

LETTER	QUANTITIES AREA (FT²)	PAINT (GAL.)	EPOXY (GAL.)	METRIC QUANTITIES AREA (m²)	PAINT (liters)	EPOXY (liters)
A	5.72	0.06	0.08	0.52	0.22	0.29
B	7.56	0.08	0.10	0.68	0.29	0.38
C	5.22	0.06	0.07	0.47	0.20	0.26
D	6.61	0.07	0.09	0.60	0.26	0.34
E	6.78	0.07	0.09	0.61	0.26	0.34
F	5.00	0.05	0.07	0.45	0.19	0.25
G	6.06	0.06	0.08	0.54	0.23	0.30
H	6.44	0.07	0.09	0.58	0.25	0.32
I	2.78	0.03	0.04	0.25	0.11	0.14
J	3.87	0.04	0.05	0.35	0.15	0.20
K	6.58	0.07	0.09	0.59	0.25	0.33
L	4.11	0.04	0.06	0.37	0.16	0.21
M	7.84	0.08	0.11	0.71	0.31	0.40
N	7.33	0.08	0.10	0.66	0.28	0.37
O	6.28	0.07	0.09	0.57	0.25	0.32
P	5.70	0.06	0.08	0.51	0.22	0.28
Q	6.42	0.07	0.09	0.58	0.25	0.32
R	6.66	0.07	0.09	0.60	0.26	0.34
S	6.68	0.07	0.09	0.60	0.26	0.34
T	4.11	0.04	0.06	0.37	0.16	0.21
U	5.88	0.06	0.08	0.53	0.23	0.30
V	5.06	0.05	0.07	0.46	0.20	0.26
W	7.38	0.08	0.10	0.66	0.28	0.37
X	4.99	0.05	0.07	0.45	0.19	0.25
Y	4.17	0.04	0.06	0.38	0.16	0.21
Z	5.44	0.06	0.07	0.49	0.21	0.27

NOTES:

1. EACH SQUARE EQUALS 4 INCHES [100 mm].
2. ALL PAVEMENT MARKINGS ARE TO CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" PUBLICATIONS, FROM THE FEDERAL HIGHWAY ADMINISTRATION.
3. ALL LETTERS ARE TO BE WHITE.
4. USE THE SIZES OF LETTERS SHOWN UNLESS SMALLER OR LARGER SIZES ARE NEEDED. THE SIZE OF LETTERS MAY BE SCALED PROPORTIONATELY DOWN BY APPROXIMATELY ONE-THIRD FOR LOW-SPEED, URBAN CONDITIONS. THE MINIMUM HEIGHT OF ANY LETTER IS 6.0 FEET [1.8 m]. LARGER SIZES MAY BE USED FOR ABOVE AVERAGE SPEEDS AND OTHER CRITICAL LOCATIONS.
5. DO NOT EXCEED MORE THAN ONE LANE IN WIDTH FOR ANY PAVEMENT MARKINGS EXCEPT IN THE CASE OF THE WORD "SCHOOL". SEE DTL. DWG. NO. 620-10 FOR MORE INFORMATION.
6. FOR MULTIPLE LINES OF INFORMATION, PLACE THE INFORMATION SO IT READS IN THE DIRECTION OF TRAVEL. DO NOT EXCEED THREE LINES OF INFORMATION AT ANY LOCATION.
7. WHEN WORDS AND SYMBOLS ARE USED IN COMBINATION, SPACE THEM AT LEAST FOUR TIMES THE HEIGHT OF CHARACTERS FOR LOW-SPEED ROADS, BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS UNDER ANY CONDITION.
8. ON NARROW, LOW-SPEED BICYCLE PATHS, SIZES OF LETTERS MAY BE SMALLER THAN SUGGESTED, BUT TO THE RELATIVE SCALE.
9. QUANTITIES ARE BASED ON THE SIZES OF PAVEMENT MARKINGS SHOWN AND ARE FOR ESTIMATING PURPOSES ONLY.
10. PAINT VOLUMES ASSUME A 17 MIL [0.432 mm] THICKNESS. EPOXY VOLUMES ASSUME A 22 MIL [0.559 mm] THICKNESS.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

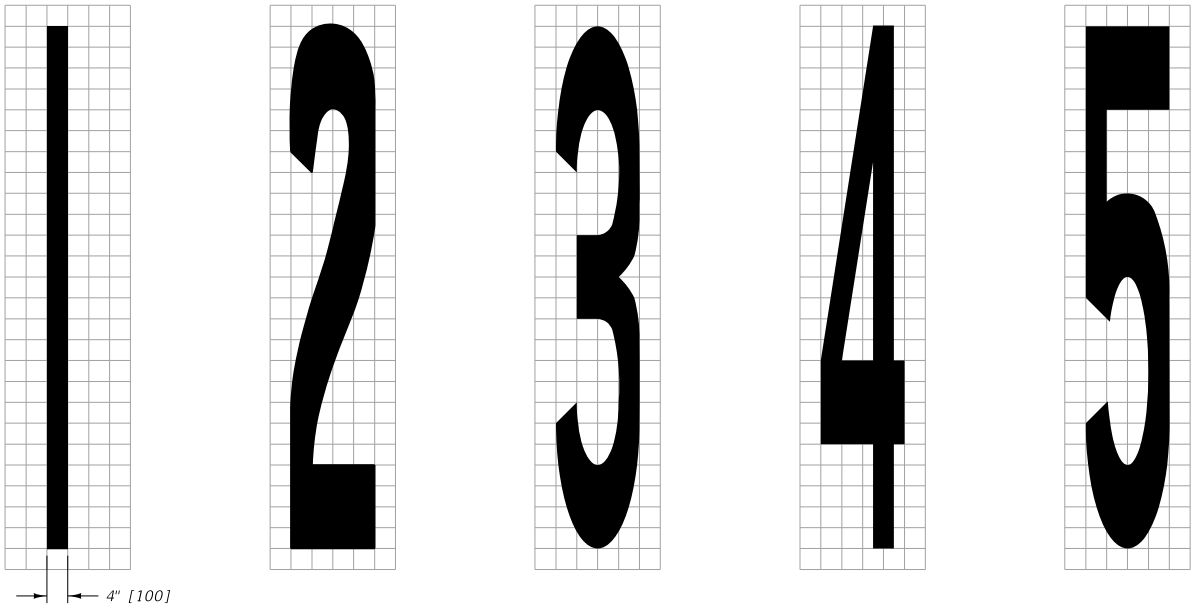
DETAILED DRAWING

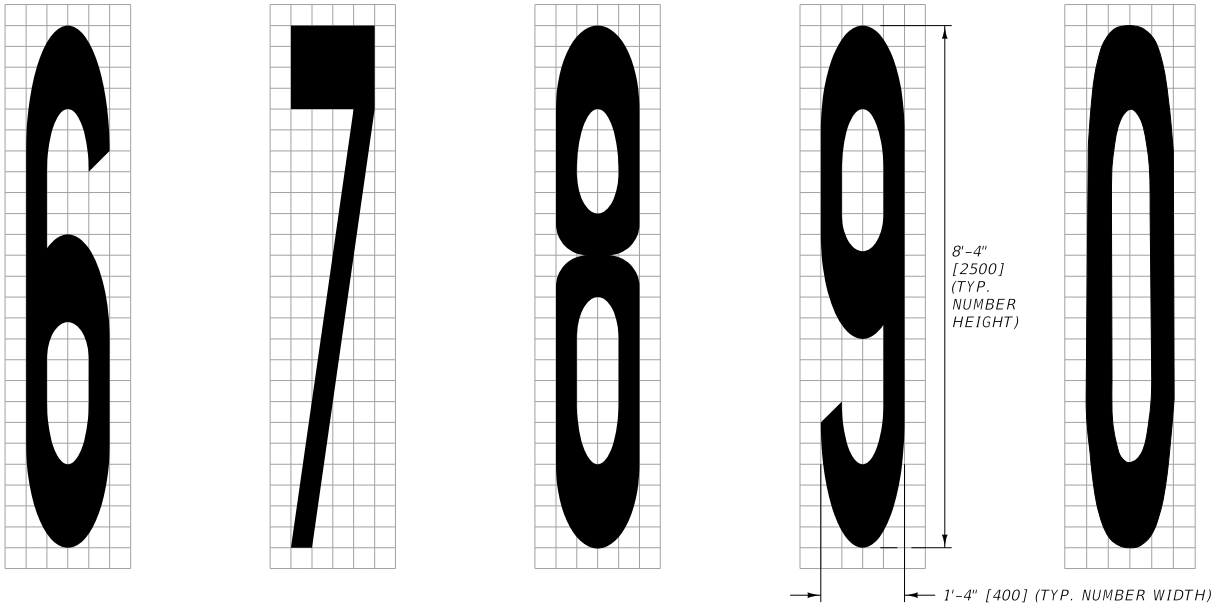
REFERENCE
STANDARD SPEC.
SECTION 620

DWG. NO.
620-00

PAVEMENT MARKINGS (LETTERS)

MDT MONTANA DEPARTMENT OF TRANSPORTATION





NOTES:

1. EACH SQUARE EQUALS 4 INCHES [100].
2. ALL PAVEMENT MARKINGS ARE TO CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" PUBLICATIONS, FROM THE FEDERAL HIGHWAY ADMINISTRATION.
3. ALL NUMBERS ARE TO BE WHITE.
4. USE THE SIZES OF NUMBERS SHOWN UNLESS SMALLER OR LARGER SIZES ARE NEEDED. THE SIZE OF NUMBERS MAY BE SCALED PROPORTIONATELY DOWN BY APPROXIMATELY ONE-THIRD FOR LOW-SPEED, URBAN CONDITIONS. THE MINIMUM HEIGHT OF ANY NUMBER IS 6 FEET [1.8 m]. LARGER SIZES MAY BE USED FOR ABOVE AVERAGE SPEEDS AND OTHER CRITICAL LOCATIONS.
5. DO NOT EXCEED MORE THAN ONE LANE IN WIDTH FOR ANY PAVEMENT MARKINGS EXCEPT IN THE CASE OF THE WORD "SCHOOL". SEE DTL. DWG. NO. 620-10 FOR MORE INFORMATION.
6. FOR MULTIPLE LINES OF INFORMATION, PLACE THE INFORMATION SO IT READS IN THE DIRECTION OF TRAVEL. DO NOT EXCEED THREE LINES OF INFORMATION AT ANY LOCATION.
7. WHEN WORDS AND SYMBOLS ARE USED IN COMBINATION, SPACE THEM AT LEAST FOUR TIMES THE HEIGHT OF CHARACTERS FOR LOW-SPEED ROADS, BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS UNDER ANY CONDITION.
8. ON NARROW, LOW-SPEED BICYCLE PATHS, SIZES OF NUMBERS MAY BE SMALLER THAN SUGGESTED, BUT TO THE RELATIVE SCALE.
9. QUANTITIES ARE BASED ON THE SIZES OF PAVEMENT MARKINGS SHOWN AND ARE FOR ESTIMATING PURPOSES ONLY.
10. PAINT VOLUMES ASSUME A 17 MIL [0.432] THICKNESS. EPOXY VOLUMES ASSUME A 22 MIL [0.559] THICKNESS.

QUANTITIES			
#	AREA (FT)	PAINT (GAL.)	EPOXY (GAL.)
1	2.78	0.03	0.04
2	6.76	0.07	0.09
3	5.97	0.06	0.08
4	5.54	0.06	0.08
5	6.86	0.07	0.09
6	6.94	0.07	0.10
7	4.11	0.04	0.06
8	7.74	0.08	0.11
9	6.94	0.07	0.10
0	7.11	0.08	0.10

METRIC QUANTITIES			
#	AREA (m)	PAINT (liters)	EPOXY (liters)
1	0.25	0.11	0.14
2	0.61	0.26	0.34
3	0.54	0.23	0.30
4	0.50	0.22	0.28
5	0.62	0.27	0.35
6	0.62	0.27	0.35
7	0.37	0.16	0.21
8	0.70	0.30	0.39
9	0.62	0.27	0.35
0	0.62	0.27	0.35

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

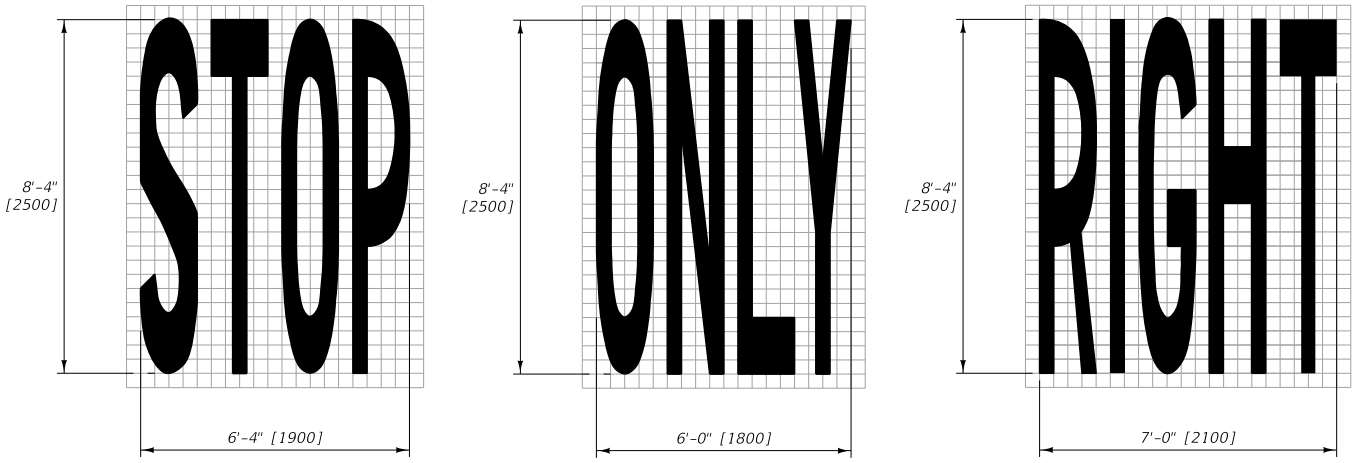
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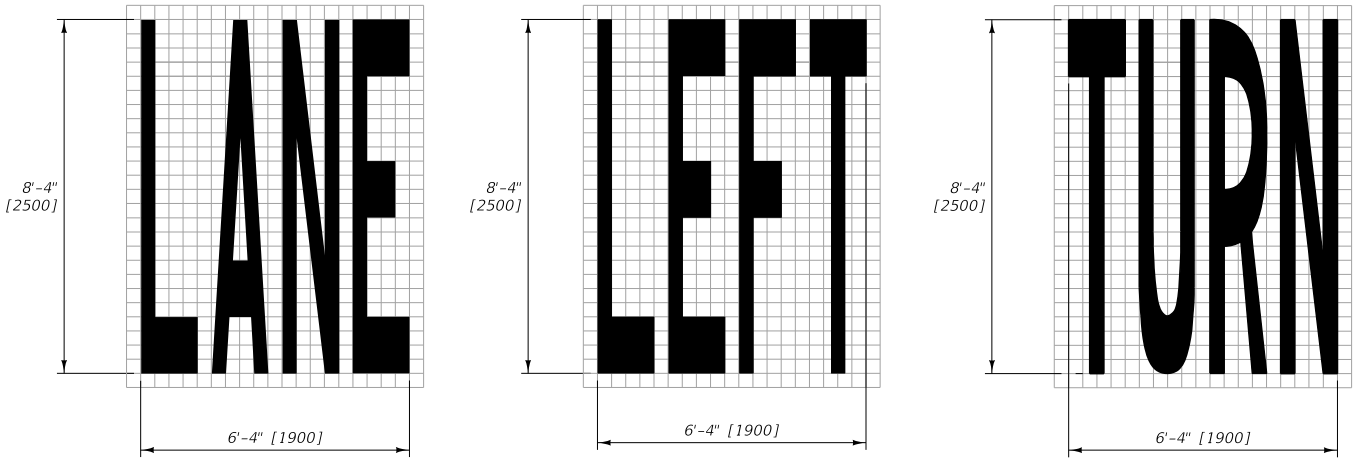
REFERENCE
STANDARD SPEC.
SECTION 620

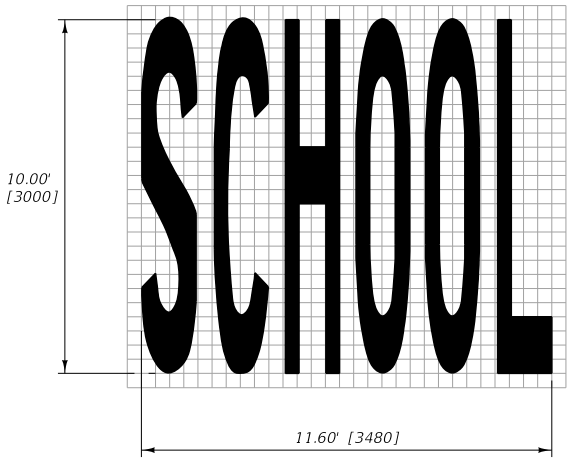
DWG. NO.
620-05

PAVEMENT MARKINGS (NUMBERS)

MDT MONTANA DEPARTMENT OF TRANSPORTATION







NOTE: EACH SQUARE EQUALS 0.40' [120]

NOTES:

1. UNLESS OTHERWISE NOTED EACH SQUARE EQUALS 4 [100] INCHES.
2. ALL PAVEMENT MARKINGS ARE TO CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" PUBLICATIONS, FROM THE FEDERAL HIGHWAY ADMINISTRATION.
3. ALL WORDS ARE TO BE WHITE.
4. USE THE SIZES OF WORDS SHOWN UNLESS SMALLER OR LARGER SIZES ARE NEEDED. THE SIZE OF WORDS MAY BE SCALED PROPORTIONATELY DOWN BY APPROXIMATELY ONE-THIRD FOR LOW-SPEED, URBAN CONDITIONS. THE MINIMUM HEIGHT OF ANY WORD IS 6 FEET [1.8 m]. LARGER SIZES MAY BE USED FOR ABOVE AVERAGE SPEEDS AND OTHER CRITICAL LOCATIONS.
5. DO NOT EXCEED MORE THAN ONE LANE IN WIDTH FOR ANY PAVEMENT MARKINGS, EXCEPT IN THE CASE OF THE WORD "SCHOOL". WHEN "SCHOOL" IS EXTENDED TO THE WIDTH OF TWO LANES, SCALE THE WORD UP PROPORTIONATELY TO FIT THE APPLICATION WIDTH.
6. FOR MULTIPLE LINES OF INFORMATION, PLACE THE INFORMATION SO IT READS IN THE DIRECTION OF TRAVEL. DO NOT EXCEED THREE LINES OF INFORMATION AT ANY LOCATION.
7. WHEN WORDS AND SYMBOLS ARE USED IN COMBINATION, SPACE THEM AT LEAST FOUR TIMES THE HEIGHT OF CHARACTERS FOR LOW-SPEED ROADS, BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS UNDER ANY CONDITION.
8. ON NARROW, LOW-SPEED BICYCLE PATHS, SIZES OF LETTERS MAY BE SMALLER THAN SUGGESTED, BUT TO THE RELATIVE SCALE.
9. QUANTITIES ARE BASED ON THE SIZES OF PAVEMENT MARKINGS SHOWN AND ARE FOR ESTIMATING PURPOSES ONLY.
10. PAINT VOLUMES ASSUME A 17 MIL [0.432] THICKNESS. EPOXY VOLUMES ASSUME A 22 MIL [0.559] THICKNESS.

QUANTITIES			
WORD	AREA (FT^2)	PAINT (GAL.)	EPOXY (GAL.)
STOP	22.77	0.24	0.31
ONLY	21.89	0.23	0.30
RIGHT	26.05	0.28	0.36
LANE	23.94	0.25	0.33
LEFT	20.00	0.21	0.27
TURN	23.98	0.25	0.33
SCHOOL	48.14	0.51	0.66

METRIC QUANTITIES			
WORD	AREA (m^2)	PAINT (liters)	EPOXY (liters)
STOP	2.05	0.89	1.15
ONLY	1.98	0.85	1.11
RIGHT	2.34	1.01	1.31
LANE	2.16	0.93	1.21
LEFT	1.80	0.78	1.01
TURN	2.16	0.93	1.21
SCHOOL	4.54	1.96	2.54

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING

REFERENCE
STANDARD SPEC.
SECTION 620

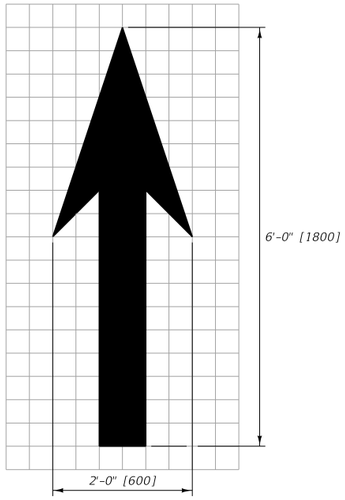
DWG. NO.
620-10

PAVEMENT MARKINGS (WORDS)

MDT MONTANA DEPARTMENT OF TRANSPORTATION

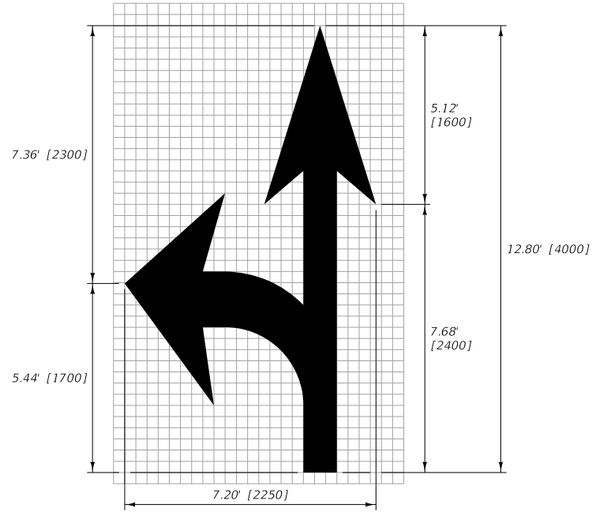
DIRECTIONAL ARROW FOR BIKE LANE

AREA = 4.56 FT[[0.41 m[]
P = 0.05 GAL. [0.18 L]
E = 0.06 GAL. [0.23 L]
(1 SQUARE = 4" [100])



COMBINED ARROW

AREA = 25.99 FT[[2.54 m[]
P = 0.28 GAL. [1.10 L]
E = 0.36 GAL. [1.42 L]
(1 SQUARE = 0.32' [100])

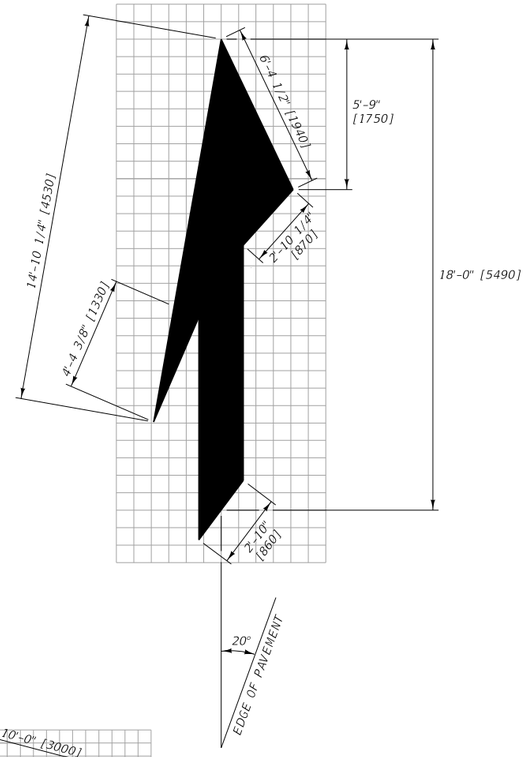


NOTE: REFER TO STRAIGHT & TURN ARROWS FOR MORE DETAIL.

18' [5.5m] LANE-REDUCTION ARROW (RIGHT)

(FOR LEFT LANE, USE MIRROR IMAGE)

AREA = 38.63 FT[[3.83 m[]
P = 0.41 GAL. [1.65 L]
E = 0.53 GAL. [2.14 L]
(1 SQUARE = 8" [200])

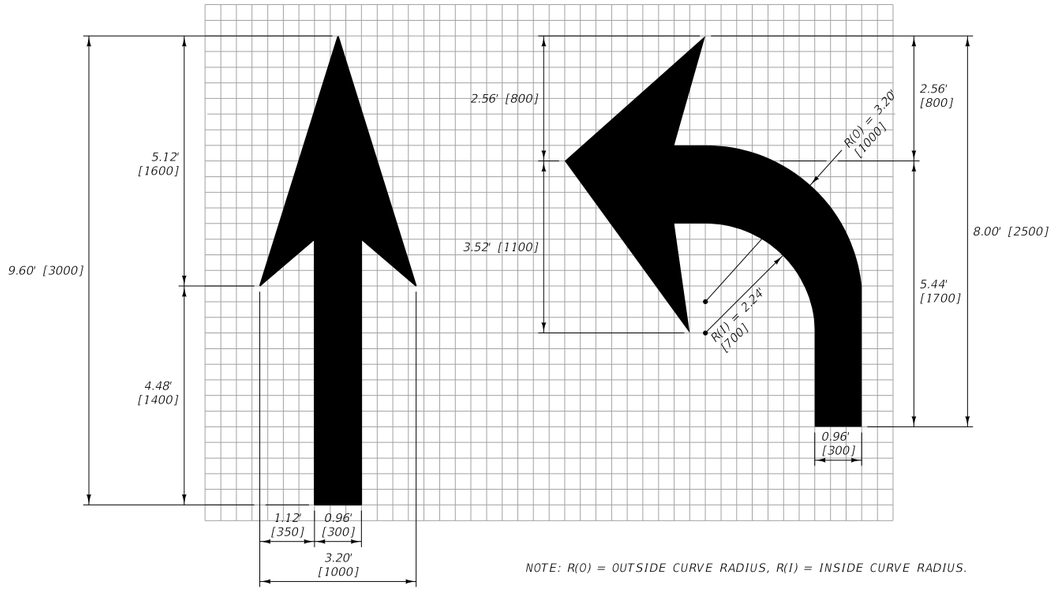


STRAIGHT ARROW

AREA = 11.42 FT[[1.12 m[]
P = 0.12 GAL. [0.48 L]
E = 0.16 GAL. [0.63 L]
(1 SQUARE = 0.32' [100])

TURN ARROW

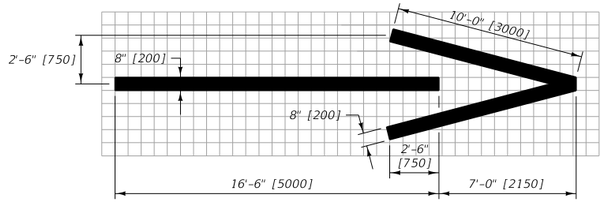
AREA = 15.57 FT[[1.52 m[]
P = 0.16 GAL. [0.66 L]
E = 0.21 GAL. [0.85 L]
(1 SQUARE = 0.32' [100])



NOTE: R(O) = OUTSIDE CURVE RADIUS, R(I) = INSIDE CURVE RADIUS.

FREEWAY AND RAMP ARROW

AREA = 23.64 FT[[2.15 m[]
P = 0.25 GAL. [0.93 L]
E = 0.32 GAL. [1.20 L]
(1 SQUARE = 8" [200])



NOTES:

1. ALL PAVEMENT MARKINGS ARE TO CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" PUBLICATIONS, FROM THE FEDERAL HIGHWAY ADMINISTRATION.
2. ALL ARROWS ARE TO BE WHITE.
3. USE THE SIZES OF ARROWS SHOWN UNLESS SMALLER OR LARGER SIZES ARE NEEDED. THE SIZE OF ARROWS MAY BE SCALED PROPORTIONATELY DOWN BY APPROXIMATELY ONE-THIRD FOR LOW-SPEED, URBAN CONDITIONS. LARGER SIZES MAY BE USED FOR ABOVE AVERAGE SPEEDS AND OTHER CRITICAL LOCATIONS.
4. DO NOT EXCEED MORE THAN ONE LANE IN WIDTH FOR ANY PAVEMENT MARKINGS EXCEPT IN THE CASE OF THE WORD "SCHOOL". SEE DTL. DWG. NO. 620-10 FOR MORE INFORMATION.
5. WHEN WORDS AND SYMBOLS ARE USED IN COMBINATION, SPACE THEM AT LEAST FOUR TIMES THE HEIGHT OF CHARACTERS FOR LOW-SPEED ROADS, BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS UNDER ANY CONDITION.
6. QUANTITIES ARE BASED ON THE SIZES OF PAVEMENT MARKINGS SHOWN AND ARE FOR ESTIMATING PURPOSES ONLY.
7. (P) - PAINT VOLUMES ASSUME A 17 MIL [0.432] THICKNESS.
   (E) - EPOXY VOLUMES ASSUME A 22 MIL [0.559] THICKNESS.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING

REFERENCE STANDARD SPEC. SECTION 620

DWG. NO. 620-15

PAVEMENT MARKINGS (ARROWS)

MDT MONTANA DEPARTMENT OF TRANSPORTATION

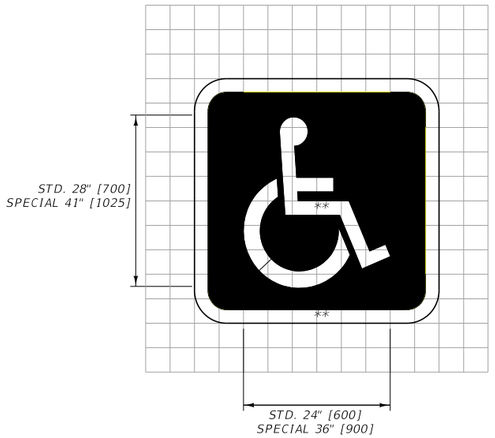
ACCESSIBILITY PARKING SPACE SYMBOL

(STANDARD)

AREA = 11.00 FT[[1.02 m[]
P = 0.04 GAL. [0.14 L] WHITE
P = 0.08 GAL. [0.30 L] BLUE
(1 SQUARE = 4" [100])

(SPECIAL)

AREA = 24.06 FT[[2.24 m[]
P = 0.08 GAL. [0.30 L] WHITE
P = 0.17 GAL. [0.64 L] BLUE
(1 SQUARE = 5.857" VERTICALLY)
(1 SQUARE = 6" [150] HORIZONTALLY)



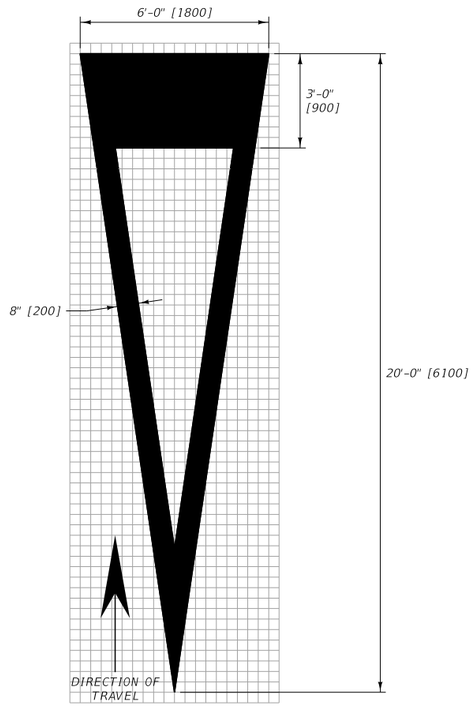
NOTE:
CENTER SYMBOL IN PARKING STALL.
BORDER REQUIRED UNLESS CONTRACT STATES OTHERWISE.
USE STANDARD SYMBOL UNLESS CONTRACT STATES OTHERWISE.

** STROKE WIDTH:
STD. 3" [75]
SPECIAL 4" [100]

YIELD AHEAD TRIANGLE

(HIGH SPEED)

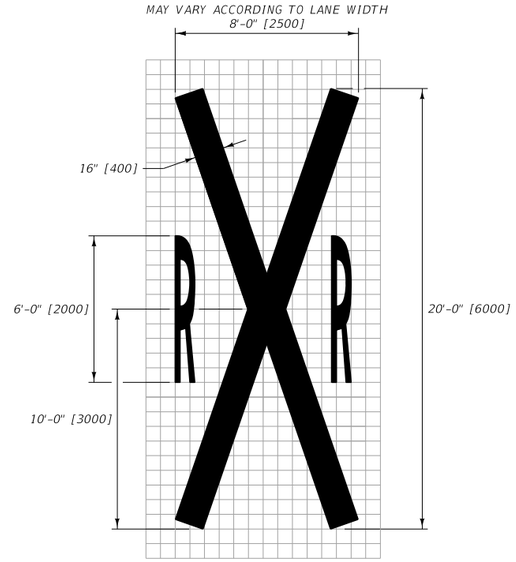
AREA = 36.54 FT[[3.33 m[]
P = 0.39 GAL. [1.44 L]
E = 0.50 GAL. [1.86 L]
(1 SQUARE = 4" [100])



NOTE:
FOR LOW SPEED INSTALLATIONS, THE 3'-0" [900] AND 20'0" [6100] DIMENSIONS MAY BE REDUCED TO 2'-6" [750] AND 13'-0" [4000] RESPECTIVELY.

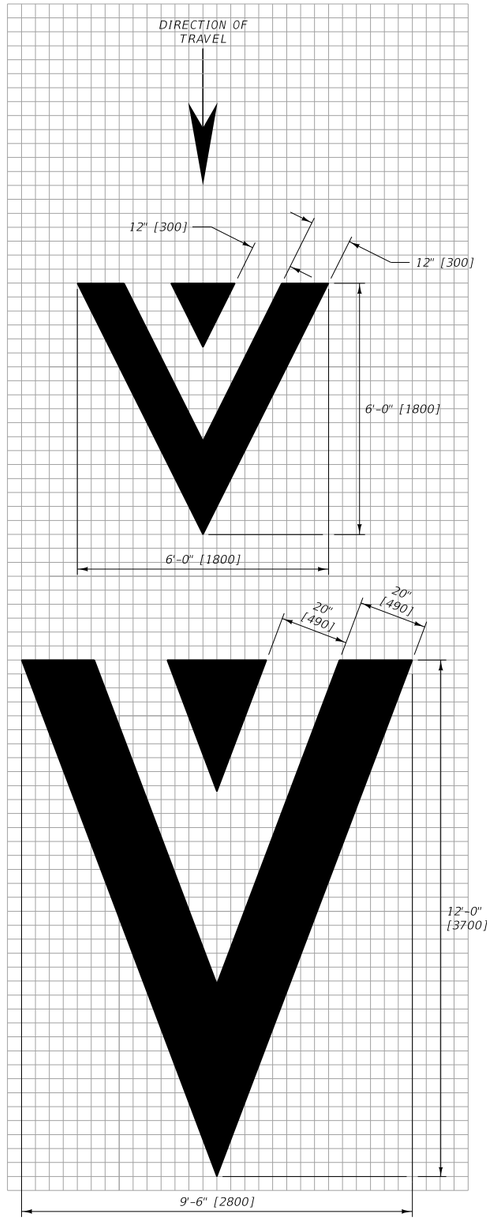
RAILROAD CROSSING SYMBOL

AREA = 58.10 FT[[5.42 m[]
P = 0.62 GAL. [2.34 L]
E = 0.80 GAL. [3.03 L]
(1 SQUARE = 8" [200])



SPEED HUMP MARKINGS

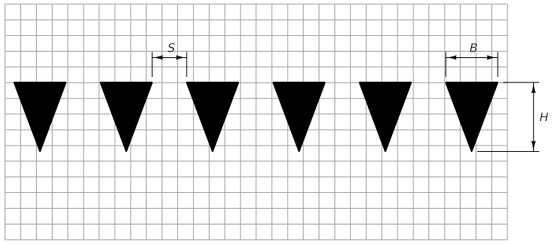
AREA = 50.42 FT[[4.56 m[]
P = 0.53 GAL. [1.97 L]
E = 0.69 GAL. [2.55 L]
(1 SQUARE = 4" [100])



YIELD LINE LAYOUT

(QUANTITIES PER TRIANGLE)

(B = 2'-0" [600])
AREA = 3.00 FT[[0.27 m[]
P = 0.03 GAL. [0.12 L]
E = 0.04 GAL. [0.15 L]



B = 2'-0" [600]
H = 3'-0" [900]
S = 12" [300]

NOTES:

1. ALL PAVEMENT MARKINGS ARE TO CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" PUBLICATIONS, FROM THE FEDERAL HIGHWAY ADMINISTRATION.
2. ALL SYMBOLS ARE TO BE WHITE EXCEPT FOR THE ACCESSIBILITY PARKING SPACE SYMBOL WHICH HAS A BLUE BACKGROUND AND WHITE HANDICAPPED SYMBOL AND BORDER.
3. DO NOT EXCEED MORE THAN ONE LANE IN WIDTH FOR ANY PAVEMENT MARKINGS EXCEPT IN THE CASE OF THE WORD "SCHOOL". SEE DTL. DWG. NO. 620-10 FOR MORE INFORMATION.
4. WHEN WORDS AND SYMBOLS ARE USED IN COMBINATION, SPACE THEM AT LEAST FOUR TIMES THE HEIGHT OF CHARACTERS FOR LOW-SPEED ROADS, BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS UNDER ANY CONDITION.
5. QUANTITIES ARE BASED ON THE SIZES OF PAVEMENT MARKINGS SHOWN AND ARE FOR ESTIMATING PURPOSES ONLY.
6. (P) - PAINT VOLUMES ASSUME A 17 MIL [0.432] THICKNESS.
(E) - EPOXY VOLUMES ASSUME A 22 MIL [0.559] THICKNESS.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING

REFERENCE
STANDARD SPEC.
SECTION 620

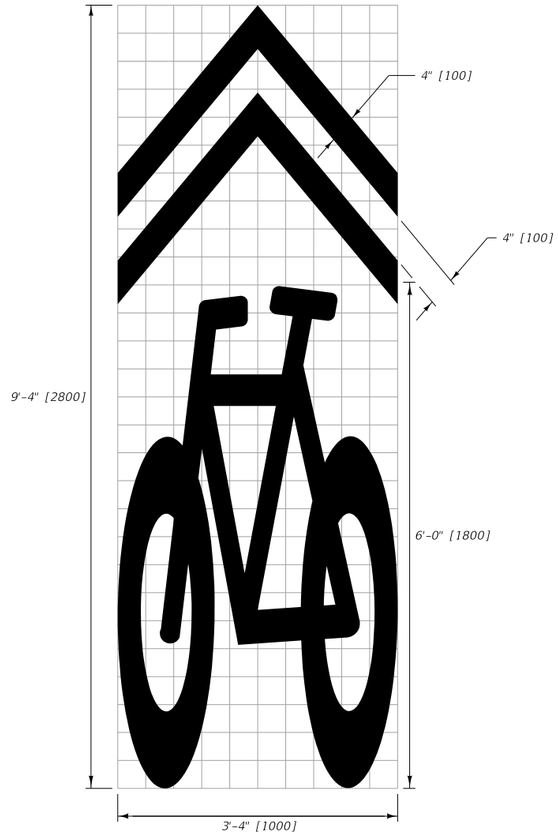
DWG. NO.
620-20

PAVEMENT MARKINGS (SYMBOLS)

MDT MONTANA DEPARTMENT OF TRANSPORTATION

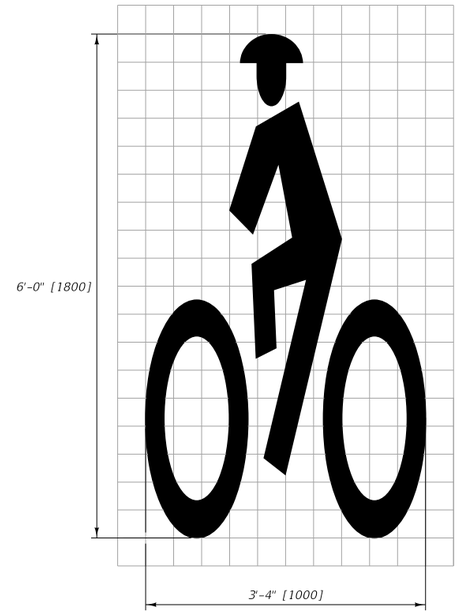
SHARROW SYMBOL

AREA = 12.52 FT[[1.12 m[]
P = 0.13 GAL. [0.48 L]
E = 0.17 GAL. [0.63 L]
(1 SQUARE = 4" [100])



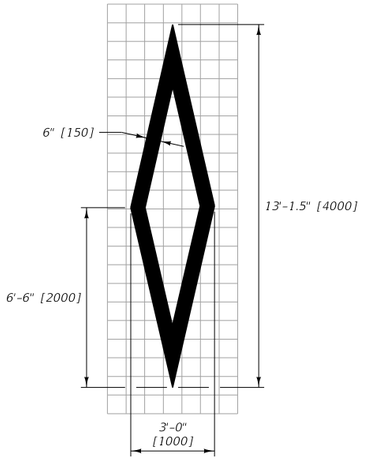
BIKE LANE SYMBOL

AREA = 5.95 FT[[0.54 m[]
P = 0.06 GAL. [0.23 L]
E = 0.08 GAL. [0.30 L]
(1 SQUARE = 4" [100])



PREFERENTIAL LANE SYMBOL

AREA = 11.16 FT[[1.05 m[]
P = 0.12 GAL. [0.45 L]
E = 0.15 GAL. [0.59 L]
(1 SQUARE = 0.65' [200])



NOTES:

1. ALL PAVEMENT MARKINGS ARE TO CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" PUBLICATIONS, FROM THE FEDERAL HIGHWAY ADMINISTRATION.
2. DO NOT EXCEED MORE THAN ONE LANE IN WIDTH FOR ANY PAVEMENT MARKINGS EXCEPT IN THE CASE OF THE WORD "SCHOOL". SEE DTL. DWG. NO. 620-10 FOR MORE INFORMATION.
3. WHEN WORDS AND SYMBOLS ARE USED IN COMBINATION, SPACE THEM AT LEAST FOUR TIMES THE HEIGHT OF CHARACTERS FOR LOW-SPEED ROADS, BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTERS UNDER ANY CONDITION.
4. QUANTITIES ARE BASED ON THE SIZES OF PAVEMENT MARKINGS SHOWN AND ARE FOR ESTIMATING PURPOSES ONLY.
5. (P) - PAINT VOLUMES ASSUME A 17 MIL [0.432] THICKNESS.
   (E) - EPOXY VOLUMES ASSUME A 22 MIL [0.559] THICKNESS.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

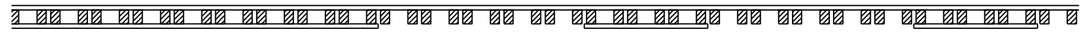
DETAILED DRAWING

REFERENCE STANDARD SPEC. SECTION 620

DWG. NO. 620-25

PAVEMENT MARKINGS (SYMBOLS)

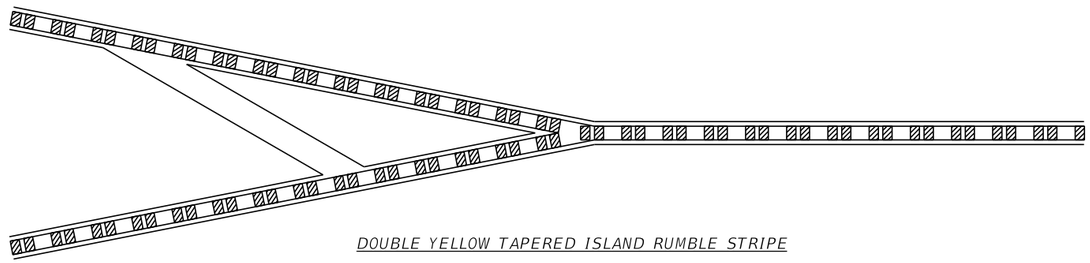
MDT MONTANA DEPARTMENT OF TRANSPORTATION



DOUBLE YELLOW AND NO PASSING RUMBLE STRIPE



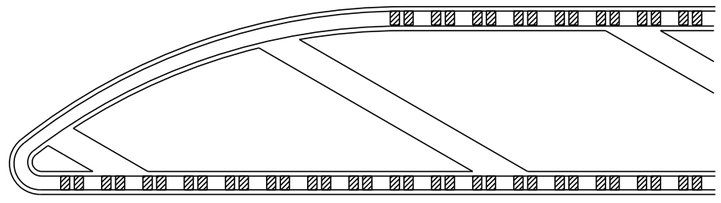
YELLOW SKIP RUMBLE STRIPE



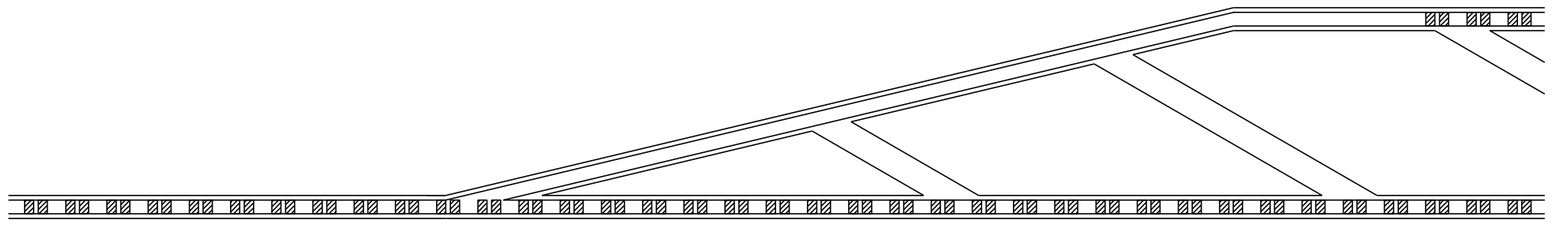
DOUBLE YELLOW TAPERED ISLAND RUMBLE STRIPE

NOTES:

1. SEE CENTERLINE RUMBLE STRIPS DTL. DWG. NO. 411-05 FOR ADDITIONAL INFORMATION.
2. ALL PAVEMENT MARKINGS ARE TO CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" PUBLICATIONS, FROM THE FEDERAL HIGHWAY ADMINISTRATION.



DOUBLE YELLOW BULLNOSE ISLAND RUMBLE STRIPE



DOUBLE YELLOW TURN LANE RUMBLE STRIPE

DETAILED DRAWING

REFERENCE STANDARD SPEC. SECTION 620	DWG. NO. 620-30

CENTERLINE RUMBLE STRIPING

MDT MONTANA DEPARTMENT OF TRANSPORTATION