



September 23, 2025

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
400 North Street
Harrisburg, PA 17105-3265

Re: Philadelphia County
City of Philadelphia
SR 0000 CPD
Columbus Blvd/ PackerAve/
Delaware Ave Inters Imp
No. A-2024-3051279
MPMS# 81304

Dear Secretary Chiavetta,

Department of Transportation is submitting Final Plans for approval on behalf of the City of Philadelphia as directed by the PUC in Secretarial Letter dated March 21, 2025. Attached for approval is additional plans as an addendum to the Final signed Construction Plans for the Construction of State Route 0000, Section CPD in Philadelphia County.

The Department of Transportation hereby avers that a set of the aforesaid final Plans are being sent to the parties of record as indicated on the Certificate of Service for examination simultaneously with this submission to the Public Utility Commission.

Department of Transportation on behalf of the City of Philadelphia respectfully request the approval of these Plans. Should you have any questions or concerns, please feel free to contact K. Michael Anderson at (610) 205 - 6867.

Sincerely,

/s/ K. Michael Anderson

K. Michael Anderson,
District RR Administrator
Engineering District 6-0
Department of Transportation

Attachments

cc: Parties of Record

Mark Chappell, Chief, Right-of-Way, Utilities, and Grade Crossing Division, 7th Floor, CKB
Karen Cummins, Assistant Counsel in Charge, Office of Chief Counsel, 9th Floor, CKB
Supervisor, Rail Safety Engineering Section, PUC, 3rd Floor, C

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Application of the City of Philadelphia for approval of the alteration of the crossing carrying Delaware Avenue (Pennsylvania State Route 32) over at-grade the right-of-way of Philadelphia Belt Line Railroad Company, located in the City of Philadelphia, Philadelphia County, and the allocation of certain costs and expenses incident thereto.

Application
Docket No. A-2024-3051279

Electronically Filed

VERIFICATION

I, K. Michael Anderson, District Railroad 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: 9/23/2025

/s/ K. Michael Anderson

K. Michael Anderson
District Railroad Administrator

**BEFORE THE
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Application
Docket No. A-2024-3051279

Electronically Filed

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the participants listed below by electronic mail pursuant to the Emergency Order at Docket Number M-2020-3019262:

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 Only:

Pennsylvania Department of Transportation, Multimodal Deputate
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Jeremy.Shoemaker@nscorp.com

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Philadelphia, PA 19148
jzakutny@glovisusa.com

Philadelphia Industrial Development Corporation
Kate McNamara, Senior Vice President of Navy Yard
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kmcnamara@PIDCphila.com

ECO Energy
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justink@eco-energy.com

INEOS Chemical
Scott Wright
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Philadelphia, PA 19148

Dependable Distribution Services, Inc. Bill Golden
2401 Columbus Blvd, Pier 84
Philadelphia, PA 19148
william@ddsocoa.com

Dated this 23 Day of September 2025

/s/ K. Michael Anderson

K Michael Anderson
District Railroad Administrator
7000 Geerdes Boulevard Ave
King of Prussia, PA 19406
610-205-6530
kmanderson@pa.gov

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	1 OF 9
CITY OF PHILADELPHIA				
REV NO	REVISIONS	DATE	BY	APPD

GENERAL NOTES

- CONTRACTOR MUST ADHERE TO PENNDOT PUBLICATION 371 - GRADE CROSSING MANUAL. THIS INCLUDES STANDARD SPECIAL PROVISIONS:
 - A01901
 - A01902
 - A02001
 - A02101
 - A02102
 - A02201
 - A02301
 - A02401
- CONTRACTOR MUST ADHERE TO THE CE-6 SPECIFIC REQUIREMENTS OF CONSOLIDATED RAIL CORPORATION (CONRAIL) FOR WORK ON IT'S RIGHT OF WAY AND OTHER PROPERTY.
- CONRAIL REQUIRES THAT ALL PERSONNEL WORKING WITHIN CONRAIL RIGHT OF WAY PARTICIPATE IN THE CONRAIL CONTRACTOR ORIENTATION TRAINING PROGRAM.
- CONTRACTOR MUST OBTAIN ADEQUATE COMMERCIAL RAILROAD PROTECTIVE LIABILITY INSURANCE IN ACCORDANCE WITH CONRAIL INSURANCE SPECIFICATIONS.
- THE CONTRACTOR IS TO FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO CONSTRUCTION OR FABRICATION.
- THE TRACK DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND ANY APPLICABLE SPECIFICATIONS. THE CONTRACTOR IS DIRECTED TO NOTIFY THE ENGINEER OF RECORD IMMEDIATELY IF ANY CONFLICT IS FOUND BETWEEN THE TRACK PLANS AND THE PLANS OF OTHER DISCIPLINES.
- ALL MATERIALS MUST COMPLY WITH RAILROAD STANDARDS, AND IF REQUESTED, BE PREPARED TO PROVIDE SUBMITTALS (E.G. GRADATIONS FOR SUBBALLAST, BALLAST ETC.) BEFORE GRADING AND TRACK CONSTRUCTION STARTS.
- POINT OF SWITCH FOR ALL TURNOUTS AND DERAILS SHALL BE MARKED FOR RAILROAD FORCES.

CONSTRUCTION NOTES:

- REPAIRS TO FACILITIES INTENDED TO REMAIN IN PLACE SHALL BE MADE BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE UNLESS OTHERWISE STATED BY THE ENGINEER.
- PRIOR TO COMMENCING WORK, ALL EXISTING SITE CONDITIONS SHALL BE FIELD VERIFIED WITH THE ENGINEER TO ASCERTAIN THE LIMITS OF WORK ACTIVITIES. THE CONTRACTOR SHALL SUBMIT AND RECEIVE THE ENGINEER'S APPROVAL OF THE CONTRACTOR'S PROJECT SCHEDULE AND OPERATIONS PLAN. EACH ITEM OF WORK SHALL BE DESCRIBED AND ACCOUNTED FOR IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR FURTHER INFORMATION REGARDING SUBMITTAL REQUIREMENTS.
- THE CONTRACTOR SHALL NOT PLACE MATERIAL AND/OR EQUIPMENT WITHIN 25 FEET OF AN ACTIVE TRACK AT ANY TIME WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- WHERE A DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS EVEN THOUGH NOT SPECIFICALLY CALLED FOR ON THE DRAWINGS.
- UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND ARE BASED ON INFORMATION PROVIDED. THE UTILITIES SHOWN MAY NOT BE A COMPLETE REPRESENTATION OF ALL UTILITY LINES IN THE PROJECT AREA. CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES BEFORE DIGGING.
- ALL MATERIALS SHALL BE NEW UNLESS SALVAGED MATERIALS ARE AUTHORIZED BY THE OWNER.
- AS WORK PROGRESSES, THE ENTIRE RIGHT-OF-WAY WHERE CONTRACTOR PERFORMS WORK SHALL BE CLEANED OF ALL EQUIPMENT, SURPLUS MATERIALS, CROSSTIES, TURNOUT SWITCH TIES, RAIL, DEBRIS, ETC. ON A DAILY BASIS. DISPOSAL SHALL BE AS DIRECTED BY THE RAILROAD, INCLUDING STACKING, BANDING, AND HAULING OF SALVAGED MATERIALS TO DESIGNATED AREA.
- RAILROAD STANDARDS WILL CONTROL WORK REQUIREMENTS IF REQUIREMENTS AND SPECIFICATIONS OF THESE PLANS DO NOT ADDRESS AN ELEMENT OF REQUIRED WORK, AREMA RECOMMENDED PRACTICES SHALL BE USED AS THE MINIMUM DESIGN CRITERIA.
- ALL PERSONS ENTERING THE PROJECT RIGHT-OF-WAY SHALL FOLLOW SITE SAFETY RULES AND ALL REQUIREMENTS SET FORTH BY RAILROAD WORKPLACE SAFETY STANDARDS.
- ALL MATERIALS REMOVED SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER. NO FOULED BALLAST, CRUSHED STONE OR DIRT IS PERMITTED WITHIN SECTION OF TRACK. TEMPORARY CROSSINGS (IF APPLICABLE) CONSTRUCTED FOR THE CONVENIENCE OF THE CONTRACTOR SHALL HAVE ALL CONTAMINATED STONE, DIRT OR DEBRIS REMOVED, AND RE-TAMPING OF CROSSING SHALL BE PERFORMED AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTION OF RAIL TRAFFIC WITH THE LOCAL RAIL OPERATIONS SUPERVISOR DURING CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE FLAGGING PROTECTION WITH RAILROADS, IF REQUIRED TO BE ON RAILROAD ROW, AT LEAST 30 DAYS IN ADVANCE NEEDING ACCESS. FLAGGERS ARE SUBJECT TO AVAILABILITY.

PAVING NOTES:

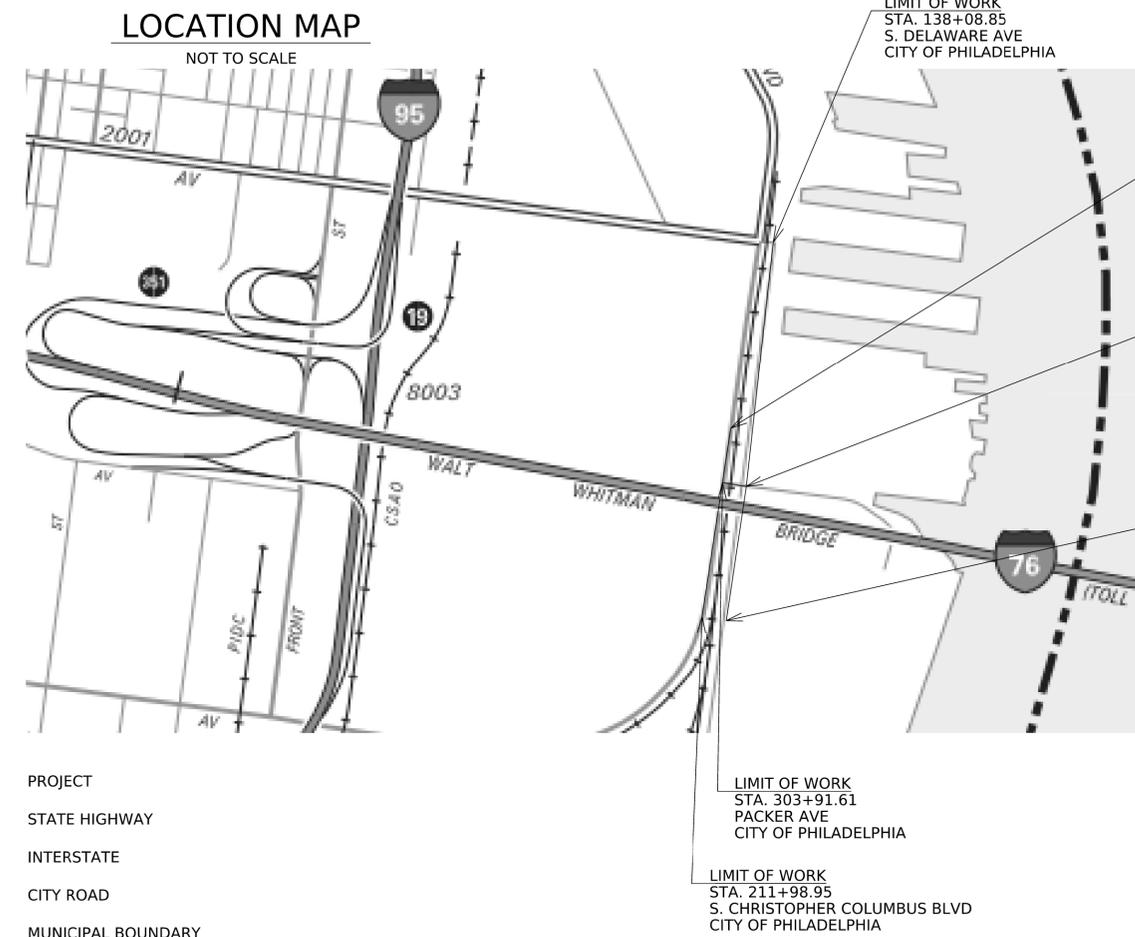
- FILTER FABRIC IS REQUIRED BETWEEN CONCRETE PAVEMENT AND BALLAST TO PREVENT FOULING OF THE BALLAST.
- GEOTEXTILE FABRIC SHALL BE INSTALLED IN ALL LOCATIONS WHERE PAVEMENT AND/OR FILL MATERIALS WOULD BE IN CONTACT WITH THE BALLAST AND/OR TIES. SEE TYPICAL SECTION SHEETS FOR LOCATION DETAILS.

RAIL NOTES:

- RAIL CUTTING SHALL BE PERFORMED WITH RAIL SAWS ONLY. NO TORCHES OR CHISELS PERMITTED.
- ALL RAIL IN CONCRETE EMBEDDED TRACK SECTIONS OR CONCRETE PANEL SECTIONS SHALL BE CONTINUOUSLY WELDED RAIL (CWR). JOINTED RAIL SHOULD BE USED IN BALLASTED SECTIONS OF TRACK. NO JOINT IN ADJOINING TRACK SHALL BE CLOSER THAN 12' TO EDGE OF CROSSING.

CROSSTIE NOTES:

- ANY NEW OR EXISTING CROSSTIES OR TURNOUT SWITCH TIES TO REMAIN THAT ARE DAMAGED BY CONTRACTOR OWNED OR OPERATED EQUIPMENT SHALL BE REPLACED WITH NEW TIES AS DETERMINED AND DIRECTED BY THE RAILROAD OR OWNER AT NO ADDITIONAL COST.



BILL OF MATERIALS			
ITEM NUMBER	DESCRIPTION	UNIT	QTY
0413-0428	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 10 TO < 30 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	SY	370
0413-6077	SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64E-22, 10 TO < 30 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	SY	370
0460-0003	ASPHALT TACK COAT (NTT/CNTT)	SY	740
0212-0014	GEOTEXTILE, CLASS 4, TYPE A	SY	370
	REMOVE PAVEMENT	CY	130
	REMOVE EXISTING TRACKS	TF	650
	SUBBASE 4" DEPTH	SY	370
	H.E.S TINTED CONCRETE PAVEMENT, 8" DEPTH	SY	28
	WOOD TIE BALLASTED TRACK - 10' TIES	TF	510
	WOOD TIE BALLASTED TRACK - 8'-6" TIES.	TF	140
	TRACK JOINTS ALONG TRACKS 1, 2, 3, 4	EA	16
	MAINLINE CONCRETE CROSSING PANELS.	EA	54
	ADA CONCRETE CROSSING PANELS.	EA	8

*FOR CONRAIL CONTRACTOR (FOR INFORMATION ONLY)

DIVISION OF WORK AND MATERIAL SUPPLY				
NUMBER	DESCRIPTION	MATERIAL	FABRICATION	LABOR
1	REMOVE PAVEMENT WITHIN CROSSING LIMITS AND 4 FT BEYOND.	N/A	N/A	C
2	REMOVE EXISTING TRACKS 1,2,3,4 WITHIN PROPOSED CROSSING LIMITS AND 20' ON EITHER SIDE.	N/A	N/A	C
3	RECONSTRUCT WOOD TIE BALLASTED TRACK FOR TRACKS 1, 2, 3, 4 WITHIN THE PROPOSED CROSSING LIMITS. USE 10' TIES.	C	C	C
4	RECONSTRUCT WOOD TIE BALLASTED TRACK FOR TRACKS 1, 2, 3, 4 WITHIN 20' ON EITHER SIDE OF THE PROPOSED CROSSING LIMITS. USE 8'-6" TIES.	C	C	C
5	INSTALL NEW TRACK JOINTS ALONG TRACKS 1, 2, 3, 4.	C	C	C
6	INSTALL GEOTEXTILE FABRIC ALONG TRACKS 1, 2, 3, 4 WHERE BALLAST WOULD COME IN CONTACT WITH FILL OR PAVEMENT MATERIALS	C	C	C
7	INSTALL ADA CONCRETE CROSSING PANELS ALONG SOUTHERN LIMITS OF PROPOSED CROSSING.	C	*	C
8	INSTALL MAINLINE CONCRETE CROSSING PANELS WITHIN LIMITS OF PROPOSED CROSSING.	C	*	C
9	INSTALL 8" H.E.S. CONCRETE BETWEEN TRACKS 3, 4.	C	C	C
10	INSTALL ASPHALT PAVEMENT WITHIN CROSSING LIMITS AS SHOWN	C	C	C

P= PENNDOT C=CONRAIL *=SHOP FABRICATION

SHEET INDEX	
DESCRIPTION	SHEET
GENERAL NOTES, SHEET INDEX, AND LOCATION MAP	1
STANDARD DETAILS	2
TYPICAL SECTIONS	3
EXISTING CONDITIONS	4
PROPOSED CONDITIONS	5
TRACK PROFILES	6-9

PREPARED BY:
Kimley»Horn
300 CORPORATE CENTER DRIVE,
SUITE 401, CAMP HILL, PA 17011

AT GRADE CROSSING

DATE: 9/10/2025

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	2 OF 9
CITY OF PHILADELPHIA				
REV NO	REVISIONS	DATE	BY	APPD

NOTES:

- CONCRETE COMPRESSIVE STRENGTH:
 - @ 28 DAYS = 4000 PSI MINIMUM.
 - @ REMOVAL FROM FORMS = 2500 PSI MINIMUM.
- REINFORCEMENT ASTM A706 #5 WELDABLE REBAR, PER BNSUPRFR COMMON STANDARD DWG NO. 200102.
- PANELS ARE DESIGNED TO CLEAR BOTH 16" PANDROL PLATES WITH E-CLIPS AND 14" DOUBLE SHOULDER THE PLATES WITH SPIKES.
- EACH LIFTING DEVICE SAFE WORKING LOAD 4000 LBS.
- OPTION #1: CUSTOM CURVED PANELS.
- OPTION #2: HEAVY-DUTY DESIGN WITH POLYESTER REINFORCED CONCRETE.
- ALL EXPOSED STEEL RECEIVES ONE COAT GRAY PRIMER.
- PANEL DESIGN CONFORMS TO BNSUPRFR COMMON STANDARDS.
- PANELS BUILT TO MEET ASTM-A1033 QUALITY STANDARDS.

WEIGHTS:

GAUGE PANEL	115#	136#	141#
FIELD PANEL	3300	3400	3600
SET WEIGHT	1750	1800	1950
	6600	7000	7500

DETAIL A: SCALE: 2" = 1'-0"

TYPICAL SECTION: SCALE: 3/4" = 1'-0"

OMEGA INDUSTRIES, INC.
700 N. 32ND ST., JOHNS RD VANCOUVER, WA 98685

MAIN LINE STANDARD
8'-1 1/2" PRECAST CONCRETE PANELS
ON 10" WOOD TIES, 115# & 136# RAIL

DATE: 11/17/15 SCALE: NOTED DRAWN BY: VJK
PROJECT: 1004726 SHEET: 1 OF 1

CROSS SECTION - GAUGE PANEL: SCALE: 2" = 1'-0"

CROSS SECTION - FIELD PANEL: SCALE: 2" = 1'-0"

DETAIL AA TYP END (ALL PANELS): SCALE: 3/4" = 1'-0"

NOTES:

- SEE OMEGA'S MANUAL FOR INSTALLATION INSTRUCTIONS.
- REINFORCEMENT ASTM A706 #5 WELDABLE REBAR.
- CONCRETE COMPRESSIVE STRENGTH:
 - @ 28 DAYS = 4000 PSI MINIMUM.
 - @ REMOVAL FROM FORMS = 2500 PSI MINIMUM.
- LIFTING DEVICE LOAD RATING 2000 LB WITH MINIMUM FOS=4.
- ALL EXPOSED STEEL RECEIVES ONE COAT GRAY PRIMER.
- TOLERANCES:
 - A. CUT OF SQUARE 3/16" (MEASURED ALONG THE DIAGONAL).
 - B. LENGTH, WIDTH AND THICKNESS ±1/8".
 - C. BOTTOM SURFACE FLATNESS WITHIN 3/32".
 - D. REINFORCEMENT PLACEMENT SHALL BE ±3/4" HORIZONTAL, ±1/8" VERTICAL.

OMEGA INDUSTRIES, INC.
700 N. 32ND ST., JOHNS RD VANCOUVER, WA 98685

MAIN LINE STANDARD
PRECAST CONCRETE PANELS
ON 10" WOOD TIES, 115# & 136# RAIL

DATE: 11/17/15 SCALE: N.T.S. DRAWN BY: VJK
PROJECT: 1003647 SHEET: 1 OF 1

PLAN VIEW: SCALE: N.T.S.

TYPICAL SECTION: SCALE: N.T.S.

DETAIL A: SCALE: N.T.S.

NOTES:

- CONCRETE COMPRESSIVE STRENGTH:
 - @ 28 DAYS = 4000 PSI MINIMUM.
 - @ REMOVAL FROM FORMS = 2500 PSI MINIMUM.
- REINFORCEMENT ASTM A706 #5 WELDABLE REBAR, PER DWG NO. 100750-01.
- PANELS ARE DESIGNED TO CLEAR BOTH 16" PANDROL PLATES WITH E-CLIPS AND 14" DOUBLE SHOULDER THE PLATES WITH SPIKES.
- LIFTING DEVICE IS DESIGNED WITH A MINIMUM SAFETY FACTOR = 4.
- ALL EXPOSED STEEL RECEIVES ONE COAT GRAY PRIMER.
- PANELS MEET ASTM A1033-14 LOAD RATINGS.

WEIGHTS:

GAUGE PANEL	115# (LB)	136# (LB)
FIELD PANEL	3300	3300
SET WEIGHT	1700	1850
	6600	7000

OMEGA INDUSTRIES, INC.
700 N. 32ND ST., JOHNS RD VANCOUVER, WA 98685

8'-1 1/2" LAG DOWN ADA CONCRETE PANELS
ON 10" WOOD TIES, 115# & 136# RAIL
GENERAL ARRANGEMENT

DATE: 09/22/22 SCALE: N.T.S. DRAWN BY: GBT
PROJECT: 1006750 SHEET: 1 OF 1

MECHANICAL PROPERTIES (FOR REFERENCE)
CORE HARDNESS: Rc 26-36
Min TENSILE: 120,000 PSI
Min YIELD: 92,000 PSI

RECOMMENDED PREDRILL: 1/2"

PLAIN FINISH, WAX DIPPED

Dimensions: 12" length, 4 3/4" thread length, 1" release, 0.620 diameter, 0.730 diameter, 30° thread angle, 5 PITCH DOUBLE LEAD, ROOT .510, 1" RAD. chamfer.

SCALE: FULL	DRAWING NO. RHSQH-J11	PRODUCT: 3/4 DEEP RECESSED HEAD TIMBER SCREW	DATE: 7/25/17	LEWIS BOLT & NUT COMPANY 30105 Sixth Avenue La Junta, CO 81050 (719) 384-3400
TOLERANCES: AS NOTED	MATERIAL: 10B22	HEAT TREAT: SEE NOTE SAE J429 GR. 5.2	DRAWN BY: TJA/LIC	

DETAIL A: SCALE 1:8

DETAIL B: SCALE 1:8

Labels: 18" to 20" TIE SPACING, PLASTIC SHUNT BREAK, 136# PANEL, 115# PANEL, NON-CONDUCTIVE RUBBER BOOT (GAUGE DEFLECTORS ONLY), DEFLECTOR PLATE GAUGE: PL 3/16" X 16" X 50 1/2", FIELD: PL 3/16" X 16" X 27", LAG SCREW 5/8" X 5", SUPPORT PLATE PL 3/16" X 8" X 8".

NOTES:

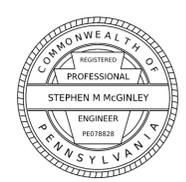
- FINISH: GRAY PRIMER
- TOTAL WEIGHT FOR ONE SET OF END DEFLECTORS: 205 LBS

OMEGA INDUSTRIES, INC.
700 N. 32ND ST., JOHNS RD VANCOUVER, WA 98685

STEEL END DEFLECTOR SYSTEM
FOR USE ON WOOD TIES, 18"-20" SPACING
115# THRU 136# RAIL

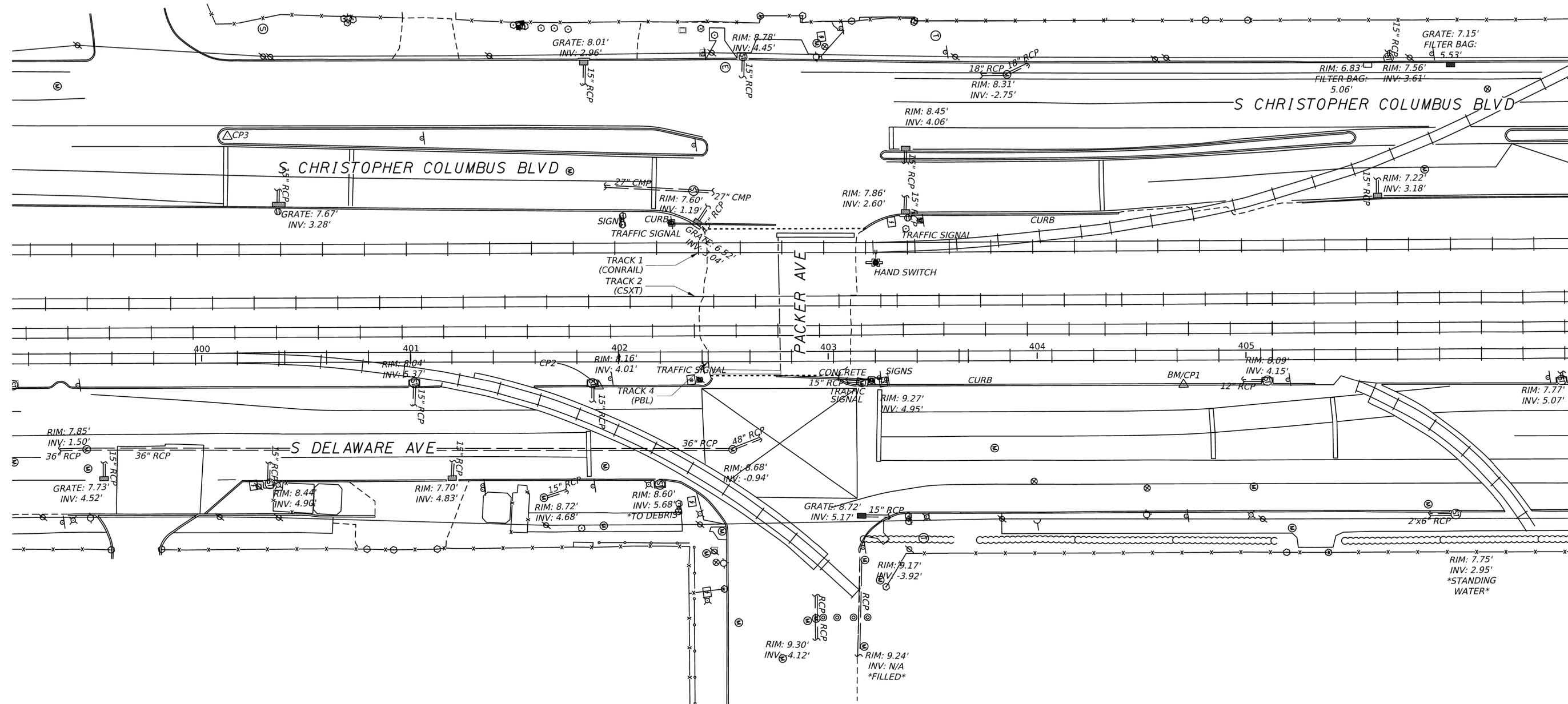
DATE: 10-13-15 SCALE: N.T.S. DRAWN BY: VJK
DWG NO: 1004438-80 SHEET: 1 OF 1

DATE PRINTED: Tuesday, October 13, 2015



**AT GRADE CROSSING
STANDARD DETAILS**

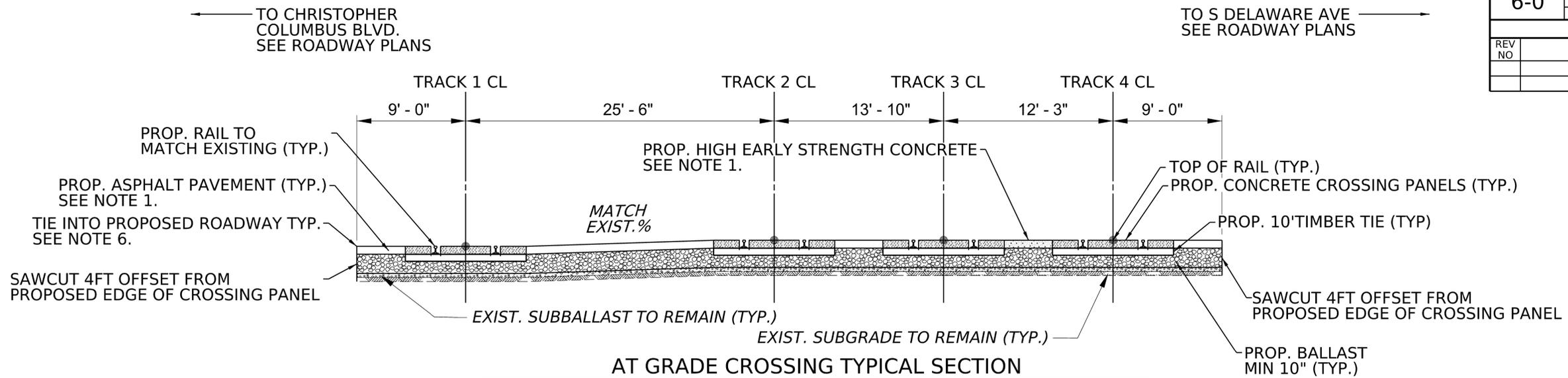
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	4 OF 9
CITY OF PHILADELPHIA				
REV NO	REVISIONS	DATE	BY	APPD



AT GRADE CROSSING
EXISTING CONDITIONS



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	3 OF 9
CITY OF PHILADELPHIA				
REV NO	REVISIONS	DATE	BY	APPD



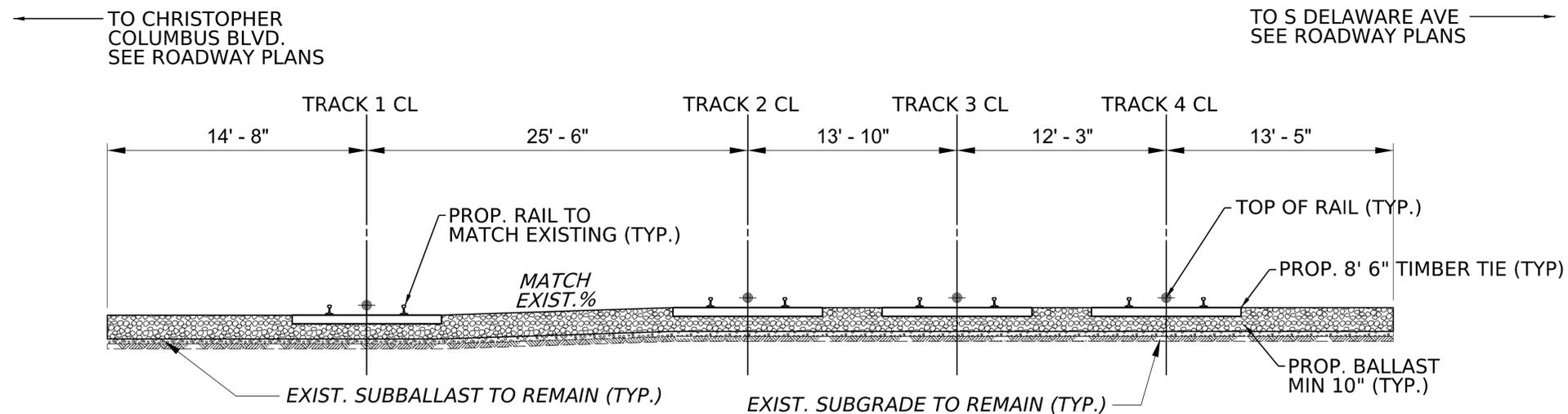
AT GRADE CROSSING TYPICAL SECTION

ADA CROSSING PANELS

TRACK 1 : STA. 101+95.58 TO STA. 102+11.83
 TRACK 2 : STA. 201+94.07 TO STA. 202+10.32
 TRACK 3 : STA. 301+94.07 TO STA. 302+10.32
 TRACK 4 : STA. 401+75.31 TO STA. 402+07.81
 NOT TO SCALE

MAINLINE STANDARD CROSSING PANELS

TRACK 1 : STA. 102+11.83 TO STA. 103+17.46
 TRACK 2 : STA. 202+10.32 TO STA. 203+17.46
 TRACK 3 : STA. 302+10.32 TO STA. 303+17.46
 TRACK 4 : STA. 402+07.81 TO STA. 403+17.46
 NOT TO SCALE



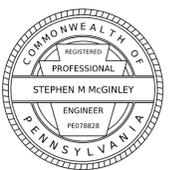
BALLASTED TRACK TYPICAL SECTION

TRACK 1 : STA. 101+74.06 TO STA. 101+95.58 AND STA. 103+17.46 TO STA. 103+37.46 (SEE NOTE 2 FOR DETAILS)
 TRACK 2 : STA. 201+74.06 TO STA. 201+94.07 AND STA. 203+15.94 TO STA. 203+35.94
 TRACK 3 : STA. 301+74.07 TO STA. 301+94.07 AND STA. 303+15.92 TO STA. 303+35.92
 TRACK 4 : STA. 401+55.31 TO STA. 401+75.31 AND STA. 403+13.43 TO STA. 403+35.93
 NOT TO SCALE

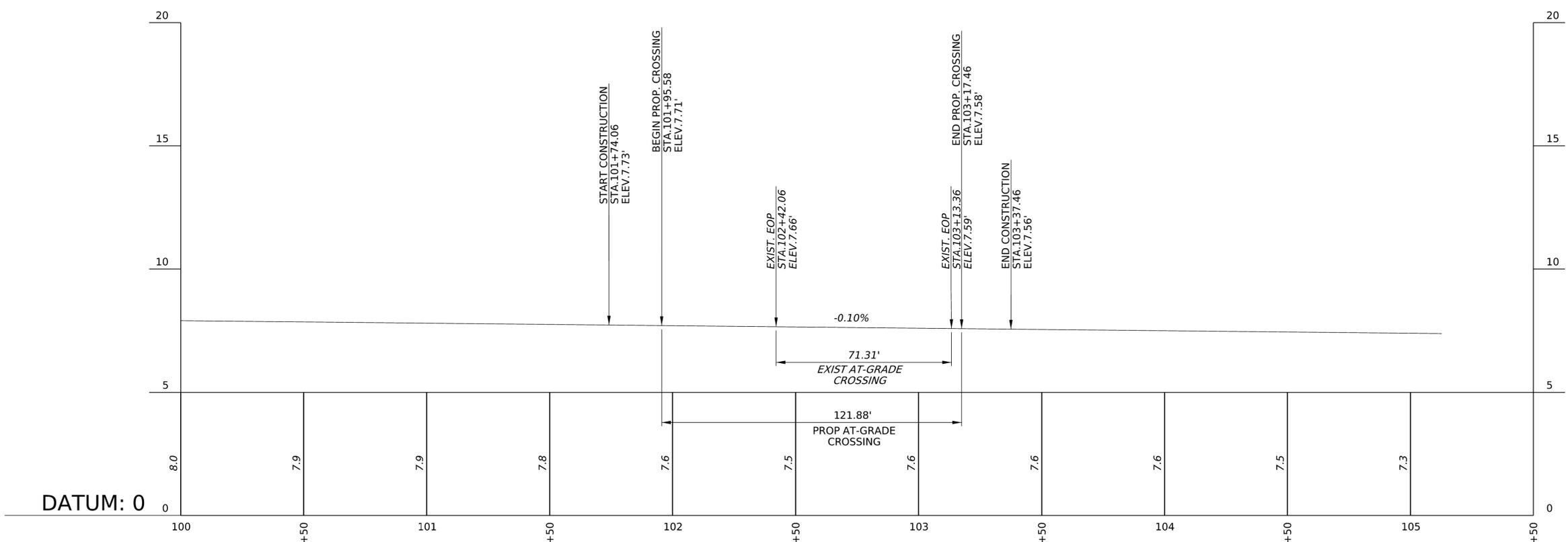
NOTES:

1. HIGH EARLY STRENGTH CONCRETE TO BE TINTED TO MATCH CONCRETE CROSSING PANELS. SEE ROADWAY PLANS FOR PAVEMENT DETAILS.
2. RAIL CONTRACTOR SHALL NOT IMPACT EXISTING TURNOUT ALONG TRACK 1.
3. CONCRETE CROSSING PANELS SHALL BE OMEGA RAIL PANELS OR EQUAL, SEE STANDARD DETAILS.
4. GEOTEXTILE FABRICS SHALL BE PLACED WHERE PAVEMENT AND/OR FILL MATERIALS WOULD COME INTO CONTACT WITH BALLAST AT ALL LOCATIONS.
5. BALLAST SHALL BE FLOODED FROM EDGE OF TIE TO EDGE OF PAVEMENT OF ADJACENT ROADWAYS TO MATCH EXISTING CONDITIONS.
6. RAIL CONTRACTOR TO REFER TO ROADWAY CONSTRUCTION PLANS FOR INTERSECTION DETAILS.

AT GRADE CROSSING TYPICAL SECTIONS



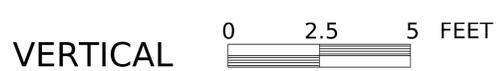
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	6 OF 9
	CITY OF PHILADELPHIA			
REV NO	REVISIONS	DATE	BY	APPD



EXISTING PROFILE
TRACK 1

DATUM: 0

SCALE



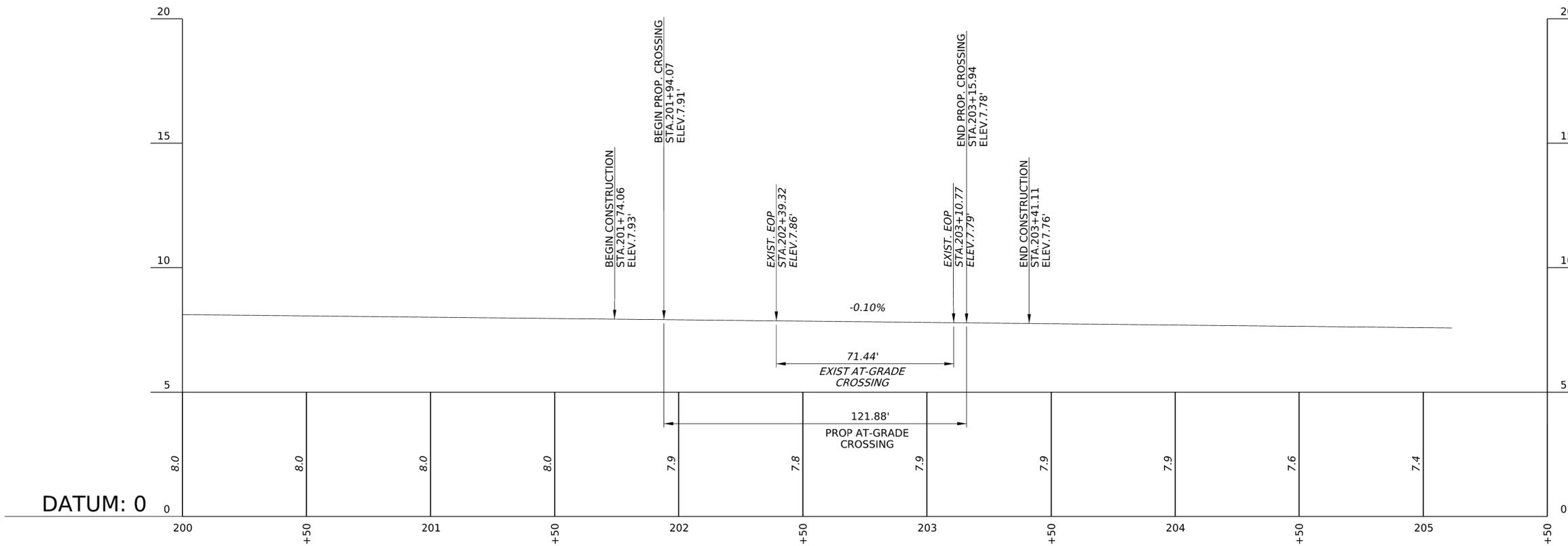
- NOTES:
 1. PROPOSED TOP OF RAIL SHOWN TO MATCH EXISTING.
 2. ALL ELEVATIONS ARE SHOWN IN FEET.

AT GRADE CROSSING
TRACK PROFILES

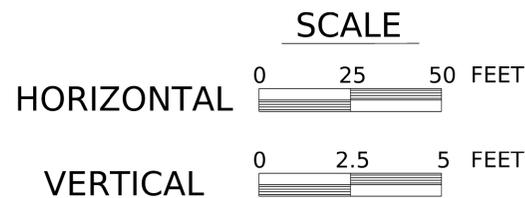


OPERATOR: Georges.Micera
FILE NAME: pw://kh-pw.bentley.com:kh-pw-01/Documents/01 Active Projects/AT-HBG-112464014 - E05849 WO 2 PhilaPort PE/CAD/PlanSheets/Rail Crossing/E05849_Prof-R.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	7 OF 9
	CITY OF PHILADELPHIA			
REV NO	REVISIONS	DATE	BY	APPD



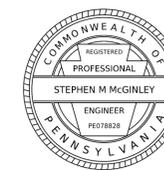
EXISTING PROFILE
TRACK 2



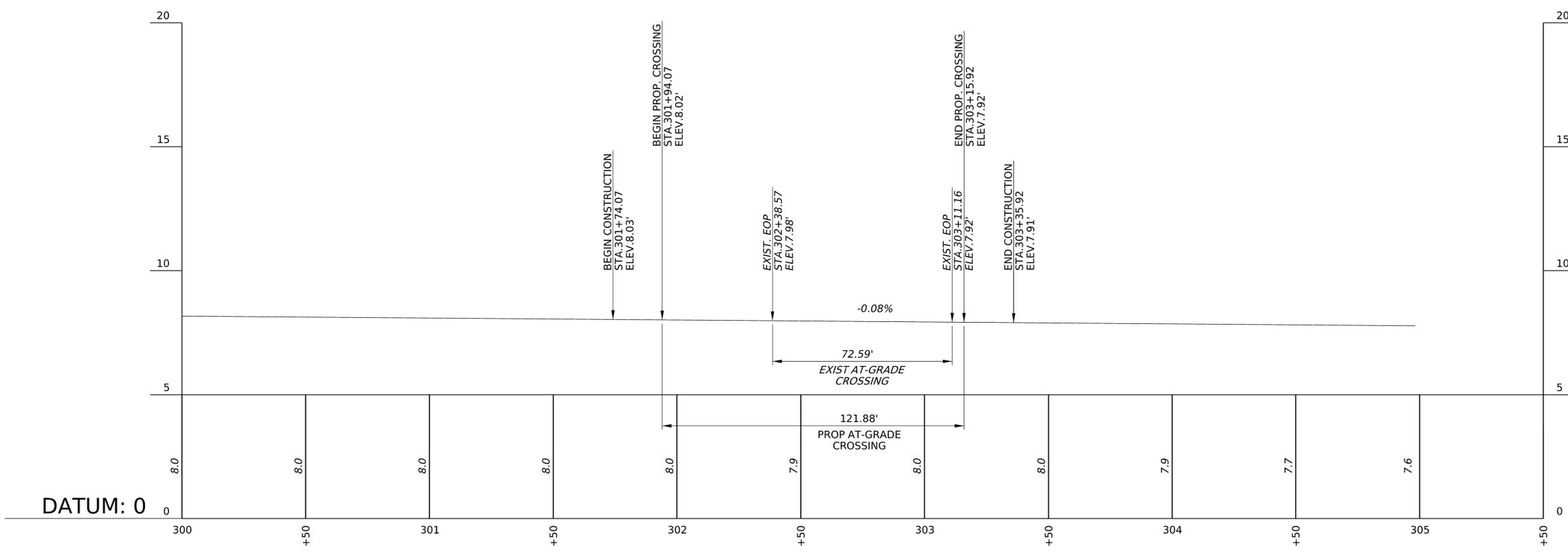
NOTES:
1. PROPOSED TOP OF RAIL SHOWN TO MATCH EXISTING.
2. ALL ELEVATIONS ARE SHOWN IN FEET.



AT GRADE CROSSING
TRACK PROFILES

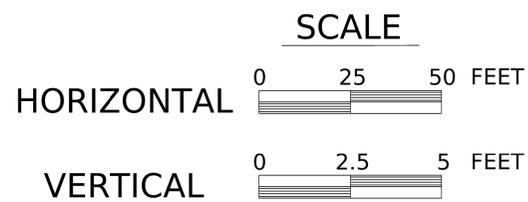


DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	8 OF 9
	CITY OF PHILADELPHIA			
REV NO	REVISIONS	DATE	BY	APPD



EXISTING PROFILE
TRACK 3

DATUM: 0



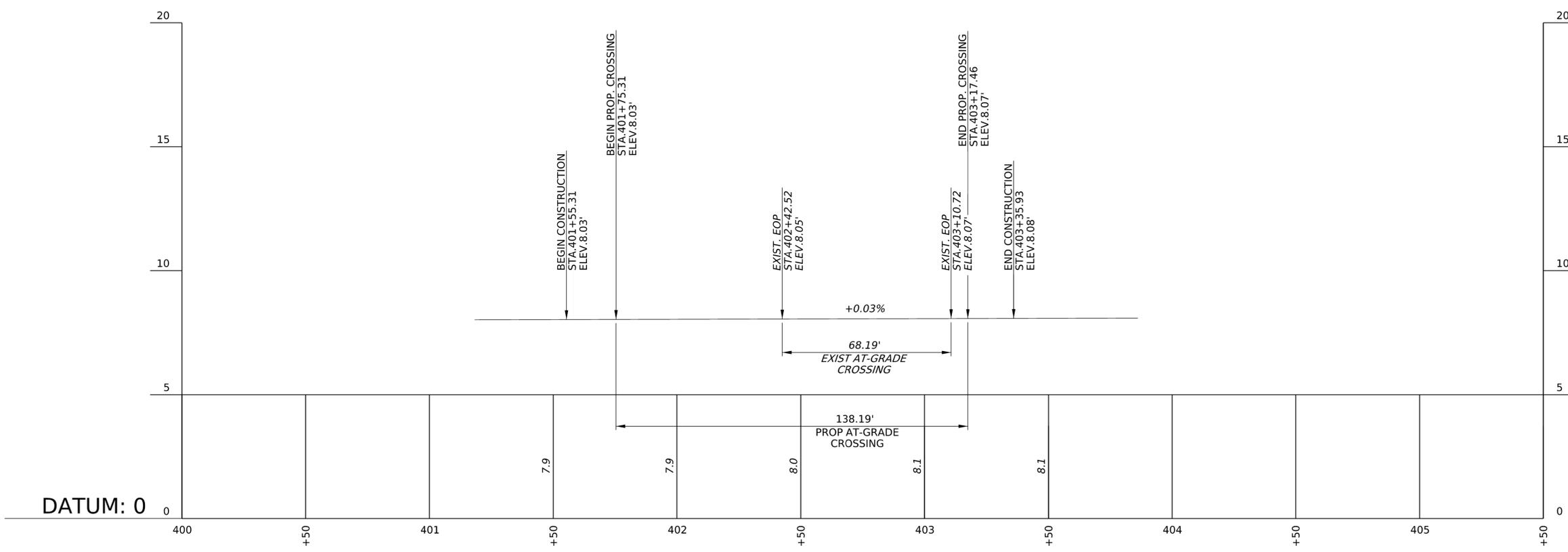
NOTES:
1. PROPOSED TOP OF RAIL SHOWN TO MATCH EXISTING.
2. ALL ELEVATIONS ARE SHOWN IN FEET.

AT GRADE CROSSING
TRACK PROFILES



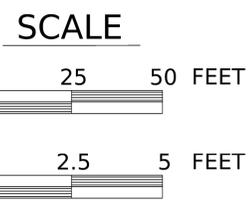
OPERATOR: Georges.Micera
FILE NAME: pw://kh-pw.bentley.com:kh-pw-01/Documents/01 Active Projects/AT-HBG-112464014 - E05849 WO 2 PhilaPort PE/CAD/PlanSheets/Rail Crossing/E05849_Prof-R.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	9 OF 9
	CITY OF PHILADELPHIA			
REV NO	REVISIONS	DATE	BY	APPD



EXISTING PROFILE
TRACK 4

DATUM: 0



NOTES:
1. PROPOSED TOP OF RAIL SHOWN TO MATCH EXISTING.
2. ALL ELEVATIONS ARE SHOWN IN FEET.

AT GRADE CROSSING
TRACK PROFILES



OPERATOR: Georges.Micera
FILE NAME: pw://kh-pw.bentley.com:kh-pw-01/Documents/01 Active Projects/AT-HBG-112464014 - E05849 WO 2 PhilaPort PE/CAD/PlanSheets/Rail Crossing/E05849_Prof-R.dgn

TABULATION OF QUANTITIES

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
				06	PHILADELPHIA	0000	CPD	2 OF 7



FIBER OPTIC CABLE, 12 STRANDS		SIGNAL CABLE, 14 AWG, 30 CONDUCTOR		ACCESSIBLE PEDESTRIAN PUSH BUTTONS		COMPOSITE JUNCTION BOX, 12"X18"X12"		COMPOSITE JUNCTION BOX, 39" OD X 24"		20' C-POST		TRAFFIC D-POLE (80')		ATC STANDARD CONTROLLER ASSEMBLY, ATC RACK MOUNT CABINET (46" H X 24" W X 20" D)		ATMS INTEGRATION AND SOFTWARE MODIFICATION		ELECTRICAL SERVICE WIRE, #6 AWG		REMOVAL OF TRAFFIC SIGNAL EQUIPMENT		AWG 6 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR, PECO SERVICE		VIDEO DETECTION SYSTEM, CAMERA (DUAL VIDEO RADAR SYSTEM)		ACQUISITION OF TRAFFIC SIGNAL SUPPORTS		REMARKS		SIDE	STATIONS			
9000 0013 LF	9000 0230 LF	9000 0924 EACH	9000 2110 EACH	9000 2112 EACH	9000 2220 EACH	9000 2223 EACH	9000 2406 EACH	9000 2451 EACH	9000 2521 LF	9000 2601 EACH	9000 4115 LF	9920 0411 EACH	9951 0180 EACH																					
TRAFFIC SIGNAL PLAN																																		
36		5	8	1	3	1	1	1		1	246	4	1																				ENTIRE PROJECT	0+00.00
	46										46																						JUNCTION BOX 6 TO STRUCTURE 7	LT 301+65.61 to 301+65.75
	290										145																						JUNCTION BOX 6 TO JUNCTION BOX 5	LT / RT 301+65.61 to 302+19.76
	270										135																						JUNCTION BOX 6 TO JUNCTION BOX 3	LT 301+65.61 to 302+94.28
	11										11																						JUNCTION BOX 5 TO STRUCTURE 6	RT 302+19.76 to 302+21.68
	310										155																						JUNCTION BOX 3 TO JUNCTION BOX 4	LT / RT 302+94.28 to 302+94.48
	19										19																						JUNCTION BOX 3 TO STRUCTURE 4	LT 302+94.28 to 302+97.69
	92										46																						JUNCTION BOX 3 TO JUNCTION BOX 2	LT 302+94.28 to 303+35.20
	11										11																						JUNCTION BOX 4 TO STRUCTURE 5	RT 302+94.48 to 302+95.59
	35																																STRUCTURE 3 TO JUNCTION BOX 2	LT 303+35.10 to 303+35.20
	16																																JUNCTION BOX 2 TO STRUCTURE 2	LT 303+35.20 to 303+35.20
	116										58																						JUNCTION BOX 2 TO JUNCTION BOX 1	LT 303+35.20 to 303+88.81
	13																																JUNCTION BOX 9 TO STRUCTURE 10	RT 303+76.98 to 303+76.98
									19																								UTILITY POLE TO CONTROLLER CABINET	LT 303+76.98 to 303+88.81
	46																																JUNCTION BOX 9 TO JUNCTION BOX 8	RT 303+76.98 to 303+90.24
	26										26																						STRUCTURE 1 TO JUNCTION BOX 1	LT 303+84.57 to 303+88.81
	10																																STRUCTURE 8 TO JUNCTION BOX 7	LT 303+86.99 to 303+90.24
	9										9																						STRUCTURE 9 TO JUNCTION BOX 8	RT 303+87.74 to 303+90.24
	102										51																						JUNCTION BOX 1 TO CONTROLLER CABINET	LT 303+88.81 to 303+88.81
	36								17		18																						CONTROLLER CABINET TO JUNCTION BOX 7	LT 303+88.81 to 303+90.24
											69																						JUNCTION BOX 7 TO JUNCTION BOX 1	LT 303+90.24 to 303+88.81
	140										70																						JUNCTION BOX 7 TO JUNCTION BOX 8	LT / RT 303+90.24 to 303+90.24
36	1598	5	8	1	3	1	1	1	36	1	1115	4	1																				TOTALS	

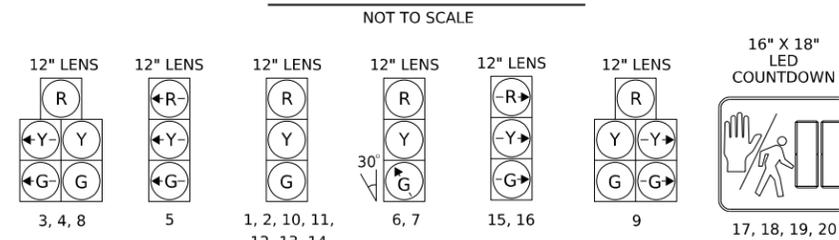
PLOTTED: 8/13/2025 7:08:02 PM

MOVEMENT, SEQUENCE, & TIMING DIAGRAM

Timing diagram table with columns for PHASE, INTERVALS, SIGNALS, and various signal states (G, Y, R, G-G, Y-Y, R-R) across 29 intervals.

FOR CONTRACTOR IMPLEMENTATION AS PART OF SIGNAL UPGRADE. SIGNAL TO RUN FREE. ALL EXCESS GREEN TIME TO GO TO PHASE 2 + 6. Includes notes for G/G-G, H, R, G/G, and G/G-G.

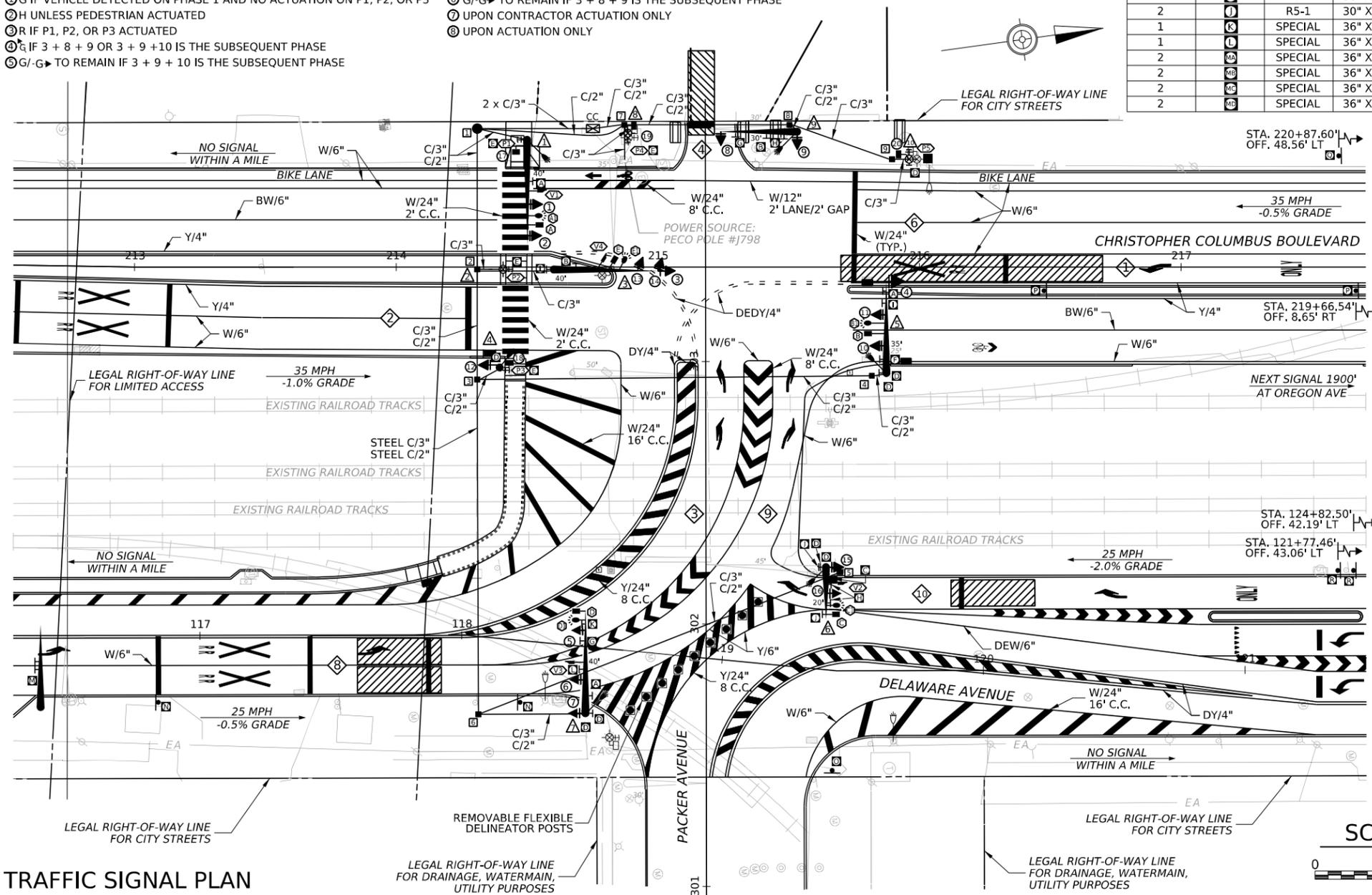
SIGNAL INDICATIONS



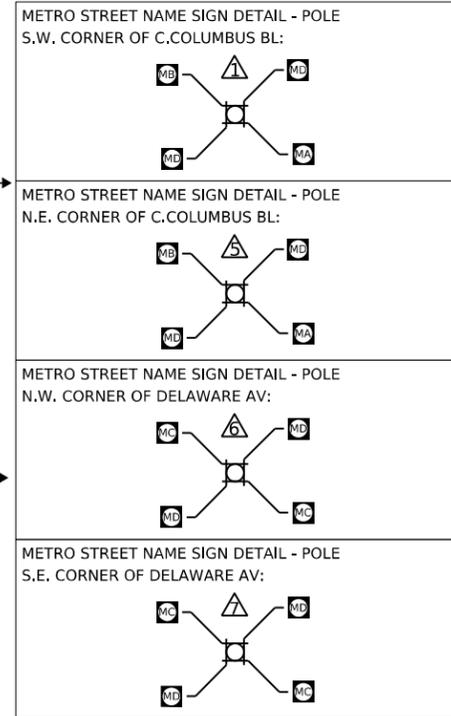
ALL VEHICULAR SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS. ALL OVERHEAD SIGNALS TO INCLUDE RETROREFLECTIVE BACKPLATES. SIGNALS TO BE EQUIPPED WITH TUNNEL LOUVERS.

SIGN TABULATION

Table with columns: QUAN, PLAN SYMBOL, SERIES NUMBER, SIGN DIMENSIONS, DESCRIPTION. Lists various signs like 'OVERHEAD STREET NAME SIGN', 'NO TURN ON RED', etc.



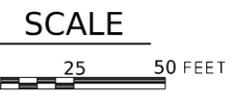
* INTERNALLY ILLUMINATED SIGN REFER TO SHEET 6 FOR ADDITIONAL SIGN TABULATIONS



Project information table including DISTRICT (6-0), COUNTY (PHILADELPHIA), ROUTE (0000), SECTION (CPD), and APPROVED (Kasim K. Ali, 9/15/2025).

MATERIAL LIST table with columns: ITEM NO., QUAN, UNIT, DESCRIPTION. Lists items like 'STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS', 'TRENCH & BACKFILL', etc.

LEGEND table defining symbols for 'NEW MAST ARM / LENGTH', 'NEW C.O.P. C-POST', 'NEW SUPPORT NUMBER', etc.



LICENSE NO. PE091721 DATE: 09/10/2025

CITY OF PHILADELPHIA TRAFFIC CONTROL SYSTEM PACKER AVENUE AT DELAWARE AVENUE & CHRISTOPHER COLUMBUS BOULEVARD

TRAFFIC SIGNAL PLAN

OPERATOR: Austin Denlinger FILE NAME: c:\pwworking\100419494\Signal Plans_V2.dgn

EMERGENCY PRE-EMPTION MOVEMENT, SEQUENCE, AND TIMING DIAGRAM

Timing diagram for emergency pre-emption showing phases 2, 1+6, 3+8+9, 3+9+10, and 4. Includes signal intervals and timing for various signal heads (R, G, Y, H, M, F, OFF).

EMERGENCY PRE-EMPTION NOTES

CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR EACH APPROACH WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.

EMERGENCY BEACON TO CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH.

SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE ARE TO TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.

PEDESTRIAN TIME TO BE SPLIT BETWEEN PED "WALK (MAN)" AND PED "CLEAR (HAND)". THE PED "WALK (MAN)" INTERVAL TO TERMINATE IMMEDIATELY, FOLLOWED BY THE PED "CLEAR (HAND)" INTERVAL. INTERVAL TO TIME OUT FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES, BEFORE GOING INTO EMERGENCY PRE-EMPTION.

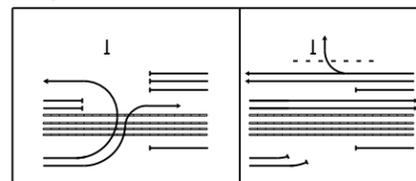
IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE TO TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.

UPON COMPLETION OF ANY PRE-EMPTION PHASE, IN RETURNING TO NORMAL OPERATION, PHASE 2+5, INTERVAL 1 TO FOLLOW.

IN EMERGENCY PRE-EMPTION, NO PRIORITY TO BE ESTABLISHED, PRE-EMPTION TO BE A "FIRST COME, FIRST SERVE" OPERATION.

IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE ARE FLASHING, ALL SIGNALS TO REMAIN FLASHING.

TRAIN PRE-EMPTION MOVEMENT, SEQUENCE, AND TIMING DIAGRAM



Timing diagram for train pre-emption showing phases 11, 12, 13, 14, 15, 1, 2, 3, 4. Includes signal intervals and timing for various signal heads (R, G, Y, H, M, F, ON, OFF).

TRAIN PRE-EMPTION NOTES

THE SIGNALS, WHEN ACTUATED BY A TRAIN, TO TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, EXCEPT FOR SIGNAL HEADS 1, 2, 10, 11, AND 12, FOLLOWED BY SELECTIVE CLEARANCES DEPENDENT UPON THE PHASE IN WHICH THE PRE-EMPTION OCCURS, FOLLOWED BY TRAIN PRE-EMPTION INTERVAL.

THE SIGNALS, WHEN ACTUATED BY A TRAIN TO TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE TRAIN PRE-EMPTION PHASE. UPON COMPLETION OF TRAIN PRE-EMPTION, IN RETURNING TO NORMAL OPERATION, PHASE 2, INTERVAL 1 TO FOLLOW.

STREET LIGHTING NOTES

- 1. A PECO S&M APPLICATION NEEDS TO BE INITIATED AND SUBMITTED FOR ANY NEW STREET LIGHTING INFRASTRUCTURE WITH A COPY TO STREET LIGHTING... 2. 2" PVC CONDUIT TO BE ROUTED AROUND THE INTERSECTION FOR STREET LIGHT WIRING... 3. CONDUIT IS TO BEGIN AT POWER SOURCE AND ROUTE TO EACH TRAFFIC STRUCTURE WITH A LUMINAIRE... 4. CITY STANDARD STREET LIGHTING WIRING TO BE UTILIZED IS (3) #4 AWG WITH (1) #6 AWG GROUND... 5. PROJECT TO CONTACT STREET LIGHTING KEVIN MCGINLEY... 6. SPECIFICATION SHEETS TO BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION OF FIXTURES AND PHOTOCNTROLS... 7. STREET LIGHTING TO BE CONTACTED ONCE WORK IS COMPLETE TO SCHEDULE AN INSPECTION FOR PROPER OPERATION... 8. REFERENCE STREET LIGHTING DETAIL #SL0204 FOR 6' BRACKET... 9. REFERENCE STREET LIGHTING DETAIL #TE0101 FOR 20' C-POST... 10. REFERENCE STREET LIGHTING DETAIL #TE0102 FOR 20' C-POST SPLIT BASE ASSEMBLY... 11. REFERENCE STREET LIGHTING DETAIL #TE0201FOR 30' D-POLE... 12. REFERENCE STREET LIGHTING DETAIL #TE0202 FOR 30' D-POLE FOUNDATION... 13. REFERENCE STREET LIGHTING DETAIL #TE0703 FOR 30' D-POLE TAP... 14. IF THERE ARE ANY SIDEWALK MODIFICATIONS, THEN A 2" REVEAL FOR STREET LIGHT POLE FOUNDATIONS MUST BE MAINTAINED AT FINAL GRADE... 15. PROTECT ALL STREET LIGHTING INFRASTRUCTURE DURING CONSTRUCTION... 16. CONTACT STREET LIGHTING TWO WEEKS PRIOR TO POURING STREET LIGHTING FOUNDATIONS FOR POLE SPOTTING MEETING... 17. REFERENCE CITY OF PHILADELPHIA, DEPARTMENT OF STREETS DETAIL TE0201, TE0202, AND TE0703 FOR 30' D-POLE, D-POLE FOUNDATION, AND D-POLE TAP FOR PROPOSED D-POLES... 18. REFERENCE CITY OF PHILADELPHIA, DEPARTMENT OF STREETS DETAIL SL0204 FOR 6' BRACKET... 19. STREETLIGHTING CURCUIT TO HAVE ITS OWN DEDICATED SERVICE TAP SEPERATE FROM THE SERVICE TAP FOR THE TRAFFIC SIGNAL CICIUT.

RAILROAD PRE-EMPTION PARAMETERS (SECONDS)

Table with 3 columns: Description, Value. Rows include MT (20), CT (4), APT (42), and Maximum Pre-emption Time (66).

RAILROAD PRE-EMPTION TIMING SEQUENCE

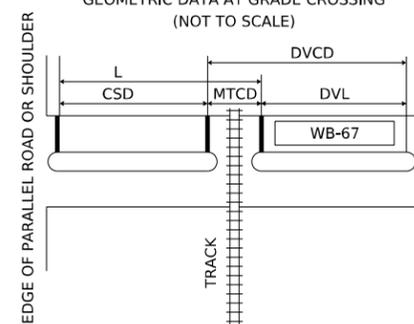
RIGHT OF WAY TRANSFER TIME: 27 SECONDS
QUEUE CLEARANCE TIME: 34 SECONDS
DESIRED MAXIMUM SEPERATION TIME: 4 SECONDS
MAXIMUM PRE-EMPTION TIME: 66 SECONDS

RAILROAD LIGHTS FLASH AFTER: 28 SECONDS
RAILROAD GATES START DESCENDING AFTER: 33 SECONDS
RAILROAD GATES DOWN AFTER: 43 SECONDS
FASTEST TRAIN CROSSES AFTER: 66 SECONDS

QUEUE CLEARANCE TIME CALCULATION PARAMETERS

Table with 3 columns: Description, Value. Rows include CSD (8'), MTCD (73'), DVL (75'), L (185'), and DVCD (252').

GEOMETRIC DATA AT GRADE CROSSING (NOT TO SCALE)



Project information table including District (6-0), County (PHILADELPHIA), Route (0000), Section (CPD), and Page (4 OF 7).

Approval table with columns for Rev No, Revisions, Date, By, and Appd. Includes signature of Kasim K. Ali and Ashwin B. Patel, P.E.

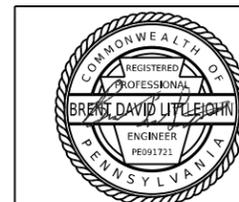
MATERIAL LIST

Empty table for material list.

LEGEND

Legend table listing symbols and descriptions for various traffic control elements like mast arms, C.O.P., detectors, and foundations.

CITY OF PHILADELPHIA TRAFFIC CONTROL SYSTEM



LICENSE NO. PE091721
DATE: 09/10/2025

PACKER AVENUE AT DELAWARE AVENUE & CHRISTOPHER COLUMBUS BOULEVARD

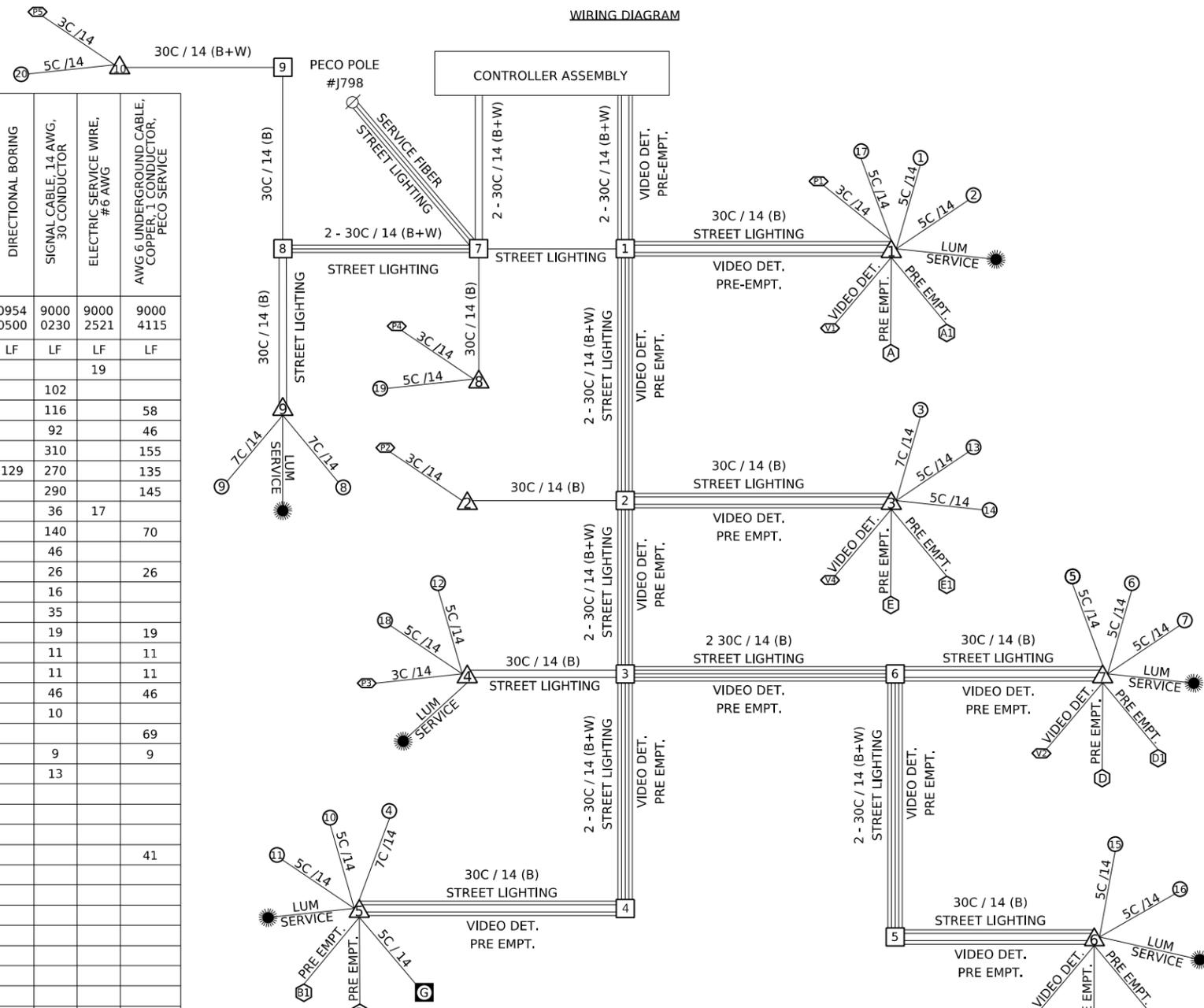
TRAFFIC SIGNAL PLAN

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	AWG 4 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR, PECO SERVICE	2" DIRECT BURIAL CONDUIT MODIFIED	3" DIRECT BURIAL CONDUIT MODIFIED	2" CONDUIT, STEEL, UNDER TRACKS	3" CONDUIT, STEEL, UNDER TRACKS	TRENCH AND BACKFILL, TYPE 1	TRENCH AND BACKFILL, TYPE 2	TRENCH AND BACKFILL, TYPE 3	SIGNAL CABLE, 14 AWG, 3 CONDUCTOR	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	DIRECTIONAL BORING	SIGNAL CABLE, 14 AWG, 30 CONDUCTOR	ELECTRIC SERVICE WIRE, #6 AWG	AWG 6 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR, PECO SERVICE
ITEM NUMBER	4910 4114	4910 5055	4910 5059	4954 0012	4954 0013	0954 0151	0954 0152	0954 0153	0954 0201	0954 0202	0954 0203	0954 0500	9000 0230	9000 2521	9000 4115
UNIT	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
SERVICE TO JB 7			14				14							19	
CC TO JB1			90				45						102		
JB 1 TO JB 2	174	52	52				20	32					116		58
JB 2 TO JB 3	138	40	40			6	6	28					92		46
JB 3 TO JB 4	465	149	149			30		119					310		155
JB 3 TO JB 6	405			129	129							129	270		135
JB 6 TO JB 5	435	139	139			22		117					290		145
CC TO JB 7			12				12						36	17	
JB 7 TO JB 8	210	64	64				45	19					140		70
JB 8 TO JB 9			40				40						46		
JB 1 TO SS 1	78	20	20				20						26		26
JB 2 TO SS 2			10				10						16		
JB 2 TO SS 3			29				29						35		
JB 3 TO SS 4	57	13	13			13							19		19
JB 4 TO SS 5	33	5	5			5							11		11
JB 5 TO SS 6	33	5	5			5							11		11
JB 6 TO SS 7	138	40	40			40							46		46
JB 7 TO SS 8			4				4						10		
JB 7 TO JB 1	207	57					57								69
JB 8 TO SS 9	27	3	3				3						9		9
JB 9 TO SS 10			7				7						13		
SS 1 TO 1													50		
SS 1 TO 2													62		
SS 1 TO 17													15		
SS 1 TO 21	123														41
SS 1 TO 22									4						
SS 2 TO 22									4						
SS 3 TO 3													65		
SS 3 TO 13													57		
SS 3 TO 14													65		
SS 4 TO 12													20		
SS 4 TO 18													15		
SS 4 TO 23									4						
SS 4 TO 24	123														41
SS 5 TO 4													60		
SS 5 TO 10													36		
SS 5 TO 11													48		
SS 5 TO 12	123														41
SS 5 TO F													31		
SS 6 TO 15													20		
SS 6 TO 16													35		
SS 6 TO 20	123														41
SS 7 TO 5													57		
SS 7 TO 6													38		
SS 7 TO 7													20		
SS 7 TO 19	123														41
SS 8 TO 19													15		
SS 8 TO 23									4						
SS 9 TO 8													54		
SS 9 TO 9													20		
SS 9 TO 20	123														41
SS 10 TO 20													15		
SS 10 TO 25									4						
TOTAL	3138	587	736	129	129	121	312	315	20	599	199	129	1598	36	1046

CC = CONTROLLER CABINET
JB = JUNCTION BOX
SS = SIGNAL SUPPORT

WIRING DIAGRAM

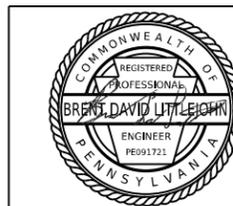


WIRING DIAGRAM LEGEND

- ▲ SUPPORT NUMBER
- JUNCTION BOX
- Ⓢ SIGNAL HEAD
- Ⓟ PEDESTRIAN PUSH BUTTON
- Ⓜ PRE EMPT. DETECTOR
- Ⓜ PRE EMPT. BEACON
- Ⓜ VIDEO DETECTOR
- ☀ LUMINAIRE SERVICE
- Ⓧ UTILITY POLE

WIRING DIAGRAM NOTES:

VIDEO DETECTION AND EMERGENCY PREEMPTION QUNANTITIES TO BE DETERMINED BY CONTRACTOR.



LICENSE NO. PE091721
DATE: 09/10/2025

DISTRICT	COUNTY	ROUTE	SECTION	
6-0	PHILADELPHIA	0000	CPD	5 OF 7

CITY OF PHILADELPHIA				
REV NO	REVISIONS	DATE	BY	APPD

MATERIAL LIST

APPROVED <u>Kasim K. Ali</u> 9/15/2025 TRAFFIC ENGINEERING DIVISION DATE	
DESIGN REVIEW <u>Ashwin B. Patel, P.E.</u> PENNDOT TRAFFIC ENGINEER DATE	Digitally signed by Ashwin B. Patel, P.E. Date: 2025.09.15 13:58:18 -0400

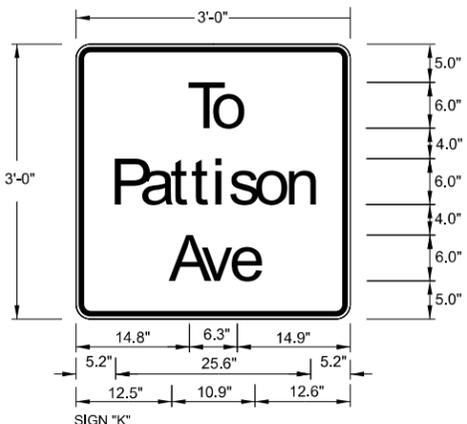
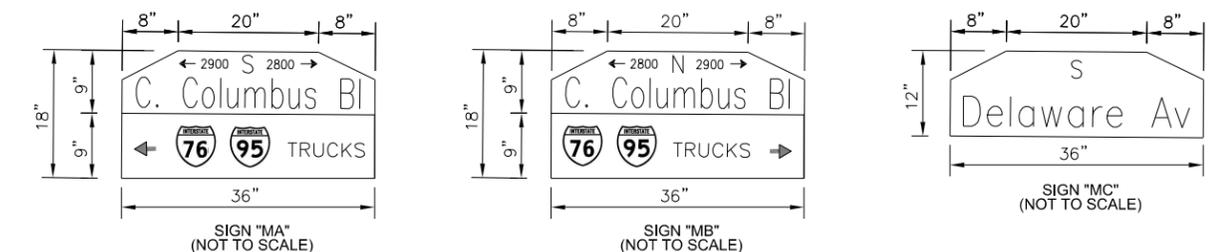
LEGEND	
25' NEW MAST ARM / LENGTH	NEW PREEMPT. DETECTOR / ID
EX. MAST ARM / LENGTH	NEW PREEMPT. BEACON / ID
NEW C.O.P. C-POST	NEW VIDEO DETECTOR / ID
EX. C.O.P. C-POST	NEW CONDUIT / SIZE
NEW C.O.P. D-POLE	NEW AERIAL SERVICE WIRE
EX. C.O.P. D-POLE	EX. AERIAL WIRE
NEW SUPPORT NUMBER	DY / 4" DOUBLE SOLID YELLOW LINE / WIDTH
NEW SIGNAL HEAD / NUMBER	DEDY / 4" DOTTED EXTENSION DOUBLE YELLOW LINE / WIDTH
NEW PEDESTRIAN SIGNAL HEAD / NUMBER	W / 4" SOLID WHITE LINE / WIDTH
EX. PEDESTRIAN SIGNAL HEAD	NEW CURB RAMP
EX. SIGN	EX. CURB RAMP
NEW STRUCTURE MOUNTED SIGN	VIDEO DETECTION AREA
NEW JUNCTION BOX / NUMBER	SIGNAL PHASE NUMBER
EX. JUNCTION BOX / NUMBER	CC NEW CONTROLLER
NEW LUMINAIRE	EX. CONTROLLER
EX. LUMINAIRE	EX. WATER VALVE
NEW PEDESTRIAN PUSH BUTTON, SIGNING / ID	EX. UTILITY MANHOLE
EX. PEDESTRIAN PUSH BUTTON, SIGNING	EX. STORMWATER MANHOLE
EX. FIRE HYDRANT	EX. UTILITY PWR. MANHOLE
	EX. TELE./COMM. MANHOLE
	EX. UTILITY POLE
	EX. CONCRETE FOUNDATION

CITY OF PHILADELPHIA
TRAFFIC CONTROL SYSTEM

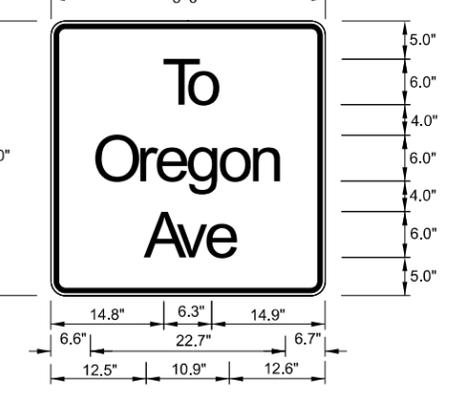
PACKER AVENUE AT DELAWARE AVENUE &
CHRISTOPHER COLUMBUS BOULEVARD

TRAFFIC SIGNAL PLAN

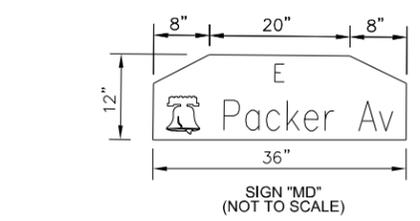
SIGN TABULATION						
PLAN SYMBOL	SERIES NUMBER	DESCRIPTION	SIZE WxH	AREA (SF)	ST. MTD. 0936-0200	
					QUANTITY	TOTAL AREA
A	D3-4	OVERHEAD STREET SIGN NAME - "PACKER AV"	96" X 28.6"	19.07	3	57.21
B	D3-4	OVERHEAD STREET SIGN NAME - "C COLUMBUS BL"	96" X 28.6"	19.07	2	38.14
C	R10-11	NO TURN ON RED	24" X 30"	5.00	1	5.00
D	R9-3	NO PEDESTRIAN CROSSING	18" X 18"	2.25	8	18.00
E	R10-3R MOD.	PUSH OR WAVE AT BUTTON FOR MAN	9" X 12"	0.75	5	3.75
F	R3-1	NO RIGHT TURN - TRAIN BLANK-OUT	30" X 36"	7.50	1	7.50
G	R10-10L	LEFT TURN SIGNAL	30" X 36"	7.50	1	7.50
H	R10-10R	RIGHT TURN SIGNAL	30" X 36"	7.50	3	22.50
I	R3-2	NO LEFT TURN	36" X 18"	4.50	2	9.00
J	R5-1	DO NOT ENTER	30" X 30"	6.25	2	12.50
K	SPECIAL	"TO PATTISON AV"	36" X 36"	9.00	1	9.00
L	SPECIAL	"TO OREGON AV"	36" X 36"	9.00	1	9.00
MA	SPECIAL	METRO STREET SIGN NAME - "C COLUMBUS BL"	36" X 18"	4.50	2	9.00
MB	SPECIAL	METRO STREET SIGN NAME - "C COLUMBUS BL"	36" X 18"	4.50	2	9.00
MC	SPECIAL	METRO STREET SIGN NAME - "DELAWARE AV"	36" X 12"	3.00	2	6.00
MD	SPECIAL	METRO STREET SIGN NAME - "PACKER AV"	36" X 12"	3.00	2	6.00
TOTAL					38	229.10



SIGN "K"
SIGN SIZE: 3'-0" x 3'-0"
SIGN AREA: 9 SQUARE FEET
BORDER RADIUS: 1.5"
BORDER THICKNESS: 0.6"
BORDER INSET: 0.4"
BACKGROUND COLOR: GREEN (RETROREFLECTIVE)
BORDER COLOR: WHITE (RETROREFLECTIVE)
LEGEND COLOR: WHITE (RETROREFLECTIVE)
LEGEND SIZE: 6"
LEGEND SERIES: ClearviewHwy-1-w [To], [Pattison], [Ave]
NOT TO SCALE



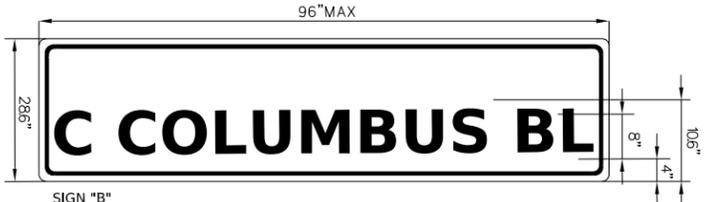
SIGN "L"
SIGN SIZE: 3'-0" x 3'-0"
SIGN AREA: 9 SQUARE FEET
BORDER RADIUS: 1.5"
BORDER THICKNESS: 0.6"
BORDER INSET: 0.4"
BACKGROUND COLOR: GREEN (RETROREFLECTIVE)
BORDER COLOR: WHITE (RETROREFLECTIVE)
LEGEND COLOR: WHITE (RETROREFLECTIVE)
LEGEND SIZE: 6"
LEGEND SERIES: ClearviewHwy-1-w [To], [Oregon], [Ave]
NOT TO SCALE



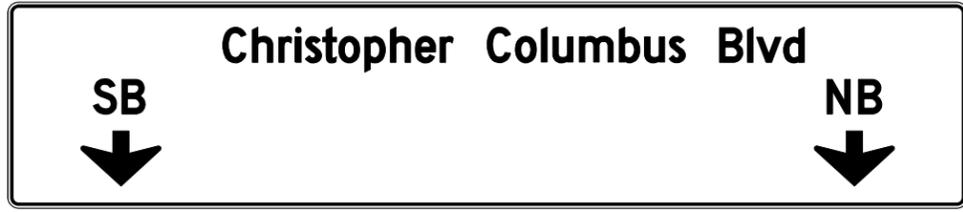
SIGN "F"
30" X 36"
NOT TO SCALE



SIGN "A"
CLEARVIEW HIGHWAY LETTERS
SERIES 1-W
BORDER = 1" AT 1" OFFSET
CORNER RADIUS 2.5"
NOT TO SCALE



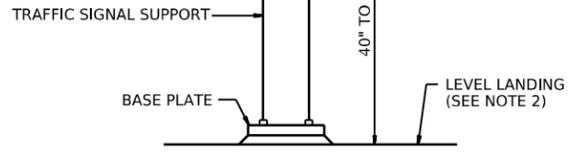
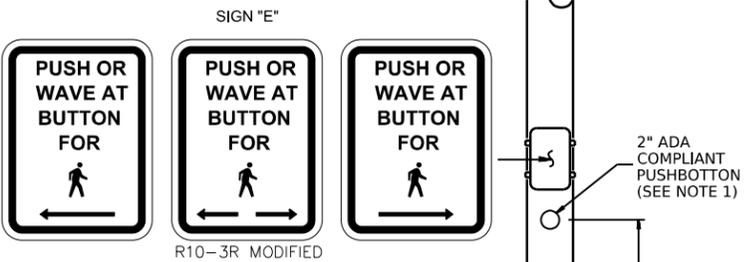
SIGN "B"
CLEARVIEW HIGHWAY LETTERS
SERIES 1-W
BORDER = 1" AT 1" OFFSET
CORNER RADIUS 2.5"
NOT TO SCALE



SIGN "M"
168" X 36"
NOT TO SCALE
(FOR INFORMATION ONLY)

SIGN TABULATION (FOR INFORMATION ONLY)				
QUAN	PLAN SYMBOL	SERIES NUMBER	SIGN DIMENSIONS	DESCRIPTION
1	M	FAB-9	168" X 36"	CHRISTOPHER COLUMBUS BLVD SB/NB
2	N	R3-8A(L-R)	30" X 30"	ADVANCED INTERSECTION LANE CONTROL
1	O	R3-7-1R	36" X 36"	ALL TRAFFIC MUST TURN RIGHT
2	P	R3-7LA	24" X 48"	LEFT LANE MUST TURN LEFT
1	Q	R3-8B(L-S-SR)	48" X 30"	ADVANCED INTERSECTION LANE CONTROL
2	R	R3-7R	36" X 36"	RIGHT LANE MUST TURN RIGHT

REFER TO SIGNING AND PAVEMENT MARKING PLAN FOR DETAILS.



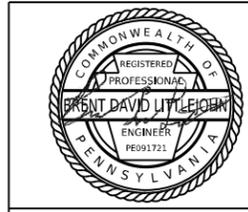
PUSHBUTTON VERTICAL PLACEMENT

SIGNALS TO BE EQUIPPED WITH ACCESSIBLE PEDESTRIAN SIGNALS (APS) WITH THE FOLLOWING FEATURES:

- ADA COMPLIANT PUSHBUTTON WITH MATCHING LED INDICATOR AND TONE.
- A TACTILE DIRECTIONAL ARROW. TACTILE ARROW TO BE ALIGNED PARALLEL TO THE CROSSING AND VIBRATE DURING WALK INDICATION.
- A PUSHBUTTON LOCATOR TONE. LOCATOR TONE TO HAVE A DURATION OF 0.15 SECONDS AND REPEAT AT 1 SECOND INTERVALS, TO BE INTENSITY RESPONSIVE TO AMBIENT SOUND, AND AUDIBLE FROM 6-12 FEET FROM THE PUSHBUTTON.
- ACTUATION OF THE PEDESTRIAN PUSHBUTTON TO BE ACCOMPANIED BY THE SPEECH MESSAGE "WAIT" WHEN THE WALK INTERVAL IS NOT TIMING
- THE WALK INDICATION TO BE THE VERBAL WALK MESSAGE "CHRISTOPHER COLUMBUS BLVD, WALK SIGN IS ON TO CROSS CHRISTOPHER COLUMBUS BLVD."

NOTES:

1. PEDESTRIAN PUSHBUTTONS TO BE A MINIMUM OF 2" DIAMETER AND A FORCE PER ACTUATION THAT CANNOT EXCEED 5 LBS.
2. ALL ACCESSIBILITY FEATURES MUST BE COMPLIANT TO PENNDOT PUBLICATION 12M (DM-2), CHAPTER 6, PUBLICATION 72M (RC STANDARDS) CRITERIA AND PUBLICATION 149.



LICENSE NO. PE091721
DATE: 09/10/2025

DISTRICT	COUNTY	ROUTE	SECTION	
6-0	PHILADELPHIA	0000	CPD	6 OF 7
CITY OF PHILADELPHIA				
REV NO	REVISIONS	DATE	BY	APPD
APPROVED		Kasim K. Ali		9/15/2025
DESIGN REVIEW		Ashwin B. Patel, P.E.		DATE
PW		PENNDOT TRAFFIC ENGINEER		DATE

MATERIAL LIST	
25'	NEW MAST ARM / LENGTH
25'	EX. MAST ARM / LENGTH
⊕	NEW C.O.P. C-POST
⊕	EX. C.O.P. C-POST
⊕	NEW C.O.P. D-POLE
⊕	EX. C.O.P. D-POLE
⚠	NEW SUPPORT NUMBER
⚠	EX. SUPPORT NUMBER
⚠	NEW SIGNAL HEAD / NUMBER
⚠	EX. SIGNAL HEAD / NUMBER
⚠	NEW PEDESTRIAN SIGNAL HEAD / NUMBER
⚠	EX. PEDESTRIAN SIGNAL HEAD / NUMBER
⚠	NEW JUNCTION BOX / NUMBER
⚠	EX. JUNCTION BOX / NUMBER
⚠	NEW LUMINAIRE
⚠	EX. LUMINAIRE
⚠	NEW PEDESTRIAN PUSH BUTTON, SIGNING / ID
⚠	EX. PEDESTRIAN PUSH BUTTON, SIGNING
⚠	EX. FIRE HYDRANT
⚠	NEW PREEMPT. DETECTOR/ID
⚠	NEW PREEMPT. BEACON/ID
⚠	NEW VIDEO DETECTOR / ID
⚠	NEW CONDUIT / SIZE
⚠	NEW AERIAL SERVICE WIRE
⚠	EX. AERIAL WIRE
⚠	DOUBLE SOLID YELLOW LINE / WIDTH
⚠	DOTTED EXTENSION DOUBLE YELLOW LINE / WIDTH
⚠	SOLID WHITE LINE / WIDTH
⚠	NEW CURB RAMP
⚠	EX. CURB RAMP
⚠	VIDEO DETECTION AREA
⚠	SIGNAL PHASE NUMBER
⚠	NEW CONTROLLER
⚠	EX. CONTROLLER
⚠	EX. WATER VALVE
⚠	EX. UTILITY MANHOLE
⚠	EX. STORMWATER MANHOLE
⚠	EX. UTILITY PWR. MANHOLE
⚠	EX. TELE./COMM. MANHOLE
⚠	EX. UTILITY POLE
⚠	EX. CONCRETE FOUNDATION

LEGEND	
25'	NEW MAST ARM / LENGTH
25'	EX. MAST ARM / LENGTH
⊕	NEW C.O.P. C-POST
⊕	EX. C.O.P. C-POST
⊕	NEW C.O.P. D-POLE
⊕	EX. C.O.P. D-POLE
⚠	NEW SUPPORT NUMBER
⚠	EX. SUPPORT NUMBER
⚠	NEW SIGNAL HEAD / NUMBER
⚠	EX. SIGNAL HEAD / NUMBER
⚠	NEW PEDESTRIAN SIGNAL HEAD / NUMBER
⚠	EX. PEDESTRIAN SIGNAL HEAD / NUMBER
⚠	NEW JUNCTION BOX / NUMBER
⚠	EX. JUNCTION BOX / NUMBER
⚠	NEW LUMINAIRE
⚠	EX. LUMINAIRE
⚠	NEW PEDESTRIAN PUSH BUTTON, SIGNING / ID
⚠	EX. PEDESTRIAN PUSH BUTTON, SIGNING
⚠	EX. FIRE HYDRANT
⚠	NEW PREEMPT. DETECTOR/ID
⚠	NEW PREEMPT. BEACON/ID
⚠	NEW VIDEO DETECTOR / ID
⚠	NEW CONDUIT / SIZE
⚠	NEW AERIAL SERVICE WIRE
⚠	EX. AERIAL WIRE
⚠	DOUBLE SOLID YELLOW LINE / WIDTH
⚠	DOTTED EXTENSION DOUBLE YELLOW LINE / WIDTH
⚠	SOLID WHITE LINE / WIDTH
⚠	NEW CURB RAMP
⚠	EX. CURB RAMP
⚠	VIDEO DETECTION AREA
⚠	SIGNAL PHASE NUMBER
⚠	NEW CONTROLLER
⚠	EX. CONTROLLER
⚠	EX. WATER VALVE
⚠	EX. UTILITY MANHOLE
⚠	EX. STORMWATER MANHOLE
⚠	EX. UTILITY PWR. MANHOLE
⚠	EX. TELE./COMM. MANHOLE
⚠	EX. UTILITY POLE
⚠	EX. CONCRETE FOUNDATION

CITY OF PHILADELPHIA
TRAFFIC CONTROL SYSTEM
PACKER AVENUE AT DELAWARE AVENUE & CHRISTOPHER COLUMBUS BOULEVARD

REFER TO TRAFFIC STANDARDS - SIGNALS, TC-8801 AND TC-8803 FOR LETTER DESIGNATIONS)

TRAFFIC SIGNAL SUPPORTS

Main table with columns: STRUCTURE NUMBER, ITEM NUMBER / TYPE, LOCATION, MAST ARM, and various signal location details (H, K, L, M, N, O, P, Q, Q1, R, S, T, U, V, Y, W, G, X, Z).

SIGNAL AND SIGN LOCATIONS WITH A VALUE OF 0' INDICATE POLE MOUNTED SIGNALS/SIGNS.

MISCELLANEOUS

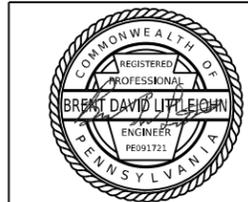
Miscellaneous table with columns: ITEM NUMBER, QUANTITY, UNIT, DESCRIPTION, LOCATION.

Project information including DISTRICT (6-0), COUNTY (PHILADELPHIA), ROUTE (0000), SECTION (CPD), and APPROVED signature (Kasim K. Ali).

MATERIAL LIST

Empty table area for the Material List.

LEGEND section containing various symbols and their corresponding descriptions for traffic signal components.



LICENSE NO. PE091721
DATE: 09/10/2025

CITY OF PHILADELPHIA
TRAFFIC CONTROL SYSTEM
PACKER AVENUE AT DELAWARE AVENUE & CHRISTOPHER COLUMBUS BOULEVARD

TRAFFIC SIGNAL PLAN

VERTICAL text on the left margin: PLOTTED: 8/13/2025 7:08:02 PM, OPERATOR: Austin, Denlinger, FILE NAME: c:\pwwork1\04049494\Signal Plans_Vz.dgn

SHEET INDEX:

SHEET NO.	DESCRIPTION:
T-1 OF 8	TITLE SHEET
W-1 OF 8	S. CHRISTOPHER COLUMBUS BOULEVARD WATER MAIN RELAY
W-2 OF 8	S. CHRISTOPHER COLUMBUS BOULEVARD WATER MAIN RELAY
W-3 OF 8	S. CHRISTOPHER COLUMBUS BOULEVARD WATER MAIN RELAY
W-4 OF 8	S. CHRISTOPHER COLUMBUS BOULEVARD WATER MAIN RELAY CROSS SECTIONS
W-5 OF 8	S. CHRISTOPHER COLUMBUS BOULEVARD WATER MAIN RELAY ACTIVE CONRAIL TRACK CROSSINGS
W-6 OF 8	TABULATION OF QUANTITIES
W-7 OF 8	TABULATION OF QUANTITIES

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	6000	CPD	1 OF 8
CITY OF PHILADELPHIA				
REVISION NUMBER	REVISIONS	DATE	BY	APPROVED



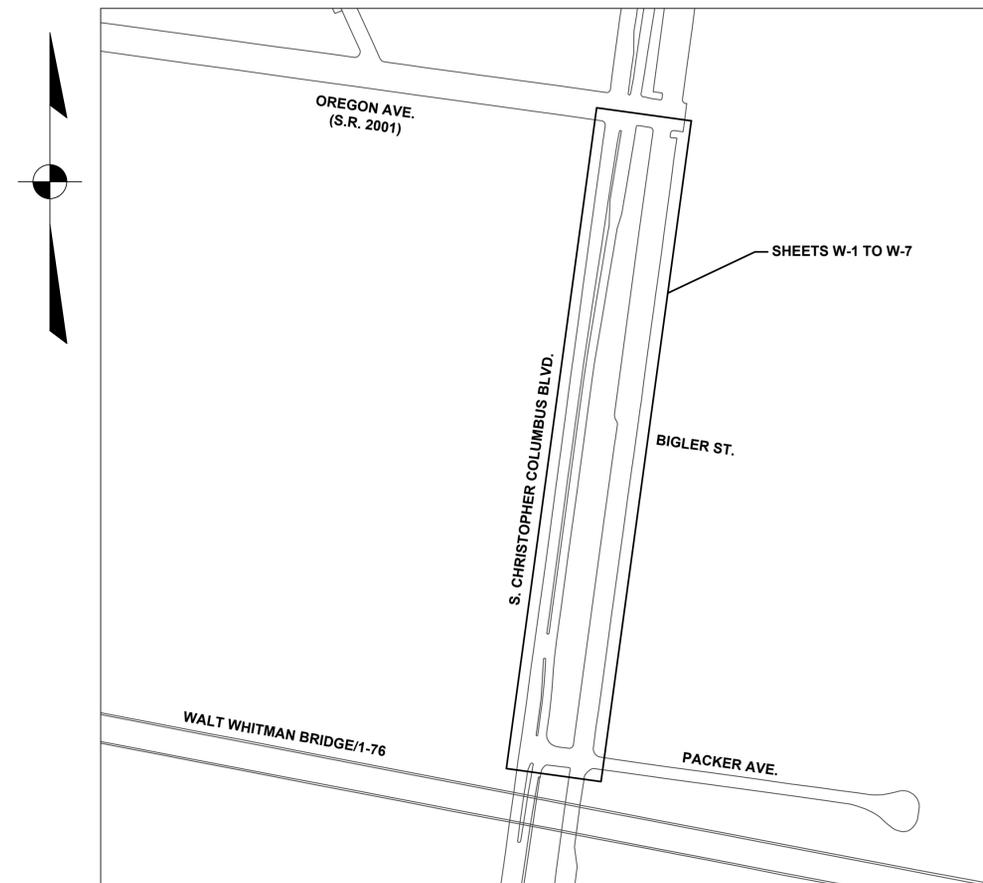
CITY OF PHILADELPHIA
WATER DEPARTMENT

PHILADELPHIA
WATER
— DEPARTMENT —

WATER MAIN RELAY PROJECT

S. CHRISTOPHER COLUMBUS BOULEVARD

PWD WORK NO. W-90482-D



LOCATION MAP
SCALE:
1" = 250'



BASE PLAN & DESIGN
PREPARED BY:



WATER MAIN RELAY PROJECT

PHILADELPHIA WATER DEPARTMENT
TITLE SHEET

APPROVED *Joe Little*
HUNT ENGINEERING COMPANY

APPROVED *Vake Hovsepian*
DEPUTY COMMISSIONER - ENGINEERING

APPROVED *[Signature]*
WATER COMMISSIONER

CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALES:
AS NOTED

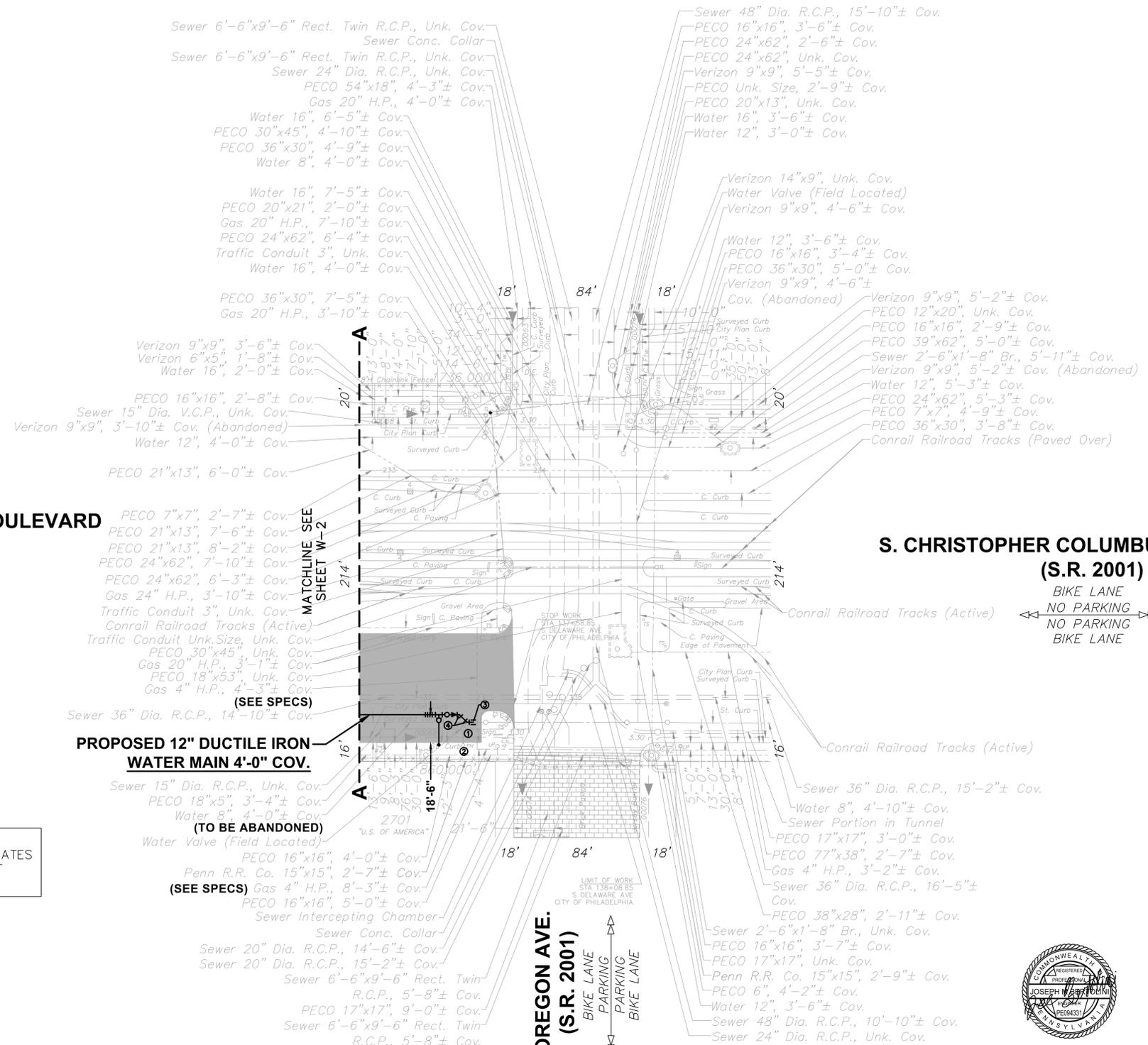
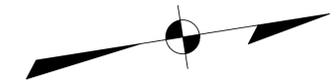
NOTE:

THE VERTICAL DATA SHOWN ON THESE PLANS IS BASED ON THE PHILADELPHIA CITY DATUM AND NOT ON PENNSYLVANIA STATE PLAN NAVD88 DATUM. THE PLANS AND DATA CONTAINED THEREIN SHALL NOT BE USED TO COORDINATE ANY OTHER SYSTEM DATUMS. USING THE HORIZONTAL AND/OR VERTICAL DATA ON THESE PLANS TO DIRECTLY TIE TO ANOTHER DATUM OTHER THAN THE PROJECT SPECIFIC DATUM MAY RESULT IN ERRORS INCLUDING MISALIGNMENTS. HUNT ENGINEERING COMPANY ASSUMES NO LIABILITY OR RESPONSIBILITY FOR TIE TO ANY DATUM OTHER THAN THAT EXPRESSLY NOTED ON THE PLAN SET.

WORK NO. W-90482-D
SHEET NO. T-1 OF 8 SHEETS

DRAWN BY:	HUNT ENGINEERING	AUG. 2025
PROJECT ENGR.		
SUPERVISOR		DATE

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	2 OF 8
REVISION NUMBER	REVISIONS	DATE	BY	APPROVED



S. CHRISTOPHER COLUMBUS BOULEVARD

BIKE LANE
NO PARKING
NO PARKING
BIKE LANE

**S. CHRISTOPHER COLUMBUS BOULEVARD
(S.R. 2001)**

BIKE LANE
NO PARKING
NO PARKING
BIKE LANE

**OREGON AVE.
(S.R. 2001)**

NOTE:
SHADED AREA INDICATES
PROPOSED PENNDOT
ROADWAY ITEMS

**PROPOSED 12" DUCTILE IRON
WATER MAIN 4'-0" COV.**

(SEE SPECS)

(TO BE ABANDONED)

(SEE SPECS)

NOTES:

DIMENSIONS AS SHOWN ARE BASED OFF OF PHYSICAL SURVEYED CURB LINES

SEE SPECIFICATION REGARDING ALL ACTIVE, INACTIVE, AND PAVED OVER RAILROAD TRACKS

ALL WORK ON OR ABOUT CONRAIL PROPERTY (OR TRACK) SHALL BE PERFORMED IN ACCORDANCE WITH: "AMERICAN RAILWAY ENGINEERING MAINTENANCE OF WAY ASSOCIATION (AREMA) REQUIREMENTS, LATEST EDITION", "SPECIFICATIONS FOR PIPELINE OCCUPANCY OF CONSOLIDATED RAIL CORPORATION PROPERTY (CE-8)" DATED APRIL 6, 2021, AND "SPECIFIC REQUIREMENTS OF CONSOLIDATED RAIL CORPORATION FOR WORK ON ITS RIGHT-OF-WAY AND OTHER PROPERTY (CE-6)" DATED OCTOBER 8, 2021.

SCALES:
PLAN 1"= 40'
AND AS NOTED

WATER MAIN NOTES:

- 1 REMOVE FRAME AND COVER.
- 2 REMOVE FIRE HYDRANTS.
- 3 REMOVE PIPE AND/OR FITTING AND RECONNECT.
- 4 ROTATE FITTING AS REQUIRED.
- 5 REMOVE AND RETURN VALVE - SEE SPEC'S

GENERAL NOTES:

ALL DISTANCES SHOWN ARE IN DISTRICT STANDARD MEASUREMENT. PAYMENT FOR ALL WORK WILL BE BASED UPON THAT STANDARD.
EXISTING WATER MAINS SHALL BE CUT & PLUGGED AS APPROVED BY THE CITY ENGINEER.
THE CONTRACTOR SHALL MAINTAIN A MINIMUM 6-INCH CLEARANCE BETWEEN ALL UNDERGROUND STRUCTURES AND THE NEW WATER MAINS.
BILLS OF MATERIAL AND PIPE TOTALS ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND PAYMENT WILL BE MADE ONLY FOR THE ACTUAL AMOUNT OF PIPE AND APPURTENANCES INSTALLED.
FIRE HYDRANTS SHALL NOT BE CONSTRUCTED OR RELOCATED UNTIL SUCH LOCATIONS HAVE BEEN APPROVED BY THE WATER DEPARTMENT CONSTRUCTION DIVISION IN THE FIELD.



PREPARED FOR:



BASE PLAN & DESIGN
PREPARED BY:



101 Lindenwood Drive | Suite 125 | Malvern, PA 19355
610.644.4600 | www.huntengineering.com

BILL OF MATERIALS

- 1 STD. FIRE HYDRANT W/CCL
- 2 STD. 7" VALVE BOXES
- 1 12" VALVE
- 1 6" VALVE
- 1 12"x6" HYD. ANCH. TEE
- 2 12" 1/8 BENDS (2 VERT.)
- 2 8" 1/8 BENDS
- 1 12"x8" REDUCER
- 1 8" SLEEVE

PIPE TOTALS (THIS SHEET)

- 20' ± 6" DUCTILE IRON WATER MAIN
- 15' ± 8" DUCTILE IRON WATER MAIN
- 65' ± 12" DUCTILE IRON WATER MAIN

PIPE TOTALS (ALL SHEETS)

- 40' ± 3" DUCTILE IRON WATER MAIN
- 30' ± 4" DUCTILE IRON WATER MAIN
- 160' ± 6" DUCTILE IRON WATER MAIN
- 75' ± 8" DUCTILE IRON WATER MAIN
- 1710' ± 12" DUCTILE IRON WATER MAIN
- 870' ± 16" DUCTILE IRON WATER MAIN

NOTICE:

PURSUANT TO THE REQUIREMENTS OF PENNSYLVANIA ACT 38 (1991), THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776, AT LEAST 3 DAYS PRIOR TO EXCAVATION

HIGHWAY DISTRICT NO. 2 WARD NO. 39
SURVEY DISTRICT NO. 2 WATER PLAT NO. 19

PA ONE CALL SERIAL 20200912240, 20200912406
GPIS NUMBER: G2020-00231

WATER MAIN RELAY PROJECT

**S. CHRISTOPHER COLUMBUS BOULEVARD
FROM
BIGLER ST. TO OREGON AVE.**

APPROVED *Joe Bortnick*
HUNT ENGINEERING COMPANY

CITY OF PHILADELPHIA
WATER DEPARTMENT

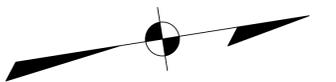
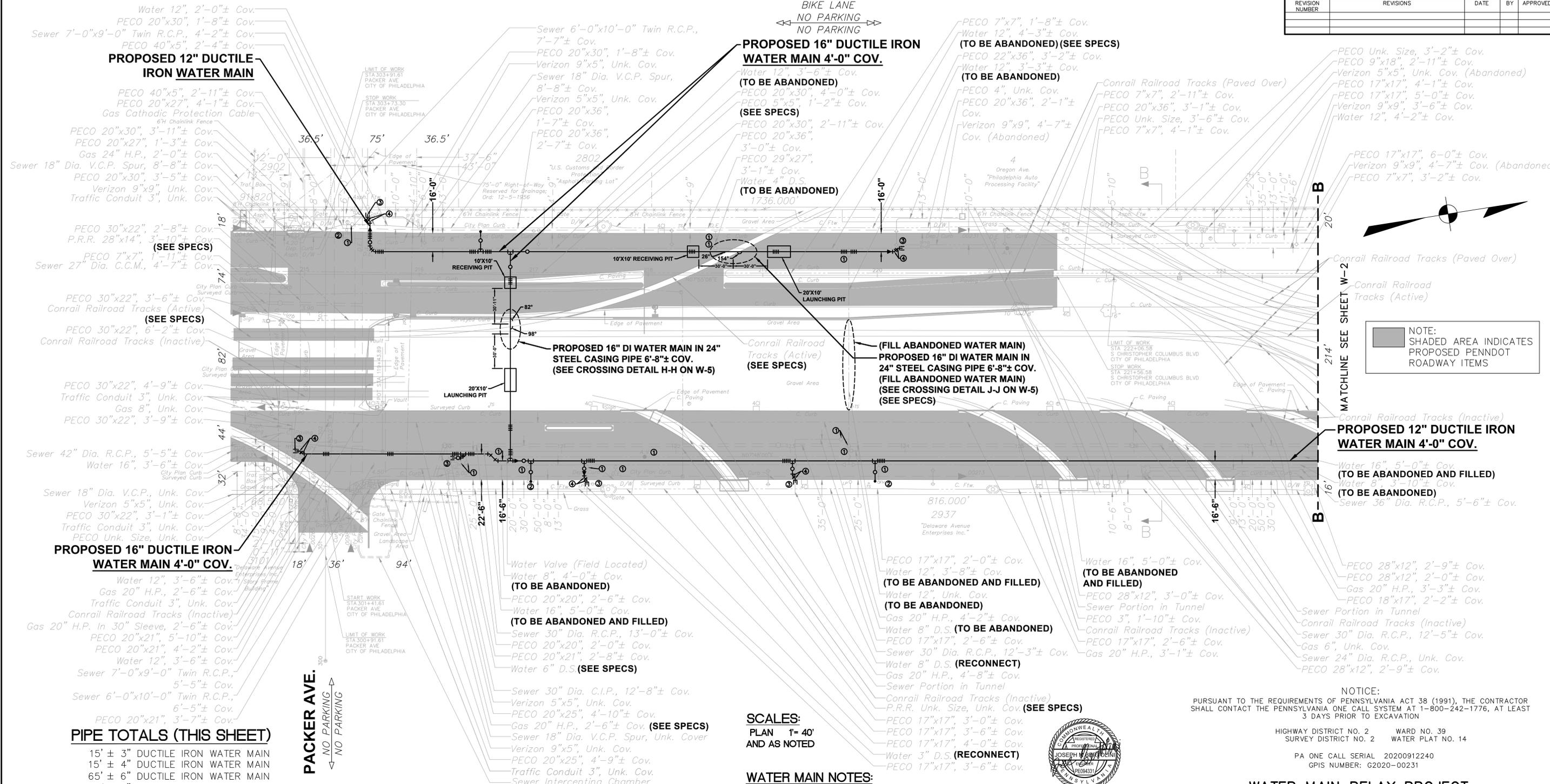
SCALES:
PLAN 1" = 40'
AND AS NOTED

WORK NO. W-90482-D
SHEET NO. W-1 OF 8 SHEETS

DRAWN BY:	HUNT ENGINEERING	AUG. 2025
PROJECT ENGR.		
SUPERVISOR		DATE

S. CHRISTOPHER COLUMBUS BOULEVARD

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	4 OF 8
CITY OF PHILADELPHIA				
REVISION NUMBER	REVISIONS	DATE	BY	APPROVED



NOTE: SHADED AREA INDICATES PROPOSED PENNDOT ROADWAY ITEMS

MATCHLINE SEE SHEET W-2

PROPOSED 12\"/>

PROPOSED 16\"/>

Water 12", 2'-0"± Cov.
 PECO 20"x30", 1'-8"± Cov.
 Sewer 7'-0"x9'-0" Twin R.C.P., 4'-2"± Cov.
 PECO 40"x5", 2'-4"± Cov.

PROPOSED 12" DUCTILE IRON WATER MAIN

PECO 40"x5", 2'-11"± Cov.
 PECO 20"x27", 4'-1"± Cov.
 Gas Cathodic Protection Cable
 6H Chainlink Fence
 PECO 20"x30", 3'-11"± Cov.
 PECO 20"x27", 1'-3"± Cov.
 Gas 24" H.P., 2'-0"± Cov.
 Sewer 18" Dia. V.C.P. Spur, 8'-8"± Cov.
 PECO 20"x30", 3'-5"± Cov.
 Verizon 9"x9", Unk. Cov.
 Traffic Conduit 3", Unk. Cov.

PECO 30"x22", 2'-8"± Cov.
 P.R.R. 28"x14", 3'-10"± Cov.
 (SEE SPECS)
 PECO 7"x7", 1'-11"± Cov.
 Sewer 27" Dia. C.C.M., 4'-7"± Cov.

PECO 30"x22", 3'-6"± Cov.
 Conrail Railroad Tracks (Active)
 (SEE SPECS)
 PECO 30"x22", 6'-2"± Cov.
 Conrail Railroad Tracks (Inactive)

PECO 30"x22", 4'-9"± Cov.
 Traffic Conduit 3", Unk. Cov.
 Gas 8", Unk. Cov.
 PECO 30"x22", 3'-9"± Cov.

PROPOSED 16" DUCTILE IRON WATER MAIN 4'-0" COV.

Water 12", 3'-6"± Cov.
 Gas 20" H.P., 2'-6"± Cov.
 Traffic Conduit 3", Unk. Cov.
 Conrail Railroad Tracks (Inactive)
 Gas 20" H.P. in 30" Sleeve, 2'-6"± Cov.
 PECO 20"x21", 5'-10"± Cov.
 PECO 20"x21", 4'-2"± Cov.
 Water 12", 3'-6"± Cov.
 Sewer 7'-0"x9'-0" Twin R.C.P., 5'-5"± Cov.
 Sewer 6'-0"x10'-0" Twin R.C.P., 6'-5"± Cov.
 PECO 20"x21", 3'-7"± Cov.

PIPE TOTALS (THIS SHEET)

15' ± 3" DUCTILE IRON WATER MAIN
 15' ± 4" DUCTILE IRON WATER MAIN
 65' ± 6" DUCTILE IRON WATER MAIN
 20' ± 8" DUCTILE IRON WATER MAIN
 730' ± 12" DUCTILE IRON WATER MAIN
 850' ± 16" DUCTILE IRON WATER MAIN

Water 12", 2'-0"± Cov.
 PECO 20"x30", 1'-8"± Cov.
 Sewer 7'-0"x9'-0" Twin R.C.P., 4'-2"± Cov.
 PECO 40"x5", 2'-4"± Cov.

PROPOSED 16" DUCTILE IRON WATER MAIN 4'-0" COV.

Water 12", 3'-6"± Cov.
 PECO 20"x30", 4'-0"± Cov.
 PECO 5"x5", 1'-2"± Cov.
 (SEE SPECS)
 PECO 20"x30", 2'-11"± Cov.
 PECO 20"x36", 3'-0"± Cov.
 PECO 20"x36", 2'-1"± Cov.
 Verizon 9"x9", 4'-7"± Cov.
 Cov. (Abandoned)

Water 12", 4'-3"± Cov.
 PECO 22"x36", 3'-2"± Cov.
 Water 12", 3'-3"± Cov.
 (TO BE ABANDONED)
 PECO 4", Unk. Cov.
 PECO 7"x7", 2'-11"± Cov.
 PECO 20"x36", 3'-1"± Cov.
 PECO 20"x36", 2'-1"± Cov.
 Verizon 9"x9", 4'-7"± Cov.
 Cov. (Abandoned)

Water 12", 3'-6"± Cov.
 PECO 20"x20", 2'-6"± Cov.
 Water 16", 5'-0"± Cov.
 (TO BE ABANDONED AND FILLED)
 Sewer 30" Dia. R.C.P., 13'-0"± Cov.
 PECO 20"x20", 2'-0"± Cov.
 PECO 20"x21", 2'-8"± Cov.
 Water 6" D.S. (SEE SPECS)

Water Valve (Field Located)
 Water 8", 4'-0"± Cov.
 (TO BE ABANDONED)
 PECO 20"x20", 2'-6"± Cov.
 Water 16", 5'-0"± Cov.
 (TO BE ABANDONED AND FILLED)
 Sewer 30" Dia. R.C.P., 13'-0"± Cov.
 PECO 20"x20", 2'-0"± Cov.
 PECO 20"x21", 2'-8"± Cov.
 Water 6" D.S. (SEE SPECS)

Sewer 30" Dia. C.I.P., 12'-8"± Cov.
 Verizon 5"x5", Unk. Cov.
 PECO 20"x25", 4'-10"± Cov.
 Gas 20" H.P., 2'-6"± Cov. (SEE SPECS)
 Sewer 18" Dia. V.C.P. Spur, Unk. Cover
 Verizon 9"x5", Unk. Cov.
 PECO 20"x25", 4'-9"± Cov.
 Traffic Conduit 3", Unk. Cov.
 Sewer Intercepting Chamber

BILL OF MATERIALS

3	STD. FIRE HYDRANT W/CCL	36	16" 1/8 BENDS (30 VERT.)
10	STD. 7" VALVE BOXES	10	12" 1/8 BENDS (6 VERT.)
3	16" VALVES	2	8" 1/8 BENDS
1	12" VALVE	1	6" 1/4 BEND
1	8" VALVE	2	3" 1/8 BENDS
4	6" VALVES	3	16"x12" REDUCERS
1	4" VALVE	1	4"x3" REDUCER
2	16"x16" TEES	2	12" SLEEVES
2	16"x6" TEES	1	8" SLEEVE
1	12"x8" TEE	1	6" SLEEVE
2	12"x6" TEES	1	3" SLEEVE
1	12"x4" TEE	1	16" MECHANICAL COUPLING

NOTES:

SEE SHEET W-4 FOR B-B CROSS SECTION

DIMENSIONS AS SHOWN ARE BASED OFF OF PHYSICAL SURVEYED CURB LINES

SEE SPECIFICATION REGARDING ALL ACTIVE, INACTIVE, AND PAVED OVER RAILROAD TRACKS

ALL WORK ON OR ABOUT CONRAIL PROPERTY (OR TRACK) SHALL BE PERFORMED IN ACCORDANCE WITH: "AMERICAN RAILWAY ENGINEERING MAINTENANCE OF WAY ASSOCIATION (AREMA) REQUIREMENTS, LATEST EDITION", "SPECIFICATIONS FOR PIPELINE OCCUPANCY OF CONSOLIDATED RAIL CORPORATION PROPERTY (CE-8)" DATED APRIL 6, 2021, AND "SPECIFIC REQUIREMENTS OF CONSOLIDATED RAIL CORPORATION FOR WORK ON ITS RIGHT-OF-WAY AND OTHER PROPERTY (CE-6)" DATED OCTOBER 8, 2021.

SCALES:
 PLAN 1" = 40'
 AND AS NOTED

WATER MAIN NOTES:

- 1 REMOVE FRAME AND COVER.
- 2 REMOVE FIRE HYDRANTS.
- 3 REMOVE PIPE AND/OR FITTING AND RECONNECT.
- 4 ROTATE FITTING AS REQUIRED.
- 5 REMOVE AND RETURN VALVE - SEE SPEC'S

GENERAL NOTES:

ALL DISTANCES SHOWN ARE IN DISTRICT STANDARD MEASUREMENT. PAYMENT FOR ALL WORK WILL BE BASED UPON THAT STANDARD.

EXISTING WATER MAINS SHALL BE CUT & PLUGGED AS APPROVED BY THE CITY ENGINEER.

THE CONTRACTOR SHALL MAINTAIN A MINIMUM 6-INCH CLEARANCE BETWEEN ALL UNDERGROUND STRUCTURES AND THE NEW WATER MAINS.

BILLS OF MATERIAL AND PIPE TOTALS ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND PAYMENT WILL BE MADE ONLY FOR THE ACTUAL AMOUNT OF PIPE AND APPURTENANCES INSTALLED.

FIRE HYDRANTS SHALL NOT BE CONSTRUCTED OR RELOCATED UNTIL SUCH LOCATIONS HAVE BEEN APPROVED BY THE WATER DEPARTMENT CONSTRUCTION DIVISION IN THE FIELD.



PREPARED FOR:



BASE PLAN & DESIGN PREPARED BY:



101 Lindenwood Drive | Suite 125 | Malvern, PA 19355
 610.644.6600 | www.hunterengineering.com

NOTICE: PURSUANT TO THE REQUIREMENTS OF PENNSYLVANIA ACT 38 (1991), THE CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776, AT LEAST 3 DAYS PRIOR TO EXCAVATION

HIGHWAY DISTRICT NO. 2 WARD NO. 39
 SURVEY DISTRICT NO. 2 WATER PLAT NO. 14
 PA ONE CALL SERIAL 20200912240
 GPS NUMBER: G2020-00231

WATER MAIN RELAY PROJECT

S. CHRISTOPHER COLUMBUS BOULEVARD FROM PACKER AVE. TO BIGLER ST.

APPROVED: *Joe Larkin*
 HUNT ENGINEERING COMPANY

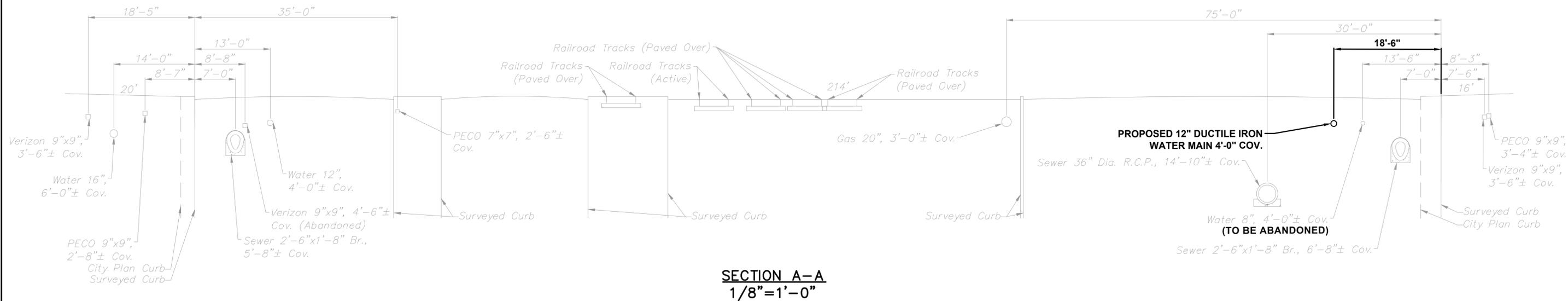
CITY OF PHILADELPHIA WATER DEPARTMENT

SCALES: PLAN 1" = 40' AND AS NOTED

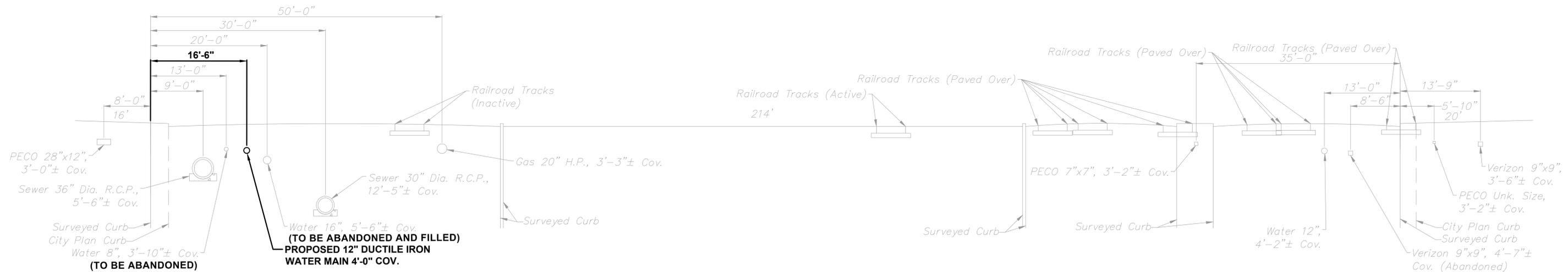
WORK NO. W-90482-D
 SHEET NO. W-3 OF 8 SHEETS

DRAWN BY:	HUNT ENGINEERING	AUG. 2025
PROJECT ENGR.		
SUPERVISOR		DATE

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	5 OF 8
CITY OF PHILADELPHIA				
REVISION NUMBER	REVISIONS	DATE	BY	APPROVED



SECTION A-A
1/8"=1'-0"



SECTION B-B
1/8"=1'-0"

NOTES:

DIMENSIONS AS SHOWN ARE BASED OFF OF PHYSICAL SURVEYED CURB LINES

SEE SPECIFICATION REGARDING ALL ACTIVE, INACTIVE, AND PAVED OVER RAILROAD TRACKS

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PREPARED FOR:



BASE PLAN & DESIGN
PREPARED BY:



101 Lindenwood Drive | Suite 125 | Malvern, PA 19355
610.644.4600 | www.huntengineering.com

WATER MAIN RELAY PROJECT

CROSS SECTIONS

APPROVED *Joe Burtin*
HUNT ENGINEERING COMPANY

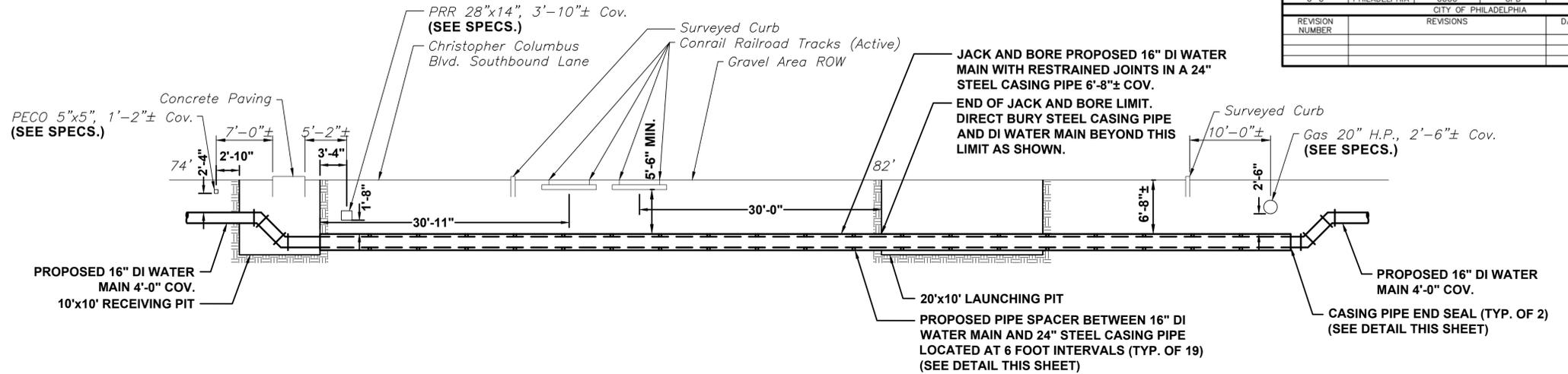
CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALE:
PLAN 1" = 40'
AND AS NOTED

WORK NO. W-90482-D
SHEET NO. W-4 OF 8 SHEETS

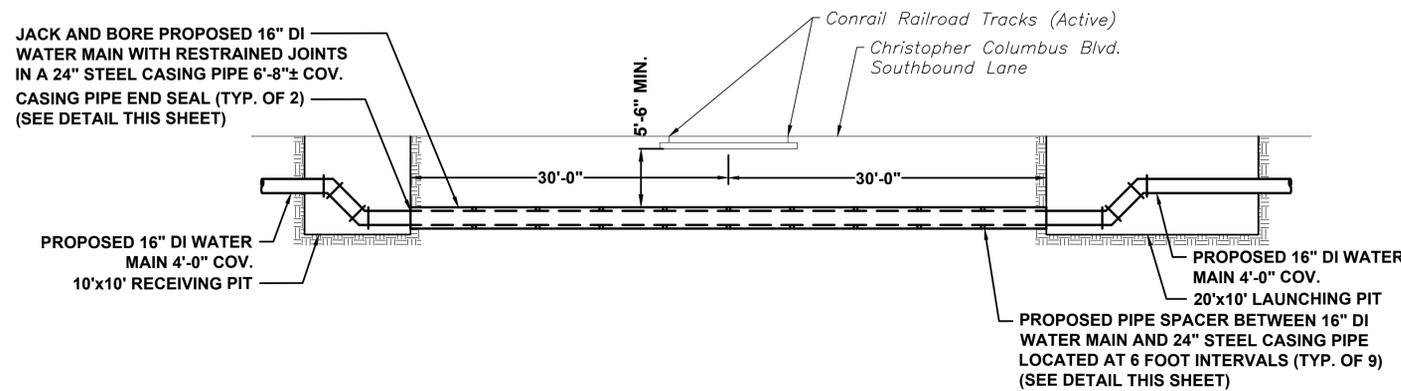
DRAWN BY:	HUNT ENGINEERING	AUG. 2025
PROJECT ENGR.		
SUPERVISOR		DATE

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0000	CPD	6 of 8
CITY OF PHILADELPHIA				
REVISION NUMBER	REVISIONS	DATE	BY	APPROVED



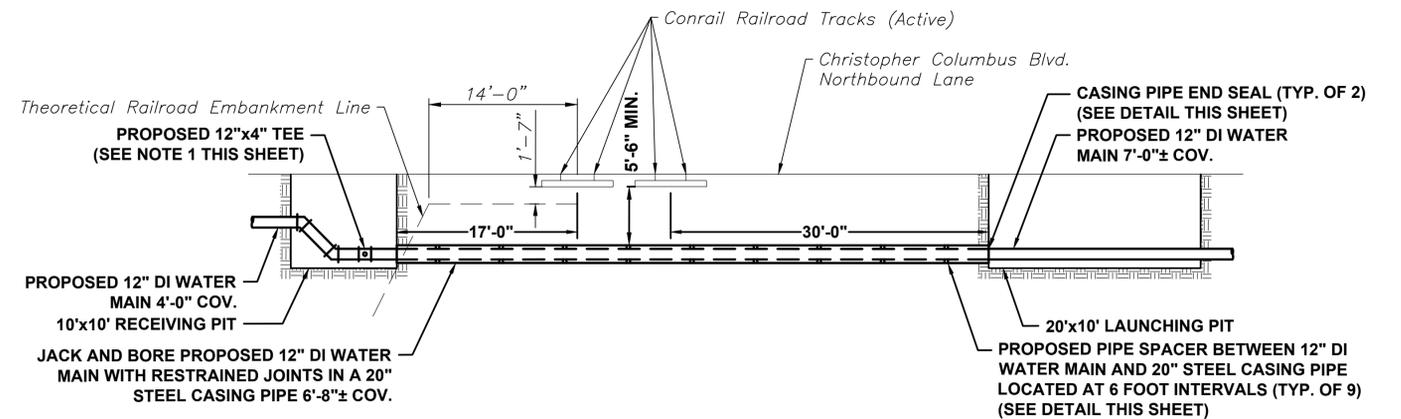
SECTION H-H

SCALE: 1/8"=1'-0"



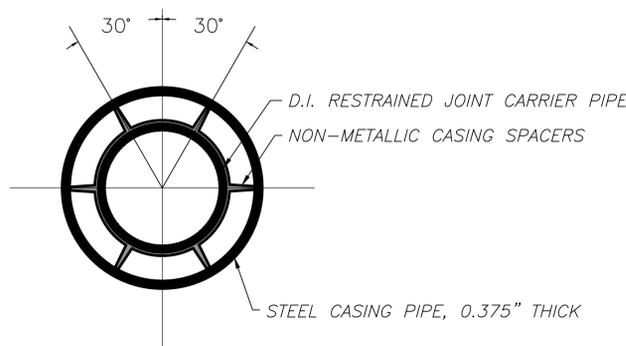
SECTION J-J

SCALE: 1/8"=1'-0"

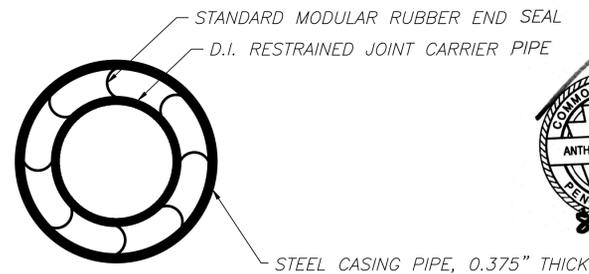


SECTION K-K

SCALE: 1/8"=1'-0"



CASING SPACER
N.T.S.



NOTE:
CONTRACTOR TO SUBMIT SHOP DRAWINGS
FOR ACTUAL END SEALS TO BE USED.

PIPE END SEAL
N.T.S.

NOTE:
CONTRACTOR TO SUBMIT SHOP DRAWINGS
FOR ACTUAL CASING SPACERS TO BE USED.

NOTE 1:
DUE TO LOCATION OF EXISTING 3" DOMESTIC WATER SERVICE, CASING PIPE CANNOT EXTEND 30 LF FROM CENTERLINE OF TRACK. CASING PIPE WILL EXTEND JUST BEYOND THE THEORETICAL RAILROAD EMBANKMENT LINE AS SHOWN IN SECTION K-K TO FACILITATE RECONNECTION OF SERVICE.

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PREPARED FOR:



BASEPLAN PREPARED BY:



DESIGN PREPARED BY:



WATER MAIN RELAY PROJECT

**ACTIVE CONRAIL TRACK CROSSINGS
PROPOSED WATER MAIN
SECTION VIEWS**

APPROVED

[Signature]
COLLIERS ENGINEERING & DESIGN

CITY OF PHILADELPHIA
WATER DEPARTMENT

SCALES:
AS NOTED

WORK NO. W-90482-D
SHEET NO. W-5 OF 8 SHEETS

DRAWN BY:	A. W-CLARK	8/14/2025
PROJECT ENGR.	R. BITTERMAN	8/14/2025
SUPERVISOR		DATE

