



ALBANY DIVISION
PLANS FOR
SAFETY UPGRADES, CULVERT EXTENSIONS, DRAINAGE IMPROVEMENTS AND OTHER MISCELLANEOUS WORK
OF THE
I-87, NEW YORK STATE THRUWAY
BETWEEN
MILEPOSTS 100.8 TO 109.3
IN
ULSTER & GREENE COUNTIES

TAA 16-27R D21448
69 SHEETS

TYPE OF CONSTRUCTION:

UPGRADE EXISTING GUIDE RAIL, INSTALL AND/OR REPLACE ADDITIONAL GUIDE RAIL, END SECTION REPLACEMENT, CULVERT EXTENSION W/ OR W/O CULVERT END PIPE REPLACEMENT & SLOPE FLATTENING, NEW U-TURN & RELOCATION, CLEAN & REGRADE EXISTING DITCHES, CLEAN CULVERTS AND OTHER MISCELLANEOUS WORK BOTH NORTHBOUND AND SOUTHBOUND DIRECTIONS.

THE LATEST REVISIONS OF THE STANDARD SHEETS MAINTAINED BY NYS DOT, WHICH ARE CURRENT ON THE DATE OF ADVERTISEMENT FOR BIDS SHALL BE CONSIDERED TO BE IN EFFECT. ALL PAY ITEMS AND WORK CONTAINED IN THE CONTRACT AND ANY ADDITIONAL PAY ITEMS AND WORK ENCOUNTERED DURING THE COURSE OF THE CONTRACT SHALL BE SUBJECT TO THE APPLICABLE STANDARD SHEET(S) LISTED ON DWG. GN-1

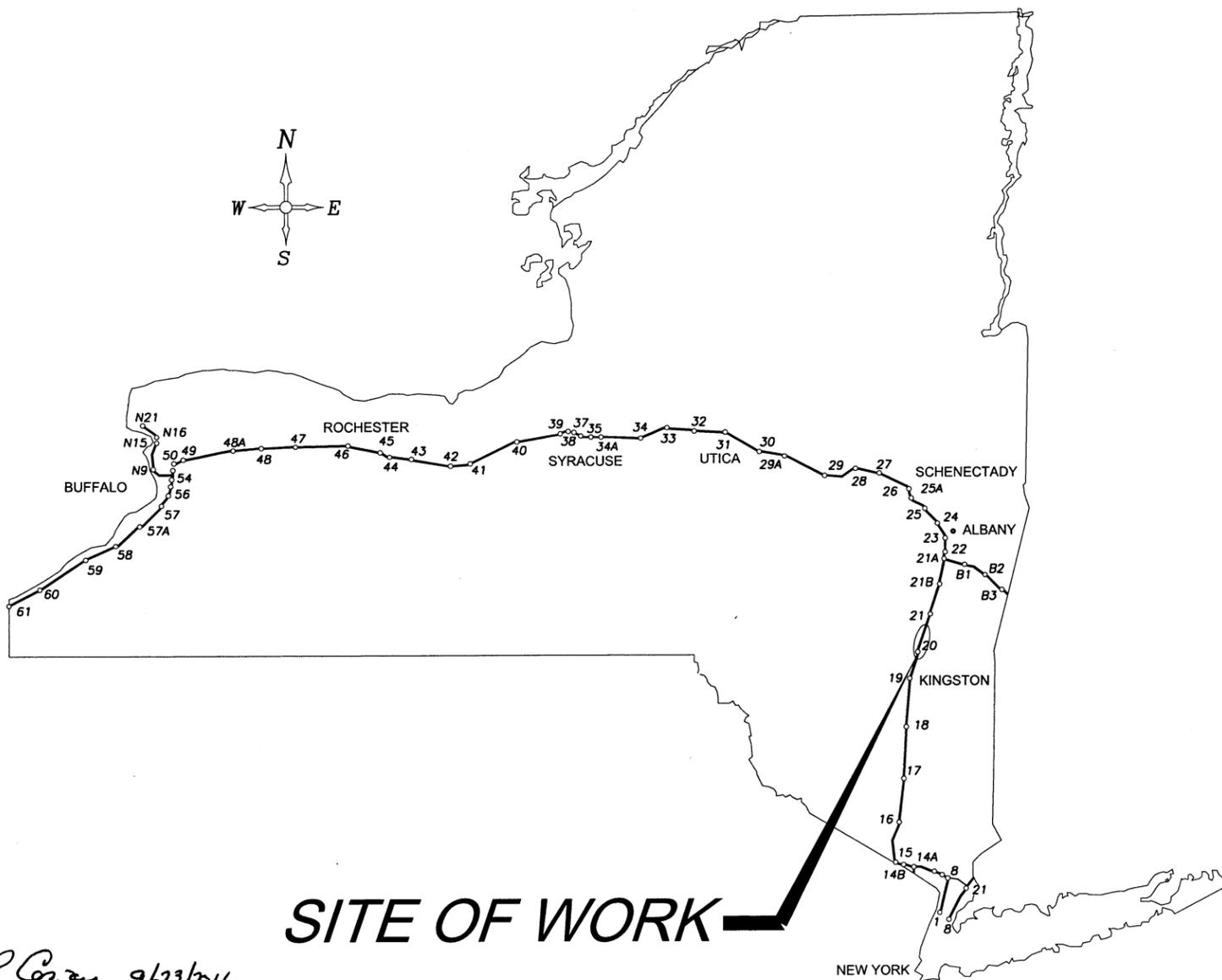
NOTES:

ALL WORK CONTEMPLATED UNDER THIS CONTRACT IS TO BE GOVERNED BY AND IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS - CONSTRUCTION AND MATERIALS U.S. CUSTOMARY UNITS" ADOPTED MAY 1, 2016 EXCEPT AS MODIFIED IN THESE PLANS AND BY THE PROPOSAL.

DIG SAFELY NEW YORK
UNDERGROUND FACILITIES PROTECTION ORGANIZATION
CALL 811

WHERE EVER ON THESE PLANS OR IN THE PROPOSAL, THE "OLD ITEM" LISTED BELOW APPEARS, THE "NEW ITEM" SHALL APPLY.

Table with 2 columns: OLD ITEM, NEW ITEM. Row 1: 203.5120_25, 621.05



SITE OF WORK

CONTRACTOR'S NAME:
AWARD DATE:
COMPLETION DATE:
FINAL ACCEPTANCE DATE:
INSPECTION FIRM'S NAME:
RESIDENT ENG./EIC:
FINAL COST TOTAL:

FISCAL SHARE COST(S)
INSPECTION FIRM CONSULTANT STAMP:

RECOMMENDED BY: [Signature] 9/23/16
DIRECTOR, OFFICE OF DESIGN

RECOMMENDED BY: [Signature] 9/21/16
DIVISION DIRECTOR

RECOMMENDED BY: [Signature] 9/24/16
TRAFFIC ENGINEER

RECOMMENDED BY: [Signature] 9/20/16
DIRECTOR, OFFICE OF CONSTRUCTION MANAGEMENT

RECOMMENDED BY: [Signature] 9/21/16
DIRECTOR OF MAINTENANCE AND OPERATIONS

APPROVED BY: [Signature] 9/26/16
CHIEF ENGINEER

REVIEWED BY: [Signature]
PROJECT MANAGER: [Signature]
BUREAU DIRECTOR: [Signature]

INDEX OF DRAWINGS		
SHEET NO	TITLE OF DRAWING	DRAWING NO.
1	TITLE OF DRAWING	
2	INDEX AND ABBREVIATIONS	IA-1
3 to 4	GENERAL NOTES	GN-1 - GN-2
5	SITE PLAN	SSP-1
6	GENERAL WZTC NOTES & CHANNELIZING DEVICES,...	GWZN
7	WORK ZONE TRAFFIC CONTROL TABLES, LEGEND, ..	TL
8 to 9	MILE MARKERS, TENTH MILE MARKERS, DELINEATORS,	DMM-1 - DMM-2
10	SHOULDER CLOSURE (SHORT DURATION)	SCM
11	WORK BEYOND SHOULDER	WBS
12	SINGLE LANE CLOSURE (SHORT OR INTER. STATIONARY)	SLC-65
13	MOBILE LANE CLOSURE	MLC
14	SHOULDER CLOSURE (SHORT OR INTER. TERM STATIONARY)	SC
15	SHORT DURATION LANE CLOSURE	SDLC
16	MOBILE LANE CLOSURE (NARROW SHOULDER)	MLC-NS
17	WORK ZONE TRAFFIC CONTROL AT INTERCHANGES, SERVICE AREAS	INT
18	MISCELLANEOUS DETAILS	MD-1
19	SHOULDER BACKUP DETAILS	SB-1A
20	DETAIL FOR PROPOSED U-TURN	UD-1
21	CLEARING AND GRUBBING	CLR-1
22 TO 24	CULVERT EXTENSION	CLVRT-1 -CLVRT-3
25 TO 26	CULVERT EXTENSION TABLES	CET-1 - CET-2
27	SLOPE FLATTENING TABLE	SFWL-1
28	CULVERT APRONS	DRD-1
29 TO 30	BARRIER REPLACEMENT	BRP-1 - BRP-2
31 TO 38	PIER PROTECTION	PP-1 -PP-8
39	THRIE BEAM/ CORRUGATED BEAM ROCK FENCE	RFD-1
40	GUIDE RAIL TRANSITION	GRTR-1
41 to 42	BARRIER PIER PROTECTION	ST-1 - ST-2
43 to 45	BARRIER AT ABUTMENTS	BTD-1 - BTD-3
46	GUIDE RAIL TABLE	GRT-1
47 to 64	GENERAL PLAN	GNP-1 - GNP-18
65	INTERCHANGE 18 PARK AND RIDE	SA-1
66	MALDEN SERVICE AREA	SA-2
67	NEW BALTIMORE SERVICE AREA	SA-3
68 to 69	ESTIMATE OF QUANTITIES	EQQ-1 - EQQ-2

ALIGNMENT	
ABBR.	DESCRIPTION
AH	AHEAD
AZ	AZIMUTH
BK	BACK
b	BASELINE
BRG	BEARING
c	CENTERLINE
CS	CURVE TO SPIRAL
e	SUPERELEVATION RATE (CROSS SLOPE)
EQ	EQUALITY
EXT	EXTERNAL
HCL	HORIZONTAL CONTROL LINE
HSD	HEADLIGHT SIGHT DISTANCE
L	LENGTH OF CIRCULAR CURVE
LS	LENGTH OF SPIRAL
LVC	LENGTH OF VERTICAL CURVE
E	CENTER CORRECTION OF VERTICAL CURVE
f	MAIN LINE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
POL	POINT ON LINE
PSD	PASSING SIGHT DISTANCE
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS
SC	SPIRAL TO CURVE
SSD	STOPPING SIGHT DISTANCE
ST	SPIRAL TO TANGENT
STA	STATION
T	TANGENT LENGTH
TGL	THEORETICAL GRADE LINE
TS	TANGENT TO SPIRAL
VC	VERTICAL CURVE

TOPOGRAPHY (DRAINAGE)	
ABBR.	DESCRIPTION
BB	BOTTOM OF BANK (STREAM)
BC	BOTTOM OF CURB
BO	BOTTOM OF OPENING
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
CIP	CAST IRON PIPE
c STRM	CENTERLINE OF STREAM
CMP	CORRUGATED METAL PIPE
CP	CONCRETE PIPE
CSP	CORRUGATED STEEL PIPE
CULV	CULVERT
DIA	DIAMETER
DMH	DRAINAGE MANHOLE
DS	DRAINAGE STRUCTURE PIPE
D'XING	DITCH CROSSING
EHW	EXTREME HIGH WATER
EL	ELEVATION
ELEV	ELEVATION
ELW	EXTREME LOW WATER
ES	END SECTION
HW	HEADWALL
INV	INVERT
MH	MANHOLE
MHW	MEAN HIGH WATER
OHW	ORDINARY HIGH WATER
OLW	ORDINARY LOW WATER
RCP	REINFORCED CONCRETE PIPE
SICPP	SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE
TB	TOP OF BANK (STREAM)
TC	TOP OF CURB
TG	TOP OF GRATE
VCP	VITRIFIED CLAY PIPE

TOPOGRAPHY (MISCELLANEOUS)	
ABBR.	DESCRIPTION
ABUT	ABUTMENT
AOBE	AS ORDERED BY ENGINEER
ASPH	ASPHALT
BOY	BOUNDARY
BLDG	BUILDING
BM	BENCH MARK
CC	CENTER TO CENTER
CONC	CONCRETE
CONST	CONSTRUCTION
CR	COUNTY ROAD
D	DEED DISTANCE
DM	DIRECT MEASUREMENT
DWY	DRIVEWAY
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
FEE	FEE ACQUISITION
FEE WO/A	FEE ACQUISITION WITHOUT ACCESS
FP	FENCE POST
FD	FOUNDATION
FL	FENCE LINE
GAR	GARAGE
GR	GRAVEL
HO	HOUSE
HWY	HIGHWAY
IP	IRON PIN OR IRON PIPE
MB	MAILBOX
MON	MONUMENT
N&W	NAIL AND WASHER
OG	ORIGINAL GROUND
O/H	OVERHEAD
P	PARCEL
PAV'T	PAVEMENT
PE	PERMANENT EASEMENT
PED POLE	PEDESTRIAN POLE
p	PROPERTY LINE
POR	PORCH
RR	RAILROAD
RTE	ROUTE
ROW	RIGHT OF WAY
RW	RETAINING WALL
SH	STATE HIGHWAY
SHLDR	SHOULDER
SPK	SPIKE
ST	STREET
STK	STAKE
STY	STORY
SW	SIDEWALK
TE	TEMPORARY EASEMENT
TO	TEMPORARY OCCUPANCY
U/G	UNDERGROUND
WW	WING WALL

UTILITIES	
ABBR.	DESCRIPTION
E	ELECTRIC
EMH	ELECTRIC MANHOLE
G	GAS
GP	GUY POLE
GSB	GAS SERVICE BOX (HOUSE LINE)
GV	GAS VALVE (MAIN LINE)
HYD	HYDRANT
LP	LIGHT POLE
LPG	LOW PRESSURE GAS
PP	POWER POLE
SA	SANITARY SEWER
SMH	SANITARY MANHOLE
ST	STORM SEWER
T	TELEPHONE
TCB	TRAFFIC CONTROL BOX
TELBOX	TELEPHONE BOX
TEL P	TELEPHONE POLE
TMH	TELEPHONE MANHOLE
CTV	CABLE TELEVISION
W	WATER
WSB	WATER SERVICE BOX (HOUSE LINE)
WV	WATER VALVE (MAIN LINE)

SUBSURFACE EXPLORATION	
ABBR.	DESCRIPTION
REPLACE ABBREVIATION "AB" WITH:	
AH	HAND AUGER
CP	CONE PENETROMETER
DA	2 1/4 INCHES CASSED DRILL HOLE
DM	DRILLING MUD
DN	4 INCHES CASSED DRILL HOLE
FH	HOLLOW FLIGHT AUGER
PA	POWER AUGER
PH	PROBE
PT	PERCOLATION TEST HOLE
RP	1 INCH SAMPLER (RETRACTABLE PLUG)
	TO BE DEFINED AT THE TIME OF EXPLORATION
SP	SEISMIC POINT
TP	TEST PIT
ABBREVIATION "C" IN CATAGORIES: DA, DM, DN, AND FH WITH:	
B	BRIDGE
C	CUT
D	DAM
F	FILL
K	CULVERT
W	WALL
X	TO BE USED IF ONE OF THE ABOVE CANNOT BE DEFINED AT THE TIME THE EXPLORATION IS MADE

STANDARD SYMBOL (PLANS)	ITEM PAYMENT UNIT: ESTIMATE OF QUANTITIES SHEET	EQUIVALENT NOMENCLATURE: (SPECS/PROPOSAL)
'	ft	LINEAR FEET
ft ²	SF	SQUARE FEET
YD ³	CY	CUBIC YARD
mi	MI	MILES
AC	AC	ACRES
lb	LB	POUND
TON	TON	TON
GAL	GAL	GALLON

ALTERED ON: _____ AFFIXED ON: 9/20/2016

SIGNATURE: _____ STAMP: _____

SIGNATURE: _____ STAMP: _____



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT: SAFETY UPGRADES, CULVERT EXTEN., DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES
TITLE OF DRAWING: INDEX & ABBREVIATIONS

CONTRACT NUMBER: TAA 16-27R
DATE: 03/31/16
DRAWING NUMBER: IA-1

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

- ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT CONTAMINATION OF THE STREAMS AND WETLANDS BY SILT, SEDIMENT, FUELS, SOLVENTS, LUBRICANTS, EPOXY COATINGS, CONCRETE LEACHATE, OR ANY OTHER POLLUTANT ASSOCIATED WITH CONSTRUCTION AND CONSTRUCTION PRECEDURES.
- DURING CONSTRUCTION, NO WET OR FRESH CONCRETE OR LEACHANT SHALL BE ALLOWED TO ESCAPE INTO THE WATERS OF THE STATE OF NEW YORK, NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS, OR OTHER DEVICES BE ALLOWED TO ENTER ANY WETLAND OR WATERS.
- ALL FEDERAL AND STATE WETLANDS (INCLUDING UNNAMED TRIBUTARIES) WITHIN THE PROJECT LIMITS ARE TO BE PROTECTED DURING CONSTRUCTION.
- THE LOCATIONS OF EROSION AND SEDIMENT MEASURES, AS INDICATED IN THE CONTRACT DOCUMENTS MAY REQUIRE FIELD ADJUSTMENT DEPENDING ON THE SEQUENCE OF THE CONSTRUCTION ACTIVITIES, CONSTRUCTION METHODS AND/OR ACTUAL FIELD CONDITIONS. THE NYSTA ENVIRONMENTAL SPECIALIST CONTACT SHALL BE NOTIFIED OF ANY SIGNIFICANT FIELD CHANGES.
- OTHER EROSION CONTROL MEASURES MAY BE REQUIRED A.O.B.E. IN ADDITION TO SCHEMES SHOWN. PAYMENT FOR ADDITIONAL WORK SHALL BE PAID UNDER THE APPROPRIATE ITEM IN THE CONTRACT.
- ALL METHODS AND EQUIPMENT PROPOSED BY THE CONTRACTOR TO ACCOMPLISH THE WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER IN CHARGE.
- THE CONTRACTOR SHALL ESTABLISH A STAGING AREA FOR CONSTRUCTION. A ROCK CONSTRUCTION ENTRANCE ALONG WITH ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY, SHALL BE INSTALLED TO LIMIT EXPOSED AREAS AND CONTROL SOIL EROSION.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED TO MINIMIZE TRACKING OF SEDIMENT ONTO PUBLIC ROADS AT ALL LOCATIONS WHERE CONSTRUCTION VEHICLES ENTER THE ROADWAY.
- INSTALL TEMPORARY SILT FENCE AS DETAILED ON THE CONSTRUCTION DRAWINGS. THE SILT FENCE SHALL REMAIN IN PLACE UNTIL PERMANENT VEGETATION IS ESTABLISHED WITHIN THE PROJECT LIMITS. SILT FENCE SHALL BE INSTALLED ALONG THE SAME CONTOUR LINE AND LENGTH. THE TOTAL OF ONE CONTINUOUS RUN SHALL NOT EXCEED 100 FT.
- ADDITIONAL SILT FENCE SHALL BE INSTALLED AROUND ALL STOCKPILE AREAS. SPOIL AREAS, AND STAGING AREAS ESTABLISHED BY THE CONTRACTOR DURING THE CONSTRUCTION PHASE. THE COST OF SILT FENCE AROUND THE TEMPORARY STOCKPILE AND STAGING AREAS SHALL BE MEASURED FOR PAYMENT.
- ALL DISTURBED AREAS SHALL BE GRADED IN A MANNER THAT DIRECTS RUNOFF TO AN EROSION AND SEDIMENT CONTROL MEASURE AT THE END OF EACH WORKING DAY.
- THE CONTRACTOR SHALL INITIATE STABILIZATION MEASURES AS SOON AS PRACTICABLE IN PORTIONS OF THE SITES WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARY OR PERMANENTLY CEASED. BUT IN NO CASE, MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- WHEN THE PROJECT IS COMPLETED AND STABILIZED, REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES. ALL SEDIMENT REMOVED FROM BEHIND SILT FENCE, CHECK DAMS AND OUTLET PROTECTION SHALL BE DISPOSED OF ON AN APPROVED SITE WHERE IT CANNOT BE WASHED INTO A WATERWAY OR WETLAND.
- EXCAVATED MATERIAL MUST BE TAKEN TO A PERMANENT SPOIL AREA OR IMMEDIATELY USED WITHIN THE PROJECT. NO EXCAVATED MATERIAL OTHER THAN TOP SOIL, MAY BE STOCKPILED WITHIN THE PROJECT LIMITS. TOP SOIL STOCKPILE LOCATIONS SHALL BE AT CONTRACTOR'S DISCRETION AND A.O.B.E.
- AT THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE ENGINEER HIS WRITTEN SCHEDULE AND PROPOSED MEASURES FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL WORK AND SCHEDULE OF OPERATIONS AS REQUIRED BY SECTION 209 OF THE NYSOT STANDARD SPECIFICATIONS.
- THE CONTRACTOR IS STRICTLY PROHIBITED FROM USING ON-SITE SOIL TO DAM, DIVERT OR OTHERWISE BLOCK A STREAM.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY SILT FENCE AND/OR CHECK DAMS AS NEEDED (APPROVED BY E.I.C) DURING CONSTRUCTION, PAID FOR UNDER ITEM 209.13 AND ITEM 209.110202, RESPECTIVELY.
- ALL DEWATERING OPERATIONS REQUIRED FOR THE PROJECT WORK SHALL BE ACCOMPLISHED BY DISCHARGING THE WATER INTO A SEDIMENT COLLECTION BAG, ITEM 209.140201. LOCATED IN AN AREA APPROVED BY THE ENGINEER. ALL WATER DISCHARGED TO THE STREAM SHALL BE DONE IN A MANNER THAT WILL NOT CREATE EROSION AND THE DISCHARGE WATER SHALL BE CLEAR AND FREE OF SEDIMENT AS THE FLOWING STREAM.

- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST BE IMPLEMENTED, INSPECTED, MONITORED AND MAINTAINED AS SPECIFIED IN THE NYSOT SPECIFICATIONS.
- THE ENGINEER SHALL BE NOTIFIED OF ANY SIGNIFICANT CHANGES TO THE EROSION AND SEDIMENT CONTROL MEASURES INDICATED IN THE CONTRACT DOCUMENTS.
- ALL DREDGED AND EXCAVATED MATERIAL THAT IS DISPOSED OF ON AN UPLAND SITE SHALL BE SUITABLY STABILIZED WITH SEED AND MULCH IN ACCORDANCE WITH SECTION 209 OF THE NYSOT STANDARD SPECIFICATIONS SO THAT IT CANNOT REASONABLY RE-ENTER ANY WATER BODY OR WETLAND AREA.
- INSPECTION, PERIODIC CLEANING AND MAINTENANCE OF TEMPORARY SOIL EROSION AND POLLUTION CONTROL DEVICES SHALL BE PERFORMED ON A SCHEDULED BASIS IN ACCORDANCE WITH SECTION 209 OF THE NYSOT SPECIFICATIONS. THE COST OF INSTALLING, CLEANING AND REMOVING TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL DEVICES SHALL BE PAID FOR UNDER THE APPROPRIATE ITEMS IN THE CONTRACT.
- DUMP TRUCKS HAULING MATERIALS TO AND FROM THE CONSTRUCTION SITE THAT ARE PRONE TO BLOWING FROM THE WIND SHALL BE COVERED WITH A TARPULIN.
- CONTROL MEASURES SHALL BE USED AS NECESSARY AND SHALL FOLLOW DITCH EXCAVATING OPERATIONS. THEY SHALL REMAIN IN PLACE UNTIL THE NEW SLOPES HAVE BEEN STABILIZED BY SEEDING, MULCH, AND/OR SLOPE PROTECTION IN ACCORDANCE WITH SECTION 209 OF THE NYSOT STANDARD SPECIFICATIONS.
- IF CONSTRUCTION ACTIVITIES ARE DISCONTINUED IN AREAS OF SOIL DISTURBANCE BEFORE FINAL GRADING IS COMPLETE, THEN TEMPORARY GRADING SHALL INCLUDE TEMPORARY SEEDING AND MULCH THAT WILL BE STABILIZED WITHIN 7 DAYS OF EXPOSURE. MULCH SHALL BE MAINTAINED UNTIL SUITABLE VEGETATIVE COVER IS ESTABLISHED. THIS PAY ITEM IS ESTIMATED AND THE QUANTITY MAY VARY BASED ON ACTUAL CONSTRUCTION CONDITIONS.
- ADDITIONAL QUANTITIES FOR EROSION CONTROL MEASURES MAY BE REQUIRED BY THE ENGINEER IN ADDITION TO THAT SHOWN. PAYMENT FOR ADDITIONAL WORK SHALL BE MADE UNDER THE APPROPRIATE ITEMS IN THE CONTRACT.
- THE CONTRACTOR SHALL NOT USE THE STREAM BED OR BANKS AS A STAGING AREA FOR EQUIPMENT OR MATERIALS. AFTER EACH WORK DAY, ALL MECHANIZED EQUIPMENT SHALL BE REMOVED FROM THE BED AND BANKS OF THE STREAM AND STORED IN AN APPROVED UPLAND SITE.

MAINTENANCE PROGRAM

- ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION ATLEAST EVERY 7 CALENDER DAYS.
- SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT ONE-HALF (1/2) THE DEPTH OF THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER.
- CHECK DAMS SHALL BE CLEANED OUT IF SEDIMENT DEPOSITS EXCEED 6 INCHES OR IF ONE-HALF (1/2) THE DESIGN CAPACITY HAS BEEN EXCEEDED, WHICHEVER IS LESS.
- SEDIMENT RECOVERED FROM CULVERT CLEANING OPERATIONS SHALL BE IMMEDIATELY REMOVED FROM THE WATERWAY UPON COMPLETION OF THE CLEANING OPERATION.
- THE THICKNESS OF ROCK CONSTRUCTION ENTRANCE SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSION BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON THE SITE FOR THIS PURPOSE.
- AT THE END OF EACH WORK DAY, ALL SEDIMENT DEPOSITED ON THE PUBLIC ROADWAY SHALL BE REMOVED AND RETURNED TO THE WORK AREA. WASHING OF THE ROADWAY WITH WATER IS NOT PERMITTED.
- DUE TO THE EXISTING STATE AND FEDERAL WETLANDS WITHIN THE PROJECT LIMITS, THE CONTRACTOR IS ADVISED THAT THE STORAGE OF EQUIPMENT IN WETLANDS IS STRICTLY PROHIBITED.
- IF SLOPE FLATTENING EFFORTS WILL RESULT IN THE RE-ESTABLISHMENT OF A DITCH, TEMPORARY SILT DYKES/ CHECK DAMS SHALL BE INSTALLED WITHIN THE NEWLY ESTABLISHED DITCHES JUST PRIOR TO THE LOCATION WHERE WATER IS DEPOSITED INTO THE STREAM OR THE WETLAND.

WORK ZONE TRAFFIC CONTROL-GENERAL NOTES

- WORK ZONE TRAFFIC CONTROL SHALL BE COMPLIED WITH THROUGHOUT THE LENGTH AND DURATION OF THE CONTRACT IN ACCORDANCE WITH THE M.U.T.C.D. AND THE CONTRACT DOCUMENTS.
- FOR A RIGHT LANE CLOSURE IN AN AREA WHERE THE USABLE LEFT SHOULDER/ MEDIAN IS LESS THAN 6 FEET, LEFT SIDE SIGNS SHALL BE MOUNTED ON THE MEDIAN GUIDE RAIL/ BARRIER. IF THE TOTAL MEDIAN WIDTH IS LESS THAN 6 FEET, LEFT SIDE SIGNING SHALL NOT BE REQUIRED.
- FOR A LEFT LANE CLOSURE IN AN AREA WHERE USABLE LEFT SHOULDER/MEDIAN IS LESS THAN 6 FEET, LEFT SIDE SIGNS SHALL BE MOUNTED ON THE MEDIAN BARRIER IF THE TOTAL MEDIAN WIDTH IS LESS THAN 6 FEET, LEFT SIDE SIGNING IN ADVANCE OF THE SHOULDER TAPER SHALL NOT BE REQUIRED.
- TEMPORARY SIGN SUPPORTS SHALL PROVIDE A MINIMUM MOUNTING HEIGHT OF 5 FEET MEASURED FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT. SIGNS SHALL BE PLACED AT OR AS NEAR AS PRACTICAL TO THE LOCATIONS SHOWN. LATERAL PLACEMENT OF SIGNS SHALL CONFORM TO SECTION 6F.03 OF THE NATIONAL MUTCD.
- THE SPEED DISPLAY TRAILERS (ITEM 619.96----25) SHALL BE PROVIDED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WHEN NOT IN OPERATION, THE SPEED DISPLAY TRAILERS SHALL BE REMOVED FROM THE TEMPORARY TRAFFIC CONTROL PATTERN.
- VMS AND HAR PLACEMENT AND MESSAGING SHOULD BE COORDINATED THROUGH AND APPROVED BY THE DIVISION TRAFFIC OFFICE OR DESIGNATED TRAFFIC MAINTENANCE COORDINATOR.
- DISTANCES SHOWN ARE APPROXIMATE ONLY AND MAY BE REVISED BY THE ENGINEER-IN-CHARGE TO MEET FIELD CONDITIONS (DRIVEWAYS, HIGHWAY ALIGNMENT, ETC.)
- THE SIGNING SHOWN IS A MINIMUM ONLY. ADDITIONAL SIGNING MAY BE REQUIRED TO MEET THE TRAFFIC AND/OR FIELD CONDITIONS.
- THE COST OF FURNISHING AND INSTALLING ALL SIGNS SHALL BE PAID FOR UNDER ITEM 619.01-BASIC WORK ZONE TRAFFIC CONTROL.

WORK RESTRICTIONS

- LANE CLOSURE CHARTS FOR THIS SEGMENT OF THE NEW YORK STATE THRUWAY ARE INCLUDED IN THE PROPOSAL AND MUST BE STRICTLY ADHERED TO AND GOVERN OVER ANY GENERAL INFORMATION PROVIDED IN THIS NOTE. NO LANE CLOSURE ACTIVITIES SHALL COMMENCE PRIOR TO THE LATEST TIME LISTED IN THE CHARTS AND ALL LANE CLOSURE ACTIVITIES MUST COMPLETELY TERMINATE PRIOR TO THE EARLIEST TIME LISTED IN THE CHARTS. (THE CONTRACTOR HAS THE OPTION TO PERFORM NIGHT TIME OPERATION IF HE/SHE ELECTS TO DO SO).

NOTES:

- BACKFILL WILL BE EARTH WHICH IS REMOVED FROM DITCH FREE FROM DEBRIS, CINDERS, AND ROCKS MEASURING 4 INCHES, OR GREATER ACROSS THEIR LARGEST DIMENSION.
- CONTRACTOR SHALL RELOCATE THE FIBER OPTIC LINES DEEPER AS NEEDED TO MAINTAIN A MINIMUM 42" COVER DEPTH BELOW PROPOSED FINAL GRADE.
- CONTRACTOR MUST BE PREPARED TO INCREASE THE LENGTH OF INNERDUCT WITH COMPATIBLE SPLIT DUCT WHICH MUST BE SUBMITTED FOR ENGINEER'S APPROVAL. ASSUME ADEQUATE FIBER SLACK IS AVAILABLE FOR RELOCATION AND EXTENSION IF REQUIRED.

DRAWINGS REFERENCED FOR TYPE OF PIER PROTECTION.				
PLAN SHEET	MILE POST	SOUTHBOUND	NORTHBOUND	CENTER PIER
GNP-5	MP 102.3 (±) PEOPLES RD.	PP-8	PP-1	
GNP-6	MP 103.16 (±) MALDEN TPKE.	PP-3	PP-2	PP-5
GNP-9	MP 104.04 (±) LAUREN TICE RD.	PP-8	PP-8	
GNP-11	MP 105.4 (±) WEST CAMP RD.	PP-6	PP-6	
GNP-17	MP 108.63 (±) BRICKSCHOOL HOU	PP-7	PP-4	

TABLE OF CLEAR ZONE WIDTHS		
START MILEPOST	END MILEPOST	DESIGNATED CLEAR ZONE WIDTH
102.7	102.5	28 FT. (SEE NOTE A)

NOTES
A. ROCK FACE 29 FT. OFFSET, TOO EXPENSIVE TO CUT BACK, NO ACCIDENT HISTORY.

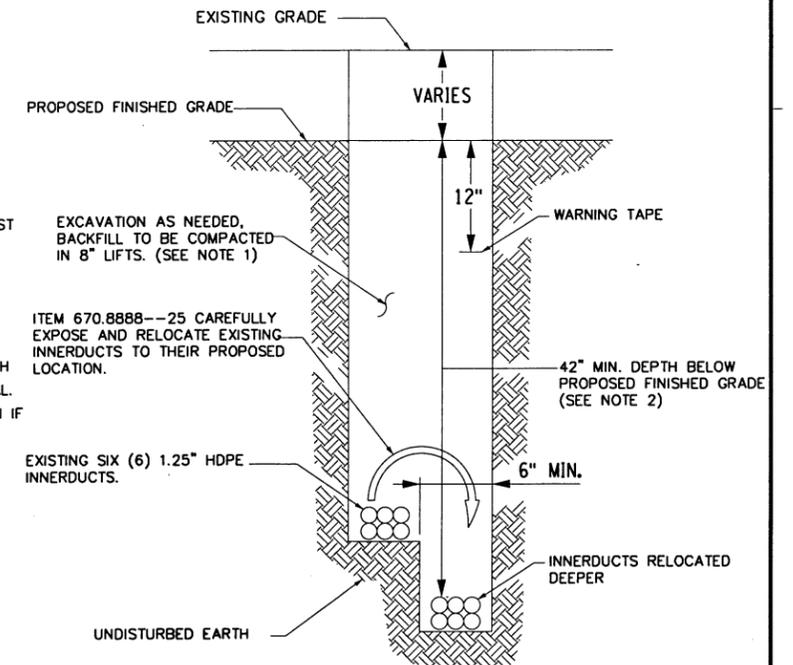
PRIOR TO BEGINING OF EXCAVATION, THE CONTRACTOR SHALL CALL "DIG SAFELY NEW YORK" @ 811 OR 800-962-7962 TO HAVE UNDERGROUND UTILITIES LOCATED.

UTILITY NOTES

- LOCATIONS OF UTILITIES PUBLIC AND/OR PRIVATE INDICATED AS EXISTING AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THEIR EXACT LOCATION SHALL BE DETERMINED IN THE FIELD. ADDITIONAL UTILITY LINES WHETHER ABANDONED OR IN SERVICE MAY EXIST AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT HIS OPERATIONS AND TAKE THE NECESSARY PRECAUTIONS TO PREVENT INTERFERENCE WITH OR DAMAGE TO THESE OR OTHER FACILITIES DURING THE COURSE OF CONSTRUCTION.
- CONTRACTOR IS ALERTED TO A FIBER OPTIC CABLE INSTALLED ALONG THE NYS THRUWAY. EXTREME CARE SHALL BE TAKEN TO POSITIVELY INSURE NO DISRUPTION IN SERVICE OR DISTURBANCE OF THIS FACILITY AT ALL LOCATIONS. FIBER OPTIC CABLE IS IDENTIFIED ON THE PLANS AS "FO". THE CONTRACTOR SHALL CALL G4S TECHNOLOGY LLC AT 518-869-5053 TO LOCATE THESE FACILITIES.
- IF THE CONTRACTOR DAMAGES AN EXISTING UTILITY SERVICE CAUSING AN INTERRUPTION IN SAID SERVICE, HE SHALL IMMEDIATELY COMMENCE WORK TO RESTORE SERVICE AND MAY NOT CEASE HIS WORK OPERATION UNTIL SERVICE IS RESTORED. THIS SHALL BE DONE AT NO COST TO THE AUTHORITY.

FIBER OPTIC NOTES:

- THE THRUWAY'S FIBER OPTIC "BACKBONE" IS LOCATED WITHIN THE ENTIRE WORK LIMITS OF THIS PROJECT. THE APPROXIMATE LOCATION IS SHOWN ON THE DRAWINGS. THE CONTRACTOR IS ADVISED TO CONTACT DIG SAFELY NY 1-800-962-7962 PRIOR TO ANY EXCAVATION. FURTHERMORE PURSUANT TO N.Y.S. CODE RULE 753, THE CONTRACTOR MUST BE PREPARED TO VERIFY THE LOCATION OF THE FIBER OPTIC LINE THROUGH HAND DUG TEST HOLES AT ONE OR MORE LOCATIONS WITHIN THE WORK AREA PRIOR TO ANY EXCAVATION.



TYPICAL VERTICAL FIBER OPTIC RELOCATION
N.T.S

NOTE: ITEM 670.8888--25 TO BE USED WHEN REQUIRED, SEE CULVERT C28 ON DRAWING GNP-8.

ALTERED ON: _____ AFFIXED ON: 9/20/2016

SIGNATURE: _____ SIGNATURE: _____
STAMP: _____ STAMP: _____

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
**SAFETY UPGRADES, CULVERT EXTENSION,
DRAINAGE & MISCELLANEOUS WORK**

LOCATION OF PROJECT
**MP 100.8 TO MP 109.3
ULSTER & GREEN COUNTIES**

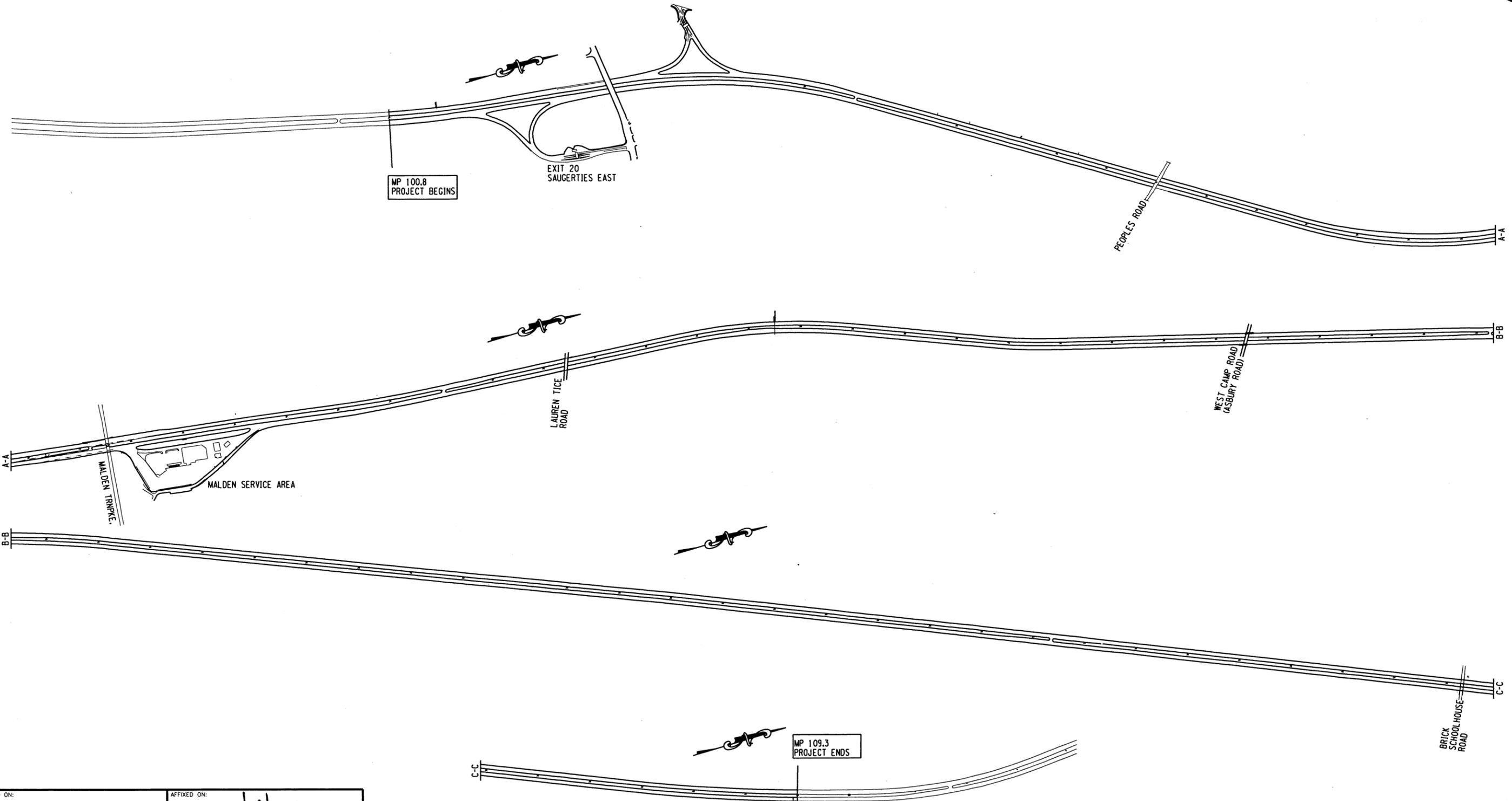
TITLE OF DRAWING
GENERAL NOTES

CONTRACT NUMBER:
TAA 16-27R

DATE:
06/30/16

DRAWING NUMBER:
GN-2

FILED BY: TA
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



LOCATION PLAN

SCALE 1" = 1000'

ALTERED ON:	AFFIXED ON: 9/20/2016
SIGNATURE: STAMP:	SIGNATURE: STAMP:

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REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXT., DRAINAGE & MISCELLANEOUS WORK

LOCATION OF PROJECT
**MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES**

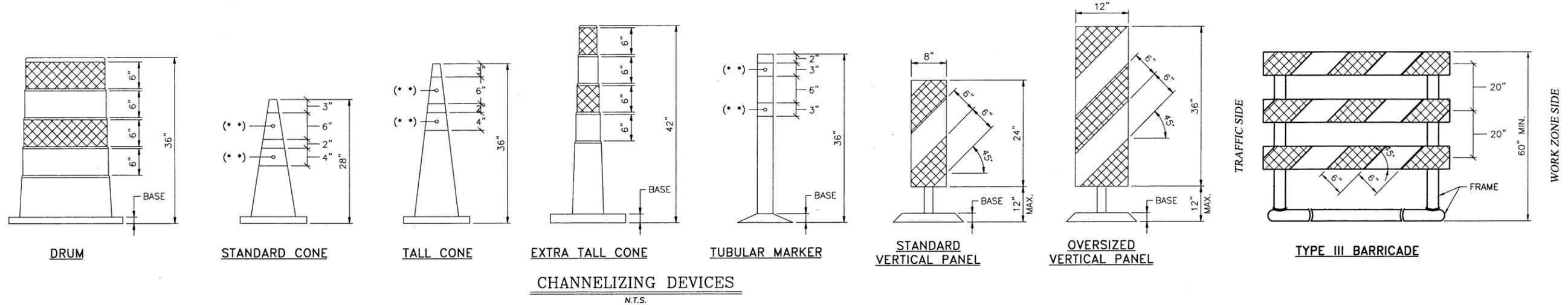
TITLE OF DRAWING
SITE PLAN

CONTRACT NUMBER:
TAA 16-27R

DATE:
06/16/16

DRAWING NUMBER:
SSP-1

DESIGN SUPERVISOR: T. MAHAR
 DESIGNED BY: R. COURNOYER
 CHECKED BY: J. SHINSKI
 DRAFTED BY: CAD
 CHECKED BY: TA
 GWZN.dgn



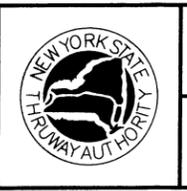
GENERAL NOTES:

1. THE ENGINEER SHALL APPROVE THE CONDITION OF ALL TEMPORARY TRAFFIC CONTROL DEVICES PRIOR TO USE. THE ENGINEER SHALL ALSO REVIEW THE PROPOSED WORK ZONE TRAFFIC CONTROL PLAN FOR PRECISE DEVICE POSITIONING PRIOR TO INSTALLATION.
2. ALL SIGNS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ORANGE SIGNS ON RIGID PANELS SHALL BE FLUORESCENT-ORANGE ASTM TYPE IX (CLASS E) RETROREFLECTIVE SHEETING. ALL OTHER COLORS OF CONSTRUCTION SIGN FACES ON RIGID PANELS SHALL BE ASTM TYPE III (CLASS B) REFLECTIVE SHEETING.
3. EXISTING SPEED LIMIT SIGNS WITHIN THE WORK ZONE SHALL BE COMPLETELY COVERED TO AVOID CONFLICT WITH THE WORK ZONE SPEED LIMIT SIGNS.
4. WHEN A SPEED DISPLAY TRAILER IS DEPLOYED, IT MAY BE USED AS A SUBSTITUTE FOR THE SECOND "WORK ZONE/SPEED LIMIT 45" SIGN (G20-5aP/R2-1). THE UNIT SHALL BE PROVIDED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. WHEN NOT IN OPERATION, THE SPEED DISPLAY TRAILER SHALL BE REMOVED FROM THE WORK ZONE.
5. CHANNELIZING DEVICES SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD AND SECTION 729 OF THE STANDARD SPECIFICATIONS WITH THE EXCEPTION THAT SHEETING REQUIREMENTS SHALL BE AS SPECIFIED ON THIS DRAWING. CHANNELIZING DEVICE TYPE AND SPACING REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 619 OF THE STANDARD SPECIFICATIONS.
6. ARROW PANELS SHALL CONFORM TO SECTION 729-15 OF THE STANDARD SPECIFICATIONS. THE ADVANCE WARNING ARROW DISPLAY SHALL BE A FULL FLASHING ARROW ONLY. CHEVRONS AND SEQUENTIAL ARROW DISPLAYS SHALL NOT BE PERMITTED. THE CAUTION MODE DISPLAY SHALL BE FOUR FLASHING CORNERS. FLASHING BAR DISPLAYS SHALL NOT BE PERMITTED.
7. THERE SHALL BE NO WORK ACTIVITY, EQUIPMENT, VEHICLES AND/OR MATERIALS LOCATED WITHIN THE BUFFER SPACE. THE SAME SHALL ALSO APPLY TO THE SPACE BETWEEN THE BARRIER VEHICLE(S) AND THE ACTIVE WORK AREA (BARRIER VEHICLE PLACEMENT DISTANCE).

CHANNELIZING DEVICE
LEGEND

	WHITE RETROREFLECTORIZED SHEETING, ASTM TYPE IX (CLASS E)
	ORANGE RETROREFLECTORIZED SHEETING, ASTM TYPE IX (CLASS E)
	NON-REFLECTORIZED ORANGE
(* *)	WHITE REFLECTIVE SHEETING, ASTM TYPE III (CLASS B) OR ASTM TYPE V (CLASS C)

REVISIONS			
DATE	DESCRIPTION	BY	SYM



NEW YORK STATE THRUWAY AUTHORITY
 DEPARTMENT OF ENGINEERING
 200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
 SAFETY UPGRADE, CULVERT EXTENSION,
 DRAINAGE & MISCELLANEOUS WORK
 LOCATION OF PROJECT
 MP 100.8 TO MP 109.3
 ULSTER & GREENE COUNTIES
 TITLE OF DRAWING
**GENERAL
 WZTC NOTES AND
 CHANNELIZING DEVICES**

CONTRACT NUMBER:
 TAA 16-27R
 DATE:
 02/13
 DRAWING NUMBER:
 GWZN

TABLE NY1-A BARRIER VEHICLE USE REQUIREMENTS (LONG TERM, INTERMEDIATE TERM & SHORT TERM STATIONARY CLOSURES)					
CLOSURE TYPE	EXPOSURE CONDITION ¹	USE REQUIREMENTS 4, 5			
		FREEWAY	NON-FREEWAY (PRECONSTRUCTION POSTED SPEED LIMIT)		
			≥ 45 MPH	35-40 MPH	≤ 30 MPH
LANE CLOSURE	WORKERS ON FOOT OR IN VEHICLES EXPOSED TO TRAFFIC	REQUIRED ³	REQUIRED ³	REQUIRED ³	OPTIONAL ²
	NON-TRAVERSABLE HAZARD (IE. EQUIPMENT, MATERIALS, EXCAVATION) ONLY NO WORKERS EXPOSED	REQUIRED ³	REQUIRED ³	OPTIONAL ²	OPTIONAL ²
SHOULDER CLOSURE	WORKERS ON FOOT OR IN VEHICLES EXPOSED TO TRAFFIC	REQUIRED ³	REQUIRED ³	OPTIONAL ²	OPTIONAL ²
	NON-TRAVERSABLE HAZARD (IE. EQUIPMENT, MATERIALS, EXCAVATION) ONLY NO WORKERS EXPOSED	REQUIRED ³	OPTIONAL ²	OPTIONAL ²	OPTIONAL ²

1. THE EXPOSURE CONDITIONS DESCRIBED IN TABLE NY1-A ASSUMES THERE IS NO POSITIVE PROTECTION (TEMPORARY TRAFFIC BARRIER) PRESENT. WHERE WORKERS OR HAZARDS ARE PROTECTED BY A TEMPORARY TRAFFIC BARRIER, BARRIER VEHICLES ARE NOT REQUIRED.
2. WHERE THE REQUIREMENT IS "OPTIONAL", EITHER A BARRIER VEHICLE OR THE STANDARD LONGITUDINAL BUFFER SPACE (TABLE 6C-2) SHALL BE PROVIDED.
3. REQUIREMENTS SHALL INCLUDE PROVIDING A SEPARATE BARRIER VEHICLE FOR EACH CLOSED LANE AND EACH CLOSED SHOULDER 8 FEET OR GREATER IN WIDTH. IF THE WORK SPACE MOVES WITHIN THE STATIONARY CLOSURE, THE BARRIER VEHICLE SHALL BE REPOSITIONED ACCORDINGLY. BARRIER VEHICLES PROTECTING NON-TRAVERSABLE HAZARDS SHALL REMAIN IN PLACE DURING BOTH WORKING AND NON-WORKING HOURS UNTIL THE HAZARD NO LONGER EXISTS. EXCEPTIONS TO THESE REQUIREMENTS MAY BE MADE, AS APPROVED BY THE ENGINEER, WHERE BARRIER VEHICLE PLACEMENT WOULD BE INEFFECTIVE OR WOULD INTERFERE WITH THE SAFE OPERATION OF TRAFFIC.
4. BARRIER VEHICLES ARE NOT REQUIRED FOR MILLING AND/OR PAVING OPERATIONS, BUT THE STANDARD LONGITUDINAL BUFFER SPACE (TABLE 6C-2) SHALL BE PROVIDED.
5. BARRIER VEHICLES ARE NOT REQUIRED FOR FLAGGING OPERATIONS.

TABLE NY1-B SHADOW VEHICLE USE REQUIREMENTS (MOBILE CLOSURES ¹)					
CLOSURE TYPE	EXPOSURE CONDITION	USE REQUIREMENTS			
		FREEWAY	NON-FREEWAY (PRECONSTRUCTION POSTED SPEED LIMIT)		
			≥ 45 MPH	35-40 MPH	≤ 30 MPH
LANE CLOSURE	WHEN ANY WORKERS, VEHICLES, OR OTHER HAZARD IS EXPOSED TO TRAFFIC	REQUIRED ^{2,4}	REQUIRED ^{2,4}	REQUIRED ^{2,4}	REQUIRED ^{3,4}
	WHEN ANY WORKERS, VEHICLES, OR OTHER HAZARD IS EXPOSED TO TRAFFIC	REQUIRED ^{2,4}	REQUIRED ^{2,4}	REQUIRED ^{3,4}	REQUIRED ^{3,4}

1. A MOBILE CLOSURE SHALL BE USED FOR ANY WORK ACTIVITY THAT MOVES CONTINUOUSLY OR INTERMITTENTLY ALONG THE TRAVELED WAY OR SHOULDER SLOWER THAN THE PREVAILING SPEED OF TRAFFIC. CHANNELIZING DEVICES ARE NOT USED FOR MOBILE CLOSURES.
2. SHADOW VEHICLES SHALL BE EQUIPPED WITH AN APPROVED REAR MOUNTED ATTENUATOR (TRUCK-MOUNTED OR TRAILER MOUNTED) FOR THE FOLLOWING MOBILE CLOSURES: LANE CLOSURES ON FREEWAYS, LANE CLOSURES ON NON-FREEWAY ROADWAYS HAVING A PRE-CONSTRUCTION POSTED SPEED LIMIT OF 35 MPH OR MORE, SHOULDER CLOSURES ON FREEWAYS, AND SHOULDER CLOSURES ON NON-FREEWAY ROADWAYS HAVING A PRE-CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE.
3. FOR MOBILE LANE CLOSURES ON NON-FREEWAY ROADWAYS HAVING A PRE-CONSTRUCTION POSTED SPEED LIMIT OF 30 MPH OR LESS AND MOBILE SHOULDER CLOSURES ON NON-FREEWAY ROADWAYS HAVING A PRE-CONSTRUCTION SPEED LIMIT OF 40 MPH OR LESS, SHADOW VEHICLES ARE NOT REQUIRED TO BE EQUIPPED WITH A REAR MOUNTED ATTENUATOR.
4. A SHADOW VEHICLE IS USED TO PROTECT EXPOSED WORKERS (ON FOOT OR IN A VEHICLE) AND SHALL BE REQUIRED FOR ALL MOBILE CLOSURES. SHADOW VEHICLE REQUIREMENTS SHALL INCLUDE PROVIDING A SEPARATE SHADOW VEHICLE FOR EACH CLOSED LANE AND EACH CLOSED SHOULDER 8 FEET OR GREATER IN WIDTH. ADDITIONAL SHADOW VEHICLES MAY BE REQUIRED TO PROMOTE THE SAFE OPERATION OF TRAFFIC AND THE INCREASED PROTECTION OF EXPOSED WORKERS, AS DIRECTED BY THE ENGINEER.

TABLE NY2-A PLACEMENT DISTANCE FOR BARRIER VEHICLES					
PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	PLACEMENT DISTANCE (FT)				
	BARRIER VEHICLES				
	18000 LBS.		24000 LBS.		
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	
> 55	100 FT	200 FT	100 FT	200 FT	
45 - 55	100 FT	200 FT	80 FT	160 FT	
< 45	80 FT	160 FT	50 FT	100 FT	

AS DEFINED IN NYS DOT STANDARD SPECIFICATION 619:
BARRIER VEHICLE: VEHICLE USED FOR STATIONARY SHOULDER CLOSURES, LANE CLOSURES AND OTHER STATIONARY WORK ZONES.
 MINIMUM DISTANCE SHOWN REFLECTS THE ACTUAL ROLL AHEAD DISTANCE FROM MANUFACTURER.

TABLE NY2-B PLACEMENT DISTANCE FOR SHADOW VEHICLES					
PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	PLACEMENT DISTANCE (FT)				
	SHADOW VEHICLES				
	18000 LBS.		24000 LBS.		
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	
> 55	230 FT	325 FT	180 FT	280 FT	
45 - 55	180 FT	280 FT	150 FT	250 FT	
< 45	100 FT	200 FT	100 FT	200 FT	

AS DEFINED IN NYS DOT STANDARD SPECIFICATION 619:
SHADOW VEHICLE: VEHICLE USED FOR MOBILE OR SHORT DURATION WORK OPERATIONS.
 MINIMUM DISTANCE SHOWN REFLECTS THE ACTUAL ROLL AHEAD DISTANCE FROM MANUFACTURER.

TABLE NY6H-3 ADVANCE WARNING SIGN SPACING					
ROAD TYPE	DISTANCE BETWEEN SIGNS			SIGN LEGEND	
	A (FT)	B (FT)	C (FT)	XX	YY
URBAN (130 MPH*)	100	100	100	AHEAD	AHEAD
URBAN (35-40 MPH*)	200	200	200	AHEAD	AHEAD
URBAN (w/45 MPH*)	350	350	350	1000 FT	AHEAD
RURAL	500	500	500	1500 FT	1000 FT
EXPRESSWAY/FREEWAY	1,000	1,500	2,640	1 MILE	1/2 MILE

* PRECONSTRUCTION POSTED SPEED LIMIT

URBAN: ANY AREA EXHIBITING AT LEAST TWO OF THE FOLLOWING CHARACTERISTICS: SIDEWALKS, BICYCLE USAGE, CURBING, CLOSED DRAINAGE SYSTEMS, DRIVEWAY DENSITIES GREATER THAN 24 DRIVEWAYS PER MILE, MINOR COMMERCIAL DRIVEWAY DENSITIES OF 10 DRIVEWAYS PER MILE OR GREATER, MAJOR COMMERCIAL DRIVEWAYS, NUMEROUS RIGHT-OF-WAY CONSTRAINTS, HIGH DENSITY OF CROSS STREETS, OPERATING SPEEDS OF 45 MPH OR LESS.

RURAL: ANY AREA EXHIBITING NO MORE THAN ONE OF ABOVE CHARACTERISTICS.

EXPRESSWAY: DIVIDED HIGHWAYS FOR THROUGH TRAFFIC WITH FULL OR PARTIAL CONTROL OF ACCESS AND GENERALLY WITH GRADE SEPARATIONS AT MAJOR CROSSROADS.

FREEWAY/INTERSTATE: LOCAL OR INTERREGIONAL HIGH-SPEED, DIVIDED, HIGH-VOLUME FACILITIES WITH FULL OR PARTIAL CONTROL OF ACCESS.

THRUWAY WORK DURATION DEFINITIONS	
LONG-TERM STATIONARY	IS WORK THAT OCCUPIES A LOCATION MORE THAN 3 CONSECUTIVE DAYS.
INTERMEDIATE-TERM STATIONARY	IS WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.
SHORT-TERM STATIONARY	IS DAYTIME WORK THAT OCCUPIES A LOCATION WITHIN A SINGLE DAYLIGHT PERIOD.
SHORT DURATION	IS DAYTIME WORK THAT OCCUPIES A LOCATION UP TO 2 HOURS, OR NIGHTTIME WORK LASTING UP TO 1 HOUR.
MOBILE	IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

TABLE 619-4 FLARE RATES FOR POSITIVE BARRIER					
TYPE OF POSITIVE BARRIER	PRECONSTRUCTION POSTED SPEED LIMIT				
	30 MPH	40 MPH	50 MPH	55 MPH	65 MPH
TEMPORARY CONCRETE BARRIER	8:1	11:1	14:1	16:1	20:1
BOX BEAM OR HEAVY POST CORRUGATED BEAM	7:1	9:1	11:1	12:1	15:1

TABLE 6C-2 LONGITUDINAL BUFFER SPACE	
PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	DISTANCE
25	155 FT
30	200 FT
35	250 FT
40	305 FT
45	360 FT
50	425 FT
55	495 FT
60	570 FT
65	645 FT

TABLE 6H-4 FORMULAS FOR DETERMINING TAPER LENGTHS										
SPEED LIMIT (S) (MPH)	TAPER LENGTH (L) (FEET)	L = TAPER LENGTH (FEET) W = WIDTH OF OFFSET (FEET) S = PRE-CONSTRUCTION POSTED SPEED LIMIT (MPH)								
40 MPH OR LESS	L = WS ² /60									
45 MPH OR MORE	L = WS									

STANDARD TAPER LENGTHS										
LATERAL SHIFT OF TRAFFIC FLOW PATH	WORK ZONE PRE-CONSTRUCTION POSTED SPEED LIMIT									
	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	
4 FT	40 FT	60 FT	80 FT	105 FT	180 FT	200 FT	220 FT	240 FT	260 FT	
5 FT	50 FT	75 FT	100 FT	135 FT	225 FT	250 FT	275 FT	300 FT	325 FT	
6 FT	65 FT	90 FT	125 FT	160 FT	270 FT	300 FT	330 FT	360 FT	390 FT	
7 FT	75 FT	105 FT	145 FT	185 FT	315 FT	350 FT	385 FT	420 FT	455 FT	
8 FT	85 FT	120 FT	165 FT	215 FT	360 FT	400 FT	440 FT	480 FT	520 FT	
9 FT	95 FT	135 FT	185 FT	240 FT	405 FT	450 FT	495 FT	540 FT	585 FT	
10 FT	105 FT	150 FT	205 FT	265 FT	450 FT	500 FT	550 FT	600 FT	650 FT	
11 FT	115 FT	165 FT	225 FT	295 FT	495 FT	550 FT	605 FT	660 FT	715 FT	
12 FT	125 FT	180 FT	245 FT	320 FT	540 FT	600 FT	660 FT	720 FT	780 FT	

WORK ZONE TRAFFIC CONTROL LEGEND	
SYMBOL	DESCRIPTION
	ARROW PANEL
	ARROW PANEL, CAUTION MODE
	ARROW PANEL SUPPORT OR TRAILER
	CHANGEABLE MESSAGE SIGN (PVMS)
	CHANNELIZING DEVICE
	CRASH CUSHION/TEMPORARY IMPACT ATTENUATOR
	DIRECTION OF TEMPORARY TRAFFIC DETOUR
	DIRECTION OF TRAFFIC
	FLAGGER
	FLAG TREE
	LUMINAIRE
	PAVEMENT MARKINGS THAT SHALL BE REMOVED FOR A LONG TERM PROJECT
	SIGN, TEMPORARY
	TEMPORARY BARRIER
	TEMPORARY BARRIER WITH WARNING LIGHTS
	TRAFFIC OR PEDESTRIAN SIGNAL
	TYPE III BARRICADE
	WARNING LIGHTS
	WORK SPACE
	WORK VEHICLE
	WORK VEHICLE W/ TRUCK MOUNTED ATTENUATOR
	TEMP/INTERIM PAVEMENT MARKING

TABLE 6C-3 TAPER LENGTH CRITERIA FOR WORK ZONES	
TYPE OF TAPER	TAPER LENGTH (L)
MERGING TAPER	L
SHIFTING TAPER	L/2
SHOULDER TAPER	L/3
ONE-LANE, TWO-WAY TRAFFIC TAPER	100 FT MAXIMUM
DOWNSTREAM TAPER	100 FT PER LANE

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
 DEPARTMENT OF ENGINEERING
 200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
 SAFETY UPGRADE, CULVERT EXTENSION,
 DRAINAGE & MISCELLANEOUS WORK

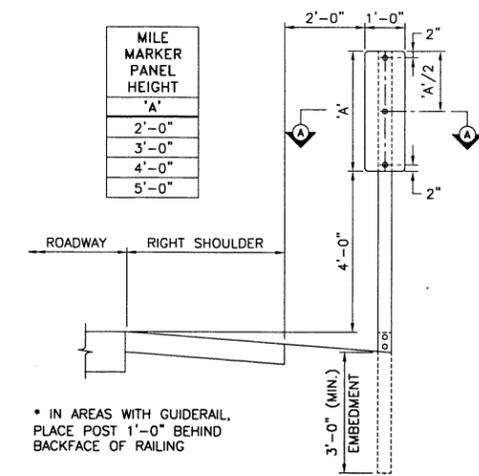
LOCATION OF PROJECT
 MP 100.8 TO MP 109.3
 ULSTER & GREENE COUNTIES

TITLE OF DRAWING
**WORK ZONE
 TRAFFIC CONTROL
 TABLES AND LEGEND**

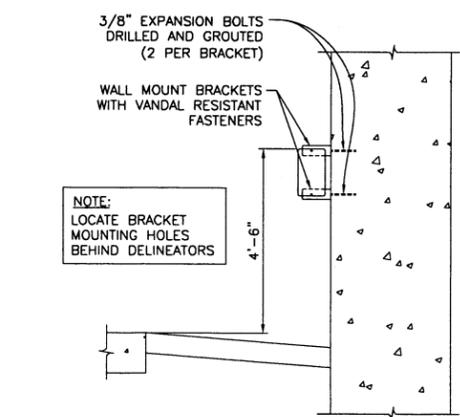
CONTRACT NUMBER:
 TAA 16-27R

DATE:
 03/16

DRAWING NUMBER:
 TL



MILE MARKER POST MOUNT INSTALLATION DETAIL
N.T.S.

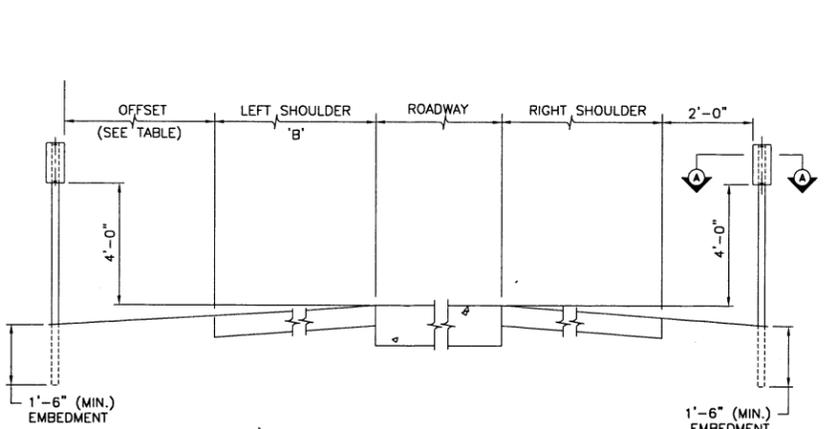


MILE MARKER AND DELINEATOR WALL MOUNT INSTALLATION DETAIL
N.T.S.

- VERTICAL MOUNT BRACKET NOTES:**
- WHEN GALVANIZED STEEL IS USED FOR BRACKETS, SPACERS THAT DO NOT INDUCE CORROSION MUST BE USED.
 - BRACKETS MAY BE USED FOR MOUNTING DELINEATORS OR REFERENCE MARKERS ON BRIDGE RAIL, GUIDE RAIL, OR AS OTHERWISE NEEDED.

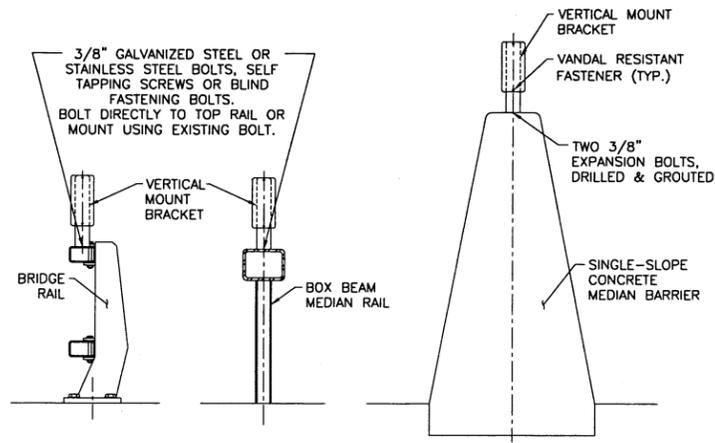
MOUNTING HOLE SPACING TABLE

'X'	DESCRIPTION
11"	FOR 5 1/2" x 12" DELINEATOR
9"	FOR 8" x 10" TENTH MILE MARKER
13"	FOR 8" x 14" TENTH MILE MARKER

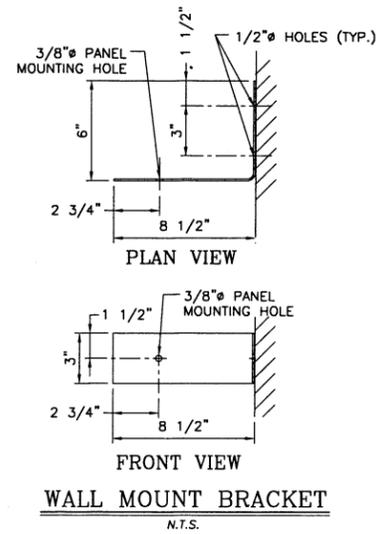


TENTH MILE MARKER AND DELINEATOR POST MOUNT INSTALLATION DETAIL
N.T.S.

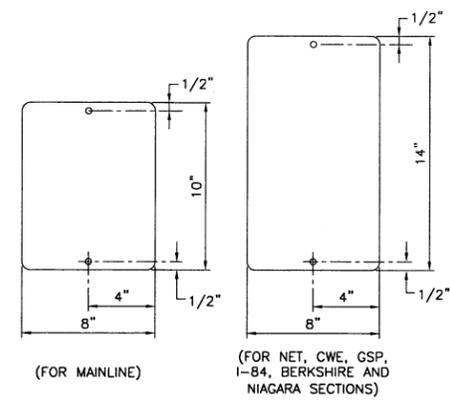
'B'	OFFSET
4'-0"	8'-0"
6'-0"	6'-0"
10'-0"	4'-0"
12'-0"	2'-0"



DELINEATOR VERTICAL MOUNT INSTALLATION DETAILS
N.T.S.



CURB SECTION
N.T.S.



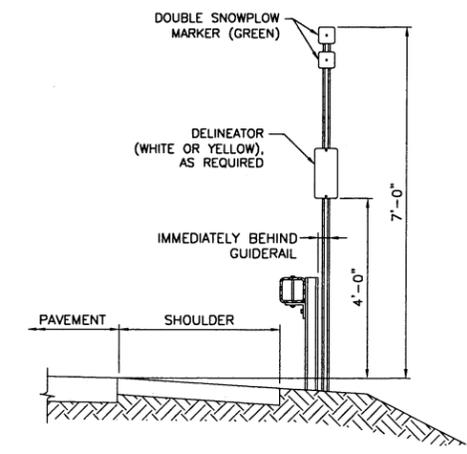
TENTH MILE MARKER
N.T.S.

SINGLE SNOWPLOW MARKER (GREEN)
N.T.S.

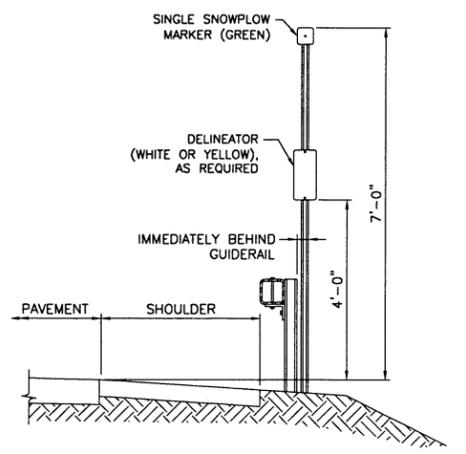
DOUBLE SNOWPLOW MARKER (GREEN)
N.T.S.

SINGLE DELINEATOR (WHITE OR YELLOW)
N.T.S.

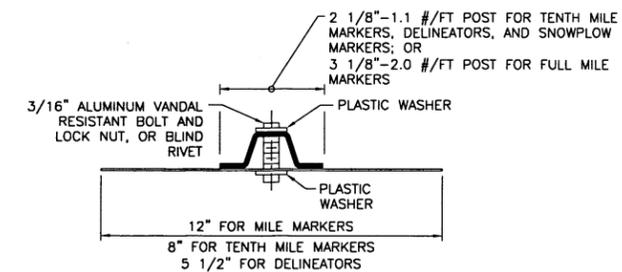
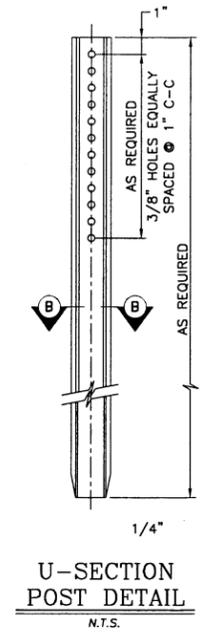
DOUBLE DELINEATOR (WHITE OR YELLOW)
N.T.S.



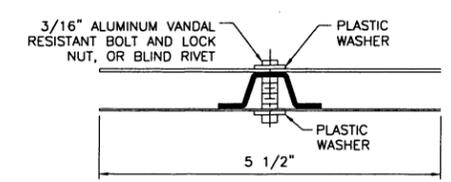
SNOWPLOW MARKER/DELINEATOR AT BEGINNING OF GUIDERAIL SECTION
N.T.S.



SNOWPLOW MARKER/DELINEATOR AT END OF GUIDERAIL SECTION
N.T.S.

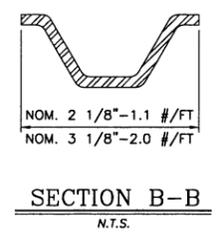


POST MOUNTED MARKERS AND DELINEATORS



BACK TO BACK DELINEATORS

SECTION A-A
N.T.S.



- NOTES:**
- MATERIAL SHALL CONFORM TO EITHER A.S.T.M. A-499 OR A.S.T.M. A-36.
 - GALVANIZING SHALL CONFORM TO A.S.T.M. A-123.
 - REMOVE ALL BURRS AND SHARP EDGES.
 - TENTH MILE MARKERS AND DELINEATORS: FOR INSTALLATION WHERE THE DISTANCE FROM FINISHED GRADE TO TOP OF POST IS LESS THAN OR EQUAL TO 5'-0", USE 1.1 #/FT POST SIZE. WHERE THE DISTANCE IS GREATER THAN 5'-0", USE 2.0 #/FT POST SIZE, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
 - MILE MARKERS (PANEL HEIGHTS OF 2'-0" TO 5'-0"): SHALL BE MOUNTED ON 2.0 #/FT POSTS REGARDLESS OF POST HEIGHT UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

REVISIONS

DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXTENSION,
DRAINAGE & MISCELLANEOUS WORK

LOCATION OF PROJECT
MP 103.8 TO MP 109.3
ULSTER & GREENE COUNTIES

TITLE OF DRAWING
MILE MRKR. TENTH MILE MRKR.
DELINEATOR. AND SNOWPLOW
MARKER INSTALLATION DETAILS

CONTRACT NUMBER:
TAA 16-27R

DATE:
06/16

DRAWING NUMBER:
DMM-1

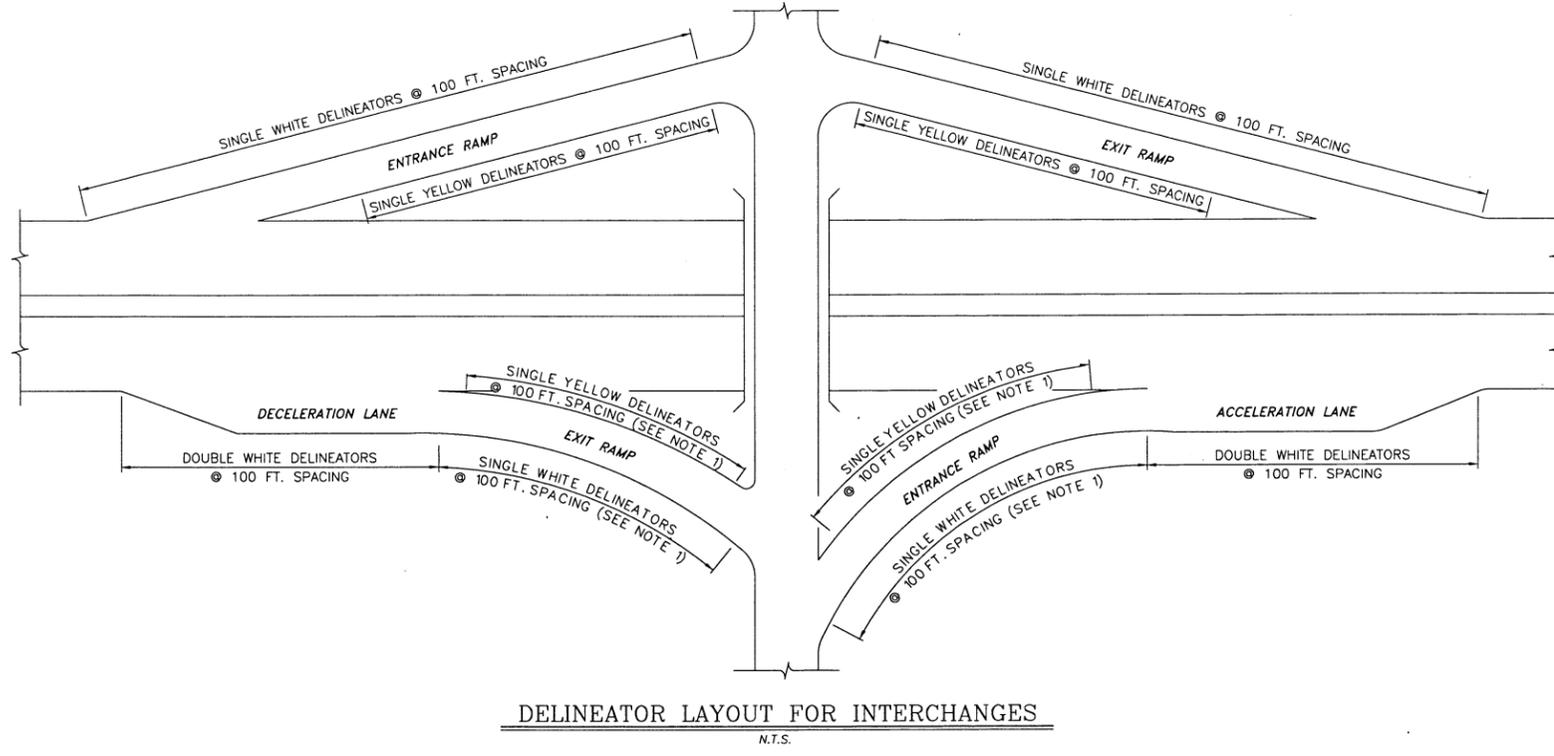
CHECKED BY: TA

DRAFTED BY: CAD

CHECKED BY: J. SHINSKI

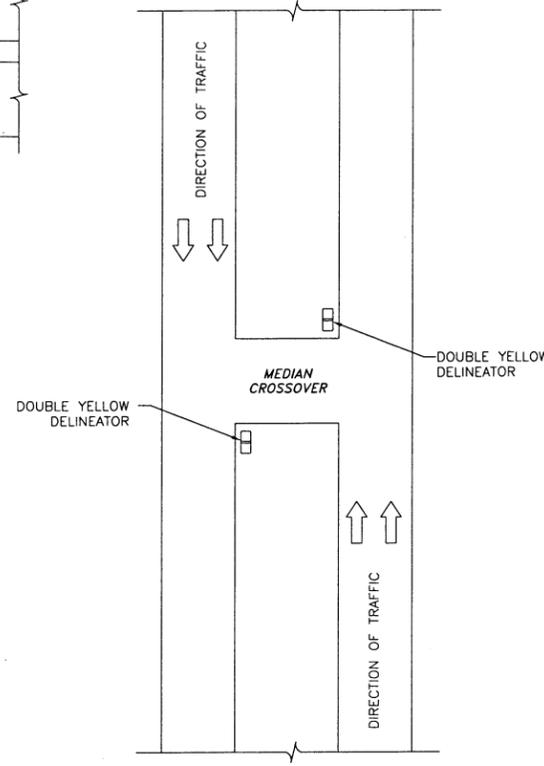
DESIGNED BY: R. COURNOYER

DESIGN SUPERVISOR: T. MAHAR



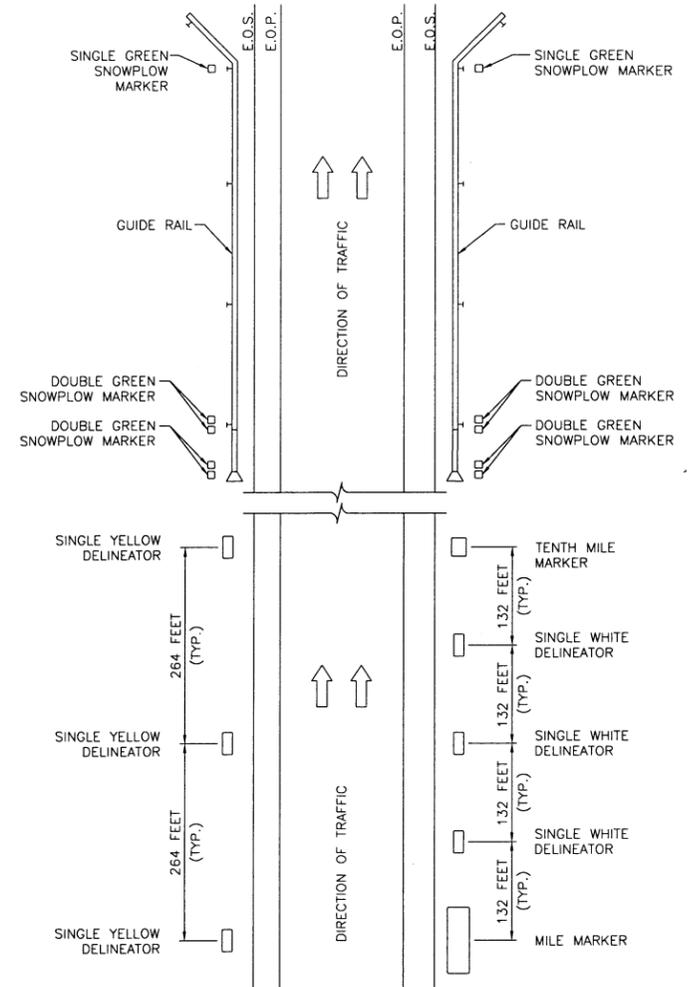
DELINEATOR LAYOUT FOR INTERCHANGES

N.T.S.



DELINEATOR LAYOUT MEDIAN CROSSOVERS

N.T.S.



MARKER AND DELINEATOR LAYOUT FOR THRUWAY MAINLINE

N.T.S.

NOTES:

1. THE TYPICAL SPACING OF DELINEATORS FOR INTERCHANGES IS 100 FEET. FOR LOCATIONS WHERE THE ROADWAY HAS A DEGREE OF CURVE OF 5 DEGREES OR MORE (OR A RADIUS OF CURVE OF 1000 FEET OR LESS), THE SPACING SHALL BE 50 FEET.
2. ON THRUWAY RAMPs WHERE TWO-WAY TRAFFIC IS SEPARATED BY BARRIER (CONCRETE, CORRUGATED BEAM, ETC.), BACK-TO-BACK YELLOW DELINEATORS SHALL BE INSTALLED ALONG THE BARRIER AT A SPACING OF 50 FEET.
3. SOME EXISTING MARKERS AND DELINEATORS WITHIN THE PROJECT LIMITS MAY NOT BE IN THE CORRECT LOCATIONS. THE CONTRACTOR SHALL INCLUDE IN THE PRICE BID FOR EACH RESPECTIVE MARKER AND/OR DELINEATOR THE COST TO ACCURATELY DETERMINE THE EXACT LOCATION PRIOR TO INSTALLATION. OVERHEAD AND MAINLINE STRUCTURES SHALL BE USED AS FIXED REFERENCE GUIDES FOR THE INSTALLATION. THE ENGINEER SHALL APPROVE THE EXACT LOCATIONS PRIOR TO INSTALLATION. ANY COST FOR THIS LAYOUT WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE MARKERS AND/OR DELINEATORS.
4. WHERE AN EXISTING TENTH MILE MARKER FALLS WITHIN A LINE OF DOUBLE WHITE DELINEATORS, THE TENTH MILE MARKER SHALL REMAIN AT ITS PRESENT LOCATION.
5. POSTS, BANDS, BRACKETS, AND ALL NECESSARY HARDWARE ARE TO BE FURNISHED BY THE CONTRACTOR. DELINEATORS, MILE MARKERS, TENTH MILE MARKERS, AND SNOWPLOW MARKERS ARE TO BE FURNISHED BY THE AUTHORITY. THE DESIGN ENGINEER SHALL PROVIDE THE SIGN SHOP WITH DELINEATOR, MILE MARKER, TENTH MILE MARKER, AND SNOWPLOW MARKER REQUIREMENTS DURING PROJECT DESIGN AS WELL AS AN APPROXIMATE DATE WHEN NEEDED IN THE FIELD. DURING CONSTRUCTION, AT LEAST ONE MONTH PRIOR TO SCHEDULED INSTALLATION, THE ENGINEER-IN-CHARGE SHALL CONTACT THE SIGN SHOP TO CONFIRM THE DATE WHEN THE MATERIAL IS NEEDED IN THE FIELD. THE SIGN SHOP WILL PREPARE THE SHIPMENT AND ARRANGE FOR DIVISION HIGHWAY TO PICK UP THE DELINEATORS AND/OR MARKERS. THE CONTRACTOR SHALL THEN ARRANGE TO PICK UP THE DELINEATORS AND/OR MARKERS FROM DIVISION HIGHWAY. COSTS FOR PICKING UP THE DELINEATORS AND/OR MARKERS FROM DIVISION HIGHWAY ARE TO BE INCLUDED IN THE PRICE BID FOR EACH RESPECTIVE ITEM.
6. IDENTICAL MILE MARKERS FOR OPPOSITE DIRECTIONS OF TRAVEL SHALL BE LOCATED DIRECTLY ACROSS FROM EACH OTHER.
7. ON CURVES, DELINEATOR FACES SHALL BE ORIENTED TO PROVIDE OPTIMUM VISIBILITY AT NIGHT. EXACT ORIENTATION WILL VARY BASED UPON THE DEGREE OF CURVE.
8. DELINEATORS, MILE MARKERS, TENTH MILE MARKERS, AND SNOWPLOW MARKERS SHALL BE ATTACHED TO POSTS AND BRACKETS USING VANDAL RESISTANT FASTENERS. THE FASTENERS SHALL BE ALUMINUM ALLOY 6061-T6 OR 2024-T4.
9. BRACKETS SHALL BE ATTACHED TO GUIDE RAIL, BRIDGE RAIL, MEDIAN RAIL, AND MEDIAN BARRIER USING BOLTS, BLIND LOCK BOLTS, SELF-TAPPING SCREWS, EXPANDING ANCHOR BOLTS, ETC. MADE OF STAINLESS STEEL, GALVANIZED STEEL, OR ALUMINUM ALLOY 6061-T6 OR 2024-T4.
10. ALUMINUM HARDWARE OF 2024-T4 SHALL BE ALCLAD OR FINISHED WITH TYPE 206 FINISH IN ACCORDANCE WITH THE SPECIFICATIONS OF ALUMINUM ANODIC COATINGS.

DELINEATORS AND SNOWPLOWING MARKERS

11. ON ROADWAY SECTIONS WITHOUT GUIDE RAIL, RIGHT SIDE DELINEATORS SHALL BE INSTALLED 2'-0" OUTSIDE THE USABLE RIGHT SHOULDER AND LEFT SIDE DELINEATORS SHALL BE INSTALLED 2 TO 8 FEET FROM THE LEFT EDGE OF SHOULDER. (REFER TO TABLE ON DMM-1.) WHERE THERE IS A CHANGE IN SHOULDER WIDTH, THE TRANSITION IN DELINEATOR PLACEMENT SHALL BE MADE GRADUALLY.
12. ON ROADWAY SECTIONS HAVING GUIDE RAIL, DELINEATORS AND SNOWPLOW MARKERS SHALL BE INSTALLED IMMEDIATELY BEHIND THE GUIDE RAIL AND BEHIND THE FRONT FACE OF THE END TREATMENT. WHERE THERE IS A CHANGE IN THE GUIDE RAIL LATERAL OFFSET, THE TRANSITION IN DELINEATOR PLACEMENT SHALL BE MADE GRADUALLY.

POST ERECTION

13. POSTS MAY EITHER BE DRIVEN OR SET. POSTS SHALL BE ERECTED TO PROVIDE THE PROPER LOCATION, LINE AND GRADE, AND TRUE VERTICAL ALIGNMENT OF THE MARKERS AND/OR DELINEATORS.

14. FOR POSTS THAT ARE DRIVEN, HAND OR MECHANICAL DEVICES MAY BE USED. A SUITABLE DRIVING CAP SHALL ALSO BE USED TO PREVENT EXCESSIVE DAMAGE TO THE TOP OF THE POSTS. AFTER DRIVING, THE TOP OF THE POSTS SHALL HAVE SUBSTANTIALLY THE SAME CROSS-SECTIONAL DIMENSIONS AS THE BODY OF THE POSTS. NO BATTERED HEADS WILL BE ACCEPTED. POSTS THAT ARE BENT OR OTHERWISE DAMAGED TO THE EXTENT THAT, IN THE OPINION OF THE ENGINEER, THEY ARE UNFIT FOR USE IN THE FINISHED WORK SHALL BE REMOVED FROM THE SITE AND REPLACED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE.
15. FOR POSTS THAT ARE SET, HOLES SHALL BE DUG TO THE FULL EMBEDMENT DEPTH SHOWN ON THE PLANS. AFTER SETTING THE POSTS AT THE FULL EMBEDMENT DEPTH, THE HOLES SHALL BE BACKFILLED WITH SUITABLE MATERIAL PLACED IN LAYERS OF NOT MORE THAN 6 INCHES IN DEPTH. EACH LAYER SHALL BE THOROUGHLY COMPACTED. CARE SHALL BE TAKEN DURING COMPACTION TO PRESERVE THE ALIGNMENT OF THE POST.
16. WHEN SOUND ROCK IS ENCOUNTERED, POSTS SHALL BE FOUNDED A MINIMUM OF 12 INCHES INTO SOUND ROCK. COST SHALL BE INCLUDED IN THE APPROPRIATE MARKER OR DELINEATOR ITEM.
17. FOR POSTS THAT ARE INSTALLED IN PAVED AREAS, SODDED AREAS, SIDEWALKS, ETC., DISTURBED AREAS SHALL BE RESTORED IN-KIND.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADE, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK

LOCATION OF PROJECT
MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES

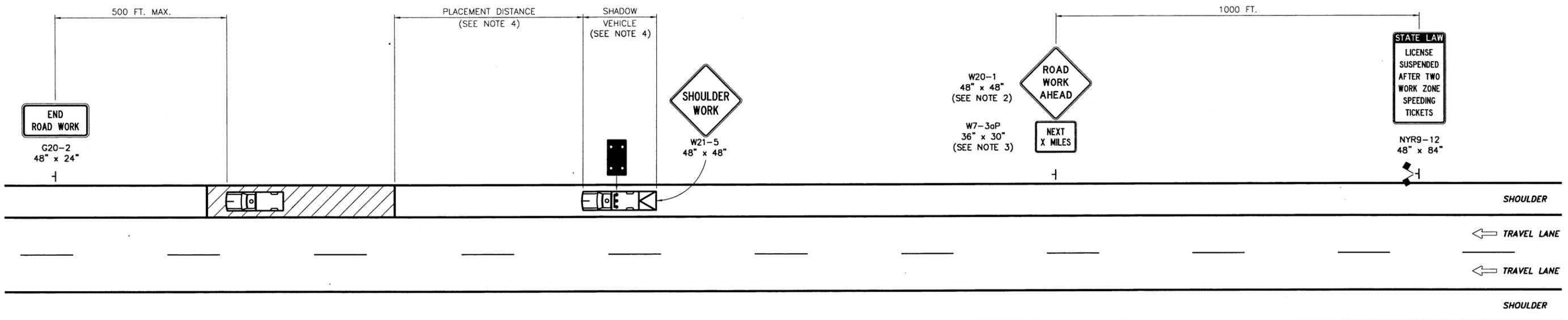
TITLE OF DRAWING
MILE MARKER, TENTH MILE MARKER, DELINEATOR, AND SNOWPLOW MARKER LAYOUT PLANS

CONTRACT NUMBER:
TAA 16-27R

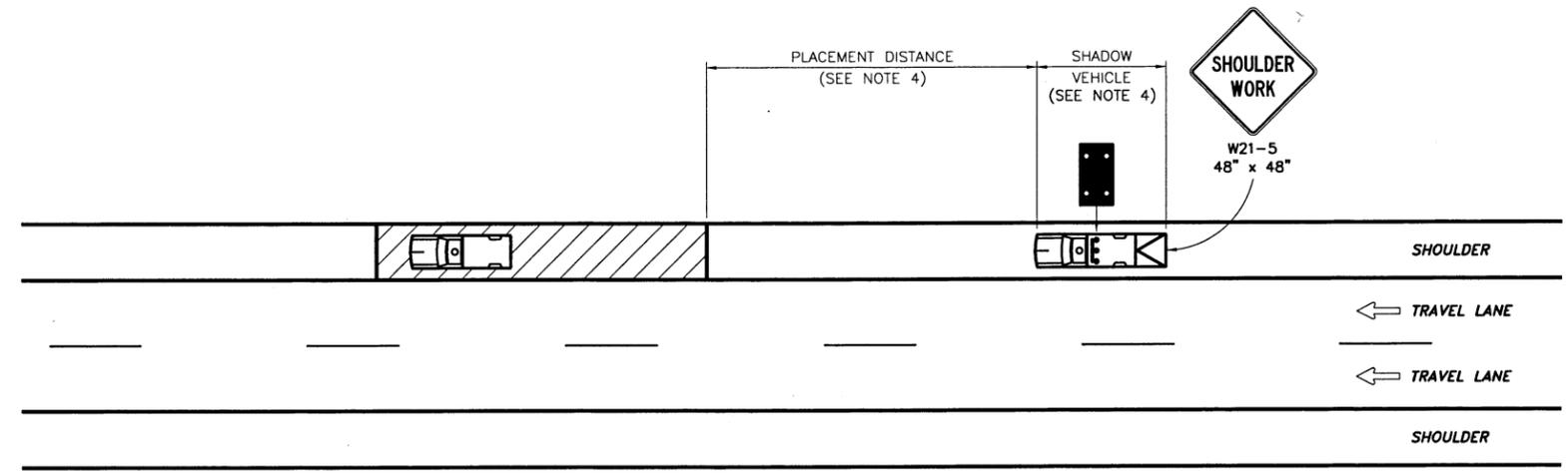
DATE:
02/13

DRAWING NUMBER:
DMM-2

SCM.dgn
 CHECKED BY: TA
 DRAFTED BY: CAD
 CHECKED BY: J. SHINSKI
 DESIGNED BY: R. COURNOYER
 DESIGN SUPERVISOR: T. MAHAR



SHORT-DURATION STATIONARY OR MOBILE SHOULDER CLOSURE
(MULTIPLE WORK LOCATIONS)
 N.T.S.



MOBILE OPERATION ON SHOULDER
 N.T.S.

NOTES:

1. THE PLANS SHOWN ARE FOR SHORT-DURATION STATIONARY WORK OR MOBILE OPERATIONS ON THE RIGHT SHOULDER. THE LEFT SHOULDER PLANS SHALL BE THE MIRROR IMAGE OF THOSE SHOWN.
2. IN SITUATIONS WHERE MULTIPLE WORK LOCATIONS WITHIN A LIMITED DISTANCE MAKE IT PRACTICAL TO PLACE STATIONARY SIGNS, THE DISTANCE BETWEEN THE ADVANCE WARNING SIGN AND THE WORK SHALL NOT EXCEED 5 MILES.
3. IN SITUATIONS WHERE THE DISTANCE BETWEEN THE ADVANCE WARNING SIGNS AND THE WORK IS 2 MILES TO 5 MILES, THE "NEXT X MILES" SUPPLEMENTAL SIGN (W7-3aP) SHALL BE USED WITH THE "ROAD WORK AHEAD" SIGN (W20-1).
4. THE SHADOW VEHICLE SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 619 OF THE STANDARD SPECIFICATIONS. FOR SHADOW VEHICLE USE AND PLACEMENT REQUIREMENTS, SEE TABLES NY1-B AND NY2-B ON THE "WORK ZONE TRAFFIC CONTROL TABLES AND LEGEND" DRAWING. THE SHADOW VEHICLE SHALL BE LOCATED COMPLETELY ON THE SHOULDER.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
 DEPARTMENT OF ENGINEERING
 200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
 SAFETY UPGRADE, CULVERT EXTENSION,
 DRAINAGE & MISCELLANEOUS WORK
 LOCATION OF PROJECT
 MP 100.8 TO MP 109.3
 ULSTER & GREENE COUNTIES
 TITLE OF DRAWING
SHOULDER CLOSURE
(SHORT-DURATION
STATIONARY AND MOBILE)

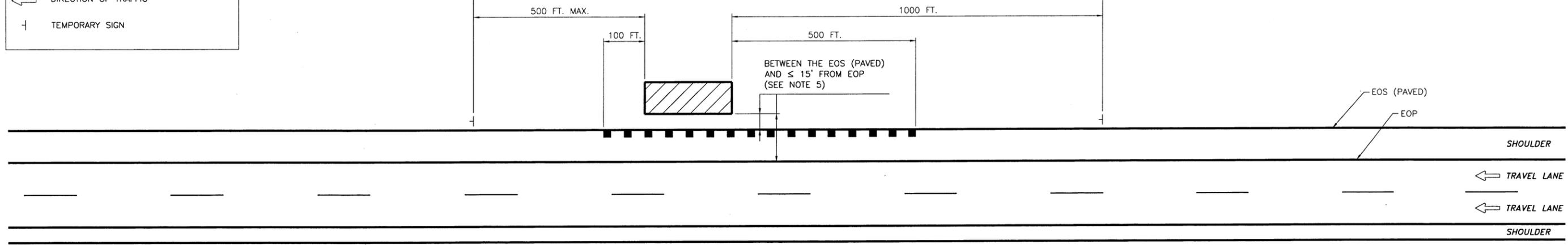
CONTRACT NUMBER:
 TAA 16-27R
 DATE:
 02/13
 DRAWING NUMBER:
 SCM

LEGEND

-  WORK SPACE
-  CHANNELIZING DEVICE
-  DIRECTION OF TRAFFIC
-  TEMPORARY SIGN

END ROAD WORK
G20-2
48" x 24"
SEE NOTE 3

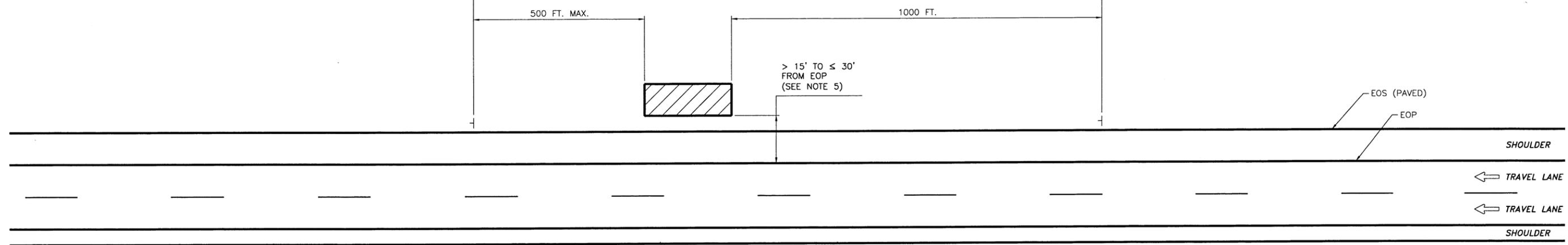
ROAD WORK AHEAD
W20-1
48" x 48"
(SEE NOTE 4)



**OPTION A
WORK BEYOND SHOULDER**
N.T.S.

END ROAD WORK
G20-2
48" x 24"
SEE NOTE 3

ROAD WORK AHEAD
W20-1
48" x 48"
(SEE NOTE 4)



**OPTION B
WORK BEYOND SHOULDER**
N.T.S.

NOTES:

1. THE PLAN SHOWN IS FOR STATIONARY WORK BEING PERFORMED OFF THE ROADWAY (BEYOND THE SHOULDER, BUT WITHIN THE R.O.W.). NO TRAFFIC CONTROL IS REQUIRED WHERE THE WORK SPACE IS BEHIND A BARRIER OR CONFINED TO AN AREA MORE THAN 30' FROM THE EDGE OF TRAVEL WAY.
2. WHEN THE WORK SPACE IS IN THE MEDIAN AND AN ADVANCE "ROAD WORK AHEAD" SIGN IS REQUIRED, THE SIGN SHALL BE PLACED ON THE LEFT SIDE OF THE DIRECTIONAL ROADWAY.
3. THE "END ROAD WORK" SIGN IS OPTIONAL IF THE WORK DURATION IS TWO HOURS OR LESS.
4. A "SHOULDER WORK" W21-5 (48" x 48") MAY BE SUBSTITUTED FOR THE "ROAD WORK AHEAD" SIGN.
5. DURING NON-WORKING HOURS, ALL EQUIPMENT AND MATERIALS SHALL BE STORED AT LEAST THIRTY (30) FEET FROM THE EDGE OF PAVEMENT (BOTH MAINLINE AND RAMPS) OR BE PROTECTED BY A PHYSICAL BARRIER AS APPROVED BY THE ENGINEER.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADE, CULVERT EXTENSION,
DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES
TITLE OF DRAWING
WORK BEYOND SHOULDER

CONTRACT NUMBER:
TAA 16-27R
DATE:
02/13
DRAWING NUMBER:
WBS

WBS.dgn
 CHECKED BY: TA
 DRAFTED BY: CAD
 CHECKED BY: J. SHINSKI
 DESIGNED BY: R. COURNOVER
 DESIGN SUPERVISOR: T. MAHAR

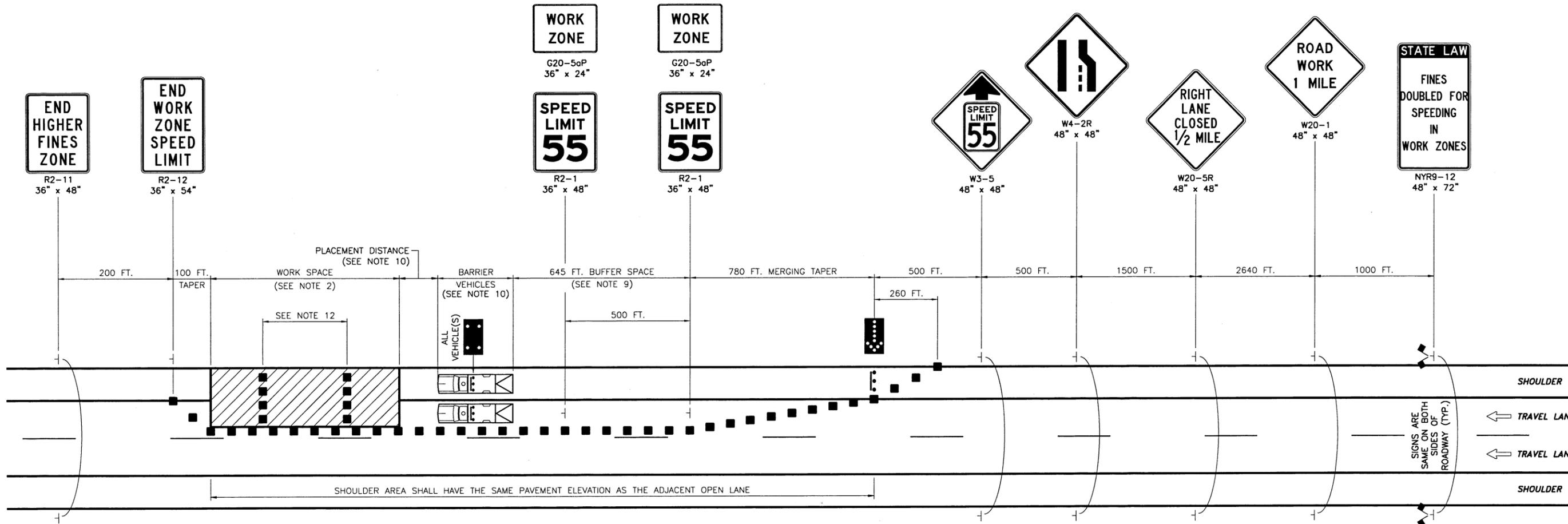
CHECKED BY: TA

DRAFTED BY: CAD

CHECKED BY: J. SHINSKI

DESIGNED BY: R. COURNOVER

DESIGN SUPERVISOR: T. MAHAR



WORK ZONE TRAFFIC CONTROL PLAN

N.T.S.

NOTES:

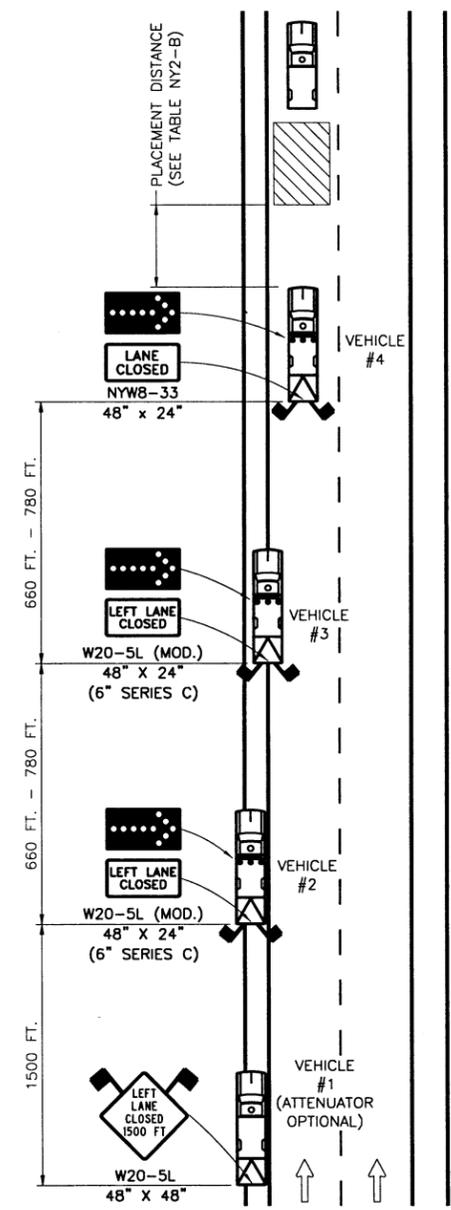
- THIS PLAN APPLIES TO TWO-, THREE-, FOUR-, AND FIVE-LANE SECTIONS.
- THE MAXIMUM LENGTH OF ANY CONTINUOUS WORK SPACE SHALL NOT EXCEED 3 MILES (2 MILES FOR MILLING AND PAVING OPERATIONS). ALL TRAFFIC SHALL BE RE-ESTABLISHED TO ITS NORMAL LANE CONFIGURATION FOR A MINIMUM 2 MILES PRIOR TO A SUCCESSIVE LANE CLOSURE. (THE SEPARATION BETWEEN SUCCESSIVE LANE CLOSURES IS MEASURED FROM THE LAST SIGN OF THE FIRST LANE CLOSURE TO THE BEGINNING OF THE MERGING TAPER OF THE SECOND LANE CLOSURE).
- THE PLAN SHOWN IS FOR A STATIONARY RIGHT LANE CLOSURE. FOR A STATIONARY LEFT LANE CLOSURE, SUBSTITUTE "LEFT LANE CLOSED 1/2 MILE" SIGN (W20-5L) FOR THE "RIGHT LANE CLOSED 1/2 MILE" SIGN (W20-5R) AND LEFT LANE ENDS SYMBOL SIGN (W4-2L) FOR THE RIGHT LANE ENDS SYMBOL SIGN (W4-2R). THE STATIONARY LEFT LANE CLOSURE PLAN SHALL BE THE MIRROR IMAGE OF THE PLAN SHOWN WITH THE EXCEPTION THAT THE "WORK ZONE/SPEED LIMIT 55" SIGNS (G20-5aP/R2-1) SHALL BE INSTALLED ON THE RIGHT SIDE OF THE ROADWAY.
- FOR A STATIONARY LANE CLOSURE IN AN AREA WHERE THE USABLE LEFT SHOULDER/MEDIAN WIDTH IS LESS THAN 6 FEET, LEFT SIDE SIGNS SHALL BE MOUNTED ON THE MEDIAN BARRIER. IF THE TOTAL MEDIAN WIDTH IS LESS THAN 6 FEET, LEFT SIDE SIGNS SHALL NOT BE REQUIRED.
- ON ROADWAY SECTIONS WHERE THE USABLE SHOULDER IS LESS THAN 8 FEET, A MOBILE LANE CLOSURE PLAN SHALL BE USED TO INSTALL AND REMOVE TEMPORARY TRAFFIC CONTROL DEVICES. THE SAME SHALL ALSO APPLY WHEN COVERING AND UNCOVERING PREVIOUSLY INSTALLED SIGNS.
- WHEN TRAFFIC IS REDUCED TO A SINGLE LANE, THE "WORK ZONE/SPEED LIMIT 55" SIGNS (G20-5aP/R2-1) SHALL BE INSTALLED ON THE RIGHT SIDE OF THE ROADWAY ONLY. IF MULTIPLE LANES ARE OPEN TO TRAFFIC, THE SIGNS SHALL BE INSTALLED ON BOTH SIDES OF THE ROADWAY.
- WHEN THE DISTANCE BETWEEN THE SECOND "WORK ZONE/SPEED LIMIT 55" SIGN (G20-5aP/R2-1) AND THE END OF THE WORK SPACE EXCEEDS 1/2 MILE, ADDITIONAL "WORK ZONE/SPEED LIMIT 55" SIGN(S) (G20-5aP/R2-1) SHALL BE INSTALLED ON THE RIGHT SIDE OF THE OPEN TRAVEL LANE, OR BOTH SIDES OF MULTIPLE OPEN TRAVEL LANES, TO MAINTAIN A MAXIMUM SPACING OF 1/2 MILE.
- IN ADDITION TO THE SIGNING SHOWN, "ROAD WORK AHEAD" (W20-1) AND "WORK ZONE/SPEED LIMIT 55" (G20-5aP/R2-1) SIGNS SHALL BE PLACED ALONG ANY ENTRANCE RAMP THAT TERMINATES WITHIN THE WORK ZONE TRAFFIC CONTROL LIMITS. THE LOCATION OF THESE SIGNS SHALL BE DETERMINED BY THE ENGINEER.
- THE LENGTH OF THE BUFFER SPACE SHALL BE EXTENDED, AS ORDERED BY THE ENGINEER, TO ENSURE ADEQUATE SIGHT DISTANCE FOR VEHICLES APPROACHING THE LANE CLOSURE TAPER. IN CASES WHERE RESTRICTIVE FEATURES ARE PRESENT, A REDUCTION IN THE BUFFER SPACE LENGTH MAY BE PERMITTED WITH THE APPROVAL OF THE ENGINEER.
- BARRIER VEHICLES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 619 OF THE STANDARD SPECIFICATIONS. FOR BARRIER VEHICLE USE AND PLACEMENT REQUIREMENTS, SEE TABLES NY1-A AND NY2-A ON THE "WORK ZONE TRAFFIC CONTROL TABLES AND LEGEND" DRAWING.
- EXISTING PAVEMENT MARKINGS SHALL BE MAINTAINED BY THE CONTRACTOR WITHIN THE WORK ZONE TRAFFIC CONTROL LIMITS.
- IN LONG WORK SPACES (1500 FEET AND GREATER), TWO DRUMS, TWO TALL CONES, OR TWO OVERSIZED VERTICAL PANELS SHALL BE PLACED TRANSVERSELY ACROSS EACH CLOSED LANE (AND SHOULDER IF WIDTH IS 8 FEET OR GREATER) AT MAXIMUM INTERVALS OF 800 FEET. IN ADDITION, TWO DRUMS, TWO TALL CONES, OR TWO OVERSIZED VERTICAL PANELS SHALL BE SIMILARLY PLACED IN ADVANCE OF ANY TRANSVERSE DROP-OFF OF 1 1/2 INCHES OR GREATER.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.

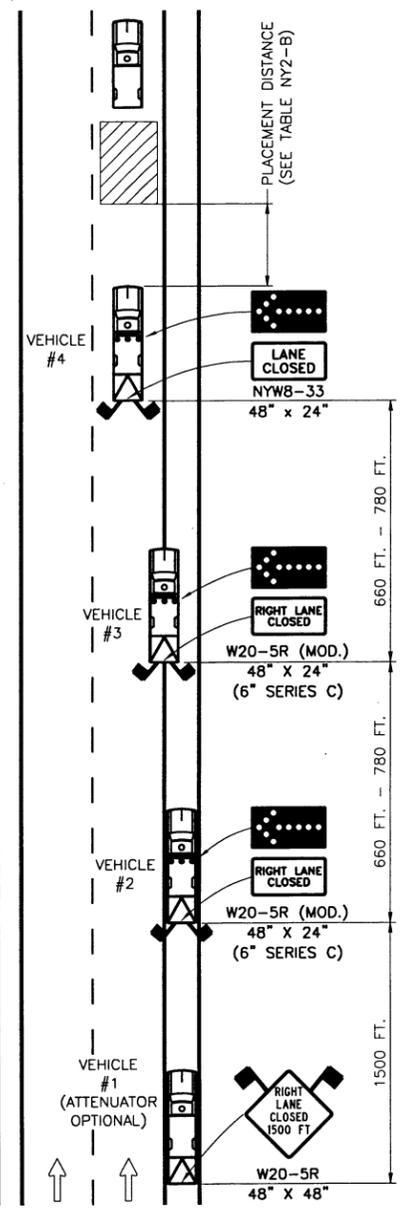


NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING 200 SOUTHERN BLVD., ALBANY, N.Y. 12209	TITLE OF PROJECT SAFETY UPGRADE, CULVERT EXTENSION, DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
	LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 02/13
TITLE OF DRAWING SINGLE LANE CLOSURE (SHORT- OR INTERMEDIATE- TERM STATIONARY)		DRAWING NUMBER: SLC-65

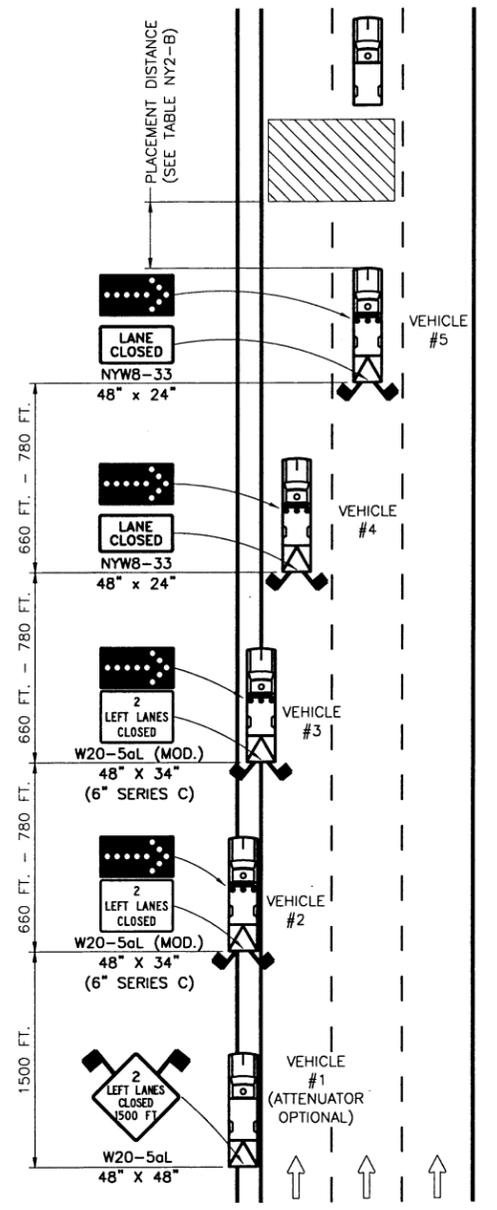
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 CHECKED BY: J. SHINSKI
 DESIGNED BY: R. COURNOYER
 DESIGN SUPERVISOR: T. MAHAR



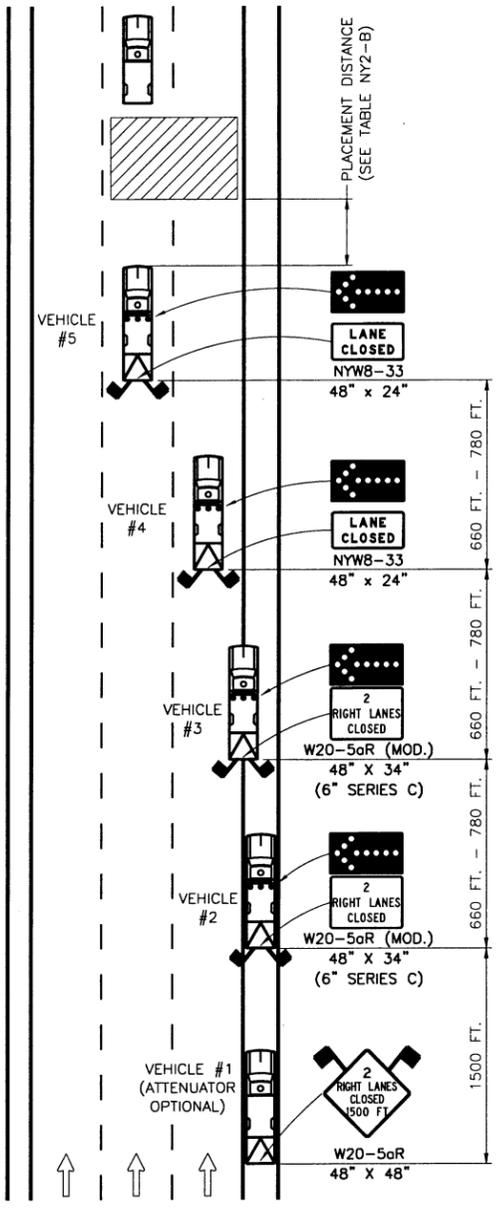
**MOBILE OPERATION
LEFT LANE CLOSURE**
N.T.S.



**MOBILE OPERATION
RIGHT LANE CLOSURE**
N.T.S.



**MOBILE OPERATION
LEFT DOUBLE LANE CLOSURE**
N.T.S.



**MOBILE OPERATION
RIGHT DOUBLE LANE CLOSURE**
N.T.S.

NOTES:

- THESE PLANS ARE TO BE UTILIZED ONLY WHEN AUTHORIZED BY THE ENGINEER.
- MOBILE OPERATIONS ARE WORK ACTIVITIES THAT MOVE CONTINUOUSLY OR STOP INTERMITTENTLY FOR SHORT PERIODS IN THE ROADWAY. THE DURATION FOR EACH INTERMITTENT STOP MAY BE APPROXIMATELY 15 MINUTES BEFORE MOVING TO A NEW LOCATION.
- VEHICLE #4 (LEFT LANE CLOSURE AND RIGHT LANE CLOSURE PLANS) AND VEHICLE #5 (LEFT DOUBLE LANE CLOSURE AND RIGHT DOUBLE LANE CLOSURE PLANS) SHALL NOT BE USED TO TRANSPORT WORKERS, MATERIALS, AND/OR EQUIPMENT TO THE WORK SITE. A SEPARATE WORK VEHICLE(S) SHALL BE REQUIRED.
- THESE TEMPORARY TRAFFIC CONTROL PLANS SHALL NOT BE ADVANCED THROUGH AN AREA WHERE THERE IS AN EXIT OR ENTRANCE RAMP.
- WHERE THE LEFT LANE IS TO BE CLOSED, VEHICLE #1 AND VEHICLE #2 ARE TO BE LOCATED COMPLETELY ON THE LEFT SHOULDER, VEHICLE #3 STRADDLES THE LEFT SHOULDER AND THE LEFT LANE, AND VEHICLE #4 IS IN THE LEFT LANE.
- WHERE THE RIGHT LANE IS TO BE CLOSED, VEHICLE #1 AND VEHICLE #2 ARE TO BE LOCATED COMPLETELY ON THE RIGHT SHOULDER, VEHICLE #3 STRADDLES THE RIGHT SHOULDER AND THE RIGHT LANE, AND VEHICLE #4 IS IN THE RIGHT LANE.
- WHERE THE LEFT TWO LANES ARE TO BE CLOSED, VEHICLE #1 AND VEHICLE #2 ARE TO BE LOCATED COMPLETELY ON THE LEFT SHOULDER, VEHICLE #3 STRADDLES THE LEFT SHOULDER AND THE LEFT LANE, VEHICLE #4 IS IN THE LEFT LANE, AND VEHICLE #5 IS IN THE CENTER LANE.
- WHERE THE RIGHT TWO LANES ARE TO BE CLOSED, VEHICLE #1 AND VEHICLE #2 ARE TO BE LOCATED COMPLETELY ON THE RIGHT SHOULDER, VEHICLE #3 STRADDLES THE RIGHT SHOULDER AND THE RIGHT LANE, VEHICLE #4 IS IN THE RIGHT LANE, AND VEHICLE #5 IS IN THE CENTER LANE.
- FOR VEHICLE #2, A TRAILER-MOUNTED ARROW PANEL MAY BE SUBSTITUTED FOR THE TRUCK-MOUNTED ARROW PANEL.
- FOR VEHICLE #2, THE ATTENUATOR IS OPTIONAL FOR DAYTIME OPERATIONS. FOR NIGHTTIME OPERATIONS, ALL VEHICLES, INCLUDING VEHICLE #1 AND VEHICLE #2 ON THE SHOULDER, SHALL BE EQUIPPED WITH AN ATTENUATOR.
- FOR VEHICLE #1, A TRUCK-MOUNTED OR TRAILER-MOUNTED PORTABLE VARIABLE MESSAGE SIGN (PVMS) MAY BE USED IN LIEU OF THE SIGN SHOWN. THE PVMS UNIT SHALL BE COMPLETELY ON THE SHOULDER AND SHALL HAVE NO PORTION PROTRUDE OVER THE TRAVEL LANE AT ANY TIME. THE MESSAGE DISPLAYED SHALL BE THE SAME AS THAT SHOWN.

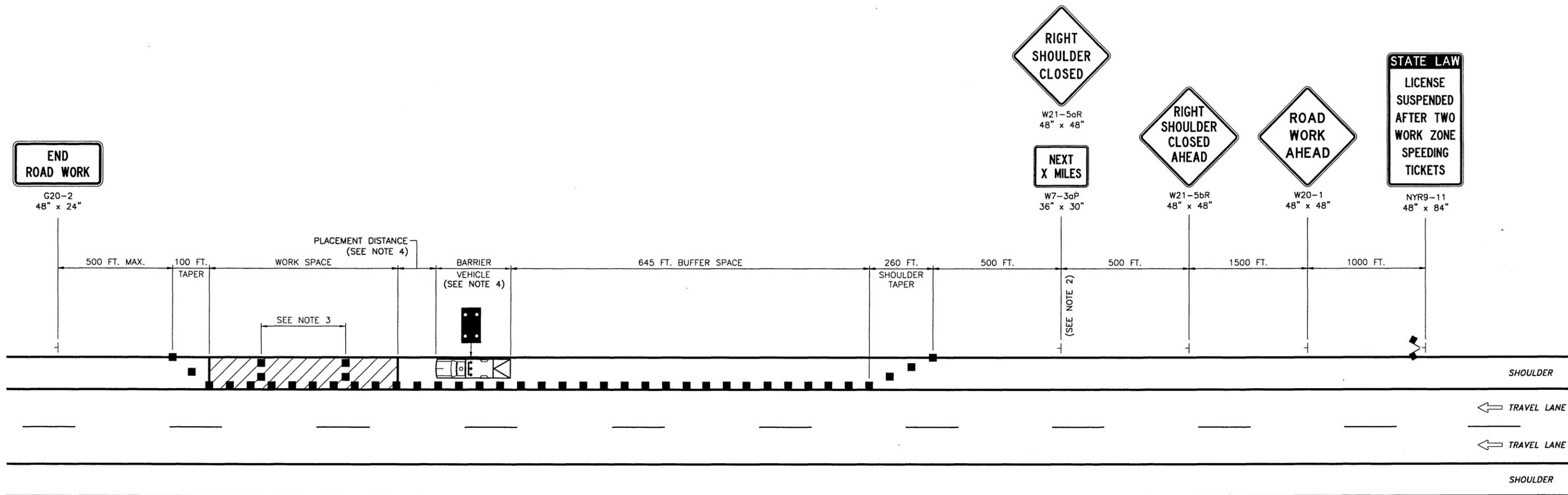
REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
 DEPARTMENT OF ENGINEERING
 200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
 SAFETY UPGRADES, CULVERT EXTENSION,
 DRAINAGE & MISCELLANEOUS WORK
 LOCATION OF PROJECT
 MP 100.8 TO MP 109.3
 ULSTER & GREENE COUNTIES
 TITLE OF DRAWING
MOBILE LANE CLOSURE

CONTRACT NUMBER:
TAA 16-27R
 DATE:
02/13
 DRAWING NUMBER:
MLC



WORK ZONE TRAFFIC CONTROL PLAN
N.T.S.

NOTES:

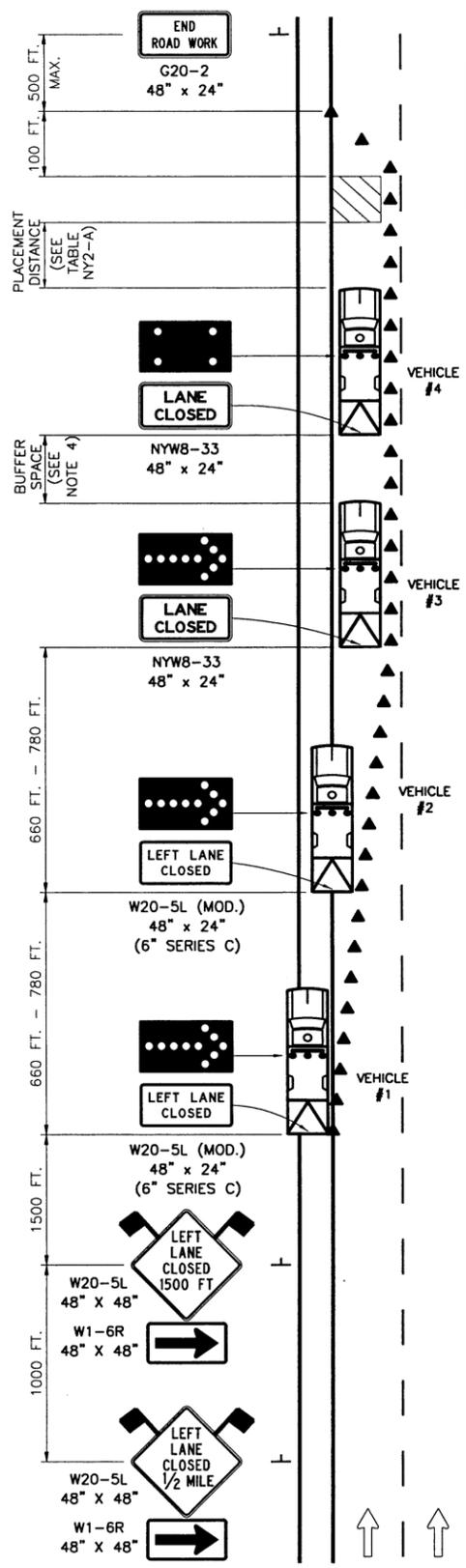
1. THE PLAN SHOWN IS FOR A SHORT- OR INTERMEDIATE-TERM STATIONARY RIGHT SHOULDER CLOSURE. FOR A SHORT- OR INTERMEDIATE-TERM STATIONARY LEFT SHOULDER CLOSURE, SUBSTITUTE "LEFT SHOULDER CLOSED AHEAD" SIGN (W21-5bL) FOR THE "RIGHT SHOULDER CLOSED AHEAD" SIGN (W21-5bR) AND "LEFT SHOULDER CLOSED" SIGN (W21-5aL) FOR THE "RIGHT SHOULDER CLOSED" SIGN (W21-5aR). THE SHORT- OR INTERMEDIATE-TERM STATIONARY LEFT SHOULDER CLOSURE PLAN SHALL BE THE MIRROR IMAGE OF THE PLAN SHOWN.
2. THE "NEXT X MILES" SUPPLEMENTAL SIGN (W7-3aP) IS REQUIRED WHEN THE SHOULDER IS CLOSED FOR A DISTANCE GREATER THAN 2 MILES.
3. IN LONG WORK SPACES (1500 FEET AND GREATER) ON PAVED SHOULDERS HAVING A WIDTH OF 8 FEET OR GREATER, TWO DRUMS, TWO TALL CONES, OR TWO OVERSIZED VERTICAL PANELS SHALL BE PLACED TRANSVERSELY ACROSS THE CLOSED SHOULDER AT MAXIMUM INTERVALS OF 800 FEET. IN ADDITION, TWO DRUMS, TWO TALL CONES, OR TWO OVERSIZED VERTICAL PANELS SHALL BE SIMILARLY PLACED IN ADVANCE OF ANY TRANSVERSE DROP-OFF OF 1 1/2 INCHES OR GREATER.
4. THE BARRIER VEHICLE SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 619 OF THE STANDARD SPECIFICATIONS. FOR BARRIER VEHICLE USE AND PLACEMENT REQUIREMENTS, SEE TABLES NY1-A AND NY2-A ON THE "WORK ZONE TRAFFIC CONTROL TABLES AND LEGEND" DRAWING. THE BARRIER VEHICLE SHALL BE LOCATED COMPLETELY ON THE SHOULDER.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.

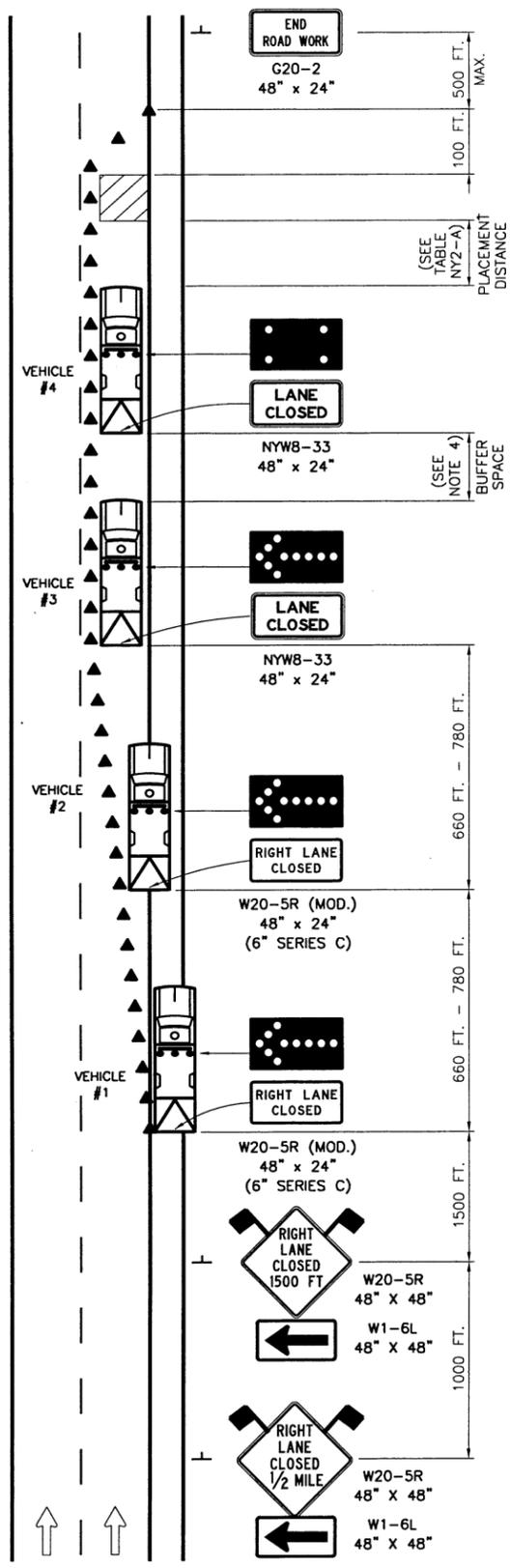


NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING 200 SOUTHERN BLVD., ALBANY, N.Y. 12209	TITLE OF PROJECT SAFETY UPGRADE, CULVERT EXTENSION, DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAS 16-27R
	LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 03/16
	TITLE OF DRAWING SHOULDER CLOSURE (SHORT- OR INTERMEDIATE- TERM STATIONARY)	DRAWING NUMBER: SC

SDLC.dgn
 CHECKED BY: TA
 DRAFTED BY: CAD
 CHECKED BY: J. SHINSKI
 DESIGNED BY: R. COURNOYER
 DESIGN SUPERVISOR: T. MAHAR



SHORT DURATION LEFT LANE CLOSURE
N.T.S.



SHORT DURATION RIGHT LANE CLOSURE
N.T.S.

GENERAL NOTES:

1. USE OF THESE PLANS SHALL BE LIMITED TO A WORK SPACE LENGTH OF 1/2 MILE OR LESS AND A DAYTIME WORK DURATION OF UP TO 2 HOURS, OR NIGHTTIME WORK DURATION UP TO 1 HOUR.
2. TRAILER-MOUNTED ARROW PANELS MAY BE SUBSTITUTED FOR VEHICLES #1, #2, AND #3. TOW VEHICLES SHALL NOT REMAIN ATTACHED TO TRAILER-MOUNTED ARROW PANELS.
3. FOR VEHICLE #1, THE ATTENUATOR IS OPTIONAL FOR DAYTIME OPERATIONS. FOR NIGHTTIME OPERATIONS, ALL VEHICLES, INCLUDING VEHICLE #1 ON THE SHOULDER, SHALL BE EQUIPPED WITH AN ATTENUATOR.
4. THE MINIMUM BUFFER SPACE LENGTH SHALL BE THE PLACEMENT DISTANCE REQUIRED FOR BARRIER VEHICLES (SEE TABLE NY2-A). THE LENGTH OF THE BUFFER SPACE SHALL BE EXTENDED, AS DETERMINED BY THE ENGINEER, TO ENSURE ADEQUATE SIGHT DISTANCE FOR VEHICLES APPROACHING THE LANE CLOSURE TAPER.

LEFT LANE CLOSURE NOTES:

1. WHERE THE LEFT LANE IS TO BE CLOSED, VEHICLE #1 IS TO BE LOCATED COMPLETELY ON THE LEFT SHOULDER, VEHICLE #2 STRADDLES THE LEFT SHOULDER AND THE LEFT LANE, AND VEHICLE #3 IS IN THE LEFT LANE.
2. FOR A LEFT LANE CLOSURE IN AN AREA WHERE THE USABLE LEFT SHOULDER/MEDIAN WIDTH IS LESS THAN 6 FEET, LEFT SIDE SIGNS SHALL BE MOUNTED ON THE MEDIAN BARRIER. IF THE TOTAL MEDIAN WIDTH IS LESS THAN 6 FEET, LEFT SIDE SIGNS IN ADVANCE OF THE LANE CLOSURE TAPER AND THE "END ROAD WORK" (G20-2) SIGN SHALL NOT BE REQUIRED.
3. FOR A LEFT LANE CLOSURE IN AN AREA WHERE THE USABLE LEFT SHOULDER/MEDIAN WIDTH IS LESS THAN 8 FEET, VEHICLE #1 IS AS FAR LEFT ON THE LEFT SHOULDER AS CONDITIONS PERMIT, VEHICLE #2 STRADDLES THE LEFT SHOULDER AND THE LEFT LANE, AND VEHICLE #3 IS IN THE LEFT LANE.
4. IN AREAS WHERE THERE IS LITTLE TO NO LEFT SHOULDER/MEDIAN WIDTH, VEHICLE #1 AND VEHICLE #2 SHALL BE IN THE LEFT LANE. FOR THESE SITUATIONS, CONSULT THE ENGINEER FOR APPROPRIATE TEMPORARY TRAFFIC CONTROL UPGRADES.

RIGHT LANE CLOSURE NOTES:

1. WHERE THE RIGHT LANE IS TO BE CLOSED, VEHICLE #1 IS TO BE LOCATED COMPLETELY ON THE RIGHT SHOULDER, VEHICLE #2 STRADDLES THE RIGHT SHOULDER AND THE RIGHT LANE, AND VEHICLE #3 IS IN THE RIGHT LANE.
2. FOR A RIGHT LANE CLOSURE IN AN AREA WHERE THE USABLE LEFT SHOULDER/MEDIAN WIDTH IS LESS THAN 6 FEET, LEFT SIDE SIGNS SHALL BE MOUNTED ON THE MEDIAN BARRIER. IF THE TOTAL MEDIAN WIDTH IS LESS THAN 6 FEET, LEFT SIDE SIGNS SHALL NOT BE REQUIRED.

LEGEND

▲ TALL TRAFFIC CONES
● 40 FT. SPACING ON TAPER AND TANGENT

REVISIONS			
DATE	DESCRIPTION	BY	SYM.

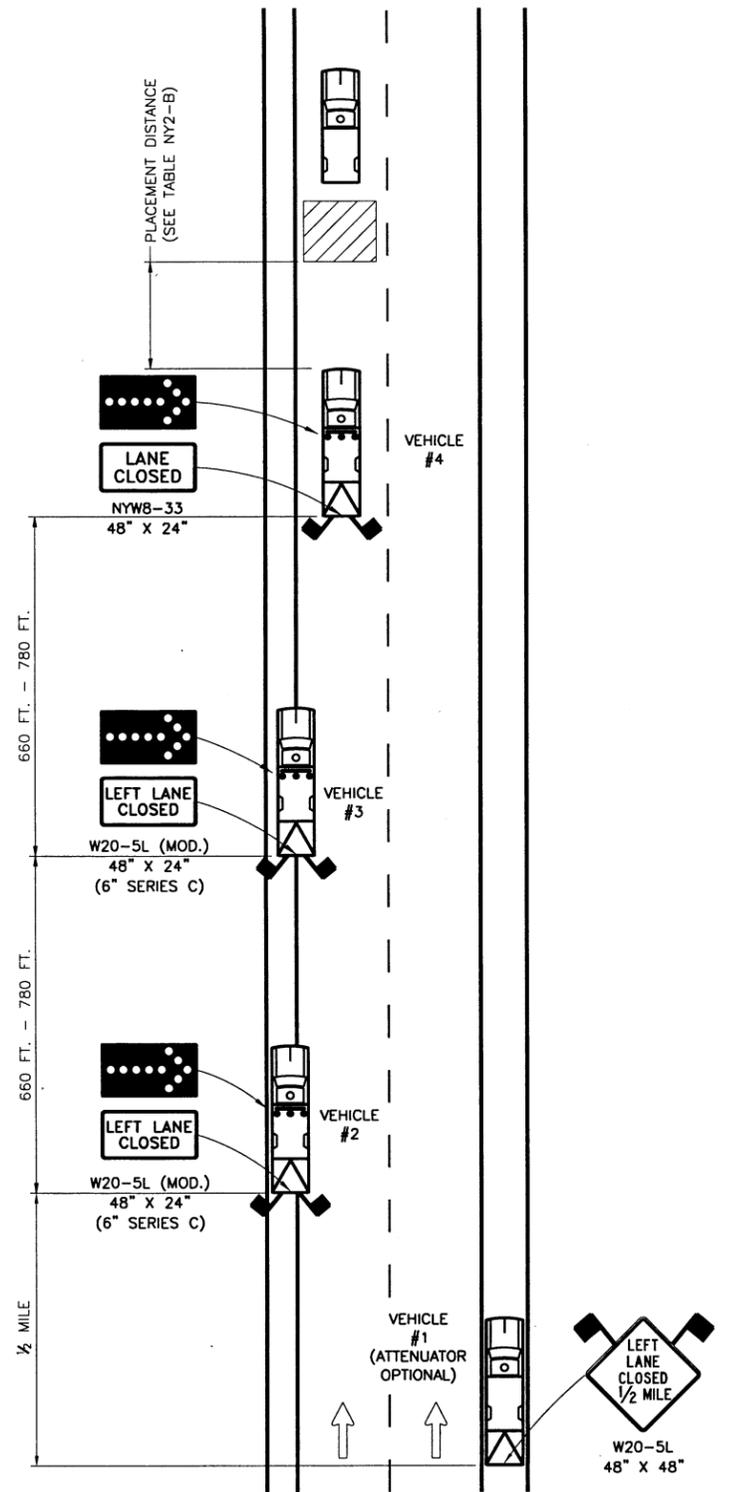


NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

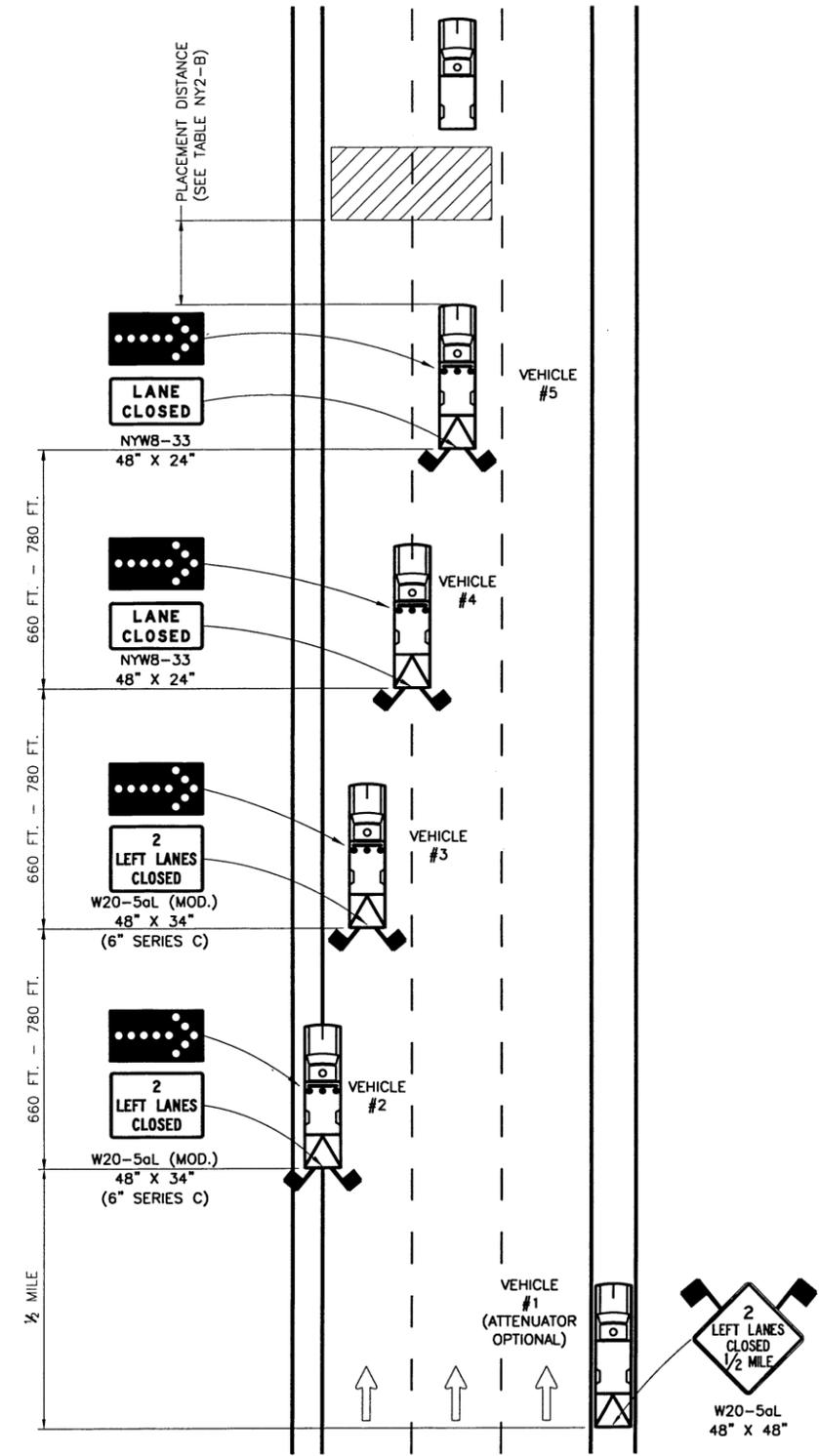
TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXTENSION,
DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES
TITLE OF DRAWING
**SHORT DURATION
LANE CLOSURE**

CONTRACT NUMBER:
TAA 16-27R
DATE:
02/13
DRAWING NUMBER:
SDLC

MLC-NS.dgn
 CHECKED BY: TA
 DRAFTED BY: CAD
 CHECKED BY: J. SHINSKI
 DESIGNED BY: R. COURNOYER
 DESIGN SUPERVISOR: T. MAHAR



**MOBILE OPERATION - SINGLE LANE CLOSURE
IN NARROW SHOULDER AREA**
N.T.S.



**MOBILE OPERATION - DOUBLE LANE CLOSURE
IN NARROW SHOULDER AREA**
N.T.S.

GENERAL NOTES:

1. THESE PLANS ARE TO BE UTILIZED ONLY WHEN AUTHORIZED BY THE ENGINEER.
2. MOBILE OPERATIONS ARE WORK ACTIVITIES THAT MOVE CONTINUOUSLY OR STOP INTERMITTENTLY FOR SHORT PERIODS IN THE ROADWAY. THE DURATION FOR EACH INTERMITTENT STOP MAY BE APPROXIMATELY 15 MINUTES BEFORE MOVING TO A NEW LOCATION.
3. VEHICLE #4 (SINGLE LANE CLOSURE PLAN) AND VEHICLE #5 (DOUBLE LANE CLOSURE PLAN) SHALL NOT BE USED TO TRANSPORT WORKERS, MATERIALS, AND/OR EQUIPMENT TO THE WORK SITE. A SEPARATE WORK VEHICLE(S) SHALL BE REQUIRED.
4. THESE TEMPORARY TRAFFIC CONTROL PLANS SHALL NOT BE ADVANCED THROUGH AN AREA WHERE THERE IS AN EXIT OR ENTRANCE RAMP.
5. FOR VEHICLE #1, A TRUCK-MOUNTED OR TRAILER-MOUNTED PORTABLE VARIABLE MESSAGE SIGN (PVMS) MAY BE USED IN LIEU OF THE SIGN SHOWN. THE PVMS UNIT SHALL BE COMPLETELY ON THE SHOULDER AND SHALL HAVE NO PORTION PROTRUDE OVER THE TRAVEL LANE AT ANY TIME. THE MESSAGE DISPLAYED SHALL BE THE SAME AS THAT SHOWN.

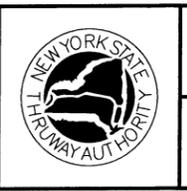
SINGLE LANE CLOSURE NOTES:

1. THE PLAN SHOWN IS FOR A MOBILE OPERATION INVOLVING A LEFT SINGLE LANE CLOSURE IN AN AREA WHERE THE USABLE LEFT SHOULDER/MEDIAN WIDTH IS LESS THAN 8 FEET.
2. WHERE THE LEFT LANE IS TO BE CLOSED, VEHICLE #1 IS TO BE LOCATED COMPLETELY ON THE RIGHT SHOULDER, VEHICLE #2 IS AS FAR LEFT ON THE LEFT SHOULDER AS CONDITIONS PERMIT, VEHICLE #3 STRADDLES THE LEFT SHOULDER AND THE LEFT LANE, AND VEHICLE #4 IS IN THE LEFT LANE.
3. IN AREAS WHERE THERE IS LITTLE TO NO LEFT SHOULDER/MEDIAN WIDTH, VEHICLE #2 AND VEHICLE #3 SHALL BE IN THE LEFT LANE.

DOUBLE LANE CLOSURE NOTES:

1. THE PLAN SHOWN IS FOR A MOBILE OPERATION INVOLVING A LEFT DOUBLE LANE CLOSURE IN AN AREA WHERE THE USABLE LEFT SHOULDER/MEDIAN WIDTH IS LESS THAN 8 FEET.
2. WHERE THE LEFT TWO LANES ARE TO BE CLOSED, VEHICLE #1 IS TO BE LOCATED COMPLETELY ON THE RIGHT SHOULDER, VEHICLE #2 STRADDLES THE LEFT SHOULDER AND THE LEFT LANE, VEHICLE #3 IS IN THE LEFT LANE, VEHICLE #4 STRADDLES THE LEFT LANE AND THE CENTER LANE, AND VEHICLE #5 IS IN THE CENTER LANE.
3. IN AREAS WHERE THERE IS LITTLE TO NO LEFT SHOULDER/MEDIAN WIDTH, VEHICLE #2 SHALL BE IN THE LEFT LANE.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
 DEPARTMENT OF ENGINEERING
 200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
 SAFETY UPGRADES, CULVERT EXTENSION,
 DRAINAGE & MISCELLANEOUS WORK
 LOCATION OF PROJECT
 MP 100.8 TO MP 109.3
 ULSTER & GREENE COUNTIES
 TITLE OF DRAWING
**MOBILE LANE CLOSURE
(NARROW SHOULDER AREA)**

CONTRACT NUMBER:
 TAA 16-27R
 DATE:
 02/13
 DRAWING NUMBER:
 MLC-NS

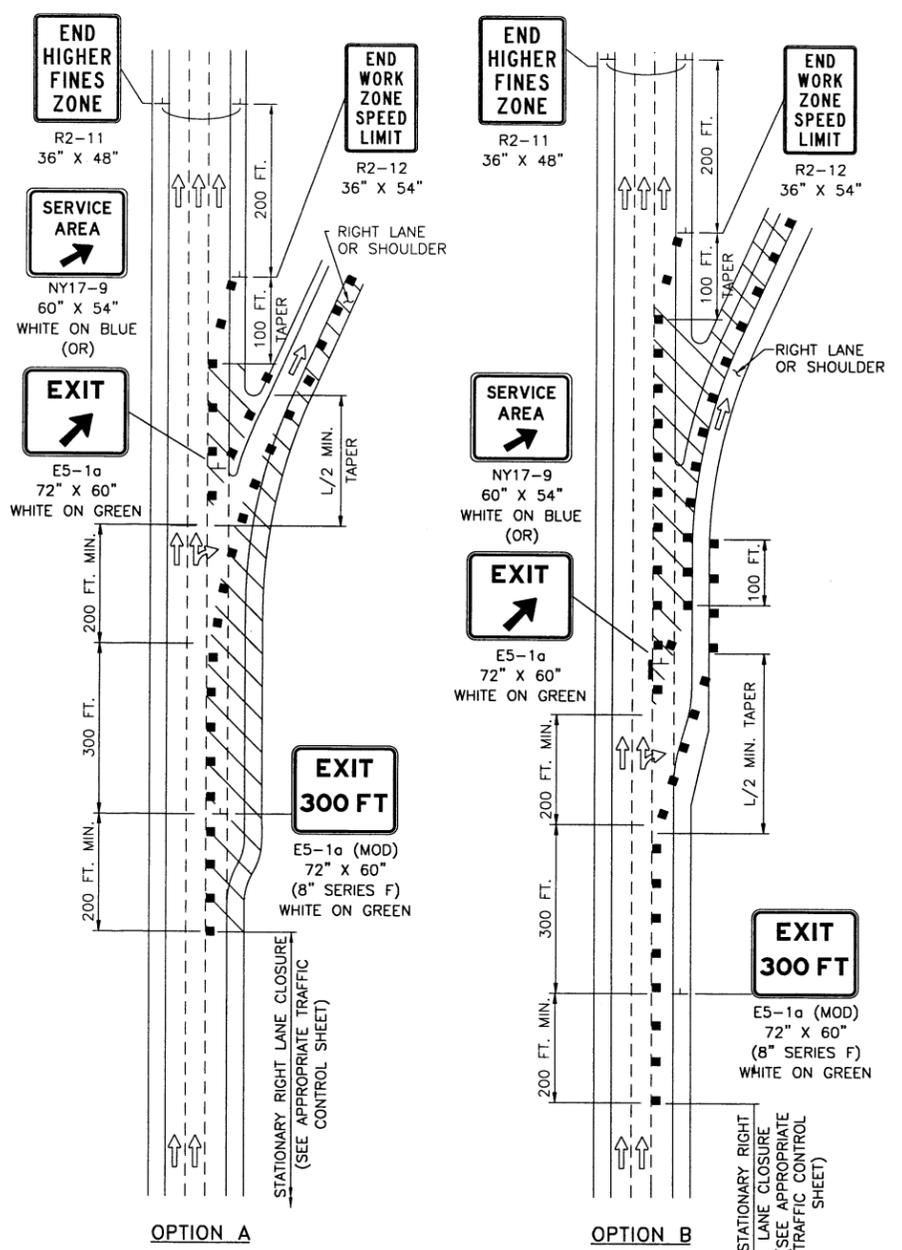
CHECKED BY: TA

DRAFTED BY: CAD

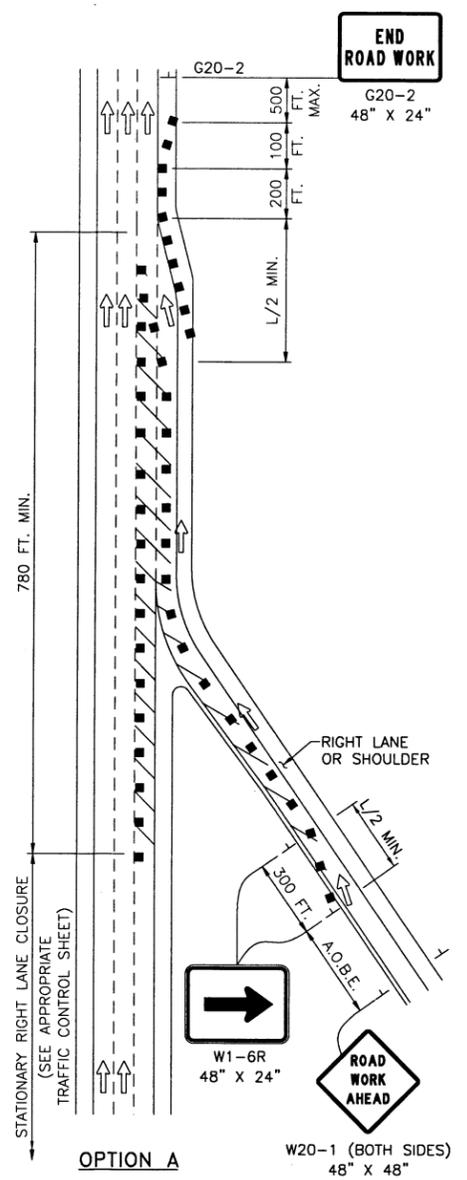
CHECKED BY: J. SHINSKI

DESIGNED BY: R. COURNOYER

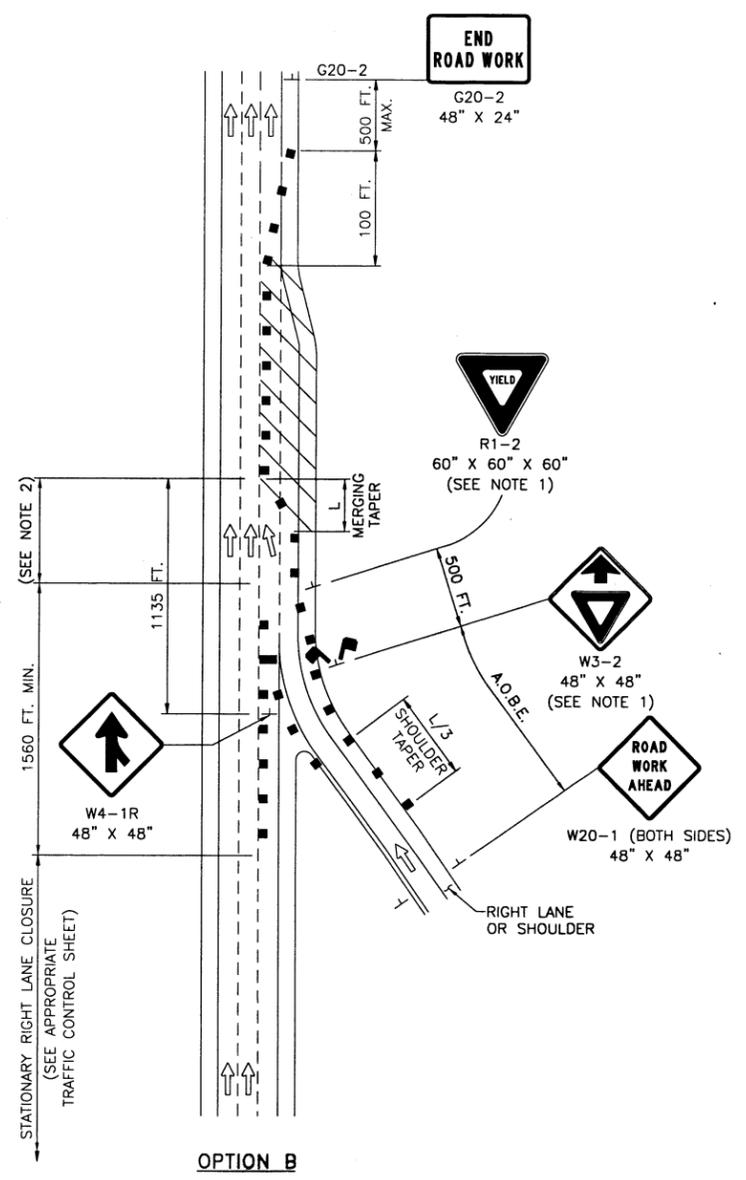
DESIGN SUPERVISOR: T. MAHAR



TYPICAL DECELERATION LANE
N.T.S.



TYPICAL ACCELERATION LANE
N.T.S.



TYPICAL WORK ZONE ON RAMP
N.T.S.

- NOTES:
1. "YIELD" (R1-2) AND "YIELD AHEAD" (W3-2) SIGNS ARE REQUIRED WHENEVER A MAINLINE LANE ADJACENT TO AN ACCELERATION LANE (ENTRANCE RAMP) IS CLOSED. IN AREAS WHERE THE MAINLINE ADJACENT TO AN ACCELERATION LANE (ENTRANCE RAMP) IS REDUCED TO A SINGLE THROUGH LANE, A FLAGGER WITH ACCOMPANYING "FLAGGER AHEAD" (W20-7a) SIGN MAY BE USED IN LIEU OF THE "YIELD" AND "YIELD AHEAD" SIGNS. THE FLAGGER WITH ACCOMPANYING "FLAGGER AHEAD" SIGN SHALL BE PLACED ON THE ACCELERATION LANE (ENTRANCE RAMP) IN ACCORDANCE WITH THE GUIDELINES ESTABLISHED IN THE MUTCD. THIS SUBSTITUTION IS NOT PERMITTED IN AREAS WHERE THE ACCELERATION LANE (ENTRANCE RAMP) IS A HIGH-SPEED FREEWAY-TO-FREEWAY CONNECTION RAMP.
 2. THE CONTRACTOR SHALL PROVIDE ADEQUATE ACCELERATION DISTANCE FOR THE YIELD CONDITION AS PER THE CONTRACT PLANS OR AS APPROVED BY THE ENGINEER.
 3. THE "FLAGGER AHEAD" (W20-7a) SIGN SHALL BE USED WHENEVER THE FLAGGER IS ON DUTY AT THE FLAGGING STATION. THE "FLAGGER AHEAD" SIGN SHALL BE PROMPTLY REMOVED, COVERED, TURNED AWAY FROM TRAFFIC, OR CHANGED TO ANOTHER APPROPRIATE LEGEND WHENEVER THE FLAGGER IS NOT AT THE FLAGGING STATION.

* USE ONLY WHEN FLAGGER IS ON DUTY

NOTE:
ADJUST CHANNELIZING DEVICES AND SIGNS TO LOCATION OF WORK ON RAMP.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADE, CULVERT EXTENSION,
DRAINAGE & MISCELLANEOUS WORK

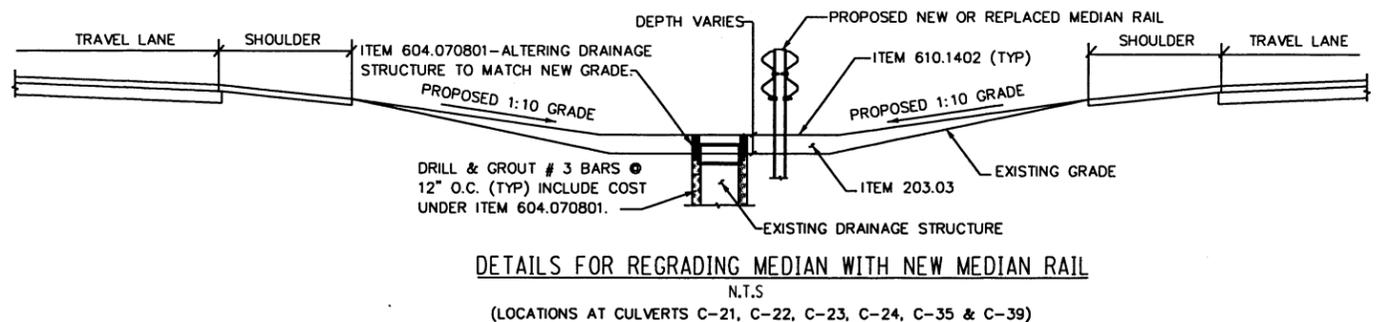
LOCATION OF PROJECT
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES

TITLE OF DRAWING
WORK ZONE TRAFFIC CONTROL AT
INTERCHANGES, SERVICE AREAS
AND PARKING AREAS

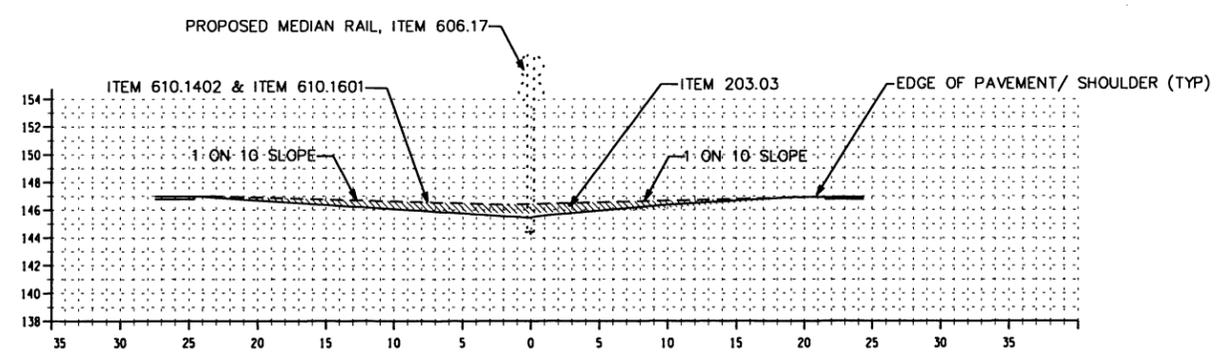
CONTRACT NUMBER:
TAA 16-27R

DATE:
06/16

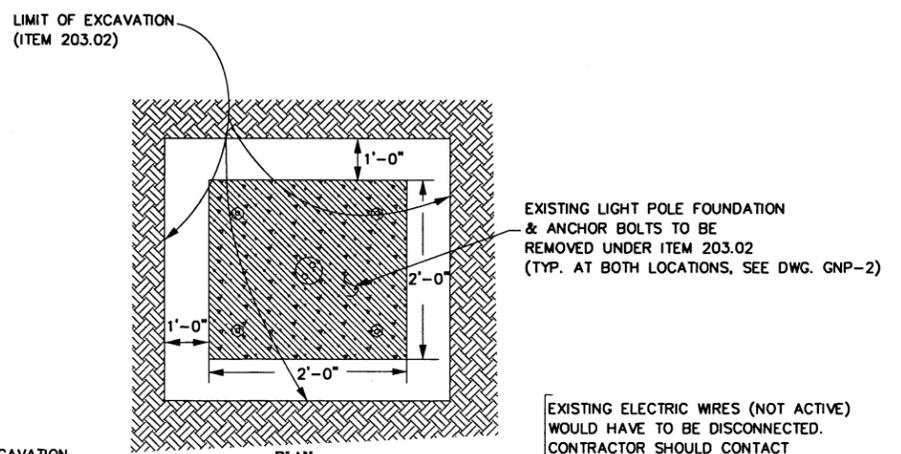
DRAWING NUMBER:
INT



DETAILS FOR REGRADE MEDIAN WITH NEW MEDIAN RAIL
N.T.S.
(LOCATIONS AT CULVERTS C-21, C-22, C-23, C-24, C-35 & C-39)

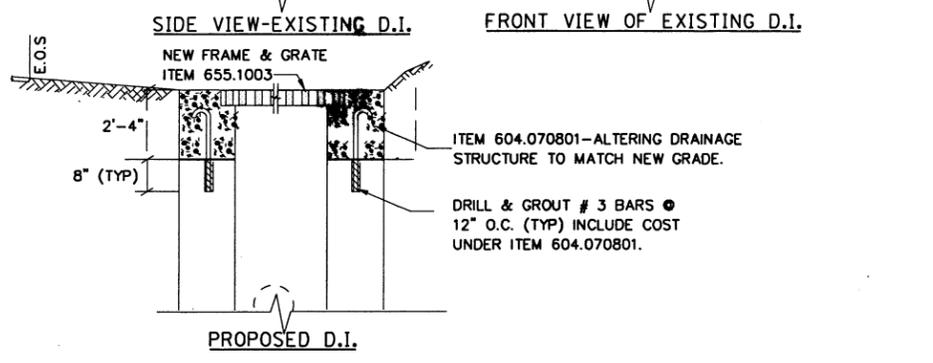
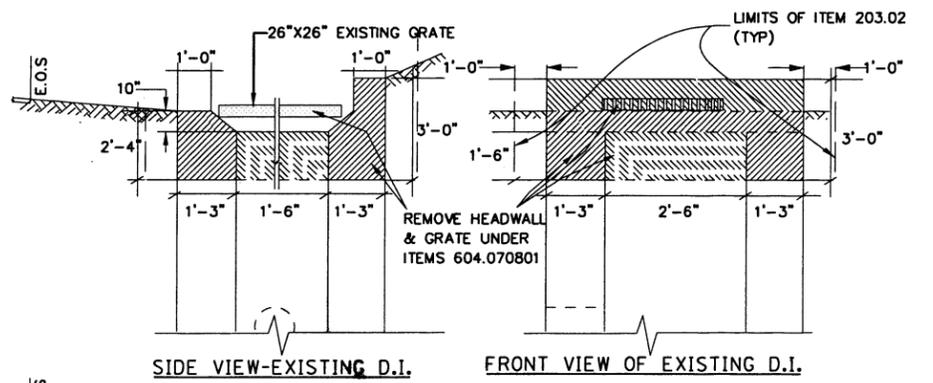


DETAILS FOR FILLING & COMPACTING AREA @ EXISTING U-TURN M.P. 103.20 (±)
N.T.S.

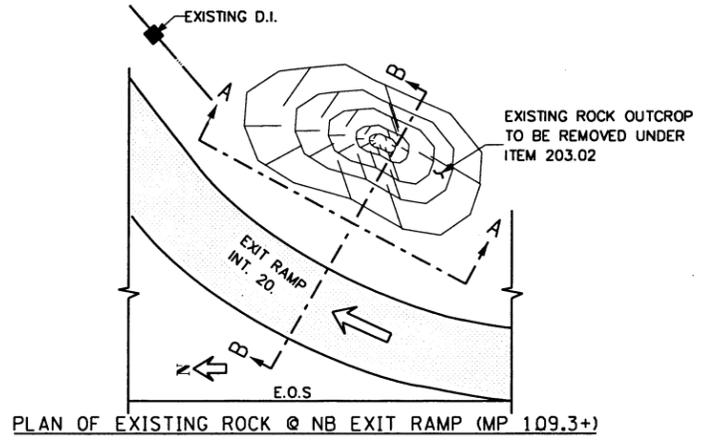


EXISTING LIGHT POLE FOUNDATION & ANCHOR BOLTS TO BE REMOVED UNDER ITEM 203.02 (TYP. AT BOTH LOCATIONS, SEE DWG. GNP-2)

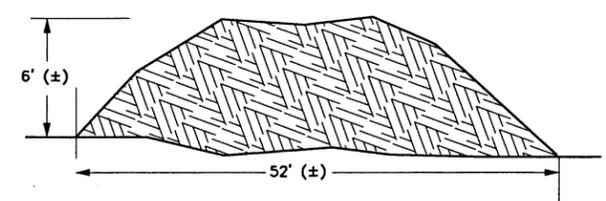
EXISTING ELECTRIC WIRES (NOT ACTIVE) WOULD HAVE TO BE DISCONNECTED. CONTRACTOR SHOULD CONTACT MR. GREG HERMANC AT (518) 471 5884 PRIOR TO THEIR REMOVAL.



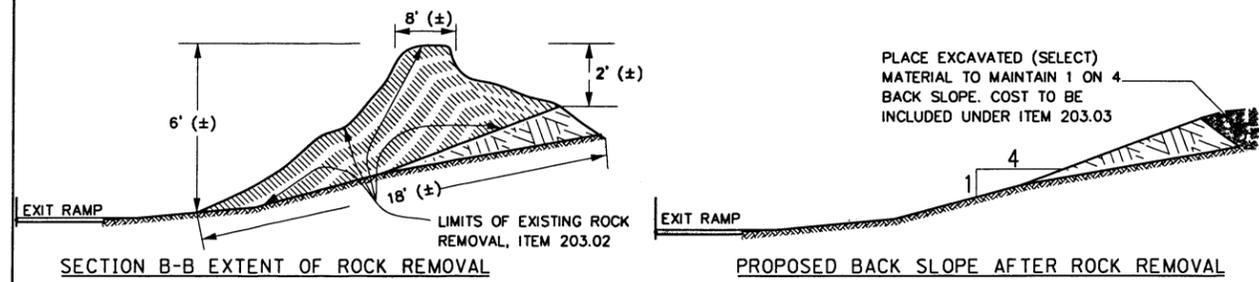
DETAIL-D
(ALTERING D.I. AT N.B. RAMP-MP 101.5(±))
N.T.S.



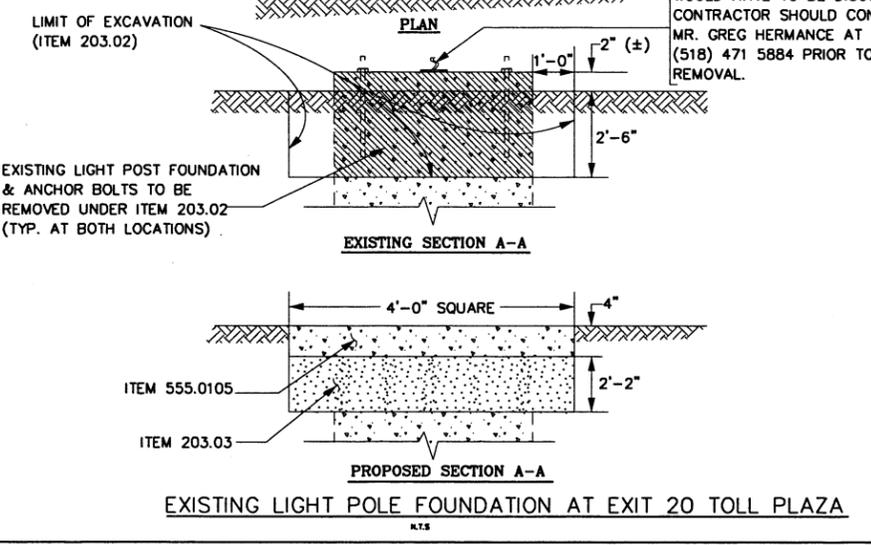
PLAN OF EXISTING ROCK @ NB EXIT RAMP (MP 109.3+)



SECTION A-A- FACE OF ROCK



DETAIL-E
(ROCK REMOVAL/SLOPE FLATTENING AT N.B. RAMP-MP 100.9(+/-))
N.T.S.



EXISTING LIGHT POLE FOUNDATION AT EXIT 20 TOLL PLAZA
N.T.S.

ALTERED ON: _____ AFFIXED ON: 9/2/2016

SIGNATURE: _____ STAMP: _____

SIGNATURE: _____ STAMP: _____

ITEM NO.	DESCRIPTION	UNIT
203.02	UNCLASSIFIED EXCAVATION & DISPOSAL	CY
203.03	EMBANKMENT IN PLACE	CY
555.0105	CONCRETE FOR STRUCTURES	CY
604.070801	ALTERING DRAINAGE STRUCTURE	CY
606.17	CORRUGATED BEAM MEDIAN BARRIER	EA
610.1402	TOPSOIL - ROADSIDE	CY
610.1601	TURF ESTABLISHMENT ROADSIDE	LS
655.1003	WELDED FRAME AND RECTANGULAR GRATE 3	LF

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

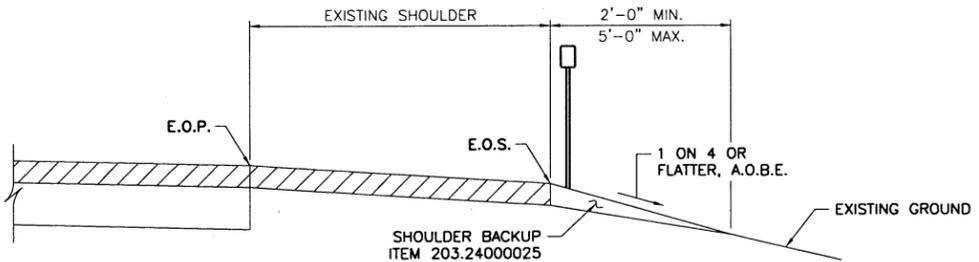
REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT: SAFETY UPGRADES, CULVERT EXTENSION, DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES
TITLE OF DRAWING: MISCELLANEOUS DETAILS

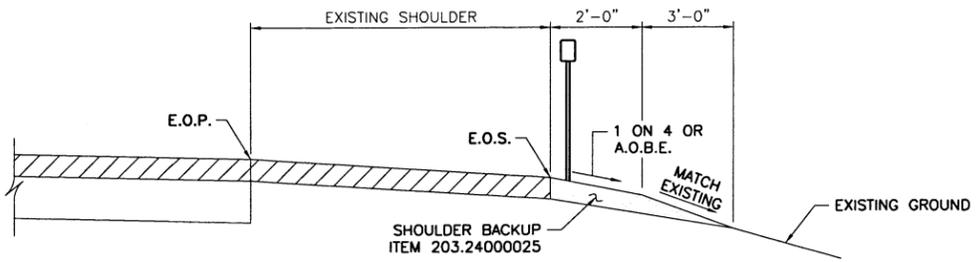
CONTRACT NUMBER: TAA 16-27R
DATE: 04/26/16
DRAWING NUMBER: MD-1



RIGHT SHOULDER BACKUP WITHOUT GUIDE RAIL AT SLOPES FLATTER THAN 1V:4H

NOTE: RIGHT SHOULDER SHOWN, LEFT SHOULDER TREATMENT SIMILAR.

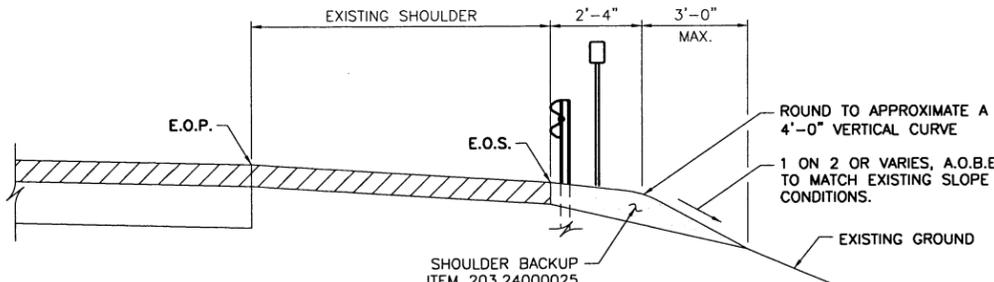
N.T.S.



RIGHT SHOULDER BACKUP WITHOUT GUIDE RAIL AT SLOPES 1V:4H OR STEEPER

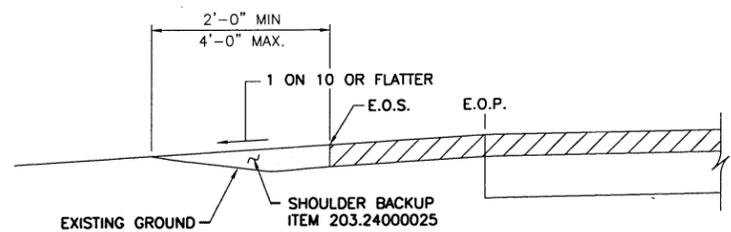
NOTE: RIGHT SHOULDER SHOWN, LEFT SHOULDER TREATMENT SIMILAR.

N.T.S.



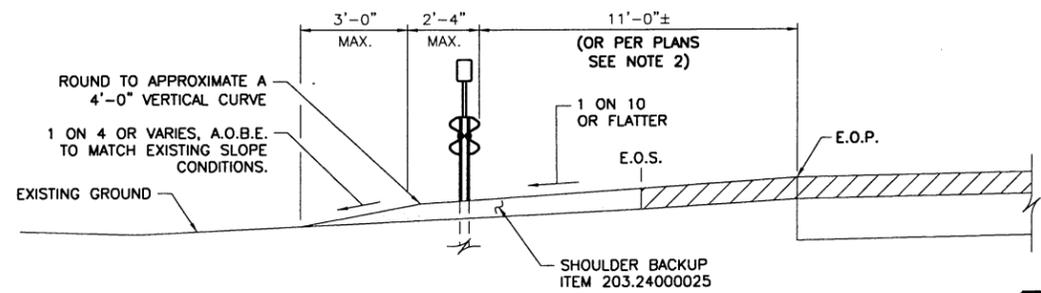
RIGHT SHOULDER BACKUP AT EXISTING AND PROPOSED GUIDE RAIL LOCATIONS

N.T.S.



LEFT SHOULDER BACKUP WHEN MEDIAN GUIDE RAIL IS LOCATED > 11' FROM EOP

N.T.S.



LEFT SHOULDER BACKUP AT EXISTING AND PROPOSED GUIDE RAIL LOCATIONS LOCATED AT 11' FROM EOP

N.T.S.

GENERAL NOTES:

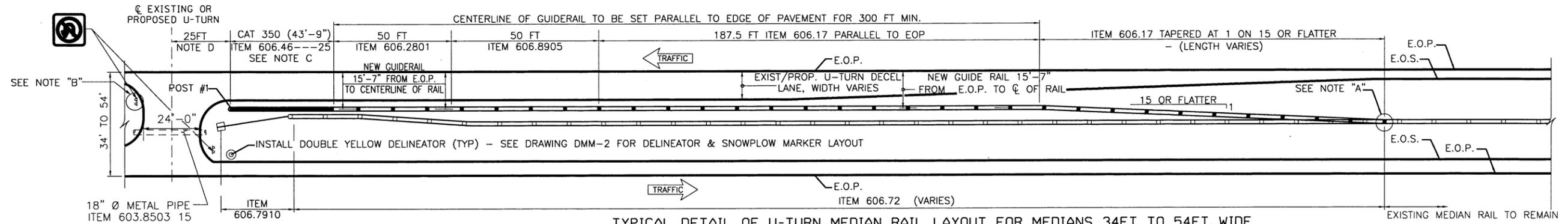
- SHOULDER BACKUP MATERIAL, ITEM 203.24000025, SHALL BE PLACED TO A RELATIVE CONSISTENT WIDTH AND SURFACE A.O.B.E.. THEREFORE, SHOULDER BACKUP MATERIAL SHALL BE PLACED AND COMPACTED UNDER AND BEHIND ALL EXISTING AND NEW GUIDE RAIL AND AT ALL TERMINALS PER NYSDOT STANDARD SHEETS 606-06 AND 606-11. SHOULDER BACKUP MATERIAL SHALL BE HAND WORKED AROUND ALL GUIDE RAIL POSTS. TO FACILITATE THIS WORK BETWEEN RUNS OF GUIDE RAIL, DELINEATORS, MILE MARKERS AND TENTH MILE MARKERS SHOULD BE REMOVED AND DISPOSED. NEW DELINEATORS, MILE MARKERS, AND TENTH MILE MARKERS SHALL BE INSTALLED AFTER FINAL GRADING IS COMPLETE. IN ALL OTHER AREAS, REPLACE DAMAGED DELINEATORS, MILE MARKERS AND TENTH MILE MARKERS A.O.B.E., TO BE PAID FOR UNDER APPROPRIATE ITEMS.
- SIMILAR DETAIL TO BE USED AT U-TURN DECELERATION LANE LOCATIONS WITH MEDIAN BARRIER (EXCEPT RAIL OFFSET WILL DIFFER PER PLAN).

REVISIONS			
DATE	DESCRIPTION	BY	SYM.

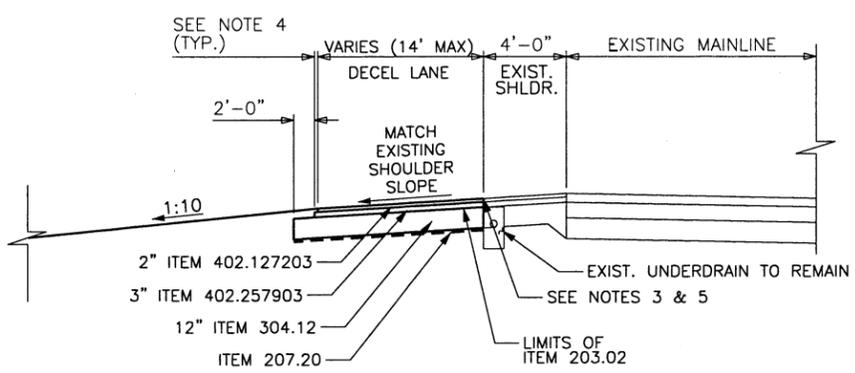


TITLE OF PROJECT SAFETY UPGRADE, CULVERT EXTENSION, DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TH MP 109.3 ULSTER & GREENE COUNTIES	DATE: 12/8/15
TITLE OF DRAWING SHOULDER BACKUP DETAILS (TYPICAL 1R PROJECTS)	DRAWING NUMBER: SB-1A

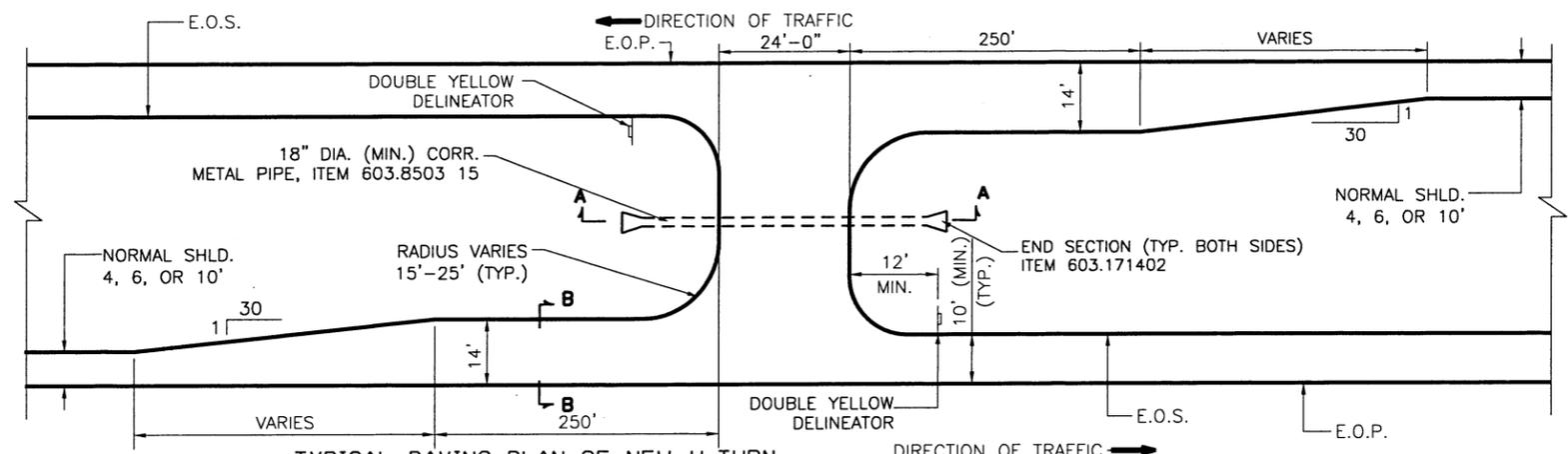
PW:\Designer_Information\Thruway_Standard_Details\Highways\Current Highway Details\Shoulder Backup 1R Projects.dgn
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



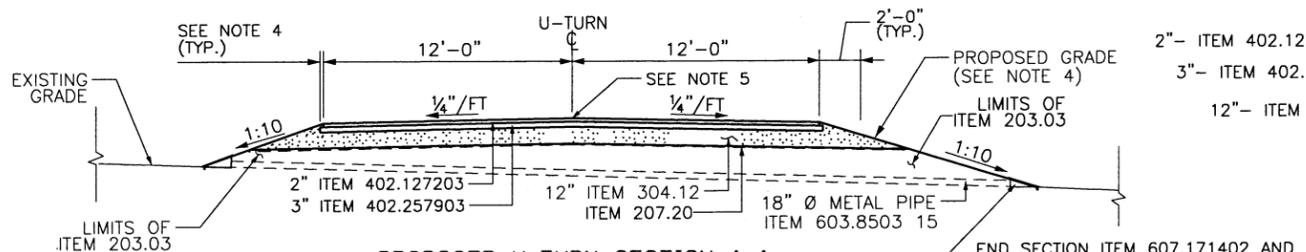
TYPICAL DETAIL OF U-TURN MEDIAN RAIL LAYOUT FOR MEDIANS 34FT. TO 54FT. WIDE



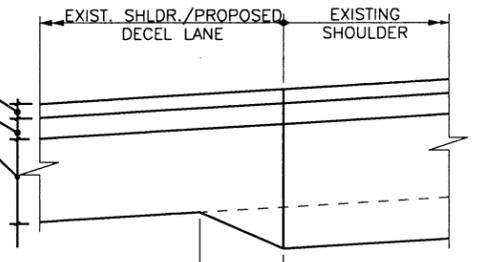
PROPOSED DECELERATION LANE SECTION B-B
SCALE: N.T.S.



TYPICAL PAVING PLAN OF NEW U-TURN
SCALE: N.T.S.



PROPOSED U-TURN SECTION A-A
SCALE: N.T.S.



DETAIL "A" - SUBBASE TAPER
SCALE: N.T.S.

ITEMS	DESCRIPTION
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL
203.03	EMBANKMENT IN PLACE
207.20	GEOTEXTILE BEDDING
304.12	SUBBASE COURSE - TYPE 2
402.127203	12.5MM TOP COURSE
402.257903	25mm F9 BINDER COURSE HMA, 70 SERIES COMPACTION
407.0102	DILUTED TACK COAT
603.0101	SAFETY GRATE
603.171402	END SECTION
603.8503 15	18" DIA. C.M.P.
606.17	CORRUGATED BEAM MEDIAN BARRIER
606.2801	HPBO (MOD.) CORRUGATED BEAM MEDIAN BARRIER
606.46---25	CRASH-CUSHION ATTN. TERMINAL 350 (CAT 350)
606.72	REMOVE & DISPOSE CORRUGATED BEAM MEDIAN BARRIER
606.7910	REMOVE & DISPOSE ANCHORAGE UNIT- CORR BEAM GUIDE RAIL & MED. BARR
606.8905	TRANSITION: HPBO (MOD.) CORRUGATED BEAM MEDIAN BARRIER TO WEAK POST CORRUGATED BEAM MEDIAN BARRIER
610.1402	TOP SOIL
610.1601	ESTABLISHING TURF
627.501408	CUTTING PAVEMENT
647.31	RELOCATE SIGN PANEL, SIGN PANEL ASSEMBLY SIZE 1 (UNDER 30 SQFT)

NOTES:

- A. THIS CONNECTION MAY REQUIRE NON-STANDARD POST SPACING AND FIELD CUTTING GUIDE RAIL WHERE CONNECTING TO EXISTING MEDIAN BARRIER. SEE NOTE IN CONTRACT PROPOSAL ENTITLED "NON-STANDARD MEDIAN BARRIER/GUIDE RAIL POST SPACING"
- B. EXISTING "NO U-TURN" SIGNS SHALL BE RESET A.O.B.E. UNDER ITEM 647.31.
- C. PAYMENT LIMITS FOR ITEM 606.46---25 SHALL INCLUDE ONE (1) 31'-3" CAT 350 TERMINAL AND ONE (1) 12'-6" PIECE OF HEAVY POST BLOCKED OUT (MOD.) CORRUGATED BEAM MEDIAN BARRIER. COST TO BE INCLUDED IN ITEM 606.46---25. RAIL HEIGHT AND WIDTH TO BE TRANSITIONED ACROSS THIS 12 1/2 FT. SPECIAL 9" AND 11" BLOCKOUT REQUIRED - SIMILAR TO NYSDOT STANDARD SHEET 606-29 SHEET 1 OF 3.
- D. 25'-0" DIMENSION IS CRITICAL. THE CONTRACTOR SHALL BEGIN LAYOUT OF PROPOSED CAT-350 BY MEASURING 25'-0" FROM THE CENTERLINE OF THE U-TURN TO POST NUMBER ONE (1).

NOTES:

1. MINIMUM DEPTH OF SUBBASE MATERIAL, ITEM 304.12, SHALL BE 12". IF PROPOSED AND EXISTING BOTTOM OF SUBBASE ELEVATIONS DO NOT MATCH, AND UNDERDRAIN IS NOT PRESENT AT THE EXISTING EDGE OF SHOULDER, SEE DETAIL "A" THIS DWG. FOR TAPER DETAILS. IF UNDERDRAIN IS PRESENT, DIFFERENT ELEVATIONS FOR THE BOTTOM OF SUBBASE SECTIONS WILL BE ACCEPTABLE.
2. THE ASPHALT AT THE EXISTING EDGE OF SHOULDER SHALL BE CUT VERTICAL, ITEM 627.5014 08, AND ITEM 407.0102, TACK COAT SHALL BE APPLIED TO THE EDGE PRIOR TO PROPOSED ASPHALT PLACEMENT.
3. ESTABLISH NEW SLOPE WITH ITEM 203.03. PLACE 3" OF TOPSOIL, ITEM 610.1402 AND ESTABLISH TURF, ITEM 610.1601, ALONG THE TOP 1/4 AREA OF SLOPE FROM E.O.S.
4. TOP OF U-TURN PAVEMENT SHALL MATCH EXISTING EDGE OF SHOULDER ELEVATION.
5. ITEM 207.20, GEOTEXTILE BEDDING, SHALL BE PLACED BELOW THE SUBBASE COURSE ALONG THE HORIZONTAL LIMITS OF ITEM 402.257903.

ALTERED ON: _____ AFFIXED ON: 9/21/2016

SIGNATURE: _____ STAMP: _____

SIGNATURE: _____ STAMP: _____

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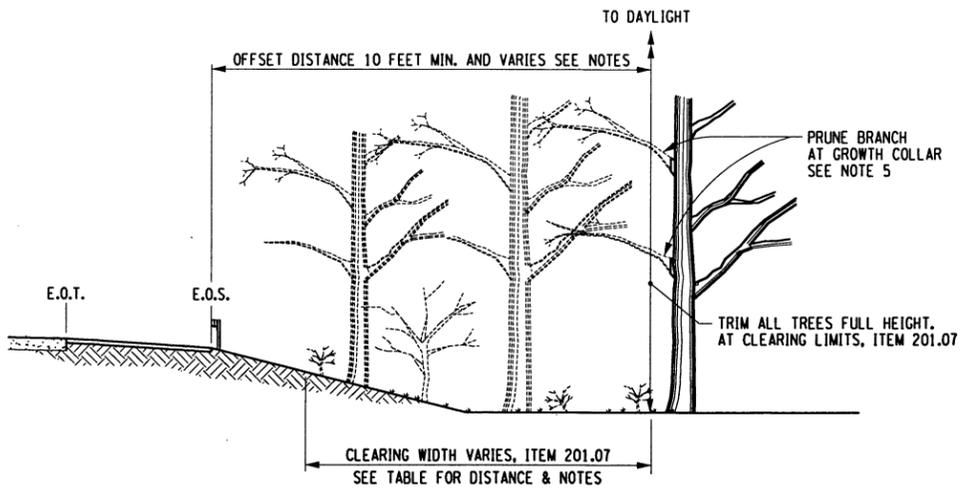
REVISIONS			
DATE	DESCRIPTION	BY	SYM.



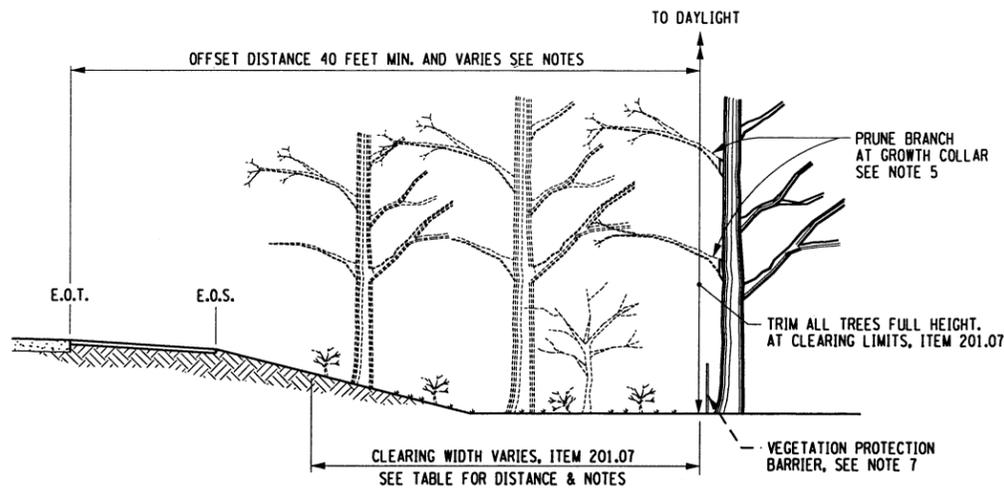
NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADE, CULVERT EXTEN.,
DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES
TITLE OF DRAWING
DETAIL FOR PROPOSED U-TURN
MP 103.0 & MP 104.725

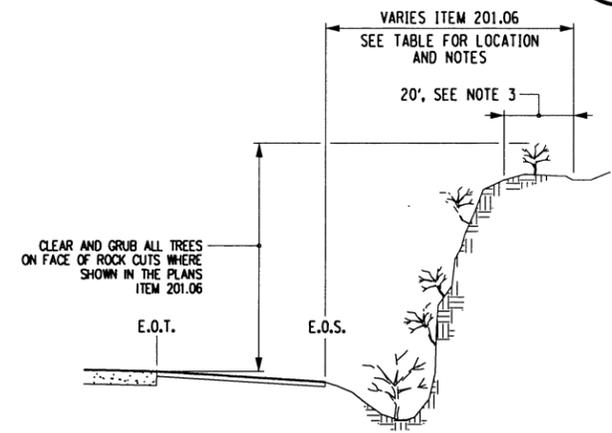
CONTRACT NUMBER:
TAA 16-27R
DATE:
12/13/15
DRAWING NUMBER:
UD-1



CLEARING AND GRUBBING BEHIND GUIDE RAIL
CLEARING AND GRUBBING - ITEM 201.07
DETAIL A
N.T.S.
SEE NOTE 1



CLEARING DETAIL - EARTH SLOPE
CLEARING AND GRUBBING - ITEM 201.07
DETAIL B
N.T.S.
SEE NOTES 1 AND 2



CLEARING AND GRUBBING ON ROCK SLOPES
DETAIL C
N.T.S.
(SEE NOTES 3 AND 4)

NOTE

DUE TO POSSIBLE PRESENCE OF THE FEDERAL-LISTED ENDANGERED INDIANA BAT IN THE PROJECT VICINITY, THE CONTRACTOR SHALL CUT TREES LARGER THAN 4" IN DIAMETER AT BREAST HEIGHT ONLY BETWEEN NOVEMBER 1ST AND MARCH 31ST. OUTSIDE OF THESE DATES, THE INDIANA BAT MAY UTILIZE TREES OF THIS SIZE FOR ROOSTING AND BREEDING AND COULD BE DISTURBED OR HARMED BY TREE REMOVAL. ONLY TREES DESIGNATED IN THE PROJECT PLANS FOR ELIMINATION SHALL BE REMOVED WITH ADJACENT TREES LEFT UNHARMED. PRIOR TO TREE REMOVAL, TREE CLEARING LIMITS AND INDIVIDUAL TREES SHALL BE MARKED AND VERIFIED BY THE E.I.C OR ENVIRONMENTAL SPECIALIST.

TREE CUTTING AND REMOVAL NOTES

TABLE OF CLEARING AND GRUBBING (ITEM 201.07)-NORTH BOUND					TABLE OF CLEARING AND GRUBBING (ITEM 201.07)-SOUTH BOUND				
SIDE	M.P. TO M.P.	DRAWING NO(S)	LENGTH X WIDTH (LF) X (LF)	ITEM 201.07 (AC)	SIDE	M.P. TO M.P.	DRAWING NO(S)	LENGTH X WIDTH (LF) X (LF)	ITEM 201.07 (AC)
NB	100.825 TO 100.850	GNP-1	132 X 20	0.06	SB	100.95 TO 100.975	GNP-1	132 X 20	0.06
NB	101.25 TO 101.30	GNP-3	264 X 20	0.12	SB	101.11 TO 101.14	GNP-1	160 X 20	0.07
NB	101.89 TO 101.925	GNP-4	185 X 15	0.06	SB	101.93 TO 102.04	GNP-4	580 X 15	0.20
NB	101.95 TO 102.00	GNP-4	265 X 15	0.09	SB	102.275 TO 102.30	GNP-5	264 X 20	0.12
NB	102.05 TO 102.10	GNP-4 & GNP-5	265 X 20	0.12	SB	103.4 TO 103.575	GNP-7 & GNP-8	925 X 15	0.32
NB	102.175 TO 102.225	GNP-5	265 X 20	0.12	SB	104.125 TO 104.340	GNP-9	1135 X 15	0.39
NB	104.075 TO 104.150	GNP-9	396 X 20	0.18	SB	104.350 TO 104.375	GNP-9	132 X 15	0.05
NB	104.85 TO 104.90	GNP-10	264 X 20	0.12	SB	104.85 TO 104.925	GNP-10	400 X 20	0.18
NB	108.267 TO 108.312	GNP-16 & GNP-17	238 X 25	0.14	SB	106.125 TO 106.30	GNP-12	925 X 15	0.32
NB	108.498 TO 108.543	GNP-16 & GNP-17	238 X 25	0.14	SB	106.750 TO 106.725	GNP-13	132 X 20	0.06
		TOTAL=	ACRES	1.15	SB	107.075 TO 107.125	GNP-14	265 X 10	0.06
					SB	108.25 TO 108.27	GNP-16	265 X 25	0.15
					SB	108.52 TO 108.6	GNP-17	425 X 25	0.24
					SB	108.874 TO 108.875	GNP-17	40 X 25	0.02
						TOTAL=	ACRES		2.24

E.O.T. = EDGE OF TRAVELED WAY
E.O.S. = EDGE OF SHOULDER

NOTES:

- DETAILS "A" AND "B" APPLY TO ALL ROADSIDE AREAS WITHIN THE WORK LIMITS. ADDITIONAL AREAS OF CLEARING AND GRUBBING MAY BE INDICATED ELSEWHERE IN THE CONTRACT DOCUMENTS.
- GRUBBING WILL BE REQUIRED BENEATH PROPOSED EMBANKMENT AREAS ONLY. WHERE TREES OR EXISTING STUMPS ARE CLEARED AND GRUBBING IS NOT REQUIRED, THE TREE TRUNK OR EXISTING STUMP SHALL BE FLUSH CUT. EXPOSED STUMPS NOT REQUIRED TO BE REMOVED, BUT WHICH ARE WITHIN 30 FEET OF THE EDGE OF THE PAVEMENT, SHALL BE CHIPPED OUT TO A DEPTH OF NOT LESS THAN 6 INCHES BELOW THE FINISHED GRADE AND HOLES BACKFILLED IF DIRECTED BY ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR BACKFILL OR EARTH COVER NECESSARY TO COMPLETE WORK.
- DETAIL "C", CLEAR & GRUB ALL TREES AND BRUSH ON FACE OF ROCK CUTS. CLEAR 20' OR TO R.O.W. BOUNDARY ON TOP OF ROCK CUTS. ALL STUMPS SHALL BE FLUSH CUT.
- IN ALL SITUATIONS, THE PAY LIMIT SHALL BE THE AREA ACTUALLY CLEARED.
- ALL BRANCHES TRIMMED WITHIN THE OFFSET DISTANCE SHALL BE PRUNED AS CLOSE TO THE TRUNK'S GROWTH COLLAR AS POSSIBLE.
- CONTRACTOR IS RESPONSIBLE FOR LIMITING DISTURBED AREAS DURING ALL CLEARING AND GRUBBING/TRIM CANOPY (TREE PRUNING) OPERATIONS. THE PROPOSED AREAS WERE NOT VALUATED AS DISTURBED AREAS AS PER THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL (SPOES) GENERAL PERMIT 0-08-001 FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. ALL DISTURBED AREAS RESULTING FROM CLEARING AND GRUBBING CONSTRUCTION ACTIVITIES SHALL BE RESTORED AS DIRECTED BY THE ENGINEER. COST IS TO BE INCLUDED IN THE CLEARING AND GRUBBING ITEM.
- TREE REMOVAL SHALL BE COMPLETED BY EITHER CLEARING AND GRUBBING OR CLEARING, FLUSH CUTTING METHODS, AS INDICATED ON PLANS. WHOLESALE CLEARING AND GRUBBING OF TREES SHALL NOT BE ALLOWED IN STATE PROTECTED WETLANDS, AND SHOULD BE AVOIDED AND MINIMIZED IN FEDERALLY PROTECTED WETLANDS WHENEVER POSSIBLE. THE CONTRACTOR SHALL TAKE CARE NOT TO FURTHER IMPACT STATE AND FEDERAL WETLANDS BEYOND WHAT IS REASONABLY NECESSARY TO CONDUCT CLEARING AND GRUBBING AND SELECTIVE TREE REMOVAL ACTIVITIES. ALL WETLAND AREAS SHOWN ON PLANS ADJACENT TO AND OUTSIDE OF CLEARING AND GRUBBING ZONES AND SELECTIVE TREE LOCATIONS SHALL BE LEFT UNDISTURBED TO PREVENT FURTHER IMPACTS, UNLESS OTHERWISE ALLOWED BY A PROJECT SPECIFIC ARMY CORP OF ENGINEERS OR NYSDEC WETLAND PERMIT. ACTIVITIES NOT TO ENCRUCH ON ADJACENT WETLANDS INCLUDE, BUT NOT LIMITED TO, MOVEMENT OF VEHICLES, CONSTRUCTION STAGING, DISPOSAL OF WOOD CHIPPINGS, PLACEMENT OF EROSION CONTROL FEATURES, AND SPREADING OF SPOILED SOIL. VEGETATION PROTECTION BARRIER FENCING, MAY BE NECESSARY IF THE ADJACENT AREAS ARE DEEMED ENVIRONMENTALLY SENSITIVE, A.O.B.E.
- ALL PROVISIONS OF SECTION 201 - CLEARING AND GRUBBING, NOT MODIFIED BY THIS DRAWING, SHALL APPLY.
- INDIVIDUAL TREE REMOVAL LISTED IN THE CONTRACT DOCUMENTS WILL BE PAID FOR UNDER ITEM 614.06XXXX. STUMPS LISTED FOR REMOVAL SHALL BE BACKFILLED TO FINISHED GRADE WITH TOPSOIL UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS. GRASS SHALL BE ESTABLISHED ON STUMP HOLES AND WILL BE PAID SEPARATELY.

ALTERED ON: _____ AFFIXED ON: _____

SIGNATURE: _____ STAMP: _____

SIGNATURE: *AMEERUDDIN ABDIL* STAMP: _____

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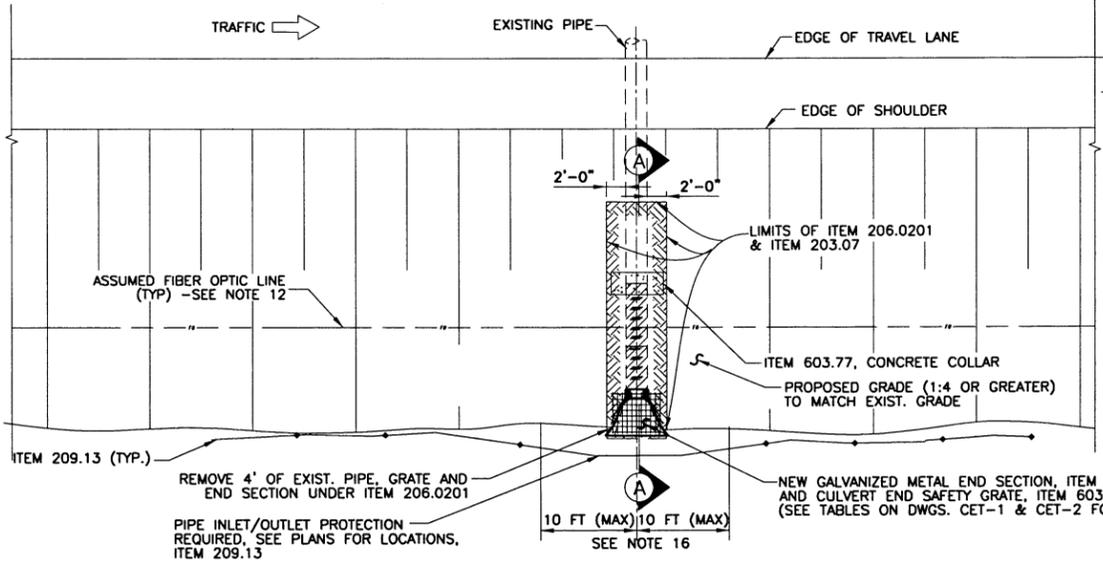
REVISIONS			
DATE	DESCRIPTION	BY	SYM.



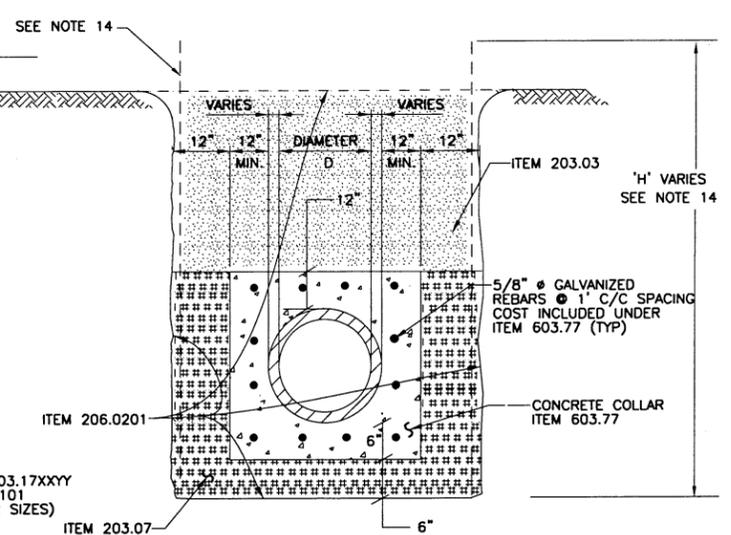
NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT: SAFETY UPGRADES, CULVERT EXTENTIONS, DRAINAGE IMPROVEMENTS, MISO. WORK
LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES
TITLE OF DRAWING: CLEARING AND GRUBBING

CONTRACT NUMBER: TAA 16-27R
DATE: 4/8/2016
DRAWING NUMBER: CLR-1



PLAN

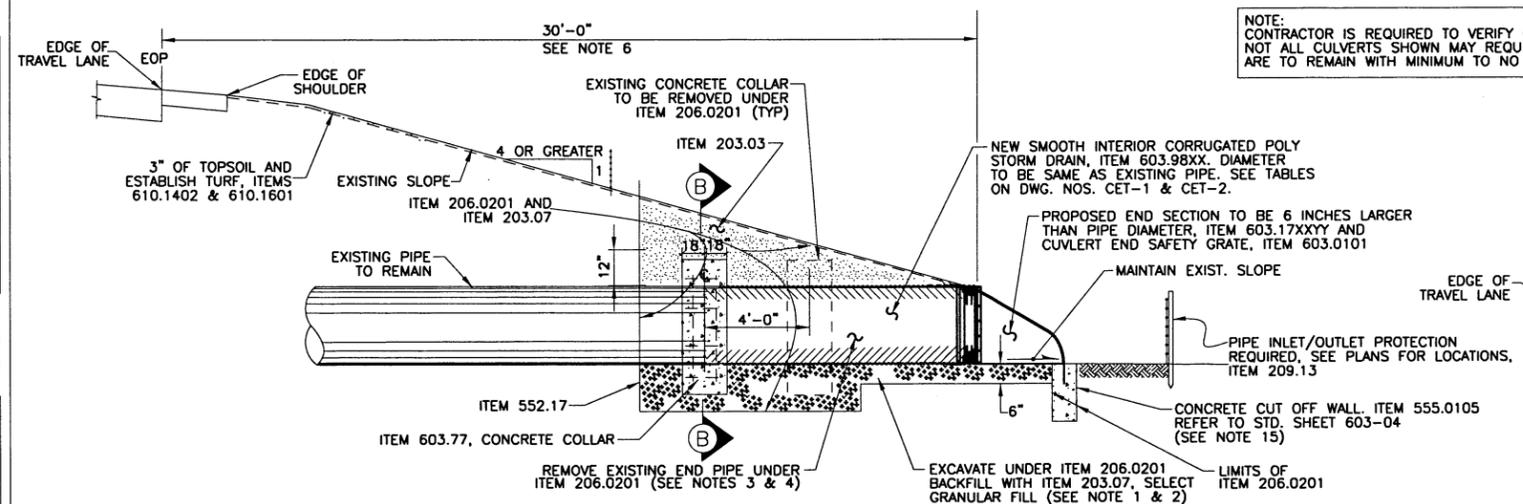


SECTION B-B
SCALE: N.T.S.

NOTES:

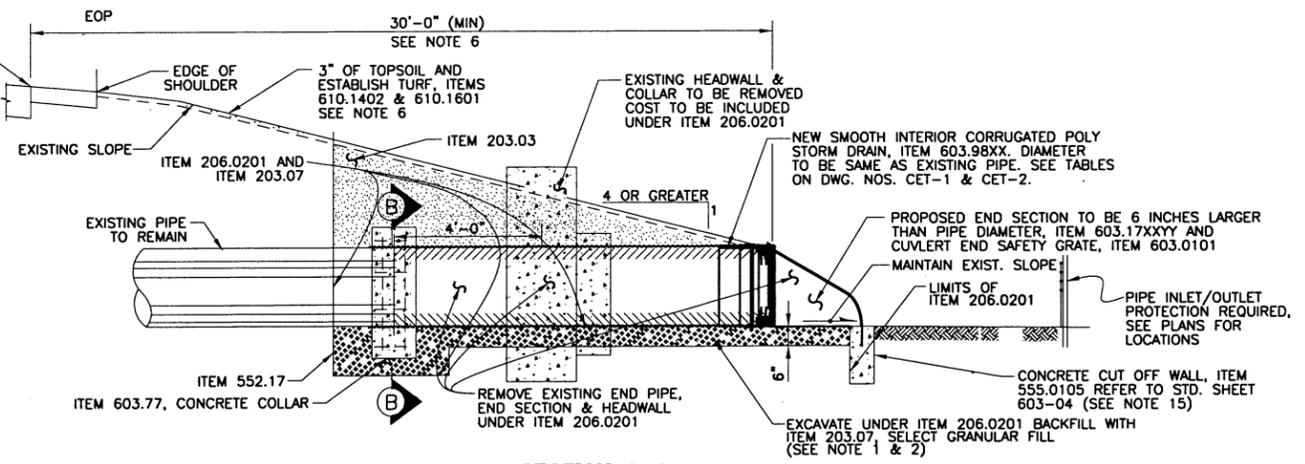
- WHEN REMOVING EXISTING CONCRETE COLLAR AND SAW CUTTING PIPE, IF ADDITIONAL SECTIONS OF PIPE ARE SEPARATED, THEY SHALL BE REMOVED A.O.B.E. EXCAVATION AND REMOVAL SHALL BE PAID FOR UNDER ITEM 206.0201. CONNECT NEW PIPE TO EXISTING WITH CONCRETE COLLAR, ITEM 603.77.
- WHEN BACKFILLING THE PROPOSED CULVERT EXTENSION, THE CONTRACTOR SHALL PLACE SELECT GRANULAR FILL - ITEM 203.07, AS DEFINED IN THE NYS DOT STANDARD SPECIFICATIONS AND AS NOTED ON THE NYS DOT STANDARD SHEETS.
- NOT ALL CULVERTS HAVE HEADWALLS. SEE TABLE ON DWGS. CET-1 & CET-2 FOR SPECIFIC LOCATIONS.
- WHEN REMOVING EXISTING COLLAR, IT IS ASSUMED THAT 4 FT OF EXISTING PIPE WILL BE REMOVED AS WELL.
- WHEN REMOVING EXISTING HEADWALLS, REMOVE 4 FT. OF EXISTING PIPE BEHIND THE COLLAR AS SHOWN ON THE PLANS. COST TO BE INCLUDED UNDER UNIT PRICE BID FOR ITEM 206.0201.
- ESTABLISH NEW SLOPE WITH ITEM 203.03. PLACE 3 INCHES OF TOPSOIL, ITEM 610.1402 AND ESTABLISH TURF, ITEM 610.1601, ALONG THE ENTIRE AREA OF THE FLATTENED SLOPE FROM THE E.O.S.
- CONTRACTOR SHALL VERIFY ALL PROPOSED CULVERT EXTENSION LENGTHS PRIOR TO INSTALLATION. EXTENSIONS MUST BE OF ADEQUATE LENGTH TO MATCH PROPOSED 1:4 SIDE SLOPE OR FLATTER. COST TO BE INCLUDED IN UNIT PRICE BID FOR ITEM 603.98XX.
- PLACE ITEM 209.13 AS DEFINED ON STANDARD SHEET 209-02 AND 209-04.
- COST FOR REMOVAL OF EXISTING END SECTION TO BE INCLUDED IN ITEM 206.0201. INSTALL NEW END SECTION UNDER ITEM 603.17XXYY, SEE TABLES ON DWGS. CET-1 & CET-2 FOR VARIOUS PAY ITEMS.
- THE CONTRACTOR SHALL SUBMIT PLANS OF PROPOSED ACCESS POINT LOCATIONS TO THE WORK SITES, ALONG WITH WZTC PLANS, AND OBTAIN APPROVAL FROM EIC PRIOR TO START OF ANY CONSTRUCTION OPERATIONS. COST TO BE INCLUDED IN VARIOUS ITEMS.
- FOR PIPE EXTENSION, SEE DETAIL THIS DRAWING AND TABLES ON DWG. SFWI
- THE THRUWAY'S FIBER OPTIC "BACKBONE" IS LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT. LOCATION SHOWN IS FOR INFORMATION PURPOSES ONLY AND NOT THE EXACT LOCATION. THE CONTRACTOR IS ADVISED TO CONTACT DIG SAFELY NY AT 1-800-962-7962 PRIOR TO ANY EXCAVATION OR CULVERT INSTALLATION.
- IF EXISTING PIPE IS DAMAGED, IT SHALL BE REPLACED IN KIND UPON E.I.C.'S APPROVAL. COST TO BE INCLUDED UNDER ITEM 603.98XX.
- SHIELDING AND SHORING, ITEM 552.17 TO BE USED AS NEEDED OR A.O.B.E.
- CUTOFF WALLS SHALL BE INSTALLED ON ALL PROPOSED END SECTIONS.
- THE PROPOSED TOE OF SLOPE SHALL BE EXTENDED 10' ON EITHER SIDE OF THE PIPE CENTERLINE, IN LINE WITH THE EDGE OF THE PROPOSED END SECTION, BEFORE THE 1:10 TAPER BEGINS ON EITHER SIDE.
- IT IS ESTIMATED THAT A FEW CULVERTS MAY REQUIRE CLEANING TO FACILITATE PROPER DRAINAGE (AVG. LENGTH 100' EACH). LOCATIONS TO BE FIELD VERIFIED AND APPROVED BY E.I.C. COST INCLUDED UNDER ITEM 621.01.

NOTE:
CONTRACTOR IS REQUIRED TO VERIFY CONDITIONS OF PIPES PRIOR TO ANY WORK SINCE NOT ALL CULVERTS SHOWN MAY REQUIRE PIPE REPLACEMENTS. PIPES IN GOOD CONDITION ARE TO REMAIN WITH MINIMUM TO NO WORK REQUIRED A.O.B.E. (TYP)



SECTION A-A

TYPICAL PIPE & END SECTION REPLACEMENT (TYPE-A)
(MAINTAINING EXISTING SLOPE)
SCALE: N.T.S.



SECTION A-A

PIPE & END SECTION REPLACEMENTS WITH EXISTING HEADWALL REMOVAL (TYPE-B)
(MAINTAINING EXISTING SLOPE)
SCALE: N.T.S.

ALTERED ON: _____

AFFIXED ON: 9/20/2016

SIGNATURE: _____

STAMP: _____

ITEM NO.	DESCRIPTION	UNIT	ITEM NO.	DESCRIPTION	UNIT
ITEM 203.03	EMBANKMENT IN PLACE	CY	ITEM 603.17XXYY	GALVANIZED STEEL END SECTIONS-PIPE (2-2/3" X 1/2" CORR.)	EA
ITEM 203.07	SELECT GRANULAR FILL	CY	ITEM 603.77	CONCRETE COLLARS	EA
ITEM 206.0201	TRENCH & CULVERT EXCAVATION	CY	ITEM 603.98XX	SMOOTH INTERIOR CORR POLY CULVERT AND STORM DRAIN PIPE	LF
ITEM 209.13	SILT FENCE - TEMPORARY	LF	ITEM 610.1402	TOPSOIL - ROADSIDE	CY
ITEM 552.17	SHIELDING AND SHORING	SF	ITEM 610.1601	TURF ESTABLISHMENT - ROADSIDE	SF
ITEM 555.0105	CONCRETE FOR STRUCTURES, CLASS A	CY	ITEM 621.01	CLEANING CULVERTS WITH SPAN OF 50 IN. OR LESS	LS
ITEM 603.0101	CULVERT END SAFETY GRATE	SF	ITEM 617.11000024	EQUIPMENT CLEANING FOR INVASIVE PLANT SPECIES	LS

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REVISIONS

DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT:
SAFETY UPGRADES, CULVERT EXTEN.
DRAINAGE & MISCELLANEOUS WORK

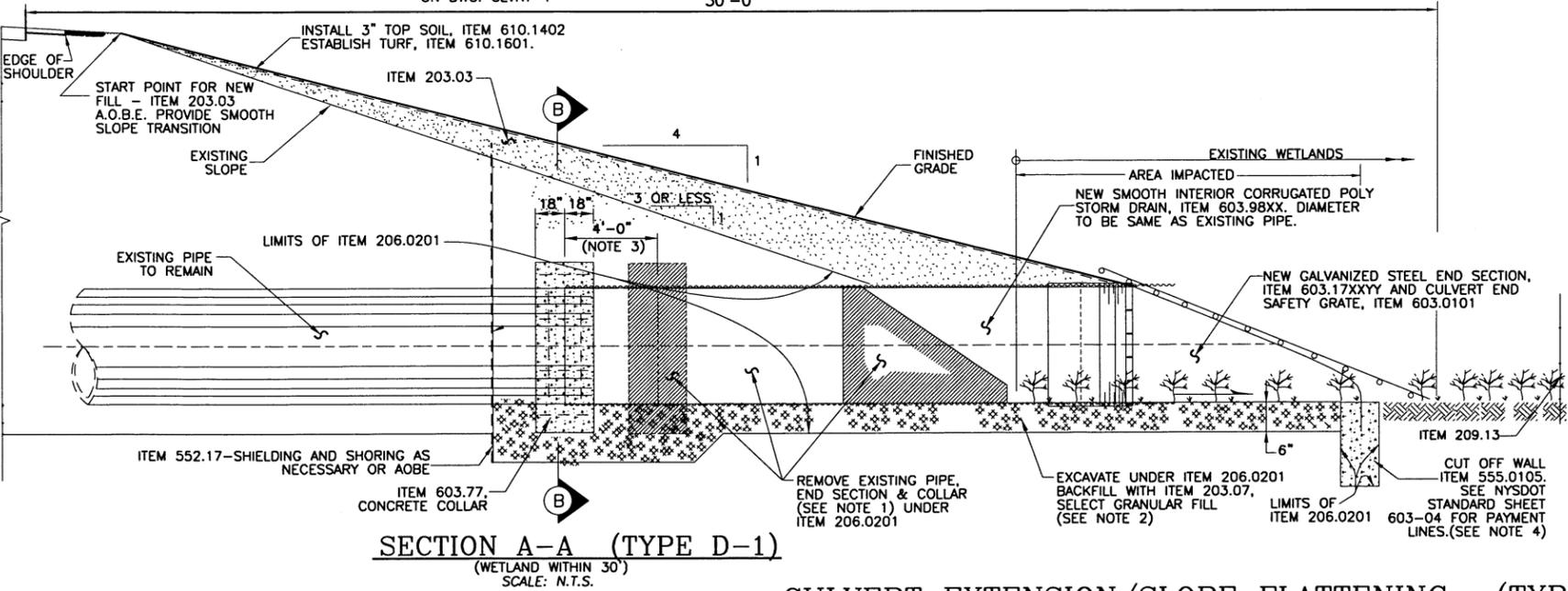
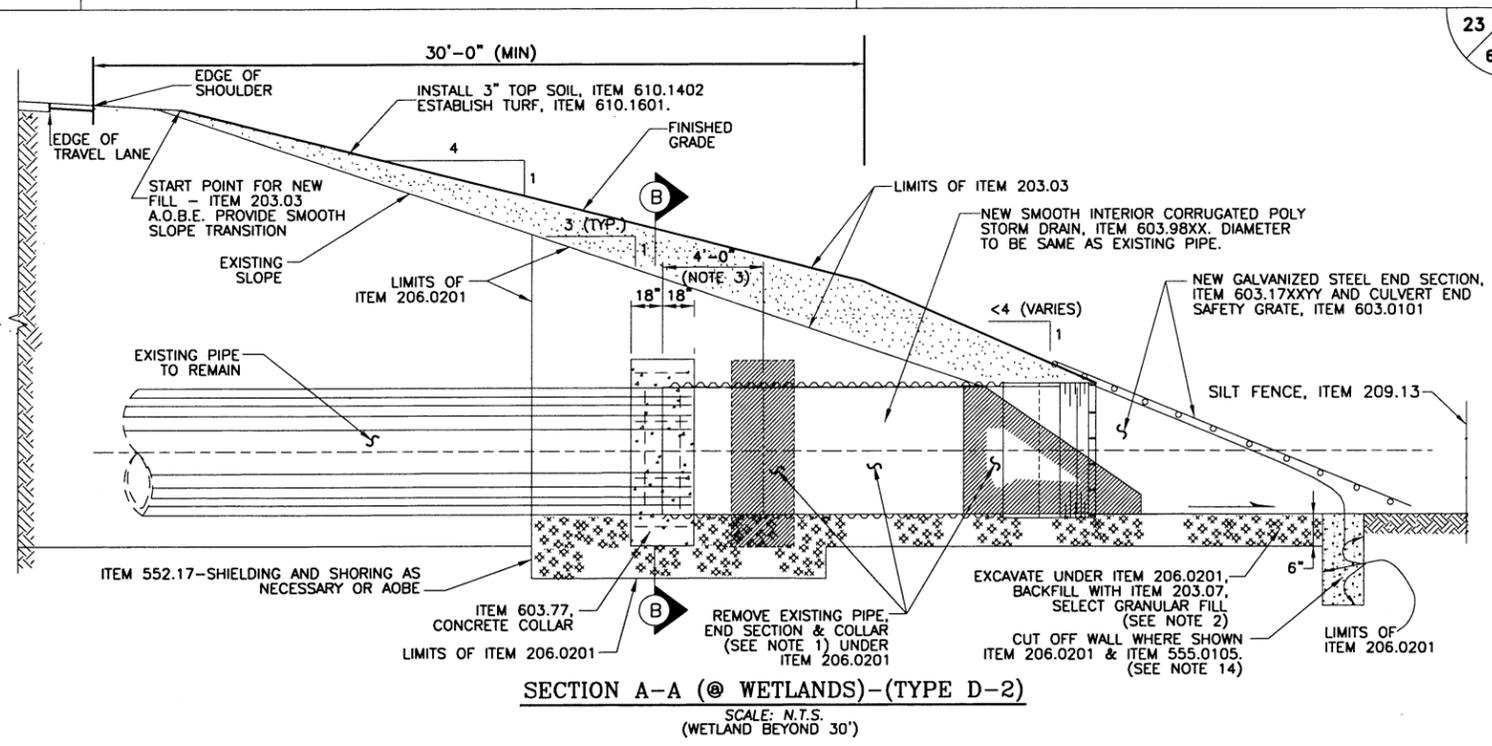
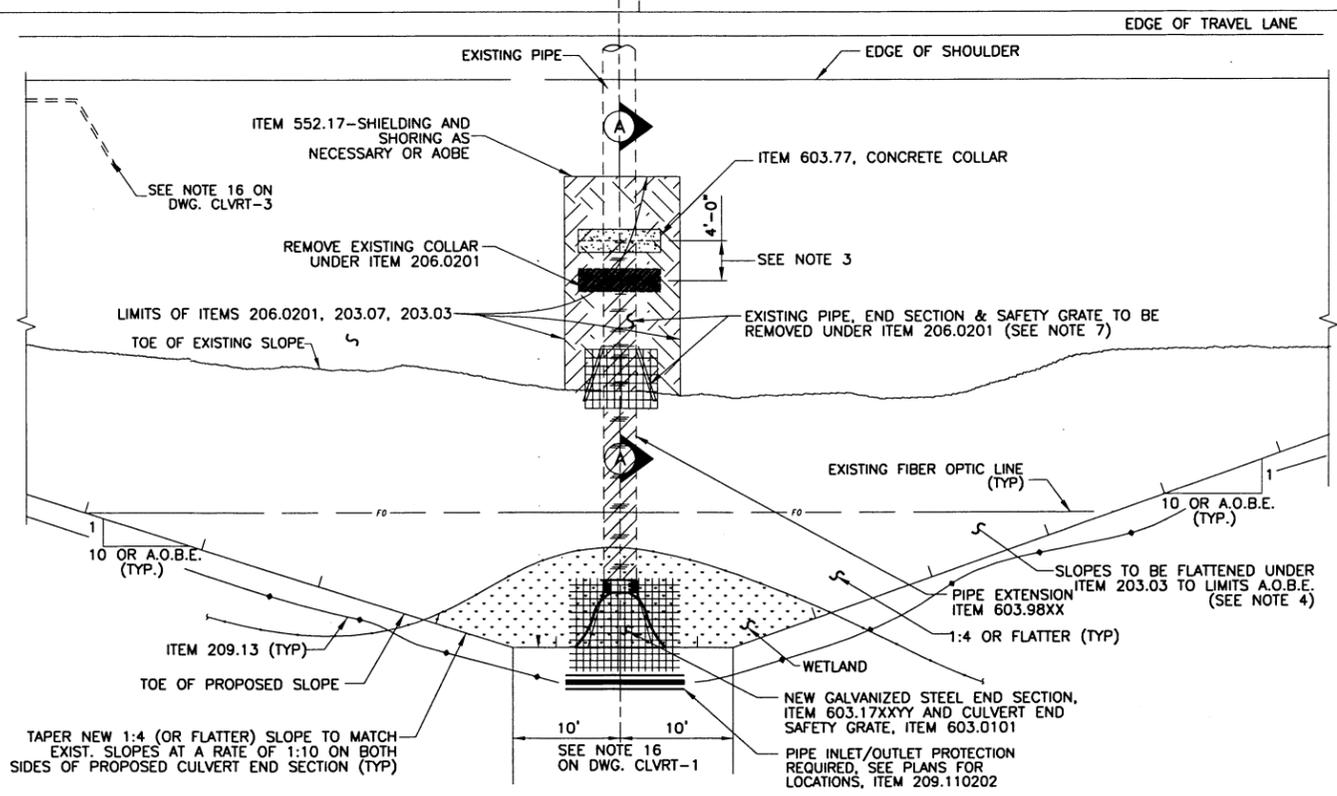
LOCATION OF PROJECT:
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES

TITLE OF DRAWING:
CULVERT EXTENSION

CONTRACT NUMBER:
TAA 16-27R

DATE:
04/16/16

DRAWING NUMBER:
CLVRT-1



NOTES:
A. REFERENCES TO NOTES ON THIS DRAWING CAN BE FOUND ON DRAWING CLVRT-1.
B. REFER TO DWG. CLVRT-1 FOR "SECTION B-B" DETAILS.

CULVERT EXTENSION/SLOPE FLATTENING- (TYPE D-1)
(WETLAND WITHIN 30')
SCALE: N.T.S.

ALTERED ON:	AFFIXED ON:	ITEM NO.	DESCRIPTION	UNIT	ITEM NO.	DESCRIPTION	UNIT
	9/20/2016	ITEM 203.03	EMBANKMENT IN PLACE	CY	ITEM 603.17XXYY	GALVANIZED STEEL END SECTIONS-PIPE (2-2/3" X 1/2" CORR.)	EA
		ITEM 203.07	SELECT GRANULAR FILL	CY	ITEM 603.77	CONCRETE COLLARS	EA
		ITEM 206.0201	TRENCH & CULVERT EXCAVATION	CY	ITEM 603.98XX	SMOOTH INTERIOR CORR POLY CULVERT AND STORM DRAIN PIPE	LF
		ITEM 209.13	SILT FENCE - TEMPORARY	CY	ITEM 610.1402	TOPSOIL - ROADSIDE	CY
		ITEM 552.17	SHIELDING AND SHORING	SY	ITEM 610.1601	TURF ESTABLISHMENT - ROADSIDE	SF
		ITEM 555.0105	CONCRETE FOR STRUCTURES, CLASS A	SF	ITEM 621.01	CLEANING CULVERTS WITH SPAN OF 50 IN. OR LESS	LF
		ITEM 603.0101	CULVERT END SAFETY GRATE	CY			

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REVISIONS			
DATE	DESCRIPTION	BY	SYM.



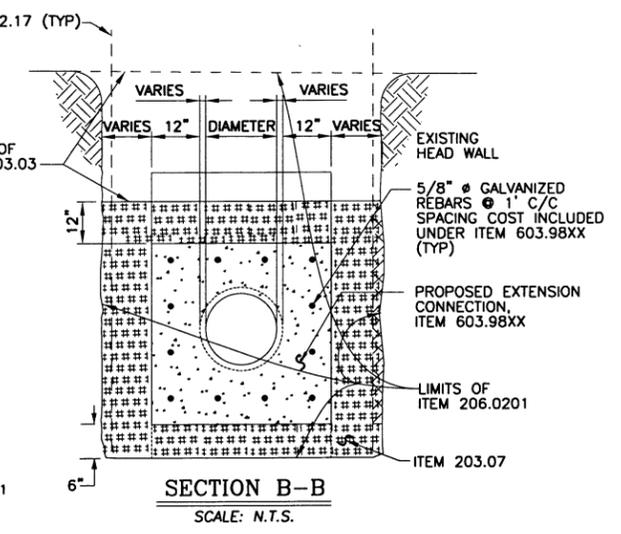
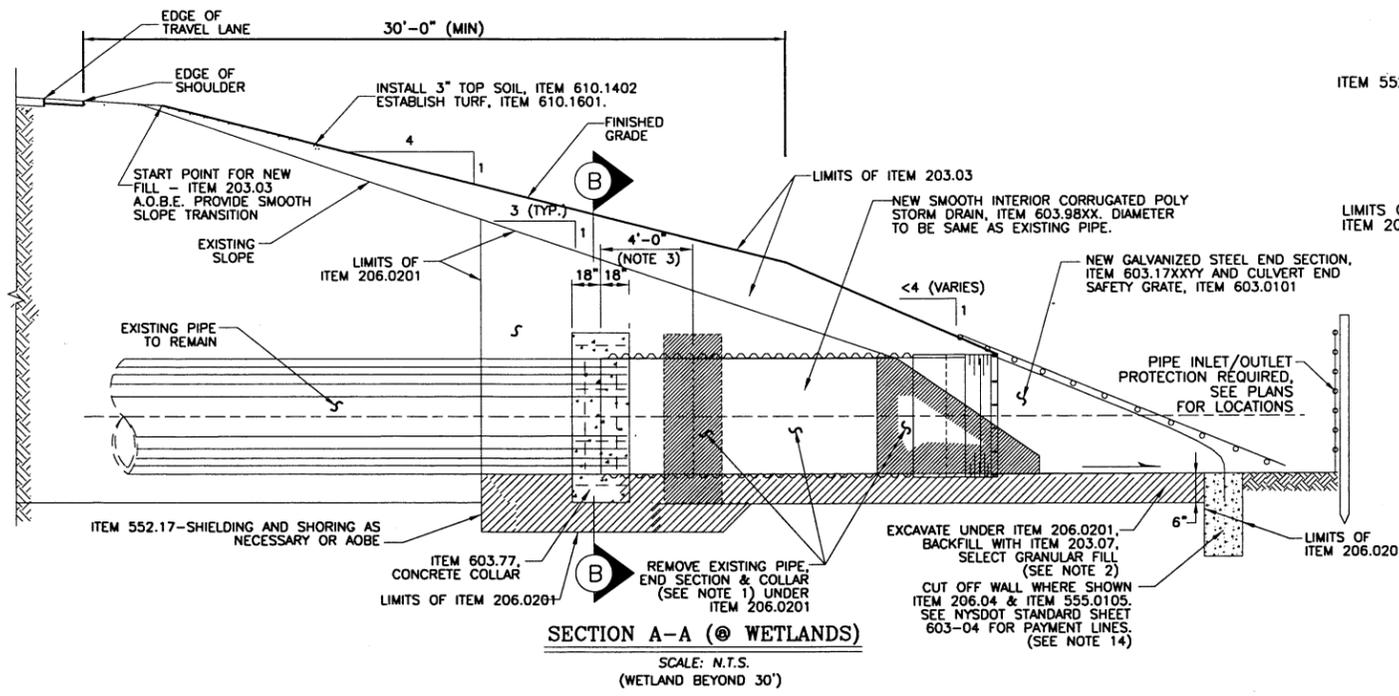
NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT: SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES
TITLE OF DRAWING: CULVERT EXTENSION

CONTRACT NUMBER: TAA 16-27R
DATE: 04/16/16
DRAWING NUMBER: CLVRT-2



DESIGNED BY: TA
CHECKED BY: TA
DRAFTED BY: TA
DESIGN SUPERVISOR: TA



- NOTES:**
1. WHEN REMOVING EXISTING CONCRETE COLLAR AND SAW CUTTING PIPE, IF ADDITIONAL SECTIONS OF PIPE ARE SEPERATED, THEY SHALL BE REMOVED A.O.B.E. EXCAVATION AND REMOVAL SHALL BE PAID FOR UNDER ITEM 206.0201.
 2. WHEN BACKFILLING THE PROPOSED CULVERT EXTENSION, THE CONTRACTOR SHALL PLACE SELECT GRANULAR FILL - ITEM 203.07, AS DEFINED IN THE NYSDOT STANDARD SPECIFICATIONS AND AS NOTED ON THE NYSDOT STANDARD SHEETS.
 3. NOT ALL CULVERTS HAVE HEADWALLS. SEE TABLE ON DWGS. GNP-1 THRU GNP-18 FOR SPECIFIC LOCATIONS.
 4. ESTABLISH NEW SLOPE WITH ITEM 203.03. PLACE 3 INCHES OF TOPSOIL, ITEM 610.1402 AND ESTABLISH TURF, ITEM 610.1601 ALONG ENTIRE LENGTH OF THE FLATTENED SLOPE (TYP) FROM THE E.O.S.
 5. CONTRACTOR SHALL VERIFY ALL PROPOSED CULVERT EXTENSION LENGTHS PRIOR TO INSTALLATION. EXTENSIONS MUST BE OF ADEQUATE LENGTH TO MATCH PROPOSED 1:4 SIDE SLOPE OR FLATTER. PAID FOR UNDER ITEM 603.98XX.
 6. PLACE ITEM 209.13 AS DEFINED ON STANDARD SHEET 209-04 AND 209-02.
 7. COST FOR REMOVAL OF EXISTING END SECTION TO BE INCLUDED IN ITEM 206.0201. INSTALL NEW END SECTION UNDER ITEM 603.17XXYY, SEE TABLE FOR LENGTH AND SIZES.
 8. THE CONTRACTOR SHALL SUBMIT PLANS OF PROPOSED ACCESS POINT LOCATIONS TO THE WORK SITES, ALONG WITH WZTC PLANS, AND OBTAIN APPROVAL FROM EIC PRIOR TO START OF ANY CONSTRUCTION OPERATIONS. COST TO BE INCLUDED IN VARIOUS ITEMS.
 9. FOR PIPE EXTENSION, SEE DETAIL THIS DWG. AND TABLES ON DWG. CET-1/ CET-2
 10. THE THRUWAY'S FIBER OPTIC "BACKBONE" IS LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT. THE APPROXIMATE LOCATION IS SHOWN ON THE DRAWINGS. THE CONTRACTOR IS ADVISED TO CONTACT DIG SAFELY NY AT 1-800-962-7962 PRIOR TO ANY EXCAVATION AND/OR CULVERT INSTALLATION.
 11. IF EXISTING PIPE IS DAMAGED, IT SHALL BE CUT OFF A.O.B.E. COST TO BE INCLUDED IN ITEM 603.98XX.
 12. SHIELDING AND SHORING, ITEM 552.17 TO BE USED AS NEEDED A.O.B.E.
 13. NEW 18" WIDE CONCRETE COLLAR WITH DOWELS FOR CONNECTING PIPE EXTENSION TO EXIST. PIPE SHALL BE PAID FOR UNDER ITEM 603.77.
 14. THE PROPOSED TOE OF SLOPE SHALL BE EXTENDED 10' ON EITHER SIDE OF THE PIPE CENTERLINE, IN LINE WITH THE EDGE OF THE PROPOSED END SECTION, BEFORE THE 1:10 TAPER BEGINS.
 15. CUTOFF WALLS SHALL BE INSTALLED ON ALL PROPOSED END SECTIONS.

FILED
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA

ALTERED ON:	AFFIXED ON:	ITEM NO.	DESCRIPTION	UNIT	ITEM NO.	DESCRIPTION	UNIT
	9/20/2016	ITEM 203.03	EMBANKMENT IN PLACE	CY	ITEM 603.17XXYY	GALVANIZED STEEL END SECTIONS-PIPE (2-2/3" X 1/2" CORR.)	EA
		ITEM 203.07	SELECT GRANULAR FILL	CY	ITEM 603.77	CONCRETE COLLARS	EA
		ITEM 206.0201	TRENCH & CULVERT EXCAVATION	CY	ITEM 603.98XX	SMOOTH INTERIOR CORR POLY CULVERT AND STORM DRAIN PIPE	LF
		ITEM 209.13	SILT FENCE - TEMPORARY	CY	ITEM 610.1402	TOPSOIL - ROADSIDE	CY
		ITEM 552.17	SHIELDING AND SHORING	SY	ITEM 610.1601	TURF ESTABLISHMENT - ROADSIDE	SF
		ITEM 555.0105	CONCRETE FOR STRUCTURES, CLASS A	SF	ITEM 621.01	CLEANING CULVERTS WITH SPAN OF 50 IN. OR LESS	LF
		ITEM 603.0101	CULVERT END SAFETY GRATE	CY			



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REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING 200 SOUTHERN BLVD., ALBANY, N.Y. 12209	TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
	LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 04/16/16
	TITLE OF DRAWING CULVERT EXTENSION	DRAWING NUMBER: CLVRT-3

FILED BY: TA
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA

NORTHBOUND CULVERT EXTENSION TABLE																		
CULVERT NO.	MILEPOST	PIPE DIA.	DRAWING NUMBER	ITEM 203.03: EMBANKMENT IN PLACE CY	ITEM 203.07: SELECT GRANULAR FILL CY	ITEM 206.0201: TRENCH & CULVERT EXCAVATION O.G. CY	ITEM 552.17: SHIELDING & SHORING SF	ITEM 555.0105 - CONCRETE FOR STRUCTURES, CLASS A CY	ITEM 603.0101: CULVERT END SAFETY GRATES SF	ITEM 603.171116: GALVANIZED STEEL END SECTION 15" EA	ITEM 603.171316: GALVANIZED STEEL END SECTION 21" EA	ITEM 603.171614: GALVANIZED STEEL END SECTION 30" EA	ITEM 603.77: CONCRETE COLLARS EA	ITEM 603.9812: SICP CULVERT PIPE, 12" DIAMETER LF	ITEM 603.9818: SICP CULVERT PIPE, 18" DIAMETER LF	ITEM 603.9824: SICP CULVERT PIPE, 24" DIAMETER LF	ITEM 610.1402: TOPSOIL - ROADSIDE CY	ITEM 610.1601: TURF ESTABLISHMENT - ROADSIDE SY
C-10	101.81	24"	GNP-4	1165.6	2.4	4.6	182	0.9	40.0	-	-	1.0	1.0	-	-	22.0	97.1	873.7
C-28	103.65	18"	GNP-8	3.7	0.5	0.7	55	0.6	30.0	-	1.0	-	1.0	-	5.0	-	-	-
C-63	106.61	12"	GNP-13	1.3	0.7	2.0	83	0.5	20.0	1.0	-	-	1.0	8.0	-	-	7.6	68.7
C-64	106.64	12"	GNP-13	466.3	1.5	6.5	130	0.5	20.0	1.0	-	-	1.0	16.0	-	-	72.8	655.0
NB TOTAL				1636.9	5.1	13.8	450.0	2.6	110.0	2.0	1.0	1.0	4.0	24.0	5.0	22.0	177.5	1597.4

SOUTHBOUND CULVERT EXTENSION TABLE																			
CULVERT NO.	MILEPOST	PIPE DIA.	DRAWING NUMBER	ITEM 203.03: EMBANKMENT IN PLACE CY	ITEM 203.07: SELECT GRANULAR FILL CY	ITEM 206.0201: TRENCH & CULVERT EXCAVATION O.G. CY	ITEM 552.17: SHIELDING & SHORING SF	ITEM 555.0105 - CONCRETE FOR STRUCTURES, CLASS A CY	ITEM 603.0101: CULVERT END SAFETY GRATES SF	ITEM 603.171116: GALVANIZED STEEL END SECTION 15" EA	ITEM 603.171316: GALVANIZED STEEL END SECTION 21" EA	ITEM 603.171614: GALVANIZED STEEL END SECTION 30" EA	ITEM 603.77: CONCRETE COLLARS EA	ITEM 603.9812: SICP CULVERT PIPE, 12" DIAMETER LF	ITEM 603.9818: SICP CULVERT PIPE, 18" DIAMETER LF	ITEM 603.9824: SICP CULVERT PIPE, 24" DIAMETER LF	ITEM 610.1402: TOPSOIL - ROADSIDE CY	ITEM 610.1601: TURF ESTABLISHMENT - ROADSIDE SY	
C-119	103.82	24"	GNP-8	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
SB TOTAL				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ALTERED ON:	AFFIXED ON: 9/20/2016
SIGNATURE: STAMP:	

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REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT:
SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK

LOCATION OF PROJECT:
**MP 100.8 TO 109.3
ULSTER & GREENE COUNTIES**

TITLE OF DRAWING:
CULVERT EXTENTION TABLES

CONTRACT NUMBER:
TAA 16-27R

DATE:
3/25/15

DRAWING NUMBER:
CET-1

FILED
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA

SUMMARY CULVERT EXTENSION TABLE															
DIRECTION	ITEM 203.03: EMBANKMENT IN PLACE	ITEM 203.07: SELECT GRANULAR FILL	ITEM 206.0201: TRENCH & CULVERT EXCAVATION O.G.	ITEM 552.17: SHIELDING & SHORING	ITEM 555.0105 - CONCRETE FOR STRUCTURES, CLASS A	ITEM 603.0101: CULVERT END SAFETY GRATES	ITEM 603.171116: GALVANIZED STEEL END SECTION 15"	ITEM 603.171316: GALVANIZED STEEL END SECTION 21"	ITEM 603.171614: GALVANIZED STEEL END SECTION 30"	ITEM 603.77: CONCRETE COLLARS	ITEM 603.9812: SICP CULVERT PIPE, 12" DIAMETER	ITEM 603.9818: SICP CULVERT PIPE, 18" DIAMETER	ITEM 603.9824: SICP CULVERT PIPE, 24" DIAMETER	ITEM 610.1402: TOPSOIL - ROADSIDE	ITEM 610.1601: TURF ESTABLISHMENT - ROADSIDE
	CY	CY	CY	SF	CY	SF	EA	EA	EA	EA	EA	LF	LF	CY	SY
NB	1,636.9	5.1	13.8	450.0	2.6	110.0	2.0	1.0	1.0	4.0	24.0	5.0	22.0	177.5	1,597.4
SB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS	1,636.9	5.1	13.8	450.0	2.6	110.0	2.0	1.0	1.0	4.0	24.0	5.0	22.0	177.5	1,597.4

ITEM 203.5120_25: GRADING, CLEANING & RESHAPING DITCHES (LF)				
MILEPOST	N.B.(RT)	S.B.(RT)	MEDIAN	TOTAL
100.8	150			150
100.98			300	300
101.25	200			200
101.42	200			200
102.26	50			50
103.28		75		75
103.63	30			30
104.25	40			40
104.4	30			30
104.58	30			30
104.7	60			60
105.38	50			50
105.71	10			10
106.61			30	30
106.75		250		250
107.38	50			50
107.48	25			25
107.86	100			100
108		80		80
108.51		50		50
108.64		50		50
TOTAL (LF) =				1860

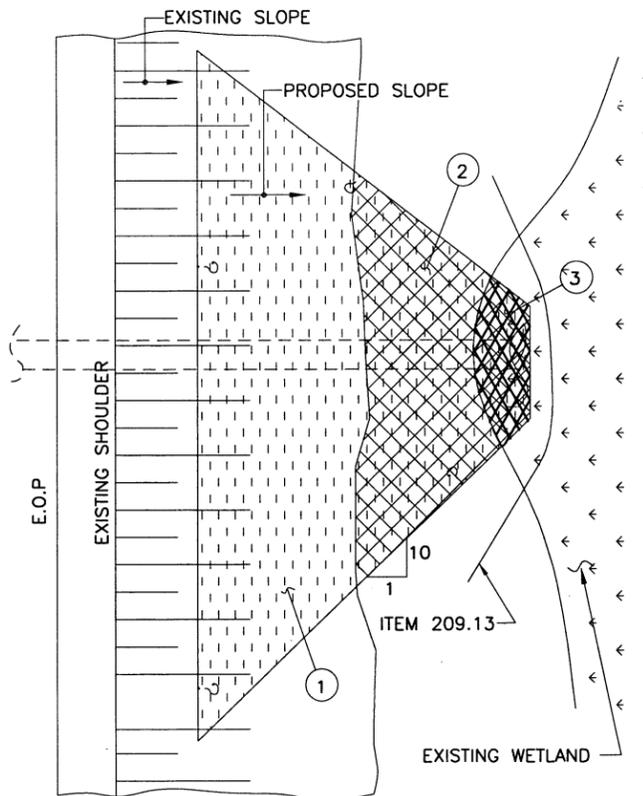
TABLE OF SILT FENCE						
SIDE	CULVERT	M.P.	TO	M.P.	DRAWING NO(S).	ITEM 209.13 (FT)
NB	C-10	101.768	-	101.830	GNP-4	330
NB	C-28	103.630	-	103.632	GNP-8	90
NB	C-63 & C-64	106.603		106.650	GNP-13	380
TOTAL						800

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REVISIONS			
DATE	DESCRIPTION	BY	SYM.

	NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING 200 SOUTHERN BLVD., ALBANY, N.Y. 12209	TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
	LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 3/25/15	DRAWING NUMBER: CET-2
	TITLE OF DRAWING CULVERT EXTENSION TABLES		



- ① OVERALL DISTURBED AREA DUE TO SLOPE FLATTENING
- ① FOOTPRINTS OF DISTURBED AREA BEYOND EXISTING SLOPE
- ③ WETLAND AREA IMPACTED

TYPICAL PLAN OF DISTURBED AREA
N.T.S

I-90 MP 100.8 to MP 109.3 SAFETY UPGRADES-WETLAND IMPACTS & DISTURBED AREAS - NORTH BOUND												
WETLAND IMPACT DUE TO SLOPE FLATTENING AND/ OR CULVERT EXTENSION												
TYPE OF WORK	M.P. LOCATION	SIDE	WORK DESCRIPTION	APPROXIMATE	APPROXIMATE	BARNROOF SLOPE	LENGTH OF CULVERT (FT)		TOTAL AREA DISTURBED		WETLAND AREA IMPACTED	
				EXISTING SLOPE	PROPOSED SLOPE		REMOVED	INSTALLED	AREA (SF)	ACRES ①	AREA (SF)	ACRES ③
FLATTENING		R=RIGHT L=LEFT	SF= SLOPE FLATTENING CE= CULVERT EXTEN.									
C-10 - N.B.	101.81	R	SF+CE	1 ON 2.30	1 ON 4	N/A	14	22	7864	0.181	2598	0.060
C-28 - N.B.	103.65	R	SF+CE	1 ON 3.74	1 ON 4	N/A	4	5	2462	0.057	0	0.000
C-63 - N.B.	106.64	R	SF+CE	1 ON 3.99	1 ON 4	N/A	8	8	618	0.014	0	0.000
C-64 - N.B.	106.65	R	SF+CE	1 ON 2.67	1 ON 3.5	N/A	8	16	5895	0.135	0	0.000
									16839	0.387	2598	0.060
TOTAL AREA (ACRES) =									DISTURBED	0.387	IMPACTED	0.060

AREAS OF ANTICIPATED WETLAND IMPACTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR IS REQUIRED TO PERFORM WORK WITHIN THE AREAS CALCULATED AND NOT EXCEED THE AREAS BEYOND WHAT IS SPECIFIED FOR EACH LOCATION IN THE TABLE ABOVE.

ALTERED ON:	AFFIXED ON: 9/20/2016
SIGNATURE: STAMP:	SIGNATURE: STAMP:

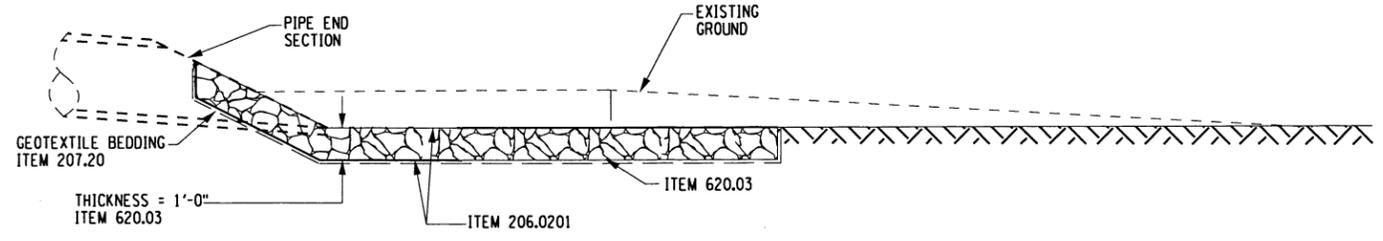
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REVISIONS			
DATE	DESCRIPTION	BY	SYM.

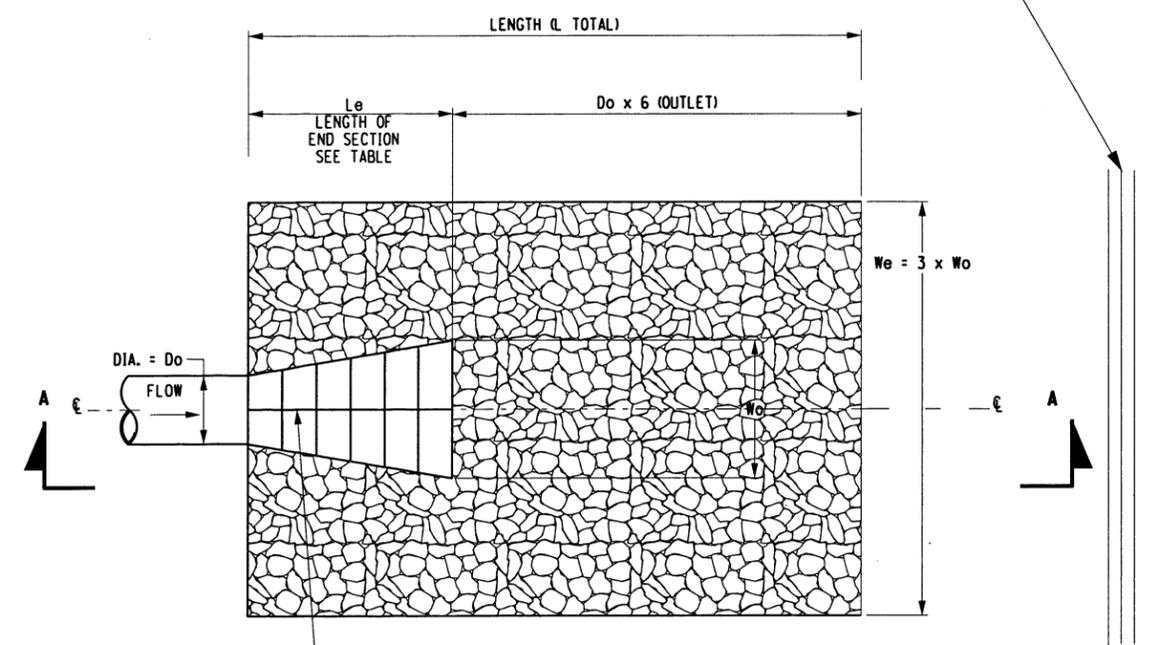
	NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING 200 SOUTHERN BLVD., ALBANY, N.Y. 12209	TITLE OF PROJECT SAFETY UPGRADE, CULVERT EXCAVATION, DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
		LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 03/24/15
		TITLE OF DRAWING SLOPE FLATTENING TABLE	DRAWING NUMBER: SFLWL-1

CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA

CHECK DAM-TEMPORARY
ITEM 209.110202 (TYP)

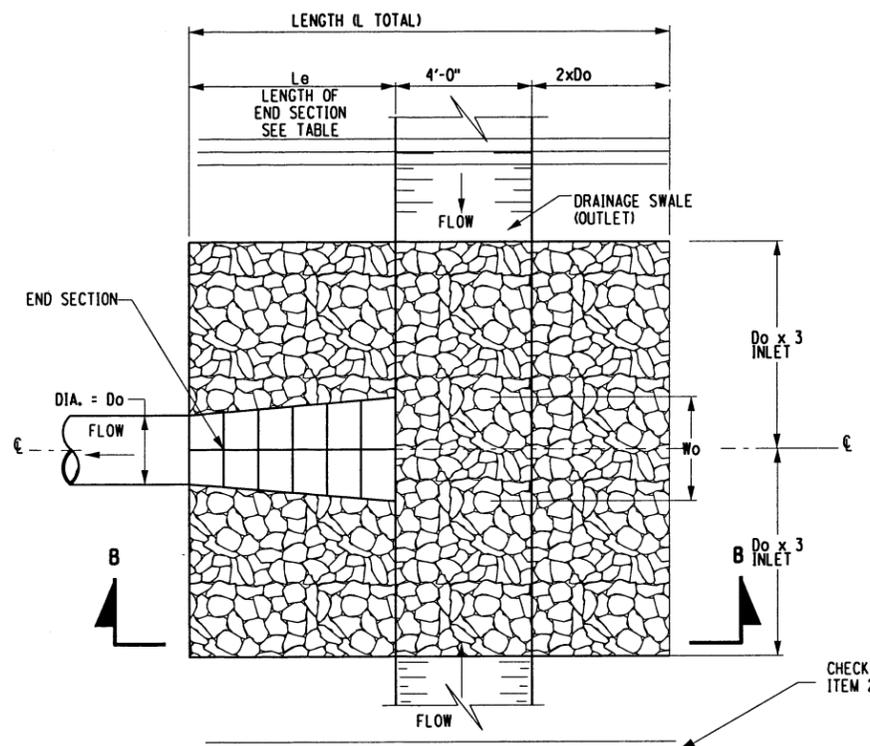


**CULVERT APRON
SECTION A-A**
N.T.S

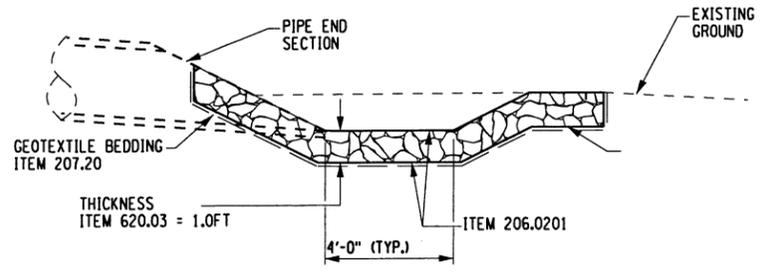


CULVERT APRON (OUTLET) - TYPE 1
N.T.S

TABLE OF CHECK DAMS	
LOCATION	ITEM 209.110201 (EA)
C-10	1
C-63	1
C-64	1
C-119	1
TOTAL =	4



CULVERT APRON (INLET) - TYPE 2
N.T.S



**CULVERT APRON
SECTION B-B**
N.T.S

STONE APRON QUANTITIES									
LOCATION	DIAMETER (IN)	CULVERT TYPE	MATERIAL TYPE	Wo	Le	TOTAL AREA (SF)	ITEM 206.0201 (CY)	ITEM 207.20 (SY)	ITEM 620.03 (CY)
TABLE OF STONE APRONS- OUTLET									
C10	24	1	LIGHT STONE	68	41	262.08	9.71	30.12	9.71
C-28	18	1		36	31	104.25	3.86	12.58	3.86
C63	12	1		24	21	46.50	1.72	6.17	1.72
C64	12	1		24	21	46.50	1.72	6.17	1.72
TABLE OF STONE APRONS- INLET									
C119	24	2		68	41	137	5.07	16.22	5.07
TOTAL=				596.33	22.09	71.26	22.09		

ALTERED ON: _____ AFFIXED ON: 9/22/2016

SIGNATURE: _____ SIGNATURE: AMERUDDIN AUDI
STAMP: _____

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REVISIONS			
DATE	DESCRIPTION	BY	SYM.

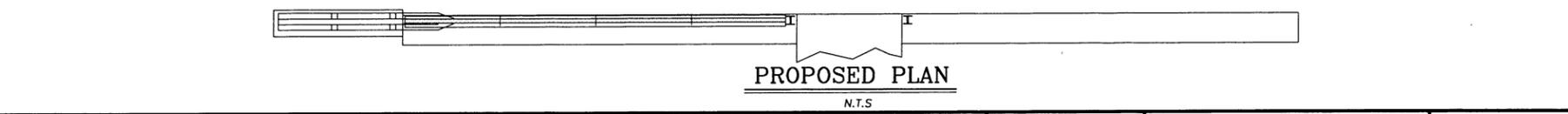
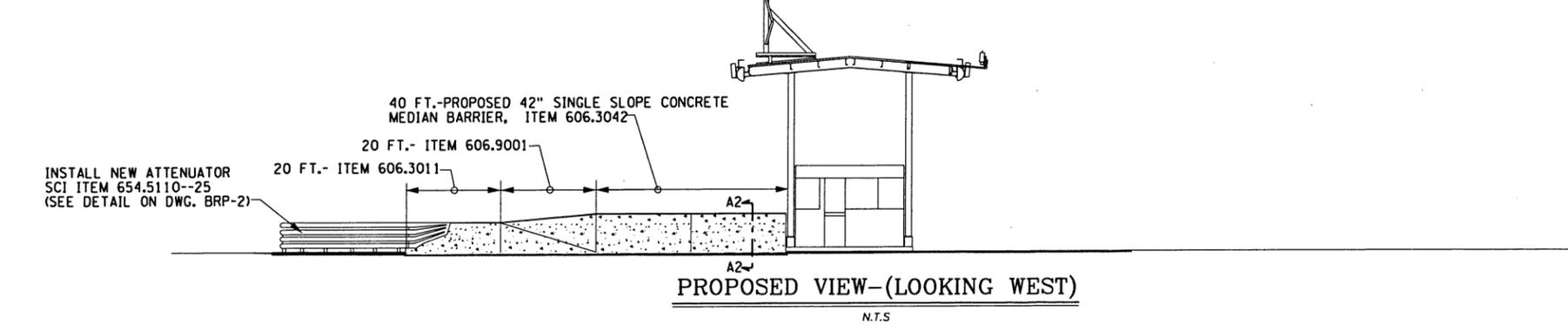
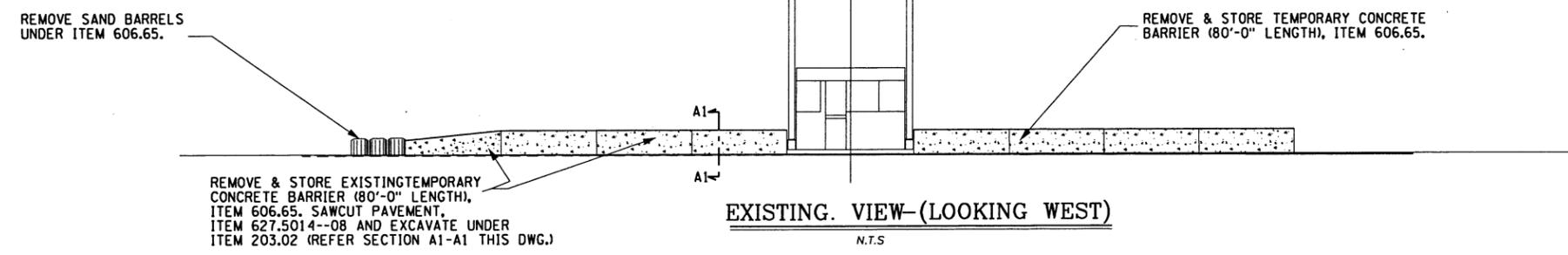
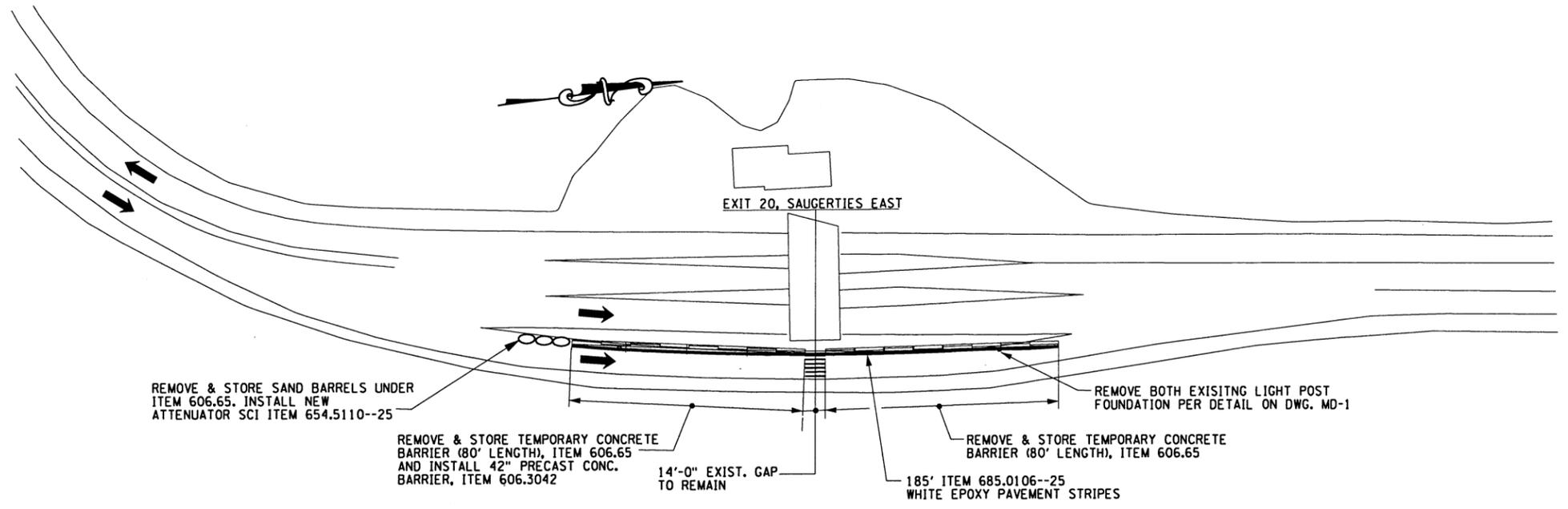
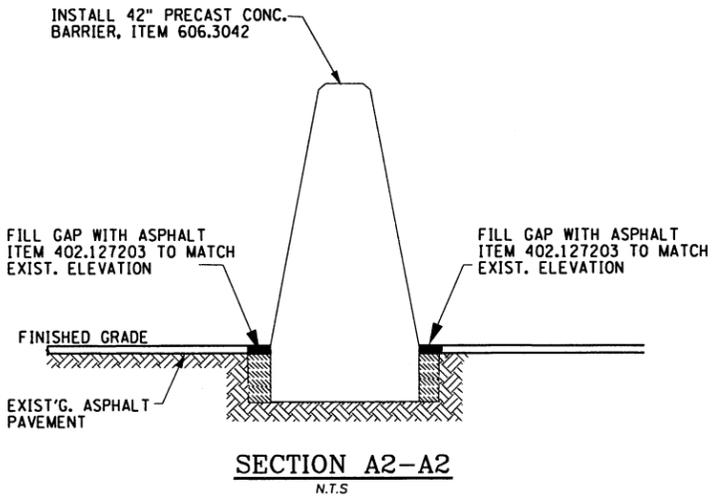
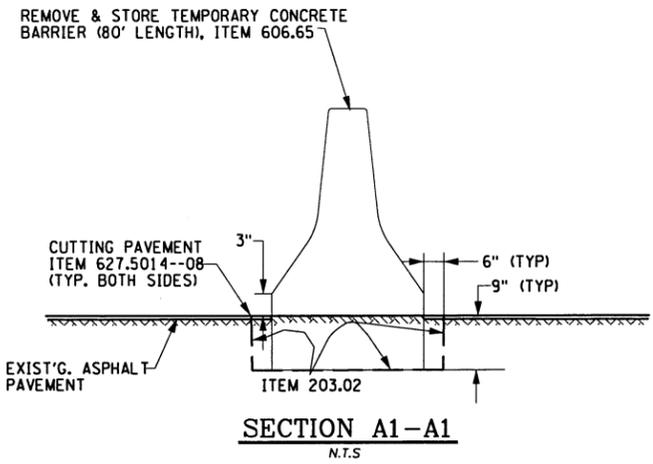


NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT: SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT: MP 100.8 TO MP 109.3 LOCATION OF PROJECT LINE 2
TITLE OF DRAWING: CULVERT APRONS

CONTRACT NUMBER: TAA 16-27R
DATE: 04/15/15
DRAWING NUMBER: DRD-1

CHECKED BY: TA
 DRAFTED BY: A.AUDIL
 CHECKED BY: TA
 DESIGNED BY: A.AUDIL
 DESIGN SUPERVISOR: TA



ITEM	DESCRIPTION
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL
203.03	EMBANKMENT IN PLACE
402.127203	12.5 F2 TOP COURSE HMA, 70 SERIES COMPACTION
606.3011	STD. CONCRETE JERSEY BARRIER (PRE-CAST)
606.3042	SINGLE SLOPE CONCRETE MEDIAN BARRIER (PRECAST)
606.65	REMOVE AND STORE CONCRETE BARRIER
606.9001	TRANSITION BETWEEN STD. JERSEY BARRIER & 42" CONC. BARRIER
627.5014--08	CUTTING PAVEMENT
654.5110--25	REUSABLE ATTENUATOR, TL2, ≤ 2 FT. OBSTRUCTION WIDTH
685.0106--25	WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES, 6" x 15 MIL

ALTERED ON: _____ AFFIXED ON: 9/24/2016

SIGNATURE: _____ SIGNATURE: _____

STAMP: _____ STAMP: _____

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REVISIONS			
DATE	DESCRIPTION	BY	SYM.

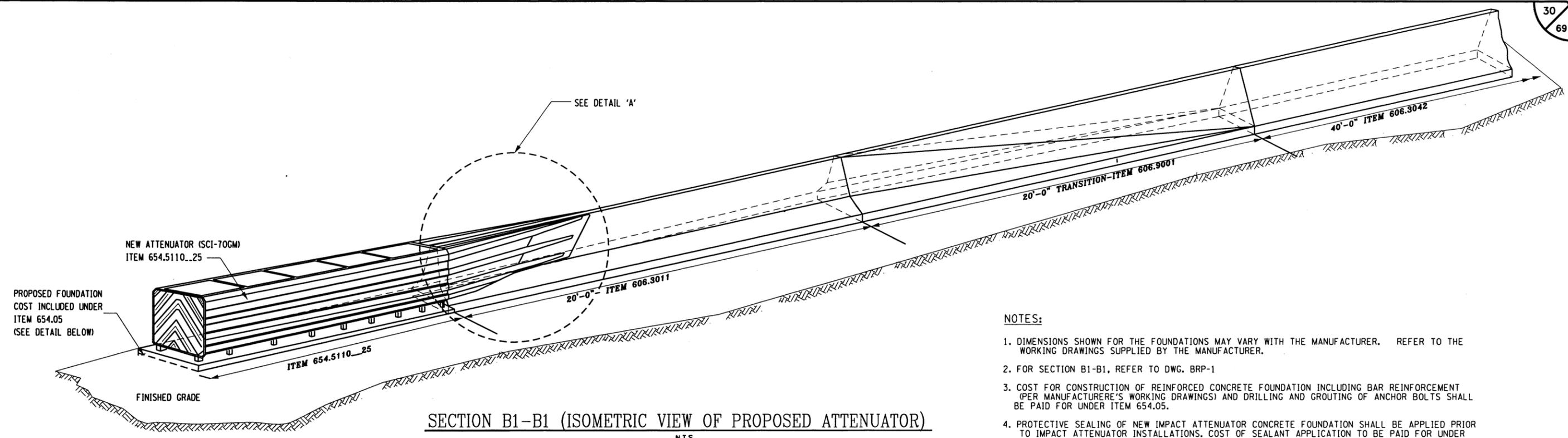


NEW YORK STATE THRUWAY AUTHORITY
 DEPARTMENT OF ENGINEERING
 200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT: SAFETY UPGRADES, CULVERT EXTENSION, DRAINAGE & MISCELLANEOUS WORK
 LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER AND GREENE COUNTIES
 TITLE OF DRAWING: BARRIER REPLACEMENT

CONTRACT NUMBER: TAA 16-27R
 DATE: 8/4/15
 DRAWING NUMBER: BRP-1

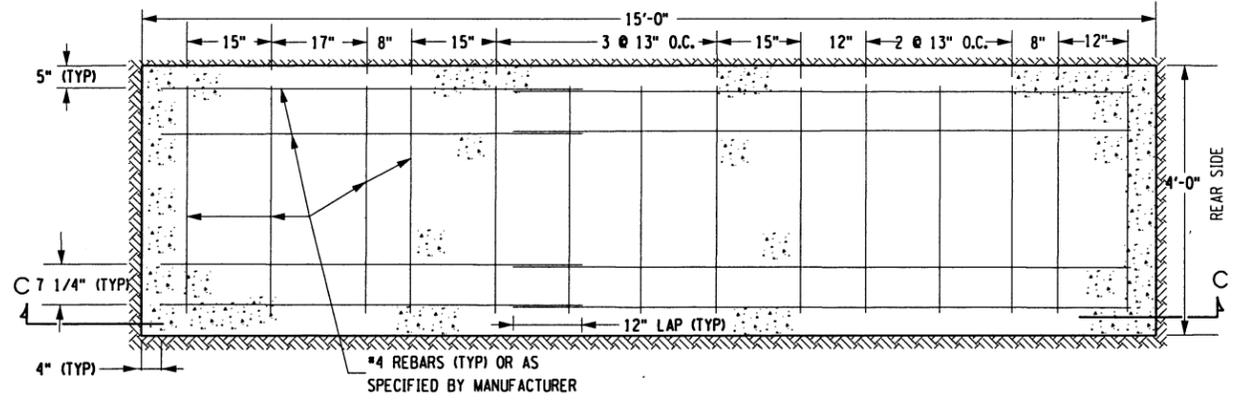
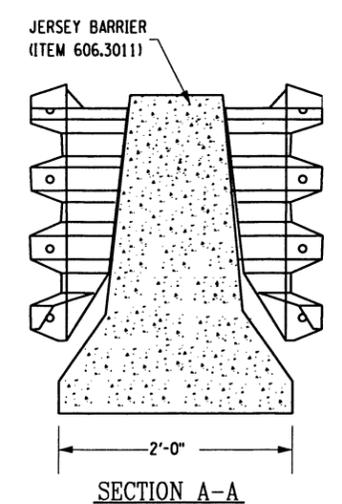
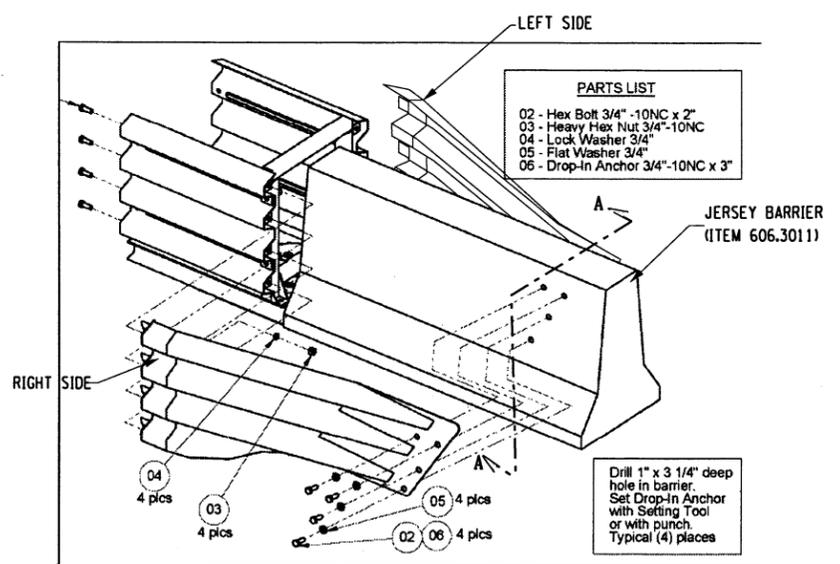
DESIGNED BY: A.AUDIL
CHECKED BY: TA
DRAFTED BY: A.AUDIL
CHECKED BY: TA
DESIGN SUPERVISOR: TA



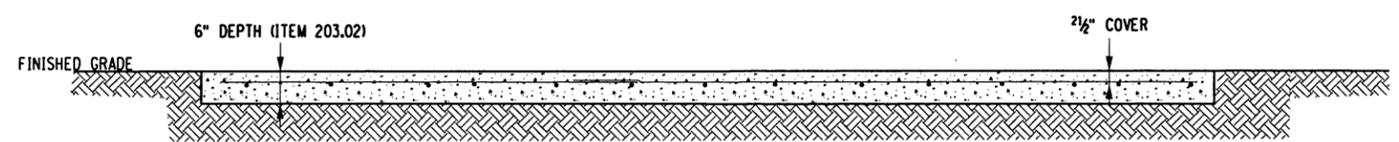
SECTION B1-B1 (ISOMETRIC VIEW OF PROPOSED ATTENUATOR)
N.T.S

NOTES:

1. DIMENSIONS SHOWN FOR THE FOUNDATIONS MAY VARY WITH THE MANUFACTURER. REFER TO THE WORKING DRAWINGS SUPPLIED BY THE MANUFACTURER.
2. FOR SECTION B1-B1, REFER TO DWG. BRP-1
3. COST FOR CONSTRUCTION OF REINFORCED CONCRETE FOUNDATION INCLUDING BAR REINFORCEMENT (PER MANUFACTURER'S WORKING DRAWINGS) AND DRILLING AND GROUTING OF ANCHOR BOLTS SHALL BE PAID FOR UNDER ITEM 654.05.
4. PROTECTIVE SEALING OF NEW IMPACT ATTENUATOR CONCRETE FOUNDATION SHALL BE APPLIED PRIOR TO IMPACT ATTENUATOR INSTALLATIONS. COST OF SEALANT APPLICATION TO BE PAID FOR UNDER ITEM 559.1696..25.
5. THE CONTRACTOR IS REQUIRED TO INFORM THE E.I.C OF THE PROPOSED WORK 2 WEEKS IN ADVANCE AND SUBMIT TRAFFIC CONTROL PLANS FOR APPROVAL.



FOUNDATION PLAN
N.T.S



SECTION C-C
N.T.S

ALTERED ON: _____ AFFIXED ON: **9/20/2016**

SIGNATURE: _____ STAMP: _____

SIGNATURE: *Ameruddin Audil* STAMP: _____

ITEM	DESCRIPTION
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL
559.1696..25	PROTECTIVE SEALANT OF STRUCTURAL CONCRETE
606.3042	SINGLE SLOPE CONCRETE MEDIAN BARRIER (PRECAST)
606.3011	STD. CONCRETE BARRIER TYPE 'A' (PRE-CAST)
606.9001	TRANSITION FROM SINGLE SLOPE TO JERSEY BARRIER
654.05	CONCRETE FOUNDATION FOR IMPACT ATTENUATOR
654.5110 25	REUSABLE ATTENUATOR, TLS, ≤ 2 FT. OBSTRUCTION WIDTH

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXTENSION, DRAINAGE & MISCELLANEOUS WORK

LOCATION OF PROJECT
**MP 100.8 TO MP 109.3
ULSTER AND GREENE COUNTIES**

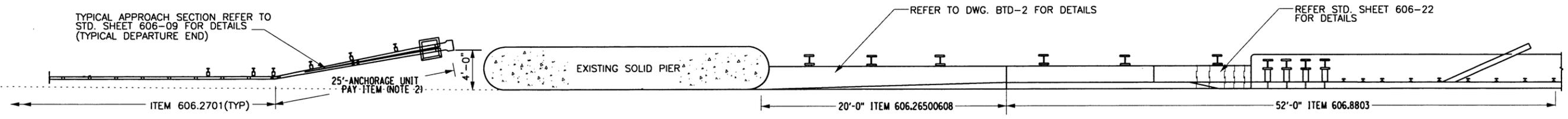
TITLE OF DRAWING
BARRIER REPLACEMENT

CONTRACT NUMBER:
TAA 16-27R

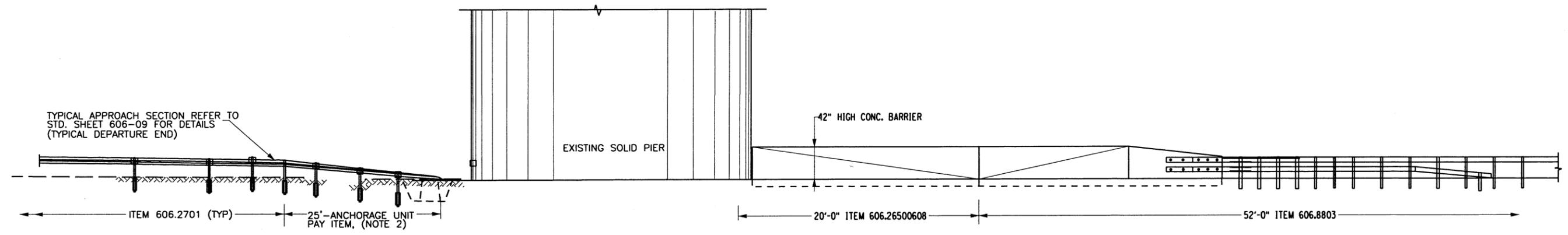
DATE:
8/4/15

DRAWING NUMBER:
BRP-2

FILED BY: TA
 CHECKED BY: TA
 DRAFTED BY: A.AUDIL
 CHECKED BY: TA
 DESIGNED BY: A.AUDIL
 DESIGN SUPERVISOR: TA



PROPOSED PIER PROTECTION PLAN @ MP 102.3 N.B.
N.T.S



PROPOSED PIER PROTECTION ELEVATION @ MP 102.3 N.B.
N.T.S

- NOTES:**
- 1) SEE DRAWING BTD-2 FOR BARRIER TRANSITION DETAILS.
 - 2) ITEM 606.2703-ANCHORAGE UNIT FOR HPBO (MOD) CORRUGATED BEAM GUIDE RAIL-DEPARTURE END.

ALTERED ON:	AFFIXED ON: 9/20/2016
SIGNATURE: STAMP:	SIGNATURE: STAMP:

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADES, DRAINAGE AND MISCELLANEOUS WORK

LOCATION OF PROJECT
**MP 100.8 TO MP 109.3
ULSTER AND GREENE COUNTIES**

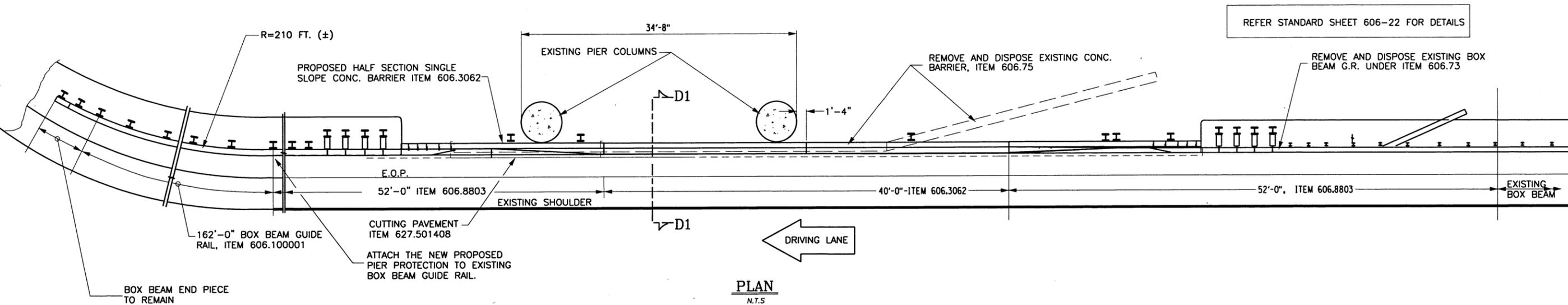
TITLE OF DRAWING
PIER PROTECTION-MP 102.3 NB

CONTRACT NUMBER:
TAA 16-27R

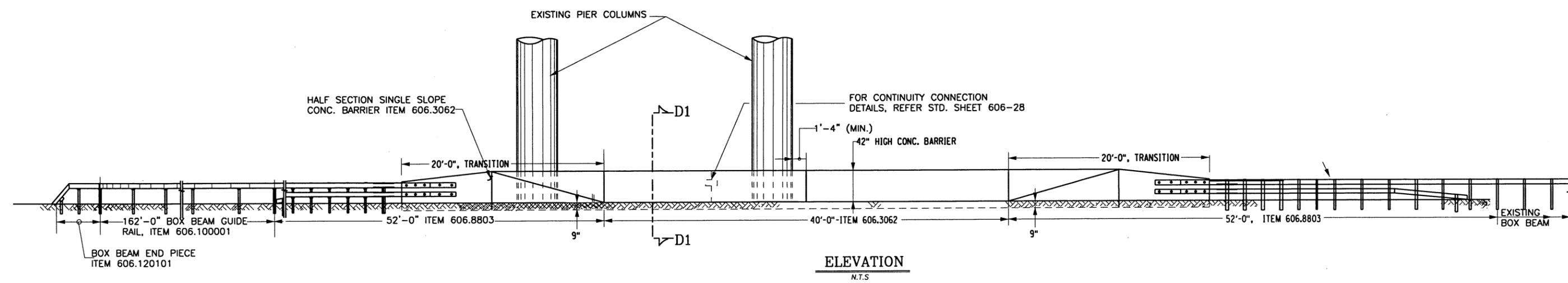
DATE:
8/4/15

DRAWING NUMBER:
PP-1

CHECKED BY: TA
 A.AUDIL
 DRAFTED BY: A.AUDIL
 CHECKED BY: A.AUDIL
 DESIGNED BY: A.AUDIL
 DESIGN SUPERVISOR: TA



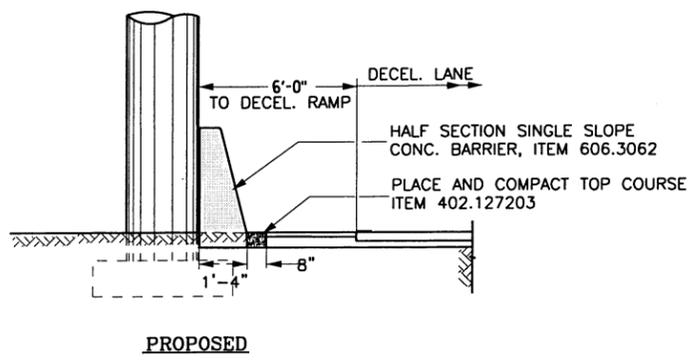
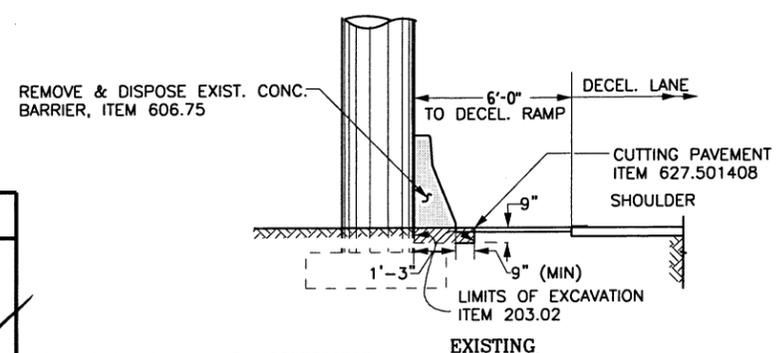
PLAN
N.T.S.



ELEVATION
N.T.S.

PROPOSED PIER PROTECTION @ MP 103.16 N.B.- MALDEN TRNPKE. (RIGHT SIDE PIER-TYPICAL)
N.T.S.

ITEM	DESCRIPTION
203.02	UNCLASSIFIED EXCAVATION & DISPOSAL
402.127203	12.5 F2 TOP COURSE HMA 70 SERIES COMPACTION
606.10001	BOX BEAM GUIDE RAIL (CURVED)
606.3062	SINGLE SLOPE HALF SECTION CONC. BARRIER (PRECAST)
606.73	REMOVING & DISPOSING BOX BEAM G.R.
606.75	REMOVING & DISPOSING CONC. BARRIER
606.8803	TRANSITION BETWEEN BOX BEAM G.R. & SINGLE SLOPE BARRIER
627.501408	CUTTING PAVEMENT
606.120101	BOX BEAM END PIECE



SECTION D1-D1
N.T.S.

(*) DIMENSIONS MAY VARY, CONTRACTOR TO GET PRIOR APPROVAL

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



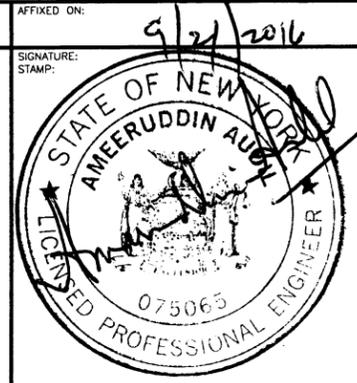
NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADES, DRAINAGE AND MISCELLANEOUS WORK
LOCATION OF PROJECT
**MP 100.8 TO MP 109.3
ULSTER AND GREENE COUNTIES**

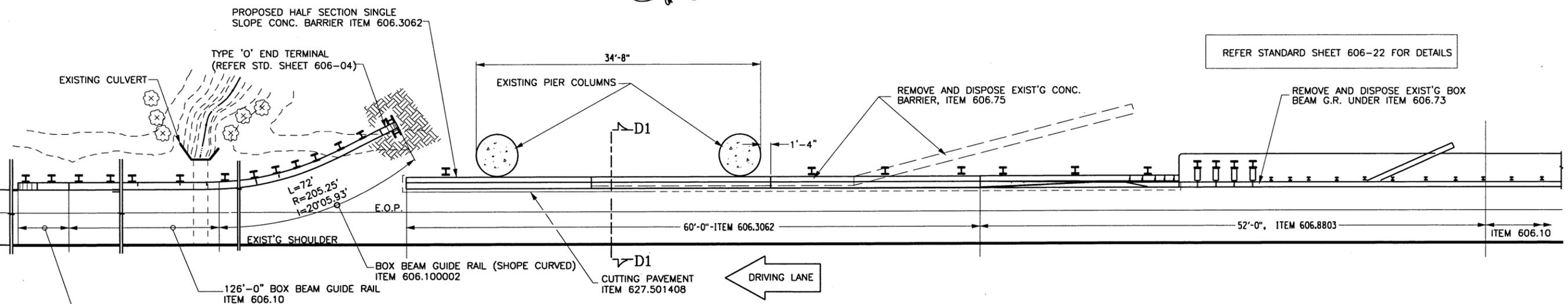
CONTRACT NUMBER:
TAA 16-27R

DATE:
8/4/15

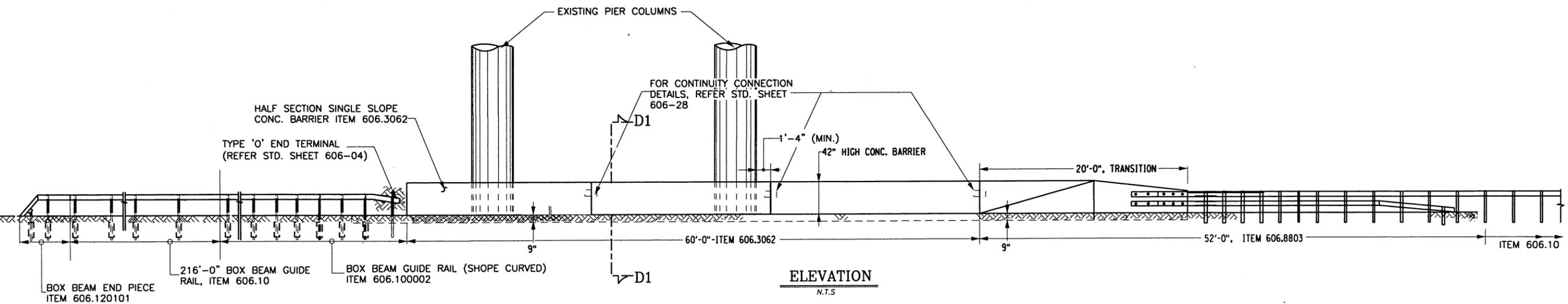
DRAWING NUMBER:
PP-2



CHECKED BY: TA
 DRAFTED BY: A.AUDIL
 DESIGNED BY: A.AUDIL
 DESIGN SUPERVISOR: TA

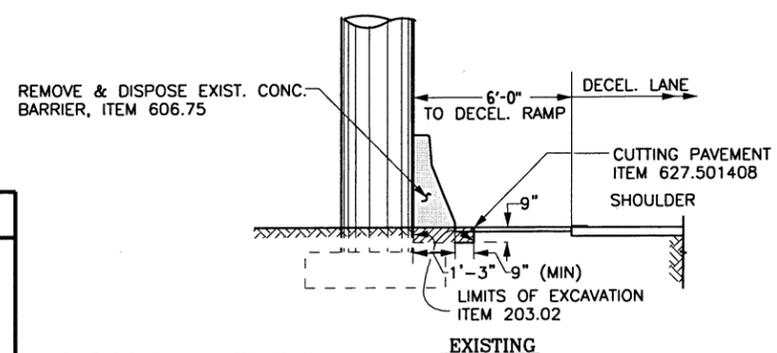


PLAN
N.T.S.

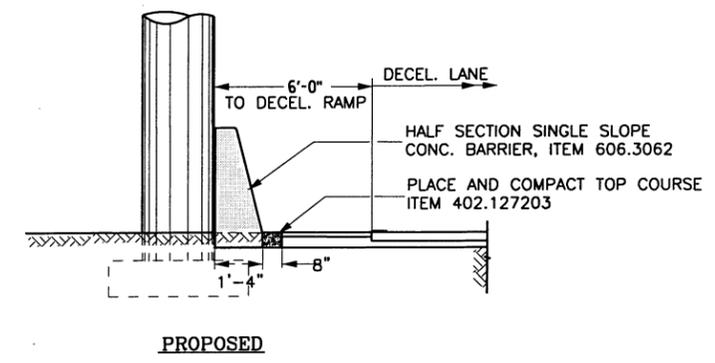


ELEVATION
N.T.S.

PROPOSED PIER PROTECTION @ MP 103.16 S.B.- MALDEN TRNPKE. (RIGHT SIDE PIER-TYPICAL)
N.T.S.



EXISTING



PROPOSED

SECTION D1-D1
N.T.S.

(* DIMENSIONS MAY VARY, CONTRACTOR TO GET PRIOR APPROVAL

ITEM	DESCRIPTION
203.02	UNCLASSIFIED EXCAVATION & DISPOSAL
402.127203	12.5 F2 TOP COURSE HMA 70 SERIES COMPACTION
606.3062	SINGLE SLOPE HALF SECTION CONC. BARRIER (PRECAST)
606.73	REMOVING & DISPOSING BOX BEAM G.R.
606.75	REMOVING & DISPOSING CONC. BARRIER
606.8803	TRANSITION BETWEEN BOX BEAM G.R. & SINGLE SLOPE BARRIER
627.501408	CUTTING PAVEMENT
606.10	BOX BEAM GUIDE RAIL
606.100002	BOX BEAM GUIDE RAIL -SHOP CURVED
606.120101	BOX BEAM END PIECE

ALTERED ON: _____ AFFIXED ON: 9/21/2016

SIGNATURE: _____ STAMP: _____

SIGNATURE: _____ STAMP: _____

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.

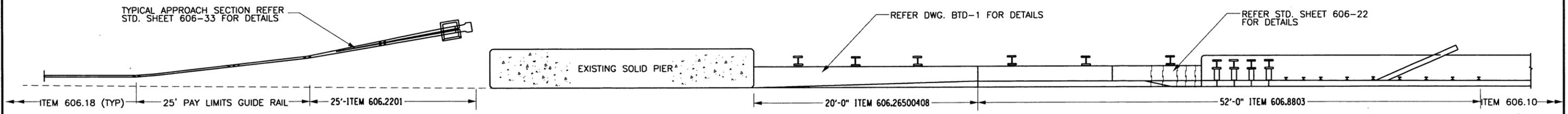


NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

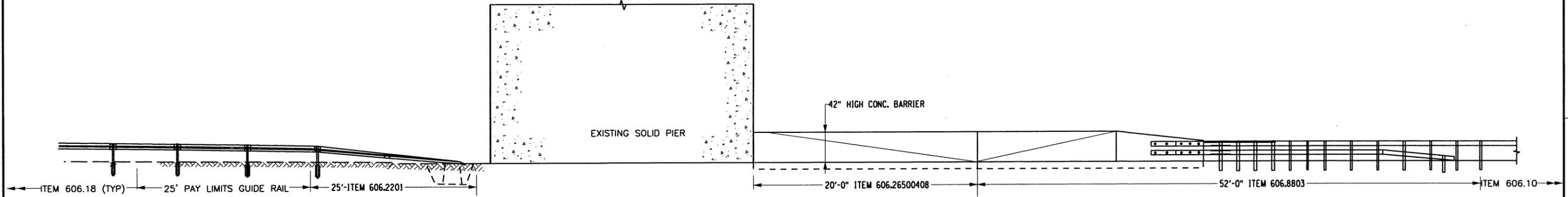
TITLE OF PROJECT: SAFETY UPGRADES, DRAINAGE AND MISCELLANEOUS WORK
LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER AND GREENE COUNTIES
TITLE OF DRAWING: PIER PROTECTION-MP 103.16SB

CONTRACT NUMBER: TAA 16-27R
DATE: 8/4/15
DRAWING NUMBER: PP-3

CHECKED BY: TA
 DRAFTED BY: A. AUDIL
 CHECKED BY: TA
 DESIGNED BY: A. AUDIL
 DESIGN SUPERVISOR: TA



PLAN
N.T.S.



ELEVATION
N.T.S.

PROPOSED PIER PROTECTION @ MP 108.63(±) N.B.
N.T.S.

- NOTES:
1) SEE DRAWING BTD-1 FOR BARRIER TRANSITION DETAILS.

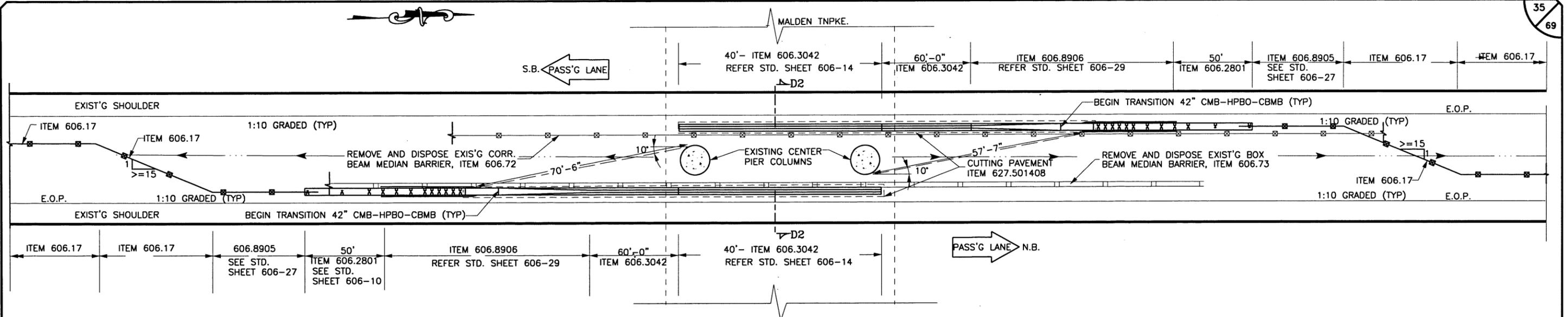
ALTERED ON:	AFFIXED ON: 9/20/2016
SIGNATURE: STAMP:	SIGNATURE: STAMP:

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

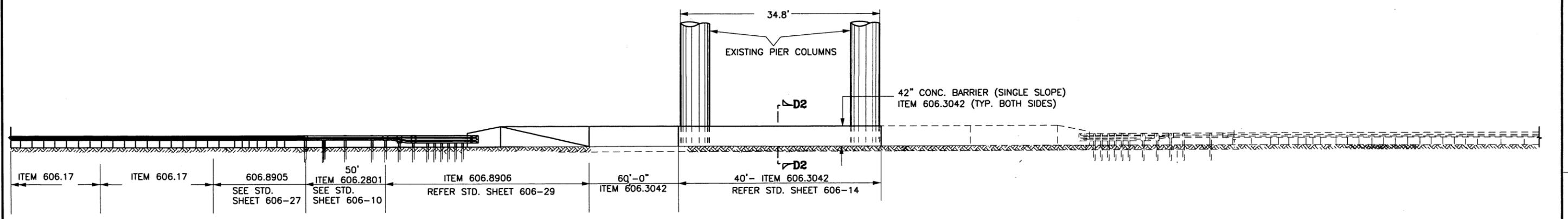
REVISIONS			
DATE	DESCRIPTION	BY	SYM.

	NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING 200 SOUTHERN BLVD., ALBANY, N.Y. 12209	TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTENSION, DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
		LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER AND GREENE COUNTIES	DATE: 8/4/15
		TITLE OF DRAWING PIER PROTECTION-MP 108.63NB	DRAWING NUMBER: PP-4

CHECKED BY: TA
 DRAFTED BY: A.AUDIL
 DESIGNED BY: A.AUDIL
 DESIGN SUPERVISOR: TA



PLAN
N.T.S.

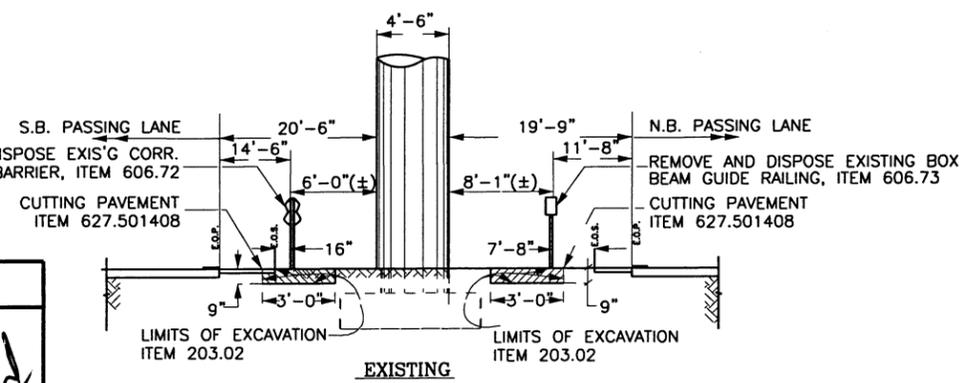


ELEVATION
N.T.S.

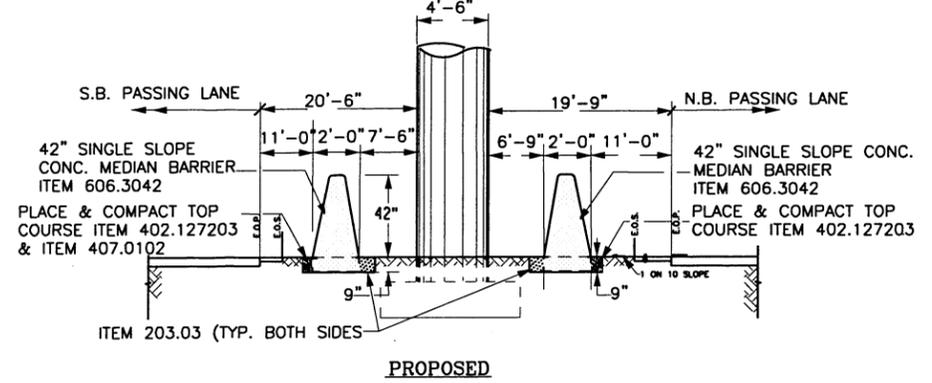
PROPOSED CENTER PIER PROTECTION @ MP 103.16- MALDEN TRNPKE. (AT MEDIAN)

N.T.S.

ITEM	DESCRIPTION
203.02	UNCLASSIFIED EXCAVATION & DISPOSAL
402.127203	12.5 F2 TOP COURSE HMA 70 SERIES COMPACTION
407.0102	DILUTED TACK COAT
606.17	CORR. BEAM MEDIAN BARRIER
606.2801	HPBO(MOD) CORR. BEAM MEDIAN BARRIER
606.3042	SINGLE SLOPE CONC. MEDIAN BARRIER (PRECAST)
606.72	REMOVE & DISPOSE CORR. BEAM MEDIAN BARRIER
606.73	REMOVE & DISPOSE BOX BEAM GUIDE RAILING
606.8905	TRANSITION-HPBO (MOD) CORR. BEAM MEDIAN BARRIER TO WEAK POST CORR. BEAM MEDIAN BARRIER
606.8906	TRANSITION-HPBO (MOD) CORR. BEAM MEDIAN BARRIER TO SINGLE SLOPE CONC. BARRIER
627.501408	PAVEMENT CUTTING



EXISTING



PROPOSED

SECTION D2-D2
N.T.S.

ALTERED ON:

SIGNATURE:
STAMP:

AFFIXED ON: 9/21/2016

SIGNATURE:
STAMP:

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM

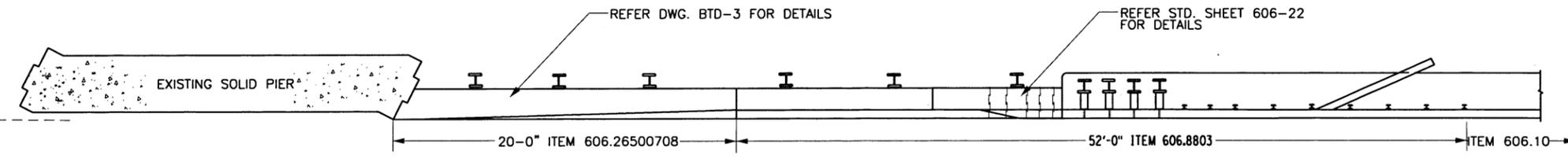


NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

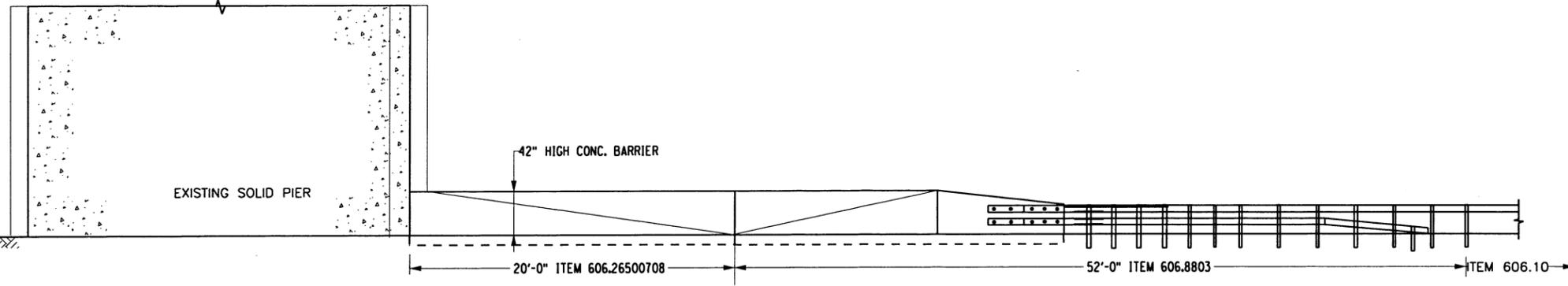
TITLE OF PROJECT: SAFETY UPGRADES, CULVERT EXTENSION, AND MISCELLANEOUS WORK
LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER AND GREENE COUNTIES
TITLE OF DRAWING: CTR. PIER PROTECT-MP 103.16

CONTRACT NUMBER: TAA 16-27R
DATE: 8/4/15
DRAWING NUMBER: PP-5

DESIGNED BY: A. AUDIL
 CHECKED BY: TA
 DRAFTED BY: A. AUDIL
 CHECKED BY: TA
 DESIGN SUPERVISOR: TA



PLAN
N.T.S



ELEVATION
N.T.S

PROPOSED PIER PROTECTION @ MP 105.4(±) N.B. & S.B.
N.T.S

- NOTES:
- 1) SEE DRAWING BTD-3 FOR BARRIER TRANSITION DETAILS.

ALTERED ON:	AFFIXED ON: 9/20/2016
SIGNATURE: STAMP:	SIGNATURE: STAMP:

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT:
SAFETY UPGRADES, CULVERT EXTENSION,
DRAINAGE & MISCELLANEOUS WORK

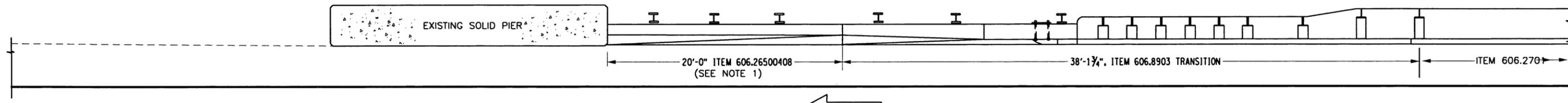
LOCATION OF PROJECT:
MP 100.8 TO MP 109.3
ULSTER AND GREENE COUNTIES

TITLE OF DRAWING:
PIER PROTECTION-MP 105.4

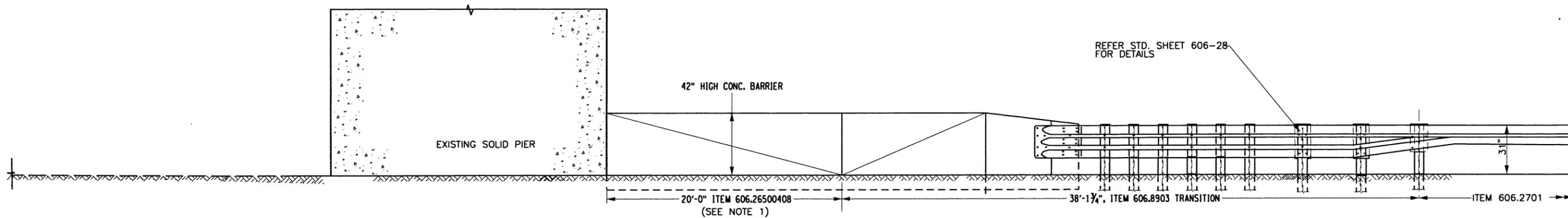
CONTRACT NUMBER:
TAA 16-27R

DATE:
8/4/15

DRAWING NUMBER:
PP-6



PLAN
N.T.S



ELEVATION
N.T.S

PROPOSED PIER PROTECTION @ MP 108.63(±) S.B.
N.T.S

- NOTES:**
1) SEE DRAWING BTD-1 FOR BARRIER TRANSITION DETAILS.

ALTERED ON:	AFFIXED ON: 9/20/2016
SIGNATURE: STAMP:	SIGNATURE: STAMP:

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM



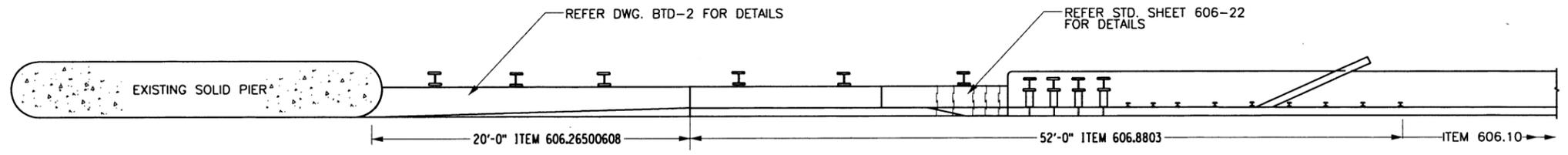
NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADES, DRAINAGE AND MISCELLANEOUS WORK
LOCATION OF PROJECT
**MP 100.8 TO MP 109.3
ULSTER AND GREENE COUNTIES**
TITLE OF DRAWING
**PIER PROTECTION
MP 108.63 S.B.**

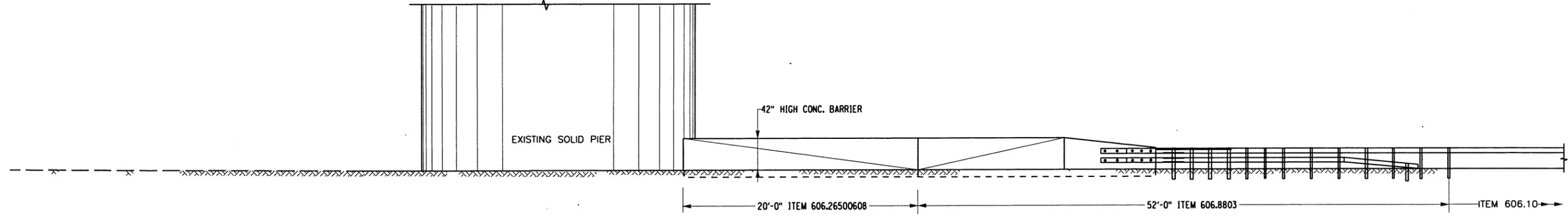
CONTRACT NUMBER:
TAA 16-27R
DATE:
8/4/15
DRAWING NUMBER:
PP-7

DESIGNED BY: A. AUDIL
CHECKED BY: TA
DRAFTED BY: A. AUDIL
CHECKED BY: TA
DESIGN SUPERVISOR: TA

FILED
 CHECKED BY: TA
 DRAFTED BY: A.AUDIL
 CHECKED BY: TA
 DESIGNED BY: A.AUDIL
 DESIGN SUPERVISOR: TA



PLAN
N.T.S



ELEVATION
N.T.S

PROPOSED PIER PROTECTION PLAN @ MP 102.3 S.B & MP 104.04 N.B./S.B.
N.T.S

- NOTES:
 1) SEE DRAWING LTD-2 FOR BARRIER TRANSITION DETAILS

ALTERED ON:	AFFIXED ON: 9/20/2016
SIGNATURE: STAMP:	

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
 DEPARTMENT OF ENGINEERING
 200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
**SAFETY UPGRADES, CULVERT EXTENSION,
 DRAINAGE & MISCELLANEOUS WORK**

LOCATION OF PROJECT
**MP 100.8 TO MP 109.3
 ULSTER AND GREENE COUNTIES**

TITLE OF DRAWING
**PIER PROTECTION
 AT M.P. 102.3 SB & 104.04**

CONTRACT NUMBER:
TAA 16-27R

DATE:
8/4/15

DRAWING NUMBER:
PP-8

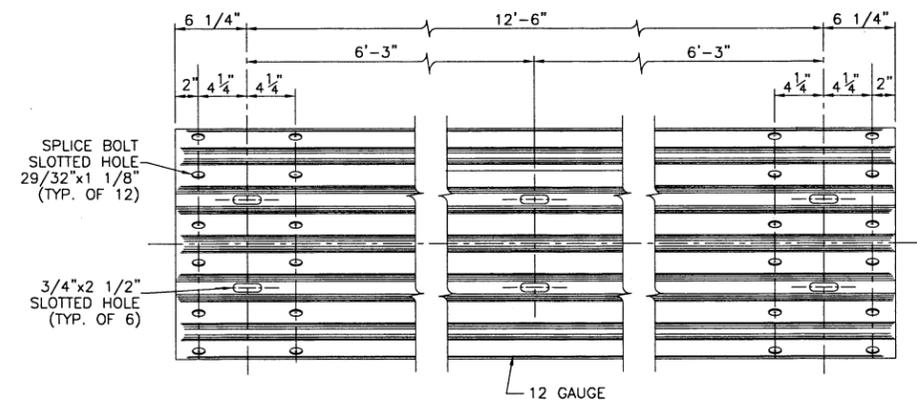
CHECKED BY: NYSTA

DRAFTED BY: CAD

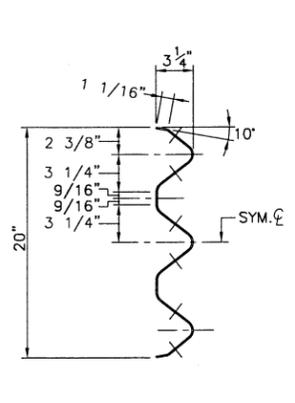
CHECKED BY: TA

DESIGNED BY: TA

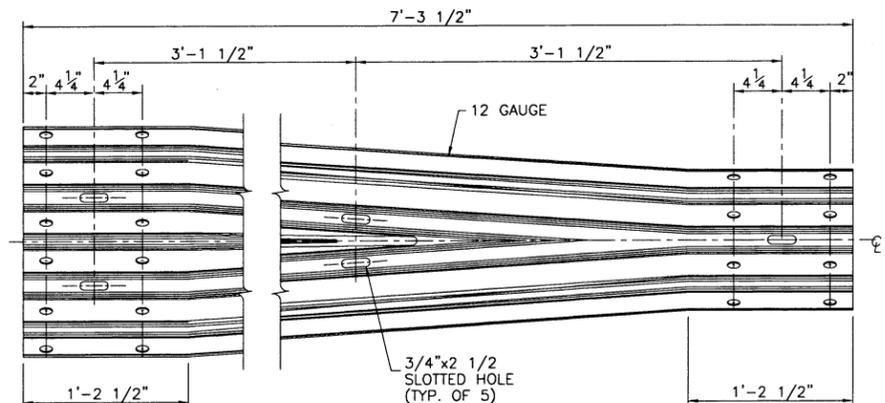
DESIGN SUPERVISOR: TA



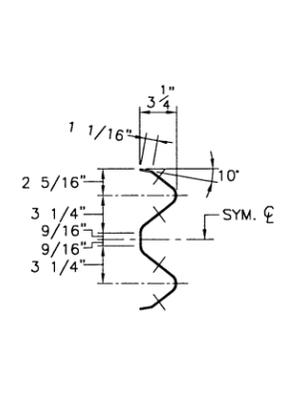
TYPICAL THRIE BEAM SECTION
SCALE: 1 1/2" = 1'-0"



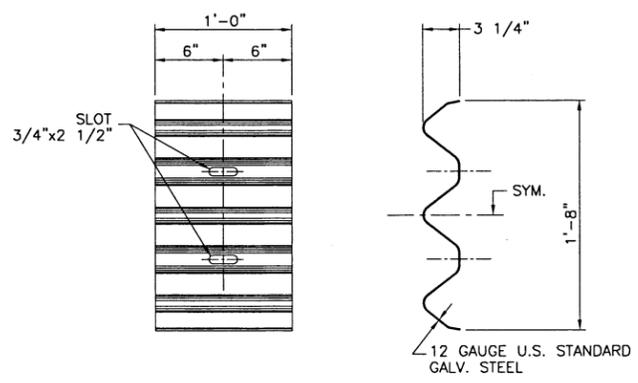
END VIEW OF TRANSITION
SCALE: 1 1/2" = 1'-0"



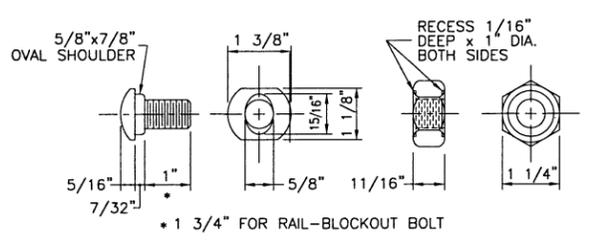
TRANSITION SECTION
THRIE BEAM TO CORRUGATED BEAM
SCALE: 1 1/2" = 1'-0"



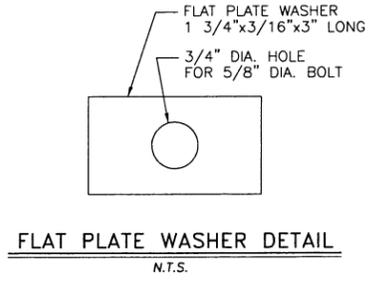
END VIEW OF TRANSITION
SCALE: 1 1/2" = 1'-0"



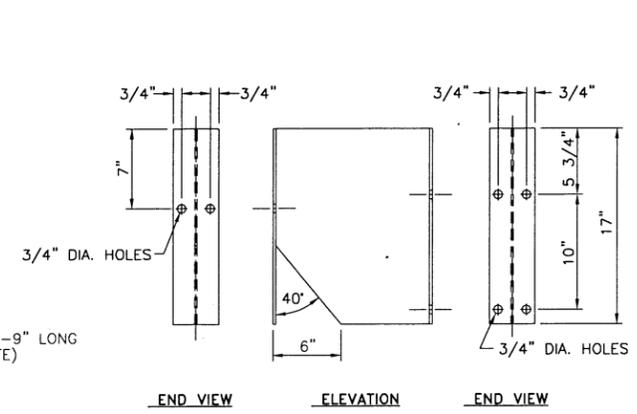
DETAIL OF BACK UP PLATE
(SEE NOTE 8)
SCALE: 1 1/2" = 1'-0"



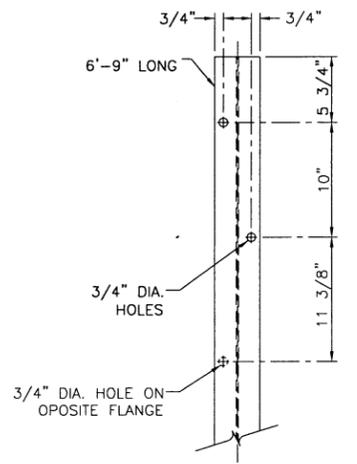
BEAM SPLICE HARDWARE DETAIL
SCALE: 6" = 1'-0"



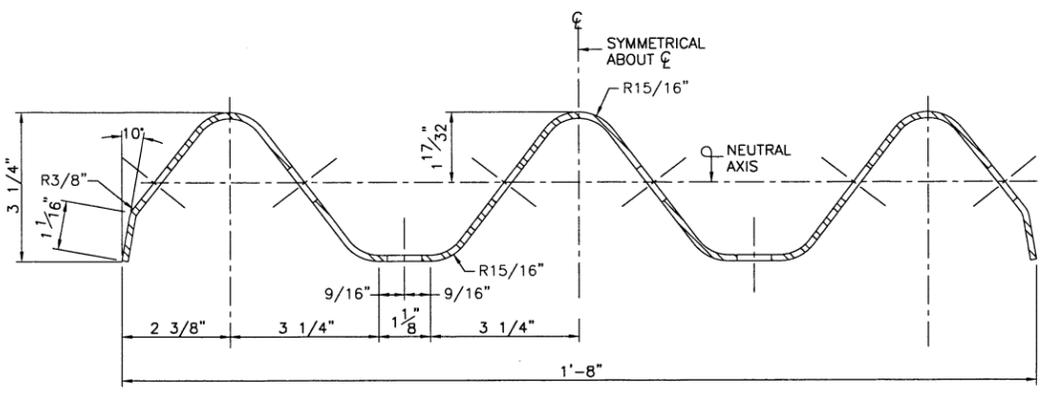
FLAT PLATE WASHER DETAIL
N.T.S.



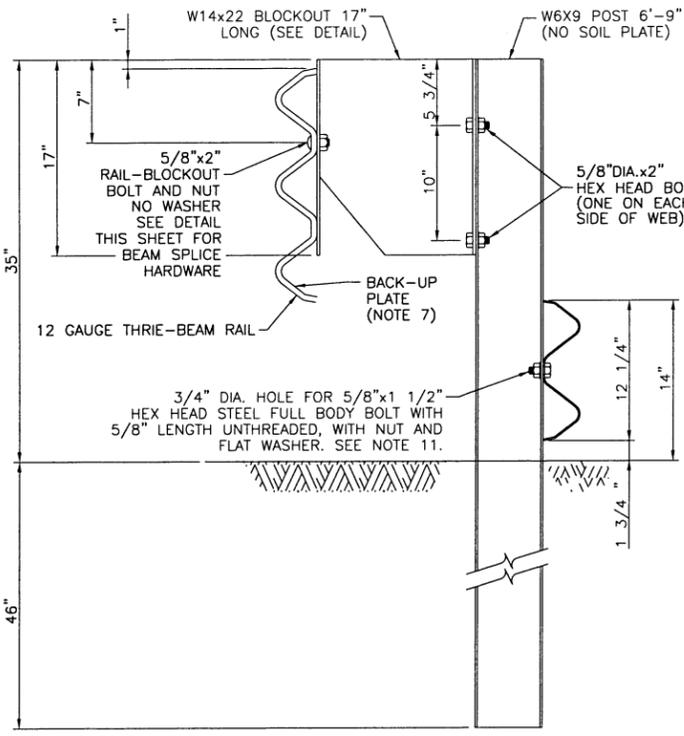
W14 x 22 BLOCKOUT DETAIL
SCALE: 1 1/2" = 1'-0"



W6x9 POST DETAIL
SCALE: 1 1/2" = 1'-0"



THRIE BEAM CROSS SECTION
SCALE: 6" = 1'-0"



THRIE BEAM BLOCKOUT ASSEMBLY
SCALE: 1 1/2" = 1'-0"

NOTES:

1. ALL THRIE BEAM SECTIONS SHALL BE 12 GAUGE.
2. THE TRANSITION SECTION FROM CORRUGATED BEAM TO THRIE BEAM SHALL BE 12 GAUGE.
3. THE MATERIAL FROM WHICH THE THRIE BEAM IS FABRICATED SHALL CONFORM TO MATERIAL SPECIFICATION 710-20.
4. ALL COMPONENTS OF THRIE BEAM SYSTEM SHALL BE GALVANIZED IN ACCORDANCE WITH MATERIAL SPECIFICATION 719-01 AFTER FABRICATION.
5. WHEN HIGHWAY POSTS OCCUR WHERE THERE ARE NO HOLES IN STANDARD THRIE BEAM SECTION, HOLES SHALL BE DRILLED IN THE APPROPRIATE LOCATIONS AND THE GALVANIZING SHALL BE REPAIRED ACCORDING TO MATERIAL SPECIFICATION 719-01.
6. ALL RAILS, POST, BLOCKS AND HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH THE PROVISIONS OF MATERIAL SUBSECTION 710-20.
7. THRIE BEAM BACK-UP PLATES SHALL BE USED AT ALL POSTS WHERE THRIE BEAM SPLICE DOES NOT OCCUR.
8. NORMAL POST SPACING IS 6'-3".
9. THE W6x8.5 IS AN ACCEPTABLE ALTERNATIVE TO THE W6x9.
10. THIS GUIDE RAIL SYSTEM IS THE U.S. CUSTOMARY UNITS VERSION OF AASHTO'S TL-4 MODIFIED THRIE BEAM (SGR09b-METRIC UNITS). THE BARRIER IS ILLUSTRATED IN APPENDIX B OF AASHTO'S ROADSIDE DESIGN GUIDE.
11. CORRUGATED BEAM IS TO BE FASTENED TO EVERY POST.

THE MAXIMUM DYNAMIC DEFLECTION IS APPROXIMATELY 3 FT. FOR A 20,000-POUND SCHOOL BUS (56 MPH, 15' IMPACT ANGLE). SEE ACCEPTANCE LETTER B64.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXTENSION,
DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES
TITLE OF DRAWING
THRIE BEAM/CORRUGATED BEAM
ROCK FENCE DETAILS
ITEM 606.1901--25

CONTRACT NUMBER:
TAA 16-27R
DATE:
06/12/15
DRAWING NUMBER:
RFD-1

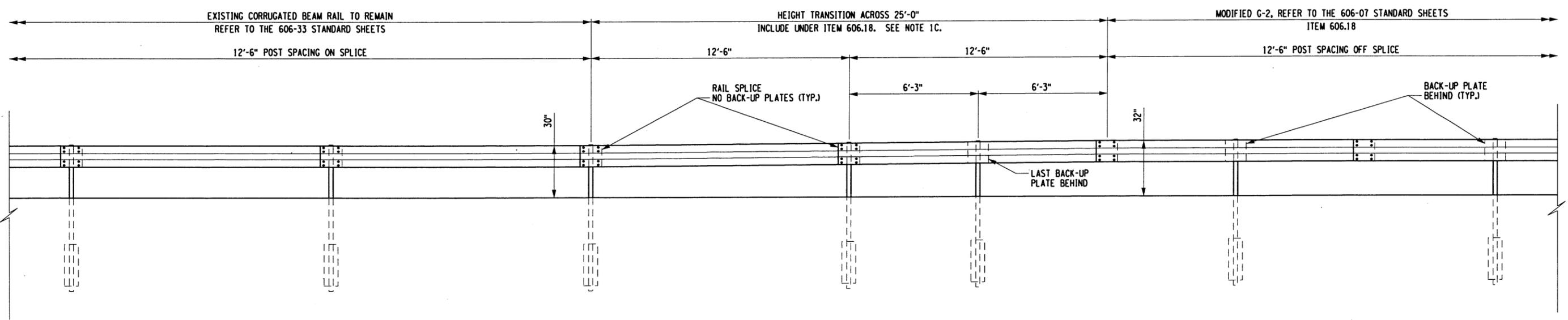
CHECKED BY: B. KOSLOSKE

DRAFTED BY: D. HOLLNER

CHECKED BY: TA

DESIGNED BY: TA

DESIGN SUPERVISOR: TA



TRANSITION DETAIL C
 MODIFIED G-2 WEAK POST CORRUGATED BEAM TO EXISTING WEAK POST CORRUGATED BEAM GUIDE RAIL
 N.T.S.

NOTE:
 DETAIL TO BE USED AT M.P. 109.3 SB RIGHT ON DRAWING GNP-18
 GUIDERAIL WORK LOCATION 26

NOTE 1C:
 TRANSITION FROM MODIFIED G-2 TO WEAK POST CORRUGATED SHALL
 BE CONSTRUCTED WITH NEW RAIL AND POSTS. POST SPACINGS
 SHALL BE AS INDICATED ABOVE. COST OF CONSTRUCTING
 TRANSITION TO BE INCLUDED UNDER ITEM 606.18.

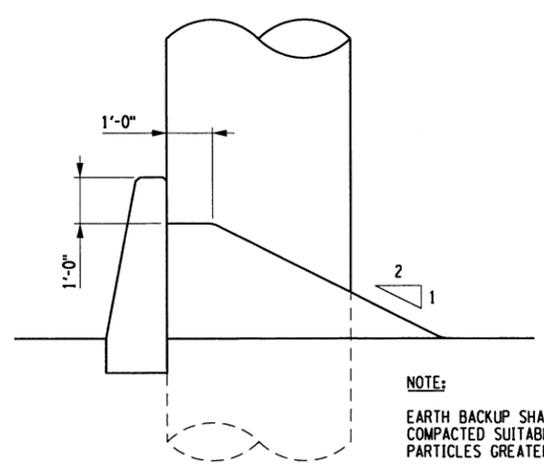
ALTERED ON:	AFFIXED ON: 9/20/2016
SIGNATURE: STAMP:	SIGNATURE: STAMP:

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

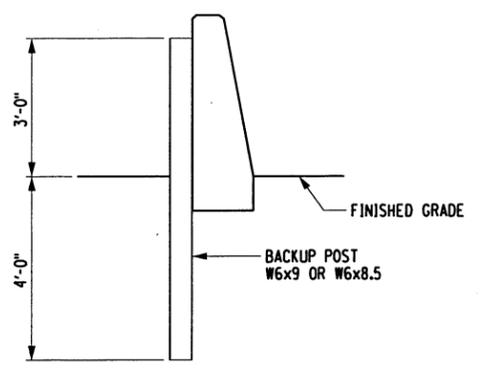
REVISIONS			
DATE	DESCRIPTION	BY	SYM.

	NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING 200 SOUTHERN BLVD., ALBANY, N.Y. 12209	TITLE OF PROJECT: SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
	LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 06/02/16	DRAWING NUMBER: GRTR-1

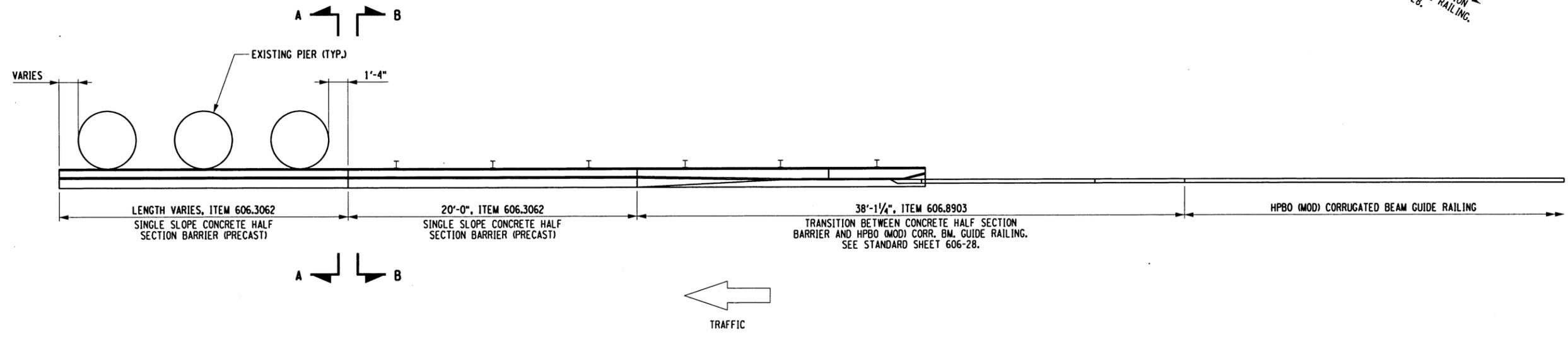
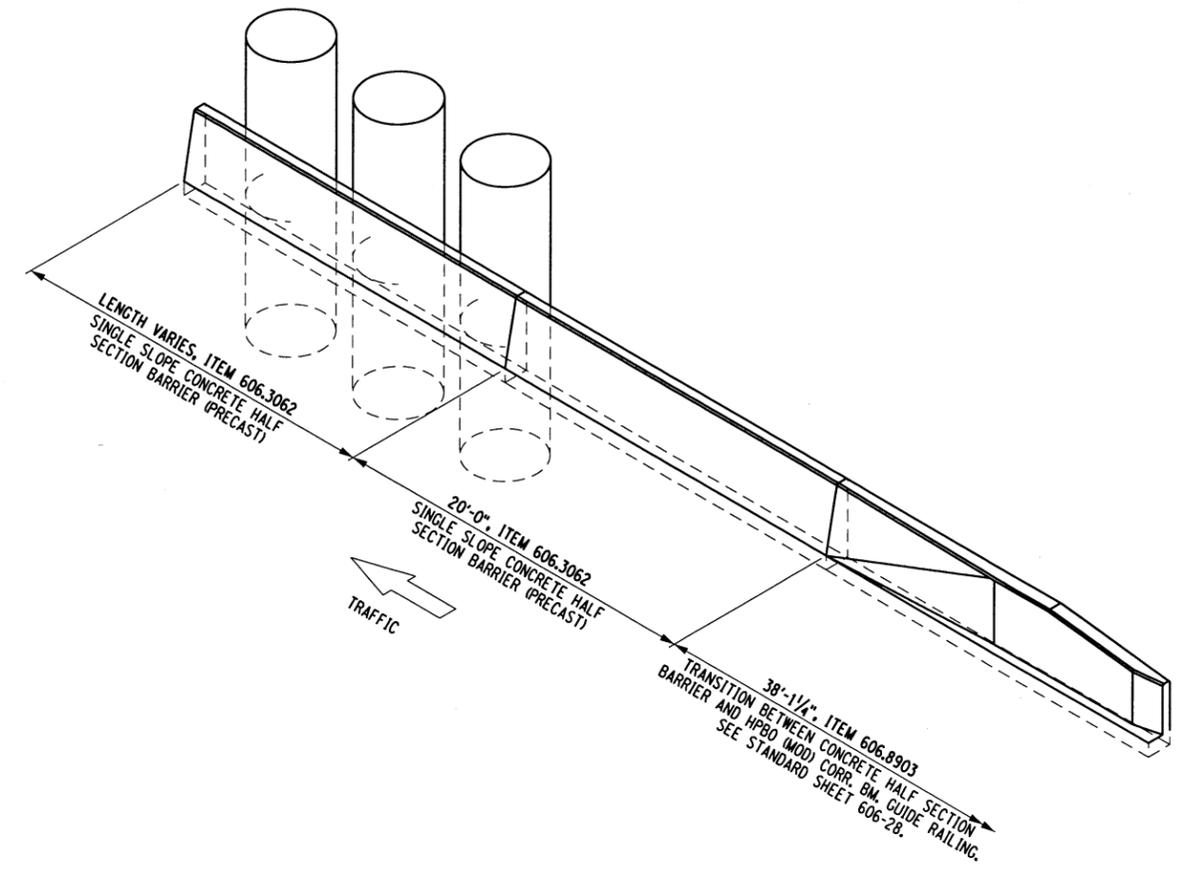
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CHECKED BY: TA
DRAFTED BY: D. HOLLNER
CHECKED BY: TA
DESIGNED BY: TA
DESIGN SUPERVISOR: TA



SECTION A-A
SINGLE-SLOPE PRECAST CONCRETE HALF SECTION BARRIER WITH EARTH BACKUP



SECTION B-B
SINGLE-SLOPE CONCRETE HALF SECTION BARRIER WITH BACKUP POST



RIGHT SIDE APPROACH TO BRIDGE PIER
N.T.S

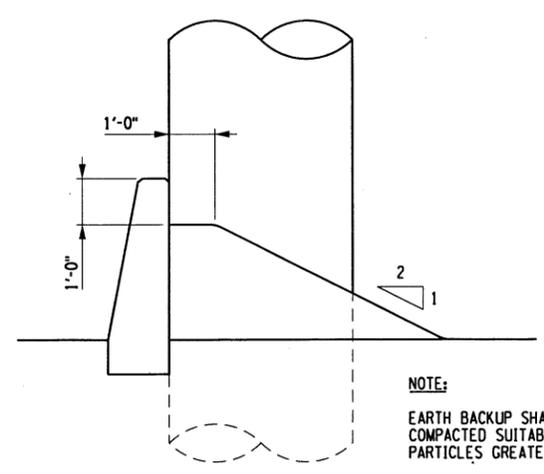
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IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

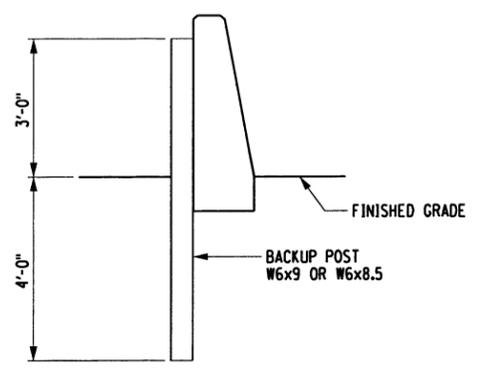
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DATE	DESCRIPTION	BY	SYM

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	LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 04/22/16	TITLE OF DRAWING: HPBO (MOD) CORR. BM. TO 42" SINGLE SLOPE HALF SECTION CONC. BARRIER PIER PROTECTION

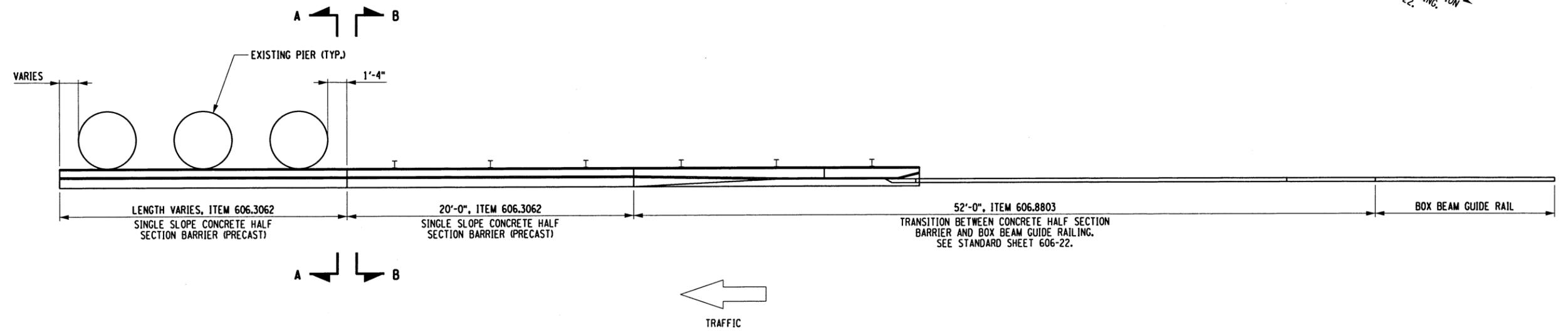
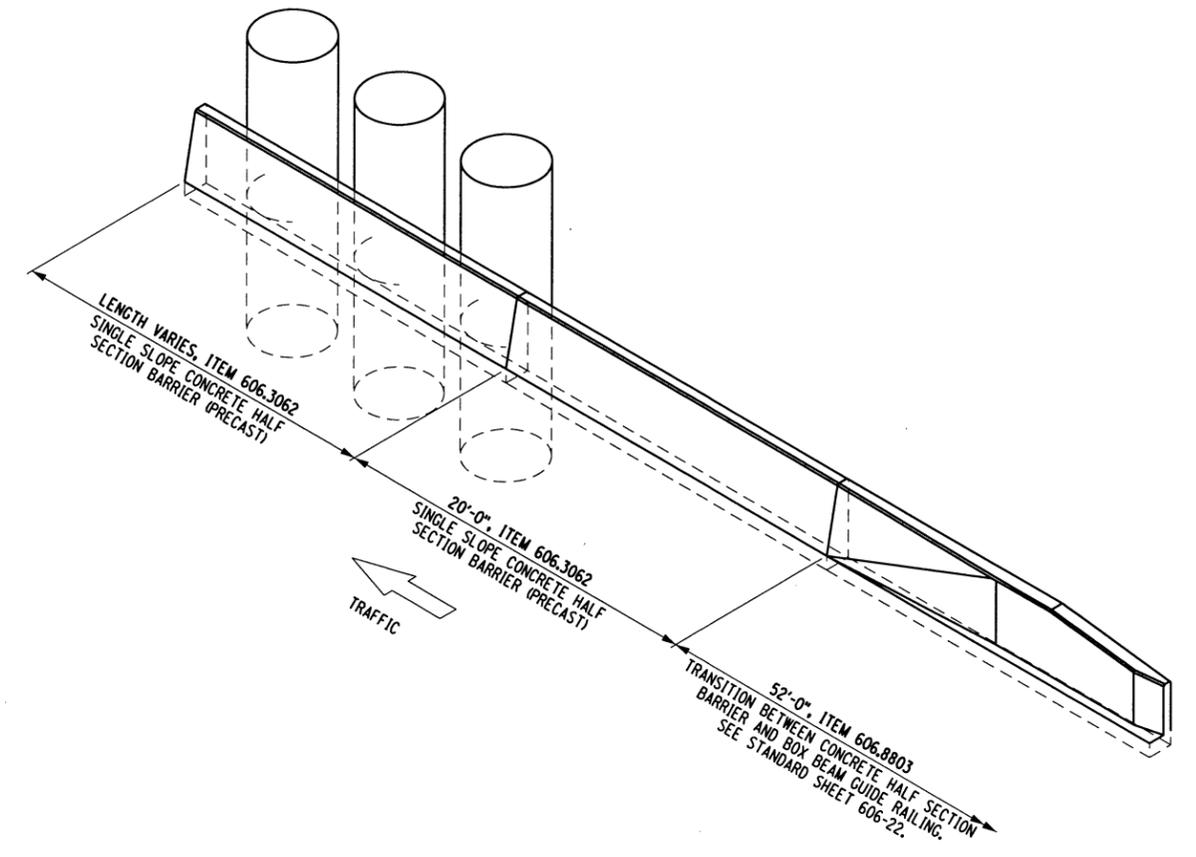
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CHECKED BY: TA
DRAFTED BY: D. HOLLNER
CHECKED BY: TA
DESIGNED BY: TA
DESIGN SUPERVISOR: TA



SECTION A-A
SINGLE-SLOPE PRECAST CONCRETE HALF SECTION BARRIER WITH EARTH BACKUP



SECTION B-B
SINGLE-SLOPE CONCRETE HALF SECTION BARRIER WITH BACKUP POST



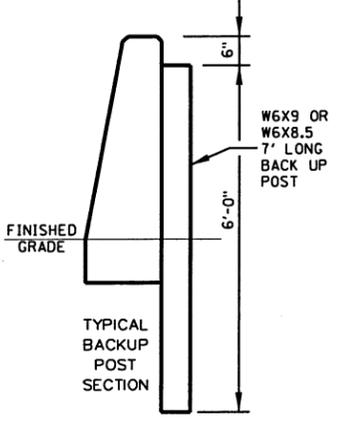
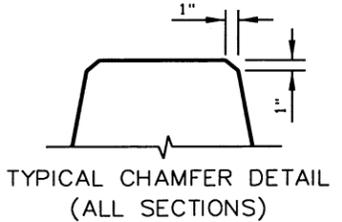
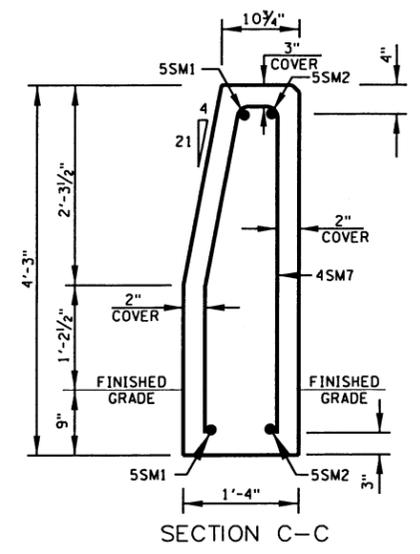
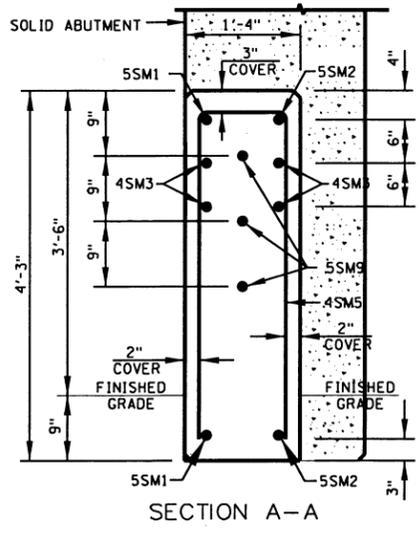
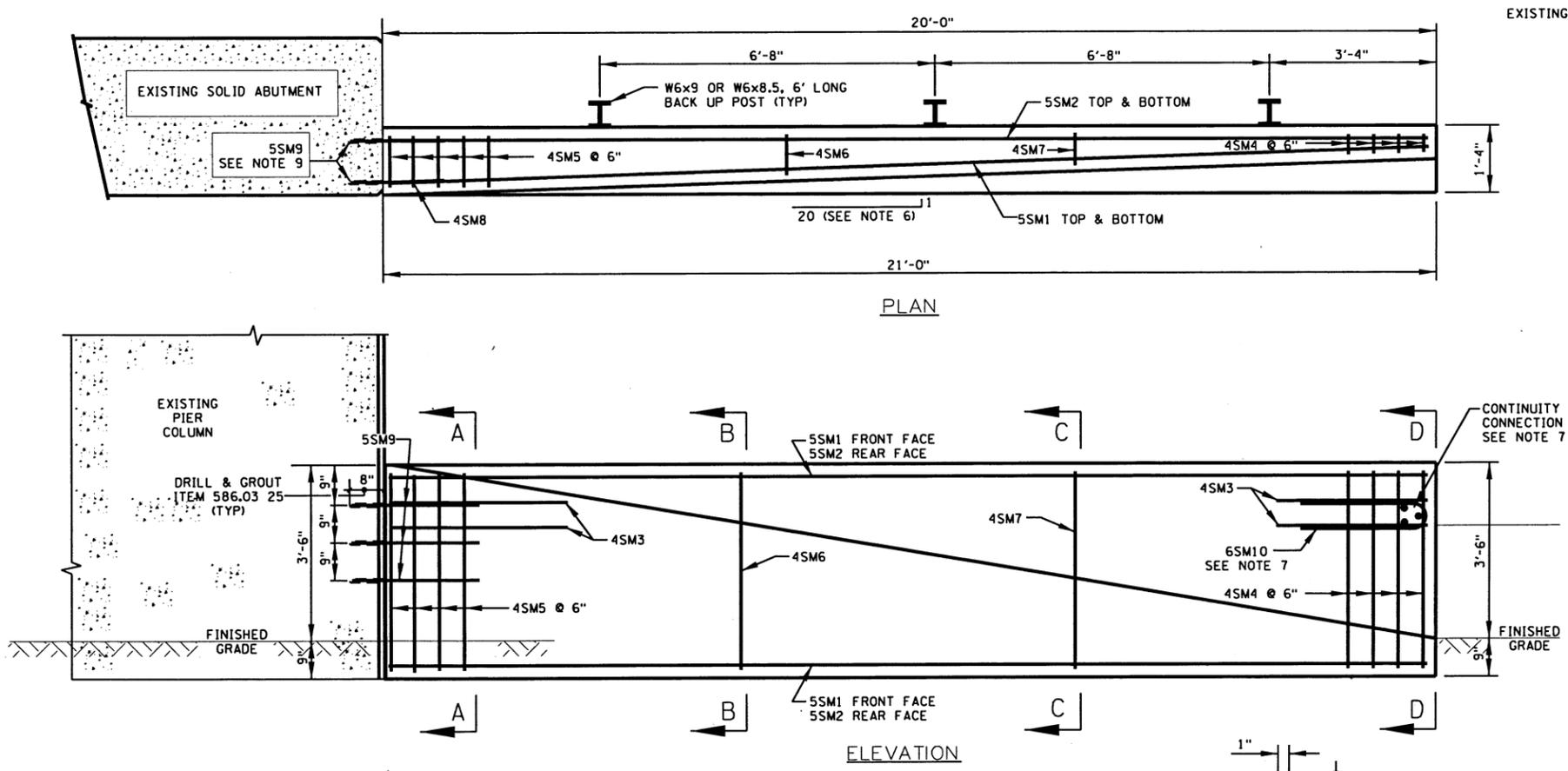
RIGHT SIDE APPROACH TO BRIDGE PIER
N.T.S.

ALTERED ON:	AFFIXED ON: 9/20/20
SIGNATURE: STAMP:	SIGNATURE: STAMP:

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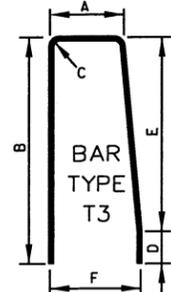
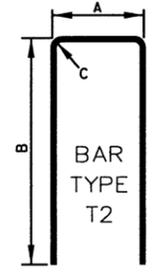
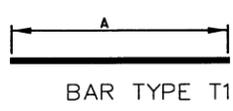
REVISIONS			
DATE	DESCRIPTION	BY	SYM.

	NEW YORK STATE THRUWAY AUTHORITY DEPARTMENT OF ENGINEERING 200 SOUTHERN BLVD., ALBANY, N.Y. 12209	TITLE OF PROJECT: SAFETY UPGRADE, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
	LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 04/22/15	TITLE OF DRAWING: BOX BEAM TO 42" SINGLE SLOPE HALF SECTION CONCRETE BARRIER PIER PROTECTION



BAR MARK	SIZE	QTY.	LENGTH (FT)	TYPE	WEIGHT (LBS)	A (IN)	B (IN)	C (IN)	D (IN)	E (IN)	F (IN)	REMARKS
5SM1	5	2	19.5	STR	40.68							
5SM2	5	2	19.5	STR	40.68							
4SM3	4	8	3.0	STR	16.03							
4SM4	4	4	7.8	T3	20.84	4	45	1.5	6	39	12	
4SM5	4	4	8.5	T2	22.71	12	45	1.5				
4SM6	4	1	8.3	T3	5.54	9	45	1.5	33	12	12	
4SM7	4	1	8.0	T3	5.34	6.5	45	1.5	21	24	12	
5SM9	5	3	2.0	T1	6.26	22			5			SEE NOTE 4
6SM10	6	1	5.8	T2	8.71	6	30	3				SEE NOTE 7

ALL REINFORCEMENT SHALL BE GALVANIZED STEEL, GRADE 60



- NOTES:
1. SURFACES SHALL BE SMOOTH.
 2. MATERIALS SHALL CONFORM TO §606-2.14, TRANSITIONS CONSTRUCTED OF, OR WITH, CONCRETE.
 3. CONSTRUCTION SHALL CONFORM TO §606-3.19, TRANSITIONS CONSTRUCTED OF, OR WITH, CONCRETE.
 4. 8" OF 5SM9 SHALL BE DRILLED AND GROUTED INTO THE EXISTING PIER AS SHOWN. COST WILL BE INCLUDED UNDER ITEM 586.02.25.
 5. SEE DWG NO PP-4 FOR RIGHT SHOULDER BARRIER PLACEMENT DETAIL.
 6. BARRIER AND GUIDE RAIL WILL TAPER AWAY FROM THE TRAVEL LANE AT A RATE OF 20:1 UNTIL A MINIMUM SHOULDER WIDTH OF 10' IS ACHIEVED.
 7. PROVISION FOR A CONTINUITY CONNECTION BETWEEN THE SPECIAL TRANSITION AND THE CONTINUATION OF THE BARRIER SYSTEM IS REQUIRED. DETAILS WILL FOLLOW THE REQUIREMENTS FROM STANDARD SHEET 606-28.
 8. PIER OR ABUTMENT DIMENSIONS MAY VARY. CONTRACTOR TO VERIFY IN FIELD.
 9. DRILL & GROUT REBARS INTO EXISTING PIER/ ABUTMENT. COST TO BE INCLUDED UNDER ITEM 586.03.25.
 10. CONTRACTOR HAS THE OPTION OF USING EITHER PRE-CAST CONCRETE OR THE CAST-IN-PLACE CONCRETE BARRIER (TYPICAL).
 11. ANY REVISIONS TO THE DETAILS FOR ATTACHING THE BARRIERS TO THE PIER/ ABUTMENT HAS TO BE PRE-APPROVED (TYP).
 12. ALL REBARS SHALL BE GALVANIZED STEEL (TYPICAL).

RIGHT SHOULDER BARRIER SPECIAL TRANSITION. DETAILS-ITEM 606.26500408
N.T.S.

ALTERED ON: _____ AFFIXED ON: 9/20/2016

SIGNATURE: _____ STAMP: _____

SIGNATURE: _____ STAMP: _____

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

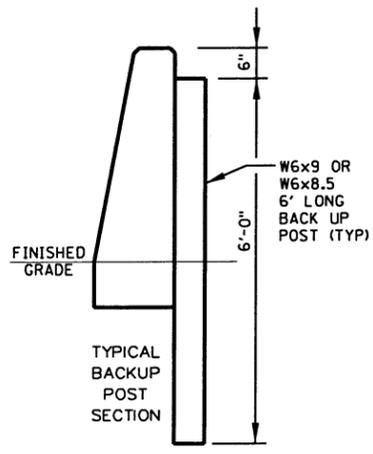
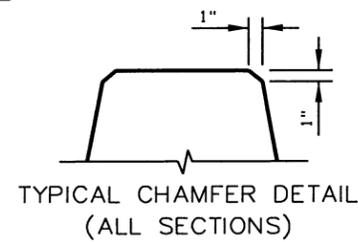
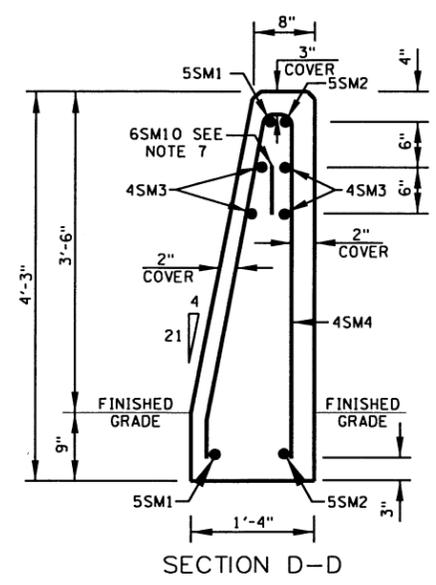
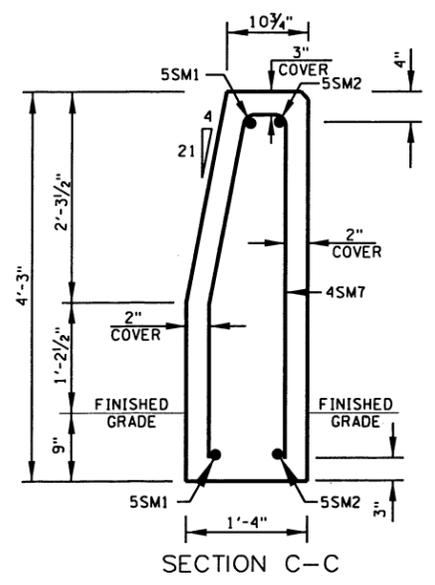
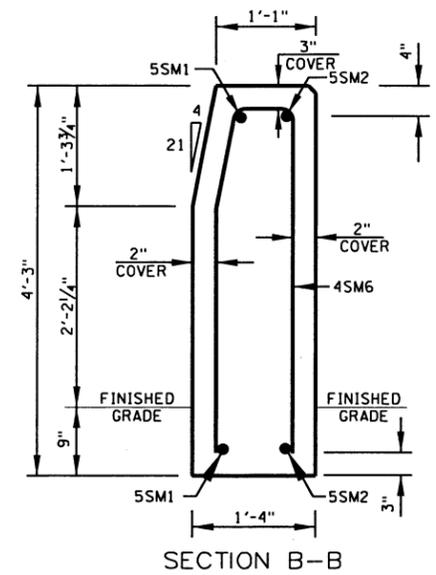
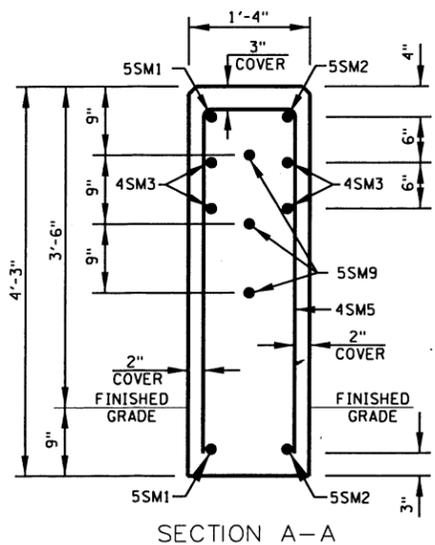
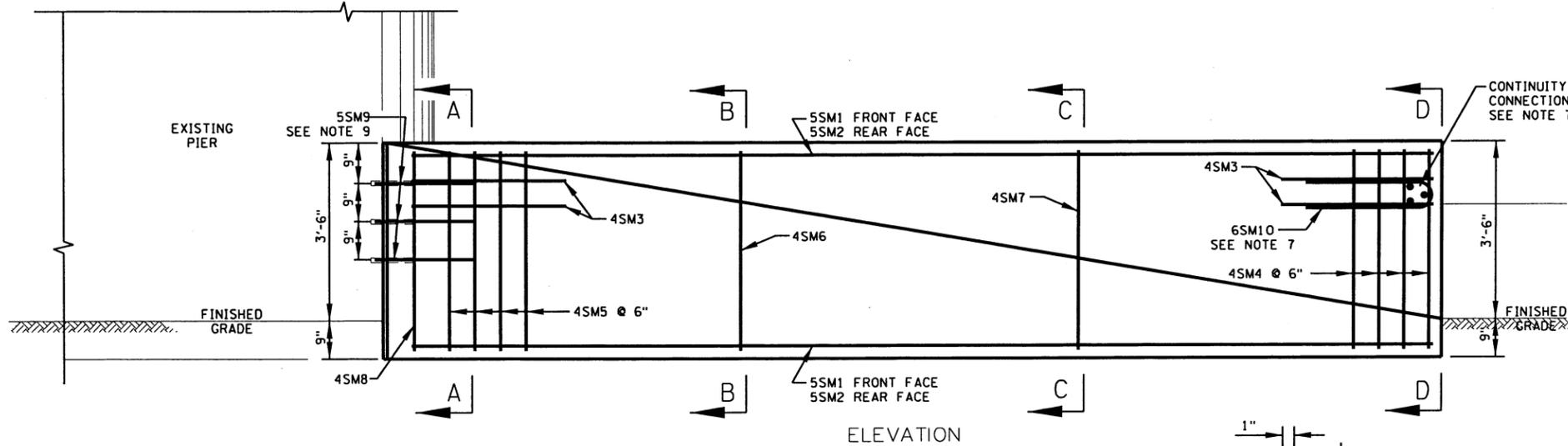
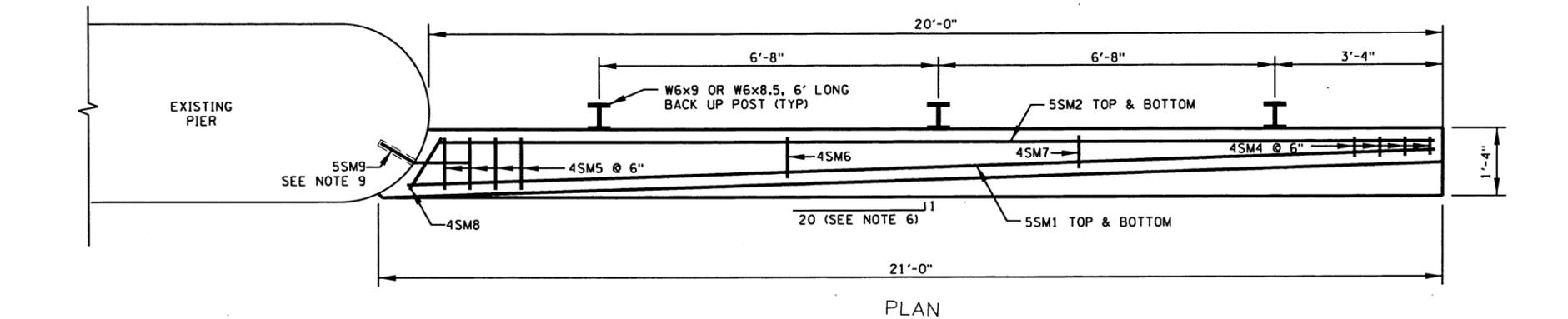
REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

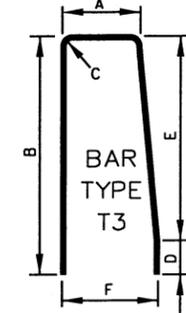
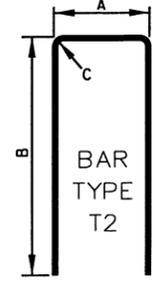
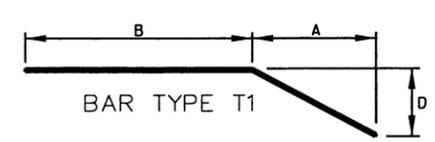
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LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES
TITLE OF DRAWING: BARRIER AT ABUTMENTS

CONTRACT NUMBER: TAA 16-27R
DATE: 04/17/15
DRAWING NUMBER: BTD-1



BAR MARK	SIZE	QTY.	LENGTH (FT)	TYPE	WEIGHT (LBS)	A (IN)	B (IN)	C (IN)	D (IN)	E (IN)	F (IN)	REMARKS
5SM1	5	2	20.5	STR	42.76							
5SM2	5	2	19.5	STR	40.68							
4SM3	4	8	3.0	STR	16.03							
4SM4	4	4	7.8	T3	20.84	4	45	1.5	6	39	12	
4SM5	4	4	8.5	T2	22.71	12	45	1.5				
4SM6	4	1	8.3	T3	5.54	9	45	1.5	33	12	12	
4SM7	4	1	8.0	T3	5.34	6.5	45	1.5	21	24	12	
4SM8	4	1	8.7	T2	5.81	14	45	1.5				
5SM9	5	3	2.0	T1	6.26	8	14		5			SEE NOTE 4
6SM10	6	1	5.8	T2	8.71	6	30	3				SEE NOTE 7

ALL REINFORCEMENT SHALL BE GALVANIZED STEEL, GRADE 60



- NOTES:
1. SURFACES SHALL BE SMOOTH.
 2. MATERIALS SHALL CONFORM TO §606-2.14, TRANSITIONS CONSTRUCTED OF, OR WITH, CONCRETE.
 3. CONSTRUCTION SHALL CONFORM TO §606-3.19, TRANSITIONS CONSTRUCTED OF, OR WITH, CONCRETE.
 4. SHORT LEG OF 5SM9 SHALL BE DRILLED AND GROUTED INTO THE EXISTING PIER AS SHOWN. COST WILL BE INCLUDED UNDER ITEM 586.02.25.
 5. SEE DWG NO PP-1 FOR RIGHT SHOULDER PLACEMENT DETAIL.
 6. BARRIER AND GUIDE RAIL WILL TAPER AWAY FROM THE TRAVEL LANE AT A RATE OF 20:1 UNTIL A MINIMUM SHOULDER WIDTH OF 10' IS ACHIEVED.
 7. PROVISION FOR A CONTINUITY CONNECTION BETWEEN THE SPECIAL TRANSITION AND THE CONTINUATION OF THE BARRIER SYSTEM IS REQUIRED. DETAILS WILL FOLLOW THE REQUIREMENTS FROM STANDARD SHEET 606-28.
 8. PIER OR ABUTMENT DIMENSIONS SHOWN MAY VARY. CONTRACTOR TO VERIFY IN FIELD.
 9. DRILL & GROUT REBARS INTO EXISTING PIER / ABUTMENT. COST TO BE INCLUDED UNDER ITEM 586.03...25

ALTERED ON: _____ AFFIXED ON: 9/20/2016

SIGNATURE: _____ STAMP: _____

SIGNATURE: _____ STAMP: _____

RIGHT SHOULDER BARRIER SPECIAL TRANSITION. DETAILS-ITEM 606.26500608
N.T.S.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.

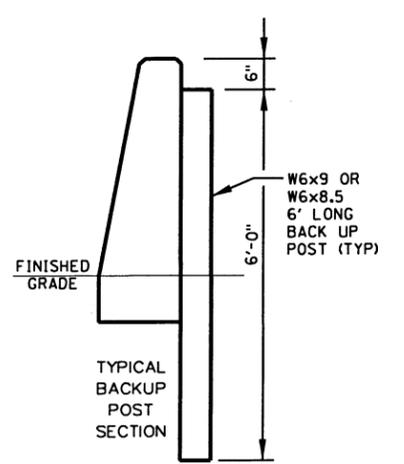
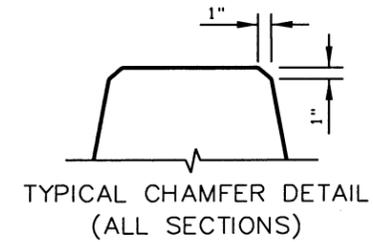
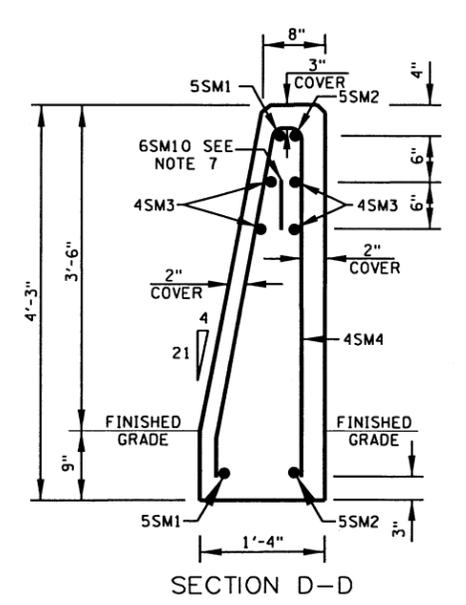
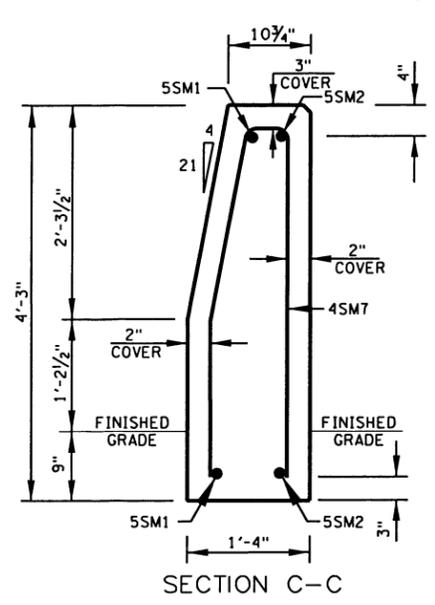
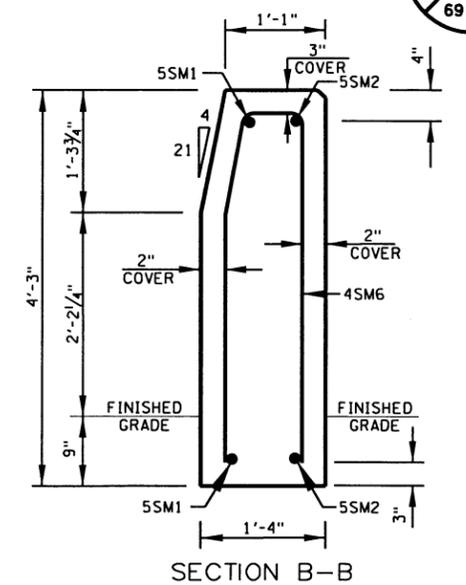
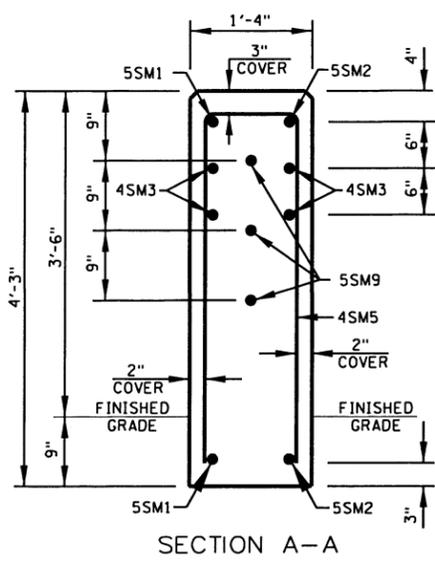
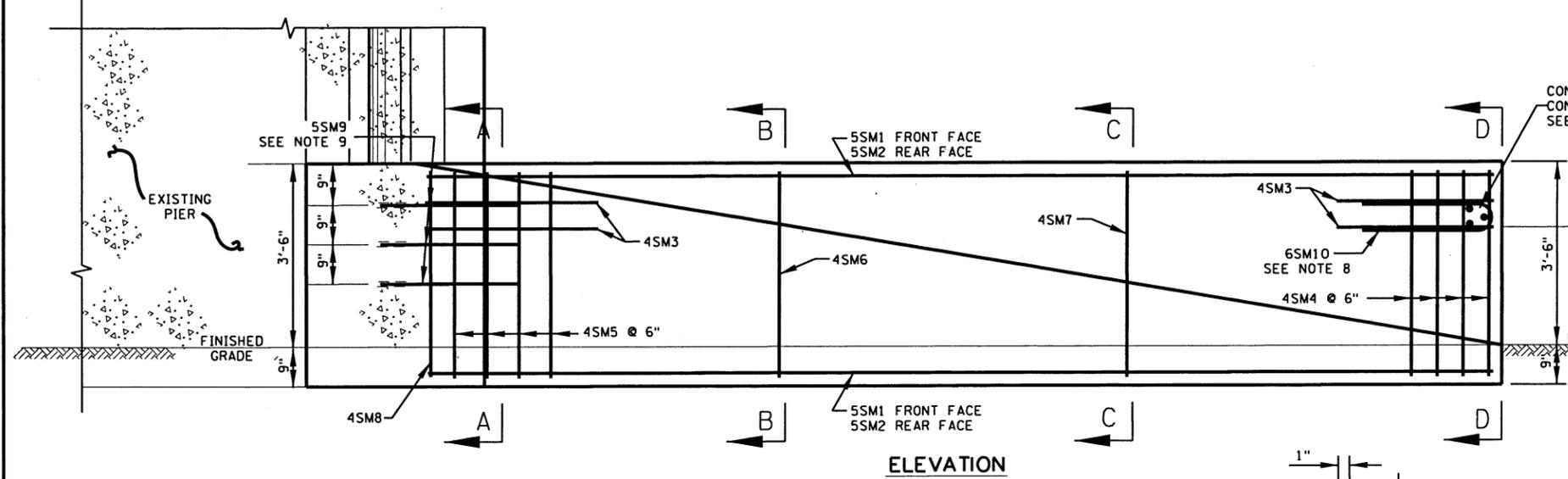
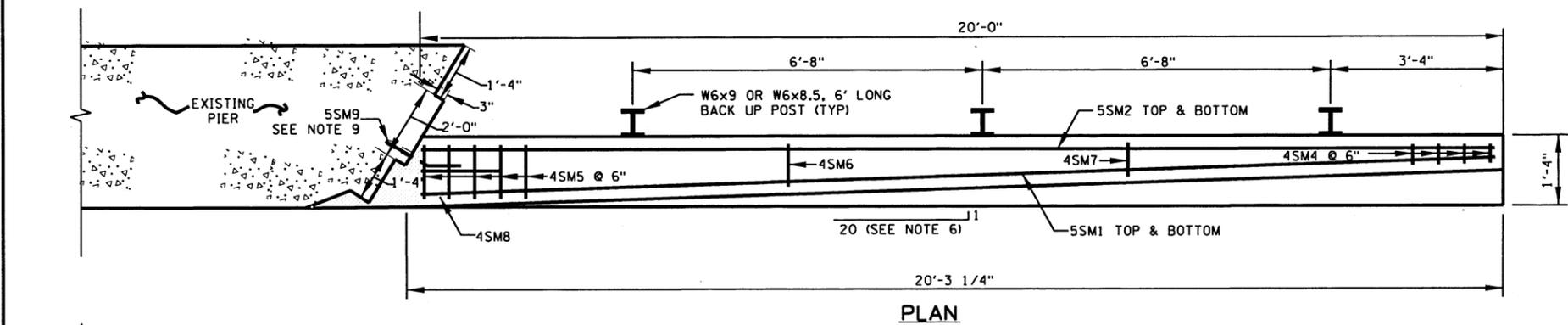


NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXTEN.,
DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES
TITLE OF DRAWING
BARRIER AT ABUTMENT

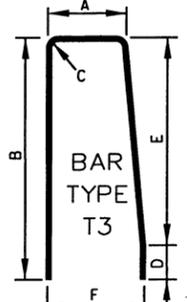
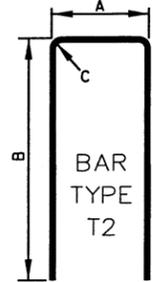
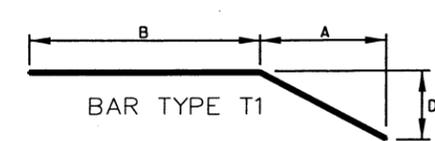
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12/15/15
DRAWING NUMBER:
BTD-2

CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



BAR MARK	SIZE	QTY	LENGTH	TYPE	WEIGHT	A	B	C	D	E	F	REMARKS
5SM1	5	2	20.5	STR	42.76	-	-	-	-	-	-	-
5SM2	5	2	19.5	STR	40.68	-	-	-	-	-	-	-
4SM3	4	8	3.0	STR	16.03	-	-	-	-	-	-	-
4SM4	4	4	7.8	T3	20.84	4	45	1.5	6	39	12	-
4SM5	4	4	8.5	T2	-	12	45	1.5	-	-	-	-
4SM6	4	1	8.3	T3	5.54	9	45	1.5	33	12	12	-
4SM7	4	1	8.0	T3	5.34	6.5	45	1.5	21	24	12	-
4SM8	4	1	8.7	T2	-	14	45	1.5	-	-	-	-
5SM9	5	3	2.0	T1	6.26	8	14	-	5	-	-	SEE NOTE 4
6SM10	6	1	5.8	T2	-	6	30	3	-	-	-	SEE NOTE 7

ALL REINFORCEMENT SHALL BE GALVANIZED STEEL, GRADE 60



- NOTES:
1. SURFACES SHALL BE SMOOTH.
 2. MATERIALS SHALL CONFORM TO §606-2.14, TRANSITIONS CONSTRUCTED OF, OR WITH, CONCRETE.
 3. CONSTRUCTION SHALL CONFORM TO §606-3.19, TRANSITIONS CONSTRUCTED OF, OR WITH, CONCRETE.
 4. SHORT LEG OF 5SM9 SHALL BE DRILLED AND GROUTED INTO THE EXISTING PIER AS SHOWN. COST WILL BE INCLUDED UNDER ITEM 586.02.25.
 5. BARRIER AND GUIDE RAIL WILL TAPER AWAY FROM THE TRAVEL LANE AT A RATE OF 20:1 UNTIL A MINIMUM SHOULDER WIDTH OF 10' IS ACHIEVED.
 6. RECORD PLANS INDICATE THAT THE EXISTING CONCRETE BARRIER IS INSTALLED IN FRONT OF EXISTING PIER OR ABUTMENT. CONTRACTOR SHALL REMOVE BARRIER WITH CARE AT THIS LOCATION TO ENSURE NO DAMAGE OCCURS TO THE EXISTING PIER OR ABUTMENT, COST WILL BE INCLUDED UNDER ITEM 606.26500408. ANY DAMAGE AND NECESSARY REPAIRS TO THE EXISTING FEATURE WILL BE THE CONTRACTORS RESPONSIBILITY.
 7. PROVISION FOR A CONTINUITY CONNECTION BETWEEN THE SPECIAL TRANSITION AND THE CONTINUATION OF THE BARRIER SYSTEM IS REQUIRED. DETAILS WILL FOLLOW THE REQUIREMENTS FROM STANDARD SHEET 606-28.
 8. PIER OR ABUTMENT DIMENSIONS SHOWN MAY VARY. CONTRACTOR TO VERIFY IN FIELD. BE SHORTENED BY 12".
 9. DRILL & GROUT REBARS INTO EXISTING PIER/ ABUTMENT. COST TO BE INCLUDED UNDER ITEM 586.03..25

RIGHT SHOULDER BARRIER SPECIAL TRANSITION DETAILS-ITEM 606.26500708

N.T.S.

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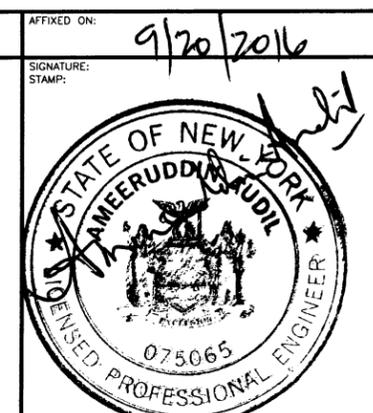
REVISIONS			
DATE	DESCRIPTION	BY	SYM.



NEW YORK STATE THRUWAY AUTHORITY
DEPARTMENT OF ENGINEERING
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

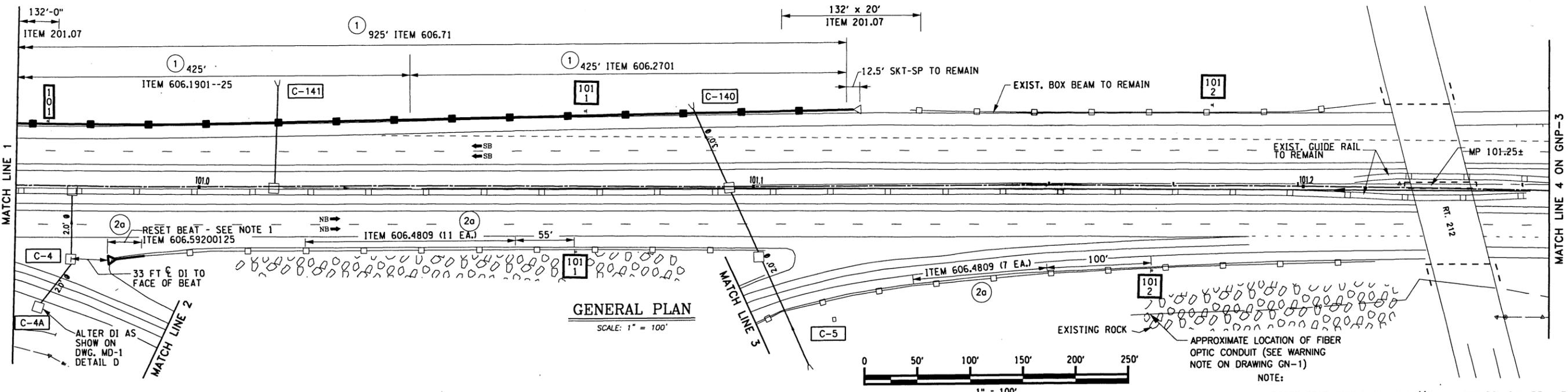
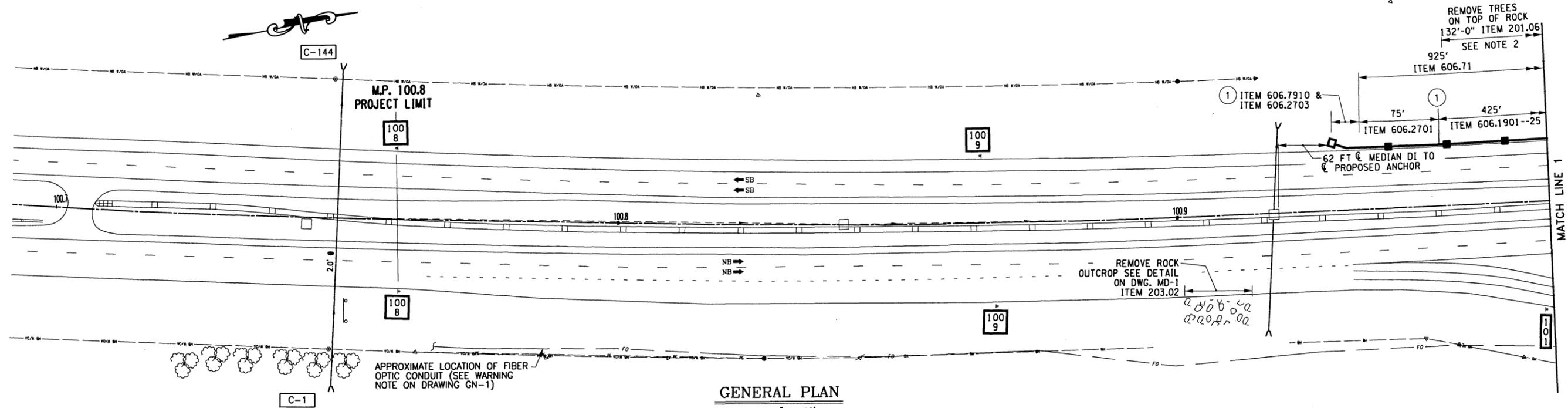
TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXTENSION,
DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES
TITLE OF DRAWING
BARRIER AT ABUTMENTS

CONTRACT NUMBER:
TAA 16-27R
DATE:
05/25/16
DRAWING NUMBER:
BTD-3



ALTERED ON: 9/20/2016
SIGNATURE: [Signature]
STAMP: [Stamp]

FILE
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



- NOTE:
- RESET BEAT WITH LESS THAN 1/2" GAP BETWEEN BOX BEAM TUBES AT "END TUBE SPLICE PLATE" PER MANUFACTURER'S INSTALLATION MANUAL ITEM 606.59200125. RESET BEAT AT THE SAME LOCATION AS THE EXISTING TERMINAL.
 - SEE DWG. CLR-1 FOR CLEARING AND GRUBBING ON ROCK SLOPES
- ⊕ REPRESENTS GUIDERAIL IMPROVEMENT LOCATION NO. AS SHOWN IN TABLE ON DWG. GRT-1.
- REFER TO DWGS. PP-1 THRU PP-8 FOR VARIOUS PIER / ABUTMENT PROTECTION DETAILS AT VARIOUS BRIDGE CROSSINGS.

ITEM	DESCRIPTION
201.06	CLEARING AND GRUBBING (LUMP SUM)
201.07	CLEARING AND GRUBBING (ACRE)
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL
606.2701	HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.2703	ANCHORAGE UNIT FOR HPBO (MOD.) CORRUGATED BEAM GUIDE RAILING
606.1901--25	THREE BEAM RAILING, CORRUGATED BEAM ROCK FENCE
606.4809	I-BEAM POSTS FOR EXISTING BOX BEAM GUIDE RAILING
606.59200125	RESETTING END TERMINALS FOR BOX BEAM GUIDE RAIL AND MEDIAN BARRIER

ITEM	DESCRIPTION
606.71	REMOVE AND DISPOSE CORRUGATED BEAM GUIDERAIL
606.7910	REMOVING AND DISPOSING ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING AND MEDIAN BARRIER

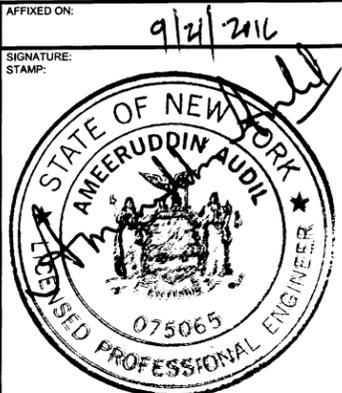
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REVISIONS			
DATE	DESCRIPTION	BY	SYM.

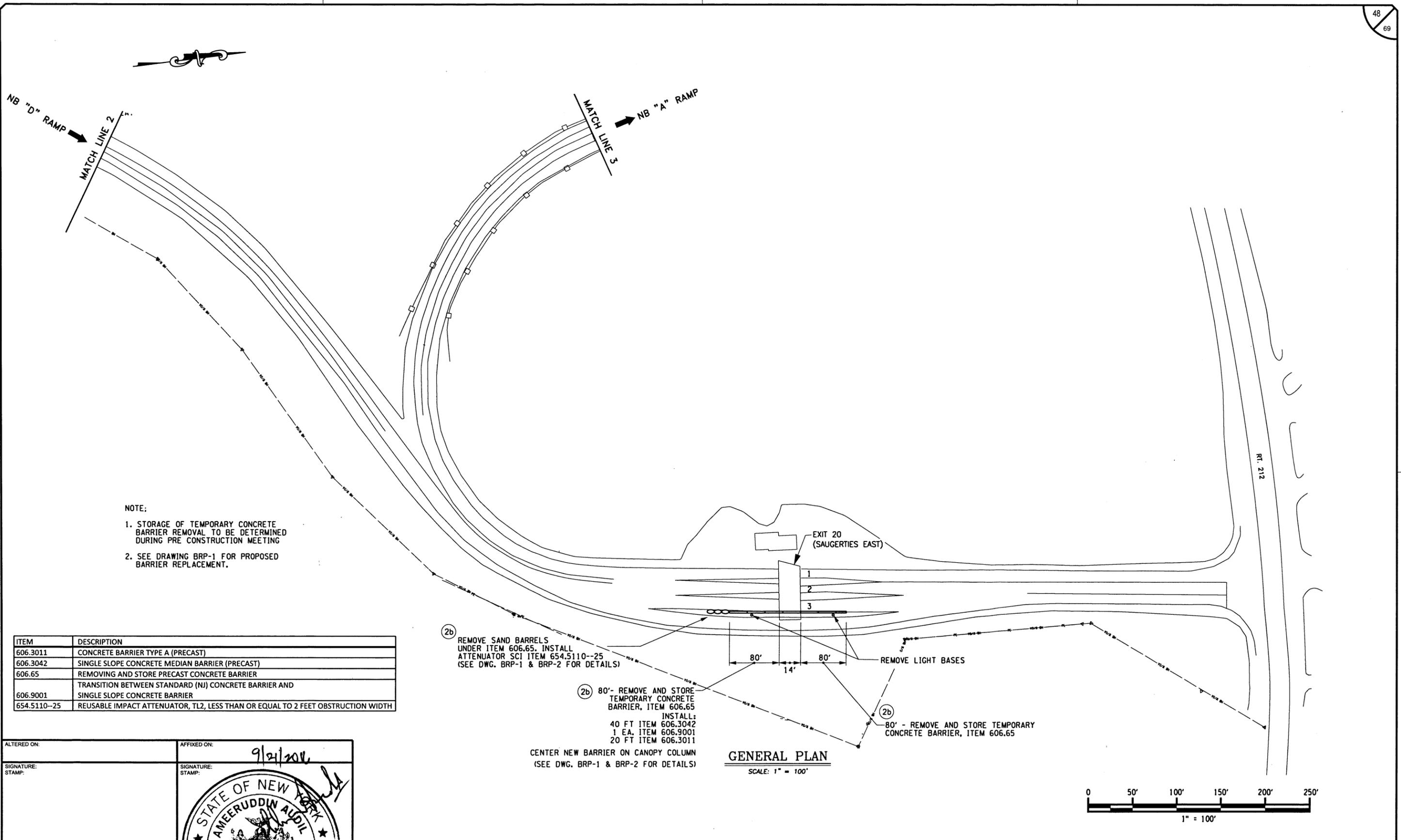
NEW YORK STATE OF OPPORTUNITY

Thruway Authority | **Canal Corporation**

TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-1



FILED
 CHECKED BY: TA
 DRAFTED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



NOTE:

1. STORAGE OF TEMPORARY CONCRETE BARRIER REMOVAL TO BE DETERMINED DURING PRE CONSTRUCTION MEETING
2. SEE DRAWING BRP-1 FOR PROPOSED BARRIER REPLACEMENT.

ITEM	DESCRIPTION
606.3011	CONCRETE BARRIER TYPE A (PRECAST)
606.3042	SINGLE SLOPE CONCRETE MEDIAN BARRIER (PRECAST)
606.65	REMOVING AND STORE PRECAST CONCRETE BARRIER
606.9001	TRANSITION BETWEEN STANDARD (NJ) CONCRETE BARRIER AND SINGLE SLOPE CONCRETE BARRIER
654.5110-25	REUSABLE IMPACT ATTENUATOR, TL2, LESS THAN OR EQUAL TO 2 FEET OBSTRUCTION WIDTH

(2b) REMOVE SAND BARRELS UNDER ITEM 606.65. INSTALL ATTENUATOR SCI ITEM 654.5110-25 (SEE DWG. BRP-1 & BRP-2 FOR DETAILS)

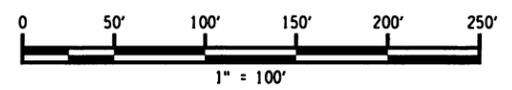
(2b) 80'- REMOVE AND STORE TEMPORARY CONCRETE BARRIER, ITEM 606.65
 INSTALL:
 40 FT ITEM 606.3042
 1 EA. ITEM 606.9001
 20 FT ITEM 606.3011

(2b) - REMOVE AND STORE TEMPORARY CONCRETE BARRIER, ITEM 606.65

REMOVE LIGHT BASES

CENTER NEW BARRIER ON CANOPY COLUMN
 (SEE DWG. BRP-1 & BRP-2 FOR DETAILS)

GENERAL PLAN
 SCALE: 1" = 100'



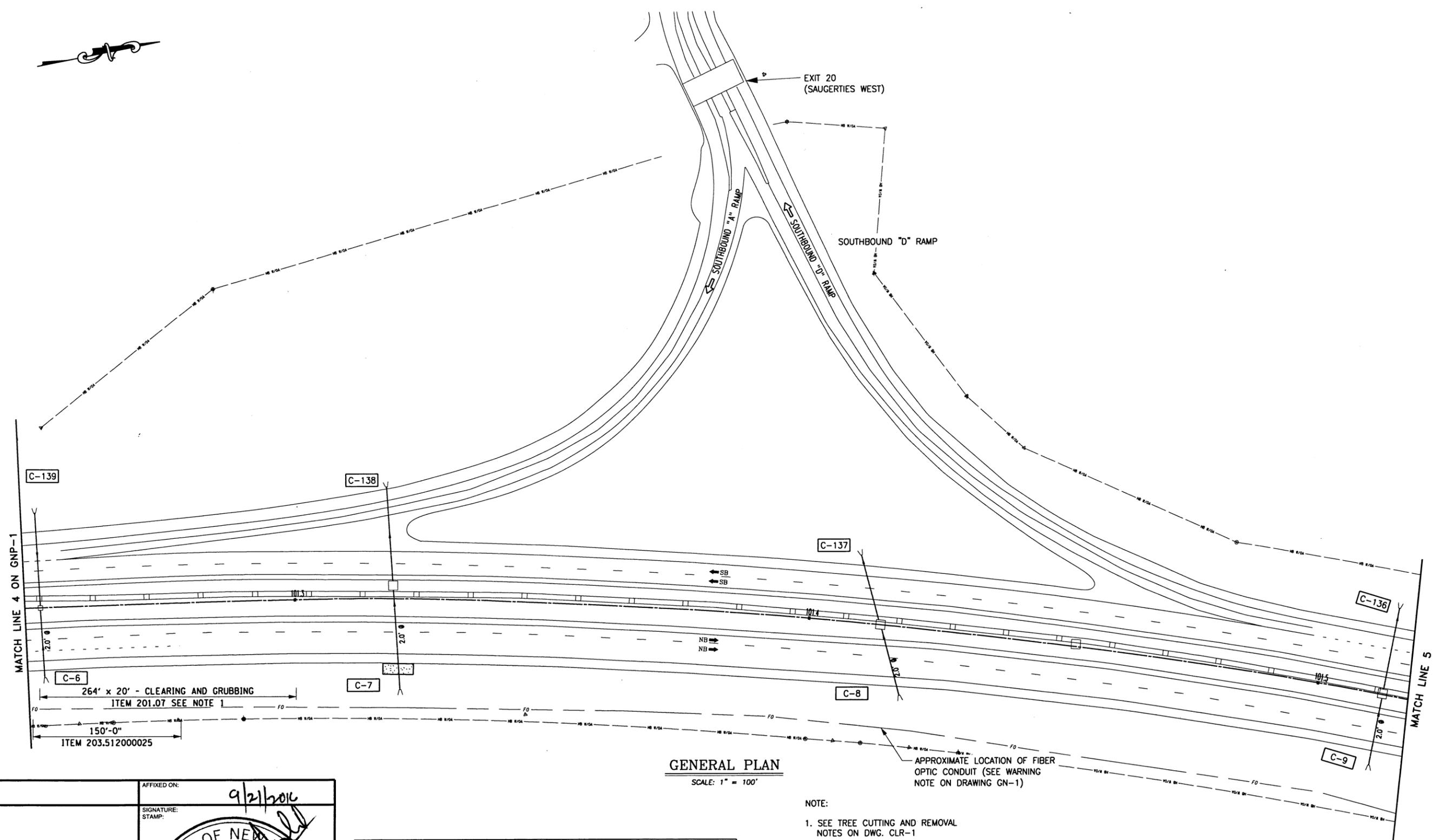
ALTERED ON:	AFFIXED ON: 9/21/2016
SIGNATURE: STAMP:	SIGNATURE: STAMP:

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REVISIONS			
DATE	DESCRIPTION	BY	SYM.

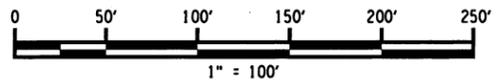
TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-2

FILE
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 CHECKED BY: TA
 DESIGN SUPERVISOR: TA



GENERAL PLAN
SCALE: 1" = 100'

NOTE:
1. SEE TREE CUTTING AND REMOVAL NOTES ON DWG. CLR-1



ALTERED ON:
SIGNATURE:
STAMP:

AFFIXED ON:
9/21/2016
SIGNATURE:
STAMP:



ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
203.51200025	GRADING, CLEANING AND RESHAPING EXISTING DITCHES

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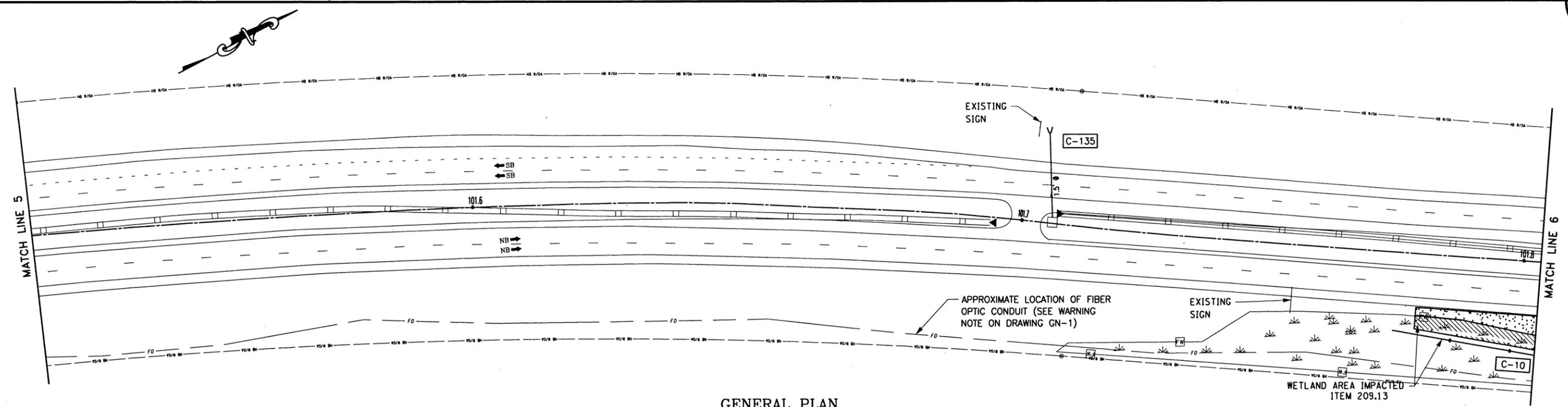
REVISIONS			
DATE	DESCRIPTION	BY	SYM.



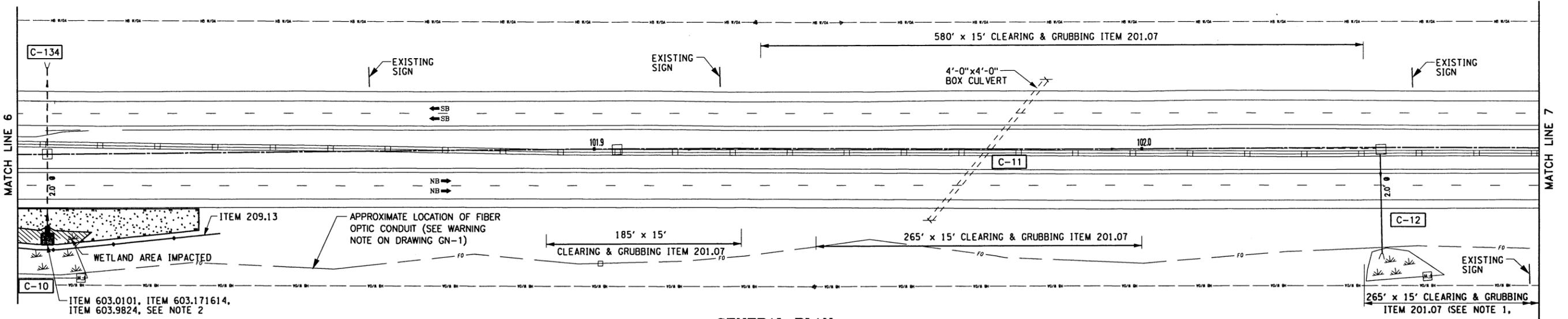
TITLE OF PROJECT:
SAFETY UPGRADES, CULVERT EXTEN.
DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT:
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES
TITLE OF DRAWING:
GENERAL PLANS

CONTRACT NUMBER:
TAA 16-27R
DATE:
4/18/2016
DRAWING NUMBER:
GNP-3

FILED
 CHECKED BY: TA
 DRAFTED BY: TA
 DESIGNED BY: TA
 CHECKED BY: TA
 DESIGN SUPERVISOR: TA

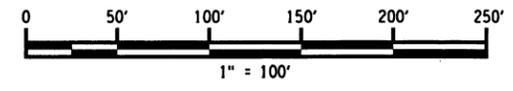


GENERAL PLAN
SCALE: 1" = 100'



GENERAL PLAN
SCALE: 1" = 100'

- NOTES:**
- SEE TREE CUTTING AND REMOVAL NOTES, DWG. NO. CLR-1.
 - REFER TO DWG. NO. CLVRT-1 THRU CLVRT-4 FOR CULVERT REPLACEMENT/EXTENSION DETAILS.



ALTERED ON:	AFFIXED ON: 9/20/2016
SIGNATURE: STAMP:	SIGNATURE: STAMP:

ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
209.13	SILT FENCE TEMPORARY
603.0101	CULVERT END SAFETY GRATE
603.171614	GALVANIZED STEEL END SECTION - PIPE (2 - 3/8" x 1/2" CORRUGATIONS) 30 INCHES DIAMETER, 16 GAUGE
603.9824	SMOOTH INTERIOR CORRUGATED POLYETHYLENE CULVERT STORM DRAIN 24" DIAMETER

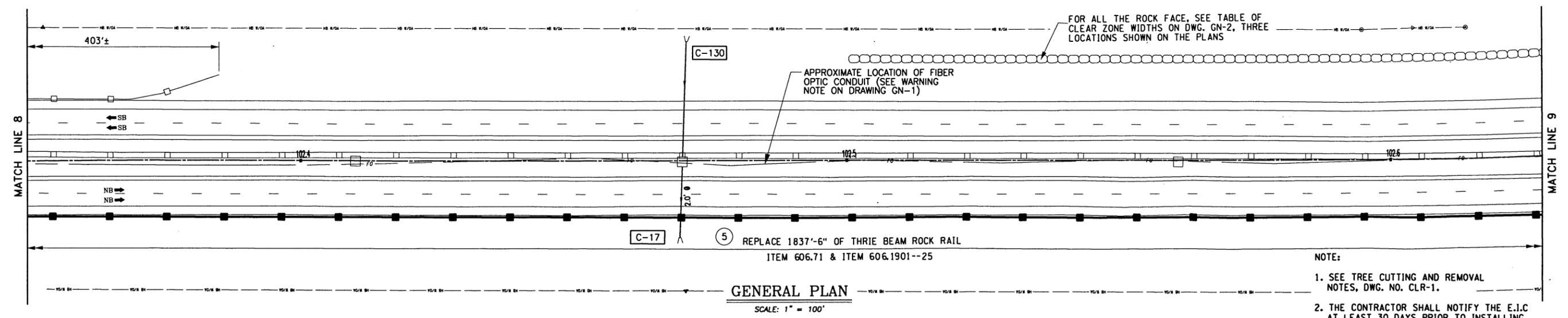
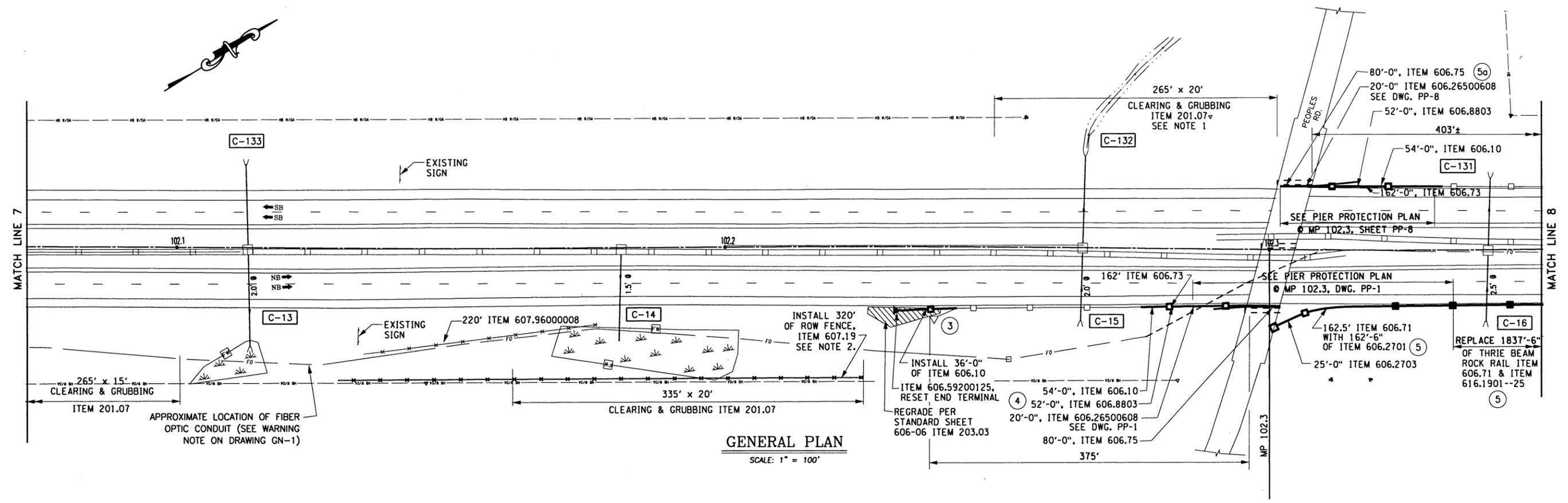
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REVISIONS			
DATE	DESCRIPTION	BY	SYM.

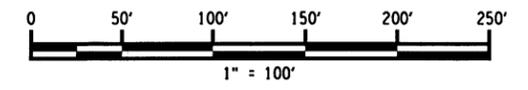
Thruway Authority | **Canal Corporation**

TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-4

FILE
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



- NOTE:
- SEE TREE CUTTING AND REMOVAL NOTES, DWG. NO. CLR-1.
 - THE CONTRACTOR SHALL NOTIFY THE E.I.C AT LEAST 30 DAYS PRIOR TO INSTALLING ROW FENCING SO THAT THE AUTHORITY'S REAL PROPERTY TECHNICAL SUPPORT UNIT CAN BE CONTACTED TO CONDUCT A SURVEY STAKE-OUT OF EXISTING HIGHWAY BOUNDARY.



ALTERED ON:

AFFIXED ON: 9/26/2016

SIGNATURE: STAMP:

ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
203.03	EMBANKMENT IN PLACE
606.10	BOX BEAM GUIDE RAILING
606.19010025	THRIE BEAM RAILING CORRUGATED BEAM ROCK FENCE
606.26500608	SPECIAL TRANSITION
606.2701	HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.2703	ANCHORAGE UNIT FOR HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.59200125	RESETTING END TERMINAL FOR BOX BEAMGUIDE RAIL AND MEDIAN BARRIER

ITEM	DESCRIPTION
606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAILING
606.73	REMOVING AND DISPOSING BOX BEAM GUIDE RAILING
606.75	REMOVING AND DISPOSING CONCRETE BARRIER
606.8803	TRANSITION BETWEEN BOX BEAM GUIDE RAIL AND SINGLE SLOPE HALF SECTION CONCRETE BARRIER(ONE OR TWO WAY OPERATION)
607.19	RIGHT OF WAY FENCING
607.96000008	REMOVING AND DISPOSE OF EXISTING FENCE

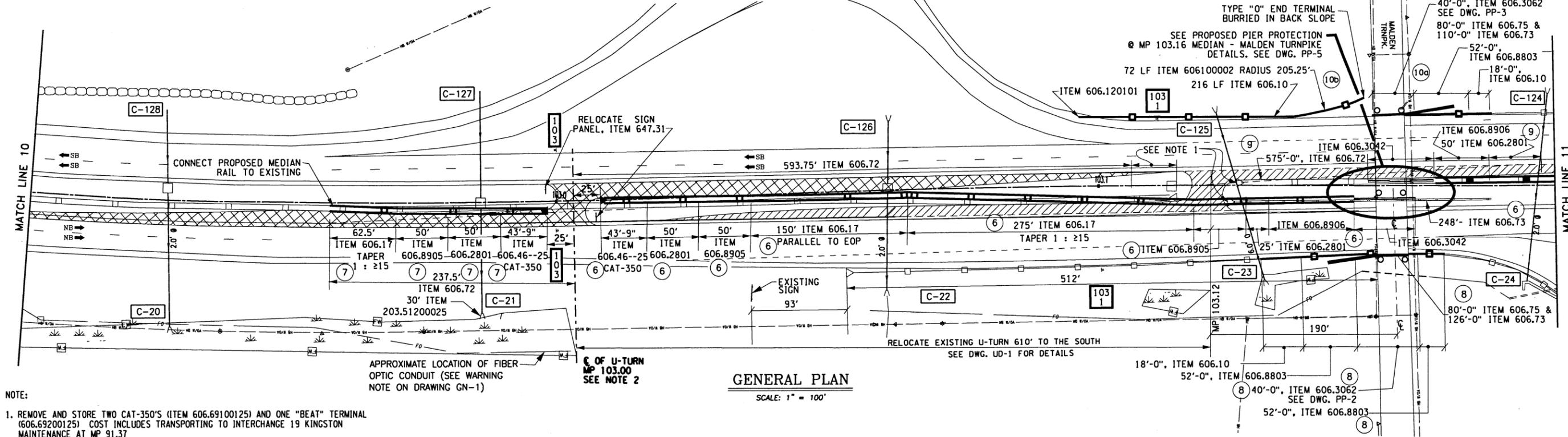
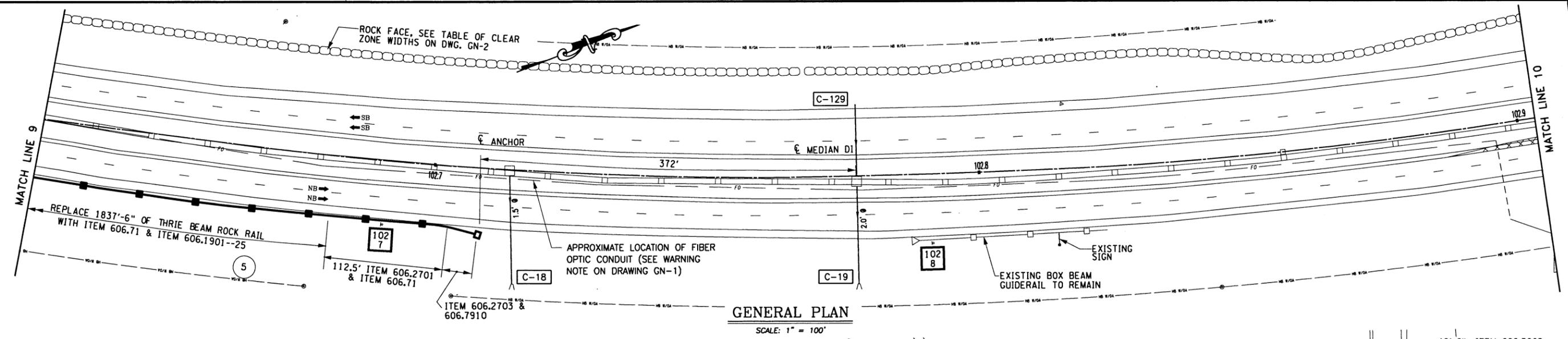
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REVISIONS			
DATE	DESCRIPTION	BY	SYM.



TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-5

FILED: TA
 CHECKED BY: TA
 DRAFTED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



- NOTE:
- REMOVE AND STORE TWO CAT-350'S (ITEM 606.69100125) AND ONE "BEAT" TERMINAL (606.69200125) COST INCLUDES TRANSPORTING TO INTERCHANGE 19 KINGSTON MAINTENANCE AT MP 91.37
 - SEE TYPICAL U-TURN LAYOUT DETAILS ON DWG UD-1

ITEM	DESCRIPTION
203.51200025	GRADING, CLEANING AND RESHAPING EXISTING DITCHES
606.10	BOX BEAM GUIDE RAILING
606.100002	BOX BEAM GUIDE RAILING SHOP BENT OR SHOP MITERED
606.120101	BOX BEAM END PIECE
606.17	CORRUGATED BEAM MEDIAN BARRIER
606.1901-25	THRIE BEAM RAILING CORRUGATED BEAM ROCK FENCE
606.2701	HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.2703	ANCHORAGE UNIT FOR HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.2801	HPBO (MOD) CORRUGATED BEAM MEDIAN BARRIER
606.3042	SINGLE SLOPE CONCRETE MEDIAN BARRIER
606.3062	SINGLE SLOPE CONCRETE HALF SECTION BARRIER (PRECAST)
606.46-25	CRASH CUSHION ATTENUATING TERMINAL 350 (CAT-350)
606.69100125	REMOVING AND STORING END TERMINAL FOR HPBO
606.69100125	CORRUGATED BEAM GUIDE RAIL AND MEDIAN BARRIER

ITEM	DESCRIPTION
606.69200125	REMOVING AND STORING END TERMINAL FOR BOX BEAM GUIDE RAIL AND MEDIAN BARRIER
606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAILING
606.72	REMOVING AND DISPOSING CORRUGATED BEAM MEDIAN BARRIER
606.73	REMOVING AND DISPOSING BOX BEAM GUIDE RAILING
606.75	REMOVING AND DISPOSING CONCRETE BARRIER
606.7910	REMOVING AND DISPOSING ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING AND MEDIAN BARRIER
606.8803	TRANSITION BETWEEN BOX BEAM GUIDE RAIL AND SINGLE SLOPE HALF SECTION CONCRETE BARRIER (ONE OR TWO WAY OPERATION)
606.8905	TRANSITION HPBO (MOD) CORRUGATED BEAM MEDIAN BARRIER TO WEEK POST CORRUGATED BEAM GUIDE RAILING
606.8906	TRANSITION HPBO (MOD) CORRUGATED BEAM MEDIAN BARRIER TO SINGLE SLOPE CONCRETE MEDIAN BARRIER

LEGEND

RECONSTRUCT SHOULDER TO CONSTRUCT U-TURNS, SEE U-TURN DETAILS

REMOVE/REESTABLISH SHOULDER WITH ASPHALT PAVEMENT A.O.B.E.

0 50' 100' 150' 200' 250'

1" = 100'

ALTERED ON: _____ AFFIXED ON: 9/20/2016

SIGNATURE: _____ STAMP: _____

SIGNATURE: _____ STAMP: _____

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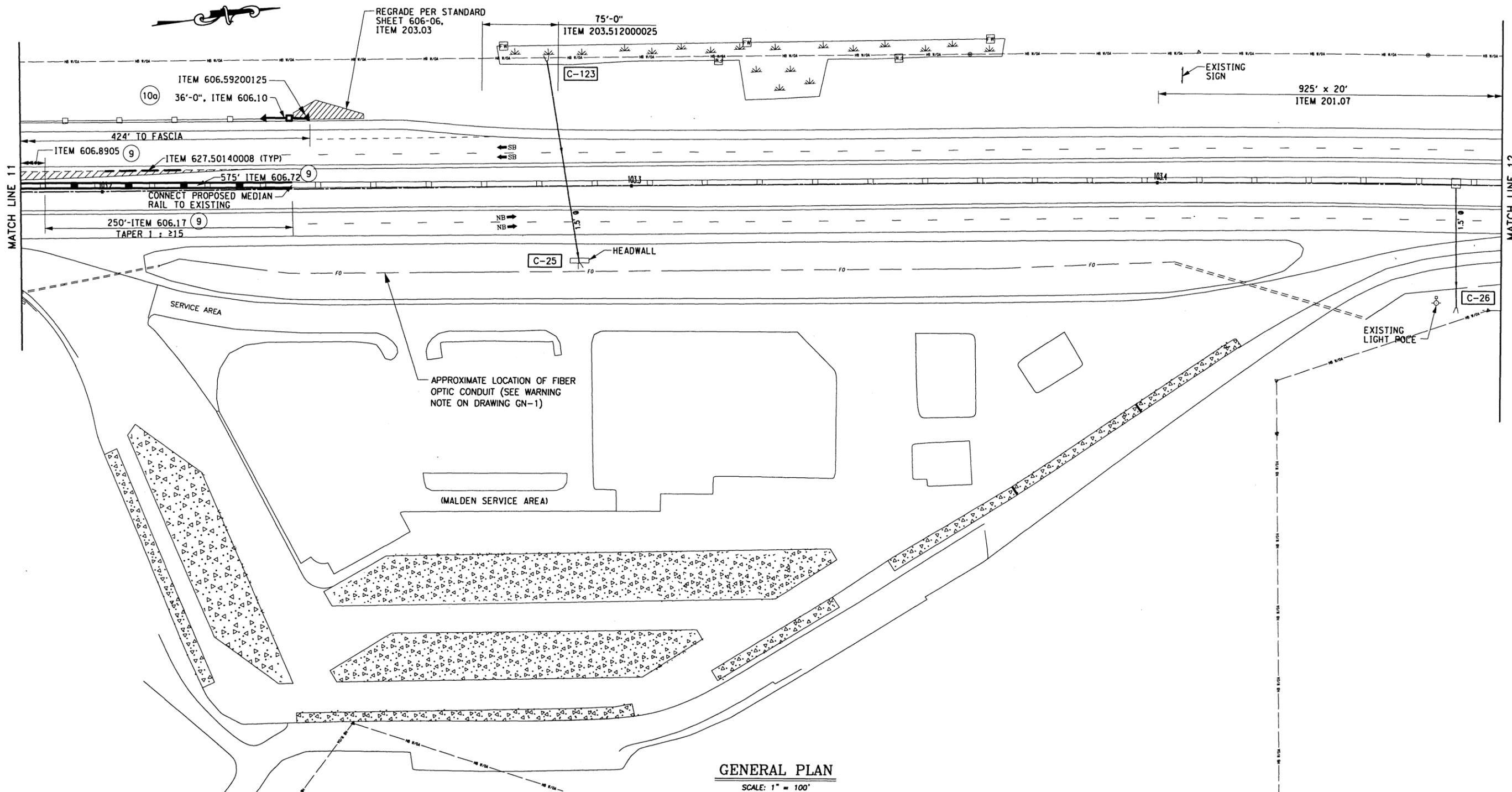
REVISIONS			
DATE	DESCRIPTION	BY	SYM.

NEW YORK STATE OF OPPORTUNITY

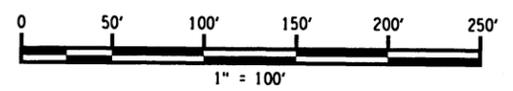
Thruway Authority | **Canal Corporation**

TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-6

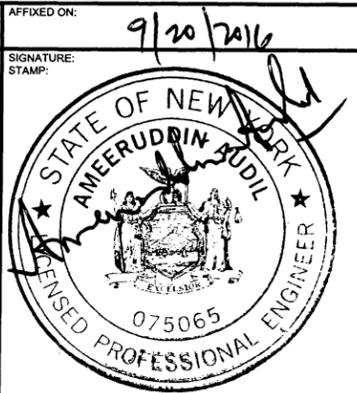
FILE
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



GENERAL PLAN
SCALE: 1" = 100'



ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
203.03	EMBANKMENT IN PLACE
203.51200025	GRADING, CLEANING AND RESHAPING EXISTING DITCHES
606.10	BOX BEAM GUIDE RAILING
606.17	CORRUGATED BEAM MEDIAN BARRIER
606.59200125	RESETTING END TERMINAL FOR BOX BEAM GUIDE RAIL AND MEDIAN BARRIER
606.72	REMOVING AND DISPOSING CORRUGATED BEAM MEDIAN BARRIER
606.8905	TRANSITION-HPBO (MOD.) CORRUGATED BEAM MEDIAN BARRIER TO WEEK POST CORRUGATED BEAM MEDIAN BARRIER
627.50140008	CUTTING PAVEMENT



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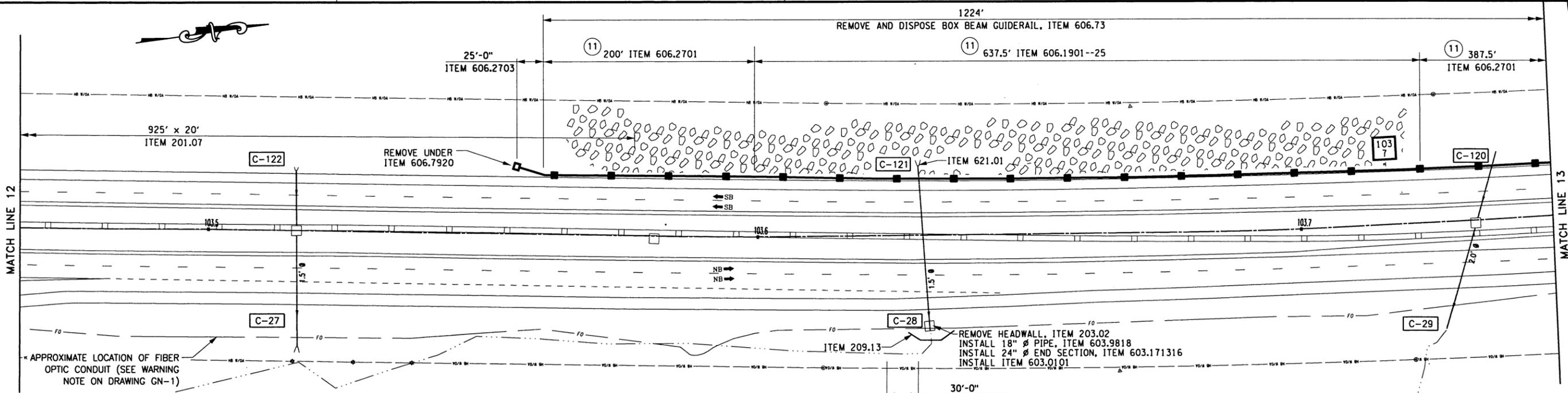
REVISIONS			
DATE	DESCRIPTION	BY	SYM.



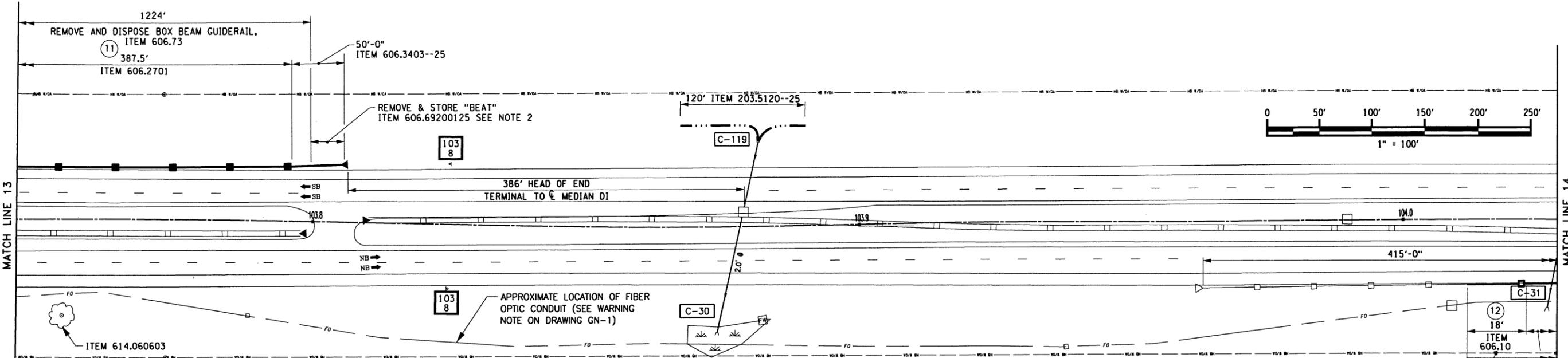
TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-7

DESIGNED BY: TA
DRAFTED BY: TA
CHECKED BY: TA
FILE

54
69



GENERAL PLAN
SCALE: 1" = 100'



GENERAL PLAN
SCALE: 1" = 100'

- NOTES:**
- REFER TO DWG. NO. CLVRT-1 THRU CLVRT-4 FOR CULVERT REPLACEMENT/EXTENSION DETAILS.
 - REMOVE AND STORAGE OF "BEAT" - ITEM 606.69200125 COST INCLUDES TRANSPORTING TO INTERCHANGE 19 KINGSTON MAINTENANCE AT MP 91.37

ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
203.03	UNCLASSIFIED EXCAVATION
203.51200025	GRADING, CLEANING AND RESHAPING EXISTING DITCHES
209.13	SILT FENCE TEMPORARY
603.0101	CULVERT END SAFETY GRATE
603.171316	GALVANIZED STEEL END SECTION PIPE (2-3/4" x 1/2" CORRUGATIONS) 21" DIA. 16 GAUGE
603.9818	SMOOTH INTERIOR CORRUGATED POLYETHYLENE CULVERT STORM DRAIN 18" DIA.
606.10	BOX BEAM GUIDE RAILING

ITEM	DESCRIPTION
606.1901--25	THREE BEAM RAILING CORRUGATED BEAM ROCK FENCE
606.2701	HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.2703	ANCHORAGE UNIT FOR HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.3403--25	END TERMINAL FOR 31" HIGH HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.69200125	REMOVING AND STORING END TERMINAL FOR BOX BEAM GUIDE RAIL AND MEDIAN BARRIER
606.73	REMOVING AND DISPOSING BOX BEAM GUIDE RAILING

ITEM	DESCRIPTION
606.7920	REMOVING AND DISPOSING BOX BEAM GUIDE RAILING END ASSEMBLY
606.8803	TRANSITION BETWEEN BOX BEAM GUIDE RAIL AND SINGLE SLOPE RAIL AND SINGLE SLOPE HALF SECTION CONCRETE BARRIER (ONE OR TWO WAY OPERATION)
614.060603	TREE REMOVAL OVER 36" TO 48" DIA. BREAST HEIGHT
621.01	STUMPS CUT TO BELOW GRADE
	CLEANING CULVERTS WITH A SPAN OF 50" OR LESS

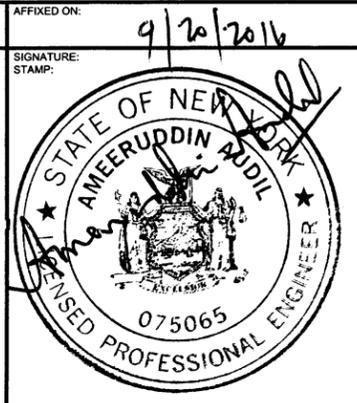
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.

NEW YORK STATE OF OPPORTUNITY
Thruway Authority | Canal Corporation

TITLE OF PROJECT: SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT: MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES
TITLE OF DRAWING: GENERAL PLANS

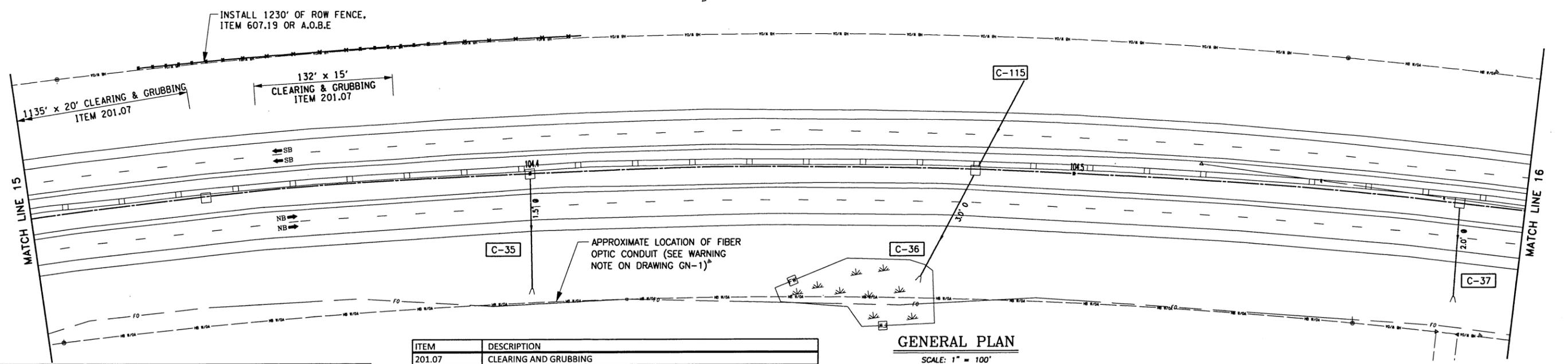
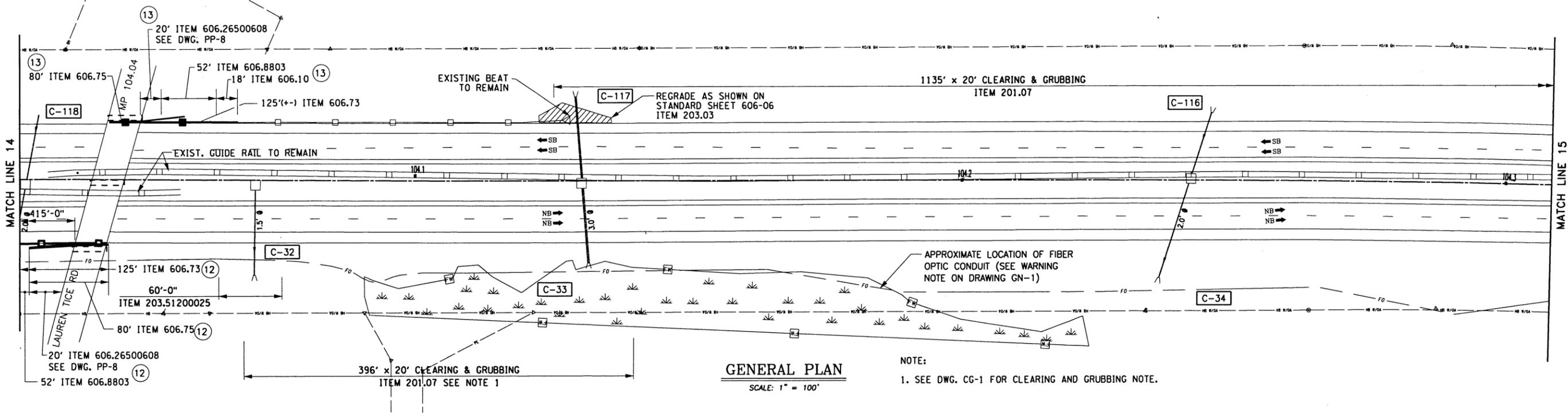
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DATE: 4/18/2016
DRAWING NUMBER: GNP-8



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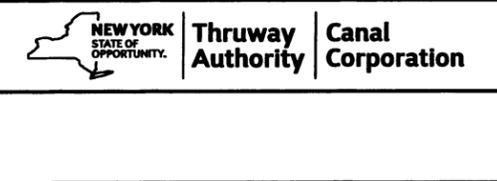
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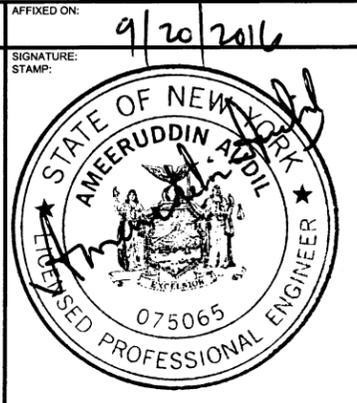
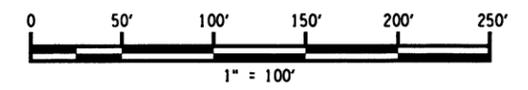
ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
203.03	EMBANKMENT IN PLACE
203.51200025	GRADING, CLEANING AND RESHAPING EXISTING DITCHES
606.10	BOX BEAM GUIDE RAILING
606.26500608	SPECIAL TRANSITION
606.73	REMOVING AND DISPOSING BOX BEAM GUIDE RAILING
606.75	REMOVING AND DISPOSING CONCRETE BARRIER
606.8803	TRANSITION BETWEEN BOX BEAM GUIDE RAIL AND SINGLE SLOPE HALF SECTION CONCRETE BARRIER(ONE OR TWO WAY OPERATION)
607.19	RIGHT OF WAY FENCING

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



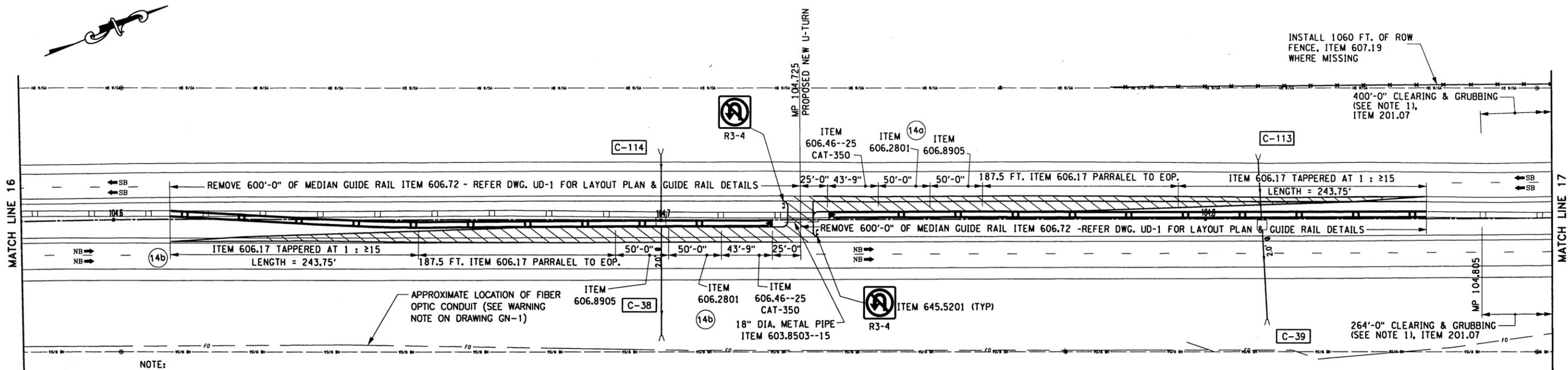
TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-9



ALTERED ON:
SIGNATURE:
STAMP:

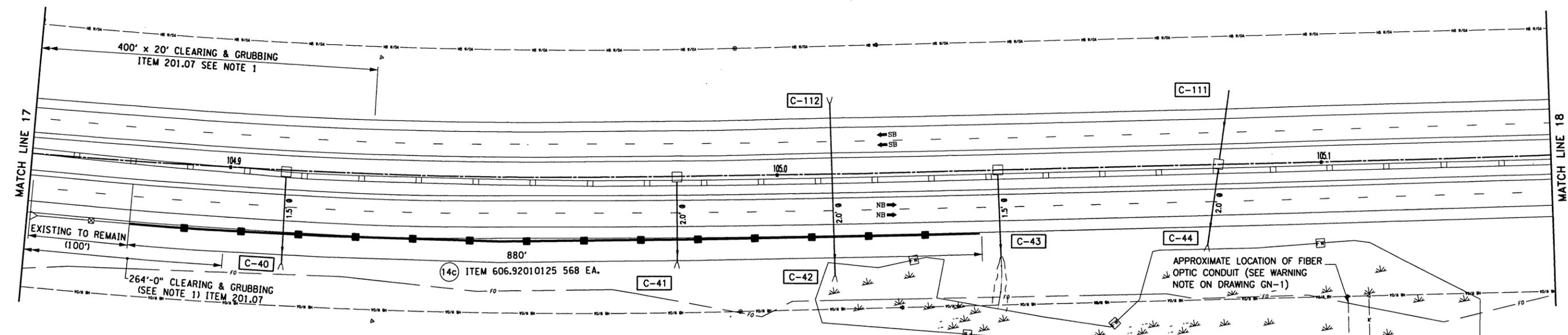
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9/20/2016
SIGNATURE:
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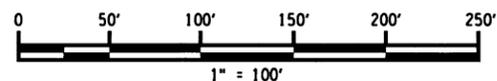


NOTE:
1. SEE DWG. CLR-1 FOR CLEARING AND GRUBBING NOTES.

GENERAL PLAN
SCALE: 1" = 100'



GENERAL PLAN
SCALE: 1" = 100'



ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
603.8503--15	DRAINAGE PIPE, OPT 18" DIA. (FOR DRIVEWAY, GRAVEL AND DIRT SURF. ROADWAYS)
606.17	CORRUGATED BEAM MEDIAN BARRIER
606.2801	HPBO (MOD) CORRUGATED BEAM MEDIAN BARRIER
606.46--25	CRASH CUSHION ATTENUATING TERMINAL 350 (CAT - 350)
606.72	REMOVING AND DISPOSING CORRUGATED BEAM MEDIAN BARRIER
606.8905	TRANSITION-HPBO (MOD.) CORRUGATED BEAM MEDIAN BARRIER TO WEAK POST CORRUGATED BEAM MEDIAN BARRIER
606.92010125	REPLACE GUIDERAIL SPLICE BOLTS
607.19	RIGHT - OF - WAY FENCING
645.5201	GROUND MOUNETD SIGN PANEL (3'X3')

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REVISIONS			
DATE	DESCRIPTION	BY	SYM.



TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES
TITLE OF DRAWING
GENERAL PLANS

CONTRACT NUMBER:
TAA 16-27R
DATE:
4/18/2016
DRAWING NUMBER:
GNP-10



ALTERED ON:
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STAMP:

AFFIXED ON:
SIGNATURE:
STAMP:

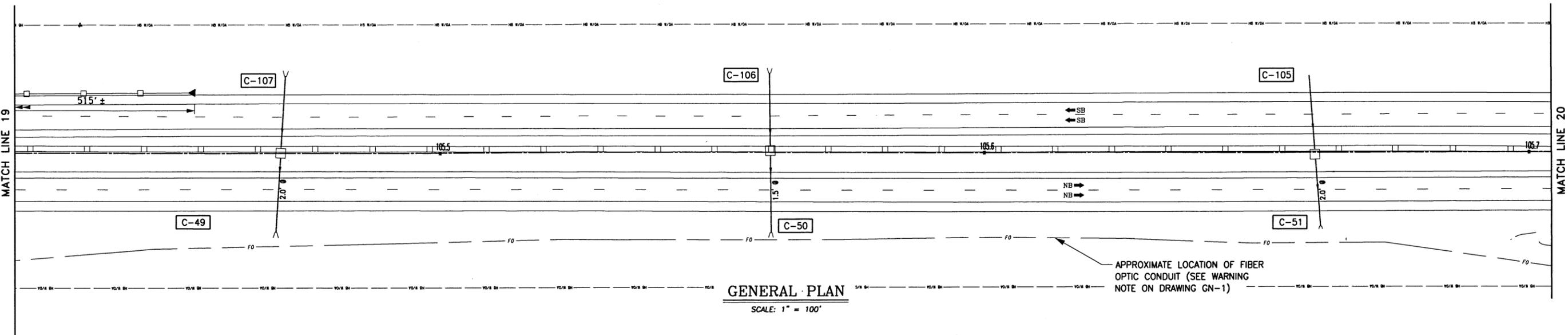
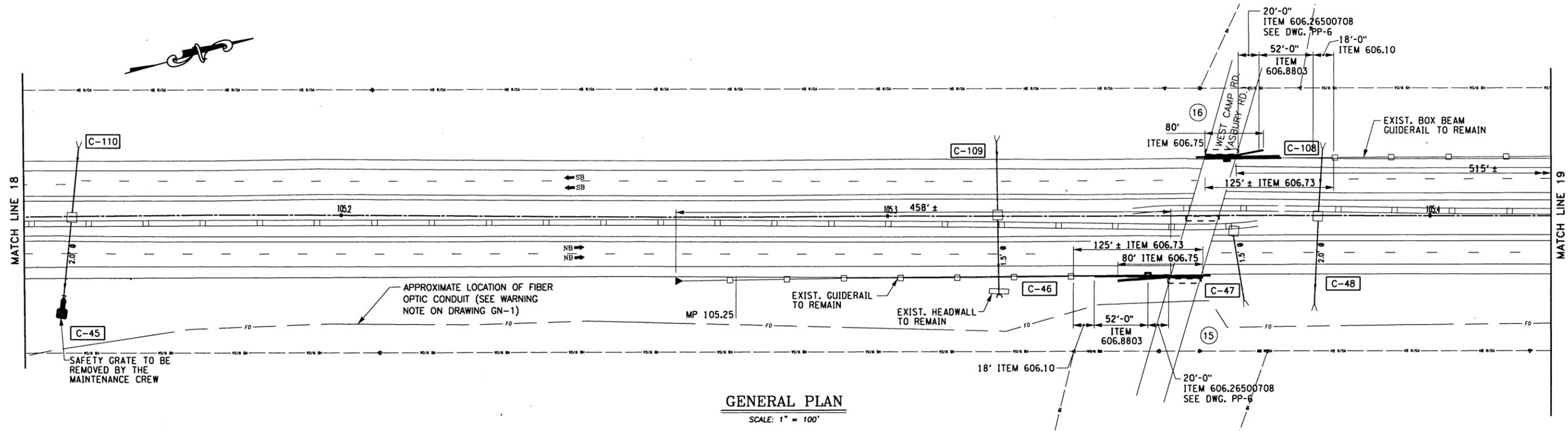
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CHECKED BY: TA

DESIGNED BY: TA

DESIGN SUPERVISOR: TA



ALTERED ON:

AFFIXED ON: 9/20/2016

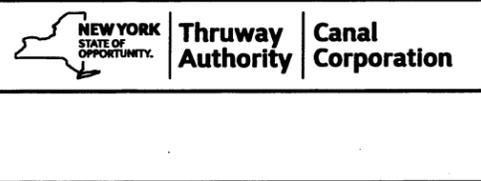
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ITEM	DESCRIPTION
606.10	BOX BEAM RAILING
606.26500708	SPECIAL TRANSITION
606.73	REMOVING AND DISPOSING BOX BEAM GUIDE RAILING
606.75	REMOVING AND DISPOSING CONCRETE BARRIER
606.8803	TRANSITION BETWEEN BOX BEAM GUIDE RAIL AND SINGLE SLOPE HALF SECTION CONCRETE BARRIER (ONE OR TWO WAY OPERATION)

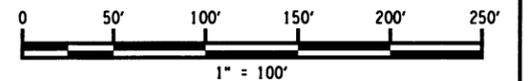
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.

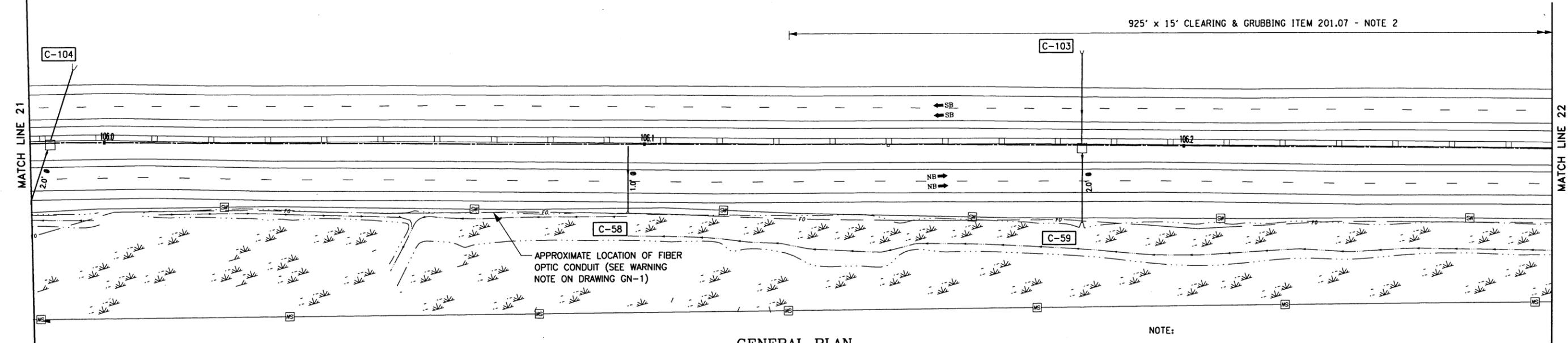
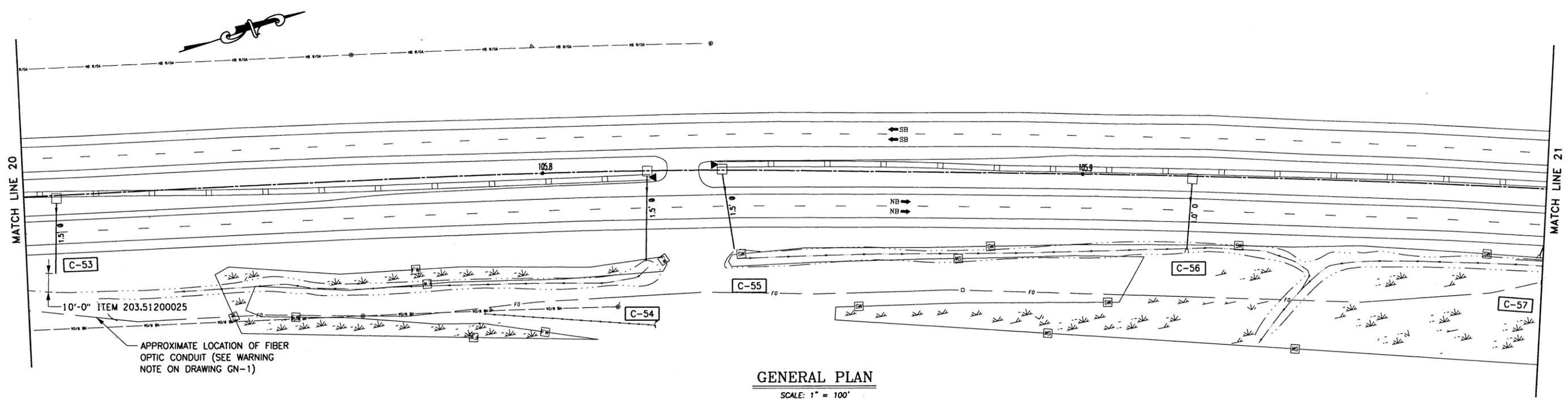


TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES
TITLE OF DRAWING
GENERAL PLANS

CONTRACT NUMBER:
TAA 16-27R
DATE:
4/18/2016
DRAWING NUMBER:
GNP-11



FILE
 CHECKED BY: TA
 DRAFTED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



- NOTE:**
- SEE DWG. CLR-1 FOR CLEARING AND GRUBBING NOTES.
 - REMOVE TREES, CLEAR AND GRUB 15'-0" BEYOND EXISTING MOWING LIMITS.

ALTERED ON:
SIGNATURE:
STAMP:

AFFIXED ON:
9/20/2016
SIGNATURE:
STAMP:

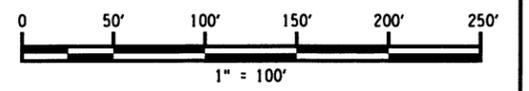
ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
203.51200025	GRADING CLEANING AND RESHAPING EXISTING DITCHES

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.

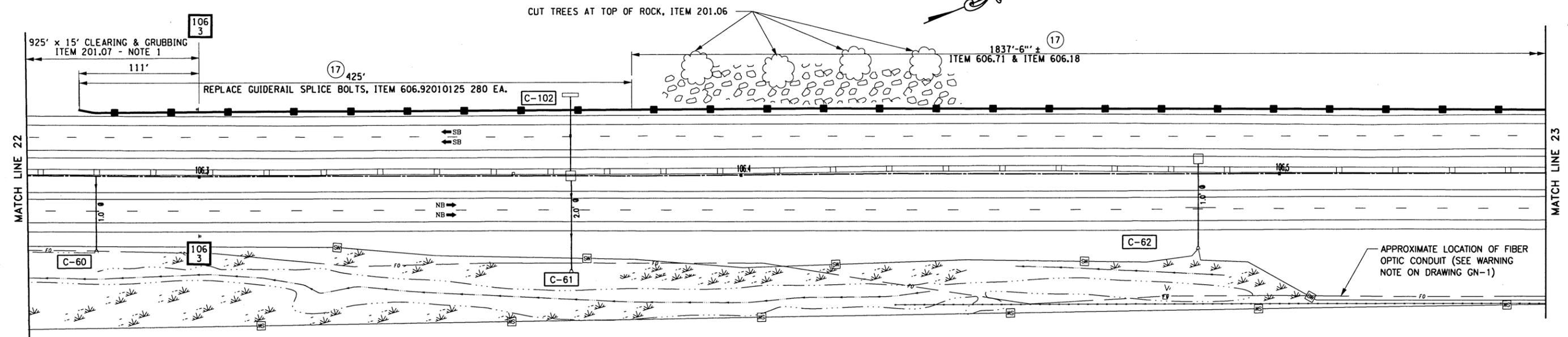


TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-12



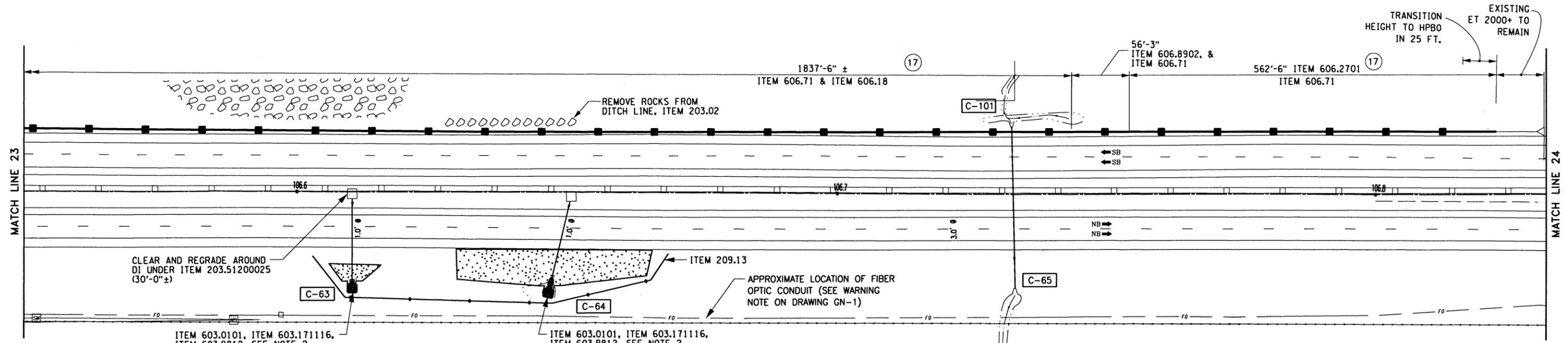
FILE
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA

59
69



NOTE:
 1. SEE DWG. CLR-1 FOR CLEARING AND GRUBBING NOTES.
 2. REFER TO DWG. NO. CLVRT-1 THRU CLVRT-4 FOR CULVERT REPLACEMENT/EXTENSION DETAILS.

GENERAL PLAN
 SCALE: 1" = 100'



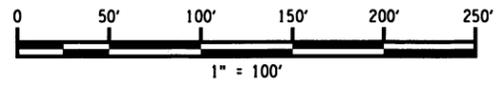
GENERAL PLAN
 SCALE: 1" = 100'

ALTERED ON:
 SIGNATURE:
 STAMP:

AFFIXED ON: 9/20/2016
 SIGNATURE:
 STAMP:


ITEM	DESCRIPTION
201.06	CLEARING AND GRUBBING
201.07	CLEARING AND GRUBBING
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL
203.51200025	GRADING, CLEANING AND RESHAPING EXISTING DITCHES
209.13	SILT FENCE, TEMPORARY
603.0101	CULVERT END SAFETY GRATE
603.171116	GALVANIZED STEEL END SECTION - (PIPE 15" DIA. 16 GAUGE)
603.9812	SMOOTH INTERIOR CORRUGATED POLYETHYLENE CULVERT PIPE - 12" DIA.

ITEM	DESCRIPTION
606.18	MODIFIED WEAK- POST, CORRUGATED BEAM GUIDERAIL
606.2701	HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAILING
606.8902	TRANSITION-HPBO (MOD.) CORRUGATED BEAM GUIDE RAILING TO WEAK POST CORRUGATED BEAM GUIDE RAILING
606.92010125	REPLACE GUIDE RAIL SPLICE BOLTS



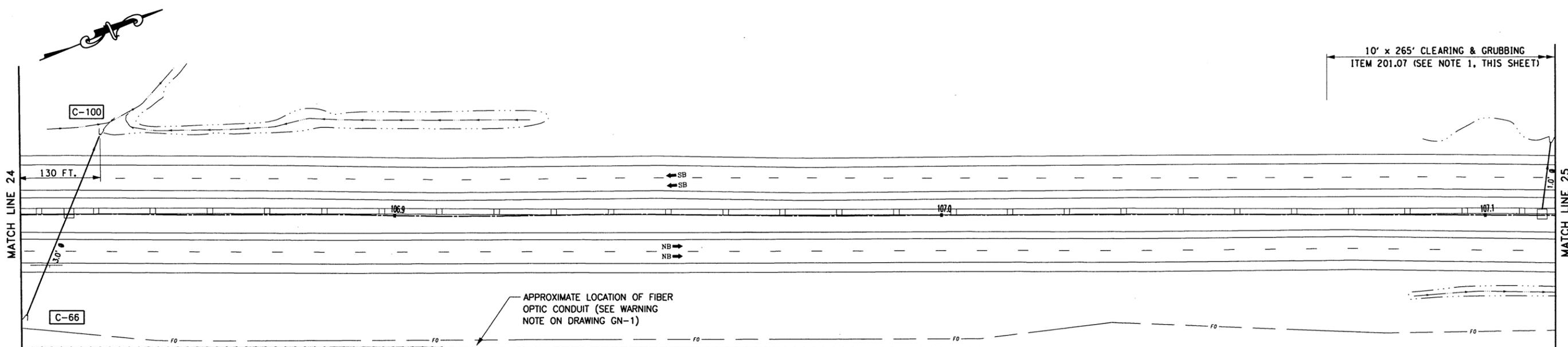
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.


Thruway Authority | **Canal Corporation**

TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-13

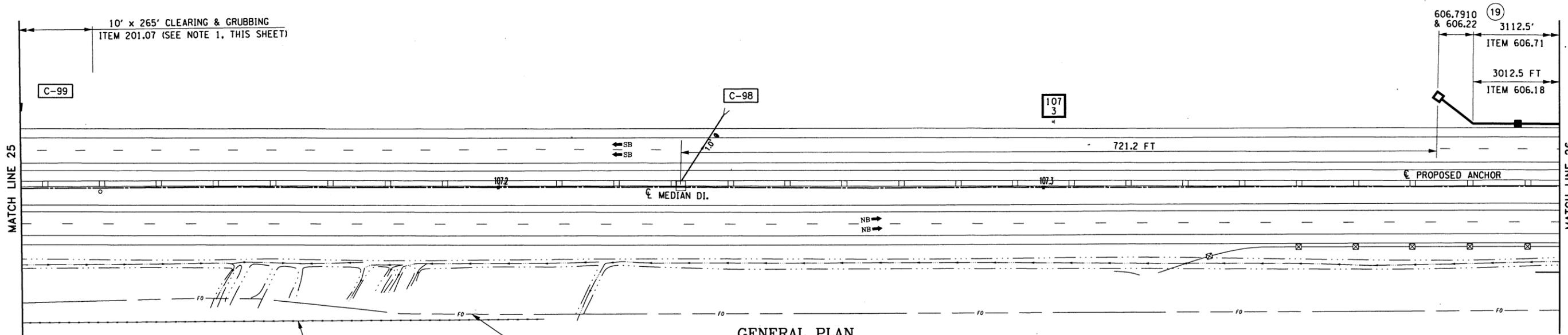
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GENERAL PLAN

SCALE: 1" = 100'

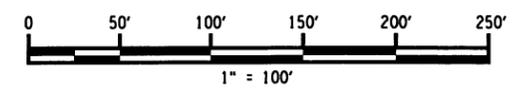
NOTE:
1. SEE DWG. CLR-1 FOR CLEARING AND GRUBBING NOTES.



GENERAL PLAN

SCALE: 1" = 100'

ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
606.18	MODIFIED G2 WEEK POST. CORRUGATED BEAM GUIDRAIL
606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDRAIL
606.7910	REMOVING AND DISPOSING ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING AND MEDIAN BARRIER
606.22	ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING



ALTERED ON: _____

AFFIXED ON: 9/20/2016

SIGNATURE: _____

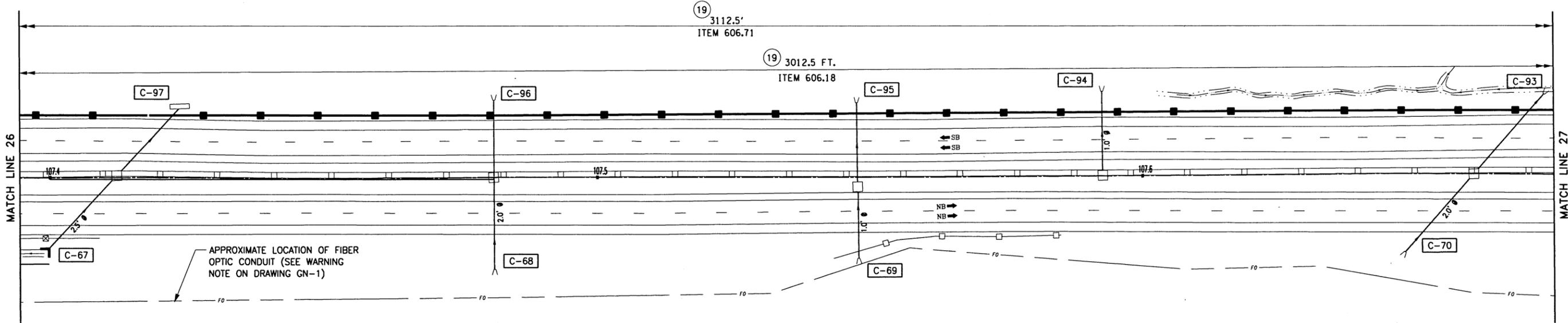
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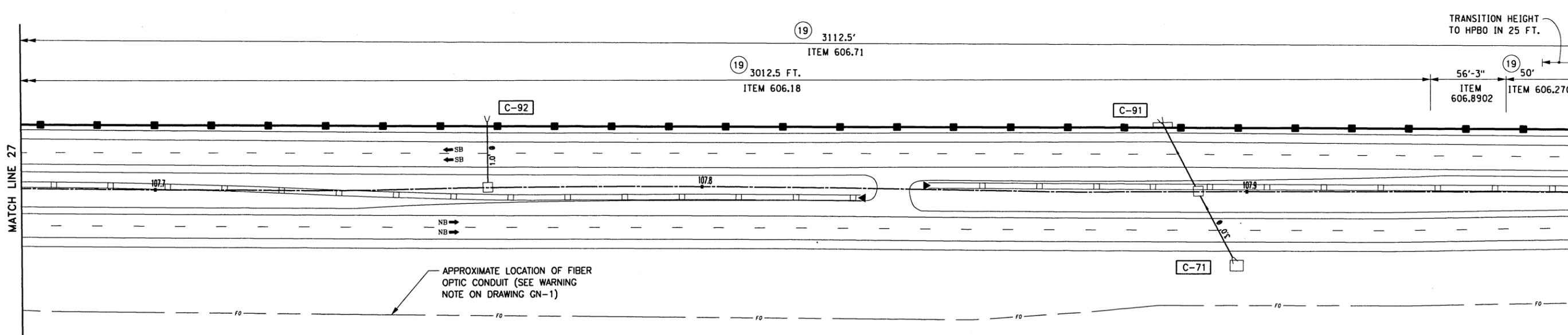
REVISIONS			
DATE	DESCRIPTION	BY	SYM.

TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-14

File
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



GENERAL PLAN
SCALE: 1" = 100'



GENERAL PLAN
SCALE: 1" = 100'

ALTERED ON:
SIGNATURE:
STAMP:

AFFIXED ON:
9/20/2016
SIGNATURE:
STAMP:

ITEM	DESCRIPTION
606.18	MODIFIED WEAK- POST, CORRUGATED BEAM GUIDERAIL
606.2701	HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAILING
606.8902	TRANSITION-HPBO (MOD.) CORRUGATED BEAM GUIDE RAILING TO WEEK POST CORRUGATED BEAM GUIDE RAILING

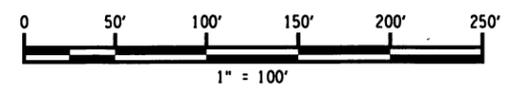
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM

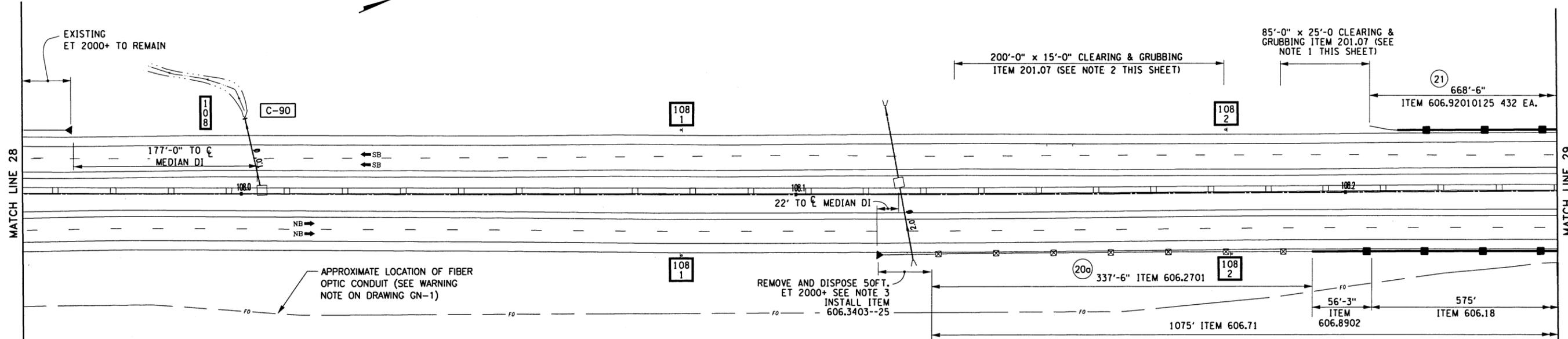


TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXTEN.
DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT
MP 100.8 TO MP 109.3
ULSTER & GREENE COUNTIES
TITLE OF DRAWING
GENERAL PLANS

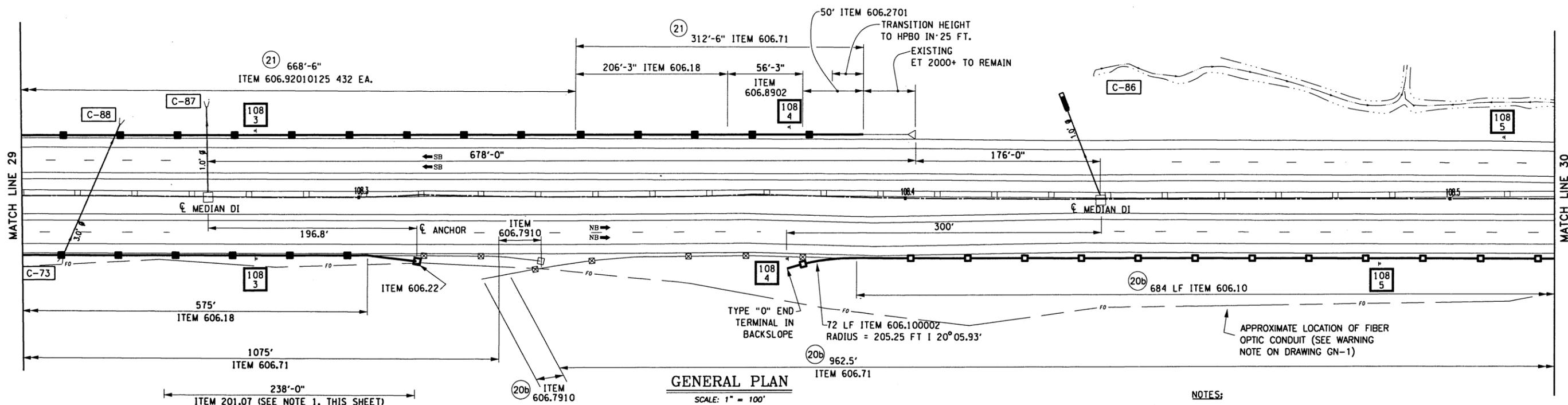
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DATE:
4/18/2016
DRAWING NUMBER:
GNP-15



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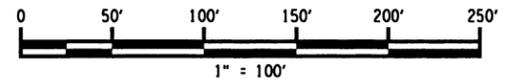
GENERAL PLAN
SCALE: 1" = 100'



GENERAL PLAN
SCALE: 1" = 100'

NOTES:

1. CLEAR AND GRUB TREES 25'-0" BEYOND EXISTING MOWING LIMIT.
2. CLEAR AND GRUB TREES 15'-0" BEYOND EXISTING MOWING LIMITS.
3. REMOVAL & DISPOSAL OF EXISTING ET 2000+ TO BE PAID UNDER ITEM 606.71.



ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
203.51200025	GRADING, CLEANING AND RESHAPING EXISTING DITCHES
606.10	BOX BEAM GUIDE RAILING
606.100002	BOX BEAM GUIDE RAILING (SHOP BENT OR SHOP MITERED)
606.18	MODIFIED G2 WEAK- POST, CORRUGATED BEAM GUIDERAIL
606.22	ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING
606.2701	HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.3403--25	END TERMINAL FOR 31" HIGH HPBO (MOD) CORRUGATED BEAM GUIDE RAILING

ITEM	DESCRIPTION
606.92010125	REMOVING AND STORING END TERMINAL FOR BOX BEAM RAIL AND MEDIAN BARRIER
606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAILING REMOVING AND DISPOSING ANCHORAGE UNITS FOR
606.7910	CORRUGATED BEAM GUIDE RAILING AND MEDIAN BARRIER TRANSITION-HPBO (MOD.) CORRUGATED BEAM GUIDE RAILING
606.8902	TO WEAK POST CORRUGATED BEAM GUIDE RAILING
606.92010125	REPLACE GUIDERAIL SPLICE BOLTS

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-16

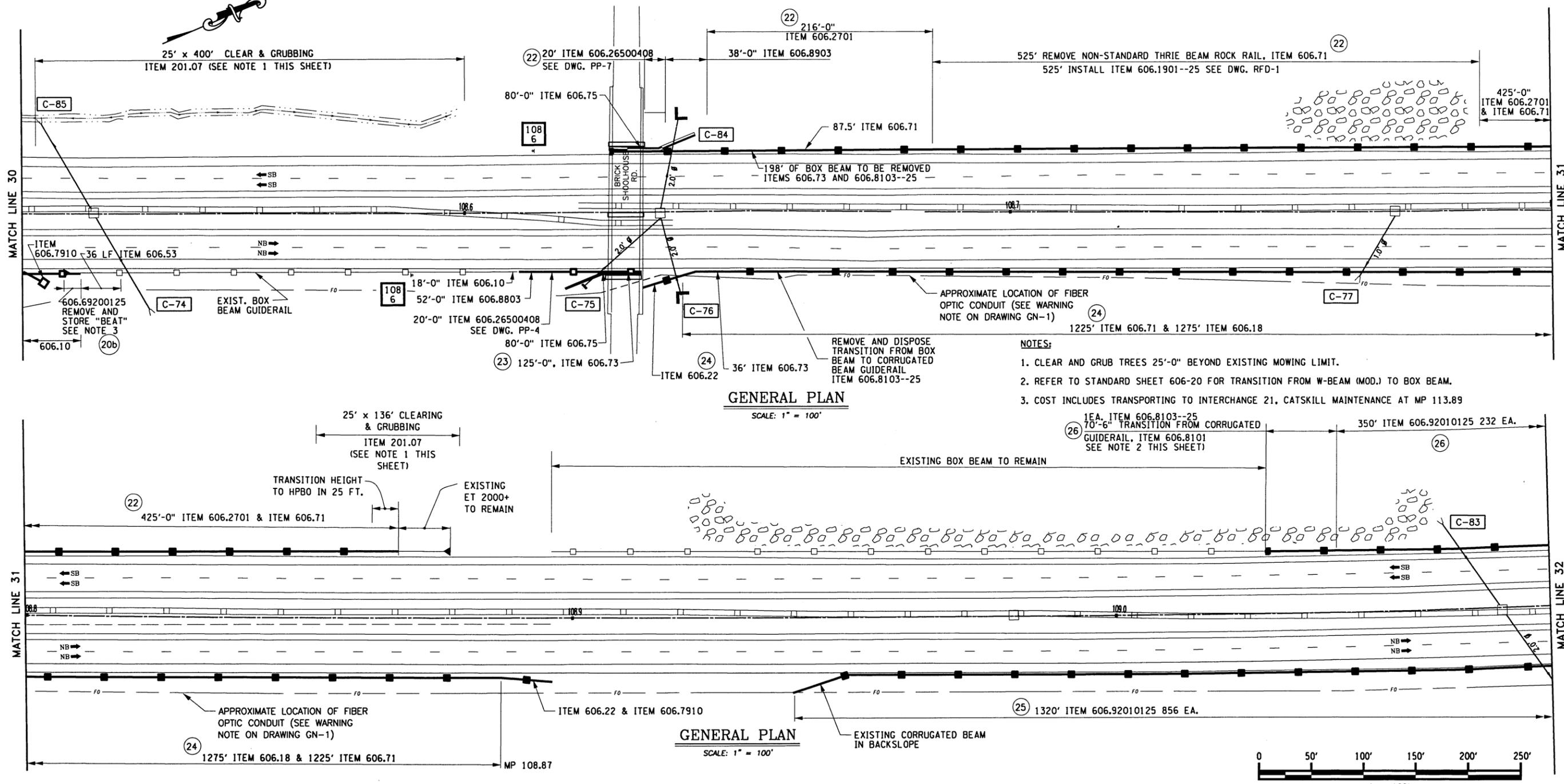


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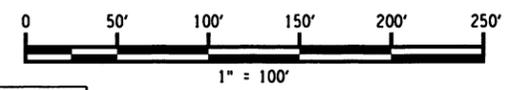
ALTERED ON:

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 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA



- NOTES:**
- CLEAR AND GRUB TREES 25'-0" BEYOND EXISTING MOWING LIMIT.
 - REFER TO STANDARD SHEET 606-20 FOR TRANSITION FROM W-BEAM (MOD.) TO BOX BEAM.
 - COST INCLUDES TRANSPORTING TO INTERCHANGE 21, CATSKILL MAINTENANCE AT MP 113.89



ITEM	DESCRIPTION
201.07	CLEARING AND GRUBBING
606.10	BOX BEAM GUIDE RAILING
606.18	MODIFIED WEAK- POST, CORRUGATED BEAM GUIDERAIL
606.19010025	THRIE BEAM RAILING CORRUGATED BEAM ROCK FENCE
606.22	ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING
606.26500408	SPECIAL TRANSITION
606.2701	HPBO (MOD) CORRUGATED BEAM GUIDE RAILING
606.53	RESETTING BOX BEAM GUIDE RAILING
606.69200125	REMOVING AND STORING END TERMINAL FOR BOX BEAM GUIDE RAIL AND MEDIAN BARRIER
606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAILING
606.73	REMOVING AND DISPOSING BOX BEAM GUIDE RAILING

ITEM	DESCRIPTION
606.75	REMOVING AND DISPOSING CONCRETE BARRIER
606.7910	REMOVING AND DISPOSING ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING AND MEDIAN BARRIER
606.8101	GUIDE RAIL TRANSITION - WEAK POST CORRUGATED BEAM TO BOX BEAM GUIDE RAIL (ONE OR TWO WAY OPERATION)
606.8103--25	REMOVING AND DISPOSE TRANSITION CORRUGATED TO BOX BEAM (ONE OR TWO WAY OPERATION) INCLUDING ANCHORAGE UNITS
606.8803	TRANSITION BETWEEN BOX BEAM GUIDE RAIL AND SINGLE SLOPE RAIL AND SINGLE SLOPE HALF SECTION CONCRETE BARRIER(ONE OR TWO WAY OPERATION)
606.8903	TRANSITION-HPBO (MOD.) CORRUGATED BEAM GUIDE RAILING TO SINGLE SLOPE CONCRETE HALF SECTION BARRIER
606.92010125	REPLACE GUIDERAIL SPLICE BOLTS

ALTERED ON: _____

AFFIXED ON: 9/20/2016

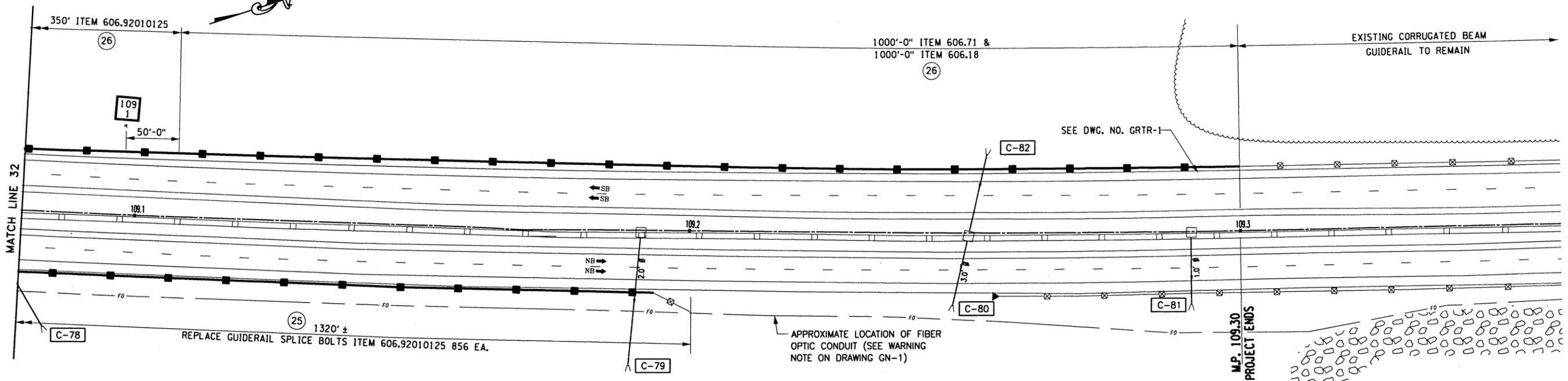
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REVISIONS			
DATE	DESCRIPTION	BY	SYM.

TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-17

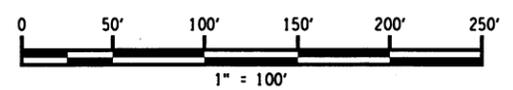


GENERAL PLAN
SCALE: 1" = 100'

FILE
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ALTERED ON:	AFFIXED ON:
SIGNATURE: STAMP:	9/20/2016

ITEM	DESCRIPTION
606.18	MODIFIED WEAK- POST, CORRUGATED BEAM GUIDERAIL
606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAILING
606.92010125	REPLACE GUIDERAIL SPLICE BOLTS

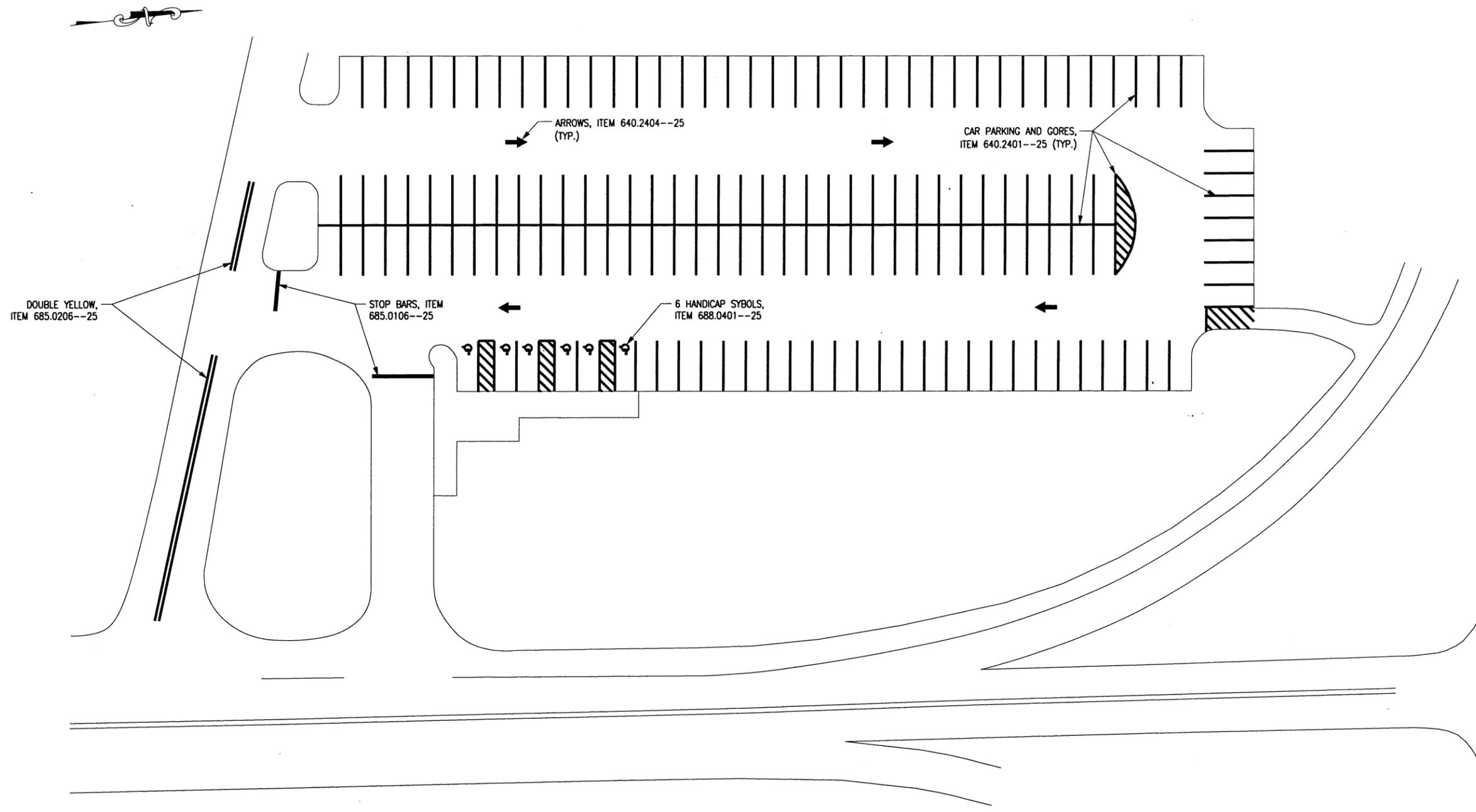


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REVISIONS			
DATE	DESCRIPTION	BY	SYM

Thruway Authority | **Canal Corporation**

TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTEN. DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER & GREENE COUNTIES	DATE: 4/18/2016
TITLE OF DRAWING GENERAL PLANS	DRAWING NUMBER: GNP-18



INTERCHANGE 18 PARK & RIDE
MP 76.01
N.T.S.

NOTE:
STRIPE ALL AREAS IDENTIFIED ABOVE;
CAR PARKING, HANDICAP SYMBOLS, GORES AND ARROWS.

DESIGNED BY: TA
CHECKED BY: TA
DRAFTED BY: TA
CHECKED BY: TA

ALTERED ON:	AFFIXED ON: 9/20/16
SIGNATURE: STAMP:	SIGNATURE: STAMP:

- ITEMS**
- 640.2401--25 - WHITE REFLECTORIZED PAVEMENT MARKINGS PAINTS, 6" x 15 MIL
 - 640.2404--25 - WHITE REFLECTORIZED PAVEMENT SYMBOLS
 - 685.0106--25 - WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES, 6" x 15 MIL
 - 685.0206--25 - YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES, 6" x 15 MIL
 - 688.0401--25 - PREFORMED REFLECTORIZED HANDICAP PARKING PAVEMENT SYMBOLS

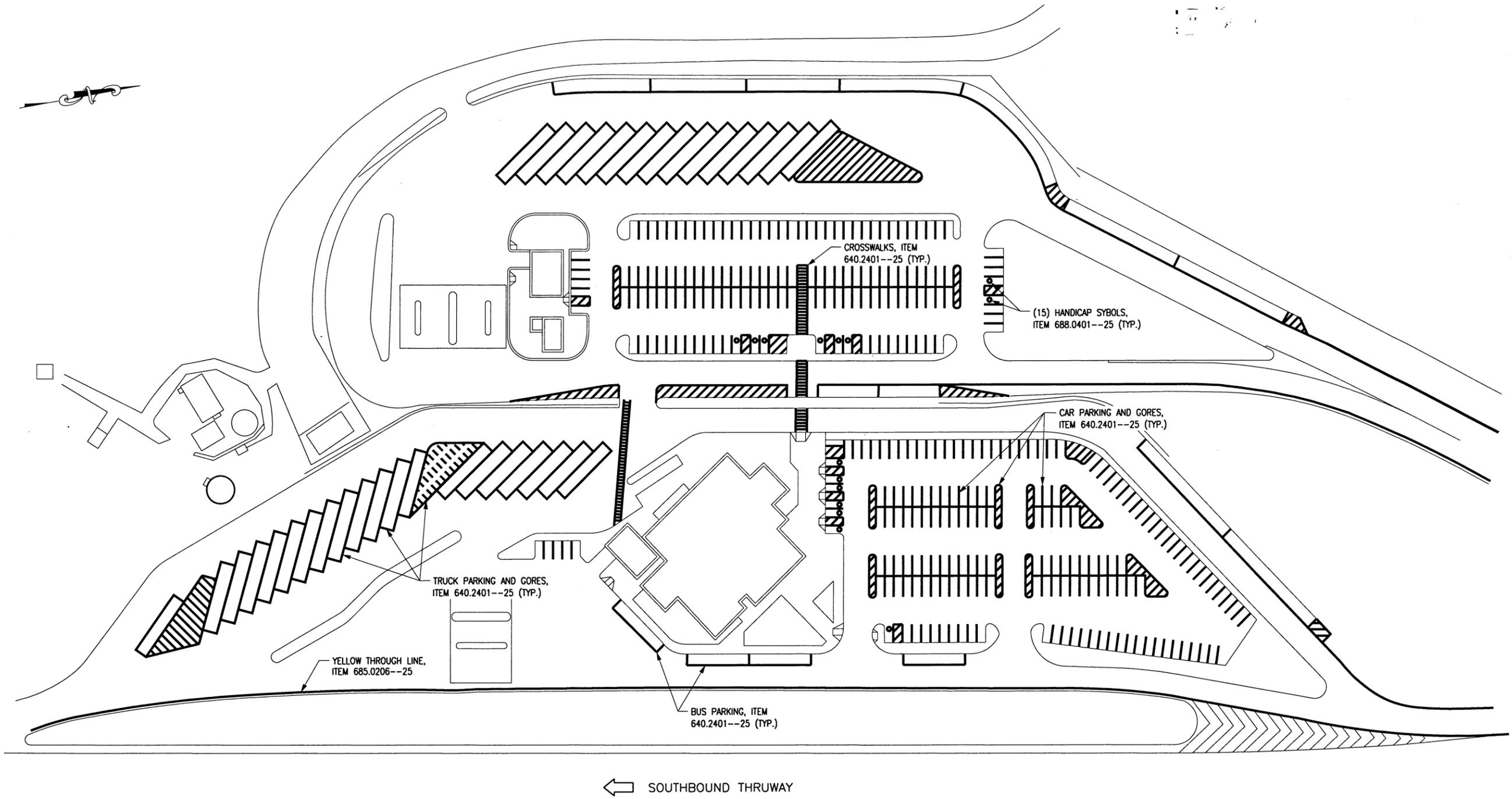
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REVISIONS			
DATE	DESCRIPTION	BY	SYM.



TITLE OF PROJECT SAFETY UPGRADES, DRAINAGE AND MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER AND GREENE COUNTIES	DATE: 7/25/16
TITLE OF DRAWING INTERCHANGE 18 PARK & RIDE MP 76.01	DRAWING NUMBER: SA-1

DESIGNED BY: TA
CHECKED BY: TA
DRAFTED BY: K. KETZ
CHECKED BY: TA



NEW BALTIMORE SERVICE AREA
MP 127.1 SB
N.T.S.

NOTE:
STRIPE ALL AREAS IDENTIFIED ABOVE;
CAR PARKING, TRUCK PARKING, BUS PARKING, YELLOW THROUGH
LINE, HANDICAP SYMBOLS, CROSSWALKS AND GORES.

- ITEMS**
- 640.2401--25 - WHITE REFLECTORIZED PAVEMENT MARKINGS PAINTS, 6"x15 MIL
 - 685.0206--25 - YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES, 6" x 15 MIL
 - 688.0401--25 - PREFORMED REFLECTORIZED HANDICAP PARKING PAVEMENT SYMBOLS

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REVISIONS			
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TITLE OF PROJECT SAFETY UPGRADES, DRAINAGE AND MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 TO MP 109.3 ULSTER AND GREENE COUNTIES	DATE: 7/25/16
TITLE OF DRAWING NEW BALTIMORE SERVICE AREA MP 127.1 SB	DRAWING NUMBER: SA-3

ALTERED ON:	AFFIXED ON: 9/20/16
SIGNATURE: STAMP:	SIGNATURE: STAMP:

ESTIMATE OF QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
201.06	CLEARING AND GRUBBING	LS	1.0
201.07	CLEARING AND GRUBBING	ACRE	3.4
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	1650.0
203.03	EMBANKMENT IN PLACE	CY	2200.0
203.07	SELECT GRANULAR FILL	CY	10.0
203.24000025	SHOULDER BACKUP MATERIAL	-TON	705.0
206.0201	TRENCH AND CULVERT EXCAVATION	CY	14.0
207.20	GEOTEXTILE BEDDING	SY	3000.0
209.110202	CHECK DAM (DITCH BOTTOM WIDTH > 3' TO 6') GRAVEL BAG-TEMPORARY	EA	10.0
209.13	SILT FENCE-TEMPORARY	LF	800.0
209.140201	SEDIMENT TRAP, SAND BAG - TEMPORARY	EA	6.0
304.12	SUBBASE COURSE, TYPE 2	CY	1000.0
402.000013	PLANT PRODUCTION QUALITY ADJUSTMENT TO HMA ITEMS	QU	41.0
402.127203	12.5 F2 TOP COURSE HMA, 70 SERIES COMPACTION	TON	335.0
402.257903	25 F9 BINDER COURSE HMA, 70 SERIES COMPACTION	TON	480.0
407.0102	DILUTED TACK COAT	GAL	120.0
552.17	SHIELDS AND SHORING	SF	450.0
553.030001	TEMPORARY WATERWAY DIVERSION STRUCTURE	EA	1.0
553.030002	TEMPORARY WATERWAY DIVERSION STRUCTURE	EA	1.0
555.0105	CONCRETE FOR STRUCTURES, CLASS A	CY	4.0
559.1696 25	PROTECTIVE SEALING OF STRUCTURAL CONCRETE	SF	80.0
586.02 25	DRILLING AND GROUTING BOLTS OR REINFORCING BARS CONCRETE GROUT	EA	15.0
603.0101	CULVERT-END SAFETY GRATE	SF	110.0
603.171116	GALVANIZED STEEL END SECTIONS-PIPE (2-2/3" X 1/2" CORRUGATIONS) 15 INCHES DIAMETER, 16 GAUGE	EA	2.0
603.171316	GALVANIZED STEEL END SECTION - PIPE (2-2/3" X 1/2" CORRUGATIONS) 21 INCH DIAMETER, 16 GAUGE	EA	1.0
603.171402	GALVANIZED STEEL END SECTIONS-PIPE (2-2/3" X 1/2" CORRUGATIONS) 24 INCH DIAMETER, 16 GAUGE	EA	4.0
603.171614	GALVANIZED STEEL END SECTION - PIPE (2-2/3" X 1/2" CORRUGATIONS) 30 INCHES DIAMETER, 14 GAUGE	EA	1.0
603.77	CONCRETE COLLARS	EA	4.0
603.8503 15	DRAINAGE PIPE, OPTIONAL 18 INCH DIA(FOR DRIVEWAY, GRAVEL AND DIRT SURF ROADWAYS ZONE 1 FILL HEIGHT 12 INCH OR MORE)	LF	80.0

ESTIMATE OF QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
603.9812	SMOOTH INTERIOR CORRUGATED POLYETHYLENE CULVERT AND STORM DRAIN 12 INCHES DIAMETER	LF	24.0
603.9818	SMOOTH INTERIOR CORRUGATED POLYETHYLENE CULVERT AND STORM DRAIN 18 INCH DIAMETER	LF	5.0
603.9824	SMOOTH INTERIOR CORRUGATED POLYETHYLENE CULVERT STORM DRAIN 24" DIAMETER	LF	22.0
604.070801	ALTERING DRAINAGE STRUCTURE	EA	8.0
606.10	BOX BEAM GUIDE RAILING	LF	1206.0
606.100002	BOX BEAM GUIDE RAILING (SHOP BENT OR SHOP MITERED)	LF	150.0
606.120101	BOX BEAM END PIECE	EA	1.0
606.17	CORRUGATED BEAM MEDIAN BARRIER	LF	1600.0
606.18	MODIFIED G2 WEAK-POST, CORRUGATED BEAM GUIDE RAIL	LF	7912.5
606.19010025	THRIE BEAM RAILING CORRUGATED BEAM ROCK FENCE	LF	3425.0
606.22	ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING	EA	6.0
606.26500408	SPECIAL TRANSITION	EA	2.0
606.26500608	SPECIAL TRANSITION	EA	4.0
606.26500708	SPECIAL TRANSITION	EA	2.0
606.2701	HPBO (MOD.) CORRUGATED BEAM GUIDERAILING	LF	3000.0
606.2703	ANCHORAGE UNIT FOR HPBO (MOD.) CORRUGATED BEAM GUIDE RAILING	EA	4.0
606.2801	HPBO (MOD.) CORRUGATED BEAM MEDIAN BARRIER	LF	275.0
606.3011	CONCRETE BARRIER TYPE A (PRECAST)	LF	20.0
606.3042	SINGLE-SLOPE CONCRETE MEDIAN BARRIER (PRECAST)	LF	240.0
606.3062	SINGLE-SLOPE CONCRETE HALF SECTION BARRIER (PRECAST)	LF	80.0
606.3403 25	END TERMINAL FOR 31 INCH HIGH HPBO (MOD) CORRUGATED BEAM GUIDE RAILING	EA	2.0
606.46000025	CRASH CUSHION ATTENUATING TERMINAL 350 (CAT-350)	EA	4.0
606.4809	I-BEAM POSTS FOR EXISTING BOX BEAM GUIDE RAILING	EA	18.0
606.53	RESETTING BOX BEAM GUIDE RAILING	LF	36.0
606.59200125	RESETTING END TERMINALS FOR BOX BEAM GUIDE RAIL AND MEDIAN BARRIER	EA	4.0
606.65	REMOVING AND STORING PRECAST CONCRETE BARRIER	LF	160.0
606.69100125	REMOVING AND STORING END TERMINAL FOR HEAVY POST BLOCKED OUT CORRUGATED GUIDE RAIL AND MEDIAN BARRIER	EA	2.0
606.69200125	REMOVING AND STORING END TERMINAL FOR BOX BEAM GUIDE RAIL AND MEDIAN BARRIER	EA	2.0
606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAILING	LF	14269.0

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DATE	DESCRIPTION	BY	SYM.



Thruway Authority | **Canal Corporation**

TITLE OF PROJECT
SAFETY UPGRADES, CULVERT EXTENSIONS
DRAINAGE & MISCELLANEOUS WORK
LOCATION OF PROJECT
MP 100.8 - MP 109.3
ULSTER AND GREENE COUNTIES

CONTRACT NUMBER:
TAA 16-27R

DATE:
9/27/16

TITLE OF DRAWING
ESTIMATE OF QUANTITIES

DRAWING NUMBER:
EQQ-1

ESTIMATE OF QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
606.72	REMOVING AND DISPOSING CORRUGATED BEAM MEDIAN BARRIER	LF	2606.0
606.73	REMOVING AND DISPOSING BOX BEAM GUIDE RAILING	LF	2891.0
606.75	REMOVING AND DISPOSING CONCRETE BARRIER	LF	960.0
606.7910	REMOVING AND DISPOSING ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING AND MEDIAN BARRIER	EA	7.0
606.7920	REMOVING AND DISPOSING BOX BEAM GUIDE RAILING END ASSEMBLY	EA	1.0
606.8101	GUIDE RAIL TRANSITION WEAK-POST CORRUGATED BEAM TO BOX BEAM GUIDE RAIL (ONE OR TWO-WAY OPERATION)	EA	1.0
606.8103 25	REMOVE AND DISPOSE GUIDE RAIL TRANSITION CORRUGATED BEAM TO BOX BEAM (ONE OR TWO WAY OPERATION) INCLUDING TRANS ANCHOR	EA	3.0
606.8803	TRANSITION BETWEEN BOX BEAM GUIDE RAIL AND SINGLE SLOPE HALF SECTION CONCRETE BARRIER(ONE OR TWO WAY OPERATION)	EA	10.0
606.8902	TRANSITION - HPBO (MOD) CORRUGATED BEAM GUIDE RAILING TO WEAK-POST CORRUGATED BEAM GUIDE RAILING	EA	5.0
606.8903	TRANSITION - HPBO (MOD.) CORR BEAM GUIDERAILING TO SINGLE SLOPE CONCRETE HALF SECTION BARRIER	EA	1.0
606.8905	TRANSITION - HPBO (MOD) CORRUGATED BEAM MEDIAN BARRIER TO WEAK POST CORRUGATED MEDIAN BARRIER	EA	6.0
606.8906	TRANSITION - HPBO (MOD) CORRUGATED BEAM MEDIAN BARRIER TO SINGLE SLOPE CONCRETE MEDIAN BARRIER	EA	2.0
606.9001	TRANSITION BETWEEN STANDARD (NJ) CONCRETE BARRIER AND SINGLE-SLOPE CONCRETE BARRIER	EA	1.0
606.92010125	REPLACE GUIDE RAIL SPLICE BOLTS	EA	2368.0
607.19	RIGHT-OF-WAY FENCING	LF	2650.0
607.96 08	REMOVE AND DISPOSE OF EXISTING FENCE	LF	220.0
610.1402	TOPSOIL- ROADSIDE	CY	200.0
610.1601	TURF ESTABLISHMENT- ROADSIDE	SY	2000.0
614.060603	TREE REMOVAL OVER 36 INCHES TO 48 INCHES DIAMETER BREAST HEIGHT - STUMPS CUT TO BELOW GRADE	EA	1.0
617.11 24	EQUIPMENT CLEANING FOR INVASIVE PLANT SPECIES	LS	1.0
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1.0
619.110512	PORTABLE, VARIABLE MESSAGE SIGN (PVMS) STANDARD SIZE - FULL MATRIX (LED) NO OPTIONAL EQUIPMENT SPEC, CELLULAR COLUMN	EA	4.0
619.24	NIGHTTIME OPERATIONS	LS	1.0
619.96 25	SPEED DISPLAY TRAILER	EA	2.0
620.03	STONE FILLING (LIGHT)	CY	25.0
621.01	CLEANING CULVERTS WITH A SPAN OF 50 INCH OR LESS	LF	160.0
621.05	CLEAN, GRADE AND SHAPE EXISTING ROADSIDE SECTION	LF	1860.0
625.120001	MAPPING, GRADE GPS INSPECTION UNIT	EA	1.0
627.5014 08	CUTTING PAVEMENT	LF	1000.0

ESTIMATE OF QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
637.11 25	ENGINEER'S FIELD OFFICE - TYPE 1	MNTH	10.0
640.2401 25	WHITE REFLECTORIZED PAVEMENT MARKING PAINTS, 6" X 15 MIL	LF	41000.0
640.2403 25	WHITE REFLECTORIZED PAVEMENT LETTERS	EA	27.0
640.2404 25	WHITE REFLECTORIZED PAVEMENT SYMBOLS	EA	7.0
645.5201	GROUND-MOUNTED SIGN PANELS WITHOUT Z-BARS HIGH-VISIBILITY SHEETING	SF	18.0
646.0603 25	INSTALL DELINEATOR OR TENTH MILE MARKER ON POST	EA	5.0
646.0610 25	INSTALL DELINEATOR OR TENTH MILE MARKER BAND OR BRACKET MOUNTED	EA	3.0
646.0626 25	INSTALL MILE MARKERS	EA	2.0
646.1032 25	RESET EXISTING DELINEATORS, AND MARKERS,	EA	6.0
646.50 25	REMOVE AND DISPOSE OF DELINEATORS AND MARKERS	EA	10.0
647.31	RELOCATE SIGN PANEL, SIGN PANEL ASSEMBLY SIZE 1, (UNDER 30 SQUARE FEET)	EA	2.0
654.05	NEW CONCRETE FOUNDATION	CY	2.0
654.5110 25	REUSABLE IMPACT ATTENUATOR, TL 2, LESS THAN OR EQUAL TO 2 FEET OBSTRUCTION WIDTH	EA	1.0
655.1003	WELDED FRAME AND RECTANGULAR GRATE 3	EA	1.0
670.8888 25	RELOCATING EXISTING FIBER OPTIC LINE	LF	250.0
685.0106 25	WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES 6 INCH X 15 MILS	LF	500.0
685.0206 25	YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES, 6 INCH X 15 MIL	LF	3000.0
687.0198 25	WHITE PREFORMED THERMOPLASTIC FOR CROSS WALK STRIPES, 12"	LF	90.0
688.0401 25	PREFORMED REFLECTORIZED HANDICAP PARKING PAVEMENT SYMBOLS	EA	23.0
697.0203 25	FIELD CHANGE ORDER (THRUWAY)	DC	100000.0
698.06	STEEL/IRON PRICE ADJUSTMENT	DC	1000.0
699.04 25	MOBILIZATION	LS	1.0

File
 CHECKED BY: TA
 DRAFTED BY: TA
 CHECKED BY: TA
 DESIGNED BY: TA
 DESIGN SUPERVISOR: TA

REVISIONS			
DATE	DESCRIPTION	BY	SYM.



TITLE OF PROJECT SAFETY UPGRADES, CULVERT EXTENSIONS DRAINAGE & MISCELLANEOUS WORK	CONTRACT NUMBER: TAA 16-27R
LOCATION OF PROJECT MP 100.8 - MP 109.3 ULSTER AND GREENE COUNTIES	DATE: 9/27/16
TITLE OF DRAWING ESTIMATE OF QUANTITIES	DRAWING NUMBER: EQQ-2