THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY UNITS

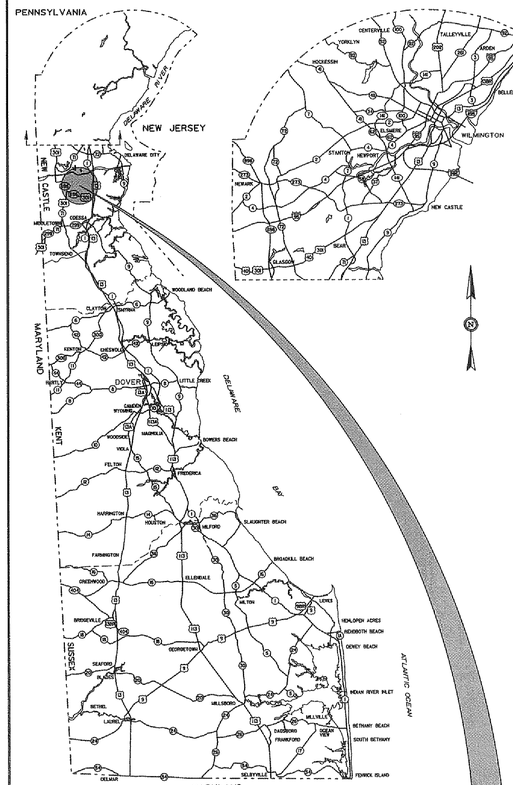
CONSTRUCTION PLANS FOR:

US 301
SR 896 TO SR 1

CONTRACT NUMBER: T200911308

FEDERAL AID PROJECT NUMBER: NH-2015(24)

COUNTY: NEW CASTLE M.R. #: 84



GENERAL LOCATION OF CONTRACT

LIMIT OF CONSTRUCTION CONTRACT T200911308 STATION 902+81

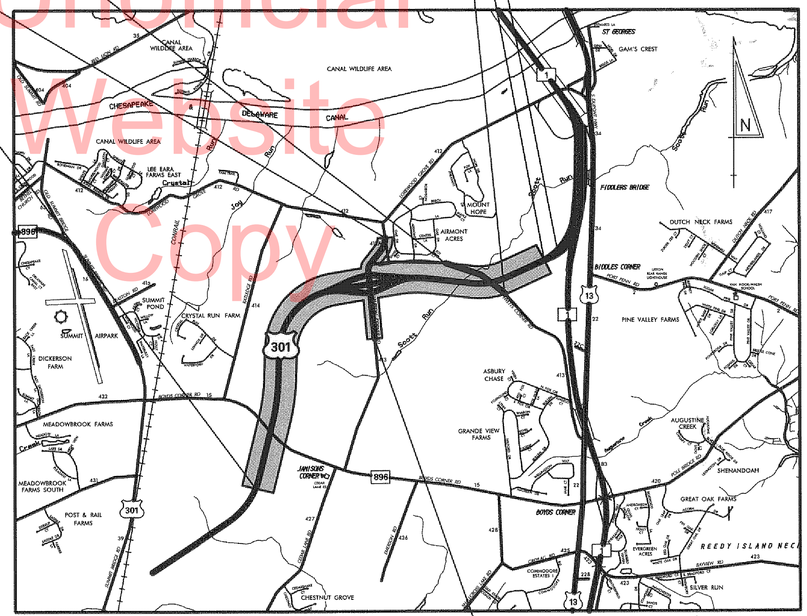
LIMIT OF CONSTRUCTION CONTRACT T200911308 STATION 132+93

BEGIN CONTRACT T200911308 STATION 667+50

LIMIT OF CONSTRUCTION CONTRACT T200911308 STATION 930+25

END CONTRACT T200911308 STATION 848+00

LIMIT OF CONSTRUCTION CONTRACT T200911308 STATION 1028+50



LOCATION MAP
SCALE: 1" = 3000'

LIMIT OF CONSTRUCTION CONTRACT T200911308 STATION 103+00

DESIGN DESIGNATION - US 301

FUNCTIONAL CLASS: RURAL PRINCIPAL ARTERIAL		D.H.V. PROJECTED: 4,560	YEAR: 2030
TYPE OF CONSTRUCTION: NEW CONSTRUCTION		DESIGN SPEED: 70 M.P.H.	
A.A.D.T. CURRENT: N/A	YEAR: N/A	TRUCKS: 9 %	
A.A.D.T. PROJECTED: 57,000	YEAR: 2030	DIRECTION OF DISTRIBUTION: 57 %	

SEE SHEET PN-03 FOR ADDITIONAL ROADWAY DESIGN DESIGNATIONS

INDEX OF SHEETS

TOTAL SHEETS: 875

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
T200911301	NORFOLK SOUTHERN RR TO SR 896
T201011302	US 301 & SR 1 INTERCHANGE
T200911302	US13 & PORT PENN RD INTERSECTION
T200511301	RW: US 301, MD STATE LINE TO SR 1
T200712003	JAMISON CORNER ROAD, FROM BOYDS CORNER ROAD TO HYETTS CORNER ROAD
T200912001	N412A, HYETTS CORNER ROAD TO LOREWOOD GROVE ROAD

PREPARED BY
THE CONSULTING FIRM OF
WR&A
WHITMAN, REQUARDT & ASSOCIATES, LLP
ENGINEERS · ARCHITECTS · PLANNERS EST. 1915

JOSEPH STEPHEN MAKAR REGISTERED No. 7974 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED _____ 10/31/14 DATE

PREPARED BY
THE CONSULTING FIRM OF
McCormick Taylor
Engineers & Planners Since 1946

PLAN SHEETS
67-72, 112-115, 150-151, 160-163, 245-246, 541-594, 605-621, 658-673, 695-698, 740, 742, 826-830

MICHAEL A. RIGLIO No. 8725 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED _____ 11/24/14 DATE

RECOMMENDED

_____ 5/18/15
SQUAD MANAGER, CONSTRUCTION DATE

_____ 5/18/15
GROUP ENGINEER, CONSTRUCTION DATE

_____ 5/26/15
ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS (CONSTRUCTION) DATE

PREPARED BY
THE CONSULTING FIRM OF
GANNETT FLEMING, INC.

PLAN SHEETS
833-875

JAMES R. SCHNEIDER 85-0006847 STATE OF DELAWARE REGISTERED ARCHITECT
SEAL

JOHN ARTHUR BARNES REGISTERED No. 8527 DELAWARE PROFESSIONAL ENGINEER
SEAL

_____ 11.7.14
RECOMMENDED DATE

_____ 11.10.14
RECOMMENDED DATE

RECOMMENDED

_____
STORMWATER ENGINEER

DATE 1 JUNE 2015

VINCENT W. DIAZIS REGISTERED No. 12358 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED

_____
SQUAD MANAGER, TRANSPORTATION SOLUTIONS (PROJECT DEVELOPMENT OR BRIDGE DESIGN)

DATE 6-2-15

DIANE MARIE LUCENTE REGISTERED No. [illegible] DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED

_____
BRIDGE DESIGN ENGINEER

DATE 6/4/15

JASON M. HASTINGS REGISTERED No. 13545 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED

_____
GROUP ENGINEER, PROJECT DEVELOPMENT

DATE 6/4/15

JOSEPH A. HORSEY No. 14581 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED

_____
ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS

DATE 6/4/15

MARK CHRISTOPHER TUDOR REGISTERED No. 10803 DELAWARE PROFESSIONAL ENGINEER
SEAL

APPROVED

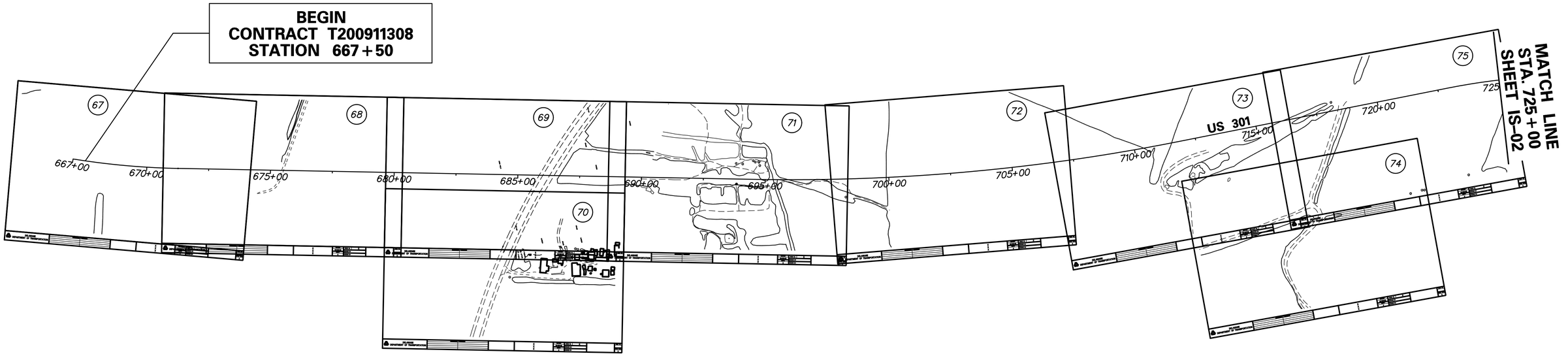
_____
CHIEF ENGINEER

DATE 6/4/15

ROBERT BRIAN MCELWEE REGISTERED No. 9557 DELAWARE PROFESSIONAL ENGINEER
SEAL

LAST REVISED: 8/7/2008
T:\DELDOT\ZCOMMON\DOCS\FROM DELDOT WEBSITE\2008-08-07\MISCELLANEOUS MICROSTATION FILES\TC.DGN

PLAN SHEET INDEX CROSS REFERENCE									
CONSTRUCTION PLAN	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
PROFILES	112	113	114, 150, 151	150, 151	114, 115	115	115, 116	N/A	116, 117
GRADES AND GEOMETRICS	N/A	N/A	160	161	162	163	164	N/A	165
STORMWATER MANAGEMENT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	622	N/A
ENVIRONMENTAL COMPLIANCE	N/A	N/A	663	N/A	664	665	666	667	N/A
CONSTRUCTION PHASING, M.O.T. AND E&S	N/A	N/A	695	696	697	698	699	701	700
PAVEMENT JOINT LAYOUT PLANS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LANDSCAPING PLAN	N/A	N/A	743	N/A	744	745	746	N/A	N/A
LIGHTING PLAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UTILITY RELOCATION PLAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SIGNING, STRIPING AND CONDUIT PLAN	N/A	N/A	790	N/A	791	792	793	N/A	793



IS-01

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 200 400 600 FEET	US 301, SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	PLAN SHEET INDEX	SHEET NO. 2
				COUNTY NEW CASTLE	DESIGNED BY: SJB		TOTAL SHTS. 875
					CHECKED BY: TAO		

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PLAN SHEET INDEX CROSS REFERENCE																	
CONSTRUCTION PLAN	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(92)	(93)	(95)	(97)	(98)	(99)	(100)	(101)	(102)
PROFILES	117, 118	118, 119	119, 120	120, 121, 140, 141, 145	121, 122, 139, 140, 145, 146	122, 123, 137, 159	123, 124, 142, 143, 148, 149	124, 125, 142, 149	135, 136, 158	136, 137, 146, 147, 158	137, 138, 139, 144, 159	138, 159	139, 140	143, 144	145, 146	147, 148	N/A
GRADES AND GEOMETRICS	166	167	168	169	170	171	172	173	181	182, 185	183, 186	184	187	188	189	190	N/A
STORMWATER MANAGEMENT	627	631	N/A	635	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	639
ENVIRONMENTAL COMPLIANCE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	668
CONSTRUCTION PHASING, M.O.T. AND E&S	702	703	704	705	706	707	690, 708	691, 709	684, 717, 730	685, 718, 731, 738	686, 719, 732, 739	687, 720, 733	721	689, 722	723	688, 724	692
PAVEMENT JOINT LAYOUT PLANS	N/A	202	203	204	205	206	207	208	N/A	211	211	N/A	211	212	213	214	N/A
LANDSCAPING PLAN	N/A	N/A	N/A	N/A	N/A	N/A	748, 749	749, 750	N/A	745, 746	747	N/A	N/A	747, 748	745	746	N/A
LIGHTING PLAN	N/A	753	754	755	756	757	758	759	N/A	761	762	763	764	765	766	767	N/A
UTILITY RELOCATION PLAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SIGNING, STRIPING AND CONDUIT PLAN	795	796	797	798	799	800	801	802	810	811	812	813	814	815	816	817	N/A

LIMIT OF CONSTRUCTION
CONTRACT T200911308
STATION 132+93

N

HYETTS CORNER ROAD

RAMP O

RAMP P

RAMP N

RAMP M

US 301

JAMISON CORNER ROAD

RUNAROUND ROAD

MATCH LINE
STA. 794+00
SHEET IS–03

MATCH LINE
STA. 725+00
SHEET IS–01

LIMIT OF CONSTRUCTION
CONTRACT T200911308
STATION 103+00

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IS–02

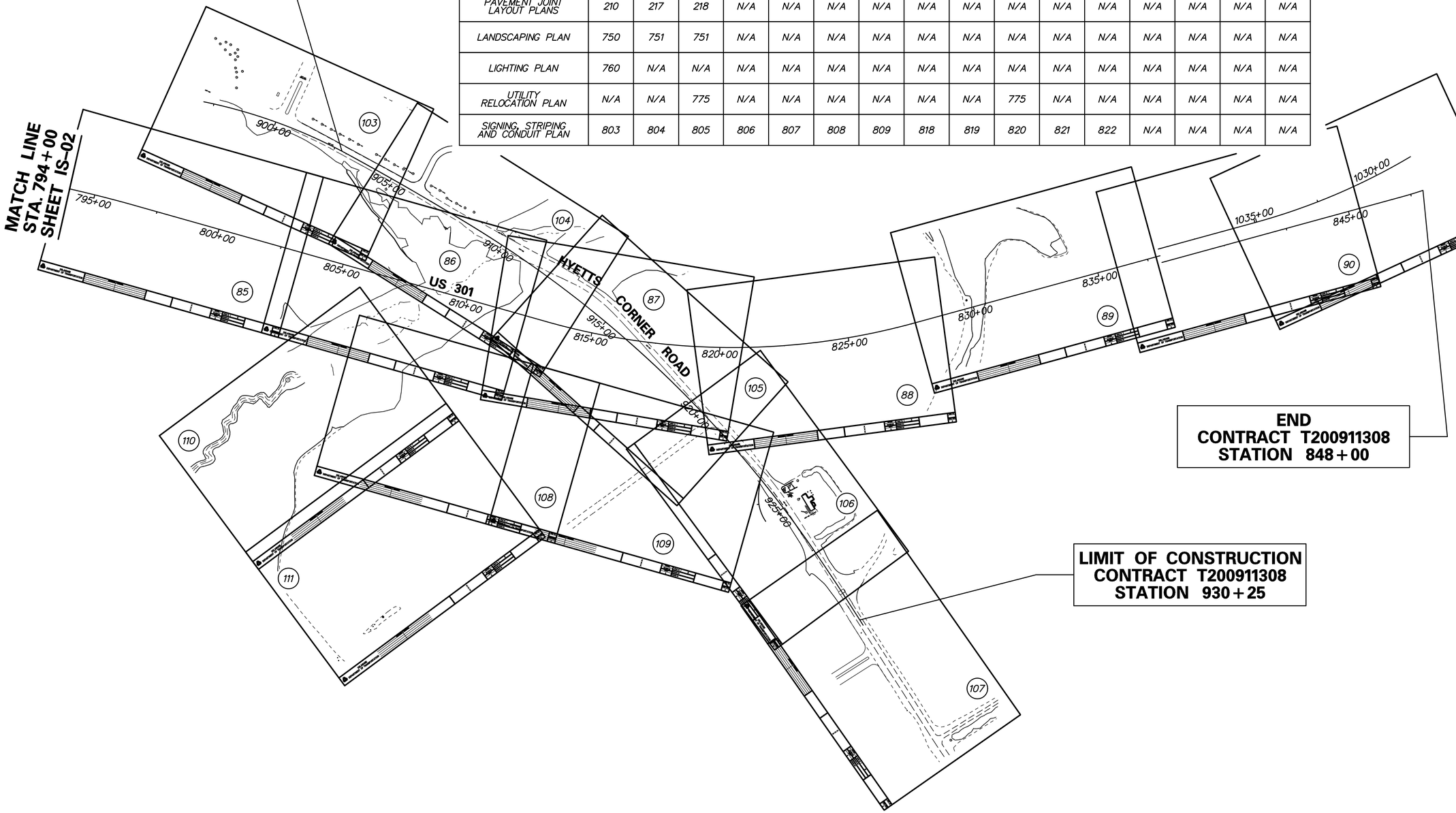
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 200 400 600 FEET	US 301, SR 896 TO SR 1	CONTRACT T200911308 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: SJB / CHECKED BY: TAO

PLAN SHEET INDEX

SHEET NO. 3
TOTAL SHTS. 875

PLAN SHEET INDEX CROSS REFERENCE																
CONSTRUCTION PLAN	(85)	(86)	(87)	(88)	(89)	(90)	(91)	(103)	(104)	(105)	(106)	(107)	(108)	(109)	(110)	(111)
PROFILES	125, 126	126, 127	127, 128	128, 129	129, 130	130, 131, 134	131, 132, 133, 134	152	152, 153, 156, 157	153, 154, 156, 157	154, 155	155	N/A	N/A	N/A	N/A
GRADES AND GEOMETRICS	174	175	176	177	178	179	180	191	192, 196, 197	193, 196, 197	194	195	N/A	N/A	N/A	N/A
STORMWATER MANAGEMENT	N/A	643	N/A	647	651	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ENVIRONMENTAL COMPLIANCE	N/A	669	N/A	N/A	670	N/A	N/A	671	671	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CONSTRUCTION PHASING, M.O.T. AND E&S	693, 710	711	712, 729	713	714	715	716	694, 725, 734	726, 735	727, 736	728, 737	N/A	N/A	N/A	N/A	N/A
PAVEMENT JOINT LAYOUT PLANS	210	217	218	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LANDSCAPING PLAN	750	751	751	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LIGHTING PLAN	760	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UTILITY RELOCATION PLAN	N/A	N/A	775	N/A	N/A	N/A	N/A	N/A	N/A	775	N/A	N/A	N/A	N/A	N/A	N/A
SIGNING, STRIPING AND CONDUIT PLAN	803	804	805	806	807	808	809	818	819	820	821	822	N/A	N/A	N/A	N/A

LIMIT OF CONSTRUCTION
CONTRACT T200911308
STATION 902+81



END
CONTRACT T200911308
STATION 848+00

LIMIT OF CONSTRUCTION
CONTRACT T200911308
STATION 930+25

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 200 400 600 FEET	**US 301, SR 896 TO SR 1**	CONTRACT T200911308 / COUNTY NEW CASTLE / BRIDGE NO. / DESIGNED BY: SJB / CHECKED BY: TAO	**PLAN SHEET INDEX**

IS-03
SHEET NO. 4
TOTAL SHTS. 875

EXISTING SYMBOLS

DRAINAGE	
	DITCH OR STREAM CENTERLINE
	DIRECTIONAL STREAM FLOW ARROW
C.B.	DRAINAGE CATCH BASIN
J.B.	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
(TYPE LABEL)	CURB AND GUTTER
	FENCE - CHAINLINK OR STRANDED
	FENCE - STOCKADE OR SPLIT RAIL
FP	FLAG POLE
	GUARDRAIL - STEEL BEAM
	GUARDRAIL - WIRE ROPE
LAMP	LAMP AND POST - RESIDENTIAL
MB	MAILBOX
PM	PARKING METER AND POST
	PAVEMENT - FLEXIBLE
	PAVEMENT - RIGID
□	PILE - BRIDGE
○	PILLAR OR MISCELLANEOUS POST
	TRAFFIC SIGN AND POST
	WALL - BRICK OR BLOCK
	WALL - STONE

NATURAL ROADSIDE FEATURES	
	GRASS LAWN
	HEDGEROW OR THICKET
	TREE - CONIFEROUS
	TREE - DECIDUOUS
	TREE STUMP
	SHRUBBERY
WL	DELINEATED WETLAND BOUNDARY LINE
	WOODS LINE BOUNDARY
OHW	ORDINARY HIGH WATER
OHW/WL	ORDINARY HIGH WATER / WETLAND

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
	EXISTING PROPERTY LINE
EASEMENT TYPE	EXISTING EASEMENT
DA	EXISTING DENIAL OF ACCESS
R/W-DA	EXISTING R/W & DENIAL OF ACCESS

SURVEY CONTROL & MONUMENTATION	
B.M.	SURVEY BENCHMARK LOCATION
T.P.	SURVEY TIE POINT LOCATION
△	SURVEY TRAVERSE POINT
◎	POINT OF CURVATURE OR TANGENCY
◎	POINT OF INTERSECTING TANGENTS

UTILITY	
	SOIL BORING LOCATION
	UTILITY TEST HOLE LOCATION
TV	CABLE TV DISTRIBUTION BOX
Ⓔ	ELECTRIC MANHOLE
EM	ELECTRIC METER
E	ELECTRIC TRANSFORMER
	POLE MOUNTED LUMINAIRE
Ⓖ	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
⊗	TRAFFIC - SIGNAL POLE AND BASE
U	UTILITY BOX
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
F.H.	WATER - FIRE HYDRANT
W.M.	WATER METER
W.V.	WATER VALVE
WELL	WELL HEAD

UTILITY COMPANY FACILITIES	
VER-C	VERIZON DELAWARE, LLC
ESNG-G	EASTERN SHORE NATURAL GAS
DP-G	DELMARVA POWER - GAS
NCC-S	NEW CASTLE COUNTY SANITARY SEWER
AW-W	ARTESIAN WATER
EX-CON	DELDOT MULTIDUCT CONDUIT - EXISTING
UNK-CON	UNKNOWN UTILITY COMPANY - CONDUIT
UNK-U	UNKNOWN UTILITY

PROPOSED SYMBOLS

CONSTRUCTION	
	CONCRETE SAFETY BARRIER - PERMANENT
BFS	BIOFILTRATION SWALE
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	BRICK PATTERNED SURFACE
	BUTT JOINT
100+00	CONSTRUCTION BASELINE
CSF	CONSTRUCTION SAFETY FENCE
	CURB, TYPE 1 & TYPE 3
	CURB, TYPE 2
	CURB & GUTTER, TYPE 1
	CURB & GUTTER, TYPE 2
	CURB & GUTTER, TYPE 3
	CURB & GUTTER, TYPE 4
CZ	CLEAR ZONE
	DRAINAGE INLET
	DITCH
	FENCE - METAL
	FENCE - WOOD
	FLARED END SECTION
	GUARDRAIL, TYPE 1
	GUARDRAIL, TYPE 2
	GUARDRAIL, TYPE 3
	GUARDRAIL END ANCHORAGE
	GUARDRAIL END TREATMENT, TYPE 1
	GUARDRAIL END TREATMENT, TYPE 2
	GUARDRAIL END TREATMENT, TYPE 3
HC	HORIZONTAL CLEARANCE
	IMPACT ATTENUATOR
	JUNCTION BOX - DRAINAGE
LOC	LIMIT OF CONSTRUCTION
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK @ 4"
	P.C.C. SIDEWALK @ 6"
	UNDERDRAIN
	UNDERDRAIN OUTLET

RIGHT-OF-WAY SYMBOLS	
	PROPOSED RIGHT-OF-WAY MONUMENT
DA	PROPOSED DENIAL OF ACCESS
PE	PROPOSED PERMANENT EASEMENT
R/W	PROPOSED RIGHT-OF-WAY
R/W-DA	PROPOSED R/W & DENIAL OF ACCESS
TCE	TEMPORARY CONSTRUCTION EASEMENT
100+00	PROPOSED RIGHT-OF-WAY BASELINE

IDENTIFIERS	
AC	ADJUST BY CONTRACTOR
AO	ADJUST BY OTHERS
B	CONCRETE SAFETY BARRIER
C	CURB OR CURB & GUTTER
CJB	CONVERT TO JUNCTION BOX
CMH	CONVERT TO DRAINAGE MANHOLE
CO	CURB OPENING
CR	CURB RAMP / TYPE
CR-N	CURB RAMP / TYPE - WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
CSF	CONSTRUCTION SAFETY FENCE / LENGTH
DI	DRAINAGE INLET
DND	DO NOT DISTURB
ED	ENERGY DISSIPATOR
F	FENCE
FES	FLARED END SECTION
FFC	FILL WITH FLOWABLE FILL
FS	FILTRATION STRUCTURE
GR	GUARDRAIL
JB	JUNCTION BOX
MH	MANHOLE
M	MONUMENT - RIGHT-OF-WAY
P	PIPE
RLC	RELOCATE BY CONTRACTOR
RLO	RELOCATE BY OTHERS
RMC	REMOVE BY CONTRACTOR
RMO	REMOVE BY OTHERS
UD	UNDERDRAIN / LENGTH
UD2	UNDERDRAIN OUTLET PIPE

TRAFFIC	
ITMS-CON	ITMS CONDUIT
SIG-CON	SIGNAL CONDUIT
	ITMS CONDUIT JUNCTION WELL
	LUMINAIRE
	PAVEMENT MARKINGS
	PAVEMENT STRIPING
	TRAFFIC SIGN

PAVEMENT SECTION(S)	
	MILL AND OVERLAY - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	CONCRETE FULL-DEPTH / RECONSTRUCTED PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	WMA FULL-DEPTH / RECONSTRUCTED PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	MISC. WMA PAVEMENT (DRIVEWAY/SIDEPATH/ GUARDRAIL MAINTENANCE PAVEMENT) - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	8" PORTLAND CEMENT CONCRETE PAVEMENT 6" GRADED AGGREGATE BASE COUURSE, TYPE B

UTILITY COMPANY FACILITIES	
VER-C	VERIZON DELAWARE, LLC
DP-E	DELMARVA POWER - GAS
DP-G	DELMARVA POWER - GAS
NCC-S	NEW CASTLE COUNTY SANITARY SEWER
AW-W	ARTESIAN WATER

MISCELLANEOUS SYMBOLS	
	INFILTRATION TRENCH
	POND MAINTENANCE ACCESS ROAD
	UTILITY TURF TRAIL
RPF	RESOURCE PROTECTION FENCING
JW	ITMS CONDUIT JUNCTION WELL
CO	ITMS CONDUIT
CA	TRAFFIC CABINET
PB	POLE BASE
ST	SEDIMENT TRAP
TS	TEMPORARY SWALE
SF	SILT FENCE
ABC	ABANDON BY CONTRACTOR

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301,
SR 896 TO SR 1

CONTRACT	BRIDGE NO.
T200911308	
COUNTY	DESIGNED BY: SJB
NEW CASTLE	CHECKED BY: TAO

LEGEND

LG-01

SHEET NO.
5
TOTAL SHTS.
875

GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.

2.

EROSION POTENTIAL FOR THIS PROJECT	CONTRACTOR ESC SUPERVISOR REQUIREMENT
( ) INSIGNIFICANT	NONE
( ) MINOR	CONTRACTOR TRAINING PROGRAM, AS DEFINED IN SECTION 6.2 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
( ) MEDIUM	CONTRACTOR TRAINING PROGRAM, AS DEFINED IN SECTION 6.2 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
(X) MAJOR	CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 6.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.

3. ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR, INCLUDE:

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

4. PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR, INCLUDE:

(X)	CROSS SECTIONS
(X)	RIGHT-OF-WAY PLANS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR)

5. 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.
( )	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.
(X)	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.

6. THE DISTURBED AREA FOR THIS PROJECT IS 241.84 ACRES.
7. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS ARE VALID FOR A THREE YEAR PERIOD, 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 WILL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS. THE STORMWATER ENGINEER WILL REVIEW THE CURRENT SEDIMENT AND STORMWATER MANAGEMENT PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

PROJECT NOTES

SECTION 100

1. ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

2. PRIOR TO PERFORMING ANY WORK ON THE PROJECT, THE CONTRACTOR AND THE ENGINEER'S REPRESENTATIVE SHALL JOINTLY PERFORM SUFFICIENT FIELD SURVEYS TO VERIFY THE ADVERTISED CROSS SECTIONS AND ELECTRONIC PROJECT FILES AND AGREE ON THE RESULTS TO ESTABLISH INITIAL GROUND ELEVATIONS THAT SHALL BE USED IN CALCULATING QUANTITIES. ANY DISCREPANCIES FOUND SHALL BE AGREED UPON PRIOR TO BEGINNING EARTHWORK OPERATIONS. ALL COSTS SHALL BE INCLUDED IN ITEM 763501 - CONSTRUCTION ENGINEERING.

3. PRIOR TO PERFORMING ANY WORK IN AREAS WHERE ADVANCE GRADING HAS BEEN PERFORMED UNDER OTHER CONTRACTS, THE CONTRACTOR AND THE ENGINEER'S REPRESENTATIVE SHALL JOINTLY PERFORM FIELD SURVEYS AND AGREE ON THE RESULTS TO ESTABLISH INITIAL GROUND ELEVATIONS THAT SHALL BE USED IN CALCULATING QUANTITIES. ALL COSTS SHALL BE INCLUDED IN ITEM 763501 - CONSTRUCTION ENGINEERING.

4. DELETE IN ITS ENTIRETY STANDARD SPECIFICATION SUBSECTION 104.10 "RIGHTS IN AND USE OF MATERIALS FOUND ON THE WORK" AND REPLACE WITH THE FOLLOWING: THE CONTRACTOR CAN EXPECT TO ENCOUNTER HORIZONTAL AND VERTICAL DEPOSITS OF MATERIAL IN THE ON-SITE BORROW SITES, ROADWAY EXCAVATIONS, OR EXCAVATION FROM OTHER WORK ITEMS THAT WILL MEET THE REQUIREMENTS FOR BORROW TYPES A, C, D, F AND/OR FURNISHING BORROW, TYPE C AS WELL AS UNSUITABLE MATERIALS. ALL REFERENCES TO THESE VARIOUS BORROW TYPES IN THE PLANS AND SPECIAL PROVISIONS SHALL BE INTERPRETED TO MEAN MATERIALS OBTAINED FROM ON-SITE EXCAVATIONS MEETING THE GRADATION REQUIREMENTS OF THE BORROW TYPE STATED IN THE PLANS OR SPECIAL PROVISIONS. THE CONTRACTOR SHALL PERFORM THE EXCAVATIONS IN A METHOD APPROVED BY THE ENGINEER SO THAT THESE DEPOSITS OF MATERIAL ARE MADE AVAILABLE TO MEET THE PROJECT NEEDS. EXCESSIVE OR INSUFFICIENT MOISTURE CONTENT SHALL NOT BE CRITERIA FOR CLASSIFYING MATERIAL AS UNSUITABLE FOR USE. PAYMENT FOR ALL OF THESE BORROW TYPES INCORPORATED INTO THE PROJECT WILL BE MADE USING THE BID ITEM UNDER WHICH THE MATERIAL WAS ORIGINALLY EXCAVATED ON SITE. UNLESS APPROVED OR SPECIFIED OTHERWISE, BORROW, TYPE B IS INTENDED TO BE FURNISHED FROM A SOURCE OUTSIDE OF THE PROJECT LIMITS AND PAID FOR UNDER ITEM 209002. PLACEMENT, HAULING, STORING, AND COMPACTING OF ALL BORROW MATERIAL EXCAVATED ON SITE TO BE USED AS THE STATED BORROW TYPES A, C, D, F, AND OR /FURNISHING BORROW, TYPE C AS NOTED IN THE PLANS OR SPECIAL PROVISIONS IS INCIDENTAL TO THE ITEM UNDER WHICH IT WAS EXCAVATED (FOR EXAMPLE, ITEMS 202000, 207000, 208000, OR OTHERS AS APPLICABLE). THE MATERIALS SHALL BE PLACED IN ACCORDANCE WITH THEIR INTENDED USE BUT NO PAYMENT WILL BE MADE UNDER THE ITEMS FOR WHICH THE EXCAVATED MATERIALS ARE USED. THE CONTRACTOR IS RESPONSIBLE FOR MANAGING THE ON-SITE EXCAVATIONS TO INCLUDE LOCATING THE TYPES OF BORROW REQUIRED TO MEET THE PLAN NEEDS, STOCKPILING, HAULING, WETTING OR DRYING THE MATERIAL TO MEET STANDARD SPECIFICATION 202.05(F), AND MULTIPLE HANDLING IF NEEDED, WITH ALL COSTS INCIDENTAL TO THE ITEM UNDER WHICH THE MATERIAL WAS INITIALLY EXCAVATED. ALL REQUIRED EROSION AND SEDIMENT CONTROL WILL BE PAID SEPARATELY USING THE APPLICABLE BID ITEMS.

SECTION 200

5. THE CONTRACTOR SHALL REMOVE AND RESET ALL MAILBOXES TO MAINTAIN MAIL SERVICE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL RELOCATE MAILBOXES AS REQUIRED BY THE PROPOSED GEOMETRICS AND AS DIRECTED BY THE ENGINEER. WHEN RELOCATING MAILBOXES IN CURBED SECTIONS, THE FACE OF THE MAILBOX SHALL BE FLUSH WITH THE BACK EDGE OF CURB. WHEN RELOCATING MAILBOXES IN OPEN SECTIONS, THE FACE OF THE MAILBOX SHALL SET BACK 8 INCHES FROM THE EDGE OF THE PAVED SHOULDER. THE BOTTOM OF THE MAILBOX SHALL BE SET 46 INCHES ABOVE THE ROADWAY SURFACE. MAILBOXES LOCATED AT DRIVEWAY ENTRANCES SHALL BE PLACED ON THE FAR SIDE OF THE DRIVEWAY IN THE DIRECTION OF TRAVEL. POSTS BEING RESET IN CONCRETE SIDEWALK SHALL BE PLACED IN AN APPROPRIATE SIZE PVC SLEEVE. COST FOR ALL WORK AND MATERIALS SHALL BE PAID UNDER ITEM 201000 - CLEARING AND GRUBBING.

6. 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. (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.

7. THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS ALONG PROPOSED DRAINAGE RUNS, 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 COMPANY INVOLVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLES SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 208000, BUT ONLY TO THE ACTUAL DEPTH EXCAVATED.

8. ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   A. CONCRETE SUPPORT FOUNDATIONS AND JUNCTION WELLS FOR TRAFFIC CONTROL DEVICES AND MISCELLANEOUS SMALL STRUCTURES NOT COVERED UNDER OTHER PAY ITEMS

9. UNLESS OTHERWISE INDICATED IN THE PLANS, UNDER ITEM 201000-CLEARING AND GRUBBING, ALL VEGETATION, TREES, STUMPS, ROOTMAT, ETC. SHALL BE REMOVED IN THEIR ENTIRETY WITHIN THE LIMITS OF CONSTRUCTION REGARDLESS OF THE EMBANKMENT HEIGHT EXCEPT SUCH OBJECTS AS ARE DESIGNATED TO REMAIN OR ARE TO BE REMOVED IN ACCORDANCE WITH OTHER SECTIONS OF THE CONTRACT DOCUMENTS. WORK UNDER ITEM 201000 IS TO BE PERFORMED IN ITS ENTIRETY EITHER BY THE PRIME CONTRACTOR OR AN APPROVED SUBCONTRACTOR. CUTTING OF FIREWOOD BY PRIVATE CITIZENS OR OTHER PARTIES SHALL NOT BE PERMITTED.

10. RIGHT-OF-WAY FENCING IS TO BE INSTALLED ALONG THE DENIAL OF ACCESS THROUGHOUT THE PROJECT LIMITS AS SHOWN ON THE PLANS. CLEARING OUTSIDE OF THE LIMITS OF CONSTRUCTION LINE FOR INSTALLATION OF THE RIGHT-OF-WAY FENCE, UTILITY RELOCATIONS DESCRIBED IN THE UTILITY STATEMENT, OR OTHER NECESSARY CONSTRUCTION SHALL BE KEPT TO A MINIMUM AND SHALL BE INCLUDED IN ITEM 201000 - CLEARING AND GRUBBING. THERE SHALL BE NO GRUBBING OUTSIDE THE LIMITS OF CONSTRUCTION.

11. DELETE THE FIRST SENTENCE OF STANDARD SPECIFICATION SUBSECTION 202.03 (C) AND REPLACE WITH THE FOLLOWING: "ALL TOPSOIL, IF PRESENT, SHALL BE REMOVED IN ITS ENTIRETY IN BOTH CUT AND FILL SECTIONS, REGARDLESS OF EMBANKMENT HEIGHT."

12. EXISTING MATERIALS ALONG THE PROPOSED ROADWAY ALIGNMENTS HAVE THE POTENTIAL TO MEET THE REQUIREMENTS OF THE BORROW, TYPE A PORTION OF THE PROPOSED PAVEMENT SECTIONS. THE CONTRACTOR SHALL EXCAVATE TO THE TOP OF THE BORROW, TYPE A PORTION OF THE PROPOSED PAVEMENT SECTIONS AT WHICH TIME THE MATERIALS SHALL BE EVALUATED BY THE ENGINEER. IF THE MATERIALS ARE DEEMED SUITABLE FOR THE BORROW, TYPE A PORTION OF THE PROPOSED PAVEMENT SECTION, THEN ITEM 202515 - COMPACTING IN-SITU MATERIAL SHALL BE USED AS DIRECTED BY THE ENGINEER. IF THE MATERIALS ARE NOT DEEMED SUITABLE, THEN THE MATERIALS SHALL BE REMOVED WITH PAYMENT MADE UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT AS DIRECTED BY THE ENGINEER AND MATERIAL MEETING THE REQUIREMENTS OF BORROW, TYPE A SHALL BE PLACED.

13. APPROVED COVERS SHALL BE INSTALLED OVER ALL LOADED TRUCKS OR TRAILERS HAULING BORROW, EXCAVATED MATERIALS, AGGREGATES, ETC. TO OR FROM THE PROJECT SITE OVER STATE MAINTAINED ROADS. THE COVERS SHALL BE INSTALLED TO PREVENT MATERIAL FROM LEAVING THE TRUCKS OR TRAILERS. THE MATERIAL SHALL BE FULLY COVERED AND THE COVERS TIED ON THE REAR AND BOTH SIDES. ANY MATERIALS DELIVERED, TRANSPORTED, OR REMOVED IN UNCOVERED TRUCKS OR TRAILERS WILL BE INCORPORATED INTO THE PROJECT, OR REMOVED FROM THE SITE, WITH NO PAYMENT TO THE CONTRACTOR FOR FURNISHING, REMOVING, OR PLACING THE MATERIALS.

14. WHEN PERFORMING ANY EXCAVATION OR BACKFILLING OPERATION, THE CONTRACTOR SHALL PROVIDE DEWATERING MEASURES AT ALL TIMES TO KEEP THE GROUNDWATER LEVEL AT LEAST ONE FOOT BELOW THE EXCAVATION ELEVATION, IN COMPLIANCE WITH DELDOT STANDARD SPECIFICATIONS, SECTION 111 - DEWATERING OPERATIONS. THE CONTRACTOR SHALL ALSO PROVIDE NECESSARY DEWATERING TO STABILIZE EXCAVATED SLOPES DURING CONSTRUCTION AND UNTIL THE SLOPES ARE STABILIZED AS DETERMINED BY THE ENGINEER. ALL DEWATERING MEASURES SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 111 OF THE STANDARD SPECIFICATIONS. ALL COSTS SHALL BE INCIDENTAL TO THE APPLICABLE EXCAVATION OR BACKFILLING ITEM.

PROJECT NOTES (CONT.)

SECTION 200 (CONT.)

15. AS NOTED IN THE CONTRACT DOCUMENTS AND DIRECTED BY THE ENGINEER, MATERIALS ARE TO BE STOCKPILED FOR LATER USE IN THE PROJECT. THE TOPSOIL FROM THESE STOCKPILE AREAS SHALL BE REMOVED IN ITS ENTIRETY AND STOCKPILED FOR REPLACEMENT IN THE AREA WHERE IT WAS EXCAVATED. THE EXCAVATION AND STOCKPILING OF THE TOPSOIL SHALL BE MEASURED FOR PAYMENT UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT. THE TOPSOIL SHALL BE REPLACED IN REASONABLY CLOSE CONFORMITY TO THE ORIGINAL LINES, GRADES AND ELEVATIONS AS DIRECTED BY THE ENGINEER. ALL COSTS ASSOCIATED WITH REPLACING THE FULL DEPTH OF THE TOPSOIL REMOVED SHALL BE PAID UNDER ITEM 733002 - TOPSOILING, 6" DEPTH. THE AREA OF TOPSOIL REPLACED SHALL ONLY BE MEASURED ONCE FOR PAYMENT UNDER ITEM 733002 - TOPSOILING, 6" DEPTH, REGARDLESS OF THE FULL DEPTH OF TOPSOIL PLACED. SEEDING AND MULCHING OF THE REPLACED TOPSOIL SHALL BE PERFORMED UNDER THE APPLICABLE BID ITEMS.

16. FOR ESTIMATING PAYMENT FOR ALL EARTHWORK ITEMS, TWO-THIRDS OF THE FACTORY RATED CAPACITY OF THE EARTHWORK MOVING EQUIPMENT SHALL BE USED. FOR TEN-WHEEL DUMP TRUCKS, TEN (10) CUBIC YARDS SHALL BE USED.

17. STORMWATER MANAGEMENT POND EXCAVATION:
   A. CLEARING AND GRUBBING OF STORMWATER POND AREAS IS TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 201000.

   B. ALL EXCAVATION AND EMBANKMENT REQUIRED FOR CONSTRUCTION OF STORMWATER PONDS WILL BE PERFORMED, MEASURED AND PAID FOR UNDER ITEM 202000, EXCAVATION AND EMBANKMENT. THE WORK WILL INCLUDE MEASUREMENT FOR:
      I. GENERAL POND EXCAVATION TO THE LINES AND GRADES SHOWN ON THE PLANS, INCLUDING THE INITIAL OVEREXCAVATION FOR USE OF THE SWM FACILITY AS A SEDIMENT BASIN IF INDICATED ON THE PLANS.
      II. EXCAVATION FOR FOREBAYS, CUT-OFF TRENCHES, AND / OR CORE TRENCHES AS SHOWN ON THE PLANS.

   C. EXCAVATION BELOW THE DESIGNED POND FINISHED GRADE OR SUBGRADE ELEVATION FOR RIPRAP PLACEMENT AND OUTLET STRUCTURE FOUNDATIONS WILL BE INCIDENTAL TO THOSE RESPECTIVE PAY ITEMS.

   D. INITIAL EXCAVATION OF SWM PONDS THAT FUNCTION AS INFILTRATION BASINS SHALL ONLY BE COMPLETED TO TWO (2) FEET ABOVE THE PERMANENT BOTTOM OF THE INFILTRATION BASIN. AFTER ALL AREAS CONTRIBUTING DRAINAGE TO THE INFILTRATION BASIN HAVE BEEN STABILIZED AS APPROVED BY THE ENGINEER, EXCAVATION TO THE PERMANENT BOTTOM ELEVATION OF THE INFILTRATION BASIN SHALL BE PERFORMED.

   E. EXCEPT AS NEEDED FOR CONSTRUCTION OF DAM FOUNDATIONS, CUTOFF TRENCHES, AND OUTLET STRUCTURES, EXCAVATED SUBGRADES WITHIN THE SWM PONDS SHALL NOT BE TEST ROLLED PER SUBSECTION 202.02 OR COMPACTED PER SUBSECTION 202.06.A.

   F. ALL REQUIREMENTS OF STANDARD SPECIFICATION SECTION 271 FOR CONSTRUCTION OF THE SWM FACILITY SHALL APPLY. IF THERE ARE CONFLICTS BETWEEN THE REQUIREMENTS IN STANDARD SPECIFICATION SECTION 271 AND STANDARD SPECIFICATION SECTION 202, THEN THE MORE STRINGENT REQUIREMENT SHALL BE FOLLOWED.

18. SEDIMENT BASIN CONSTRUCTION AND MAINTENANCE:
   A. CLEARING AND GRUBBING OF SEDIMENT BASIN POND AREAS IS TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 201000.

   B. ALL EXCAVATION AND EMBANKMENT REQUIRED FOR CONSTRUCTION OF SEDIMENT BASINS WILL BE PERFORMED, MEASURED AND PAID FOR UNDER ITEM 202000, EXCAVATION AND EMBANKMENT.

   C. REMOVAL OF SEDIMENT FROM THE SEDIMENT BASIN SHALL BE PERFORMED WHEN THE CLEANOUT ELEVATION IS REACHED AS NOTED ON THE PLANS.

   D. SEDIMENT REMOVAL FROM THE SEDIMENT BASIN SHALL BE MEASURED FOR PAYMENT UNDER ITEM 202000. ONLY REMOVAL OF SEDIMENT FROM A SEDIMENT BASIN SHALL BE MEASURED FOR PAYMENT UNDER ITEM 202000.

   E. REMOVAL OF SEDIMENT FROM ALL OTHER EROSION AND SEDIMENT CONTROL DEVICES AND REMOVAL OF SEDIMENT THAT HAS BYPASSED OR OTHERWISE NOT BEEN TRAPPED BY ANY SEDIMENT CONTROL DEVICE SHALL BE INCLUDED IN THE PAYMENT FOR THE SEDIMENT CONTROL ITEM PER SECTION 900.

SECTION 300

19. A. THE CONTRACTOR MAY ELECT TO USE ANY OF THE FOLLOWING MATERIALS TO MEET THE REQUIREMENTS OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B':
   a. CRUSHED STONE (PER STANDARD SPECIFICATION 821)
   b. CRUSHED CONCRETE (PER STANDARD SPECIFICATION 821)
   c. HOT-MIX MILLINGS (PER SPECIAL PROVISION 302514 MILLED HOT-MIX BASE COURSE)

   THE CONTRACTOR WILL NOT BE ALLOWED TO MIX DIFFERENT MATERIALS (OR SIMILAR MATERIALS FROM DIFFERENT SOURCES) TO MEET THE REQUIREMENTS OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

   ALL OF THE ABOVE LISTED MATERIALS ARE PERMITTED FOR USE ON THE JOB, PROVIDED THEY ARE SEPARATED INTO APPROVED AREAS. EACH AREA OF BASE COURSE MUST BE CONSTRUCTED USING MATERIALS FROM A SINGULAR SOURCE, FULL DEPTH, IN ORDER THAT PROPER TESTING MAY BE ACCOMPLISHED. THE CONTRACTOR AND DELDOT'S PROJECT ENGINEER SHALL AGREE ON THE LIMITS OF EACH SOURCE OF MATERIAL PRIOR TO PLACEMENT.

   B. THE QUANTITY USED FOR BASE OF EACH OF THE ABOVE LISTED MATERIALS WILL BE THE CONTRACTOR'S CHOICE, WITH THE TOTAL MEETING THE ADVERTISED QUANTITY OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

   C. THE CONTRACTOR MAY ALSO ELECT TO RECYCLE MILLINGS FOR USE IN HOT-MIX AS PERMITTED BY THE STANDARD SPECIFICATIONS. THE CHOICE OF THE QUANTITY OF MILLINGS USED FOR THIS PURPOSE, OR FOR BASE COURSE, LIES WITH THE CONTRACTOR. ALL MILLING MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR.

   D. HOT-MIX MILLINGS MAY BE GENERATED FROM THE FOLLOWING SOURCES:
   a. MATERIAL MADE AVAILABLE WHEN MILLED ON THIS CONTRACT UNDER SECTION 760 - PAVEMENT MILLING.
   b. MATERIAL MILLED ON THIS CONTRACT AT THE CONTRACTOR'S CHOICE UNDER ITEM 202000.
   c. MILLED MATERIAL FURNISHED ON THE JOB FROM THE CONTRACTOR'S YARD OR OTHER OUTSIDE SOURCE.

   ALL MILLED MATERIALS SHALL MEET THE MATERIAL REQUIREMENTS OF ITEM 302514 - MILLED HOT-MIX BASE COURSE.

   E. PAYMENT CLARIFICATION:
   a. SHOULD THE CONTRACTOR ELECT TO MILL PORTIONS OF HOT-MIX SHOWN ON THE PLANS TO BE REMOVED UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT THE COST OF MILLING THIS HOT-MIX WILL BE PAID AS ITEM 202000 - EXCAVATION AND EMBANKMENT. THE MILLINGS GENERATED MAY BE RECYCLED INTO WARM-MIX, UTILIZED FOR BASE COURSE, OR DISPOSED OF TO AN APPROVED SITE. HAULING COSTS FOR DISPOSAL AND/OR RECYCLING ARE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT.

   b. MILLINGS GENERATED UNDER SECTION 760 - PAVEMENT MILLING MAY BE RECYCLED INTO WARM-MIX, UTILIZED FOR BASE COURSE OR DISPOSED OF BY THE CONTRACTOR TO AN APPROVED SITE. NO SEPARATE PAYMENT WILL BE MADE FOR TRANSPORTING MILLINGS ON SITE OR TO AN APPROVED DISPOSAL SITE.

   c. SHOULD THE CONTRACTOR ELECT TO TEMPORARILY STOCKPILE MILLINGS ON THE JOB SITE FOR LATER USE, ALL COSTS FOR STOCKPILING AND SUBSEQUENT REHANDLING SHALL BE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT.

   d. MILLINGS USED FOR BASE COURSE SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE. NO SEPARATE PAYMENT WILL BE MADE TO FURNISH MILLINGS FROM AN OUTSIDE SOURCE OR TRANSPORT MILLINGS WITHIN THE PROJECT LIMITS. MILLINGS USED FOR BASE COURSE WILL BE PAID IN PLACE AT THE UNIT BID PRICE FOR ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

PROJECT NOTES (CONT.)

SECTION 300 (CONT.)

e. ALL COSTS TO UTILIZE MILLINGS IN RECYCLED WARM-MIX WILL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE WARM-MIX ITEM USING THE RECYCLED MATERIAL.

f. SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE IS PROVIDED TO SPECIFY THE MEANS OF LAY DOWN AND COMPACTION AS WELL AS THE MATERIAL REQUIREMENTS FOR MILLINGS USED AS BASE COURSE. ALL COSTS TO BRING THE MILLINGS INTO COMPLIANCE WITH THE REQUIREMENTS OF ITEM 302514 - MILLED HOT-MIX BASE COURSE ARE INCIDENTAL TO ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'. NO PAYMENT WILL BE MADE FOR ITEM 302514 - MILLED HOT-MIX BASE COURSE. THE QUANTITYOF MILLINGS USED FOR BASE COURSE WILL BE PAID FOR UNDER ITEM 302007 - GRADED AGGREGATE BASE COURSE.

SECTION 400

20. THE PAVEMENT SECTION FOR WARM-MIX RESIDENTIAL DRIVEWAYS SHALL BE 2" WARM-MIX, TYPE 'C' OVER 8" GRADED AGGREGATE BASE COURSE, TYPE 'B', UNLESS OTHERWISE NOTED ON THE PLANS.

21. MEASURES FOR MAINTAINING PUBLIC TRAFFIC, SUCH AS TEMPORARY ROADS, DETOURS, RUNAROUNDS, ETC, SHALL BE CONSTRUCTED UTILIZING THE APPLICABLE STANDARD BID ITEMS, NOT TEMPORARY ROADWAY MATERIAL (TRM). TRM IS INTENDED FOR MAINTAINING INGRESS AND EGRESS TO PROPERTIES OR BUSINESSES AS WELL AS MAINTENANCE OF EXISTING PUBLIC ROADWAYS. TRM SHALL ALSO BE USED TO MAINTAIN DETOUR ROADS, ETC. AFTER THEIR INITIAL CONSTRUCTION.

22. PRIOR TO PLACEMENT OF ANY SECTION OF PCC PAVEMENT, THE UNDERLYING BASE COURSES OF SOIL CEMENT AND PERMEABLE TREATED BASE SHALL BE COMPLETED TO THEIR FULL WIDTH (OUTSIDE OF SHOULDER TO OUTSIDE OF SHOULDER) AND THE UNDERDRAIN AND UNDERDRAIN OUTLETS INSTALLED FOR THE ENTIRE SECTION OF PAVING BEING CONSIDERED BY THE CONTRACTOR.

23. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT ALL PERMEABLE TREATED BASE (PTB) PLACED DURING ANY ONE CONSTRUCTION SEASON IS COVERED WITH PCC OR WARM MIX PAVEMENT, AS APPLICABLE, BY THE END OF THE CONSTRUCTION SEASON. ANY PTB WHICH HAS NOT BEEN PAVED OVER AT THE END OF THE SEASON MUST BE ENTIRELY COVERED WITH POLYETHYLENE SHEETING, PROPERLY ANCHORED AND OVERLAPPED AT LEAST EIGHTEEN INCHES FOR THE WINTER AND UNTIL PAVING OPERATIONS RESUME. NO CONSTRUCTION TRAFFIC OF ANY KIND WILL BE PERMITTED TO TRAVERSE OVER PTB AT ANY TIME, EITHER UNCOVERED OR COVERED WITH POLYETHYLENE, EXCEPT FOR NECESSARY EQUIPMENT UTILIZED DURING PAVING OPERATIONS. THE COST OF FURNISHING, INSTALLING AND MAINTAINING THE POLYETHYLENE SHEETING SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE PTB.

24. EXCEPT FOR NECESSARY EQUIPMENT UTILIZED DURING PAVING OPERATIONS, NO CONSTRUCTION TRAFFIC OF ANY KIND SHALL BE PERMITTED TO RUN ON THE SOIL CEMENT BASE COURSE.

SECTION 600

25. THE DEPARTMENT AND THE CONTRACTOR SHALL REVIEW VIDEO INSPECTION OF ALL EXISTING PIPES AND DRAINAGE STRUCTURES TO BE USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION PRIOR TO THE START OF CONSTRUCTION. EXISTING PIPES AND DRAINAGE STRUCTURES DAMAGED DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND AT THE CONTRACTOR'S EXPENSE. THE DEPARTMENT OR ITS REPRESENTATIVE WILL INSPECT NEW PIPE RUNS TO CONFIRM CONDITION PRIOR TO ACCEPTANCE.

26. ITEM 602002 - PCC MASONRY, CLASS B SHALL BE USED TO CONSTRUCT MISCELLANEOUS TYPES OF STRUCTURES SUCH AS PADS, BOLLARDS, ENCASEMENTS, ETC. AS DIRECTED BY THE ENGINEER UNLESS THE WORK IS TO BE PAID OTHERWISE AS INDICATED IN THE CONTRACT DOCUMENTS. THESE MISCELLANEOUS TYPES OF STRUCTURES ARE ANTICIPATED TO INVOLVE LESS THAN FIVE CUBIC YARDS PER SITE. THE VOLUME MEASURED FOR PAYMENT SHALL BE THE VOLUME OF P.C.C. MASONRY ACTUALLY PLACED TO CONSTRUCT THE MISCELLANEOUS STRUCTURE WITHIN THE LIMITS APPROVED BY THE ENGINEER. ALL COSTS ASSOCIATED WITH FURNISHING ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK INCLUDING CONCRETE, REINFORCING STEEL, EXCAVATION, BACKFILL, BACKFILLING, ETC. SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 602002-P.C.C. MASONRY, CLASS B.

SECTION 700

27. IN AREAS WHERE PROPOSED CURB 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, INCLUDING SAW CUTTING EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.

28. 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.

29. PORTLAND CEMENT CONCRETE CHANNELIZING ISLANDS THAT ARE LESS THAN 75 SQ FT MAY BE POURED MONOLITHICALLY, OR AS DIRECTED BY THE ENGINEER.

30. STATION, OFFSET AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED TO THE CENTER OF THE GRATE ALONG THE FLOWLINE FOR INLETS, AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.

31. WHERE SPECIFIED ON THE PLANS, DRAINAGE INLET GRATES ADJACENT TO THE ROAD WHICH ARE NOT TYPE 1 SHALL BE REPLACED. THE ACTUAL LOCATIONS, THE NEED FOR ANY GRATE MODIFICATIONS OR FOR NEW FRAMES SHALL BE DETERMINED BY THE ENGINEER. ALL REPLACED GRATES/FRAMES SHALL BE DELIVERED TO THE NEAREST DISTRICT MAINTENANCE YARD WITH THE COST OF DELIVERY INCIDENTAL TO ITEM 708500 - REPLACING CATCH BASIN GRATES. FINAL PAYMENT FOR REPLACED GRATES/FRAMES SHALL NOT BE MADE UNTIL RECEIPT OF DELIVERED MATERIALS IS PRODUCED, SIGNED BY A DELDOT MAINTENANCE YARD SUPERVISOR.

32. 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.

33. RAISED/RECESSED PAVEMENT MARKERS (RPM) SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL TITLED "DELAWARE DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS" (PART 3) AND THE LATEST RPM GUIDELINES. PAYMENT FOR RPM INSTALLATION SHALL BE MADE UNDER ITEM 748502 - RAISED/RECESSED PAVEMENT MARKER.

34. ALL UNDERDRAIN OUTLETS, CATCH BASINS, PIPES, CONDUITS, JUNCTION WELLS, ETC. IN GUARDRAIL AREAS OR NEAR OTHER CONSTRUCTION YET TO BE PERFORMED SHALL BE VISIBLY MARKED BY THE CONTRACTOR AT THE TIME OF INSTALLATION IN ORDER TO AVOID FUTURE DAMAGE DURING DRIVING OF THE GUARDRAIL POSTS OR PERFORMANCE OF OTHER CONSTRUCTION. THE LOCATION OF GUARDRAIL POSTS AND OTHER CONSTRUCTION SHALL BE STAKED IN THE FIELD PRIOR TO PLACING THESE ITEMS. THE LOCATION OF THESE ITEMS SHALL BE ADJUSTED TO AVOID CONFLICTS WITH THE GUARDRAIL OR OTHER CONSTRUCTION. ALTERATIONS TO THE GUARDRAIL POST SPACING WILL NOT BE ALLOWED. ANY WORK REQUIRED TO RELOCATE THESE ITEMS DUE TO CONFLICTS WITH GUARDRAIL OR OTHER CONSTRUCTION SHALL BE PERFORMED TO THE SATISFACTION OF THE ENGINEER AND SHALL BE AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REMOVAL AND REPLACEMENT OF PAVEMENT.

35. DELDOT OR ITS REPRESENTATIVE SHALL FURNISH AND INSTALL RIGHT-OF-WAY MONUMENTS AFTER THE COMPLETION OF THE PROJECT. LOCATIONS OF RIGHT-OF-WAY MONUMENTS ARE PROVIDED ON THE PLANS FOR INFORMATION ONLY.

36. THE LOCATION FOR ITEM 759506 - FIELD OFFICE, TYPE II.22 SPECIAL COMPLEX SHALL BE ON PARCEL 222.

37. THE COST OF ANY FLOODLIGHTING NECESSARY DUE TO WORK BY THE CONTRACTOR ON ANY ITEM OCCURRING AFTER DARK SHALL BE INCIDENTAL TO THE BID PRICE OF THE ITEM BEING CONSTRUCTED AFTER DARK. DURING ALL CONSTRUCTION, ALL PERSONS WITHIN THE WORK ZONE SHALL HAVE SAFETY WEAR IN ACCORDANCE WITH THE DEMUTCD.

38. NO LESPEDEZA, ERAGROSTIS CURVULA, OR CORONILLA VARIA SHALL BE SEEDED. SECTION 734 - SEEDING HAS BEEN MODIFIED TO REMOVE LESPEDEZA, ERAGROSTIS CURVULA, AND CORONILLA VARIA.

PROJECT NOTES (CONT.)

SECTION 700 (CONT.)

38. INSTALLATION OF RIPRAP OUTLET PROTECTION (ITEMS 712005 AND 712006) SHALL BE IN ACCORDANCE WITH DIMENSIONS AND QUANTITIES INDICATED ON THE CONSTRUCTION PLANS. THE SPECIFIED DIMENSIONS ARE MINIMUM DIMENSIONS NECESSARY TO PROVIDE SUFFICIENT EROSION CONTROL. THE QUANTITY LISTED REPRESENTS THE SQUARE YARDAGE BASED UPON THE PLAN DEPICTION OF THE RIPRAP. DUE TO THE IRREGULAR CONFIGURATION OF SOME RIPRAP PADS, THE NOTED QUANTITY MAY NOT BE ACHIEVED BY A NOMINAL AMOUNT NOT TO EXCEED 5% LESS THAN THE NOTED QUANTITY. THE ENGINEER SHALL APPROVE ALL RIPRAP INSTALLATION. THE COST FOR SUPPLY AND INSTALLATION OF ALL STONE BEDDING BELOW PROPOSED RIPRAP SHALL BE INCIDENTAL TO THE ASSOCIATED RIPRAP ITEM.

40. ITEM 727000 - RIGHT-OF-WAY FENCE SHALL BE INSTALLED BY HAND IN SENSITIVE AREAS. SENSITIVE AREAS INCLUDE WOODS, WETLANDS, STREAMS, CULTURAL RESOURCE AREAS AND OTHER AREAS AS SHOWN ON THE PLANS AND AS DETERMINED BY THE ENGINEER. THERE SHALL BE NO VEHICLE ACCESS AND GRUBBING FOR THE PURPOSES OF INSTALLING RIGHT-OF-WAY FENCE IN SENSITIVE AREAS. CLEARING OF VEGETATION FOR THE PURPOSE OF INSTALLING RIGHT-OF-WAY FENCE SHALL BE KEPT TO A MINIMUM IN SENSITIVE AREAS. IF REMOVAL OF VEGETATION CANNOT BE AVOIDED, THE VEGETATION SHALL BE CUT FLUSH WITH THE GROUND SURFACE (I.E., NO DISTURBANCE OF THE ROOT MAT). HAND-MIXED CONCRETE SHALL BE USED FOR CONCRETE FOOTINGS IN SENSITIVE AREAS. POST SPACING SHALL BE ADJUSTED AS APPROVED BY THE ENGINEER TO COMPLY WITH THE MINIMUM AND MAXIMUM CLEARANCE OF THE BOTTOM OF THE FABRIC. NO EXCAVATION OR BACKFILLING OF THE EXISTING GROUND SHALL BE CONDUCTED TO COMPLY WITH THE MINIMUM AND MAXIMUM CLEARANCE OF THE BOTTOM OF FABRIC OVER GROUND IN SENSITIVE AREAS. EXCAVATIONS FOR POSTS AND FOOTERS WITHIN SENSITIVE AREAS THAT WILL BE USED FOR BACKFILLING OF THE POSTS AND FOOTERS SHALL BE PLACED ON PLASTIC AND ANY EXCESS EXCAVATIONS SHALL BE REMOVED AND DISPOSED OF IN NON-SENSITIVE AREAS AS APPROVED BY THE ENGINEER.

SECTION 900

41. THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S STORMWATER SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

MISCELLANEOUS

42. THE CONTRACTOR SHALL CONTACT MICHAEL ELLER, THE CHIEF OF SCHEDULING FOR DART FIRST STATE, 14 DAYS PRIOR TO THE START OF CONSTRUCTION AT 302-576-6061.

43. ALL SANITARY SEWER FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEW CASTLE COUNTY DEPARTMENT OF SPECIAL SERVICES STANDARD SPECIFICATIONS AND DETAILS AND OSHA REQUIREMENTS. ALL SPECIFICATIONS, STANDARDS, AND DETAILS SHALL BE THE LATEST REVISION. IN THE EVENT OF ANY DEVIATION IN THE SPECIFICATIONS, THE ENGINEER'S DECISION SHALL PREVAIL.

44. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS PRIOR TO ORDERING AND/OR FABRICATION OF ANY MATERIALS NEEDED FOR THE SANITARY SEWER CONSTRUCTION. TOP ELEVATIONS AND SANITARY SEWER MANHOLE DEPTHS ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL VERIFY EXISTING GROUND ELEVATIONS TO THEIR SATISFACTION AND SANITARY SEWER FINAL MANHOLE TOP ELEVATIONS SHALL BE SET 6-INCHES ABOVE FINISHED OR EXISTING GRADE IN NON-IMPROVED AREAS AND AT GRADE IN EXISTING PAVEMENT.

45. ANY CHANGES TO OR DEVIATIONS FROM THESE PLANS REQUESTED BY THE CONTRACTOR MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND ENVIRONMENTAL MONITOR PRIOR TO CONDUCTING ANY WORK. APPROVAL MAY TAKE A SIGNIFICANT AMOUNT OF TIME TO COMPLETE AND ALL CHANGES MAY NOT BE APPROVED. THE CONTRACTOR SHALL HAVE NO CLAIM AGAINST THE DEPARTMENT FOR COSTS OR DELAYS ASSOCIATED WITH THE APPROVAL OR REJECTION OF REQUESTED CHANGES OR DEVIATIONS FROM THESE PLANS.

46. RESTORATION OF TEMPORARY IMPACTS

A. PRIOR TO PERFORMING ANY WORK ASSOCIATED WITH TEMPORARY IMPACTS TO DELINEATED WETLANDS, THE CONTRACTOR SHALL STAKE THE LIMITS OF TEMPORARY DISTURBANCE WITHIN THE WETLANDS AND ALLOW 14 CALENDAR DAYS FOR DELDOT TO OBTAIN EXISTING TOPOGRAPHY SURVEY WITHIN THE TEMPORARY DISTURBANCE. THIS EXISTING SURFACE SHALL BE PROVIDED TO AND ACCEPTED BY THE CONTRACTOR BEFORE ANY WORK IS PERFORMED WITHIN THE WETLANDS. THE CONTRACTOR SHALL HAVE 5 CALENDAR DAYS TO RESPOND TO THE EXISTING SURFACE INFORMATION OR OTHERWISE IT SHALL BE CONSIDERED ACCEPTED. THE EXISTING SURFACE PLAN SHALL BE PROVIDED IN BOTH DIGITAL AND PAPER COPIES CONFORMING TO DELDOT CADD STANDARDS AT THE SAME SCALE AS THE CONTRACT PLANS.

B. UPON MUTUAL ACCEPTANCE OF THE EXISTING SURFACE TOPOGRAPHY PLAN, THE CONTRACTOR SHALL FIRST INSTALL THE RESOURCE PROTECTION FENCE, AND THEN INSTALL THE NECESSARY EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER. THE AREA OF THE TEMPORARY DISTURBANCE MAY BE CLEARED OF VEGETATION AS NECESSARY. VEGETATION SHALL NOT BE GRUBBED, AND SHALL BE CUT FLUSH WITH THE GROUND (I.E., NO DISTURBANCE OF THE ROOT MAT).

C. INSTALL THE TEMPORARY ACCESS ROAD OR OTHER NEEDED TEMPORARY DISTURBANCE AS SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER. GEOTEXTILE SHALL BE PLACED ON TOP OF THE EXISTING GROUND TO PROVIDE SEPARATION BETWEEN THE EXISTING GROUND AND ANY PLACED MATERIALS.

D. WHEN THE CONTRACTOR HAS COMPLETED THE WORK REQUIRING THE TEMPORARY WETLAND DISTURBANCE, ALL MATERIALS THAT WERE PLACED BY THE CONTRACTOR SHALL BE REMOVED IN THEIR ENTIRETY. ONCE ALL MATERIALS HAVE BEEN REMOVED, THE CONTRACTOR SHALL ALLOW 14 CALENDAR DAYS FOR DELDOT TO OBTAIN EXISTING SURFACE ELEVATIONS OF THE DISTURBED AREA FOLLOWING THE SAME PROCEDURE DESCRIBED ABOVE FOR OBTAINING ORIGINAL ELEVATIONS. THESE EXISTING SURFACE ELEVATIONS SHALL BE PROVIDED TO THE CONTRACTOR AND INCLUDE A PLAN SHOWING THE ELEVATION DIFFERENCES BETWEEN THE ORIGINAL AND EXISTING SURFACES.

E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE TEMPORARY DISTURBED AREA TO ORIGINAL ELEVATIONS WITH A GRADING TOLERANCE OF PLUS OR MINUS 0.1 FEET. RESTORATION OF THE DISTURBED AREA SHALL BE ACCOMPLISHED IN THE FOLLOWING MANNER:

I. TILL THE GROUND WITHIN THE DISTURBED AREA TO LOOSEN UP THE SOILS DUE TO COMPACTION DURING CONSTRUCTION IN ACCORDANCE WITH THE SPECIFICATIONS OF ITEM 202555 - SUBSOIL TILLAGE. MINIMUM VERTICAL TILLAGE DEPTH SHALL BE 24 INCHES AS MEASURED BY FIELD PERFORMANCE.

II. PLACE TOPSOIL TO FILL DEPRESSIONS TO THE ORIGINAL GROUND ELEVATIONS. TOPSOIL SHALL BE THE TOP 9 INCHES OF SOIL OBTAINED FROM AN ACTIVE OR RECENTLY (LESS THAN 2 YEARS) FALLOW OR ABANDONED CROP PRODUCING FARM FIELD OR A SANDY LOAM WITH A MINIMUM OF 4% ORGANIC MATTER. MAXIMUM DEPTH OF A SINGLE LIFT OF TOPSOIL PLACED SHALL BE 6 INCHES AND SHALL BE PLACED IN ACCORDANCE WITH SECTION 732.

III. DISK THE FINAL TOPSOIL SURFACE WITHIN THE DISTURBED AREA TO PREPARE THE AREA FOR SEED. USE A MINIMUM OF 3 PASSES OF A DISK USING LOW GROUND PRESSURE EQUIPMENT TO A MINIMUM DEPTH OF 4 INCHES.

IV. WHEN THE CONTRACTOR BELIEVES THAT RESTORATION OF THE ORIGINAL ELEVATIONS HAS BEEN ACHIEVED, 7 CALENDAR DAYS SHALL BE ALLOWED FOR THE AREA TO AGAIN BE SURVEYED BY DELDOT UNDER THE SAME CONDITIONS DESCRIBED ABOVE AND THE SURVEY PLAN OF THE RESTORED ELEVATIONS WILL BE PROVIDED TO THE CONTRACTOR. DELDOT SHALL ADVISE THE CONTRACTOR IF ADDITIONAL RESTORATION WORK IS REQUIRED AND THE CONTRACTOR SHALL ADDRESS THOSE AREAS AND ALLOW FOR 7 CALENDAR DAYS FOR NEW SURVEY INFORMATION TO BE OBTAINED UNTIL THE RESTORATION IS APPROVED BY DELDOT.

PROJECT NOTES (CONT.)

MISCELLANEOUS (CONT.)

F. UPON ACCEPTANCE OF THE RESTORED ELEVATIONS, THE CONTRACTOR SHALL APPLY SEED TO THE DISTURBED WETLAND. SEEDING SHALL VARY BASED ON THE SLOPE TO BE SEEDED. ON SLOPES 5:1 OR FLATTER, SEEDING SHALL BE CONDUCTED UNDER ITEM 734552 - WET GROUND EROSION CONTROL GRASS SEEDING - FLATS. ON SLOPES GREATER THAN 5:1, SEEDING SHALL BE CONDUCTED UNDER ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND.

G. THE RESTORED AREAS WITHIN THE LIMITS OF THE DELINEATED WETLANDS SHALL BE PLANTED UNDER ITEM 737523 - PLANTING. SMOOTH ALDER SHALL BE PLANTED 10-FOOT ON CENTER ON SLOPES FLATTER THAN 5:1 AND SOUTHERN ARROWWOOD SHALL BE PLANTED 10-FOOT ON CENTER ON SLOPES STEEPER THAN 5:1. PLANTS SHALL BE INSTALLED DURING THE FIRST AVAILABLE PLANTING WINDOW PER THE STANDARD SPECIFICATIONS. SHRUBS SHALL NOT BE PLANTED UNDER BRIDGES. BEGIN SHRUB PLANTING 10 FEET OUTSIDE OF THE BRIDGE PARAPETS.

H. UPON FINAL ACCEPTANCE OF THE PLANTING, THE CONTRACTOR SHALL REMOVE THE RESOURCE PROTECTION FENCING AND THE EROSION AND SEDIMENT CONTROL MEASURES.

I. ALL COSTS FOR INSTALLING, REMOVING, AND RESTORING THE TEMPORARY WETLAND ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 202508 - WETLAND ACCESS ROAD, TYPE II, WITH THE EXCEPTION OF THE RESOURCE PROTECTION FENCE, WHICH SHALL BE PAID UNDER ITEM 727552. MAINTENANCE OF STREAM FLOW ASSOCIATED WITH THE WETLAND ACCESS ROAD, BRIDGE CONSTRUCTION AND ASSOCIATED ACTIVITIES TO BE PERFORMED IN WHOLE OR IN PART FROM THE WETLAND ACCESS ROAD, AND STREAM AND WETLAND RESTORATION ACTIVITIES SHALL BE INCIDENTAL TO ITEM 202508 - WETLAND ACCESS ROAD, TYPE II.

47. RESTORATION OF PERMANENT IMPACTS

A. PERMANENT IMPACTS TO CLEARED AND GRUBBED WETLANDS THAT HAVE NOT BEEN GRADED SHALL BE RESTORED WITH SEEDING AND SHRUB PLANTING AS INDICATED ON THE PLANS. SEEDING AND PLANTING SHALL BE CONDUCTED BETWEEN THE LIMITS OF GRADING AND THE LOC IN LOCATIONS DESIGNATED ON THE PLANS.

B. SEEDING SHALL VARY BASED ON SLOPE TO BE SEEDED. ON SLOPES 5:1 OR FLATTER, SEEDING SHALL BE PAID FOR AND CONDUCTED UNDER ITEM 734552 - WET GROUND EROSION CONTROL GRASS SEEDING - FLATS. ON SLOPES GREATER THAN 5:1 SEEDING SHALL PAID FOR AND CONDUCTED UNDER ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND.

C. SHRUBS SHALL BE PLANTED IN THE PERMANENT IMPACT RESTORATION AREA. THE SHRUB PLANTING WILL VARY BASED ON SLOPE OF THE PLANTED AREA. ON SLOPES 5:1 OR FLATTER, SHRUB PLANTING SHALL CONSIST OF CONTAINERIZED 3 TO 5 FOOT TALL SMOOTH ALDER (ALNUS SERRULATA) LOCATED 10 FOOT ON CENTER. ON SLOPES GREATER THAN 5:1 SHRUB PLANTING SHALL CONSIST OF CONTAINERIZED 3 TO 5 FOOT TALL SOUTHERN ARROWWOOD (VIBURNUM DENTATUM) LOCATED 10 FOOT ON CENTER. PERMANENT IMPACT RESTORATION SHRUB PLANTING SHALL BE PAID FOR AND CONDUCTED UNDER ITEM 737523 - PLANTING.

48. STREAM BOTTOM AND SLOPE RIPRAP TREATMENT

A. RIPRAP IN STREAMS IN THE FOLLOWING LOCATIONS SHALL BE TREATED AS SPECIFIED IN THE ENVIRONMENTAL COMPLIANCE NOTES:
1. STATION 711+25 RIGHT
2. STATION 712+23 RIGHT

49. ALONG US 301 FROM STA. 686+10 TO STA. 700+00, WITHIN THE LIMITS OF EMBANKMENT, EXCAVATE 2 FEET BELOW EXISTING GRADE FOR ENTIRE ROADWAY FOOTPRINT, PLACE GEOTEXTILE - STABILIZATION (ITEM 713001) AND BACKFILL WITH 2 FEET OF BORROW TYPE B. EXCAVATION WITHIN WOODED AREAS SHALL BE INCIDENTAL TO ITEM 201000 - CLEARING AND GRUBBING. ALL OTHER EXCAVATION SHALL BE PAID FOR UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT.

50. THE CONTRACTOR SHALL COORDINATE WITH THE PRINCIPAL AT ST. GEORGES TECHNICAL HIGH SCHOOL (302-449-3360) A MINIMUM OF TWO WEEKS PRIOR TO ANY CONSTRUCTION ACTIVITIES THAT WILL IMPACT EXISTING ACCESS TO THE SCHOOL. THIS INCLUDES INSTALLING MAINTENANCE OF TRAFFIC DEVICES FOR THE HYETTS CORNER ROAD CLOSURE. DURING THE CLOSER OF HYETTS CORNER ROAD, THE CONTRACTOR SHALL MAINTAIN DAILY BUS ACCESS FOR SCHOOL ACTIVITIES AND TRAFFIC SHALL OPERATE UNDER FLAGGER CONTROL AT THE POINT OF ROAD CLOSURE DURING STUDENT DROP OFF AND PICK UP.

51. A PORTION OF THE PROPOSED EARTH BERM ALONG RAMP P (STA. 50+00 TO STA. 60+00 LT) AND US 301 (STA. 788+31 TO STA. 799+00 LT) WAS CONSTRUCTED UNDER DELDOT CONTRACT T200912001. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING FINAL GRADING OF THE PROPOSED EARTH BERM AS SHOWN IN THIS CONTRACT. AS-BUILT SURVEY INFORMATION WILL BE PROVIDED TO IDENTIFY CHANGES IN EXISTING GRADING AND ESTIMATE HOW MUCH EARTHWORK REMAINS TO COMPLETE THE FINAL BERM CONSTRUCTION. THE QUANTITY OF EARTHWORK ASSOCIATED WITH CONSTRUCTING THE BERM SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 202000.

52. IF GROWTH OF A NOXIOUS WEED AS DEFINED IN TITLE 3 OF THE DELAWARE CODE OR AS IDENTIFIED BY THE ENGINEER IS DETECTED WITHIN THE PROJECT LIMITS AS A RESULT OF USING ON-SITE MATERIALS, THE CONTRACTOR SHALL ERADICATE THE WEED USING ITEM 735501 HERBICIDE APPLICATION, NOXIOUS WEEDS. GROWTH OF NOXIOUS WEEDS RESULTING FROM THE CONTRACTOR BRINGING MATERIALS TO THE PROJECT FROM OFF-SITE SOURCES SHALL BE ERADICATED AT THE CONTRACTOR'S EXPENSE.

53. THE CONTRACTOR SHALL FOLLOW ALL STATE AND LOCAL ORDINANCES CONCERNING CONSTRUCTION NOISE DURING THE DURATION OF THE CONSTRUCTION ACTIVITIES.

RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	STATION	OFFSET	NORTHING	EASTING
1	685+88.60	140.00	548925.4420	578343.0425
2	696+23.10	140.00	549932.6442	578591.5855
3	696+21.20	125.00	549934.0764	578576.5297
4	696+50.00	125.00	549962.6160	578582.9476
5	698+00.00	160.00	550104.6344	578649.0059
6	701+00.00	160.00	550405.5684	578704.3570
7	704+00.00	140.00	550710.8724	578728.5444
8	706+50.00	140.00	550963.6990	578756.4739
9	702+00.00	-135.00	550550.5880	578428.6360
10	699+00.00	-145.00	550261.7596	578369.0923
11	698+00.00	-160.00	550168.4117	578335.4259
12	697+00.00	-160.00	550072.5024	578315.2944
13	696+00.00	-150.00	549974.6148	578303.7121
14	694+56.04	-150.00	549837.2249	578270.8692
15	692+00.00	-150.00	549588.7490	578209.1027
16	687+43.94	-150.00	549146.1481	578099.0803
17	705+00.19	-135.53	550843.1930	578466.9143
23	690+22.32	140.00	549346.3537	578447.6733
24	694+56.04	140.00	549767.2654	578552.3042
26	708+00.00	-125.00	551135.7980	578505.1926
27	709+00.00	-110.00	551233.0506	578526.9885
28	711+00.00	-110.00	551430.0432	578536.9743
29	711+74.02	-130.00	551503.5857	578519.4294
30	715+00.00	-130.00	551829.4258	578528.8472
31	709+00.00	140.00	551217.2749	578776.4902
32	711+74.02	140.00	551495.7851	578789.3167
33	712+40.05	140.00	551561.7868	578791.2244
34	712+23.57	218.00	551543.0557	578868.7155
35	711+90.00	230.00	551509.1545	578879.7407
36	711+90.00	257.00	551508.3745	578906.7294
37	712+19.28	262.00	551537.4932	578912.5731
38	711+97.72	421.59	551511.3380	579071.4701
39	712+67.58	482.39	551579.4106	579134.2697
40	717+64.27	424.95	552077.5519	579091.1968
41	720+12.62	396.22	552326.6261	579069.6601
42	718+00.00	-130.00	552129.3006	578537.5144
43	721+00.00	-140.00	552429.4643	578536.1859
44	720+61.37	251.00	552379.5563	578925.9067
45	722+24.26	120.00	552546.1640	578779.6674
46	722+96.36	120.00	552618.2336	578801.7504
47	725+00.00	-155.00	552841.8576	578541.9056
48	728+33.33	-155.00	553190.0678	578604.1965
49	731+66.67	-155.00	553526.9064	578712.2251
50	725+61.77	120.00	552869.9359	578822.4306
51	727+80.29	283.00	553038.6244	579018.3925
52	731+02.19	150.00	553357.9844	578974.2190
53	735+00.00	-155.00	553846.3942	578864.0737
54	735+53.17	-135.00	553885.2282	578909.4173
55	738+00.00	-135.00	554102.6143	579052.1475
56	739+50.00	-155.00	554240.1956	579133.6900
57	734+68.15	150.00	553671.1880	579115.7494
58	737+46.12	260.00	553830.4871	579343.2032
59	738+40.30	260.00	553898.7842	579392.7524
60	739+96.48	145.00	554082.6537	579393.1936
61	741+00.00	140.00	554158.7446	579454.5339
62	742+00.00	-155.00	554436.1147	579312.7074
63	744+50.00	-155.00	554613.1831	579510.3897
64	745+48.55	-145.00	554669.3907	579598.9937
65	749+35.61	-145.00	554887.9547	579944.8242
66	744+50.00	140.00	554383.8820	579695.9860
67	748+00.00	140.00	554573.1237	579966.4922
68	750+61.40	-345.00	555128.4552	579979.5588
69	752+42.21	-345.00	555208.5131	580169.0592
70	753+03.55	-170.00	555067.4930	580292.7949
71	85+00.00	120.00	555158.4846	580484.3480
72	83+00.00	75.00	555198.5827	580685.3881
73	752+00.00	160.00	554722.1607	580311.8327
74	11+50.00	85.00	554782.1836	580399.3003
75	14+77.01	85.00	554843.0018	580702.1220
76	57+77.92	210.00	555746.1149	583053.3087
77	55+50.00	180.00	555709.8226	583274.6316
78	41+50.00	115.00	555225.8068	583277.2373

RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	STATION	OFFSET	NORTHING	EASTING
79	42+83.06	135.00	555241.7613	583404.1729
80	52+75.00	190.00	555720.4740	583543.1225
81	50+00.00	190.00	555731.1115	583811.2643
82	791+00.00	-235.00	555737.3029	584092.5709
84	790+06.00	284.00	555217.2723	584005.0799
85	790+69.85	150.00	555352.1502	584064.1865
86	793+65.29	150.00	555346.0548	584350.6602
87	795+00.00	-220.00	555706.5423	584509.7956
88	796+60.74	-260.00	555730.5787	584681.2453
89	799+35.00	-260.00	555700.4956	584953.8551
90	800+25.00	-150.00	555581.2876	585031.2466
91	802+90.00	-150.00	555552.2208	585294.6477
92	796+60.74	150.00	555323.0525	584636.2740
93	799+50.00	150.00	555291.3242	584923.7933
94	802+50.00	170.00	555238.5390	585219.7895
95	109+99.90	-54.85	554044.0750	582010.4301
96	109+99.90	65.15	554054.9032	582129.9405
97	109+99.90	90.00	554057.1458	582154.6927
98	110+78.53	-54.85	554122.3848	582003.3395
99	113+64.06	-90.00	554403.5730	581942.5726
100	116+18.42	-90.00	554656.8995	581919.6237
101	26+25.00	115.00	554730.4405	581833.6201
102	113+54.72	90.00	554410.5160	582122.6808
103	116+54.72	90.00	554709.2925	582095.6145
104	72+50.00	95.00	555615.1963	581656.6295
105	126+50.00	-120.00	555692.0528	581800.4372
106	127+15.00	-90.00	555762.1783	581832.0290
107	129+85.58	-90.00	556048.9197	581880.1177
108	126+73.81	114.87	555714.7026	582035.4103
109	128+37.77	108.80	555862.8445	582042.0158
110	132+03.78	-72.73	556256.6520	581938.1956
111	78+24.09	75.00	555391.8497	581120.2857
112	75+69.93	105.00	555517.7589	581349.2858
113	74+75.72	105.00	555550.5075	581440.1450
114	64+50.00	-135.00	555699.9822	582378.6310
115	61+11.00	135.00	555685.4562	582717.3196
116	18+04.03	85.00	554840.2935	581010.9788
117	21+00.00	100.00	554792.2335	581303.4094
118	23+07.10	100.00	554769.0349	581509.2022
119	32+00.00	140.00	554845.8760	582418.2506
120	34+50.00	127.50	554954.8476	582643.5980
121	37+00.00	115.00	555063.8192	582868.9453
122	38+00.00	140.00	555079.7814	582970.7795
123	39+21.44	140.00	555127.1251	583082.6143
124	43+96.00	325.00	555080.5465	583547.6922
125	46+35.00	513.00	554927.2451	583774.0670
126	47+60.00	470.00	554978.9576	583870.1758
127	789+50.00	358.00	555141.9038	583954.6650
128	722+96.36	-142.95	552625.8304	578538.9094
129	131+79.72	-76.54	556220.0381	581927.9591
150	806+00.00	170.00	555200.1489	585567.6777
151	810+13.51	170.00	555154.7923	585978.6949
152	811+00.00	193.00	555122.4446	586062.1380
153	813+21.39	193.00	555098.1613	586282.1914
154	815+66.18	193.00	555081.4445	586544.1815
155	919+66.79	-85.00	555138.8197	586966.6275
156	823+61.63	160.00	555225.4986	587377.7065
157	827+58.20	160.00	555372.4964	587771.2681
158	827+58.20	170.00	555363.4163	587775.4576
159	831+05.20	170.00	555508.7906	588090.5374
160	834+52.20	170.00	555654.1650	588405.6173
161	838+00.00	143.00	555799.8756	588721.4258
162	838+00.00	123.00	555818.0358	588713.0468
163	842+53.54	123.00	556008.0449	589124.8667
164	847+07.08	123.00	556198.0540	589536.6865
165	848+00.00	123.00	556241.8662	589625.6356
166	848+00.00	148.00	556219.7267	589637.2479
167	902+02.44	55.00	555782.0720	585320.0122
168	902+76.68	-50.00	555860.4766	585421.8496
169	902+76.70	-60.00	555869.9676	585424.9970
170	906+59.19	-60.00	555738.7071	585787.2797
171	907+00.00	-41.79	555706.9758	585818.9925
172	908+63.81	-70.00	555672.5423	585982.4607
173	910+17.67	-70.00	555611.3379	586126.2756
174	918+00.00	140.00	555051.1271	586701.3233

RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	STATION	OFFSET	NORTHING	EASTING
175	921+00.02	80.00	554926.8063	586972.7529
176	921+00.02	140.00	554879.6219	586935.6903
177	924+00.00	60.00	554751.9717	587211.3882
178	927+04.02	60.00	554543.5729	587426.9281
179	924+48.42	-85.00	554826.3713	587344.9811
180	926+76.29	-55.00	554643.5743	587490.1138
181	927+04.02	-55.00	554623.4380	587509.6723
182	929+89.45	-55.00	554413.1360	587705.5315
183	930+50.00	-55.00	554368.0982	587746.0003
184	930+50.00	-23.99	554347.3751	587722.9375
185	929+89.45	60.00	554336.2735	587619.9911
186	930+50.00	60.00	554291.2357	587660.4599
187	930+50.00	49.01	554298.5841	587668.6378
188	903+06.58	-60.00	555860.1197	585454.1562
189	60+20.00	230.00	555776.4696	582812.3067
190	924+46.42	-45.11	554798.4218	587316.4459
191	926+76.15	-29.64	554625.9502	587471.8804

NOTE: ALL RIGHT-OF-WAY MONUMENTS WILL BE SET BY DELDOT UPON COMPLETION OF THE PROJECT.

DESIGN DESIGNATION - JAMISON CORNER ROAD (N412)

FUNCTIONAL CLASS: MAJOR COLLECTOR		D.H.V. PROJECTED: 730 YEAR: 2030
TYPE OF CONSTRUCTION: WIDENING		DESIGN SPEED: 45 M.P.H.
A.A.D.T. CURRENT: 188	YEAR: 2003	TRUCKS: 5 %
A.A.D.T. PROJECTED: 7,300	YEAR: 2030	DIRECTION OF DISTRIBUTION: 63 %

DESIGN DESIGNATION - HYETTS CORNER ROAD (N413)

FUNCTIONAL CLASS: MINOR COLLECTOR		D.H.V. PROJECTED: 90 YEAR: 2030
TYPE OF CONSTRUCTION: WIDENING		DESIGN SPEED: 45 M.P.H.
A.A.D.T. CURRENT: 188	YEAR: 2003	TRUCKS: 10 %
A.A.D.T. PROJECTED: 900	YEAR: 2030	DIRECTION OF DISTRIBUTION: 63 %

DESIGN DESIGNATION - RAMP O

FUNCTIONAL CLASS: MINOR COLLECTOR		D.H.V. PROJECTED: 110 YEAR: 2030
TYPE OF CONSTRUCTION: NEW		DESIGN SPEED: 50 M.P.H.
A.A.D.T. CURRENT: N/A	YEAR: N/A	TRUCKS: 2 %
A.A.D.T. PROJECTED: 1,300	YEAR: 2030	DIRECTION OF DISTRIBUTION: N/A

DESIGN DESIGNATION - RAMP P

FUNCTIONAL CLASS: MINOR COLLECTOR		D.H.V. PROJECTED: 180 YEAR: 2030
TYPE OF CONSTRUCTION: NEW		DESIGN SPEED: 50 M.P.H.
A.A.D.T. CURRENT: N/A	YEAR: N/A	TRUCKS: 2 %
A.A.D.T. PROJECTED: 2,300	YEAR: 2030	DIRECTION OF DISTRIBUTION: N/A

DESIGN DESIGNATION - RAMP N

FUNCTIONAL CLASS: MINOR COLLECTOR		D.H.V. PROJECTED: 250 YEAR: 2030
TYPE OF CONSTRUCTION: NEW		DESIGN SPEED: 50 M.P.H.
A.A.D.T. CURRENT: N/A	YEAR: N/A	TRUCKS: 2 %
A.A.D.T. PROJECTED: 2,400	YEAR: 2030	DIRECTION OF DISTRIBUTION: N/A

DESIGN DESIGNATION - RAMP M

FUNCTIONAL CLASS: MINOR COLLECTOR		D.H.V. PROJECTED: 120 YEAR: 2030
TYPE OF CONSTRUCTION: NEW		DESIGN SPEED: 50 M.P.H.
A.A.D.T. CURRENT: N/A	YEAR: N/A	TRUCKS: 2 %
A.A.D.T. PROJECTED: 2,000	YEAR: 2030	DIRECTION OF DISTRIBUTION: N/A

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301,
SR 896 TO SR 1

CONTRACT	T200911308
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY: SJB	
CHECKED BY: TAO	

NOTES

PN-03	
SHEET NO.	8
TOTAL SHTS.	875

EARTHWORK SUMMARY – TOTALS

EXCAVATION - ALIGNMENT	
FROM CROSS SECTIONS	
PLUS EXCAVATION FROM US 301	254,992 C.Y.
PLUS EXCAVATION FROM RAMP M	11,091 C.Y.
PLUS EXCAVATION FROM RAMP N	11,640 C.Y.
PLUS EXCAVATION FROM RAMP O	3,532 C.Y.
PLUS EXCAVATION FROM RAMP P	7,669 C.Y.
PLUS EXCAVATION FROM NORTHBOUND EMERGENCY RAMP	21 C.Y.
PLUS EXCAVATION FROM SOUTHBOUND EMERGENCY RAMP	429 C.Y.
PLUS EXCAVATION FROM RUNAROUND ROAD	19,226 C.Y.
PLUS EXCAVATION FROM JAMISON CORNER ROAD	3,584 C.Y.
PLUS EXCAVATION FROM HYETTS CORNER ROAD	6,934 C.Y.
PLUS EXCAVATION FROM SCOTT RUN PAID UNDER ITEM 202000	3,017 C.Y.
SUBTOTAL EXCAVATION FROM CROSS SECTIONS	322,137 C.Y.
PLUS EXCAVATION FROM BORROW SITES	
BORROW TYPE A EXCAVATED MATERIAL	83,993 C.Y.
BORROW TYPE C EXCAVATED MATERIAL	17,986 C.Y.
BORROW TYPE D EXCAVATED MATERIAL	31,027 C.Y.
BORROW TYPE F EXCAVATED MATERIAL	728,589 C.Y.
TOPSOIL REMOVED	61,334 C.Y.
SUBTOTAL EXCAVATION FROM BORROW SITES	922,929 C.Y.
SUBTOTAL - EXCAVATION FROM CROSS SECTIONS	1,245,065 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	100,372 C.Y.
PLUS TOPSOIL PLACED IN CUT:	29,052 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	9,865 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	4,694 C.Y.
LESS ROOTMAT REMOVED IN CUT	1,497 C.Y.
LESS REMOVAL OF EXISTING PCC PAVEMENT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
PLUS SWM EXCAVATION	220,201 C.Y.
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	1,607,752 C.Y.

STORMWATER MANAGEMENT EXCAVATION	
FROM GRID ANALYSIS*:	
SWM POND NO. 720	66,287 C.Y.
SWM POND NO. 722	880 C.Y.
SWM POND NO. 723	1,625 C.Y.
SWM POND NO. 725	2,725 C.Y.
SWM POND NO. 731	57,716 C.Y.
SWM POND NO. 733	8,685 C.Y.
SWM POND NO. 734	60,469 C.Y.
SWM POND NO. 737	7,343 C.Y.
SUBTOTAL - EXCAVATION FROM GRID ANALYSIS	205,730 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	1,833 C.Y.
PLUS TOPSOIL PLACED IN CUT SECTIONS	12,638 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL - STORMWATER MANAGEMENT POND	220,201 C.Y.
*INCLUDES 2' OF OVEREXCAVATION OF SWM PONDS	

STREAM RESTORATION BORROW REQUIRED	
FROM CROSS SECTIONS	466 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	20 C.Y.
PLUS MATERIAL FOR STREAM RESTORATION BORROW MIX	63 C.Y.
SUBTOTAL STREAM RESTORATION BORROW REQUIRED	549 C.Y.
PLUS STREAM RESTORATION BORROW X ADJUSTMENT FACTOR (0.20)	110 C.Y.
SUBTOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	659 C.Y.
LESS EXCAVATION AVAILABLE FOR STREAM RESTORATION BORROW	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	659 C.Y.

STREAM RESTORATION BORROW MIX REQUIRED	
FROM CROSS SECTIONS	126 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	40 C.Y.
SUBTOTAL STREAM RESTORATION BORROW MIX REQUIRED	166 C.Y.
PLUS STREAM RESTORATION BORROW MIX X ADJUSTMENT FACTOR (0.20)	33 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW MIX REQUIRED	199 C.Y.

EXCAVATION AVAILABLE FOR EMBANKMENT	
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	1,607,752 C.Y.
LESS MATERIAL REQUIRED FOR SWM EMBANKMENT	28,318 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR STRUCTURES	15,031 C.Y.
PLUS EXCAVATION INCIDENTAL TO STRUCTURAL ITEMS	5,943 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR PIPE TRENCHES	18,423 C.Y.
PLUS CHANNEL EXCAVATION	1,031 C.Y.
PLUS EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHES	0 C.Y.
PLUS EXCAVATION FROM INSTALLATION OF UNDERDRAINS	4,690 C.Y.
PLUS EXCAVATION INCIDENTAL TO STREAM RESTORATION ITEMS	188 C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	164,423 C.Y.
LESS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	9,865 C.Y.
LESS TOPSOIL REMOVED FROM STORM WATER MANAGEMENT PONDS	22,699 C.Y.
LESS TOPSOIL REMOVED FROM BORROW SITES	61,334 C.Y.
LESS UNSUITABLE EXCAVATION	515 C.Y.
LESS MATERIAL USED FOR BORROW TYPE A	83,993 C.Y.
LESS MATERIAL USED FOR BORROW TYPE D	31,027 C.Y.
LESS MATERIAL USED FOR BORROW TYPE B	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE C	17,986 C.Y.
LESS MATERIAL USED FOR STREAM RESTORATION BORROW	0 C.Y.
SUBTOTAL TYPE F EXCAVATION AVAILABLE FOR EMBANKMENT	1,232,897 C.Y.

TYPE A MATERIAL REQUIRED	
FROM CROSS SECTIONS	80,715 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	10,721 C.Y.
SUBTOTAL BORROW TYPE A REQUIRED	69,994 C.Y.
PLUS CAPPING REQUIRED X ADJUSTMENT FACTOR (0.20)	13,999 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE A REQUIRED	83,993 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE A	83,993 C.Y.
TOTAL ADJUSTED TYPE A BORROW REQUIRED	0 C.Y.

TYPE C MATERIAL REQUIRED	
TEST HOLE EXCAVATION BACKFILL REQUIRED	150 C.Y.
PIPE/UTILITY BACKFILL REQUIRED	8,988 C.Y.
TYPE C BACKFILL FOR STRUCTURES	5,850 C.Y.
PLUS BORROW, TYPE C REQUIRED X ADJUSTMENT FACTOR (0.20)	2,998 C.Y.
SUBTOTAL ADJUSTED TYPE C BORROW REQUIRED	17,986 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE C	17,986 C.Y.
TOTAL ADJUSTED TYPE C BORROW REQUIRED	0 C.Y.

TYPE D MATERIAL REQUIRED	
SOIL CEMENT BASE COURSE (SY)	155,134 S.Y.
VOLUME OF TYPE D, CY (6" DEPTH)	25,856 C.Y.
PLUS BORROW, TYPE D REQUIRED X ADJUSTMENT FACTOR (0.20)	5,171 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE D REQUIRED	31,027 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE D	31,027 C.Y.
TOTAL ADJUSTED TYPE D BORROW REQUIRED	0 C.Y.

TYPE B MATERIAL REQUIRED	
BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVED UNDER FILL	0 C.Y.
BACKFILL FOR EXCAVATION OF UNSUITABLE SOILS	23,928 C.Y.
TYPE B BACKFILL FOR STRUCTURES	1,778 C.Y.
PLUS BACKFILL X ADJUSTMENT FACTOR (0.20)	5,141 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE B REQUIRED	30,847 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE B	0 C.Y.
TOTAL ADJUSTED TYPE B BORROW REQUIRED	30,847 C.Y.

TYPE F MATERIAL REQUIRED	
EMBANKMENT REQUIRED (FROM CROSS SECTIONS)	1,053,383 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	98,548 C.Y.
PLUS ROOTMAT REMOVED UNDER FILL NOT BACKFILLED WITH BORROW TYPE B	0 C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	3,078 C.Y.
PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	4,694 C.Y.
PLUS EMBANKMENT FOR PIPE BACKFILL (TYPE F)	1,721 C.Y.
PLUS EMBANKMENT FOR STRUCTURES	19,618 C.Y.
PLUS EMBANKMENT FOR EARTH MOUNDS	440 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	37,973 C.Y.
LESS TOPSOIL PLACED IN VISUAL BERM**	54,191 C.Y.
LESS EXCESS TOPSOIL TO BE PLACED IN OUTER EMBANKMENTS	40,855 C.Y.
LESS MSE WALL OR OTHER RETAINING WALL SELECT BACKFILL	8,609 C.Y.
LESS SURCHARGE	9,604 C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0 C.Y.
LESS LIGHTWEIGHT AGGREGATE	1,917 C.Y.
LESS STREAM BACKFILL MATERIAL	919 C.Y.
SUBTOTAL EMBANKMENT REQUIRED	1,027,414 C.Y.
PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20)	205,483 C.Y.
SUBTOTAL ADJUSTED EMBANKMENT REQUIRED	1,232,897 C.Y.
LESS EXCAVATION AVAILABLE FOR EMBANKMENT	1,232,897 C.Y.
TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.
THEREFORE, TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.

**NOTE IF A SUFFICIENT AMOUNT OF TOPSOIL IS NOT AVAILABLE BORROW TYPE F SHALL BE UTILIZED TO CONSTRUCT THE BERM TO FULL HEIGHT

TOPSOIL SUMMARY	
TOPSOIL REMOVED IN CUT AND FILL	164,423 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	9,865 C.Y.
PLUS TOPSOIL FROM STORMWATER MANAGEMENT FACILITIES	22,699 C.Y.
PLUS TOPSOIL FROM BORROW SITES	61,334 C.Y.
SUBTOTAL - TOPSOIL AVAILABLE	258,322 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	48,786 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES	29,511 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (BORROW SITE)	61,334 C.Y.
LESS TOPSOIL PLACED IN SWM FACILITIES	13,779 C.Y.
LESS TOPSOIL PLACED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	9,865 C.Y.
SUBTOTAL - EXCESS TOPSOIL/TOPSOIL NEEDED	95,046 C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	40,855 C.Y.
LESS TOPSOIL UTILIZED FOR VISUAL BERM	54,191 C.Y.
LESS CULTIVATED SOIL UNSUITABLE FOR EMBANKMENT	0 C.Y.
EXCESS TOPSOIL*	0 C.Y.
*EXCESS TOPSOIL TO BE BURIED IN BORROW SITES PER NOTES ON DRAWING GR-01	

PROPOSAL QUANTITIES	
ITEM NO. 202000 EXCAVATION AND EMBANKMENT*	1,618,102 C.Y.
ITEM NO. 203000 CHANNEL EXCAVATION	1,031 C.Y.
ITEM NO. 207000 EXCAVATION AND BACKFILL FOR STRUCTURES	15,031 C.Y.
ITEM NO. 208000 EXCAVATION AND BACKFILL FOR PIPE TRENCHES	18,423 C.Y.
ITEM NO. 209001 BORROW, TYPE A	0 C.Y.
ITEM NO. 209002 BORROW, TYPE B	30,847 C.Y.
ITEM NO. 209003 BORROW, TYPE C	0 C.Y.
ITEM NO. 209004 BORROW, TYPE D	0 C.Y.
ITEM NO. 209006 BORROW, TYPE F	0 C.Y.
ITEM NO. 209511 LIGHTWEIGHT AGGREGATE	1,917 C.Y.
ITEM NO. 212000 UNDERCUT EXCAVATION	0 C.Y.
ITEM NO. 733002 TOPSOILING (6" DEPTH)**	797,797 S.Y.
ITEM NO. 209512 STREAM RESTORATION BORROW	659 C.Y.
ITEM NO. 209513 STREAM RESTORATION BORROW MIX	199 C.Y.

*INCLUDES 10,350 CY OF SEDIMENT REMOVAL

**NOTE: TOPSOILING BORROW SITES SHALL BE PAID UNDER ITEM 733002 REGARDLESS OF DEPTH.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301,
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	
T200911308	DESIGNED BY: SJB	
COUNTY	CHECKED BY: TAO	
NEW CASTLE		

EARTHWORK SUMMARY

EW-01

SHEET NO.
9
TOTAL SHTS.
875

EARTHWORK SUMMARY – PHASE 1

EXCAVATION - ALIGNMENT	
FROM CROSS SECTIONS	
PLUS EXCAVATION FROM US 301	10,785 C.Y.
PLUS EXCAVATION FROM RAMP M	5,954 C.Y.
PLUS EXCAVATION FROM RAMP N	0 C.Y.
PLUS EXCAVATION FROM RAMP O	0 C.Y.
PLUS EXCAVATION FROM RAMP P	3,080 C.Y.
PLUS EXCAVATION FROM NORTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM SOUTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM RUNAROUND ROAD	10,913 C.Y.
PLUS EXCAVATION FROM JAMISON CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM HYETTS CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM SCOTT RUN PAID UNDER ITEM 202000	0 C.Y.
SUBTOTAL EXCAVATION FROM CROSS SECTIONS	30,732 C.Y.
PLUS EXCAVATION FROM BORROW SITES	
BORROW TYPE A EXCAVATED MATERIAL	0 C.Y.
BORROW TYPE C EXCAVATED MATERIAL	1,957 C.Y.
BORROW TYPE D EXCAVATED MATERIAL	0 C.Y.
BORROW TYPE F EXCAVATED MATERIAL	0 C.Y.
TOPSOIL REMOVED (VILLAGE OF SCOTT RUN WEST SITE)	9,269 C.Y.
SUBTOTAL EXCAVATION FROM BORROW SITES	11,226 C.Y.
SUBTOTAL - EXCAVATION FROM CROSS SECTIONS AND BORROW SITES	41,958 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	12,114 C.Y.
PLUS TOPSOIL PLACED IN CUT:	5,414 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING (6	1,420 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	85 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS REMOVAL OF EXISTING PCC PAVEMENT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
PLUS SWM EXCAVATION	69,967 C.Y.
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	130,959 C.Y.

STORMWATER MANAGEMENT EXCAVATION	
FROM GRID ANALYSIS*:	
SWM POND NO. 720	0 C.Y.
SWM POND NO. 722	0 C.Y.
SWM POND NO. 723	0 C.Y.
SWM POND NO. 725	0 C.Y.
SWM POND NO. 731	57,716 C.Y.
SWM POND NO. 733	8,685 C.Y.
SWM POND NO. 734	0 C.Y.
SWM POND NO. 737	0 C.Y.
SUBTOTAL - EXCAVATION FROM GRID ANALYSIS	66,401 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0 C.Y.
PLUS TOPSOIL PLACED IN CUT SECTIONS	3,566 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL - STORMWATER MANAGEMENT POND	69,967 C.Y.
*INCLUDES 2' OF OVEREXCAVATION OF SWM PONDS	

STREAM RESTORATION BORROW REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
PLUS MATERIAL FOR STREAM RESTORATION BORROW MIX	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW REQUIRED	0 C.Y.
PLUS STREAM RESTORATION BORROW X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR STREAM RESTORATION BORROW	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	0 C.Y.

STREAM RESTORATION BORROW MIX REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW MIX REQUIRED	0 C.Y.
PLUS STREAM RESTORATION BORROW MIX X ADJUSTMENT FACTOR (0.20)	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW MIX REQUIRED	0 C.Y.

EXCAVATION AVAILABLE FOR EMBANKMENT	
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	130,959 C.Y.
LESS MATERIAL REQUIRED FOR SWM EMBANKMENT	5,439 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR STRUCTURES	0 C.Y.
PLUS EXCAVATION INCIDENTAL TO STRUCTURAL ITEMS	0 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR PIPE TRENCHES	3,385 C.Y.
PLUS CHANNEL EXCAVATION	0 C.Y.
PLUS EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHES	0 C.Y.
PLUS EXCAVATION FROM INSTALLATION OF UNDERDRAINS	0 C.Y.
PLUS STOCKPILED MATERIAL FROM PREVIOUS PHASES	0 C.Y.
PLUS EXCAVATION INCIDENTAL TO STREAM RESTORATION ITEMS	0 C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	23,660 C.Y.
LESS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	1,420 C.Y.
LESS TOPSOIL REMOVED FROM STORM WATER MANAGEMENT PONDS	6,773 C.Y.
LESS TOPSOIL REMOVED FROM BORROW SITES	9,269 C.Y.
LESS UNSUITABLE EXCAVATION	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE A	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE D	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE B	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE C	1,957 C.Y.
LESS MATERIAL USED FOR STREAM RESTORATION BORROW	0 C.Y.
SUBTOTAL TYPE F EXCAVATION AVAILABLE FOR EMBANKMENT	85,826 C.Y.

TYPE A MATERIAL REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	0 C.Y.
SUBTOTAL BORROW TYPE A REQUIRED	0 C.Y.
PLUS CAPPING REQUIRED X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE A REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE A	0 C.Y.
TOTAL ADJUSTED TYPE A BORROW REQUIRED	0 C.Y.

TYPE C MATERIAL REQUIRED	
TEST HOLE EXCAVATION BACKFILL REQUIRED	0 C.Y.
PIPE/UTILITY BACKFILL REQUIRED	1,631 C.Y.
TYPE C BACKFILL FOR STRUCTURES	0 C.Y.
PLUS BORROW, TYPE C REQUIRED X ADJUSTMENT FACTOR (0.20)	326 C.Y.
SUBTOTAL ADJUSTED TYPE C BORROW REQUIRED	1,957 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE C	1,957 C.Y.
TOTAL ADJUSTED TYPE C BORROW REQUIRED	0 C.Y.

TYPE D MATERIAL REQUIRED	
SOIL CEMENT BASE COURSE (SY)	0 S.Y.
VOLUME OF TYPE D, CY (6" DEPTH)	0 C.Y.
PLUS BORROW, TYPE D REQUIRED X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE D REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE D	0 C.Y.
TOTAL ADJUSTED TYPE D BORROW REQUIRED	0 C.Y.

TYPE B MATERIAL REQUIRED	
BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVED UNDER FILL	0 C.Y.
BACKFILL FOR EXCAVATION OF UNSUITABLE SOILS	0 C.Y.
TYPE B BACKFILL FOR STRUCTURES	0 C.Y.
PLUS BACKFILL X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE B REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE B	0 C.Y.
TOTAL ADJUSTED TYPE B BORROW REQUIRED	0 C.Y.

TYPE F MATERIAL REQUIRED	
EMBANKMENT REQUIRED (FROM CROSS SECTIONS)	83,983 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	12,114 C.Y.
PLUS ROOTMAT REMOVED UNDER FILL NOT BACKFILLED WITH BORROW TYPE B	0 C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	0 C.Y.
PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	85 C.Y.
PLUS EMBANKMENT FOR PIPE BACKFILL (TYPE F)	1,307 C.Y.
PLUS EMBANKMENT FOR STRUCTURES	0 C.Y.
PLUS EMBANKMENT FOR EARTH MOUNDS	0 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	5,478 C.Y.
LESS TOPSOIL PLACED IN VISUAL BERM**	54,191 C.Y.
LESS EXCESS TOPSOIL TO BE PLACED IN OUTER EMBANKMENTS	9,583 C.Y.
LESS MSE WALL OR OTHER RETAINING WALL SELECT BACKFILL	0 C.Y.
LESS SURCHARGE	0 C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0 C.Y.
LESS LIGHTWEIGHT AGGREGATE	0 C.Y.
LESS STREAM BACKFILL MATERIAL	0 C.Y.
SUBTOTAL EMBANKMENT REQUIRED	28,236 C.Y.
PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20)	5,647 C.Y.
SUBTOTAL ADJUSTED EMBANKMENT REQUIRED	33,884 C.Y.
LESS EXCAVATION AVAILABLE FOR EMBANKMENT	85,826 C.Y.
TOTAL ADJUSTED TYPE F BORROW REQUIRED*	-51,942 C.Y.
THEREFORE, TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.

*EXCESS TYPE F CONTRIBUTES TO "STOCKPILED MATERIAL FROM PREVIOUS PHASES" IN PHASE 2, STA. 709+00 TO SCOTT RUN

**NOTE IF A SUFFICIENT AMOUNT OF TOPSOIL IS NOT AVAILABLE BORROW TYPE F SHALL BE UTILIZED TO CONSTRUCT THE BERM TO FULL HEIGHT

TOPSOIL SUMMARY	
TOPSOIL REMOVED IN CUT AND FILL	23,660 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	1,420 C.Y.
PLUS TOPSOIL FROM STORMWATER MANAGEMENT FACILITIES	6,773 C.Y.
PLUS TOPSOIL FROM BORROW SITES	9,269 C.Y.
PLUS TOPSOIL FROM PREVIOUS PHASES	0 C.Y.
SUBTOTAL - TOPSOIL AVAILABLE	41,122 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	5,478 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES	5,414 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (BORROW SITE)	9,269 C.Y.
LESS TOPSOIL PLACED IN SWM FACILITIES	3,566 C.Y.
LESS TOPSOIL PLACED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	1,420 C.Y.
SUBTOTAL - EXCESS TOPSOIL/TOPSOIL NEEDED	15,974 C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	9,583 C.Y.
LESS TOPSOIL REQUIRED FOR VISUAL BERM	54,191 C.Y.
LESS CULTIVATED SOIL UNSUITABLE FOR EMBANKMENT	0 C.Y.
EXCESS TOPSOIL*	0 C.Y.
TOPSOIL FOR VISUAL BERM REQUIRED FROM FUTURE PHASES	47,800 C.Y.
*BECOMES "TOPSOIL FROM PREVIOUS PHASES," IN PHASE 2, STA. 709+00 TO SCOTT RUN	

PROPOSAL QUANTITIES	
ITEM NO. 202000 EXCAVATION AND EMBANKMENT	SEE EW-01
ITEM NO. 203000 CHANNEL EXCAVATION	SEE EW-01
ITEM NO. 207000 EXCAVATION AND BACKFILL FOR STRUCTURES	SEE EW-01
ITEM NO. 208000 EXCAVATION AND BACKFILL FOR PIPE TRENCHES	SEE EW-01
ITEM NO. 209001 BORROW, TYPE A	SEE EW-01
ITEM NO. 209002 BORROW, TYPE B	SEE EW-01
ITEM NO. 209003 BORROW, TYPE C	SEE EW-01
ITEM NO. 209004 BORROW, TYPE D	SEE EW-01
ITEM NO. 209006 BORROW, TYPE F	SEE EW-01
ITEM NO. 209511 LIGHTWEIGHT AGGREGATE	SEE EW-01
ITEM NO. 212000 UNDERCUT EXCAVATION	SEE EW-01
ITEM NO. 733002 TOPSOILING (6" DEPTH)**	SEE EW-01
ITEM NO. 209512 STREAM RESTORATION BORROW	SEE EW-01
ITEM NO. 209513 STREAM RESTORATION BORROW MIX	SEE EW-01

**NOTE: TOPSOILING BORROW SITES SHALL BE PAID UNDER ITEM 733002 REGARDLESS OF DEPTH.

NOTE: Select Backfill required for Retaining Walls, which shall be furnished, estimated in structural calculations

EARTHWORK SUMMARY – PHASE 2 (SOUTH OF SR 896)

EXCAVATION - ALIGNMENT	
FROM CROSS SECTIONS	
PLUS EXCAVATION FROM US 301	2,111 C.Y.
PLUS EXCAVATION FROM RAMP M	0 C.Y.
PLUS EXCAVATION FROM RAMP N	0 C.Y.
PLUS EXCAVATION FROM RAMP O	0 C.Y.
PLUS EXCAVATION FROM RAMP P	0 C.Y.
PLUS EXCAVATION FROM NORTHBOUND EMERGENCY RAMP	21 C.Y.
PLUS EXCAVATION FROM SOUTHBOUND EMERGENCY RAMP	429 C.Y.
PLUS EXCAVATION FROM RUNAROUND ROAD	0 C.Y.
PLUS EXCAVATION FROM JAMISON CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM HYETTS CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM SCOTT RUN PAID UNDER ITEM 202000	0 C.Y.
SUBTOTAL EXCAVATION FROM CROSS SECTIONS	2,561 C.Y.
PLUS EXCAVATION FROM BORROW SITES	
BORROW TYPE A EXCAVATED MATERIAL	2,232 C.Y.
BORROW TYPE C EXCAVATED MATERIAL	0 C.Y.
BORROW TYPE D EXCAVATED MATERIAL	483 C.Y.
BORROW TYPE F EXCAVATED MATERIAL	73,721 C.Y.
TOPSOIL REMOVED	0 C.Y.
SUBTOTAL EXCAVATION FROM BORROW SITES	76,435 C.Y.
SUBTOTAL - EXCAVATION FROM CROSS SECTIONS AND BORROW SITES	78,996 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	3,856 C.Y.
PLUS TOPSOIL PLACED IN CUT:	264 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	246 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS REMOVAL OF EXISTING PCC PAVEMENT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
PLUS SWM EXCAVATION	0 C.Y.
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	83,362 C.Y.

STORMWATER MANAGEMENT EXCAVATION	
FROM GRID ANALYSIS*:	
SWM POND NO. 720	0 C.Y.
SWM POND NO. 722	0 C.Y.
SWM POND NO. 723	0 C.Y.
SWM POND NO. 725	0 C.Y.
SWM POND NO. 731	0 C.Y.
SWM POND NO. 733	0 C.Y.
SWM POND NO. 734	0 C.Y.
SWM POND NO. 737	0 C.Y.
SUBTOTAL - EXCAVATION FROM GRID ANALYSIS	0 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0 C.Y.
PLUS TOPSOIL PLACED IN CUT SECTIONS	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL - STORMWATER MANAGEMENT POND	0 C.Y.
*INCLUDES 2' OF OVEREXCAVATION OF SWM PONDS	

STREAM RESTORATION BORROW REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
PLUS MATERIAL FOR STREAM RESTORATION BORROW MIX	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW REQUIRED	0 C.Y.
PLUS STREAM RESTORATION BORROW X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR STREAM RESTORATION BORROW	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	0 C.Y.

STREAM RESTORATION BORROW MIX REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW MIX REQUIRED	0 C.Y.
PLUS STREAM RESTORATION BORROW MIX X ADJUSTMENT FACTOR (0.20)	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW MIX REQUIRED	0 C.Y.

EXCAVATION AVAILABLE FOR EMBANKMENT	
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	83,362 C.Y.
LESS MATERIAL REQUIRED FOR SWM EMBANKMENT	0 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR STRUCTURES	0 C.Y.
PLUS EXCAVATION INCIDENTAL TO STRUCTURAL ITEMS	0 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR PIPE TRENCHES	0 C.Y.
PLUS CHANNEL EXCAVATION	0 C.Y.
PLUS EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHES	0 C.Y.
PLUS EXCAVATION FROM INSTALLATION OF UNDERDRAINS	292 C.Y.
PLUS STOCKPILED MATERIAL FROM PREVIOUS PHASES	0 C.Y.
PLUS EXCAVATION INCIDENTAL TO STREAM RESTORATION ITEMS	0 C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	4,107 C.Y.
LESS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	246 C.Y.
LESS TOPSOIL REMOVED FROM STORM WATER MANAGEMENT PONDS	0 C.Y.
LESS TOPSOIL REMOVED FROM BORROW SITES	0 C.Y.
LESS UNSUITABLE EXCAVATION	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE A	2,232 C.Y.
LESS MATERIAL USED FOR BORROW TYPE D	483 C.Y.
LESS MATERIAL USED FOR BORROW TYPE B	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE C	0 C.Y.
LESS MATERIAL USED FOR STREAM RESTORATION BORROW	0 C.Y.
SUBTOTAL TYPE F EXCAVATION AVAILABLE FOR EMBANKMENT	76,586 C.Y.

TYPE A MATERIAL REQUIRED	
FROM CROSS SECTIONS*	2,094 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	234 C.Y.
SUBTOTAL BORROW TYPE A REQUIRED	1,860 C.Y.
PLUS CAPPING REQUIRED X ADJUSTMENT FACTOR (0.20)	372 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE A REQUIRED	2,232 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE A	2,232 C.Y.
TOTAL ADJUSTED TYPE A BORROW REQUIRED	0 C.Y.
*INCLUDES ROOTMAT REMOVED UNDER FILL BACKFILLED WITH BORROW TYPE A	

TYPE C MATERIAL REQUIRED	
TEST HOLE EXCAVATION BACKFILL REQUIRED	0 C.Y.
PIPE/UTILITY BACKFILL REQUIRED	0 C.Y.
TYPE C BACKFILL FOR STRUCTURES	0 C.Y.
PLUS BORROW, TYPE C REQUIRED X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED TYPE C BORROW REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE C	0 C.Y.
TOTAL ADJUSTED TYPE C BORROW REQUIRED	0 C.Y.

TYPE D MATERIAL REQUIRED	
SOIL CEMENT BASE COURSE (SY)	2,413 S.Y.
VOLUME OF TYPE D, CY (6" DEPTH)	402 C.Y.
PLUS BORROW, TYPE D REQUIRED X ADJUSTMENT FACTOR (0.20)	80 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE D REQUIRED	483 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE D	483 C.Y.
TOTAL ADJUSTED TYPE D BORROW REQUIRED	0 C.Y.

TYPE B MATERIAL REQUIRED	
BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVED UNDER FILL	0 C.Y.
BACKFILL FOR EXCAVATION OF UNSUITABLE SOILS	0 C.Y.
TYPE B BACKFILL FOR STRUCTURES	1,017 C.Y.
PLUS BACKFILL X ADJUSTMENT FACTOR (0.20)	203 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE B REQUIRED	1,220 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE B	0 C.Y.
TOTAL ADJUSTED TYPE B BORROW REQUIRED	1,220 C.Y.

TYPE F MATERIAL REQUIRED	
EMBANKMENT REQUIRED (FROM CROSS SECTIONS)	64,787 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	2,031 C.Y.
PLUS ROOTMAT REMOVED UNDER FILL NOT BACKFILLED WITH BORROW TYPE B	0 C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	0 C.Y.
PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
PLUS EMBANKMENT FOR PIPE BACKFILL (TYPE F)	0 C.Y.
PLUS EMBANKMENT FOR STRUCTURES	0 C.Y.
PLUS EMBANKMENT FOR EARTH MOUNDS	220 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	1,800 C.Y.
LESS TOPSOIL PLACED IN VISUAL BERM	0 C.Y.
LESS EXCESS TOPSOIL TO BE PLACED IN OUTER EMBANKMENTS	1,416 C.Y.
LESS MSE WALL OR OTHER RETAINING WALL SELECT BACKFILL	0 C.Y.
LESS SURCHARGE	0 C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0 C.Y.
LESS LIGHTWEIGHT AGGREGATE	0 C.Y.
LESS STREAM BACKFILL MATERIAL	0 C.Y.
SUBTOTAL EMBANKMENT REQUIRED	63,822 C.Y.
PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20)	12,764 C.Y.
SUBTOTAL ADJUSTED EMBANKMENT REQUIRED	76,586 C.Y.
LESS EXCAVATION AVAILABLE FOR EMBANKMENT	76,586 C.Y.
TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.
THEREFORE, TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.

TOPSOIL SUMMARY	
TOPSOIL REMOVED IN CUT AND FILL	4,107 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	246 C.Y.
PLUS TOPSOIL FROM STORMWATER MANAGEMENT FACILITIES	0 C.Y.
PLUS TOPSOIL FROM BORROW SITES	0 C.Y.
PLUS TOPSOIL FROM PREVIOUS PHASES	0 C.Y.
SUBTOTAL - TOPSOIL AVAILABLE	4,354 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	2,034 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES	264 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (BORROW SITE)	0 C.Y.
LESS TOPSOIL PLACED IN SWM FACILITIES	0 C.Y.
LESS TOPSOIL PLACED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	246 C.Y.
SUBTOTAL - EXCESS TOPSOIL/TOPSOIL NEEDED	1,809 C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	1,416 C.Y.
LESS TOPSOIL UTILIZED FOR VISUAL BERM	0 C.Y.
LESS CULTIVATED SOIL UNSUITABLE FOR EMBANKMENT	0 C.Y.
EXCESS TOPSOIL*	393 C.Y.
TOPSOIL FOR VISUAL BERM REQUIRED FROM FUTURE PHASES	18,230 C.Y.
*BECOMES "TOPSOIL FROM PREVIOUS PHASES," IN PHASE 2, SCOTT RUN TO NORTH LIMITS	

PROPOSAL QUANTITIES	
ITEM NO. 202000 EXCAVATION AND EMBANKMENT	SEE EW-01
ITEM NO. 203000 CHANNEL EXCAVATION	SEE EW-01
ITEM NO. 207000 EXCAVATION AND BACKFILL FOR STRUCTURES	SEE EW-01
ITEM NO. 208000 EXCAVATION AND BACKFILL FOR PIPE TRENCHES	SEE EW-01
ITEM NO. 209001 BORROW, TYPE A	SEE EW-01
ITEM NO. 209002 BORROW, TYPE B	SEE EW-01
ITEM NO. 209003 BORROW, TYPE C	SEE EW-01
ITEM NO. 209004 BORROW, TYPE D	SEE EW-01
ITEM NO. 209006 BORROW, TYPE F	SEE EW-01
ITEM NO. 209511 LIGHTWEIGHT AGGREGATE	SEE EW-01
ITEM NO. 212000 UNDERCUT EXCAVATION	SEE EW-01
ITEM NO. 733002 TOPSOILING (6" DEPTH)**	SEE EW-01
ITEM NO. 209512 STREAM RESTORATION BORROW	SEE EW-01
ITEM NO. 209513 STREAM RESTORATION BORROW MIX	SEE EW-01

**NOTE: TOPSOILING BORROW SITES SHALL BE PAID UNDER ITEM 733002 REGARDLESS OF DEPTH.

NOTE: Select Backfill required for Retaining Walls, which shall be furnished, estimated in structural calculations

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301,
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	
T200911308	DESIGNED BY: SJB	
COUNTY	CHECKED BY: TAO	
NEW CASTLE		

EARTHWORK SUMMARY

EW-03

SHEET NO.	TOTAL SHTS.
11	875

EARTHWORK SUMMARY – PHASE 2 (SR 896 TO STA. 709+00)

EXCAVATION - ALIGNMENT	
FROM CROSS SECTIONS	
PLUS EXCAVATION FROM US 301	3,288 C.Y.
PLUS EXCAVATION FROM RAMP M	0 C.Y.
PLUS EXCAVATION FROM RAMP N	0 C.Y.
PLUS EXCAVATION FROM RAMP O	0 C.Y.
PLUS EXCAVATION FROM RAMP P	0 C.Y.
PLUS EXCAVATION FROM NORTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM SOUTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM RUNAROUND ROAD	0 C.Y.
PLUS EXCAVATION FROM JAMISON CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM HYETTS CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM SCOTT RUN PAID UNDER ITEM 202000	0 C.Y.
SUBTOTAL EXCAVATION FROM CROSS SECTIONS	3,288 C.Y.
PLUS EXCAVATION FROM BORROW SITES	
BORROW TYPE A EXCAVATED MATERIAL	12,921 C.Y.
BORROW TYPE C EXCAVATED MATERIAL	4,729 C.Y.
BORROW TYPE D EXCAVATED MATERIAL	3,715 C.Y.
BORROW TYPE F EXCAVATED MATERIAL	244,289 C.Y.
TOPSOIL REMOVED	0 C.Y.
SUBTOTAL EXCAVATION FROM BORROW SITES	265,655 C.Y.
SUBTOTAL - EXCAVATION FROM CROSS SECTIONS AND BORROW SITES	268,943 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	6,628 C.Y.
PLUS TOPSOIL PLACED IN CUT:	0 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	398 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS REMOVAL OF EXISTING PCC PAVEMENT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
PLUS SWM EXCAVATION	0 C.Y.
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	275,968 C.Y.

STORMWATER MANAGEMENT EXCAVATION	
FROM GRID ANALYSIS*:	
SWM POND NO. 720	0 C.Y.
SWM POND NO. 722	0 C.Y.
SWM POND NO. 723	0 C.Y.
SWM POND NO. 725	0 C.Y.
SWM POND NO. 731	0 C.Y.
SWM POND NO. 733	0 C.Y.
SWM POND NO. 734	0 C.Y.
SWM POND NO. 737	0 C.Y.
SUBTOTAL - EXCAVATION FROM GRID ANALYSIS	0 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0 C.Y.
PLUS TOPSOIL PLACED IN CUT SECTIONS	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL - STORMWATER MANAGEMENT POND	0 C.Y.
*INCLUDES 2' OF OVEREXCAVATION OF SWM PONDS	

STREAM RESTORATION BORROW REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
PLUS MATERIAL FOR STREAM RESTORATION BORROW MIX	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW REQUIRED	0 C.Y.
PLUS STREAM RESTORATION BORROW X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR STREAM RESTORATION BORROW	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	0 C.Y.

STREAM RESTORATION BORROW MIX REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW MIX REQUIRED	0 C.Y.
PLUS STREAM RESTORATION BORROW MIX X ADJUSTMENT FACTOR (0.20)	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW MIX REQUIRED	0 C.Y.
	0 0.0

EXCAVATION AVAILABLE FOR EMBANKMENT	
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	275,968 C.Y.
LESS MATERIAL REQUIRED FOR SWM EMBANKMENT	0 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR STRUCTURES	2,413 C.Y.
PLUS EXCAVATION INCIDENTAL TO STRUCTURAL ITEMS	0 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR PIPE TRENCHES	2,062 C.Y.
PLUS CHANNEL EXCAVATION	0 C.Y.
PLUS EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHES	0 C.Y.
PLUS EXCAVATION FROM INSTALLATION OF UNDERDRAINS	590 C.Y.
PLUS STOCKPILED MATERIAL FROM PREVIOUS PHASES	0 C.Y.
PLUS EXCAVATION INCIDENTAL TO STREAM RESTORATION ITEMS	0 C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	6,628 C.Y.
LESS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	398 C.Y.
LESS TOPSOIL REMOVED FROM STORM WATER MANAGEMENT PONDS	0 C.Y.
LESS TOPSOIL REMOVED FROM BORROW SITES	0 C.Y.
LESS UNSUITABLE EXCAVATION	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE A	12,921 C.Y.
LESS MATERIAL USED FOR BORROW TYPE D	3,715 C.Y.
LESS MATERIAL USED FOR BORROW TYPE B	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE C	4,729 C.Y.
LESS MATERIAL USED FOR STREAM RESTORATION BORROW	0 C.Y.
SUBTOTAL TYPE F EXCAVATION AVAILABLE FOR EMBANKMENT	252,643 C.Y.

TYPE A MATERIAL REQUIRED	
FROM CROSS SECTIONS	12,869 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	2,102 C.Y.
SUBTOTAL BORROW TYPE A REQUIRED	10,767 C.Y.
PLUS CAPPING REQUIRED X ADJUSTMENT FACTOR (0.20)	2,153 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE A REQUIRED	12,921 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE A	12,921 C.Y.
TOTAL ADJUSTED TYPE A BORROW REQUIRED	0 C.Y.

TYPE C MATERIAL REQUIRED	
TEST HOLE EXCAVATION BACKFILL REQUIRED	10 C.Y.
PIPE/UTILITY BACKFILL REQUIRED	1,480 C.Y.
TYPE C BACKFILL FOR STRUCTURES	2,451 C.Y.
PLUS BORROW, TYPE C REQUIRED X ADJUSTMENT FACTOR (0.20)	788 C.Y.
SUBTOTAL ADJUSTED TYPE C BORROW REQUIRED	4,729 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE C	4,729 C.Y.
TOTAL ADJUSTED TYPE C BORROW REQUIRED	0 C.Y.

TYPE D MATERIAL REQUIRED	
SOIL CEMENT BASE COURSE (SY)	18,577 S.Y.
VOLUME OF TYPE D, CY (6" DEPTH)	3,096 C.Y.
PLUS BORROW, TYPE D REQUIRED X ADJUSTMENT FACTOR (0.20)	619 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE D REQUIRED	3,715 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE D	3,715 C.Y.
TOTAL ADJUSTED TYPE D BORROW REQUIRED	0 C.Y.

TYPE B MATERIAL REQUIRED	
BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVED UNDER FILL	0 C.Y.
BACKFILL FOR EXCAVATION OF UNSUITABLE SOILS	23,928 C.Y.
TYPE B BACKFILL FOR STRUCTURES	761 C.Y.
PLUS BACKFILL X ADJUSTMENT FACTOR (0.20)	4,938 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE B REQUIRED	29,626 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE B	0 C.Y.
TOTAL ADJUSTED TYPE B BORROW REQUIRED	29,626 C.Y.

TYPE F MATERIAL REQUIRED	
EMBANKMENT REQUIRED (FROM CROSS SECTIONS)	227,652 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	6,628 C.Y.
PLUS ROOTMAT REMOVED UNDER FILL NOT BACKFILLED WITH BORROW TYPE B	0 C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	3,078 C.Y.
PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
PLUS EMBANKMENT FOR PIPE BACKFILL (TYPE F)	0 C.Y.
PLUS EMBANKMENT FOR STRUCTURES	0 C.Y.
PLUS EMBANKMENT FOR EARTH MOUNDS	0 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	4,743 C.Y.
LESS TOPSOIL PLACED IN VISUAL BERM	0 C.Y.
LESS EXCESS TOPSOIL TO BE PLACED IN OUTER EMBANKMENTS	22,080 C.Y.
LESS MSE WALL OR OTHER RETAINING WALL SELECT BACKFILL	0 C.Y.
LESS SURCHARGE	0 C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0 C.Y.
LESS LIGHTWEIGHT AGGREGATE	0 C.Y.
LESS STREAM BACKFILL MATERIAL	0 C.Y.
SUBTOTAL EMBANKMENT REQUIRED	210,535 C.Y.
PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20)	42,107 C.Y.
SUBTOTAL ADJUSTED EMBANKMENT REQUIRED	252,642 C.Y.
LESS EXCAVATION AVAILABLE FOR EMBANKMENT	252,643 C.Y.
TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.
THEREFORE, TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.

TOPSOIL SUMMARY	
TOPSOIL REMOVED IN CUT AND FILL	6,628 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	398 C.Y.
PLUS TOPSOIL FROM STORMWATER MANAGEMENT FACILITIES	0 C.Y.
PLUS TOPSOIL FROM BORROW SITES	0 C.Y.
PLUS TOPSOIL FROM PREVIOUS PHASES	22,296 C.Y.
SUBTOTAL - TOPSOIL AVAILABLE	29,321 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	6,844 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES	0 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (BORROW SITE)	0 C.Y.
LESS TOPSOIL PLACED IN SWM FACILITIES	0 C.Y.
LESS TOPSOIL PLACED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	398 C.Y.
SUBTOTAL - EXCESS TOPSOIL/TOPSOIL NEEDED	22,080 C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	22,080 C.Y.
LESS TOPSOIL UTILIZED FOR VISUAL BERM	0 C.Y.
LESS CULTIVATED SOIL UNSUITABLE FOR EMBANKMENT	0 C.Y.
EXCESS TOPSOIL*	0 C.Y.
TOPSOIL FOR VISUAL BERM REQUIRED FROM FUTURE PHASES	18,230 C.Y.
*BECOMES "TOPSOIL FROM PREVIOUS PHASES," IN PHASE 2, SOUTH OF SR 896	

PROPOSAL QUANTITIES	
ITEM NO. 202000 EXCAVATION AND EMBANKMENT	SEE EW-01
ITEM NO. 203000 CHANNEL EXCAVATION	SEE EW-01
ITEM NO. 207000 EXCAVATION AND BACKFILL FOR STRUCTURES	SEE EW-01
ITEM NO. 208000 EXCAVATION AND BACKFILL FOR PIPE TRENCHES	SEE EW-01
ITEM NO. 209001 BORROW, TYPE A	SEE EW-01
ITEM NO. 209002 BORROW, TYPE B	SEE EW-01
ITEM NO. 209003 BORROW, TYPE C	SEE EW-01
ITEM NO. 209004 BORROW, TYPE D	SEE EW-01
ITEM NO. 209006 BORROW, TYPE F	SEE EW-01
ITEM NO. 209511 LIGHTWEIGHT AGGREGATE	SEE EW-01
ITEM NO. 212000 UNDERCUT EXCAVATION	SEE EW-01
ITEM NO. 733002 TOPSOILING (6" DEPTH)**	SEE EW-01
ITEM NO. 209512 STREAM RESTORATION BORROW	SEE EW-01
ITEM NO. 209513 STREAM RESTORATION BORROW MIX	SEE EW-01

**NOTE: TOPSOILING BORROW SITES SHALL BE PAID UNDER ITEM 733002 REGARDLESS OF DEPTH.

EARTHWORK SUMMARY – PHASE 2 (STA. 709+00 TO SCOTT RUN)

EXCAVATION - ALIGNMENT	
FROM CROSS SECTIONS	
PLUS EXCAVATION FROM US 301	63,089 C.Y.
PLUS EXCAVATION FROM RAMP M	2,955 C.Y.
PLUS EXCAVATION FROM RAMP N	11,640 C.Y.
PLUS EXCAVATION FROM RAMP O	3,532 C.Y.
PLUS EXCAVATION FROM RAMP P	2,433 C.Y.
PLUS EXCAVATION FROM NORTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM SOUTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM RUNAROUND ROAD	0 C.Y.
PLUS EXCAVATION FROM JAMISON CORNER ROAD	3,584 C.Y.
PLUS EXCAVATION FROM HYETTS CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM SCOTT RUN PAID UNDER ITEM 202000	551 C.Y.
SUBTOTAL EXCAVATION FROM CROSS SECTIONS	87,785 C.Y.
PLUS EXCAVATION FROM BORROW SITES	
BORROW TYPE A EXCAVATED MATERIAL	45,546 C.Y.
BORROW TYPE C EXCAVATED MATERIAL	2,588 C.Y.
BORROW TYPE D EXCAVATED MATERIAL	20,199 C.Y.
BORROW TYPE F EXCAVATED MATERIAL	330,886 C.Y.
TOPSOIL REMOVED	0 C.Y.
SUBTOTAL EXCAVATION FROM BORROW SITES	399,219 C.Y.
SUBTOTAL - EXCAVATION FROM CROSS SECTIONS AND BORROW SITES	487,004 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	57,271 C.Y.
PLUS TOPSOIL PLACED IN CUT:	14,167 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	5,465 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	1,085 C.Y.
LESS ROOTMAT REMOVED IN CUT	326 C.Y.
LESS REMOVAL OF EXISTING PCC PAVEMENT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
PLUS SWM EXCAVATION	79,640 C.Y.
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	644,306 C.Y.

STORMWATER MANAGEMENT EXCAVATION	
FROM GRID ANALYSIS*:	
SWM POND NO. 720	66,287 C.Y.
SWM POND NO. 722	880 C.Y.
SWM POND NO. 723	1,625 C.Y.
SWM POND NO. 725	2,725 C.Y.
SWM POND NO. 731	0 C.Y.
SWM POND NO. 733	0 C.Y.
SWM POND NO. 734	0 C.Y.
SWM POND NO. 737	0 C.Y.
SUBTOTAL - EXCAVATION FROM GRID ANALYSIS	71,517 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	1,625 C.Y.
PLUS TOPSOIL PLACED IN CUT SECTIONS	6,498 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL - STORMWATER MANAGEMENT POND	79,640 C.Y.
*INCLUDES 2' OF OVEREXCAVATION OF SWM PONDS	

STREAM RESTORATION BORROW REQUIRED	
FROM CROSS SECTIONS	91 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
PLUS MATERIAL FOR STREAM RESTORATION BORROW MIX	19 C.Y.
SUBTOTAL STREAM RESTORATION BORROW REQUIRED	110 C.Y.
PLUS STREAM RESTORATION BORROW X ADJUSTMENT FACTOR (0.20)	22 C.Y.
SUBTOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	132 C.Y.
LESS EXCAVATION AVAILABLE FOR STREAM RESTORATION BORROW	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	132 C.Y.

STREAM RESTORATION BORROW MIX REQUIRED	
FROM CROSS SECTIONS	37 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW MIX REQUIRED	37 C.Y.
PLUS STREAM RESTORATION BORROW MIX X ADJUSTMENT FACTOR (0.20)	7 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW MIX REQUIRED	44 C.Y.

EXCAVATION AVAILABLE FOR EMBANKMENT	
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	644,306 C.Y.
LESS MATERIAL REQUIRED FOR SWM EMBANKMENT	15,762 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR STRUCTURES	672 C.Y.
PLUS EXCAVATION INCIDENTAL TO STRUCTURAL ITEMS	1,438 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR PIPE TRENCHES	1,840 C.Y.
PLUS CHANNEL EXCAVATION	157 C.Y.
PLUS EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHES	0 C.Y.
PLUS EXCAVATION FROM INSTALLATION OF UNDERDRAINS	3,075 C.Y.
PLUS STOCKPILED MATERIAL FROM PREVIOUS PHASES	166,014 C.Y.
PLUS EXCAVATION INCIDENTAL TO STREAM RESTORATION ITEMS	59 C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	91,091 C.Y.
LESS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	5,465 C.Y.
LESS TOPSOIL REMOVED FROM STORM WATER MANAGEMENT PONDS	11,859 C.Y.
LESS TOPSOIL REMOVED FROM BORROW SITES	0 C.Y.
LESS UNSUITABLE EXCAVATION	79 C.Y.
LESS MATERIAL USED FOR BORROW TYPE A	45,546 C.Y.
LESS MATERIAL USED FOR BORROW TYPE D	20,199 C.Y.
LESS MATERIAL USED FOR BORROW TYPE B	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE C	2,588 C.Y.
LESS MATERIAL USED FOR STREAM RESTORATION BORROW	0 C.Y.
SUBTOTAL TYPE F EXCAVATION AVAILABLE FOR EMBANKMENT	624,972 C.Y.

TYPE A MATERIAL REQUIRED	
FROM CROSS SECTIONS	45,873 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	7,918 C.Y.
SUBTOTAL BORROW TYPE A REQUIRED	37,955 C.Y.
PLUS CAPPING REQUIRED X ADJUSTMENT FACTOR (0.20)	7,591 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE A REQUIRED	45,546 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE A	45,546 C.Y.
TOTAL ADJUSTED TYPE A BORROW REQUIRED	0 C.Y.

TYPE C MATERIAL REQUIRED	
TEST HOLE EXCAVATION BACKFILL REQUIRED	15 C.Y.
PIPE/UTILITY BACKFILL REQUIRED	1,246 C.Y.
TYPE C BACKFILL FOR STRUCTURES	896 C.Y.
PLUS BORROW, TYPE C REQUIRED X ADJUSTMENT FACTOR (0.20)	431 C.Y.
SUBTOTAL ADJUSTED TYPE C BORROW REQUIRED	2,588 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE C	2,588 C.Y.
TOTAL ADJUSTED TYPE C BORROW REQUIRED	0 C.Y.

TYPE D MATERIAL REQUIRED	
SOIL CEMENT BASE COURSE (SY)	100,993 S.Y.
VOLUME OF TYPE D, CY (6" DEPTH)	16,832 C.Y.
PLUS BORROW, TYPE D REQUIRED X ADJUSTMENT FACTOR (0.20)	3,366 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE D REQUIRED	20,199 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE D	20,199 C.Y.
TOTAL ADJUSTED TYPE D BORROW REQUIRED	0 C.Y.

TYPE B MATERIAL REQUIRED	
BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVED UNDER FILL	0 C.Y.
BACKFILL FOR EXCAVATION OF UNSUITABLE SOILS	0 C.Y.
TYPE B BACKFILL FOR STRUCTURES	0 C.Y.
PLUS BACKFILL X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE B REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE B	0 C.Y.
TOTAL ADJUSTED TYPE B BORROW REQUIRED	0 C.Y.

TYPE F MATERIAL REQUIRED	
EMBANKMENT REQUIRED (FROM CROSS SECTIONS)	483,281 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	57,271 C.Y.
PLUS ROOTMAT REMOVED UNDER FILL NOT BACKFILLED WITH BORROW TYPE B	0 C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	0 C.Y.
PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	1,085 C.Y.
PLUS EMBANKMENT FOR PIPE BACKFILL (TYPE F)	414 C.Y.
PLUS EMBANKMENT FOR STRUCTURES	4,168 C.Y.
PLUS EMBANKMENT FOR EARTH MOUNDS	110 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	15,121 C.Y.
LESS TOPSOIL PLACED IN VISUAL BERM	0 C.Y.
LESS EXCESS TOPSOIL TO BE PLACED IN OUTER EMBANKMENTS	6,265 C.Y.
LESS MSE WALL OR OTHER RETAINING WALL SELECT BACKFILL	3,827 C.Y.
LESS SURCHARGE	0 C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0 C.Y.
LESS LIGHTWEIGHT AGGREGATE	0 C.Y.
LESS STREAM BACKFILL MATERIAL	305 C.Y.
SUBTOTAL EMBANKMENT REQUIRED	520,810 C.Y.
PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20)	104,162 C.Y.
SUBTOTAL ADJUSTED EMBANKMENT REQUIRED	624,972 C.Y.
LESS EXCAVATION AVAILABLE FOR EMBANKMENT	624,972 C.Y.
TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.
THEREFORE, TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.

TOPSOIL SUMMARY	
TOPSOIL REMOVED IN CUT AND FILL	91,091 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	5,465 C.Y.
PLUS TOPSOIL FROM STORMWATER MANAGEMENT FACILITIES	11,859 C.Y.
PLUS TOPSOIL FROM BORROW SITES	0 C.Y.
PLUS TOPSOIL FROM PREVIOUS PHASES	0 C.Y.
SUBTOTAL - TOPSOIL AVAILABLE	108,416 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	23,071 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES	14,247 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (BORROW SITE)	0 C.Y.
LESS TOPSOIL PLACED IN SWM FACILITIES	7,500 C.Y.
LESS TOPSOIL PLACED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	5,465 C.Y.
SUBTOTAL - EXCESS TOPSOIL/TOPSOIL NEEDED	58,131 C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	6,265 C.Y.
LESS TOPSOIL UTILIZED FOR VISUAL BERM	29,570 C.Y.
LESS CULTIVATED SOIL UNSUITABLE FOR EMBANKMENT	0 C.Y.
EXCESS TOPSOIL*	22,296 C.Y.
TOPSOIL FOR VISUAL BERM REQUIRED FROM FUTURE PHASES	18,230 C.Y.
*BECOMES "TOPSOIL FROM PREVIOUS PHASES," IN PHASE 2, SR 896 TO STA. 709+00	

PROPOSAL QUANTITIES	
ITEM NO. 202000 EXCAVATION AND EMBANKMENT	SEE EW-01
ITEM NO. 203000 CHANNEL EXCAVATION	SEE EW-01
ITEM NO. 207000 EXCAVATION AND BACKFILL FOR STRUCTURES	SEE EW-01
ITEM NO. 208000 EXCAVATION AND BACKFILL FOR PIPE TRENCHES	SEE EW-01
ITEM NO. 209001 BORROW, TYPE A	SEE EW-01
ITEM NO. 209002 BORROW, TYPE B	SEE EW-01
ITEM NO. 209003 BORROW, TYPE C	SEE EW-01
ITEM NO. 209004 BORROW, TYPE D	SEE EW-01
ITEM NO. 209006 BORROW, TYPE F	SEE EW-01
ITEM NO. 209511 LIGHTWEIGHT AGGREGATE	SEE EW-01
ITEM NO. 212000 UNDERCUT EXCAVATION	SEE EW-01
ITEM NO. 733002 TOPSOILING (6" DEPTH)**	SEE EW-01
ITEM NO. 209512 STREAM RESTORATION BORROW	SEE EW-01
ITEM NO. 209513 STREAM RESTORATION BORROW MIX	SEE EW-01

**NOTE: TOPSOILING BORROW SITES SHALL BE PAID UNDER ITEM 733002 REGARDLESS OF DEPTH.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301,
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	
T200911308	DESIGNED BY: SJB	
COUNTY	CHECKED BY: TAO	
NEW CASTLE		

EARTHWORK SUMMARY

EW-05

SHEET NO.
13
TOTAL SHTS.
875

EARTHWORK SUMMARY – PHASE 2 (SCOTT RUN TO NORTH LIMITS)

EXCAVATION - ALIGNMENT	
FROM CROSS SECTIONS	
PLUS EXCAVATION FROM US 301	175,719 C.Y.
PLUS EXCAVATION FROM RAMP M	0 C.Y.
PLUS EXCAVATION FROM RAMP N	0 C.Y.
PLUS EXCAVATION FROM RAMP O	0 C.Y.
PLUS EXCAVATION FROM RAMP P	0 C.Y.
PLUS EXCAVATION FROM NORTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM SOUTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM RUNAROUND ROAD	0 C.Y.
PLUS EXCAVATION FROM JAMISON CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM HYETTS CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM SCOTT RUN PAID UNDER ITEM 202000	0 C.Y.
SUBTOTAL EXCAVATION FROM CROSS SECTIONS	175,719 C.Y.
PLUS EXCAVATION FROM BORROW SITES	
BORROW TYPE A EXCAVATED MATERIAL	19,906 C.Y.
BORROW TYPE C EXCAVATED MATERIAL	5,713 C.Y.
BORROW TYPE D EXCAVATED MATERIAL	6,362 C.Y.
BORROW TYPE F EXCAVATED MATERIAL	0 C.Y.
TOPSOIL REMOVED (VILLAGE OF SCOTT RUN EAST/HYETTS CORNER LLC SITES)	52,065 C.Y.
SUBTOTAL EXCAVATION FROM BORROW SITES	84,047 C.Y.
SUBTOTAL - EXCAVATION FROM CROSS SECTIONS AND BORROW SITES	259,765 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	11,669 C.Y.
PLUS TOPSOIL PLACED IN CUT:	6,798 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	1,547 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	748 C.Y.
LESS REMOVAL OF EXISTING PCC PAVEMENT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
PLUS SWM EXCAVATION	70,593 C.Y.
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	349,626 C.Y.

STORMWATER MANAGEMENT EXCAVATION	
FROM GRID ANALYSIS*:	
SWM POND NO. 720	0 C.Y.
SWM POND NO. 722	0 C.Y.
SWM POND NO. 723	0 C.Y.
SWM POND NO. 725	0 C.Y.
SWM POND NO. 731	0 C.Y.
SWM POND NO. 733	0 C.Y.
SWM POND NO. 734	60,469 C.Y.
SWM POND NO. 737	7,343 C.Y.
SUBTOTAL - EXCAVATION FROM GRID ANALYSIS	67,812 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	208 C.Y.
PLUS TOPSOIL PLACED IN CUT SECTIONS	2,573 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL - STORMWATER MANAGEMENT POND	70,593 C.Y.
*INCLUDES 2' OF OVEREXCAVATION OF SWM PONDS	

STREAM RESTORATION BORROW REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
PLUS MATERIAL FOR STREAM RESTORATION BORROW MIX	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW REQUIRED	0 C.Y.
PLUS STREAM RESTORATION BORROW X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR STREAM RESTORATION BORROW	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	0 C.Y.

STREAM RESTORATION BORROW MIX REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW MIX REQUIRED	0 C.Y.
PLUS STREAM RESTORATION BORROW MIX X ADJUSTMENT FACTOR (0.20)	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW MIX REQUIRED	0 C.Y.

EXCAVATION AVAILABLE FOR EMBANKMENT	
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	349,626 C.Y.
LESS MATERIAL REQUIRED FOR SWM EMBANKMENT	7,117 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR STRUCTURES	10,060 C.Y.
PLUS EXCAVATION INCIDENTAL TO STRUCTURAL ITEMS	636 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR PIPE TRENCHES	10,839 C.Y.
PLUS CHANNEL EXCAVATION	0 C.Y.
PLUS EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHES	0 C.Y.
PLUS EXCAVATION FROM INSTALLATION OF UNDERDRAINS	346 C.Y.
PLUS STOCKPILED MATERIAL FROM PREVIOUS PHASES	0 C.Y.
PLUS EXCAVATION INCIDENTAL TO STREAM RESTORATION ITEMS	0 C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	25,787 C.Y.
LESS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	1,547 C.Y.
LESS TOPSOIL REMOVED FROM STORM WATER MANAGEMENT PONDS	4,068 C.Y.
LESS TOPSOIL REMOVED FROM BORROW SITES	52,065 C.Y.
LESS UNSUITABLE EXCAVATION	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE A	19,906 C.Y.
LESS MATERIAL USED FOR BORROW TYPE D	6,362 C.Y.
LESS MATERIAL USED FOR BORROW TYPE B	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE C	5,713 C.Y.
SUBTOTAL TYPE F EXCAVATION AVAILABLE FOR EMBANKMENT	248,941 C.Y.

TYPE A MATERIAL REQUIRED	
FROM CROSS SECTIONS	16,589 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	0 C.Y.
SUBTOTAL BORROW TYPE A REQUIRED	16,589 C.Y.
PLUS CAPPING REQUIRED X ADJUSTMENT FACTOR (0.20)	3,318 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE A REQUIRED	19,906 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE A	19,906 C.Y.
TOTAL ADJUSTED TYPE A BORROW REQUIRED	0 C.Y.

TYPE C MATERIAL REQUIRED	
TEST HOLE EXCAVATION BACKFILL REQUIRED	100 C.Y.
PIPE/UTILITY BACKFILL REQUIRED	4,458 C.Y.
TYPE C BACKFILL FOR STRUCTURES	203 C.Y.
PLUS BORROW, TYPE C REQUIRED X ADJUSTMENT FACTOR (0.20)	952 C.Y.
SUBTOTAL ADJUSTED TYPE C BORROW REQUIRED	5,713 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE C	5,713 C.Y.
TOTAL ADJUSTED TYPE C BORROW REQUIRED	0 C.Y.

TYPE D MATERIAL REQUIRED	
SOIL CEMENT BASE COURSE (SY)	31,809 S.Y.
VOLUME OF TYPE D, CY (6" DEPTH)	5,302 C.Y.
PLUS BORROW, TYPE D REQUIRED X ADJUSTMENT FACTOR (0.20)	1,060 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE D REQUIRED	6,362 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE D	6,362 C.Y.
TOTAL ADJUSTED TYPE D BORROW REQUIRED	0 C.Y.

TYPE B MATERIAL REQUIRED	
BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVED UNDER FILL	0 C.Y.
BACKFILL FOR EXCAVATION OF UNSUITABLE SOILS	0 C.Y.
TYPE B BACKFILL FOR STRUCTURES	0 C.Y.
PLUS BACKFILL X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE B REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE B	0 C.Y.
TOTAL ADJUSTED TYPE B BORROW REQUIRED	0 C.Y.

TYPE F MATERIAL REQUIRED	
EMBANKMENT REQUIRED (FROM CROSS SECTIONS)	104,406 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	11,669 C.Y.
PLUS ROOTMAT REMOVED UNDER FILL NOT BACKFILLED WITH BORROW TYPE B	0 C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	0 C.Y.
PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
PLUS EMBANKMENT FOR PIPE BACKFILL (TYPE F)	0 C.Y.
PLUS EMBANKMENT FOR STRUCTURES	15,450 C.Y.
PLUS EMBANKMENT FOR EARTH MOUNDS	110 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	3,990 C.Y.
LESS TOPSOIL PLACED IN VISUAL BERM	0 C.Y.
LESS EXCESS TOPSOIL TO BE PLACED IN OUTER EMBANKMENTS	869 C.Y.
LESS MSE WALL OR OTHER RETAINING WALL SELECT BACKFILL	4,782 C.Y.
LESS SURCHARGE	9,604 C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0 C.Y.
LESS LIGHTWEIGHT AGGREGATE	0 C.Y.
LESS STREAM BACKFILL MATERIAL	0 C.Y.
SUBTOTAL EMBANKMENT REQUIRED	112,391 C.Y.
PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20)	22,478 C.Y.
SUBTOTAL ADJUSTED EMBANKMENT REQUIRED	134,869 C.Y.
LESS EXCAVATION AVAILABLE FOR EMBANKMENT	248,941 C.Y.
TOTAL ADJUSTED TYPE F BORROW REQUIRED*	-114,072 C.Y.
THEREFORE, TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.
*EXCESS TYPE F CONTRIBUTES TO "STOCKPILED MATERIAL FROM PREVIOUS PHASES" IN PHASE 2 709+00 TO SCOTT RUN	

TOPSOIL SUMMARY	
TOPSOIL REMOVED IN CUT AND FILL	25,787 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	1,547 C.Y.
PLUS TOPSOIL FROM STORMWATER MANAGEMENT FACILITIES	4,068 C.Y.
PLUS TOPSOIL FROM BORROW SITES	52,065 C.Y.
PLUS TOPSOIL FROM PREVIOUS PHASES	393 C.Y.
SUBTOTAL - TOPSOIL AVAILABLE	83,860 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	3,990 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES	6,798 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (BORROW SITE)	52,065 C.Y.
LESS TOPSOIL PLACED IN SWM FACILITIES	2,712 C.Y.
LESS TOPSOIL PLACED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	1,547 C.Y.
SUBTOTAL - EXCESS TOPSOIL/TOPSOIL NEEDED	16,748 C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	869 C.Y.
LESS TOPSOIL UTILIZED FOR VISUAL BERM	15,879 C.Y.
LESS CULTIVATED SOIL UNSUITABLE FOR EMBANKMENT	0 C.Y.
EXCESS TOPSOIL*	0 C.Y.
TOPSOIL FOR VISUAL BERM REQUIRED FROM FUTURE PHASES	2,351 C.Y.
*BECOMES "TOPSOIL FROM PREVIOUS PHASES," IN PHASE 3	

PROPOSAL QUANTITIES	
ITEM NO. 202000 EXCAVATION AND EMBANKMENT	SEE EW-01
ITEM NO. 203000 CHANNEL EXCAVATION	SEE EW-01
ITEM NO. 207000 EXCAVATION AND BACKFILL FOR STRUCTURES	SEE EW-01
ITEM NO. 208000 EXCAVATION AND BACKFILL FOR PIPE TRENCHES	SEE EW-01
ITEM NO. 209001 BORROW, TYPE A	SEE EW-01
ITEM NO. 209002 BORROW, TYPE B	SEE EW-01
ITEM NO. 209003 BORROW, TYPE C	SEE EW-01
ITEM NO. 209004 BORROW, TYPE D	SEE EW-01
ITEM NO. 209006 BORROW, TYPE F	SEE EW-01
ITEM NO. 209511 LIGHTWEIGHT AGGREGATE	SEE EW-01
ITEM NO. 212000 UNDERCUT EXCAVATION	SEE EW-01
ITEM NO. 733002 TOPSOILING (6" DEPTH)**	SEE EW-01
ITEM NO. 209512 STREAM RESTORATION BORROW	SEE EW-01
ITEM NO. 209513 STREAM RESTORATION BORROW MIX	SEE EW-01

**NOTE: TOPSOILING BORROW SITES SHALL BE PAID UNDER ITEM 733002 REGARDLESS OF DEPTH.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301,
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	
T200911308	DESIGNED BY: SJB	
COUNTY	CHECKED BY: TAO	
NEW CASTLE		

EARTHWORK SUMMARY

EW-06

SHEET NO.
14
TOTAL SHTS.
875

EARTHWORK SUMMARY – PHASE 3

EXCAVATION - ALIGNMENT	
FROM CROSS SECTIONS	
PLUS EXCAVATION FROM US 301	0 C.Y.
PLUS EXCAVATION FROM RAMP M	2,183 C.Y.
PLUS EXCAVATION FROM RAMP N	0 C.Y.
PLUS EXCAVATION FROM RAMP O	0 C.Y.
PLUS EXCAVATION FROM RAMP P	2,156 C.Y.
PLUS EXCAVATION FROM NORTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM SOUTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM RUNAROUND ROAD	8,313 C.Y.
PLUS EXCAVATION FROM JAMISON CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM HYETTS CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM SCOTT RUN PAID UNDER ITEM 202000	0 C.Y.
SUBTOTAL EXCAVATION FROM CROSS SECTIONS	12,652 C.Y.
PLUS EXCAVATION FROM BORROW SITES	
BORROW TYPE A EXCAVATED MATERIAL	435 C.Y.
BORROW TYPE C EXCAVATED MATERIAL	0 C.Y.
BORROW TYPE D EXCAVATED MATERIAL	269 C.Y.
BORROW TYPE F EXCAVATED MATERIAL	53,769 C.Y.
TOPSOIL REMOVED	0 C.Y.
SUBTOTAL EXCAVATION FROM BORROW SITES	54,472 C.Y.
SUBTOTAL - EXCAVATION FROM CROSS SECTIONS	67,124 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	5,347 C.Y.
PLUS TOPSOIL PLACED IN CUT:	1,004 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	463 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	1,905 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS REMOVAL OF EXISTING PCC PAVEMENT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
PLUS SWM EXCAVATION	0 C.Y.
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	75,843 C.Y.

STORMWATER MANAGEMENT EXCAVATION	
FROM GRID ANALYSIS*:	
SWM POND NO. 720	0 C.Y.
SWM POND NO. 722	0 C.Y.
SWM POND NO. 723	0 C.Y.
SWM POND NO. 725	0 C.Y.
SWM POND NO. 731	0 C.Y.
SWM POND NO. 733	0 C.Y.
SWM POND NO. 734	0 C.Y.
SWM POND NO. 737	0 C.Y.
SUBTOTAL - EXCAVATION FROM GRID ANALYSIS	0 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0 C.Y.
PLUS TOPSOIL PLACED IN CUT SECTIONS	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL - STORMWATER MANAGEMENT POND	0 C.Y.
*INCLUDES 2' OF OVEREXCAVATION OF SWM PONDS	

STREAM RESTORATION BORROW REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
PLUS MATERIAL FOR STREAM RESTORATION BORROW MIX	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW REQUIRED	0 C.Y.
PLUS STREAM RESTORATION BORROW X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR STREAM RESTORATION BORROW	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	0 C.Y.

STREAM RESTORATION BORROW MIX REQUIRED	
FROM CROSS SECTIONS	0 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	0 C.Y.
SUBTOTAL STREAM RESTORATION BORROW MIX REQUIRED	0 C.Y.
PLUS STREAM RESTORATION BORROW MIX X ADJUSTMENT FACTOR (0.20)	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW MIX REQUIRED	0 C.Y.

EXCAVATION AVAILABLE FOR EMBANKMENT	
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	75,843 C.Y.
LESS MATERIAL REQUIRED FOR SWM EMBANKMENT	0 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR STRUCTURES	0 C.Y.
PLUS EXCAVATION INCIDENTAL TO STRUCTURAL ITEMS	0 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR PIPE TRENCHES	0 C.Y.
PLUS CHANNEL EXCAVATION	0 C.Y.
PLUS EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHES	0 C.Y.
PLUS EXCAVATION FROM INSTALLATION OF UNDERDRAINS	105 C.Y.
PLUS STOCKPILED MATERIAL FROM PREVIOUS PHASES	0 C.Y.
PLUS EXCAVATION INCIDENTAL TO STREAM RESTORATION ITEMS	0 C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	7,716 C.Y.
LESS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	463 C.Y.
LESS TOPSOIL REMOVED FROM STORM WATER MANAGEMENT PONDS	0 C.Y.
LESS TOPSOIL REMOVED FROM BORROW SITES	0 C.Y.
LESS UNSUITABLE EXCAVATION	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE A	435 C.Y.
LESS MATERIAL USED FOR BORROW TYPE D	269 C.Y.
LESS MATERIAL USED FOR BORROW TYPE B	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE C	0 C.Y.
LESS MATERIAL USED FOR STREAM RESTORATION BORROW	0 C.Y.
SUBTOTAL TYPE F EXCAVATION AVAILABLE FOR EMBANKMENT	67,065 C.Y.

TYPE A MATERIAL REQUIRED	
FROM CROSS SECTIONS	829 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	467 C.Y.
SUBTOTAL BORROW TYPE A REQUIRED	362 C.Y.
PLUS CAPPING REQUIRED X ADJUSTMENT FACTOR (0.20)	72 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE A REQUIRED	435 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE A	435 C.Y.
TOTAL ADJUSTED TYPE A BORROW REQUIRED	0 C.Y.

TYPE C MATERIAL REQUIRED	
TEST HOLE EXCAVATION BACKFILL REQUIRED	0 C.Y.
PIPE/UTILITY BACKFILL REQUIRED	0 C.Y.
TYPE C BACKFILL FOR STRUCTURES	0 C.Y.
PLUS BORROW, TYPE C REQUIRED X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED TYPE C BORROW REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE C	0 C.Y.
TOTAL ADJUSTED TYPE C BORROW REQUIRED	0 C.Y.

TYPE D MATERIAL REQUIRED	
SOIL CEMENT BASE COURSE (SY)	1,343 S.Y.
VOLUME OF TYPE D, CY (6" DEPTH)	224 C.Y.
PLUS BORROW, TYPE D REQUIRED X ADJUSTMENT FACTOR (0.20)	45 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE D REQUIRED	269 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE D	269 C.Y.
TOTAL ADJUSTED TYPE D BORROW REQUIRED	0 C.Y.

TYPE B MATERIAL REQUIRED	
BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVED UNDER FILL	0 C.Y.
BACKFILL FOR EXCAVATION OF UNSUITABLE SOILS	0 C.Y.
TYPE B BACKFILL FOR STRUCTURES	0 C.Y.
PLUS BACKFILL X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE B REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE B	0 C.Y.
TOTAL ADJUSTED TYPE B BORROW REQUIRED	0 C.Y.

TYPE F MATERIAL REQUIRED	
EMBANKMENT REQUIRED (FROM CROSS SECTIONS)	53,684 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	5,347 C.Y.
PLUS ROOTMAT REMOVED UNDER FILL NOT BACKFILLED WITH BORROW TYPE B	0 C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	0 C.Y.
PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	1,905 C.Y.
PLUS EMBANKMENT FOR PIPE BACKFILL (TYPE F)	0 C.Y.
PLUS EMBANKMENT FOR STRUCTURES	0 C.Y.
PLUS EMBANKMENT FOR EARTH MOUNDS	0 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	5,048 C.Y.
LESS TOPSOIL PLACED IN VISUAL BERM	0 C.Y.
LESS EXCESS TOPSOIL TO BE PLACED IN OUTER EMBANKMENTS	0 C.Y.
LESS MSE WALL OR OTHER RETAINING WALL SELECT BACKFILL	0 C.Y.
LESS SURCHARGE	0 C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0 C.Y.
LESS LIGHTWEIGHT AGGREGATE	0 C.Y.
LESS STREAM BACKFILL MATERIAL	0 C.Y.
SUBTOTAL EMBANKMENT REQUIRED	55,888 C.Y.
PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20)	11,178 C.Y.
SUBTOTAL ADJUSTED EMBANKMENT REQUIRED	67,065 C.Y.
LESS EXCAVATION AVAILABLE FOR EMBANKMENT	67,065 C.Y.
TOTAL ADJUSTED TYPE F BORROW REQUIRED*	0 C.Y.
THEREFORE, TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.

TOPSOIL SUMMARY	
TOPSOIL REMOVED IN CUT AND FILL	7,716 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	463 C.Y.
PLUS TOPSOIL FROM STORMWATER MANAGEMENT FACILITIES	0 C.Y.
PLUS TOPSOIL FROM BORROW SITES	0 C.Y.
PLUS TOPSOIL FROM PREVIOUS PHASES	0 C.Y.
SUBTOTAL - TOPSOIL AVAILABLE	8,179 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	5,515 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES	1,004 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (BORROW SITE)	0 C.Y.
LESS TOPSOIL PLACED IN SWM FACILITIES	0 C.Y.
LESS TOPSOIL PLACED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	463 C.Y.
SUBTOTAL - EXCESS TOPSOIL/TOPSOIL NEEDED	1,197 C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	0 C.Y.
LESS TOPSOIL UTILIZED FOR VISUAL BERM	2,351 C.Y.
LESS CULTIVATED SOIL UNSUITABLE FOR EMBANKMENT	0 C.Y.
EXCESS TOPSOIL*	0 C.Y.
TOPSOIL FOR VISUAL BERM REQUIRED FROM FUTURE PHASES	1,155 C.Y.
*BECOMES "TOPSOIL FROM PREVIOUS PHASES," IN PHASE 4	

PROPOSAL QUANTITIES	
ITEM NO. 202000 EXCAVATION AND EMBANKMENT	SEE EW-01
ITEM NO. 203000 CHANNEL EXCAVATION	SEE EW-01
ITEM NO. 207000 EXCAVATION AND BACKFILL FOR STRUCTURES	SEE EW-01
ITEM NO. 208000 EXCAVATION AND BACKFILL FOR PIPE TRENCHES	SEE EW-01
ITEM NO. 209001 BORROW, TYPE A	SEE EW-01
ITEM NO. 209002 BORROW, TYPE B	SEE EW-01
ITEM NO. 209003 BORROW, TYPE C	SEE EW-01
ITEM NO. 209004 BORROW, TYPE D	SEE EW-01
ITEM NO. 209006 BORROW, TYPE F	SEE EW-01
ITEM NO. 209511 LIGHTWEIGHT AGGREGATE	SEE EW-01
ITEM NO. 212000 UNDERCUT EXCAVATION	SEE EW-01
ITEM NO. 733002 TOPSOILING (6" DEPTH)**	SEE EW-01
ITEM NO. 209512 STREAM RESTORATION BORROW	SEE EW-01
ITEM NO. 209513 STREAM RESTORATION BORROW MIX	SEE EW-01

**NOTE: TOPSOILING BORROW SITES SHALL BE PAID UNDER ITEM 733002 REGARDLESS OF DEPTH.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301,
SR 896 TO SR 1

CONTRACT	BRIDGE NO.
T200911308	
DESIGNED BY: SJB	
COUNTY	
NEW CASTLE	CHECKED BY: TAO

EARTHWORK SUMMARY

EW-07

SHEET NO.	TOTAL SHTS.
15	875

EARTHWORK SUMMARY – PHASE 4

EXCAVATION - ALIGNMENT	
FROM CROSS SECTIONS	
PLUS EXCAVATION FROM US 301	0 C.Y.
PLUS EXCAVATION FROM RAMP M	0 C.Y.
PLUS EXCAVATION FROM RAMP N	0 C.Y.
PLUS EXCAVATION FROM RAMP O	0 C.Y.
PLUS EXCAVATION FROM RAMP P	0 C.Y.
PLUS EXCAVATION FROM NORTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM SOUTHBOUND EMERGENCY RAMP	0 C.Y.
PLUS EXCAVATION FROM RUNAROUND ROAD	0 C.Y.
PLUS EXCAVATION FROM JAMISON CORNER ROAD	0 C.Y.
PLUS EXCAVATION FROM HYETTS CORNER ROAD	6,934 C.Y.
PLUS EXCAVATION FROM SCOTT RUN PAID UNDER ITEM 202000	2,466 C.Y.
SUBTOTAL EXCAVATION FROM CROSS SECTIONS	9,400 C.Y.
PLUS EXCAVATION FROM BORROW SITES	
BORROW TYPE A EXCAVATED MATERIAL	2,953 C.Y.
BORROW TYPE C EXCAVATED MATERIAL	2,998 C.Y.
BORROW TYPE D EXCAVATED MATERIAL	0 C.Y.
BORROW TYPE F EXCAVATED MATERIAL	25,925 C.Y.
TOPSOIL REMOVED	0 C.Y.
SUBTOTAL EXCAVATION FROM BORROW SITES	31,875 C.Y.
SUBTOTAL - EXCAVATION FROM CROSS SECTIONS	41,275 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	3,488 C.Y.
PLUS TOPSOIL PLACED IN CUT:	1,405 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	326 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	1,619 C.Y.
LESS ROOTMAT REMOVED IN CUT	423 C.Y.
LESS REMOVAL OF EXISTING PCC PAVEMENT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
PLUS SWM EXCAVATION	0 C.Y.
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	47,689 C.Y.

STORMWATER MANAGEMENT EXCAVATION	
FROM GRID ANALYSIS*:	
SWM POND NO. 720	0 C.Y.
SWM POND NO. 722	0 C.Y.
SWM POND NO. 723	0 C.Y.
SWM POND NO. 725	0 C.Y.
SWM POND NO. 731	0 C.Y.
SWM POND NO. 733	0 C.Y.
SWM POND NO. 734	0 C.Y.
SWM POND NO. 737	0 C.Y.
SUBTOTAL - EXCAVATION FROM GRID ANALYSIS	0 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0 C.Y.
PLUS TOPSOIL PLACED IN CUT SECTIONS	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL - STORMWATER MANAGEMENT POND	0 C.Y.
*INCLUDES 2' OF OVEREXCAVATION OF SWM PONDS	

STREAM RESTORATION BORROW REQUIRED	
FROM CROSS SECTIONS	375 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	20 C.Y.
PLUS MATERIAL FOR STREAM RESTORATION BORROW MIX	44 C.Y.
SUBTOTAL STREAM RESTORATION BORROW REQUIRED	439 C.Y.
PLUS STREAM RESTORATION BORROW X ADJUSTMENT FACTOR (0.20)	88 C.Y.
SUBTOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	527 C.Y.
LESS EXCAVATION AVAILABLE FOR STREAM RESTORATION BORROW	0 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW REQUIRED	527 C.Y.

STREAM RESTORATION BORROW MIX REQUIRED	
FROM CROSS SECTIONS	89 C.Y.
PLUS MATERIAL FOR FABRIC ENCAPSULTAED SOIL LIFTS	40 C.Y.
SUBTOTAL STREAM RESTORATION BORROW MIX REQUIRED	129 C.Y.
PLUS STREAM RESTORATION BORROW MIX X ADJUSTMENT FACTOR (0.20)	26 C.Y.
TOTAL ADJUSTED STREAM RESTORATION BORROW MIX REQUIRED	155 C.Y.

EXCAVATION AVAILABLE FOR EMBANKMENT	
SUBTOTAL - EXCAVATION AND EMBANKMENT (ITEM 202000)	47,689 C.Y.
LESS MATERIAL REQUIRED FOR SWM EMBANKMENT	0 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR STRUCTURES	1,886 C.Y.
PLUS EXCAVATION INCIDENTAL TO STRUCTURAL ITEMS	3,869 C.Y.
PLUS EXCAVATION AND BACKFILLING FOR PIPE TRENCHES	297 C.Y.
PLUS CHANNEL EXCAVATION	873 C.Y.
PLUS EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHES	0 C.Y.
PLUS EXCAVATION FROM INSTALLATION OF UNDERDRAINS	282 C.Y.
PLUS STOCKPILED MATERIAL FROM PREVIOUS PHASES	0 C.Y.
PLUS EXCAVATION INCIDENTAL TO STREAM RESTORATION ITEMS	129 C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	5,433 C.Y.
LESS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	326 C.Y.
LESS TOPSOIL REMOVED FROM STORM WATER MANAGEMENT PONDS	0 C.Y.
LESS TOPSOIL REMOVED FROM BORROW SITES	0 C.Y.
LESS UNSUITABLE EXCAVATION	437 C.Y.
LESS MATERIAL USED FOR BORROW TYPE A	2,953 C.Y.
LESS MATERIAL USED FOR BORROW TYPE D	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE B	0 C.Y.
LESS MATERIAL USED FOR BORROW TYPE C	2,998 C.Y.
LESS MATERIAL USED FOR STREAM RESTORATION BORROW	0 C.Y.
SUBTOTAL TYPE F EXCAVATION AVAILABLE FOR EMBANKMENT	42,879 C.Y.

TYPE A MATERIAL REQUIRED	
FROM CROSS SECTIONS	2,461 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	0 C.Y.
SUBTOTAL BORROW TYPE A REQUIRED	2,461 C.Y.
PLUS CAPPING REQUIRED X ADJUSTMENT FACTOR (0.20)	492 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE A REQUIRED	2,953 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE A	2,953 C.Y.
TOTAL ADJUSTED TYPE A BORROW REQUIRED	0 C.Y.

TYPE C MATERIAL REQUIRED	
TEST HOLE EXCAVATION BACKFILL REQUIRED	25 C.Y.
PIPE/UTILITY BACKFILL REQUIRED	173 C.Y.
TYPE C BACKFILL FOR STRUCTURES	2,300 C.Y.
PLUS BORROW, TYPE C REQUIRED X ADJUSTMENT FACTOR (0.20)	500 C.Y.
SUBTOTAL ADJUSTED TYPE C BORROW REQUIRED	2,998 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE C	2,998 C.Y.
TOTAL ADJUSTED TYPE C BORROW REQUIRED	0 C.Y.

TYPE D MATERIAL REQUIRED	
SOIL CEMENT BASE COURSE (SY)	0 S.Y.
VOLUME OF TYPE D, CY (6" DEPTH)	0 C.Y.
PLUS BORROW, TYPE D REQUIRED X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE D REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE D	0 C.Y.
TOTAL ADJUSTED TYPE D BORROW REQUIRED	0 C.Y.

TYPE B MATERIAL REQUIRED	
BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVED UNDER FILL	0 C.Y.
BACKFILL FOR EXCAVATION OF UNSUITABLE SOILS	0 C.Y.
TYPE B BACKFILL FOR STRUCTURES	0 C.Y.
PLUS BACKFILL X ADJUSTMENT FACTOR (0.20)	0 C.Y.
SUBTOTAL ADJUSTED BORROW TYPE B REQUIRED	0 C.Y.
LESS EXCAVATION AVAILABLE FOR BORROW TYPE B	0 C.Y.
TOTAL ADJUSTED TYPE B BORROW REQUIRED	0 C.Y.

TYPE F MATERIAL REQUIRED	
EMBANKMENT REQUIRED (FROM CROSS SECTIONS)	35,591 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	3,488 C.Y.
PLUS ROOTMAT REMOVED UNDER FILL NOT BACKFILLED WITH BORROW TYPE B	0 C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	0 C.Y.
PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	1,619 C.Y.
PLUS EMBANKMENT FOR PIPE BACKFILL (TYPE F)	0 C.Y.
PLUS EMBANKMENT FOR STRUCTURES	0 C.Y.
PLUS EMBANKMENT FOR EARTH MOUNDS	0 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	1,792 C.Y.
LESS TOPSOIL PLACED IN VISUAL BERM	0 C.Y.
LESS EXCESS TOPSOIL TO BE PLACED IN OUTER EMBANKMENTS	642 C.Y.
LESS MSE WALL OR OTHER RETAINING WALL SELECT BACKFILL	0 C.Y.
LESS SURCHARGE	0 C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0 C.Y.
LESS LIGHTWEIGHT AGGREGATE	1,917 C.Y.
LESS STREAM BACKFILL MATERIAL	614 C.Y.
SUBTOTAL EMBANKMENT REQUIRED	35,733 C.Y.
PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20)	7,147 C.Y.
SUBTOTAL ADJUSTED EMBANKMENT REQUIRED	42,879 C.Y.
LESS EXCAVATION AVAILABLE FOR EMBANKMENT	42,879 C.Y.
TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.
THEREFORE, TOTAL ADJUSTED TYPE F BORROW REQUIRED	0 C.Y.

TOPSOIL SUMMARY	
TOPSOIL REMOVED IN CUT AND FILL	5,433 C.Y.
PLUS TOPSOIL REMOVED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	326 C.Y.
PLUS TOPSOIL FROM STORMWATER MANAGEMENT FACILITIES	0 C.Y.
PLUS TOPSOIL FROM BORROW SITES	0 C.Y.
PLUS TOPSOIL FROM PREVIOUS PHASES	0 C.Y.
SUBTOTAL - TOPSOIL AVAILABLE	5,759 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	1,853 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES	1,784 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (BORROW SITE)	0 C.Y.
LESS TOPSOIL PLACED IN SWM FACILITIES	0 C.Y.
LESS TOPSOIL PLACED OUTSIDE OF CROSS SECTION TEMPLATE FOR ROUNDING	326 C.Y.
SUBTOTAL - EXCESS TOPSOIL/TOPSOIL NEEDED	1,796 C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	642 C.Y.
LESS TOPSOIL UTILIZED FOR VISUAL BERM	1,155 C.Y.
LESS CULTIVATED SOIL UNSUITABLE FOR EMBANKMENT	0 C.Y.
EXCESS TOPSOIL	0 C.Y.

PROPOSAL QUANTITIES	
ITEM NO. 202000 EXCAVATION AND EMBANKMENT	SEE EW-01
ITEM NO. 203000 CHANNEL EXCAVATION	SEE EW-01
ITEM NO. 207000 EXCAVATION AND BACKFILL FOR STRUCTURES	SEE EW-01
ITEM NO. 208000 EXCAVATION AND BACKFILL FOR PIPE TRENCHES	SEE EW-01
ITEM NO. 209001 BORROW, TYPE A	SEE EW-01
ITEM NO. 209002 BORROW, TYPE B	SEE EW-01
ITEM NO. 209003 BORROW, TYPE C	SEE EW-01
ITEM NO. 209004 BORROW, TYPE D	SEE EW-01
ITEM NO. 209006 BORROW, TYPE F	SEE EW-01
ITEM NO. 209511 LIGHTWEIGHT AGGREGATE	SEE EW-01
ITEM NO. 212000 UNDERCUT EXCAVATION	SEE EW-01
ITEM NO. 733002 TOPSOILING (6" DEPTH)**	SEE EW-01
ITEM NO. 209512 STREAM RESTORATION BORROW	SEE EW-01
ITEM NO. 209513 STREAM RESTORATION BORROW MIX	SEE EW-01

**NOTE: TOPSOILING BORROW SITES SHALL BE PAID UNDER ITEM 733002 REGARDLESS OF DEPTH.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301,
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	
T200911308	DESIGNED BY: SJB	
COUNTY	CHECKED BY: TAO	
NEW CASTLE		

EARTHWORK SUMMARY

EW-08

SHEET NO.
16
TOTAL SHTS.
875