THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY UNITS

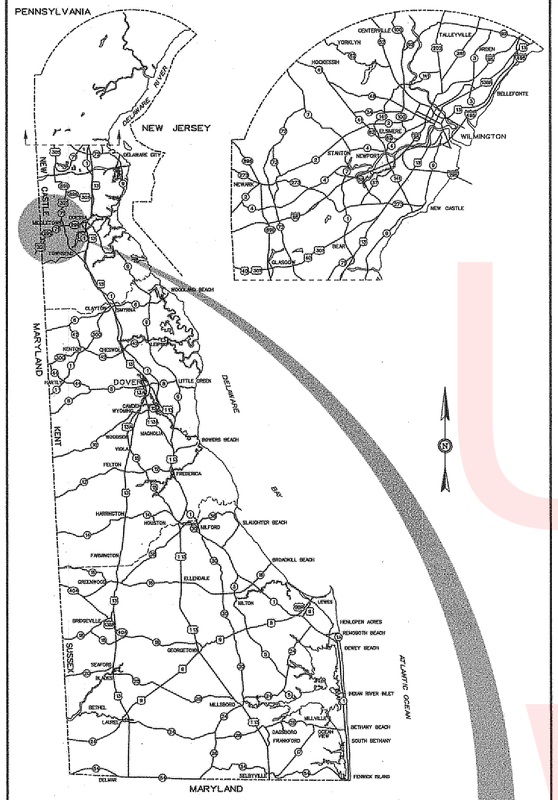
CONSTRUCTION PLANS FOR:

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT NUMBER: T200811301

FEDERAL AID PROJECT NUMBER: NH 2015(20)

COUNTY: NEW CASTLE M.R. #: 84



GENERAL LOCATION OF CONTRACT

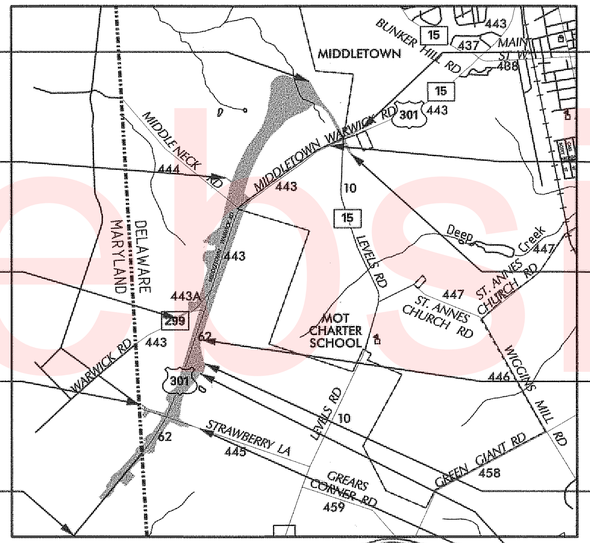
END
CONTRACT T200811301
STATION 258+00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 32+00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 1201+50

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 1001+00

BEGIN
CONTRACT T200811301
STATION 62+75



LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 748+00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 732+00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 667+00

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 1131+45

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 601+53

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 511+58

LIMIT OF CONSTRUCTION
CONTRACT T200811301
STATION 1020+60

DESIGN DESIGNATION

FUNCTIONAL CLASS: RURAL PRINCIPAL ARTERIAL	D.H.V. PROJECTED: 4,560	YEAR: 2030
TYPE OF CONSTRUCTION: NEW	DESIGN SPEED: 70 M.P.H.	
A.A.D.T. CURRENT: N/A YEAR: N/A	TRUCKS: 20 %	
A.A.D.T. PROJECTED: 57,000 YEAR: 2030	DIRECTION OF DISTRIBUTION: 57 %	

SEE PLAN SHEET LG-02 FOR ADDITIONAL DESIGN DESIGNATIONS

INDEX OF SHEETS

SHEET Nº	TABLE OF CONTENTS
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328 - 337	SIGN STRUCTURE PLANS
338 - 438	STORMWATER MANAGEMENT PLANS
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645 - 647	DETOUR PLANS
648 - 665	LANDSCAPING PLANS
666 - 690	LIGHTING PLANS
691 - 735	UTILITY RELOCATION PLANS
736 - 792	SIGNING, STRIPING AND CONDUIT PLANS
793 - 799	SIGNALIZATION PLANS
800 - 810	WIM AND CVISN PLANS
811 - 850	TOLLING PLANS

TOTAL SHEETS: 850

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
25-128-04	US 301 FROM N444, MIDDLENECK ROAD TO N58 PETERSON ROAD
23-500-38	US 301 WEIGH STATION AND INSPECTION FACILITY

PREPARED BY
THE CONSULTING FIRM OF
JACOBS
1700 MARKET STREET, SUITE 1000
PHILADELPHIA, PA 19103
267-234-9500

SEAN KENNETH MAZE LICENSE No. 15560 DELAWARE PROFESSIONAL ENGINEER — SEAL

RECOMMENDED _____ DATE 2 JUL 2015

SEE SHEET 2 FOR SHEETS PREPARED BY SUBCONSULTANTS

RECOMMENDED

SQUAD MANAGER, CONSTRUCTION — DATE 9/18/15

GROUP ENGINEER, CONSTRUCTION — DATE 9/18/15

ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS (CONSTRUCTION) — DATE 9/23/15

PREPARED BY
THE CONSULTING FIRM OF
RUMMEL, KLEPPER & KAHL, LLP

PLAN SHEETS
439 - 445
464
648 - 665

WILLIAM K. HELLMANN REGISTERED No. 6402 DELAWARE PROFESSIONAL ENGINEER — SEAL

RECOMMENDED _____ DATE 7/6/2015

SEE SHEET 2 FOR PLANS PREPARED BY SUBCONSULTANTS

PREPARED BY
THE CONSULTING FIRM OF
GANNETT FLEMING, INC.

PLAN SHEETS
811 - 850

ARTHUR GARRISON REGISTERED No. 8527 DELAWARE PROFESSIONAL ENGINEER — SEAL

JAMES R. SCHNEIDER S5-0006647 STATE OF DELAWARE REGISTERED ARCHITECT — SEAL

RECOMMENDED _____ DATE 07/13/15

RECOMMENDED _____ DATE 7-14-15

RECOMMENDED

STORMWATER ENGINEER

DATE 29 Sep 2015

VINCENT W. DAVIS REGISTERED No. 12898 DELAWARE PROFESSIONAL ENGINEER — SEAL

RECOMMENDED

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

DATE 10-6-2015

DIANE MARIE GUNN LICENSE No. 8008 DELAWARE PROFESSIONAL ENGINEER — SEAL

RECOMMENDED

BRIDGE DESIGN ENGINEER

DATE 7 OCT 2015

JASON N. HASTINGS REGISTERED No. 13545 DELAWARE PROFESSIONAL ENGINEER — SEAL

RECOMMENDED

GROUP ENGINEER, PROJECT DEVELOPMENT

DATE 10/7/2015

JOSEPH A. HOSTLE REGISTERED No. 14581 DELAWARE PROFESSIONAL ENGINEER — SEAL

RECOMMENDED

ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS

DATE 10/7/15

MARK CHRISTOPHER TUDOR REGISTERED No. 10803 DELAWARE PROFESSIONAL ENGINEER — SEAL

APPROVED

CHIEF ENGINEER

DATE 10/12/15

ROBERT BRIAN MCCLEARY REGISTERED No. 8567 DELAWARE PROFESSIONAL ENGINEER — SEAL

LAST REVISED: 12/24/2012
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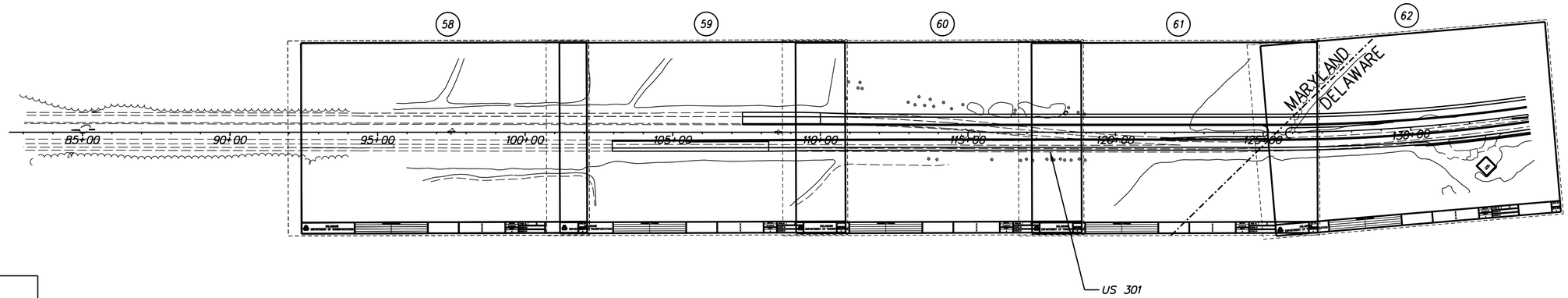
PLAN SHEET INDEX CROSS REFERENCE

		58	59	60	61	62
CONSTRUCTION PLANS	CP-					
PROFILES	PF-	-	104	105	106	107
GRADES AND GEOMETRICS	GG-	-	161	162	163	164
PAVEMENT JOINT LAYOUT DETAILS	PJ-	-	240	241	242	243
STORMWATER MANAGEMENT PLANS	SW-	-	338	339, 346, 347	352, 359	364, 369
CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS	CS-	486, 487, 501, 510 511, 538, 539, 581 582, 593, 594, 595 611, 612, 634, 635	487, 488, 501, 502 510, 511, 512, 539 540, 582, 583, 595 612, 634, 635, 636	488, 502, 503, 512 540, 583, 613, 636	488, 489, 512, 513 540, 541, 583, 584 613, 614, 636, 637	489, 513, 541 584, 614, 637
LANDSCAPING PLANS	LS-	-	648	649	650	651
SIGNING, STRIPING, AND CONDUIT PLANS	SS-	737, 738	738, 739	740	741	742
WIM AND CVISN PLANS	WS-	800, 801	801, 802	802, 803	803, 804	804, 805



PLAN SHEETS PREPARED BY
SUBCONSULTANTS OF
RUMMEL, KLEPPER & KAHL, LLP

	PLAN SHEETS
GANNETT FLEMING, INC.	811 - 850
STREETSCAPES, INC.	648 - 665

PLAN SHEETS PREPARED BY
SUBCONSULTANTS OF
JACOBS

	PLAN SHEETS
PENNONI ASSOCIATES INC.	28 - 30
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	793 - 799
STRAUGHAN ENVIRONMENTAL, INC.	338 - 438

BEGIN
CONTRACT T200811301
STATION 62+75

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IS-01

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

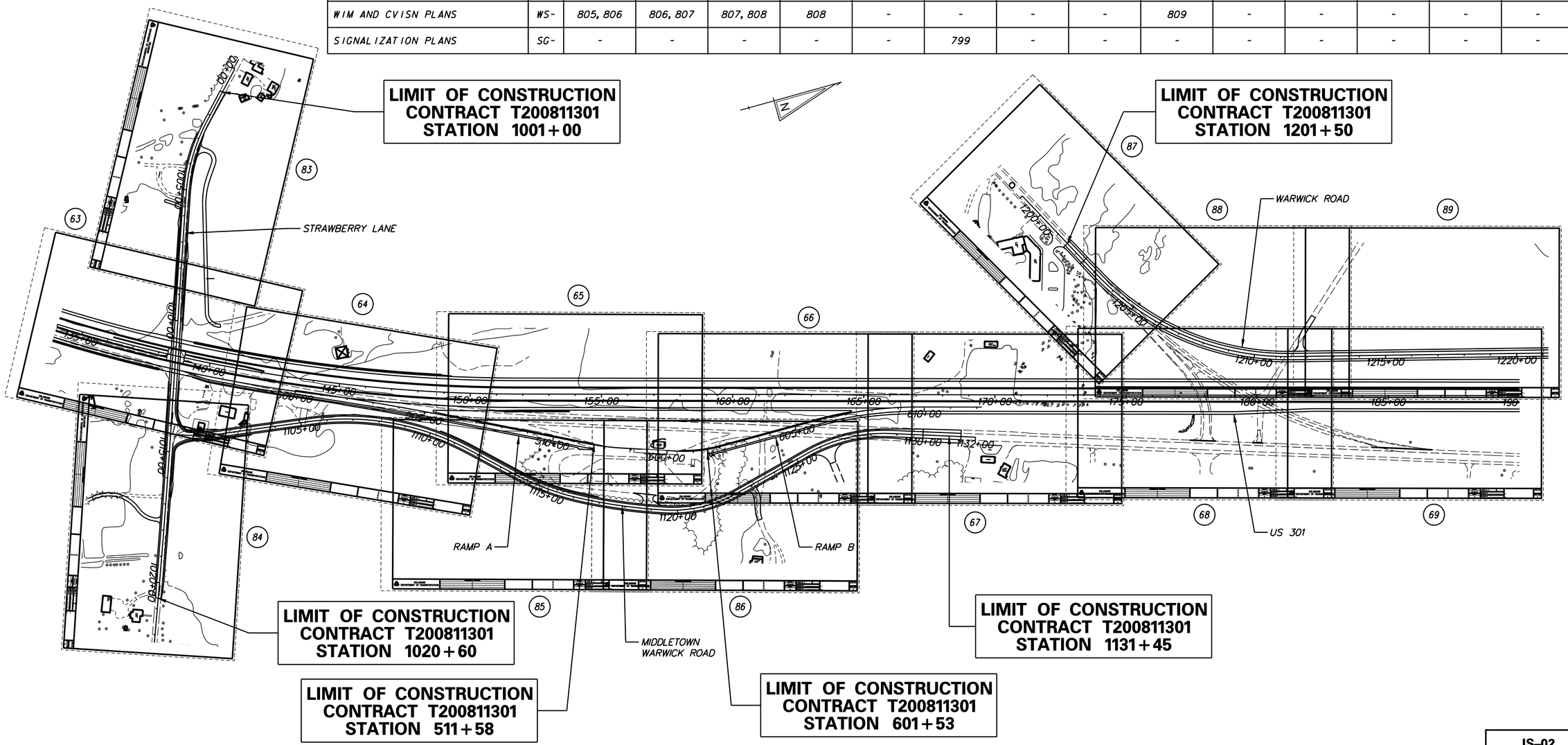
SCALE
0 200 400 600
FEET

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.		SHEET NO.
T200811301	DESIGNED BY: RF	PLAN SHEET INDEX	2
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY: SKH		850

PLAN SHEET INDEX CROSS REFERENCE

		63	64	65	66	67	68	69	83	84	85	86	87	88	89
CONSTRUCTION PLANS	CP-														
PROFILES	PF-	108, 133 134, 135	109, 124 138, 139	110, 124 125, 126	111, 126 127, 141	112. 127 141	113	114	133, 136	134, 135 137, 138	139, 140	140, 141	142	143	144
GRADES AND GEOMETRICS	GG-	165	166	167	168	169	170	171	185	186	187	188	189	190	191
PAVEMENT JOINT LAYOUT DETAILS	PJ-	244	245	246	247	248	249	250	-	-	-	-	-	-	-
STORMWATER MANAGEMENT PLANS	SW-	377	377, 383 387	383, 405 420	405	-	-	398	373	377, 428	420	405	-	-	392
CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS	CS-	489, 490, 499 513, 514, 534 541, 542, 562 584, 585, 614 615, 631, 637 638	490, 514, 515 542, 543, 564 585, 586, 615 616, 638, 639	515, 543, 564 586, 616, 639	514, 515, 516 543, 544, 564 565, 586, 587 599, 616, 617 639, 640	516, 517, 544 545, 565, 566 587, 588, 617 618, 640, 641	517, 545, 566 588, 600, 601 618, 641	517, 518, 545 546, 566, 567 588, 589, 600 601, 602, 618 619, 641, 642	499, 534 562, 631	490, 500, 514 535, 563, 585 615, 632, 638	543, 564, 586 616, 639	543, 544, 564 565, 586, 587 616, 617, 639 640	498, 532, 533 560, 561, 578 579, 591	517, 533, 545 561, 565, 566 579, 588, 592 618, 630, 640 641	517, 519, 545 547, 566, 568 588, 618, 620 641
LANDSCAPING PLANS	LS-	-	652	653	654	655	656	657	-	664	-	-	-	-	-
LIGHTING PLANS	LI-	666	667	668	669	670	671		-	-	-	-	-	-	-
SIGNING, STRIPING, AND CONDUIT PLANS	SS-	743	744	745	746	747	748	749	763	764	765	766	767	768	769
WIM AND CVISN PLANS	WS-	805, 806	806, 807	807, 808	808	-	-	-	-	809	-	-	-	-	-
SIGNALIZATION PLANS	SG-	-	-	-	-	-	799	-	-	-	-	-	-	-	-



IS-02

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 200 400 600
FEET

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: RF	
COUNTY		
NEW CASTLE	CHECKED BY: SKH	

PLAN SHEET INDEX

SHEET NO. 3
TOTAL SHTS. 850

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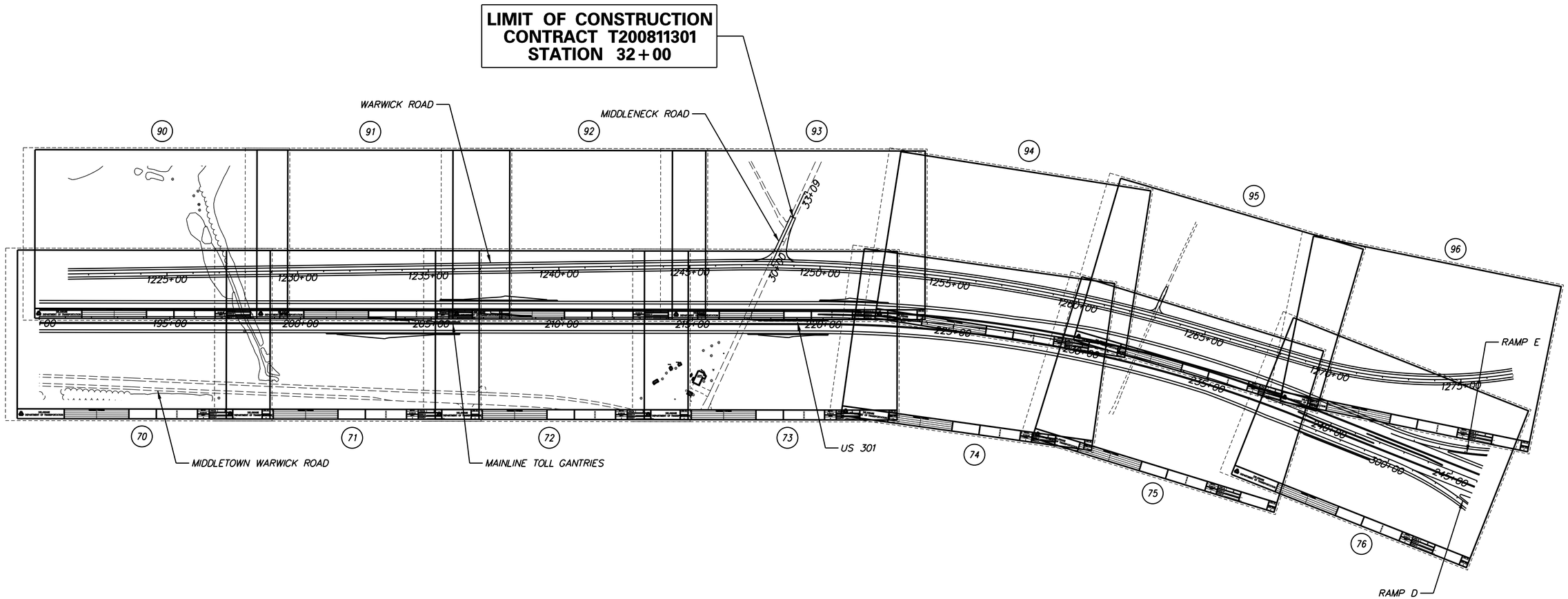
PLAN SHEET INDEX CROSS REFERENCE

		(70)	(71)	(72)	(73)	(74)	(75)	(76)	(90)	(91)	(92)	(93)	(94)	(95)	(96)
CONSTRUCTION PLANS	CP-	70	71	72	73	74	75	76	90	91	92	93	94	95	96
PROFILES	PF-	115	116	117	118	119	120	121, 128 131	145	146	147	148, 158	149	150	151
GRADES AND GEOMETRICS	GG-	172	173	174	175	176	177	178	192	193	194	195	196	197	198
PAVEMENT JOINT LAYOUT DETAILS	PJ-	251	252	253	254	255	256	257	-	-	-	-	-	-	-
STORMWATER MANAGEMENT PLANS	SW-	398	433	-	-	-	-	-	392	-	-	-	-	-	-
CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS	CS-	518, 546, 567 589, 602, 619 642	518, 520, 546 548, 567, 569 589, 590, 619 621, 642	520, 548, 569 590, 621	520, 522, 548 550, 571, 590 621, 623	522, 523, 550 551, 571, 572 623, 624	523, 551 572, 624	523, 524, 551 552, 572, 573 624, 625	519, 547 568, 620	519, 521, 547 549, 568, 570 620, 622	521, 549 570, 622	521, 522, 549 550, 570, 571 622, 623	522, 523, 550 551, 571, 572 623, 624	523, 551 572, 624	491, 523, 524 525, 551, 552 572, 573, 574 624, 625, 626
LANDSCAPING PLANS	LS-	658	659	-	660	661	662	663	-	-	-	-	-	-	-
LIGHTING PLANS	LI-	-	-	-	-	-	672	673	-	-	-	-	-	-	-
SIGNING, STRIPING, AND CONDUIT PLANS	SS-	750	751	752	753	754	755	756	770	771	772	773	774	775	776



IS–03

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 200 400 600
FEET

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.
T200811301	
COUNTY	DESIGNED BY: RF
NEW CASTLE	CHECKED BY: SKH

PLAN SHEET INDEX

SHEET NO.
4
TOTAL SHTS.
850

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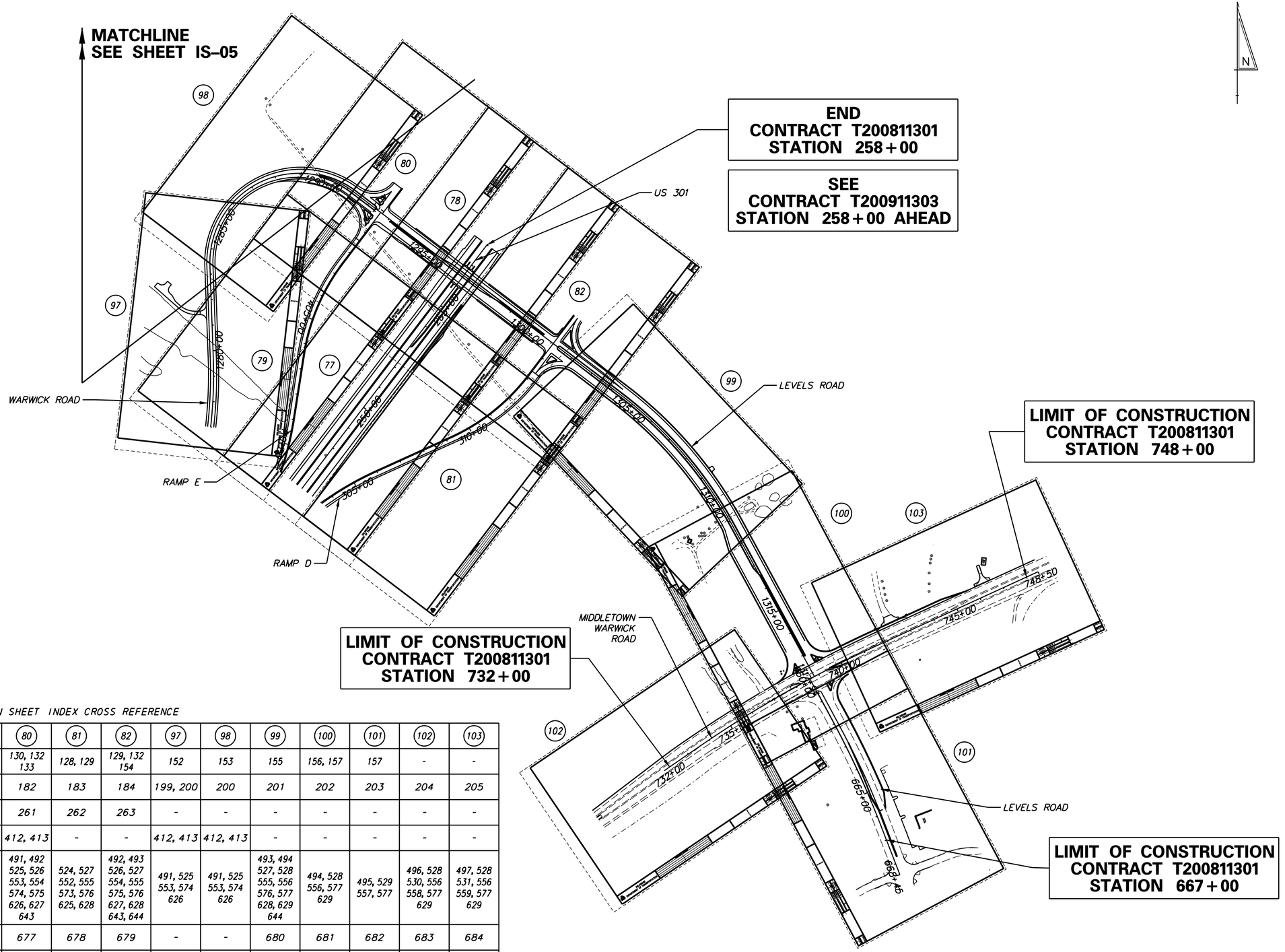

PLAN SHEET INDEX CROSS REFERENCE

CONSTRUCTION PLANS	77	78	79	80	81	82	97	98	99	100	101	102	103
PROFILES	122, 128 131	123, 154	130	130, 132 133	128, 129	129, 132 154	152	153	155	156, 157	157	-	-
GRADES AND GEOMETRICS	179	180	181	182	183	184	199, 200	200	201	202	203	204	205
PAVEMENT JOINT LAYOUT DETAILS	258	259	260	261	262	263	-	-	-	-	-	-	-
STORMWATER MANAGEMENT PLANS	412, 413	-	412, 413	412, 413	-	-	412, 413	412, 413	-	-	-	-	-
CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS	524, 526 552, 554 573, 575 625, 627	492, 526 554, 575 627, 643	524, 525 552, 553 573, 574 625, 626	491, 492 525, 526 553, 554 574, 575 626, 627 643	524, 527 552, 555 573, 576 625, 628	492, 493 526, 527 554, 555 575, 576 627, 628 643, 644	491, 525 553, 574 626	491, 525 553, 574 626	493, 494 527, 528 555, 556 576, 577 628, 629 644	494, 528 556, 577 629	495, 529 557, 577	496, 528 530, 556 558, 577 629	497, 528 531, 556 559, 577 629
LIGHTING PLANS	674	675	676	677	678	679	-	-	680	681	682	683	684
SIGNING, STRIPING, AND CONDUIT PLANS	757	758	759	760	761	762	777	778	779	780	781	782	783
SIGNALIZATION PLANS	-	-	-	798	-	797	-	-	-	793, 794 795, 796	-	-	-

IS–04

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 200 400 600
FEET

US 301
MARYLAND STATE LINE
TO LEVEL ROAD

CONTRACT	BRIDGE NO.
T200811301	DESIGNED BY: RF
COUNTY	CHECKED BY: SKH
NEW CASTLE	

PLAN SHEET INDEX

SHEET NO.
5
TOTAL SHTS.
850

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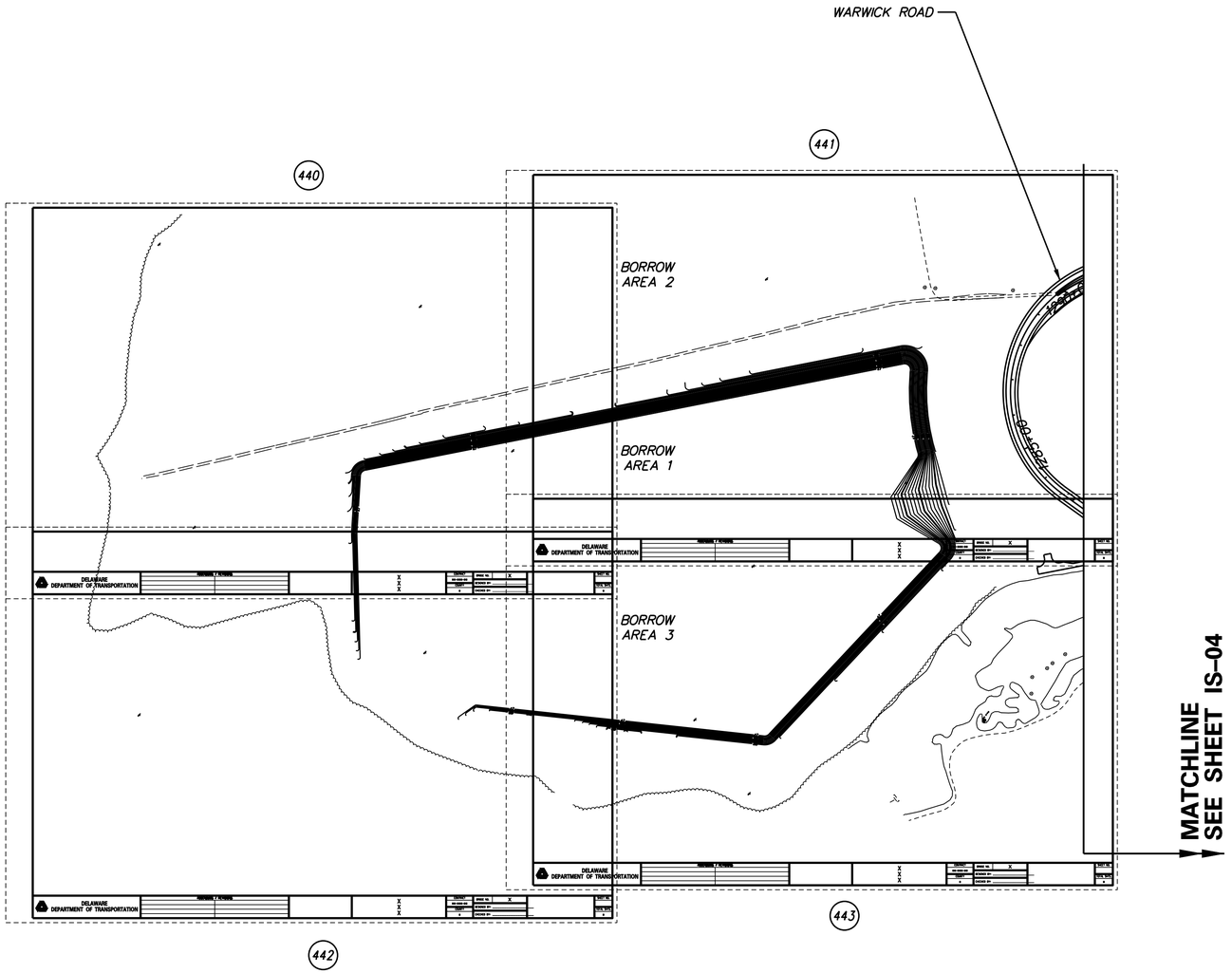
PLAN SHEET INDEX CROSS REFERENCE

BORROW SITE GRADING PLANS	440	441	442	443



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IS-05

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 200 400 600 FEET

US 301 MARYLAND STATE LINE TO LEVELS ROAD

CONTRACT T200811301	BRIDGE NO.	SHEET NO. 6
COUNTY NEW CASTLE	DESIGNED BY: RF	TOTAL SHTS. 850
	CHECKED BY: SKH	

PLAN SHEET INDEX

EXISTING SYMBOLS

DRAINAGE	
—∞—	DITCH OR STREAM CENTERLINE
—v→	DIRECTIONAL STREAM FLOW ARROW
D.I.	DRAINAGE INLET
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
—x—	FENCE - CHAINLINK OR STRANDED
—o—	FENCE - STOCKADE OR SPLIT RAIL
F.P.	FLAG POLE
—n—	GUARDRAIL - STEEL BEAM
—n—	GUARDRAIL - WIRE ROPE
LAMP	LAMP AND POST - RESIDENTIAL
MB	MAILBOX
P.M.	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
	MARSH BOUNDARY LINE
	TREE - CONIFEROUS
	TREE - DECIDUOUS
	TREE STUMP
	SHRUBBERY
— WL —	DELINEATED WETLAND BOUNDARY LINE
	WOODS LINE BOUNDARY

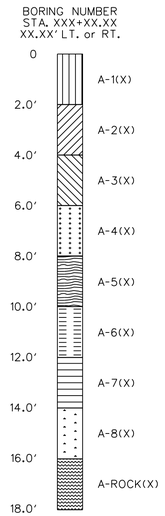
SURVEY CONTROL & MONUMENTATION	
B.M.	SURVEY BENCHMARK LOCATION
T.P.	SURVEY TIE POINT LOCATION
△	SURVEY TRAVERSE POINT
◎	POINT OF CURVATURE OR TANGENCY
◎	POINT OF INTERSECTING TANGENTS

RIGHT-OF-WAY SYMBOLS	
C.M.	PROPERTY MARKER - CONCRETE MON.
I.P.	PROPERTY MARKER - IRON PIPE
100+00	HISTORIC RIGHT-OF-WAY BASELINE
	HISTORIC PROPERTY BOUNDARY
— — —	EXISTING RIGHT-OF-WAY
— PP —	EXISTING PROPERTY LINE
— EASEMENT TYPE —	EXISTING EASEMENT
— DA —	EXISTING DENIAL OF ACCESS
— R/W-DA —	EXISTING R/W & DENIAL OF ACCESS

UTILITY	
	SOIL BORING LOCATION
	UTILITY TEST HOLE LOCATION
TV	CABLE TV DISTRIBUTION BOX
Ⓔ	ELECTRIC MANHOLE
EM	ELECTRIC METER
E	ELECTRIC TRANSFORMER
	LUMINAIRE - COBRA HEAD
	LUMINAIRE - OFFSET
Ⓖ	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
?	MANHOLE - UNDETERMINED OWNER

UTILITY COMPANY FACILITIES	
—— AB-U ——	ATLANTIC BROADBAND (UNDERGROUND)
—— AW-W ——	ARTESIAN WATER COMPANY
—— CU-G ——	CHESAPEAKE UTILITIES CORP. - GAS
—— EX-CON ——	DEDOT MULTIDUCT CONDUIT
—— EX-SIG ——	DELDOT SIGNAL CONDUIT
—— DP-E ——	DELMARVA POWER - ELECTRIC
—DP-E-OH—	DELMARVA POWER - ELECTRIC (OVERHEAD)
— TM-E-OH —	TOWN OF MIDDLETOWN - ELECTRIC (OVERHEAD)
—— TM-S ——	TOWN OF MIDDLETOWN - SEWER
—— VER-C ——	VERIZON
—VER-C-OH—	VERIZON (OVERHEAD)
—VER-FO-OH—	VERIZON FIBER-OPTIC (OVERHEAD)

IDENTIFIERS	
(CO x)	EXISTING CONDUIT RUN (X OF CONDUIT RUN)
(CA x)	EXISTING CABINET BASE (TYPE OF CABINET BASE)
(JW x)	EXISTING JUNCTION WELL (TYPE OF JUNCTION WELL)
(PB x)	EXISTING POLE BASE (TYPE OF POLE BASE)
(LSA)	EXISTING LIGHTING SERVICE
(LST)	EXISTING LIGHTING STANDARD



DELDOT BORING LEGEND

SOILS LEGEND

A-3 SAND	A-2-7 CLAYEY SAND	A-7-4 SILTY CLAY
A-2 SAND & FINES	A-7-2 SANDY CLAY	A-7 CLAY
A-2-4 SILTY SAND	A-4 SILT	A-6 COLLOIDAL CLAY
A-4-2 SANDY SILT	A-4-7 CLAYEY SILT	A-5 MICA, DIATOMS

PLAN LOCATION OF SOIL BORINGS

BORING TARGETS AND PROFILES SCALE:
HORIZONTAL - NONE
VERTICAL - SEE PROFILE SHEETS

AO-ABOVE OPTIMUM
SAT-SATURATED
LIQ-LIQUEFIED

TS-TOPSOIL
RM-ROOT MAT
BC-BITUMINOUS CONCRETE
SB-STONE BASE
PCC-PORTLAND CEMENT CONCRETE
RPPSA - ROCK PENETRATED BY POWER SOIL AUGER

LL-LIQUID LIMIT (%)
PI-PLASTICITY INDEX (%)
NP-NON-PLASTIC
MDD-MAXIMUM DRY DENSITY (pcf)
OMC-OPTIMUM MOISTURE CONTENT (%)
USC-UNIFIED SOIL CLASSIFICATION
USDA-UNITED STATES DEPARTMENT OF AGRICULTURE CLASSIFICATION

w/GR-WITH GRAVEL
w/RF-WITH ROCK FRAGMENTS

NOTES: SOIL SYMBOLS DENOTE MSMT CLASSIFICATIONS

ALL DIMENSIONS, DEPTHS AND ELEVATIONS ARE NOTED IN FEET

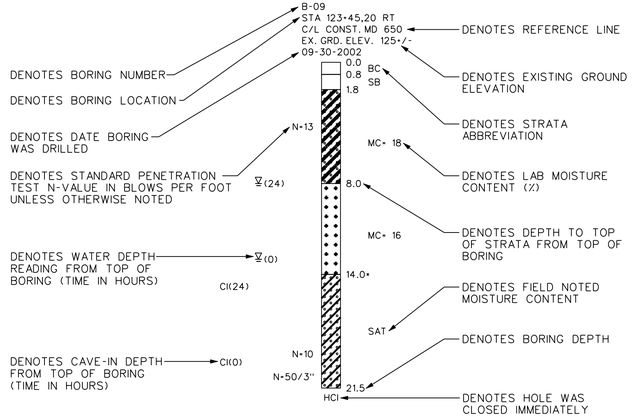
AN ASTERISK AT THE TOP DEPTH OF STRATA INDICATES THAT STRATA WAS VISUALLY CLASSIFIED BY DRILLER

MDD & OMC PER A.A.S.H.T.O. DESIGNATION T-180

N PER A.A.S.H.T.O. DESIGNATION T-206

UNLESS OTHERWISE NOTED ON PLANS, ALL SOIL SURVEY BORINGS FOR ROADWAY CONSTRUCTION WERE LEFT OPEN FOR 24 HOURS WITH NO EXCESS MOISTURE OR FREE WATER ENCOUNTERED DURING TIME OF SOIL SURVEY (insert date of soil investigation)

EXAMPLE SOIL BORING PROFILE



MDSHA BORING LEGEND

LG-01

LAST REVISED: 3/12/2008
J:\2008 PROJECTS\E3X3480I\700CADD\750AET\ROADWAY\LG_301AET_001.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: RF	
COUNTY	CHECKED BY: SKH	
NEW CASTLE		

LEGEND

SHEET NO.
7
TOTAL SHTS.
850

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 1-31 & 1-27
	GUARDRAIL, TYPE 2-31 & 2-27
	GUARDRAIL, TYPE 3-31 & 3-27
	GUARDRAIL END ANCHORAGE
	GUARDRAIL END TREATMENT, TYPE 1-31
	GUARDRAIL END TREATMENT, TYPE 2-31
	GUARDRAIL END TREATMENT, TYPE 3-31
	IMPACT ATTENUATOR
HC	HORIZONTAL CLEARANCE
	JUNCTION BOX - DRAINAGE
LOC	LIMIT OF CONSTRUCTION
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOILING & PERMANENT GRASS SEEDING
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK @ 4"
	P.C.C. SIDEWALK @ 6"
	UNDERDRAIN
	UNDERDRAIN OUTLET

LANDSCAPING

	MAJOR DECIDUOUS TREE
	EVERGREEN TREES
	MINOR DECIDUOUS TREE
	SHRUBS

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
CO	CURB OPENING
CA x	PROPOSED CABINET BASE (TYPE OF CABINET BASE)
CO x	PROPOSED CONDUIT RUN
CJB	CONVERT TO JUNCTION BOX
CMH	CONVERT TO DRAINAGE MANHOLE
CR	CURB RAMP / TYPE
CR-N	CURB RAMP / TYPE - WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
CSF	CONSTRUCTION SAFETY FENCE
DI	DRAINAGE INLET
DND	DO NOT DISTURB
ED	ENERGY DISSIPATOR
F	FENCE
FES	FLARED END SECTION
FF C	FILL WITH FLOWABLE FILL
FS	FILTRATION STRUCTURE
GR	GUARDRAIL
HW	HEADWALL
JB	JUNCTION BOX
JW x	PROPOSED JUNCTION WELL (TYPE OF JUNCTION WELL)
LSR	LIGHTING SERVICE
LST	LIGHTING STANDARD
M	MONUMENT - RIGHT-OF-WAY
MH	MANHOLE
P	PIPE
PB x	PROPOSED POLE BASE (TYPE OF POLE BASE)
RL C	RELOCATE BY CONTRACTOR
RL O	RELOCATE BY OTHERS
RM C	REMOVE BY CONTRACTOR
RM O	REMOVE BY OTHERS
SF	SILT FENCE
ST	SEDIMENT TRAP
RSF	REINFORCED SILT FENCE
UD	UNDERDRAIN / LENGTH
UDO	UNDERDRAIN OUTLET PIPE

PAVEMENT SECTION(S)

	OVERLAY PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	RECONSTRUCTED PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	DRIVEWAY AND ENTRANCE PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS

TRAFFIC

DOT-E	DELDOT - ELECTRIC
ITMS-CON	ITMS CONDUIT
WIM-E	WIM ELECTRICAL CONDUIT
WIM-COM	WIM COMMUNICATIONS CONDUIT
SIG-CON	SIGNAL CONDUIT
	CONDUIT JUNCTION WELL
	UTILITY POLE
	CABINET BASE
	POLE BASE
P	SERVICE PEDESTAL
	LUMINAIRE - COBRA HEAD
	LUMINAIRE - MONGOOSE
	HIGH MAST LIGHT - 3 FIXTURE
	HIGH MAST LIGHT - 4 FIXTURE
	HIGH MAST LIGHT - 6 FIXTURE
	PAVEMENT MARKINGS
	PAVEMENT STRIPING
	TRAFFIC SIGN

UTILITY COMPANY FACILITIES

AW-W	ARTESIAN WATER COMPANY
DP-E	DELMARVA POWER - ELECTRIC
DP-E-OH	DELMARVA POWER - ELECTRIC (OVERHEAD)
TM-S	TOWN OF MIDDLETOWN -SEWER
VER-C	VERIZON
VER-C-OH	VERIZON (OVERHEAD)

MISCELLANEOUS

	POND MAINTENANCE ACCESS
	POND ACCESS ROAD, MARYLAND
	INFILTRATION TRENCH

DESIGN DESIGNATION - MIDDLETOWN WARWICK ROAD

FUNCTIONAL CLASS: LOCAL		D.H.V. PROJECTED: 287	YEAR: 2030
TYPE OF CONSTRUCTION: NEW		DESIGN SPEED: 40 M.P.H.	
• A.A.D.T. CURRENT: 13,347	YEAR: 2009	TRUCKS: 2 %	
A.A.D.T. PROJECTED: 4,100	YEAR: 2030	DIRECTION OF DISTRIBUTION: 54 %	

• EXISTING US 301

DESIGN DESIGNATION - STRAWBERRY LANE

FUNCTIONAL CLASS: LOCAL		D.H.V. PROJECTED: 450	YEAR: 2030
TYPE OF CONSTRUCTION: NEW		DESIGN SPEED: 40 M.P.H.	
A.A.D.T. CURRENT: 617	YEAR: 2009	TRUCKS: 10 %	
A.A.D.T. PROJECTED: 4,500	YEAR: 2030	DIRECTION OF DISTRIBUTION: 63 %	

DESIGN DESIGNATION - LEVELS / WARWICK ROAD

FUNCTIONAL CLASS: MAJOR COLLECTOR		D.H.V. PROJECTED: 1,110	YEAR: 2030
TYPE OF CONSTRUCTION: NEW		DESIGN SPEED: 40 M.P.H.	
A.A.D.T. CURRENT: 1,879	YEAR: 2009	TRUCKS: 13 %	
A.A.D.T. PROJECTED: 18,500	YEAR: 2030	DIRECTION OF DISTRIBUTION: 61 %	

LG-02

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT T200811301	BRIDGE NO.	SHEET NO. 8
COUNTY NEW CASTLE	DESIGNED BY: RF CHECKED BY: SKH	TOTAL SHTS. 850

LEGEND

LAST REVISED: 3/12/2008
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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. THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.

3. THE ENDS OF ALL CURBS SHALL BE DEPRESSED FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1) UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4. THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" INSIDE MINIMUM DIAMETER, 6" INSIDE MAXIMUM DIAMETER) IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL SIT ON THE TOP OF THE SUBBASE MATERIAL. THE COST SHALL BE INCIDENTAL TO THE CONTRACT.

5. STAGING AREAS - PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE CONTRACT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED AND SEEDED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATIONS 732 AND 734, FOR TOPSOIL AND SEEDING RESPECTIVELY, TO THE SATISFACTION OF THE ENGINEER. THE SEED SHALL ADHERE TO THE SPECIFICATIONS OF SECTION 734 FOR PERMANENT GRASS SEEDING - DRY GROUND. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH REESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.

6. SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT AT THE TIME OF BID. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT AT THE TIME OF BID. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

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

7. ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR INCLUDE:

( )	NONE
(X)	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(X)	RASTER FILES, IN .PDF FILE FORMAT, FOR ALL PLAN SHEETS.
(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).

8. 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.

9. THE DISTURBED AREA FOR THIS PROJECT IS 264.81 ACRES.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK." ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.

11. THE EROSION AND SEDIMENT CONTROL PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE EROSION AND SEDIMENT CONTROL PLANS ARE VALID FOR A THREE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE THREE YEARS, THE CONTRACTOR SHALL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVAL. DELDOT WILL REVIEW THE CURRENT EROSION AND SEDIMENT CONTROL PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

12. CROSS SECTIONS USED IN THE PREPARATION OF THIS CONTRACT ARE AVAILABLE FROM THE DEPARTMENT.

13. RIGHT-OF-WAY PLANS FOR RIGHT-OF-WAY OR EASEMENT STAKEOUT PURPOSES ARE AVAILABLE FROM THE DEPARTMENT.

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. SECTION 100 PROJECT NOTES CONTINUED ON SHEET PN-03.

SECTION 200

4. 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.

5. 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 - EXCAVATION AND BACKFILLING FOR PIPE TRENCHES, BUT ONLY TO THE ACTUAL DEPTH EXCAVATED.

6. ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   - CONDUIT, CABLES, JUNCTION WELLS, AND POLE BASES UNLESS OTHERWISE SPECIFIED ON THE PLANS
   - STONE SIGN BASE AND CONCRETE PAD AT STATION 118+30 LT
   - EXISTING SERVICE PEDESTALS AND CABINET BASES TO BE REMOVED
   - TRAFFIC MAST ARM AND ASSOCIATED EQUIPMENT DESCRIBED IN PROJECT NOTE #47
   - 8" PVC IRRIGATION LINE AT STATION 232+25

7. 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.

8. RIGHT-OF-WAY FENCING IS TO BE INSTALLED ALONG THE DENIAL OF ACCESS THROUGH 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.

9. 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."

10. 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.

11. 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.

12. WHEN PERFORMING ANY EXCAVATION OR BACKFILLING OPERATION, THE CONTRACTOR SHALL PROVIDE DEWATERING MEASURES IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 902 AND/OR SECTION 906 AT ALL TIMES TO KEEP THE GROUNDWATER LEVEL AT LEAST ONE FOOT BELOW THE EXCAVATION ELEVATION. 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 COSTS SHALL BE INCIDENTAL TO THE APPLICABLE EXCAVATION OR BACKFILLING ITEM.

13. 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 REGARDLESS OF THE FULL DEPTH OF TOPSOIL PLACED. SEEDING AND MULCHING OF THE REPLACED TOPSOIL SHALL BE PERFORMED UNDER THE APPLICABLE BID ITEMS.

14. 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.

SECTION 200 - CONTINUED

15. FOR EXISTING PAVEMENT AREAS HATCHED FOR REMOVAL THAT ARE OUTSIDE THE LIMITS OF EXCAVATION AS INDICATED ON THE CROSS SECTIONS, THE PAVEMENT SHALL BE REMOVED IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 202.05. PAYMENT FOR THIS WORK WILL BE COVERED UNDER ITEM 202000. TOPSOILING AND SEEDING SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS 732 AND 734.

16. 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 RIP-RAP 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 910 FOR CONSTRUCTION OF THE SWM FACILITY SHALL APPLY. IF THERE ARE CONFLICTS BETWEEN THE REQUIREMENTS IN STANDARD SPECIFICATION SECTION 910 AND STANDARD SPECIFICATION SECTION 202, THEN THE MORE STRINGENT REQUIREMENT SHALL BE FOLLOWED.

17. 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

18. 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 FOR ITEM 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 ITEM 760502.
    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 HOT-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 ITEM 760502 - PAVEMENT MILLINGS, TAPERCUT MAY BE RECYCLED INTO HOT-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.

SECTION 300 - CONTINUED

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 COUSRE, TYPE 'B'.

e. ALL COSTS TO UTILIZE MILLINGS IN RECYCLED HOT-MIX WILL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE HOT-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 QUANTITY OF MILLINGS USED FOR BASE COURSE WILL BE PAID FOR UNDER ITEM 302007 - GRADED AGGREGATE BASE COURSE.

SECTION 400

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

20. MEASURES FOR MAINTAINING PUBLIC TRAFFIC, SUCH AS TEMPORARY ROADS, DETOURS, RUN-AROUNDS, 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.

21. 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.

22. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT ALL PERMEABLE TREATED BASE (PTB) PLACED DURING ANY ONE CONSTRUCTION SEASON IS COVERED WITH PCC OR HOT 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.

23. 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

24. THE DEPARTMENT AND THE CONTRACTOR SHALL INSPECT 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 WILL VIDEO INSPECT NEW PIPE RUNS TO CONFIRM CONDITION PRIOR TO ACCEPTANCE. PIPE CLEANING PRIOR TO VIDEO INSPECTION AND MAINTENANCE OF TRAFFIC DURING THE VIDEO INSPECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND INCIDENTAL TO THE PIPE ITEM THAT IS BEING VIDEO INSPECTED.

25. ANY DRAINAGE INLET OR MANHOLE WITH A STRUCTURE DEPTH EXCEEDING THE MAXIMUM DEPTH PROVIDED IN THE DELDOT STANDARD CONSTRUCTION DETAILS WILL REQUIRE THE CONTRACTOR TO SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 105.04 OF THE STANDARD SPECIFICATIONS. COST FOR THESE ITEMS WILL BE INCIDENTAL TO THE RESPECTIVE STANDARD ITEM AS SPECIFIED ON THE CONSTRUCTION PLANS.

26. ITEM 602002 - P.C.C. 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, TOLLS 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. PORTLAND CEMENT CONCRETE CHANNELIZING ISLANDS THAT ARE LESS THAN 75 SQ FT MAY BE POURED MONOLITHICALLY, OR AS DIRECTED BY THE ENGINEER.

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

30. 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.

31. AS THIS PROJECT IS ANTICIPATED TO EXTEND OVER A WINTER PERIOD, THE CONTRACTOR IS NOTIFIED THAT SNOW REMOVAL WILL BE HANDLED BY STATE FORCES. MAINTENANCE OF TRAFFIC CONTROL DEVICES FOLLOWING SNOW REMOVAL OPERATIONS SHALL BE PERFORMED BY THE CONTRACTOR AND SHALL BE INCIDENTAL TO ITEM 743000 - MAINTENANCE OF TRAFFIC.

32. 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.

SECTION 700 - CONTINUED

33. 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.

34. DELDOT OR A DELDOT 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.

35. THE LOCATION FOR ITEM 759506 - FIELD OFFICE, TYPE II.22 SPECIAL COMPLEX, IS RECOMMENDED TO BE ON PARCEL NO. 135.

36. 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 NIGHT WORK, ALL PERSONS WITHIN THE WORK ZONE SHALL HAVE SAFETY WEAR IN ACCORDANCE WITH THE DEMUTCD.

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

38. 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

39. 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 TEAM SUPPORT 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

40. 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.

41. THE DESIGN OF THIS PROJECT HAS BEEN BASED ON PHOTOGRAMMETIC MAPPING PREPARED BY AEROMETRIC INC. IN 2006, SUPPLEMENTED BY SURVEY PERFORMED BY PENNONI ASSOCIATES INC. IN 2008, 2009, AND 2010. SURVEY CONTROL POINTS PREPARED BY CENTURY ENGINEERING IN 2008.

42. 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.

43. 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 INSTALL THE NECESSARY EROSION AND SEDIMENT CONTROL DEVICES AND RESOURCE PROTECTION FENCE 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. 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.

MISCELLANEOUS - CONTINUED

II. PLACE TOPSOIL TO FILL DEPRESSIONS TO THE ORIGINAL GROUND ELEVATIONS. 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 MAXIMUM 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.

F. UPON ACCEPTANCE OF THE RESTORED ELEVATIONS, THE CONTRACTOR SHALL APPLY WET GROUND EROSION CONTROL GRASS SEEDING - FLATS AND STRAW MULCH TO THE AREA WITHIN THE DISTURBED WETLANDS. SEEDING SHALL CONFORM TO ITEM 734552 - WET GROUND EROSION CONTROL GRASS SEEDING - FLATS. STRAW MULCH SHALL CONFORM TO SECTION 735.

G. THE RESTORED AREAS WITHIN THE LIMITS OF THE DELINEATED WETLANDS SHALL BE PLANTED UNDER ITEM 737523. 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.

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 WITH THE EXCEPTION OF:

I. RESOURCE PROTECTION FENCE SHALL BE PAID UNDER ITEM 727552.

II. PLANTING SHALL BE PAID UNDER ITEM 737523.

44. 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 THE SLOPE TO BE SEEDED. ON SLOPES 5:1 OR FLATTER, SEEDING SHALL BE PAID FOR AND CONDUCTED UNDER ITEM 734017 - TEMPORARY GRASS SEEDING, DRY GROUND. ON SLOPES GREATER THAN 5:1, SEEDING SHALL BE 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 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.

45. STREAM BOTTOM AND SLOPE RIPRAP TREATMENT

A. RIPRAP IN STREAMS IN THE FOLLOWING LOCATIONS SHALL BE TREATED AS SPECIFIED IN THE COMPLIANCE NOTES:

I. RR-1 US 301 STATION 125+50 RIGHT
II. RR-501 US 301 STATION 126+50 LEFT
III. RR-61 WARWICK ROAD STATION 1227+25 LEFT
IV. RR-7 STRAWBERRY LANE STATION 1019+00 RIGHT

46. THE FOLLOWING NOTES ARE APPLICABLE FOR THE LIMITS OF WORK WITHIN THE STATE OF MARYLAND ONLY.

A. RIGHT OF WAY AND EASEMENT LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THEY ARE NOT OFFICIAL. FOR OFFICIAL FEE RIGHT OF WAY AND EASEMENT INFORMATION, SEE APPROPRIATE RIGHT OF WAY PLATS THAT WILL BE PROVIDED BY THE ENGINEER.

B. ALL WORK SHALL CONFORM TO THE CONDITIONS STATED IN MDE PERMIT #10-SF-0061.

C. SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION.

47. PRIOR TO REMOVING THE TRAFFIC MAST ARM AND ASSOCIATED EQUIPMENT AROUND STATION 130+50 LT, CONTACT MIKE SOMERS AT 302-659-4099 28 DAYS BEFORE BEGINNING WORK TO COORDINATE THE REMOVAL OF CABINET EQUIPMENT BY DELDOT FORCES. EQUIPMENT SHALL BE DELIVERED TO DELDOT'S MAINTENANCE YARD (NEWARK TOLL PLAZA) AT 1200 WHITAKER ROAD. EVERYTHING REQUIRED TO COMPLETE THIS WORK SHALL BE COVERED UNDER ITEM 211000.

48. REFER TO THE CONSTRUCTION PLAN SHEETS FOR THE LOCATION OF THE CLEAR ZONE AREA LIMITS.

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

50. 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.

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PN-02

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301	BRIDGE NO.	NOTES	SHEET NO. 10
				COUNTY NEW CASTLE	DESIGNED BY: RF		TOTAL SHTS. 850
					CHECKED BY: SKH		

EARTHWORK SUMMARY

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	TOTAL
EXCAVATION - SUBTOTAL ITEM 202000 FROM CROSS SECTIONS							
1 FROM CROSS SECTIONS							
A US 301 MAINLINE	957	58,772	0	12,062	7,768	0	79,559
B RAMP A	0	0	0	0	458	0	458
C RAMP B	0	0	0	0	590	0	590
D RAMP C	0	3,684	0	0	0	0	3,684
E RAMP D	0	3,902	0	0	0	0	3,902
F RAMP E	0	14,357	0	0	0	0	14,357
G RAMP F	0	31	0	0	0	0	31
H STRAWBERRY LANE	0	1,566	0	0	0	0	1,566
I STRAWBERRY ACCESS A	0	85	0	0	0	0	85
J STRAWBERRY ACCESS B	0	22	0	0	0	0	22
K MIDDLETOWN WARWICK ROAD	0	1,017	0	0	594	0	1,611
L WARWICK/LEVELS ROAD	0	88,617	2,161	0	0	0	90,778
M MIDDLENECK ROAD	0	151	0	0	0	0	151
N TEMPORARY CROSS OVERS & INTERSECTIONS	495	0	0	274	3,061	2,938	6,768
2 PLUS EXISTING TOPSOIL REMOVED UNDER FILL	823	66,401	219	3,721	4,835	0	75,999
3 PLUS PROPOSED TOPSOIL PLACED IN CUT (INCLUDED IN EXCAVATION FROM CROSS SECTIONS)	0	0	0	0	0	0	0
4 PLUS PAVEMENT REMOVED UNDER FILL	0	486	198	443	8,811	0	9,938
5 LESS ROOTMAT REMOVED IN CUT (NOT INCLUDED IN CROSS SECTIONS)	0	0	0	0	0	0	0
6 LESS REMOVAL OF PCC COVERED UNDER ITEM 758000	0	93	1,622	0	3,247	0	4,962
7 LESS ROCK EXCAVATION	0	0	0	0	0	0	0
8 SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM CROSS SECTIONS	2,275	238,998	956	16,500	22,870	2,938	284,537
STORMWATER MANAGEMENT POND (SEE POND EARTHWORK SUMMARY ON SHEETS PN-05 & PN-06)							
9 SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM SWM PONDS (LINE 9 ON PN-05 & PN-06)	7,347	144,715	0	0	17,117	0	169,179
SEDIMENT REMOVAL FROM TEMPORARY SEDIMENT BASINS							
10 SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM TEMPORARY SEDIMENT BASINS	1,331	28,429	0	0	0	0	29,760
EXCAVATION AVAILABLE FOR EMBANKMENT							
11 SUBTOTAL EXCAVATION AND EMBANKMENT QUANTITY FROM CROSS SECTIONS (ITEM 202000 - LINE 8)	2,275	238,998	956	16,500	22,870	2,938	284,537
12 PLUS STORMWATER MANAGEMENT POND EXCAVATION AVAILABLE FOR EMBANKMENT (LINE 17 ON PN-05 & PN-06)	6,506	125,785	0	0	17,633	0	149,924
13 PLUS SEDIMENT REMOVAL FROM TEMPORARY SEDIMENT BASINS (80%)	1,065	22,743					23,808
14 PLUS EXCAVATION AND BACKFILL FOR STRUCTURES (ITEM 207000)	0	551	0	0	0	0	551
15 PLUS MSE WALL EXCAVATION (INCIDENTAL TO ITEM 602772)	0	771	0	0	0	0	771
16 PLUS EXCAVATION AND BACKFILL FOR PIPE TRENCHES (ITEM 208000)	51	12,060	0	0	333	0	12,444
17 PLUS EXCAVATION FOR PIPES SMALLER THAN 24" (COVERED UNDER SECTION 612)	20	2,398	0	35	340	0	2,793
18 PLUS CHANNEL EXCAVATION (ITEM 203000)	0	110	0	0	0	0	110
19 PLUS EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHES	0	0	0	0	0	0	0
20 PLUS EXCAVATION FROM INSTALLATION OF UNDERDRAINS	0	2,685	32	128	288	0	3,133
21 PLUS REMOVAL OF PCC COVERED UNDER ITEM 758000	0	93	1,622	0	3,247	0	4,962
22 LESS EXISTING TOPSOIL REMOVED IN CUT AND FILL COVERED UNDER 202000	1,257	113,123	930	7,313	6,305	0	128,928
23 LESS EXISTING PAVEMENT UNABLE TO BE PLACED IN EMBANKMENT	0	0	1,622	409	8,816	1,358	12,205
24 LESS UNSUITABLE EXCAVATION (0%)	0	0	0	0	0	0	0
25 TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	8,660	293,071	58	8,941	29,590	1,580	341,900
BORROW TYPE A							
26 BORROW, TYPE A FOR CAPPING	0	78,391	793	8,195	14,945	0	102,324
27 LESS TOPSOIL PLACED ON FILL SLOPES (NOT INCLUDED IN TYPE A AREAS)	0	0	0	0	0	0	0
28 SUBTOTAL BORROW, TYPE A CAPPING REQUIRED	0	78,391	793	8,195	14,945	0	102,324
29 PLUS CAPPING REQUIRED X ADJUSTMENT FACTOR (0.20%)	0	15,678	159	1,639	2,989	0	20,465
30 TOTAL ADJUSTED BORROW, TYPE A REQUIRED	0	94,069	952	9,834	17,934	0	122,789

PROJECT NOTES, SECTION 100 (CONTINUED FROM SHEET PN-01)

3. 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.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT T200811301
COUNTY NEW CASTLE
BRIDGE NO.
DESIGNED BY: MJB
CHECKED BY: MFM

NOTES &
EARTHWORK SUMMARY

SHEET NO. 11
TOTAL SHTS. 850

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EARTHWORK SUMMARY

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	TOTAL
BORROW TYPE B							
31 BACKFILL FOR ROOTMAT REMOVAL UNDER FILL	9	38,539	171	3,315	6,379	0	48,413
32 PLUS BACKFILL FOR UNSUITABLE SOIL UNDER PAVEMENT, STRUCTURES & FILL	0	1,608	0	0	270	0	1,878
33 SUBTOTAL BORROW, TYPE B	9	40,147	171	3,315	6,649	0	50,291
34 PLUS BACKFILL X ADJUSTMENT FACTOR (0.20 +/-)	2	8,029	34	663	1,330	0	10,058
35 PLUS ADJUSTED BORROW, TYPE B FROM SWM PONDS (LINE 21 ON PN-05 & PN-06)	2,546	17,846	0	0	2,846	0	23,238
36 TOTAL ADJUSTED BORROW, TYPE B REQUIRED	2,557	66,022	205	3,978	10,825	0	83,587
BORROW, TYPE C							
37 FOR PIPE TRENCH BACKFILL, AND STRUCTURE BACKFILL	50	6,971	0	26	500	0	7,547
38 PLUS UTILITY TRENCH BACKFILL	23	0	0	0	0	0	23
39 SUBTOTAL BORROW, TYPE C	73	6,971	0	26	500	0	7,570
40 PLUS BORROW, TYPE C REQUIRED X ADJUSTMENT FACTOR (0.20 +/-)	15	1,394	0	5	100	0	1,514
41 TOTAL ADJUSTED BORROW, TYPE C, REQUIRED	88	8,365	0	31	600	0	9,084
BORROW, TYPE D							
42 BORROW, TYPE D FOR 139,935 SY OF SOIL CEMENT BASE COURSE (0.1667)	0	16,694	0	2,248	4,380	0	23,322
43 PLUS BORROW, TYPE D REQUIRED X ADJUSTMENT FACTOR (0.20 +/-)	0	3,339	0	450	876	0	4,664
44 TOTAL ADJUSTED BORROW, TYPE D, REQUIRED	0	20,033	0	2,698	5,256	0	27,986
BORROW, TYPE F							
45 EMBANKMENT REQUIRED BELOW CAPPING	2,573	419,575	163	36,503	61,557	123	520,494
46 PLUS EXISTING TOPSOIL REMOVED UNDER FILL	823	66,401	219	3,721	4,835	0	75,999
47 PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	486	198	443	8,811	0	9,938
48 PLUS BACKFILL FOR PIPE TRENCHES (OUTSIDE LIMITS OF TYPE C)	0	3,814	0	0	0	0	3,814
49 PLUS BACKFILL FOR STRUCTURES OUTSIDE LIMITS OF CROSS SECTIONS	0	96	0	0	0	0	96
50 LESS PROPOSED TOPSOIL PLACED ON FILL SLOPES (NOT INCLUDED IN FILL AREAS)	0	0	0	0	0	0	0
51 LESS EXCESS TOPSOIL TO BE PLACED IN OUTER EMBANKMENTS	0	0	0	0	0	0	0
52 LESS MSE WALL BACKFILL (NOT INCLUDED IN EMBANKMENT QUANTITIES)	0	0	0	0	0	0	0
53 SUBTOTAL EMBANKMENT REQUIRED BELOW CAPPING	3,396	490,372	580	40,667	75,203	123	610,341
54 PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20 +/-)	679	98,074	116	8,133	15,041	25	122,068
55 PLUS ADJUSTED BORROW, TYPE F FROM SWM PONDS (LINE 32 ON PN-05 & PN-06)	1,568	24,979	0	0	6,092	0	32,639
56 TOTAL ADJUSTED BORROW, TYPE F, REQUIRED	5,643	613,425	696	48,800	96,336	148	765,048
EXCAVATION - TOTAL ITEM 202000 INCLUDING EARTHWORK REQUIRED FROM BORROW SOURCE							
57 TOTAL ADJUSTED BORROW, TYPE A, REQUIRED (LINE 30)	0	94,069	952	9,834	17,934	0	122,789
58 TOTAL ADJUSTED BORROW, TYPE C, REQUIRED (LINE 41)	88	8,365	0	31	600	0	9,084
59 TOTAL ADJUSTED BORROW, TYPE D, REQUIRED (LINE 44)	0	20,033	0	2,698	5,256	0	27,986
60 TOTAL ADJUSTED BORROW, TYPE F, REQUIRED (LINE 56)	5,643	613,425	696	48,800	96,336	148	765,048
61 TOTAL ADJUSTED BORROW REQUIRED	5,731	735,893	1,648	61,363	120,126	148	924,907
62 LESS EXCAVATION AVAILABLE FOR EMBANKMENT (LINE 25)	8,660	293,071	58	8,941	29,590	1,580	341,900
63 EARTHWORK REQUIRED FROM BORROW SOURCE	-2,929	439,892	1,590	52,422	90,536	-1,432	584,440
64 PLUS EXISTING TOPSOIL REMOVED FROM BORROW SOURCE	37,710	0	0	0	0	0	37,710
65 SUBTOTAL ITEM 202000 - EARTHWORK REQUIRED FROM BORROW SOURCE	37,710	439,892	1,590	52,422	90,536	-1,432	622,150
66 PLUS SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM CROSS SECTIONS (LINE 8)	2,275	238,998	956	16,500	22,870	2,938	284,537
67 PLUS SUBTOTAL TIEM 202000 - EXCAVATION AND EMBANKMENT FROM SWM PONDS (LINE 9)	7,347	144,715	0	0	17,117	0	169,179
68 PLUS SUBTOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM TEMPORARY SEDIMENT BASINS	1,331	28,429	0	0	0	0	29,760
69 TOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT	48,663	852,034	2,546	68,922	130,523	2,938	1,105,626
70 STOCKPILE MATERIAL NEEDS FROM BORROW SOURCE	0	144,547	-1,590	-52,422	-90,536	0	0
71 TOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT PER PHASE	48,663	996,582	956	16,500	39,987	2,938	1,105,626
TOPSOIL SUMMARY							
72 EXISTING TOPSOIL REMOVED IN CUT	434	46,722	711	3,592	1,470	0	52,929
73 PLUS EXISTING TOPSOIL REMOVED UNDER FILL	823	66,401	219	3,721	4,835	0	75,999
74 PLUS EXISTING TOPSOIL REMOVED IN CUT AND FILL FROM STORMWATER MANAGEMENT PONDS (LINE 44 ON PN-05 & PN-06)	841	19,227	0	0	1,076	0	21,144
75 SUBTOTAL TOPSOILING AVAILABLE FOR REUSE	2,098	132,350	930	7,313	7,381	0	150,072
76 LESS PROPOSED TOPSOILING REQUIRED ROADWAY	513	61,555	1,011	2,444	7,822	768	74,113
77 LESS PROPOSED TOPSOILING REQUIRED FOR SWM PONDS (LINE 45 ON PN-05 & PN-06)	0	4,169	0	0	14,056	0	18,225
78 SUBTOTAL EXCESS (+) TOPSOIL OR TOPSOIL NEEDED (-)	1,585	66,626	-81	4,869	-14,497	-768	57,734
79 LESS TOPSOIL PLACED IN OUTER EMBANKMENTS	0	0	0	0	0	0	0
80 TOTAL EXCESS (+) TOPSOIL OR TOPSOIL NEEDED (-)	1,585	66,626	-81	4,869	-14,497	-768	57,734

NOTE: EXCESS TOPSOIL SHALL BE DELIVERED TO THE MITIGATION SITE. COORDINATE THE EXACT LOCATION OF THE STOCKPILE WITH THE ENGINEER.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT T200811301
COUNTY NEW CASTLE
BRIDGE NO.
DESIGNED BY: MJB
CHECKED BY: MFM

EARTHWORK SUMMARY

SHEET NO. 12
TOTAL SHTS. 850

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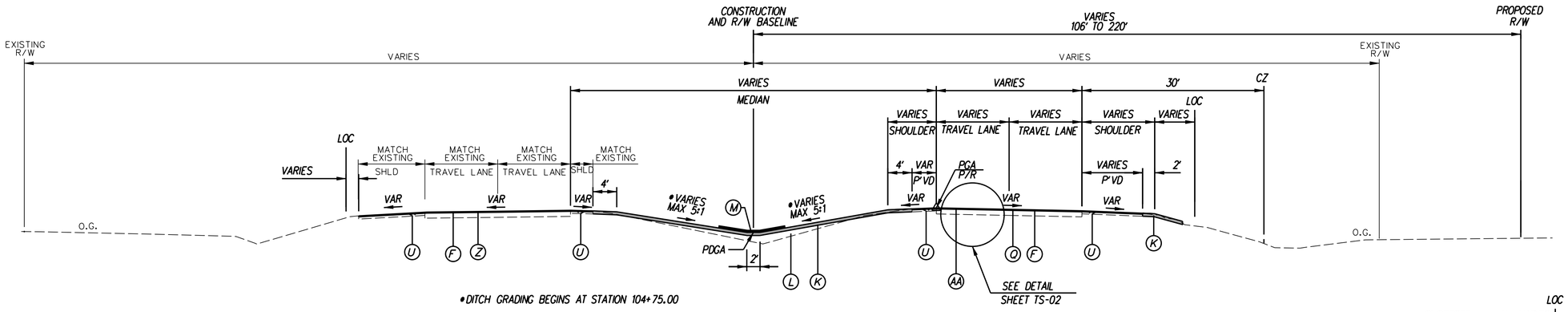
POND EARTHWORK SUMMARY

	CONSTRUCTION PHASE	PHASE 1			PHASE 2														
	BMP NUMBER	070032	606	SUBTOTAL	070033	070035	604	605	607	608	609	610	611	613	616	618	619	620	SUBTOTAL
STORMWATER MANAGEMENT POND EXCAVATION																			
1	FROM CROSS SECTIONS	1,206	4,171	5,377	1,202	867	4,328	65	0	0	1,219	11,887	26,984	1,178	78,836	931	157	9,148	136,802
2	PLUS EXISTING TOPSOIL REMOVED UNDER FILL	144	83	227	359	185	64	0	459	0	325	465	267	282	203	82	510	382	3,583
3	PLUS PROPOSED TOPSOIL PLACED IN CUT (INCLUDED IN EXCAVATION FROM SECTIONS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLUS CLAY CORE OR CUT-OFF TRENCH BELOW EXISTING TOPSOIL	1,741	0	1,741	825	1,482	0	255	817	0	0	0	0	0	0	0	0	0	3,379
5	PLUS PAVEMENT REMOVED UNDER FILL	0	2	2	0	0	0	0	926	0	0	0	0	25	0	0	0	0	951
6	LESS ROOTMAT REMOVED IN CUT (NOT INCLUDED IN CROSS SECTIONS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	LESS REMOVAL OF PCC COVERED UNDER ITEM 758000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	LESS ROCK EXCAVATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	TOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM SWM PONDS	3,091	4,256	7,347	2,386	2,534	4,392	320	2,202	0	1,544	12,352	27,251	1,485	79,039	1,013	667	9,530	144,715
EXCAVATION AVAILABLE FOR EMBANKMENT																			
10	TOTAL EXCAVATION AND EMBANKMENT FROM SWM PONDS (ITEM NO. 202000 - LINE 9)	3,091	4,256	7,347	2,386	2,534	4,392	320	2,202	0	1,544	12,352	27,251	1,485	79,039	1,013	667	9,530	144,715
11	LESS EXISTING TOPSOIL REMOVED IN CUT AND FILL	159	682	841	841	343	165	0	459	0	507	3,626	3,539	490	6,478	226	574	1,979	19,227
12	LESS EXISTING PAVEMENT UNABLE TO BE PLACED IN EMBANKMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	PLUS RIPRAP EXCAVATION IN CUT	0	0	0	0	0	0	41	0	0	0	0	0	0	113	0	30	0	184
14	PLUS STRUCTURAL EXCAVATION	0	0	0	0	0	0	47	0	0	0	0	0	0	25	0	36	0	108
15	PLUS MAINTENANCE ACCESS IN CUT	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5
16	LESS UNSUITABLE EXCAVATION (0%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	2,932	3,574	6,506	1,545	2,191	4,227	408	1,743	0	1,037	8,726	23,712	995	72,704	787	159	7,551	125,785
BORROW, TYPE B																			
18	BACKFILL FOR ROOTMAT REMOVAL	2,050	72	2,122	0	1,107	2,795	3,272	0	2,848	2,351	0	0	450	201	1,116	696	36	14,872
19	SUBTOTAL BORROW, TYPE B	2,050	72	2,122	0	1,107	2,795	3,272	0	2,848	2,351	0	0	450	201	1,116	696	36	14,872
20	PLUS BACKFILL X ADJUSTMENT FACTOR (0.20+/-)	410	14	424	0	221	559	654	0	570	470	0	0	90	40	223	139	7	2,974
21	TOTAL ADJUSTED BORROW, TYPE B, REQUIRED	2,460	86	2,546	0	1,328	3,354	3,926	0	3,418	2,821	0	0	540	241	1,339	835	43	17,846
BORROW, TYPE F																			
22	EMBANKMENT REQUIRED	579	65	644	628	729	1,693	1,716	2,960	2,470	2,122	412	244	1,206	294	1,109	2,160	615	18,358
23	PLUS TOPSOIL REMOVED UNDER FILL	144	83	227	359	185	64	0	459	0	325	465	267	282	203	82	510	382	3,583
24	PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	PLUS BACKFILL FOR STRUCTURES	0	0	0	0	0	0	30	0	0	0	0	0	0	25	0	21	0	76
26	PLUS CLAY CORE BACKFILL IN CUT	478	0	478	28	327	0	0	0	0	0	0	0	0	0	0	0	0	355
27	LESS CLAY CORE IN FILL	42	0	42	191	238	0	150	681	0	0	0	0	0	0	0	0	0	1,260
28	LESS RIPRAP IN FILL	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	21
29	LESS MAINTENANCE ACCESS IN FILL	0	0	0	0	0	0	85	0	61	0	0	0	0	69	0	60	0	275
30	SUBTOTAL EMBANKMENT REQUIRED	1,159	148	1,307	824	1,003	1,757	1,511	2,738	2,388	2,447	877	511	1,488	453	1,191	2,631	997	20,816
31	PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20+/-)	232	30	261	165	201	351	302	548	478	489	175	102	298	91	238	526	199	4,163
32	TOTAL ADJUSTED BORROW, TYPE F, REQUIRED	1,391	178	1,568	989	1,204	2,108	1,813	3,286	2,866	2,936	1,052	613	1,786	544	1,429	3,157	1,196	24,979
POND EARTHWORK SUMMARY																			
33	TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT (LINE 17)	2,932	3,574	6,506	1,545	2,191	4,227	408	1,743	0	1,037	8,726	23,712	995	72,704	787	159	7,551	125,785
34	LESS TOTAL ADJUSTED BORROW, TYPE F, REQUIRED (LINE 32)	1,391	178	1,568	989	1,204	2,108	1,813	3,286	2,866	2,936	1,052	613	1,786	544	1,429	3,157	1,196	24,979
35	EMBANKMENT AVAILABLE FOR ROADWAY	1,541	3,396	4,938	556	987	2,119	-1,405	-1,543	-2,866	-1,899	7,674	23,099	-791	72,160	-642	-2,998	6,355	100,806
CLAY BORROW																			
36	CLAY CORE IN CUT	1,741	0	1,741	825	1,482	0	255	817	0	0	0	0	0	0	0	0	0	3,379
37	PLUS CLAY CORE IN FILL	42	0	42	191	238	0	150	681	0	0	0	0	0	0	0	0	0	1,260
38	LESS CLAY BACKFILL IN CUT	478	0	478	28	327	0	0	0	0	0	0	0	0	0	0	0	0	355
39	SUBTOTAL CLAY BORROW REQUIRED	1,305	0	1,305	988	1,393	0	405	1,498	0	0	0	0	0	0	0	0	0	4,284
40	PLUS CLAY BORROW REQUIRED X ADJUSTMENT FACTOR (0.20+/-)	261	0	261	198	279	0	81	300	0	0	0	0	0	0	0	0	0	857
41	TOTAL ITEM 274000 - ADJUSTED CLAY BORROW REQUIRED	1,566	0	1,566	1,186	1,672	0	486	1,798	0	0	0	0	0	0	0	0	0	5,141
TOPSOIL SUMMARY																			
42	EXISTING TOPSOIL REMOVED IN CUT	15	599	614	482	158	101	0	0	0	182	3,161	3,272	208	6,275	144	64	1,597	15,644
43	PLUS EXISTING TOPSOIL REMOVED UNDER FILL	144	83	227	359	185	64	0	459	0	325	465	267	282	203	82	510	382	3,583
44	SUBTOTAL TOPSOIL AVAILABLE FOR REUSE	159	682	841	841	343	165	0	459	0	507	3,626	3,539	490	6,478	226	574	1,979	19,227
45	LESS TOPSOIL REQUIRED	0	0	0	0	0	0	731	0	568	0	0	0	0	2,275	0	595	0	4,169
46	SUBTOTAL EXCESS (+) TOPSOIL OR TOPSOIL NEEDED (-)	159	682	841	841	343	165	-731	459	-568	507	3,626	3,539	490	4,203	226	-21	1,979	15,058

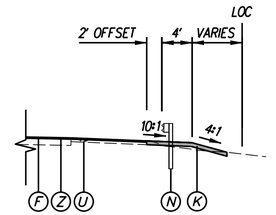
POND EARTHWORK SUMMARY

	CONSTRUCTION PHASE	PHASE 5																TOTAL
	BMP NUMBER	070032	070033	070034	070035	604	606	607	609	610	611	612	613	617	618	620	SUBTOTAL	
STORMWATER MANAGEMENT POND EXCAVATION																		
1	FROM CROSS SECTIONS	0	48	352	0	0	0	0	0	5,753	0	4,851	228	1,963	0	2,317	15,512	157,691
2	PLUS EXISTING TOPSOIL REMOVED UNDER FILL	0	0	84	0	0	0	0	0	0	187	218	0	50	4	0	543	4,353
3	PLUS PROPOSED TOPSOIL PLACED IN CUT (INCLUDED IN EXCAVATION FROM SECTIONS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PLUS CLAY CORE OR CUT-OFF TRENCH BELOW EXISTING TOPSOIL	0	0	386	0	0	0	332	0	0	0	0	0	0	0	0	718	5,838
5	PLUS PAVEMENT REMOVED UNDER FILL	0	0	0	0	0	0	0	0	0	0	47	0	297	0	0	344	1,297
6	LESS ROOTMAT REMOVED IN CUT (NOT INCLUDED IN CROSS SECTIONS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	LESS REMOVAL OF PCC COVERED UNDER ITEM 758000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	LESS ROCK EXCAVATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	TOTAL ITEM 202000 - EXCAVATION AND EMBANKMENT FROM SWM PONDS	0	48	822	0	0	0	332	0	5,753	187	5,116	228	2,310	4	2,317	17,117	169,179
EXCAVATION AVAILABLE FOR EMBANKMENT																		
10	TOTAL EXCAVATION AND EMBANKMENT FROM SWM PONDS (ITEM NO. 202000 - LINE 9)	0	48	822	0	0	0	332	0	5,753	187	5,116	228	2,310	4	2,317	17,117	169,179
11	LESS EXISTING TOPSOIL REMOVED IN CUT AND FILL	0	0	90	0	0	0	0	0	0	187	480	0	315	4	0	1,076	21,144
12	LESS EXISTING PAVEMENT UNABLE TO BE PLACED IN EMBANKMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	PLUS RIPRAP EXCAVATION IN CUT	42	44	32	70	45	38	0	41	60	65	20	23	38	0	44	562	746
14	PLUS STRUCTURAL EXCAVATION	76	70	70	88	67	59	5	35	49	63	13	6	5	8	45	659	767
15	PLUS MAINTENANCE ACCESS IN CUT	0	0	0	0	0	67	0	0	145	0	110	0	22	0	27	371	376
16	LESS UNSUITABLE EXCAVATION (0%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	118	162	834	158	112	164	337	76	6,007	128	4,779	257	2,060	8	2,433	17,633	149,924
BORROW, TYPE B																		
18	BACKFILL FOR ROOTMAT REMOVAL	431	0	1,629	312	0	0	0	0	0	0	0	0	0	0	0	2,372	19,366
19	SUBTOTAL BORROW, TYPE B	431	0	1,629	312	0	0	0	0	0	0	0	0	0	0	0	2,372	19,366
20	PLUS BACKFILL X ADJUSTMENT FACTOR (0.20+/-)	86	0	326	62	0	0	0	0	0	0	0	0	0	0	0	474	3,873
21	TOTAL ADJUSTED BORROW, TYPE B, REQUIRED	517	0	1,955	374	0	0	0	0	0	0	0	0	0	0	0	2,846	23,239
BORROW, TYPE F																		
22	EMBANKMENT REQUIRED	127	483	872	716	0	0	1,296	0	691	175	472	0	209	342	0	5,383	24,385
23	PLUS TOPSOIL REMOVED UNDER FILL	0	0	84	0	0	0	0	0	0	187	218	0	50	4	0	543	4,353
24	PLUS PCC AND BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	PLUS BACKFILL FOR STRUCTURES	47	42	42	58	43	35	5	35	32	39	13	6	5	8	28	438	514
26	PLUS CLAY CORE BACKFILL IN CUT	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27	860
27	LESS CLAY CORE IN FILL	0	0	59	0	0	0	250	0	0	0	0	0	0	0	0	309	1,611
28	LESS RIPRAP IN FILL	0	0	0	0	0	0	21	0	0	0	0	0	0	23	0	44	65
29	LESS MAINTENANCE ACCESS IN FILL	164	158	103	153	64	0	102	82	0	33	0	42	0	34	26	961	1,236
30	SUBTOTAL EMBANKMENT REQUIRED	10	367	863	621	-21	35	928	-47	723	368	703	-36	264	297	2	5,077	27,200
31	PLUS EMBANKMENT REQUIRED X ADJUSTMENT FACTOR (0.20+/-)	2	73	173	124	-4	7	186	-9	145	74	141	-7	53	59	0	1,015	5,440
32	TOTAL ADJUSTED BORROW, TYPE F, REQUIRED	12	440	1,036	745	-25	42	1,114	-56	868	442	844	-43	317	356	2	6,092	32,640
POND EARTHWORK SUMMARY																		
33	TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT (LINE 17)	118	162	834	158	112	164	337	76	6,007	128	4,779	257	2,060	8	2,433	17,633	149,924
34	LESS TOTAL ADJUSTED BORROW, TYPE F, REQUIRED (LINE 32)	12	440	1,036	745	-25	42	1,114	-56	868	442	844	-43	317	356	2	6,092	32,640
35	EMBANKMENT AVAILABLE FOR ROADWAY	106	-278	-202	-587	137	122	-777	132	5,139	-314	3,935	300	1,743	-348	2,431	11,541	117,284
CLAY BORROW																		
36	CLAY CORE IN CUT	0	0	386	0	0	0	332	0	0	0	0	0	0	0	0	718	5,838
37	PLUS CLAY CORE IN FILL	0	0	59	0	0	0	250	0	0	0	0	0	0	0	0	309	1,611
38	LESS CLAY BACKFILL IN CUT	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27	860
39	SUBTOTAL CLAY BORROW REQUIRED	0	0	418	0	0	0	582	0	0	0	0	0	0	0	0	1,000	6,589
40	PLUS CLAY BORROW REQUIRED X ADJUSTMENT FACTOR (0.20+/-)	0	0	84	0	0	0	116	0	0	0	0	0	0	0	0	200	1,318
41	TOTAL ITEM 274000 - ADJUSTED CLAY BORROW REQUIRED	0	0	502	0	0	0	698	0	0	0	0	0	0	0	0	1,200	7,907
TOPSOIL SUMMARY																		
42	EXISTING TOPSOIL REMOVED IN CUT	0	0	6	0	0	0	0	0	0	0	262	0	265	0	0	533	16,791
43	PLUS EXISTING TOPSOIL REMOVED UNDER FILL	0	0	84	0	0	0	0	0	0	187	218	0	50	4	0	543	4,353
44	SUBTOTAL TOPSOIL AVAILABLE FOR REUSE	0	0	90	0	0	0	0	0	0	187	480	0	315	4	0	1,076	21,144
45	LESS TOPSOIL REQUIRED	1,236	841	582	708	1,441	657	507	1,173	1,380	2,101	916	644	400	611	859	14,056	18,225
46	SUBTOTAL EXCESS (+) TOPSOIL OR TOPSOIL NEEDED (-)	-1,236	-841	-492	-708	-1,441	-657	-507	-1,173	-1,380	-1,914	-436	-644	-85	-607	-859	-12,980	2,919

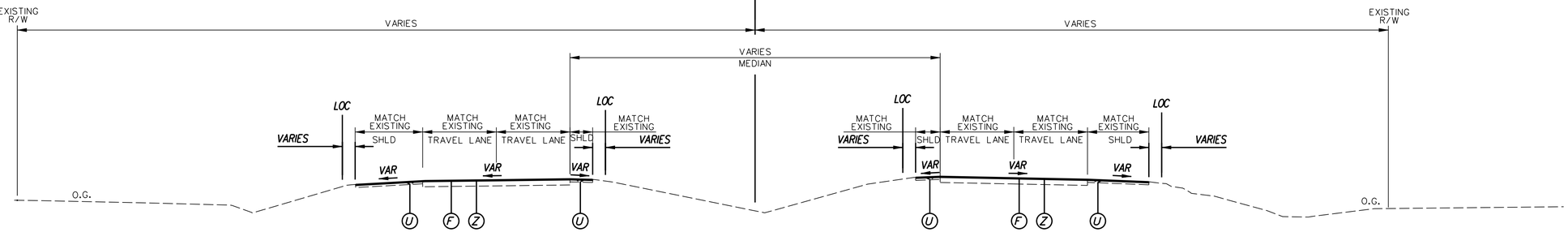


*DITCH GRADING BEGINS AT STATION 104+75.00

TYPICAL NORMAL SECTION US 301 – FOUR LANES
NB STATION 102+95.00 TO STATION 105+50.00
SB STATION 104+75.00 TO STATION 107+35.00



TYPICAL NORMAL SECTION US 301 (RIGHT)
NB STATION 94+53.27 TO STATION 102+18.40



*APPROXIMATE STATIONS: PROVIDE MILL AND OVERLAY TO TEMPORARY STRIPING LIMITS AS PER M.O.T. SCHEME

TYPICAL NORMAL SECTION US 301 – FOUR LANES
- **NB STATION 62+75.00 TO STATION 102+95.00**
- **SB STATION 97+00.00 TO STATION 104+75.00**

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-01

DELAWARE DEPARTMENT OF TRANSPORTATION

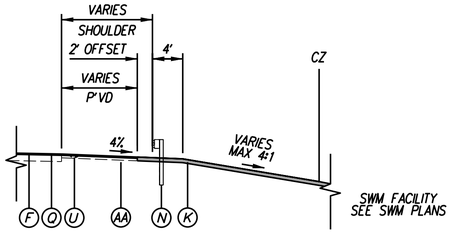
ADDENDUMS / REVISIONS

NOT TO SCALE

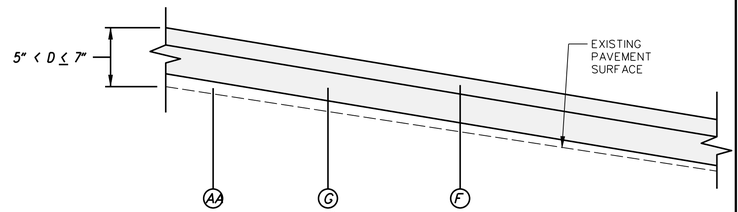
US 301
MARYLAND STATE LINE TO LEVELS ROAD

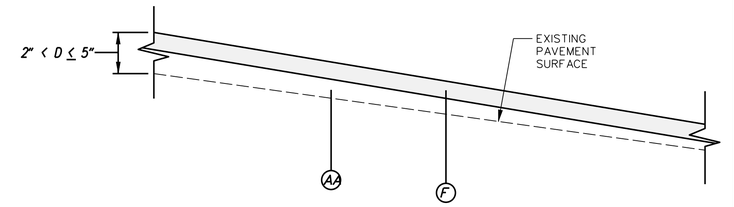
CONTRACT	BRIDGE NO.		TYPICAL SECTIONS	SHEET NO.
T200811301	DESIGNED BY: ES			15
COUNTY	CHECKED BY: MFM			TOTAL SHTS.
NEW CASTLE				850

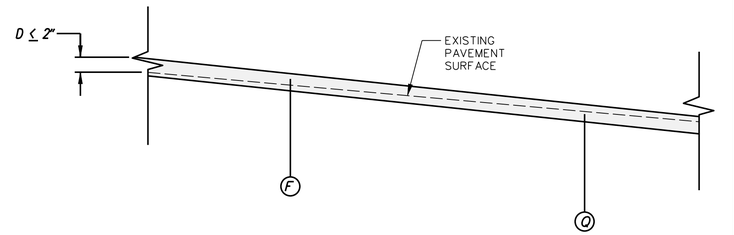
J:\2008 PROJECTS\E3X3480\700CADD\750AET\ROADWAY\TS_301AET_001.DGN



TYPICAL NORMAL SECTION US 301 (RIGHT)
NB STATION 107+30.00 TO STATION 108+25.00

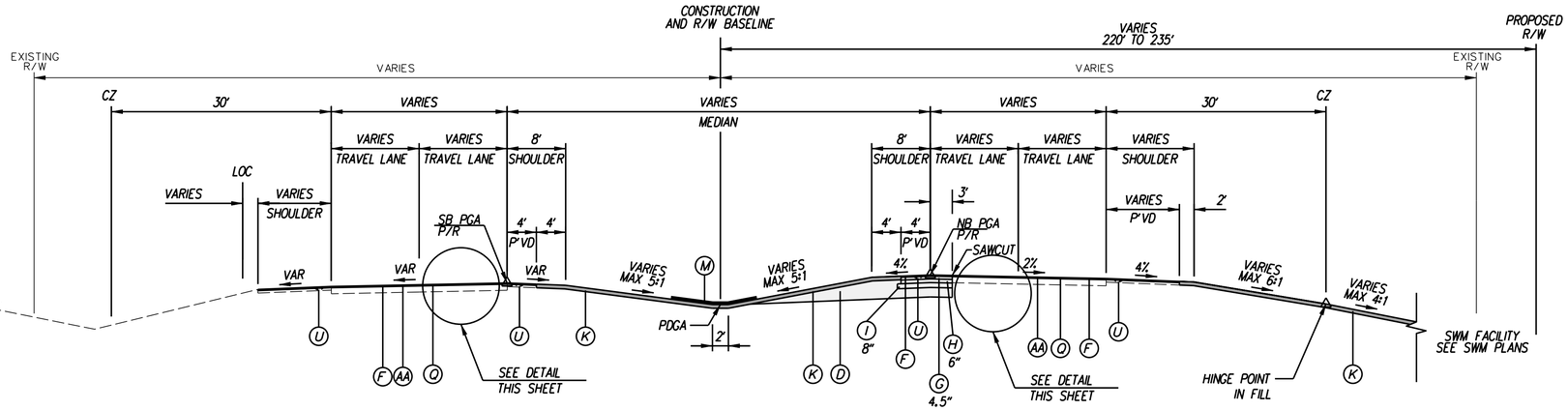






PROFILE MILLING AND HOT-MIX WEDGE DETAIL

SEE CONSTRUCTION DETAILS FOR MILLING LIMITS



TYPICAL NORMAL SECTION US 301 – FOUR LANES
NB STATION 105+50.00 TO STATION 108+25.00
SB STATION 107+35.00 TO STATION 110+00.00

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
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- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

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2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
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4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
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   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
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7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-02

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	
COUNTY	CHECKED BY: MFM	
NEW CASTLE		

TYPICAL SECTIONS

SHEET NO.
16
TOTAL SHTS.
850

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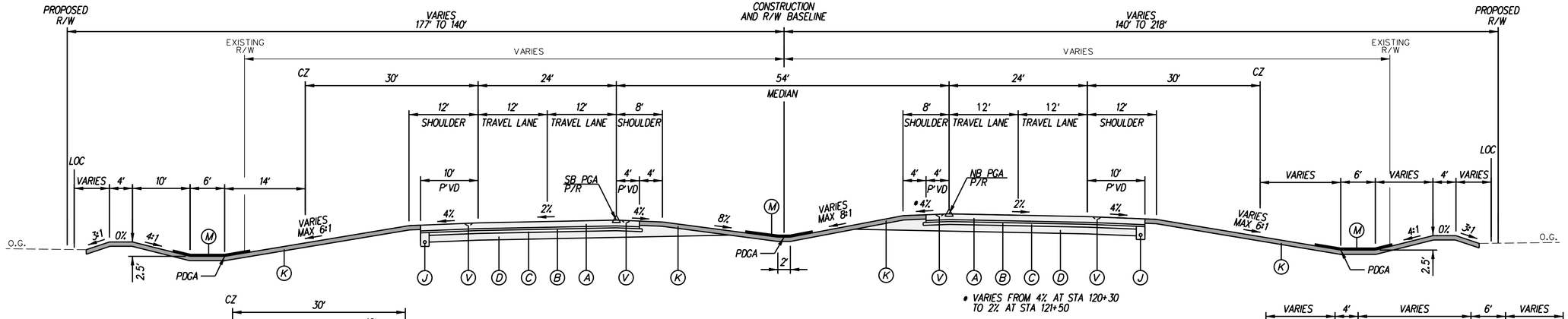
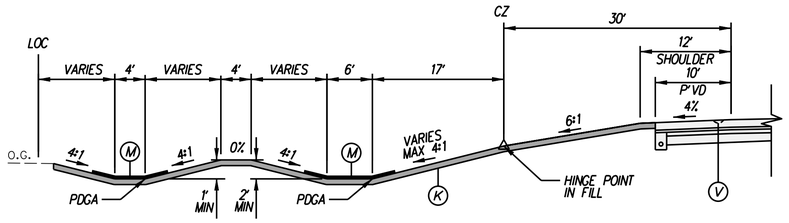
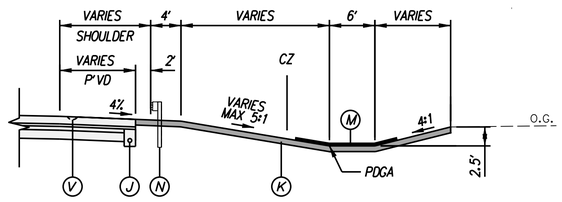


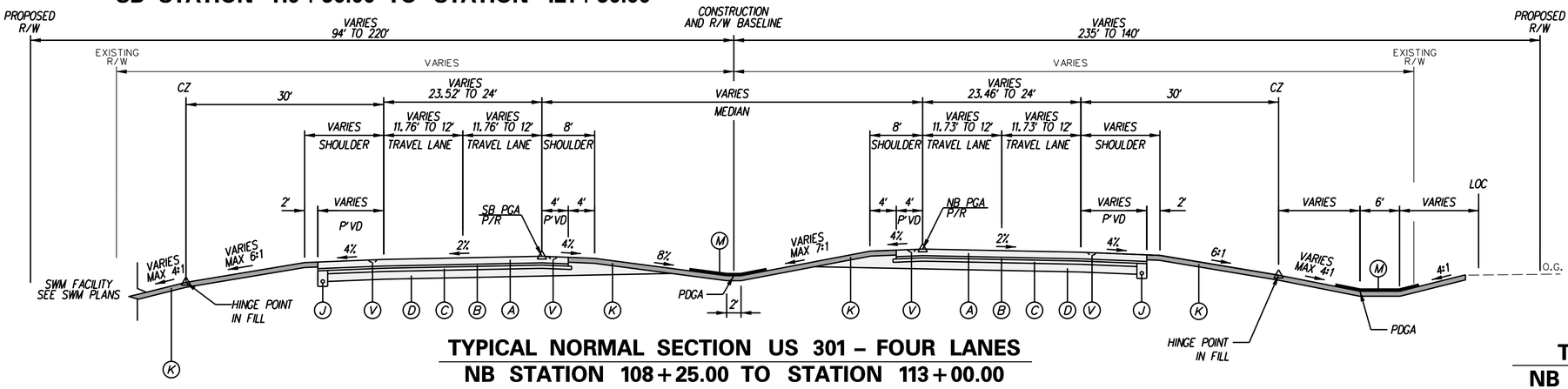
TYPICAL NORMAL SECTION US 301 – FOUR LANES
NB STATION 113+00.00 TO STATION 121+50.00
SB STATION 114+00.00 TO STATION 121+50.00



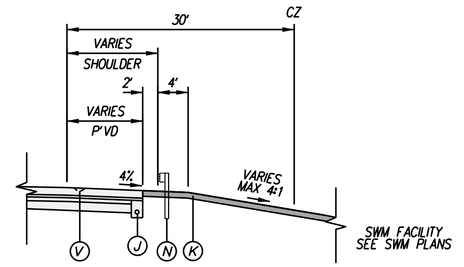
TYPICAL NORMAL SECTION US 301 (LEFT)
SB STATION 119+50.00 TO STATION 121+50.00



TYPICAL NORMAL SECTION US 301 (RIGHT)
NB STATION 109+50.00 TO STATION 111+42.50



TYPICAL NORMAL SECTION US 301 – FOUR LANES
NB STATION 108+25.00 TO STATION 113+00.00
SB STATION 110+00.00 TO STATION 114+00.00



TYPICAL NORMAL SECTION US 301 (RIGHT)
NB STATION 108+25.00 TO STATION 109+50.00

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
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- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–03

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.		TYPICAL SECTIONS	SHEET NO.
T200811301	DESIGNED BY: ES			17
COUNTY	CHECKED BY: MFM			TOTAL SHTS.
NEW CASTLE				850

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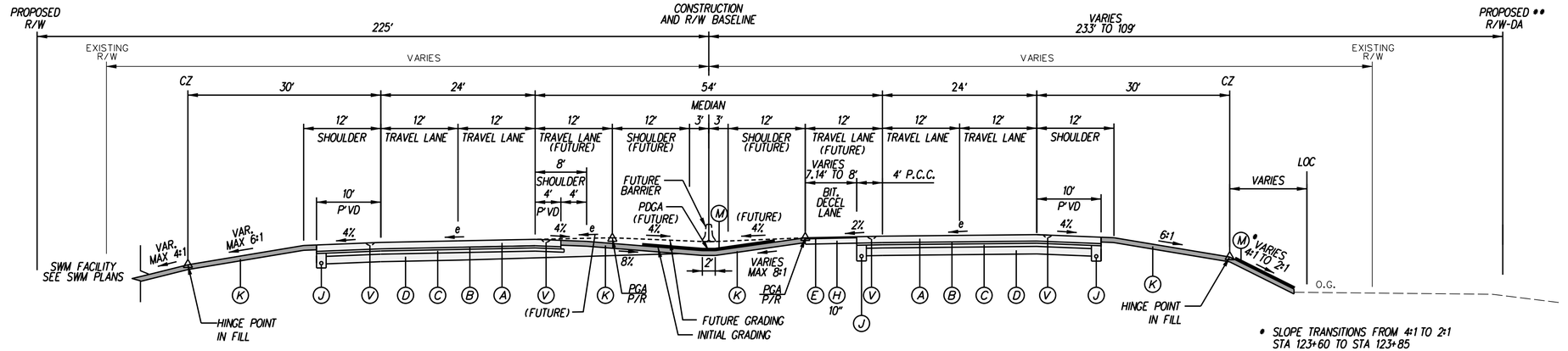
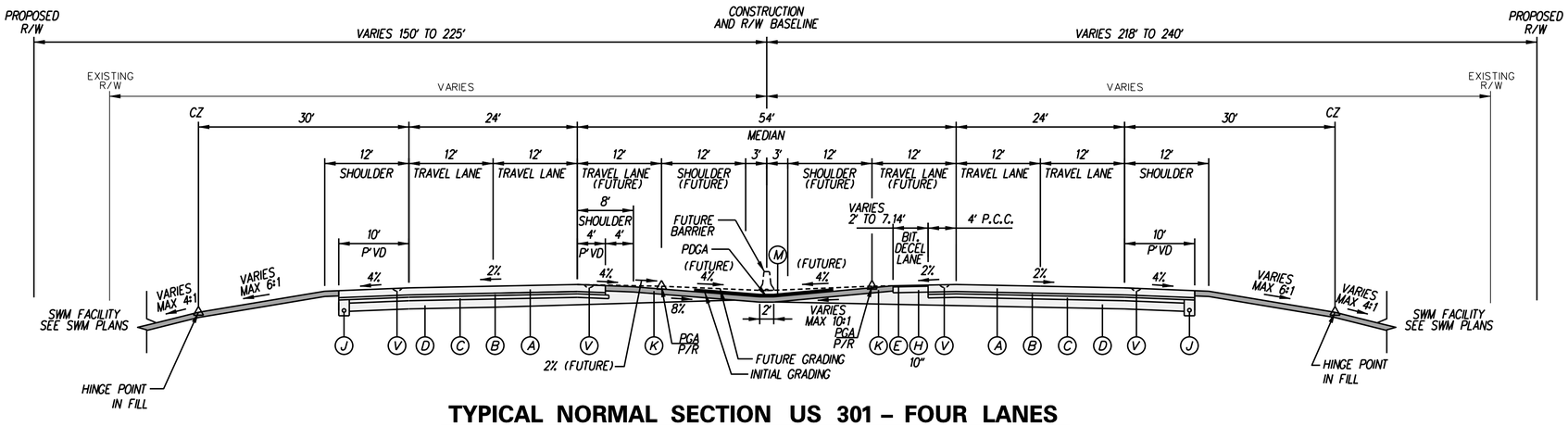


* SLOPE TRANSITIONS FROM 4:1 TO 2:1 STA 123+60 TO STA 123+85

** DA BEGINS AT STA 124+30.00 AND R/W-DA BEGINS AT STA 125+15.00

TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES
STATION 122+99.98 TO STATION 125+00.00
e_{MAX}=3.2%



TYPICAL NORMAL SECTION US 301 – FOUR LANES
STATION 121+50.00 TO STATION 122+99.98

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–04

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.
T200811301	DESIGNED BY: ES
COUNTY	CHECKED BY: MFM
NEW CASTLE	

TYPICAL SECTIONS

SHEET NO.
18
TOTAL SHTS.
850

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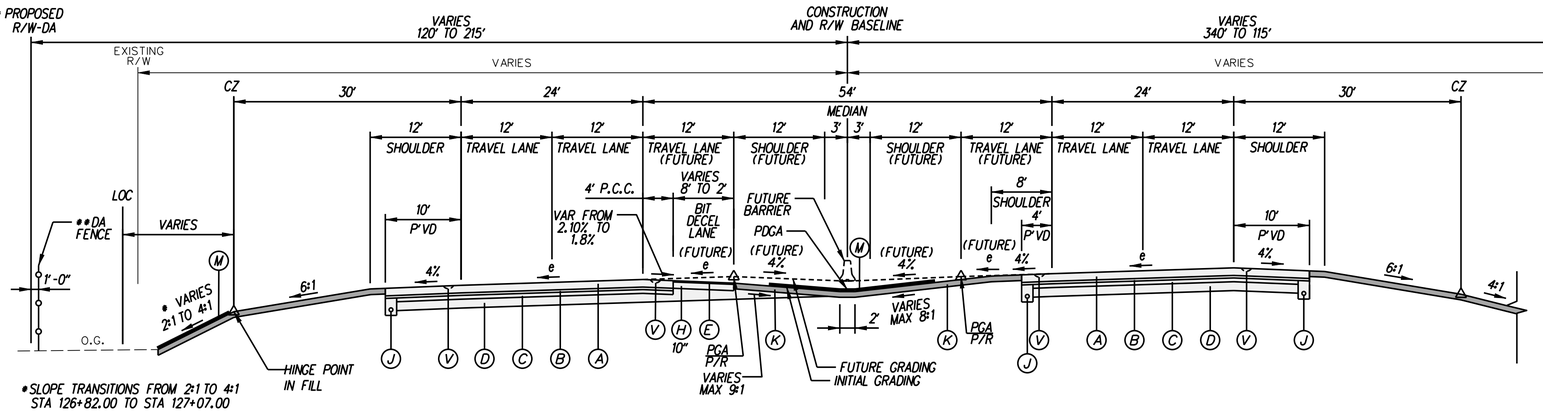


• SLOPE TRANSITIONS FROM 2:1 TO 4:1 STA 126+82.00 TO STA 127+07.00

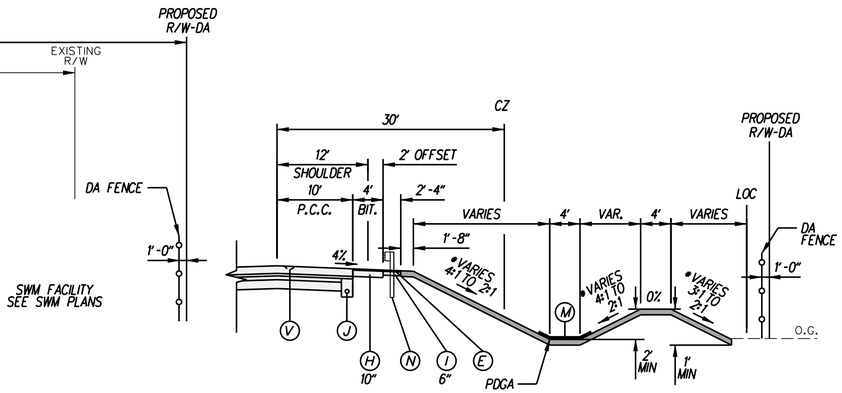
•• DA BEGINS AT STA 127+74.47 AND FENCE BEGINS AT STA 128+00.00

TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES

NB STATION 125+94.00 TO STATION 138+15.72

SB STATION 125+94.00 TO STATION 129+44.00

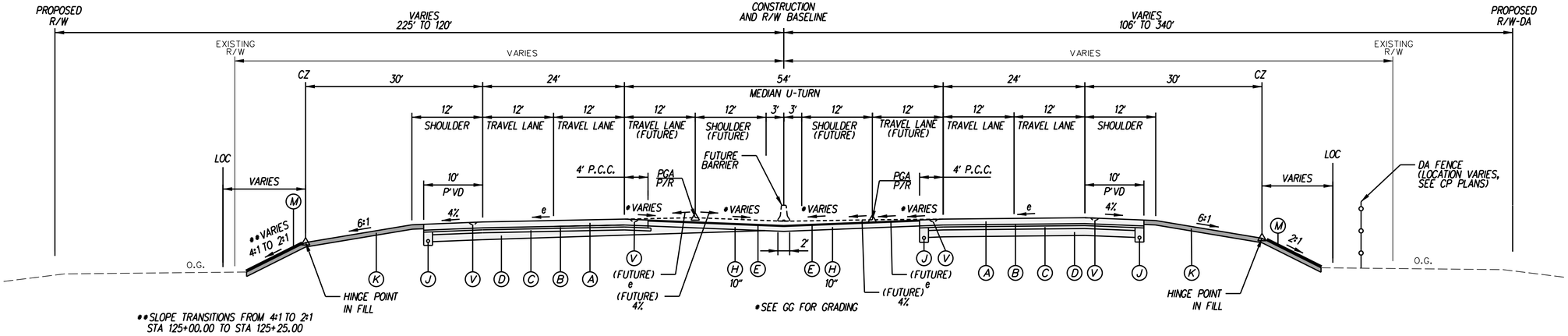
e_{MAX} = 3.2%



• SLOPE TRANSITIONS FROM 4:1 AND 3:1 TO 2:1 STA 134+00.00 TO STA 134+90.00
SLOPE TRANSITIONS FROM 2:1 TO 4:1 AND 3:1 STA 136+65.00 TO STA 137+50.00

TYPICAL SUPERELEVATED SECTION (RIGHT)

NB STATION 130+67.00 TO STATION 138+15.72



•• SLOPE TRANSITIONS FROM 4:1 TO 2:1 STA 125+00.00 TO STA 125+25.00

TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES WITH MEDIAN U-TURN

STATION 125+00.00 TO STATION 125+94.00

e_{MAX} = 3.2%

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
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   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-05

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	TYPICAL SECTIONS
COUNTY	CHECKED BY: MFM	
NEW CASTLE		

SHEET NO.
19
TOTAL SHTS.
850

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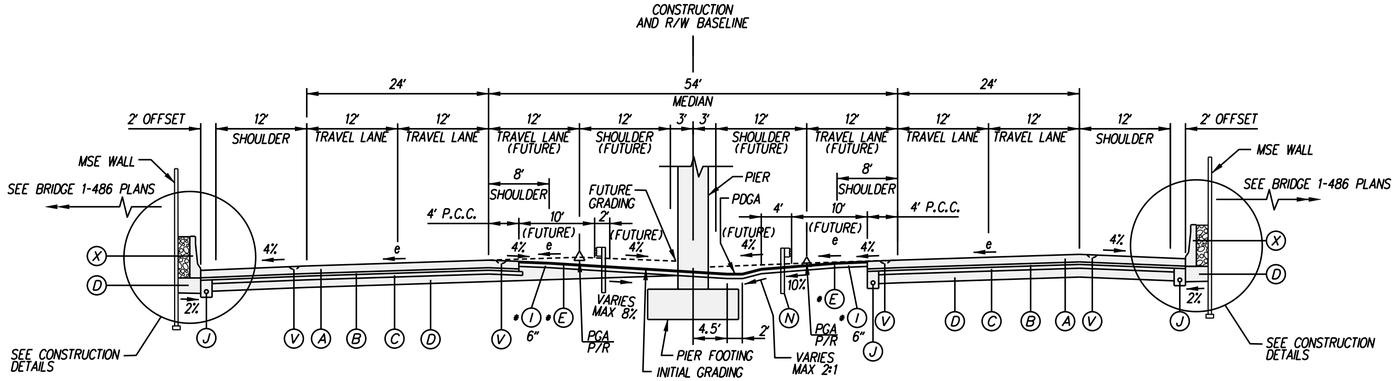


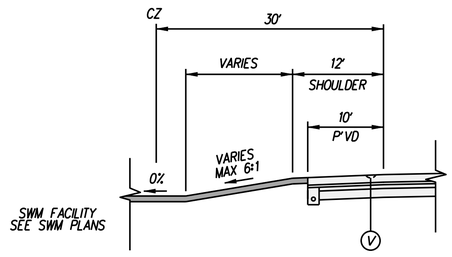
• MAINTENANCE PAVEMENT IS ONLY UNDER THE STRUCTURE FROM STA 138+35.00 TO STA 139+00.00

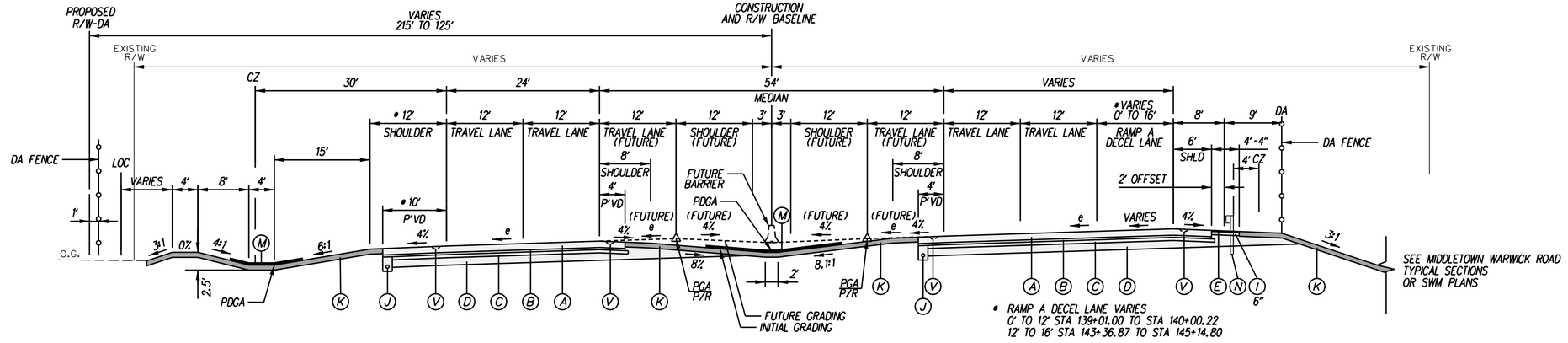
TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES UNDER STRAWBERRY LANE

NB STATION 138+15.72 TO STATION 139+44.30

SB STATION 137+82.04 TO STATION 139+23.60

e_{MAX} = 3.2%





• PAVED SHOULDER VARIES FROM 10' TO 14' STATION 137+00 TO STATION 137+82.04

• RAMP A DECEL LANE VARIES
0' TO 12' STA 139+01.00 TO STA 140+00.22
12' TO 16' STA 143+36.87 TO STA 145+14.80

TYPICAL SUPERELEVATED SECTION US 301 (LEFT)

SB STATION 128+00.00 TO STATION 132+00.00

TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES & DECEL LANE

NB STATION 139+44.30 TO STATION 145+14.80

SB STATION 129+44.00 TO STATION 137+82.04

e_{MAX} = 3.2%

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–06

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	TYPICAL SECTIONS
COUNTY	CHECKED BY: MFM	
NEW CASTLE		

SHEET NO. 20
TOTAL SHTS. 850

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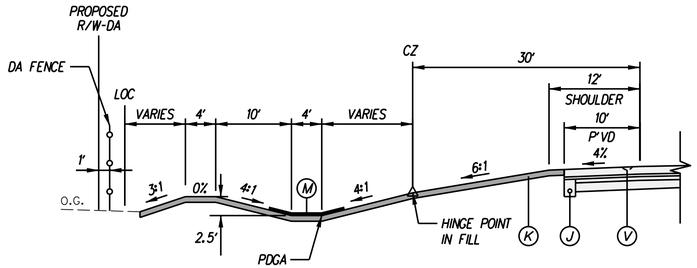
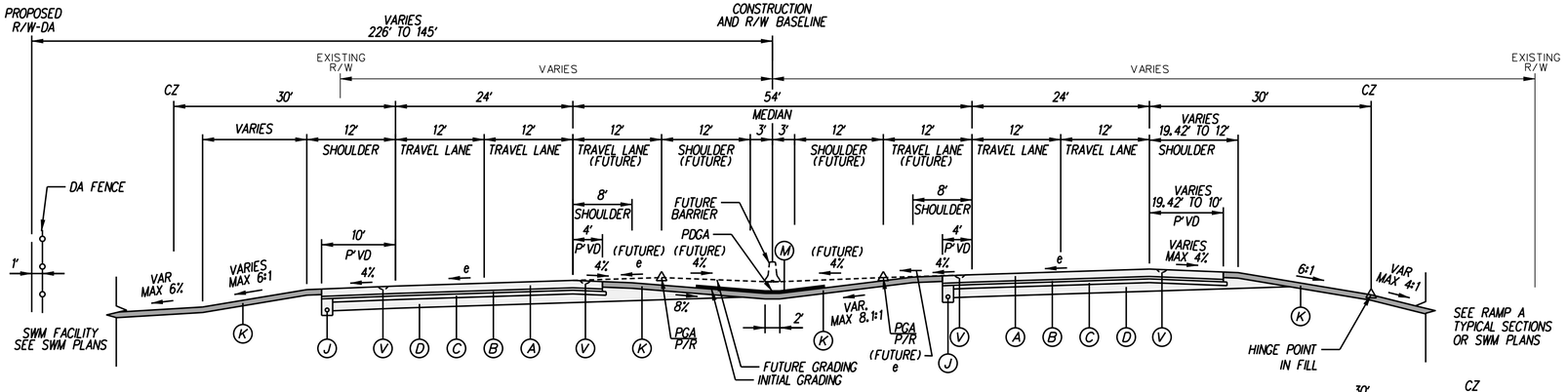
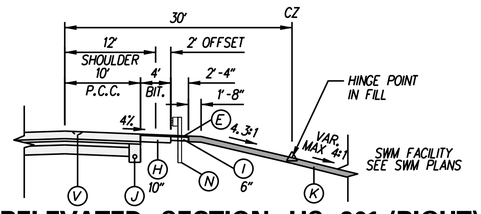


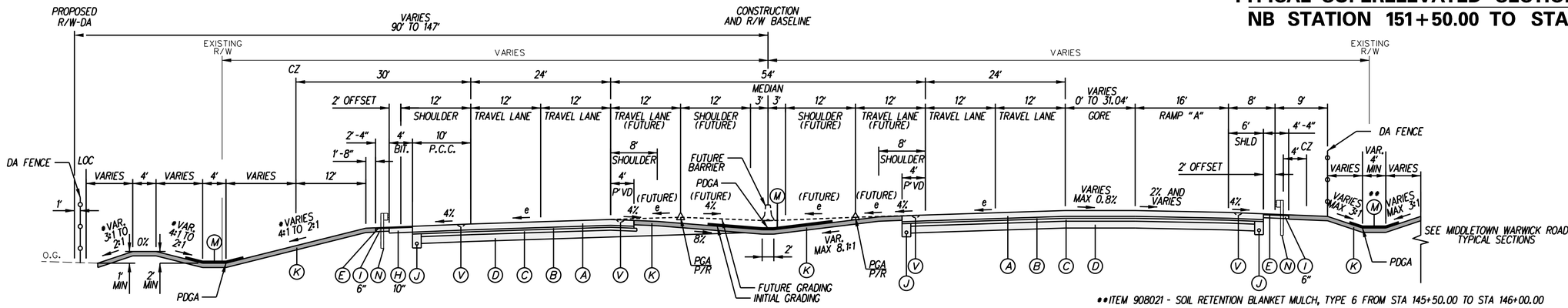
TYPICAL SUPERELEVATED SECTION (LEFT)
SB STATION 152+50.00 TO STATION 154+30.43



TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES
NB STATION 148+62.22 TO STATION 154+30.43
SB STATION 148+66.18 TO STATION 154+30.43
e_{MAX} = 3.2%



TYPICAL SUPERELEVATED SECTION US 301 (RIGHT)
NB STATION 151+50.00 TO STATION 153+76.80



•• ITEM 908021 - SOIL RETENTION BLANKET MULCH, TYPE 6 FROM STA 145+50.00 TO STA 146+00.00

• SLOPE TRANSITIONS FROM 4:1 AND 3:1 TO 2:1
STA 144+20.00 TO STA 144+70.00
SLOPE TRANSITIONS FROM 2:1 TO 4:1 AND 3:1
STA 145+25.00 TO STA 145+75.00

TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES & RAMP
NB STATION 145+14.80 TO STATION 148+62.22
SB STATION 139+23.60 TO STATION 148+66.18
e_{MAX} = 3.2%

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–07

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: E'S	
COUNTY	CHECKED BY: MFM	
NEW CASTLE		

TYPICAL SECTIONS

SHEET NO.
21
TOTAL SHTS.
850

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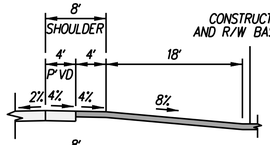
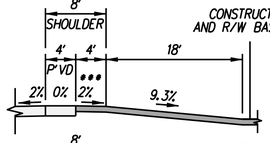


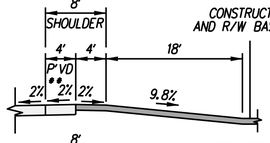
STA 178+10



••• VARIES 2% TO 4%
STA 176+90 TO STA 178+10

••• 2% STA 175+70 TO
STA 176+90

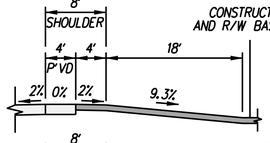
STA 175+70



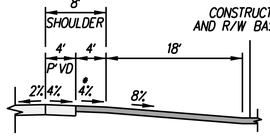
•• VARIES 2% TO 0%
STA 174+50 TO STA 175+70

•• 2% STA 165+00 TO STA 174+50

STA 165+00



STA 163+80

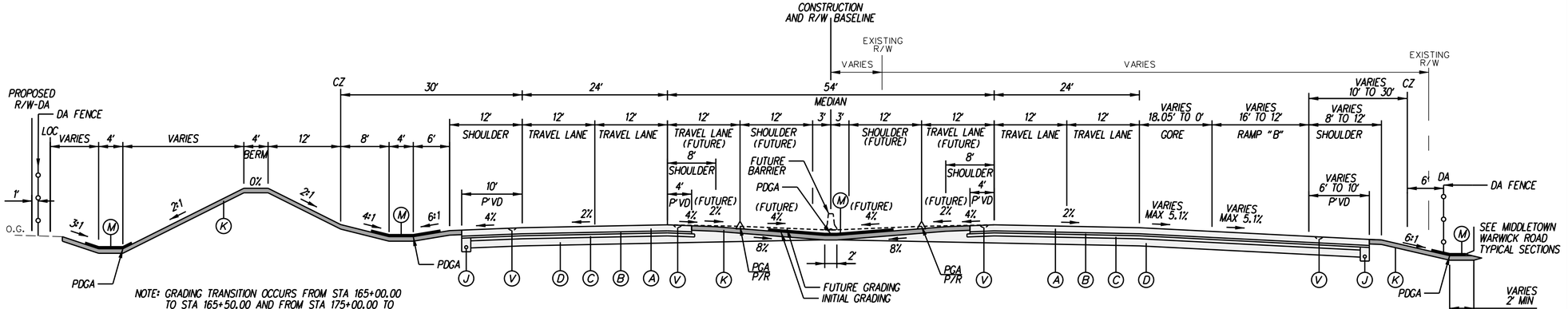


• 2% STA 162+60 TO STA 163+80

• VARIES 4% TO 2%
STA 161+40 TO STA 162+60

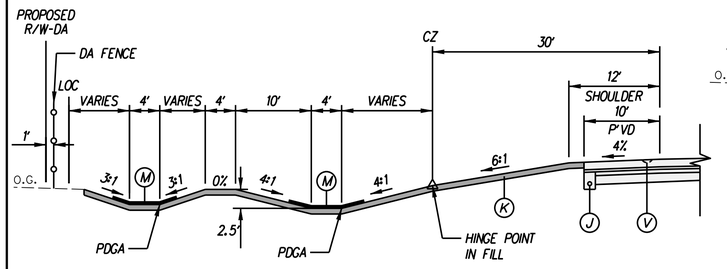
STA 161+40

SHOULDER TRANSITION DETAIL

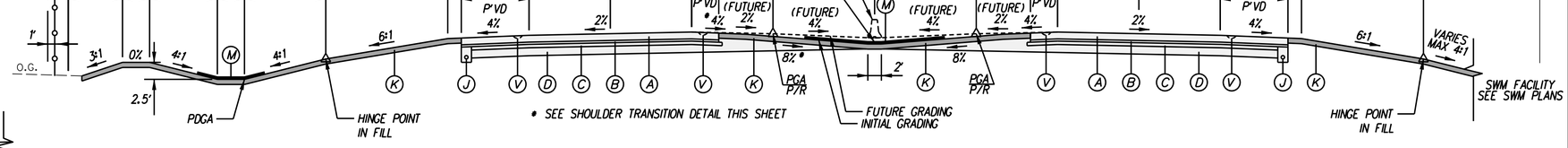


NOTE: GRADING TRANSITION OCCURS FROM STA 165+00.00 TO STA 165+50.00 AND FROM STA 175+00.00 TO STA 176+00.00. SEE GRADING DETAILS ON GG-50 AND GG-51.

TYPICAL NORMAL SECTION US 301 – FOUR LANES & RAMP
NB STATION 164+53.70 TO STATION 167+10.00
SB STATION 165+00.00 TO STATION 176+00.00



TYPICAL NORMAL SECTION US 301 (LEFT)
SB STATION 161+00.00 TO STATION 165+00.00



* SEE SHOULDER TRANSITION DETAIL THIS SHEET

TYPICAL NORMAL SECTION US 301 – FOUR LANES
NB STATION 154+30.43 TO STATION 164+53.70
SB STATION 154+30.43 TO STATION 165+00.00

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
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   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-08

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DELAWARE
DEPARTMENT OF TRANSPORTATION

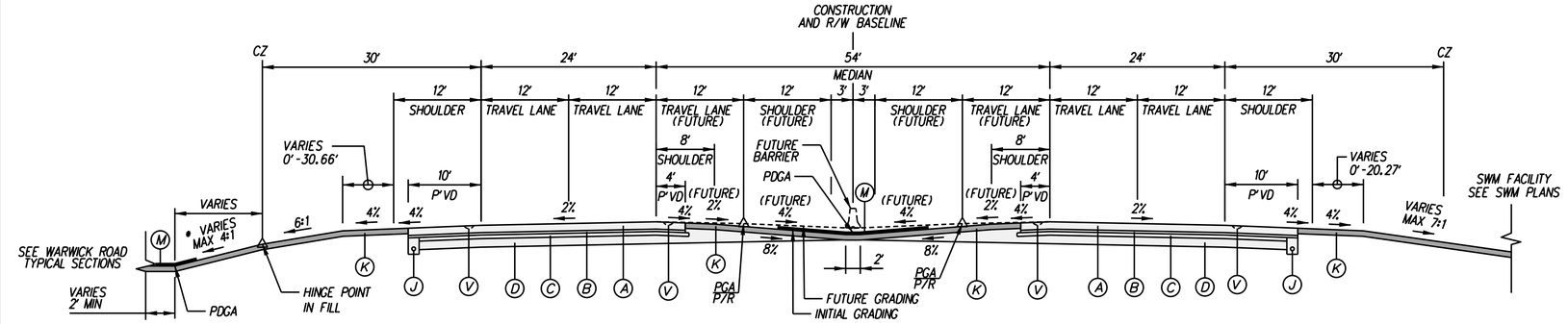
ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	TYPICAL SECTIONS
COUNTY	CHECKED BY: MFM	
NEW CASTLE		

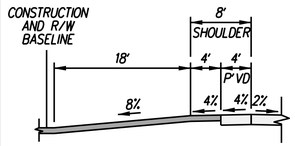
SHEET NO.
22
TOTAL SHTS.
850



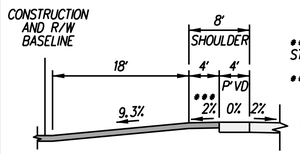
• SLOPE TRANSITION FROM 4:1 TO 6:1 FROM STA 190+25 TO STA 190+50

TYPICAL NORMAL SECTION US 301 – FOUR LANES

NB STATION 182+10.00 TO STATION 200+98.20
NB STATION 206+76.54 TO STATION 217+09.55
SB STATION 182+10.00 TO STATION 204+66.43
SB STATION 209+83.56 TO STATION 217+09.55

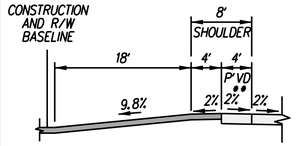


STA 181+60



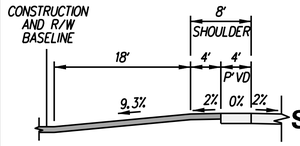
••• VARIES 2% TO 4% STA 180+40 TO STA 181+60
••• 2% STA 179+20 TO STA 180+40

STA 179+20

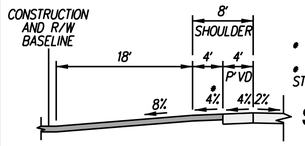


•• VARIES 2% TO 0% STA 178+00 TO STA 179+20
•• 2% STA 173+50 TO STA 178+00

STA 173+50



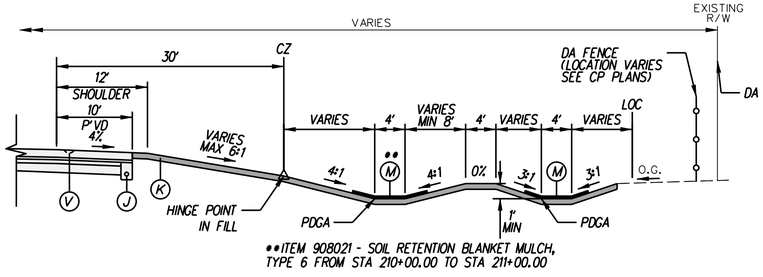
STA 172+30



• 2% STA 171+10 TO STA 172+30
• VARIES 4% TO 2% STA 169+90 TO STA 171+10

STA 169+90

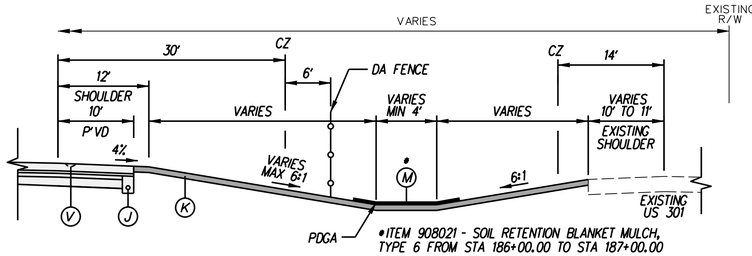
SHOULDER TRANSITION DETAIL



••ITEM 908021 - SOIL RETENTION BLANKET MULCH, TYPE 6 FROM STA 210+00.00 TO STA 211+00.00

TYPICAL SECTION US 301 (RIGHT)

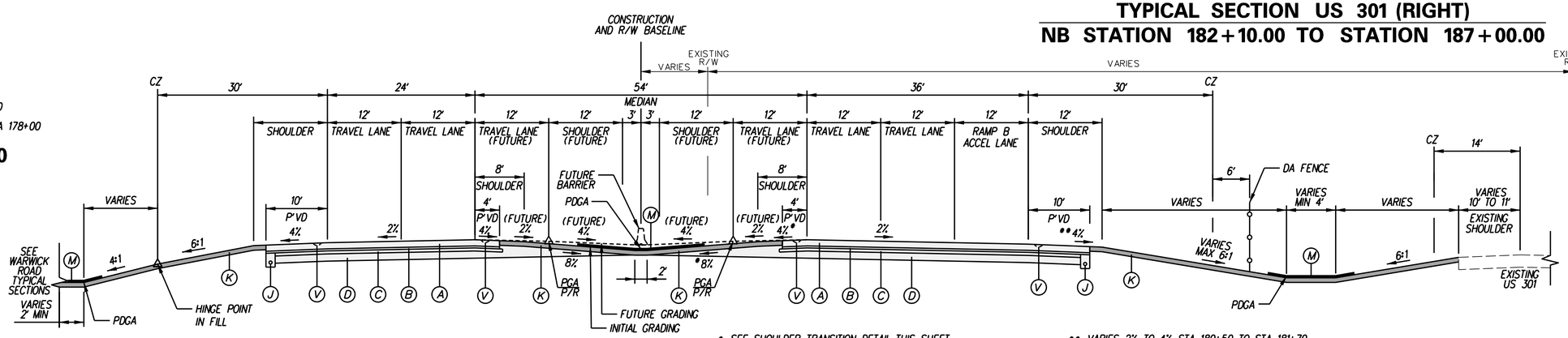
NB STATION 206+76.54 TO STATION 217+09.55



•ITEM 908021 - SOIL RETENTION BLANKET MULCH, TYPE 6 FROM STA 186+00.00 TO STA 187+00.00

TYPICAL SECTION US 301 (RIGHT)

NB STATION 182+10.00 TO STATION 187+00.00



• SEE SHOULDER TRANSITION DETAIL THIS SHEET

•• VARIES 2% TO 4% STA 180+50 TO STA 181+70
2% STA 174+40 TO STA 180+50
VARIES 4% TO 2% STA 173+20 TO STA 174+40

TYPICAL NORMAL SECTION US 301 – FOUR LANES & RAMP

NB STATION 167+10.00 TO STATION 182+10.00
SB STATION 176+00.00 TO STATION 182+10.00

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
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- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
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- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
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- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
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   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–09

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: E.S	TYPICAL SECTIONS
COUNTY	CHECKED BY: M.F.M	SHEET NO. 23
NEW CASTLE		TOTAL SHTS. 850

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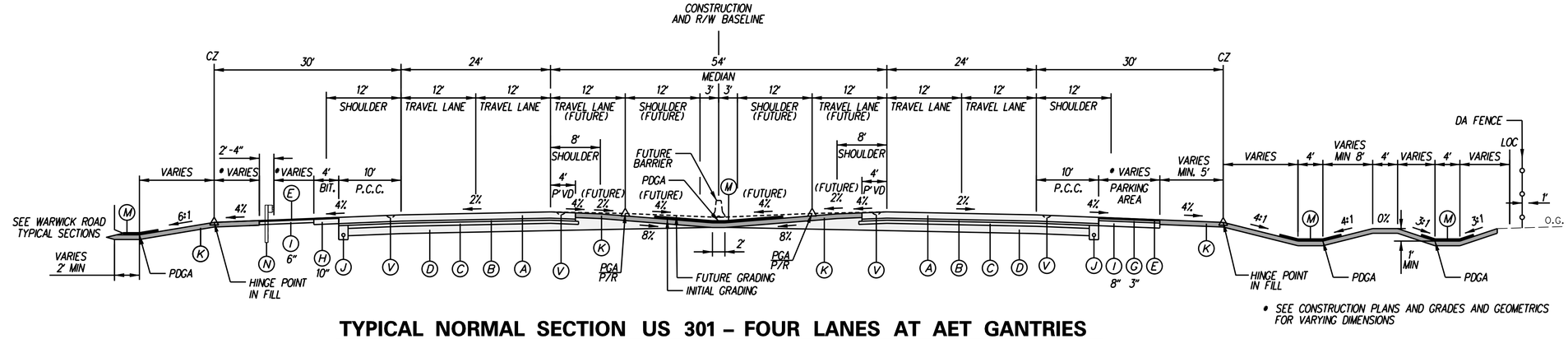
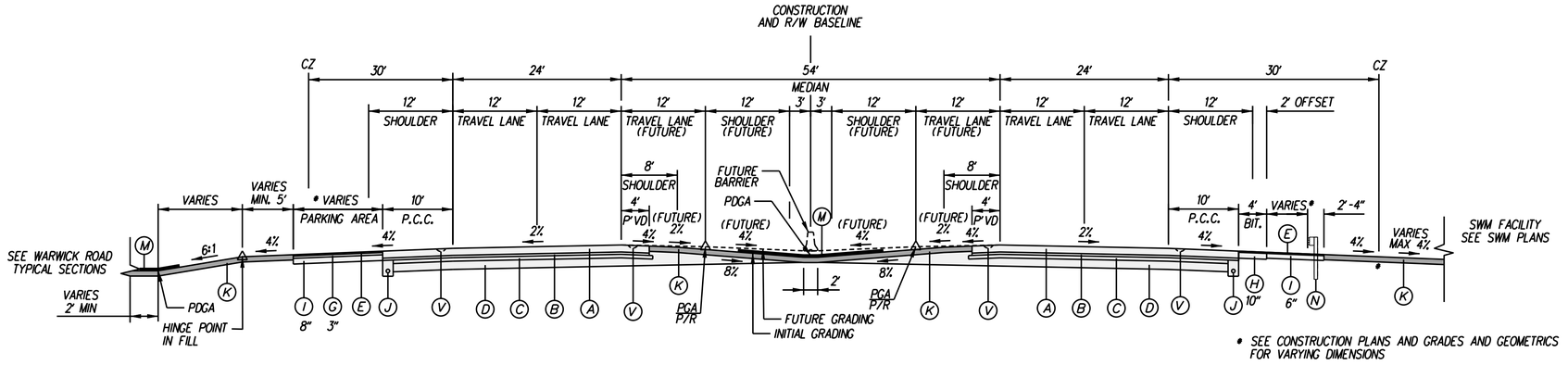


• SEE CONSTRUCTION PLANS AND GRADES AND GEOMETRICS FOR VARYING DIMENSIONS

TYPICAL NORMAL SECTION US 301 – FOUR LANES AT AET GANTRIES
NB STATION 206+09.55 TO STATION 206+76.54
SB STATION 205+33.57 TO STATION 209+83.56



• SEE CONSTRUCTION PLANS AND GRADES AND GEOMETRICS FOR VARYING DIMENSIONS

TYPICAL NORMAL SECTION US 301 – FOUR LANES AT AET GANTRIES
NB STATION 200+98.20 TO STATION 206+09.55
SB STATION 204+66.43 TO STATION 205+33.57

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–10

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	TYPICAL SECTIONS
COUNTY	CHECKED BY: MFM	SHEET NO. 24
NEW CASTLE		TOTAL SHTS. 850

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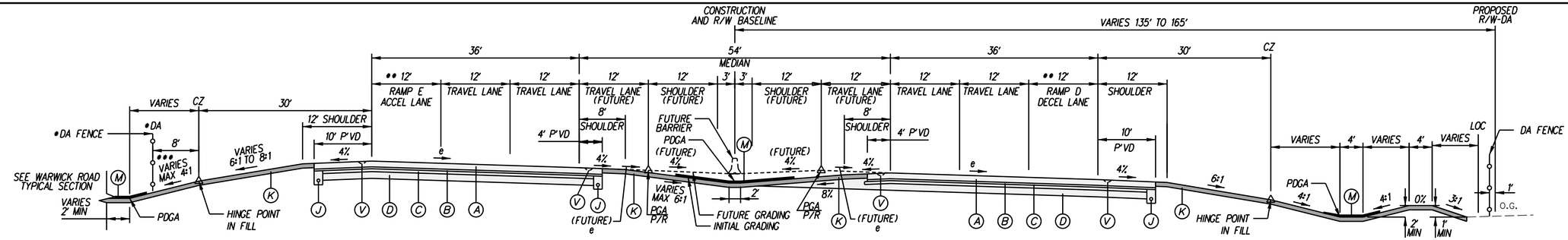
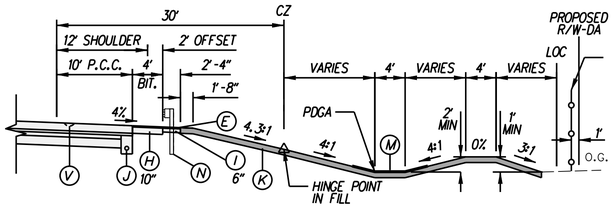


* DA AND FENCE TRANSITIONS FROM WARWICK ROAD TO US 301 MAINLINE STATION 225+41.24 TO STATION 226+00.00

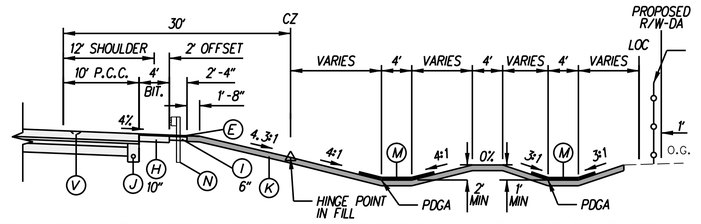
** RAMP D VARIES FROM 0' TO 12' STATION 235+06.00 TO STATION 237+56.00
RAMP E VARIES FROM 0' TO 12' STATION 227+26.00 TO STATION 230+26.00

*** SLOPE TRANSITIONS FROM 6:1 TO 4:1 FROM STATION 229+75 TO STATION 230+00

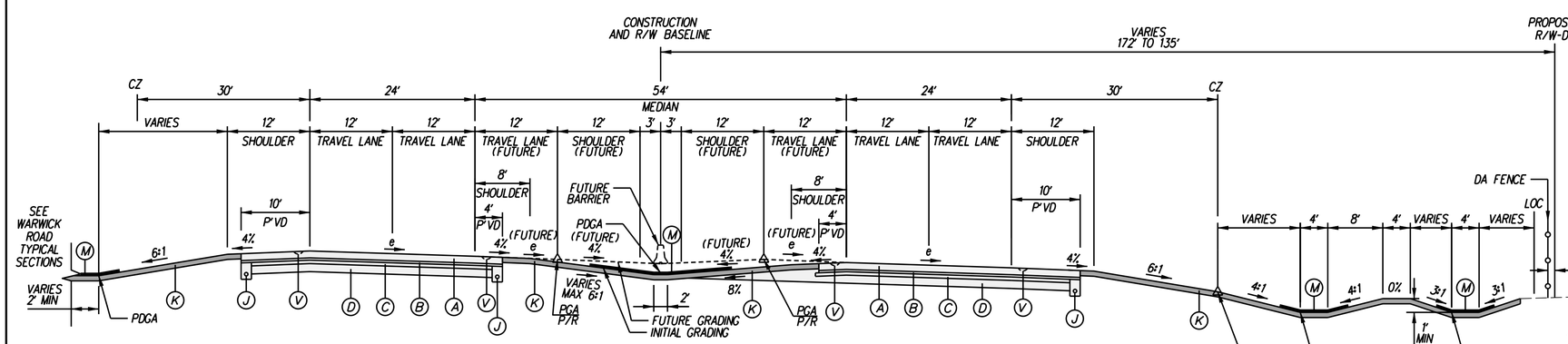
TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES & RAMPS
NB STATION 235+06.00 TO STATION 241+33.77
SB STATION 227+26.00 TO STATION 241+33.77
e_{MAX} = 3.8%



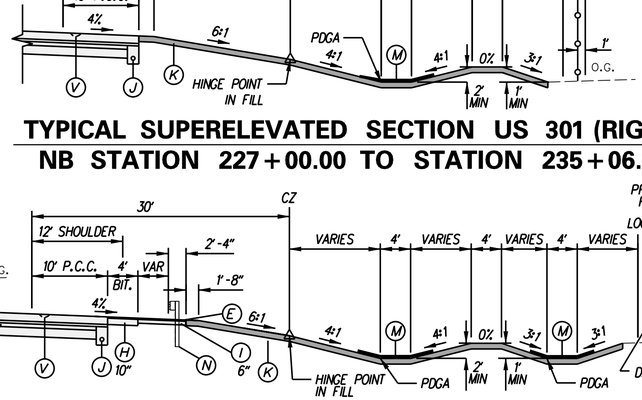
TYPICAL SUPERELEVATED SECTION US 301 (RIGHT)
NB STATION 239+15.73 TO STATION 239+75.00



TYPICAL SUPERELEVATED SECTION US 301 (RIGHT)
NB STATION 239+75.00 TO STATION 241+33.77



TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES
NB STATION 217+09.55 TO STATION 235+06.00
SB STATION 217+09.55 TO STATION 227+26.00
e_{MAX} = 3.8%



TYPICAL SUPERELEVATED SECTION US 301 (RIGHT)
NB STATION 227+00.00 TO STATION 235+06.00

TYPICAL SUPERELEVATED SECTION US 301 (RIGHT)
NB STATION 217+11.02 TO STATION 220+19.01

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–11

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

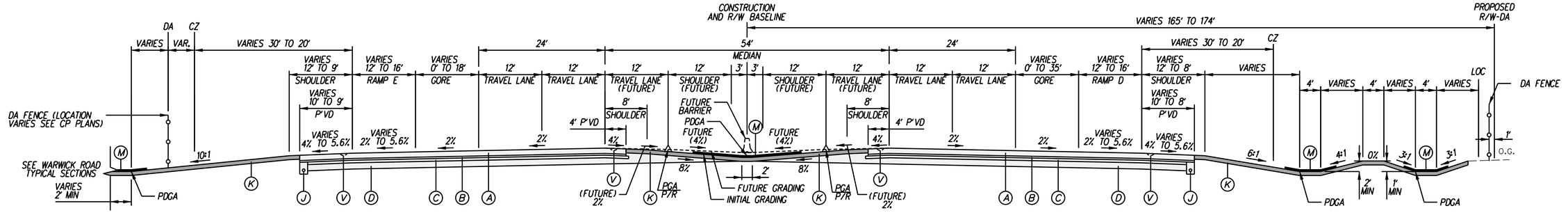
NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

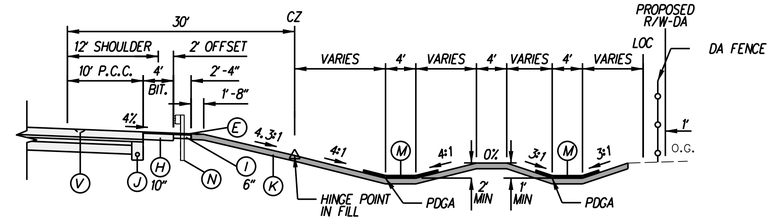
CONTRACT	BRIDGE NO.	
T200811301		
COUNTY	DESIGNED BY: ES	
NEW CASTLE	CHECKED BY: MFM	

TYPICAL SECTIONS

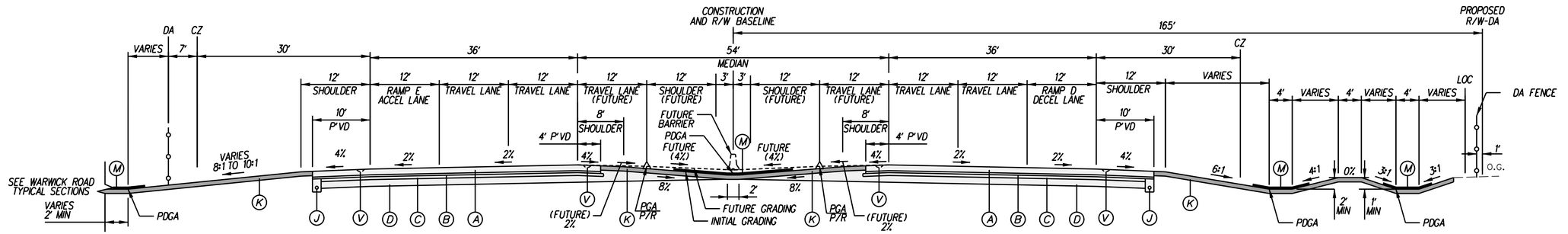
SHEET NO.
25
TOTAL SHTS.
850



TYPICAL NORMAL SECTION US 301 – FOUR LANES & RAMPS
NB STATION 242+56.18 TO STATION 245+59.64
SB STATION 242+26.00 TO STATION 244+54.92



TYPICAL NORMAL SECTION US 301 (RIGHT)
NB STATION 241+33.77 TO STATION 241+88.50



TYPICAL NORMAL SECTION US 301 – FOUR LANES & RAMPS
NB STATION 241+33.77 TO STATION 242+56.18
SB STATION 241+33.77 TO STATION 242+26.00

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
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- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
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   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–12

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	
COUNTY	CHECKED BY: MFM	
NEW CASTLE		

TYPICAL SECTIONS

SHEET NO. 26
TOTAL SHTS. 850

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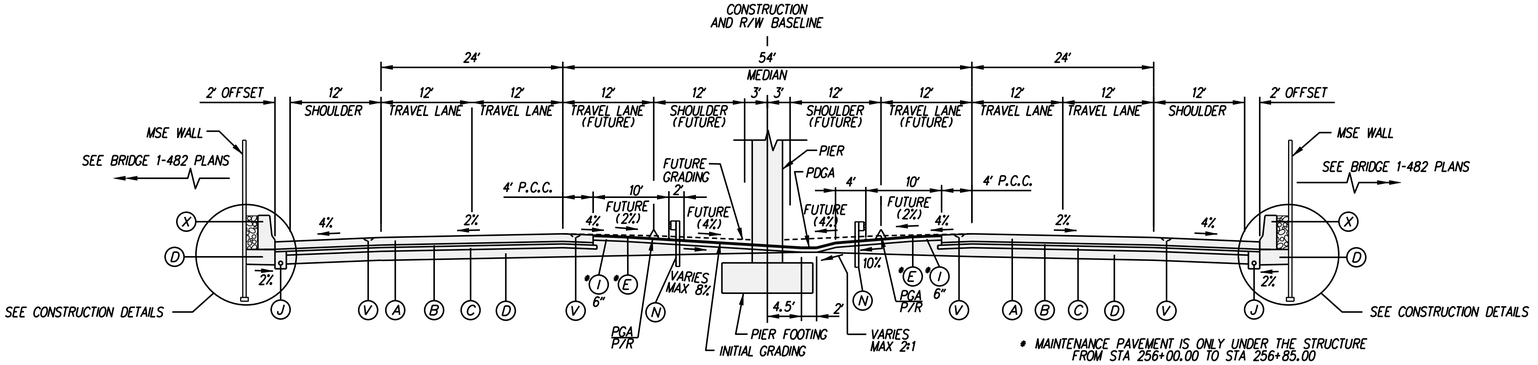
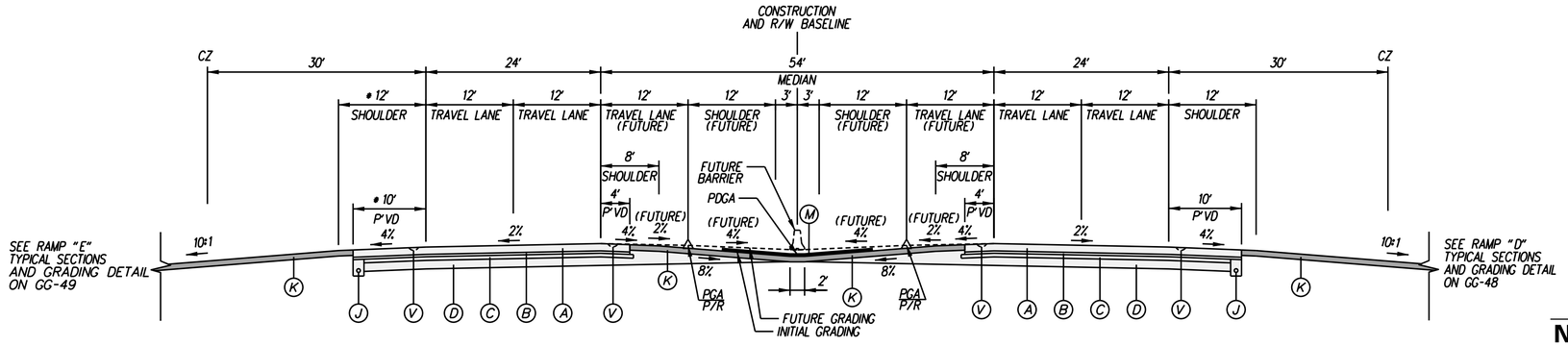


* MAINTENANCE PAVEMENT IS ONLY UNDER THE STRUCTURE FROM STA 256+00.00 TO STA 256+85.00

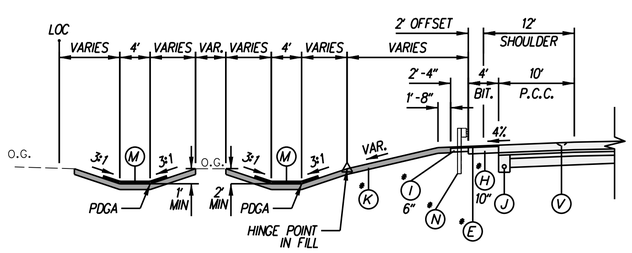
TYPICAL NORMAL SECTION US 301 – FOUR LANES UNDER LEVELS ROAD
STATION 255+53.00 TO STATION 257+33.00



* PAVED SHOULDER VARIES FROM 10' TO 14' STATION 254+53.07 TO STATION 255+53.00

TYPICAL NORMAL SECTION US 301 – FOUR LANES
NB STATION 245+59.64 TO STATION 255+53.00
***NB STATION 257+33.00 TO STATION 258+00.00**
SB STATION 244+54.92 TO STATION 255+53.00
***SB STATION 257+33.00 TO STATION 258+00.00**

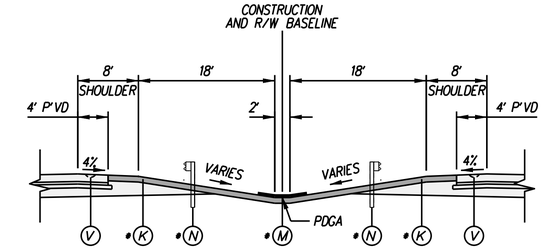
* SEE MEDIAN TRANSITION DETAIL



* H, I, K, E AND N TO BE CONSTRUCTED UNDER CONTRACT T200911303

TYPICAL NORMAL SECTION US 301 (LEFT)
SB STATION 257+32.99 TO STATION 258+00.00

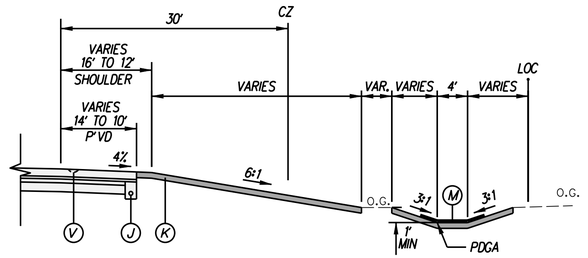
NOTE: SEE GG SHEETS AND CROSS SECTIONS FOR VARYING DIMENSIONS



* K, M, AND N TO BE CONSTRUCTED UNDER CONTRACT T200911303

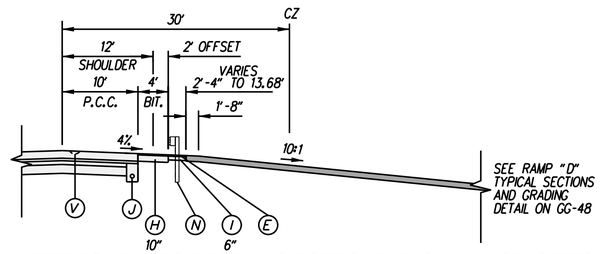
TYPICAL NORMAL SECTION US 301 – MEDIAN TRANSITION DETAIL
STATION 257+33.00 TO STATION 258+00.00

NOTES:
1. FOR GRADING NORTH OF STATION 258+00.00, SEE CONSTRUCTION DETAILS AND GG GRADING DETAILS.
2. SEE GG SHEETS AND CROSS SECTIONS FOR VARYING DIMENSIONS.



TYPICAL NORMAL SECTION US 301 (RIGHT)
NB STATION 257+32.99 TO STATION 258+00.00

NOTE: SEE GG SHEETS AND CROSS SECTIONS FOR VARYING DIMENSIONS



TYPICAL NORMAL SECTION US 301 (RIGHT)
NB STATION 254+09.71 TO STATION 255+52.99

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

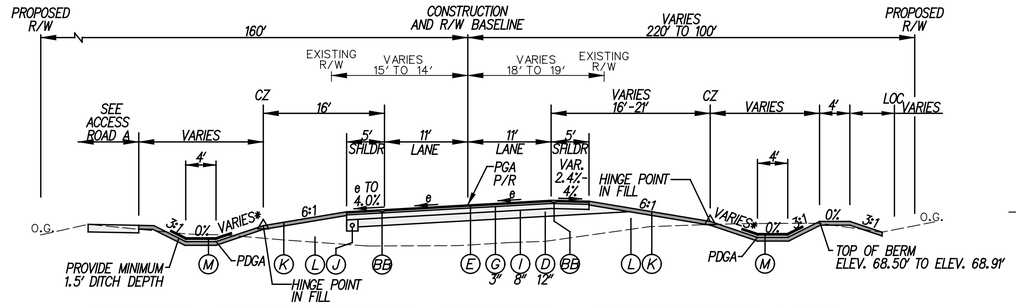
ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

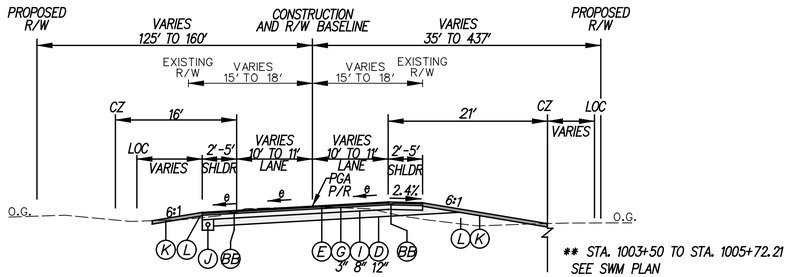
TS–13

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301 / COUNTY NEW CASTLE / BRIDGE NO. / DESIGNED BY: E'S / CHECKED BY: MFM	TYPICAL SECTIONS	SHEET NO. 27 / TOTAL SHTS. 850

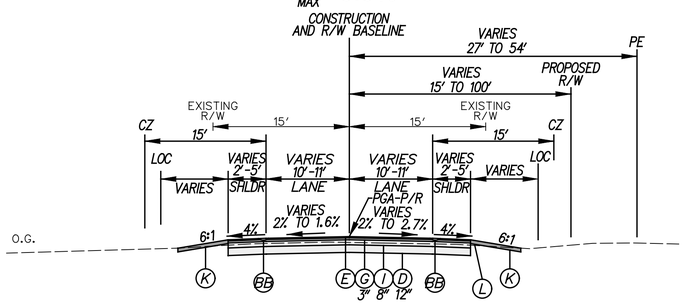
J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\TS_301AET_013.DGN



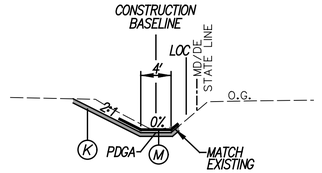
TYPICAL SUPERELEVATED SECTION – STRAWBERRY LANE
STATION 1004+75.00 TO STATION 1006+29.66
e_{MAX}=5.6%



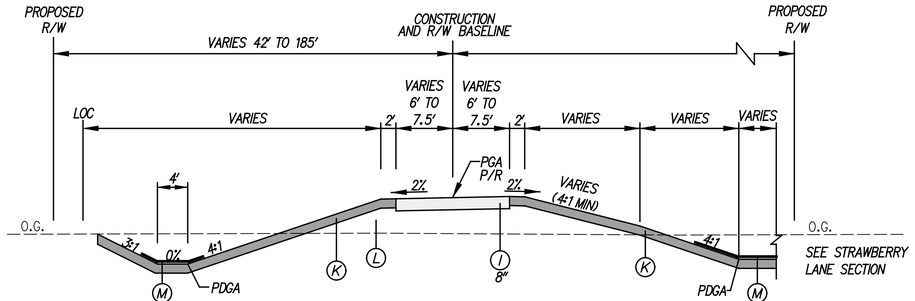
TYPICAL SUPERELEVATED SECTION – STRAWBERRY LANE
STATION 1001+13.59 TO STATION 1004+75.00
e_{MAX}=5.6%



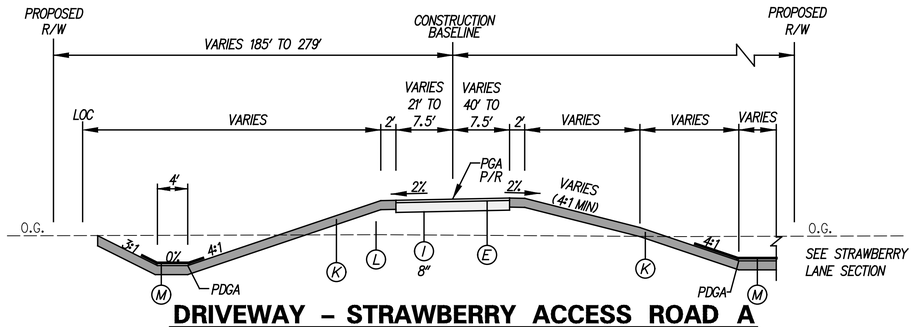
TYPICAL NORMAL SECTION – WILSON ST./STRAWBERRY LANE
STATION 1001+00.00 TO STATION 1001+13.59
STATION 1018+95.72 TO STATION 1020+59.94



TYPICAL SECTION – STRAWBERRY LANE DITCH



TYPICAL SECTION – STRAWBERRY ACCESS ROAD A
STATION 10+47.08 TO STATION 17+59.01



DRIVEWAY – STRAWBERRY ACCESS ROAD A
STATION 10+16.00 TO 10+47.08

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 733002 - TOPSOILING, 6" DEPTH
  ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 734013 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

* FILL SLOPE RATIO CHART	
HEIGHT OF EMBANKMENT	SLOPE RATIO
0'-5'	6:1
>5'-10'	4:1
>10'-15'	3:1
>15'	2:1 WITH GUARDRAIL

OR AS SHOWN IN CONTRACT DOCUMENTS

TS-14

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

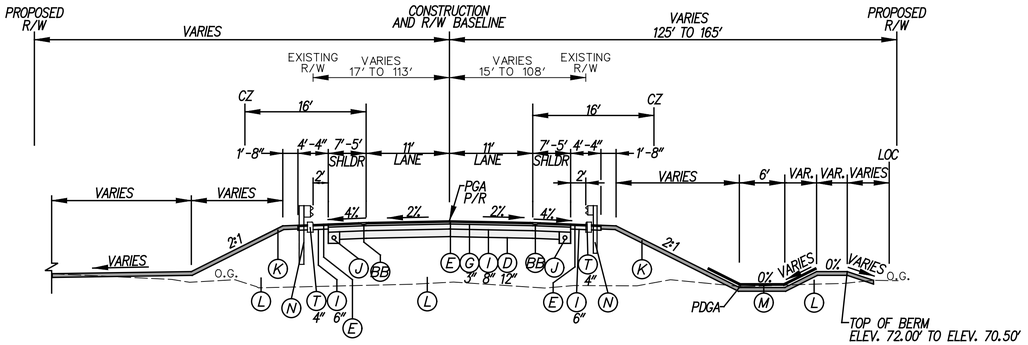
NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.
T200811301	DESIGNED BY: MAG/TAM
COUNTY	CHECKED BY: PAH
NEW CASTLE	

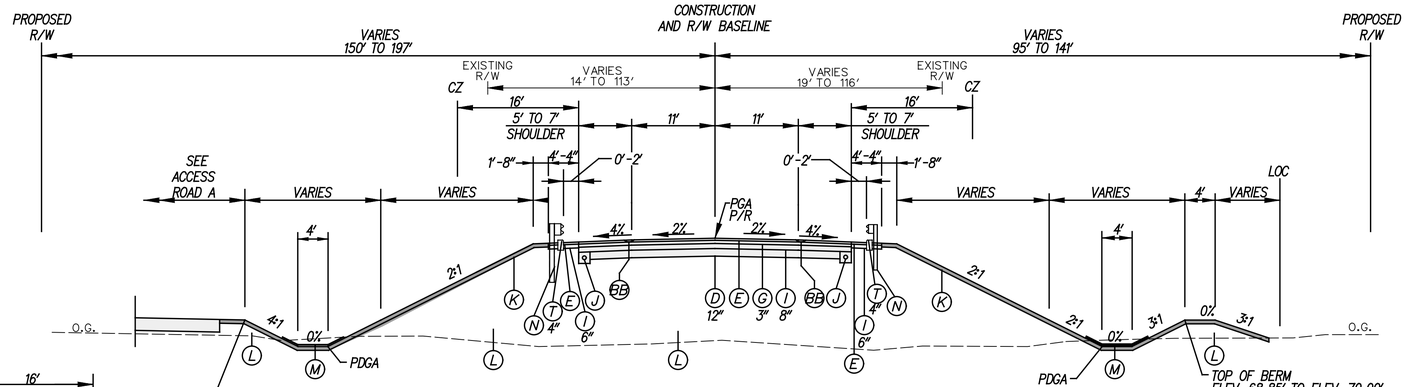
TYPICAL SECTIONS

SHEET NO.
28
TOTAL SHTS.
850

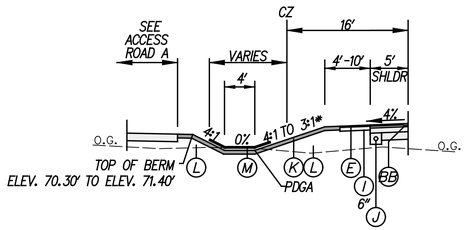


TYPICAL NORMAL SECTION – STRAWBERRY LANE
STATION 1012+30.10 TO STATION 1013+75.00

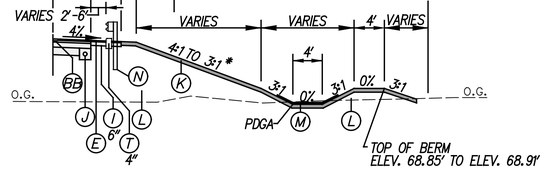
NOTE: PROPOSED BRIDGE FROM STA. 1010+37.83 TO STA.1012+30.10



TYPICAL NORMAL SECTION – STRAWBERRY LANE
STATION 1006+29.66 TO STATION 1010+37.83



TYPICAL NORMAL SECTION – STRAWBERRY LANE
STATION 1006+45.00 LT TO STATION 1007+75.00 LT



ALTERNATE SECTION – STRAWBERRY LANE
STATION 1006+29.66 RT TO STATION 1007+50.00 RT

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 733002 - TOPSOILING, 6" DEPTH
  ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 734013 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

* FILL SLOPE RATIO CHART	
HEIGHT OF EMBANKMENT	SLOPE RATIO
0'-5'	6:1
>5'-10'	4:1
>10'-15'	3:1
>15'	2:1 WITH GUARDRAIL

OR AS SHOWN IN CONTRACT DOCUMENTS

TS-15

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

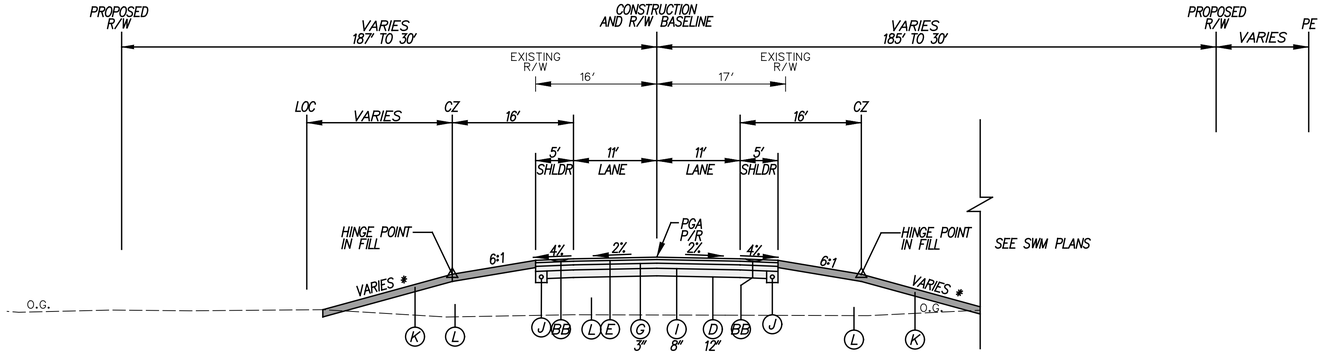
NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

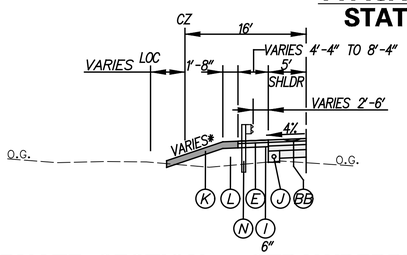
CONTRACT	BRIDGE NO.
T200811301	DESIGNED BY: MAG/TAM
COUNTY	CHECKED BY: PAH
NEW CASTLE	

TYPICAL SECTIONS

SHEET NO.
29
TOTAL SHTS.
850

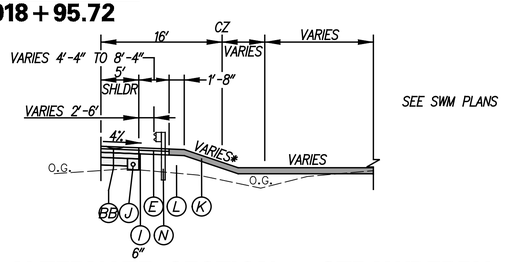


TYPICAL NORMAL SECTION – STRAWBERRY LANE
STATION 1013+75.00 TO STATION 1018+95.72



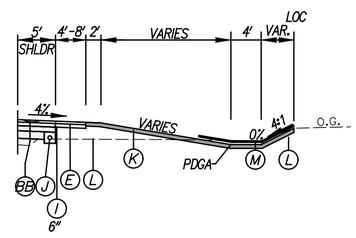
ALTERNATE SECTION – STRAWBERRY LANE
STATION 1016+00.00 LT. TO STATION 1017+30.00 LT.

GRADING FOR GUARDRAIL AND END TREATMENT ATTENUATOR, TYPE 2 STA. 1016+25.00, LT.

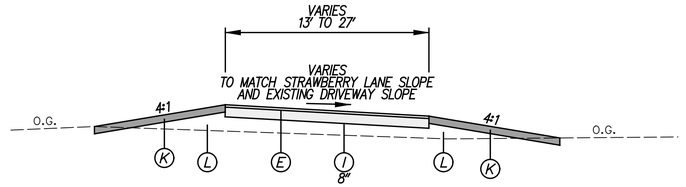


ALTERNATE SECTION – STRAWBERRY LANE
STATION 1015+25.00 RT. TO STATION 1016+55.00 RT.

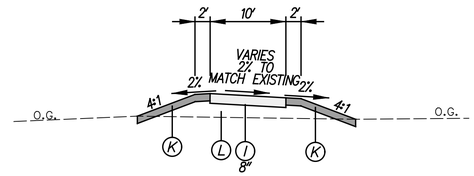
GRADING FOR END TREATMENT ATTENUATOR, TYPE 2 STA. 1015+50.00, RT.



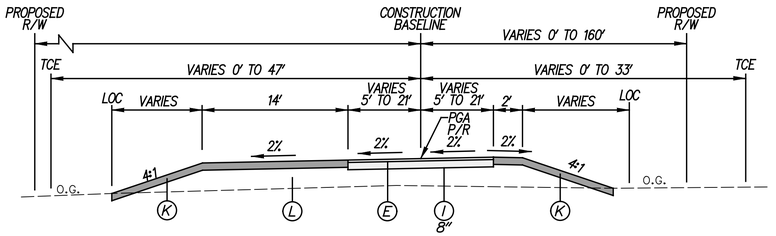
ALTERNATE SECTION – STRAWBERRY LANE
STATION 1017+86.50 RT. TO STATION 1018+96.00 RT.



DRIVEWAY
STATION 1020+37.00 RT. (STRAWBERRY LANE)



DRIVEWAY
STATION 1005+67.55 RT. (STRAWBERRY LANE)



STRAWBERRY ACCESS ROAD B /DRIVEWAY
STATION 20+16.00 TO STATION 23+07.83

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 733002 - TOPSOILING, 6" DEPTH
  ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

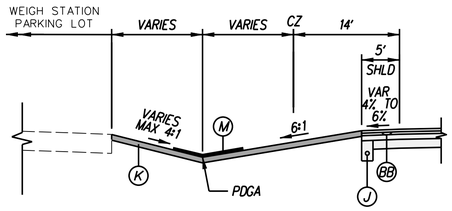
1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 734013 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

* FILL SLOPE RATIO CHART	
HEIGHT OF EMBANKMENT	SLOPE RATIO
0'-5'	6:1
>5'-10'	4:1
>10'-15'	3:1
>15'	2:1 WITH GUARDRAIL

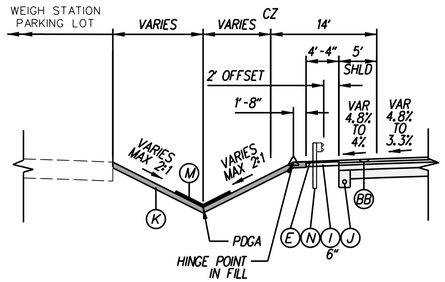
OR AS SHOWN IN CONTRACT DOCUMENTS

TS-16

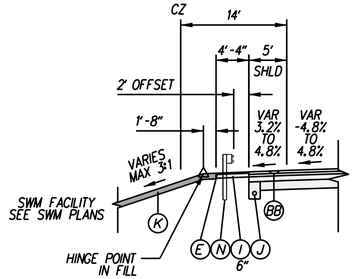
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301	BRIDGE NO.	TYPICAL SECTIONS	SHEET NO. 30
				COUNTY NEW CASTLE	DESIGNED BY: MAG/TAM		TOTAL SHTS. 850
					CHECKED BY: PAH		



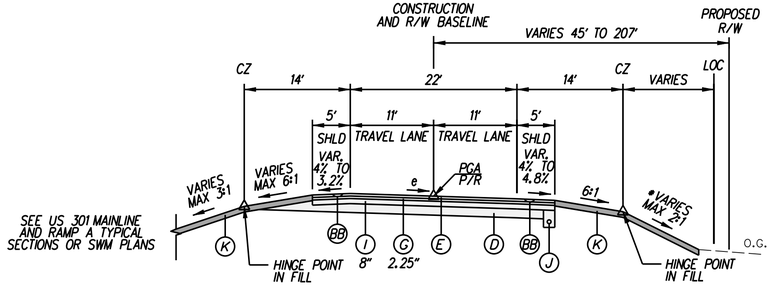
MIDDLETOWN WARWICK ROAD (LEFT)
STATION 1116+88.85 TO STATION 1121+75.00



MIDDLETOWN WARWICK ROAD (LEFT)
STATION 1115+50.00 TO STATION 1116+88.85

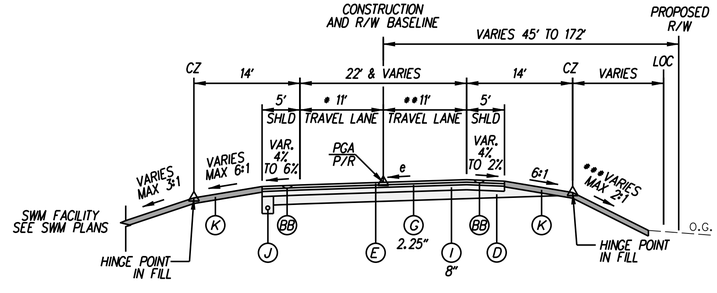


MIDDLETOWN WARWICK ROAD (LEFT)
STATION 1110+34.30 TO STATION 1115+50.00



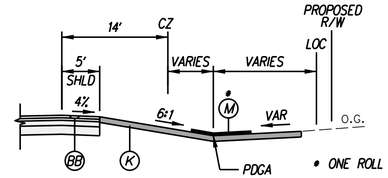
* 4:1 FROM STATION 1104+36.16 TO STATION 1104+50.00
4:1 FROM STATION 1110+00.00 TO STATION 1110+25.00
SLOPE TRANSITIONS FROM 4:1 TO 2:1 STATION 1110+25.00 TO STATION 1110+50.00
2:1 FROM STATION 1110+50.00 TO STATION 1112+63.98

TYPICAL SUPERELEVATED SECTION – MIDDLETOWN WARWICK ROAD
e_{MAX}=4.8% FOR STATION 1104+36.16 TO STATION 1112+63.98

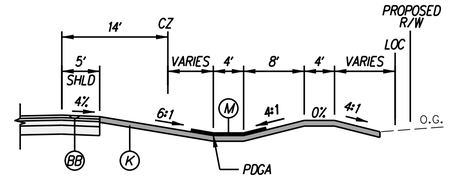


* VARIES FROM 15.07' TO 11.00' STATION 1100+52.14 TO STATION 1100+71.85
** VARIES FROM 21.18' TO 11.00' STATION 1100+52.14 TO STATION 1101+01.09
*** 2:1 FROM STATION 1100+52.14 TO STATION 1102+40.62
2:1 FROM STATION 1112+63.98 TO STATION 1117+50.00
SLOPE TRANSITIONS FROM 2:1 TO 4:1 STATION 1117+50.00 TO STATION 1118+00.00

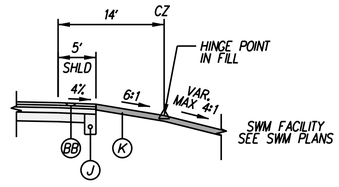
TYPICAL SUPERELEVATED SECTION – MIDDLETOWN WARWICK ROAD
e_{MAX}=2.0% FOR STATION 1100+52.14 TO STATION 1102+40.62
e_{MAX}=4.8% FOR STATION 1112+63.98 TO STATION 1116+53.08
e_{MAX}=3.3% FOR STATION 1116+53.08 TO STATION 1119+01.46
e_{MAX}=6.0% FOR STATION 1119+01.46 TO STATION 1123+50.60



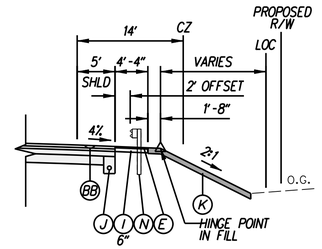
MIDDLETOWN WARWICK ROAD (RIGHT)
STATION 1120+00.00 TO STATION 1122+72.00



MIDDLETOWN WARWICK ROAD (RIGHT)
STATION 1118+00.00 TO STATION 1120+00.00



MIDDLETOWN WARWICK ROAD (RIGHT)
STATION 1104+50.00 TO STATION 1110+00.00



MIDDLETOWN WARWICK ROAD (RIGHT)
STATION 1100+52.14 TO STATION 1102+40.62

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–17

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.		TYPICAL SECTIONS	SHEET NO.
T200811301	DESIGNED BY: ES			31
COUNTY	CHECKED BY: MFM			TOTAL SHTS.
NEW CASTLE				850

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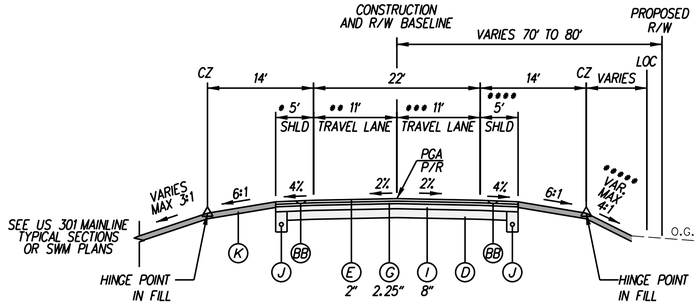
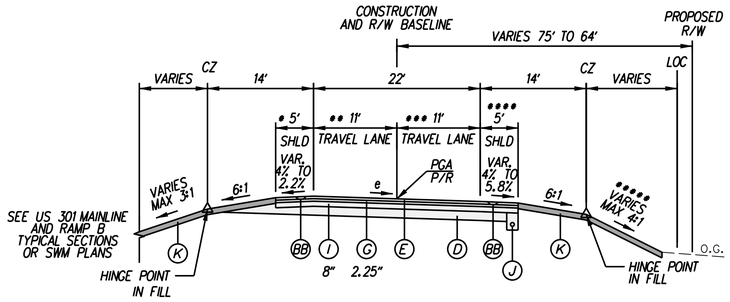
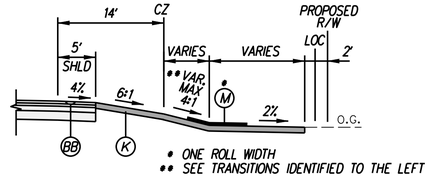


TYPICAL NORMAL SECTION – MIDDLETOWN WARWICK ROAD
STATION 1102+40.62 TO STATION 1104+36.16
STATION 1123+50.60 TO STATION 1124+32.36
STATION 1129+88.79 TO STATION 1130+00.00

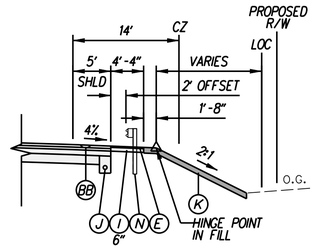
- • VARIES FROM 5' TO 10.39' STATION 1128+55.01 TO STATION 1130+00.00
- •• VARIES FROM 11' TO 12.10' STATION 1125+45.67 TO STATION 1128+79.30
- ••• VARIES FROM 11' TO 12.08' STATION 1125+41.58 TO STATION 1128+75.76
- •••• VARIES FROM 5' TO 13.69' FROM STATION 1128+77.53 TO STATION 1130+00.00
- ••••• 4:1 FROM STATION 1103+07.50 TO STATION 1104+36.16
  6:1 FROM STATION 1123+50.00 TO STATION 1123+75.00
  SLOPE TRANSITIONS FROM 6:1 TO 4:1 STATION 1123+75.00 TO STATION 1124+00.00
  4:1 FROM STATION 1124+00 TO STATION 1127+75.00



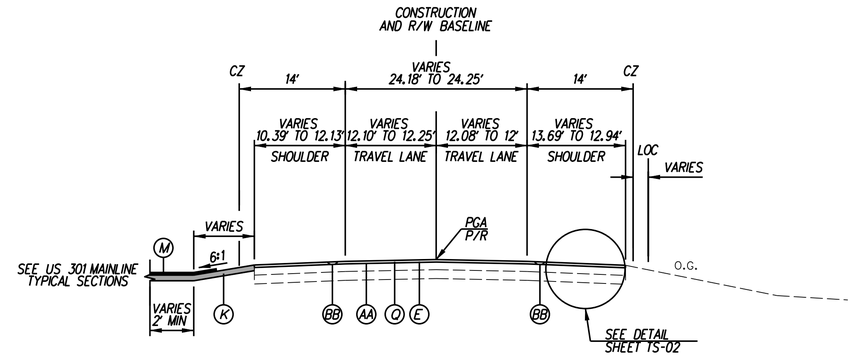
TYPICAL SUPERELEVATED SECTION – MIDDLETOWN WARWICK ROAD
e_{MAX} = 5.8% FOR STATION 1124+32.36 TO STATION 1129+88.79



MIDDLETOWN WARWICK ROAD (RIGHT)
STATION 1123+50.60 TO STATION 1125+75.00



MIDDLETOWN WARWICK ROAD (RIGHT)
STATION 1102+40.62 TO STATION 1103+07.50



TYPICAL NORMAL SECTION – EXISTING MIDDLETOWN WARWICK ROAD
STATION 1130+00.00 TO STATION 1131+45.00

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–18

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: E.S	TYPICAL SECTIONS
COUNTY	CHECKED BY: M.F.M	SHEET NO. 32
NEW CASTLE		TOTAL SHTS. 850

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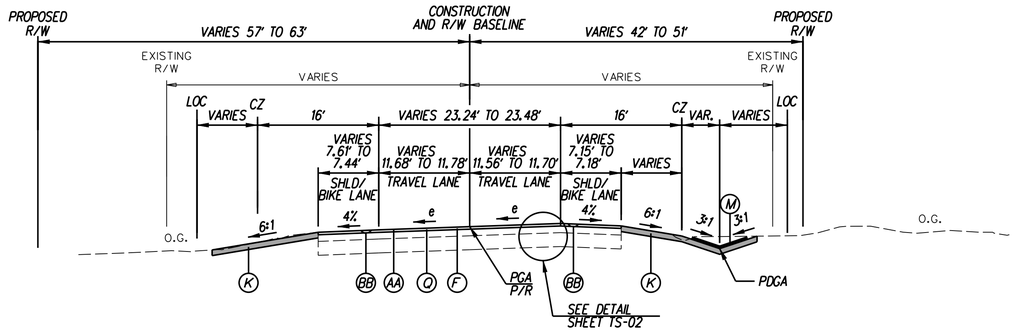
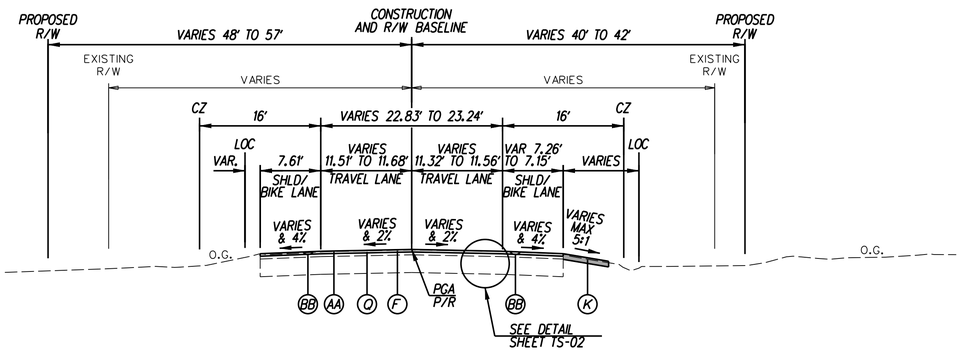


TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES
STATION 1202+07.10 TO STATION 1202+40.00
e_{MAX} = 4.8%



TYPICAL NORMAL SECTION WARWICK ROAD – TWO LANES
STATION 1201+50.00 TO STATION 1202+07.10

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–19

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301	BRIDGE NO.	TYPICAL SECTIONS
				COUNTY NEW CASTLE	DESIGNED BY: E'S	SHEET NO. 33
					CHECKED BY: MFM	TOTAL SHTS. 850

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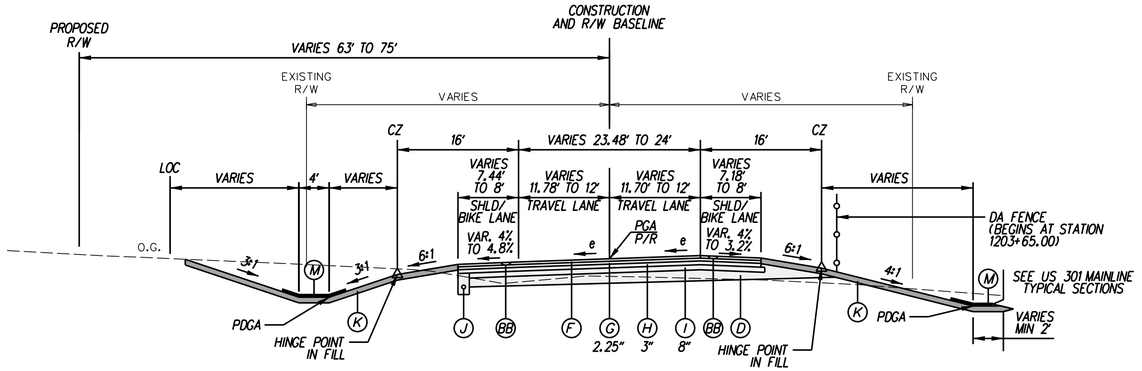
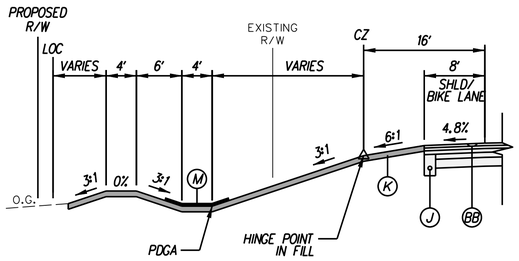
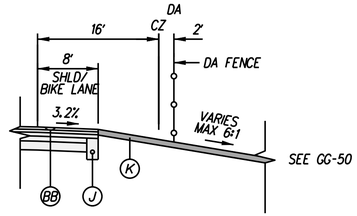


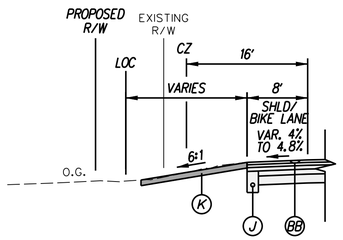
TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES
STATION 1202+40.00 TO STATION 1212+47.24
e_{MAX}=4.8%



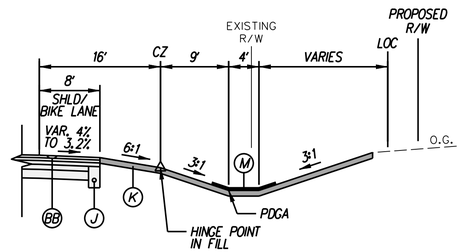
TYPICAL SUPERELEVATED SECTION (LEFT)
STATION 1205+50.00 STATION 1207+00.00



TYPICAL SUPERELEVATED SECTION (RIGHT)
STATION 1203+75.00 TO STATION 1207+00.00



TYPICAL SUPERELEVATED SECTION (LEFT)
STATION 1202+40.00 STATION 1205+50.00



TYPICAL SUPERELEVATED SECTION (RIGHT)
STATION 1202+50.00 TO STATION 1203+75.00

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–20

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.		SHEET NO.
T200811301	DESIGNED BY: ES	TYPICAL SECTIONS	34
COUNTY	CHECKED BY: MFM		TOTAL SHTS.
NEW CASTLE			850

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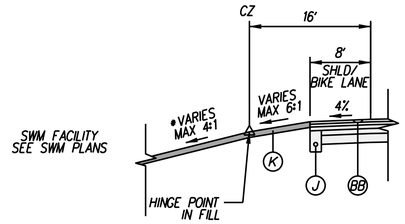
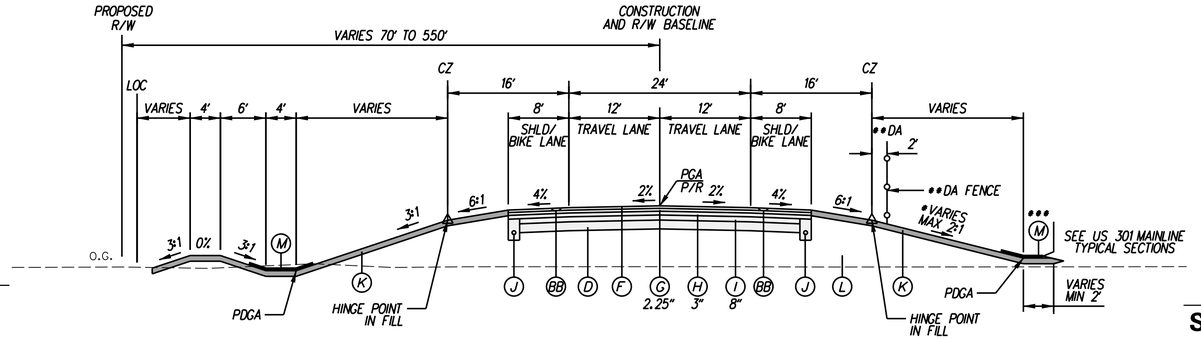
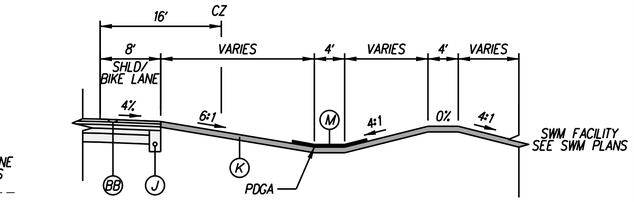


TYPICAL NORMAL SECTION (LEFT)
STATION 1218+50.00 TO STATION 1225+50.00

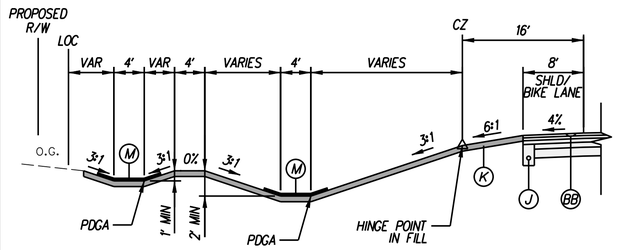




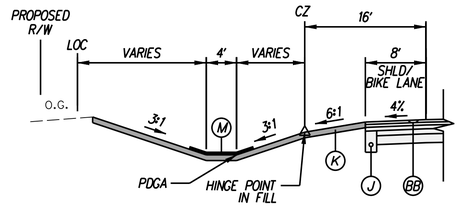
TYPICAL NORMAL SECTION (RIGHT)
STATION 1280+59.79 TO STATION 1282+16.79

- • 4:1 FROM STATION 1212+47.24 TO STATION 1220+25.00
  SLOPE TRANSITIONS FROM 4:1 TO 6:1 STATION 1220+25.00 TO STATION 1220+50.00
  6:1 FROM STATION 1220+50.00 TO STATION 1260+25.00
  SLOPE TRANSITIONS FROM 6:1 TO 4:1 STATION 1260+25.00 TO STATION 1260+50.00
  4:1 FROM STATION 1260+50.00 TO STATION 1268+16.01
- •• DA AND DA FENCE TRANSITIONS FROM WARWICK ROAD TO US 301 MAINLINE STATION 1255+75.00 TO STATION 1256+36.92
- ••• ITEM 908021 - SOIL RETENTION BLANKET MULCH, TYPE 6 FROM STA 1240+00.00 TO STA 1241+00.00

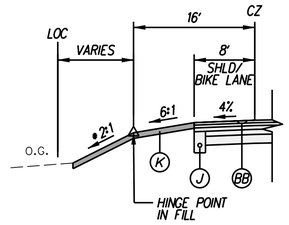
TYPICAL NORMAL SECTION WARWICK ROAD – TWO LANES
STATION 1212+47.24 TO STATION 1268+16.01
STATION 1280+59.79 TO STATION 1282+16.79



TYPICAL NORMAL SECTION (LEFT)
STATION 1214+75.00 TO STATION 1218+50.00
STATION 1227+50.00 TO STATION 1240+30.00

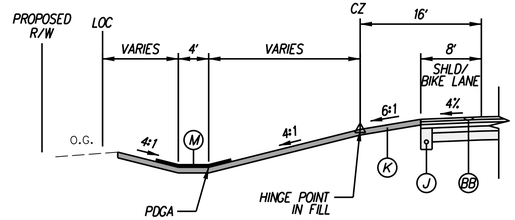


TYPICAL NORMAL SECTION (LEFT)
STATION 1212+47.24 TO STATION 1214+75.00
STATION 1249+00.00 TO STATION 1250+80.00
STATION 1261+60.00 TO STATION 1265+75.00



• SLOPE TRANSITIONS FROM 4:1 TO 2:1 STATION 1225+50.00 TO STATION 1226+25.00

TYPICAL NORMAL SECTION (LEFT)
STATION 1225+50.00 TO STATION 1227+50.00



TYPICAL NORMAL SECTION (LEFT)
STATION 1280+59.79 TO STATION 1282+16.79

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–21

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	TYPICAL SECTIONS
COUNTY	CHECKED BY: MFM	SHEET NO. 35
NEW CASTLE		TOTAL SHTS. 850

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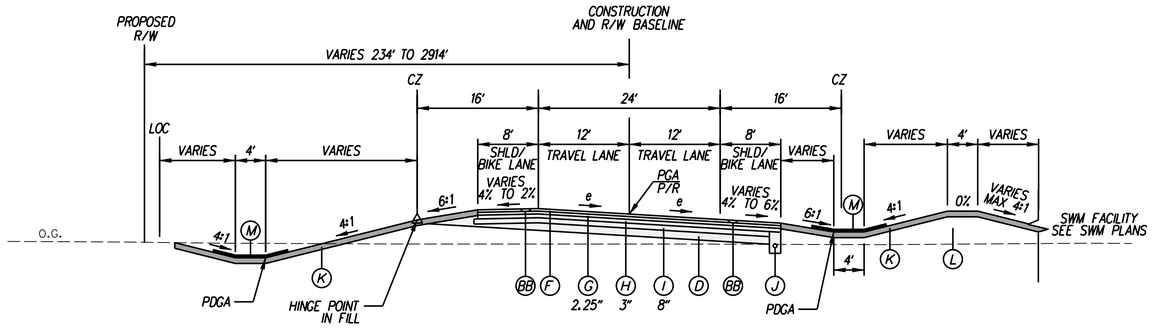
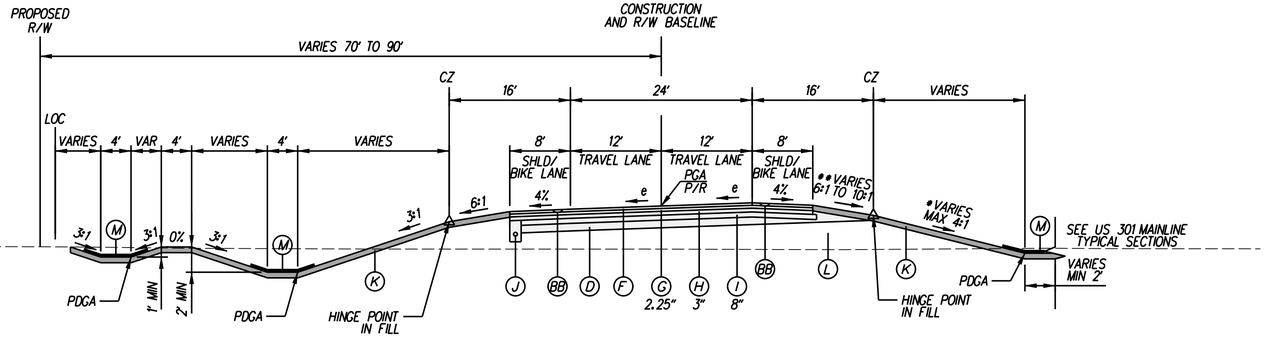
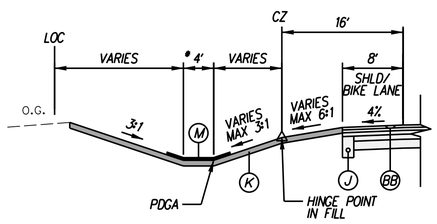


TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES
STATION 1282+16.79 TO STATION 1285+73.09
e_{MAX}= 6.0%



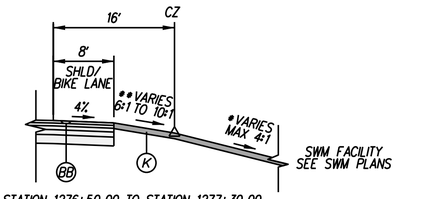
* 4:1 FROM STATION 1268+16.01 TO STATION 1270+40.00
SLOPE TRANSITIONS FROM 4:1 TO 10:1 STATION 1270+40.00 TO STATION 1272+80.00
10:1 FROM STATION 1272+80.00 TO STATION 1276+50.00
** 6:1 FROM STATION 1268+16.01 TO STATION 1270+40.00
SLOPE TRANSITIONS FROM 6:1 TO 10:1 STATION 1270+40.00 TO STATION 1272+80.00
10:1 FROM STATION 1272+80.00 TO STATION 1276+50.00

TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES
STATION 1268+16.01 TO STATION 1280+59.79
e_{MAX}= 3.5%



* WIDTH VARIES 4' TO 10' STA 1277+94.30 TO STA 1279+64.52

TYPICAL SUPERELEVATED SECTION (LEFT)
STATION 1278+00.00 TO STATION 1280+59.79



* 10:1 FROM STATION 1276+50.00 TO STATION 1277+30.00
SLOPE TRANSITIONS FROM 10:1 TO 4:1 STATION 1277+30.00 TO STATION 1280+00.00
** 10:1 FROM STATION 1276+50.00 TO STATION 1277+30.00
SLOPE TRANSITIONS FROM 10:1 TO 8:1 STATION 1277+30.00 TO STATION 1280+00.00

TYPICAL SUPERELEVATED SECTION (RIGHT)
STATION 1276+50.00 TO STATION 1280+59.79

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
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- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
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  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
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- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
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- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
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   - WMA, SUPERPAVE, BCBC - 6"
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6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–22

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301 MARYLAND STATE LINE TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	
COUNTY	CHECKED BY: MFM	
NEW CASTLE		

TYPICAL SECTIONS

SHEET NO.
36
TOTAL SHTS.
850

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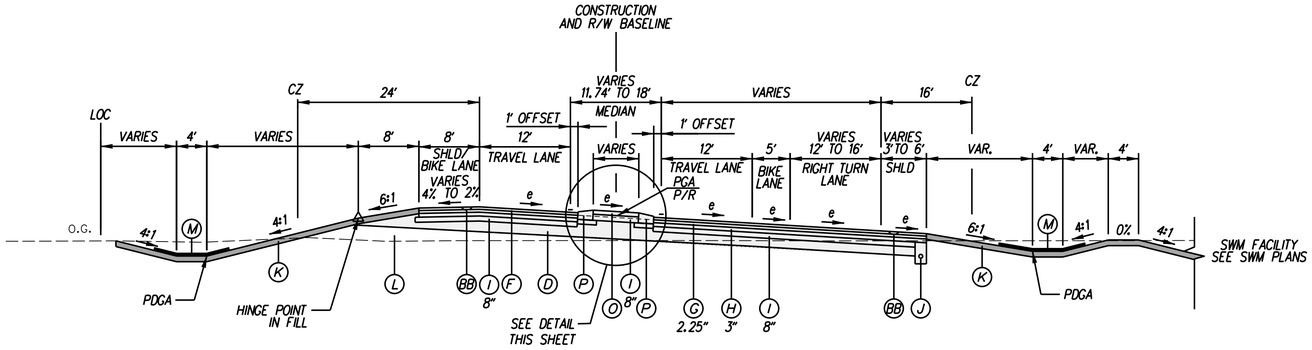
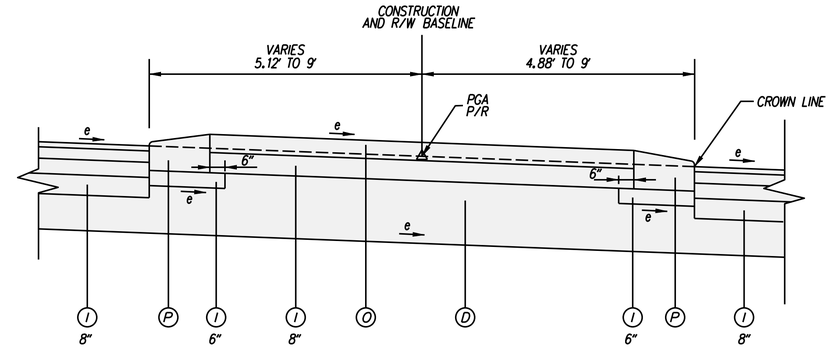
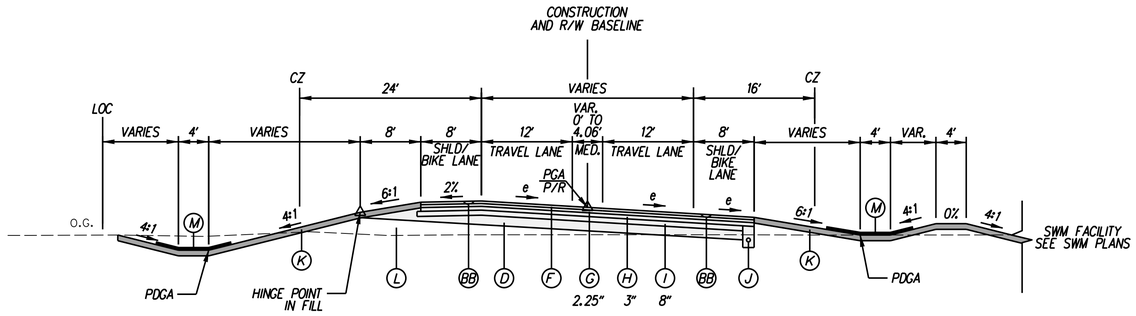


• PAVEMENT DEPTH TRANSITIONS FROM 1291+24.96 TO 1291+40.00 SEE DETAIL SHEET DT-02

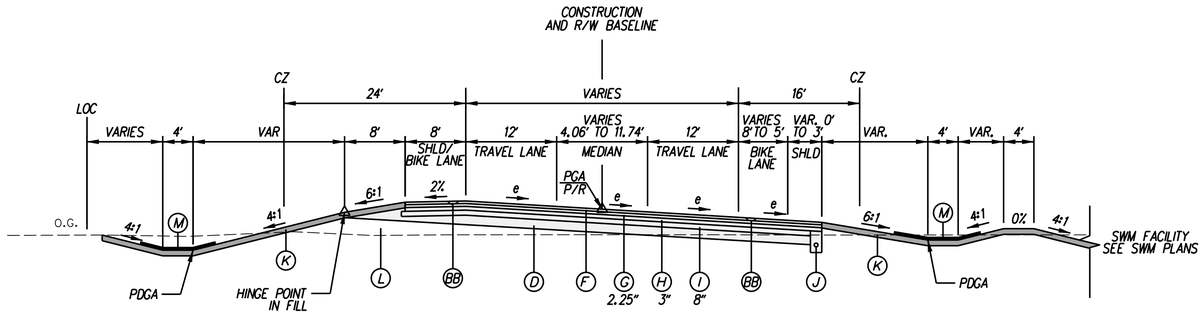
TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES & AUX. LANE
STATION 1289+78.79 TO STATION 1292+39.00
e_{MAX} = 6.0%



MEDIAN DETAIL WARWICK ROAD
SUPERELEVATED SECTION



TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES
STATION 1285+73.09 TO STATION 1288+00.00
e_{MAX} = 6.0%



TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES
STATION 1288+00.00 TO STATION 1289+78.79
e_{MAX} = 6.0%

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 733002 - TOPSOILING, 6" DEPTH
  ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 734013 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 72058B, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–23

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

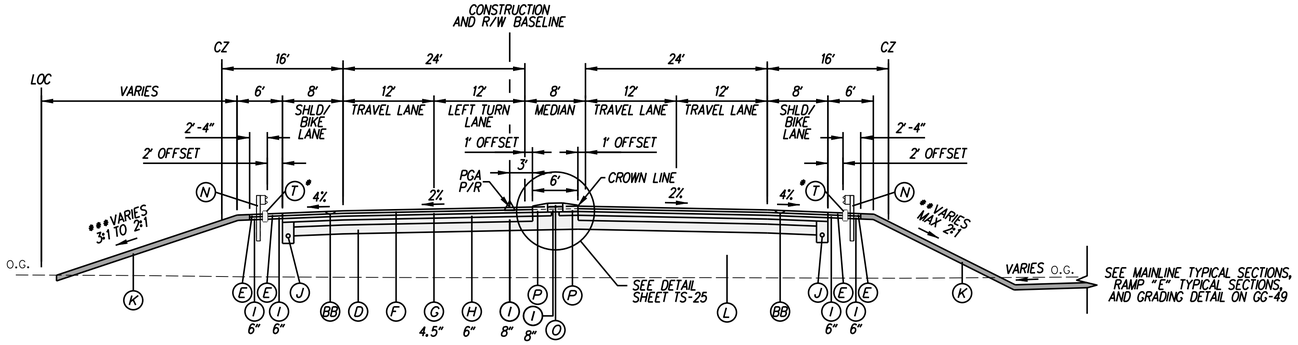
NOT TO SCALE

US 301
MARYLAND STATE LINE TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	
COUNTY	CHECKED BY: MFM	
NEW CASTLE		

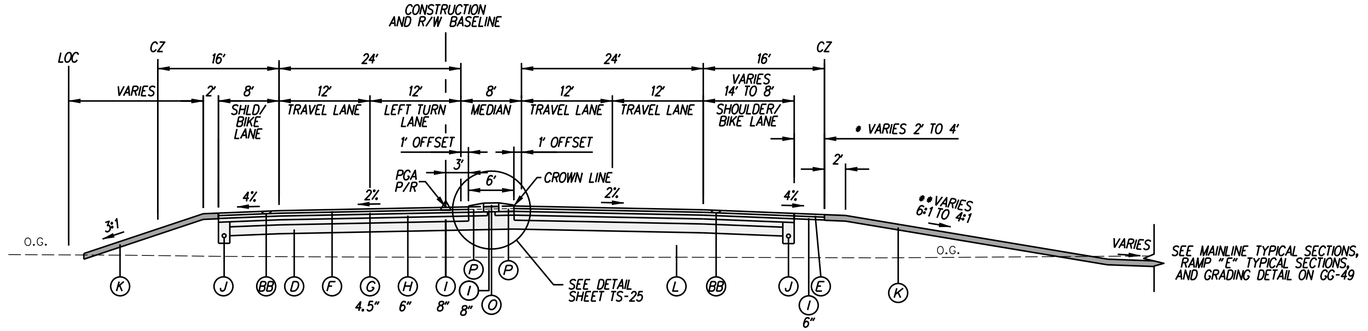
TYPICAL SECTIONS

SHEET NO.
37
TOTAL SHTS.
850



• PCC CURB EXTENDS FROM BRIDGE PARAPETS TO 2' BEYOND THE DOWNSTREAM EDGE OF INLETS SHOWN ON THE PLANS.
•• SLOPE TRANSITIONS FROM 6:1 TO 3:1 STATION 1293+20.00 TO STATION 1294+80.00
SLOPE TRANSITIONS FROM 3:1 TO 2:1 STATION 1294+80.00 TO STATION 1295+40.00
••• SLOPE TRANSITIONS FROM 3:1 TO 2:1 STATION 1294+00.00 TO STATION 1294+50.00
2:1 SLOPE FROM STATION 1294+50.00 TO STATION 1295+11.12

TYPICAL NORMAL SECTION LEVELS ROAD – THREE LANES & LEFT TURN LANE
STATION 1294+00.00 TO STATION 1295+11.12



• MAINTENANCE PAVEMENT BEGINS AT STATION 1293+46.33.
•• SLOPE TRANSITIONS FROM 6:1 TO 3:1 STATION 1293+20.00 TO STATION 1294+80.00
SLOPE TRANSITIONS FROM 3:1 TO 2:1 STATION 1294+80.00 TO STATION 1295+40.00

TYPICAL NORMAL SECTION LEVELS ROAD – THREE LANES & LEFT TURN LANE
STATION 1292+39.00 TO STATION 1294+00.00

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-24

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	TYPICAL SECTIONS
COUNTY	CHECKED BY: MFM	
NEW CASTLE		

SHEET NO.
38
TOTAL SHTS.
850

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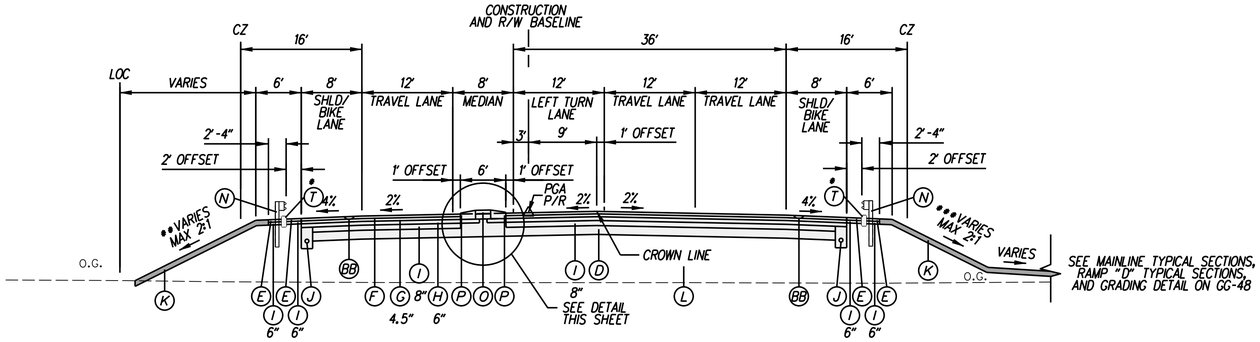
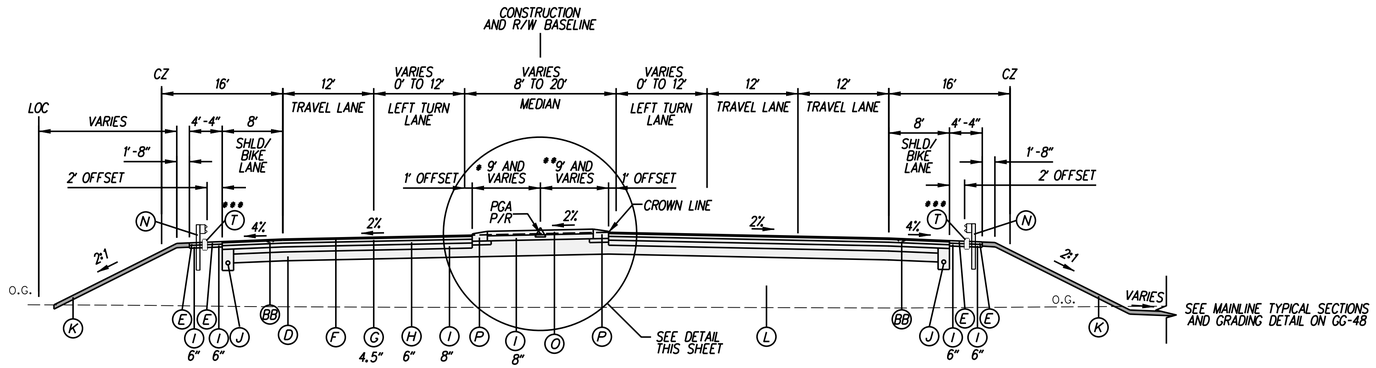


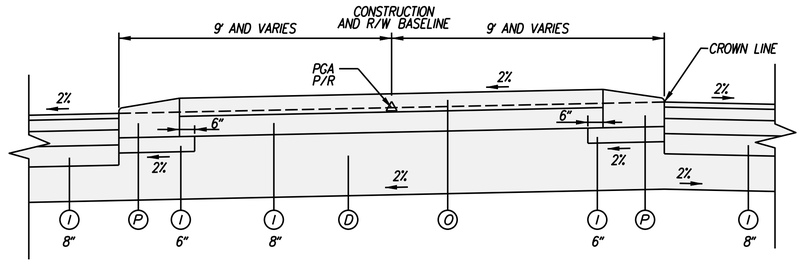
• PCC CURB EXTENDS FROM BRIDGE PARAPETS TO 2' BEYOND THE DOWNSTREAM EDGE OF INLETS SHOWN ON THE PLANS
•• 2:1 FROM STATION 1298+56.71 TO STATION 1300+00.00
SLOPE TRANSITIONS FROM 2:1 TO 3:1 STATION 1300+00.00 TO STATION 1300+50.00
3:1 FROM STATION 1300+50.00 TO 1301+09.00
••• 2:1 FROM STATION 1298+56.71 TO STATION 1299+00.00
SLOPE TRANSITIONS FROM 2:1 TO 6:1 STATION 1299+00.00 TO 1300+70.00

TYPICAL NORMAL SECTION LEVELS ROAD – THREE LANES & LEFT TURN LANE
STATION 1298+56.71 TO STATION 1301+09.00



• WB MEDIAN TRANSITIONS FOR LEFT TURN LANE FROM STA 1295+11.00 TO STA 1296+11.00
•• EB MEDIAN TRANSITIONS FOR LEFT TURN LANE FROM STA 1297+57.00 TO STA 1298+57.00
••• P.C.C. CURB EXTENDS FROM BRIDGE PARAPETS TO 2' BEYOND THE DOWNSTREAM EDGE OF INLETS SHOWN ON THE PLANS

TYPICAL NORMAL SECTION LEVELS ROAD – THREE LANES & LEFT TURN TAPERS
STATION 1295+11.12 TO STATION 1298+56.71
(SEE BRIDGE PLANS FOR STATION 1295+69.48 TO STATION 1297+65.98)



MEDIAN DETAIL LEVELS ROAD

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–25

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	TYPICAL SECTIONS
COUNTY	CHECKED BY: MFM	SHEET NO. 39
NEW CASTLE		TOTAL SHTS. 850

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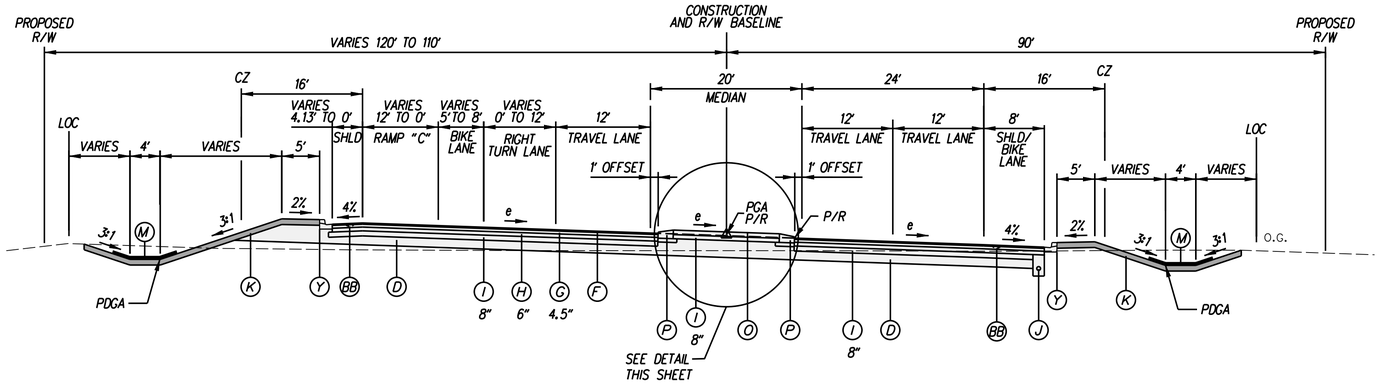
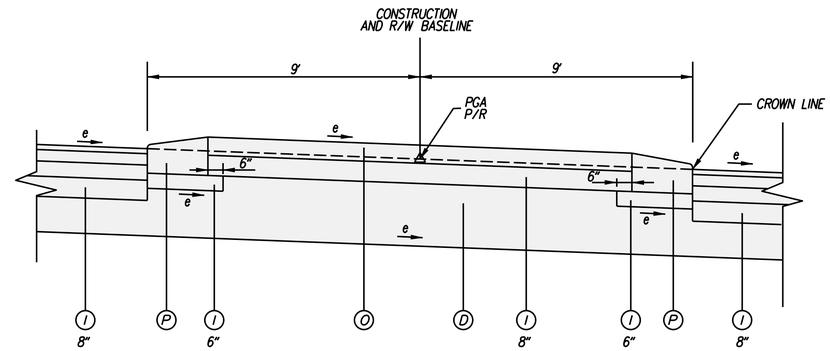
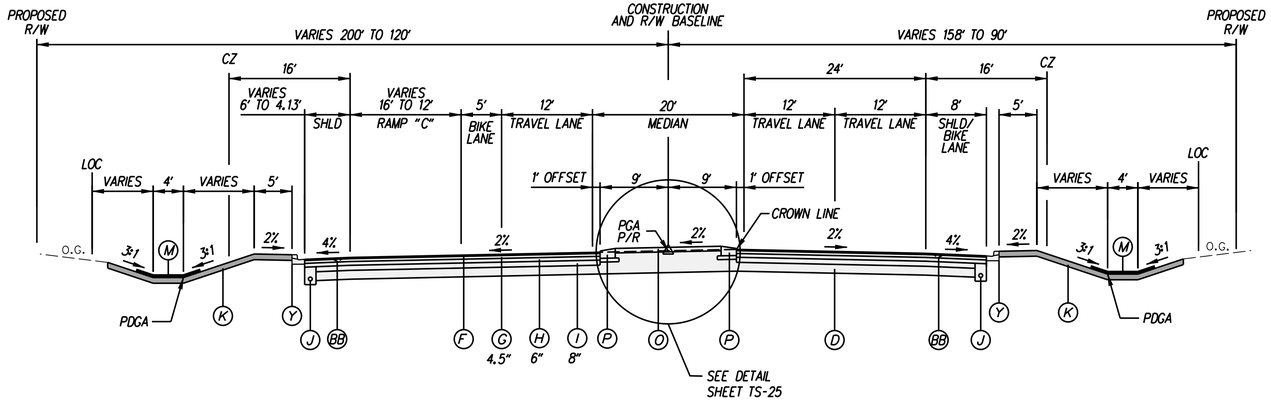


TYPICAL SUPERELEVATED SECTION LEVELS ROAD
STATION 1302+98.98 TO STATION 1304+35.51
e_{MAX} = 3.8%



MEDIAN DETAIL LEVELS ROAD
SUPERELEVATED SECTION



TYPICAL NORMAL SECTION LEVELS ROAD
STATION 1301+09.00 TO STATION 1302+98.98

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-26

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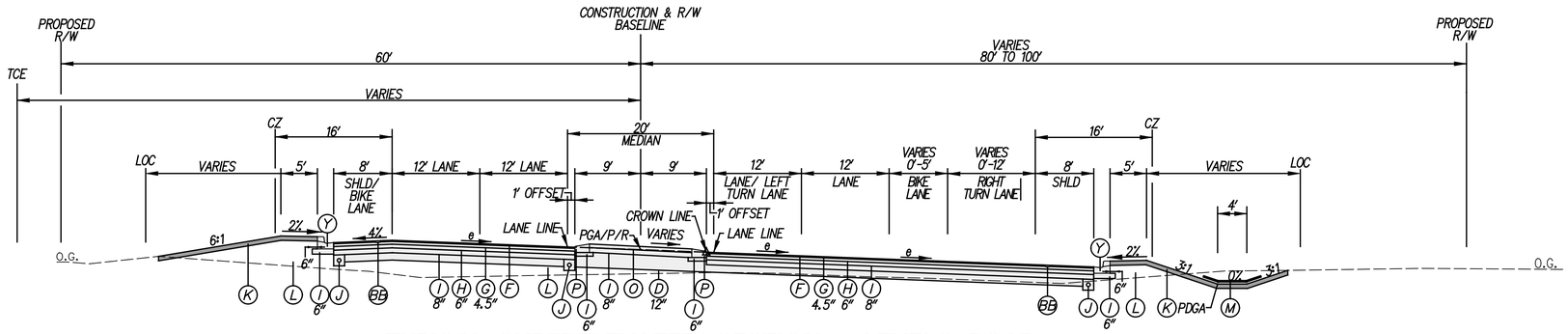
DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

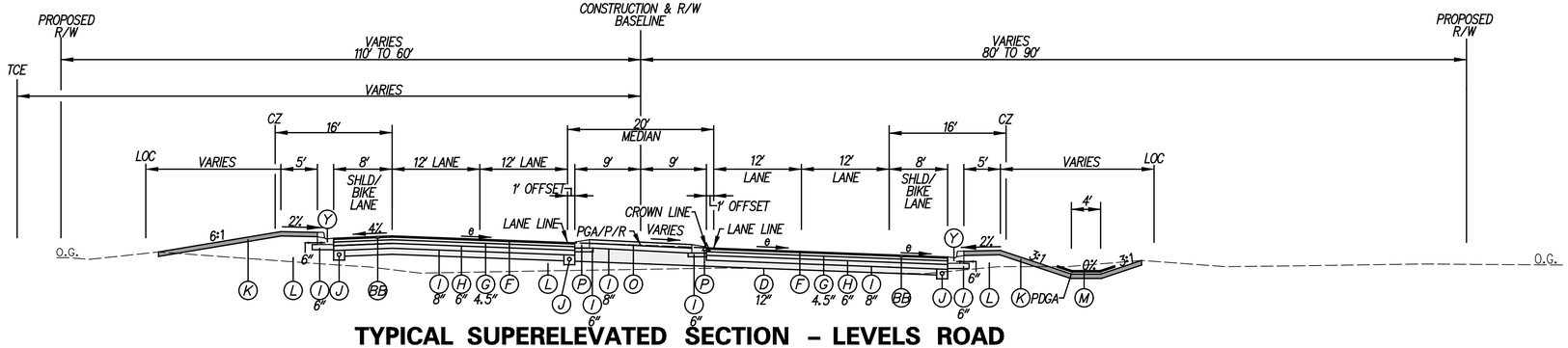
NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

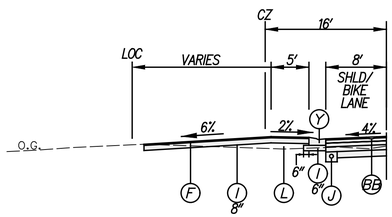
CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: ES	TYPICAL SECTIONS
COUNTY	CHECKED BY: MFM	SHEET NO. 40
NEW CASTLE		TOTAL SHTS. 850



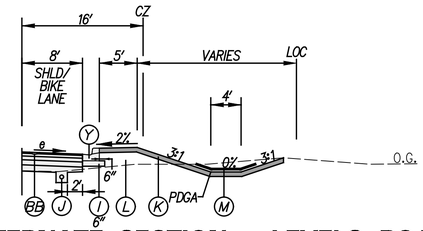
TYPICAL SUPERELEVATED SECTION – LEVELS ROAD
STATION 1311+20.00 TO STATION 1312+58.79
e_{MAX}=3.8%



TYPICAL SUPERELEVATED SECTION – LEVELS ROAD
STATION 1304+35.51 TO STATION 1311+20.00
e_{MAX}=3.8%



ALTERNATE SECTION – FARM ENTRANCE
STATION 1308+80.00 LT TO STATION 1309+06.00 LT



ALTERNATE SECTION – LEVELS ROAD
STATION 1307+25.00 RT TO STATION 1308+75.00 RT

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 733002 - TOPSOILING, 6" DEPTH
  ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 734013 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

TS-27

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

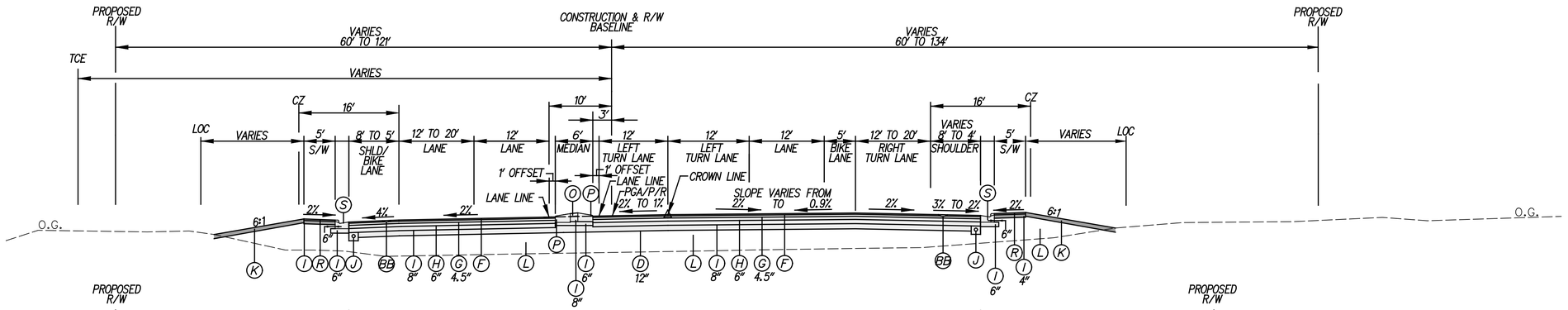
NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

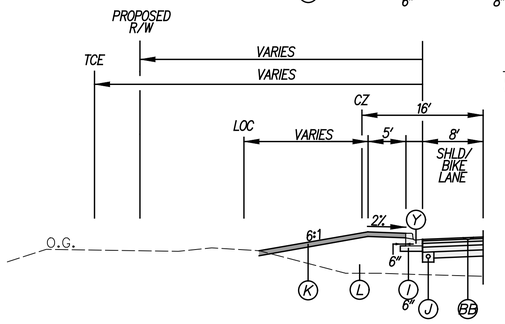
CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: MAG/TAM	
COUNTY	CHECKED BY: PAH	
NEW CASTLE		

TYPICAL SECTIONS

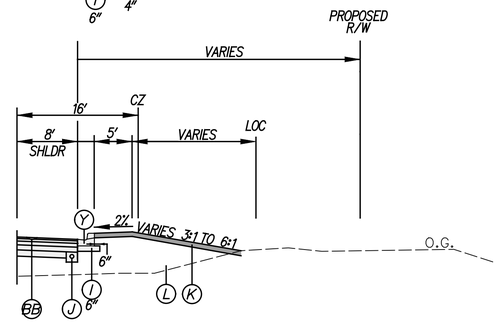
SHEET NO.
41
TOTAL SHTS.
850



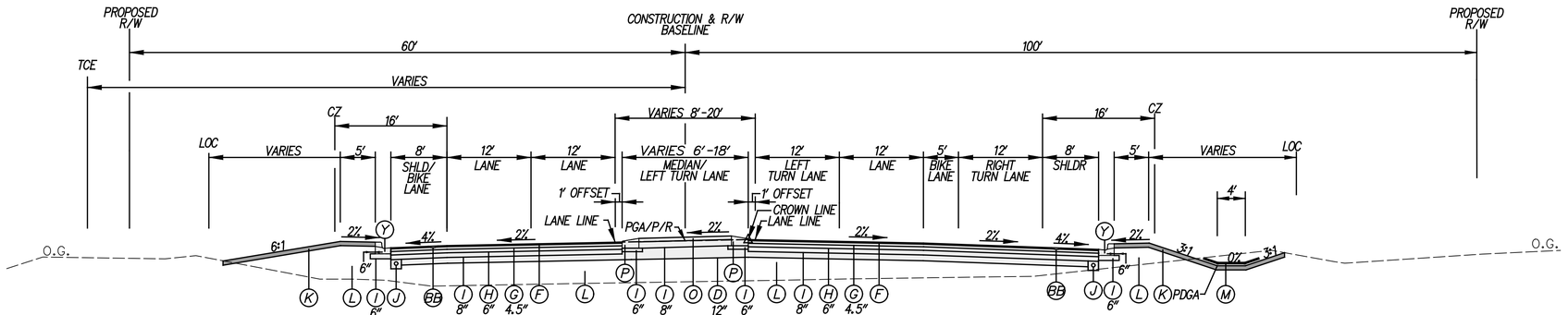
TYPICAL NORMAL SECTION – LEVELS ROAD
STATION 1316+50.00 TO STATION 1317+53.25



ALTERNATE SECTION – LEVELS ROAD
STATION 1316+50.00 LT TO STATION 1316+58.71 LT



ALTERNATE SECTION – LEVELS ROAD
STATION 1316+50.00 RT TO STATION 1316+63.76 RT



TYPICAL NORMAL SECTION – LEVELS ROAD
STATION 1312+58.79 TO STATION 1316+50.00

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 733002 - TOPSOILING, 6" DEPTH
  ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 734013 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-28

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

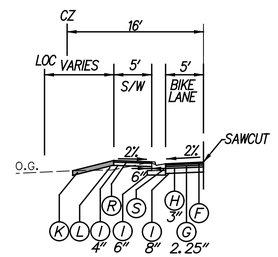
NOT TO SCALE

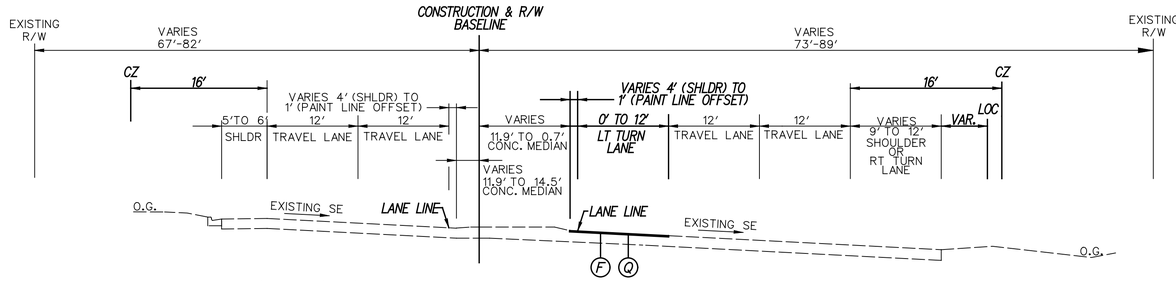
US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: MAG/TAM	
COUNTY	CHECKED BY: PAH	
NEW CASTLE		

TYPICAL SECTIONS

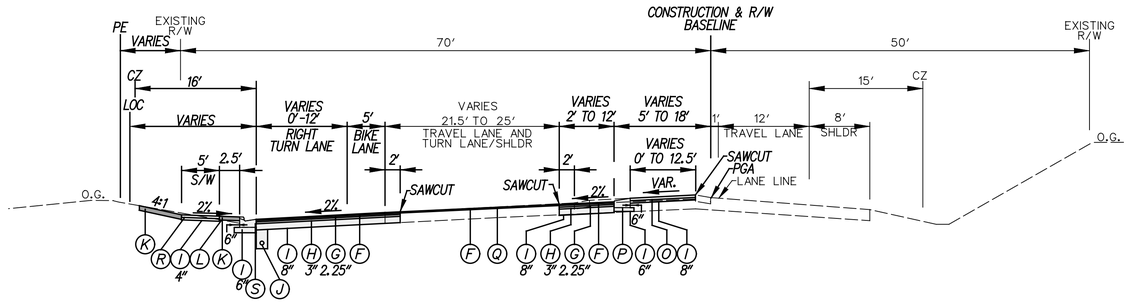
SHEET NO.
42
TOTAL SHTS.
850



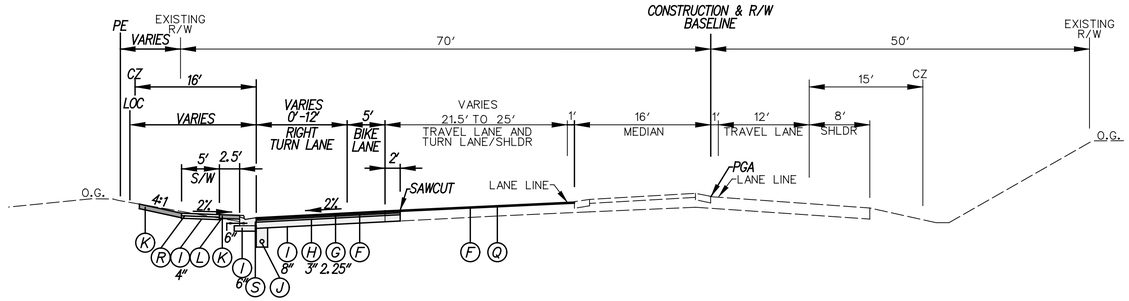


TYPICAL SECTION – MIDDLETOWN WARWICK ROAD
STATION 732+23.82 LT TO STATION 737+40.00

ALTERNATE SECTION – MIDDLETOWN WARWICK ROAD
STATION 737+40.00 LT TO STATION 739+35.18 LT



TYPICAL SECTION – EXISTING LEVELS ROAD
STATION 662+90.23 STATION 665+84.00



TYPICAL SECTION – EXISTING LEVELS ROAD
STATION 660+50.60 TO STATION 662+90.23

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 733002 - TOPSOILING, 6" DEPTH
  ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 734013 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-29

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

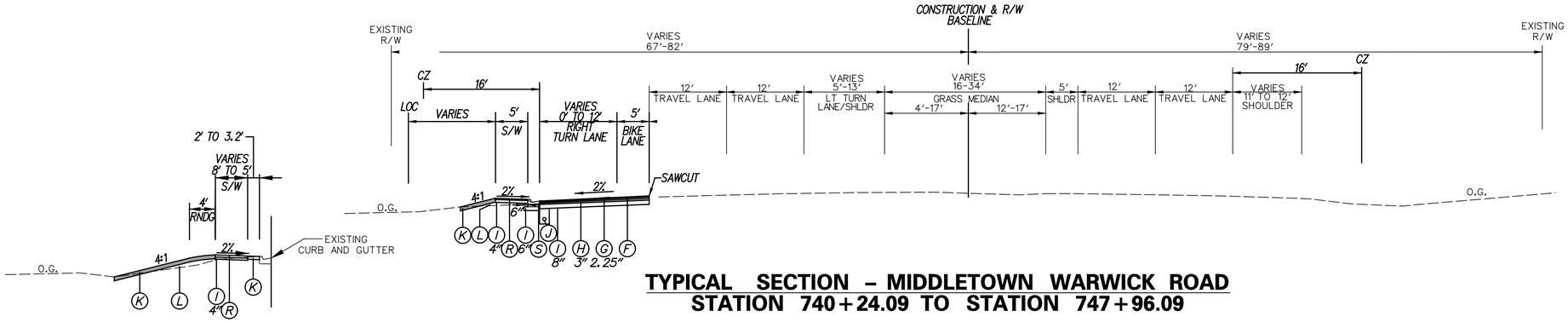
NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: MAG/TAM	
COUNTY	CHECKED BY: PAH	
NEW CASTLE		

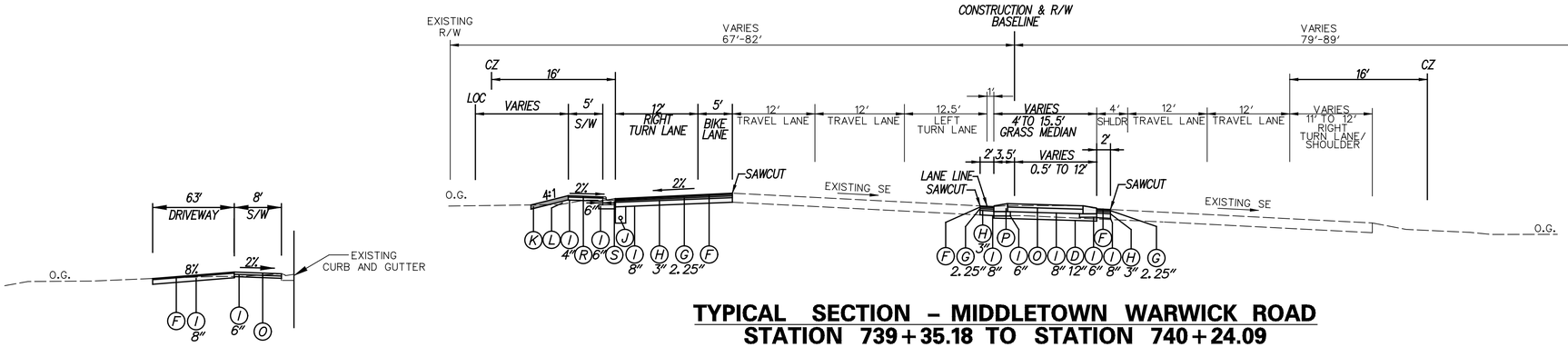
TYPICAL SECTIONS

SHEET NO.
43
TOTAL SHTS.
850

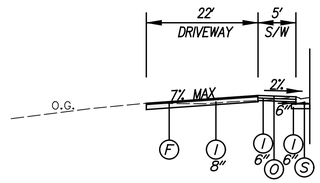


TYPICAL SECTION – MIDDLETOWN WARWICK ROAD
STATION 740+24.09 TO STATION 747+96.09

TYPICAL SECTION – MIDDLETOWN WARWICK ROAD
STATION 745+71.15 TO STATION 747+96.10

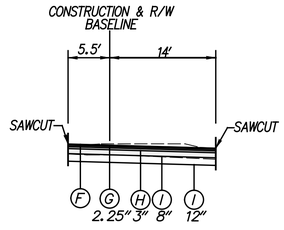


ALTERNATE SECTION – DRIVEWAY
STATION 746+00.23 LT TO STATION 746+66.01 LT

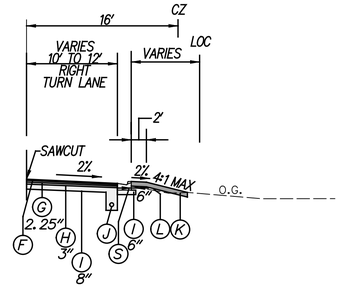


ALTERNATE SECTION – DRIVEWAY
STATION 742+03.16 LT TO STATION 742+78.40 LT

TYPICAL SECTION – MIDDLETOWN WARWICK ROAD
STATION 739+35.18 TO STATION 740+24.09



ALTERNATE SECTION – MIDDLETOWN WARWICK ROAD
STATION 739+35.18 TO STATION 739+54.49



ALTERNATE SECTION – MIDDLETOWN WARWICK ROAD
STATION 739+54.58 STATION 740+04.52

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 733002 - TOPSOILING, 6" DEPTH
  ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
5. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:
   - WMA, SUPERPAVE, TYPE C - 2"
   - WMA, SUPERPAVE, TYPE B - 3"
   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 734013 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-30

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

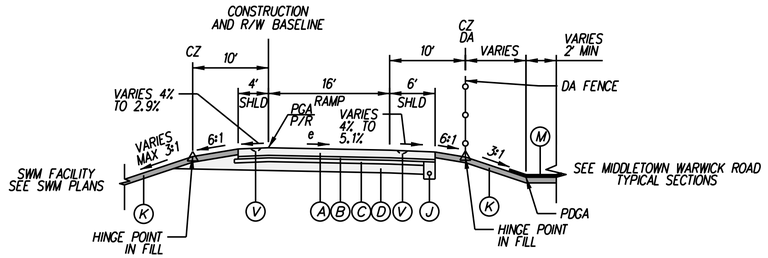
NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: MAG/TAM	
COUNTY	CHECKED BY: PAH	
NEW CASTLE		

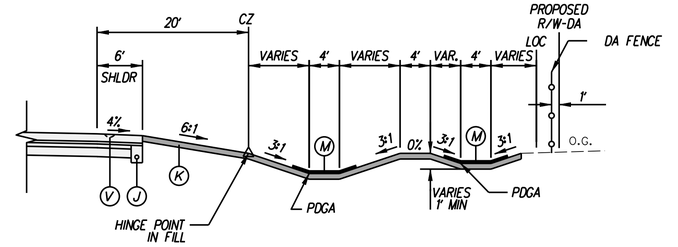
TYPICAL SECTIONS

SHEET NO.
44
TOTAL SHTS.
850



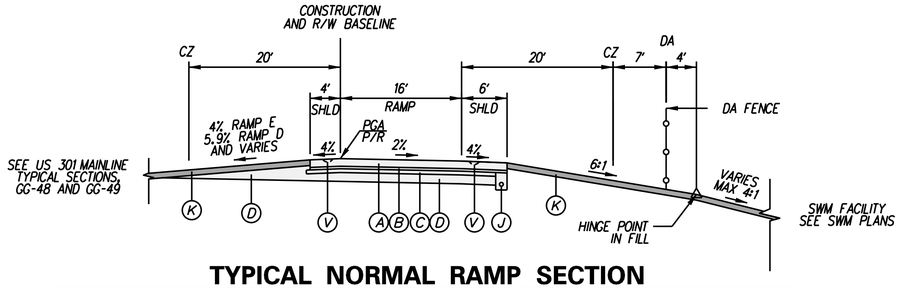
TYPICAL SUPERELEVATED RAMP SECTION

e_{MAX}=5.1% RAMP B – STATION 605+34.15 TO STATION 607+22.57



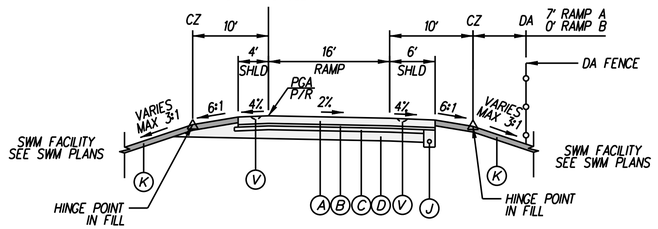
TYPICAL RAMP SECTION – RAMP D (RIGHT)

RAMP D STATION 306+49.17 TO STATION 307+65.74



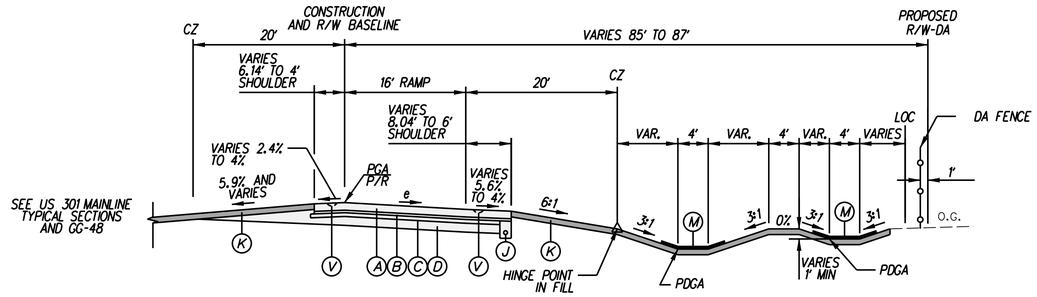
TYPICAL NORMAL RAMP SECTION

RAMP D – STATION 306+49.17 TO STATION 307+65.74
RAMP E – STATION 407+95.12 TO STATION 408+45.38



TYPICAL NORMAL RAMP SECTION

RAMP A – STATION 505+31.01 TO STATION 511+57.65
RAMP B – STATION 601+53.37 TO STATION 605+34.15



TYPICAL SUPERELEVATED RAMP SECTION

e_{MAX}=5.6% RAMP D – STATION 303+05.17 TO STATION 306+49.17

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 401827 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE), 2"
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (H) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (I) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (J) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" (WHERE NOTED ON THE PLANS)
- (K) ITEM 908010 - TOPSOILING, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
- (L) ITEM 209006 - BORROW, TYPE F
- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (N) GALVANIZED STEEL BEAM GUARDRAIL (SEE NOTE 8)
- (O) ITEM 705002 - P.C.C. SIDEWALK, 6"
- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
- (BB) ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX

NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE TRANSITIONS.
4. PROVIDE SRBM TYPE 5 IN ALL SWALES AT A MINIMUM OF 1' DEPTH UNLESS SHOWN OTHERWISE ON PLANS.
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   - WMA, SUPERPAVE, BCBC - 6"
   - GABC - 8"
6. SEEDING ITEM 734556 TO BE USED IN MARYLAND ONLY AND SEEDING ITEM 908014 TO BE USED IN DELAWARE ONLY.
7. SEE CONSTRUCTION DETAILS FOR ROADWAY SAFETY EDGE APPLICATION GUIDELINES.
8. SEE PLAN SCHEDULES FOR TYPE AND LOCATION OF ITEMS: 720043, 720044, 720050, 720051, 720052, 720585, 720586, 720588, 725001, 725002, 726001.

ABBREVIATIONS

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PDGA - PROFILE DITCH GRADE APPLIED
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P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS–31

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301 / BRIDGE NO. / DESIGNED BY: E'S / COUNTY NEW CASTLE / CHECKED BY: MFM	TYPICAL SECTIONS	SHEET NO. 45 / TOTAL SHTS. 850

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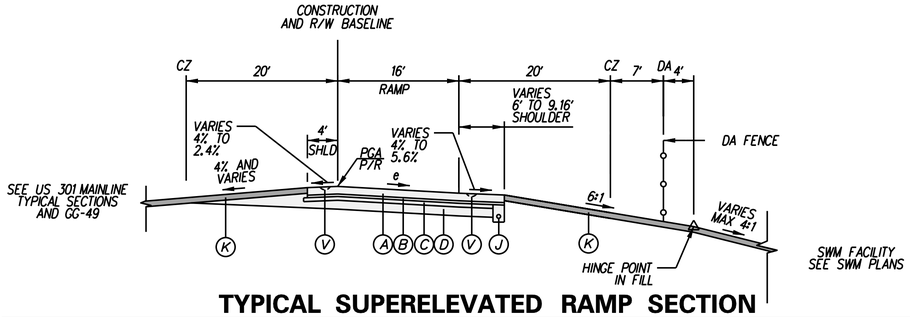
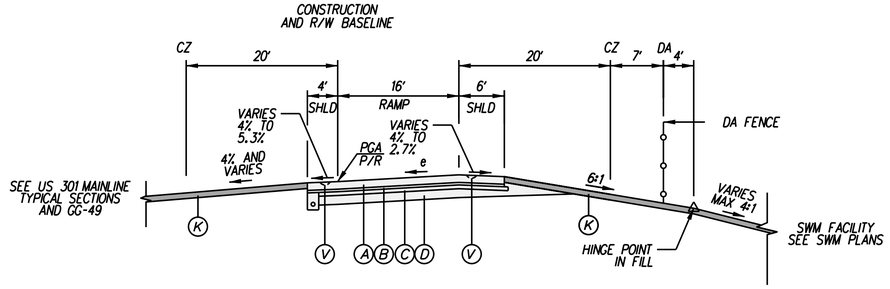


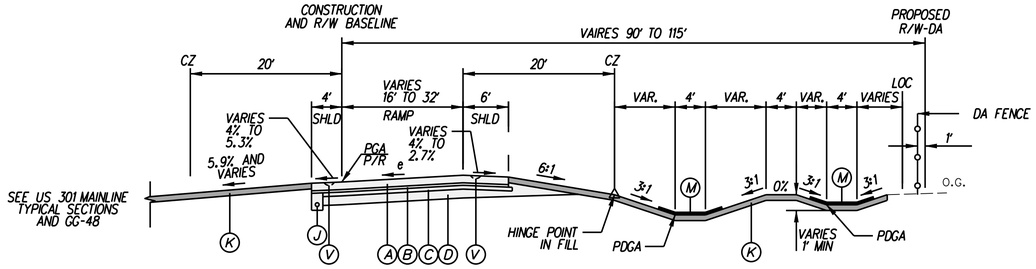
TYPICAL SUPERELEVATED RAMP SECTION

e_{MAX}=5.6% RAMP E – STATION 408+45.38 TO STATION 412+64.08



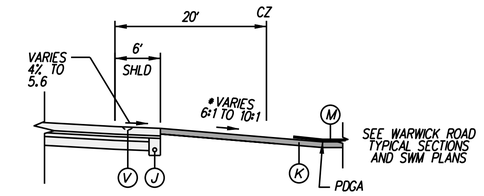
TYPICAL SUPERELEVATED RAMP SECTION

e_{MAX}=5.3% RAMP E – STATION 400+34.00 TO STATION 407+95.12



TYPICAL SUPERELEVATED RAMP SECTION

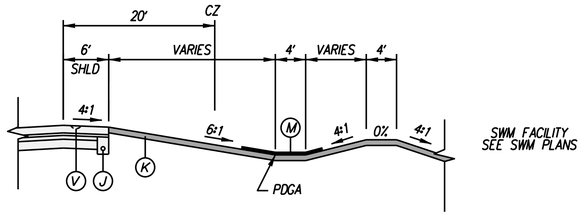
e_{MAX}=5.3% RAMP D – STATION 307+65.74 TO STATION 314+37.68



* SLOPE TRANSITIONS FROM 6:1 TO 10:1 STATION 409+50.00 TO STATION 410+50.00
10:1 SLOPE FROM STATION 410+50.00 TO STATION 412+64.08

TYPICAL RAMP SECTION – RAMP E (RIGHT)

RAMP E STATION 409+50.00 TO STATION 412+64.08



TYPICAL RAMP SECTION – RAMP E (RIGHT)

RAMP E STATION 400+34.00 TO STATION 401+39.00

LEGEND

- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
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  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  ITEM 734556 - PERMANENT VEGETATIVE STABILIZATION, MARYLAND
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- (M) ITEM 908020 - SOIL RETENTION BLANKET MULCH, TYPE 5
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- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
- (V) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (AA) ITEM 401825 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, WEDGE
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ABBREVIATIONS

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PDGA - PROFILE DITCH GRADE APPLIED
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GABC - GRADED AGGREGATE BASE COURSE

TS-32

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	
T200811301	DESIGNED BY: E.S	
COUNTY	CHECKED BY: M.F.M	
NEW CASTLE		

TYPICAL SECTIONS

SHEET NO.
46
TOTAL SHTS.
850

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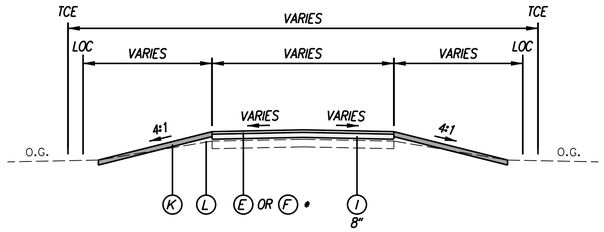
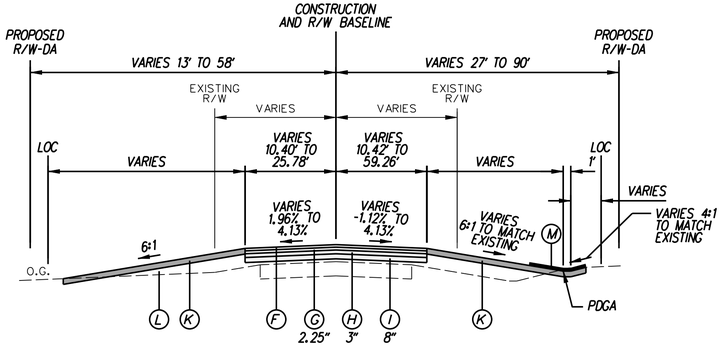


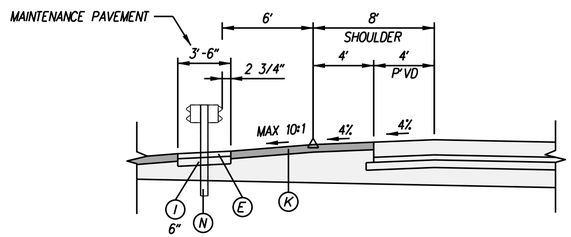
* (E) OR (F) SHALL MATCH THE MATERIAL USED ON THE INTERSECTING ROADWAY. FOR THE WARWICK ROAD DRIVEWAY AT STATION 1281+50 LT LAYER (F) ENDS WHERE THE SHADING STOPS ON THE CONSTRUCTION PLAN.

DRIVEWAY

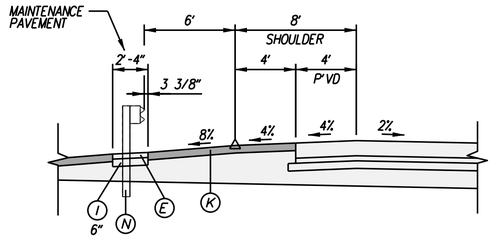
STATION 1123+00 RT. (MIDDLETOWN WARWICK ROAD)
STATION 1211+77 LT. (WARWICK ROAD)
STATION 1263+00 LT. (WARWICK ROAD)
STATION 1281+50 LT. (WARWICK ROAD)



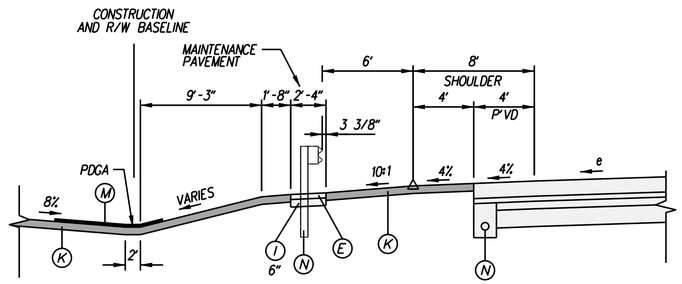
TYPICAL NORMAL SECTION MIDDLENECK ROAD – TWO LANES
STATION 30+21.91 TO STATION 32+00.00



US 301 MAINLINE INSIDE SHOULDER TYPE 3–31 GUARDRAIL DETAIL WHERE SHOWN ON PLANS



NORMAL US 301 MAINLINE INSIDE SHOULDER GUARDRAIL DETAIL WHERE SHOWN ON PLANS



SUPERELEVATED US 301 MAINLINE INSIDE SHOULDER GUARDRAIL DETAIL WHERE SHOWN ON PLANS

LEGEND

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- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (Q) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (R) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (S) ITEM 701016 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-4
- (T) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (U) ITEM 760016 - RUMBLE STRIPS, HOT-MIX
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- (W) ITEM 720587 - P.C.C. SAFETY BARRIER PERMANENT, DOUBLE FACE, MODIFIED
- (X) ITEM 720653 - P.C.C. SAFETY BARRIER PERMANENT, SINGLE FACE, MODIFIED
- (Y) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 3-8
- (Z) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
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NOTES:

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TS–33

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	T200811301
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY: ES	
CHECKED BY: MFM	

TYPICAL SECTIONS

SHEET NO.	47
TOTAL SHTS.	850