

RENT CONSTRUCTION ITEMS

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OVERVIEW

Rent Construction Items have different documentation requirements for each unit of measure (UOM). All Rent Construction Items must be counted, measured and calculated and/or based on plan. Documentation examples for a few selected Rent Construction Items are illustrated in this chapter. Some minor modifications may be required to show the unusual circumstances that may occur with different items, but the general format should be followed. If there are items which cannot be documented according to the following examples, contact the Construction Admin Services Section for assistance.

INSPECTOR'S RESPONSIBILITIES – RENT CONSTRUCTION ITEMS

- Use the Agreement Estimate report as a reference to ensure that items and quantities are paid in the correct category (AEB).
- Use the Summary of Construction Signs (Figure 22-1), the Summary of Barricades (Figure 22-2), and/or the Main Structure List, located in the Contract plans, to help identify items, quantities, descriptions and locations.

SUMMARY OF CONSTRUCTION SIGNS						
NOTE: QUANTITIES SHOWN ARE APPROXIMATE AND ARE SUBJECT TO INCREASE OR DECREASE.						
ADDITIONAL SIGNS, NOT LISTED, MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.						
* QUANTITIES FOR CONSTRUCTION SIGNS AND TRAFFIC CONTROL DEVICES ARE BASED ON A ONE WORK ZONE SETUP.						
STP-0160(018)						
SIGN NO.	MESSAGE	PANEL SIZE	TOTAL SIGNS*	SQFT EACH	SQFT TOTAL	
M1-1	INTERSTATE SHIELD (15) (BLACK ON ORANGE)	24" X 36"	33	4.0	92.0	
M3-1	NORTH (BLACK ON ORANGE)	24" X 12"	11	2.0	22.0	
M3-3	SOUTH (BLACK ON ORANGE)	24" X 12"	9	2.0	18.0	
M4-3	DETOUR (BLACK ON ORANGE)	30" X 15"	15	3.1	47.0	
M6-1	ARROW (BYM) RIGHT OR LEFT	21" X 15"	18	2.2	39.6	
M6-2	ARROW (BYM) UP	21" X 15"	8	2.2	17.5	
NBA-1	BUSINESS ACCESS (RIGHT ARROW)	42" X 42"	4	12.3	49.0	
NBA-2	BUSINESS ACCESS (LEFT ARROW)	42" X 42"	4	12.3	49.0	
NDP-1	30 MINUTE DELAY POSSIBLE	48" X 36"	6	13.0	78.0	
NPR-1	PREPARE TO STOP	48" X 48"	7	16.0	112.0	
NRC-1	RAMP CLOSED	48" X 36"	6	13.0	78.0	
NRC-2A	RAMP CLOSED AHEAD	48" X 48"	2	16.0	32.0	
NRE-1	RAMP EXIT	42" X 54"	1	15.8	15.8	
NTL-1	LEFT TURN LANE	30" X 48"	11	16.0	110.0	
NTL-2	RIGHT TURN LANE	30" X 48"	1	10.0	10.0	
NTT-1	THROUGH TRAFFIC UP ARROW	54" X 60"	6	22.8	112.8	
NWZ-1	BEGIN WORK ZONE	48" X 24"	10	8.0	80.0	
NWZ-2	END WORK ZONE	48" X 24"	12	8.0	96.0	
NWZ-3	DOUBLE PENALTY IN WORK ZONE	48" X 48"	10	16.0	160.0	
R2-1	SPEED LIMIT 25	48" X 60"	2	20.0	40.0	
R2-1	SPEED LIMIT 55	48" X 60"	6	20.0	100.0	
R2-1	SPEED LIMIT 65	48" X 60"	4	20.0	80.0	
R2-5A	REDUCE SPEED AHEAD	48" X 24"	4	20.0	80.0	
R3-1	NO RIGHT TURN (BYM)	48" X 48"	1	16.0	16.0	
R3-2	NO LEFT TURN (BYM)	48" X 48"	2	16.0	32.0	
R3-7L	MANDATORY TURN (LEFT)	30" X 30"	3	6.3	18.8	
R3-7R	MANDATORY TURN (RIGHT)	30" X 30"	3	6.3	18.8	
RA-7A	KEEP RIGHT (HORIZONTAL ARROW)	48" X 60"	2	20.0	40.0	
RA-8A	KEEP LEFT (HORIZONTAL ARROW)	48" X 60"	2	20.0	40.0	
R11-2	ROAD CLOSED	48" X 30"	7	10.0	70.0	
R11-4	ROAD CLOSED TO THRU TRAFFIC	60" X 30"	1	12.6	12.6	
W1-1L	TURN (LEFT)	48" X 48"	1	16.0	16.0	
W1-1R	TURN (RIGHT)	48" X 48"	1	16.0	16.0	
W1-4BL	TWO LANE REVERSE CURVE (LEFT)	48" X 48"	2	16.0	32.0	
W1-4BR	TWO LANE REVERSE CURVE (RIGHT)	48" X 48"	4	16.0	64.0	
W1-4L	REVERSE CURVE (LEFT)	48" X 48"	2	16.0	32.0	
W1-4R	REVERSE CURVE (RIGHT)	48" X 48"	8	16.0	128.0	
W1-1AR	THRU TRAFFIC MERGE RIGHT	48" X 48"	1	16.0	16.0	
W4-3L	LANE ENDS (LEFT)	48" X 48"	6	16.0	96.0	
W4-3R	LANE ENDS (RIGHT)	48" X 48"	2	16.0	32.0	
W6-3	TWO WAY (BYM)	48" X 48"	1	16.0	16.0	
W13-1	ADVISORY SPEED PLATE (15)	24" X 24"	2	4.0	8.0	
W13-1	ADVISORY SPEED PLATE (35)	24" X 24"	6	4.0	24.0	
W13-1	ADVISORY SPEED PLATE (45)	24" X 24"	11	4.0	44.0	
W13-1	ADVISORY SPEED PLATE (55)	24" X 24"	5	4.0	20.0	
W20-1	ROAD WORK AHEAD	48" X 48"	12	16.0	192.0	
W20-2	DETOUR AHEAD	48" X 48"	2	16.0	32.0	
W20-4	ONE LANE ROAD AHEAD	48" X 48"	1	16.0	16.0	
W20-3L	LEFT LANE CLOSED AHEAD	48" X 48"	6	16.0	96.0	
W20-3R	RIGHT LANE CLOSED AHEAD	48" X 48"	4	16.0	64.0	
W20-7A	FLAGGER SYMBOL	48" X 48"	7	16.0	112.0	
W21-8	SHOULDER WORK	48" X 48"	7	16.0	112.0	
TOTAL SIGNS NEEDED			391			
TOTAL SQUARE FEET					2842.1	
IM-015-1(128)						
NWZ-1	BEGIN WORK ZONE	48" X 24"	2	8.0	16.0	
NWZ-2	END WORK ZONE	48" X 24"	2	8.0	16.0	
NWZ-3	DOUBLE PENALTY IN WORK ZONE	48" X 48"	2	16.0	32.0	
R2-1	SPEED LIMIT 55	48" X 60"	2	20.0	40.0	
R2-1	SPEED LIMIT 65	48" X 60"	2	20.0	40.0	
W4-3L	LANE ENDS (LEFT)	48" X 48"	2	16.0	32.0	
W4-3R	LANE ENDS (RIGHT)	48" X 48"	2	16.0	32.0	
W13-1	ADVISORY SPEED PLATE (55)	24" X 24"	2	4.0	8.0	
W20-1	ROAD WORK AHEAD	48" X 48"	2	16.0	32.0	
W20-3L	LEFT LANE CLOSED AHEAD	48" X 48"	2	16.0	32.0	
W20-3R	RIGHT LANE CLOSED AHEAD	48" X 48"	2	16.0	32.0	
W21-8	SHOULDER WORK	48" X 48"	2	16.0	32.0	
TOTAL SIGNS NEEDED			24			
TOTAL SQUARE FEET					344.8	
FEED NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.		
8	NEVADA	1280-1280	CLATSOP	38		

Figure 22-1: Summary of Construction Signs

SUMMARY OF CONSTRUCTION BARRICADES
NOTE: QUANTITIES SHOWN ARE APPROXIMATE AND ARE SUBJECT TO INCREASE OR DECREASE.

STP-0160(016)			
	UNIT		TOTAL
CONSTRUCTION DEVICES			
ARROW BOARDS (TYPE C) (EACH)	EACH		2.00
ATTENUATOR 45 MPH	EACH		2.00
ATTENUATOR 85 MPH	EACH		1.00
TYPE 3B BARRICADE	EACH		57.00
TRAFFIC CONES (EACH)	EACH		393.00
TRAFFIC DRUMS (EACH)	EACH		202.00
FLAGGER	EACH		4.00
PORTABLE TRAFFIC SIGNAL	EACH		1.00
PORTABLE PRECAST CONCRETE BARRIER RAIL	LIN FT		42.00
TEMPORARY PAINTED STRIPING (BROKEN WHITE)	MILE		3.33
TEMPORARY PAINTED STRIPING (8-INCH SOLID WHITE)	MILE		0.37
TEMPORARY PAINTED STRIPING (DOUBLE SOLID YELLOW)	MILE		2.76
TEMPORARY PAINTED STRIPING (SOLID WHITE)	MILE		11.87
TEMPORARY PAINTED STRIPING (SOLID YELLOW)	MILE		5.16
TEMPORARY PAINTED STRIPING (VARIES)	SQFT		1060.00
TYPE 1 TEMPORARY STRIPING TAPE (SOLID WHITE)	LIN FT		3210.00
TYPE 1 TEMPORARY STRIPING TAPE (SOLID YELLOW)	LIN FT		1620.00
TYPE 1 TEMPORARY STRIPING TAPE (PILOT LINES)	LIN FT		700.00

IM-015-1(126)			
	UNIT		TOTAL
CONSTRUCTION DEVICES			
ARROW BOARDS (TYPE C) (EACH)	EACH		1
ATTENUATOR 85 MPH	EACH		1
TRAFFIC DRUMS (EACH)	EACH		202
PORTABLE PRECAST CONCRETE BARRIER RAIL	LIN FT		420
TEMPORARY PAINTED STRIPING (BROKEN WHITE)	MILE		18.40
TEMPORARY PAINTED STRIPING (SOLID WHITE)	MILE		10.70
TEMPORARY PAINTED STRIPING (SOLID YELLOW)	MILE		8.70
TEMPORARY PAINTED STRIPING (DOTTED WHITE)	MILE		1.20

GENERAL NOTES

1. Refer to Nevada Department of Transportation Standard Specifications for Road and Bridge Construction, 2001 Edition, for specifications except as modified by these plans and special provisions.
2. Sign numbers shown on the Summary of Construction Signs are taken from the Manual on Uniform Traffic Control Devices (2003 Edition) and Standard Highway Signs (2002) and Nevada Supplement thereto, (1997 Edition).
3. Traffic control devices, construction signs, and barricades shall conform to the requirements of the M.U.T.C.D. 2003 edition and the Nevada Standard Plans, 2003 Edition.
4. Depth of base and surface is minimum compacted thickness.
5. State will remove and furnish all milepost marker panels.
6. Guide posts and object markers shall be removed by contractor, at no direct payment.
7. The Contractor shall avoid damage to underground utilities. Locations are approximate and the Contractor will field verify and survey the locations. No Direct Payment.
8. Grades and cross slopes of the roadway shall conform to the present travel way.
9. All legally established survey monuments disturbed during construction shall be preserved in accordance with State and local laws and regulations.
10. Mineral filler and asphalt cement quantities shown are for informational purposes only and payment for them is included within the Plantmix Surfacing (Type 2C) (Wet) and Plantmix Open-Graded Surfacing (3/8-inch) (Wet) bid item.
11. For traffic control not shown, refer to Nevada Standards, 2003 Edition and MUTCD (2003) Edition.

9	NEVADA	STP0160(016) IM-015-1(126)	CLARK	35
FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.

Figure 22-2: Summary of Construction Barricades

- Review the following for accuracy:
 - Special Provisions
 - Supplemental Notices

- Change Orders

Note: When any changes are made to an item, reference the Change Order number in the DWR item posting remarks.

- Turn in ALL Rent Construction Item calculation sheets to the Office Engineer.

DAILY WORK REPORT (DWR) – MOBILE INSPECTOR

1. Create a DWR in Mobile Inspector daily to document the activity being monitored. Refer to the [Mobile Inspector User Guide](#) for details on using this application.
 - Report Details – daily activities
 - Item Postings – item(s) and quantity(s)
 - Equipment – type, number and hours used
 - Personnel – title and hours
2. Record the following required information in the Report Details window (Figure 22-3):
 - Date
 - Weather
 - Low Temp and High Temp
 - Attachments: (N/A) Send ALL photos via email.
 - Remarks: Select the appropriate Remark Type. Verify with the Resident Engineer on what information is required.

Figure 22-3: DWR Report Detail Window

3. Record the following required information in the New Item Postings window:
 - Item: Select the appropriate Project/Catg., if item is in more than one Project/Catg. – Refer to the AEB report.
 - Contractor: ALWAYS the Prime Contractor (Subs are not allowed).
 - Qty: Based on plan, measurements and calculations
 - Location: Line Designation
 - Station From/To: Refer to Contract plans.
 - Offset Type: Enter the LT, RT, or CL.
 - Offset Dist. Enter if known.

- Comments– Must show calculations when appropriate, refer to Calculation Sheet when appropriate (refer to Appendix B, Calculation Formulas, in this Manual for a Calculation Sheet example), other information relevant to item posting, and explanations when Attention Flag is checked.
- Attention Flag – Use to bring attention to Resident Engineer and Office Engineer for overruns and plan errors. Must enter Attention Comments.

NOTES for Rent Construction Item postings:

- If an each item has a specific location/station callout in the plans, then a separate posting will be done. It should NOT be grouped in a posting.
- If each items do NOT have a location/station callout but are grouped in a table or structure list, then they can be combined in one posting.
- Refer to Figure 22-4 through Figure 22-8 for examples of Rent Construction Item postings with different UOM.

New Item Posting	
Item:	RENT ARROW BOARD (...)
Contractor:	SIERRA NEVADA CONS...
Qty:	1.00 EACH
Authorized:	2.000 EACH
Total Posted:	0.000 EACH
Location:	"CW" 220 + 40
Station From:	[] + []
Offset Type:	RT
Offset Dist:	[]
Station To:	[] + []
Offset Type:	[]
Offset Dist:	[]
Measured:	[]
Comments:	Counted
3999 remaining	

NOTES for Rent Construction Item EACH (Figure 22-4):

- Payment for EACH items will be based on field count.
- Location: Enter the Line Designation
- Offset Type: Enter the LT, RT, or CL.
- Offset Dist: Enter if known
- Sig. Fig. = .01

Figure 22-4: DWR Item Posting – Rent Construction Item EACH

New Item Posting

Item: RENT TRAFFIC DRUMS

Contractor: SIERRA NEVADA CONS...

Qty: 50.00 EACH
 Authorized: 100.000 EACH
 Total Posted: 0.000 EACH

Location: "BW"

Station From: 0 + 10
Offset Type: RT
Offset Dist:

Station To: 11 + 00
Offset Type: RT
Offset Dist:

Measured:

Comments:
 Counted

3992 remaining

Figure 22-5: DWR Item Posting - Rent Construction Item EACH

NOTES for Rent Construction Item EACH (Figure 22-5):

- Payment for EACH items will be based on field count (this example shows an EACH item combined).
- Location: Enter the Line Designation
- Station From/To: Refer to Contract plans
- Offset Type: Enter the LT, RT, or CL.
- Offset Dist: Enter if known
- Sig. Fig. = .01

New Item Posting

Item: RENT PORTABLE PREC...

Contractor: SIERRA NEVADA CONS...

Qty: 40.00 LFT
 Authorized: 100.000 LFT
 Total Posted: 0.000 LFT

Location: "TW"

Station From: 220 + 10
Offset Type: RT
Offset Dist:

Station To: 224 + 30
Offset Type: RT
Offset Dist:

Measured:

Comments:

3999 remaining

Figure 22-6: DWR Item Posting – Rent Construction Item LFT

NOTES for Rent Construction Item LFT (Figure 22-6):

- Payment for LFT items will be based on field measurements.
- Location: Enter the Line Designation
- Station From/To: Refer to Contract plans
- Offset Type: Enter the LT, RT, or CL.
- Offset Dist: Enter if known
- Sig. Fig. = .01

New Item Posting

Item: RENT CONSTRUCTION...
Contractor: SIERRA NEVADA CONS...
Qty: 16.00 SQFT
 Authorized: 195.000 SQFT
 Total Posted: 0.000 SQFT
Location: "NW" 20 + 10
Station From: [] + []
Offset Type: RT
Offset Dist: []
Station To: [] + []
Offset Type: []
Offset Dist: []
Measured: []
Comments:
 Summary of Construction Signs
 Sign # NPS-1
 3956 remaining

Figure 22-7: DWR Item Posting – Rent Construction Item SQFT

NOTES for Rent Construction Item SQFT (Figure 22-7):

- Payment for SQFT (Signs only) shall be based on plan or if different than plan a complete explanation as to how the SQFT were derived or calculations are needed.
- Calculation for SQFT = L x W
- Location: Enter the Line Designation
- Offset Type: Enter the LT, RT, or CL.
- Offset Dist: Enter if known
- Sig. Fig. = .01
- Sign No. must be entered in the Comments (Sign No. is identification number of the sign as shown in the Contract plans). The message for the Sign No. must match the Summary of Construction Signs sheet (refer to Figure 22-1). If it does not, an explanation is required.

New Item Posting

Item: RENT CONSTRUCTION...
Contractor: SIERRA NEVADA CONS...
Qty: 2.00 SQFT
 Authorized: 195.000 SQFT
 Total Posted: 0.000 SQFT
Location: "RW" 40 + 10
Station From: [] + []
Offset Type: RT
Offset Dist: []
Station To: [] + []
Offset Type: []
Offset Dist: []
Measured: []
Comments:
 Message: Prepare To Stop
 12" x 24" / 144 = 2.00
 Per CO # 4
 3937 remaining

Figure 22-8: DWR Item Posting – Rent Construction Item SQFT

NOTES for Rent Construction Item SQFT (Figure 22-8):

- Payment for SQFT (Signs only) shall be based on plan or if different than plan a complete explanation as to how the SQFT were derived or calculations are needed.
- Calculation for SQFT = L x W
- Location: Enter the Line Designation
- Offset Type: Enter the LT, RT, or CL.
- Offset Dist: Enter if known
- Sig. Fig. = .01
- Sign No. must be entered in the Comments (Sign No. is identification number of the sign as shown in the Contract plans). The message for the Sign No. must match the Summary of Construction Signs sheet (refer to Figure 22-1). If it does not, an explanation is required.

- Record the following required information in the New Equipment window (Figure 22-9 and Figure 22-10).
 - Contractor: Actual contractor performing the work (include subs).
 - Type: Select from the Equipment list
 - Used: How many of each type.
 - Hours Used: Total hours in use.
 - Comments: Details of the type of equipment (e.g., diesel, HP, model, make). Include equipment attachment information if applicable.

New Equipment

Contractor: LAS VEGAS PAVI...
 Type: Bobcat 256C Skid ...
 Number: 1
 Hours: 8

Figure 22-9: DWR Equipment Entry

Add Equipment

LAS VEGAS PAVING CORPORATION
 Bobcat 256C Skid Steer, Diesel, 82HP, 2350lbs
 Number: 1.00 Hours: 8.00

LAS VEGAS PAVING CORPORATION
 Bobcat Auger Loader, Attachment, 15C w/12" bit
 Number: 1.00 Hours: 8.00

Figure 22-10: DWR Equipment List

5. Record the following required information in the New Personnel window (Figure 22-11 and Figure 22-12):
 - Contractor: Actual contractor performing the work (include subs).
 - Type: Select from the Personnel list.
 - Number: How many of each title.
 - Total Hours: Total hours worked.
 - Comments: Details of personnel type (e.g., foreman w/name, laborer, truck driver).

New Personnel

Contractor: LAS VEGAS PAVING CO...
 Type: Foreman - Donald Driver
 Number: 1
 Hours: 8

Figure 22-11: DWR Personnel Entry







Add Personnel	
LAS VEGAS PAVING CORPORATION Foreman - Donald Driver Number: 1.00 Hours: 8.00	 
LAS VEGAS PAVING CORPORATION Laborer Number: 3.00 Hours: 8.00	 
LAS VEGAS PAVING CORPORATION Operator Number: 2.00 Hours: 8.00	 

Figure 22-12: DWR Personnel List

- Complete a final review of the DWR, lock the report, and Sync Data.

Note: When a Mobile Inspector DWR is completed, locked and Synd Data is completed, the information is uploaded into an AWP DWR, where it is reviewed and Approved for processing progress payments.

DAILY WORK REPORT (DWR) – AWP EDITS

The Officer Engineer reviews each Inspector's DWRs for required entries and accuracy. If edits are needed on a DWR, the Inspector who created it will be required to log into the AWP program on a computer (not the iPad) and complete the edits. Refer to Chapter 5, Daily Work Reports, Section, Editing a Mobile Inspector DWR, in the [AWP User Guide](#) for details.

OFFICE ENGINEER'S RESPONSIBILITIES – RENT CONSTRUCTION ITEMS

- Save Rent Construction Item photos in the appropriate EDOC Contract Files\Contract Files\ Division No. 3 - Multimedia Records\3.# Photographs with Descriptions directory.
- Review Rent Construction Item Calculation Sheets for accuracy and save electronically in the appropriate EDOC Contract Files\Contract Files\Division No. 7 - Construction Pay Estimate and Related Data\7.# DWR Calculation Sheets directory using this naming convention: DWR YYYY-MM-DD Inspectors Initials, (e.g. DWR 2016-03-19 KMM).
- Distribute executed copies of Change Orders to Inspectors.

DAILY WORK REPORT (DWR) – AWP

When a Mobile Inspector DWR is locked by an Inspector, the information is uploaded into an AWP DWR. Refer to Chapter 5, Daily Work Reports, in the [AWP User Guide](#) for details.

- Verify the following:
 - Information in the Remarks
 - Information in the Contractor On Site tab
 - Information in the Contractor Equipment tab
 - Information in the Contractor Personnel tab
 - Items are paid correctly according to the contract documents (e.g., plans, supplemental notices, Change Orders).
 - Item quantities

- Quantities in postings are documented to the correct Significant Figure (.01)
- Stations and Line Designations in the Locations
- Calculations are correct.
- Comments reference calculation sheets, if applicable.

Note: Length does not always equal the difference between the beginning and ending station. Sometimes there is a curve or an obstacle that will affect the distance. Always check with the Inspector before assuming the calculations are incorrect.

2. Approve the DWR if everything is correct.
3. If there are edits required in the DWR, Reject it.
4. Notify the Inspector who created the DWR there are edits to be completed. The Inspector will be required to log into the AWP program on a computer (not the iPad) to complete the edits.
5. Review the corrected DWR and Approve.

