

TAS 25-7, D215010

MP 197.9 to MP 210.3: Safety Upgrades & Miscellaneous Work:

Design Calculations & Quantity Work Ups.



PREPARED BY:

NEW YORK STATE THRUWAY AUTHORITY
HIGHWAY DESIGN BUREAU
200 SOUTHERN BOULEVARD
ALBANY, NEW YORK 12209

December 2024

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Design Calculations.



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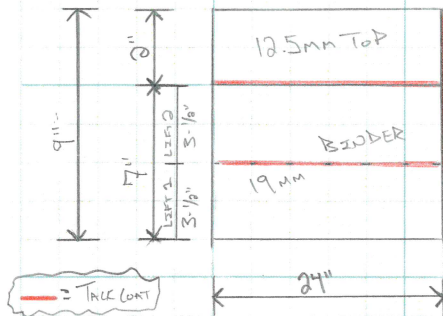
December 2024



New York State Thruway Authority

PROJECT # H162.2, TAS 25.4MADE BY [Signature] DATE 10/16/24CHECKED BY TJW DATE 10/21/2024SUBJECT ASPHALT REQ'D FOR PIER PROTECTIONSHEET # 1 OF 2

→ DESIGN CALCS



ASSUME →

$$WB_{RIGHT} = 100'$$

$$WB_{MIDIAN} = 190'$$

$$EB_{RIGHT} = 100'$$

$$EB_{MIDIAN} = 200'$$

$$\Sigma = 590' \approx 600' \text{ LENGTH}$$

→ ITEM 203.02: UNCLASSIFIED EXCAVATION & DISPOSAL (CY)

$$\text{VOLUME} = \left[\frac{9''(24'')}{144 \text{ in}^2/\text{ft}^2} \right] (600') = 1.5 \text{ ft}^3 (600 \text{ ft}) = \frac{900 \text{ ft}^3}{27 \text{ ft}^3/\text{cy}} = 33.33 \text{ cy}$$

Say 35 cy

→ ITEM 404.1282: 12.5MM F2 TOP COURSE ASPHALT, 80 SERIES (TN)

$$* \text{ASSUME } \gamma = 153 \text{ lb/ft}^3$$

$$\frac{\left[\frac{2''(24'')}{144 \text{ in}^2/\text{ft}^2} \right] (600')}{2000 \text{ lb/TN}} \cdot 153 \text{ lb/ft}^3 = \frac{200 \text{ ft}^3 (153 \text{ lb/ft}^3)}{2000 \text{ lb/TN}} = 15.3 \text{ TN}$$

Say 16 TN

→ ITEM 404.1989: 19MM F9 BINDER COURSE ASPHALT, 80

$$* \text{ASSUME } \gamma = 153 \text{ lb/ft}^3$$

$$\frac{\left[\frac{7''(24'')}{144 \text{ in}^2/\text{ft}^2} \right] (600')}{2000 \text{ lb/TN}} \cdot 153 \text{ lb/ft}^3 = \frac{700 \text{ ft}^3 (153 \text{ lb/ft}^3)}{2000 \text{ lb/TN}} = 53.6 \text{ TN}$$

Say 54 TN

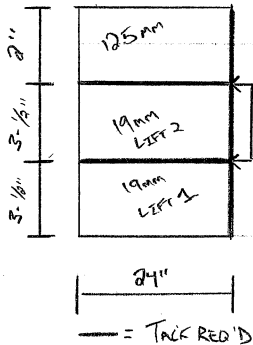
TACK COAT →



New York State Thruway Authority

PROJECT # H162.2TAS 25-4MADE BY [Signature]DATE 10/16/24CHECKED BY TJWDATE 10/21/2024SUBJECT ASPHALT REQ'D FOR PIER PROTECTIONSHEET # 2OF 2

→ ITEM 407.0103: STRAIGHT TACK COAT (GAL)



PER TABLE 407-01: TACK APP. RATES \Rightarrow NEW ASPHALT = $0.03 - 0.04 \text{ GAL/yd}^2 \Rightarrow$ USE 0.04 GAL/yd^2
 VERT FACES = $0.06 - 0.07 \text{ GAL/yd}^2 \Rightarrow$ USE 0.07 GAL/yd^2

$$\text{FLAT AREA} = \left[\frac{600' (24" / 12" / \text{ft})}{9 \text{ ft}^2 / \text{yd}^2} \right] (2) (0.04 \text{ GAL/yd}^2) = 10.67 \text{ GALLONS}$$

$$\text{VERT FACES} = 600' + [4 \text{ SHOULDERS } (2 \text{ START \& STOP})] (2') = 616 \text{ FT}$$

$$\left[\frac{616 \text{ FT } (9" / 12" / \text{ft})}{9 \text{ ft}^2 / \text{yd}^2} \right] (0.07 \text{ GAL/yd}^2) = 3.59 \text{ GALLONS}$$

$$\delta \text{ TACK} = 10.67 \text{ GALLONS} + 3.59 \text{ GALLONS} = 14.26 \text{ GALLONS}$$

SAY 15 GALLONS

→ ITEM 687-5014--08: CUTTING PAVEMENT (LF)

* ITEM IS USED TO AIDE IN REMOVAL.

$$600' + [4 \text{ SHOULDERS } (2 \text{ START \& STOP})] (2') = 616 \text{ FT}$$

SAY 620 FT



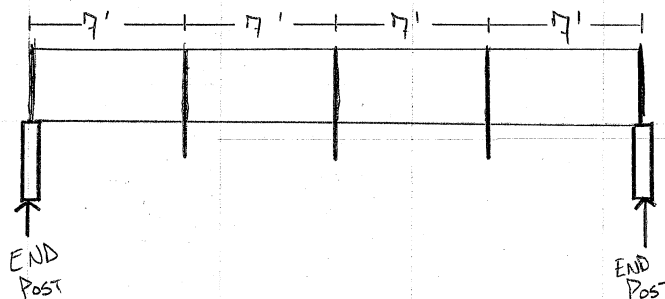
New York State Thruway Authority

PROJECT # TAS 25-4MADE BY [Signature]DATE 10/18/24CHECKED BY TJWDATE 10/18/2024

SUBJECT _____

SHEET # 1OF 2MEDIAN FENCE INSTALL MP 205.05 # MP 203.31MEDIAN MP 205.05' : MINDENVILLE RD.

→ ASSUME 28' MALL TO MALL



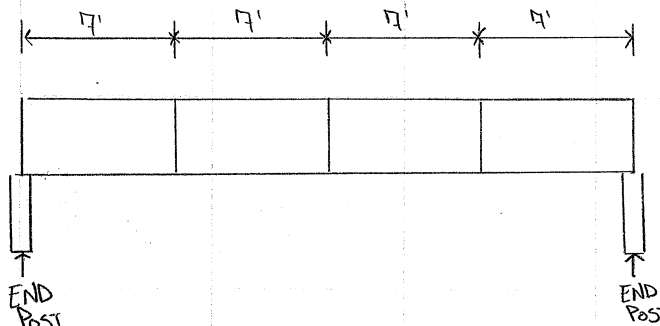
NYS DOT 607-4.01

$$= 28' + 10' (2 \text{ END POST}) = 48'$$

$$2 \text{ SIDES} = 2(48') = 96 \text{ FE} \approx 100 \text{ FE}$$

MEDIAN MP 203.31 : JOHNSVILLE RD.

→ ASSUME 28' MALL TO MALL



NYS DOT 607-4.01

$$= 28' + 10' (2 \text{ END POST}) = 48'$$

$$2 \text{ SIDES} = 2(48') = 96 \text{ FE} \approx 100 \text{ FE}$$

$$\text{TOTAL } \delta = 200'$$

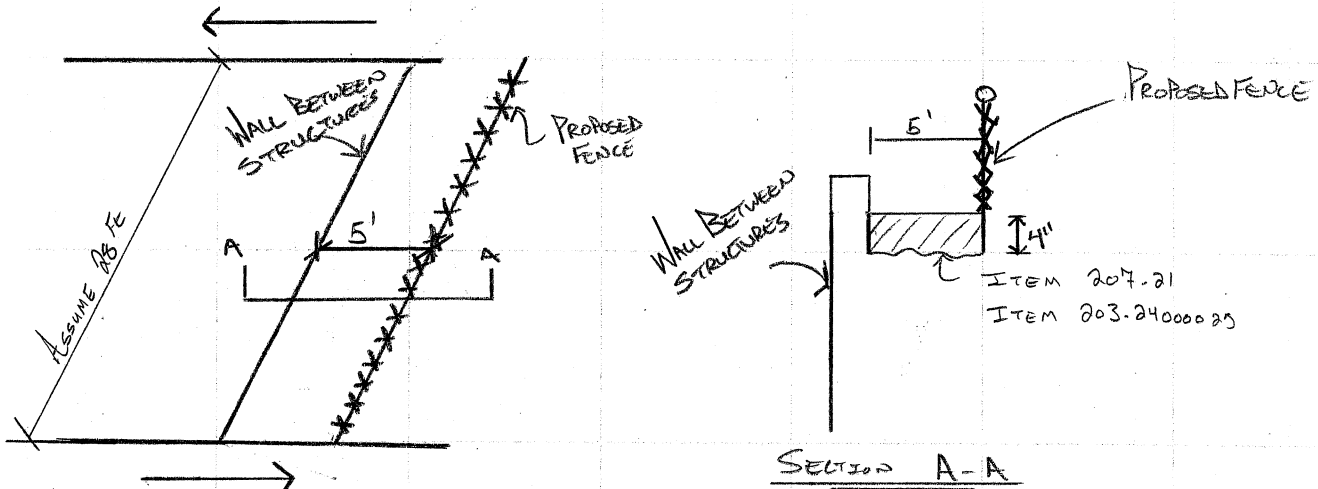
↑ ITEM 607-3103



New York State Thruway Authority

PROJECT # TAS 25-4MADE BY [Signature] DATE 10/18/24CHECKED BY TJW DATE 12/23/2024

SUBJECT _____

SHEET # 2 OF 2MEDIAN FENCE GRADING MP 205.05 & MP 203.31

$$A_{\text{AREA}} = 5' (28 \text{ FE}) = 140 \text{ FE}^2$$

ITEM 203.24000025: SHOULDER BACKUP TOASSUME $\gamma = 100 \text{ LB/FE}^3$

$$V_{\text{OL}} = \frac{[140 \text{ FE}^2 (4''/12''/\text{FE})]}{2000 \text{ LB/TN}} \cdot 100 \text{ LB/FE}^3 = 2.33 \text{ TN (4 LOCATIONS)} = 9.3 \text{ TN}$$

SAY 10 TNITEM 207.21: GEOTEXTILE SEPARATION - SY

$$\Rightarrow \frac{140 \text{ FE}^2}{9 \text{ FE}^2/\text{YD}^2} = 15.5 \text{ YD}^2 (4 \text{ LOCATIONS}) = 62.2 \text{ YD}^2$$

SAY 65 YD²



New York State Thruway Authority

PROJECT # TAS 25-7MADE BY DWDATE 12/5/24CHECKED BY TJWDATE 12/9/24SUBJECT DESIGN CALL: SIGN GRADINGSHEET # 1OF 2

* ALL GRADING SHALL BE DONE PER NYSTA SS TA 203-03

MP 207.48 WB SIGN: BLUE IROQUOIS S/A - 2 MILES

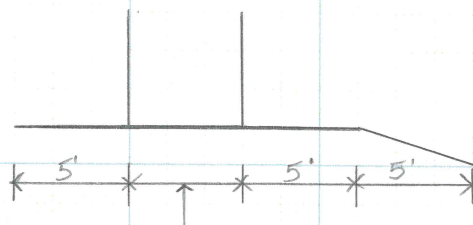
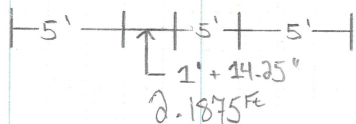
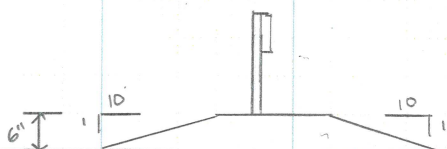
PER RSAR = POST = 14.25"

SPACING = 9'-1"

STUB HEIGHT = 6", 4"

OFF PAINT STRIPE = 38 FE

ASSUME 6" "



$$2(14.25") + 9'-1" = 11.458' FE$$

$$AREA = (5+5+2.1875') (5' + 11.458' + 5' + 5') = 455.21 FE^2$$

ITEM 203.02: UNCLASSIFIED (CY)

$$\text{ASSUME 4" STRIP OF EXISTING} \Rightarrow \frac{(4"/12"/FE) (455.21 FE^2)}{27 FE^3/CY} = 5.62 CY \approx 7 CY$$

TOPSOIL PRIOR TO PLACING

ITEM 203.03: EMBANKMENT (CY)

$$\text{ASSUME 6" } \Rightarrow 0.5 FE (455.21 FE^2) = \frac{227.6 FE^3}{27 FE^3/CY} = 8.43 CY \approx 10 CY$$

ITEM 610-1402: TOPSOIL (CY)

$$4" \Rightarrow \frac{4"/12"/FE (455.21 FE^2)}{27 FE^3/CY} = 5.62 CY \approx 7 CY$$

ITEM 610-1601 TURF ESTABLISHMENT (SY)

$$\rightarrow \frac{455.21 FE^2}{9 FE^2/YD^2} = 50.57 SY \approx 51 YD^2$$



New York State Thruway Authority

PROJECT # TAS 25-17MADE BY [Signature]DATE 12/10/24CHECKED BY TJWDATE 12/18/24SUBJECT DESIGN CALL: SIGN GRADINGSHEET # 1OF 2

* ALL GRADING SHALL BE DONE PER NYSTA SS TA 203-03

MP 199.964: GREEN UTICA, CUSE, BUFFALO DIST SIGN

$$\text{PER RSAR} = \text{POST} = 12" = 1'$$

$$\text{SPACING} = 8'-11"$$

$$\text{STUB HEIGHT} = 8', 6"$$

SEE DWG ON MP 207-H8WB SIGN

$$\begin{aligned} \text{AREA} &= (5+5+5 + (1' + 1')) \cdot (5' + [2(1') + 8'-11"] + 5' + 5') \\ &\quad (17') \cdot (5' + 10.92' + 5' + 5') \\ &\quad 17' (25.92') = 440.64 \text{ FE}^2 \end{aligned}$$

ITEM 203.02: UNCLASSIFIED (cy)

$$\begin{aligned} \text{ASSUME 4" STRIP OF EXISTING} \\ \text{TOP SOIL PRIOR TO PLACING} \Rightarrow \frac{(4"/12"/\text{FE}) (440.64 \text{ FE}^2)}{27 \text{ FE}^3/\text{cy}} = 5.44 \text{ cy} \approx 7 \text{ cy} \end{aligned}$$

ITEM 203.03: EMBANKMENT (cy)

$$\text{ASSUME 6"} \Rightarrow \frac{(0.5') (440.64 \text{ FE}^2)}{27 \text{ FE}^3/\text{cy}} = 8.16 \text{ cy} \approx 10 \text{ cy}$$

ITEM 610.1402: TOPSOIL (cy)

$$\text{ASSUME 4"} \Rightarrow \frac{4"/12"/\text{FE} (440.64 \text{ FE}^2)}{27 \text{ FE}^3/\text{cy}} = 5.44 \text{ cy} \approx 7 \text{ cy}$$

ITEM 610.1601 TURF ESTABLISHMENT (sy)

$$\frac{440.64 \text{ FE}^2}{9 \text{ FE}^2/\text{sy}} = 48.96 \text{ sy} \approx 50 \text{ sy}$$

TAS 25-7, D215010

MP 197.9 to MP 210.3: Safety Upgrades & Miscellaneous Work:

Quantity Work Ups.



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ALBANY, NEW YORK 12209

December 2024



New York State Thruway Authority

PROJECT # TAS 25-7MADE BY [Signature]DATE 12/20/24CHECKED BY TJWDATE 12/23/2024

SUBJECT _____

SHEET # 1 OF 1ITEM 203-03: EMBANKMENT IN PLACE (CY)

* ITEM IS USED FOR SIGN GRADING PER NYSTA SS TA 203-03

* SEE DESIGN CALL: SIGN GRADING P. 546

LOCATION

MP	207.48 WB	10cy	←
MP	199.96 WB	10cy	←

 $\Sigma = 20cy$

•• SAY 20cy FOR ITEM 203-03



New York State Thruway Authority

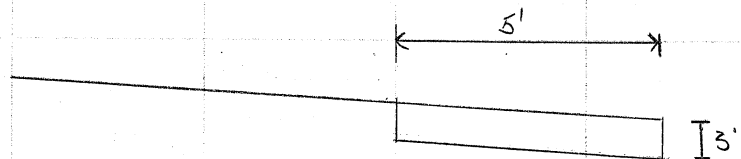
PROJECT # 4162-2MADE BY [Signature]DATE 10/16/24CHECKED BY TJWDATE 10/21/2024

SUBJECT _____

SHEET # 1OF 1Item 203.24000025: SHOULDER BACKUP MATERIAL (TN)

→ IMPACT TERMINALS = $16(50\text{Fe}) = 800\text{Fe}$
 → TRANSITIONS = $41(50\text{Fe}) = 2,050\text{Fe}$
 BOX BEAM = $4,878\text{Fe} + 72\text{Fe} = 4,950\text{Fe}$
 WEARPOST = $17,150\text{Fe}$
 HPBO = $26,500\text{Fe}$
 HPBO MED = $29,325\text{Fe}$
 BARRIER = $300\text{Fe} + 120\text{Fe} = 420\text{Fe}$

$$\text{Total } \delta = 81,215\text{Fe} \approx \text{Say } 82,000\text{Fe}$$



- Assume $\gamma = 100\text{lb/Fe}^3$, 3" DEEP & 5' WIDE

$$\text{Vol} = \left[\left(\frac{3}{12}\text{Fe} \right) (5') (82,000\text{Fe}) \right] = 102,500\text{Fe}^3$$

$$@ 100\text{lb/Fe}^3 \Rightarrow \frac{102,500\text{Fe}^3 (100\text{lb/Fe}^3)}{2000\text{lb/TN}} = 5,125\text{TN}$$

+ 10 TN (GRADING NEAR FENCE INSTALL @ MP 205.05 & 203.31)

→ P34 DESIGN CALL

$$\delta = 5,135\text{TN}$$

•• Say 5,200 TN For Item 203.24000025



New York State Thruway Authority

PROJECT # TAS 25-17MADE BY [Signature]DATE 12/20/24CHECKED BY TJWDATE 12/23/2024

SUBJECT _____

SHEET # 1 OF 1ITEM 206.05: TEST PIT EXCAVATION (EA)

* SEE NOTES ON GNN-1, GENERAL NOTES.

* ITEM IS USED TO NOT INTERFERE WITH ANY UNDERGROUND CULVERTS, FIBER OPTIC, ETC.

* APPROX. /RECOMMENDED LOCATIONS LISTED BELOW.

DWG GNP-12 (45) → 3 EA.

DWG GNP-20 (46) → 1 EA.

DWG GNP-27 (41) → 2 EA.

DWG GNP-53 (40) → 1 EA.

$$\begin{array}{r} \Sigma = 7 \text{ EA} \\ + 3 \text{ EA (A.O.B.E. USE)} \\ \hline 10 \text{ EA} \end{array}$$

∴ SAY 10 EA FOR ITEM 206.05



New York State Thruway Authority

PROJECT # TAS 25-7 MADE BY [Signature] DATE _____CHECKED BY TJW DATE 12/23/2024SUBJECT _____ SHEET # 1 OF 1ITEM 207.21: GEO TEXTILE SEPARATION (SY)

* ITEM IS USED TO PREVENT EXCESSIVE
VEGETATION GROWTH BEHIND FENCE WHERE
ACCESS IS DIFFICULT.

65 SQ. Yd. ← SEE DESIGN CALL PG 4

∴ SAY 65 SQ. Yd. FOR ITEM 207.21



New York State Thruway Authority

PROJECT #

TAS 85-7

MADE BY

DATE

12/20/24

CHECKED BY

TJW

DATE

12/23/2024

SUBJECT

SHEET #

1

OF

1

ITEM 404.1282: 12.5MM F-2 TOP COURSE ASPHALT, 80 SERIES (TN)

* ITEM USED FOR PIER PROTECTION INSTALL & REMOVAL
OF EXISTING.

16 TN ← DESIGN CALLS P1

• • SAY 16 TN FOR ITEM 404.1282



New York State Thruway Authority

PROJECT #

1AS 05-7

MADE BY

DATE

12/20/24

CHECKED BY

TJW

DATE

12/23/2024

SUBJECT

SHEET #

1

OF

1

ITEM 404.1989: 19MM F9 BINDER COURSE ASPHALT, 80 SERIES (TN)

* ITEM IS USED DURING PIER PROTECTION INSTALL TO
REBUILD AREA OF EXISTING BARRIER

54 TN ← DESIGN CALL P.1

∴ SAY 54 TN FOR ITEM 404.1989



New York State Thruway Authority

PROJECT # TAS 05-7MADE BY [Signature]DATE 12/20/24CHECKED BY TSWDATE 12/23/2024

SUBJECT _____

SHEET # 1OF 1ITEM 407.0103: STRAIGHT TACK CONT (GALLONS)

* ITEM USED FOR PIER PROTECTION INSTALL TO REBUILD
AREA OF EXISTING BARRIER.

15 GALLONS ← SEE DESIGN LNC P.2

∴ SAY 15 GALLONS ITEM 407.0103



New York State Thruway Authority

PROJECT # TAS 25-7MADE BY [Signature]DATE 12/20/24CHECKED BY TJWDATE 12/23/2024

SUBJECT _____

SHEET # 1 OF 1ITEM 604.070201: ALTERING DRAINAGE STRUCTURES, BASINS & MANHOLES (EA)

* RAISE & RESET EXISTING DI IN
EB SERVICE AREA DECEL GORE TO PROPER
ELEVATION.

SEE DWG GNP-3

1 EA.

∴ SAY 1 EA. FOR ITEM 604.070201



New York State Thruway Authority

PROJECT # TAS 25-7MADE BY [Signature]DATE 12/18/24CHECKED BY TJWDATE 12/23/2024

SUBJECT _____

SHEET # 1OF 4ITEM 606.XX : SUMMARY OF ALL 606 ITEMS. (E&LF)

NOTE: - QUANTITIES FOR GUIDE RAIL ITEMS ARE BASED OF FIELD MEASUREMENTS, MICROSTATION, REQUIREMENTS OF NYSDOT HDM CH 10 & REQUIREMENTS OF NYSTA & NYSDOT STANDARD SHEETS & SPECIFICATIONS.

- ALL QUANTITIES ARE BROKEN DOWN ON DWG GRT-1 → GRT-5 & Pg 4

ITEM #	DESCRIPTION	Qty
606.10	BOX BEAM BARRIER	4,978 ^{FE}
606.100002	BOX BEAM GUIDE RAILING (SHOP BENT OR SHOP MITERED)	72 ^{FE}
606.120101	BOX BEAM END PIECE	3 EA
606.18	WEAK POST CORRUGATED BEAM GUIDE RAILING	17,150 ^{FE} + 50' 17,200' 15 EA. *SEE Pg 4
606.22	ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING	
606.2701	HPBO (MOD.) CORRUGATED BEAM GUIDE RAILING	26,300 ^{FE} + 200 26,500 ^{FE} 6 EA. *SEE Pg 4
606.2703	ANCHORAGE UNITS FOR HPBO (MOD.) CORRUGATED BEAM GUIDE RAILING	
606.28	HEAVY POST BLOCKED-OUT (MOD.) CORRUGATED BEAM MEDIAN BARRIER END TERMINAL (ENERGY-ABSORBING)	16 EA.
606.2801	HPBO (MOD.) CORRUGATED BEAM MEDIAN BARRIER	29,025.5 ^{FE} + 287.5 ^{FE} 29,312.5 ^{FE} *SEE Pg 4
606.3042	SINGLE-SLOPE CONCRETE MEDIAN BARRIER (PRE-CAST)	29,325 ^{FE} 320 ^{FE}
606.3062	SINGLE-SLOPE CONCRETE HALF SECTION BARRIER (PRECAST)	120 ^{FE}
606.59100125	RESETTING END TERMINAL FOR HPBO CORRUGATED GUIDE RAIL & MEDIAN BARRIER.	2 EA



New York State Thruway Authority

PROJECT #

1/AS 25-7

MADE BY

DATE

12/18/24

CHECKED BY

TJL

DATE

12/23/2024

SUBJECT

SHEET #

2

OF

4

ITEM 606.XX: SUMMARY OF ALL 606 ITEMS (EA/LF) CONT....

Item #	DESCRIPTION	Qty
606.59200125	RESETTING END TERMINAL FOR BOX BEAM GUIDE RAIL & MEDIAN BARRIER	3 EA
606.71	REMOVE & DISPOSING CORRUGATED BEAM GUIDE RAILING	62,725 FE *SEE Pg 4 +50*200 FE ← 62,975 FE
606.7101	REMOVING & DISPOSING HPBO (MOD) CORRUGATED BEAM GUIDE RAILING	1,850 FE
606.72	REMOVING & DISPOSING CORRUGATED BEAM MEDIAN BARRIER	12,981.25 EA ≈ 12,987.5 FE
606.73	REMOVING & DISPOSING BOX BEAM GUIDE RAILING	1,044 FE
606.74	REMOVING & DISPOSING BOX BEAM MEDIAN BARRIER	612 FE
606.75	REMOVING & DISPOSING CONCRETE BARRIER	120 FE
606.7910	REMOVING & DISPOSING ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING & MEDIAN BARRIER	33 EA
606.7911	REMOVING & DISPOSING WEAK & HEAVY POST CORRUGATED BEAM ENERGY ABSORBING TERMINALS.	3 EA
606.7981	REMOVING & DISPOSING BOX BEAM GUIDE RAILING ENERGY ABSORBING TERMINALS.	3 EA
606.8101	GUIDE RAIL TRANSITION WEAK POST CORRUGATED BEAM TO BOX BEAM GUIDE RAIL (ONE OR TWO WAY OPERATION)	1 EA
606.8103-25	REMOVING & DISPOSING GUIDE RAIL TRANSITION CORRUGATED BEAM TO BOX BEAM (ONE OR TWO WAY OPERATIONS) INCLUDING TRANSITION ANCHORAGE UNITS	15 EA





New York State Thruway Authority

PROJECT # TAS 25-7MADE BY [Signature]DATE 12/19/24CHECKED BY TJWDATE 12/29/2024

SUBJECT _____

SHEET # 3OF 4ITEM 606.XX: SUMMARY OF ALL 606 ITEMS (EA & LF) CONT.

ITEM #	DESCRIPTION	Qty
606.8803	TRANSITION BETWEEN BOX BEAM GUIDE RAIL & SINGLE SLOPE HALF SECTION CONCRETE BARRIER (ONE OR TWO WAY OPERATION)	4.0 EA
606.8901	TRANSITION: HEAVY POST BLOCKED OUT (MOD.) CORRUGATED GUIDE RAILING TO BOX BEAM GUIDE RAILING	8.0 EA
606.8902	TRANSITION: HEAVY POST BLOCKED OUT (MOD.) CORRUGATED BEAM GUIDE RAILING TO WEAK POST CORRUGATED BEAM GUIDE RAILING	6.0 EA
606.8903	TRANSITION: HPBO (MOD.) CORRUGATED BEAM GUIDE RAILING TO SINGLE SLOPE CONCRETE HALF SECTION BARRIERS	1.0 EA
606.8904	TRANSITION: HPBO (MOD.) CORRUGATED BEAM MEDIAN BARRIER TO BOX BEAM MEDIAN BARRIER	2.0 EA
606.8905	TRANSITION: HPBO (MOD.) CORRUGATED BEAM MEDIAN BARRIER TO WEAK POST CORRUGATED BEAM MEDIAN BARRIER	16.0 EA
606.8906	TRANSITION: HPBO (MOD.) CORRUGATED BEAM MEDIAN BARRIER TO SINGLE SLOPE CONCRETE MEDIAN BARRIER	2.0 EA
606.9004	TRANSITION BETWEEN HALF SECTION & FULL SECTION SINGLE SLOPE CONCRETE BARRIER (RIGHT POCKET)	1.0 EA



New York State Thruway Authority

PROJECT # TAS25-7MADE BY [Signature]DATE 12/20/24CHECKED BY TJUDATE 12/23/2024SUBJECT ITEM 606.XXSHEET # 4 OF 4Item 606.XX:

* ALL QTY ON Pg 1-3 SHALL MATCH DWG GET - 1 → GET - 5, ADJUSTMENTS TO QTY FOR REPLACEMENT OF "Y" SHAPED W-BEAM TO THREE BEAM TRANSITION & HPBO (MOD.) MEDIAN TO HPBO (MOD.) ARE SHOWN & ADJUSTED HERE

"Y" SHAPED W-BEAM TO THREE-BEAM TRANSITION:

* SEE NYSDOT SS 606-28 Pg 2 of 3

* PAYMENT UNDER 606.71 & 606.2701

MP 208.4	WBR (15)	= 2
GNP-11	WBL (47)	= 2
	EBR (21)	= 2
	EBL (48)	= 2
MP 205.05	WBR (11)	= 2
GNP-28	WBL (48)	= 2
	EBR (37)	= 2
	EBL (42)	= 2
MP 203.03	WBR (10)	= 2
	WBL (43)	= 2
	EBR (42)	= 2
	EBL (31)	= 2

→ $\Sigma = 24$ "Y" SHAPED W-BEAM TO THREE BEAM

ASSUME 7.5' PER TRANSITION

$$7.5' (24) = 180 \text{ FE}$$

$$= 187.5 \text{ FE} + 12.5$$

$$= 200 \text{ FE}$$

RESET RAIL ON
GNP-28, NOTE 3

HPBO (MOD.) MEDIAN TO HPBO (MOD.)

* SEE NYSTA SS 606-08, PAYMENT UNDER ITEM 606.2801, PAY FACTOR = 1.5
TRANSITION LENGTH = 37'-6"

MP 205.05	WBL (44)	= 1.0
GNP-28	EBL (42)	= 2.0
MP 203.03	EBL (42)	= 2.0
GNP 37		

→ $\Sigma = 5$ HPBO MED TO HPBO

$$5 (37.5 \text{ FE}) = 187.5 (1.5 \text{ PAY FACTOR}) = 281.25 \text{ FE}$$

$$\text{Say } 287.5 \text{ FE}$$

8 BOLT CONNECTION

* SEE NYSTA SS 606.03, PAYMENT UNDER 606.18 RATHER THAN 606.17
* GNP-11, WB & EB APPROACH & 606.71

$$25' \text{ EA (2 LOCATIONS)} = 50' \text{ FOR ITEM 606.18 \& 606.71}$$



New York State Thruway Authority

PROJECT # TAS 25-7MADE BY [Signature]

DATE

10/16/24CHECKED BY TJW

DATE

10/21/2024

SUBJECT _____

SHEET # 1

OF

1ITEM 606.92010125: REPLACE GUIDE RAIL SPLICE BOLTS (EA)

$$\text{GNP-63 } \textcircled{40} \text{ MP } 197.915 \text{ TO MP } 198.120 = 0.205 \text{ MI} \times 5,280 \text{ FT/MI} = 1,082.4 \text{ FT}$$

↑ PER RS&R P. 5/38

$$\text{HPBO} \Rightarrow 12.5 \text{ FT/SECTION}$$

$$\frac{1,082.4 \text{ FT}}{12.5 \text{ FT/SECTION}} = 86.6 \approx 87 \text{ SECTIONS.} + 2 \text{ SECTIONS}$$

START & STOP

89 SECTIONS

PER NYS DOT SS 606-09

$$\uparrow 16 \text{ SPLICE BOLTS / SECTION (89 SECTIONS)} = 1,424 \text{ BOLTS.}$$

ASSUME 50% REQ. REPLACEMENT

$$1,424 (0.50) = 712 \text{ BOLTS}$$

SAY 715 BOLTS.

\therefore SAY 715 EA FOR ITEM 606.92010125



New York State Thruway Authority

PROJECT # TAS 25-7MADE BY [Signature]

DATE

12/20/24CHECKED BY TJW

DATE

12/23/2024

SUBJECT _____

SHEET # 1OF 1ITEM 607.3103: OPTIONAL CHAIN-LINK FENCE, TYPE 1, WITH TOP TENSION WIRE 8' (LF)

- * FENCE TO BE INSTALLED 5' OFF TOP OF WALL BETWEEN STRUCTURES IN MALL OF TWY. MP 205.05 & MP 203.31
- * ASSUMED LENGTH OF 28 FE, EXACT LOCATION & LAYOUT IS A.O.B.E
- * LAYOUT FENCE PER NYSDOT SPECS & NYSDOT SS 607-05
- * SEE DESIGN CALL Pg 3-4

L = 200 FE ← DESIGN CALL Pg 3

•• SAY 200 FE FOR ITEM 607.3103



New York State Thruway Authority

PROJECT # TAS 25-17MADE BY [Signature]DATE 12/20/24CHECKED BY TJWDATE 12/23/2024

SUBJECT _____

SHEET # 1OF 1ITEM 610-1402: TOPSOIL - ROADSIDE Cy

* ITEM IS USE FOR SIGN GRADING PER NYSTA SS TA 203-03

* SEE DESIGN CALC. SIGN GRADING Pg 546

MP 207.48 WB = 7cy ←

MP 199.96 WB = 7cy ←

Σ = 14cy

•• SAY 14cy FOR ITEM 610-1402



New York State Thruway Authority

PROJECT # TAS 25-17MADE BY [Signature]DATE 12/20/24CHECKED BY TJWDATE 12/23/2024

SUBJECT _____

SHEET # 1OF 1ITEM 610.1601: TURF ESTABLISHMENT - ROADSIDE (SY)

* ITEM USED FOR SIGN GRADING PER NYSTA SS TA 203-03

* SEE DESIGN CALL FOR SIGN GRADING PG 5#6

LOCATION

MP 207.48 WB = 51 yd²MP 199.96 WB = 50 yd² $\Sigma = 101 \text{ yd}^2$

∴ SAY 101 yd² FOR ITEM 610.1601



New York State Thruway Authority

PROJECT #

TAS 25-17

MADE BY

DATE

12/23/24

CHECKED BY

TNW

DATE

12/23/2024

SUBJECT

SHEET #

1

OF

1

ITEM 619.01: BASIC WORK ZONE TRAFFIC CONTROL (LS)

SAS 1-0



New York State Thruway Authority

PROJECT # TAS 25-17MADE BY [Signature]DATE 12/20/24CHECKED BY TJWDATE 12/23/2024

SUBJECT _____

SHEET # 1 OF 1ITEM 619.110513: PORTABLE VARIABLE MESSAGE SIGN (PVM) STANDARD SIZE (EA)

ASSUME 4 EA.

:: SAY 4.0 EA FOR ITEM 619.110513



New York State Thruway Authority

PROJECT # TAS 25-17MADE BY [Signature]DATE 12/20/24CHECKED BY TJWDATE 12/23/2024

SUBJECT _____

SHEET # 1OF 1ITEM 601.05020004: PREPARING GRADE FOR VEGETATION CONTROL STRIP (LF)

* ITEM IS USED TO GRADE SHOULDERS
TO ALLOW POSITIVE DRAINAGE.
EXACT USE, LOCATION & WIDTH IS A.O.B.E

SEE ITEM 203.04000025 FOR BREAK DOWN

↳ 82,000 ft

∴ SAY 82,000 ft FOR ITEM 601.05020004



New York State Thruway Authority

PROJECT # TAS 25-17MADE BY [Signature]

DATE

12/20/24CHECKED BY TJW

DATE

12/23/2024

SUBJECT _____

SHEET # 1OF 1ITEM 607.5014--25: CUTTING PAVEMENT (LF)

* ITEM USE IS FOR INSTALL OF PIER PROTECTION
OR TO AID W/ REMOVAL. EXACT USE ISA.O.B.E

→ 620 FE

← DESIGN CALL Pg 2

∴ SAY 620 FE FOR ITEM 607.5014--25



New York State Thruway Authority

PROJECT #

TAS 25-17

MADE BY

DATE

12/20/24

CHECKED BY

TSW

DATE

12/23/2024

SUBJECT

SHEET #

1

OF

1

ITEM 637.12-25: ENGINEERS FIELD OFFICE - TYPE 2 (MONTH)

ASSUME 10 MONTHS

SAY 10 MONTHS FOR ITEM 637.12-25

Delineator Table			646.0626 25 INSTALL MILE MARKERS	646.0603 25 TENTH MILE MARKER	646.0603 25 WHITE	646.0603 25 YELLOW	646.0801 25 INSTALL SNOWPLOW MARKER, SINGLE UNIT	646.0802 25 INSTALL SNOWPLOW MARKER, DOUBLE UNIT	646.50 25 REMOVE AND DISPOSE OF DELINEATORS AND MARKERS
Location	Milepost	Direction	EA	EA	EA	EA	EA	EA	EA
1	197.925 - 198.310	WB-R	1	3	12	0	0	0	16
2	198.350 - 198.915	WB-R	0	6	16	0	1	0	23
3	199.025 - 199.175	WB-R	0	2	4	0	0	2	8
4	199.265 - 199.400	WB-R	0	2	3	0	0	0	5
5	199.594 - 199.864	WB-R	0	0	0	0	0	0	0
6	200.249 - 200.609	WB-R	0	4	12	0	1	2	19
7	201.166 - 201.398	WB-R	0	2	6	0	1	2	11
8	201.498 - 201.653	WB-R	0	0	0	0	0	0	0
9	202.223 - 203.057	WB-R	0	0	1	0	0	2	3
10	203.122 - 204.497	WB-R	1	13	35	0	1	0	50
11	204.911 - 205.136	WB-R	0	1	3	0	1	0	5
12	205.606 - 206.225	WB-R	0	2	8	0	1	0	11
13	206.505 - 207.177	WB-R	1	5	17	0	1	0	24
14	207.568 - 207.758	WB-R	0	0	0	0	0	0	0
15	208.119 - 208.665	WB-R	0	5	6	0	1	0	12
16	208.845 - 209.437	WB-R	1	4	17	0	1	0	23
17	209.668 - 209.702	WB-R	0	0	0	0	0	0	0
18	210.138 - 210.249	WB-R	0	1	3	0	0	2	6
19	210.233 - 210.162	EB-R	0	1	2	0	1	0	4
20	209.466 - 208.978	EB-R	0	0	0	0	0	0	0
21	207.746 - 208.022	EB-R	0	7	20	0	1	—	28

22	207.747 - 207.616	EB-R	0	0	0	0	0	0	0
23	207.338 - 206.555	EB-R	1	5	6	0	0	0	12
24	206.488 - 206.388	EB-R	0	0	2	0	1	0	3
25	206.302 - 206.023	EB-R	0	2	7	0	1	0	10
26	205.878 - 205.679	EB-R	0	0	0	0	0	0	0
27	205.137 - 204.992	EB-R	0	1	3	0	1	0	5
28	204.530 - 204.333	EB-R	0	2	4	0	1	0	7
29	209.938 - 203.848	EB-R	0	0	0	0	0	0	0
30	203.639 - 203.534	EB-R	0	0	0	0	0	0	0
31	203.419 - 202.757	EB-R	1	6	19	0	1	2	29
32	202.440 - 202.316	EB-R	0	0	0	0	0	0	0
33	201.736 - 201.622	EB-R	0	0	0	0	0	0	0
34	201.472 - 201.209	EB-R	0	2	8	0	1	2	13
35	200.715 - 200.521	EB-R	0	0	0	0	0	0	0
36	200.005 - 199.721	EB-R	1	2	8	0	1	0	12
37	199.535 - 199.379	EB-R	0	1	3	0	1	0	5
38	199.295 - 199.170	EB-R	0	0	1	0	0	2	3
39	198.883 - 197.905	EB-R	1	8	23	0	0	0	32
40	197.915 - 200.004	MED	0	0	0	2	0	0	2
41	200.019 - 202.478	MED	0	0	0	6	0	4	10
42	200.024 - 205.117	MED	0	0	0	53	0	4	57
43	203.197 - 203.282	MED	0	0	0	2	0	1	3
44	204.931 - 205.216	MED	0	0	0	2	0	2	4
45	205.226 - 208.124	MED	0	0	0	18	0	4	22
46	205.515 - 206.610	MED	0	0	0	2	1	0	3

47	208.134 - 208.389	MED	0	0	0	2	1	2	5
48	208.389 - 209.472	MED	0	0	0	2	0	2	4
49	209.482 - 210.289	MED	0	0	0	3	1	2	6
50	209.652 - 209.707	MED	0	0	0	0	0	0	0
51	210.138 - 210.289	MED	0	0	0	2	0	0	4
52		MED	—	—	-	-	—	—	0
53		MED	—	—	-	-	—	—	0
54		MED	—	—	-	-	—	—	0
55		MED	—	—	-	-	—	—	0
SUBTOTAL			8.00	87.00	249.00	94.00	22.00	37.00	499.00



New York State Thruway Authority

PROJECT # TAS 25-7MADE BY [Signature]

DATE

12/23/24CHECKED BY TJW

DATE

12/23/2024

SUBJECT _____

SHEET # 1OF 1ITEM 646.0603--25: INSTALL DELINEATOR OR 1/10" MILE MARKER ON POST (EA)

WHITE = 249

YELLOW = 94

1/10" = 87

Σ = 430 EA

∴ SAY 430 EA. FOR ITEM 646.0603--25



New York State Thruway Authority

PROJECT # 1AS 25-7MADE BY [Signature]DATE 12/23/24CHECKED BY TJWDATE 12/23/2024

SUBJECT _____

SHEET # 1 OF 1ITEM 646-0626 -- 25 : INSTALL MILE MARKER (EA)

8 EA.

∴ SAY 8 EA FOR ITEM 646-0625--25:



New York State Thruway Authority

PROJECT #

TAS 25-17

MADE BY

DATE

12/23/24

CHECKED BY

TJW

DATE

12/23/2024

SUBJECT

SHEET #

1

OF

1

ITEM 646.0801--25: INSTALL SNOWPLOW MARKER, SINGLE UNIT. (EA)

22EA

∴ SAY 22EA FOR ITEM 646.0801--25



New York State Thruway Authority

PROJECT #

1AS 25-4

MADE BY

DATE

12/23/24

CHECKED BY

TU

DATE

12/23/2024

SUBJECT

SHEET #

1

OF

1

ITEM 646.0802--25: INSTALL SNOW PLOW MARKER, DOUBLE UNIT. (EN)

37 EN

∴ SAY 37 EN FOR ITEM 646.0802--25



New York State Thruway Authority

PROJECT # TAS 25-17 MADE BY [Signature] DATE 12/23/24
 CHECKED BY TJW DATE 12/23/2024
 SUBJECT _____ SHEET # 1 OF 1

ITEM 646.50 ----25: REMOVE & DISPOSE OF DELINEATORS & MARKERS. (EA)

WHITE	=	249	}	Σ = 430	ITEM 646.0603--25
YELLOW	=	94			
1/10 IN	=	87			
MM	=	8			- 646.0625--25
SINGLE SNOW PLW	=	22			- 646.0801--25
DOUBLE SNOW PLW	=	37			- 646.0802--25
EXTRA	=	2			- REMOVAL OF TWO DOUBLE SNOW PLW NO LONGER REQ'D

Σ = 499 EA

∴ SAY 499 EA FOR ITEM 646.50 ----25



New York State Thruway Authority

PROJECT #

TAS 25-7

MADE BY

A handwritten signature, possibly 'JN', written in dark ink.

DATE

12/03/24

CHECKED BY

TJW

DATE

12/23/2024

SUBJECT

SHEET #

1

OF

1

ITEM 697.03: FIELD CHANGE PAYMENT

(D-C)

7% OF TOTAL ELIGIBLE ITEMS



New York State Thruway Authority

PROJECT #

TAS 25-17

MADE BY

DATE

12/23/24

CHECKED BY

JW

DATE

12/23/2024

SUBJECT

SHEET #

1

OF

1

ITEM 698.06 : STEEL / IRON PRICE ADJUSTMENTS (D-C)

FLAT PRICE = \$1,000.00



New York State Thruway Authority

PROJECT #

TAS 25-7

MADE BY

DATE

12/23/24

CHECKED BY

TJW

DATE

12/23/2024

SUBJECT

SHEET #

1

OF

1

ITEM 699.04: MOBILIZATION (LS)

UP TO 4% OF ESTIMATED BID.

15 FOR ITEM 699.04