

# BIDDING DOCUMENTS

**PROJECT:** CURVE WARNING SIGNS 2022

**PROJECT #:** WSIGNS

**BID OPENING:** APRIL 27, 2:00 P.M.

**COMPLETION DATE:** DECEMBER 31, 2022

**CONTRACTING AGENCY:**



**ROAD  
DEPARTMENT**

**61150 SE 27<sup>TH</sup> STREET  
BEND, OREGON 97702  
PHONE: (541) 388-6581  
FAX: (541) 388-2719  
WEB: [www.deschutes.org/road](http://www.deschutes.org/road)**



ROAD  
DEPARTMENT

**BIDDING DOCUMENTS**  
**CURVE WARNING SIGNS 2022**

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**DESCRIPTION OF PARTS OF BIDDING DOCUMENTS WHICH ARE NOT BOUND HEREIN:**

OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2021

The Specification that is applicable to the Work on this Project is the 2021 edition of the "Oregon Standard Specifications for Construction". All number references in these Special Provisions shall be understood to refer to the Sections and subsections of the Standard Specifications bearing like numbers and to Sections and subsections contained in these Special Provisions in their entirety.

**DESCHUTES COUNTY, OREGON  
ROAD DEPARTMENT  
INVITATION TO BID  
CURVE WARNING SIGNS 2022**

Sealed bids will be received at the Deschutes County Road Department, 61150 SE 27<sup>th</sup> Street, Bend, Oregon 97702, until but not after, **2:00 p.m. on April 27, 2022**, at which time and place all bids for the above-entitled public works project will be publicly opened and read aloud.

The Class of Work of this Project is Signing. The value for this Contract is estimated to be between \$100,000 and \$120,000. The Work will consist of, but not be limited to, the following:

- Install and maintain temporary traffic control.
- Remove and reinstall existing signs, as appropriate.
- Install new sign footings, sign supports and permanent signs.
- Perform additional and incidental work as called for by the specifications and plans.

Specifications and other bid documents may be inspected and obtained from the Deschutes County Bids and RFPs website at <http://www.deschutes.org/rfps>. Inquiries pertaining to these specifications shall be directed to Cody Smith, County Engineer, in writing at [Cody.Smith@deschutes.org](mailto:Cody.Smith@deschutes.org) or the address above.

Bids shall be made on the forms furnished by the County, including a Bid Bond or Cashiers Check for the minimum amount of 10% of the Bid Price, addressed and mailed or delivered to Chris Doty, Department Director, 61150 SE 27<sup>th</sup> Street, Bend, Oregon 97702 in a sealed envelope plainly marked "BID FOR CURVE WARNING SIGNS 2022" and the name and address of the bidder.

Bidders must submit a Subcontractor Disclosure Statement. The subcontractor disclosure statement may be submitted in the sealed bid prior to 2:00 p.m. on April 27, 2022 or in a separate sealed envelope marked "SUBCONTRACTOR DISCLOSURE STATEMENT - CURVE WARNING SIGNS 2022" prior to 4:00 p.m. on April 27, 2022 at the above location.

Because the work called for under this contract is for a public works project subject to state prevailing rates of wage under ORS 279C.800 to 279C.870, the County will not receive or consider a bid unless the bid contains a statement by the bidder that the bidder will comply with ORS 279C.840. Each bid must contain a statement as to whether the bidder is a resident bidder, as defined in ORS 279A.120. Vendors shall use recyclable and/or sustainably sourced products to the maximum extent economically feasible in the performance of the contract work set forth in this document.

Bidders shall be prequalified with the State of Oregon for the Class of Work stated above in accordance with ORS 279C.430 through 279C.450 and Deschutes County Code 12.52.020. The successful bidders and subcontractors providing labor shall maintain a qualified drug testing program for the duration of the contract. Bidders shall be licensed with the Construction Contractor's Board. Contractors and subcontractors need not be licensed under ORS 468A.720.

Deschutes County may reject any bid not in compliance with all prescribed bidding procedures and requirements, and may reject for good cause any or all bids upon a finding of Deschutes County it is in the public interest to do so. The protest period for this procurement is seven (7) calendar days.

CHRIS DOTY  
Road Department Director

PUBLISHED:  
DAILY JOURNAL OF COMMERCE: April 6, 2022  
THE BEND BULLETIN: April 6, 2022

## INFORMATION FOR BIDDERS

1. **General Description of Project.** A general description of the work to be performed is contained in the Invitation to Bid. The scope is indicated in the applicable parts of these Contract documents.
2. **Contract Documents.** The Contract documents under which it is proposed to execute the work consist of the material bound herewith. These Contract documents are intended to be mutually complementary and to provide all details reasonably required for the execution of the proposed work.

Any person contemplating the submission of a proposal and being in doubt as to the meaning or intent of said contract document shall at once notify, in writing, the Road Department Director of Deschutes County, Oregon. Any interpretation of change will be mailed or delivered to each person receiving a set of documents.

3. **Form of Proposals.** All proposals must be submitted on the forms furnished. Subcontractor disclosure form may be submitted with the bid or in a separate envelope.
4. **Substitutions.** Materials and/or products called for in the specifications are named in order to establish a standard of quality design. Manufacturers or suppliers of products similar to those specified may submit bids on the work providing requests for approval of substitution materials are made at least seven (7) calendar days prior to the bid opening. Adequate information on which to base approval or disapproval must be furnished to the Road Department Director or his representative and the Road Department Director shall be the sole judge of any request. When the Road Department Director approves a substitution, it is with the understanding that the Contractor guarantees the substituted article or materials to be equal or better than the specified.
5. **Preparation of Proposals.** All blank spaces in the proposal form must be filled in, in ink, or typed, in both words and figures where required. No changes shall be made in phraseology of the forms. Written amount shall govern in cases of discrepancy between the amount stated in writing and amount stated in figures.

Any proposal shall be deemed informal which contains omissions, erasures, alterations, or additions of any kind, or prices uncalled for, or which, in any manner shall fail to conform to the conditions of the published invitation to bidders.

The bidder shall sign his/her proposal in the blank space provided therefore. Proposals made by corporations or partnerships shall contain names and addresses of the principal officers or partners therein. If a corporation makes a proposal, it must be signed by one of the principal officers thereof, and the corporate seal affixed.

If made by a partnership, it must be signed by one of the partners, clearly indicating that he is signing as a partner of the firm. In the case of a proposal



made by a joint venture, each of the joint venturers must sign the proposal in his personal capacity.

The wording of the proposal shall not be changed. Any additions, conditions, limitations or provisions inserted by the bidder will render the proposal irregular and may cause its rejection.

6. **Submission of Proposals.** All proposals must be submitted in the time and place and in the manner prescribed in the invitation to bid. Proposals must be made on the prescribed proposal forms furnished. Each proposal must be submitted in a sealed envelope, so marked as to indicate its contents without being opened. If the proposal is submitted by mail, the sealed envelope containing the bid must be enclosed in a separate envelope plainly addressed for mailing to conformance with instructions in the Invitation to Bid

A responsive bid proposal must include the following completed items:

- Bid Proposal Form
- Schedule of Bid Items
- Bid Guaranty Form

7. **Modification or Withdrawal of Proposal.** Any bidder may modify his bid by written or telegraphic communication at any time prior to the scheduled closing time for receipt of bids, provided such communication is received by the County prior to the closing time, and provided further that a written confirmation of a telegraphic modification over the signature of the bidder was mailed prior to the closing time. If written confirmation of a telegraphic communication is not received within at least two calendar days of the closing time, no consideration will be given to the modification. The written or telegraphic communication should not reveal the bid price, but should state the addition or subtraction or other modification so that the County will not know the final prices or terms until the sealed bid is opened.

Proposals may be withdrawn prior to the scheduled time for the opening of the proposals either by telegraphic or written request, or in person. No proposal may be withdrawn after the time scheduled for opening of proposals, unless the County has failed to comply with the time limits applicable to award of the Contract.

8. **Disclosure of First Tier Subcontractors.** Bidders must submit a subcontractor disclosure statement where the value, estimated by the contracting Agency exceeds \$100,000. The subcontractor disclosure statement may be submitted in the sealed bid prior to the bid closing OR it may be submitted in a separate sealed envelope marked "**SUBCONTRACTOR DISCLOSURE STATEMENT**" and the name of the project, within two (2) working hours after the bid closing. Bidder must submit a statement on the form provided in these contract documents identifying all first-tier subcontractors that will furnish labor or labor and materials and whose contract value is equal to or greater than:

- 5% of the total project bid, but at least \$15,000, or
- \$350,000 regardless of the percentage of the total project bid.

For each subcontractor listed, include:

- The name, address and telephone number of the subcontractor:
- The category of work that the subcontractor would be performing.

If no subcontracts subject to the above disclosure requirements are anticipated, a bidder is required to indicate “**NONE**” on the accompanying form.

To determine disclosure requirements, it is required that bidders disclose subcontract information for any subcontractor as follows:

- 1) Use the forms bound herewith for the required disclosure.

Notice – Bidder’s Requirements: Bidders are required to disclose information about certain first-tier subcontractors when the contract value estimated by the contracting Agency for a Public Improvement is greater than \$100,000 (see ORS 279C.370). Specifically, when the contract amount of a first-tier subcontractor furnishing labor or labor and materials would be greater than or equal to: (i) 5% of the project bid, but at least \$15,000, or

(ii) \$350,000 regardless of the percentage, the bidder must disclose the following information about that subcontract either in its Bid submission or within two working hours after bid closing:

(a) The subcontractor’s name, and

(b) The category of work that the subcontractor would be performing.

- 2) If the bidder will not be using any subcontractors that are subject to the above disclosure requirements, the bidder is required to indicate “**NONE**” on the accompanying form.
- 3) Bidder shall submit the disclosure form required by OAR 137-049-0360 either in its bid submission or separately within two working hours after Bid Closing in the manner specified by the invitation to bid.
- 4) Compliance with the disclosure and submittal requirements of ORS 279C.370 and OAR 137-049-0360 is a matter of Responsiveness. Bids which are submitted by Bid Closing, but for which the disclosure submittal has not been made by the specified deadline, are not responsive and shall not be considered for Contract award.
- 5) County shall obtain, and make available for public inspection, the disclosure forms required by ORS 279C.370 and OAR 137-049-0360. County shall also provide copies of disclosure forms to the Bureau of Labor and Industries as required by ORS 279C.835. County is not required to determine the accuracy or completeness of the information provided on disclosure forms.
- 6) Substitution of affected first-tier subcontractors shall be made only in accordance with ORS 279C.585. County shall accept written submissions filed under the statute as public records. Aside from issues involving inadvertent clerical error under ORS 279.585(5), County does not have a statutory role or duty to review, approve, or resolve disputes

concerning such substitutions. See ORS 279C.590 regarding complaints to the Construction Contractors Board on improper substitution.

**THE COUNTY MUST REJECT A BID IF THE BIDDER FAILS TO SUBMIT THE DISCLOSURE FORM WITH THIS INFORMATION BY THE STATED DEADLINE (see OAR 137-049-0360).**

9. **Bid Security.** The Bid Bond or Cashier's Check will be for a minimum of ten per cent (10%) of the amount of the bid price. If a bidder bids more than one bid proposal, each proposal must be accompanied by separate bid security. The County reserves the right to retain the bid security of the three (3) lowest bidders until the successful bidder has signed and delivered the contract and furnished one hundred percent (100%) Performance and Payment Bonds.
10. **Conditions of Work.** Each bidder must inform himself of the conditions relating to the execution of the work, and make himself thoroughly familiar with all the Contract documents. Failure to do so will not relieve the successful bidder of his obligations to enter into a Contract and complete the contemplated work in strict accordance with the Contract documents. Each bidder must inform himself on all laws and statutes, both Federal and State, relative to the regular execution of the work, the employment of labor, protection of public health, access to the work and similar requirements.
11. **Award of Contract.** The award of the contract will be made by the County on the basis of the proposal which in its sole and absolute judgment will best serve the interest of the County.

County will issue a notice of intent to award contract. Any bidder may protest the notice of intent to award contract within seven (7) calendar days of the notice of intent to award contract.

The County reserves the right to accept or reject any or all proposals, and to waive any informalities and irregularities in said proposals.

12. **Payment and Retainage.** Payment for work performed will be made by the County as specified in the Special Provisions based upon the contract unit prices on the Bid Schedule.

Upon substantial completion of the contract, Contractor may request a partial release of retainage held by the County. The maximum amount of a request for a partial release retainage shall be the Contract amount less 150 percent of the estimated cost of the Contract yet to be performed through final completion. Upon final completion, Contractor may request release of the remaining retainage. Each request for the release of retainage shall be accompanied by the Consent of the contractor's surety.

13. **Performance Bond and Payment Bond.** The successful bidder shall file with the County, at the time of execution of the contract, a Performance Bond and a Payment Bond each of not less than the contract price on the forms furnished by the County. The Surety Company furnishing the required bonds shall have a sound financial standing and a record of service satisfactory to the County, and shall be authorized to do business in the

State of Oregon. In lieu of a Performance Bond, the contractor may file cash, a Certified or Cashier's Check made payable to Deschutes County, Oregon. This money, check or certificate will be held by the County conditioned on and subject to the same provisions as set forth in the attached Performance Bond. ORS 279C.380 allows no flexibility for a cash deposit in lieu of a Payment Bond.

County may request a copy of Contractor's surety bond(s). Contractor must supply County with copy of surety bond(s) within ten (10) calendar days from the date of the request.

14. **Required Public Works Bond.** Before starting work on this project the Contractor and every subcontractor to which Contractor is a party for the performance of work under this contract must have a public works bond filed with the Construction Contractors Board, 700 Summer St. NE, Suite 300, Salem, Oregon 97309-5052, before starting work on the project, unless exempt under section 2 (7) or (8) of 2005 Oregon Laws Chapter 360 ORS 279C.836(7) or (8). Every subcontract to which Contractor is a party for the performance of work under this contract shall contain a provision requiring the subcontractor to have a public works bond filed with the Construction Contractors Board before starting work on this project, unless exempt under ORS 279C.836 (7) or (8) section 2 (7) or (8) of 2005 Oregon Laws Chapter 360.
15. **Failure to Execute Contract.** Upon failure by the successful bidder to enter into the Contract and furnish the necessary bond within ten (10) calendar days from the date Notice of Award is made, the bid bond accompanying the bid shall be forfeited, the proceeds paid to the County, and the award withdrawn. The award may then be made to the next lowest responsible bidder, or all bids rejected and the work is re-advertised.
16. **Disclaimer of Responsibility.** Neither the County nor the Road Department Director will be responsible for oral interpretations. Should a bidder find discrepancies in, or omissions from the drawings, specifications, or other pre-bid documents, or be in doubt as to their meaning, he shall notify the County at least seven (7) calendar working days prior to the bid opening date. Any and all such interpretations, any supplemental instructions or approval of manufacturer's materials to be substituted will be made only in the form of written addenda to the specifications, which, if issued, will be hand delivered or sent by regular mail, email and fax to all prospective bidders receiving a set of such documents, not later than two (2) calendar days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued are to be covered in the bid for such addenda to become part of the Agreement.
17. **Permits and Licenses.** The successful bidder shall be required to have or obtain, at his expense, any and all permits and licenses required by Deschutes County, any City within the County, and the State of Oregon, pertaining to the service he proposes to furnish. Licensing shall include without limitation registration with Construction Contractors Board and in the case of professional engineers and architects proof of current licensing with the appropriate State licensing board.

18. **Minimum Requirements of Bid.** The following minimum requirements as to the form and manner of submitting bids must be strictly observed; variance from these requirements will result in rejection of the bid as unresponsive.
- a. Each Bid must be submitted on forms furnished by the County, and include a complete set of contract documents.
  - b. Each Bid must be signed by the bidder.
  - c. Bid security, in the required form and amount, must accompany each bid.
  - d. Each blank in the proposal must be filled in unless an alternative is provided. Each separate bid item must be bid on, unless the proposal form clearly indicates otherwise.
  - e. Each Bid must be submitted in a separate sealed envelope, marked to identify without opening, and in the hands of the Road Department Director at the time and place specified for bid opening.
  - f. A proposal containing modifications, deletions, exceptions or reservations which in any way conflict with or purport to alter any substantive provision contained in the bid documents, will not be considered.
  - g. A conditional bid will not be considered.
  - h. Any bid submitted without all of the pages of the bid documents, but with a sufficient number of the pages of the bid documents to allow the evaluation of the bid, shall be deemed to have been submitted with the missing pages for purposes of bid evaluation. The missing pages of the bid documents shall be deemed to be incorporated into bid by reference.
19. **Plans.** Plans are not to be taken or construed as being reproduced at precisely the indicated scale. Where the plans are photographic reductions of the original tracings, the approximate amount of reduction is indicated by a note on the plans.
20. **Specifications.** The specifications are the minimum acceptable specifications for the project for which proposals are sought. Any deviation from the specifications contained herein, shall render the bid non-responsive.
21. **Examination of Site and Conditions.** Bidders are required, prior to submission of bids, to carefully examine the site and the Plans and Specifications of the contemplated work. Errors and omissions in the Plans or Specifications shall be called to the attention of the Road Department Director prior to submission of bid so that addenda may be issued. Failure to do so on the part of the Contractor does not relieve him of responsibility for a correct and completely finished job. Only a written interpretation or correction by addendum shall be binding.

22. **Pre-Bid Inquiries.** Bidders with pre-bid inquiries shall contact Cody Smith, County Engineer, in writing at [cody.smith@deschutes.org](mailto:cody.smith@deschutes.org) or 61150 SE 27<sup>th</sup> Street, Bend, Oregon 97702.
23. **Prequalification of Bidders.** Bidders shall be pre-qualified with the State of Oregon in accordance with ORS 279C.430 and Deschutes County Code 12.52.020. The prequalification class is as shown in the Invitation to Bid. This contract is subject to ORS 279C.800 to 279C.870. The successful bidders and subcontractors providing labor shall maintain a qualified drug-testing program for the duration of the contract. Bidders shall be licensed with the Construction Contractor's Board. Contractors and subcontractors need not be licensed under ORS 468.710.
24. **Contract Award.** Deschutes County reserves the right to postpone award of the contract for fourteen (14) calendar days from the date of the bid opening, or until a final decision is made on a protest, whichever is later.
25. **Bidder Statement.** Submission of a bid for the project shall constitute a statement by the bidder that the provisions of ORS 279C.840 are to be complied with.

**BID PROPOSAL FORM**  
**CURVE WARNING SIGNS 2022**

\_\_\_\_\_

BIDDER NAME

\_\_\_\_\_

CCB#

\_\_\_\_\_

ADDRESS

\_\_\_\_\_

CITY

\_\_\_\_\_

STATE

\_\_\_\_\_

ZIP CODE

\_\_\_\_\_

CONTACT NAME

\_\_\_\_\_

CONTACT PHONE NUMBER

\_\_\_\_\_

CONTACT EMAIL ADDRESS

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein; that this Proposal is, in all respects, fair and without fraud; and it is made without collusion with any official of Deschutes County, Oregon, hereinafter called County; and that the Proposal is made without any connection or collusion with any person making another proposal on this contract.

The Bidder further declares that Bidder has carefully examined the contract documents and the project location; that Bidder is satisfied as to the quantities involved, including materials and equipment, and conditions of work involved; and that this proposal is made according to the provisions and under the terms of the contract documents, which documents are hereby made a part of this Proposal.

The Bidder agrees that all of the applicable provisions of Oregon law relating to public contracts (ORS Chapter 279) are, by this reference, incorporated in and made a part of this Proposal. Bidder hereby states that Bidder will comply with ORS 279C.840.

Bidder declares that (check appropriate box):

The Bidder is a resident bidder of the State of Oregon.

The Bidder is a nonresident bidder from the State of \_\_\_\_\_.

Bidder declares that the Bidder is not in violation of any tax laws of the State of Oregon and Deschutes County, including but not limited to those programs listed in ORS 305.380(4),

The Bidder further agrees that if this Proposal is accepted, Bidder will, within ten (10) calendar days after notification of acceptance, execute the contract with the County in the form of contract annexed hereto; and will, at the time of execution of the contract, deliver to the County the Performance and Payment Bonds (See Section 13 Information for Bidders) required herein; and will, to the extent of this Proposal, furnish all materials necessary to complete the work in the manner, in the time, and according to the methods as specified in the contract documents and required by the Road Department Director.

The Bidder certifies that it has a drug testing program in place for its employees, or warrants that a drug testing program will be in place prior to execution of this contract, that the drug testing program is in writing, that new employees must pass a drug screening, that existing employees may be tested for reasonable cause or when an employee is injured or involved in an accident resulting in property

damage. The Bidder agrees that each subcontractor providing labor under this Contract shall maintain a qualifying drug testing program for the duration of the Contract.

The Bidder agrees to commence work upon the issuance of a "Notice to Proceed" by the County and fully complete the project according to the time schedule specially set forth in the contract documents.

The Bidder further agrees to pay liquidated damages for failure to complete within the specified time.

It is agreed that if the Bidder is awarded the contract for the work herein proposed and shall fail or refuse to execute the contract and furnish the contract and furnish the specified Performance and Payment Bond within ten (10) calendar days after receipt of notification of acceptance of Bidder's proposal, then, in that event, the bid security deposited herewith according to the conditions of the Invitation to Bid and Information for Bidders shall be retained by the County as liquidated damages; and it is agreed that the said sum is a fair measure of the amount of damage the County will sustain in case the Bidder shall fail or refuse to enter into the contract for the said work and to furnish the Performance and Payment Bonds (See Section 13 Information for Bidders) as specified in the contract documents. Bid security in the form of a certified check shall be subject to the same requirements as a bond.

(IF SOLE PROPRIETOR OR PARTNERSHIP)

IN WITNESS HERETO, the undersigned has set hand this \_\_\_\_\_ day of \_\_\_\_\_, 2022.

\_\_\_\_\_  
SIGNATURE OF BIDDER

\_\_\_\_\_  
TITLE

(IF CORPORATION)

IN WITNESS WHEREOF, the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this \_\_\_\_\_ day of \_\_\_\_\_, 2022.

\_\_\_\_\_  
NAME OF CORPORATION

By: \_\_\_\_\_

Title: \_\_\_\_\_

Attest: \_\_\_\_\_

**(SCHEDULE OF BID ITEMS TO FOLLOW)**



ITEM NO.	SPEC SECTION	ITEM	UNIT	QTY	UNIT PRICE	AMOUNT
001	00210	Mobilization	LS	1	\$ _____	\$ _____
002	00221	Temporary Work Zone Traffic Control, Complete	LS	1	\$ _____	\$ _____
003	00905	Remove Existing Signs	LS	1	\$ _____	\$ _____
004	00905	Remove and Reinstall Existing Signs	LS	1	\$ _____	\$ _____
005	00920	Sign Support Footings	LS	1	\$ _____	\$ _____
006	00930	Perforated Steel Square Tube Slip Base Sign Supports	LS	1	\$ _____	\$ _____
007	00940	Signs, Standard Sheeting, Sheet Aluminum	SQFT	276	\$ _____	\$ _____

**TOTAL BID:** \_\_\_\_\_

<b>FOR DESCHUTES COUNTY USE ONLY</b>	
ADD _____ % FOR NON-RESIDENT BIDDER	_____
TOTAL BID	_____

The Bidder acknowledges receipt of the following Addenda: (insert addenda numbers)

No.\_\_\_\_ No.\_\_\_\_ No.\_\_\_\_ No.\_\_\_\_ No.\_\_\_\_ No.\_\_\_\_ No.\_\_\_\_ No.\_\_\_\_

# FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

Project Name: CURVE WARNING SIGNS 2022

Bid #: WSIGNS      Bid Closing Date: April 27, 2022      Time: 2:00 P.M.

Name of Bidding Contractor: \_\_\_\_\_

This form must be submitted at the location specified in the Invitation to Bid on the advertised bid closing date and within two working hours (4:00 p.m.) after the advertised bid closing time.

List below the name of each subcontractor that will be furnishing labor or materials and that is required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED).

	NAME	DOLLAR VALUE	CATEGORY OF WORK
1)	_____	\$ _____	_____
2)	_____	\$ _____	_____
3)	_____	\$ _____	_____
4)	_____	\$ _____	_____
5)	_____	\$ _____	_____
6)	_____	\$ _____	_____
7)	_____	\$ _____	_____
8)	_____	\$ _____	_____

Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award.

Form submitted by

Bidder name: \_\_\_\_\_

Contact name: \_\_\_\_\_ Phone number: \_\_\_\_\_

**BID BOND**

KNOW ALL MEN BY THESE PRESENTS, That \_\_\_\_\_

\_\_\_\_\_

hereinafter called the Principal, and \_\_\_\_\_

\_\_\_\_\_

a corporation duly organized under the laws of the State of \_\_\_\_\_,

having its principal place of business at \_\_\_\_\_

\_\_\_\_\_, in the State of \_\_\_\_\_,

and authorized to do business in the State of Oregon, as Surety, are held and firmly bound unto the

County of Deschutes, hereinafter called the Obligee, in the penal sum of \_\_\_\_\_

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_),

for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this Bond is that, whereas, the Principal is submitting a bid proposal for the CURVE WARNING SIGNS 2022 project hereby made a part hereof;

NOW THEREFORE, if the said bid proposal submitted by the said principal be accepted, and the contract be awarded to said Principal, and if the said Principal shall execute the proposed contract and shall furnish the Performance and Payment Bond as required by the bidding and contract documents with the time fixed by said documents, then this obligation shall be void, otherwise to remain in full force and effect. Signed and sealed this \_\_\_\_ day of \_\_\_\_\_, 2022.

SURETY:

CONTRACTOR:

\_\_\_\_\_  
Name

\_\_\_\_\_  
Name

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

# CONTRACT

## FOR

### CURVE WARNING SIGNS 2022

THIS CONTRACT is made and entered into, in duplicate, this \_\_\_\_\_ day of \_\_\_\_\_, 2022, by and between DESCHUTES COUNTY, a political subdivision of the State of Oregon, by and through its Board of County Commissioners, hereinafter called "County", and \_\_\_\_\_, an Oregon corporation, hereinafter called "Contractor."

#### WITNESSTH:

THAT the said Contractor, in consideration of the sums to be paid by the County in the manner and at the time herein provided, and in consideration of the other covenants and agreements herein contained, hereby agrees to perform and complete the work herein described and provided for and to furnish all necessary machinery, tools, apparatus, equipment, supplies, materials and labor and do all things in accordance with the applicable Plans, the applicable Standard Specifications, the Special Provisions and other required provisions bound herewith or incorporated therein, and in accordance with such alterations or modifications of the same as may be made by the County, and according to such directions as may from time to time be made or given by the Engineer under the authority and within the meaning and purpose of this Contract. This agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the Contractor.

THAT the applicable Plans, the applicable Standard Specifications, the Special Provisions and other required provisions bound herewith or incorporated therein and the Schedule of Items bound herewith are hereby specifically referred to and by this reference made a part hereof, and shall by such reference have the same force and effect as though all of the same were fully written or inserted herein.

THAT the Contractor shall faithfully complete and perform all of the obligations of this Contract, and in particular, shall promptly, as due, make payment of all just debts, dues, demands and obligations incurred in the performance of said Contract; and shall not permit any lien or claim to be filed or prosecuted against the County, its agents or employees. It is expressly understood that the laws of the State of Oregon and the Ordinances of the County shall govern this Contract in all things.

THAT in consideration of the faithful performance of all of the obligations, general and special, herein set out, and in consideration of the faithful performance of the work as set forth in the Contract Documents in accordance with the directions and to the satisfaction of the Engineer, the County agrees to pay to the said Contractor the amount earned, as determined from the actual quantities of work performed, and taking into consideration any amounts that may be deductible and under the terms of the Contract, and to make such payments in the manner and at the times provided in the applicable provisions.

**(SIGNATURE PAGE TO FOLLOW)**

IN WITNESS WHEREOF, the parties hereto have subscribed their names and affixed their respective official seals as of the date first above written

**CONTRACTOR**

**BOARD OF COUNTY COMMISSIONERS  
OF DESCHUTES COUNTY, OREGON**

BY: \_\_\_\_\_

\_\_\_\_\_  
PATTI ADAIR, CHAIR

TITLE: \_\_\_\_\_

\_\_\_\_\_  
ANTHONY DeBONE, VICE CHAIR

DATE: \_\_\_\_\_

\_\_\_\_\_  
PHIL CHANG, COMMISSIONER

ATTEST:

\_\_\_\_\_  
RECORDING SECRETARY

APPROVED AS TO CONTENT:

\_\_\_\_\_  
ROAD DEPARTMENT DIRECTOR

APPROVED AS TO FORM:

\_\_\_\_\_  
COUNTY LEGAL COUNSEL

Bond # \_\_\_\_\_

**PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called  
(Corporation, Partnership, or Individual)

“Principal”, and \_\_\_\_\_  
(Name of Surety)

hereinafter called “Surety”, are held and firmly bound unto Deschutes County, Oregon

hereinafter called “Owner”, in the penal sum of \_\_\_\_\_

\_\_\_\_\_ Dollars, \$(\_\_\_\_\_) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the \_\_\_\_\_ day of \_\_\_\_\_, 2022, a copy of which is hereto attached and made a part hereof for the construction of:

**CURVE WARNING SIGNS 2022**

NOW THEREFORE, if Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by Owner, with or without notice to Surety and during the **two year guaranty period**, and if Principal shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless Owner from all costs and damages which is may suffer by reason of failure to do so, and shall reimburse and repay Owner all outlay and expense which Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED FURTHER, that Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or the specifications.

PROVIDED, FURTHER, that no final settlement between Owner and Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in two counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_ 2022.

(SEAL)

**PRINCIPAL:** \_\_\_\_\_

By \_\_\_\_\_  
Signature

\_\_\_\_\_  
Official Capacity

Attest: \_\_\_\_\_  
Corporation Secretary

(SEAL)

**SURETY:** \_\_\_\_\_  
*[Add signatures for each surety if using multiple bonds]*

**BY ATTORNEY-IN-FACT:**  
*[Power-of-Attorney must accompany each surety bond]*

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Phone Fax

NOTE: Date of bond must not be prior to date of Contract.  
If Contractor is Partnership, all partners should execute bond.

Bond # \_\_\_\_\_

**PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called  
(Corporation, Partnership, or Individual)

“Principal”, and \_\_\_\_\_  
(Name of Surety)

hereinafter called “Surety”, are held and firmly bound unto Deschutes County, Oregon

hereinafter called “Owner”, in the penal sum of \_\_\_\_\_

\_\_\_\_\_ Dollars, \$(\_\_\_\_\_) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the \_\_\_\_\_ day of \_\_\_\_\_, 2022, a copy of which is hereto attached and made a part hereof for the construction of:

**CURVE WARNING SIGNS 2022**

NOW, THEREFORE, if Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between Owner and Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.



IN WITNESS WHEREOF, this instrument is executed in two counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 2022.

(SEAL)

**PRINCIPAL:** \_\_\_\_\_

By \_\_\_\_\_  
Signature

\_\_\_\_\_  
Official Capacity

Attest: \_\_\_\_\_  
Corporation Secretary

(SEAL)

**SURETY:** \_\_\_\_\_

*[Add signatures for each surety if using multiple bonds]*

**BY ATTORNEY-IN-FACT:**  
*[Power-of-Attorney must accompany each surety bond]*

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Phone Fax

NOTE: Date of bond must not be prior to date of Contract.  
If Contractor is Partnership, all partners should execute bond.

# **SPECIAL PROVISIONS**

**PROJECT: CURVE WARNING SIGNS 2022**

**PROJECT #: WSIGNS**


**CONTRACTING AGENCY:**



**ROAD  
DEPARTMENT**

**61150 SE 27<sup>TH</sup> STREET  
BEND, OREGON 97702  
PHONE: (541) 388-6581  
FAX: (541) 388-2719  
WEB: [www.deschutes.org/road](http://www.deschutes.org/road)**

**PROFESSIONAL OF RECORD CERTIFICATION:**

<p>Seal w/signature</p>  <p>EXPIRATION DATE: <u>6-30-23</u></p> <p>Date Signed: <u>3-4-22</u></p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Sections <u>00220 through 02910</u></p>
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**SPECIAL PROVISIONS**

**WORK TO BE DONE**

The work to be done under this contract consists of the following on the CURVE WARNING SIGNS 2022 project.

1. Install and maintain temporary traffic control.
2. Remove and reinstall existing signs, as appropriate.
3. Install new sign footings, supports and permanent signs.
4. Perform additional and incidental work as called for by the specifications and plans.

**APPLICABLE SPECIFICATIONS**

The Specification that is applicable to the Work on this Project is the 2021 edition of the "Oregon Standard Specifications for Construction."

All number references in these Special Provisions shall be understood to refer to the Sections and subsections of the Standard Specifications and Supplemental Specifications bearing like numbers and to Sections and subsections contained in these Special Provisions in their entirety.

Copies of the Oregon Standard Specifications may be purchased or viewed online at

[http://www.oregon.gov/ODOT/Business/Pages/Standard\\_Specifications.aspx](http://www.oregon.gov/ODOT/Business/Pages/Standard_Specifications.aspx).

**APPLICABLE RULES**

The rules applicable to this contract are the Attorney General's Model Public Contract Rules, Chapter 137-046 and Chapter 137-049, as presently constituted and Deschutes County Code (DCC) Chapter 2.37. The provisions of DCC Chapter 2.37.150 are incorporated herein by reference. These provisions may be viewed at the following web address:

<http://www.co.deschutes.or.us/administration/page/deschutes-county-code>

**CONTRACT TIME**

The Contractor shall complete all Work to be done under the Contract not later than December 31, 2022.

**CLASS OF WORK**

The Class of Work for this Project is Signing.

**SECTION 00110 - ORGANIZATION, CONVENTIONS, ABBREVIATIONS AND DEFINITIONS**

Comply with Section 00110 of the Standard Specifications modified as follows:

**00110.20 Definitions** - Replace the definitions of the words and phrases list below with the following definitions :

**Agency** – County of Deschutes

**Bid Booklet** - The version that can be accessed and printed from the Deschutes County Bids and RFPs website, which contains the information identified in 00120.10.

**Engineer** - The Road Department Director of Deschutes County acting either directly or through his authorized representatives.

**SECTION 00120 - BIDDING REQUIREMENTS AND PROCEDURES**

Comply with Section 00120 of the Standard Specifications modified as follows:

**00120.00 Prequalification of Bidders** – Replace the last paragraph with the following:

Deschutes County Road Department will regularly evaluate the performance of Contractors on its projects for purposes of responding to reference checks, future prequalification and determinations of responsibility.

**00120.01 General Bidding Requirements** - Replace this subsection with the following:

Bidders shall submit bids by paper.

The standard prequalification forms furnished by the ODOT Procurement Office shall be used by the bidder to file authorized signatures with Deschutes County Road Department. Signatures are of personnel authorized to submit Bids, modify Bids, or withdraw Bids.

**00120.05 Request for Solicitation Documents** – Replace this subsection with the following:

Bidders shall obtain solicitation documents from the Deschutes County Bids and RFPs website:

<https://www.deschutes.org/rfps>

Each request shall include both the name of the person ordering or obtaining the Solicitation Documents, and the name of the Entity intending to use them. The Agency will add the name of the Entity intending to use the Solicitation Documents to the list of Holders of Bidding Plans. Bidders are cautioned that only Solicitation Documents obtained properly from the Deschutes County website may be used to submit Bids.

Only paper Bids will be accepted.

Copies of the Oregon Standard Specifications may be purchased or viewed online at

[http://www.oregon.gov/ODOT/Business/Pages/Standard\\_Specifications.aspx](http://www.oregon.gov/ODOT/Business/Pages/Standard_Specifications.aspx).

The Plans, which are applicable to the Work to be performed under the Contract, are bound herewithin.

**00120.10 Bid Booklet** – Replace this subsection with the following:

The Bidding Documents Booklet may include, but is not limited to:

- Cover Page
- Index
- Invitation to Bid
- Information for Bidders
- Bid Proposal Form
- Schedule of Bid Items
- Subcontractor Disclosure Form
- Bid Guaranty Form
- Contract Form (for review only)
- Payment and Performance Bond Forms (for review only)

Depending on the Class of Project, other certificates or statements may be bound within the Bidding Documents Booklet. Plans, specifications, and other documents referred to in the Bidding Documents Booklet will be considered part of the Bid.

**00120.30 Changes to Plans, Specifications, or Quantities before Opening of Bids** – Replace all instances of “ODOT eBIDS” with “Deschutes County Bids and RFPs”.

Replace the first paragraph with the following:

The Agency reserves the right to issue Addenda making changes or corrections to the Plans, Specifications, or quantities. The Agency will provide Addenda only by publishing them on the Agency's web site at:

<https://www.deschutes.org/rfps>

Delete the last paragraph.

**00120.40(a) (2) Electronic Bids** – Delete this subsection.

**00120.40(c) (2) Electronic Bid Schedule Entries** – Delete this subsection.

**00120.40 (d) Bidder's Address and Signature Pages** – Replace this subsection with the following:

Bidders shall include in the Bid the address to which all communication concerning the Bid and Contract should be sent. The Bid shall be signed by a duly authorized representative of the Bidder.

**00120.40(e) (2) Bid Guaranty with Electronic Bids** – Delete this subsection.

**00120.40(f) Disclosure of First-Tier Subcontractors** – Under the paragraph “The Subcontractor Disclosure Form may be submitted for a paper Bid either,” replace the second bulleted item with the following:

- By removing it from the paper Bid Booklet, filling it out and submitting it separately to the Deschutes County Public Works Engineering and Construction Division at the address given in the Bid Booklet.

Delete the third bulleted item.

Delete the paragraph which begins “The Subcontractor Disclosure Form may be submitted for an electronic Bid either:”

Replace the paragraph that begins “Subcontractor Disclosure forms submitted by...” with the following:

Subcontractor Disclosure Forms submitted by any method will be considered late if not received by the Agency within two working hours of the time designated for receiving Bids.

**00120.45 Submittal of Bids** – Replace this subsection with the following:

Bids shall be submitted in the manner and prior to the time listed in the Bidding Documents Booklet. Bids may be submitted by mail, parcel delivery service, hand delivery or email. Bids submitted after the time set for receiving Bids will not be opened or considered. The Agency assumes no responsibility for the receipt and return of late Bids.

**00120.50 Submitting Bids for More than One Contract** – Delete this subsection.

**00120.60(a) Paper Bids** – Replace all references to “ODOT Procurement Office” with “Agency.”

Delete the third bullet point.

**00120.60(b) Electronic Bids** – Delete this subsection.

**00120.70 Rejection of Nonresponsive Bids** – Add the following bullet to the end of the bullet list:

- The Agency determines that any Pay Item is significantly unbalanced to the potential detriment of the Agency.

**00120.95 Opportunity for Cooperative Arrangement** – Delete this subsection.

## SECTION 00130 – AWARD AND EXECUTION

Comply with Section 00130 of the Standard Specifications modified as follows:

**00130.10 Award of Contract** – Replace the paragraph that begins “The Agency will provide Notice of Intent...” with the following:

The Agency will provide Notice of Intent to Award on the Agency’s website:

<https://www.deschutes.org/rfps>

Delete the paragraph that begins “The Award will not be final until...”

**00130.15 Right to Protest Award** – Replace this subsection with the following:

Adversely affected or aggrieved Bidders, limited to the three apparent lowest Bidders and any other Bidder directly in line for Contract Award, may submit to the Board of County Commissioners of Deschutes County a written protest of the Agency’s intent to Award within five working days following the Bid Opening. The protest shall specify the grounds upon which it is based.

The Agency is not obligated to consider late protests.

**00130.50 Execution of Contract and Bonds:**

**(a) By the Bidder** – In the sentence that begins “The successful Bidder...” replace “ODOT Procurement Office – Construction” with “Agency” and replace “15 Calendar Days” with “the requested amount of time”.

**(b) By the Agency** – In the sentence that begins “Within 7 Calendar Days...” replace “7” with “21 (twenty-one)”.

## SECTION 00140 – SCOPE OF WORK

Comply with Section 00140 of the Standard Specifications.

## SECTION 00150 - CONTROL OF WORK

Comply with Section 00150 of the Standard Specifications modified as follows:

**00150.05 Cooperative Arrangements** – Replace this subsection with the following:

Agency is not, by virtue of this Contract, a partner or joint venturer with Contractor in connection with activities carried out under this Contract, and shall have no obligation with respect to Contractor's debts or any other liabilities of each and every nature.

**00150.15(b) Agency Responsibilities** - Replace this subsection, except for the subsection number and title, with the following:



The Agency will:

- Provide copies of plans and specifications.
- Evaluate grade for acceptance at each course of material.
- Perform measurements and calculations for pay quantities.
- Perform final “as constructed” measurements.
- Stake locations for sign installations.

**00150.15(c) Contractor Responsibilities** – Replace this subsection, except for the subsection number and title, with the following:

The Contractor shall:

- Layout and set construction stakes and marks to establish the lines, grades, Slopes, Cross Sections and curve super-elevations for Roadwork to construct the Project as shown and specified, by means approved by the Engineer.
- Make calculations, field notes and survey drawings for the layout and control of work as are necessary to construct the Project as specified.
- Provide original or copies of notes, calculations and drawings as requested.
- Preserve survey monuments and control stations as governed by applicable law.
- Establish control stations as necessary to control the Project.
- Replace and augment control stations as necessary to control the Project.
- Remove and dispose of all flagging, lath, stakes and other temporary staking material after the Project is completed.
- Protect from damage or disturbance any Utility that remains within the area in which Work is being performed. Maintain and re-establish location marks according to OAR 952-001-0090(3)(a). Coordinate re-establishment of the location marks with the associated Utility.
- Determine the exact location before excavating within the tolerance zone according to OAR 952-001-0090(3)(c);
- In addition to the notification required in OAR 952-001-0090(6), notify the Engineer and the Utility as soon as the Contractor discovers any previously unknown Utility conflicts or issues. Contrary to the OAR, stop excavating until directed by the Engineer and allow the Utility a minimum of two weeks to relocate or resolve the previously unknown Utility issues; and

Add the following subsection:

**00150.50(f) Utility Information:**

There are no anticipated conflicts with Utilities. The Contractor shall contact those Utilities having buried facilities and request that they locate and mark them for their protection prior to construction.

### SECTION 00160 – SOURCE OF MATERIALS

Comply with Section 00160 of the Standard Specifications modified as follows:

**00160.30 Agency-Furnished Materials** – Add the following paragraph:

No Agency materials are being offered for use on this project. Contractor shall provide all required materials.

**00160.40 Agency-Furnished Sources**– Add the following paragraph:

No Agency sources are being offered for use on this project. Contractor shall provide all required materials.

### SECTION 00165 - QUALITY OF MATERIALS

Comply with Section 00165 of the Standard Specifications modified as follows:

**00165.03 Testing by Agency** – Delete this subsection.

**00165.04 Costs of Testing** – Delete this subsection.

**00165.50(b)(1) Specification Materials** – Delete the second sentence.

**00165.10(a) Field-Tested Materials** – Add the following sentence to the end of this subsection:

This is a Type D project.

### SECTION 00170 – LEGAL RELATIONS AND RESPONSIBILITIES

Comply with Section 00170 of the Standard Specifications modified as follows:

Add the following subsection:

**00170.09 Debt Limitation** - This Contract is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provision herein which would conflict with law are deemed inoperative to that extent.

**00170.65(b-1) Minimum Wage Rates** – Replace the last two paragraphs in this subsection with the following:

The applicable prevailing wage rates for this project are the most recent version published by the Oregon Labor and Industries at the time the Project was initially advertised (Prevailing Wage Rates for Public Works Contracts, January 1, 2022). The wage rates can be found at the following website:

[https://www.oregon.gov/boli/WHD/PWR/Pages/pwr\\_state.aspx](https://www.oregon.gov/boli/WHD/PWR/Pages/pwr_state.aspx)

**00170.70(a) Insurance Coverages** - Add the following to the end of this subsection:

The following insurance coverages and dollar amounts are required pursuant to this subsection:

<b>Insurance Coverages</b>	<b>Combined Single Limit per Occurrence</b>	<b>Annual Aggregate Limit</b>
Commercial General Liability	\$ 2,000,000	\$ 5,000,000
Commercial Automobile Liability	\$ 1,000,000	(aggregate limit not required)

**(d) Additional Insured** – Replace this subsection except for the subsection number and title with the following:

The liability insurance coverages of 00170.70(a) shall include an Additional Insured Endorsement specifying the “Deschutes County, and its respective officers, agents, employees, and volunteers and the Deschutes County Board of Commissioners” as Additional Insureds, but only with respect to the Contractor's activities to be performed under the Contract. Coverage shall be primary and non-contributory with any other insurance and self-insurance. The liability coverages of 00170.70(a) that are permitted by the Agency to be obtained by an appropriate Subcontractor shall include all of the foregoing as Additional Insureds and shall also include the Contractor and its officers and employees as Additional Insureds.

Additional Insured Endorsements on the Commercial General Liability shall be written on ISO Form CG 20 10 07 04, or equivalent, with respect to liability arising out of ongoing operations and ISO Form CG 20 37 07 04, or equivalent, with respect to liability arising out of completed operations. Additional Insured Endorsements shall be submitted with the Certificate(s) of Insurance and must be acceptable to the Agency.

Add the following as Additional Insureds under the Contract:

- Deschutes County and its officers, agents, employees, and volunteers
- Deschutes County Board of Commissioners

**(g) Certificate(s) of Insurance** - Replace this subsection except for the subsection number and title with the following:

As evidence of the insurance coverages required by the Contract, the Contractor shall furnish Certificate(s) of Insurance to the Agency at the time(s) provided in 00130.50(a). As evidence of insurance coverages required by the Contract but permitted by the Agency under 00170.70(a) to be obtained by an appropriate Subcontractor, the Contractor shall furnish Certificate(s) of Insurance to the Agency for such coverages together with the Contractor's request under 00180.21 for approval of the subcontract with that Subcontractor. The Certificate(s) shall:

- List “Deschutes County and its officers, agents, employees, and volunteers and the Deschutes County Board of Commissioners” as a Certificate holder and as an endorsed Additional Insured;

- Include all required endorsements or copies of the applicable policy language effecting coverage required by the Contract;
- Specify that all liability insurance coverages shall be primary and non-contributory with any other insurance and self-insurance, with exception of Workers' Compensation;
- Include a list of all policies that fall under the Excess/Umbrella Insurance if Excess or Umbrella Insurance is used to meet the minimum insurance requirement.

**00170.72 Indemnity/Hold Harmless** - Add the following paragraph and bullets to the end of this subsection:

Extend indemnity and hold harmless to the Agency and the following:

- Deschutes County and its officers, agents, and employees
- Deschutes County Board of Commissioners

**SECTION 00180 – PROSECUTION AND PROGRESS**

Comply with Section 00180 of the Standard Specifications modified as follows:

**00180.40(c) Specific Limitations** - Limitations of operations specified in these Special Provisions include, but are not limited to, the following:

<b>Limitations</b>	<b>Subsection</b>
Cooperation with Utilities .....	00150.50
On-Site Work .....	00180.40(b)
Contract Time .....	00180.50(h)
Traffic Lane Restrictions .....	00220.40(e)

Be aware of and subject to schedule limitations in the Standard Specifications that are not listed in this subsection.

**00180.41 Project Work Schedules** - After the paragraph that begins "One of the following Type..." add the following paragraph:

In addition to the "look ahead" Project Work schedule, a Type A schedule as detailed in the Standard Specifications is required on this Contract.

**00180.50(h) Contract Time** - The Contractor shall complete all Work to be done under the Contract not later than December 31, 2022.

**SECTION 00190 – MEASUREMENT OF PAY QUANTITIES**

Comply with Section 00190 of the Standard Specifications.

### **SECTION 00195 - PAYMENT**

Comply with Section 00195 of the Standard Specifications modified as follows:

**00195.12(d) Steel Materials Pay Item Selection** - Add the following to this subsection:

No Pay Items under this Contract qualify for the steel escalation/de-escalation program for this Project.

**00195.50(b) Retainage** – Replace the first paragraph of this subsection with the following:

The amount to be retained from progress payments will be 5% of the value of Work accomplished, and will be retained in one of the forms specified in Subsection (c) below. No retainage will be withheld from Work performed as Force Account Work, escalation/de-escalation, bonuses, or other items decided by the Agency.

**00195.50(c-2) Cash, Alternate B (Retainage Surety Bond)** - Delete this subsection.

**00195.50(c-3) Bonds Securities, and Other Instruments** – Delete this subsection.

**00195.50(d) Release of Retainage** – Replace this subsection with the following:

As the Work progresses, release of the amounts retained under (b) above will only be considered for Pay Items that have been satisfactorily completed. For purposes of this Subsection, a Pay Item will be considered satisfactorily completed only if all of the Work for the Pay Item is complete and all contractual requirements pertaining to the Pay Item and Work have been satisfied. Work not included in a Pay Item, or which constitutes part of an uncompleted Pay Item, will not be regarded as satisfactorily completed Work for the purposes of this Subsection.

A determination of satisfactory completion of Pay Items or Work or release of retainage shall not be construed as acceptance or approval of the Work and shall not relieve the Contractor of responsibility for defective Materials or workmanship or for latent defects and warranty obligations.

The Contractor shall comply with all applicable legal requirements for withholding and releasing retainage and for prompt payments, including but not limited to those in ORS Chapters 279C and 701, and 49 CFR 26.29.

### **SECTION 00196 – PAYMENT FOR EXTRA WORK**

Comply with Section 00196 of the Standard Specifications.

### **SECTION 00197 – PAYMENT FOR FORCE ACCOUNT WORK**

Comply with Section 00197 of the Standard Specifications.

**SECTION 00199 - DISAGREEMENTS, PROTESTS, AND CLAIMS**

Comply with Section 00199 of the Standard Specifications modified as follows:

**00199.40 Claim Decision; Review; Exhaustion of Administrative Remedies** – Replace the second and third paragraphs with the following:

If the Engineer denies the claim for additional compensation or a combination of additional compensation and Contract Time, in full or in part, according to 00199.40(a), the Contractor may request review of the denial. The disputed claim may then be resolved, in full or in part, at any of the three progressive steps of claim review procedure as set forth in (b) through (d) of this Subsection.

If the Engineer has denied a claim, in full or in part, for Contract Time only according to 00180.80, or has denied a claim, in full or in part, for correction of final compensation according to 00195.95, those disputed claims may then be resolved, in full or in part, at any of the three progressive steps of claim review procedure as specified in (b) through (d) of this Subsection.

Delete the fifth paragraph.

**00199.40(b-e)** - Replace these subsections in their entirety with the following:

**00199.40(b) Step 1: Board of Commissioners Review** – The Contractor shall request that the Engineer arrange for a hearing during a regularly scheduled Board of Commissioners Meeting in order to present the denied or partially denied claim for formal review and discussion. The meeting will take place within 21 Calendar Days of the Agency's receipt of the request, or as otherwise agreed by the parties.

If the Board of Commissioners determines that the Contractor must furnish additional information or documentation to allow proper analysis of the claim, the Engineer will prepare a Board meeting agenda item for a second hearing within 14 Calendar Days, or as otherwise agreed by the parties, at which the Contractor shall present the requested information or documentation.

If the Contractor does not accept the Step 1 decision, the Contractor may, within 10 Calendar Days of receipt of the written decision, request in writing through the Engineer that the claim be advanced to Step 3 or 4 (see (c) and (d) below).

**00199(c) Step 2: Arbitration** - At this step, the claim will be resolved by binding arbitration before a single arbitrator according to the Construction Industry Arbitration Rules of the American Arbitration Association or such other arbitration service and rules as agreed by the parties.

Arbitration filing costs and any arbitrator's fees will be divided equally between the Agency and the Contractor.

**00199(d) Step 3: Litigation** – This step applies to appeals of arbitration awards issued in Step 2 at 00199.40(c) above, according to ORS 36.600 through ORS 36.740.

The Contractor must follow each step in order, and exhaust all available administrative remedies before resorting to litigation. Lawsuits must be properly filed in a court of competent jurisdiction within 6 months from the date of the final decision that exhausted the Contractor's available administrative remedies under this Section 00199.

The Contractor shall comply with 00170.00.

### **SECTION 00210 - MOBILIZATION**

Comply with Section 00210 of the Standard Specifications.

### **SECTION 00220 - ACCOMMODATIONS FOR PUBLIC TRAFFIC**

Comply with Section 00220 of the Standard Specifications modified as follows:

**00220.40(e-1) Closed Lanes** - Replace this subsection, except for the subsection number and title, with the following:

One Traffic Lane may be closed when allowed, shown, or directed during the following periods of time except as indicated in 00220.40(e)(2):

- Daily, Monday through Friday between 7:00 a.m. and 6:00 p.m.

### **SECTION 00221 - COMMON PROVISIONS FOR WORK ZONE TRAFFIC CONTROL**

Comply with Section 00221 of the Standard Specifications modified as follows:

**00221.90(b) Temporary Protection and Direction of Traffic** - Delete the bullet that begins "Moving temporary barrier to and from Contractor's stockpile areas".

Replace the bullet that begins "When the Schedule of Items does not include ..." with the following bullet:

- Preparing and signing the daily "Traffic Control Inspection Report", when a TCS is not included in the Schedule of Items or when a TCS is not onsite for a work shift.

### **SECTION 00440 – COMMERCIAL GRADE CONCRETE**

Comply with Section 00440 of the Standard Specifications.

### **SECTION 00905 - REMOVAL AND REINSTALLATION OF EXISTING SIGNS**

Comply with Section 00905 of the Standard Specifications modified as follows:

**00905.40 General** – Replace the sentence that begins "Dispose of all..." in the last paragraph of this subsection with the following:

Salvage all existing signs not used in reinstallation as part of this project, and deliver them to the Agency at the Deschutes County offices located at 61150 SE 27<sup>th</sup> St, Bend, OR 97702. Dispose of all other appurtenances removed and not used in reinstallation, according to 00290.20.

**SECTION 00920 - SIGN SUPPORT FOOTINGS**

Comply with Section 00920 of the Standard Specifications modified as follows:

**00920.80 Measurement** - Add the following to the end of this subsection:

The estimated quantities of concrete for minor sign supports are:

<b>Support Type</b>	<b>Quantity</b>
Perforated Steel Square Tube Slip Base Sign Supports	5.25 cu. yd.

**SECTION 00930 - METAL SIGN SUPPORTS**

Comply with Section 00930 of the Standard Specifications modified as follows:

**00930.00 Scope** – Add the following paragraph to this subsection:

This work consists of furnishing and installing 2-inch by 2-inch, 12ga. Perforated Steel Square Tube Slip Base Sign Supports at locations shown.

Perforated Steel Square Tube post lengths shall be provided according to the Sign & Post Data Tables, which are bound herein.

**00930.80 Measurement** - Add the following to the end of this subsection:

The estimated quantities of structural steel are as follows:

<b>Item</b>	<b>Estimated Quantity (Pound)</b>
<b>Minor Sign Supports</b>	
Perforated Steel Square Tube Slip Base Sign Supports	1,629



### **SECTION 00940 - SIGNS**

Comply with Section 00940 of the Standard Specifications modified as follows:

**00940.40 General** – Add the following paragraph to the end of this subsection:

Furnish 30-inch by 30-inch “Turn”, “Curve” and “Reverse Turn” signs (W1-1, W1-2 and W1-3).

Furnish 48-inch by 24-inch “One-Direction Large Arrow” and “Two-Direction Large Arrow” signs (W1-6 and W1-7).

Furnish 18-inch by 24-inch “Chevron Alignment” signs (W1-8).

Furnish 18-inch by 18-inch “Advisory Speed” plaques (W13-1P).

Furnish 18-inch by 18-inch “Type 1 Object Marker” sign (OM1-3).

### **SECTION 02530 - STRUCTURAL STEEL**

Comply with Section 02530 of the Standard Specifications.

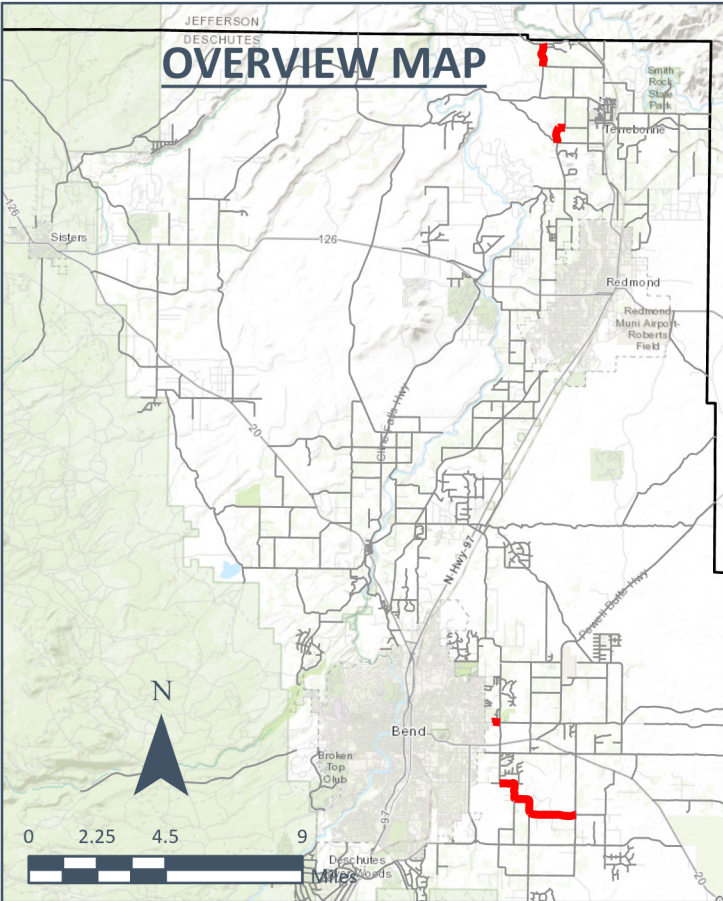
### **SECTION 02560 - FASTENERS**

Comply with Section 02560 of the Standard Specifications.

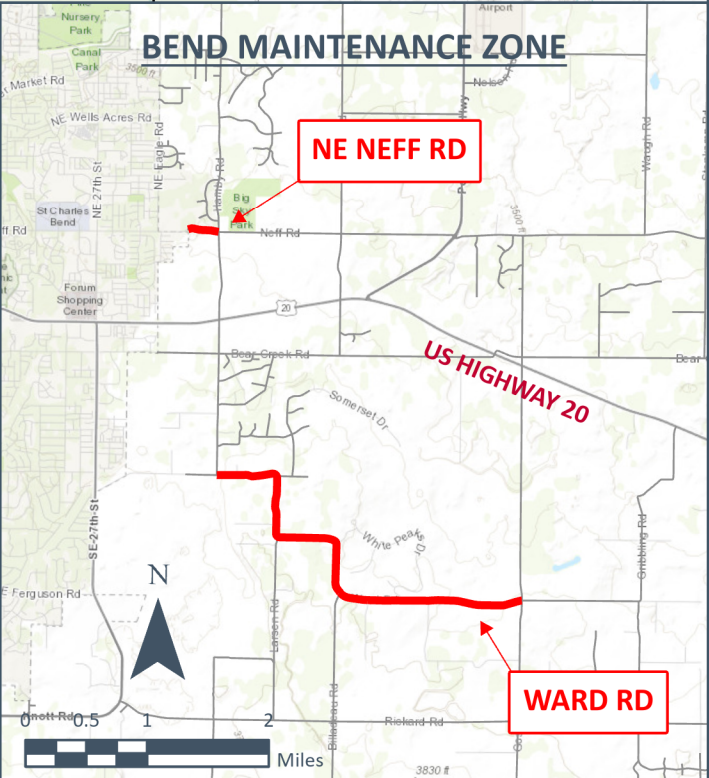
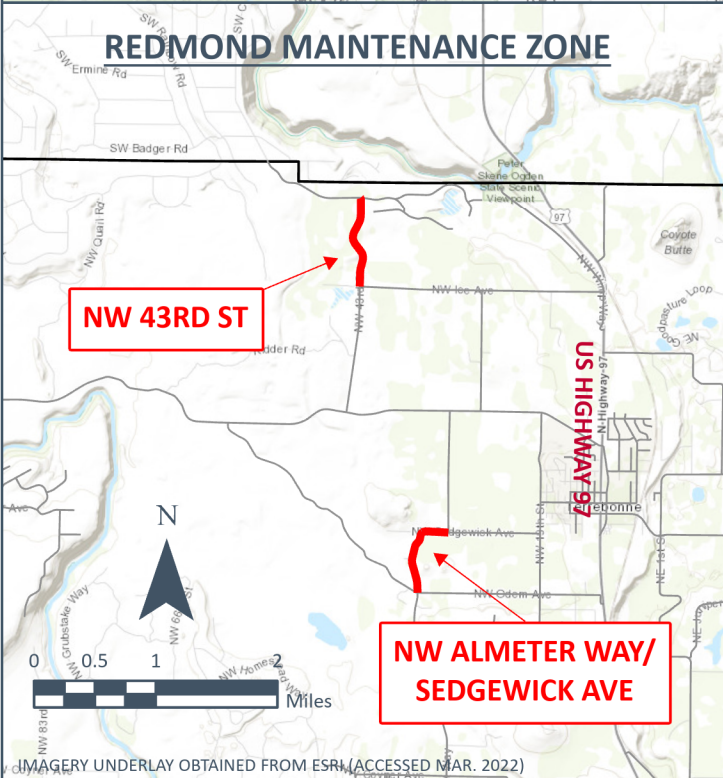
### **SECTION 02910 - SIGN MATERIALS**

Comply with Section 02910 of the Standard Specifications.

###



- OREGON STANDARD DRAWINGS**
- TM200 - SIGN INSTALLATION DETAILS
  - TM201 - MISCELLANEOUS SIGN PLACEMENT DETAILS
  - TM602 - TRIANGULAR BASE BREAKAWAY MULTI-DIRECTIONAL SLIP BASE DESIGN
  - TM670 - WOOD POST SIGN SUPPORTS
  - TM671 - 3 SECOND GUST WIND SPEED MAP
  - TM676 - SIGN ATTACHMENTS
  - TM678 - SECONDARY SIGN MOUNTING DETAILS
  - TM681 - PERFORATED STEEL SQUARE TUBE (PSST) SIGN SUPPORT INSTALLATION
  - TM688 - PERFORATED STEEL SQUARE TUBE (PSST) SLIP BASE FOUNDATION
  - TM800 - TABLES, ABRUPT EDGE AND PCMS DETAILS
  - TM821 - TEMPORARY SIGN SUPPORTS
  - TM822 - TEMPORARY SIGN SUPPORTS
  - TM850 - 2-LANE, 2-WAY ROADWAYS



**LEGEND**

- SIGN COMPLIANCE ROAD SEGMENTS
- DESCHUTES COUNTY ROADS
- COUNTY BOUNDARY

**VICINITY MAP**

SIGN COMPLIANCE 2022

MARCH 2022



IMAGERY UNDERLAY OBTAINED FROM ESRI (ACCESSED MAR. 2022)



● SIGN & NEW SUPPORT LOCATION

■ REMOVE EXISTING SIGN

■ INSTALL NEW SIGNS

■ REMOVE & SAVE EXISTING SIGN

■ REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

STA 0+00 = LOWER BRIDGE WAY

CENTERLINE OFFSET: 22.0'  
(unless noted)



NW 43RD ST – MP 7.0

SIGN COMPLIANCE 2021

DESCHUTES COUNTY ROAD DEPARTMENT  
61150 S.E. 27TH STREET, BEND, OR. 97702

SCALE: 1"=100' DRAWN BY: T.G.W.  
FILE: 43RD signs.dwg

DATE: 9/14/2021

SHEET  
1 OF 4



● SIGN & NEW SUPPORT LOCATION

REMOVE EXISTING SIGN

REMOVE & SAVE EXISTING SIGN

INSTALL NEW SIGNS

REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

STA 0+00 = LOWER BRIDGE WAY

CENTERLINE OFFSET: 22.0'  
(unless noted)

NW 43RD ST – MP 7.3

SIGN COMPLIANCE 2021



DESCHUTES COUNTY ROAD DEPARTMENT  
61150 S.E. 27TH STREET, BEND, OR. 97702

SCALE: 1"=100'  
FILE: 43RD signs.dwg

DRAWN BY: T.G.W.

DATE: 9/14/2021

SHEET  
2 OF 4



● SIGN & NEW SUPPORT LOCATION

■ REMOVE EXISTING SIGN

■ INSTALL NEW SIGNS

■ REMOVE & SAVE EXISTING SIGN

■ REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

STA 0+00 = LOWER BRIDGE WAY

CENTERLINE OFFSET: 22.0' (unless noted)



NW 43RD ST – MP 7.4

SIGN COMPLIANCE 2021

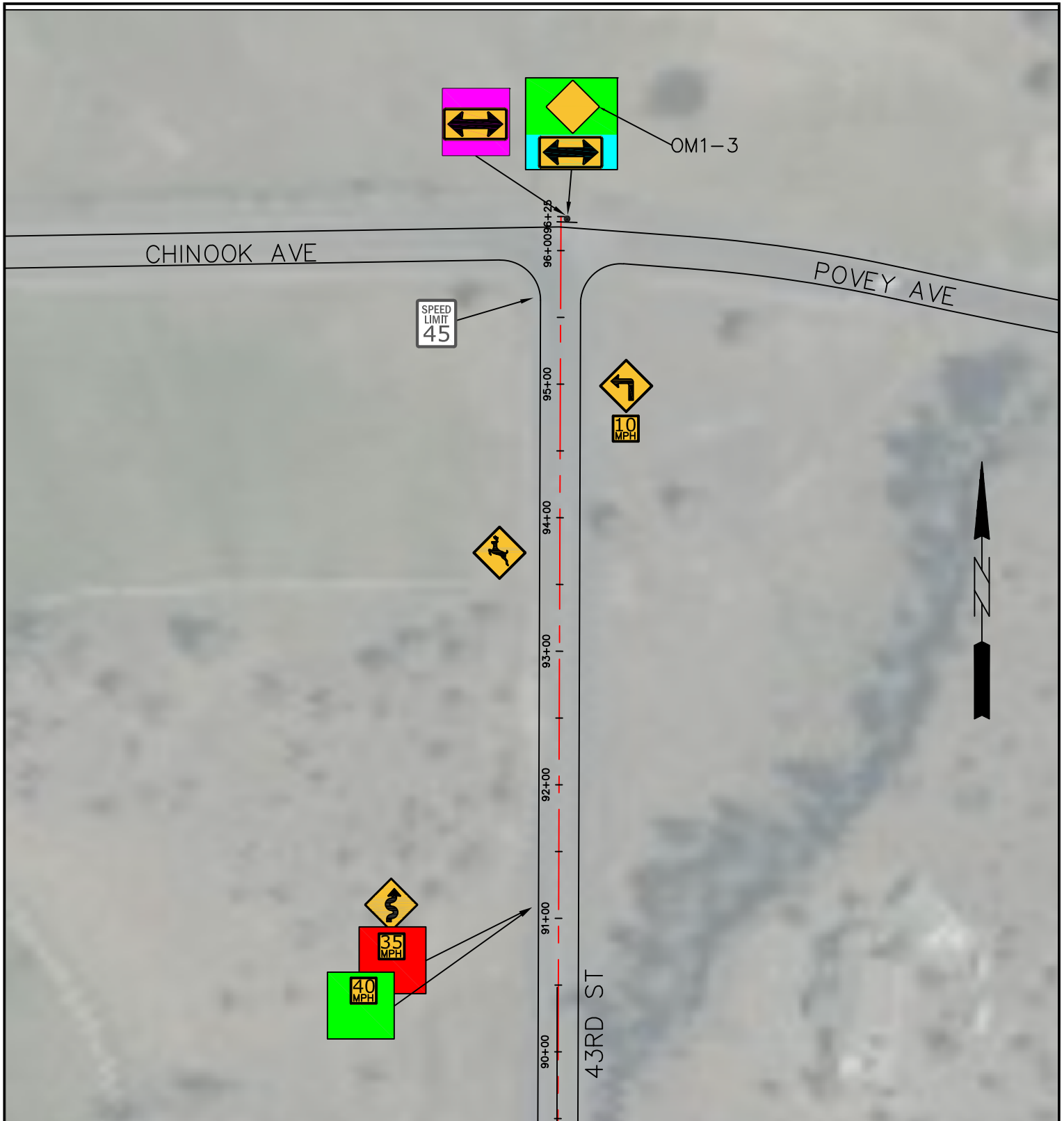
DESCHUTES COUNTY ROAD DEPARTMENT  
61150 S.E. 27TH STREET, BEND, OR. 97702

SCALE: 1"=100' DRAWN BY: T.G.W.  
FILE: 43RD signs.dwg

DATE: 9/14/2021

SHEET 3 OF 4





● SIGN & NEW SUPPORT LOCATION

REMOVE EXISTING SIGN

REMOVE & SAVE EXISTING SIGN

INSTALL NEW SIGNS

REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

STA 0+00 = LOWER BRIDGE WAY

CENTERLINE OFFSET: 22.0'  
(unless noted)



NW 43RD ST – MP 7.85

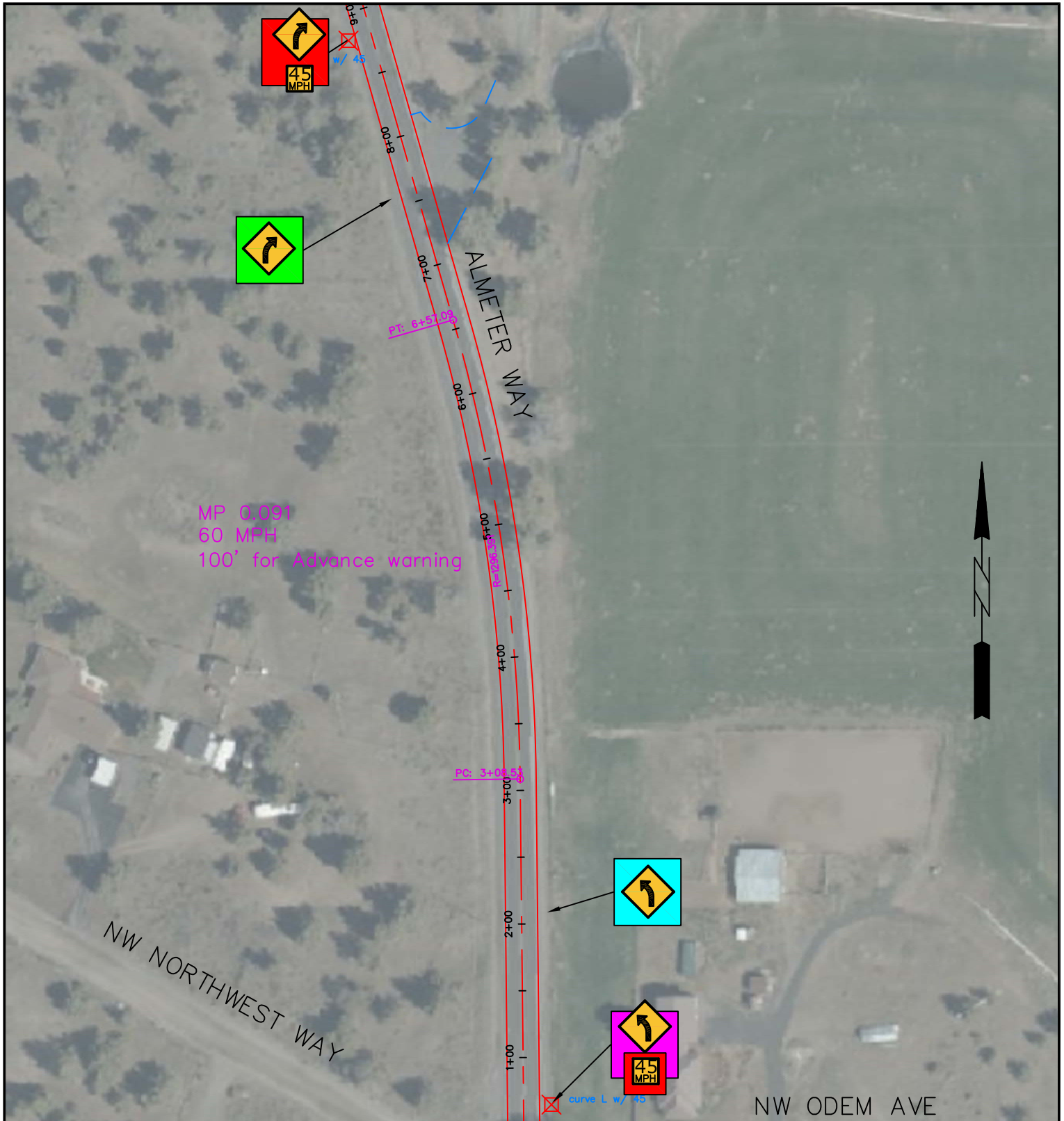
SIGN COMPLIANCE 2021

DESCHUTES COUNTY ROAD DEPARTMENT  
61150 S.E. 27TH STREET, BEND, OR. 97702

SCALE: 1"=100' DRAWN BY: T.G.W.  
FILE: 43RD signs.dwg

DATE: 9/14/2021

SHEET  
4 OF 4



● SIGN & NEW SUPPORT LOCATION

■ REMOVE EXISTING SIGN

■ INSTALL NEW SIGNS

■ REMOVE & SAVE EXISTING SIGN

■ REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

STA 0+00 = ODEM AVENUE

CENTERLINE OFFSET: 19.0' UNLESS NOTED

NW ALMETER WAY – MP 0.0–0.3

SIGN COMPLIANCE 2021



DESCHUTES COUNTY ROAD DEPARTMENT  
61150 S.E. 27TH STREET, BEND, OR. 97702

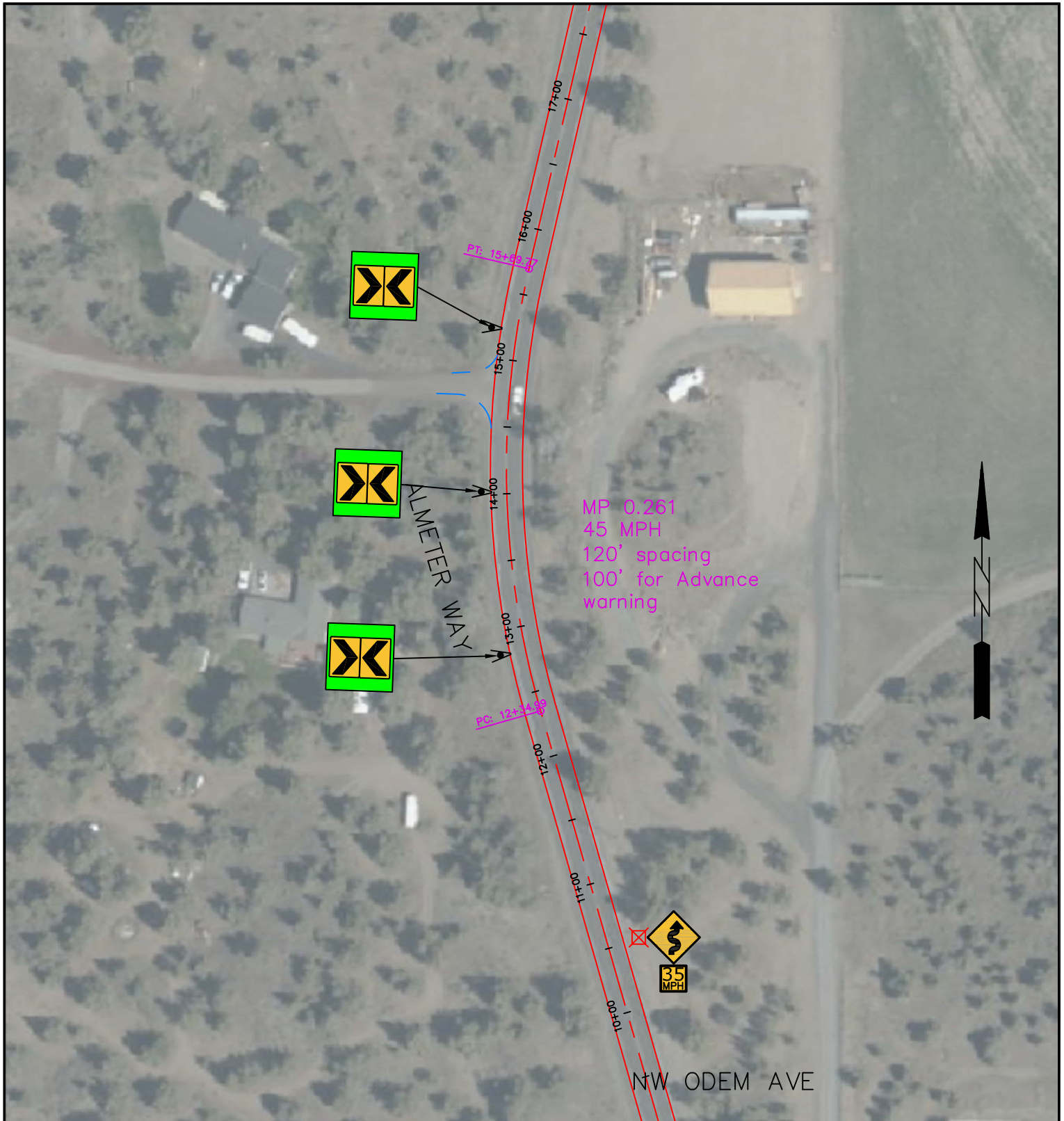
SCALE: 1"=200'

DRAWN BY: T.G.W.

DATE: 9/14/2021

FILE: Almeter signs.dwg

SHEET 1 OF 4



● SIGN & NEW SUPPORT LOCATION

■ REMOVE EXISTING SIGN

■ INSTALL NEW SIGNS

■ REMOVE & SAVE EXISTING SIGN

■ REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

STA 0+00 = ODEM AVENUE

CENTERLINE OFFSET: 19.0'  
UNLESS NOTED

NW ALMETER WAY — MP 0.261

SIGN COMPLIANCE 2021

DESCHUTES COUNTY ROAD DEPARTMENT  
61150 S.E. 27TH STREET, BEND, OR. 97702

SCALE: 1"=100'

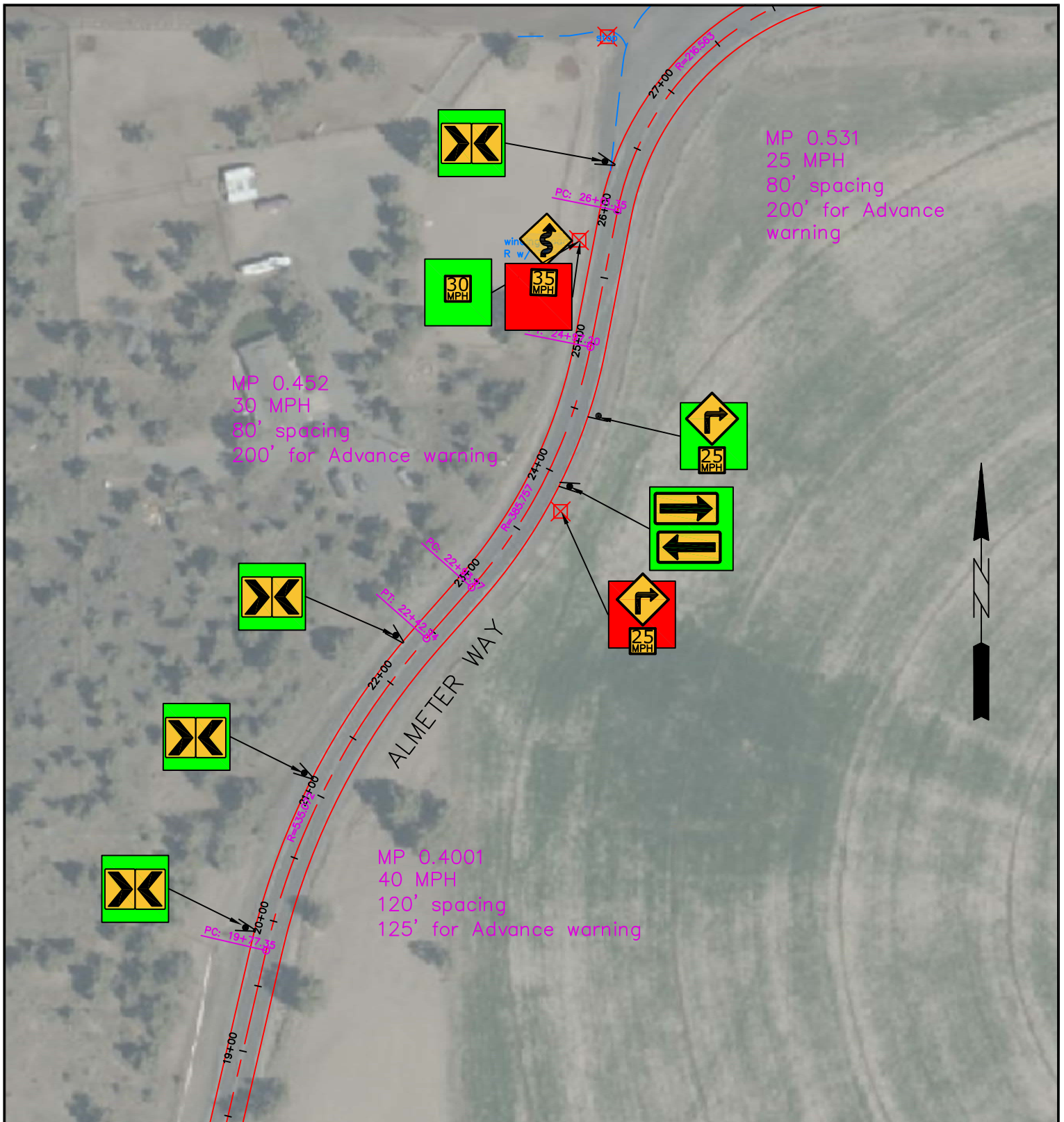
DRAWN BY: T.G.W.

DATE: 9/14/2021

FILE: Almeter signs.dwg

SHEET  
2 OF 4





● SIGN & NEW SUPPORT LOCATION

REMOVE EXISTING SIGN

REMOVE & SAVE EXISTING SIGN

INSTALL NEW SIGNS

REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

STA 0+00 = ODEM AVENUE

CENTERLINE OFFSET: 19.0'  
UNLESS NOTED

NW ALMETER WAY — MP 0.40–0.53

SIGN COMPLIANCE 2021



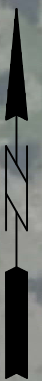
DESCHUTES COUNTY ROAD DEPARTMENT  
61150 S.E. 27TH STREET, BEND, OR. 97702

SCALE: 1"=100'  
FILE: Almeter signs.dwg

DRAWN BY: T.G.W.

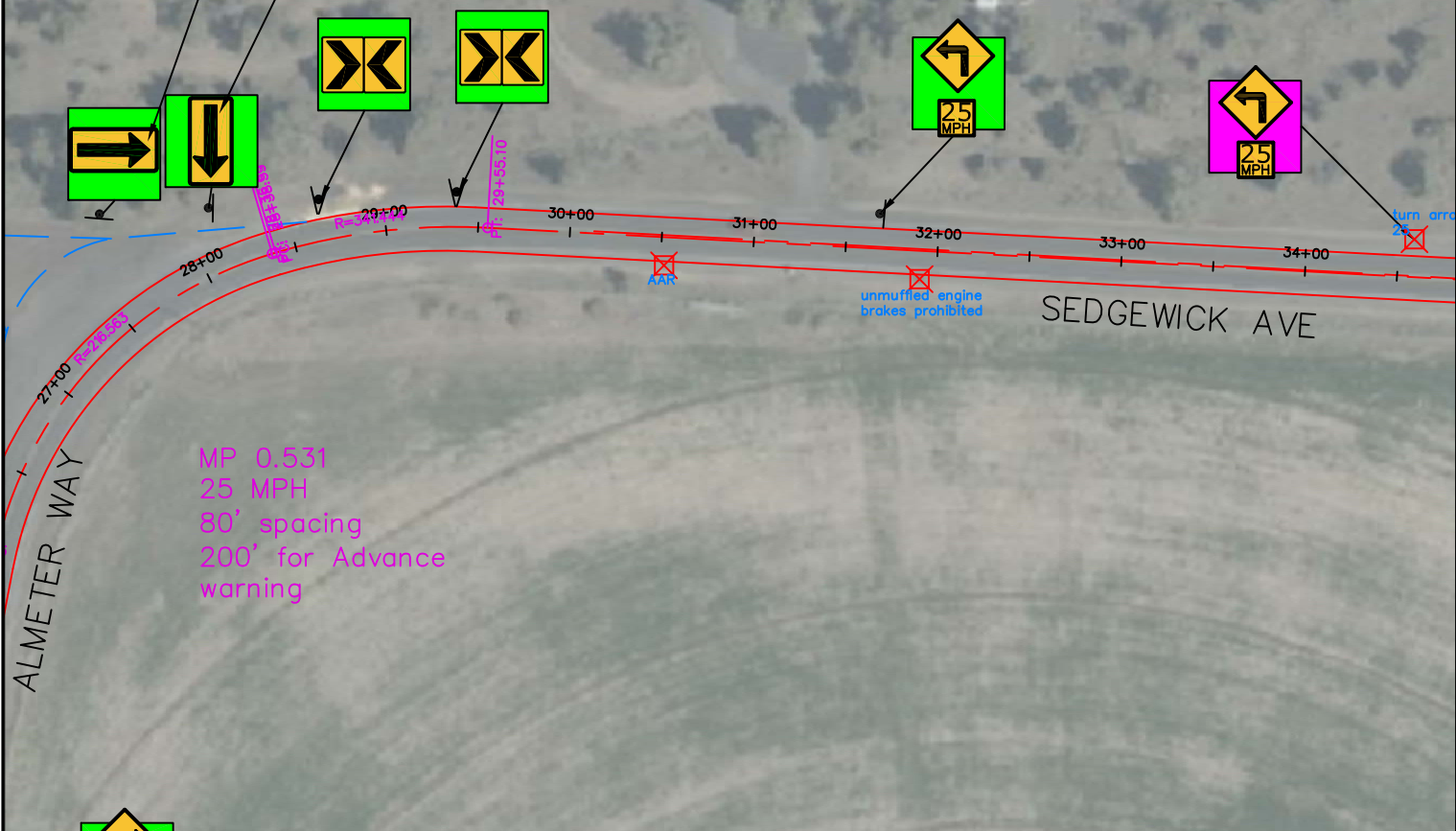
DATE: 9/14/2021

SHEET  
3 OF 4



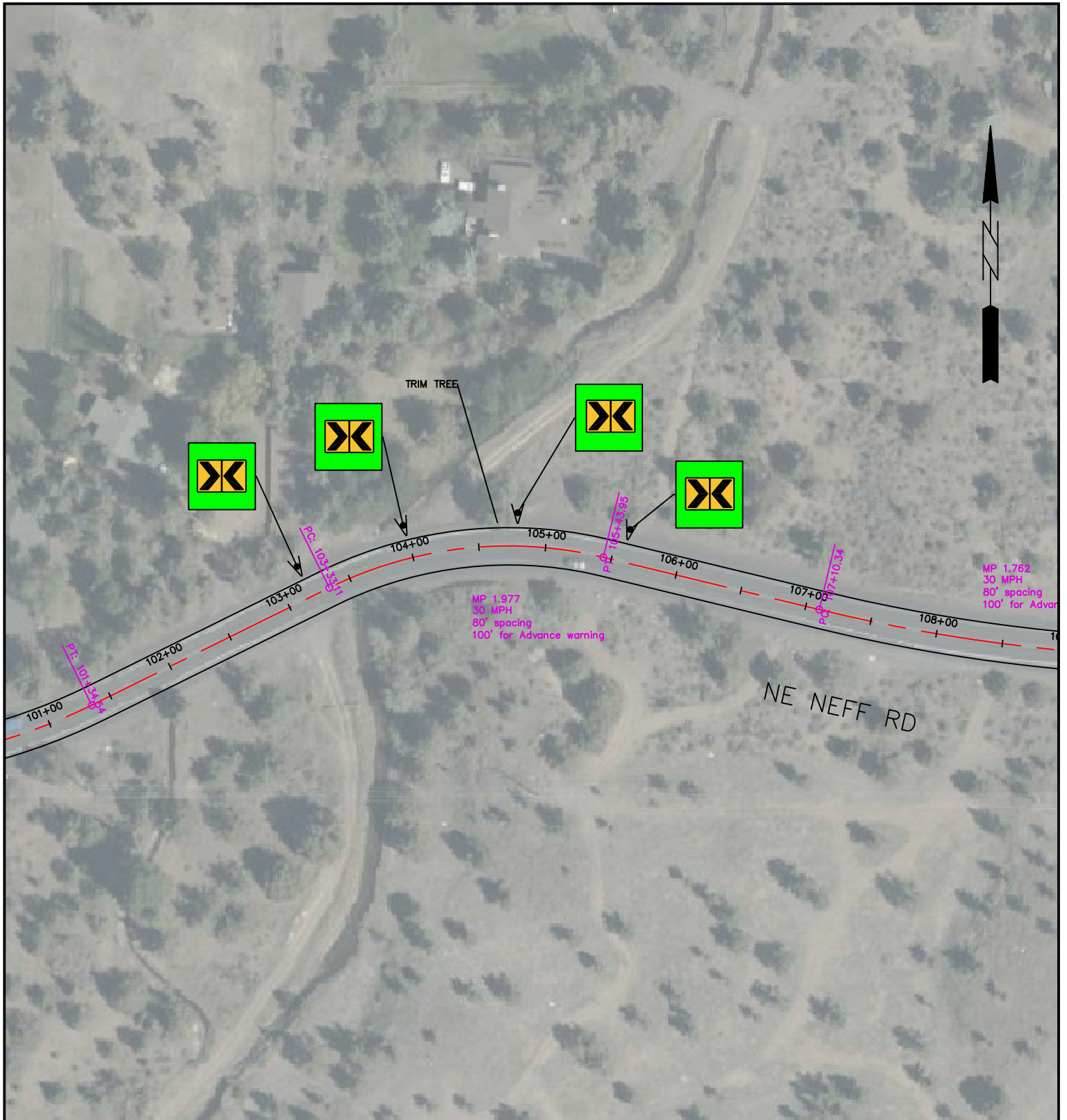
LG ARROW (R)  
STA: 27+70.04  
OFF: 60.36L




LG ARROW (L)  
STA: 28+14.64  
OFF: 35.35L



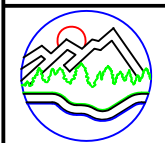
- SIGN & NEW SUPPORT LOCATION
  - REMOVE EXISTING SIGN
  - INSTALL NEW SIGNS
  - REMOVE & SAVE EXISTING SIGN
  - REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT
- STA 0+00 = ODEM AVENUE  
CENTERLINE OFFSET: 19.0'  
UNLESS NOTED

	SEDGEWICK AVE – MP 0.531		
	SIGN COMPLIANCE 2021		
DESCHUTES COUNTY ROAD DEPARTMENT 61150 S.E. 27TH STREET, BEND, OR. 97702	SCALE: 1"=100'   DRAWN BY: T.G.W.   DATE: 9/14/2021	SHEET 4 OF 4	



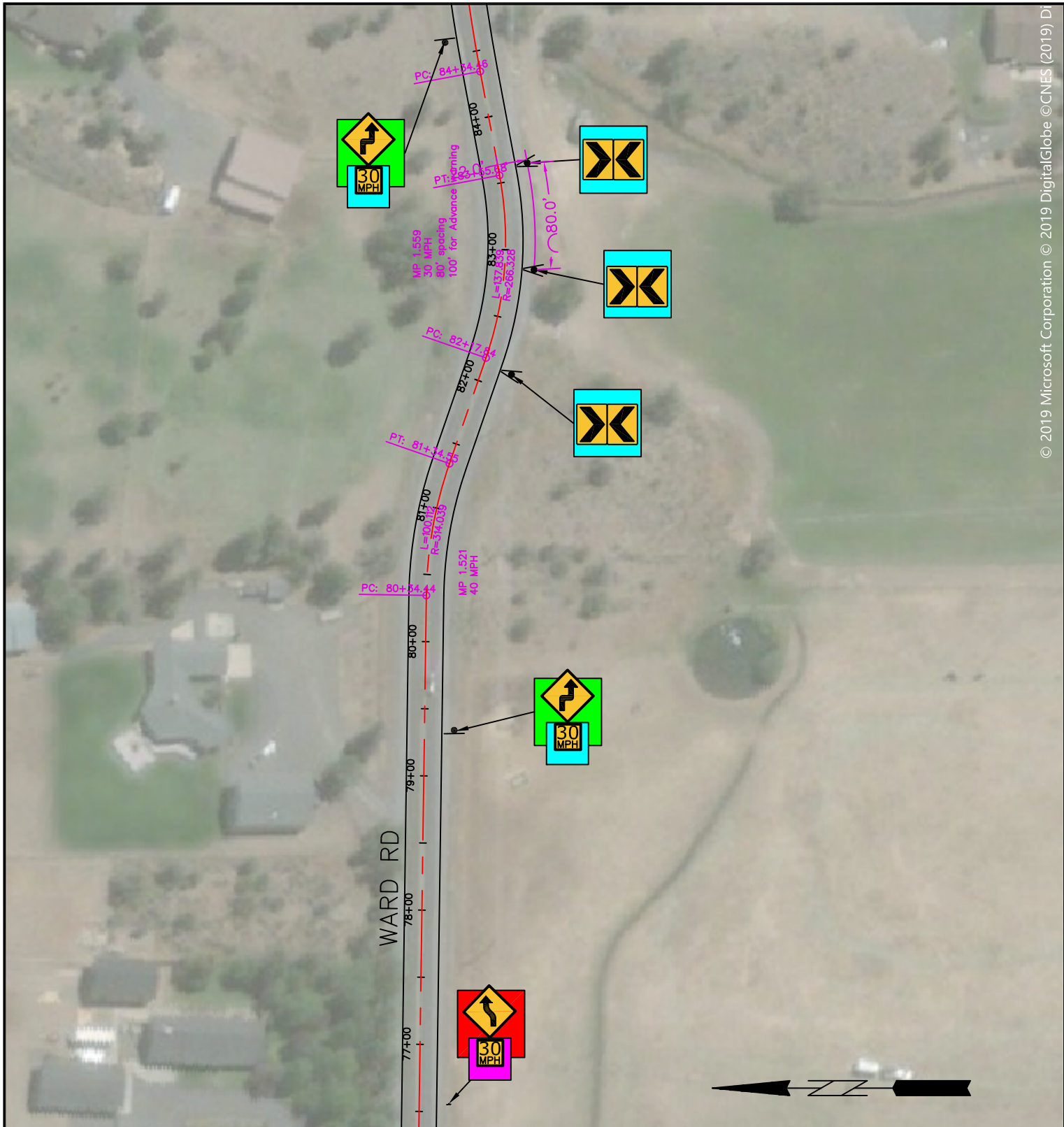
-  SIGN LOCATION
-  REMOVE EXISTING SIGN
-  INSTALL NEW SIGNS

STA 0+00 = NE 13th ST  
 CENTERLINE OFFSET: 25.0'



NE NEFF RD			
SIGN COMPLIANCE MP 1.977			
DESCHUTES COUNTY ROAD DEPARTMENT 61150 S.E. 27TH STREET, BEND, OR. 97702	SCALE: 1"=100'	DRAWN BY: T.G.W.	DATE: 9/14/2021
FILE: Neff signs.dwg			SHEET 1 OF 1





● SIGN & NEW SUPPORT LOCATION

- REMOVE EXISTING SIGN
- INSTALL NEW SIGNS
- REMOVE & SAVE EXISTING SIGN
- REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

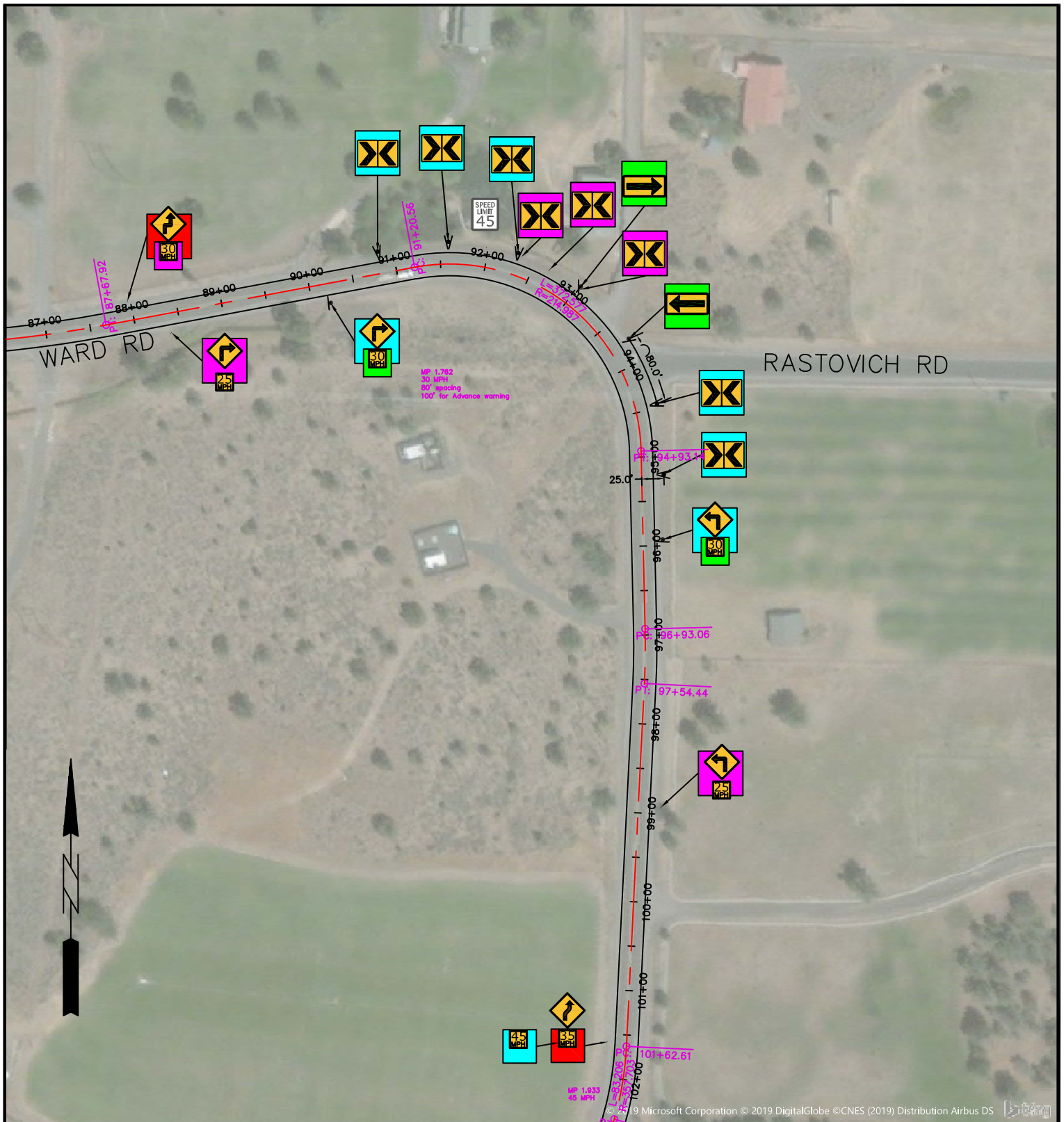
STA 0+00 = HIGHWAY 20  
 CENTERLINE OFFSET: 22.0'



WARD RD – MP 1.559

SIGN COMPLIANCE 2021

DESCHUTES COUNTY ROAD DEPARTMENT 61150 S.E. 27TH STREET, BEND, OR. 97702	SCALE: 1"=100' FILE: Ward Rd-MapImport.dwg	DRAWN BY: T.G.W. DATE: 6/03/19	SHEET 1 OF 5
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● SIGN & NEW SUPPORT LOCATION

- REMOVE EXISTING SIGN
- REMOVE & SAVE EXISTING SIGN
- INSTALL NEW SIGNS
- REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

STA 0+00 = HIGHWAY 20

CENTERLINE OFFSET: 25.0' (L)  
22.0' (R)



WARD RD – MP 1.762

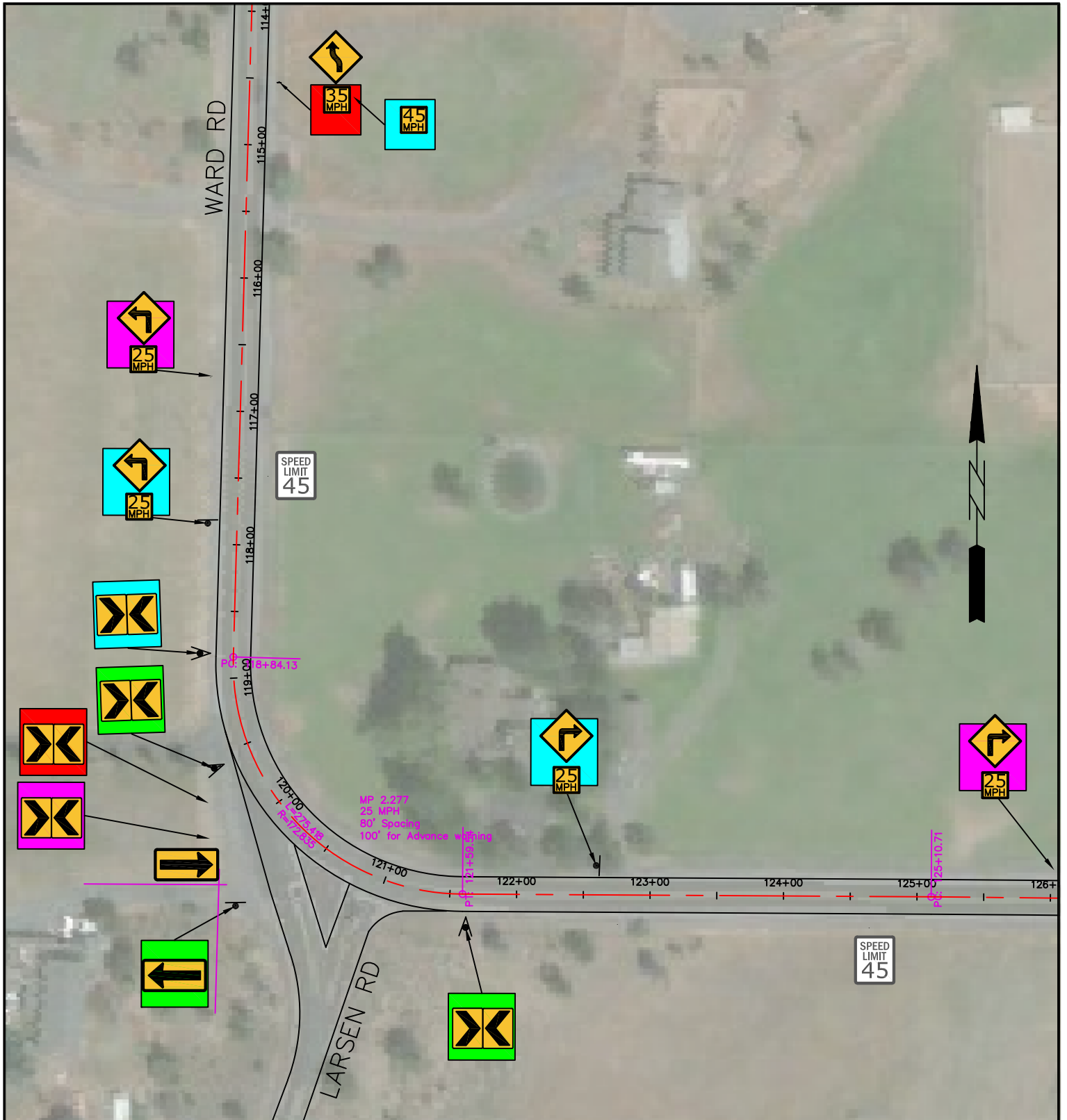
SIGN COMPLIANCE 2021

DESCHUTES COUNTY ROAD DEPARTMENT  
61150 S.E. 27TH STREET, BEND, OR. 97702

SCALE: 1"=150' DRAWN BY: T.G.W.  
FILE: Ward Rd-MapImport.dwg

DATE: 6/03/19

SHEET  
2 OF 5



● SIGN & NEW SUPPORT LOCATION

■ REMOVE EXISTING SIGN

■ INSTALL NEW SIGNS

■ REMOVE & SAVE EXISTING SIGN

■ REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

STA 0+00 = HIGHWAY 20

CENTERLINE OFFSET: VARIES, SEE SIGN LIST



WARD RD – MP 2.277

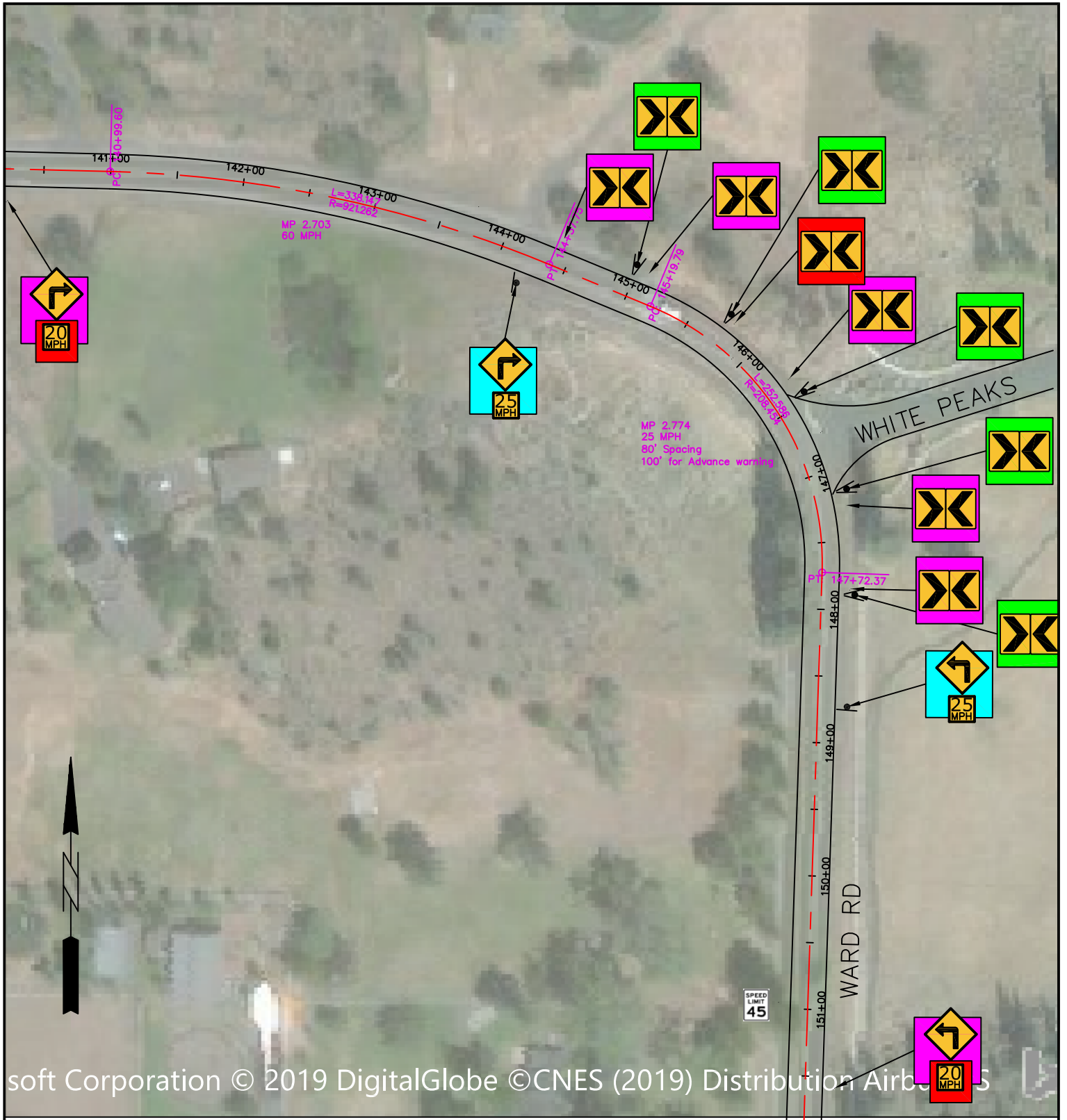
SIGN COMPLIANCE 2021

DESCHUTES COUNTY ROAD DEPARTMENT  
61150 S.E. 27TH STREET, BEND, OR. 97702

SCALE: 1"=100' DRAWN BY: T.G.W.  
FILE: Ward Rd-MapImport.dwg

DATE: 6/03/19

SHEET 3 OF 5



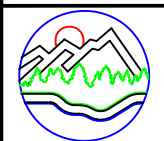
soft Corporation © 2019 DigitalGlobe ©CNES (2019) Distribution Airbus

● SIGN & NEW SUPPORT LOCATION

- REMOVE EXISTING SIGN
- REMOVE & SAVE EXISTING SIGN
- INSTALL NEW SIGNS
- REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

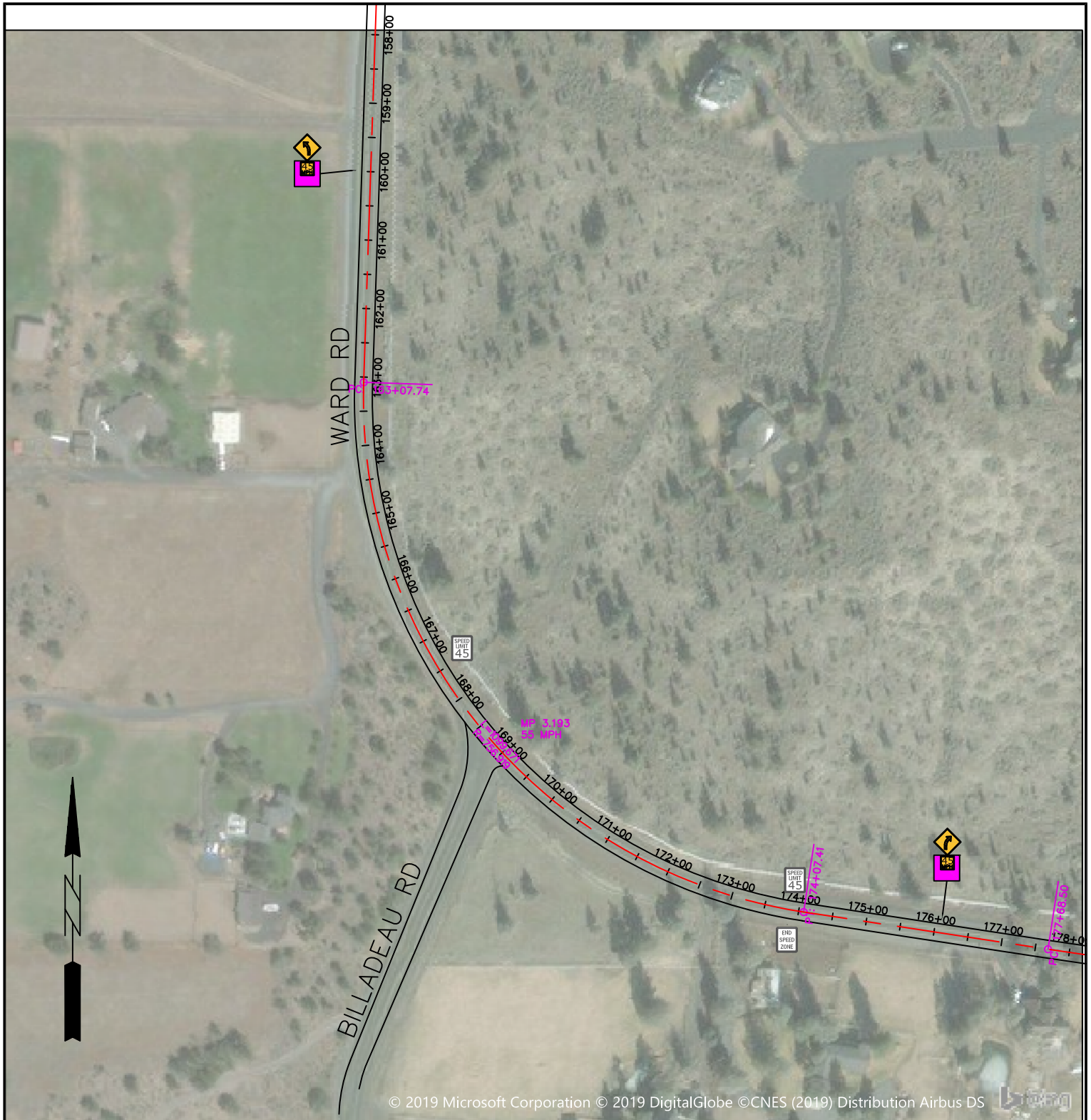
STA 0+00 = HIGHWAY 20

CENTERLINE OFFSET: 22.0'



<b>WARD RD – MP 2.774</b>			
<b>SIGN COMPLIANCE 2021</b>			
DESCHUTES COUNTY ROAD DEPARTMENT 61150 S.E. 27TH STREET, BEND, OR. 97702	SCALE: 1"=100' FILE: Ward Rd-MapImport.dwg	DRAWN BY: T.G.W. DATE: 6/03/19	SHEET 4 OF 5





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● SIGN & NEW SUPPORT LOCATION

■ REMOVE EXISTING SIGN

■ INSTALL NEW SIGNS

■ REMOVE & SAVE EXISTING SIGN

■ REINSTALL EXISTING SIGN ON NEW SIGN SUPPORT

STA 0+00 = HIGHWAY 20

CENTERLINE OFFSET: 22.0'



WARD RD — MP 3.193

SIGN COMPLIANCE 2021

DESCHUTES COUNTY ROAD DEPARTMENT  
61150 S.E. 27TH STREET, BEND, OR. 97702

SCALE: 1"=200' DRAWN BY: T.G.W.  
FILE: Ward Rd-MapImport.dwg

DATE: 6/03/19

SHEET 5 OF 5



**TABLE 1 - SIGN & POST DATA TABLE: NW 43RD STREET**

**CURVE WARNING SIGNS 2022**

Sign Type	Location	Side	CL Offset, feet	Dimensions, inches		Color		Post Length, ft (2"- 12ga.)	Mounting Height, ft <sup>1</sup>	Directive
				Width	Height	Background	Legend			
<b>W13-1-45</b>	<b>59+24.16</b>	<b>R</b>	<b>21'</b>	<b>18</b>	<b>18</b>	<b>Y</b>	<b>BK</b>			<b>RE</b>
W13-1-40	59+24.16	R	21'	18	18	Y	BK			N
W1-8L	65+74.59	R	23'	18	24	Y	BK	12	5	N
W1-8R	65+74.59	R	23'	18	24	Y	BK		5	N
W1-8L	66+94.59	R	23'	18	24	Y	BK	12	5	N
W1-8R	66+94.59	R	23'	18	24	Y	BK		5	N
W1-8L	68+14.59	R	23'	18	24	Y	BK	12	5	N
W1-8R	68+14.59	R	23'	18	24	Y	BK		5	N
W1-8L	69+34.59	R	23'	18	24	Y	BK	12	5	N
W1-8R	69+34.59	R	23'	18	24	Y	BK		5	N
W1-8L	70+54.59	R	23'	18	24	Y	BK	12	5	N
W1-8R	70+54.59	R	23'	18	24	Y	BK		5	N
W1-8R	75+05.90	L	23'	18	24	Y	BK	12	5	N
W1-8L	75+05.90	L	23'	18	24	Y	BK		5	N
W1-8R	76+25.90	L	23'	18	24	Y	BK	12	5	N
W1-8L	76+25.90	L	23'	18	24	Y	BK		5	N
W1-8R	77+45.90	L	23'	18	24	Y	BK	12	5	N
W1-8L	77+45.90	L	23'	18	24	Y	BK		5	N
W1-8R	78+65.90	L	23'	18	24	Y	BK	12	5	N
W1-8L	78+65.90	L	23'	18	24	Y	BK		5	N
W1-8R	79+85.90	L	23'	18	24	Y	BK	12	5	N
W1-8L	79+85.90	L	23'	18	24	Y	BK		5	N
<b>W13-1-35</b>	<b>91+08.14</b>	<b>L</b>	<b>20'</b>	<b>18</b>	<b>18</b>	<b>Y</b>	<b>BK</b>			<b>RE</b>
W13-1-40	91+08.14	L	20'	18	18	Y	BK			N
<b>W1-7</b>	<b>96.25</b>		<b>END</b>	<b>48</b>	<b>24</b>	<b>Y</b>	<b>BK</b>			<b>RS</b>
OM1-3	96+25		END	48	24	Y	BK	12	7	N
W1-7	96+25		END	48	24	Y	BK	12		RI

Legend: Sign Installation Sign Removal

Abbreviations: L = Left; R = Right; RE = Remove Existing Sign & Support; N = Install New Sign;  
RS = Remove & Save Existing Sign, Remove Existing Sign Support; RI = Reinstall Existing Sign

Notes: 1) Mounting Height is height from edge of pavement to bottom of primary sign.

TABLE 2 - SIGN & POST DATA TABLE: NW ALMETER WAY

CURVE WARNING SIGNS 2022

Sign Type	Location	Side	CL Offset, feet	Dimensions, inches		Color		Post Length, ft (2"- 12ga.)	Mounting Height, ft <sup>1</sup>	Directive
				Width	Height	Background	Legend			
W1-2L	0+64.51	R	21'	30	30	Y	BK			RS
W13-1-45	0+64.51	R	21'	18	18	Y	BK			RE
W1-2L	2+08.53	R	19'	30	30	Y	BK	12	7	RI
W1-2R	7+57.09	L	19'	30	30	Y	BK	12	7	N
W1-2R	8+80.04	L	19'	30	30	Y	BK			RE
W13-1-45	8+80.04	L	19'	18	18	Y	BK			RE
W1-8L	12+82.10	L	19'	18	24	Y	BK	10	5	N
W1-8R	12+82.10	L	19'	18	24	Y	BK		5	N
W1-8L	14+02.01	L	19'	18	24	Y	BK	10	5	N
W1-8R	14+02.01	L	19'	18	24	Y	BK		5	N
W1-8L	15+22.01	L	19'	18	24	Y	BK	10	5	N
W1-8R	15+22.01	L	19'	18	24	Y	BK		5	N
W1-8L	19+90.14	L	19'	18	24	Y	BK	10	5	N
W1-8R	19+90.14	L	19'	18	24	Y	BK		5	N
W1-8L	21+10.14	L	19'	18	24	Y	BK	10	5	N
W1-8R	21+10.14	L	19'	18	24	Y	BK		5	N
W1-8L	22+30.14	L	19'	18	24	Y	BK	10	5	N
W1-8R	22+30.14	L	19'	18	24	Y	BK		5	N
W1-1R	23+76.94	R	22'	30	30	Y	BK			RE
W13-1-25	23+76.94	R	22'	18	18	Y	BK			RE
W1-6L	23+95.58	R	19'	48	18	Y	BK	12	5	N
W1-6R	23+95.58	R	19'	48	24	Y	BK			N
W1-1R	24+50.00	R	19'	18	24	Y	BK	12	7	N
W13-1-25	24+50.00	R	19'	30	30	Y	BK			N
W13-1-35	25+73.87	L	24'	18	18	Y	BK			RE
W13-1-30	25+73.87	L	24'	18	18	Y	BK			N
W1-8R	26+33.06	L	19'	18	24	Y	BK	10	5	N
W1-8L	26+33.06	L	19'	18	24	Y	BK		5	N
W1-6R	27+70.04	L	60.5'	48	24	Y	BK	10	5	N
W1-6L	28+14.64	L	35.5'	48	24	Y	BK	10	5	N
W1-8R	29+38.23	L	19'	18	24	Y	BK	12	5	N
W1-8L	29+38.23	L	19'	18	24	Y	BK		5	N
W1-1L	31+37.60	L	19'	30	30	Y	BK	12	7	RI
W13-1-25	31+67.60	L	19'	18	18	Y	BK			RI
W1-1L	34+58.29	R	20'	30	30	Y	BK			RS
W13-1-25	34+58.29	R	20'	18	18	Y	BK			RS

Legend: Sign Installation Sign Removal

Abbreviations: L = Left; R = Right; RE = Remove Existing Sign & Support; N = Install New Sign; RS = Remove & Save Existing Sign, Remove Existing Sign Support; RI = Reinstall Existing Sign

Notes: 1) Mounting Height is height from edge of pavement to bottom of primary sign.

**TABLE 3 - SIGN & POST DATA TABLE: NE NEFF ROAD**

**CURVE WARNING SIGNS 2022**

Sign Type	Location	Side	CL Offset, feet	Dimensions, inches		Color		Post Length, ft (2" - 12ga.)	Mounting Height, ft <sup>1</sup>	Directive
				Width	Height	Background	Legend			
W1-8L	103+18.53	L	25	18	24	Y	BK	12	5	N
W1-8R	103+18.53	L	25	18	24	Y	BK		5	N
W1-8L	103+98.53	L	25	18	24	Y	BK	12	5	N
W1-8R	103+98.53	L	25	18	24	Y	BK		5	N
W1-8L	104+78.53	L	25	18	24	Y	BK	12	5	N
W1-8R	104+78.53	L	25	18	24	Y	BK		5	N
W1-8L	105+58.53	L	25	18	24	Y	BK	12	5	N
W1-8R	105+58.53	L	25	18	24	Y	BK		5	N

Legend: Sign Installation Sign Removal

Abbreviations: L = Left; R = Right; RE = Remove Existing Sign & Support; N = Install New Sign;  
RS = Remove & Save Existing Sign, Remove Existing Sign Support; RI = Reinstall Existing Sign

Notes: 1) Mounting Height is height from edge of pavement to bottom of primary sign.

**TABLE 4 - SIGN & POST DATA TABLE: WARD ROAD**

**CURVE WARNING SIGNS 2022**

Sign Type	Location	Side	CL Offset, feet	Dimensions, inches		Color		Post Length, ft (2"- 12ga.)	Mounting Height, ft <sup>1</sup>	Directive
				Width	Height	Background	Legend			
W1-4L	76+56.00	R	22'	30	30	Y	BK			RE
W13-1-30	76+56.00	R	22'	18	18	Y	BK			RS
W1-3R	79+34.29	R	22'	30	30	Y	BK	12	7	N
W13-1-30	79+34.29	R	22'	18	18	Y	BK			RI
W1-8L	82+12.34	R	22'	18	24	Y	BK	12	5	RI
W1-8R	82+12.34	R	22'	18	24	Y	BK		5	RI
W1-8L	82+86.65	R	22'	18	24	Y	BK	12	5	RI
W1-8R	82+86.65	R	22'	18	24	Y	BK		5	RI
W1-8L	83+60.95	R	22'	18	24	Y	BK	12	5	RI
W1-8R	83+60.95	R	22'	18	24	Y	BK		5	RI
W1-3R	84+60.95	L	22'	30	30	Y	BK	12	7	N
W13-1-30	84+60.95	L	22'	18	18	Y	BK			RI
W1-3R	87+96.48	L	22'	30	24	Y	BK			RE
W13-1-30	87+96.48	L	22'	18	18	Y	BK			RS
W1-1R	88+38.72	R	22'	30	30	Y	BK			RS
W13-1-25	88+38.72	R	22'	18	18	Y	BK			RS
W1-1R	90+20.56	R	22'	30	30	Y	BK	12	7	RI
W13-1-30	90+20.56	R	22'	18	18	Y	BK			N
W1-8R	90+83.05	L	25'	18	24	Y	BK	12	5	RI
W1-8L	90+83.05	L	25'	18	24	Y	BK		5	RI
W1-8R	91+58.90	L	25'	18	24	Y	BK	12	5	RI
W1-8L	91+58.90	L	25'	18	24	Y	BK		5	RI
W1-8R	92+30.56	L	25'	18	24	Y	BK	12	5	RI
W1-8L	92+30.56	L	25'	18	24	Y	BK		5	RI
W1-8R	92+34.72	L	22'	18	24					RS
W1-8L	92+34.72	L	22'	18	24					RS
W1-8R	92+66.40	L	22'	18	24					RS
W1-8L	92+66.40	L	22'	18	24					RS
W1-6R	93+02.23	L	25'	48	24	Y	BK	12	5	N
W1-8R	93+03.36	L	22'	18	24	Y	BK			RS
W1-8L	93+03.36	L	22'	18	24	Y	BK			RS
W1-6L	93+73.89	L	25'	48	24	Y	BK	12	5	N
W1-8R	94+45.56	L	25'	18	24	Y	BK	12	5	RI
W1-8L	94+45.56	L	25'	18	24	Y	BK		5	RI
W1-8R	95+20.14	L	25'	18	24	Y	BK	12	5	RI
W1-8L	95+20.14	L	25'	18	24	Y	BK		5	RI
W1-1L	95+93.20	L	22'	30	30	Y	BK	12	7	RI
W13-1-30	95+93.20	L	22'	18	18	Y	BK			N
W1-1L	98+92.37	L	25'	30	30	Y	BK			RS
W13-1-25	98+92.37	L	25'	18	18	Y	BK			RS
W13-1-35	101+58.72	R	22'	18	18	Y	BK			RE
W13-1-45	101+58.72	R	22'	18	18	Y	BK			RI
W13-1-35	114+52.32	L	22'	18	18	Y	BK			RE
W13-1-45	114+52.32	L	22'	18	18	Y	BK			RI
W1-1L	116+74.08	R	22'	30	30	Y	BK			RS
W13-1-25	116+74.08	R	22'	18	18	Y	BK			RS
W1-1L	117+84.55	R	22'	30	30	Y	BK	12	7	RI
W13-1-25	117+84.55	R	22'	18	18	Y	BK			RI
W1-8L	118+81.79	R	25'	18	24	Y	BK	12	5	RI
W1-8R	118+81.79	R	25'	18	24	Y	BK		5	RI
W1-8L	119+57.78	R	30'	18	24	Y	BK	10	5	N
W1-8R	119+57.78	R	30'	18	24	Y	BK		5	N
W1-8L	119+75.71	R	45'	18	24	Y	BK			RE
W1-8R	119+75.71	R	45'	18	24	Y	BK			RE
W1-8L	119+93.42	R	58'	18	24	Y	BK			RS
W1-8R	119+93.42	R	58'	18	24	Y	BK			RS



TABLE 4 - SIGN & POST DATA TABLE: WARD ROAD

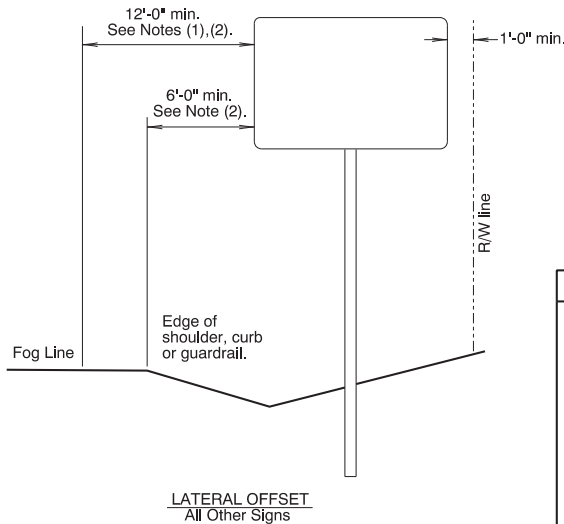
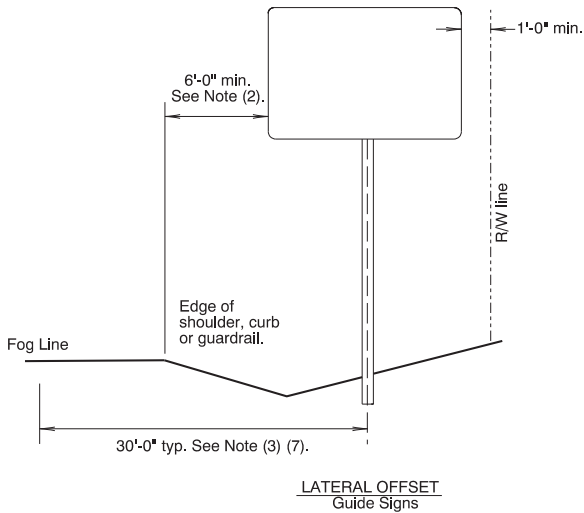
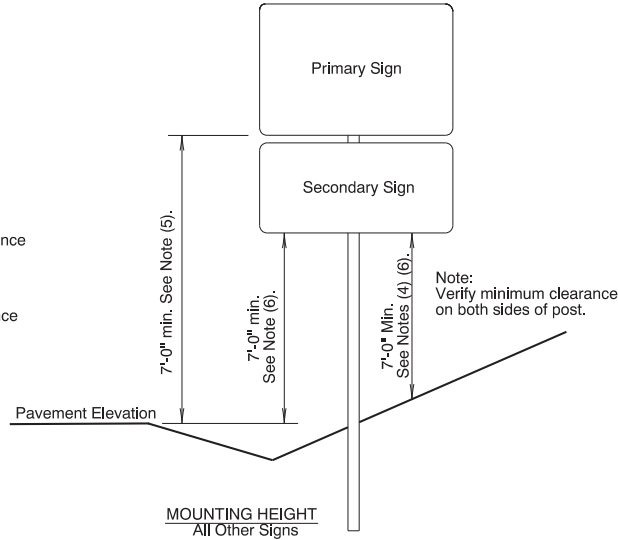
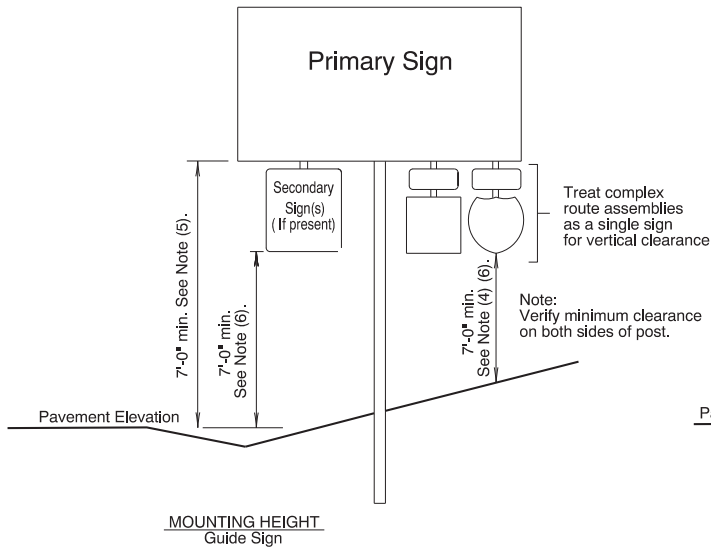
CURVE WARNING SIGNS 2022

Sign Type	Location	Side	CL Offset, feet	Dimensions, inches		Color		Post Length, ft (2"- 12ga.)	Mounting Height, ft <sup>1</sup>	Directive
				Width	Height	Background	Legend			
W1-6L	120+29.99	R	76.75'	48	24	Y	BK	10	5	N
W1-8L	121+61.92	R	25'	18	24	Y	BK	10	5	N
W1-8R	121+61.92	R	25'	18	24	Y	BK		5	N
W1-1R	122+59.54	L	22'	30	30	Y	BK	12	7	RI
W13-1-25	122+59.54	L	22'	18	18	Y	BK			RI
W1-1R	126+50.88	L	22'	30	30	Y	BK			RS
W13-1-25	126+50.88	L	22'	18	18	Y	BK			RS
W1-1R	140+23.68	R	22'	30	30	Y	BK			RS
W13-1-20	140+23.68	R	22'	18	18	Y	BK			RE
W1-1R	144+19.86	R	22'	30	30	Y	BK	12	7	RI
W13-1-25	144+19.86	R	22'	18	18	Y	BK			RI
W1-8R	144+40.80	R	22'	18	24	Y	BK			RS
W1-8L	144+40.80	R	22'	18	24	Y	BK			RS
W1-8R	144+98.72	L	25'	18	24	Y	BK	12	5	N
W1-8L	144+98.72	L	25'	18	24	Y	BK		5	N
W1-8R	145+09.44	L	22'	18	24	Y	BK			RS
W1-8L	145+09.44	L	22'	18	24	Y	BK			RS
W1-8R	145+72.39	L	25'	18	24	Y	BK	12	5	N
W1-8L	145+72.39	L	25'	18	24	Y	BK		5	N
W1-8R	145+78.08	L	22'	18	24	Y	BK			RE
W1-8L	145+78.08	L	22'	18	24	Y	BK			RE
W1-8R	146+30.88	L	22'	18	24	Y	BK			RS
W1-8L	146+30.88	L	22'	18	24	Y	BK			RS
W1-8R	146+43.82	L	25'	18	24	Y	BK	12	5	N
W1-8L	146+43.82	L	25'	18	24	Y	BK		5	N
W1-8R	147+15.26	L	25'	18	24	Y	BK	12	5	N
W1-8L	147+15.26	L	25'	18	24	Y	BK		5	N
W1-8R	147+25.92	L	22'	18	24	Y	BK			RS
W1-8L	147+25.92	L	22'	18	24	Y	BK			RS
W1-8R	147+84.00	L	22'	18	24	Y	BK			RS
W1-8L	147+84.00	L	22'	18	24	Y	BK			RS
W1-8R	147+88.39	L	25'	18	24	Y	BK	12	5	N
W1-8L	147+88.39	L	25'	18	24	Y	BK		5	N
W1-1L	148+72.45	L	22'	30	30	Y	BK	12	7	RI
W13-1-25	148+72.45	L	22'	18	18	Y	BK			RI
W1-1L	151+58.55	L	22'	30	30	Y	BK			RS
W13-1-20	151+58.55	L	22'	18	18	Y	BK			RE
W13-1-45	159+98.40	R	22'	18	18	Y	BK			RS
W13-1-45	176+08.8	L	22'	18	18	Y	BK			RS

Legend: Sign Installation Sign Removal

Abbreviations: L = Left; R = Right; RE = Remove Existing Sign & Support; N = Install New Sign;  
RS = Remove & Save Existing Sign, Remove Existing Sign Support; RI = Reinstall Existing Sign

Notes: 1) Mounting Height is height from edge of pavement to bottom of primary sign.



**General Installation Notes:**

- Signing details shown on this sheet are intended to convey "typical" conditions only. Individual locations may require installation different from those shown. For guidance regarding unique installations or exceptions call the Project Sign Designer or Region Traffic Section.
- Locate breakaway supports away from ditches to avoid problems with erosion, corrosion, debris, maintenance and breakaway performance. See Dwg. No. TM635 for more information.
- For wood post support details see Dwg. No. TM670.
- For perforated steel square tube support details see Dwg. No. TM681.
- For triangular base breakaway support details see Dwg. No. TM602.
- For multi-post breakaway support details see Dwg. No. TM600.
- Mounting heights should not be more than 3 inches more than the minimum heights shown, where practical.
- 2" vertical spacing between all signs.

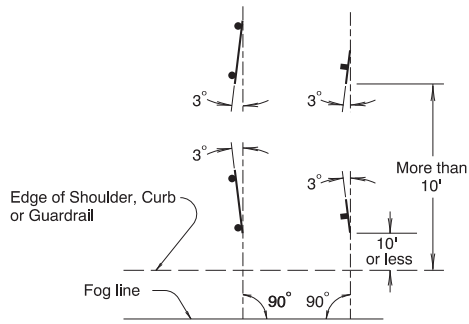
**Notes:**

- 6' minimum if behind barrier.
- 2' minimum if restricted R/W.
- 20' for ramp terminals.
- 8' minimum if bicycle path underneath.
- 8' minimum if secondary signs attached.
- 5' minimum if outside clearzone, in rural areas and no pedestrians underneath.
- For multi-post installations measure distance from post closest to roadway.

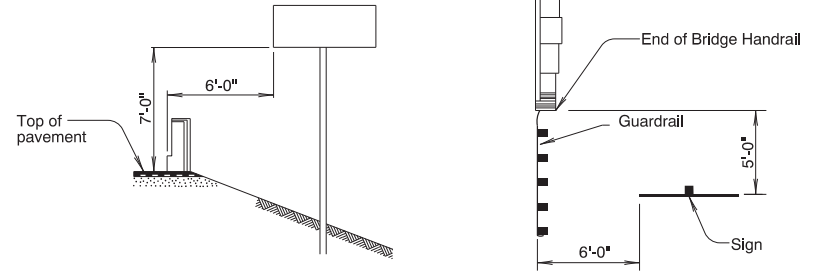
CALC. BOOK NO. <u>  N/A  </u>	SDR DATE <u>  01/08/2018  </u>
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
<b>OREGON STANDARD DRAWINGS</b>	
<b>SIGN INSTALLATION DETAILS</b>	
2021	
DATE	REVISION DESCRIPTION

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.*

TM201.dgn 12-10-2009



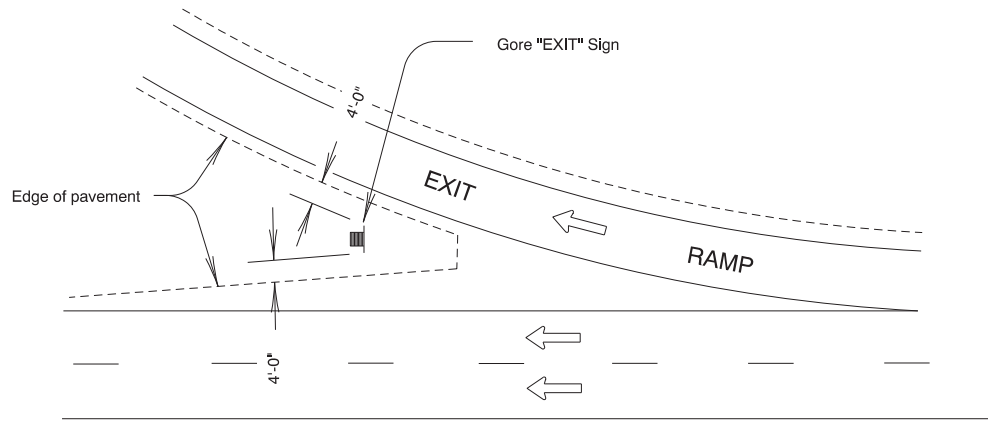
SIGN PLACEMENT



ELEVATION

PLAN

SIGN LOCATION FOR FREEWAY OVERCROSSING  
(MINIMUM VALUES)

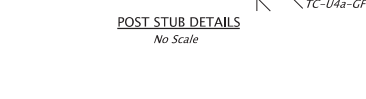
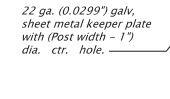
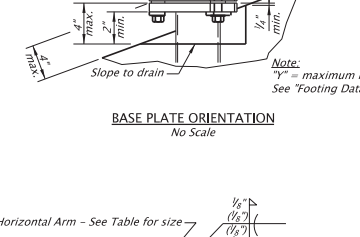
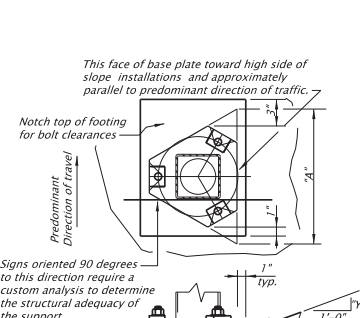
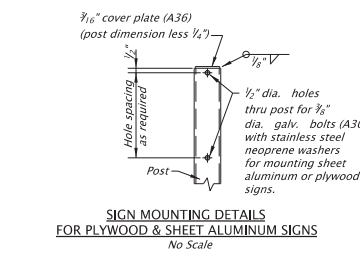
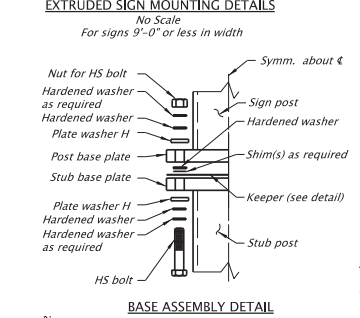
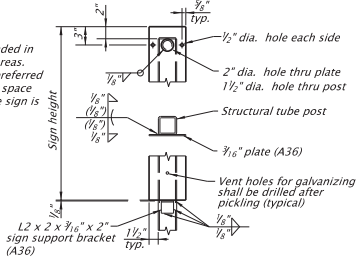
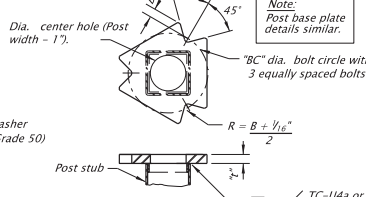
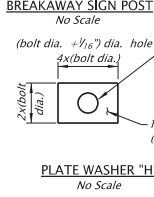
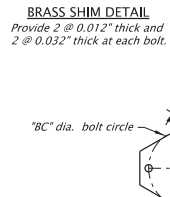
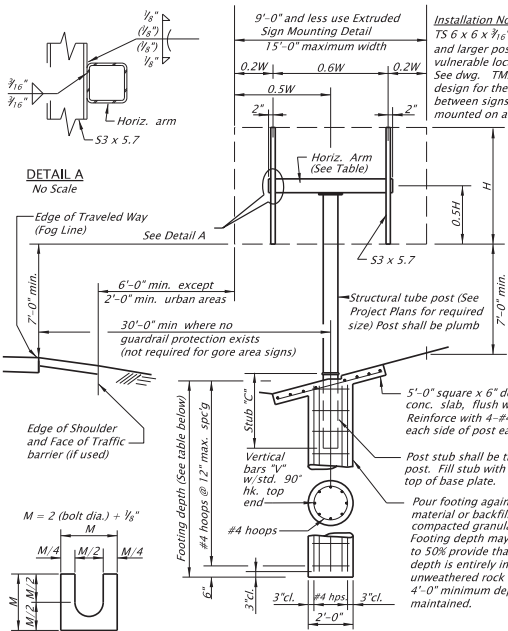


TYPICAL "EXIT" SIGN INSTALLATION

TM201

CALC. BOOK NO. <u>  N/A  </u>		SDR DATE <u>  12-10-09  </u>	
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications			
<b>OREGON STANDARD DRAWINGS</b>			
<b>MISCELLANEOUS SIGN PLACEMENT DETAILS</b>			
2021			
DATE	REVISION DESCRIPTION		

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.*



- GENERAL NOTES:**
- Sign supports are designed in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals 1994. Use a wind velocity with a 10-year mean recurrence interval.
  - All concrete shall be Commercial Grade Concrete ( $f_c = 3000$  psi)
  - All reinforcing steel shall conform to AASHTO Specification M31, Grade 60, or ASTM A706.
  - The following splice lengths shall be used unless otherwise shown:
 

Bar Size	#4	#5
Splice Length (mm)	1'-1"	1'-5"
  - Structural steel shall conform to AASHTO M223 (ASTM A572) Grade 50, unless shown otherwise.
  - Structural tubing shall conform to ASTM Specification A500, Grade B, or A501.
  - Shims shall be fabricated from brass shim stock conforming to ASTM B36.
  - All bolts shall be high strength bolts conforming to ASTM Specification A325 (AASHTO M164). Nuts for high strength bolts shall be well lubricated heavy hexagon nuts conforming to ASTM Specification A563 (AASHTO M291), Grade DII. Hardened steel washers shall conform to ASTM Specification F436 (AASHTO M293).
  - Steel sheet for keepers shall conform to ASTM Specification A653.
  - Base plate holes shall be sub-drilled and reamed to size. Base plate slot shall be saw cut or machine guided flame cut.
  - Keeper sheet metal shall be galvanized in accordance with ASTM A653, Coating G165. All other steel including fasteners shall be hot-dip galvanized after fabrication. Remove galvanizing runs and beads on all slip surfaces. Nuts for high strength bolts may be retapped after galvanizing.
  - The use of post larger than required by design will not be permitted.
  - See Dwg. TM675 for sign and sign mounting details.

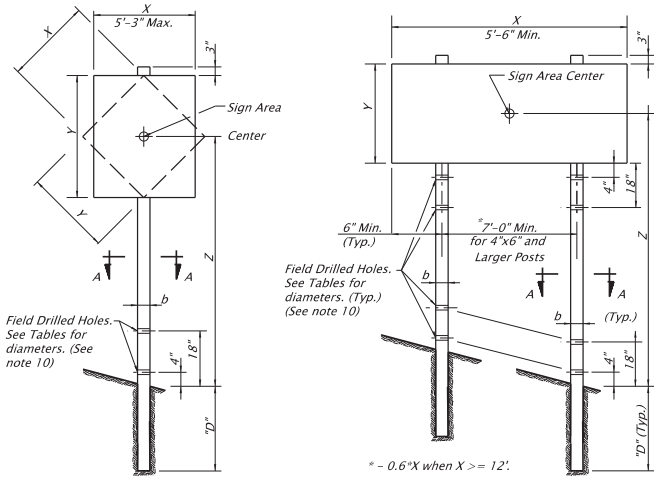
- BASE PLATE BOLTING PROCEDURE:**
- Assemble post to stub as shown in Base Assembly Detail.
  - Shim as required to plumb post. ( $\pm 1/16"$  vert. 12") (2 shims maximum per bolt)
  - Tighten bolts in a systematic order to the "T1" ft-lbs torque.
  - Loosen and retighten bolts to the "T2" ft-lbs torque. Use the same order as the initial tightening and DO NOT OVER TIGHTEN! Bury threads at junction with nut using a center punch.

Accompanied by dwgs. TM200, TM201, TM635, TM675

CALC. BOOK NO.	1493	SDR DATE	09-JAN-2015
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications			
<b>OREGON STANDARD DRAWINGS</b>			
<b>TRIANGULAR BASE BREAKAWAY MULTI-DIRECTIONAL SLIP BASE DESIGN</b>			
2021			
DATE	REVISION DESCRIPTION		

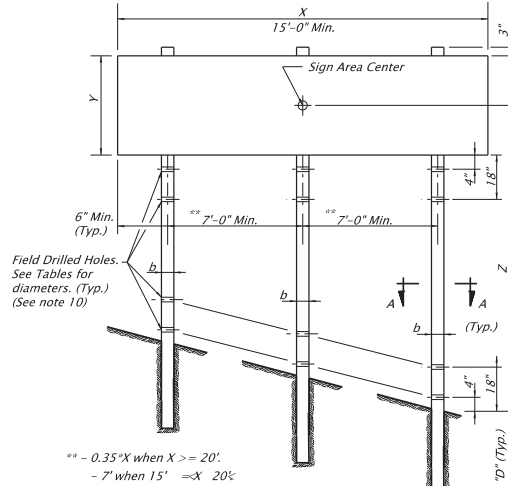
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.



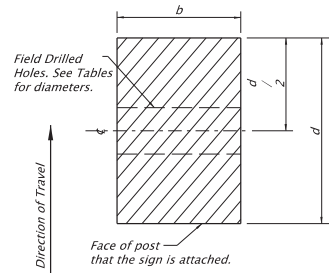


**ELEVATION**

No scale



\*\* - 0.35\*X when X >= 20'  
- 7' when 15' <= X < 20%



**SECTION A-A**

No scale

**General Notes:**

1. Wood posts are available in the following commercial lengths: 12', 14', 16', 18', 20', 22', 24', 26'.
2. Material shall be Douglas Fir No. 1 and according to Section 02110.40.
3. For horizontal and vertical clearances of permanent signs refer to TM200 and of temporary signs refer to TM822.
4. Wood post design in accordance with the 5th Edition 2009 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.
5. Use the 3 second gust wind speeds shown on TM671 for the site specific sign location.
6. General design parameters are  $K_z = 0.87$ ,  $SIF$  (duration factor) = 1.6,  $C_d$  (sign) = 1.20, and  $G = 1.14$ .
7. The sign width to sign height or sign height to sign width ratio shall not exceed 5.0.
8. Permanent signing uses an  $I_r = 0.71$  for a recurrence interval of 10 years.
9. Temporary signing uses an  $I_r = 0.45$  for a recurrence interval of 1.5 years.
10. Posts protected by barrier or guardrail do not require field drilled holes.
11. 4" x 4" posts should not be used in snow plow areas.

**Post Embedment Installation:**

1. Excavate the hole at least 12" larger in diameter than the diagonal dimension of the post. Maintain at least 6" of space around the edges of the post to accommodate compaction equipment.
2. Align the post in the hole to a vertical position.
3. The space around the wood post shall be backfilled to finished ground surface.
4. Backfill with selected general backfill meeting the requirements of 00330.13.
5. Place in layers not greater than 6 inches.
6. Solidly ram and tamp the layers into the excavation area around the post.
7. Dampen during placement if too dry to compact properly.
8. Replace and finish the surface around the post to match the surrounding surface.

		$(X * Y * Z)$ in $ft^3$ - Maximum												Field Drilled Hole Diameters	Post Embedment Depth "D"
		3 Second Gust Wind Speed (TM671)													
		85 MPH				95 MPH				105 and 110 MPH					
POST SIZE $b \times d$		Number of Posts				Number of Posts				Number of Posts					
		1	2	3*	3*	1	2	3*	3*	1	2	3*	3*		
4" x 4"		77	154	165	231	62	124	132	186	56	112	120	168	Not Req'd	4' - 0"
4" x 6"		162	324	347	486	130	260	278	390	117	234	250	351	1 1/2"	5' - 0"
6" x 6"		270	540	578	810	216	432	462	648	195	390	417	585	2"	5' - 0"
6" x 8"		494	988	1058	1482	395	790	846	1185	356	712	762	1068	3"	7' - 0"

**PERMANENT WOOD POST TABLE**

\*\* - Linear Interpolate  $X*Y*Z$  3 post values for signs greater than 15' and less than 20'.  
\*\* - See note 8

		$(X * Y * Z)$ in $ft^3$ - Maximum												Field Drilled Hole Diameters	Post Embedment Depth "D"
		3 Second Gust Wind Speed (TM671)													
		85 MPH				95 MPH				105 and 110 MPH					
POST SIZE $b \times d$		Number of Posts				Number of Posts				Number of Posts					
		1	2	3*	3*	1	2	3*	3*	1	2	3*	3*		
4" x 4"		122	244	261	366	98	196	210	294	88	176	188	264	Not Req'd	4' - 0"
4" x 6"		257	514	550	771	205	410	439	615	185	370	396	555	1 1/2"	5' - 0"
6" x 6"		426	852	912	1278	341	682	730	1023	308	616	660	924	2"	5' - 0"
6" x 8"		779	1558	1669	2337	624	1248	1337	1872	563	1126	1206	1689	3"	7' - 0"

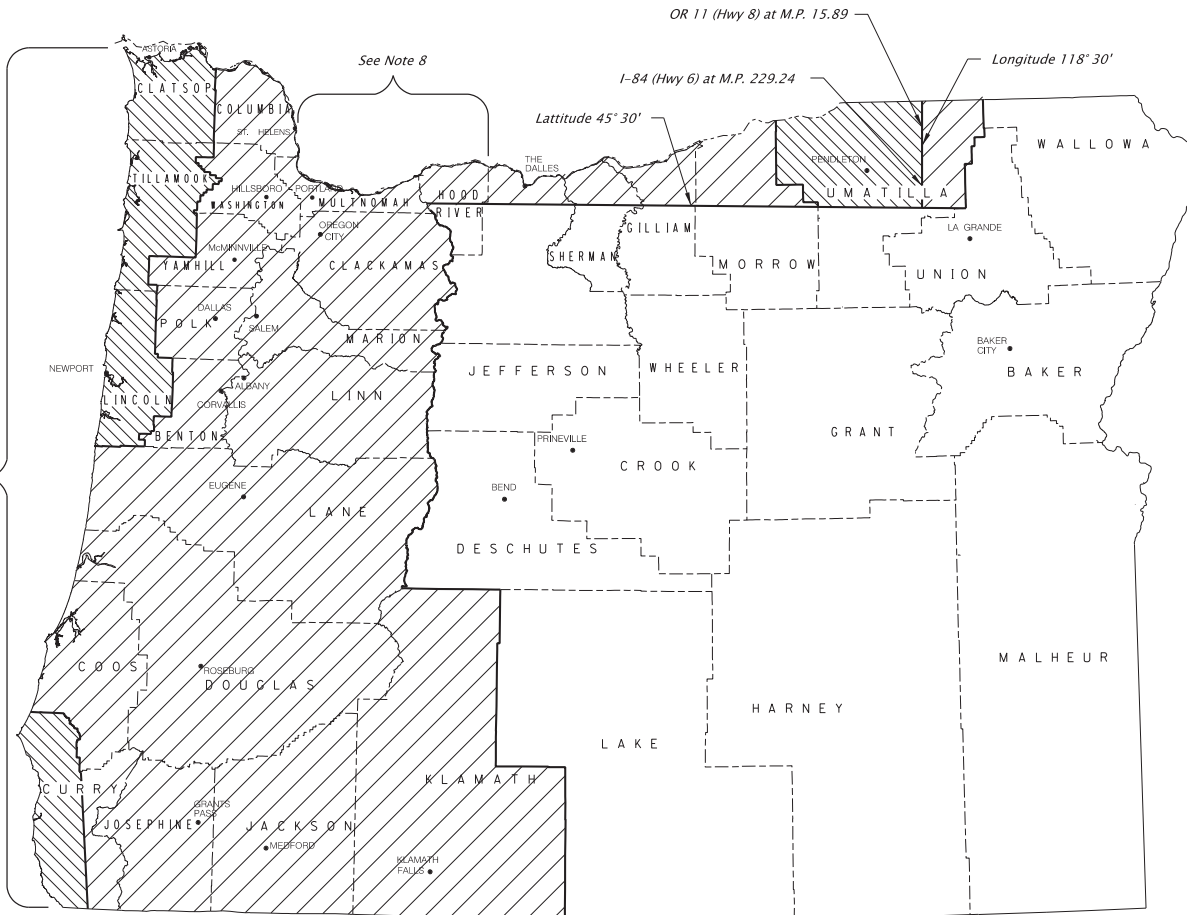
**TEMPORARY WOOD POST TABLE**

\*\* - Linear Interpolate  $X*Y*Z$  3 post values for signs greater than 15' and less than 20'.  
\*\* - See note 9

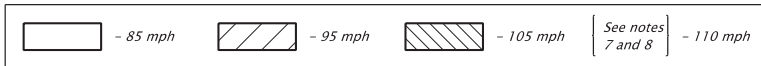
Accompanied by dwgs. TM200, TM671, TM822

CALC. BOOK NO. <b>5850</b>	SDR DATE <b>06-JAN-2017</b>
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
<b>OREGON STANDARD DRAWINGS</b>	
<b>WOOD POST SIGN SUPPORTS</b>	
2021	
DATE	REVISION DESCRIPTION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.



See Note 8

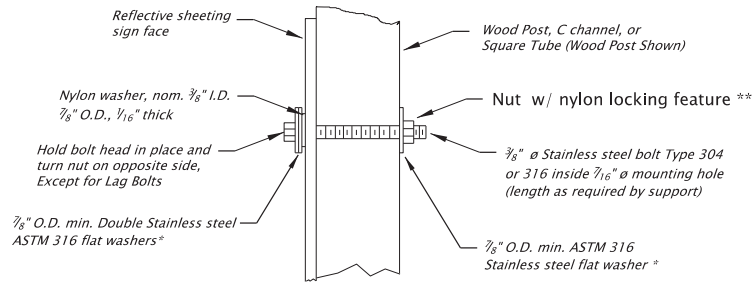


1. The wind velocity map as shown is adapted from AASHTO 2001 4th Edition - "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals", Appendix C, Figure C-3 and Section 3, Figure 3-2. It uses the wind speed map shown in Figure 1609 of the 2007 Oregon Structural Code to account for locations in the State with special wind regions.
2. The wind velocities shown above are 3-Second Gust wind velocities.
3. The Exposure Category is C.
4. The mean recurrence interval is 50-Years.
5. Mountainous terrain, gorges, and ocean promontories are classified as special wind regions and shall be examined for unusual wind conditions.
6. The Interval Height (Kz) is 30 ft.
7. All areas with full exposure to ocean winds shall be designated 110 mph areas.
8. Areas in Multnomah and Hood River counties with full exposure to Columbia River Gorge winds shall be designated 110 mph areas.
9. Localities may have adopted wind speed higher than that shown on this map. Those higher wind speed shall be used.

CALC. BOOK NO. _____	SDR DATE <b>06-JAN-2012</b>
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
<b>OREGON STANDARD DRAWINGS</b>	
<b>3 SECOND GUST WIND SPEED MAP</b>	
2021	
DATE	REVISION DESCRIPTION

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.*

10-JUL-2020  
tm676.dgn

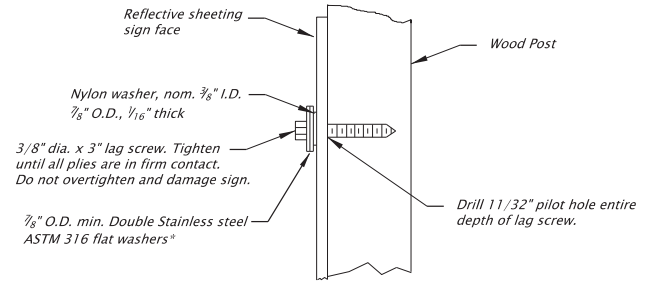


Note:  
 1) When signs are placed on opposing sides of post, 3/8" x 3" lag screws can be used instead of through bolt.  
 2) Use nylon and stainless steel washers when signs are placed on both sides of post.  
 3) Burr threads at junction with nut when locknuts are not used.  
 4) Post bolts to extend beyond the tightened nuts within the limits of 1/4" to 1".

\* Stainless steel bonded sealing washer with neoprene layer is an acceptable substitute

\*\* Acceptable substitute for nylon locking nuts:  
 ANCO PIN-LOC  
 TRI-LOC® Top Lock Locknut

**SIGN ATTACHMENT DETAIL**



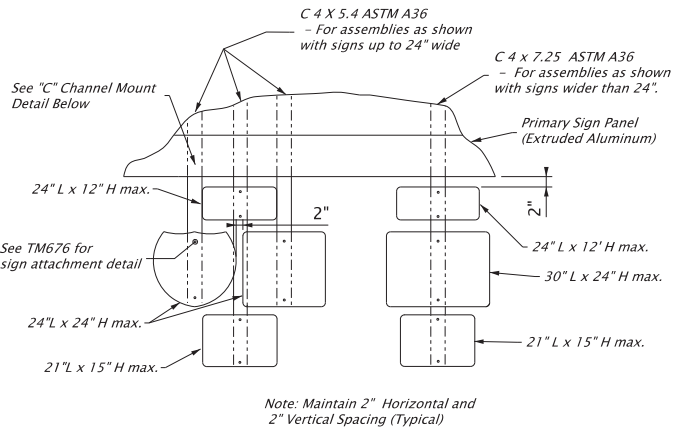
\* Stainless steel bonded sealing washer with neoprene layer is an acceptable substitute

Note: This optional detail is to be used only when specified on a project.

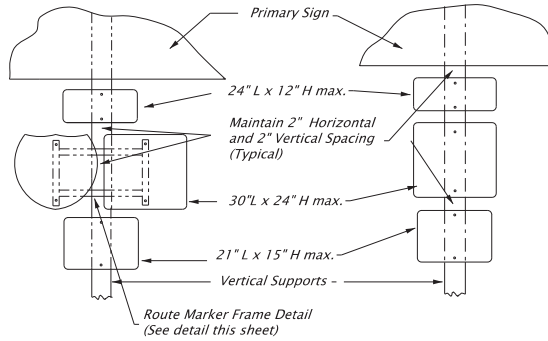
**OPTIONAL WOOD POST LAG SCREW DETAIL**

TM676

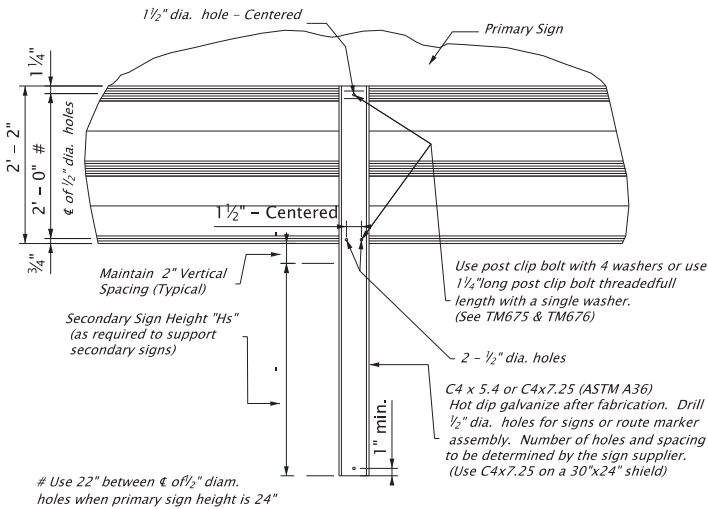
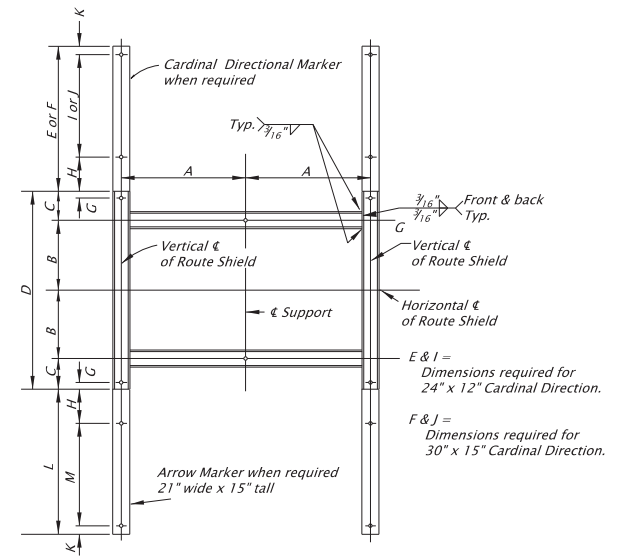
CALC. BOOK NO. _____		SDR DATE <u>10-JUL-2020</u>	
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications			
<p>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>		<b>OREGON STANDARD DRAWINGS</b>	
		<b>SIGN ATTACHMENTS</b>	
		2021	
DATE	REVISION	DESCRIPTION	
07/20		Added optional lag screw detail.	



**ROUTE MARKERS MOUNTED TO EXTRUDED PANELS**  
No Scale



**ROUTE MARKERS MOUNTED TO VERTICAL SUPPORTS**  
No Scale



**"C" CHANNEL CONNECTION DETAIL**  
No Scale

Shield Sizes (in inches)	A	B	C	D	E	F	G	H	I	J	K	L	M
2 - 24" x 24"	13	8	3 1/2	23	14	17	3/4	4	9	12	1	17	12
1 - 24" x 24" & 1 - 30" x 24"	14 1/2	8	3 1/2	23	14	17	3/4	4	9	12	1	17	12
2 - 30" x 24"	16	8	3 1/2	23	14	17	3/4	4	9	12	1	17	12
2 - 36" x 36"	19	12	5 1/2	35	14	17	1 3/8	4	9	12	1	17	12
1 - 36" x 36" & 1 - 45" x 36"	21 1/4	12	5 1/2	35	14	17	1 3/8	4	9	12	1	17	12
2 - 45" x 36"	23 1/2	12	5 1/2	35	14	17	1 3/8	4	9	12	1	17	12

Note: Route Marker frames shall be constructed from 2" x 2" x 3/16" ASTM A53 GR B tubing, galvanized after fabrication. Provide 7/16" holes, 3/8" galvanized steel bolts, washers, and lock-nuts for mounting route marker frame to post. For sign attachments see TM676.

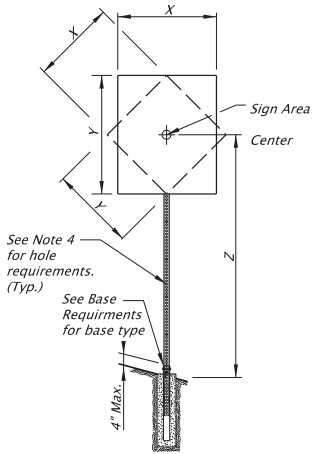
**ROUTE MARKER FRAME DETAIL**

No Scale

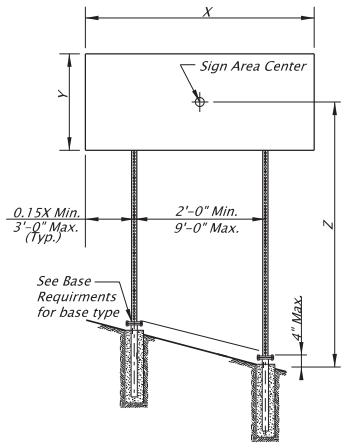
Accompanied by dwgs. TM675, TM676

CALC. BOOK NO. _____	SDR DATE <b>09-JAN-2015</b>
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
<b>OREGON STANDARD DRAWINGS</b>	
<b>SECONDARY SIGN MOUNTING DETAILS</b>	
2021	
DATE	REVISION DESCRIPTION

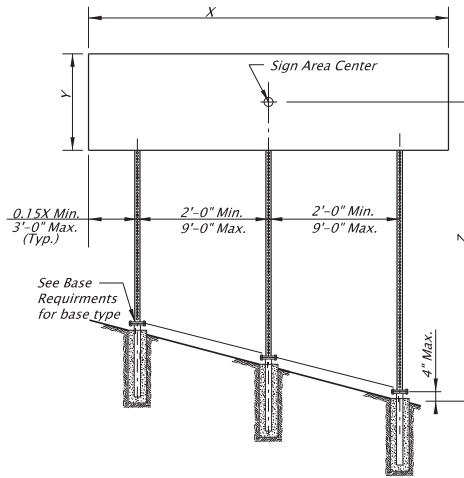
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.



**SINGLE POST ELEVATION**  
No scale



**TWO POST ELEVATION**  
No scale



**THREE POST ELEVATION**  
No scale

Square Tube Size	(X * Y * Z) in ft <sup>3</sup> - Maximum								
	3 Second Gust Wind Speed (TM671)								
	85 MPH			95 MPH			105 or 110 MPH		
	Number of Posts			Number of Posts			Number of Posts		
2"-12 ga.	79	158	237	63	126	189	57	114	171
2½"-12 ga.	136	272	408	109	218	327	98	196	294
2½"-10 ga.	165	330	495	132	264	396	119	238	357
2¼" & 2½"-12 ga.	231	462	693	185	370	555	167	334	501

**PERMANENT PERFORATED STEEL SQUARE TUBE TABLE**

Square Tube Size	(X * Y * Z) in ft <sup>3</sup> - Maximum								
	3 Second Gust Wind Speed (TM671)								
	85 MPH			95 MPH			105 or 110 MPH		
	Number of Posts			Number of Posts			Number of Posts		
2"-12 ga.	125	250	375	100	200	300	90	180	270
2½"-12 ga.	215	430	645	172	344	516	155	310	465
2½"-10 ga.	261	522	783	209	418	627	189	378	567
2¼" & 2½"-12 ga.	364	728	1092	292	584	876	263	526	789

**TEMPORARY PERFORATED STEEL SQUARE TUBE TABLE**

\* - See 2¼" & 2½" - 12 ga. detail.

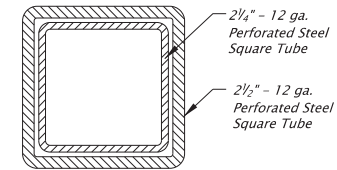
Square Tube Size	Number of Posts		
	1	2	3
2"-12 ga.	Anchor	Anchor	N/A
2½"-12 ga.	Anchor	Slip	Slip
2½"-10 ga.	Slip	Slip	Slip
2¼" & 2½"-12 ga.	Slip	Slip	Slip

1. Anchor - See Drawing TM687 for PSST anchor foundation details.
2. Slip - See Drawing TM688 for PSST slip base foundation details.
3. N/A - Do not use this option.

**BASE REQUIREMENTS**

**GENERAL NOTES:**

1. Perforated Steel Square Supports are designed in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals 4th Edition, 2001, 2002, 2003, and 2006 interim revisions.
2. The design basic wind speed (3 second gust) shall be according to the wind map shown on TM671.
3. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
4. Use 7/16" diameter holes at 1" spacing on each of the 4 sides.
5. Steel post shall have a minimum yield stress of 50 ksi.
6. Steel shall be galvanized according to ASTM A653 with coating designation G90.
7. General design parameters are Kz = 0.87, Cd (sign) = 1.20, and G = 1.14.
8. Permanent signing uses an Ir = 0.45 for a recurrence interval of 10 years.
9. Temporary signing uses an Ir = 0.45 for a recurrence interval of 1.5 years.
10. The sign width to sign height or sign height to sign width ratio shall not exceed 5.0.
11. For horizontal and vertical clearances of permanent signs refer to TM200 and of temporary signs refer to TM822.
12. Posts protected by barrier or guardrail do not require slip bases.



2¼" - 12 ga. PSST to extend entire length inside of the 2½" - 12 ga. PSST.

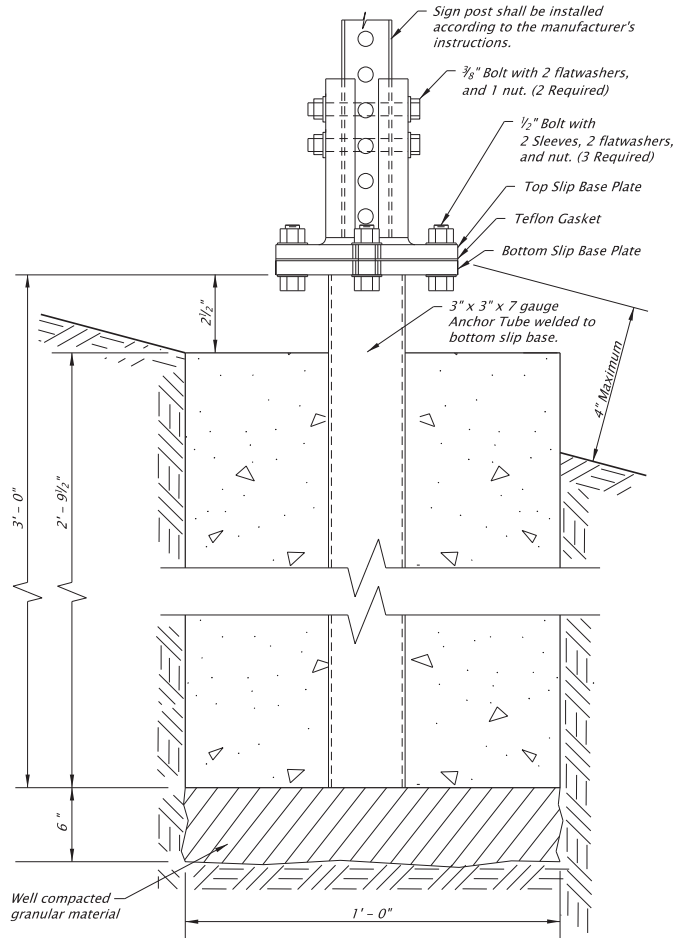
**2¼" & 2½" - 12 GA. DETAIL**

No scale

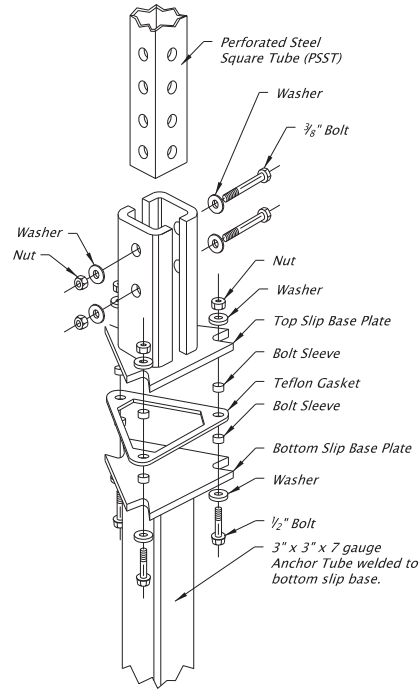
Accompanied by dwgs. TM200, TM671, TM687, TM688, TM689, TM822

CALC. BOOK NO. 5752	SDR DATE 10-JUL-2017
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
<b>OREGON STANDARD DRAWINGS</b>	
<b>PERFORATED STEEL SQUARE TUBE (PSST) SIGN SUPPORT INSTALLATION</b>	
2021	
DATE	REVISION DESCRIPTION

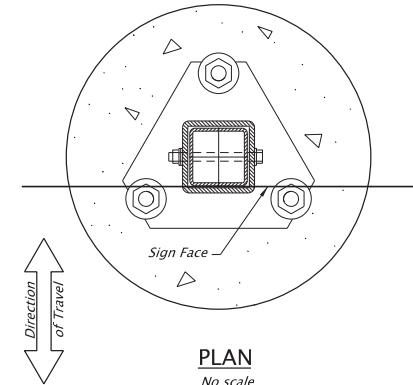
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.



**SLIP BASE ELEVATION**  
No scale



**SLIP BASE EXPLODED VIEW**  
No scale



**PLAN**  
No scale

**General Notes:**

1. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
2. Slip base steel shall be hot dipped galvanized or approved equal.
3. Footing concrete shall be Commercial Grade Concrete (fc = 3000 psi) per Specification 00440. The CGC mixture may be accepted at the site of placement according to 00440.14.
4. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
5. All slip bases shall be pre-assembled by the manufacturer and shall be installed according to the manufacturer's instructions.
6. Use slip bases listed on the ODOT Qualified products list or submit crash testing data, installation instructions, and unstamped working drawings according to 00150.35.
7. Slip base details shown are not for a specific manufacturer and are only shown to convey general pieces of a slip base system. Specific slip base material will be according to the manufacturer's documentation.

Accompanied by dwgs. TM681, TM687

CALC. BOOK NO. <b>5752</b>	SDR DATE <b>06-JAN-2012</b>
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
<b>OREGON STANDARD DRAWINGS</b>	
<b>PERFORATED STEEL SQUARE TUBE (PSST) SLIP BASE FOUNDATION</b>	
2021	
DATE	REVISION DESCRIPTION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

01-JUL-2021

TM800

TAPER TYPES & FORMULAS	
TAPER	FORMULA
Merging (Lane Closure)	"L"
Shifting	"L"/2 or 1/2"L"
Shoulder Closure	"L"/3 or 1/3"L"
Flagging (See Drg. TM850)	50' - 100'
Downstream (Termination)	Varies (See Drawings)

★ Use Pre-Construction Posted Speed to select the Speed from the Tables below:

TEMPORARY BARRIER FLARE RATE TABLE	
★ SPEED (mph)	MINIMUM FLARE RATE
≤ 30	8:1
35	9:1
40	10:1
45	12:1
50	14:1
55	16:1
60	18:1
65	19:1
70	20:1

MINIMUM LENGTHS TABLE					
"L" VALUE FOR TAPERS (ft)					BUFFER "B" (ft)
★ SPEED (mph)	W = Lane or Shoulder Width being closed or shifted				
	W ≤ 10	W = 12	W = 14	W = 16	
25	105	125	145	165	75
30	150	180	210	240	100
35	205	245	285	325	125
40	265	320	375	430	150
45	450	540	630	720	180
50	500	600	700	800	210
55	550	660	770	880	250
60	600	720	840	960	285
65	650	780	910	1000	325
70	700	840	980	1000	365
FREEWAYS					
55	1000	1000	1000	1000	250
60	1000	1000	1000	1000	285
65	1000	1000	1000	1000	325
70	1000	1000	1000	1000	365

NOTES:

- For Lane closures where W < 10', use "L" value for W = 10'.
- For Shoulder closures where W < 10', use "L" value for W = 10' or calculate "L" using formula, for Speeds ≥ 45: L = WS, Speeds < 45: L = S<sup>2</sup>W/60, S = Speed, W=Width

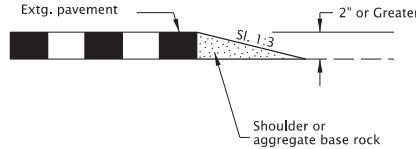
TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE				
★ SPEED (mph)	Sign Spacing (ft)			Max. Channelizing Device Spacing (ft)
	A	B	C	
20 - 30	100	100	100	20
35 - 40	350	350	350	20
45 - 55	500	500	500	40
60 - 70	700	700	700	40
Freeway	1000	1500	2640	40

NOTES:

- Place traffic control devices on 10 ft. spacing for intersection and access radii.
- When necessary, sign spacing may be adjusted to fit site conditions.
- Limit spacing adjustments to 30% of the "A" dimension for all speeds.

NOTES:

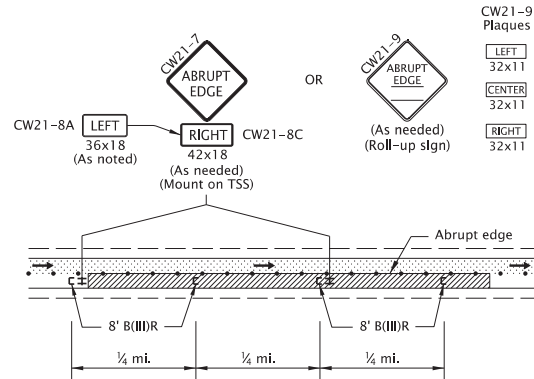
- When paved shoulders adjacent to excavations are less than four feet wide protect longitudinal abrupt edge as shown.
- Use aggregate wedge when abrupt edge is 2 inches or greater.



EXCAVATION ABRUPT EDGE

NOTES:

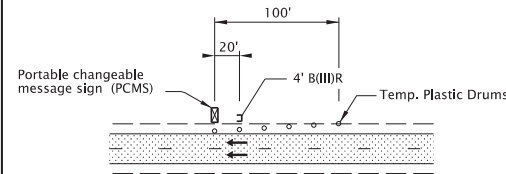
- Abrupt edges may be created by paving, operations, excavations or other roadway work. Use abrupt edge signing for longitudinal abrupt edges of 1 inch or greater.
- If the excavation is located on left side of traffic, replace the 8' B(III)R barricades with 8' B(III)L barricades and replace the "RIGHT" (CW21-8C) riders with "LEFT" (CW21-8A) riders.
- Continue signing and other traffic control devices throughout excavation area at spacings shown.
- If roll-up signs are used, attach the correct (CW21-9) plaques to the sign face using hook and loop fasteners. Place roll-up signs in advance of barricades.



TYPICAL ABRUPT EDGE DELINEATION

NOTES:

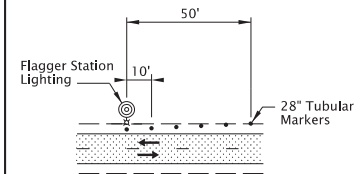
- Install PCMS beyond the outside shoulder, when possible.
- Use the appropriate type of barricade panels for PCMS location. Right shoulder, use Type B(III)R. Left shoulder, use Type B(III)L.
- Use six drums in shoulder taper on 20' spacing. The drums and barricade may be omitted when PCMS is placed behind a roadside barrier.
- Detail as shown is used for trailered and non-crashworthy components of:
  - Portable Traffic Signals
  - Smart Work Zone Systems



PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) INSTALLATION

NOTES:

- Install Flagger Station Lighting beyond the outside shoulder, where practical.
- Use six tubular markers in shoulder taper on 10' spacing.
- Place cart / generator / power supply off of the shoulder, as far as practical.



FLAGGER STATION LIGHTING DELINEATION

GENERAL NOTES FOR ALL TCP DRAWINGS:

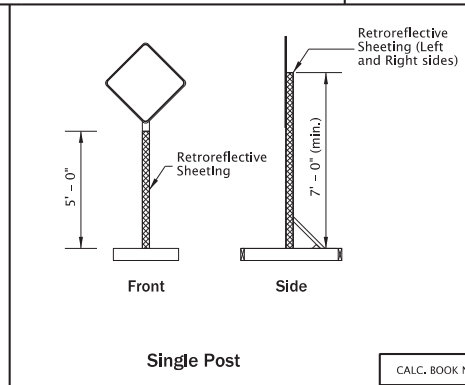
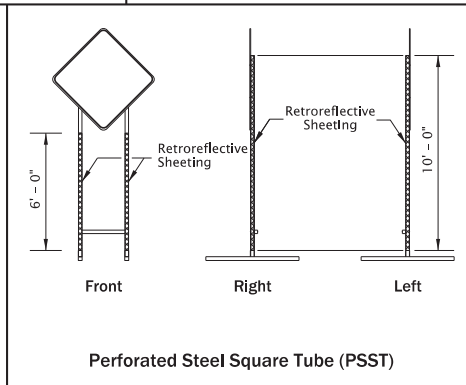
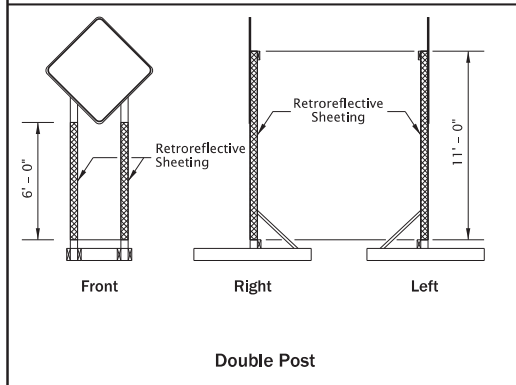
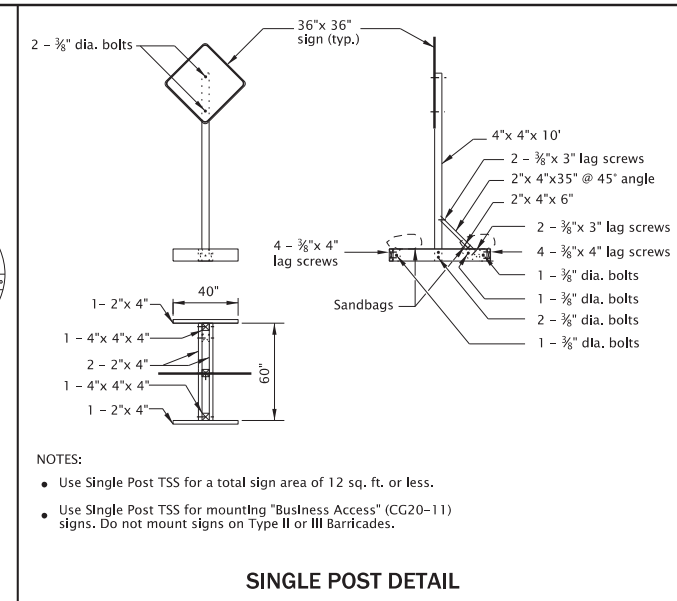
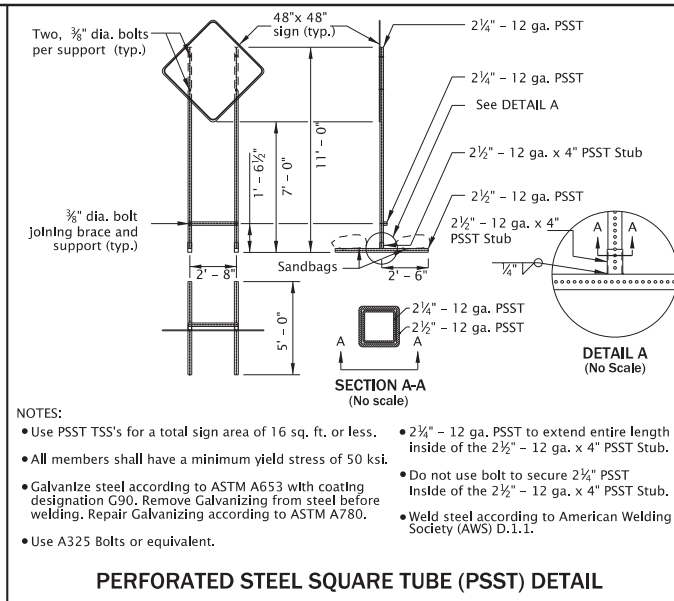
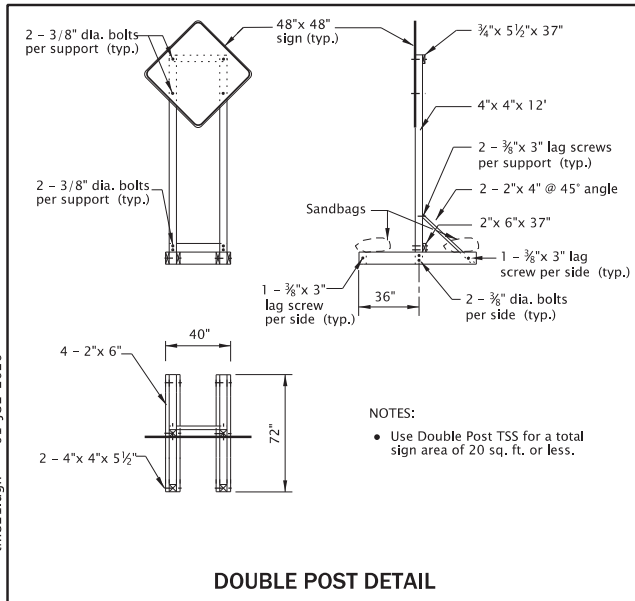
- Signs and other Traffic Control Devices (TCD) shown are the minimum required.
- Place a barricade approx. 20' ahead of all sequential arrow boards.
- Arrows shown in roadway are directional arrows to indicate traffic movements.
- All signs are 48" x 48" unless otherwise shown. Use fluorescent orange sheeting for the background of all temporary warning signs.
- All diamond shaped warning signs mounted on barrier sign supports shall be 36" by 36". All other signs mounted on barrier sign supports shall not exceed 12 sq. ft. in total sign area.
- Low speed highways have a pre-construction posted speed of 40 mph or less. High speed highways have a pre-construction posted speed of 45 mph or higher.
- Do not locate sign supports in locations designated for bicycle or pedestrian traffic.
- Combine drawing details to complete temporary traffic control for each work activity.
- To be accompanied by Dwg. Nos. TM820 & TM821.

- Temp. Plastic Drums See TCD Spacing Table for max. spacing.
  - 28" Tubular Markers See TCD Spacing Table for max. spacing.
- UNDER TRAFFIC  
 UNDER CONSTRUCTION

CALC. BOOK NO. <u>    </u> TM09-01 <u>    </u>	SDR DATE <u>    </u> 01-JUL-2021 <u>    </u>
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
<b>OREGON STANDARD DRAWINGS</b>	
<b>TABLES, ABRUPT EDGE AND PCMS DETAILS</b>	
2021	
DATE	REVISION DESCRIPTION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.





**TEMPORARY SIGN SUPPORT GENERAL NOTES:**

- Do not tip over TSS at any time.
- Do not locate TSS's in locations that block pedestrian or bicycle traffic.
- For wooden TSS's, use either Douglas Fir or Hem Fir, which is surfaced four sides (S4S) and free of heart center (FOHC).
- See "Temporary Sign Placement" detail on TM822 for sign installation heights.
- Do not place or stack ballast more than 24" above the ground.
- When sign is inconsistent with current work zone conditions, cover sign; or turn sign 90 degrees away from approaching traffic. Remove TSS from roadway when signing is not needed for more than 3 days.
- Place a minimum of 50 lbs of sandbags on each of the four TSS supports legs. (25 lb. max per bag) (min. 100 lbs per side of each TSS).
- See Dwg. No. TM204 for flag board mounting detail.

**NOTES:**

- Apply fluorescent orange, ANSI Type VIII or IX retroreflective sheeting to TSS posts, as shown, for all temporary signs, except "STOP" and "DO NOT ENTER". For "STOP" and "DO NOT ENTER" signs, used red ANSI Type III or IV retroreflective sheeting on the TSS posts.
- Apply sign post retroreflectivity to each TSS post facing front; and to the left and right sides of the TSS, as shown. Use 3" wide sheeting for wood post TSS's. Use 2" wide sheeting for PSST TSS's.
- Sheeting may be applied directly to post material; or applied to a rigid, lightweight substrate, then securely attached to the posts.

**NOTES:**

- Apply fluorescent orange, ANSI Type VIII or IX retroreflective sheeting to TSS posts, as shown, for all temporary signs, except "STOP" and "DO NOT ENTER". For "STOP" and "DO NOT ENTER" signs, used red ANSI Type III or IV retroreflective sheeting on the TSS posts.
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**SIGN POST REFLECTIVE SHEETING PLACEMENT**

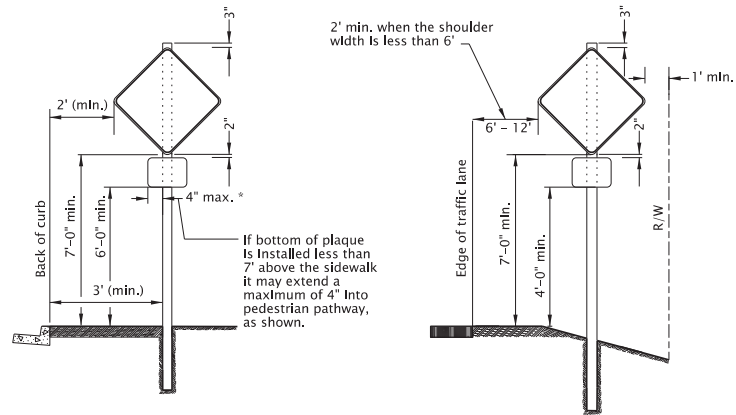
CALC. BOOK NO. --- N/A ---	SDR DATE --- 01-JUL-2020 ---
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
<b>OREGON STANDARD DRAWINGS</b>	
<b>TEMPORARY SIGN SUPPORTS</b>	
2021	
DATE	REVISION DESCRIPTION

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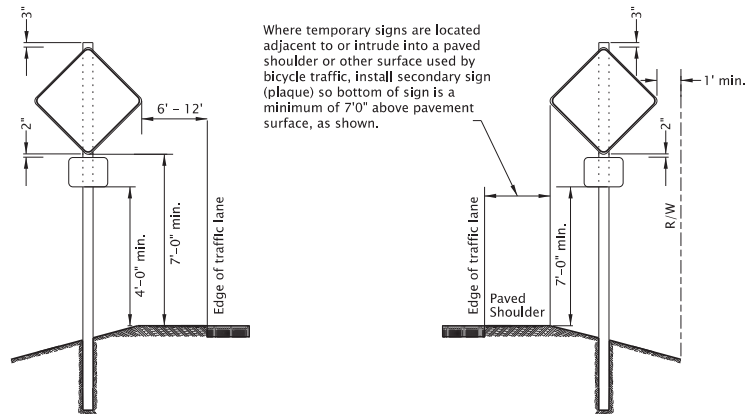
NOTES:

- Do not block bicycle lanes, sidewalks, or TPAR's with sign supports. Maintain minimum widths for these facilities according TCP Design Manual, MUTCD, ADA, or as directed.
- To be accompanied by Dwg. Nos. TM670, TM671, TM687, TM688 & TM689.



Urban Areas With Curb/Sidewalk

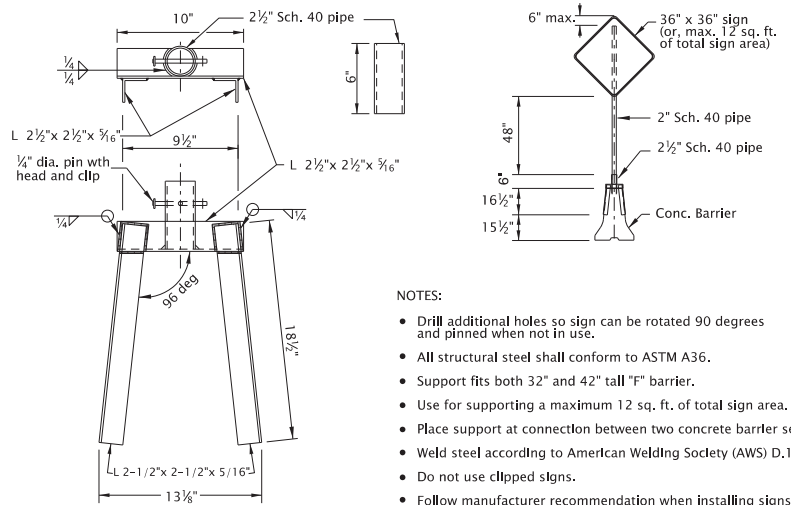
Rural Areas



Divided Highway/Freeway Medians  
No Curb/Sidewalk

Rural or Urban Areas - Curb or No Curb  
Bicycles On Shoulder

TEMPORARY SIGN PLACEMENT



NOTES:

- Drill additional holes so sign can be rotated 90 degrees and pinned when not in use.
- All structural steel shall conform to ASTM A36.
- Support fits both 32" and 42" tall "F" barrier.
- Use for supporting a maximum 12 sq. ft. of total sign area.
- Place support at connection between two concrete barrier sections.
- Weld steel according to American Welding Society (AWS) D.1.1.
- Do not use clipped signs.
- Follow manufacturer recommendation when installing signs on barrier other than concrete.

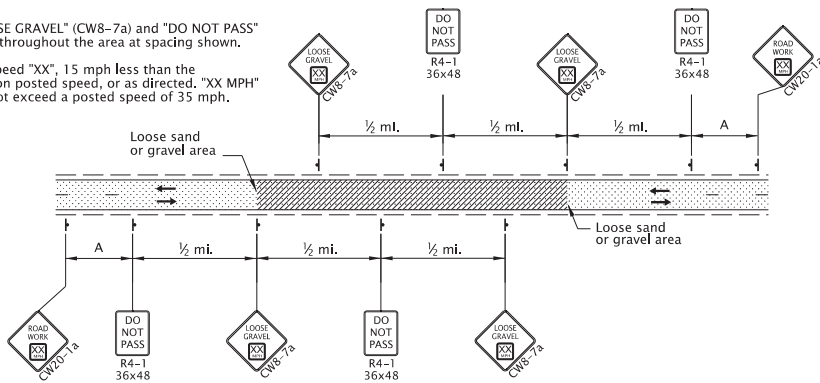
CONCRETE BARRIER SIGN SUPPORT

CALC. BOOK NO. --- N/A ---	SDR DATE --- 01-JUL-2020 ---
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
<b>OREGON STANDARD DRAWINGS</b>	
<b>TEMPORARY SIGN SUPPORTS</b>	
2021	
DATE	REVISION DESCRIPTION

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.*

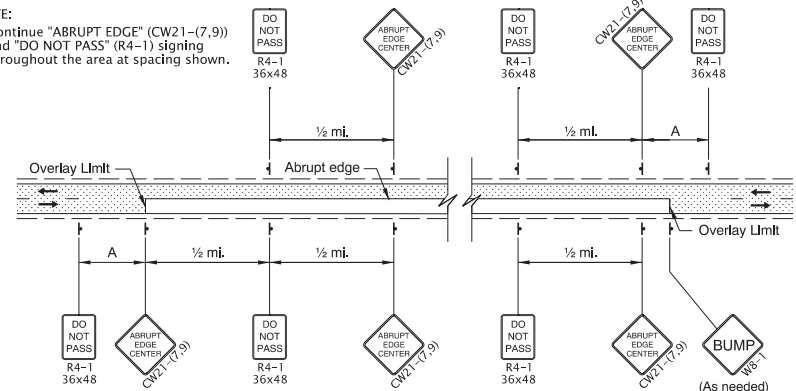
01-JUL-2020  
tm850.dgn

- NOTE:
- Continue "LOOSE GRAVEL" (CW8-7a) and "DO NOT PASS" (R4-1) signing throughout the area at spacing shown.
  - Use advisory speed "XX", 15 mph less than the pre-construction posted speed, or as directed. "XX MPH" placard shall not exceed a posted speed of 35 mph.



2-Lane, 2-Way Roadway  
**LOOSE GRAVEL IN ROADWAY SIGNING**

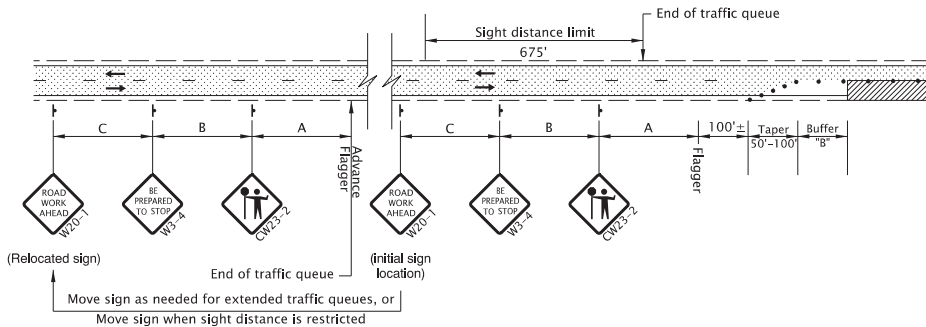
- NOTE:
- Continue "ABRUPT EDGE" (CW21-(7,9)) and "DO NOT PASS" (R4-1) signing throughout the area at spacing shown.



2-Lane, 2-Way Roadway  
**OVERLAY AREA SIGNING**

- NOTES:
- Place Advance Flagger and additional signing when traffic queues extend beyond initial warning signing OR when sight distance is restricted.
  - Relocate initial "ROAD WORK AHEAD" (W20-1) sign in advance of additional "BE PREPARED TO STOP" (W3-4) and Flagger Ahead (CW23-2) signs, as shown.

- Place additional Tubular Markers for Flagger and Advance Flagger Stations according to FLAGGER STATION DELINEATION detail.



**ADVANCE FLAGGER FOR EXTENDED TRAFFIC QUEUES**

GENERAL NOTES FOR ALL DETAILS:

- The "FLAGGER" (CW23-2) symbol sign shall be used only in conjunction with the "BE PREPARED TO STOP" (W3-4) sign.
- Cover existing passing zone signing, as directed.
- Install temporary striping as required.
- To determine Taper Length ("L") and Buffer Length ("B"), use the "MINIMUM LENGTHS TABLE" shown on Dwg. No. TM800.
- To determine sign spacing A, B, and C, use "TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE" on Dwg. No. TM800.
- Install a "BICYCLES ON ROADWAY" (CW11-1) sign in advance of the closure when a bike lane is closed, or when the shoulder is closed and bikes are expected.
- At night, flagger stations shall be illuminated according to the FLAGGER STATION LIGHTING DELINEATION detail on Dwg No. TM800.

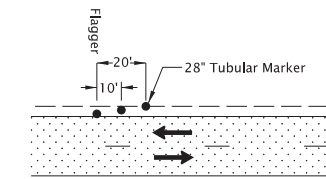
- To be accompanied by Dwg. Nos. TM820 & TM821.

- • • • • 28" Tubular Markers on 20' max. spacing for flagger tapers and stations
- • • • • 28" Tubular Markers See TCD Spacing Table on TM800 for max. spacing.

- UNDER TRAFFIC
- UNDER CONSTRUCTION
- CONSTRUCTION UNDER TRAFFIC

NOTE:

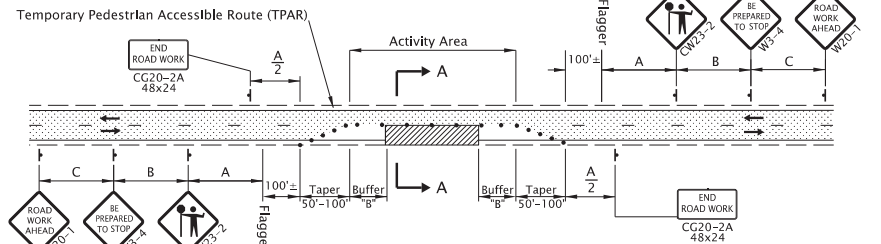
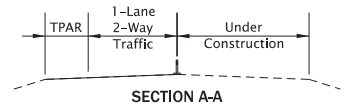
- Use a minimum of 3 tubular markers in shoulder taper on 10' spacing for flagger station delineation.



**FLAGGER STATION DELINEATION**

NOTE:

- When using pilot cars with flaggers to control traffic during paving operations, the Tubular Marker spacing along centerline may be increased to 200' within the Activity Area, as shown or as directed.
- Include "WAIT FOR FLAGGER" (CR4-23) signs mounted on Type II Barricade located approx. 50' before each Flagger.
- Coordinate and control pedestrians movements through the TPAR using Flaggers, other TCM, or as directed. When the existing shoulder is greater than or equal to 4' wide, provide a minimum of 4' of width for the TPAR.



2-Lane, 2-Way Roadway  
**ONE LANE CLOSURE**

CALC. BOOK NO. ---N/A---

SDR DATE 01-JUL-2020

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

**OREGON STANDARD DRAWINGS**

**2-LANE, 2-WAY ROADWAYS**

2021

DATE	REVISION DESCRIPTION

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TM850