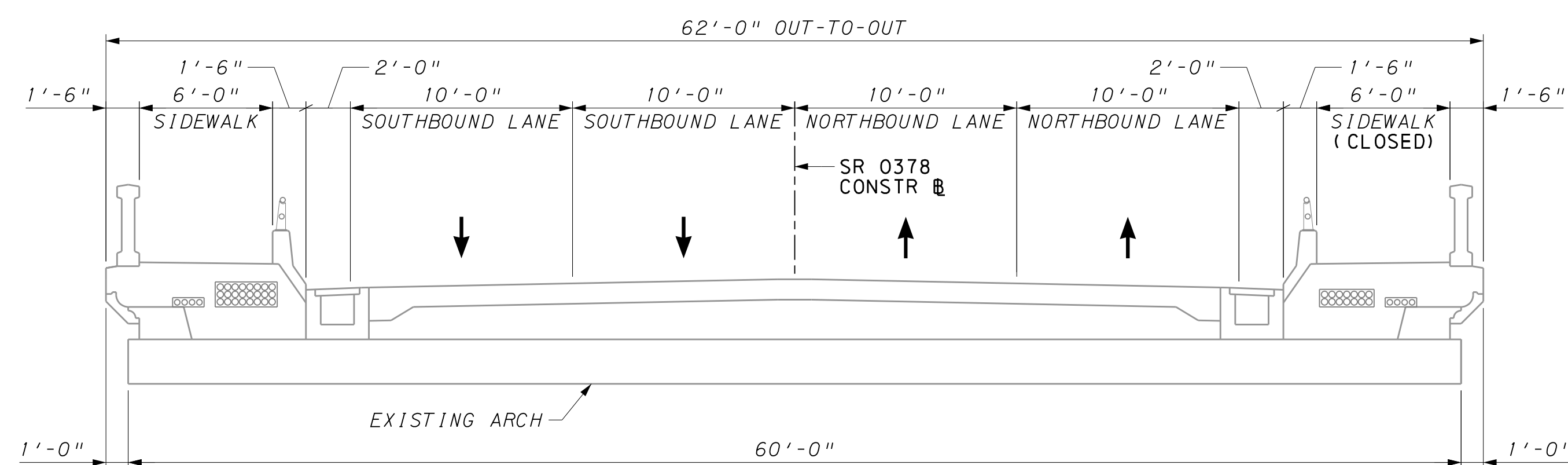
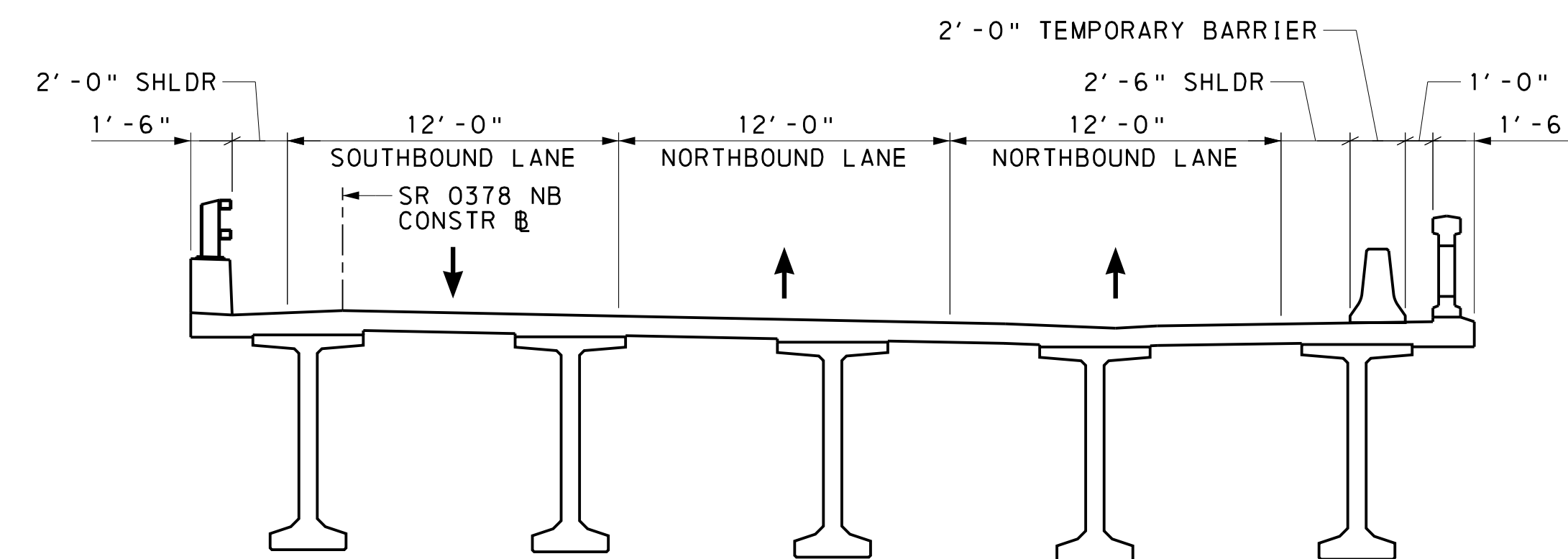
STAGES 5A THROUGH 6B (SPANS 5-7)

2 0 2 5 FEET



STAGE 7A (SPANS 1-6)

2 0 2 5 FEET



STAGE 7A (SPANS 7-14)

2 0 2 5 FEET

LEGEND:

 AREA OF REMOVAL AND RECONSTRUCTION

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					

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CONCEPTUAL

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

LEHIGH AND NORTHAMPTON COUNTIES
 SR 0378 SECTION 03B

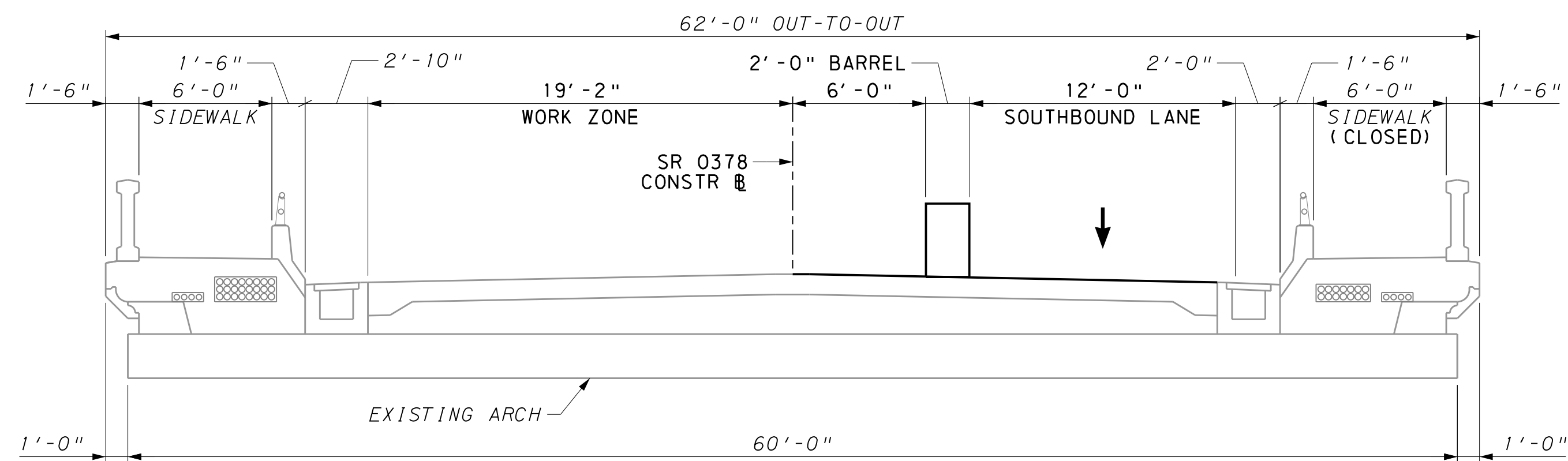
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 OVER LEHIGH RIVER & CANAL, CITY STREETS,
 AND NORFOLK SOUTHERN RAILWAY COMPANY

HILL TO HILL BRIDGE
 CONSTRUCTION STAGING 4

PREPARED BY:
 HNTB CORPORATION
 640 HAMILTON STREET
 SUITE 301
 ALLENTOWN, PA 18101

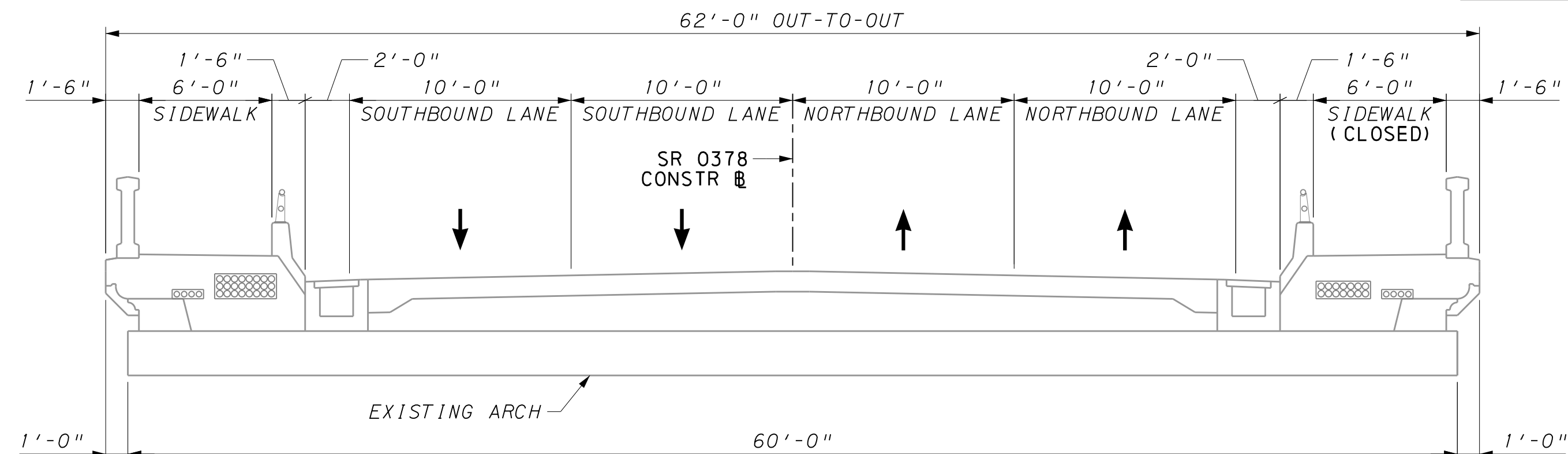
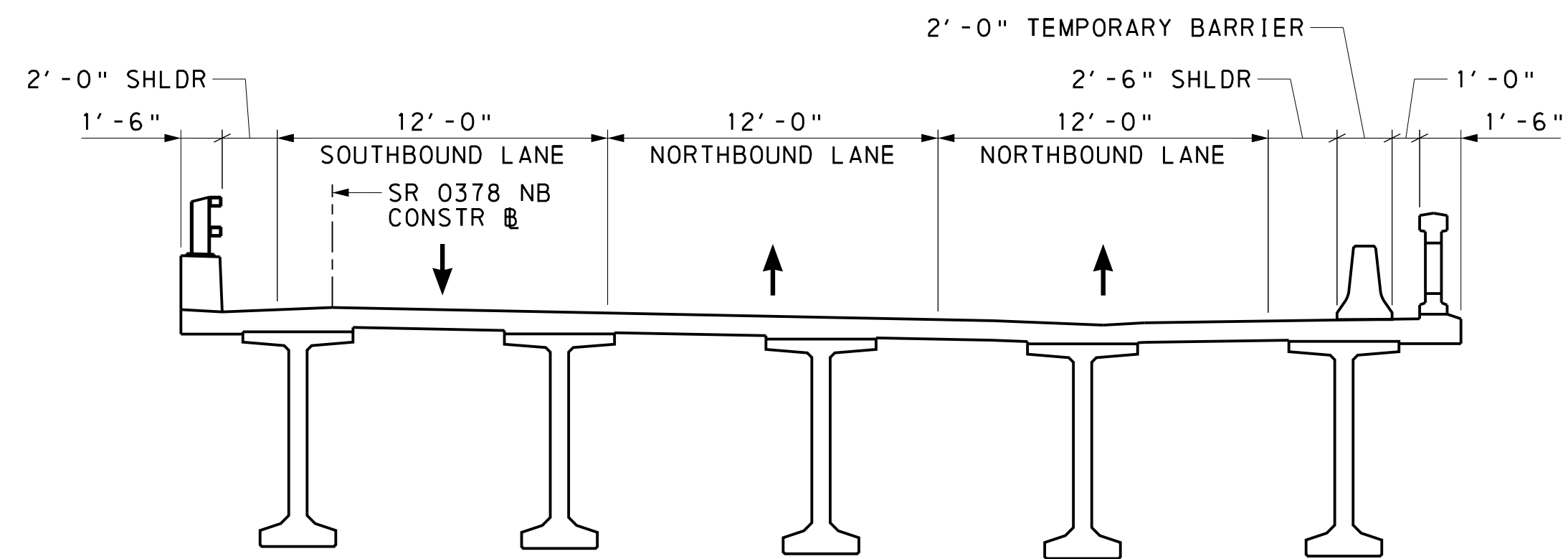
RECOMMENDED _____ SHEET 17 OF 21
 EXHIBIT "B" Page 12 of 15 S-XXXX

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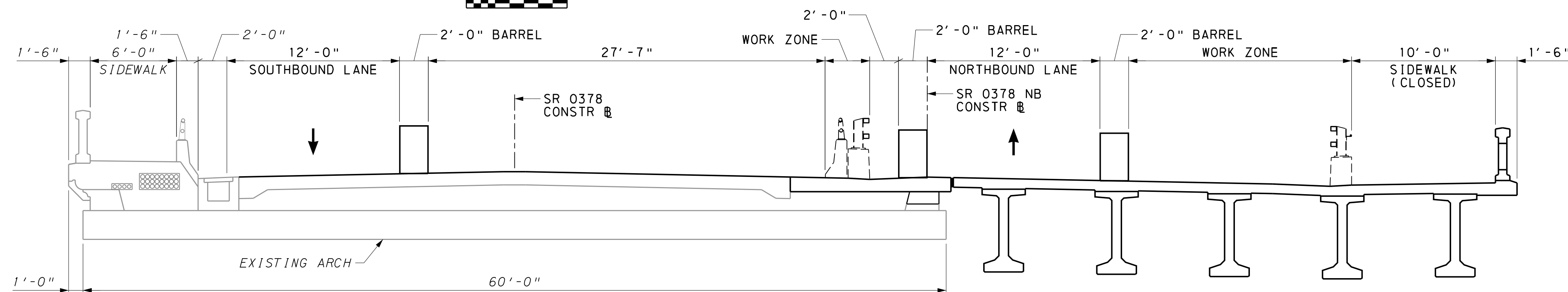
STAGE 7B (SPANS 1-6)

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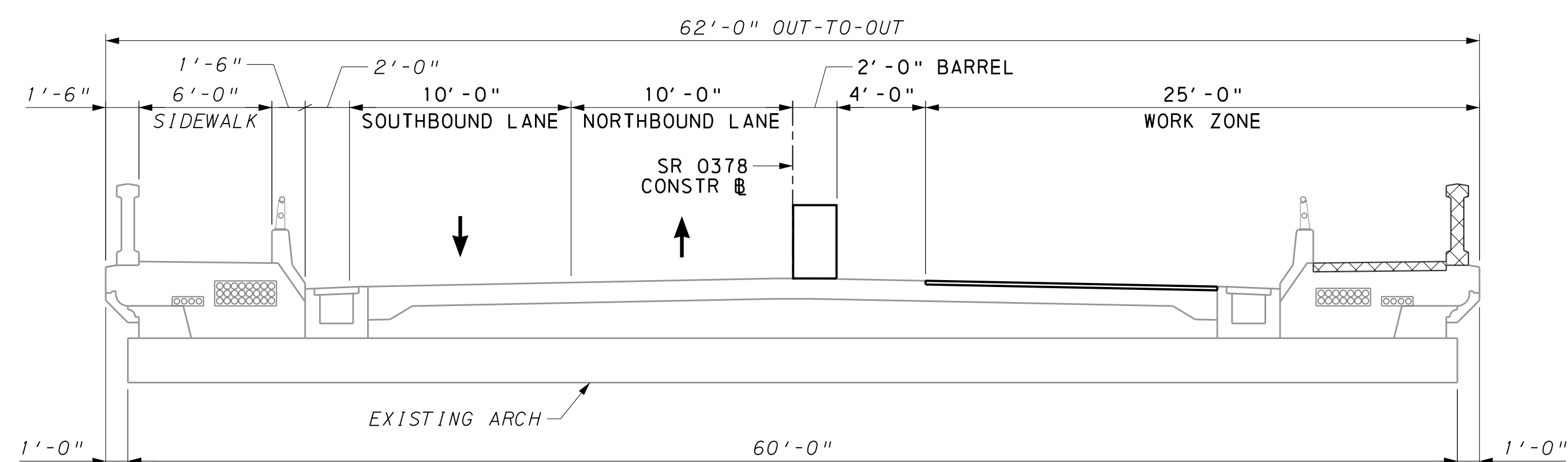
STAGE 7B (SPANS 7-14)

2 0 2 5 FEET



STAGE 8A (SPANS 5-7)

2 0 2 5 FEET



STAGE 8A (SPANS 8-14)

2 0 2 5 FEET

STAGE 7B:

SPANS 1 TO 4: DURING A LONG TERM CONSTRUCTION PERIOD MAINTAIN 1 SOUTHBOUND LANE ON THE EAST SIDE OF THE EXISTING STRUCTURE. PLACE 1 SOUTHBOUND LANE AND 2 NORTHBOUND LANES ON THE NEW STRUCTURE. REPAIR AND OVERLAY WESTERN PORTION OF EXISTING ROADWAY.

STAGE 8A:

SPANS 1E TO 6E: DURING NIGHTS AND WEEKENDS, MAINTAIN 1 SOUTHBOUND LANE ON THE WEST SIDE OF THE EXISTING STRUCTURE AND 1 NORTHBOUND LANE ON THE NEW STRUCTURE. CONSTRUCT PA BRIDGE BARRIER ALONG THE SIDEWALK AND AROUND THE CORE AREA.

SPANS 8 TO SPUR SPAN: DURING NIGHTS AND WEEKENDS, MAINTAIN 1 SOUTHBOUND LANE AND 1 NORTHBOUND LANE ON THE WEST SIDE OF THE EXISTING STRUCTURE. REPAIR AND OVERLAY EASTERN PORTION OF EXISTING ROADWAY. BEGIN REPAIRING THE EXISTING EASTERN SIDEWALK/RAILINGS IN SPANS 8-13. BEGIN CONCRETE REPAIRS TO THE EXISTING STRUCTURE IN SPANS 8 THROUGH 13.

NOTES:

1. TYPICAL SECTIONS ARE NOT SHOWN FOR ALL STAGES. STAGES THAT CONTAIN ACTIVITIES THAT DO NOT AFFECT TRAFFIC PATTERNS HAVE BEEN OMITTED. ADDITIONAL TYPICAL SECTIONS ARE NOT SHOWN FOR PERIODS IN BETWEEN INDIVIDUAL STAGES AS IT IS ASSUMED DURING THESE PERIODS TRAFFIC PATTERNS WOULD RETURN TO THE EXISTING CONFIGURATIONS.
2. IT IS ASSUMED THAT TRAFFIC LANES WIDER THAN AS SHOWN ARE NOT REQUIRED FOR WINTER MAINTENANCE EQUIPMENT AS THE CONTRACT DOCUMENT WILL NOT PERMIT THE LANE RESTRICTION DURING INCLEMENT WEATHER.

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REVISIONS					

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 BMS STR ID: 39-0378-0074-0000 BRKEY: 23182
 BMS STR ID: 39-0378-0080-0076 BRKEY: 23184
 BMS STR ID: 39-7302-0000-0102 BRKEY: 23518
 BMS STR ID: 39-7302-0000-0000 BRKEY: 67426

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CONCEPTUAL

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

LEHIGH AND NORTHAMPTON COUNTIES
 SR 0378 SECTION 03B

NB SEG 0074 OFFSET 0001 SB SEG 0075 OFFSET 0000
 SR 0378 NB STA 111+02.50 & SR 0378 SB STA 117+15.11
 OVER LEHIGH RIVER & CANAL, CITY STREETS,
 AND NORFOLK SOUTHERN RAILWAY COMPANY

HILL TO HILL BRIDGE
 CONSTRUCTION STAGING 5

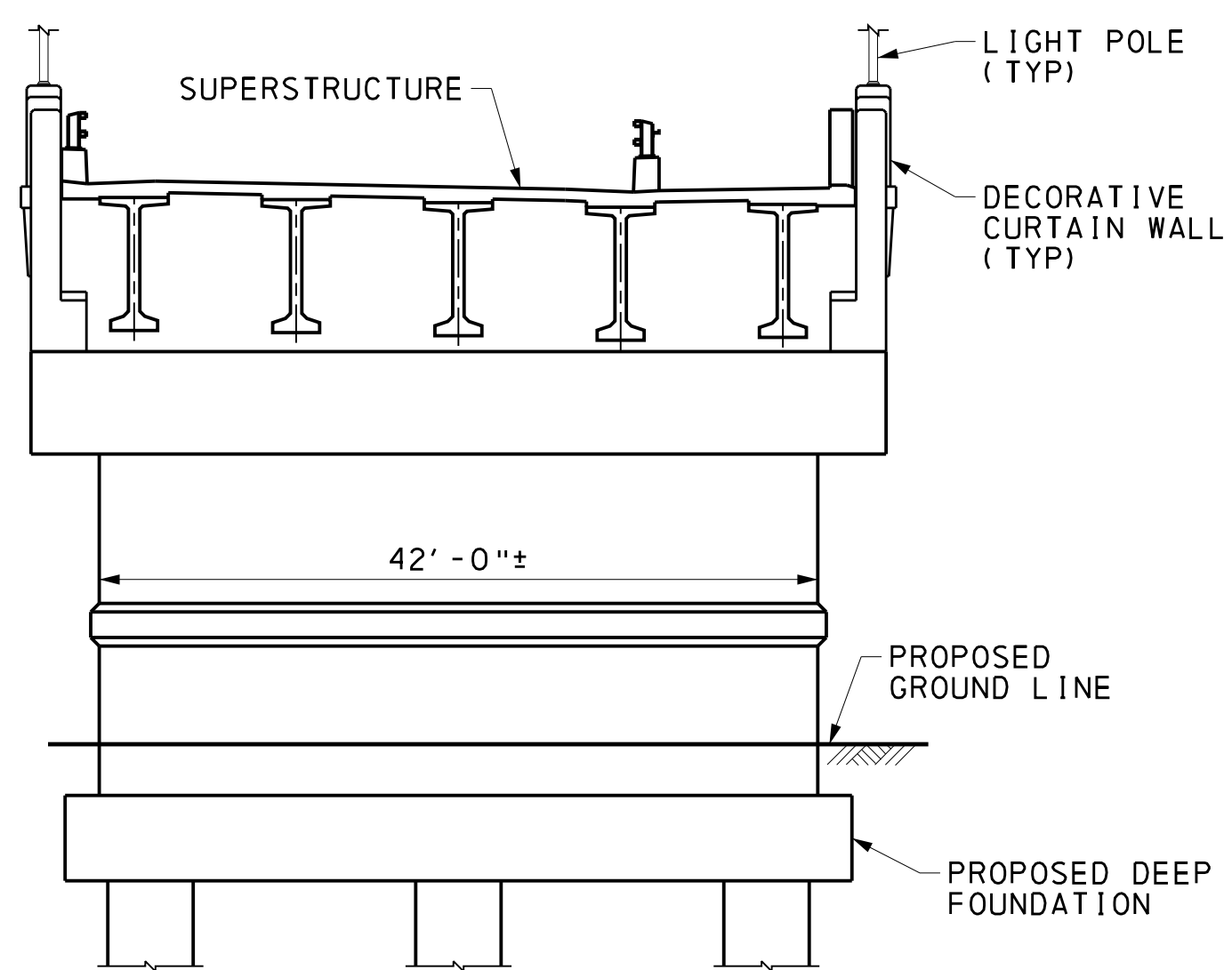
PREPARED BY:
 HNTB CORPORATION
 640 HAMILTON STREET
 SUITE 301
 ALLENTOWN, PA 18101

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 EXHIBIT "B" Page 13 of 15

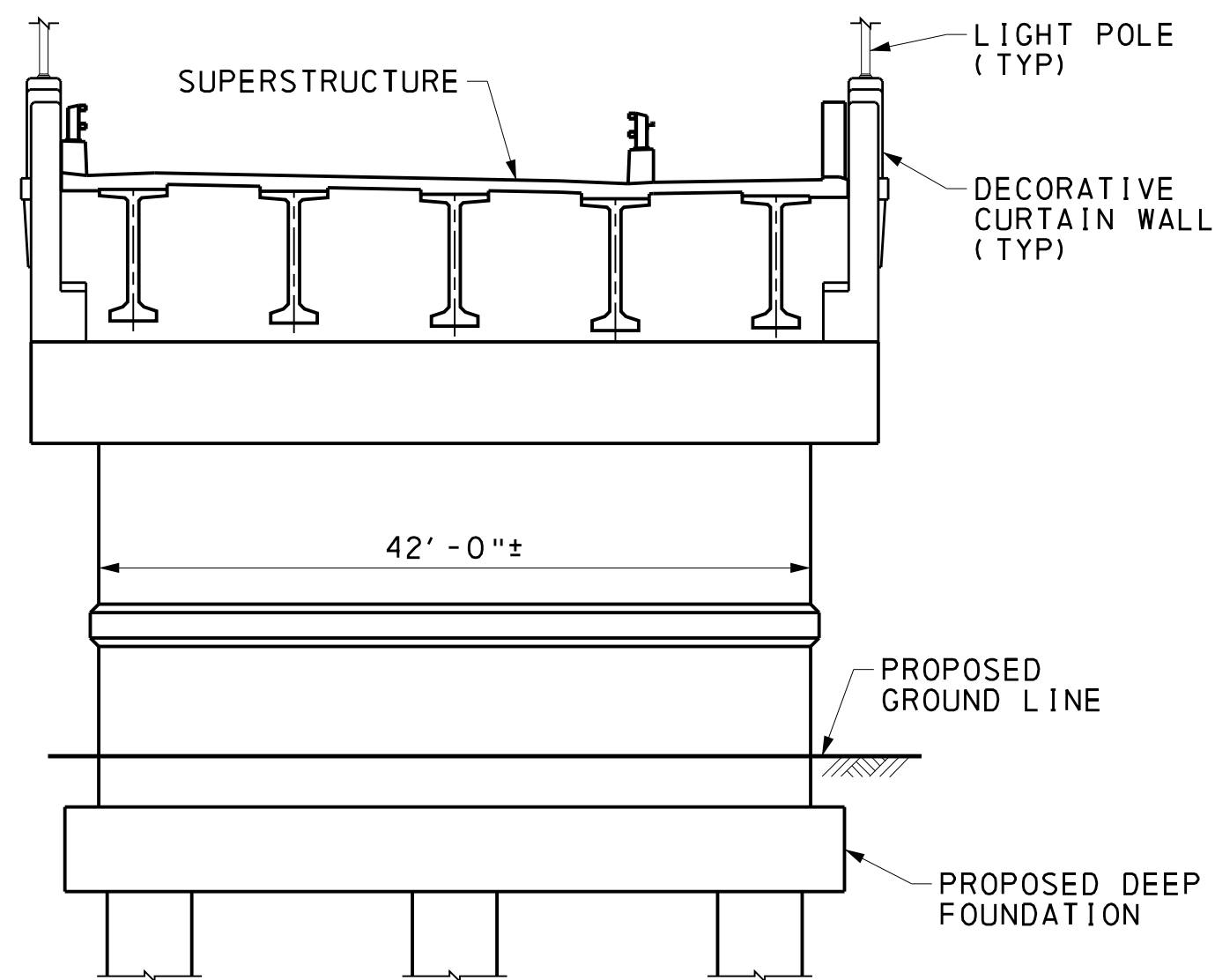
SHEET 18 OF 21
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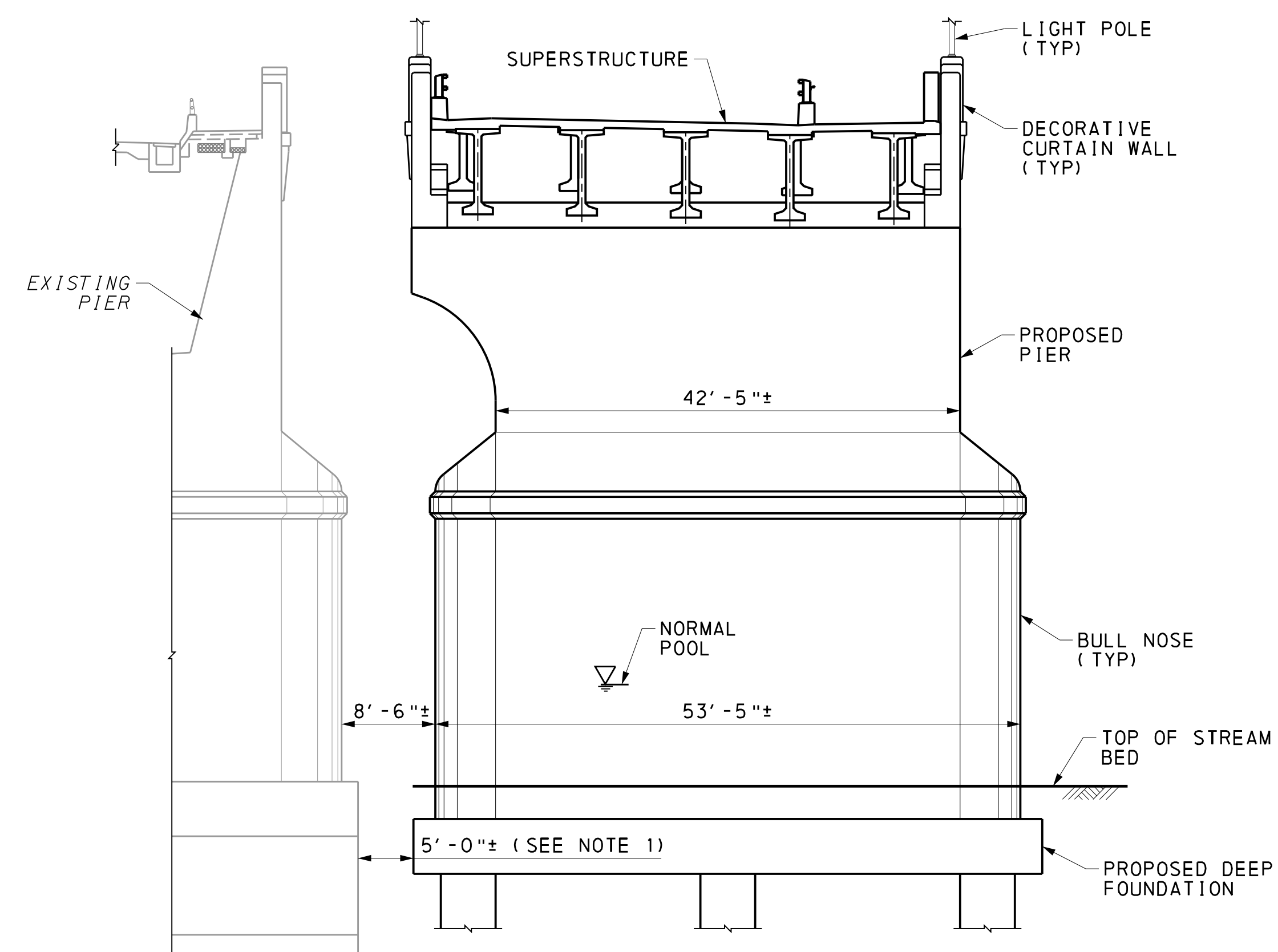
AREA OF REMOVAL AND RECONSTRUCTION



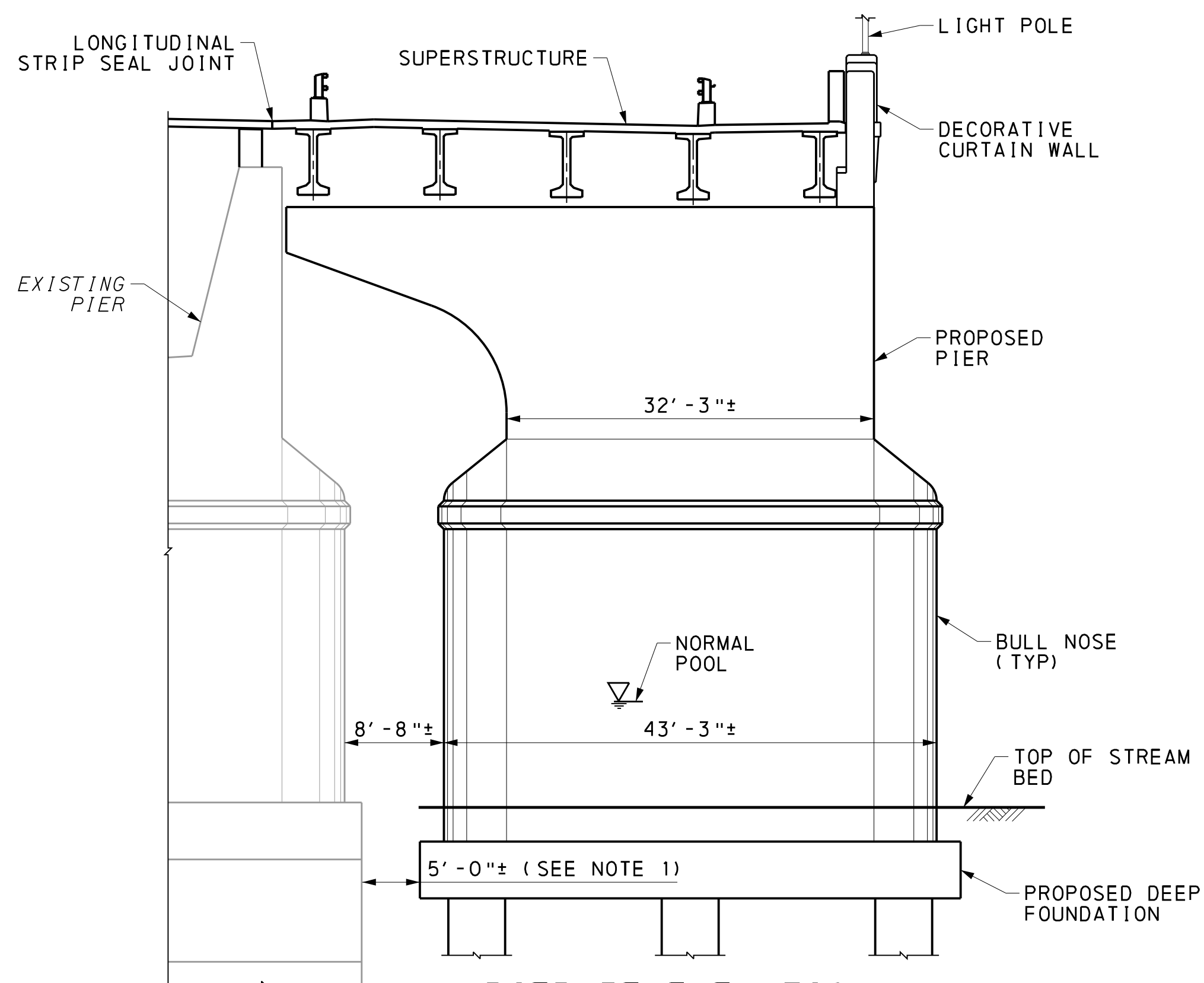
PIER 1E ELEVATION
5 0 5 10 FEET



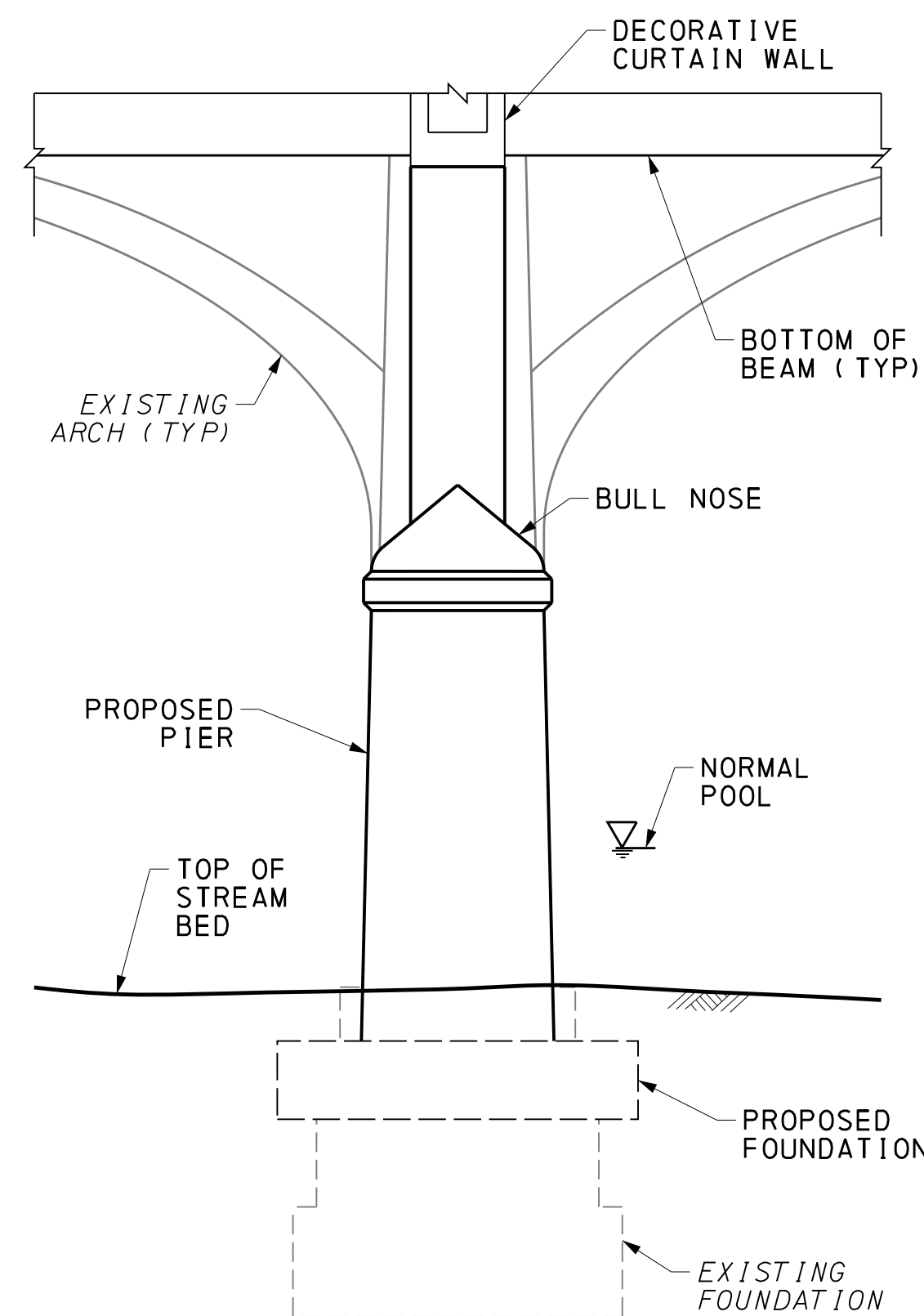
PIER 3E ELEVATION
5 0 5 10 FEET



PIER 4E ELEVATION
5 0 5 10 FEET



PIER 5E ELEVATION
5 0 5 10 FEET



TYPICAL RIVER PIER SIDE ELEVATION
5 0 5 10 FEET
1" = 10'

NOTES:

1. THE PROXIMITY OF THE PROPOSED FOUNDATION TO THE EXISTING FOUNDATION WILL BE FURTHER INVESTIGATED IN FINAL DESIGN WHEN THE STRUCTURE FOUNDATION REPORT IS AVAILABLE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					
SR 0378 PREVIOUSLY KNOWN AS LR 297 MPMS/ECMS PROJ: 93630					
BMS STR ID: 39-0378-0074-0001 BRKEY: TBD					
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

LEHIGH AND NORTHAMPTON COUNTIES
SR 0378 SECTION 03B

NB SEG 0074 OFFSET 0001 SB SEG 0075 OFFSET 0000
SR 0378 NB STA 111+02.50 & SR 0378 SB STA 117+15.11
OVER LEHIGH RIVER & CANAL, CITY STREETS,
AND NORFOLK SOUTHERN RAILWAY COMPANY

HILL TO HILL BRIDGE
PIER ELEVATIONS 1

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PREPARED BY:
HNTB CORPORATION
640 HAMILTON STREET
SUITE 301
ALLENTOWN, PA 18101

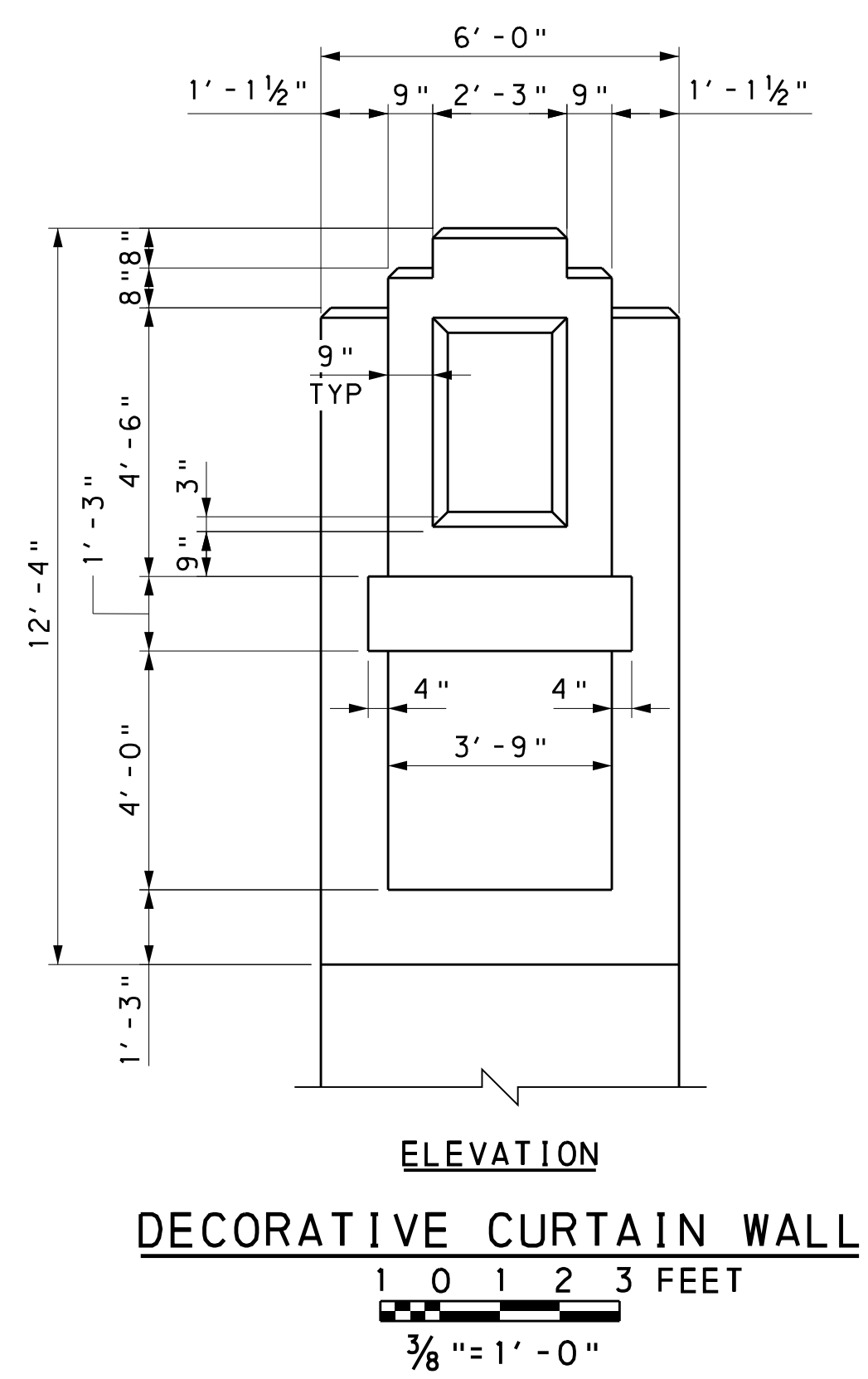
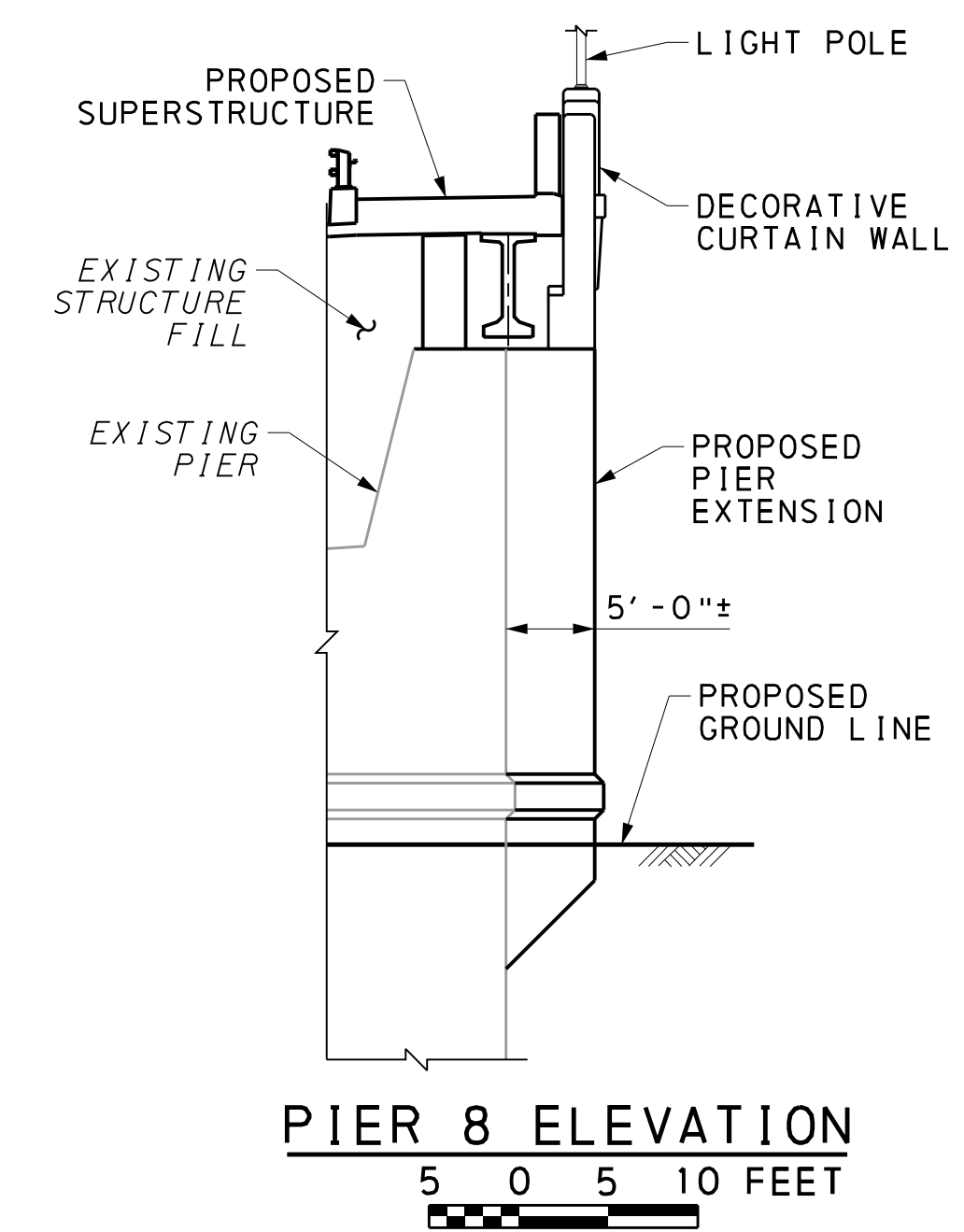
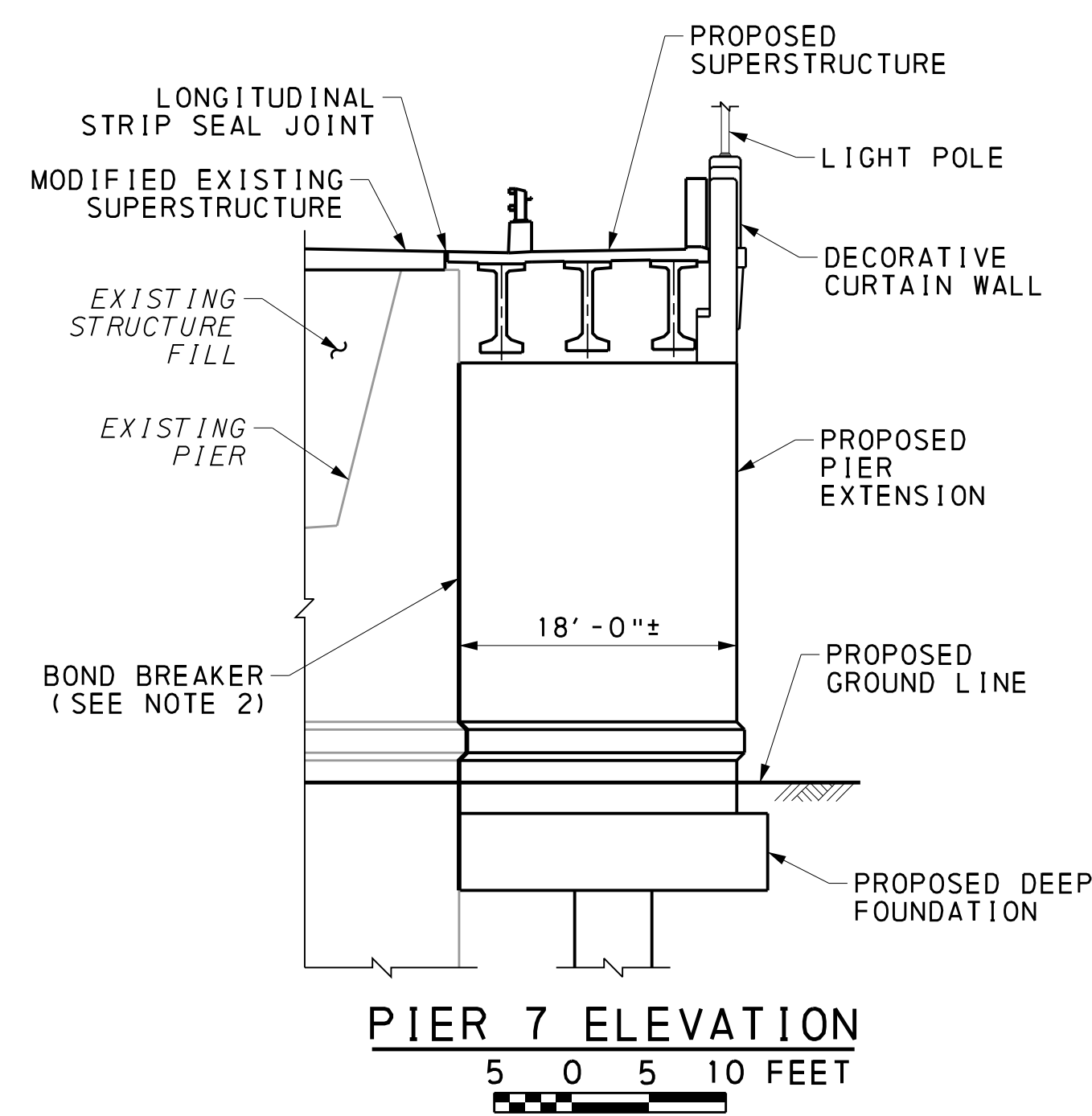
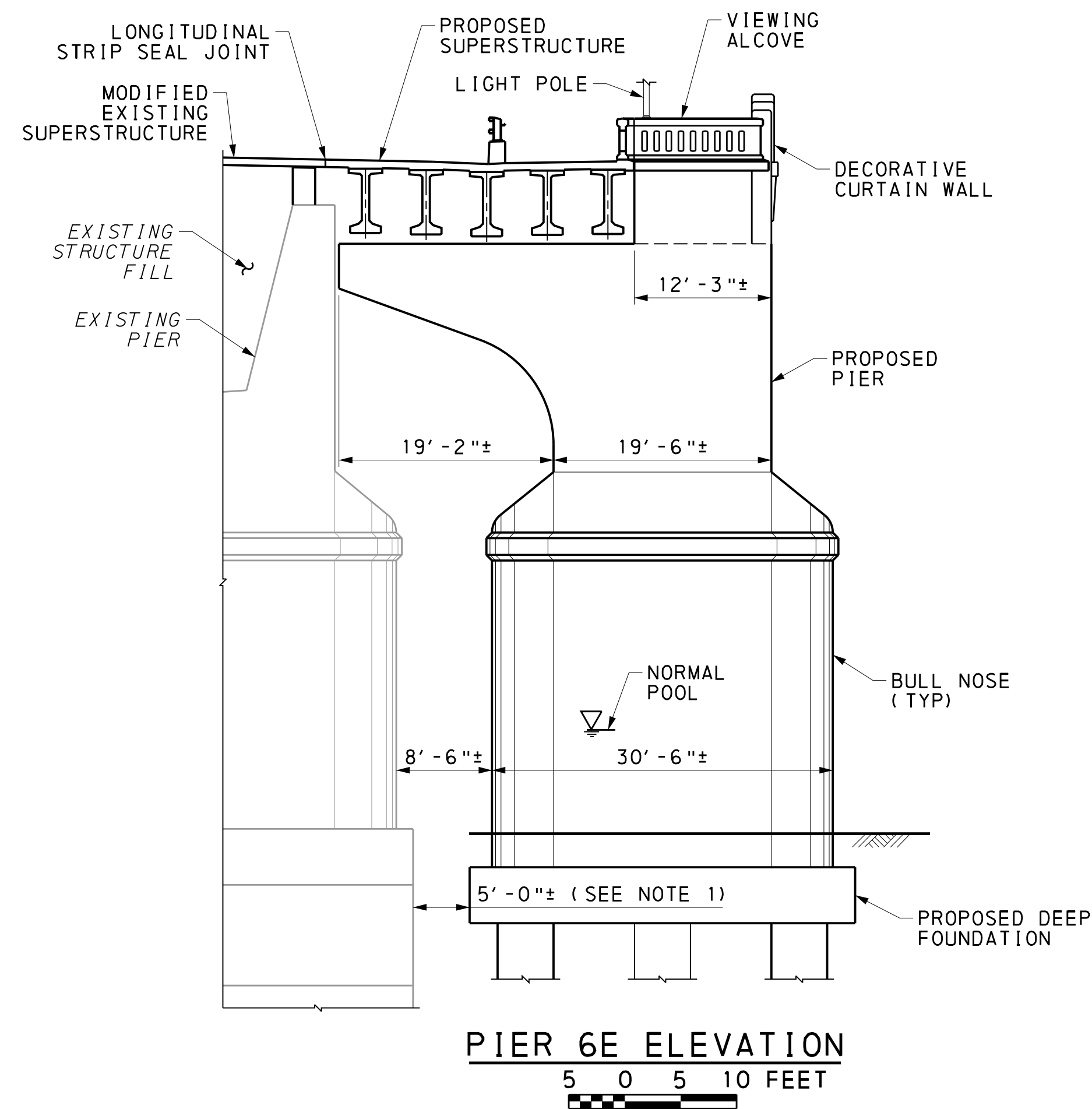
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SHEET 20 OF 21

EXHIBIT "B" Page 14 of 15

S-XXXX

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NOTES:

1. THE PROXIMITY OF THE PROPOSED FOUNDATION TO THE EXISTING FOUNDATION WILL BE FURTHER INVESTIGATED IN FINAL DESIGN WHEN THE STRUCTURE FOUNDATION REPORT IS AVAILABLE.
2. THE CONNECTION BETWEEN THE EXISTING PIER 7 AND THE EXTENSION WILL BE FURTHER INVESTIGATED IN FINAL DESIGN WHEN THE STRUCTURE FOUNDATION REPORT IS AVAILABLE.

Mark	Description	By	Chk'd	Recm'd	Date
REVISIONS					
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

CONCEPTUAL

LEHIGH AND NORTHAMPTON COUNTIES
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OVER LEHIGH RIVER & CANAL, CITY STREETS,
AND NORFOLK SOUTHERN RAILWAY COMPANY

HILL TO HILL BRIDGE
PIER ELEVATIONS 2

PREPARED BY:
HNTB CORPORATION
640 HAMILTON STREET
SUITE 301
ALLENTOWN, PA 18101

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EXHIBIT "B" Page 15 of 15
SHEET 21 OF 21
S-XXXX

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