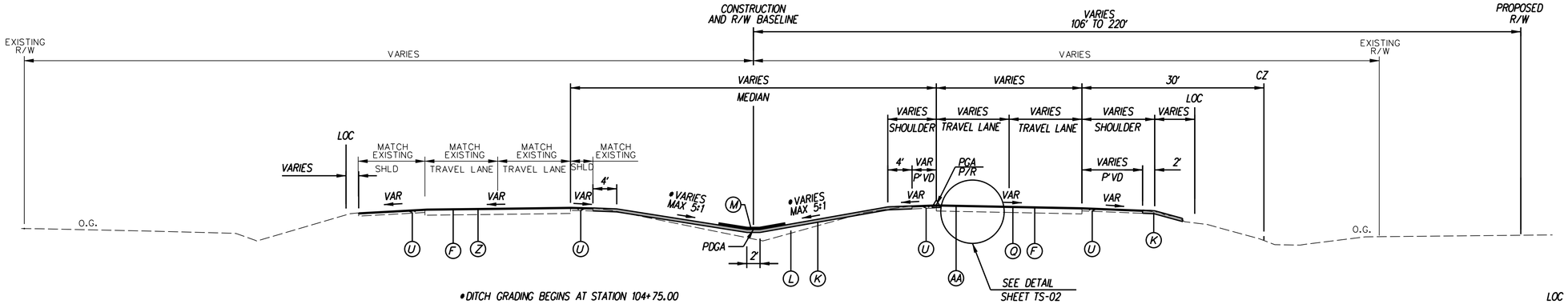
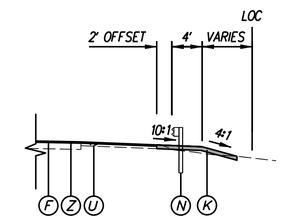
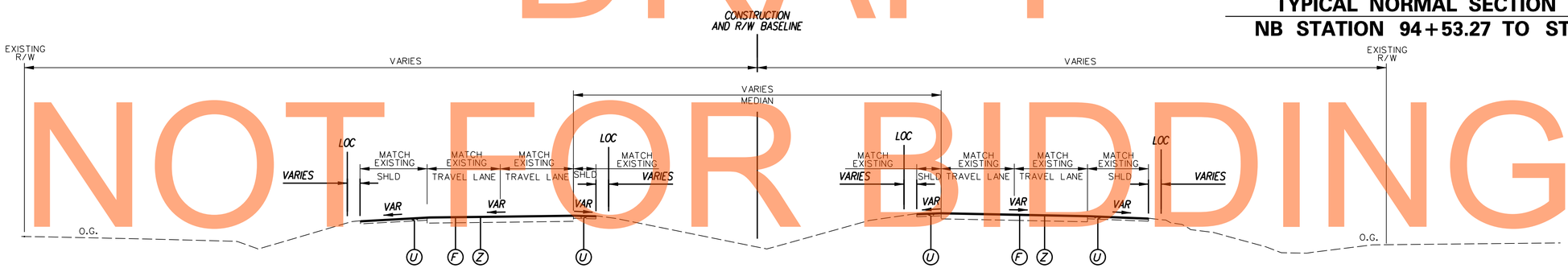


*DITCH GRADING BEGINS AT STATION 104+75.00

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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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

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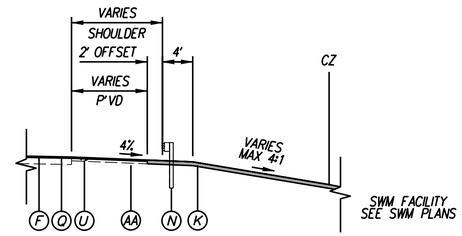
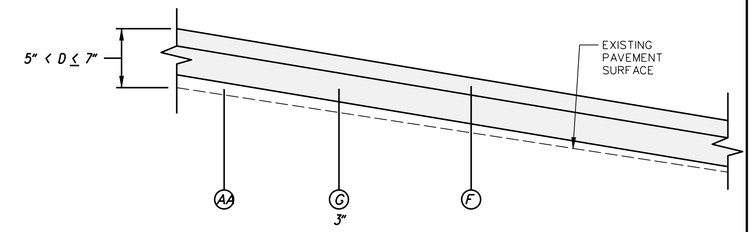
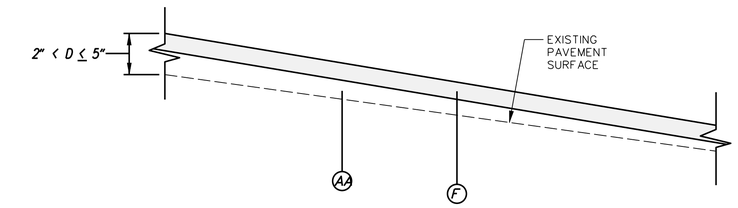
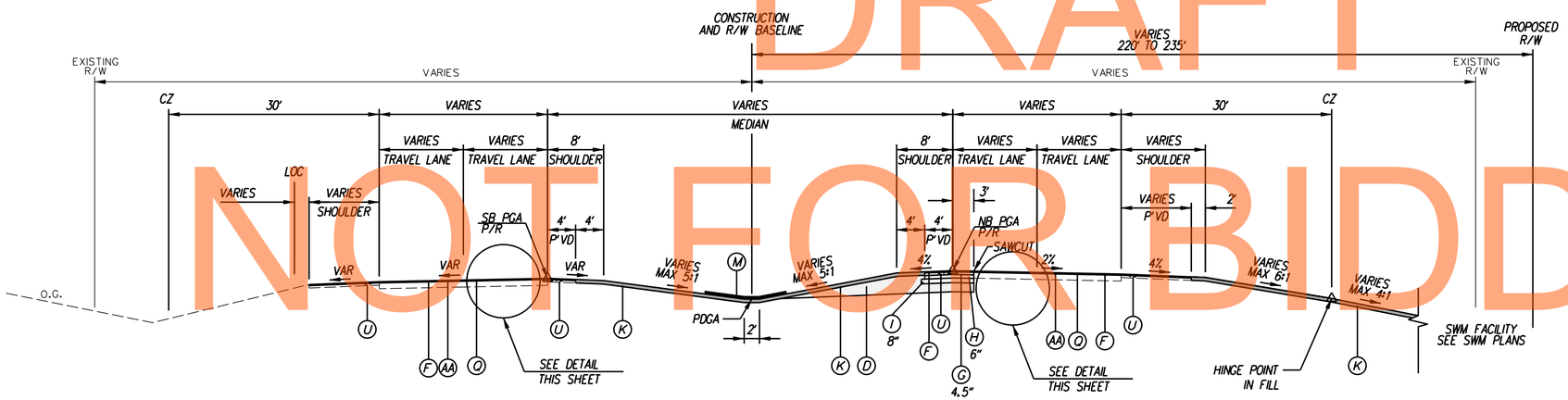


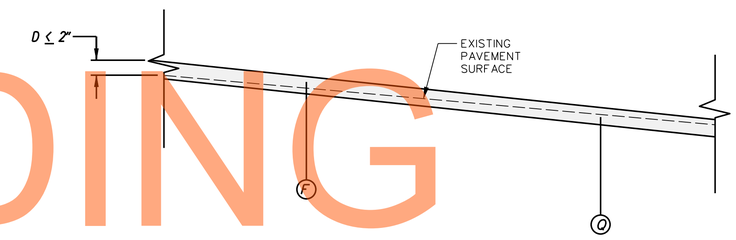
TYPICAL NORMAL SECTION US 301 (RIGHT)
NB STATION 107+30.00 TO STATION 108+25.00







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



PROFILE MILLING AND HOT-MIX WEDGE DETAIL

SEE CONSTRUCTION DETAILS FOR MILLING LIMITS

DRAFT
NOT FOR BIDDING
AUGUST 2015

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, 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–02

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. 16 / TOTAL SHTS. 850

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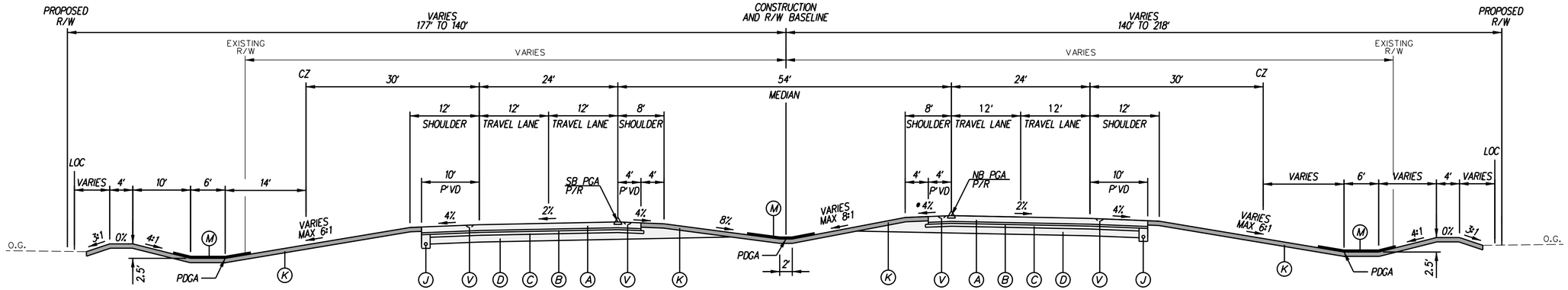
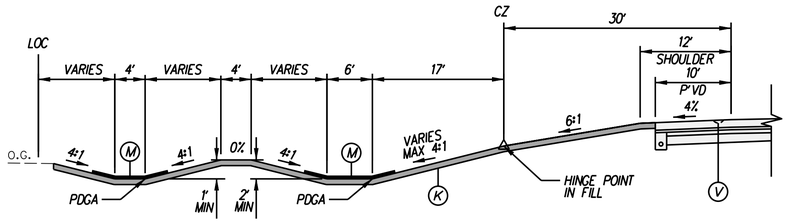
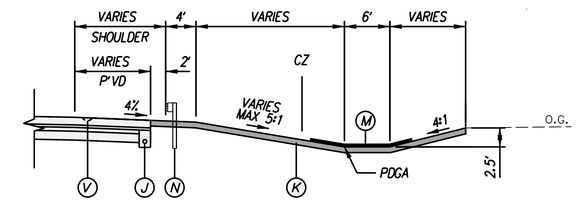


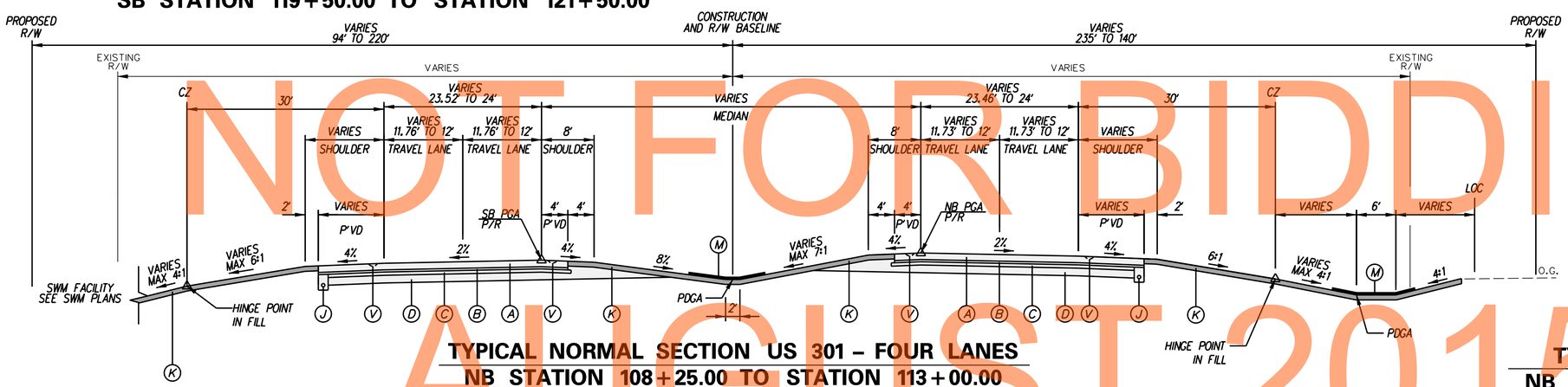
TYPICAL NORMAL SECTION US 301 – FOUR LANES
NB STATION 113+00.00 TO STATION 121+50.00
SB STATION 114+00.00 TO STATION 121+50.00



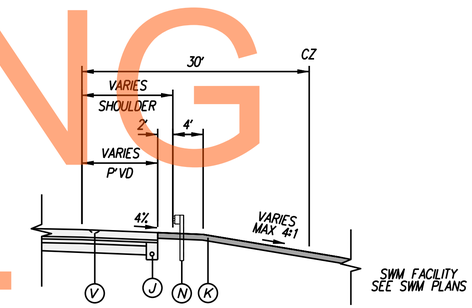
TYPICAL NORMAL SECTION US 301 (LEFT)
SB STATION 119+50.00 TO STATION 121+50.00



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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–03

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. 17 / TOTAL SHTS. 850				

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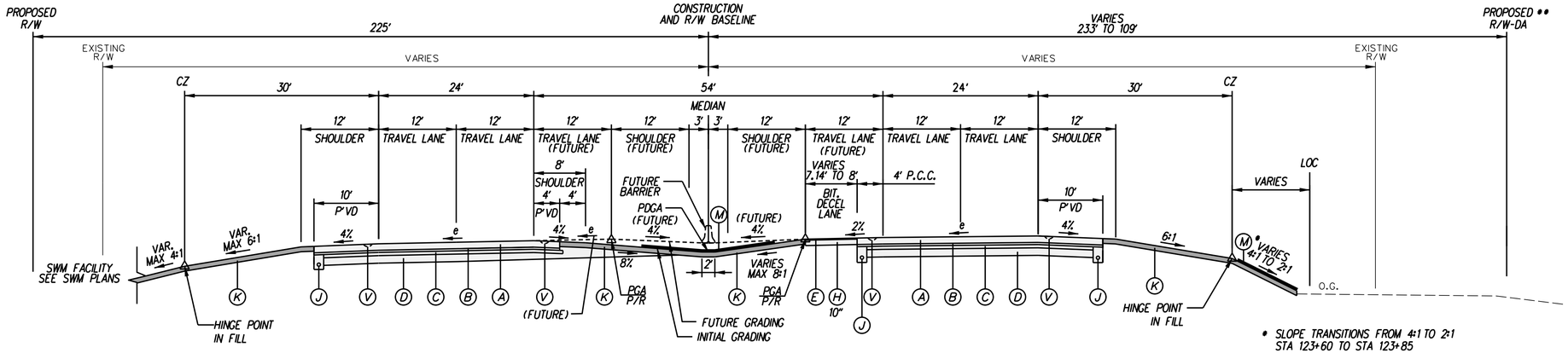
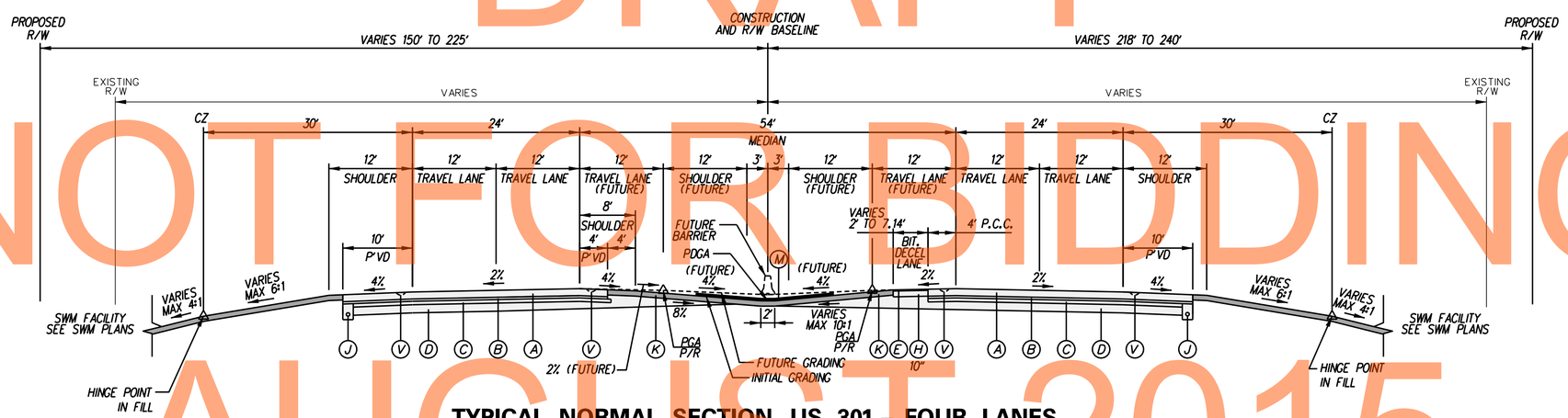


TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES

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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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 T200811301	BRIDGE NO.	TYPICAL SECTIONS	SHEET NO. 18
				COUNTY NEW CASTLE	DESIGNED BY: ES		TOTAL SHTS. 850
					CHECKED BY: MFM		

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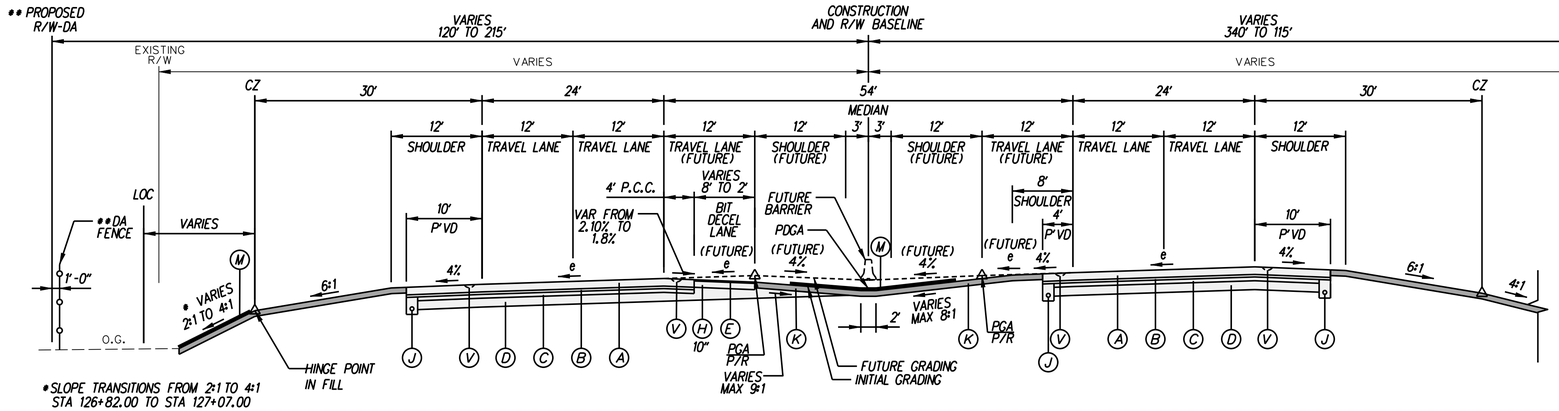
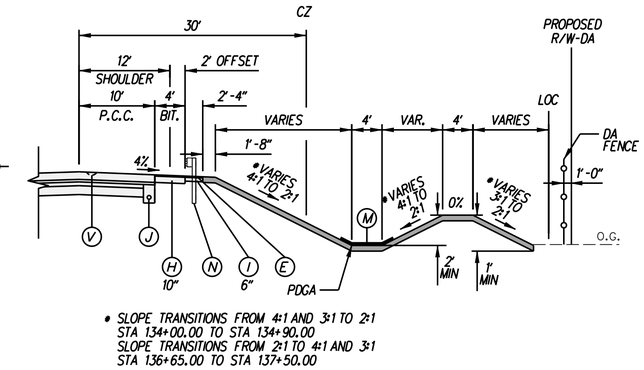


TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES

NB STATION 125+94.00 TO STATION 138+15.72

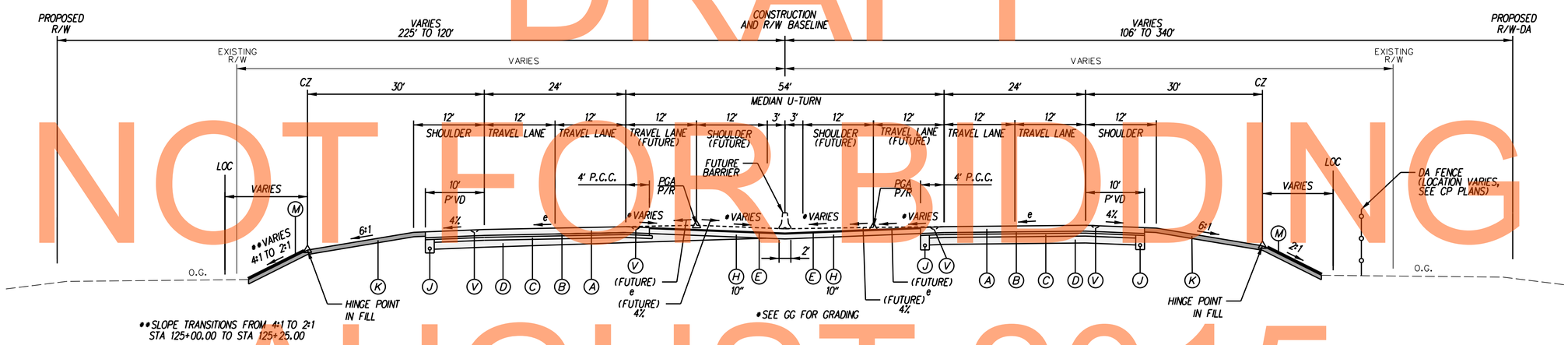
SB STATION 125+94.00 TO STATION 129+44.00

e_{MAX} = 3.2%



TYPICAL SUPERELEVATED SECTION (RIGHT)

NB STATION 130+67.00 TO STATION 138+15.72



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

STATION 125+00.00 TO STATION 125+94.00

e_{MAX} = 3.2%

DRAFT
NOT FOR BIDDING
AUGUST 2015

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–05

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. 19 / TOTAL SHTS. 850

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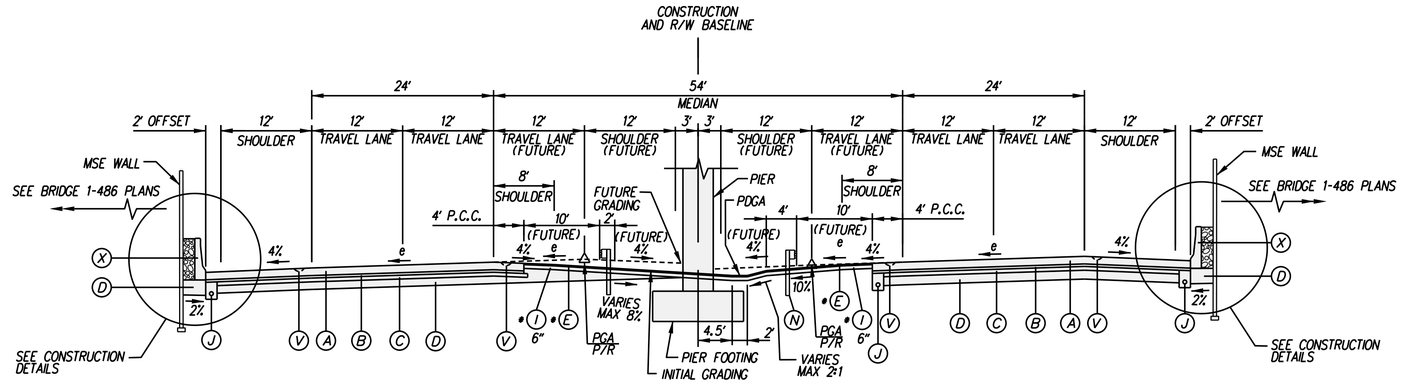
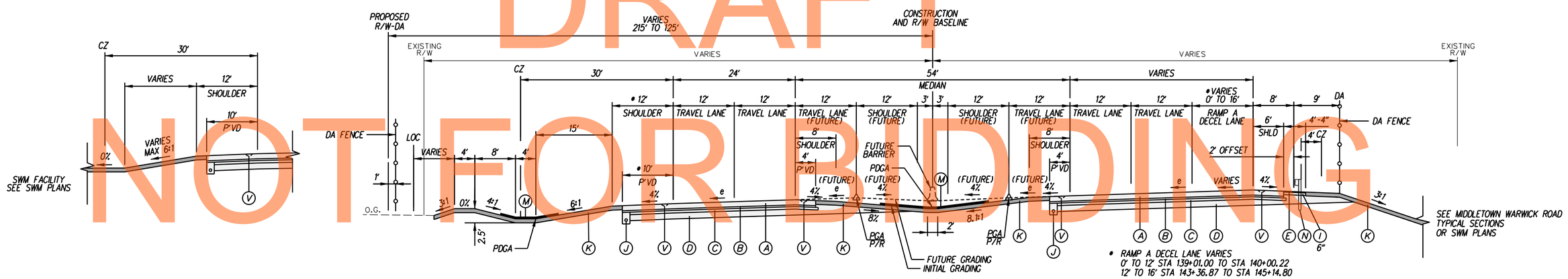


TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES UNDER STRAWBERRY LANE

NB STATION 138+15.72 TO STATION 139+44.30

SB STATION 137+82.04 TO STATION 139+23.60

e_{MAX} = 3.2%



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%

DRAFT
NOT FOR BIDDING
AUGUST 2015

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, 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–06

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. 20 / TOTAL SHTS. 850

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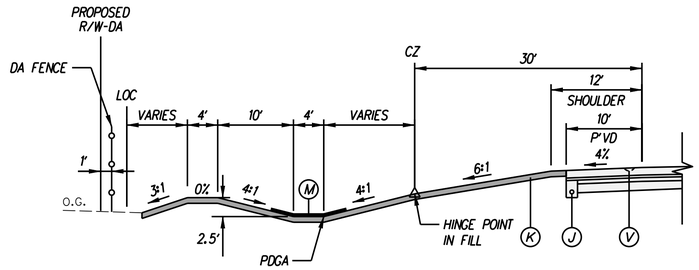
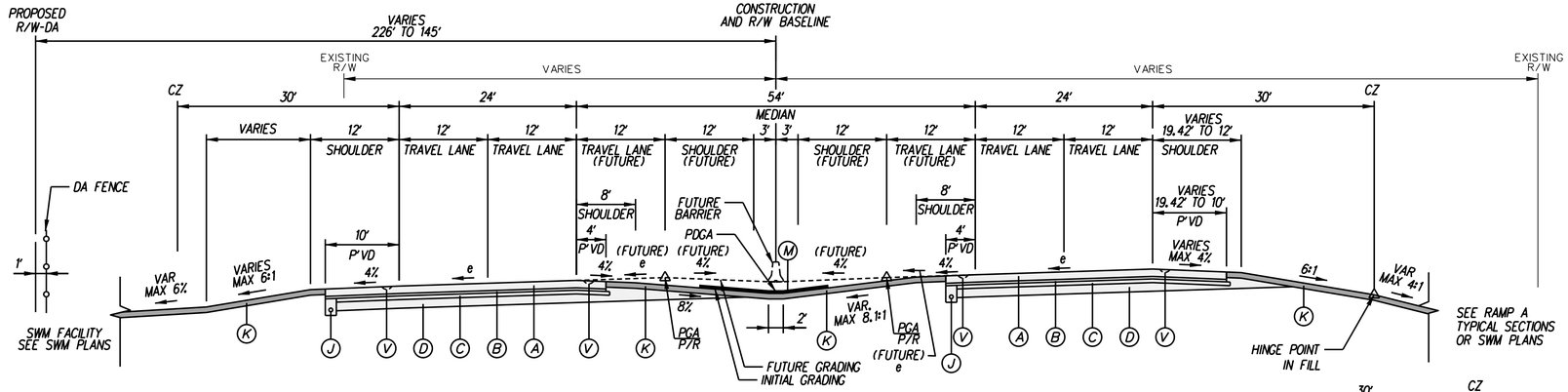
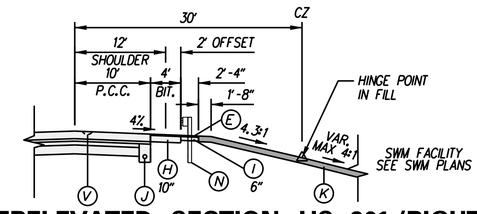


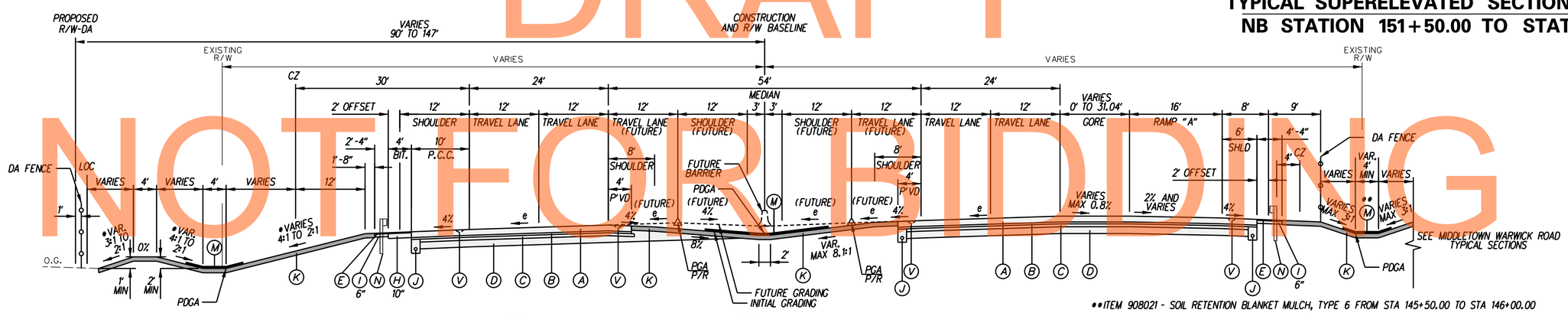
TYPICAL SUPERELEVATED SECTION (LEFT)
SB STATION 152+50.00 TO STATION 154+30.43



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



• 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

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

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%

DRAFT
NOT FOR BIDDING
AUGUST 2015

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 T200811301 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: ES / CHECKED BY: MFM	TYPICAL SECTIONS	SHEET NO. 21 / TOTAL SHTS. 850

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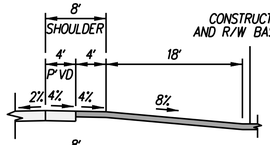
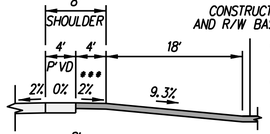


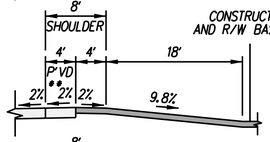
STA 178+10



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

*** 2% STA 175+70 TO STA 176+90

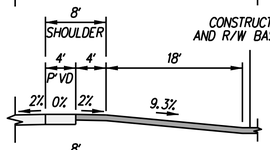
STA 175+70



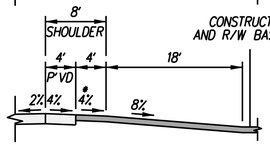
** VARIES 2% TO 0% STA 174+50 TO STA 175+70

** 2% STA 165+00 TO STA 174+50

STA 165+00



STA 163+80

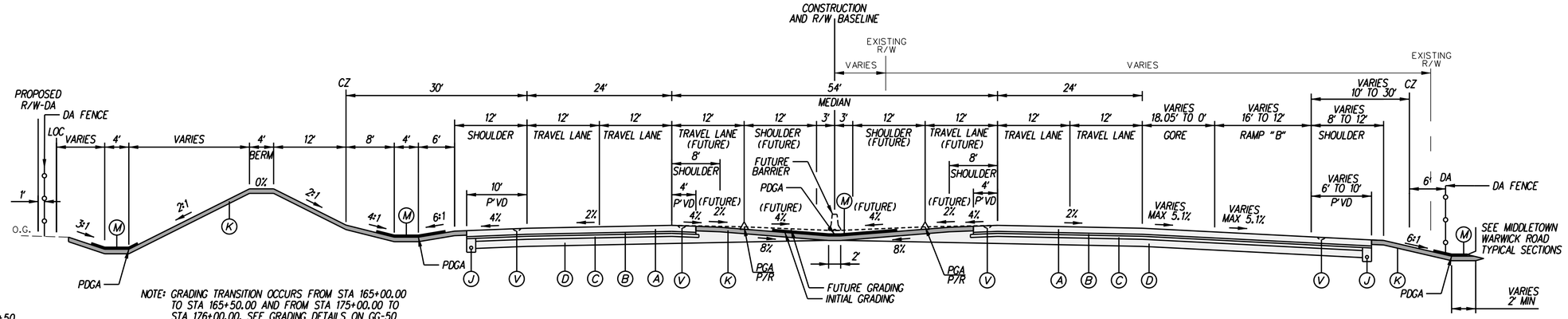


* 2% STA 162+60 TO STA 163+80

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

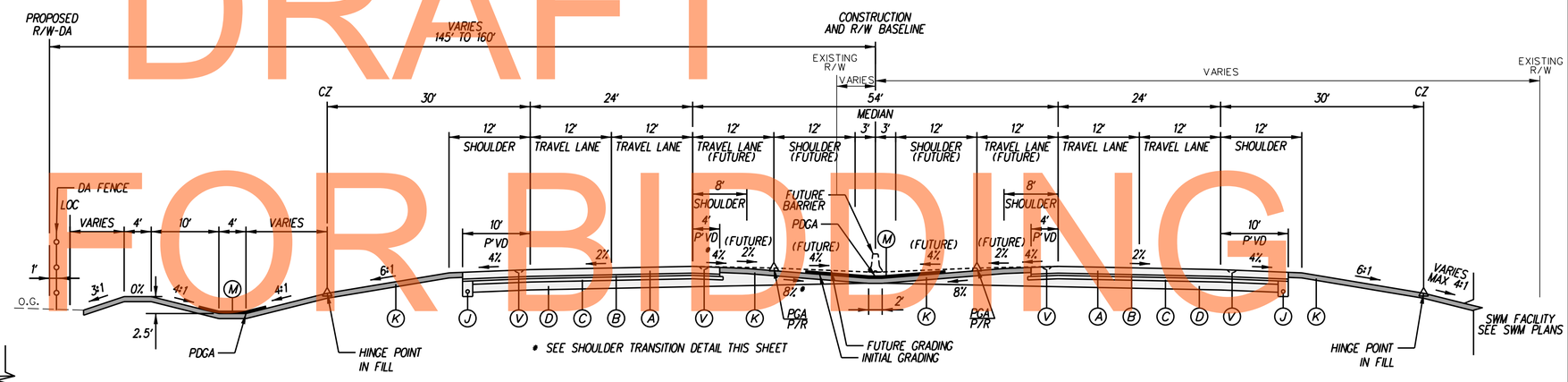
STA 161+40

SHOULDER TRANSITION DETAIL



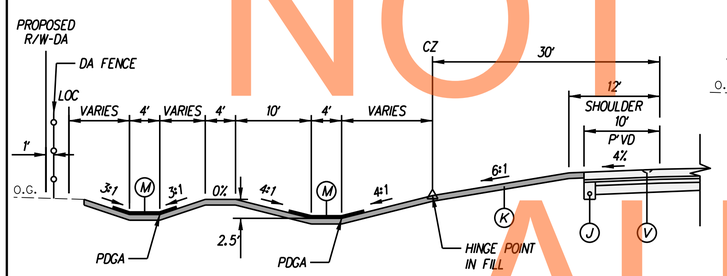
NOTE: GRADING TRANSITION OCCURS FROM STA 165+00.00 TO STA 165+50.00 AND FROM STA 175+00.00 TO STA 176+00.00. SEE GRADING DETAILS ON GG-50 AND GG-51.

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



* 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



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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, 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–08

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. 22 / TOTAL SHTS. 850

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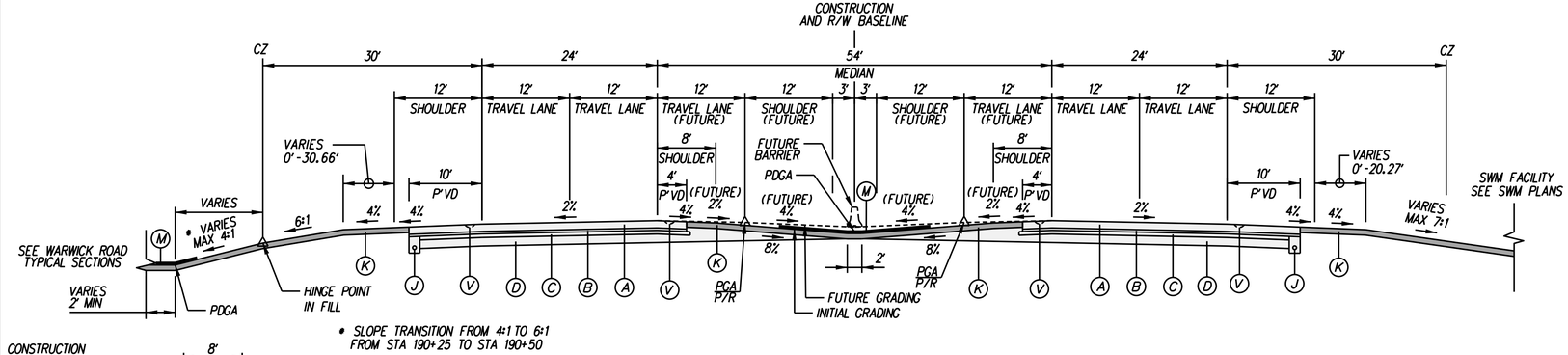
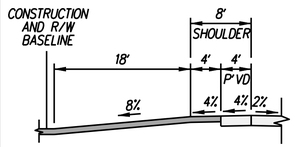
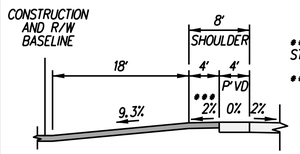


TYPICAL NORMAL SECTION US 301 – FOUR LANES

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



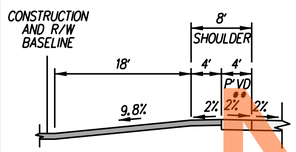
STA 181+60



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

••• 2% STA 179+20 TO STA 180+40

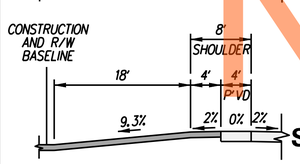
STA 179+20



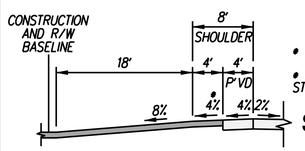
•• VARIES 2% TO 0% STA 178+00 TO STA 179+20

•• 2% STA 173+50 TO STA 178+00

STA 173+50



STA 172+30

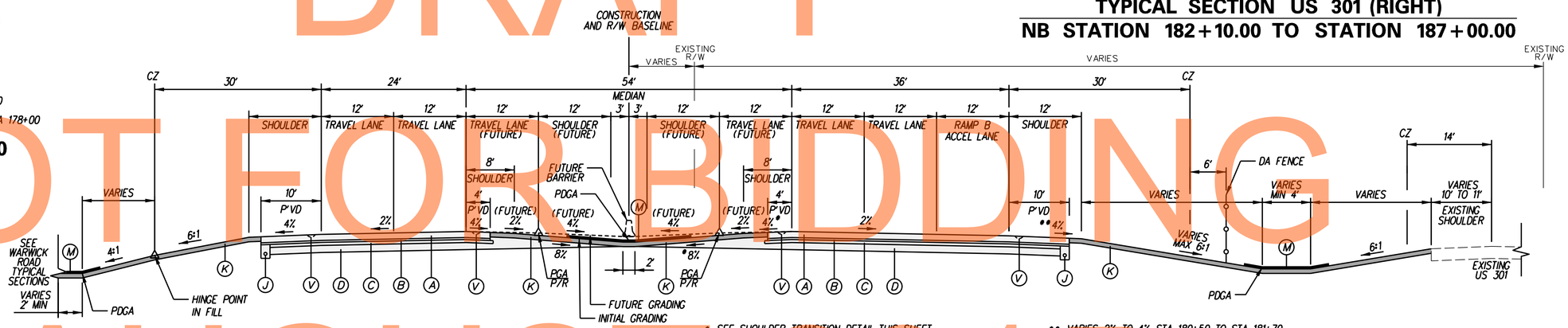


• 2% STA 171+10 TO STA 172+30

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

STA 169+90

SHOULDER TRANSITION DETAIL

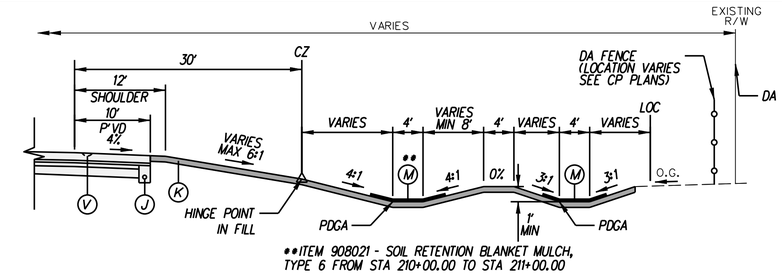


• SEE SHOULDER TRANSITION DETAIL THIS SHEET

•• 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

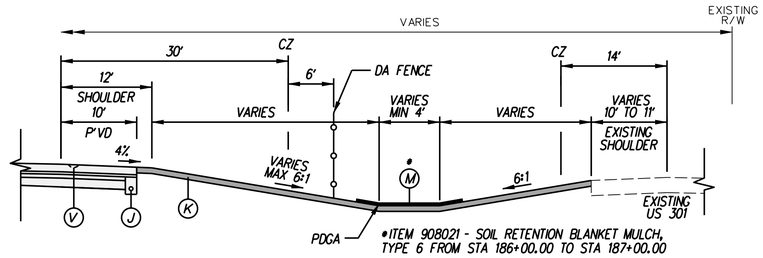
NB STATION 167+10.00 TO STATION 182+10.00
SB STATION 176+00.00 TO STATION 182+10.00



••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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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–09

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. 23	TOTAL SHTS. 850			

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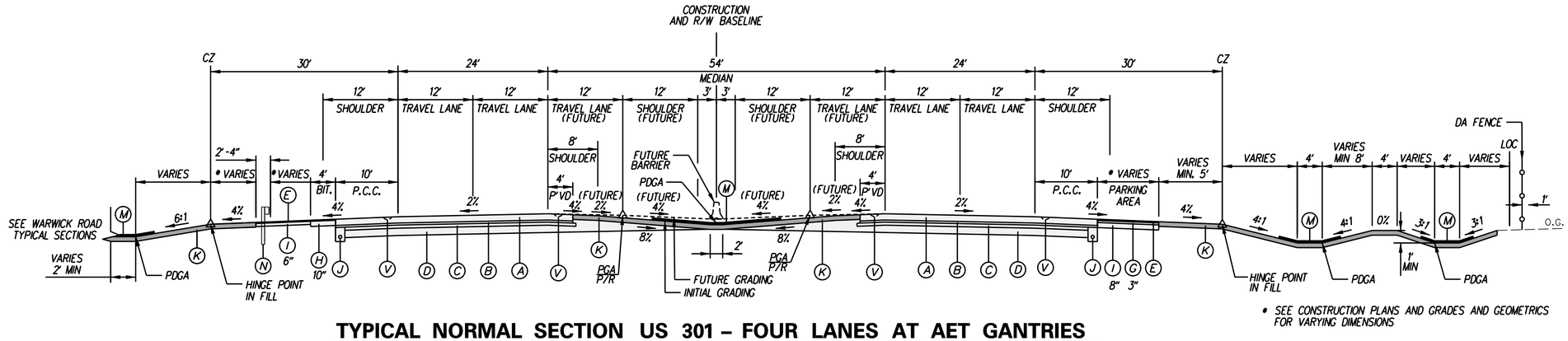
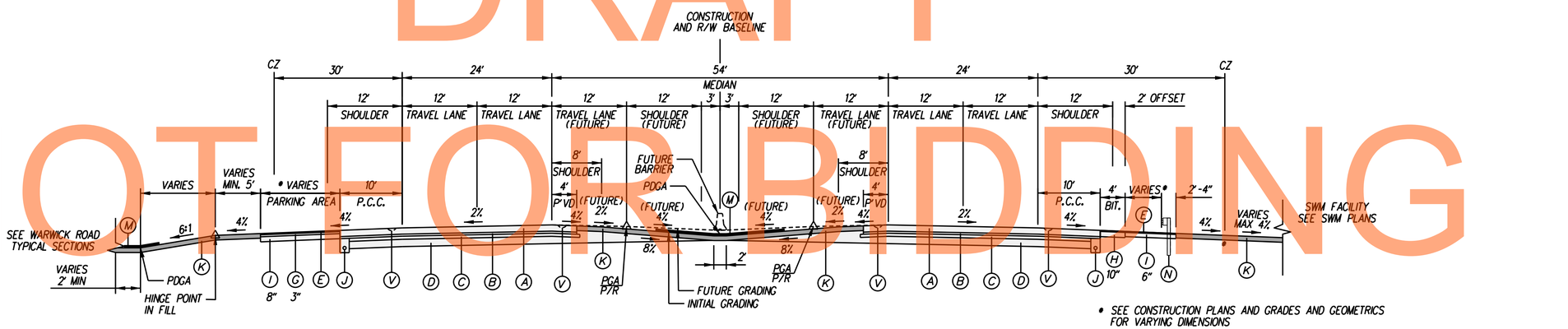


TYPICAL NORMAL SECTION US 301 – FOUR LANES AT AET GANTRIES

NB STATION 206+09.55 TO STATION 206+76.54

SB STATION 205+33.57 TO STATION 209+83.56



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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"
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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–10

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. 24 / TOTAL SHTS. 850

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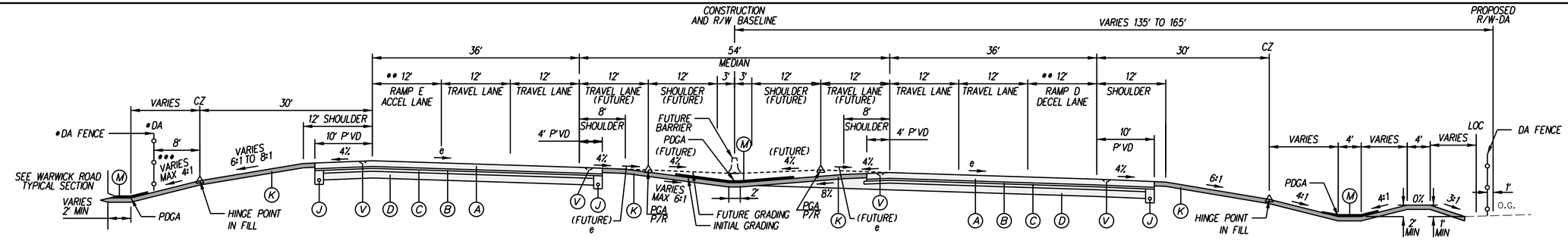
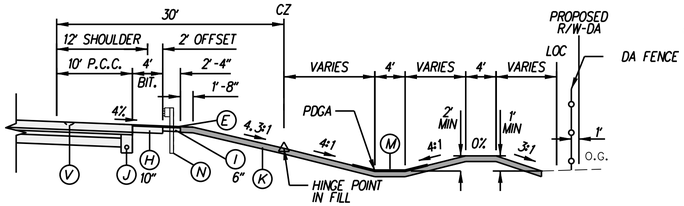


• DA AND FENCE TRANSITIONS FROM WARWICK ROAD TO US 301 MAINLINE STATION 225+41.24 TO STATION 226+00.00

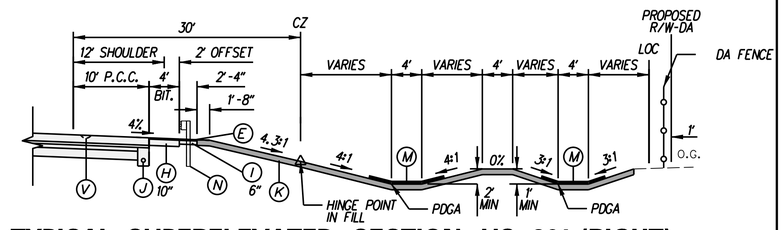
•• RAMP D VARIES FROM 0' TO 12' STATION 235+06.00 TO STATION 237+56.00
RAMP E VARIES FROM 0' TO 12' STATION 227+26.00 TO STATION 230+26.00

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

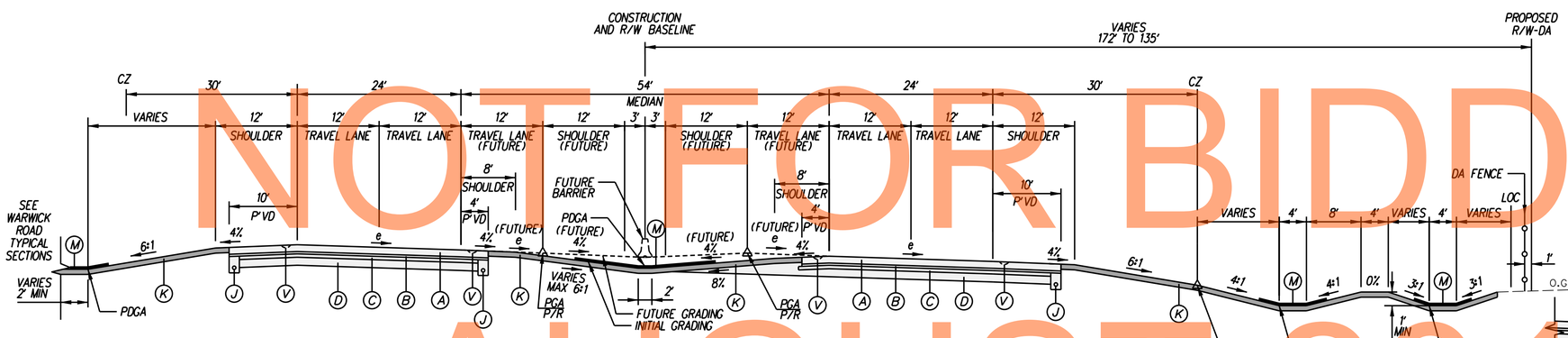
TYPICAL SUPERELEVATED SECTION US 301 – FOUR LANES & RAMPS
NB STATION 235+06.00 TO STATION 241+33.77
SB STATION 227+26.00 TO STATION 241+33.77
e_{MAX} = 3.8%



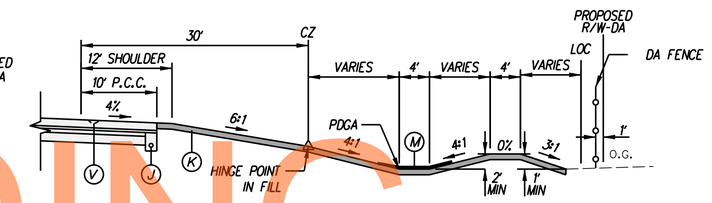
TYPICAL SUPERELEVATED SECTION US 301 (RIGHT)
NB STATION 239+15.73 TO STATION 239+75.00



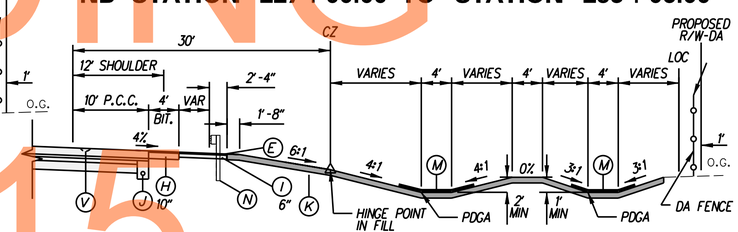
TYPICAL SUPERELEVATED SECTION US 301 (RIGHT)
NB STATION 239+75.00 TO STATION 241+33.77



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"
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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–11

DRAFT
NOT FOR BIDDING
AUGUST 2015

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. 25
				COUNTY NEW CASTLE	DESIGNED BY: ES		TOTAL SHTS. 850
					CHECKED BY: MFM		

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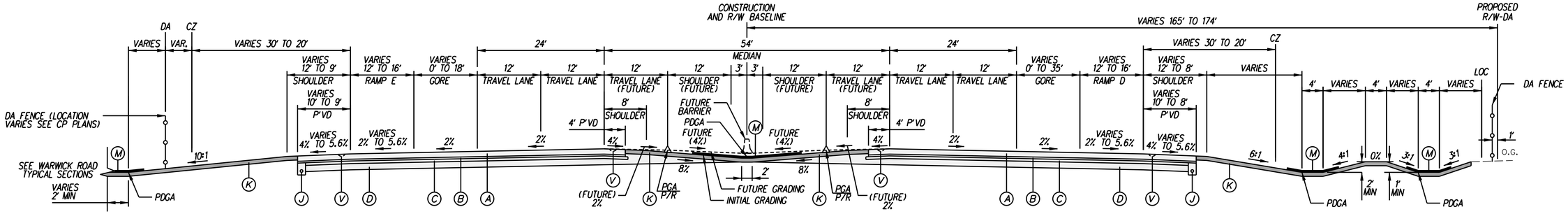
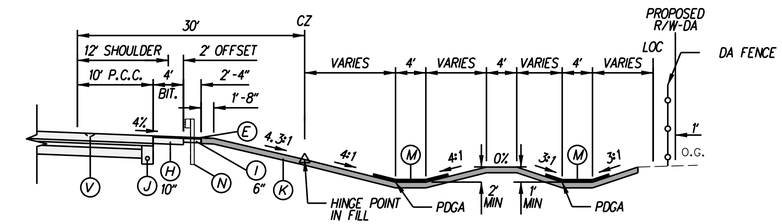


TYPICAL NORMAL SECTION US 301 – FOUR LANES & RAMPS

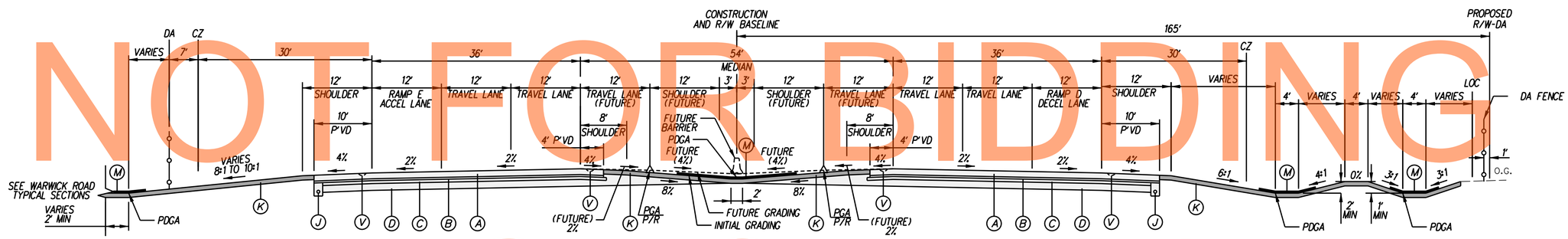
NB STATION 242+56.18 TO STATION 245+59.64

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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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, 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–12

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. 26 / TOTAL SHTS. 850

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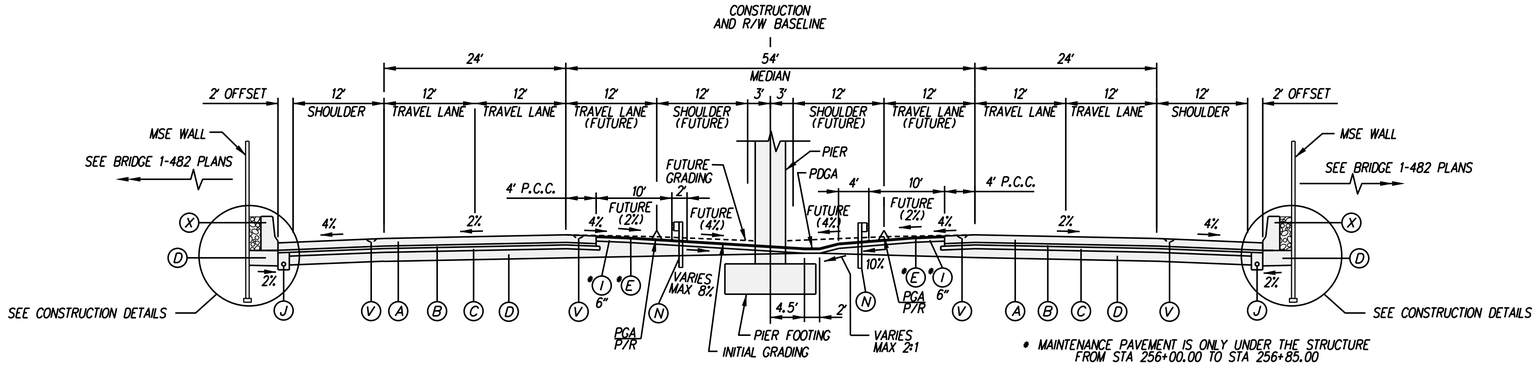
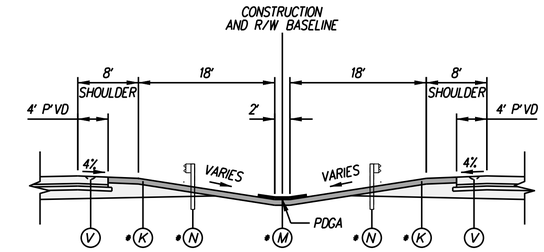


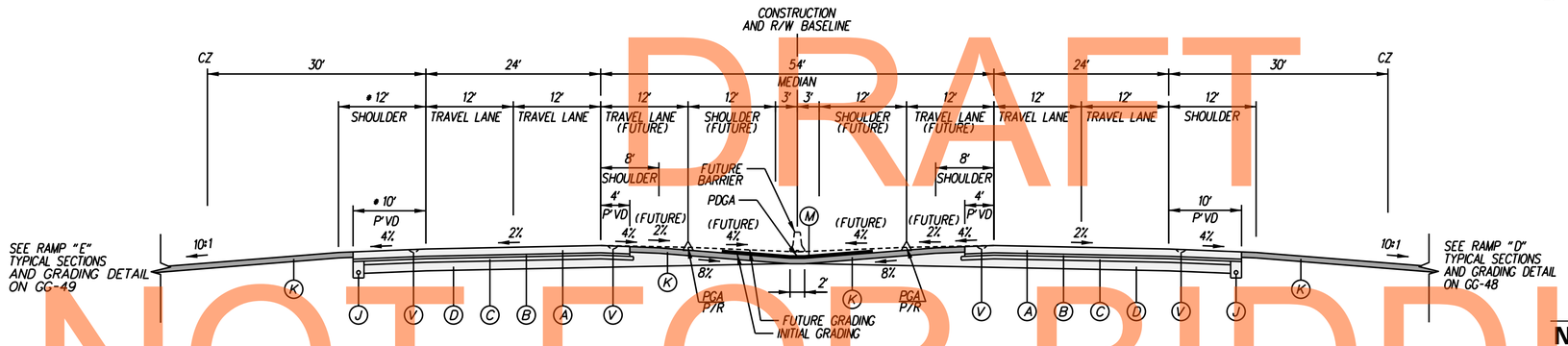
TYPICAL NORMAL SECTION US 301 – FOUR LANES UNDER LEVELS ROAD
STATION 255+53.00 TO STATION 257+33.00



• 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

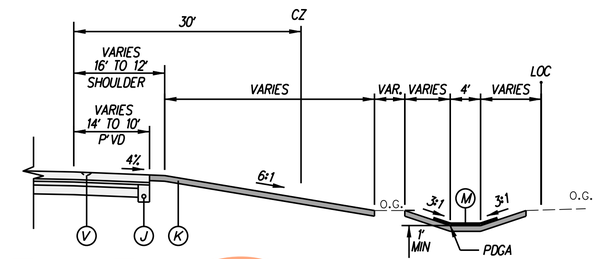
NOTES:
1. FOR GRADING NORTH OF STATION 258+00.00, SEE CONSTRUCTION DETAILS AND GG GRADING DETAILS.
2. SEE GG SHEETS AND CROSS SECTIONS FOR VARYING DIMENSIONS.



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

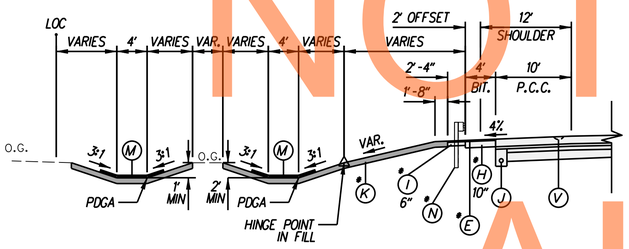
TYPICAL NORMAL SECTION US 301 – FOUR LANES
NB STATION 245+59.64 TO STATION 255+53.00
*NB STATION 257+33.00 TO STATION 258+00.00
SB STATION 244+54.92 TO STATION 255+53.00
*SB STATION 257+33.00 TO STATION 258+00.00

• SEE MEDIAN TRANSITION DETAIL



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

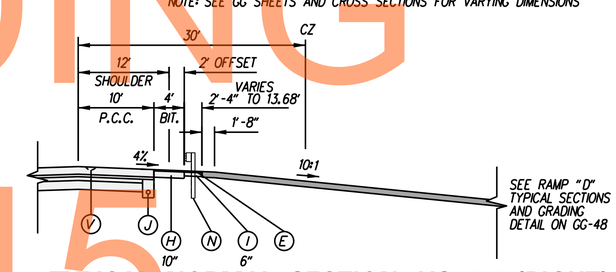
NOTE: SEE GG SHEETS AND CROSS SECTIONS FOR VARYING DIMENSIONS



• 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



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.
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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, 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–13

DRAFT
NOT FOR BIDDING
AUGUST 2015

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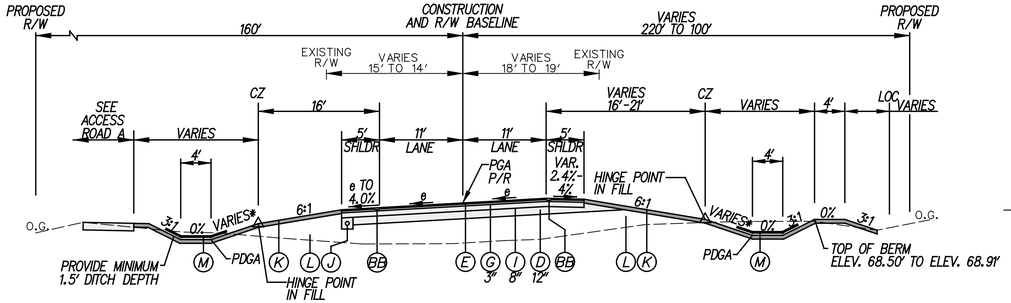
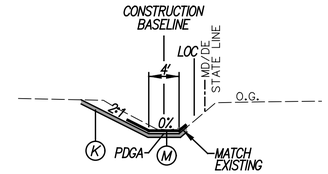
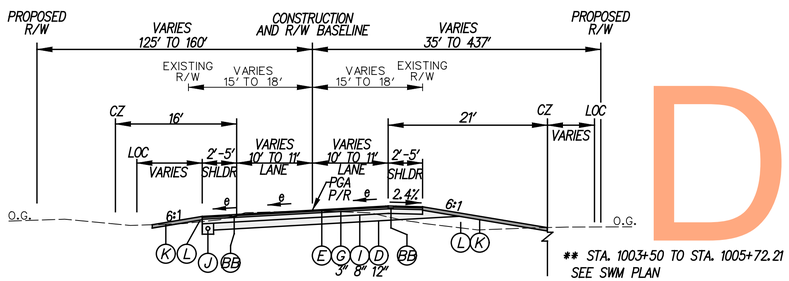
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301	BRIDGE NO.	TYPICAL SECTIONS	SHEET NO. 27
				COUNTY NEW CASTLE	DESIGNED BY: ES		TOTAL SHTS. 850
					CHECKED BY: MFM		



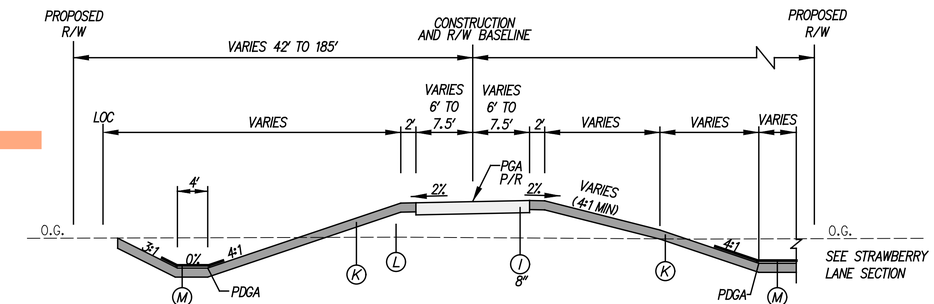
TYPICAL SUPERELEVATED SECTION – STRAWBERRY LANE
STATION 1004+75.00 TO STATION 1006+29.66
e_{MAX}=5.6%



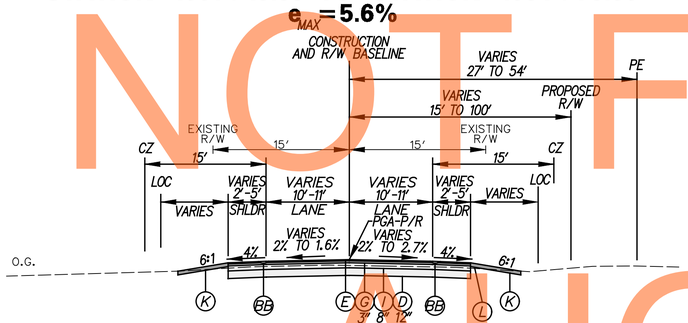
TYPICAL SECTION – STRAWBERRY LANE DITCH



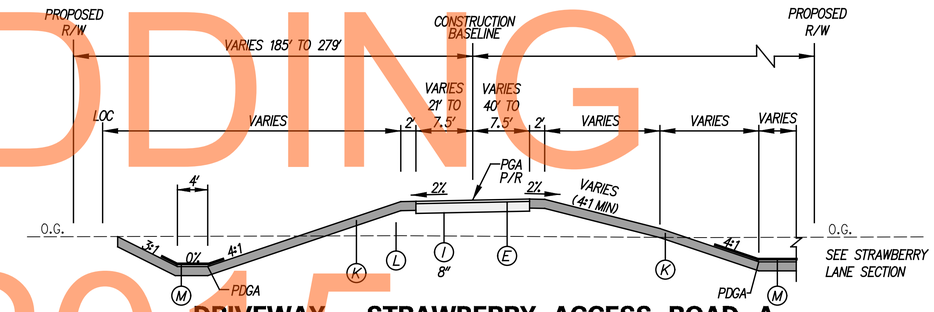
TYPICAL SUPERELEVATED SECTION – STRAWBERRY LANE
STATION 1001+13.59 TO STATION 1004+75.00
e_{MAX}=5.6%



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



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



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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
- (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.
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   - 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

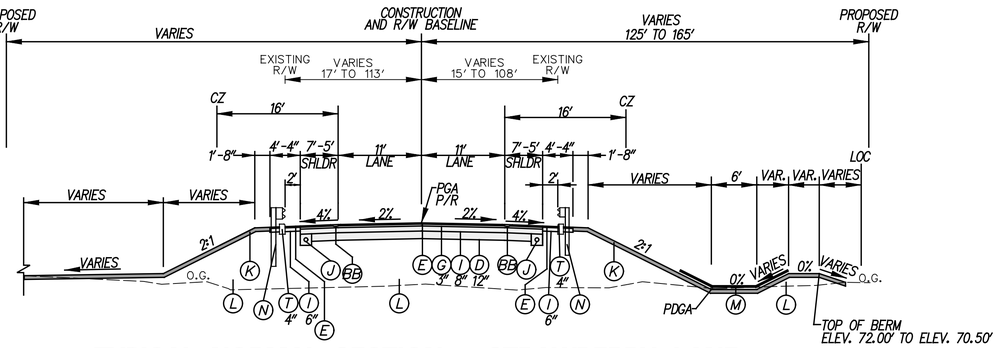
NOT TO SCALE

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

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

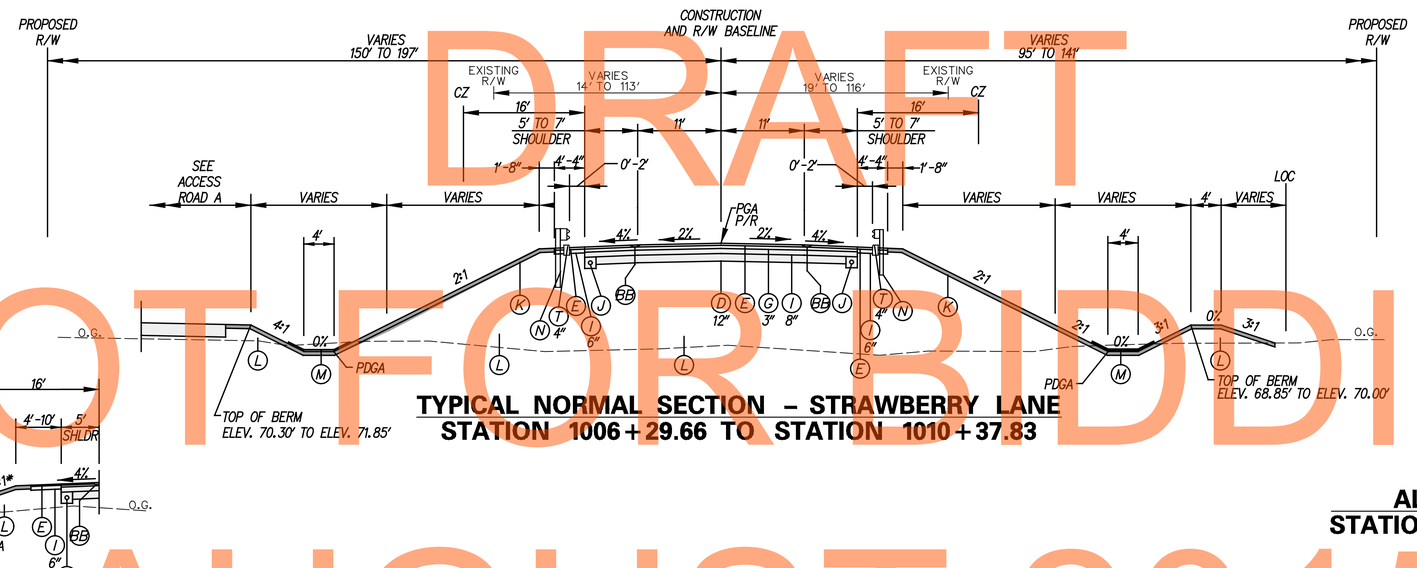
TYPICAL SECTIONS

SHEET NO. 28
TOTAL SHTS. 850

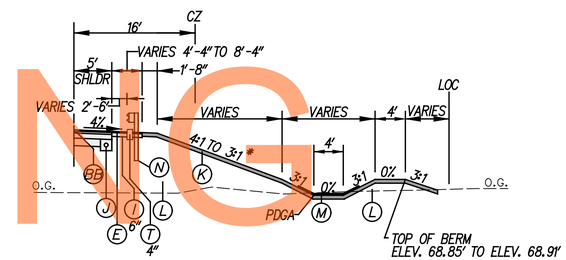


TYPICAL NORMAL SECTION – STRAWBERRY LANE
STATION 1012+30.10 TO STATION 1013+75.00

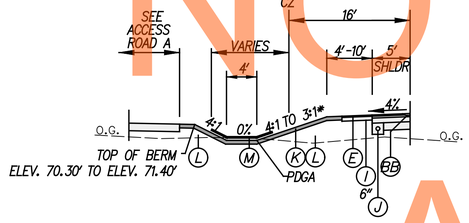
NOTE: PROPOSED BRIDGE FROM STA. 1010+37.83 TO STA. 1012+30.10



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



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



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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:

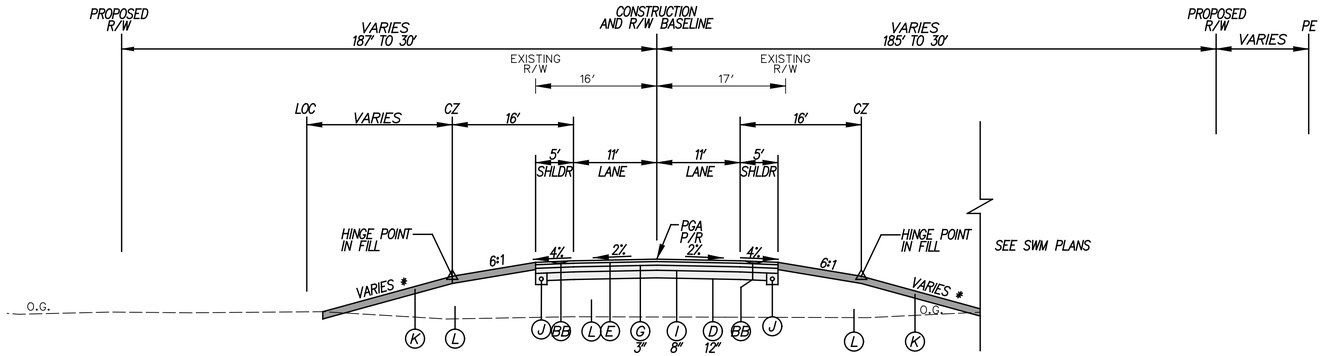
1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE 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

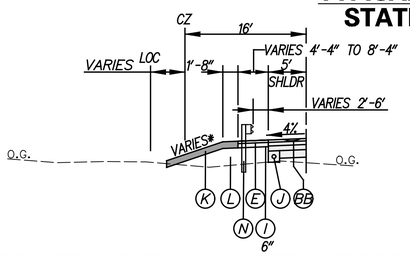
OR AS SHOWN IN CONTRACT DOCUMENTS

TS-15

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MAG/TAM / CHECKED BY: PAH	TYPICAL SECTIONS	SHEET NO. 29 / TOTAL SHTS. 850

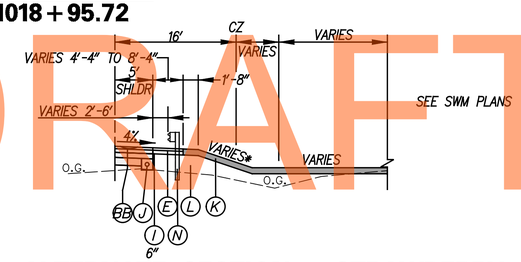


TYPICAL NORMAL SECTION – STRAWBERRY LANE
STATION 1013+75.00 TO STATION 1018+95.72



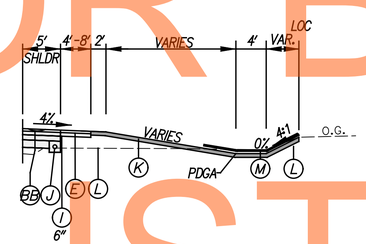
ALTERNATE SECTION – STRAWBERRY LANE
STATION 1016+00.00 LT. TO STATION 1017+30.00 LT.

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

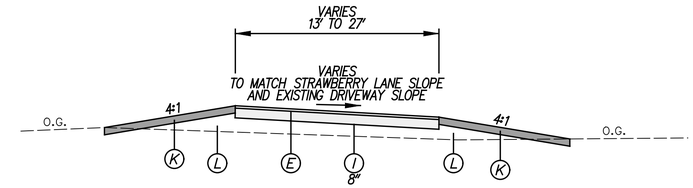


ALTERNATE SECTION – STRAWBERRY LANE
STATION 1015+25.00 RT. TO STATION 1016+55.00 RT.

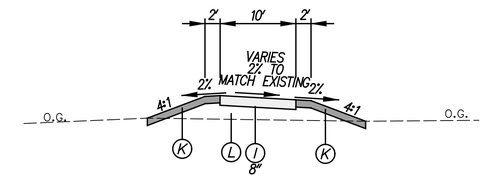
GRADING FOR END TREATMENT ATTENUATOR, TYPE 2 STA. 1015+50.00, RT.



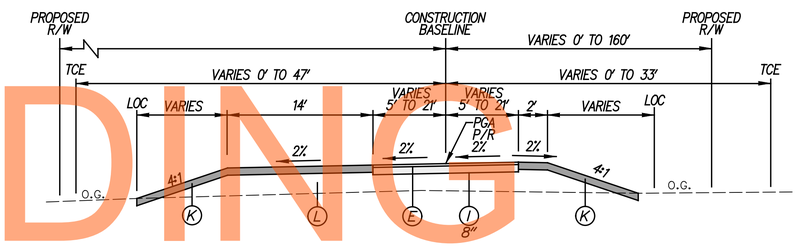
ALTERNATE SECTION – STRAWBERRY LANE
STATION 1017+86.50 RT. TO STATION 1018+96.00 RT.



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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 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.
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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 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

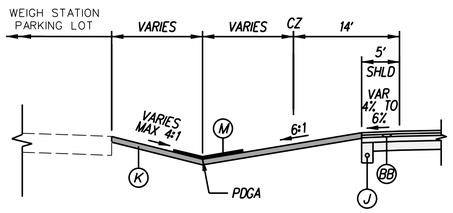
NOT TO SCALE

US 301
MARYLAND STATE LINE TO LEVELS ROAD

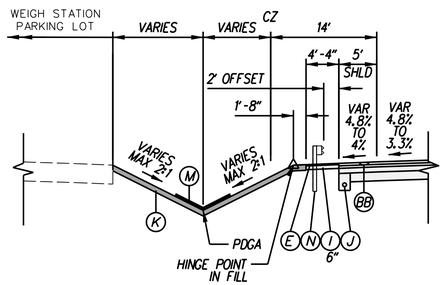
CONTRACT	BRIDGE NO.
T200811301	DESIGNED BY: MAG/TAM
COUNTY	
NEW CASTLE	CHECKED BY: PAH

TYPICAL SECTIONS

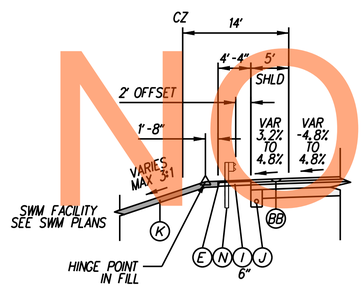
SHEET NO. 30
TOTAL SHTS. 850



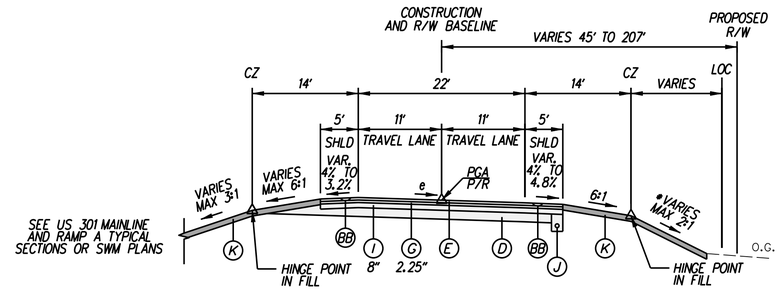
MIDDLETOWN WARWICK ROAD (LEFT)
STATION 1116+88.85 TO STATION 1121+75.00



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

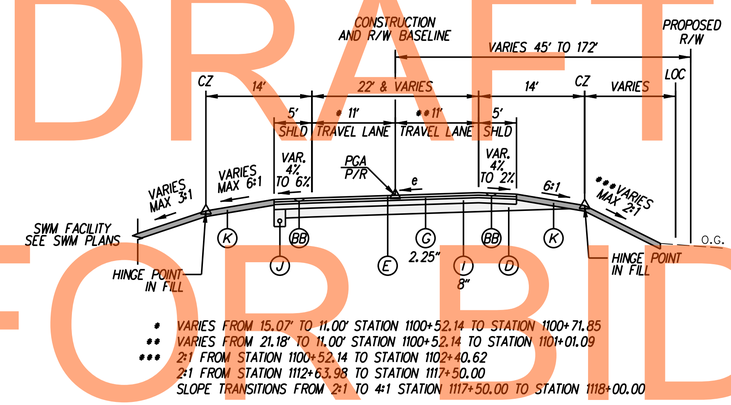


MIDDLETOWN WARWICK ROAD (LEFT)
STATION 1110+34.30 TO STATION 1115+50.00



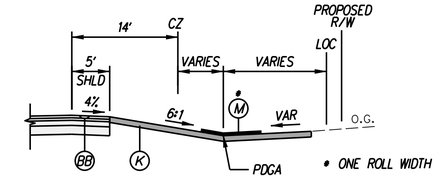
• 4:1 FROM STATION 1104+36.16 TO STATION 1104+50.00
4:1 FROM STATION 1110+00.00 TO STATION 1110+25.00
SLOPE TRANSITIONS FROM 4:1 TO 2:1 STATION 1110+25.00 TO STATION 1110+50.00
2:1 FROM STATION 1110+50.00 TO STATION 1112+63.98

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

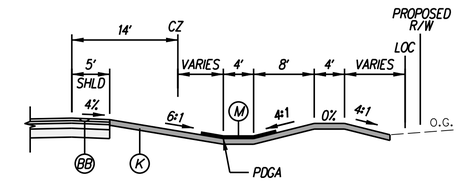


• VARIES FROM 15.07' TO 11.00' STATION 1100+52.14 TO STATION 1100+71.85
•• VARIES FROM 21.18' TO 11.00' STATION 1100+52.14 TO STATION 1101+01.09
••• 2:1 FROM STATION 1100+52.14 TO STATION 1102+40.62
2:1 FROM STATION 1112+63.98 TO STATION 1117+50.00
SLOPE TRANSITIONS FROM 2:1 TO 4:1 STATION 1117+50.00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

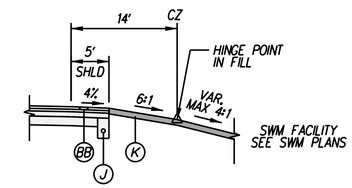
TYPICAL SUPERELEVATED SECTION – MIDDLETOWN WARWICK ROAD
e_{MAX}=2.0% FOR STATION 1100+52.14 TO STATION 1102+40.62
e_{MAX}=4.8% FOR STATION 1112+63.98 TO STATION 1116+53.08
e_{MAX}=3.3% FOR STATION 1116+53.08 TO STATION 1119+01.46
e_{MAX}=6.0% FOR STATION 1119+01.46 TO STATION 1123+50.60



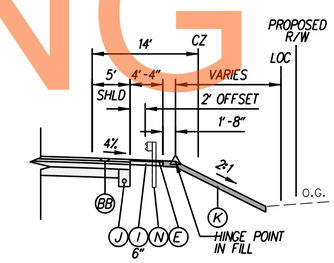
MIDDLETOWN WARWICK ROAD (RIGHT)
STATION 1120+00.00 TO STATION 1122+72.00



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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.

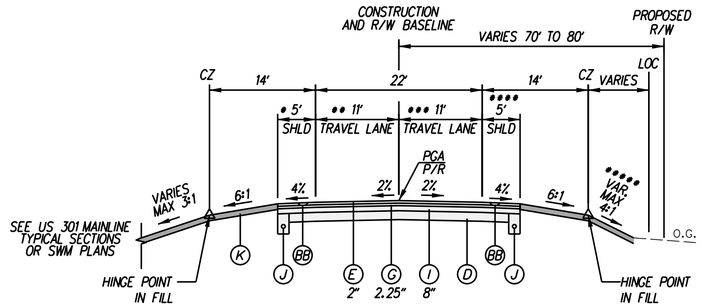
ABBREVIATIONS

PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
PVD - 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 T200811301 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: ES / CHECKED BY: MFM	TYPICAL SECTIONS	SHEET NO. 31 / TOTAL SHTS. 850

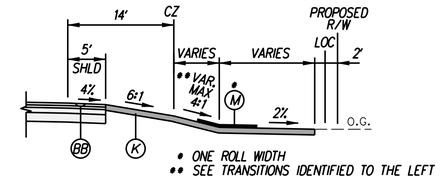
J:\2008 PROJECTS\E3X348011\700CADD\750AET\ROADWAY\TS_301AET_017.DGN



TYPICAL NORMAL SECTION – MIDDLETOWN WARWICK ROAD

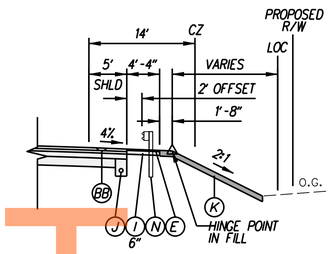
STATION 1102+40.62 TO STATION 1104+36.16
STATION 1123+50.60 TO STATION 1124+32.36
STATION 1129+88.79 TO STATION 1130+00.00

- • 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



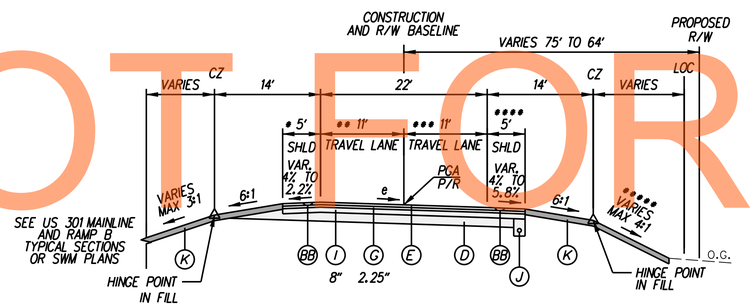
MIDDLETOWN WARWICK ROAD (RIGHT)

STATION 1123+50.60 TO STATION 1125+75.00



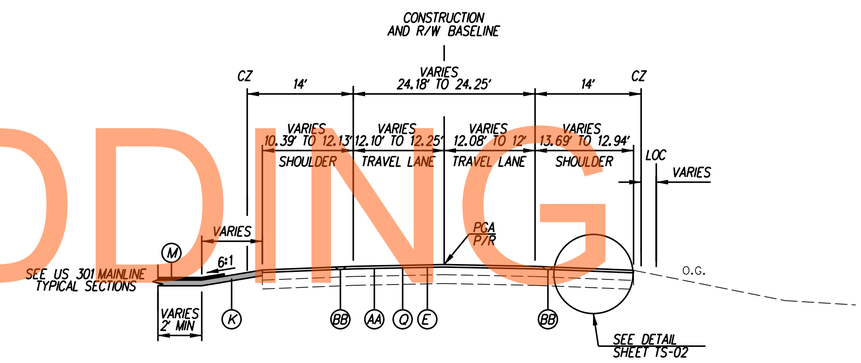
MIDDLETOWN WARWICK ROAD (RIGHT)

STATION 1102+40.62 TO STATION 1103+07.50



TYPICAL SUPERELEVATED SECTION – MIDDLETOWN WARWICK ROAD

e_{MAX}=5.8% FOR STATION 1124+32.36 TO STATION 1129+88.79



TYPICAL NORMAL SECTION – EXISTING MIDDLETOWN WARWICK ROAD

STATION 1130+00.00 TO STATION 1131+45.00

DRAFT
NOT FOR BIDDING
AUGUST 2015

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 T200811301 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: ES / CHECKED BY: MFM
TYPICAL SECTIONS	SHEET NO. 32	TOTAL SHTS. 850			

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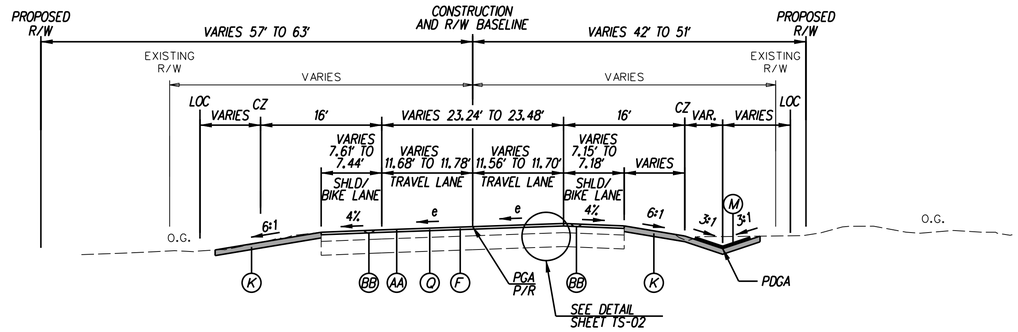
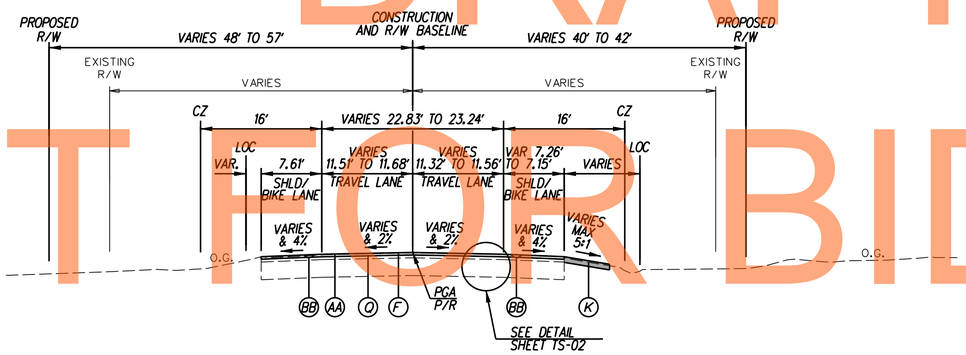


TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES
STATION 1202+07.10 TO STATION 1202+40.00
e_{MAX}=4.8%

DRAFT
NOT FOR BIDDING
AUGUST 2015



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, 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–19

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. 33 / TOTAL SHTS. 850

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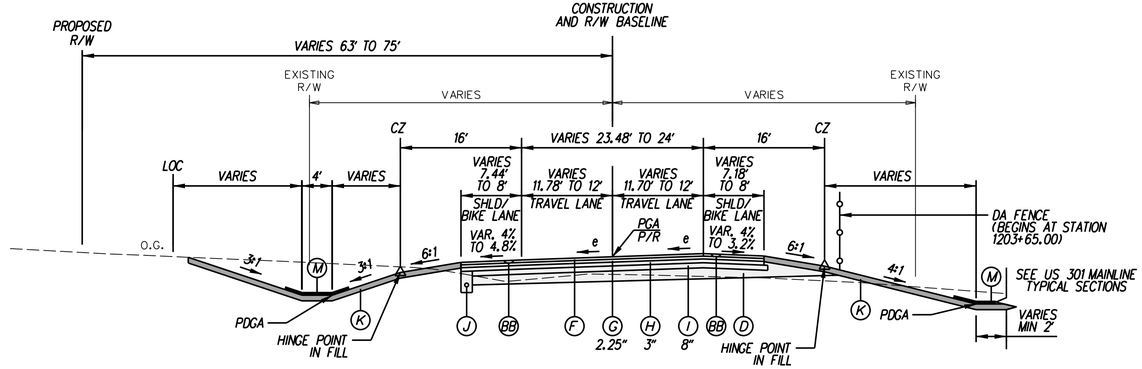
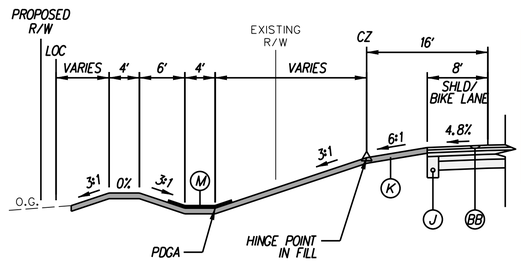
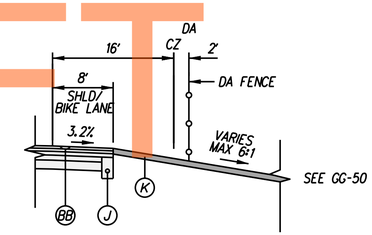


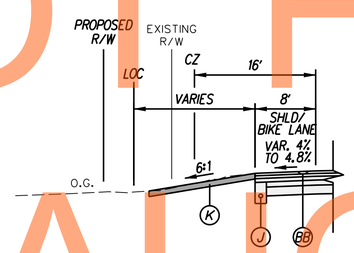
TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES
STATION 1202+40.00 TO STATION 1212+47.24
e_{MAX}=4.8%



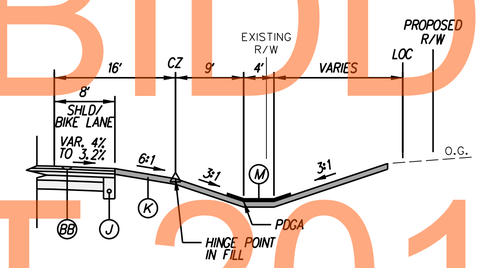
TYPICAL SUPERELEVATED SECTION (LEFT)
STATION 1205+50.00 STATION 1207+00.00



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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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  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
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- (P) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
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- (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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NOTES:

1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
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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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   - 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, 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–20

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. 34 / TOTAL SHTS. 850

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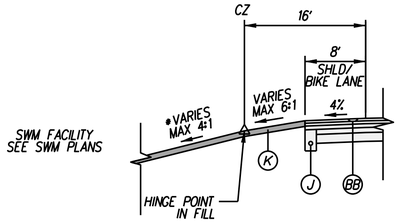
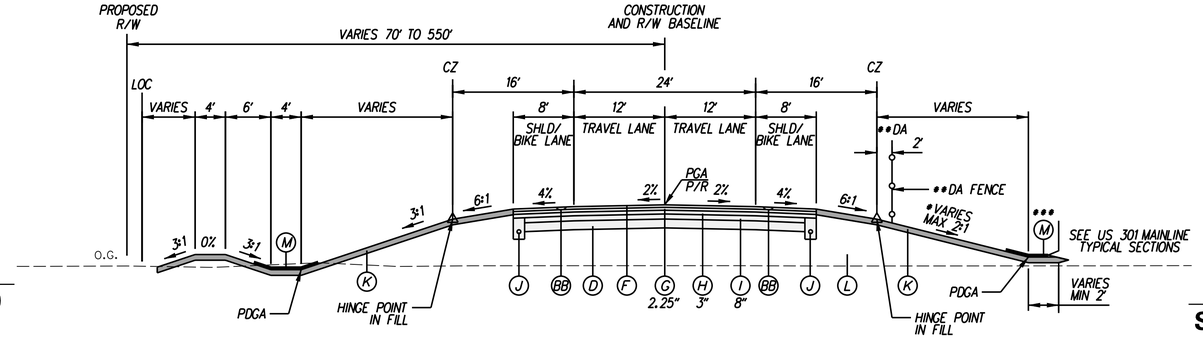
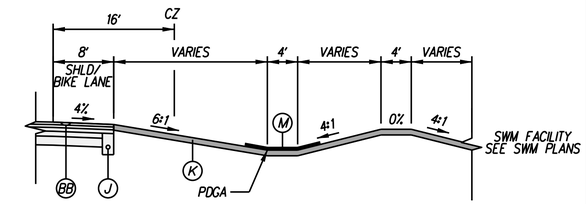


TYPICAL NORMAL SECTION (LEFT)
STATION 1218+50.00 TO STATION 1225+50.00

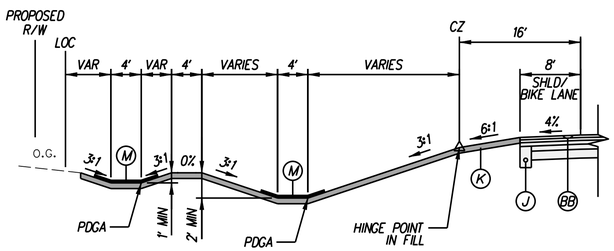


- • 4:1 FROM STATION 1212+47.24 TO STATION 1220+25.00
  SLOPE TRANSITIONS FROM 4:1 TO 6:1 STATION 1220+25.00 TO STATION 1220+50.00
  6:1 FROM STATION 1220+50.00 TO STATION 1260+25.00
  SLOPE TRANSITIONS FROM 6:1 TO 4:1 STATION 1260+25.00 TO STATION 1260+50.00
  4:1 FROM STATION 1260+50.00 TO STATION 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

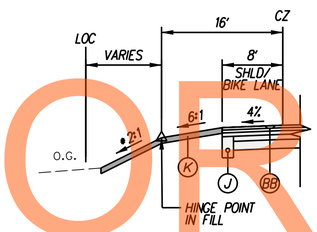
TYPICAL NORMAL SECTION WARWICK ROAD - TWO LANES
STATION 1212+47.24 TO STATION 1268+16.01
STATION 1280+59.79 TO STATION 1282+16.79



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

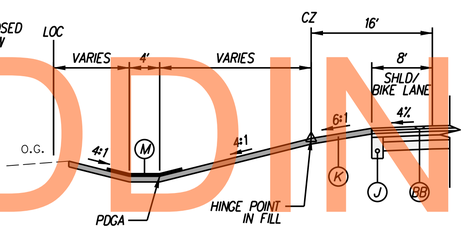


TYPICAL NORMAL SECTION (LEFT)
STATION 1214+75.00 TO STATION 1218+50.00
STATION 1227+50.00 TO STATION 1240+30.00

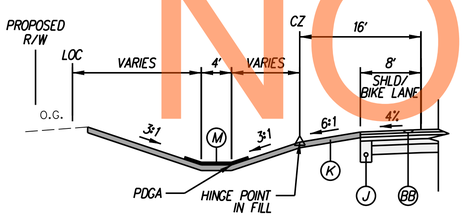


• SLOPE TRANSITIONS FROM 4:1 TO 2:1 STATION 1225+50.00 TO STATION 1226+25.00

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



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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

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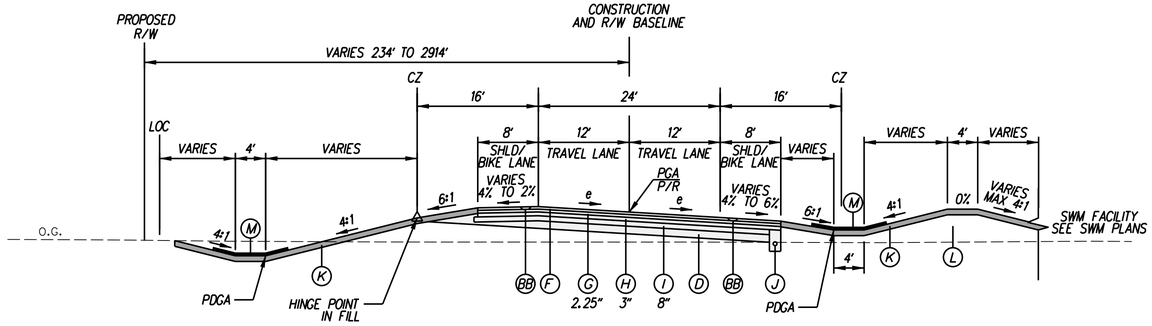
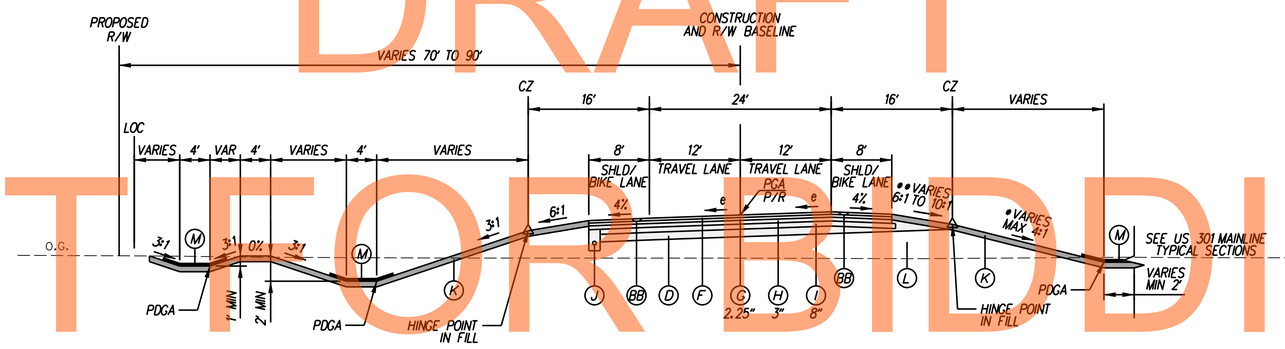


TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES

STATION 1282+16.79 TO STATION 1285+73.09

e_{MAX} = 6.0%

DRAFT
NOT FOR BIDDING
AUGUST 2015

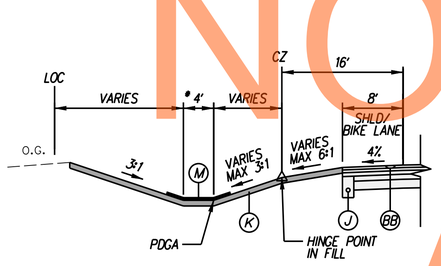


* 4:1 FROM STATION 1268+16.01 TO STATION 1270+40.00
SLOPE TRANSITIONS FROM 4:1 TO 10:1 STATION 1270+40.00 TO STATION 1272+80.00
10:1 FROM STATION 1272+80.00 TO STATION 1276+50.00
** 6:1 FROM STATION 1268+16.01 TO STATION 1270+40.00
SLOPE TRANSITIONS FROM 6:1 TO 10:1 STATION 1270+40.00 TO STATION 1272+80.00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

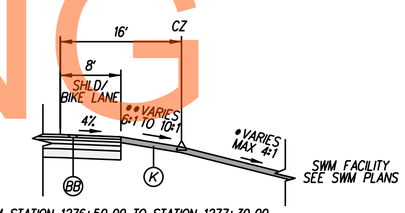
e_{MAX} = 3.5%



* 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 6:1 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"
- (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, 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–22

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. 36
				COUNTY NEW CASTLE	DESIGNED BY: ES		TOTAL SHTS. 850
					CHECKED BY: MFM		

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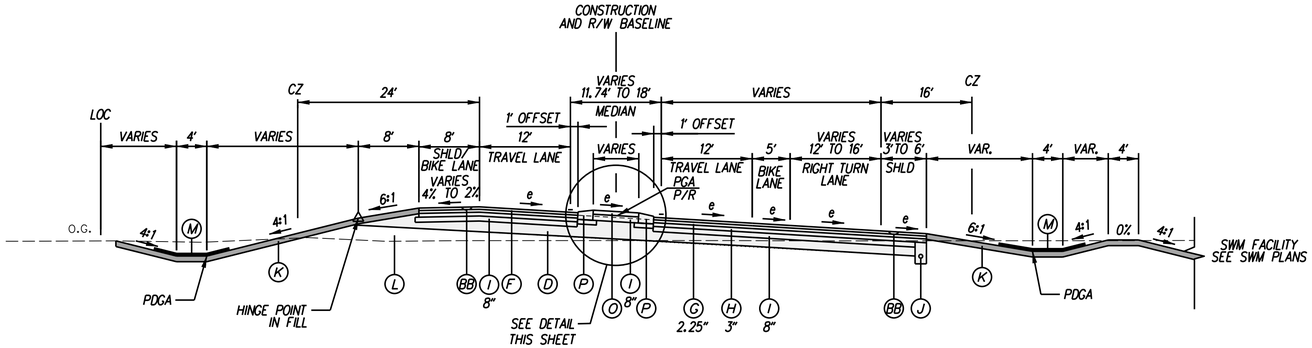
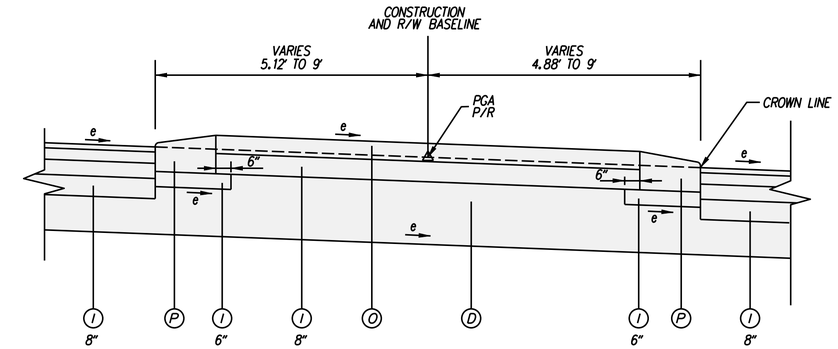
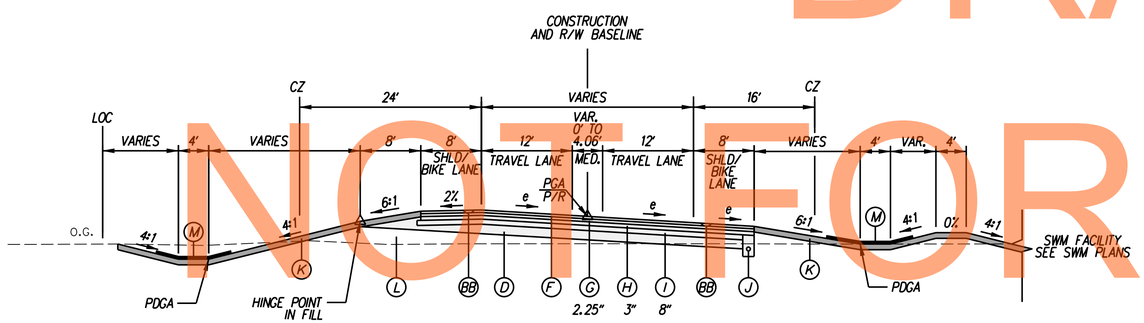


• PAVEMENT DEPTH TRANSITIONS FROM 1291+24.96 TO 1291+40.00 SEE DETAIL SHEET DT-02

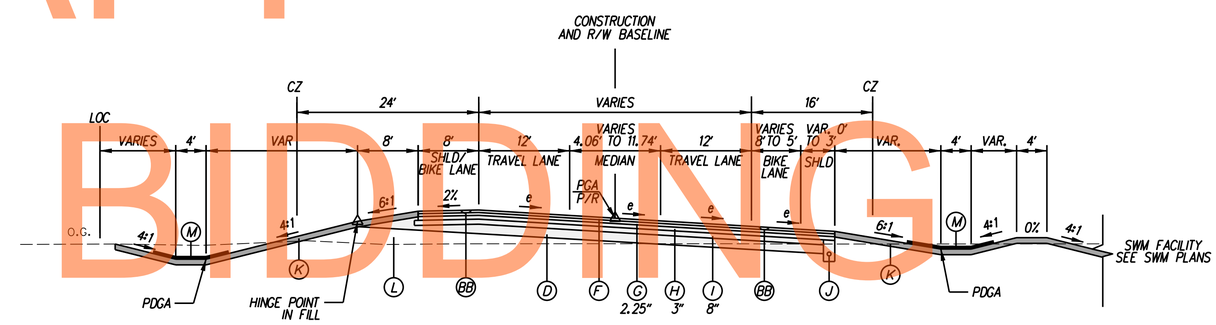
TYPICAL SUPERELEVATED SECTION WARWICK ROAD – TWO LANES & AUX. LANE
STATION 1289+78.79 TO STATION 1292+39.00
e_{MAX}=6.0%



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%

DRAFT
NOT FOR BIDDING
AUGUST 2015

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

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. 37 / TOTAL SHTS. 850

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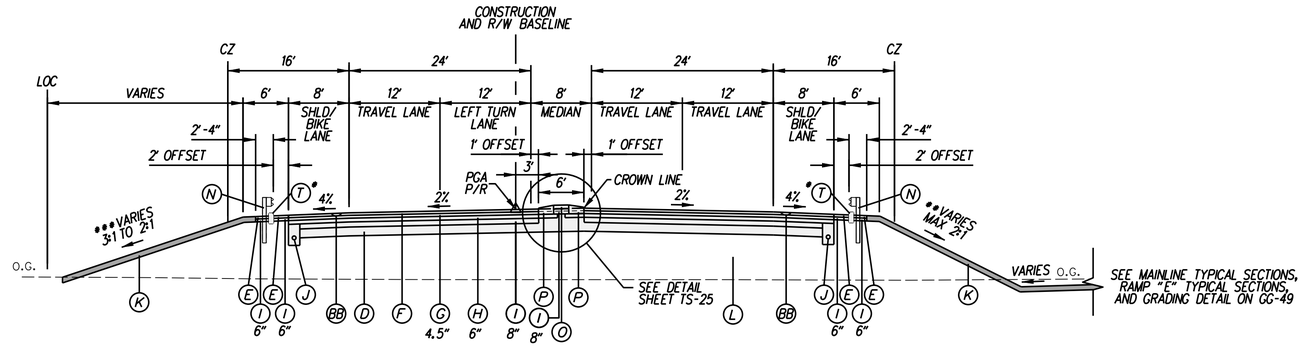
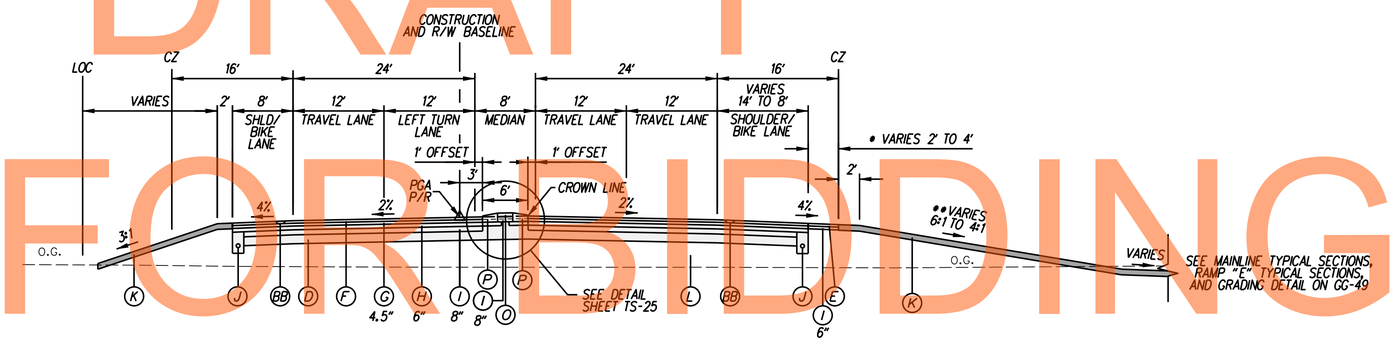


• PCC CURB EXTENDS FROM BRIDGE PARAPETS TO 2' BEYOND THE DOWNSTREAM EDGE OF INLETS SHOWN ON THE PLANS.
•• SLOPE TRANSITIONS FROM 6:1 TO 3:1 STATION 1293+20.00 TO STATION 1294+80.00
SLOPE TRANSITIONS FROM 3:1 TO 2:1 STATION 1294+80.00 TO STATION 1295+40.00
••• SLOPE TRANSITIONS FROM 3:1 TO 2:1 STATION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

DRAFT
NOT FOR BIDDING
AUGUST 2015



• 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"
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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.
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, 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–24

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. 38 / TOTAL SHTS. 850

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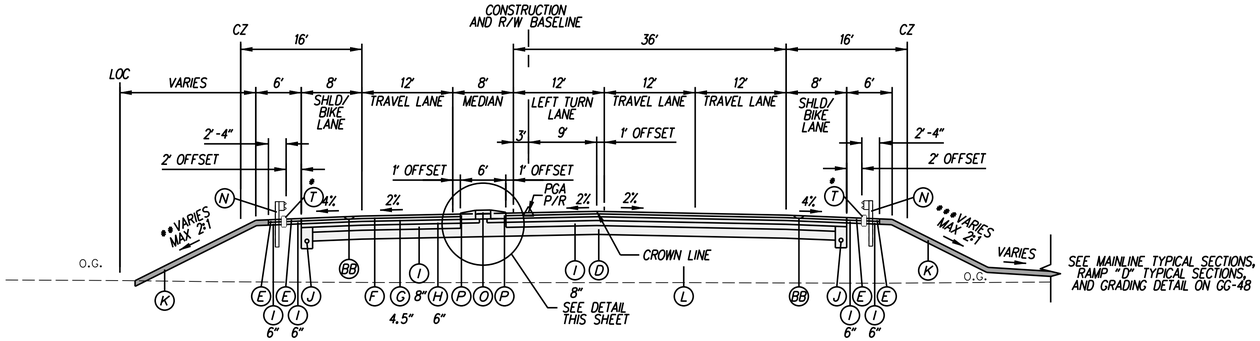
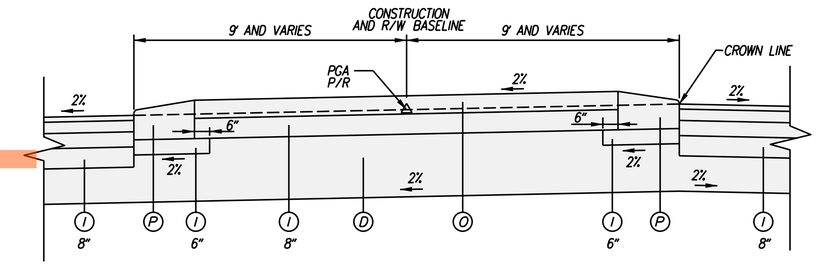
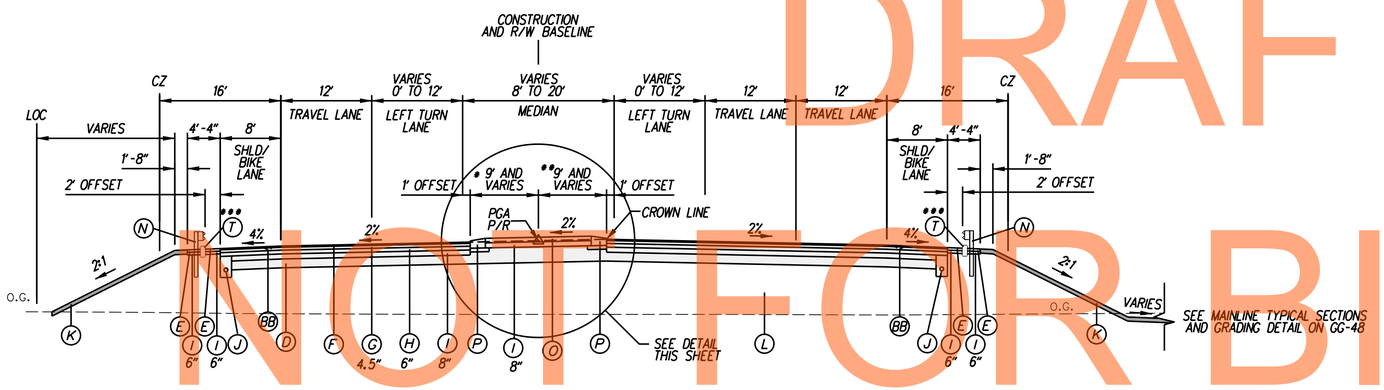


• PCC CURB EXTENDS FROM BRIDGE PARAPETS TO 2' BEYOND THE DOWNSTREAM EDGE OF INLETS SHOWN ON THE PLANS
•• 2:1 FROM STATION 1298+56.71 TO STATION 1300+00.00
SLOPE TRANSITIONS FROM 2:1 TO 3:1 STATION 1300+00.00 TO STATION 1300+50.00
3:1 FROM STATION 1300+50.00 TO 1301+09.00
••• 2:1 FROM STATION 1298+56.71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



MEDIAN DETAIL LEVELS ROAD



• 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)

DRAFT
NOT FOR BIDDING
AUGUST 2015

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

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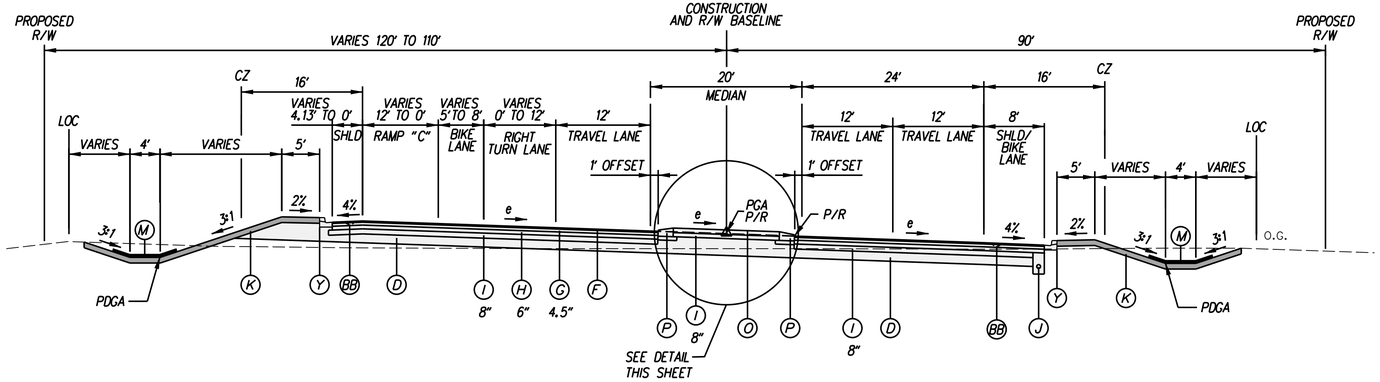
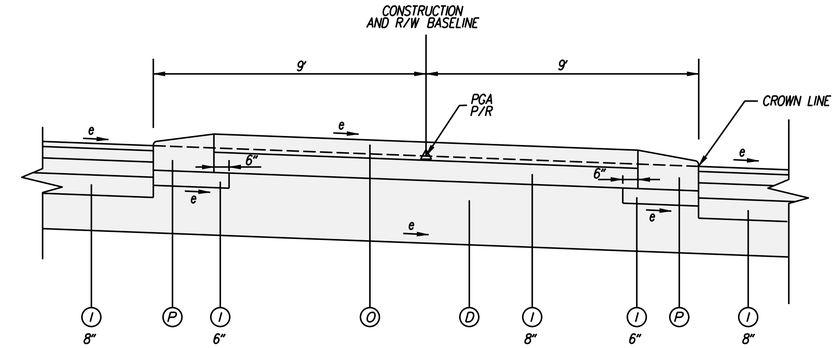
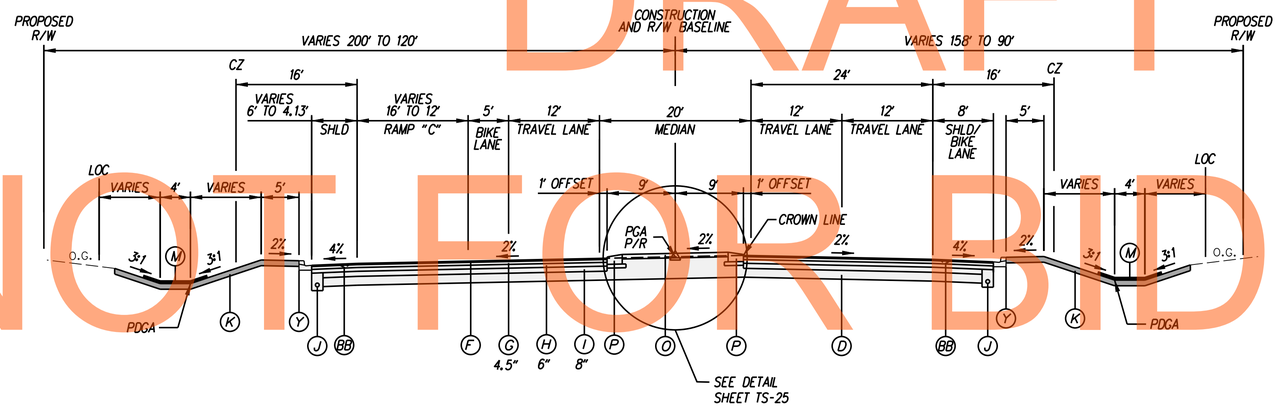


TYPICAL SUPERELEVATED SECTION LEVELS ROAD
STATION 1302+98.98 TO STATION 1304+35.51
e_{MAX}=3.8%



MEDIAN DETAIL LEVELS ROAD
SUPERELEVATED SECTION



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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
PVD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-26

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. 40 / TOTAL SHTS. 850

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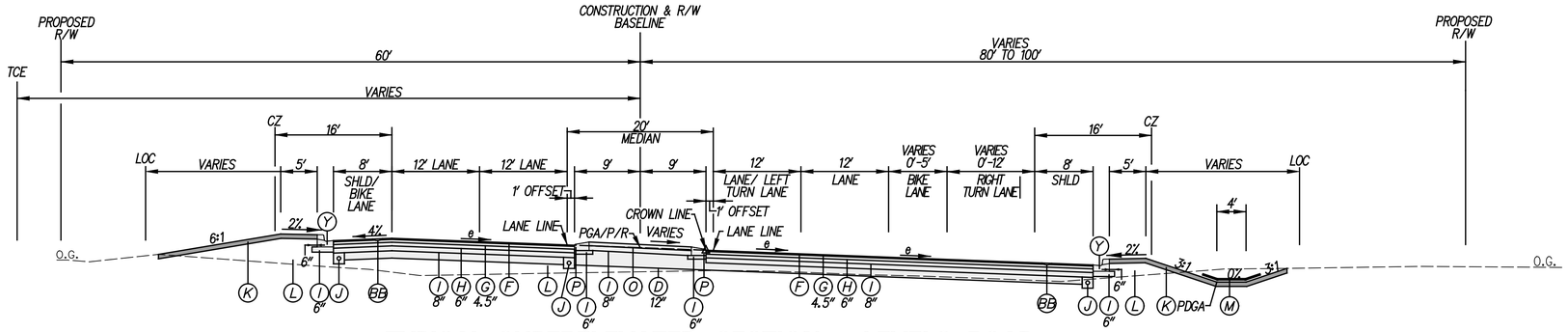
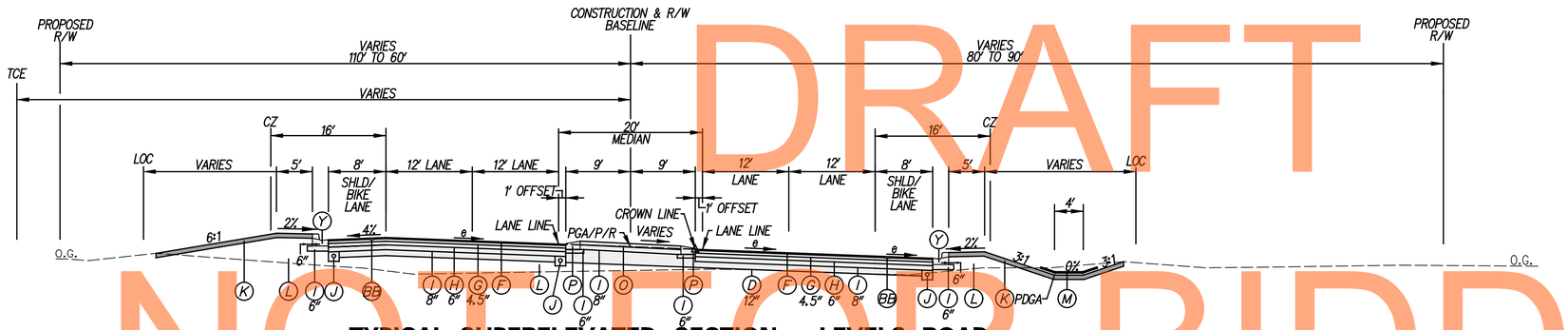
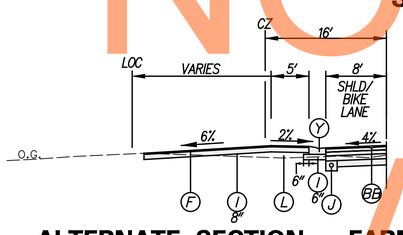


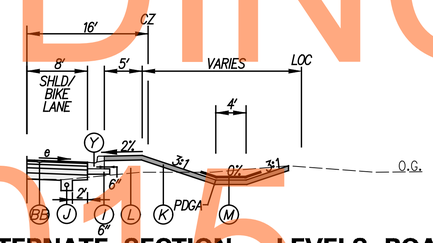
TYPICAL SUPERELEVATED SECTION – LEVELS ROAD
STATION 1311+20.00 TO STATION 1312+58.79
e_{MAX}=3.8%



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

LEGEND

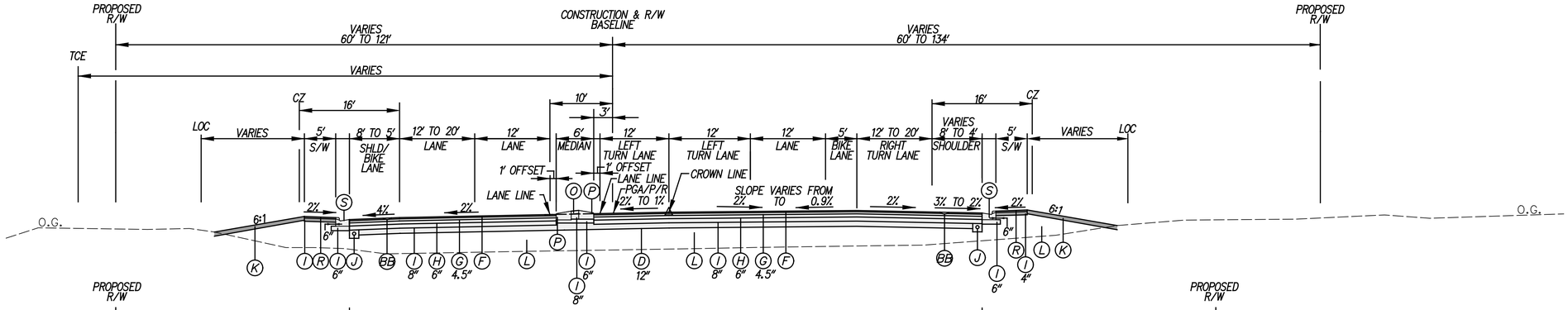
- (A) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (B) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (C) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (D) ITEM 209001 - BORROW, TYPE A, 12" & VARIES
- (E) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE), 2"
- (F) ITEM 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:

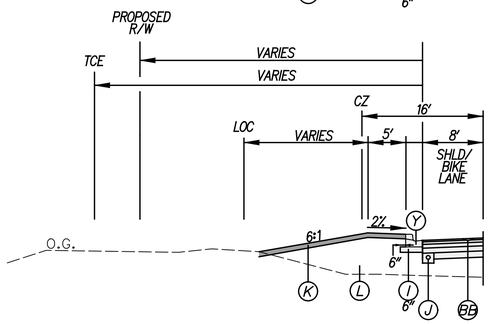
1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE 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

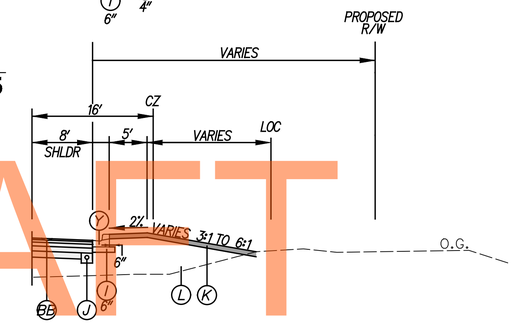
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MAG/TAM / CHECKED BY: PAH	TYPICAL SECTIONS	SHEET NO. 41 / TOTAL SHTS. 850



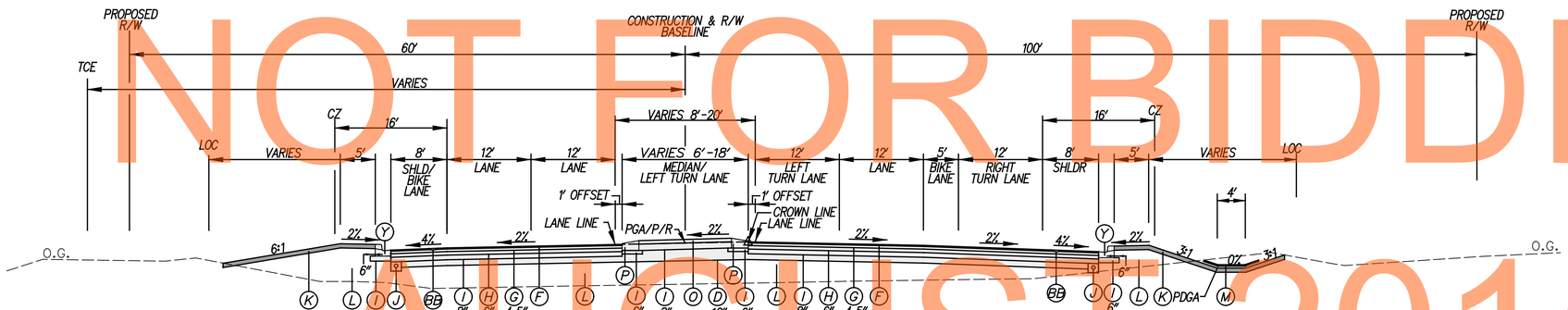
TYPICAL NORMAL SECTION – LEVELS ROAD
STATION 1316+50.00 TO STATION 1317+53.25



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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:

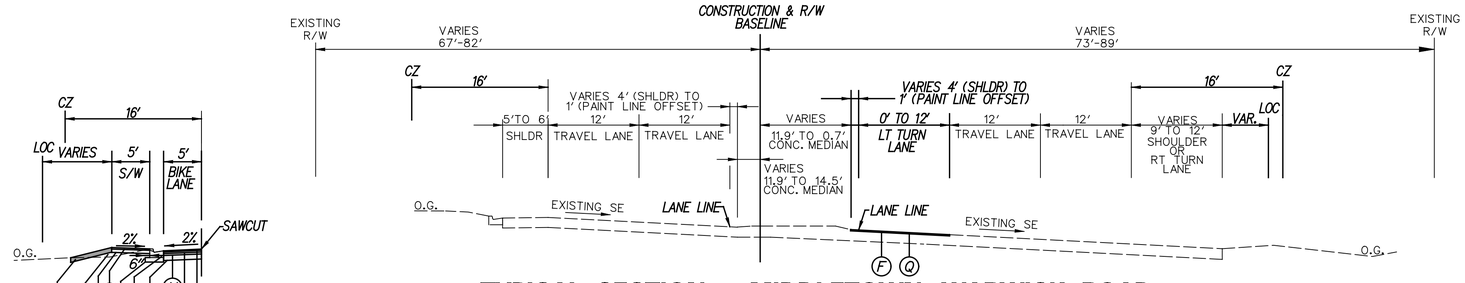
1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE 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

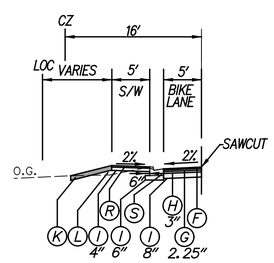
PGA - PROFILE GRADE APPLIED
PDGA - PROFILE DITCH GRADE APPLIED
P/R - POINT OF ROTATION
P'VD - PAVED
BCBC - BITUMINOUS CONCRETE BASE COURSE
GABC - GRADED AGGREGATE BASE COURSE

TS-28

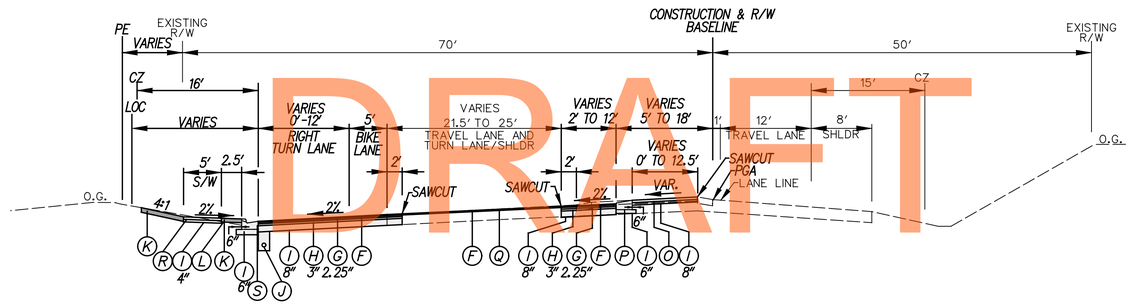
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MAG/TAM / CHECKED BY: PAH
TYPICAL SECTIONS	SHEET NO. 42	TOTAL SHTS. 850			



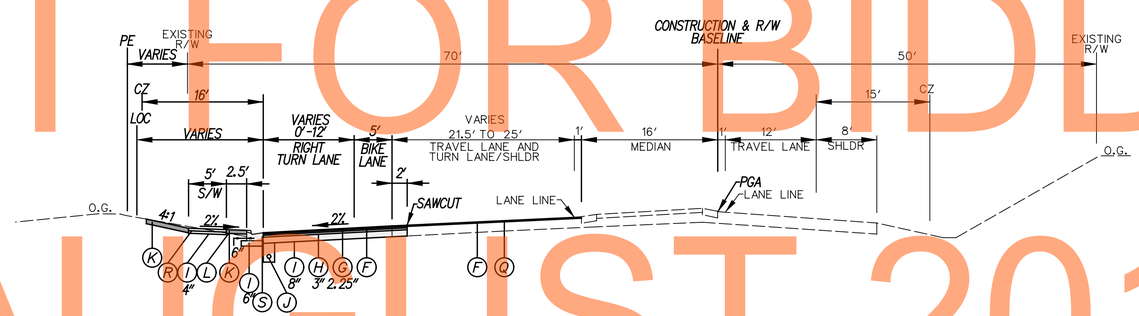
TYPICAL SECTION – MIDDLETOWN WARWICK ROAD
STATION 732+23.82 LT TO STATION 737+40.00



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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:

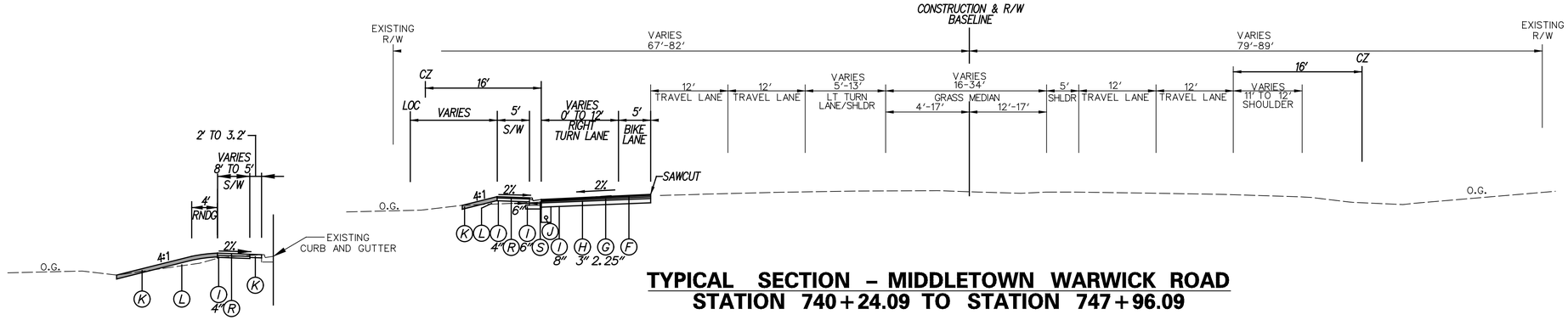
1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE 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

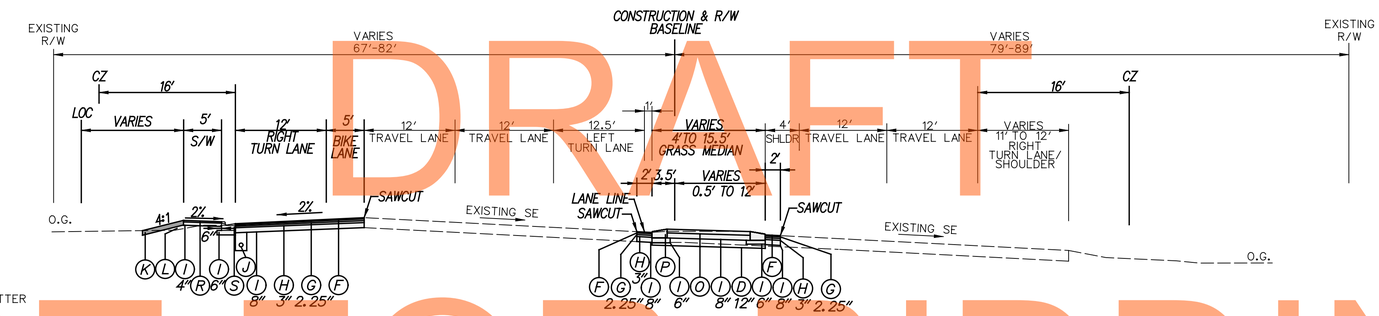
TS-29

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: MAG/TAM / CHECKED BY: PAH	TYPICAL SECTIONS	SHEET NO. 43 / TOTAL SHTS. 850

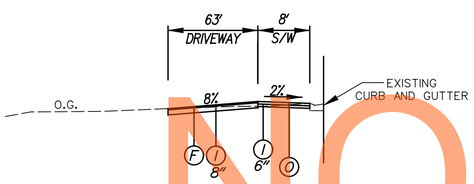


TYPICAL SECTION – MIDDLETOWN WARWICK ROAD
STATION 740+24.09 TO STATION 747+96.09

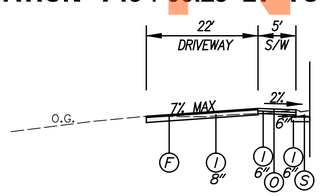
TYPICAL SECTION – MIDDLETOWN WARWICK ROAD
STATION 745+71.15 TO STATION 747+96.10



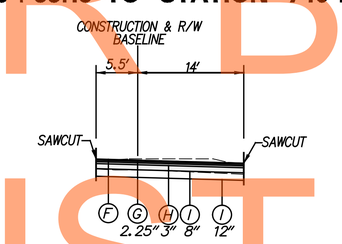
TYPICAL SECTION – MIDDLETOWN WARWICK ROAD
STATION 739+35.18 TO STATION 740+24.09



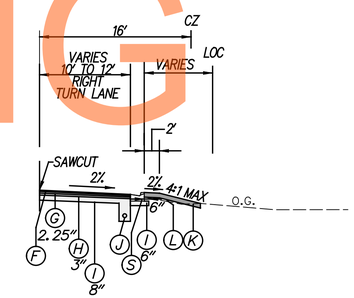
ALTERNATE SECTION – DRIVEWAY
STATION 746+00.23 LT TO STATION 746+66.01 LT



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



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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:

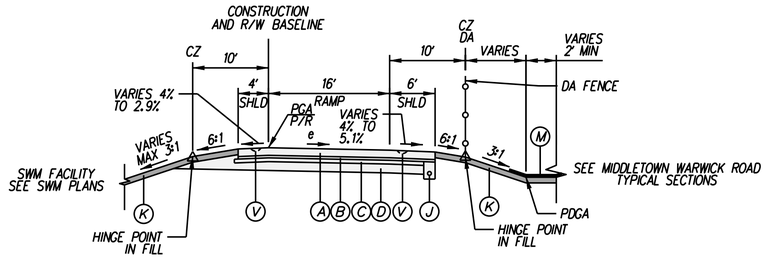
1. THE MAXIMUM ALGEBRAIC DIFFERENCE BETWEEN THE TRAVEL LANE CROSS SLOPE AND THE SHOULDER CROSS SLOPE SHALL NOT EXCEED 8%.
2. SHOULDER CROSS SLOPE ON THE LOW SIDE SHALL BE THE SAME AS THE TRAVEL LANE CROSS SLOPE WHEN SUPERELEVATION IS 4% OR GREATER.
3. SEE GRADES AND GEOMETRICS SHEETS FOR CROSS SLOPE 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

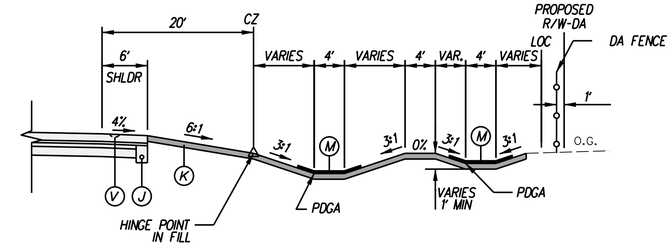
TS-30

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301 MARYLAND STATE LINE TO LEVELS ROAD	CONTRACT T200811301 / COUNTY NEW CASTLE	BRIDGE NO. / DESIGNED BY: MAG/TAM / CHECKED BY: PAH
TYPICAL SECTIONS	SHEET NO. 44 / TOTAL SHTS. 850				



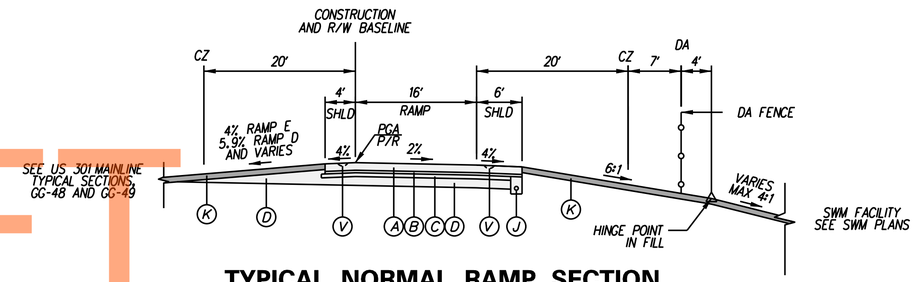
TYPICAL SUPERELEVATED RAMP SECTION

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



TYPICAL RAMP SECTION – RAMP D (RIGHT)

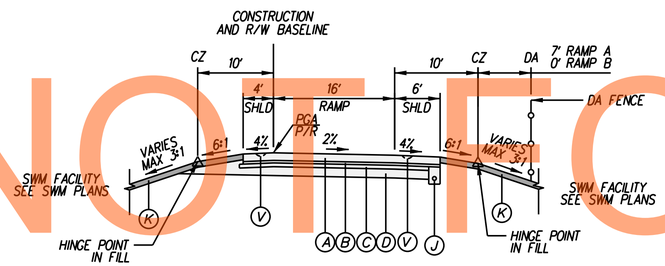
RAMP D STATION 306+49.17 TO STATION 307+65.74



TYPICAL NORMAL RAMP SECTION

RAMP D – STATION 306+49.17 TO STATION 307+65.74

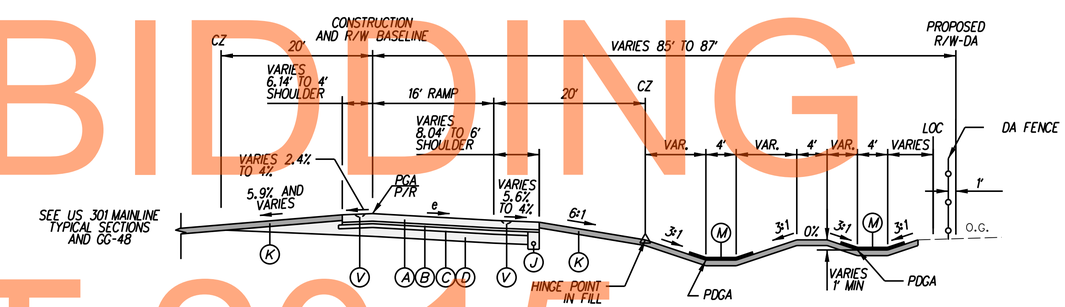
RAMP E – STATION 407+95.12 TO STATION 408+45.38



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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–31

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

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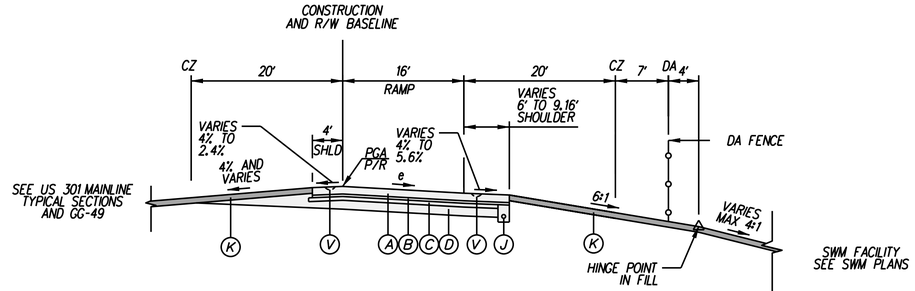
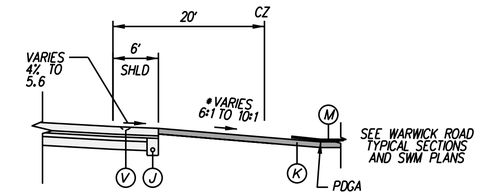


TYPICAL SUPERELEVATED RAMP SECTION

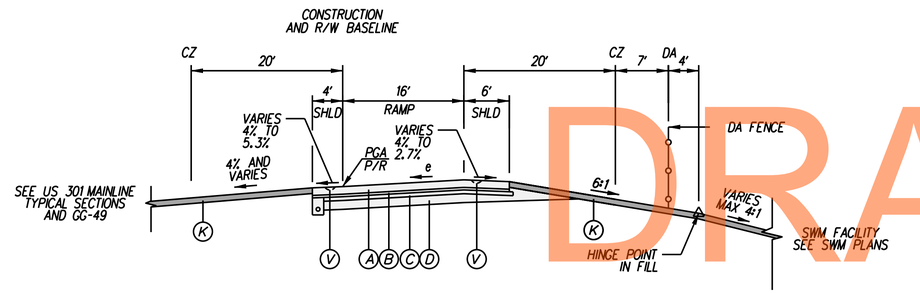
e_{MAX}=5.6% RAMP E – STATION 408+45.38 TO STATION 412+64.08



* 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

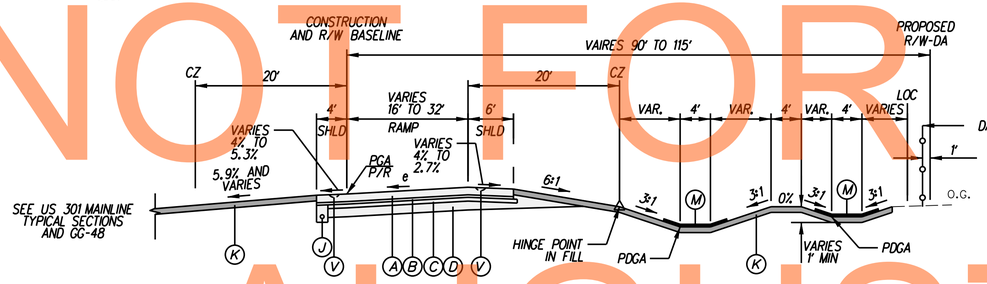
TYPICAL RAMP SECTION – RAMP E (RIGHT)

RAMP E STATION 409+50.00 TO STATION 412+64.08



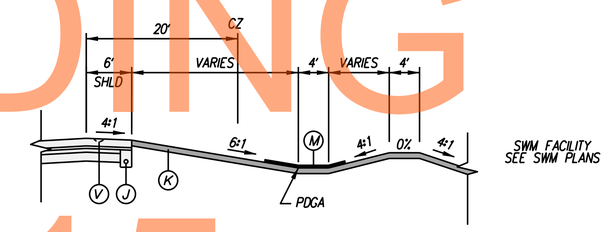
TYPICAL SUPERELEVATED RAMP SECTION

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



TYPICAL RAMP SECTION – RAMP E (RIGHT)

RAMP E STATION 400+34.00 TO STATION 401+39.00

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NOT FOR BIDDING
AUGUST 2015

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, 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-32

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. 46 / TOTAL SHTS. 850

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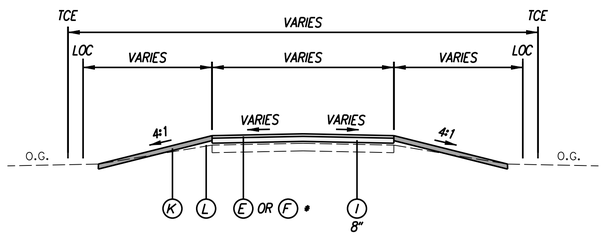
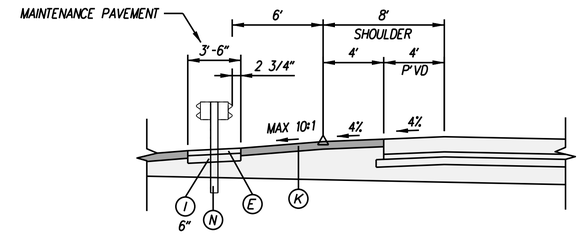


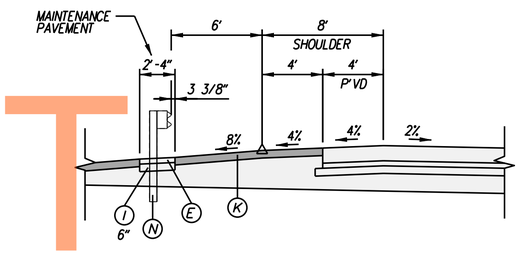
• (E) OR (F) SHALL MATCH THE MATERIAL USED ON THE INTERSECTING ROADWAY. FOR THE WARWICK ROAD DRIVEWAY AT STATION 1281+50 LT LAYER (F) ENDS WHERE THE SHADING STOPS ON THE CONSTRUCTION PLAN.

DRIVEWAY

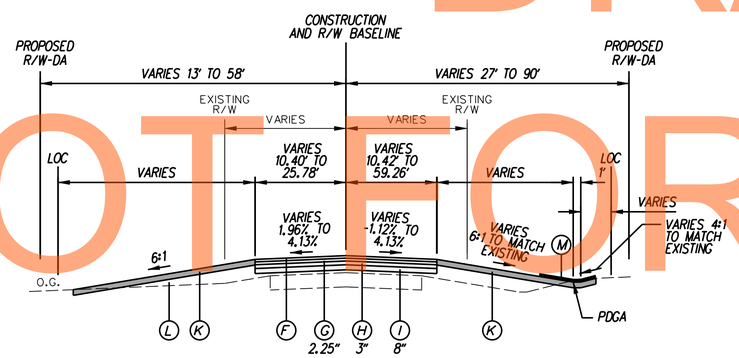
STATION 1123+00 RT. (MIDDLETOWN WARWICK ROAD)
STATION 1211+77 LT. (WARWICK ROAD)
STATION 1263+00 LT. (WARWICK ROAD)
STATION 1281+50 LT. (WARWICK ROAD)



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

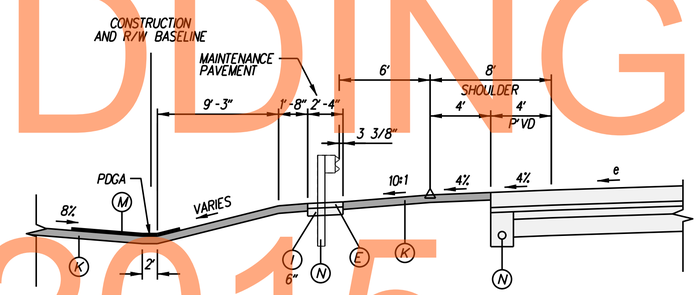


NORMAL US 301 MAINLINE INSIDE SHOULDER GUARDRAIL DETAIL WHERE SHOWN ON PLANS



TYPICAL NORMAL SECTION MIDDLENECK ROAD - TWO LANES

STATION 30+21.91 TO STATION 32+00.00



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

DRAFT
NOT FOR BIDDING
AUGUST 2015

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TS-33

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

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