STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

JENNIFER COHAN
SECRETARY

VIA WEBSITE POSTING AND OVERNIGHT DELIVERY

October 25, 2019

Contract No. T201907402.01
Federal Aid Project No.NH-N059(44)
Rehabilitation of I-95, 2nd Street On-Ramp Improvements
New Castle County

Ladies and Gentlemen:

Enclosed is Addendum No. 2 for the referenced contract consisting of the following:

1. **The date for the receipt of bids has been moved to <u>Tuesday, November 5, 2019</u>**, prior to 2:00 p.m.

2. The Bid Proposal Cover, revised, to be substituted for the same page of the Proposal.

3. Four (4) pages, No Fault Incentive/Liquidated Damages, has been revised and replaced with five (5) pages, pages iii through viA. The number of weather days for the ramp closure as noted in Item C. will be updated in forthcoming addendum.

4. Twenty-one (21) pages, Bid Proposal Forms, pages 1 through 21, revised, to be substituted for same pages in the Proposal.

   <u>The following Item Numbers have quantity changes</u>: 202000, 207000, 301002, 401026, 401027, 401028, 602130, 705002, 705007, 727548, 905500 and 613001.

   <u>The following Item Numbers have been added</u>: 610009 and 762000.

   <u>The following Item Number has been deleted</u>: 762001.

5. Thirteen (13) sheets, Construction Plans, Sheets 3, 17, 31, 32, 33, 156, 157, 216, 219, 222, 227, 228 and 254, revised, to be substituted for the same sheets in the Plans.

6. Bid Express Amendment File No. 2.

Please note the revisions listed above and submit your bid based upon this information.

Sincerely,
~signature on file~
Connie Ivins
Competitively Bid Contracts Coordinator
Delaware Department of Transportation

Addendum No. 2
October 25, 2019

STATE OF DELAWARE

DEPARTMENT OF TRANSPORTATION

BID PROPOSAL

for

CONTRACT T201907402.01

FEDERAL AID PROJECT NO. NH-N059(44)

CFDA NO. 20.205

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

NEW CASTLE COUNTY

ADVERTISEMENT DATE: September 30, 2019

COMPLETION TIME: 397 Calendar Days

SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
DELAWARE DEPARTMENT OF TRANSPORTATION
AUGUST 2016

Bids will be received in the Bidder's Room at the Delaware Department of Transportation's Administration Building, 800 Bay Road, Dover, Delaware prior to 2:00 P.M. local time ~~**October 29**~~ **November 5, 2019**

Contract T201907402 Incentive/Disincentive

The contract drawings and notes provide a sequence of construction for this contract. Time is an essential element of this Contract. Several temporary traffic conditions shown on the Plans and listed below will result in significant congestion, delay, and/or operational constraints to the traveling public.

A. Liquidated Damages for I-95 Lane Closures

Interim Road User Cost (RUC) liquidated damages for delays in opening lanes along I-95 NB and SB will be enforced according to the below charts.

Table 1

	Northbound and Southbound I-95 (Monday through Friday)
	Contractor Damages for Failure to Reopen Lanes
Time All Lanes Reopened ("Verizon Time")	One Lane Closure
6:00 AM to 6:14 AM	$500
6:15 AM to 6:29 AM	$1,000
6:30 AM to 6:44 AM	$1,500
6:45 AM to 6:59 AM	$2,000
7:00 AM to 7:14 AM	$2,500
7:15 AM to 7:29 AM	$3,000
7:30 AM to 7:44 AM	$3,500
7:45 AM to 7:59 AM	$4,000
Not Open by 8:59 AM	$6,000

For every hour, or portion thereof, after 7:59 am, $2,000 (one lane closure) will be assessed up to a **day total of $30,000.00**.

Table 2

Number of Lanes closed	Contractor Damages for Failure to Reopen Lanes
One Lane Closure	+$500/15 Minutes

The Road User Cost (RUC) liquidated damages for the I-95 portion of this contract will be up to $30,000 per Calendar Day. Assessment of Road User Costs and Liquidated Damages will be made by change order. There is no limit on the number of days that RUC's can be assessed. The Engineer will be the sole approving authority as to when lane closures, lane width restrictions and shoulder width restrictions are complete after traffic is returned to the ultimate alignment. The Contractor will be assessed the Road User Costs for failure to open the roadway on time per the Contract.

<u>Calculation Examples for Assessment of RUC liquidated damages for I-95 Lane Closures</u>

- One lane closure of the southbound I-95 until 7:20 AM on a Tuesday:

  Per Table 1, a RUC liquidated damage of **$3,000** will be assessed.

  Full Closure RUC from 6:00 am to 7:20 am I-95 SB

6:00 AM to 6:14 AM	$5,00
6:15 AM to 6:29 AM	$1,000
6:30 AM to 6:44 AM	$1,500
6:45 AM to 6:59 AM	$2,000
7:00 AM to 7:14 AM	$2,500
7:15 AM to 7:20 AM	**$3,000**

B. The following is the lane closure hours for I-95 southbound scupper work:

The I-95 SB Left lane closure on Phase 1 - Detail 1 (CS-104 through CS-108) to perform the bridge scupper work is permitted between the hours of Friday at 10 PM through the immediately following Monday at 5 AM (i.e., weekend closure period). The weekend closure period is permitted for one weekend only. If the lane is not reopened by 5 AM on Monday morning, RUC liquidated damages will be assessed in accordance with Part A of these notices.

C. **Liquidated Damages for Ramp Closures**

The Road User Cost (RUC) liquidated damages for the ramp closure portion of this contract will be up to $10,000 per Calendar Day for every day that the ramp remains closed beyond 255 Calendar Days. The 255 Calendar Days for the ramp closure include XX Weather Days. The RUC liquidated damages will be limited to 90 Calendar Days beyond the 255 Calendar Day limit, resulting in a maximum RUC liquidated damage assessment of $900,000. Assessment of RUC liquidated damages will be made by change order. The Contractor will be assessed the Road User Costs for failure to open the roadway on time per the Contract. RUC liquidated damages will be assessed based solely on whether or not the Contractor completes the work described below for the Ramp B Closure work within 255 Calendar Days.

*Ramp B Closure Work***.** Beginning on the Calendar Day that the Contractor closes Ramp B, the Contractor must complete the Ramp B Closure work as defined below within 255 Calendar Days. The "Ramp B Closure" work consists of all the following work items:

1. Demolishing Ramp B.
2. Completion of all work on the plans indicated to be completed during Phase 2 associated with Ramp D including the associated widening of Bridge No 1-748S. This work also includes installation of all bridge expansion joint strip seals and bridge drainage system including scuppers and downspout piping.
3. Performance of all profiling, necessary corrective work, grooving, texturing, and application of sealants on all concrete bridge decks and concrete pavement sections.
4. Completion of all work on the plans indicated to be completed during Phases 1 and 2 associated with Lancaster Avenue, Martin Luther King Jr. Blvd, Adams Street, 2nd Street, and Jackson Street (the "City" streets).
5. Installed and fully operational permanent traffic signal equipment as shown on the Plans on the City street intersections.
6. Installation of permanent pavement markings as shown on the Plans on the ramp, approach roadways, and mainline.
7. Installation of permanent signs and sign structures as shown on the Plans on the ramp, approach roadways, and mainline.
8. Installed and fully operational roadway lighting as shown on the Plans on the ramp, approach roadways, and mainline.

9. Removal of all temporary traffic control devices.
10. Ramp D is open to traffic and operating in the ultimate conditions.

The Ramp B Closure work will not be considered complete until the permanent parapets on the bridges, permanent retaining walls, and permanent traffic barriers are in place, properly cured, and functioning. The use of temporary bolted down barrier or other temporary traffic barrier in lieu of permanent parapets on the bridges, retaining walls and permanent traffic barriers is not permitted.

~~C.~~D. No Fault Incentive~~/Liquidated Damages~~ for Ramp Closures

Incentive~~ or disincentive~~ payments will be awarded ~~or assessed~~ based solely on whether or not the Contractor completes the work described below for the Ramp B Closure work ~~within~~ in less than 255 Calendar Days.

The Contractor shall anticipate that impacts and delays may be caused by or arise from any number of events during the course of the Contract, including, but not limited to, work performed, work deleted, quantity overruns, change orders, supplemental agreements, Extra Work, delays, disruptions, differing site conditions, alterations of plans for character of work, utility conflicts, design changes, design defects or omissions, time extensions, right of way issues, permitting issues, actions of suppliers, actions of subcontractors or other contractors, actions of third parties, strikes, shop or working drawing approval, approval process delays, maintenance of traffic changes, expansion of physical limits of the project to make it functional, weather, weekends, holidays, suspension of the Contractor's operations, or other such events, forces or factors experienced in bridge and highway construction work. Such delays and events and their potential impact on performance by the Contractor are to be specifically contemplated and acknowledged by the parties entering into this Contract, and shall not be considered as a reason to extend the 255 Calendar-Day time period in which the Ramp B Closure work must be completed by the Contractor. Provided, however, that if a Catastrophic Event occurs, the schedule may be extended as set forth herein.

Regardless of the amount earned by the Contractor in the calculation of the No Fault Incentive Payment (including, but not limited to an amount of $0.00), all costs whatsoever incurred by the Contractor to accelerate its work to overcome or absorb such impacts and delays in an effort to complete the Ramp B Closure work prior to the expiration of the 255-Calendar-Day time period, regardless of whether the Contractor successfully does so or not, are the sole responsibility of the Contractor in every instance. Any and all impacts and delays that impact the No Fault Incentive, including but not limited to those identified above, shall be the sole responsibility of the Contractor, and the Contractor shall not be permitted to file a claim against the Department for any costs related to the No Fault Incentive.

~~Regardless of whether or not the Contractor earns the No Fault Incentive payment or is required to pay the No Fault Liquidated Damages amount, any and all impacts and delays, including but not limited to, those identified above, shall be the sole responsibility of the Contractor, and the Contractor shall not be permitted to file a claim against the Department for any costs related to any impacts and delays, including, but not limited to, those identified above. Regardless of the amount earned by the Contractor in the calculation of the No Fault Incentive Payment (including, but not limited to an amount of $0.00), or if the Contractor is charged the No Fault Liquidated Damages Amount, all costs whatsoever incurred by the Contractor to accelerate its work to overcome or absorb such impacts and delays in an effort to complete the Ramp B Closure work prior to the expiration of~~

~~the 255 Calendar Day time period, regardless of whether the Contractor successfully does so or not, are the sole responsibility of the Contractor in every instance.~~

~~*Ramp B Closure Work*. Beginning on the Calendar Day that the Contractor closes Ramp B, the Contractor must complete the Ramp B Closure work as defined below within 255 Calendar Days. The "Ramp B Closure" work consists of all the following work items:~~

1. ~~Demolishing Ramp B.~~
2. ~~Completion of all work on the plans indicated to be completed during Phase 2 associated with Ramp D including the associated widening of Bridge No 1-748S. This work also includes installation of all bridge expansion joint strip seals and bridge drainage system including scuppers and downspout piping.~~
3. ~~Performance of all profiling, necessary corrective work, grooving, texturing, and application of sealants on all concrete bridge decks and concrete pavement sections.~~
4. ~~Completion of all work on the plans indicated to be completed during Phases 1 and 2 associated with Lancaster Avenue, Martin Luther King Jr. Blvd, Adams Street, 2nd Street, and Jackson Street (the "City" streets).~~
5. ~~Installed and fully operational permanent traffic signal equipment as shown on the Plans on the City street intersections.~~
6. ~~Installation of permanent pavement markings as shown on the Plans on the ramp, approach roadways, and mainline.~~
7. ~~Installation of permanent signs and sign structures as shown on the Plans on the ramp, approach roadways, and mainline.~~
8. ~~Installed and fully operational roadway lighting as shown on the Plans on the ramp, approach roadways, and mainline.~~
9. ~~Removal of all temporary traffic control devices.~~
10. ~~Ramp D is open to traffic and operating in the ultimate conditions.~~

~~The Ramp B Closure work will not be considered complete until the permanent parapets on the bridges, permanent retaining walls, and permanent traffic barriers are in place, properly cured, and functioning. The use of temporary bolted down barrier or other temporary traffic barrier in lieu of permanent parapets on the bridges, retaining walls and permanent traffic barriers is not permitted.~~

Definitions for Part D~~C~~:

No Fault Incentive. For every Calendar Day, up to thirty (30) Calendar Days, that the Ramp B Closure work described above is complete before the 255th Calendar Day, the Contractor will receive an incentive payment of Ten Thousand Dollars ($10,000.00) per Calendar Day. The maximum incentive payment will not exceed Three Hundred Thousand Dollars ($300,000.00).

~~*No Fault Liquidated Damages.* If the Ramp B Closure work is not completed at the end of the 255th Calendar Day, the Contractor will be required to make a disincentive payment to the Department in the amount of Ten Thousand Dollars ($10,000.00) per Calendar Day that the Ramp B Closure work is not complete and continuing for each Calendar Day that the Ramp B Closure work remains not complete with no maximum on the total amount of disincentive payments that the Contractor shall be required to remit. The amount of the disincentive payment shall be deducted from any monies due the Contractor, not as a penalty, but as a liquidated damage assessed to recover the cost of inconvenience to the public, the added cost of engineering and supervision, and the other extra~~

~~expenditures of public funds due to the Contractor's failure to complete the Ramp B Closure work in 255 Calendar Days. Any disincentive amount in excess of any monies due or retained percentage shall be paid to the Department by the Contractor. The disincentive payment described above may be assessed in addition to any other liquidated damages assessed as part of this contract.~~

Catastrophic Events. In the event that a catastrophic event results in a declared state of emergency by the state of Delaware, that directly and substantially affects the Contractor's operations on this Contract, the Contractor and the Department shall agree on the number of Calendar Days to extend the 255-Calendar-Day time period. In the event that the Contractor and Department cannot agree on the number of Calendar Days to extend the 255-Calendar-Day time period, the Department shall unilaterally determine the number of Calendar Days to extend the 255-Calendar-Day time period due solely to the impact of the catastrophic event. The Contractor shall have no right whatsoever to contest such determination, save and except the Contractor establishes that the number of Calendar Days determined by the Department were arbitrary or without any reasonable basis. Any and all disputes as to the number of Calendar days added in the event of a Catastrophic Event shall be decided by the Secretary of Transportation, or his or her designee, and such determination shall be final with no right of appeal.

~~D.~~E. Additional Notes

Liquidated damages from these notices shall be combined when multiple requirements are not met. For example, if Ramp D is closed beyond 255 calendar days and a lane closure extends beyond the allowable closure time, liquidated damages from Part A and Part C will be added together and deducted from any monies due the Contractor as a cumulative liquidated damage.

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

SECTION 0001 REHABILITATION OF I-95, 2ND STREET ON-RANP IMPROVEMENTS

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0010	201000 CLEARING AND GRUBBING	LUMP	LUMP			
0020	202000 EXCAVATION AND EMBANKMENT	1738.000 CY				
0030	202003 UNDERCUT EXCAVATION	20.000 CY				
0040	202518 SETTLEMENT MONUMENT	26.000 EACH				
0050	204000 TEST HOLE	18.000 CY				
0060	207000 STRUCTURAL EXCAVATION	531.000 CY				
0070	208000 FLOWABLE FILL	50.000 CY				
0080	209004 BORROW, TYPE C	600.000 CY				
0090	209006 BORROW, TYPE F	476.000 CY				

DELAWARE DEPARTMENT OF TRANSPORTATION PAGE: 2
SCHEDULE OF ITEMS DATE:

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0100	211000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP	LUMP			
0110	211001 REMOVAL OF PORTLAND CEMENT CONCRETE PAVEMENT, CURB AND SIDEWALK	2600.000 SY				
0120	211002 REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	1145.000 LF				
0130	301001 GRADED AGGREGATE BASE COURSE, TYPE B	927.000 CY				
0140	301002 GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	27.000 CY				
0150	302005 DELAWARE NO. 57 STONE	55.000 TON				
0160	401016 SUPERPAVE TYPE B, PG 76-22	149.000 TON				
0170	401021 SUPERPAVE TYPE BCBC, PG 64-22	197.000 TON				
0180	401026 BITUMINOUS CONCRETE, SUPERPAVE TYPE C, 160 GYRATIONS PG 64-22 PATCHING	12.000 TON				

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0190	401027 BITUMINOUS CONCRETE, SUPERPAVE TYPE B, 160 GYRATIONS PG 64-22 PATCHING	17.000 TON				
0200	401028 BITUMINOUS CONCRETE, SUPERPAVE BITUMINOUS CONRETE BASE COURSE, 160 GYRATIONS PG 64-22 PATCHING	27.000 TON				
0210	401045 SUPERPAVE TYPE C, PG 70-22 (NON-CARBONATE STONE)	608.000 TON				
0220	401046 SUPERPAVE TYPE C, PG 76-22 (NON-CARBONATE STONE)	98.000 TON				
0230	501006 PORTLAND CEMENT CONCRETE PAVEMENT, 12"	1124.000 SY				
0240	601031 REINFORCED CONCRETE PIPE, 12" CLASS IV	137.000 LF				
0250	601032 REINFORCED CONCRETE PIPE, 15", CLASS IV	221.000 LF				
0260	601503 CLEANING BRIDGE SCUPPERS	20.000 EACH				
0270	602001 DRAINAGE INLET, 24" X 24"	1.000 EACH				
0280	602003 DRAINAGE INLET, 34" X 24"	9.000 EACH				

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0290	602031 MANHOLE, 48" X 48"	1.000 EACH				
0300	602037 MANHOLE, SPECIAL	LUMP	LUMP			
0310	602067 CONVERTING DRAINAGE INLET TO JUNCTION BOX	6.000 EACH				
0320	602130 ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	21.000 EACH				
0330	602132 ADJUSTING AND REPAIRING EXISTING MANHOLE	15.000 EACH				
0340	604000 JACKING BRIDGE	LUMP	LUMP			
0350	604001 PROTECTIVE SHIELD	LUMP	LUMP			
0360	604502 PROTECTION OF EXISTING STRUCTURES	LUMP	LUMP			
0370	605021 FURNISH STEEL H PILES, HP 12" X 53"	840.000 LF				
0380	605071 FURNISH STEEL H INDICATOR OR TEST PILES, HP 12" X 53"	131.000 LF				

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0390	605121 INSTALL STEEL H PILES, HP 12" X 53"	840.000 LF				
0400	605171 INSTALL STEEL H INDICATOR OR TEST PILES, HP 12" X 53"	131.000 LF				
0410	605201 DYNAMIC PILE TESTING BY CONTRACTOR	3.000 EACH				
0420	605509 MICROPILES	2320.000 LF				
0430	605510 MICROPILE PROOF TEST	6.000 EACH				
0440	607000 MECHANICALLY STABILIZED EARTH WALLS	15873.000 SF				
0450	610002 PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	70.000 CY				
0460	610005 PORTLAND CEMENT CONCRETE MASONRY, SUBSTRUCTURE, CLASS A	6.000 CY				
0470	610008 PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	248.000 CY				
0480	610009 PORTLAND CEMENT CONCRETE MASONRY, CLASS B	3.000 CY				

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	CTS	BID AMOUNT DOLLARS	CTS
0490	610010 PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS B	51.000	CY				
0500	610012 PORTLAND CEMENT CONCRETE MASONRY, PIER FOOTING, CLASS B	216.000	CY				
0510	610013 PORTLAND CEMENT CONCRETE MASONRY, PIER ABOVE FOOTING, CLASS B	85.000	CY				
0520	610016 PORTLAND CEMENT CONCRETE MASONRY, CLASS D	40.000	CY				
0530	610017 PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	613.000	CY				
0540	610018 PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	385.000	CY				
0550	610019 HIGH EARLY STRENGTH CONCRETE	4.000	CY				
0560	611000 BAR REINFORCEMENT	101427.000	LB				
0570	611001 BAR REINFORCEMENT, EPOXY COATED	267516.000	LB				
0580	613000 EPOXY CONCRETE SEALER	417.000	SF				

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0590	613001 SILICONE-BASED ACRYLIC CONCRETE SEALER	29902.000 SF				
0600	615001 STEEL STRUCTURES	LUMP	LUMP			
0610	623003 REPLACE ANCHOR BOLTS	14.000 EACH				
0620	623500 BRONZE BEARINGS	44.000 EACH				
0630	624000 PREFABRICATED EXPANSION JOINT SYSTEM, 3"	333.000 LF				
0640	625000 LATEX MODIFIED CONCRETE OVERLAY INSTALLATION	7068.000 SYIN				
0650	625001 FURNISHING LATEX-MODIFIED CONCRETE OVERLAY	247.000 CY				
0660	625503 ADDITIONAL LATEX-MODIFIED CONCRETE FOR PARTIAL DECK REPAIRS	25.000 CY				
0670	625504 POLYESTER POLYMER CONCRETE SAND MIX FOR RUMBLE STRIPS	45.000 CF				
0680	628041 DEEP SPALL REPAIR	20.000 CF				

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0690	628042 REHABILITATION OF PORTLAND CEMENT CONCRETE MASONRY	2.000 CY				
0700	628053 DECK REPAIR, FULL DEPTH	15.000 SF				
0710	628070 DRILLING HOLES AND INSTALLING DOWELS	184.000 EACH				
0720	628502 REMOVAL OF EXISTING DECK REPAIRS	15.000 SF				
0730	701011 PORTLAND CEMENT CONCRETE CURB, TYPE 1-4	155.000 LF				
0740	701013 PORTLAND CEMENT CONCRETE CURB, TYPE 1-8	169.000 LF				
0750	701020 INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-2	518.000 LF				
0760	701022 INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-6	811.000 LF				
0770	701509 CURB RETAINING WALL, TYPE 3	254.000 LF				
0780	705001 PORTLAND CEMENT CONCRETE SIDEWALK, 4"	410.000 SF				

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0790	705002 PORTLAND CEMENT CONCRETE SIDEWALK, 6"	2284.000 SF				
0800	705007 SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	72.000 SF				
0810	705009 PEDESTRIAN CONNECTION, TYPE 2, 3, AND/OR 4	270.000 SF				
0820	709001 PERFORATED PIPE UNDERDRAINS, 6"	518.000 LF				
0830	710002 ADJUST WATER VALVE BOXES	16.000 EACH				
0840	711011 INSTALLING SANITARY SEWER, PVC, 12"	390.000 LF				
0850	711021 INSTALLING SANITARY SEWER, DIP, 12"	27.000 LF				
0860	711500 ADJUST AND REPAIR EXISTING SANITARY MANHOLE	10.000 EACH				
0870	711503 GUIDED TUNNEL BORING	156.000 LF				
0880	711504 GUIDED TUNNEL BORING OBSTRUCTION REMOVAL	40.000 HOUR				

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0890	720021 GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	46.000 LF				
0900	721001 GUARDRAIL END TREATMENT, TYPE 1-31, TEST LEVEL 3	2.000 EACH				
0910	721010 GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	2.000 EACH				
0920	727005 DECORATIVE FENCE	1434.000 LF				
0930	727006 TEMPORARY CONSTRUCTION FENCE	242.000 LF				
0940	727548 PROTABLE CHAIN LINK FENCE	1785.000 LF				
0950	760007 RUMBLE STRIPS, CONCRETE	427.000 LF				
0960	760010 PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT	10700.000 SYIN				
0970	760013 PAVEMENT MILLING, PORTLAND CEMENT CONCRETE PAVEMENT	3382.000 SYIN				
0980	760500 TOTAL SURFACE HYDRODEMOLITION	950.000 SY				

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0990	760501 DEEP CUT HYDRODEMOLITION	281.000 SY				
1000	762000 SAW CUTTING, BITUMINOUS CONCRETE	1350.000 LF				
1010	763000 INITIAL EXPENSE/DE-MOBILIZATION	LUMP	LUMP			
1020	763501 CONSTRUCTION ENGINEERING	LUMP	LUMP			
1030	763503 TRAINEE	1040.000 HOUR	0.80000		832.00	
1040	763508 PROJECT CONTROL SYSTEM DEVELOPMENT PLAN	LUMP	LUMP			
1050	763509 CPM SCHEDULE UPDATES AND/OR REVISED UPDATES	15.000 EAMO				
1060	801000 MAINTENANCE OF TRAFFIC	LUMP	LUMP			
1070	802003 ARROW PANELS TYPE C	1000.000 EADY				
1080	803001 FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	225.000 EADY				

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1090	805001 PLASTIC DRUMS	88800.000 EADY				
1100	806001 TRAFFIC OFFICERS	900.000 HOUR	75.00000		67500.00	
1110	807001 FURNISH AND INSTALL TEMPORARY PORTLAND CEMENT CONCRETE SAFETY BARRIER, UNPINNED	240.000 LF				
1120	807002 FURNISH AND INSTALL TEMPORARY PORTLAND CEMENT CONCRETE SAFETY BARRIER, PINNED IN BITUMINOUS PAVEMENT	75.000 LF				
1130	807003 FURNISH AND INSTALL TEMPORARY PORTLAND CEMENT CONCRETE SAFETY BARRIER, PINNED IN CONCRETE	1950.000 LF				
1140	807007 REFLECTOR PANELS	60.000 EACH				
1150	807008 GLARE SCREEN	2265.000 LF				
1160	808001 FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE I	300.000 EADY				
1170	808002 FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	300.000 EADY				

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1180	809005 FURNISH TEMPORARY IMPACT ATTENUATOR - NON-GATING, REDIRECTIVE, TEST LEVEL 3	3.000 EACH				
1190	810001 TEMPORARY WARNING SIGNS AND PLAQUES	34725.000 EADY				
1200	811007 FLAGGER, NEW CASTLE COUNTY, FEDERAL	440.000 HOUR				
1210	811016 FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	110.000 HOUR				
1220	813001 TEMPORARY BARRICADES, TYPE III	24000.000 LFDY				
1230	817002 PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	2075.000 SF				
1240	817005 PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 5"	45.000 LF				
1250	817013 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	13265.000 LF				
1260	817014 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 10"	1595.000 LF				

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	CTS	BID AMOUNT DOLLARS	CTS
1270	817018 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 3"`	2950.000	LF				
1280	817020 RETROREFLECTIVE PREFORMED PATTERENED MARKINGS, 5"	33.000	LF				
1290	817022 RETROREFLECTIVE PREFORMED PATTERNED MARKINGS, 8"	625.000	LF				
1300	817023 RETROREFLECTIVE PREFORMED PATTERNED MARKINGS, 13"	115.000	LF				
1310	817027 RAISED/RECESSED PAVEMENT MARKER	65.000	EACH				
1320	817031 REMOVAL OF PAVEMENT STRIPING	2870.000	SF				
1330	818003 SUPPLY OF FLAT SHEET ALUMINUM SIGN PANEL, TYPE XI, RETROREFLECTIVE SHEETING	110.000	SF				
1340	818006 SUPPLY OF EXTRUDED ALUMINUM SIGN PANEL, TYPE XI, RETROREFLECTIVE SHEETING	363.000	SF				
1350	819016 INSTALLATION OF 4" DIAMETER HOLE, LESS THAN OR EQUAL TO 6" DEPTH	5.000	EACH				

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1360	819018 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	62.000 EACH				
1370	819019 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON MULTIPLE SIGN POSTS	69.000 SF				
1380	820002 REINFORCED CONCRETE MASONRY SIGN FOUNDATION, W-8	2.000 EACH				
1390	820009 SUPPLY OF BREAKAWAY I-BEAM SIGN POSTS, W-8	40.000 LF				
1400	820014 SUPPLY AND INSTALLATION OF BOLT KIT FOR BREAKAWAY COUPLING	2.000 EACH				
1410	820015 SUPPLY AND INSTALL OF HINGE PLATE FOR BREAKAWAY COUPLING	2.000 EACH				
1420	820016 SUPPLY AND INSTALLATION OF BREAKAWAY COUPLING SYSTEM	2.000 EACH				
1430	820017 INSTALLATION OF BREAKAWAY I-BEAM SIGN POSTS	2.000 EACH				
1440	820019 INSTALL SIGN PANEL ON BREAKAWAY I-BEAM SIGN SUPPORT	165.000 SF				

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1450	821001 SUPPLY OF BARRIER MOUNTED SIGN SUPPORT, 4" POST	1.000 EACH				
1460	821003 INSTALLATION OF BARRIER MOUNTED SIGN SUPPORT	2.000 EACH				
1470	821005 INSTALLATION OF SIGN ON BARRIER MOUNTED SIGN SUPPORT	29.000 SF				
1480	822001 INSTALL SIGN PANEL OVERLAY	110.000 SF				
1490	822002 INSTALLLATION OF SIGN ON/OVER HIGHWAY STRUCTURE	198.000 SF				
1500	822008 REMOVAL OF OVERHEAD I-BEAM	6.000 EACH				
1510	822009 REMOVAL OF SIGN ON/OVER HIGHWAY STRUCTURE	391.000 SF				
1520	824001 BARRIER MOUNTED DELINEATOR	35.000 EACH				
1530	824002 POST MOUNTED DELINEATORS	5.000 EACH				
1540	830001 CONDUIT JUNCTION WELL, TYPE 1, 20" X 20" PRECAST CONCRETE	10.000 EACH				

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1550	830002 CONDUIT JUNCTION WELL, TYPE 4, 20" X 42-1/2" PRECAST CONCRETE	2.000 EACH				
1560	830008 ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL	2.000 EACH				
1570	830010 REMOVAL OF EXISTING JUNCTION WELL	2.000 EACH				
1580	830501 JUNCTION BOX ON STRUCTURE	5.000 EACH				
1590	831001 FURNISH AND INSTALL UP TO 3" FLEXIBLE METALLIC-LIQUID TIGHT CONDUIT	80.000 LF				
1600	831003 FURNISH AND INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (OPEN CUT)	545.000 LF				
1610	831004 FURNISH AND INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	800.000 LF				
1620	831006 FURNISH AND INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (TRENCH)	125.000 LF				
1630	831008 FURNISH AND INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (OPEN CUT)	150.000 LF				

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1640	831009 FURISH AND INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (ON STRUCTURE)	1250.000	LF				
1650	832002 FURINSH AND INSTALL 1-CONDUCTOR # 3/0 AWG STRANDED COPPER, TYPE USE-2	850.000	LF				
1660	832006 FURNISH AND INSTALL 1-CONDUCTOR #2 AWG STRANDED COPPER, TYPE USE-2	725.000	LF				
1670	832007 FURNISH AND INSTALL 1-CONDUCTOR #4 AWG STRANDED COPPER, TYPE USE-2	1750.000	LF				
1680	832008 FURNISH AND INSTALL 1-CONDUCTOR #6 STRANDED COPPER, TYPE USE-2	9600.000	LF				
1690	832010 FURNISH AND INSTALL 1-CONDUCTOR #10 STRNDED COPPER, TYPE USE-2	1800.000	LF				
1700	832017 FURNISH AND INSTALL STRANDED INSULATED COPPER GROUND WIRE, 1/#2 AWG	225.000	LF				
1710	832019 FURNISH AND INSTALL STRANDED INSULATED COPPER GROUND WIRE, 1/#6 AWG	3300.000	LF				

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1720	832035 REMOVAL OF CABLE FROM CONDUIT OR TRAFFIC /LIGHTING POLE	3575.000 LF				
1730	833001 BONDING AND GROUNDING EXISTING JUNCTION WELL	1.000 EACH				
1740	834002 POLE BASE, TYPE 3A	1.000 EACH				
1750	834005 POLE BASE, TYPE 4A	8.000 EACH				
1760	834006 POLE BASE, TYPE 6	4.000 EACH				
1770	834007 POLE BASE EXTENSION	34.000 CF				
1780	835002 CABINET BASE TYPE M	1.000 EACH				
1790	835004 CABINET BASE TYPE R	1.000 EACH				
1800	842004 ELECTRIC SERVICE ON PEDESTAL WITH SERVICE RISER	1.000 EACH				
1810	843001 ELECTRICAL TESTING	LUMP	LUMP			

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	CTS	BID AMOUNT DOLLARS	CTS
1820	847002 INSTALL OR REMOVAL OF BASE OR PAD MOUNTED CABINET	1.000	EACH				
1830	847003 LIGHTING CONTROL CABINET - 200 A, 277/480V	1.000	EACH				
1840	850011 REMOVAL OF LUMINAIRE	18.000	EACH				
1850	850522 LUMINAIRE (LED), 400 WATTS, HPS EQUIVALENT	17.000	EACH				
1860	850527 LED WALL PACK, 150 WATTS HPS EQUIVALENT	9.000	EACH				
1870	851003 ALUMINUM LIGHTING STANDARD WITH SINGLE DAVIT ARM, 40' POLE	7.000	EACH				
1880	851007 RELOCATED EXISTING LIGHT STANDARD	3.000	EACH				
1890	905004 INLET SEDIMENT CONTROL, DRAINAGE INLET	44.000	EACH				
1900	905500 SUPER SILT FENCE	1333.000	LF				
1910	906002 DEWATERING BAG	6.000	EACH				
1920	906003 SUMP PIT	6.000	EACH				

CONTRACT ID: T201907402.01 PROJECT(S): NH-N059(44)

All figures must be typewritten.

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1930	907012 TEMPORARY SLOPE DRAIN, 12"	250.000 LF				
1940	908004 TOPSOIL, 6" DEPTH	200.000 SY				
1950	908010 TOPSOILING, 6" DEPTH	2000.000 SY				
1960	908014 PERMANENT GRASS SEEDING, DRY GROUND	2000.000 SY				
1970	908020 EROSION CONTROL BLANKET MULCH	1897.000 SY				
1980	908021 TURF REINFORCEMENT MATTING, TYPE 1	104.000 SY				
1990	908023 STABILIZED CONSTRUCTION ENTRANCE	400.000 SY				
	SECTION 0001 TOTAL					
	TOTAL BID					

ADDENDUM PREPARED BY

WRA Whitman, Requardt and Associates, LLP
Engineers • Architects • Environmental Planners Est. 1915

10/03/2019
DATE

THIS SEAL APPLIES TO THE FOLLOWING SHEETS CHANGED UNDER ADDENDUM #1:
3, BID PROPOSAL SHEETS I, VII, VIII, 45A, 45B, 45C, 113-118,
SCHEDULE OF ITEMS PAGES 11-21

WILLIAM A. GESCHREI LICENSE No. 15578 DELAWARE PROFESSIONAL ENGINEER

SEAL

ADDENDUM PREPARED BY

WRA Whitman, Requardt and Associates, LLP
Engineers • Architects • Environmental Planners Est. 1915

10/24/2019
DATE

THIS SEAL APPLIES TO THE FOLLOWING SHEETS CHANGED UNDER ADDENDUM #2:
3, 17, 31, 32, 33, 156, 157, 216, 219, 222, 227, 228, 254,
SCHEDULE OF ITEMS PAGES 1-21

WILLIAM A. GESCHREI LICENSE No. 15578 DELAWARE PROFESSIONAL ENGINEER

SEAL

ADDENDA / REVISIONS		
1 ADDENDUM 1	D.A.N. 10/03/2019	
2 ADDENDUM 2	D.A.N. 10/24/2019	

NOT TO SCALE

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT	T201907402
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY:	D. NIZAMOFF
CHECKED BY:	W. GESCHREI

ADDENDA AND REVISIONS

AR-01
SECTION
SHEET NO. 3

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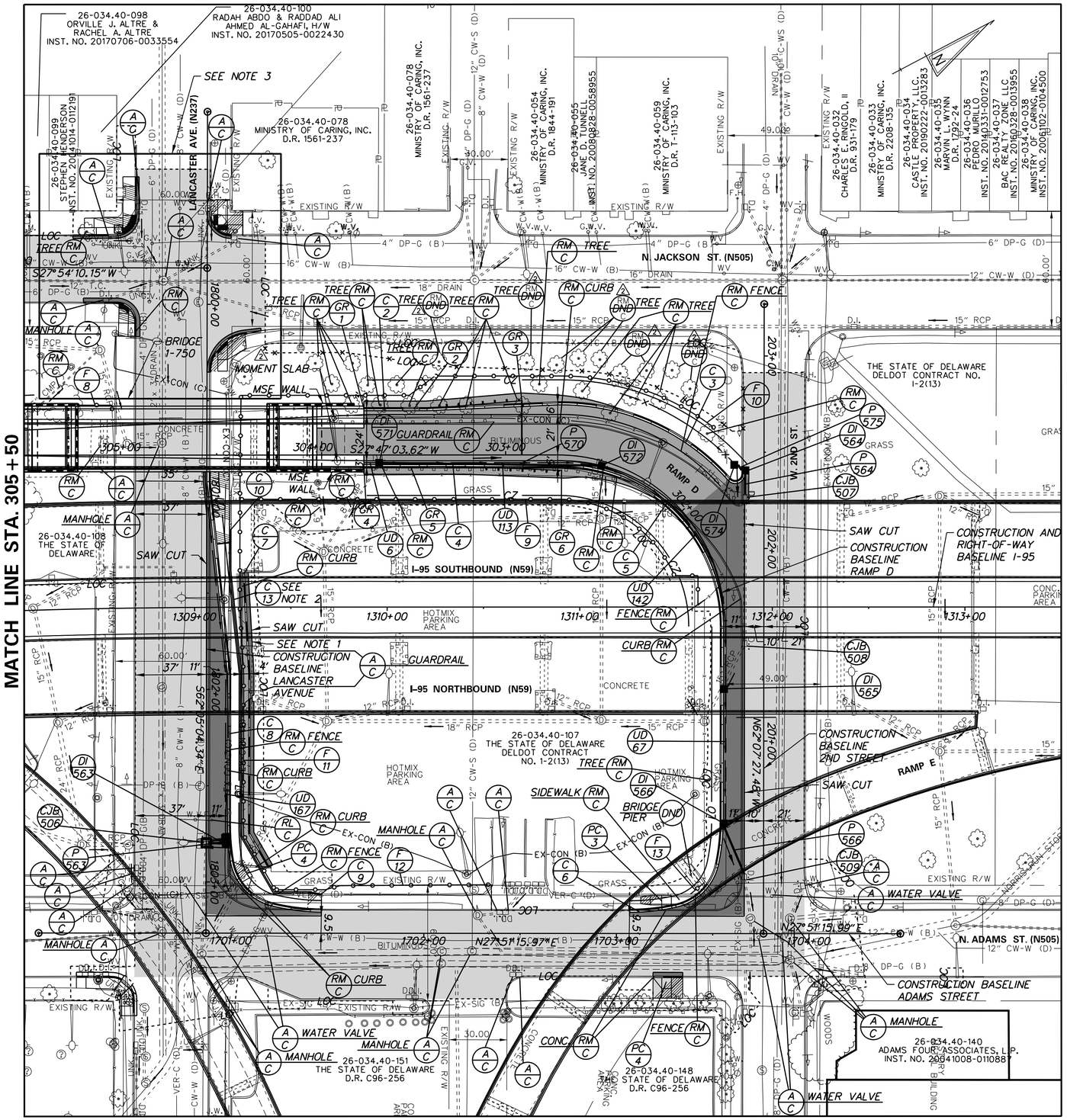

FENCE SCHEDULE

NO.	QTY.	DESCRIPTION	NOTES
8	20.56′	DECORATIVE FENCE (ITEM 727005)	STA. 305+04, 23′ RT. TO STA. 305+22, 26′ RT. (+/-)
9	269.41′	DECORATIVE FENCE (ITEM 727005)	STA. 301+47, 13′ LT. TO STA. 304+38, 23′ LT. (+/-)
10	255.49′	DECORATIVE FENCE (ITEM 727005)	STA. 302+14, 43′ RT. TO STA. 304+37, 31′ RT. (+/-)
11	262.22′	DECORATIVE FENCE (ITEM 727005)	STA. 1800+47, 18′ LT. TO STA. 1803+04, 36′ LT. (+/-)
12	112.68′	DECORATIVE FENCE (ITEM 727005)	STA. 1701+23, 23′ LT. TO STA. 1702+35, 25′ LT. (+/-)
13	9.36′	DECORATIVE FENCE (ITEM 727005)	STA. 1703+38, 20′ LT. TO STA. 1703+46, 26′ LT. (+/-)

GUARDRAIL SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
1	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	303+73.58	24.00′	19.75′
2	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	303+53.83	24.00′	12.50′
3	GUARDRAIL END TREATMENT, TYPE 1-31, TEST LEVEL 3	303+41.33	24.00′	50.00′
4	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	303+73.58	-6.00′	19.75′
5	GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	303+53.83	-6.00′	32.94′
6	GUARDRAIL END TREATMENT, TYPE 1-31, TEST LEVEL 3	303+20.89	-6.00′	50.00′

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE (FT/FT)	INT. EL.	DIS. EL.
563	15″ RCP	IV	7′	0.0030	12.40	12.38
564	15″ RCP	IV	12′	0.0083	24.94	24.84
566	15″ RCP	IV	26′	0.0100	16.59	16.33
570	15″ RCP	IV	112′	0.0719	34.60	26.52
575	15″ RCP	IV	5′	0.0030	25.05	25.04

DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
563	1802+78.47	-12.00	34″ x 24″	1	20.09	12.40
564	202+40.02	-11.00	34″ x 24″	1	28.44	24.94
*565	201+27.01	-22.00	34″ x 24″	1	22.61	MATCH EX.
566	200+57.22	-22.00	34″ x 24″	1	20.09	16.59
571	303+65.63	-6.08	34″ x 24″	2	38.20	34.60
572	302+49.20	-4.44	34″ x 24″	2	30.02	24.17
574	302+00.00	-36.23	24″ x 24″	6	28.03	25.05

*-INLET SHALL BE CAST-IN-PLACE.

CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
2	I.P.C.C. CURB AND GUTTER, TYPE 3-2	174.20′
3*	I.P.C.C. CURB AND GUTTER, TYPE 3-6	38.43′
4	I.P.C.C. CURB AND GUTTER, TYPE 3-2	174.84′
5*	I.P.C.C. CURB AND GUTTER, TYPE 3-6	216.62′
6	I.P.C.C. CURB AND GUTTER, TYPE 3-6	15.20′
7	P.C.C. CURB, TYPE 1-8	155.49′
8	I.P.C.C. CURB AND GUTTER, TYPE 3-6	262.30′
9	P.C.C. CURB, TYPE 1-8	6.67′
10	P.C.C. CURB, TYPE 1-8	6.74′
13	CURB RETAINING WALL, TYPE 3	253.16′

*TRANSITION I.P.C.C. CURB AND GUTTER TYPE 3-6 TO I.P.C.C CURB AND GUTTER TYPE 3-2 OVER 4′.

*CONVERT TO JUNCTION BOX SCHEDULE

NO.	STATION	OFFSET	T.C. EL.	INV. EL.
507	202+26.68	-9.81	25.80	N/A
508	201+50.59	-10.01	21.12	N/A
509	200+29.44	-9.95	17.30	N/A
506	1802+78.06	-0.25	14.70	N/A

*-CONVERT TO JUNCTION BOX BY CUTTING DOWN INLET WALLS AND INSTALLING JUNCTION BOX TOP SLAB PER STANDARD D-7. TOP SLAB SHALL BE LOCATED BELOW ROADWAY GAB.

NOTES:

1. SEE CONSTRUCTION DETAIL DT-01 FOR CURB PATCH DETAIL.
2. SEE STANDARD CONSTRUCTION DETAIL C-6 (2017) FOR CURB RETAINING WALL. A MAXIMUM HEIGHT OF 4′-0″ IS ALLOWED AT THIS LOCATION. PROVIDE PORTLAND CEMENT CONCRETE MASONRY, CLASS A FOR CURB RETAINING WALL. PAYMENT WILL BE MADE UNDER ITEM 701509 - CURB RETAINING WALL, TYPE 3 FOR THE ENTIRE LENGTH OF THE CURB RETAINING WALL.
3. SEE CONSTRUCTION DETAIL DT-04 AND DT-05 FOR LANCASTER AVENUE AND JACKSON STREET INTERSECTION DETAILS.
4. SEE CONSTRUCTION DETAIL DT-01 FOR DECORATIVE FENCE DETAIL.

ADDENDA / REVISIONS

2 ADJUSTED LOC, ADDED RM/C 9 TREES D.A.N. 10/24/2019

SCALE 0 30 60 90 FEET

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT	BRIDGE NO. 1-750
T201907402	DESIGNED BY: J. DAVIS
COUNTY	
NEW CASTLE	CHECKED BY: B. TOWNSEND

CONSTRUCTION PLAN

CP-03

SECTION WRA

SHEET NO. 17

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SECTION 200

1. REMOVAL OF STRUCTURES AND OBSTRUCTIONS:
   ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS ASSOCIATED WITH BRIDGE 1-748S SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
   - EXTERIOR PARAPETS (SPANS 26S TO 39S)
   - EXTERIOR DECK OVERHANGS (SPANS 26S TO 39S)
   - STEEL SIGN SUPPORT BRACKETS
   - TRAFFIC SIGNS AND LIGHT POLES ATTACHED TO BRIDGE
   - DECORATIVE BARRIER (SPANS 26S-28S AND PARTIAL IN SPAN 25S)
   - CONCRETE DECK AROUND TYPE III SCUPPERS IN SPANS 35S, 37S, AND 39S.
   - PORTIONS OF DRAINAGE AND SEWER PIPES TO BE ABANDONED WHERE THEY INTERFERE WITH PROPOSED FOUNDATIONS.

2. SIGNING:
   TO AVOID DAMAGE, SIGNS WITHIN PROJECT LIMITS MAY BE REMOVED DURING CONSTRUCTION IF NEEDED, BUT MUST BE REPLACED TO MATCH EXISTING CONDITIONS BEFORE REOPENING THE ROADWAY. ALL WORK RELATED TO MOVING AND REINSTALLING THE SIGN SHALL BE INCIDENTAL TO ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS. IF THE SIGN IS DAMAGED DURING CONSTRUCTION, THE SIGN SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

SECTION 600

3. PORTLAND CEMENT CONCRETE:
   USE PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS AS FOLLOWS:
   (f'c = 28-DAY COMPRESSIVE STRENGTH)
   CLASS A - PARAPETS, ABUTMENT STEM AND BACKWALL, PEDESTALS (f'c = 4.5 ksi)
   CLASS B - FOOTINGS, COLUMNS, PIER CAPS (f'c = 3.0 ksi)
   CLASS D - DECK, APPROACH SLABS, SLEEPER SLABS (f'c = 4.5 ksi)
   A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT WITH THE APPROVAL OF THE ENGINEER.
   - CHAMFER ALL EXPOSED EDGES ¾" X ¾" UNLESS OTHERWISE NOTED.
   - DO NOT SLIP-FORM PARAPETS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
   - CONTRACTOR SHALL SUPPLY CONCRETE FOR THE PARAPETS, BRIDGE DECK, AND APPROACH SLABS THAT INCLUDES A SHRINKAGE-REDUCING/COMPENSATING ADMIXTURE. PAYMENT FOR ADMIXTURE WILL BE INCIDENTAL TO ITS RESPECTIVE CONCRETE ITEM (ITEMS 610008, 610016, 610017, AND 610018). THE ADMIXTURE MAY BE SUPPLIED BY ONE PRODUCT THAT PROVIDES BOTH EXPANSION AND PORE WATER SURFACE TENSION OR TWO SEPARATE PRODUCTS EACH ADDED AT DOSAGE RECOMMENDED BY MANUFACTURER'S TECHNICAL DATA SHEETS AND HAVING THE FOLLOWING CHARACTERISTICS:
   (A) DESIGNED TO PROVIDE BOTH THE FOLLOWING CHARACTERISTICS:
   I. EXPANDS AT A RATE THAT CLOSELY COMPENSATES FOR SHRINKAGE OF THE CONCRETE MIX.
   II. REDUCES THE CAPILLARY SURFACE TENSION OF THE CONCRETE PORE WATER.
   (B) PROVIDES AT LEAST 80% SHRINKAGE REDUCTION AS MEASURED AND DOCUMENTED BY FIELD PERFORMANCE.
   (C) FORMULATED FOR USE IN FREEZING AND THAWING WEATHER.

4. BAR REINFORCEMENT:
   - REINFORCING STEEL SHALL CONFORM TO AASHTO M 31 (ASTM A615), GRADE 60.
   - REINFORCING STEEL SHALL HAVE A 3" CLEAR COVER IF CAST AGAINST EARTH OR A 2" CLEAR COVER ELSEWHERE, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
   - ALL REINFORCING STEEL SHALL BE PROTECTED WITH FUSION BONDED EPOXY UNLESS OTHERWISE SPECIFIED ON THE PLANS. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO ASTM A775.
   - ANY FIELD CUTTING OR FIELD BENDING MUST BE APPROVED BY THE ENGINEER UNLESS NOTED ON THE PLANS. PAYMENT FOR FIELD CUTTING AND FIELD BENDING WILL BE INCIDENTAL TO THE BAR REINFORCEMENT ITEM.
   - GALVANIZED REINFORCING STEEL MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL AT NO ADDITIONAL COST TO THE DEPARTMENT WITH THE APPROVAL OF THE ENGINEER.
   - WELDING OF REINFORCEMENT DURING FABRICATION OR CONSTRUCTION WILL NOT BE PERMITTED UNLESS SPECIFIED.

△2 5. CONCRETE SEALER:
   REFER TO DIAGRAMS CONTAINING SILICONE-BASED ACRYLIC CONCRETE SEALER LIMITS ON PARAPETS AND DECK OVERHANGS ON DWGS. TS-01 TO TS-04 AND AS-02. EPOXY CONCRETE SEALER SHALL BE APPLIED TO THE BEAM SEATS AND BEARING PEDESTALS AT PIERS ~~23 TO 26~~. SILICONE-BASED ACRYLIC CONCRETE SEALER SHALL BE APPLIED TO THE REMAINING EXPOSED CONCRETE SURFACES AT PIERS ~~23 TO 26~~. PAYMENT FOR SILICONE-BASED ACRYLIC CONCRETE SEALER AND EPOXY CONCRETE SEALER WILL BE MADE UNDER ITEMS 613001 AND 613000, RESPECTIVELY.

34D TO 39D

34D TO 39D AND ABUTMENT 40D

SECTION 600 (CONTINUED)

6. STRUCTURAL STEEL:
   PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M 270, GRADE 50 (ASTM A709, GRADE 50) DESIGNATION, EXCEPT WHEN NOTED OTHERWISE. THE ADDITIONAL REQUIREMENTS FOR CHARPY V-NOTCH TESTING (DENOTED AS 'CVN' ON PLANS) OF AASHTO M 270 FOR PRIMARY LOAD CARRYING MEMBERS SHALL BE INCLUDED. SUPPLEMENTAL NOTCH TOUGHNESS REQUIREMENTS ARE MANDATORY FOR:
   - TOP AND BOTTOM GIRDER FLANGES AS SHOWN ON PLANS
   - GIRDER WEB PLATES AS SHOWN ON PLANS
   - ALL DIAPHRAGM MEMBERS AND DIAPHRAGM CONNECTION PLATES

   ALL FASTENERS ARE 1" DIAMETER ASTM F3125 GR A325 HIGH STRENGTH BOLTS, TYPE 1, UNLESS OTHERWISE NOTED.

   PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH AASHTO/AWS D1.5M/1.5:2015 BRIDGE WELDING CODE, AND CONTRACT DOCUMENTS. MAKE TACK WELDS WITH THE SAME TYPE OF ELECTRODE AND INCORPORATE IN THE FINAL WELD. NO OTHER TACK WELDING WILL BE PERMITTED.

   DO NOT MAKE WELDS BY MANUAL SHIELDED METAL ARC PROCESS FOR PRIMARY GIRDER WELDS SUCH AS FLANGE TO WEB WELDS OR FOR SHOP SPLICES OF WEB AND FLANGES.

   DO NOT USE FORM SUPPORT SYSTEMS THAT WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.

   THE FASCIA GIRDERS ARE DESIGNED FOR A TEMPORARY CONSTRUCTION LOAD APPLIED TO THE WEB WITHIN 6" OF THE BOTTOM FLANGE AT APPROXIMATELY 4'-0" INTERVALS. THIS LOAD APPROXIMATES THE HORIZONTAL COMPONENT OF A DECK SLAB OVERHANG FORM SUPPORT BRACKET AND CONSISTS OF A 0.465 KIP/FT ALLOWANCE FOR THE WEIGHT OF CONCRETE, FORMS, SCREED RAILING AND WALKWAY, AND A 3 KIP MOVING LOAD FOR THE DECK FINISHING MACHINE.

   SHOP ASSEMBLE THE ENTIRE STEEL SUPERSTRUCTURE INCLUDING TRANSVERSE GIRDERS FOLLOWING THE SAME ERECTION PROCEDURES AND SUPPORT CONDITIONS TO ENSURE PROPER FIT FOR ALL STRUCTURAL STEEL COMPONENTS PRIOR TO REAMING OF BOLT HOLES FOR SPLICES AND DIAPHRAGM CONNECTION PLATES.

   VERTICALLY ADJUST STAY-IN-PLACE FORMS TO ATTAIN FINISHED LINES AND GRADES REQUIRED ON THE PLANS.

   USE OVERSIZED HOLES ON DIAPHRAGM CONNECTORS. ALL BOLTS ON DIAPHRAGMS MUST BE FINGER TIGHT AT ERECTION. BOLTS ARE TO BE TORQUED BEFORE CONCRETE DECK IS POURED.

   SET ANCHOR BOLTS TO TEMPLATE OR IN PRE-FORMED HOLES. DO NOT DRILL UNLESS SPECIFICALLY INDICATED ON PLANS. FILL THE PRE-FORMED HOLES WITH NON-SHRINK GROUT. IN MASONRY PLATES, FILL THE CLEARANCE BETWEEN ANCHOR BOLTS AND HOLES WITH APPROVED NON-HARDENING CAULKING COMPOUND.

   STABILITY OF GIRDERS, PARTIAL GIRDERS AND COMPLETED GIRDERS IS TO BE MAINTAINED BY THE CONTRACTOR DURING ERECTION UNTIL ALL GIRDERS AND DIAPHRAGMS ARE IN-PLACE AND ALL BOLTS ARE PROPERLY INSTALLED. ERECTION LOADS INCLUDING SELF-WEIGHT OF THE STEEL MEMBERS, WIND LOADING AND CONSTRUCTION LIVE LOAD EFFECTS ARE TO BE EVALUATED BY THE CONTRACTOR FOR STABILITY, STRESSES AND DEFLECTIONS ON THE STEEL MEMBERS DURING ANY STAGE OF ERECTION.

   BLAST CLEAN THE FAYING SURFACES OF SPLICES AND CONNECTIONS THAT REMAIN UNASSEMBLED FOR A PERIOD OF 12 MONTHS OR MORE FOLLOWING THE INITIAL CLEANING.

   PAINTING OF EXISTING AND NEW STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH SECTION 616. EXISTING STEEL SHALL BE PAINTED AS INDICATED IN PLANS.

7. BEARINGS:
   STEEL PLATE FIXED BEARINGS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 615 AND IN ACCORDANCE WITH CHAPTER 18 OF THE 2017 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 4TH EDITION. PAYMENT FOR STEEL PLATE FIXED BEARINGS WILL BE MADE UNDER ITEM 615001 - STEEL STRUCTURES.

   BRONZE SLIDING PLATE EXPANSION BEARINGS SHALL CONFORM TO ITEM 623500 - BRONZE BEARINGS. PAYMENT WILL BE MADE UNDER ITEM 623500.

SECTION 800

8. TEMPORARY MOUNTED BARRIERS:
   THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A WORKING DRAWING SUBMITTAL DETAILING THE PROPOSED MEANS AND METHODS TO ANCHOR THE PORTABLE P.C.C. STRUCTURE MOUNTED BARRIER (DESIGNED FOR TL-3 IMPACT LOADING) AND TO REPAIR THE BOLT HOLES IN THE DECK. THE CONTRACTOR SHALL ADJUST THE LOCATION OF ANCHORS TO AVOID CONFLICT WITH TOP FLANGE OF GIRDERS AND BAR REINFORCEMENT IN THE DECK. PAYMENT WILL BE INCIDENTAL TO ITEM 807003 - FURNISH AND INSTALL TEMPORARY PCC SAFETY BARRIER, PINNED IN CONCRETE.

9. SAWCUTTING:
   ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT. ALL HOT-MIX OR P.C.C. SAWCUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

MISCELLANEOUS

10. DESIGN SPECIFICATIONS:
    (A) DELDOT BRIDGE DESIGN MANUAL, 2017 EDITION.
    (B) 2014 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION, U.S. CUSTOMARY UNITS INCLUDING 2015 AND 2016 INTERIM.
    (C) PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE 2016 DELDOT STANDARD SPECIFICATIONS INCLUDING 2018 SUPPLEMENTAL SPECIFICATIONS.

11. LOADING:
    - DEAD LOADS INCLUDE 25 PSF FOR FUTURE WEARING SURFACE ON DECK SLAB AND 15 PSF FOR STAY-IN-PLACE FORMS (INCLUDES CONCRETE IN FORM CORRUGATIONS).
    - DESIGN LIVE LOADS INCLUDE HL-93 LOADING.
    - FATIGUE DESIGN IS BASED ON THE FOLLOWING ONE DIRECTIONAL TRAFFIC VOLUMES: ADTT = 3,910 IN YEAR 2040.
    - LIVE LOAD DISTRIBUTION TO THE GIRDERS IS BASED ON THE AASHTO SIMPLIFIED METHOD.
    - THERMAL LOADS AND MOVEMENTS ARE BASED ON THE MODERATE TEMPERATURE RANGE AS STIPULATED IN THE AASHTO LRFD DESIGN SPECIFICATIONS AS 0° TO 110°F. THE NORMAL TEMPERATURE SHALL BE CONSIDERED TO BE 68° F.
    - LIVE LOAD DEFLECTION SHALL BE LIMITED TO L/800.
    - FOR SEISMIC LOADS, CONSIDER SEISMIC PERFORMANCE ZONE 1, WITH A SITE CLASS = D AND OPERATIONAL CATEGORY = ESSENTIAL.
    - FOR REINFORCEMENT DISTRIBUTION REQUIREMENTS, CONSIDER CLASS 1 EXPOSURE CRITERIA FOR DECKS.
    - PARAPETS HAVE BEEN DESIGNED FOR MASH TEST LEVEL 4 (TL-4).

12. EXISTING CONDITIONS:
    ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, GEOMETRY, AND ELEVATIONS AS NECESSARY PRIOR TO ORDERING ANY MATERIALS AND COMMENCING CONSTRUCTION TO ENSURE PROPER FIT OF THE PROPOSED CONSTRUCTION. PAYMENT WILL BE INCIDENTAL TO ITEM 763501 - CONSTRUCTION ENGINEERING.

13. ROADWAY CLEARANCES:
    A MINIMUM OF 16'-6" SHALL BE MAINTAINED ABOVE ALL ROADWAYS.

14. CONTINGENT QUANTITIES:
    THESE CONTRACT DRAWINGS HAVE BEEN PREPARED BASED ON ORIGINAL CONTRACT PLANS, SHOP DRAWINGS, AND FIELD INSPECTION NOTES TAKEN FROM NOVEMBER 16, 2014 THROUGH FEBRUARY 5, 2015. ADDITIONAL REPAIRS HAVE BEEN ADDED BASED ON THE MARCH 2017 BIENNIAL BRIDGE INSPECTION REPORT. ACTUAL CONDITIONS MAY REQUIRE MODIFICATION IN CONSTRUCTION DETAILS AND WORK QUANTITIES. ALL DIMENSIONS AND DETAILS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING ANY MATERIALS. SEE DWG. PN-03 FOR PAY ITEM CONTINGENCY PERCENTAGES.

15. UTILITIES:
    SEE UTILITY STATEMENT AND UTILITY RELOCATION PLAN SHEETS FOR FURTHER INFORMATION ON UTILITY COORDINATION.

    THE CONTRACTOR SHALL CALL MISS UTILITY AND LOCATE ALL UNDERGROUND UTILITIES BEFORE COMMENCING ANY EXCAVATION OR INSTALLING ANY FOUNDATIONS.

16. ENVIRONMENTAL COMPLIANCE:
    ENVIRONMENTAL COMPLIANCE PLANS ARE NOT REQUIRED FOR THIS PROJECT. NO ENVIRONMENTAL RESOURCES ARE IMPACTED BY THE PROPOSED WORK.

MISCELLANEOUS (CONTINUED)

17. COORDINATION WITH DART:
BRIDGE NO. 1-748S IS LOCATED OVER PARKING LOTS OCCUPIED BY DART. THE CONTRACTOR SHALL NOTIFY VINCENT DAMIANI AT (302) 598-0570 AND DAVID REESE AT (302) 353-0897 AT LEAST 35 DAYS PRIOR TO THE START OF ANY WORK IN THE DART PARKING LOTS. AFTER THIS INITIAL CONTACT, THE CONTRACTOR SHALL NOTIFY DART 14 DAYS IN ADVANCE OF ANY ADDITIONAL COORDINATION REQUIREMENTS AND/OR CHANGES IN THE TRAFFIC PATTERNS. AT NO TIME SHALL THE CONTRACTOR OCCUPY AN AREA ON THE GROUND IN THE PARKING LOTS GREATER THAN THE AREA OF TWO SPANS. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR DART BUSSES AND EMPLOYEES TO THE REMAINING PORTIONS OF THE PARKING LOT. ADDITIONALLY THE CONTRACTOR WILL NOT BE PERMITTED TO WORK IN MORE THAN ONE PARKING LOT AT A TIME.

18. COORDINATION WITH THE CITY OF WILMINGTON:
THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE CITY OF WILMINGTON, ESPECIALLY WORK WHICH IMPACTS CITY STREETS. THE CONTRACTOR SHALL NOTIFY BRIAN MITCHELL AT (302) 576-3089 AT LEAST 14 DAYS PRIOR TO ANY COORDINATION REQUIREMENTS AND/OR CHANGES IN TRAFFIC PATTERNS.

19. CONTRACTOR SUBMISSIONS:
PRIOR TO OR WITH THE SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT THE FIELD VERIFICATION NOTES ON MEMBER SIZES AND DIMENSIONS NECESSARY TO REVIEW THE SHOP DRAWINGS.

20. CONSTRUCTION FENCE:
PORTABLE CHAINLINK FENCE IS REQUIRED AROUND THE PERIMETER OF ALL BELOW-DECK WORK AREAS AND AT LOCATIONS DIRECTED BY THE ENGINEER. PAYMENT WILL BE MADE UNDER ITEM 727548 - PORTABLE CHAINLINK FENCE. SEE DWGS. CS-01 TO CS-301.

21. CLEARING AND GRUBBING:
ALL VEGETATIVE GROWTH SHALL BE REMOVED FROM THE PIERS, ABUTMENTS, AND SUPERSTRUCTURE ELEMENTS TO REMAIN AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE INCIDENTAL TO ITEM 201000 - CLEARING AND GRUBBING.

22. CONTRACT RESTRICTIONS:
THE DEPARTMENT HAS NOT OBTAINED A NOISE WAIVER UNDER THE PROVISIONS OF THE CITY OF WILMINGTON CODE FOR THE PURPOSE OF WORKING EXTENDED HOURS AT NIGHT. WORKING HOURS FOR THIS PROJECT SHALL BE LIMITED TO 8:00AM TO 7:00PM, MONDAY THROUGH FRIDAY; 9:00AM TO 7:00PM SATURDAY; 10:00AM TO 5:00PM SUNDAY AND HOLIDAYS. THE CONTRACTOR MAY COORDINATE AND SUBMIT TO OBTAIN A NOISE WAIVER FOR PURPOSES OF EXPEDITING HIS CONSTRUCTION EFFORTS AT NO ADDITIONAL COST TO THE DEPARTMENT. THE CONTRACTOR SHALL ADDRESS ANY CONCERNS ABOUT THE NOISE WAIVER TO THE DEPARTMENT OF LICENSES AND INSPECTIONS, CITY OF WILMINGTON, 800 FRENCH ST., 5TH FLOOR, WILMINGTON, DELAWARE 19801. THE DEPARTMENT WILL NOT BE HELD RESPONSIBLE FOR ANY ISSUES/DELAYS/OR REJECTIONS WITH THE COORDINATION, RECEIPT OR EXECUTION OF THE WORK IN CONJUNCTION WITH THE NOISE WAIVER AND CANNOT BE CAUSE FOR A DELAY CLAIM.

IN ADDITION, BRIDGE AND ROAD CLOSURES WILL NOT BE PERMITTED ON THE FOLLOWING WEEKENDS:
T.B.D.

NOTE: THESE ARE PROJECTED DATES AND SHALL BE CONFIRMED WITH THE CITY OF WILMINGTON'S EVENTS CALENDAR.

http://sites.google.com/site/wilmingtoneventswept/Home

FOR ADDITIONAL WORK RESTRICTIONS, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLAN SHEETS ON DWGS. CS-01 TO CS-301.

23. STOCKPILES:
STOCKPILES OF BORROW AND/OR OTHER MATERIALS WILL NOT BE ALLOWED UNDER THE BRIDGES AND NEAR BRIDGE FOUNDATIONS.

24. ABBREVIATIONS:

ACCEL. = ACCELERATION
BOT. = BOTTOM
C/C = CENTER-TO-CENTER
℄ = CENTERLINE
CLR. = CLEAR
DIA. = DIAMETER
DWG. = DRAWING
E.F. = EACH FACE
EL. = ELEVATION
EQ = ENTIRE QUANTITY
EXP. = EXPANSION
F.F. = FRONT FACE
FIX. = FIXED
ITS = INTELLIGENT TRANSPORTATION SYSTEM
J.B. = JUNCTION BOX
L.L.V. = LONG LEG VERTICAL
LMC = LATEX MODIFIED CONCRETE
LT = LEFT
MAX. = MAXIMUM
MIN. = MINIMUM
NB = NORTHBOUND
NO. = NUMBER
N.T.S. = NOT TO SCALE
OH = OVERHEAD
P.C.C. = PORTLAND CEMENT CONCRETE
R = RADIUS
R.F. = REAR FACE
RT = RIGHT
SB = SOUTHBOUND
SCH. = SCHEDULE
SHLD. = SHOULDER
S.S. = STAINLESS STEEL
STA. = STATION
S.W. = SHOP WELD
TRK = TRACK
TYP. = TYPICAL
UG = UNDERGROUND

INDEX OF BRIDGE 1-748S SHEETS

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		TOTAL BRIDGE SHEETS: 124

QUANTITIES

ITEM Nº	ITEM TITLE	UNIT	QUANTITY
207000	STRUCTURAL EXCAVATION	CY	531
211000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
301001	GRADED AGGREGATE BASE COURSE, TYPE B	CY	31
601503	CLEANING BRIDGE SCUPPER	EACH	20
604000	JACKING BRIDGE	LS	1
604001	PROTECTIVE SHIELD	LS	1
604502	PROTECTION OF EXISTING STRUCTURES	LS	1
605509	MICROPILES	LF	2320
605510	MICROPILES PROOF TEST	EA	6
605021	FURNISH STEEL H-PILES, HP 12 X 53	LF	378
605071	FURNISH STEEL H INDICATOR OR TEST PILES, HP 12 X 53	LF	54
605121	INSTALL STEEL H-PILES, HP 12 X 53	LF	378
605171	INSTALL STEEL H INDICATOR OR TEST PILES, HP 12 X 53	LF	54
605201	DYNAMIC PILE TESTING BY CONTRACTOR	EA	1
610002	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY	29
610005	PORTLAND CEMENT CONCRETE MASONRY, SUBSTRUCTURE, CLASS A	CY	6
610008	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	139
610010	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS B	CY	29
610012	PORTLAND CEMENT CONCRETE MASONRY, PIER FOOTING, CLASS B	CY	216
610013	PORTLAND CEMENT CONCRETE MASONRY, PIER ABOVE FOOTING, CLASS B	CY	85
610016	PORTLAND CEMENT CONCRETE MASONRY, CLASS D	CY	14
610017	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	504
610018	PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY	38
610019	HIGH EARLY STRENGTH CONCRETE	CY	4
611000	BAR REINFORCEMENT	LB	101427
611001	BAR REINFORCEMENT, EPOXY COATED	LB	135292
613000	EPOXY CONCRETE SEALER	SF	417
2 613001	SILICONE-BASED ACRYLIC CONCRETE SEALER	SF	~~13973~~ 19206
615001	STEEL STRUCTURES	LS	1
623004	REPLACE ANCHOR BOLTS	EA	14
623500	BRONZE BEARINGS	EA	44
624000	PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF	267
625000	LATEX-MODIFIED CONCRETE OVERLAY INSTALLATION	SY-IN	6530
625001	FURNISHING LATEX-MODIFIED CONCRETE OVERLAY	CY	228
625503	ADDITIONAL LATEX-MODIFIED CONCRETE FOR PARTIAL DECK REPAIRS	CY	25
625504	POLYESTER POLYMER CONCRETE SAND MIX FOR RUMBLE STRIPS	CF	45
628041	DEEP SPALL REPAIR	CF	20
628042	REHABILITATION OF P.C.C. MASONRY	CY	2
628053	DECK REPAIR, FULL DEPTH	SF	15
628070	DRILLING HOLES AND INSTALLING DOWELS	EA	184
628502	REMOVAL OF EXISTING DECK REPAIRS	SF	15
760013	PAVEMENT MILLING, PORTLAND CEMENT CONCRETE PAVEMENT	SY-IN	3382
760500	TOTAL SURFACE HYDRODEMOLITION	SY	950
760501	DEEP CUT HYDRODEMOLITION	SY	281

ADDENDA / REVISIONS

2 MODIFIED QTY ITEM 613001	D.A.N. 10/24/2019	

NOT TO SCALE

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT	BRIDGE NO.	1 748S 059
T201907402	DESIGNED BY: D. NIZAMOFF	
COUNTY		
NEW CASTLE	CHECKED BY: W. GESCHREI	

BRIDGE PROJECT NOTES AND QUANTITIES

PN-02
SECTION WRA
SHEET NO. 32

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10/24/2019 10:26:59 PM

REPAIR NO.	REPAIR DESCRIPTION	LOCATION	REMARKS	DWG. NO.	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.	CONTINGENT %	TOTAL QTY.
1	JOINT REPLACEMENT (FULL JOINT SYSTEM REPLACEMENT)	PIERS 26S THROUGH 39S	PARTIAL WIDTH, QTY INCLUDES NEW WIDTH OF JOINTS OVER PIERS 34D-39D	EX-01	610017	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	45	0	45
				TO	611000	BAR REINFORCEMENT	LB	9957	0	9957
				EX-10	624000	PREFABRICATED EXPANSION JOINT SYSTEMS, 3"	LF	113	0	113
					628070	DRILLING HOLES AND INSTALLING DOWELS	EA	156	0	156
3	MILL EXISTING DECK/OVERLAY	SPANS 26S THROUGH 39S	PARTIAL WIDTH	PN-04,	628053	DECK REPAIR, FULL DEPTH	SF	12	25	15
				DM-01,	628502	REMOVAL OF EXISTING DECK REPAIRS	SF	12	25	15
				DM-02	760013	PAVEMENT MILLING, PORTLAND CEMENT CONCRETE PAVEMENT	SY-IN	3452	0	3452
4	HYDRODEMOLITION OF EXISTING DECK SURFACE	SPANS 26S THROUGH 39S	PARTIAL WIDTH	DM-01	760500	TOTAL SURFACE HYDRODEMOLITION	SY	950	0	950
				TO	760501	DEEP CUT HYDRODEMOLITION	SY	347	0	347
				DM-03						
5	FURNISH AND INSTALL LMC OVERLAY	SPANS 26S THROUGH 39S	PARTIAL WIDTH	PN-04	625000	LATEX-MODIFIED CONCRETE OVERLAY INSTALLATION	SY-IN	6530	0	6530
					625001	FURNISHING LATEX-MODIFIED CONCRETE OVERLAY	CY	182	25	228
					625503	ADDITIONAL LATEX-MODIFIED CONCRETE FOR PARTIAL DECK REPAIRS	CY	20	25	25
6	REPAIR SPALL/DELAMINATION IN SOFFIT	SPAN 30S	2 SPALLS BETWEEN GIRDERS S-7 AND S-8 SEE CONCRETE SOFFIT REPAIR TABLE BELOW	PN-04	628041	DEEP SPALL REPAIR	CF	2	25	3
8	WIDEN SPANS 33S-39S	SPANS 33S, 34S, 35S, 36S, 37S, 38S, AND 39S		FT-01,	207000	STRUCTURAL EXCAVATION	CY	531	0	531
				FT-02,	211000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	0	1
				PL-01	604001	PROTECTIVE SHIELD	LS	1	0	1
				TO 09,	605021	FURNISH STEEL H-PILES, HP 12 X 53	LF	378	0	378
				AB-01	605071	FURNISH STEEL H INDICATOR OR TEST PILES, HP 12 X 53	LF	54	0	54
				TO 04,	605121	INSTALL STEEL H-PILES, HP 12 X 53	LF	378	0	378
				PR-01,	605171	INSTALL STEEL H INDICATOR OR TEST PILES, HP 12 X 53	LF	54	0	54
				PR-07	605201	DYNAMIC PILE TESTING BY CONTRACTOR	EA	1	0	1
				TO 18	605509	MICROPILES	LF	2210	0	2210
				BB-01	605510	MICROPILE PROOF TEST	EA	6	0	6
				TO 04,	610002	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE	CY	29	0	29
				FR-01,		FOOTING, CLASS A				
				FR-02,	610005	PORTLAND CEMENT CONCRETE MASONRY, SUBSTRUCTURE, CLASS A	CY	7	0	7
				BM-01	610008	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	57	0	57
				TO 05,	610010	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS B	CY	29	0	29
				DK-08	610012	PORTLAND CEMENT CONCRETE MASONRY, PIER FOOTING, CLASS B	CY	201	0	201
				TO 16,	610013	PORTLAND CEMENT CONCRETE MASONRY, PIER ABOVE FOOTING, CLASS B	CY	94	0	94
				AS-01	610016	PORTLAND CEMENT CONCRETE MASONRY, CLASS D	CY	14	0	14
				TO 04	610017	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	236	0	236
					610018	PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY	38	0	38
					611000	BAR REINFORCEMENT	LB	75260	0	75260
					611001	BAR REINFORCMENT, EPOXY COATED	LB	69600	0	69600
					613000	EPOXY CONCRETE SEALER (2)	SF	~~434~~ 417	0	~~434~~ 417
					613001	SILICONE-BASED ACRYLIC CONCRETE SEALER (2)	SF	~~275267~~ 13973	0	13973 ~~275267~~
					615001	STEEL STRUCTURES	LS	1	0	1
					623500	BRONZE BEARINGS	EA	17	0	17
					624000	PREFABRICATED EXPANSION JOINT SYSTEMS, 3"	LF	154	0	154
					628070	DRILLING HOLES AND INSTALLING DOWELS	EA	28	0	28
10	CLEAN SCUPPER AND DOWNSPOUT	SPANS 28S, 29S (2), 30S, 32S (2), 33S, 34S, 36S, 38S	SEE NOTES, THIS SHEET		601503	CLEANING BRIDGE SCUPPER	EA	10	100	20
12	REPLACE BRIDGE SCUPPER / ADD NEW BRIDGE SCUPPER	SPANS 27S, 28S, 29S (2), 30S, 31S, 32S (2), 35S (NEW), 37S (NEW), 39S (NEW)	11 SCUPPERS (8 REPLACE, 3 NEW)	DT-03	610019	HIGH EARLY STRENGTH CONCRETE	CY	4	0	4
				TO	611000	BAR REINFORCEMENT	LB		0	0
				DT-05	615001	STEEL STRUCTURES	LS	1	0	1
13	REPLACE SCUPPER DOWNSPOUT / ADD NEW DOWNSPOUT	P26S C1; P28S C1; P29S C1; P30S C1; P31S C1; P33S C1; P34S C2; P35S C2; P36S C2 (NEW); P37S C2; P38S C2 (NEW); P39S C2; P40S C2 (NEW)	13 LOCATIONS (10 REPLACE, 3 NEW) INCLUDES NEW CLEAN-OUT AT BASE OF COLUMN SEE HIGHWAY DWG. DT-06 FOR CLEAN-OUT DET.	DT-06 & DT-07	615001	STEEL STRUCTURES	LS	1	0	1
14	REMOVE AND REPLACE BRIDGE PARAPET	WEST PARAPET SPANS 26S, 27S, 28S, 29S, 30S, 31S, AND 32S	INCLUDES REMOVING AND REPLACING A PORTION OF THE DECK AND OVERHANG	DM-01,	211000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	0	1
				DM-02,	604001	PROTECTIVE SHIELD	LS	1	0	1
				TS-01,	610008	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	73	0	73
				DK-01	610017	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	153	0	153
				TO 07,	611000	BAR REINFORCEMENT	LB	16262	0	16262
				PA-01	611001	BAR REINFORCEMENT, EPOXY COATED	LB	25370	0	25370
				TO 04	613001	SILICONE-BASED ACRYLIC CONCRETE SEALER	SF	5233	0	5233
19	REPLACE BRIDGE LIGHTING	SEE LIGHTING PLANS FOR COMPLETE LIST OF LOCATIONS, ITEMS, AND PAYMENT								
24	JACK AND REPLACE EXISTING BRIDGE BEARINGS	SPAN 33S, PIER 34S; SPAN 34S, PIER 35S; SPAN 35S, PIER 35S; SPAN 37S, PIER 37S; SPAN 38S, PIER 39S, BEARING 6; SPAN 39S, PIER 39S, BEARINGS 1 & 6	27 BEARING REPLACEMENTS	RH-01 TO RH-04,	604000	JACKING BRIDGE	LS	1	0	1
				BB-01 TO BB-04	623500	BRONZE BEARINGS	EA	27	0	27
28	REMOVE STEEL SIGN SUPPORT BRACKETS	SPAN 28S AT BEAM S-7, SPAN 36S AT BEAM S-6		DM-04	211000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1	0	1
37	REPAIR DEEP SPALLS IN CONCRETE SUBSTRUCTURE	PIERS 34S, 35S, 37S, 56S, 58S		PR-02 TO 06	628041	DEEP SPALL REPAIR	CF	16	25	20
47	FILL RUMBLE STRIPS	PIER 23 TO PIER 51S	LEFT SHOULDER	PN-04	625504	POLYESTER POLYMER CONCRETE SAND MIX FOR RUMBLE STRIPS	CF	36	25	45

LMC OVERLAY NOTES:

1. NO LONGITUDINAL CONSTRUCTION JOINTS SHALL BE PLACED IN THE LMC OVERLAY. OVERLAY SHALL BE POURED FULL WIDTH WITHIN LIMITS OF WORK AS SHOWN ON DWGS. TS-01 TO TS-04.

CLEAN SCUPPER AND DOWNSPOUT NOTES:

1. PRIOR TO IMPLEMENTING STAGE I LANE CLOSURES, THE CONTRACTOR SHALL CLEAN THE EXISTING BRIDGE SCUPPERS ON I-95 SB WITHIN THE LIMITS OF THE WORK ON THE BRIDGE AND AS DIRECTED BY THE ENGINEER. IN ADDITION, AFTER STAGE 2 CONSTRUCTION IS COMPLETE, ALL BRIDGE SCUPPERS SHALL BE CLEANED AS NECESSARY AND BE CLEAR OF DEBRIS PRIOR TO COMPLETION OF THE CONTRACT. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND ITEM 601503 - CLEANING BRIDGE SCUPPERS.
2. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL THE SOURCE OF THE WATER TO BE USED TO CLEAN THE BRIDGE SCUPPERS. ONLY WATER THAT IS SAFE FOR DOWNSTREAM ENVIRONMENTS SHALL BE USED.

CONCRETE SOFFIT REPAIR NOTES:

1. THE LOCATION AND QUANTITIES OF THE REPAIRS SHOWN ON THIS DRAWING ARE BASED ON INSPECTION FIELD NOTES (SEE NOTE 13 ON DWG. PN-01). PRIOR TO STARTING EACH REPAIR, THE LIMITS SHALL BE VERIFIED BY THE CONTRACTOR IN THE PRESENCE OF THE ENGINEER.

CONCRETE SOFFIT REPAIR TABLE

LOCATION	DEEP SPALL REPAIR SIZE
SPAN 30S, BETWEEN GIRDERS S-7 & S-8	14"± x 24"±
SPAN 30S, BETWEEN GIRDERS S-7 & S-8	6"± x 6"±

ADDENDA / REVISIONS

(2) MODIFIED QTY REPAIR 8 ITEMS 613000 & 613001 D.A.N. 10/24/2019

NOT TO SCALE

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT T201907402 | COUNTY NEW CASTLE | BRIDGE NO. 1 748S 059 | DESIGNED BY: D. NIZAMOFF | CHECKED BY: W. GESCHREI

SUMMARY OF PROPOSED REPAIR AND RECONSTRUCTION ITEMS

PN-03 | SECTION WRA | SHEET NO. 33

N:\31987-004\Contract_Romp_D\CADD\Bridge\BR1-748S_PN03_A02.dgn
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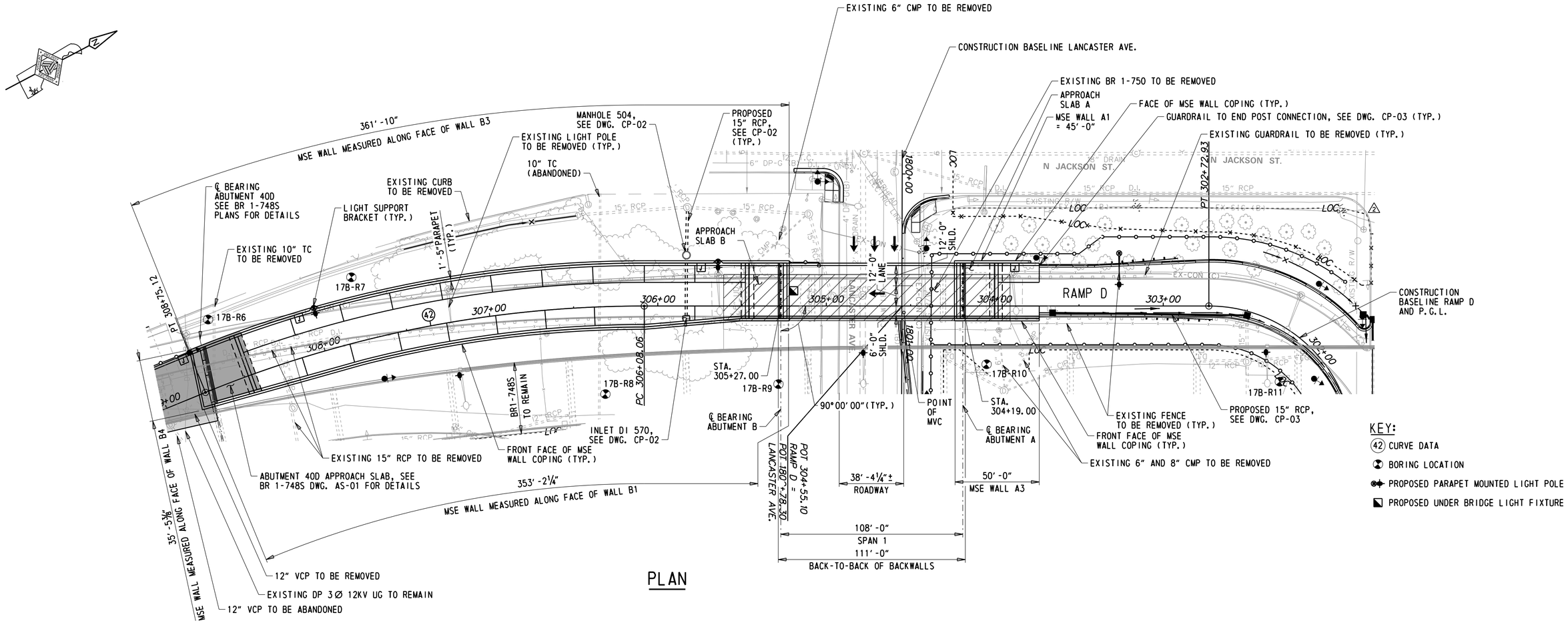
QUANTITIES

ITEM Nº	ITEM TITLE	UNIT	QUANTITY
202518	SETTLEMENT MONUMENT	EACH	26
207000	STRUCTURAL EXCAVATION	CY	~~4478~~ 0 △2
211000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
301001	GRADED AGGREGATE BASE COURSE, TYPE B	CY	329
604001	PROTECTIVE SHIELD	LS	1
604502	PROTECTION OF EXISTING STRUCTURES	LS	1
605021	FURNISH STEEL H-PILES, HP 12 X 53	LF	462
605071	FURNISH STEEL H INDICATOR OR TEST PILES, HP 12 X 53	LF	77
605121	INSTALL STEEL H PILES, HP 12 X 53	LF	462
605171	INSTALL STEEL H INDICATOR OR TEST PILES, HP 12 X 53	LF	77
605201	DYNAMIC PILE TESTING BY CONTRACTOR	EACH	2
607000	MECHANICALLY STABILIZED EARTH WALLS	SF	15873
610002	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY	41
610008	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	109
610010	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS B	CY	22
610016	PORTLAND CEMENT CONCRETE MASONRY, CLASS D	CY	26
610017	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	109
610018	PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY	347
611001	BAR REINFORCEMENT, EPOXY COATED	LB	132224
613001	SILICONE BASED ACRYLIC CONCRETE SEALER	SF	10696
615001	STEEL STRUCTURES	LS	1
624000	PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF	66
625000	LATEX-MODIFIED CONCRETE OVERLAY INSTALLATION	SY-IN	538
625001	FURNISHING LATEX-MODIFIED CONCRETE OVERLAY	CY	19

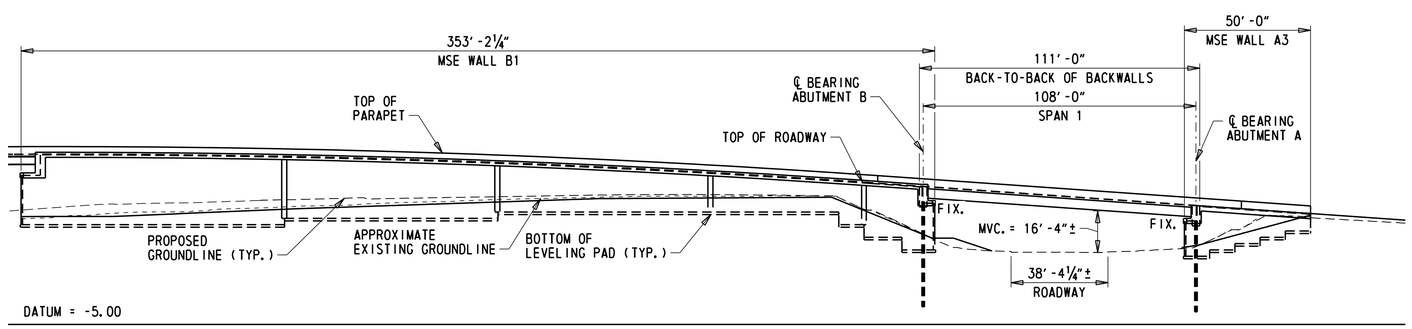
LOAD RATING SUMMARY

DESIGN VEHICLE	RATING FACTOR	RATING WEIGHT (TON)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	1.18	N/A	EXTERIOR	105	SERVICE II
HL-93 TANDEM (INVENTORY)	1.40	N/A	EXTERIOR	105	SERVICE II
HL-93 TRUCK TRAIN (INVENTORY)	N/A	N/A	N/A	N/A	N/A
HS-20 (INVENTORY)	1.68	60.48	EXTERIOR	105	SERVICE II
HL-93 TRUCK (OPERATING)	1.54	N/A	EXTERIOR	105	SERVICE II
HL-93 TANDEM (OPERATING)	1.82	N/A	EXTERIOR	105	SERVICE II
HL-93 TRUCK TRAIN (OPERATING)	N/A	N/A	N/A	N/A	N/A
HS-20 (OPERATING)	2.19	78.84	EXTERIOR	105	SERVICE II
DE S220 & LEGAL-LANE (LEGAL)	2.92	58.40	EXTERIOR	105	SERVICE II
DE S335 & LEGAL-LANE (LEGAL)	1.64	57.40	EXTERIOR	105	SERVICE II
DE S437 & LEGAL-LANE (LEGAL)	1.56	57.16	EXTERIOR	105	SERVICE II
DE T330 & LEGAL-LANE (LEGAL)	2.18	65.40	EXTERIOR	105	SERVICE II
DE T435 & LEGAL-LANE (LEGAL)	1.90	66.50	EXTERIOR	105	SERVICE II
DE T540 & LEGAL-LANE (LEGAL)	1.67	66.80	EXTERIOR	105	SERVICE II

NOTES:
1) LOAD RATING INCLUDES FUTURE WEARING SURFACE AS NOTED IN THE PLANS.
2) RATING VALUES FOR THE EV2, EV3, SU4, SU5, SU6, AND SU7 VEHICLES CAN BE FOUND IN THE LOAD RATING CALCULATIONS IN THE BRIDGE INSPECTION FILE.



PLAN

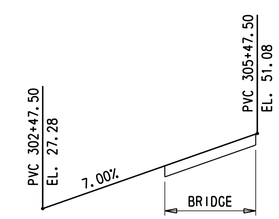


ELEVATION - DEVELOPED ALONG CONSTRUCTION BASELINE RAMP D

HORIZONTAL CURVE DATA

CURVE (42)

P.I. STA. = 307+43.30
DELTA = 22°16'20.4372"
Dc = 8°20'23.9893"
R = 687.00'
T = 135.2345'
L = 267.0546'
E = 13.1838'
P.C. STA. = 306+08.06
P.T. STA. = 308+75.12



VERTICAL CURVE DATA RAMP D

NOTES:

1. FOR LENGTHS OF MSE WALLS A2 AND B2, SEE DWG. FT-02.

LEGEND:

EXISTING BR 1-750 TO BE REMOVED

ADDENDA / REVISIONS	
2 ADJUSTED LOC	D.A.N. 10/24/2019

SCALE 0 30 60 90 FEET

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT	BRIDGE NO.	1 750 6148
T201907402	DESIGNED BY: D. NIZAMOFF	
COUNTY		
NEW CASTLE	CHECKED BY: W. GESCHREI	

GENERAL PLAN AND ELEVATION

PE-01
SECTION
WRA
SHEET NO.
157

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TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
A	5" SOLID WHITE EPOXY RESIN	413'
B	5" SOLID YELLOW EPOXY RESIN	409'
C	10" SOLID WHITE EPOXY RESIN	-
E	5" BROKEN WHITE EPOXY RESIN 10' LINE & 30' GAP	100'

CONSTRUCTION PHASING LEGEND

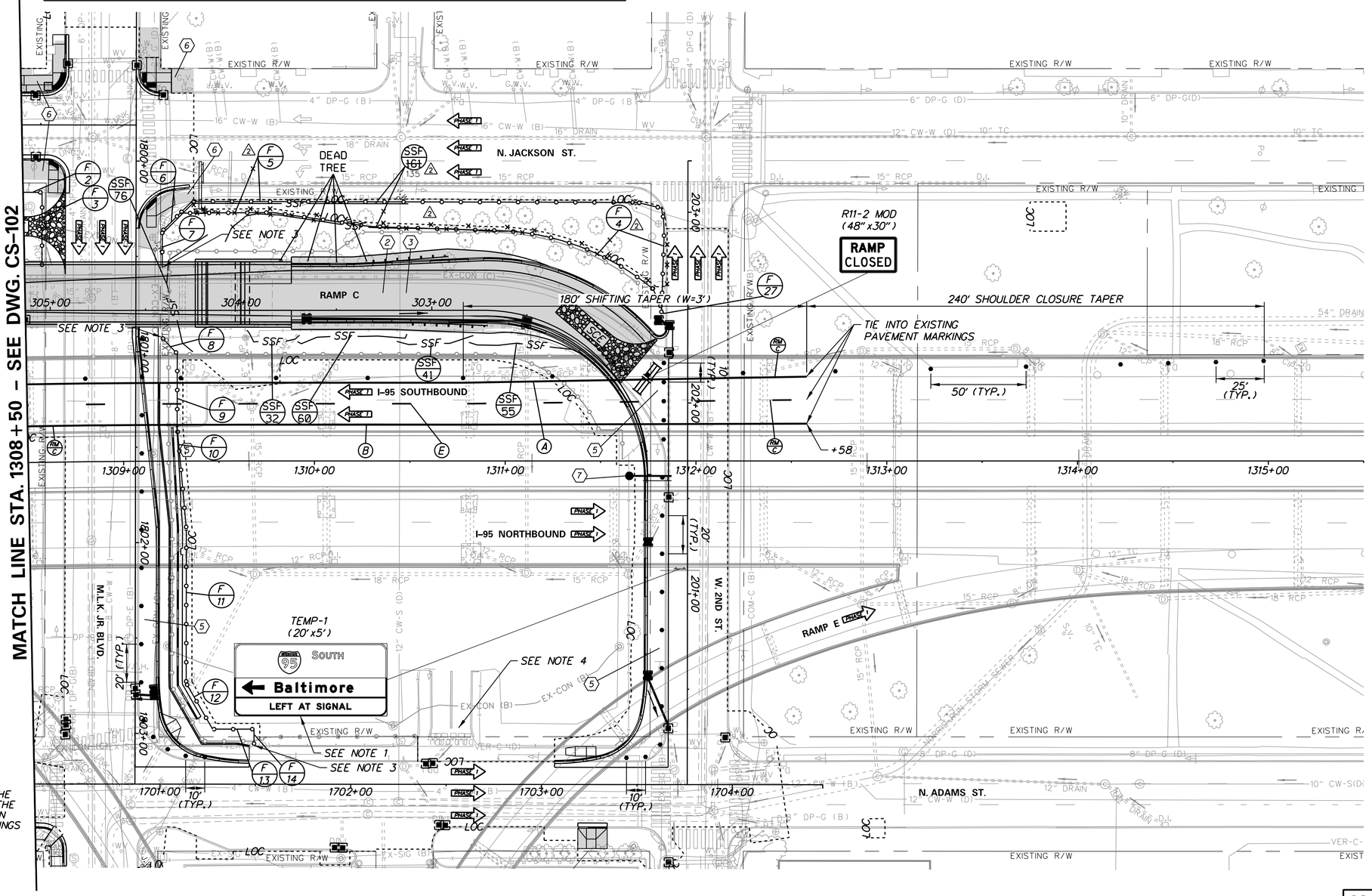
- PROPOSED CONSTRUCTION THIS PHASE
- EXISTING SIGN/PROPOSED TEMPORARY SIGN
- TYPE III BARRICADE
- PLASTIC DRUM
- TRAFFIC FLOW ARROW
- TEMPORARY P.C.C. SAFETY BARRIER, UNPINNED
- TEMPORARY P.C.C. SAFETY BARRIER, PINNED
- TEMPORARY IMPACT ATTENUATOR
- ARROW PANEL
- REMOVE EXISTING STRIPING BY CONTRACTOR
- PROTECTION VEHICLE WITH TRUCK-MOUNTED ATTENUATOR

SEQUENCE OF CONSTRUCTION - PHASE 1

1. INSTALL TEMPORARY TRAFFIC CONTROL DEVICES AS SHOWN ON THE PERMANENT WARNING SIGN PLAN AND PHASE 1 PLANS. SHIFT TRAFFIC TO DESIGNATED TRAVEL LANE. CONCURRENTLY INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN AND NEW STORM DRAIN SYSTEMS ARE INSTALLED.
2. CLOSE EXISTING RAMP C AND DETOUR TRAFFIC.
3. DEMOLISH THE EXISTING STRUCTURE AND BEGIN CONSTRUCTION OF PROPOSED RAMP D.
4. INSTALL PEDESTRIAN DETOUR AS SHOWN ON DWG. DP-04 OR DP-05 DEPENDING ON AREA WITH WORK (SEE NOTE 2).
5. DURING ALLOWABLE LANE CLOSURE HOURS (SEE DRAWING CS-03) INSTALL LANE CLOSURES ON CITY STREETS AS SHOWN ON PHASE 1 - DETAIL 2 AND CONSTRUCT ROADWAY WIDENING AND RAMP D TIE-IN.
6. DURING ALLOWABLE LANE CLOSURE HOURS (SEE DRAWING CS-03) PERFORM LANE CLOSURES ON CITY STREETS USING TYPICAL APPLICATIONS AND COMPLETE SIDEWALK AND CURB RAMP WORK.
7. COORDINATE WITH CONTRACTOR FOR CONTRACT NO. 201907002 TO ALLOW FOR CONSTRUCTION OF PROPOSED CANTILEVER SIGN STRUCTURE C-10. INSTALL PERMANENT SIGN PANEL ON CANTILEVER SIGN STRUCTURE C-10 PRIOR TO OPENING RAMP D TO TRAFFIC.

TEMPORARY FENCE SCHEDULE

NO.	QTY.	DESCRIPTION	NOTES
2	119'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 400+49, 35' LT. TO STA. 401+67, 35' LT. (+/-)
3	39'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 1800+17, 49' RT. TO STA. 1800+54, 28' RT. (+/-)
4	~~207'~~	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 302+08, 45' RT. TO STA. 303+83, 51' RT. (+/-)
5	49'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 303+83, 51' RT. TO STA. 304+32, 51' RT. (+/-)
6	13'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 304+32, 51' RT. TO STA. 304+42, 43' RT. (+/-)
7	20'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 1800+37, 14' LT. TO STA. 1800+56, 14' LT. (+/-)
8	12'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 1800+92, 14' LT. TO STA. 1801+01, 22' LT. (+/-)
9	39'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 1801+01, 22' LT. TO STA. 1801+39, 22' LT. (+/-)
10	54'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 1801+39, 22' LT. TO STA. 1801+93, 27' LT. (+/-)
11	81'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 1801+93, 27' LT. TO STA. 1802+74, 27' LT. (+/-)
12	28'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 1802+74, 27' LT. TO STA. 1802+98, 41' LT. (+/-)
13	22'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 1701+28, 29' LT. TO STA. 1701+49, 29' LT. (+/-)
14	9'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 1802+98, 62' LT. TO STA. 1803+06, 62' LT. (+/-)
27	16'	PORTABLE CHAINLINK FENCE (ITEM 727548)	STA. 302+00, 41' RT. TO STA. 302+10, 47' RT. (+/-)



NOTES:

1. INSTALL OVERLAY ON EXISTING SIGN AS SHOWN, UPON CLOSURE OF EX. RAMP C.
2. THE CONTRACTOR SHALL NOT PERFORM WORK ALONG M.L.K. JR. BLVD. AND AT THE INTERSECTION OF M.L.K. JR. BLVD. AND ADAMS ST. OR ALONG 2ND ST. AND AT THE INTERSECTION OF 2ND ST. AND ADAMS ST. SIMULTANEOUSLY SO THAT PEDESTRIAN ACCESS CAN BE MAINTAINED USING THE PEDESTRIAN DETOURS SHOWN ON DRAWINGS DP-04 AND DP-05.
3. SECURE TEMPORARY FENCE TO EXISTING PERMANENT FENCE.
4. MAINTAIN ACCESS TO DART PARKING LOT AT ALL TIMES.

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ADDENDA / REVISIONS

2 ADJUSTED LOC, TEMPORARY FENCE, AND SSF D.A.N. 10/24/2019

SCALE 0 30 60 90 FEET

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-748S, 1-750
T201907402	DESIGNED BY: WRA	
COUNTY		
NEW CASTLE	CHECKED BY: WRA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1

CS-103

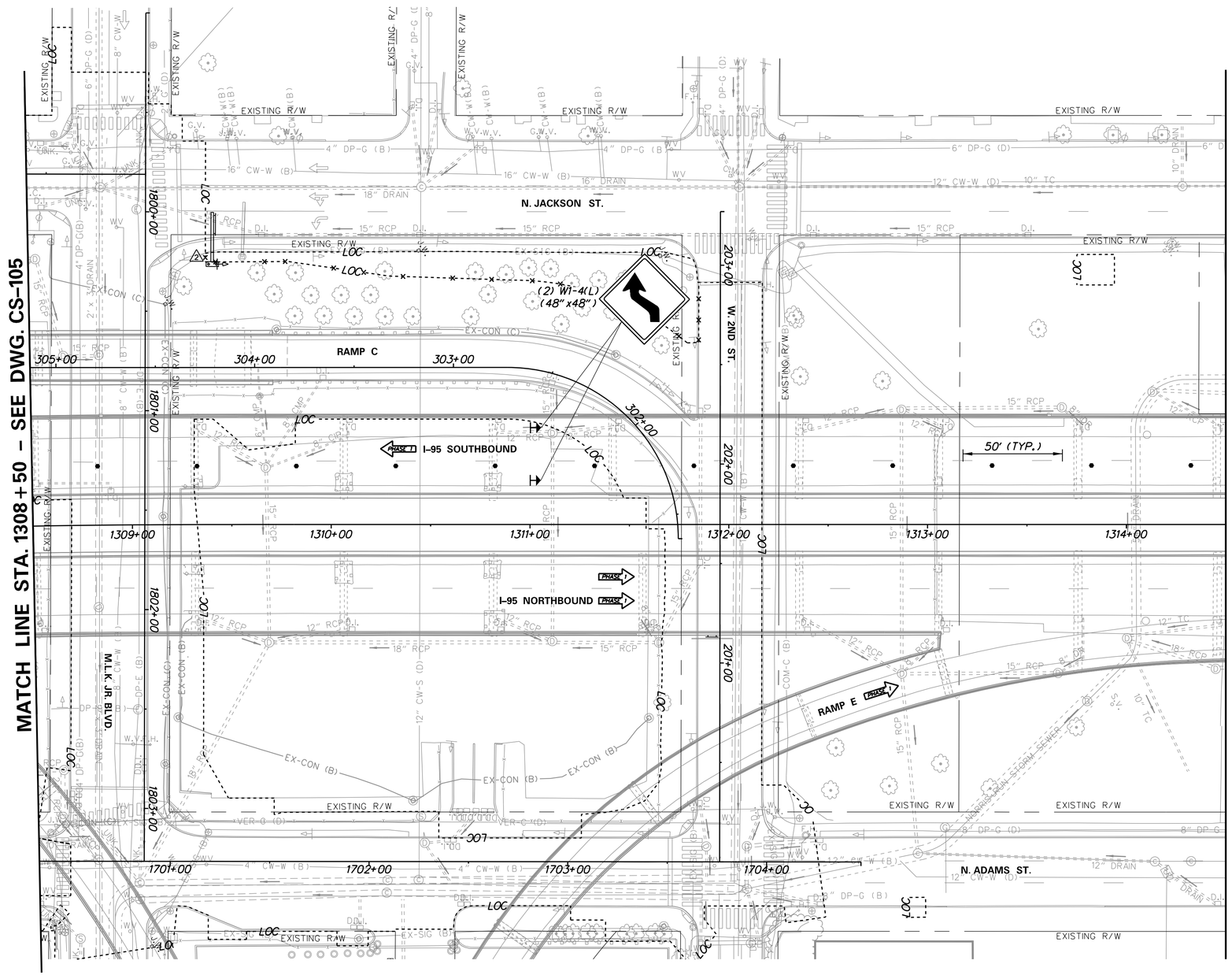
SECTION	SHEET NO.
WRA	216

CONSTRUCTION PHASING LEGEND

- PROPOSED CONSTRUCTION THIS PHASE
- EXISTING SIGN/PROPOSED TEMPORARY SIGN
- TYPE III BARRICADE
- PLASTIC DRUM
- TRAFFIC FLOW ARROW
- TEMPORARY P.C.C. SAFETY BARRIER, UNPINNED
- TEMPORARY P.C.C. SAFETY BARRIER, PINNED
- TEMPORARY IMPACT ATTENUATOR
- ARROW PANEL
- REMOVE EXISTING STRIPING BY CONTRACTOR
- PROTECTION VEHICLE WITH TRUCK-MOUNTED ATTENUATOR

SEQUENCE OF CONSTRUCTION - PHASE 1

1. DURING ALLOWABLE LANE CLOSURE HOURS (SEE DRAWING CS-03) INSTALL TEMPORARY TRAFFIC CONTROL DEVICES AS SHOWN ON THIS PLAN. SHIFT TRAFFIC TO DESIGNATED TRAVEL LANES.



ADDENDA / REVISIONS	
2 ADJUSTED LOC	D.A.N. 10/24/2019

SCALE: 0 30 60 90 FEET

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-748S, 1-750
T201907402	DESIGNED BY: WRA	
COUNTY	CHECKED BY: WRA	
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1 – DETAIL 1

CS-106
SECTION
WRA
SHEET NO.
219

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CONSTRUCTION PHASING LEGEND

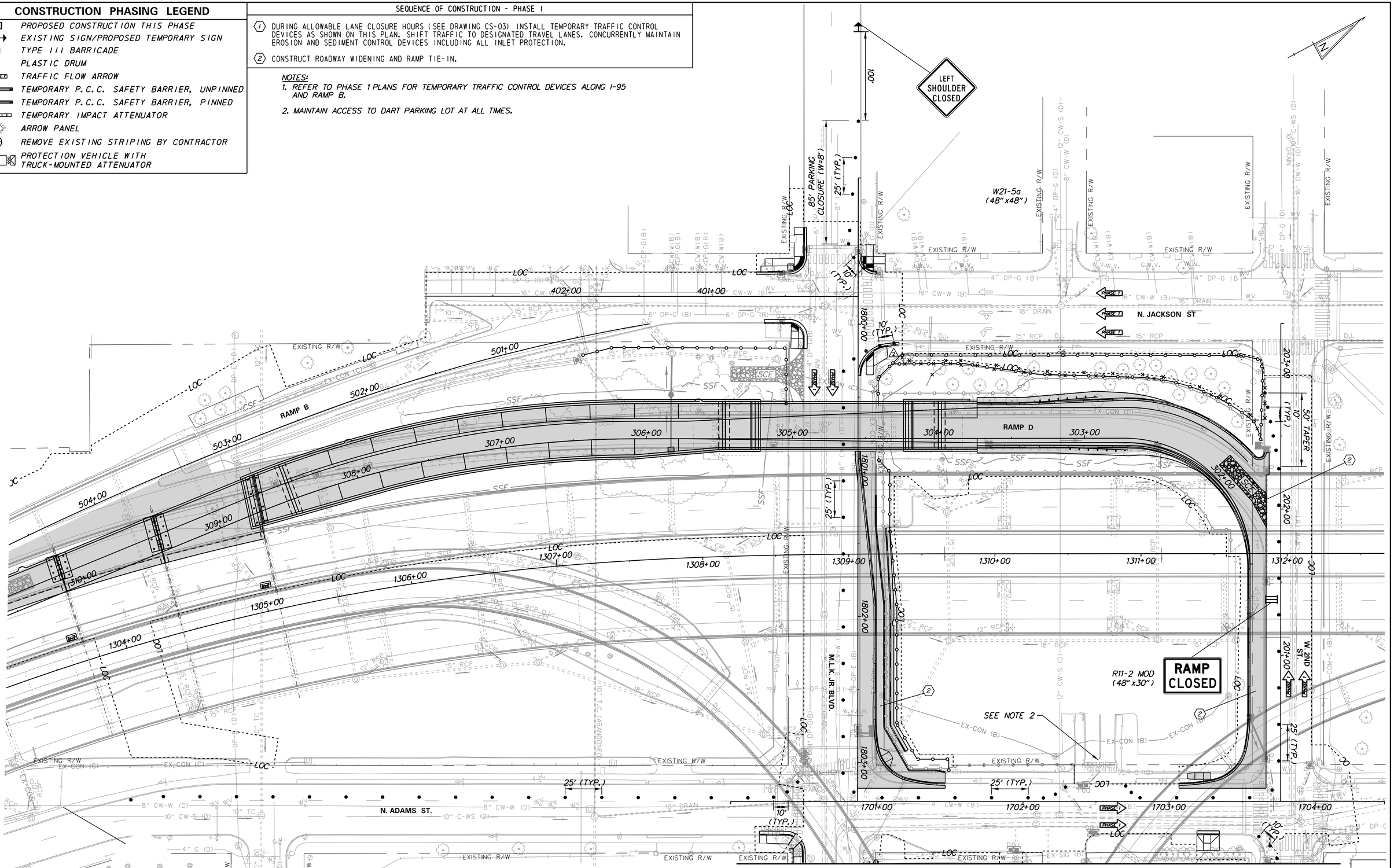
- PROPOSED CONSTRUCTION THIS PHASE
- EXISTING SIGN/PROPOSED TEMPORARY SIGN
- TYPE III BARRICADE
- PLASTIC DRUM
- TRAFFIC FLOW ARROW
- TEMPORARY P.C.C. SAFETY BARRIER, UNPINNED
- TEMPORARY P.C.C. SAFETY BARRIER, PINNED
- TEMPORARY IMPACT ATTENUATOR
- ARROW PANEL
- REMOVE EXISTING STRIPING BY CONTRACTOR
- PROTECTION VEHICLE WITH TRUCK-MOUNTED ATTENUATOR

SEQUENCE OF CONSTRUCTION - PHASE 1

1. DURING ALLOWABLE LANE CLOSURE HOURS (SEE DRAWING CS-03) INSTALL TEMPORARY TRAFFIC CONTROL DEVICES AS SHOWN ON THIS PLAN. SHIFT TRAFFIC TO DESIGNATED TRAVEL LANES. CONCURRENTLY MAINTAIN EROSION AND SEDIMENT CONTROL DEVICES INCLUDING ALL INLET PROTECTION.
2. CONSTRUCT ROADWAY WIDENING AND RAMP TIE-IN.

NOTES:

1. *REFER TO PHASE 1 PLANS FOR TEMPORARY TRAFFIC CONTROL DEVICES ALONG I-95 AND RAMP B.*
2. *MAINTAIN ACCESS TO DART PARKING LOT AT ALL TIMES.*



ADDENDA / REVISIONS

2 ADJUSTED LOC, TEMPORARY FENCE, AND SSF D.A.N. 10/24/2019

SCALE 0 30 60 90 FEET

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-748S, 1-750
T201907402	DESIGNED BY: WRA	
COUNTY		
NEW CASTLE	CHECKED BY: WRA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1 – DETAIL 2

CS-109
SECTION
WRA
SHEET NO.
222

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CONSTRUCTION PHASING LEGEND

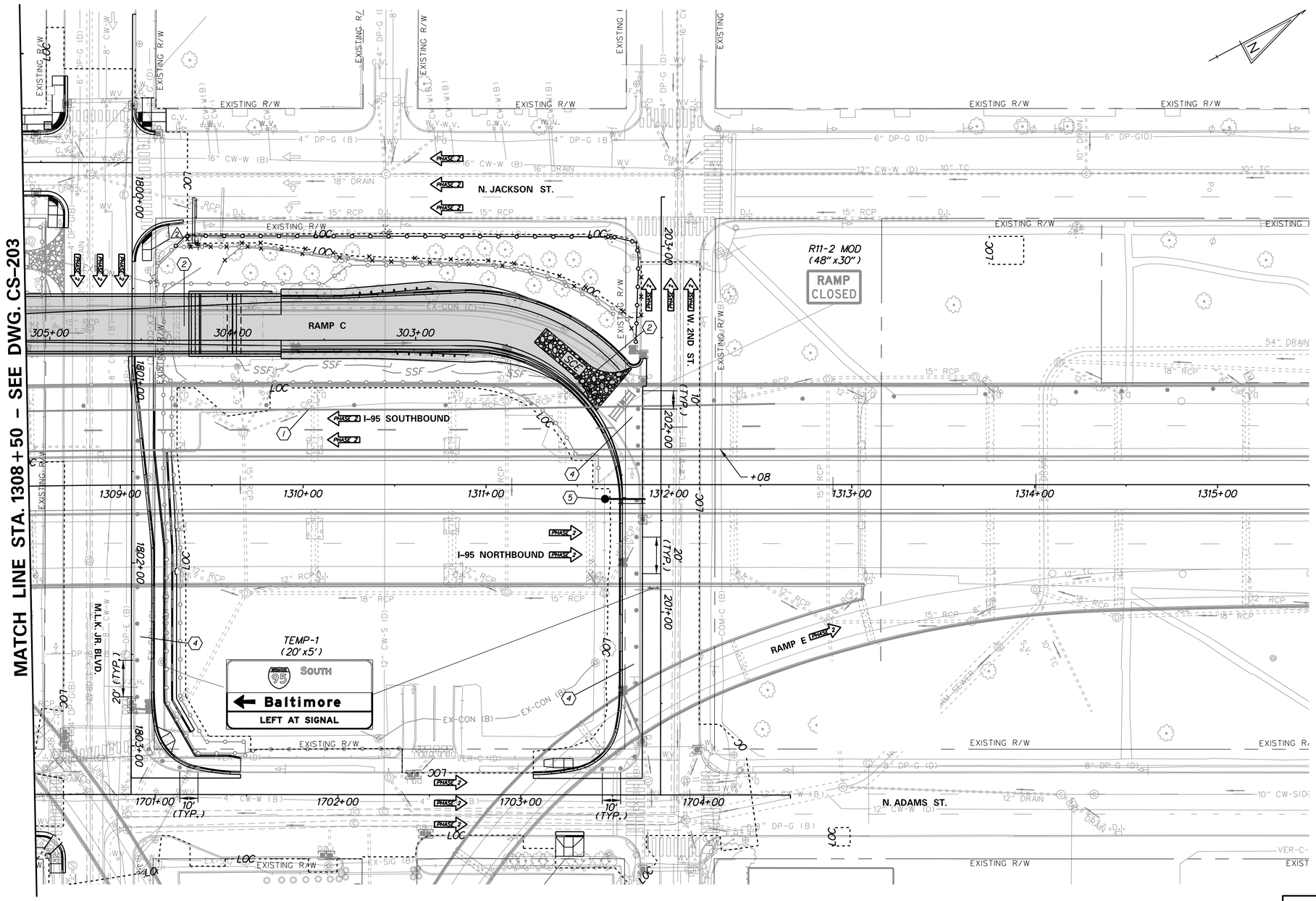
- PROPOSED CONSTRUCTION THIS PHASE
- EXISTING SIGN/PROPOSED TEMPORARY SIGN
- TYPE III BARRICADE
- PLASTIC DRUM
- TRAFFIC FLOW ARROW
- TEMPORARY P.C.C. SAFETY BARRIER, UNPINNED
- TEMPORARY P.C.C. SAFETY BARRIER, PINNED
- TEMPORARY IMPACT ATTENUATOR
- ARROW PANEL
- REMOVE EXISTING STRIPING BY CONTRACTOR
- PROTECTION VEHICLE WITH TRUCK-MOUNTED ATTENUATOR

SEQUENCE OF CONSTRUCTION - PHASE 2

1. MAINTAIN TEMPORARY TRAFFIC CONTROL DEVICES FROM PHASE I FOR I-95 SOUTHBOUND AND SIDE STREETS, AS SHOWN ON PLAN.
2. MAINTAIN CLOSURE OF EXISTING RAMP C AND DETOUR TRAFFIC. CONTINUE DEMOLITION OF THE EXISTING STRUCTURE AND CONSTRUCTION OF PROPOSED RAMP D.
3. INSTALL PEDESTRIAN DETOUR AS SHOWN ON DWG. DP-04 OR DP-05 DEPENDING ON AREA WITH WORK (SEE NOTE 1).
4. DURING ALLOWABLE LANE CLOSURE HOURS (SEE DRAWING CS-03) INSTALL LANE CLOSURES ON CITY STREETS AS SHOWN ON PHASE I - DETAIL 2 AND CONSTRUCT ROADWAY WIDENING AND RAMP D TIE-IN.
5. COORDINATE WITH CONTRACTOR FOR CONTRACT NO. T201907002 TO ALLOW FOR CONSTRUCTION OF PROPOSED CANTILEVER SIGN STRUCTURE C-10. INSTALL PERMANENT SIGN PANEL ON CANTILEVER SIGN STRUCTURE C-10 PRIOR TO OPENING RAMP D TO TRAFFIC.

NOTES:

1. THE CONTRACTOR SHALL NOT PERFORM WORK ALONG M.L.K. JR. BLVD. AND AT THE INTERSECTION OF M.L.K. JR. BLVD. AND ADAMS ST. OR ALONG 2ND ST. AND AT THE INTERSECTION OF 2ND ST. AND ADAMS ST. SIMULTANEOUSLY SO THAT PEDESTRIAN ACCESS CAN BE MAINTAINED USING THE PEDESTRIAN DETOURS SHOWN ON DRAWINGS DP-04 AND DP-05.



ADDENDA / REVISIONS	
2 ADJUSTED LOC, TEMPORARY FENCE, AND SSF	D.A.N. 10/24/2019

SCALE 0 30 60 90 FEET

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-748S, 1-750
T201907402	DESIGNED BY: WRA	
COUNTY	CHECKED BY: WRA	
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2

CS-204
SECTION
WRA
SHEET NO.
227

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CONSTRUCTION PHASING LEGEND

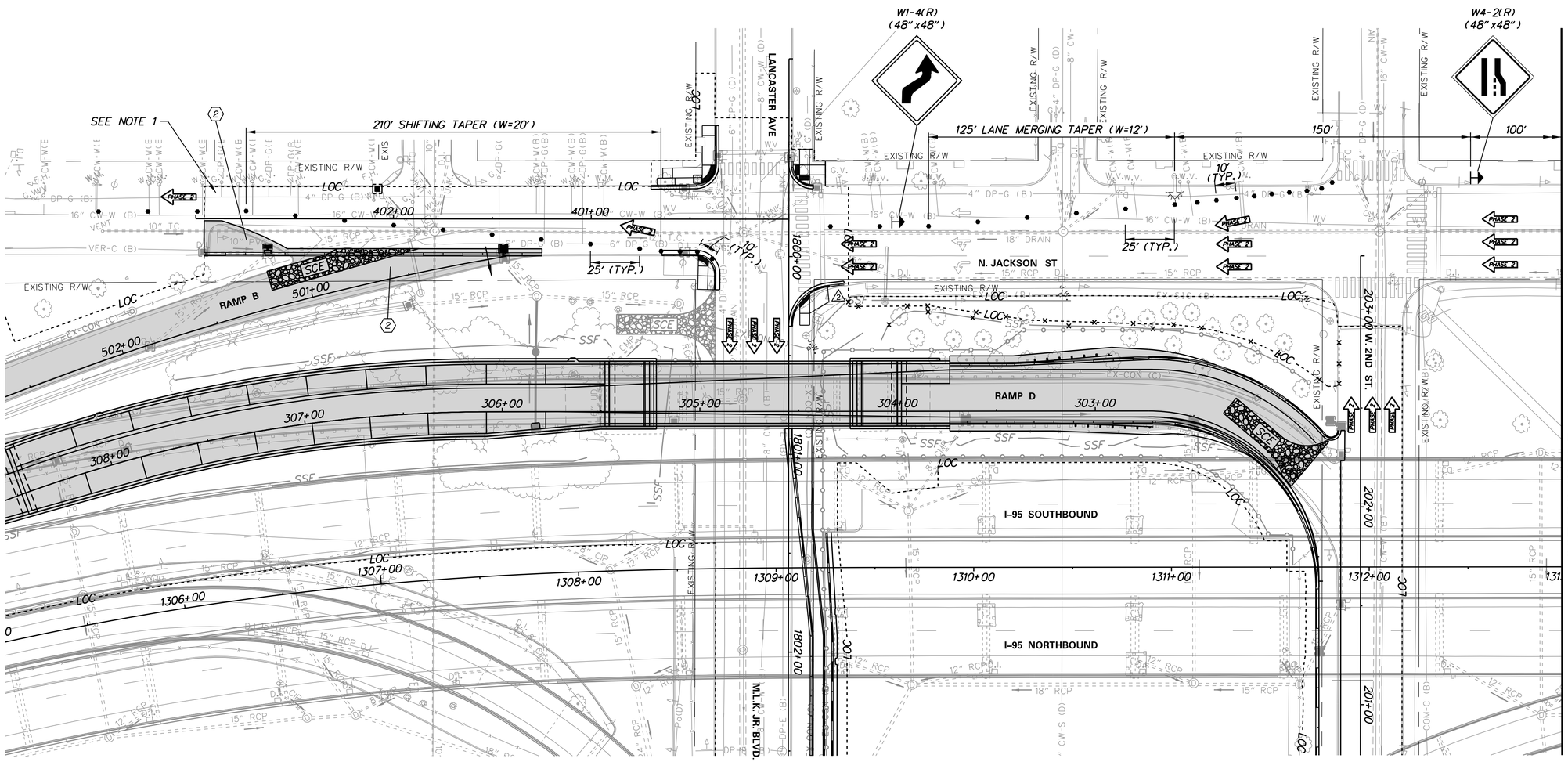
- PROPOSED CONSTRUCTION THIS PHASE
- EXISTING SIGN/PROPOSED TEMPORARY SIGN
- TYPE III BARRICADE
- PLASTIC DRUM
- TRAFFIC FLOW ARROW
- TEMPORARY P.C.C. SAFETY BARRIER, UNPINNED
- TEMPORARY P.C.C. SAFETY BARRIER, PINNED
- TEMPORARY IMPACT ATTENUATOR
- ARROW PANEL
- REMOVE EXISTING STRIPING BY CONTRACTOR
- PROTECTION VEHICLE WITH TRUCK-MOUNTED ATTENUATOR

SEQUENCE OF CONSTRUCTION - PHASE 2

1. DURING ALLOWABLE LANE CLOSURE HOURS (SEE DRAWING CS-03) INSTALL TEMPORARY TRAFFIC CONTROL DEVICES AS SHOWN ON THIS PLAN. SHIFT TRAFFIC TO DESIGNATED TRAVEL LANES. CONCURRENTLY INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN AND NEW STORM DRAIN SYSTEMS ARE INSTALLED.
2. REMOVE CURB BUMPOUT AND CONSTRUCT ROADWAY WIDENING.

NOTES:

1. COORDINATE WITH CITY OF WILMINGTON TO IMPLEMENT PARKING RESTRICTION ON THE WEST SIDE OF THE JACKSON STREET DURING IMPLEMENTATION OF THIS TRAFFIC CONTROL DETAIL.
2. TEMPORARY TRAFFIC CONTROL DEVICES ALONG I-95 NOT SHOWN.
3. REFER TO PHASE 2 PLANS FOR TEMPORARY TRAFFIC CONTROL DEVICES ALONG I-95, LANCASTER AVE, M.L.K. JR. BLVD, ADAMS ST, AND 2ND ST.



ADDENDA / REVISIONS	
2 ADJUSTED LOC AND SSF	D.A.N. 10/24/2019

SCALE: 0 30 60 90 FEET

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-748S, 1-750
T201907402	DESIGNED BY: WRA	
COUNTY		
NEW CASTLE	CHECKED BY: WRA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2 - DETAIL 1

CS-205
SECTION
WRA
SHEET NO.
228

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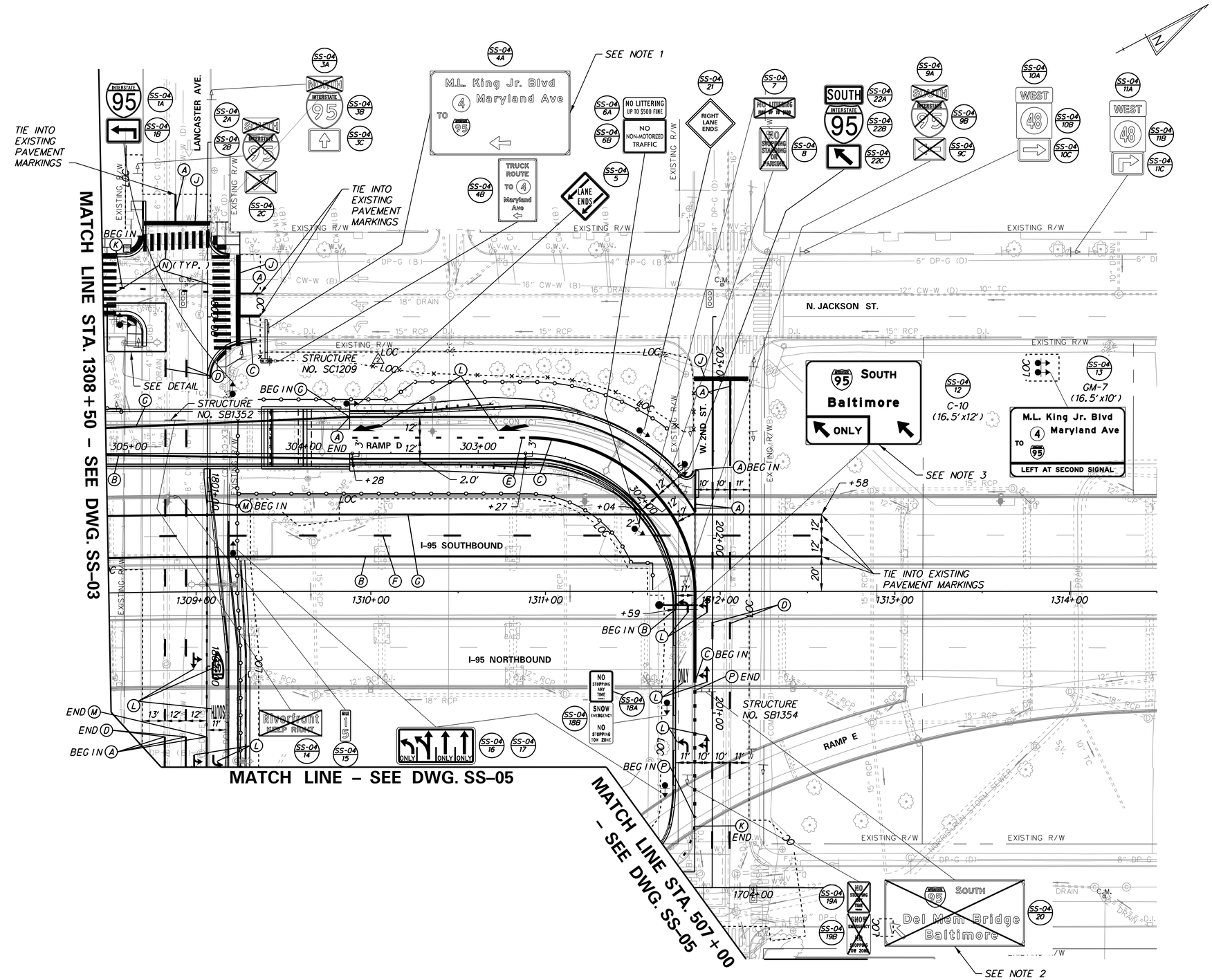
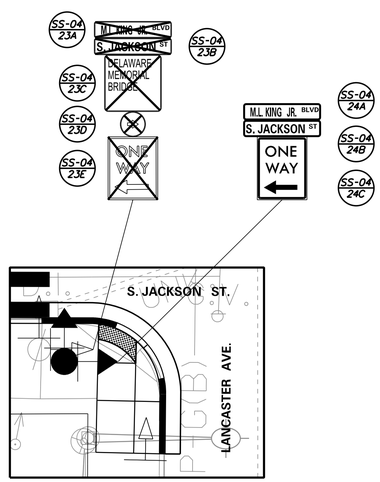
PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM		QUANTITY
A	5" SOLID WHITE EPOXY RESIN PAINT (ITEM 817013)		430 LF
B	5" SOLID YELLOW EPOXY RESIN PAINT (ITEM 817013)		410 LF
C	10" SOLID WHITE EPOXY RESIN PAINT (ITEM 817014)		240 LF
D	5" BROKEN WHITE PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, 10' LINE, 30' GAP (ITEM 817013)		200 LF
E	5" DOTTED WHITE RETROREFLECTIVE PREFORMED PATTERNED MARKINGS (TAPE) 3' LINE, 9' GAP (ITEM 817020)		27 LF
F	8" BROKEN WHITE RETROREFLECTIVE PREFORMED PATTERNED CONTRAST PAVEMENT MARKINGS, 10' LINE & 30' GAP (ITEM 817022)		100 LF
G	8" SOLID WHITE CONTRAST EPOXY RESIN PAINT, 5" WHITE, 3" BLACK	ITEM 817013	550 LF
		ITEM 817018	550 LF
H	13" DOTTED WHITE RETROREFLECTIVE PREFORMED PATTERNED CONTRAST PAVEMENT MARKINGS, 3' LINE & 9' GAP (TAPE) (ITEM 817023)		0 LF
J	16" SOLID WHITE PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC (ITEM 817002)		135 SF
K	5" DOTTED WHITE PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 2' LINE, 6' GAP (ITEM 817005)		16 LF
L	SOLID WHITE ALKYD-THERMOPLASTIC PERMANENT PAVEMENT SYMBOL (ITEM 817002)		245 SF
M	5" DOTTED WHITE PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, 2' LINE, 6' GAP (ITEM 817013)		32 LF
N	PERMANENT PAVEMENT STRIPING, SYMBOL, ALKYD-THERMOPLASTIC, WHITE, 10'x2', (ITEM 817002)		660 SF
P	10" DOTTED WHITE PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, 2' LINE, 6' GAP (ITEM 817014)		20 LF

NOTES:

1. SIGN STRUCTURE, SIGN SUPPORTS AND SIGN PANELS PROPOSED BY OTHERS UNDER CONTRACT NO. T201907002.
2. REMOVE EXISTING SIGN PANEL AND OVERHEAD I-BEAMS ONLY. EXISTING SIGN SUPPORTS TO BE REMOVED BY OTHERS.
3. INSTALL PROPOSED SIGN PANEL C-10 ON THE SIGN STRUCTURE AND SIGN SUPPORTS PROPOSED BY OTHERS UNDER CONTRACT NO. T201907002.





SIGN PLACEMENT DETAIL
SCALE: 1" =10'

ADDENDA / REVISIONS	
2 ADJUSTED LOC	D.A.N. 10/24/2019

SCALE 0 30 60 90 FEET

REHABILITATION OF I-95, 2ND STREET ON-RAMP IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-748S, 1-750
T201907402	DESIGNED BY: WRA	
COUNTY		
NEW CASTLE	CHECKED BY: WRA	

SIGNING, STRIPING & CONDUIT PLAN

SS-04
SECTION
WRA
SHEET NO.
254

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