

NOTES:

- ① THIS SIGN LAYOUT IS INTENDED TO BE A PERMANENT INSTALLATION FOR THE DURATION OF THE CONSTRUCTION PROJECT, AS APPROVED BY THE PROJECT MANAGER. COVER OR REMOVE ANY SIGNS WHEN NOT IN USE, INCLUDING UNWARRANTED SPEED LIMIT SIGNS. REMOVE ANY SIGN SUPPORTS IF THEY WILL NOT BE NEEDED WITHIN 90 DAYS.
- ② POST THE END OF WORK ZONE SPEED LIMIT USING ONE SIGN WHEN THE NORMAL POSTED SPEED LIMIT FOR ALL VEHICLES IS THE SAME. USE TWO SIGNS WHEN CAR, TRUCK AND NIGHTTIME SPEED LIMITS ARE DIFFERENT.
- ③ INCLUDE REGULATORY SIGNING ONLY IF A WORK ZONE OR ROADWAY HAS CONDITIONS THAT WARRANT SPEED RESTRICTIONS. MODIFY REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS.
- ④ IN ADDITION TO THE SIGNS SHOWN, INCLUDE THE APPROPRIATE TWO-LANE WORK AREA SIGNS (DTL. DWG. 618-08) WHEN A WORK AREA IS LOCATED AT THE BEGINNING OR END OF THE WORK ZONE.
- ⑤ SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION.
- ⑥ POST THE SPEED LIMIT APPROPRIATE FOR ALL VEHICLES FOR THE REMAINDER OF THE WORK ZONE BEFORE RESUMING TO NORMAL POSTED SPEED LIMITS AT THE END OF THE WORK ZONE.

* DENOTES SIGNS UNIQUE TO MONTANA.

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

DETAILED DRAWINGS

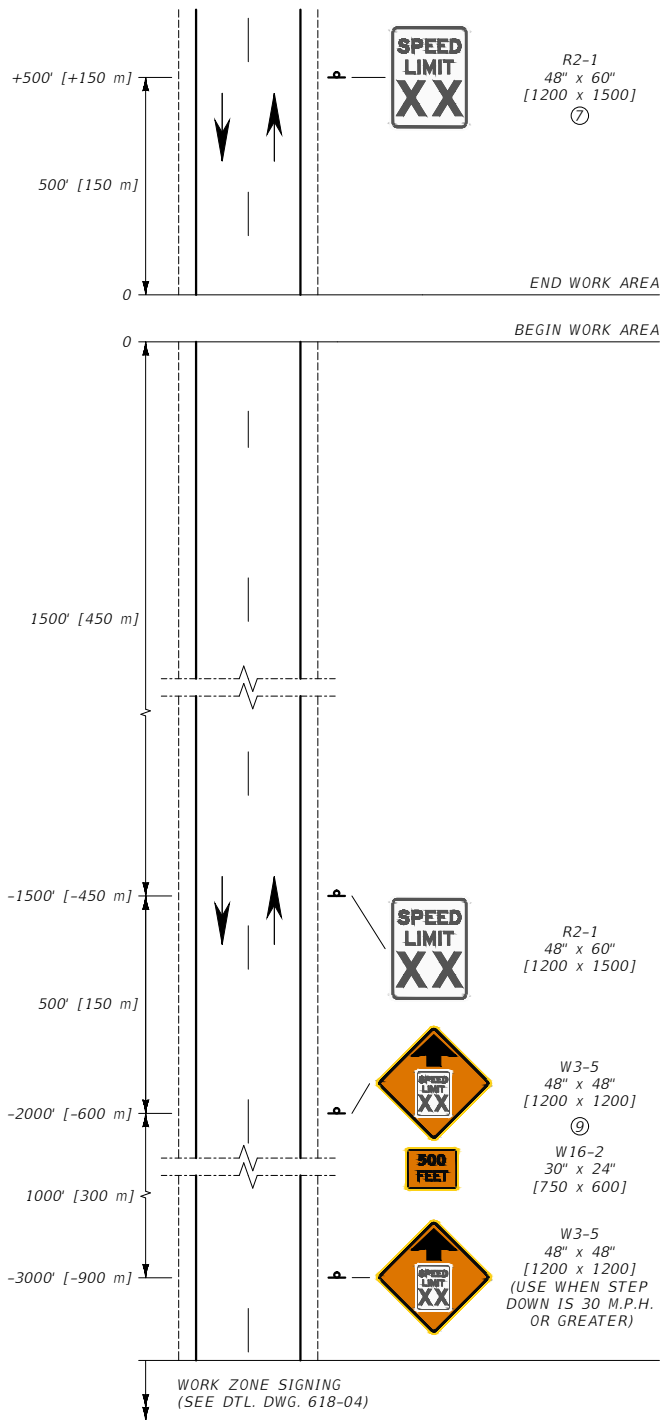
REFERENCE STANDARD SPEC. SECTION 618	DWG. NO. 618-04
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TWO-LANE WORK ZONE

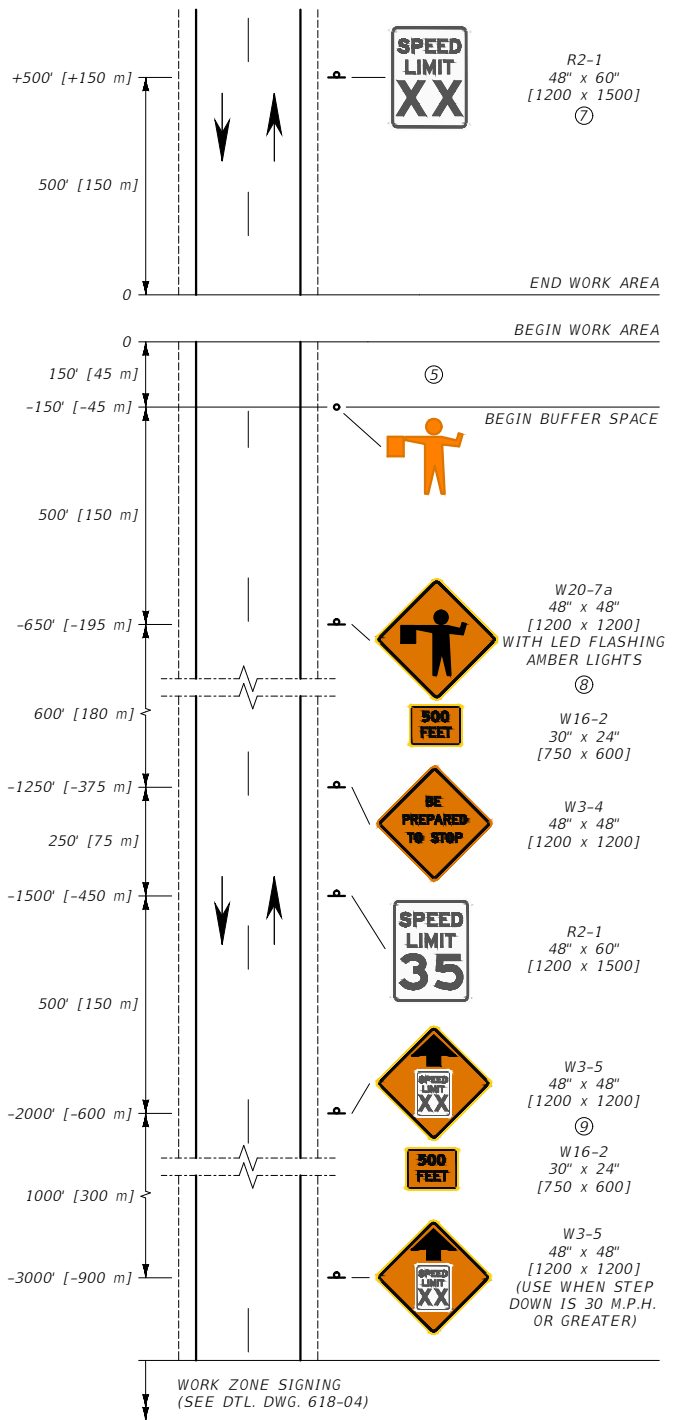
EFFECTIVE: JAN 23, 2020



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JUN 27, 2024



WORK AREA WITH NO FLAGGER



WORK AREA WITH FLAGGER

NOTES:

- ① THESE SIGN LAYOUTS ALSO USED IN CONJUNCTION WITH THE PERMANENT LAYOUT ILLUSTRATED ON DTL. DWG. 618-04 FOR WORK AREAS LOCATED AT THE BEGIN AND END OF THE WORK ZONES.
- ② XX = SPEED DETERMINED BY THE PROJECT MANAGER.
- ③ INCLUDE REGULATORY SIGNING ONLY IF THERE IS REASON TO RESTRICT SPEED WITHIN THE WORK ZONE. REMOVE OR COVER EXISTING REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS.
- ④ SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION. COMBINE SUCCESSIVE WORK AREAS WHEN LESS THAN 1.0 MILE [1.6 km] APART.
- ⑤ BUFFER SPACE MAY BE INCREASED FOR DOWNGRADES AND OTHER CONDITIONS AFFECTING STOPPING DISTANCE.

- ⑥ PROVIDE A SECOND FLAGGER WHEN REQUIRED PER SECTION 618.
- ⑦ POST THE SPEED LIMIT APPROPRIATE FOR ALL VEHICLES FOR THE REMAINDER OF THE WORK ZONE BEFORE RESUMING TO NORMAL POSTED SPEED LIMITS AT THE END OF THE WORK ZONE.
- ⑧ AMBER LED FLASHERS MUST MEET STANDARD SPECIFICATION SECTION 715 AND DTL. DWG. 618-01 REQUIREMENTS.
- ⑨ INCLUDE THESE SIGNS WITH ALL FLAGGERS. INCLUDE THESE SIGNS WITHIN WORK ZONES WHEN STEP DOWN IS 20 M.P.H. OR GREATER.

* DENOTES SIGNS UNIQUE TO MONTANA.

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

DETAILED DRAWINGS

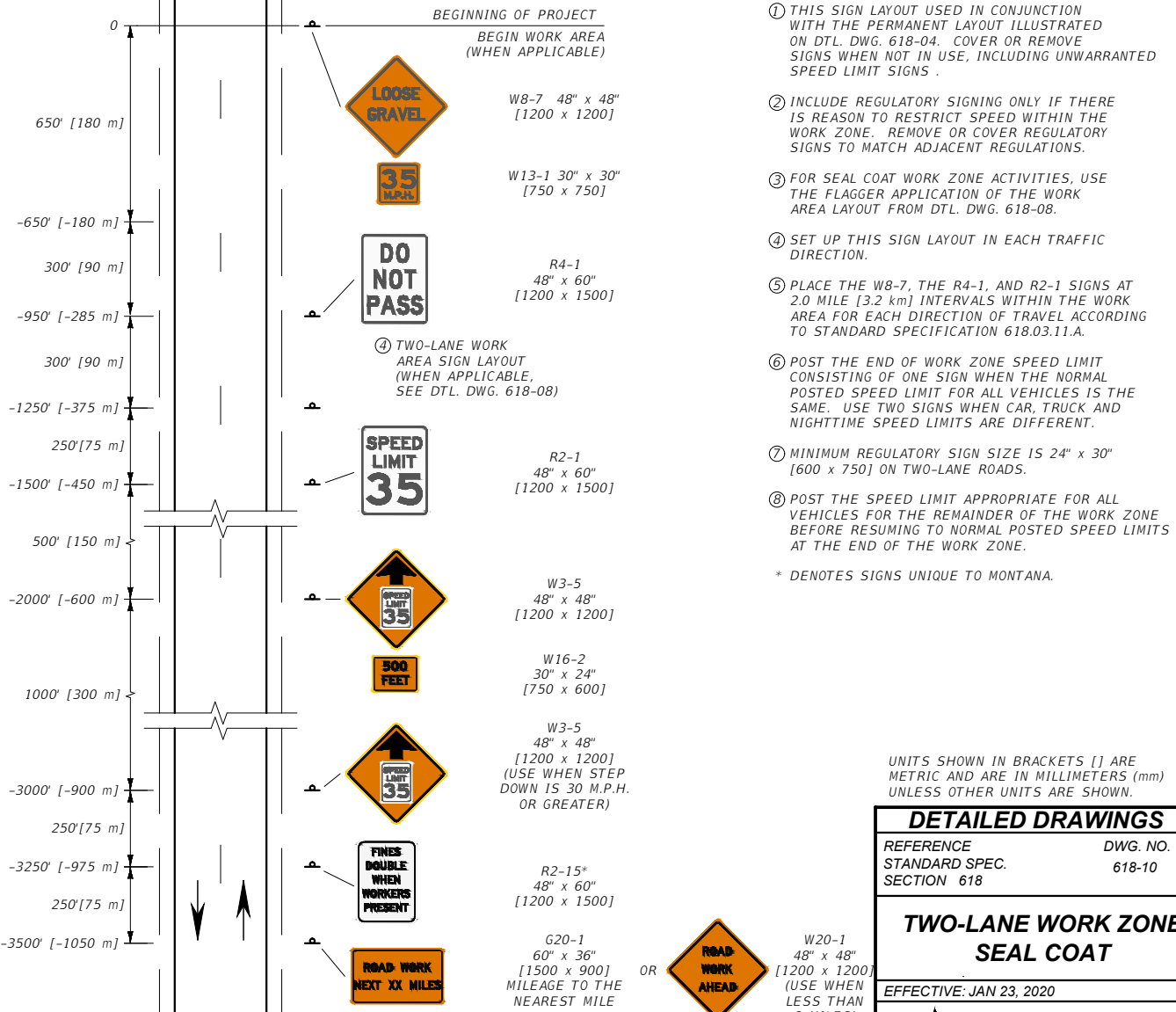
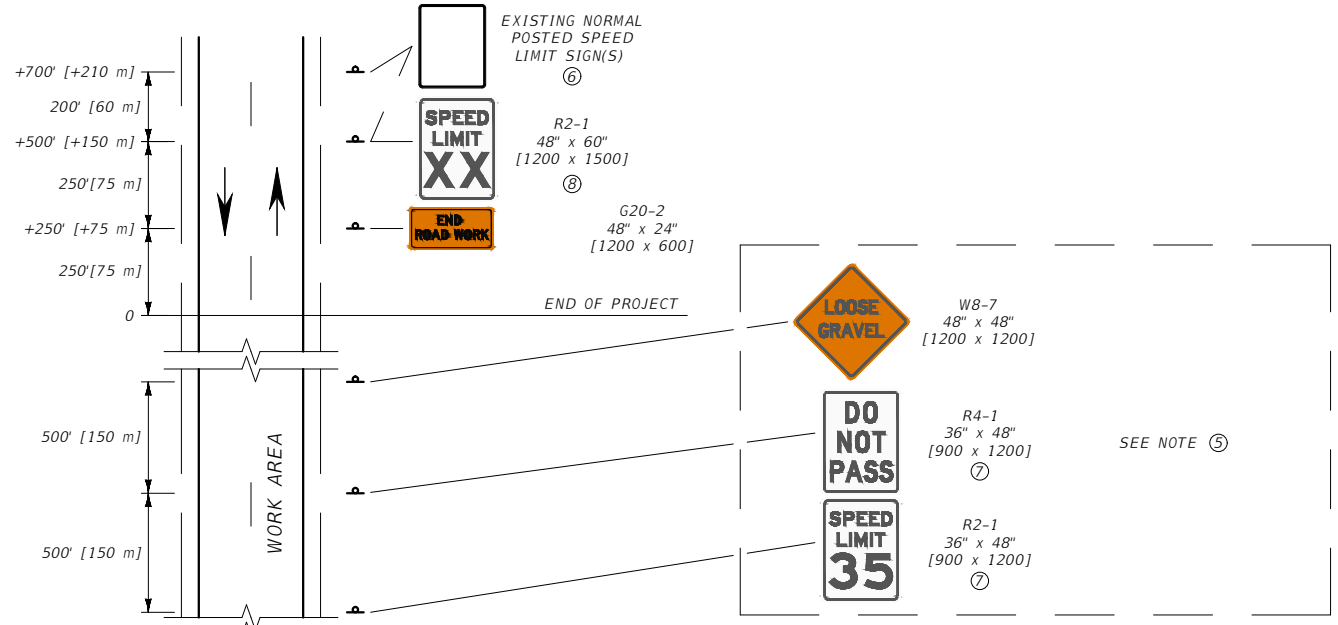
REFERENCE	DWG. NO.
STANDARD SPEC. SECTION 618, 715	618-08

TWO-LANE WORK AREAS

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- NOTES:
- ① THIS SIGN LAYOUT USED IN CONJUNCTION WITH THE PERMANENT LAYOUT ILLUSTRATED ON DTL. DWG. 618-04. COVER OR REMOVE SIGNS WHEN NOT IN USE, INCLUDING UNWARRANTED SPEED LIMIT SIGNS .
 - ② INCLUDE REGULATORY SIGNING ONLY IF THERE IS REASON TO RESTRICT SPEED WITHIN THE WORK ZONE. REMOVE OR COVER REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS.
 - ③ FOR SEAL COAT WORK ZONE ACTIVITIES, USE THE FLAGGER APPLICATION OF THE WORK AREA LAYOUT FROM DTL. DWG. 618-08.
 - ④ SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION.
 - ⑤ PLACE THE W8-7, THE R4-1, AND R2-1 SIGNS AT 2.0 MILE [3.2 km] INTERVALS WITHIN THE WORK AREA FOR EACH DIRECTION OF TRAVEL ACCORDING TO STANDARD SPECIFICATION 618.03.11.A.
 - ⑥ POST THE END OF WORK ZONE SPEED LIMIT CONSISTING OF ONE SIGN WHEN THE NORMAL POSTED SPEED LIMIT FOR ALL VEHICLES IS THE SAME. USE TWO SIGNS WHEN CAR, TRUCK AND NIGHTTIME SPEED LIMITS ARE DIFFERENT.
 - ⑦ MINIMUM REGULATORY SIGN SIZE IS 24" x 30" [600 x 750] ON TWO-LANE ROADS.
 - ⑧ POST THE SPEED LIMIT APPROPRIATE FOR ALL VEHICLES FOR THE REMAINDER OF THE WORK ZONE BEFORE RESUMING TO NORMAL POSTED SPEED LIMITS AT THE END OF THE WORK ZONE.
- * DENOTES SIGNS UNIQUE TO MONTANA.

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

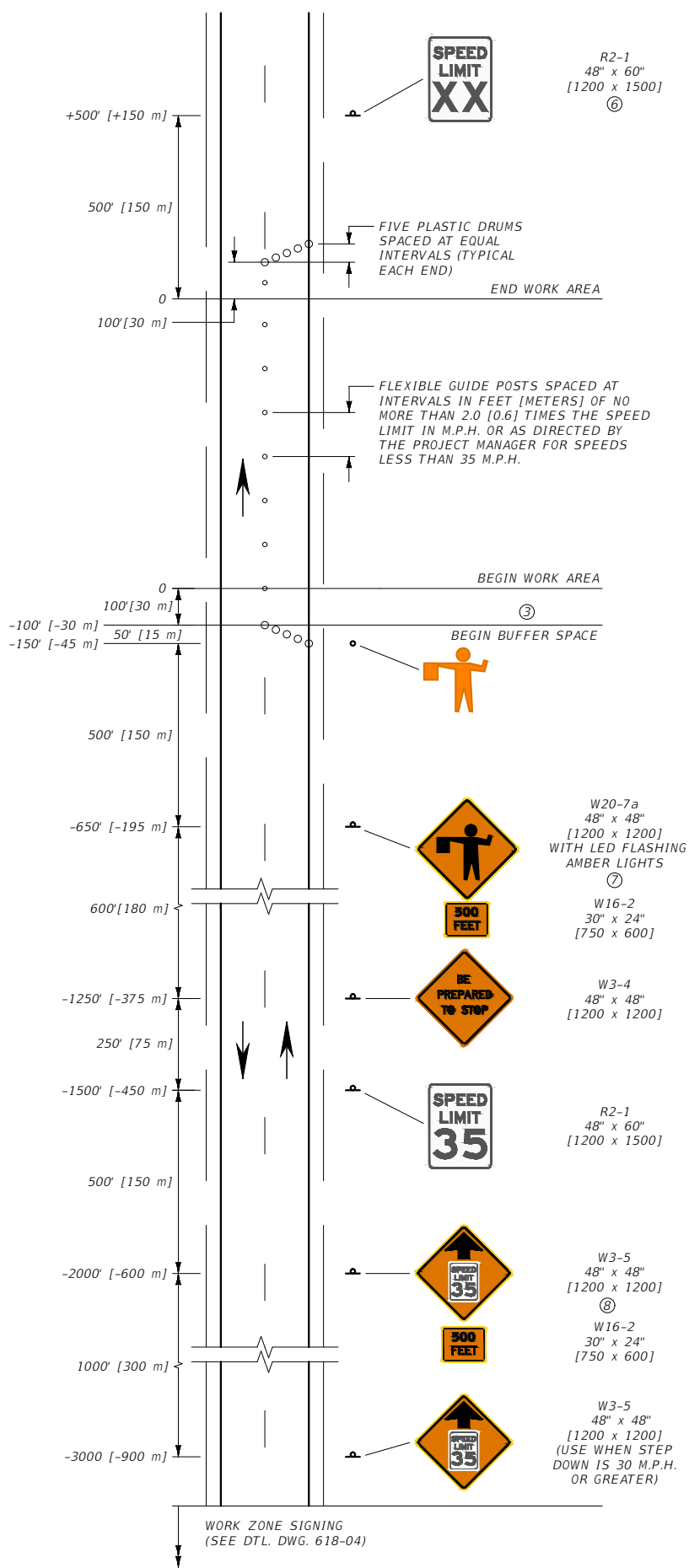
DETAILED DRAWINGS	
REFERENCE STANDARD SPEC. SECTION 618	DWG. NO. 618-10

TWO-LANE WORK ZONE SEAL COAT

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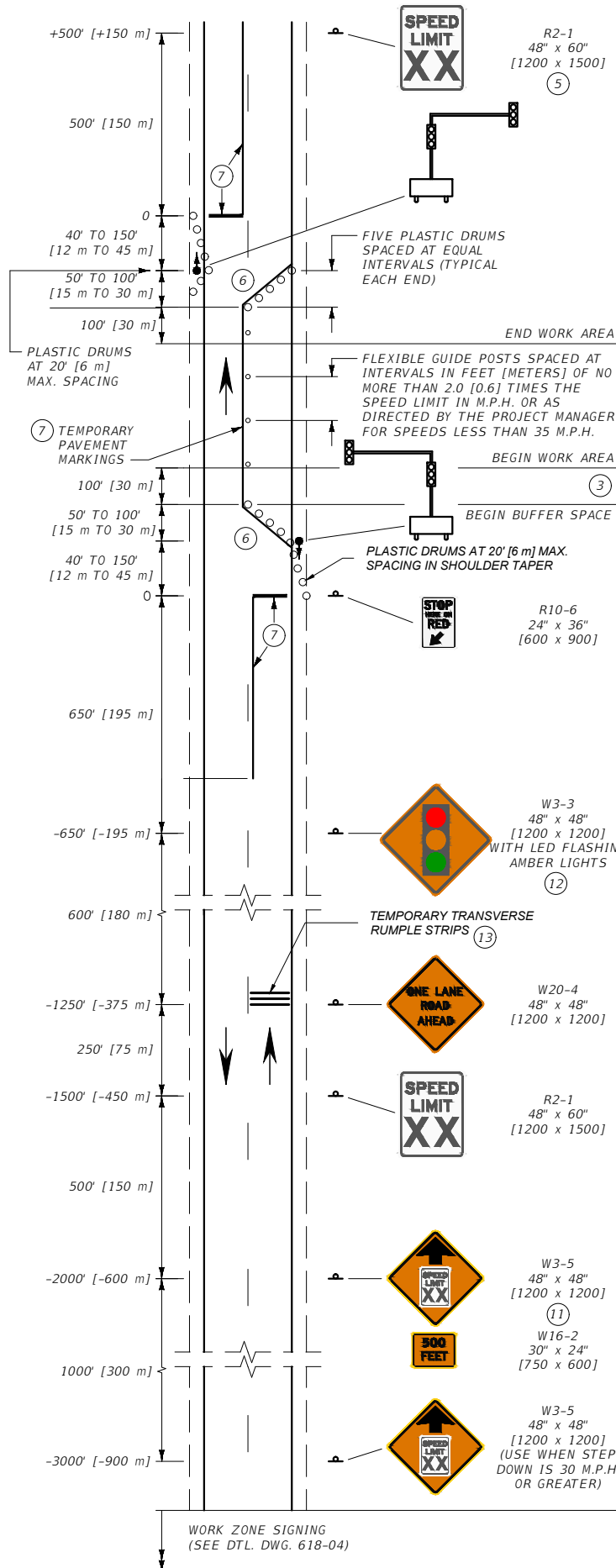
- NOTES:
- ① MODIFY REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS.
 - ② SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION.
 - ③ THE BUFFER SPACE MAY BE INCREASED FOR DOWNGRADES AND OTHER CONDITIONS AFFECTING STOPPING DISTANCE.
 - ④ PROVIDE A SECOND FLAGGER WHEN REQUIRED BY SECTION 618.03.14.
 - ⑤ XX = SPEED DETERMINED BY PROJECT MANAGER.
 - ⑥ POST THE SPEED LIMIT APPROPRIATE FOR ALL VEHICLES FOR THE REMAINDER OF THE WORK ZONE BEFORE RESUMING TO NORMAL POSTED SPEED LIMITS AT THE END OF THE WORK ZONE.
 - ⑦ AMBER LED FLASHERS MUST MEET STANDARD SPECIFICATION SECTION 715 AND DTL. DWG. 618-01 REQUIREMENTS.
 - ⑧ INCLUDE THESE SIGNS WITH ALL FLAGGERS. INCLUDE THESE SIGNS WITHIN WORK ZONES WHEN STEP DOWN IS 20 M.P.H. OR GREATER.
- * DENOTES SIGNS UNIQUE TO MONTANA.

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

DETAILED DRAWINGS	
REFERENCE	DWG. NO.
STANDARD SPEC.	618-12
SECTION 618, 715	
TWO-LANE WORK AREA LANE CLOSURE - FLAGGER CONTROLLED	
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JUN 27, 2024

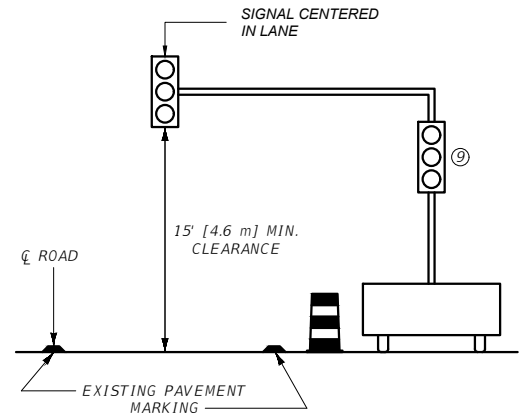




NOTES:

- ① MODIFY REGULATORY SIGNS TO MATCH ADJACENT REGULATIONS.
- ② SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION.
- ③ BUFFER SPACE MAY BE INCREASED FOR DOWNGRADES AND OTHER CONDITIONS AFFECTING STOPPING DISTANCE.
- ④ XX = SPEED DETERMINED BY THE PROJECT MANAGER.
- ⑤ POST THE SPEED LIMIT APPROPRIATE FOR ALL VEHICLES FOR THE REMAINDER OF THE WORK ZONE BEFORE RESUMING TO NORMAL POSTED SPEED LIMITS AT THE END OF THE WORK ZONE.
- ⑥ REMOVE ANY CONFLICTING PAVEMENT MARKINGS BETWEEN THE STOP LINE AND WORK ZONE BOUNDARY.
- ⑦ PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN WHEN ROADWAY SURFACE IS PAVED AND THE SIGNALS WILL BE IN PLACE LONGER THAN 3 DAYS. REMOVABLE TEMPORARY TAPE PAVEMENT MARKINGS AND MASKING MAY BE USED. IF TRAFFIC PAINT IS USED FOLLOW 620.03.6 FOR APPLICATION THICKNESS AND GLASS BEAD RATE. TEMPORARY STRIPING INSTALLATION AND MAINTENANCE AND MARKING REMOVAL COST IS INCIDENTAL TO SIGNAL INSTALLATION COST. STOP BARS MUST BE 24" WIDE AND SPAN THE ENTIRE LANE WIDTH. UPON REMOVAL OF THE TEMPORARY TRAFFIC CONTROL SIGNALS, REMOVE ALL TEMPORARY PAVEMENT MARKINGS USING NONDESTRUCTIVE METHODS AND RESTORE PERMANENT OR INTERIM PAVEMENT MARKINGS.
- ⑧ TEMPORARY TRAFFIC CONTROL SIGNALS MUST MEET PERMANENT TRAFFIC CONTROL SIGNAL PHYSICAL DISPLAY AND OPERATIONAL REQUIREMENTS.
- ⑨ ESTABLISH TEMPORARY TRAFFIC CONTROL SIGNAL TIMING BY CONSULTING WITH AN AUTHORIZED TRAFFIC ENGINEER. ENSURE RED CLEARANCE INTERVAL DURATIONS ALLOW VEHICLES TRAVELING IN OPPOSING DIRECTIONS TO CLEAR THE SINGLE LANE SECTION. INCORPORATE SAFEGUARDS TO AVOID CONFLICTING SIGNAL INDICATIONS AT OPPOSITE ENDS OF THE WORK ZONE.
- ⑩ USE TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES TO DIRECT TRAFFIC ENTERING FROM APPROACHES INTO THE SIGNAL CONTROLLED MAINLINE WORK AREA.
- ⑪ INCLUDE THESE SIGNS WITH ALL FLAGGERS. INCLUDE THESE SIGNS WITHIN WORK ZONES WHEN STEP DOWN IS 20 M.P.H. OR GREATER.
- ⑫ ENSURE AMBER LED FLASHERS MEET STANDARD SPECIFICATION 715 AND DTL. DWG. 618-01 REQUIREMENTS.
- ⑬ TEMPORARY TRANSVERSE RUMBLE STRIPS REQUIRED FOR NIGHTTIME OPERATIONS. REFER TO STANDARD SPECIFICATION 618.03.14.

* DENOTES SIGNS UNIQUE TO MONTANA.



TEMPORARY TRAFFIC CONTROL SIGNAL DETAIL

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

DETAILED DRAWINGS

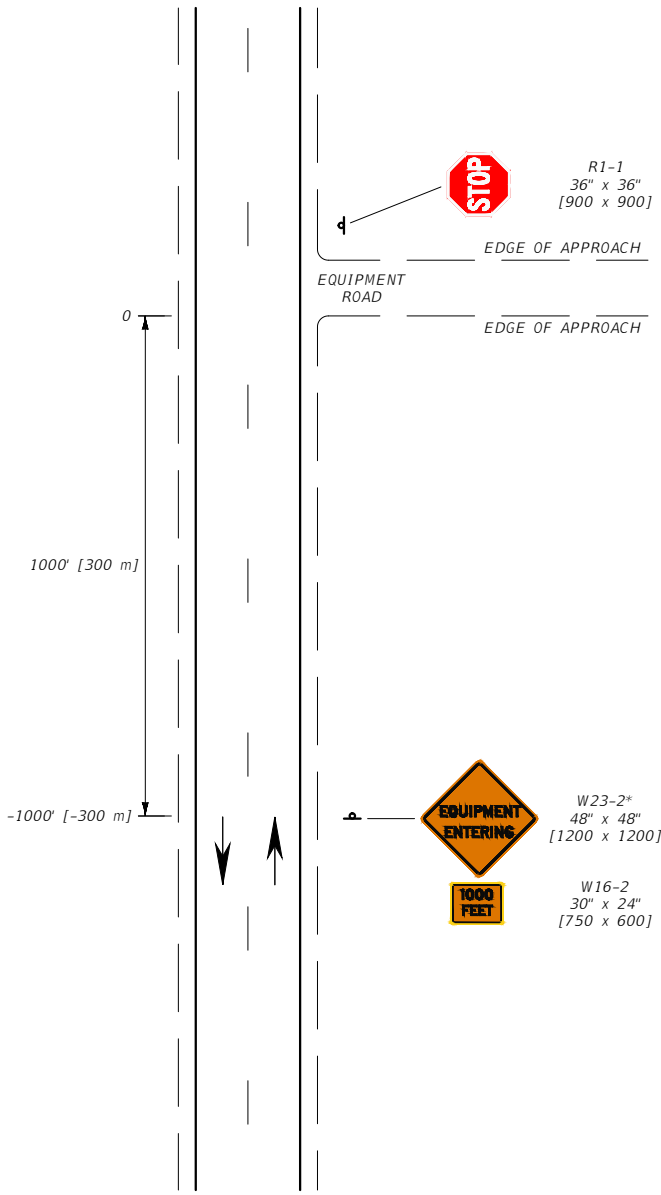
REFERENCE STANDARD SPEC. SECTION 618	DWG. NO. 618-13
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**TWO-LANE WORK ZONE
LANE CLOSURE - SIGNAL
CONTROLLED**

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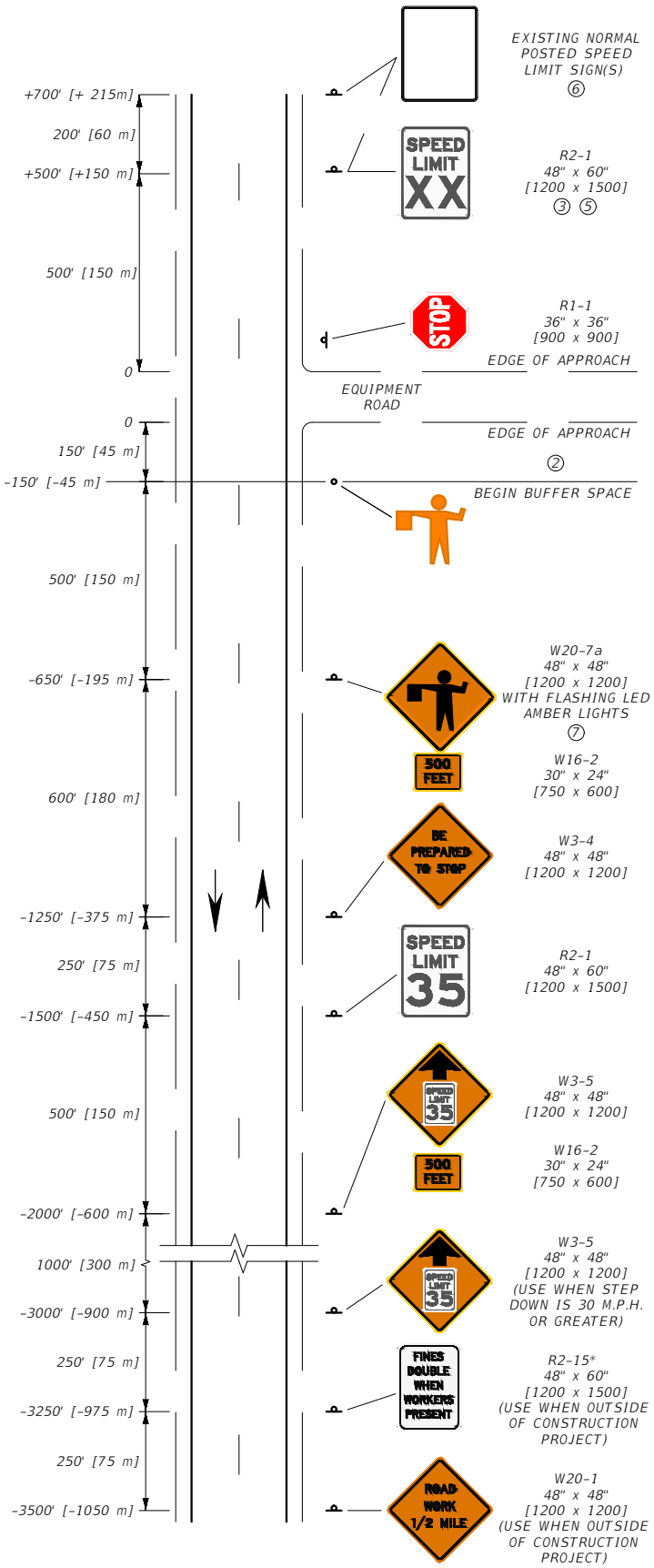


- NOTES:
- ① REFER TO DTL. DWG. 618-16 IF FLAGGER IS NEEDED.
 - ② SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION, AS NEEDED.
- * DENOTES SIGNS UNIQUE TO MONTANA.

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

DETAILED DRAWINGS	
REFERENCE	DWG. NO.
STANDARD SPEC.	618-14
SECTION 618	
TWO-LANE EQUIPMENT ENTRANCES	
EFFECTIVE: JAN 23, 2020	
	

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JUN 27, 2024



- NOTES:
- ① SET UP THIS SIGN LAYOUT IN EACH TRAFFIC DIRECTION, AS NEEDED.
 - ② BUFFER SPACE MAY BE INCREASED FOR DOWNGRADES AND OTHER CONDITIONS AFFECTING STOPPING DISTANCE.
 - ③ XX = SPEED DETERMINED BY THE PROJECT MANAGER.
 - ④ WHEN THIS SIGN LAYOUT OCCURS OUTSIDE A CONSTRUCTION PROJECT, INCLUDE THE W20-1 AND R2-15* SIGNS.
 - ⑤ POST THE SPEED LIMIT APPROPRIATE FOR ALL VEHICLES FOR THE REMAINDER OF THE WORK ZONE BEFORE RESUMING TO NORMAL POSTED SPEED LIMITS AT THE END OF THE WORK ZONE.
 - ⑥ OUTSIDE THE PROJECT, USE A SINGLE SIGN TO POST THE SPEED LIMIT WHEN THE NORMALLY POSTED SPEED LIMIT IS THE SAME FOR ALL VEHICLES. USE TWO SEPARATE SPEED LIMIT SIGNS TO DENOTE TRUCK SPEED LIMIT, AND CAR DAYTIME/NIGHTTIME SPEED LIMITS.
 - ⑦ ENSURE AMBER LED FLASHERS MEET STANDARD SPECIFICATION SECTION 715 AND DTL. DWG. 618-01 REQUIREMENTS.
- * DENOTES SIGNS UNIQUE TO MONTANA.

EQUIPMENT ENTRANCE WITH FLAGGER

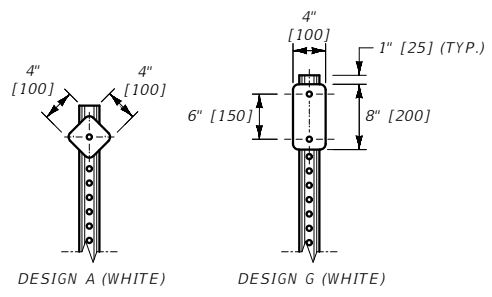
UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWINGS	
REFERENCE	DWG. NO.
STANDARD SPEC.	618-16
SECTION 618, 715	
TWO-LANE EQUIPMENT ENTRANCES	
EFFECTIVE: JAN 23, 2020	

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JUN 27, 2024

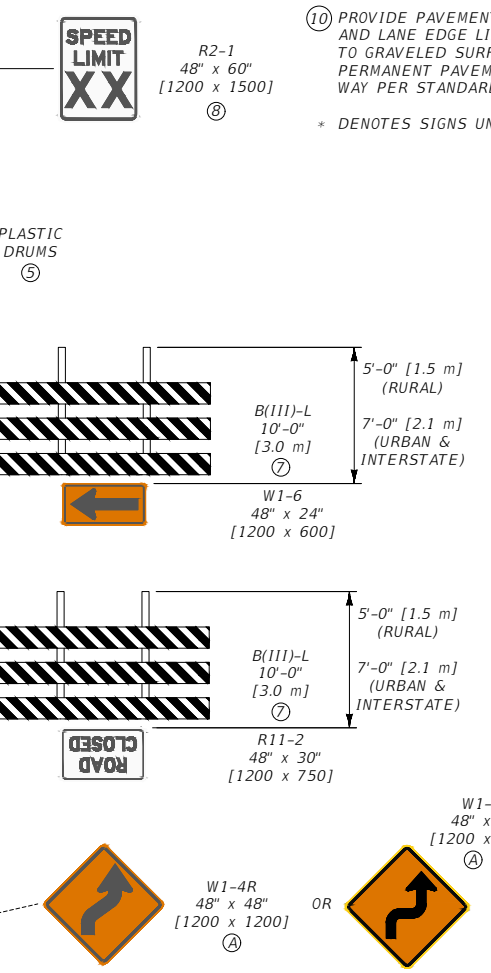
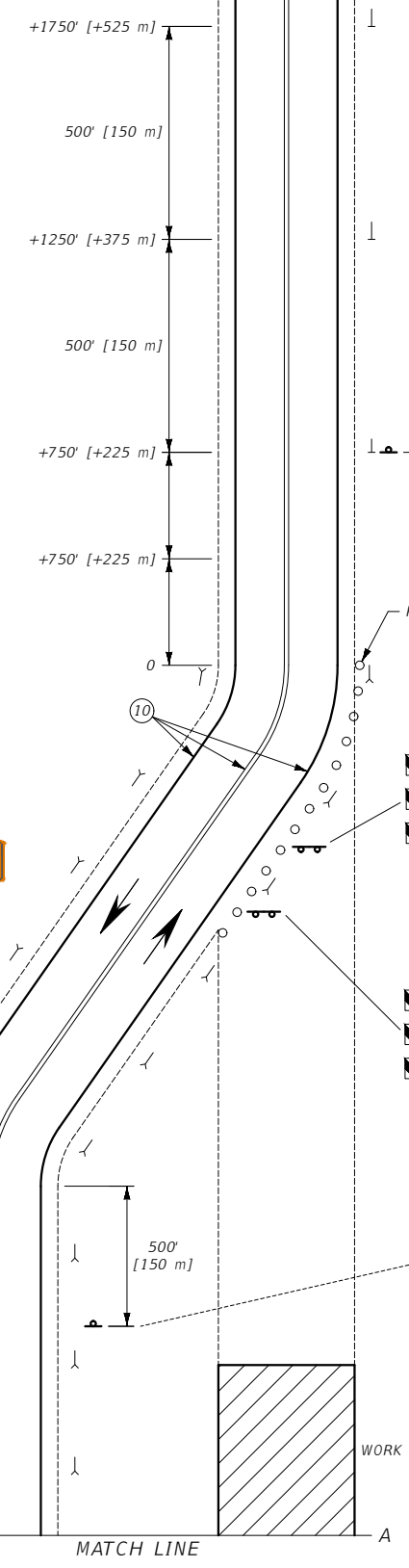
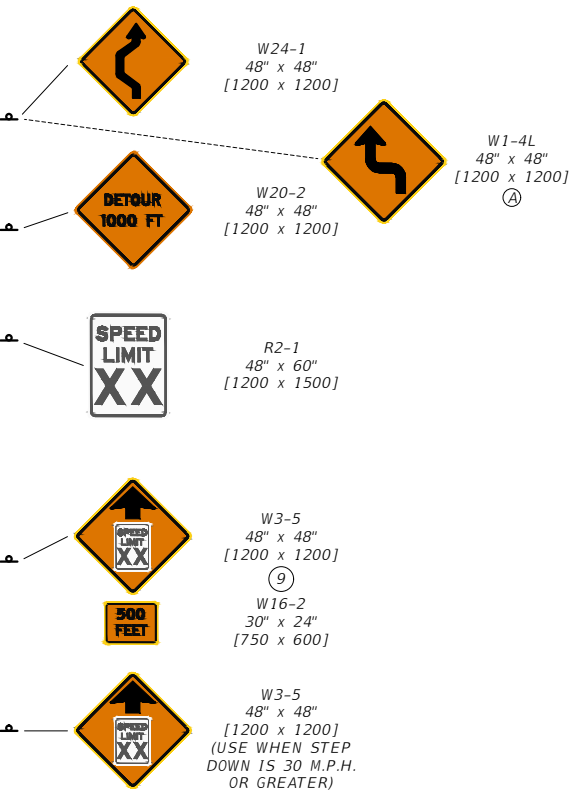
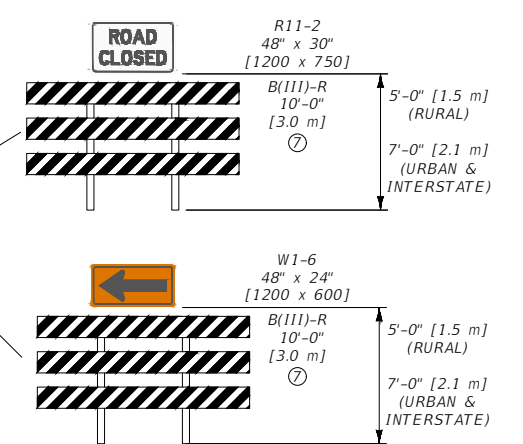
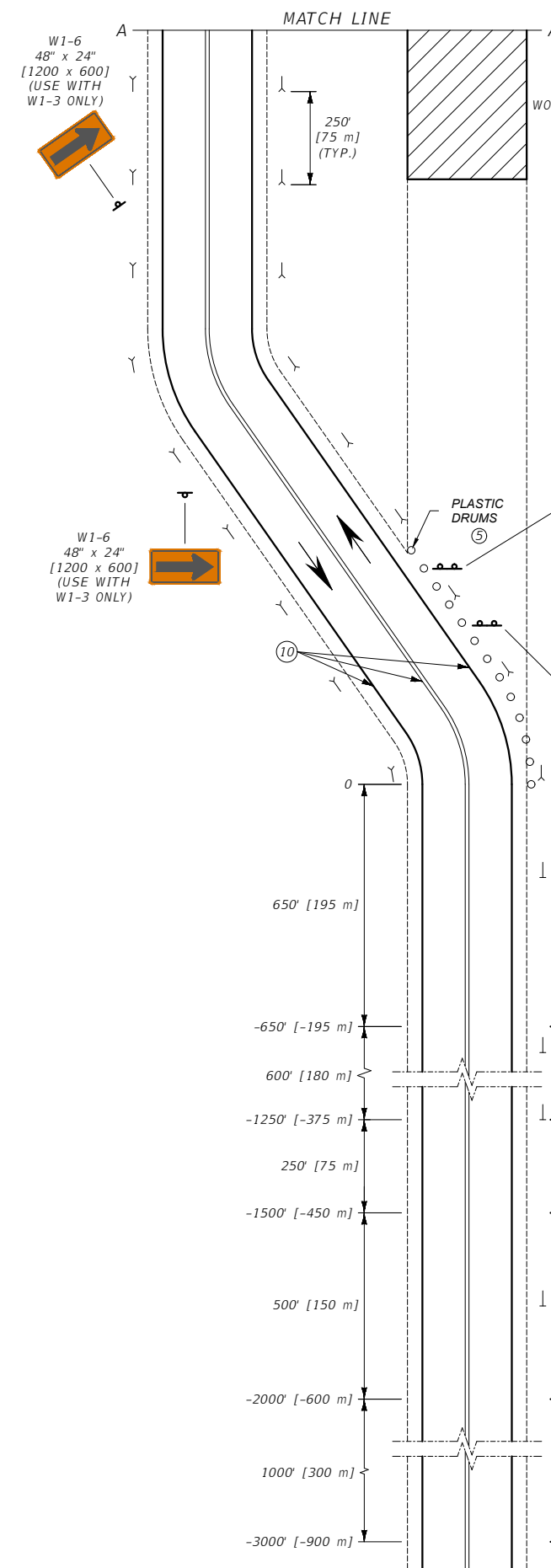


- NOTES:
- SET UP THE SIGN LAYOUT IN THIS DRAWING FOR BOTH TRAFFIC DIRECTIONS.
 - PAVED DETOURS 24 FEET [7.2 m] WIDE OR GREATER REQUIRE 4 INCH [100] WHITE SHOULDER STRIPES AND APPROPRIATE CENTERLINE STRIPES.
 - UNPAVED DETOURS MAY REQUIRE ADDITIONAL DELINEATION.
 - USE ONLY POST MOUNTED SIGNS. DO NOT USE PORTABLE SIGN MOUNTS.
 - PLACE PLASTIC DRUMS AT INTERVALS IN FEET [METERS] OF NO MORE THAN ONE [0.3] TIMES THE SPEED LIMIT IN M.P.H. OR AS DIRECTED BY THE PROJECT MANAGER FOR SPEEDS LESS THAN 35 M.P.H.
 - XX = SPEED DETERMINED BY THE DETOUR DESIGN SPEED OR THE PROJECT MANAGER.
 - SEE DTL. DWG. 618-03.
 - POST THE SPEED LIMIT APPROPRIATE FOR ALL VEHICLES FOR THE REMAINDER OF THE WORK ZONE BEFORE RESUMING TO NORMAL POSTED SPEED LIMITS AT THE END OF THE WORK ZONE.
 - INCLUDE THESE SIGNS WITH ALL FLAGGERS. INCLUDE THESE SIGNS WITHIN WORK ZONES WHEN STEP DOWN IS 20 M.P.H. OR GREATER.
 - PROVIDE PAVEMENT MARKINGS TO DELINEATE CENTERLINE AND LANE EDGE LINE THROUGHOUT TRANSITION FROM PAVED TO GRAVELED SURFACE. REMOVE NO LONGER APPLICABLE PERMANENT PAVEMENT MARKINGS WITHIN THE TRAVELED WAY PER STANDARD SPECIFICATION 618.03.5.
- * DENOTES SIGNS UNIQUE TO MONTANA.



DELINEATOR LEGEND	
	DESIGN A
	DESIGN G

- (A) USE W1-4 OR W1-3 SIGNS WHEN TANGENT DISTANCE ALONG THE DIVERSION IS MORE THAN 60' [180 m].
- (B) USE W1-3 SIGNS ONLY WHEN CURVE DESIGN SPEEDS ARE 30 M.P.H. [50 km/hr] OR LESS.



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

DETAILED DRAWINGS	
REFERENCE STANDARD SPEC. SECTION 618	DWG. NO. 618-18
TWO-LANE WORK ZONE DIVERSION	
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