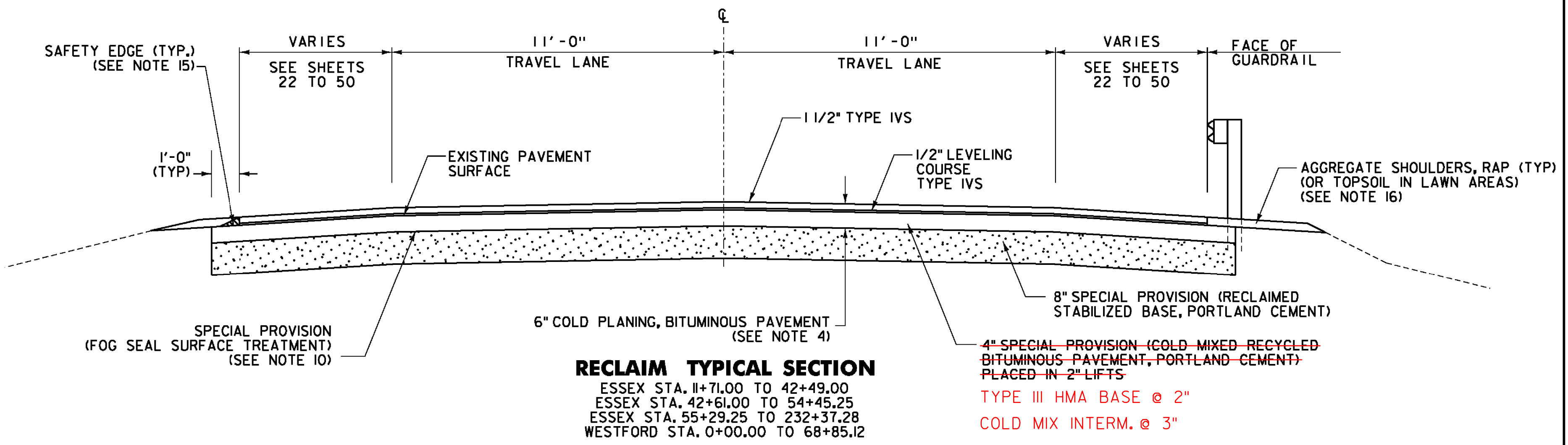
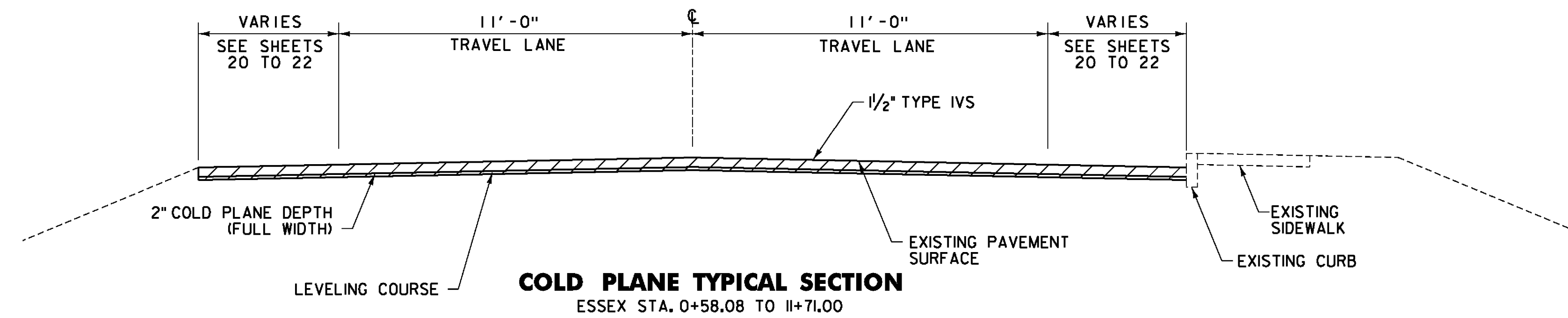


NOTES

- WETLANDS HAVE BEEN LOCATED NEAR SECTIONS OF THE PROJECT AREA. IF WORK EXTENDS INTO THE WETLANDS, STATE AND FEDERAL PERMITS WILL BE REQUIRED (TO BE ACQUIRED BY THE CONTRACTOR). SEE LAYOUTS FOR INDIVIDUAL SENSITIVE LOCATIONS.
- ALL WORK SHALL BE PERFORMED WITHIN THE STATE RIGHT OF WAY.
- THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE PROJECT AREA TO OBTAIN A UNIT COST FOR ITEM 201.0 CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS.
- COLD PLANING TO BE COMPLETED ACCORDING TO TYPICAL OR AS NOTED OTHERWISE ON THE PLANS. THIS SHALL BE PAID AS ITEM 210.10 COLD PLANING, BITUMINOUS PAVEMENT. A FULL DEPTH BUTT JOINT SHALL BE CONSTRUCTED AT THE BEGINNING AND END OF THE PROJECT AND ALL PAVED SIDE ROAD APPROACHES AS DENOTED ON THE PROJECT PLANS OR AS OTHERWISE DIRECTED BY THE ENGINEER. SAWCUTTING WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO ITEM 210.10 COLD PLANING, BITUMINOUS PAVEMENT.
- THE COLD PLANED SURFACES BETWEEN ESSEX STA. 0+58.08 AND 11+71.00 SHALL HAVE SURFACE PREPARATION BEFORE THE LEVELING COURSE IS PLACED. SURFACE PREPARATION SHALL CONSIST OF POT HOLE PATCHING AND PATCHING OF ALL LARGE CRACKS THAT ARE AT LEAST ONE INCH IN WIDTH. THIS WORK SHALL BE PAID AS ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I). SEE DETAIL ON SHEET 18.
- THE CONTRACTOR SHALL USE CAUTION WHEN COLD PLANING AND PAVING OPERATIONS OCCUR ON BRIDGE DECKS. SHOULD ANY DAMAGE OCCUR TO THE DECK OR MEMBRANE AS A RESULT OF THESE OPERATIONS THE ENGINEER SHALL CONTACT THE VTRANS CONSTRUCTION STRUCTURES ENGINEER TO PROVIDE AN ASSESSMENT OF THE DAMAGE AND RECOMMEND ANY NECESSARY REPAIRS. THE CONSTRUCTION STRUCTURES ENGINEER WILL ALSO DETERMINE IF THE DAMAGE WAS AVOIDABLE. IF THE CONTRACTOR IS DETERMINED BY THE ENGINEER TO BE AT FAULT FOR THE DAMAGE, THE RECOMMENDED REPAIRS SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE STATE.
- PRIOR TO RECLAIMING, ANY EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE ENGINEER WILL BE EXCAVATED TO THE DEPTH OF RECLAIMING OR AS DIRECTED BY THE ENGINEER. EXCAVATED MATERIAL WILL BE SPREAD ON THE ADJACENT SLOPES OR REMOVED FROM THE PROJECT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR USING THE APPROPRIATE RENTAL ITEMS. THE METHOD OF REMOVAL AND THE USE OF RENTAL ITEMS SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY WORK BEING DONE. MATERIAL REMOVED SHALL BE REPLACED WITH ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED. FOR EXISTING SHOULDER RECONSTRUCTION DETAIL SEE SHEET 5.
- THE FIRST RECLAIM PASS SHALL BE PERFORMED FROM TOP OF BANK TO TOP OF BANK WHERE FULL WIDTH IS NOT ACHIEVABLE. THIS WORK SHALL BE PAID UNDER ITEM 310.20 RECLAIMED STABILIZED BASE. THE SECOND PASS SHALL BE PERFORMED FULL WIDTH PER THE TYPICAL SECTION. THIS WORK SHALL BE PAID UNDER ITEM 900.675 SPECIAL PROVISION (RECLAIMED STABILIZED BASE, PORTLAND CEMENT).
- AN ADDITIONAL QUANTITY OF ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED HAS BEEN INCLUDED TO CORRECT SUPERELEVATION AND GRADATION DEFICIENCIES WITHIN THE RECLAIMED SECTION.
- ITEM 900.683 SPECIAL PROVISION (FOG SEAL SURFACE TREATMENT) SHALL BE APPLIED ON THE SURFACE OF THE RECLAIMED STABILIZED BASE, PORTLAND CEMENT AT THE RATE OF 0.15 GAL/SY OR AS DIRECTED BY THE ENGINEER.
- FOR THE PURPOSES OF QUANTITY CALCULATION IT HAS BEEN ASSUMED ITEM 900.675 SPECIAL PROVISION (COLD MIXED RECYCLED BITUMINOUS PAVEMENT, PORTLAND CEMENT) WILL REQUIRE 4% BY WEIGHT OF ITEM 415.25 EMULSIFIED ASPHALT, COLD MIX. FOR THE SAME PURPOSE IT HAS ALSO BEEN ASSUMED 2% BY WEIGHT OF PORTLAND CEMENT WILL BE REQUIRED BY MIX DESIGN.
- EMULSIFIED ASPHALT, TYPE CRS-IH, SHALL BE APPLIED AS A TACK COAT ON THE COLD MIXED RECYCLED PAVEMENT AT A RATE OF 0.04 TO 0.06 GAL/SY. EMULSIFIED ASPHALT TYPE CRS-IH OR RSI-H SHALL BE APPLIED AS A TACK COAT BETWEEN THE 1/2 INCH LEVELING COURSE AND THE 1 1/2 INCH WEARING COURSE OF SUPERPAVE BITUMINOUS CONCRETE PAVEMENT AT A RATE OF 0.025 TO 0.04 GAL/SY. THE SAME ITEM SHALL BE APPLIED TO COLD PLANED SURFACES AT A RATE OF 0.08 GAL/SY. ALL APPLICATIONS WILL BE PAID UNDER ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-IH OR CRS-IH).
- SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TOLERANCE = +/- 1/4 INCH. (TOTAL THICKNESS EXCLUDING LEVELING). SUBBASE OF CRUSHED GRAVEL, FINE GRADED TOLERANCE = +/- 1 INCH TOTAL SUBBASE THICKNESS.
- THE PAVEMENT LEVELING COURSE AND WEARING COURSE SHALL BE SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IVS. LEVELING HAS BEEN INCLUDED TO RESHAPE THE ROADWAY PRIOR TO PAVING THE WEARING COURSE ALONG THE ENTIRE PROJECT. ALL ASPHALT CEMENT USED IN THE SUPERPAVE BITUMINOUS CONCRETE PAVEMENT SHALL BE AS SPECIFIED IN SUBSECTION 490.03(b).
- EDGES OF PAVEMENT SHALL INCLUDE A SAFETY EDGE AS SHOWN ON SHEET 5.
- ALL EDGES OF PAVEMENT SHALL BE BACKED UP TO FULL HEIGHT WITH AGGREGATE SHOULDERS, RAP AS DIRECTED BY THE ENGINEER AND WILL BE PAID FOR UNDER ITEM 402.13 AGGREGATE SHOULDERS, RAP.
- ALL PAVED AND GRAVEL RESIDENTIAL AND COMMERCIAL DRIVES SHALL RECEIVE A PAVED APRON OF FOUR FEET, AND ALL FIELD DRIVES SHALL RECEIVE A 2 FOOT PAVED APRON UNLESS OTHERWISE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER. ANY AND ALL REQUIRED EXCAVATION IN DRIVE AREAS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE NEW BITUMINOUS SURFACE SHALL BE CONSTRUCTED AS DIRECTED AND WILL BE PAID FOR UNDER ITEM 900.675, SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES). ALL OTHER BITUMINOUS MATERIALS PLACED WITHIN THE PROJECT LIMITS WHETHER BY HAND OR MECHANICAL METHODS SHALL BE PAID AS ITEM 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT.
- A QUANTITY FOR ITEM 604.412, REHAB DI, CB OR MH, CLASS I HAS BEEN INCLUDED IN THE QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER. ALL DI'S SHALL BE RAISED OR REHABILITATED SUCH THAT THE NEW GRATE ELEVATION IS LEVEL WITH THE SURROUNDING TERRAIN.
- AN ESTIMATED QUANTITY OF ITEM 619.17 YIELDING MARKER POSTS HAS BEEN INCLUDED TO DELINEATE PIPE INLETS, PIPE OUTLETS, UNDERDRAIN OUTLETS, AND DROP INLETS LOCATED OUTSIDE THE PAVEMENT SURFACE OR AS DIRECTED BY THE ENGINEER.
- STEEL BEAM GUARDRAIL WITH STEEL POSTS SHALL BE USED ON THIS PROJECT.
- 3' - 7' OF BACKING IS REQUIRED BEHIND THE FACE OF GUARDRAIL WITH 6 FOOT POSTS. IF THIS CANNOT BE OBTAINED THEN 8 FOOT POSTS SHALL BE USED. PAYMENT WILL BE MADE UNDER ITEM 621.20 STEEL BEAM GUARDRAIL, GALVANIZED, ITEM 621.205 STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS, ITEM 621.215 HD STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS, OR ITEM 621.216 HD STEEL BEAM GUARDRAIL, GALVANIZED/NESTED.
- ESTIMATED QUANTITIES OF ITEMS 608.25 ALL PURPOSE EXCAVATOR RENTAL, TYPE I, ITEM 608.37 TRUCK RENTAL AND ITEM 608.40 LOADER RENTAL, TYPE I HAVE BEEN INCLUDED FOR THE PROVISION OF CONSTRUCTING GUARDRAIL END SECTION FLARES WITH EXCAVATED DITCHING MATERIAL. AN ESTIMATED QUANTITY OF ITEM 203.30 EARTH BORROW HAS BEEN INCLUDED IN THE CASE THAT THE DITCHING MATERIAL IS NOT SUITABLE TO USE IN THE GUARDRAIL END SECTION FLARE AREA. THE AMOUNT OF 25 CUBIC YARDS OF EARTH BORROW HAS BEEN ESTIMATED FOR EACH NEW GUARDRAIL END SECTION FLARE. ITEM 653.20 TEMPORARY EROSION MATTING SHALL BE PLACED ON ALL SLOPES CREATED BY THE GUARDRAIL END SECTION FLARE. THE QUANTITIES INCLUDED REFLECT 25 SY OF ITEM 653.20 TEMPORARY EROSION MATTING FOR EACH NEW GUARDRAIL END SECTION FLARE TO BE USED AS DIRECTED BY THE ENGINEER. PRIOR TO THE PLACEMENT OF TEMPORARY EROSION MATTING, THE AREA SHALL BE TOPSOILED AND SEEDING USING ITEM 651.35, TOPSOIL AND ITEM 651.15 SEED.
- ITEMS 649.51 GEOTEXTILE FOR SILT FENCE AND 653.60 EROSION LOG SHALL BE USED AT THE DISCRETION OF THE ENGINEER.



TYPICAL ORDER OF OPERATIONS FOR RECLAIMED STABILIZED BASE WITH PORTLAND CEMENT PAVEMENT REHABILITATION

STEP	DESCRIPTION	PAYMENT ITEM(S)
1	COLD PLANE EXISTING BITUMINOUS CONCRETE PAVEMENT 6"	ITEM 210.10 COLD PLANING BITUMINOUS PAVEMENT
2	REPAIR EXISTING SHOULDERS AS DIRECTED BY THE ENGINEER	ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED
3	RECLAIM EXISTING ROAD BED 8" FROM TOP OF SLOPE TO TOP OF SLOPE USING WATER FOR STABILIZATION AND COMPACTION	ITEM 310.20 RECLAIMED STABILIZED BASE
4	CORRECT SUPERELEVATION DEFICIENCIES	ITEM 301.28 SUBBASE OF CRUSHED GRAVEL, FINE GRADED
5	PLACE PORTLAND CEMENT ON ROAD BED SURFACE AND RECLAIM ROAD BED 8", CURE, MICROCRACK AND APPLY FOG SEAL SURFACE TREATMENT	ITEM 900.675 SPECIAL PROVISION (RECLAIMED STABILIZED BASE, PORTLAND CEMENT), ITEM 900.680 SPECIAL PROVISION (PORTLAND CEMENT FOR BASE STABILIZATION) AND ITEM 900.683 SPECIAL PROVISION (FOG SEAL SURFACE TREATMENT)
6	PLACE 4" COLD MIXED RECYCLED BITUMINOUS PAVEMENT, PORTLAND CEMENT IN (2) 2" LIFTS	ITEM 900.675 SPECIAL PROVISION (COLD MIXED RECYCLED PAVEMENT, PORTLAND CEMENT)
7	PLACE 1/2" TYPE IVS LEVELING COURSE	ITEM 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT
8	PLACE 1 1/2" TYPE IVS WEARING COURSE	ITEM 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT

NOTE: THIS LIST OF PROCEDURES FOR REHABILITATING THE EXISTING ROADBED ARE PRESENTED FOR INFORMATIONAL PURPOSES ONLY AND SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL PREPARE THEIR OWN SCHEDULE OF OPERATIONS TO COMPLETE THE PROPOSED WORK UTILIZING THE APPROPRIATE PAY ITEMS AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

NOT TO SCALE

PROJECT TYPICAL SHEET #1

PROJECT NAME: ESSEX-WESTFORD
PROJECT NUMBER: STP 2912(I)

FILE NAME: p10c226.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p10c226pts01.i

PLOT DATE: 2/20/2013
DRAWN BY: STANTEC
CHECKED BY: STANTEC
SHEET 4 OF 239

