



AMERICAN SOCIETY OF HIGHWAY ENGINEERS

National Project of the Year Award

OFFICIAL ENTRY FORM

AWARD CATEGORY (Check One): Under \$20 Million Over \$20 Million

SPONSORING REGION (Check One):

- | | | |
|---|--|---|
| <input checked="" type="checkbox"/> Northeast | <input type="checkbox"/> Great Lakes | <input type="checkbox"/> Northwest |
| <input type="checkbox"/> Mid-Atlantic | <input type="checkbox"/> North Central | <input type="checkbox"/> Rocky Mountain |
| <input type="checkbox"/> Southeast | <input type="checkbox"/> South Central | <input type="checkbox"/> Southwest |

CONTACT INFORMATION FOR SUBMITTING REGION:

Contact Name: Scott R. Eshenaur ASHE Region Position: NPY Chairperson
Phone (Office): 717-790-9565 Phone (Mobile): 717-580-8426 E-Mail Address: sreshenaur@modjeski.com

PROJECT INFORMATION:

ENTERING AGENCY/COMPANY'S NAME: RK&K
PROJECT NAME: SR 273 & I-95 Interchange Improvements Project TYPE: Highways, Structures
PROJECT LOCATION: Newark, DE
CITY: Newark COUNTY: New Castle STATE: DE
FINAL CONSTRUCTION COST: \$12.96 Million BUDGETED CONSTRUCTION COST: \$14.39 Million
PROJECT COMPLETION DATE: Substantially complete: 8/16/2023
PROJECT ASHE SECTION: First State ASHE SECTION CONTACT NAME: Leonard Brooks
PHONE (OFFICE): 302-342-3125 PHONE (MOBILE): 302-218-2862 E-MAIL: lbrooks@geolyn.com

PROJECT TEAM:

PROJECT OWNER: Delaware Department of Transportation
STREET ADDRESS: 800 Bay Road
CITY: Dover STATE: DE ZIP: 19903
CONTACT PERSON: Breanna Kovach, PE PHONE: 302-760-2522
E-MAIL ADDRESS: breanna.kovach@delaware.gov

PROJECT DESIGN FIRM: RK&K
STREET ADDRESS: 750 Shipyard Drive, Suite 350
CITY: Wilmington STATE: DE ZIP: 19801
CONTACT PERSON: Carey Webb, PE PHONE: 410-207-3162
E-MAIL ADDRESS: cwebb@rkk.com

PRIME CONTRACTOR: A-Del Construction Co., Inc.
STREET ADDRESS: 10 Adel Drive
CITY: Newark STATE: DE ZIP: 19702
CONTACT PERSON: Jon Baker PHONE: 302-453-8286
E-MAIL ADDRESS: jbaker@a-del.com

Entry Form Completed By: Carey Webb Date: 1/23/2024



ASHE
First State

2023 PROJECT OF THE YEAR



SR 273 & I-95 Interchange Improvements Project

COOPERATION CREATES HARMONY AT HARMONY ROAD



INTRODUCTION

The extremely short weave area from the southbound I-95 off ramp/westbound SR 273 merge point to the Harmony Road traffic signal had been a safety and operational concern for decades, creating anxiety, ill-temper – and even rage – in the best intentioned drivers. Those exiting from I-95 wanting to travel west on SR 273 towards Newark mixed heavily with those on westbound SR 273 wanting to make a right on Harmony Road, resulting in a turbulent situation during the weekday morning and afternoon peak hours. When the Harmony Road traffic signal was red for westbound SR 273, the traffic gridlock at the weave would routinely back-up onto southbound I-95, creating an extremely dangerous condition.

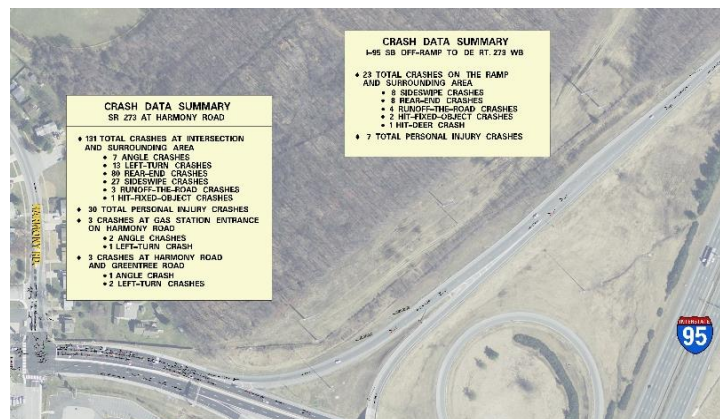


Pre-construction weaving condition.

Daily commuters familiar with the challenges of the problematic weaving area, which was just 475 feet in length, would drive on the shoulders (and even the grass!) to cut into traffic. Due to the significant amount of daily traffic and the short weaving distance, the area was routinely identified by DeIDOT as a safety hazard. During the initial study phase of the project, between December 2011 and December 2013, there were 131 crashes near the SR 273 and Harmony Road intersection and 23 crashes along the southbound I-95 off ramp to westbound SR 273. These crashes were primarily side-swipe, angle and rear-end crashes, as would be expected in a highly congested, highly turbulent area.

PROJECT HISTORY

DeIDOT Project Development and RK&K developed a phased approach to design short-term geometric and pedestrian improvements at the SR 273/Harmony Road intersection, followed by a planning study to address overall safety, operational and geometric deficiencies of the interchange. This approach led to the design and construction of a mid-term safety and traffic operations improvement project, which was substantially completed in the Spring of 2023.



Crash data analysis.

MID-TERM SOLUTION

DeIDOT Project Development and RK&K conceived, planned and designed a solution that relocated the I-95 southbound ramp to westbound SR 273 further east from the Harmony Road intersection and installed a new traffic signal at this relocated ramp to help meter traffic, eliminate the weave, and improve safety. In addition, a 1400-foot-long third lane was added to westbound SR 273 east of Harmony Road to add capacity.



Selected Alternative.

COMPLEXITY

In order to reduce future maintenance costs and minimize overall disruption and impacts to the travelling public, DeIDOT used the construction of the SR 273 and I-95 Interchange Improvements as an opportunity to simultaneously perform several other pending projects in the area, rather than performing that work separately and causing additional construction-related traffic impacts. These additional construction tasks included:

- Installation of a new stormwater management facility to assist with future crediting and water quality and quantity management for the Christina River Watershed.
- Ground-mount sign replacements and updates throughout the interchange.
- High mast lighting replacement throughout the interchange and on I-95.
- Curb and guardrail replacement throughout the interchange to meet current guidelines.



High mast lighting replacement.



Bridge deck removal.



WB 273 overhead sign replacement.

- Bridge deck patching, deck joint rehabilitation, bearing replacements, and resurfacing of the SR 273 bridge over I-95.
- Pavement patching on SR 273 to repair existing cracks and deficiencies.
- Resurfacing the entire interchange to refresh the top layer of pavement, including adding high friction surface treatment on the sharper ramp curves to enhance driver safety.
- Overhead sign structure replacements on both SR 273 and I-95.
- Replacement of an overhead sign structure on westbound SR 273 in advance of an adjacent DelDOT I-95 ramp improvement project.

This variety of construction tasks demanded extensive coordination and cooperation between DelDOT Project Development, RK&K, various other DelDOT sections, DelDOT Construction, and A-Del throughout design and construction to ensure a successful project.

CONSTRUCTION PHASING

Since I-95 is the major east coast artery, the Team had to be particularly aware of limiting impacts to commuters, visitors and interstate commerce. RK&K developed and A-Del implemented a phased approach to minimize lane closures, but in order to erect the overhead sign structures on I-95, a full closure of both directions was required. This feat involved the development of intricate detour plans, constant coordination with DelDOT's Community Relations for advanced notification of detour routes and timing, and partnership with DelDOT's Transportation Management Center to ensure all traffic emergency scenarios were anticipated and covered.



I-95 closure for overhead sign erection.

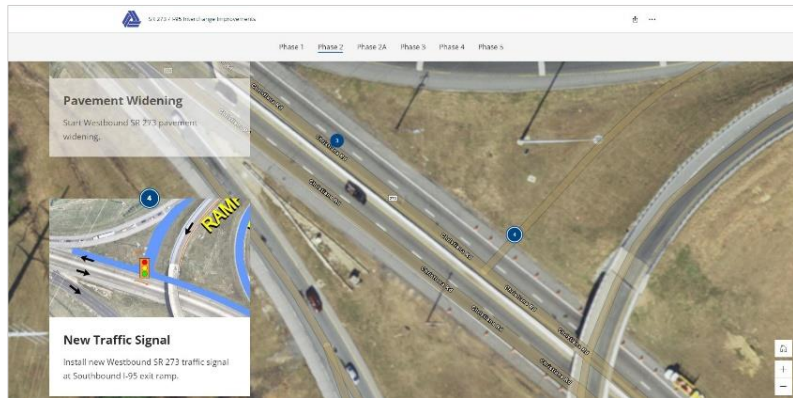
INNOVATION

Prior to A-Del starting construction, the RK&K team developed a project-specific website to inform the public of the upcoming construction, including anticipated phases, timing, detours, etc. Once the project was in construction, RK&K updated the project timeline and milestones, and posted construction photos and traffic alerts to keep the content current. The website also included an interactive map to show the different locations of work during the different phases of construction.

DelDOT Construction also employed drones to survey and quantify soil stockpiles for payment to A-Del.



DelDOT drone use.



Project-specific interactive website.

GEOTECHNICAL & STRUCTURAL

During construction the Team utilized crosshole sonic logging (CSL) testing to verify the integrity of each drilled shaft foundation installed. In a few cases where CSL testing was inconclusive, A-Del used Low Strain Pile Integrity Testing (PIT) to confirm the results of the CSL testing.

Another innovative aspect of the SR 273/I-95 Interchange Improvements project is the sheer size and scale of the double mast steel monopipe overhead sign structures spanning both directions of I-95 with no center support. These structures are likely some of the largest diameter monopipe sign structures in the US - the largest has a 212-foot span with a 42" monopipe diameter.



Double mast steel monopipe overhead structure.

BENEFITS TO TRAVELING PUBLIC

The Project has benefitted the traveling public in numerous ways, both tangible and emotional. Residents and commuters alike have realized improved traffic operations, travel times and safety while traveling this short section of westbound SR 273. Emotionally, drivers no longer need to endure the daily stress of negotiating the dreaded weave and potentially upsetting their fellow travelers!

A project benefit the traveling public will not see but greatly appreciate is how including the multiple construction components to simultaneously perform other pending projects in the area minimized overall disruption and travel impacts in their daily lives.

COMMITMENT TO SAFETY

Improving safety within the study area was one of two primary purposes of the project – and the project has delivered. Since the reconfiguration of the southbound I-95 off-ramp and new signal installation at westbound SR 273 was activated in July 2022, the number of crashes resulting in injury through June 2023 in the project area has decreased 70% when compared to the same one-year period in 2018 thru 2019. The installation of high friction surface treatment on numerous ramp curves will help vehicles maintain pavement friction during rain events and when vehicles are traveling at higher speeds.



New Southbound I-95 ramp to Westbound 273 - During construction.

During construction, A-Del and DelDOT Construction maintained the highest level of work zone safety, with no reportable injuries or OSHA violations.

SUSTAINABLE FEATURES

During the preliminary design phase, the RK&K team worked closely with the DelDOT Water Resources division to identify a stormwater over-management opportunity to assist with future crediting and water quality and quantity management. The RK&K team designed an extended detention wet pond facility in compliance with DNREC Best Management Practices specifications that discharges at a non-erosive rate and provides stormwater credit for the project and the Christina River Watershed. The strategic placement of the new BMP worked in conjunction with the roadway improvements drainage design and also alleviated downstream outfall erosion issues.



New stormwater management facility.

EXCEEDING DELDOT'S NEEDS

Not including some steel supply chain challenges towards the end of the project, A-Del and the Team delivered the project on-time and under-budget (\$13M actual vs. \$14.4M estimated). Multiple DelDOT departments benefitted from the project's inclusive philosophy of packaging a program of individual improvements into one cohesive construction contract to save time and money, and better serve DelDOT's customers.

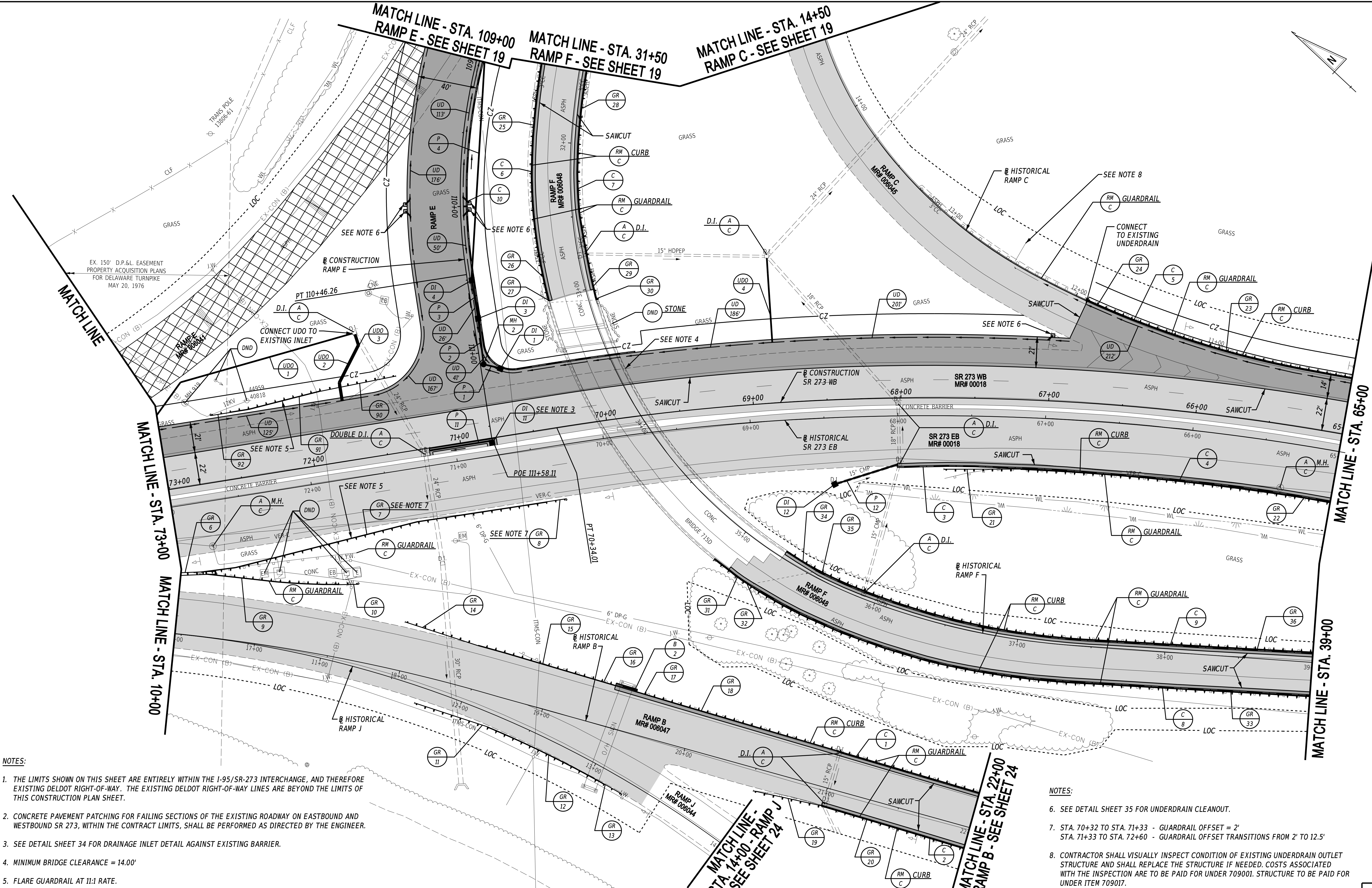
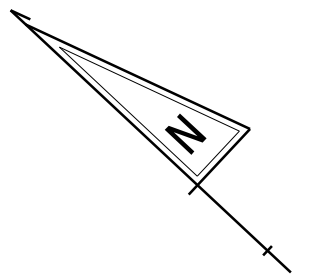
"The improvements to SR 273 at the I-95 off ramp have made driving through the area so much better! I have used the exit daily for years and the changes have made it easier and safer to get on and off 95 and down 273. Traffic flows better and not having to fight across 2 lanes of traffic makes it a lot simpler." - Nicole Howard, Townsend, DE

COLLABORATION SUCCESS

After two years of construction, the SR 273 and I-95 Interchange Improvements project was substantially completed in the Spring of 2023. Through all the planning, design and construction coordination and complexity, the final product is performing as envisioned. This project is a great example of the DelDOT Project Development, Bridge, Traffic, Water Resources and Pavement Rehab Sections working together with RK&K and A-Del Construction to deliver a successful project meeting a myriad of goals for the Department, and saving time, money and travel headaches for the residents and commuters in this region of New Castle County.



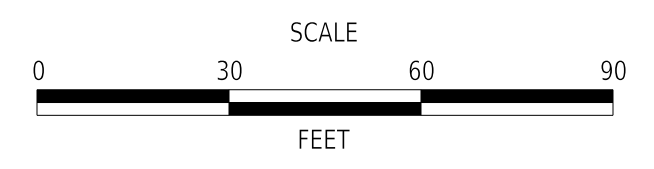
Completed Project.



- NOTES:**
1. THE LIMITS SHOWN ON THIS SHEET ARE ENTIRELY WITHIN THE I-95/SR-273 INTERCHANGE, AND THEREFORE EXISTING DELDOT RIGHT-OF-WAY. THE EXISTING DELDOT RIGHT-OF-WAY LINES ARE BEYOND THE LIMITS OF THIS CONSTRUCTION PLAN SHEET.
 2. CONCRETE PAVEMENT PATCHING FOR FAILING SECTIONS OF THE EXISTING ROADWAY ON EASTBOUND AND WESTBOUND SR 273, WITHIN THE CONTRACT LIMITS, SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER.
 3. SEE DETAIL SHEET 34 FOR DRAINAGE INLET DETAIL AGAINST EXISTING BARRIER.
 4. MINIMUM BRIDGE CLEARANCE = 14.00'
 5. FLARE GUARDRAIL AT 11:1 RATE.

- NOTES:**
6. SEE DETAIL SHEET 35 FOR UNDERDRAIN CLEANOUT.
 7. STA. 70+32 TO STA. 71+33 - GUARDRAIL OFFSET = 2'
STA. 71+33 TO STA. 72+60 - GUARDRAIL OFFSET TRANSITIONS FROM 2' TO 12.5'
 8. CONTRACTOR SHALL VISUALLY INSPECT CONDITION OF EXISTING UNDERDRAIN OUTLET STRUCTURE AND SHALL REPLACE THE STRUCTURE IF NEEDED. COSTS ASSOCIATED WITH THE INSPECTION ARE TO BE PAID FOR UNDER 709001. STRUCTURE TO BE PAID FOR UNDER ITEM 709017.

ADDENDA / REVISIONS



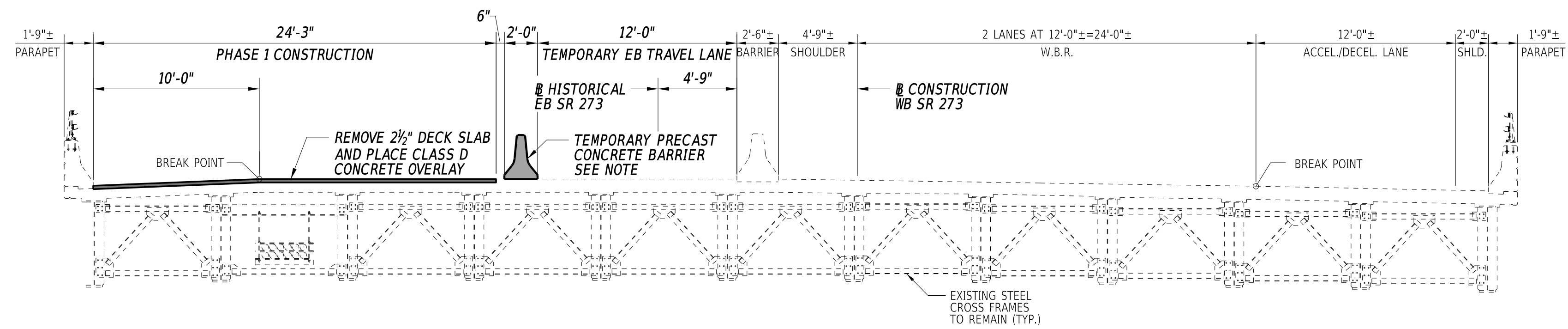
HSIP NCC, SR 273 AND I-95 INTERCHANGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	715, 715A, 715B, 715C & 715D
T200800713	DESIGNED BY:	B. BURRIS
COUNTY	CHECKED BY:	Z. SCHOLL
NEW CASTLE		

CONSTRUCTION PLAN

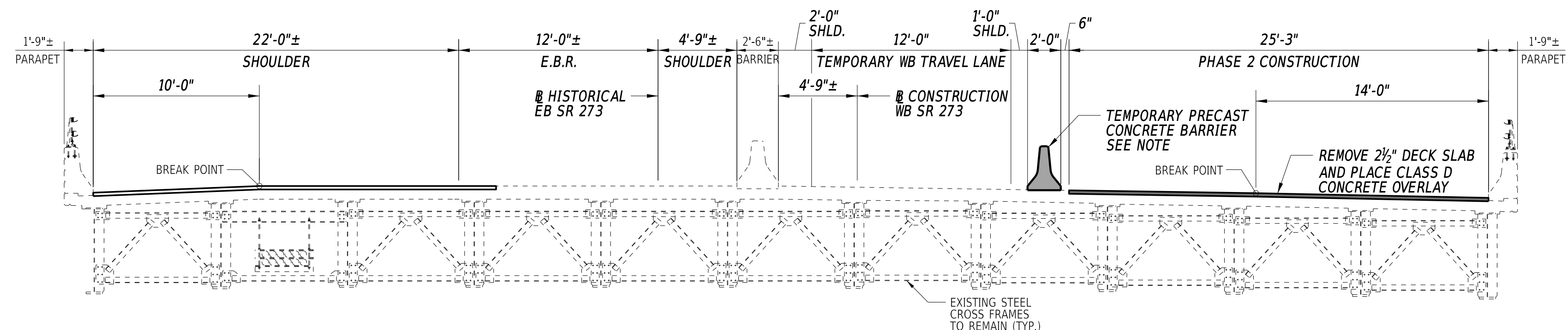
CP-02
SECTION
RK&K
SHEET NO.
14

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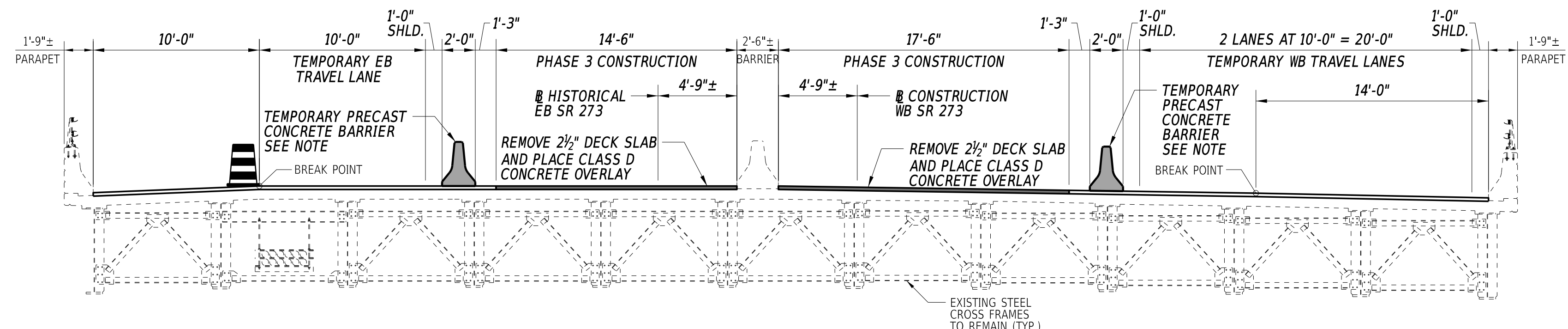
TYPICAL SECTION - PHASE 1

SCALE: 3/16" = 1'-0"



TYPICAL SECTION - PHASE 2

SCALE: 3/16" = 1'-0"



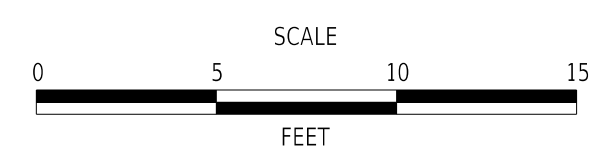
TYPICAL SECTION - PHASE 3

SCALE: 3/16" = 1'-0"

NOTES:

- DO NOT BOLT TEMPORARY PRECAST CONCRETE BARRIER TO DECK.
- FOR TEMPORARY STRIPING ON BRIDGE 1-715, REFER TO TYPICAL SECTIONS ON CONSTRUCTION PHASING SHEETS.

ADDENDA / REVISIONS



HSIP NCC, SR 273 AND I-95 INTERCHANGE IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-715
T200800713	DESIGNED BY:	E. LORETE
COUNTY	CHECKED BY:	D. TUSING
NEW CASTLE		

SEQUENCE OF CONSTRUCTION

SECTION
RK&K
SHEET NO.
40

BMP-1042: EXTENDED DETENTION WET POND

TOTAL DRAINAGE AREA TO BMP: 19.05 AC, CN: 80

RPv RUNOFF VOLUME: 60,815 CF

MANAGEMENT PROVIDED BY FACILITY:
 WATER QUALITY BY 48-HR EXTENDED DETENTION OF RUNOFF FROM RPv (1-YEAR) STORM EVENT.
 WATER QUANTITY BY ATTENUATION OF RUNOFF FROM Cv (10-YEAR) AND Fv (100-YEAR) STORM EVENTS.

REFER TO SECTION 910 OF THE STANDARD SPECIFICATIONS.

GENERAL NOTES:

1. POND AREA ABOVE ELEVATION 63.50 SHALL BE 6" TOPSOIL (AND/OR TOPSOILING), EROSION CONTROL BLANKET AND SEEDING AS FOLLOWS: EROSION CONTROL BLANKET MULCH AND GRASS SEEDING- STORMWATER FACILITY MIX TO BE PLACED FROM EXISTING WATERLINE AT TIME OF SEEDING UP TO DISTURBED ELEVATION 70.00
2. EXCAVATED MATERIAL SHALL BE USED IF DETERMINED SUITABLE BY THE ENGINEER IN FIELD.
3. UPON COMPLETION OF THE POND CONSTRUCTION, AS-BUILT PLANS SHALL BE SUBMITTED TO THE DELDOT STORMWATER ENGINEER.*

SEQUENCE OF CONSTRUCTION NOTES:

1. BEFORE ANY CONSTRUCTION BEGINS ON THE WET POND, CONTACT THE DESIGNATED CCR A MINIMUM OF 2 WORKING DAYS IN ADVANCE SO THAT THE REQUIRED FACILITY CONSTRUCTION CHECKLIST CAN BE COMPLETED.
2. IN GENERAL, CONSTRUCT STORMWATER MANAGEMENT FACILITY WORKING FROM DOWNSTREAM TO UPSTREAM.

INITIAL CONSTRUCTION

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THE CONSTRUCTION PHASING PLANS.
2. CLEAR AND GRUB FOR INSTALLATION OF THE PERIMETER EROSION AND SEDIMENT CONTROLS AS SHOWN ON THE PHASE 3 CONSTRUCTION PHASING PLANS.
3. INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS SURROUNDING THE POND CONSTRUCTION AS SHOWN ON THE PHASE 3 CONSTRUCTION PHASING PLANS.
4. INSTALL MH-27 AS A DOGHOUSE MANHOLE ON EXISTING 30"RCP WHERE SHOWN ON PLANS. MAINTAIN DOWNSTREAM CONNECTION. INSTALL P-26 FROM MH-27 IN THE DIRECTION OF THE POND OUTLET CONTROL STRUCTURE.
5. CLEAR AND GRUB REMAINING AREA FOR WET POND CONSTRUCTION.
6. EXCAVATE AREA FOR OUTLET STRUCTURE INSTALLATION. DEWATER FOUNDATION AS NEEDED IN ACCORDANCE WITH DEWATERING PRACTICES AS SHOWN IN SECTION 900 OF THE STANDARD SPECIFICATIONS.
7. CONSTRUCT POND OUTLET STRUCTURE (DI-26). INSTALL SKIMMER DEWATERING DEVICE AND/OR OTHER TEMPORARY MODIFICATIONS AS NEEDED IN ACCORDANCE WITH SECTION 900.
8. COMPLETE POND BASIN EXCAVATION TO LINES AND GRADES SHOWN. INSTALL RIPRAP (RR-5 & RR-6) WHERE SHOWN ON PLANS. PLACE TOPSOIL AT ELEVATIONS NOTED ON PLANS.
9. INSTALL MH-25 AS A DOGHOUSE MANHOLE ON EXISTING 30"RCP WHERE SHOWN ON PLANS. INSTALL P-25 AND FES-25 WHERE SHOWN ON PLANS. FOLLOWING INSTALLATION, CUT AND REMOVE EXISTING 30"RCP FROM MH-25 TO MH-27.
10. PUMP AS NECESSARY FROM POND OUTLET CONTROL STRUCTURE TO EXISTING STRUCTURE DOWNSTREAM OF MH-27 AND INSTALL P-27 FROM MH-27 TO EXISTING STRUCTURE. REMOVE PUMP ONCE INSTALLATION IS COMPLETE.
11. ALL DISTURBED AREAS MEETING FINAL ELEVATIONS AND GRADES ABOVE THE PERMANENT BOTTOM ELEVATION (OR THE EXISTING WATER SURFACE ELEVATION AT TIME OF SEEDING) SHALL BE SEED WITH GRASS SEEDING-STORMWATER FACILITY AND MULCHED WITH EROSION CONTROL BLANKET MULCH.

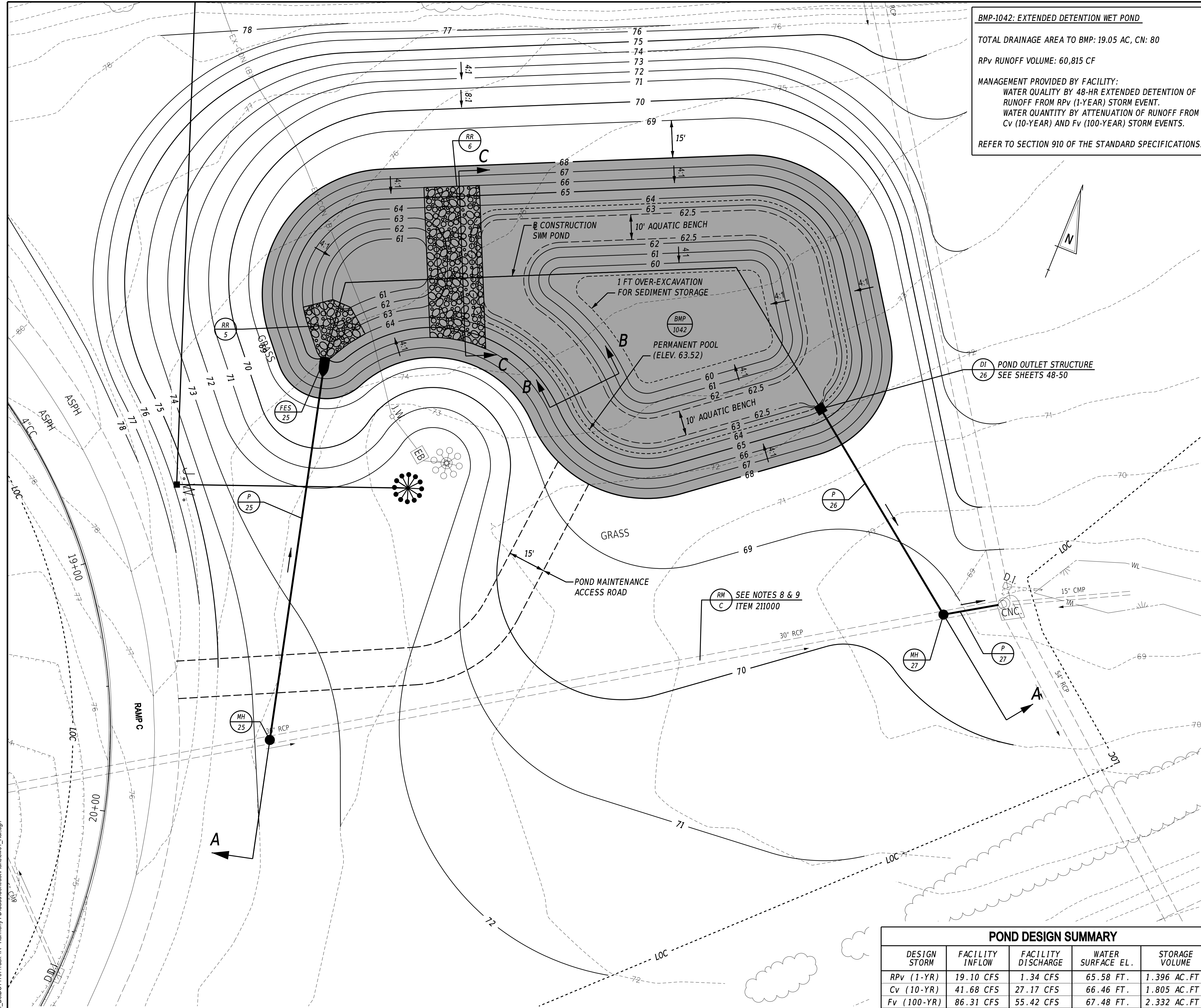
MAINTENANCE OF SEDIMENT BASIN

1. THE CONTRACTOR SHALL INSPECT THE BASIN THE NEXT WORK DAY FOLLOWING A RAIN EVENT AND MAKE ANY REPAIRS AS NEEDED.
2. ANY EXCESS SEDIMENT AROUND THE POND OUTLET CONTROL STRUCTURE AREA WILL BE REMOVED WITHIN TWO WORKING DAYS AND DISPOSED AT A LOCATION APPROVED BY THE ENGINEER.

CONVERSION TO PERMANENT WET POND FACILITY

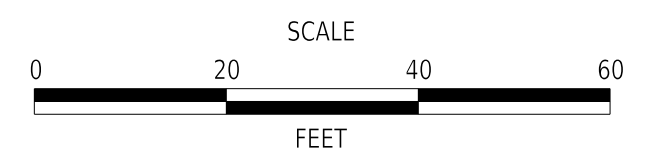
1. CONVERT THE SEDIMENT BASIN AFTER ALL AREAS DRAINING TO IT HAVE ATTAINED FINAL STABILIZATION AND THE STORMWATER ENGINEER HAS CONCURRED WITH THE CONVERSION.
2. REMOVE ANY EXCESS SEDIMENT FROM THE POND BOTTOM ABOVE ELEVATION 60.00. PERMANENT POND DEPTH SHALL BE NO GREATER THAN 8 FT IN ACCORDANCE WITH SECTIONS 11.13.6.2 AND 11.13.6.3 OF THE DELAWARE SEDIMENT & STORMWATER REGULATIONS.
3. REMOVE ANY EXCESS SEDIMENT FROM THE FOREBAY(S) ABOVE ELEVATION 61.00.
4. COMPLETE STABILIZATION OF ALL BARE AREAS WITH GRASS SEEDING STORMWATER FACILITY AND EROSION CONTROL BLANKET MULCH.
5. WITH APPROVAL FROM THE ENGINEER, REMOVE REMAINING E&S CONTROLS.

*AS-BUILT DRAWINGS WILL BE COMPLETED BY THE CONTRACTOR AND CERTIFIED BY A DELAWARE PLS BEFORE THE DELDOT INITIAL INSPECTION DATE. THESE DRAWINGS SHALL BE SENT TO THE STORMWATER ENGINEER FOR VERIFICATION. AS-BUILT DRAWINGS WILL INCLUDE, BUT NOT BE LIMITED TO:
 -GENERAL TOPOGRAPHY OF THE WHOLE FACILITY AT 1-FOOT CONTOURS INCLUDING FOREBAY AND TOP/TOE OF ANY EMBANKMENT.
 -INVERT OF PIPE THAT INFLOWS TO THE POND.
 -OUTLINE OF ALL RIPRAP AND OBTAIN SPOT ELEVATIONS ON TOP OF THE RIPRAP.
 -OUTLET STRUCTURE INVERTS OF ANY AND ALL ORIFICES/WEIRS, TOP OF STRUCTURE, OUTLET PIPE, ETC.
 -PRIMARY OUTFLOW PIPE INVERTS AT THE ENTRANCE AND EXIT.



POND DESIGN SUMMARY				
DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE EL.	STORAGE VOLUME
RPv (1-YR)	19.10 CFS	1.34 CFS	65.58 FT.	1.396 AC. FT.
Cv (10-YR)	41.68 CFS	27.17 CFS	66.46 FT.	1.805 AC. FT.
Fv (100-YR)	86.31 CFS	55.42 CFS	67.48 FT.	2.332 AC. FT.

ADDENDA / REVISIONS



HSIP NCC, SR 273 AND I-95 INTERCHANGE IMPROVEMENTS

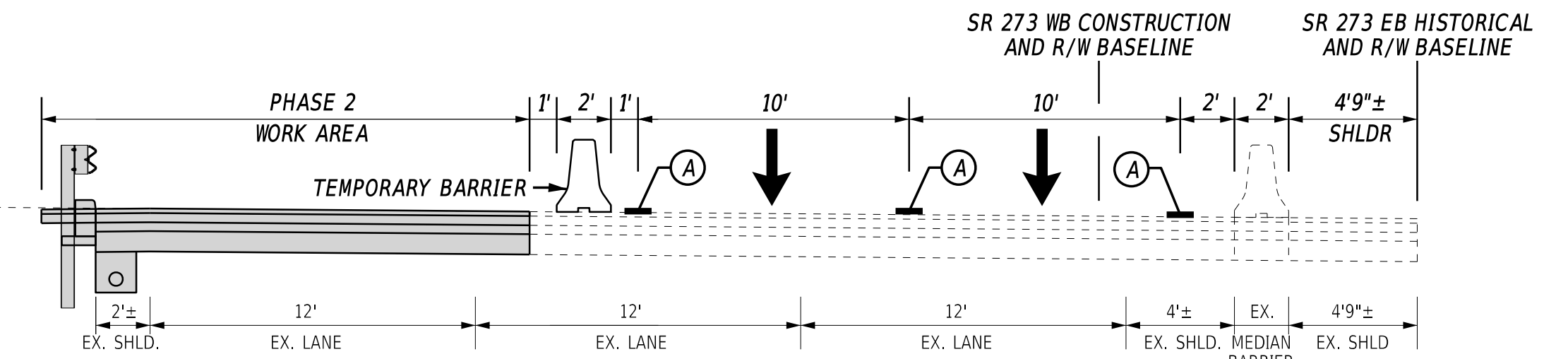
CONTRACT	BRIDGE NO.	715, 715A, 715B, 715C & 715D
T200800713	DESIGNED BY:	S. ROUPE
COUNTY	CHECKED BY:	T. CUTILLO
NEW CASTLE		

STORMWATER MANAGEMENT PLAN

SECTION	RK&K
SHEET NO.	45

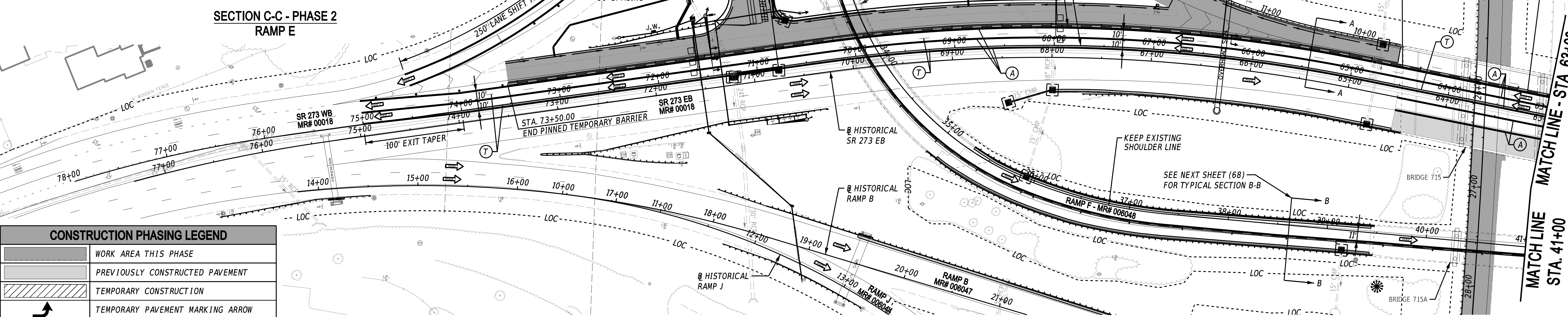
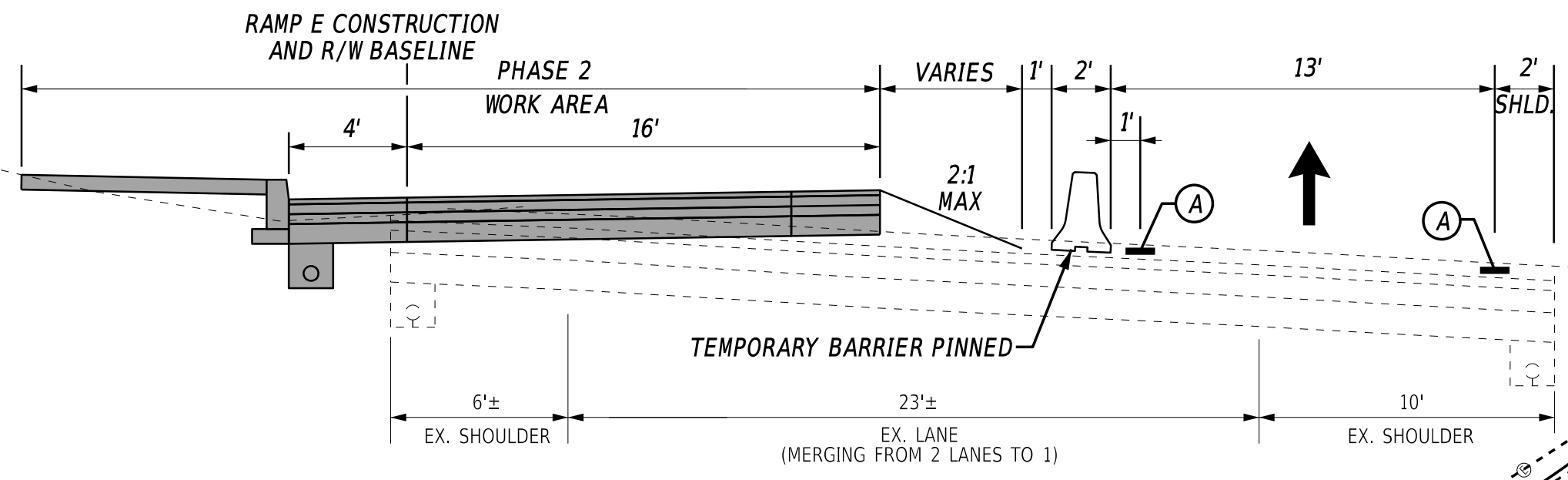
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- REMOVE BAGS FROM RAMP F DETOUR SIGNS TO CLOSE RAMP F DURING ALLOWABLE NIGHT TIME HOURS AND RELOCATE/REMOVE TEMPORARY BARRIER AS SHOWN ON PHASE 2 PLANS UTILIZING TEMPORARY STRIPING PLACED IN PHASE 1. ONCE ALL TEMPORARY BARRIER ON RAMP F IS SET, BAG RAMP F DETOUR SIGNS FOR REMAINDER OF PHASE AND REOPEN RAMP F TO TRAFFIC.
- USE DETOUR PLAN TO CLOSE ENTRANCE RAMP C FROM WESTBOUND SR273 TO SOUTHBOUND I-95.
- USE TA-34 TO RELOCATE TEMPORARY BARRIER ON EASTBOUND SR273, RAMP B, AND WESTBOUND SR 273 TO THE PHASE 2 ALIGNMENTS. USE TA-5B TO INSTALL RELOCATED TEMPORARY BARRIER ON RAMP E. USE TA-35B TO REMOVE EXISTING PAVEMENT MARKINGS AND TAPE, APPLY TEMPORARY STRIPING AND BLACKOUT TAPE, AND INSTALL TEMPORARY PAVEMENT MARKINGS AS SHOWN ON PHASE 2 PLANS. INSTALL ADDITIONAL TRAFFIC CONTROL DEVICES AND WARNING SIGNS TO SHIFT TRAFFIC ON WESTBOUND SR273 AND RAMP E AS SHOWN.
- WITH PRIOR APPROVAL FROM ENGINEER, IMPLEMENT PHASE 2A TO CLOSE WESTBOUND SR 273 DOWN TO ONE LANE AND COMMENCE BRIDGE 715 DECK REPAIRS. SEE PHASE 2A PLANS FOR PHASE 2A TRAFFIC CONTROL. THIS WORK IS EXPECTED TO TAKE A MAXIMUM OF 40 DAYS TO COMPLETE. PHASE 2A TO BE CONCURRENT AT ANY TIME DURING PHASE 2.
- CLEAR AND GRUB PHASE 2 WORK AREA AND INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON PLANS.
- JACK BRIDGE 715 AND REPLACE BEARINGS ON WESTBOUND SR273. THE JACKING OPERATION SHALL BE RESTRICTED TO NIGHTTIME HOURS ONLY, UTILIZING ROLLING ROAD BLOCKS IN ACCORDANCE WITH DELDOT MUTCD STANDARD TA-35H FOR CLOSURE OF WESTBOUND SR273. THE CONTRACTOR SHALL COORDINATE WITH DELDOT CONSTRUCTION AND TRAFFIC SAFETY AS TO THE DURATION AND WORK HOUR RESTRICTIONS FOR THE ROLLING ROAD BLOCKS. SEE BRIDGE PLANS FOR BEARING REPLACEMENT SEQUENCE OF CONSTRUCTION.
- COMMENCE CONSTRUCTION ACTIVITIES ON RAMP E AND WESTBOUND 273. SAWCUT AND REMOVE EXISTING PAVEMENT AND EXCAVATE FOR FULL DEPTH PAVEMENT CONSTRUCTION AS SHOWN ON PLANS. REMOVE EXISTING GUARDRAIL, CURB AND MAINTENANCE PAVEMENT AS REQUIRED. ROUGH GRADE TO PROPOSED SUBGRADE, INSTALL UNDERDRAINS AND UNDERDRAIN OUTFALLS AS SHOWN ON PLANS. COMPLETE FIRST HALF OF DRAINAGE SYSTEM AS SHOWN ON PHASE 2 ALONG RAMP E WORKING UPSTREAM FROM OUTFALL POINT(S). INSTALL NEW CURB AND GUARDRAIL WITHIN THE PHASE 2 WORK AREA.
- ON RAMP F, SAWCUT AND REMOVE EXISTING PAVEMENT, CURB, GUARDRAIL AND INSTALL NEW CURB AND GUARDRAIL AS SHOWN ON PHASE 2 PLANS. ADJUST DRAINAGE INLETS AS SHOWN ON CONSTRUCTION PLANS.
- COMPLETE ALL NEW TRAFFIC SIGNAL INSTALLATIONS AT THE INTERSECTION OF RAMP E AND WESTBOUND SR273, ENSURING THAT QUEUE DETECTION IS FUNCTIONAL AND STOP LINES ARE IN PLACE PRIOR TO THIS INTERSECTION BEING OPEN TO TRAFFIC.
- INSTALL NEW OVERHEAD SIGN STRUCTURE FOUNDATIONS ON SR273. CONSTRUCT NEW PAVEMENT SECTION TO FINAL GRADE ON WESTBOUND SR273 AND RAMP E AND FINAL GRADE SIDE SLOPES. KEEP EXISTING RAMP E TRAFFIC PATTERNS OPEN.
- INSTALL NEW OVERHEAD SIGN STRUCTURE ON SR273. INSTALLATION SHALL BE RESTRICTED TO NIGHTTIME HOURS ONLY, UTILIZING ROLLING ROAD BLOCKS IN ACCORDANCE WITH DELDOT MUTCD STANDARD TA-35H FOR CLOSURES. THE CONTRACTOR SHALL COORDINATE WITH DELDOT CONSTRUCTION AND TRAFFIC SAFETY AS TO THE DURATION AND WORK HOUR RESTRICTIONS FOR THE ROLLING ROAD BLOCKS.
- PHASE 3 WORK SHALL NOT COMMENCE UNTIL THE NEW SIGN STRUCTURE IS INSTALLED AND ACCEPTED BY THE ENGINEER.
- ON RAMP C, REMOVE EXISTING CURB, GUARDRAIL & MAINTENANCE PAVEMENT AND INSTALL NEW GUARDRAIL AS SHOWN ON CONSTRUCTION PLANS. MILL, OVERLAY AND APPLY HIGH FRICTION SURFACE TREATMENT ON RAMP C. ADJUST INLETS AND INSTALL PERMANENT TRAFFIC SIGNS AND PERMANENT PAVEMENT MARKINGS.
- STABILIZE AREA IN ACCORDANCE WITH DELDOT STANDARD SPECIFICATIONS BEFORE PROCEEDING TO THE NEXT PHASE. REMOVE EROSION AND SEDIMENT CONTROL DEVICES AFTER FINAL VEGETATIVE STABILIZATION OF ALL DISTURBED AREAS AS DETERMINED BY THE ENGINEER. REMOVE ALL TRAFFIC CONTROL DEVICES NOT REQUIRED FOR FUTURE PHASES.



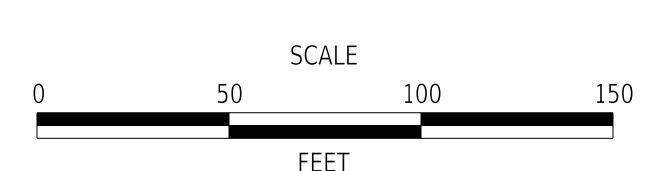
TEMPORARY PAVEMENT MARKINGS LEGEND		
SYM.	ITEM	QUANTITY
(A)	4" SOLID WHITE TEMPORARY PAINT PAVEMENT STRIPING (ITEM 817003)**	5,985 LF
(D)	4" DASHED WHITE TEMPORARY PAINT PAVEMENT STRIPING, 2" LINE & 6" GAP (ITEM 817003)**	0 LF
(G)	WHITE TEMPORARY PAINT PAVEMENT SYMBOL (ITEM 817004)**	0 SF
(H)	4" SOLID WHITE TEMPORARY TAPE PAVEMENT STRIPING (ITEM 817009)**	973 LF
(P)	WHITE TEMPORARY TAPE PAVEMENT SYMBOL (ITEM 817010)**	0 SF
(R)	6" BLACKOUT TAPE (ITEM 817008)*	0 LF
(T)	REMOVAL OF PAVEMENT STRIPING (ITEM 817031)*	955 SF

* USE BLACKOUT TAPE TO COVER EXISTING PAVEMENT MARKINGS ON BITUMINOUS CONCRETE AND REMOVE EXISTING PAVEMENT MARKINGS ON CONCRETE (BRIDGES) AS SHOWN UNLESS OTHERWISE NOTED.
** USE TEMPORARY TAPE STRIPING ON BITUMINOUS CONCRETE AND TEMPORARY PAINT STRIPING ON CONCRETE (BRIDGES) AS SHOWN UNLESS OTHERWISE NOTED.



CONSTRUCTION PHASING LEGEND	
[Solid Grey]	WORK AREA THIS PHASE
[Light Grey]	PREVIOUSLY CONSTRUCTED PAVEMENT
[Hatched]	TEMPORARY CONSTRUCTION
[Arrow]	TEMPORARY PAVEMENT MARKING ARROW

ADDENDA / REVISIONS



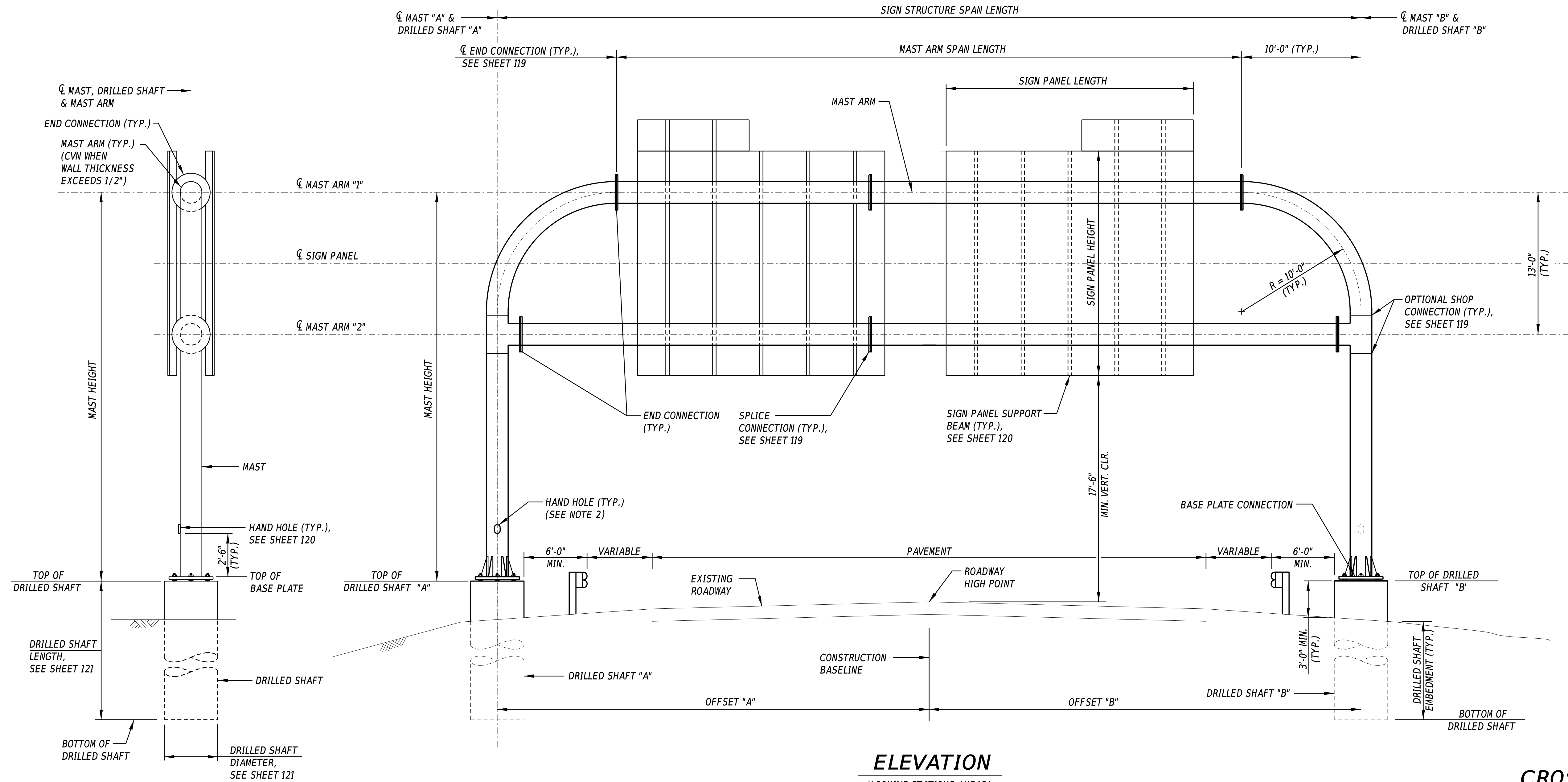
HSIP NCC, SR 273 AND I-95 INTERCHANGE IMPROVEMENTS

CONTRACT	T200800713	BRIDGE NO.	715, 715A, 715B, 715C & 715D
COUNTY	NEW CASTLE	DESIGNED BY:	B. BURRIS
		CHECKED BY:	Z. SCHOLL

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

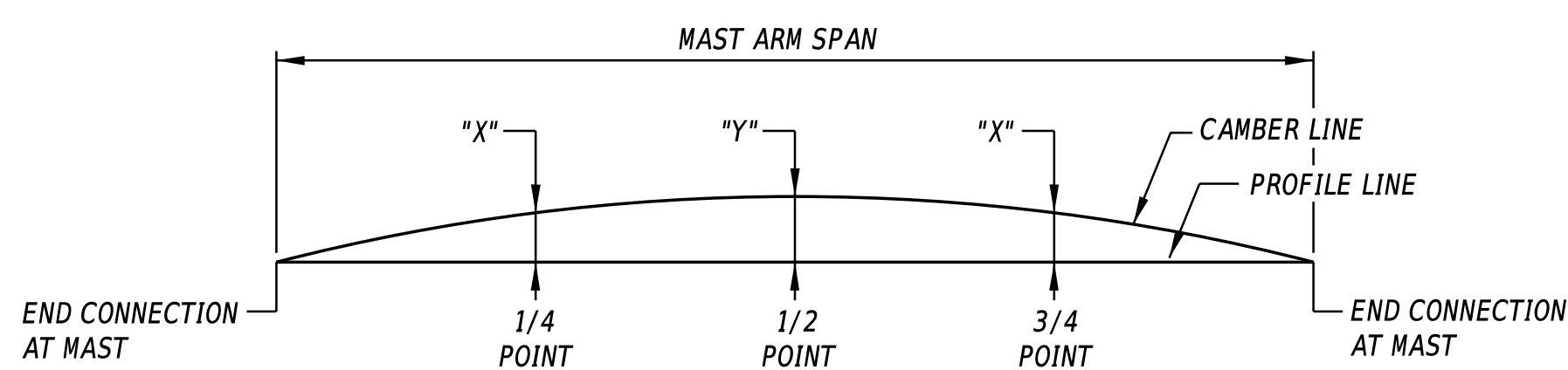
SECTION	RK&K
SHEET NO.	67

17-AUG-2020 15:36 \\saves01\work\142014201414144_DelDOT1707\Task_4A - Harmony PD\Cadd\Contract\Plans\cs06_Har.dgn



ELEVATION
(LOOKING STATIONS AHEAD)

END VIEW



CAMBER DIAGRAM

MAXIMUM CAMBER (AT 1/2 POINT) REPRESENTS
MAXIMUM DEAD LOAD CAMBER PLUS L/1000
WHERE L = SIGN STRUCTURE SPAN.

NOTES:

1. SEAL GAP BETWEEN BASE PLATE AND CONCRETE DRILLED SHAFT WITH GALVANIZED SCREEN, 1/2" x 1/2" MESH AND 0.063" DIAMETER WIRES, TO PREVENT ENTRY OF RODENTS. SCREEN IS TO BE REMOVABLE AND ATTACHED TO BASE PLATE WITH STAINLESS STEEL HARDWARE. SCREEN IS TO BE OF SUFFICIENT STIFFNESS TO PREVENT ENTRY BETWEEN SCREEN AND FOUNDATION WHILE PERMITTING DRAINAGE.
2. LOCATE HAND-HOLE ON THE DOWN-TRAFFIC SIDE OF EACH MAST, WITH A DIRECTION THAT IS 90 DEGREES TO THE PLANE CONTAINING THE MAST ARM.

CROSS-REFERENCE NOTES:

1. FOR SIGN STRUCTURE LOCATIONS, SEE SHEETS NO. 96, 100, 107-109.
2. FOR SIGN PANEL LAYOUTS, SEE SHEETS NO. 110-111.
3. FOR SIGN STRUCTURE NOTES, SEE SHEET NO. 115.
4. FOR OVERHEAD SIGN SUPPORT STRUCTURE CHART, SEE SHEET NO. 118.
5. FOR BASE PLATE CONNECTION DETAILS, SEE SHEET NO. 119.
6. FOR END CONNECTION DETAILS, SEE SHEET NO. 119.
7. FOR OPTIONAL SHOP CONNECTION DETAILS, SEE SHEET NO. 119.
8. FOR MAST ARM END DETAILS, SEE SHEET NO. 119.
9. FOR TEE CONNECTION DETAIL, SEE SHEET NO. 119.
10. FOR SIGN PANEL SUPPORT BEAM DETAILS, SEE SHEET NO. 120.
11. FOR HAND HOLE DETAIL, SEE SHEET NO. 120.
12. FOR FOUNDATION DETAILS, SEE SHEET NO. 121.
13. FOR SIGN PANEL LOCATION ON STRUCTURE, SEE SHEET NO. 122-123.

OVERHEAD SIGN STRUCTURE GEOMETRY

SIGN STRUCTURE NO.	ACTUAL SIGN PANEL AREA (SF)	DESIGN SIGN PANEL AREA (SF)	SIGN STRUCTURE SPAN LENGTH	MAST ARM SPAN LENGTH	TOP OF DRILLED SHAFT "A" EL.	TOP OF DRILLED SHAFT "B" EL.	CL MAST ARM "1" EL.	CL MAST ARM "2" EL.	MAST "A" HEIGHT	MAST "B" HEIGHT	CAMBER "X" (INCHES)	CAMBER "Y" (INCHES)
S01065	2006.8	2478.8	212'-0"	192'-0"	64.80	66.90	99.50	86.50	34'-8 3/8"	32'-7 1/8"	10.01	15.02
S01066	2691.8	2958.0	191'-6"	171'-6"	59.20	56.42	91.77	78.77	32'-6 13/16"	32'-4 3/16"	7.44	11.36
S01070	2880.8	3190.9	179'-6"	159'-6"	93.73	91.51	126.72	113.72	32'-11 15/16"	35'-6 11/16"	6.12	9.40

ADDENDA / REVISIONS

NOT TO SCALE

**HSIP NCC, SR 273 AND I-95
INTERCHANGE IMPROVEMENTS**

CONTRACT	BRIDGE NO.	715, 715A, 715B, 715C & 715D
T200800713	DESIGNED BY:	M. BECHTEL
COUNTY	CHECKED BY:	J. PAMPUCH
NEW CASTLE		

**OVERHEAD SIGN
STRUCTURE - ELEVATION
AND END VIEWS**

SECTION
RK&K
SHEET NO.
117













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

NICOLE MAJESKI
SECRETARY

MEMORANDUM

TO: Chance Malkin, Area Engineer, Group 2 Construction

FROM: Tom Nickel, ADA Title II Coordinator *TN*

DATE: June 28, 2023

SUBJECT: Contract T200800713, HSIP NCC, SR 273 and I-95 Interchange Improvements

The ADA Section reviewed the referenced project ADA report per your request. Based on this review and follow-up actions by the administering construction group, all affected or constructed pedestrian features within the project scope and project limits are complete in accordance with the DelDOT Pedestrian Accessible Standards for Facilities on the Public Right of Way (PAS) and/or Americans with Disabilities Act (ADA) requirements.

No exceptions or Request for Practical Exceptions exist for this project.

The DelDOT Office of Civil Rights, ADA Section does not object to, and is recommending formal acceptance of, the project based on PAS or ADA requirements. This recommendation applies to accessible facilities in the public right-of-way under DelDOT jurisdiction and authority and does not apply to accessible facilities that DelDOT will not accept or will not maintain.

TN:tn

cc: Anne Brown, Director Maintenance and Operations
Brian Urbanek, Assistant Director, Statewide Support Services
Brian Schilling, Canal District Engineer
Mike Hauske, Canal District Maintenance Engineer
Wendy Henry, Civil Rights Administrator
Mark Luszcz, Deputy Director of Operations Support
Mark Buckalew, Chief of Constructions and Materials
Jon Ledger, Group 2 Construction Engineer
Alicia Howard, Group 1 Construction
Brad Damtoft, Engineering Support
Maria Gieske, Projects Compliance Technician




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

NICOLE MAJESKI
 SECRETARY

MEMORANDUM

TO: Anne Brown, Director, Maintenance and Operations

VIA: Craig Stevens, North District Engineer
 Brian Schilling, Canal District Engineer

FROM: Jonathan Ledger, Group 2 Construction 

DATE: August 17, 2023

SUBJECT: Contract No. T200800713, HSIP NCC, SR 273 and I-95 Interchange Improvement, New Castle County, F.A.P. No. ESTP-N018(13)

The referenced project has been completed in reasonable conformance with the applicable plans and specifications. All items identified during the ADA Inspection and Primary Inspection have been completed, with any exclusions noted as follows:

- *Guardrail (GR-1 and GR-2) on SR 273 Eastbound to be reinstalled in accordance with punch list item 51.*

Formal partial acceptance of the project by the Department of Transportation can now be made. The attached Partial Acceptance Letter has been prepared for signature by the Director of Maintenance and Operations. In order to allow for the efficient and timely acceptance and close out of this project, if Maintenance and Operations is not able to concur with the partial acceptance of this project, please provide a list within 30 days of the date of this memo specifying any outstanding items/concerns as to why the Partial Acceptance Letter cannot be signed.

Additionally, be advised that the following items (if so noted) were included as part of the construction of this contract:

ITEM	
Landscape Plantings	___ Yes <u> X </u> No

Recommendation for Partial Acceptance

Contract No. T200800713

August 17, 2023

Page 2 of 2

Highway Lighting	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Stormwater BMP's	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
ADA	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No

JL:ah

Enclosure

cc: Daniel Montag, FHWA
Lanie Clymer, Director, Finance
Mark Buckalew, Chief of Construction and Materials
Brian Urbanek, Assistant Director, Statewide Support Services
Brad Damtoft, Group Engineer, Engineering Support
Michael Hauske, Canal District Maintenance Engineer
John Garcia, North District Maintenance Engineer
Breanna Kovach, Group Engineer, Project Development North
Ninna Vaughn, Contract Services Administrator
Chance Malkin, Area Engineer, Group 2 Construction
Thomas Brooks, Assistant Maintenance Engineer, North District
Tom Nickel, ADA Title II/Section 504 Coordinator
Doug Marx, Chief Estimator, Groups 1 and 2 Construction
npdes@delaware.gov
Bret Martine, Century Engineering
Tate Cantwell, Century Engineering



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

NICOLE MAJESKI
SECRETARY

August 17, 2023

Mr. Jon Baker
A-Del Construction Co., Inc.
10 Adel Drive
Newark, DE 19702

Dear Mr. Baker:

This letter is in reference to **Contract No. T200800713, HSIP NCC, SR 273 and I-95 Interchange Improvement, New Castle County, F.A.P. No. ESTP-N018(13).**

The Group 2 Construction Engineer has notified us that all items on the referenced contract with exception of guardrail (GR-1 and GR-2) on SR 273 eastbound have been completed according to plans and specifications. The project is partially accepted by the Division of Maintenance and Operations as of August 16, 2023. The last chargeable day of work was July 12, 2023.

You are relieved of any further construction and maintenance responsibilities on this project with exception of the noted guardrail on SR 273 eastbound. However, the contract will not be closed, and final payment will not be made until the value of such work has been reviewed, all previous payments checked, all claims satisfied, and all provisions of the contract have been completely fulfilled.

Sincerely,

Anne Brown
Director, Maintenance and Operations

AB:ah
cc: Shanté Hastings, Deputy Secretary/Chief Engineer
Daniel Montag, Area Engineer, FHWA
C.R. McLeod, Director, Community Relations



cc (*continued*):

Lanie Clymer, Director, Finance
Jim Pappas, Director, Transportation Resiliency and Sustainability
Mark Luszc, Deputy Director, Operations and Support
Maureen Kelley, Deputy Director, Design
Jason Hastings, Chief of Bridges and Structures
Monroe Hite, Chief of Right of Way
Matthew Vincent, Chief of Project Development North
John Caruano, Chief of Environmental and Administrative Support
Mark Buckalew, Chief of Construction and Materials
Craig Stevens, North District Engineer
Brian Schilling, Canal District Engineer
Brian Urbanek, Assistant Director, Maintenance & Operations
Jeff Niezgoda, Assistant Director, Local Systems Improvement
Beth Hermansader, Assistant Director, Decision and Data Support
Eric Cimo, Utilities Engineer
Breanna Kovach, Group Engineer, Project Development North
Stephen Wright, Water Resource Manager, Engineering Support
Brad Damtoft, Group Engineer, Engineering Support
Jennifer Pinkerton, Chief Materials & Research Engineer
Jonathan Ledger, Group 2 Construction Engineer
Anna Smith, Environmental Stewardship
Ninna Vaughn, Contract Services Administrator
Wendy Henry, Civil Rights Administrator
James Roscoe, Operation Services Manager, Right of Way
Rosemary Richardson, Real Estate Representative, Right of Way
Robby Brown, Land Services Manager, Right of Way
Maureen Zito, Appraisal Services Manager
Ting Guo, E&S Engineer, Engineering Support
Abebaw Berihun, PAR Coordinator, Engineering Support
Christine Levely, External Audit Supervisor
Chance Malkin, Area Engineer, Group 2 Construction
Debbie Kukulich, Utilities
Nate Zimmerman, E&S Manager, Engineering Support
Doug Marx, Chief Estimator, Groups 1 and 2 Construction
Kevin Gustafson, Road Inventory Supervisor
Luz Norris, DBE Program Manager, Office of Civil Rights
Kim Smith, Competitively Bid Contracts Coordinator
Rebecca Patchett, Administrative Officer, Engineering Support
Tate Cantwell, Century Engineering
Christie Bonniwell, GPI
dot.contracting@delaware.gov
Brandon Morris, A-Del Construction Co., Inc.

January 23, 2024

ASHE National Project of the Year Committee
American Society of Highway Engineers
610 Radcon St.
Johnstown, PA 15904

RE: Commitment Statement

To Whom It May Concern,

As required in the Eligibility And Submittal Requirements, this letter serves as a statement of commitment that at least one representative from RK&K will attend the awards luncheon.

Sincerely,
Rummel, Klepper & Kahl, LLP

A handwritten signature in blue ink that reads 'Carey D. Webb'.

Carey D. Webb, PE
Senior Project Delivery Leader, Transportation