

**ADDENDUM #2 for
Bid Number: 23-08-3104LE
Navajo Division of Transportation Project**

N546 & N547 – Shiprock, NM: Clearing & Grubbing for approximately 4.3 miles.

Addendum#2 is issued to extend the proposal submission date from October 10, 2023, at 2:00pm, to **October 24, 2023**, by no later than 2:00pm, Window Rock, AZ, time.

Disposal site of vegetation from clearing & grubbing work is at the following GOOGLE Earth Pro coordinates: As soon as Shiprock Chapter gives me the location of the disposal site, I will share the location with the Firms who attended the ‘Mandatory Pre-Bid Meeting’ at the project site.

In ADDENDUM #2 to the RFP, all corrections to the RFP are in **RED FONT**.

All other RFP requirements remain in force.

 10/19/2023

Don Jackson, Civil Engineer

Navajo DOT, Dept of Roads

Email: djackson@navajodot.org

**ADDENDUM #1 for
Bid Number: 23-08-3104LE
Navajo Division of Transportation Project**

N546 & N547 – Shiprock, NM: Clearing & Grubbing for approximately 4.3 miles.

Addendum#1 is issued to extend the proposal submission date from September 5, 2023, at 2:00pm, to **October 10, 2023**, by no later than 2:00pm, Window Rock, AZ, time.

In addition, here is the new Mandatory Pre-Bid Meeting time and questions posed by firms inquiring about this RFP.

MANDATORY PRE-BID MEETING TIME: October 3, 2023, at 11:30am, MST.

Some Firms have stated that they were at the Pre-bid meeting and no one from the Owner's team was present. On Page 2 of the RFP, the following is stated: "Note: If a firm download's from the websites given above or gets a copy of the RFP from another source other than from Mr. Jackson, please contact Mr. Jackson by email so that if an addendum(s) or questions are issued/answered, your firm will receive the information." If attention was given to this statement, the Owner's Rep would have notified the Firm of the Pre-bid meeting cancellation.

1. Q. Contractor providing its own water – What are the sources available? Can we pay to place a jumper on a hydrant to fill our water truck and pay based on the meter reading? Ans. *To acquire water for the project, contact: Melvin Badonie, Navajo Nation Water Code Compliance Officer, badoniem@yahoo.com, or 505-368-1426. He will also answer any questions on hydrants and the location of water source(s).*
2. What are the work hours? Can we work on weekends? *Work hours are at sunlight and 30 minutes prior to sunset. Working weekends will be determined at the Pre-bid meeting by Michele Peterson.*
3. What type of traffic control are you expecting? In looking at the Google Earth view, these are dirt roads that service a handful of houses. We don't want to include a full flagger crew with pilot cars in the bid if it is not necessary. The RFP says to always leave one lane open ... is the road wide enough to do so? Ans. *A full flagger crew with pilot cars is not required. At times parts of the roads will require closure; when closure is required, coordinate with Michele Peterson, Shiprock Chapter Manager, when full closure is required. Her contact info for now is: mpeterson@nnchapters.org*
4. Does this work require a P&P bond? Ans. *Yes, a Performance & Payment bond is required when the work begins. Page 4 of the RFP, statement #15 & 16, state the insurance requirements for this project.*
5. The RFP states the commencement is February or March next year. Is this a hard start date, or can we mobilize immediately? What is the presumed end of contract date? Ans. *Yes, February or March of next year is a hard date. The presumed end of the contract date will be reflected on the Firm's project schedule, for example a GANTT chart. Note: the proposal(s) points will include the time a Firm requires to complete the project.*
6. Do you have a preferred progression of work? For example, start N547 prior to N546? Ans. *The progression of work, N546 or N547, is up to the Contractor.*

7. How is firewood to be stockpiled for community use? Stack where dropped or collect and move to a designated area? Ans. *Michele Peterson will answer these questions at the Pre-Bid meeting. She is also the contact person during this project activity.*
8. Where is the designated area for chipping and hauling of tree limbs per the RFP? Are we leaving chips onsite or haul out/dispose of off-site? Ans. *Off site. The haul site is no further than 1.5 miles from the project site's furthest northwest location. A map will be provided by Michele Peterson at the Pre-bid meeting.*
9. What "materials" are you requiring submittals for? Only material that we can see using is the stump killer that's applied after grinding and tree wound dressing. Ans. *Yes, the only submittal is the stump killer.*
10. What type of "rejected material" would there be that we would then have to dispose of off-site in an approved recycling facility, per the RFP? Ans. *Only materials are vegetation to the designated area and all trash to the local transfer station.*
11. How is the final sign-off obtained and by whom? Ans. *Final sign-off will be done by Shiprock Chapter Manager, Michele Peterson.*
12. In the RFP it is called out to grind stumps but in the FP-14 regulations it says that stumps 24" and under should be removed. Which are we doing? If we are removing the stumps, FP-14 also says to backfill the holes created. Is there backfill material anywhere onsite or will we have to truck it in? Ans. *Stumps will be grinded.*
13. What type of SWPPP & BMP is required? In the RFP it references the requirements in FP-14 but there are no requirements listed in FP-14. Ans. *SWPPP & BMP is not required.*

In ADDENDUM #1 to the RFP, all corrections to the RFP are in **RED FONT**.

All other RFP requirements remain in force.

 9/18/23

Don Jackson, Civil Engineer
Navajo DOT, Dept of Roads
Email: djackson@navajodot.org

Addendum #2 to
Request for Proposals
Bid Number: 23-08-3104LE

The Navajo Nation Office of the Controller - Purchasing Department, and Navajo Division of Transportation - Department of Roads, are accepting qualifications and sealed bids for routes N546 & N547 - Shiprock: Clearing & Grubbing for approximately 4.3 miles.

Contacts for a bid packet are L. Etsitty, Navajo Nation Purchasing Department, www.nnooc.org, (928)871-6317; or, D. Jackson, Navajo DOT, Department of Roads, djackson@navajodot.org, (505)371-8350.

The closing date for this project is ~~September 5, October 10~~ **October 24** 2023, at 2:00pm, Window Rock, AZ, time. Any Proposals received after the closing date will be considered non-responsive and returned to the sender. No facsimile or emailed RFPs will be accepted.

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Section 1 - Overview

1. Request for Proposal (RFP) Packet – The instructions on the proposal preparation, required documents, eligibility requirements, and evaluation criteria are provided herein.

The RFP package may be obtained from the Navajo Division of Transportation website, beginning August 10 - <http://www.navajodot.org/RFP.aspx>. The Proposal Packet can also be obtained from the Navajo Nation Purchasing Department, www.nnooc.org, or, D. Jackson, Navajo DOT, djackson@navajodot.org, (505)371-8350.

Note: If a firm download's from the websites given above or gets a copy of the RFP from another source other than from Mr. Jackson, please contact Mr. Jackson by email so that if an addendum(s) or questions are issued/answered, your firm will receive the information.

2. This maintenance project includes the following challenges:

- There is no bid item for water; the contractor is expected to incorporate this cost into the maintenance activities requiring water.

General Scope of Work (SOW) – Clearing & Grubbing for approximately 4.3 miles. The Navajo Nation is the lead agency for this project.

Note: The Contractor selected for this project is tentatively not expected to start maintenance activities until March or April of 2023. No change order(s), regardless of the NTP date, will be entertained for price increases to complete this maintenance project. The Contractor's initial bid amount is what the Owner shall consider FIRM and non-negotiable.

3. Schedule of Activities: Note, all times are Window Rock, AZ, 2023, times.

<u>Activities:</u>	<u>Due Date:</u>
i. Advertised Period	Aug 10 thru Sept 5.
ii. Mandatory pre-bid meeting at project site.	August 25, 11:30am.
iii. Deadline to Submit RFP Questions	August 31 October 5 Oct 14 , by 12:00pm.
iv. Final Response to Written RFP Questions	September 1 October 6 Oct 18 by 12:00pm.
v. RFP Submittal Deadline	September 5 October 10 Oct 24 by 2:00pm.
vi. Evaluation of proposals	Week of September 11 October 16 Oct 23
vii. Final Selection of Firm	Week of September 11 October 16 Oct 23 .

4. Inquiries – Questions regarding this RFP must be submitted by email to the Project Contact listed below. Written responses to written questions and any RFP amendments will be distributed by email to all parties who obtained an RFP package and have notified L. Etsitty, NN Purchasing Department, or D. Jackson, Navajo DOT. No further questions, in any form, will be answered after the ~~August 31~~ ~~October 5~~ **October 14** deadline. Project Contact: D. Jackson, Engineer, Navajo Division of Transportation, Telephone: (505) 371-8350, and Email: djackson@navajodot.org.

5. Proposal Submittal Deadline – Proposals must be physically submitted to the following address by ~~September 5~~ ~~October 10~~ **October 24**, no later than 2:00 PM (local Window Rock, AZ time).

Navajo Division of Transportation
Attention: Don Jackson
Navajo Transportation Complex
#16 Old Coal Mine Road
Mentmore, NM 87319

Late, facsimiled or e-mailed proposals will not be accepted. These will be returned to the firm un-rated and firms responding in such mode shall be considered non-responsive.

6. Addendum to the RFP – In the event it becomes necessary to revise any part of the RFP, Navajo DOT shall issue a written addendum on the specifics of the change and inform all concerned. **Addendums will also be made available for download from the Navajo DOT website (www.navajodot.org).** The addendum(s) does not need to be included as part of the RFP document. However, the consulting firm should acknowledge receipt and review of the addendum(s) under the Letter of Interest.
7. Rejections of Proposals – The Navajo DOT reserves the right to reject any or all proposals and to waive informalities in the proposals received whenever such a rejection or waiver is in the best interest of the Navajo nation.
8. Proprietary Information – Any restrictions on the use of data contained within any proposals must be clearly stated in the proposal. Each page that contains proprietary information must be stamped or imprinted “Proprietary”.
9. Ownership of Proposals – All materials submitted with the RFP accepted for rating shall become the property of Navajo DOT and not returned to the firm. The Navajo DOT has the right to use any or all information presented in the RFP subject to limitations outlined in Paragraph 8, above. Disqualifications or non-selection of a firm or proposal does not eliminate this right.
10. Cost Incurred – The Navajo DOT is not liable for any cost incurred by the firm prior to the issuance of a signed contract for services.
11. Contractual Obligation – The contents of the proposal may become part of the contractual obligations of the contract award. Failure of the firm to accept these obligations may result in cancellation of the award for services.
12. Evaluation Criteria – Proposals accepted for rating shall be evaluated based on the criteria and point system set forth in Part 12(a) that follows.

Part 12(a) – Rating System on Evaluation Criteria

Each proposal will be evaluated and rated as follows. Descriptions of the components are provided in Section 3 – Proposal Content and Evaluation Criteria

- | | |
|--|-----------|
| 1. Overall professionalism and conciseness of proposal..... | 15 points |
| 2. Qualifications & Experience, of firm & project team..... | 30 Points |
| 3. Approach to Scope of Work, including FP-14 Specifications, and to include Project Understanding & Project Scheduling. | 40 Points |
| 4. Listing of Equipment for SOW; and Product Certifications as Stated in Specifications. | 15 Points |

A Short List of qualified candidates will be determined from the 100 points. To get to the Short List, the firms must receive a minimum of 80 points.

It is the intent of Navajo DOT to rank the firms according to the responses submitted. The Navajo DOT reserves the right to conduct detailed interviews in person, of qualified/responsive firms, if warranted.

13. Standard Contract – The Navajo Nation reserves the right to incorporate contract provisions which are based on applicable requirements, such as, Navajo Nation Laws, State, and local requirements, etc. into the contract documents. This includes provisions of the Navajo Business and Procurement Act, at 12 N. N. C. § 1501 et Seq., and the Navajo Business Opportunity Act, at 5 N. N. C. § 201 et Seq.

14. Taxes – All work performed, and services provided within the territorial jurisdiction of the Navajo Nation is subject to the six percent (6 %) Navajo Sales Tax (24 N. N. C. § 601 et Seq.).

15. Insurance – The Navajo Nation will require the successful firm, at its sole expense, to procure and maintain adequate and sufficient insurance for all potential liability, such as, commercial general liability, automobile liability, worker’s compensation, performance & payment bonds, etc. The general contractor shall provide all bonds and insurance prior to the Notice to Proceed with Construction. For the Proposal, provide affidavit from surety indicating Contractor’s ability to provide said bonds.

16. Bonding documentation required. The Navajo Nation’s Representative must receive written documentation of all required bonds prior to the issuance of a Notice to Proceed for the Project, and Contractor shall not commence any work or services under this Contract until such documentation is received by the Navajo Nation.

17. Disclaimer – The Navajo Nation’s acceptance or review of any proposal shall not guarantee the execution of any contract, and the proposed contract shall be reviewed by all appropriate departments through the 2 N. N. C. § 164 review process, including the Navajo Nation Department of Justice, for administrative and legal sufficiency, prior to execution by the Navajo Nation. The Navajo Nation reserves the right to reject any proposed contract prior to execution, for improprieties in the procurement process or applicable Navajo Nation or federal laws or regulations, or the failure to submit all requested documents or information.

Section 2 – Proposal Requirements and Selection

1. Proposal Submission

A. Proposal must be submitted in a sealed envelope clearly marked:

- a. **“DO NOT OPEN – Proposal for Bid #23-08-3104LE, N546 & N547 - Shiprock:** Clearing & Grubbing for approximately 4.3 miles.
- b. The name of the firm submitting the proposal shall be legibly written and shown on the outside of the sealed envelope, to include the firms address.

- B. Proposal Standards: The firm shall submit one (1) original and three (3) identical copies of their Proposal packet for the evaluation committee members. Appearance of proposal is important and professionalism in proposal presentation should not be neglected. The proposal standards are as follows:
- a. This RFP proposal may not exceed 15 single-sided pages (maximum 8 ½” x 11”) with a minimum of 10 pt. type.
 - b. Pages that have photos, charts, and graphs will be counted towards the maximum number of pages.
 - c. The following information is not included in the 15-page limit: proposal front and back cover; cover letter on company letterhead; divider and/or tabs, as long as there is nothing on them; and maximum 1-page resumes of each team member.
 - d. RFP submittals should be plastic or metal spiral-bound only. **Please do not submit RFP in loose-leaf 3-ring binders; these will be considered non-responsive and returned to the firm un-rated.**
 - e. Submissions exceeding the 15-page limit or any resumes exceeding the 1-page limit will be considered non-responsive and will be returned to the Applicant unrated.
- C. In a separate sealed envelope clearly marked as “**BID PROPOSAL – N546 & N547 - Shiprock; Bid #23-08-3104LE**”, the firm shall provide its bid amount to complete the Scope of Work. The sealed envelope will not be opened by the Navajo DOT until after the RFP proposals have been reviewed and ranked.
2. Proposal Review Process, Receipt of proposals, will be verified on the due date specified. The Navajo DOT will screen and evaluate proposals received in accordance with the following criteria. Proposals which fail this check will be considered non-responsive and returned to the firm un-rated.
- a. Proposal is received by the required deadline date and time.
 - b. Proposal meets the proposal submission requirement set forth above, under Section 2, Part 1, (A), (B), & (C).
3. Proposal Evaluation
- a. Proposal shall be evaluated and rated in accordance with the criteria outlined in Part 12(a) - Rating System on Evaluation Criteria.
 - b. The Navajo DOT will rate the proposal based on total points awarded and all firms with a minimum score of 80 out of 100 points will be determined as responsive. The Navajo DOT reserves the right to interview these qualified firms.
4. Award of Contract
- a. The Navajo DOT will issue a Notice to Proceed to the firm upon execution of the contract. No work shall be performed by the firm until such notice is given by Navajo DOT. The Navajo DOT is not liable for any cost incurred by the firm prior to issuance of a signed contract award, for “Clearing & Grubbing for approximately 4.3 miles.”

Section 3 – Proposal Content and Evaluation Criteria

1. Qualifications and Experience of firm and project team. Proposals must specifically address and affirm the following:

- a. Letter of Interest that indicates why your firm should be selected for project N546 & N547 - Shiprock. In addition, the firm should acknowledge receipt and review of any addendum(s) issued. State that firm is capable of performing all or most aspects of the project.
- b. Evidence of insurance and statement from bonding company that all bonds will be completed prior to Notice to Proceed with Construction.
- c. Resume of personnel that will be involved in the task of completing projects, including professional qualifications and experiences of key personnel. Include personnel of sub-consultants which will be utilized by the prime consultant.
- d. Provide key personnel's availability for the proposed work, and roles and responsibilities. Include their knowledge of the Navajo Nation, and FP-14 Specifications with respect to Clearing & Grubbing. Project length is approximately 4.3 miles.
- e. Organizational Chart outlining the inter-relationship and line of communication between the firm and sub-consultants.
- f. Recent experiences in providing services comparable to the proposed SOW as listed in Section 4. Interested firms shall provide three (3) references from similar projects within the last five (5) years. List the reference's contact person's name, address, and phone number.

3. Approach to Scope of Work with respect to FP -14 Specifications.

- a. Approach to Scope of Work - Describe your understanding of the project and approach to delivering the project SOW with respect to FP -14 Specifications, in addition to the work described in Section 4.
- b. Include how your firm will schedule the work. Include a graphical illustration i.e., a Project Schedule such as a GANTT Chart.

4. List of Equipment for SOW and Product Certifications, as Stated in Specifications.

- a. List equipment to complete the Scope of Work and list Product Certifications, including meeting requirements as stated in FP-14 Specifications.

Section 4 – SCOPE OF WORK for Project N546 & N547 - Shiprock, NM: Clearing & Grubbing. Project length is approximately 4.3 miles. While only the FP-14 Specifications for the Bid Items are attached to this RFP, the entire '*Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects FP-14*', applies to this project. Contractor is advised to read attached specifications which reference other specifications within FP-14.

This maintenances project includes the following challenges:

- *Note: The Contractor selected for this project is not expected to start maintenance activities until late February or March of 2023. No change order(s), regardless of the NTP date, will be entertained for price increases to complete this maintenance project. The Contractor's initial bid amount is what the Owner shall consider FIRM and non-negotiable.*
- There is no bid item for water; the contractor is expected to incorporate this cost into the maintenance activities requiring water.

FP-14 can be downloaded from the following website:
<https://flh.fhwa.dot.gov/resources/specs/fp-14/fp14.pdf>.

When construction begins, coordination with Navajo DOT shall be through the Construction Manager (CM), Don Jackson (505-371-8350), djackson@navajodot.org.

Scope of Work:

1. BOPs & EOPs: Refer to attached Strip Map.
2. Water is not a bid item. The Contractor selected for this project shall include the cost of water to perform all maintenance activities to specifications in the appropriate bid item. This includes dust abatement.
3. Section 107 - LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC: Follow the requirements of FAR Clause 52.236-7 Permits and Responsibilities. Comply with applicable laws, ordinances, safety codes, regulations, orders, and decrees. Protect and indemnify the Government and its representatives against claim or liability arising from or based on the alleged violation of the same. Comply with permits and agreements obtained by the Government for performing the work that is included in the contract. Obtain additional permits or agreements and modifications to Government obtained permits or agreements that are required by the Contractor's methods of operation. Submit copies of permits and agreements.
4. There is a **Mandatory Pre-Bid Meeting** at the project site on ~~August 25~~ **October 3**, 11:30am. The meeting will begin at the N546 BOP (36.795148, -108.725587). Coordinates given herewith are also shown on the attached Strip Map.
5. Mobilization - Section 151: This work consists of moving personnel, equipment, material, and incidentals to the project and performing work necessary before beginning work at the project site. This work also includes obtaining permits, insurance, and bonds.
6. Section 155 - SCHEDULES FOR CONSTRUCTION CONTRACTS. Submit construction schedule per Section 155.
 - a. Only Project Schedule required, such as a GANTT Chart.
 - b. Critical Path Method construction schedules are not allowed.
7. Section 156 – PUBLIC TRAFFIC. Controlling and protecting public traffic and dust abatement (for the work and public travel) is not a pay item.
8. Section 201. —CLEARING AND GRUBBING: This work consists of clearing and grubbing within the clearing limits ~~designated in the plans~~. Instead of plans, there will be a mandatory Pre-Bid Site visit to the project site for showing of the clearing limits.
 - a. Clearing of vegetation
 - i. Includes up to fence line on either side of the road
 - ii. Firewood to be stockpiled for community use
 - iii. Chipping and hauling of limbs to designated area
 - b. Tillage of soils
 - i. Includes stump grinding
 - ii. Includes vertical tillage of all vegetative matter
 - c. Stump Cut treatment to prevent regrowth

- d. Selected Contractor to coordinate the leaving of salvaged firewood for tribal members with Shiprock Chapter Manager.
9. Section 635 - TEMPORARY TRAFFIC CONTROL: In addition to following Section 635, Contractor is to abide by the following.
 - a. At least one lane will always remain opened, and motorists will always have access.
 - b. The Traffic Control Plan (TCP) will be submitted to the Construction Manager for approval 10 business days prior to any work on N546 & N547. Any changes to TCP during construction will require Contractor to submit updated plan to CM 5-days minimum for approval.
10. Submittals - In addition to submittals for Bid Items, other submittals required are the following: All submittals are considered incorporated into parts of appropriate Bid Items.
 - a. Certifications for materials, per FP-14 specifications.¹
 - b. Safety & Health Plan per FP-14 specifications.¹
 - c. Contact list of any subcontractors and key personnel.
 - d. ~~SWPPP & BMPs, per FP-14 specifications.¹~~
 - e. Project Schedule such as GANTT Chart. Note: Project Schedule is required for Proposal.
11. Water: There will be no separate bid item for water and the water permit. The cost for providing water shall be included in the respective bid items for the work to be performed.
12. The vendor will have to dispose of any rejected material at his own expense off the Government property in approved recycling facilities.
13. Explain approach for other activities required for acceptable Scope of Work and compliance with specifications.
14. State how project communication is intended to keep all parties involved in the project.
15. Materials Delivery Contractor shall follow their Temporary Traffic Control and Safety Plan throughout the construction of the project, as well as General Contractor's Temporary Traffic Control Plan.
16. Staging area is a Mobilization item.

CERTIFIED NAVAJO BUSINESS: If applicable, provide documentation that the business is currently certified by the Navajo Nation Business Regulatory Department and prioritized under Navajo Nation Council Resolution CAP-37-02 and, also, under the Section 204 (A) (1) and (2) of the revised Navajo Nation Business Opportunity Act.

If selected for this project, submit to Navajo DOT the following:

- PROOF OF CERTIFICATE OF INSURANCE: Provide proof of Certificate of Insurance.
- Taxpayer Identification: Form W-9.
- Affidavit of Non-Collusion.

Quality Assurance:

Navajo DOT will provide quality assurance to ensure that work is being performed in accordance with the Scope of Work and project specifications.

Final inspection will include Navajo DOT for acceptance of scope of work.

Compliance:

Comply with conditions stated in all compliance reports, cultural & biological. If a cultural site is discovered, immediately notify NDOT Roads Dept. Note: Navajo DOT will give copies of archeological & environmental reports to the selected Contractor.

Bid #23-08-3104LE**BID SCHEDULE FOR N546 & N547, Shiprock, NM, for construction activity: Clearing and Grubbing.**

August 10, 2023

BID SCHEDULE

BID ITEM NO.	FP-14 ITEM NO.	Item Description	Estimated Quantity	Unit	Unit Price	Total
1	151	Mobilization	All Required	LS		
2	201	Clearing and Grubbing	All Required	LS		
3	635	Temporary Traffic Control Plan.	All Required	LS		
4	N/A	Contingency.				\$10,000.00
		SUBTOTAL				
		Navajo Nation Tribal Tax - 6%.				
		TOTAL PROJECT COST.				

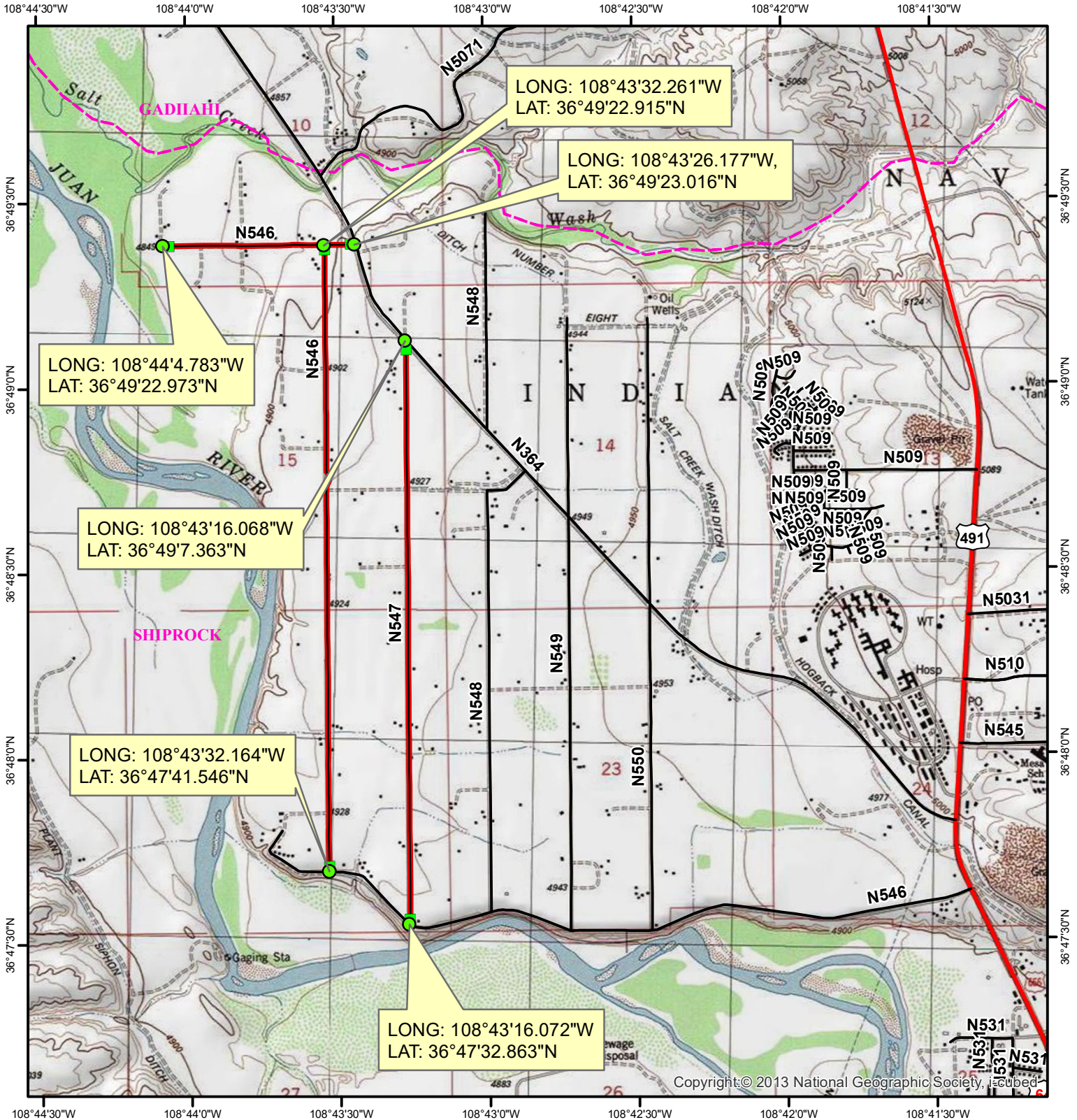
Note: No payment will be made for work performed in excess of that staked, ordered, or otherwise authorized.

FP-14 can be downloaded from the following FHWA website:

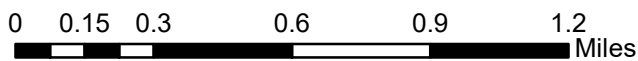
<https://flh.fhwa.dot.gov/resources/specs/fp-14/fp14.pdf>



N546 & N547 - Shiprock, NM Northern Agency



- N546
- N547
- BIA Roads
- Chapter Boundary



Route: N546 & N547
 Length: N/A
 Date: Aug 02, 2023
 Ownership: BIA



STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS

FP-14



U.S. Department
of Transportation

**Federal Highway
Administration**

Federal Lands Highway

**Standard Specifications
for Construction of
Roads and Bridges on
Federal Highway Projects**

FP-14

**UNITED STATES DEPARTMENT
OF TRANSPORTATION**

Federal Highway Administration

Section 201. — CLEARING AND GRUBBING

Description

201.01 This work consists of clearing and grubbing within the clearing limits designated in the plans.

Material

201.02 Conform to the following Subsections:

Backfill material	704.03
Tree wound dressing	713.08(g)

Construction Requirements

201.03 General. Construct erosion control measures according to Section 157. Perform work within designated limits.

Do not damage vegetation designated to remain. If damage occurs, repair or replace the vegetation in an acceptable manner. Where possible, preserve vegetation adjacent to bodies of water. Treat cuts or scarred surfaces of trees and shrubs with tree wound dressing.

201.04 Clearing. Within the clearing limits clear trees, brush, downed timber, and other vegetation as follows:

- (a) Cut trees so they fall within the clearing limits;
- (b) In areas of cut slope rounding, cut stumps flush with or below the final ground-line;
- (c) In areas outside the excavation, embankment, and slope rounding limits, cut stumps to within 6 inches (150 millimeters) of the ground; and
- (d) Trim tree branches that extend over the road surface and shoulders to attain a clear height of 20 feet (6 meters). If required, remove other branches to present a balanced appearance. Trim according to accepted tree surgery practices. Treat wounds with tree wound dressing.

201.05 Grubbing. Grub deep enough to remove stumps, roots, buried logs, moss, turf, or other vegetative debris as follows:

- (a) Grub areas to be excavated, except for cut slope rounding areas;
- (b) Grub embankment areas. Undisturbed stumps less than 24 inches (600 millimeters) in diameter may be left in place if they protrude less than 6 inches (150 millimeters) above the original ground and will be covered with more than 48 inches (1200 millimeters) of embankment. Remove all other stumps;
- (c) Grub pits, channel changes, and ditches only to the depth necessary for the excavation; and
- (d) Backfill stump holes and other grubbing holes with backfill material to the level of the surrounding ground according to Subsection 209.09. Compact backfill according to Subsection 209.10.

201.06 Disposal. Merchantable timber is the Contractor's property. Dispose of clearing and grubbing debris according to Subsection 203.05.

201.07 Acceptance. Clearing and grubbing will be evaluated under Subsection 106.02.

Material for tree wound dressing will be evaluated under Subsection 106.03.

Backfilling and compacting of stumps and grubbing holes will be evaluated under Section 209.

Measurement

201.08 Measure the Section 201 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

Do not make deductions from the area computation unless excluded areas are shown in the plans.

Do not measure clearing and grubbing of borrow or material sources.

Payment

201.09 The accepted quantities will be paid at the contract price per unit of measurement for the Section 201 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Section 635. — TEMPORARY TRAFFIC CONTROL

Description

635.01 This work consists of furnishing, installing, maintaining, relocating, and removing temporary traffic control devices and services as ordered for the control and protection of public traffic through the project.

Advance warning arrow board, barricade, and warning light types are designated in the MUTCD.

Material

635.02 Conform to the MUTCD and the following Sections and Subsections:

Concrete barrier (temporary)	618
Delineator and object marker retroreflectors	718.08(b)
Guardrail (temporary)	617
Retroreflective sheeting	718.01
Sign panels	633.05
Sign posts	633.04
Temporary plastic fence	710.11
Temporary pavement markings	718.16

Construction Requirements

635.03 Qualifications. Provide flaggers certified by ATSSA, the National Safety Council, a state department of transportation, or other acceptable organization. Use pilot car operators conforming to the qualifications of a flagger.

635.04 General. Furnish, install, and maintain temporary traffic control devices adjacent to and within the project as required by the MUTCD, traffic control plan, and Section 156. Install and maintain traffic control devices as follows:

- (a) Furnish and install traffic control devices before the start of construction operations;
- (b) Install only those traffic control devices needed for each stage or phase;
- (c) Relocate temporary traffic control devices as necessary;
- (d) Remove devices that no longer apply to the existing conditions;
- (e) Immediately replace devices that are lost, stolen, destroyed, or inoperative;
- (f) Keep temporary traffic control devices clean;
- (g) Furnish and maintain traffic control devices that meet the "acceptable" standard described in ATSSA, *Quality Standards for Work Zone Traffic Control Devices*. Amend the ATSSA standards as follows:
 - (1) Repair or remove and replace "marginal" devices within 48 hours; and

- (2) Repair or remove and replace "*unacceptable*" devices immediately;
- (h) Remove temporary traffic control devices upon contract completion or when approved; and
- (i) Furnish crashworthy temporary traffic control devices.

635.05 Barricades. Use barricades of the type and size specified or according to the MUTCD. Use Type III, IV, IX, or XI retroreflective sheeting.

635.06 Cones and Tubular Markers. Use cones or tubular markers of the height specified or according to the MUTCD. Use Type III or Type VI retroreflective sheeting.

635.07 Construction Signs. Use Type III, IV, VIII, IX, or XI prismatic retroreflective sheeting. Use fluorescent sheeting for orange signs. For roll-up signs, use fluorescent Type VI retroreflective sheeting.

Install posts according to Section 633. Portable sign supports may be used instead of sign posts when approved by the CO.

Remove or completely cover unnecessary signs. Use metal, plywood, or other acceptable material to cover signs. Do not use adhesives, glues, tapes, or mechanical fasteners that mar the face of the panel of the sign to be covered.

635.08 Drums. Use plastic drums that are at least 36 inches (900 millimeters) high and at least 18 inches (450 millimeters) in diameter. Use Type III or Type VI retroreflective sheeting.

635.09 Flaggers. Use flaggers certified according to Subsection 635.03. Use Type III, IV, VIII, IX, or XI retroreflective sheeting on flagger paddles. Do not use flags.

635.10 Pilot Cars. Use pilot car operators certified according to Subsection 635.03. Mount a "*PILOT CAR FOLLOW ME*" sign on the rear and a high-intensity, rotating, flashing, oscillating, or strobe light on the roof of the pilot car.

635.11 Temporary Barriers. Use temporary barriers that are crashworthy and are new or used provided they are not badly damaged. Lifting holes no larger than 4 inches (100 millimeters) or lifting loops are permitted.

Mount white or yellow retroreflectors as applicable, to the top or side of the barrier on 25-foot (8-meter) centers. Mount the retroreflectors at a uniform height at least 24 inches (600 millimeters) above the road surface. Flexible barrier delineators or barrier delineation tape may be used instead of retroreflectors when approved by the CO.

635.12 Temporary Guardrail. Construct temporary guardrail according to Section 617.

Mount white or yellow retroreflectors as applicable, to the top or side of the guardrail on 25-foot (8-meter) centers. Mount the retroreflectors at a uniform height at least 24 inches (600 millimeters) above the road surface.

635.13 Temporary Pavement Markings and Delineation. Before opening a pavement surface to traffic, remove conflicting pavement markings by sandblasting or other methods that do not damage the surface or texture of the pavement. Make the removal pattern uneven to not perpetuate the outline of the removed pavement markings. Lightly coat sandblasted or removal areas on asphalt surfaces with emulsified asphalt.

Place and maintain temporary pavement markings that are neat, crack free, true, straight, and unbroken.

If temporary signs and pavement markers are substituted for temporary pavement markings, install temporary signs and pavement markers according to the MUTCD and plans.

For temporary pavement markings, use preformed retroreflective tape, traffic paint, or pavement markers as follows:

(a) Preformed retroreflective tape. Apply according to the manufacturer's instructions. Remove loose preformed retroreflective tape before placing additional pavement layers.

(b) Pavement markers. Do not use pavement markers during seasonal suspensions. When chip seals, slurry seals, or tack coats are used after marker placement, protect the markers with an approved protective cover, and remove it after the asphalt material is sprayed.

(c) Traffic paint. Do not apply traffic paint to the final surface. Apply traffic paint as the temporary pavement marking if no work will be performed on the project for at least 30 consecutive days. Apply traffic paint at a 15 mil (0.38-millimeter) minimum wet film thickness or at a rate of 107 square feet per gallon (2.6 square meters per liter). Immediately apply Type 1 glass beads on the paint at a minimum rate of 6 pounds per gallon (0.7 kilograms per liter) of paint.

Remove temporary pavement markers before placing additional pavement layers or permanent pavement markings. Remove temporary markings after 14 days and apply permanent pavement markings unless approved by the CO.

635.14 Vertical Panels. Use vertical panels that are at least 24 inches (600 millimeters) in height and 8 to 12 inches (200 to 300 millimeters) wide. Use Type III, IV, VIII, IX, or XI retroreflective sheeting.

635.15 Warning Lights. Use warning lights of the types shown in the plans or according to the MUTCD. Install warning lights with a minimum mounting height of 30 inches (750 millimeter) to the bottom of the lens. Secure lights to the top of the traffic control device they are supplementing. Use batteries recommended by the light manufacturer. Mount large batteries below windshield height and preferably on the ground. Replace batteries when they no longer provide satisfactory performance.

Use Type C steady-burn warning lights for delineation on barricades or drums. Use Type A low-intensity flashing warning lights on the first 2 barricades or drums in the merging or shifting taper series. Use Type B high-intensity flashing warning lights on the first two advance warning signs. Type A and Type C warning lights are intended to warn road users during nighttime hours, while Type B warning lights are intended to warn road users during both daylight and nighttime hours.

635.16 Shadow Vehicle. Use a 19,800 pound (9000-kilogram) \pm 990 pound (\pm 450 kilogram) shadow vehicle equipped with a truck-mounted attenuator (crash cushion) attached to the rear of the vehicle, exterior flashing yellow dome light, and an arrow board.

Use the shadow vehicle to provide physical protection to workers from traffic approaching from the rear during moving operations.

Use the following procedures to close a lane of traffic:

- (a) Move the shadow vehicle to a point approximately 200 feet (60 meters) from the first advance warning sign for the lane closure and stop on the shoulder;
- (b) Activate the flashing lights and flashing arrow board. Begin the arrow board in the caution mode and after approximately 2 minutes display the correct flashing pass arrow;
- (c) Move the shadow vehicle (now acting as a protection vehicle) along the shoulder to the first sign location, stopping approximately 100 feet (30 meters) before the sign location in a blocking position;
- (d) Place the first sign then proceed to the next advance sign location. Repeat step (c) for the second sign and install that sign. Repeat this procedure until advance warning signs are installed;
- (e) After installing the advanced warning signs for the lane closure, move the shadow vehicle into the lane that is to be closed to a position 100 feet (30 meters) before the closing taper location. Install the channelizing devices for the taper in the shielded lane; then
- (f) Move the shadow vehicle off the roadway and past the taper on the shoulder and remain in position until the flashing arrow board for the closure (if one is to be provided) is placed and operating. Move the shadow vehicle with the workers as they proceed to set up the remaining devices as additional protection.

Alternate lane closure procedures may be used if approved by the CO.

635.17 Pavement Patch. Use an asphalt mix according to Section 403 or commercial available cold asphalt mix to repair potholes and rough spots in the traveled way before reopening travel lanes to traffic. If cold asphalt mix is used, remove and replace with hot asphalt mix before placing succeeding hot asphalt lifts.

635.18 Temporary Crash Cushions. Use a crashworthy temporary crash cushion according to manufacturer's recommendations.

635.19 Temporary Signal System. Use a temporary signal system according to MUTCD Parts 4 and 6.

Provide the names and telephone numbers of at least two emergency contacts who can be reached 24 hours a day, and who are available to arrive on site within 4 hours of notification to repair or replace malfunctioning temporary signal equipment. In addition, provide for emergency flaggers who can be reached 24 hours a day, and who are available to perform traffic control operations within the timeframes specified below until the temporary signal system is operable.

If the traffic signal malfunctions during construction operations, immediately begin traffic control operations using flaggers until the system is returned to normal signal operation. Complete traffic signal repairs within 6 hours of the malfunction.

If the traffic signal malfunctions during a period when no construction activity is taking place, begin traffic control operations using flaggers as soon as possible, but no later than 2 hours after the initial notification. Continue temporary flagging operations until the system is returned to normal signal operation. Complete traffic signal repairs within 12 hours of notification.

Section 635

No payment will be made for the use of flaggers in place of a malfunctioning or inoperable temporary signal system.

635.20 Temporary Fence. Use temporary fence according to Section 619.

635.21 Temporary Rumble Strip. Use transverse or longitudinal rumble strips according to the MUTCD Part 6 to alert drivers of an approaching flagger station or work area.

635.22 Steel Plates. Use 1-inch (25-millimeter) or thicker steel plates capable of safely carrying traffic. Secure the plates to the pavement to prevent movement.

635.23 Acceptance. Material for temporary traffic control devices will be evaluated under Subsections 106.02 and 106.03.

Vehicles for pilot cars and shadow vehicles will be evaluated under Subsections 106.02 and 106.04.

Placement of temporary traffic control devices will be evaluated under Subsections 106.02 and 106.04.

Temporary traffic control services will be evaluated under Subsections 106.02 and 106.04.

Measurement

635.24 Measure the Section 635 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable when ordered by the CO and installed.

When measuring temporary traffic control pay items, measure only one time even if relocated or replaced, except for pay items paid by the hour.

Measure barricades by the linear foot (meter) of width.

When measuring construction signs by the square foot (square meter), measure front face sign panel. Do not measure posts and temporary supports.

When there is a pay item for moving temporary barriers, do not measure movement of temporary barriers for work access or the convenience of the Contractor.

When measuring temporary pavement markings, measure only one application of pavement markings per lift. When temporary pavement markings are measured by the linear foot or mile (meter or kilometer), measure the number of linear feet or miles (meters or kilometers) of lines applied along the centerline of each 4-inch (100-millimeter) wide line applied regardless of color. Measure solid lines from end to end of each continuous line. Measure broken lines from end to end including gaps. For line widths greater than 4 inches (100 millimeters), adjust the measured length of line in the ratio of the required width to 4 inches (100 millimeters). When temporary pavement markings are measured by the square foot (square meter), measure the number of square feet (square meters) of symbols or letter markings based on the marking area shown in the plans or, if not shown, the area of each marking measured in place to the nearest square foot (square meter).

When measuring temporary pavement markers, measure only one application of pavement markings per lift, even if replaced. Measure temporary pavement markers used at the option of the Contractor instead of temporary pavement markings as equivalent temporary pavement markings and not as temporary pavement markers.

When measuring pavement marking removal, measure the actual line removed. Do not measure gaps.

When measuring temporary crash cushions, measure each entire crash cushion configuration.

When there is a pay item for moving temporary crash cushion, do not measure movement of temporary crash cushion for work access or the convenience of the Contractor.

Measure replacement barrels or cartridges for crash cushions for the barrels or cartridges damaged by public traffic.

Payment

635.25 The accepted quantities will be paid at the contract price per unit of measurement for the Section 635 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Progress payments for temporary traffic control devices will be paid as follows:

- (a) 50 percent of the pay item amount will be paid upon installation.
- (b) An additional 25 percent of the pay item amount will be paid following completion of 50 percent of the contract amount.
- (c) Payment of the remaining portion of the pay item amount will be paid when the temporary traffic control devices are removed from the project.

Progress payments for pay items paid for by the hour will be paid at 100 percent of the pay item amount when ordered by the CO and furnished.