

CHAPTER 21
Mobilization and Rent Construction Items

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Rev 11/09

**DOCUMENTATION REQUIREMENT
SECTION A
MOBILIZATION**

The computer calculates the amount paid to the Contractor for mobilization automatically when the bi-weekly progress payment is processed. It is not necessary for field personnel to prepare any forms or documentation for mobilization. The completed progress payment shall be the source documentation for mobilization.

Partial payments shall be made in accordance with subsection 109.06 of the Standard Specifications of Road and Bridge Construction, (Silver book) as follows:

1. When 5% of the original contract amount is earned from other bid items, 50% of the amount bid for mobilization, or 5% of the original contract amount, whichever is less, will be paid.
2. When 10% of the original contract amount is earned from other bid items, 100% of the amount bid for mobilization, or 10% of the original contract amount, whichever is less, will be paid (not to include the 5% paid for mobilization mentioned in #1).
3. Upon completion of all bid item work on the contract, payment of any amount bid for mobilization in excess of 10% of the original contract amount will be paid. Entering a "Final" status on the payment will do this.

Item number 628 0004 is the only applicable item for mobilization that is automatically generated. Agreed price items for mobilization created by change orders shall be documented according to the UOM.

**DOCUMENTATION REQUIREMENT
SECTION B
RENT CONSTRUCTION ITEMS**

Rent construction signs, rent cones, rent drums, rent barricades, rent barricade warning lights, etc. shall be documented in a RENT CONST SIGNS, ETC book. For rent traffic control devices paid by lump sum, refer to Chapter 19 (Lump Sum Items).

To setup the field books the information on rent construction items shall be found in the contract plans on the Main Structure list, or the Summary of Construction Signs, or the Summary of Barricades, or on the Estimate of Quantities. A Summary of Construction Signs is illustrated on page 21-3, an illustration of a Summary of Construction Barricades is on page 21-4, and the Estimate of Quantities is in Chapter 2 (Setting up a Contract, Book Format, etc.).

Recording the installations of the rent items in the RENT CONST SIGNS, ETC book is the only documentation required for these items. The total quantities installed are coded on the progress payment. On the first payment after the rent items are erected, the computer will initialize the 50% payment. The computer will automatically calculate the pro-rated payments on the remaining portion. The Payment Final Balance Report shows the monetary amounts paid on these items. The only information required to accomplish these calculations is the quantity installed each payment cycle.

Documentation for only a few selected rent construction items is illustrated in this chapter. Documentation for practically any rent construction item can be provided by setting up the books in the same manner according to the UOM, except 201 and 202 removal items, as illustrated in Chapter 4, (Removal Items). Some minor modifications may be required to show the unusual circumstances that may occur with different items, but the general format must be followed. If there are items that cannot be documented according to the following examples, please call Headquarters Construction for assistance.

A separate page shall be provided for each bid item. Make sure to leave enough pages between installations for any added or missed items.

Any items requiring measurements, percentages, or final quantity calculations must be shown in the field book or on a CALCULATION sheet (Form No. 040-034) and filed in the CALCULATION book as illustrated in Chapter 2 (Setting up a Contract, Book Format, etc.). Make sure to cross reference the quantity in the field book to the CALCULATION sheet and the CALCULATION sheet to the field book(s) and page(s).

It is important that all records be kept in a neat and legible manner. All **notes in the remarks column must be initialed** by the person or persons responsible for the entry. **All calculations must be checked and initialed by the checker.**

See Chapter 19 (Lump Sum Items) when Rent Traffic Control Devices are paid by lump sum.

Each book shall be setup as illustrated in Chapter 2 (Setting up a Contract, Book Format, etc.) and recapped as illustrated in Chapter 24 ("Finaling Out" a Contract).

**DOCUMENTATION REQUIREMENT
SECTION C
RENT CONSTRUCTION ITEMS
(SUMMARY OF CONSTRUCTION SIGNS)**

To setup the field books the information on rent construction items shall be found in the contract plans on the Main Structure list, or on the Summary of Construction Signs, Summary of Barricades, or on the Estimate of Quantities. As many items as room permits may be documented in one book before beginning another. The **Inspector** and the **Officeperson** are responsible to assure the message, sign no., plan, and the sqft installed for rent construction signs match the Summary of Construction Signs sheet in the contract plans. **Skip at least one line between entries. A separate page shall be provided for each bid item. Make sure to leave enough pages between items for any added or missed items.** An illustration of a Summary of Construction Signs is shown below and an illustration of a Summary of Construction Barricades is shown on page 21-4.

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(016)						
SIGN NO.	MESSAGE	PANEL SIZE	TOTAL SIGNS*	SQFT EACH	SQFT TOTAL	
M1-1	INTERSTATE SHIELD (16) (BLACK ON ORANGE)	24" X 24"	23	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_8	DETOUR (BLACK ON ORANGE)	30" X 15"	15	3.1	47.0	
M6_1	ARROW (SYM) RIGHT OR LEFT	21" X 15"	18	2.2	39.4	
M6_3	ARROW (SYM) 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	12.0	72.0	
NPS_1	PREPARE TO STOP	48" X 48"	7	16.0	112.0	
NRC_1	RAMP CLOSED	48" X 36"	6	12.0	72.0	
NRC_1A	RAMP CLOSED AHEAD	48" X 48"	2	16.0	32.0	
NRE_1	RAMP EXIT	42" X 54"	1	16.8	16.8	
NTL_1	LEFT TURN LANE	30" X 48"	11	10.0	110.0	
NTL_2	RIGHT TURN LANE	30" X 48"	1	10.0	10.0	
NTT_1	THROUGH TRAFFIC UP ARROW	54" X 60"	5	22.5	112.5	
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"	5	20.0	100.0	
R2_1	SPEED LIMIT 65	48" X 60"	4	20.0	80.0	
R2_5A	REDUCE SPEED AHEAD	48" X 60"	4	20.0	80.0	
R3_1	NO RIGHT TURN (SYM)	48" X 48"	1	16.0	16.0	
R3_2	NO LEFT TURN (SYM)	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	
R4_7A	KEEP RIGHT (HORIZONTAL ARROW)	48" X 60"	3	20.0	60.0	
R4_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	12.5	12.5	
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	
W4_1AR	THRU TRAFFIC MERGE RIGHT	48" X 48"	1	16.0	16.0	
W4_2L	LANE ENDS (LEFT)	48" X 48"	6	16.0	96.0	
W4_2R	LANE ENDS (RIGHT)	48" X 48"	2	16.0	32.0	
W6_3	TWO WAY (SYM)	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_5L	LEFT LANE CLOSED AHEAD	48" X 48"	6	16.0	96.0	
W20_5R	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_5	SHOULDER WORK	48" X 48"	7	16.0	112.0	
IM-015-1(126)			TOTAL SIGNS NEEDED	291		
			TOTAL SQUARE FEET		2942.1	
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_2L	LANE ENDS (LEFT)	48" X 48"	2	16.0	32.0	
W4_2R	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_5L	LEFT LANE CLOSED AHEAD	48" X 48"	2	16.0	32.0	
W20_5R	RIGHT LANE CLOSED AHEAD	48" X 48"	2	16.0	32.0	
W21_5	SHOULDER WORK	48" X 48"	2	16.0	32.0	
			TOTAL SIGNS NEEDED	24		
			TOTAL SQUARE FEET		344.0	

FED. RD. DIST. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA	IM-015-1(126)	CLARK	3R

RENT CONSTRUCTION ITEMS (SUMMARY OF CONSTRUCTION DEVICES)

SUMMARY OF CONSTRUCTION BARRICADES

NOTE: QUANTITIES SHOWN ARE APPROXIMATE AND ARE SUBJECT TO INCREASE OR DECREASE.

STP-0160(016)

CONSTRUCTION DEVICES	UNIT	TOTAL
ARROW BOARDS (TYPE C) (EACH)	EACH	2.00
ATTENUATOR 45 MPH	EACH	2.00
ATTENUATOR 65 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	1820.00
TYPE 1 TEMPORARY STRIPING TAPE (PILOT LINES)	LIN FT	700.00

IM-015-1(126)

CONSTRUCTION DEVICES	UNIT	TOTAL
ARROW BOARDS (TYPE C) (EACH)	EACH	1
ATTENUATOR 65 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	STP-0160(016) IM-015-1(126)	CLARK	3S
FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.

**DOCUMENTATION REQUIREMENT
SECTION D
RENT CONSTRUCTION ITEMS
(INDEX AND INITIAL KEY)**

Below is an illustration of an index and an initial key. When setting up a field book at the beginning of a contract make sure each item in the book is listed on the index. During the contract if anything is added to the book make sure it is placed on the index. At job closeout make sure the index has the ending page for each item listed on more than one page. Make sure to list the book recap page(s) on the index. If room permits skip a line between entries on the index. Check the initial key each progress payment to assure that everyone who has made entries in the book has initialed and signed the initial key. If the signature is not legible, have the person print his/her name under the signature. Make sure the initials used throughout the book match the way the initials show on the initial key. If the initials change, add the new initials to the initial key next to the original initials.

Index		Initial Key		
Page	Description	Initials	Signature	Title
4-8	Rent Traffic cones	Ⓢ	Shelli Jones	Tech II
10-14	Rent Const. Barricades (Type III B)	SP	Syrene Phillips	Tech II
16-17	Rent Changeable Message Sign	JD	Jack Dougherty	Tech III
20	Rent Arrow Board (Type C)	MD	Mary Davis	Tech I
22-24	Rent Traffic Drums	VT	Van Thomas	Tech II
26	Rent Temp. Impact Attenuator (45 MPH)			
28	Rent Temp. Impact Attenuator (65 MPH)			
30	Rent Truck-mounted Impact Attenuator			
32-50	Rent Construction Signs			
52-60	Rent Portable Precast Conc. Barrier Rail			
75	Book Recap			

Rent construction items shall be documented in a RENT CONST SIGNS, ETC book.

The following is an illustration for an item with a UOM of Each.

The illustration on this page shows an Each item that is listed on the Summary of Barricades in the contract plans, as illustrated on page 21-4 and is combined. If there are questions on whether an each item can be listed separately or combined, please call Headquarters Construction for assistance.

The **Officeperson** shall complete for each page the item number, item description, plan quantity, the significant figure on the top right-hand side of the page, all column headings, page total in the bottom left-hand corner of the page, the AEB number, and location and plan if indicated on a structure list. **Skip at least one line between entries. A separate page shall be provided for each bid item. Make sure to leave enough pages between items for any added or missed items.**

Daily, the **Inspector** shall document the location and AEB# if not already entered, qty, date, initials, and any remarks that are needed. **Skip at least one line between entries.**

Note: All entries must be entered as called out in the plans and document left, right, or centerline, where applicable.

Payment for Each items will be based on field count.

Item No. 625 0072					Sig Fig = 1		22
Item: RENT Traffic Drums							
Plan Qty: 202 Each							
Location	Qty	Date	Insp	AEB*	Pmr*	Remarks	
'X' 0+10 To 'X' 11+00 LT	50	9-10-08	JD	2			
'X' 13+00 To 17+00 LT	100	9-12-08	JD	2			
Page total:							

When making out the field books if a required item of work is not illustrated in this chapter, use an example that has the

**DOCUMENTATION REQUIREMENT
SECTION G
RENT CONSTRUCTION ITEMS
(WHEN PAID BY SQUARE FOOT)**

Rent construction items shall be documented in a RENT CONST SIGNS, ETC book.

The illustration on page 21-10 is an item with a UOM of Sqft.

Each construction sign shall be on a separate line. Skip at least one line between entries. A separate page shall be provided for each bid item. Make sure to leave enough pages between items for any added or missed items.

The **Inspector** shall document the following for Rent Construction Signs in the RENT CONST SIGNS, ETC book:

1. Location - stationing where sign is placed. If sign is portable, record the original location the sign was placed. If there are no stations make sure to use cross streets.
2. Message – the wording on the sign. The message must match the Sign No. description and both must match the Summary of Construction Signs sheet. If it does not an explanation is required.
3. Install. No. - each sign erected on the contract is assigned a number. Record the corresponding installation number, contract number, date and initials with a permanent black marking pen on the back of the sign to identify the sign in case it is relocated or if inspectors change during the contract.
4. Sign No. - identification number of the various types of signs as shown in the plans. The message for the Sign No. must match the message written in the field book and both must match the Summary of Construction Signs sheet. If it does not an explanation is required.
5. Plan - plan sqft for each sign taken from the plans. If sqft does not match the Summary of Construction Signs, then calculations or an explanation as to where the quantity was derived is required. If a sign is added the plan quantity will be zero.
6. Sqft. Inst. - square foot of signs erected. Must match plan or an explanation is required. If sqft does not match the Summary of Construction Signs, then calculations or an explanation as to where the quantity was derived is required. The significant figure is to .01.
7. Date Inst. - the date the sign was first erected on the contract.
8. Insp. – **Inspector's** initials.
9. AEB # - AEB number.

The **Inspector** and the **Officeperson** are responsible to assure there is a complete location, the message, sign no., plan, and the sqft installed for rent construction signs match the Summary of Construction Signs sheet in the contract plans or there is a calculation or an explanation as to how the quantity was derived.

Rent construction items shall be documented in a RENT CONST SIGNS, ETC book.

The following is an illustration for an item with a UOM of Sqft.

The illustration on this page shows a sqft item that is located on the Summary of Construction Signs sheet in the contract plans, as illustrated on page 21-3.

The **Officeperson** shall complete for each page the item number, item description, plan quantity, the significant figure on the top right-hand side of the page, all column headings, and page total in the bottom left-hand corner of the page. **Skip at least one line between entries. A separate page shall be provided for each bid item. Make sure to leave enough pages between items for any added or missed items. All calculations must be checked and initialed.**

Daily, the **Inspector** shall document the complete location, message, install number, sign number, plan, sqft installed, date installed, initials, and AEB#. **Skip at least one line between entries.**

Note: Instructions for Rent Const. Signs are on page 21-9. All entries must be entered as called out in the plans and document left, right, or centerline, where applicable.

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.

Item No: 625 0500		Sig fig: .01		32					
Item: Rent Const Signs		L x W ÷ 144 = sq ft							
Plan Qty: 3286.00 Sq ft									
Location	Message	Instll No.	Sign No.	Plan	Sq ft Install	Date Install	Insp	AEB#	Pmt#
"X" 20+10 LT	Roadwork Ahead	1	1020-1	16.00	16.00	9-15-08	JD	2	
"X" 3+05 RT	Speed Limit 65	2	R2-1	20.00	20.00	9-15-08	JD	2	
"X" 10+15 RT	Prepare to Stop	3	NPS-1	16.00	16.00	9-15-08	JD	2	
"BD" 56+20 LT	Pass with Care	4	R4-2	5.00	5.00	9-15-08	JD	2	
"BD" 57+40 RT	Turn (Left)	5	W1-1L	16.00	16.00	9-15-08	JD	2	
"BD" 58+90 LT	Slow Traffic Keep Right	6	Special	2.00	2.00	9-15-08	JD	2	
Page total		NOT in Plans see muted book page 2B-3 (2003) sign was add to protect the public field mens. 12" X 24" = 144 = 2.00 sq ft. Sign was add to help slow down TRAFFIC							

When making out the field books if a required item of work is not illustrated in this chapter, use an example that has the same UOM.