STANDARD PLANS
for
ROAD AND BRIDGE CONSTRUCTION

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
2001

STANDARD PLANS
for
ROAD AND BRIDGE CONSTRUCTION

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
JULY 2001

APPROVED: Gilbert S. Rogers, P.E.
CHIEF ENGINEER

July 30, 2001
DATE

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JULY 13, 2001

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SG–9	WARNING SIGNS
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SG–11	WARNING SIGNS
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STANDARD NO. CR-1

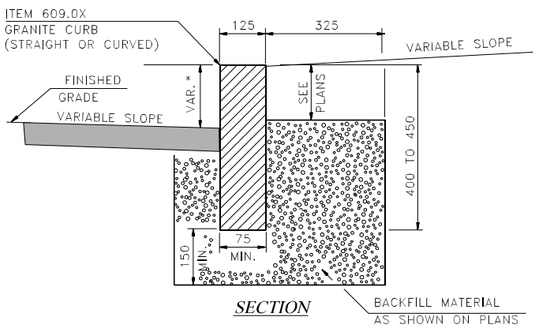
REVISION DATE

*.DGN FILE NAME
CR–1

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. CR-1



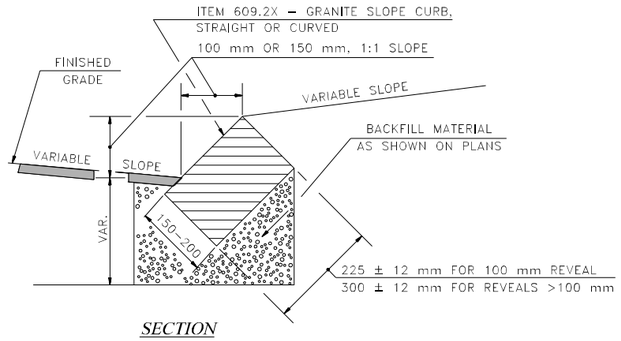
* NORMALLY 175 mm REVEAL, VARIES TO 50 mm AT DRIVEWAYS AND 0 mm AT PEDESTRIAN SIDEWALK RAMPS.

RADIUS	MAX. LENGTH
<6.4 m	USE CURVED CURB
6.4 m	0.9 m
6.7 m – 8.5 m	1.2 m
8.8 m – 10.7 m	1.5 m
11.0 m – 12.8 m	1.8 m
13.1 m – 14.9 m	2.1 m
15.2 m – 17.1 m	2.4 m
17.4 m – 18.3 m	2.7 m
OVER 18.3 m	3.0 m

MINIMUM LENGTH OF STRAIGHT CURB STONES = 0.9 m
MAXIMUM LENGTH OF STRAIGHT CURB STONES = 3.0 m
MAXIMUM LENGTH OF STRAIGHT CURB STONES
LAID ON CURVES – SEE CHART

NOTE: ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *STRAIGHT OR CURVED GRANITE CURB*	REV. DATE	PLATE 1 STANDARD CR–1

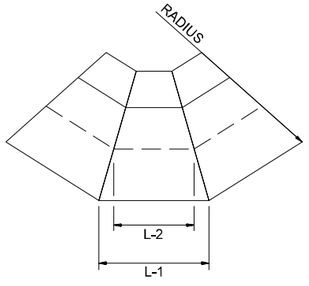


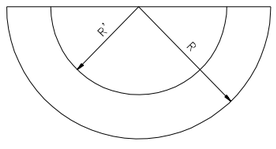
RADIUS FOR STONES WITH SQUARE JOINTS	MAXIMUM LENGTH
<0.6 m	USE CURVED CURB
0.6 m – 4.6 m	USE RADIAL JOINTS
4.9 m – 8.5 m	0.5 m
8.8 m – 12.5 m	0.6 m
12.8 m – 16.8 m	0.9 m
17.1 m – 20.7 m	1.2 m
21.0 m – 25.0 m	1.5 m
25.3 m – 29.3 m	1.8 m
29.6 m – 33.5 m	2.1 m
OVER 33.5 m	2.4 m

MINIMUM LENGTH OF STRAIGHT CURB STONES = 450 mm
MAXIMUM LENGTH OF STRAIGHT CURB STONES = 2.4 m
MAXIMUM LENGTH OF STRAIGHT CURB STONES
LAID ON CURVES – SEE CHART

NOTE: ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *GRANITE SLOPE CURB*	REV. DATE	PLATE 2 STANDARD CR–1



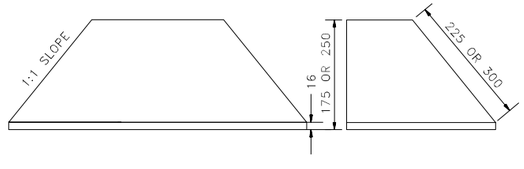


R' = 141 mm FOR 0.3 m R

R' = 294 mm FOR 0.5 m R

DETAIL FOR CUTTING SLOPE CURB WITH RADIAL JOINTS

NOTE: USE FOR 0.6 m TO 6.0 m RADIUS – SEE CHART ON PLATE 4.



DETAIL FOR CUTTING CURVED SLOPE CURB WITH 0.3 m OR 0.5 m RADIUS

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *DETAILS FOR CUTTING STRAIGHT GRANITE SLOPE CURB*	REV. DATE	PLATE 3 STANDARD CR–1

L-1	RADIUS (SEE DETAIL ON PLATE 3)															
	0.600	0.750	0.900	1.050	1.200	1.500	1.800	2.100	2.400	2.700	3.000	3.300	3.600	3.900	4.200	4.500
	L-2															
225	165															
300	220	236														
325	239	256														
350	257	276	288													
375	276	295	309													
400	294	315	329	339												
425	312	335	350	361	369	380	387	393	397	400	402	405	406	408	409	410
450	331	355	370	382	390	402	410	416	420	423	426	428	430	432	433	434
475	349	374	391	403	412	425	433	439	444	447	450	452	454	456	457	458
500	367	394	412	424	434	447	456	462	467	471	473	476	478	480	481	482
525							479	485	490	494	497	500	502	504	505	506
550							501	508	514	518	521	523	526	528	529	531
575							524	531	537	541	545	547	550	552	553	555
600							547	555	560	565	568	571	573	576	577	579
625														600	601	603
650														623	625	627
675														647	649	651
700														671	673	675
725														695	698	699
750														719	722	723
775														743	746	748
800														767	770	772
825														791	794	796
850														815	818	820
875														839	842	852
900														863	863	876

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *CHART FOR CUTTING STRAIGHT GRANITE SLOPE CURB WITH RADIAL JOINTS*	REV. DATE	PLATE 4 STANDARD CR–1

STANDARD NO. CR-1

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. CR-1

STANDARD NO. CR-2

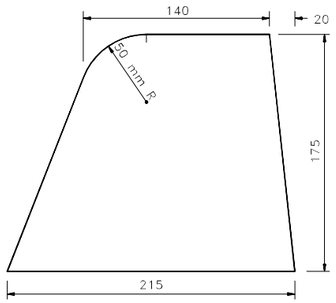
REVISION DATE

*.DGN FILE NAME
CR–2

METRIC
STANDARD PLANS

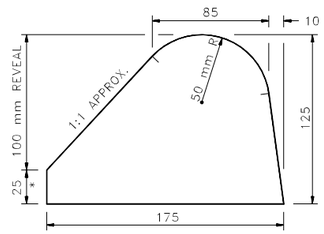
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. CR-2



TYPE 'A'

ITEM NO. 609.812
NOTE: TO BE USED ONLY WHEN CALLED FOR ON PLANS

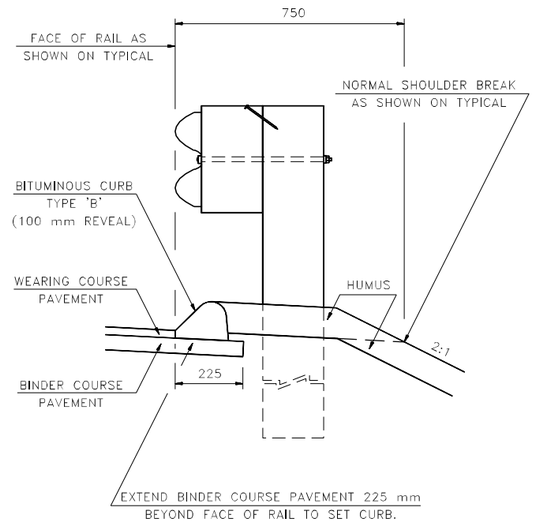


* MATCH WEARING COURSE PAVEMENT TO 25 mm FACE

TYPE 'B' (100 mm REVEAL)

ITEM NO. 609.811
NOTE: NORMALLY USED UNDER GUARDRAIL. SEE PLATE 2 FOR PLACEMENT DETAIL.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *BITUMINOUS CURB*	REV. DATE	PLATE 1 STANDARD CR–2



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *BITUMINOUS CURB PLACEMENT UNDER BEAM GUARDRAIL*	REV. DATE	PLATE 2 STANDARD CR–2

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS	REV. DATE	PLATE STANDARD

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS	REV. DATE	PLATE STANDARD

STANDARD NO. CR-2

STANDARD NO. DL-2

REVISION DATE
7-13-01

*.DGN FILE NAME
DL-2

METRIC
STANDARD PLANS

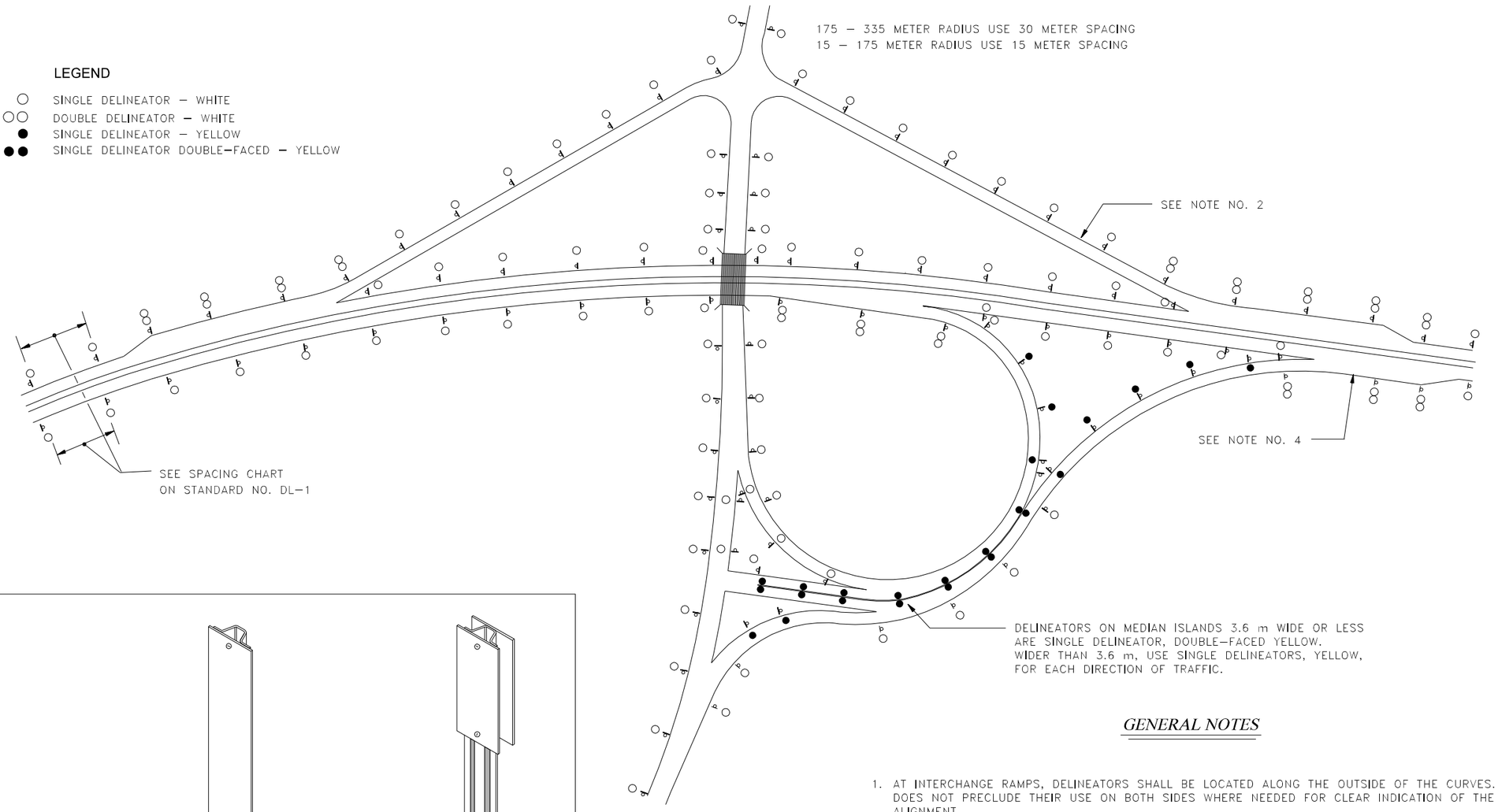
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

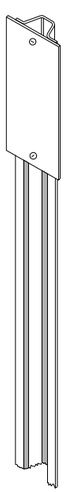
STANDARD NO. DL-2

DELINEATOR SPACING FOR RAMPS AND LOOPS
RADIUS 335 METERS OR LESS

LEGEND

- ○ SINGLE DELINEATOR – WHITE
- ○○ DOUBLE DELINEATOR – WHITE
- ● SINGLE DELINEATOR – YELLOW
- ●● SINGLE DELINEATOR DOUBLE–FACED – YELLOW





SINGLE DELINEATOR
ITEM 621.31

DOUBLE DELINEATOR
ITEM 621.32

SINGLE DELINEATOR
DOUBLE-FACED
ITEM 621.33

GENERAL NOTES

1. AT INTERCHANGE RAMPS, DELINEATORS SHALL BE LOCATED ALONG THE OUTSIDE OF THE CURVES. THIS DOES NOT PRECLUDE THEIR USE ON BOTH SIDES WHERE NEEDED FOR CLEAR INDICATION OF THE ALIGNMENT.
2. CONTINUE NORMAL DELINEATOR SPACING ON RIGHT SIDE OF RAMPS IF RADII OF CURVES ARE GREATER THAN 300 METERS OR TANGENT (SEE STD. NO. DL–1)
3. WHEN THE RADII OF RIGHT HAND CURVES ON RAMPS AND LOOPS ARE LESS THAN 300 METERS, DELINEATE THE LEFT SIDE (OUTSIDE OF CURVE) OF EACH RAMP OR LOOP FROM THE PC TO THE PT OR CARRY DELINEATION ON THE RIGHT SIDE FOR A MINIMUM OVERLAP OF 2 DELINEATORS. WHERE DELINEATION IS TERMINATED ON THE LEFT SIDE, BEGIN DELINEATION AGAIN ON THE RIGHT SIDE WITH A MINIMUM OVERLAP OF 2 DELINEATORS. WHEN THE GAP ON THE RIGHT SIDE IS LESS THAN 150 METERS, CONTINUE THE DELINEATORS ON THE RIGHT SIDE THROUGH THE CURVE.
4. ON SPEED CHANGE LANES THE DELINEATORS SHALL BE INSTALLED ON THE RIGHT FOR RIGHT HAND CONNECTIONS, AND ON THE LEFT FOR LEFT HAND CONNECTIONS. DOUBLE DELINEATORS SHALL BE INSTALLED AT 30 METER INTERVALS ALONG ACCELERATION AND DECELERATION LANES.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

DELINEATION STANDARD

INTERCHANGE DELINEATION

STANDARD NO. DL-2

REVISION DATE
7-13-01

*.DGN FILE NAME
DL-2

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DL-2

STANDARD NO. DL-3

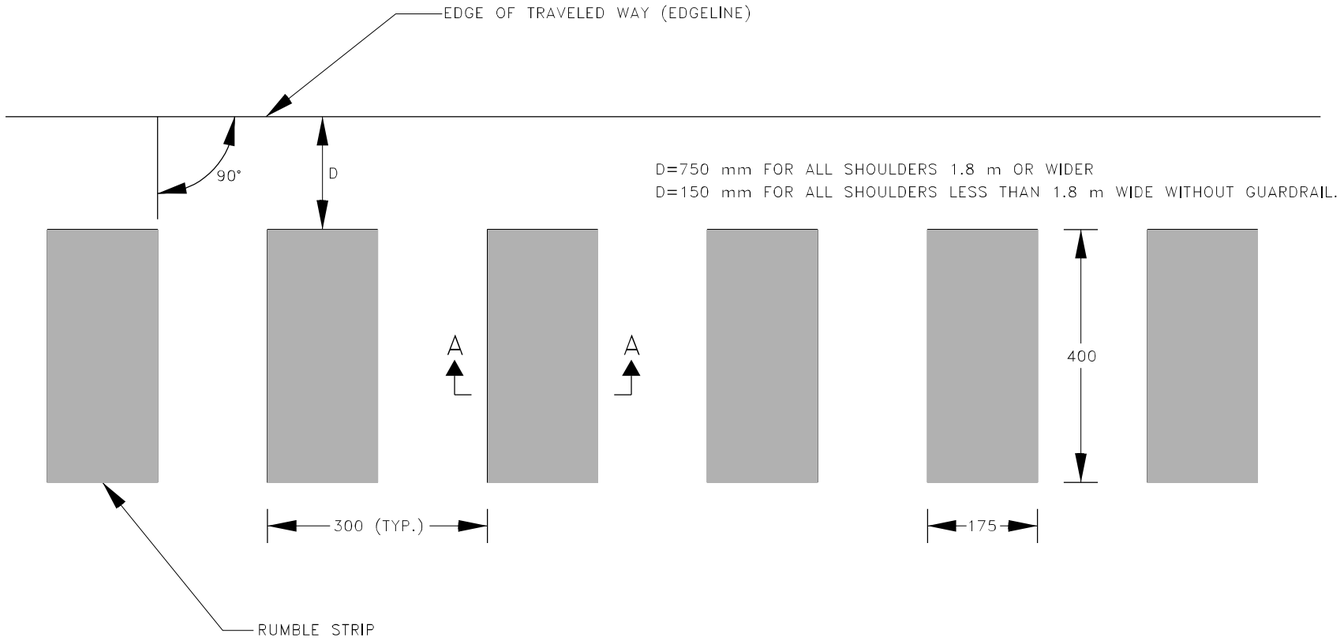
REVISION DATE
7-13-01

*.DGN FILE NAME
DL-3

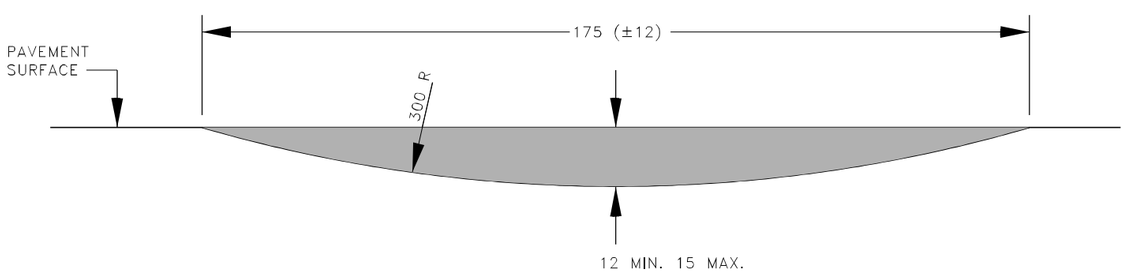
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DL-3



RUMBLE STRIP DETAIL



SECTION A-A

* RUMBLE STRIPS ARE NOT REQUIRED ON SHOULDERS LESS THAN 1.8 m WITH GUARDRAIL

GENERAL NOTES

1. RUMBLE STRIPS SHALL NOT ENCROACH INTO EXISTING MAINTENANCE FACILITY DRIVEWAYS, SERVICE AREA RAMPS, MAINTENANCE MEDIAN CROSSOVERS, OR ACCELERATION OR DECELERATION LANES.
2. WHERE AT-GRADE BRIDGES ARE PRESENT, RUMBLE STRIPS SHALL END/BEGIN 6.0 m BEYOND THE EXISTING BRIDGE DECK JOINTS.
3. RUMBLE STRIPS SHALL BE CONSTRUCTED ON ALL BREAKDOWN LANES AND MEDIAN SHOULDERS UNLESS OTHERWISE SPECIFIED HEREIN.
4. RUMBLE STRIPS SHALL NOT BE MILLED ON ANY PAVEMENT MARKINGS. REPLACEMENT OF PAVEMENT MARKINGS SHALL BE AT THE CONTRACTOR'S EXPENSE.
5. RUMBLE STRIPS SHALL HAVE A FINISHED DIMENSION OF 175 mm (±12 mm) WIDE IN THE DIRECTION OF TRAVEL AND HAVE A MINIMUM OF 400 mm LONG MEASURED PERPENDICULAR TO THE DIRECTION OF TRAVEL.
6. THE DEPRESSIONS SHALL HAVE A CONCAVE CIRCULAR SHAPE WITH A MINIMUM 12 mm DEPTH AT THE CENTER (15 mm MAXIMUM DEPTH).

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

DELINEATION STANDARD

RUMBLE STRIP DETAILS

STANDARD NO. DL-3

REVISION DATE
7-13-01

*.DGN FILE NAME
DL-3

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DL-3

STANDARD NO. DP-1

REVISION DATE
7-13-01

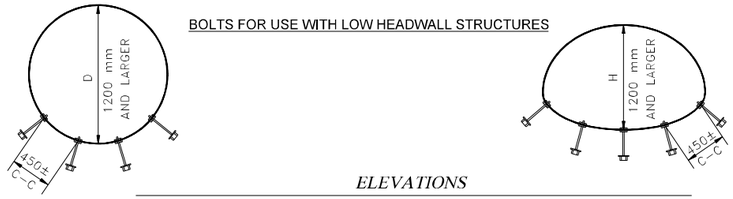
*.DGN FILE NAME
DP-1

METRIC STANDARD PLANS

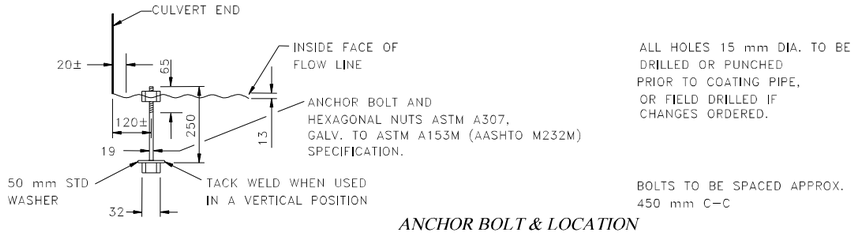
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DP-1

BOLTS FOR USE WITH LOW HEADWALL STRUCTURES



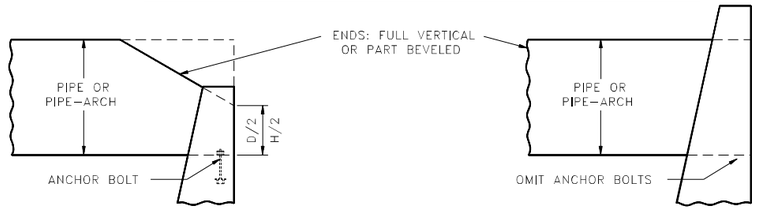
ELEVATIONS



ALL HOLES 15 mm DIA. TO BE DRILLED OR PUNCHED PRIOR TO COATING PIPE, OR FIELD DRILLED IF CHANGES ORDERED.

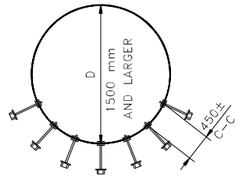
BOLTS TO BE SPACED APPROX. 450 mm C-C

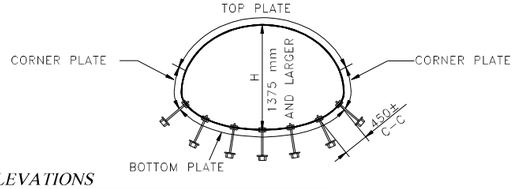
ANCHOR BOLT & LOCATION



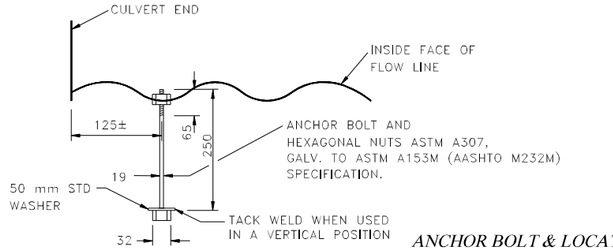
DESIGN WITH LOW HEADWALL *DESIGN WITH FULL HEADWALL*

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *ANCHOR BOLTS FOR CORRUGATED STEEL PIPE AND PIPE-ARCH*	REV. DATE	PLATE 1 STANDARD DP-1





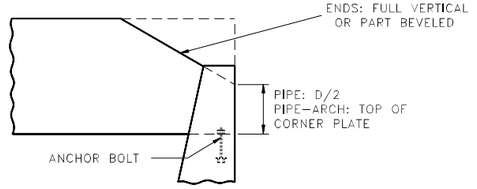
ELEVATIONS



ALL HOLES 25 mm DIA. TO BE DRILLED OR PUNCHED PRIOR TO COATING PIPE, OR FIELD DRILLED IF CHANGES ORDERED.

BOLTS TO BE SPACED APPROX. 450 mm C-C, EXCEPT ON SKEW CUT ENDS. SOME HOLES WILL NOT BE IN CORRUGATION VALLEY.

ANCHOR BOLT & LOCATION



NOTE: WITH FULL HEADWALL, ANCHOR BOLTS NOT REQUIRED, EXCEPT ON SKEWS GREATER THAN 20° WHERE FULL PERIPHERY ANCHOR BOLTS ARE TO BE USED.

DESIGN WITH LOW HEADWALL

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *ANCHOR BOLTS FOR STRUCTURAL STEEL PLATE PIPE AND PIPE-ARCH*	REV. DATE	PLATE 2 STANDARD DP-1

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS	REV. DATE	PLATE 3 STANDARD DP-1

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS	REV. DATE	PLATE 4 STANDARD DP-1

STANDARD NO. DP-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DP-1

STANDARD NO. DR-1

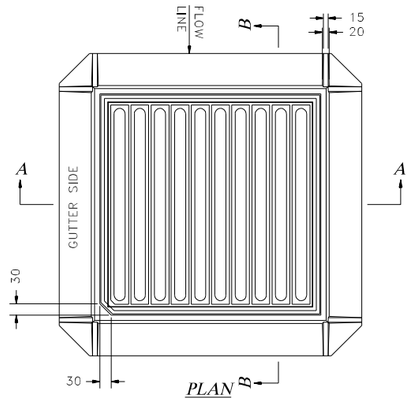
REVISION DATE
7-13-01

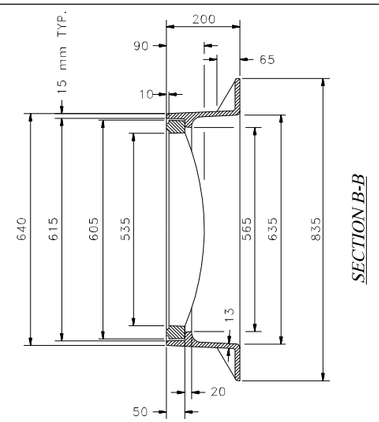
*.DGN FILE NAME: DR-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DR-1

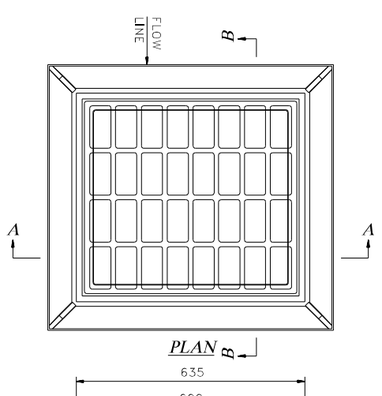


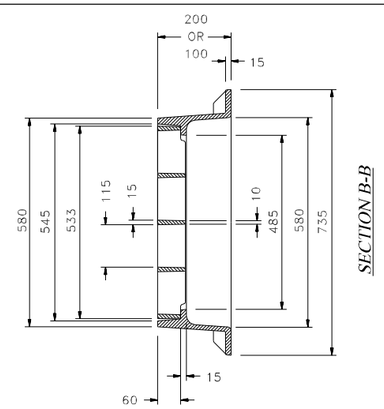


GENERAL NOTES

1. ALL DIMENSIONS ARE NOMINAL.
2. FREE OPEN AREA = 0.17 m^2.
3. NOT TO BE USED WHEN BICYCLE TRAFFIC IS ANTICIPATED.
4. USE 3-FLANGE FRAME IF INSTALLED ADJACENT TO GRANITE CURB.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *TYPE "A" GRATE & FRAME*	REV. DATE	PLATE 1 / STANDARD DR-1

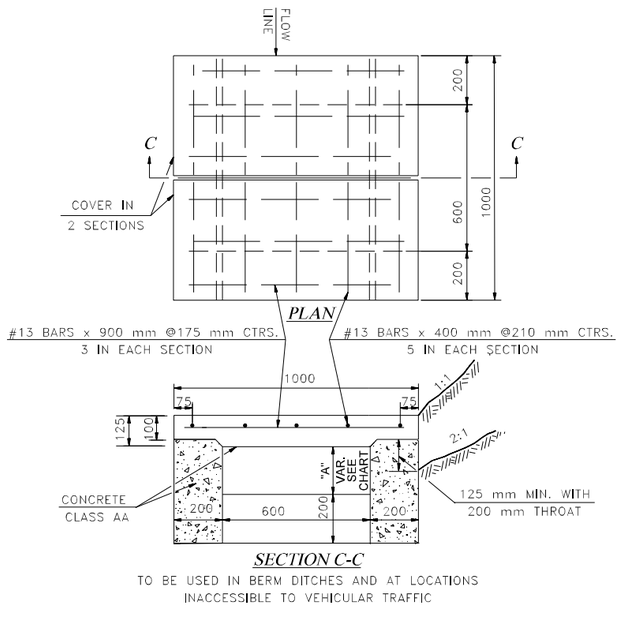




GENERAL NOTES

1. ALL DIMENSIONS ARE NOMINAL.
2. FRAME AVAILABLE IN 100 OR 200 mm HEIGHTS.
3. FREE OPEN AREA = 0.22 m^2.
4. USE 3-FLANGE FRAME IF INSTALLED ADJACENT TO GRANITE CURB.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *TYPE "B" GRATE & FRAME*	REV. DATE	PLATE 2 / STANDARD DR-1

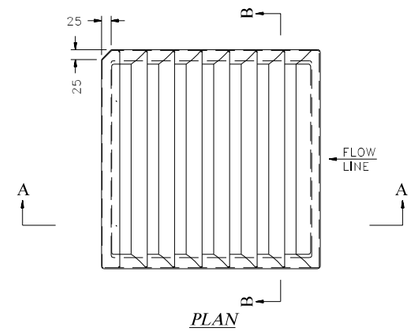


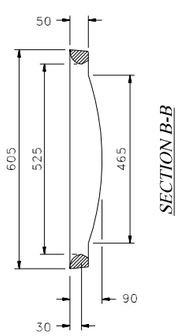
TO BE USED IN BERM DITCHES AND AT LOCATIONS INACCESSIBLE TO VEHICULAR TRAFFIC

PIPE DIA MILLIMETERS	THROAT DEPTH "A" MILLIMETERS	
	ONE THROAT	TWO THROAT
300	200	200
350	200	200
375	200	200
400	225	200
450	400	200
500	400	225
600	450	400

IN A SERIES OF CONNECTING C.B.'S OR D.I.'S, THE OUTLET PIPES MAY INCREASE IN DIAMETER, BUT THE SURFACE THROAT OPENINGS ARE NOT AFFECTED.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *TYPE "C" GRATE & FRAME*	REV. DATE	PLATE 3 / STANDARD DR-1





GENERAL NOTES

1. ALL DIMENSIONS ARE NOMINAL.
2. USE WITH TYPE "A" FRAME.
3. NOT TO BE USED WHEN BICYCLE TRAFFIC IS ANTICIPATED.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *TYPE "E" GRATE*	REV. DATE	PLATE 4 / STANDARD DR-1

STANDARD NO. DR-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DR-1

STANDARD NO. DR-2

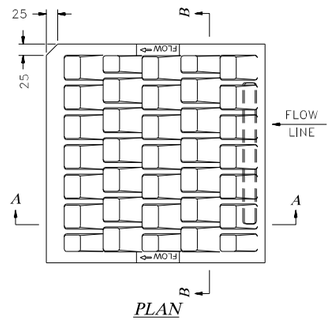
REVISION DATE
7-13-01

*.DGN FILE NAME
DR-2

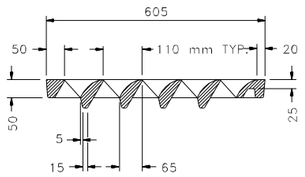
METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

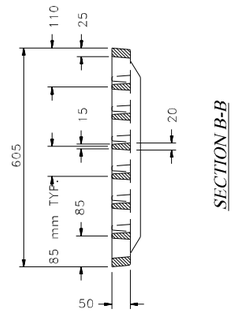
STANDARD NO. DR-2



PLAN



SECTION A-A

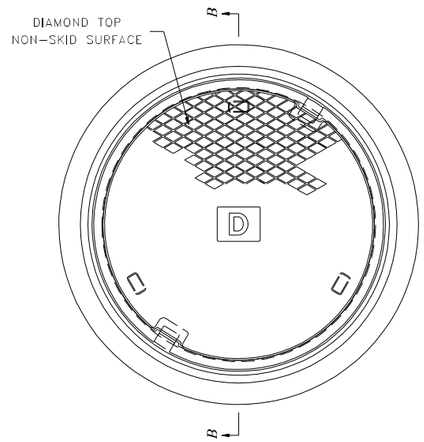


SECTION B-B

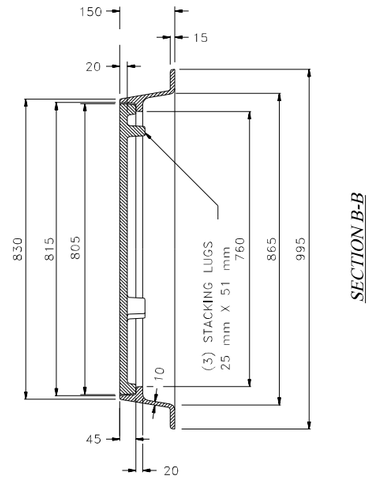
GENERAL NOTES

1. ALL DIMENSIONS ARE NOMINAL
2. USE WITH TYPE "A" FRAME
3. FREE OPEN AREA = 0.14 m^2
4. TO BE USED ON STEEP GRADES WHERE HIGH CAPACITY IS NEEDED AND BICYCLE TRAFFIC IS ANTICIPATED.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *TYPE "F" GRATE*	REV. DATE	PLATE 1 / STANDARD DR-2



PLAN

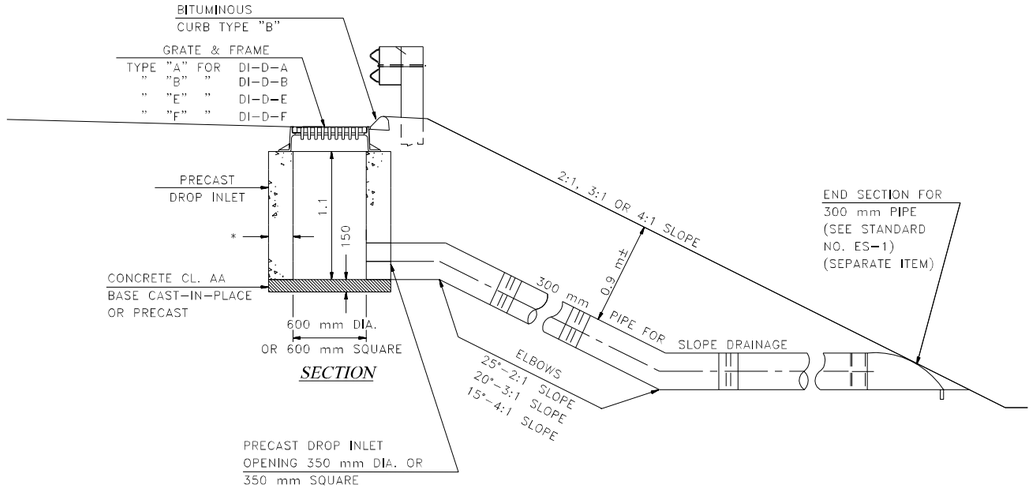


SECTION B-B

GENERAL NOTES

1. ALL DIMENSIONS ARE NOMINAL
2. 75 mm HIGH LETTER ("D", "E", "S", OR "T" CORRESPONDING TO THE UTILITY) IN THE CENTER OF THE COVER.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *MANHOLE COVER & FRAME*	REV. DATE	PLATE 2 / STANDARD DR-2

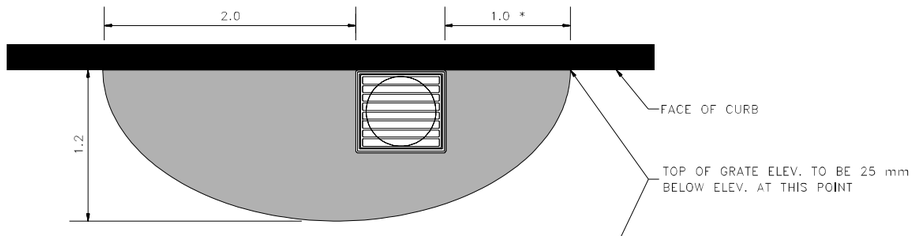


SECTION

* 200 mm UNREINFORCED; 125 mm REINFORCED

ITEM NO.: 604.24X

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *DROP INLET TYPE D & PIPE FOR SLOPE DRAINAGE*	REV. DATE	PLATE 3 / STANDARD DR-2



PLAN

ELEVATION

GENERAL NOTES

1. SHADED AREA REPRESENTS APPROXIMATE LIMITS OF PAVEMENT DEPRESSION

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *PAVEMENT DEPRESSION DETAIL*	REV. DATE	PLATE 4 / STANDARD DR-2

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DR-2

STANDARD NO. DR-3

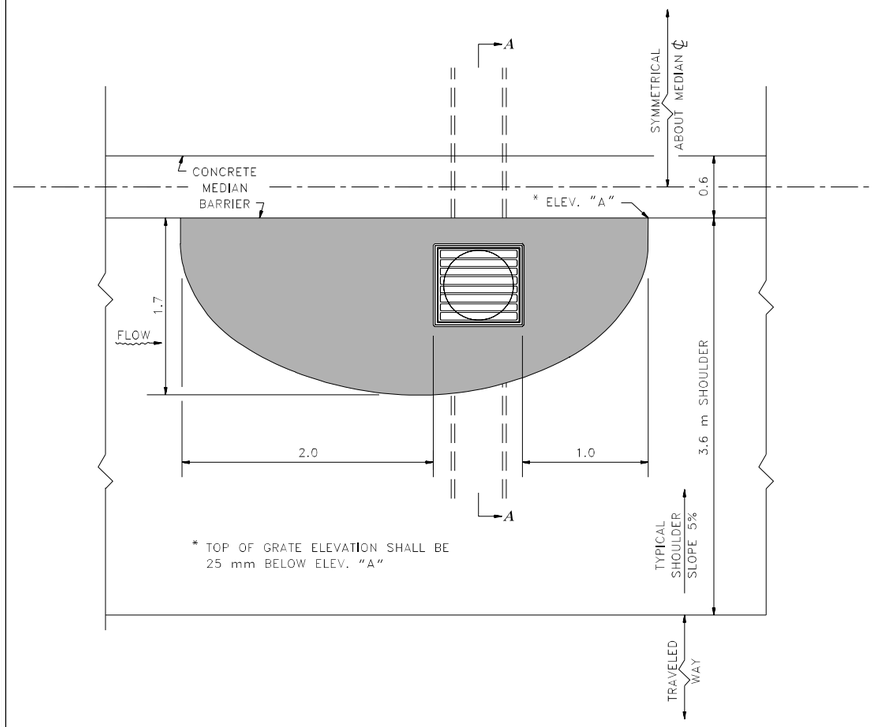
REVISION DATE
7-13-01

*.DGN FILE NAME
DR-3

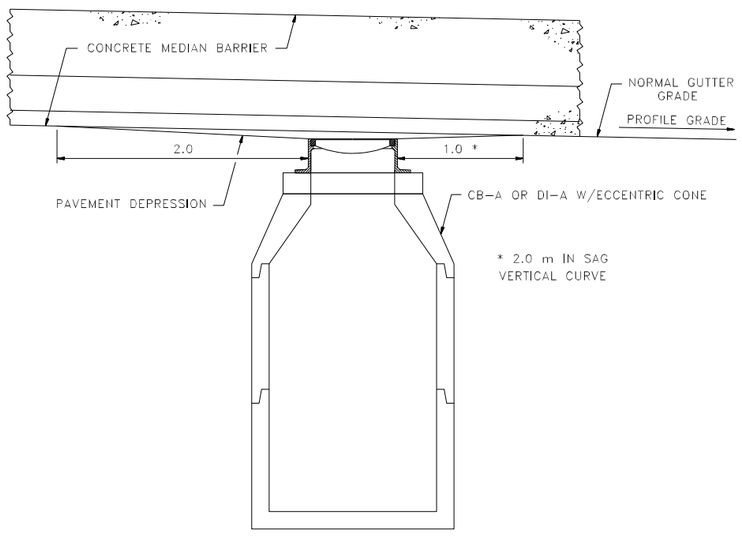
METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

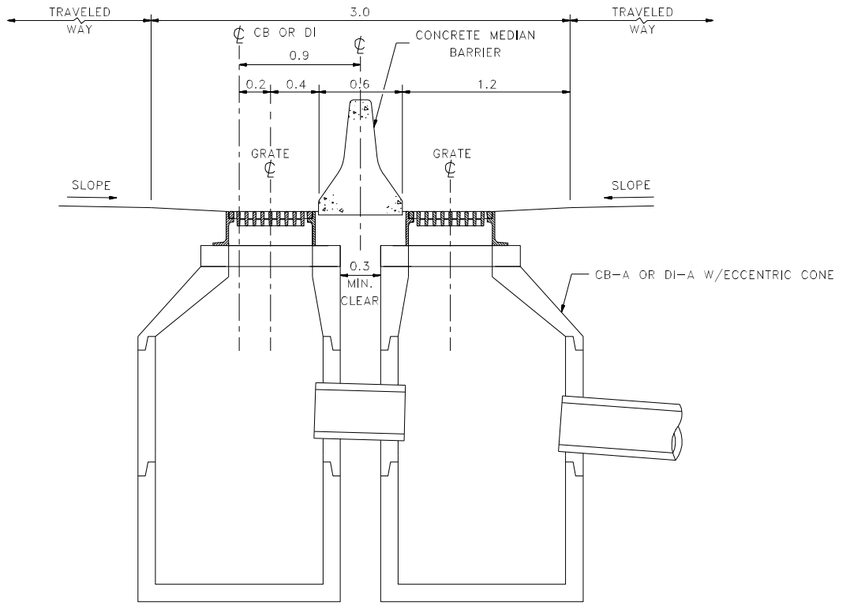
STANDARD NO. DR-3



PLAN

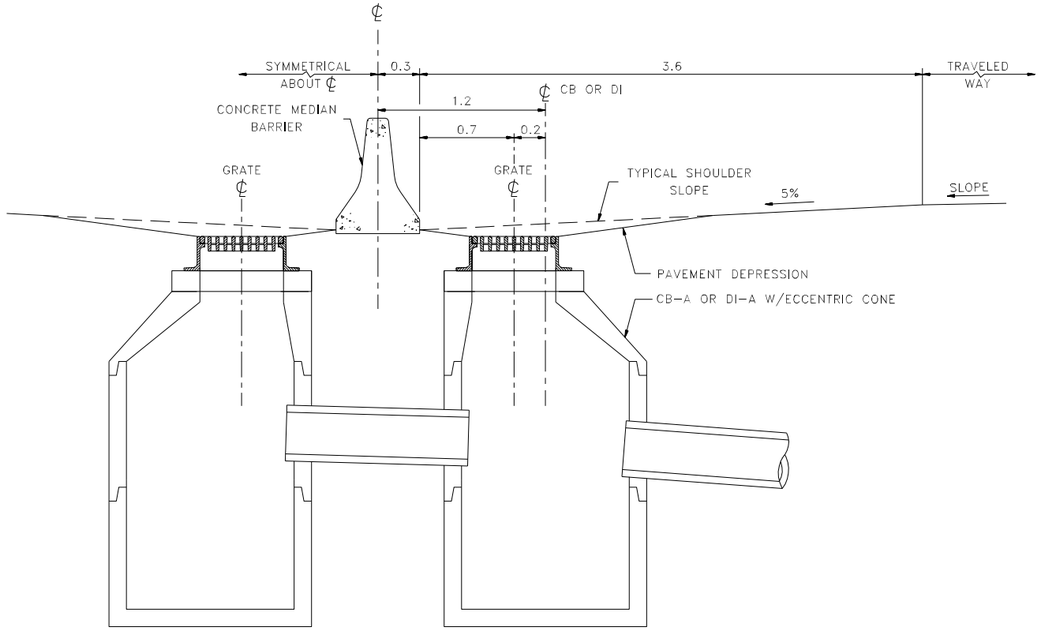


ELEVATION



3.0 m WIDE MEDIAN DRAINAGE DETAILS

(OR ALTERNATE DESIGN FOR SPECIAL CONDITIONS)



SECTION A-A

7.8 m WIDE MEDIAN DRAINAGE DETAILS

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

DRAINAGE STANDARD

CONCRETE MEDIAN BARRIER DRAINAGE DETAILS

STANDARD NO. DR-3

REVISION DATE
7-13-01

*.DGN FILE NAME
DR-3

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DR-3

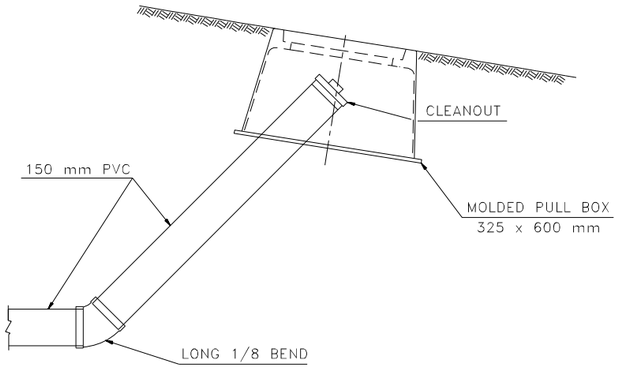
STANDARD NO. DR-4

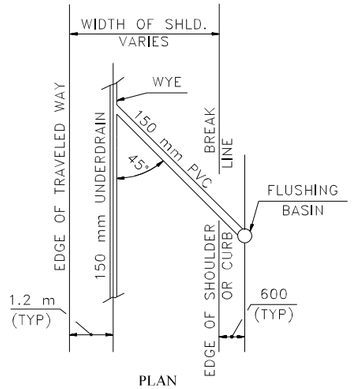
REVISION DATE
7-13-01

*.DGN FILE NAME
DR-4

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.



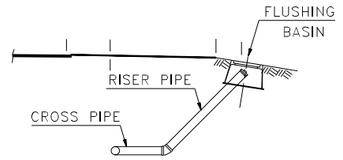


PLAN

ITEM 605.79 – UNDERDRAIN FLUSHING BASIN SHALL INCLUDE ALL REQUIRED RISER PIPE, 45° WYE, LONG BEND, CROSS PIPE, CLEANOUT, PULL BOX AND BACKFILL MATERIAL AS REQUIRED.

USE ITEM 622.1 – STEEL WITNESS MARKER TO MARK PULL BOX LOCATION.

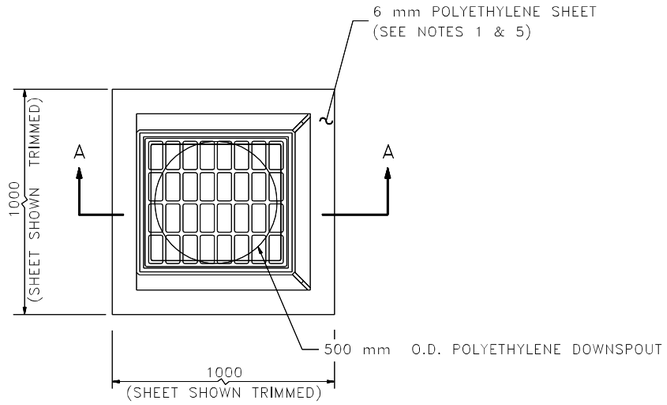
TYPICAL DETAIL



CROSS SECTION

TYPICAL LOCATION

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *UNDERDRAIN FLUSHING BASIN*	REV. DATE	PLATE 1 / STANDARD DR-4



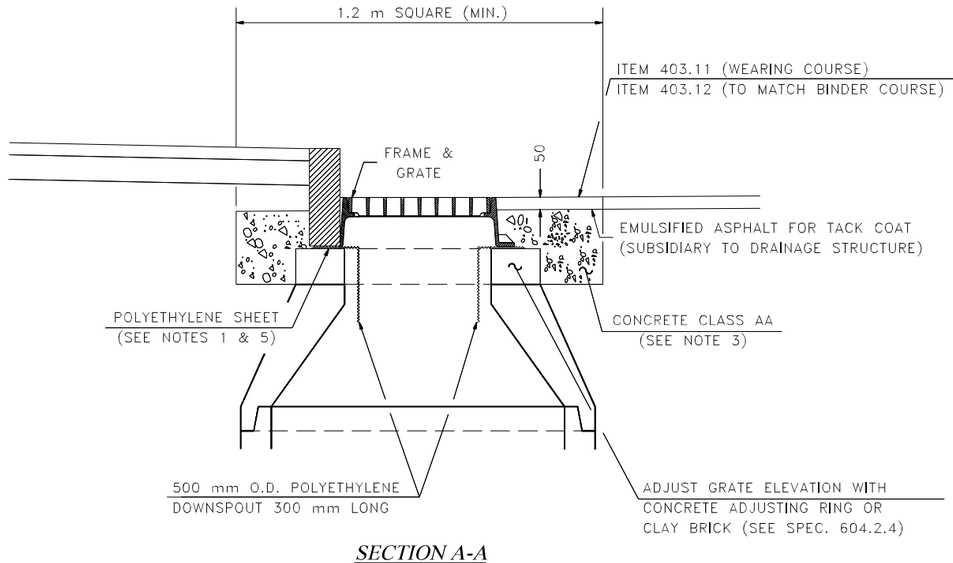
PLAN

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *POLYETHYLENE LINER*	REV. DATE	PLATE 2 / STANDARD DR-4

GENERAL NOTES

1. POLYETHYLENE LINER (ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET.
2. PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT BETWEEN FRAME AND POLYETHYLENE SHEET.
3. PLACE CLASS AA CONCRETE TO 50 mm BELOW THE TOP OF GRATE ELEVATION (SUBSIDIARY TO DRAINAGE STRUCTURE).
4. USE ON DRAINAGE STRUCTURES 1.2 m MIN. DIAMETER ONLY.
5. TRIM POLYETHYLENE SHEET A MAXIMUM OF 100 mm OUTSIDE THE FLANGE ON THE FRAME FOR THE CATCH BASIN BEFORE PLACING CONCRETE (EXCEPT AS SHOWN WHEN USED WITH CURB).
6. THE CENTER OF THE GRATE & FRAME MAY BE SHIFTED A MAXIMUM OF 150 mm FROM THE CENTER OF THE DOWNSPOUT IN ANY DIRECTION.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *POLYETHYLENE LINER*	REV. DATE	PLATE 3 / STANDARD DR-4



SECTION A-A

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *POLYETHYLENE LINER*	REV. DATE	PLATE 4 / STANDARD DR-4

STANDARD NO. DR-4

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DR-4

STANDARD NO. DR-5

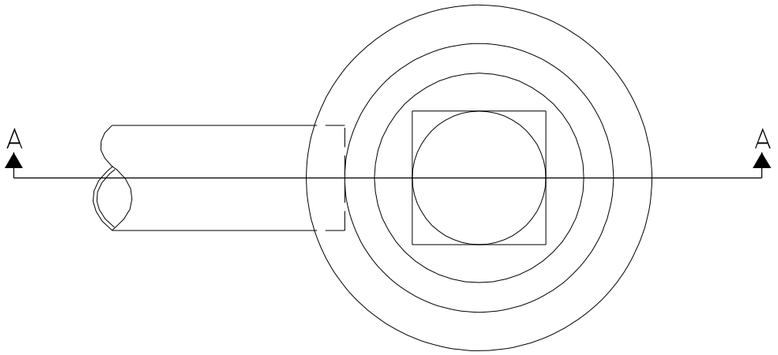
REVISION DATE
7-13-01

*.DGN FILE NAME
DR-5

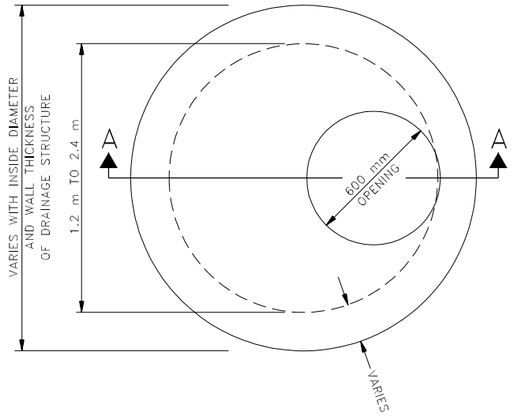
METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

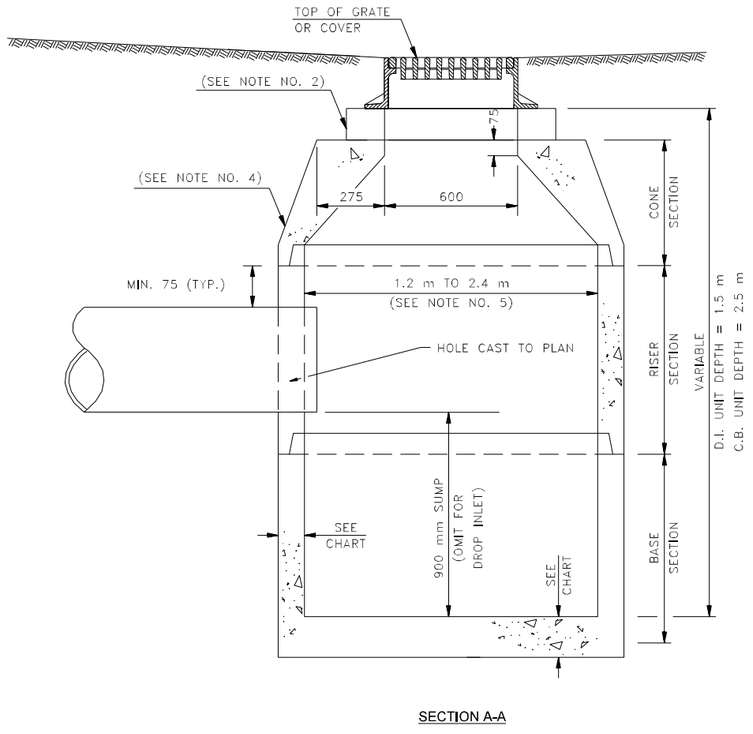
STANDARD NO. DR-5



PLAN



PLAN



SECTION A-A

* 165 mm FOR 1.2 m Ø STRUCTURE
200 mm FOR >1.2 m Ø STRUCTURES

SECTION A-A

FLAT SLAB TOP

DIAMETER	WALL THICKNESS (MIN.)	FLOOR THICKNESS (MIN.)
1.2 m	125 mm	150 mm
1.5 m	150 mm	200 mm
1.8 m	175 mm	200 mm
2.1 m	200 mm	250 mm
2.4 m	225 mm	250 mm

GENERAL NOTES

1. ITEM NUMBERS: CB=604.1XXX, DI=604.2XXX, MH=604.32XX
2. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
3. CB & DI GRATES IN PAVED AREAS SHALL BE SET ACCORDING TO THE PAVEMENT DEPRESSION DETAIL SHOWN ON PLATE 4 OF STANDARD NO. DR-2.
4. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
5. FOR STRUCTURES WITH DIAMETERS GREATER THAN 1.2 m, THE DIAMETER MAY BE CONSTANT FROM TOP TO BOTTOM WITH A FLAT SLAB TOP, OR A RISER SECTION THAT TRANSITIONS FROM A STANDARD 1.2 m CONE SECTION TO THE LARGER DIAMETER RISER OR BASE SECTION MAY BE USED.
6. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
7. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 75 mm BEYOND INSIDE WALL OF STRUCTURE.
8. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 100 mm HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
9. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 300 mm OF OUTSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 75 mm TO JOINTS.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

DRAINAGE STANDARD

PRECAST REINFORCED CONCRETE C.B., D.I. AND M.H.

STANDARD NO. DR-5

REVISION DATE
7-13-01

*.DGN FILE NAME
DR-5

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. DR-5

STANDARD NO. ES-1

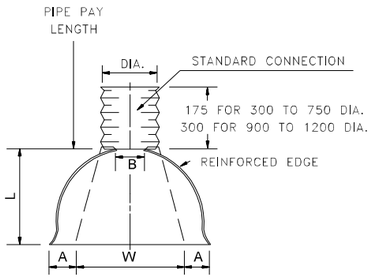
REVISION DATE
7-13-01

*.DGN FILE NAME
ES-1

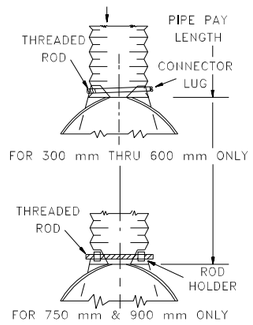
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. ES-1

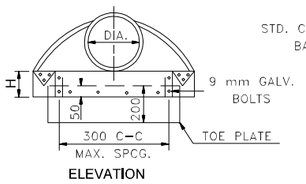


PLAN

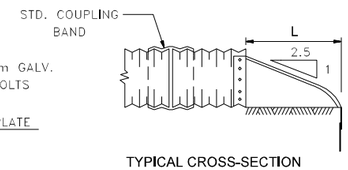


ALTERNATE CONNECTIONS

ITEM NO.	PIPE DIA.	METAL THICK	DIMENSIONS				
			A (25 TOL)	B MAX	H (25 TOL)	L (50 TOL)	W (50 TOL)
603.34103	300	1.6	150	150	150	525	600
603.34104	375	1.6	175	200	150	650	750
603.34105	450	1.6	200	250	150	775	900
603.34106	600	1.6	250	325	150	1025	1200
603.34108	750	2.0	300	400	200	1275	1500
603.34109	900	2.0	350	475	225	1500	1800
603.34111	1050	2.7	400	550	275	1725	2100
603.34112	1200	2.7	450	675	300	1950	2250



ELEVATION

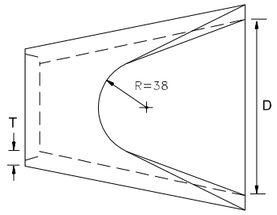


TYPICAL CROSS-SECTION

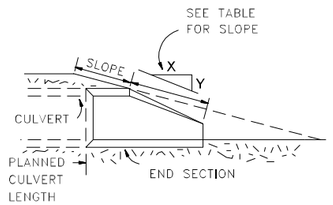
GENERAL NOTES

1. END SECTION FOR 300 mm TO 750 mm DIA. PIPE IN ONE PIECE, FOR 900 mm TO 1200 mm DIA. PIPE TO BE MADE FROM TWO SHEETS JOINED BY RIVETING OR BOLTING ON CENTER LINE.
2. CONNECTOR SECTION, CORNER PLATE AND TOE PLATE TO BE SAME THICKNESS AS END SECTION AND EACH TO BE GALVANIZED.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *END SECTION FOR CORRUGATED STEEL PIPE*	REV. DATE	PLATE 1 / STANDARD ES-1



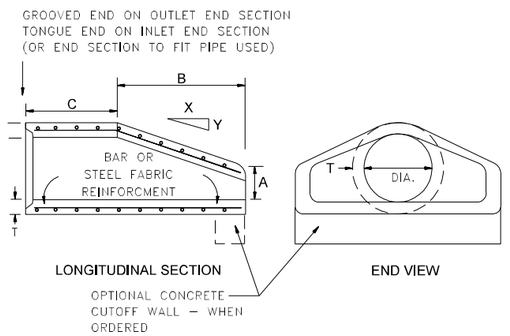
PLAN



SLOPE DETAIL

GENERAL NOTES

1. DESIGN OF END SECTION SHALL CONFORM TO STANDARD REINFORCED CONCRETE PIPE.
2. CUT OFF WALL TO BE POURED IN FIELD, IF NECESSARY, AS DIRECTED BY THE ENGINEER.
3. PAYMENT FOR THE CUT OFF WALL WILL BE MADE UNDER THE APPROPRIATE CONTRACT ITEMS.



LONGITUDINAL SECTION

END VIEW

ITEM NO.	PIPE DIA.	APPROX. SLOPE X to Y	A	B	C	D	G	T
603.30103	300	3 TO 1	100	600	1222	600	50	50
603.30104	375	3 TO 1	150	675	1150	750	56	56
603.30105	450	3 TO 1	225	675	1150	900	63	63
603.30106	600	3 TO 1	238	1088	750	1200	75	75
603.30108	750	3 TO 1	300	1350	494	1500	88	88
603.30109	900	3 TO 1	375	1575	869	1800	100	100
603.30111	1050	3 TO 1	525	1575	875	1950	113	113
603.30112	1200	3 TO 1	600	1800	650	2100	125	125
603.30114	1350	2.4 TO 1	675	1625	825	2250	138	138
603.30115	1500	2 TO 1	750	1500	975	2400	150	150
603.30118	1800	1.86 TO 1	900	1950	525	2700	150	175

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *CONCRETE END SECTION FOR REINFORCED CONCRETE PIPE*	REV. DATE	PLATE 2 / STANDARD ES-1

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS	REV. DATE	PLATE 3 / STANDARD ES-1

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS	REV. DATE	PLATE 4 / STANDARD ES-1

STANDARD NO. ES-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

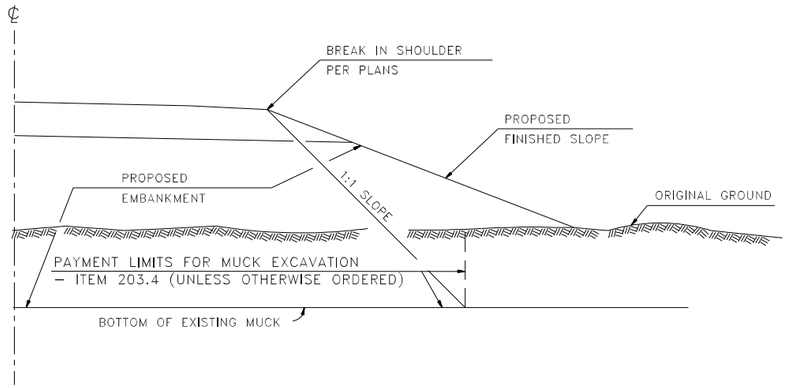
STANDARD NO. ES-1

STANDARD NO. EW-1

REVISION DATE
7-13-01

*.DGN FILE NAME
EW-1

METRIC
STANDARD PLANS



TYPICAL HALF-SECTION SHOWING
MUCK TO BE REMOVED
PER SECTION 203.3.6.1

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *MUCK EXCAVATION*	REV. DATE	PLATE 1 STANDARD EW–1

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS	REV. DATE	PLATE 2 STANDARD EW–1

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS	REV. DATE	PLATE 3 STANDARD EW–1

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS	REV. DATE	PLATE 4 STANDARD EW–1

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. EW-1

STANDARD NO. EW-1

REVISION DATE
7-13-01

*.DGN FILE NAME
EW-1

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. EW-1

STANDARD NO. FN-1

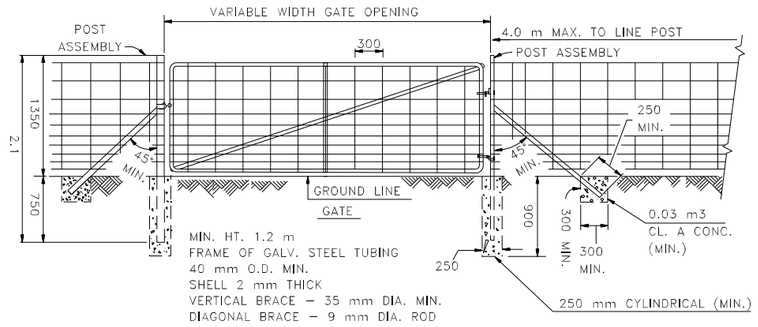
REVISION DATE
7-13-01

*.DGN FILE NAME
FN-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. FN-1

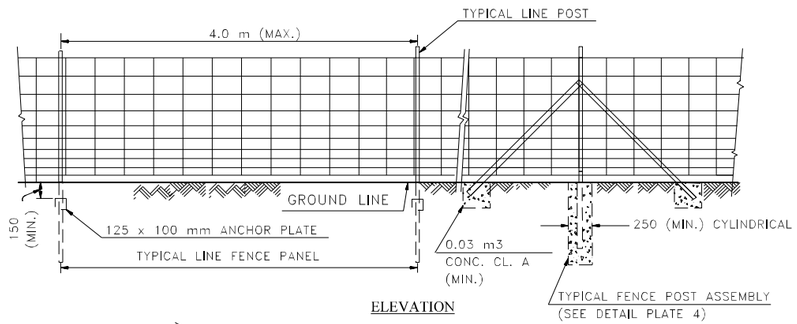


ELEVATION

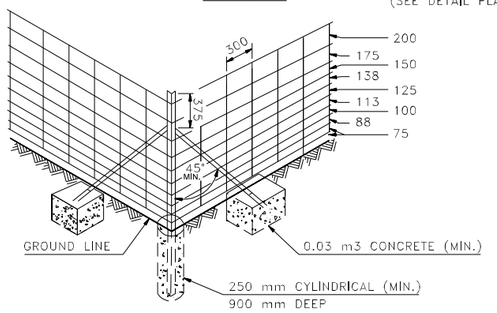
GENERAL NOTES

1. ALL END POSTS SHALL HAVE ONE BRACE, ALL CORNER AND INTERMEDIATE BRACE OR PULL POSTS SHALL HAVE TWO BRACES.
2. INTERMEDIATE OR LINE POSTS SHALL BE STANDARD STUDDED TEE POSTS.
3. END POSTS, CORNER POSTS AND PULL POSTS SHALL BE AN ANGLE POST DETAILED IN PLATE 3. BRACES SHALL BE AN ANGLE POST DETAILED IN PLATE 4.
4. WHERE GROUND CONDITION PERMITS, FORMS FOR FOOTING WILL NOT BE REQUIRED.
5. CONCRETE SHALL BE CLASS A.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *WOVEN WIRE FENCE (ITEM 607.1)*	REV. DATE	PLATE 1 / STANDARD FN-1

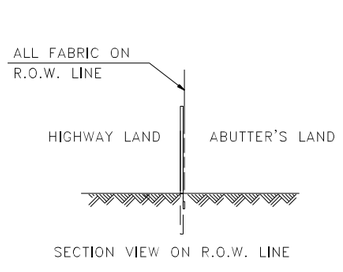


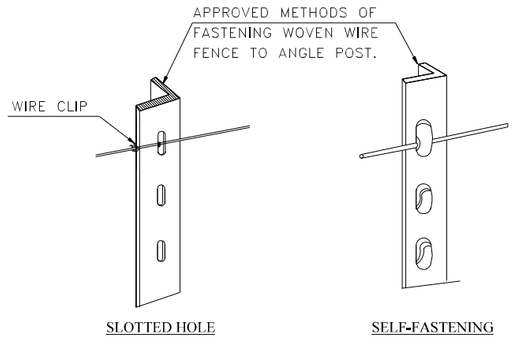
ELEVATION



DETAIL OF CORNER BRACE - POST ASSEMBLY

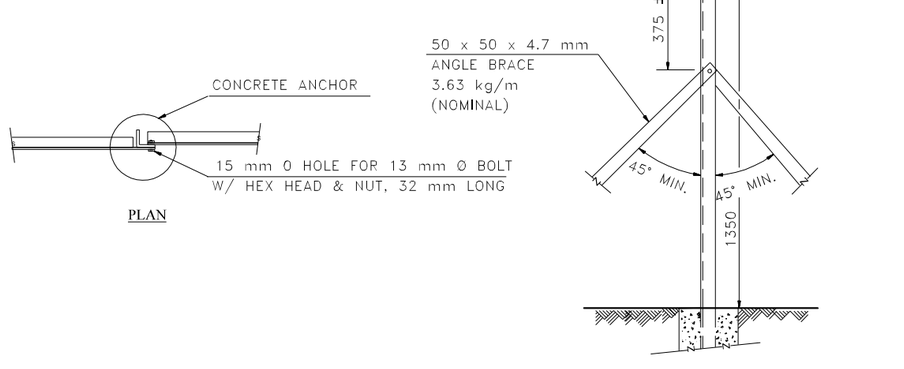
ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *POST ASSEMBLIES FOR WOVEN WIRE FENCE (ITEM 607.41)*	REV. DATE	PLATE 2 / STANDARD FN-1





63 x 63 x 6.3 mm ANGLE POST
6.1 kg/m (NOMINAL)

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *POST ASSEMBLIES FOR WOVEN WIRE FENCE*	REV. DATE	PLATE 3 / STANDARD FN-1



ELEVATION

TYPICAL FENCE POST ASSEMBLY

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *ANGLE BRACES FOR WOVEN WIRE FENCE*	REV. DATE	PLATE 4 / STANDARD FN-1

STANDARD NO. FN-1

REVISION DATE
7-13-01

*.DGN FILE NAME
FN-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. FN-1

STANDARD NO. FN-2

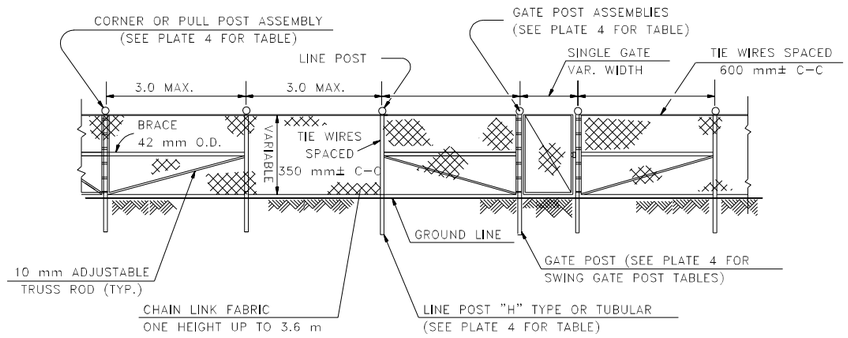
REVISION DATE
7-13-01

*.DGN FILE NAME
FN-2

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. FN-2

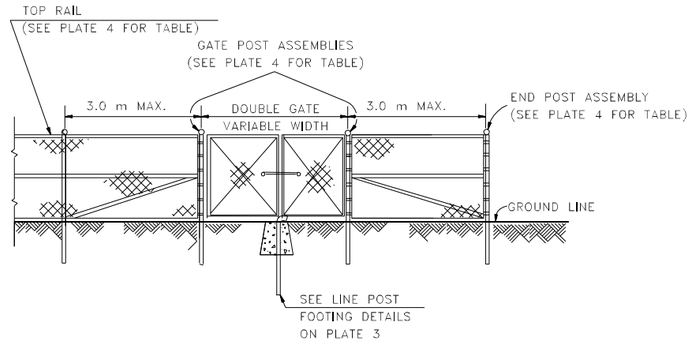


ELEVATION

GENERAL NOTES

1. ALL END POSTS SHALL HAVE ONE BRACE. (SEE DETAIL PLATE 2).
2. ALL CORNER AND INTERMEDIATE BRACE OR PULL POSTS SHALL HAVE TWO BRACES.
3. POST FOOTING DETAILS ARE SHOWN IN PLATE 3. FOR FENCE ERECTION ON THE RIGHT-OF-WAY LINE, SEE PLATE 3 OF STD. NO. FN-1.
4. FENCE DETAILS ARE FOR STEEL OR ALUMINUM FENCING. FOR ADDITIONAL DETAILS AND NOTES, SEE PLATES 2,3,& 4.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *CHAIN LINK FENCE*	REV. DATE	PLATE 1 / STANDARD FN-2

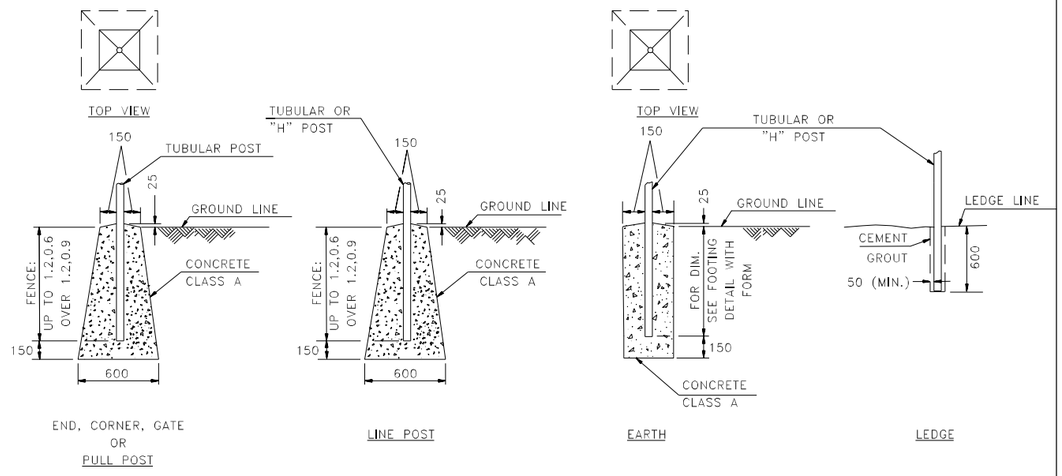


ELEVATION

GENERAL NOTES

1. FOR ADDITIONAL DETAILS AND NOTES SEE PLATES 1, 3 & 4.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *CHAIN LINK FENCE*	REV. DATE	PLATE 2 / STANDARD FN-2



FOOTING DETAIL
(WITH FORM)

FOOTING DETAIL
(WITHOUT FORM)

GENERAL NOTES

1. WHERE GROUND CONDITION PERMITS, FORMS FOR FOOTINGS WILL NOT BE REQUIRED.
2. ALUMINUM POSTS IN CONCRETE SHALL HAVE A PROTECTIVE COATING – 607.2.6

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *CHAIN LINK FENCE*	REV. DATE	PLATE 3 / STANDARD FN-2

END, CORNER AND PULL POST

FENCE HEIGHT (m)	TUBULAR ROUND	kg/m	TUBULAR SQUARE	kg/m
STEEL				
UP TO 1.8	60 mm O.D.	5.43	50 x 50 mm	5.36
OVER 1.8	72 mm O.D.	8.62	63 x 63 mm	8.48
ALUMINUM				
UP TO 3.6	72 mm O.D.	2.98	75 x 75 mm	2.62

TOP RAILS

FENCE HEIGHT (m)	ROUND	kg/m
STEEL		
ALL	42 mm O.D.	3.38
ALUMINUM		
UP TO 3.6	42 mm O.D.	1.17

LINE POSTS

FENCE HEIGHT (m)	TUBULAR ROUND	kg/m	"H" TYPE H	kg/m
STEEL				
UP TO 1.8	48 mm O.D.	4.05	47 x 41 mm	4.02
OVER 1.8	60 mm O.D.	5.43	56 x 49 mm	6.10
ALUMINUM				
UP TO 3.6	60 mm O.D.	1.88	56 x 49 mm	1.83

STEEL SWING GATE AND POST TABLE

TYPE	GATE OPENING SINGLE	GATE OPENING DOUBLE	GATE POST (TUBULAR) ROUND	kg/m	SQUARE	kg/m
A	UP TO 1.8	UP TO 3.6	72 mm O.D.	8.62	63 x 63 mm	8.48
B	OVER 1.8 TO 3.9	OVER 3.6 TO 7.8	100 mm O.D.	13.56	75 x 75 mm	11.24
C	OVER 3.9 TO 5.4	OVER 7.8 TO 10.8	166 mm O.D.	28.23	–	–
D	OVER 5.4	OVER 10.8	216 mm O.D.	42.49	–	–
GATE FRAME	UP TO 1.8		42 mm O.D.	3.38	38 x 38 mm	2.83
	OVER 1.8		48 mm O.D.	4.05	50 x 50 mm	4.05

ALUMINUM SWING GATE AND POST TABLE

TYPE	GATE OPENING SINGLE	GATE OPENING DOUBLE ROUND	GATE POST (TUBULAR) ROUND	kg/m	SQUARE	kg/m
A – A	UP TO 1.8	UP TO 3.6	72 mm O.D.	2.98	75 x 75 mm	2.62
B – A	OVER 1.8 TO 3.6	OVER 3.6 TO 7.2	100 mm O.D.	4.69	–	–
C – A	OVER 3.6 TO 5.4	OVER 7.2 TO 10.8	166 mm O.D.	9.77	–	–
D – A	OVER 5.4 TO 9.6	OVER 10.8 TO 13.2	216 mm O.D.	14.70	–	–
GATE FRAME ALL			48 mm O.D.	1.40	50 x 50 mm	1.67

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *POSTS FOR CHAIN LINK FENCE*	REV. DATE	PLATE 4 / STANDARD FN-2

STANDARD NO. GR-1

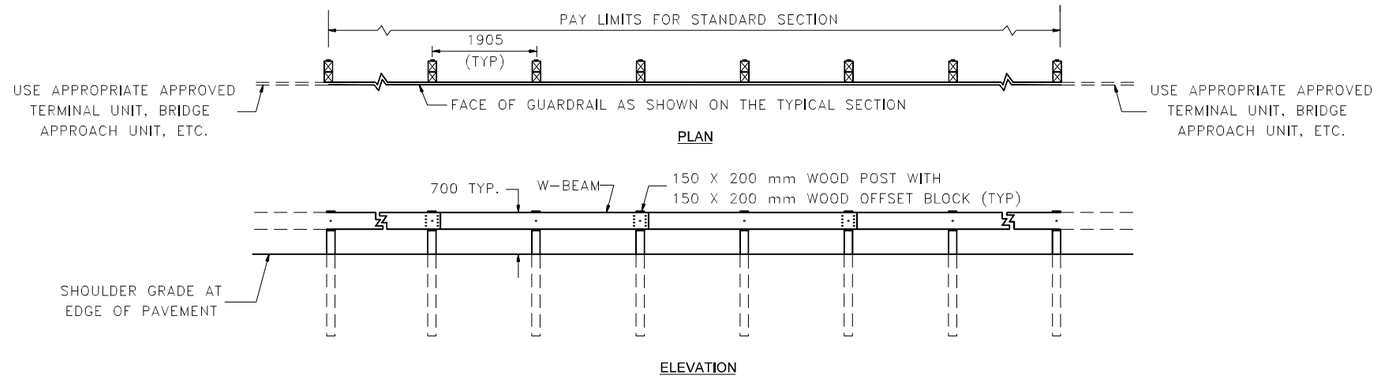
REVISION DATE
7-13-01

*.DGN FILE NAME: GR-1

METRIC STANDARD PLANS

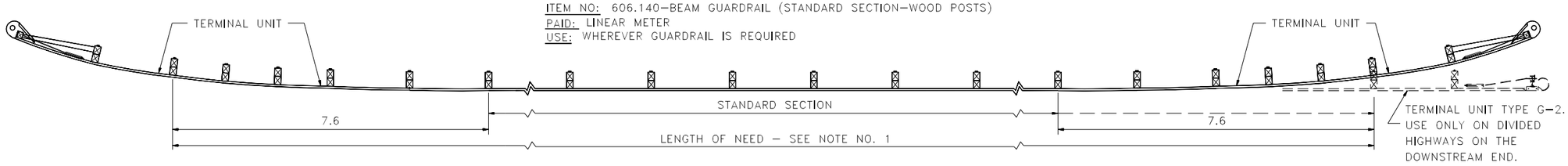
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. GR-1

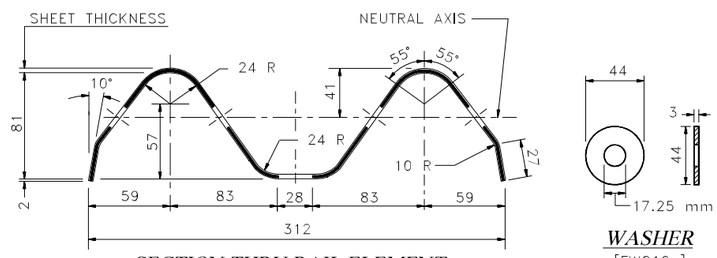


STANDARD SECTION

ITEM NO: 606.140—BEAM GUARDRAIL (STANDARD SECTION—WOOD POSTS)
PAID: LINEAR METER
USE: WHEREVER GUARDRAIL IS REQUIRED

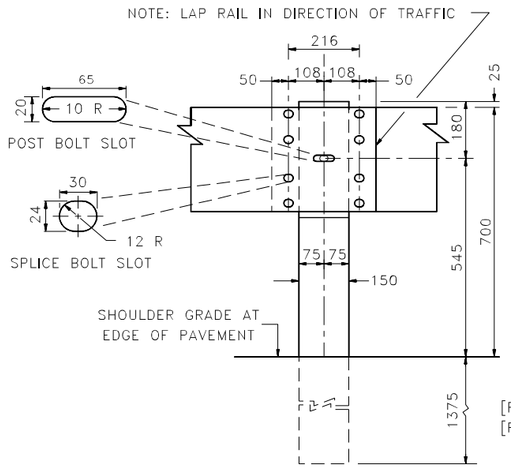


SAMPLE GUARDRAIL INSTALLATION LAYOUT

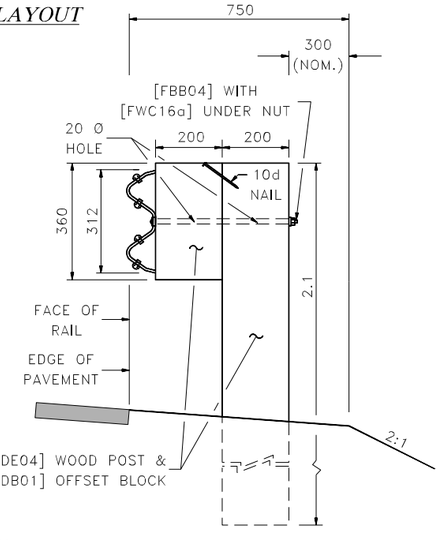


SECTION THRU RAIL ELEMENT
[RWM02a OR RWM22a]

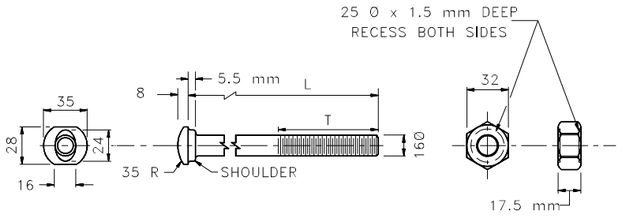
WASHER
[FWC16a]



LINE POST ELEVATION VIEW AT BEAM SPLICE
(SHOWN WITHOUT FASTENERS)

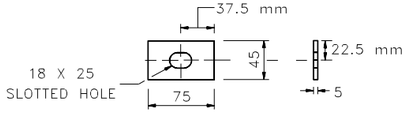


TYPICAL SIDE VIEW
(SHOWN WITH FASTENERS)



DESIGNATOR	L	T	INTENDED USE
FBB01	35	FULL LENGTH THREAD	RAIL SPLICE BOLTS
FBB02	50	45 mm	POST BOLT (STEEL POSTS)
FBB03	255	100 mm	POST BOLT
FBB04	460	100 mm	POST BOLT (WOOD POSTS)
FBB05	640	100 mm	POST BOLT (DOUBLE-FACED RAIL)

16 mm BUTTON HEAD BOLT AND RECESSED NUT
[FBB01—05]



RECTANGULAR PLATE WASHER
[FWR03] (6 REQ'D)
(SEE NOTE NO. 3)

GENERAL NOTES

1. LENGTH OF NEED IS THE TOTAL LENGTH OF A LONGITUDINAL BARRIER NEEDED TO SHIELD AN AREA OF CONCERN. TO DETERMINE THE LENGTH OF NEED, REFER TO THE *ROADSIDE DESIGN GUIDE* — AASHTO, 1996.
2. DESIGNATIONS PROVIDED IN BRACKETS [ ] REFERENCE STANDARD ELEMENTS DETAILED IN *A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE*, 1995, AASHTO—AGC—ARTBA JOINT COOPERATIVE COMMITTEE.
3. THE RECTANGULAR PLATE WASHER [FWR03] IS USED ONLY FOR 11.43 m OF STANDARD SECTION UPSTREAM OF A TERMINAL UNIT TYPE G—2 (SEE STANDARD NO. GR—5).
4. USE 4130 mm LENGTH RAIL ELEMENT IN CURVES OF LESS THAN 100 m RAIL RADIUS.
5. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
6. USE [PDE02] 1830 mm LONG POSTS WHEN FILL SLOPE IS 4:1 OR FLATTER AND/OR WHEN FIELD CONDITIONS DICTATE (e.g.,LEDGE FILLS), AS DETERMINED BY THE ENGINEER.
7. WHEN GUARDRAIL IS INSTALLED BEHIND CURB, EITHER 1.8 m BEHIND SLOPE CURB ON A CURBED RAMP OR AT THE BACK OF SIDEWALK WITH BARRIER CURB, THE RAIL HEIGHT SHALL BE SET FROM THE GRADE AT THE FACE OF RAIL.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

BEAM GUARDRAIL
STANDARD SECTION-WOOD POSTS
& HARDWARE DETAILS

STANDARD NO. GR-1
METRIC STANDARD PLANS
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STANDARD NO. GR-1

STANDARD NO. GR-2

REVISION DATE
7-13-01

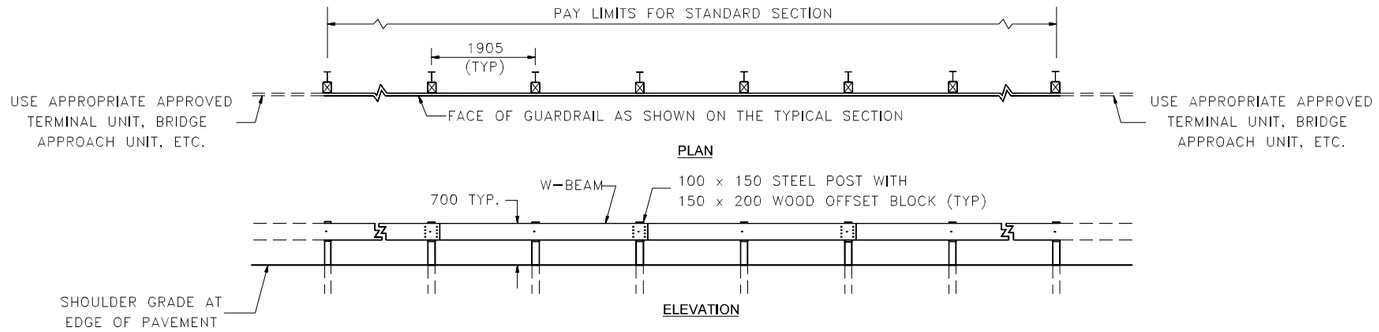
*.DGN FILE NAME
GR-2

METRIC
STANDARD PLANS

DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

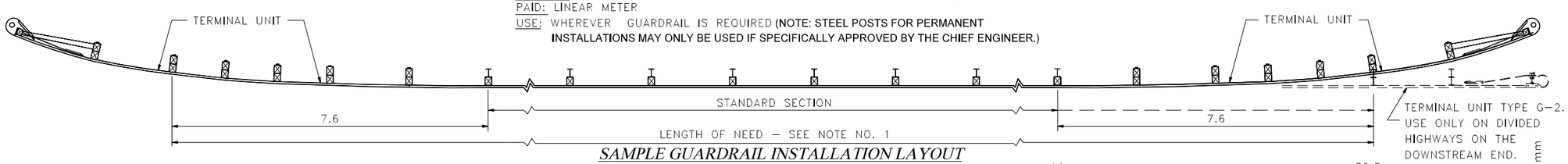
STATE OF NEW HAMPSHIRE

STANDARD NO. GR-2

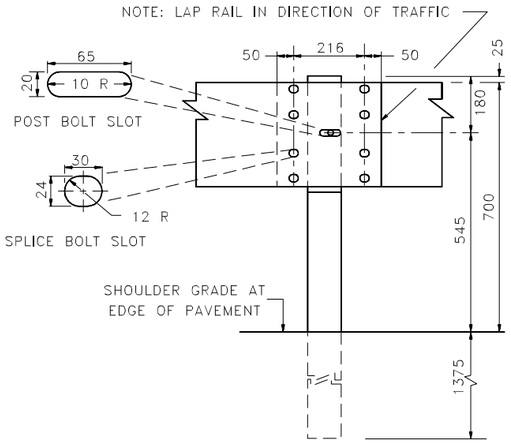


STANDARD SECTION

ITEM NO: 606.120–BEAM GUARDRAIL (STANDARD SECTION–STEEL POSTS)
PAID: LINEAR METER
USE: WHEREVER GUARDRAIL IS REQUIRED (NOTE: STEEL POSTS FOR PERMANENT INSTALLATIONS MAY ONLY BE USED IF SPECIFICALLY APPROVED BY THE CHIEF ENGINEER.)

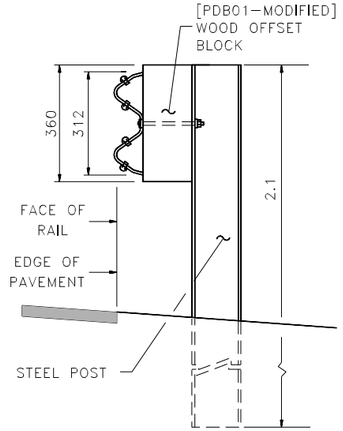


SAMPLE GUARDRAIL INSTALLATION LAYOUT



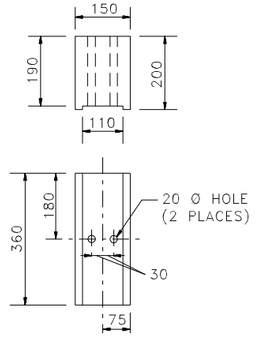
LINE POST ELEVATION VIEW AT BEAM SPLICE

(SHOWN WITHOUT FASTENERS)

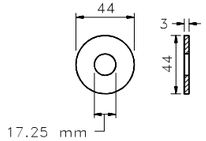


TYPICAL SIDE VIEW

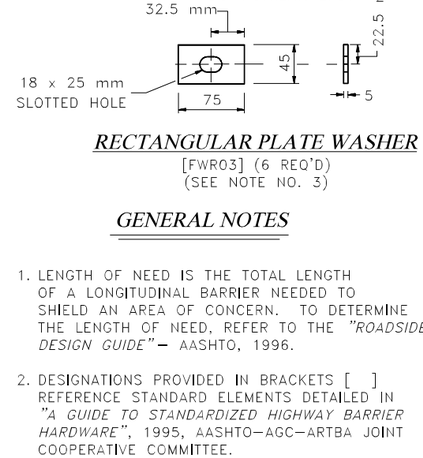
(SHOWN WITH FASTENERS)



WOOD BLOCK
[PDB01–MODIFIED]

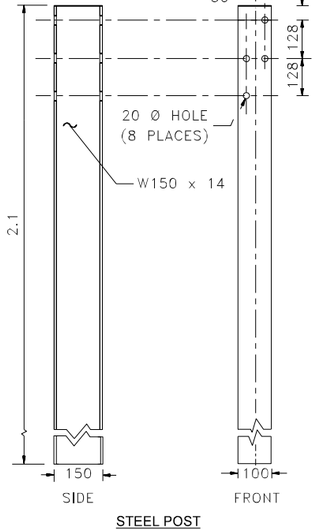


WASHER



RECTANGULAR PLATE WASHER

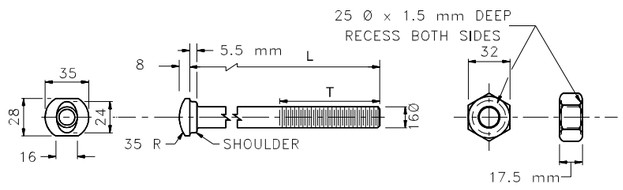
[FWR03] (6 REQ'D)
(SEE NOTE NO. 3)



STEEL POST

STRUCTUAL SHAPE STEEL POST & BLOCK

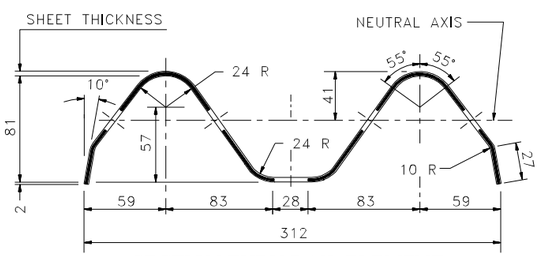
[PWE02]



DESIGNATOR	L	T	INTENDED USE
FBB01	35	FULL LENGTH THREAD	RAIL SPLICE BOLTS
FBB02	50	45 mm	POST BOLT (STEEL POSTS)
FBB03	255	100 mm	POST BOLT
FBB04	460	100 mm	POST BOLT (WOOD POSTS)
FBB05	640	100 mm	POST BOLT (DOUBLE–FACED RAIL)

16 mm BUTTON HEAD BOLT AND RECESSED NUT

[FBB01–05]



SECTION THRU RAIL ELEMENT

[RWM02a] OR [RWM22a]

GENERAL NOTES

1. LENGTH OF NEED IS THE TOTAL LENGTH OF A LONGITUDINAL BARRIER NEEDED TO SHIELD AN AREA OF CONCERN. TO DETERMINE THE LENGTH OF NEED, REFER TO THE *"ROADSIDE DESIGN GUIDE"* – AASHTO, 1996.
2. DESIGNATIONS PROVIDED IN BRACKETS [ ] REFERENCE STANDARD ELEMENTS DETAILED IN *"A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE"*, 1995, AASHTO–AGC–ARTBA JOINT COOPERATIVE COMMITTEE.
3. THE RECTANGULAR PLATE WASHER [FWR03] IS USED ONLY FOR 11.43 m OF STANDARD SECTION UPSTREAM OF A TERMINAL UNIT TYPE G–2 (SEE STANDARD NO. GR–5).
4. USE 4130 mm LENGTH RAIL ELEMENT IN CURVES OF LESS THAN 100 m RAIL RADIUS.
5. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
6. WHEN GUARDRAIL IS INSTALLED BEHIND CURB, EITHER 1.8 m BEHIND SLOPE CURB ON A CURBED RAMP OR AT THE BACK OF SIDEWALK WITH BARRIER CURB, THE RAIL HEIGHT SHALL BE SET FROM THE GRADE AT THE FACE OF RAIL.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

BEAM GUARDRAIL
STANDARD SECTION-STEEL POSTS
& HARDWARE DETAILS

STANDARD NO. GR-2

REVISION DATE
7-13-01

*.DGN FILE NAME
GR-2

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. GR-2

STANDARD NO. GR-3A

REVISION DATE
7-13-01

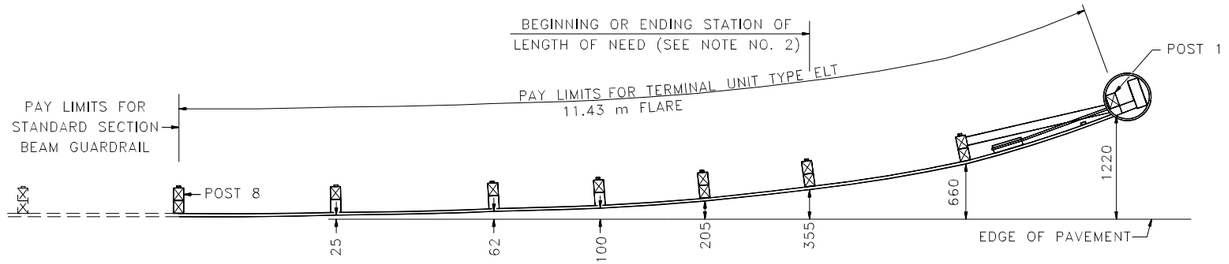
*.DGN FILE NAME
GR-3A

METRIC STANDARD PLANS

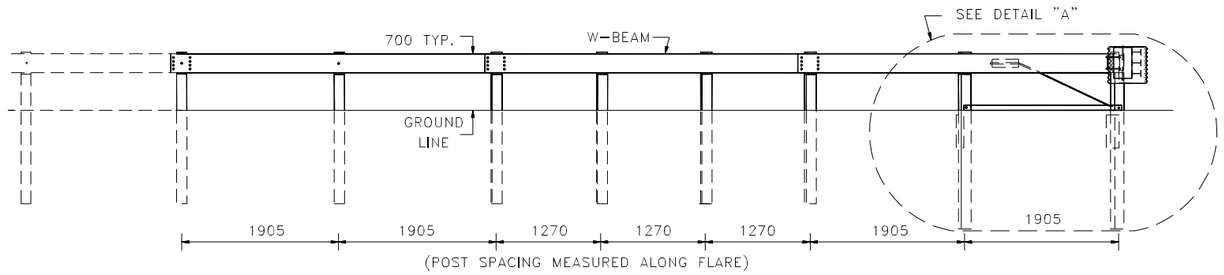
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. GR-3A

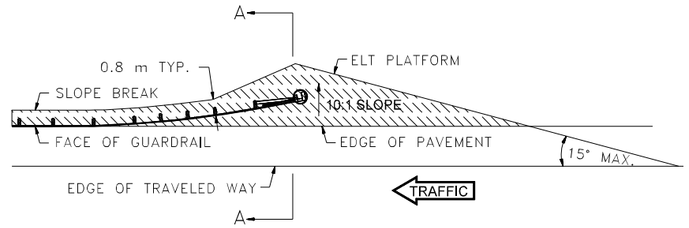
ECCENTRIC LOADER TERMINAL - ELT



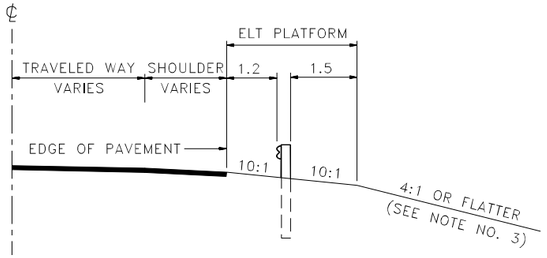
PLAN



ELEVATION



PLAN



SECTION A-A

TERMINAL UNIT TYPE ELT

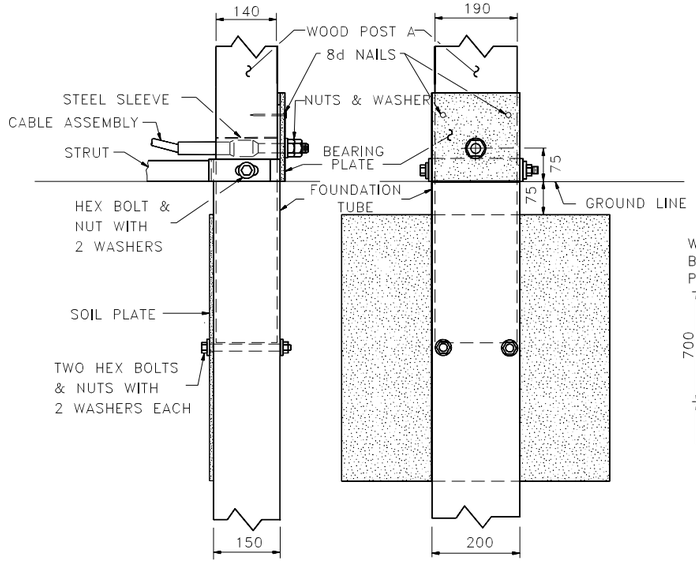
ITEM NO. 606.1452 – BEAM GUARDRAIL (TERMINAL UNIT TYPE ELT)

PAID: UNIT

USE: AT BEGINNING OR END OF STANDARD SECTION GUARDRAIL

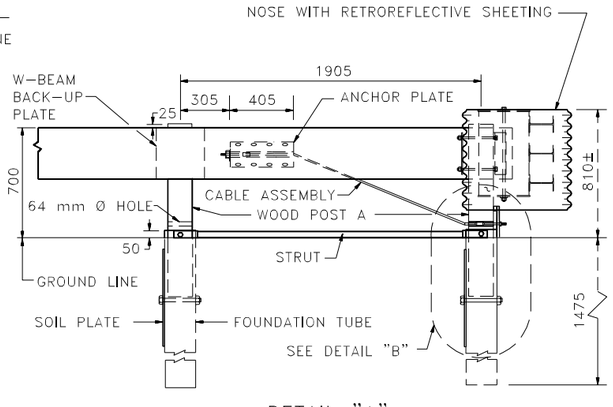
GRADING DETAILS

LAYOUT DETAILS



SIDE VIEW END VIEW

DETAIL "B"



DETAIL "A"

BREAKAWAY NOSE SECTION

GENERAL NOTES

1. THE CORRECT ASSEMBLY AND INSTALLATION OF THIS TERMINAL UNIT, INCLUDING THE LAYOUT OF THE 11.43 m FLARE, IS IMPORTANT TO ITS PROPER PERFORMANCE
2. THE LENGTH OF NEED IS THE TOTAL LENGTH OF A LONGITUDINAL BARRIER NEEDED TO SHIELD AN AREA OF CONCERN. TO DETERMINE THE LENGTH OF NEED, REFER TO THE *ROADSIDE DESIGN GUIDE* – AASHTO, 1996.
3. THE AREA OUTSIDE AND DOWNSTREAM OF THE FIRST 3810 mm (BREAKAWAY NOSE SECTION) OF THE ELT SHOULD BE REASONABLY TRAVERSABLE AND FREE OF FIXED-OBJECT HAZARDS TO THE EXTENT PRACTICAL. IF A CLEAR RUNOUT IS NOT ATTAINABLE, THIS AREA SHOULD AT LEAST BE SIMILAR IN CHARACTER TO UPSTREAM, UNSHIELDED ROADSIDE AREAS.
4. SEE STANDARDS NO. GR-3B & GR-3C FOR ELT HARDWARE DETAILS. SEE STANDARD NO. GR-1 FOR ADDITIONAL DETAILS OF COMMON HARDWARE.
5. THIS TERMINAL SHALL BE INSTALLED USING THREE 3810 mm LONG STRAIGHT SECTIONS OF W-BEAM RAIL THAT ARE FORCED AGAINST THE POSTS. SHOP-CURVED SECTIONS SHALL NOT BE USED. (THE SECOND SENTENCE OF 606.2.4.2 DOES NOT APPLY.)

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

BEAM GUARDRAIL
TERMINAL UNIT TYPE ELT

STANDARD NO. GR-3A

STANDARD NO. GR-3B

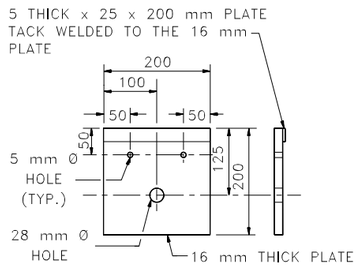
REVISION DATE
7-13-01

*.DGN FILE NAME
GR-3B

METRIC STANDARD PLANS

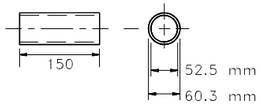
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. GR-3B

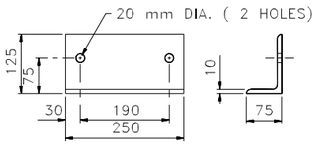


NOTE: ATTACH PLATE TO POST WITH TWO 8d GALVANIZED NAILS

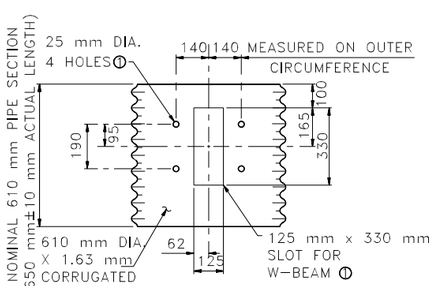
BEARING PLATE
[FPB01]



POST SLEEVE
[FMM02]

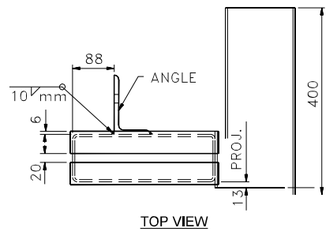


ANGLE

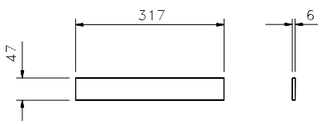


NOTE:
① DO NOT USE FLAME CUTTING FOR THESE OPENINGS

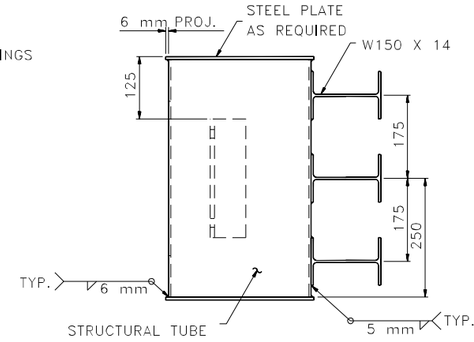
CORRUGATED STEEL PIPE



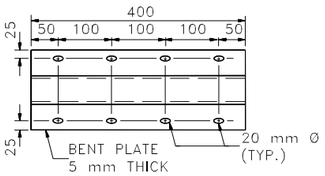
TOP VIEW



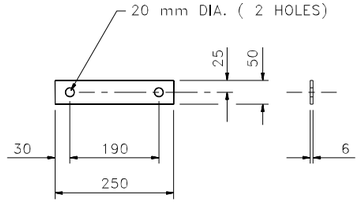
STEEL PLATE
(4 REQUIRED)



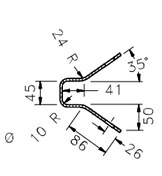
SIDE VIEW

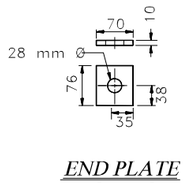


M24 HEX NUT & WASHER
[FNX24a] AND [FWC24a]



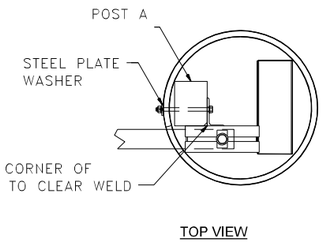
STEEL PLATE WASHER



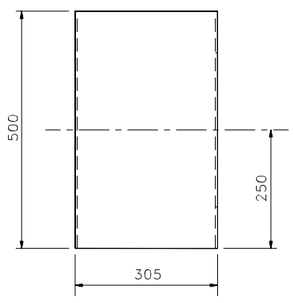


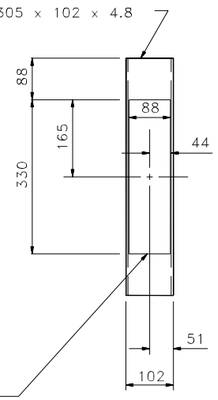
ANCHOR BRACKET
[FPA01]

END PLATE
[FPA01]



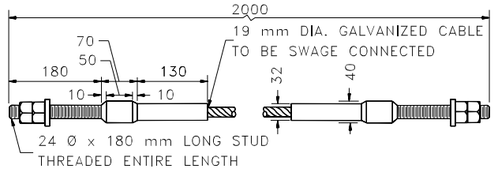
TOP VIEW





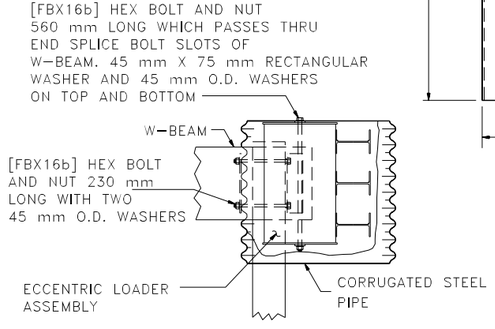
STRUCTURAL TUBE

ECCENTRIC LOADER ASSEMBLY



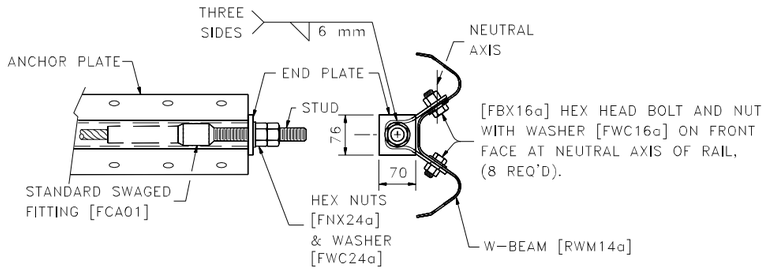
NOTE: TIGHTEN CABLE ASSEMBLY TO TAUT TENSION & DOUBLE-NUT BOTH ENDS

CABLE ASSEMBLY
[FCA01]



SIDE VIEW

NOSE DETAILS



ANCHOR PLATE ASSEMBLY DETAILS

GENERAL NOTES

1. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
2. DESIGNATIONS PROVIDED IN BRACKETS [ ] RELATE TO STANDARD ELEMENTS IN *A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE*, 1995, AASHTO-AGC-ARTBA JOINT COOPERATIVE COMMITTEE.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

BEAM GUARDRAIL
TERMINAL UNIT TYPE ELT
HARDWARE DETAILS

STANDARD NO. GR-3B

STANDARD NO. GR-3C

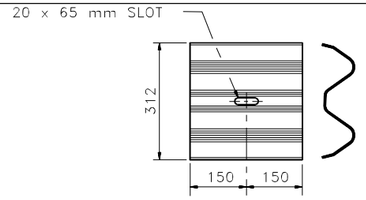
REVISION DATE
7-13-01

*.DGN FILE NAME: GR-3C

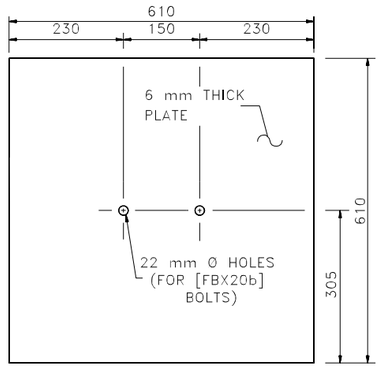
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

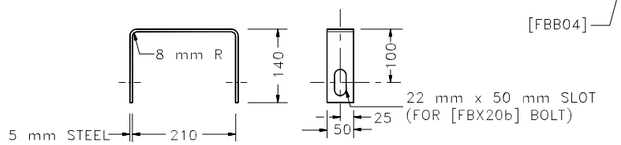
STANDARD NO. GR-3C



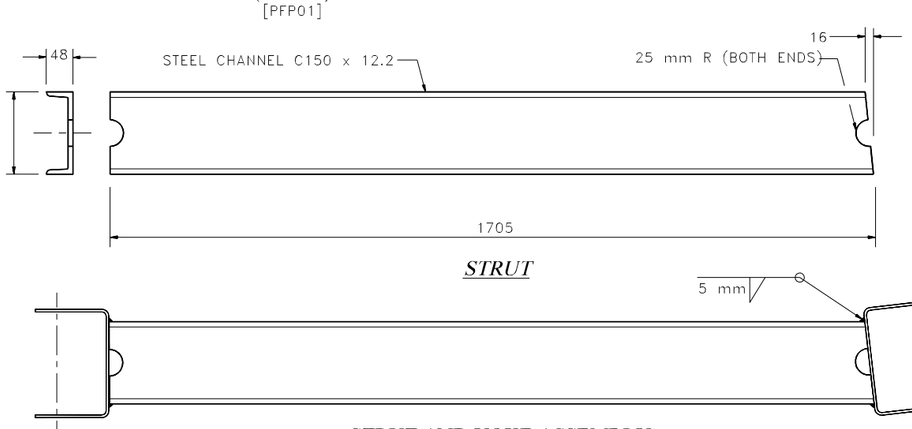
W-BEAM BACK-UP PLATE
(3 REQ'D)
[RWB01a]



SOIL PLATE
(2 REQ'D–POSTS A)

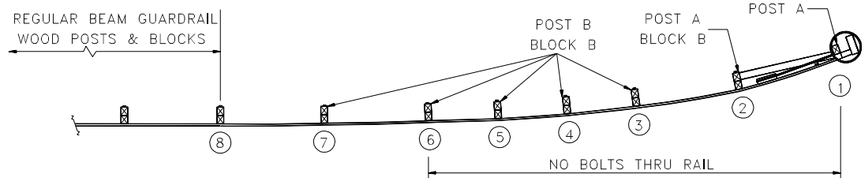


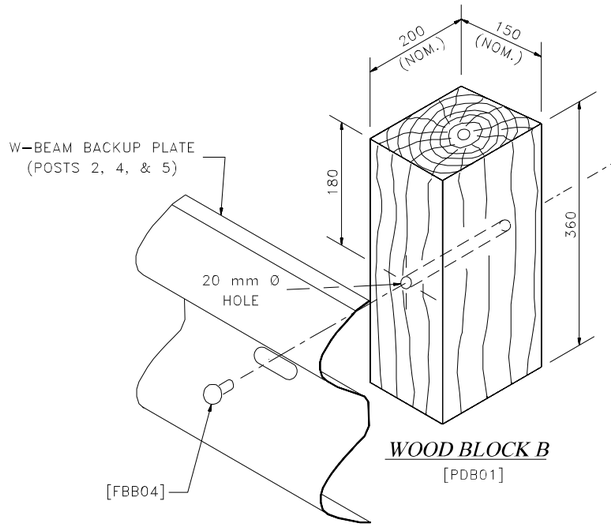
YOKE
(2 REQ'D)
[PFP01]



STRUT

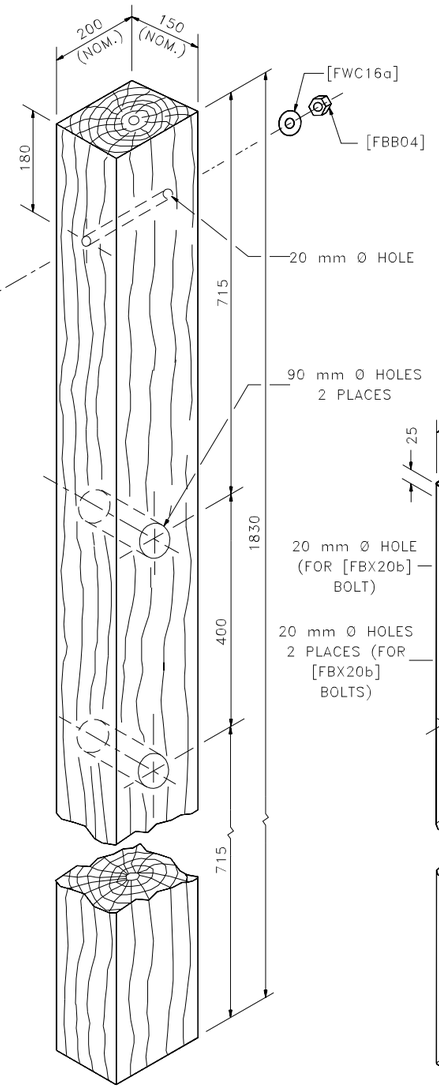
STRUT AND YOKE ASSEMBLY
SHOWN LEGS UP. FOR OPPOSITE HAND, INSTALL LEGS DOWN.
[PFP01]



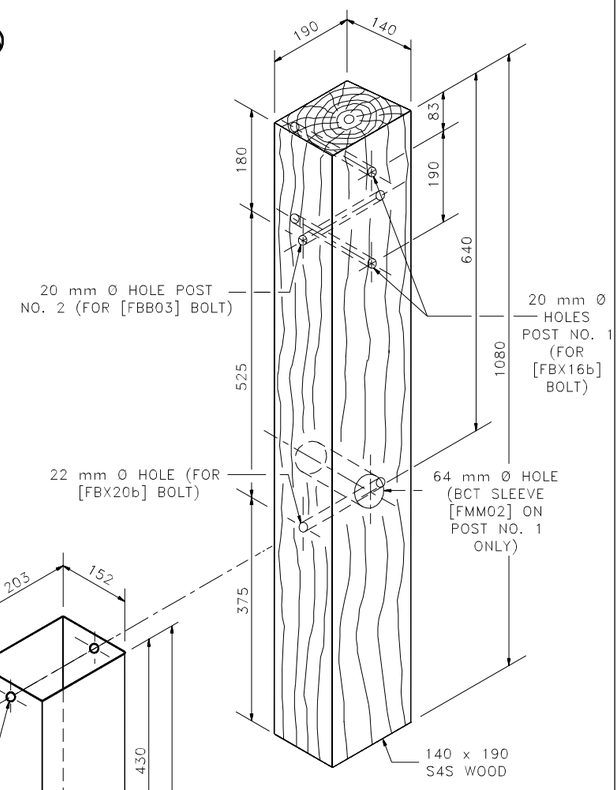


WOOD BLOCK B
[PDB01]

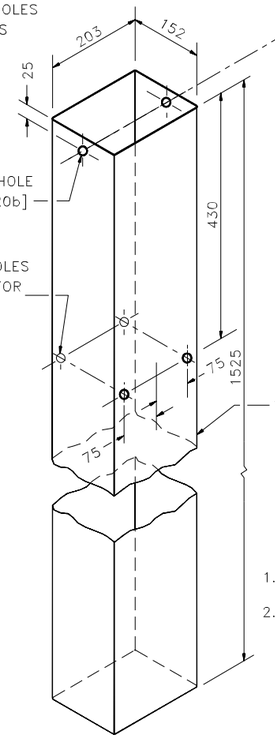
POST BOLT ASSEMBLY, POSTS 2-7



CRT TIMBER
BREAKAWAY WOOD POST B
[PDE09] MODIFIED (5 REQ'D)



BCT TIMBER
BREAKAWAY WOOD POST A
NOTE: CORNERS OF POSTS MUST BE ROUNDED TO FIT FILLET IN STEEL TUBES – (2 REQUIRED) [PDF01]



FOUNDATION TUBE
(2 REQ'D – POSTS A)
[PTE05]

GENERAL NOTES

1. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
2. DESIGNATIONS PROVIDED IN BRACKETS [ ] RELATE TO STANDARD ELEMENTS IN *A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE*, 1995, AASHTO–AGC–ARTBA JOINT COOPERATIVE COMMITTEE.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

BEAM GUARDRAIL
TERMINAL UNIT TYPE ELT
HARDWARE DETAILS

STANDARD NO. GR-3C
METRIC STANDARD PLANS
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STANDARD NO. GR-3C

STANDARD NO. GR-4A

REVISION DATE
7-13-01

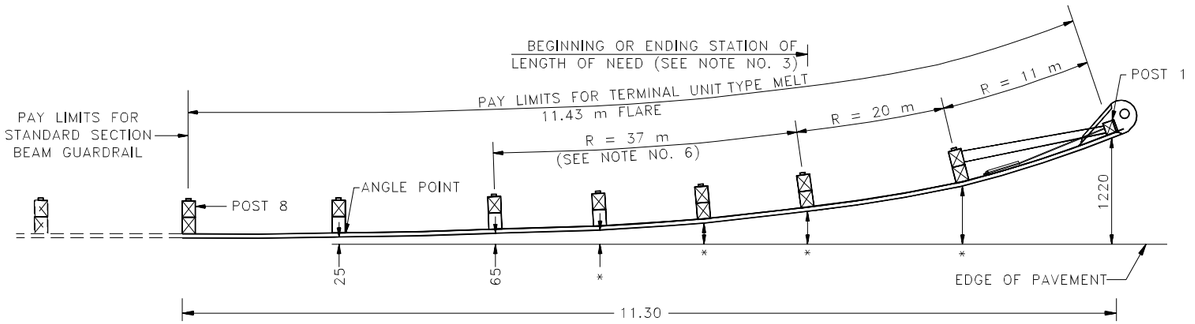
*.DGN FILE NAME
GR-4A

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

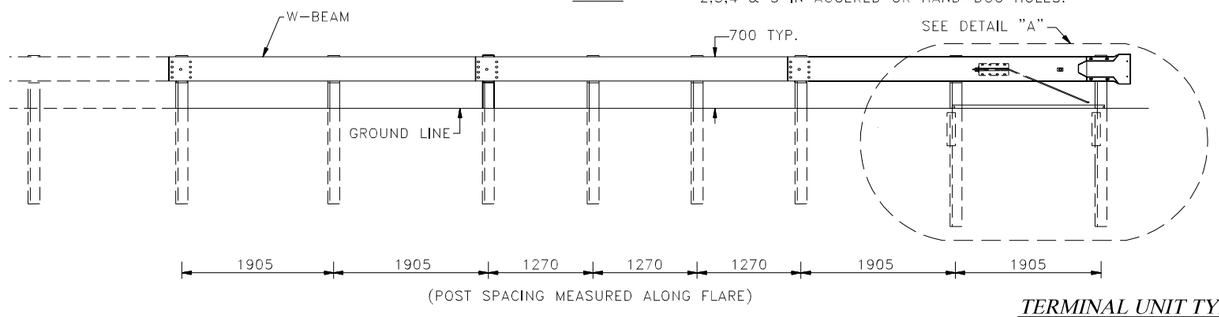
STANDARD NO. GR-4A

MODIFIED ECCENTRIC LOADER TERMINAL - MELT



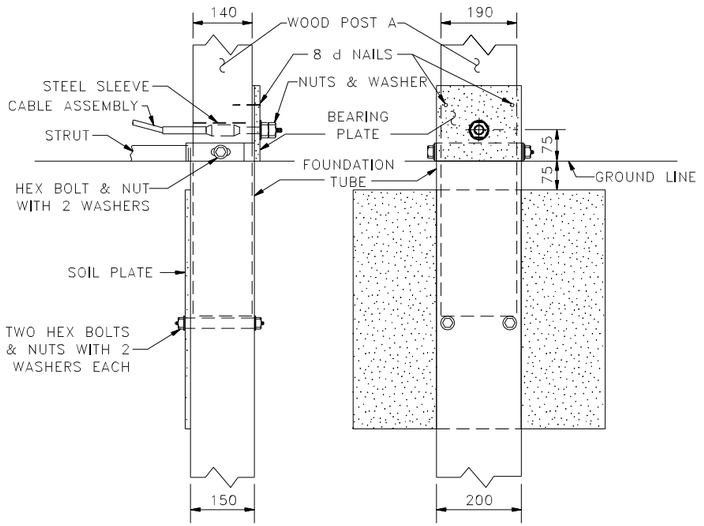
PLAN

* USE SHOP-BENT RAIL AS MANUFACTURED TO FIELD FIT POSTS 2,3,4 & 5 IN AUGERED OR HAND-DUG HOLES.



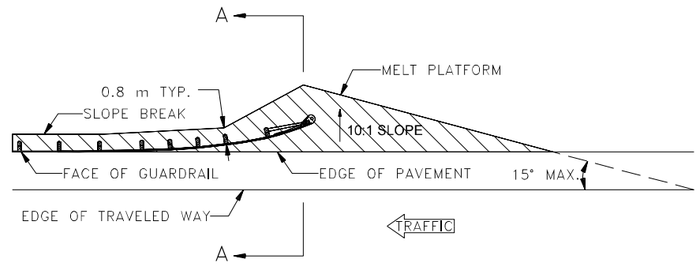
ELEVATION

LAYOUT DETAILS

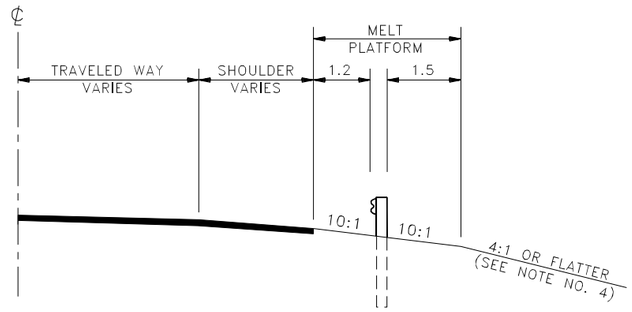


SIDE VIEW END VIEW

DETAIL "B"



PLAN



SECTION A-A

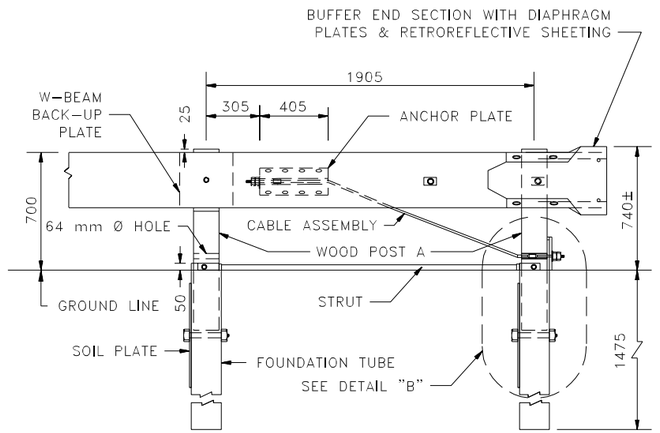
GRADING DETAILS

TERMINAL UNIT TYPE MELT

ITEM NO. 606.1451 – BEAM GUARDRAIL (TERMINAL UNIT TYPE MELT)

PAID: UNIT

USE: AT BEGINNING OR END OF STANDARD SECTION GUARDRAIL



DETAIL "A"

BREAKAWAY NOSE SECTION

GENERAL NOTES

1. *TERMINAL UNIT TYPE MELT IS APPROVED FOR USE ONLY ON NON-NHS (NATIONAL HIGHWAY SYSTEM) ROADWAYS WITH A POSTED SPEED LIMIT OF 40 MPH OR LESS. THIS TERMINAL WILL BE USED ONLY IN SPECIAL SITUATIONS DUE TO SITE CONDITIONS WHERE IT MAY BE MORE APPROPRIATE, AND IT'S USE WILL REQUIRE APPROVAL FROM THE DIRECTOR OR ASSISTANT DIRECTOR OF PROJECT DEVELOPMENT.*
2. THE CORRECT ASSEMBLY AND INSTALLATION OF THIS TERMINAL UNIT, INCLUDING THE LAYOUT OF THE 11.43 m FLARE, IS IMPORTANT TO ITS PROPER PERFORMANCE.
3. THE LENGTH OF NEED IS THE TOTAL LENGTH OF A LONGITUDINAL BARRIER NEEDED TO SHIELD AN AREA OF CONCERN. TO DETERMINE THE LENGTH OF NEED, REFER TO THE *ROADSIDE DESIGN GUIDE* – AASHTO, 1996.
4. THE AREA OUTSIDE AND DOWNSTREAM OF THE FIRST 3810 mm (BREAKAWAY NOSE SECTION) OF THE MELT SHOULD BE REASONABLY TRAVERSABLE AND FREE OF FIXED-OBJECT HAZARDS TO THE EXTENT PRACTICAL. IF A CLEAR RUNOUT IS NOT ATTAINABLE, THIS AREA SHOULD AT LEAST BE SIMILAR IN CHARACTER TO UPSTREAM, UNSHIELDED ROADSIDE AREAS.
5. SEE STANDARDS NO. GR-4B & GR-4C FOR MELT HARDWARE DETAILS. SEE STANDARD NO. GR-1 FOR ADDITIONAL DETAILS OF COMMON HARDWARE.
6. THE TWO 1905 mm W-BEAM RAIL ELEMENTS FOR POST 1 TO 6 SHALL BE SHOP-BENT TO THE RADII SPECIFIED. THE 1905 mm ELEMENT FOR POSTS 6 TO 8 SHALL BE SHOP BENT TO PRODUCE THE ANGLE POINT SPECIFIED AT POST 7.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

BEAM GUARDRAIL TERMINAL UNIT TYPE MELT

STANDARD NO. GR-4A

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. GR-4A

STANDARD NO. GR-4B

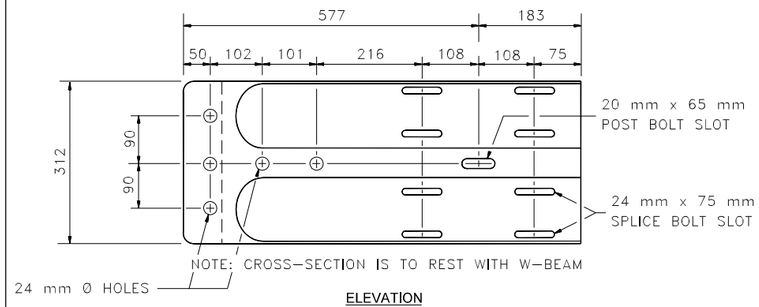
REVISION DATE
7-13-01

*.DGN FILE NAME
GR-4B

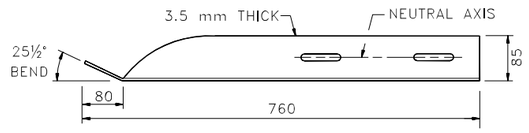
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. GR-4B



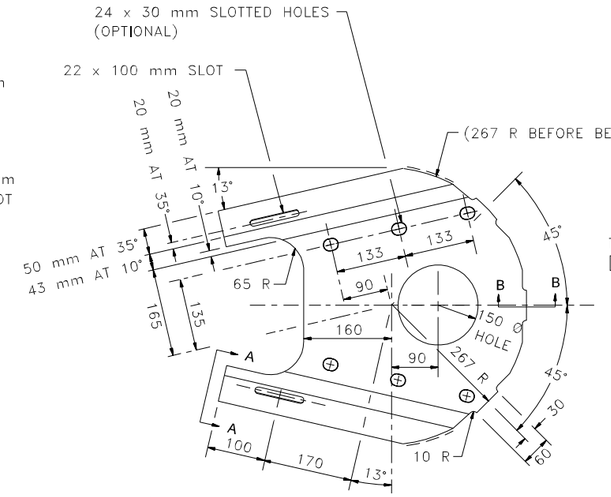
ELEVATION



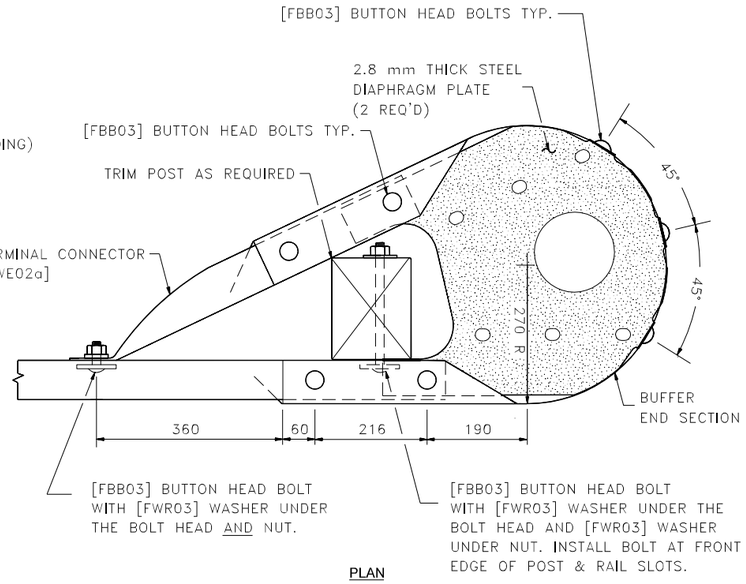
PLAN

W BEAM TERMINAL CONNECTOR

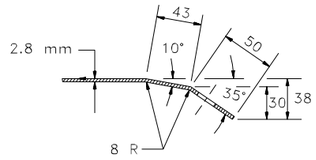
[RWE02a]



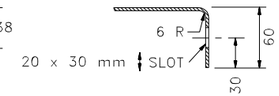
PLAN



PLAN



VIEW A-A



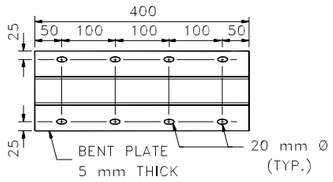
SECTION B-B

DIAPHRAGM PLATE

[REE01] (2 REQ'D)

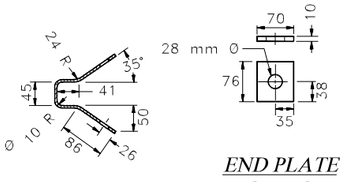
M24 HEX NUT & WASHER

[FNX24a] AND [FWC24a]



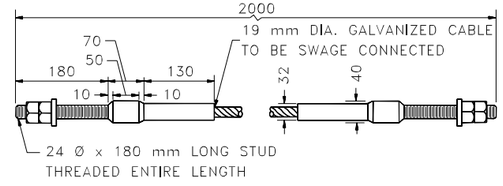
ANCHOR PLATE (BENT)

[FPA01]



END PLATE

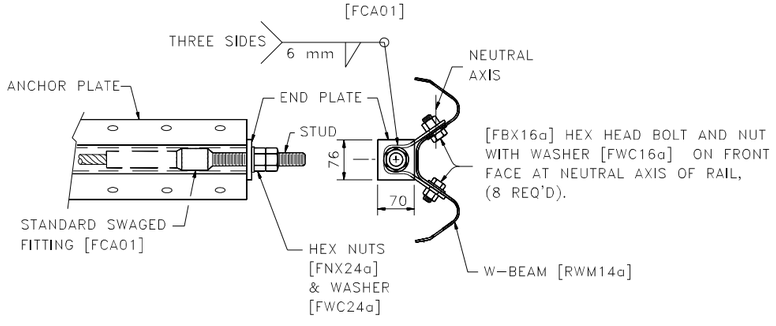
[FPA01]



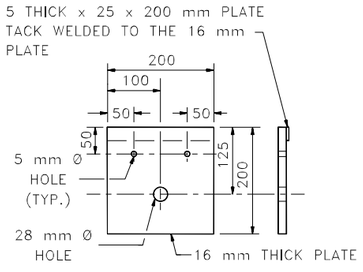
NOTE: TIGHTEN CABLE ASSEMBLY TO TAUT TENSION & DOUBLE-NUT BOTH ENDS

CABLE ASSEMBLY

[FCA01]



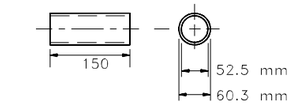
ANCHOR PLATE ASSEMBLY DETAILS



NOTE: ATTACH PLATE TO POST WITH TWO 8d GALVANIZED NAILS

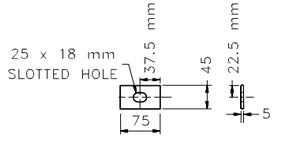
BEARING PLATE

[FPB01]



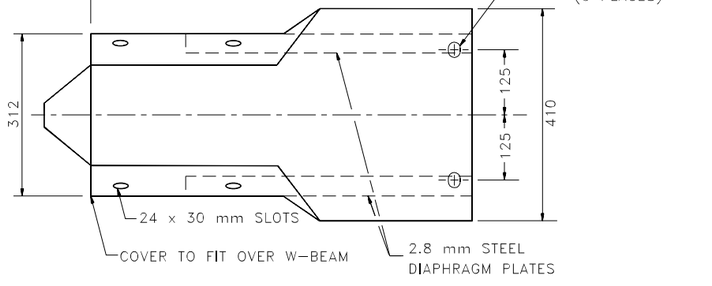
POST SLEEVE

[FMM02]



RECTANGULAR PLATE WASHER

[FWR03] (3 REQ'D)



ELEVATION

BUFFER END SECTION WITH DIAPHRAGM PLATES

[RWE04a] MODIFIED

GENERAL NOTES

1. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
2. DESIGNATIONS PROVIDED IN BRACKETS [ ] RELATE TO STANDARD ELEMENTS IN *A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE*, 1995, AASHTO-AGC-ARTBA JOINT COOPERATIVE COMMITTEE.

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GUARDRAIL STANDARD

BEAM GUARDRAIL TERMINAL UNIT TYPE MELT HARDWARE DETAILS

STANDARD NO. GR-4B

STANDARD NO. GR-4C

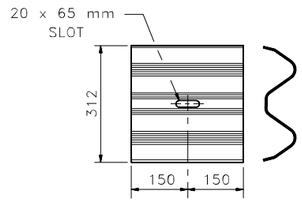
REVISION DATE
7-13-01

*.DGN FILE NAME
GR-4C

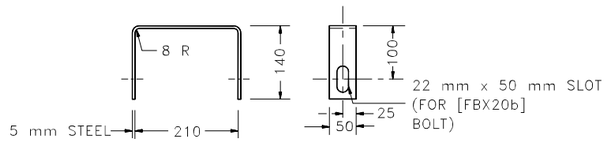
METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

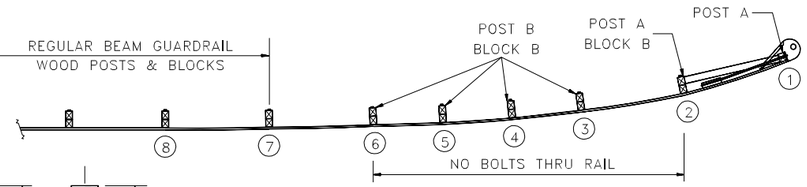
STANDARD NO. GR-4C

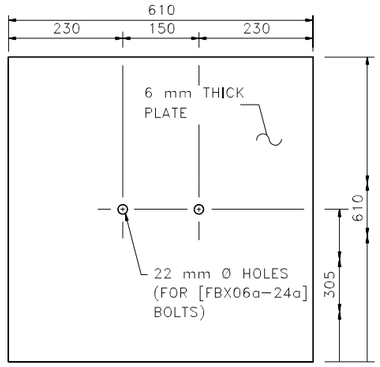


W-BEAM BACK-UP PLATE
(3 REQ'D)
[RWB01a]

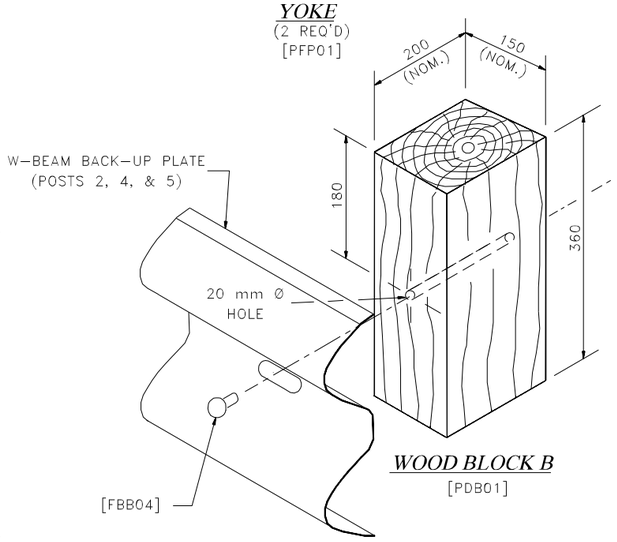


YOKE
(2 REQ'D)
[PFP01]



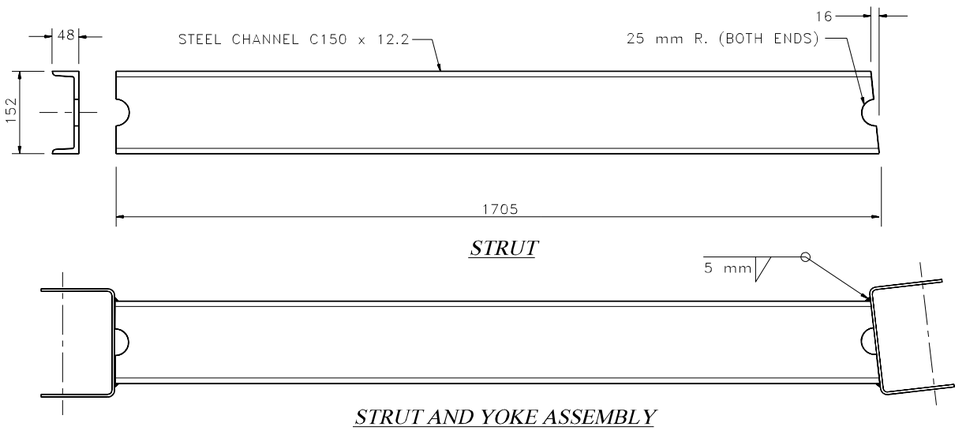


SOIL PLATE
(2 REQ'D–POSTS A)



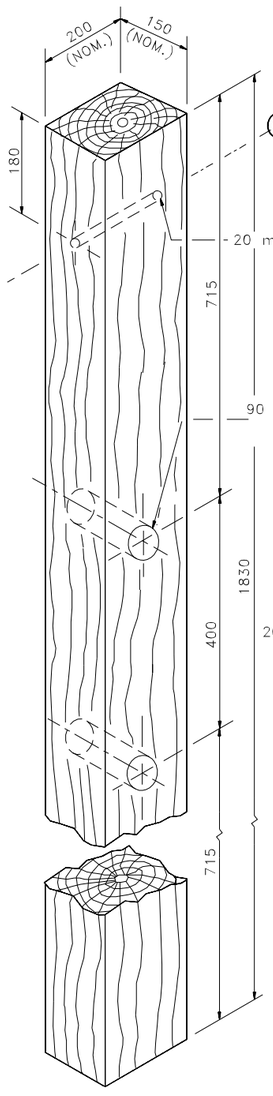
WOOD BLOCK B
[PDB01]

POST BOLT ASSEMBLY, POSTS 2-6

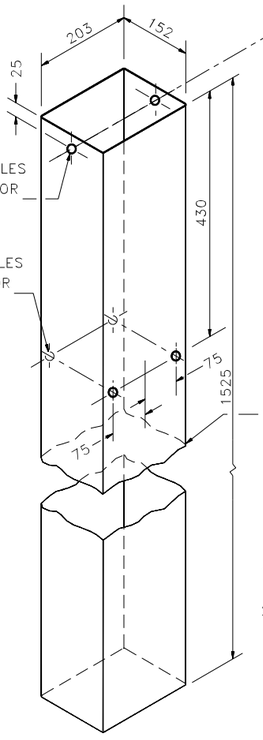


STRUT

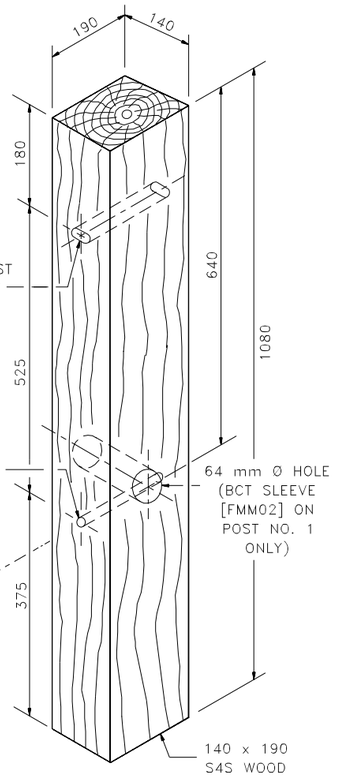
STRUT AND YOKE ASSEMBLY
SHOWN LEGS UP. FOR OPPOSITE HAND, INSTALL LEGS DOWN.
[PFP01]



CRT TIMBER
BREAKAWAY WOOD POST B
[PDE09] MODIFIED (4 REQ'D)



FOUNDATION TUBE
(2 REQ'D – POSTS A)
[PTE05]



BCT TIMBER
BREAKAWAY WOOD POST A
NOTE: CORNERS OF POSTS MUST BE ROUNDED TO FIT FILLET IN STEEL TUBES – (2 REQUIRED) [PDF01]

GENERAL NOTES

1. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
2. DESIGNATIONS PROVIDED IN BRACKETS [ ] RELATE TO STANDARD ELEMENTS IN *A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE*, 1995, AASHTO–AGC–ARTBA JOINT COOPERATIVE COMMITTEE.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

BEAM GUARDRAIL
TERMINAL UNIT TYPE MELT
HARDWARE DETAILS

STANDARD NO. GR-4C
REVISION DATE
7-13-01
*.DGN FILE NAME
GR-4C
METRIC
STANDARD PLANS
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STANDARD NO. GR-4C

STANDARD NO. GR-5

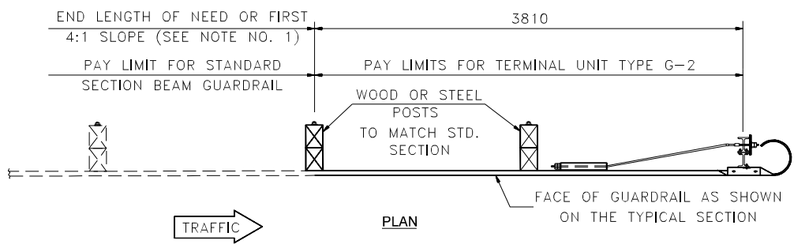
REVISION DATE
7-13-01

*.DGN FILE NAME
GR-5

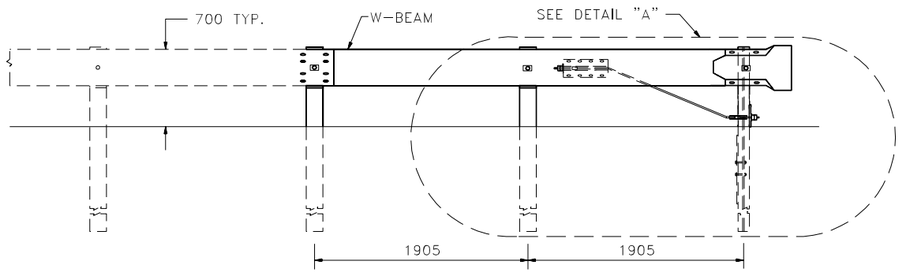
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

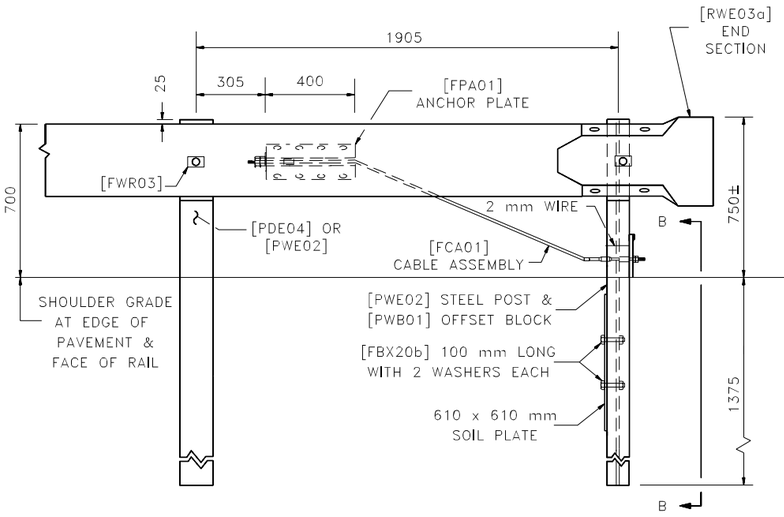
STANDARD NO. GR-5



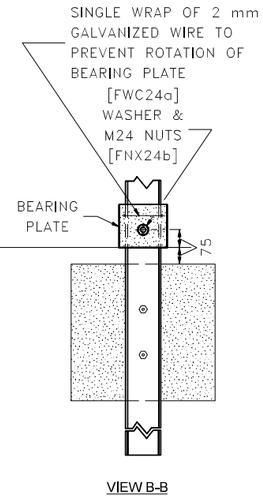
PLAN



ELEVATION



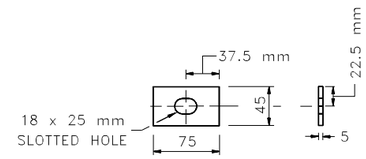
DETAIL "A"



VIEW B-B

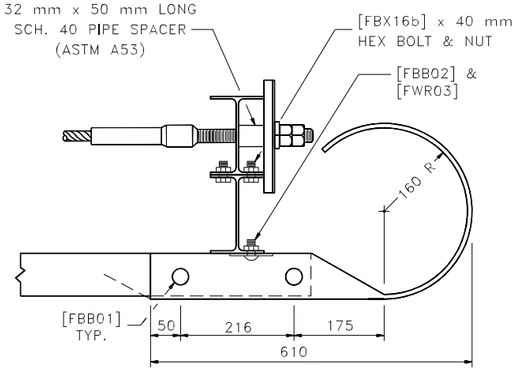
TERMINAL UNIT TYPE G-2

ITEM NO: 606.147– BEAM GUARDRAIL (TERMINAL UNIT TYPE G–2)
PAID: UNIT
USE: ON DIVIDED HIGHWAYS ONLY WITH DIRECTION OF TRAFFIC AS INDICATED

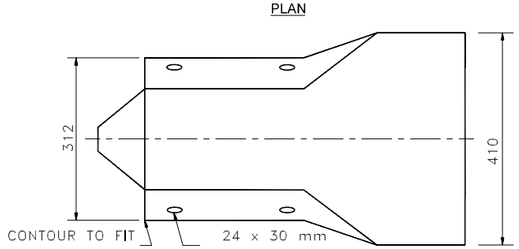


RECTANGULAR PLATE WASHER

[FWR03] (3 REQ'D)



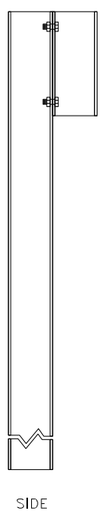
PLAN



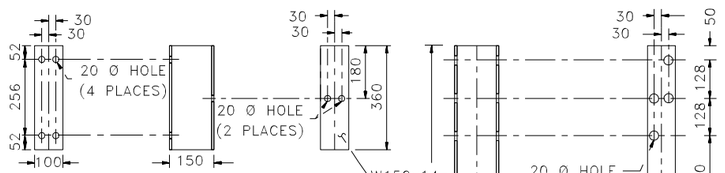
ELEVATION

END SECTION

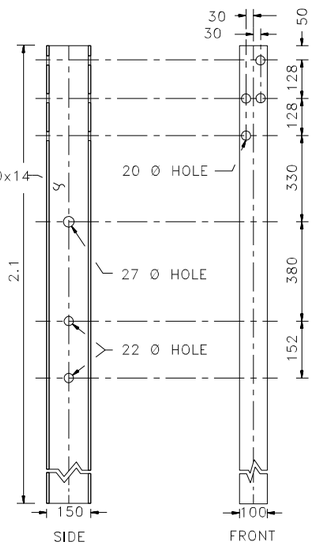
[RWE03a]



SIDE



STEEL OFFSET BLOCK
[PWB01]



STEEL POST

STRUCTURAL SHAPE STEEL POST & BLOCK

[PWE02] MODIFIED

GENERAL NOTES

1. THE LENGTH OF NEED IS THE TOTAL LENGTH OF A LONGITUDINAL BARRIER NEEDED TO SHIELD AN AREA OF CONCERN. TO DETERMINE THE LENGTH OF NEED, REFER TO *THE ROADSIDE DESIGN GUIDE* – AASHTO, 1996 THE G–2 UNIT SHALL TERMINATE IN A 4:1 OR FLATTER SLOPE.
2. DESIGNATIONS PROVIDED IN BRACKETS [ ] REFERENCE STANDARD ELEMENTS DETAILED IN *A GUIDE TO STANDARDIZED HIGHWAY BARRIER RAIL HARDWARE*, 1995, AASHTO–AGC–ARTBA JOINT COOPERATIVE COMMITTEE.
3. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
4. STANDARDS NO. GR–1 (OR GR–2), GR–3B & GR–3C SHALL BE USED IN CONJUNCTION WITH THIS STANDARD. SEE THESE STANDARDS FOR ADDITIONAL DETAILS OF COMMON HARDWARE.
5. TIGHTEN CABLE ASSEMBLY TO TAUT TENSION AND DOUBLE–NUT BOTH ENDS.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

BEAM GUARDRAIL TERMINAL UNIT TYPE G-2

STANDARD NO. GR-5

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. GR-5

STANDARD NO. GR-6

REVISION DATE
7-13-01

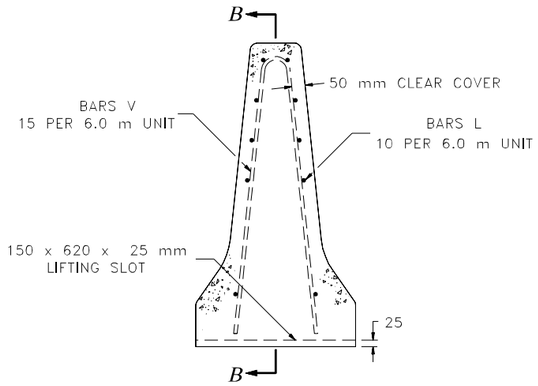
*.DGN FILE NAME
GR-6

METRIC
STANDARD PLANS

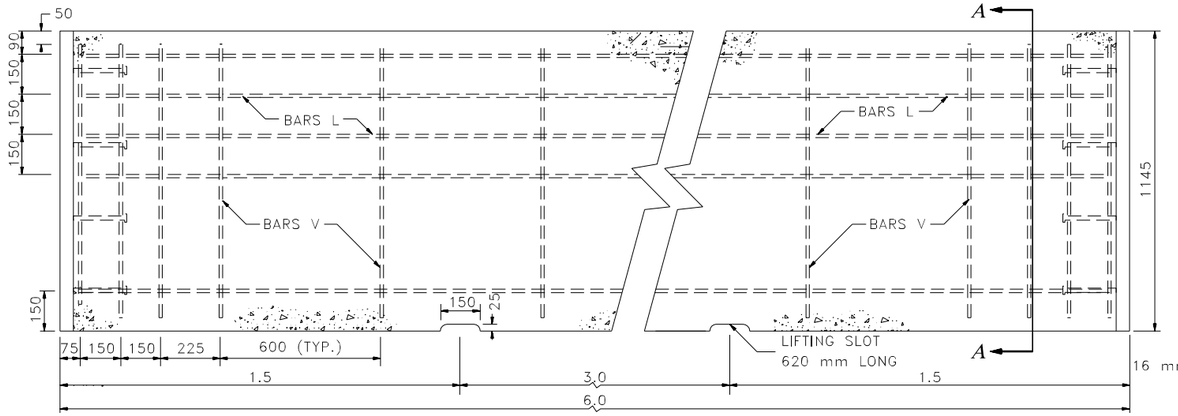
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STATE OF NEW HAMPSHIRE

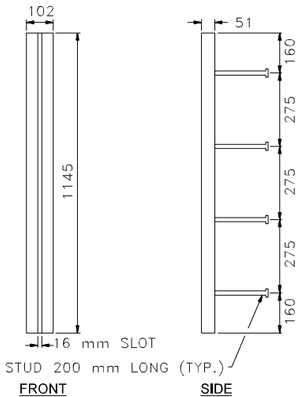
STANDARD NO. GR-6



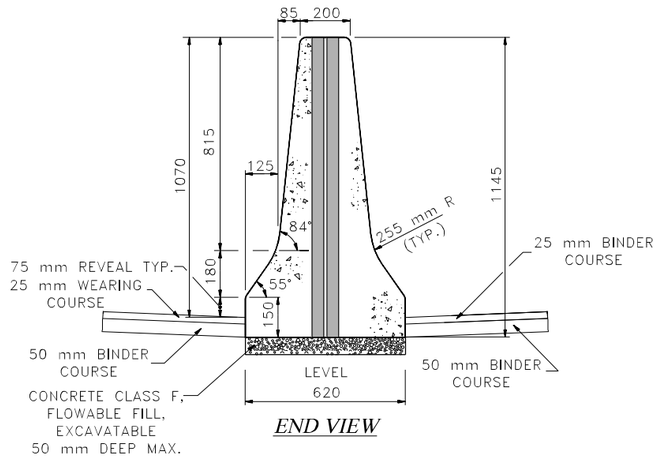
STANDARD BARRIER SECTION A-A



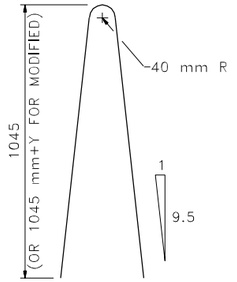
STANDARD BARRIER SECTION B-B



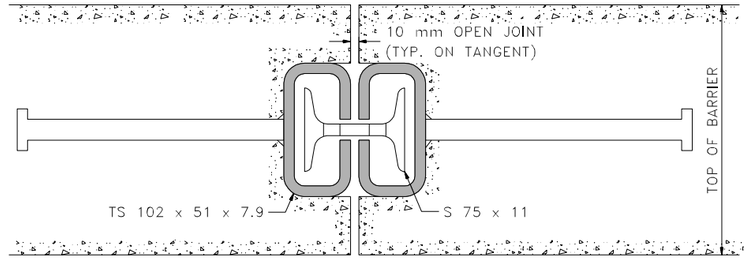
STRUCTURAL TUBE
TS 102 x 51 x 7.9



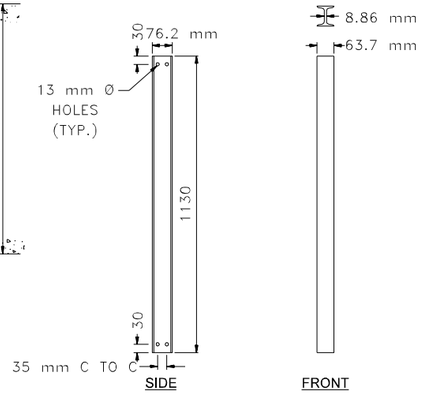
END VIEW



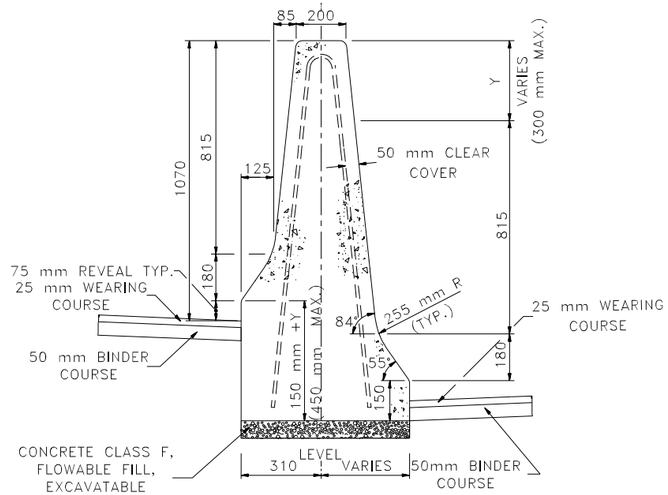
BAR V DETAIL (#13)



VERTICAL I-BEAM CONNECTION DETAIL

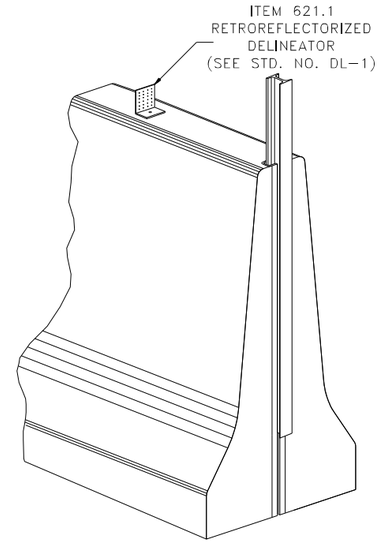


I-BEAM
S 75 x 11

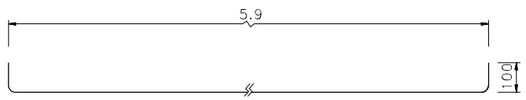


MODIFIED BARRIER SECTION

NOTE: Y=ELEVATION DIFFERENTIAL BETWEEN BARRELS AT FACE OF BARRIER



PERSPECTIVE VIEW



BAR L DETAIL (#13)

GENERAL NOTES

1. THE DIMENSIONS FOR THIS SHAPE CORRESPOND TO THE DESIGNATION SGM10a–b IN *A GUIDE TO STANDARDIZED HIGHWAY BARRIER RAIL HARDWARE*, 1995, AASHTO–AGC–ARTBA JOINT COOPERATIVE COMMITTEE.
2. STANDARD BARRIER IS ITEM NO. 606.412; MODIFIED BARRIER IS ITEM NO. 606.4129.
3. ALL EXPOSED EDGES OF CONCRETE SHALL BE ROUNDED AT A 25 mm RADIUS EXCEPT AS SHOWN.
4. I–BEAMS AND STRUCTURAL TUBES SHALL BE GALVANIZED AFTER FABRICATION.
5. STUD WELDING SHALL BE IN ACCORDANCE WITH ITEM 547.
6. SLOT IN STRUCTURAL TUBE SHALL BE CUT WITH MECHANICALLY GUIDED MEANS TO A SMOOTH, UNIFORM SURFACE MEETING A SURFACE ROUGHNESS OF 25 um OR BETTER (ANSI B46.1).

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

PRECAST CONCRETE BARRIER 1070 mm F-SHAPE (DOUBLE-FACED)

STANDARD NO. GR-6

STANDARD NO. GR-6

REVISION DATE
7-13-01

*.DGN FILE NAME
GR-6

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. GR-6

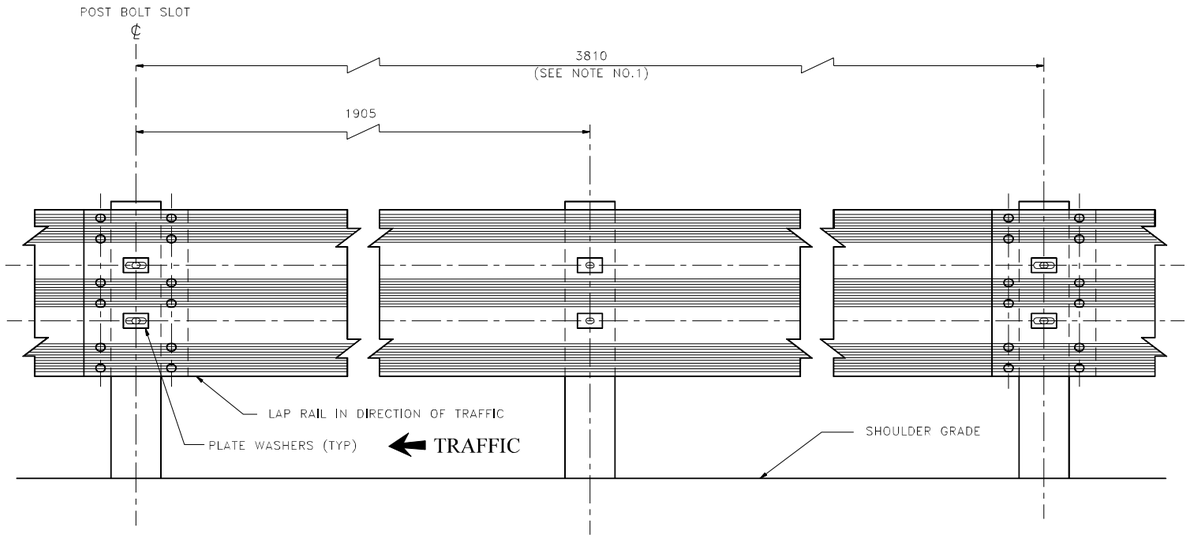
STANDARD NO. GR-7

REVISION DATE
7-13-01

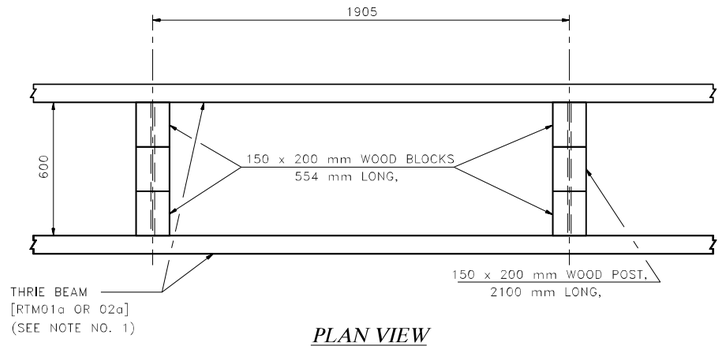
*.DGN FILE NAME: GR-7

METRIC STANDARD PLANS

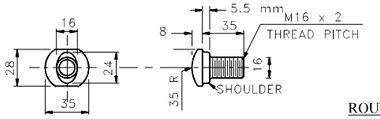
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.



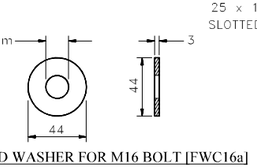
ELEVATION VIEW



PLAN VIEW



SPLICE BOLT [FBB01]
(12 REQ'D PER SPLICE)



ROUND WASHER FOR M16 BOLT [FWC16a]

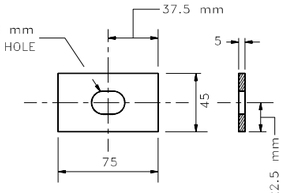
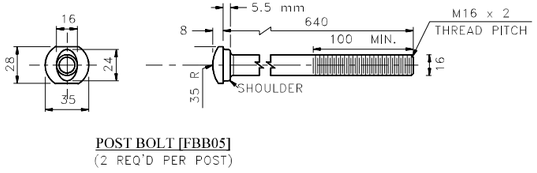
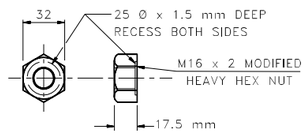


PLATE WASHER [FWR03]

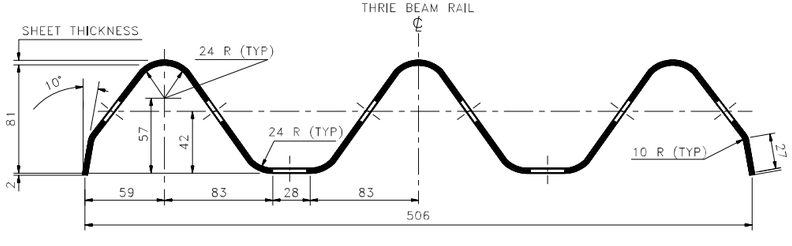


POST BOLT [FBB05]
(2 REQ'D PER POST)

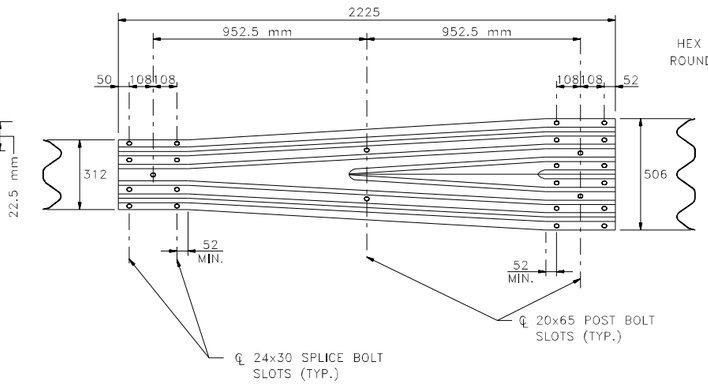
NOTE: LONGER ERECTION BOLTS MAY BE REQUIRED



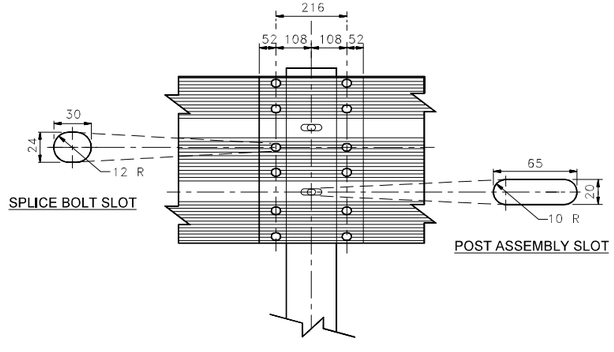
NUT FOR SPLICE & POST BOLTS
[FBB01 & 05]



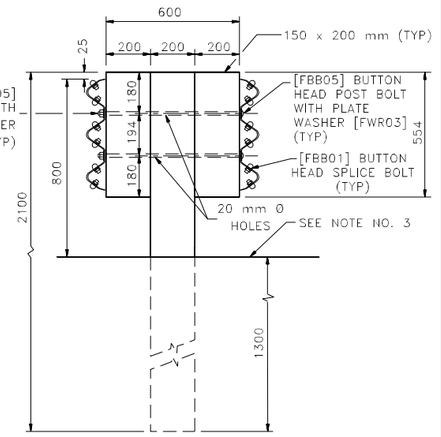
THRIE BEAM RAIL SECTION
[RTM01a & RTM02a]



W-THRIE BEAM TRANSITION SECTION
[RWT01a]



BEAM SPLICE



SIDE VIEW AT SPLICE POST

GENERAL NOTES

1. 7.6 m RAIL PANELS MAY BE USED IN PLACE OF 3.8 m PANELS, EXCEPT ON CURVES WITH A RAIL RADIUS OF LESS THAN 100 m.
2. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
3. GUARDRAIL HEIGHT SHALL BE SET FROM THE GRADE AT THE FACE OF RAIL.
4. DESIGNATIONS PROVIDED IN BRACKETS [ ] RELATE TO STANDARD ELEMENTS DETAILED IN *A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE*, 1995, AASHTO–AGC–ARTBA JOINT COOPERATIVE COMMITTEE.
5. SEE STD. NO. DL–1 FOR BEAM GUARDRAIL DELINEATORS.
6. ITEM NO.: 606.21403 – DOUBLE–FACED BEAM GUARDRAIL (THRIE BEAM) INCLUDING TRANSITION SECTIONS.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

BEAM GUARDRAIL
THRIE BEAM DOUBLE-FACED

STANDARD NO. GR-7

REVISION DATE
7-13-01

*.DGN FILE NAME: GR-7

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. GR-7

STANDARD NO. GR-8

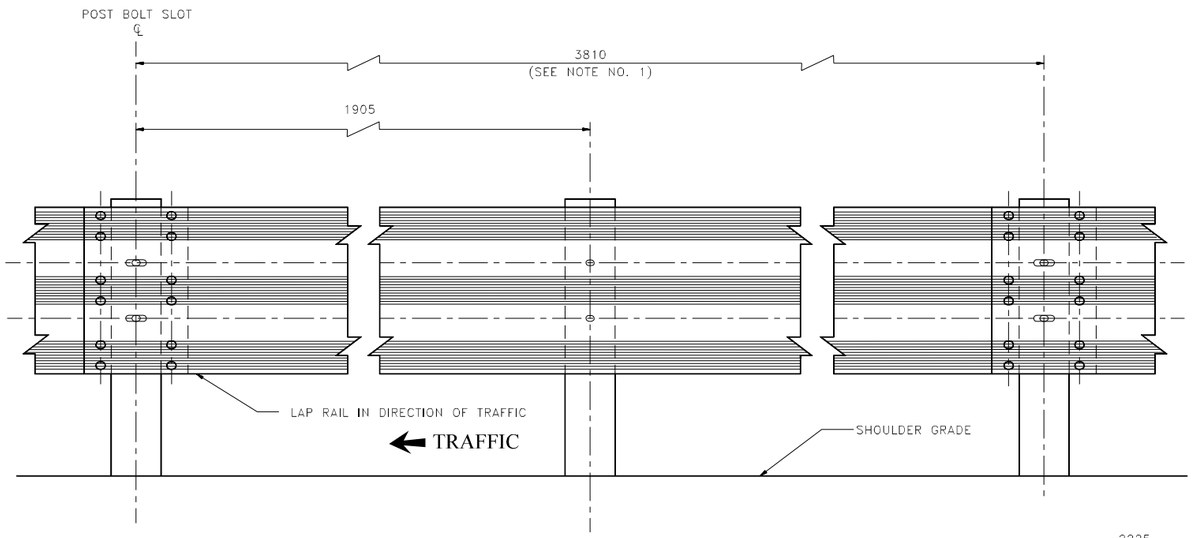
REVISION DATE
7-13-01

*.DGN FILE NAME: GR-8

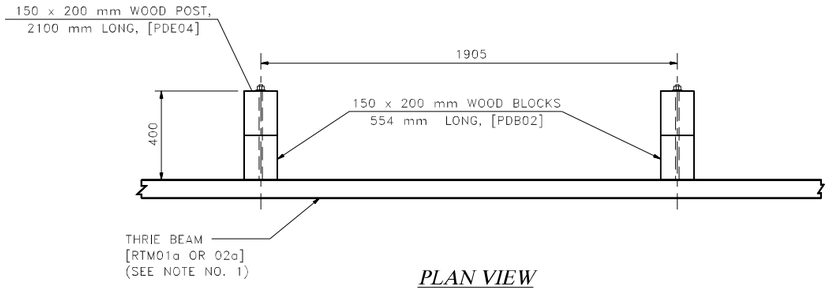
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

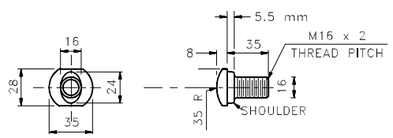
STANDARD NO. GR-8



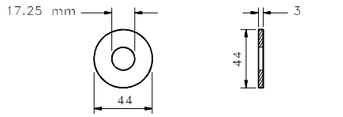
ELEVATION VIEW



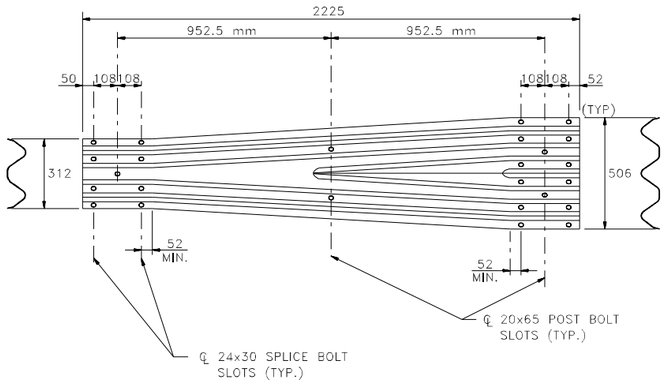
PLAN VIEW



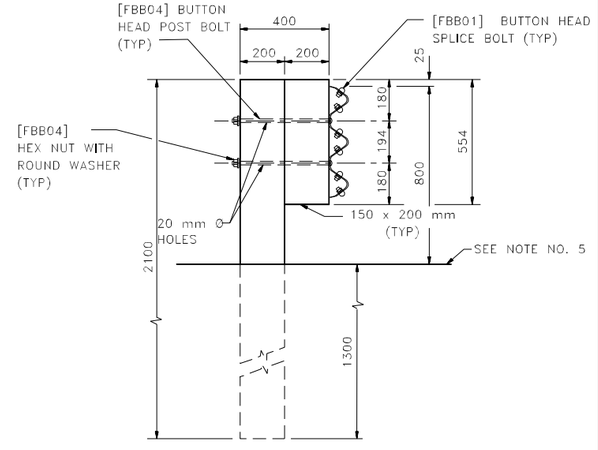
SPLICE BOLT [FBB01]
(12 REQ'D PER SPLICE)



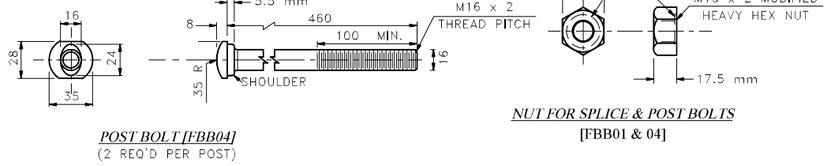
ROUND WASHER FOR M16 BOLT [FCW16a]



W-THRIE BEAM TRANSITION SECTION
[RWT01a]



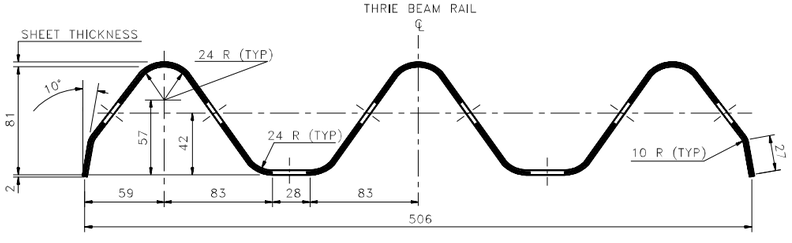
SIDE VIEW AT SPLICE POST



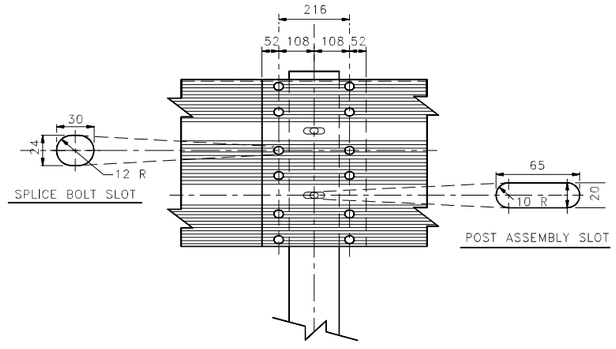
POST BOLT [FBB04]
(2 REQ'D PER POST)

NUT FOR SPLICE & POST BOLTS
[FBB01 & 04]

NOTE: LONGER ERECTION BOLTS MAY BE REQUIRED



THRIE BEAM RAIL SECTION
[RTM01a & RTM02a]



BEAM SPLICE

GENERAL NOTES

1. 7.6 m RAIL PANELS MAY BE USED IN PLACE OF 3.8 m PANELS, EXCEPT ON CURVES WITH A RAIL RADIUS OF LESS THAN 100 m.
2. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
3. GUARDRAIL HEIGHT SHALL BE SET FROM THE GRADE AT THE FACE OF RAIL.
4. DESIGNATIONS PROVIDED IN BRACKETS [ ] RELATE TO STANDARD ELEMENTS DETAILED IN "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE", 1995, AASHTO–AGC–ARTBA JOINT COOPERATIVE COMMITTEE.
5. SEE STD. NO. DL–1 FOR BEAM GUARDRAIL DELINEATORS.
6. ITEM NO: 606.1403–BEAM GUARDRAIL (THRIE BEAM) INCLUDING TRANSITION SECTIONS.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

GUARDRAIL STANDARD

BEAM GUARDRAIL THRIE BEAM SINGLE-FACED

STANDARD NO. GR-8

STANDARD NO. HR-1

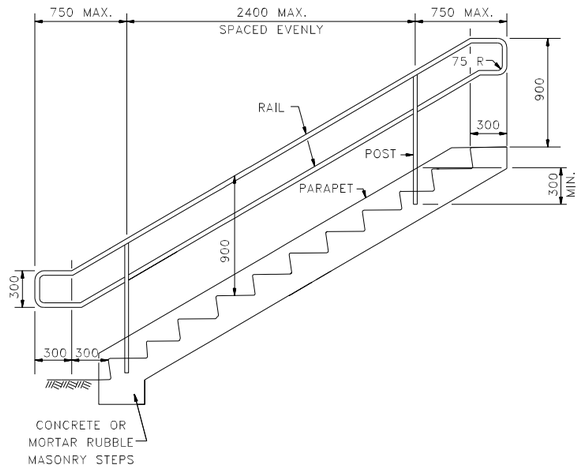
REVISION DATE
7-13-01

*.DGN FILE NAME: HR-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

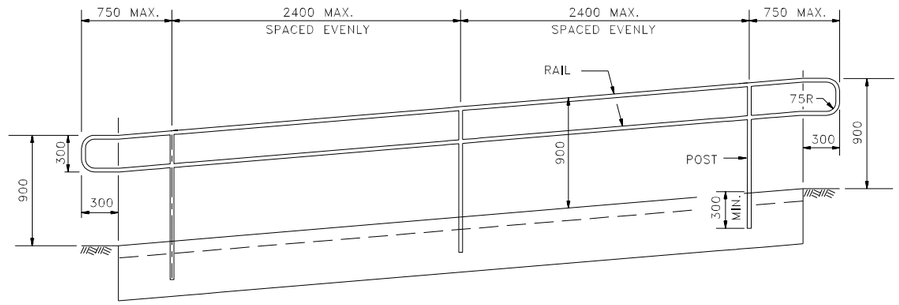
STANDARD NO. HR-1



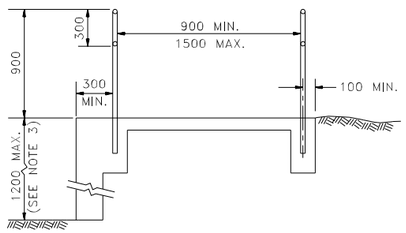
GENERAL NOTES

1. RAIL SHALL BE 32 mm TO 40 mm O.D.
2. POSTS SHALL BE 32 mm NOMINAL.
3. POSTS SHALL BE CENTERED IN PARAPET OF STEPS.
4. HANDRAILS SHALL BE INSTALLED ON BOTH SIDES OF STEPS.
5. THE MINIMUM SPACING BETWEEN HANDRAILS IS 900 mm, MAXIMUM 1500 mm.
6. ITEM NO: 606.610X – STEP HANDRAIL, (MATERIAL).

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *STEP HANDRAIL*	REV. DATE	PLATE 1 / STANDARD HR-1



ELEVATION

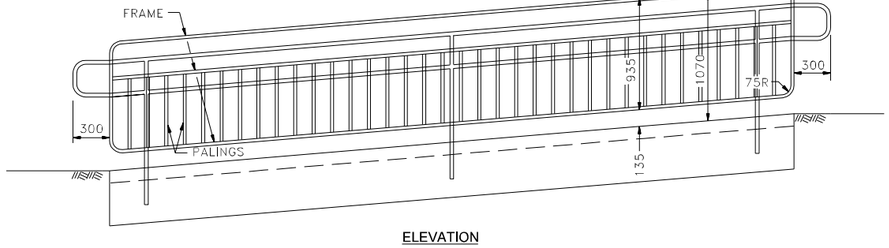


CROSS-SECTION

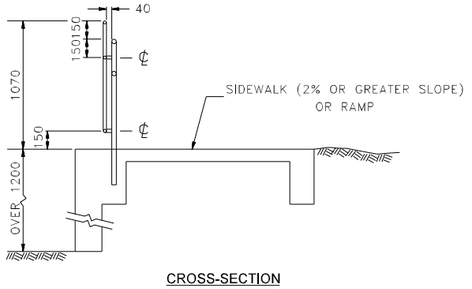
GENERAL NOTES

1. RAIL SHALL BE 32 mm TO 40 mm O.D.
2. POSTS SHALL BE 32 mm NOMINAL.
3. WHEN THIS DIMENSION EXCEEDS 1200 mm, A GUARD IS REQUIRED (SEE PLATE 3).
4. ITEM NO: 606.620X – RAMP HANDRAIL, (MATERIAL).

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *RAMP HANDRAIL*	REV. DATE	PLATE 2 / STANDARD HR-1



ELEVATION

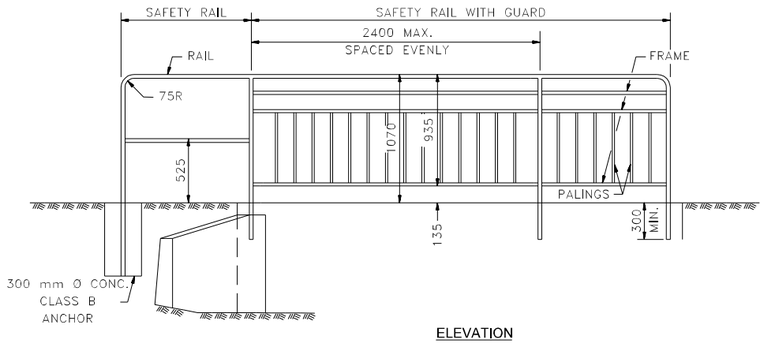


CROSS-SECTION

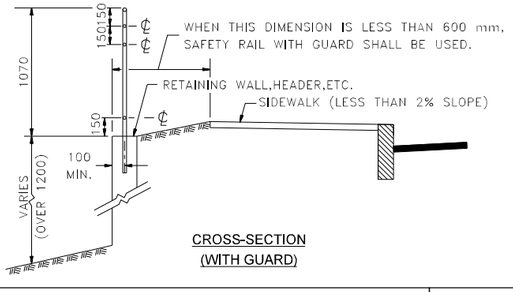
GENERAL NOTES

1. FOR DETAILS OF HANDRAIL, SEE PLATE 2.
2. FRAME AND CONNECTORS TO HANDRAIL SHALL BE 25 mm NOMINAL.
3. PALINGS SHALL BE 19 mm NOMINAL SPACED 150 mm ON CENTER.
4. ITEM NO: 606.611X – STEP HANDRAIL W/ GUARD, (MATERIAL); 606.621X – RAMP HANDRAIL W/ GUARD, (MATERIAL).

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *GUARD FOR HANDRAIL*	REV. DATE	PLATE 3 / STANDARD HR-1



ELEVATION



CROSS-SECTION
(WITH GUARD)

GENERAL NOTES

1. RAIL, POSTS, AND HORIZONTAL MEMBER OF SAFETY RAIL WITHOUT GUARD SHALL BE 32 mm NOMINAL.
2. FRAME SHALL BE 25 mm NOMINAL.
3. PALINGS SHALL BE 19 mm NOMINAL SPACED 150 mm ON CENTER.
4. ITEM NO: 606.630X – SAFETY RAIL, (MATERIAL); 606.631X – SAFETY RAIL W/ GUARD, (MATERIAL).

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS: *SAFETY RAIL & SAFETY RAIL WITH GUARD*	REV. DATE	PLATE 4 / STANDARD HR-1

STANDARD NO. HR-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. HR-1

STANDARD NO. HR-2

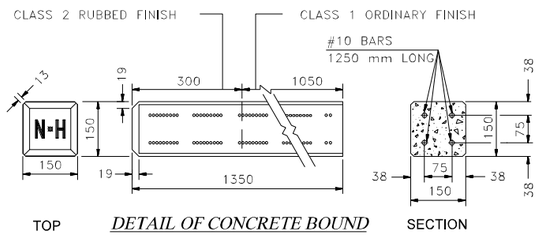
REVISION DATE
7-13-01

*.DGN FILE NAME: HR-2

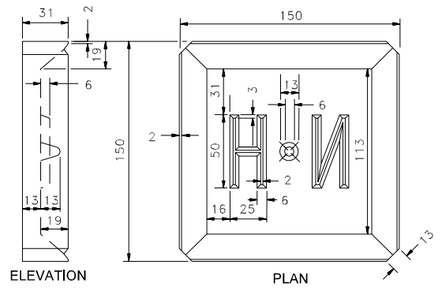
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. HR-2



DETAIL OF CONCRETE BOUND



DETAIL OF METAL FORM

GENERAL NOTES

1. CONCRETE SHALL BE CLASS A.
2. BOUNDS TO BE SET IN GRAVEL, 225 mm ON ALL SIDES OF AND UNDER BOUND.
3. WHEN BOUNDING NON-STATE RIGHT-OF-WAY FOR CITIES AND TOWNS, USE ITEM 622.4-STONE BOUNDS.
4. ITEM NO: 622.2-CONCRETE BOUNDS.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS

CONCRETE BOUND

REV. DATE

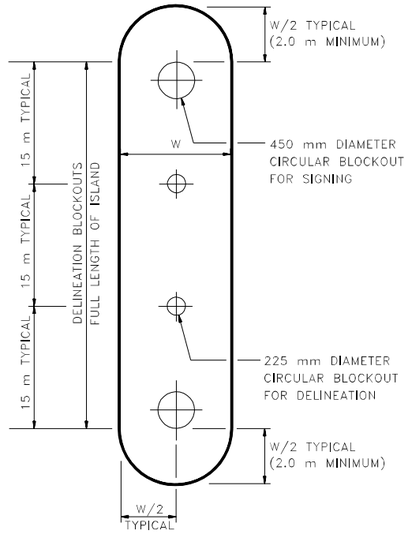
PLATE 1

STANDARD HR-2

TYPICAL TREATMENT OF RAISED ISLAND TO PROVIDE BLOCKOUTS FOR SIGNING AND DELINEATION

GENERAL NOTES

1. ISLANDS LESS THAN 5.0 m LONG REQUIRE ONLY ONE 450 mm CIRCULAR BLOCKOUT LOCATED AT THE MIDPOINT.
2. ADDITIONAL SIGNING BLOCKOUTS SHALL BE PROVIDED OPPOSITE ALL DRIVEWAYS AND SIDE ROAD APPROACHES.
3. BLOCKOUTS SHALL BE BACKFILLED WITH 50 mm OF COLD PATCH. BLOCKOUTS AND COLD PATCH ARE SUBSIDIARY TO THE RAISED ISLAND CONSTRUCTION.
4. IT MAY BE NECESSARY TO ADJUST THE LOCATION OF BLOCKOUTS TO AVOID UTILITY STRUCTURES OR PEDESTRIAN CROSSWALK OPENINGS.



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

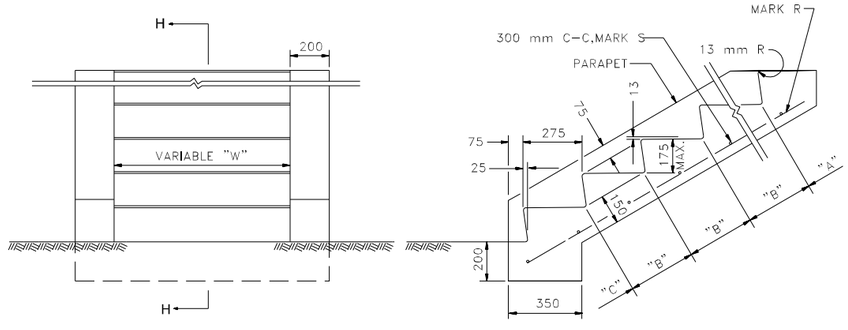
NHDOT STANDARD PLANS

RAISED ISLAND BLOCKOUTS

REV. DATE

PLATE 2

STANDARD HR-2



REINFORCING STEEL			
MARK	SIZE	NUMBER	LENGTH (EACH)
R	#16	1 EA. PARAPET 1 EA. M. OF WIDTH "W"	200 mm FOR "A" +325 mm EACH "B" +400 mm FOR "C"
S	#13	1 FOR "A" 1 FOR "B" 2 FOR "C"	150 mm EA. PARAPET + WIDTH "W"

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

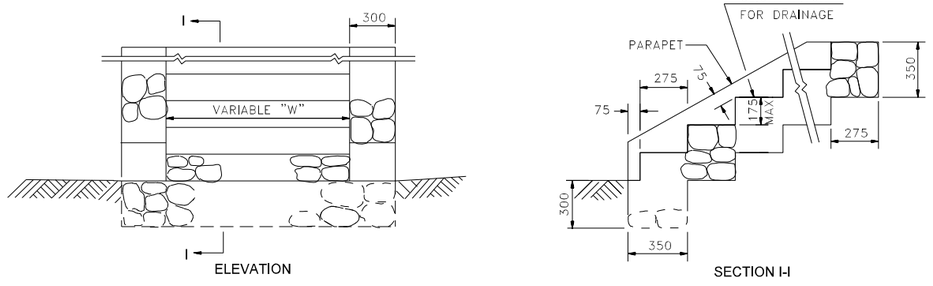
NHDOT STANDARD PLANS

CONCRETE STEPS

REV. DATE

PLATE 3

STANDARD HR-2



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS

MORTAR RUBBLE MASONRY STEPS

REV. DATE

PLATE 4

STANDARD HR-2

STANDARD NO. HR-2

STANDARD NO. HW-1

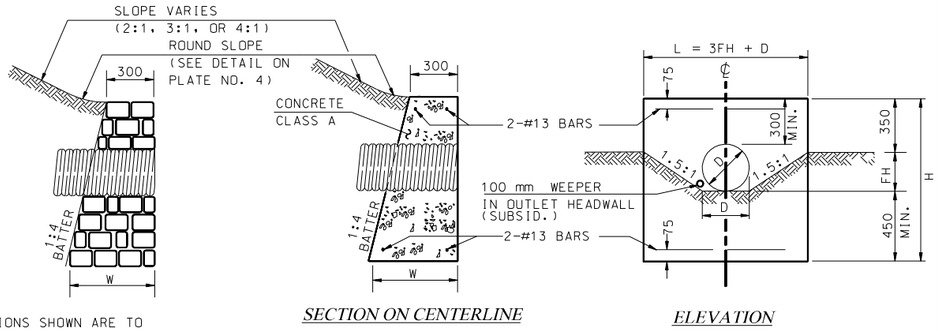
REVISION DATE
7-13-01

*.DGN FILE NAME: HW-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. HW-1



SECTION ON CENTERLINE *ELEVATION*

DIMENSIONS SHOWN ARE TO PAYMENT LINES. MORTAR RUBBLE MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.

NOTE: STEEL QUANTITIES ARE FOR CONCRETE HEADWALLS ONLY.

DIAMETER D (mm)	MASONRY PER 100 mm OF WALL m3	MASONRY PER STANDARD HEADER m3	STEEL PER STANDARD HEADER kg	LENGTH OF BARS mm	HEADER EXC. PER HEADER 100 mm DEPTH m3	HEADER LENGTH L mm	HEADER HEIGHT H mm	FILL HEIGHT FH mm	WIDTH AT BOTTOM OF HEADER W mm	"L" HEADWALL MASONRY IN CORNER FRUSTRUM m3	"L" HEADWALL HEADER EXC. PER HEADER 100 mm DEPTH m3
300	0.047	0.47	4	950	0.198	1050	1050	250	565	0.21	0.265
375	0.051	0.65	5	1150	0.238	1350	1125	325	580	0.24	0.309
450	0.056	0.86	6	1550	0.279	1650	1200	400	600	0.27	0.353
600	0.065	1.36	9	2150	0.364	2250	1350	550	640	0.32	0.446
750	0.076	1.97	11	2750	0.454	2850	1500	700	675	0.39	0.543
900	0.086	2.70	14	3350	0.549	3450	1650	850	715	0.47	0.645
1050	0.098	3.56	16	3950	0.647	4050	1800	1000	750	0.55	0.753
1200	0.109	4.55	19	4550	0.753	4650	1950	1150	790	0.64	0.865
1350	0.122	5.69	21	5150	0.861	5250	2100	1300	825	0.75	0.982
1500	0.135	6.98	24	5750	0.974	5850	2250	1450	865	0.86	1.104
1650	0.149	8.44	26	6350	1.091	6450	2400	1600	900	0.98	1.231
1800	0.163	10.07	29	6950	1.214	7050	2550	1750	940	1.12	1.363

NOTE: FOR PLAN OF "L" HEADWALL SEE PLATE NO. 1 OF STD. NO. HW-2

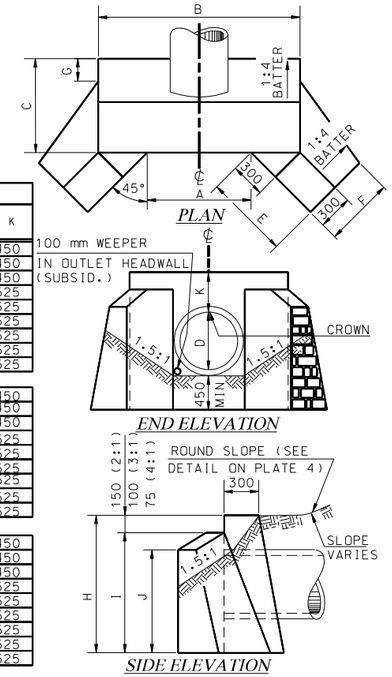
ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS
HEADWALLS FOR PIPES OTHER THAN R.C.:
CONCRETE P.C.-1
MORTAR RUBBLE MASONRY P.C.-2

REV. DATE

PLATE 1
STANDARD HW-1

DIMENSIONS SHOWN ARE TO PAYMENT LINES. MORTAR RUBBLE MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.



2:1 SLOPE

DIAMETER D(mm)	QUANTITIES PER HEADER M.R.M. m3	QUANTITIES PER HEADER EXC. FOR 100 mm DEPTH m3	A	B	C	E	F	G	H	I	J	K
600	1.87	0.47	750	1600	675	875	575	150	1500	1350	1150	450
750	2.44	0.57	925	1775	725	1050	600	125	1650	1500	1225	450
900	3.08	0.64	1100	1950	750	1225	625	100	1800	1650	1300	450
1050	4.21	0.78	1275	2125	800	1500	650	75	2025	1875	1450	525
1200	5.11	0.89	1450	2300	850	1700	675	50	2175	2025	1525	525
1350	6.06	0.99	1625	2475	875	1875	700	25	2325	2175	1600	525
1500	7.18	1.10	1800	2650	925	2050	725	25	2475	2325	1700	525
1650	8.33	1.21	1975	2825	950	2225	750	0	2625	2475	1775	525
1800	9.68	1.31	2150	3000	1000	2425	775	-25	2775	2625	1875	525

3:1 SLOPE

600	2.15	0.52	750	1600	675	1050	600	150	1500	1400	1225	450
750	2.85	0.63	925	1775	725	1275	625	150	1650	1550	1325	450
900	3.59	0.73	1100	1950	750	1475	650	100	1800	1700	1425	450
1050	4.95	0.87	1275	2125	800	1800	700	75	2025	1925	1575	525
1200	6.00	0.99	1450	2300	850	2000	725	75	2175	2075	1675	525
1350	7.16	1.10	1625	2475	875	2225	750	50	2325	2225	1775	525
1500	8.49	1.22	1800	2650	925	2425	775	25	2475	2375	1875	525
1650	9.90	1.34	1975	2825	950	2650	800	0	2625	2525	1975	525
1800	11.49	1.47	2150	3000	1000	2850	825	0	2775	2675	2075	525

4:1 SLOPE

600	2.33	0.55	750	1600	675	1150	625	150	1500	1425	1275	450
750	3.07	0.66	925	1775	725	1375	650	150	1650	1575	1375	450
900	3.90	0.76	1100	1950	750	1600	675	100	1800	1725	1500	450
1050	5.38	0.92	1275	2125	800	1950	725	75	2025	1950	1650	525
1200	6.58	1.04	1450	2300	850	2175	750	75	2175	2100	1775	525
1350	7.86	1.16	1625	2475	875	2425	775	50	2325	2250	1875	525
1500	9.31	1.29	1800	2650	925	2650	800	25	2475	2400	1975	525
1650	10.89	1.42	1975	2825	950	2875	825	25	2625	2550	2100	525
1800	12.65	1.56	2150	3000	1000	3125	850	0	2775	2700	2200	525

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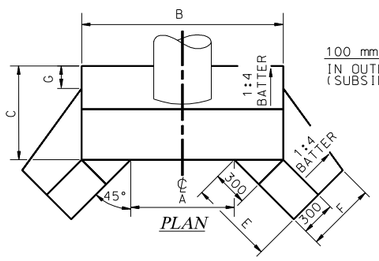
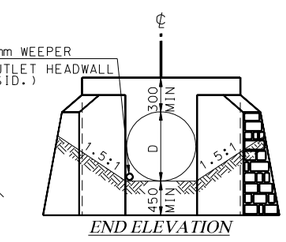
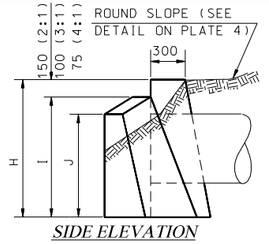
NHDOT STANDARD PLANS
MORTAR RUBBLE MASONRY
HEADWALLS WITH 45° WINGS
FOR R.C. PIPE P.C.-8

REV. DATE

PLATE 2
STANDARD HW-1







2:1 SLOPE

DIAMETER D (mm)	QUANTITIES PER HEADER M.R.M. m3	QUANTITIES PER HEADER EXC. FOR 100 mm DEPTH m3	A	B	C	E	F	G	H	I	J
600	1.45	0.41	675	1525	650	700	575	175	1350	1200	1050
750	1.94	0.49	825	1675	675	875	575	150	1500	1350	1150
900	2.53	0.57	975	1825	725	1075	600	150	1650	1500	1225
1050	3.19	0.66	1125	1975	750	1250	625	125	1800	1650	1325
1200	4.08	0.75	1300	2150	800	1425	650	100	1950	1800	1400
1500	5.83	0.94	1600	2450	875	1800	700	50	2250	2100	1575
1800	8.10	1.15	1925	2775	950	2150	725	25	2550	2400	1750

3:1 SLOPE

600	1.67	0.45	675	1525	650	850	575	175	1350	1250	1125
750	2.25	0.55	825	1675	675	1075	600	150	1500	1400	1225
900	2.91	0.64	975	1825	725	1275	625	150	1650	1550	1325
1050	3.72	0.74	1125	1975	750	1500	650	100	1800	1700	1425
1200	4.62	0.84	1300	2150	800	1700	675	100	1950	1850	1525
1500	6.80	1.06	1600	2450	875	2125	725	75	2250	2150	1725
1800	9.53	1.29	1925	2775	950	2550	775	25	2550	2450	1925

4:1 SLOPE

600	1.80	0.48	675	1525	650	950	600	175	1350	1275	1150
750	2.43	0.57	825	1675	675	1175	625	150	1500	1425	1275
900	3.20	0.67	975	1825	725	1400	650	150	1650	1575	1375
1050	4.04	0.77	1125	1975	750	1650	675	100	1800	1725	1500
1200	5.08	0.89	1300	2150	800	1875	700	100	1950	1875	1600
1500	7.48	1.12	1600	2450	875	2325	750	75	2250	2175	1825
1800	11.32	1.47	1925	2775	950	2800	800	25	2550	2475	2025

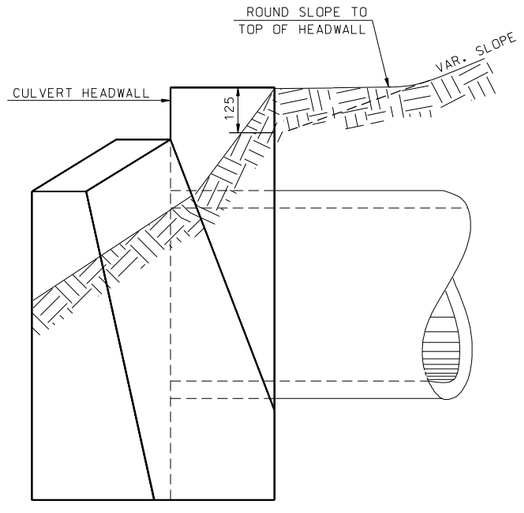
DIMENSIONS SHOWN ARE TO PAYMENT LINES. MORTAR RUBBLE MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS
MORTAR RUBBLE MASONRY
HEADWALLS WITH 45° WINGS
FOR PIPES OTHER THAN R.C. P.C.-6

REV. DATE

PLATE 3
STANDARD HW-1



SIDE ELEVATION

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS
SLOPE ROUNDING
AT TOP OF CULVERT HEADWALL

REV. DATE

PLATE 4
STANDARD HW-1

STANDARD NO. HW-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. HW-1

STANDARD NO. HW-2

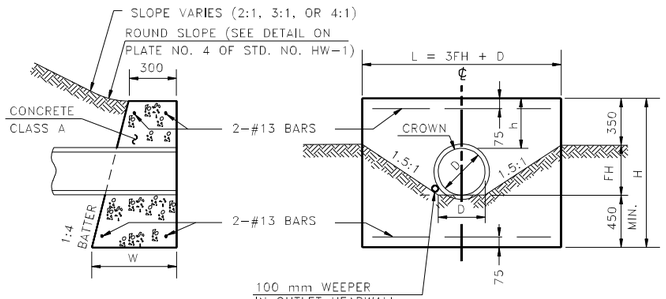
REVISION DATE
7-13-01

*.DGN FILE NAME: HW-2

METRIC STANDARD PLANS

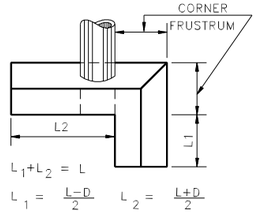
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. HW-2



SECTION ON CENTERLINE

ELEVATION



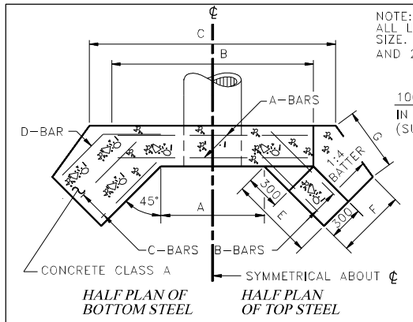
PLAN OF L HEADWALL

SECTIONS ON CENTERLINE FOR PC-4 SIMILAR TO PC-2.

DIAMETER D (mm)	MASONRY PER 100 mm OF WALL m3	MASONRY PER STANDARD HEADER m3	STEEL PER STANDARD HEADER kg	LENGTH OF BARS mm	HEADER EXC. PER HEADER 100 mm DEPTH m3	HEADER LENGTH L mm	HEADER HEIGHT H mm	FILL HEIGHT FH mm	"h" mm	WIDTH AT BOTTOM OF HEADER W mm	"L" HEADWALL MASONRY IN CORNER FRUSTRUM m3	"L" HEADWALL HEADER EXC. PER HEADER 100 mm DEPTH m3
300	0.051	0.61	5	1150	0.229	1275	1125	325	375	580	0.24	0.300
375	0.060	1.01	7	1700	0.302	1800	1275	475	450	620	0.29	0.398
450	0.065	1.27	7	1700	0.345	2100	1350	550	450	640	0.32	0.426
600	0.076	1.84	11	2600	0.434	2700	1500	700	450	675	0.39	0.523
750	0.086	2.54	13	3200	0.528	3300	1650	850	450	715	0.47	0.625
900	0.098	3.39	16	3800	0.627	3900	1800	1000	450	750	0.55	0.732
1050	0.116	4.80	19	4550	0.773	4725	2025	1225	525	805	0.72	0.890
1200	0.128	5.94	21	5150	0.883	5325	2175	1375	525	845	0.80	1.008
1350	0.142	7.23	24	5750	0.998	5925	2325	1525	525	880	0.92	1.134
1500	0.156	8.73	26	6350	1.117	6525	2475	1675	525	920	1.05	1.260
1650	0.173	10.46	29	6950	1.241	7125	2625	1825	525	955	1.19	1.395
1800	0.186	12.07	31	7550	1.370	7725	2775	1975	525	995	1.34	1.532

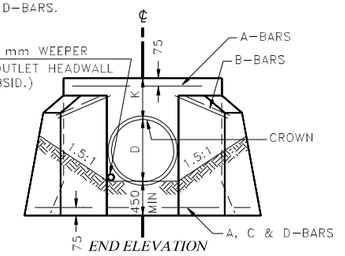
NOTE: STEEL QUANTITIES ARE FOR CONCRETE HEADWALLS ONLY

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *HEADWALLS FOR R.C. PIPE:* *CONCRETE* *P.C.-3* *MORTAR RUBBLE MASONRY* *P.C.-4*	REV. DATE	PLATE 1 STANDARD HW-2

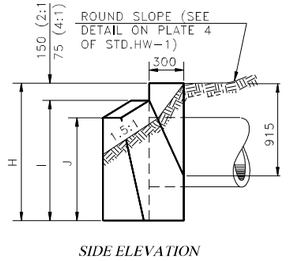


HALF PLAN OF BOTTOM STEEL *HALF PLAN OF TOP STEEL*

NOTE:
ALL LIKE BARS IN EACH HEADWALL ARE THE SAME SIZE. EACH STD. HEADER HAS 4 A, B & C-BARS, AND 2 D-BARS.



END ELEVATION



SIDE ELEVATION

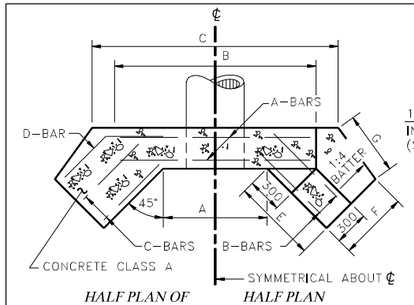
2:1 SLOPE

DIAMETER D (mm)	QUANTITIES PER HEADER CONC m3	STEEL kg	EXC. FOR 100 mm DEPTH m3	DIMENSIONS A	B	C	E	F	G	H	I	J	K	REINFORCING STEEL SIZE	LENGTH A BARS	B BARS	C BARS	D BARS	D-BARS a	b
600	1.51	16	0.40	750	1600	1975	900	575	675	1500	1350	1150	450	13	1500	950	900	1400	725	675
750	1.97	19	0.45	925	1775	2250	1075	600	825	1650	1500	1225	450	13	1675	1125	1075	1575	750	825
900	2.48	21	0.53	1100	1950	2525	1250	625	975	1800	1650	1300	450	13	1850	1275	1225	1750	800	950
1050	3.41	57	0.64	1275	2125	2850	1525	650	1200	2025	1875	1450	525	19	2025	1575	1475	2350	1150	1200
1200	4.11	63	0.72	1450	2300	3125	1725	675	1350	2175	2025	1525	525	19	2200	1775	1675	2525	1150	1375
1350	4.94	68	0.79	1625	2475	3375	1900	700	1500	2325	2175	1600	525	19	2375	1975	1825	2750	1225	1525
1500	5.77	73	0.88	1800	2650	3650	2075	725	1650	2475	2325	1700	525	19	2550	2125	2000	2925	1225	1700
1650	6.73	80	0.95	1975	2825	3950	2250	750	1800	2625	2475	1775	525	19	2725	2300	2175	3125	1250	1875
1800	7.87	85	1.03	2150	3000	4200	2450	775	1950	2775	2625	1875	525	19	2900	2475	2350	3300	1275	2025

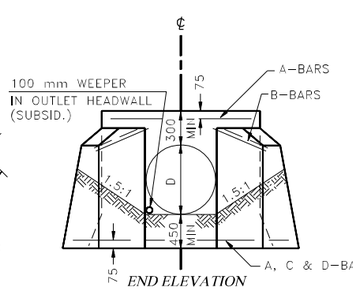
4:1 SLOPE

600	1.97	20	0.48	750	1600	2025	1175	625	950	1500	1425	1275	450	13	1500	1275	1200	1650	750	900
750	2.53	22	0.56	925	1775	2300	1400	650	1125	1650	1575	1375	450	13	1675	1500	1400	1875	800	1075
900	3.31	25	0.65	1100	1950	2575	1625	675	1325	1800	1725	1500	450	13	1850	1725	1600	2125	850	1275
1050	4.58	68	0.78	1275	2125	2925	1975	725	1600	2025	1950	1650	525	19	2025	2075	1925	2775	1200	1575
1200	5.57	74	0.87	1450	2300	3175	2200	750	1800	2175	2100	1775	525	19	2200	2300	2125	3025	1250	1775
1350	6.71	81	0.98	1625	2475	3450	2450	775	2025	2325	2250	1875	525	19	2375	2550	2350	3275	1275	2000
1500	7.91	88	1.08	1800	2650	3725	2675	800	2200	2475	2400	1975	525	19	2550	2775	2600	3525	1300	2225
1650	9.25	95	1.18	1975	2825	3975	2900	825	2400	2625	2550	2100	525	19	2725	3000	2825	3800	1375	2425
1800	10.81	101	1.29	2150	3000	4275	3150	850	2600	2775	2700	2200	525	19	2900	3250	2925	4025	1400	2625

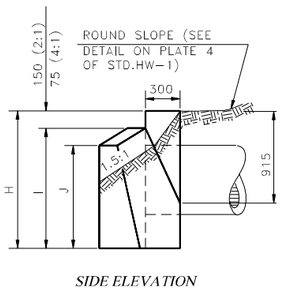
ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *CONCRETE HEADWALLS WITH 45° WINGS FOR R.C. PIPE* *P.C.-7*	REV. DATE	PLATE 2 STANDARD HW-2



HALF PLAN OF BOTTOM STEEL *HALF PLAN OF TOP STEEL*



END ELEVATION



SIDE ELEVATION

NOTE:
ALL LIKE BARS IN EACH HEADWALL ARE THE SAME SIZE. EACH STD. HEADER HAS 4 A, B & C-BARS, AND 2 D-BARS.

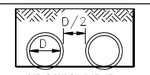
2:1 SLOPE

DIAMETER D (mm)	QUANTITIES PER HEADER CONC m3	STEEL kg	EXC. FOR 100 mm DEPTH m3	DIMENSIONS A	B	C	E	F	G	H	I	J	REINFORCING STEEL SIZE	LENGTH A BARS	B BARS	C BARS	D BARS	D-BARS a	b
600	1.15	15	0.34	675	1525	1800	725	575	525	1350	1200	1050	13	1425	775	725	1175	700	475
750	1.54	17	0.41	825	1675	2050	900	575	675	1500	1350	1150	13	1575	975	925	1375	775	600
900	2.00	19	0.47	975	1825	2300	1075	600	825	1650	1500	1225	13	1725	1150	1050	1550	800	750
1050	2.53	21	0.55	1125	1975	2550	1250	625	975	1800	1650	1300	13	1875	1325	1225	1750	850	900
1200	3.14	56	0.61	1300	2150	2825	1450	650	1125	1950	1800	1400	19	2050	1525	1400	2300	1200	1100
1500	4.57	66	0.76	1600	2450	3300	1800	700	1400	2250	2100	1575	19	2350	1875	1700	2675	1350	1325
1800	6.37	78	0.93	1925	2775	3825	2175	725	1700	2550	2400	1750	19	2675	2250	2025	3100	1450	1650

4:1 SLOPE

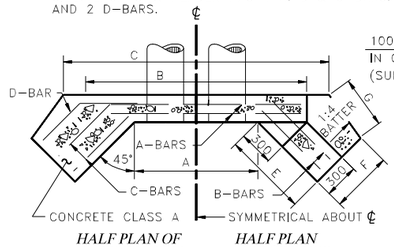
600	1.48	17	0.40	675	1525	1850	950	600	750	1350	1275	1150	13	1425	1050	950	1450	775	675
750	2.00	20	0.48	825	1675	2100	1175	625	950	1500	1425	1275	13	1575	1275	1150	1725	850	875
900	2.63	23	0.56	975	1825	2350	1400	650	1150	1650	1575	1375	13	1725	1525	1375	1925	850	1075
1050	3.36	25	0.65	1125	1975	2600	1650	675	1325	1800	1725	1500	13	1875	1750	1575	2200	900	1300
1200	4.20	65	0.74	1300	2150	2875	1875	700	1525	1950	1875	1600	19	2050	1950	1800	2750	1225	1525
1500	6.19	78	0.93	1600	2450	3375	2325	750	1925	2250	2175	1825	19	2350	2400	2250	3200	1275	1925
1800	8.69	92	1.13	1925	2775	3900	2800	800	2300	2550	2475		19	2675	2850	2725	3675	1350	2325

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *CONCRETE HEADWALLS WITH 45° WINGS FOR PIPES OTHER THAN R.C.* *P.C.-5*	REV. DATE	PLATE 3 STANDARD HW-2

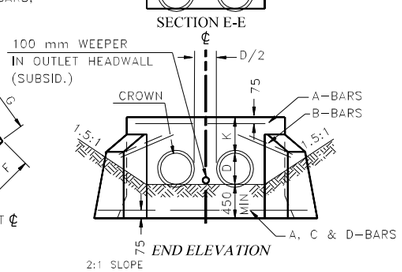


EXCAVATION BETWEEN PIPES INCLUDED IN STRUCTURE EXCAVATION

NOTE:
ALL LIKE BARS IN EACH HEADWALL ARE THE SAME SIZE. EACH STD. HEADER HAS 4 A, B & C-BARS, AND 2 D-BARS.

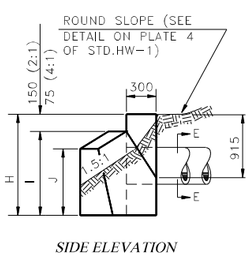


HALF PLAN OF BOTTOM STEEL *HALF PLAN OF TOP STEEL*



END ELEVATION

2:1 SLOPE



SIDE ELEVATION

DIAMETER D (mm)	QUANTITIES PER HEADER CONC m3	STEEL kg	EXC. FOR 100 mm DEPTH m3	DIMENSIONS A	B	C	E	F	G	H	I	J	K	D/2	REINFORCING STEEL SIZE	LENGTH A BARS	B BARS	C BARS	D BARS	D-BARS a	b
600	1.87	21	0.49	1800	2650	3000	900	575	675	1500	1350	1150	450	300	13	2550	950	900	1400	725	675
750	2.43	24	0.57	2225	3075	3525	1075	600	825	1650	1500	1225	450	375	13	2975	1125	1075	1575	750	825
900	3.05	28	0.67	2650	3500	4075	1250	625	975	1800	1650	1300	450	450	13	3400	1275	1225	1750	800	950
1050	4.15	73	0.81	3075	3925	4650	1525	650	1200	2025	1875	1450	525	525	19	3825	1575	1475	2350	1150	1200
1200	4.99	82	0.91	3500	4350	5175	1725	675	1350	2175	2025	1525	525	600	19	4250	1775	1675	2525	1150	1375
1350	5.93	89	1.00	3925	4775	5725	1900	700	1500	2325	2175	1600	525	675	19	4675	1975	1825	2750	1225	1525
1500	6.96	97	1.12	4350	5200	6250	2075	725	1650	2475	2325	1700	525	750	19	5100	2125	2000	2925	1225	1700
1650	8.07	105	1.21	4775	5625	6725	2250	750	1800	2625	2475	1775	525	825	19	5525	2300	2175	3125	1250	1875
1800	9.39	113	1.32	5200	6050	7250	2450	775	1950	2775	2625	1875	525	900	19	5950	2475	2350	3300	1275	2025

4:1 SLOPE

600	2.33	24	0.57	1800	2650	3000	1175	625	950	1500	1425	1275	450	300	13	2550	1275	1200	1650	750	900
750	3.00	28	0.68	2225	3075	3525	1400	650	1125	1650	1575	1375	450	375	13	2975	1500	1400	1875	800	1075
900	3.89	32	0.79	2650	3500	4075	1625	675	1325	1800	1725	1500	450	450	13	3400	1725	1600	2125	850	1275
1050	5.33	84	0.95	3075	3925	4650	1975	725	1600	2025	1950	1650	525	525	19	3825	2075	1925	2775	1200	1575
1200	6.45	93	1.06	3500	4350	5175	2200	750	1800	2175	2100	1775	525	600	19	4250	2300	2125	3025	1250	1775
1350	7.75	102	1.19	3925	4775	5725	2450	775	2025	2325	2250	1875	525	675	19	4675	2550	2350	3275	1275	2000
1500	9.10	111	1.31	4350	5200	6250	2675	800	2200	2475	2400	1975	525	750	19	5100	2775	2600	3525	1300	2225
1650	10.61	121	1.44	4775	5625	6725	2900	825	2400	2625	2550	2100	525	825	19	5525	3000	2825	3800	1375	2425
1800	12.33	128	1.58	5200	6050	7250	3150	850	2600	2775	2700	2200	525	900	19	5950	3250	2925	4025	1400	2625

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.	NHDOT STANDARD PLANS *CONCRETE HEADWALLS WITH 45° WINGS FOR TWIN R.C. PIPE* *P.C.-9*	REV. DATE	PLATE 4 STANDARD HW-2

STANDARD NO. HW-2

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. HW-2

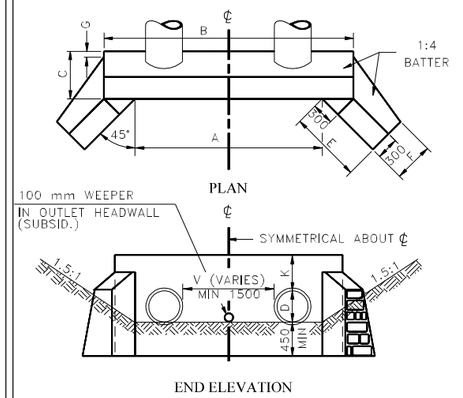
STANDARD NO. HW-3

REVISION DATE
7-13-01

*.DGN FILE NAME
HW-3

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.



DIMENSIONS SHOWN ARE TO PAYMENT LINES. MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.

2:1 SLOPE (FOR 3:1 AND 4:1 SLOPES SEE PLATE 2)

DIAMETER D(mm)	QUANTITIES PER HEADER				DIMENSIONS									
	M.R.M. m3 V=1.5	M.R.M. PER 100 mm ADD. LENGTH V=1.5	EXC. FOR 100 mm DEPTH V=1.5	EXC. PER 100 mm ADD. LENGTH 100 mm DEPTH m3	A V=1.5	B V=1.5	C	E	F	G	H	I	J	K
600	3.36	0.075	0.77	0.013	3000	3850	675	875	575	150	1500	1350	1150	450
750	4.25	0.087	0.90	0.013	3350	4200	725	1050	600	125	1650	1500	1225	450
900	5.13	0.098	1.01	0.014	3700	4550	750	1225	625	100	1800	1650	1300	450
1050	6.69	0.115	1.17	0.014	4050	4900	800	1500	650	75	2025	1875	1450	525
1200	7.97	0.129	1.33	0.015	4400	5250	850	1700	675	50	2175	2025	1525	525
1350	9.23	0.141	1.47	0.015	4750	5600	875	1875	700	25	2325	2175	1600	525
1500	10.77	0.156	1.62	0.015	5100	5950	925	2050	725	25	2475	2325	1700	525
1650	12.27	0.169	1.76	0.016	5450	6300	950	2225	750	0	2625	2475	1775	525
1800	14.08	0.186	1.91	0.016	5800	6650	1000	2425	775	−25	2775	2625	1875	525

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS
MORTAR RUBBLE MASONRY HEADWALLS WITH 45° WINGS FOR TWIN R. C. PIPES P.C.-10

REV. DATE

PLATE 1
STANDARD HW-3

3:1 SLOPE

DIAMETER D (mm)	QUANTITIES PER HEADER				DIMENSIONS									
	M.R.M. m3 V=1.5	M.R.M. PER 100 mm ADD. LENGTH V=1.5	EXC. FOR 100 mm DEPTH V=1.5	EXC. PER 100 mm ADD. LENGTH 100 mm DEPTH m3	A V=1.5	B V=1.5	C	E	F	G	H	I	J	K
600	3.65	0.075	0.82	0.013	3000	3850	675	1050	600	150	1500	1400	1225	450
750	4.65	0.087	0.96	0.013	3350	4200	725	1275	625	150	1650	1550	1325	450
900	5.64	0.098	1.09	0.014	3700	4550	750	1475	650	100	1800	1700	1425	450
1050	7.43	0.115	1.27	0.014	4050	4900	800	1800	700	75	2025	1925	1575	525
1200	8.86	0.129	1.43	0.015	4400	5250	850	2000	725	75	2175	2075	1675	525
1350	10.34	0.141	1.57	0.015	4750	5600	875	2225	750	50	2325	2225	1775	525
1500	12.08	0.156	1.74	0.015	5100	5950	925	2425	775	25	2475	2375	1875	525
1650	13.84	0.169	1.90	0.016	5450	6300	950	2650	800	0	2625	2525	1975	525
1800	15.90	0.186	2.07	0.016	5800	6650	1000	2850	825	0	2775	2675	2075	525

4:1 SLOPE

DIAMETER D (mm)	QUANTITIES PER HEADER				DIMENSIONS									
	M.R.M. m3 V=1.5	M.R.M. PER 100 mm ADD. LENGTH V=1.5	EXC. FOR 100 mm DEPTH V=1.5	EXC. PER 100 mm ADD. LENGTH 100 mm DEPTH m3	A V=1.5	B V=1.5	C	E	F	G	H	I	J	K
600	3.83	0.075	0.85	0.013	3000	3850	675	1150	625	150	1500	1425	1275	450
750	4.87	0.087	0.99	0.013	3350	4200	725	1375	650	150	1650	1575	1375	450
900	5.96	0.098	1.12	0.014	3700	4550	750	1600	675	100	1800	1725	1500	450
1050	7.88	0.115	1.32	0.014	4050	4900	800	1950	725	75	2025	1950	1650	525
1200	9.44	0.129	1.48	0.015	4400	5250	850	2175	750	75	2175	2100	1775	525
1350	11.06	0.141	1.64	0.015	4750	5600	875	2425	775	50	2325	2250	1875	525
1500	12.88	0.156	1.81	0.015	5100	5950	925	2650	800	25	2475	2400	1975	525
1650	14.84	0.169	1.98	0.016	5450	6300	950	2875	825	25	2625	2550	2100	525
1800	17.02	0.186	2.16	0.016	5800	6650	1000	3125	850	0	2775	2700	2200	525

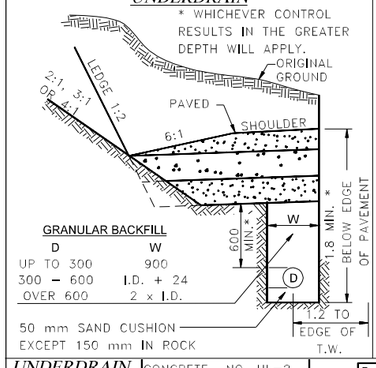
ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS
MORTAR RUBBLE MASONRY HEADWALLS WITH 45° WINGS FOR TWIN R. C. PIPES P.C.-10

REV. DATE

PLATE 2
STANDARD HW-3

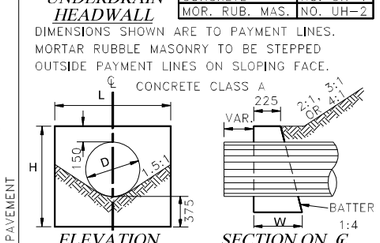
UNDERDRAIN



UNDERDRAIN HEADWALL

CONCRETE MOR. RUB. MAS.	NO. UH-1 NO. UH-2

DIMENSIONS SHOWN ARE TO PAYMENT LINES. MORTAR RUBBLE MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACE.

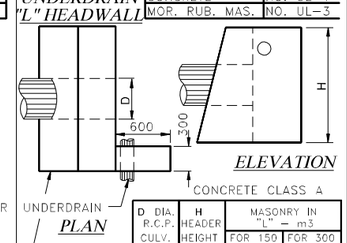


ELEVATION *SECTION ON ℄*

D UND. DIA. mm	PER HEADER MAS'RY m3	PER HEADER EXC. PER 100 mm DEPTH m3	L	H	W
150	0.13	0.12	600	675	395
300	0.24	0.17	950	825	430
375	0.33	0.19	1150	900	450

UNDERDRAIN "L" HEADWALL

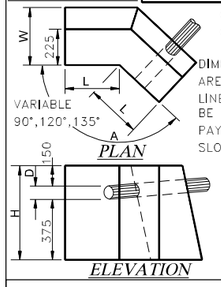
CONCRETE MOR. RUB. MAS.	NO. UL-1 NO. UL-3



D DIA. R.C.P. CULV. mm	H HEADER HEIGHT mm	MASONRY IN "L" – m3 FOR 150 UND.	MASONRY IN "L" – m3 FOR 300 UND.
375	1275	0.23	0.21
450	1350	0.24	0.22
600	1500	0.28	0.25
750	1650	0.31	0.28
900	1800	0.33	0.31

UNDERDRAIN "L" HEADWALL

CONCRETE MOR. RUB. MAS.	NO. UL-2 NO. UL-4

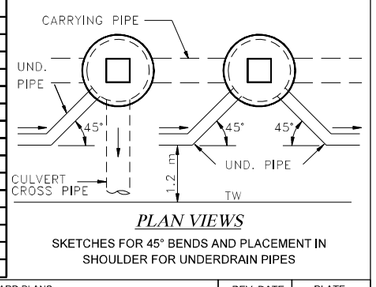


CONCRETE CLASS A

DIMENSIONS SHOWN ARE TO PAYMENT LINES. M.R.M. TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.

D (mm) UND. DIA.	A	PER HEADER MAS'RY m3	PER HEADER EXC. PER 100 mm DEPTH m3	L mm	H mm	W mm
150	90°	0.23	0.18	375	675	395
150	120°	0.20	0.16	375	675	395
150	135°	0.19	0.16	375	675	395
300	90°	0.41	0.24	600	825	430
300	120°	0.37	0.22	600	825	430
300	135°	0.36	0.21	600	825	430
375	90°	0.55	0.28	750	900	450
375	120°	0.50	0.26	750	900	450
375	135°	0.49	0.25	750	900	450
450	90°	0.65	0.30	825	975	470
450	120°	0.60	0.28	825	975	470
450	135°	0.59	0.27	825	975	470
600	90°	0.96	0.37	1050	1125	505
600	120°	0.90	0.34	1050	1125	505
600	135°	0.87	0.33	1050	1125	505

C.B. (OR HEADER) *C.B.*



PLAN VIEWS

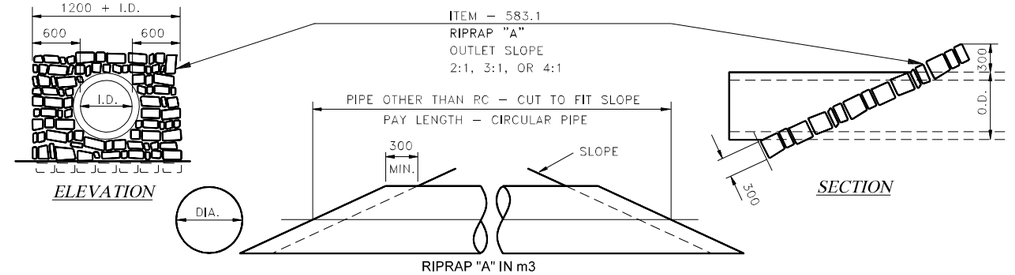
SKETCHES FOR 45° BENDS AND PLACEMENT IN SHOULDER FOR UNDERDRAIN PIPES

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS
UNDERDRAIN HEADWALLS & UNDERDRAIN "L" HEADWALLS

REV. DATE

PLATE 3
STANDARD HW-3



RIPRAP "A" IN m3

INSIDE DIAM. PIPE mm	REINFORCED CONCRETE PIPE 2:1	REINFORCED CONCRETE PIPE 3:1	REINFORCED CONCRETE PIPE 4:1	PIPE OTHER THAN R.C. 2:1	PIPE OTHER THAN R.C. 3:1	PIPE OTHER THAN R.C. 4:1
300	0.64	0.92	1.20	0.58	0.83	1.08
375	0.74	1.05	1.37	0.67	0.94	1.24
450	0.83	1.18	1.54	0.76	1.07	1.40
525	–	–	–	0.85	1.20	1.54
600	1.02	1.44	1.88	0.94	1.33	1.74
750	1.21	1.71	2.23	1.13	1.60	2.09
900	1.40	1.98	2.58	1.32	1.87	2.45
1050	1.59	2.26	2.94	1.53	2.16	2.82
1200	1.79	2.53	3.32	1.74	2.45	3.21
1350	2.00	2.82	3.68	1.95	2.76	3.62
1500	2.20	3.11	4.06	2.17	3.08	4.02
1650	2.41	3.39	4.44	2.41	3.40	4.44
1800	2.61	3.69	4.83	2.65	3.74	4.88

NOTE: FOR PIPES WITH QUANTITIES BELOW HEAVY LINE, STD. HEADWALLS WILL GENERALLY BE REQUIRED.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS
SLOPE PAVING FOR PIPE OUTLETS

REV. DATE

PLATE 4
STANDARD HW-3

STANDARD NO. HW-3

REVISION DATE
7-13-01

*.DGN FILE NAME
HW-3

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. HW-3

STANDARD NO. MB-1

REVISION DATE
7-13-01

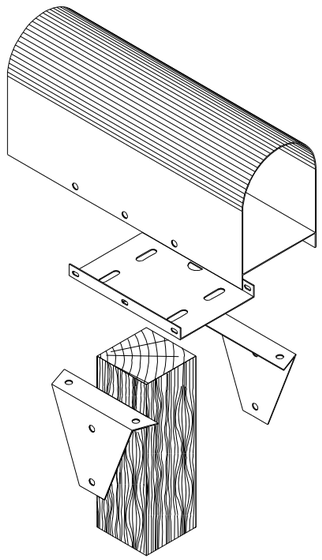
*.DGN FILE NAME
MB-1

METRIC
STANDARD PLANS

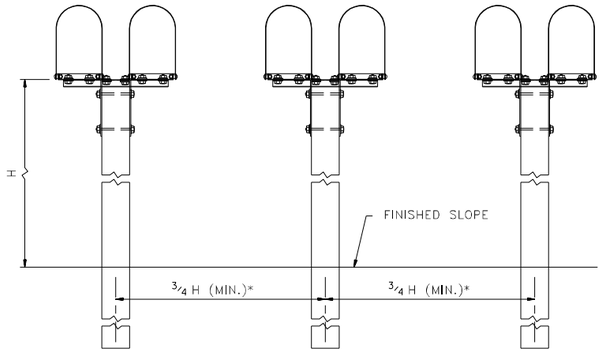
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STATE OF NEW HAMPSHIRE

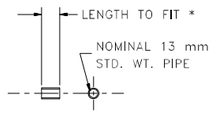
STANDARD NO. MB-1



EXPLODED VIEW
(SEE NOTE NO. 1)



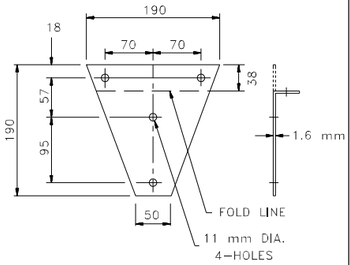
SPACING FOR MULTIPLE POST INSTALLATION
* FULL HEIGHT PREFERABLE



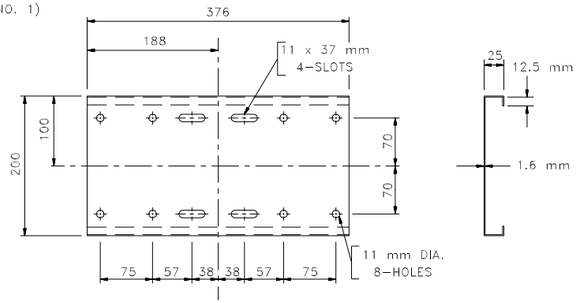
SPACER

* STANDARD MAILBOX WIDTHS ARE 165 mm, 203 mm, 292 mm

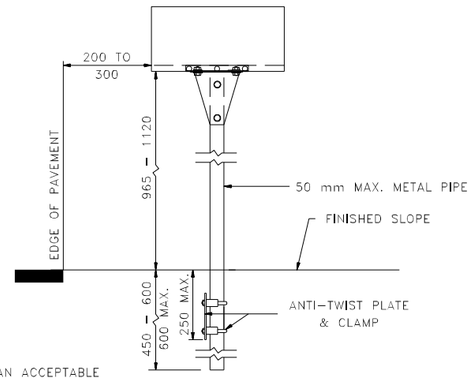
PLATFORM
(SEE NOTE NO. 1)



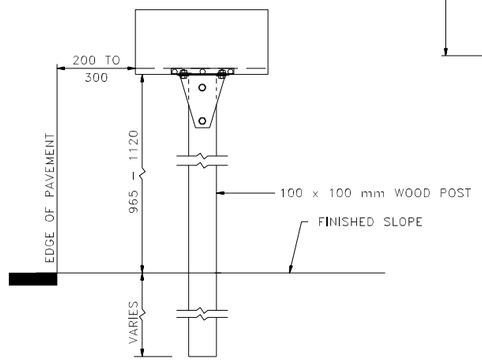
BRACKET
(SEE NOTE NO. 1)



SHELF
(SEE NOTE NO. 1)



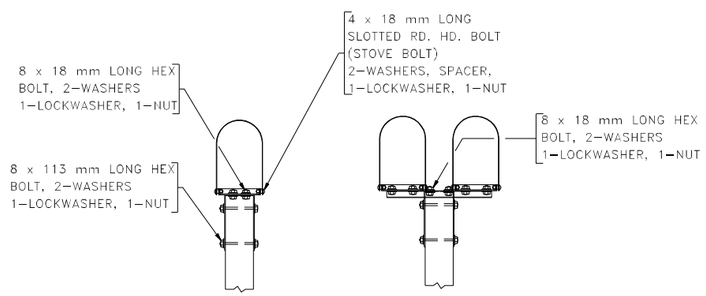
METAL POST



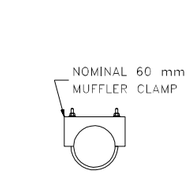
WOOD POST

GENERAL NOTES

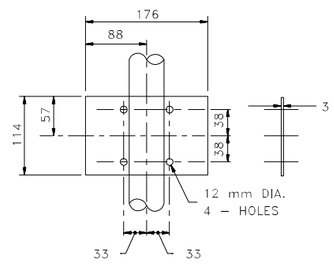
1. THE MAILBOX SUPPORT ASSEMBLY SHOWN ON THIS SHEET IS AN EXAMPLE OF AN ACCEPTABLE NON-PROPRIETARY DESIGN.
2. NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SUPPORT STRUCTURE UNLESS THE SUPPORT STRUCTURE AND MAILBOX ARRANGEMENT HAVE BEEN SHOWN TO BE SAFE BY CRASH TESTING. HOWEVER, LIGHTWEIGHT NEWSPAPER BOXES MAY BE MOUNTED BELOW THE MAILBOX ON THE SIDE OF THE MAILBOX SUPPORT.
3. MAILBOX SUPPORTS SHALL NOT BE SET IN CONCRETE UNLESS THE SUPPORT DESIGN HAS BEEN SHOWN TO BE SAFE BY CRASH TESTS WHEN SO INSTALLED.
4. A SINGLE 100 x 100 mm SQUARE* OR 100 mm DIAMETER* WOOD POST OR A METAL POST WITH A STRENGTH NO GREATER THAN A 50 mm DIAMETER STANDARD STRENGTH STEEL PIPE AND EMBEDDED NO MORE THAN 600 mm INTO THE GROUND WILL BE ACCEPTABLE AS A MAILBOX SUPPORT. A METAL POST SHALL NOT BE FITTED WITH AN ANCHOR PLATE, BUT IT SHALL HAVE AN ANTI-TWIST DEVICE THAT EXTENDS NO MORE THAN 250 mm BELOW THE GROUND SURFACE.
   * THESE DIMENSIONS ARE BOTH MAXIMUM AND MINIMUM
5. IN AREAS OF HIGH SNOWFALL, CANTILEVER DESIGNS MAY BE ADVANTAGEOUS. CANTILEVER SUPPORTS PERMIT WINDSHIELD CONTACT WITH THE MAILBOX WITHOUT THE VEHICLE FIRST CONTACTING THE POST, THEREFORE, AN APPROVED BREAKAWAY SUPPORT MUST BE USED.
6. FOR ADDITIONAL INFORMATION, REFER TO *A GUIDE FOR ERECTING MAILBOXES ON HIGHWAYS* – AASHTO, 1994.
7. ITEM NO: 670.066



ASSEMBLY HARDWARE



CLAMP
(FOR METAL POSTS ONLY)



ANTI-TWIST PLATE
(FOR METAL POSTS ONLY)

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

MAILBOX STANDARD

MAILBOX SUPPORT ASSEMBLY DETAILS

STANDARD NO. MB-1

STANDARD NO. PL-1A

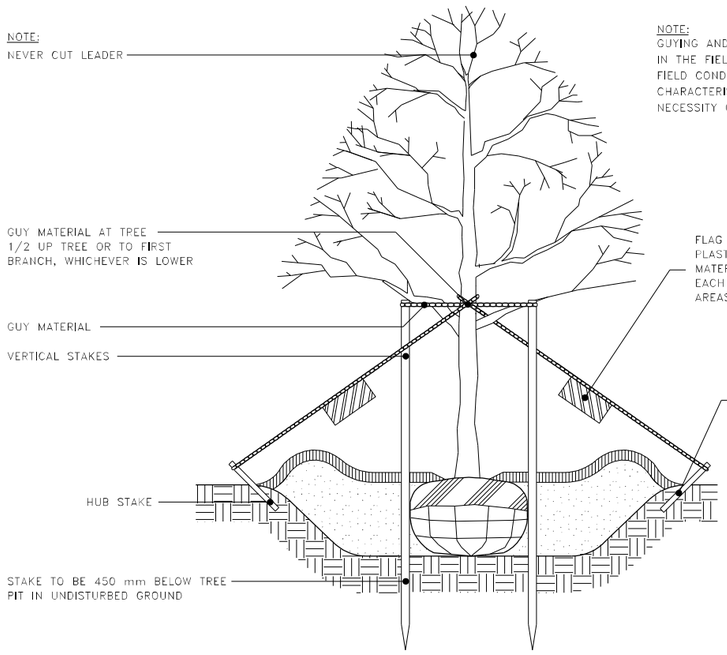
REVISION DATE
7-13-01

*.DGN FILE NAME
PL-1A

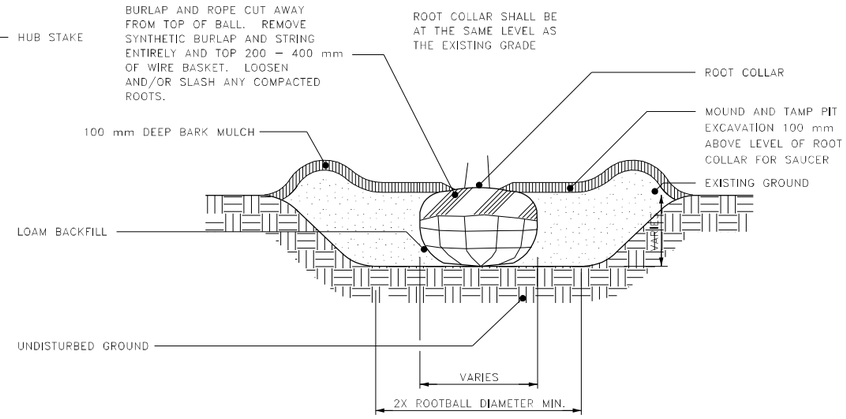
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

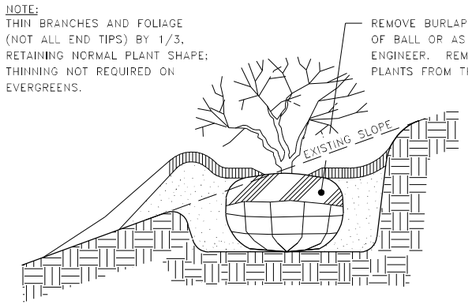
STANDARD NO. PL-1A



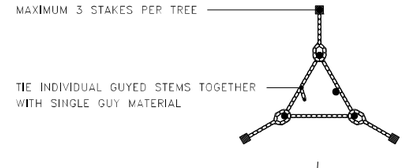
DECIDUOUS TREE PLANTING

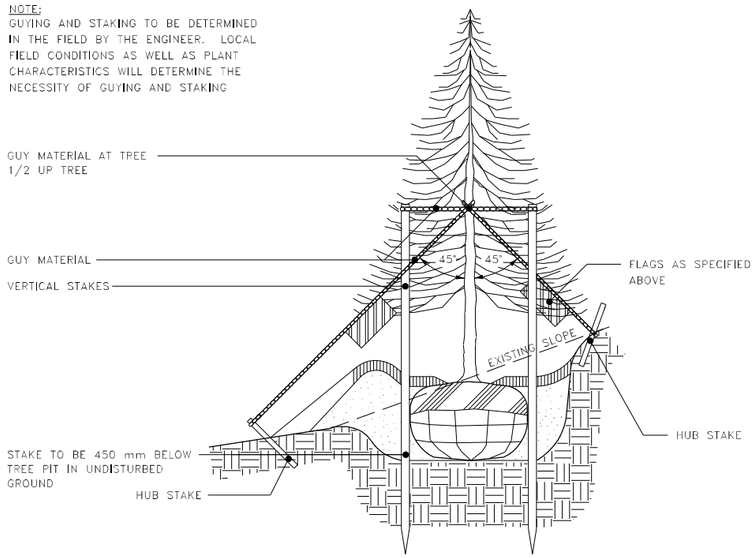


TYPICAL PLANTING PIT ON LEVEL

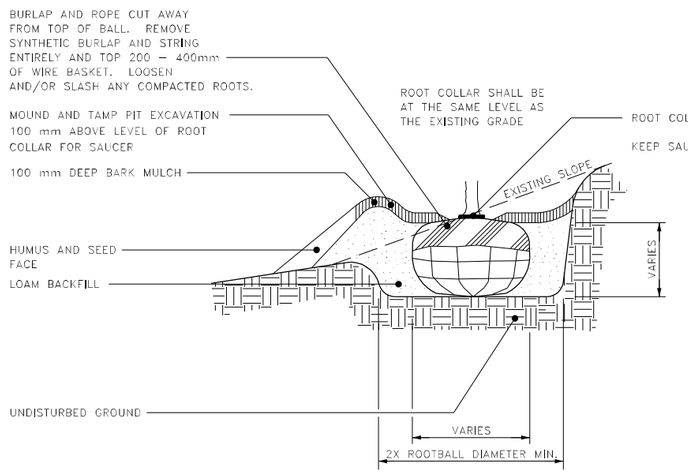


SHRUB PLANTING

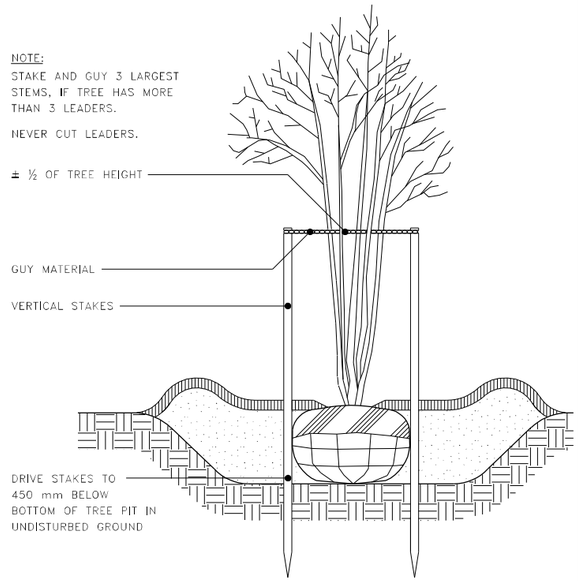




EVERGREEN TREE PLANTING



TYPICAL PLANTING PIT ON SLOPE 4:1 OR GREATER



MULTI-STEM TREE PLANTING

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PLANTING STANDARD

PLANTING DETAILS

STANDARD NO. PL-1A

STANDARD NO. PL-1B

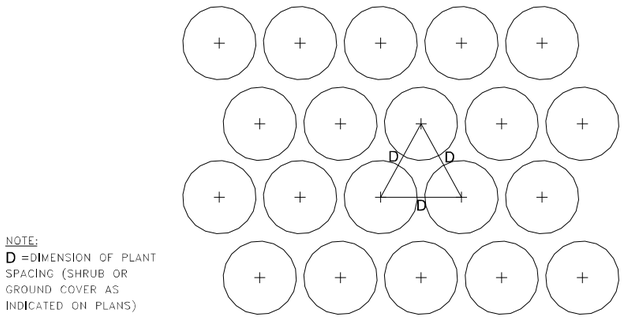
REVISION DATE
7-13-01

*.DGN FILE NAME
PL-1B

METRIC STANDARD PLANS

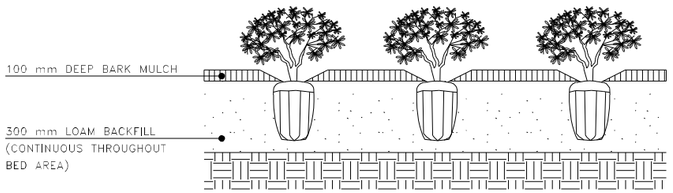
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PL-1B

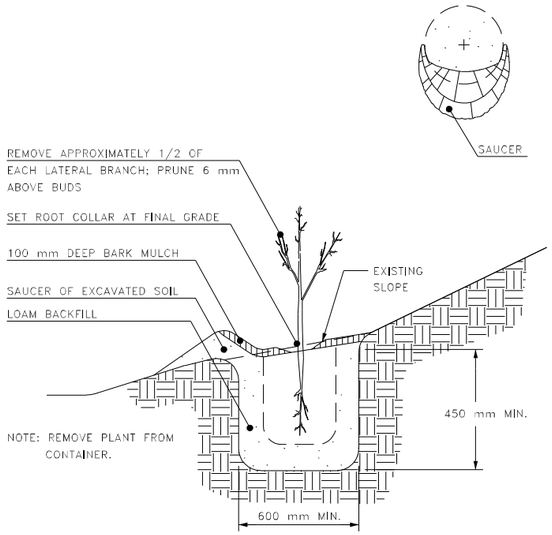


NOTE:
D =DIMENSION OF PLANT SPACING (SHRUB OR GROUND COVER AS INDICATED ON PLANS)

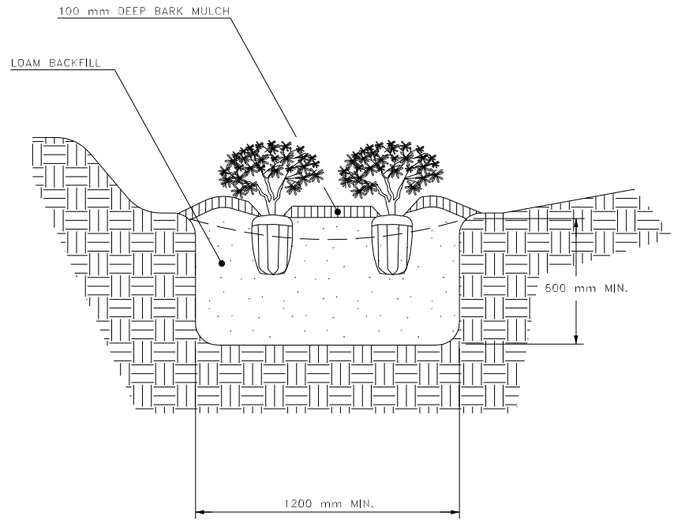
TYPICAL BED PLANT SPACING



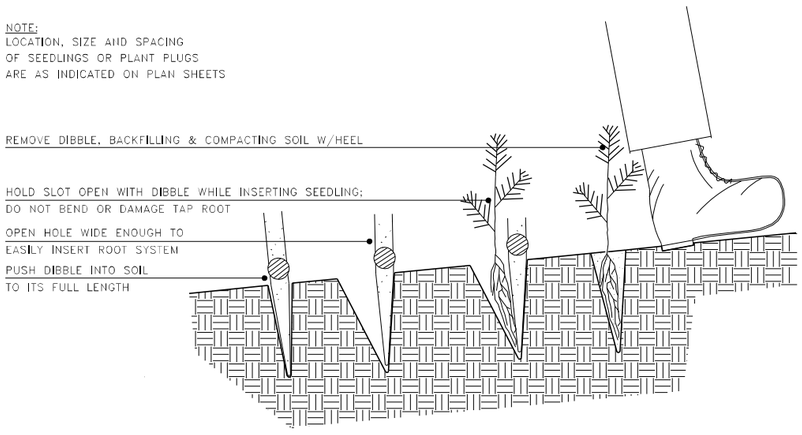
GROUNDCOVER BED PLANTING



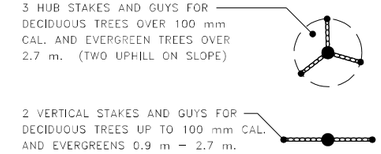
LINER PLANTING (DECIDUOUS)



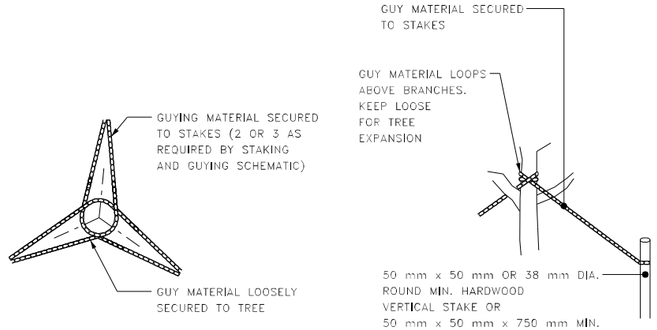
TRENCH NARROW MEDIAN PLANTING



SEEDLINGS (EVERGREEN) OR WETLAND PLUG PLACEMENT



STAKING AND GUYING PLAN SCHEMATIC



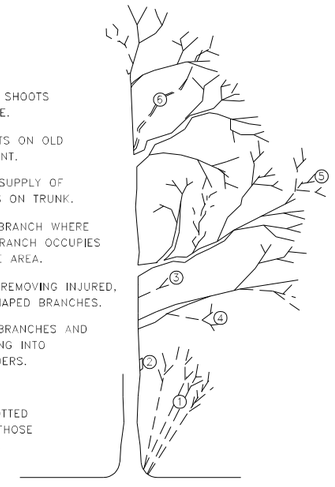
NOTE:
PLASTIC CHAINLOCK (LANDSCAPE QUALITY AND SUITABLE STRENGTH FOR GUYING TREES) OR EQUIVALENT GUYING MATERIAL

GUYING DETAILS

TREE STAKING AND GUYING

NOTE:
① REMOVE SUCKER SHOOTS AT BASE OF TREE.
② MAKE CLEAN CUTS ON OLD STUBS, IF PRESENT.
③ REMOVE ENTIRE SUPPLY OF TWIGS AND BUDS ON TRUNK.
④ REMOVE LOWER BRANCH WHERE AN OVERLYING BRANCH OCCUPIES ABOUT THE SAME AREA.
⑤ SHAPE TREE BY REMOVING INJURED, DEAD AND MISSHAPED BRANCHES.
⑥ REMOVE CROSS BRANCHES AND THOSE DEVELOPING INTO SECONDARY LEADERS.

NOTE:
BRANCHES IN DOTTED LINES INDICATE THOSE TO BE REMOVED.



TREE PRUNING

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PLANTING STANDARD

PLANTING DETAILS

STANDARD NO. SL-1

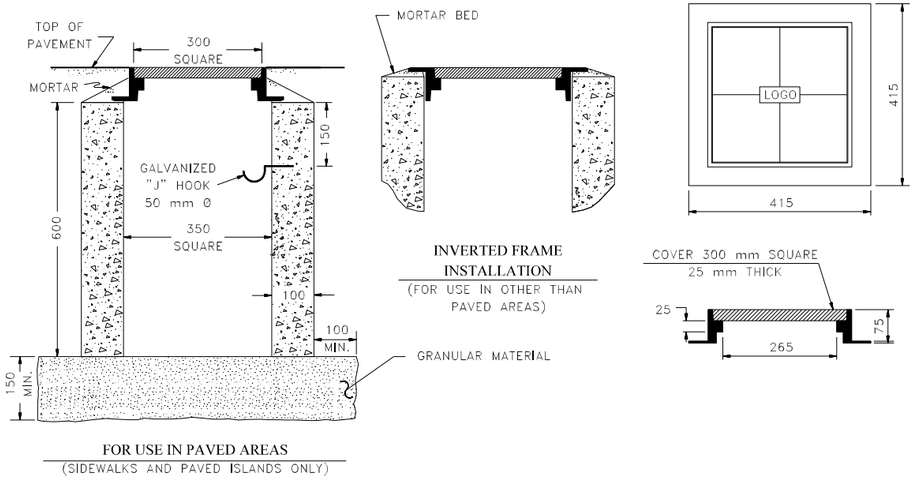
REVISION DATE
7-13-01

*.DGN FILE NAME
SL-1

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SL-1

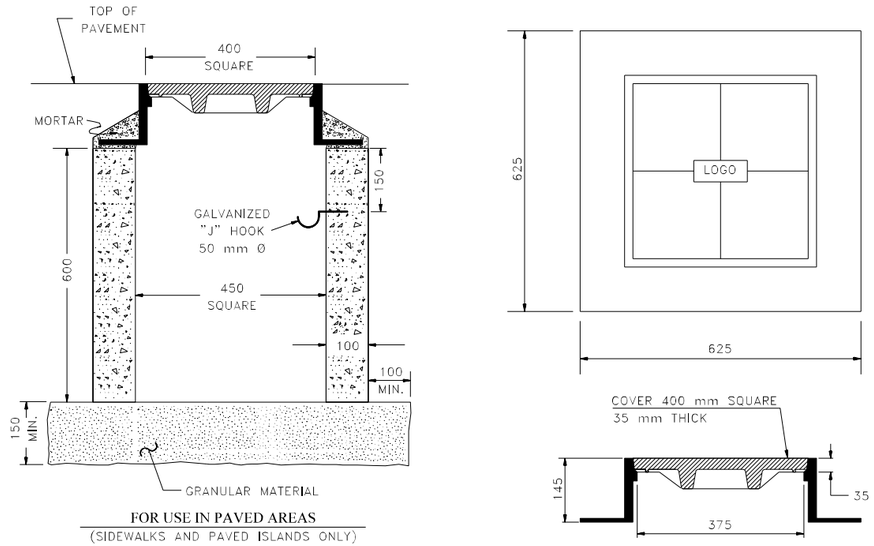


FOR USE IN PAVED AREAS
(SIDEWALKS AND PAVED ISLANDS ONLY)

INVERTED FRAME INSTALLATION
(FOR USE IN OTHER THAN PAVED AREAS)

CONCRETE PULL BOX 350 mm

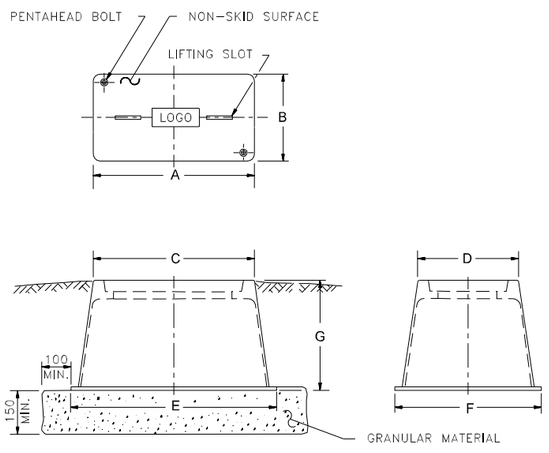
ITEM NO: 614.511



FOR USE IN PAVED AREAS
(SIDEWALKS AND PAVED ISLANDS ONLY)

CONCRETE PULL BOX 450 mm

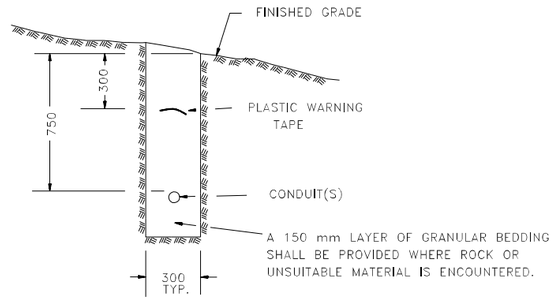
ITEM NO: 614.512



	A	B	C	D	E	F	G
ITEM NO 614.522	600	325	650	375	775	550	400 – 450
ITEM NO 614.523	750	425	800	475	975	650	650

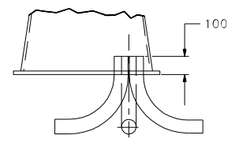
MOLDED PULL BOXES

(FOR USE IN OTHER THAN PAVED AREAS)



NOTE: BACKFILL ABOVE CONDUIT SHALL BE IN ACCORDANCE WITH 614.

TRENCH DETAIL FOR CONDUIT INSTALLATION



90° ELBOWS – NUMBER, SIZE & TYPE AS REQUIRED IN PLANS OR SPECIAL PROVISIONS. USE STEEL ELBOWS WITH GROUNDING BUSHINGS WHEN CONDUIT RUN EXCEEDS 60 m.

CONDUIT ARRANGEMENT - ALL TYPES

GENERAL NOTES

1. DIMENSIONS SHOWN ARE NOMINAL. MOLDED PULL BOXES MAY VARY BY 12 mm.
2. ADJUST FRAMES & COVERS SO THAT DRAINAGE WILL BE AWAY FROM PULL BOX.
3. LOGO = SIGNAL OR POWER AS REQUIRED, ON CENTER OF COVER.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

SIGNAL & LIGHTING STANDARD

PULL BOXES & CONDUIT TRENCH DETAIL

STANDARD NO. SL-1

STANDARD NO. SL-2

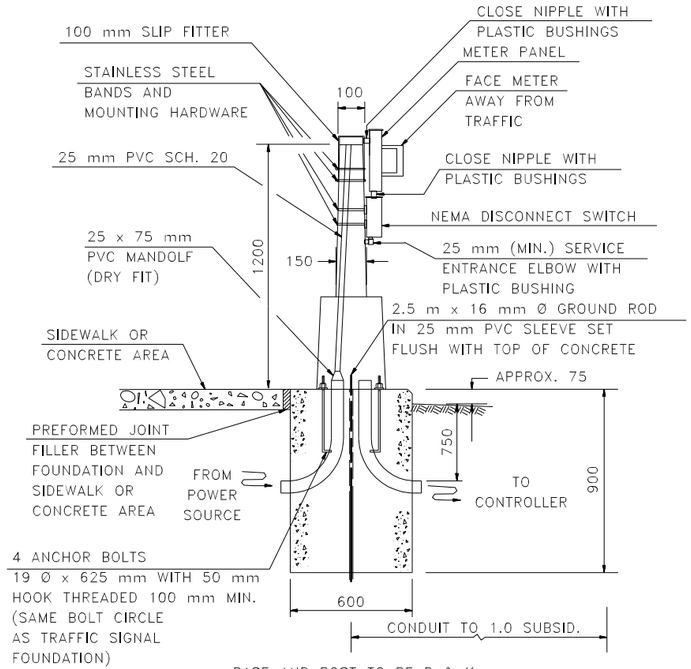
REVISION DATE
7-13-01

*.DGN FILE NAME
SL-2

METRIC
STANDARD PLANS

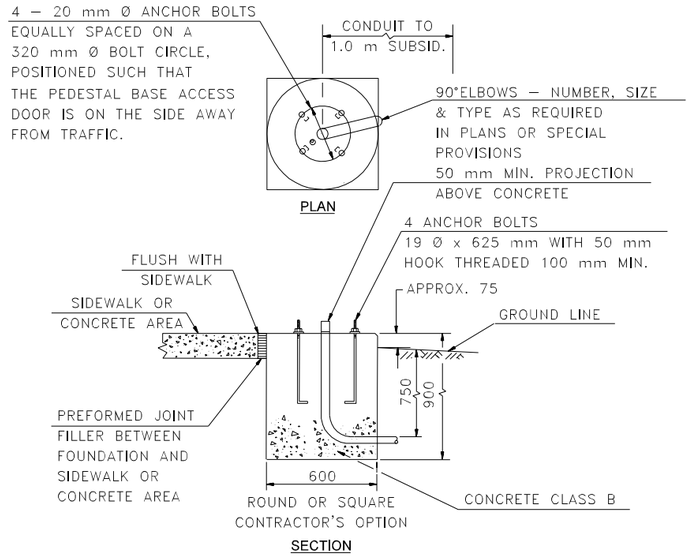
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SL-2



BASE AND POST TO BE P & K CP 314 OR APPROVED EQUAL

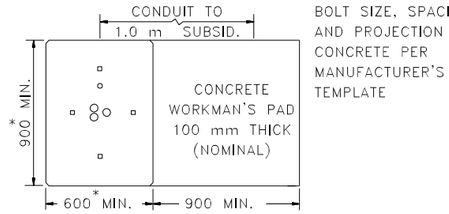
TRAFFIC SIGNAL METER PEDESTAL AND FOUNDATION



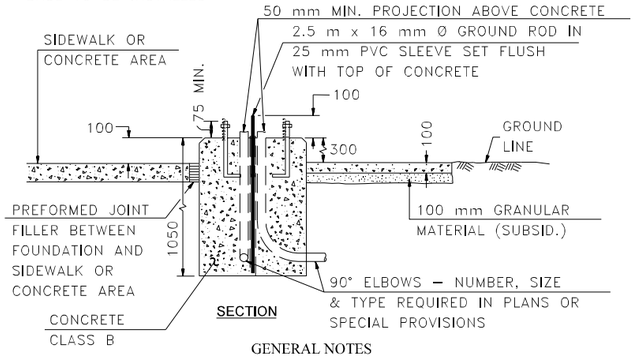
1. SIZE OF FOUNDATION MAY BE CHANGED IN THE PLANS OR SPECIAL PROVISIONS, OR IN THE FIELD AS DIRECTED BY THE ENGINEER.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 20 mm.
3. OPEN ENDS OF ALL CONDUITS INTO FOUNDATION SHALL BE CAPPED UNTIL CABLES ARE INSTALLED.

CONCRETE FOUNDATION FOR PEDESTALS

(TRAFFIC OR PEDESTRIAN SIGNAL)



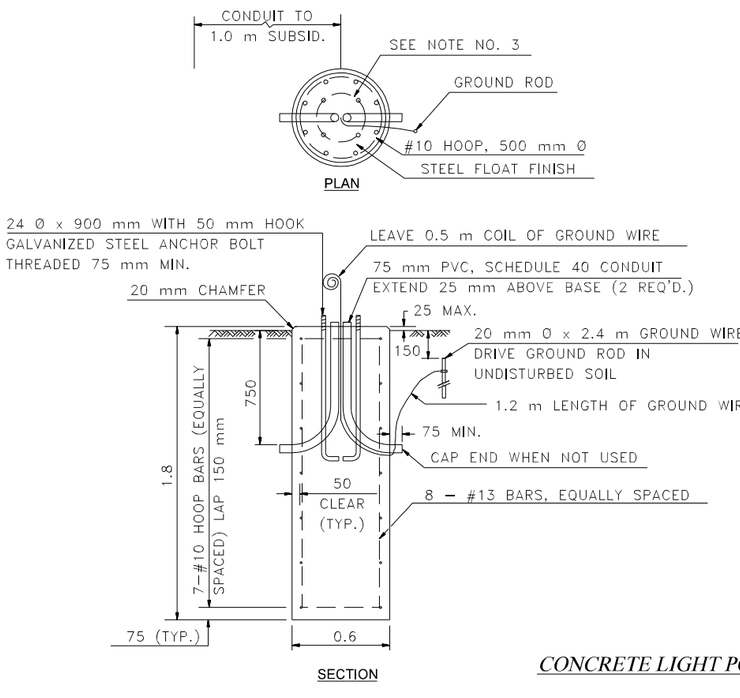
* FOUNDATION SHALL BE 150 mm WIDER AND LONGER THAN CABINET BASE TO BE INSTALLED



GENERAL NOTES

1. WORKMAN'S PAD MAY BE ELIMINATED IF CONTROLLER CABINET IS IN SIDEWALK SECTION.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 20 mm.
3. WORKMAN'S PAD (AND CABINET DOOR) SHOULD BE ORIENTED TO PERMIT MAXIMUM VIEW OF SIGNAL INSTALLATION (AWAY FROM TRAFFIC, IF POSSIBLE).

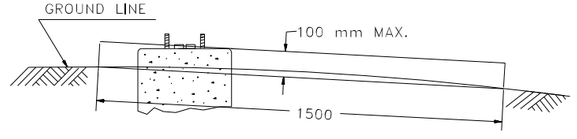
CONCRETE FOUNDATION FOR CONTROLLER CABINET



CONCRETE LIGHT POLE BASE TYPE B

GENERAL NOTES

1. ALL LIGHT POLES, LUMINAIRES, AND WIRE TO BE FURNISHED AND INSTALLED BY THE POWER COMPANY, UNLESS OTHERWISE DIRECTED.
2. ANCHOR BOLTS, GROUND ROD & GROUND WIRE TO BE FURNISHED BY THE POWER COMPANY AND INSTALLED BY THE CONTRACTOR, UNLESS OTHERWISE DIRECTED.
3. BOLT CIRCLE DIAMETER SHALL BE VERIFIED WITH THE POWER COMPANY.
4. ALL BASES SHALL BE LOCATED 3.0 m (TO CENTER) FROM FACE OF CURB OR EDGE OF PAVED SHOULDER, UNLESS OTHERWISE NOTED.
5. REINFORCEMENT SHALL CONFORM TO SECTION 544 OF THE STANDARD SPECIFICATIONS.
6. ANY ANCHOR BOLTS DAMAGED DURING INSTALLATION SHALL BE REPARIED OR REPLACED AS DIRECTED BY THE ENGINEER.
7. UPON INSTALLATION, ANCHOR BOLT THREADS SHALL BE CLEANED WITH A WIRE BRUSH.
8. TERRAIN SURROUNDING BASE MUST BE GRADED AS SHOWN IN DETAIL "A" TO PREVENT IMPACTING VEHICLES FROM SNAGGING ON BASE.
9. ITEM NO. 625.2 OR 625.22



DETAIL "A"

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

SIGNAL & LIGHTING STANDARD

CONCRETE FOUNDATIONS & LIGHT POLE BASE, TYPE B

STANDARD NO. SL-2
METRIC STANDARD PLANS
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STANDARD NO. SL-2

STANDARD NO. TS-1A

REVISION DATE
7-13-01

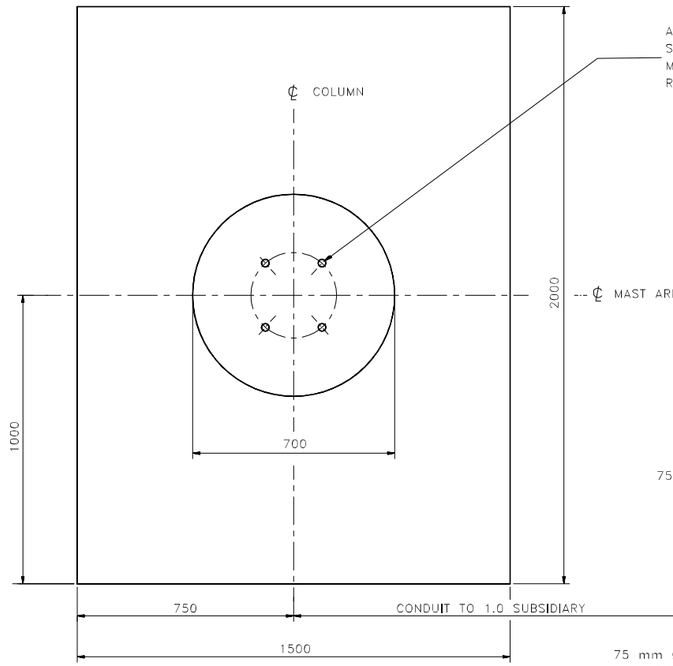
*.DGN FILE NAME
TS-1A

METRIC STANDARD PLANS

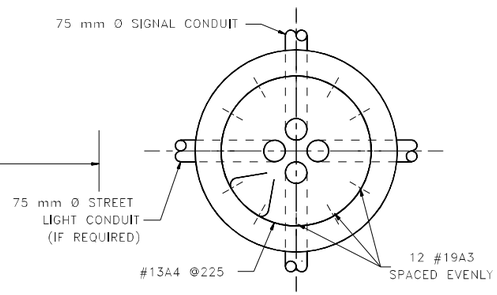
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. TS-1A

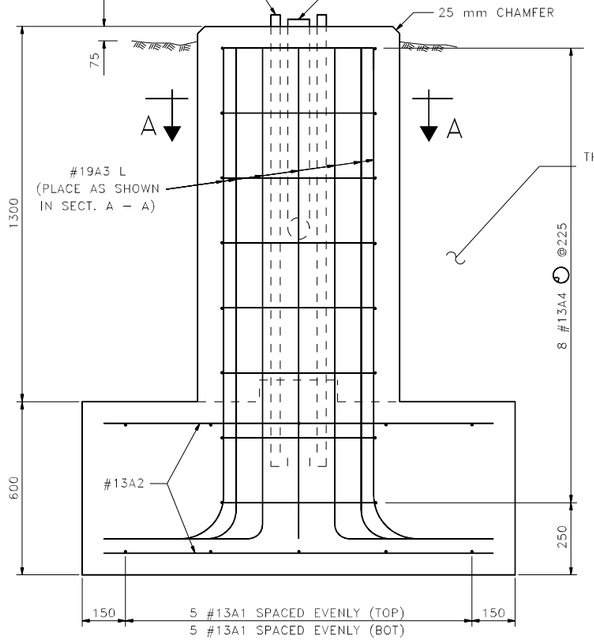
TRAFFIC SIGNAL MAST ARM FOUNDATION - TYPE 1A



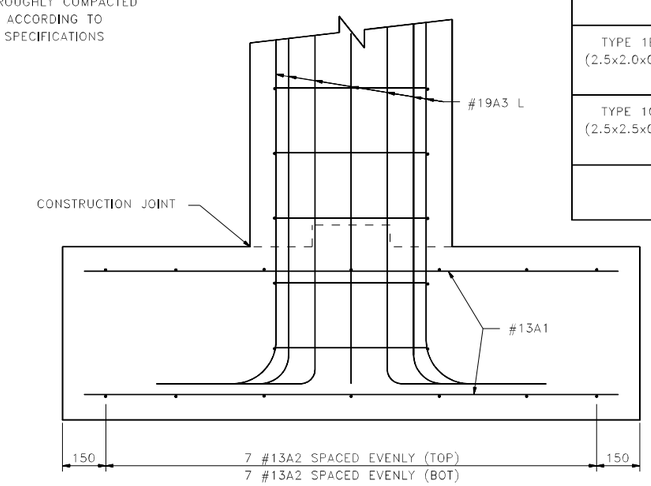
PLAN



SECTION A - A



ELEVATION



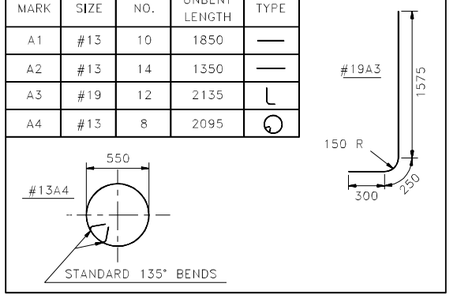
END ELEVATION

GENERAL NOTES (TYPE 1 FOOTING)

1. SEE SHEET 2 OF 2 FOR DETAILS OF TYPE 1B & TYPE 1C FOOTINGS.
2. ALL REINFORCING STEEL SHALL BE EITHER GRADE 300 OR 400.
3. ALL REINFORCING STEEL SHALL BE A MINIMUM 75 mm CLEAR.
4. THE TYPE 1 SPREAD FOOTING SHALL BE POURED IN PLACE ON UNDISTURBED MATERIAL. THE MAXIMUM DESIGN SOIL PRESSURE IS 0.15 MPa. IF THE SOIL IS NOT CAPABLE OF A BEARING PRESSURE OF 0.15 MPa, THE ENGINEER SHALL ORDER REMOVAL OF THE WEAK FOUNDATION MATERIAL AND PLACEMENT OF STRUCTURAL FILL, ITEM 508. COST OF ITEM 508 SHALL BE PAID AS EXTRA WORK. IF SUITABLE SOILS ARE NOT FOUND WITHIN A REASONABLE DISTANCE BELOW THE BOTTOM OF THE FOOTING, THE ENGINEER SHALL REQUEST A REDESIGN.
5. WHERE LEDGE IS ENCOUNTERED, EXCAVATION SHALL STILL EXTEND TO LIMITS SHOWN.

REINFORCING SCHEDULE

MARK	SIZE	NO.	UNBENT LENGTH	TYPE
A1	#13	10	1850	—
A2	#13	14	1350	—
A3	#19	12	2135	L
A4	#13	8	2095	○



TYPICAL QUANTITIES PER BASE

ITEM NO.	DESCRIPTION	QUANTITY
520.21 *	CONCRETE CLASS B (FTGS)	2.3 m3
544 *	REINFORCING STEEL	111 kg
206.1 *	COMMON STRUCTURE EXCAVATION	10 m3

* ITEM NUMBERS SHOWN ARE FOR SPECIFICATION REFERENCE ONLY. NO SEPARATE PAYMENT WILL BE MADE FOR THESE ITEMS.

STANDARD SPREAD FOOTINGS FOR TRAFFIC SIGNALS

DETERMINATION OF REQUIRED FOOTING SIZE

FOOTING SIZE	CASE 1 (MAX. h=12.0, MAX. h1=7.0) SHAPE	MAX. LENGTH OF ONE MAST ARM WITH ONE LUMINAIRE ON THE SAME POLE (L)	MAX. NUMBER OF SIGNALS FOR CASE 1	CASE 2 (MAX. h1=7.0) SHAPE	MAX. LENGTH OF ONE MAST ARM WITH NO LUMINAIRE (L)	MAX. NUMBER OF SIGNALS FOR CASE 2
TYPE 1A (2.0x1.5x0.6)	h, h1, L	6.0 m	2	h1, L	10.0 m	3
TYPE 1B (2.5x2.0x0.6)	h, h1, L	10.0 m	3	h1, L	15.0 m	4
TYPE 1C (2.5x2.5x0.6)	h, h1, L	15.0 m	3			

NOTE: COMBINATIONS OTHER THAN THOSE SHOWN IN THE ABOVE CHART SHALL NOT BE USED WITHOUT DESIGN APPROVAL.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

TRAFFIC SIGNAL STANDARD

TRAFFIC SIGNAL MAST ARM FOUNDATION - TYPE 1A

STANDARD NO. TS-1A
METRIC STANDARD PLANS
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STANDARD NO. TS-1A

STANDARD NO. TS-1B

REVISION DATE
7-13-01

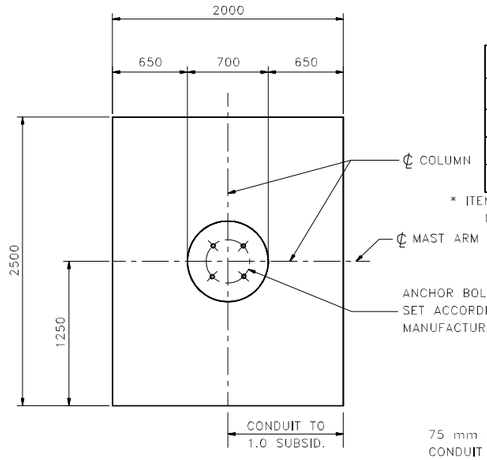
*.DGN FILE NAME
TS-1B

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. TS-1B

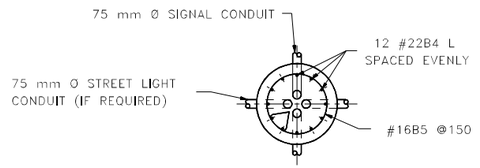
TRAFFIC SIGNAL MAST ARM FOUNDATION - TYPE 1B



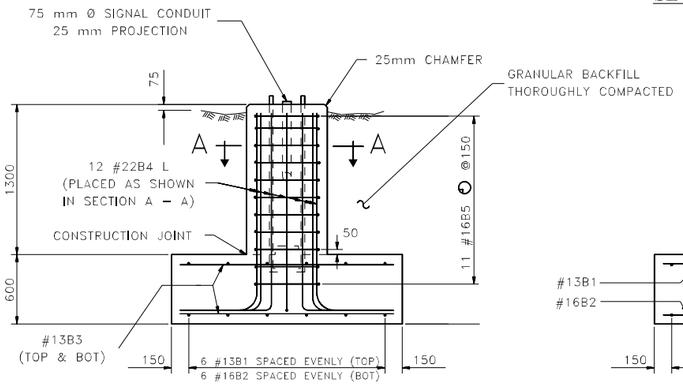
PLAN

TYPICAL QUANTITIES PER BASE		
ITEM NO.	DESCRIPTION	QUANTITY
520.21 *	CONCRETE CLASS B (FTGS)	3.5 m^3
544 *	REINFORCING STEEL	188 kg
206.1 *	COMMON STRUCTURE EXCAVATION	15 m^3

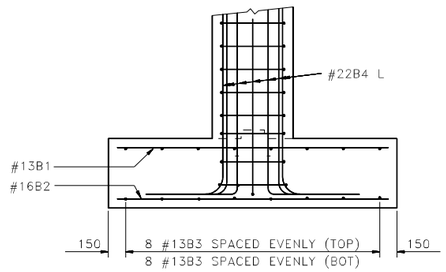
* ITEM NUMBERS SHOWN ARE FOR SPECIFICATION REFERENCE ONLY. NO SEPARATE PAYMENT WILL BE MADE FOR THESE ITEMS.



SECTION A - A

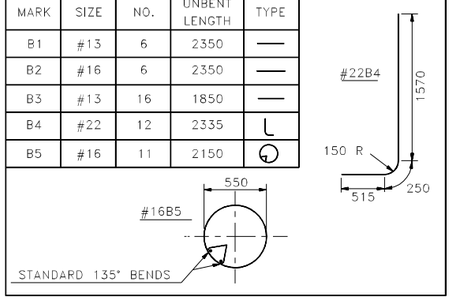


ELEVATION

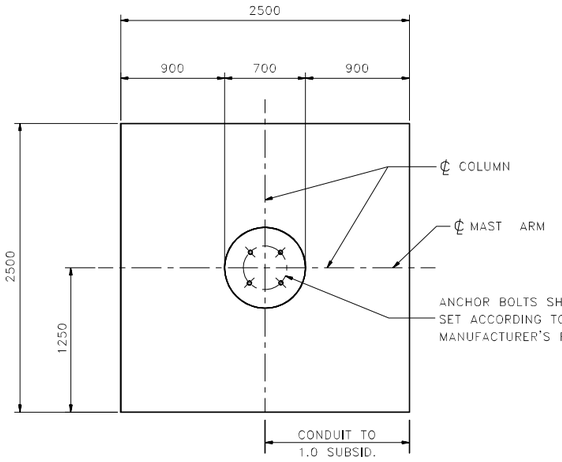


END ELEVATION

REINFORCING SCHEDULE				
MARK	SIZE	NO.	UNBENT LENGTH	TYPE
B1	#13	6	2350	—
B2	#16	6	2350	—
B3	#13	16	1850	—
B4	#22	12	2335	L
B5	#16	11	2150	↻



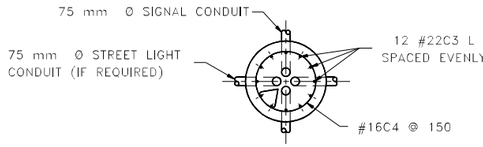
TRAFFIC SIGNAL MAST ARM FOUNDATION - TYPE 1C



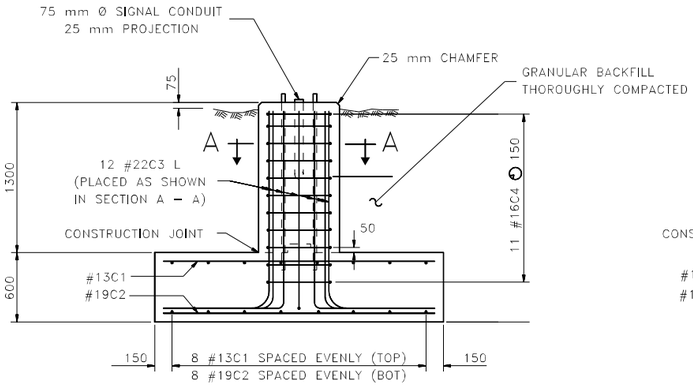
PLAN

TYPICAL QUANTITIES PER BASE		
ITEM NO.	DESCRIPTION	QUANTITY
520.21 *	CONCRETE CLASS B (FTGS)	4.3 m^3
544 *	REINFORCING STEEL	253 kg
206.1 *	COMMON STRUCTURE EXCAVATION	18 m^3

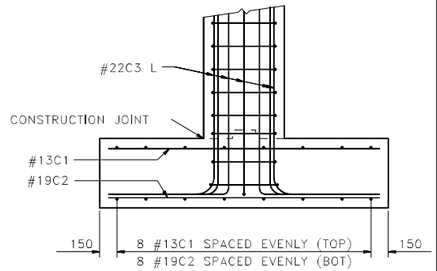
* ITEM NUMBERS SHOWN ARE FOR SPECIFICATION REFERENCE ONLY. NO SEPARATE PAYMENT WILL BE MADE FOR THESE ITEMS.



SECTION A - A

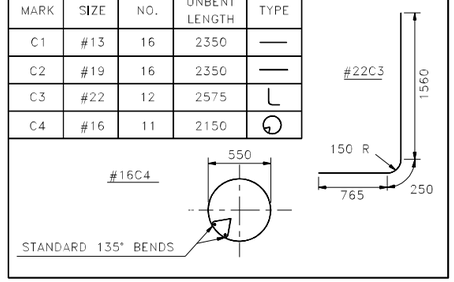


ELEVATION



END ELEVATION

REINFORCING SCHEDULE				
MARK	SIZE	NO.	UNBENT LENGTH	TYPE
C1	#13	16	2350	—
C2	#19	16	2350	—
C3	#22	12	2575	L
C4	#16	11	2150	↻



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

TRAFFIC SIGNAL STANDARD

TRAFFIC SIGNAL MAST ARM FOUNDATIONS - TYPE 1B & 1C

STANDARD NO. TS-1B

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. TS-1B

STANDARD NO. TS-2

REVISION DATE
7-13-01

*.DGN FILE NAME
TS-2

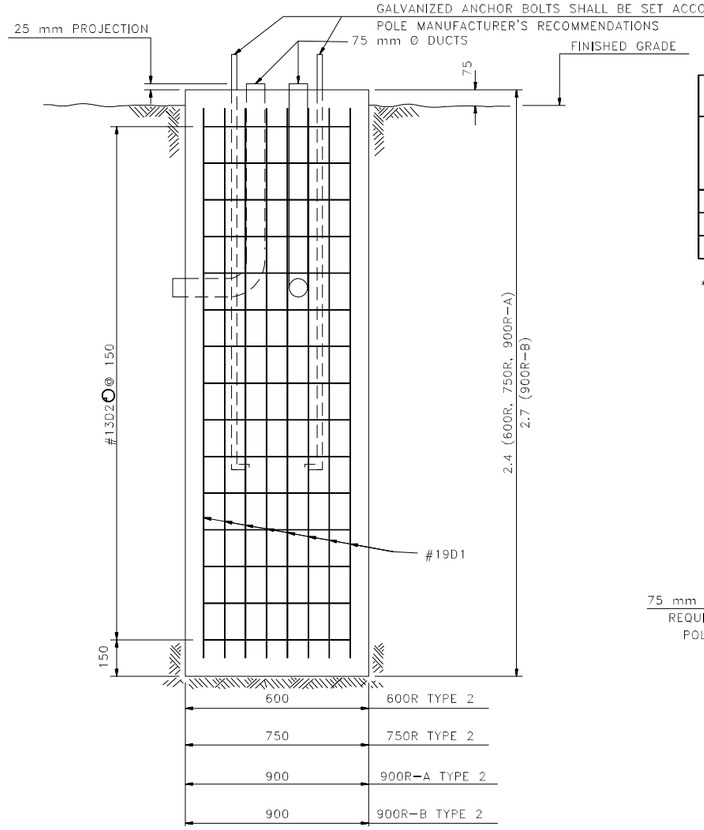
METRIC
STANDARD PLANS

DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STATE OF NEW HAMPSHIRE

STANDARD NO. TS-2

TRAFFIC SIGNAL MAST ARM FOUNDATION - TYPE 2 - 600R, 750R, 900R-A, 900R-B



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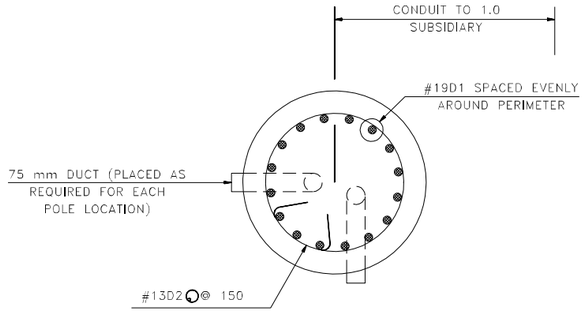


PLAN

TYPICAL QUANTITIES PER BASE

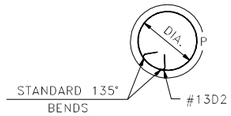
ITEM NUMBER	ITEM	UNIT	QUANTITY FOR FOOTING SIZE			
			600R	750R	900R-A	900R-B
▲ 508*	STRUCTURAL FILL	m^3	19	20	22	25
520.21*	CONCRETE CLASS B, FOOTINGS	m^3	0.8	1.1	1.6	1.8
544*	REINFORCING STEEL	kg	89	115	142	161

* ITEM NUMBERS ARE FOR SPECIFICATION REFERENCE ONLY. NO SEPARATE PAYMENT WILL BE MADE FOR THESE ITEMS, EXCEPT AS PROVIDED IN NOTE NO. 1 OF THE GENERAL NOTES, AND NOTE NO. 4 FOR THE EXCAVATED HOLES.

REINFORCING SCHEDULE

MARK	SIZE	NO.	UNBENT LENGTH	TYPE
D1	#19	"X"	"Z"	—
D2	#13	"W"	"Y"	○

FOUNDATION SIZE	"W"	"X"	"Y"	"Z"
600R	15	12	1825	2250
750R	15	16	2300	2250
900R-A	15	20	2775	2250
900R-B	17	20	2775	2550



FOUNDATION SIZE	DIMENSION	
	D	P
600R	440	1382
750R	590	1854
900R-A	740	2325
900R-B	740	2325

GENERAL NOTES (TYPE 2 FOOTING)

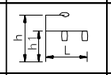
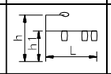
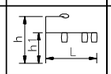
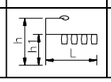
1. THE ROUND TYPE 2 FOOTING SHALL BE POURED IN DRILLED HOLES AGAINST UNDISTURBED MATERIAL. THE MAXIMUM DESIGN SOIL PRESSURE IS 0.15 MPa (BOTH HORIZONTALLY AND VERTICALLY). IF THE SOIL IS NOT CAPABLE OF A BEARING PRESSURE OF 0.15 MPa OR WILL NOT STAND VERTICALLY, THE ENGINEER SHALL REQUEST AN EXCAVATED HOLE AS DESCRIBED BELOW.
2. THE DRILLED HOLES FOR THE ROUND TYPE 2 FOOTING SHALL BE MADE WITH THE PROPER SIZE AUGER DRILLED TO THE PROPOSED BOTTOM OF FOOTING (2.4 m BELOW THE FINISHED GROUND SURFACE FOR 600R, 750R AND 900R-A, AND 2.7 m FOR 900R-B).
3. TRENCHES FOR THE CONDUITS SHALL BE HAND DUG WITHIN 1.5 m OF THE PROPOSED FOOTING SURFACE, DISTURBING AS LITTLE SOIL AS POSSIBLE IN PLACING OF THE CONDUITS (APPROXIMATELY 0.8 m MAXIMUM DOWN FROM THE EXISTING GROUND SURFACE). THE RESULTING TRENCHES SHALL BE BACKFILLED WITH STRUCTURAL FILL. THE HORIZONTAL LIMIT SHALL BE 1.5 m FROM THE FOOTING SURFACE.
4. THE ENGINEER SHALL REQUEST A BORING AT ANY LOCATION WHERE HE DEEMS THE SOILS TO BE QUESTIONABLE BEFORE PROCEEDING WITH THE DRILLING OPERATION. IF AFTER THE DRILLING OPERATION THE SOILS ARE NOT FOUND UNSUITABLE, THE ENGINEER SHALL REQUEST AN EXCAVETED HOLE AS DETERMINED BELOW OR THE USE OF A TYPE 1 SPREAD FOOTING.
5. WHERE LEDGE IS ENCOUNTERED THE DRILL SHALL PENETRATE THE LEDGE A MINIMUM OF 0.9 m AND IN ALL CASES A MINIMUM FOOTING LENGTH OF 1.5 m SHALL BE OBTAINED. MAXIMUM DRILL PENETRATION SHALL ALL BE 2.4 m FOR 600R, 750R AND 900R-A, AND 2.7 m FOR 900R-B.
6. ALL REINFORCING STEEL SHALL BE EITHER GRADE 300 OR GRADE 400
7. ALL REINFORCING STEEL SHALL BE A MINIMUM 75 mm CLEAR.

▲ *EXCAVATED HOLES*

1. AS AN ALTERNATIVE TO THE ABOVE DRILLED HOLES, THE ROUND TYPE 2 FOOTINGS MAY BE POURED IN EXCAVATED HOLES, USING THE PROPER FORMS WHICH MUST BE REMOVED, OR PRECAST AND PLACED IN THE EXCAVATED HOLES.
2. THE EXCAVATED HOLES SHALL BE AT LEAST 0.9 m CLEAR OF THE FOOTING SIDES AND 0.3 m DEEPER THAN THE FOOTING. CARE SHALL BE TAKEN TO AVOID OVER-EXCAVATING AROUND THE TOP OF THE FOOTING.
3. ANY LEDGE ENCOUNTERED SHALL BE REMOVED TO THE ABOVE LIMITS IF POSSIBLE OR THE ENGINEER SHALL REQUEST A REDESIGN.
4. THE TOTAL EXCAVATED HOLE FOR EACH FOOTING SHALL BE COMPLETELY BACKFILLED WITH STRUCTURAL FILL. NO PAYMENT SHALL BE MADE FOR STRUCTURAL FILL, EXCEPT AS PROVIDED IN NOTE NO. 1 OF THE GENERAL NOTES.

STANDARD ROUND TRAFFIC SIGNAL FOUNDATION

DETERMINATION OF REQUIRED FOOTING SIZE

FOOTING SIZE	CASE 1 (MAX. h=12.2, MAX. h1=6.7)			CASE 2 (MAX. h1=6.7)		
	SHAPE	MAX. LENGTH OF ONE MAST ARM WITH ONE LUMINAIRE ON THE SAME POLE (L)	MAX. NUMBER OF SIGNALS FOR CASE 1	SHAPE	MAX. LENGTH OF ONE MAST ARM WITH NO LUMINAIRE (L)	MAX. NUMBER OF SIGNALS FOR CASE 2
600R TYPE 2 (600 x 2.4)		5.0 m	2		8.0 m	3
750R TYPE 2 (750 x 2.4)		8.0 m	3		11.0 m	4
900R-A TYPE 2 (900 x 2.4)		11.0 m	3		13.0 m	4
900R-B TYPE 2 (900 x 2.7)		15.0 m	4		15.0 m	4

NOTE: COMBINATIONS OTHER THAN THOSE SHOWN IN THE ABOVE CHART SHALL NOT BE USED WITHOUT DESIGN APPROVAL.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

TRAFFIC SIGNAL STANDARD

TRAFFIC SIGNAL MAST ARM FOUNDATION - TYPE 2

STANDARD NO. TS-2
METRIC STANDARD PLANS
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STATE OF NEW HAMPSHIRE
STANDARD NO. TS-2

STANDARD NO. TS-3

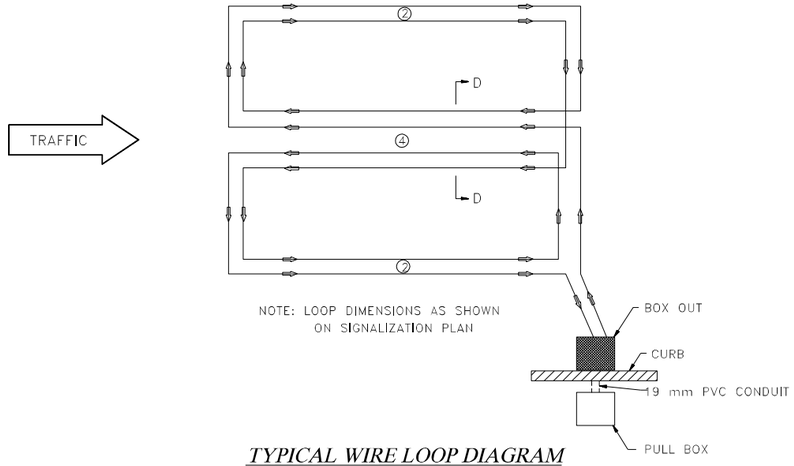
REVISION DATE
7-13-01

*.DGN FILE NAME
TS-3

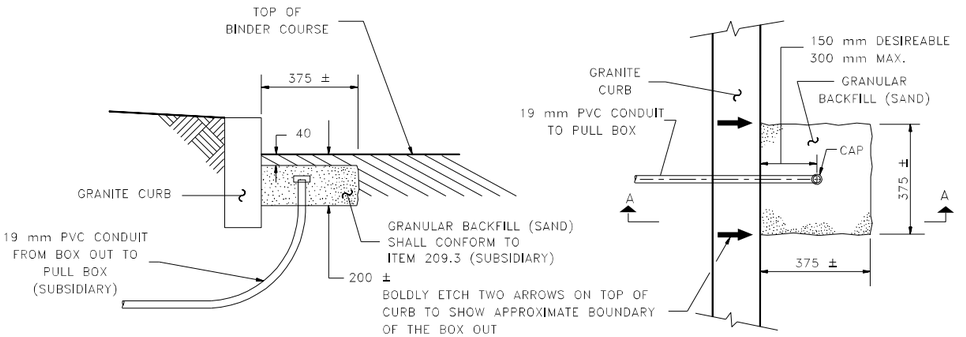
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. TS-3



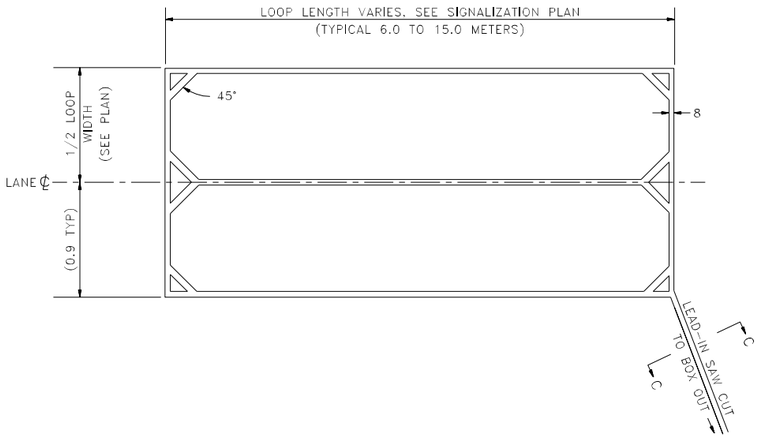
TYPICAL WIRE LOOP DIAGRAM
NOT TO SCALE



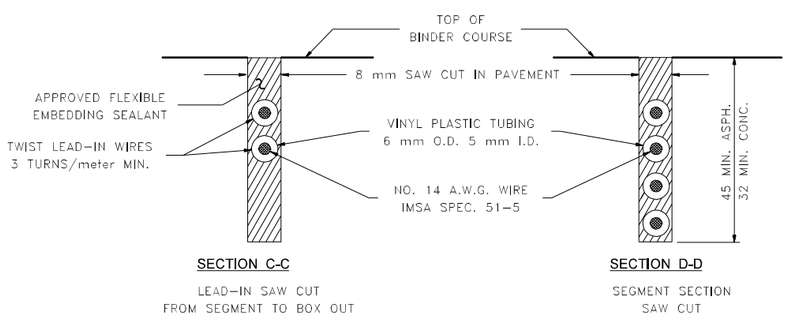
SECTION A-A

PLAN

DETECTOR BOX OUT DETAIL STAGE 1: AT PAVING
NOT TO SCALE



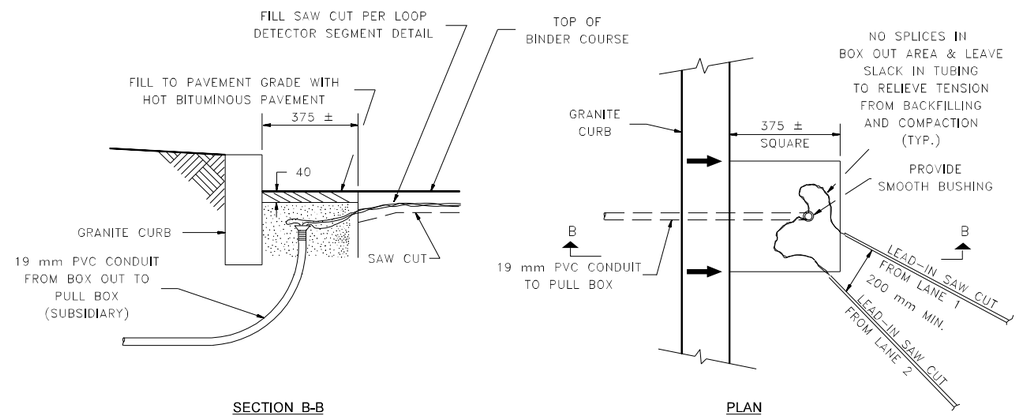
QUADRUPOLE LOOP INSTALLATION SAW CUT DETAIL
NOT TO SCALE



SECTION C-C
LEAD-IN SAW CUT FROM SEGMENT TO BOX OUT

SECTION D-D
SEGMENT SECTION SAW CUT

LOOP DETECTOR SEGMENT DETAIL
NOT TO SCALE



SECTION B-B

PLAN

DETECTOR BOX OUT DETAIL STAGE 2: AT LOOP INSTALLATION
NOT TO SCALE

GENERAL NOTES

1. MAXIMUM OF TWO LEAD-IN PAIRS PER 19 mm CONDUIT.
2. TAPE TUBING 75 mm ON EACH SIDE OF THE SAW CUT BOX OUT BOUNDARY WITH ELECTRICAL TAPE.
3. AFTER TUBING IS INSTALLED, FILL CONDUIT WITH CRUMPLED PAPER AND SEAL WITH PLIABLE DUCT SEALANT.
4. USE ITEM 209.3 – GRANULAR BACKFILL (SAND) (SUBSIDIARY) TO COVER AND SUPPORT THE VINYL PLASTIC TUBING.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

TRAFFIC SIGNAL STANDARD

QUADRUPOLE LOOP DETECTOR 2-4-2 TURNS

STANDARD NO. TS-3

REVISION DATE
7-13-01

*.DGN FILE NAME
TS-3

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. TS-3

STANDARD NO. TS-4

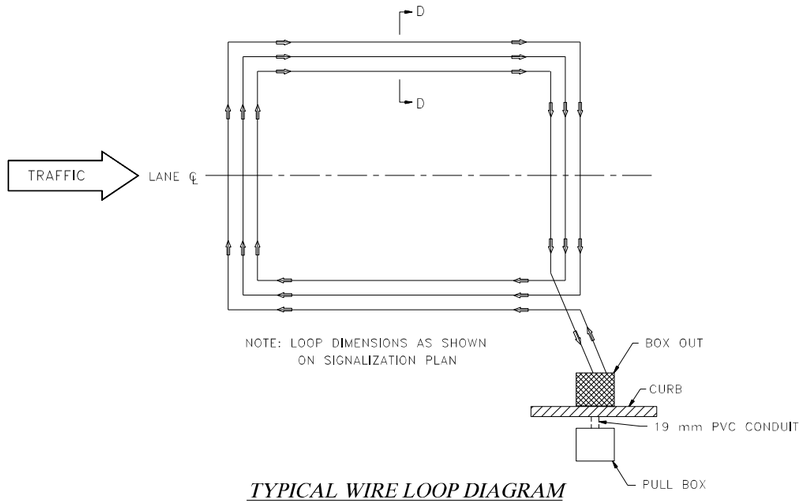
REVISION DATE
7-13-01

*.DGN FILE NAME
TS-4

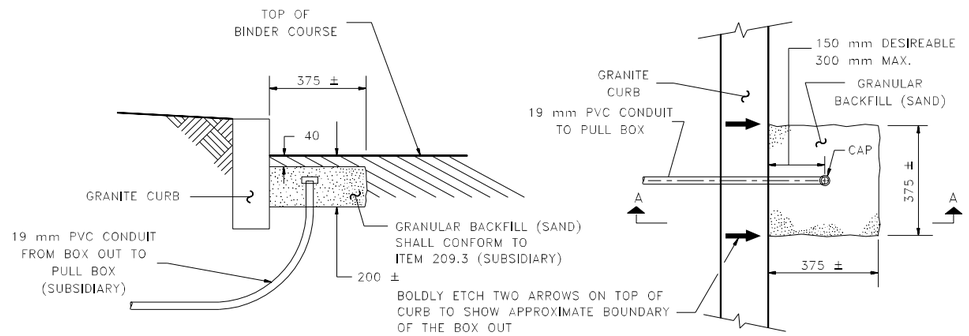
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

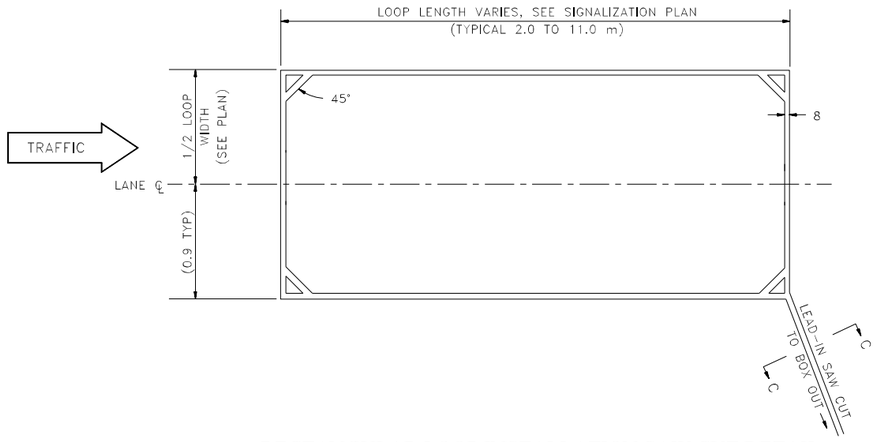
STANDARD NO. TS-4



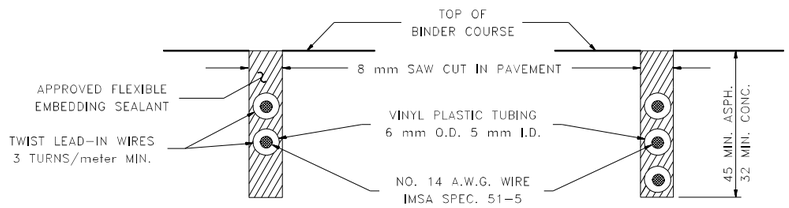
TYPICAL WIRE LOOP DIAGRAM
NOT TO SCALE



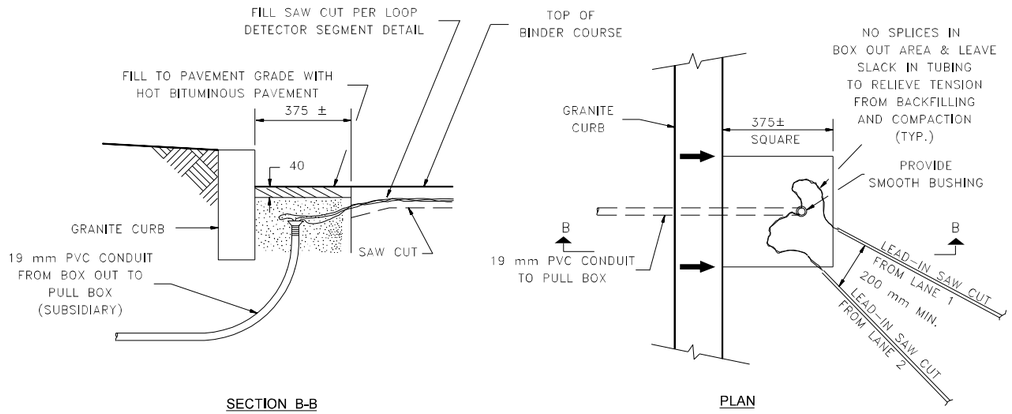
DETECTOR BOX OUT DETAIL STAGE 1: AT PAVING
NOT TO SCALE



RECTANGULAR LOOP INSTALLATION SAW CUT DETAIL
NOT TO SCALE



LOOP DETECTOR SEGMENT DETAIL
NOT TO SCALE



DETECTOR BOX OUT DETAIL STAGE 2: AT LOOP INSTALLATION
NOT TO SCALE

GENERAL NOTES

1. MAXIMUM OF TWO LEAD-IN PAIRS PER 19 mm CONDUIT.
2. TAPE TUBING 75 mm ON EACH SIDE OF THE SAW CUT BOX OUT BOUNDARY WITH ELECTRICAL TAPE.
3. AFTER TUBING IS INSTALLED, FILL CONDUIT WITH CRUMPLED PAPER AND SEAL WITH PLIABLE DUCT SEALANT.
4. USE ITEM 209.3 – GRANULAR BACKFILL (SAND) (SUBSIDIARY) TO COVER AND SUPPORT THE VINYL PLASTIC TUBING.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

TRAFFIC SIGNAL STANDARD

RECTANGULAR LOOP DETECTOR 3 TURNS

STANDARD NO. TS-4
METRIC STANDARD PLANS
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STANDARD NO. TS-4

STANDARD NO. PM-1

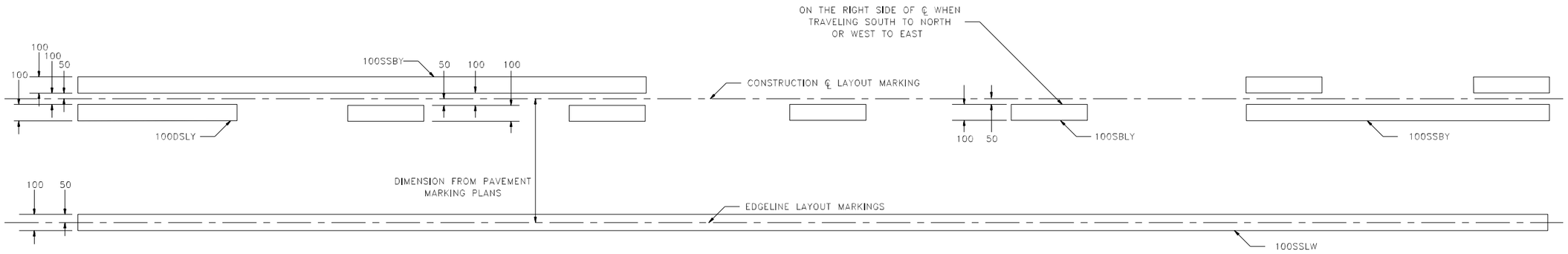
REVISION DATE
7-13-01

*.DGN FILE NAME
PM-1

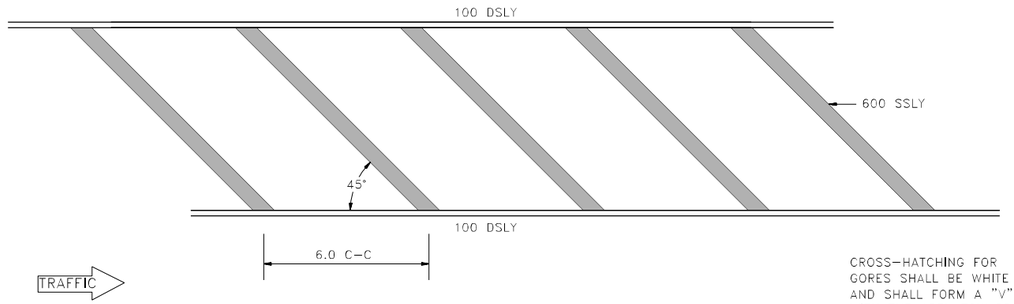
METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PM-1

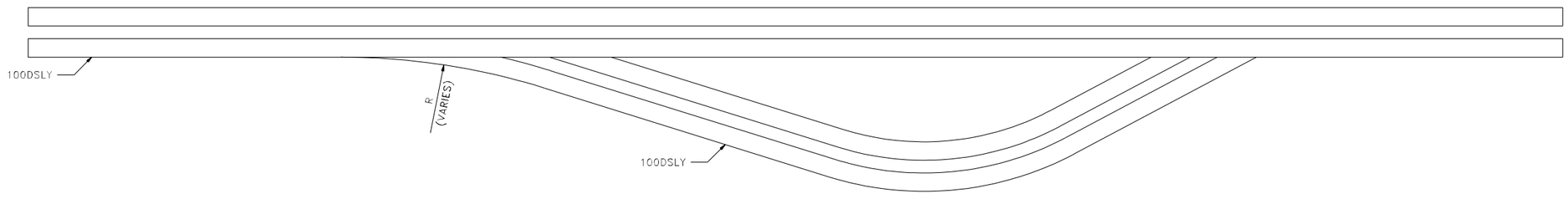


TWO-LANE ROADWAY STRIPING LAYOUT



CROSS-HATCHING FOR GORES SHALL BE WHITE AND SHALL FORM A "V" WITH THE APEX TOWARD APPROACHING TRAFFIC.

CROSS-HATCHING DETAIL
(TO BE USED ONLY WHEN SPECIFIED)



DIVERGING (OR CONVERGING) LINES FOR PAINTED ISLANDS

LEGEND

{ }SSL() = {SIZE IN MILLIMETERS} SINGLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
{ }DSL() = {SIZE IN MILLIMETERS} DOUBLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
{ }SSB() = {SIZE IN MILLIMETERS} SINGLE SOLID W/ BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
{ }SBL() = {SIZE IN MILLIMETERS} SINGLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
{ }DBL() = {SIZE IN MILLIMETERS} DOUBLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)

EXAMPLE:
A 100 mm SINGLE SOLID LINE WHITE = 100SSLW

DOUBLE LINES

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

LAYOUT DETAILS

STANDARD NO. PM-1

STANDARD NO. PM-2

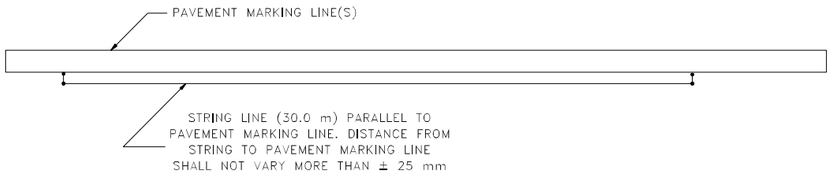
REVISION DATE
7-13-01

*.DGN FILE NAME
PM-2

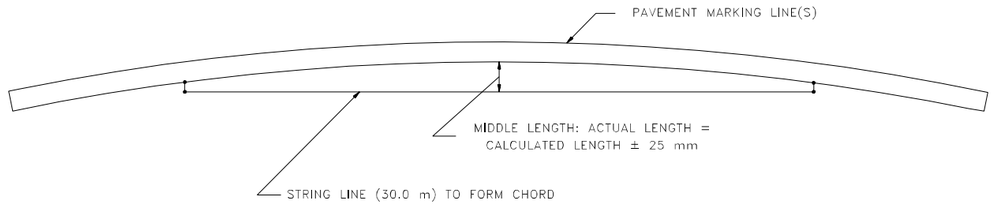
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

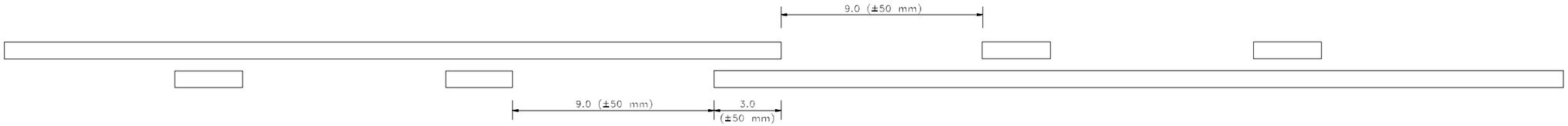
STANDARD NO. PM-2



TANGENT SECTION

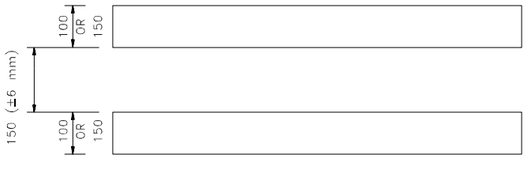


CURVED SECTION

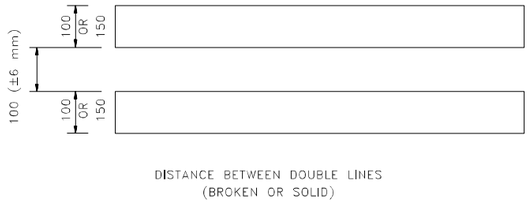


TYPICAL "CROSS-SWITCH" PASSING ZONE

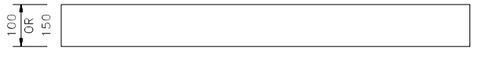
TYPICAL BROKEN LINE



DOUBLE LINES WITH RPMS



DOUBLE LINES



TYPICAL LANE LINE WIDTH

GENERAL NOTES

1. ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THESE STANDARDS AND THE CURRENT EDITION OF THE *MUTCD*.
2. WIDTH OF LINES SHALL VARY NO MORE THAN ± 6 mm FROM THAT SPECIFIED.
3. THE WET FILM THICKNESS OF A PAINTED LINE SHALL BE A MINIMUM OF 508 MICROMETERS THROUGHOUT THE ENTIRE WIDTH AND LENGTH OF LINE SPECIFIED.
4. BROKEN LINES SHALL BEGIN AND END WITH THE NEAREST FULL CYCLE OF BROKEN LINE.
5. SOLID LONGITUDINAL LINES SHALL BEGIN AND END WITHIN 50 mm OF A LAYOUT SYMBOL INDICATING THE END OF THE LINE, OR WITH A FULL CYCLE OF BROKEN LINE (IF APPROPRIATE).

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

TOLERANCES FOR PAVEMENT MARKING LINES

STANDARD NO. PM-2

STANDARD NO. PM-3A

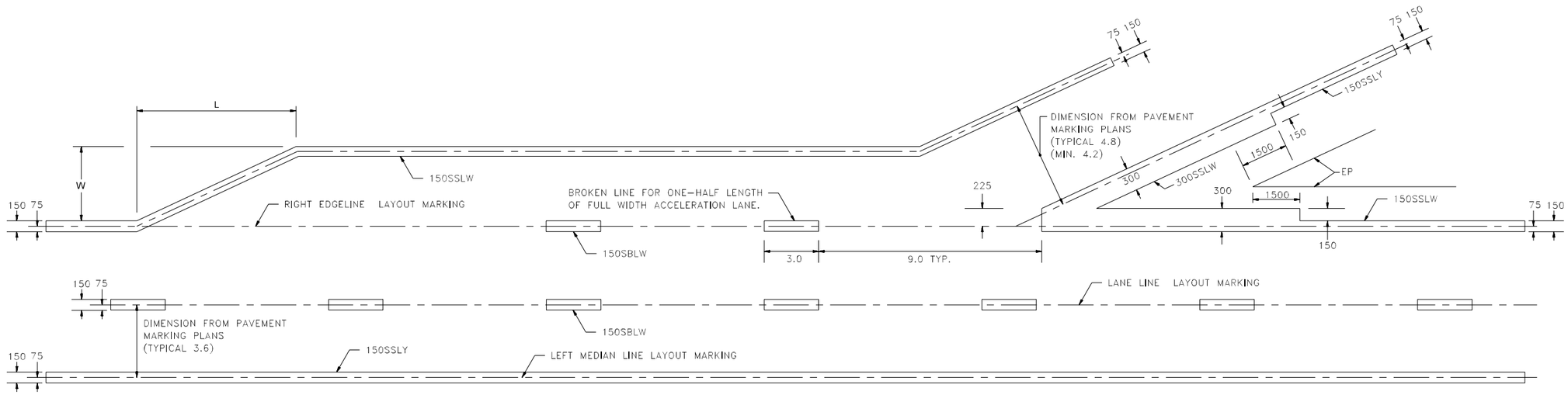
REVISION DATE
7-13-01

*.DGN FILE NAME
PM-3A

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PM-3A



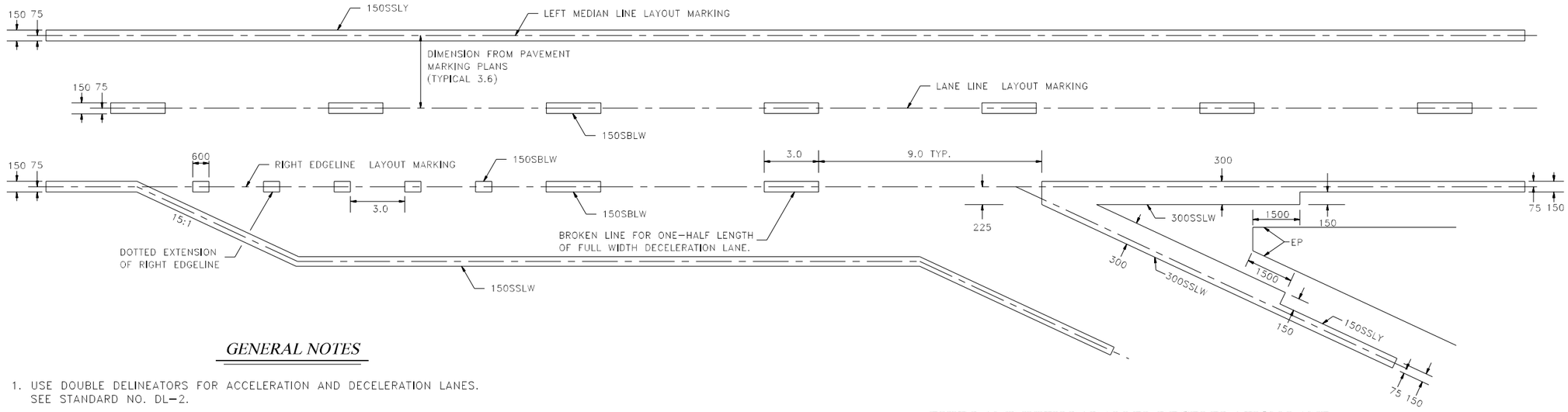
TRANSITION TAPER = L

POSTED SPEED (mph)	L *
≤ 40	WS²/60
≥ 45	WS

* CONVERSION FOR METERS MULTIPLY L x 0.30

W = WIDTH OF OFFSET (feet)
S = POSTED SPEED LIMIT (mph)

ENTRANCE RAMP WITH PARALLEL ACCELERATION LANE



EXIT RAMP WITH PARALLEL DECELERATION LANE

GENERAL NOTES

1. USE DOUBLE DELINEATORS FOR ACCELERATION AND DECELERATION LANES. SEE STANDARD NO. DL-2.
2. ALL RAMPS WITH A MINIMUM ROADWAY WIDTH OF 6.0 m SHALL RECEIVE BOTH WHITE EDGELINE AND YELLOW MEDIAN LINE WHETHER THE RAMP HAS RAISED CURBING OR NOT.
3. THE EDGE AND MEDIAN LINE MARKINGS FOR RAMPS WILL BE A MINIMUM OF 800 mm FROM THE CURB OR EDGE OF PAVEMENT.
4. THE MINIMUM DISTANCE BETWEEN THE LINES FOR RAMPS SHOULD BE 4.2 m. THE MEDIAN LINE ON A RAMP SHALL CONNECT WITH THE GORE MARKING. THE EDGE LINE SHALL CONNECT WITH THE MAINLINE EDGELINE TO PROVIDE A CONTINUOUS LINE.

INTERSTATE AND DIVIDED HIGHWAYS

PAVEMENT MARKING STANDARD

DIVIDED ROADWAY MULTIPLE LANES WITH ENTRANCE AND EXIT RAMPS STRIPING LAYOUT

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

STANDARD NO. PM-3A

STANDARD NO. PM-3B

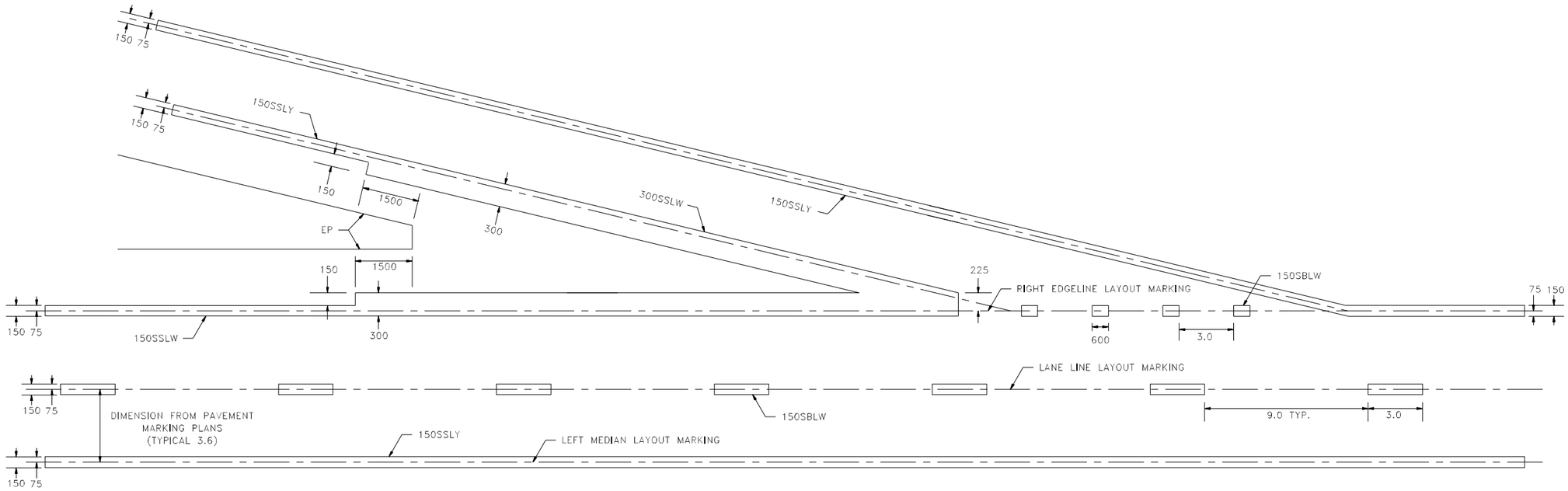
REVISION DATE
7-13-01

*.DGN FILE NAME
PM-3B

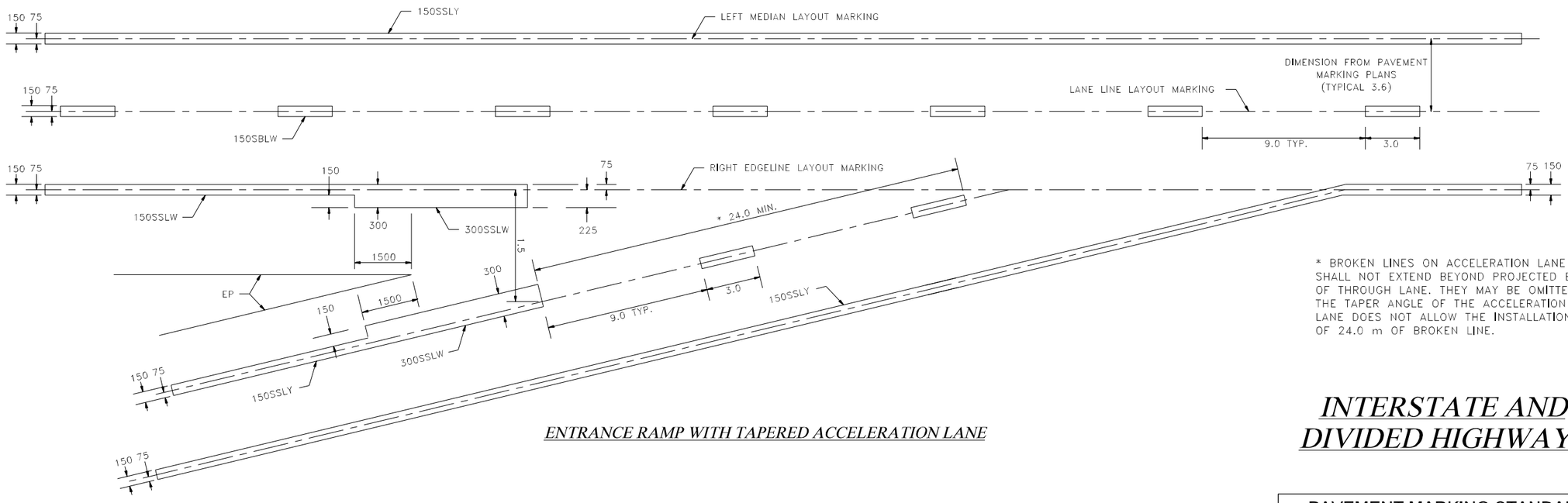
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PM-3B



EXIT RAMP WITH TAPERED DECELERATION LANE



ENTRANCE RAMP WITH TAPERED ACCELERATION LANE

* BROKEN LINES ON ACCELERATION LANE SHALL NOT EXTEND BEYOND PROJECTED EDGE OF THROUGH LANE. THEY MAY BE OMITTED IF THE TAPER ANGLE OF THE ACCELERATION LANE DOES NOT ALLOW THE INSTALLATION OF 24.0 m OF BROKEN LINE.

INTERSTATE AND DIVIDED HIGHWAYS

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

DIVIDED ROADWAY MULTIPLE LANES WITH ENTRANCE AND EXIT RAMPS STRIPING LAYOUT

STANDARD NO. PM-3B

STANDARD NO. PM-3C

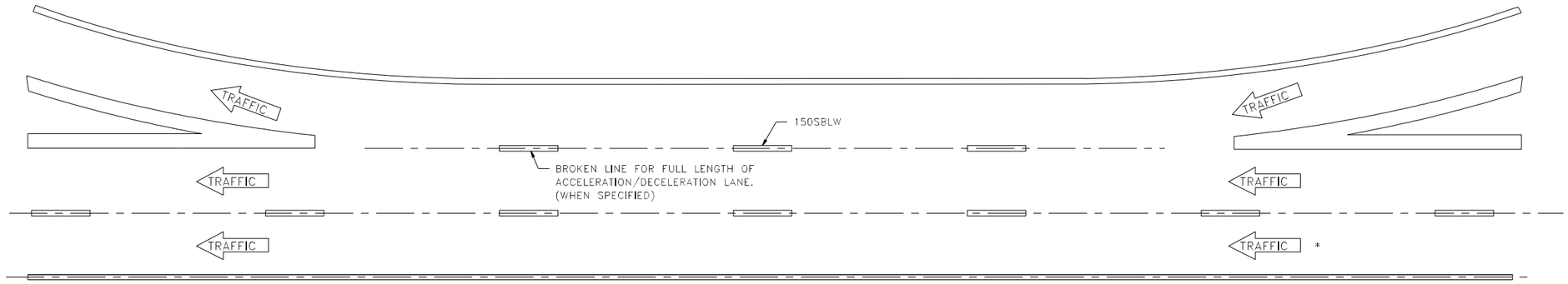
REVISION DATE
7-13-01

*.DGN FILE NAME
PM-3C

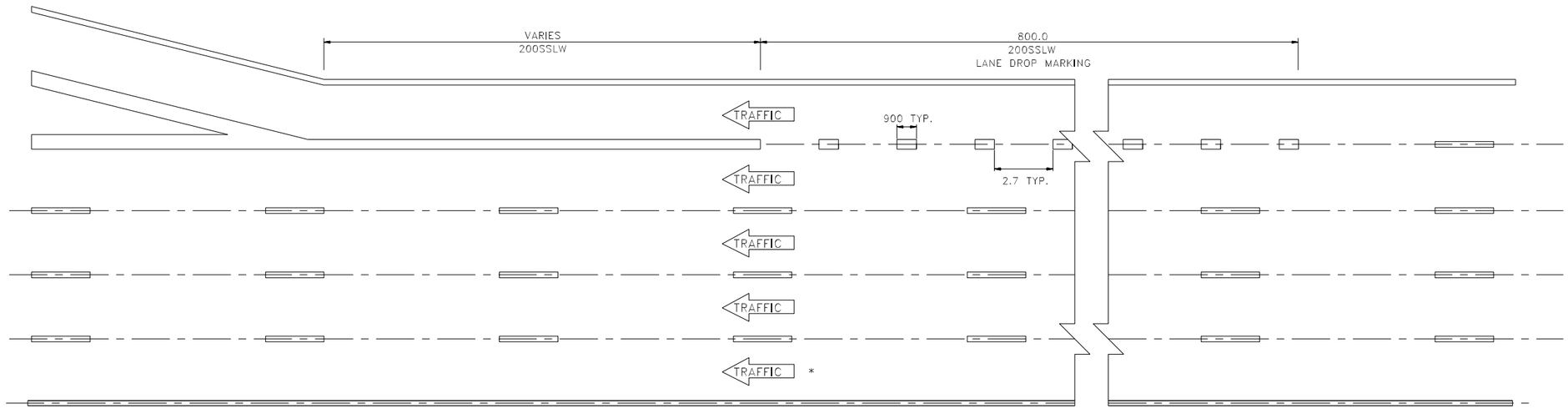
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PM-3C



ENTRANCE AND EXIT RAMP CLOVERLEAF MARKINGS



EXIT RAMPS WITH LANE DROP AT EXIT

* ARROWS SHOWN ON THIS SHEET INDICATE DIRECTION OF TRAFFIC ONLY.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

DIVIDED ROADWAY MULTIPLE LANES WITH ENTRANCE AND EXIT RAMPS STRIPING LAYOUT

STANDARD NO. PM-3C

STANDARD NO. PM-4

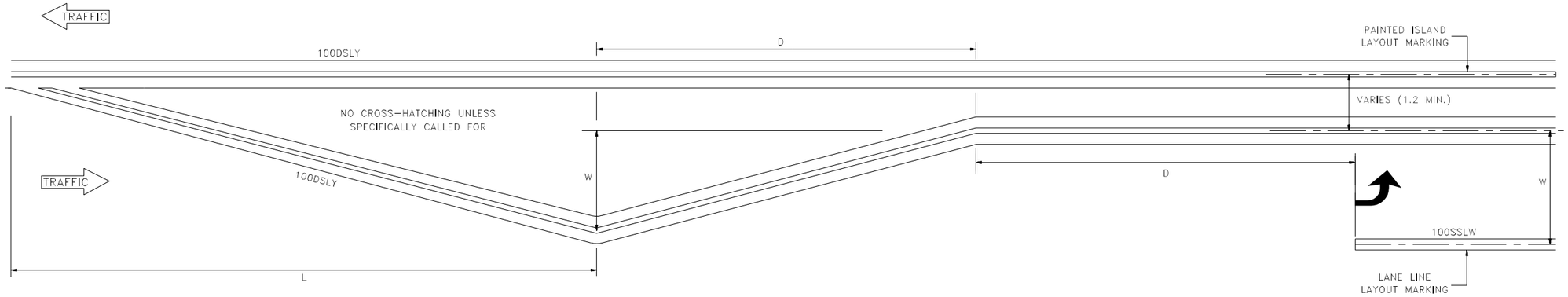
REVISION DATE
7-13-01

*.DGN FILE NAME
PM-4

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PM-4



TRANSITION TAPER = L

POSTED SPEED (mph)	L
≤ 40	$WS^2/60$
≥ 45	$W.S$

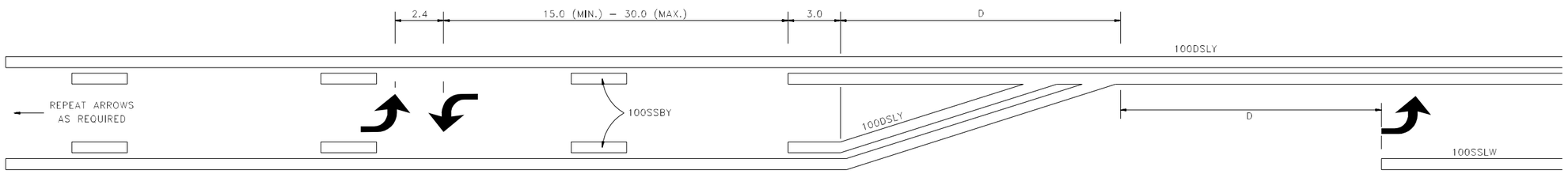
* CONVERSION FOR METERS
MULTIPLY L X 0.30

W = WIDTH OF OFFSET (feet)
S = POSTED SPEED LIMIT (mph)

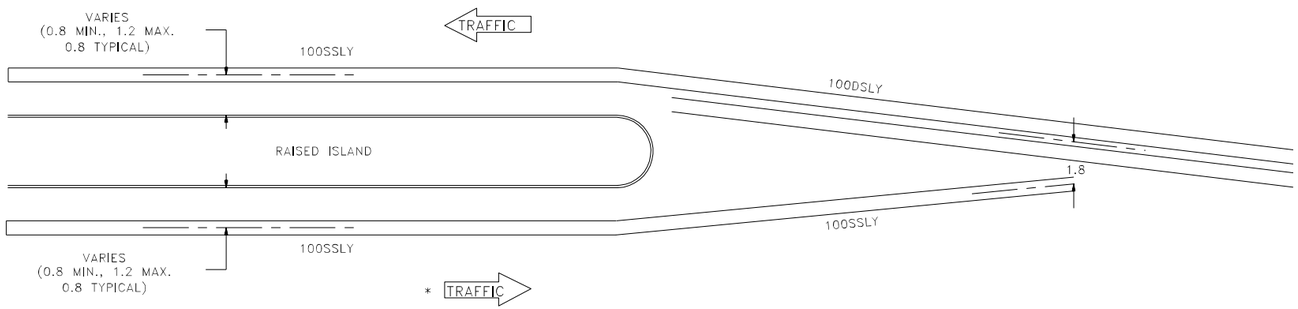
PAINTED ISLAND WITH LEFT TURN LANE

DECELERATION TRANSITION TAPER = D

POSTED SPEED (mph)	LENGTH ft	LENGTH m
≤ 40	75	23.0
≥ 45	100	30.0



SINGLE LANE, TWO-WAY LEFT TURN WITH LEFT TURN ONLY



STRIPING AT ENDS OF RAISED ISLANDS

GENERAL NOTES

1. SEE STANDARD NO. PM-6 FOR LAYOUT OF WORDS AND SYMBOLS WITHIN TURN LANES.

* ARROWS SHOWN ON THIS SHEET INDICATE DIRECTION OF TRAFFIC ONLY.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

PAINTED ISLAND DETAILS

STANDARD NO. PM-4
REVISION DATE
7-13-01
*.DGN FILE NAME
PM-4
METRIC STANDARD PLANS
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STANDARD NO. PM-4

STANDARD NO. PM-5

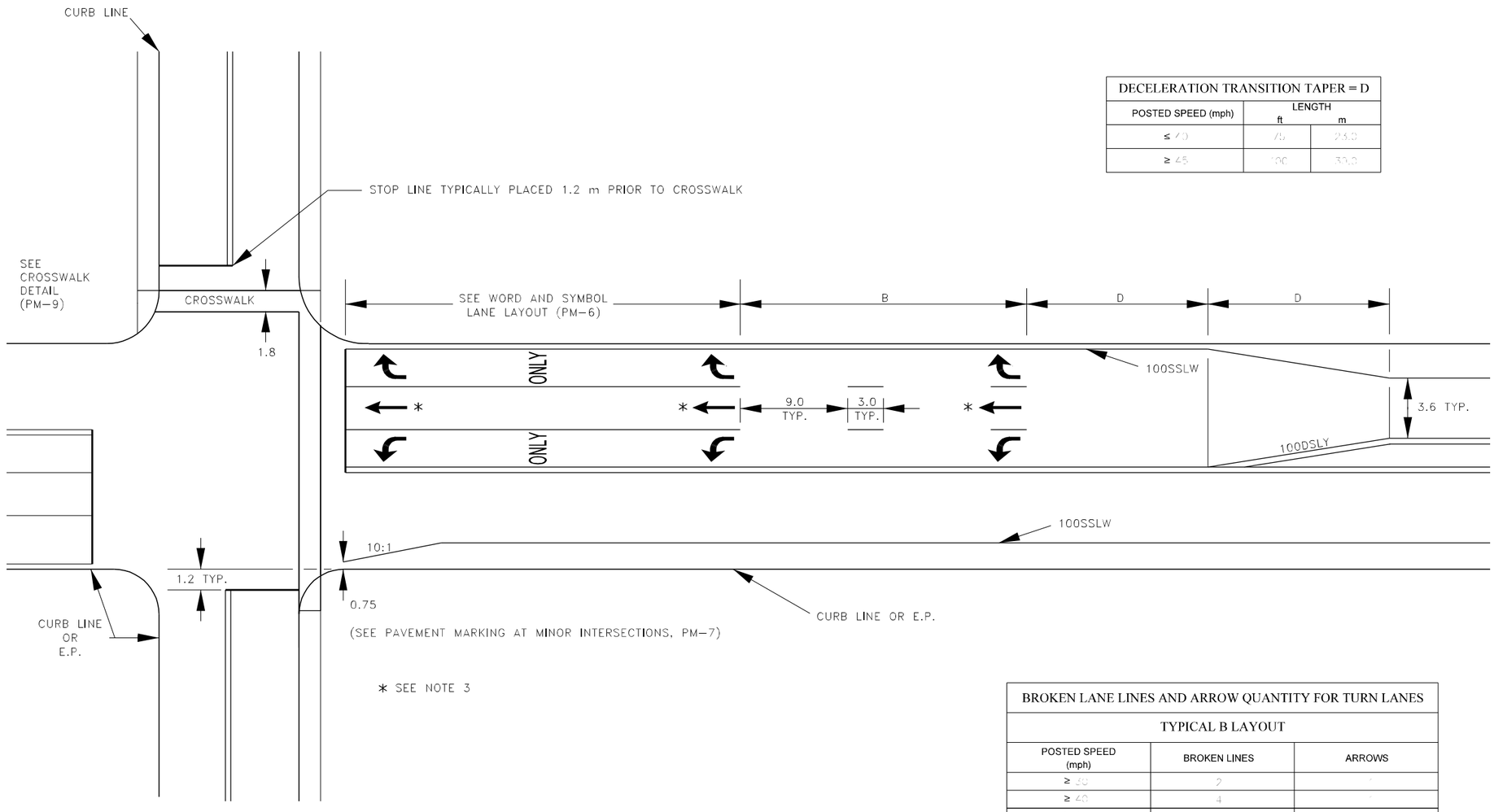
REVISION DATE
7-13-01

*.DGN FILE NAME
PM-5

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PM-5



DECELERATION TRANSITION TAPER = D		
POSTED SPEED (mph)	LENGTH ft	m
≤ 40	45	25.0
≥ 45	100	30.0

BROKEN LANE LINES AND ARROW QUANTITY FOR TURN LANES		
TYPICAL B LAYOUT		
POSTED SPEED (mph)	BROKEN LINES	ARROWS
≥ 30	2	1
≥ 40	4	1
≥ 45	5	2

GENERAL NOTES

1. PAINTED EDGELINE REQUIRED ON CURBED SHOULDERS GREATER THAN 750 mm.
2. STOP LINES ARE 450 mm WIDE
3. STRAIGHT THRU ARROWS ARE OPTIONAL. SEE THE PAVEMENT MARKING PLANS FOR THE APPROPRIATE LAYOUT.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

INTERSECTION DETAILS

STANDARD NO. PM-5

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PM-5

STANDARD
NO. PM-6

REVISION DATE
7-13-01

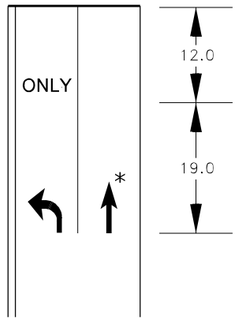
*.DGN FILE NAME
PM-6

METRIC
STANDARD PLANS

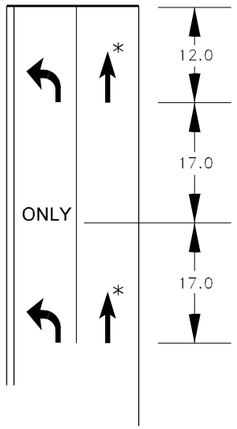
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD
NO. PM-6

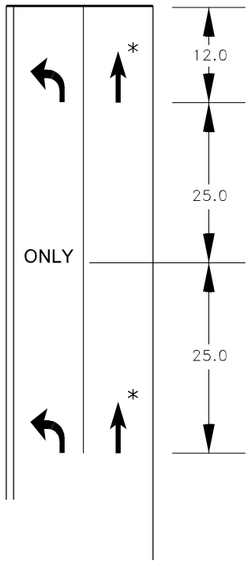
31.0 m / LANE LINE



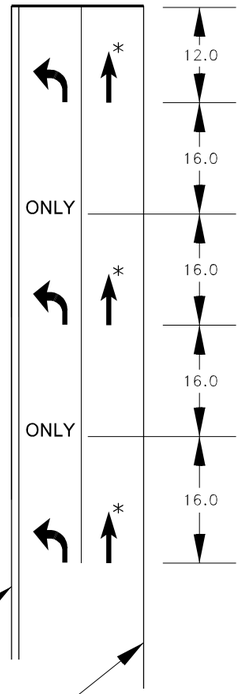
46.0 m / LANE LINE



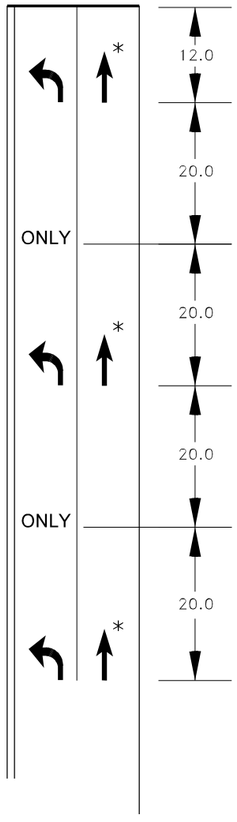
62.0 m / LANE LINE



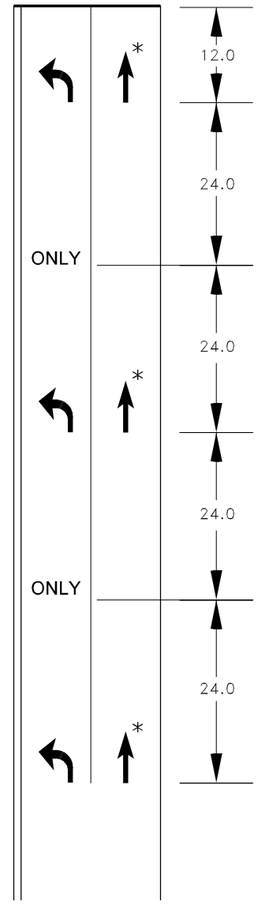
76.0 m / LANE LINE



92.0 m / LANE LINE



108.0 m / LANE LINE



TYPICAL:
CENTER LINE OR ISLAND

TYPICAL:
EDGELINE, CURB LINE
OR LANE LINE

* SEE NOTE NO. 5

GENERAL NOTES

1. WORDS AND SYMBOLS SHALL BE CENTERED LATERALLY WITHIN THE LANE. THE LONGITUDINAL DIMENSION SHALL BE PARALLEL TO THE LANE.
2. LONGITUDINAL SPACING BETWEEN SUCCESSIVE WORDS AND/OR SYMBOLS IN TURN LANES SHOULD BE AT LEAST 4 TIMES AND NO GREATER THAN 10 TIMES THE HEIGHT OF THE LARGEST CHARACTER.
3. THE STOP LINE MAY NOT BE PRESENT.
4. SEE WORDS AND SYMBOLS, PM-10A, FOR WORDS AND SYMBOL DETAILS.
5. STRAIGHT THRU ARROWS ARE OPTIONAL. SEE THE PAVEMENT MARKING PLANS FOR THE APPROPRIATE LAYOUT.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

WORD AND SYMBOL LANE LAYOUT

STANDARD
NO. PM-6

REVISION DATE
7-13-01

*.DGN FILE NAME
PM-6

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD
NO. PM-6

STANDARD NO. PM-7

REVISION DATE
7-13-01

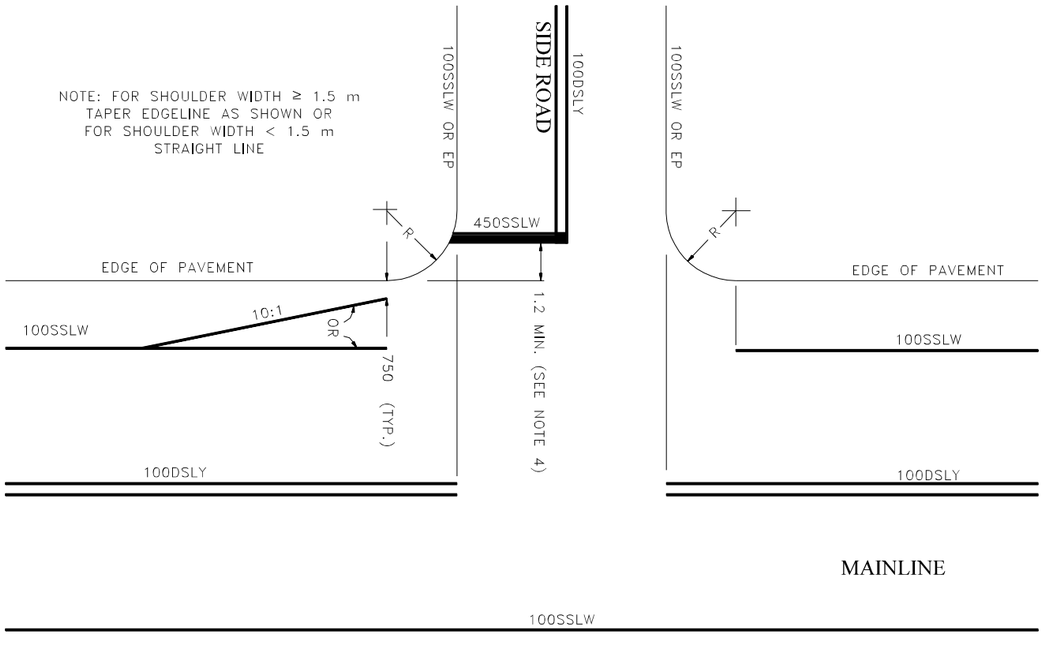
*.DGN FILE NAME
PM-7

METRIC STANDARD PLANS

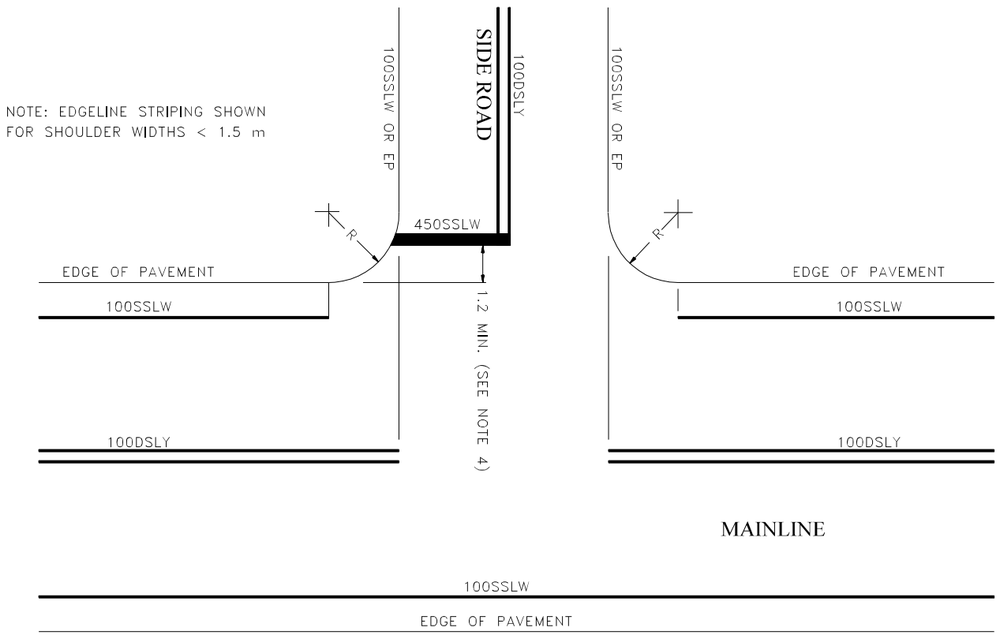
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PM-7

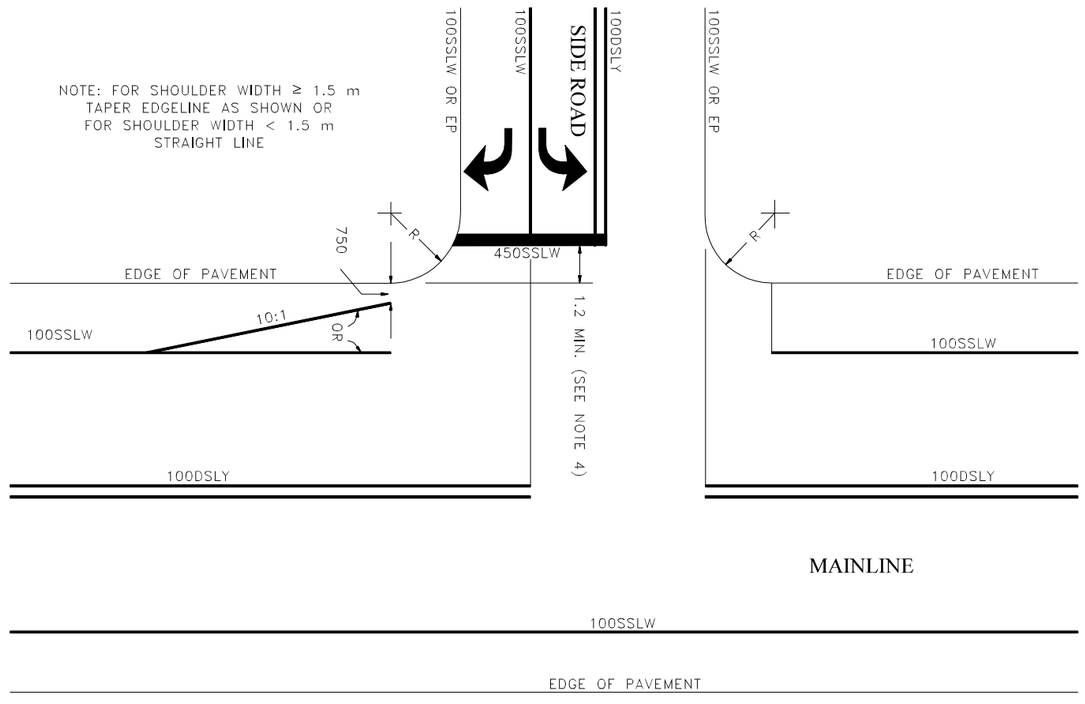
CENTERLINE AND EDGE LINE "CUTS" AT SIDE ROAD



CENTERLINE AND EDGE LINE "CUTS" AT SIDE ROAD



CENTERLINE AND EDGE LINE "CUTS" AT SIDE ROAD WITH TURN LANES



GENERAL NOTES

1. EDGELINE DETAILS SHOWN ARE FOR MAINLINE ROADWAYS WITHOUT TURN LANES. THE PRESENCE OF TURN LANES MAY REQUIRE DIFFERENT EDGELINE TREATMENTS.
2. EDGELINES ON SIDE ROADS, WHEN CALLED FOR, SHALL FOLLOW THE ABOVE MAINLINE TYPICALS. EDGELINES SHALL NOT BE CONTINUOUS AROUND THE MAINLINE/ SIDE ROAD RADIUS.
3. CENTERLINE SHALL BE CONTINUOUS PAST RESIDENTIAL DRIVEWAYS. CENTERLINE SHALL BREAK FOR COMMERCIAL DRIVES W/TRAFFIC CONTROLS, MINOR SIDE ROADS OR PRIVATE ROAD INTERSECTIONS.
4. LOCATION OF THE STOP LINE MAY VARY DUE TO INTERSECTION SIGHT DISTANCE AND VEHICLE TURNING RADIUS, AND MAY NOT COINCIDE WITH THE LOCATION OF THE STOP SIGN.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

PAVEMENT MARKINGS AT MINOR INTERSECTIONS

STANDARD NO. PM-7

STANDARD
NO. PM-8

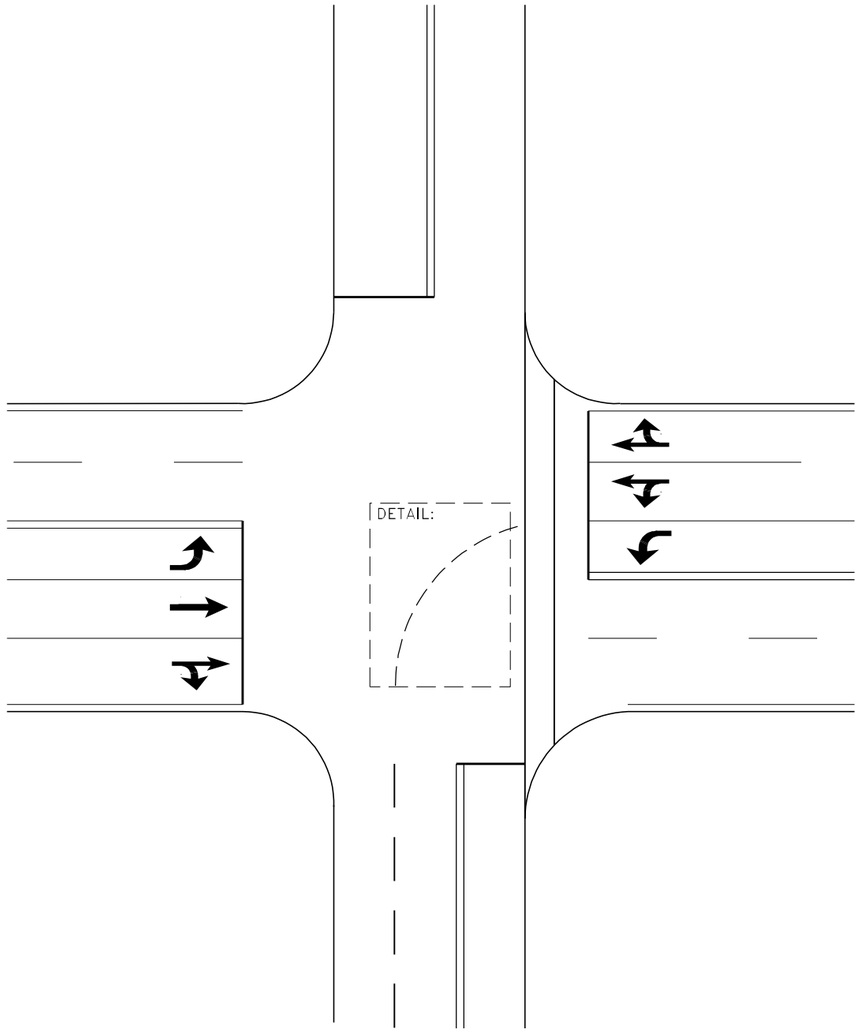
REVISION DATE
7-13-01

*.DGN FILE NAME
PM-8

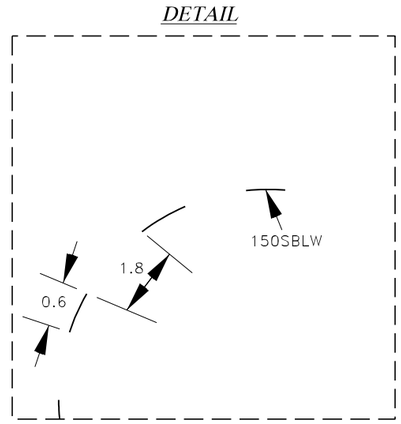
METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD
NO. PM-8



DETAIL



GENERAL NOTE

1. IF NO CROSSWALK, BEGIN EXTENSION LINE AT THE STOP LINE.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

TURNING LANE EXTENSION DETAIL

STANDARD
NO. PM-8

REVISION DATE
7-13-01

*.DGN FILE NAME
PM-8

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD
NO. PM-8

STANDARD
NO. PM-9

REVISION DATE
7-13-01

*.DGN FILE NAME
PM-9

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD
NO. PM-9

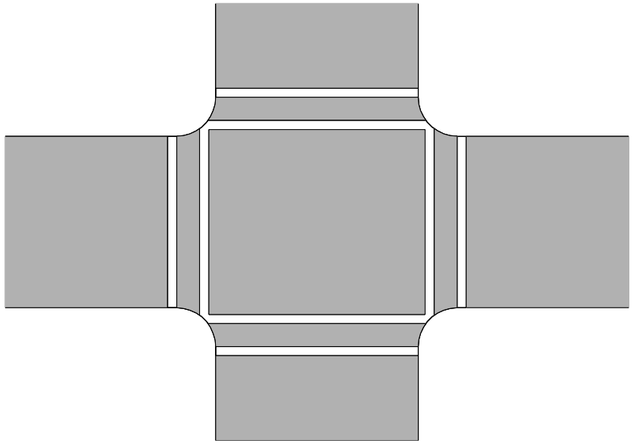


FIGURE A - STANDARD CROSSWALK MARKING

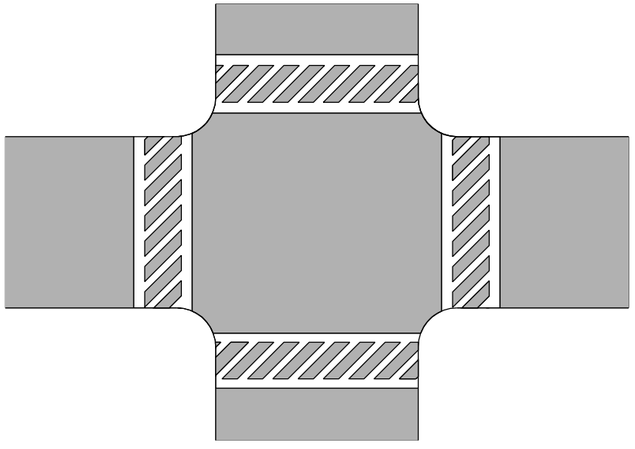


FIGURE B - CROSSWALK MARKING WITH DIAGONAL LINES

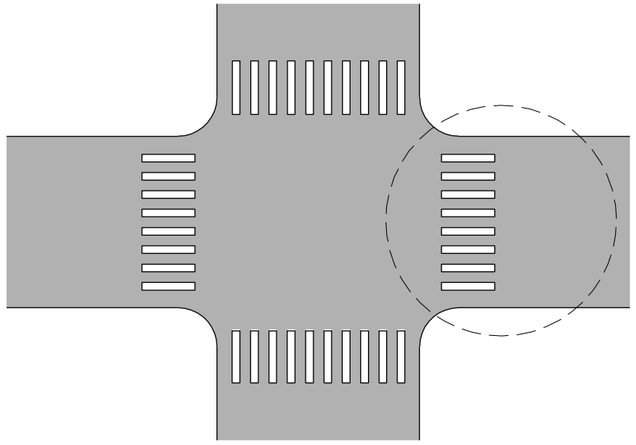


FIGURE C - CROSSWALK MARKING WITH LONGITUDINAL LINES

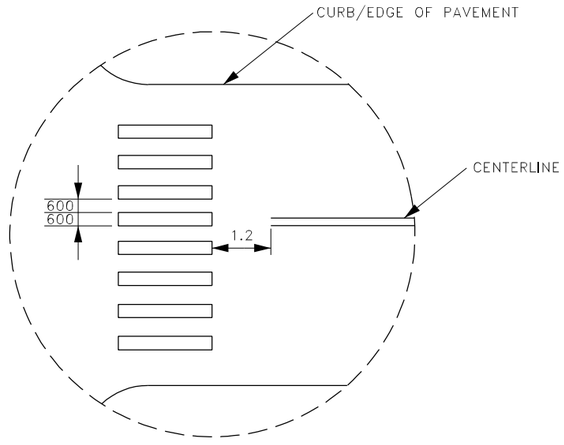


FIGURE C - CROSSWALK DETAIL

GENERAL NOTES

1. TRANSVERSE CROSSWALK LINES SHALL BE SOLID WHITE LINES NOT LESS THAN 150 mm WIDE AND NOT LESS THAN 2.0 m APART C–C.
2. FOR ADDED VISIBILITY CROSSWALKS MAY BE MARKED WITH DIAGONAL LINES AT 45 DEGREES, (FIGURE B). DIAGONAL LINES SHOULD BE APPROXIMATELY 600 mm WIDE AND SPACED 600 mm APART.
3. WHITE LONGITUDINAL LINES AT 90 DEGREES 600 mm WIDE AND 600 mm APART MAY BE USED WITH THE TRANSVERSE LINES OMITTED, (FIGURE C).

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

CROSSWALK DETAIL OPTIONS

STANDARD
NO. PM-9

REVISION DATE
7-13-01

*.DGN FILE NAME
PM-9

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD
NO. PM-9

STANDARD NO. PM-10A

REVISION DATE
7-13-01

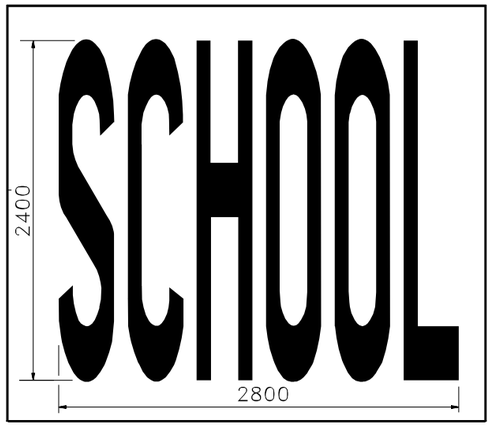
*.DGN FILE NAME
PM-10A

METRIC
STANDARD PLANS

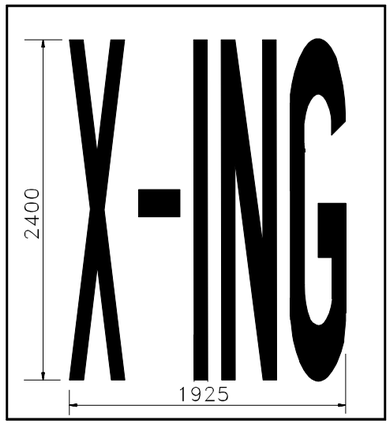
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STATE OF NEW HAMPSHIRE

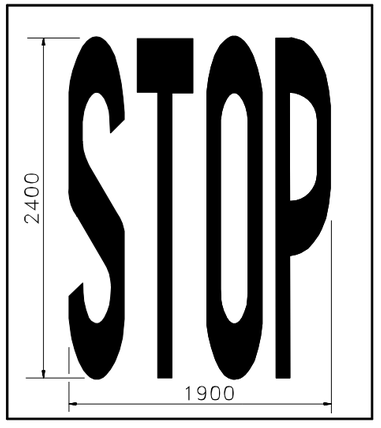
STANDARD NO. PM-10A



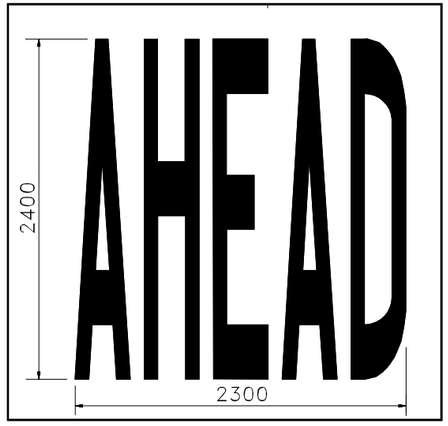
PAY QUANTITY= 3.23 m^2



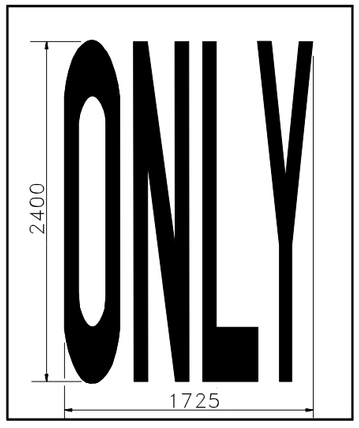
PAY QUANTITY= 1.94 m^2



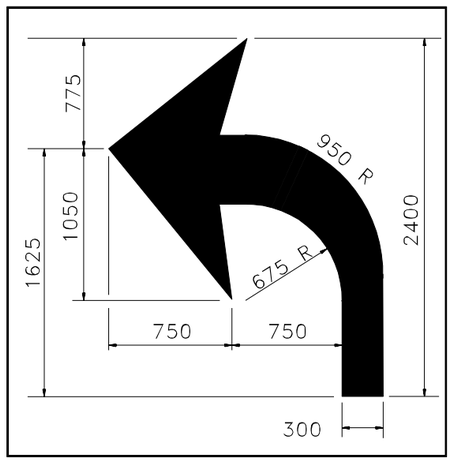
PAY QUANTITY= 2.07 m^2



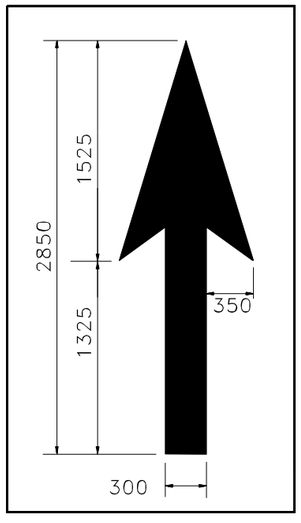
PAY QUANTITY = 2.91 m^2



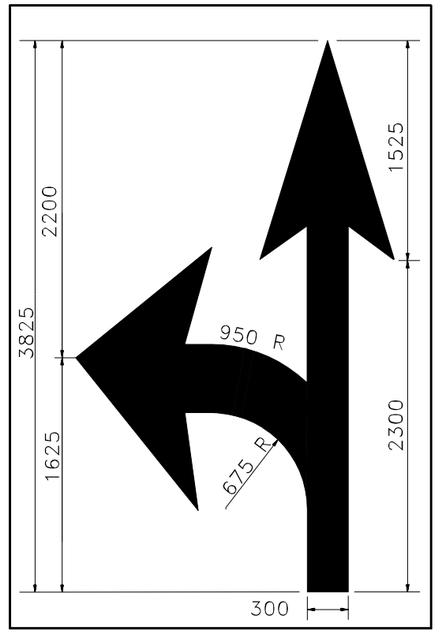
PAY QUANTITY= 2.08 m^2



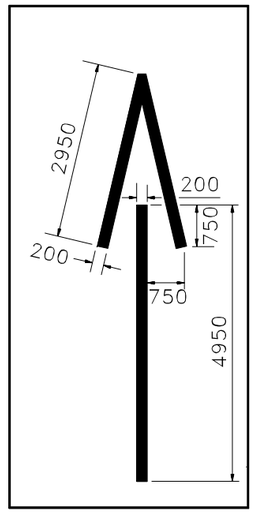
TURN ARROW
(RIGHT TURN OPPOSITE IN KIND)
PAY QUANTITY= 1.58 m^2



THROUGH (STRAIGHT) ARROW
PAY QUANTITY= 1.16 m^2



COMBINATION ARROW
PAY QUANTITY= 2.68 m^2



WRONG-WAY ARROW
PAY QUANTITY= 2.17 m^2

GENERAL NOTES :

1. ALL WORDS AND SYMBOLS SHALL BE RETROREFLECTIVE WHITE AND SHALL CONFORM TO THE LATEST VERSION OF THE *MUTCD*.
2. MULTI-WORD MESSAGES SHALL READ "UP"; THAT IS, THE FIRST WORD SHALL BE NEAREST THE APPROACHING DRIVER.
3. THE WORD "ONLY" SHALL NOT BE USED WITH THROUGH OR COMBINATION ARROWS, AND SHALL NOT BE USED ADJACENT TO A BROKEN LANE LINE. A WORD/SYMBOL SHALL PRECEED THE WORD "ONLY".
4. COMBINATION ARROWS MAY BE COMPRISED OF 2 SINGLE ARROWS (e.g. TURN AND THROUGH ARROWS). HOWEVER, THE SHAFTS OF THE ARROWS SHALL COINCIDE AS SHOWN.
5. PREFORMED WORDS AND SYMBOLS SHALL BE PRE-CUT BY THE MANUFACTURER.
6. WRONG-WAY ARROWS SHALL NOT BE SUBSTITUTED FOR THROUGH ARROWS.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

WORDS AND SYMBOLS

STANDARD NO. PM-10A

STANDARD NO. PM-10B

REVISION DATE
7-13-01

*.DGN FILE NAME
PM-10B

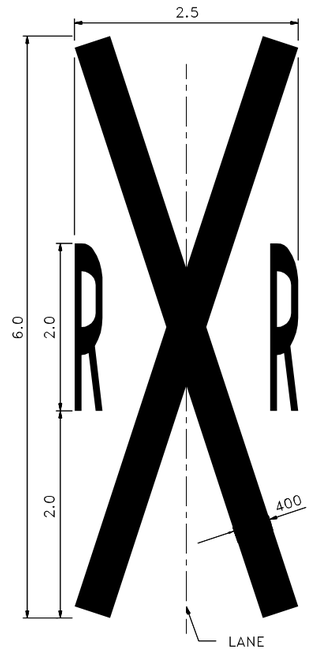
METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

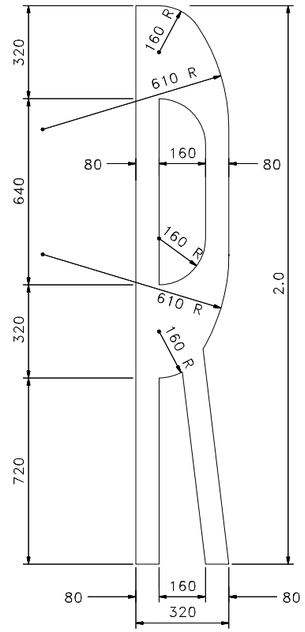
STANDARD NO. PM-10B

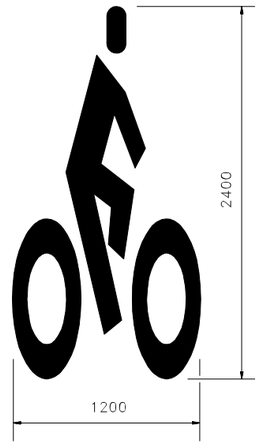
PAY QUANTITIES FOR STANDARD (2.4-METER) LETTERS AND NUMERALS
(SQUARE METERS)

A	0.54	S	0.57
B	0.72	T	0.37
C	0.49	U	0.61
D	0.63	V	0.46
E	0.59	W	0.65
F	0.46	X	0.40
G	0.59	Y	0.39
H	0.61	Z	0.53
I	0.19	1	0.19
J	0.36	2	0.53
K	0.59	3	0.52
L	0.38	4	0.51
M	0.84	5	0.61
N	0.72	6	0.73
O	0.59	7	0.33
P	0.54	8	0.68
Q	0.62	9	0.73
R	0.63	0	0.59

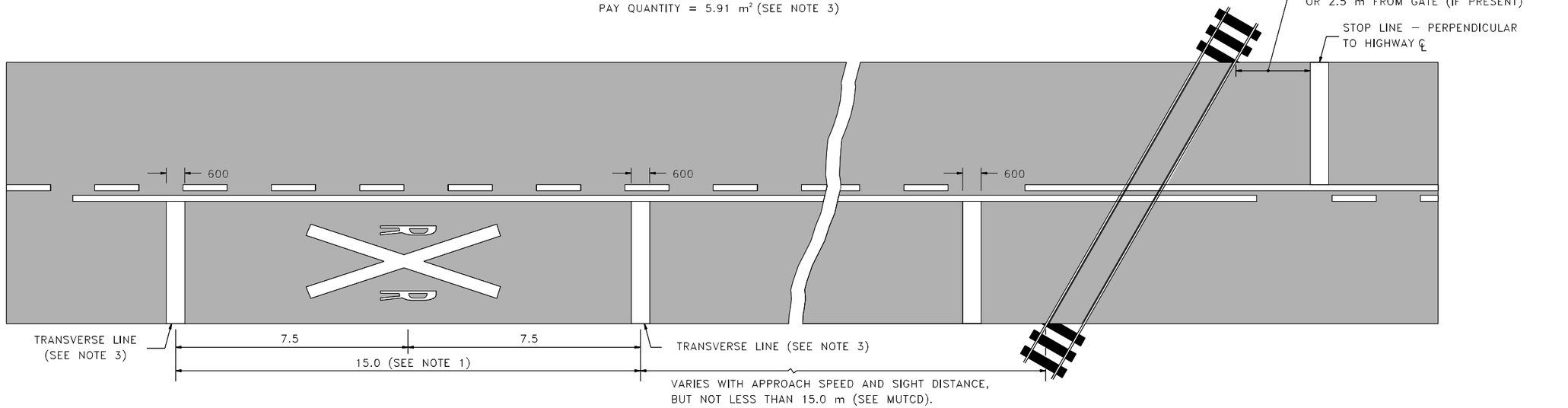


RAILROAD CROSSING SYMBOL
PAY QUANTITY = 5.91 m² (SEE NOTE 3)





BICYCLE LANE SYMBOL
PAY QUANTITY = 1.2 m²



PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSINGS

1. WHEN USED, A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10–1, NOT SHOWN).
2. ON MULTI–LANE ROADS THE TRANSVERSE LINES SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL RXR SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.
3. RXR SYMBOL WILL BE PAID FOR BY THE SQUARE METER, TRANSVERSE LINES (600 mm WIDE) WILL BE PAID FOR BY THE LINEAR METER.

PAVEMENT MARKING STANDARD

WORDS AND SYMBOLS

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

STANDARD NO. PM-10B

STANDARD NO. PM-11

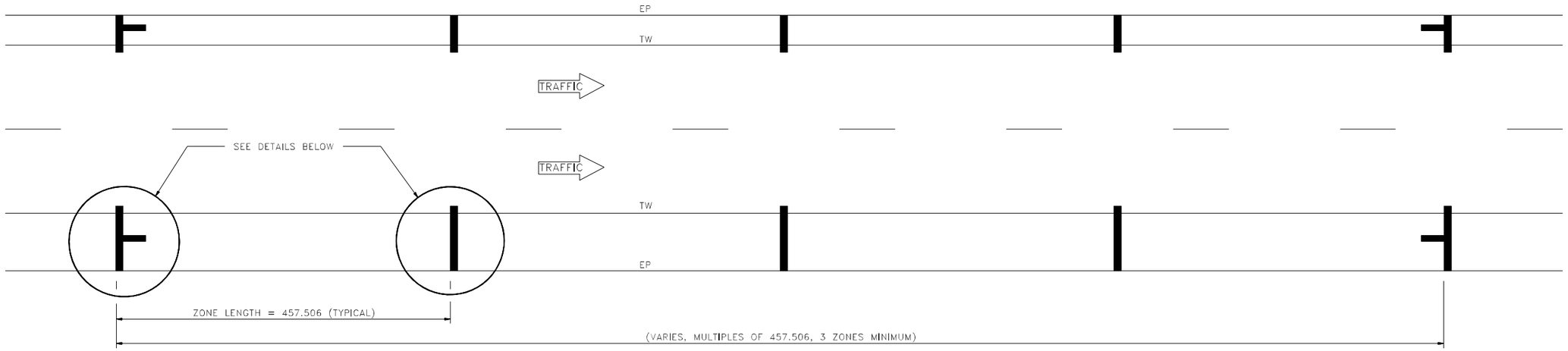
REVISION DATE
7-13-01

*.DGN FILE NAME
PM-11

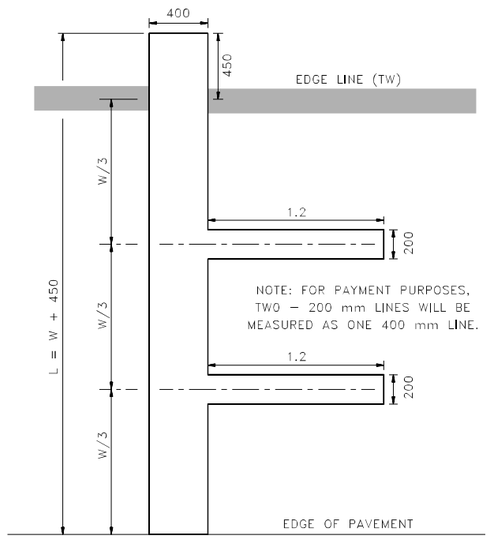
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

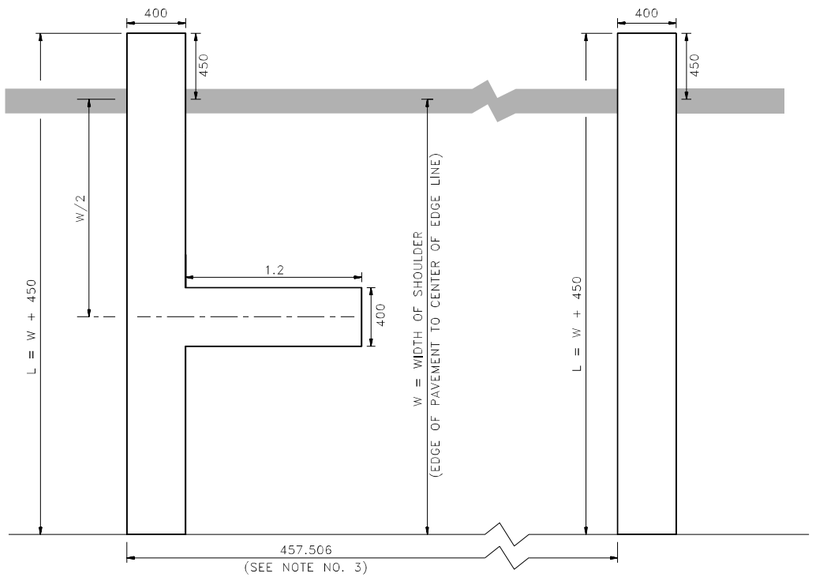
STANDARD NO. PM-11



LAYOUT DETAILS



APPROACH END PATTERN - ALTERNATE
(DEPARTURE END OPPOSITE IN KIND)
(SEE NOTE NO. 2)



APPROACH END PATTERN - STANDARD
(DEPARTURE END OPPOSITE IN KIND)

INTERMEDIATE PATTERN

PAVEMENT MARKING DETAILS

RIGHT SHOULDER SHOWN – LEFT SHOULDER OPPOSITE IN KIND (SEE NOTE NO. 2)

GENERAL NOTES

1. ALL SPEED ZONE MARKINGS SHALL BE SOLID WHITE.
2. ALTERNATE APROACH END PATTERN SHALL BE USED FOR 3 ZONE LAYOUT ONLY. STANDARD PATTERN SHALL BE USED IN LIEU OF ALTERNATE PATTERN FOR LEFT SHOULDER WIDTHS LESS THAN 2.4 m.
3. LONGITUDINAL DISTANCES SHALL BE MEASURED BY NHDOT SURVEY PERSONNEL. A COPY OF SURVEY NOTES SHALL BE FORWARDED TO BUREAU OF TRAFFIC.
4. FOR LEGAL REASONS, STATE POLICE SHALL BE PRESENT DURING THE INSTALLATION OF THESE MARKINGS. (TEL. 271–3678).
5. STATE POLICE SHOULD BE NOTIFIED WHEN ANY EXISTING MARKINGS ARE REMOVED DUE TO CONSTRUCTION.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PAVEMENT MARKING STANDARD

SPEED ZONE PAVEMENT MARKINGS (DIVIDED HIGHWAY)

STANDARD NO. PM-11

STANDARD NO. PS-1A

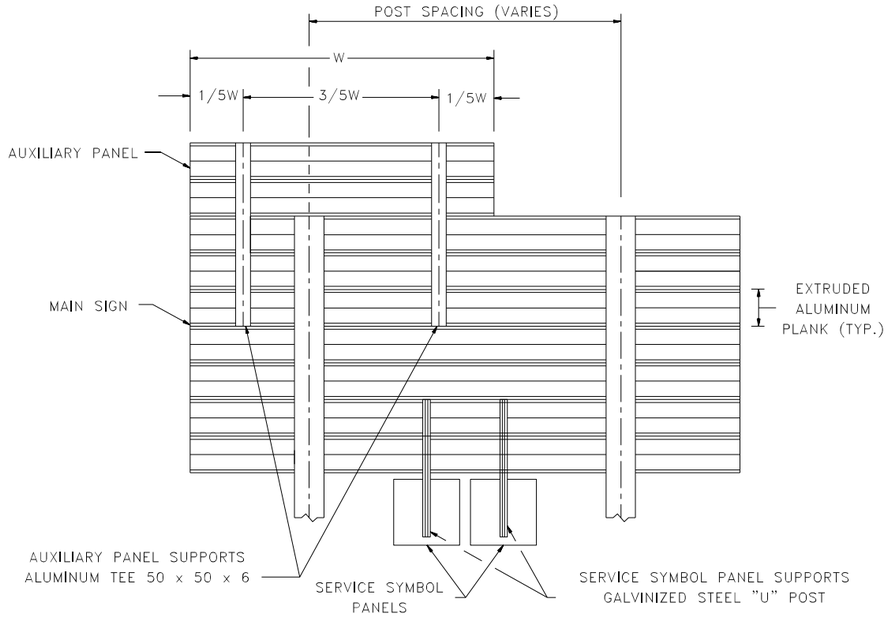
REVISION DATE
7-13-01

*.DGN FILE NAME
PS-1A

METRIC STANDARD PLANS

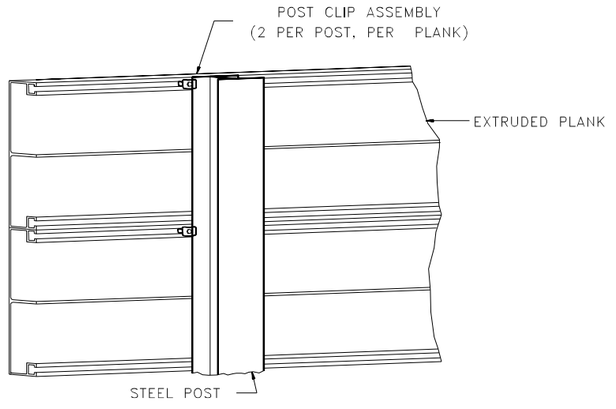
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PS-1A



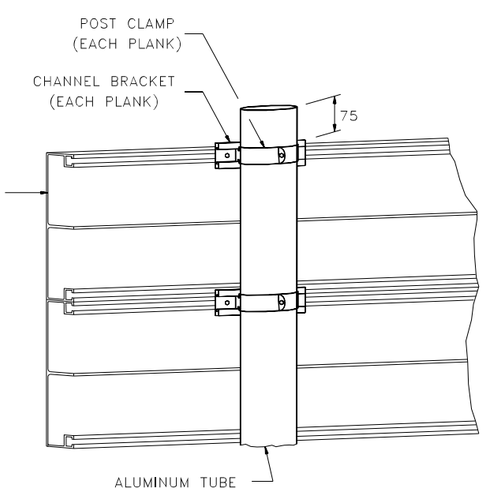
ATTACHMENT OF AUXILIARY PANELS (BACK VIEW)

1. AUXILIARY PANELS SHALL BE MOUNTED TO THE RIGHT SIDE OF THE MAIN SIGN FOR RIGHT-HAND EXIT RAMPS, OR TO THE LEFT FOR LEFT-HAND EXIT RAMPS. SUPPORTS SHALL EXTEND TO THE TOP OF THE EXIT PANEL AND SHALL OVERLAP THE MAIN SIGN BY A MINIMUM OF 3 FULL PLANKS AS SHOWN.
2. SERVICE SYMBOL PANELS SHALL BE MOUNTED IMMEDIATELY BELOW THE MAIN SIGN AND CENTERED LATERALLY WITHIN THE WIDTH OF THE SIGN. SUPPPORTS SHALL OVERLAP THE MAIN SIGN BY A MINIMUM OF 2 FULL PLANKS AS SHOWN.
3. POST CLIP ASSEMBLIES SHALL BE INSTALLED ON BOTH SIDES OF EACH AUXILIARY PANEL SUPPORT AT EACH PLANK, AS WELL AS AT EACH END OF BOTH SUPPORTS.



PLANK MOUNTED ON STEEL BEAM

1. POST CLIP ASSEMBLIES SHALL BE INSTALLED ON BOTH SIDES OF EACH POST AT EACH PLANK AS WELL AS AT THE TOP AND BOTTOM OF THE SIGN.
2. STEEL BEAM SHALL BE FLUSH WITH TOP OF SIGN, AND SHALL NOT EXTEND ONTO AUXILIARY PANELS.



PLANK MOUNTED ON TUBING

1. POST CLAMP ASSEMBLIES SHALL BE INSTALLED AT EACH PLANK, AS WELL AS AT THE TOP AND BOTTOM OF THE SIGN.
2. TUBES SHALL NOT BE USED AS AUXILIARY PANEL SUPPORTS.

GENERAL NOTES

1. GAP BETWEEN ANY TWO ASSEMBLED PLANK SECTIONS SHALL NOT EXCEED 2 mm.
2. ALLOWABLE LATERAL BOW SHALL NOT EXCEED ± 3 mm.
3. ALL PLANK SECTIONS SHALL BE ONE PIECE FOR THE ENTIRE WIDTH OF SIGN SPECIFIED, AND SHALL NOT EXCEED ± 3 mm FROM THE LENGTH SPECIFIED.
4. FOR EXTRUDED PLANK SIGNS WITH AN OVERALL HEIGHT IN INTERVALS OF 100 mm, ALL PLANK SECTIONS SHALL BE 300 mm WIDE.
5. FOR EXTRUDED PLANK SIGNS WITH AN OVERALL HEIGHT IN INTERVALS OF 50 mm, ONE 150 mm WIDE PLANK SECTION SHALL BE AT THE TOP OR BOTTOM OF THE SIGN, ALL OTHER PLANK SECTIONS SHALL BE 300 mm WIDE.
6. ALL ASSEMBLY HARDWARE SHALL BE ALUMINUM ALLOY AS SHOWN.
7. SIGNS GREATER THAN 2400 mm IN WIDTH SHALL BE MOUNTED ON STEEL BEAM.
8. ROUTE MARKER SIGNS WITH AUXILIARY SIGNS (NORTH, SOUTH, ETC.) SHALL BE CONSIDERED A SINGLE SIGN ASSEMBLY . THE CLEARANCE HEIGHT IS MEASURED FROM THE BOTTOM OF THE LOWEST AUXILIARY SIGN TO A LEVEL LINE PROJECTED FROM THE NEAT EDGE OF ROADWAY.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PERMANENT SIGNING STANDARD

ALUMINUM PLANK DETAILS

STANDARD NO. PS-1A

STANDARD NO. PS-1B

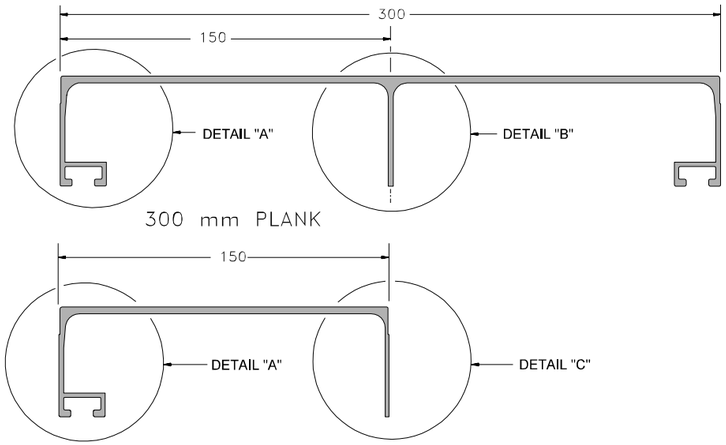
REVISION DATE
7-13-01

*.DGN FILE NAME
PS-1B

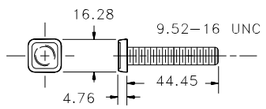
METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PS-1B

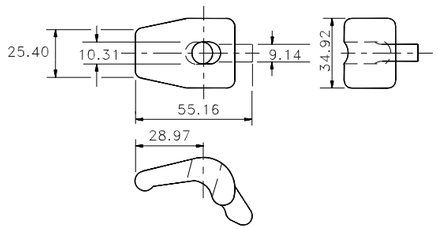


EXTRUDED ALUMINUM SIGN PLANK



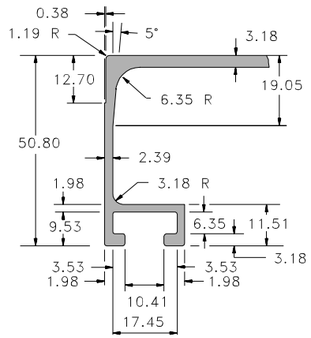
POST CLIP BOLT

ASTM B 211M, ALLOY 2024–T4 OR 6061–T6
ALL DIMESIONS SHOWN ARE IN MILLIMETERS

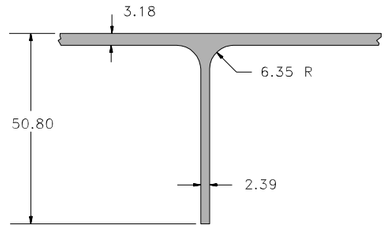


POST CLIP

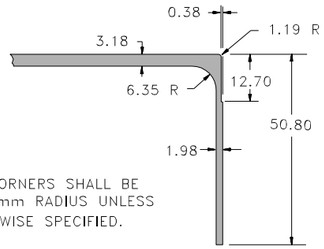
ASTM B 108M, ALLOY 356.0–T6
ALL DIMENSIONS SHOWN ARE IN MILLIMETERS



DETAIL "A"



DETAIL "B"

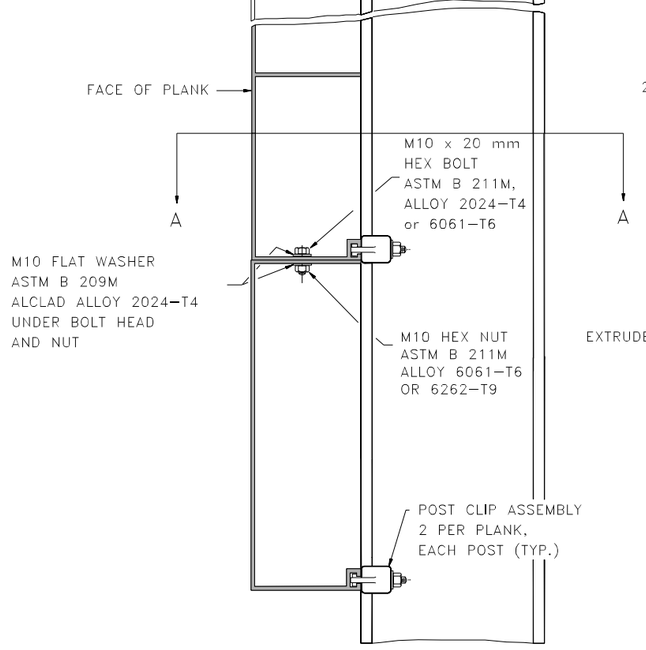


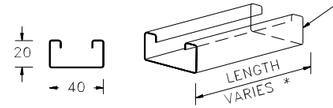
NOTE: ALL CORNERS SHALL BE 2.58 mm RADIUS UNLESS OTHERWISE SPECIFIED.

DETAIL "C"

STIFFENER DETAILS

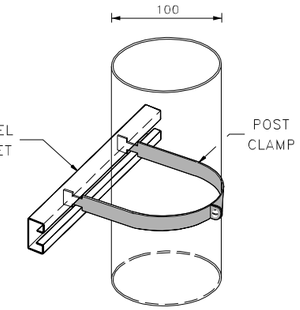
ALL DIMENSIONS SHOWN ARE IN MILLIMETERS





* CHANNEL BRACKET LENGTH = 200 mm (MIN.)

P–4100 EG CHANNEL 1.9 mm THICK



P–1120–EG POST CLAMP 101.6 mm DIA. 3.0 mm

POST CLAMP ASSEMBLIES

1. HARDWARE SHALL BE UNISTRUT OR EQUAL
2. FINISH SHALL BE ELECTRO–GALVANIZED
3. USE 8 mm STAINLESS STEEL CAP SCREW WITH 22 mm O.D. WASHER & LOCKNUT FOR BRACKET TO SIGN CONNECTION

PERMANENT SIGNING STANDARD

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

ALUMINUM PLANK DETAILS

STANDARD NO. PS-1B

STANDARD NO. PS-2

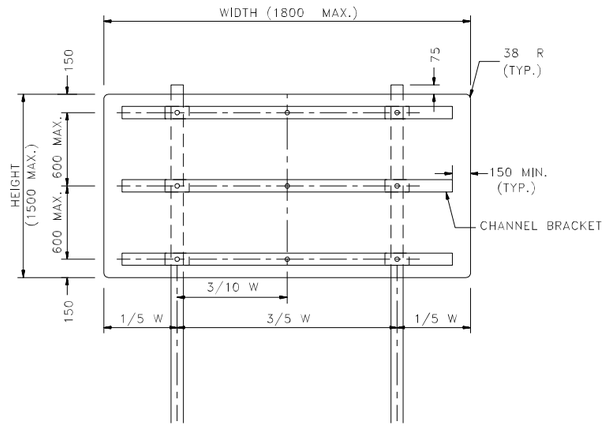
REVISION DATE
7-13-01

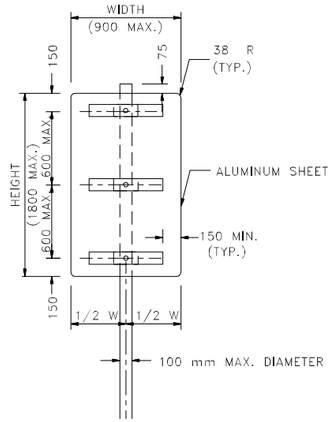
*.DGN FILE NAME
PS-2

METRIC
STANDARD PLANS

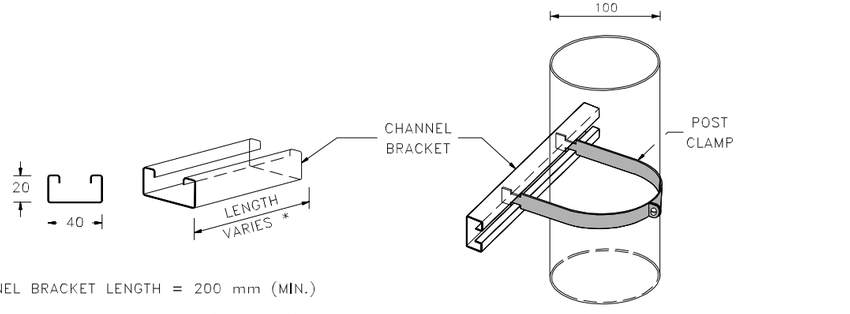
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PS-2





ALUMINUM POST SPACING



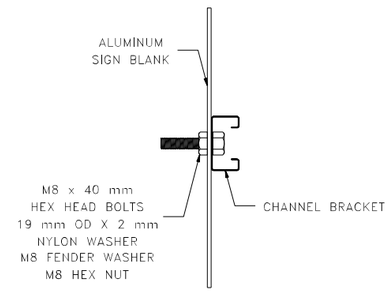
* CHANNEL BRACKET LENGTH = 200 mm (MIN.)

P-4100 EG CHANNEL 1.9 mm THICK

P-1120-EG POST CLAMP 101.6 mm DIA. 3.0 mm

POST CLAMP ASSEMBLIES

1. HARDWARE SHALL BE UNISTRUT OR EQUAL
2. FINISH SHALL BE ELECTRO-GALVANIZED
3. USE 8 mm STAINLESS STEEL CAP SCREW WITH 22 mm O.D. WASHER & LOCKNUT FOR BRACKET TO SIGN CONNECTION



SIGN BLANK ATTACHMENT DETAIL

* SIGNS WITH TWO POST INSTALLATION REQUIRE CENTER BOLT PER CHANNEL BRACKET

GENERAL NOTES

1. BRACKETS: ALL SIGNS TO BE FASTENED TO POSTS WITH POST CLAMP ASSEMBLIES AS SHOWN.
2. SIGN WIDTH 900 mm OR LESS MAY BE MOUNTED ON U-CHANNEL POST. SEE TUBULAR/ U-CHANNEL POST DETAIL, PS-3.
3. RECTANGULAR SIGNS GREATER THAN 900 mm X 900 mm OR LESS THAN OR EQUAL TO 1200 mm X 1200 mm MAY BE MOUNTED ON DUAL U-CHANNEL POST.
4. DIAMOND SHAPE SIGNS GREATER THAN 900 mm SHALL BE MOUNTED ON ALUMINUM TUBING.
5. SIGN HEIGHT 1200 mm OR LESS, CENTER CHANNEL BRACKET MAY BE OMITED.
6. SEE SIGN TEXT LAYOUT SHEETS IN PLANS FOR ACTUAL SIGN SIZES AND POST TYPES.
7. CHANNEL BRACKET SHALL NOT EXTEND PAST EDGE OF SIGN.
8. DIAMOND SHAPE SIGNS REQUIRE ONLY TWO BRACKETS.
9. SIGN GREATER THAN 1800 mm IN WIDTH SHALL BE ALUMINUM PLANK.
10. SIGN HEIGHT AND LATERAL CLEARANCE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE *MUTCD*.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PERMANENT SIGNING STANDARD

ALUMINUM SHEET DETAILS

STANDARD NO. PS-2

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PS-2

STANDARD NO. PS-3

REVISION DATE
7-13-01

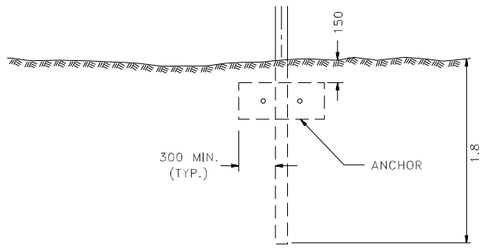
*.DGN FILE NAME
PS-3

METRIC
STANDARD PLANS

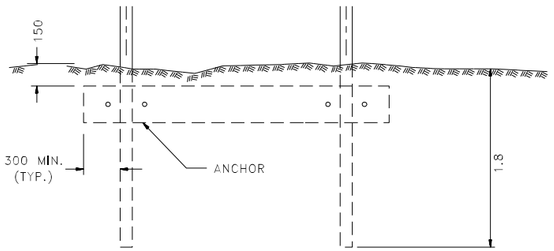
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PS-3

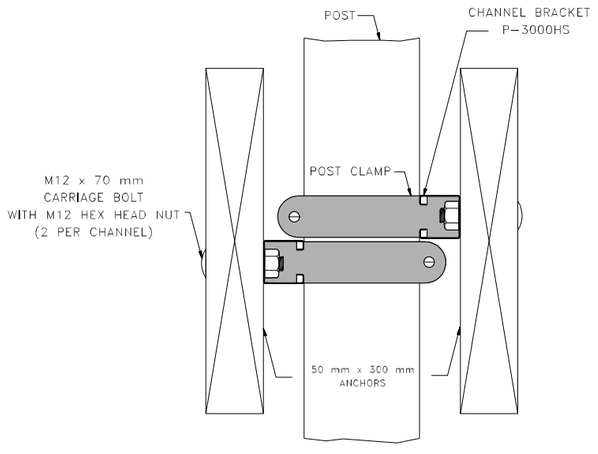
DIRECT BURIED



SINGLE POST

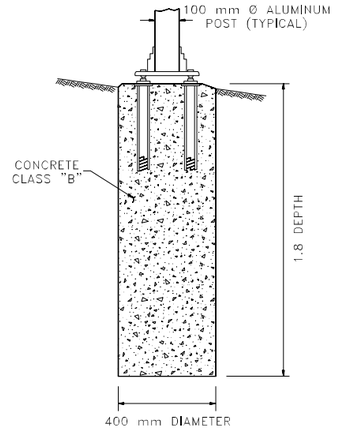


DOUBLE POST

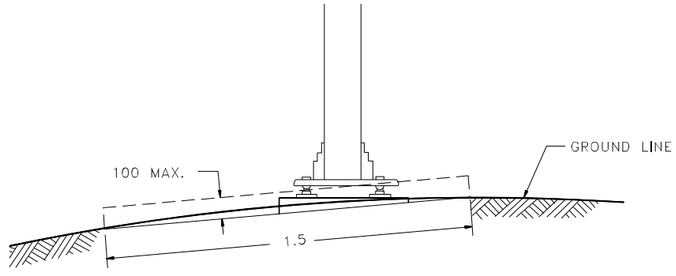


ANCHOR DETAIL

BREAKAWAY



FOOTING DETAIL



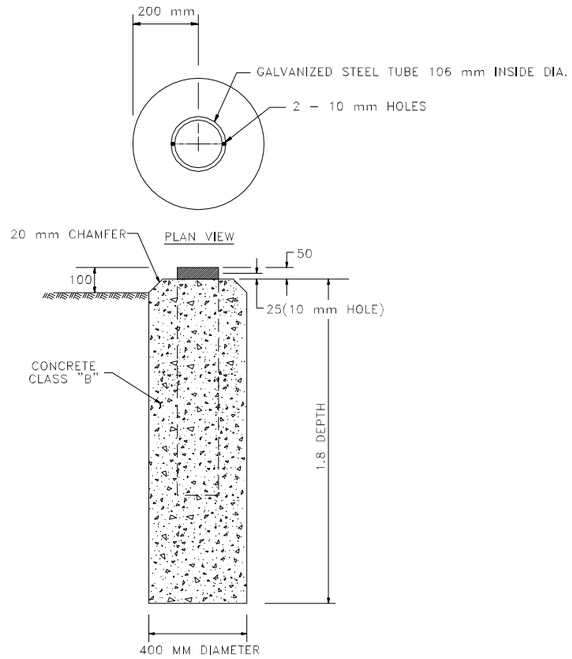
MAXIMUM BREAKAWAY STUB HEIGHT

BREAKAWAY SUPPORTS PLACED ON ROADSIDE SLOPES SHALL NOT ALLOW IMPACTING VEHICLES TO SNAG ON EITHER THE FOUNDATION OR ANY SUBSTANTIAL REMAINS OF THE SUPPORT. SURROUNDING TERRAIN SHALL BE GRADED TO PERMIT VEHICLES TO PASS OVER ANY NON-BREAKAWAY PORTION OF THE SIGN INSTALLATION WHICH REMAINS IN THE GROUND OR RIGIDLY ATTACHED TO THE FOUNDATION.

U-CHANNEL

1. U-CHANNEL POST SHALL NOT BE SPLICED AND DO NOT REQUIRE CHANNEL BRACKETS.
2. U-CHANNEL POSTS SHALL BE INSTALLED 900 mm OR GREATER BELOW EXISTING GROUND.

CONCRETE BASE



NOTES:

1. GALVANIZED STEEL TUBE 106 mm I.D. X 1.2 m/6 mm WALL.
2. CONCRETE CLASS B.
3. TOP TO HAVE TROWEL FINISH.
4. USE 7.8 mm x 138 mm LONG STAINLESS STEEL BOLT WITH STAINLESS STEEL NYLON INSERT NUT FOR SECURING POST.
5. ALUMINUM CAP SHALL BE INSTALLED ON THE TOP OF THE SIGN POST WITH THIS INSTALLATION.

PRECAST CONCRETE BASE

GENERAL NOTES

1. SIGN HEIGHT AND LATERAL CLEARANCE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE *MUTCD*.
2. ANCHORS: USE 2 PIECES OF 50 mm x 300 mm ROUGH PLANK (PRESSURE TREATED) CLAMPED TO POST WITH A MINIMUM OF 300 mm OVERHAND, TO BE PARALLEL WITH GROUND LINE.
3. MULTIPLE POST SIGNS MUST BE PROTECTED BY GUARDRAIL OR OTHER POSITIVE BARRIER, UNLESS BREAKAWAY MOUNTED.
4. THE MINIMUM HORIZONTAL CLEARANCE TO THE NEAR EDGE OF ANY MULTIPLE POST NON-BREAKAWAY MOUNT SIGN SHALL BE 2.1 m MIN. FROM FACE OF BEAM GUARDRAIL. OTHER TYPES OF GUARDRAIL OR BARRIER MAY REQUIRE A GREATER OFFSET.
5. SEE SIGN TEXT LAYOUT SHEETS IN PLANS FOR ACTUAL SIGN SIZES AND POST TYPES.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PERMANENT SIGNING STANDARD

TUBULAR / U-CHANNEL POST DETAIL

STANDARD NO. PS-3

REVISION DATE
7-13-01

*.DGN FILE NAME
PS-3

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PS-3

STANDARD NO. PS-4A

REVISION DATE
7-13-01

*.DGN FILE NAME
PS-4A

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PS-4A

PROCEDURE FOR SELECTING BEAM SECTIONS

- DETERMINE VALUES FOR W, H, & L AS INDICATED IN DRAWING
  W = MAXIMUM WIDTH OF REQUIRED SIGN
  H = MAXIMUM HEIGHT OF REQUIRED SIGN
  L = MAXIMUM DISTANCE BETWEEN TOP OF FOOTING AND BOTTOM OF REQUIRED SIGN. (SEE GENERAL NOTE NO. 4)
- FOR SIGN SIZES BETWEEN THOSE VALUES IN THE TABLE, USE NEXT HIGHEST METER VALUE.
- ENTER TABLE WITH MAXIMUM VALUE OF "L" AND REQUIRED VALUES OF "W" AND "H" FOR SELECTION OF APPROPRIATE BEAM SELECTION.

2 POST SIGN

W(mm)	L(m)	H(mm)											
		1200	1500	1800	2100	2400	2700	3000	3300	3600	3900	4200	4500
1800	2.4	S100x11	S100x11	S100x11	S100x11	W150x14	W150x14	W150x14	W150x18	W150x18	W150x18	W150x22	W150x22
	3.0	S100x11	S100x11	S100x11	W150x14	W150x14	W150x14	W150x18	W150x18	W150x22	W150x22	W150x22	W150x22
	3.6	S100x11	S100x11	W150x14	W150x14	W150x14	W150x18	W150x18	W150x22	W150x22	W150x22	W200x27	W200x27
2400	2.4	S100x11	S100x11	W150x14	W150x14	W150x14	W150x18	W150x18	W150x22	W150x22	W150x22	W200x27	W200x27
	3.0	S100x11	W150x14	W150x14	W150x14	W150x18	W150x18	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27
	3.6	S100x11	W150x14	W150x14	W150x18	W150x18	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27
3000	2.4	S100x11	W150x14	W150x14	W150x18	W150x18	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27
	3.0	W150x14	W150x14	W150x18	W150x18	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27
	3.6	W150x14	W150x14	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x27
	4.3	W150x14	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31
	4.9	W150x14	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31
3600	2.4	W150x14	W150x14	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x27
	3.0	W150x14	W150x14	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31
	3.6	W150x14	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31
	4.3	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33
	4.9	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33
4200	2.4	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33
	3.0	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33
	3.6	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39
	4.3	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39
	4.9	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39	W250x39
4800	2.4	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33
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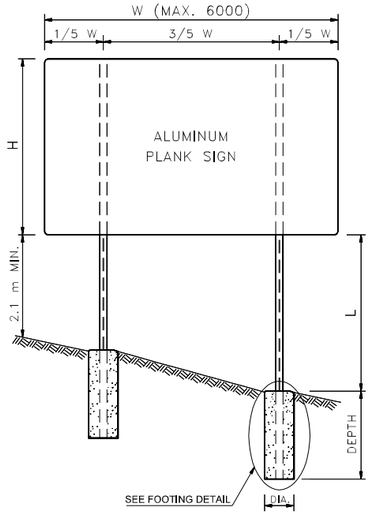
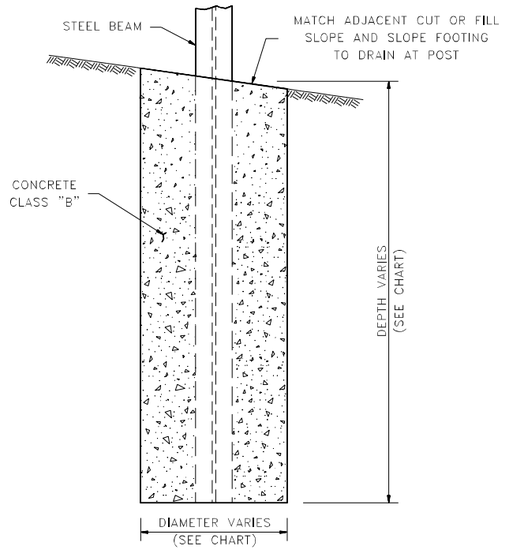
	3.6	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39	W250x39
	4.3	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39	W250x39	W310x39
	4.9	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39
	5.5	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39
5400	2.4	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39
	3.0	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39	W250x39
	3.6	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39	W250x39	W310x39
	4.3	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39
	4.9	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39
	5.5	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39	--
6000	2.4	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39	W250x39
	3.0	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W250x39	W310x39
	3.6	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39
	4.3	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39	--
	4.9	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	--	--
	5.5	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39	--	--
	6.1	W200x27	W200x27	W200x31	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39	--	--	--



POST SPACING DETAIL



FOOTING DETAIL

GENERAL NOTES

1. SIGNS SHALL BE PROVIDED FOR LOCATIONS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SIGN TEXT LAYOUT SHEETS IN PLANS FOR SIGN SIZES AND APPROXIMATE LOCATIONS.
2. DIMENSIONS, ELEVATIONS, SLOPES, AND SITUATIONS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL CASES WILL DEPEND ON FIELD CONDITIONS.
3. WHEN TWO INDEPENDENT SIGNS ARE MOUNTED AS A SINGLE INSTALLATION, THE POST SUPPORTS SHALL BE CALCULATED WITH THE TOTAL AREA OF THE TWO SIGNS BEING CONSIDERED AS ONE UNIT, INCLUDING AN ALLOWANCE FOR A 150 mm VERTICAL SPACE BETWEEN THE TWO SIGNS.
4. POST LENGTH TO BE DETERMINED BY SIGN SIZE AND LOCATION, AND EXACT FIELD LOCATION TO BE DETERMINED BY THE ENGINEER.
5. TOP ELEVATIONS OF STEEL POSTS SHALL BE THE SAME FOR EACH SIGN AND FLUSH WITH SIGN TOP.
6. SEE STANDARD NO. PS-1A & PS-1B FOR ADDITIONAL INFORMATION.

POST	FOOTING	
SIZE	DEPTH	DIAMETER
S100x11	1.8 m	600 mm
W150x14	1.8 m	600 mm
W150x18	1.8 m	600 mm
W150x22	2.3 m	600 mm
W200x27	2.3 m	750 mm
W200x31	2.6 m	750 mm
W250x33	2.6 m	900 mm
W250x39	2.6 m	900 mm
W310x39	2.6 m	900 mm

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PERMANENT SIGNING STANDARD

STEEL BEAM DETAILS (NON-BREAKAWAY)

STANDARD NO. PS-4A
METRIC STANDARD PLANS
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STANDARD NO. PS-4A

STANDARD NO. PS-4B

REVISION DATE
7-13-01

*.DGN FILE NAME
PS-4B

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

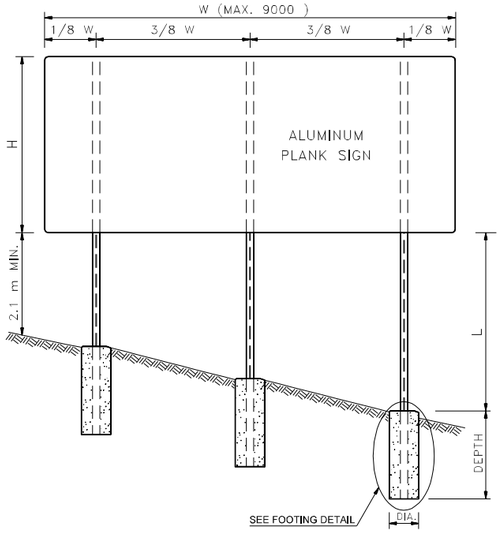
STANDARD NO. PS-4B

PROCEDURE FOR SELECTING BEAM SECTIONS

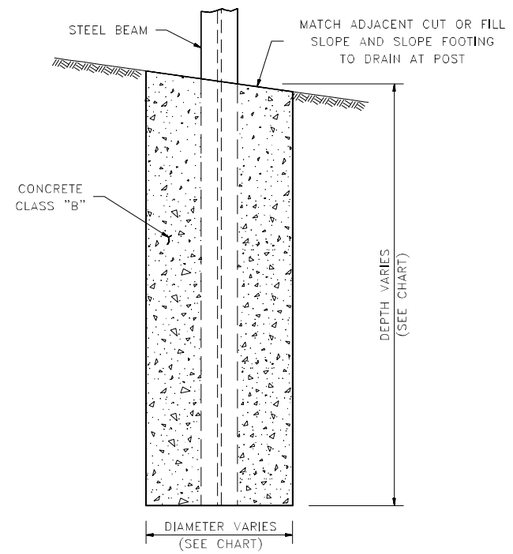
- DETERMINE VALUES FOR W, H, & L AS INDICATED IN DRAWING
  W = MAXIMUM WIDTH OF REQUIRED SIGN
  H = MAXIMUM HEIGHT OF REQUIRED SIGN
  L = MAXIMUM DISTANCE BETWEEN TOP OF FOOTING AND BOTTOM OF REQUIRED SIGN. (SEE GENERAL NOTE NO. 4)
- FOR SIGN SIZES BETWEEN THOSE VALUES IN THE TABLE, USE NEXT HIGHEST METER VALUE.
- ENTER TABLE WITH MAXIMUM VALUE OF "L" AND REQUIRED VALUES OF "W" AND "H" FOR SELECTION OF APPROPRIATE BEAM SELECTION.

3 POST SIGN

W(mm)	L(m)	H(mm) 1200	1500	1800	2100	2400	2700	3000	3300	3600	3900	4200	4500
6600	2.4	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33
	3.0	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33
	3.6	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39
	4.3	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39	W250x39
	4.9	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39	W250x39	W310x39
	5.5	W150x22	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39
	6.1	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39
	6.7	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39
7200	2.4	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33
	3.0	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39
	3.6	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x33	W250x39	W250x39
	4.3	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39
	4.9	W150x22	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39
	5.5	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39
	6.1	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39	--
	6.7	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39	--
7800	2.4	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39
	3.0	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39
	3.6	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W310x39	W310x39
	4.3	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39
	4.9	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39
	5.5	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39	--
	6.1	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	--	--
	6.7	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39	--	--
	7.3	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W310x39	W310x39	W310x39	--	--	--
8400	2.4	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39
	3.0	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39
	3.6	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39
	4.3	W150x22	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39
	4.9	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W310x39	W310x39	W310x39	--
	5.5	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	--	--
	6.1	W200x27	W200x27	W200x31	W200x31	W250x33	W250x39	W250x39	W310x39	W310x39	--	--	--
	6.7	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W310x39	W310x39	W310x39	--	--	--
	7.3	W200x27	W200x27	W200x31	W250x33	W250x39	W250x39	W310x39	W310x39	--	--	--	--
9000	2.4	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39
	3.0	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39
	3.6	W150x22	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39
	4.3	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	--
	4.9	W200x27	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W250x39	W310x39	W310x39	--	--
	5.5	W200x27	W200x27	W200x31	W200x31	W250x33	W250x39	W250x39	W310x39	W310x39	W310x39	--	--
	6.1	W200x27	W200x27	W200x31	W250x33	W250x33	W250x39	W310x39	W310x39	W310x39	--	--	--
	6.7	W200x27	W200x27	W200x31	W250x33	W250x39	W250x39	W310x39	W310x39	--	--	--	--
	7.3	W200x27	W200x31	W250x33	W250x33	W250x39	W310x39	W310x39	--	--	--	--	--



POST SPACING DETAIL



FOOTING DETAIL

POST	FOOTING	
SIZE	DEPTH	DIAMETER
S100x11	1.8 m	600 mm
W150x14	1.8 m	600 mm
W150x18	1.8 m	600 mm
W150x22	2.3 m	600 mm
W200x27	2.3 m	750 mm
W200x31	2.6 m	750 mm
W250x33	2.6 m	900 mm
W250x39	2.6 m	900 mm
W310x39	2.6 m	900 mm

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PERMANENT SIGNING STANDARD

STEEL BEAM DETAILS (NON-BREAKAWAY)

STANDARD NO. PS-4B

STANDARD NO. PS-5A

REVISION DATE
7-13-01

*.DGN FILE NAME
PS-5A

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

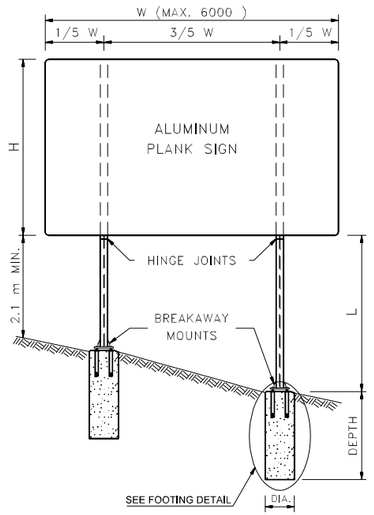
STANDARD NO. PS-5A

PROCEDURE FOR SELECTING BEAM SECTIONS

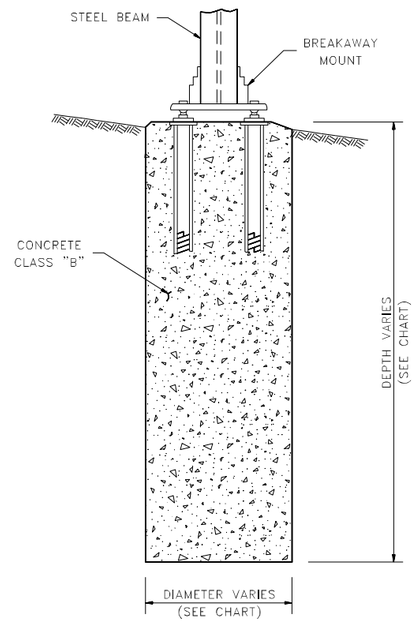
- DETERMINE VALUES FOR W, H, & L AS INDICATED IN DRAWING
  W = MAXIMUM WIDTH OF REQUIRED SIGN
  H = MAXIMUM HEIGHT OF REQUIRED SIGN
  L = MAXIMUM DISTANCE BETWEEN TOP OF FOOTING AND BOTTOM OF REQUIRED SIGN. (SEE GENERAL NOTE NO. 4)
- FOR SIGN SIZES BETWEEN THOSE VALUES IN THE TABLE, USE NEXT HIGHEST METER VALUE.
- ENTER TABLE WITH MAXIMUM VALUE OF "L" AND REQUIRED VALUES OF "W" AND "H" FOR SELECTION OF APPROPRIATE BEAM SELECTION.

2 POST SIGN

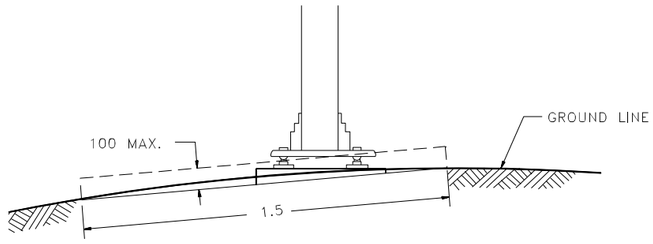
W(mm)	L(m)	H(mm)											
		1200	1500	1800	2100	2400	2700	3000	3300	3600	3900	4200	4500
1800	2.4	W150x14	W150x14	W150x14	W150x14	W150x14	W150x14	W150x14	W150x14	W150x18	W150x18	W200x27	W200x27
	3.0	W150x14	W150x14	W150x14	W150x14	W150x18	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27
	3.6	W150x14	W150x18	W150x18	W150x18	W150x22	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27
	4.3	W150x18	W150x18	W150x18	W150x22	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31
	4.9	W150x18	W150x22	W150x22	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27	W200x31	W200x31	W200x31
2400	2.4	W150x14	W150x14	W150x14	W150x14	W150x14	W150x14	W150x18	W150x18	W150x18	W150x22	W200x27	W200x27
	3.0	W150x14	W150x14	W150x18	W150x18	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27
	3.6	W150x18	W150x18	W150x22	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31
	4.3	W150x18	W150x22	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W200x31
	4.9	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27	W200x31	W200x31	W200x31	W200x31	W250x39	W250x39
3000	2.4	W150x14	W150x14	W150x14	W150x14	W150x18	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W250x33
	3.0	W150x14	W150x18	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W250x33
	3.6	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33
	4.3	W150x22	W150x22	W150x22	W200x27	W200x27	W200x27	W200x31	W200x31	W200x31	W200x31	W250x39	W250x39
	4.9	W150x22	W150x22	W200x27	W200x27	W200x31	W200x31	W200x31	W200x31	W250x39	W250x39	W250x39	W250x39
3600	2.4	W150x14	W150x14	W150x14	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W310x39
	3.0	W150x14	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W250x33	W310x39
	3.6	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x33	W310x39
	4.3	W150x22	W150x22	W200x27	W200x27	W200x27	W200x31	W200x31	W250x33	W250x39	W250x39	W250x39	W310x39
	4.9	W150x22	W200x27	W200x27	W200x31	W200x31	W200x31	W250x39	W250x39	W250x39	W250x39	W310x39	W310x39
4200	2.4	W150x14	W150x14	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W200x31	W310x39	W360x45
	3.0	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W310x39	W310x39	W360x45
	3.6	W150x18	W150x22	W200x27	W200x27	W200x27	W200x31	W200x31	W200x31	W250x33	W310x39	W310x39	W360x45
	4.3	W150x22	W150x22	W200x27	W200x27	W200x31	W200x31	W250x33	W250x39	W250x39	W310x39	W310x39	W360x45
	4.9	W150x22	W200x27	W200x31	W200x31	W250x33	W250x39	W250x39	W250x39	W310x39	W360x45	--	--
4800	2.4	W150x14	W150x14	W150x18	W150x18	W200x27	W200x27	W200x27	W200x27	W200x27	W250x33	W360x45	--
	3.0	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W250x39	W310x39	W360x45	--
	3.6	W150x22	W150x22	W200x27	W200x27	W200x31	W200x31	W200x31	W250x39	W250x39	W310x39	W360x45	--
	4.3	W150x22	W200x27	W200x27	W200x31	W200x31	W250x39	W250x39	W250x39	W250x39	W310x39	W360x45	--
	4.9	W200x27	W200x27	W200x31	W200x31	W250x39	W250x39	W250x39	W310x39	--	--	--	--
5400	2.4	W150x14	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W310x39	--	--
	3.0	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x31	W250x33	W310x39	W360x45	--	--
	3.6	W150x22	W150x22	W200x27	W200x27	W200x31	W200x31	W250x39	W250x39	W310x39	W360x45	--	--
	4.3	W150x22	W200x27	W200x31	W200x31	W250x33	W250x39	W250x39	W250x39	W310x39	--	--	--
	4.9	W200x27	W200x31	W200x31	W250x39	W250x39	W250x39	W310x39	--	--	--	--	--
6000	2.4	W150x14	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W250x39	W310x39	--	--
	3.0	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W310x39	W360x45	--	--	--
	3.6	W150x22	W150x22	W200x27	W200x31	W200x31	W250x33	W250x39	W310x39	W360x45	--	--	--
	4.3	W200x27	W200x27	W200x31	W200x31	W250x39	W250x39	W250x39	W310x39	--	--	--	--
	4.9	W200x27	W200x31	W250x39	W250x39	W250x39	W310x39	--	--	--	--	--	--



POST SPACING DETAIL



FOOTING DETAIL



MAXIMUM BREAKAWAY STUB HEIGHT

BREAKAWAY SUPPORTS PLACED ON ROADSIDE SLOPES SHALL NOT ALLOW IMPACTING VEHICLES TO SNAG ON EITHER THE FOUNDATION OR ANY SUBSTANTIAL REMAINS OF THE SUPPORT. SURROUNDING TERRAIN SHALL BE GRADED TO PERMIT VEHICLES TO PASS OVER ANY NON-BREAKAWAY PORTION OF THE SIGN INSTALLATION WHICH REMAINS IN THE GROUND OR RIGIDLY ATTACHED TO THE FOUNDATION.

POST	FOOTING	
SIZE	DEPTH	DIAMETER
W150x14	1.8 m	600 mm
W150x18	1.8 m	600 mm
W150x22	2.3 m	600 mm
W200x27	2.3 m	750 mm
W200x31	2.6 m	750 mm
W250x33	2.6 m	900 mm
W250x39	2.6 m	900 mm
W310x39	2.6 m	900 mm
W360x45	2.7 m	900 mm

GENERAL NOTES

1. SIGNS SHALL BE PROVIDED FOR LOCATIONS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SIGN TEXT LAYOUT SHEETS IN PLANS FOR SIGN SIZES AND APPROXIMATE LOCATIONS.
2. DIMENSIONS, ELEVATIONS, SLOPES, AND SITUATIONS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL CASES WILL DEPEND ON FIELD CONDITIONS.
3. WHEN TWO INDEPENDENT SIGNS ARE MOUNTED AS A SINGLE INSTALLATION, THE POST SUPPORTS SHALL BE CALCULATED WITH THE TOTAL AREA OF THE TWO SIGNS BEING CONSIDERED AS ONE UNIT, INCLUDING AN ALLOWANCE FOR A 150 mm VERTICAL SPACE BETWEEN THE TWO SIGNS.
4. POST LENGTH TO BE DETERMINED BY SIGN SIZE AND LOCATION, AND EXACT FIELD LOCATION TO BE DETERMINED BY THE ENGINEER.
5. TOP ELEVATIONS OF STEEL POSTS SHALL BE THE SAME FOR EACH SIGN AND FLUSH WITH SIGN TOP.
6. SEE STANDARD NO. PS-1A & PS-1B FOR ADDITIONAL INFORMATION.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PERMANENT SIGNING STANDARD

STEEL BEAM DETAILS (BREAKAWAY)

STANDARD NO. PS-5A

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PS-5A

STANDARD NO. PS-5B

REVISION DATE
7-13-01

*.DGN FILE NAME
PS-5B

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

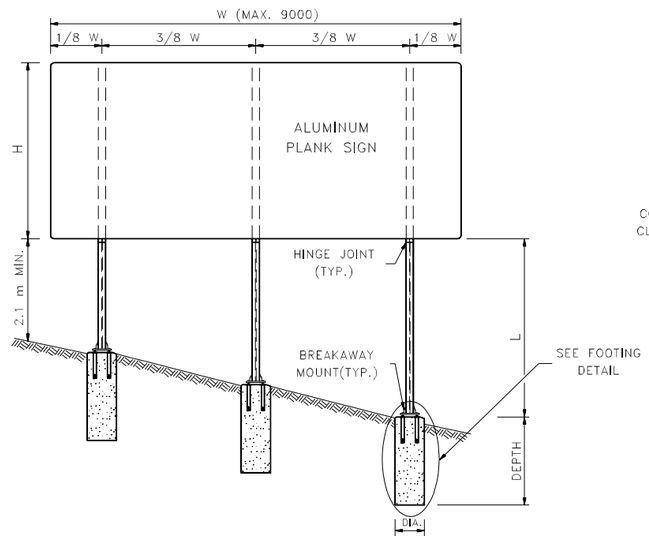
STANDARD NO. PS-5B

PROCEDURE FOR SELECTING BEAM SECTIONS

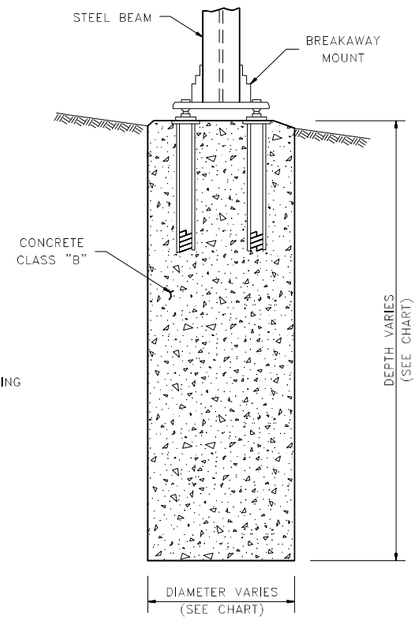
- DETERMINE VALUES OF W, H, & L AS INDICATED IN DRAWING
  - W = MAXIMUM WIDTH OF REQUIRED SIGN
  - H = MAXIMUM HEIGHT OF REQUIRED SIGN
  - L = MAXIMUM DISTANCE BETWEEN TOP OF FOOTING AND BOTTOM OF REQUIRED SIGN (SEE GENERAL NOTE NO. 4)
- FOR SIGN SIZES BETWEEN THOSE VALUES IN THE TABLE, USE NEXT HIGHEST FOOT VALUE.
- ENTER TABLE WITH MAXIMUM VALUE OF "L" AND REQUIRED VALUES OF "W" AND "H" FOR SELECTION OF APPROPRIATE BEAM SECTION.

3 POST SIGN

W(mm)	L(m)	H(mm) 1200	1500	1800	2100	2400	2700	3000	3300	3600	3900	4200	4500
6600	2.4	W150x14	W150x14	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W360x45	--
	3.0	W150x18	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x31	W250x33	W310x39	W360x45	--
	3.6	W150x18	W150x22	W200x27	W200x27	W200x27	W200x31	W200x31	W200x31	W250x39	W310x39	W360x45	--
	4.3	W150x22	W200x27	W200x27	W200x31	W200x31	W200x31	W250x39	W250x39	W250x39	W310x39	W360x45	--
	4.9	W200x27	W200x27	W200x31	W200x31	W250x39	W250x39	W250x39	W310x39	W310x39	--	--	--
7200	2.4	W150x14	W150x14	W150x18	W150x18	W200x27	W200x27	W200x27	W200x27	W200x31	W250x33	W360x45	--
	3.0	W150x18	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W250x39	W310x39	W360x45	--
	3.6	W150x22	W150x22	W200x27	W200x27	W200x31	W200x31	W200x31	W250x39	W250x39	W310x39	W360x45	--
	4.3	W150x22	W200x27	W200x27	W200x31	W200x31	W250x39	W250x39	W250x39	W250x39	W310x39	W360x45	--
	4.9	W200x27	W200x27	W200x31	W200x31	W250x39	W250x39	W250x39	W310x39	--	--	--	--
7800	2.4	W150x14	W150x18	W150x18	W150x18	W200x27	W200x27	W200x27	W200x27	W250x33	W310x39	--	--
	3.0	W150x18	W150x22	W150x22	W200x27	W200x27	W200x27	W200x31	W250x33	W310x39	W360x45	--	--
	3.6	W150x22	W150x22	W200x27	W200x27	W200x31	W200x31	W200x31	W250x39	W310x39	W360x45	--	--
	4.3	W150x22	W200x31	W200x31	W200x31	W200x31	W250x39	W250x39	W250x39	W310x39	W360x45	--	--
	4.9	W200x27	W200x31	W200x31	W250x39	W250x39	W250x39	W310x39	W360x45	--	--	--	--
8400	2.4	W150x14	W150x18	W150x18	W200x27	W200x27	W200x27	W200x27	W200x27	W250x33	W310x39	--	--
	3.0	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W250x33	W310x39	W360x45	--	--
	3.6	W150x22	W150x22	W200x27	W200x27	W200x31	W200x31	W250x39	W250x39	W310x39	W360x45	--	--
	4.3	W200x27	W200x27	W200x31	W250x39	W250x39	W250x39	W250x39	W310x39	W310x39	--	--	--
	4.9	W200x27	W200x31	W200x31	W250x39	W250x39	W250x39	W310x39	--	--	--	--	--
9000	2.4	W150x14	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W250x39	W310x39	--	--
	3.0	W150x18	W150x22	W200x27	W200x27	W200x27	W200x27	W250x33	W310x39	W360x45	--	--	--
	3.6	W150x22	W200x27	W200x27	W200x31	W200x31	W250x33	W250x39	W310x39	W360x45	--	--	--
	4.3	W200x27	W200x27	W200x31	W200x31	W250x39	W250x39	W250x39	W310x39	--	--	--	--
	4.9	W200x27	W200x31	W250x39	W250x39	W250x39	W310x39	--	--	--	--	--	--



POST SPACING DETAIL



FOOTING DETAIL

POST	FOOTING	
SIZE	DEPTH	DIAMETER
W150x14	1.8 m	600 mm
W150x18	1.8 m	600 mm
W150x22	2.3 m	600 mm
W200x27	2.3 m	750 mm
W200x31	2.6 m	750 mm
W250x33	2.6 m	900 mm
W250x39	2.6 m	900 mm
W310x39	2.6 m	900 mm
W360x45	2.7 m	900 mm

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PERMANENT SIGNING STANDARD

STEEL BEAM DETAILS (BREAKAWAY)

STANDARD NO. PS-5B

STANDARD
NO. PS-6A

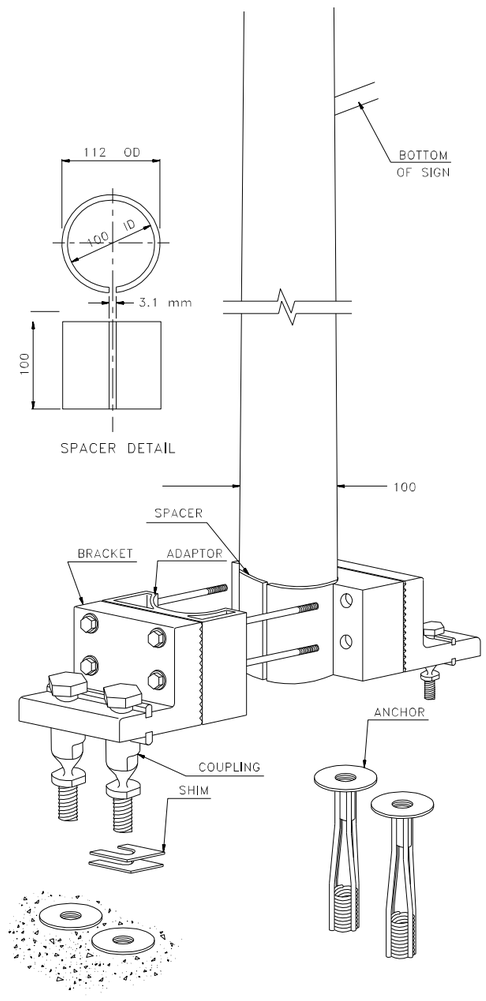
REVISION DATE
7-13-01

*.DGN FILE NAME
PS-6A

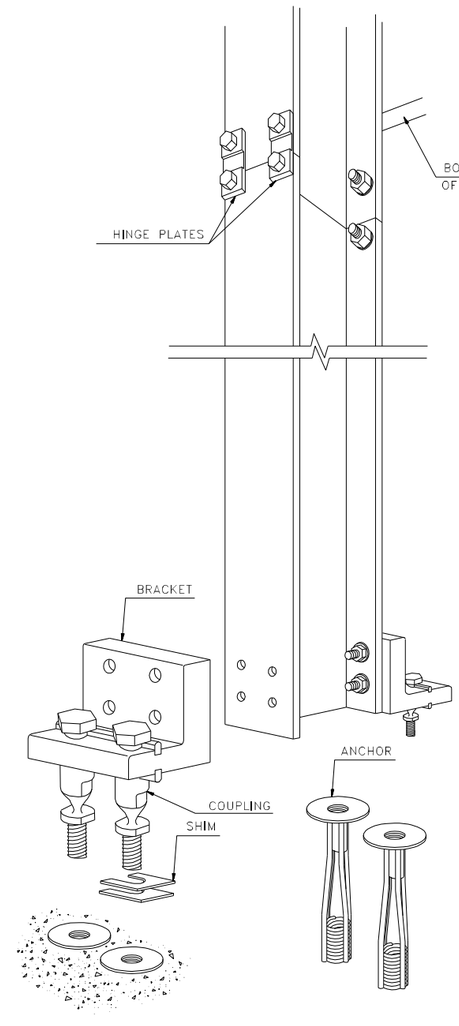
METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

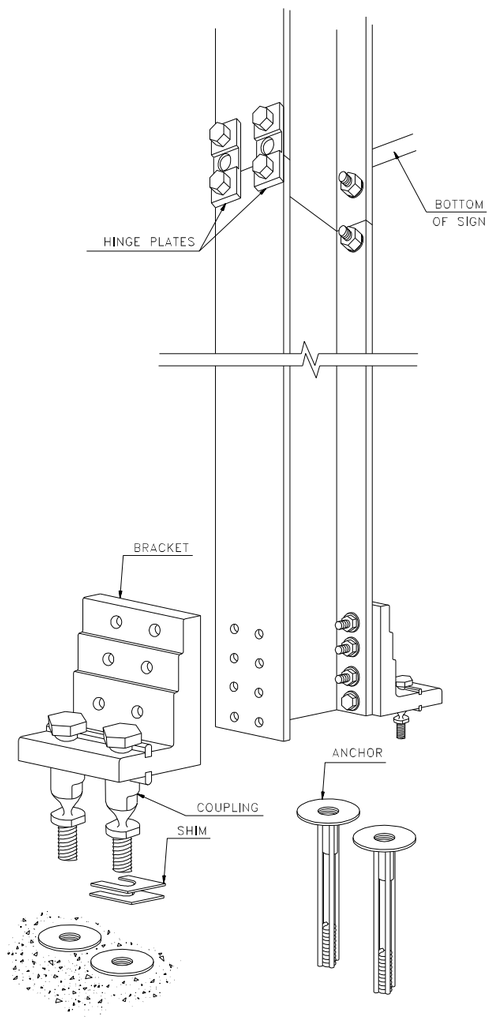
STANDARD
NO. PS-6A



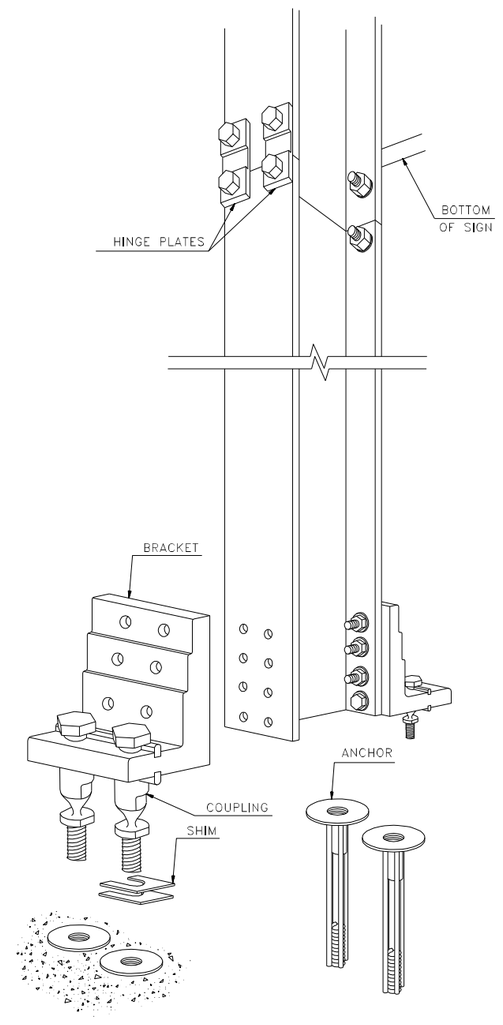
TRANSPO TYPE APx4.5 (S/B) (OR EQUAL)
USE FOR 100 mm DIAMETER ALUMINUM TUBE



TRANSPO TYPE AI6-LP (OR EQUAL)
USE FOR W150x14 STEEL BEAM



TRANSPO TYPE B-525-LP (OR EQUAL)
USE FOR W150x18, W150x22, W200x27, OR W200x31 STEEL BEAMS



TRANSPO TYPE B-650-LP (OR EQUAL)
USE FOR W250x33, W250x39, W310x39, OR W360x45 STEEL BEAMS

GENERAL NOTES

1. ASSEMBLE ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
2. SEE PS-5A OR PS-5B FOR STEEL BEAM SIZES.
3. SEE PS-6B FOR BRACKET SELECTION TABLES FOR TYPE B525-LP & B-650-LP.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PERMANENT SIGNING STANDARD

BREAKAWAY MOUNTS

STANDARD
NO. PS-6A

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD
NO. PS-6A

STANDARD NO. PS-6B

REVISION DATE
7-13-01

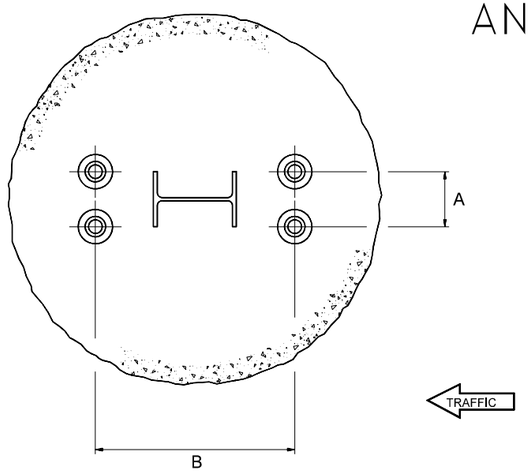
*.DGN FILE NAME
PS-6B

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PS-6B

ANCHOR INSTALLATION & BRACKET SELECTION



PLAN VIEW OF FOOTINGS

(SEE PS-3, PS-5A, OR PS-5B FOR FOOTING SIZES)

A = LATERAL SPACING OF ANCHORS

75 mm FOR B-525 USED ON 150 mm & 200 mm WIDE FLANGE POSTS

100 mm FOR B-650 USED ON 250 mm , 300 mm, & 350 mm WIDE FLANGE POSTS

108 mm FOR AI6 USED NO W150x14 WIDE FLANGE POSTS

B = LONGITUDINAL SPACING OF ANCHORS

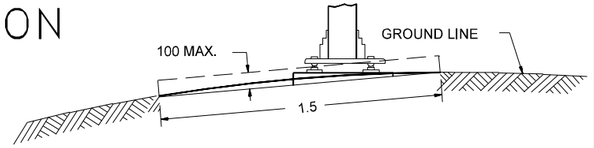
* BRACKET #1 – DEPTH OF POST SECTION PLUS 202 mm

* BRACKET #2 – DEPTH OF POST SECTION PLUS 205 mm

* BRACKET #3 – DEPTH OF POST SECTION PLUS 206 mm

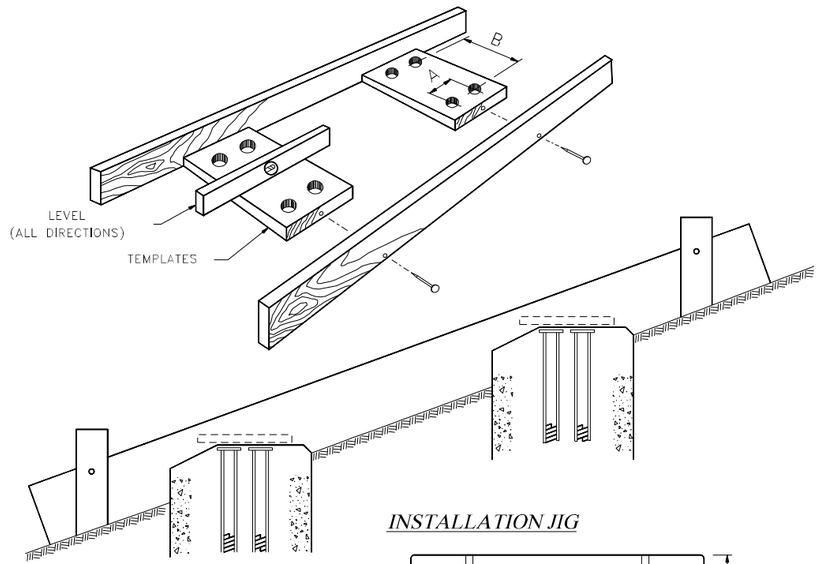
DEPTH OF POST SECTION PLUS 94 mm FOR AI6

* FOR B-525 & B-650 MOUNTS, SEE BRACKET TABLES



MAXIMUM BREAKAWAY STUB HEIGHT

BREAKAWAY SUPPORTS PLACED ON ROADSIDE SLOPES SHALL NOT ALLOW IMPACTING VEHICLES TO SNAG ON EITHER THE FOUNDATION OR ANY SUBSTANTIAL REMAINS OF THE SUPPORT. SURROUNDING TERRAIN SHALL BE GRADED TO PERMIT VEHICLES TO PASS OVER ANY NON-BREAKAWAY PORTION OF THE SIGN INSTALLATION WHICH REMAINS IN THE GROUND OR RIGIDLY ATTACHED TO THE FOUNDATION.



150 mm POST

POST LENGTH = L+H(mm)

SIGN HEIGHT = H(mm)	3000	3300	3600	3900	4200	4500	4800	5100	5400	5700	6000	6300	6600	6900	7200	7500
900																
1200																
1500														1		
1800																
2100																
2400																
2700																
3000										2						
3300																
3600																
3900			3													
4200																
4500																

200 mm POST

POST LENGTH = L+H(mm)

SIGN HEIGHT = H(mm)	3000	3300	3600	3900	4200	4500	4800	5100	5400	5700	6000	6300	6600	6900	7200	7500
900																
1200																
1500																
1800														1		
2100																
2400																
2700																
3000										2						
3300																
3600																
3900			3													
4200																
4500																

BRACKET TABLES FOR B-525-LP MOUNTS

250 mm POST

POST LENGTH = L+H(mm)

SIGN HEIGHT = H(mm)	3000	3300	3600	3900	4200	4500	4800	5100	5400	5700	6000	6300	6600	6900	7200	7500
900																
1200																
1500														1		
1800																
2100																
2400																
2700																
3000										2						
3300																
3600																
3900			3													
4200																
4500																

300 mm POST

POST LENGTH = L+H(mm)

SIGN HEIGHT = H(mm)	3000	3300	3600	3900	4200	4500	4800	5100	5400	5700	6000	6300	6600	6900	7200	7500
900																
1200																
1500														1		
1800																
2100																
2400																
2700																
3000																
3300										2						
3600																
3900			3													
4200																
4500																

350 mm POST

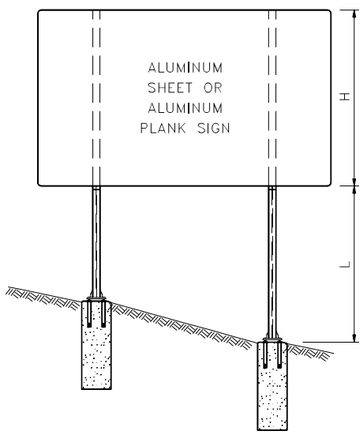
POST LENGTH = L+H(mm)

SIGN HEIGHT = H(mm)	3000	3300	3600	3900	4200	4500	4800	5100	5400	5700	6000	6300	6600	6900	7200	7500
900																
1200																
1500														1		
1800																
2100																
2400																
2700																
3000																
3300										2						
3600																
3900			3													
4200																
4500																

BRACKET TABLES FOR B-650-LP MOUNTS

SELECT CORRECT BRACKET NUMBER BY LOCATING THE INTERSECTION OF SIGN HEIGHT AND POST LENGTH IN THE BRACKET SELECTION MATRIX. THE INTERSECTION WILL BE EITHER ZONE 1, 2, OR 3 WHICH CORRESPONDS TO BRACKET NUMBERS 1, 2, OR 3.

INSTALLATION JIG



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PERMANENT SIGNING STANDARD

BREAKAWAY MOUNTS

STANDARD NO. PS-6B

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. PS-6B

STANDARD NO. SG-1

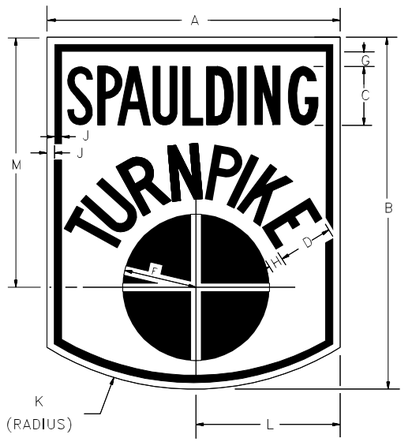
REVISION DATE
7-13-01

*.DGN FILE NAME
SG-1

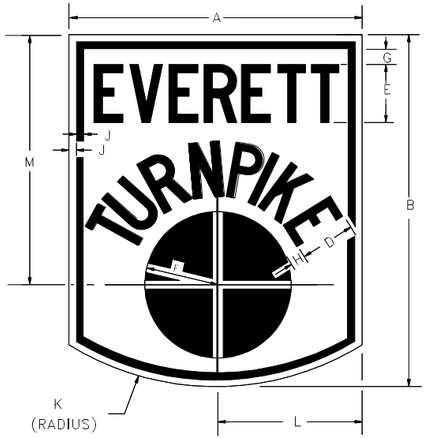
METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-1



M1-6a

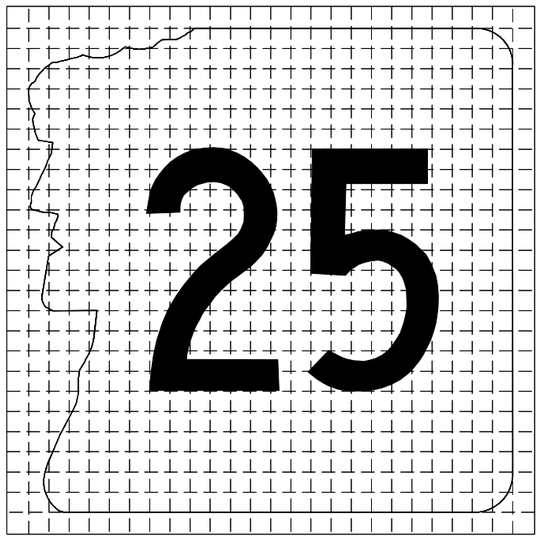


M1-6b

N.H. TURNPIKE ROUTE MARKERS

(FOR GUIDE SIGN USE)

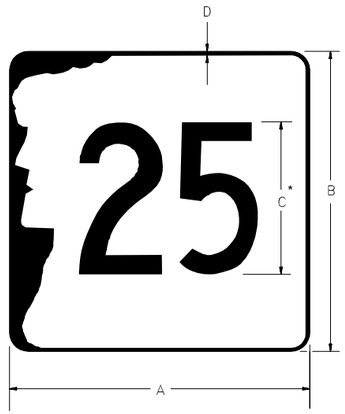
SIGN	DIMENSIONS (mm)											
	A	B	C	D	E	F	G	H	J	K	L	M
STANDARD	500	600	100B	100B	100C	125	25	25	12	425	250	425
OVERHEAD	750	900	150B	150B	150C	200	50	25	12	712	375	625



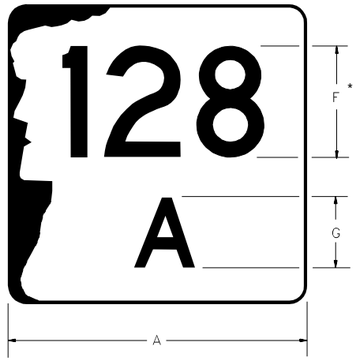
M1-5, N.H. STATE ROUTE MARKER PATTERN (CENTER LINE)

(FOR GUIDE SIGN USE)

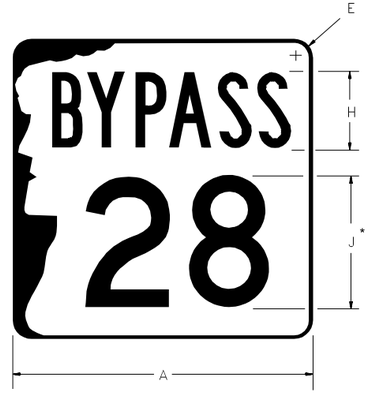
NOTE: USE TABLE ABOVE RIGHT FOR NUMERAL AND LETTER SIZES.
USE THIS PATTERN FOR ALL N.H. STATE ROUTE MARKERS.



M1-5



M1-5a



M1-5b

M1-5c

N.H. STATE ROUTE MARKER

(FOR INDEPENDENT USE)

SIGN	DIMENSIONS (mm)								
	A	B	C	D	E	F	G	H	J
1,2 DIGITS	600	600	300D	13	38	225D	150D	150B	225D
3 DIGITS	600	600	300B	13	38	225D	150D	150B	225D
1,2 DIGITS	750	750	375D	13	38	300D	200D	200B	300D
3 DIGITS	750	750	375B	13	38	300D	200D	200B	300D
1,2 DIGITS	900	900	450D	19	56	350D	225D	225B	350D
3 DIGITS	900	900	450B	19	56	350D	225D	225B	350D

* OPTICALLY SPACE NUMERALS WITHIN SHIELD

M1-5d

GENERAL NOTES

1. BACKGROUND FOR ALL SHIELDS SHALL BE SILVER TYPE III SHEETING.
2. SHEET ALUMINUM USED FOR DEMOUNTABLE ROUTE MARKERS SHALL CONFORM TO THE OUTLINE OF THE SHIELD. AS AN OPTION FOR N.H. STATE ROUTE MARKERS, THE CUT OUT "OLD MAN" OUTLINE MAY BE MOUNTED ON SQUARE SHEET ALUMINUM COVERED WITH SHEETING WHICH MATCHES THE BACKGROUND OF THE MAIN SIGN IN ACCORDANCE WITH 615.
3. NEW HAMPSHIRE STATE ROUTE MARKERS SHALL UTILIZE "THE OLD MAN" IMAGE OR OUTLINE AS FOLLOWS:
   - INDEPENDENT ROUTE MARKERS SHALL HAVE BLACK TEXT INSIDE A BLACK "OLD MAN" IMAGE AS SHOWN ABOVE;
   - GUIDE SIGN ROUTE MARKERS SHALL HAVE BLACK TEXT ON A CUT OUT SILVER "OLD MAN" OUTLINE AS SHOWN BELOW LEFT.
4. NEW HAMPSHIRE TURNPIKE ROUTE MARKERS SHALL UTILIZE THE FOLLOWING DESIGN:
   - SPAULDING TURNPIKE GUIDE SIGN ROUTE MARKERS SHALL HAVE BLUE TYPE III TEXT, BORDER, AND DISK ON A SILVER BACKGROUND,
   - EVERETT TURNPIKE GUIDE SIGN ROUTE MARKERS SHALL HAVE GREEN TYPE III TEXT, BORDER, AND DISK ON A SILVER BACKGROUND.
5. INTERSTATE AND U.S. ROUTE MARKERS SHALL CONFORM TO THE *MUTCD* AND STANDARD HIGHWAY SIGNS MANUAL.
6. DIMENSIONS OF ROUTE MARKERS NOT SHOWN ON THIS SHEET SHALL BE DIRECTLY PROPORTIONAL TO THOSE SHOWN.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

PERMANENT SIGNING STANDARD

ROUTE MARKER DETAILS

STANDARD NO. SG-1

REVISION DATE
7-13-01

*.DGN FILE NAME
SG-1

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-1

STANDARD NO. SG-2

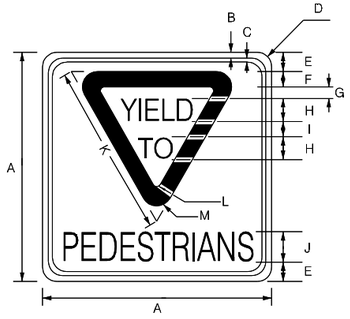
REVISION DATE
7-13-01

*.DGN FILE NAME: SG-2

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-2



R1-2B1

	DIMENSIONS (mm)												
SIGN	A	B	C	D	E	F	G	H	I	J	K	L	M
STD.	750	13	13	47	63	50	38	75D	50	100B	563	13	50

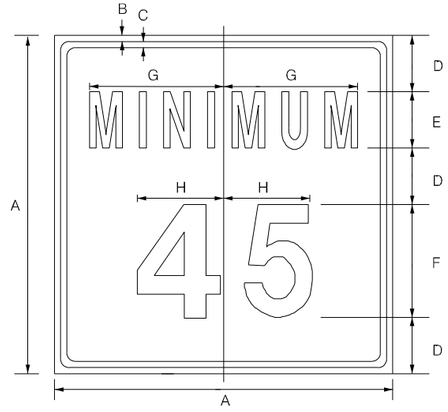
COLORS
BACKGROUND – WHITE REFLECTIVE
TRIANGLE & 'YIELD TO' – RED REFLECTIVE
BORDER & 'PEDESTRIANS' – BLACK NON-REFLECTIVE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
YIELD TO PEDESTRAINS

REV. DATE

PLATE 1
STANDARD SG-2



R2-4B1

	DIMENSIONS (mm)							
SIGN	A	B	C	D	E	F	G	H
STD.	1200	19	22	200	200C	400D	475	306

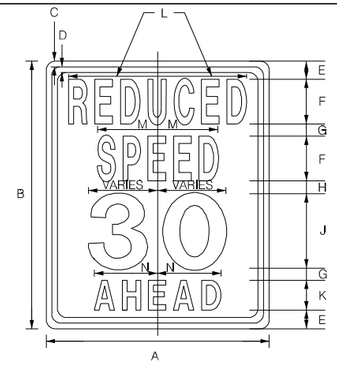
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
MINIMUM 45

REV. DATE

PLATE 2
STANDARD SG-2



R2-5B1

	DIMENSIONS (mm)												
SIGN	A	B	C	D	E	F	G	H	J	K	L	M	N
STD.	750	900	13	19	63	150	41	44	250E	100	300	203	213
FWY.	900	1200	19	19	75	175B	88	81	300E	150C	372	256	275
SPECIAL	1200	1500	19	22	150	200C	100	103	350E	150D	500	350	319

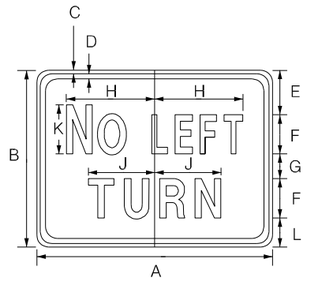
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
REDUCED SPEED 30 AHEAD

REV. DATE

PLATE 3
STANDARD SG-2



R3-3LB1

	DIMENSIONS (mm)										
SIGN	A	B	C	D	E	F	G	H	J	K	L
STD.	600	450	13	13	113	100C	63	225	169	125C	75

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
NO LEFT TURN

REV. DATE

PLATE 4
STANDARD SG-2

STANDARD NO. SG-2

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-2

STANDARD NO. SG-3

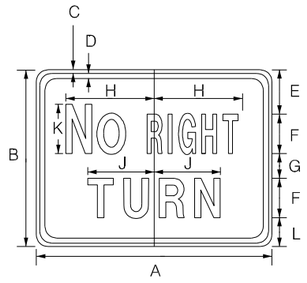
REVISION DATE
7-13-01

*.DGN FILE NAME
SG-3

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-3



R3-3RB1

	DIMENSIONS (mm)										
SIGN	A	B	C	D	E	F	G	H	J	K	L
STD.	600	450	13	13	113	100C	63	244	169	125C	75

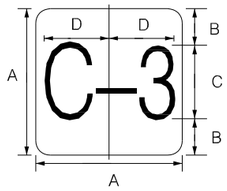
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
NO RIGHT TURN

REV. DATE

PLATE 1
STANDARD SG-3



R4-5B1

	DIMENSIONS (mm)			
SIGN	A	B	C	D
STD.	300	75	150C	100

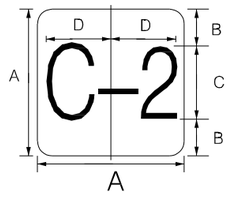
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
C-3

REV. DATE

PLATE 2
STANDARD SG-3



R4-5bB1

	DIMENSIONS (mm)			
SIGN	A	B	C	D
STD.	300	75	150C	100

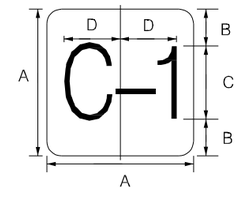
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
C-2

REV. DATE

PLATE 3
STANDARD SG-3



R4-5cB1

	DIMENSIONS (mm)			
SIGN	A	B	C	D
STD.	300	75	150C	100

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
C-1

REV. DATE

PLATE 4
STANDARD SG-3

METRIC STANDARD PLANS
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STANDARD NO. SG-3

STANDARD NO. SG-4

REVISION DATE
7-13-01

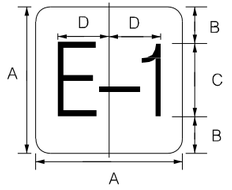
*.DGN FILE NAME: SG-4

METRIC STANDARD PLANS

DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STATE OF NEW HAMPSHIRE

STANDARD NO. SG-4



R4-5dB1

	DIMENSIONS (mm)			
SIGN	A	B	C	D
STD.	300	75	150C	100

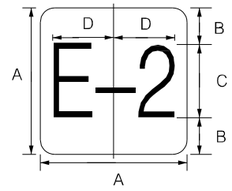
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
E-1

REV. DATE

PLATE 1
STANDARD SG-4



R4-5eB1

	DIMENSIONS (mm)			
SIGN	A	B	C	D
STD.	300	75	150C	100

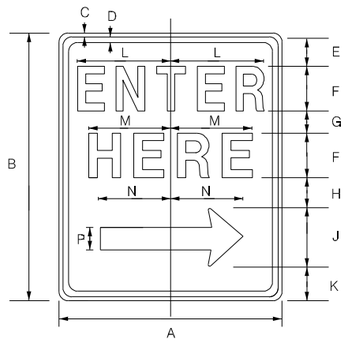
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
E-2

REV. DATE

PLATE 2
STANDARD SG-4



R4-7B1

	DIMENSIONS (mm)													
SIGN	A	B	C	D	E	F	G	H	J	K	L	M	N	P
STD.	750	900	13	13	94	200C	75	119	200	138	313	275	244	75

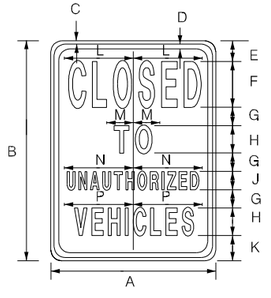
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
ENTER HERE

REV. DATE

PLATE 3
STANDARD SG-4



R5-10B1

	DIMENSIONS (mm)													
SIGN	A	B	C	D	E	F	G	H	J	K	L	M	N	P
STD.	450	600	13	13	56	125B	50	75C	50C	69	194	47	200	178

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
CLOSED TO UNAUTHORIZED VEHICLES

REV. DATE

PLATE 4
STANDARD SG-4

STANDARD NO. SG-4

STANDARD NO. SG-5

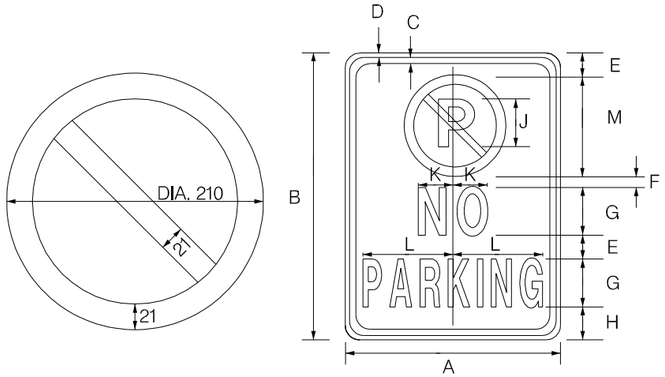
REVISION DATE
7-13-01

*.DGN FILE NAME
SG-5

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-5



R7-2B1

	DIMENSIONS (mm)											
SIGN	A	B	C	D	E	F	G	H	J	K	L	M
STD.	450	600	13	13	50	22	100C	69	127C	72	188	213

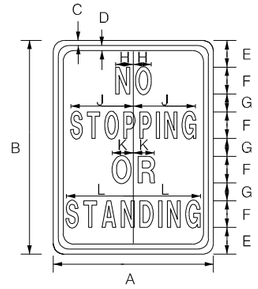
COLORS
LEGEND /BORDER – RED/BLACK
BACKGROUND – WHITE
'P' – BLACK

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
NO PARKING

REV. DATE

PLATE 1
STANDARD SG-5



R7-4B1

	DIMENSIONS (mm)										
SIGN	A	B	C	D	E	F	G	H	J	K	L
STD.	450	600	13	13	75	75C	50	50	175	59	188

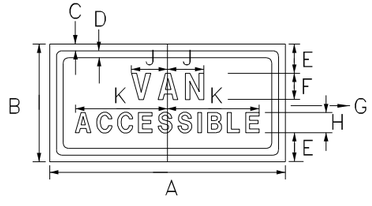
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
NO STOPPING OR STANDING

REV. DATE

PLATE 2
STANDARD SG-5



R7-8a

	DIMENSIONS (mm)									
SIGN	A	B	C	D	E	F	G	H	J	K
STD.	450	225	13	13	56	50D	25	38D	69	175

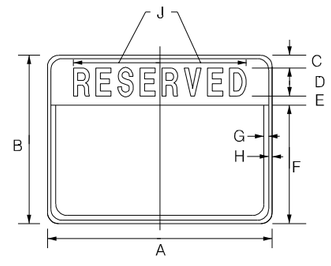
COLORS
LEGEND /BORDER – GREEN /BLACK
BACKGROUND – WHITE /WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
VAN ACCESSIBLE

REV. DATE

PLATE 3
STANDARD SG-5



R7-8aB1

	DIMENSIONS (mm)								
SIGN	A	B	C	D	E	F	G	H	J
STD.	600	450	34	75D	25	316	13	9	231

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
RESERVED

REV. DATE

PLATE 4
STANDARD SG-5

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-5

STANDARD NO. SG-6

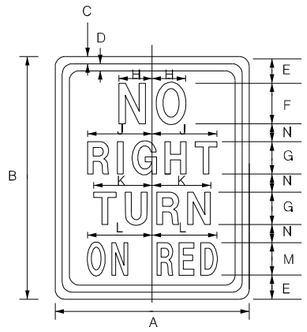
REVISION DATE
7-13-01

*.DGN FILE NAME
SG-6

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-6



R10-11B1

	DIMENSIONS (mm)												
SIGN	A	B	C	D	E	F	G	H	J	K	L	M	N
STD.	600	750	13	13	75	125D	125C	103	200	181	200	100C	44

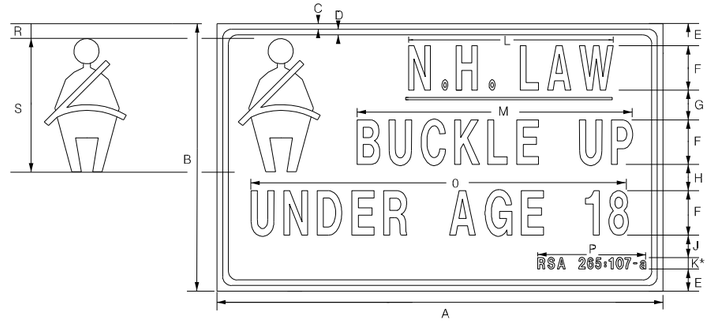
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
NO RIGHT TURN ON RED

REV. DATE

PLATE 1
STANDARD SG-6



R16-1B1

	DIMENSIONS (mm)															
SIGN	A	B	C	D	E	F	G	H	J	K*	L	M	O	P	R	S
STD.	1500	900	19	19	75	150C	100	88	75	38	688	925	1263	363	50	450
FWY.	2100	1200	22	22	125	200D	138	113	50	50	1025	1400	1838	500	88	600

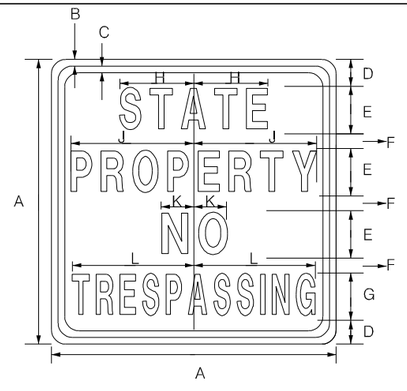
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
N.H. LAW BUCKLE UP UNDER AGE 18

REV. DATE

PLATE 2
STANDARD SG-6



R16-2B1

	DIMENSIONS (mm)										
SIGN	A	B	C	D	E	F	G	H	J	K	L
STD.	600	13	13	50	100C	34	100B	156	259	69	256

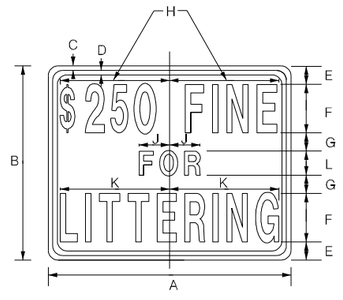
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
STATE PROPERTY NO TRESPASSING

REV. DATE

PLATE 3
STANDARD SG-6



R16-3B1

	DIMENSIONS (mm)										
SIGN	A	B	C	D	E	F	G	H	J	K	L
STD.	750	600	13	13	75	125B	47	338	94	338	100C

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

REGULATORY SIGN
NHDOT STANDARD PLANS
$ 250 FINE FOR LITTERING

REV. DATE

PLATE 4
STANDARD SG-6

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-6

STANDARD NO. SG-7

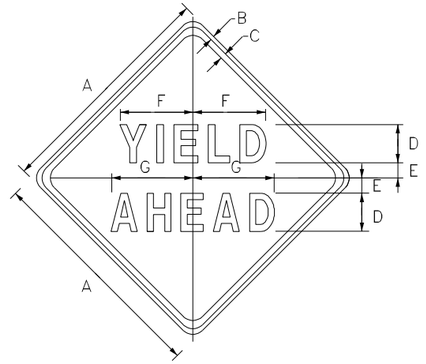
REVISION DATE
7-13-01

*.DGN FILE NAME: SG-7

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-7



W3-2

	DIMENSIONS (mm)						
SIGN	A	B	C	D	E	F	G
STD.	750	19	19	125D	50	238	266

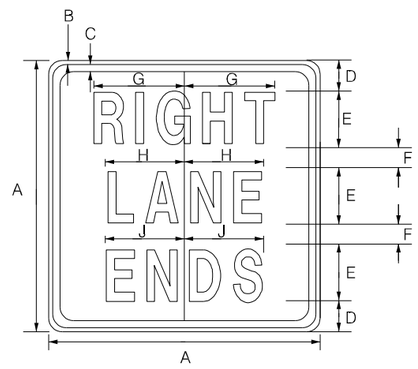
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
YIELD AHEAD

REV. DATE

PLATE 1
STANDARD SG-7



W4B-9A

	DIMENSIONS (mm)								
SIGN	A	B	C	D	E	F	G	H	J
STD.	600	13	13	69	125C	44	200	175	175

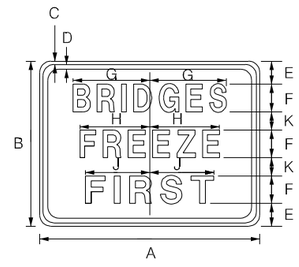
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
RIGHT LANE ENDS

REV. DATE

PLATE 2
STANDARD SG-7



W5B-2

	DIMENSIONS (mm)									
SIGN	A	B	C	D	E	F	G	H	J	K
STD.	600	600	13	13	70	125B	229	184	152	44

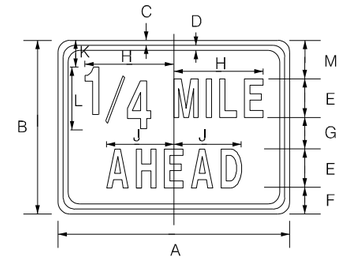
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
BRIDGES FREEZE FIRST

REV. DATE

PLATE 3
STANDARD SG-7



W7B-1

	DIMENSIONS (mm)											
SIGN	A	B	C	D	E	F	G	H	J	K	L	M
STD.	600	450	13	13	100C	69	81	238	175	69	163	100

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
1/4 MILE AHEAD

REV. DATE

PLATE 4
STANDARD SG-7

STANDARD NO. SG-7
METRIC STANDARD PLANS
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
STANDARD NO. SG-7

STANDARD NO. SG-8

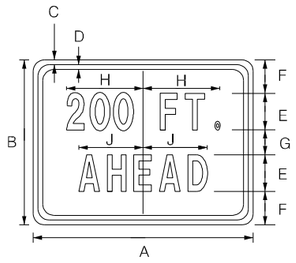
REVISION DATE
7-13-01

*.DGN FILE NAME: SG-8

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-8



W7B-2

	DIMENSIONS (mm)								
SIGN	A	B	C	D	E	F	G	H	J
STD.	600	450	13	13	100C	91	66	209	175
FWY.	600	750	13	13	125C	125	100	531	444

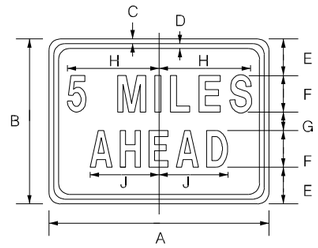
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
200 FT. AHEAD

REV. DATE

PLATE 1
STANDARD SG-8



W7B-3

	DIMENSIONS (mm)								
SIGN	A	B	C	D	E	F	G	H	J
STD.	600	450	13	13	100	100C	50	250	188

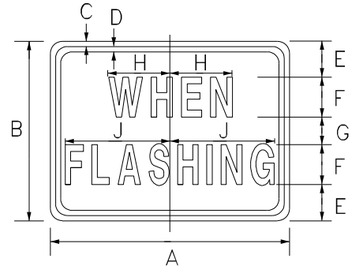
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
5 MILES AHEAD

REV. DATE

PLATE 2
STANDARD SG-8



W7B-4

	DIMENSIONS (mm)								
SIGN	A	B	C	D	E	F	G	H	J
STD.	600	450	13	13	91	100B	69	156	263

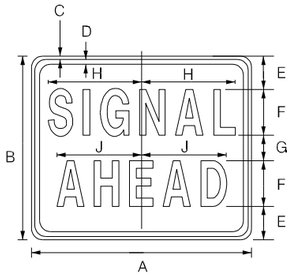
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
WHEN FLASHING

REV. DATE

PLATE 3
STANDARD SG-8



W7B-5

	DIMENSIONS (mm)								
SIGN	A	B	C	D	E	F	G	H	J
STD.	600	450	13	13	91	125C	69	255	231

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
SIGNAL AHEAD

REV. DATE

PLATE 4
STANDARD SG-8

STANDARD NO. SG-8

STANDARD NO. SG-9

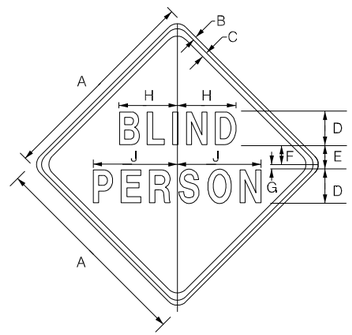
REVISION DATE
7-13-01

*.DGN FILE NAME
SG-9

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-9



W11B-1

	DIMENSIONS (mm)								
SIGN	A	B	C	D	E	F	G	H	J
STD.	750	19	19	125D	85	69	16	213	306

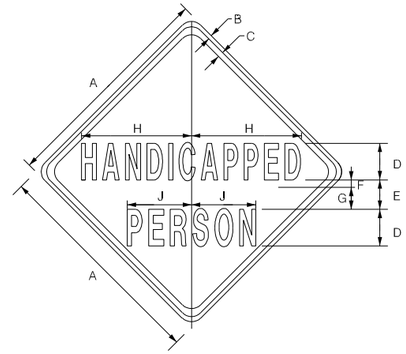
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
BLIND PERSON

REV. DATE

PLATE 1
STANDARD SG-9



W11B-2

	DIMENSIONS (mm)								
SIGN	A	B	C	D	E	F	G	H	J
STD.	750	19	19	125D	100	25	75	375	219

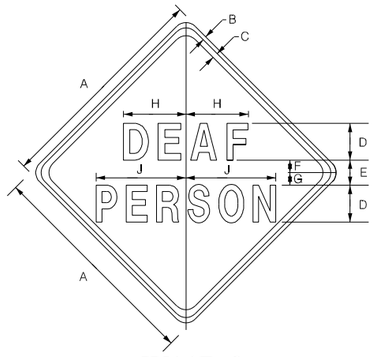
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
HANDICAPPED PERSON

REV. DATE

PLATE 2
STANDARD SG-9



W11B-3

	DIMENSIONS (mm)								
SIGN	A	B	C	D	E	F	G	H	J
STD.	750	19	19	125D	86	69	16	213	306

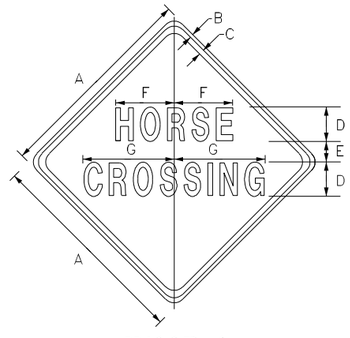
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
DEAF PERSON

REV. DATE

PLATE 3
STANDARD SG-9



W11B-4

	DIMENSIONS (mm)						
SIGN	A	B	C	D	E	F	G
STD.	750	19	19	125D	75	213	331

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
HORSE CROSSING

REV. DATE

PLATE 4
STANDARD SG-9

STANDARD NO. SG-9

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-9

STANDARD NO. SG-10

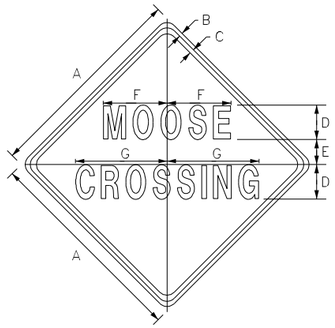
REVISION DATE
7-13-01

*.DGN FILE NAME: SG-10

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-10



W11B-5

	DIMENSIONS (mm)						
SIGN	A	B	C	D	E	F	G
STD.	900	19	19	150D	109	278	400
FWY.	1200	22	22	200D	125	712	1063

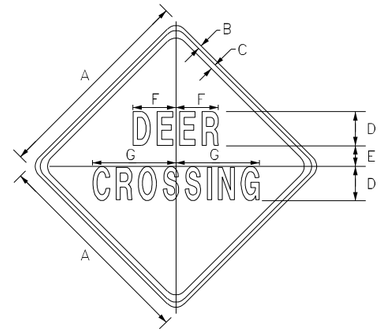
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
MOOSE CROSSING

REV. DATE

PLATE 1
STANDARD SG-10



W11B-6

	DIMENSIONS (mm)						
SIGN	A	B	C	D	E	F	G
STD.	750	13	19	125C	75	158	303
FWY.	900	19	19	150C	109	200	400

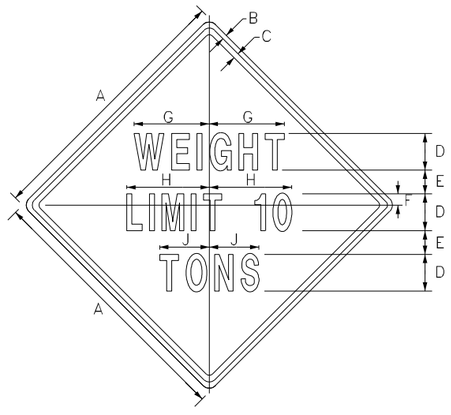
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
DEER CROSSING

REV. DATE

PLATE 2
STANDARD SG-10



W12B-1

	DIMENSIONS (mm)								
SIGN	A	B	C	D	E	F	G	H	J
STD.	900	19	19	125C	81	260	256	281	169

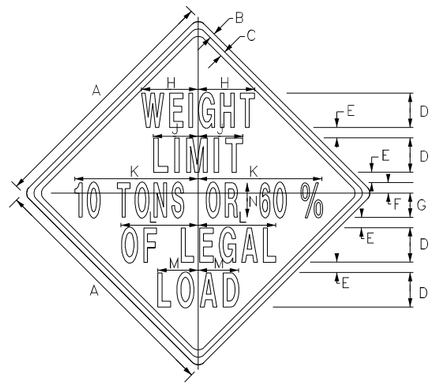
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
WEIGHT LIMIT 10 TONS

REV. DATE

PLATE 3
STANDARD SG-10



W12B-2

	DIMENSIONS (mm)												
SIGN	A	B	C	D	E	F	G	H	J	K	L	M	N
STD.	900	19	19	125B	38	38	88	206	163	450	281	147	100B

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
WEIGHT LIMIT 10 TONS OR 60% OF LEGAL LOAD

REV. DATE

PLATE 4
STANDARD SG-10

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-10

STANDARD NO. SG-11

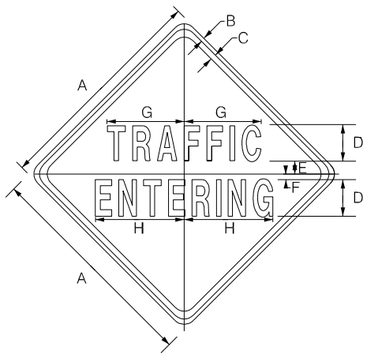
REVISION DATE
7-13-01

*.DGN FILE NAME
SG-11

METRIC STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-11



W14B-1

	DIMENSIONS (mm)							
SIGN	A	B	C	D	E	F	G	H
STD.	750	19	19	1250	44	19	263	303

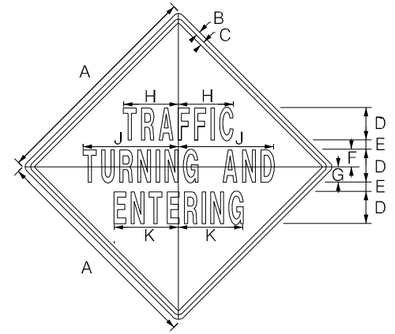
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
TRAFFIC ENTERING

REV. DATE

PLATE 1
STANDARD SG-11



W14B-2

	DIMENSIONS (mm)									
SIGN	A	B	C	D	E	F	G	H	J	K
STD.	900	19	19	1250	38	63	63	281	425	313

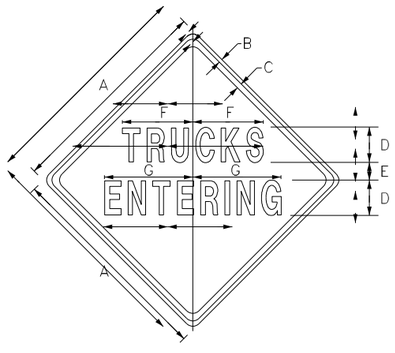
COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
TRAFFIC TURNING AND ENTERING

REV. DATE

PLATE 2
STANDARD SG-11



W14B-3

	DIMENSIONS (mm)						
SIGN	A	B	C	D	E	F	G
STD.	750	13	19	1250	63	250	313
FWY.	900	19	19	1500	75	300	375

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

WARNING SIGN
NHDOT STANDARD PLANS
TRUCKS ENTERING

REV. DATE

PLATE 3
STANDARD SG-11

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS

REV. DATE

PLATE 4
STANDARD SG-11

STANDARD NO. SG-11

STANDARD NO. SG-12

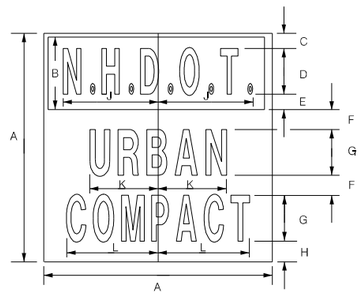
REVISION DATE
7-13-01

*.DGN FILE NAME
SG-12

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-12



D1-7B1

	DIMENSIONS (mm)										
SIGN	A	B	C	D	E	F	G	H	J	K	L
STD.	375	119	25	75C	25	33	75B	34	156	113	150

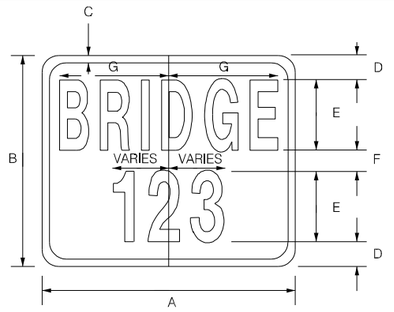
COLORS
LEGEND /BORDER – GREEN
BACKGROUND – WHITE

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

MISCELLANEOUS SIGN
NHDOT STANDARD PLANS
N.H.D.O.T. URBAN COMPACT

REV. DATE

PLATE 1
STANDARD SG-12



D1-8B1

	DIMENSIONS (mm)						
SIGN	A	B	C	D	E	F	G
STD.	450	375	13	44	125B	38	194

COLORS
LEGEND /BORDER – WHITE
BACKGROUND – GREEN

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

MISCELLANEOUS SIGN
NHDOT STANDARD PLANS
BRIDGE 123

REV. DATE

PLATE 2
STANDARD SG-12

D3B-1

METRIC UNITS

	DIMENSIONS (mm)						
SIGN	A	B	C	D	E	F	G
STD.	900	200	9	13	50	*100C	*VARIES

*F VARIES DEPENDING ON LENGTH OF WORD.
*G VARIES DEPENDING ON LENGTH OF WORD.

COLORS
LEGEND /BORDER – BLACK
BACKGROUND – YELLOW

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

MISCELLANEOUS SIGN
NHDOT STANDARD PLANS
SIGN SHOP RD

REV. DATE

PLATE 3
STANDARD SG-12

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS OR METERS. WHOLE NUMBERS INDICATE MILLIMETERS; DECIMAL NUMBERS INDICATE METERS UNLESS OTHERWISE NOTED.

NHDOT STANDARD PLANS

REV. DATE

PLATE 4
STANDARD SG-12

METRIC
STANDARD PLANS

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.

STANDARD NO. SG-12