

# THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION



**CONSTRUCTION PLANS FOR:** 

# CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN END, FY16-18

CONTRACT NUMBER: T201407004 FEDERAL AID PROJECT NUMBER: ESTP-2014(21)

> COUNTY: NEW CASTLE M.R. #: N/A

# SEE SHEET 2 FOR PROJECT LOCATION

### **U.S. CUSTOMARY** D.H.V. PROJECTED: N/A YEAR: N/A TYPE OF CONSTRUCTION: SIGN REPLACEMENT DESIGN SPEED: N/A M.P.H. A.A.D.T. CURRENT: N/A A.A.D.T. PROJECTED: N/A YEAR: N/A DIRECTION OF DISTRIBUTION: N/A % INDEX OF SHEETS TABLE OF CONTENTS SHEET Nº TITLE SHEET PROJECT LOCATION LEGEND SHEET CONSTRUCTION PLANS GUIDE SIGN DETAILS SIGN STRUCTURE NOTES **CROSS SECTIONS** OVERHEAD SIGN STRUCTURE ELEVATION AND END VIEW - SO1109 SIGN STRUCTURE DETAILS - 2 FOUNDATION DETAILS - 1 FOUNDATION DETAILS - 2 SOIL BORING LOGS 1 - 5 CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS DETOUR PLANS SHOULDER CLOSURE DETAIL LEFT EXIT SIGN STRUCTURES **TOTAL SHEETS: 83**

DESIGN DESIGNATION

FUNCTIONAL CLASS: N/A

**UNITS** 

APPROVED DE	SIGN EXCE	PTIONS	
DESIGN PARAMETER	REQUIRED	PROVIDED	DATE
ADDENDA	& REVISIO	NS	

**DESCRIPTION** 

	ASSOCIATED CONTRACTS
CONTRACT NO.	CONTRACT NAME
64-04-020	I-95 (PART 'B') NINTH STREET TO BRANDYWINE
64-04-020	I-95 (PART 'C') FOURTH STREET TO BRANDYWINE
68-02-001	I-95 SIGNING
80-064-10	DELAWARE AVENUE BRANDYWINE CEMETARY
64-01-062	I-495 R/W
64-02-022	I-495 PENN RR TO TERMINAL THOUROUGHFARE
64-04-024	I-495 R/W
65-03-005	I-495 R/W
76-07-017	SIGNING - I-95, I-295 & I-495

RECOMMENDED

**TY-LIN**INTERNATIONAL

**DOVER, DELAWARE** 

RECOMMENDED (SHEETS 1-59)

SQUAD MANAGER, CONSTRUCTION

STORMWATER ENGINEER

RECOMMENDED

08/28/2015 DATE

08/28/2015 DATE

08/31/2015 DATE

RECOMMENDED

THE CONSULTING FIRM OF

RECOMMENDED (SHEETS 60-83)

SQUAD MANAGER, BRIDGE DESIGN

DATE

RECOMMENDED

BRIDGE DESIGN ENGINEER 08/27/2015 DATE \_

SEAL



RECOMMENDED

GROUP ENGINEER, PROJECT DEVELOPMENT

SEAL

RECOMMENDED

ASSISTANT DIRECTOR, BRIDGE

DATE \_\_\_\_08/31/2015

No. 10774

**APPROVED** 

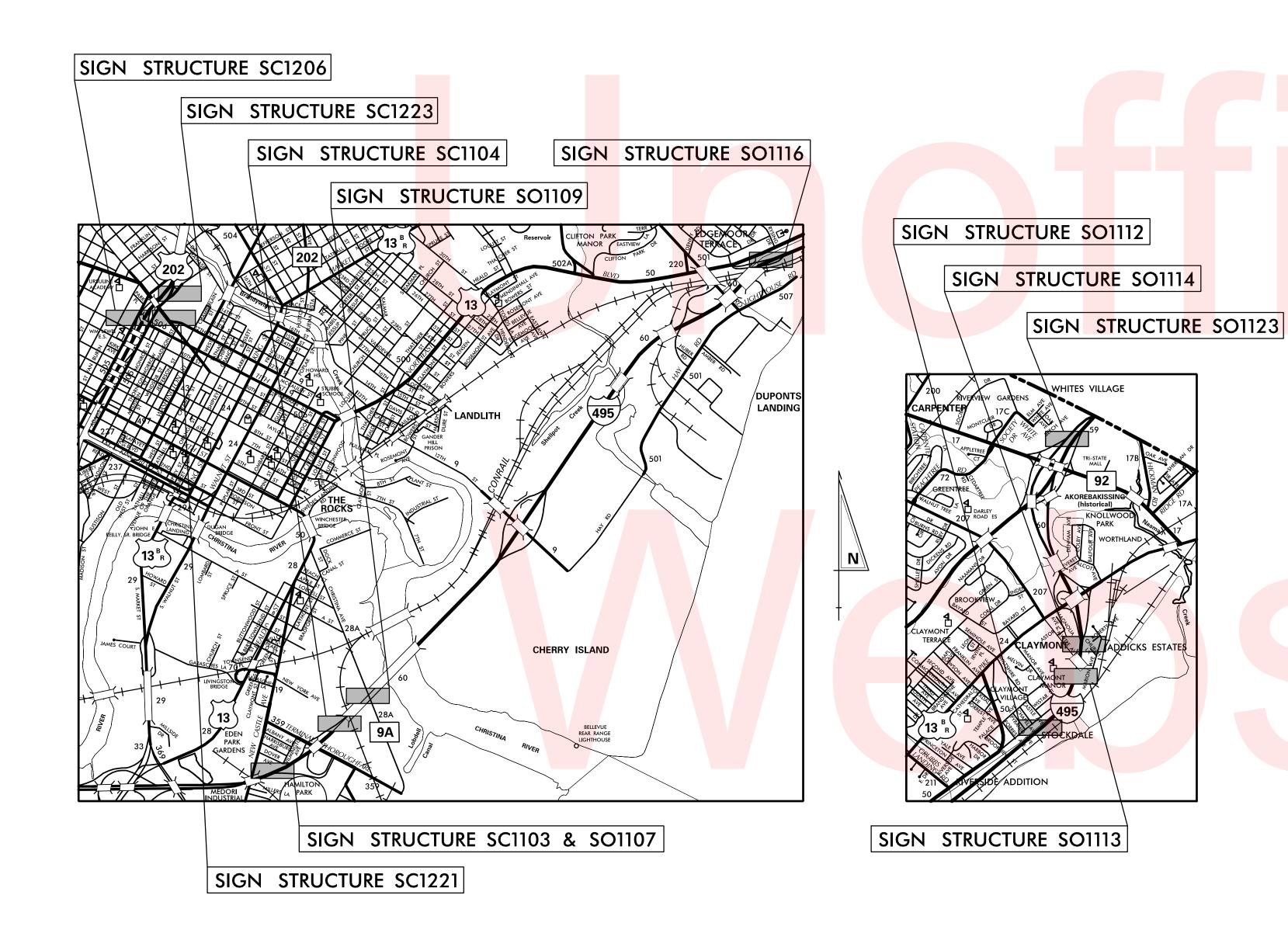
CHIEF ENGINEER M. Clean

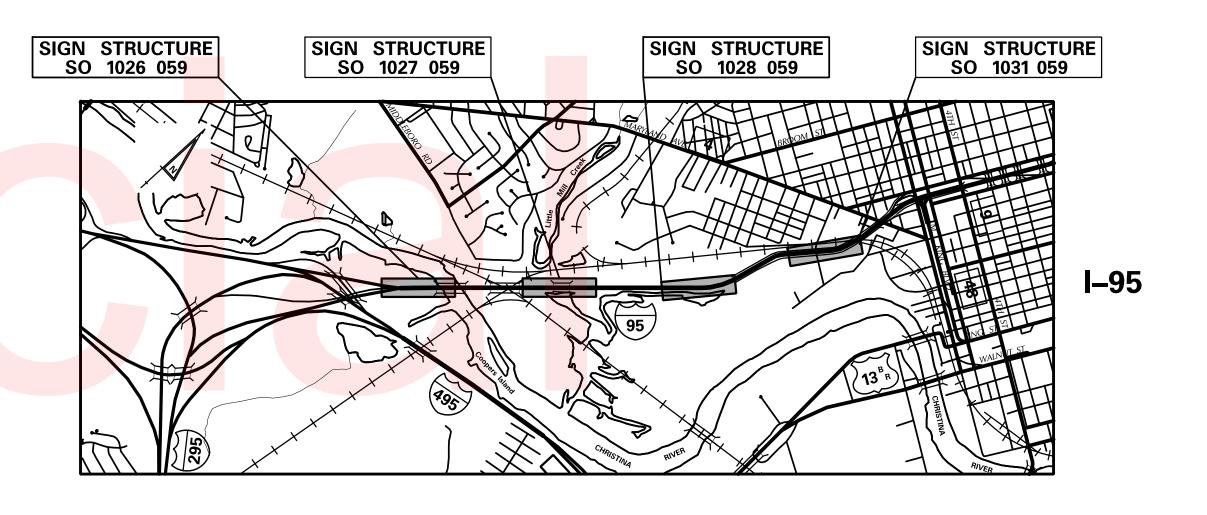
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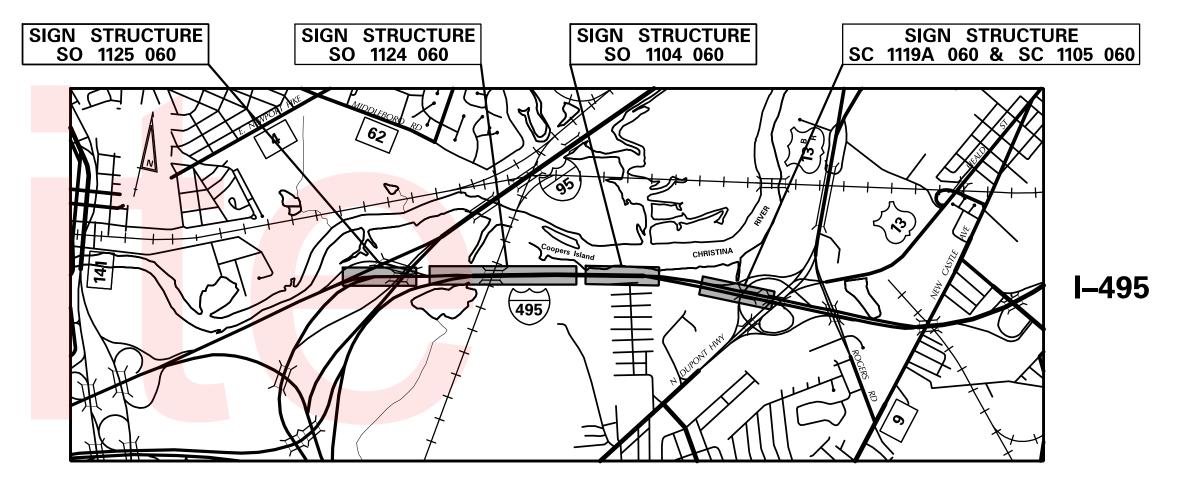
SONAL ENC

No. 8567

NAME & DATE







PROJECT LOCATION

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT N/A BRIDGE NO. T201407004 DESIGNED BY: RMB COUNTY NEW CASTLE CHECKED BY: DEF

PROJECT LOCATION

### DRAINAGE DITCH OR STREAM CENTERLINE ----oo------DIRECTIONAL STREAM FLOW ARROW **──** DRAINAGE INLET DRAINAGE JUNCTION BOX DRAINAGE MANHOLE SIZE/TYPE\_LABEL DRAINAGE PIPE AND FLOW ARROW DRAINAGE PIPE HEADWALL RIPRAP - AREA FEATURE RIPRAP - LINEAR FEATURE MANMADE ROADSIDE FEATURES BOLLARD - STEEL POLE BOLLARD - WOOD POST (TYPE LABEL) CURB AND GUTTER (TYPE LABEL) FENCE - CHAINLINK OR STRANDED ——X——— FENCE - STOCKADE OR SPLIT RAIL <del>---</del>0-----FLAG POLE GUARDRAIL - STEEL BEAM \_\_\_\_ GUARDRAIL - WIRE ROPE LAMP AND POST - RESIDENTIAL MAILBOX PARKING METER AND POST

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NATURAL ROADSIDE FEATURES			
A/L	GRASS LAWN		
ananana	HEDGEROW OR THICKET		
	MARSH BOUNDARY LINE		
*	TREE - CONIFEROUS		
	TREE - DECIDUOUS		
点	TREE STUMP		
<b>©</b>	SHRUBBERY		
WL	DELINEATED WETLAND BOUNDARY LINE		
	WOODS LINE BOUNDARY		

PAVEMENT - FLEXIBLE

TRAFFIC SIGN AND POST

WALL - BRICK OR BLOCK

PILLAR OR MISCELLANEOUS POST

PAVEMENT - RIGID

PILE - BRIDGE

WALL - STONE

	WOODS LINE BOONDAIL	
	RIGHT-OF-WAY SYMBOLS	
C.M.	PROPERTY MARKER - CONCRETE MON.	
I.P.	PROPERTY MARKER - IRON PIPE	
100+00	HISTORIC RIGHT-OF-WAY BASELINE	
	EXISTING RIGHT-OF-WAY	
—— <del>।</del>	EXISTING PROPERTY LINE	
EASEMENT TYPE	EXISTING EASEMENT	
——— DA ———	EXISTING DENIAL OF ACCESS	
R/W-DA	EXISTING R/W & DENIAL OF ACCESS	
·		

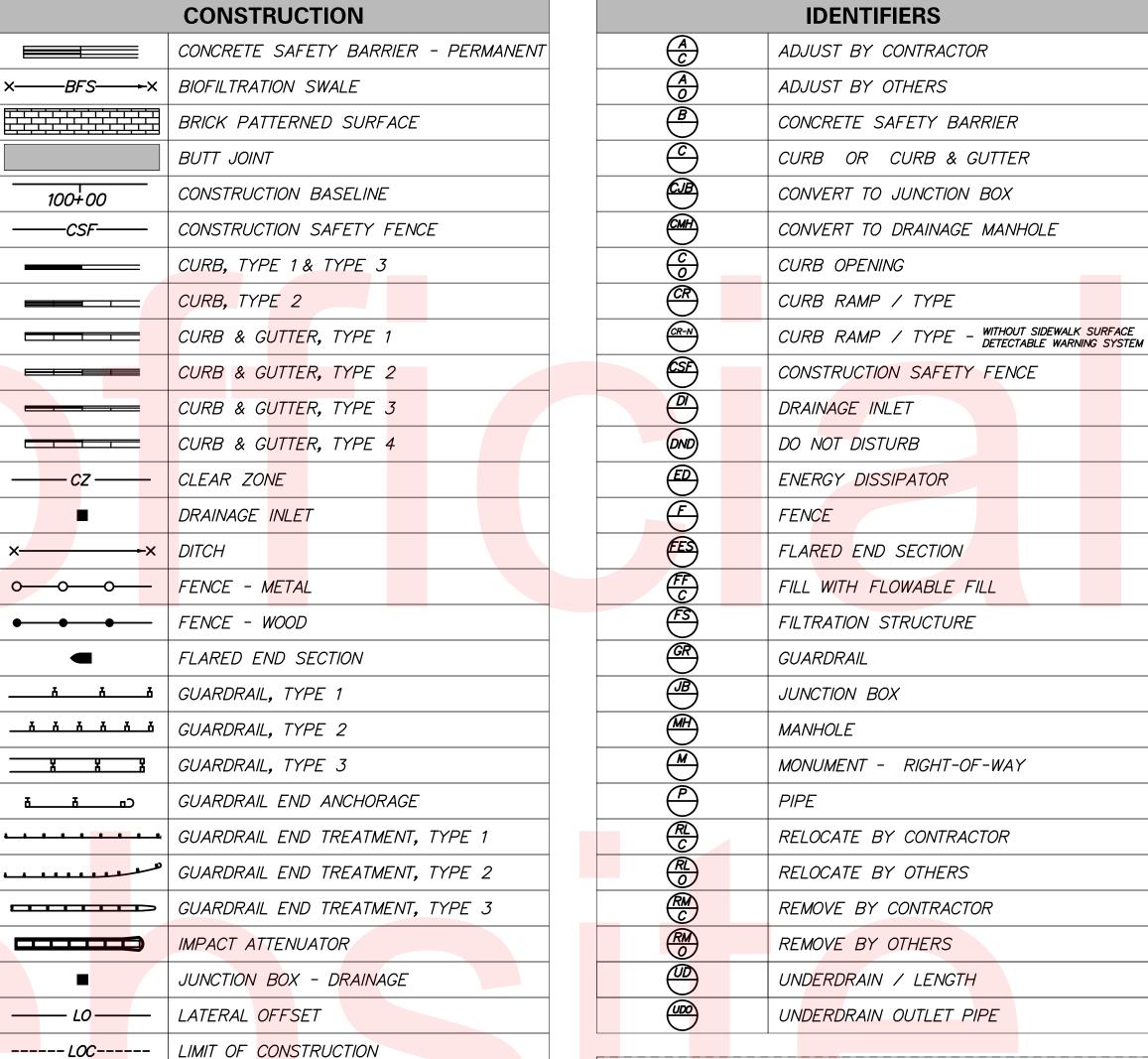
SURVEY (	CONTROL & MONUMENTATION
В.М.	SURVEY BENCHMARK LOCATION
T.P.	SURVEY TIE POINT LOCATION
$\triangle$	SURVEY TRAVERSE POINT
0	POINT OF CURVATURE OR TANGENCY
<u> </u>	POINT OF INTERSECTING TANGENTS

**EXISTING SYMBOLS** 

$\triangle$	SURVEY TRAVERSE POINT	
0	POINT OF CURVATURE OR TANGENCY	
<b>©</b>	POINT OF INTERSECTING TANGENTS	
	UTILITY	
•	SOIL BORING LOCATION	
•	UTILITY TEST HOLE LOCATION	
TV	CABLE TV DISTRIBUTION BOX	
E	ELECTRIC MANHOLE	
EM	ELECTRIC METER	
E	ELECTRIC TRANSFORMER	
<del></del>	POL <mark>E MO</mark> UNTED LUMI <mark>NAIRE</mark>	
©	GAS MANHOLE	
G.M.	GAS METER	
G.V.	GAS VALVE	
G.P.	GAS PUMP - SERVICE STATION	
	RAILROAD TRACKS	
\$	SANITARY SEWER MANHOLE	
S.V.	SANITARY SEWER VALVE	
VENT	SANITARY SEWER VENT OR CLEANOUT	
S.D.F.	SEPTIC DRAIN FIELD	
B	TELEPHONE BOOTH	
	TELEPHONE MANHOLE	
T	TELEPHONE TEST POINT	
J.W.	TRAFFIC - CONDUIT JUNCTION WELL	
	TRAFFIC - LIGHT POLE AND BASE	
	TRAFFIC - PEDESTRIAN POLE & BASE	
	TRAFFIC - SIGNAL CABINET & BASE	
8	TRAFFIC - SIGNAL POLE AND BASE	
U	UTILITY BOX	
<b>⋄→</b>	UTILITY POLE GUY WIRE ANCHOR	
Ø	UTILITY POLE	
F.ॄH.	WATER - FIRE HYDRANT	
W.M.	WATER METER	
₩ <b>.</b> ∀.	WATER VALVE	
WELL	WELL HEAD	
?	MANHOLE - UNDETERMINED OWNER	

UTILIT	TY COMPANY FACILITIES
——DP-E——	DELMARVA POWER (ELECTRIC)
——DP-G——	DELMARVA POWER (GAS)
CW-S	CITY OF WILMINGT <mark>on (s</mark> ewer)
CW-W-	CITY OF WILMINGTON (WATER)
——EX-CON—	TRAFFIC CABLE
VER-C	VERIZON

### PROPOSED SYMBOLS



CONSTR	JCT <mark>ION</mark> PHASING & M.O.T		
Ħ	BARRICADE, TYPE 3		
	CONCRETE SAFETY BARRIER - PORTABLE		
	CONSTRUCTION SAFETY FENCE / LENGTH		
—— <i>CSF</i> ——	CONSTRUCTION SAFETY FENCE		
<b> </b>	CONSTRUCTION WARNING SIGN LOCATION		
END ROAD WORK	CONSTRUCTION WARNING SIGN		
•••••	CRASH CUSHION ARRAY		
•	DRUM - TRAFFIC CONTROL		
<b>.</b> ◆	FLAGGER LOCATION		
	PHASING TRAFFIC FLOW ARROW		
	TEMPORARY CONSTRUCTION		
<b>A</b>	TEMPORARY PAVEMENT MARKING ARROW		
	TRUCK WITH MOUNTED ATTENUATOR		
	WORK AREA - ACTIVE PHASE		

PAVEMENT SECTION(S)			
	OVERLAY PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS		
	RECONSTRUCTED PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS		
	DRIVEWAY AND ENTRANCE PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS		
RIGHT-OF-WAY SYMBOLS			
₿	PROPOSED RIGHT-OF-WAY MONUMENT		
DA	PROPOSED DENIAL OF ACCESS		

———PE——— PROPOSED PERMANENT EASEMENT

	PROPOSED R/W & DENIAL OF ACCESS	
——————————————————————————————————————	TEMPORARY CONSTRUCTION EASEMENT	
100+00	PROPOSED RIGHT-OF-WAY BASELINE	
TRAFFIC		
ITMS-CON ITMS CONDUIT		
SIG-CON	——SIG-CON — SIGNAL CONDUIT	
■ CONDUIT JUNCTION WELL		
	LUMINAIRE	

PAVEMENT STRIPING

TRAFFIC SIGN

EROSIO	N & SEDIMENT CONTROL		
- DWBAG	DEWATERING BAG		
- DWB	DEWATERING BASIN		
ED	EARTH DIKE		
	INLET SEDIMENT CONTROL		
·=====================================	PERIMETER DIKE/SWALE		
· <b>©</b>	PORTABLE SEDIMENT TANK		
SBD	SANDBAG DIKE		
SB SB	SANDBAG DIVERSION		
	STONE CHECK DAM		
SCE SCE	STABILIZED CONSTRUCTION ENTRANCE		
SF €	SILT FENCE / LENGTH		
——SF——	SILT FENCE		
—— <i>RSF</i> ——	SILT FENCE - REINFORCED		
SP-1	SUMP PIT, TYPE 1		
SP-2	SUMP PIT, TYPE 2		
<u>\$1</u>	SEDIMENT TRAP		
ST	SEDIMENT TRAP		
<b>F</b>	SEDIMENT TRAP WITH INLET AS OUTLET		
Ş <del>-</del> Sf	SEDIMENT TRAP PIPE OUTLET		
SW	STILLING WELL		
·===/====I	TEMPORARY SWALE		
<i>TSD</i>	TEMPORARY SLOPE DRAIN		
T T T T T T T T T T T T T T T T T T T	TURBIDITY CURTAIN / LENGTH		
	TURBIDITY CURTAIN		

**DELAWARE** DEPARTMENT OF TRANSPORTATION ADDENDUMS / REVISIONS

NOT TO SCALE

MAILBOX

MANHOLE

PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH

RIPRAP

PAVEMENT PATCH

P.C.C. SIDEWALK - 4"

UNDERDRAIN OUTLET

LANDSCAPING

LANDSCAPE PLANTINGS

UNDERDRAIN

SHRUBBERY

CONIFEROUS TREE

DECIDUOU<mark>S TR</mark>EE

| PIPE & DIRECTIONAL FLOW ARROW

P.C.C. SIDEWALK - 6" (USE 8" DEPTH FOR CHANNELIZATION ISLANDS.)

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A
T201407004	DESIGNED BY:	JWS
NEW CASTLE	CHECKED BY: I	DEF

**LEGEND SHEET** 

- 2. THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.
- 3. THE END OF ALL CURBS SHALL BE DEPRESSED FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1) UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 4. LANE CLOSURES ALONG 1-495 AND DELAWARE AVENUE ARE PERMITTED BETWEEN 8:00PM AND 5:00AM, SUNDAY NIGHT THROUGH FRIDAY MORNING.
- 5. THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" I<mark>NSIDE</mark> MINIMUM DIAMETER, 6" <mark>INSIDE</mark> MAXIMUM DIAMETER) IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR F<mark>UTURE</mark> TRAFFIC SIGN POSTS A<mark>S DIR</mark>ECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL SIT ON THE TOP OF THE SUBBASE MATERIAL<mark>. THE</mark> COST SHALL BE INCIDENTAL TO THE CONTRACT.
- 6. STAGING AREAS PROPER EROSION AND SEDIMENT CONTROL MEASU<mark>RES A</mark>S DETERMINED BY THE <mark>ENGIN</mark>EER SHA<mark>LL BE</mark> INSTALLED IN ALL STAGING AREAS. ALL AREAS USED BY THE CONT<mark>RACTOR</mark> FOR STAGING OPERATI<mark>ONS S</mark>HALL BE <mark>FULLY</mark> RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE CONTRACT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATIONS 732, 734 AND 735, FOR TOPSOIL, SEE AND MULCH RESPECTIVELY, TO THE SATISFACTION OF THE ENGINEER. THE SEED SHALL ADHERE TO THE SPEC<mark>IFICAT</mark>IONS OF SECTION 734 FOR PERMANENT GRASS SEEDING - DRY GROUND. ALL COSTS ASSO<mark>CIATED</mark> WITH RESTORATION OF THE STAGING A<mark>REA</mark> SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAN<mark>D OF GRASS DOES N</mark>OT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WI<mark>th re</mark>establishing a sati<mark>sfacto</mark>ry stand <mark>of g</mark>rass SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 7. SITE REVIEWER AN EROSION CONTROL SITE REVIEWER SHALL BE A PER<mark>SON FROM THE CONTRA</mark>CTOR'S STAFF <mark>ASSIG</mark>NED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

EROSION POTENTIAL FOR THIS PROJECT	SITE REVIEWER REQUIREMENT
(X) INSIGNIFICANT	NONE
( ) MINOR	CONTRACTOR CERTIFICATION COURSE TRAINING ONLY, AS DEFINED IN SECTION 13 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
( ) MEDIUM	THE SUPERINTENDENT OR A SEPARATE INDIVIDUAL FROM THE CONTRACTOR'S STAFF SHALL BE A CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 12 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
( ) MAJOR	SUPERINTENDENT AND AN INDIVIDUAL FROM CONTRACTOR'S STAFF SHALL BE CCR. ONE INDIVIDUAL FROM THE CONTRACTOR'S STAFF MUST BE A CCR PRIOR TO THE EXECUTION OF THE CONTRACT. THE SUPERINTENDENT MUST BECOME A CCR WITHIN ONE YEAR AFTER THE AWARD OF CONTRACT.

8. ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE AWARDED CONTRA<mark>CTOR,</mark> INCLU<mark>DE:</mark>

( X )	NONE
( )	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
( )	ALL PLAN SHEETS, IN PDF FORMAT.
( )	EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
( )	PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
( )	DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM).

NOTE: THE DOCUMENT ENTITLED "RELEASE FOR DELIVERY OF DOCUMENTS IN ELECTRONIC FORM TO A CONTRACTOR" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

9. AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

( )	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
( X )	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR, PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 743000.
( )	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR SHALL BE PAID FOR UNDER ITEM 743031.

- 10. THE DISTURBED AREA FOR THIS PROJECT IS <u>1.34</u> ACRES.
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK". ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.

- 12. THE EROSION AND SEDIMENT CONTROL PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE EROSION AND SEDIMENT CONTROL PLANS ARE VALID FOR A THREE YEAR PERIOD FOR EACH WORK ORDER, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE THREE YEARS, THE CONTRACTOR SHALL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVAL. DELDOT WILL REVIEW THE CURRENT EROSION AND SEDIMENT CONTROL PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFCATIONS.
- 13. CONTRACT TERM; THIS CONTRACT SHALL BE FOR A PERIOD OF THREE YEARS (1,095 CALENDAR DAYS) AND SHALL BEGIN FROM THE DATE OF NOTICE TO PROCEED. THE PERFORMANCE BOND SHALL BE SUBMITTED AT THE BEGINNING OF EACH FISCAL YEAR. FAILURE ON THE PART OF THE CONTRACTOR TO SUBMIT THE PERFORMANCE BOND FOR THE EXTENSION PERIOD PRIOR TO THE LAST WORKING DAY BEFORE END OF THE PREVIOUS PERIOD SHALL RESULT IN THE CONTRACT BEING CANCELLED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE FORMS NECESSARY TO RENEW THE PERFORMANCE BOND EACH YEAR THE CONTRACT IS IN FORCE.
- 14. THE DEPARTMENT ANTICIPATES ADDING SEVERAL MORE SIGN LOCATIONS THROUGHOUT THE CONTRACT TERM; HOWEVER, NO ADDITIONAL WORK IS GUARANTEED.
- 15. ADVANCE UTILITY RELOCATION INVOLVEMEN<mark>T IS ANT</mark>ICIPATED A<mark>ND WI</mark>LL DE AD<mark>DRESS</mark>ED IN FUTURE WORK ORDER SUBMITTALS PRIOR TO ISSUING A NOTICE TO PROCEED FOR THAT WORK ORDER. SHOULD ANY CONFLICTS BE ENCOUNTERED DURING CONSTRUCTION REQUIRING ADJUSTMENT AND/OR RELOCATION OF THE EXISTING FACILITIES, THE NECESSARY RELOCATION WORK SHALL BE ACCOMPLISHED BY THE RESPECTIVE UTILITY, AS DIRECTED BY THE CONSTRUCTION ENGINEER. ANY ADJUSTMENTS AND/OR RELOCATIONS ON MUNICIPALLY OWNED FACILITIES SHALL BE DONE BY THE STATE'S CONTRACTOR IN ACCORDANCE WITH THE RESPECTIVE UTILITY'S STANDARD SPECIFICATIONS AS DIRECTED BY THE CONSTRUCTION ENGINEER.
- EACH LOCATION SHALL BE CONSIDERED A SINGLE UNIT OF WORK (WORK ORDER). UPON COMPLETION OF EACH SINGLE UNIT OF WORK AND ACCEPTANCE BY THE DEPARTMENT, ONE ITEMIZED ESTIMATE WILL BE PREPARED BY THE DEPARTMENT FOR TH<mark>AT WO</mark>RK. THE CONTRACT<mark>OR SH</mark>ALL REV<mark>IEW AND APPROVE THE INVOICE. PAYM</mark>ENT WILL BE MONTHLY FOR THE COMPLE<mark>TED</mark> INVOICES AS OUTLINED IN SECTION 109.07.
- 17. PROSECUTION AND PROGRESS OF WORK:

THE CONTRACTOR SHALL COMMENCE WORK INDICATED ON THE WORK ORDER NO LATER THAN THE THIRTIETH (30) BUSINESS DAY AFTER ISSUANCE UNLESS REQUIRED MATERIALS ARE NOT AVAILABLE. NON-AVAILABILITY OF MATERIALS SHALL BE VERIFIED BY AT LEAST THREE (3) DIFFERENT SOURCES. VERIFICATION SHALL BE FORMAL AND SUPPLIED BY THE CONTRACTOR IN WRITING.

ISSUANCE OF EACH WORK ORDER CONSTITUTES THE NOTICE TO PROCEED WITH THE WORK DESCRIBED ON THE WORK ORDER. IF THERE IS A VERIFIED NON-AVAILABILITY OF MATERIALS, TIME CHARGES SHALL COMMENCE ON THE FIRST (1ST) WORKING DAY FOLLOWING THE DELIVERY DATE OF SAID MATERIALS.

FAILURE TO START ASSIGNED WORK ORDERS IN THE ALLOWED TIME CONSTITUTES "FAILURE TO PURSUE THE WORK" AND SUBJECTS THE CONTRACTOR TO LIQUIDATED DAMAGES AS OUTLINED IN SUBSECTION 108.09 OF THE STANDARD SPECIFICATIONS. IF WORK ON A SPECIFIC WORK ORDER IS NOT COMPLETED WITHIN THE ALLOTTED TIME, LIQUIDATED DAMAGES WILL BE ASSESSED IN ACCORDANCE WITH SUBSECTION 108.09 AND BASED ON THE TOTAL VALUE OF THAT WORK ORDER.

A FINAL INSPECTION WILL BE PERFO<mark>rmed</mark> IN ACCORDANCE WITH SUBSECTION 105.20 ON EACH WORK O<mark>RDER</mark> AND IF THE WORK IS SATISFACTORILY COMPLETE<mark>D IT W</mark>ILL BE ACCEPTED BY THE DEPARTMENT.

- 18. THE CONTRACTOR MAY SIMULTANEOUSLY WORK ON MULTIPLE LOCATIONS WITH APPROVAL FROM THE TRAFFIC ENGINEER AND PROVIDING THE DETOURS AND MOT DO NOT OVERLAP.
- 19. PLANS SHOWN ARE SUBJECT TO MINOR CHANGES, FINAL APPROVED PLANS WILL BE ISSUED WHEN THE WORK ORDER IS GIVEN TO THE CONTRACTOR, PAYMENT WILL BE MADE ON THE ACTUAL QUANTITIES USED.
- 20. THE INITIAL EXPENSE WILL BE PAID ONE TIME FOR THE FIRST WORK ORDER. JOB ORDER MOBILIZATION (ITEM 763612) WILL BE UTILIZED TO PAY FOR MOBILIZATION TO ALL OTHER WORK ORDER LOCATIONS.

1. ANY DAMAGE TO ITEMS NOT DESIGNATED TO BE REPLACED BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

### SECTION 200

- 2. IN AREAS WHERE TREES OR SHRUBS WILL BE OVERHANGING THE PROPOSED SIDEWALK, PRUNING MAY BE NECESSARY TO ACHIEVE A VERTICAL CLEAR SPACE OF 10 FEET ABOVE THE PROPOSED SIDEWALK ELEVATION, THE CONTRACTOR SHALL PRUNE EXISTING TREE AND SHRUB BRANCHES, WHICH OVERHANG THE SIDEWALK, IN ACCORDANCE WITH I.S.A. STANDARDS. THE CONTRACTOR SHALL NOTIFY DELDOT'S ROADSIDE ENVIRONMENTALIST ADMINISTRATOR, EUGENE 'CHIP' ROSAN, JR. AT (302) 760-2185 AND/OR HIS DESIGNEE, AT LEAST TWO (2) DAYS PRIOR TO THE PRUNING OPERATION. ALL COSTS ASSOCIATED WITH THE ABOVE WORK TO BE PAID UNDER ITEM 201000 - CLEARING AND GRUBBING.
- 3. THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS AT POINTS OF POSSIBLE UTILITY CONFLICTS, TO DETERMINE IF A CONFLICT EXISTS, ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR, WITH THE ENGINEER AND THE UTILITY COMPA<mark>NY INVO</mark>LVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLES SHALL BE INCI<mark>DENTAL</mark> TO ITEM 618537-DRILLED SHAFT, 54", 618538-DRILLED SHAFT, 60", 618539-DRILLED SHAFT ROCK SOCKET, 48".
- ITEMS TO BE REMOVED UNDER ITEM 211000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
  - EXISTING SIGN STRUCTURE SC1206
  - EXISTING SIGN STRUCTURE SC1221
  - EXISTING SIGN STRUCTURE SC1223
  - EXISTING SIGN STRUCTURE SO1107 *- EXISTING SIGN STRUCTURE S011<mark>08</mark>*
  - EXISTING SIGN STRUCTURE SO1109
  - EXISTING SIGN STRUCTURE SO1112 - EXISTING SIGN STRUCTURE SO1113
  - EXISTING SIGN STRUCTURE SO1114
  - EXISTING SIGN STRUCTURE SO1116
  - EXISTING SIGN STRUCTURE SO1123

ADDENDUMS / REVISIONS

EXISTING SIGN STRUCTURES AND PANELS SHALL BE THE PROPERTY OF THE CONTRACTOR.

5. EXISTING SIGN STRUCTURE FOUNDATIONS SHALL BE CUT 1' BELOW EXISTING GRADE. PAYMENT SHALL BE INCLUDED IN ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS, AREA AROUND EXISTING STRUCTURE SHALL BE RE-GRADED. TOPSOILED, SEEDED AND MULCHED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATIONS 908004 AND 908014.

### SECTION 600

- 6. THE SIGN STRUCTURES SHALL BE SHOP-ASSEMBLED TO ENSURE PROPER FIT OF SPLICE BOLTS IN THE FIELD.
- 7. ALL WELDING SHALL BE SUBJECTED TO NON-DESTRUCTIVE TESTING IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE ANSI/AASHTO/AWS D1.1 STRUCTURAL WELDING CODE - STEEL. WELDS IN MAIN MEMBERS SHALL BE ULTRASONICALLY INSPECTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- 8. SIGN STRUCTURES SHALL BE FABRICATED SO THAT AFTER ERECTION, THE MASTS AND MAST ARMS SHALL CONFORM TO THE CAMBER DIAGRAMS SHOWN IN THE DRAWINGS.
- 9. THE CONTRACTOR SHALL INCLUDE LEAD TIME OR DELIVERY DATE ON SHOP DRAWINGS.

### SECTION 700

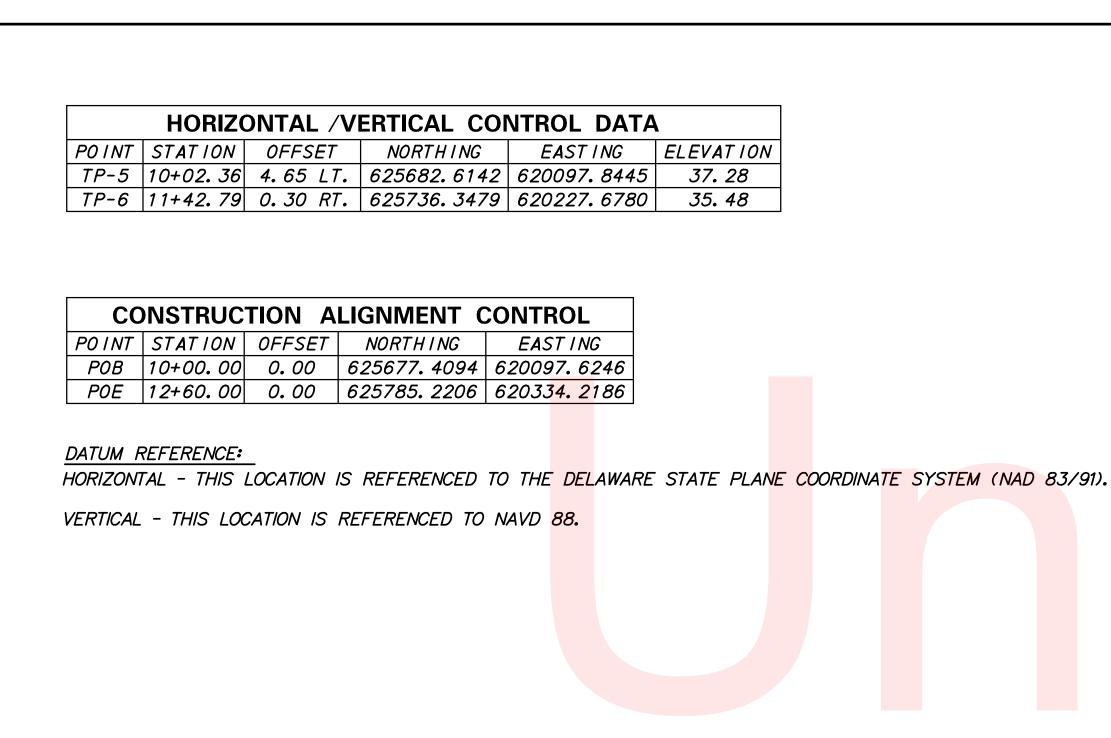
- 10. THE CONTRACTOR IS RESPONSI<mark>BLE T</mark>O FIELD VERIFY ALL EXISTING CONDITIONS, LAYOUT DIMENSIONS, AND CLEARANCES THAT ARE SHOWN ON THE DRAWINGS PRIOR TO ANY CONSTRUCTION WORK, THE COST OF THIS ITEM SHALL BE INCIDENTAL TO ITEM 763501 - CONSTRUCTI<mark>ON EN</mark>GINEERING.
- 11. THE CONTRACTOR SHALL SURVEY THE LAYOUT OF PROPOSED FOUNDATIONS AND ANCHOR BOLTS AND OBTAIN ENGINEER'S APPROVAL OF THE FOUNDATION LOCATIONS PRIOR TO PREPARING SHOP DRAWINGS FOR SIGN SUPPORTS TO BE ERECTED THEREON. THE S<mark>HOP DRAWINGS SHA</mark>LL INCLUDE THE MEASUREMENTS OBTAINED FROM THE SURVEY. ALL SURVEY DATA WILL BE BASED <mark>ON TH</mark>E NATION<mark>AL GE</mark>ODETIC SURVEY VERTICAL DATUM (NAVD88) AND THE NATIONAL GEODETIC SURVEY HORIZONTAL DATUM (NAD83) PA<mark>VEME</mark>NT FOR ALL THE SURVEY WORK WILL BE INCIDENTAL TO ITEM 763501 - CONSTRUCTION ENGINEERING.
- 12. THE CONTRACTOR SHALL ENSURE THAT THERE ARE NO GAPS BETWEEN SECTIONS OF SIGN.
- 13. IN AREAS WHE<mark>re pro</mark>posed c<mark>urb </mark>meets existing curb and the two curb types are not similar, the proposed CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK, INCLU<mark>DING</mark> SAW CU<mark>TTING</mark> EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.
- 14. WHERE PROPOSED CONCRETE SIDEWALK IS CONSTRUCTED TO MEET EXISTING SIDEWALK, THE EXISTING SIDEWALK SHALL BE SAWCUT AT THE TIE-IN POINT OR MEET THE NEAREST EXISTING SIDEWALK JOINT. ALL SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM 762002 SAWCUTTING, CONCRETE, FULL DEPTH.
- 15. 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.

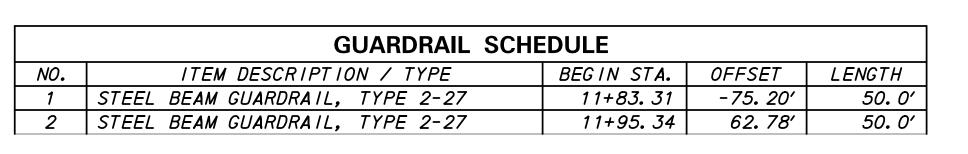
### MISCELLANEOUS

- 16. THE CONTRACTOR SHALL COVER ALL SIGN FOUNDATION EXCAVATIONS AT THE END OF EACH WORKDAY WITH STEEL PLATES CAPABLE OF SUPPORTING PEDESTRIAN LOADS OR AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCIDENTAL TO ITEM 618537-DRILLED SHAFT, 54", 618538-DRILLED SHAFT, 60", 618539-DRILLED SHAFT ROCK SOCKET, 48".
- 17. IF ANY PUMPING IS NECESSARY TO EXCAVATE FOR THE SIGN STRUCTURE FOUNDATIONS, PLEASE REFER TO SECTION 111 FOR THE PUMPING REQUIREMENTS. PAYMENT SHALL BE INCIDENTAL TO ITEM 618537-DRILLED SHAFT, 54", 618538-DRILLED SHAFT, 60", 618539-DRILLED SHAFT ROCK SOCKET, 48".
- 18. ALL WORK SHAL<mark>L BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY.</mark>
- <mark>19. Heidle. Krofft, deld</mark>ot archaeologist, must be contacted at (302)760-2125 or heidl.Krofft@state.de.us TWO WEEKS PRIOR TO CONSTRUCTION. HEIDI KROFFT OR A DELDOT ARCHAEOLOGIST MUST BE ON SITE DURING THE EXCAVATION PHASE AT SIGN STRUCTURE SC1221 TO MONITOR WORK ADJACENT TO THE WILMINGTON AND BRANDYWINE CEMETERY. IF GRAVE SHAFTS OR HUMAN REMAINS ARE ENCOUNTERED, ALL WORK SHALL STOP IMMEDIATELY UNTIL BOTH DELDOT AND THE STATE HISTORIC PRESERVATION OFFICE HAVE CONCURRED THAT THE CONSTRUCTION WORK WILL NOT IMPACT ANY INTACT ARCHAEOLOGICAL DEPOSITS. THIS CONSULTATION SHALL TAKE PLACE NO MORE THAN 24 HOURS AFTER CONSTRUCTION HAS STOPPED, ALL WORK ON THE PROJECT SHALL COMPLY WITH THE DELAWARE STATE UNMARKED HUMAN REMAINS LAW (7 DEL.C. CH. 54).
- 20. THE CONTRACTOR SHALL VERIFY IF THE SIGN STRUCTURE LOCATIONS ARE WITHIN A SUPERFUND SITE. REFER TO SPECIAL PROVISION 202560 FOR GUIDANCE AND MORE INFORMATION.
- 21. THE CONTRACTOR SHALL CONTACT MICHAEL ELLER, CHIEF OF SCHEDULING FOR DART FIRST STATE, AT 302-576-6061 14 DAYS PRIOR TO THE START OF CONSTRUCTION OF A WORK ORDER.
- 22. QUANTITIES HAVE BEEN INCREASED TO ACCOUNT FOR THE POTENTIAL ADDITION OF FUTURE SIGN STRUCTURE LOCATIONS, CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY USED FOR EACH ITEM.

TOTAL SHTS. 83

SHEET NO.





CURB SCHEDULE					
NO.	ITEM DESCRIPTION / TYPE	LENGTH			
1	P.C.C. CURB, TYPE 1-4	<i>50.0′</i>			

TRAVERSE POINT

SOIL BORING SCHEDULE STATION OFFSET DESCRIPTION CS-8 40.66' SEE SOIL BORING LOG 11+88.74

ADDENDUMS / REVISIONS

EXISTING — OVERHEAD SIGN SO1107 Wilmington Dover EXIT 👉 ONLY S01107-1 RM CURB SIGN MESSAGE TO BE DETERMINED BY DELDOT TRAFFIC S01107-2 EXISTING OVERHEAD (RM) SIGN STRUCTURE C EXISTING (RM) SIDEWALK C A BARRIER (DND) EXIT 2 Terminal Ave Port of Wilm SC1103-1 EXISTING OVERHEAD SIGN SO1107 TRAVERSE POINT GUARDRAIL C **⊕** CS-8 EXISTING —
OVERHEAD
SIGN SO1107 PROPOSED SC1103 NOTE: 1. LIMITS OF SURVEY ARE WITHIN STATE OF DELAWARE RIGHT-OF-WAY. EXISTING OVERHEAD RM SIGN STRUCTURE CROSS REFERENCE NOTES: 1. REFER TO SIGN STRUCTURE NOTES FOR SIGN STRUCTURE LOCATION.

GUARDRAIL (RM

PROPOSED SO1107

S01107-3

EXIT **1** 

**13** 

CONTRACT N/A BRIDGE NO. DESIGNED BY: RMB

CONSTRUCTION PLAN SIGN STRUCTURES SC1103 AND SO1107 TAL SHTS

**DELAWARE** DEPARTMENT OF TRANSPORTATION

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

T201407004 COUNTY NEW CASTLE CHECKED BY: DEF

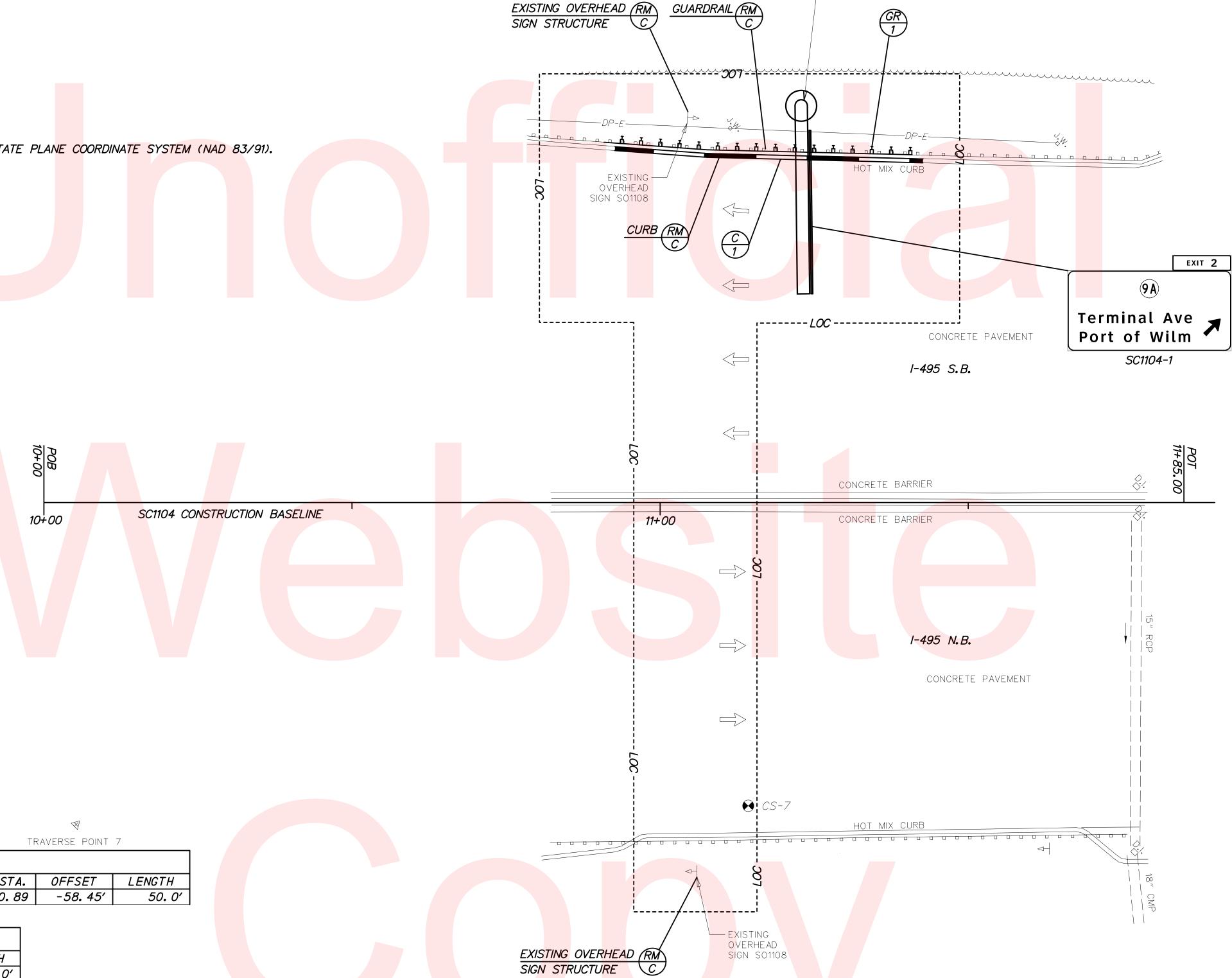
No. of the second secon

CONSTRUCTION ALIGNMENT CONTROL							
PO INT	POINT STATION OFFSET NORTHING EASTING						
POB	10+00.00	0.00	<i>626828.0193</i>	<i>621706. 1350</i>			
POT	11+85.00	0.00	<i>626958.8860</i>	<i>6218<mark>36.8</mark>978</i>			

### DATUM REFERENCE:

HORIZONTAL - THIS LOCATION IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).

VERTICAL - THIS LOCATION IS REFERENCED TO NAVD 88.



		1 17	AVERSE POINT	/			
	GUARDRAIL SCHEDULE						
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH			
1	STEEL BEAM GUARDRAIL, TYPE 2-27	10+90.89	- <i>58. 45′</i>	<i>50.0′</i>			

CURB SCHEDULE					
NO.	ITEM DESCRIPTION / TYPE	LENGTH			
1	P.C.C. CURB, TYPE 1-4	50.0′			

SOIL BORING SCHEDULE								
NO.	NO. STATION OFFSET DESCRIPTION							
<i>CS-7</i>								

NOTE:

1. LIMITS OF SURVEY ARE WITHIN STATE OF DELAWARE RIGHT-OF-WAY.

CROSS REFERENCE NOTES:

1. REFER TO SIGN STRUCTURE NOTES FOR SIGN STRUCTURE LOCATION.



DENDUMS	/ REVISIONS				
		SCALE			
		0	10	20	
			FI	EET	

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

PROPOSED SC1104

CONTRACT	BRIDGE NO.		
T201407004		147	
COUNTY	DESIGNED BY: I	RMB	
NEW CASTLE	CHECKED BY: [	DEF	

CONSTRUCTION PLAN SIGN STRUCTURE SC1104 AND SO1108 SHEET NO.

6

TOTAL SHTS.

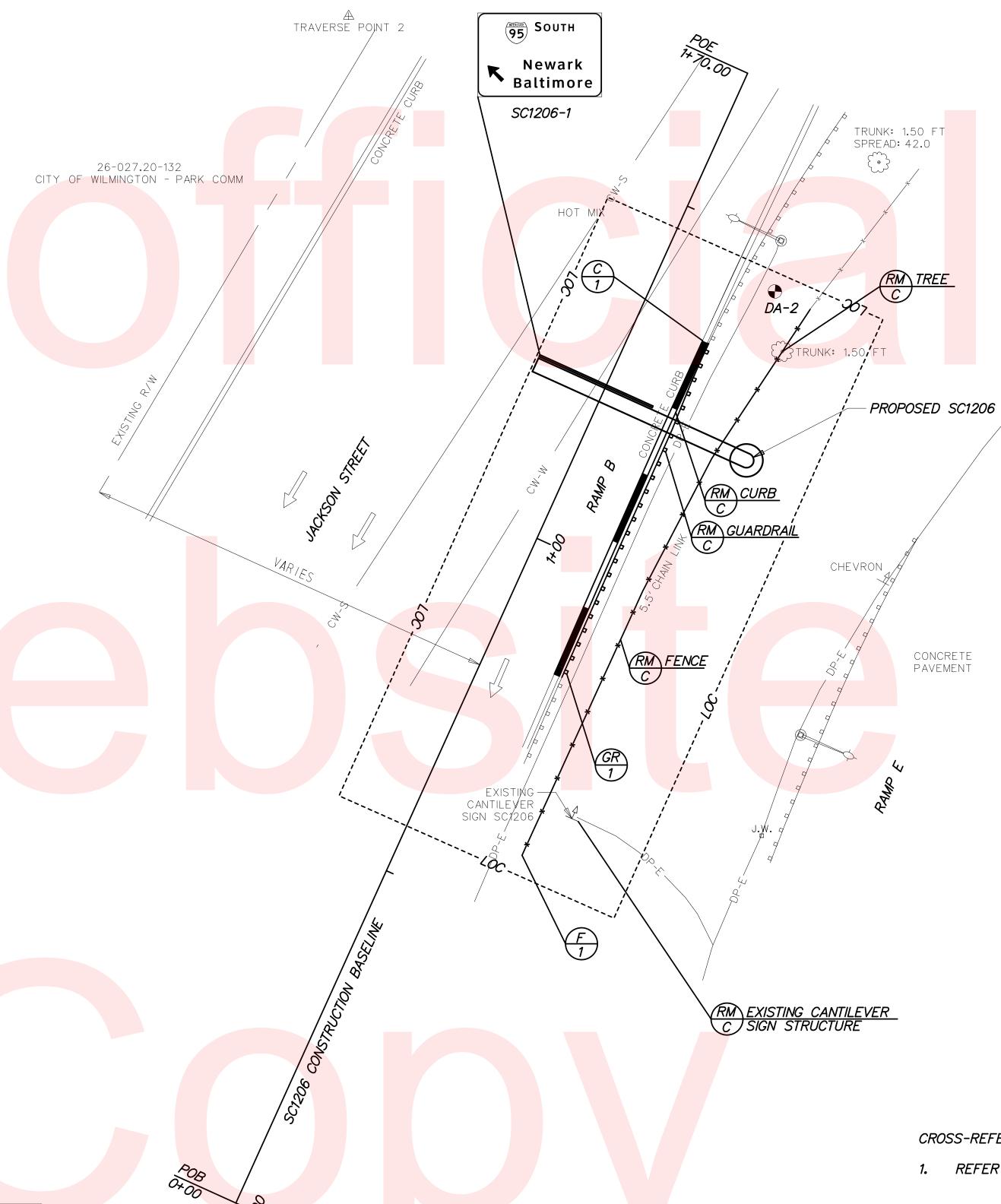
83

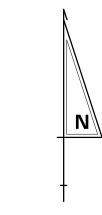
/28/2015 12:29:44 AM

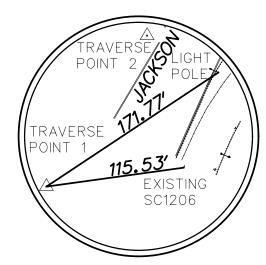
CONSTRUCTION ALIGNMENT CONTROL						
PO INT	STATION	OFFSET	NORTHING	EASTING		
POB	0+00.00	0.00	<i>4837.</i> 3 <u>355</u>	4984. 5404		
P0E	1+70.00	0.00	4992. 1 <mark>887</mark>	<i>5054. 6867</i>		

HORIZONTAL - THIS LOCATION IS BASED OFF AN ASS<mark>UMED</mark> HORIZONTAL DATUM<mark>.</mark>

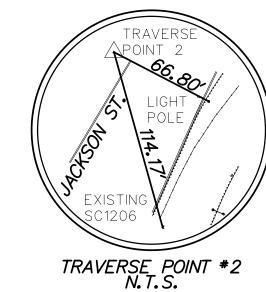
VERTICAL - THIS LOCATION IS BASED OFF AN ASSUM<mark>ED VE</mark>RTICAL DATUM.







TRAVERSE POINT #1 N.T.S.





	GUARDRAIL SCHEDULE							
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH				
1	STEEL BEAM GUARDRAIL, TYPE 1-27	0+84.07	10.97	<i>50.0′</i>				

	CURB SCHEDULE						
NO.	ITEM DESCRIPTION / TYPE	LENGTH					
1	P.C.C. CURB, TYPE 1-8	50.0'					

FENCE SCHEDULE							
NO.	QTY.	DESCRIPTION	NOTES				
1	85 LF	CHAIN-LINK FENCE, 5.5 FT. HIGH (ITEM 727004)	STA. 0+60, 16' RT. TO STA. 1+44, 21' RT. (+/-)				
	NO.		NO. QTY. DESCRIPTION				

CROSS-REFERENCE NOTES:

1. REFER TO SIGN STRUCTURE NOTES FOR SIGN STRUCTURE LOCATION.

SOIL BORING SCHEDULE						
NO.	STATION	OFFSET	DESCRIPT ION			
DA-2	1+44. 29	15. 75′	SEE SOIL BORING LOG			

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE

1 10 20

FEET

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A	
T001407004	5711502 770	IVA	
T201407004	DESIGNED BY: RMB		CONSTRUCTION PLAN
COUNTY	DESIGNED BIOL	ZMD	SIGN STRUCTURE SC1206
NEW CASTLE	CHECKED BY: [	DEF	

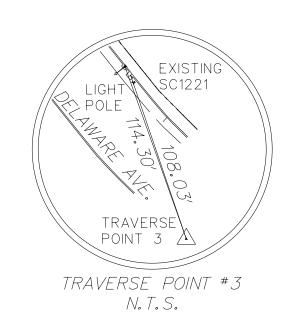
SHEET NO.
7
TOTAL SHTS
83

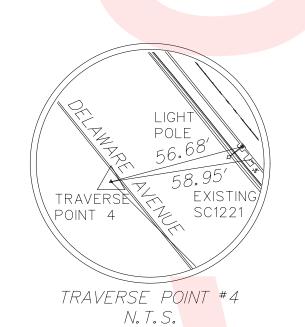
HORIZONTAL / VERTICAL CONTROL DATA							
POINT	STATION	OFFSET	NORTHING	EAST ING	ELEVATION		
TP-3	0+01.07	25.91 LT.	5206. 9709	4793. 0284	49.19		
TP-4	1+32.16	37.07 LT.	5300.0000	4700.0000	50.00		

CONSTRUCTION ALIGNMENT CONTROL							
PO INT	STATION	OFFSET	NORTHING	EASTING			
POB	0+00.00	0.00	<i>5222.</i> 8 <mark>546</mark>	4813.5261			
POE	2+00.00	0.00	<i>5375.</i> 7 <mark>655</mark>	4684.6144			

HORIZONTAL - THIS LOCATION IS BASED OFF AN ASS<mark>UMED</mark> HORIZONTAL DATUM<mark>.</mark>

VERTICAL - THIS LOCATION IS BASED OFF AN ASSUM<mark>ED VE</mark>RTICAL DATUM.





CROSS-REFERENCE NOTES:

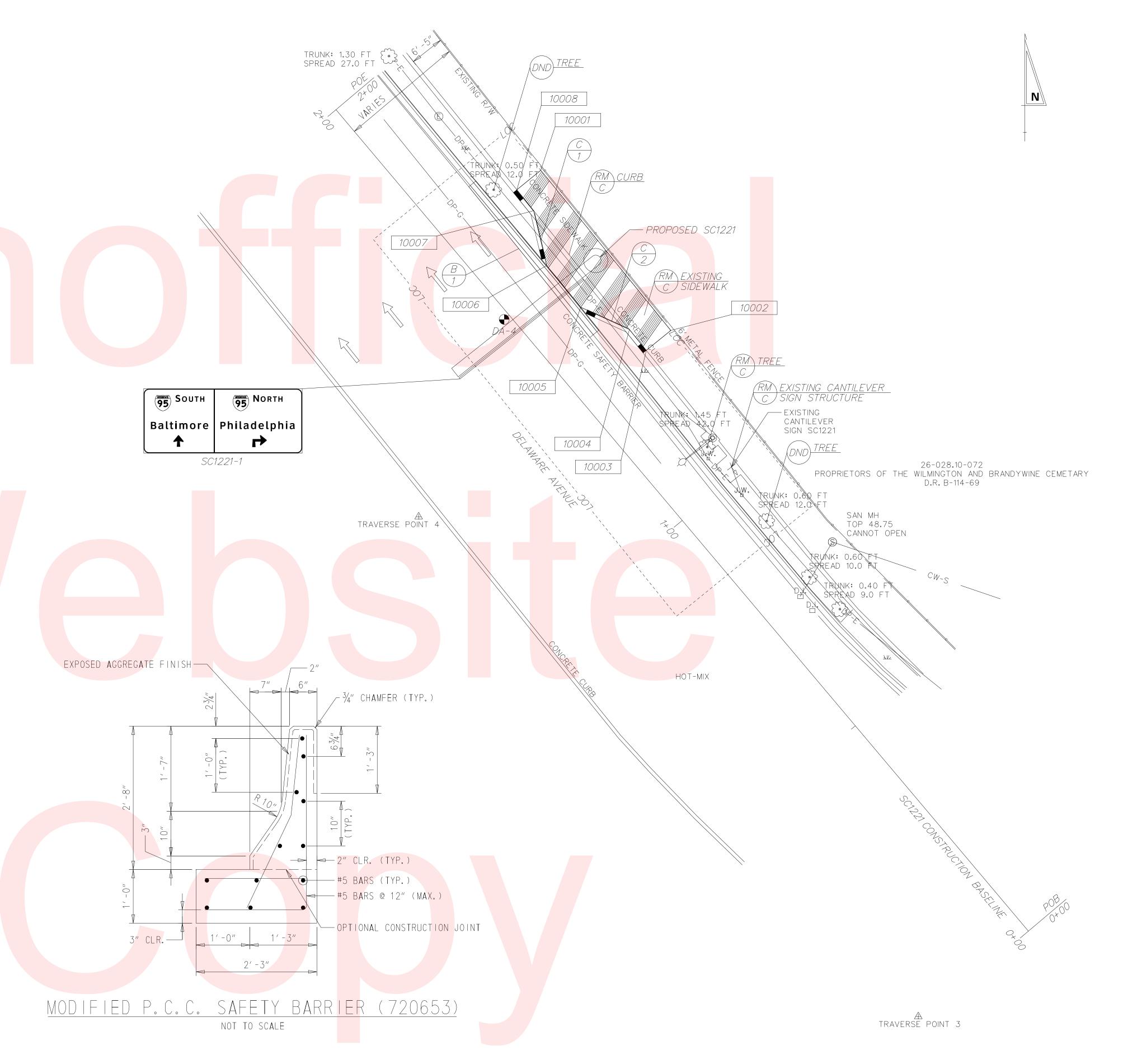
1. REFER TO SIGN STRUCTURE NOTES FOR SIGN STRUCTURE LOCATION.

COORDINATE LIST								
POINT NO.	STATION	OFFSET	NORTHING	EAST I NG				
10001	1+66.79	21.87	5364. 4773	4722. 7411				
10002	1+28.40	21.17	5334.6684	4746. 9528				
10003	1+28.51	15. 29	5330. 9591	4742. 3860				
10004	1+33.50	15.40	5334. 8494	4739. 2451				
10005	1+42.53	11.13	5338. 9965	4730. 1661				
10006	1+52.53	11.29	5346. 7428	4723. 8423				
10007	1+61.90	16.02	5356. 9631	4721.4203				
10008	1+66.90	16.14	5360.8588	4718. 2861				

	BARRIER SCHEDULE					
NO.	ITEM DESCRIPTION / TYPE	LENGTH				
1	MODIFIED P.C.C. SAFETY BARRIER	36.0′				

	CURB SCHEDULE	
NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	P.C.C. CURB, TYPE 1-8	15.5′
2	P.C.C. CURB, TYPE 1-8	15.0′

SOIL BORING SCHEDULE						
NO.	STATION	OFFSET	DESCRIPTION			
DA-4	1+49.96	-1.23'	SEE SOIL BORING LOG			



NTRACT	BRIDGE NO.	N/A	
107001	BIND 02 1100	IVA	
407004	DECIONED DV. I	DMD	CO
DUNTY	DESIGNED BY: I	KMD	SIGN
CASTLE	CHECKED BY: I	DEF	

SHEET NO.

8

TOTAL SHTS.

83

HORIZONTAL / VERTICAL CONTROL DATA							
PO INT	STATION	OFFSET	NORTHING	EASTING	ELEVATION		
TP-7	0+03.40	17. 28 LT.	4916.6504	4916.6501	<i>50.68</i>		
TP-8	1+15.49	19.18 RT.	5000.0000	5000.0000	50.00		

CONSTRUCTION ALIGNMENT CONTROL							
PO I NT	STATION	OFFSET	NORTHING	EASTING			
POB	0+00.00	0.00	4905. 7 <mark>8</mark> 04	<i>4930. 5062</i>			
P0E	1+40.00	0.00	<i>5030.</i> 5 <mark>389</mark>	4994.0302			

HORIZONTAL - THIS LOCATION IS BASED OFF AN ASS<mark>UMED</mark> HORIZONTAL DATUM<mark>.</mark>

VERTICAL - THIS LOCATION IS BASED OFF AN ASSUM<mark>ED V</mark>ERTICAL DATUM.

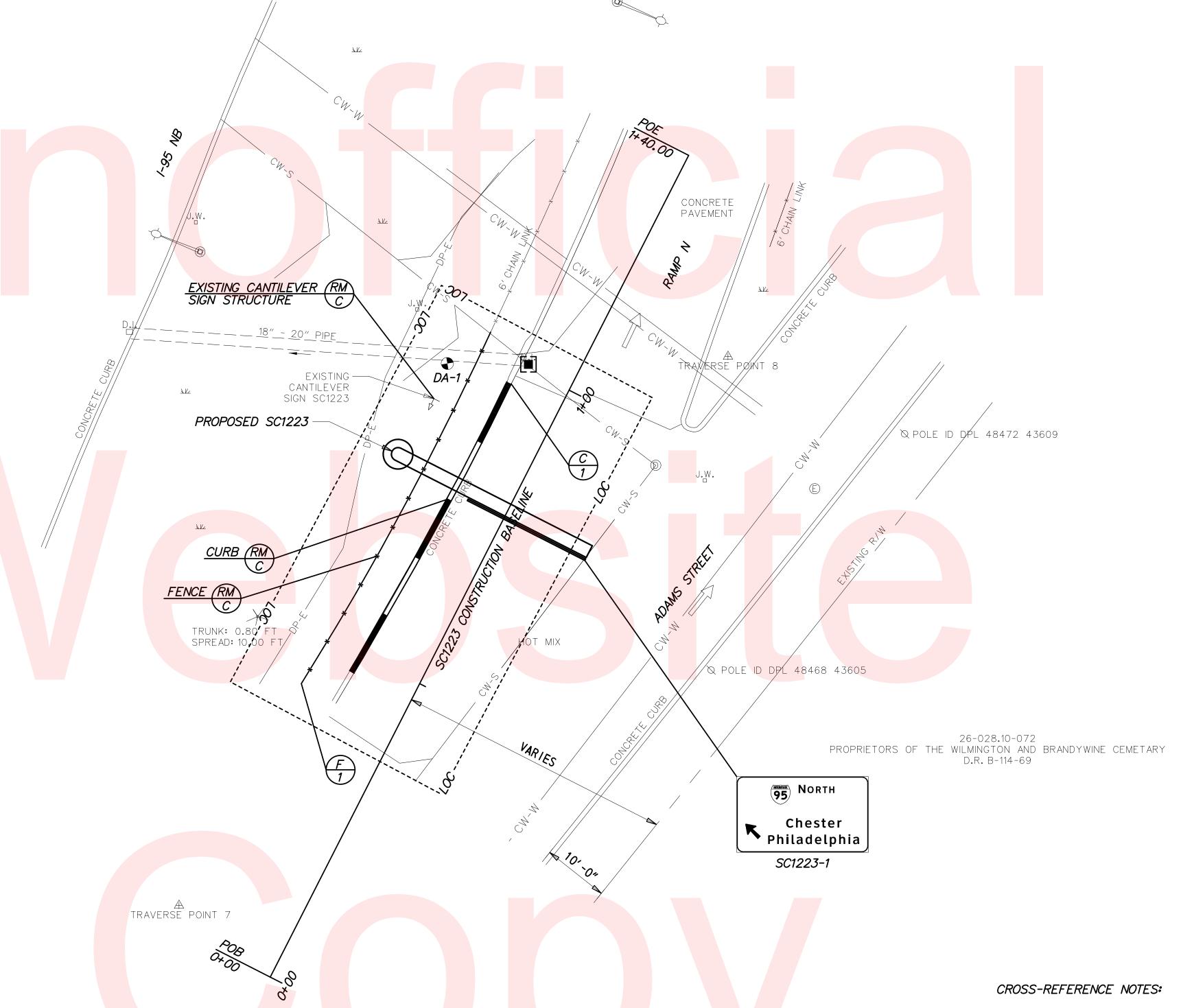
**CURB SCHEDULE** 

LENGTH

*50.0′* 

ITEM DESCRIPTION / TYPE

1 P.C.C. CURB, TYPE 1-8



1. REFER TO SIGN STRUCTURE NOTES FOR SIGN STRUCTURE LOCATION.

TRAVERSE POINT #7 N.T.S.

TRAVERSE POINT #8

	FENCE SCHEDULE							SOIL BORI	NG SCHEDULE	
NO.	QTY.	DESCRIPT ION	NOTES				NO.	STATION	OFFSET	DESCRIPT ION
1	61 LF	CHAIN-LINK FENCE, 6.0 FT. HIGH (ITEM 727004)	STA. 0+42, 16' LT. TO STA. 1+02, 15' LT. (+/-)				DA-1	0+95.22	-18.31′	SEE SOIL BORING LOG

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

DELAWARE STRUCTURES, OPEN-END, FY16-18

ADDENDUMS / REVISIONS

CANTILEVER AND OVERHEAD SIGN STRUCTION PLAN SIGN STRUCTION PLAN SIGN STRUCTURE SC1223

TOTAL SHT NEW CASTLE

NEW CASTLE

CHECKED BY: DEF

CONTRACT

BRIDGE NO.

N/A

DESIGNED BY: RMB

CONTRACT

T201407004

DESIGNED BY: RMB

CONSTRUCTION PLAN SIGN STRUCTURE SC1223

TOTAL SHT

RET

NEW CASTLE

CONTRACT

DESIGNED BY: RMB

CONTRACT

DESIGNED BY: RMB

CONTRACT

DESIGNED BY: RMB

CONTRACT

NEW CASTLE

CONSTRUCTION PLAN SIGN STRUCTURE SC1223

TOTAL SHT

RET

NEW CASTLE

CONTRACT

DESIGNED BY: RMB

CONTRACT

NEW CASTLE

CONTRACT

DESIGNED BY: RMB

CONTRACT

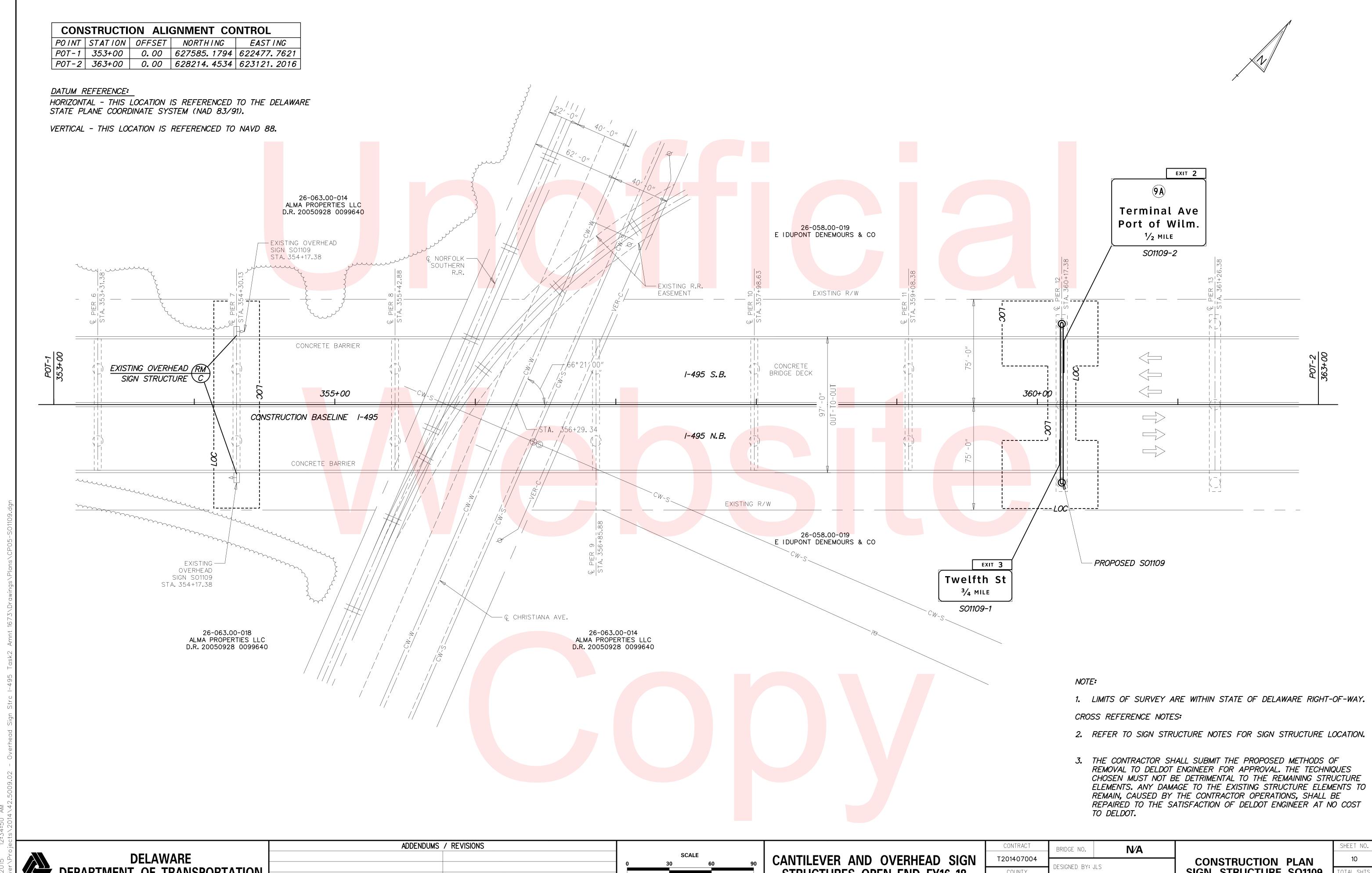
NEW CASTLE

CONTRACT

DESIGNED BY: RMB

CONTRACT

/2015 12:33:03 AM



DEPARTMENT OF TRANSPORTATION

STRUCTURES, OPEN-END, FY16-18

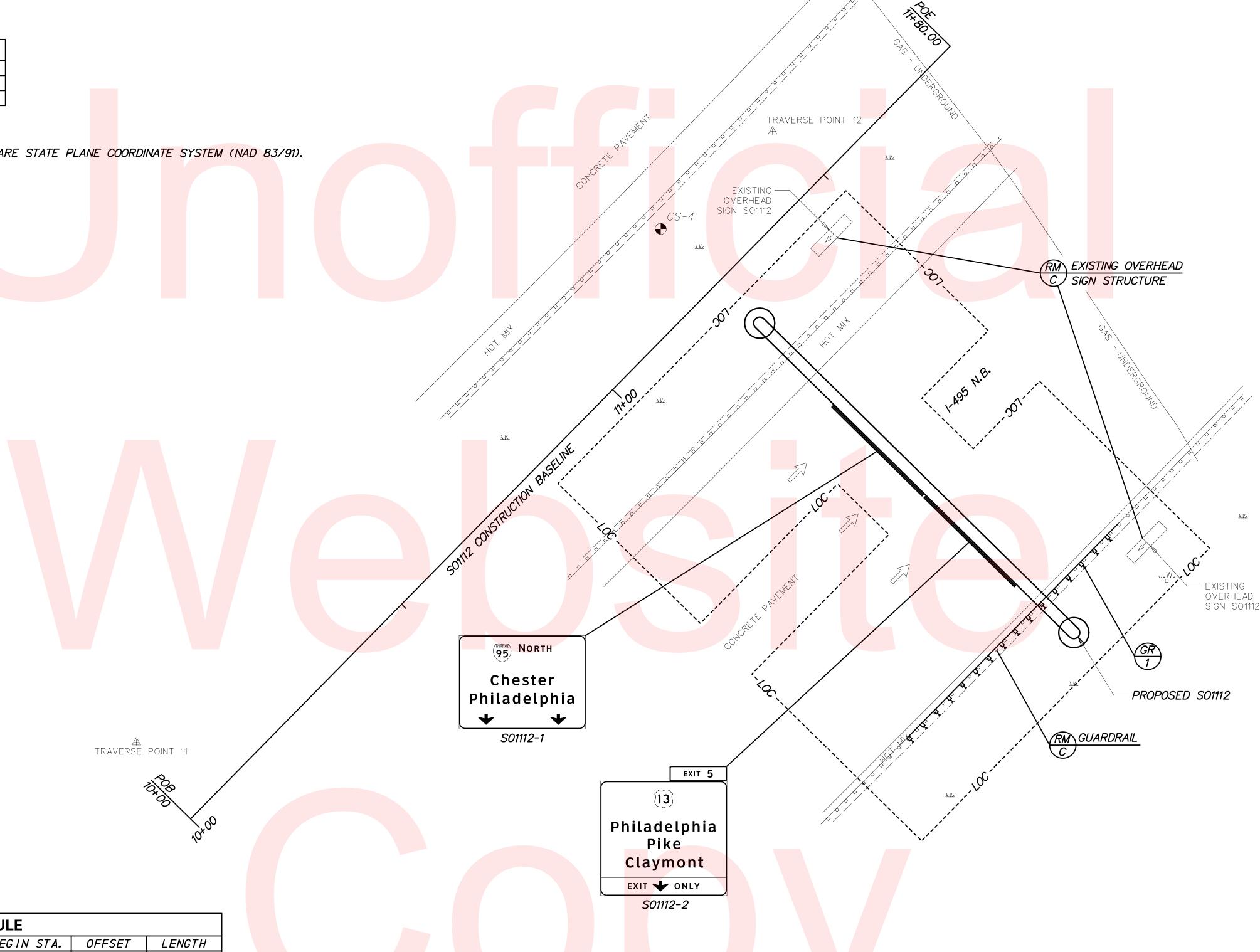
CONTRACT	BRIDGE NO.	N/A		
201407004	Bride Trov	IVA		
201407004	DESIGNED BY: JLS			
COUNTY	DESIGNED DI-	JLS	(	
W CASTLE	CHECKED BY: [	DEF		

SIGN STRUCTURE SO1109

CONSTRUCTION ALIGNMENT CONTROL						
PO INT	STATION	<i>OFFSET</i>	NORTHING	EASTING		
POB	10+00.00	0.00	<i>654437. 6004</i>	<i>645567. 5079</i>		
POE	11+80.00	0.00	<i>654565. 9611</i>	<i>64569<mark>3.6</mark>964</i>		

HORIZONTAL - THIS LOCATION IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).

VERTICAL - THIS LOCATION IS REFERENCED TO NAVD 88.



	GUARDRAIL SCHEDULE								
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH					
1	STEEL BEAM GUARDRAIL, TYPE 2-27	10+92.99	<i>75.</i> 45′	<i>50.0′</i>					

	SOIL BORING SCHEDULE					
NO.	STATION	OFFSET	DESCRIPTION DESCRIPTION			
CS-4	11+24.64	-13.02'	SEE SOIL BORING LOG			

NOTE:

1. LIMITS OF SURVEY ARE WITHIN STATE OF DELAWARE RIGHT-OF-WAY.

CROSS REFERENCE NOTES:

1. REFER TO SIGN STRUCTURE NOTES FOR SIGN STRUCTURE LOCATION.



ADDENDUMS	/ REVISIONS				
			SC	ALE	
		0	10	20	
			FF	ET	
			• •		

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A	
T201407004	DECIONED DV.		CONSTRU
COUNTY	DESIGNED BY: I	KMR	SIGN STR
NEW CASTLE	CHECKED BY: I	DEF	

CONSTRUCTION PLAN SIGN STRUCTURE SO1112

11 TOTAL SHTS.

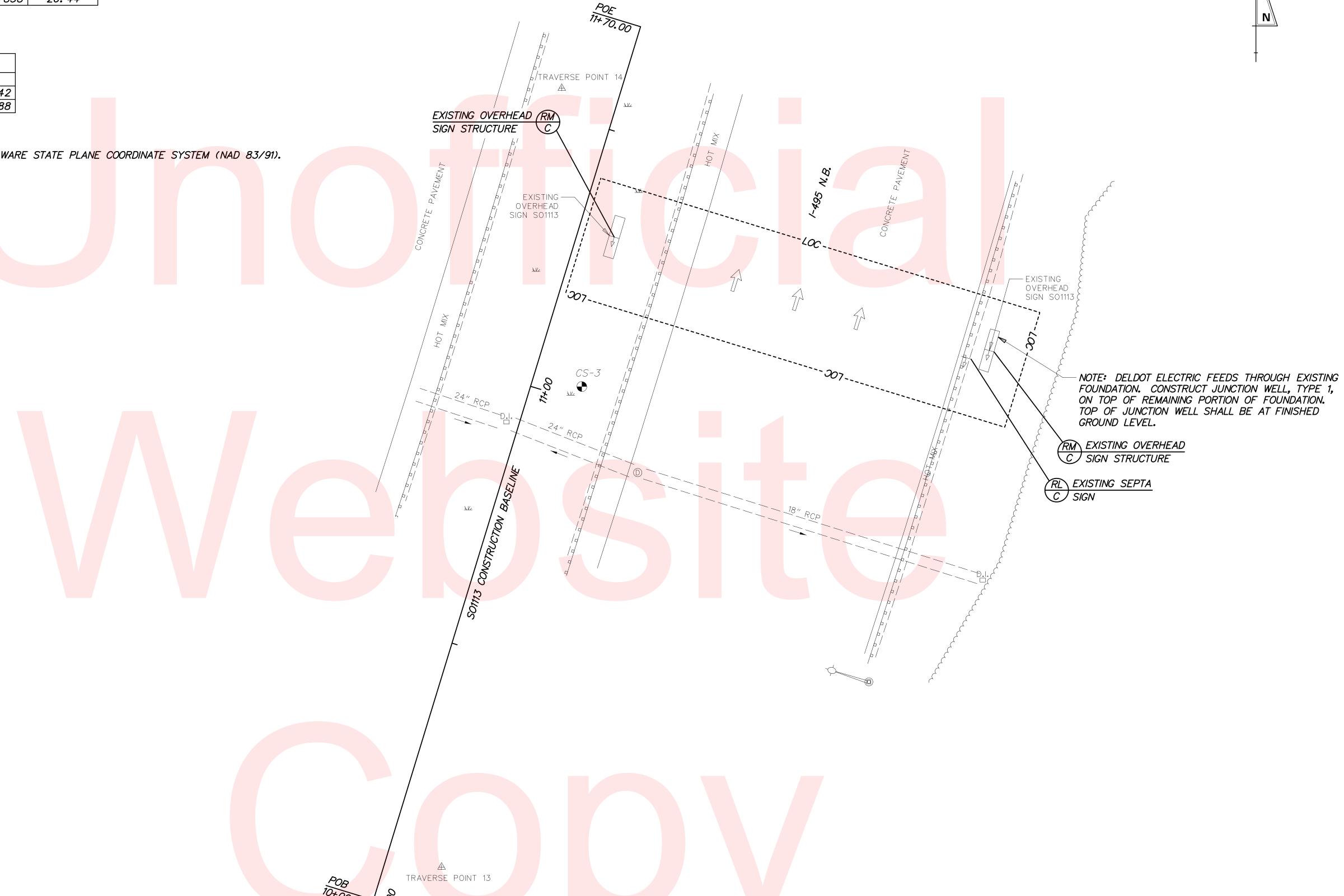
83

---014\42.5009.02 - Overhead Sign Strc I-495 Task2 Amnt 16

CONSTRUCTION ALIGNMENT CONTROL						
PO INT	STATION	<b>OFFSET</b>	NORTHING	EASTING		
POB	10+00.00	0.00	<i>655770.</i> 8408	<i>64645</i> <b>8.</b> <i>7242</i>		
P0E	11+70.00	0.00	<i>655933. 4092</i>	<i>64650<mark>8. 4</mark>388</i>		

HORIZONTAL - THIS LOCATION IS REFERENCED TO THE DELAWARE STATE PLANE COORDINA<mark>TE SYSTEM (NAD 83</mark>/91).

VERTICAL - THIS LOCATION IS REFERENCED TO NAVD 88.



SOIL BORING SCHEDULE						
NO.	STATION	OFFSET	DESCRIPT ION			
CS-3	11+02.74	9. 15'	SEE SOIL BORING LOG			

NOT

1. LIMITS OF SURVEY ARE WITHIN STATE OF DELAWARE RIGHT-OF-WAY.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE

1 10 20

FEET

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A
T201407004		
COUNTY	DESIGNED BY: RMB	
NEW CASTLE	CHECKED BY: [	DEF

CONSTRUCTION PLAN SIGN STRUCTURE SO1113

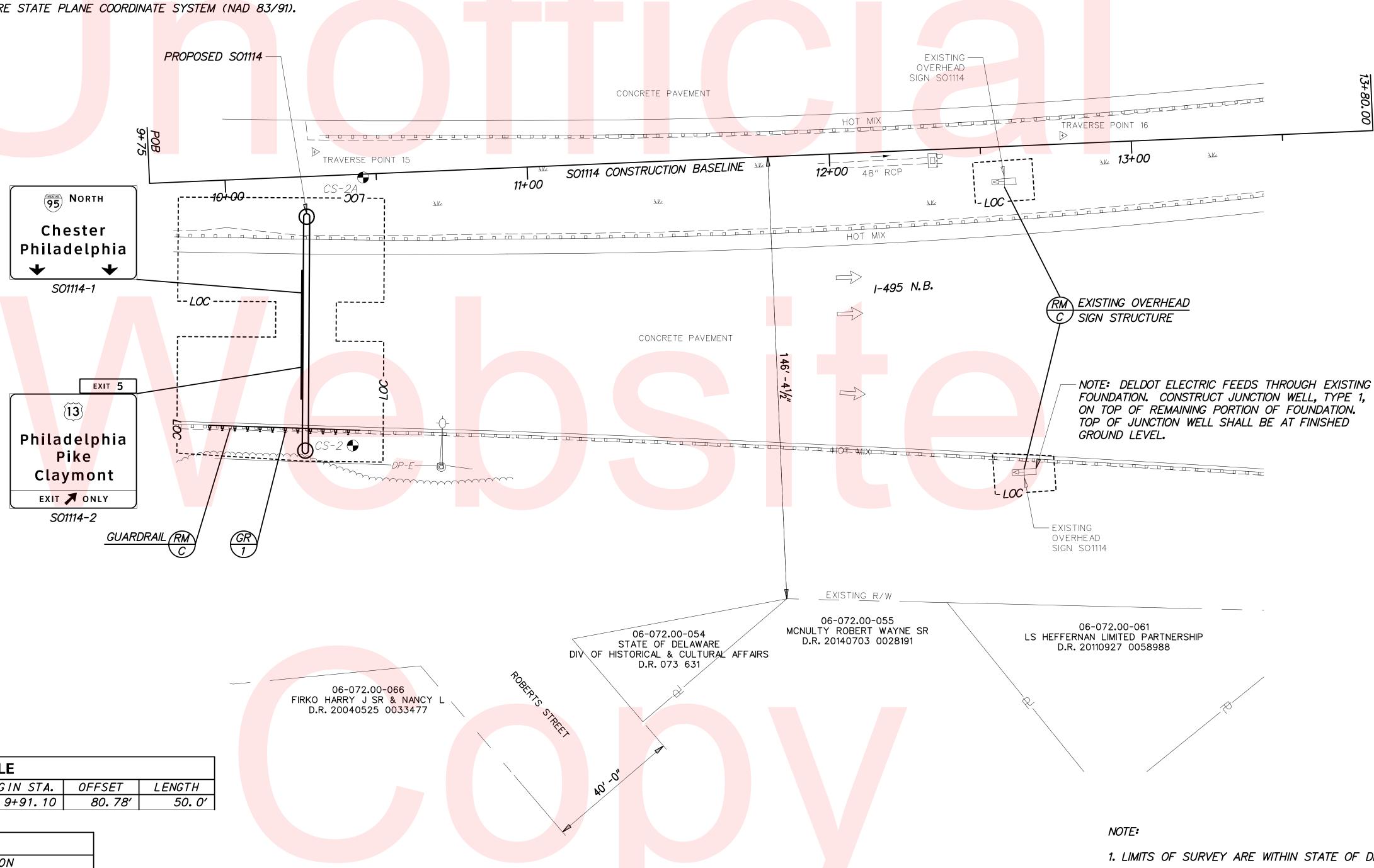


# CONSTRUCTION ALIGNMENT CONTROL PO INT STATION OFFSET NORTHING EASTING POB 9+75.00 0.00 656556.6888 646614.1699 POE 13+80.00 0.00 656961.6460 646608.2835

### DATUM REFERENCE:

HORIZONTAL - THIS LOCATION IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).

VERTICAL - THIS LOCATION IS REFERENCED TO NAVD 88.



GUARDRAIL SCHEDULE							
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH			
1	STEEL BEAM GUARDRAIL, TYPE 2-27	9+91.10	80.78′	<i>50.0′</i>			

		SOIL BORI	NG SCHEDULE
NO.	STATION	OFFSET	DESCRIPTION
CS-2	10+38.40	<i>89. 57′</i>	SEE SOIL BORING LOG
CS-2A	10+45.63	1. 10'	SEE SOIL BORING LOG

1. LIMITS OF SURVEY ARE WITHIN STATE OF DELAWARE RIGHT-OF-WA
CROSS REFERENCE NOTES:

1. REFER TO SIGN STRUCTURE NOTES FOR SIGN STRUCTURE LOCATION.



ADDENDUMS / REVISIONS

SCALE

0 20 40

FEET

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

NEW

NTRACT	BRIDGE NO.	N/A	
407004	2.00	IVA	CONCERN
DUNTY	DESIGNED BY: F	RMB	CONSTRU SIGN STRU
CASTLE	CHECKED BY: [	DEF	oldiv offic

CONSTRUCTION PLAN
IGN STRUCTURE SO1114

 CONSTRUCTION
 ALIGNMENT
 CONTROL

 POINT
 STATION
 OFFSET
 NORTHING
 EASTING

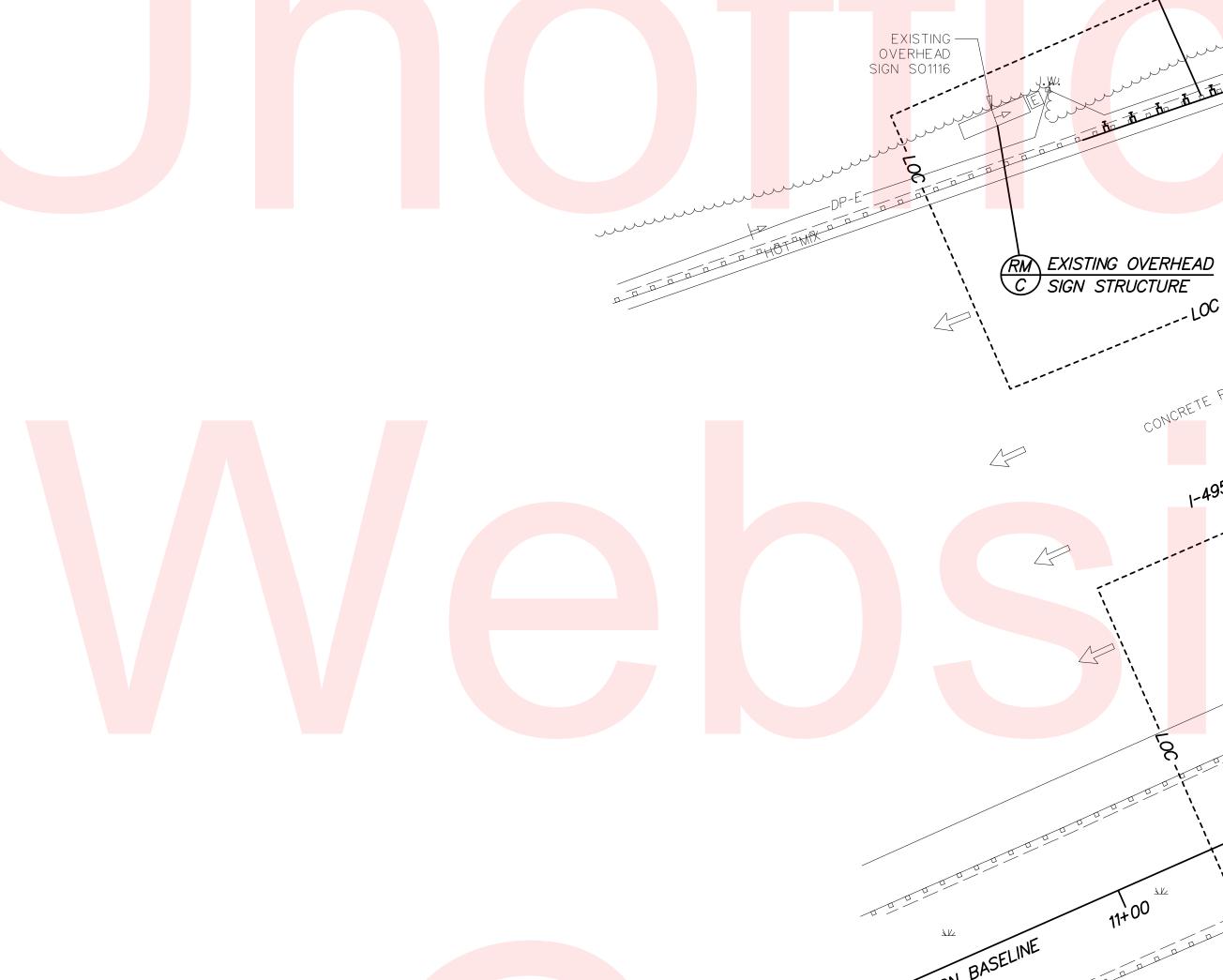
 POB
 10+00.00
 0.00
 639094.0390
 633254.4632

 POE
 12+40.00
 0.00
 639190.8961
 633474.0508

DATUM REFERENCE:

HORIZONTAL - THIS LOCATION IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).

VERTICAL - THIS LOCATION IS REFERENCED TO NAVD 88.



NO. ITEM DESCRIPTION / TYPE BEGIN STA. OFFSET		GUARDRAIL SCHEDULE									
	LENGTH	GIN STA. OFFSET		NO.							
1   STEEL BEAM GUARDRAIL, TYPE 2-27   11+30.06   -77.85'	50.0′	1+30.06 -77.85'		STEEL BEAM GUARDRAIL, TYPE 2-27	1						

		SOIL BORI	NG SCHEDULE
NO.	STATION	OFFSET	DESCRIPTION
CS-5	<i>12+25.35</i>	1.83′	SEE SOIL BORING LOG

TRAVERSE POINT 17

NOTE:

S01116-3

EXIT 4 A

**ЕХІТ 4 В** 

Edgemoor

 $^{1}/_{2}$  MILE

S01116-1

(13)

Gov Printz Blvd 🗷

S01116-2

1. LIMITS OF SURVEY ARE WITHIN STATE OF DELAWARE RIGHT-OF-WAY.

CROSS REFERENCE NOTES:

1. REFER TO SIGN STRUCTURE NOTES FOR SIGN STRUCTURE LOCATION.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE

0 10 20

FEET

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

RM EXISTING OVERHEAD

C SIGN STRUCTURE

— EXISTING OVERHEAD SIGN SO1116

PROPOSED SO1116

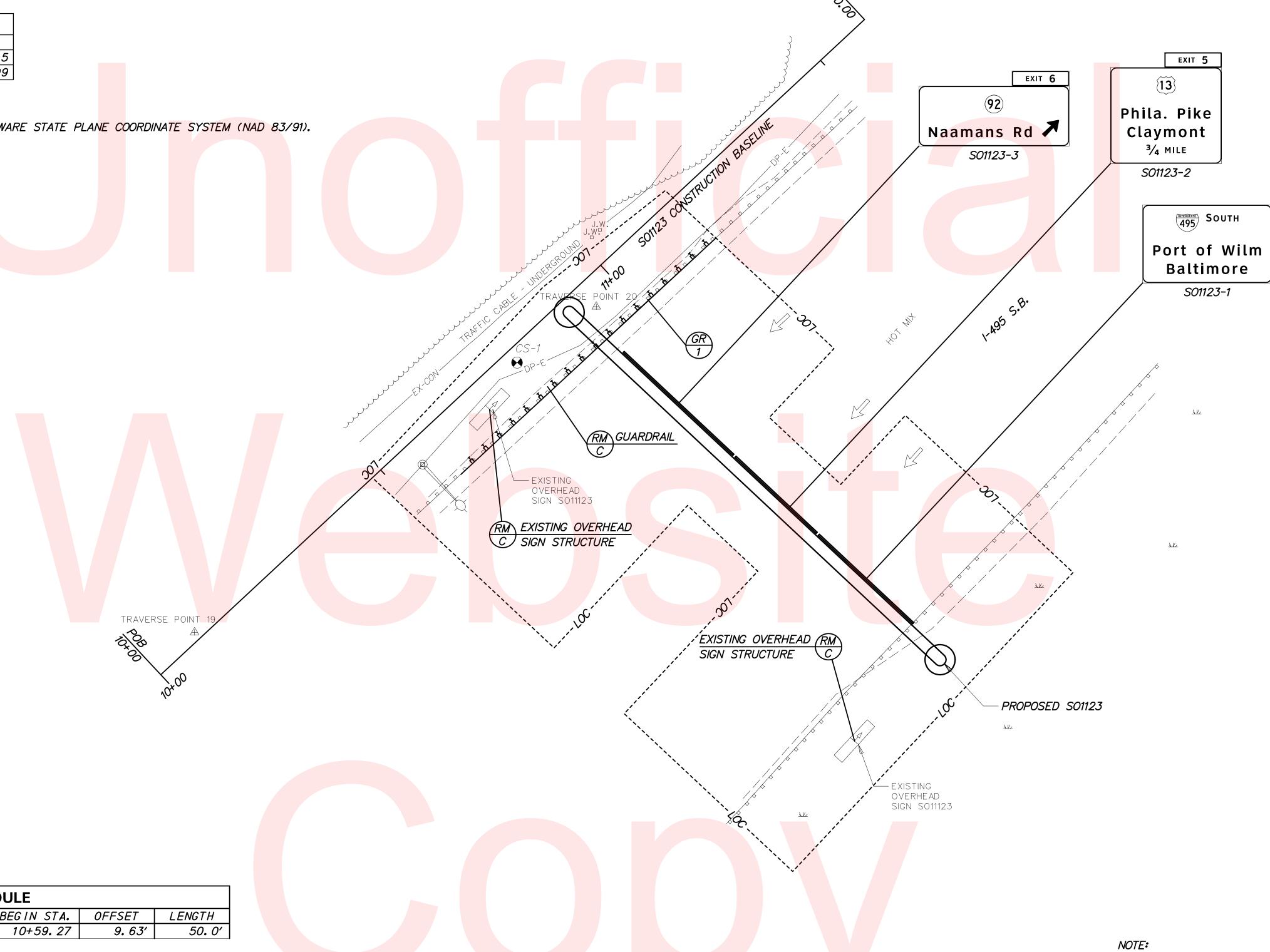
CONTRACT	BRIDGE NO.	N/A	
T201407004	DECIONED DV.		CONSTRUC
COUNTY	DESIGNED BY: I	KMR	SIGN STRU
NEW CASTLE	CHECKED BY: I	DEF	

CONSTRUCTION PLAN SIGN STRUCTURE SO1116

CC	NSTRUC	TION A	LIGNMENT C	CONTROL
PO INT	STATION	0FFSET	NORTHING	EASTING
POB	10+00.00	0.00	<i>661993. 2502</i>	<i>646115.7615</i>
POE	11+60.00	0.00	<i>662102. 3035</i>	<i>6462<mark>32.8</mark>399</i>

HORIZONTAL - THIS LOCATION IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).

VERTICAL - THIS LOCATION IS REFERENCED TO NAVD 88.



	GUARDRAIL SCH	DULE		
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
1	STEEL BEAM GUARDRAIL, TYPE 2-27	10+59.27	9. 63'	<i>50.0′</i>

	9	SOIL BORI	NG SCHEDULE
NO.	STATION	OFFSET	DESCRIPTION
CS-1	<i>10+78.78</i>	<i>2.</i> 38′	SEE SOIL BORING LOG

1. LIMITS OF	SURVEY	ARE	WITHIN	STATE	OF	DELAWARE	RIGHT-OF-V	V.
CROSS REFE	ERENCE N	<i>IOTES</i>	:					

1. REFER TO SIGN STRUCTURE NOTES FOR SIGN STRUCTURE LOCATION.





CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A	
T201407004	DECIONED DV.		CONSTRU
COUNTY	DESIGNED BY: F	KMR	SIGN STR
NEW CASTLE	CHECKED BY: [	DEF	

CONSTRUCTION PLAN SIGN STRUCTURE SO1123

- 1. COLORS: B = BLACK, G = GREEN, O = ORANGE, W = WHITE, Y = YELLOW
- 2. LETTER LOCATIONS ARE PANEL EDGE TO LOWER LEFT CORNER.
- 3. FOR ARROW DETAILS, SEE FHWA PUBLICATION "STANDARD HIGHWAY SIGNS BOOK".
- 4. SIGNS SHALL BE FABRICATED OF EXTRUDED ALUMINUM CHANNEL PANELS WITH TYPE IX SHEETING PER ITEM 749500.
- 5. ALL COPY SHALL BE CLEARVIEW 5-W FONT, UNLESS NOTED OTHERWISE.
- 6. SIGNS SHOWN ON THIS PLAN SHALL BE PAID FOR UNDER ITEM 749500 "SIGN PANEL".
- 7. THE DESIGN OF SIGNS SHALL FOLLOW THE REQUIREMENTS SET FORTH IN THE 2011 DELAWARE MANUAL ON UNIFORM TRAFFIC
- CONTROL DEVICES (MUTCD) AND THE FHWA 2004 EDITION OF "STANDARD HIGHWAY SIGNS" IN CONJUNCTION WITH THE 2012 SUPPLEMENT.

8				SIZE	,	COLO	OR BO	RDER			
PANEL DES I GNAT I ON QUANT I TY		LEGEND	AREA (S. F.)	HEIGHT	HIDIM	TEGEND	BACKGROUND	RADIUS	ARROW	SHIELD	REMARKS
SC1103-1 SC1104-1	BORDER 9'-6" R=3, 25" TH=2" 28. 25" 57. 5" 28. 25"  17" 36" 29" 20"(1) 17" Port of Wilm  BORDER 9'-6" EXIT 2  17. 5" 15"(1) 7. 5" 40. 3" 40. 3" 34. 5" 28. 20"(1) 17" 20"(1) 17" 28. 2"	Y           SERIES         LETTER SPACINGS           10.0         E         X         I         T         I         10.0           Clearview-5-W         28.2         36.8         48.3         53.2         I         I         10.0           Clearview-5-W         75.4         I	23. 8	2' -6"	9′ -6″	W	G 2"	3"			EXTRUDEL ALUMINUM
	BORDER 20" 278" 20"  TH=2" 26'-6"  FONT: (1) ClearviewHwy-5-W	Clearview-5-W       23.4       43.3       65.6       78.6       109.6       130.3       159.9       191.8       203.6       216.0         SYMBOL       ROT       X       Y       WID       HT         M1-5       0.0       141.0       103.0       36.0       36.0         AR-Type A       315.0       263.5       28.3       27.8       43.8	344.5	13' -0"	26' -6'	' W	G 2"	12"	TYPE A @ 45° 34.5″	M1-5 36" x 36"	
SC1206-1 1	17' -0"  15" 36" 36" 27. 6" 24. 2"  BORDER R=12" TH=2" FONT: (1) ClearvlewHwy-5-W	Y   SERIES   LETTER SPACINGS   HT   LEN	195.5	11'-6"	17′ -0′	· W	G 2"	12"	TYPE A		EXTRUDE! ALUMINUI
SC1221-1 1	29' -6"    14"	SERIES   LETTER SPACINGS   HT   LEN     115.0   S   O   U   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   H   N   O   R   T   T   T   T   T   T   T   T   T	354.0	12' -0"	29′ -6′	' W	G 2"	12"	TYPE B @ 0° 25.3" TYPE C 90° R 25.9"	( 2) M1 - 1 36" x 36"	EXTRUDE AL UM I NL
SC1223-1 1	20' -0"    15"   18"   15" (1)   18"   15" (1)   12" (1)   12" (1)   14"   16" (1)   15"   16"	Y   SERIES   LETTER SPACINGS   LEN	230.0	11'-6"	20' -0'	' W	G 2"	12"	TYPE A @ 45° 27.6"	M1 - 1 36" x 36"	EXTRUDE ALUMINU

T:\Dover\Projects\2014\42.500

DELAWARE DEPARTMENT OF TRANSPORTATION

NOT TO SCALE

ADDENDUMS / REVISIONS

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A	
201407004			
COUNTY	DESIGNED BY: (	JM2	GU
EW CASTLE	CHECKED BY: [	DEF	

GUIDE SIGN DETAILS - 1

- 1. COLORS: B = BLACK, G = GREEN, O = ORANGE, W = WHITE, Y = YELLOW
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>				SIZE		COLO	R BOR	DER			
PANEL DES I GNAT I ON QUANT I TY		LEGEND	AREA (S.F.)	HEIGHT	MIDTH	LEGEND	UNIOUT HT	RADIUS	ARROW	OT31HS	REMARKS
	BORDER R=3. 25" TH=2"  30" 54" 30"  17"  17"  36"  13)  17"  36"	Y           SERIES           10.0         E         X         I         T           Clearview-5-W         30.0         38.6         50.0         55.0           7.5         1         15.0           Clearview-5-W         77.2         6.8	23. 8	2' -6"	9' -6"	W C	G 2"	3"			
S01107-1 1	36" 29" 20"(1) 17" 20"(1) 17" 20"(1) 17" 11" 12"(1) 12"(1) EXIT   ◆ ONLY  36" 29" 156" 120"(1) 17" 17" 17" 17" 17" 120"(1) 17" 36" 22" 36"	90.0 W i I m i n g t o n  Clearview-5-W 19.1 51.0 62.8 75.2 105.0 116.9 137.6 157.7 172.8 195.0  53.0 D o v e r  Clearview-5-W 67.7 90.0 109.9 129.5 151.1  13.0 E X I T O N L Y  Clearview-5-W 42.5 52.8 66.5 72.5 135.5 151.0 165.6 175.0	247.0	13' -0"	19' -0"	W C	G 2"	12"		M1-4 36" x 36"	EXTRUDED ALUMINUM
	BORDER 19.1" 189.8" 19.1"  R=12" TH=2" 19'-0"  FONT: (1) ClearviewHwy-5-W	SYMBOL         ROT         X         Y         WID         HT           M1-4         0.0         96.0         139.0         36.0         36.0           AR-DOWN         0.0         91.5         8.0         32.0         22.0	57.0	3' -0"	19' -0"	В	2"		DOWN ARROW 22"		
S01107-2 1		SIGN DETAILS TO BE DETERMINED BY DELDOT TRAFFIC									
	4' -0"	Y SERIES         LETTER SPACINGS         HT LEN           70.0         T         O         8.0									
S01107-3 1	TO 40 EXIT  8"(1) 24"  8" 8"(1)  6" 12"(1)	Clearview-5-W   16.3   24.2	28. 0	7' -0"	4' -0"	W	G 2"	6"		M1-4 24" x 24"	ALUMINUM INSTALL UPRIGHT
	BORDER 11" 26" 11" R=6" TH=2"  FONT: (1) ClearviewHwy-5-W	SYMBOL         ROT         X         Y         WID         HT           M1-4         0.0         12.3         40.0         24.0         24.0									
	BORDER 9' -6" R=3. 25"	Y SERIES         LETTER SPACINGS         HT LEN           10.0         E X I T         10.0	23. 8	2' -6"	9′ -6″	W	G 2"	3"			
S01109-1 1	17. 5" 10"(1) 17. 5" 17	Clearview-5-W         28.2         36.8         48.2         53.2         32.2           7.5         3         15.0           Clearview-5-W         75.4         10.5           52.5         T         W         e         I         f         t         N         E         10.5									EXTRUDED ALUMINUM
	BORDER 18.95" 172.1" 18.95" R=12" 17'-6"  FONT: (1) ClearvlewHwy-5-W	17.5 3/4 18.0 18.0	131.3	7' -6"	17' -6"	W	G 2"	12"			

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE CANT

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A	
T004407004	2111202 110	IVA	
T201407004	DECIONED DV.	IMC	CHIDE CIC
COUNTY	DESIGNED BY: (	GUIDE SIG	
NEW CASTLE	CHECKED BY: [	DEF	

GUIDE SIGN DETAILS - 2

1. COLORS: B = BLACK, G = GREEN, O = ORANGE, W = WHITE, Y = YELLOW

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CONTROL DEVICES (MUTCD) AND THE FHWA 2004 EDITION OF "STANDARD HIGHWAY SIGNS" IN CONJUNCTION WITH THE 2012 SUPPLEMENT.

S						SIZE		COLOR B	DRDER		
PANEL DESIGNATIO		LEGEND			AREA (S. F.)	НЕІСНТ	WIDTH	LEGEND BACKGROUND WIDTH	77	ARROW	REMARK
01109-2 1	BORDER R=3. 25" TH=2" 28. 25" 57. 5" 28. 25"  18" 10" (1) 10" (1) 10" (1) 28" 28" 28" 20" (1) Terminal Ave 20" (1)	Y SERIES  10.0 E X I T Clearview-5-W 28.2 36.8 48.3 53.2  7.5 2 Clearview-5-W 75.4  90.0 T e r m i n a Clearview-5-W 24.0 43.5 65.0 80.0 109.9 121.7 142.0 163  53.0 P o r t O f	LETTER SPACINGS	HT LEN 10.0 32.2 15.0 10.3 20.0 222.0	23. 8	2' -6"	9' -6"	W G 2	′ 3″		EXTRUL
7709-2 7	Port of Wilm.    17"	53.0       P       o       r       t       O       f         Clearview-5-W       21.6       41.5       63.8       76.8       107.8       128.5         18.0       1/2       Image: Clearview-5-W       95.4       Image: Clearview-5-W       133.1       149.0       156.1       167.0         SYMBOL       ROT       X       Y       WID       HT         M1-5       0.0       117.0       138.0       36.0       36.0	158.1 190.0 201.8 214.2 243.4	20.0 226.8 18.0 25.7 12.0 41.5	360.0	16′ -0″	22' -6"	W G 2	12"	M1-5 36" x 36 <sup>-</sup>	ALUMI
01112-1 2	21' - 0"    17"	Y SERIES  154.0 N O R T H Clearview-5-W 118.9 135.1 150.6 162.5 174.8  87.0 C h e s t e r Clearview-5-W 63.0 85.4 106.0 126.0 143.2 158.2 179.8  50.0 P h i I a d e Clearview-5-W 21.9 42.6 63.7 75.5 86.6 107.1 128.4 149  SYMBOL ROT X Y WID HT M1-1 0.0 67.9 133.0 36.0 36.0 ARDOWN 360.0 38.0 8.0 32.1 22.0 ARDOWN 360.0 182.0 8.0 32.1 22.0		HT LEN 15.0/12.0 65.1 20.0 125.9 20.0 208.3	325. 5	15′ -6″	21' -0"	W G 2	$\begin{pmatrix} & 12'' & A \end{pmatrix}$	(2) DOWN M1-1 RROW 36" x 36' 22"	EXTRUI " ALUMII
1112-2 1	BORDER R=3. 25"	Y         SERIES         10.0       E       X       I       T       I<	9.9 162.3 183.6 204.7 215.3	HT LEN 10.0 32.2 15.0 10.3 20.0 208.3 20.0 65.5 20.0 154.2	23. 8 336. 0			W G 2			EXTRU " ALUMI
	BORDER R=12" TH=2"  FONT: (1) ClearviewHwy-5-W	13.0     E     X     I     T     O     N     I       Clearview-5-W     54.5     64.8     78.5     84.5     147.5     163.0     17       SYMBOL     ROT     X     Y     WID     HT       M1-4     0.0     108.0     174.0     36.0     36.0       ARDOWN     0.0     103.5     8.0     32.0     22.0		12.0 38.6 50.0	<i>63.</i> 0	3′ -0″	21' -0"	B Y 2	'   12"   A	00WN RROW 22"	
	BORDER 9'-6" R=3. 25" 28. 25" 57. 5" 28. 25" TH=2" 28. 25" 57. 5" 28. 25"  18"  18"  18"	Y SERIES  10.0 E X I T Clearview-5-W 28.2 36.8 48.2 53.2  7.5 5 Clearview-5-W 75.4	LETTER SPACINGS	HT LEN 10.0 32.2 15.0 10.3	23.8	2′ -6″	9' -6"	W G 2	′ 3″		
1114-2 1	36" 27" Philadelphia Pike 20"(1) 17" 20"(1) 17" 20"(1) 17" 20"(1) 17" 20"(1) 18" PIKE Claymont 20"(1) 17" 20"(1) 20" 11" 20"(1) 20" 4.6" 24.8" 36" 36" 24.8" 36" 21.85" 208.3" 21.85"	Clearview-5-W       75.4         127.0       P       h       i       I       a       d       e         Clearview-5-W       21.9       42.6       63.7       75.5       86.6       107.1       128.4       149.4         93.0       P       i       k       e       c <t< td=""><td>9.9 162.3 183.6 204.7 215.3</td><td>20.0 208.3 20.0 65.5 20.0 154.2 12.0 38.6 50.0</td><td>336.0</td><td>16′ -0″</td><td>21' -0"</td><td>W G 2</td><td></td><td> M1-4 36" x 36<sup>-</sup></td><td>EXTRUI " ALUMII</td></t<>	9.9 162.3 183.6 204.7 215.3	20.0 208.3 20.0 65.5 20.0 154.2 12.0 38.6 50.0	336.0	16′ -0″	21' -0"	W G 2		M1-4 36" x 36 <sup>-</sup>	EXTRUI " ALUMII
	BORDER 21.85" 208.3" 21.85" R=12" 21'-0"  TH=2" 21'-0"  FONT: (1) ClearviewHwy-5-W	SYMBOL         ROT         X         Y         WID         HT           M1–4         0.0         108.0         174.0         36.0         36.0           AR–TYPE A         315.0         107.0         6.6         20.0         31.5			63.0	3' -0"	21' -0"	B Y 2	'   1 <i>2"</i>   @		

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DELAWARE DEPARTMENT OF TRANSPORTATION

NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT
BRIDGE NO.

T201407004

COUNTY

DESIGNED BY: JWS

CHECKED BY: DEF

CHECKED BY: DEF

GUIDE SIGN DETAILS – 3

### NOTES:

- 1. COLORS: B = BLACK, G = GREEN, O = ORANGE, W = WHITE, Y = YELLOW
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× .				SIZE	_	COLO	R BOF	DER			
PANEL DES I GNAT I ON QUANT I TY		LEGEND	AREA (S.F.)	НЕ І СНТ	WIDTH	LEGEND	1701/	RADIUS	ARROW	SHIELD	REMARKS
501116-1 1	BORDER R=3.25" TH=2" 26.3" 85.4" 26.3" 10" 10" EXIT 4 B 7.5" 10" 10" 20" 20" 20" (1) 24"	Y         LETTER SPACINGS         HT           10.0         E         X         I         T         10.0         10.0         Clearview-5-W         26.3         34.9         46.3         51.3         32.2         32.2         33.2         35.0         35.0         35.0         35.0         35.0         35.0         35.0         35.0         36.0 <td>28.8</td> <td>2' -6"</td> <td>11' -6'</td> <td>' W C</td> <td>3 2"</td> <td>3"</td> <td></td> <td></td> <td><i>EXTRUDED</i></td>	28.8	2' -6"	11' -6'	' W C	3 2"	3"			<i>EXTRUDED</i>
SO1116-1 1    18"(1)	56.0       E       d       g       e       m       o       o       r         Clearview-5-W       22.4       41.0       62.3       83.7       105.2       134.7       156.1       178.4         17.0       12       Image: color of the color of t	140.0	8′ -0″	17′ -6′	' W C	S 2"	12"			ALUMINUM	
501116-2 1	BORDER R=3. 25" TH=2" 24. 95" 88. 1" 24. 95" 10" (1) EXIT 4 A 7.5" 15" (1) 7.5" 67. 5"	Y           SERIES         LETTER SPACINGS         HT           10.0         E         X         I         T         10.0         10.0         Clearview-5-W         24.9         33.5         45.0         49.9         - </td <td>28.8</td> <td>2' -6"</td> <td>11′ -6′</td> <td>' W C</td> <td>5 2"</td> <td>3"</td> <td></td> <td></td> <td>EXTRUDED ALUMINUM</td>	28.8	2' -6"	11′ -6′	' W C	5 2"	3"			EXTRUDED ALUMINUM
BORDER R=-12" TH=2"  GOV Printz Blvd  34. 5"  30' -0"  FONT: (1) ClearviewHwy-5-W	BORDER 20" 320" 20" TH=2" 30' -0"	18.0 G o v P r i n t z B I v d 20.0 Clearview-5-W 20.0 43.6 63.4 100.1 120.8 135.4 147.2 166.7 181.2 215.8 237.8 247.7 267.4 261.9  SYMBOL ROT X Y WID HT M1-4 0.0 162.0 66.0 36.0 36.0 AR-Type A 315.0 305.6 18.0 27.8 43.8	300.0 10'	10' -0"	30′ -0′	' W C	5 2"	12" @	150 1	M1-4 "x36"	
S01116-3 1	BORDER R=7" TH=2" FONT: (1) ClearviewHwy-5-W	SERIES   LETTER SPACINGS   LEN   70.0 N O R T H   8.0   8.0   Clearview-5-W 6.0   15.4   25.7   33.7   41.9   42.1   24.0 E X I T   8.0   6.0   4.1   21.0   30.1   34.1   8.0   Clearview-5-W   14.1   21.0   30.1   34.1   25.8   6.0   4 A   A   A   Clearview-5-W   15.3   27.4   23.4     SYMBOL   ROT   X   Y   WID   HT   M1-5   0.0   15.0   40.0   24	31.5	7' -0"	4' -6"	W	5 2"	7"		M1-5 "x24"	ALUMINUM INSTALL ON UPRIGHT

DELAWARE
DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT	BRIDGE NO.	N⁄A		
201407004 COUNTY	DESIGNED BY:	JWS	GUIDE SIGN	DETAILS - 4
W CASTLE	CHECKED BY: [	DEF		

S - 4 SHEET NO.

19

TOTAL SHTS.

83

NOT TO SCALE

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2				SIZE	_	COLO	R BOF	RDER			
PANEL DES I GNAT 10N QUANT 1TY		LEGEND	AREA (S.F.)	HEIGHT	WIDTH	LEGEND	TIDI	RADIUS	ARROW	SHIELD	REMARKS
S01123-1 1	21' - 6"    18    36"   495   SOUTH   18"   12" (1)	Y   SERIES   LETTER SPACINGS   HT   LEN   LEN	279.5	13' -0"	21' -6"	W	S 2"	12"			EXTRUDED ALUMINUM
S01123-2 1	BORDER 87.3.25" 28.25" 57.5" 28.25" 15" (1) 7.5"	Y         LETTER SPACINGS         HT           10.0         E         X         I         T         10.0	23. 8	2' -6"	9′ -6″	W	G 2"	3"			EXTRUDED
	Claymont    17"	Clearview-5-W       33.9       56.2       67.3       86.2       107.0       136.5       158.8       178.2         18.0       3/4       18.0	296.0	16' -0"	18′ -6″	W	S 2"	12"		M1-4 36" x 36"	ALUMINUM
S01123-3 1	BORDER 8-3.25" 27.95" 58.1" 27.95"  TH=2" 27.95" 58.1" 27.95"  18" 10" (1) EXIT 6  18" 36"  28" 20" (1) 18" 34.5"  18" 34.5"	Y           SERIES         LETTER SPACINGS           10.0         E         X         I         T         10.0	23. 8	2' -6"	9′ -6″	W	S 2"	3"			EXTRUDED ALUMINUM
	### ##################################	SYMBOL         ROT         X         Y         WID         HT           M1-5         0.0         132.0         66.0         36.0         36.0           AR-Type A         315.0         245.5         18.0         27.8         43.8	250.0	10' -0"	25′ -0″	W	S 2"	1	YPE A 2 45° 34.5″	M1-5 36" x 36"	

DELAWARE
DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT	BRIDGE NO.	N/A		(
01407004	DINIDOL NO.	IVA		
COUNTY	DESIGNED BY: (	JWS	GUIDE SIGN DETAILS - 5	Ţ
W CASTLE	CHECKED BY: [	DEF		

### SIGN STRUCTURE NOTES

### DESIGN SPECIFICATIONS

- 1. AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS", 2013, 6TH EDITION.
- 2. AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES", 2002, 17TH EDITION.
- 3. DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AUGUST 2001, INCLUDING ALL SUPPLEMENTALS AND THE CONTRACT SPECIAL PROVISIONS.
- 4. AWS D1.1 STRUCTURAL WELDING CODE.

### DESIGN LOADS

- 1. THE DESIGN WIND SPEED IS 90 MPH (3-SECOND G<mark>UST W</mark>IND SPEED), BASED ON A 50-YEAR MEAN RECURRENCE INTERVAL.
- 2. THE DESIGN ICE LOAD IS 3 PSF.
- 3. THE DESIGN SIGN PANEL WEIGHT IS 3 PSF.
- 4. THE DESIGN SIGN PANEL AREA INCLUDES AN ADDITI<mark>ONAL 15% INCREASE IN AREA OVER</mark> THE ACTUAL SIGN PANEL AREA EXCEPT FOR SC1221.
- 5. FATIGUE DESIGN FOR CANTILEVER SIGN STRUCTURE<mark>S IS B</mark>ASED ON FATIGUE CATE<mark>GORY</mark> I FOR GALLOPING, NATURAL WINDS GUSTS, AND TRUCK-INDUCED GUSTS.

### MATERIALS

- 1. ALL STRUCTURAL PIPE FOR MASTS AND MAST ARMS SHALL CONFORM TO ASTM A53, GRADE B.
- 2. ALL STEEL PLATES, SHAPES, AND BACKING RINGS SHALL CONFORM TO AASHTO M270, GRADE 36 OR BETTER.
- 3. ALL STEEL MEMBERS GREATER THAN OR EQUAL TO 1/2" THICK, SHALL MEET THE CHARPY V-NOTCH REQUIREMENTS FOR ZONE 2, NON-FRACTURE CRITICAL.
- 4. THE STRUCTURE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111.
- 5. ALL CONNECTION BOLTS (INCLUDING SPLICE BOLTS AND ATTACHMENT BOLTS) SHALL CONFORM TO ASTM A325, WASHERS SHALL CONFORM TO ASTM F436, AND NUTS SHALL CONFORM TO ASTM A563, GRADE DH, OR ASTM A194, GRADE 2H.
- 6. U-BOLTS SHALL CONFORM TO ASTM A449.
- 7. ANCHOR BOLTS SHALL CONFORM TO AASHTO M314, GRADE 55. ANCHOR NUTS SHALL CONFORM TO ASTM A563, GRADE DH, OR ASTM A194, GRADE 2H. WASHERS SHALL CONFORM TO ASTM F436.
- 8. ALL HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M232.
- 9. PORTLAND CEMENT CONCRETE FOR DRILLED SHAFTS AND SIDEWALKS SHALL BE DELDOT CLASS B, (f'c = 3,000 PSI). PORTLAND CEMENT CONCRETE FOR PEDESTALS SHALL BE DELDOT CLASS A, (f'c = 4,500 PSI).
- 10. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
- 11. REINFORCING STEEL SHALL CONFORM TO AASHTO M31, GRADE 60 AND BE UNCOATED UNLESS OTHERWISE NOTED.
- 12. ALL REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE NOTED.

- 1. FORM MASTS FOR SIGN STRUCTURES TO THE RADII SHOWN ON THE PLANS IN ACCORDANCE WITH THE TUBE AND PIPE ASSOCIATION INTERNATIONAL RECOMMENDED STANDARDS FOR INDUCTION BENDING OF PIPE AND TUBE (TPA-IBS-98).
- 2. STEEL TEMPLATES SHALL BE USED TO SET ANCHOR BOLTS PLUMB WHEN POURING THE
- FOUNDATION. BASE PLATES SHALL BE IN FULL CONTACT WITH ALL FLAT WASHERS.
- 4. ALL ANCHOR BOLTS SHALL BE TIGHTENED USING TURN OF NUT METHOD (1/6 TURN AFTER SNUG
- 5. THREADS OF ANCHOR BOLTS SHALL BE BURRED OFF AT FACE OF NUT AFTER COLUMN IS
- 6. LOCK WASHERS WITH FLAT WASHERS SHALL ONLY BE USED FOR "U" BOLT CONNECTIONS, AND NUT SHALL BE TURNED UNTIL THE LOCK WASHER IS FLAT.
- MAST AND MAST ARM O.D. DIMENSIONS ARE ACTUAL.
- 8. FIELD VERIFY ALL DIMENSIONS BEFORE ORDERING ANY MATERIALS.
- 9. FABRICATE ALL SIGN STRUCTURES INTO THE LARGEST PRACTICAL SECTIONS PRIOR TO GALVANIZING. SUBMIT SPLICE LOCATIONS TO THE ENGINEER FOR APPROVAL. DO NOT COMMENCE FABRICATION UNTIL SUCH SPLICE LOCATIONS ARE APPROVED.
- 10. DO NOT USE GROUT BETWEEN BASE PLATE AND CONCRETE PEDESTAL.
- 11. SLOPE TOP OF PEDESTAL 4% FROM CENTER TO NEAR EDGES FOR DRAINAGE.
- 12. PROVIDE DOUBLE NUTS AND WASHERS FOR EACH ANCHOR BOLT.
- 13. PERMANENT CAMBER EQUAL TO L/1000 HAS BEEN PROVIDED IN ADDITION TO THE DEAD LOAD CAMBER, WHERE L IS EQUAL TO THE SIGN STRUCTURE SPAN LENGTH.

		SIGN STRUC	TURE LOCA	TIONS		
SIGN STRUCTURE NO.	STRUCTURE TYPE	BASEL INE	STATION "A"	OFFSET "A"	STATION "B"	OFFSET "B"
SC1103	CANT ILEVER	SC1103 & S01107	12+14.29	70.45′ RT.	-	-
SC1104	CANT ILEVER	S01104	<i>11+23.69</i>	65.10′ LT.	-	-
SC1206	CANT ILEVER	SC1206	1+21.59	21.74 RT.	-	-
SC1221	CANT ILEVER	SC1221	1+47. 36	18.87 RT.	-	-
SC1223	CANT ILEVER	SC1223	<i>0+79.55</i>	18.73 LT.	-	-
<i>S01107</i>	OVERHEAD	SC1103 & S01107	<i>12+15. 43</i>	84. 20′ LT.	12+14.29	0. 24′ RT.
501109	OVER <mark>HEAD</mark>	S01109	<i>360+17. 37</i>	57.50′ LT.	<i>360+17.37</i>	55.50′ RT.
501112	OVER <mark>HEAD</mark>	S01112	11+24. 99	9.68′ RT.	11+24.91	82.93′ RT.
501114	OVERHEAD	S01114	10+26. <mark>45</mark>	13. 27′ RT.	10+22.66	90.69′ RT.
501116	OVERHEAD	S01116	11+61. <mark>84</mark>	82.55′ LT.	11+62.08	1.47′ LT.
501123	OVER <mark>HEAD</mark>	501123	10+90. <mark>83</mark>	2.18′ RT.	10+96.57	86.76′ RT.



**DELAWARE** DEPARTMENT OF TRANSPORTATION ADDENDUMS / REVISIONS

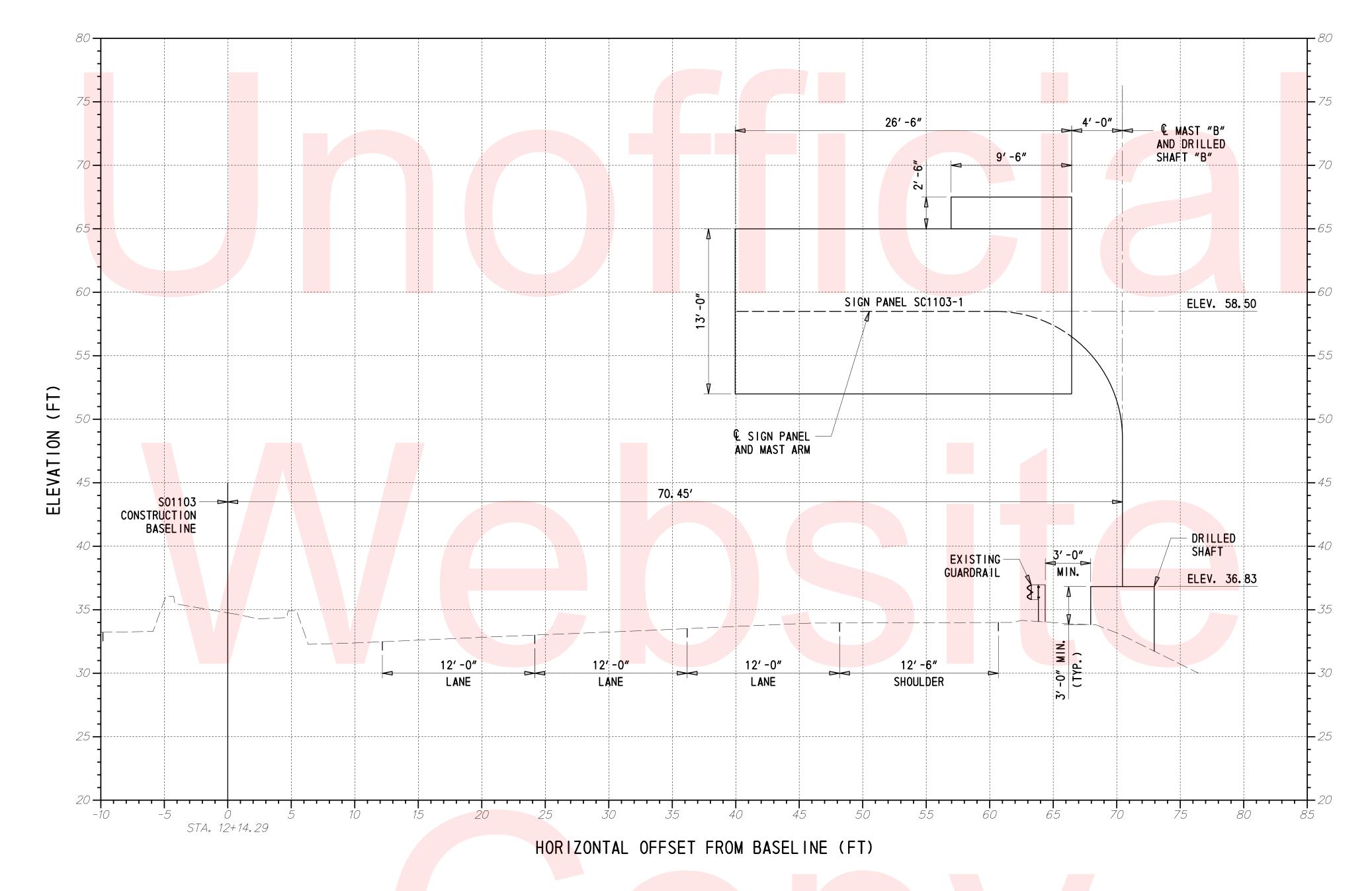
CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT N/A BRIDGE NO. T201407004 DESIGNED BY: PM COUNTY NEW CASTLE CHECKED BY: DEF

SIGN STRUCTURE NOTES

TAL SHTS

NOT TO SCALE



STA. 12+14.29
S01107 CONSTRUCTION BASELINE (LOOKING STATIONS AHEAD)

NOTE:

1. CROSS SECTIONS ARE TAKEN NORMAL TO ROADWAY.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

DELAWARE STRUCTURES, OPEN-END, FY16-18

CONTRACT BRIDGE NO. N/A

T201407004

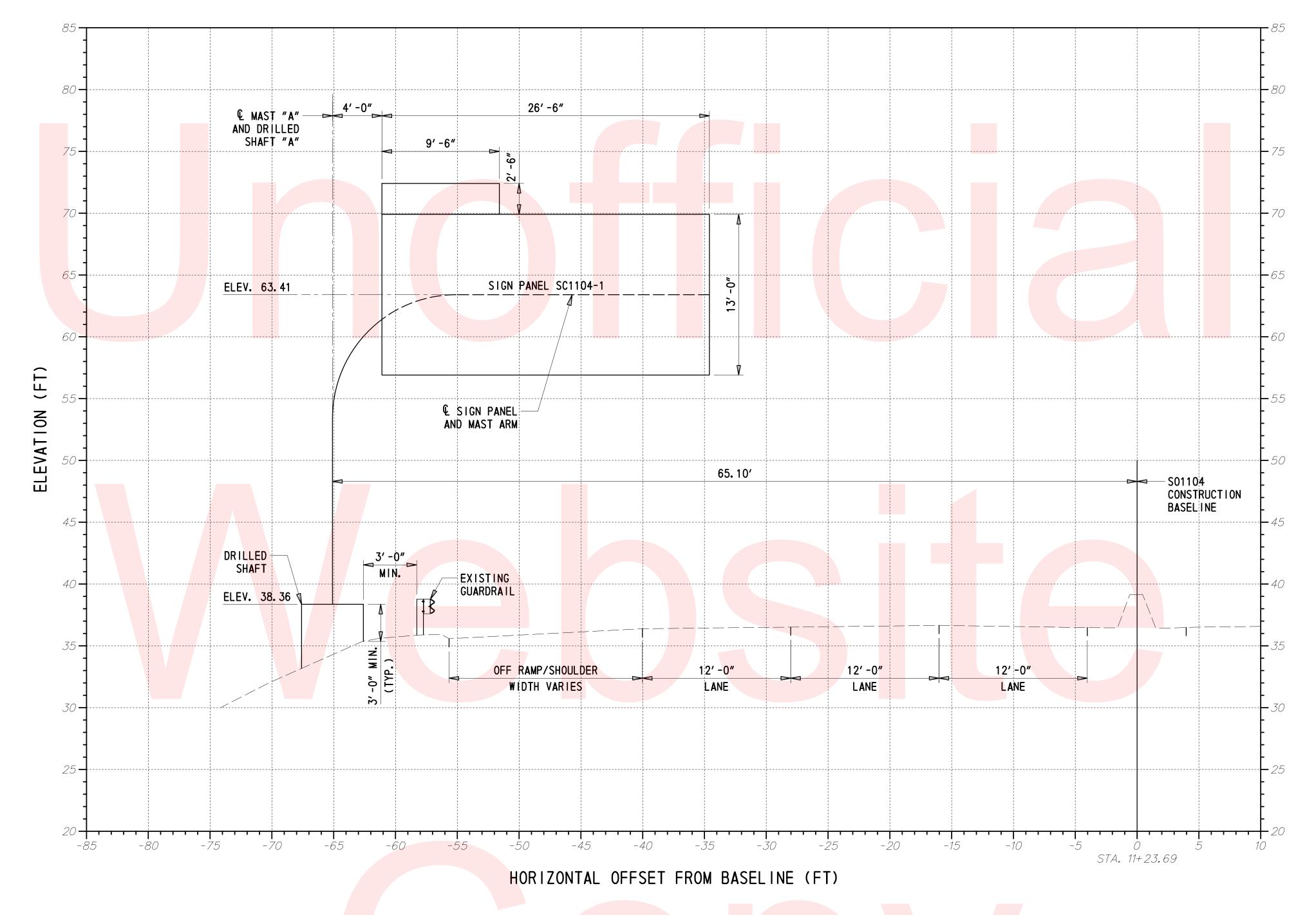
DESIGNED BY: JWS

SHEET NO.

22

TOTAL SHTS.

83



STA. 11+23.69
S01108 CONSTRUCTION BASELINE (LOOKING STATIONS AHEAD)

NOTE:

1. CROSS SECTIONS ARE TAKEN NORMAL TO ROADWAY.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

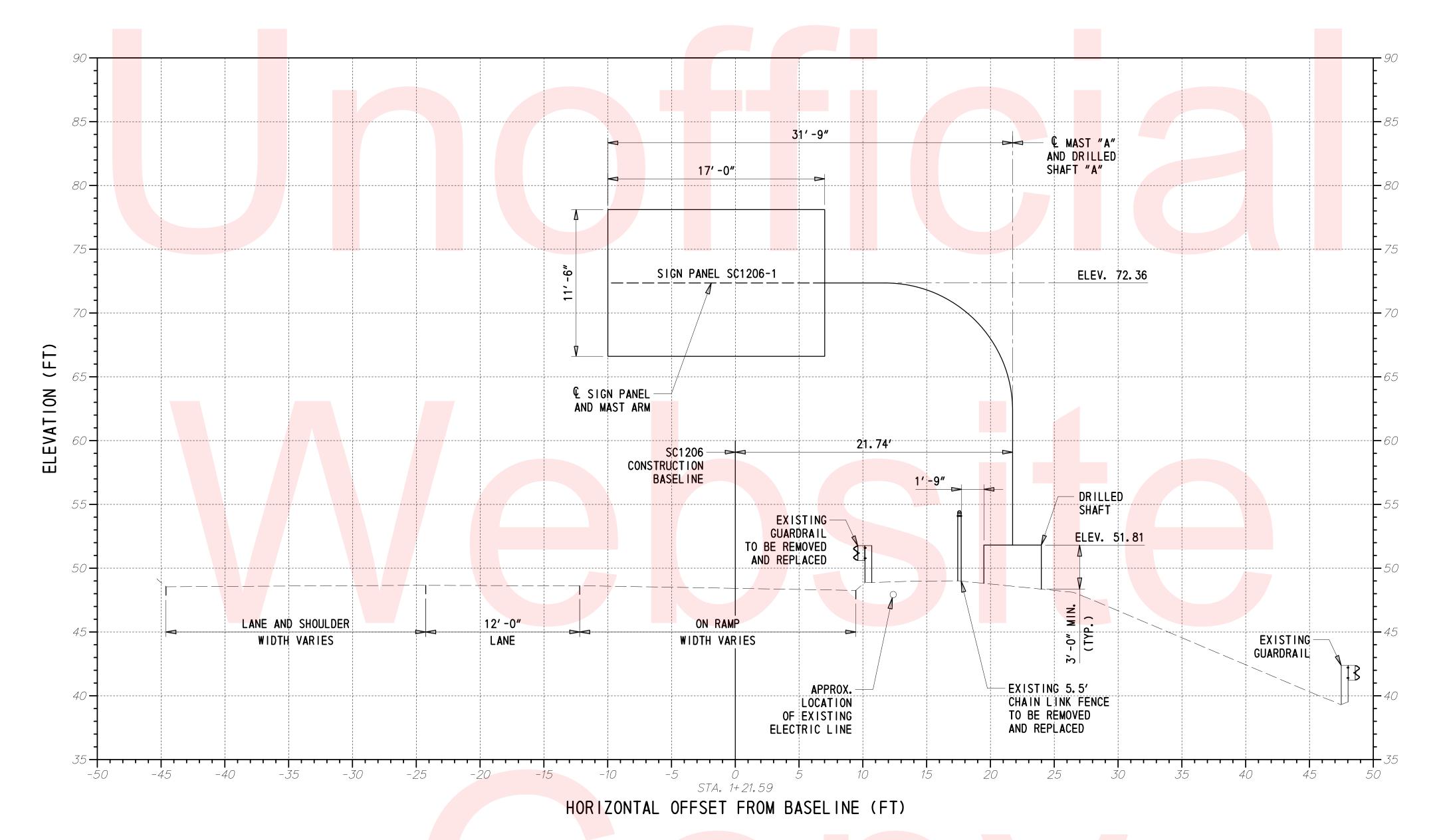
SHEET NO.

CONTRACT
DESIGNED BY: JWS

CROSS SECTION
SIGN STRUCTURE SC1104

TOTAL SHIS.

83



STA. 1+21.59
SC1206 CONSTRUCTION BASELINE (LOOKING STATIONS AHEAD)

NOTE:

1. CROSS SECTIONS ARE TAKEN NORMAL TO ROADWAY.

DELAWARE DEPARTMENT OF TRANSPORTATION

| ADDENDUMS / REVISIONS | SCALE | SOUTH | STRUCTURES, OPEN-END, FY16-18 | SHEET NO. | S

STA. 1+47.90
SC1221 CONSTRUCTION BASELINE (LOOKING STATIONS AHEAD)

NOTE:

1. CROSS SECTIONS ARE TAKEN NORMAL TO ROADWAY.

DELAWARE PARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

DELAWARE STRUCTURES, OPEN-END, FY16-18

TEET

CANTILEVER AND OVERHEAD SIGN STRUCTURE SOPEN-END, FY16-18

CONTRACT
BRIDGE NO. N/A

CROSS SECTION SIGN STRUCTURE SC1221

TOTAL SHT

NEW CASTLE
CHECKED BY: DEF

NEW CASTLE
CHECKED BY: DEF

TOTAL SHT

NEW CASTLE
CHECKED BY: DEF

TOTAL SHT

REPLICATION OF TRANSPORTATION

SHEET NO. N/A

CROSS SECTION SIGN STRUCTURE SC1221

TOTAL SHT

REPLICATION OF TRANSPORTATION

TOTAL SHT

REPLICATION OF TRANSPORTATION

TOTAL SHT

NEW CASTLE
CHECKED BY: DEF

TOTAL SHT

REPLICATION OF TRANSPORTATION

TOTAL SHT

TOTAL SHT

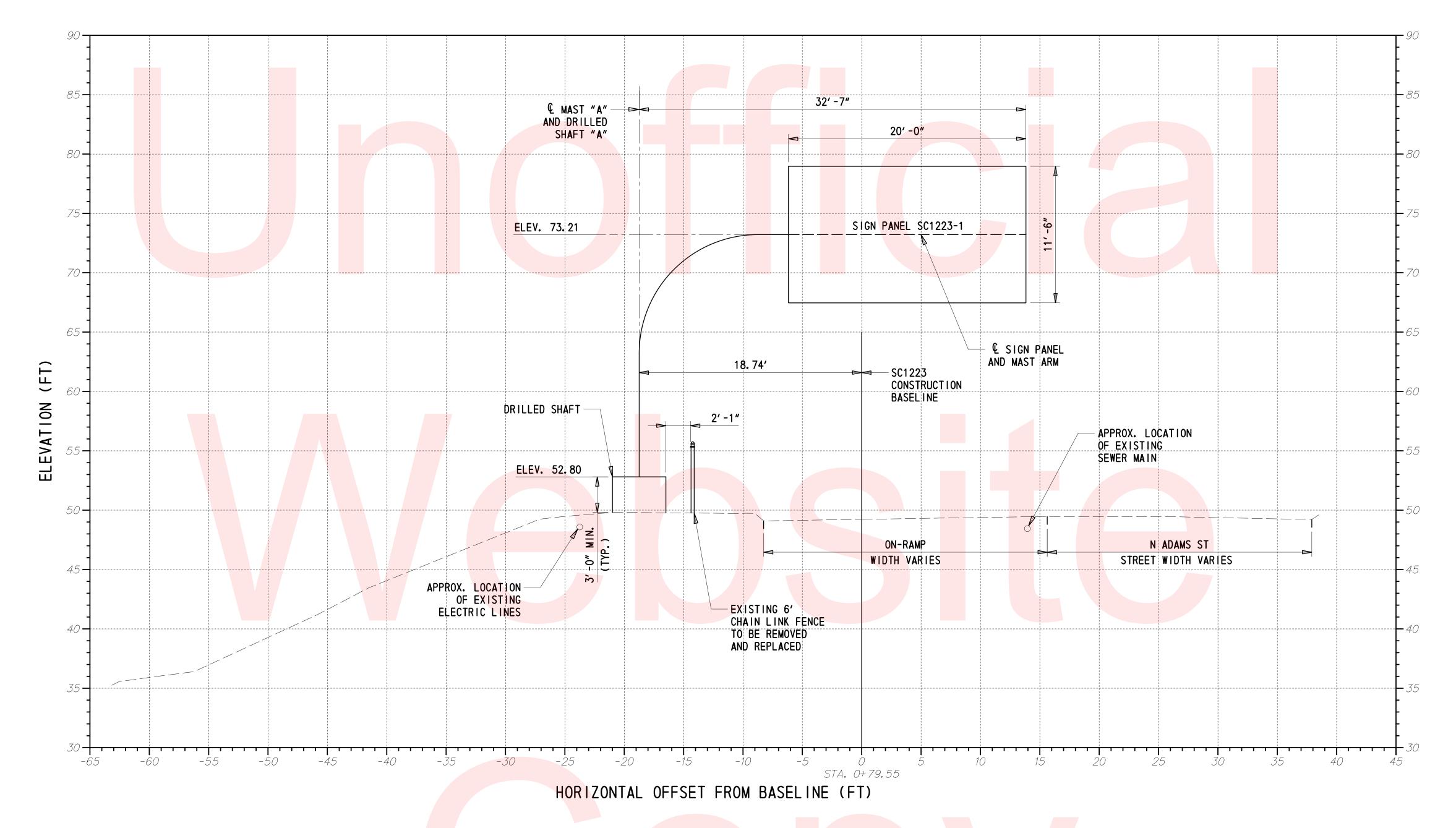
REPLICATION OF TRANSPORTATION

TOTAL SHT

REPLICATION OF TRANSPORTATION

TOTAL SHT

TOT



STA. 0+79.55
SC1223 CONSTRUCTION BASELINE (LOOKING STATIONS AHEAD)

NOTE:

1. CROSS SECTIONS ARE TAKEN NORMAL TO ROADWAY.

DELAWARE PARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

DELAWARE STRUCTURES, OPEN-END, FY16-18

CONTRACT BRIDGE NO. N/A

T201407004

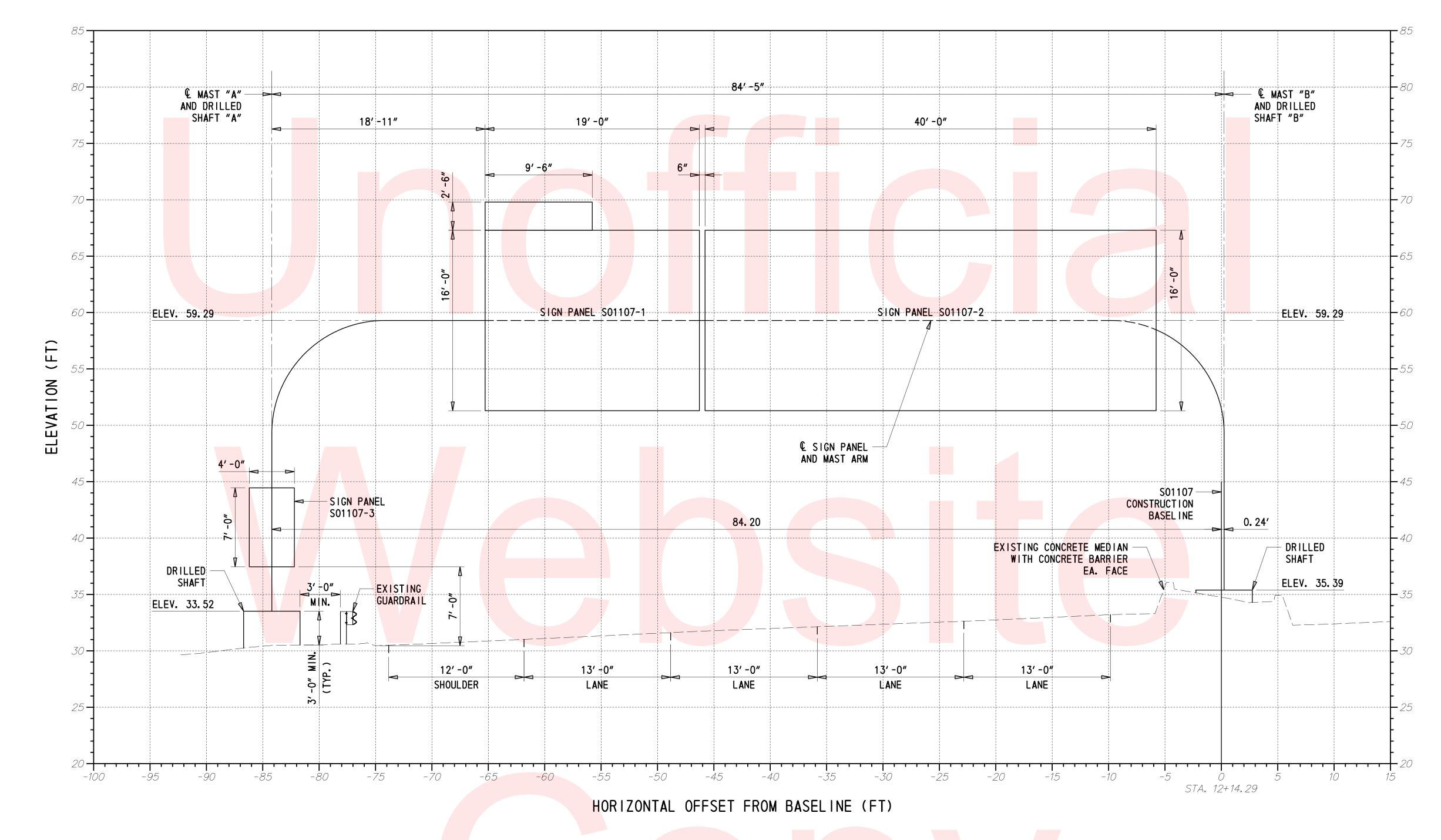
DESIGNED BY: JWS

SHEET NO.

26

TOTAL SHTS.

83



STA. 12+14.29
S01107 CONSTRUCTION BASELINE (LOOKING STATIONS AHEAD)

NOTE:

1. CROSS SECTIONS ARE TAKEN NORMAL TO ROADWAY.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

DELAWARE STRUCTURES, OPEN-END, FY16-18

CANTILEVER AND OVERHEAD SIGN STRUCTURE SO1107

STRUCTURES, OPEN-END, FY16-18

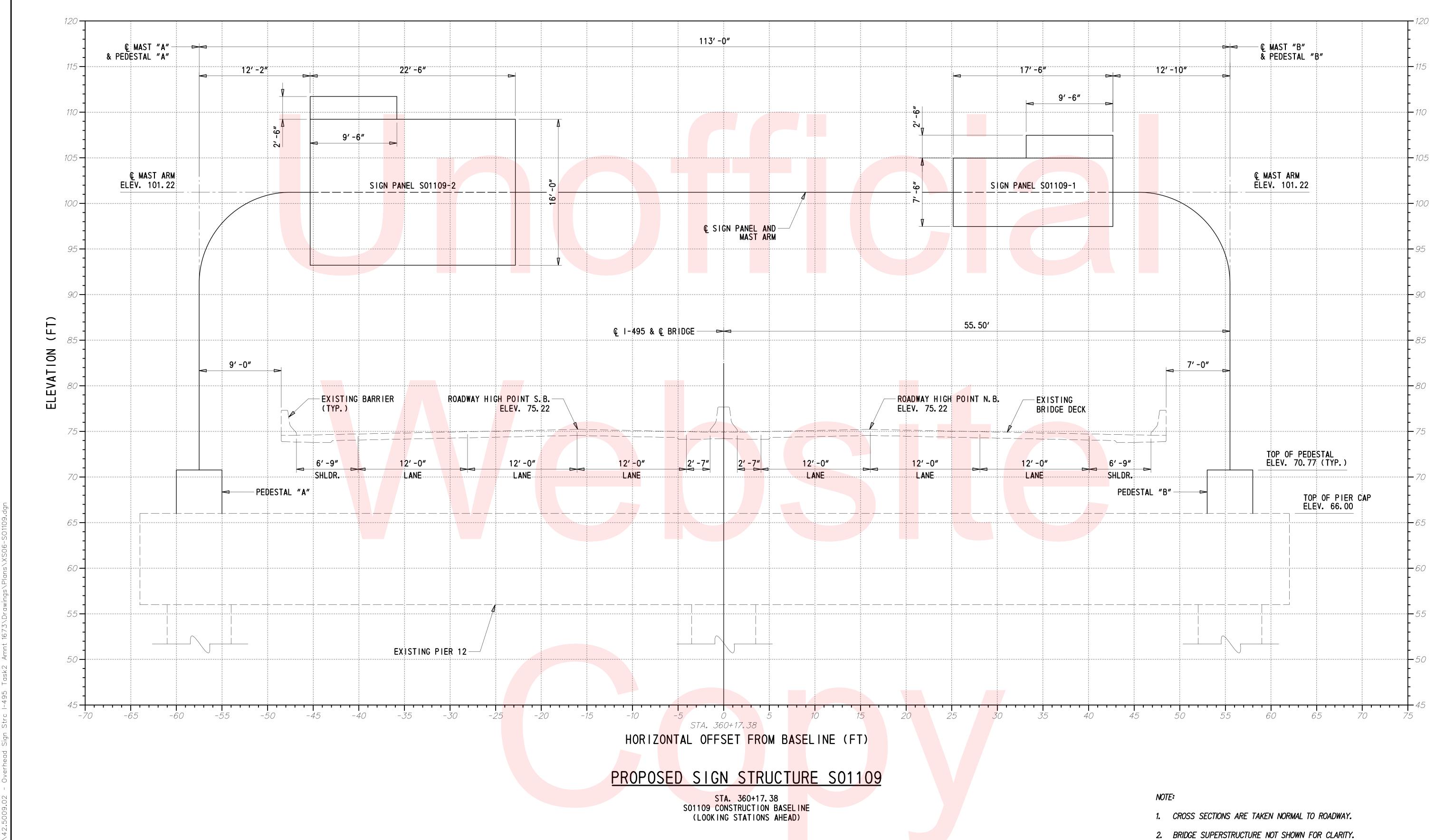
CONTRACT

DESIGNED BY: JWS

CROSS SECTION SIGN STRUCTURE SO1107

TOTAL SHIS.

83



CONTRACT

T201407004

COUNTY

NEW CASTLE

CANTILEVER AND OVERHEAD SIGN

STRUCTURES, OPEN-END, FY16-18

BRIDGE NO.

DESIGNED BY: JLS

CHECKED BY: DEF

N/A

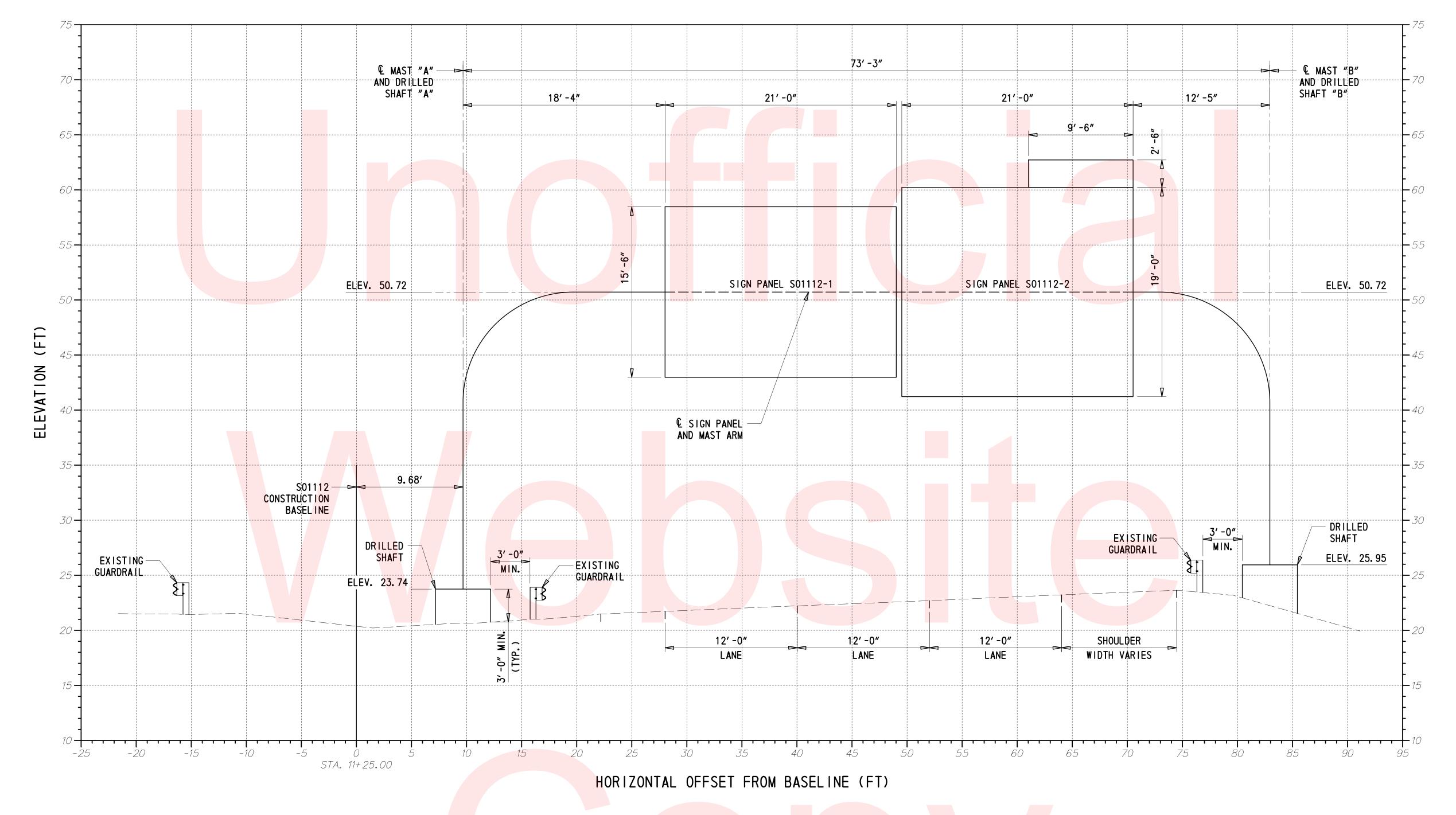
28

CROSS SECTION
SIGN STRUCTURE SO1109

ADDENDUMS / REVISIONS

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DELAWARE DEPARTMENT OF TRANSPORTATION



STA. 11+25.00
S01112 CONSTRUCTION BASELINE (LOOKING STATIONS AHEAD)

NOTE:

1. CROSS SECTIONS ARE TAKEN NORMAL TO ROADWAY.

DELAWARE PARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

DELAWARE STRUCTURES, OPEN-END, FY16-18

ADDENDUMS / REVISIONS

CANTILEVER AND OVERHEAD SIGN STRUCTURE SO1112

FEET

CANTILEVER AND OVERHEAD SIGN STRUCTURE SO1112

FEET

CANTILEVER AND OVERHEAD SIGN STRUCTURE SO1112

CONTRACT

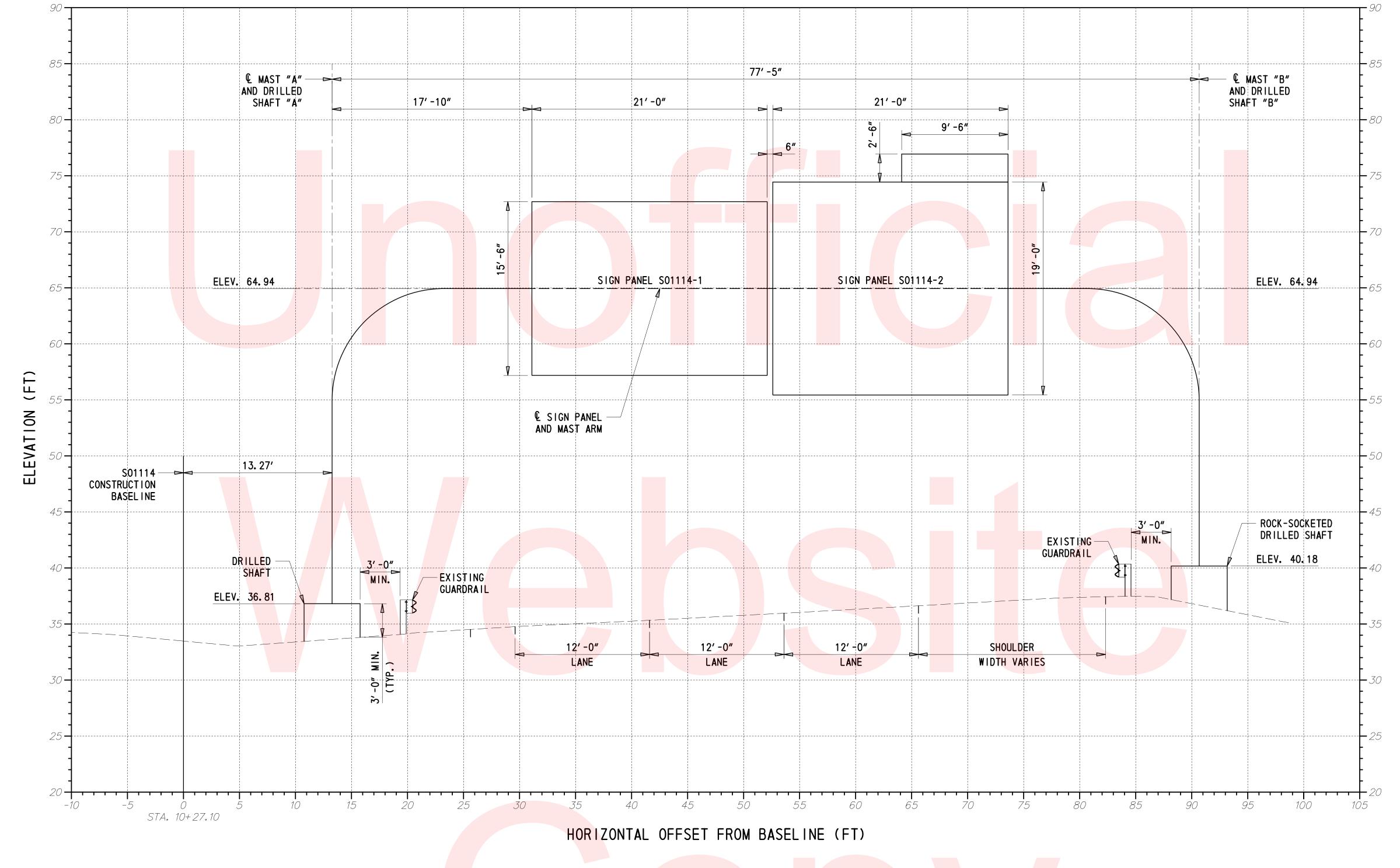
BRIDGE NO.

DESIGNED BY: JWS

CROSS SECTION SIGN STRUCTURE SO1112

TOTAL SHTS.

83



STA. 10+27.10
S01114 CONSTRUCTION BASELINE (LOOKING STATIONS AHEAD)

NOTE:

1. CROSS SECTIONS ARE TAKEN NORMAL TO ROADWAY.

DELAWARE PARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

DELAWARE STRUCTURES, OPEN-END, FY16-18

ADDENDUMS / REVISIONS

CANTILEVER AND OVERHEAD SIGN STRUCTURE SO1114

CONTRACT BRIDGE NO. N/A

T201407004

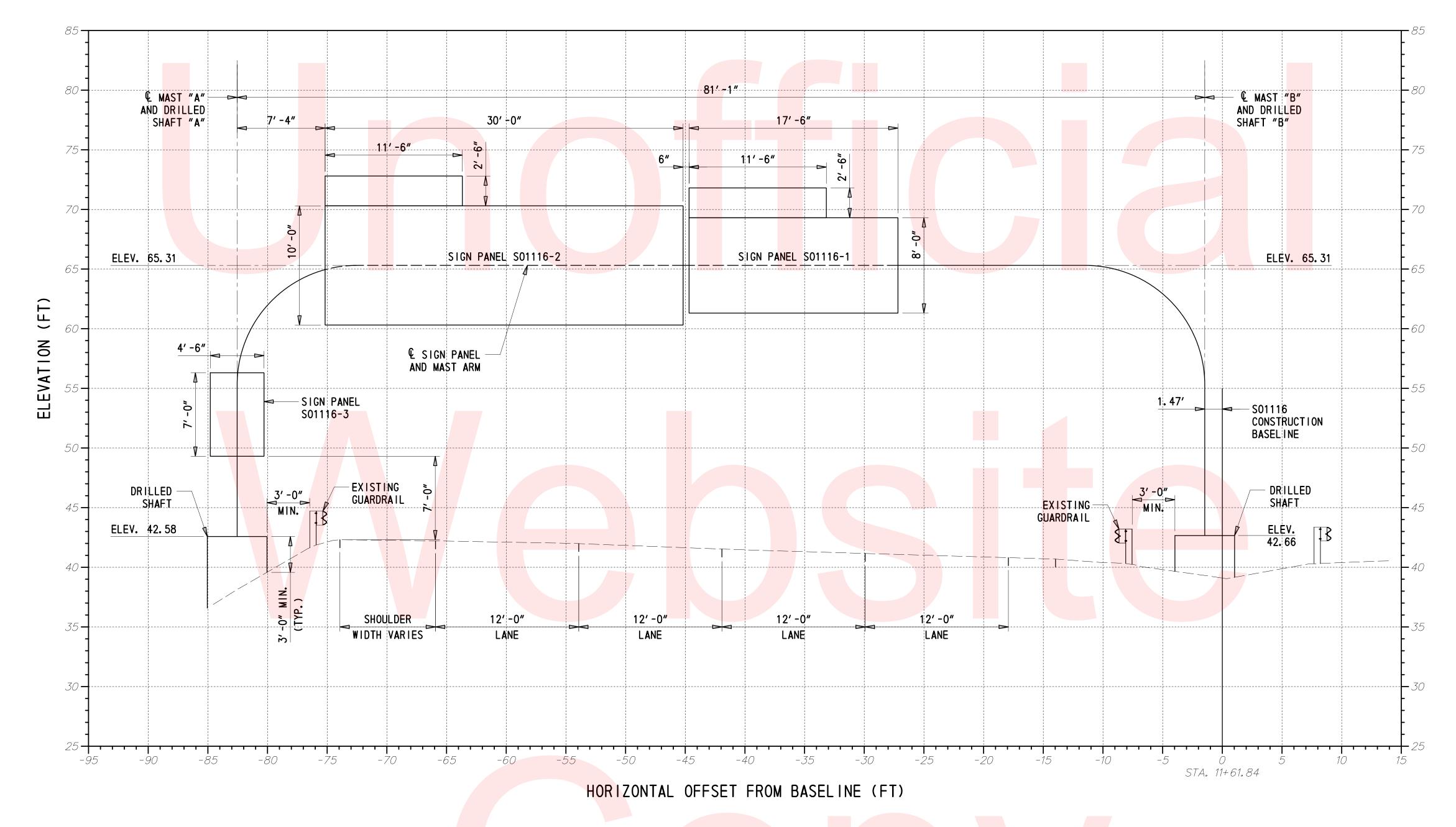
DESIGNED BY: JLS

New CASTLE CHECKED BY: DEF

SHEET NO. 30

TOTAL SHTS.

83



STA. 11+61.84
S01116 CONSTRUCTION BASELINE (LOOKING STATIONS AHEAD)

NOTE:

1. CROSS SECTIONS ARE TAKEN NORMAL TO ROADWAY.

DELAWARE DEPARTMENT OF TRANSPORTATION

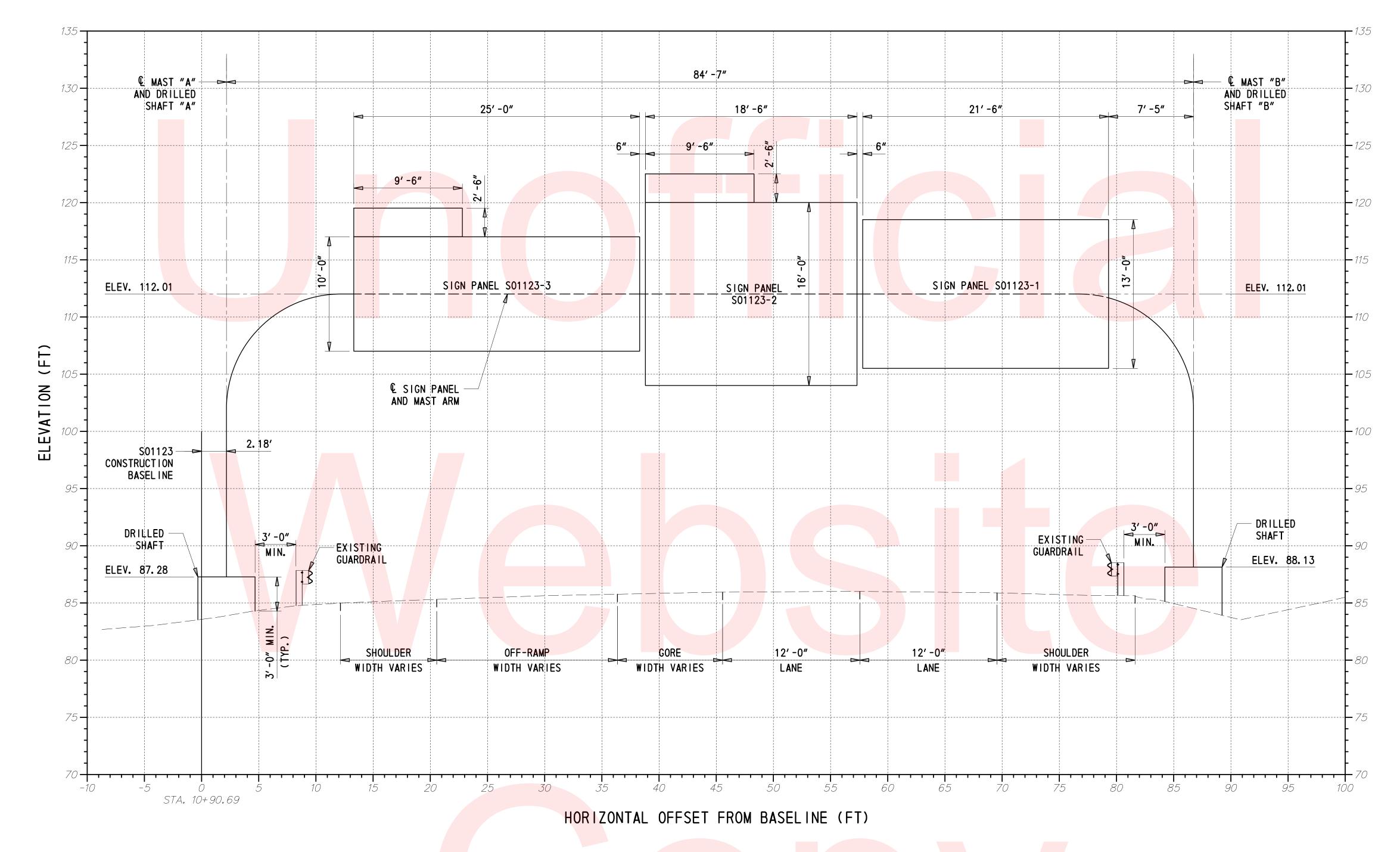
ADDENDUMS / REVISIONS

DELAWARE STRUCTURES, OPEN-END, FY16-18

CONTRACT T201407004
DESIGNED BY: JWS
DESIGNED BY: JWS
TOTAL SHTS.

RIDGE NO. N/A
DESIGNED BY: JWS
CROSS SECTION SIGN STRUCTURE SO1116
TOTAL SHTS.

83



STA. 10+90.69
S01123 CONSTRUCTION BASELINE (LOOKING STATIONS AHEAD)

NOTE:

1. CROSS SECTIONS ARE TAKEN NORMAL TO ROADWAY.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

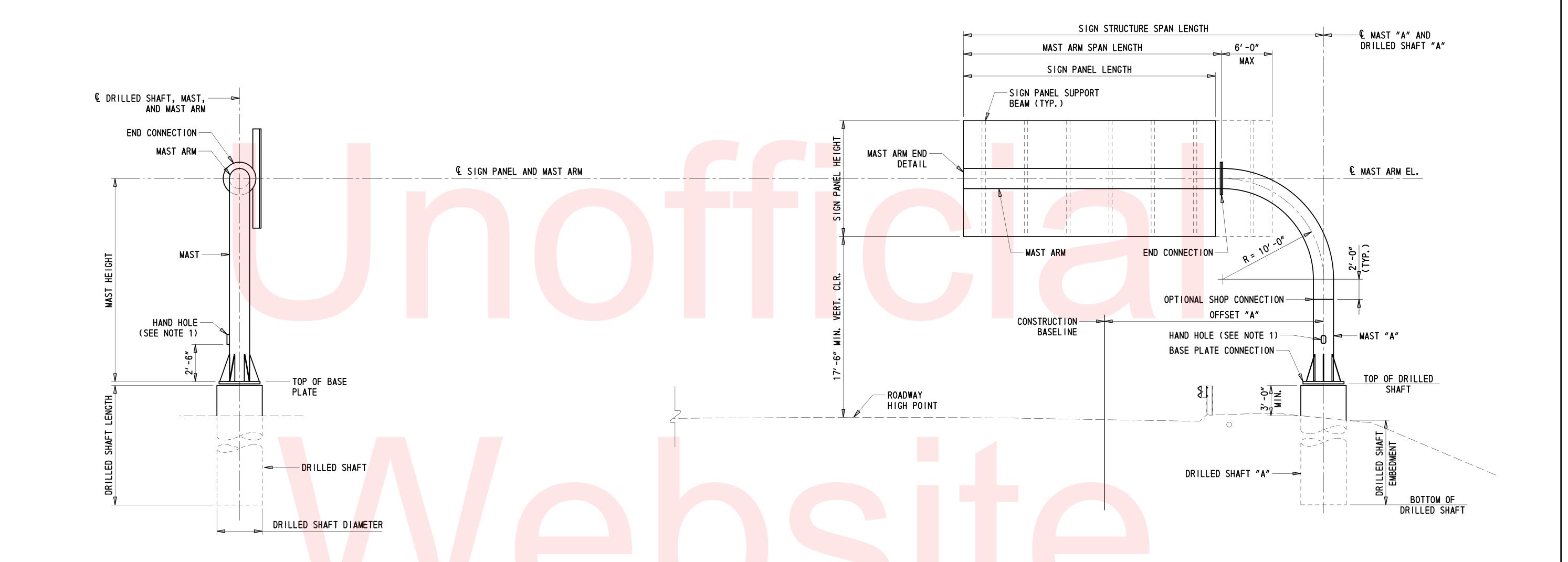
DELAWARE STRUCTURES, OPEN-END, FY16-18

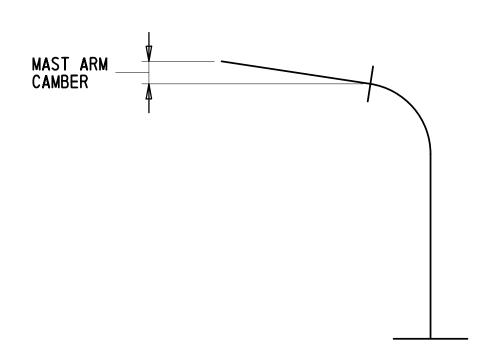
ADDENDUMS / REVISIONS

CANTILEVER AND OVERHEAD SIGN STRUCTURE SO1123

TOTAL SHIET NO.

SHEET NO.





END VIEW

### CAMBER DIAGRAM

MAST ARM CAMBER MUST INCLUDE BOTH MAST ARM AND MAST DEFLECTION. BACK RAKING OF MAST IS NOT PERMITTED.

	SIGN STRUCTURE GEOMETRY										
SIGN STRUCTURE NO.	AC <mark>TUA</mark> L SIGN PANEL AREA (SF)	D <mark>ESIG</mark> N SIGN PANEL AREA (SF)	SIGN STR <mark>UCTU</mark> RE SPAN LENGTH	MAST ARM SPAN LENGTH	<b>€</b> MAST <b>A</b> RM EL.	MAST "A" HEIGHT	MAST ARM CAMBER				
SC1103	<i>368. 3</i>	423. 5	<i>30′</i> - <mark>6″</mark>	20' -6"	<i>58. 50</i>	21' -3"	2. 40"				
SC1104	<i>368. 3</i>	<i>423.</i> 5	<i>30′ -6″</i>	20' -6"	<i>63.41</i>	24' -7"	2. 64"				
SC1206	195. 5	224.8	31' -9"	21' -9"	<i>72. 36</i>	20' -3"	<i>3. 73"</i>				
SC1221	<i>354. 0</i>	354.0	33' -6"	23' -6"	<i>73.</i> 00	22' -7"	2. 80"				
SC1223	230.0	264.5	32' -7"	22' -7"	<i>73. 21</i>	20' -2"	2. 58"				

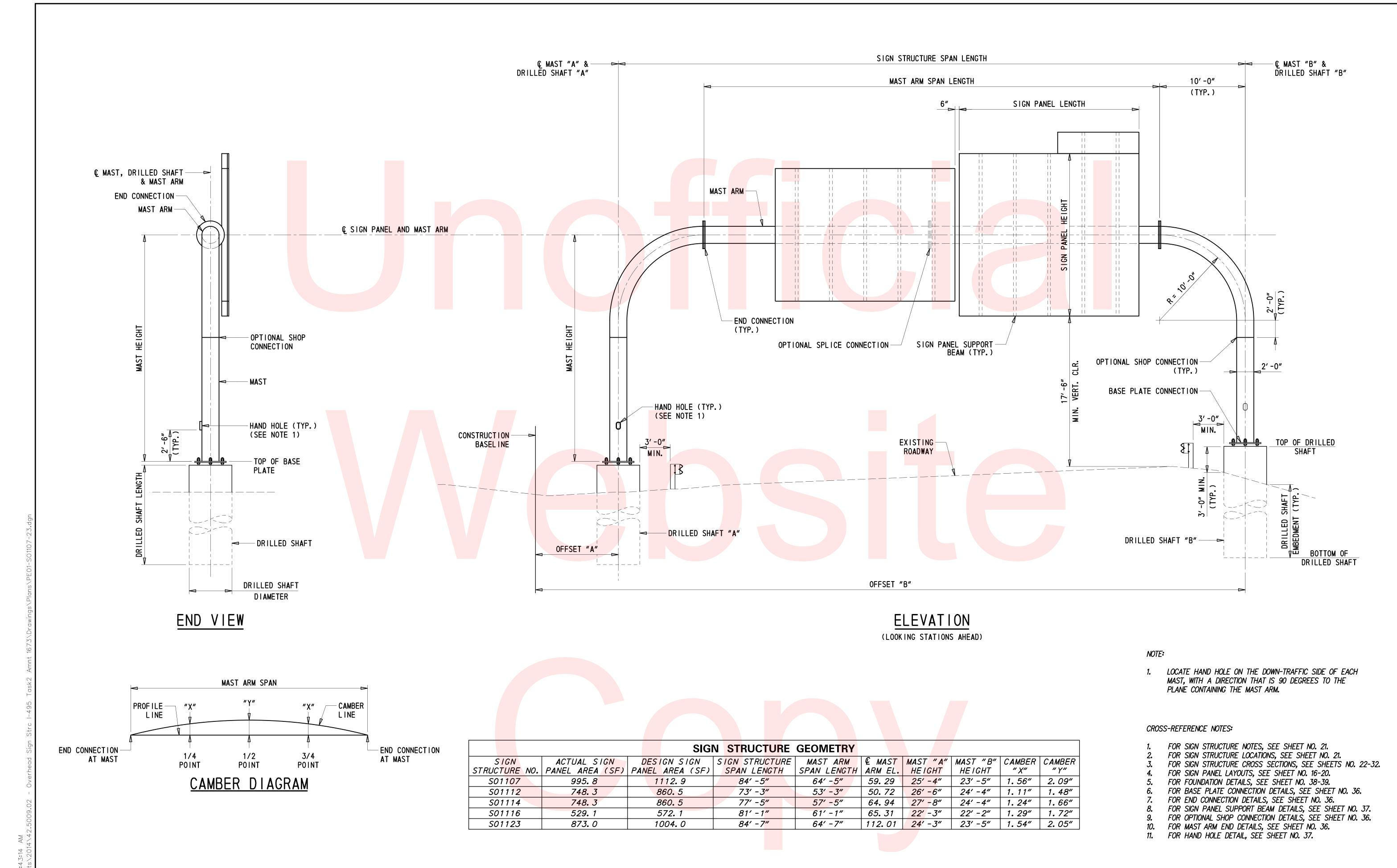
ELEVATION

1. LOCATE HAND HOLE ON THE DOWN-TRAFFIC SIDE OF THE MAST, WITH A DIRECTION THAT IS 90 DEGREES TO THE PLANE CONTAINING THE MAST ARM.

### CROSS-REFERENCE NOTES:

- FOR SIGN STRUCTURE NOTES, SEE SHEET NO. 21.
- FOR SIGN STRUCTURE LOCATIONS, SEE SHEET NO. 21.
- FOR SIGN STRUCTURE CROSS SECTIONS, SEE SHEETS NO. 22-32.
- FOR SIGN PANEL LAYOUTS, SEE SHEET NO. 16-20.
- FOR FOUNDATION DETAILS, SEE SHEET NO. 38-39.
- FOR BASE PLATE CONNECTION DETAILS, SEE SHEET NO. 36.
- FOR END CONNECTION DETAILS, SEE SHEET NO. 36.
- FOR SIGN PANEL SUPPORT BEAM DETAILS, SEE SHEET NO. 37.
- FOR OPTIONAL SHOP CONNECTION DETAILS, SEE SHEET NO. 36.
- FOR MAST ARM END DETAILS, SEE SHEET NO. 36. FOR HAND HOLE DETAIL, SEE SHEET NO. 37.

	ADDENDUMS	/ REVISIONS	CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18	CONTRACT	BRIDGE NO.	N/A		SHEET NO.
DELAWARE DEPARTMENT OF TRANSPORTATION		NOT TO COALE		T201407004	DECIONED BY DUB		CANTILEVER SIGN STRUCTURE ELEVATION AND END VIEW	33
		NOT TO SCALE		COUNTY	DESIGNED RA: KWR	2IGNED RA: KWR		TOTAL SHTS.
				NEW CASTLE	CHECKED BY: DEF			83



DEPARTMENT OF TRANSPORTATION

**DELAWARE** 

ADDENDUMS / REVISIONS

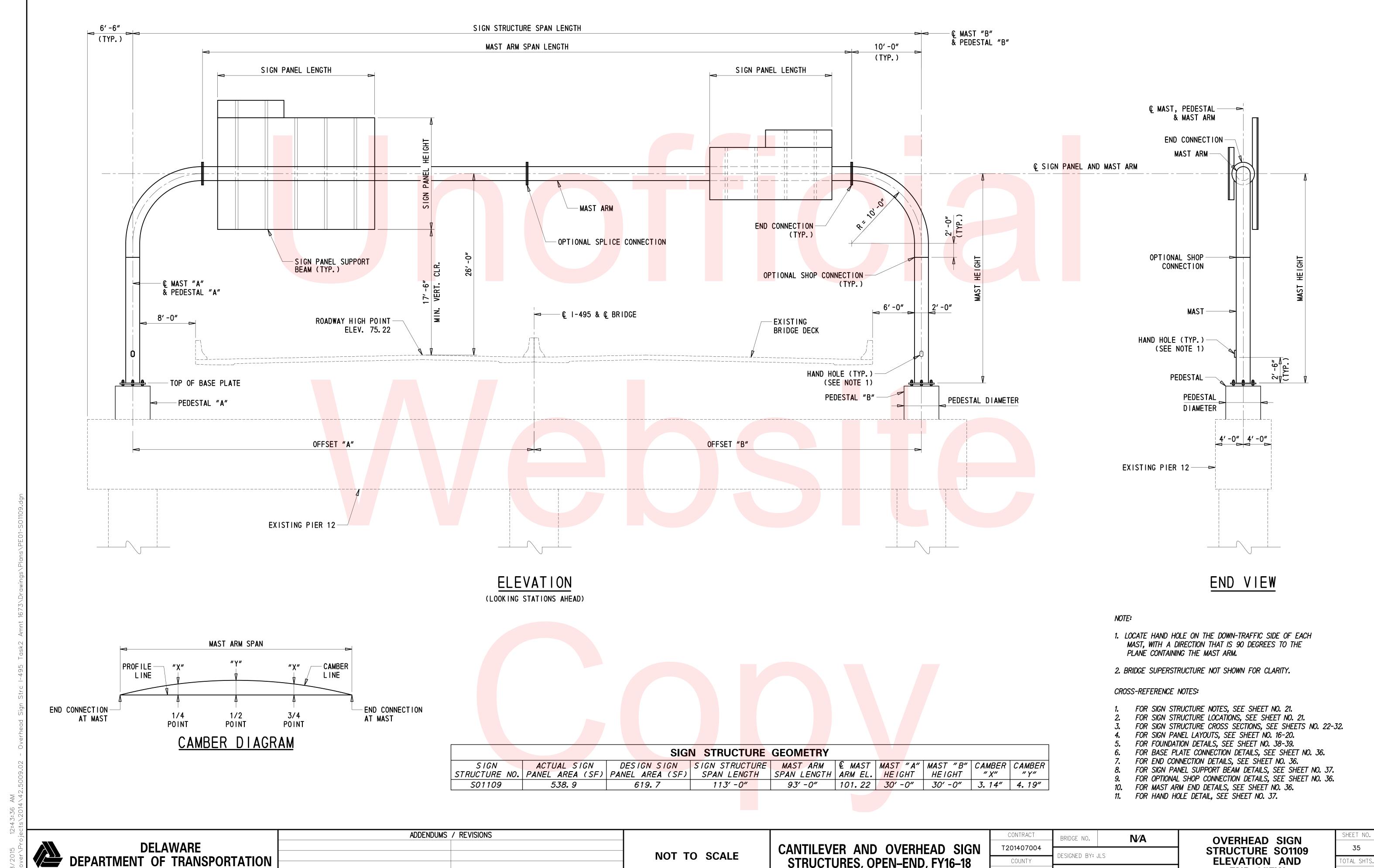
NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT N/A BRIDGE NO. T201407004 DESIGNED BY: PM COUNTY NEW CASTLE CHECKED BY: DEF

**OVERHEAD SIGN** STRUCTURE ELEVATION AND END VIEW

34 TAL SHTS

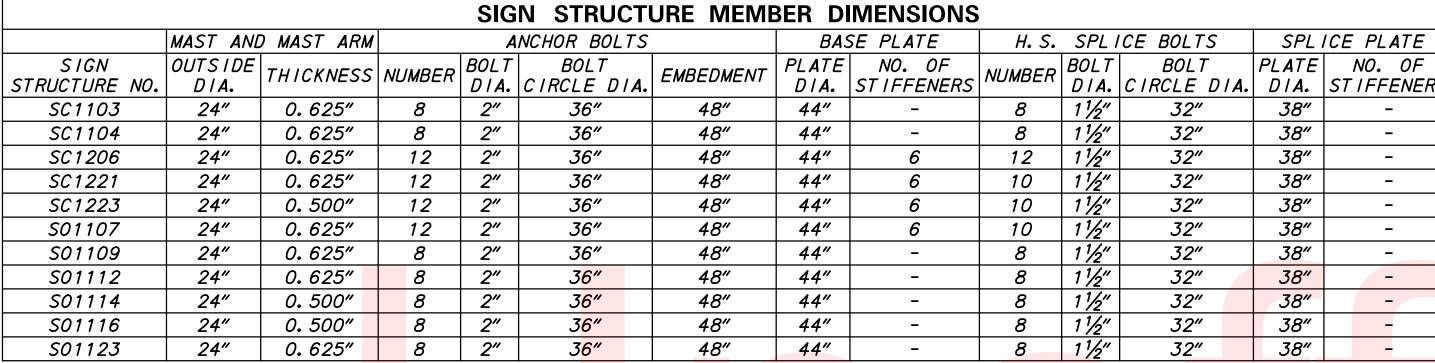


STRUCTURES, OPEN-END, FY16-18

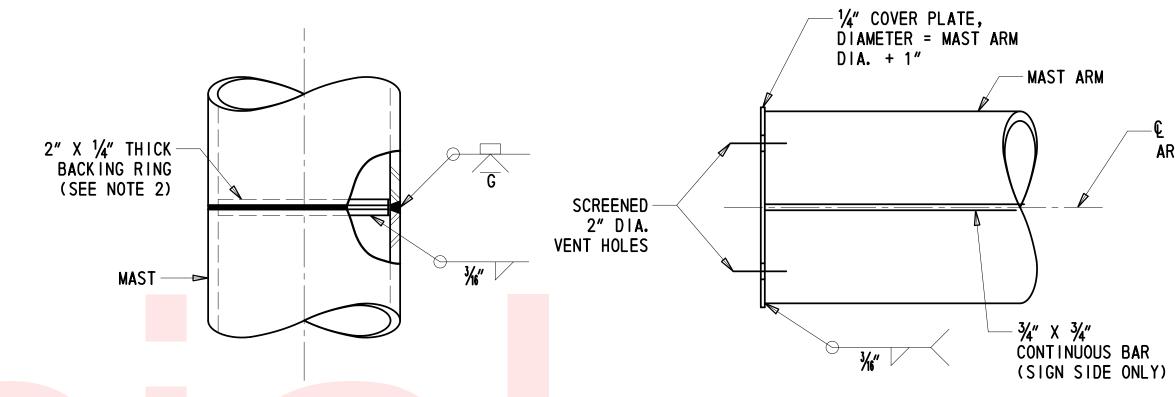
COUNTY NEW CASTLE CHECKED BY: DEF

**ELEVATION AND END VIEW** 

OTAL SHTS 83

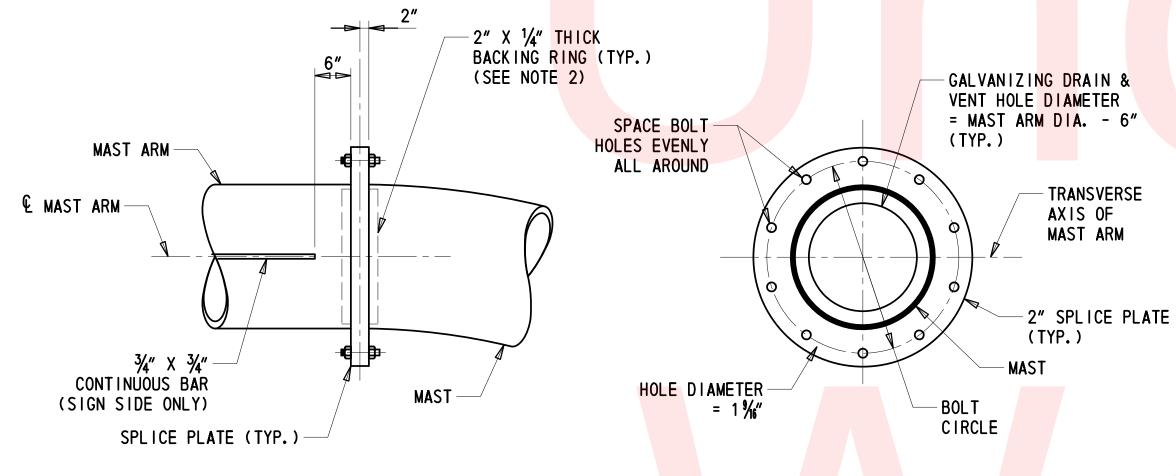


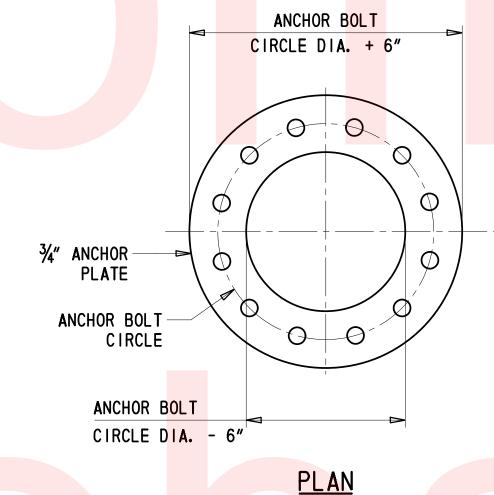
SECTION

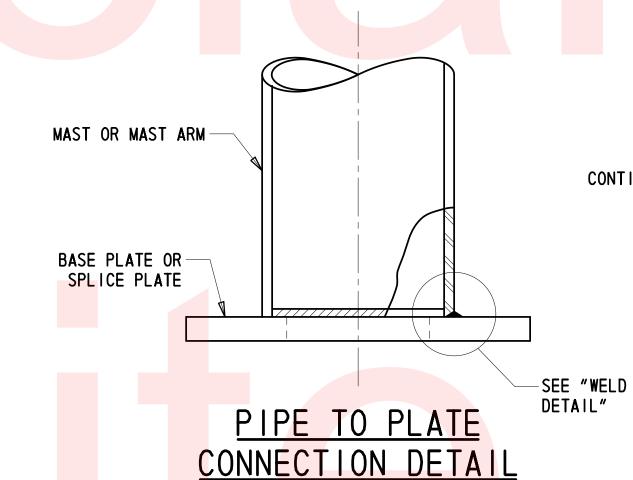


### OPTIONAL SHOP CONNECTION DETAIL

### MAST ARM END DETAIL

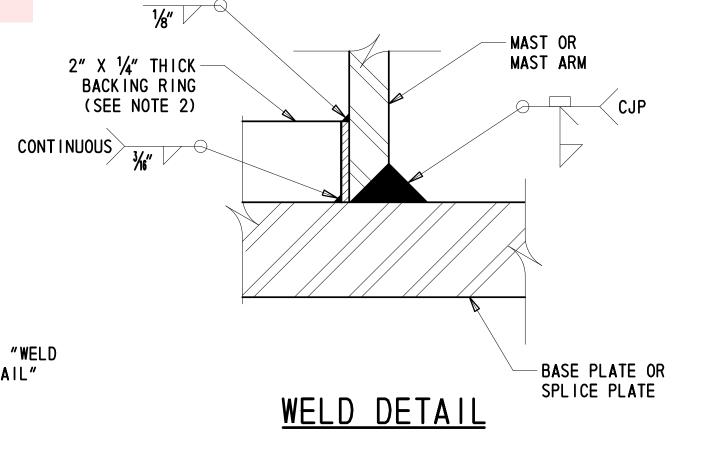






- CHAMFER PL

1" X 45°



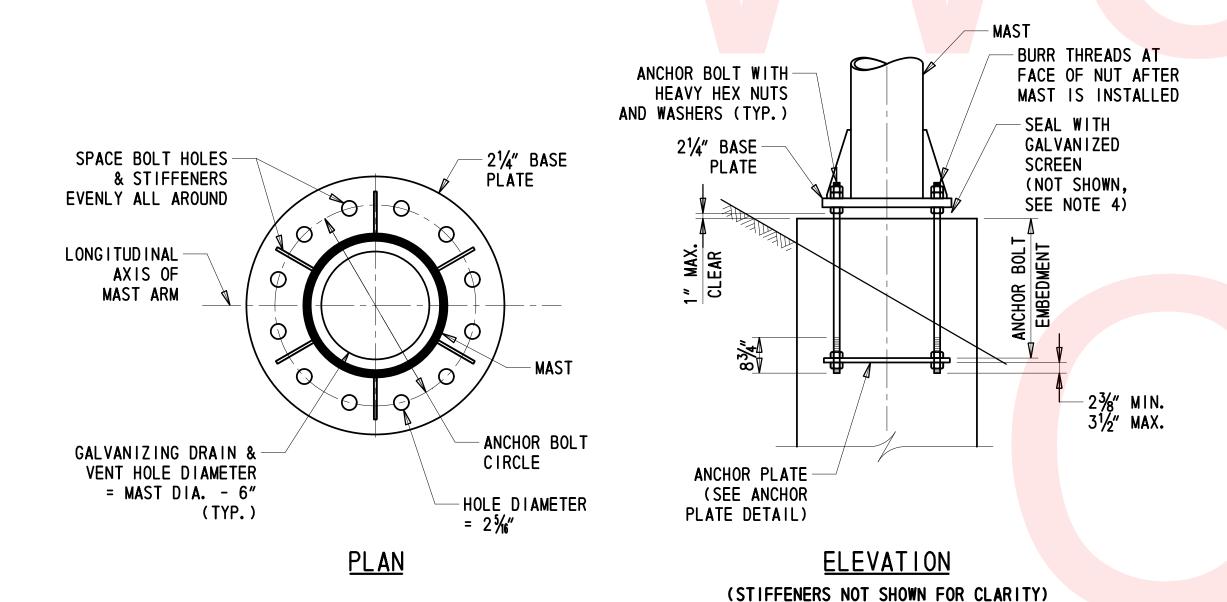
**ELEVATION** 

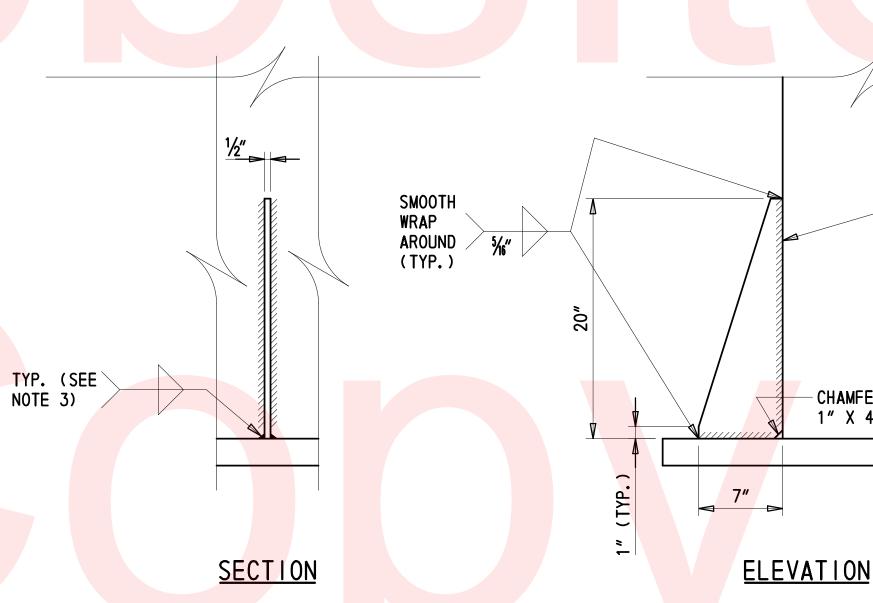
### END CONNECTION DETAILS

(10 BOLT CONFIGURATION SHOWN, OTHER CONFIGURATIONS SIMILAR)

### ANCHOR PLATE DETAIL

(12 BOLT CONFIGURATION SHOWN, OTHER CONFIGURATIONS SIMILAR)





### NOTES:

TYP. (SEE

5//6" NOTE 3)

- PROVIDE STIFFENERS AS INDICATED IN SIGN STRUCTURE MEMBER DIMENSIONS TABLE.
- TOP WELD OF THE BACKING RING SHALL BE MADE AFTER ULTRASONIC INSPECTION OF THE GROOVE WELD. BACKING RING
- MUST BE FABRICATED AS A CONTINUOUS RING. TERMINATE WELDS 1/4" SHORT OF STIFFENER CHAMFER.
- SEAL BASE PLATE TO FOUNDATION GAP WITH GALVANIZED STEEL SCREEN, 1/2" BY 1/2" MESH AND 0.063" DIAMETER WIRES. SCREEN IS TO PREVENT ENTRY OF RODENTS WHILE PERMITTING DRAINAGE. SCREEN IS TO BE REMOVABLE AND ATTACHED TO THE BASE PLATE WITH STAINLESS STEEL HARDWARE.

### CROSS-REFERENCE NOTES:

- FOR SIGN STRUCTURE NOTES, SEE SHEET NO. 21.
- FOR SIGN PANEL SUPPORT BEAM DETAILS, SEE SHEET NO. 37.
- FOR FOUNDATION DETAILS, SEE SHEET NO. 38-39.

### BASE PLATE CONNECTION DETAILS

(12 BOLT CONFIGURATION SHOWN, OTHER CONFIGURATIONS SIMILAR)

ADDENDUMS / REVISIONS

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT N/A BRIDGE NO. T201407004 DESIGNED BY: PM COUNTY NEW CASTLE CHECKED BY: DEF

SIGN STRUCTURE **DETAILS - 1** 

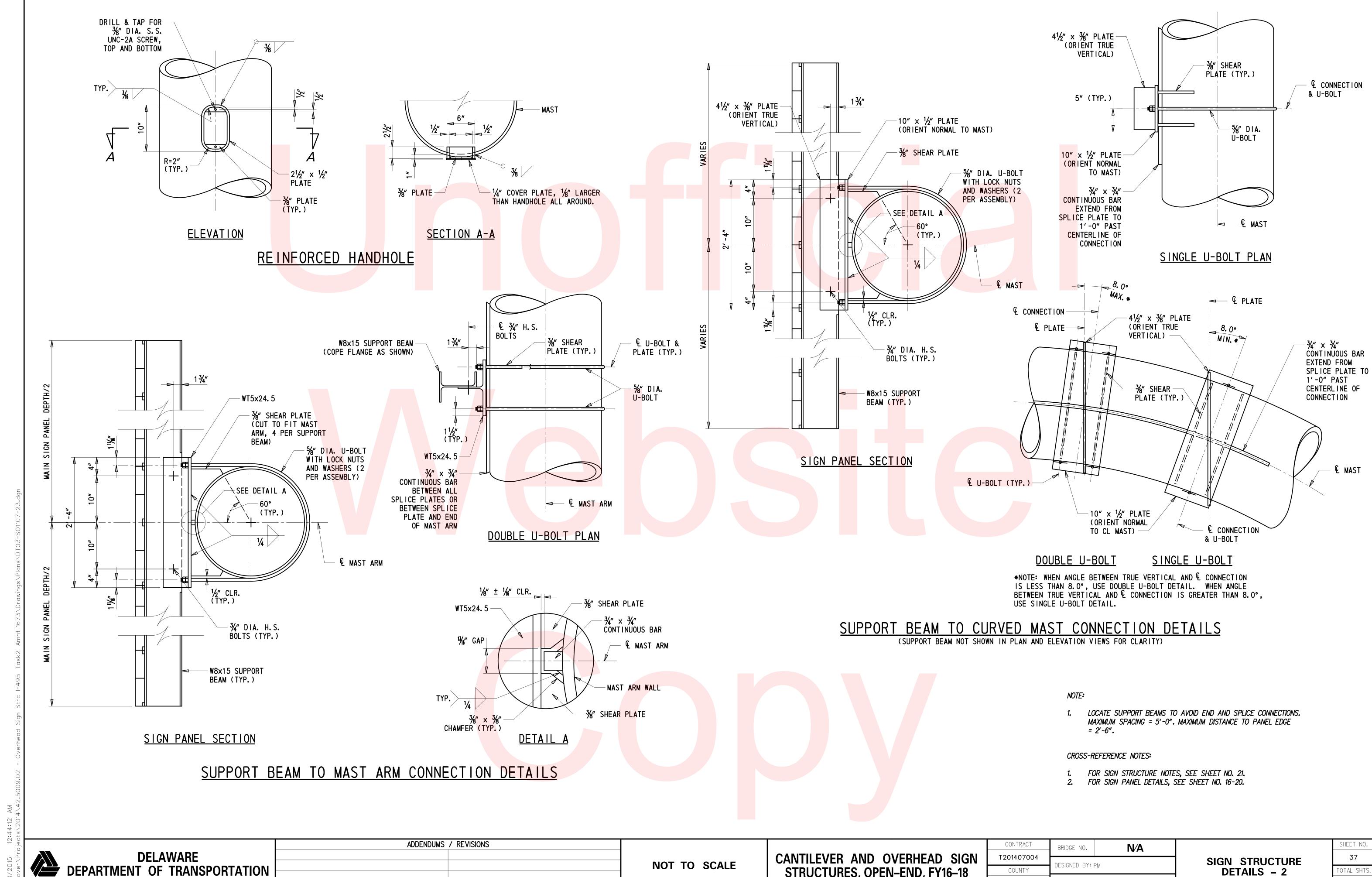
36 OTAL SHTS 83

**DELAWARE DEPARTMENT OF TRANSPORTATION** 

NOT TO SCALE

STIFFENER DETAILS

(BASE CONNECTION)



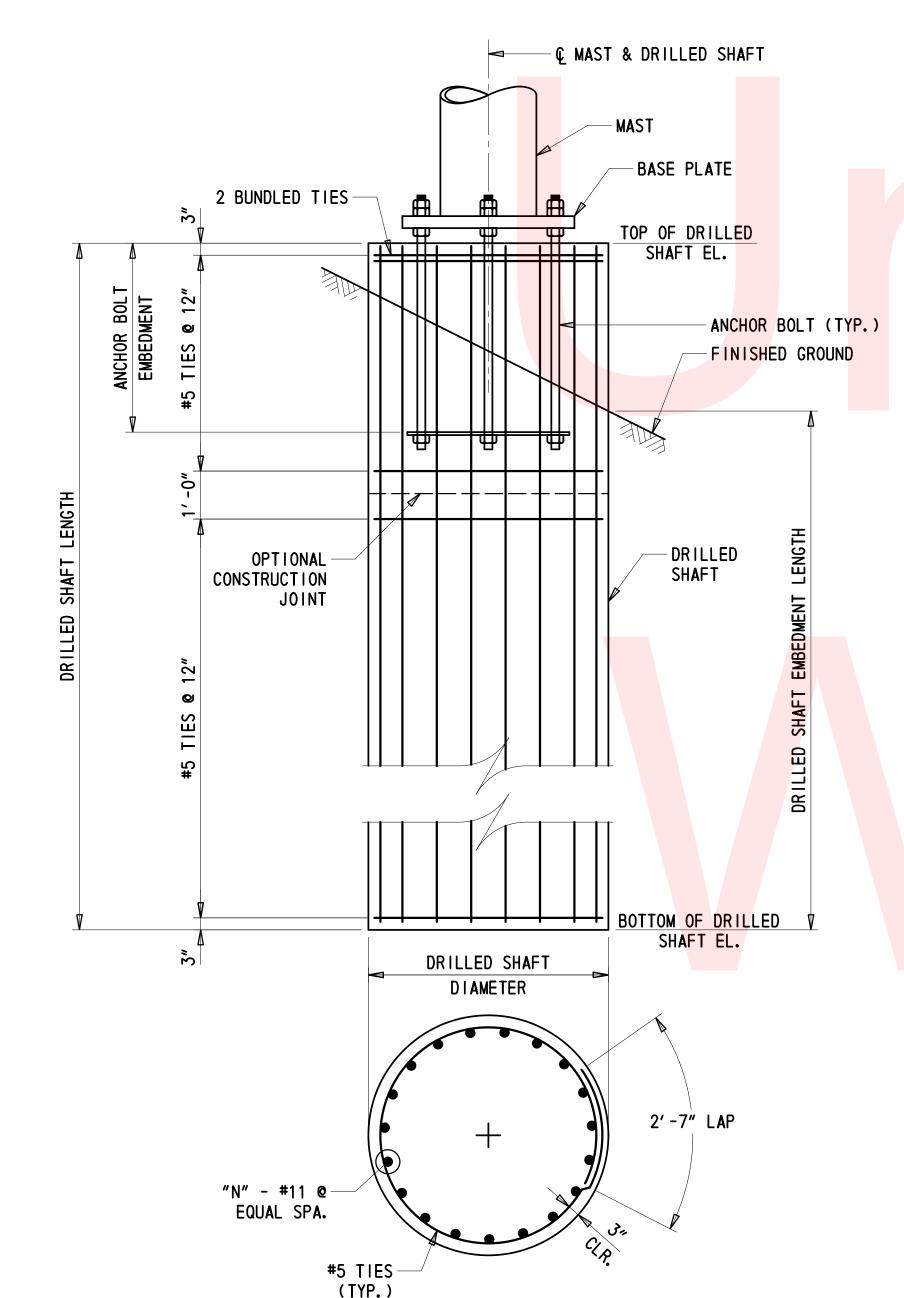
NOT TO SCALE

STRUCTURES, OPEN-END, FY16-18

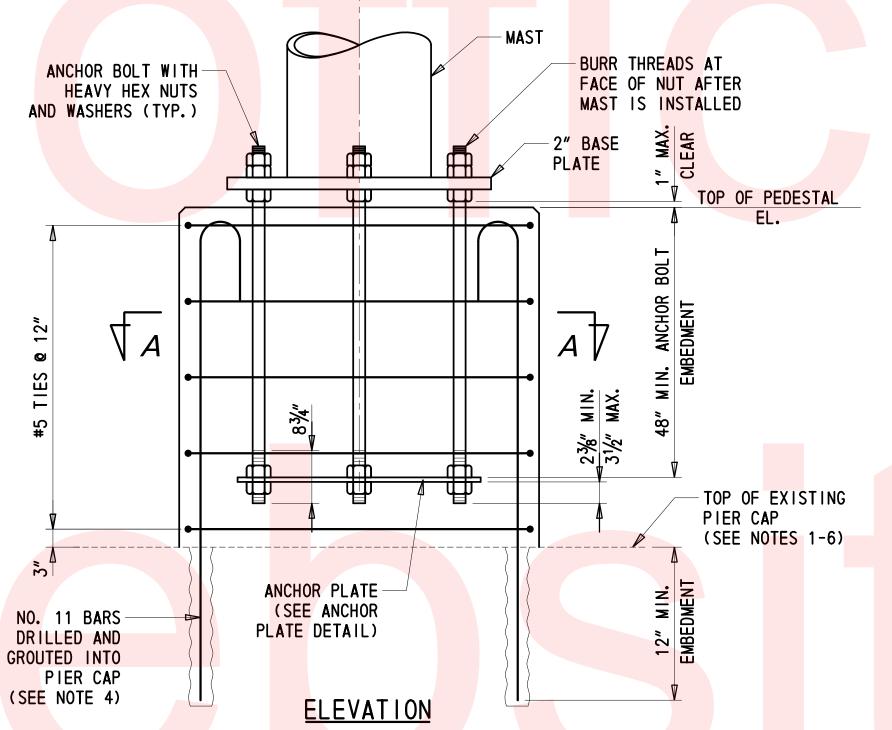
DESIGNED BY: PM COUNTY CHECKED BY: DEF NEW CASTLE

SIGN STRUCTURE DETAILS - 2

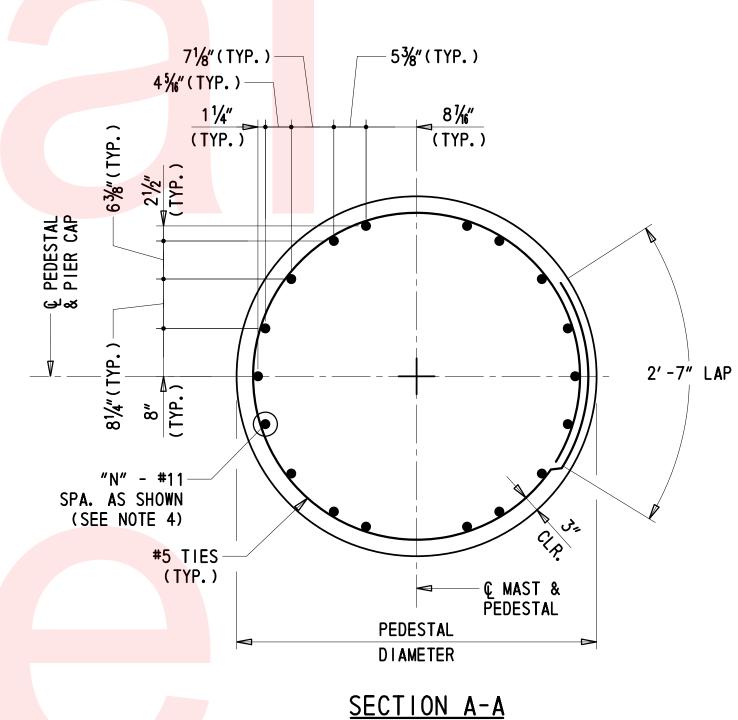
OTAL SHTS



DRILLED SHAFT FOUNDATION DETAILS



← Ç MAST & PEDESTAL



# PEDESTAL REINFORCEMENT DETAILS

(OVERHEAD SIGN STRUCTURE S01109)

### CROSS-REFERENCE NOTES:

- 1. FOR SIGN STRUCTURE NOTES, SEE SHEET NO. 21.
- 2. FOR ANCHOR BOLT AND BASE PLATE DETAILS, SEE SHEET NO. 36.

### NOTES:

- EPOXY ADHESIVE ANCHORING SYSTEM SHALL BE USED TO DEVELOP THE YIELD STRENGTH OF THE DOWEL BARS WITHIN THE SPECIFIED EMBEDMENT. ALL DRILL HOLES SHALL BE PREPARED AND CLEANED OF ANY RESIDUES PRIOR TO INSTALLATION OF EPOXY ADHESIVE ANCHORING SYSTEM FOR THE DOWELS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- THE EPOXY AD<mark>HESIVE ANCHORED</mark> DOWEL BARS SH<mark>ALL B</mark>E PLACED TO THE DEPTH AS SHOWN IN THE **PLAN**S ADEQUATE TO DEVELOP THE **YIEL**D STRENGTH OF THE DOWELED BARS IN ACCOR<mark>DANCE WITH MAN</mark>UFACTURER'S RECOMMENDATIONS.
- EPOXY ADHES<mark>IVE ANCHORING MATE</mark>RIAL SHALL BE INSERTED TO A DEP<mark>TH SUFFICI</mark>ENT TO ENSURE COMPLETE FILLING OF THE DRILL HOLE AFTER INSERTION OF THE DOWEL BARS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- CAUTION SHALL BE EXERCIS<mark>ED W</mark>HILE DRILLING TO AVOID EXISTING REINF<mark>ORCIN</mark>G STEEL. THE CONTRACTOR SHALL CHECK AND VERIFY THE DIMENSIONS AND BAR SPACING PRIOR TO DRILLING THE HOLES. TH<mark>E CON</mark>TRACTOR SHALL MAKE NECESSARY ADJUSTMENTS TO THE SPACING SHOWN TO EN<mark>SURE</mark> PROTECTION OF EXISTING REI<mark>NFORCING S</mark>TEEL.

### NOTES (CONT.):

- 5. REINFORCING STEEL FOR PEDESTAL SHALL BE EPOXY COATED.
- 6. SLOPE TOP OF PEDESTAL 4% FROM CENTER TO NEAR EDGES FOR DRAINAGE.
- 7. TOP OF DRILLED SHAFT SHALL BE 3'-0" MIN. ABOVE FINISHED GROUND.
- ALL DRILLED SHAFT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DRILLED SHAFTS SPECIAL PROVISION EXCEPT AS MODIFIED BELOW.
- 9. TEMPORARY STEEL CASING SHALL BE INSTALLED IN DRILLED SHAFT HOLE UNTIL CONCRETE HAS BEEN PLACED.
- 10. NO PERMANENT CASING SHALL BE USED.

**DELAWARE** DEPARTMENT OF TRANSPORTATION ADDENDUMS / REVISIONS

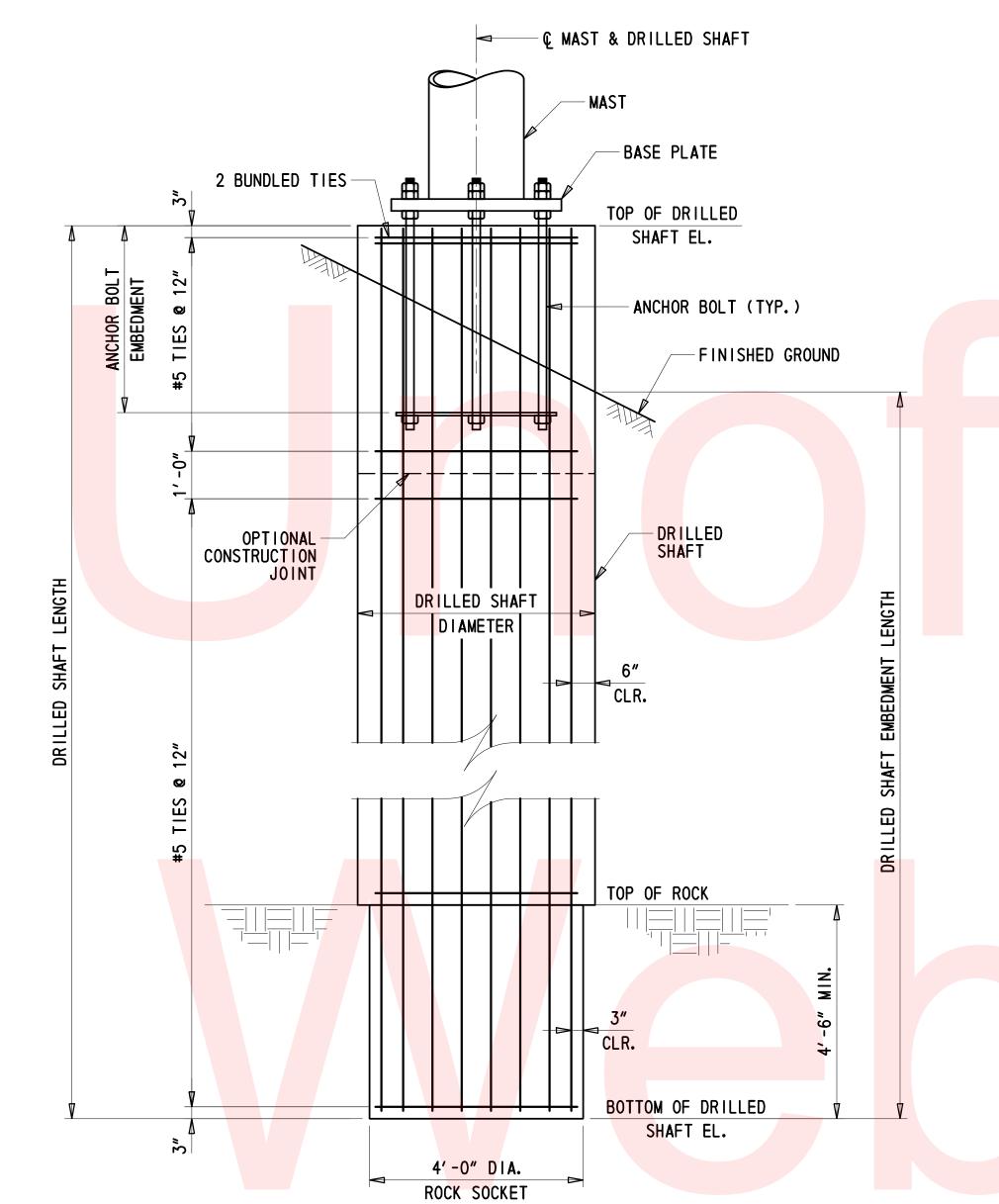
CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.		
T201407004	1271		ł
COUNTY	DESIGNED BY:		
NEW CASTLE	CHECKED BY: I	DEF	

**FOUNDATION DETAILS - 1** 

DTAL SHTS

NOT TO SCALE



### SIGN STRUCTURE FOUNDATION SUMMARY DRILLED SHAFT "A" ROCK-SOCKETED DRILLED SHAFT "B" SIGN STRUCTURE NO. DIAMETER TOP EL. BOTTOM LENGTH EMBEDMENT "N" DIAMETER TOP EL. BOTTOM LENGTH EMBEDMENT LENGTH

4' -6" 36.81 18.81 18' -0" 15' -0" 19 4' -6" 40.18 22.68 17' -6" 14' -6"

### CROSS-REFERENCE NOTES:

- 1. FOR SIGN STRUCTURE NOTES, SEE SHEET NO. 21.
- 2. FOR ANCHOR BOLT AND BASE PLATE DETAILS, SEE SHEET NO. 36.
- 3. FOR DRILLED SHAFT FOUNDATION DETAILS, SEE SHEET 38.

### NOTES:

- 1. ALL DRILLED SHAFT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DRILLED SHAFTS SPECIAL PROVISION EXCEPT AS MODIFIED BELOW.
- 2. THE IDENTIFICATION AND OCCURRENCE OF BEDROCK WILL BE FIELD VERIFIED DURING THE INSTALLATION OF THE DRILLED SHAFTS. THE VERIFICATION PROCESS WILL CONSIST OF:

-THE TOP OF BEDROCK SHALL BE DEFINED AT THE DEPTH WHERE SPECIAL EXCAVATION STARTS. SPECIAL EXCAVATION IS DEFINED IN THE DRILLED SHAFT SPECIAL PROVISION.

-IN THE CASE OF TOP-HOLE INSPECTION THE BOTTOM OF SHAFT SHALL BE INSPECTED BY WEIGHTED TAPE USING AT LEAST SIX SEPARATE SOUNDINGS. THE MEASURED THICKNESS OF THE SEDIMENTS SHOULD MEET THE REQUIREMENTS GIVEN IN DRILLED SHAFT SPECIAL PROVISION.

3. THE TERMINATION ELEVATIONS OF THE DRILLED SHAFTS WILL BE DETERMINED BY THE ENGINEER BASED ON PROBING RESULTS AND MUST MEET ALL OF THE FOLLOWING CRITERIA:

> -BE AT OR BELOW THE BOTTOM OF DRILLED SHAFT ELEVATION PROVIDED IN THE SIGN STRUCTURE FOUNDATION SUMMARY TABLE; AND -HAVE THE MINIMUM EMBEDMENT INTO BEDROCK AS PROVIDED IN THE SIGN STRUCTURE FOUNDATION SUMMARY TABLE & DETAILS.

- 4. TEMPORARY STEEL CASING SHALL BE INSTALLED IN DRILLED SHAFT HOLE UNTIL CONCRETE HAS BEEN PLACED.
- 5. NO PERMANENT CASING SHALL BE USED.
- 6. TOP OF DRILLED SHAFT SHALL BE 3'-O" MIN. ABOVE FINISHED GROUND.

DRILLED SHAFT DIAMETER 4'-0" DIA. ROCK SOCKET 2'-7" LAP "N" - #11 @-EQUAL SPA. #5 TIES-(TYP.)

# ROCK-SOCKETED DRILLED SHAFT FOUNDATION DETAILS

(OVERHEAD SIGN STRUCTURE S01114)

**DELAWARE** DEPARTMENT OF TRANSPORTATION ADDENDUMS / REVISIONS

NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO. <b>N/A</b>			
T201407004 COUNTY	DESIGNED BY: IZB			
NEW CASTLE	CHECKED BY: I	DEF		

**FOUNDATION** DETAILS - 2

39 OTAL SHTS

BOR	RING: CS-1	(S01123)		DATE DRILLED: 7/24/14			
	TION: 10+7		<b>OFFSET:</b> 2. 38′	ELEVATION: 83, 50	NORTHI	<b>VG:</b> 662045. 200	<b>EASTING:</b> 646175.028
CON	/MENTS: N/	Α					
<u>NIO</u> [	DEDTU	DI OME /e"		SAMPLE INFORMATION		CLASS /G.I.	DEMARKS
<b>NO</b> .	<b>DEPTH</b> 0. 0	<b>BLOWS /6"</b> 8	MOIST MEDIUM DENSE GRAY	DESCRIPTION SILTY FINE GRAVEL W/SOME FIN	JE TO	A-1-B	REMARKS
'	0.0	14	COARSE SAND, TRACE OF CL		VL 10		
		11	,				
	0.0	7					
2	0.0	17		<mark>lty f</mark> ine s <b>a</b> nd <b>a</b> nd fine gr <b>a</b> ve	EL W/SOME	<b>A</b> -1-B	
		10	COARSE SAND.				
	2.0	15 23					
3	2.0	13	SATURATED VERY DENSE GRA	Y SILTY FINE TO COARSE SAND	W/TRACE	A-2-4(0)	
	2.0	22	FINE GRAVEL.	THE TO SOME SAME	117 117702		
		33					
	4.0	43					
4	4.0	40		Y SILTY FINE SAND W/SOME COA	ARSE SAN <mark>D,</mark>	A-2-4(0)	
5	6.0 6.0	50 6	TRACE OF FINE GRAVEL.	SANDY SILT W/TRACE COARSE S	CAND AND	A-4(0)	
)	0.0	11	FINE GRAVEL.	SANDI SILI W/ TRACE COARSE S	DANU ANU	A-4(0)	
		19	THE SIMILE.				
	8.0	27					
6	8.0	42		SANDY SILT W/ <mark>SOME C</mark> OARSE SA	AND, TR <mark>ace</mark>	A-4(0)	
	10.0	50	OF FINE GRAVEL.			1 ((0)	
/	10.0	5 32	l .	SANDY SILT W/SOME COARSE SA	AND AND	A-4(0)	
	12.0	50	CLAY, TRACE OF FINE GRAV	EL.			
8	12.0	4	SATURATED VERY DENSE GRA	Y SILTY FINE SAND W/SOME COA	ARSE SAND.	A-2-4(0)	
-	14.0	50	TRACE OF FINE GRAVEL.		,		
9	14.0	4		SANDY SILT W/SOME COARSE SA	AND, TRACE	A-4(0)	
	16.0	50	OF FINE GRAVEL AND CLAY.				
10	16.0	10		SANDY SILT W/SOME COARSE SA	AND AND	A-4(0)	
11	18.0 18.0	50 50	FINE GRAVEL, TRACE OF CL	AY. Y FINE TO COARSE SAND AND FI	INE CRAVEI	A-2-4(0)	
	24.0		W/SOME SILT.	THE TO COANSE SAND AND TH	INC ONAVEL	A 2 +(0)	
12	24.0	50		CATION OF SATURATED VERY DEN	NSE GRAY		
	29.0		FINE TO COARSE SAND AND				
13	29.0	50		Y FINE GRAVEL W/SOME FINE TO	COARSE	<b>A</b> -1-B	
D 1	33.0		SAND AND SILT.				
R-1	33. 0 33. 5		GRANITE				
R-2	33. 5		GRANITE				
	38. 5						
	38.5		END BORING				
	43.5						
ROR	RING: CS-2	(\$01114)		DATE DRILLED: 5/29/14			
	TION: 10+3		<b>OFFSET:</b> 89. 57′	ELEVATION: 37. 45	NORTHI	<b>VG</b> : 656621. 385	<b>EASTING:</b> 646702.804
	MENTS: N/		0110211 2312		11011111		
				SAMPLE INFORMATION			
NO.	<b>DEPTH</b>	BLOWS /6"	MOLCE MEDIUM DENCE DOOWN	DESCRIPTION CAND IN CAMP II	W COME	CLASS /G.I.	REMARKS
	0.0	<u>2</u> 5	FINE GRAVEL.	SILTY COARSE TO FINE SAND V	W/SUME	A-1-B	
		6	I THE GRAVEE.				
	0.0	12					
2	0.0	20		TO FINE SAND AND FINE GRAVE	EL W/SOME	<b>A</b> -1-B	
		10	SILT.				
	0.0	20					
3	2.0 2.0	10 14	WET VERY STILE ROOWN OLA	Y W/SOME FINE TO COARSE SAND	) FINE	A-6(5)	
J	∠. ∪	10	GRAVEL AND SILT.	I MY DOME I HAF IN COMUZE DANF	۱۱۱۷⊏ ب	A 0(3)	l
		9					l
	4.0	8					
4	4.0	10		CATION OF WET HARD BROWN SAM	NDY CL <del>ay</del>	A-6(5)	
		15	W/SOME SILT.				

BOR	ING: CS-2A	(S01114)	DATE DRILLED: 5/22/14				
STA	TION: 10+4	-5. 63	<b>DFFSET:</b> 1.10' <b>ELEVATION:</b> 33.73 <b>NORTHING:</b> 656627.331 <b>EASTING:</b>				
CON	MENTS: N/	′ A					
,		<b></b>	SAMPLE INFORMATION				
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS		
1	0.0	3	WET STIFF BROWN COARSE SANDY SILT W/SOME FINE SAND,	A-4(0)			
		6	GRAVEL AND CLAY.				
		9					
0	0.0	12	WET VERY RELIGE BROWN OF AVEY AND AREA CAMPY EINE ARAME	TI W (00)			
2	0.0	13	WET VERY DENSE BROWN CLAYEY COARSE SANDY FINE GRAVE	EL W/SOME A-2-4(0)			
7	2.0	50	FINE SAND AND SILT.	AND EINE A 4/4)			
3	2. 0	6	WET VERY STIFF BROWN CLAYEY SILT W/SOME FINE SAND A	AND FINE A-4(4)			
		8	GRAVEL, TRACE OF COARSE SAND.				
	4.0	8					
4	4. 0	11	WET MEDIUM DENSE BROWN CLAYEY COARSE TO FINE SAND W	V/SOME FINE A-2-4(0)			
+	4. 0		GRAVEL AND SILT.	V/ SOIME TINE A Z 4(0)			
		13 17	ONAVEL AND STET.				
	6.0	<u>-</u> 11					
5	6.0	2	WET VERY LOOSE BROWN SILTY COARSE TO FINE SAND W/SC	OME FINE A-2-4(0)			
Ŭ	0.0	2	GRAVEL AND CLAY.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
		2					
	8.0	1					
6	8.0	1	WET VERY LOOSE BROWN CLAYEY COARSE TO FINE SAND W/S	SOME FINE A-2-4(0)			
		1	GRAVEL AND SILT.				
		1					
	10.0	1					
7	10.0	2	NO SIEVE ANALYSIS - INDICATION OF WET DENSE BROWN F	INE GRAVEL			
		8	W/SOME COARSE TO FINE SAND AND SILT.				
		8					
	12.0	17					
8	12.0	50	WET DENSE BROWN FINE GRAVEL W/SOME COARSE TO FINE S	SAND AND A-1-A			
	14.0		SILT.				
C-1	14.0		BROKEN ROCK 19.5" RECOVERY 0% RQD				
	14.5		PROVEN POOK 70% PERONERY 11% POO				
C-2	14.5		BROKEN ROCK 38" RECOVERY 41% RQD				
	16.5		DDOVEN DOOK 74# DECOVEDY DECOVEDY 40% DOD				
C-3	16.5		BROKEN ROCK 34" RECOVERY RECOVERY 18% RQD				
	20.5		TAID DODING				
	20.5		END BORING				
	25. 5						

- 1. NORTHING AND EASTING COORDINATES ARE REFERENCED
  TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).
- 2. ELEVATIONS ARE BASED OFF OF NAVD 88.

	ADDENDUMS / REVISIONS
DELAWARE DEPARTMENT OF TRANSPORTATION	
DEPARTIVIENT OF TRANSPORTATION	

BOULDER - 7" RECOVERY 0% RQD

END BORING

13.0 18.0 18.0 23.0 WEATHERED ROCK 56" RECOVERY 70.1% RQD

SLIGHTLY WEATHERED ROCK 52" RECOVERY 83% RQD

NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A I				
T201407004						
COUNTY	DESIGNED BY: RMB					
NEW CASTLE	CHECKED BY: [	DEF				

SOIL BORING LOG - 1

40 TOTAL SHTS. 83

DOD.	ING: CS-4	(CO1110)	<b>DATE DRILLED:</b> 5/20/14		
	TION: 11+2	-		<b>NG:</b> 654535. 607	7 <b>EASTING:</b> 645645.604
	IMENTS: N/		CITALITY CONTRACTOR CO	<b>110.</b> 00.1000.007	LAGINIG. 013013.001
	IIII III III		SAMPLE INFORMATION		
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	3	MOIST VERY STIFF BROWN CLAYEY FINE TO COARSE SANDY SILT	A-4(0)	
		10	W/TRACE FINE GRAVEL.		
		16			
	0.0	9			
2	0.0	12	WET VERY STIFF BROWN SIL <mark>TY CLA</mark> Y W/SOME FINE SAND, TRACE OF	A-6(6)	
		15	COARSE SAND AND FINE GRAVEL.		
	0 0	14			
3	2.0	11 5	WET STIFF BROWN SILT W/SOME CLAY, TRACE OF FINE TO COARSE	A-4(4)	
J	2. 0	6	SAND AND FINE GRAVEL.	A-4(4)	
		8	SAND AND TINE GRAVEE.		
	4.0	10			
4	4.0	7	WET VERY STIFF BROWN CLAYEY SILT W/TRACE FINE TO COARSE SAND.	A-4(7)	
		8			
		9			
	6.0	8			
5	6.0	3	WET STIFF BROWN SILT W/TRACE FINE TO COARSE SAND.	A-4(0)	
		6			
	0 0	7			
6	8. 0 8. 0	8 11	WET HARD BROWN FINE GRAVELLY SILT W/SOME FINE SAND, TRACE OF	A-4(0)	
0	0. 0	26	COARSE SAND.	A-4(0)	
		14	COARD.		
	10.0	16			
7	10.0	3	WET STIFF BROWN CLAYEY FINE SANDY SILT W/SOME COARSE SAND AND	A-4(0)	
		8	FINE GRAVEL.		
		4			
_	12.0	7			
8	12.0	7	WET MEDIUM DENSE BROWN FINE SAND AND FINE GRAVEL W/SOME	<b>A</b> -1-B	
		15 14	COARSE SAND AND SILT.		
	14.0	15			
9	14.0	12	WET VERY DENSE BROWN SILTY FINE SAND AND FINE GRAVEL W/SOME	<b>A</b> -1-B	
Ŭ	1 16 0	32	COARSE SAND.	, , , , , , , , , , , , , , , , , , ,	
		27			
	16.0	20			
10	16.0	4	SATURATED STIFF BROWN FINE SANDY CLAY W/SOME SILT, TRACE OF	<b>A</b> -7-5(15)	
		5	COARSE SAND.		
	10.0	6			
11	18.0	8 3	SATURATED STIFF GREEN FINE SANDY CLAY W/SOME SILT, TRACE OF	A-7-5(5)	
'	10. U	6	COARSE SAND.	A-7-3(3)	
		8	COMINGE SAIND.		
	24.0	8			
12	24.0	7	SATURATED MEDIUM DENSE GREEN CLAYEY FINE SAND W/SOME COARSE	<b>A</b> -2-7(0)	
		12	SAND AND SILT.		
		12			
	29.0	12			
13	29.0	7	SATURATED HARD GREEN CLAYEY FINE SANDY SILT W/TRACE COARSE	A-4(3)	
	<b>7</b> ./ ∩	18 50	SAND.		
	34. 0 34. 0	30	END BORING		
	38.0		LIND BOTTING		

	RING: CS-5		DATE DRILLED: 5/20/14			
			OFFSET: 1.83' ELEVATION: N	3' <b>ELEVATION: NORTHING:</b> 639183. 31 <b>EASTING:</b> 63		
CON	MENTS: N/	<u>′ A</u>				
======			SAMPLE INFORMATION			
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS	
1	0.0	3	_  WET STIFF BROWN SILT W/SOME COARSE TO FINE SAND, FINE GRA	AVEL, A-4(0)		
		<b> </b> 7	TRACE OF CLAY.			
		5				
	0.0	8				
2	0.0	7	NO SIEVE ANALYSIS - INDICATION OF WET STIFF BROWN SILT W/	SOME		
		8	COARSE TO FINE SAND AND FINE GRAVEL.			
		6				
	2.0	5				
3	2.0	2	WET STIFF BROWN CLAYEY FINE GRAVELLY SILT W/SOME FINE TO	A-4(1)		
		3	COARSE SAND.			
		9				
	4.0	36				
4	4.0	15	WET HARD BROWN CLAY W/SO <mark>ME COA</mark> RSE TO FINE SAND, FINE GRAV	/EL A-6(2)		
		20	AND SILT.			
		25				
	6.0	18				
5	6.0	16	NO SIEVE ANALYSIS - INDI <mark>CATION</mark> OF WE <mark>T HARD</mark> BROWN CLAY W/S	SOME		
	8.0	50	COARSE TO FINE SAND, FINE GRAVEL AND SILT.			
C-1	8.0		BOULDERS 6" RECOVERY 0% RQD			
	8.0					
C-2	8.0		BOULDERS 7" RECOVERY 0% RQD			
	13.0					
C-3	13.0		ROCK 16" RECOVERY 0% RQD			
	18.0					
C-4	18.0		ROCK 15" RECOVERY 15% RQD			
	23.0					
2-5	23.0		NO RECOVERY			
	28.0					
	28.0		END BORING			
	33.0					

- 1. NORTHING AND EASTING COORDINATES ARE REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).
- 2. ELEVATIONS ARE BASED OFF OF NAVD 88.

o ject		ADDENDUMS / REVISIONS	
T:∖Dover∖Pr	DELAWARE DEPARTMENT OF TRANSPORTATION		N

NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A		
T001407004	B. 115 02 1101	IVA		
T201407004	DECICNED DV. DND			
COUNTY	DESIGNED BY: RMB			
NEW CASTLE	CHECKED BY: [	DEF		

SOIL BORING LOG - 2

STATIO	<b>ON:</b> 11+1	LE C <b>a</b> lled pe	OFFSET: 49.21' R BILL DETWILER AND DOUG FI	ELEVATION: 36.28	NORTH	<b>ING:</b> 626874. 092	<b>EASTING:</b> 621821.734				
	DEPTH		R BILL DETWILER AND DOUG FI			110, 02007 1: 002	EASIING. UZIUZI./34				
<b>NO.</b>											
<b>NO.</b>		SAMPLE INFORMATION									
1	0.0	BLOWS /6"		DESCRIPTION		CLASS /G.I.	REMARKS				
	i	2	MOIST LOOSE GRAY FINE TO C	OARSE SANDY FINE GI	RAVEL W/SOME	A-1-B					
		3	SILT.								
	0 0	5									
	0.0	6	MOLCE MEDILIN DENCE CDAY CO	ADCE TO FINE CAND	AND FINE ODAVEL	<b>A</b> 1 D					
2	0.0	6	MOIST MEDIUM DENSE GRAY CO	ARSE TO FINE SAND .	AND FINE GRAVEL	A-1-B					
		8	W/SOME SILT.								
	2.0	<u>9</u> 10									
3	2.0		MOIST MEDIUM DENSE GRAY SI	ITY FINE TO COARSE	SAND W/SOME FINE	A-2-4(0)					
J	∠. ∪	6 7	GRAVEL.	LITTINL TO COARSE	SAND W/ SUME FINE	A 2 4(U)					
		4	OKAVEL.								
	4.0	·									
4	4.0	8	MOIST STIFF GRAY COARSE TO	FINE SANDY SILT W	TRACE FINE	A-4(0)					
'	1.0	6	GRAVEL AND CLAY.	77112 371187 3727 11.	111102 1 1112						
		5									
	6.0	7									
5	6.0	7	MOIST VERY DENSE GRAY CLAY	EY FINE GRAVEL W/S	OME FINE TO	A-2-4(0)					
	8.0	50	COARSE SAND.								
6	8.0	50	NO RECOVERY								
	10.0										
7	10.0		BOULDER								
	12.0										
8	12.0		BOULDER								
	16.0		DOWN DED								
9	16.0		BOULDER								
10	18.0										
10	18.0		BOULDER								
11	24.0		BOULDER								
	24.0		DOOLDEN								
12	29.0		BOULDER								
1 4	34.0		BOOLDEN								
13	34.0		BOULDER								
	39.0										
	39.0		END BORING								
	41.0										
	-										

BOF	RING: CS-8	(SC1103 & SC	1107)	<b>DATE DRILLED:</b> 9/18/14			
<b>STATION:</b> 11+88.74						<b>IG:</b> 625718. 668	<b>EASTING:</b> 620286, 231
CON	MMENTS: OF	STRUCTION @	18.0′				
				SAMPLE INFORMATION			
NO.	DEPTH	BLOWS /6"		DESCRIPTION		CLASS /G.I.	REMARKS
1	0.0	3	MOIST LOOSE BROWN SIL	TY COARSE SAND AND FINE GRAVEL	W/SOME	A-2-4(0)	
		4	FINE SAND AND CLAY.				
		6					
	0.0	5					
2	0.0	7	MOIST MEDIUM DENSE BE	ROWN SILTY FINE TO COARSE SAND A	AND FINE	<b>A</b> -1-B	
		9	GRAVEL.				
		10					
	2.0	9					
3	2.0	6	-1	ROWN <mark>CLAYE</mark> Y COARSE S <mark>AND A</mark> ND FINE	E GRAVEL	A-2-4(0)	
		8	W/SOME FINE SAND AND	SILT.			
		8	-				
	4.0	8					
4	4.0	10	-	ROWN CLAYEY COARSE SAND AND FINE	E GRAVEL	A-2-4(0)	
		10	W/SOME FINE SAND AND	SILT.			
		10	-				
	6.0	8		VEV E VIE OR VIE V OV E VIVORUE O		1.440	
5	6.0	9		YEY <mark>FINE GRA</mark> VELL <mark>Y SILT</mark> W/SOME CO	DARSE TO	A-4(0)	
		16	FINE SAND.				
	0 0	16	-				
C	8.0	15 15	WET HADD DOWN OLAVE	/ FINE GRAVELLY SILT W/SOME FINE	- то	<b>A</b> 4(2)	
6	8.0		COARSE SAND.	FINE GRAVELLI SILI W/SUME FINE	= 10	A-4(2)	
		15	- CUARSE SAND.				
	10.0	15 15	-				
7	10.0	13	WET BROWN FINE GRAVE	LY CLAY W/SOME COARSE TO FINE S	CAND AND	A-6(1)	
′	12.0		SILT.	LET GEAT W/ SOME GOARGE TO TIME S	ANIA WIND	A 0(1)	
8	12.0	7		CLAYEY COARSE SANDY FINE GRAVEL	I Y S I I T	A-4(0)	
0	12.0	}	W/SOME FINE SAND.	OLIVIET GOMISE SAMET TIME GIVIVEE		7. 1. (0)	
		13	-				
	14.0	9	-				
9	14.0	11	WET VERY STIFF BROWN	FINE GRAVELLY CLAY W/SOME COARS	SE TO FINE	A-6(2)	
		13	SAND AND SILT.				
		13	-				
	16.0	14	-				
	16.0		END BORING				
	18.0						

- 1. NORTHING AND EASTING COORDINATES ARE REFERENCED
  TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).
- 2. ELEVATIONS ARE BASED OFF OF NAVD 88.

12 ojec		ADDENDUMS / REVISIONS			COI
)15 -\Pro	DELAWARE		NOT TO SCALE	CANTILEVER AND OVERHEAD SIGN	T201
/20	DEPARTMENT OF TRANSPORTATION		NOT TO SCALE	STRUCTURES, OPEN-END, FY16-18	C(
8/28 T:\D	<b>,</b>				NEW

CONTRACT
BRIDGE NO. NA

T201407004
COUNTY

SOIL BORING LOG - 3

TOTAL S

83

BOR	RING: DA-1	(SC1223)	<b>DATE DRILLED:</b> 7/28/14		
STA	<b>TION:</b> 0+95	. 22	OFFSET: 18. 31 LT. ELEVATION: 49. 82 NORTHI	<b>NG:</b> 4998. 9425	<b>EASTING:</b> 4957. 3929
CON	MENTS: RO	OCK CORE FROM	33.5' - 38.5' (100 % RECOVERY, 60 % RQD), 38.5' - 43.5' (100 %	RECOVERY, 42	% RQD)
			SAMPLE INFORMATION		
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0		MOIST BROWN SILTY COARSE SAND AND FINE GRAVEL W/SOME FINE	<b>A</b> -1-B	
	0.0		SAND.		
2	0.0		MOIST BROWN CLAYEY COARS <mark>E SAN</mark> DY FINE GRAVEL W/SOME FINE SAND	<b>A</b> -1-B	
	2.0		AND SILT.		
3	2.0	8	MOIST MEDIUM DENSE BROWN COARSE SAND AND FINE GRAVEL W/SOME	<b>A</b> -1-B	
		8	FINE SAND AND SILT.		
		9			
	4.0	9	NO CLEVE AND VOICE THE LOT WERE PROMITED TO THE PROPERTY OF TH		
4	4.0	8	NO SIEVE ANALYSIS - INDICATION OF MOIST MEDIUM DENSE BROWN		
		8	COARSE TO FINE SAND AND FINE GRAVEL.		
	0 0	8 			
	6.0	9	MOLET MEDILIM DENCE DROWN COARCE CAND AND FINE CRAVEL WICCOME	1 1 D	
5	6.0	·	MOIST MEDIUM DENSE BROWN COARSE SAND AND FINE GRAVEL W/SOME	A-1-B	
		8 7	FINE SAND AND SILT.		
	0 0				
6	8.0	1.0	MOIST MEDIUM DENSE BROWN COARSE SAND AND FINE GRAVEL W/SOME	A-1-B	
6	8.0	10		A-1-B	
		15 11	FINE SAND, TRACE OF SILT.		
	10.0	20			
7	10.0	8	MOIST MEDIUM DENSE BROWN COARSE SANDY FINE GRAVEL W/SOME SILT	A-1-A	
/	10.0	16	AND CLAY, TRACE OF FINE SAND.	A-I-A	
		18	AND CLAT, INACE OF FINE SAND.		
	12.0	18			
8	12.0	6	MOIST VERY DENSE BROWN COARSE SANDY FINE GRAVEL W/SOME FINE	<b>A</b> -1-B	
	12.0	40	SAND AND SILT, TRACE OF CLAY.		
		35	The state of sent.		
	14.0	50			
9	14.0	50	NO SIEVE ANALYSIS - INDICATION OF MOIST DENSE BROWN SILTY		
	16.0		FINE TO COARSE SAND.		
10	16.0	7	SATURATED VERY STIFF BROWN SILTY CLAY W/SOME COARSE SAND,	A-7-5(22)	
		8	TRACE OF FINE SAND.		
		9			
	18.0	11			
11	18.0	5	SATURATED VERY STIFF BROWN FINE SANDY CLAY W/SOME SILT AND	A-7-5(11)	
		8	COARSE SAND, TRACE OF FINE GRAVEL.		
		13			
	24.0	12			
12	24.0	5	SATURATED MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND.	A-2-4(0)	
		8			
		9			
	29.0	12			
13	29.0	50	NO SIEVE ANALYSIS - INDI <mark>catio</mark> n of Satur <mark>ated D</mark> ense B <mark>rown</mark> Silty		
	34.0		COARSE TO FINE SAND.		
	34.0		END BORING		
	36.0				

<u>B</u> or	RING: DA-2	(SC1206)		DATE DRILLED: 9/10/1	4		
STA	TION: 1+44.	. 29	<b>OFFSET:</b> 15. 75 RT.	<b>ELEVATION:</b> 49. 43		<b>NG:</b> 4962. 2700	<b>EASTING:</b> 5058. 4231
CON	MENTS: PC	SSIBLE OLD R	OAD/HOT-MIX @ 18'-20'				
				SAMPLE INFORMATIO	N		
NO.	DEPTH	BLOWS /6"		DESCRIPTION		CLASS /G.I.	REMARKS
1	0.0	3	MOIST MEDIUM DENSE BROWN	SILTY FINE GRAVEL W/SOM	E COARSE TO	A-2-4(0)	
		5	FINE SAND.				
		1 1					
	0.0	7					
2	0.0	16	MOIST HARD BROWN CLAYEY S	SILT W/TRACE COARSE TO F	INE SAND AND	A-4(6)	
		16	FINE GRAVEL.				
		1 4					
	2.0	12					
3	2.0	6	MOIST STIFF BROWN SILTY C	CLAY W/SOME FINE TO COAR	SE SAND.	A-6(9)	
-		7	TRACE OF SILT.		,		
		6					
	4.0	9					
4	4. 0	11	MOIST STIFF BROWN CLAYEY	SILT W/SOME FINE GRAVEL	AND COARSE	A-4(3)	
,		8	SAND, TRACE OF FINE SAND.			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		7	The state of the s				
	6.0	9					
5	6.0	7	MOIST MEDIUM DENSE BROWN	COARSE SANDY FINE GRAVE	I W/SOME FINE	A-1-A	
	0.0	3	SAND AND SILT.	COARSE SANDITIME ORATE	E W/ SOME I TIVE		
		11	SAND AND STET.				
	8.0	9					
6	8. 0	7	WET MEDIUM DENSE BROWN CL	AVEY COARSE TO FINE SAN	D W/SOME SILT	A-2-4(0)	
0	0.0	 8	AND FINE GRAVEL.	TATEL COANSE TO TIME SAN	D W/JONE SILI	A 2 4(0)	
		 7	AND TINE SHAVEE.				
	10.0	 8					
7	10.0	6	WET MEDIUM DENSE BROWN SI	LLTY FINE TO COARSE SAND	W/SOME FINE	A-2-4(0)	
′	10.0	6	GRAVEL.	TETT TINE TO COARSE SAND	W/ JOIVIL I TIVL	A 2 4(0)	
		6	ONAVEE.				
	12.0	6					
8	12.0	5	WET MEDIUM DENSE BROWN SI	ILTY FINE TO COARSE SAND	W/SOME FINE	A-2-4(0)	
O	12.0	 6	GRAVEL.	TETT TINE TO COANSE SAND	W/JOIVIL I TIVL	A 2 4(0)	
		6	ONAVEE.				
	14.0	9					
9	14.0	12	WET MEDIUM DENSE BROWN CO	TARSE SAND AND FINE CDAN	EL W/SOME	<b>A</b> -1-B	
IJ	14.0	L 11	FINE SAND, TRACE OF SILT.		LL W/ JUNE		
			I THE SAND, THACE OF SIET.				
	16.0	10					
10	16.0	6	WET MEDIUM DENSE BROWN CO	ARCE TO FINE CAND W/COM	E EINE ODAVEI	<b>A</b> -1-B	
10	10.0	5	AND SILT.	DANSE TO FINE SAND W/SUN	IL I TINE GMAVEL	H-1-D	
		6	AND SILI.				
	18.0	8					
11	18. 0	13	SATURATED STIFF BROWN COA	ARSE TO FINE CANDY SILT	W/SOME CLAV	A-5(1)	
1 1	10.0		SATURATED STITL DIVOWN COA	THE TO THE SANDI SILI	H/ JOIVIL CLAI.	A 3(1)	
		9					
	24.0	5					
R-1	24. 0	J	RECOVERY - 90% RQD - 47%			+	
η – I			NECUVERT - 90% KUD - 4/%				
D 0	26.0		DECOVEDY 56° DOD 54°				
R-2	26.0		RECOVERY - 56% RQD - 51%				
	31.0		END DODING				
	31.0		END BORING				
	35. 5						

- 1. NORTHING AND EASTING COORDINATES ARE BASED OFF AN ASSUMED HORIZONTAL DATUM.
- 2. ELEVATIONS ARE BASED OFF AN ASSUMED VERTICAL DATUM.

9.03 -	DELAMADE	ADDENDUMS / REVISIONS	
J:\42.5009	DEPARTMENT OF TRANSPORTATION		NOT TO S

CONTRACT	BRIDGE NO.	N/A
T201407004	DECIONED DV.	2010
COUNTY	DESIGNED BY: F	KMR
NEW CASTLE	CHECKED BY: [	DEF

SOIL BORING LOG - 4

	ING: DA-4			DATE DRILLED: 9/15/14	1	-	1
	<b>ΓΙΟΝ:</b> 1+49.		OFFSET: 1. 23 LT.	ELEVATION: 48. 46	NORTHI	<b>NG:</b> 5336. 7139	<b>EASTING:</b> 4715. 9269
CON	IMENIS: AL	IGER REFUSAL	@ 42.5'. LOST PLUG DOWN HOL				
NO.	DEPTH	BLOWS /6"	· <sub>[</sub>	SAMPLE INFORMATION DESCRIPTION		CLASS /G.I.	REMARKS
1 <b>VO.</b>	0. 0	<b>BLUWS / 0</b> 5		DESCRIPTION  LTY FINE GRAVEL W/SOME COA	JRSE TO	A-1-B	NEIVIANNO
1	1.0	7	FINE SAND.	TETT TIME ONAVEL W/ SOME COA	INSE TO	AID	
2	1.0	9		ATION OF MOIST MEDIUM DENSE	GRAY		
		8	SILTY FINE GRAVEL W/SOME (				
		7					
	2.0	10					
3	2.0	8	- 1	EY SILT W/SOME FINE GRAVEL,	TRACE OF	A-4(4)	
		10	FINE TO COARSE SAND.	TO COARSE SAND.			
	4 0	12					
4	4.0	11	WET VEDY CTIES DOWN CHITA	/ OLAV W/COME FINE ODAVEL	TD LOE OF	<b>A</b> C(O)	
4	4.0	8 10	-	Y CLAY W/SOME FINE GRAVEL,	TRACE OF	A-6(9)	
		14	COARSE TO FINE SAND.				
	6.0	15					
5	6.0	8	WET MEDIUM DENSE BROWN COA	ARSE SAND AND FINE GRAVEL W	I/SOME	A-1-B	
Ŭ	J. J	10	FINE SAND AND SILT.				
		11					
	8.0	11					
6	8.0	8		NE S <b>a</b> ndy fine <mark>grave</mark> l W/some	COARSE	<b>A</b> -1-B	
		12	SAND AND SILT.				
		13					
7	10.0	14	WET DENCE DROWN COARCE CAN	IDV FINE ODAVEL WYCONE FINE	CAND AND		
7	10.0	12	-	NDY FINE GRAVEL W/SOME FINE	: SAND AND	<b>A</b> -1-B	
		21	SILT.				
	12.0	20 14	-				
8	12.0	17	WET DENSE BROWN SILTY COAF	RSE TO FINE SAND AND FINE G	GRAVEI	A-2-4(0)	
		21	W/SOME CLAY.			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		26					
	14.0	32					
9	14.0	8		SANDY SILT W/TRACE COARSE	SAND AND	A-4(0)	
		11	FINE GRAVEL.				
	4.0	7					
1.0	16.0	14	NO CLEVE ANALYCIC INDICA	ATION OF WET HADD DOOWN FIN	IE CANDY		
10	16.0	21 24	NO STEVE ANALYSIS - INDICA   SILT W/TRACE COARSE SAND A	ATIO <mark>n of Wet Ha</mark> rd Brown Fin	NE SANDI		
		18	STET W/ THACE COARSE SAIND A	AND TINE GRAVEE.			
	18.0	20					
11	18.0	18	WET HARD BROWN CLAYEY COAF	RSE SANDY SILT W/SOME FINE	SAND AND	A-4(1)	
		20	FINE GRAVEL.				
		16					
	24.0	19					
12	24.0	10	-	AYEY COARSE SAND AND FINE G	GRAVEL	A-2-4(0)	
		12	. W/SOME FINE S <mark>AND A</mark> ND SIL <mark>T.</mark>				
	29.0	1 4 1 7					
13	29.0	12	NO SIEVE ANALYSIS - INDICA	ATION OF WET MEDIUM DENSE B	RROWN		
13	Z9. U	13	SILTY COARSE TO FINE SAND		DIVOWIN		
		15	STETT COARGE TO THE SAND	WY SOME TIME STAVEL.			
	34.0	13					
14	34.0	8	WET MEDIUM DENSE BROWN SIL	TY COARSE TO FINE <mark>SAND W/</mark> S	SOME FINE	A-2-4(0)	
		9	GRAVEL.				
		15					
	39.0	16	END DODANG				
	39.0		END BORING				
	41.0						

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### NOTES:

- 1. NORTHING AND EASTING COORDINATES ARE BASED OFF AN ASSUMED HORIZONTAL DATUM.
- 2. ELEVATIONS ARE BASED OFF AN ASSUMED VERTICAL DATUM.

DELAWARE
DEPARTMENT OF TRANSPORTATION

NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT
BRIDGE NO.

T201407004

COUNTY

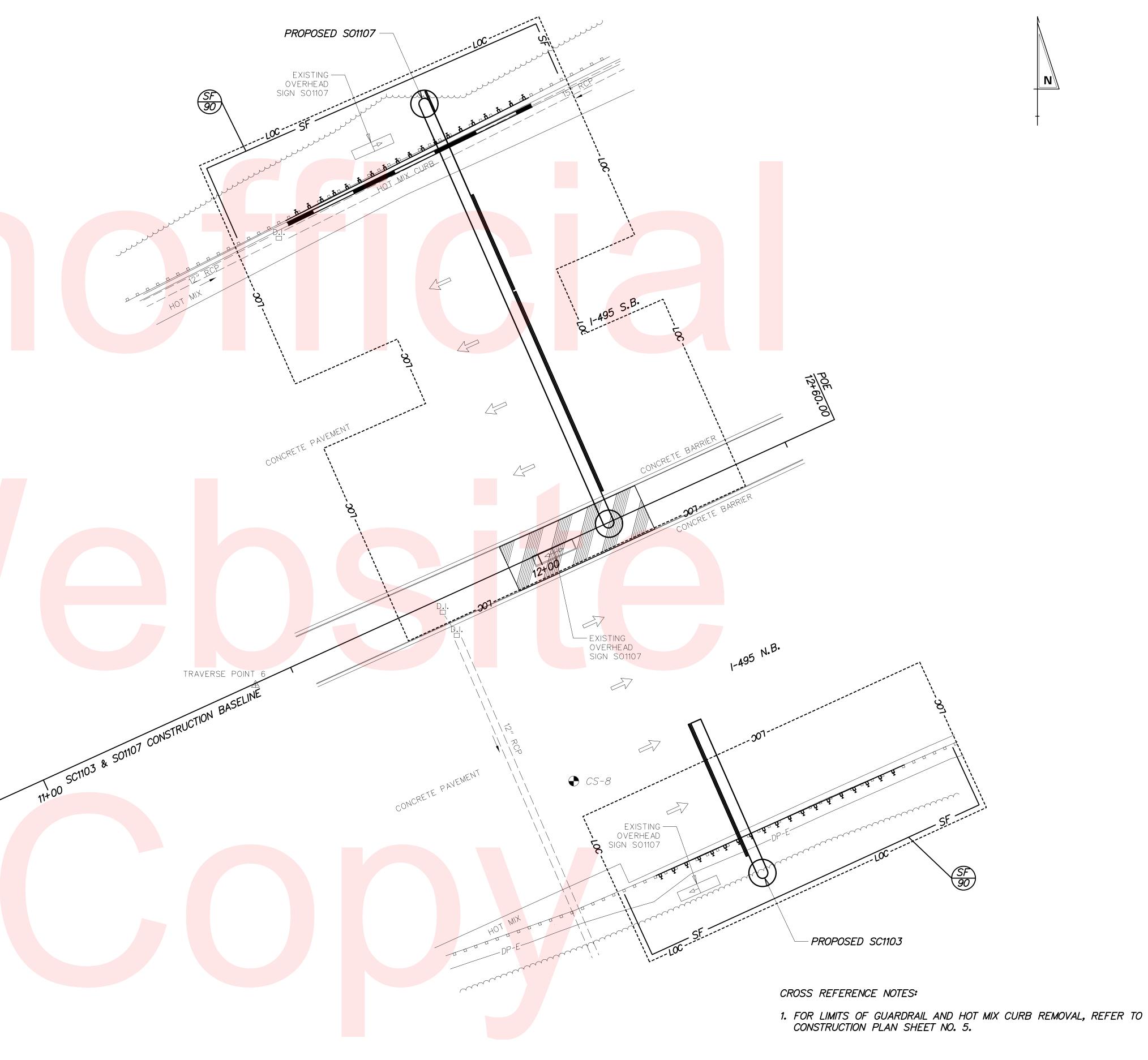
DESIGNED BY: RMB

CHECKED BY: DEF

SOIL BORING LOG - 5

44 TOTAL SHTS. 83

- 1. INSTALL MOT DEVICES IN ACCORDANCE WITH DELDOT MUTCD STANDARDS. FOR CONSTRUCTION ACTIVITIES ADJACENT TO THE OUTSIDE SHOULDERS, USE SHOULDER CLOSURE DETAIL ON SHEET 59. FOR MEDIAN LANE CLOSURES, USE TA-33(B).
- 2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN.
- 3. REMOVE GUARDRAIL AND HOT MIX CURB TO THE EXTENTS SHOWN IN THE PLANS. DO NOT DISTURB THE MEDIAN BARRIER.
- 4. PERFORM EXCAVATIONS FOR DRILLED SHAFT TO THE DIMENSIONS AND ELEVATION SHOWN IN THE PLANS.
- 5. PERFORM REMAINING CONSTRUCTION ACTIVITY IN WORK AREA AS PER PLANS, INCLUDING PLACING NEW SIGN STRUCTURE, REMOVING EXISTING SIGN STRUCTURE, AND REPLACING GUARDRAIL AND HOT MIX CURB TO MATCH EXISTING.
- 6. INSTALLATION OF PROPOSED SIGN STRUCTURE AND REMOVAL OF EXISTING SIGN STRUCTURE SHALL BE RESTRICTED TO NIGHTTIME HOURS ONLY. ROLLING ROAD BLOCKS IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-35H SHALL BE USED. THE CONTRACTOR SHALL CONTACT DELDOT TRAFFIC TO COORDINATE THE DURATION AND WORK HOUR RESTRICTIONS FOR THE ROLLING ROAD BLOCKS.
- 7. EXISTING SIGN STRUCTURE MAY NOT BE REMOVED UNTIL AFTER THE NEW REPLACEMENT SIGN STRUCTURE IS INSTALLED AND ACCEPTED, UNLESS NOTED ON THE PLANS OR OTHERWISE APPROVED BY THE ENGINEER. INSTALL TEMPORARY SIGNS WHERE NEW SIGN STRUCTURES BLOCK THE VIEW OF SIGNS ON EXISTING SIGN STRUCTURES.
- 8. COMPLETE ALL REMAINING WORK INCLUDING FULL RES<mark>TORATION OF AREAS</mark> TO ITS ORG<mark>INAL CONDITIONS, ROADWAY REPAIR, AND GRADING.</mark>
- 9. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.
- 10. REMOVE ALL MOT DEVICES INCLUDING TEMPORARY SIGNS AND REOPEN THE ROADWAY.



DELAWARE DEPARTMENT OF TRANSPORTATION

TRAVERSE POINT

ADDENDUMS / REVISIONS

SCALE

1 10 20

FEET

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A	C
T201407004			
COUNTY	DESIGNED BY: PM		
NEW CASTLE	CHECKED BY: [	DEF	

CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLAN SIGN STRUCTURES SC1103 AND SO1107

TOTAL SHTS.

83

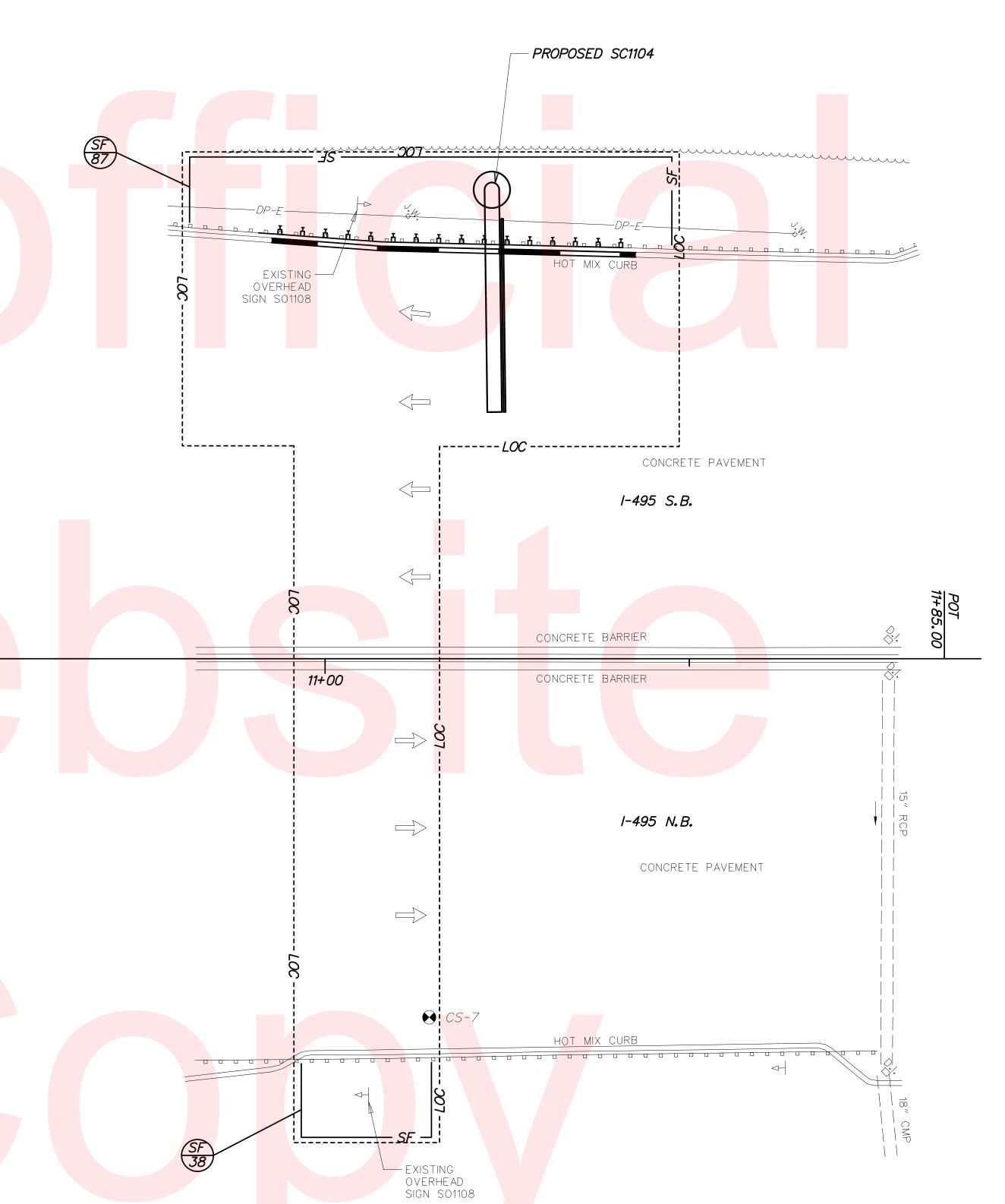
- 1. INSTALL MOT DEVICES IN ACCORDANCE WITH DELDOT MUTCD STANDARDS. FOR CONSTRUCTION ACTIVITIES ADJACENT TO THE OUTSIDE SHOULDERS, USE SHOULDER CLOSURE DETAIL ON SHEET 59.
- 2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN.
- 3. REMOVE GUARDRAIL AND HOT MIX CURB TO THE EXTENTS SHOWN IN THE PLANS.
- 4. PERFORM EXCAVATIONS FOR DRILLED SHAFT TO THE DIMENSIONS AND ELEVATION SHOWN IN THE PLANS.
- 5. PERFORM REMAINING CONSTRUCTION ACTIVITY IN WORK AREA AS PER PLANS, INCLUDING PLACING NEW SIGN STRUCTURE, REMOVING EXISTING SIGN STRUCTURE, AND REPLACING GUARDRAIL AND HOT MIX CURB TO MATCH EXISTING.
- 6. INSTALLATION OF PROPOSED SIGN STRUCTURE AND REMOVAL OF EXISTING SIGN STRUCTURE SHALL BE RESTRICTED TO NIGHTTIME HOURS ONLY. ROLLING ROAD BLOCKS IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-35H SHALL BE USED. THE CONTRACTOR SHALL CONTACT DELDOT TRAFFIC TO COORDINATE THE DURATION AND WORK HOUR RESTRICTIONS FOR THE ROLLING ROAD BLOCKS.
- 7. EXISTING SIGN STRUCTURE MAY NOT BE REMOVED UNTIL AFTER THE NEW REPLACEMENT SIGN STRUCTURE IS INSTALLED AND ACCEPTED, UNLESS NOTED ON THE PLANS OR OTHERWISE APPROVED BY THE ENGINEER. INSTALL TEMPORARY SIGNS WHERE NEW SIGN STRUCTURES BLOCK THE VIEW OF SIGNS ON EXISTING SIGN STRUCTURES.
- 8. COMPLETE ALL REMAINING WORK INCLUDING FULL RESTORATION OF AREAS TO ITS ORGINAL CONDITIONS, ROADWAY REPAIR, AND GRADING.
- 9. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.

SC1104 CONSTRUCTION BASELINE

10+00

TRAVERSE POINT 7

10. REMOVE ALL MOT DEVICES INCLUDING TEMPORARY SIGNS AND REOPEN THE ROADWAY.



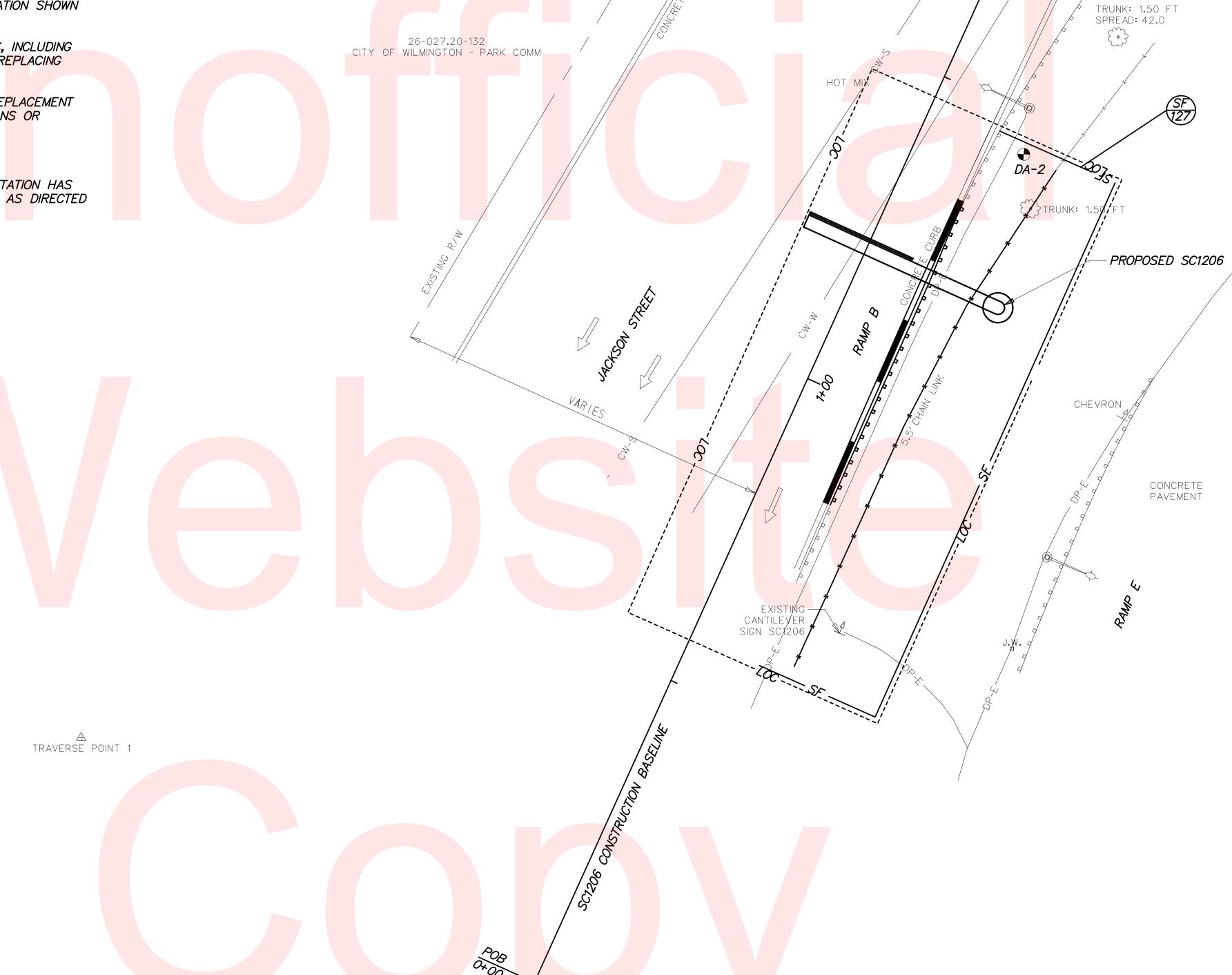
CROSS REFERENCE NOTES:

1. FOR LIMITS OF GUARDRAIL AND HOT MIX CURB REMOVAL, REFER TO CONSTRUCTION PLAN SHEET NO. 6.

ADDENDUMS / REVISIONS CONSTRUCTION PHASING, CONTRACT N/A BRIDGE NO. M.O.T. AND EROSION CONTROL PLAN **DELAWARE** CANTILEVER AND OVERHEAD SIGN T201407004 DESIGNED BY: PM **DEPARTMENT OF TRANSPORTATION** STRUCTURES, OPEN-END, FY16-18 COUNTY SIGN STRUCTURES SC1104 AND SO1108 NEW CASTLE CHECKED BY: DEF

2014\42.5009.02 - Overhead Sign Strc I-495 Task2 Amnt 1673\Drawings\Plans`

- 1. INSTALL MOT DEVICES IN ACCORDANCE WITH TYPICAL APPLICATION 33 (B) OF THE DELAWARE MUTCD FOR THE LEFT LANE ON JACKSON STREET AND IN ACCORDANCE WITH THE DETOUR PLAN.
- 2. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN. NEAREST TWO DRAINAGE INLETS SOUTH OF THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED WITH ITEM 905005 INLET SEDIMENT CONTROL, CURB INLET.
- 3. REMOVE CHAIN LINK FENCE, GUARDRAIL AND CONCRETE CURB TO THE EXTENTS SHOWN IN THE PLANS.
- 4. PERFORM EXCAVATIONS FOR DRILLED SHAFT TO THE DIMENSIONS AND ELEVATION SHOWN IN THE PLANS.
- 5. PERFORM REMAINING CONSTRUCTION ACTI<mark>VITY IN WORK AREA AS PER PLANS, INCLUDING PLACING NEW SIGN STRUCTURE, REMOVING EXISTING SIGN STRUCTURE, AND REPLACING CHAIN LINK FENCE, GUARDRAIL AND CONCRETE CURB TO MATCH EXISTING.</mark>
- 6. EXISTING SIGN STRUCTURE MAY NOT BE REMOVED UNTIL AFTER THE NEW REPLACEMENT SIGN STRUCTURE IS INSTALLED AND ACCEPTED, UNLESS NOTED ON THE PLANS OR OTHERWISE APPROVED BY THE ENGINEER.
- 7. COMPLETE ALL REMAINING WORK INCLUDING ROADWAY REPAIR AND GRADING.
- 8. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.
- 9. REMOVE ALL MOT DEVICES AND REOPEN THE ROADWAY.



TRAVERSE POINT 2

### CROSS-REFERENCE NOTES:

1. FOR LIMITS OF CHAIN LINK FENCE, GUARDRAIL AND CONCRETE CURB REMOVAL, REFER TO CONSTRUCTION PLAN, SHEET NO. 7.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE

0 10 20 3

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN–END, FY16–18

NTRACT	BRIDGE NO.	N/A	CONICEDIA
1407004			CONSTRU M.O.T.,
YTNUC	DESIGNED BY: (	JWS	CON
CASTLE	CHECKED BY: [	DEF	SIGN ST

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN SIGN STRUCTURE SC1206

- 1. INSTALL MOT DEVICES IN ACCORDANCE WITH TYPICAL APPLICATION 37 OF THE DELAWARE
- 2. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN. NEAREST TWO DRAINAGE INLETS SOUTH OF THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED WITH ITEM 905004 - INLET SEDIMENT CONTROL, DRAINAGE INLET.
- 3. REMOVE CONCRETE SAFETY BARRIER, CONCRETE CURB, AND SIDEWALK TO THE EXTENTS SHOWN IN THE PLANS. INSTALL 12 FOOT LENGTH OF P.C.C. SAFETY BARRIER WITH TAPERED END AT UPSTREAM END OF EXPOSED BARRIER
- 4. PERFORM EXCAVATIONS FOR DRILLED SH<mark>AFT TO THE DIMENSIONS AND</mark> ELEVATION SHOWN IN THE PLANS. CONTRACTOR SHALL REMO<mark>VE A</mark>LL EXCAVATED MAT<mark>ERIAL</mark> AT THE END OF EACH WORK DAY.
- 5. PERFORM REMAINING CONSTRUCTION ACTI<mark>VITY IN WORK AREA AS PER PLANS, INCLUDING</mark> PLACING NEW SIGN STRUCTURE, REMOVING EXISTING SIGN STRUCTURE, AND REPLACING CONCRETE SAFETY BARRIER, CONCRETE CURB, AND SIDEWALK TO MATCH EXISTING.
- 6. INSTALLATION OF PROPOSED SIGN STRUC<mark>TURE</mark> AND REMOVAL OF EXISTING SIG<mark>N ST</mark>RUCTURE SHALL BE RESTRICTED TO NIGHTTIME CLOSURE HOURS ONLY.
- 7. EXISTING SIGN STRUCTURE MAY NOT BE REMOVED UNTIL AFTER THE NEW REPLACEMENT SIGN STRUCTURE IS INSTALLED AND ACCEPTED, UNLESS NOTED ON THE PLANS OR OTHERWISE APPROVED BY THE ENGINEER.
- 8. COMPLETE ALL REMAINING WORK INCLUDING ROADWAY REPAIR AND GRADING.
- 9. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.
- 10. REMOVE ALL MOT DEVICES AND REOPEN THE ROADWAY.

PROPOSED SC1221 CANTILEVER SIGN SC1221 26-028.10-072 PROPRIETORS OF THE WILMINGTON AND BRANDYWINE CEMETARY D.R. B-114-69 TRAVERSE POINT 4 TOP 48.75 CANNOT OPEN SPREAD 10.0 PU

CROSS-REFERENCE NOTES:

FOR LIMITS OF CONCRETE SAFETY BARRIER, CONCRETE CURB AND SIDEWALK REMOVAL, REFER TO CONSTRUCTION PLAN, SHEET NO. 8.

**DELAWARE** DEPARTMENT OF TRANSPORTATION ADDENDUMS / REVISIONS

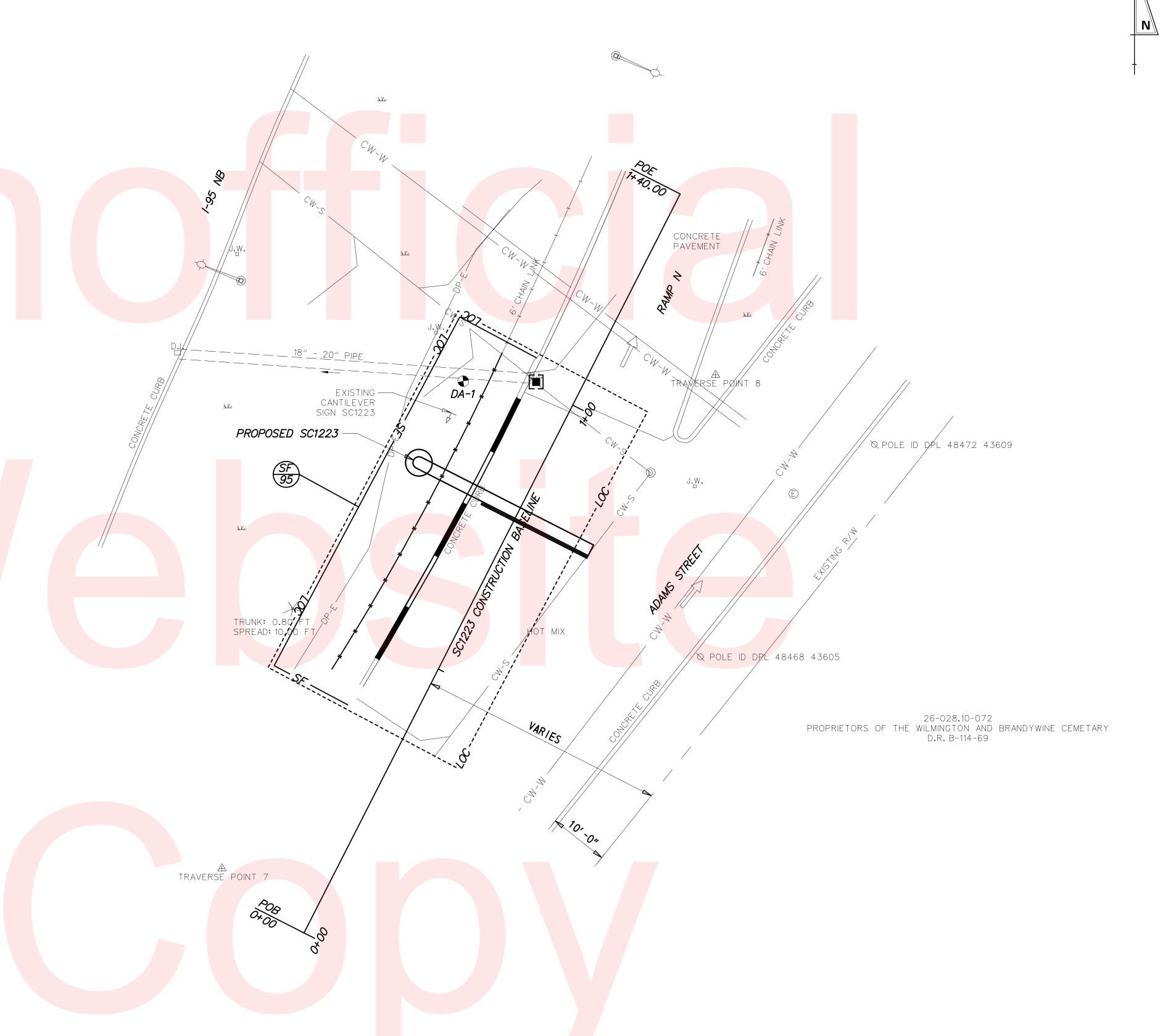
CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

N/A BRIDGE NO. T201407004 DESIGNED BY: JWS COUNTY CHECKED BY: DEF NEW CASTLE

TRAVERSE POINT 3

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN **SIGN STRUCTURE SC1221** 

- 1. INSTALL MOT DEVICES IN ACCORDANCE WITH THE DETOUR PLAN.
- 2. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN, NEAREST TWO DRAINAGE INLETS NORTH OF THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED WITH ITEM 905005 - INLET SEDIMENT CONTROL, CURB INLET.
- 3. REMOVE CHAIN LINK FENCE AND CONCRETE CURB TO THE EXTENTS SHOWN IN THE PLANS.
- 4. PERFORM EXCAVATIONS FOR DRILLED SHAFT TO THE DIMENSIONS AND ELEVATION SHOWN IN THE PLANS.
- 5. PERFORM REMAINING CONSTRUCTION ACTI<mark>VITY IN WORK AREA AS PER PLANS, INCLUDING</mark> PLACING NEW SIGN STRUCTURE, REMOVING EXISTING SIGN STRUCTURE, AND REPLACING CHAIN LINK FENCE AND CONCRETE CURB TO MATCH EXISTING.
- 6. EXISTING SIGN STRUCTURE MAY NOT BE REMOVED UNTIL AFTER THE NEW REPLACEMENT SIGN STRUCTURE IS INSTALLED AND ACCEPTED, UNLESS NOTED ON THE PLANS OR OTHERWISE APPROVED BY THE ENGINEER.
- 7. COMPLETE ALL REMAINING WORK INCLUDING ROADWAY REPAIR AND GRADING.
- 8. REMOVE TEMPORARY EROSION AND SEDIM<mark>ENT CONTROL DEVICES AFTER VEGETATION HAS</mark> STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.
- 9. REMOVE ALL MOT DEVICES AND REOPEN THE ROADWAY.



### CROSS-REFERENCE NOTES:

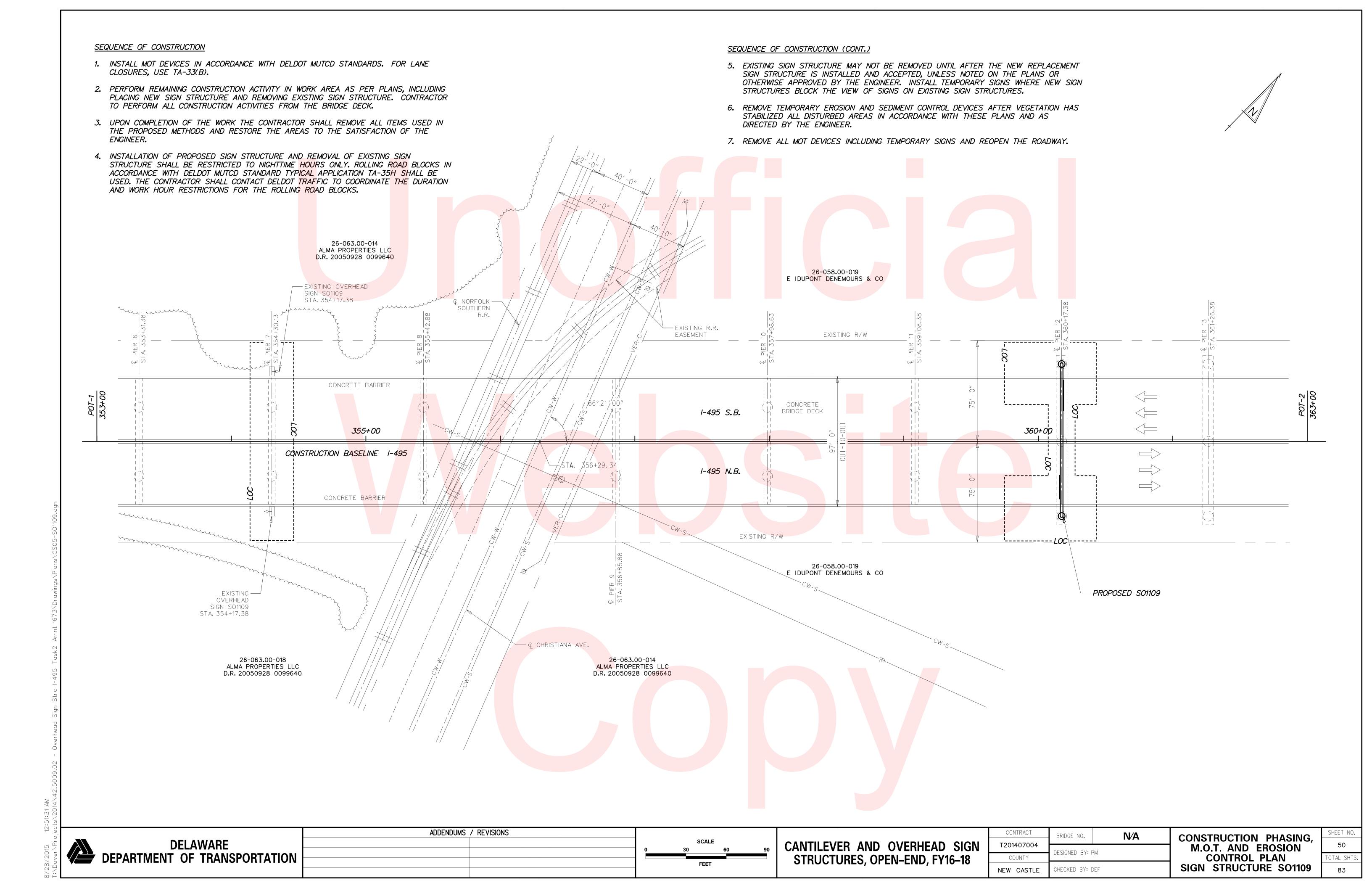
1. FOR LIMITS OF CHAIN LINK FENCE AND CONCRETE CURB REMOVAL, REFER TO CONSTRUCTION PLAN, SHEET NO. 9.

**DELAWARE** DEPARTMENT OF TRANSPORTATION ADDENDUMS / REVISIONS

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A	CONOTRUCTION
T201407004			CONSTRUCTION M.O.T., AND
COUNTY	DESIGNED BY: I	KWR	CONTROL
NEW CASTLE	CHECKED BY: I	DEF	SIGN STRUCTU

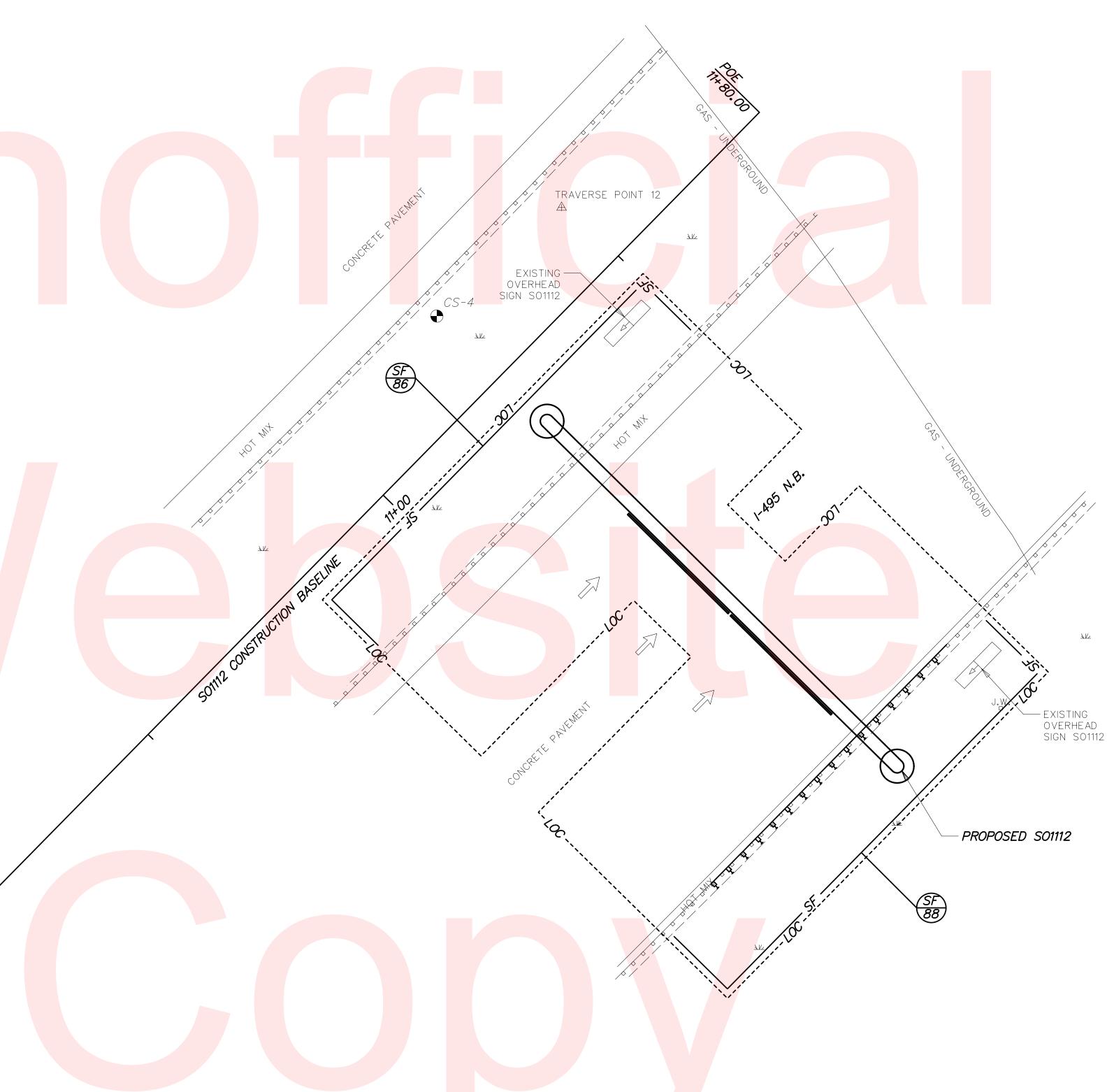
N PHASING, EROSION L PLAN **TURE SC1223** 



- 1. INSTALL MOT DEVICES IN ACCORDANCE WITH DELDOT MUTCD STANDARDS. FOR CONSTRUCTION ACTIVITIES ADJACENT TO THE OUTSIDE SHOULDERS, USE SHOULDER CLOSURE DETAIL ON SHEET 59. FOR CONSTRUCTION ACTIVITIES PERFORMED IN THE MEDIAN OF THE ROADWAY, WORK MUST BE PERFORMED BEHIND THE GUARDRAIL IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-1.
- 2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN.
- 3. REMOVE GUARDRAIL TO THE EXTENTS SHOWN IN THE PLANS.
- 4. PERFORM EXCAVATIONS FOR DRILLED SHAFT TO THE DIMENSIONS AND ELEVATION SHOWN IN THE PLANS.
- 5. PERFORM REMAINING CONSTRUCTION ACTIVITY IN WORK AREA AS PER PLANS, INCLUDING PLACING NEW SIGN STRUCTURE, REMOVING EXISTING SIGN STRUCTURE, AND REPLACING GUARDRAIL TO MATCH EXISTING.
- 6. INSTALLATION OF PROPOSED SIGN STRUCTURE AND REMOVAL OF EXISTING SIGN STRUCTURE SHALL BE RESTRICTED TO NIGHTTIME HOURS ONLY, ROLLING ROAD BLOCKS IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-35H SHALL BE USED. THE CONTRACTOR SHALL CONTACT DELDOT TRAFFIC TO COORDINATE THE DURATION AND WORK HOUR RESTRICTIONS FOR THE ROLLING ROAD BLOCKS.
- 7. EXISTING SIGN STRUCTURE MAY NOT BE REMOVED UNTIL AFTER THE NEW REPLACEMENT SIGN STRUCTURE IS INSTALLED AND ACCEPTED, UNLESS NOTED ON THE PLANS OR OTHERWISE APPROVED BY THE ENGINEER. INSTALL TEMPORARY SIGNS WHERE NEW SIGN STRUCTURES BLOCK THE VIEW OF SIGNS ON EXISTING SIGN STRUCTURES.
- 8. COMPLETE ALL REMAINING WORK INCLUDING FULL RESTORATION OF AREAS TO ITS ORGINAL CONDITIONS, ROADWAY REPAIR, AND GRADING.
- 9. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.

A traverse point 11

10. REMOVE ALL MOT DEVICES INCLUDING TEMPORARY SIGNS AND REOPEN THE ROADWAY.



CROSS REFERENCE NOTES:

1. FOR LIMITS OF GUARDRAIL REMOVAL, REFER TO CONSTRUCTION PLAN SHEET NO. 11.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE

1 10 20

FEET

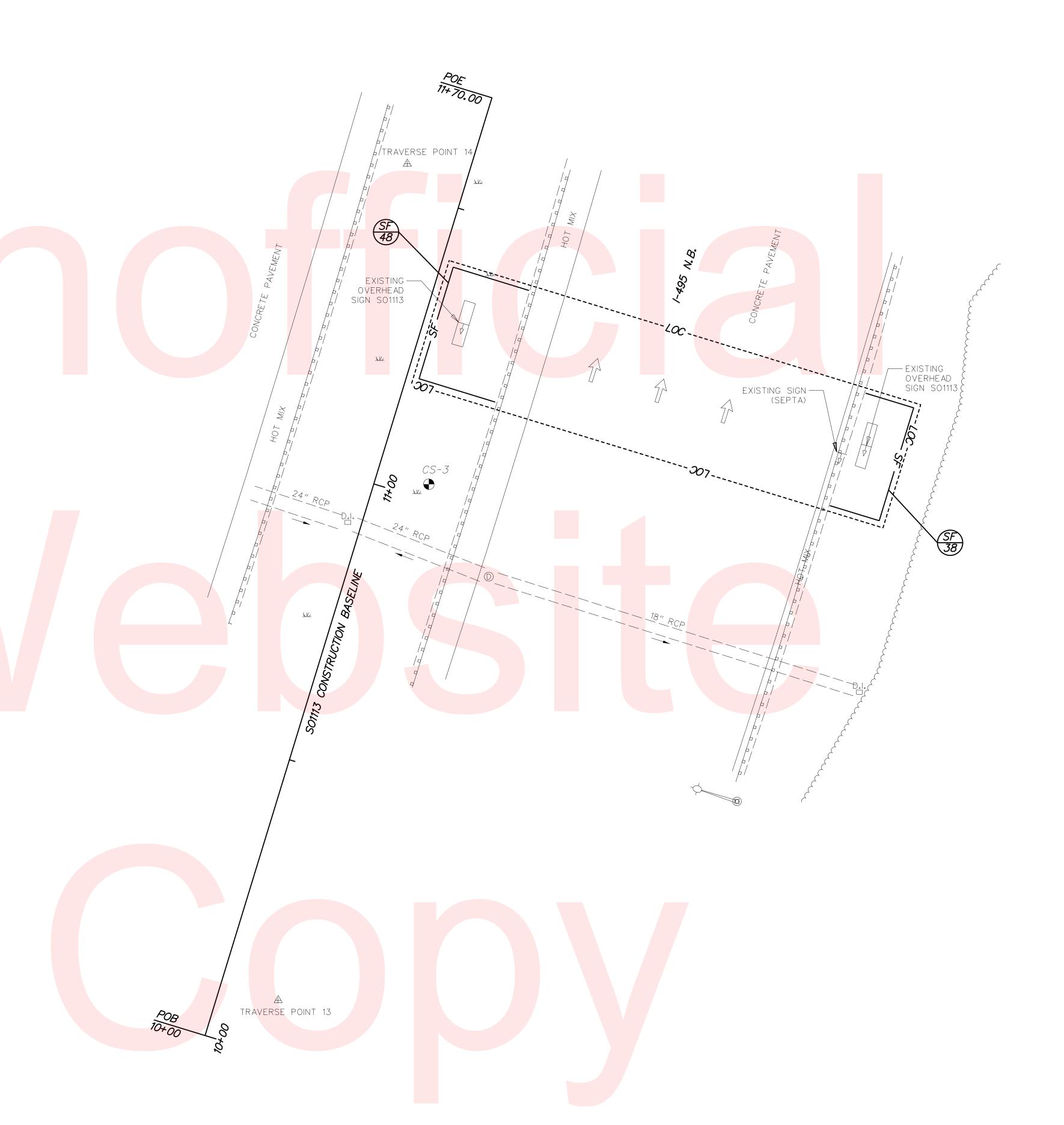
CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A	CONCEDIA
T201407004			CONSTRUC M.O.T.
COUNTY	DESIGNED BY: F	7M	CON.
NEW CASTLE	CHECKED BY: [	DEF	SIGN STF

CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLAN SIGN STRUCTURE SO1112

51 TOTAL SHTS. 2 83

- 1. ROLLING ROAD BLOCKS IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-35H SHALL BE USED. THE CONTRACTOR SHALL CONTACT DELDOT TRAFFIC TO COORDINATE THE DURATION AND WORK HOUR RESTRICTIONS FOR THE ROLLING ROAD BLOCKS.
- 2. INSTALL MOT DEVICES IN ACCORDANCE WITH DELDOT MUTCD STANDARDS. FOR CONSTRUCTION ACTIVITIES PERFORMED IN THE MEDIAN OF THE ROADWAY, WORK MUST BE PERFORMED BEHIND THE GUARDRAIL IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-1.
- 3. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN.
- 4. RELOCATE EXISTING SEPTA SIGN 10' SOUTH ALONG GUARDRAIL PRIOR TO REMOVING EXISTING SIGN STRUCTURE SO1113.
- 5. PERFORM REMAINING CONSTRUCTION ACTIVITY IN WORK AREA AS PER PLANS, INCLUDING REMOVING EXISTING SIGN STRUCTURE AND RELOCATING THE EXISTING SEPTA SIGN.
- 6. COMPLETE ALL REMAINING WORK INCLUDING FULL RESTORATION OF AREAS TO ITS ORGINAL CONDITIONS, ROADWAY REPAIR, AND GRADING.
- 7. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.
- 8. REMOVE ALL MOT DEVICES INCLUDING TEMPORARY SIGNS AND REOPEN THE ROADWAY.



DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE

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FEET

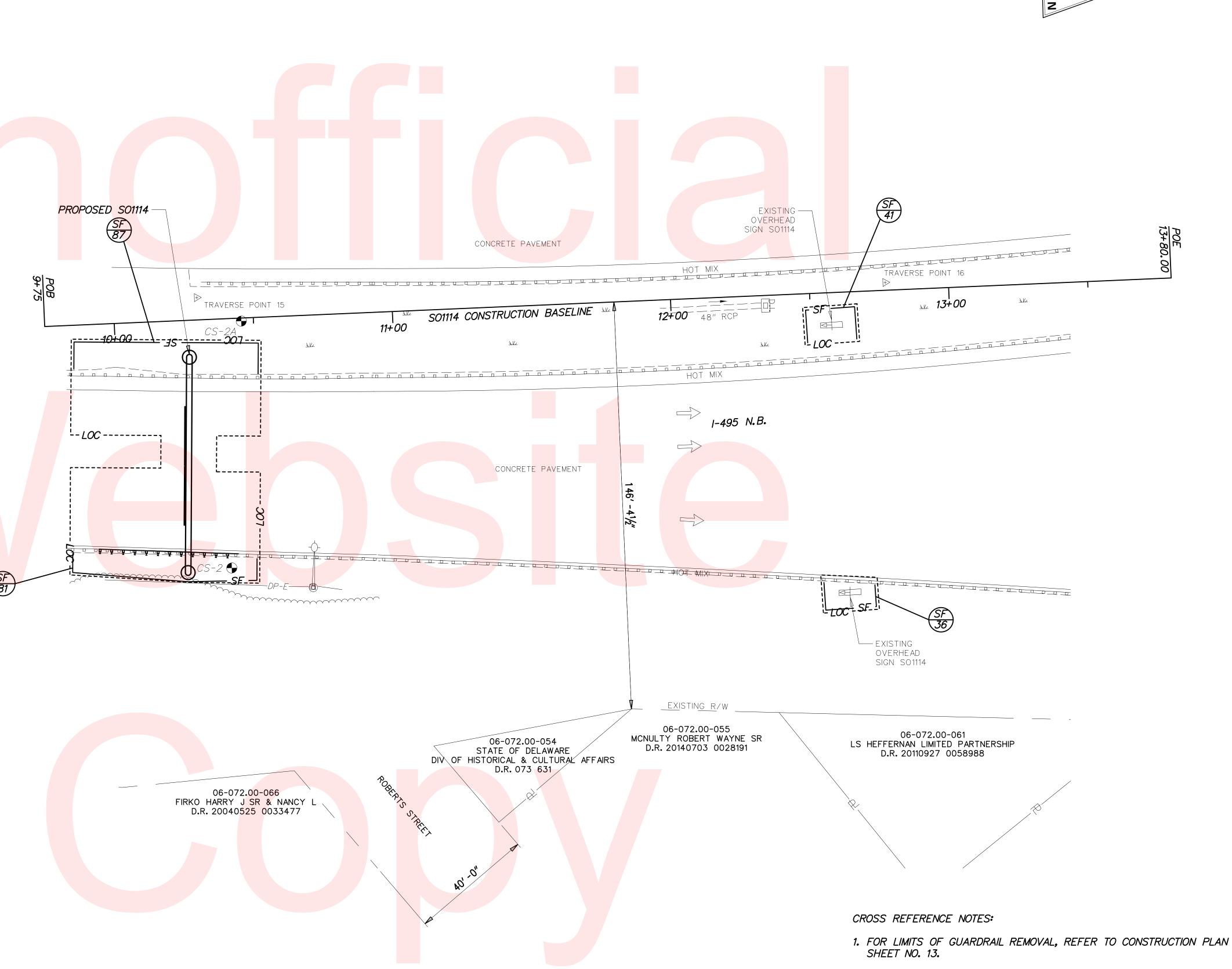
CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT	BRIDGE NO.	N/A	
201407004			
COUNTY	DESIGNED BY: I	ZB	
EW CASTLE	CHECKED BY: [	DEF	

CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLAN SIGN STRUCTURE SO1113

52 TOTAL SHTS. 83

- 1. INSTALL MOT DEVICES IN ACCORDANCE WITH DELDOT MUTCD STANDARDS. FOR CONSTRUCTION ACTIVITIES ADJACENT TO THE OUTSIDE SHOULDERS, USE SHOULDER CLOSURE DETAIL ON SHEET 59. FOR CONSTRUCTION ACTIVITIES PERFORMED IN THE MEDIAN OF THE ROADWAY, WORK MUST BE PERFORMED BEHIND THE GUARDRAIL IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-1.
- 2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN.
- 3. REMOVE GUARDRAIL TO THE EXTENTS SHOWN IN THE PLANS.
- 4. PERFORM EXCAVATIONS FOR DRILLED SHAFT TO THE DIMENSIONS AND ELEVATION SHOWN IN THE PLANS.
- 5. PERFORM REMAINING CONSTRUCTION ACTIVITY IN WORK AREA AS PER PLANS, INCLUDING PLACING NEW SIGN STRUCTURE, REMOVING EXISTING SIGN STRUCTURE, AND REPLACING GUARDRAIL TO MATCH EXISTING.
- 6. INSTALLATION OF PROPOSED SIGN STRUCTURE AND REMOVAL OF EXISTING SIGN STRUCTURE SHALL BE RESTRICTED TO NIGHTTIME HOURS ONLY. ROLLING ROAD BLOCKS IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-35H SHALL BE USED. THE CONTRACTOR SHALL CONTACT DELDOT TRAFFIC TO COORDINATE THE DURATION AND WORK HOUR RESTRICTIONS FOR THE ROLLING ROAD BLOCKS.
- 7. EXISTING SIGN STRUCTURE MAY NOT BE REMOVED UNTIL AFTER THE NEW REPLACEMENT SIGN STRUCTURE IS INSTALLED AND ACCEPTED, UNLESS NOTED ON THE PLANS OR OTHERWISE APPROVED BY THE ENGINEER. INSTALL TEMPORARY SIGNS WHERE NEW SIGN STRUCTURES BLOCK THE VIEW OF SIGNS ON EXISTING SIGN STRUCTURES.
- 8. COMPLETE ALL REMAINING WORK INCLUDING FULL RESTORATION OF AREAS TO ITS ORGINAL CONDITIONS, ROADWAY REPAIR, AND GRADING.
- 9. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.
- 10. REMOVE ALL MOT DEVICES INCLUDING TEMPORARY SIGNS AND REOPEN THE ROADWAY.



DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE

0 20 40

FEET

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT
BRIDGE NO.

T201407004

COUNTY

DESIGNED BY: PM

CHECKED BY: DEF

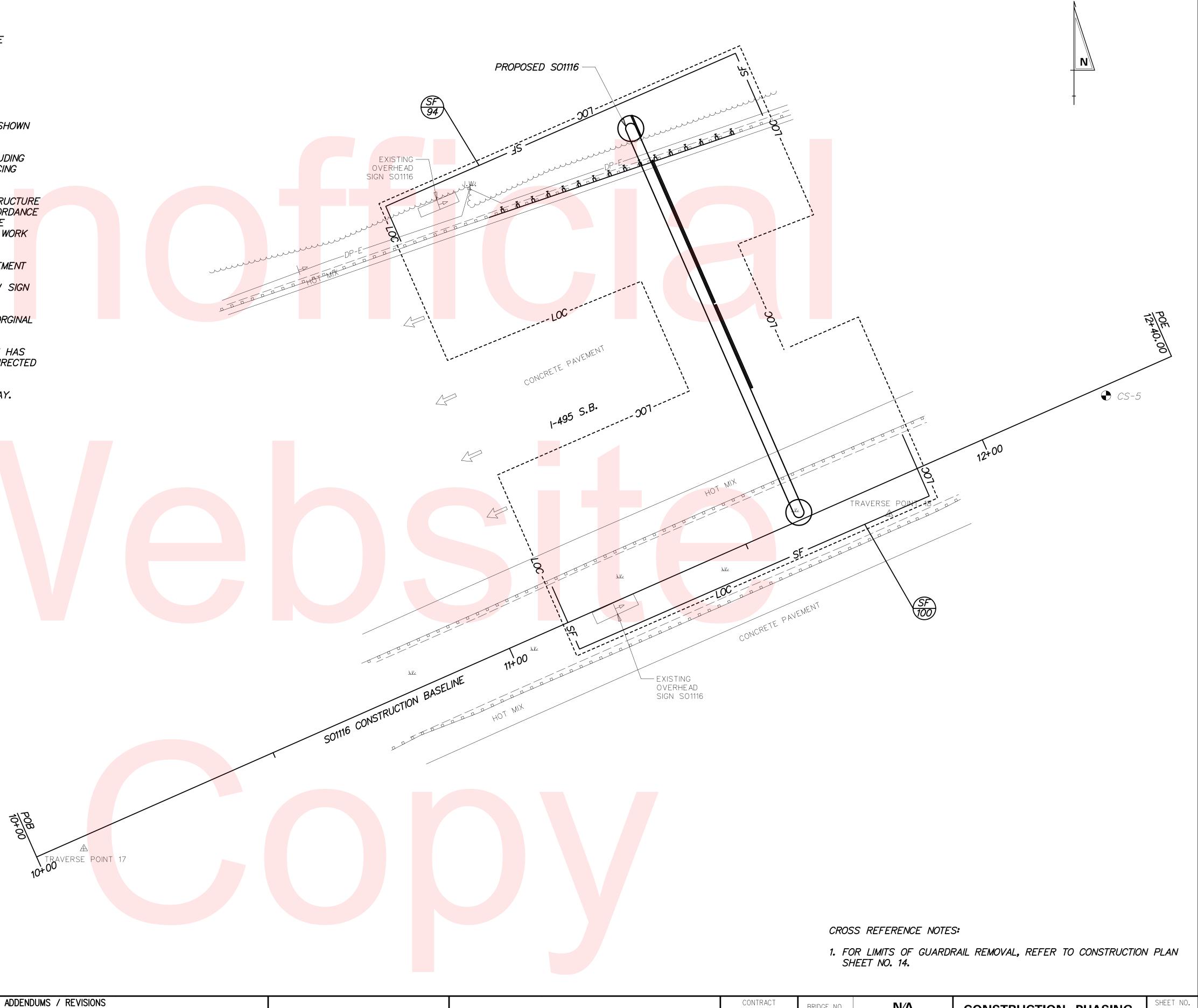
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CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLAN SIGN STRUCTURE SO1114

53
TOTAL SHTS.

83

- 1. INSTALL MOT DEVICES IN ACCORDANCE WITH DELDOT MUTCD STANDARDS. FOR CONSTRUCTION ACTIVITIES ADJACENT TO THE OUTSIDE SHOULDERS, USE SHOULDER CLOSURE DETAIL ON SHEET 59. FOR CONSTRUCTION ACTIVITIES PERFORMED IN THE MEDIAN OF THE ROADWAY, WORK MUST BE PERFORMED BEHIND THE GUARDRAIL IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-1.
- 2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN.
- 3. REMOVE GUARDRAIL TO THE EXTENTS SHOWN IN THE PLANS.
- 4. PERFORM EXCAVATIONS FOR DRILLED SHAFT TO THE DIMENSIONS AND ELEVATION SHOWN IN THE PLANS.
- 5. PERFORM REMAINING CONSTRUCTION ACTIVITY IN WORK AREA AS PER PLANS, INCLUDING PLACING NEW SIGN STRUCTURE, REMOVING EXISTING SIGN STRUCTURE, AND REPLACING GUARDRAIL TO MATCH EXISTING.
- 6. INSTALLATION OF PROPOSED SIGN STRUCTURE AND REMOVAL OF EXISTING SIGN STRUCTURE SHALL BE RESTRICTED TO NIGHTTIME HOURS ONLY, ROLLING ROAD BLOCKS IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-35H SHALL BE USED. THE CONTRACTOR SHALL CONTACT DELDOT TRAFFIC TO COORDINATE THE DURATION AND WORK HOUR RESTRICTIONS FOR THE ROLLING ROAD BLOCKS.
- 7. EXISTING SIGN STRUCTURE MAY NOT BE REMOVED UNTIL AFTER THE NEW REPLACEMENT SIGN STRUCTURE IS INSTALLED AND ACCEPTED, UNLESS NOTED ON THE PLANS OR OTHERWISE APPROVED BY THE ENGINEER. INSTALL TEMPORARY SIGNS WHERE NEW SIGN STRUCTURES BLOCK THE VIEW OF SIGNS ON EXISTING SIGN STRUCTURES.
- 8. COMPLETE ALL REMAINING WORK INCLUDING FULL RESTORATION OF AREAS TO ITS ORGINAL CONDITIONS, ROADWAY REPAIR, AND GRADING.
- 9. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.
- 10. REMOVE ALL MOT DEVICES INCLUDING TEMPORARY SIGNS AND REOPEN THE ROADWAY.



DELAWARE DEPARTMENT OF TRANSPORTATION

SCALE
0 10 20
FEET

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT
BRIDGE NO.

T201407004

COUNTY

DESIGNED BY: PM

CHECKED BY: DEF

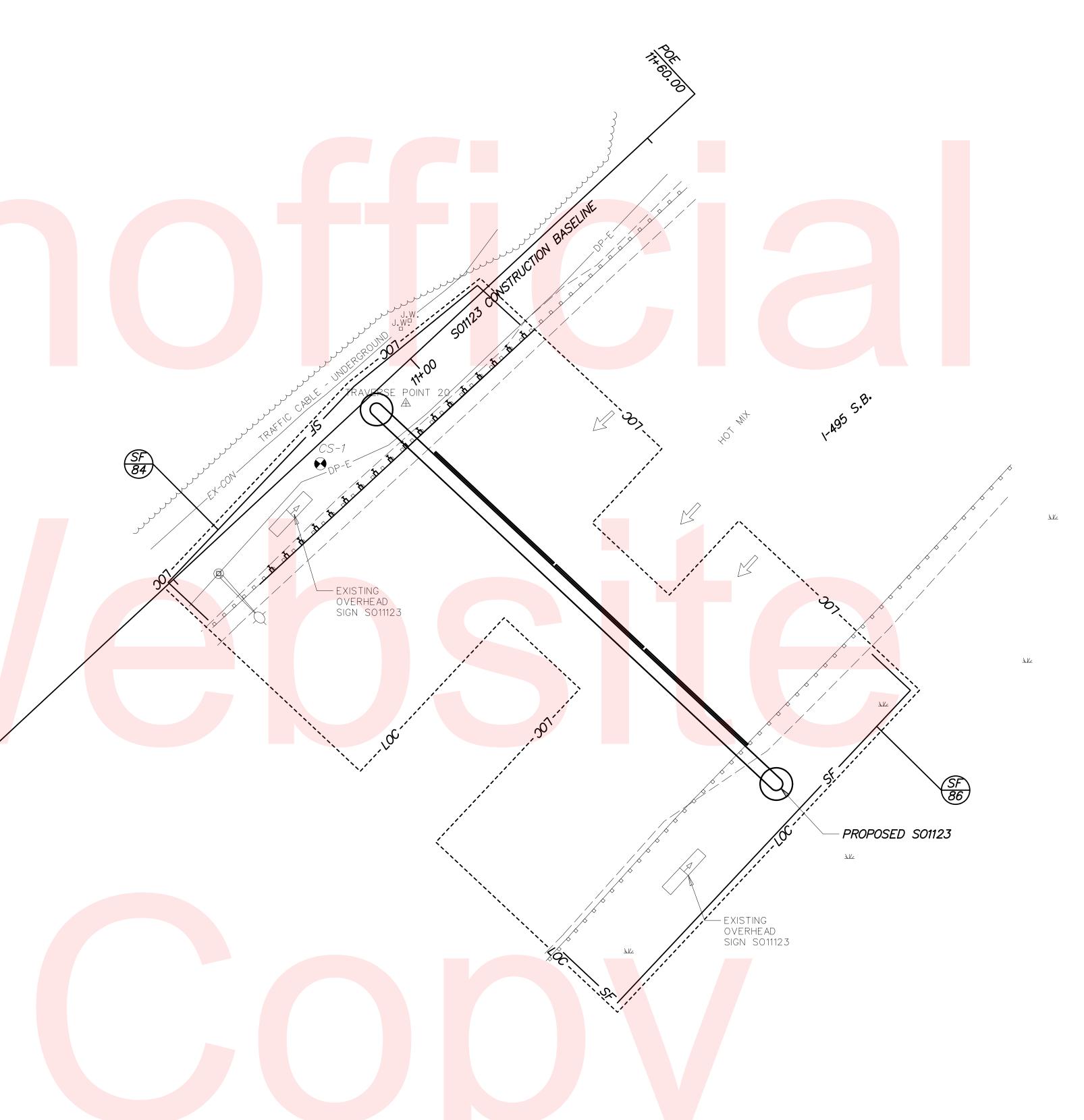
CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLAN SIGN STRUCTURE SO1116

16 83

- 1. INSTALL MOT DEVICES IN ACCORDANCE WITH DELDOT MUTCD STANDARDS. FOR CONSTRUCTION ACTIVITIES ADJACENT TO THE OUTSIDE SHOULDERS, USE SHOULDER CLOSURE DETAIL ON SHEET 59. FOR CONSTRUCTION ACTIVITIES PERFORMED IN THE MEDIAN OF THE ROADWAY, WORK MUST BE PERFORMED BEHIND THE GUARDRAIL IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-1.
- 2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN.
- 3. REMOVE GUARDRAIL TO THE EXTENTS SHOWN IN THE PLANS.
- 4. PERFORM EXCAVATIONS FOR DRILLED SHAFT TO THE DIMENSIONS AND ELEVATION SHOWN IN THE PLANS.
- 5. PERFORM REMAINING CONSTRUCTION ACTIVITY IN WORK AREA AS PER PLANS, INCLUDING PLACING NEW SIGN STRUCTURE, REMOVING EXISTING SIGN STRUCTURE, AND REPLACING GUARDRAIL TO MATCH EXISTING.
- 6. INSTALLATION OF PROPOSED SIGN STRUCTURE AND REMOVAL OF EXISTING SIGN STRUCTURE SHALL BE RESTRICTED TO NIGHTTIME HOURS ONLY. ROLLING ROAD BLOCKS IN ACCORDANCE WITH DELDOT MUTCD STANDARD TYPICAL APPLICATION TA-35H SHALL BE USED. THE CONTRACTOR SHALL CONTACT DELDOT TRAFFIC TO COORDINATE THE DURATION AND WORK HOUR RESTRICTIONS FOR THE ROLLING ROAD BLOCKS.
- 7. EXISTING SIGN STRUCTURE MAY NOT BE REMOVED UNTIL AFTER THE NEW REPLACEMENT SIGN STRUCTURE IS INSTALLED AND ACCEPTED, UNLESS NOTED ON THE PLANS OR OTHERWISE APPROVED BY THE ENGINEER. INSTALL TEMPORARY SIGNS WHERE NEW SIGN STRUCTURES BLOCK THE VIEW OF SIGNS ON EXISTING SIGN STRUCTURES.
- 8. COMPLETE ALL REMAINING WORK INCLUDING FULL RESTORATION OF AREAS TO ITS ORGINAL CONDITIONS, ROADWAY REPAIR, AND GRADING.
- 9. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATION HAS STABILIZED ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.

TRAVERSE POINT

10. REMOVE ALL MOT DEVICES INCLUDING TEMPORARY SIGNS AND REOPEN THE ROADWAY.



CROSS REFERENCE NOTES:

1. FOR LIMITS OF GUARDRAIL REMOVAL, REFER TO CONSTRUCTION PLAN SHEET NO. 15.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE

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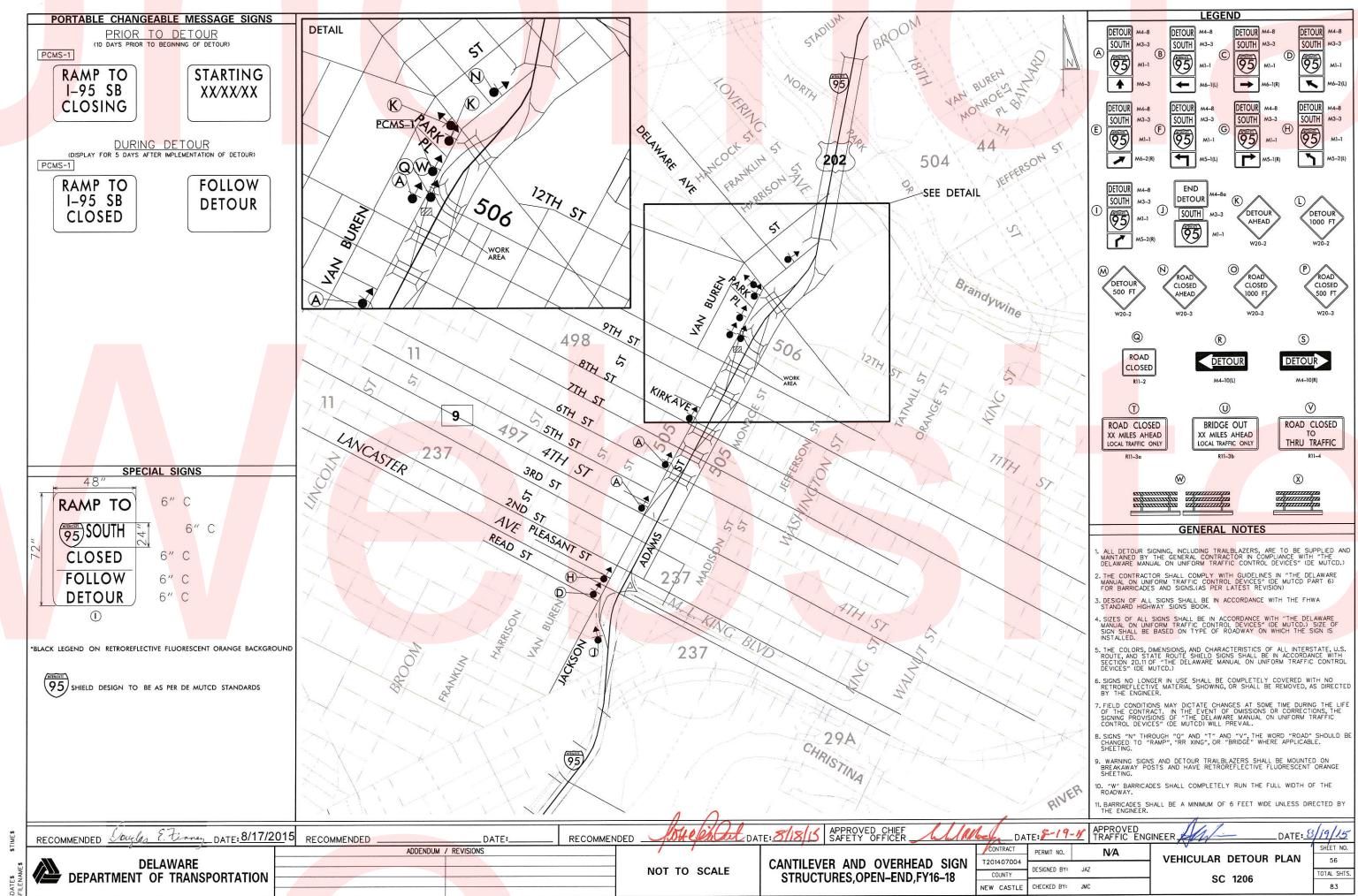
FEET

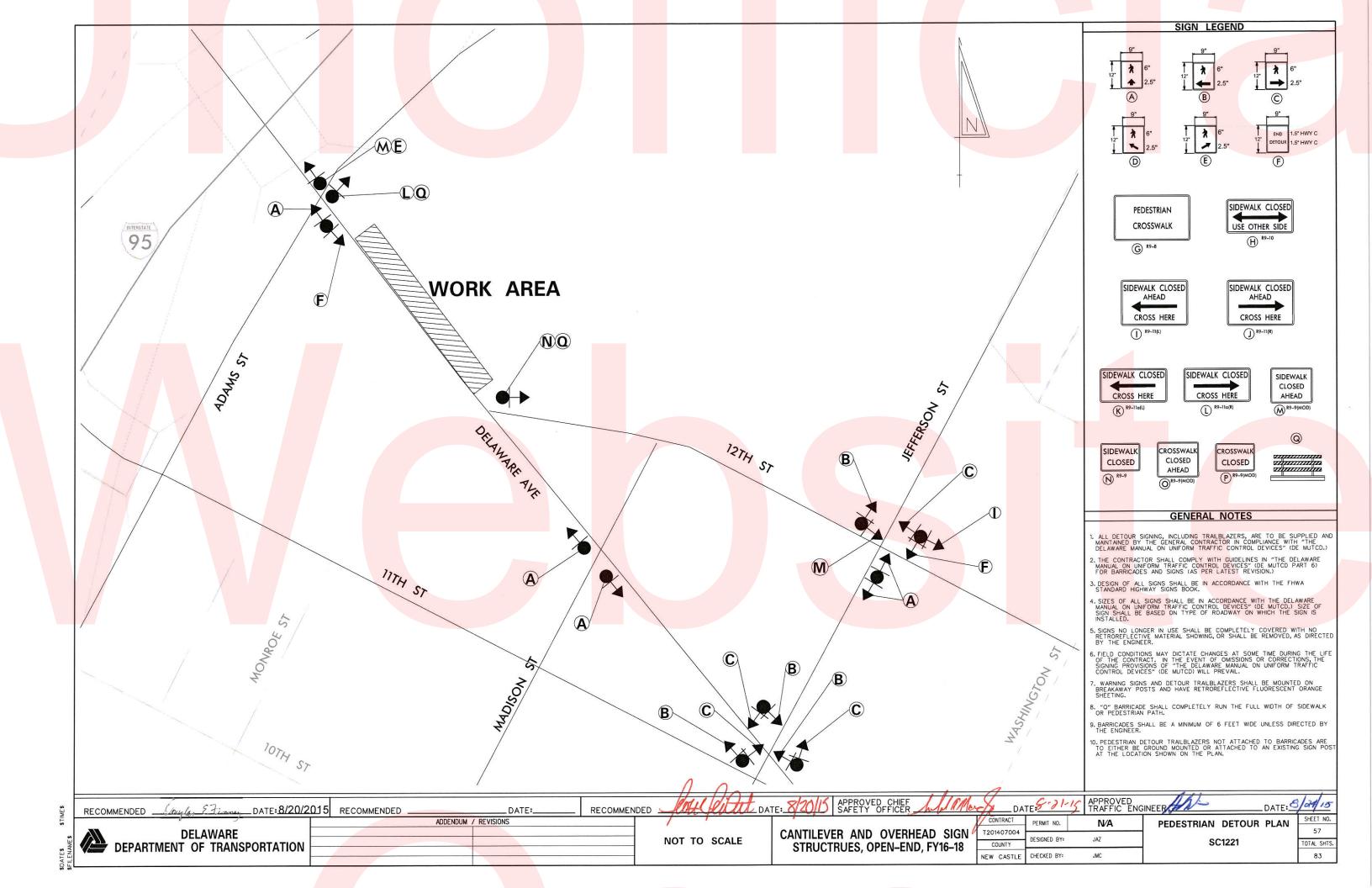
CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

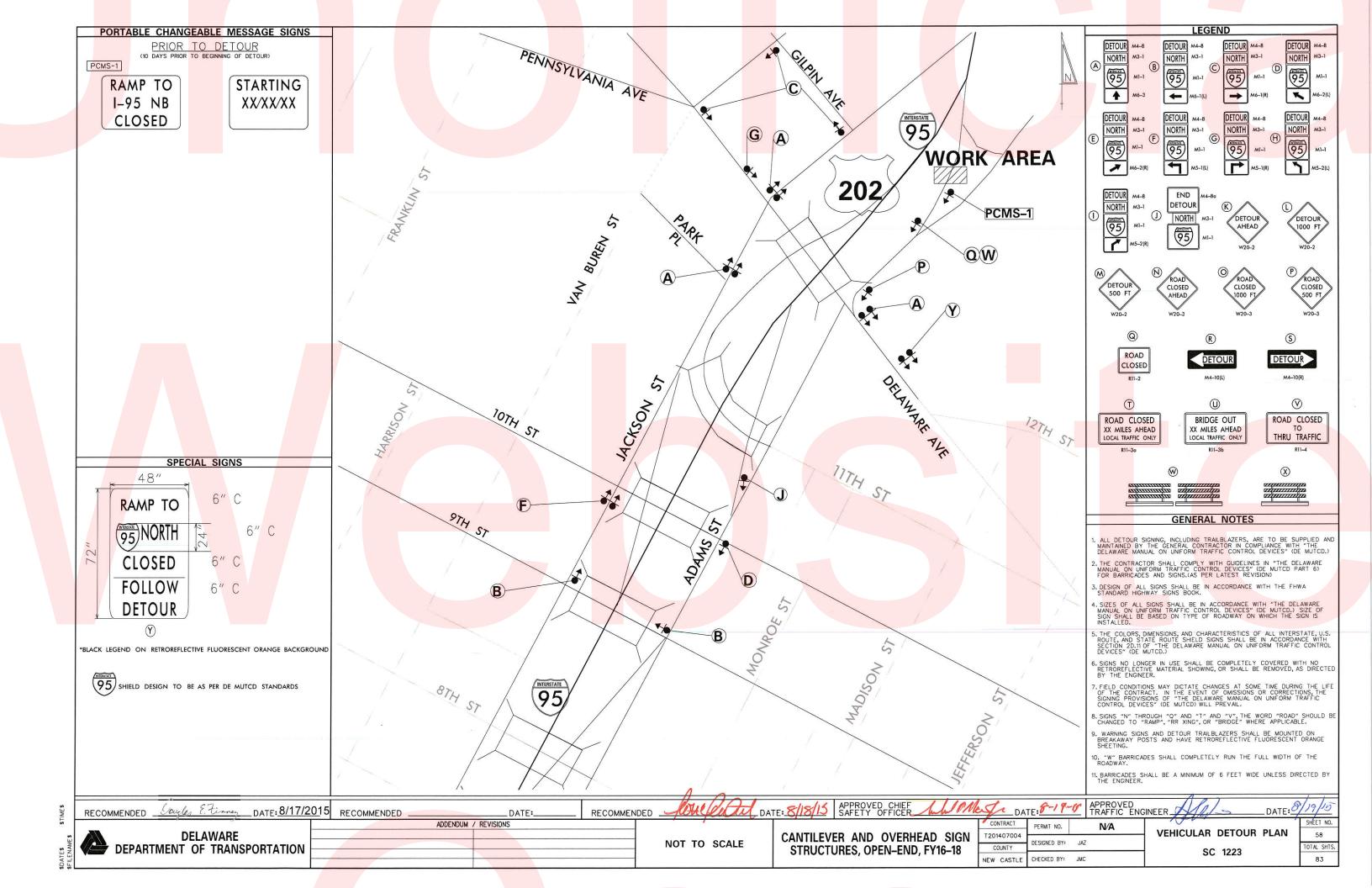
CONTRACT	BRIDGE NO.	N/A	CONS	
T201407004	1271		M.C	
COUNTY	DESIGNED BY: F	ZM		
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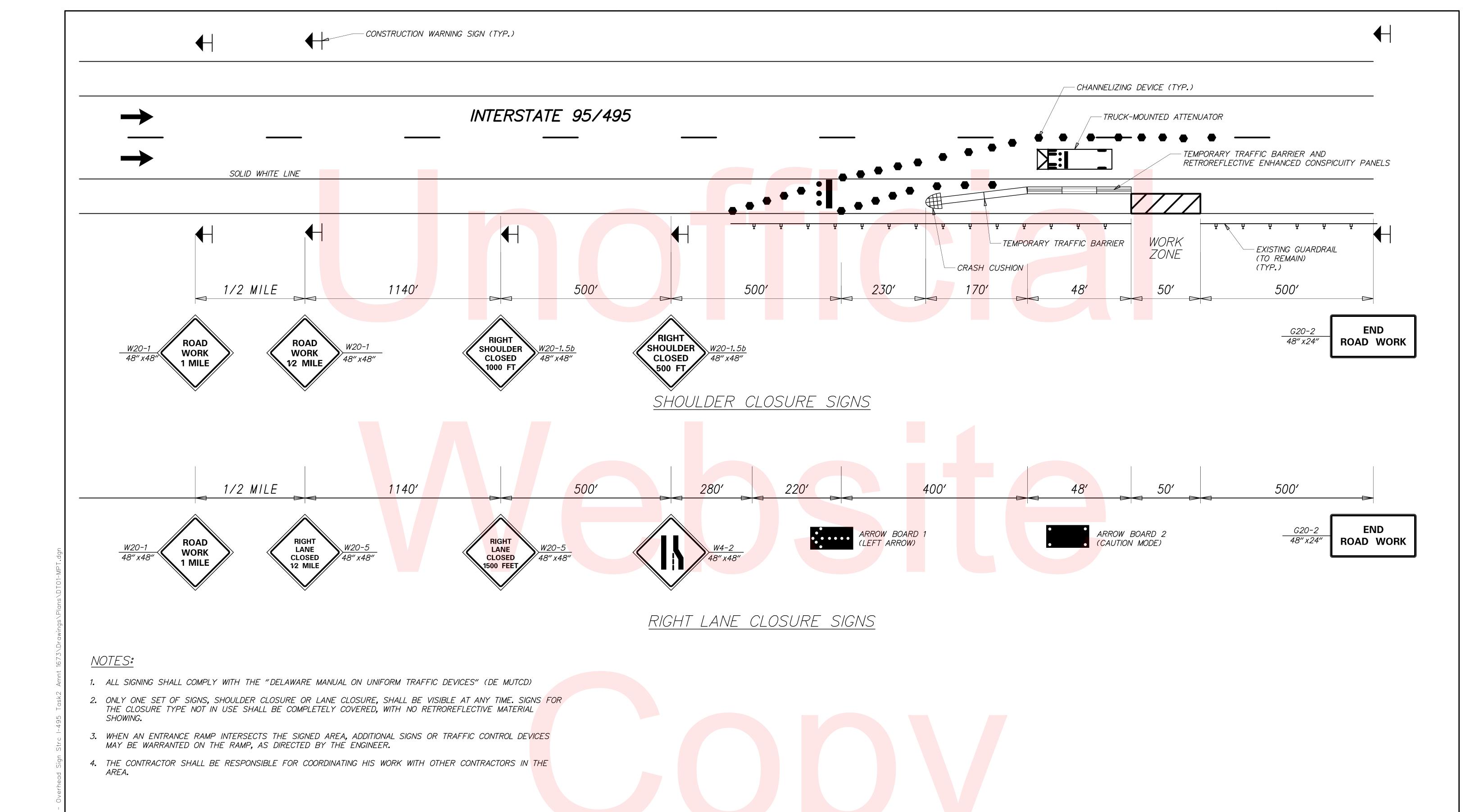
CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLAN SIGN STRUCTURE SO1123

123 83



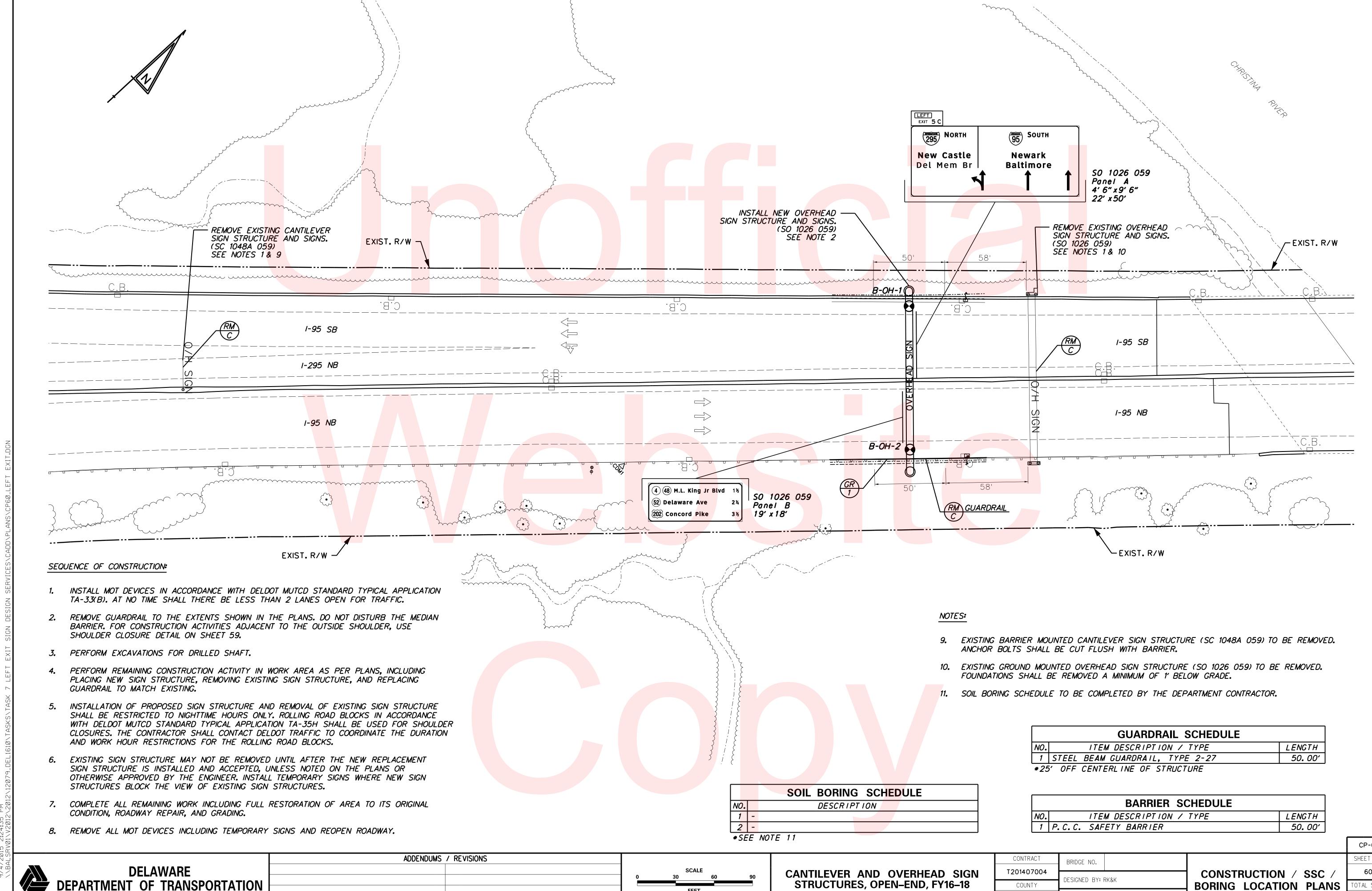






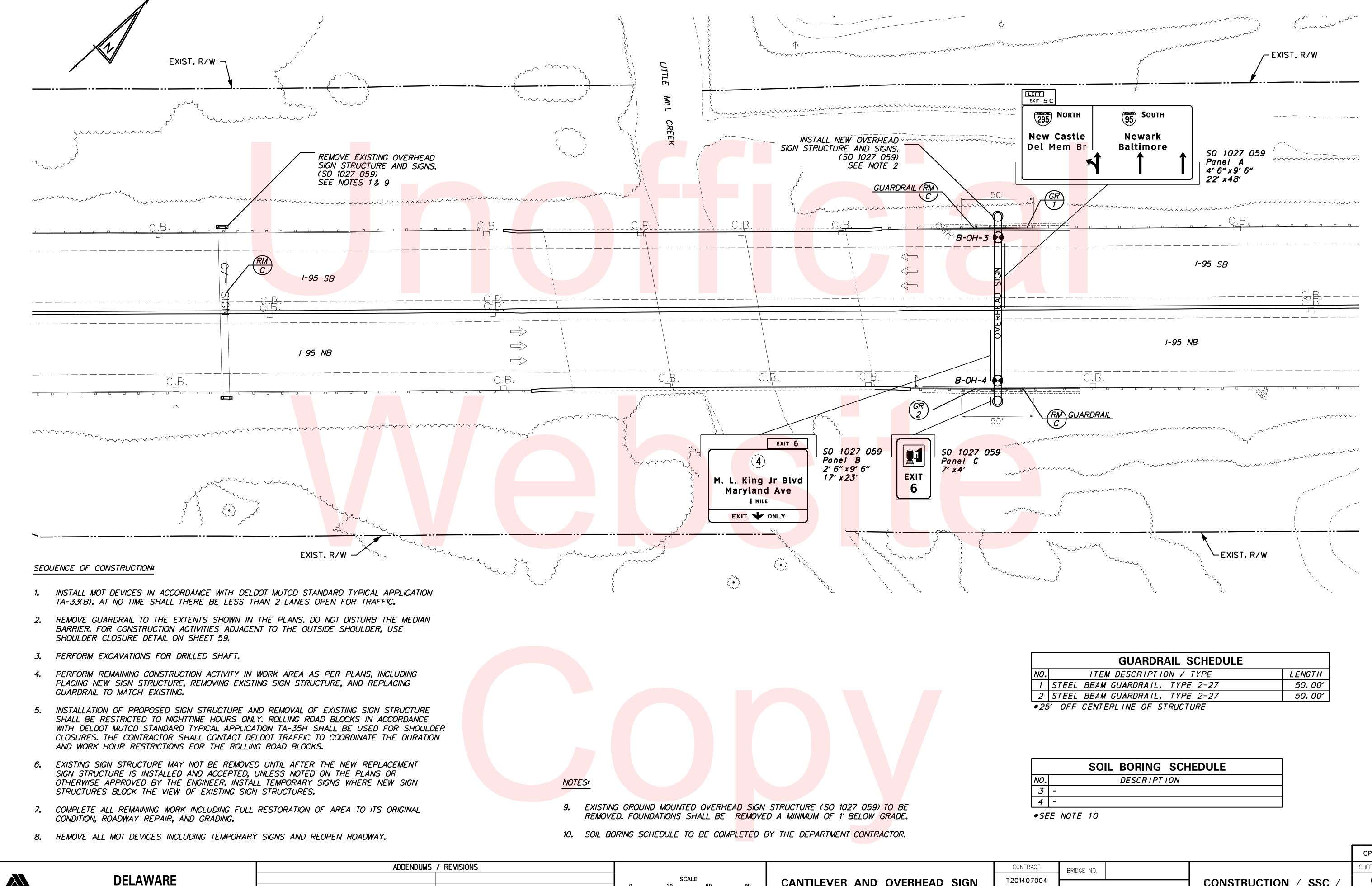
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DEPARTIVIENT	UL	WARE TRANSPORTATION	

DNTRACT	BRIDGE NO.	N/A	
1407004	DINIDOL NO.	IVA	
71407004	DESIGNED BY: ,	ΙΔ7	SHOULDER
COUNTY	DESIGNED BY		DETA
CASTLE	CHECKED BY: 1	NR	



CHECKED BY: JCR

NEW CASTLE



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DEPARTMENT OF TRANSPORTATION

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT

BRIDGE NO.

DESIGNED BY: RK&K

OUNTY

NEW CASTLE

CHECKED BY: JCR

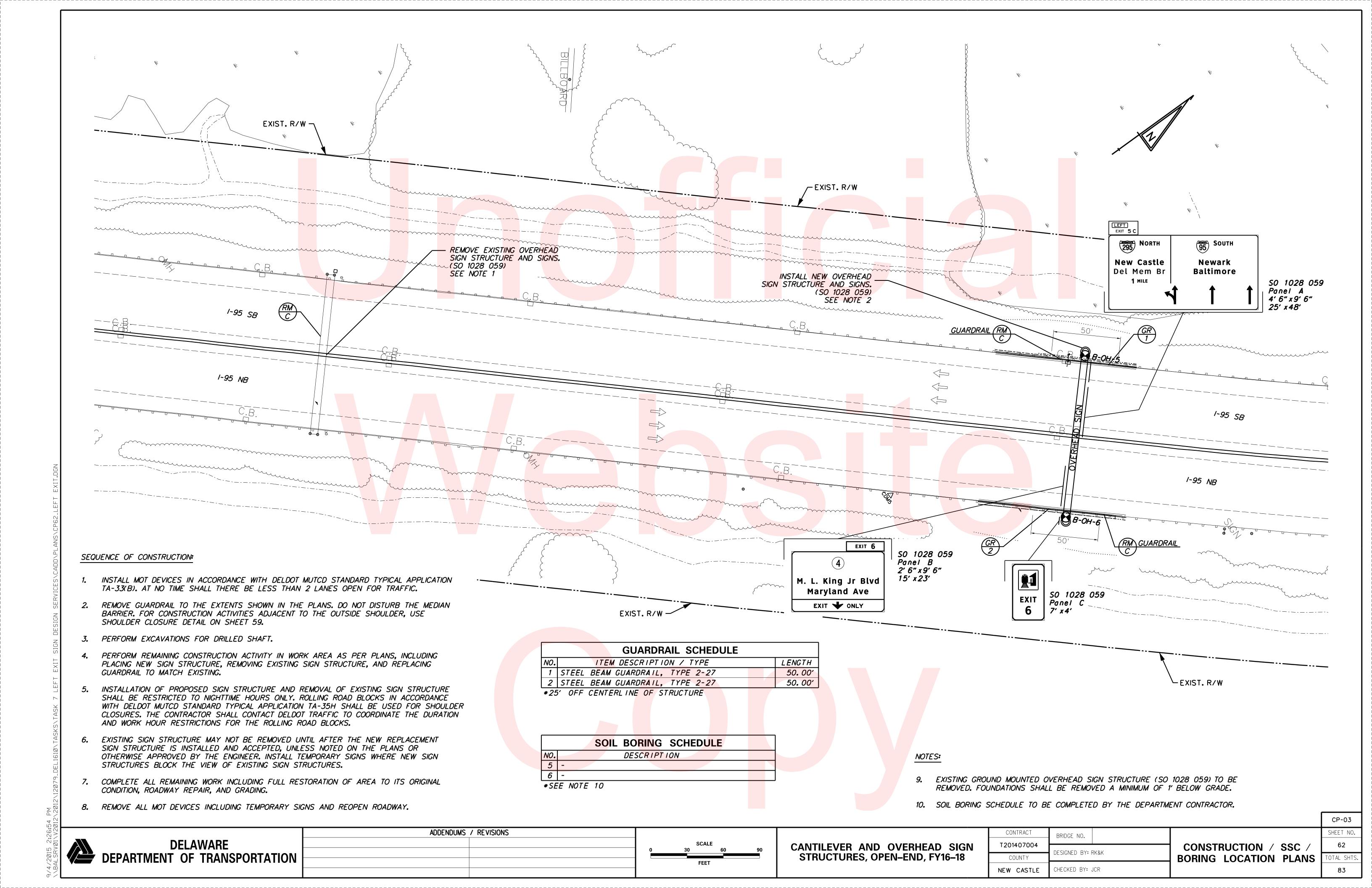
CONSTRUCTION / SSC / BORING LOCATION PLANS

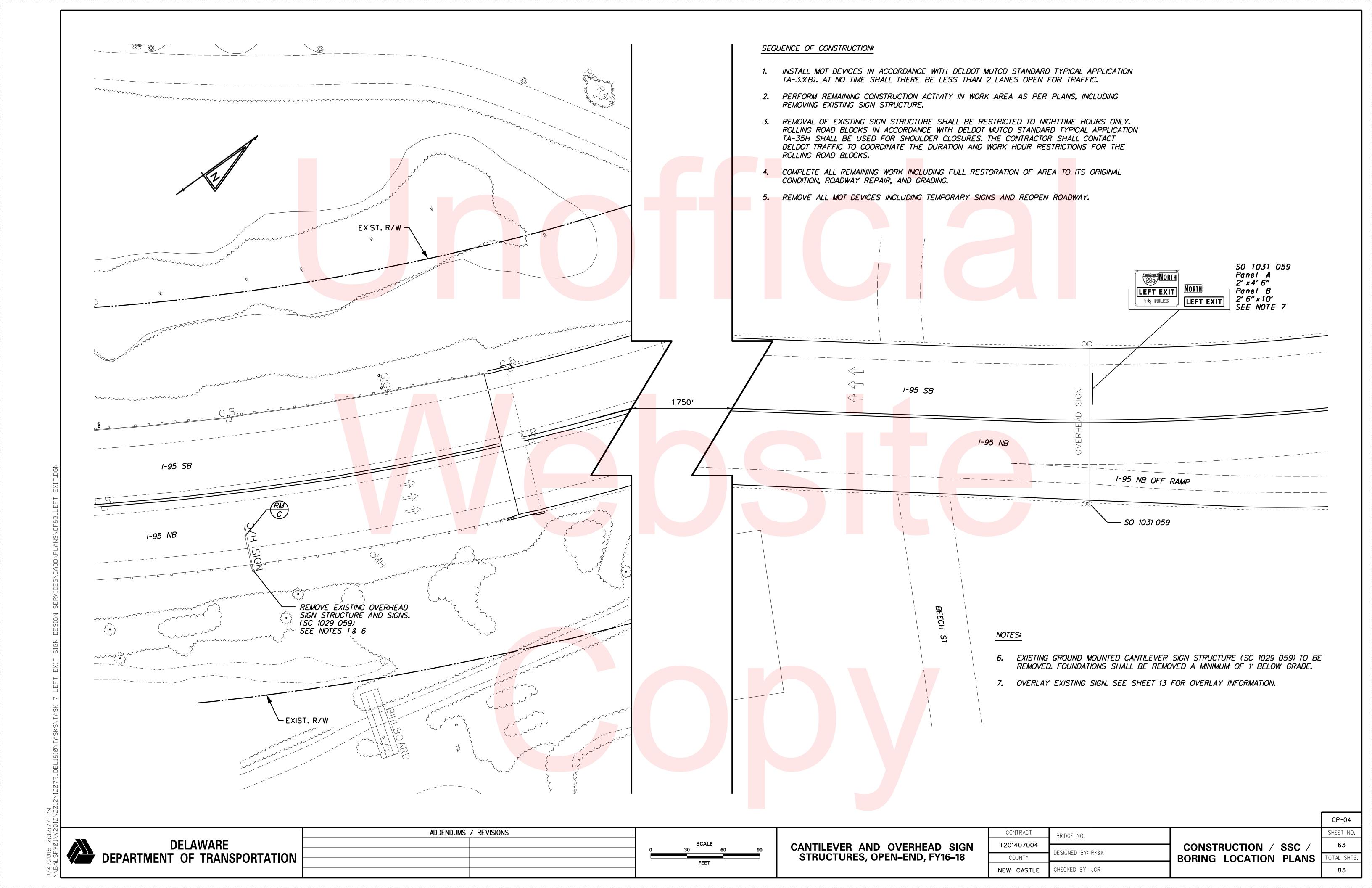
NEW CASTLE

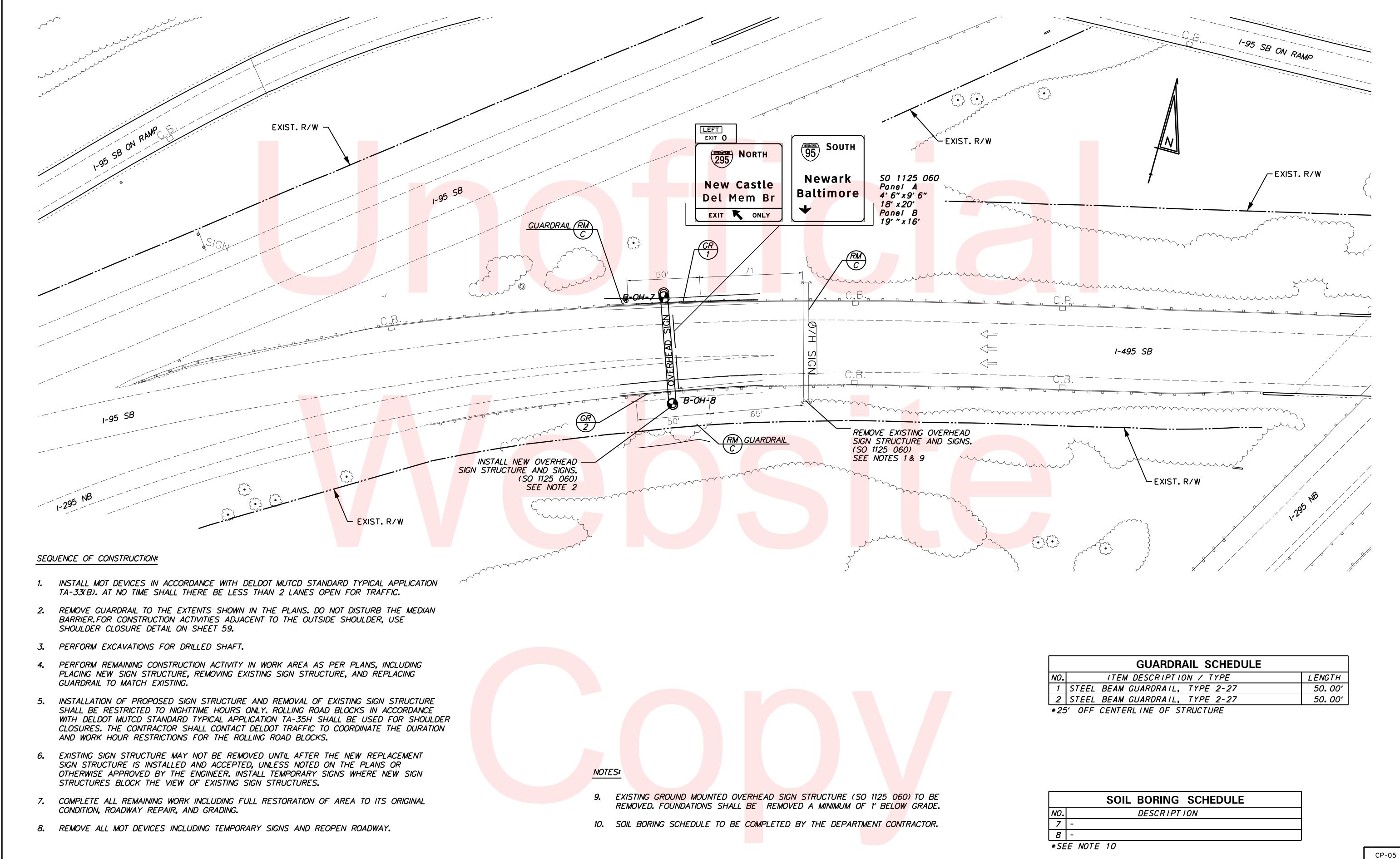
SHEET

CONSTRUCTION / SSC / BORING LOCATION PLANS

83







**DELAWARE** 

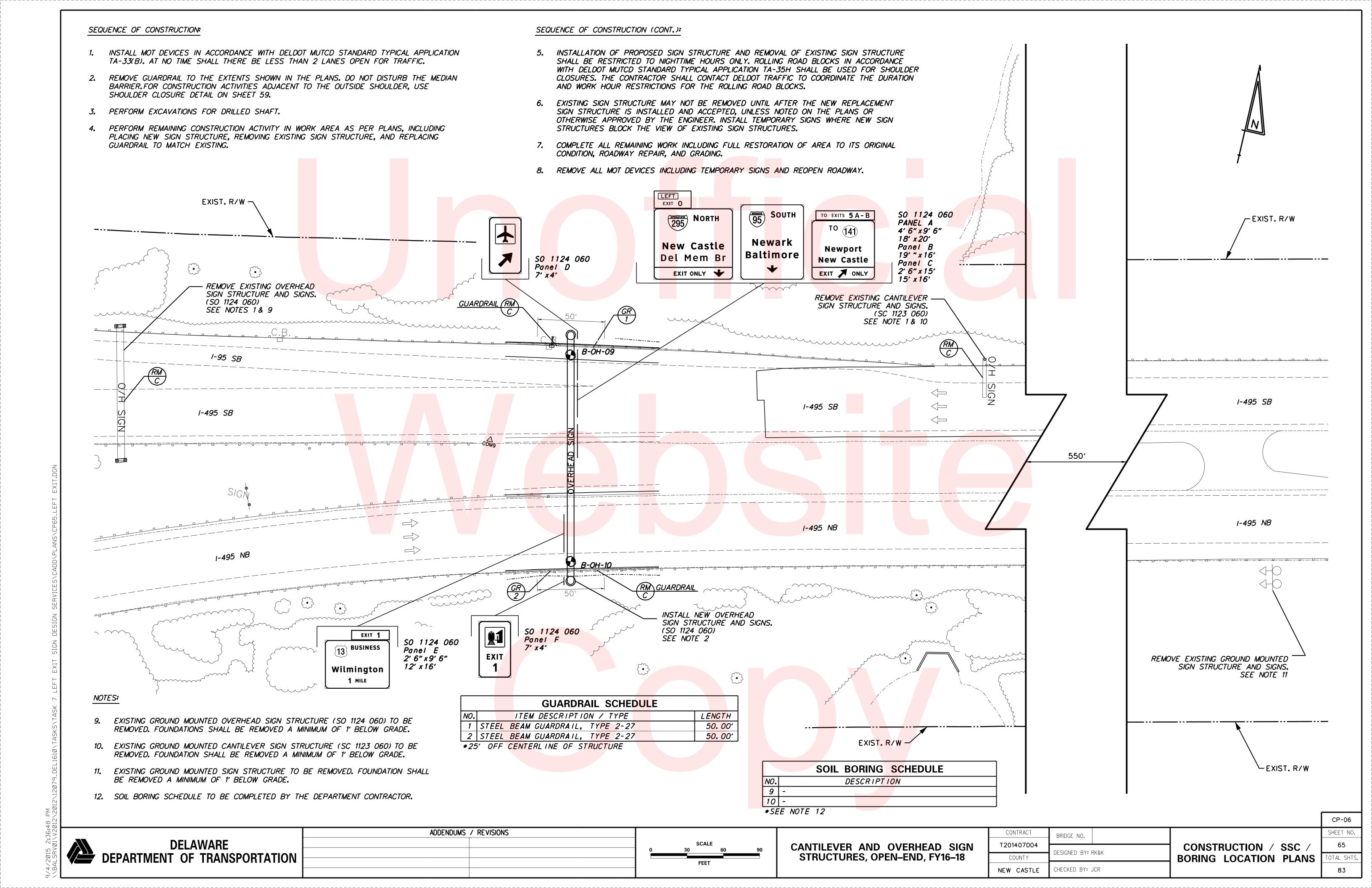
DEPARTMENT OF TRANSPORTATION

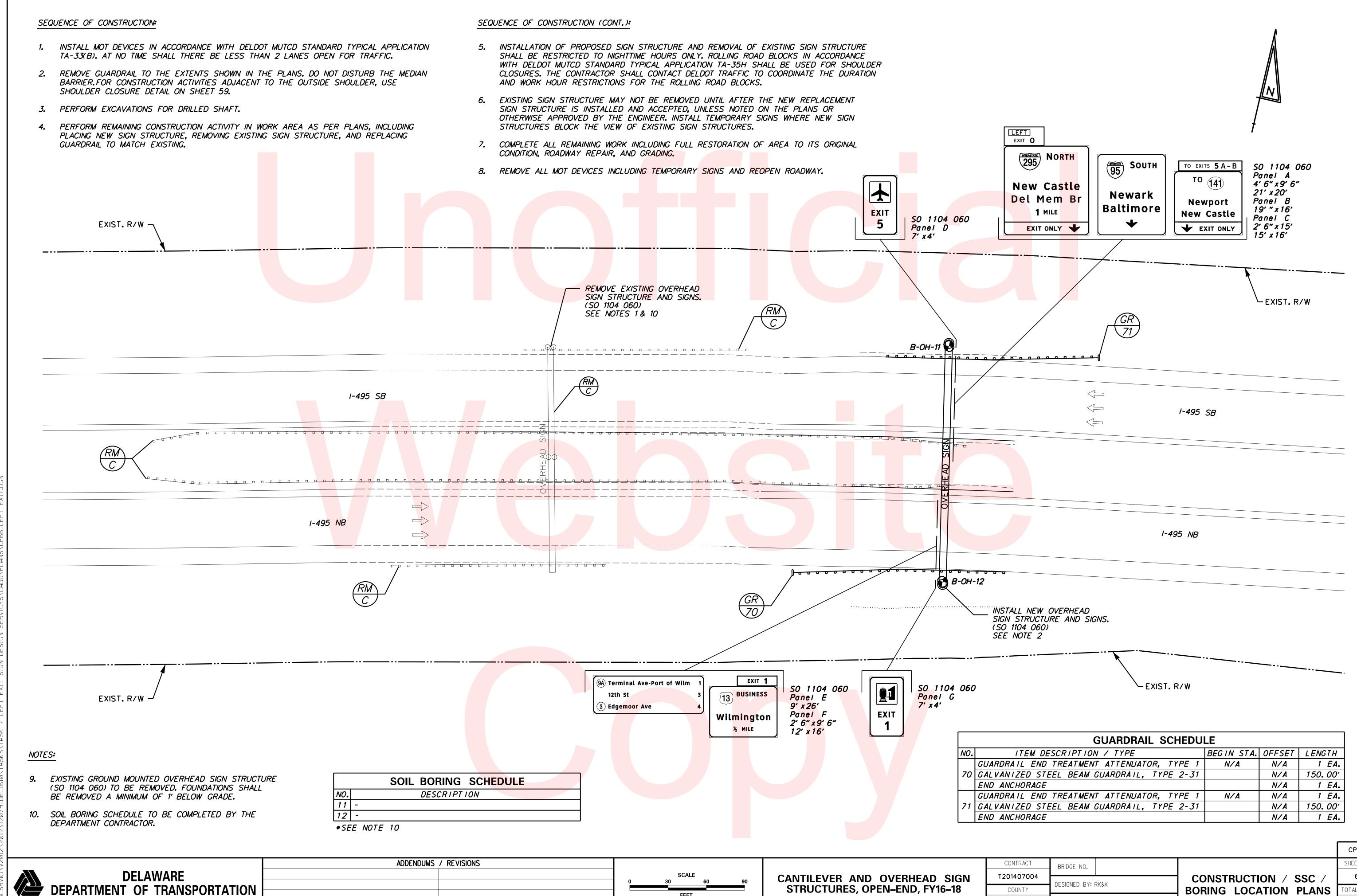
ADDENDUMS / REVISIONS

**CANTILEVER AND OVERHEAD SIGN** STRUCTURES, OPEN-END, FY16-18

CONTRACT BRIDGE NO. T201407004 DESIGNED BY: RK&K COUNTY CHECKED BY: JCR NEW CASTLE

CONSTRUCTION / SSC / **BORING LOCATION PLANS** 

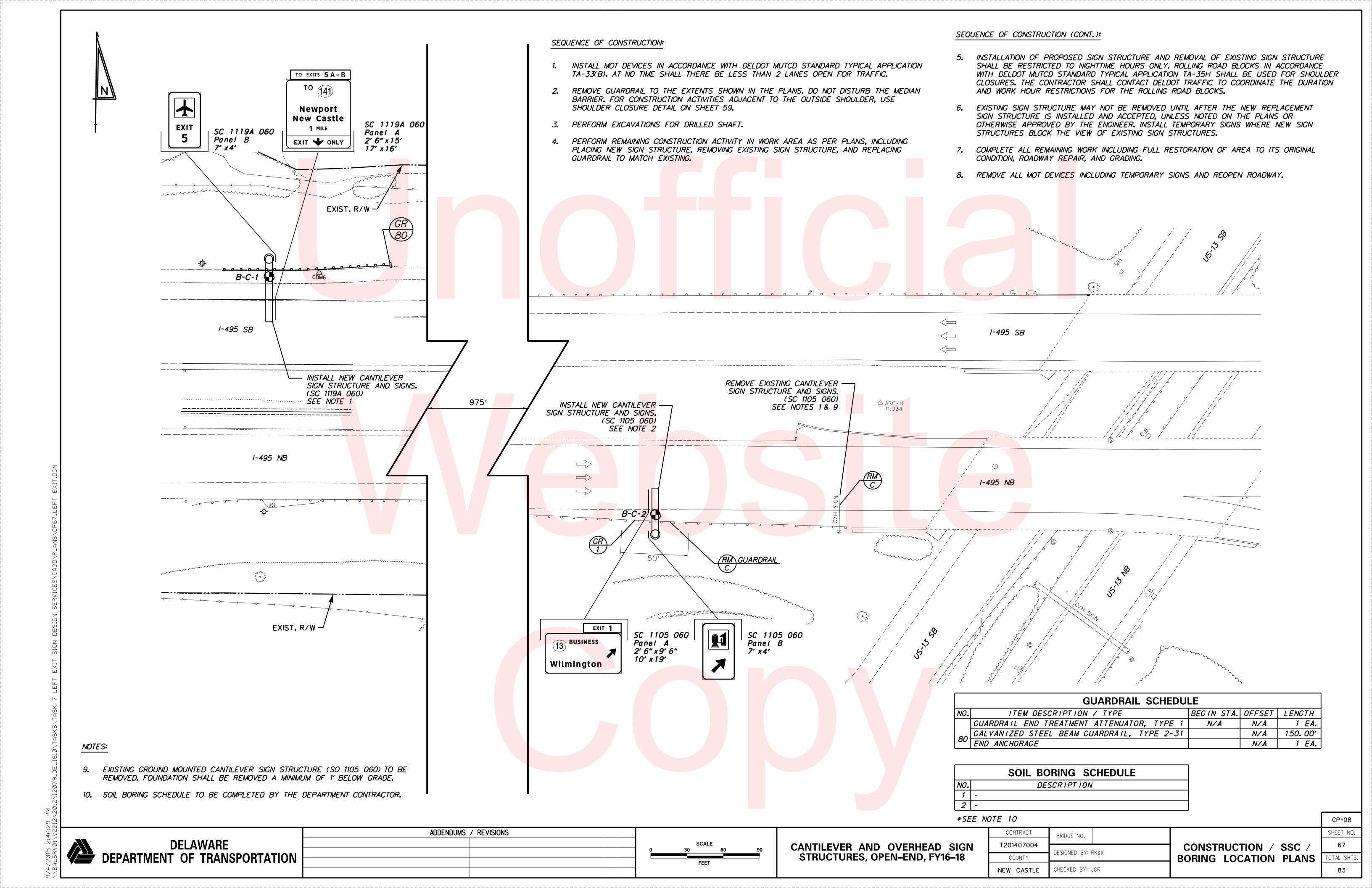


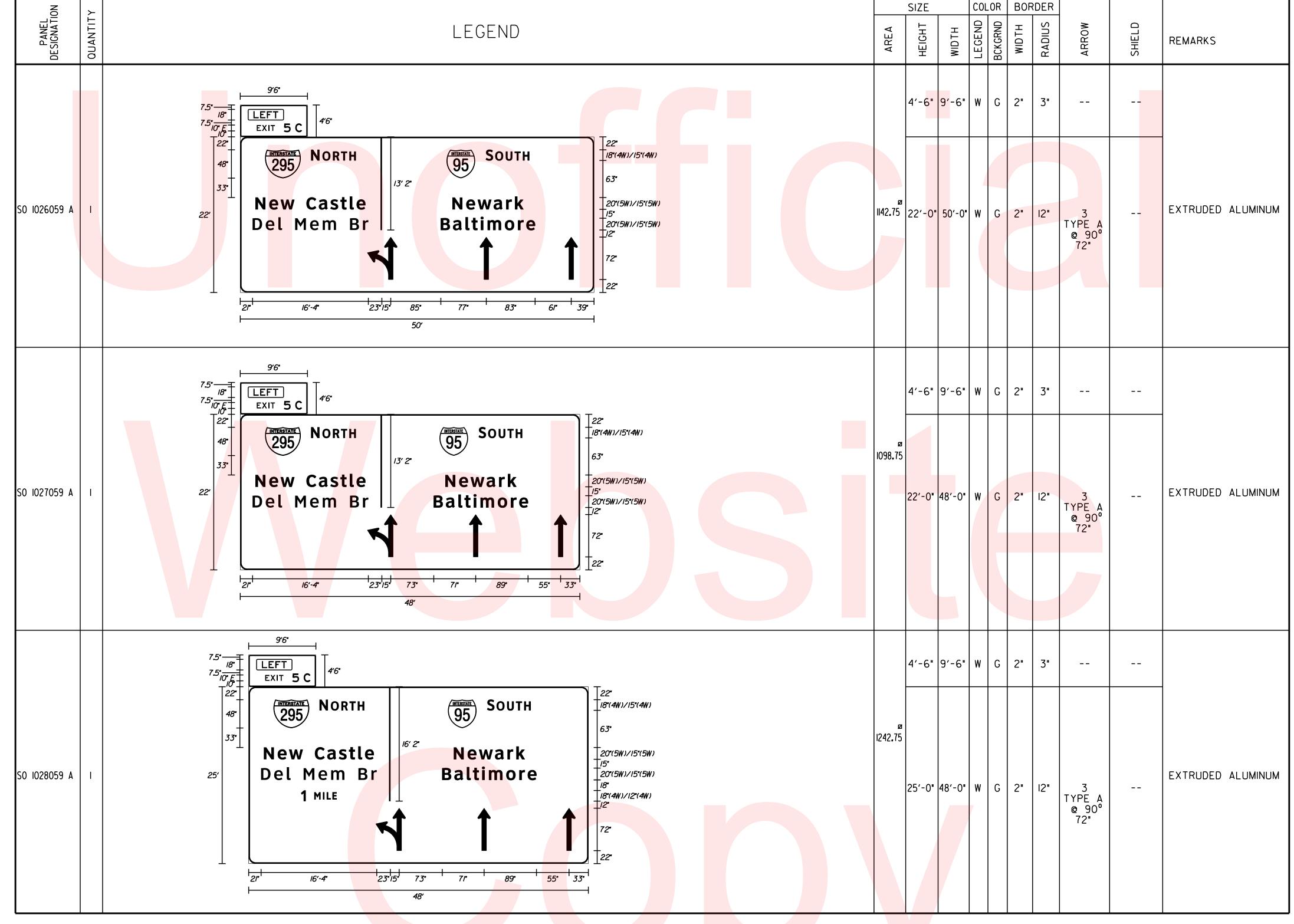




CONTRACT	BRIDGE NO.		
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COUNTY	DESIGNED BY: F	RK&K	BO
W CASTLE	CHECKED BY: .	JCR	

NEW





NOTES: I. COLORS: B=BLACK, BL=BLUE, BR=BROWN, G=GREEN, W=WHITE/SILVER, Y=YELLOW.
2. THE CONTRACTOR WILL FURNISH AND INSTALL ALL SIGNS SHOWN ON THIS SHEET.

ADDENDUMS / REVISIONS CONTRACT BRIDGE NO. **DELAWARE** 68 T201407004 **CANTILEVER AND OVERHEAD SIGN** NOT TO SCALE SIGN DETAILS DESIGNED BY: RK&K DEPARTMENT OF TRANSPORTATION STRUCTURES, OPEN-END, FY16-18 OTAL SHTS COUNTY NEW CASTLE CHECKED BY: JCR 83

NOTES: I. COLORS: B=BLACK, BL=BLUE, BR=BROWN, G=GREEN, W=WHITE/SILVER, Y=YELLOW.
2. THE CONTRACTOR WILL FURNISH AND INSTALL ALL SIGNS SHOWN ON THIS SHEET.

**DELAWARE DEPARTMENT OF TRANSPORTATION** 

ADDENDUMS / REVISIONS

**CANTILEVER AND OVERHEAD SIGN** STRUCTURES, OPEN-END, FY16-18

CONTRACT BRIDGE NO. T201407004 DESIGNED BY: RK&K COUNTY CHECKED BY: JCR NEW CASTLE

SIGN DETAILS

69

OTAL SHTS

83

NOT TO SCALE

Z >		SIZE COLOR BORDER	S >		SIZE	COLOR BORDER
PANEL DESIGNATION QUANTITY	LEGEND	AREA HEIGHT WID TH WID TH WID TH RADIUS RADIUS SHIELD	PANEL DESIGNATIT	LEGEND	нЕІСНТ	LEGEND BCKGRND WIDTH WIDTH SHIELD SHIELD
S0 II24060 B S0 II04060 B	2 "	7) 304 9 19'-0" 16'-0" W G 2" 12" DOWN MI-I	EXTRUDED ALUMINUM SO 1124060 D	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	7'-0" 4'-0"	W G I.25" 6" TYPE A 0.5 30"×30" EXTRUDED ALUMINUM 36"
SO 1124060 A I	7.5'		EXTRUDED ALUMINUM SO 1124060 E I	9'-6"    2'-6"   EXIT 1	ø	W G 2" 3"  MI-4 36"×36" EXTRUDED ALUMINUM
S0 II24060 C I	TO EXITS 5 A - B   TO (4W) / 15" (4W)   16"   36"   36"   36"   17"   16" (5W) / 12" (5W)   17"   16" (5W) / 12" (5W)   16"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   16" (5W) / 12" (5W)   16" (5W) / 12" (5W)   16" (5W) / 12" (5W)   16"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   12"   16" (5W) / 12" (5W)   16"   12"	2'-6"   15'-0"   W   G   2"   3"          15'-0"   16'-0"   W   G   2"   12"   MI-5     45"×36"     3'-0"   16'-0"   B   Y   2"   12"   TYPE   A   @45 °   36"	EXTRUDED ALUMINUM SO 1124060 F 2 SO 1104060 G	7'  EXIT $ \begin{array}{cccccccccccccccccccccccccccccccccc$	3 <sup>ø</sup> 7'-0" 4'-0"	W G 1.25" 6" 30"x30" EXTRUDED ALUMINUM

NOTES; COLORS: B=BLACK, BL=BLUE, BR=BROWN, G=GREEN, W=WHITE/SILVER, Y=YELLOW. 2. THE CONTRACTOR WILL FURNISH AND INSTALL ALL SIGNS SHOWN ON THIS SHEET.

50:0°		ADDENDUMS / REVISIONS			CONTRACT	BRIDGE NO.		SHEET NO.
5 11: \LEF	DELAWARE		NOT TO SCALE	CANTILEVER AND OVERHEAD SIGN	T201407004	DESIGNED DV. DIV. IV	SIGN DETAILS	70
/201 vork	DEPARTMENT OF TRANSPORTATION		NOT TO SCALE	STRUCTURES, OPEN-END, FY16-18	COUNTY	DESIGNED BIORNAN	SIGN DETAILS	TOTAL SHTS.
3/3			7		NEW CASTLE	CHECKED BY: JCR		83

NO >		SIZE COLOR BORDER							8 >				SIZE COLOR BORDER					
PANEL DESIGNATI	LEGEND	AREA	HEIGHT	WIDTH	BCKGRND WID T H	RADIUS	ARROW	SHIELD	REMARKS	PANEL DESIGNATION	QUANTIT	LEGEND		WIDTH LEGEND BCKGRND	WIDTH	RADIUS	SHIELD	REMARKS
SO 1104060 A I	7.5'	462.75 IS	8'-0" 2	20'-0" W	G 2" Y 2"	12"	DOWN ARROW 22"	MI-I 60"×48"	EXTRUDED ALUMINUM	SO 1104060 E		9'   24"   9A Terminal Ave-Port of Wilm   1	234 <sup>Ø</sup> 9'-C	0" 26'-0" W G	2"	2"	(2)MI-5 24"×24"	EXTRUDED ALUMINUM
S0 II04060 C I	15'	293.5	3'-0"	16'-0" W	G 2"  Y 2"	12"	DOWN ARROW 22"	MI-5 45"×36"	EXTRUDED ALUMINUM	S0 II04060 F		9'-6"  EXIT 1    2'-6"   EXIT 1	<u>ø</u> 215.75	9'-6" W G		3" 2"	MI-4 36"×36"	EXTRUDED ALUMINUM
SO 1104060 D SC 1119A060 B	7'  EXIT  5  12'  24'  12'  4'	28 7	7'-O" ·	4'-0" W	G I.25"	6"		I-5 30"×30"	EXTRUDED ALUMINUM	SC 1119A060 A		TO EXITS 5 A - B	309.5	6" 15'-0" W G  16'-0" W G	2"	2"	MI-5 45"×36"	EXTRUDED ALUMINUM

NOTES; COLORS: B=BLACK, BL=BLUE, BR=BROWN, G=GREEN, W=WHITE/SILVER, Y=YELLOW. 2. THE CONTRACTOR WILL FURNISH AND INSTALL ALL SIGNS SHOWN ON THIS SHEET.

SHEET NO.
71
TOTAL SHTS.
83
N DE

NOTES: I. COLORS: B=BLACK, BL=BLUE, BR=BROWN, G=GREEN, W=WHITE/SILVER, Y=YELLOW.
2. THE CONTRACTOR WILL FURNISH AND INSTALL ALL SIGNS SHOWN ON THIS SHEET.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

**CANTILEVER AND OVERHEAD SIGN** STRUCTURES, OPEN-END, FY16-18

CONTRACT BRIDGE NO. T201407004 DESIGNED BY: RK&K COUNTY CHECKED BY: JCR NEW CASTLE

SIGN DETAILS

72 OTAL SHTS 83

- 2. AASHTO "LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012", INCLUDING ALL REVISIONS.
- 3. DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AUGUST 2001, INCLUDING ALL SUPPLEMENTALS.
- 4. AASHTO/AWS D1.5 BRIDGE WELDING CODE AND AWS D1.1 STRUCTURAL WELDING CODE.

### DESIGN LOADS:

- 1. THE DESIGN WIND SPEED IS 90 MPH (3-SECOND GUST WIND SPEED),
  BASED ON A 50-YEAR MEAN RECURRENCE INTERVAL.
- 2. THE DESIGN ICE LOAD IS 3 PSF.
- 3. THE DESIGN SIGN PANEL AREA INCLUDES AN ADDITIONAL 15% INCREASE IN AREA OVER THE ACTUAL SIGN PANEL AREA.
- 4. FATIGUE DESIGN FOR OVERHEAD SIGN STRUCTURES IS BASED ON FATIGUE CATEGORY II FOR NATURAL WIND GUSTS AND TRUCK- INDUCED GUSTS.
- 5. FATIGUE DESIGN FOR CANTILEVER SIGN STRUCTURES IS BASED ON FATIGUE CATEGORY I FOR GALLOPING, NATURAL WINDS GUSTS, AND TRUCK INDUCED GUSTS.

### MATERIALS:

- 1. SIGN STRUCTURE POSTS AND OVERHEAD MEMBERS SHALL BE ROUND, NON-TAPERED, TUBULAR STEEL PIPE CONFORMING TO THE FOLLOWING REQUIREMENTS:
  - A. THE PIPE SHALL HAVE A MINIMUM YIELD STRENGTH OF 52,000 PSI AND CONFORM TO ONE OF THE FOLLOWING MATERIAL DESIGNATIONS:

ASTM A53, GRADE B, TYPE E OR S API 5LX, GRADE X52 ASTM A106, GRADE C, TYPE S ASTM A500, GRADE B

- B. MILL CERTIFICATIONS FOR EACH SIGN STRUCTURE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- C. THE PIPE SHALL HAVE A MINIMUM CHARPY V-NOTCH IMPACT TEST RESULT OF 25 FT-LB AT 40°F. CHARPY V-NOTCH SAMPLING AND TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH ASTM A673, FREQUENCY H.
- 2. ALL STEEL PLATES AND SHAPES SHALL CONFORM TO AASHTO M270, GRADE 36 OR BETTER. ALL STEEL PLATES AND SHAPES SHALL MEET THE CHARPY V-NOTCH REQUIREMENTS FOR ZONE 2, NON-FRACTURE CRITICAL.
- 3. THE STRUCTURE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111.
- 4. ALL CONNECTION BOLTS SHALL CONFORM TO AASHTO M164. WASHERS SHALL CONFORM TO AASHTO M293, AND NUTS SHALL CONFORM TO AASHTO M291, GRADE DH, OR AASHTO M292, GRADE 2H.
- 5. ANCHOR BOLTS SHALL CONFORM TO AASHTO M314, GRADE 55. ANCHOR NUTS SHALL CONFORM TO AASHTO M291, GRADE DH, OR AASHTO M292, GRADE 2H. WASHERS SHALL CONFORM TO AASHTO M293.
- 6. ALL HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M232.
- 7. PORTLANT CEMENT CONCRETE FOR PEDESTALS AND FOUNDATIONS SHALL BE DELDOT CLASS B (f'c = 3,000 PSI).
- 8. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
- 9. REINFORCING STEEL SHALL CONFORM TO AASHTO M31, GRADE 60.
- 10. ALL REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE NOTED.

### GENERAL:

- 1. BECAUSE SURVEY DATA PROVIDING SIGN STRUCTURE LOCATIONS AND ROADWAY CROSS-SLOPES WAS NOT AVAILABLE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE SURVEY INFORMATION NECESSARY TO VERIFY MINIMUM SIGN STRUCTURE HEIGHTS AND SPAN LENGTHS FOR EACH SIGN STRUCTURE. THE CONTRACTOR SHALL SUBMIT ALL SURVEY INFORMATION TO THE DEPARTMENT FOR FINAL DESIGN AND TO VERIFY THE STRUCTURAL ADEQUACY OF ALL MEMBER SIZES AND CONNECTIONS PROVIDED IN THE CONTRACT DRAWINGS.
- 2. DRILLED SHAFT FOUNDATION SIZES AND REINFORCING DETAILS SHOWN IN THE CONTRACT DRAWINGS ARE FOR ESTIMATION PURPOSES ONLY. THE FINAL DESIGN OF EACH DRILLED SHAFT FOUNDATION WILL BE PERFORMED BY THE ENGINEER ONCE THE DEPARTMENT OBTAINS SOIL BORING INFORMATION.
- 3. FORM MASTS FOR SIGN STRUCT<mark>URES TO THE RADII SHOWN ON THE PLANS IN ACCORDANCE WITH THE TUBE AND PIPE ASSOCIATION INTERNATIONAL RECOMMENDED STANDARDS FOR INDUCTION BENDING OF PIPE AND TUBE (TPA-IBS-98).</mark>
- 4. STEEL TEMPLATES SHALL BE USED TO SET ANCHOR BOLTS PLUMB WHEN POURING THE FOUNDATION.
- 5. BASE PLATES SHALL BE IN FULL CONTACT WITH ALL FLAT WASHERS.
- 6. ALL ANCHOR BOLTS SHALL BE TIGHTENED USING TURN OF NUT METHOD (1/6 TURN AFTER SNUG TIGHT).
- 7. THREADS OF ANCHOR BOLTS SHALL BE BURRED OFF AT FACE OF NUT AFTER COLUMN IS INSTALLED.
- 8. LOCK WASHERS WITH FLAT WASHERS SHALL ONLY BE USED FOR U-BOLT CONNECTIONS AND NUTS SHALL BE TURNED UNTIL THE LOCK WASHER IS FLAT.
- 9. COLUMN, CHORD, AND BRACING O.D. DIMENSIONS ARE ACTUAL.
- 10. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE ORDERING ANY MATERIALS.
- 11. FABRICATE ALL SIGN STRUCTURES INTO THE LARGEST PRACTICAL SECTIONS PRIOR TO GALVANIZING.

  SUBMIT SPLICE LOCATIONS TO THE ENGINEER FOR APPROVAL. DO NOT COMMENCE FABRICATION UNTIL

  SUCH SPLICE LOCATIONS ARE APPROVED.
- 12. DO NOT USE GROUT BETWEEN BASE PLATE AND CONCRETE PEDESTAL.
- 13. SLOPE TOP OF PEDESTAL 4% FROM CENTER TO NEAR EDGES FOR DRAINAGE.
- 14. PROVIDE DOUBLE NUTS AND WASHERS FOR EACH ANCHOR BOLT.
- 15. PERMANENT CAMBER EQUAL TO L/1000 HAS BEEN PROVIDED IN ADDITION TO THE DEAD LOAD CAMBER.

  CAMBER SHALL BE INCORPORATED DURING FABRICATION.
- 16. THE COST OF THE ROUND, NON-TAPERED, TUBULAR STEEL PIPE AND STRUCTURAL STEEL SHAPES, PLATES AND BARS, INCLUDING FABRICATION, COATING, ERECTION AND CONNECTIONS SHALL BE PAID FOR UNDER THE PERTINENT "STEEL SIGN STRUCTURES, TUBULAR ARCH, CANTILEVER" OR "STEEL SIGN STRUCTURES, TUBULAR ARCH, OVERHEAD" ITEM.
- 17. THE COST OF EACH FOUNDATION, INCLUDING EXCAVATION, REINFORCEMENT, CONCRETE AND ANCHORAGE MATERIALS, SHALL BE PAID FOR UNDER THE PERTINENT DRILLED SHAFT FOUNDATION ITEM.
- 18. THIS SET OF PLANS SHALL BE USED BY THE CONTRACTOR TO BID THE PROJECT.
- 19. ALL TOWER SUPPORTS SHALL BE LOCATED BEHIND PHYSICAL TRAFFIC BARRIERS, IF PRESENT.
- 20. INSTALL ACCESS HOLE ON POST OPPOSITE DIRECTION OF TRAFFIC.

## SHEET INDEX

SHEE NO.	T	DESCRIPTION
SS-0	1	SIGN STRUCTURE GENERAL NOTES AND INDEX OF SHEETS
SS-0	2	OVERHEAD SIGN STRUCTURE ELEVATION AND END VIEWS
SS-0	3	CANTILEVER SIGN STRUCTURE ELEVATION AND END VIEW
SS-0	4	SIGN SUPPORT STRUCTURE CHARTS
SS-0	5	OVERHEAD SIGN STRUCTURE DETAILS
SS-0	6	CANTILEVER SIGN STRUCTURE DETAILS
SS-0	7	OVERHEAD/CANTILEVER SIGN STRUCTURE DETAILS
SS-0	8	SIGN STRUCTURE FOUNDATION DETAILS

SI	GN STRUC	TURE I	LOCATION			
IGN STRUCTURE			SUPPORT OF	FSET FROM		
NUMBER	STRUCTURE TYPE	BASELINE	EXISTING SIGN	N STRUCTURE *		
			WEST SUPPORT	EAST SUPPORT		
S01026 059	OVERHEAD	I-95	86′ SOUTH	87′ SOUTH		
S01027 059	OVERHEAD	I-95	537′ NORTH	534′ NORTH		
S01028 059	OVERHEAD	I-95	564′ NORTH	563′ NORTH		
			NORTH SUPPORT	SOUTH SUPPORT		
S01104 060	OVERHEAD	I-495	281' EAST	275' EAST		
S01124 060	OVERHEAD	I-495	335' EAST	346' EAST		
S01125 060	OVERHEAD	I-495	98′ WEST	92′ WEST		
SC1105 060	CANTILEVER	I-495	-	137′ WEST		
SC1119A-060	CANTILEVER	I-495	NEW ST	RUCTURE		

\* OFFSET DISTANCES ARE MEASURED BETWEEN SUPPORT CENTERS AND REPORTED TO THE NEAREST FOOT. FINAL SIGN STRUCTURE LOCATIONS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18

CONTRACT
BRIDGE NO.

T201407004

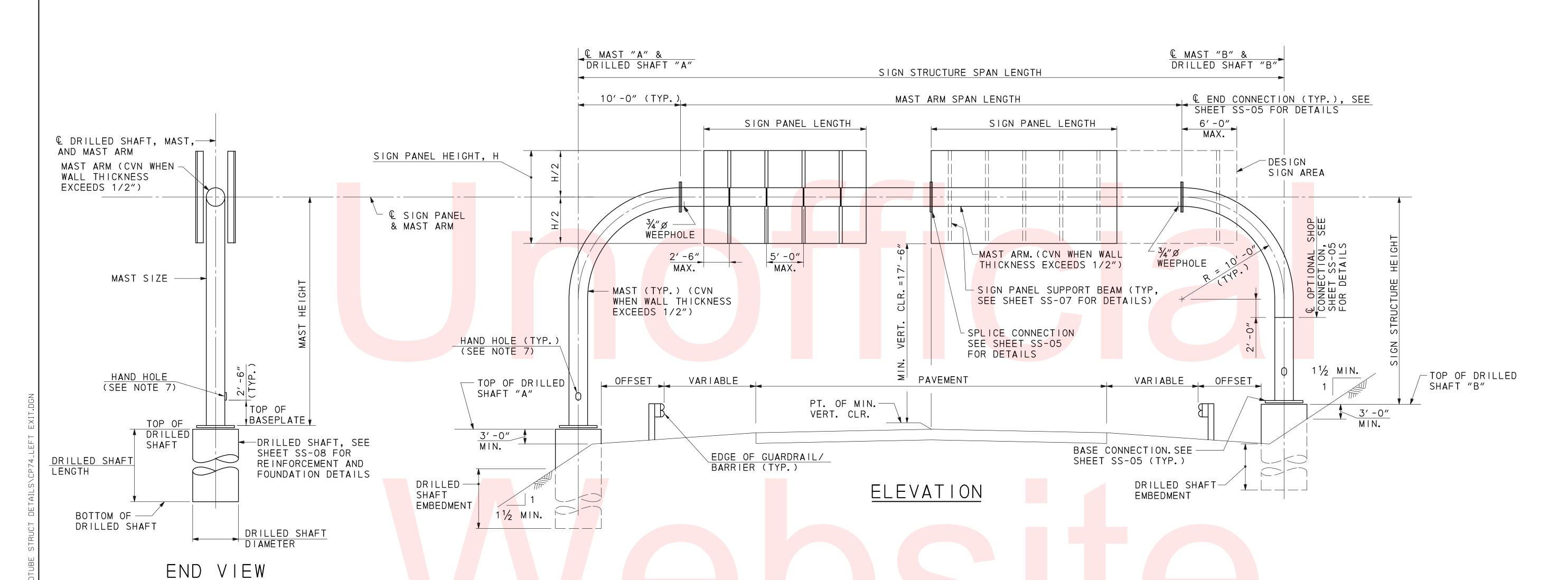
COUNTY

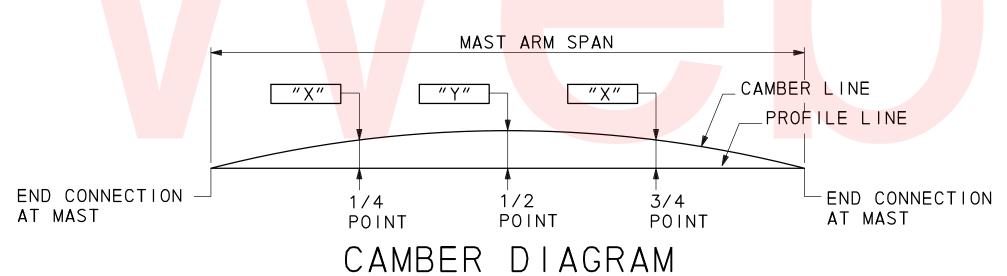
DESIGNED BY: RK&K PLO

NEW CASTLE CHECKED BY: JW

GENERAL NOTES AND INDEX OF SHEETS

SS-01
SHEET NO.
73
TOTAL SHTS.
83





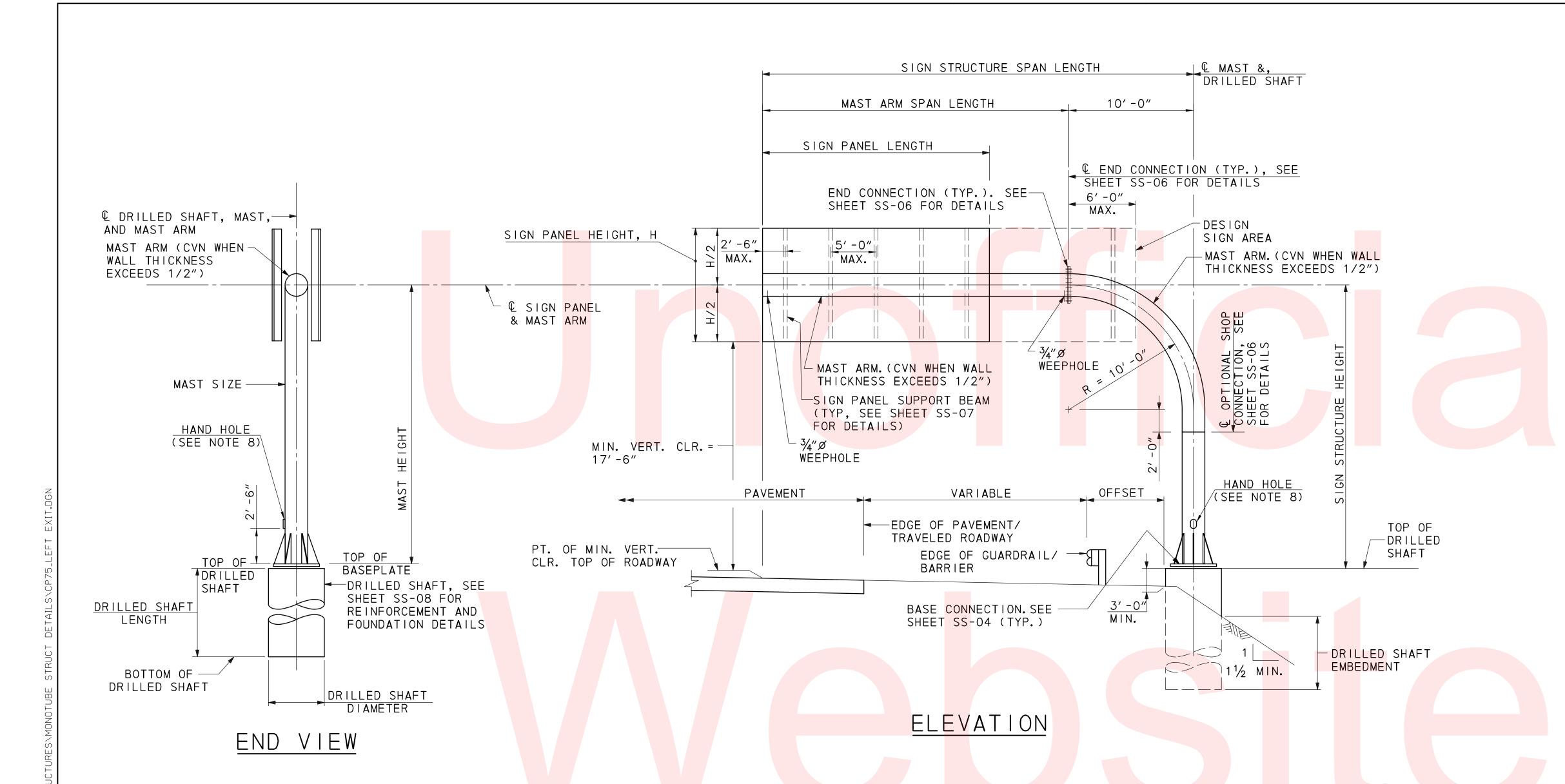
- 1. FOR GENERAL NOTES, SEE SHEET SS-01.
- 2. FOR SIGN PANEL DETAILS, SEE SIGN DETAIL SHEETS. 3. GROUT SHALL NOT BE PLACED BETWEEN BASE PLATE AND
- CONCRETE CAISSON. 4. TIGHTEN ANCHOR BOLTS USING TURN-OF-NUT METHOD (ADDITIONAL 1/6 TURN AFTER SNUG TIGHT) ONCE SIGN PANEL IS LEVELED.
- 5. SEAL GAP BETWEEN BASE PLATE AND CONCRETE DRILLED SHAFT WITH GALVANIZED SCREEN, 1 1/4" TO 3/8" OPENING, 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.
- 6. FOR OVERHEAD SIGN SUPPORT STRUCTURE CHART, SEE SHEET SS-04. 7. 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. FOR HAND HOLE DETAILS, SEE SHEET SS-07.

# MAXIMUM CAMBER (AT 1/2 POINT) REPRESENTS

MAXIMUM DEAD LOAD CAMBER PLUS L/1000 WHERE L = SIGN STRUCTURE SPAN.

	CAMBER		
SIGN STRUCTURE NUMBER	SPAN	"X" (IN.)	"Y" (IN.)
S0 1026 0 <mark>59</mark>	107′ -3″	2.99	3.54
S0 1027 <mark>059</mark>	108′ -0″	3.03	3.64
S0 1028 0 <mark>59</mark>	107′ -0″	3.05	3.65
SO 1104 0 <mark>60</mark>	150′ -0″	5. 51	7.05
SO 1124 06 <mark>0</mark>	163′ -0″	7. 24	9. 46
S0 1125 060	56′ -6″	1.31	1. 41

SS-02 ADDENDUMS / REVISIONS SHEET NO. CONTRACT BRIDGE NO. **OVERHEAD SIGN DELAWARE** 74 T201407004 CANTILEVER AND OVERHEAD SIGN NOT TO SCALE STRUCTURE - ELEVATION DESIGNED BY: RK&K PLO DEPARTMENT OF TRANSPORTATION STRUCTURES, OPEN-END, FY16-18 OTAL SHTS COUNTY AND END VIEWS 83 CHECKED BY: JW NEW CASTLE

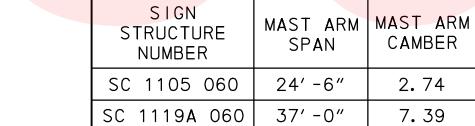


MAST ARM CAMBER

ADDENDUMS / REVISIONS



- 1. FOR GENERAL NOTES, SEE SHEET SS-01.
- 2. FOR SIGN PANEL DETAILS, SEE SIGN DETAIL SHEETS. 3. GROUT SHALL NOT BE PLACED BETWEEN BASE PLATE AND
- CONCRETE CAISSON. 4. TIGHTEN ANCHOR BOLTS USING TURN-OF-NUT METHOD
- (ADDITIONAL 1/6 TURN AFTER SNUG TIGHT) ONCE SIGN PANEL IS LEVELED.
- 5. TERMINATE WELDS 1/2" SHORT OF STIFFENER ENDS AND STIFFENER CHAMFER.
- 6. SEAL GAP BETWEEN BASE PLATE AND CONCRETE DRILLED SHAFT WITH GALVANIZED SCREEN, 1 1/4" TO 3/8" OPENING, 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.
  7. FOR CANTILEVER SIGN SUPPORT STRUCTURE CHART, SEE SHEET SS-04.
- 8. 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.



# -MAST SHALL BE PLUMB FOLLOWING ADDITION OF DEAD LOAD

# CAMBER DIAGRAM

MAST ARM CAMBER MU<mark>ST IN</mark>CLUDE BOTH MAST ARM AND MAST DEFLECTION BACK RAKING OF MAST IS NOT PERMITTED.

CA	MBER	
SIGN STRUCTURE NUMBER	MAST ARM SPAN	MAST ARM CAMBER
SC 1105 060	24′ -6″	2.74
SC 1119A 060	37′ -0″	7. 39

**DELAWARE** DEPARTMENT OF TRANSPORTATION

NOT TO SCALE

**CANTILEVER AND OVERHEAD SIGN** STRUCTURES, OPEN-END, FY16-18

CONTRACT BRIDGE NO. T201407004 DESIGNED BY: RK&K PLO COUNTY CHECKED BY: NEW CASTLE JW

**CANTILEVER SIGN** STRUCTURE - ELEVATION AND END VIEW

SS-03 SHEET NO. 75 OTAL SHTS

	OVERHEAD SIGN SUPPORT STRUCTURE CHART															
			М	AST AND	MAST A	RM	1A	NCHOR BO	LTS	BASE	PLATE	H.S.	(SPLICE	) BOLTS	SPLICE PLATE	
SIGN STRUCTURE NO.	SIGN STRUCTURE SPAN LENGTH*	DESIGN PANEL AREA (SF)	MAST ARM SPAN LENGTH *	SIGN STRUCTURE HEIGHT *	DIAMETER (INCHES)	THICKNESS (INCHES)	NO. OF BOLTS	DIAMETER (INCHES)	BOLT CIRCLE	DIAMETER (INCHES)	THICKNESS (INCHES)	NO. OF BOLTS	DIAMETER (INCHES)	BOLT CIRCLE (INCHES)	DIAMETER (INCHES)	THICKNESS (INCHES)
SO 1026 059	127′ -3″	1542	107′ -3″	28′ -6″	30	0.625	16	2	38	45	3. 75	16	1.5	38	45	2.5
S0 1027 059	128′ -0″	1741	108′ -0″	28′ -6″	30	0.625	16	2	38	45	3. 75	16	1.5	38	45	2. 5
SO 1028 059	127′ -0″	1853	107′ -0″	30′ -0″	30	0.625	16	2	38	45	3. 75	16	1.5	38	45	2. 5
S0 1125 060	76′ -6″	890	56′ -6″	28′ -0″	24	0.562	8	2	30	37	2	8	1.5	30	37	2
SO 1124 060	183′ -0″	1510	163′ -0″	28′ -0″	30	0.625	16	2	38	45	3. 75	16	2	38	45	2.5
SO 1104 060	170′ -0″	2036	150′ -0″	28′ -0″	32	0.625	16	2	40	47	3, 75	16	2	40	47	2.5

				CANTILEVER SIGN SUPPORT STRUCTURE CHART															
		MAST AND MAST ARM			ANCHOR BOLTS			BASE PLATE		H.S. (SPLICE) BOLTS		SPLICE PLATE							
	SIGN STRUCTURE NO.	SIGN STRUCTURE SPAN LENGTH*	DESIGN PANEL AREA (SF)	MAST ARM SPAN LENGTH *	SIGN STRUCTURE HEIGHT *		THICKNESS (INCHES)	NO. OF BOLTS	DIAMETER (INCHES)	BOLT CIRCLE	DIAMETER (INCHES)		NO. OF STIFFENERS	NO. OF BOLTS	DIAMETER (INCHES)	BOLT CIRCLE	DIAMETER (INCHES)	THICKNESS (INCHES)	NO. OF STIFFENERS
S	C 1119A 060	47′ -0″	356	37′ -0″	28′ -0″	24	0.562	12	2	30	42	2	6	12	1.5	30	37	2	-
S	C 1105 060	34′ -6″	246	24′ -6″	28′ -0″	24	0.562	12	2	30	42	2	6	12	1.5	30	37	2	-

\* NOTE: BECAUSE SURVEY SHOWING ROADWAY HIGH POINTS AND CROSS-SLOPES WAS NOT AVAILABLE, THE DESIGN SIGN STRUCTURE HEIGHT WAS DETERMINED ASSUMING A 3-FOOT VERTICAL TOLERANCE BETWEEN THE TRUE HIGH POINT IN THE FINISHED ROADWAY SURFACE AND PROPOSED TOP OF DRILLED SHAFT FOUNDATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING SURVEYS TO VERIFY SPAN LENGTHS AND STRUCTURE HEIGHTS. SURVEY RESULTS SHALL BE SUBMITTED TO THE DEPARTMENT FOR FINAL DESIGN AND VERIFICATION OF ALL INFORMATION PROVIDED IN THE SIGN STRUCTURE CHARTS.

DELAWARE
DEPARTMENT OF TRANSPORTATION

NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURES, OPEN-END, FY16-18 CONTRACT
BRIDGE NO.

T201407004

COUNTY

DESIGNED BY: RK&K PLO

NEW CASTLE

CHECKED BY: JW

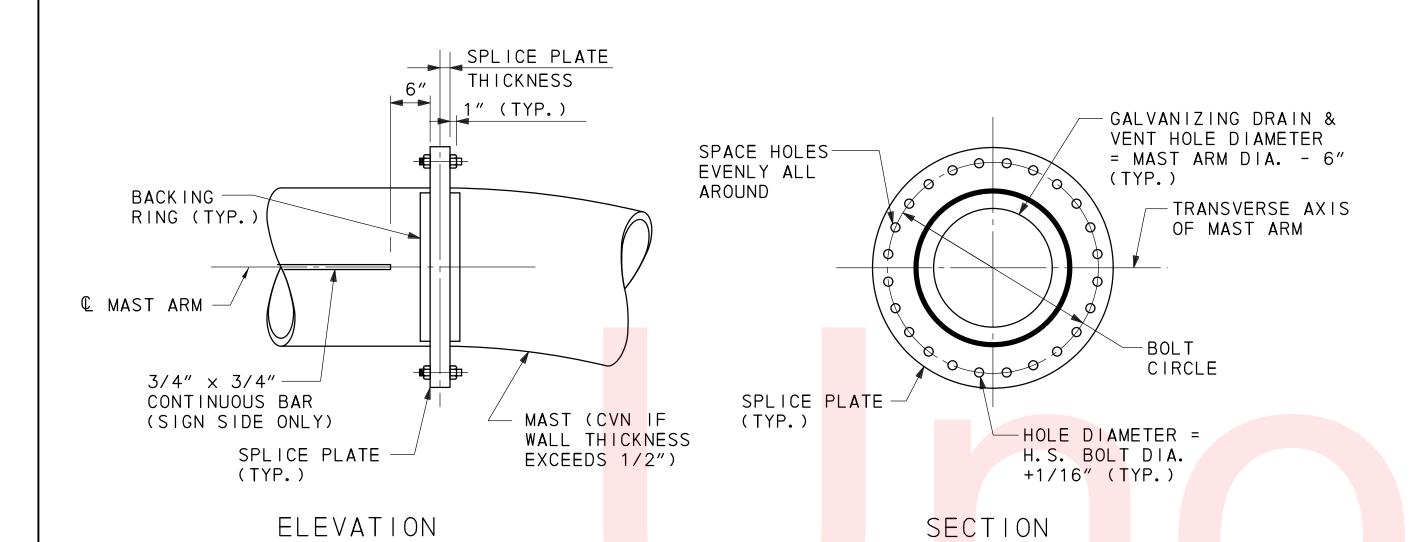
SIGN SUPPORT STRUCTURE CHARTS

SHEET NO.

76

TOTAL SHTS.

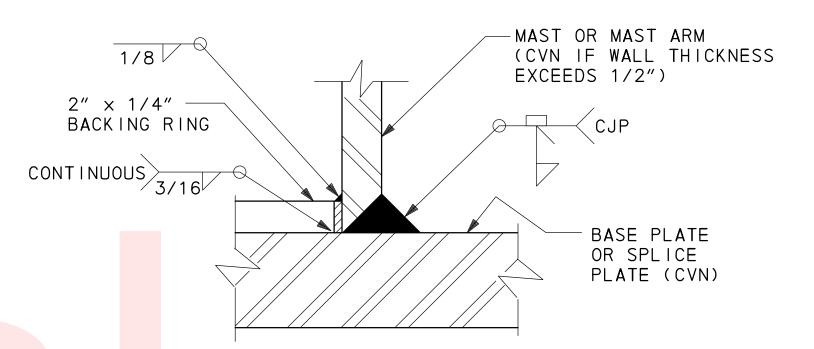
83



OPTIONAL SHOP CONNECTION DETAIL

2" X 1/4"

BACKING RING



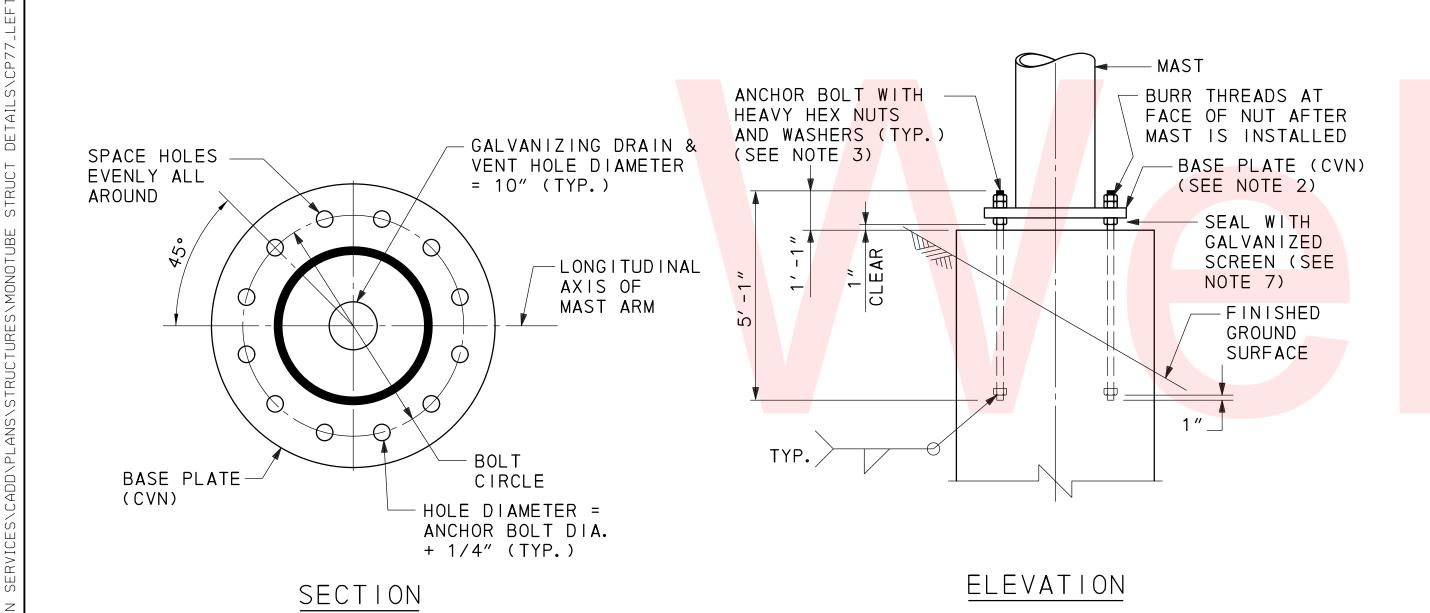
WELD DETAIL

### WELD DETAIL NOTE:

BACKING RING MUST BE FITTED/SIZED TO THE PIPE COLUMN AND CONTINUOUSLY FILLET WELDED TO THE BASE PLATE BEFORE THE FULL PENETRATION GROOVE WELD IS MADE. BACKING RING MUST BE FABRICATED AS A CONTINUOUS RING.

# OVERHEAD STRUCTURE END CONNECTION DETAILS

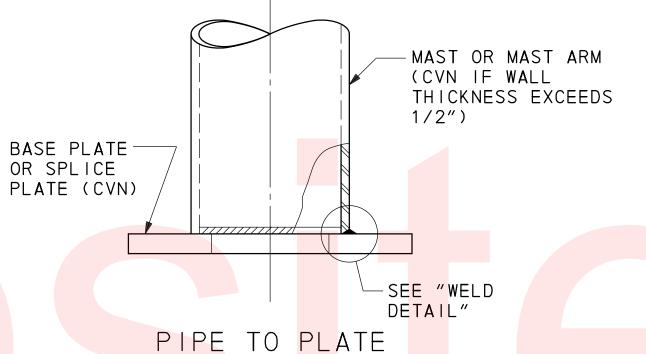
(MAST ARM SPLICE CONNECTION SIMILAR) (24 BOLT CONFIGURATION SHOWN, OTHER CONFIGURATIONS SIMILAR)



# OVERHEAD STRUCTURE BASE CONNECTION DETAILS

(12 BOLT CONFIGURATION SHOWN, OTHER CONFIGURATIONS SIMILAR)

ADDENDUMS / REVISIONS



-MAST (CVN IF WALL

THICKNESS EXCEEDS

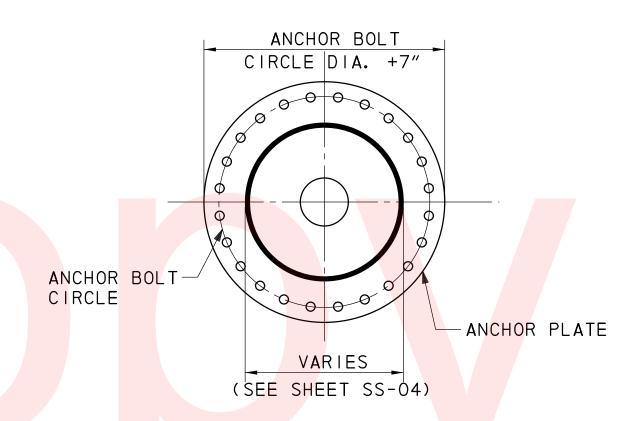
1/2")

3/16/

CONNECTION DETAIL

### NOTES:

- 1. FOR GENERAL NOTES, SEE SHEET SS-01.
- 2. GROUT SHALL NOT BE PLACED BETWEEN BASE PLATE AND CONCRETE
- 3. TIGHTEN ANCHOR BOLTS USING TURN-OF-NUT METHOD (ADDITIONAL 1/6 TURN AFTER SNUG TIGHT) ONCE SIGN PANEL IS LEVELED.
  - CHAMFER.
- 5. FOR DRILLED SHAFT INFORMATION, SEE SHEET SS-08.
- 6. FOR SIGN PANEL SUPPORT BEAM DETAILS, SEE SHEET SS-07.
- SEAL WITH GALVANIZED SCREEN, 1 1/4" TO 3/8" OPENING, 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.



PLAN

# ANCHOR PLATE DETAIL

(24 BOLT CONFIGURATION SHOWN, OTHER CONFIGURATIONS SIMILAR)

**DELAWARE** DEPARTMENT OF TRANSPORTATION

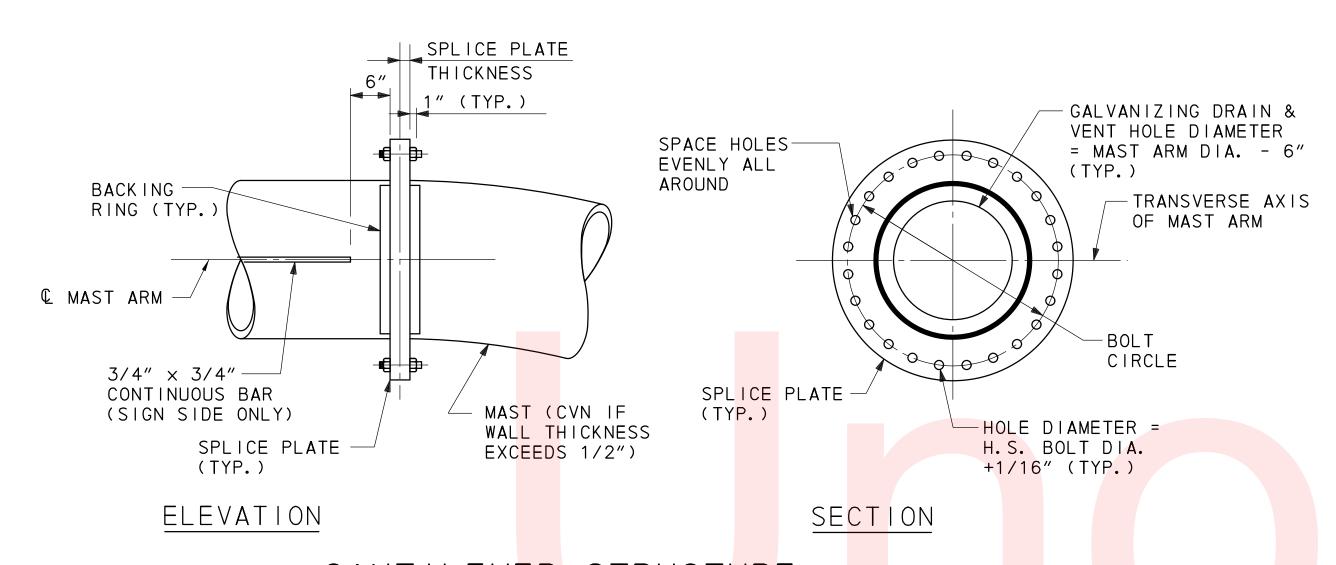
NOT TO SCALE

**CANTILEVER AND OVERHEAD SIGN** STRUCTURES, OPEN-END, FY16-18

CONTRACT BRIDGE NO. T201407004 DESIGNED BY: RK&K PLO COUNTY CHECKED BY: JW NEW CASTLE

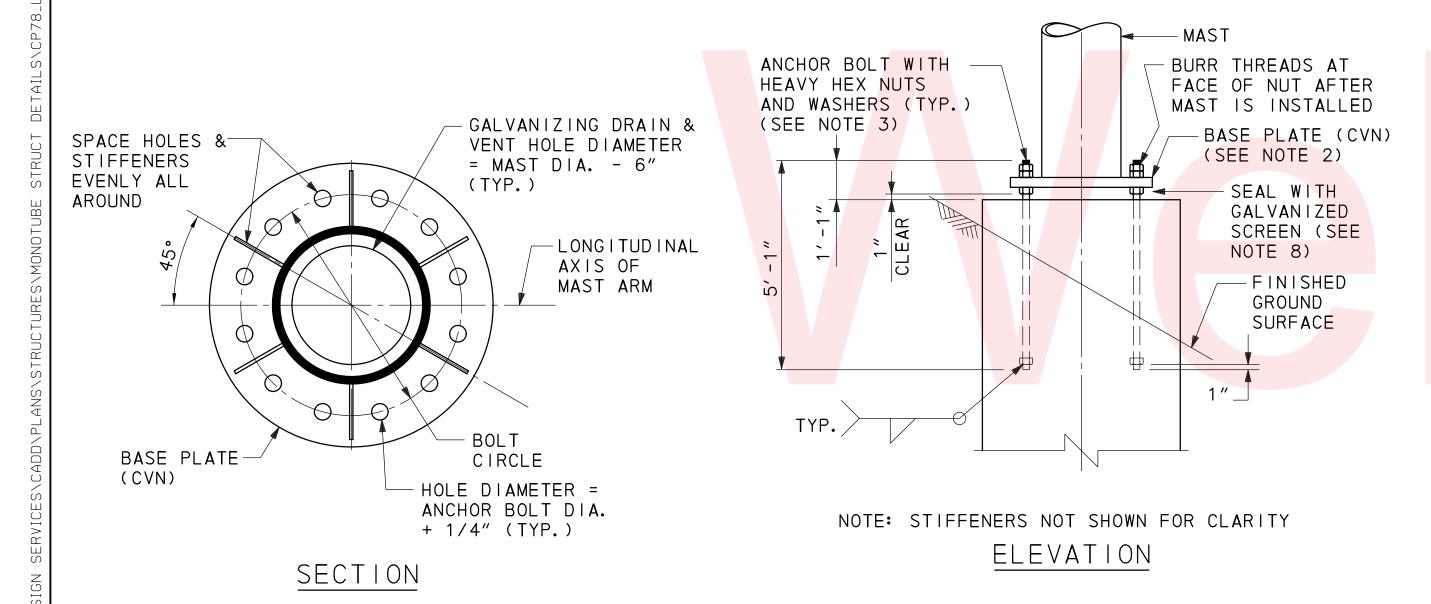
**OVERHEAD** SIGN STRUCTURE **DETAILS** 

SS-05 SHEET NO. 77 OTAL SHTS 83



# CANTILEVER STRUCTURE END CONNECTION DETAILS

(MAST ARM SPLICE CONNECTION SIMILAR) (24 BOLT CONFIGURATION SHOWN, OTHER CONFIGURATIONS SIMILAR)



# CANTILEVER STRUCTURE BASE CONNECTION DETAILS

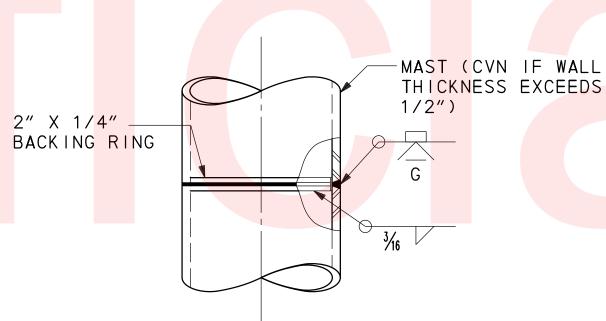
(12 BOLT CONFIGURATION SHOWN, OTHER CONFIGURATIONS SIMILAR)

ADDENDUMS / REVISIONS

# -1/4" COVER PLATE DIAMETER = MAST ARM DIA. + 1" SCREENED 2" DIA. VENT HOLES $-3/4" \times 3/4"$ CONTINUOUS BAR (SIGN SIDE ONLY)

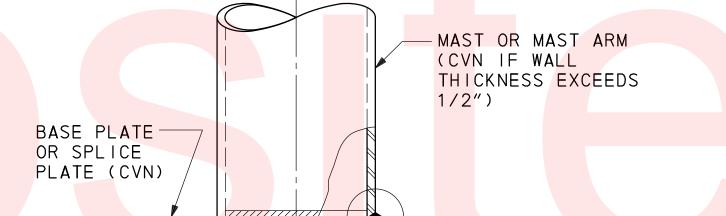
### MAST ARM END DETAIL

(CANTILEVER STRUCTURES)



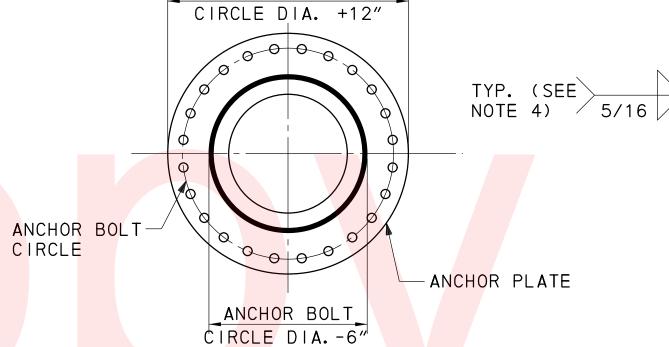
# OPTIONAL SHOP

# CONNECTION DETAIL



DETAIL"

PIPE TO PLATE CONNECTION DETAIL

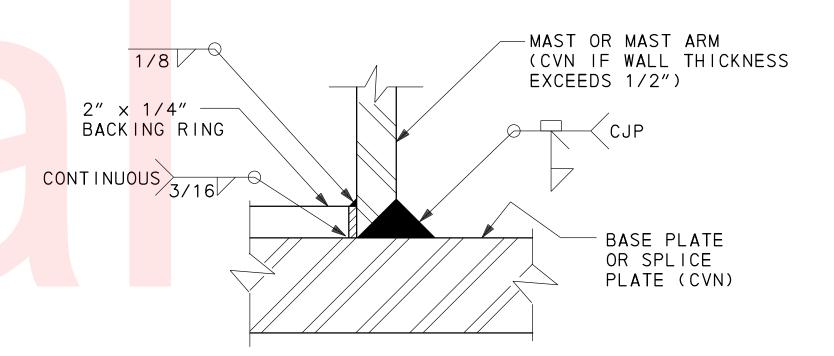


ANCHOR BOLT

SECTION

NOTES:

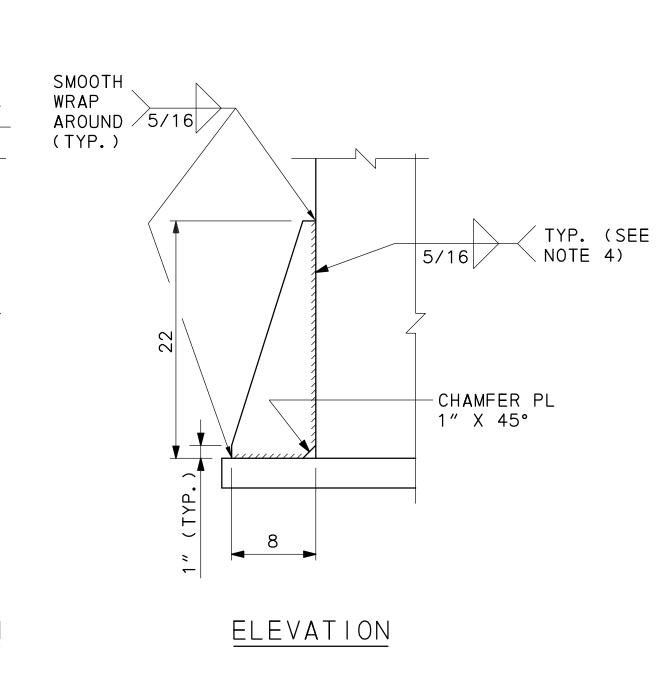
- 1. FOR GENERAL NOTES, SEE SHEET SS-01.
- 2. GROUT SHALL NOT BE PLACED BETWEEN BASE PLATE AND CONCRETE DRILLED SHAFT.
- 3. TIGHTEN ANCHOR BOLTS USING TURN-OF-NUT METHOD (ADDITIONAL 1/6 TURN AFTER SNUG TIGHT) ONCE SIGN PANEL IS LEVELED ..
- 4. TERMINATE WELDS 1/2" SHORT OF STIFFENER ENDS AND STIFFENER CHAMFER.
- 5. PROVIDE STIFFENERS AS INDICATED IN TABLES.
- 6. FOR DRILLED SHAFT INFORMATION, SEE SHEET SS-08.
- 7. FOR SIGN PANEL SUPPORT BEAM DETAILS, SEE SHEET SS-07.
- 8. SEAL WITH GALVANIZED SCREEN, 1 1/4" TO 3/8" OPENING, 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.



### WELD DETAIL

### WELD DETAIL NOTE:

BACKING RING MUST BE FITTED/SIZED TO THE PIPE COLUMN AND CONTINUOUSLY FILLET WELDED TO THE BASE PLATE BEFORE THE FULL PENETRATION GROOVE WELD IS MADE. BACKING RING MUST BE FABRICATED AS A CONTINUOUS RING.



### PLAN

# ANCHOR PLATE DETAIL

(24 BOLT CONFIGURATION SHOWN, OTHER CONFIGURATIONS SIMILAR)

 7117			
CONTRACT	BRIDGE NO.		
T201407004	,		
COUNTY	DESIGNED BY: RK&K	PLO	
NEW CASTLE	CHECKED BY:	JW	

**CANTILEVER** SIGN STRUCTURE **DETAILS** 

SS-06 SHEET NO. 78 OTAL SHTS 83

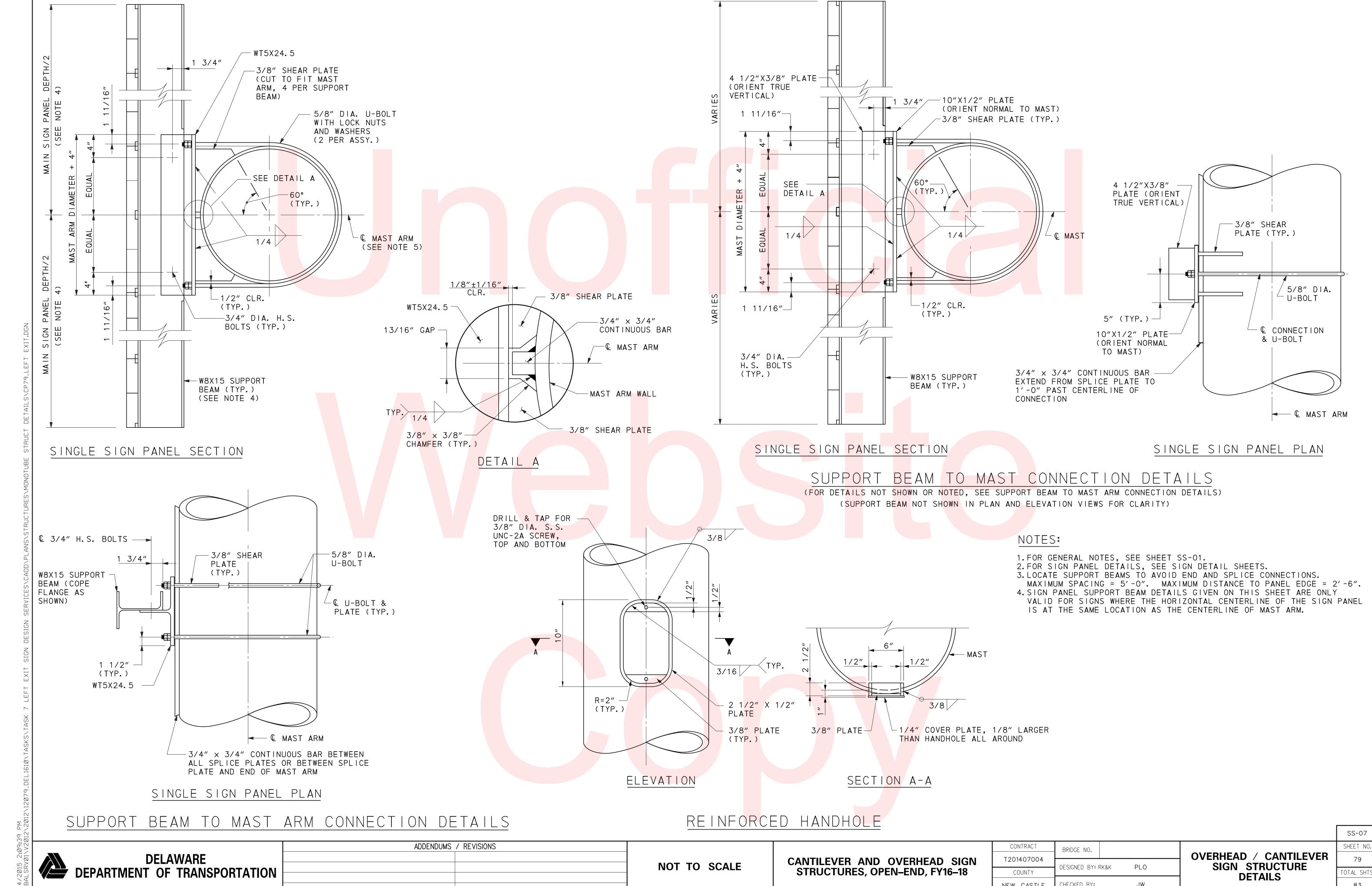
**DELAWARE** DEPARTMENT OF TRANSPORTATION

NOT TO SCALE

**CANTILEVER AND OVERHEAD SIGN** STRUCTURES, OPEN-END, FY16-18

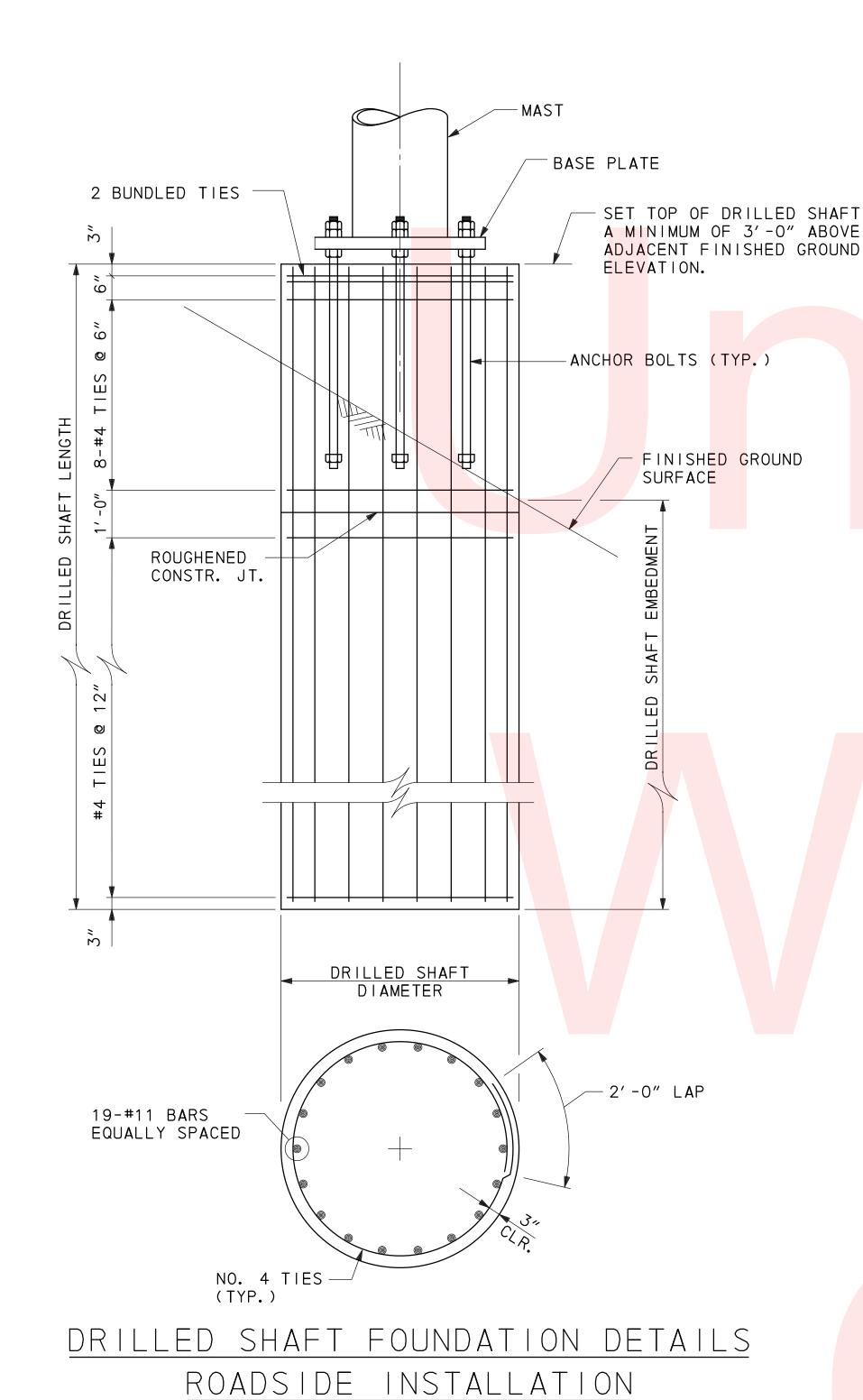
STIFFENER DETAILS

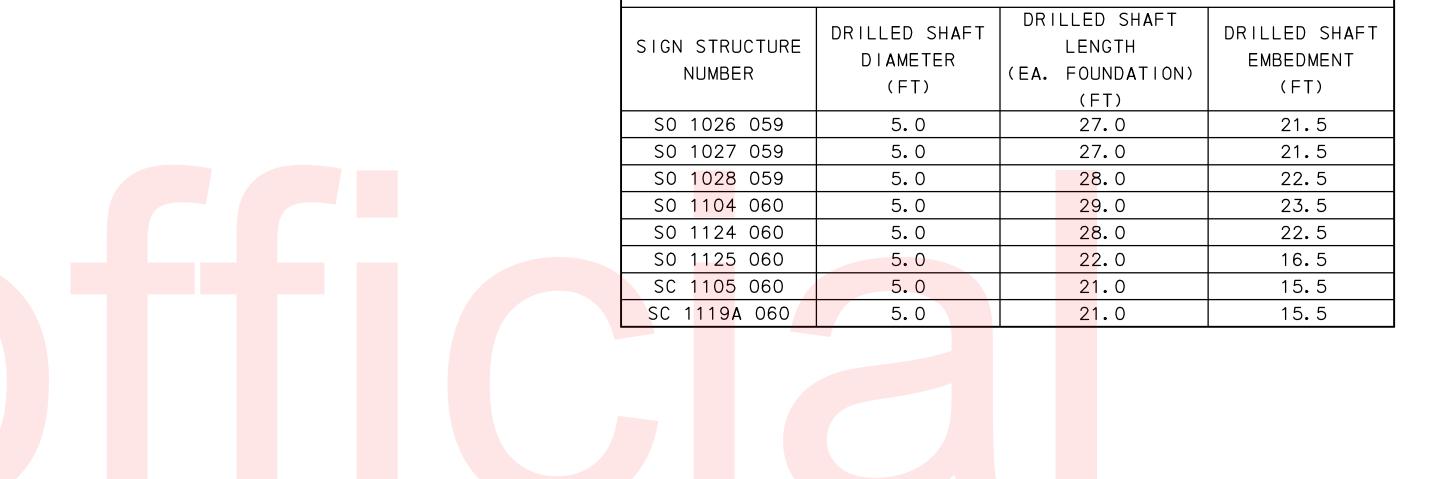
(BASE CONNECTION)



CHECKED BY: JW NEW CASTLE

OTAL SHTS 83





NOTE: DRILLED SHAFT FOUNDATION SIZES, LENGTHS, AND REINFORCING LAYOUT SHOWN ARE INTENDED FOR ESTIMATION PURPOSES ONLY. THE FINAL DESIGN OF EACH DRILLED SHAFT FOUNDATION WILL BE PERFORMED BY THE ENGINEER ONCE SOIL BORING INFORMATION IS OBTAINED BY THE DEPARTMENT.

SIGN STRUCTURE FOUNDATIONS

TYPICAL SHOULDER DETAIL

TOP OF

DRILLED SHAFT

© MAST & ──►

♠ DRILLED

SHAFT

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

CONTRACT
BRIDGE NO.

T201407004

COUNTY

DESIGNED BY: RK&K PLO

NEW CASTLE
CHECKED BY: JW

SIGN STRUCTURE FOUNDATION DETAILS

SHEET NO.

80

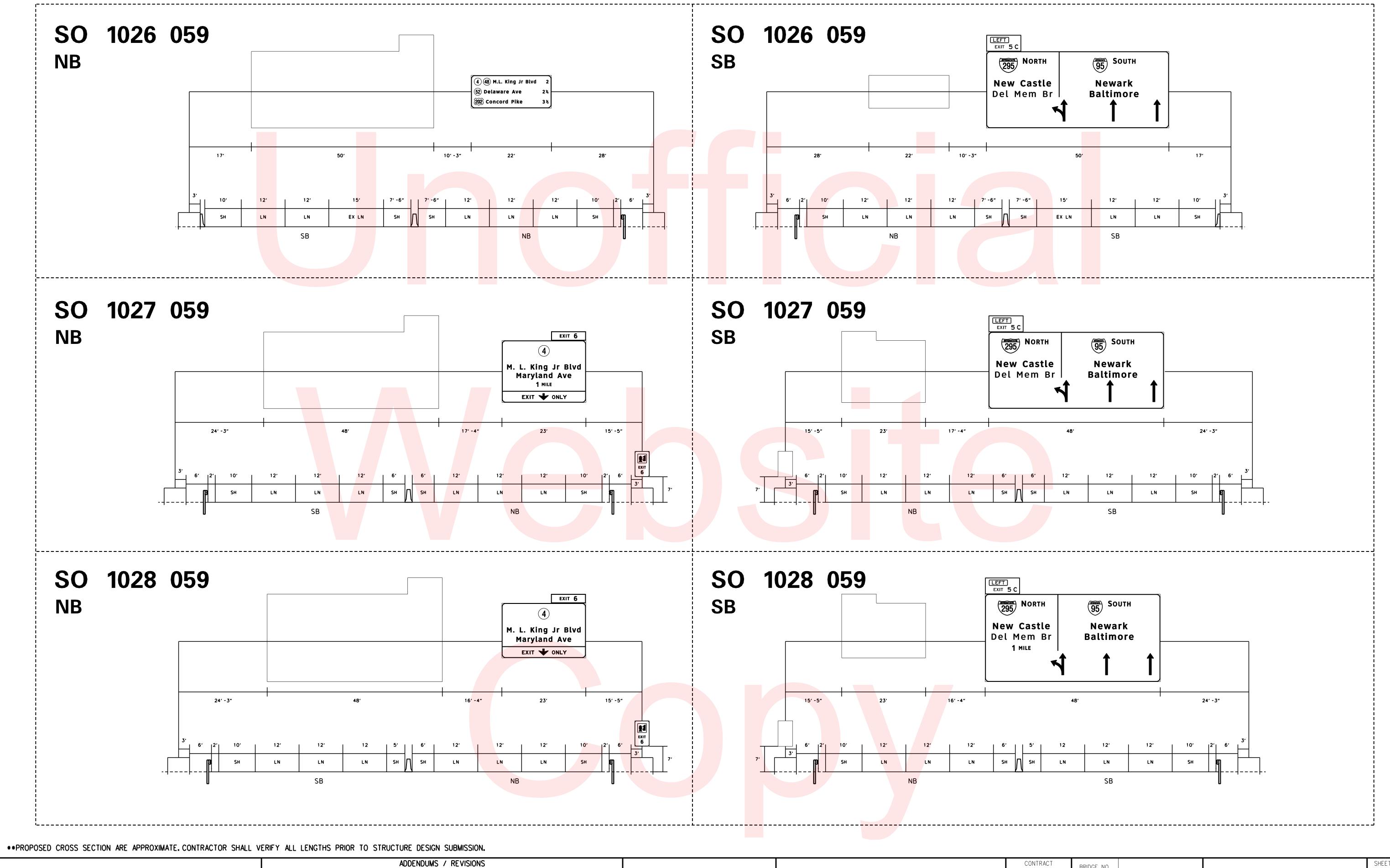
TOTAL SHTS.

CANTILEVER AND OVERHEAD SIGN
STRUCTURES, OPEN-END, FY16-18

T201407004

COUNTY

DESIGNED BY: RK&K



F:\WORK\LEFT EXIT FULL PROJE

DELAWARE DEPARTMENT OF TRANSPORTATION

NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURE, OPEN END, FY16–18

CONTRACT
BRIDGE NO.

T201407004

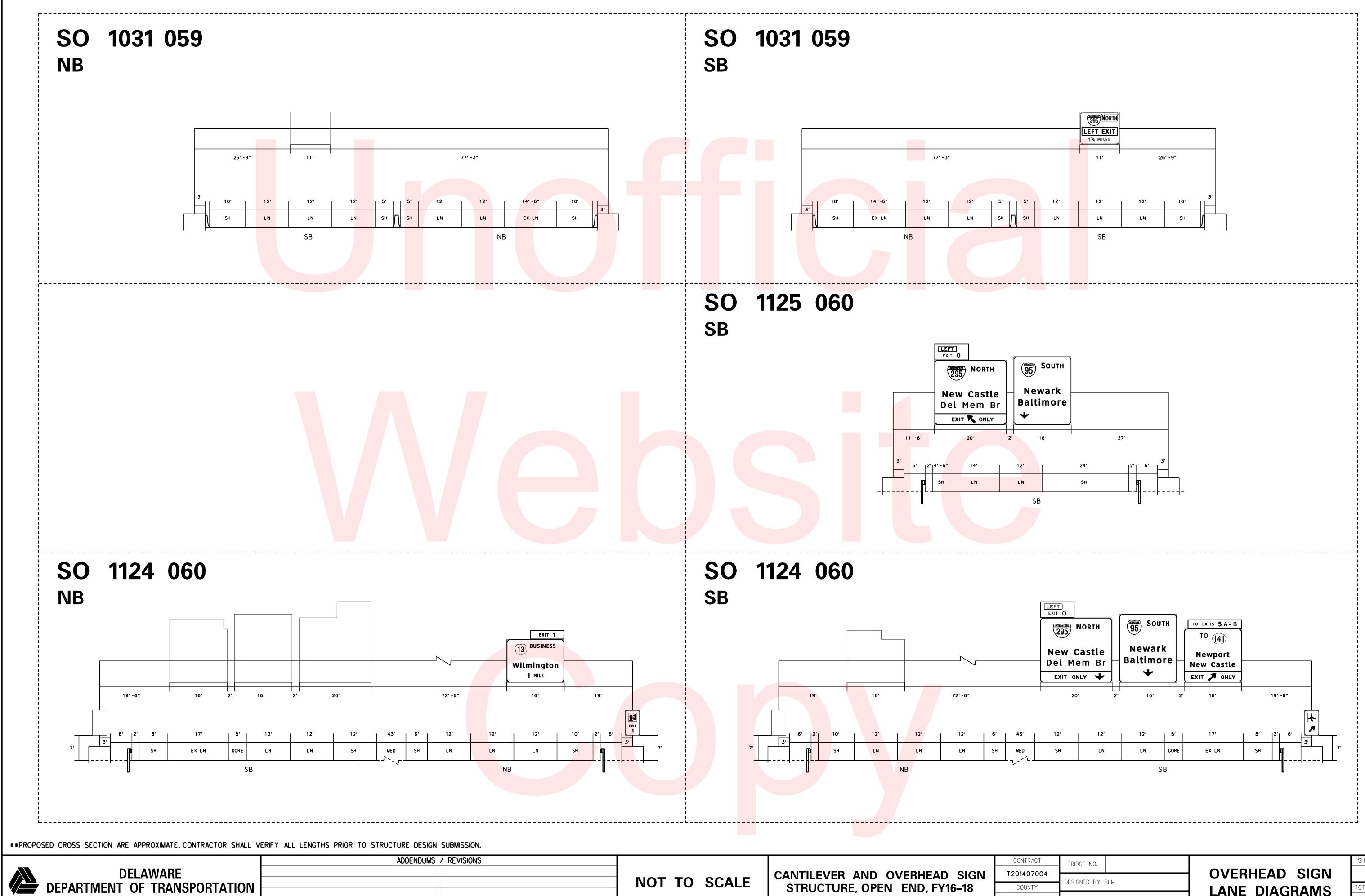
COUNTY

DESIGNED BY: SLM

CHECKED BY: JCR

OVERHEAD SIGN LANE DIAGRAMS

81 TOTAL SHTS. 83

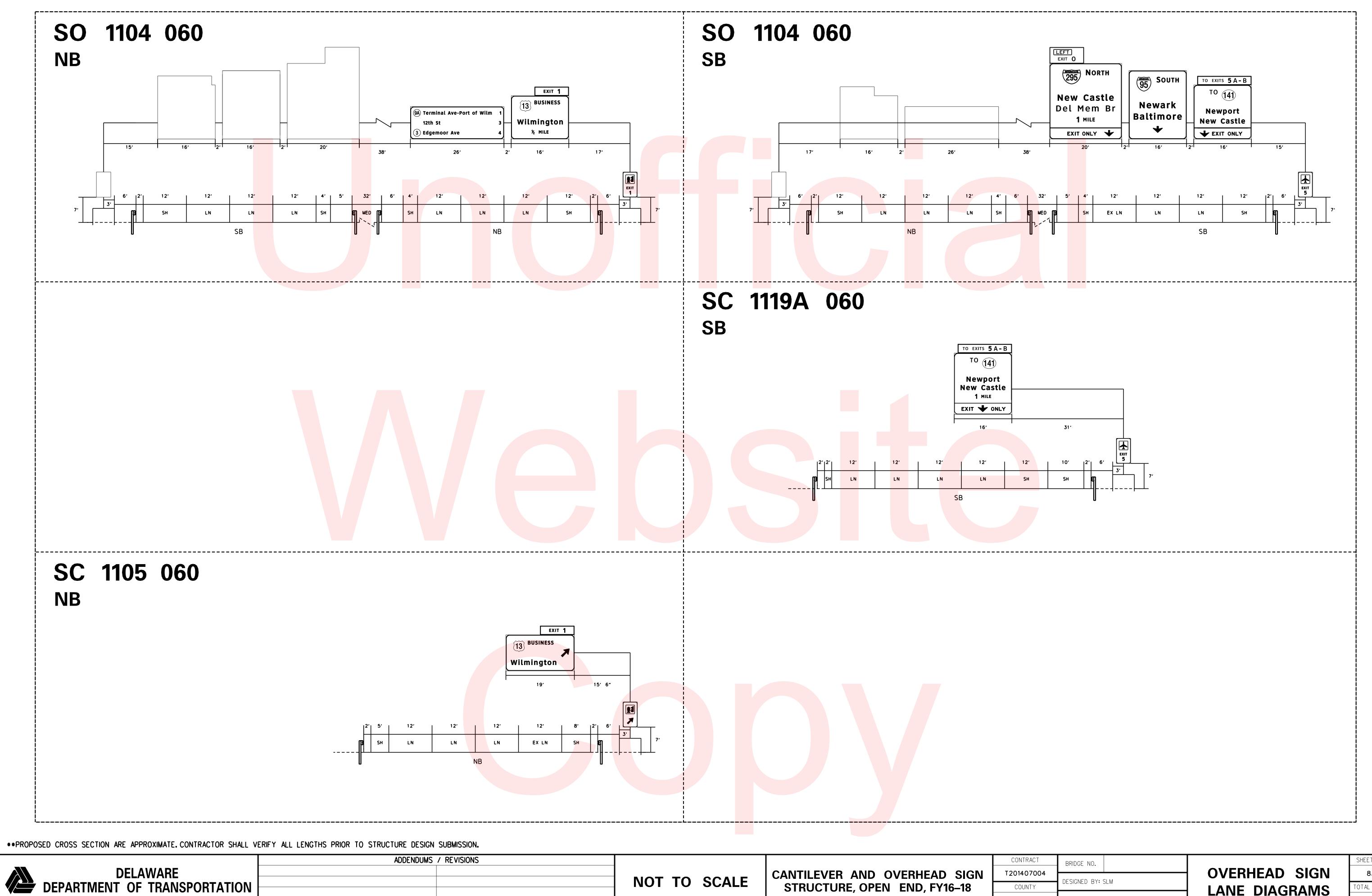


NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURE, OPEN END, FY16–18

DESIGNED BY: SLM COUNTY NEW CASTLE CHECKED BY: JCR

**OVERHEAD SIGN** LANE DIAGRAMS



NOT TO SCALE

CANTILEVER AND OVERHEAD SIGN STRUCTURE, OPEN END, FY16-18

T201407004 DESIGNED BY: SLM COUNTY NEW CASTLE CHECKED BY: JCR

**OVERHEAD SIGN** LANE DIAGRAMS