Federal Lands Highway
"Commitment to Excellence"

CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. Department of Transportation
Federal Highway Administration

CONSTRUCTION PAYNOTE AND DOCUMENTATION EXAMPLE BOOK

- A guide for Contractors and FHWA contract administration personnel on CFL Field Projects
- To be used with CFL Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects

Last Updated: April 2012

Construction Paynote Examples

This book was developed to be used as a guideline for Central Federal Lands Highway Division staff, our partnering agencies, and the contractors we work with. The Construction Paynote Examples book gives examples of how a contractor should submit a request for payment (paynote), and examples of documentation that adequately support their request.

Contractors should refer to Section 109 of the FP03 for details of how particular items of work should be measured and paid. Examples in this book were created to demonstrate various methods of measurement and support documentation. This book shows examples of support documentation (certifications, calculations, tickets, etc.).These are solely examples and do not intend to summarize all support documentation needed prior to payment of any given pay item. The method or requirements prescribed in the FP03 or Special Contract Requirements supersedes any examples given in the Field Note Sample Book.

General Instructions

- Paynotes shall be completed in blue pen or typed on a computer
- White-out is not allowed.
- To correct an error, strike out the mistake, write the correction above or below, and initial next to the correction.
- Paynotes and any support documentation shall be organized and clearly legible.
- All sections of the paynote must be filled in.
- Paynotes shall be signed by an approved contractor representative. Paynotes will not be accepted for payment without the contractor's signature.
- Paynotes will not be accepted without quality certifications, test results, and/or any other required documentation for materials used in the work.
- Certifications for any given item of work should include a statement from the Contractor that certifies that the material meets specifications and will be used on the project. All material placed for any given item of work should also be identifiable (i.e. roll numbers for silt fence, heat numbers for pipe, etc.).
- A single submittal of a certification is acceptable for multiple pay requests as long as the material for the item of work being performed is include within the certification.
- Paynotes shall be completed in a timely fashion per section 109.01 of the FP-03 or the Special Contract Requirements.
- For items with material incentive, QL-pay factors shall be computed and reported in a timely fashion per section 109.01 of the FP-03 or the Special Contract Requirements. Also, see section 106.05 of the FP-03 or the Special Contract Requirements.

EEBACS

The Engineer Estimating, Bidding, Award and Construction System (EEBACS) is an integrated system that provides for estimation, solicitation/award, and contract administration of FLH's construction projects. EEBACS is a Web-based system that is maintainable and scalable. Portions of the Construction module will also be offered in an off-line version – Not currently available, under development. EEBACS consists of a series of components that tracks costs from a project's inception through final acceptance.

The Construction module tracks information as the project progresses through construction. It provides for the development, approval, and tracking of payments for contract items. The Construction module also allow for tracking and management of other contract administration information including contract modifications, equipment, personnel, subcontractors, and contract status. In the Construction phase EEBACS provides the capability to:

- Create, track and approve Inspector Daily Reports (IDR);
- Create, track and approve Contractor Daily Reports (CDR);
- Create and track the Project Engineer's Daily Dairy;
- Track onsite personnel and equipment;
- Track subcontractors and associated information;
- Create and track Contract Modifications;
- Document and track contract administration and status;
- Create, track and approve payments to the contractor; and
- Generate detailed reports of how the project was constructed, including cost, equipment, and personnel.

The format used for the paynotes displayed in this example book mimics the general format of the EEBACS paynote page. Central Federal Lands intends to implement EEBACS with a select number of projects in 2012. Eventually, EEBACS will be used on all projects advertised by CFL. A blank paynote is provided on the following page (if an electronic copy is desired, speak to the Project Engineer to obtain the file).To date, the FP-03 and our Special Contract requirements do not require the Contractor to use any specific form for paynotes. For non-EEBACS projects, the Contractor may use this form if desired. However, if the Contractor chooses to use another paynote format, the format must comply with section 109.01 of the FP-03 or the Special Contract Requirements.

NOTE: An EEBACS user manual is available for the Contractor if desired. Please talk to the Project Engineer to request access.

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date:

Project Number: Project Name:

Account:

Pay Note Information:

Pay Item #: Item Description: Pay Unit:

Item Line #: Item Type:

Pay Note #: Pay Period:

Pay Note Entry:

Work Start Date: Work End Date:

Location/Description:

Remarks/Calculations:

Support Documentation/References:

Measured By:

TOTAL QUANTITY:

☐ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Date:

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Date:

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Date:

TABLE OF CONTENTS (Arranged by Pay Unit)

TABLE OF CONTENTS (Arranged by FP-03 Division)

Appendix

SECTION 1: LUMP SUM ITEMS

GENERAL NOTE:
The items shown here are examples only - all measurement, documentation, and payment will conform to the project contract requirements regardless of what is shown here. Included here are examples of some of the many documentation types that may be required. Often documentation such as certifications and qualifications may be submitted and accepted once and then referenced accordingly instead of attaching additional copies for each pay note or payment period. Many documentation items are required prior to production, delivery, or placement; required documentation should be provided at the appropriate time and not necessarily at time of payment.

NOTE ON LPSM ITEMS:
Items paid by Lump Sum typically have very specific directions for when and how they will be paid. Please refer to the FP, the Special Contract Requirements, and plans for your project for detailed instructions prior to submitting any pay notes. In almost all cases, lump sum items require specific documentation prior to any payment. Lump sum items are not directly measured for payment but general measurements may be made to verify or estimate progress.

Example 1 of 2 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 06/30/11

Project Number: SD PRA BADL 10(5) Project Name: Badlands Loop Road

Account: Schedule A

Pay Note Information:

Pay Item #: 15101-0000 Item Description: Mobilization Pay Unit: LPSM

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 1 Pay Period: 1

Pay Note Entry:

Work Start Date: 06/01/11 Work End Date: 06/30/11

Location/Description:

Notice to Proceed was issued on May 27, 2011.
Bond premiums, SF 25 and 25A were submitted to FHWA on May 29, 2011.
Began mobilizing construction equipment to the project on 06/01/11.
Began construction activities on 06/05/11.

Remarks/Calculations:

-Refer to FP-03 151.03(b)
-Original contract amount ($12,000,000) minus mobilization ($1,000,000) = revised total ($11,000,000)
-Contract work complete to date (06/30/11) = $750,000 (which is greater than 5% contract amount via other bid items)

Pay lesser of the following two amounts
(a) 50% of mobilization = $500,000
(b) 5% of original contract = $600,000

Support Documentation/References:

See attached SF25 (performance bond) and SF25A (payment bond)

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: $500,000 (LPSM)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 06/30/11

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 06/30/11

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 07/10/11

mobilization support documentation (performance bond)

Bond #929481895

PERFORMANCE BOND (See Instructions on reverse)	DATE BOND EXECUTED (Must be same or later than date of contract) September 4, 2009	FORM APPROVED OMB NO. 9000-0045

PRINCIPAL (Legal name and business address)	TYPE OF ORGANIZATION ("X" one)
Duininck, Inc. P.O. Box 208 Prinsburg, MN 56281	☐ INDIVIDUAL ☐ PARTNERSHIP ☐ JOINT VENTURE ☑ CORPORATION STATE OF INCORPORATION: Minnesota

SURETY (IES) (Name(s) and business address(es))	PENAL SUM OF BOND			
Continental Casualty Company & National Fire Insurance Company of Hartford 333 South Wabash Avenue Chicago, IL 60604	MILLION(S) 11	THOUSAND(S 222	HUNDRED(S 396	CENTS 60
	CONTRACT DATE 9/1/09		CONTRACT NO. DTFH68-09-C-00037	

OBLIGATION:

We, the Principal and Surety(ies), are firmly bound to the United States of America (hereinafter called the Government) in the above penal sum. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally. However, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us. For all other purposes, each Surety binds itself, jointly and severally with the Principal, for the payment of the sum shown opposite the name of the Surety. If no limit of liability is indicated, the limit of liability is the full amount of the penal sum.

CONDITIONS:

The principal has entered into the contract identified above.

THEREFORE:

The above obligation is void if the Principal –

(a)(1) Performs and fulfills all the undertakings, covenants, terms, conditions, and agreements of the contract during the original term of the contract and any extensions thereof that are granted by the Government, with or without notice to the Surety(ies), and during the life of any guaranty required under the contract, and (2) performs and fulfills all the undertakings, covenants, terms conditions, and agreements of any and all duly authorized modifications of the contract that hereafter are made. Notice of those modifications to the Surety(ies) are waived.

(b) Pays to the Government the full amount of the taxes imposed by the Government, it the said contract is subject to the Miller Act, (40 U.S.C. 270a-270a), which are collected, deducted, or witheld from wages paid by the Prinicpal in carrying out the construction contract with respect to which this bond is furnished.

WITNESS:

The Principal and Surety(ies) executed this performance bond and affixed their seals on the above date.

DUININCK, INC. CORPORATE SEAL MINNESOTA

PRINCIPAL

	1.	2.	3.	CORPORATE SEAL
SIGNATURE(S)	(Seal)	(Seal)	(Seal)	
NAME(S) & TITLE(S) (Typed)	1. Chris G. Duininck Vice-President	2.	3.	

INDIVIDUAL SURETY(IES)

	1.	2.
SIGNATURE(S)	(Seal)	(Seal)
NAME(S) (Typed)	1.	2.

CORPORATE SURETY(IES)

SURETY A	NAME & ADDRESS	Continental Casualty Company 333 South Wabash Avenue, Chicago IL 60604	STATE OF INC. IL	LIABILITY LIMIT $569,497,000.00	
	SIGNATURE(S)	1.	2.		CORPORATE SEAL
	NAME(S) & TITLE(S) (Typed)	1. Linda K. Ryks Attorney-in-Fact	2.		

NSN 7540-01-152-8060 EXPIRATION DATE 25-107 SF25.wpf STANDARD FORM 25 (REV. 1-90)
Previous edition not usable Prescribed by GSA-FAR (48(CFR) 53.228 (b)

mobilization support documentation (performance bond)

CORPORATE SURETY(IES) (Continued)

SURETY B	NAME & ADDRESS	National Fire Insurance Company of Hartford 333 South Wabash Avenue, Chicago, IL 60604	STATE OF INC. IL	LIABILITY LIMIT $11,139,000.00	
	SIGNATURE(S)	1. Linda K Ryks	2.		CORPORATE SEAL
	NAME(S) & TITLE(S) (Typed)	1. Linda K. Ryks Attorney-in-Fact	2.		
SURETY C	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT	
	SIGNATURE(S)	1.	2.		CORPORATE SEAL
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY D	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT	
	SIGNATURE(S)	1.	2.		CORPORATE SEAL
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY E	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT	
	SIGNATURE(S)	1.	2.		CORPORATE SEAL
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY F	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT	
	SIGNATURE(S)	1.	2.		CORPORATE SEAL
	NAME(S) & TITLE(S) (Typed)	1.	2.		
SURETY G	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT	
	SIGNATURE(S)	1.	2.		CORPORATE SEAL
	NAME(S) & TITLE(S) (Typed)	1.	2.		

BOND PREMIUM	RATE PER THOUSAND	TOTAL
	$5.00 Slide	$39, 206.00

INSTRUCTIONS

1. This form is authorized for use in connection with Government contracts. Any deviation from this form will require the written approval of the Administrator of General Services.

2. Insert the full legal name and business address of the Principal in the space designated "Principal" on the face of the form. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.

3. (a) Corporations executing the bons as sureties must appear on the Department of the Treasury's list of the approved sureties and must act within the limitation listed therein. Where more than one corporate surety is involved their names and addresses shall appear in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES)." in the space designated "SURETY(IES)" on the face of the form, insert only the letter identification of the sureties.

(b) Where individual sureties are involved, a completed Affidavit of Individual Surety (Standard Form 28), for each individual surety, shall accompany the bond. The Government may require the surety to furnish additional substantiating information concerning its financial capability.

4. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Corporate Seal", and shall affix an adhesive seal if executed in Maine, New Hampshire, or any other jurisdiction requiring adhesive seals.

5. Type the name and title of each person signing this bond in the space provided.

mobilization support documentation (performance bond)

POWER OF A ORNEY APPOINTING INDIVIDUAL AT RNEY-IN-FACT

Know All Men By These Presents, That Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company (herein called "the CNA Companies"), are duly organized and existing insurance companies having their principal offices in the City of Chicago, and State of Illinois, and that they do by virtue of the signatures and seals herein affixed hereby make, constitute and appoint

Wes G Wieberdink, Linda K Ryks, Roger Ahrenholz, Myron Mulder, Individually

of Prinsburg, MN, their true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on their behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of their insurance companies and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Boards of Directors of the insurance companies.

In Witness Whereof, the CNA Companies have caused these presents to be signed by their Senior Vice President and their corporate seals to be hereto affixed on this 19th day of January, 2009.

Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

Robert M. Mann Senior Vice President

State of Illinois, County of Cook, ss:

On this 19th day of January, 2009, before me personally came Robert M. Mann to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Chicago, State of Illinois; that he is a Senior Vice President of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company described in and which executed the above instrument; that he knows the seals of said insurance companies; that the seals affixed to the said instrument are such corporate seals; that they were so affixed pursuant to authority given by the Boards of Directors of said insurance companies and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance companies.

OFFICIAL SEAL
ELIZA PRICE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES: 09/17/09

My Commission Expires September 17, 2009

Eliza Price Notary Public

CERTIFICATE

I, Mary A. Ribikawskis, Assistant Secretary of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the insurance companies printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance companies this 4th day of September, 2009.

Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

Mary A. Ribikawskis Assistant Secretary

Form F6853-7/2008

mobilization support documentation (payment bond)

Bond #929481895

PAYMENT BOND (See Instructions on reverse)	DATE BOND EXECUTED (Must be same or later than date of contract)	FORM APPROVED OMB NO.
	September 4, 2009	9000-0045

PRINCIPAL (Legal name and business address)	TYPE OF ORGANIZATION ("X" one)
Duininck, Inc. P.O. Box 208 Prinsburg, MN 56281	☐ INDIVIDUAL ☐ PARTNERSHIP ☐ JOINT VENTURE ☑ CORPORATION STATE OF INCORPORATION: Minnesota

SURETY (IES) (Name(s) and business address(es))	PENAL SUM OF BOND			
	MILLION(S)	THOUSAND(S	HUNDRED(S	CENTS
Continental Casualty Company & National Fire Insurance Company of Hartford 333 South Wabash Avenue Chicago, IL 60604	11	222	396	60

CONTRACT DATE	CONTRACT NO.
9/1/2009	DTFH68-09-C-00037

OBLIGATION:

We, the Principal and Surety(ies), are firmly bound to the United States of America (hereinafter called the Government) in the above penal sum. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally. However, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us. For all other purposes, each Surety binds itself, jointly and severally with the Principal, for the payment of the sum shown opposite the name of the Surety. If no limit of liability is indicated, the limit of liability is the full amount of the penal sum.

CONDITIONS:

The above obligation is void if the Principal promptly makes a payment to all persons having a direct relationship with the Principal or a subcontractor of the Principal for furnishing labor, material or both in the prosecution of the work provided for in the contract identified above, and any authorized modifications of the contract that subsequently are made. Notice of those modifications to the Surety(ies) are waived.

WITNESS:

The Principal and Surety(ies) executed this performance bond and affixed their seals on the above date.

PRINCIPAL

	1.	2.	3.
SIGNATURE(S)	(Seal)	(Seal)	(Seal)
NAME(S) & TITLE(S) (Typed)	1. Chris G. Duininck Vice-President	2.	3.

DUININCK, INC. CORPORATE SEAL MINNESOTA

INDIVIDUAL SURETY(IES)

	1.	2.
SIGNATURE(S)	(Seal)	(Seal)
NAME(S) (Typed)	1.	2.

CORPORATE SURETY(IES)

SURETY A	NAME & ADDRESS	Continental Casualty Company 333 South Wabash Avenue, Chicago, IL 60604	STATE OF INC. IL	LIABILITY LIMIT $569,497,000.00	
	SIGNATURE(S)	1. Linda K. Ryks	2.		CORPORATE
	NAME(S) & TITLE(S) (Typed)	1 Linda K. Ryks Attorney-in-Fact	2.		SEAL

NSN 7540-01-152-8060 EXPIRATION DATE 25-205 STANDARD FORM 25-A (REV. 1-90)
Previous edition not usable

mobilization support documentation (payment bond)

CORPORATE SURETY(IES) (Continued)

SURETY B	NAME & ADDRESS	National Fire Insurance Company of Hartford 333 South Wabash Avenue, Chicago, IL 60604	STATE OF INC. IL	LIABILITY LIMIT $11, 139,000.00	
	SIGNATURE(S)	1. Linda K Ryks	2.		CORPORATE
	NAME(S) & TITLE(S) (Typed)	1. Linda K. Ryks Attorney-in-Fact	2.		SEAL
SURETY C	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT	
	SIGNATURE(S)	1.	2.		CORPORATE
	NAME(S) & TITLE(S) (Typed)	1.	2.		SEAL
SURETY D	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT	
	SIGNATURE(S)	1.	2.		CORPORATE
	NAME(S) & TITLE(S) (Typed)	1.	2.		SEAL
SURETY E	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT	
	SIGNATURE(S)	1.	2.		CORPORATE
	NAME(S) & TITLE(S) (Typed)	1.	2.		SEAL
SURETY F	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT	
	SIGNATURE(S)	1.	2.		CORPORATE
	NAME(S) & TITLE(S) (Typed)	1.	2.		SEAL
SURETY G	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT	
	SIGNATURE(S)	1.	2.		CORPORATE
	NAME(S) & TITLE(S) (Typed)	1.	2.		SEAL

INSTRUCTIONS

1. This form is authorized for use in connection with Government contracts. Any deviation from this form will require the written approval of the Administrator of General Services.

2. Insert the full legal name and business address of the Principal in the space designated "Principal" on the face of the form. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.

3. (a) Corporations executing the bons as sureties must appear on the Department of the Treasury's list of the approved sureties and must act within the limitation listed therein. Where more than one corporate surety is involved their names and addresses shall appear in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES)." in the space designated "SURETY(IES)" on the face of the form, insert only the letter identification of the sureties.

(b) Where individual sureties are involved, a completed Affidavit of Individual Surety (Standard Form 28), for each individual surety, shall accompany the bond. The Government may require the surety to furnish additional substantiating information concerning its financial capability.

4. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Corporate Seal", and shall affix an adhesive seal if executed in Maine, New Hampshire, or any other jurisdiction requiring adhesive seals.

5. Type the name and title of each person signing this bond in the space provided.

mobilization support documentation (payment bond)

POWER OF / ORNEY APPOINTING INDIVIDUAL AT RNEY-IN-FACT

Know All Men By These Presents, That Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company (herein called "the CNA Companies"), are duly organized and existing insurance companies having their principal offices in the City of Chicago, and State of Illinois, and that they do by virtue of the signatures and seals herein affixed hereby make, constitute and appoint

Wes G Wieberdink, Linda K Ryks, Roger Ahrenholz, Myron Mulder, Individually

of Prinsburg, MN, their true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on their behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of their insurance companies and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Boards of Directors of the insurance companies.

In Witness Whereof, the CNA Companies have caused these presents to be signed by their Senior Vice President and their corporate seals to be hereto affixed on this 19th day of January, 2009.

Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

Robert M. Mann Senior Vice President

State of Illinois, County of Cook, ss:

On this 19th day of January, 2009, before me personally came Robert M. Mann to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Chicago, State of Illinois; that he is a Senior Vice President of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company described in and which executed the above instrument; that he knows the seals of said insurance companies; that the seals affixed to the said instrument are such corporate seals; that they were so affixed pursuant to authority given by the Boards of Directors of said insurance companies and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance companies.

OFFICIAL SEAL
ELIZA PRICE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES: 09/17/09

My Commission Expires September 17, 2009

Eliza Price Notary Public

CERTIFICATE

I, Mary A. Ribikawskis, Assistant Secretary of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the insurance companies printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance companies this 4th day of September, 2009.

Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

Mary A. Ribikawskis Assistant Secretary

Form F6853-7/2008

Payment 2 of 2 and final payment for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 08/31/11

Project Number: SD PRA BADL 10(5) Project Name: Badlands Loop Road

Account: Schedule A

Pay Note Information:

Pay Item #: 15101-0000 Item Description: Mobilization Pay Unit: LPSM

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 32 Pay Period: 3

Pay Note Entry:

Work Start Date: 08/01/11 Work End Date: 08/31/11

Location/Description:

Notice to Proceed was issued on May 27, 2011.
Bond premiums, SF 25 and 25A were submitted to FHWA on May 29, 2011.
Began mobilizing construction equipment to the project on 06/01/11.
Began construction activities on 06/05/11.

Remarks/Calculations:

-Refer to FP-03 151.03(b)
-Original contract amount ($12,000,000) minus mobilization ($1,000,000) = revised total ($11,000,000)
-Contract work complete to date (08/31/11) = $3,000,000 (which is greater than 10% contract amount via other bid items)

Previous Payment = $500,000 (Pay Period #1)
Remaining balance for payment: $1,000,000 - $500,000 = $500,000
Pay $500,000 in Pay Period 3
Mobilization is now 100% complete

Support Documentation/References:

N/A

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: $500,000 (LPSM)

☐ Interim Measurement ☒ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 08/31/11

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 08/31/11

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 09/09/11

Example #1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 07/31/11

Project Number: WY ERFO 261(1) Project Name: Cedar Pass Road

Account: Schedule A

Pay Note Information:

Pay Item #: 15201-0000 Item Description: Construction Survey and Staking Pay Unit: LPSM

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only

Pay Note #: 15 Pay Period: 2

Pay Note Entry:

Work Start Date: 07/24/11 Work End Date: 07/31/11

Location/Description:

Construction Survey and Staking activities began on 07/01/10.
Pipe plots (7/24 to 7/30): STA 100+56, 104+78, 106+67, 107+95
Pipe Staking (7/24, 7/27): STA 100+56, 104+78
Clearing Stakes RT and LT (7/24 to 7/28): STA 100+00 to 152+80
Reference Stakes RT and LT (7/26, 7/27): STA 100+00 to 152+80
Slope Stakes RT and LT (7/30,7/31): STA 100+00 to 152+80

Remarks/Calculations:

Per agreement with FHWA CO and Contractor Owner, the breakdown of work for all LPSM survey work is as follows:
15% pipes, 5% curb/drainage, 60% clearing/ref/slope, 5% red tops, 7% blue tops, 3% parking and 5% misc. (signs/striping,etc.)

See attached spreadsheets: 2.94% of 15% completed of pipe survey, 16.87% of 60% completed of clearing/ref/slope stakes

Pay 2.94% + 16.87% = 19.81% X ($15,000 LPSM) = $2,971.50

Support Documentation/References:

Pipe Culvert Survey Breakdown Spreadsheet, Clearing/Ref/Slope Staking Breakdown Spreadsheet
Note: Pipe plots have been submitted and approved prior to payment (see example of acceptable pipe plot)

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: **$2,971.50 (LPSM)**

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 07/31/11

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 07/31/11

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 08/07/11

survey and staking support documentation (pipe culvert survey breakdown spreadsheet)

WY ERFO 261(1), Cedar Pass Road
Survey and Staking (LPSM)

Pipe Culverts-17 total (15% of LPSM)						
#	Date Complete	**Pipe Plots (10%)**	Pay Percentage*	Date Completed	**Staking (5%)**	Pay Percentage**
1	7/24/2011	100+56	0.59	7/24/2011	100+56	0.29
2	7/24/2011	104+78	0.59	7/27/2011	104+78	0.29
3	7/30/2011	106+67	0.59	*Not yet completed*	106+67	0.29
4	7/30/2011	107+95	0.59	*Not yet completed*	107+95	0.29
5	*Not yet completed*	108+98	0.59	*Not yet completed*	108+98	0.29
6	*Not yet completed*	110+09	0.59	*Not yet completed*	110+09	0.29
7	*Not yet completed*	115+78	0.59	*Not yet completed*	115+78	0.29
8	*Not yet completed*	118+03	0.59	*Not yet completed*	118+03	0.29
9	*Not yet completed*	119+89	0.59	*Not yet completed*	119+89	0.29
10	*Not yet completed*	124+45	0.59	*Not yet completed*	124+45	0.29
11	*Not yet completed*	137+36	0.59	*Not yet completed*	137+36	0.29
12	*Not yet completed*	152+56	0.59	*Not yet completed*	152+56	0.29
13	*Not yet completed*	167+66	0.59	*Not yet completed*	167+66	0.29
14	*Not yet completed*	231+45	0.59	*Not yet completed*	231+45	0.29
15	*Not yet completed*	235+63	0.59	*Not yet completed*	235+63	0.29
16	*Not yet completed*	247+11	0.59	*Not yet completed*	247+11	0.29
17	*Not yet completed*	260+13	0.59	*Not yet completed*	260+13	0.29

(0.59% X 4) + (0.29% X 2) = 2.94%

***Pipe Plot Pay Percentage = ((1/17)*0.1)*100**

****Staking Pay Percentage = ((1/17)*0.05)*100**

survey and staking support documentation (clearing/ref/slope staking breakdown spreadsheet)

WY ERFO 261(1), Cedar Pass Road
Survey and Staking (LPSM)

Clearing, Reference and Slope Staking: 100+00 to 269+00 = 16,900 feet total (60% of Survey and Staking LPSM)

Clearing (18%)					Reference (18%)					Slope (18%)					Restake as Needed (6%)
Date	Station	-	Station	Length (feet)	Date	Station	-	Station	Length (feet)	Date	Station	-	Station	Length (feet)	
07/24/11	100+00	-	116+00	1600	7/26/11	100+00	-	123+00	2300	7/30/11	100+00	-	122+50	2250	
07/25/11	116+00	-	128+00	1200	7/27/11	123+00	-	152+80	2980	7/31/11	122+50	-	152+80	3030	
07/27/11	128+00	-	143+00	1500											
07/28/11	143+00	-	152+80	980											Pay at the end of project once all necessary restaking is completed
Total Length in feet =				5280	Total Length in feet =				5280	Total Length in feet =				5280	

CALCULATIONS:

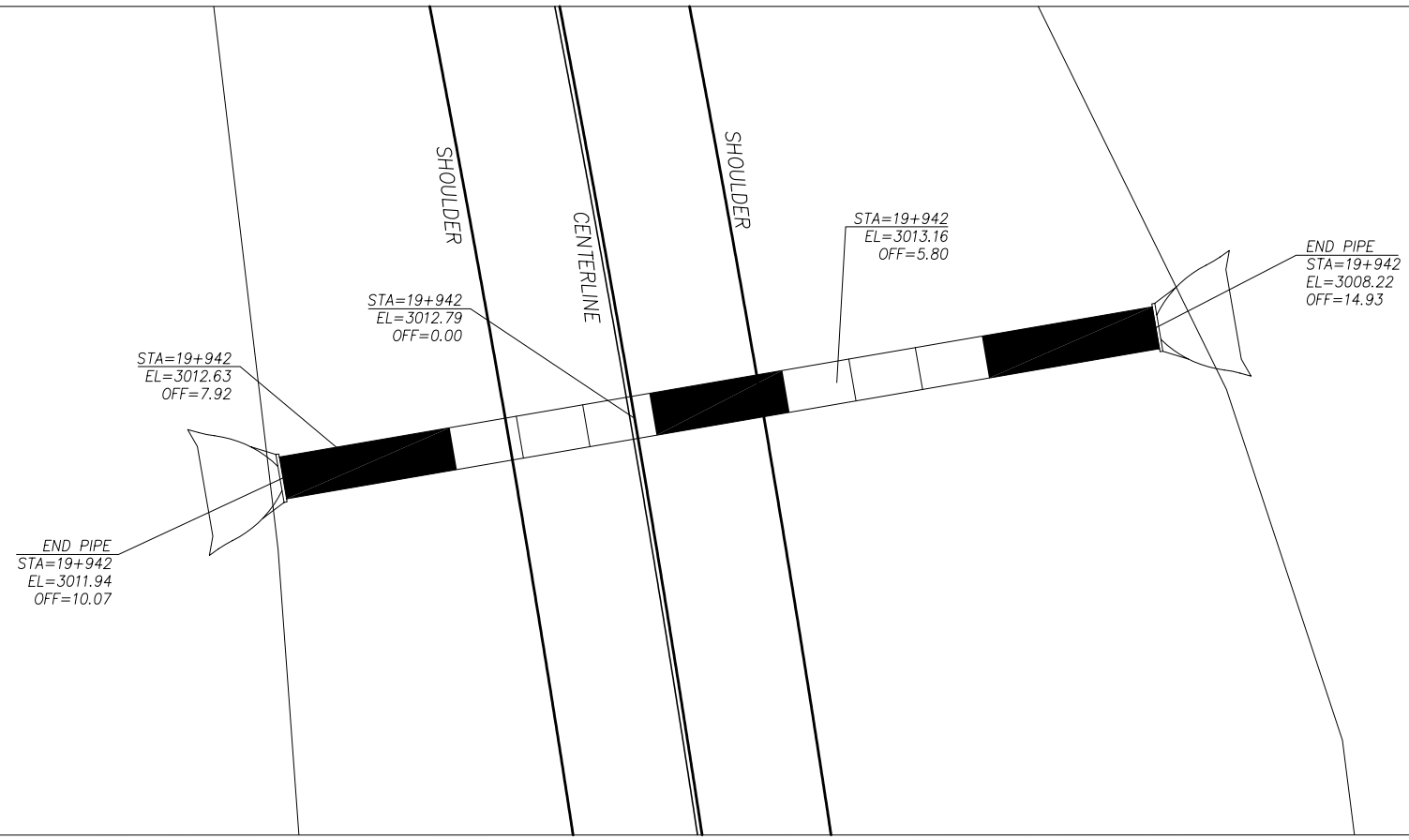
TOTAL CLEARING % FOR PAYMENT = (5,280'/16,900') X 18% = 5.623%

TOTAL REFERENCE % FOR PAYMENT = (5,280'/16,900') X 18% = 5.623%

TOTAL SLOPE % FOR PAYMENT = (5,280'/16,900') X 18% = 5.623%

TOTAL = 16.869%

NOTE: This example shows an acceptable submittal of a pipe plot. A pipe plot is required for each culvert being installed per contract requirements.

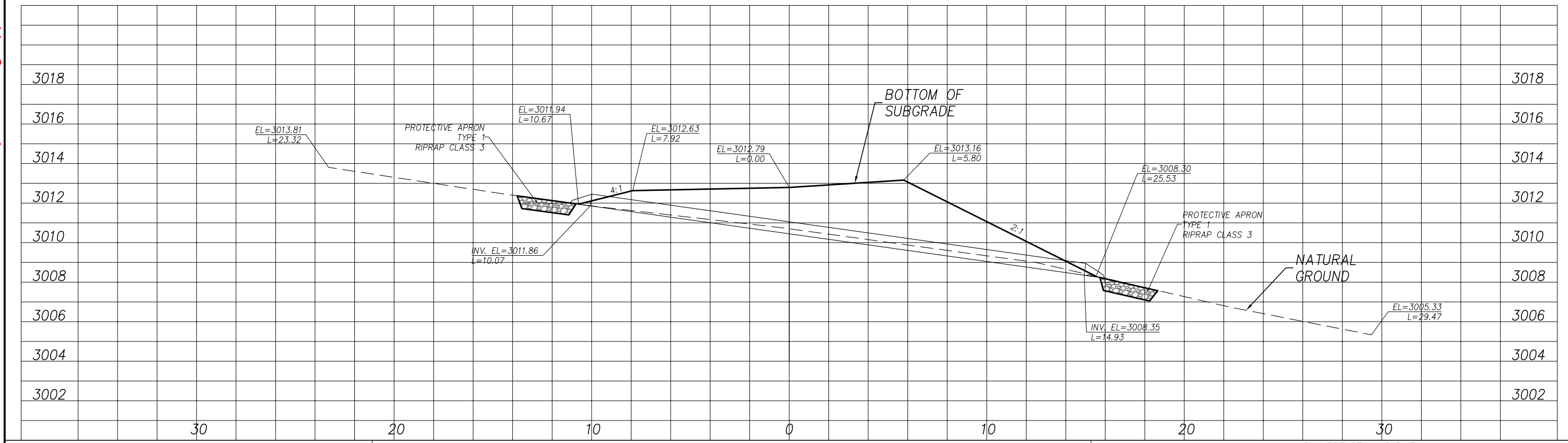


N

SCALE=1:100
(594mm X 841mm)

NOTES:
1. OFF= OFFSET FROM ROADWAY CENTERLINE TO SPECIFIC POINT ON PLAN VIEW.

2. L= HORIZONTAL LENGTH FROM INTERSECTION OF ROADWAY CENTERLINE AND CULVERT PIPE TO SPECIFIC POINT ON PROFILE DRAWING.



PEPG ENGINEERING, L.L.C.
8805 S SANDY PARKWAY • SANDY, UT 84070
PH: (801) 562-2521 • FAX: (801) 562-2551

SEVENMILE-GOOSEBERRY ROAD PHASE II

UTAH FOREST HIGHWAY PROJECT P.F.H. 39-1(2)
SEVIER COUNTY--FISH LAKE NATIONAL FOREST
CULVERT CROSSING 19+930

CULVERT STAKING DATA

DESIGN STA.:	19+930	ACTUAL STA.:	19+942	DIAMETER:	600 MM	SKEW:	NONE
PIPE HORIZ. LENGTH:	25.00 M	PIPE LENGTH:	26.54 M	PIPE TYPE:	METAL	END SECTIONS:	2
INLET ELEV.:	3011.86	OUTLET ELEV.:	3008.35	DROP:	3.51 M	SLOPE:	14.04%
STAKED BY:	PEPG ENGINEERING			DATE:	7-31-09		

survey and staking support documentation

Payment 1 of 2 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 08/31/10

Project Number: WY ERFO 261(1) Project Name: Cedar Pass Road

Account: Schedule A

Pay Note Information:

Pay Item #: 15401-0000 Item Description: Contractor Testing Pay Unit: LPSM

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 5 Pay Period: 1

Pay Note Entry:

Work Start Date: 08/12/10 Work End Date: 8/31/10

Location/Description:

On 8/12/10 testing facilities were established and approved by FHWA, qualified testing personnel were identified and approved by FHWA, and SF-1413's for the subcontractor performing this work were submitted and later approved by FHWA.
On 8/24/11, testing began for site 6 embankment work.

Remarks/Calculations:

Per 154.07(a), 25% of the item amount, not to exceed 0.5 percent of the original contract amount, will be paid after all the testing facilities are in place, qualified sampling and testing personnel are identified, and the work being tested has started.
-Original Contract Amount = $1,000,000
-Contractor Testing Amount = $10,000
Pay lesser of the following two amounts
a) $1,000,000 x %0.5 = $5,000
b) $10,000 X %25 = $2,500
Note:To date, a low % of total testing has been completed...per Contractor and FHWA, prorated payment will be begin on PP 2.

Support Documentation/References:

(1) QC Plan (Appendix G) (2) Material Testing Lab Accreditation (3) Site 6 embankment testing reports 8/24/11 - 8/31/11
(4) Material Tester Certificates (NOT SHOWN)

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: **$2,500 (LPSM)**

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 08/31/10

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 08/31/10

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Engineer Date: 09/05/10

support documentation for contractor testing (material testing lab accreditation)

American Association of State Highway and Transportation Officials

AASHTO Accreditation Program - Certificate of Accreditation

This is to signify that

CONTRACTOR INC.

has demonstrated proficiency for the testing of construction materials and has met the minimum requirements in AASHTO R18 set forth by the AASHTO Highway Subcommittee on Materials.

The scope of accreditation can be obtained by viewing the AAP Directories of Accredited Laboratories (www.amrl.net) or by contacting AMRL.

Signatures Required

Executive Director

Signatures Required

Chair, AASHTO Highway Subcommittee on Materials

AAP®

AASHTO R18

support documentation for contractor testing (site 6 embankment test reports)

Geotechnical • Environmental • Materials Testing

REPORT OF FIELD DENSITY TEST RESULTS

Client:		**Date:**	August 24, 2011
Project:	WY ERFO 261 Cedar Pass Road, WY	**Project No:**	11-1490-T
Item Tested:	**Street**	**Report No:**	03
		Test No's.:	1 through 2

Test	Location: Site 6	Depth	MDD	OMC	Dry Dens.	Moist	% Comp.	Soil Type
1	676 + 10 South Side	1st Lift	130.3	6.7	127.0	6.4	97.5	Silty SAND with Gravel
2	676 + 10 South Side	1st Lift	130.3	6.7	125.5	9.6	96.3	Silty SAND with Gravel

COMPACTION SPECIFICATIONS

Area: Street	**Compaction:** ≥ 95% of ASHTO T-99	**Moisture:** +/-2 pts OMC

	INDICATION OF DENSITY TEST PASS OR FAILURE This report presents opinions as a result of our observation of fill placement. We have relied on the contractor to continue applying the recommended compactive effort and moisture to the fill during times when our observer is not observing operations. Tests are made of the fill only as believed necessary to calibrate our observer's judgment. Test data are not the sole basis for opinions on whether the fill meets specifications. Our tests indicate only the field dry density and moisture content of the material sampled. The quality and swell potential of the material is not considered herein.
	Periodic Observation of fill placement being continued unless otherwise advised.
☐ **Pass**	In our opinion the fill has been compacted to the spec. requirements as indicated by test number 1 through 2.
☐ **Failure**	In our opinion fill does not meet specified requirements as indicated by Test No. (s) and should be removed or reworked. Contractor has been advised.
☐ **Remarks:**	
Field Observer: DH **Reviewed By:** DP	

Payment 2 of 2 and final payment for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 9/30/10

Project Number: WY ERFO 261(1) Project Name: Cedar Pass Road

Account: Schedule A

Pay Note Information:

Pay Item #: 15401-0000 Item Description: Contractor Testing Pay Unit: LPSM

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 36 Pay Period: 2

Pay Note Entry:

Work Start Date: 9/1/10 Work End Date: 9/30/10

Location/Description:

From 9/1/10 to 9/30/10 Embankment (for RSS embankment construction) and Aggregate Base Testing (see attached test results)

Remarks/Calculations:

Per 154.07(b), payment for the remaining portion of the item amount will be prorated based on the total work complete.
Testing facilities/personnel in place and item begin = 25% (75% remaining) Paid Estimate 1 on 8/31/10

Original contract amount ($1,000,000) minus contractor testing ($10,000) = revised total ($990,000)
Contract work complete to date (09/30/10) = $300,000 ($300,000/$990,000 X %100 = %30.3)
%30.3 (contract work complete to date) X 75% (remaining testing work to be paid) = %22.72

%22.72 X $10,000 = $2,272.72

Support Documentation/References:

(1) Site 5 Embankment Testing Summary (2) Site 5 embankment testing reports (3) Site 5 aggregate testing reports 10/30/11

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: **$2,272.72 (LPSM)**

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 9/30/10

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 9/30/10

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 10/02/10

support documentation for contractor testing (site 5 embankment testing summary)

Site 5 EMBANKMENT TESTING SUMMARY

WY ERFO 261(1), Cedar Pass Road, CONTRACTOR INC.

Date	Station	Elev. (ft.)	Proctor	Density (PCF)	Moisture (%)	% Compaction	(+/-) Moisture	Pass (Y/N)
9/27/2011	**277+55**	8938	In-Situ: 121.5 PCF @12.3%	116.6	14	96.0	1.7	Y
9/27/2011	**277+58**	8939.5	In-Situ: 121.5 PCF @12.3%	115.9	12.7	95.4	0.4	Y
9/29/2011	**277+50**	8945	In-Situ: 121.5 PCF @12.3%	118.9	14.5	97.9	2.2	Y
9/29/2011	**277+15**	8945	In-Situ: 121.5 PCF @12.3%	120.6	13	99.3	0.7	Y
9/30/2011	**277+25**	8945.5	In-Situ: 121.5 PCF @12.3%	118	13.8	97.1	1.5	Y
9/30/2011	**277+20**	8946	In-Situ: 121.5 PCF @12.3%	117.9	14.2	97.0	1.9	Y
9/30/2011	**276+55**	8946	In-Situ: 121.5 PCF @12.3%	116.9	14.1	96.2	1.8	Y
9/30/2011	**277+45**	8947	Rch Pit: 130.4 PCF @6.7%	126.8	7.2	97.2	0.5	Y
10/1/2011	**277+40**	8948	Rch Pit: 130.4 PCF @6.7%	124.9	8.1	95.8	1.4	Y
10/1/2011	**277+30**	8948.5	Rch Pit: 130.4 PCF @6.7%	129.2	7.7	99.1	1	Y
10/1/2011	**277+15**	8949.5	Rch Pit: 130.4 PCF @6.7%	126.1	7.6	96.7	0.9	Y
10/3/2011	**277+00**	8951.5	Rch Pit: 130.4 PCF @6.7%	125.7	8	96.4	1.3	Y
10/4/2011	**277+00**	8953	Rch Pit: 130.4 PCF @6.7%	129.7	8.1	99.5	1.4	Y
10/5/2011	**277+15**	8954	Rch Pit: 130.4 PCF @6.7%	125.7	5.9	96.4	-0.8	Y
10/6/2011	**277+25**	8956	Rch Pit: 130.4 PCF @6.7%	126	6.4	96.6	-0.3	Y
10/14/2011	**277+20**	8957.5	Rch Pit: 130.4 PCF @6.7%	128.7	6	98.7	-0.7	Y
10/14/2011	**276+55**	8959	Rch Pit: 130.4 PCF @6.7%	127.2	6.3	97.5	-0.4	Y
10/14/2011	**277+45**	8960.5	Rch Pit: 130.4 PCF @6.7%	128	6.1	98.2	-0.6	Y
10/14/2011	**277+20**	8962	Rch Pit: 130.4 PCF @6.7%	128.9	7.4	98.8	0.7	Y
10/15/2011	**277+55**	8963.5	Rch Pit: 130.4 PCF @6.7%	130.2	7.2	99.8	0.5	Y
10/15/2011	**277+45**	8965	Rch Pit: 130.4 PCF @6.7%	129.8	7.1	99.5	0.4	Y
10/16/2011	**276+40**	8966.5	Rch Pit: 130.4 PCF @6.7%	128.7	8.4	98.7	1.7	Y
10/18/2011	**277+30**	8968	Rch Pit: 130.4 PCF @6.7%	129.5	8.2	99.3	1.5	Y
10/19/2011	**277+15**	8969.5	Rch Pit: 130.4 PCF @6.7%	129.5	7.4	99.3	0.7	Y
10/19/2011	**276+20**	8971	Rch Pit: 130.4 PCF @6.7%	133.2	13.2	102.1	6.5	Y
10/20/2011	**277+55**	8972.5	Rch Pit: 130.4 PCF @6.7%	137.2	9.8	105.2	3.1	Y
10/21/2011	**277+45**	8974	Rch Pit: 130.4 PCF @6.7%	127.7	8.1	97.9	1.4	Y
10/21/2011	**277+40**	8975.5	Rch Pit: 130.4 PCF @6.7%	128.7	7.4	98.7	0.7	Y
10/22/2011	**277+30**	8977	Rch Pit: 130.4 PCF @6.7%	126.6	7.4	97.1	0.7	Y
10/23/2011	**276+15**	8978.5	Rch Pit: 130.4 PCF @6.7%	130	6.9	99.7	0.2	Y
10/24/2011	**277+10**	8980	Rch Pit: 130.4 PCF @6.7%	129.9	6.9	99.6	0.2	Y
10/25/2011	**277+00**	8981.5	Rch Pit: 130.4 PCF @6.7%	126.4	6.3	96.9	-0.4	Y
10/27/2011	**276+50**	8983	Ten Pit: 137.2 PCF @ 4.3%	133.9	4.6	97.6	0.3	Y
10/28/2011	**277+50**	8984.5	Ten Pit: 137.2 PCF @ 4.3%	136.3	5.3	99.3	1	Y
10/29/2011	**277+00**	8986	Ten Pit: 137.2 PCF @ 4.3%	130.9	4	95.4	-0.3	Y
10/30/2011	**276+70**	8988	Ten Pit: 137.2 PCF @ 4.3%	137.1	5.1	99.9	0.8	Y
10/30/2011	**276+30**	8990.5	Ten Pit: 137.2 PCF @ 4.3%	135.1	4.9	98.5	0.6	Y

See example of Contractor Daily Test Report (submitted to FHWA each day)

support documentation for contractor testing (site 5 embankment testing report)

• Geotechnical • Environmental • Materials Testing

REPORT OF FIELD DENSITY T

Client:			October 30, 2011
Project:	WY ERFO 261 Cedar Pass Road, WY	**Project No:**	11-1490-T
Item Tested:	**Street Subgrade**	**Report No:**	50
		Test No's.:	1 through 2

Test	Location: Site 5	Elevation	MDD	OMC	Dry Dens.	Moist	% Comp.	Soil Type
1	Station 276 + 70	8988'	137.2	4.3	137.1	5.1	99.9	Gravelly, Silty SAND
2	Station 276 + 30	8990.5'	137.2	4.3	135.1	4.9	98.5	Gravelly, Silty SAND

COMPACTION SPECIFICATIONS

Area: Street Subgrade	**Compaction:** ≥ 95% of ASHTO T-99	**Moisture:** +/-2 pts OMC

	INDICATION OF DENSITY TEST PASS OR FAILURE This report presents opinions as a result of our observation of fill placement. We have relied on the contractor to continue applying the recommended compactive effort and moisture to the fill during times when our observer is not observing operations. Tests are made of the fill only as believed necessary to calibrate our observer's judgment. Test data are not the sole basis for opinions on whether the fill meets specifications. Our tests indicate only the field dry density and moisture content of the material sampled. The quality and swell potential of the material is not considered herein.
	Periodic Observation of fill placement being continued unless otherwise advised.
☑ **Pass**	In our opinion the fill has been compacted to the spec. requirements as indicated by test number 1 through 2.
☐ **Failure**	In our opinion fill does not meet specified requirements as indicated by Test No. (s) and should be removed or reworked. Contractor has been advised.
☐ **Remarks:**	
Field Observer: BA **Reviewed By:** DP	

support documentation for contractor testing (site 5 aggregate testing report)

Geotechnical • Environmental • Materials Testing

REPORT OF FIELD DENSITY TEST RESULTS

Client:		**Date:**	October 30, 2011
Project:	WY ERFO 261 Cedar Pass Road, WY	**Project No:**	11-1490-T
Item Tested:	**Street Subgrade**	**Report No:**	51
		Test No's.:	1 through 4

Test	Location: Site 5	Elevation	MDD	OMC	Dry Dens.	Moist	% Comp.	Soil Type
1	Station 277 + 50 Left 2' Offset	Grade	145.7	6.4	138.9	5.7	95.3	Base Coarse Gravel with Silt and Sand
2	Station 277 + 50 Right 2' Offset	Grade	145.7	6.4	140.0	5.4	96.1	Base Coarse Gravel with Silt and Sand
3	Station 276 + 65 Left 2' Offset	Grade	145.7	6.4	141.2	6.8	96.9	Base Coarse Gravel with Silt and Sand
4	Station 276 + 65 Right 2' Offset	Grade	145.7	6.4	138.4	8.3	95.0	Base Coarse Gravel with Silt and Sand

COMPACTION SPECIFICATIONS

Area: Street Subgrade	**Compaction:** ≥ 95% of ASHTO T-99	**Moisture:** +/-2 pts OMC

	INDICATION OF DENSITY TEST PASS OR FAILURE This report presents opinions as a result of our observation of fill placement. We have relied on the contractor to continue applying the recommended compactive effort and moisture to the fill during times when our observer is not observing operations. Tests are made of the fill only as believed necessary to calibrate our observer's judgment. Test data are not the sole basis for opinions on whether the fill meets specifications. Our tests indicate only the field dry density and moisture content of the material sampled. The quality and swell potential of the material is not considered herein.
	Periodic Observation of fill placement being continued unless otherwise advised.
☐ **Pass**	In our opinion the fill has been compacted to the spec. requirements as indicated by test number 1 through 4.
☐ **Failure**	In our opinion fill does not meet specified requirements as indicated by Test No. (s) and should be removed or reworked. Contractor has been advised.
☐ **Remarks:**	
Field Observer: BA **Reviewed By:** DP	

SECTION 2: STATION ITEMS

GENERAL NOTE:
The items shown here are examples only - all measurement, documentation, and payment will conform to the project contract requirements regardless of what is shown here. Included here are examples of some of the many documentation types that may be required. Often documentation such as certifications and qualifications may be submitted and accepted once and then referenced accordingly instead of attaching additional copies for each pay note or payment period. Many documentation items are required prior to production, delivery, or placement; required documentation should be provided at the appropriate time and not necessarily at time of payment.

NOTE ON STA ITEMS:
Items paid by the STA are generally items that include many miles of continuous work (i.e. Staking, Ditch Reconditioning, Pulverizing, and Rumble Strip). A Station is generally paid once every 50’ or 100’ (i.e. for intervals of 50’, work from station 100+00 to 200+00 = 2 stations). Please review the plans and specifications for payment intervals on your specific project. Payment by station is determined from the approved centerline referencing stakes. Station quantities shown in the Plans are estimates and are generally very accurate, but only actually ordered and performed quantities are paid. Please refer to the FP, the Special Contract Requirements, and plans of your project for detailed instructions prior to submitting any pay notes.

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 10/28/10

Project Number: SD PFH 17-1(8) Project Name: Hill City to Lead

Account: Schedule B

Pay Note Information:

Pay Item #: 15206-0000 Item Description: Slope, Reference, & Clearing Stake Pay Unit: STA

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 22 Pay Period: 2

Pay Note Entry:

Work Start Date: 10/24/10 Work End Date: 10/28/10

Location/Description:

Clearing and Grubbing Staking: 10/24/10 & 10/28/10, STATION 85+80 to 126+00 (50' intervals)*

*See Slope, Reference, and Clearing & Grubbing Stake Daily Totals Spreadsheet

Remarks/Calculations:

19.00 STA + 7.67 STA = 26.67 STA

Pay 26.67 STA

Support Documentation/References:

(1) Slope, Reference, and Clearing & Grubbing Stake Daily Totals Spreadsheet

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 26.67 (STA)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 10/28/10

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 10/28/10

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 11/04/10

slope, reference, and clearing & grubbing support documentation

SD PFH 17-1(6) Hill City to Lead

15206-0000: Slope, Reference, and Clearing & Grubbing Stake Daily Totals

Pay Period 3 (10-1-2010 to 10-31-2010)

Pay Unit: STA

SLOPE STAKING (1/3 of total work for this item)					
DATE	STA START	STA END	INTERVAL STAKED (FEET)	TOTAL STA STAKED	1/3 OF TOTAL STA STAKED (PAY AMOUNT)
10/1/2010	11+00	21+50	50	21	7.00
10/2/2010	22+00	34+00	50	24	8.00
10/3/2010	34+50	52+00	50	35	11.67
10/4/2010	52+50	74+00	50	43	14.33
10/7/2010	74+50	98+00	50	47	15.67
10/8/2010	98+50	114+00	50	31	10.33
10/10/2010	114+50	120+00	50	11	3.67
			TOTALS =	212	**70.67**

REFERENCE STAKING (1/3 of total work for this item)					
DATE	STA START	STA END	INTERVAL STAKED (FEET)	TOTAL STA STAKED	1/3 OF TOTAL STA STAKED (PAY AMOUNT)
10/11/2010	11+00	33+50	50	45	15.00
10/14/2010	34+00	57+00	50	46	15.33
10/15/2010	57+50	87+00	50	59	19.67
10/16/2010	87+50	100+00	50	25	8.33
10/17/2010	100+50	114+00	50	27	9.00
			TOTALS =	202	**67.33**

CLEARING AND GRUBBING STAKING (1/3 of total work for this item)					
DATE	STA START	STA END	INTERVAL STAKED (FEET)	TOTAL STA STAKED	1/3 OF TOTAL STA STAKED (PAY AMOUNT)
10/20/2010	11+00	55+00	50	88	29.33
10/21/2010	55+50	85+00	50	59	19.67
10/24/2010	85+50	114+00	50	57	19.00
10/28/2010	114+50	126+00	50	23	7.67
			TOTALS =	227	**75.67**

Section 3: EACH ITEMS

GENERAL NOTE:
The items shown here are examples only - all measurement, documentation, and payment will conform to the project contract requirements regardless of what is shown here. Included here are examples of some of the many documentation types that may be required. Often documentation such as certifications and qualifications may be submitted and accepted once and then referenced accordingly instead of attaching additional copies for each pay note or payment period. Many documentation items are required prior to production, delivery, or placement; required documentation should be provided at the appropriate time and not necessarily at time of payment.

NOTE ON EACH ITEMS:
Items paid by the EACH are generally items that are appropriate to track on an individual basis (i.e. placing boulders, placing a gate, culvert end sections, traffic control cones, etc.). Payment by each is the actual number of units completed and accepted. Quantities shown in the Plans are estimates; only actually ordered and performed quantities are paid. Generally, when submitting for payment on items paid by the EACH, it is required to show on the paynote when the item was completed, where the item was placed (stationing/offset/sketch on the plans) and how many items were placed. Please refer to the FP, the Special Contract Requirements, and plans of your project for detailed instructions prior to submitting any pay notes.

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 9/17/08

Project Number: UT PFH 39-1(2) Project Name: 7 Mile Gooseberry Road

Account: Option X

Pay Note Information:

Pay Item #: 15215-3000 Item Description: Survey & Staking, Drainage Structure Pay Unit: EACH

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 34 Pay Period: 2

Pay Note Entry:

Work Start Date: 09/15/08 Work End Date: 9/17/08

Location/Description:

Pipe location:
9/15/08: 18+855
9/17/08: 17+520, 17+697, 17+832, 18+050

Remarks/Calculations:

Each culvert above has been plotted and staked per contract requirements.

Total = 5 EACH

Support Documentation/References:

Approved pipe calculations/plots for each pipe being paid for (only 18+855 shown in this example)

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 5 (EACH)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 9/17/08

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 9/17/08

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 10/01/08

Form FHWA-1460
(Rev. 3-74)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

MADE BY.............. DATE........... PROJECT.......................................

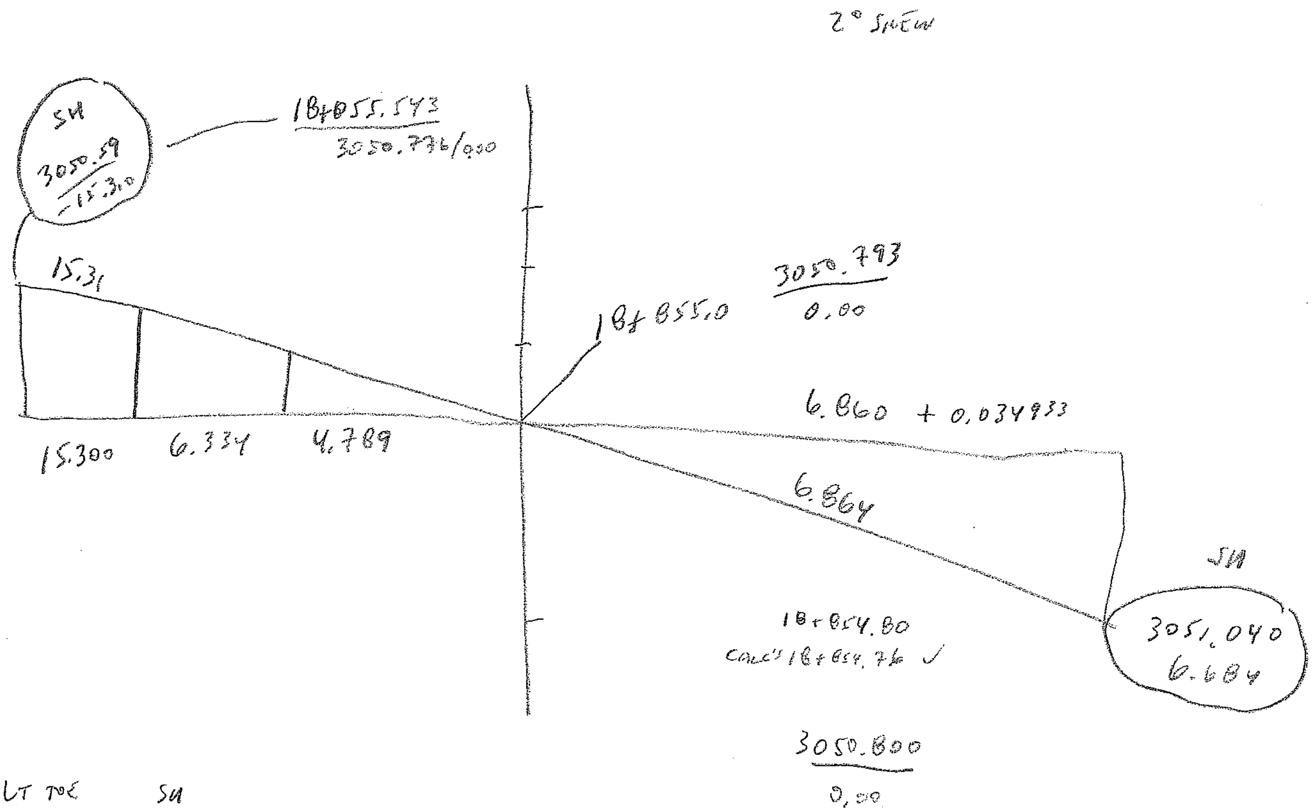
CHECKED BY........... DATE........... ....

CALCULATIONS FOR.......... 18+855 .... SHEET NO............

DESIGN L = 37m ; 600mm

drainage structure survey & staking support documentation

* PIPE = METAL ; FILL > 3.5 m



LT TOE SH

$\frac{3048.45}{-19.5}$ $\frac{3050.59}{-15.31}$

$= \frac{2.14}{4.19} = 1.96:1$ ✓

2:1 FILL = 0.6 - 0.3 = 0.3 x 2 = 0.6 IN FROM

TOE = 18.9

RT TOE SH

$\frac{3044.430}{20.40}$ $\frac{3051.040}{6.684} = \frac{6.61}{13.716} = 2.075:1$

2:1 FILL = 0.6 - 0.3 = 0.3 x 2 = 0.6 IN FROM

TOE = 19.80+/-

PIPE DROP = $\frac{3.92}{39.10}$ = 10.026 = 39.296 = 128.9'

128' = 39.014 m

= 38.017 ALL

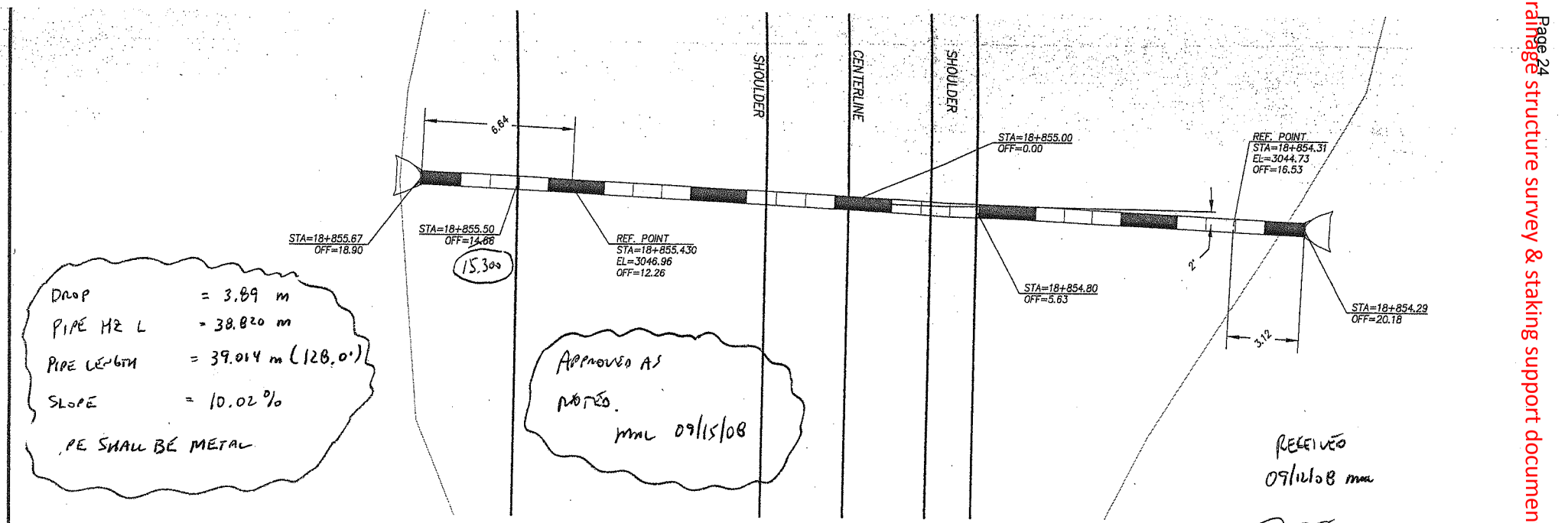
-18.91

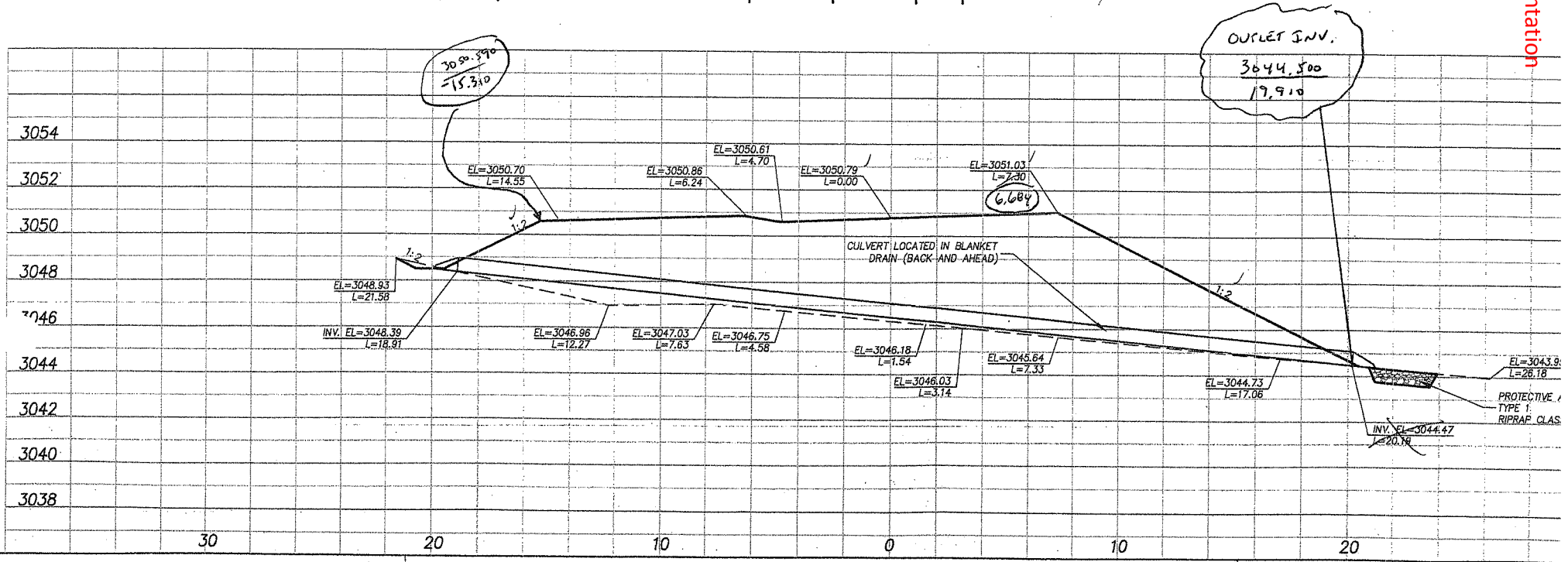
HOLD INLET

$\frac{3048.39}{-18.91}$

OUTLET

$\frac{3044.50}{19.91} = \frac{3.89}{38.82}$ = 39.014 m = 128'





PEPG ENGINEERING, L.L.C.
421 W. 12300 S. #400 • DRAPER, UT 84020
PH: (801) 562-2521 • FAX: (801) 562-2551

SEVENMILE-GOOSEBERRY ROAD PHASE II

UTAH FOREST HIGHWAY PROJECT P.F.H. 39-1(2)
SEVIER COUNTY--FISH LAKE NATIONAL FOREST
CULVERT CROSSING 18+855

CULVERT STA	
DESIGN STA.: 18+855	ACTUAL STA.: 18+855.00
PIPE HORIZ. LENGTH: 39.10 M	PIPE LENGTH: ~~39.30 M~~ 39.014
INLET ELEV.: 3048.39	OUTLET ELEV.: ~~3044.47~~ 3044.500
STAKED BY: PEPG ENGINEERING	

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 06/12/11

Project Number: NM PRA CAVE 10(1) Project Name: Carlsbad Caverns

Account: Schedule B

Pay Note Information:

Pay Item #: 25125-0000 Item Description: Boulders Pay Unit: EACH

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 65 Pay Period: 2

Pay Note Entry:

Work Start Date: 06/11/11 Work End Date: 06/12/11

Location/Description:

-6/11/11: 10 boulders placed every 15 feet from Station 29+80 to 31+30 (as approved by the CO)
-6/12/11: 14 boulders placed every 15 feet from Station 31+45 to 33+55 (as approved by the CO)

Remarks/Calculations:

-(10 boulders placed on 6/11/11) + (14 boulders placed on 6/12/11) = 24 BOULDERS TOTAL

-Pay 24 boulders EACH

Support Documentation/References:

See attached plan sheet, D14 for placement details

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 24 (EACH)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 06/12/11

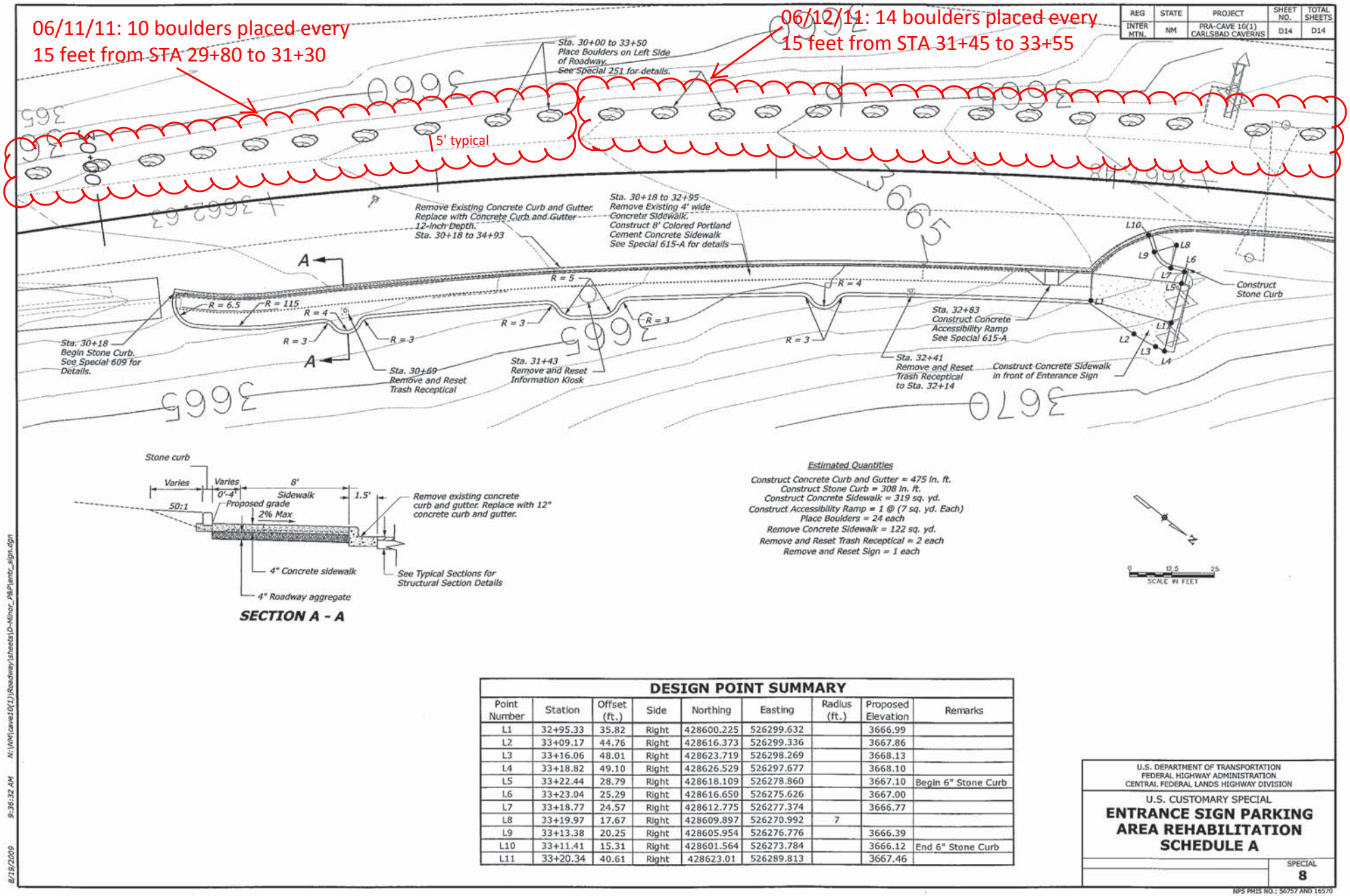
Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 06/12/11

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 07/13/11

boulder support documentation



REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
INTER MTN.	NM	PRA-CAVE 10(1) CARLSBAD CAVERNS	D14	D14

DESIGN POINT SUMMARY

Point Number	Station	Offset (ft.)	Side	Northing	Easting	Radius (ft.)	Proposed Elevation	Remarks
L1	32+95.33	35.82	Right	428600.225	526299.632		3666.99	
L2	33+09.17	44.76	Right	428616.373	526299.336		3667.86	
L3	33+16.06	48.01	Right	428623.719	526298.269		3668.13	
L4	33+18.82	49.10	Right	428626.529	526297.677		3668.10	
L5	33+22.44	28.79	Right	428618.109	526278.860		3667.10	Begin 6" Stone Curb
L6	33+23.04	25.29	Right	428616.650	526275.626		3667.00	
L7	33+18.77	24.57	Right	428612.775	526277.374		3666.77	
L8	33+19.97	17.67	Right	428609.897	526270.992	7		
L9	33+13.38	20.25	Right	428605.954	526276.776		3666.39	
L10	33+11.41	15.31	Right	428601.564	526273.784		3666.12	End 6" Stone Curb
L11	33+20.34	40.61	Right	428623.01	526289.813		3667.46	

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY SPECIAL

ENTRANCE SIGN PARKING AREA REHABILITATION SCHEDULE A

SPECIAL 8

NPS PMIS NO.: 56757 AND 16570

8/19/2009 9:36:32 AM N:\WM\cave10(1)\Roadway\sheets\D-Minor_P&Plant_sign.dgn

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 05/27/09

Project Number: UT PFH 39-1(2) Project Name: 7 Mile Gooseberry Road

Account: Schedule C

Pay Note Information:

Pay Item #: 63316-1000 Item Description: Remove and Reset Sign Pay Unit: EACH

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 112 Pay Period: 4

Pay Note Entry:

Work Start Date: 05/07/09 Work End Date: 5/27/09

Location/Description:

See attached remove and reset sign support documentation spreadsheet for location and description of work.

Remarks/Calculations:

-Pay 20 EACH

Support Documentation/References:

Remove and reset sign support documentation spreadsheet

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 20 (EACH)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 05/27/09

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 5/27/09

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 6/05/09

remove and reset signs support documentation

63316 Remove and Reset Signs

Removed/ Reset	Work Completed	Station	Side	Sign
		5+75	RT	Reverse turn sigh right
		11+75	RT	Pavement Ends
		14+50	LT	Reverse turn sigh right
x/x	5/27/2009	25+68	Rt	Lights on for safety
x/x	5/27/2009	54+95	RT	MP 1
x/x	5/27/2009	107+75	RT	MP 2
x/x	5/24/2009	160+55	RT	MP 3
x/x	5/24/2009	213+35	RT	MP 4
x/x	5/24/2009	266+15	RT	MP 5
x/x	5/24/2009	318+95	RT	MP 6
x/x	5/24/2009	371+75	RT	MP 7
x/x	5/19/2009	424+55	RT	MP 8
x/x	5/19/2009	450+35	LT	Rd #7830
x/x	5/12/2009	450+34	LT	22 National Forest
x/x	5/12/2009	478+69	RT	MP 9
x/x	5/12/2009	530+15	RT	MP 10
x/x	5/12/2009	563+50	LT	Rd #7860
x/x	5/7/2009	582+95	RT	MP 11
x/x	5/7/2009	605+00	RT	Intersection Ahead
x/x	5/7/2009	607+80	RT	Satsop Center 7/Wynoochee Lake 6
x/x	5/7/2009	610+64	RT	22 National Forest
x/x	5/7/2009	613+34	LT	Montesano 30
x/x	5/7/2009	614+83	RT	Lights on for safety

= 20 TOTAL

Note: Paid per post. A post with multiple signs attached is paid as 1 EACH.

Section 4: HOUR/WEEK ITEMS

GENERAL NOTE:
The items shown here are examples only - all measurement, documentation, and payment will conform to the project contract requirements regardless of what is shown here. Included here are examples of some of the many documentation types that may be required. Often documentation such as certifications and qualifications may be submitted and accepted once and then referenced accordingly instead of attaching additional copies for each pay note or payment period. Many documentation items are required prior to production, delivery, or placement; required documentation should be provided at the appropriate time and not necessarily at time of payment.

NOTE ON HOUR ITEMS:
Items paid by the Hour are only paid when ordered by the CO. Hour quantities shown in the Plans are estimates; only actually ordered and performed quantities are paid. Please refer to the FP, the Special Contract Requirements, and plans for your project for detailed instructions prior to submitting any pay notes. In order to fully provide documentation for measurement and payment, advance consideration should be given to tracking the individual persons or equipment that are used and the specific start and stop times. For clarity, hourly ordered work should be completed separately from other items when possible.

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 10/11/2009

Project Number: ND PRA THRO 10(3) Project Name: North Unit Scenic Drive

Account: Schedule C

Pay Note Information:

Pay Item #: 62201-0900 Item Description: Wheel Loader,2 Cubic Yard Capacity Pay Unit: Hours

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 123 Pay Period: 5

Pay Note Entry:

Work Start Date: 10/08/2009 Work End Date: 10/11/2009

Location/Description:

(1) Station 385+00 to 395+00 LT on 10/11/09: Move boulders from 1200 to 1730 = 5.5 hours*
(2) Station 385+00 to 410+10 RT on 10/10/09: Move NPS stockpile from 0700 to 1530 (1/2 hr lunch) = 8 hours*
(3) Station 227+00 parking lot entrance on 10/09/09:Move NPS stockpile from 0700 to 1530 (1/2 hr lunch) = 8 hours*
(4) Station 87+50 cross road pipe RT on 10/08/09 from 0700 to 1030 = 3.5 hours*

*Extra work directed by CFL project engineer and performed by Tom the Operator on the CAT 950H

Remarks/Calculations:

From Location/Description:
Total quantity (Hours) = 5.5 + 8 + 8 + 3.5 = 25 Hours

Support Documentation/References:

N/A

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 25.0 (Hours)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 10/11/09

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 10/11/09

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane and the Project Engineer Date: 10/11/09

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 8/21/10

Project Number: CA PFH 112-1(1) Project Name: South Fork Smith River Road

Account: Option X

Pay Note Information:

Pay Item #: 63510-0100 Item Description: Traffic Control Supervisor Pay Unit: WEEK

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 67 Pay Period: 3

Pay Note Entry:

Work Start Date: 8/15/10 Work End Date: 8/21/10

Location/Description:

Certified Traffic Control Supervisor, Cassie Fitzhugh worked 7 consecutive days from 08/15/10 to 08/21/10.
See attached Daily Traffic Control Reports

Remarks/Calculations:

Per SCR 635.26, measure Traffic and Safety Supervisor by the week (7 consecutive days, beginning and ending at midnight on the same day of the week) for the work described in Subsection 156.08. Payment will be full compensation for the work prescribed.

08/15/10 to 08/21/10 = 1 week

Support Documentation/References:

Scanned T.C.S Certifications, Daily Traffic Control Reports

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 1 (WEEK)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 8/21/10

Contractor Representative (Signature):

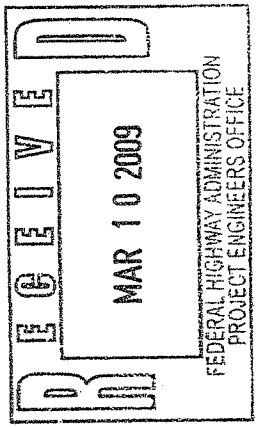
Approved by FHWA Representative (Print): Joe the Inspector Date: 8/21/10

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Inspector Date: 9/5/10

Oregon Department of Transportation

Certification for



TRAFFIC CONTROL SUPERVISOR

Cassie Fitzhugh

COPY

Evergreen Safety Council presents this certificate to the above named person, to identify their having met the Oregon Department of Transportation experience and examination standards, as administered by the Traffic Control Oversight Committee for the classification of Traffic Control Supervisor.

Attested to on this the *13th* day of *July, 2004*

President

EVERGREEN SAFETY COUNCIL

Instructor

traffic control supervisor support documentation

TIDEWATER CONTRACTORS, INC.

16156 Hwy 101 South X P.O. Box 1956 X Brookings, Oregon 97415
Phone - (541)469-5341 X Fax - (541)469-5543
Dave Baldwin Jess Fitzhugh
CCB # 29995 CCLB# 456696

TIDEWATER CONTRACTORS, INC. Est. 1978 Brookings - John Day, Oregon 541-469-5341 • 541-932-4888

COPY

RECEIVED
MAR 10 2009
FEDERAL HIGHWAY ADMINISTRATION
PROJECT ENGINEERS OFFICE

March 5, 2009

Re: CA PFH 112-1(1) Traffic Control Supervisor and Traffic Control Plan

Tidewater Contractors, Inc. Traffic Control Supervisor will be Cassie Fitzhugh. Cassie started out as a Traffic Control Flagger and Pilot Car Driver over 11 years ago. For the past 7 years she has set-up and maintained most of Tidewaters Traffic Control operations for ODOT and Cal Trans. In July of 2004 Cassie passed her Traffic Control Supervisor course for ODOT.

In the event that Cassie is unavailable Elaine Davis will be her replacement. Elaine set-up and maintained the Traffic Control operations for Tidewater when Cassie was unavailable. In March of 2008 Elaine passed her Traffic Control Supervisor course for ODOT.

Tidewater will comply with Standard Drawings 635-5 thru 635-9 and 635-13 and the site specific Traffic Control Drawings on pages T30, T31 and T32 when applicable. Tidewater will also comply with Section 108 and 156 regarding Traffic Control.

Thank you,

George Fitzhugh
Tidewater Contractors, Inc.

OREGON CERTIFIED TRAFFIC CONTROL
SUPERVISOR

ıme: Cassie A Fitzhugh

). No.#: 020366

ɪrtification #: 03729

ɜue Date: 1/26/2010

ıte of Expiration: 1/31/2013

Valid with government issued photo ID

This certifies that the person identified on this card has successfully met the training requirements to be awarded Oregon Traffic Control Supervisor (TCS) status.

EVERGREEN SAFETY COUNCIL

Training presented by:

Evergreen Safety Council

Instructor's name (print): Dave White

Training Location: Salem, OR

Training is MUTCD Compliant.
To verify information on this card contact
Evergreen Safety Council at 1-800-521-0778.

traffic control supervisor support documentation

Federal Highway Administration
Central Federal Lands Highway Division

DAILY TRAFFIC CONTROL REPORT

PROJECT NAME & NUMBER South Fork Smith River Road / CA PFH 112-1 (1)		DATE 8-21-10	CONTRACT NO. DTFH68-09-C-00010
Pay Item: 63510-0100 Traffic and Safety Supervisor			
TECHNICIAN	DAY ☐ S ☐ M ☐ T ☐ W ☐ T ☐ F ☒ S	TEMPERATURE HIGH °F LOW °F	TCS: Cassie Fitzhugh
WEATHER ☒ CLEAR ☐ PT. CLOUDY ☐ CLOUDY ☐ RAIN ☐ SNOW	WIND CONDITIONS ☒ CALM ☐ LIGHT ☐ STRONG	ARRIVAL TIME	DEPARTURE TIME

TODAY'S OPERATIONS:
A)
Rock Crk)
B)
Bldr Crk)
C) Schmuebel ~ shoring @ both walls
D)

→ Dust Control

EVIDENCE OF AN ACCIDENT	☐ YES ☒ NO
DAMAGED TRAFFIC CONTROL DEVICES	☐ YES ☒ NO
ADEQUATE BUFFER SPACE	☒ YES ☐ NO
IS THE WORK AREA PROTECTED	☒ YES ☐ NO
MATERIALS PROPERLY STORED	☒ YES ☐ NO
ARE LANE CLOSURES IN ACCORD WITH ALLOWED HOURS	☒ YES ☐ NO
TRAFFIC DELAYS MEET CONTRACT SPECIFICATIONS	☒ YES ☐ NO

	NUMBER USED	A: RCK:	B:	BLDR:	C: D:
PILOT VEHICLE	1				1
FLAGGERS	2				2
CONSTRUCTION SIGNS	6				6
BARRICADES					
DRUMS	96	18		3	75
WARNING LIGHTS	1				1
TUBULAR TRAFFIC MARKERS	231	32 47	10	37	88 17
PAVEMENT MARKINGS					
ARROW BOARD					
VARIABLE MESSAGE BOARD					
TEMPORARY CONCRETE BARRIER	117	60			57/3
OTHER					

LOCATION (STATION #) OF MISSING OR DAMAGED DEVICES

DATE LAST CLEANED:	CONES	LIGHTS	SIGNS	BARRICADES

TSS SIGNATURE	FHWA SIGNATURE	DATE
Cassie Fitzhugh	8/21/10	8/21/10

traffic control supervisor support documentation

Federal Highway Administration
Central Federal Lands Highway Division

DAILY TRAFFIC CONTROL REPORT

PROJECT NAME & NUMBER	DATE	CONTRACT NO.
South Fork Smith River Road / CA PFH 112-1 (1)	8-20-10	DTFH68-09-C-00010
Pay Item: 63510-0100 Traffic and Safety Supervisor		

TECHNICIAN	DAY	TEMPERATURE	TCS:
	☐ S ☐ M ☐ T ☐ W ☐ T ☒ F ☐ S	HIGH °F / LOW °F	Cassie Fitzhugh

WEATHER	WIND CONDITIONS	ARRIVAL TIME	DEPARTURE TIME
☒ CLEAR ☐ PT. CLOUDY ☐ CLOUDY ☐ RAIN ☐ SNOW	☒ CALM ☐ LIGHT ☐ STRONG		

TODAY'S OPERATIONS:
A) TW ~ still building MSE wall !!
Rock Crk)
B)
Bldr Crk)
C) Schraeubel ~ shoring
D)

Dust Control

EVIDENCE OF AN ACCIDENT	☐ YES ☒ NO
DAMAGED TRAFFIC CONTROL DEVICES	☐ YES ☒ NO
ADEQUATE BUFFER SPACE	☑ YES ☐ NO
IS THE WORK AREA PROTECTED	☑ YES ☐ NO
MATERIALS PROPERLY STORED	☑ YES ☐ NO
ARE LANE CLOSURES IN ACCORD WITH ALLOWED HOURS	☑ YES ☐ NO
TRAFFIC DELAYS MEET CONTRACT SPECIFICATIONS	☑ YES ☐ NO

	NUMBER USED	A: RCK:	B:	BLDR:	C: D:
PILOT VEHICLE	2	1			1
FLAGGERS	4	2			2
CONSTRUCTION SIGNS	12	6			6
BARRICADES					
DRUMS	96	18		3	75
WARNING LIGHTS	1				1
TUBULAR TRAFFIC MARKERS	231	32 47	10	37	88 17
PAVEMENT MARKINGS					
ARROW BOARD					
VARIABLE MESSAGE BOARD					
TEMPORARY CONCRETE BARRIER	117	60			57/3
OTHER					

LOCATION (STATION #) OF MISSING OR DAMAGED DEVICES

DATE LAST CLEANED:	CONES	LIGHTS	SIGNS	BARRICADES

TSS SIGNATURE	FHWA SIGNATURE	DATE
Cassie Fitzhugh	8/27/10	8-20-10

traffic control supervisor support documentation

Federal Highway Administration
Central Federal Lands Highway Division

DAILY TRAFFIC CONTROL REPORT

PROJECT NAME & NUMBER: South Fork Smith River Road / CA PFH 112-1 (1)		DATE: 8-19-10	CONTRACT NO.: DTFH68-09-C-00010
Pay Item: 63510-0100 Traffic and Safety Supervisor			
TECHNICIAN	DAY: ☐ S ☐ M ☐ T ☐ W ☒ T ☐ F ☐ S	TEMPERATURE HIGH °F / LOW °F	TCS: Cassie Fitzhugh
WEATHER: ☒ CLEAR ☐ PT. CLOUDY ☐ CLOUDY ☐ RAIN ☐ SNOW	WIND CONDITIONS: ☒ CALM ☐ LIGHT ☐ STRONG	ARRIVAL TIME	DEPARTURE TIME

TODAY'S OPERATIONS:
A) TW - Builder MSE Wall
Rock Crk)
B)
Bldr Crk)
C) TW - Wall Ex — Schnaeble shoring ; shotcrete
D)

Dust Control

EVIDENCE OF AN ACCIDENT	☐ YES ☒ NO
DAMAGED TRAFFIC CONTROL DEVICES	☐ YES ☒ NO
ADEQUATE BUFFER SPACE	☒ YES ☐ NO
IS THE WORK AREA PROTECTED	☒ YES ☐ NO
MATERIALS PROPERLY STORED	☒ YES ☐ NO
ARE LANE CLOSURES IN ACCORD WITH ALLOWED HOURS	☒ YES ☐ NO
TRAFFIC DELAYS MEET CONTRACT SPECIFICATIONS	☒ YES ☐ NO

	NUMBER USED	A:	RCK:	B:	BLDR:	C:	D:
PILOT VEHICLE	2	1				1	
FLAGGERS	4	2				2	
CONSTRUCTION SIGNS	12	6				6	
BARRICADES					2		
DRUMS	96	18			3	75	
WARNING LIGHTS	1					1	
TUBULAR TRAFFIC MARKERS	232	32	47	10	32	88	17
PAVEMENT MARKINGS							
ARROW BOARD							
VARIABLE MESSAGE BOARD							
TEMPORARY CONCRETE BARRIER	117	60				57 3	
OTHER							

LOCATION (STATION #) OF MISSING OR DAMAGED DEVICES

DATE LAST CLEANED:	CONES	LIGHTS	SIGNS	BARRICADES

TSS SIGNATURE	FHWA SIGNATURE	DATE
Cassie Fitzhugh	8/20/10	8/19/10

traffic control supervisor support documentation

Federal Highway Administration
Central Federal Lands Highway Division

Federal Lands Highway
Commitment to Excellence

DAILY TRAFFIC CONTROL REPORT

PROJECT NAME & NUMBER South Fork Smith River Road / CA PFH 112-1 (1)	DATE 8-18-10	CONTRACT NO. DTFH68-09-C-00010
Pay Item: 63510-0100 Traffic and Safety Supervisor		
TECHNICIAN	DAY ☐ S ☐ M ☐ T ☒ W ☐ T ☐ F ☐ S	TEMPERATURE HIGH °F LOW °F
TCS: Cassie Fitzhugh		
WEATHER ☒ CLEAR ☐ PT. CLOUDY ☐ CLOUDY ☐ RAIN ☐ SNOW	WIND CONDITIONS ☒ CALM ☐ LIGHT ☐ STRONG	ARRIVAL TIME / DEPARTURE TIME

TODAY'S OPERATIONS:

A) TW - Builden MSE Wall
Rock Crk)
B)
Bldr Crk)
C) TW - Wall Ex for Shoring — Schnaubel - shoring : shotcrete
D)

Dust Control

EVIDENCE OF AN ACCIDENT	☐ YES	☒ NO
DAMAGED TRAFFIC CONTROL DEVICES	☐ YES	☒ NO
ADEQUATE BUFFER SPACE	☒ YES	☐ NO
IS THE WORK AREA PROTECTED	☒ YES	☐ NO
MATERIALS PROPERLY STORED	☒ YES	☐ NO
ARE LANE CLOSURES IN ACCORD WITH ALLOWED HOURS	☒ YES	☐ NO
TRAFFIC DELAYS MEET CONTRACT SPECIFICATIONS	☒ YES	☐ NO

	NUMBER USED	A:	RCK:	B:	BLDR:	C:	D:
PILOT VEHICLE	2	1				1	
FLAGGERS	4	2				2	
CONSTRUCTION SIGNS	12	6				6	
BARRICADES							
DRUMS	96	18			3	75	
WARNING LIGHTS	1					1	
TUBULAR TRAFFIC MARKERS	231	32	47	10	37	88	17
PAVEMENT MARKINGS							
ARROW BOARD							
VARIABLE MESSAGE BOARD							
TEMPORARY CONCRETE BARRIER	117	60				57/3	
OTHER							

LOCATION (STATION #) OF MISSING OR DAMAGED DEVICES
* Weekly Meeting

DATE LAST CLEANED: CONES LIGHTS SIGNS BARRICADES

TSS SIGNATURE Cassie Fitzhugh	FHWA SIGNATURE [illegible] 8/27/10	DATE 8-18-10

traffic control supervisor support documentation

Federal Highway Administration
Central Federal Lands Highway Division

Federal Lands Highway — Commitment to Excellence

DAILY TRAFFIC CONTROL REPORT

PROJECT NAME & NUMBER	DATE	CONTRACT NO.
South Fork Smith River Road / CA PFH 112-1 (1)	8-17-10	DTFH68-09-C-00010
Pay Item: 63510-0100 Traffic and Safety Supervisor		

TECHNICIAN	DAY	TEMPERATURE	TCS:
	☐ S ☐ M ☒ T ☐ W ☐ T ☐ F ☐ S	HIGH °F / LOW °F	Cassie Fitzhugh

WEATHER	WIND CONDITIONS	ARRIVAL TIME	DEPARTURE TIME
☒ CLEAR ☐ PT. CLOUDY ☐ CLOUDY ☐ RAIN ☐ SNOW	☐ CALM ☒ LIGHT ☐ STRONG		

TODAY'S OPERATIONS:
A) TW Builder MSE wall
Rock Crk)
B)
Bldr Crk)
C) TW Excavater wall for shoring ~ Schnaubel shoring @ C2
D)

EVIDENCE OF AN ACCIDENT	☐ YES ☒ NO
DAMAGED TRAFFIC CONTROL DEVICES	☐ YES ☒ NO
ADEQUATE BUFFER SPACE	☒ YES ☐ NO
IS THE WORK AREA PROTECTED	☒ YES ☐ NO
MATERIALS PROPERLY STORED	☒ YES ☐ NO
ARE LANE CLOSURES IN ACCORD WITH ALLOWED HOURS	☒ YES ☐ NO
TRAFFIC DELAYS MEET CONTRACT SPECIFICATIONS	☒ YES ☐ NO

	NUMBER USED	A: RCK:	B:	BLDR:	C: D:
PILOT VEHICLE	2	1			1
FLAGGERS	4	2			2
CONSTRUCTION SIGNS	12	6			6
BARRICADES					
DRUMS	96	18		3	75
WARNING LIGHTS	1				1
TUBULAR TRAFFIC MARKERS	231	32 47	10	37	88 17
PAVEMENT MARKINGS					
ARROW BOARD					
VARIABLE MESSAGE BOARD					
TEMPORARY CONCRETE BARRIER	117	60			57/3
OTHER					

LOCATION (STATION #) OF MISSING OR DAMAGED DEVICES

DATE LAST CLEANED:	CONES	LIGHTS	SIGNS	BARRICADES

TSS SIGNATURE	FHWA SIGNATURE	DATE
Cassie Fitzhugh	8/27/10	8/17/10

traffic control supervisor support documentation

Federal Highway Administration
Central Federal Lands Highway Division

Federal Lands Highway — Commitment to Excellence

WEEKLY TRAFFIC CONTROL REPORT

PROJECT NAME & NUMBER	DATE	CONTRACT NO.
South Fork Smith River Road / CA PFH 112-1 (1)	8-16-10	DTFH68-09-C-00010
Pay Item: 63510-0100 Traffic and Safety Supervisor		

TECHNICIAN	DAY	TEMPERATURE HIGH °F / LOW °F	TCS:
	☐ S ☒ M ☐ T ☐ W ☐ T ☐ F ☐ S		Cassie Fitzhugh

WEATHER	WIND CONDITIONS	ARRIVAL TIME	DEPARTURE TIME
☒ CLEAR ☐ PT. CLOUDY ☐ CLOUDY ☐ RAIN ☐ SNOW	☐ CALM ☒ LIGHT ☐ STRONG		

TODAY'S OPERATIONS:
A) TW - Builder MSE wall
Rock Crk)
B)
Bldr Crk)
C) Schnaubel - Shoring
D)

TW - wall Excavation w/ haulaway

Dust Control

EVIDENCE OF AN ACCIDENT	☐ YES ☒ NO
DAMAGED TRAFFIC CONTROL DEVICES	☐ YES ☒ NO
ADEQUATE BUFFER SPACE	☒ YES ☐ NO
IS THE WORK AREA PROTECTED	☒ YES ☐ NO
MATERIALS PROPERLY STORED	☒ YES ☐ NO
ARE LANE CLOSURES IN ACCORD WITH ALLOWED HOURS	☒ YES ☐ NO
TRAFFIC DELAYS MEET CONTRACT SPECIFICATIONS	☒ YES ☐ NO

	NUMBER USED	A:	RCK:	B:	BLDR:	C:	D:
PILOT VEHICLE	2	1				1	
FLAGGERS	4	2				2	
CONSTRUCTION SIGNS	12	6				6	
BARRICADES							
DRUMS	96	18			3	75	
WARNING LIGHTS	1					1	
TUBULAR TRAFFIC MARKERS	231	32	47	10	37	88	17
PAVEMENT MARKINGS							
ARROW BOARD							
VARIABLE MESSAGE BOARD							
TEMPORARY CONCRETE BARRIER	117	60				57/3	
OTHER							

LOCATION (STATION #) OF MISSING OR DAMAGED DEVICES
*Weekly Drive Thru = All looked well Nothing new to Report :)

DATE LAST CLEANED:	CONES	LIGHTS	SIGNS	BARRICADES

TSS SIGNATURE	FHWA SIGNATURE	DATE
Cassie A Fitzhugh	8/27/10	8-16-10

traffic control supervisor support documentation

Federal Highway Administration
Central Federal Lands Highway Division

DAILY TRAFFIC CONTROL REPORT

PROJECT NAME & NUMBER South Fork Smith River Road / CA PFH 112-1 (1)	DATE 8-15-10	CONTRACT NO. DTFH68-09-C-00010	
Pay Item: 63510-0100 Traffic and Safety Supervisor			
TECHNICIAN	DAY ☒ S ☐ M ☐ T ☐ W ☐ T ☐ F ☐ S	TEMPERATURE HIGH °F LOW °F	TCS: Cassie Fitzhugh
WEATHER ☐ CLEAR ☐ PT. CLOUDY ☐ CLOUDY ☐ RAIN ☐ SNOW	WIND CONDITIONS ☐ CALM ☐ LIGHT ☐ STRONG	ARRIVAL TIME	DEPARTURE TIME

TODAY'S OPERATIONS:
A)
Rock Crk)
B)
Bldr Crk)
C)
D)

Dust Control

EVIDENCE OF AN ACCIDENT	☐ YES ☐ NO
DAMAGED TRAFFIC CONTROL DEVICES	☐ YES ☐ NO
ADEQUATE BUFFER SPACE	☐ YES ☐ NO
IS THE WORK AREA PROTECTED	☐ YES ☐ NO
MATERIALS PROPERLY STORED	☐ YES ☐ NO
ARE LANE CLOSURES IN ACCORD WITH ALLOWED HOURS	☐ YES ☐ NO
TRAFFIC DELAYS MEET CONTRACT SPECIFICATIONS	☐ YES ☐ NO

	NUMBER USED	A: RCK:	B:	BLDR:	C: D:
PILOT VEHICLE					
FLAGGERS					
CONSTRUCTION SIGNS					
BARRICADES					
DRUMS					
WARNING LIGHTS					
TUBULAR TRAFFIC MARKERS					
PAVEMENT MARKINGS					
ARROW BOARD					
VARIABLE MESSAGE BOARD					
TEMPORARY CONCRETE BARRIER					
OTHER					

LOCATION (STATION #) OF MISSING OR DAMAGED DEVICES

DATE LAST CLEANED:	CONES	LIGHTS	SIGNS	BARRICADES

TSS SIGNATURE	FHWA SIGNATURE	DATE
Cassie Fitzhugh	8/15/10	8/15/10

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 10/29/2009

Project Number: ND PRA THRO 10(3) Project Name: North Unit Scenic Drive

Account: Schedule A

Pay Note Information:

Pay Item #: 63506-0500 Item Description: Flagger Pay Unit: HOUR

Item Line #: Example: A1040 Item Type: Example: NM

Pay Note #: 212 Pay Period: 6

Pay Note Entry:

Work Start Date: 10/29/09 Work End Date: 10/29/09

Location/Description:

10/29/2009 = 24.0 hours*

*See supporting documentation

Remarks/Calculations:

Per SCR 635.26, payment will be full compensation for the work prescribed.

Sum of hours from Location/Description = 24.0 hours

Pay 24.0 hours

Support Documentation/References:

Daily Record of Flagger Hours, Flagger Certification

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 24 (HOURS)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 10/29/09

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 10/29/09

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 11/12/09

flagger support documentation

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highways Administration
Central Federal Lands Highway Division
Lakewood, CO 80228

DAILY RECORD OF MISCELLANEOUS ITEMS

Project Number: ND PRA THRO 10(3) **Date:** 10-29-2009

Project Name: North Unit Scenic Drive

Bid Item Number/Description: 63506-0500, FLAGGERS

LOCATION	DESCRIPTION OF WORK	UNIT	QUANTITY
150+00 TO 10+00	PAT SWOPE 10:30 AM TO 2:30 PM	HOUR	4.0
BEHIND BLADE	TOM KILISHEK 10:30 AM TO 11:30 AM	HOUR	1.0
TRAFFIC CNTRL	TOM KILISHEK 11:30 AM TO 2:30 PM	HOUR	3.0
2000+00 Y	PAT SWOPE 2:30 PM TO 10:30 PM	HOUR	8.0
2000+00 Y	TOM KILISHEK 2:30 PM TO 10:30 PM	HOUR	8.0
	TOTAL →	HOUR	24.0

This form is not a standard form or a paynote. It is an example of a form that the contractor chose to use for line items with multiple daily activities that are difficult to track. It is acceptable to attach other forms with paynotes as long as the date, location, description and quantity of work is clearly noted.

flagger support documentation

T... Oregon Department of Transportation

TRAFFIC CONTROL FLAGGER
Oregon Work Zone Traffic Control
Certification of Completion

NAME Ochoa Lizeth A
I.D. NUMBER 51627
EXPIRATION DATE 4/9/2013

Card Holder Must Provide Government Photo I.D.

The person named on this card has met the Industry Standard Requirements of Traffic Control/Work Zone Safety by completing this Oregon Department of Transportation approved course offered through

CHEMEKETA COMMUNITY COLLEGE

Instructor's Name Paul West

Instructor's ID # 390

Section 5: ACRE Items

GENERAL NOTE:
The items shown here are examples only - all measurement, documentation, and payment will conform to the project contract requirements regardless of what is shown here. Included here are examples of some of the many documentation types that may be required. Often documentation such as certifications and qualifications may be submitted and accepted once and then referenced accordingly instead of attaching additional copies for each pay note or payment period. Many documentation items are required prior to production, delivery, or placement; required documentation should be provided at the appropriate time and not necessarily at time of payment.

NOTE ON ACRE ITEMS:
Items paid by the ACRE are generally items that include large areas of work (i.e. Seeding, Clearing, Topsoil, Rolled Erosion Control Product, etc.). ACRE quantities shown in the Plans are estimates; only actually ordered and performed quantities are paid. Please refer to the FP, the Special Contract Requirements, and plans of your project for detailed instructions prior to submitting any pay notes. Make longitudinal and traverse measurement by the foot or meter and then use appropriate conversion factors to convert to an ACRE or HECTARE, respectively. It is not okay to determine longitudinal lengths based off of station ranges; the length must be physically measured or surveyed. Generally, when submitting for payment on items paid by the ACRE, it is required to show on the paynote when the work was performed, where the work was performed (station ranges and offsets), measurement sketches, measurement calculations, survey reports if performed, and necessary conversion calculations.

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 01/03/2006

Project Number: OR PFH 244-1(1) Project Name: Sunriver to Mt. Bachelor

Account: OPTION Y

Pay Note Information:

Pay Item #: 20101-0000 Item Description: Clearing and Grubbing Pay Unit: ha

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 27 Pay Period: 2

Pay Note Entry:

Work Start Date: 12/29/2005 Work End Date: 01/03/2006

Location/Description:

From 12/29/2005 to 1/03/2006, workers cleared and grubbed both sides of the roadway from Station 13+320 to Station 14+500.

Remarks/Calculations:

Per attached clearing report, Station 13+320 to Station 14+500 = 28,628 square meters = 2.863 ha

Pay 2.863 ha

Support Documentation/References:

(1) Clearing Report for plan quantities

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 2.863 ha

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 01/03/2006

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 01/03/2006

Approved by FHWA Representative (Signature):

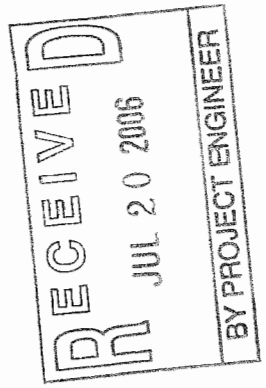
Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 01/07/2006

clearing and grubbing support

01/03/2006

SUNRIVER TO MT. BACHELOR
PROJ OR PFH 244-1(1)
MAINLINE
CLEARING REPORT

Page# 42



STATION	CLEARING LT	DISTANCE RT	EXCEPTION WIDTH	AREA m2	SUBTOTAL m2	AREAS ES
			0.000	391		
13+240.00 R 1	9.273	9.967				
			0.000	458		
13+260.00 R 1	12.882	13.631				
			0.000	479		
13+280.00 R 1	11.567	9.745				
			0.000	436		
13+300.00 R 1	11.843	10.420				
			0.000	450		
START 13+320.00 R 1	12.073	10.653				
			0.000	458		
13+340.00 R 1	12.230	10.777				
			0.000	462		
13+360.00 R 1	12.291	10.815				
			0.000	461		
13+380.00 R 1	11.620	11.279				
			0.000	460		
13+400.00 R 1	11.489	11.514				
			0.000	458		
13+420.00 R 1	11.209	11.546				
			0.000	454		
13+440.00 R 1	10.907	11.651				
			0.000	457		
13+460.00 R 1	11.100	11.968				
			0.000	467		
13+480.00 R 1	11.532	12.081				
			0.000	474		
13+500.00 R 1	11.942	11.787			10912	1.0 (ACCUM m2 294813.0000)
			0.000	486		
13+520.00 R 1	12.076	12.753				
			0.000	497		
13+540.00 R 1	11.915	12.874				

513-1 m²

clearing and grubbing support

01/03/2006

SUNRIVER TO MT. BACHELOR
PROJ OR PFH 244-1(1)
MAINLINE
CLEARING REPORT

STATION	CLEARING LT	DISTANCE RT	EXCEPTION WIDTH	AREA m2	SUBTOTAL m2	AREAS ES
13+560.00 R 1	12.331	13.511	0.000	507		
13+580.00 R 1	12.878	13.917	0.000	527		
13+600.00 R 1	12.617	13.570	0.000	530		
13+620.00 R 1	12.985	13.412	0.000	526		
13+640.00 R 1	13.397	13.348	0.000	532		
13+660.00 R 1	13.903	12.981	0.000	537		
13+680.00 R 1	13.588	12.165	0.000	527		
13+700.00 R 1	13.215	10.499	0.000	495		
13+720.00 R 1	13.028	10.509	0.000	473		
13+740.00 R 1	12.922	10.308	0.000	468		
13+760.00 R 1	12.251	10.887	0.000	464		
13+780.00 R 1	11.498	10.109	0.000	448		
13+800.00 R 1	10.369	14.855	0.000	469		
13+820.00 R 1	7.089	8.822	0.000	412		
13+840.00 R 1	9.323	8.477	0.000	338		
13+860.00 R 1	12.549	8.137	0.000	385		

7638 m²

clearing and grubbing support

01/03/2006

SUNRIVER TO MT. BACHELOR
PROJ OR PFH 244-1(1)
MAINLINE
CLEARING REPORT

STATION	CLEARING DISTANCE LT	RT	EXCEPTION WIDTH	AREA m2	SUBTOTAL m2	AREAS ES
			0.000	412		
13+880.00 R 1	13.011	7.446				
			0.000	403		
13+900.00 R 1	12.833	6.951				
			0.000	400		
13+920.00 R 1	12.725	7.440				
			0.000	398		
13+940.00 R 1	12.846	6.744				
			0.000	431		
13+960.00 R 1	13.132	10.335				
			0.000	459		
13+980.00 R 1	12.369	10.020				
			0.000	425		
14+000.00 R 1	10.387	9.669			11549	1.1549 (ACCUM m2 306362.0000)
			0.000	397		
14+020.00 R 1	9.719	9.881				
			0.000	390		
14+040.00 R 1	9.079	10.266				
			0.000	391		
14+060.00 R 1	9.148	10.510				
			0.000	383		
14+080.00 R 1	6.661	11.971				
			0.000	387		
14+100.00 R 1	6.313	13.732				
			0.000	419		
14+120.00 R 1	6.513	15.251				
			0.000	472		
14+140.00 R 1	9.359	16.072				
			0.000	525		
14+160.00 R 1	11.017	15.999				
			0.000	540		
14+180.00 R 1	10.501	16.418				

clearing and grubbing support

01/03/2006

SUNRIVER TO MT. BACHELOR
PROJ OR PFH 244-1(1)
MAINLINE
CLEARING REPORT

STATION	CLEARING LT	DISTANCE RT	EXCEPTION WIDTH	AREA m2	SUBTOTAL m2	AREAS ES
14+200.00 R 1	13.855	24.066	0.000	649		
14+220.00 R 1	11.103	15.178	0.000	643		
14+240.00 R 1	12.138	16.921	0.000	554		
14+260.00 R 1	10.462	16.707	0.000	563		
14+280.00 R 1	10.456	15.385	0.000	531		
14+300.00 R 1	10.650	16.024	0.000	526		
14+320.00 R 1	11.113	16.776	0.000	546		
14+340.00 R 1	11.917	17.811	0.000	577		
14+360.00 R 1	12.710	16.770	0.000	593		
14+380.00 R 1	12.185	18.083	0.000	598		
14+400.00 R 1	11.802	17.318	0.000	594		
14+420.00 R 1	12.943	19.385	0.000	615		
14+440.00 R 1	20.437	13.276	0.000	661		
14+460.00 R 1	10.209	12.343	0.000	563		
14+480.00 R 1	10.430	9.610	0.000	426		
14+500.00 R 1	9.520	8.872	0.000	385	12928	1.2928 (ACCUM m2 319290.0000)

RECEIVED
JUL 20 2006
BY PROJECT ENGINEER

9024 m²

clearing and grubbing support

OR PFH 244-1(1) Clearing and Grubbing Summary (December 2005 to January 2006)

458 +
462 +
461 +
460 +
458 +
454 +
457 +
467 +
474 +
486 +
497 +
507 +
527 +
530 +
526 +
532 +
537 +
527 +
495 +
473 +
468 +
464 +
448 +
469 +
412 +
338 +
385 +
412 +
403 +
400 +
398 +
431 +
459 +
425 +
397 +
390 +
391 +
383 +
387 +
419 +
472 +
525 +
540 +
649 +
643 +
554 +
563 +
531 +
526 +
546 +
577 +
593 +
598 +
594 +
615 +
661 +
563 +
426 +
385 +

TOTAL = 28628 meters squared

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 8/22/2010

Project Number: SD PFH 17-1(6) Project Name: Hill City to Lead

Account: Schedule A

Pay Note Information:

Pay Item #: 62406-0200 Item Description: Placing Conserved Topsoil, 2" depth Pay Unit: ACRE

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 211 Pay Period: 6

Pay Note Entry:

Work Start Date: 8/17/2010 Work End Date: 8/21/2010

Location/Description:

(a) 8/17/2010: Placed Conserved Topsoil at Deerfield STA 31+00 to 35+15 RT
(b) 8/18/2010: Placed Conserved Topsoil at Deerfield STA 35+15 to 41+20 RT
(c) 8/19/2010: Placed Conserved Topsoil at Deerfield and Newton Trail Slope STA 38+50 to 41+50 LT
(d) 8/20/2010: Placed Conserved Topsoil at the slope of Newton Fork Ranch
(e) 8/21/2010: Placed Conserved Topsoil at Deerfield STA 49+00 to 41+50 LT
Note: Topsoil placed by Tim the Operator with a Hitachi EX230 Excavator.

Remarks/Calculations:

Per FP-03 624.07, payment will be full compensation for the work prescribed in this section.

From Location/Description:
(a) 4,162.5 SF* + (b) 14,970.0 SF* + (c) 4,861 SF* + (d) 3,317 SF* + (e) 22,086 SF* = 49,396.5 SF

(49,396.5 SF) / (43,560 SF/ACRE) = 1.134 ACRE

*See attached Placing Conserved Topsoil Sketches and Calculations

Support Documentation/References:

(1) Placing Conserved Topsoil Sketches and Calculations

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 1.134 (ACRE)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 8/22/10

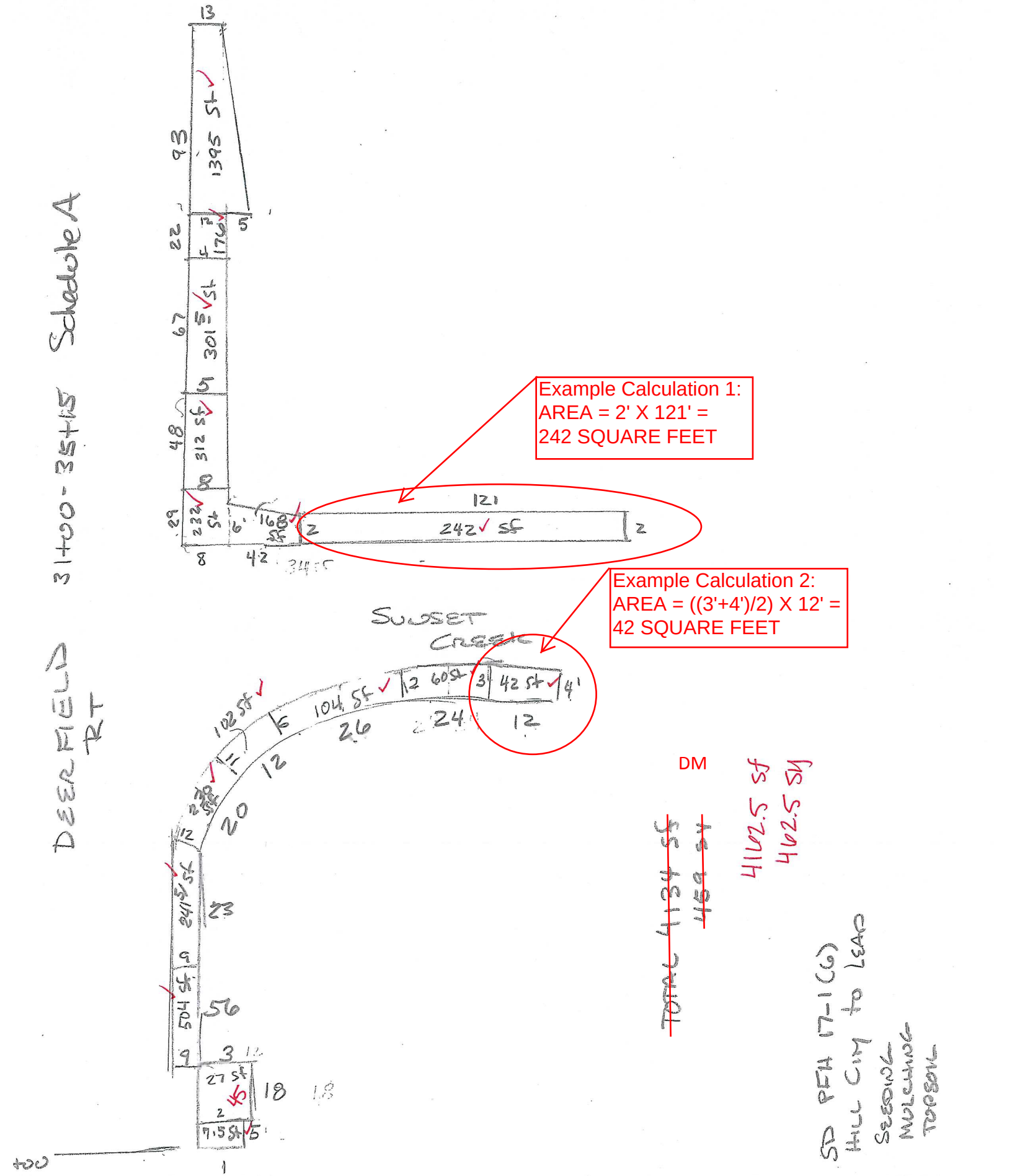
Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 8/22/10

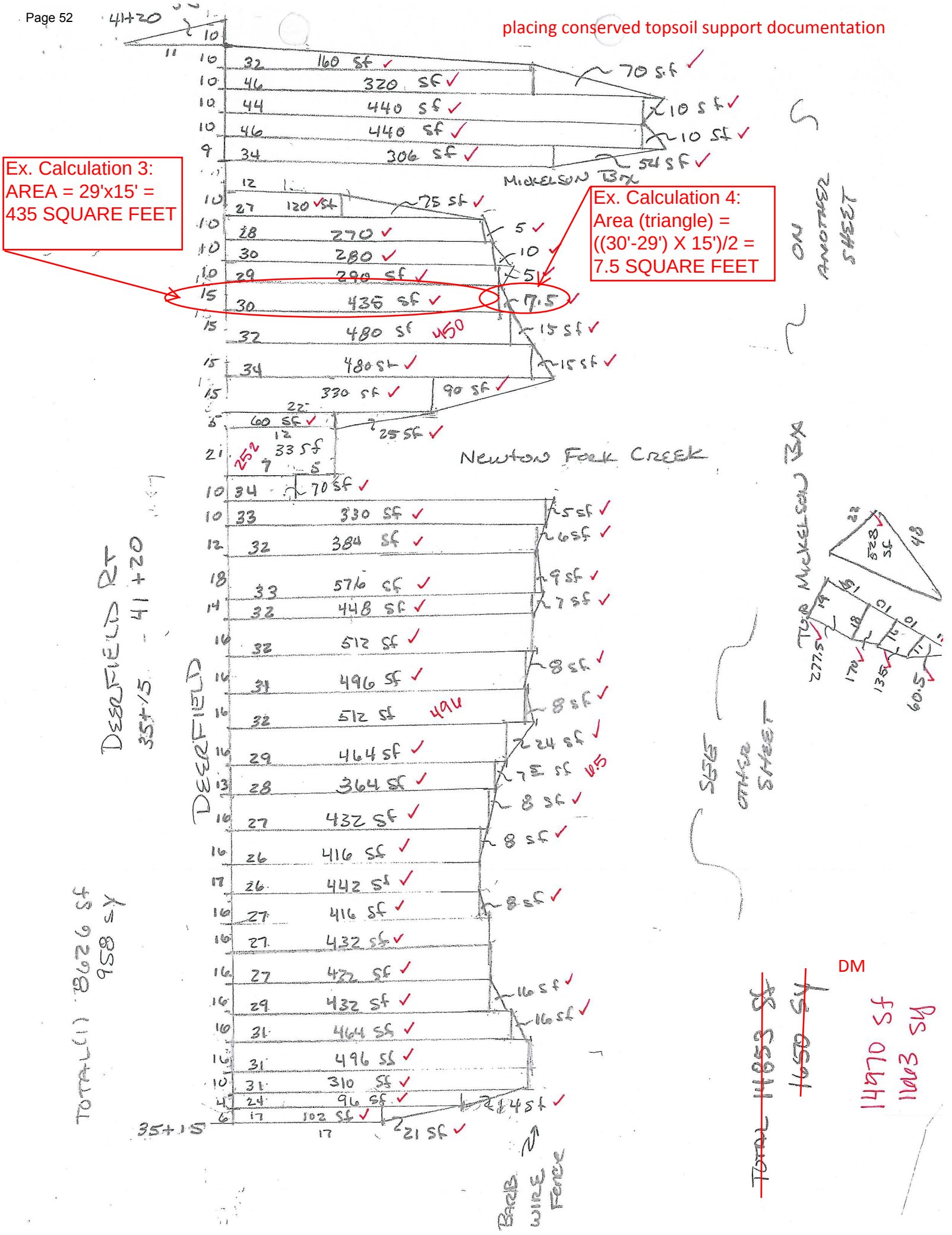
Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 8/25/10

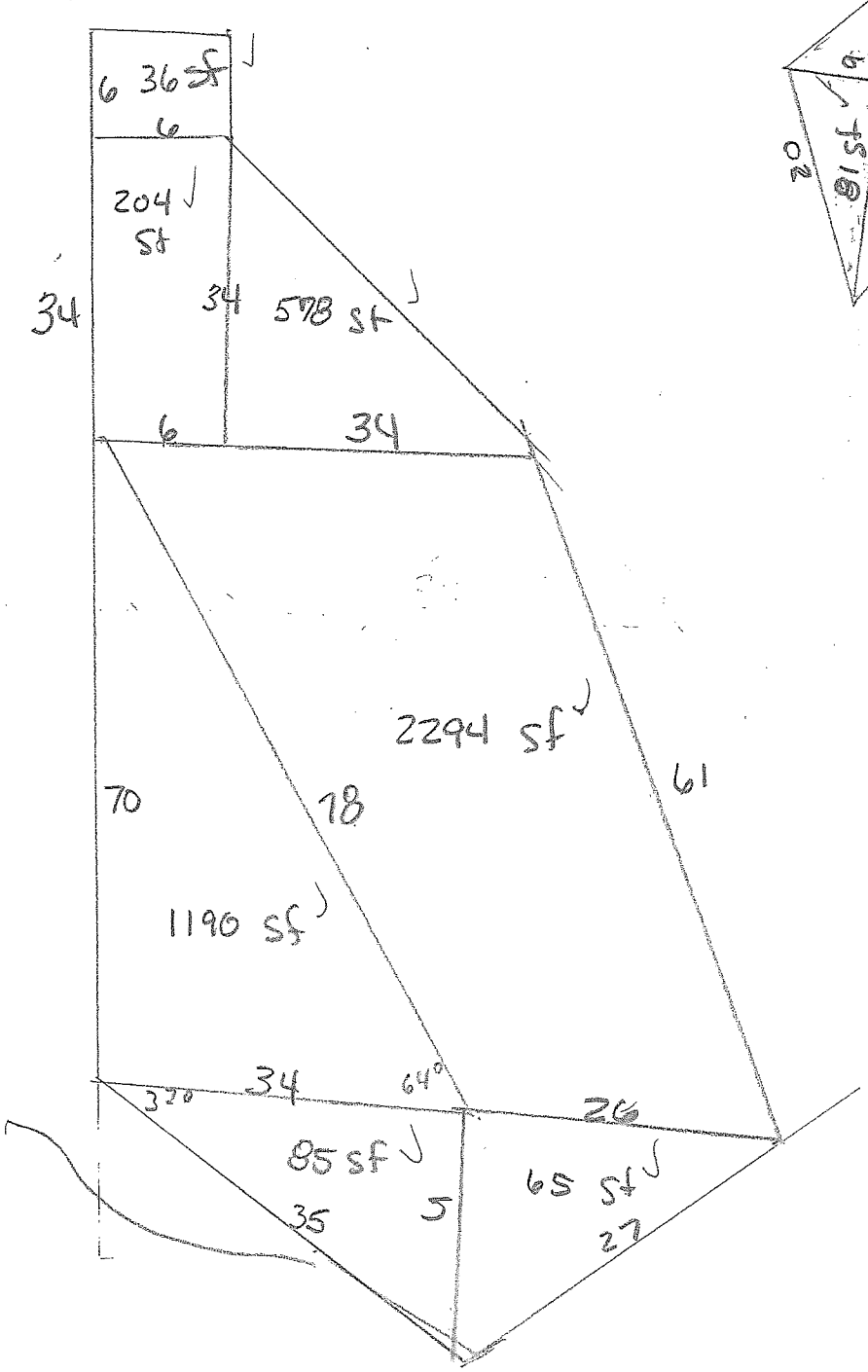
placing conserved topsoil support documentation



placing conserved topsoil support documentation



placing conserved topsoil support documentation



Deerfield LT + Newman Fork

Bottom of Slope

39+50 - 41+70

TOTAL 4881 sf

540 SY

SD PFH 17-1 (6)

WILLOW TO LEAD

SEEDING

MULCHING

TOPSOIL

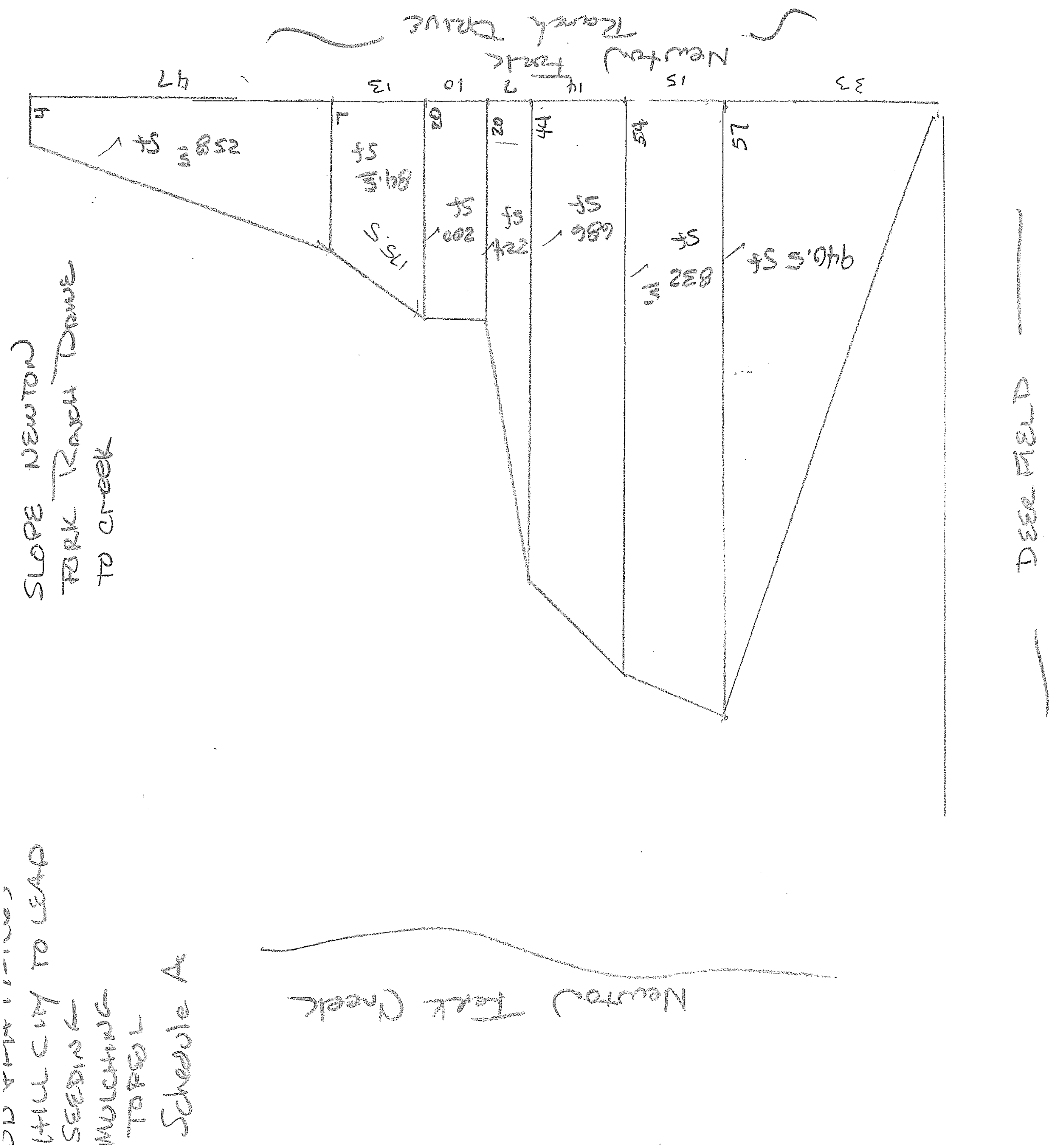
Schultz A

placing conserved topsoil support documentation

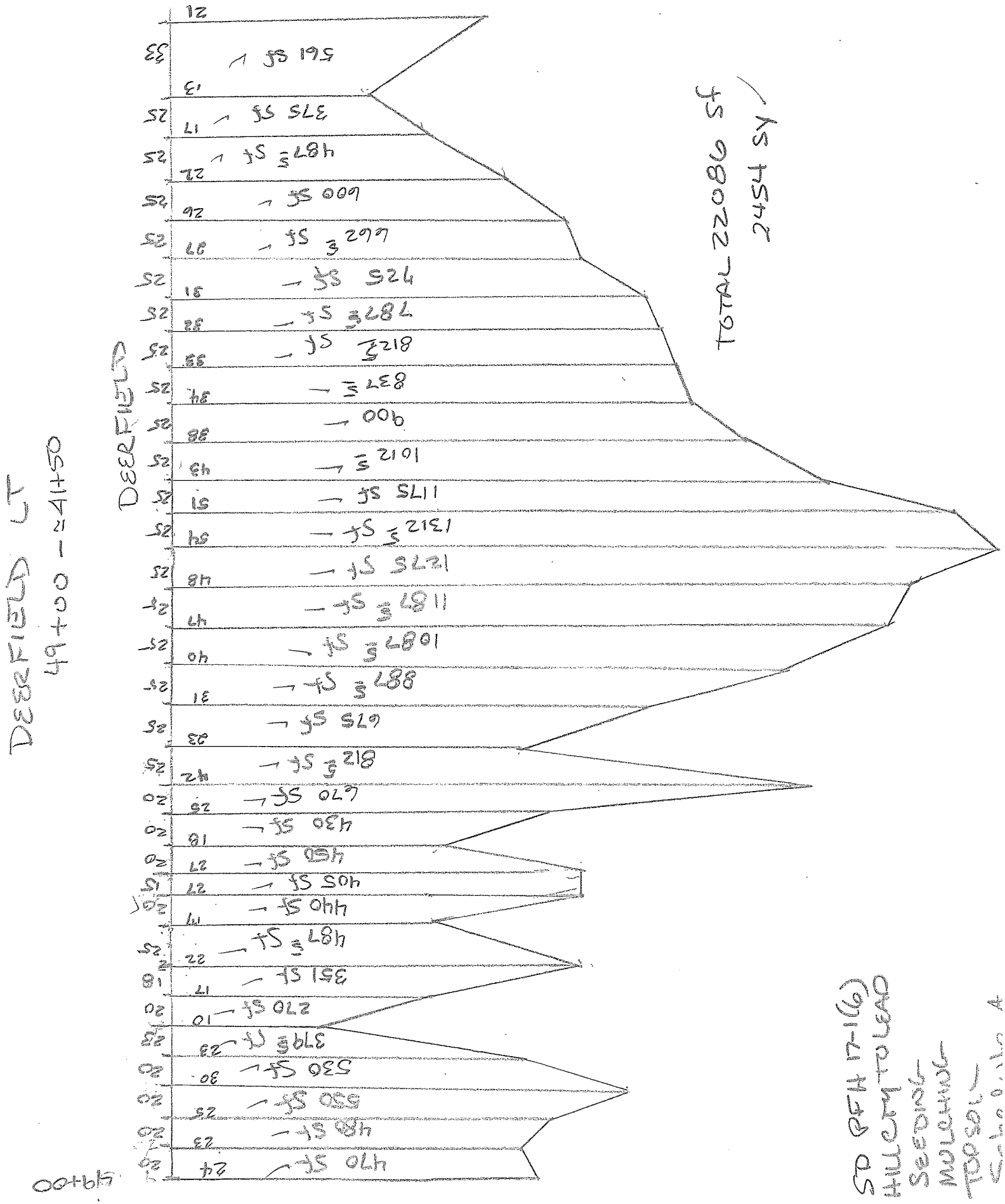
~~Total 3224 sf~~
~~358 sy~~

DM

3317 sf
368.5 sy



placing conserved topsoil support documentation



Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 8/4/10

Project Number: SD PFH 17-1(6) Project Name: Hill City to Lead

Account: Option W

Pay Note Information:

Pay Item #: 62510-2000 Item Description: Seeding, Hydraulic Method Pay Unit: ACRE

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 137 Pay Period: 6

Pay Note Entry:

Work Start Date: 8/1/10 Work End Date: 8/3/10

Location/Description:

(A) 8/1/2010: Hydraulic Seeding at Burnt Fork, top of bench*
(B) 8/2/2010: Hydraulic Seeding at Burnt Fork, slope*
(C) 8/3/2010: Hydraulic Seeding at Burnt Fork, ditch*

*See attached sketch

Remarks/Calculations:

From Location/Description:
(A) 7,626 SF* + (B) 12,780.5 SF* + (C) 8,000 SF* = 28,406.5 SF

(28,406.5 SF) / (43,560 SF/ACRE) = 0.652 ACRE

*See attached Hydraulic Seeding Sketches and Calculations

Support Documentation/References:

(1) Hydraulic Seeding Sketches and Calculations (2) Hydraulic Seeding Certification

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 0.652 (ACRE)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 8/4/10

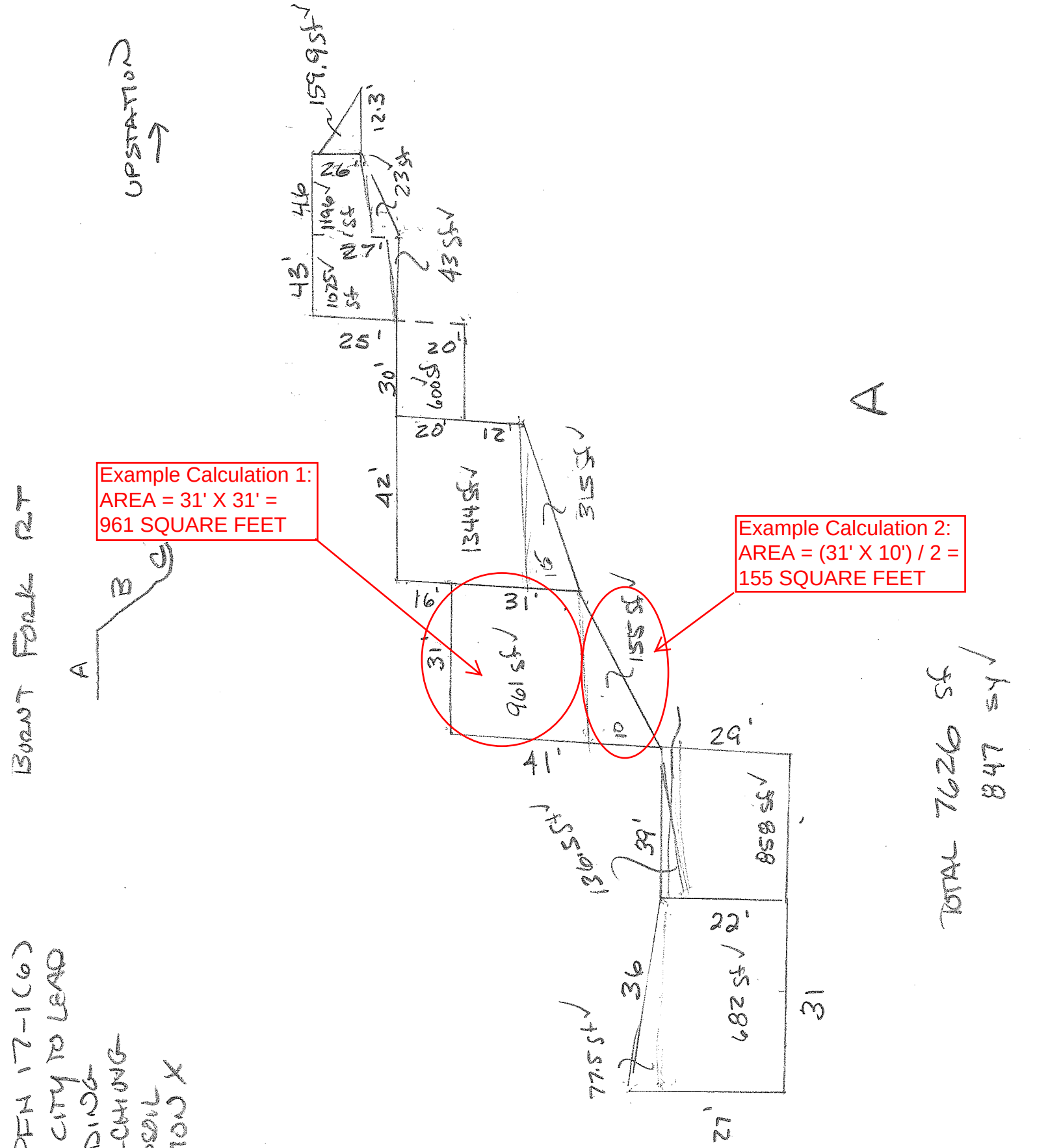
Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 8/5/10

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 8/7/10

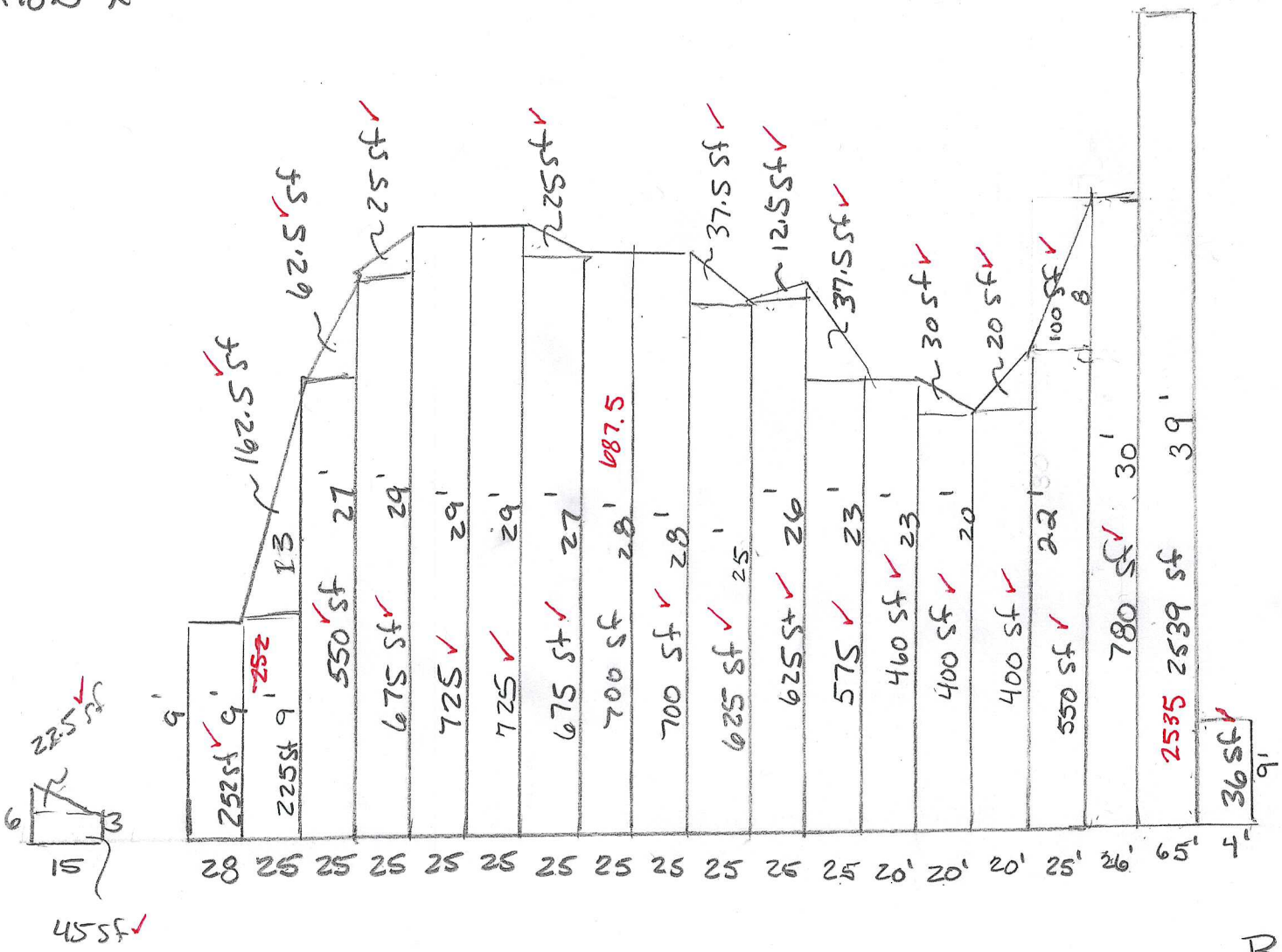
seeding support documentation



SD PPH 17-1163.
HILL CITY TO LEAD
SEEDING
MULCHING
TOPSOIL

OPTION X

BURNT FORK
SLOPE RT



seeding support documentation

~~TOTAL 12796 sf~~
~~1422 sy~~

B 12780.5 12808 sf
1420 1423 sy

DM

SD PLN 17-1160
HILL CITY TO LEAD
SEEDING
MULCHING
TOPSOIL

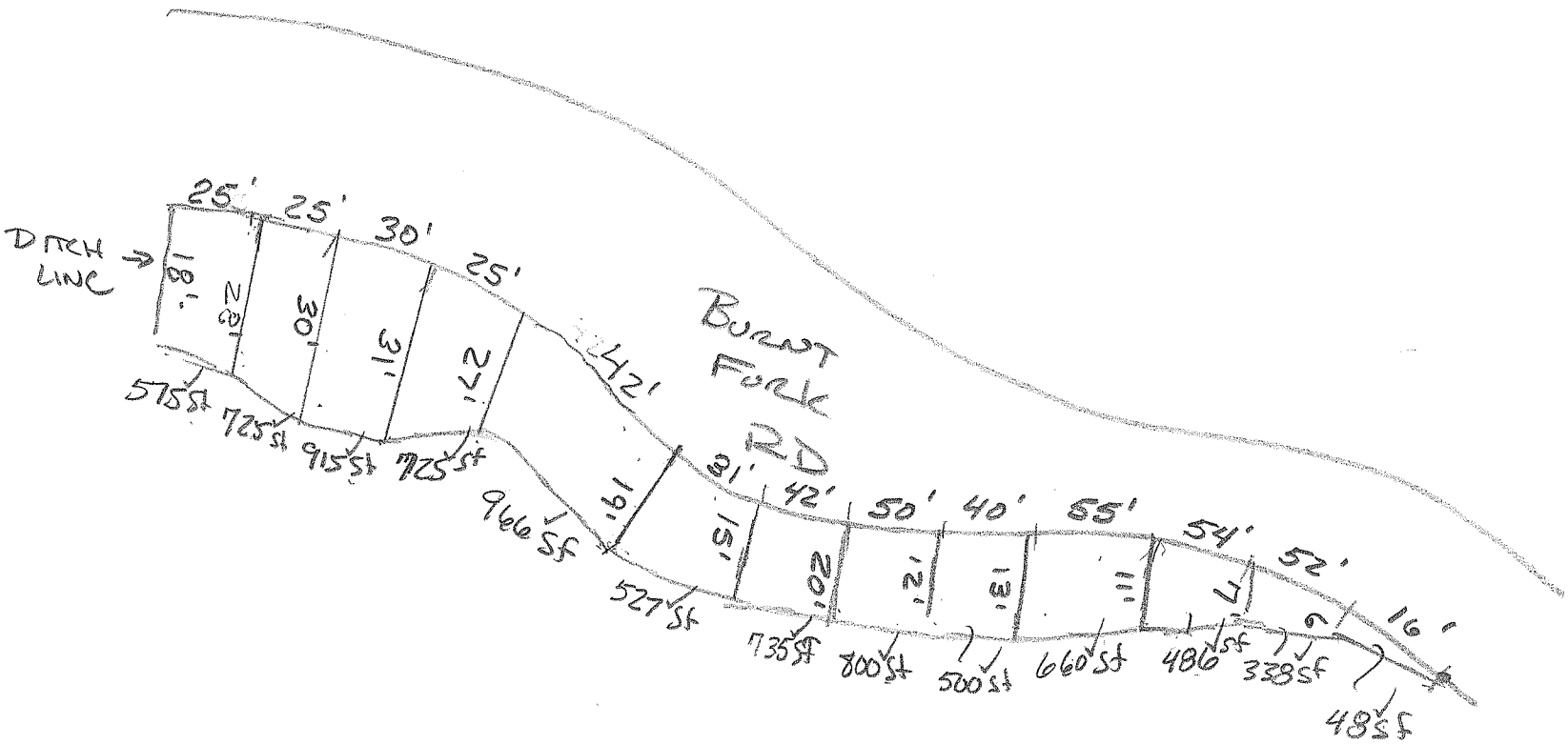
OPTION X

BURNT FORK RT

A

B

C



TOTAL 8000 SF

889 SY

C DITCH

seeding support documentation

Profile™
Your Trusted Partner In Soil Solutions™

Project
SD PFH 17-1
Contract #
DTFH68-10-C00010

November 20, 2008

Re: Certificate of Compliance, Terra-Blend™ with UltraGro™

To Whom It May Concern:

This letter is to certify that Profile Products, LLC manufacturers the product marketed as Terra-Blend™ with UltraGro™. Each bale of Terra-Blend™ with UltraGro™ has been subjected to Profile Products Quality Assurance and Quality Control program and is manufactured to meet or exceed all physical property, endurance, performance and packaging requirements listed in the data specification. A copy of the data specification along with other product information for Terra-Blend™ with UltraGro™ can be located on the Terra-Mulch® website at www.terra-mulch.com. Should you have any questions regarding this product please contact Profile Products.

Cordially,

Michael D. Robeson, PE, CPESC
Technical Services Manager
Profile Products

RED WILK CONSTRUCTION INC.
PO Box 381 • Huron, SD 57350
Transmitted As Indicated: ☐ Approved
☒ Referred to A / E Approval ☐ Revise & Resubmit
These / This item(s) have been checked for compliance with the Contract Documents.
Checked by: MB JF Date: 5/13/10
Please Return Drawings to Address Above
OMF 6/1/10

Section 32 92 16.16 – Hydraulic Seeding: Hydraulic Mulch – Blend with Biostimulant

GENERAL

1.01 SUMMARY

A. This section specifies a hydraulically-applied Hydraulic Mulch (HM) – Blend with biostumulant composed of long strand, thermally refined (within a pressure vessel) wood fibers that have been pressure treated to 80 – 85 psi (552 – 586 kPa) with steam and heat treated for 15 minutes at 380 – 440 degrees Fahrenheit (193 – 226 degrees Celsius), cellulose fibers and a biostimulant. The HM creates a porous and absorbent erosion layer that enhances germination and plant growth.

B. Related Sections: Other Specification Sections, which directly relate to the work of this Section include, but are not limited to the following:
   1. *Section 01 57 00 – Temporary Erosion and Sediment Control*
   2. *Section 31 00 00 – Earthwork*
   3. *Section 31 91 00 – Planting Preparation*
   4. *Section 32 92 00 – Turf and Grasses*

1.02 SUBMITTALS

A. Product Data: Submit manufacturer's product data and installation instructions. Include required substrate preparation, list of materials and application rate.

B. Certifications: Manufacturer shall submit a letter of certification that the product meets or exceeds all physical property, endurance, performance and packaging requirements.

1.03 DELIVERY, STORAGE AND HANDLING

A. Deliver materials and products in UV and weather-resistant factory labeled packages. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from damage, weather, excessive temperatures and construction operations.

PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

A. PROFILE Products LLC
750 Lake Cook Road – Suite 440
Buffalo Grove, IL 60089
800-366-1180 (Fax 847-215-0577)
www.profileproducts.com

2.02 MATERIALS

A. The Hydraulic Mulch – Blend with Biostimulant shall be Terra-Blend™ with UltraGro™ and conform to the following property values.

Property	Test Method	Req. Value (English)	Req. Value (SI)
Physical			
Water Holding Capacity	ASTM D7367	1000% minimum	1000% minimum
Color	Observed	Green	Green
Endurance			
Functional Longevity[1]	Observed	Up to 3 months	Up to 3 months
Performance			
Cover Factor[2]	Large Scale Testing[4]	0.65 maximum	0.65 maximum
% Effectiveness[3]	Large Scale Testing[4]	35% minimum	35% minimum

1. Functional Longevity is the estimated time period, based upon field observations, that a material can be anticipated to provide erosion control and agronomic benefits as influenced by composition, as well as site-specific conditions, including; but not limited to – temperature, moisture, light conditions, soils, biological activity, vegetative establishment and other environmental factors..
3. Cover Factor is calculated as soil loss ratio of treated surface versus an untreated control surface.
4. % Effectiveness = One minus Cover Factor multiplied by 100%.
5. Large scale testing conducted at Utah Water Research Laboratory. For specific testing information please contact a Profile technical service representative at 866-325-6262.

2.03 COMPOSITION

A. All components of the HM shall be pre-packaged by the Manufacturer to assure both material performance and compliance with the following values. No chemical additives with the exception of fertilizer and liming materials should be added to this product.

1. Thermally Processed (within a pressure vessel) Wood Fiber (minimum) – 60% ± 3%
   a) Heated to a temperature greater than 380 degrees Fahrenheit (193 degrees Celsius) for 15 minutes at a pressure greater than 80 psi (552 kPa)

   Cellulose Fibers (maximum) – 27% ± 3%
   UltraGro™ Biostimulant – 1% ± 0.5%
   Moisture Content – 12% ± 3%

2.04 PACKAGING

A. Bags: Net Weight – 50 lb, UV and weather-resistant plastic film
   Pallets: Weather-proof, stretch-wrapped with UV resistant pallet cover
   Pallet Quantity: 40 bags/pallet or 1 ton/pallet

EXECUTION

3.01 SUBSTRATE AND SEEDBED PREPARATION

A. Examine substrates and conditions where materials will be applied. Apply product to geotechnically stable slopes that have been designed and constructed to divert runoff away from the face of the slope. Do not proceed with installation until satisfactory conditions are established.

B. Depending upon project sequencing and intended application, prepare seedbed in compliance with other specifications under Section 1.01 B

3.02 INSTALLATION

A. Strictly comply with equipment manufacturer's installation instructions and recommendations. Use approved hydro-spraying machines with fan-type nozzle (50-degree tip). To achieve optimum soil surface coverage, apply HM from opposing directions to soil surface. Rough surfaces (rocky terrain, cat tracks and ripped soils) may require higher application rates to achieve 75% cover. Slope interruption devices or water diversion techniques are recommended when slope lengths exceed 23 feet (7 m). Maximum slope length is for product applications on a 4H:1V slope. For application on steeper slopes, slope interruption lengths may need to be decreased based on actual site conditions. Not recommended for channels or areas with concentrated water flow. No chemical additives with the exception of fertilizer and liming materials should be added to this product.

B. For Erosion Control and Revegetation: To ensure proper application rates, measure and stake area.

1. *Apply fertilizer with specified prescriptive agronomic formulations, seed and HM at a rate of 50 lb per 100 gallons (23 kg / 380 liters) of water over properly prepared surfaces. Confirm loading rates with equipment manufacturer.*

Do not apply on saturated soils or substrates. Do not apply if precipitation is anticipated within 24-48 hours.

C. Mixing: A mechanically agitated hydraulic-application machine is recommended:
   1. *Fill 1/3 of mechanically agitated hydroseeder with water. Turn pump on for 15 seconds and purge and pre-wet lines. Turn pump off.*
   2. *Turn agitator on and load low density materials first (i.e. seed).*

3. *Continue slowly filling tank with water while loading fiber matrix into tank.*
4. *Consult application and loading charts to determine number of bags to be added for desired area and application rate. Mix at a rate of 50 lb of HM per 100 gallons (23 kg/380 liters). Contact Equipment manufacturer to confirm optimum mixing rates.*
5. *All HM should be completely loaded before water level reaches 75% of the top of tank.*
6. *Top off with water and mix until all fiber is fully broken apart and hydrated (minimum of 10 minutes).*
7. *Add fertilizer*
8. *Shut off recirculation valve to minimize potential for air entrainment within the slurry.*
9. *Slow down agitator and start applying with a 50-degree fan tip nozzle.*
10. *Spray in opposing directions for maximum soil coverage.*

D. Application Rates: These application rates are for standard conditions. Designers may wish to reduce rates to encourage faster vegetation establishment or may need to increase application rates on rough surfaces.

Slope Gradient / Condition	**English**	**SI**
≤ 4H to 1V	2000 lb/ac	2250 kg/ha
> 4H to 1V and ≤ 3H to 1V	2500 lb/ac	2800 kg/ha

3.03 CLEANING AND PROTECTION

A. After application, thoroughly flush the tank, pumps and hoses to remove all material. Wash all material from the exterior of the machine and remove any slurry spills.

B. Clean spills promptly. Advise owner of methods for protection of treated areas. Do not allow treated areas to be trafficked or subjected to grazing.

Section 6: LNFT/METER/MILE ITEMS

GENERAL NOTE:
The items shown here are examples only - all measurement, documentation, and payment will conform to the project contract requirements regardless of what is shown here. Included here are examples of some of the many documentation types that may be required. Often documentation such as certifications and qualifications may be submitted and accepted once and then referenced accordingly instead of attaching additional copies for each pay note or payment period. Many documentation items are required prior to production, delivery, or placement; required documentation should be provided at the appropriate time and not necessarily at time of payment.

NOTE ON LNFT/METER/MILE ITEMS:
Items paid by length are generally items that are appropriate to measure from end-to-end. Length quantities shown in the Plans are estimates; only actually ordered and performed quantities are paid. Please refer to the FP, the Special Contract Requirements, and plans of your project for detailed instructions prior to submitting any pay notes. Generally, items paid by length are measured with approved devices along the length of the item from end-to-end; parallel to the base or foundation; along the top; along the front face; or along the invert. Do not measure overlaps. It is necessary to measure lengths as specified within the contract for that specific item. Items measured by length often have differing measurement methods based on the item. When submitting for payment on items paid by length, it is required to show on the paynote when the work was performed, where the work was performed (station ranges, offsets, depths, sketches), measurement calculations, who measured the work, survey reports if performed, and necessary conversion calculations (i.e. feet to mile).

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 07/31/11

Project Number: AZ PFH 43-1(4) Project Name: Sunrise Park- Big Lake Road

Account: Option X

Pay Note Information:

Pay Item #: 15705-0100 Item Description: Soil Erosion Control, Silt Fence Pay Unit: LNFT

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 71 Pay Period: 3

Pay Note Entry:

Work Start Date: 7/2/2011 Work End Date: 7/2/2011

Location/Description:

1) 7/02/11: 123+46 to 124+60 RT, 116' measured
2) 7/02/11: 124+77 to 125+75 RT, 100' measured
3) 7/02/11: 127+00 to 128+97 RT, 195' measured

Remarks/Calculations:

Sum of silt fence from Location/Description = 116' + 100' + 195' = 408'
Pay 408 LNFT of Silt Fence

Per FP-03, section 157.16 (a), 50% of the unit bid price will be paid upon installation. See attached Silt Fence Payment Summary Sheet for retention information.
NOTE: Do not show retention information on any paynotes.

Support Documentation/References:

Silt Fence Certification, Silt Fence Payment Summary Sheet

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 408 (LNFT)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 08/31/11

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 08/31/11

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 09/05/11

silt fence support documentation

U.S. Department of Transportation
Federal Highway Administration

AZ PFH 43-1(4), Sunrise Park- Big Lake Road
Option X

Silt Fence Payment Summary Sheet

Paynote #	Paynote Date	Total Quantity (feet)	Per section 157.16 of the FP-03									Perecentage of total qnty paid to date
			50 % paid upon installation			25% paid upon 50% completion of project			25% paid upon removal			
			Quantity	Date	PP	Quantity	Date	PP	Quantity	Date	PP	
64	6/29/11	233	116.5	29-Jun	2	58.25	31-Aug	4		TBD		0.75
66	6/30/11	124	62	29-Jun	2	31	31-Aug	4		TBD		0.75
69	7/1/11	156	78	1-Jul	3	39	31-Aug	4		TBD		0.75
71	7/2/11	408	204	2-Jul	3	102	31-Aug	4		TBD		0.75
76	7/3/11	321	160.5	29-Jun	3	80.25	31-Aug	4		TBD		0.75
80	7/6/11	231	115.5	29-Jun	3	57.75	31-Aug	4		TBD		0.75
82	7/7/11	345	172.5	29-Jun	3	86.25	31-Aug	4		TBD		0.75
Totals		**1818**	**909**			**454.5**						**0.75**

NOTE TO PROJECT ENGINEERS: This is only an example of a tracking method for silt fence quantities. Other formats should be used given project conditions. DO NOT LET CONTRACTORS SHOW RETENT OF QUANTITIES ON PAYNOTES. IT SHOULD BE DEDUCTED AND SHOWN ONLY ON A MONTHLY SUMMARY SHEET OR ITEM SUMMARY SHEET, SUCH AS THIS.

silt fence support documentation

HANES GEO COMPONENTS
A Leggett & Platt COMPANY

Silt Fence Fabric TerraTex SF-D

w 28" 2x4 12.5ga welded wire

Silt Fence Fabric TerraTex SF-D with 28" 2x4 12.5ga welded wire is a preassembled silt fence fabric with 36" TerraTex SF-D woven geotextile attached to 28" 12.5 gauge 2x4 welded wire. The TerraTex SF-D is made up of polypropylene filaments. These filaments are woven to form a stable and durable network such that the filaments retain their relative position. It is non-biodegradable and resistant to most soil chemicals, acids, and alkali with a pH range of 3 to 12. TerraTex SF-D is manufactured to meet or exceed the following minimum average roll values:

Property	Test Method	Minimum Average Roll Value English	Minimum Average Roll Value Metric
Grab Tensile	ASTM D-4632	124 x 124 lb	0.550 x 0.550 kN
Elongation	ASTM D-4632	15% x 15%	15% x 15%
Mullen Burst	ASTM D-3786	300 psi	2067 kPa
Puncture	ASTM D-4833	65 lb	0.289 kN
Trap Tear	ASTM D-4533	65 lb	0.289 kN
UV Resistance	ASTM D-4355	80% @ 500 hr	80% @ 500 hr
AOS	ASTM D-4751	30 US Sieve	0.600 mm
Permittivity	ASTM D-4491	0.05 sec-1	0.05 sec-1
Flow Rate	ASTM D-4491	8 gal/min/ft^2	325.6 l/min/m^2

1/2010

Contractor Certification: By signing below, I certify that the above submitted item(s) have been reviewed in detail and are correct, are in the proper units, and are in strict conformance with the contract drawings and specifications except as otherwise stated. The above submitted item(s) will be used on project AZ PFH 43-1(4) for pay item 15705-0100, Silt Fence

Bob The Contractor 05/12/11

815 Buxton Street Winston Salem, NC 27101
888 - 239 - 4539 • Fax: 336 - 747 - 1652
www.hanesgeo.com info@hanesgeo.com

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 08/30/11

Project Number: PRA DINO PRES 1(11) Project Name: Pavement Preservation

Account: Option X

Pay Note Information:

Pay Item #: 41410-1000 Item Description: Crack, Cleaning and Sealing Pay Unit: MILE

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 121 Pay Period: 4

Pay Note Entry:

Work Start Date: 08/31/11 Work End Date: 08/31/11

Location/Description:

Deerlodge Entrance Road, Deerlodge pullouts/aprons/ditches, and Deerlodge Information Kiosk Parking Area have all been cracked sealed per contract specification on 08/31/11.

See attached support documentation for exact locations of work

Remarks/Calculations:

Per SCR 414.06, measure crack cleaning and sealing by the mile of one lane of roadway measured along the centerline denoting total length in miles. For parking areas or other locations quantified by areas in square feet, measure miles based on an 11 foot lane width.

Pay 6.68 miles (see attached support documentation for calculations)

Support Documentation/References:

Support Calculations and Certifications

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: **6.68 (MILE)**

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 08/31/11

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 08/31/11

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Inspector Date: 09/05/11

crack cleaning and sealing support documentation

U.S.Department of Transportation
Federal Highway Administration

PROJECT PRA DINO PRES 1 (11)

DATE 8/2/2011

PAY ITEM 41411-1000 Crack Cleaning and Sealing

PAY UNITS Mile BID QUANTITY 48.00 EST # 2

Calculations:

Deerlodge Information Parking:
(MP 3.01) 231'L x 20'W: (4620 SQFT) / (11' lane miles X 5280 feet/mile) = 0.08 miles

SCHEDULE A

Area	Route #	Length (Mile)
Deerlodge Entrance Road	101	6.52
Deerlodge Pullouts, Aprons and Ditches	101	0.08
Deerlodge Information Kiosk Parking Area	913	0.08
Total	6.68	Miles

MP 0.00 TO MP 6.52 = 6.52 miles

Deerlodge Pullouts, Aprons Ditches:
Pullout A (MP 1.01) 80'L X 15'W: (1200 SQFT) / (11' lane miles x 5280 feet/mile) = 0.02 miles
Pullout B (MP 4.56) 200'L X12'W: (2400 SQFT) / (11' lane miles x 5280 feet/mile) = 0.01 miles
Apron A (MP 2.33) 50'L X 12'W: (600 SQFT) / (11' lane miles x 5280 feet/mile) = 0.04 miles
Pullout C (MP 5.01) 25'L x 24'W: (600 SQFT) / (11' lane miles x 5280 feet/mile) = 0.01 miles

Total = 0.08 miles

Inspected By _____ 8/2/11
Todd Birk, Harris & Associates — Date

Contractor Acceptance _____ 8/24/11
Contractor Representative — Date

Project Engineer Approval _____ 8/8/11
Joe Kosine, FHWA Project Engineer — Date

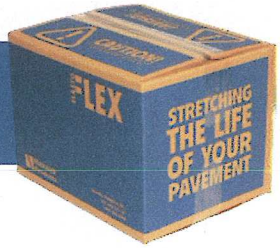
TOTAL This Sheet	**6.68**	Mile
Total Previous Sheet	0.00	Mile
Total Previous Date	0.00	Mile
Total This Estimate	6.68	Mile
Total Previous Estimate	39.02	Mile
Total to Date	45.70	Mile

95.2% Complete

Warmer check

crack cleaning and sealing support documentation

ELASTOFLEX 65 Specification



JOINT AND CRACK SEALANT, FOR ASPHALT AND CONCRETE PAVEMENTS

Elastoflex 65

is a hot applied polymer modified asphalt crack sealant for concrete and asphalt pavements. It is a self-leveling material that melts easily in the kettle yet sets up quickly upon cooling. ElastoFlex 65 is formulated with a low viscosity, producing a material that will readily penetrate the crack, filling it from the bottom up. This material has a low flexibility, which enables it to perform extremely well in cold weather, yet also has a high softening point so it will not track. This material is well suited for either pour pots or pressure feed application systems.

Specification

Test	Specification
Cone Penetration: @ 77°F (25°C), ASTM D 5329	70 max.
Flexibility: 2 Sec. 1" Mandrel	0°F min. (-18°C)
Softening Point: ASTM D 36	205°F min. (96°C)
Resilience: @ 77°F (25°C), ASTM D 5329	35% min.
Ductility: @ 77°F (25°C), 5 cm/min.	40 cm min.
Flow: @ 140°F (60°C), ASTM D 5329	3 mm max.
Asphalt Compatibility: ASTM D 5329	Pass

Applicable Specs: ASTM D 5078

Application: Before use, the user must read and follow the Application Instructions for the above referenced sealant. This product must be heated using indirect heating methods, either a double boiler or hot oil circulating kettle. Equipment must have means of maintaining constant agitation to the material.
Recommended application temperature: 380°F (193°C).
Maximum safe heating temperature: 400°F (204°C).

Packaging: This product is packaged in approximately 30 lb. (13.6 kg) blocks with a dissolvable plastic liner that is capable of becoming part of the mixture.

Warranty: Maxwell Products, Inc. warrants that Elastoflex Sealants meet the applicable specifications at the time of shipment. Due to the many differing procedures used in preparing and installing sealants, Maxwell Products assumes no liability for sealant failure due to improper installation, equipment failure or operator errors. Any remedies are limited, at Maxwell Products' option, to replacement of materials or refund (full or partial) of the purchase price from Maxwell Products. Claims must be made within three (3) months of the date of purchase. There is no other warranty either expressed or implied.

Contractor Certification: By signing below, I certify that the above submitted item(s) have been reviewed in detail and are correct, are in the proper units, and are in strict conformance with the contract drawings and specifications except as otherwise stated. The above submitted item(s) will be used on project PRA DINO PRES 1(11) for pay item 41411-0000, Crack Cleaning and Sealing

Bob the Contractor 07/ 01/2011

Revised 07/2010

Maxwell PRODUCTS INCORPORATED
650 South Delong Street ▪ Salt Lake City, UT 84104

crack cleaning and sealing support documentation

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 01/10/08

Project Number: PFF OR 127-1(1) Project Name: Boulder Creek Bridge

Account: Schedule B

Pay Note Information:

Pay Item #: 55101-1300 Item Description: Steel H-piles 250 x 85, in place Pay Unit: METER

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 214 Pay Period: 5

Pay Note Entry:

Work Start Date: 01/01/08 Work End Date: 01/10/08

Location/Description:

Centerline Abutment STA 8+143.037*:

PIle 1: Driven 01/01/08 and 01/02/08	Pile 6: Driven 01/05/08	
PIle 2: Driven 01/02/08	Pile 7: Driven 01/05/08 and 01/08/08	
PIle 3: Driven 01/03/08	Pile 8: Driven 01/08/08	
Pile 4: Driven 01/04/08	Pile 9: Driven 01/09/08	
Pile 5: Driven 01/04/08	Pile 10: Driven 01/10/08	*See attached Pile Layout

Remarks/Calculations:

Piles 1 through10 were each driven 15.24 meters

(15.24 meters/pile) X (10 piles) = 152.4 meters

Support Documentation/References:

Pile Layout. Example for an acceptable Micro-pile submittal, capacity computation, and certification.

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 152.4 (meters)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 01/10/08

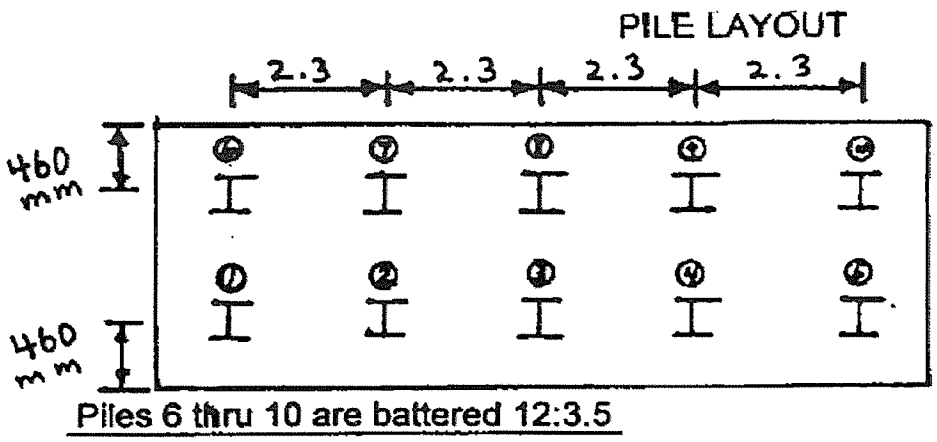
Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 01/10/08

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 01/17/08

driven pile support documentation



8+143.037

C/L ABUT

Pile Driving Record

1/10/1998
Bolder Creek Bridge
Abutment #2

Pile Type: HP 250 x 85
Hammer Name/Model: Delmag D8-22

Hammer Energy: 23.87 kN-m
Req'D Bearing: 440 kN

Pile No.	Length in Leads (m)	Cut Off Length (m)	Cut Off Elev. (m)	Tip Elev. (m)
1	7.62	0.229	238.658	225.552
	7.62	1.905	238.658	
2	15.24	3.100	238.658	226.518
3	15.24	3.200	238.658	226.619
4	15.24	2.819	238.658	226.238
5	15.24	2.234	238.658	225.653
6	7.62	0.305	238.658	225.857
	7.62	1.600	238.658	
7	15.24	2.643	238.658	226.564
8	15.24	2.691	238.658	226.613
9	15.24	2.286	238.658	226.223
10	15.24	1.829	238.658	225.784
	152.4	24.841		

Pile No.	Ground Elev (m)	Blows per 25mm	55101 (m)	55106 (ea)
1	238.354	6	13.11	1
	238.354			
2	238.354	7	12.14	
3	238.354	7	12.04	
4	238.354	6	12.42	
5	238.354	6	13.01	
6	238.354	6	12.8	1
	238.354			
7	238.354	7	12.09	
8	238.354	7	12.05	
9	238.354	8	12.44	
10	238.354	6	12.87	
			125.0	2

driven pile support documentation

U.S. Department of Transportation
Federal Highway Administration

Central Federal Lands
Highway Division
Field Office

CERTIFICATE OF COMPLIANCE

PROJECT: Beartooth Hwy. (U.S. 212)

DATE: 4-16-09

CONTRACT NO.: HPP 4-1 (5)

ITEM: 56901-0000

DESCRIPTION: Neat Cement Grout

QUANTITY: Per Plans

CONTRACTOR: HK Contractors

I certify that the materials covered by invoice no. 00012

comply with AASHTO_____, ASTM_____, or

other contract requirements as follows: FP-03 Sec.725.22 (f)

Test results on samples of the materials can be reviewed at (address):
See attached

I also certify that all materials and components directly incorporated into these construction materials, if applicable, comply with the requirements of the "BUY AMERICAN ACT".

COMPANY: CE&MT

ADDRESS: 3677 N. Hwy. 126 Suite A
Farr West, Utah 84404

BY: I AM JAMES
(Signature)

TITLE: Quality Control Supervisor

driven pile support documentation

INTRODUCTION

HBI understands that during the ongoing mitigation of the Bear Tooth Highway, a bridge over Little Bear Creek will be replaced. Micro-piling has been selected as a noninvasive means of supporting the structure. Due to the sensitivity of the area, extra precautions will be taken to insure the well being of the surrounding areas.

MICRO PILES METHODS

Micro piles are small diameter piles that can be installed in almost any type of ground where piles are required, with design loads as small as 2,700 kg and as high as 362,000 kg. Also known as minipiles, pin piles, needle piles or root piles, micropiles can offer a viable alternative to conventional piling techniques, particularly in restricted access or low headroom situations.

Initially, a steel pipe or casing is generally drilled or driven to the required bearing stratum or depth. The bearing element of the pile is then constructed. This may consist of simply socketing the pile tip into a rock formation or it may include various other drilling and grouting techniques within the bearing stratum. A center steel bar is typically inserted into the hole. The steel pipe/casing is then filled with grout and may be partially or fully extracted. The grout can be pressurized to increase pile/soil bond. The connection to the foundation is then constructed by tying into the micropile.

driven pile support documentation

MICROPILE INSTALLATION

Micropiles will be installed with a KLEMM 806-2 drill weighing approximately 17,237 kg and a KLEMM KR 803-2 weighing approximately 11,521 kg.

Micro pile drilling will be conducted utilizing a duplex drilling system where-by the casing is installed to the depth of bedrock with an inner string and air hammer. The drill cuttings will be forced through the casing and out a flushing bell near the head of the drill. The casing will be advanced into the bedrock to insure a secure "seat". The inner string is then advanced to the depth specified in the provided plans. Generally this depth is 2.9 meters into the bedrock creating a bond zone. The inner string and air hammer are then removed from the casing. High strength thread bar is installed into the casing with centralizers to provide adequate grout cover. The hole will then be tremie grouted from the bottom, up with 28 MPa neat cement grout.

Neat cement grout for the micropiles will be mixed on-site using a high-shear colloidal mixer.

driven pile support documentation

MICROPILE QA/QC

HBI will utilize a variety of QA/QC methods during this project. One micropile per cap will be proof tested in tension, for a total of 2. One additional sacrificial pile will be installed and performance tested in tension. The tension test will verify the soil to grout bond capacity. Load verification will not include a pile compression test.

HBI's QA/QC program will consist of preconstruction submittals, design, and field documentation. The field documentation will include drilling logs filled out by HBI's driller describing in general terms the conditions encountered during drilling. The grouting operations will also be documented on forms by HBI personnel to describe the grout volume experienced during construction of each micropile.

Material certifications will be submitted when they become available from the manufacturer.

Micro pile Testing

Proof Tests

HBI will proof test two micro piles in tension during the project. The load will be applied using a calibrated jack as outlined in the attached schematic. Load on the pile will be measured by hydraulic pressure as read on a pressure gauge. Calibration factors will be used for this and obtained from the calibration of the gauge/jack system. Two displacement gauges accurate to .025 mm will be used for these measurements.

A calibration chart for the hydraulic ram showing the gauge pressure to force relationship will be submitted when available. The ram is currently being calibrated.

Loading of the pile will be conducted in steps of 25% of the design load. The load will be held long enough to get a displacement reading and then increased to the next step. Loading in steps assists in determining micro pile performance and safety during the test. Displacements will be noted at each increment as outlined in the loading sequence.

Micropile failure will be evaluated using the following general criteria:

1) More than 13 mm total vertical movement at 100% of design load as measured relative to the pile prior to the start of testing.
2) Movement during the creep test exceeding 1 mm / log cycle time (1 to 10 minutes) or 2 mm / log cycle time (6 to 60 minutes) and has a linear or decreasing creep rate.
3) Slope of the load vs. deflection curve should be less than .635mm per kip at 1.33DL.

After the test is completed the setup will be removed and the pile will be prepared as the rest of production piles. A copy of the report to be submitted following the proof test is attached below. Our ram calibration curve will be provided in English units, however we

driven pile support documentation

will concert all results to SI prior to submittal.

MICROPILE
TENSION STATIC PILE LOAD TEST

DATE:
HBI JOB No:
DESCRIPTION: Bear Tooth Highway
DESIGN LOAD (TENSION): 170 kips
JACK: SPX Power Team RH2005 200 ton AL @ 50 PSI = 3 kips

PILE PROPERTIES: 5.5 OD x 0.361 Wall
PILE LENGTH: 0 Feet
APPROXIMATE SURFACE ELEV: 0
ELEVATION AT TIP: 0

Left Right

TEST LOAD	ELAPSED TIME hrs:min:sec	JACK GAGE(1) (psi)	JACK ACTUAL FIELD (psi)	JACK LOAD (kips)	DIAL GAGE READINGS GAGE #1 (ft)	DIAL GAGE READINGS GAGE #2 (ft)	AVG TOTAL DEFL (ft)	NOTES
AL (0.05 DL)	0:00:00	230		9			0.000	
0.25 DL	0:01:00	1170		43			0.000	
0.50 DL	0:02:00	2200		85			0.000	
0.75 DL	0:03:00	3260		126			0.000	
1.00 DL	0:04:00	4330		170			0.000	
1.33 DL	0:05:00	5740		226			0.000	
1.33 DL	0:06:00	5740		226			0.000	
1.33 DL	0:07:00	5740		226			0.000	
1.33 DL	0:08:00	5740		226			0.000	
1.33 DL	0:09:00	5740		226			0.000	
1.33 DL	0:10:00	5740		226			0.000	
1.33 DL	0:11:00	5740		226			0.000	
1.33 DL	0:12:00	5740		226			0.000	
1.33 DL	0:13:00	5740		226			0.000	
1.33 DL	0:14:00	5740		226			0.000	
1.33 DL	0:15:00	5740		226			0.000	
1.67 DL	0:16:00	7230		284			0.000	
AL (0.05 DL)	0:17:00	230		9			0.000	

Performance / Load Verification Test

One pre-production pile load test to verify the design of the pile system and the construction methods proposed prior to installing any production piles. This pre-production pile will require a #89 bar in order to pull the anchor to failure. The sacrificial pile load test results will be submitted for review or acceptance.

The attached diagram shows the initial setup for a pile tension test. The cribbing on the reaction beam will be a minimum of 2.2 m from the test pile. A pressure gauge will be used to measure the load on the pile. Dial gauges accurate to 0.025 mm will be used to measure the deflection and thus the load on the pile. The testing ram, jack and gauge setup is beeing calibrated together to ensure accuracy. The pressure gauge is accurate to 50 PSI or .35 MPa.

Also attached is a copy of the report that will be submitted after the performance test. The report includes times, loads and elongations at each increment. . Our ram calibration curve is provided in English units, however we will convert all results to SI units prior to submittal.

driven pile support documentation

MICROPILE
TENSION STATIC PILE LOAD TEST

DATE:
HBI JOB No:
DESCRIPTION: Bear Tooth Highway
DESIGN LOAD (TENSION): 170 kips
JACK: SPX Power Team RH2008 200 ton AL @ 80 PSI = 3 kips

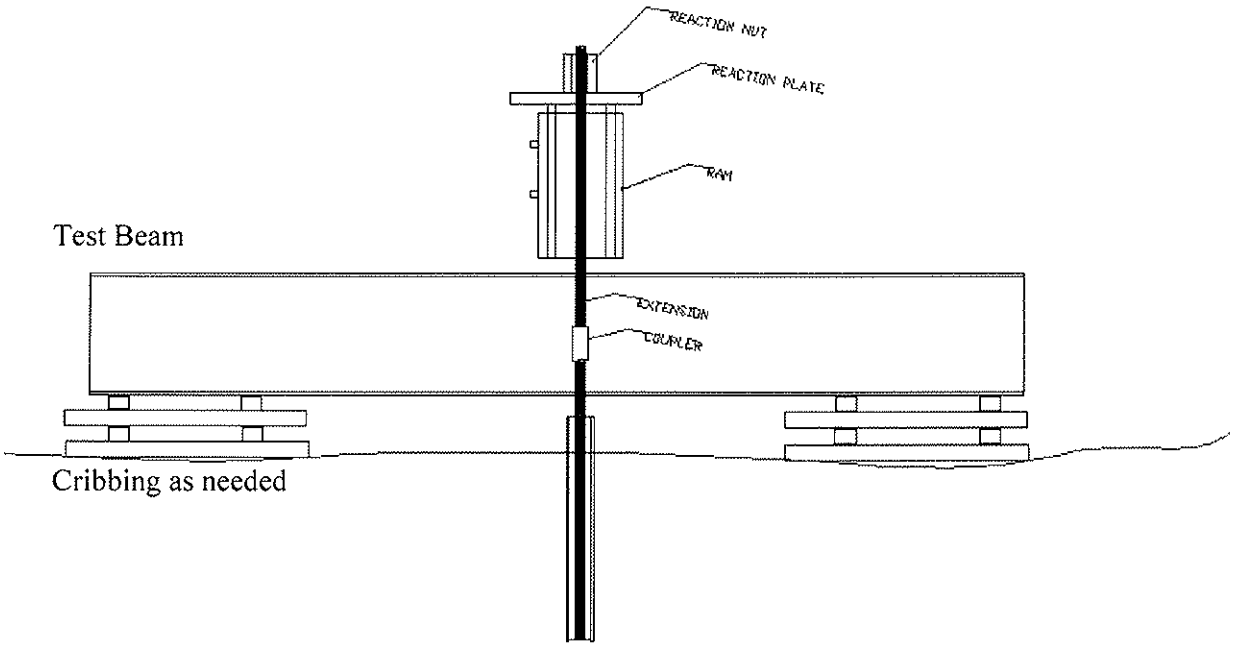
PILE PROPERTIES: 5.5 OD x 0.361 Wall
PILE LENGTH: 0 Feet
APPROXIMATE SURFACE ELEV: 0
ELEVATION AT TIP: 0

Left Right

TEST LOAD	ELAPSED TIME Hr:min:sec	JACK GAGE (1) (psi)	JACK ACTUAL FIELD (psi)	JACK LOAD (kips)	DUAL GAGE READINGS GAGE #1 (in)	DUAL GAGE READINGS GAGE #2 (in)	AVG TOTAL DEFL (in)	NOTES:
AL (0.65 DL)	0:00:00	230		9			0.000	
0.25 DL	0:01:00	1170		43			0.000	
0.50 DL	0:02:00	2200		85			0.000	
AL (0.65 DL)	0:03:00	230		9			0.000	
0.25 DL	0:04:00	1170		43			0.000	
0.50 DL	0:05:00	2200		85			0.000	
0.75 DL	0:06:00	3260		128			0.000	
AL (0.65 DL)	0:07:00	230		9			0.000	
0.25 DL	0:08:00	1170		43			0.000	
0.50 DL	0:09:00	2200		85			0.000	
0.75 DL	0:10:00	3260		128			0.000	
1.00 DL	0:11:00	4330		170			0.000	
AL (0.65 DL)	0:12:00	230		9			0.000	
0.25 DL	0:13:00	1170		43			0.000	
0.50 DL	0:14:00	2200		85			0.000	
0.75 DL	0:15:00	3260		128			0.000	
1.00 DL	0:16:00	4330		170			0.000	
1.33 DL	0:17:00	5740		226			0.000	
1.33 DL	0:18:00	5740		226			0.000	
1.33 DL	0:19:00	5740		226			0.000	
1.33 DL	0:20:00	5740		226			0.000	
1.33 DL	0:21:00	5740		226			0.000	
1.33 DL	0:22:00	5740		226			0.000	
1.33 DL	0:26:00	5740		226			0.000	
1.33 DL	0:36:00	5740		226			0.000	
1.33 DL	0:46:00	5740		226			0.000	
1.33 DL	1:06:00	5740		226			0.000	
1.33 DL	1:16:00	5740		226			0.000	
1.75 DL	1:17:00	7560		298			0.000	
2.0 DL	1:18:00	7800		383			0.000	
2.0 DL	1:19:00	7800		383			0.000	
2.0 DL	1:20:00	7800		425			0.000	
2.0 DL	1:22:00	7800		425			0.000	
2.0 DL	1:24:00	7800		425			0.000	
AL (0.65 DL)	1:25:00	230		9			0.000	

driven pile support documentation

Micro Pile Test Setup



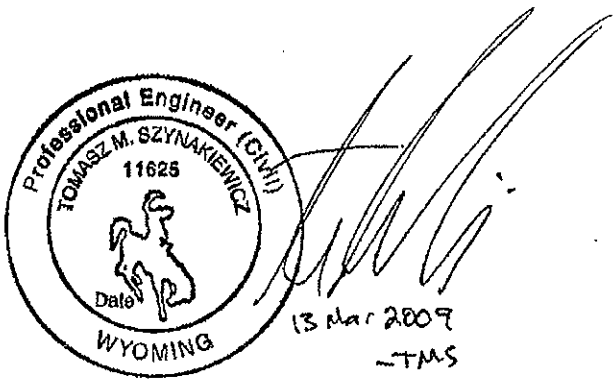
Production QA/QC Methods

HBI will employ a full time qualified Superintendent for the duration of the work. Daily site reports will also be completed by the Superintendent and submitted to the Contractor.

driven pile support documentation

MICROPILE DESIGN CALCULATIONS
Project: Little Bear Creek Bridge #1
Location: Shoshone National Forest
Job #: 48905
By: TSP
Checked By: TMS
Date: 03/13/09

HAYWARD BAKER
Seaver Grouting Division
KELLER



Introduction: A new bridge is being constructed along the Beartooth Highway. Abutments on either end of the bridge will bear on a deep foundation system consisting of micropiles.

Hayward Baker will install 9.625 inch diameter cased micropiles as summarized below. A working load of 170 kips in axial compression and 8.3 kips in lateral per micropile has been specified. Soil borings from FHWA, page number RG2711-D, Project Number WY HPP 4-1(4). Borings THB-8, THB-24, THB-25 were assumed as the closet boring to the work and reflects an overburden (which will be cased) soil then a bedrock consisting of Gneiss or Medium Strong to Strong Sandstone. All bedrock has been assumed as Sandstone for design. Bond values used in Sandstone are from: Rock Anchors, State of the Art, by Littlejohn and Bruce, 1977, Table III.

Design Load: [illegible]
Casing Diameter [illegible]

TMS

driven pile support documentation

MICROPILE DESIGN CALCULATIONS
Project: Little Bear Creek Bridge #1
Location: Shoshone National Forest
Job #: 48905
By: TSP
Checked By: TMS
Date: 03/13/09

HAYWARD BAKER
Denver Grouting Division
KELLER

Introduction: A new bridge is being constructed along the Beartooth Highway. Abutments on either end of the bridge will bear on a deep foundation system consisting of micropiles.

Hayward Baker will install 245 mm diameter cased micropiles as summarized below. A working load of 758 kN in axial compression and 37 kN in lateral per micropile has been specified. Soil borings from FHWA, page number RG2711-D, Project Number WY HPP 4-1(4). Borings THB-8, THB-24, THB-25 were assumed as the closet boring to the work and reflects an overburden (which will be cased) soil then a bedrock consisting of Gneiss or Medium Strong to Strong Sandstone. All bedrock has been assumed as Sandstone for design. Bond values used in Sandstone are from: Rock Anchors, State of the Art, by Littlejohn and Bruce, 1977, Table III.

Design Load:	$Pdes := 758 \cdot kN$
Casing Diameter	$ODCasing := 245 \cdot mm$

driven pile support documentation

MICROPILE DESIGN CALCULATIONS
Project: Little Bear Creek Bridge #1
Location: Shoshone National Forest
Job #: 48905
By: TSP
Checked By: TMS
Date: 03/13/09

HAYWARD BAKER
Denver Grouting Division
KELLER

Casing Wall Thickness

$WallCasing := 14 \cdot mm$

$IDCasing := ODCasing - 2 \cdot WallCasing$

$AreaCasing := \left(\frac{\pi}{4}\right) \cdot \left(ODCasing^2 - IDCasing^2\right)$

$AreaCasing = 0.01\ m^2$

Area of Threadbar

$AREABar := 1452 \cdot mm^2$

$\phi Threadbar := 43 \cdot mm$

Grout Area In Casing

$AREAGroutCasing := \left(\frac{\pi}{4}\right) \cdot IDCasing^2 - AREABar$

$AREAGroutCasing = 0.036\ m^2$

Grout Strength

$Fgrout := 28 \cdot MPa$

Casing Strength

$Fycasing := 552 \cdot MPa$

Bar Strength

$Fybar := 517 \cdot MPa$

Allowable Grout Stress	$\sigma allowgrout := 0.33 \cdot Fgrout$	$\sigma allowgrout = 9.24 \cdot MPa$
Allowable Casing Stress	$\sigma allowcasing := 0.4 \cdot Fycasing$	$\sigma allowcasing = 220.8 \cdot MPa$
Allowable Bar Stress	$\sigma allowbar := 0.4 \cdot Fybar$	$\sigma allowbar = 206.8 \cdot MPa$

Allowable Load In Upper Pile Zone

driven pile support documentation

MICROPILE DESIGN CALCULATIONS
Project: Little Bear Creek Bridge #1
Location: Shoshone National Forest
Job #: 48905
By: TSP
Checked By: TMS
Date: 03/13/09

HAYWARD BAKER
Denver Grouting Division
KELLER

$Pallowableupper := AreaCasing \cdot \sigma allowcasing + AREAGroutCasing \cdot \sigma allowgrout$

$Pallowableupper = 578.123 \cdot kip$

Allowable Load in Bond Zone $\phi bond := 20.32 \cdot cm$

Bond Zone Diameter

Area of Grout in Bond Zone

$AREAGroutBondZone := \left(\frac{\pi}{4}\right) \cdot \phi bond^2 - AREABar$

$AREAGroutBondZone = 0.031\ m^2$

Load Carried By Grout

$Pgrout := AREAGroutBondZone \cdot \sigma allowgrout$

$Pgrout = 286.23 \cdot kN$

Load Carried by Threadbar $Pr := Pdes - Pgrout$ $Pr = 471.77 \cdot kN$

Required Threadbar Area

$$Athreadbarrequired := \frac{Pr}{\sigma allowbar}$$

$Athreadbarrequired = 22.813 \cdot cm^2$

Bond Length Of Micropile

$AREABar = 14.52 \cdot cm^2$

Factor of Safety $FOS := 2.0$

Ultimate Bond

$\Sigma Ult := 827.371 kPa$

driven pile support documentation

MICROPILE DESIGN CALCULATIONS
Project: Little Bear Creek Bridge #1
Location: Shoshone National Forest
Job #: 48905
By: TSP
Checked By: TMS
Date: 03/13/09

HAYWARD BAKER
Denver Grouting Division
KELLER

Ultimate Bond Stress in Bond Zone

$\sigma ultbond := \Sigma Ult$

Allowable Bond Stress in Bond Zone

$$\sigma allowbond := \frac{\sigma ultbond}{FOS}$$

Allowable Load Per Foot

$\sigma allowbond = 4.137 \times 10^{5}\,Pa$

Required Bond Length

$Fallow := \sigma allowbond \cdot \phi bond \cdot \pi$

$$Lbond := \frac{Pdes}{Fallow}$$

$Fallow = 59.369\,m^{-1} \cdot kip$

$Lbond = 2.87\,m$

USE LBOND=2.9m

Summary: Drilling duplex with casing and down-hole-hammer through overburden soils and into the bedrock. Once bedrock is contacted, a 2.9 m bond zone will be drilled. Drill tooling will be pulled out, a #43, grade 520 threadbar will be installed into the hole, and the hole will be tremie grouted with a 28 MPa neat cement grout mixed to a water/cement ratio by weight of 0.43 -0.50 . A water reducer (Glenium 3030NS) may be added to grout during mixing at the rate of 4.0 oz per 100 lbs of cement.

driven pile support documentation

SAND

CHARACTERISTIC LOAD METHOD OF ANALYSIS FOR LATERALLY LOADED PILES   03/13/09   PROJECT NO.: 48905
CLM2.0 August, 2001   NAME: Little Bear Creek Bridge #1

Duncan, J. M., Evans, Jr., L. T. and Ooi, P. S. K. (1994) "Lateral Load Analysis of Single Piles and Drilled Shafts." J. Geot Div, ASCE, (120) No. 5,1018-1033.
Brettmann, T. and Duncan, J. M. (1996) "Computer Application of CLM Lateral Load Analysis to Piles and Drilled Shafts." J Geot Div ASCE (122) No. 6, 496-500
Mokwa, R. L. and Duncan, J. M. (2001) "Laterally Loaded Pile Group Effects and P-Y Multipliers."

SOIL TYPE: SAND

INPUT PARAMETERS	INSTRUCTIONS AND DEFINITIONS	
UNITS FORCE = KIPS LENGTH = IN	Select either CLAY or SAND soil conditions worksheet. Input data in red cells only.	**CALCULATED PILE PARAMETERS** Icirc = 421.28 IN^4 (I for solid circle) RI = 0.38 (I / Icirc) EpRI = 11068.81 KIPS/IN^2 $E_pR_I/\gamma D\phi K_p$ = 98,056 L/D = 29
SOIL PROPERTIES ϕ = 38 DEGREES γ = 7.50E-05 KIPS/IN^3 Kp = 4.20	Su = Undrained shear strength for clay ϕ = Effective friction angle for sand γ = Effective unit weight for sand Do = Outside pile diameter (circular) or width (noncircular) Di = Inside diameter of pipe pile (enter zero for solid section) I = Moment of inertia for any noncircular section (enter zero for circular section) Rcr = Ratio of cracked EI to uncracked EI Ep = Modulus of elasticity of pile or drilled shaft L = Length of pile or drilled shaft Nrow = Number of rows in pile group S/D = Pile spacing to diameter ratio Fm = Group efficiency	**CHARACTERISTIC LOAD AND MOMENT** Pc = 2326.8 KIPS Mc = 133396.4 IN-KIPS
PILE PROPERTIES Do = 9.625 IN Di = 8.535 IN I = 0 IN^4 Rcr = 1 Ep = 29000 KIPS/IN^2 L = 275.62 IN		**CALCULATED P-MULTIPLIER** Fm = N/A for Nrow=1
PILE GROUP PROPERTIES Nrow = 1 S/D = 3		**MINIMUM REQUIRED L/D FOR CLM** $E_pR_I/\gamma D\phi K_p$ = 10,000 / 40,000 / 200,000 L/D 8 / 11 / 14

LOADING CONDITION: LOAD ONLY

FREE HEAD

			SINGLE PILE		GROUP	
Pt KIPS per Pile	Pt/Pc	Yt/D	Yp IN	Mmax IN-KIPS	Yp IN	Mmax IN-KIPS
8.3	0.0036	0.0223	0.214	233.9	N/A for Nrow=1	N/A for Nrow=1
7.5	0.0032	0.0191	0.184	203.3	N/A for Nrow=1	N/A for Nrow=1
7.0	0.0030	0.0172	0.165	184.8	N/A for Nrow=1	N/A for Nrow=1
6.0	0.0026	0.0136	0.131	149.3	N/A for Nrow=1	N/A for Nrow=1
5.0	0.0021	0.0103	0.099	116.0	N/A for Nrow=1	N/A for Nrow=1
4.0	0.0017	0.0073	0.071	85.2	N/A for Nrow=1	N/A for Nrow=1
3.0	0.0013	0.0047	0.046	57.2	N/A for Nrow=1	N/A for Nrow=1
2.0	0.0009	0.0025	0.025	32.6	N/A for Nrow=1	N/A for Nrow=1
1.0	0.0004	0.0009	0.009	12.5	N/A for Nrow=1	N/A for Nrow=1
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1

FIXED HEAD

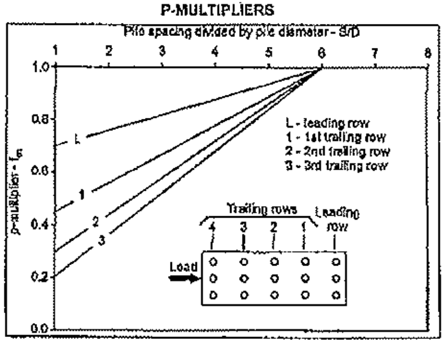
			SINGLE PILE		GROUP	
Pt KIPS per Pile	Pt/Pc	Yt/D	Yp IN	Mmax IN-KIPS	Yp IN	Mmax IN-KIPS
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1
0.0	0.0000	0.0000	0.000	0.0	N/A for Nrow=1	N/A for Nrow=1

LOADING CONDITION: MOMENT ONLY

FREE HEAD

Mt IN-KIPS	Mt/Mc	Ym/D	Ym IN
0.0	0.0000	0.0000	0.00
0.0	0.0000	0.0000	0.00
0.0	0.0000	0.0000	0.00
0.0	0.0000	0.0000	0.00
0.0	0.0000	0.0000	0.00
0.0	0.0000	0.0000	0.00
0.0	0.0000	0.0000	0.00
0.0	0.0000	0.0000	0.00
0.0	0.0000	0.0000	0.00
0.0	0.0000	0.0000	0.00

P-MULTIPLIERS



LOADING CONDITION: COMBINED LOAD AND MOMENT

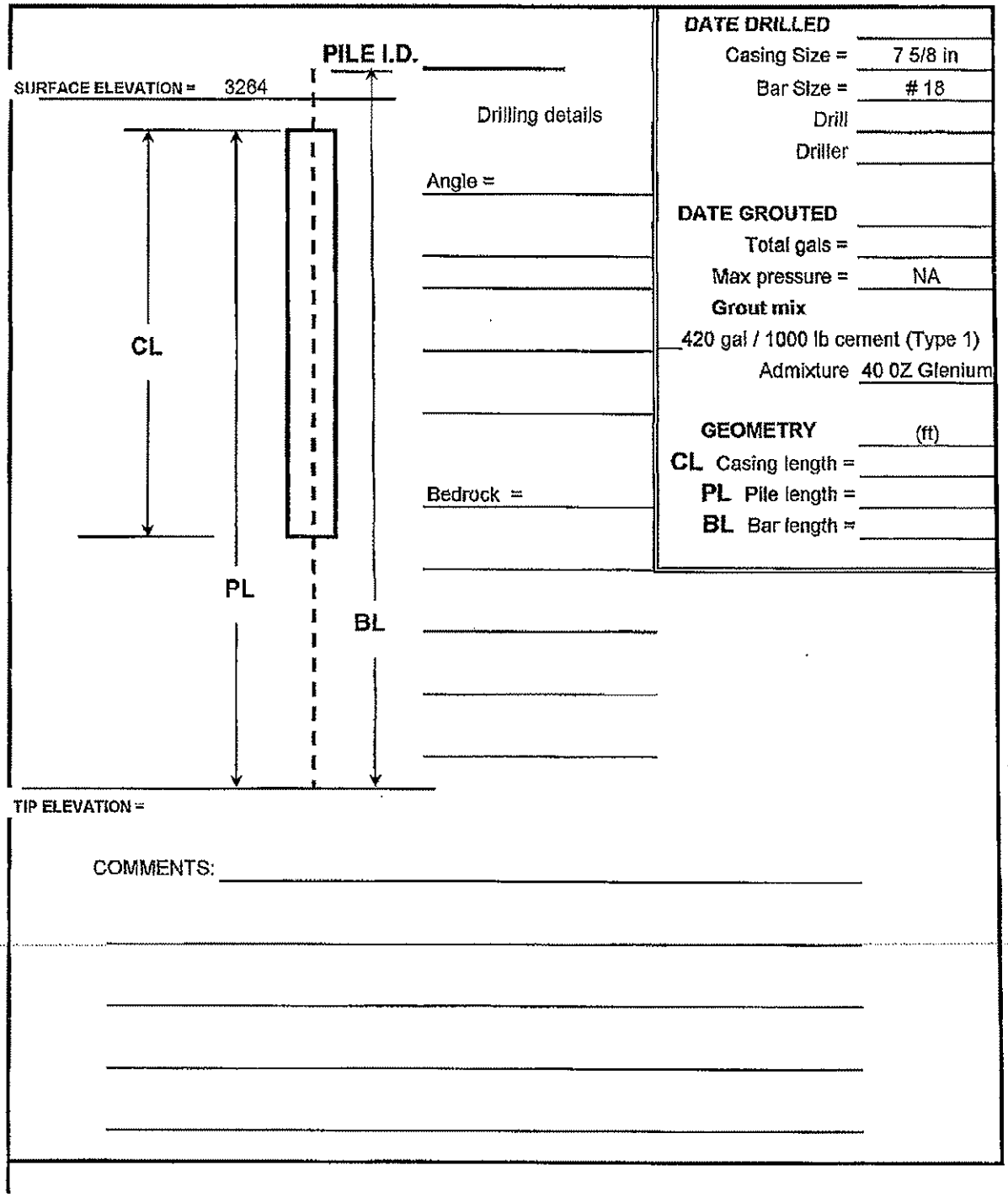
FREE HEAD

Pt KIPS per Pile	Mt IN-KIPS	Pt/Pc	Yp/D	Mt/Mc	Ym/D	Pa/Pc	Ma/Mc	Σ P/Pc	Σ M/Mc	Σ Yp/D	Σ Ym/D	Yavg/D	Yavg IN
0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	#VALUE!
0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	#VALUE!
0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	#VALUE!
0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	#VALUE!
0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	#VALUE!
0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	#VALUE!
0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	#VALUE!
0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	#VALUE!
0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	#VALUE!
0.0	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	#VALUE!

TMS

driven pile support documentation

MICRO-PILE INSTALLATION LOG



Drilling details

Angle =

Bedrock =

DATE DRILLED

Casing Size = 7 5/8 in

Bar Size = # 18

Drill

Driller

DATE GROUTED

Total gals =

Max pressure = NA

Grout mix

420 gal / 1000 lb cement (Type 1)

Admixture 40 0Z Glenium

GEOMETRY (ft)

CL Casing length =

PL Pile length =

BL Bar length =

COMMENTS:

Hayward Baker

				F.E.		Date:		
Pile #	Ultimate Load (lbs)					Design Load (lbs)	Total Length (ft)	Angle
	115500					77000		10
Step	Increment	Gauge Pressure (psi)	Load (lbs)	Actual gauge pressure	Actual Load (lbs)	Dial indicator 1 (in)	Dial indicator 2 (in)	Average Movement (in)
1	0	0	0	100	755			0.000
2	AL	538	9500	600	10745			0.000
2	0.25DL	1026	19250	1250	23732			0.000
3	0.50DL	1988	38500	2500	48707			0.000
4	0.75DL	2951	57750	3650	71684			0.000
5	1.00DL	3913	77000	4800	94661			0.000
6	1.20DL	4876	96250	6000	118637			0.000
7	1.50DL	5838	115500	7200	142613			0.000
8			2 min	7200	142613			0.000
9			3 min	7200	142613			0.000
10			4 min	7200	142613			0.000
11			5 min	7200	142613			0.000
12			6 min	7200	142613			0.000
13			10 min	7200	142613			0.000
Rock Socket Length (ft)	Free length (in)	Start of 10 min. load hold (in)	End of 10 min. load hold (in)	Creep (in)	Creep < 0.04 (in) ?	Movement at DL < 0.125 in	Free Length Elongation (in)	Total Elastic Movement (in)
10		0.000	0.000	0.000	yes	yes	0.000	0.000

Hayward Baker Inc. Selected Projects: Large Micropile Jobs within the past 5 years

	Job Info	Year	Amount	Owner	Engineer	Contractor	Remarks
48883	McCoy Springs Edwards, CO	2008	$250,000	Rich Seth Warner Developments Avon, CO (970)949-4360			Micropiles to stabilize strucutre on slope
48813	Rolling Hills Wind Farm (Micropiles) Glenrock, WY	2008	$2,505,738	Raeburn Roger PacifiCorp Energy Portland, OR (503)813-6667	Kevin Cramer Tetra Tech EC Morris Plains, NJ (973)630-8000	Kevin Cramer Tetra Tech EC Morris Plains, NJ (973)630-8000	Micropile portion of Rolling Hills wind Farm ground improvement and construction of new foundation for new wind farm
48790	Wheeler Switchback #1 Parachute, CO	2008	$807,683	Blake Roush Williams Parachute, CO (970)263-5321			Slope stabilization to protect oil and gas access roadway. Emergency job to support ~450 LF of roadway
48741	Exxon Mobil Refinery-Construction Billings, MT	2008	$590,913	Gary Krieger Exxon Mobil Refinery Billings, MT (406)657-5380	Tom McCormick Technip USA Houston, TX (281)870-1111	Chad Peterson GOP Construction Company Billings, MT (406)656-4632	Micropiles for new foundation at Exxon Mobil refinery
48674	Lutheran Medical Center Wheat Ridge, CO	2007	$159,000	Tom Willson Exempla Lutheran Medical Center Wheat Ridge, CO (303)917-7704		David Beczkalo Mortenson Construction Denver, CO (303)295-2511	40 micropiles inside a hospital
48656	Sweetwater Lodge Teton Village, WY	2007	$412,335	unknown Unknown Sweetwater Lodge LLC Boise, ID (208)385-9876		Karl Kostelic Shaw Builders LLC Jackson, WY (307)733-8401	micropile wall for construction of new hotel
48643	705 Whiskey Ridge Edwards, CO	2007	$293,700	Mr Kerzner Walden CC LLC Nassau, 9708455656		Bill Oneill George Shaffer Construction Co. Avon, CO (970)845-5656	Micropiles for expansive soils for new home construction
48572	Rapid City Regional Hospital Tunnel Rapid City, SD	2007	$320,000	Vern Osterloo Rapid City Regional Hospital Rapid City, SD (605)388-0029	Mike Albertson Albertson Engineering Inc. Rapid City, SD (605)343-9606	J Chytka J Scull Construction Service Inc. Rapid City, SD (605)342-2379	3,000 SF micropile shoring for open-cut tunnel under existing hospital central utility plant.

	Job Info	Year	Amount	Owner	Engineer	Contractor	Remarks
48515	Essex Snow Shed 2007 Essex, MT	2007	$915,930	Ron Berry BNSF Railway Company Kansas City, KS (913)551-4163			Micropiles to stabilize outer post foundations on snowshed 12.
48493	Red Sky 2007 Wolcott, CO	2006	$236,935	John Reece R & R Homes Carr, CO (970)231-2003		Benno Scheidegger Vail Valley Custom Builders Edwards, CO (970)926-8771	Micropiles for residence in expansive clays
48490	Frontier Refinery Cheyenne, WY	2006	$259,878	Jim Casillo Frontier Oil Corporation Houston, TX (713)688-9600		Jim Casillo D-Cok, LLC Houston, TX (713)690-9050	40 Micropiles to 23 FT deep 9 5/8 casing.
48275	Essex Snow Shed Essex, MT	2005	$392,800	Clyde Lobb BNSF Railway Ft. Worth, TX (817)352-4114	Ron Berry BNSF Railway Company Kansas City, KS (913)551-4163		Micropile installation for snowshed re-support. 1 test pile, 25 micropiles
48231	Red Sky Ranch Phase II Wolcott, CO	2005	$900,000	Peter Penfold Community Concepts, LLC Edwards, CO (970)926-1720	Scott Myers Koechlein Consulting Engineers, Inc. Lakewood, CO (303)989-1223	Pete Penfold Architectural Impact Edwards, CO (970)926-1720	Sleeved micropiles for new foundations for 12 large homes in the Vail Colorado area.
48177	Vail Plaza Phase II Vail, CO	2005	$846,766	Waldir Prado Vail Village Inn Vail, CO (970)476-4657	John Mechling CTL Thompson Inc. Glenwood Springs, CO (303)945-2809	Chuck MacDonald Shaw Construction Denver, CO (303)825-4740	Micropiles for crane pads & large footings due to soft silts.
48093	Rose Medical Center Denver, CO	2005	$237,750	Mark Peterman Rose Medical Center Denver, CO (303)355-5412	Mark Peterman L.A. Fuess Partners, Inc. Dallas, TX (214)871-7010	Walter Jones Bovis Lend Lease, Inc. Nashville, TN (615)963-2600	Micropiles and structure jacking of 6 story parking garage column.

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 08/15/09

Project Number: UT PFH 39-1(2) Project Name: Sevenmile Gooseberry

Account: Schedule A

Pay Note Information:

Pay Item #: 60201-0800 Item Description: 600mm pipe culvert Pay Unit: METER

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 132 Pay Period: 3

Pay Note Entry:

Work Start Date: 08/12/09 Work End Date: 08/13/09

Location/Description:

Culvert Crossing at Station 19+930
(1) Culvert pipe plot submitted on 7/31/09
(2) Culvert pipe plot approved by FHWA on 8/04/09 (see attached)
(3) Culvert pipe staked and excavated on 08/12/09
(4) Culvert pipe installed (Heat # 052637) and backfilled on 08/13/09

Remarks/Calculations:

Per approved pipe plot and from field measurement verification, the length of the culvert installed at STA 19+930 = 26.50 meters

Pay 26.50 meters

Support Documentation/References:

Pipe Plot STA 19+930, Pipe Certifications

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 26.50 (meters)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

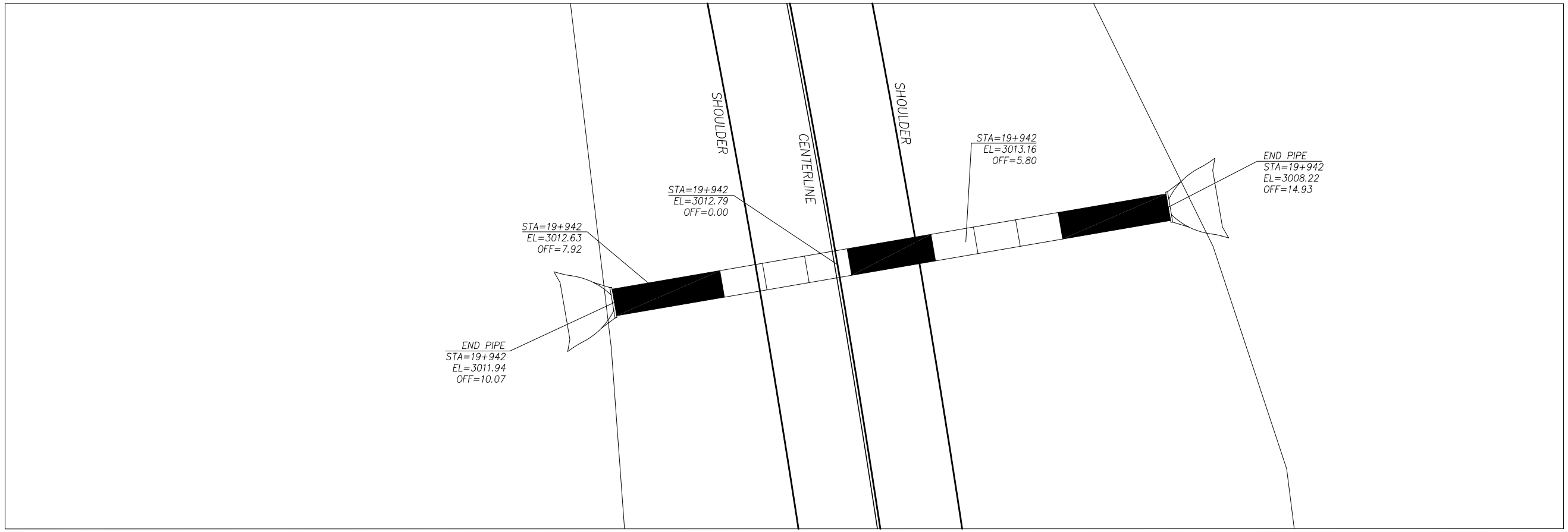
Contractor Representative (Print): Bob the Contractor Date: 08/13/09

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 08/13/09

Approved by FHWA Representative (Signature):

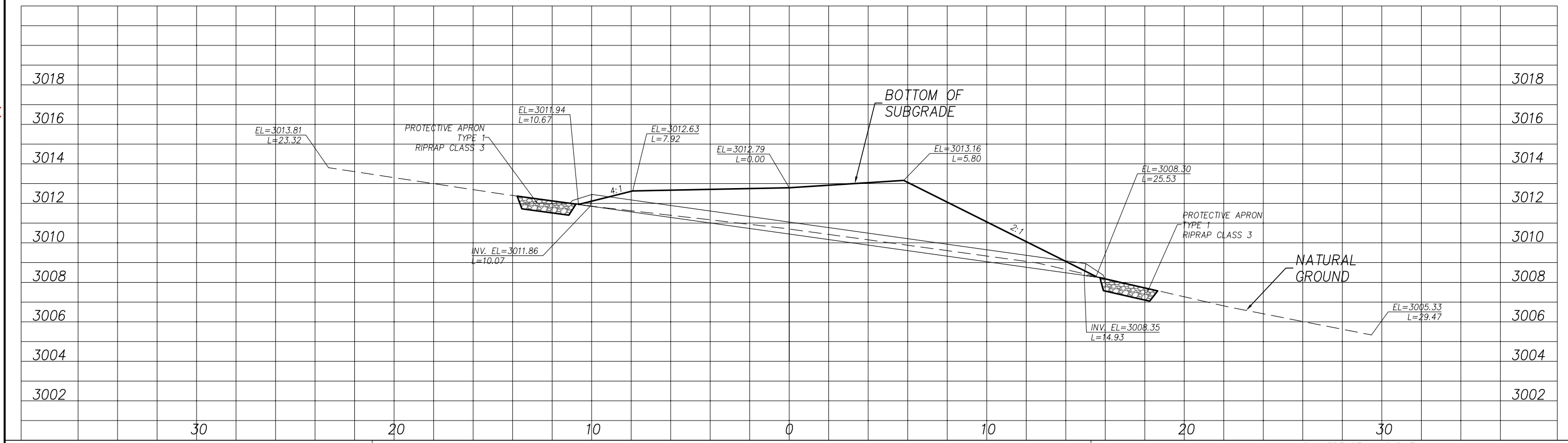
Checked by FHWA Representative (Signature): Jane the Contractor Date: 08/31/09



SCALE=1:100
(594mm X 841mm)

NOTES:
1. OFF= OFFSET FROM ROADWAY CENTERLINE TO SPECIFIC POINT ON PLAN VIEW.

2. L= HORIZONTAL LENGTH FROM INTERSECTION OF ROADWAY CENTERLINE AND CULVERT PIPE TO SPECIFIC POINT ON PROFILE DRAWING.



PEPG ENGINEERING, L.L.C.
8805 S SANDY PARKWAY • SANDY, UT 84070
PH: (801) 562-2521 • FAX: (801) 562-2551

SEVENMILE-GOOSEBERRY ROAD PHASE II

UTAH FOREST HIGHWAY PROJECT P.F.H. 39-1(2)
SEVIER COUNTY--FISH LAKE NATIONAL FOREST
CULVERT CROSSING 19+930

CULVERT STAKING DATA

DESIGN STA.:	19+930	ACTUAL STA.:	19+942	DIAMETER:	600 MM	SKEW:	NONE
PIPE HORIZ. LENGTH:	25.00 M	PIPE LENGTH:	26.54 M	PIPE TYPE:	METAL	END SECTIONS:	2
INLET ELEV.:	3011.86	OUTLET ELEV.:	3008.35	DROP:	3.51 M	SLOPE:	14.04%
STAKED BY:	PEPG ENGINEERING			DATE:	7-31-09		

** THIS IMAGE HAS BEEN ALTERED **

CONTECH CONSTRUCTION PRODUCTS INC.

2245 Canyon Creek Rd.
Redding, CA 96001
530/243-1207 Phone
530/243-1932 Fax

Fabricator's Certificate of Compliance

TO: DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Date: 6/16/2009
Contract No: 112-1(1)

This is to certify all materials supplied by us in this lot, as indicated by test in the flat galvanized coil stock, comply in all requests with specifications, including mechanical property requirements, for this contract. We further certify that all manufacturing processes for steel material furnished for incorporation into the work on this project, has occurred in the United States. All material listed below meets the requirements of Section 66 in the CALTRANS standard specifications.

HUGGER joints furnished on this contract are in full compliance to CALTRANS "Performance Requirements", when specified, for standard, positive, and down drain categories, and water-tightness.

Copies of certified mill test reports showing the mechanical analysis and weight of coating for each heat used to fabricate this lot of material are available in our office. The quantities of fabricated material in this lot are listed below or on an attached sheet.

All bituminous coated material shall conform to Section 66-1.03 in the CALTRANS standard specifications.

Qty.	Description of material	Bit Cld	Cld & Pvd	Paved	This certified material is fabricated from the heat numbers listed below.
296 lf	16ga 24" galv cmp (600 mm)				052637, 052643, 052643
20 ea	18ga 24" H-12 bands (600 mm)				
13 ea	24" end sections (600 mm)				
3 ea	12" end sections (300 mm)				

Plant Order No. 73-3390

Consignee: Johnson Ind.

Fabricator - CONTECH C.P.I.
Redding, CA

By: _____
Authorized Representative

CALTRANS

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 3/30/11

Project Number: CA PFH 112- 1(1) Project Name: South Fork Smith River Road

Account: Schedule A

Pay Note Information:

Pay Item #: 63404-0400 Item Description: Pavement markings, type A, Solid Pay Unit: LNFT

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 345 Pay Period: 7

Pay Note Entry:

Work Start Date: 3/30/11 Work End Date: 3/30/11

Location/Description:

On 08/30/10: A continuous, Type-A, double-yellow, 4-inch permanent pavement marking line was painted per contract requirements from STATION 21+00 to 148+00

Remarks/Calculations:

Per FP-03 634.13, measure solid pavement lines from end to end of each continuous line.

STATION 21+00 to 148+00 = 12,700 LNFT (STA to STA). Measurement by walking the line from end to end with a measurement wheel = 12,716.10 LNFT.

(12,716.10 LNFT per line) X (2 lines) = 25,432.20 LNFT

Support Documentation/References:

Paint Certification (not shown in this book)

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 25,432.20 (LNFT)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 3/30/11

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 3/30/11

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 4/2/11

TRANSMITTAL FORM FOR SUBMITTALS & CERTIFICATIONS

(attach additional sheets as necessary)

PROJECT NUMBER: CA PFH 112-1(1)

TRANSMITTAL NO: 1

PROJECT NAME: South Fork Smith River Road

DATE: 11/9/10

PAY ITEM NUMBER & DESCRIPTION: 63404-0400

DESCRIPTION OF INFORMATION SUBMITTED: MATERIAL SPECS: PAINT STRIPING

NUMBER OF COPIES FURNISHED: 1

TYPE OF SUBMITTAL: ___ New Submittal ✓ Resubmittal

VARIANCE OR SUBSTITUTION REQUESTED? ___ Yes ___ No

APPLICABLE CONTRACT REFERENCES (LIST) AND CONTRACT COMPLIANCE (INDICATE):

PLAN SHEET(S) ____

FP SUBSECTION(S) 718

SCR SUBSECTION(S) 718

ACCEPTED DRAWINGS ____

OTHER ____

PLAN COMPLIANCE?	Yes	No	Var/Sub	N/A
FP COMPLIANCE?	Yes	No	Var/Sub	N/A
SCR COMPLIANCE?	Yes	No	Var/Sub	N/A
DRWG COMPLIANCE?	Yes	No	Var/Sub	N/A
OTHER COMPLIANCE?	Yes	No	Var/Sub	N/A

DESCRIBE ANY PROPOSED VARIATION OR SUBSTITUTION (include the reason for the requested change, a detailed comparison of the specified and proposed item, manufacturer's or other relevant supporting data, and any proposed cost savings to the Government. Attach additional pages as necessary. Note: the applicable specification compliance type listed above that relies on the variation or substitution should be marked "Var/Sub."):

MATERIAL SPECIFICATIONS FOR PAVEMENT MARKINGS

I certify that the above submitted item(s) have been reviewed in detail and are correct, are in the proper units (metric or english as required by the contract), and are in strict conformance with the contract drawings and specifications except as otherwise stated.

Robert E. Nixa ROBERT E. NIXA QCS FOR TIDEWATER 11/9/10

(Signature and printed name of knowledgeable person) (Title and Company Name) (Date)

REVIEW BY QUALITY CONTROL MANAGER (return unacceptable submittals to submitter):

RECOMMENDED ACTION ON VARIANCE/SUBSTITUTION REQUEST: ___ Approve ___ Reject ___ Resubmit

RECOMMENDED ACTION ON OVERALL SUBMITTAL: ✓ Accept ___ Accept Except as Noted

___ Accept Except as Noted/Resubmit ___ Reject/Resubmit RN ✗ More Info Req'd on Var/Sub, Resubmit

Remarks:

I certify that I have reviewed the attached submittal or certification for apparent compliance with the contract requirements. Any deviations are identified above.

Signed by Robert E. Nixa ROBERT E. NIXA Date 11/9/10

(signature and printed name)

GOVERNMENT RESPONSE :

VARIANCE/SUBSTITUTION REQUEST: ✓ Approved ___ Rejected ___ Resubmit

OVERALL SUBMITTAL: ___ Accepted ___ Accepted Except as Noted ___ Accepted Except as Noted/Resubmit ___ Rejected/Resubmit ___ More Info Req'd on Var/Sub, Resubmit

Remarks:

Signed by [signature] PE Date 11/15/10

(signature and printed name and title)

pavement marking support documentation

Ennis Traffic Safety Solutions

CERTIFICATE OFCOMPLIANCE

This is to certify that:

The following lots have been manufactured to meet all requirements of HPS-4 two component modified Urethane traffic marking system

Product	Lot No	MFG
HPS-4 White	Enter Batch # TE007W137	7-14-2010

To obtain the desired qualities, parts A and B must be mixed in a two- to-one ratio (two parts of component A (resin) with one part of component B (catalyst).

I. *Part A* consists of the following composition:

White System Component		Yellow System Component		Black System Component	
Titanium Dioxide	21-27% ✓	Total Pigments	17-23% ✓	Total Pigments	20-30%
Modified Urethane Resin	73-79%	Modified Urethane Resin	77-83%	Modified Urethane Resin	70-80%

II. *Part B* (catalyst) has an amine value of 330 +/- 30 (ASTM D2074)

III. When Parts A and B are properly and thoroughly mixed (two Parts A to one Part B) the following properties will result:

Property	Result	Test Method
No Track Time	With beads: 2 minutes maximum	ASTM D 711 ✓
Hardness (Shore D)	> 70	ASTM D 2240 ✓
Abrasion Resistance	Less than 80 mg	ASTM D 4060 ✓
Adhesion	concrete failure	ASTM D 4541 ✓
Tensile Strength	> 6000 psi	ASTM D 638
Compressive Strength	> 12,000 psi	ASTM D 695 ✓
Color:	Meets Federal Standard Number 595B ✓	ASTM D 1729 ✓

I certify that the above information is true and correct to the best of my knowledge.

JOHNNY LAMBERT
Ennis Traffic Safety Solutions
EPOXY LAB. Manager

Date 7-15-2010

Section 7: SQUARE FEET/SQUARE YARD Items

GENERAL NOTE:
The items shown here are examples only - all measurement, documentation, and payment will conform to the project contract requirements regardless of what is shown here. Included here are examples of some of the many documentation types that may be required. Often documentation such as certifications and qualifications may be submitted and accepted once and then referenced accordingly instead of attaching additional copies for each pay note or payment period. Many documentation items are required prior to production, delivery, or placement; required documentation should be provided at the appropriate time and not necessarily at time of payment.

NOTE ON SQUARE FEET/ SQUARE YARD ITEMS:
Area quantities shown in the Plans are estimates; only actually ordered and performed quantities are paid. Please refer to the FP, the Special Contract Requirements, and plans of your project for detailed instructions prior to submitting any pay notes. Typically, area items are measured on a plane parallel to the surface being measured. Items paid by area are sometimes irregularly shaped items. It is generally acceptable to simplify irregularly shaped items by breaking down areas into shapes with easily calculated areas such as squares, rectangles, circles, semi circles, trapezoids, triangles, etc. When breaking down areas into simpler shapes, the process should be mutually agreed upon by the Contractor and a FHWA representative. It is also acceptable to measure the area of items from an approved survey method. When submitting for payment on items paid by area, it is required to show on the paynote when the work was performed, where the work was performed (station ranges, offsets, sketches), measurement and calculations with area formulas clearly noted, who measured the work, survey reports if performed, and necessary conversion calculations (i.e. square yard to square feet).

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 10/29/10

Project Number: CA PRA SEKI 10(8) Project Name: Generals Highway

Account: OPTION X

Pay Note Information:

Pay Item #: 20303-1600 Item Description: Removal of Pavement Pay Unit: SQYD

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 52 Pay Period: 2

Pay Note Entry:

Work Start Date: 10/22/10 Work End Date: 10/29/10

Location/Description:

(1) Station 663+00 to 660+75 on 10/22/10 = 688.89 SQYD*
(2) Station 660+75 to 657+75 on 10/23/10 = 897.06 SQYD*
(3) Station 657+75 to 655+50 on 10/24/10 = 625.00 SQYD*
(4) Station 655+50 to 653+00 on 10/25/10 = 643.33 SQYD*
(5) Station 653+00 to 650+75 on 10/26/10 = 562.22 SQYD*
(6) Station 650+75 to 647+25 on 10/27/10 = 995.83 SQYD*
(7) Station 647+25 to 645+66 on 10/28/10 = 427.28 SQYD*
(8) Station 645+66 to 644+00 on 10/29/10 = 481.94 SQYD*

*See removal of pavement quantity spreadsheet.

Remarks/Calculations:

Per FP-03 203.08, payment will be full compensation for the work prescribed.

From Location/Description:
Total quantity (SQYD) = 688.89 + 897.06 + 625.00 + 643.33 + 562.22 + 995.83 + 427.28 + 481.94 = 5321.56 SQYD

Round the total to the zero decimal place... Pay 5322 SQYD

Support Documentation/References:

Removal of pavement quantity spreadsheet

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 5322 (SQYD)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 10/29/10
Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 10/29/10
Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 11/5/10

CA PRA SEKI 10 (8) GENERALS HIGHWAY
Option X Item 20303-1600 Removal of Pavement (SQYD)

PAGE 1

MEASUREMENTS		CALCULATIONS						
STA	Measured Roadway Width (feet)	STA 1	STA 2	Length (feet)	Average Roadway Width (feet)	Area (SQFT)	AREA (SQYD)	Date Completed
634+00	26.10	634+00	635+00	100.00	25.05	2505.00	**278.33**	
635+00	24.00	635+00	635+75	75.00	22.50	1687.50	**187.50**	
635+75	21.00	635+75	636+75	100.00	21.00	2100.00	**233.33**	
636+75	21.00	636+75	637+25	50.00	22.00	1100.00	**122.22**	
637+25	23.00	637+25	637+75	50.00	23.50	1175.00	**130.56**	
637+75	24.00	637+75	638+25	50.00	25.00	1250.00	**138.89**	
638+25	26.00	638+25	638+81	56.00	29.00	1624.00	**180.44**	
638+81	32.00	638+81	639+00	19.00	32.50	617.50	**68.61**	
639+00	33.00	639+00	639+17	17.00	34.00	578.00	**64.22**	
639+17	35.00	639+17	639+50	33.00	35.50	1171.50	**130.17**	**NOT YET COMPLETED**
639+50	36.00	639+50	639+91	41.00	31.00	1271.00	**141.22**	
639+91	26.00	639+91	640+25	34.00	24.50	833.00	**92.56**	
640+25	23.00	640+25	640+50	25.00	23.00	575.00	**63.89**	
640+50	23.00	640+50	641+50	100.00	23.00	2300.00	**255.56**	
641+50	23.00	641+50	642+00	50.00	22.50	1125.00	**125.00**	
642+00	22.00	642+00	642+75	75.00	22.00	1650.00	**183.33**	
642+75	22.00	642+75	643+25	50.00	23.00	1150.00	**127.78**	
643+25	24.00	643+25	643+69	44.00	24.00	1056.00	**117.33**	
643+69	24.00	643+69	644+00	31.00	24.50	759.50	**84.39**	
644+00	25.00	644+00	644+50	50.00	26.50	1325.00	**147.22**	10/29/2010
644+50	28.00	644+50	645+25	75.00	26.50	1987.50	**220.83**	**481.94**
645+25	25.00	645+25	645+66	41.00	25.00	1025.00	**113.89**	
645+66	25.00	645+66	646+00	34.00	24.50	833.00	**92.56**	10/28/2010
646+00	24.00	646+00	646+50	50.00	24.00	1200.00	**133.33**	
646+50	24.00	646+50	647+00	50.00	24.00	1200.00	**133.33**	**427.28**
647+00	24.00	647+00	647+25	25.00	24.50	612.50	**68.06**	
647+25	25.00	647+25	647+75	50.00	26.00	1300.00	**144.44**	10/27/2010
647+75	27.00	647+75	648+00	25.00	28.00	700.00	**77.78**	
648+00	29.00	648+00	648+25	25.00	28.50	712.50	**79.17**	
648+25	28.00	648+25	648+75	50.00	28.00	1400.00	**155.56**	
648+75	28.00	648+75	649+25	50.00	28.00	1400.00	**155.56**	**995.83**
649+25	28.00	649+25	649+75	50.00	25.00	1250.00	**138.89**	
649+75	22.00	649+75	650+75	100.00	22.00	2200.00	**244.44**	
650+75	22.00	650+75	651+18	43.00	22.00	946.00	**105.11**	10/26/2010
651+18	22.00	651+18	651+50	32.00	27.00	864.00	**96.00**	
651+50	32.00	651+50	651+75	25.00	31.50	787.50	**87.50**	
651+75	31.00	651+75	652+25	50.00	29.00	1450.00	**161.11**	**562.22**
652+25	27.00	652+25	653+00	75.00	13.50	1012.50	**112.50**	

CA PRA SEKI 10 (8) GENERALS HIGHWAY
Option X Item 20303-1600 Removal of Pavement (SQYD)

PAGE 2

MEASUREMENTS		CALCULATIONS						
STA	Measured Roadway Width (feet)	STA 1	STA 2	Length (feet)	Average Roadway Width (feet)	Area (SQFT)	AREA (SQYD)	Date Completed
653+00	22.00	653+00	653+50	50.00	22.00	1100.00	**122.22**	10/25/2010
653+50	22.00	653+50	654+25	75.00	22.00	1650.00	**183.33**	
654+25	22.00	654+25	654+80	55.00	23.00	1265.00	**140.56**	**643.33**
654+80	24.00	654+80	655+25	45.00	25.00	1125.00	**125.00**	
655+25	26.00	655+25	655+50	25.00	26.00	650.00	**72.22**	
655+50	26.00	655+50	656+00	50.00	26.00	1300.00	**144.44**	10/24/2010
656+00	26.00	656+00	656+50	50.00	26.50	1325.00	**147.22**	
656+50	27.00	656+50	657+00	50.00	25.50	1275.00	**141.67**	**625.00**
657+00	24.00	657+00	657+25	25.00	23.00	575.00	**63.89**	
657+25	22.00	657+25	657+75	50.00	23.00	1150.00	**127.78**	
657+75	24.00	657+75	658+75	100.00	25.50	2550.00	**283.33**	10/23/2010
658+75	27.00	658+75	659+25	50.00	27.00	1350.00	**150.00**	
659+25	27.00	659+25	660+03	78.00	27.50	2145.00	**238.33**	**897.06**
660+03	28.00	660+03	660+50	47.00	28.00	1316.00	**146.22**	
660+50	28.00	660+50	660+75	25.00	28.50	712.50	**79.17**	
660+75	29.00	660+75	661+25	50.00	28.00	1400.00	**155.56**	10/22/2010
661+25	27.00	661+25	661+96	71.00	27.00	1917.00	**213.00**	
661+96	27.00	661+96	662+25	29.00	27.00	783.00	**87.00**	**688.89**
662+25	27.00	662+25	662+50	25.00	27.00	675.00	**75.00**	
662+50	27.00	662+50	663+00	50.00	28.50	1425.00	**158.33**	
663+00	30.00							

TOTAL (this estimate) = 5321.56

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 10/27/09

Project Number: Example: ND PRA THRO 10(3)
Project Name: Example: North Unit Scenic Drive

Account: Schedule A

Pay Note Information:

Pay Item #: 20703-0000
Item Description: Geogrid
Pay Unit: SQYD

Item Line #: N/A (for EEBACS only)
Item Type: N/A (for EEBACS only)

Pay Note #: 213
Pay Period: 6

Pay Note Entry:

Work Start Date: 10/26/09
Work End Date: 10/26/09

Location/Description:

On 10/26/2009: Approved biaxial geogrid was placed at the following locations:
Hole 1: 33+00 to 33+14 = 16.33 SQYD*
Hole 2: 33+60 to 33+75 = 9.17 SQYD*
Hole 3: 34+20 to 34+36 = 23.27 SQYD*

*See attached Geogrid sketch/calculation sheet

Remarks/Calculations:

16.33 SQYD + 9.17 SQYD + 23.27 SQYD = 48.77 SQYD

PAY 48.77 SQYD TOTAL

Support Documentation/References:

Geogrid sketch/calculation sheet and biaxial geogrid certification.

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 48.77 (SQYD)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor
Date: 10/27/09
Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector
Date: 10/27/09
Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer
Date: 11/5/09

geogrid support documentation

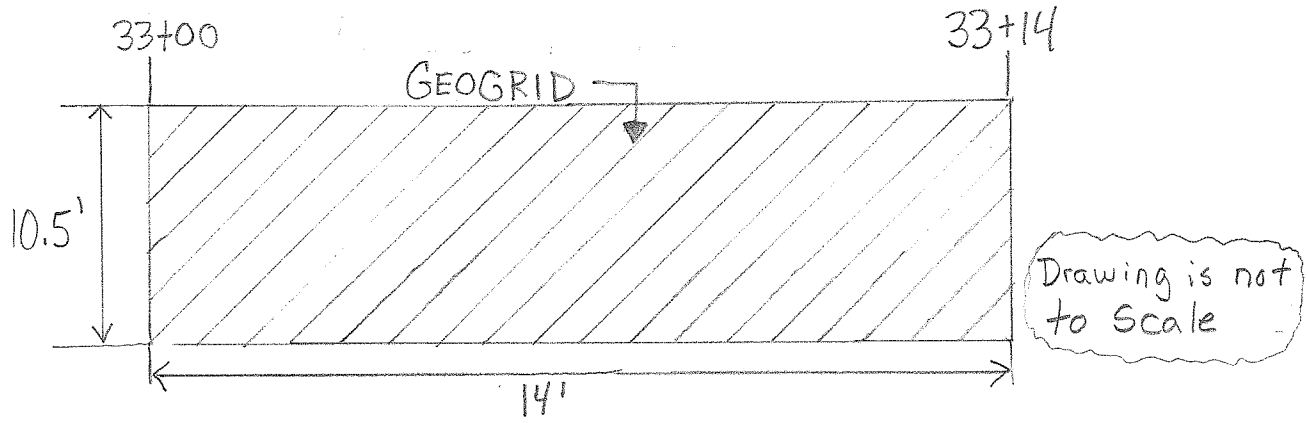
Form FHWA-1460
(Rev. 3-74)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

MADE BY SS DATE 10/26/09
CHECKED BY DJ DATE 10/26/09
CALCULATIONS FOR 20703-0000, GEOGRID

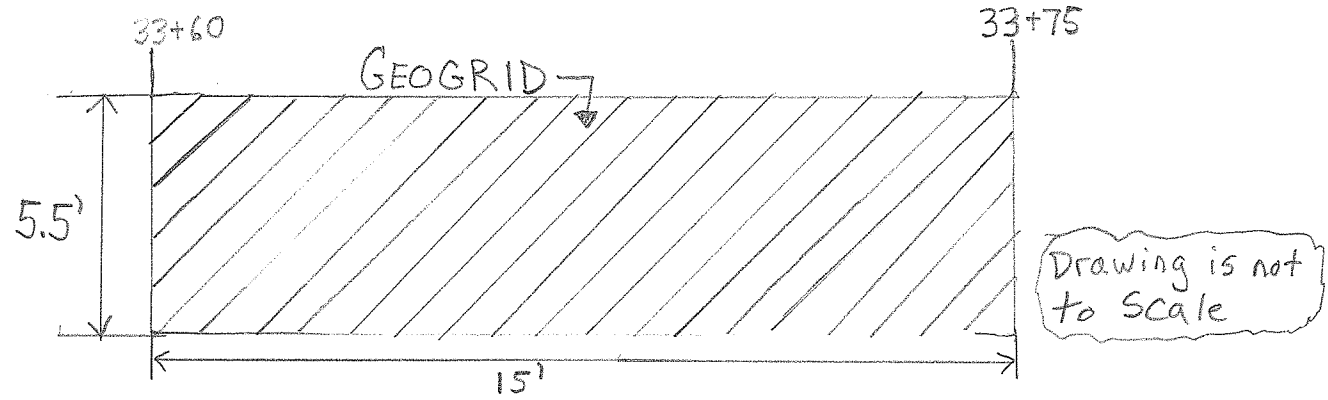
PROJECT ND PRA THRO 10(3)
NORTH UNIT SCENIC DRIVE
SHEET NO. 1/1

Hole # 1: 10.5'W x 14' L x 1.17'D 10/26/09



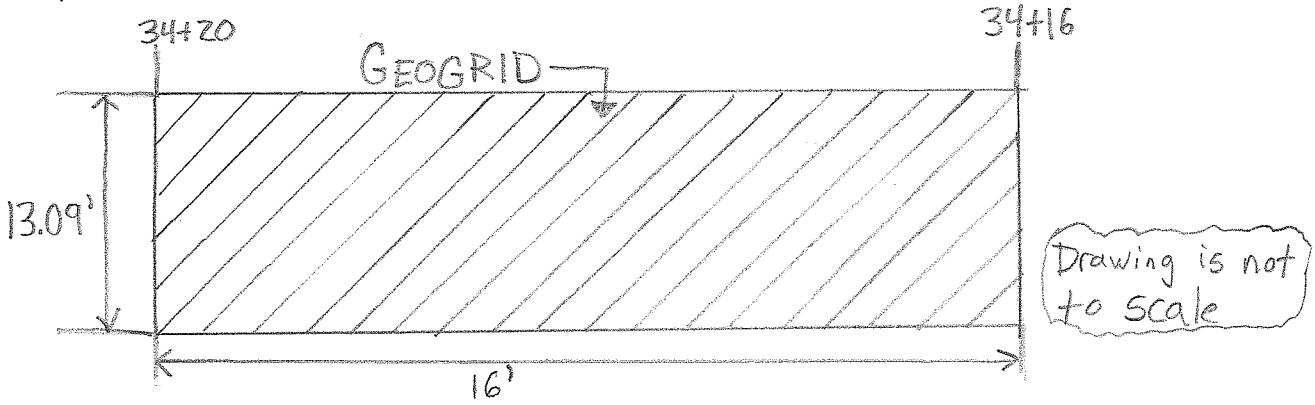
Area of Geogrid = 14' x 10.5' = 147 SQFT ÷ 9 = 16.33 SQYD

Hole #2: 5.5'W x 15'L x 1.13'D 10/26/09



Area of Geogrid = 15' x 5.5' = 82.5 SQFT ÷ 9 = 9.17 SQYD

Hole #3: 13.09'W x 16'L x 1.15'D 10/26/09



Area of Geogrid = 16' x 13.09' = 209.44 SQFT ÷ 9 = 23.27 SQYD

geogrid support documentation

June 29, 2011

Hanes Components
Denver, Co

This letter is to certify that B 100 Geogrids as manufactured by Synteen Technical Fabrics for Hanes Geo meets or exceeds the standards for Geogrids as set by FHWA, NCMA and other industry groups.

All Geogrids use 100% virgin resin with NO regrind material. The polyester yarns have a minimum molecular weight of 25,000 g/mol and a CEG of less than 30.

B 100is composed of high molecular weight, high-tenacity multifilament polyester yarns that are woven into a stable network placed under tension. The yarns used by STF meet the requirements for molecular weight and CEG's as established by US Department of Transportation.. The high strength polyester yarns are coated with a PVC material. SF. Series Geogrids are inert to biological degradation and are resistant to naturally encountered chemicals, alkalis and acids. SF. Series Geogrids are typically used for soil reinforcement applications such as retaining walls, steep slopes, embankments, sub-grade stabilization, and embankments over soft soils and waste containment applications.

TENSILE PROPERTIES	TEST METHOD	MARV VALUES LBS/FT
Ultimate Strength MD XMD	ASTM D 6637	2388 3870
LTDS	FHWA	1341 3350

RF Creep -1.54 RF Durability - 1.10 RF Installation Damage 1.05 Type 3 Synteen Technical Fabrics has tested our geogrids in accordance with FHWA, NCMA and Geosynthetic Research 10, 000 hour creep testing, GRI GG2 junction testing, Coefficient of interaction and geogrid pull out testing in accordance with GRI GG5 and installation damages testing WSDOT Method 925. In addition, STF has performed NCMA connection testing with several segmental wall systems. Reduction factors listed above are all based on specific testing. All VG Series geogrids are delivered in UV protected wrap. Labels are attached to the grid rolls indicating geogrid style, roll number. The roll number is recorded in our QC lab. All physical test data is filed according to roll numbers.

Don D Show
Vice President of Sales & Marketing

geogrid support documentation

Synteen Technical Fabrics, Inc.

PROUDLY MADE IN THE USA by Synteen Lancaster, South Carolina

714 03(a) * Need long term design strength using test method GRI: 664

SYNTEEN SF12 BIAXIAL GEOGRID

BASE COURSE REINFORCEMENT AND SUBGRADE IMPROVEMENT

SF12 is composed of high molecular weight, high tenacity multifilament polyester yarns, woven into a stable network placed under tension. The high strength polyester yarns are PVC coated and are inert to biological degradation and are resistant to naturally encountered chemicals, alkalis and acids.

(See Table 714-7) show ASTM reduction factors

REINFORCEMENT PROPERTIES		TEST METHOD	MARV VALUES Lbs/ft	MARV VALUES kN/m
Ultimate Strength	MD XMD	ASTM 6637	2,388 5,268	34.9 76.8
Initial Modulus	MD XMD	ASTM 6637	178,000 235,000	2,598 3,432
Tensile Strength at 2% Strain	MD XMD	ASTM 6637	526 797	7.7 11.6
Tensile Strength at 5% Strain	MD XMD	ASTM 6637	1,042 1,367	15.2 19.9
True in place strength after site damage testing based on TRI method of "installation" damage testing with poorly graded gravel (GP) and well groomed gravel (SW).				
True Tensile Strength at 2% Strain	MD (GP) MD (SW)	ASTM 6637 & ASTM 5818	438 496	6.3 7.2
True Tensile Strength at 2% Strain	XMD (GP) XMD (SW)	ASTM 6637 & ASTM 5818	664 752	9.7 11.0
True Tensile Strength at 5% Strain	MD (GP) MD (SW)	ASTM 6637 & ASTM 5818	868 983	12.6 14.3
True Tensile Strength at 5% Strain	XMD (GP) XMD (SW)	ASTM 6637 & ASTM 5818	940 1,065	13.7 15.5
Junction Strength (lb./junction)	MD XMD	GRI-GG2	59.4 64.8	0.87 0.95
FHWA Sum of Junctions – Strength (81 total junctions)	MD XMD	GRI-GG2	4,851 5,249	70.8 76.6
FHWA Sum of Junctions – Efficiency	MD XMD	GRI-GG2	203% 100%	
Coefficient of Pullout Interaction		ASTM 6706 Sandy Gravel Sand	$C_i = 1.0$ $C_i = 1.0$	
Aperture Size *	MD XMD	Measured	1.0 ✓ 1.0 ✓	25 25
Roll Dimensions 12' x 150' 15' x 150' 17' x 150'		Measured	200 square yards per roll 250 square yards per roll 283 square yards per roll	

Synteen can produce custom widths, apertures and master roll lengths.

PLEASE NOTE: Flexural Stiffness based on ASTM D 5732 was withdrawn by ASTM in 2008, and is no longer recognized by ASTM D-35 as an acceptable geosynthetic test method.

* Attest certification by having a person having legal authority to bind the manufacturer. (714 03(b))

Synteen Technical Fabrics, Inc.
1950 West Meeting Street . Lancaster, SC 29720
800.796.8336

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 10/28/09

Project Number: CA PRA SEKI 10(8) Project Name: General's Highway

Account: Schedule A

Pay Note Information:

Pay Item #: 25801-0300 Item Description: RC Retaining Wall, 8' Type-1 Granite Pay Unit: SQFT

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 341 Pay Period: 6

Pay Note Entry:

Work Start Date: 10/10/10 Work End Date: 10/28/10

Location/Description:

10/10/2010: Excavation for Footing (F-3), Excavation for Footing (F-7)
10/11/2010: Excavation for Footing (F-12)
10/20/2010,10/21/2010: Footing Concrete Pour, 55201-L02-0007, 55201-L02-0008 (F-12)
10/26/2010: Footing Concrete Pour, 55201-L02-0010 (F-7)
10/28/2010: Footing Concrete Pour, 55201-L02-0012 (F-3)

Remarks/Calculations:

Per agreement with FHWA CO and Contractor Owner, the following breakdown of work for all retaining wall work is as follows: 28% excavation, 30% footing (concrete), 30% stem (concrete) and 12% backfill.

Per approved wall profile: (F-3) 77.29 SQFT + (F-7) 82.88 SQFT + (F-12) 86.05 SQFT = 246.22 SQFT
28% excavation + 30% footing (concrete) = 58%
246.22 SQFT X 58% = 142.81 SQFT

Support Documentation/References:

(1) Approved Wall 3B Profile (2) 25801-0300 Work Breakdown Spreadsheet (3) Wall 3B Quantity Spreadsheet
NOTE: This item has a seperate pay factor adjustment for 552 concrete (see appendix for an example)

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 142.81 (SQFT)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 10/30/10

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 10/30/10

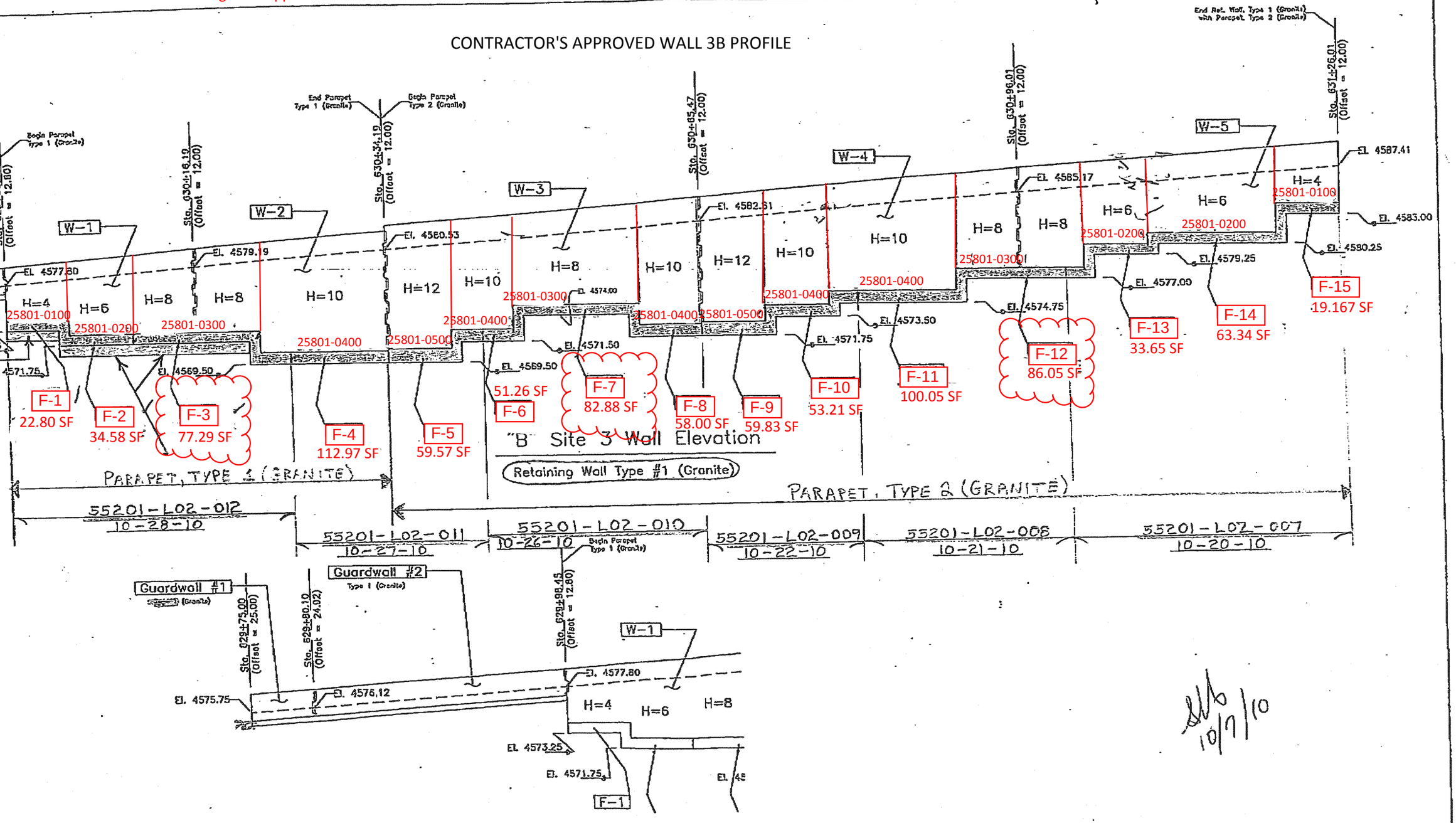
Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 11/5/10

NOTE 2: Prior to payment being made. certifications for reinforcing steel, cement and concrete test results need to be submitted by the Contractor.

8' reinforced concrete retaining wall support documentation

CONTRACTOR'S APPROVED WALL 3B PROFILE



10/7/10

3				
2				
1				
0	FOR APPROVAL			
	REVISIONS	DATE	BY	

THE FULL INTENT & PURPOSE OF THIS PLACING DRAWING IS THE PLACING & FABRICATION OF REINFORCING STEEL BARS ONLY. IT IS NOT TO BE USED AS A MEANS OF COMMUNICATION BETWEEN THE ARCHITECT, ENGINEER, CONTRACTOR OR ANY OTHER SUB-TRADE. / REINFORCING STEEL PLACING DRAWINGS ONLY. USE IN CONJUNCTION WITH CONTRACT DRAWINGS & SPECIFICATIONS. ELEVATIONS & DIMENSIONS SHOWN ON THIS DRAWING ARE FOR DETAILING PURPOSES ONLY & SHOULD NOT BE USED FOR CONSTRUCTION UNLESS VERIFIED BY ENGINEER OR CONTRACTOR.

CMC Rebar
2990 E. ANNADALE
FRESNO, CA 93725
TEL: (559) 487-2000
FAX: (559) 487-2010

LOCATION	Sequoia/Kings Canyon Nat'l Park
ARCHITECT	
ENGINEER	U.S. Dept of Transportation
CUSTOMER	Frontier Contracting, Inc.
DRAWN BY	John Wats

PROJECT: PRA SEKI 10(8) Generals Highway Walls
TITLE OF DRAWING: Schedule "B" Site 3 Wall Elevation – Site 3 Wall & Details
PROJECT NO.: N0100125
DRAWING NO.: BS3W-L1
LOT NO.:

02-27-12;01:14PM;

2/ 2

8' granite reinforced concrete retaining wall support documentation

CA PRA SEKI 10(8)

Generals Highway

Sequoia/ King's Canyon National Park

Allen Engineering Contractor, Inc.

25801-0300B Reinforced Concrete Retaining Wall 8' Type 1 Granite

Wall	Footing	Excavation (28)	Footing (30)	Stem (30)	Backfill (12)
##	F-##				
	F-##				
	F-##				
	F-##				
	F-##				
##	F-##				
	F-##				
	F-##				
	F-##				
3B	F-3	10/10/2010	10/28/2010	11/29/2010	12/30/2010
	F-7	10/10/2010	10/26/2010	11/27/2010	12/28/2010
	F-12	10/11/2010	10/21/2010	11/22/2010	12/23/2010

8' reinforced concrete retaining wall support documentation

Wall 3B -Sta. 629+75 to Sta. 631+26.01

Wall Section	Mainline Station to	Mainline Station to		Baseline Sta. to	Baseline Sta	Granite-Guardwall	Granite-Guardwall, Type 1 (o.f. formlined)	Granite - Parapet, Type 1 (o.f formlined)	Granite-Parapet, Type 2 (all faces formlined)	Granite - Wall Height (Type 1) 4 ft	Granite - Wall Height (Type 1) 6 ft	Granite - Wall Height (Type 1) 8 ft	Granite -Wall Height (Type 1) 10 ft	Granite - Wall Height (Type 1) 12 ft	Granite - Wall Height (Type 1) 14 ft	Granite -Wall Height (Type 1) 16 ft	Granite - Wall Height (Type 1) 18 ft
						Pay per ft	Pay per ft	Pay per ft	Pay per ft	Pay per SQFT							
GW3	**629+75.00**	**629+98.45**		00+00.00	00+06.00	6											
GW3				00+06.00	00+30.00		24										
Wall 3	**629+98.45**	**630+16.19**		00+30.00	00+36.00			6.00		22.800							
Wall 3				00+36.00	00+42.00			6.00			34.577						
Wall 3				00+42.00	00+48.00			6.00				37.284					
Wall 3	**630+16.19**	**630+34.19**		00+48.00	00+54.00			6.00				40.007					
Wall 3				00+54.00	00+66.00			12.00					112.971				
Wall 3	**630+34.19**	**630+65.47**		00+66.00	00+72.00				6.00					59.572			
Wall 3				00+72.00	00+78.00				6.00				51.258				
Wall 3				00+78.00	00+90.00				12.00			82.877					
Wall 3				00+90.00	00+96.00				6.00				58.001				
Wall 3	**630+65.47**	**630+96.01**		00+96.00	01+02.00				6.00					59.834			
Wall 3				01+02.00	01+08.00				6.00				53.214				
Wall 3				01+08.00	01+20.00				12.00				100.052				
Wall 3				01+20.00	01+26.00				6.00			41.670					
Wall 3	**630+96.01**	**631+26.01**		01+26.00	01+32.00				6.00			44.384					
Wall 3				01+32.00	01+38.00				6.00		33.646						
Wall 3				01+38.00	01+50.00				12.00		63.343						
Wall 3				01+50.00	01+56.00				6.00	19.167							
	Total Area for Retaining Wall									**41.967**	**131.566**	**246.222**	**375.496**	**119.406**	**0.000**	**0.000**	**0.000**
	Total Length for Guardwall					**6.000**	**24.000**										
	Total Length for Parapet							**36.000**	**90.000**								
	Total Length of Site 3 =			**42**													
	Wall Unit Price					**$1,800**	**$1,400**	**$1,100**	**$500**	**$250**	**$260**	**$270**	**$280**	**$290**	**$300**	**$340**	**$360**
	Wall Costs					**$10,800**	**$33,600**	**$39,600**	**$45,000**	**$10,492**	**$34,207**	**$66,480**	**$105,139**	**$34,628**	**$0**	**$0**	**$0**
						6.00	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Guardwall						0.00	0.00	36.00	90.00	41.97	131.57	246.22	375.50	119.41	0.00	0.00	0.00
Wall 3														**Total Costs =**		**$379,945**	

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 9/28/09

Project Number: ND PRA THRO 10(3) Project Name: North Unit Scenic Drive

Account: Schedule A

Pay Note Information:

Pay Item #: 30306-3500 Item Description: Pulverizing, 7-inch depth Pay Unit: SQYD

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 312 Pay Period: 5

Pay Note Entry:

Work Start Date: 9/28/09 Work End Date: 9/29/09

Location/Description:

(1) Pulverize station 232+00 to 249+00 = 6,284 SQYD* 9/28/09
(2) Pulverize station 43+00 to 81+36 = 13,069 SQYD* 9/28/09

(3) Pulverize station 10+00 to 43+00 = 6,039 SQYD* 9/29/09
(4) Pulverize Cannon Ball Parking Area = 1,505 SQYD* 9/29/09

* See attached pulverization sketches and calculations

Remarks/Calculations:

Per FP-03 303.11, payment will be full compensation for the work prescribed.

From Location/Description:
Total quantity (SQYD) = 6,284 + 13,069 + 6,039 + 1,505 = 26,897 SQYD

PAY 26,897 SQYD

Support Documentation/References:

(1) Pulverization sketches and calculations.
Note: Pulverization grading analysis and Compaction results examples are not shown, but are required prior to payment

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 26,897 (SQYD)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 9/29/09

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 9/29/09

Approved by FHWA Representative (Signature):

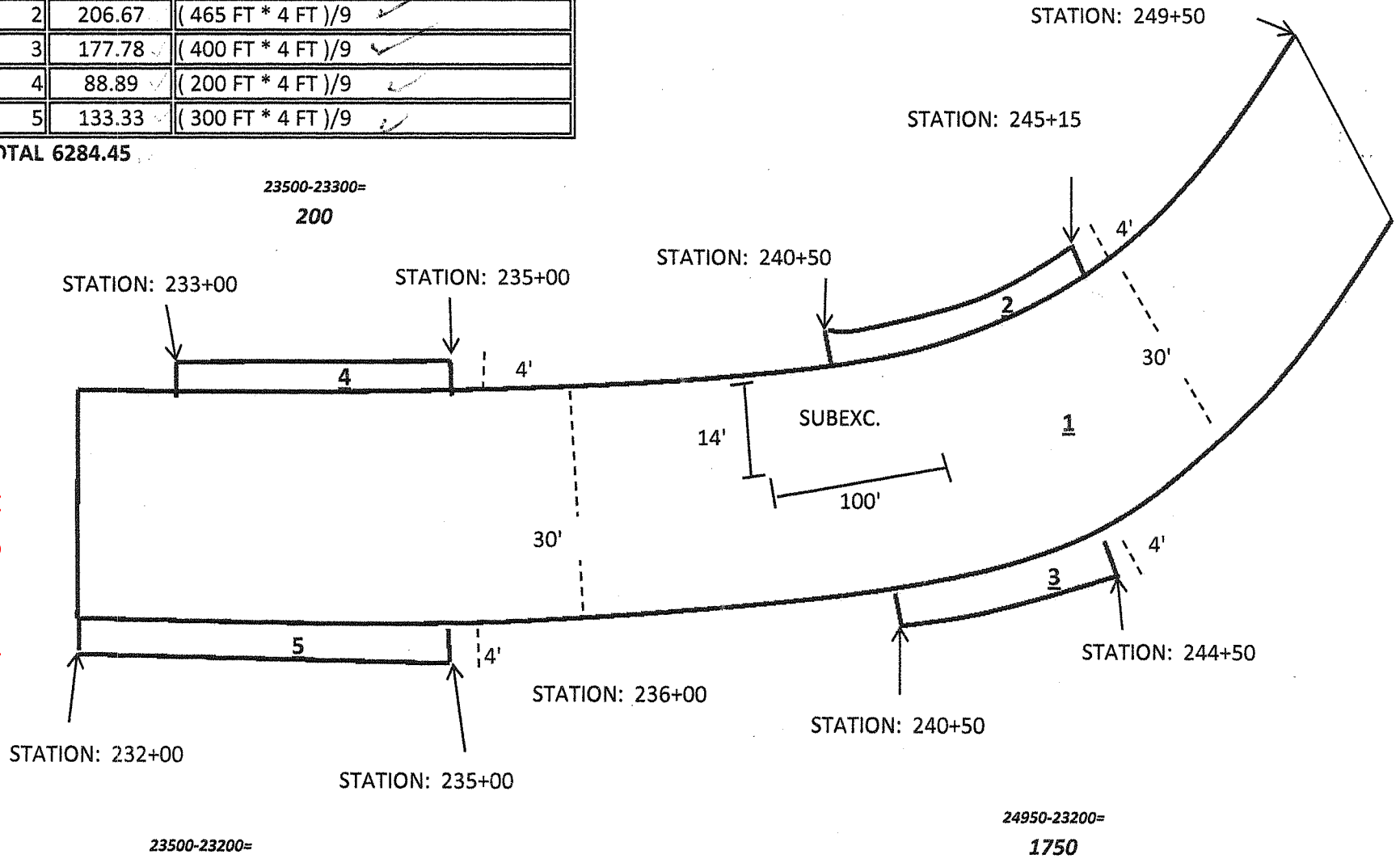
Checked by FHWA Representative (Signature): Jane the Engineer Date: 10/5/09

9/16 '99
18

30306-3500 PULVERIZING 7-INCH DEPTH @ STATION 249+50 TO 233+00

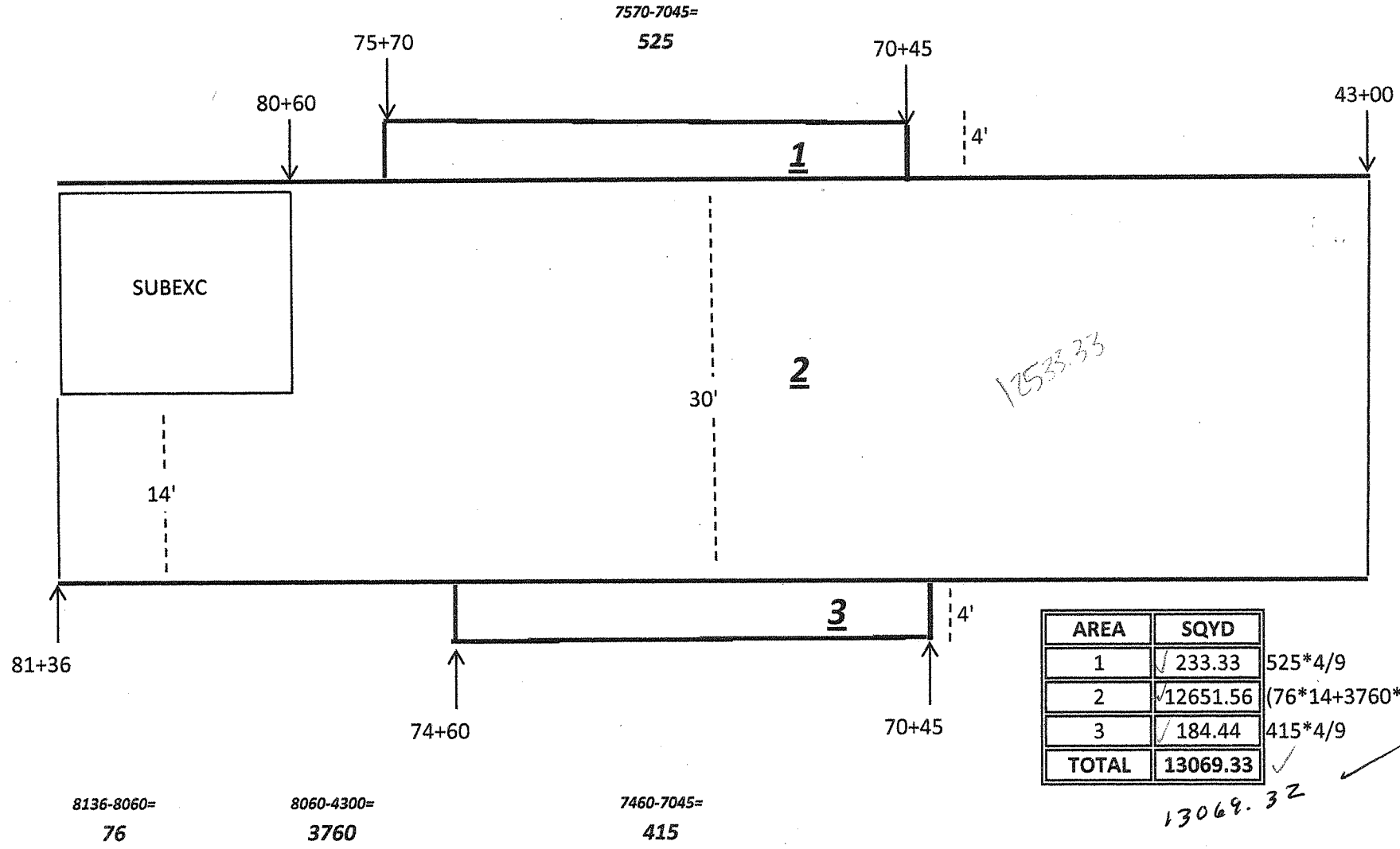
AREA	SQYD	FORMULA
1	5677.78	(1750 FT * 30 FT -14 FT *100 FT)/9
2	206.67	(465 FT * 4 FT)/9
3	177.78	(400 FT * 4 FT)/9
4	88.89	(200 FT * 4 FT)/9
5	133.33	(300 FT * 4 FT)/9

TAL 6284.45



pulverizing support documentation

30306-3500, PULVERIZING, 7 INCH DEPTH, STATIONS 81+36 TO 43+00

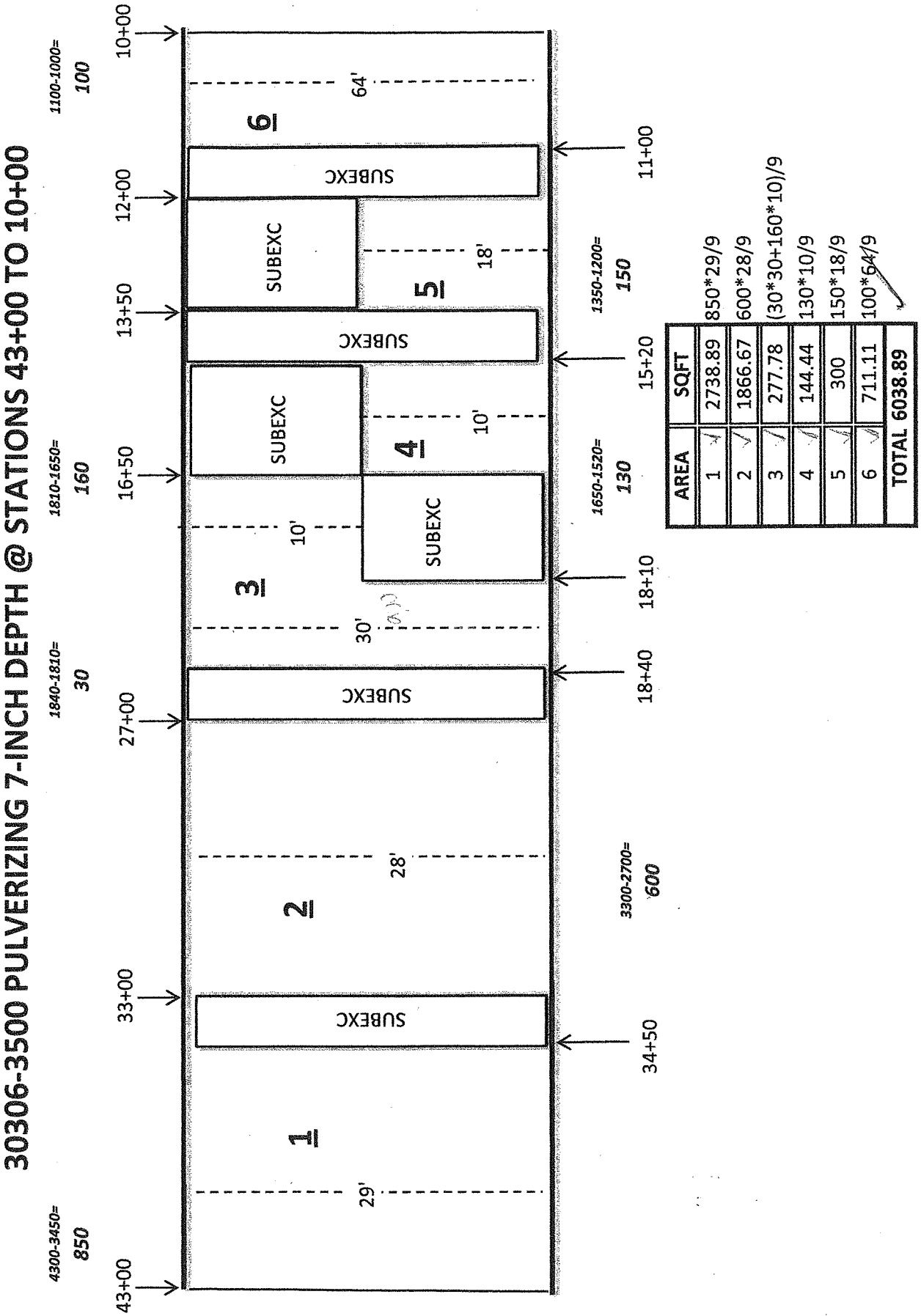


AREA	SQYD	
1	√ 233.33	525*4/9
2	√12651.56	(76*14+3760*30)/9
3	√ 184.44	415*4/9
TOTAL	13069.33	✓

13069.32

pulverizing support documentation

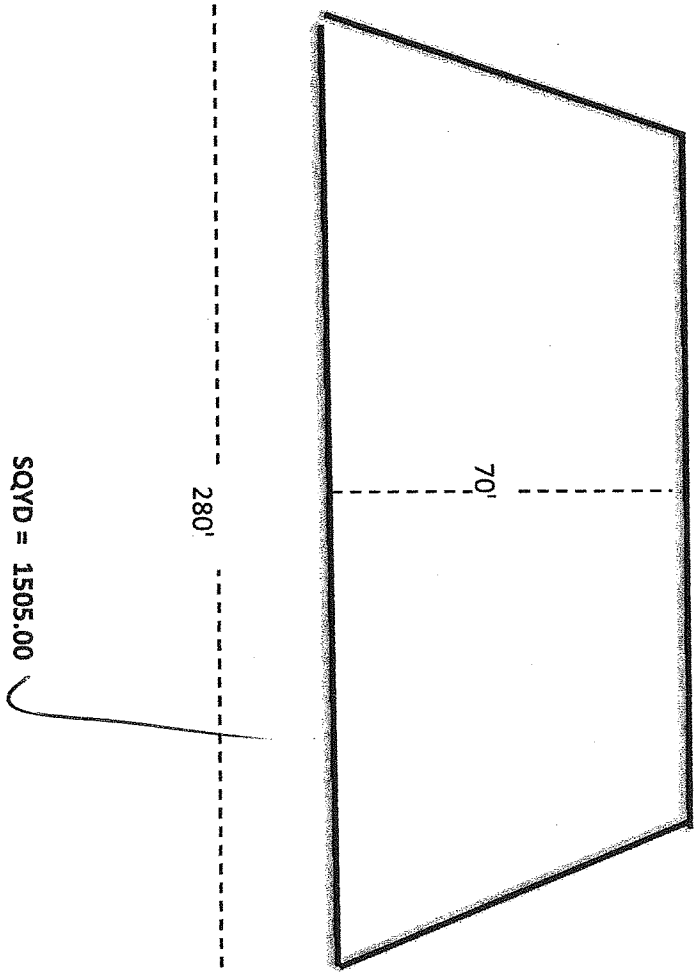
pulverizing support documentation



AREA	SQFT	
1	2738.89	850*29/9
2	1866.67	600*28/9
3	277.78	(30*30+160*10)/9
4	144.44	130*10/9
5	300	150*18/9
6	711.11	100*64/9
TOTAL	6038.89	

pulverizing support documentation

30306-3500 PULVERIZATION 7-INCH DEPTH @ CANNON BALL PARKING AREA



AREA = [((107' + 280')/2) X 70'] = 13,545 SQFT
13,545 SQFT / (9 SQFT/ SQYD) = 1505 SQYD

9/5/09

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 06/09/09

Project Number: CA PFH 112-1(1) Project Name: South Fork Smith River Road

Account: Schedule A

Pay Note Information:

Pay Item #: 63504-1000 Item Description: TTC, construction sign Pay Unit: SQFT

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 12 Pay Period: 1

Pay Note Entry:

Work Start Date: 06/09/09 Work End Date: 06/09/09

Location/Description:

Site D / Option X for Clark Road intersection on 6/09/09 = 68.5 SQFT*
Site D / Option X for Bishop Visitor Center Parking on 6/09/09 = 33.5 SQFT*
Site C for Boulder Creek Bridge on 06/09/09 = 13.5 SQFT*

*See attached TTC Construction Sign Support Calculations

Remarks/Calculations:

Per FP-03 635.27, 50% of the unit bid price will be paid upon installation. See attached TTC Construction Sign Payment Summary Sheet for retention information.

NOTE: Do not show retention information on any paynotes.

From TTC Construction Sign Support Calculations, total area of signs installed = 115.5 SQFT

Support Documentation/References:

TTC Construction Sign Certification, TTC Construction Sign Support Calculation, TTC Construction Sign Payment Summary Sheet

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 115.5 (SQFT)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 06/09/09

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 06/09/09

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 07/01/09

TTC construction sign support documentation

MANUFACTURER AND DISTRIBUTOR
2324 SE Umatilla St. • Portland, Oregon 97202
Federal ID # 93-0500143 • WATS 1-800-547-8518
PHONE 503-235-8531 • FAX 503-235-5112 • EMAIL sales@tssco.com

April 6, 2009

Tidewater Contractors, inc.
PO Box 1956
Brookings, OR 97415-0156

FAXED 4/6 10:15

Attn: Susan/George

Re: FHA project So. Fork Smith River Rd, CA PFH 112-1(1)
Certification

We certify that the construction signs produced on our invoices 913392 dated 3-27-09 and 913927 dated 4-03-09 meet or exceed specifications for this project. The signs were produced with 5052-H38 aluminum with Type IV reflective sheeting.

The type III barricades meet NCHRP-350 requirements, and the reflective sheeting is Type III

Please contact the undersigned if you need further information.

Thank you

Tom Loun
Quality Assurance

TTC construction sign support documentation

CONSTRUCTION SIGNS

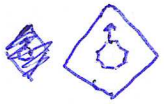
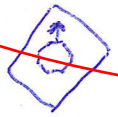
63504-1000
SQ FT

SITE D / OPTION X

VERIFIED 6.9.09 RN

- ONE LANE ROAD AHEAD 1 EA 4'·4' = 16
- ONE LANE ROAD AHEAD 1 EA 4'·4' = 16
- 25 MPH 1 EA 18"·18" = 2.25
- 25 MPH 1 EA 18"·18" = 2.25

68.5 SQFT

-  1 EA 4'·4' = 16
-  1 EA 4'·4' = 16

68.5

- 500 FT 1 EA 18"·18" = 2.25
- 500 FT 1 EA 18"·18" = 2.25
-  1 EA 18"·18" = 2.25
-  1 EA 18"·18" = 2.25

33.5 SQFT

38

- PROCEED WHEN CLEAR 1 EA 12"·24" = 2
- PROCEED WHEN CLEAR 1 EA 12"·24" = 2
- ROAD WORK AHEAD 1 EA 4'·4' = 16
- ROADWAY IMPROVEMENT 1 EA 18"·36" = 4.5

SITE C

- 25 MPH 1 EA 18"·18" = 2.25
- 25 MPH 1 EA 18"·18" = 2.25

13.5 SQFT

13.5

BOULDER CK BRIDGE

-  1 EACH 18"·18" = 2.25
-  1 EA 18"·18" = 2.25

SITE B

- 25 MPH 1 EA 18"·18" = 2.25
- 25 MPH 1 EA 18"·18" = 2.25

File: 63504-1000
Sheet: 3C

TTC construction sign support documentation

U.S. Department of Transportation
Federal Highway Administration

CA PFH 112-1(1), South Fork Smith River Road
Schedule A

TTC Construction Sign Payment Summary Sheet 63504-1000

Paynote #	Paynote Date	Total Quantity (SQFT)	Per section 635.27 of the FP-03									Perecentage of total qnty paid to date
			50 % paid upon installation			25% paid upon 50% completion of project			25% paid upon removal			
			Quantity	Date	PP	Quantity	Date	PP	Quantity	Date	PP	
3	6/5/09	25	12.5	5-Jun	1	6.25	31-Oct	5		TBD		0.75
6	6/6/09	112	56	6-Jun	1	28	31-Oct	5		TBD		0.75
12	6/9/09	115.5	57.75	9-Jun	1	28.875	31-Oct	5		TBD		0.75
15	6/13/09	29	14.5	13-Jun	1	7.25	31-Oct	5		TBD		0.75
16	6/20/09	15	7.5	20-Jun	1	3.75	31-Oct	5		TBD		0.75
19	6/26/09	62	31	26-Jun	1	15.5	31-Oct	5		TBD		0.75
24	7/2/09	14	7	2-Jul	2	3.5	31-Oct	5		TBD		0.75
27	7/3/09	32	16	3-Jul	2	8	31-Oct	5		TBD		0.75
Totals		**404.5**	**202.25**			**101.125**						**0.75**

NOTE TO PROJECT ENGINEERS: This is only an example of a tracking method for TTC quantities. Other formats should be used given project conditions. DO NOT LET CONTRACTORS SHOW RETENT OF QUANTITIES ON PAYNOTES. IT SHOULD BE DEDUCTED AND SHOWN ONLY ON A MONTHLY SUMMARY SHEET OR ITEM SUMMARY SHEET, SUCH AS THIS.

Section 8: CUBIC YARD ITEMS

GENERAL NOTE:
The items shown here are examples only - all measurement, documentation, and payment will conform to the project contract requirements regardless of what is shown here. Included here are examples of some of the many documentation types that may be required. Often documentation such as certifications and qualifications may be submitted and accepted once and then referenced accordingly instead of attaching additional copies for each pay note or payment period. Many documentation items are required prior to production, delivery, or placement; required documentation should be provided at the appropriate time and not necessarily at time of payment.

NOTE ON VOLUME ITEMS:
Volume quantities shown in the Plans are estimates; only actually ordered and performed quantities are paid. Please refer to the FP, the Special Contract Requirements, and plans of your project for detailed instructions prior to submitting any pay notes. Depending on the specific item, volume items are measured by the following methods;

(1) Cubic yard in place

(2) Cubic yard in the hauling vehicle

(3) Cubic yard in the structure.

(4) Cubic yard by metering

Please see section 109.02 (b) and the section of the specific pay item within the contract for detailed measurement requirements. When submitting for payment on items paid by volume, it is required to show on the paynote when the work was performed, where the work was performed (station ranges, offsets, sketches), measurement and calculations with volume formulas clearly noted, who measured the work, survey reports if performed, and necessary conversion calculations (i.e. cubic foot to cubic yard).

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 07/08/09

Project Number: CA PFH 112-1(1) Project Name: South Fork Smith River Road

Account: Schedule A

Pay Note Information:

Pay Item #: 20401-0000 Item Description: Roadway excavation Pay Unit: CUYD

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 126 Pay Period: 3

Pay Note Entry:

Work Start Date: 07/03/09 Work End Date: 07/04/09

Location/Description:

Rock Creek Site Roadway Excavation from Station 206+00 to 207+60 RT (inboard) side rock slope cuts (~1.5H:1.0V)

Remarks/Calculations:

Per end area calculations from before & after surveyed cross sections, the total excavated area at Rock Creek = 2714.59 CUYD

Pay 2714.59 CUYD

Support Documentation/References:

Rock Creek As-Built Volumes, Rock Creek As-Built Cross Sections, Rock Creek Survey Data

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 2714.59 (CUYD)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 07/08/09

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 07/08/09

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 07/31/09

excavation support documentation

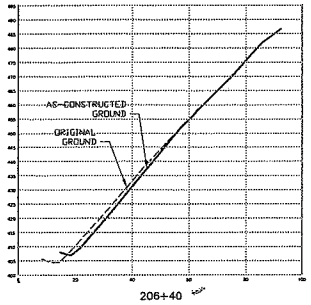
ROCK CREEK SITE
AS_BUILT VOLUMES

STATION	DISTANCE	END AREA (DESIGN) Sq. Ft.	VOLUME (DESIGN) Cu. Ft.		END AREA (ACTUAL) Sq. Ft.	VOLUME (ACTUAL) Cu. Ft.
206+00.00		2.69			90.31	
	20.00		48.10			3125.30
206+20.00		2.12			222.22	
	20.00		43.70			2922.10
206+40.00		2.25			69.99	
	8.20		25.09			898.43
206+48.20		3.87			149.14	
	11.80		265.74			3091.66
206+60.00		41.17			374.87	
	17.00		2404.40			10450.58
206+77.00		241.70			854.61	
	11.41		3737.74			10525.72
206+88.41		413.47			990.39	
	3.72		1608.97			3695.37
206+92.13		451.57			996.37	
	4.73		2183.34			4651.93
206+96.86		471.62			970.62	
	11.27		5496.38			10456.02
207+08.13		503.78			884.93	
	4.73		2333.66			4006.07
207+12.86		482.97			808.97	
	4.00		1862.62			3099.46
207+16.86		448.34			740.76	
	8.27		3498.95			5566.50
207+25.13		397.84			605.43	
	4.55		1650.63			2562.61
207+29.68		327.71			520.99	
	7.45		2010.23			3326.13
207+37.13		211.95			371.93	
	4.73		846.91			1583.65
207+41.86		146.15			297.69	
	18.14		1412.02			3332.41
207+60.00		9.53			69.72	
			29428.49	CU. FT.		73293.95
			1089.94 (Design)	**CU.YD.**		**2714.59** (Actual)

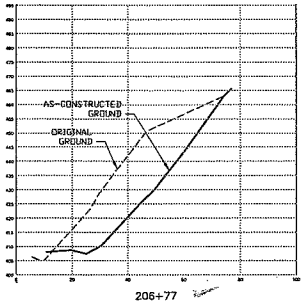
Actual excavation work at this station range was approved by the CO.

excavation support documentation

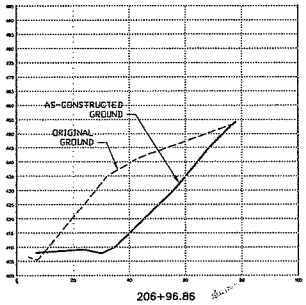
SOUTH FORK SMITH RIVER
CA PFH 112-1(1)
ROCK CREEK SITE
AS-BUILT
CROSS SECTION



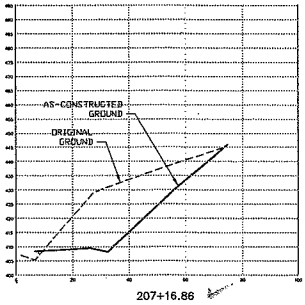
206+40



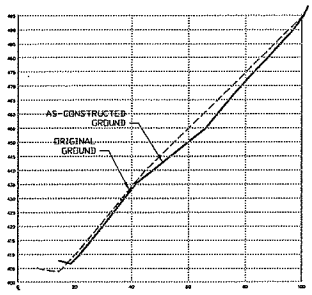
206+77



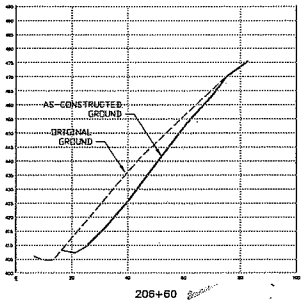
206+96.86



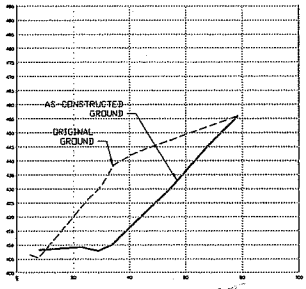
207+16.86



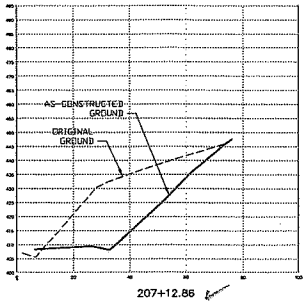
206+20



206+60



206+92.13



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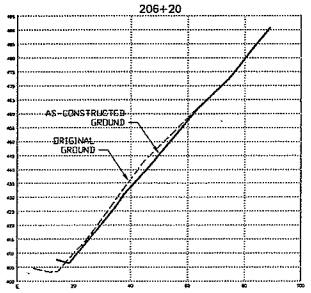
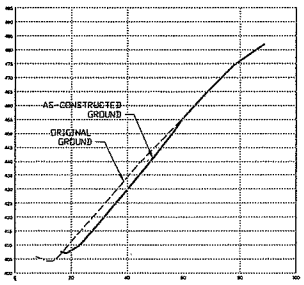
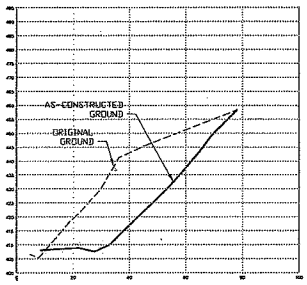


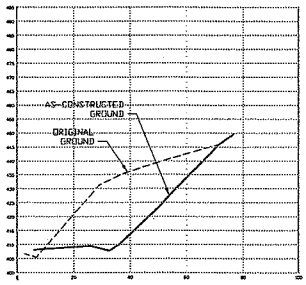
206+00



206+48.20



206+88.41



207+08.13

excavation support documentation

1300	2521664	6020153	412.555 TOPO EL
1304	2521647	6020179	404.83 TOPO EL
1305	2521652	6020186	404.35 TOPO EL
1306	2521656	6020193	403.87 TOPO EL
1307	2521661	6020200	403.39 TOPO EL
1333	2521678	6020145	412.486 TOPO EL
1334	2521681	6020147	410.034 TOPO EL
1335	2521685	6020144	410.035 TOPO EL
1336	2521689	6020140	410.042 TOPO EL
1337	2521694	6020136	410.019 TOPO EL
1338	2521699	6020133	410.024 TOPO EL
1339	2521704	6020130	410.008 TOPO EL
1340	2521711	6020126	409.974 TOPO EL
1341	2521720	6020124	409.959 TOPO EL
1342	2521747	6020122	409.905 TOPO EL
1343	2521751	6020122	409.888 TOPO EL
1344	2521769	6020122	409.715 TOPO EL
1345	2521780	6020120	409.545 TOPO EL
1346	2521803	6020114	409.092 TOPO EL
1347	2521821	6020095	428.256 TOPO EL
1348	2521777	6020108	423.843 TOPO EL
1349	2521753	6020110	422.558 TOPO EL
1350	2521732	6020111	422.103 TOPO EL
1351	2521707	6020114	422.189 TOPO EL
1352	2521687	6020125	421.972 TOPO EL
1353	2521671	6020137	422.026 TOPO EL
1354	2521658	6020145	422.673 TOPO EL
1355	2521657	6020134	430.646 TOPO EL
1356	2521680	6020121	429.505 TOPO EL
1357	2521698	6020109	429.875 TOPO EL
1358	2521716	6020104	430.002 TOPO EL
1359	2521730	6020104	429.776 TOPO EL
1360	2521748	6020105	429.803 TOPO EL
1361	2521765	6020104	430.794 TOPO EL
1362	2521788	6020097	434.095 TOPO EL
1363	2521815	6020090	438.175 TOPO EL
1364	2521813	6020072	457.939 TOPO EL
1365	2521790	6020072	454.484 TOPO EL
1366	2521760	6020095	444.306 TOPO EL
1367	2521735	6020094	443.5 TOPO EL
1368	2521719	6020091	444.394 TOPO EL
1369	2521700	6020094	444.944 TOPO EL
1370	2521692	6020091	446.527 TOPO EL
1371	2521715	6020081	455.488 TOPO EL
1372	2521740	6020088	452.443 TOPO EL
1373	2521760	6020088	453.697 TOPO EL
1374	2521768	6020083	456.246 TOPO EL
1375	2521788	6020062	466.449 TOPO EL
1376	2521811	6020058	471.735 TOPO EL
1377	2521816	6020059	472.337 TOPO EL
1378	2521807	6020041	493.969 TOPO EL
1379	2521807	6020041	493.971 TOPO EL
1380	2521795	6020039	492.222 TOPO EL
1381	2521778	6020043	487.874 TOPO EL
1382	2521756	6020073	471.264 TOPO EL
1383	2521735	6020077	468.187 TOPO EL
1384	2521772	6020042	493.834 TOPO EL
1385	2521784	6020035	499.284 TOPO EL
1386	2521796	6020030	503.364 TOPO EL

SURVEY DATA

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 10/22/2011

Project Number: WY ERFO 261(1) Project Name: Cedar Pass Road

Account: Schedule A

Pay Note Information:

Pay Item #: 20420-0000 Item Description: Embankment construction, reinforced Pay Unit: CUYD

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 125 Pay Period: 3

Pay Note Entry:

Work Start Date: 10/22/11 Work End Date: 10/22/11

Location/Description:

Reinforced Embankment Construction on 1.5H:1V Reinforced Soil Slope: 1.5 ' lift (el. 8975.5 - el. 8977), STATION 276+25 to 277+85.

Remarks/Calculations:

Per Embankment Calculation (el. 8975.5 -8977), the volume on this lift = 453.33 CUYD

Pay 453.33 CUYD

Support Documentation/References:

Embankment Calculation (el. 8975.5 -8977), Site 5 Embankment Tracking by Lift, Site 5 Testing Summary

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 453.33 (CUYD)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 10/22/11

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 10/22/11

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 11/01/11

embankment construction support documentation

Form FHWA-1460
(Rev. 3-74)

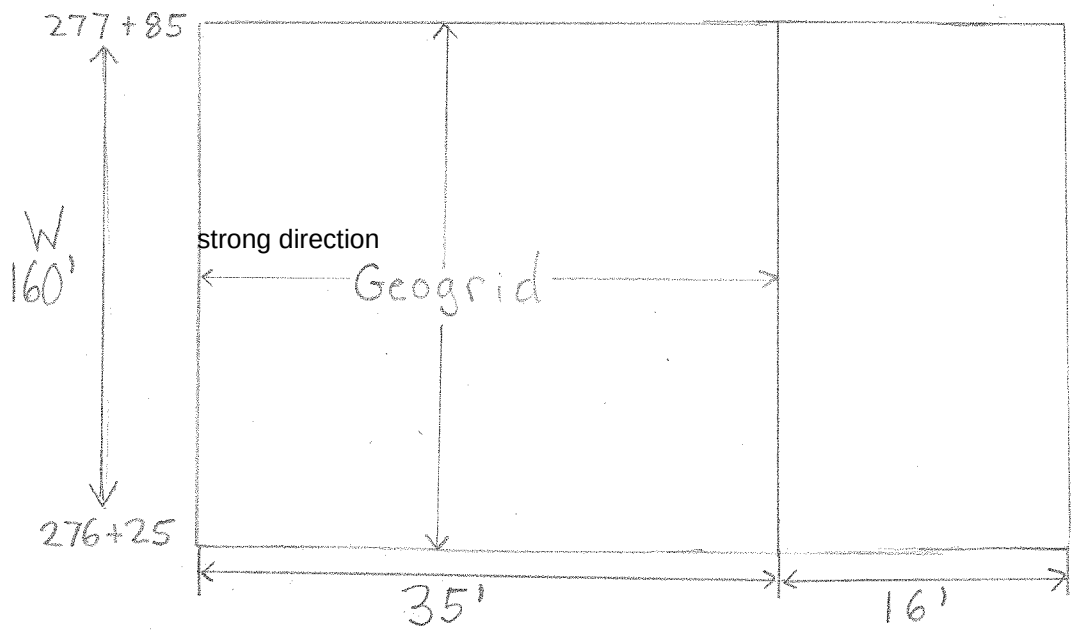
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

MADE BY TU DATE 10/22/11 PROJECT WY ERFO 261(1) Cedar Pass road

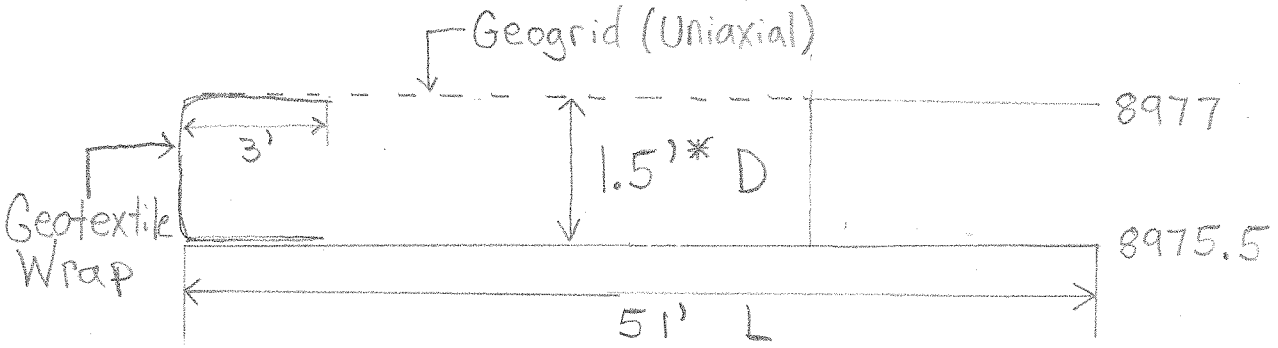
CHECKED BY ..... DATE .....

CALCULATIONS FOR Embankment (el. 8975.5-8977) SHEET NO. .....

Plan View (el. 8977):



Cross Section View:



* Compacted Fill depth: 125.7 PCF (96.4%), 5.2% (-1.5%) PASS

Calculation (CUYD)

$$\text{Volume} = \frac{(1.5' \text{ D} \times 160' \text{ W} \times 51' \text{ L})}{27 \text{ ft}^3/\text{yd}^3} = 453.33 \text{ CUYD}$$

embankment construction support documentation

Site 5 EMBANKMENT TRACKING BY LIFT									
WY ERFO 261(1), Cedar Pass Road CONTRACTOR: Rocky Mountain Excavating									
Date	Station	To	Staion	El. (ft)	To	El. (ft)	Width (ft)	(CUYD)	Notes
9/27/2011	277+50	-	277+62	8936.5	-	8939.5	35	46.67	Permeable
9/28/2011	277+30	-	277+50	8934.0	-	8938.0	35	103.70	Permeable
9/28/2011	277+30	-	277+50	8938.0	-	8939.5	35	38.89	Permeable
9/28/2011	277+30	-	277+62	8939.5	-	8941.0	32.75	58.22	Permeable
9/29/2011	277+12	-	277+62	8941.0	-	8944.0	30	166.67	Permeable
9/29/2011	277+12	-	277+62	8944.0	-	8945.5	30	83.33	Borrow
9/30/2011	277+00	-	277+62	8945.5	-	8947.0	30	103.33	Borrow
10/1/2011	277+00	-	277+62	8947.0	-	8949.5	30	172.22	Borrow
10/3/2011	276+87	-	277+00	8948.0	-	8949.5	30	21.67	Borrow
10/3/2011	276+87	-	277+62	8949.5	-	8951.5	30	166.67	Borrow
10/4/2011	277+15	-	277+45	8948.5	-	8951.5	5	16.67	Borrow
10/4/2011	276+75	-	277+62	8951.5	-	8953.0	35	169.17	Borrow
10/4/2011	276+53	-	276+75	8951.5	-	8953.0	25	30.56	Borrow
10/5/2011	276+53	-	277+62	8953.0	-	8956.0	35	423.89	Borrow
10/6/2011	276+90	-	277+20	8952.0	-	8957.5	10	61.11	Borrow
10/6/2011	276+90	-	277+20	8954.0	-	8957.5	10	38.89	Borrow
10/6/2011	276+90	-	277+20	8956.0	-	8957.5	10	16.67	Borrow
10/6/2011	276+75	-	277+62	8956.0	-	8957.5	35	169.17	Borrow
10/6/2011	276+53	-	276+75	8956.0	-	8957.5	25	30.56	Borrow
10/14/2011	276+53	-	276+75	8957.5	-	8959.0	25	30.56	Borrow
10/14/2011	276+75	-	277+62	8957.5	-	8959.0	35	169.17	Borrow
10/14/2011	277+00	-	277+20	8957.5	-	8960.5	20	44.44	Borrow
10/14/2011	276+53	-	277+62	8959.0	-	8960.5	35	211.94	Borrow
10/14/2011	276+44	-	277+62	8960.5	-	8962.0	35	229.44	Borrow
10/15/2011	276+44	-	277+62	8962.0	-	8963.5	35	229.44	Borrow
10/15/2011	276+44	-	277+66	8963.5	-	8965.0	35	237.22	Borrow
10/16/2011	276+44	-	277+66	8965.0	-	8966.5	35	237.22	Borrow
10/18/2011	276+41	-	277+66	8966.5	-	8968.0	60	416.67	Borrow
10/19/2011	276+41	-	277+66	8968.0	-	8969.5	58	402.78	Borrow
10/19/2011	276+41	-	277+66	8969.5	-	8971.0	55	381.94	Borrow
10/20/2011	276+29	-	277+66	8971.0	-	8972.5	53	403.39	Borrow
10/21/2011	276+25	-	277+80	8972.5	-	8974.0	55	473.61	Borrow
10/21/2011	276+25	-	277+85	8974.0	-	8975.5	59	524.44	Borrow
10/22/2011	276+25	-	277+85	8975.5	-	8977.0	51	453.33	Borrow
10/23/2011	276+25	-	277+85	8977.0	-	8978.5	47	417.78	Borrow
10/24/2011	276+25	-	277+85	8978.5	-	8980.0	40	355.56	Borrow
10/25/2011	276+25	-	277+85	8980.0	-	8981.5	40	355.56	Borrow
10/27/2011	276+15	-	277+95	8981.5	-	8983.0	38	380.00	Borrow
10/28/2011	276+15	-	277+95	8983.0	-	8984.5	36	360.00	Borrow
							RUNNING TOTAL=	**8232.54**	**CUYD**

embankment construction support construction

Site 5 EMBANKMENT TESTING SUMMARY								
WY ERFO 261(1), Cedar Pass Road, CONTRACTOR INC.								
Date	Station	Elev. (ft.)	Proctor	Density (PCF)	Moisture (%)	% Compaction	(+/-) Moisture	Pass (Y/N)
9/27/2011	**277+55**	8938	In-Situ: 121.5 PCF @12.3%	116.6	14	96.0	1.7	Y
9/27/2011	**277+58**	8939.5	In-Situ: 121.5 PCF @12.3%	115.9	12.7	95.4	0.4	Y
9/29/2011	**277+50**	8945	In-Situ: 121.5 PCF @12.3%	118.9	14.5	97.9	2.2	Y
9/29/2011	**277+15**	8945	In-Situ: 121.5 PCF @12.3%	120.6	13	99.3	0.7	Y
9/30/2011	**277+25**	8945.5	In-Situ: 121.5 PCF @12.3%	118	13.8	97.1	1.5	Y
9/30/2011	**277+20**	8946	In-Situ: 121.5 PCF @12.3%	117.9	14.2	97.0	1.9	Y
9/30/2011	**276+55**	8946	In-Situ: 121.5 PCF @12.3%	116.9	14.1	96.2	1.8	Y
9/30/2011	**277+45**	8947	Rch Pit: 130.4 PCF @6.7%	126.8	7.2	97.2	0.5	Y
10/1/2011	**277+40**	8948	Rch Pit: 130.4 PCF @6.7%	124.9	8.1	95.8	1.4	Y
10/1/2011	**277+30**	8948.5	Rch Pit: 130.4 PCF @6.7%	129.2	7.7	99.1	1	Y
10/1/2011	**277+15**	8949.5	Rch Pit: 130.4 PCF @6.7%	126.1	7.6	96.7	0.9	Y
10/3/2011	**277+00**	8951.5	Rch Pit: 130.4 PCF @6.7%	125.7	8	96.4	1.3	Y
10/4/2011	**277+00**	8953	Rch Pit: 130.4 PCF @6.7%	129.7	8.1	99.5	1.4	Y
10/5/2011	**277+15**	8954	Rch Pit: 130.4 PCF @6.7%	125.7	5.9	96.4	-0.8	Y
10/6/2011	**277+25**	8956	Rch Pit: 130.4 PCF @6.7%	126	6.4	96.6	-0.3	Y
10/14/2011	**277+20**	8957.5	Rch Pit: 130.4 PCF @6.7%	128.7	6	98.7	-0.7	Y
10/14/2011	**276+55**	8959	Rch Pit: 130.4 PCF @6.7%	127.2	6.3	97.5	-0.4	Y
10/14/2011	**277+45**	8960.5	Rch Pit: 130.4 PCF @6.7%	128	6.1	98.2	-0.6	Y
10/14/2011	**277+20**	8962	Rch Pit: 130.4 PCF @6.7%	128.9	7.4	98.8	0.7	Y
10/15/2011	**277+55**	8963.5	Rch Pit: 130.4 PCF @6.7%	130.2	7.2	99.8	0.5	Y
10/15/2011	**277+45**	8965	Rch Pit: 130.4 PCF @6.7%	129.8	7.1	99.5	0.4	Y
10/16/2011	**276+40**	8966.5	Rch Pit: 130.4 PCF @6.7%	128.7	8.4	98.7	1.7	Y
10/18/2011	**277+30**	8968	Rch Pit: 130.4 PCF @6.7%	129.5	8.2	99.3	1.5	Y
10/19/2011	**277+15**	8969.5	Rch Pit: 130.4 PCF @6.7%	129.5	7.4	99.3	0.7	Y
10/19/2011	**276+20**	8971	Rch Pit: 130.4 PCF @6.7%	133.2	13.2	102.1	6.5	Y
10/20/2011	**277+55**	8972.5	Rch Pit: 130.4 PCF @6.7%	137.2	9.8	105.2	3.1	Y
10/21/2011	**277+45**	8974	Rch Pit: 130.4 PCF @6.7%	127.7	8.1	97.9	1.4	Y
10/21/2011	**277+40**	8975.5	Rch Pit: 130.4 PCF @6.7%	128.7	7.4	98.7	0.7	Y
10/22/2011	**277+30**	8977	Rch Pit: 130.4 PCF @6.7%	125.7	5.2	96.4	-1.5	Y
10/23/2011	**276+15**	8978.5	Rch Pit: 130.4 PCF @6.7%	130	6.9	99.7	0.2	Y
10/24/2011	**277+10**	8980	Rch Pit: 130.4 PCF @6.7%	129.9	6.9	99.6	0.2	Y
10/25/2011	**277+00**	8981.5	Rch Pit: 130.4 PCF @6.7%	126.4	6.3	96.9	-0.4	Y
10/27/2011	**276+50**	8983	Ten Pit: 137.2 PCF @ 4.3%	133.9	4.6	97.6	0.3	Y
10/28/2011	**277+50**	8984.5	Ten Pit: 137.2 PCF @ 4.3%	136.3	5.3	99.3	1	Y
10/29/2011	**277+00**	8986	Ten Pit: 137.2 PCF @ 4.3%	130.9	4	95.4	-0.3	Y
10/30/2011	**276+70**	8988	Ten Pit: 137.2 PCF @ 4.3%	137.1	5.1	99.9	0.8	Y
10/30/2011	**276+30**	8990.5	Ten Pit: 137.2 PCF @ 4.3%	135.1	4.9	98.5	0.6	Y

Payment 1 of 2 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 01/19/2012

Project Number: SD PFH 17-1(6) Project Name: Hill City to Lead

Account: Schedule A

Pay Note Information:

Pay Item #: 20441-0000 Item Description: Waste Pay Unit: CUYD

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 176 Pay Period: 4

Pay Note Entry:

Work Start Date: 01/10/2012 Work End Date: 01/19/2012

Location/Description:

Waste Pile #1 Total 531 CUYD	Waste Pile #2 Total 495 CUYD	
(1) Station 23+60 to 24+25 = 117 CUYD*	(6) Station 41+68 to 45+42 = 198 CUYD*	
(2) Station 24+25 to 26+14 = 99 CUYD*	(7) Station 51+98 to 52+74 = 108 CUYD*	
(3) Station 31+17 to 32+09 = 135 CUYD*	(8) Station 55+67 to 56+12 = 63 CUYD*	
(4) Station 34+68 to 35+12 = 72 CUYD*	(9) Station 56+12 to 57+64 = 90 CUYD*	*See spreadsheet for estimate
(5) Station 40+97 to 41+68 = 108 CUYD*	(10) Station 57+64 to 58+02 = 36 CUYD*	calculations (based on load counts)

Remarks/Calculations:

Per FP-03 204.16.e, measure waste by the cubic yard in its final position. Take cross sections before and after to determine final quantity. Payment will be full compensation for the work prescribed in this section.
From Location/Description: ***This quantity is an interim estimated quantity based on load counts prior to final survey***

Total estimated quantity Waste pile #1 (CUYD) = 117 + 99 + 135 + 72 + 108 = 531 CUYD
Total estimated quantity Waste pile #2 (CUYD) = 198 + 108 + 63 + 90 + 36 = 495 CUYD

Total paid = 531 + 495 = 1026 (CUYD)

Support Documentation/References:

Spreadsheet computations based on load counts

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 1026 (CUYD)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 01/19/2012

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 01/20/2012

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 01/20/2012

waste support documentation

SD PFH 17-1(6) Hill City to Lead
20441-0000 WASTE (CUYD) TRACKING

Date	Station	to	Station	Truck Loads	Approximate Volume (CUYD) from Truck Loads*	Description of Work
1/10/2012	23+60	-	24+25	13	117	Slope Cuts on inboard side. Laid back to 1V:1.5H. **Waste Pile 1.**
1/12/2012	24+25	-	26+14	11	99	Slope Cuts on inboard side. Laid back to 1V:1.5H. **Waste Pile 1.**
1/12/2012	31+17	-	32+09	15	135	Slope Cuts on outboard side. Laid back to 1V:2.0H **Waste Pile 1.**
1/12/2012	34+68	-	35+12	8	72	Slope Cuts on outboard side. Laid back to 1V:2.0H **Waste Pile 1.**
1/13/2012	40+97	-	41+68	12	108	Slope Cuts on inboard side. Laid back to 1V:1.5H. **Waste Pile 1.**
					531	
1/16/2012	41+68	-	45+42	22	198	Slope Cuts on inboard side. Laid back to 1V:1.5H. **Waste Pile 2.**
1/17/2012	51+98	-	52+74	12	108	Slope Cuts on inboard side. Laid back to 1V:1.5H. **Waste Pile 2.**
1/18/2012	55+67	-	56+12	7	63	Slope Cuts on inboard side. Laid back to 1V:1.5H. **Waste Pile 2.**
1/19/2012	56+12	-	57+64	10	90	Slope Cuts on inboard side. Laid back to 1V:1.5H. **Waste Pile 2.**
1/19/2012	57+64	-	58+02	4	36	Slope Cuts on inboard side. Laid back to 1V:1.5H. **Waste Pile 2.**
					495	

Payment 2 of 2 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 01/26/2012

Project Number: SD PFH 17-1(6) Project Name: Hill City to Lead

Account: Schedule A

Pay Note Information:

Pay Item #: 20441-0000 Item Description: Waste Pay Unit: CUYD

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 180 Pay Period: 5

Pay Note Entry:

Work Start Date: 01/10/2012 Work End Date: 01/19/2012

Location/Description:

Quantity based on cross section survey data

Waste Pile #1 Total 517.86 CUYD *See TIN to TIN volume report
Waste Pile #2 Total 514.10 CUYD

NOTE: This item was previously paid on paynote #176 based on estimated interim values. This measurement indicates the final measurement per FP-03.

Remarks/Calculations:

Per FP-03 204.16.e, measure waste by the cubic yard in its final position. Take cross sections before and after to determine final quantity. ***This quantity is the final quantity based on final survey***

Total quantity Waste pile #1 (CUYD) = 517.86(actual) - 531(interim paid paynote #176) = -13.14 CUYD
Total quantity Waste pile #2 (CUYD) = 514.10(actual) - 495 (interim paid paynote #176) = 19.10 CUYD

Net pay for estimate = -13.14 + 19.10 = 5.96 CUYD

Support Documentation/References:

Computation checks and TIN to TIN reports

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 5.96 (CUYD)

☐ Interim Measurement ☒ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 01/26/2012

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 01/27/2012

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 01/27/2012

SU PFH 17-1(6)
Waste pile 1

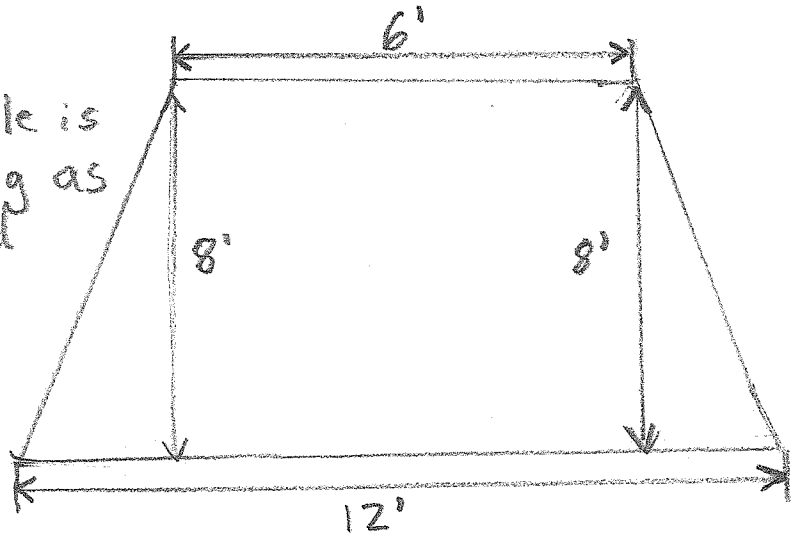
waste support documentation

site 15a.vol

```
**********************************************************************
**                                                                  **
** TIN to TIN Volume Report -- Thu Jan 26 09:52:41 2012             **
**                                                                  **
** From TIN <cavo10(2)og.tin> to TIN <Red Line.tin>                 **
**                                                                  **
** Prismoidal Volume                                                **
**                                                                  **
**                                                                  **
**********************************************************************
**                                                                  **
**  Total Cut =          4.441 Cubic Yards                          **
**  Total Fill =         522.299 Cubic Yards                        **
**  Area =               605.302 Sq Yards                           **
**  Balance =            -517.858 Cubic Yards  <- Pay               **
**                                                                  **
**********************************************************************
```

Measured by Joe the inspector and Bob the Contractor on 1/21/12
Calculations by Jim the Contractor on 1/23/12

Waste pile is ~220' long as measured



$$V = \left[\left(\frac{12' + 6'}{2} \right) \times 8' \times 220' \right] \div 27 \frac{CUYD}{CUFT} = 521 \text{ CUY} \checkmark$$

Pay Surveyed amount of 517.86 CUYD

SD PFH 17-1(6)
Waste Pile 2

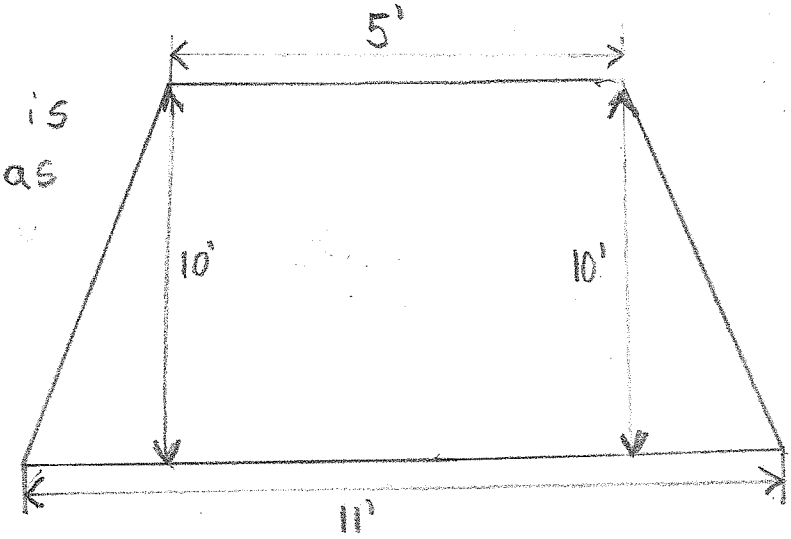
waste support documentation

site 15b.vol

```
**********************************************************************
**                                                                  **
** TIN to TIN Volume Report -- Thu Jan 26 09:55:21 2012             **
**                                                                  **
** From TIN <Green Line.tin> to TIN <Red Line.tin>                  **
**                                                                  **
** Prismoidal Volume                                                **
**                                                                  **
**                                                                  **
**********************************************************************
**                                                                  **
**  Total Cut =          2.620 Cubic Yards                          **
**  Total Fill =         516.720 Cubic Yards                        **
**  Area =               603.939 Sq Yards                           **
**  Balance =            -514.100 Cubic Yards  <-- Pay              **
**                                                                  **
**********************************************************************
```

Measured by Joe the inspector and Bob the Contractor on 1/21/12
Calculations by Jim the Contractor on 1/23/12

Waste pile is ~170' long as measured



$$V = \left[\left(\frac{11' + 5'}{2}\right) \times 10' \times 170'\right] \div 27 \frac{CUYD}{CUFT} = 504 \text{ CUYD}$$ ✓

Pay surveyed amount of 514.10 CUYD

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 11/08/2009

Project Number: ND PRA THRO 10(3) Project Name: North Unit Scenic Drive

Account: Option Y

Pay Note Information:

Pay Item #: 25101-2000 Item Description: RIPRAP, CLASS 2 Pay Unit: CUYD

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 125 Pay Period: 3

Pay Note Entry:

Work Start Date: 10/08/2009 Work End Date: 11/08/2009

Location/Description:

(1) Station 385+00 on 11/08/09 = 6.85 CUYD*
(2) Station 105+50 on 10/21/09 = 8.15 CUYD*
(3) Station 227+00 on 10/08/09 = 8.94 CUYD*
(4) Station 87+50 on 10/08/09 = 4.28 CUYD*

*See computations.

Remarks/Calculations:

Total quantity (CUYD) = 6.85 + 8.15 + 8.94 + 4.28 = 28.22 CUYD

Support Documentation/References:

riprap sketches and computations

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 28.22 (CUYD)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 11/08/09

Contractor Representative (Signature):

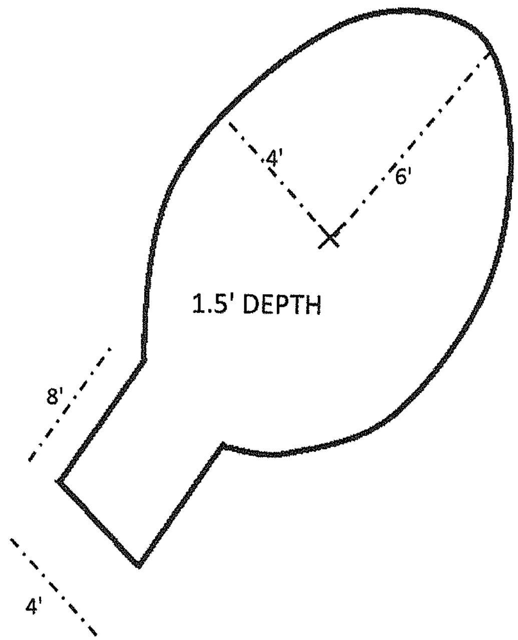
Approved by FHWA Representative (Print): Joe the Inspector Date: 11/09/09

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 11/09/09

riprap support documentation

25101-2000 RIPRAP, CLASS 2 @ 385+00

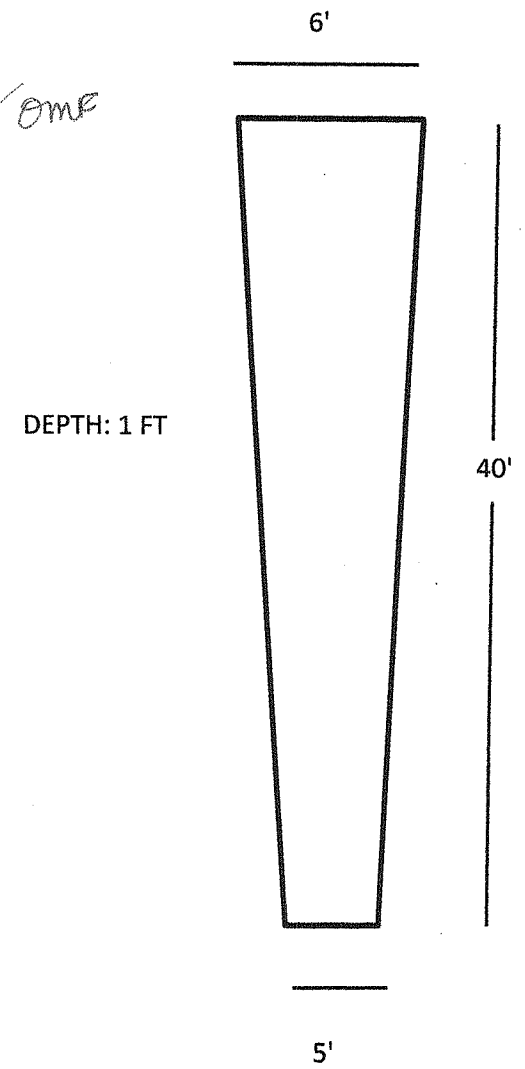


AREA OF ELLIPSE = π*a*b where a & b are equal to 4' & 6' as seen in drawing

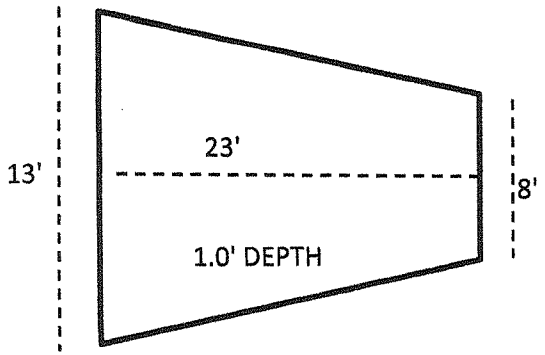
[{ (4'*6'*3.14) + (8'*6') } * 1.5'] / 27 = **<u>6.85</u>** **<u>CUYD</u>**

25101-2000 RIPRAP, CLASS 2 @105+50

(40 FT * 5.5 FT * 1 FT) / 27 = 8.15 CUYD ✓ OMF



25101-2000 PLACED RIPRAP, CLASS 2 @ 227+00 & 87+50

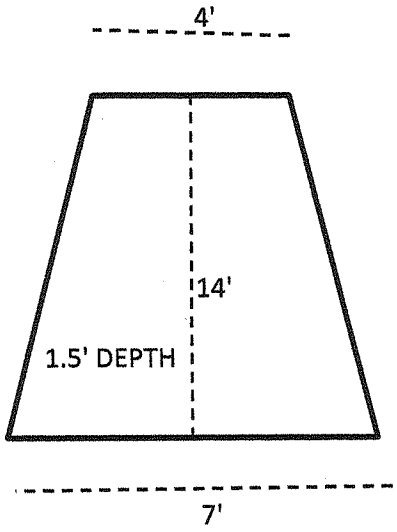


EDGE OF CULVERT @ 227+00

10.5

(1 FT * 23 FT * (13 FT + 8 FT)/2)/27

8.94 CUYD ✓ OMF



GULLY @ 87+50

5.5

(14 FT * 1.5 FT * (4 FT + 7 FT) /2)/27

✓ **4.28 CUYD**

OMF

6.5

riprap support documentation

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 8/10/11

Project Number: ND PRA THRO 10(3) Project Name: North Unit Scenic Drive

Account: Option X

Pay Note Information:

Pay Item #: 60101-0000 Item Description: Concrete Pay Unit: CUYD

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 132 Pay Period: 4

Pay Note Entry:

Work Start Date: 8/08/11 Work End Date: 8/10/11

Location/Description:

8/08/11: 1210+76 Footings = 14.75 CUYD*
8/10/11: 1210+76 Wingwalls and Headwalls = 15.64 CUYD*

*See Concrete Pour Sketches and Calculations

Remarks/Calculations:

Total quantity (CUYD) = 14.75 + 15.64 = 30.39 CUYD

Support Documentation/References:

Concrete Pour Sketches and Calculations, 601minor concrete certification example

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 30.39 (CUYD)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 8/10/11

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 8/10/11

Approved by FHWA Representative (Signature):

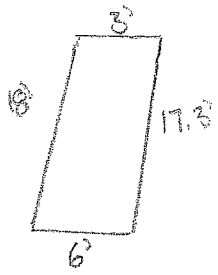
Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 9/01/11

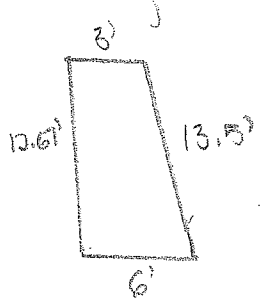
Concrete Quantities
August

minor concrete support documentation

Olivia Farrell

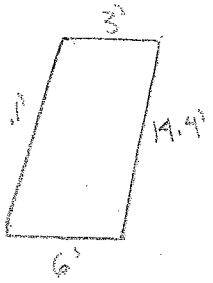
12W + 7G - Footings (08/08/11)

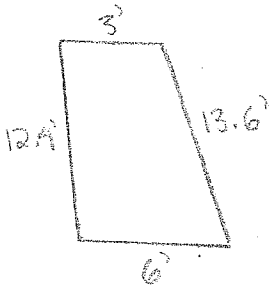




$\left(\frac{3'+6'}{2}\right) \times \left(\frac{18'+17.3'}{2}\right) \times 1.5' = 119.14\ ft^3$

$\left(\frac{3'+6'}{2}\right) \times \left(\frac{12.6'+13.5'}{2}\right) \times 1.5' = 88.32\ ft^3$





$\left(\frac{3'+6'}{2}\right) \times \left(\frac{16.1'+19.4'}{2}\right) \times 1.5' = 102.94\ ft^3$

$\left(\frac{3'+6'}{2}\right) \times \left(\frac{12.4'+13.6'}{2}\right) \times 1.5' = 87.75\ ft^3$

All footings are 1.5' thick

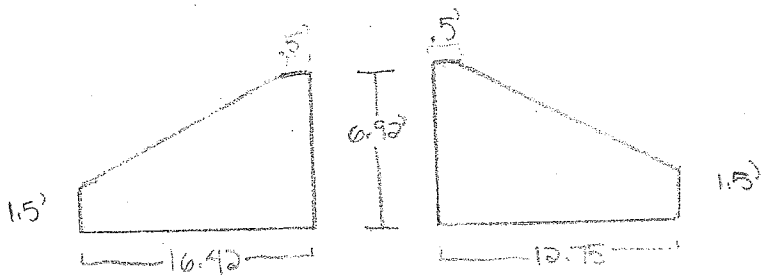
Total = 398.15 ft³

= 14.75 CUYD

Measured by Joe the Inspector and Bob the Contractor on 8/10/11

minor concrete support documentation

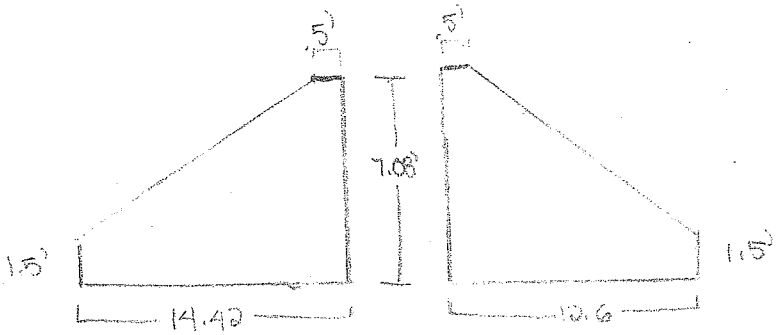
1210+76 Wingwalls (08/10/11)



$2(.5' \times 6.92') \times 1' = 6.92$

$\left(\frac{1.5' + 6.92'}{2}\right) \times 12.5' \times 1' = 52.63$

$\left(\frac{1.5' + 6.92'}{2}\right) \times 13.92' \times 1' = 67.02$



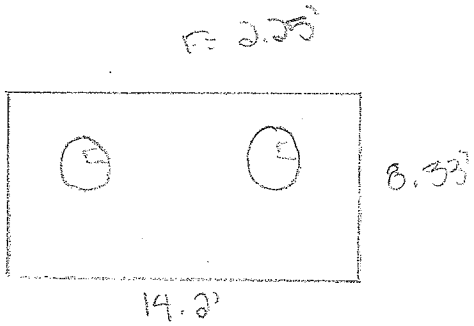
$2(.5' \times 7.08') \times 1' = 7.08$

$\left(\frac{1.5' + 7.08'}{2}\right) \times 12.1' \times 1' = 51.9$

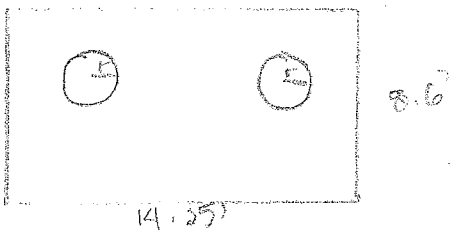
$\left(\frac{1.5' + 7.08'}{2}\right) \times 13.92' \times 1' = 59.72$

1' thick for all walls

1210+76 Headwalls



$(8.33' \times 14.2') - 2(\pi\ 2.25^2) = 86.48$



$(8.6' \times 14.25') - 2(\pi\ 2.25^2) = 90.74$

Total = 422.49 ft³

= 15.64 CUYDS

1' thick for both headwalls

Measured by Joe the Inspector and Bob the Contractor on 8/10/11

minor concrete support documentation

TRANSMITTAL FORM FOR SUBMITTALS & CERTIFICATIONS

(attach additional sheets as necessary)

RECEIVED
JUL 21 2009
FEDERAL HIGHWAY ADMINISTRATION
PROJECT ENGINEERS OFFICE

PROJECT NUMBER: CA PFH 112-1(1) TRANSMITTAL NO: 2

PROJECT NAME: South Fork Smith River Road DATE: 7/20/09

PAY ITEM NUMBER & DESCRIPTION: 60103-0080, 60103-0140

DESCRIPTION OF INFORMATION SUBMITTED: Concrete Mix Designs for Headwalls

NUMBER OF COPIES FURNISHED: 4

TYPE OF SUBMITTAL: ___ New Submittal X Resubmittal

VARIANCE OR SUBSTITUTION REQUESTED? ___ Yes ___ No

APPLICABLE CONTRACT REFERENCES (LIST) AND CONTRACT COMPLIANCE (INDICATE):

PLAN SHEET(S)	T1, T2	PLAN COMPLIANCE?	Yes	No	Var/Sub	N/A
FP SUBSECTION(S)	601	FP COMPLIANCE?	Yes	No	Var/Sub	N/A
SCR SUBSECTION(S)	-	SCR COMPLIANCE?	Yes	No	Var/Sub	N/A
ACCEPTED DRAWINGS	-	DRWG COMPLIANCE?	Yes	No	Var/Sub	N/A
OTHER	-	OTHER COMPLIANCE?	Yes	No	Var/Sub	N/A

DESCRIBE ANY PROPOSED VARIATION OR SUBSTITUTION (include the reason for the requested change, a detailed comparison of the specified and proposed item, manufacturer's or other relevant supporting data, and any proposed cost savings to the Government. Attach additional pages as necessary. Note: the applicable specification compliance type listed above that relies on the variation or substitution should be marked "Var/Sub."):

Attached are 2 concrete mix designs for culvert headwalls.

I certify that the above submitted item(s) have been reviewed in detail and are correct, are in the proper units (metric or english as required by the contract), and are in strict conformance with the contract drawings and specifications except as otherwise stated.

Mike Bockstahler — Tidewater — 7/20/09

(Signature and printed name of knowledgeable person) (Title and Company Name) (Date)

REVIEW BY QUALITY CONTROL MANAGER (return unacceptable submittals to submitter):

RECOMMENDED ACTION ON VARIANCE/SUBSTITUTION REQUEST: ___Approve ___Reject ___Resubmit

RECOMMENDED ACTION ON OVERALL SUBMITTAL: ___Accept ___Accept Except as Noted

___Accept Except as Noted/Resubmit ___Reject/Resubmit ___More Info Req'd on Var/Sub, Resubmit

Remarks:

I certify that I have reviewed the attached submittal or certification for apparent compliance with the contract requirements. Any deviations are identified above.

Signed by Robert E Nixa Date 7.21.09

(signature and printed name)

GOVERNMENT RESPONSE :

VARIANCE/SUBSTITUTION REQUEST: ___Approved ___Rejected ___Resubmit

OVERALL SUBMITTAL: X Accepted ___Accepted Except as Noted ___Accepted Except as Noted/Resubmit ___Rejected/Resubmit ___More Info Req'd on Var/Sub, Resubmit

Remarks:

Signed by _____ Date 8/17/09

(signature and printed name and title)

60103-0080

minor concrete support documentation

U.S. Department of Transportation
Federal Highway Administration
Federal Lands Highway

MINOR PORTLAND CEMENT CONCRETE MIX DESIGN
TRIAL BATCH SUMMARY

Project: South Fork Smith River Date: 7/20/09

Contractor: Tidewater Concrete for: Culvert Headwalls

Concrete producer: Eureka Ready Mix Concrete Co.

Mix designation: F 255 - A

☒ English ☐ Metric

MIX PROPERTIES

Compressive strength (28 day)	4500	
Slump	4"	
Air content	4%	percent
Water/cement ratio[1]	.49	

PROPORTIONS

Material	Specific Gravity (SSD)	SSD Mass	Absolute Volume
Cement	3.15	458	2.33
Water	1.00	299	4.79
Coarse aggregate	5.32	1534	9.24
Fine aggregate	5.02	1558	9.56
Total air _____			1.08
Other _____			
Totals:		3849	27

Admixtures	Dosage
Air entrainment	
Water reducer	
Retarder	
Color	
Accelerator	
Other	

[1] The ratio of the mass of water, exclusive only of that absorbed by the aggregate, to the combined mass of cementitious material (i.e. cement, fly ash, silica fume, and ground granulated blast furnace slag (GGBFS)).

☒ APPROVED
☐ APPROVED AS NOTED
☐ RETURNED FOR CORRECTION
Date 8/17/09 By _____
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
See FAR 52.236.21(e) for limitations of Government's responsibility in approving this document

Form FHWA 1606 (Rev 02-07)

60103-0080

minor concrete support documentation

EUREKA READY MIX CONCRETE CO., INC.

ERM

EUREKA SAND & GRAVEL

1955 Hilfiker Lane
Eureka, Ca. 95501

Concrete Mix Design

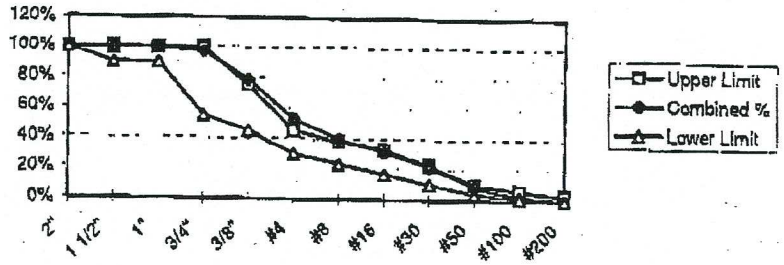
Contractor: Johnson Industries
Project: CAPFH 112-1(1)
Plant: Eureka Ready Mix
Aggregate Source: Arcata

Mix Design Number: F 255 4A

Mechanical analyses percent passing U.S. standard sieves

Sieve	2"	1 1/2"	1"	3/4"	3/8"	#4	#8	#16	#30	#50	#100	#200
1"x #4	100%	100%	100%	90%	18%	1%	0%	0%	0%	0%	0%	0%
3/8 Rock	100%	100%	100%	100%	99%	18%	1%	1%	0%	0%	0%	0%
Concrete Sand	100%	100%	100%	100%	100%	100%	82%	65%	45%	19%	4%	1%
Combined	100%	100%	100%	97%	78%	53%	40%	31%	22%	9%	2%	0%
"x" Values												

Sack Content:	6.50	sk
Specified Strength:	4500	psi
EntrainedAir	4.0%	
W/Cm Ratio:	0.49	
Slump:	4.00	
Cement Type:	Type II	
WRDA 64	0	oz
Adva 100	0	oz
Air Entrainment	6	oz
Recover	0	oz
Daraset	0	oz



Material	100%	Specific Gravity	Density lb/ft³.	S.S.D. Weight		Vol. ft³
1"x #4	26%	2.66	165.98	767	lb	4.62
3/8 Rock	26%	2.66	165.98	767	lb	4.62
Concrete Sand	48%	2.64	164.74	1405	lb	8.53
Cement	75%	3.15	196.56	458	lb	2.33
Fly Ash	25%	2.38	148.51	153	lb	1.03
Water		1.00	62.40	299	lb	4.79
Total Air:	4.0%					1.08
	1 Bg Fibers					
Total	Unit Weight =	142.5 pcf		3849	lb	27.00

Note: Based upon aggregate in saturated surface dry conditions. Correction necessary for free moisture on aggregates.

The above mix is based on the consideration that the compressive strengths will equal or exceed the strength shown above when cylinders are taken, handled and cured in accordance with ASTM (C-31). If the correct procedures for testing are not followed of if the water/cementitious materials ratio is exceeded, this mix as shown above cannot be expected to produce the desired properties.

Submitted by _____ Date: 7/20/09

Section 9: TON ITEMS

GENERAL NOTE:
The items shown here are examples only - all measurement, documentation, and payment will conform to the project contract requirements regardless of what is shown here. Included here are examples of some of the many documentation types that may be required. Often documentation such as certifications and qualifications may be submitted and accepted once and then referenced accordingly instead of attaching additional copies for each pay note or payment period. Many documentation items are required prior to production, delivery, or placement; required documentation should be provided at the appropriate time and not necessarily at time of payment.

NOTE ON TON ITEMS:
Items paid by the Ton are typically required to conform to both specific weighing and receiving procedures so that they can be measured, documented, accepted, and paid. Please refer to the FP, the Special Contract Requirements, and plans for your project for detailed instructions prior to submitting any pay notes. In almost all cases, items by the ton require scale certification along with specific weight and receiving documentation. It is best to discuss and review sample documentation and procedures for acceptance prior to any production or delivery of material. Special care should also be taken to verify and calculate material documentation using the correct units and conversions for either Metric tons (ton, “t”) and English tons (Ton, “T”) as the case may require.

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 11/11/10

Project Number: CA PFH 112-1(1) Project Name: South Fork Smith River Road

Account: Schedule A

Pay Note Information:

Pay Item #: 40301-0000 Item Description: Hot asphalt concrete pavement Pay Unit: TON

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 210 Pay Period: 6

Pay Note Entry:

Work Start Date: 11/11/10 Work End Date: 11/11/10

Location/Description:

Mainline paving from Station 101+60 to 113+00: RT(11.5') and LT(10.5' wide), 1.5" lift height per side.

Weigh Tickets* 198399, 198401, 198402, 198404, 198405, 198406, 198407, 198408, 198409, 198410

*11/11/10 Weigh Tickets attached

Remarks/Calculations:

Per attached 11/11/10 paving weigh tickets, pay 223.73 TONS

Support Documentation/References:

11/11/10 Weigh Tickets, Spread Report, Daily Record of Platform Scale Weights, Daily Yield Calculation
Note: All required asphalt test results per the contract are also needed prior to payment.

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 223.73 (TONS)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 11/11/10

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 11/11/10

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Date: 11/13/10

hot asphalt pavement support documentation

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

TIDEWATER CONTRACTORS INC. (Weighmaster)
P.O. Box 1956 - Bookings, OR 97415
(541) 469-5341
CCB #29995
CA. #456696

198399

11-11 20 10

CUSTOMER'S NAME DTFH-68-09-C-00010 # 1382

DELIVER TO: S. fork Smith River Rd. site A

TRUCK CO. G. Allen TRUCK NO. 10 DRIVER: Bobby

DRIVER: X ON ____ OFF

PRODUCT Hot A/C # 40301000

SUPPLY SOURCE (check one)

X Crockett Bar ____ Hole Pit ____ Stary Pit #1 ____ Scheve

WEIGHING LOCATION (check one)

X Crockett Bar: 1750 S. Fred Haight Drive, Smith River, CA

____ Stary Pit #1: Approx. 3 mi. N. or Crescent City, CA. on Elk Valley Road

____ Scheve Pit: Approx. 1.5 mi. up French Hill Rd., Gasquet, CA

____ ____

TIME OUT ____ BY Marilind Chapin
Deputy Weighmaster

GR ____ LBS.
TARE ____ LBS.
NET ____ LBS.
20.65 TONS

(1)

TIME ARRIVED: 951
I STA: 101+60 - 102+90 RT

ID 10

GROSS 76300 lb
TARE 35000 lb RECALLED
NET 41300 lb

11/11/2010 10:24AM

Weight X Price = ____
Sales Tax = ____
Total = ____

20.65

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

TIDEWATER CONTRACTORS INC. (Weighmaster)
P.O. Box 1956 - Bookings, OR 97415
(541) 469-5341
CCB #29995
CA. #456696

198401

11-11 20 10

CUSTOMER'S NAME DTFH-68-09-C-00010 # 1382

DELIVER TO: S. fork Smith River Rd. site A

TRUCK CO. G-Allen TRUCK NO. 9 DRIVER: Sam

DRIVER: X ON ____ OFF

PRODUCT Hot A/C # 40301000

SUPPLY SOURCE (check one)

X Crockett Bar ____ Hole Pit ____ Stary Pit #1 ____ Scheve

WEIGHING LOCATION (check one)

X Crockett Bar: 1750 S. Fred Haight Drive, Smith River, CA

____ Stary Pit #1: Approx. 3 mi. N. or Crescent City, CA. on Elk Valley Road

____ Scheve Pit: Approx. 1.5 mi. up French Hill Rd., Gasquet, CA

____ ____

TIME OUT ____ BY Marilind Chapin
Deputy Weighmaster

GR ____ LBS.
TARE ____ LBS.
NET ____ LBS.
21.70 TONS

(2)

TIME ARRIVED: 1005
I STA: 102+60 - 105+25 RT

ID 9

GROSS 76180 lb
TARE 32780 lb RECALLED
NET 43400 lb

11/11/2010 10:36AM

Weight X Price = ____
Sales Tax = ____
Total = ____

42.35

hot asphalt pavement support documentation

WEIGHMASTER CERTIFICATE
THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

TIDEWATER CONTRACTORS INC. (Weighmaster)
P.O. Box 1956 - Bookings, OR 97415
(541) 469-5341
CCB #29995
CA. #456696

198402

11-11 20 10

CUSTOMER'S NAME DTFH-68-09-C-00010 # 1382
DELIVER TO: S. Fork Smith River Rd. Site-A
TRUCK CO. G. Allen TRUCK NO. 4 DRIVER: Mike
DRIVER: X ON ____ OFF
PRODUCT Hot A/C # 40301000
SUPPLY SOURCE (check one)
X Crockett Bar ____ Hole Pit ____ Stary Pit #1 ____ Scheve

WEIGHING LOCATION (check one)
X Crockett Bar: 1750 S. Fred Haight Drive, Smith River, CA
____ Stary Pit #1: Approx. 3 mi. N. or Crescent City, CA, on Elk Valley Road
____ Scheve Pit: Approx. 1.5 mi. up French Hill Rd., Gasquet, CA
____ ____

TIME OUT ____ BY Marlind Chapin
Deputy Weighmaster

GR ____ LBS.
TARE ____ LBS.
NET ____ LBS.
22.98 TONS

(3)

TIME ARRIVED 1023
± STA. 105+10 - 107+80 NT

ID 4

GROSS 78940 lb
TARE 32980 lb RECALLED
NET 45960 lb

11/11/2010 10:50AM

Weight X Price = ____
Sales Tax = ____
Total = ____

65.31

WEIGHMASTER CERTIFICATE
THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

TIDEWATER CONTRACTORS INC. (Weighmaster)
P.O. Box 1956 - Bookings, OR 97415
(541) 469-5341
CCB #29995
CA. #456696

198404

11-11 20 10

CUSTOMER'S NAME DTFH-68-09-C-00010 # 1382
DELIVER TO: S. Fork Smith River Rd. Site-A
TRUCK CO. ____ TRUCK NO. 69 DRIVER: Ron
DRIVER: X ON ____ OFF
PRODUCT Hot A/C # 40301000
SUPPLY SOURCE (check one)
X Crockett Bar ____ Hole Pit ____ Stary Pit #1 ____ Scheve

WEIGHING LOCATION (check one)
X Crockett Bar: 1750 S. Fred Haight Drive, Smith River, CA
____ Stary Pit #1: Approx. 3 mi. N. or Crescent City, CA, on Elk Valley Road
____ Scheve Pit: Approx. 1.5 mi. up French Hill Rd., Gasquet, CA
____ ____

TIME OUT ____ BY Marlind Chapin
Deputy Weighmaster

GR ____ LBS.
TARE ____ LBS.
NET ____ LBS.
22.24 TONS

(4)

TIME ARRIVED 1041
± STA. 107+80 - 110+75 NT

ID 69

GROSS 78600 lb
TARE 34120 lb RECALLED
NET 44480 lb

11/11/2010 11:03AM

Weight X Price = ____
Sales Tax = ____
Total = ____

87.5

hot asphalt pavement support documentation

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

TIDEWATER CONTRACTORS INC. (Weighmaster) P.O. Box 1956 - Bookings, OR 97415 (541) 469-5341 CCB #29995 CA. #456696

198405

11-11 20 10

CUSTOMER'S NAME DTFH-68-09-C-00010 # 1382

DELIVER TO: S. Fork Smith River Rd. Site A

TRUCK CO. TWC TRUCK NO. 54 DRIVER: Dan

DRIVER: X ON ___ OFF

PRODUCT Hot A/C # 40301000

SUPPLY SOURCE (check one)

X Crockett Bar ___ Hole Pit ___ Stary Pit #1 ___ Scheve

WEIGHING LOCATION (check one)

X Crockett Bar: 1750 S. Fred Haight Drive, Smith River, CA

___ Stary Pit #1: Approx. 3 mi. N. or Crescent City, CA, on Elk Valley Road

___ Scheve Pit: Approx. 1.5 mi. up French Hill Rd., Gasquet, CA

TIME OUT ___ BY Marilind Chapin

Deputy Weighmaster

GROSS ___ LBS.

TARE ___ LBS.

NET ___ LBS.

22.17 TONS

Time Arrived 1101.

℄ STA 110+75 – 113+00 Rt

2 ⑤ of

ID 54

GROSS 81940 lb
TARE 37600 lb RECALLED
NET 44340 lb

11/11/2010 11:17AM

Weight X Price = ___

Sales Tax = ___

Total = ___

109.7

WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

TIDEWATER CONTRACTORS INC. (Weighmaster) P.O. Box 1956 - Bookings, OR 97415 (541) 469-5341 CCB #29995 CA. #456696

198406

11-11 20 10

CUSTOMER'S NAME DTFH-68-09-C-00010 # 1382

DELIVER TO: S. Fork Smith River Rd. Site A

TRUCK CO. G. Allen TRUCK NO. 10 DRIVER: Bobby

DRIVER: X ON ___ OFF

PRODUCT Hot A/C # 40301000

SUPPLY SOURCE (check one)

X Crockett Bar ___ Hole Pit ___ Stary Pit #1 ___ Scheve

WEIGHING LOCATION (check one)

X Crockett Bar: 1750 S. Fred Haight Drive, Smith River, CA

___ Stary Pit #1: Approx. 3 mi. N. or Crescent City, CA, on Elk Valley Road

___ Scheve Pit: Approx. 1.5 mi. up French Hill Rd., Gasquet, CA

TIME OUT ___ BY M. Chapin

Deputy Weighmaster

⑥

GROSS ___ LBS.

TARE ___ LBS.

NET ___ LBS.

22.12 TONS

Time Arrived 1214PM

℄ STA 101+60 – 104+00 Lt

ID 10

GROSS 79240 lb
TARE 35000 lb RECALLED
NET 44240 lb

11/11/2010 12:47PM

Weight X Price = ___

Sales Tax = ___

Total = ___

131.86

hot asphalt pavement support documentation

WEIGHMASTER CERTIFICATE
THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

TIDEWATER CONTRACTORS INC. (Weighmaster)
P.O. Box 1956 - Bookings, OR 97415
(541) 469-5341
CCB #29995
CA. #456696

198407

11-11 20 10

CUSTOMER'S NAME DTFH-68-09-C-00010 # 1382
DELIVER TO: S. Fork Smith River Rd. Site-A
TRUCK CO. G. Allen TRUCK NO. 9 DRIVER: Sam
DRIVER: X ON ____ OFF
PRODUCT Hot A/C # H0301000
SUPPLY SOURCE (check one)
X Crockett Bar ____ Hole Pit ____ Stary Pit #1 ____ Scheve
WEIGHING LOCATION (check one)
X Crockett Bar: 1750 S. Fred Haight Drive, Smith River, CA
____ Stary Pit #1: Approx. 3 mi. N. or Crescent City, CA. on Elk Valley Road
____ Scheve Pit: Approx. 1.5 mi. up French Hill Rd., Gasquet, CA
____
TIME OUT ____ BY Marlind Chapin
Deputy Weighmaster

(7)

GROSS ____ LBS.
TARE ____ LBS.
NET ____ LBS.
22.98 TONS

Time arrived 1232
± STA. 104+00 - 105+30 LT

ID 9

GROSS 78740 lb
TARE 32780 lb RECALLED
NET 45960 lb

11/11/2010 01:00PM

Weight X Price = ____
Sales Tax = ____
Total = ____

154.84

WEIGHMASTER CERTIFICATE
THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

TIDEWATER CONTRACTORS INC. (Weighmaster)
P.O. Box 1956 - Bookings, OR 97415
(541) 469-5341
CCB #29995
CA. #456696

198408

11-11 20 10

CUSTOMER'S NAME DTFH-68-09-C-00010 # 1382
DELIVER TO: S. Fork Smith River Rd. Site-A
TRUCK CO. G. Allen TRUCK NO. 4 DRIVER: Mike
DRIVER: X ON ____ OFF
PRODUCT Hot A/C # H0301000
SUPPLY SOURCE (check one)
X Crockett Bar ____ Hole Pit ____ Stary Pit #1 ____ Scheve
WEIGHING LOCATION (check one)
X Crockett Bar: 1750 S. Fred Haight Drive, Smith River, CA
____ Stary Pit #1: Approx. 3 mi. N. or Crescent City, CA. on Elk Valley Road
____ Scheve Pit: Approx. 1.5 mi. up French Hill Rd., Gasquet, CA
____
TIME OUT ____ BY Marlind Chapin
Deputy Weighmaster

(8)

GROSS ____ LBS.
TARE ____ LBS.
NET ____ LBS.
23.63 TONS

Time arrived 1241
± STA 105+30 - 107+90 UT

ID 4

GROSS 80240 lb
TARE 32980 lb RECALLED
NET 47260 lb

11/11/2010 01:14PM

Weight X Price = ____
Sales Tax = ____
Total = ____

178.47

hot asphalt pavement support documentation

WEIGHMASTER CERTIFICATE
THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

TIDEWATER CONTRACTORS INC. (Weighmaster)
P.O. Box 1956 - Bookings, OR 97415
(541) 469-5341
CCB #29995
CA. #456696

198409

11-11 20 10

CUSTOMER'S NAME DTFH 68-09-C-00010 # 1382

DELIVER TO: S. fork Smith River Rd. Site A

TRUCK CO. Sunrise TRUCK NO. 69 DRIVER: Ron

DRIVER: X ON ____ OFF

PRODUCT Hot A/C # 40301000

SUPPLY SOURCE (check one)

X Crockett Bar ____ Hole Pit ____ Stary Pit #1 ____ Scheve

WEIGHING LOCATION (check one)

X Crockett Bar: 1750 S. Fred Haight Drive, Smith River, CA

____ Stary Pit #1: Approx. 3 mi. N. or Crescent City, CA, on Elk Valley Road

____ Scheve Pit: Approx. 1.5 mi. up French Hill Rd., Gasquet, CA

____ ____

TIME OUT ____ BY Marilind Chapin
Deputy Weighmaster

GROSS ____ LBS.
TARE ____ LBS.
NET ____ LBS.
22.46 TONS

C

TIME RAN WES 110
± STA. 107+90 - 110+60 LT

ID 69

GROSS 79040 lb
TARE 34120 lb RECALLED
NET 44920 lb

11/11/2010 01:25PM

Weight X Price = ____
Sales Tax = ____
Total = ____

200.93

WEIGHMASTER CERTIFICATE
THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

TIDEWATER CONTRACTORS INC. (Weighmaster)
P.O. Box 1956 - Bookings, OR 97415
(541) 469-5341
CCB #29995
CA. #456696

198410

11-11 20 10

CUSTOMER'S NAME DTFH-68-09-C-00010 # 1382

DELIVER TO: S. fork smith River Rd Site-A

TRUCK CO. TWC TRUCK NO. 54 DRIVER: DAN

DRIVER: X ON ____ OFF

PRODUCT Hot A/C # 40301000

SUPPLY SOURCE (check one)

X Crockett Bar ____ Hole Pit ____ Stary Pit #1 ____ Scheve

WEIGHING LOCATION (check one)

X Crockett Bar: 1750 S. Fred Haight Drive, Smith River, CA

____ Stary Pit #1: Approx. 3 mi. N. or Crescent City, CA, on Elk Valley Road

____ Scheve Pit: Approx. 1.5 mi. up French Hill Rd., Gasquet, CA

____ ____

TIME OUT ____ BY Marilind Chapin
Deputy Weighmaster

GROSS ____ LBS.
TARE ____ LBS.
NET ____ LBS.
22.79 TONS

10

TIME RAN WES 136
± STA 110+60 - 113+00 LT

ID 54

GROSS 83180 lb
TARE 37600 lb RECALLED
NET 45580 lb

11/11/2010 01:39PM

Weight X Price = ____
Sales Tax = ____
Total = ____

223.72

hot asphalt pavement support documentation

WFLHD-434
(Rev 12/90)

STREET DELIVERY REPORT
SPREAD REPORT

PAGE NO.

PROJECT: SOUTH FORK SMITH RIVER ROAD CA PFH 112-1 (1)

ITEM NO.: 40301-

DATE 11/11/10

SOURCE NO.: CROCKETT BAR Pay Lot No.: SITE A

SHEET NO. 1 OF 1

LOAD NO.	TRUCK NO.	TIME	STATION TO ± STATION	REMARKS	LOAD NO.	TRUCK NO.	TIME	STATION TO STATION	REMARKS
1	10	951 AM	101+60 –	102+90 NT					
2	9	1005	102+60 –	105+25 NT					
3	4	1023	105+10 –	107+80 NT					
4	69	1041	107+80 –	110+75 NT					
5	54	1101	110+75 –	113+00 NT					
6	10	1214 PM	101+60 –	104+00 LT					
7	9	1232	104+00 –	105+30 LT					
8	4	1241	105+30 –	107+90 LT					
9	69	110	107+90 –	110+60 LT					
10	54	136	110+60 –	113+00 LT					

ROUND 1

ROUND 2

CERTIFICATION

I CERTIFY THAT THE ABOVE LOADS WERE PLACED AS SHOWN AND ARE THE SOLE BASIS FOR PAYMENT.

Contractor signature RMT & NMJ RCS Received by: Date 11/11/10

wflhd434.wpf

hot asphalt pavement support documentation

Date: 11-11-10

TIDEWATER CONTRACTORS, INC.

Sheet # 1

P.O. Box 1956 • Brookings, OR 97415 • 541-469-5341

CCB #29995

DAILY RECORD OF PLATFORM SCALE WEIGHTS

CUSTOMERS NAME DTFH-68-09-C-00010

JOB or PROJECT # 1382 # 40301000 CONTACT S. Fork Smith River Rd. Site-A.

SUPPLY SOURCE: Crockett Bar MATERIAL WEIGHED Hot A/C

Load	TIME	Truck # Driver	GROSS WEIGHT	TARE WEIGHT	NET WEIGHT	TONAGE	ACCU TONAGE	TICKET #
1	9:25	10	76300	35000	41300	20.65	20.65	198399
2	9:35	9	76180	32780	43400	21.70	42.35	401
3	9:50	4	78940	32980	45960	22.98	65.93	402
4	10:05	69	78600	34120	44480	22.24	87.57	404
5	10:20	54	81940	37600	44340	22.17	109.74	405
6	11:50	10	79240	35000	44240	22.12	131.86	406
7	12:00	9	78740	32780	45960	22.98	154.84	407
8	12:15	4	80240	32980	47260	23.63	178.47	408
9	12:25	69	79040	34120	44920	22.46	200.93	409
0	12:40	54	83180	37600	45580	22.79	223.72	410
	SUBTOTAL							
1								
2								
3								
4								
5								
6								
7								
8								
9								
0								
	SUBTOTAL							
1								
2								
3								
4								
5								
6								
7								
8								
9								
0								
	SUBTOTAL							
1								
2								
3								
4								
5								
6								
7								
8								
9								
0								
	FORWARD							

Marilind Chapin

DEPUTY PUBLIC WEIGHMASTER

hot asphalt pavement support documentation

TIDEWATER CONTRACTORS INC.

DATE 11-11-10
JOB NAME & # / PHASE # #1382 - S. fork Smith River Rd. Site A
CUSTOMER NAME DTFH-68-09-C-00010
CONTRACT # H0301000
SCALE LOCATION CROCKETT BAR

TRUCK #	DRIVER	PUC WEIGHT	TIME/TARE		TIME /TARE		PLATE
G.ALLEN	10-Bobby		8:00	35000			SP95076
G.ALLEN	9-Sam		8:05	32780			VPH4261
G.ALLEN	4-MIKE		8:10	32980			VPH4260
SUNRISE	69-Ron		8:30	34120			5257983
TWC	54-DAN		8:45	37600			YAC2806

FINAL LOAD COUNT 10

DAILY TOTAL 223.72

SIGNATURE Marilind Chapin

hot asphalt pavement support documentation

CA PFH 112-1(1) South Fork Smith River Road

MARSHALL DAILY YIELD (11/11/10)

		LT	RT	Avg Max Rice	Avg Density
Begin Sta		101+60	101+60		
				158.8	92.1
End Sta		113+00	113+00		
	Legnth paved (ft)	1,140	1,140		
	Avg Width (ft)	10.50	11.50		
	Depth (ft)	0.125	0.125		
	CuFt	1,496.3	1,638.8		
	Total CuFt	3,135.0			
	Compacted wt, Tons	229.25			
	Ticket tons	223.72			
	Yield	**0.98**			
CUMULATIVE TO DATE		2,624.95	TONS		
	Plan Qty	10,890.0	TONS		
	% Complete	24.10			

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 10-25-10

Project Number: SD PFH 17-1(6) Project Name: Hill City to Lead

Account: Schedule A

Pay Note Information:

Pay Item #: 41201-0000 Item Description: Tack Coat Pay Unit: TON

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 134 Pay Period: 3

Pay Note Entry:

Work Start Date: 10/25/2010 Work End Date: 10/25/2010

Location/Description:

On 10/25/10 Tack Coat was applied from Station 10+00 to Station 12+50 RT (11' wide).

Remarks/Calculations:

Per FP-03 412.08, measure tack coat including water added for dilution.

Weigh Out = 6.28 TONS on 10/22/10, Weigh Back = 6.03 TONS on 10/25/10*

6.28 TONS - 6.03 TONS = 0.25 TONS

*See supporting weigh tickets

Support Documentation/References:

Weigh Tickets with SS-1H certification, Tack Coat Application Calculation,

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 0.25 (TONS)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 10/25/10

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 10/26/10

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 10/30/10

tack coat support documentation

08465

HILLS MATERIALS COMPANY

P.O. Box 2320 – Rapid City, SD 57709
Phone: (605) 394-3300 • Fax: (605) 341-3446

DELIVERY TICKET

017503

Date	Time	P.O. No.	Dispatcher	Location	Ticket No.
10/22/2010	10:10:44	50.462.1301	LORI	8 RC EMULSION	017503

Customer / Destination / Description

670703 RED WILK
DEERFIELD RD
HILL CITY SD 57769

Gross:	37220
Tare:	24660
Net:	12560
Tons:	6.28

Code	Description	Qty.	Unit	Price	Amount
104	HOT WATER	3.03	TONS		
		727.23	GALLONS		
235	SS-1H	3.25	TONS		
		762.91	GALLONS		

* 1 TO 1 *
WEIGHOUT
46.8 51.2V 48.2 51.8W 46.8 51.2RV 46.2 51.8RW

LOADING TEMP 180 F SPEC. GRAV. 102
VISCOSITY 35 SSF @ 77 F

Order #		Lds Today		Tank #		Sales Total	
Lds Rec'd	1	Qty Today	1.59	Res. Asph.	21	Tax %	
Qty Rec'd	2			Wt./Gal.	62.00	Sub Total	
	4.10				8.333 8.520	Credits	
						Total Due	

Hauler	Truck #	Desc	Driver
1-HILLS MATERIALS COMPANY	803	54.803 YELLOW	EDDIE

Notes

THIS SHIPMENT OF ASPHALTIC MATERIAL COMPLIES WITH SD DOT/FHWA SPECIFICATIONS.
Emergency contact phone #s: (605)394-5220 or (605) 394-4139

Goods Received By

CUSTOMER COPY
CUSTOMER COPY

tack coat support documentation

208497

HILLS MATERIALS COMPANY

P.O. Box 2320 – Rapid City, SD 57709
Phone: (605) 394-3300 • Fax: (605) 341-3446

DELIVERY TICKET

017598

Date	Time	P.O. No.	Dispatcher	Location	Ticket No.
10/25/2010	08:08:01	50.462.1301		8 RC EMULSION	017598

Customer

670705 RED WILK
DEERFIELD RD
HILL CITY SD 57769

Destination / Description

STA 10+00 to 12+50

Gross:	36720
Tare:	24660
Net:	12060
Tons:	6.03

Code	Description	Qty.	Unit	Price	Amount
104	HOT WATER	-2.91	TONS		
		-698.43	GALLONS		
235	SS-1H	-3.12	TONS		
		-732.39	GALLONS		

" 1 TO 1 "
"WEIGHBACK (END)" "DIFF. TRUCK"
48.8 51.2 48.3 51.7

LOADING TEMP 180 F SPEC. GRAV. 102
VISCOSITY 35 SSF @ 77 F

Order #	1	Lds Today		Tank #	21
Lds Rec'd	2	Qty Today	-3.12	Res. Asph.	62.00
Qty Rec'd	0.98			Wt./Gal.	8.333 8.520

Sales Total	
Tax	%
Sub Total	
Credits	
Total Due	

Hauler	Truck #	Desc	Driver
1-HILLS MATERIALS COMPANY	803	54 803 YELLOW	EDDIE/PA

Notes

THIS SHIPMENT OF ASPHALTIC MATERIAL COMPLIES WITH SD DOT/FHWA SPECIFICATIONS.
Emergency contact phone #s: (605)394-5220 or (605) 394-4139

Goods Received By

CUSTOMER COPY

Form FHWA-1460
(Rev. 3-74)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

tack coat support documentation

MADE BY BB DATE 10/25/10
CHECKED BY DA DATE 10/26/10
CALCULATIONS FOR Tack Coat Application

PROJECT SD PFH 17-1(6) Hill City to Lead
SHEET NO. 1 OF 1

Per FP-03, section 412.06, apply the asphalt according to Subsection 409.08 at a rate of 0.03 to 0.15 gallons per square yard.

Check Application Rate

- Tack Coat applied from STA 10+00 to 12+50 ON RT side of roadway, width = 11 feet.
- Tack Coat = 233 Gal/TON
- Weigh Out = 3.25 TONS, Weigh Back = 3.12 TONS

3.25 TONS - 3.12 TONS = 0.13 TONS

$0.13 \text{ TONS} \times 233 \frac{\text{Gal}}{\text{TON}} = 30.29 \text{ GAL}$

250' x 11' = 2,750 SQFT = 305.56 SQYD

$\text{Application Rate} = \frac{30.29 \text{ GAL}}{305.56 \text{ SQYD}} = 0.099 \text{ GAL/SQYD}$

✓

0.03 gal/sqyd < 0.099 gal/sqyd < 0.15 gal/sqyd

MEETS SPECIFICATION

Section 10: GALLON ITEMS

GENERAL NOTE:
The items shown here are examples only - all measurement, documentation, and payment will conform to the project contract requirements regardless of what is shown here. Included here are examples of some of the many documentation types that may be required. Often documentation such as certifications and qualifications may be submitted and accepted once and then referenced accordingly instead of attaching additional copies for each pay note or payment period. Many documentation items are required prior to production, delivery, or placement; required documentation should be provided at the appropriate time and not necessarily at time of payment.

NOTE ON TON ITEMS:
Items paid by the gallon are either measured, metered, or commercial volumes. Please refer to the FP, the Special Contract Requirements, and plans for your project for detailed instructions prior to submitting any pay notes. If gallons will be measured or metered onsite, advance consideration and discussion should occur to ensure that the methods, equipment, and documentation will be acceptable.

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 09/24/11

Project Number: HI SR 200(2) Project Name: Saddle Road

Account: Schedule A

Pay Note Information:

Pay Item #: 15801-0000 Item Description: Watering for dust control Pay Unit: Mgal

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 202 Pay Period: 7

Pay Note Entry:

Work Start Date: 09/01/10 Work End Date: 09/23/11

Location/Description:

9/1/2011 to 9/23/2011: Watering Saddle Road during aggregate placement work performed between Station 125+00 to 165+00

Remarks/Calculations:

Pay 25.04 Mgal (see attached water log)

Support Documentation/References:

Water log
Note: Volume Certification was provided to the CO on 8/01/11

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 25.04 (Mgal)

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 09/24/11

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 09/25/11

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Inspector Date: 10/07/11

watering for dust control support documentation

200(2) WATER LOG JULY 2011

Date	Ticket #	Begin Meter	End Meter	Quantity (Mgal)	Tank Size	Pay Quantity	ck	Location/Use
9/1/2011	388	21.900	25.300	3.400	4.000	0.000	√	Quarry
		25.300	28.800	3.500	4.000	0.000	√	Quarry
09/12/11	385	74.400	77.700	3.300	4.000	3.300	√	Base/Rollers
"	"	77.700	80.800	3.100	4.000	3.100	√	Rollers
09/13/11	384	80.800	84.200	3.400	4.000	3.400	√	Rollers
09/14/11	383	84.200	87.200	3.000	4.000	0.000	√	Quarry
"	"	87.200	90.200	3.000	4.000	0.000	√	Quarry
09/15/11	382	90.700	93.400	2.700	4.000	0.000	√	Quarry
"	"	799.000	802.000	3.000	4.000	0.000	√	Quarry
09/19/11	381	15.300	18.500	3.200	4.000	3.200	√	Road
09/21/11	380	18.490	23.000	4.510	4.000	3.700	√	Clean road
"	"	23.000	26.060	3.060	4.000	3.060	√	Clean road
"	"	26.060	30.000	3.940	4.000	3.940	√	Clean road
09/23/11	379	30.000	33.600	3.600	4.000	3.600	√	Clean riprap
"	"	33.600	37.450	3.850	4.000	3.850	√	Clean riprap
07/31/11	Tons paving in August	6645.900		-0.920		-6.114		Deduct 0.92 gal/ton paving
						25.04		

NOTE: Water placed at the quarry was not paid for per direction of the CO. Watering of the quarry was done per the Contractor.

Example 1 of 1 for this item

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 08/06/10

Project Number: SD PRA BADL 10(5) Project Name: Badlands Loop Road

Account: Schedule B

Pay Note Information:

Pay Item #: 63404-0200 Item Description: Pavement markings, Type B (white) Pay Unit: GAL

Item Line #: N/A (for EEBACS only) Item Type: N/A (for EEBACS only)

Pay Note #: 174 Pay Period: 3

Pay Note Entry:

Work Start Date: 08/02/10 Work End Date: 08/06/10

Location/Description:

(1) Prairie Winds on 08-02-2010 - 3.0 GAL*
(2) Burns Basin on 08-02-2010 - 3.5 GAL*
(3) Doors and Windows on 08-03-2010 - 1.0 GAL *
(4) Homestead on 08-04-2010 - 3.0 GAL*
(5) Conata on 08-04-2010 - 2.5 GAL*
(6) Pinnacles on 08-04-2010 - 2.5 GAL* *See pavement marking computations

Remarks/Calculations:

Total quantity (GAL) = 3.0 + 3.5 + 1.0 + 3.0 + 2.5 + 2.5 = 15.5GAL

Support Documentation/References:

Pavement marking computations, Paint certification (see page 94)

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 15.5 (GAL)

☐ Interim Measurement ☒ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 08/06/10

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 08/07/10

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 08/07/10

pavement marking (gal) support documentation

PRAIRIE WINDS

$$935\ LF \times \left[4'' \times \frac{1\ FT}{12''}\right] = 308.\ FT^2$$

+ SPRAY RATE = 103 $\frac{FT^2}{GAL}$

$$308\ FT^2 \times \frac{1\ GAL}{103\ FT^2} = 3.0\ GALLONS$$

TOTAL GALLONS = 3.0 GALLONS

BURNS BASIN

$$1090\ LF \times \left[4'' \times \frac{1\ FT}{12''}\right] = 360\ FT^2$$

+ SPRAY RATE = 103 $\frac{FT^2}{GAL}$

$$360\ FT^2 \times \frac{1\ GAL}{103\ FT^2} = 3.5\ GALLONS$$

TOTAL GALLONS = 3.5 GALLONS

DOORS AND WINDOWS

$$64\ LF \times \left[4.5'' \times \frac{1\ FT}{12\ INCH}\right] = 24\ ft^2$$

- CROSS LINES

10 LINES × 7.5' (EACH) × 1' (WIDTH) = 75 ft^2

- TOTAL COVERAGE = 99 ft^2

+ SPRAY RATE = ≈ 103 $\frac{ft^2}{GAL}$

$$99\ ft^2 \times \frac{1\ GAL}{103\ ft^2} = 1.0\ GAL$$

pavement marking (gal) support documentation

HOMESTEAD

$$929\ LF\ (PER\ PLAN) \times \left[4" \times \frac{1\ FT}{12"}\right] = 309.7\ ft^2$$

* SPRAY RATE = $\frac{103\ ft^2}{6\ AL}$

$$309.7\ ft^2 \times \frac{1\ GAL}{103\ ft^2} = 3.0\ GALLONS$$

CONATA

* NOT INCLUDING RV LINE

$$780\ LF \times \left[4" \times \frac{1\ FT}{12"}\right] = 257.5\ ft^2$$

* SPRAY RATE = $\frac{103\ ft^2}{6\ AL}$

$$257.5\ ft^2 \times \frac{1\ GAL}{103\ ft^2} = 2.5\ GALLONS$$

PINNACLES

* NOT INCLUDING HANDICAP AREA W/ CROSS HATCH AND A FEW SMALL LINES

$$790\ LF \times \left[4" \times \frac{1\ FT}{12"}\right] = 263.33\ ft^2$$

* SPRAY RATE = $103\ ft^2/6\ AL$

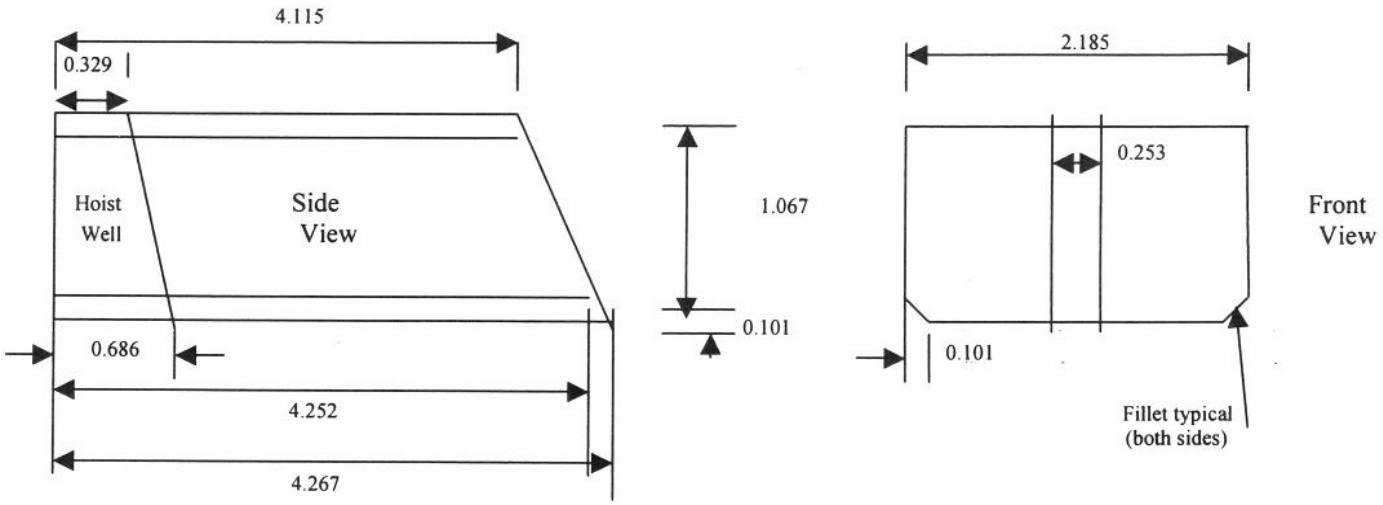
$$263.33\ ft^2 \times \frac{1\ GAL}{103\ ft^2} = 2.5\ GALLONS$$

Appendix

Truck Measurement Example

Truck No. ? (tractor)
Trailer No. ? (belly dump)
License No. XXXXXXX

Project Name XXXXXXXXXXXX
Project Number XX XXX XXXX (X)



(dimensions are meters unless otherwise noted)

Volume

$\frac{4.115 + 4.267}{2} \times 2.185 \times 1.067$ = **9.771**

Less Hoist Well

$\frac{0.686 + 0.329}{2} \times 0.253 \times 1.067$ = **-0.137** (minus)

Less Fillets

$\frac{0.101 \times 0.101}{2} \times \frac{4.252 + 4.267}{2} \times 2$ = **-0.043** (minus)

Total Volume = **9.591 m^3**

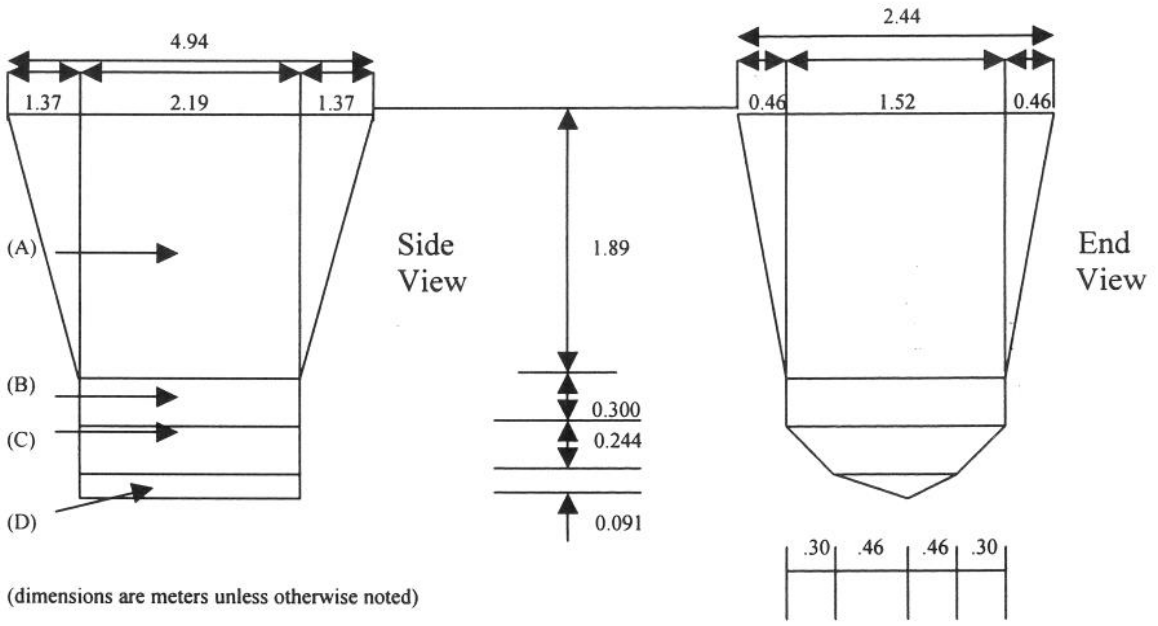
NOTE
The above computations are for illustration only, and not necessarily part of survey notes. However, to ensure measurements are adequate, the surveyor might make at least rough computations for complicated shapes.

Composed By: _____ **Checked By:** _____

Truck Measurement Example

Truck No. ? (tractor)
Trailer No. ? (belly dump)

Project Name XXXXXXXXXXXX
Project Number XX XXX XXXX (X)



(dimensions are meters unless otherwise noted)

Volume (A) (Use prismoidal formula, $V = \frac{h}{b}(A_1 + (4A_m + A_2)$ $h = 1.89$

$A_1 = 4.94 \times 2.44 = 12.05$ $A_2 = 2.19 \times 1.52 = 3.33$ $A_m = \frac{(4.94 + 2.19)}{2} \times \frac{(2.44 + 1.52)}{2} = 7.07$

$V = \frac{1.89}{b}(12.05 + (4 \times 7.07) + 3.33) =$ **13.753**

Volume (B)

$V = 2.19 \times 1.52 \times 0.30 =$ **0.999**

Volume (C)

$V = 2.19 \times \frac{1.52 + 0.92}{2} \times 0.244 =$ **0.652**

Volume (D)

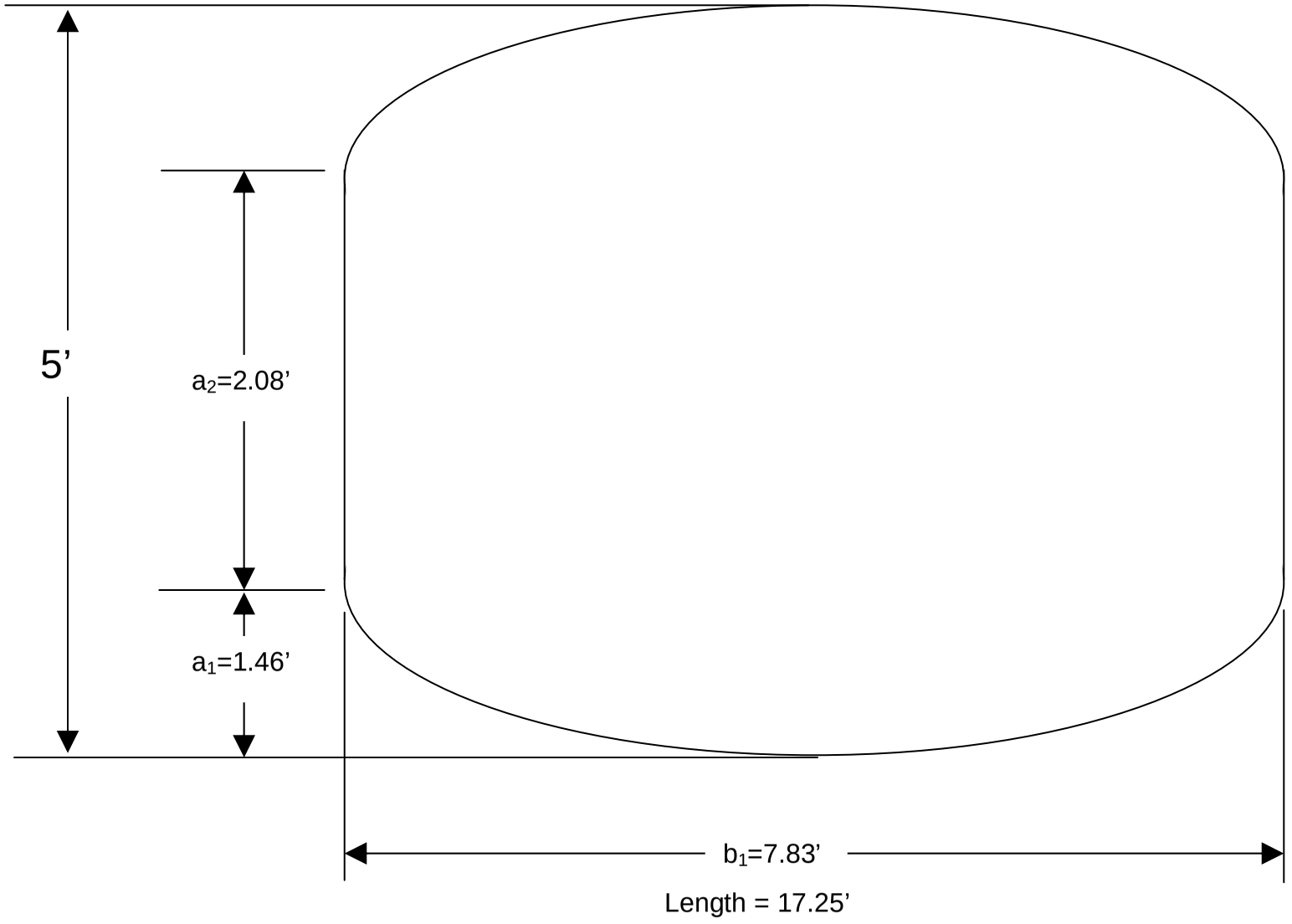
$V = 2.19 \times \frac{0.92}{2} \times 0.091 =$ **0.092**

Total Volume = **15.496 m^3**

Composed By: _____ **Checked By:** _____

Water Truck Dimensions

_142__ Date_____



$A_1 = \pi \cdot a_1 \cdot b_1$
$= \pi \cdot (1.46) \cdot (7.83/2)$
$= 17.98$ SF

$A_2 = a_2 \cdot b_1$
$= (2.08) \cdot (7.83)$
$= 16.29$ SF

$A_1 + A_2 = 34.27$ SF

Volume = Area x Length
$= (34.27)\ (17.25)$
$= 591.16\ FT^3$

$1\ ft^3 = 7.48$ Gallons

Total Volume = 4421.9 gal

Total Volume = 4.4 MGAL

Truck Measure Agreement
Dated_____

FHWA Representative

Contractor Representative

TEMPERATURE-VOLUME CORRECTIONS FOR ASPHALTIC MATERIALS (CUSTOMARY UNITS)

GROUP 0 – SPECIFIC GRAVITY AT 60°F OF 0.850 TO 0.966
LEGEND: t = Observed Temperature in Degrees Fahrenheit
M = Multiplier for Correcting Oil Volumes to the Basis of 60°F

t	M	t	M	t	M	t	M	t	M
0	1.0241	**50**	1.0040	**100**	0.9842	**150**	0.9647	**200**	0.9456
1	1.0237	**51**	1.0036	**101**	0.9838	**151**	0.9643	**201**	0.9452
2	1.0233	**52**	1.0032	**102**	0.9834	**152**	0.9639	**202**	0.9448
3	1.0229	**53**	1.0028	**103**	0.9830	**153**	0.9635	**203**	0.9444
4	1.0225	**54**	1.0024	**104**	0.9826	**154**	0.9632	**204**	0.9441
5	1.0221	**55**	1.0020	**105**	0.9822	**155**	0.9628	**205**	0.9437
6	1.0217	**56**	1.0016	**106**	0.9818	**156**	0.9624	**206**	0.9433
7	1.0213	**57**	1.0012	**107**	0.9814	**157**	0.9620	**207**	0.9429
8	1.0209	**58**	1.0008	**108**	0.9810	**158**	0.9616	**208**	0.9425
9	1.0205	**59**	1.0004	**109**	0.9806	**159**	0.9612	**209**	0.9422
10	1.0201	**60**	1.0000	**110**	0.9803	**160**	0.9609	**210**	0.9418
11	1.0197	**61**	0.9996	**111**	0.9799	**161**	0.9605	**211**	0.9414
12	1.0193	**62**	0.9992	**112**	0.9795	**162**	0.9601	**212**	0.9410
13	1.0189	**63**	0.9988	**113**	0.9791	**163**	0.9597	**213**	0.9407
14	1.0185	**64**	0.9984	**114**	0.9787	**164**	0.9593	**214**	0.9403
15	1.0181	**65**	0.9980	**115**	0.9783	**165**	0.9589	**215**	0.9399
16	1.0177	**66**	0.9976	**116**	0.9779	**166**	0.9585	**216**	0.9395
17	1.0173	**67**	0.9972	**117**	0.9775	**167**	0.9582	**217**	0.9391
18	1.0168	**68**	0.9968	**118**	0.9771	**168**	0.9578	**218**	0.9388
19	1.0164	**69**	0.9964	**119**	0.9767	**169**	0.9574	**219**	0.9384
20	1.0160	**70**	0.9960	**120**	0.9763	**170**	0.9570	**220**	0.9380
21	1.0156	**71**	0.9956	**121**	0.9760	**171**	0.9566	**221**	0.9376
22	1.0152	**72**	0.9952	**122**	0.9756	**172**	0.9562	**222**	0.9373
23	1.0148	**73**	0.9948	**123**	0.9752	**173**	0.9559	**223**	0.9369
24	1.0144	**74**	0.9944	**124**	0.9748	**174**	0.9555	**224**	0.9365
25	1.0140	**75**	0.9940	**125**	0.9744	**175**	0.9551	**225**	0.9361
26	1.0136	**76**	0.9936	**126**	0.9740	**176**	0.9547	**226**	0.9358
27	1.0132	**77**	0.9932	**127**	0.9736	**177**	0.9543	**227**	0.9354
28	1.0128	**78**	0.9929	**128**	0.9732	**178**	0.9539	**228**	0.9350
29	1.0124	**79**	0.9925	**129**	0.9728	**179**	0.9536	**229**	0.9346
30	1.0120	**80**	0.9921	**130**	0.9725	**180**	0.9532	**230**	0.9343
31	1.0116	**81**	0.9917	**131**	0.9721	**181**	0.9528	**231**	0.9339
32	1.0112	**82**	0.9913	**132**	0.9717	**182**	0.9524	**232**	0.9335
33	1.0108	**83**	0.9909	**133**	0.9713	**183**	0.9520	**233**	0.9331
34	1.0104	**84**	0.9905	**134**	0.9709	**184**	0.9517	**234**	0.9328
35	1.0100	**85**	0.9901	**135**	0.9705	**185**	0.9513	**235**	0.9324
36	1.0096	**86**	0.9897	**136**	0.9701	**186**	0.9509	**236**	0.9320
37	1.0092	**87**	0.9893	**137**	0.9697	**187**	0.9505	**237**	0.9316
38	1.0088	**88**	0.9889	**138**	0.9693	**188**	0.9501	**238**	0.9313
39	1.0084	**89**	0.9885	**139**	0.9690	**189**	0.9498	**239**	0.9309
40	1.0080	**90**	0.9881	**140**	0.9686	**190**	0.9494	**240**	0.9305
41	1.0076	**91**	0.9877	**141**	0.9682	**191**	0.9490	**241**	0.9301
42	1.0072	**92**	0.9873	**142**	0.9678	**192**	0.9486	**242**	0.9298
43	1.0068	**93**	0.9869	**143**	0.9674	**193**	0.9482	**243**	0.9294
44	1.0064	**94**	0.9865	**144**	0.9670	**194**	0.9478	**244**	0.9290
45	1.0060	**95**	0.9861	**145**	0.9666	**195**	0.9475	**245**	0.9286
46	1.0056	**96**	0.9857	**146**	0.9662	**196**	0.9471	**246**	0.9283
47	1.0052	**97**	0.9854	**147**	0.9659	**197**	0.9467	**247**	0.9279
48	1.0048	**98**	0.9850	**148**	0.9655	**198**	0.9463	**248**	0.9275
49	1.0044	**99**	0.9846	**149**	0.9651	**199**	0.9460	**249**	0.9272

SI (1) (METRIC) TO U .S. CUSTOMARY CONVERSION FACTORS (approximate)				
Symbol	**When You Know**	**Multiply By**	**To Find**	**Symbol**
		LENGTH		
µm	micrometers	3.9×10^{-5}	inches	in
mm	millimeters	0.039	inches	in
m	meters	3.28	feet	ft
m	meters	1.09	yards	yd
km	kilometers	0.621	miles	mi
		AREA		
mm^2	square millimeters	0.0016	square inches	in^2
m^2	square meters	10.764	square feet	ft^2
m^2	square meters	1.195	square yards	yd^2
ha	hectares	2.47	acres	ac
km^2	square kilometers	0.386	square miles	mi^2
		VOLUME		
mL	milliliters	0.034	fluid ounces	fl oz
L	liters	0.264	gallons	gal
m^3	cubic meters	35.31	cubic feet	ft^3
m^3	cubic meters	1.308	cubic yards	yd^3
		MASS		
g	grams	0.035	ounces	oz
kg	kilograms	2.202	pounds	lb
Mg	megagrams	1.1023	short tons	T
(or "t")	(or "metric ton")		(2000 lb)	
		TEMPERATURE (exact)		
ºC	Celsius temperature	1.8C +32	Fahrenheit temperature	ºF
		ILLUMINATION		
lx	lux	0.0929	foot-candles	fc
cd/m^2	candela/m^2	0.2919	foot-Lamberts	fl
		MISCELLANEOUS		
J	joule	0.7376	foot·poundforce	ft·lbf
N	newtons	0.225	poundforce	lbf
kPa	kilopascals	0.145	poundforce per square inch	lbf/in^2

(1) SI is the symbol for the International System of Units.
Appropriate rounding should be made to comply with Section 4 of ASTM E 380.

Project No.: ID PFH CDP 67(2) **Project Name:** GRANGEMONT ROAD

Contract No.: DTFH 70-10-C-00009 **Award date:** APRIL 28, 2010

The certification, Subcontractor listing, and attached itemized request for payment of $326,286.11 serves as the contractor's invoice for work performed during the period indicated below, and under the contract cited.

CONTRACTOR CERTIFICATION

[FAR Clause 52.232-5 & FAR 52.232-27]

RECEIVED
AUG 03 2010
BY PROJECT ENGINEER

I hereby certify, to the best of my knowledge and belief, that:

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of Chapter 39 of Title 31, United States Code; and

(3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract.

Pave Earth First, Inc.
Contractor Company Name

Aug 2, 2010
Date Signed

Submitted by: Name A. Lincoln
Print Name and Title

2
Estimate Number

Submitted by: A. Lincoln
Signature

July 1, 10 through July 31, 10
Dates for Progress Payment Period

Subcontractor	SF1413 & WFLHD 130 Submitted Y/N	Total Amount of Subcontract	Previous Payments	Amount Included in this Estimate*	Cumulative Retent through this Estimate
S by SW Survey	Y	107,305.00	$39,434.59	$39,434.59	0
We Flag, Inc.	Y	198,522.50	$4,410.00	$19,209.00	0
Erosion Control, Inc.	Y	15,083.68	0.00	$13,349.70	0
Testers-R-Us, LLC.	Y	48,573.00	0.00	$6,510.00	0

* Excludes any retent included in the right-most column. ___Check if continued on additional page

Grangemont Road, ID PFH 67(2)
DTFH70-10-C-00009
Estimate Number 2

Pave Earth First

P.O. Box 5
Somewhere, ID 53852
Office: (208) 555-5552

Paynote Information:

	Bid Item	Description	Quantity	Unit	Unit Price	Total	Previous Quantity	Previous Amount	Month Quantity	Month Revenue	To Date Quantity	To Date Revenue	Quantity Remaining	Revenue Remaining
1	15101-0000	Mobilization	1	LS	$135,561.44	$135,561.44	0.14	$18,978.60	0.50	$67,780.72	0.64	$86,759.32	0.36	$48,802.12
2	15201-0000	Construction Survey and Staking	1	LS	$112,670.25	$112,670.25	0.35	$39,434.59	0.35	$39,434.59	0.70	$78,869.18	0.30	$33,801.08
3	15301-0000	Contractor Quality Control	1	LS	$69,382.00	$69,382.00	0	$0.00	0.05	$3,469.10	0.05	$3,469.10	0.95	$65,912.90
4	15401-0000	Contractor Testing	1	LS	$54,250.00	$54,250.00	0	$0.00	0.12	$6,510.00	0.12	$6,510.00	0.88	$47,740.00
5	15705-1500	Soil Erosion Control, Sediment Wattle	5,920	LNFT	$2.34	$13,852.80	0	$0.00	5700	$13,338.00	5700	$13,338.00	220	$514.80
6	15801-0000	Watering for Dust Control	3,000	MGAL	$2.00	$6,000.00	0	$0.00	0	$0.00	0	$0.00	3,000	$6,000.00
7	20301-2400	Removal of Signs	74	EA	$15.00	$1,110.00	0	$0.00	0	$0.00	0	$0.00	74	$1,110.00
8	20302-1300	Removal of Guardrail, Concrete Barrier	2,600	LNFT	$5.00	$13,000.00	0	$0.00	0	$0.00	0	$0.00	2,600	$13,000.00
9	20402-0000	Subexcavation	250	CUYD	$17.00	$4,250.00	0	$0.00	0	$0.00	0	$0.00	250	$4,250.00
10	20410-0000	Select Borrow	250	CUYD	$31.56	$7,890.00	0	$0.00	0	$0.00	0	$0.00	250	$7,890.00
11	20703-0000	GeoGrid	550	SQYD	$5.50	$3,025.00	0	$0.00	0	$0.00	0	$0.00	550	$3,025.00
12	30302-1000	Ditch Reconditioning	17,100	LNFT	$0.53	$9,063.00	0	$0.00	9990	$5,294.70	9990	$5,294.70	7,110	$3,768.30
13	30306-4000	Pulverization, 8in depth	268,000	SQYD	$0.74	$198,320.00	0	$0.00	0	$0.00	0	$0.00	268,000	$198,320.00
14	30405-1100	Cement Aggregate Stabilization, In-place Aggregate, 8in	268,000	SQYD	$0.57	$152,760.00	0	$0.00	0	$0.00	0	$0.00	268,000	$152,760.00
15	30416-0000	Cement	3,350	TON	$127.10	$425,785.00	0	$0.00	0	$0.00	0	$0.00	3,350	$425,785.00
16	30806-0000	Bedding and Backfill Aggregate	150	TON	$12.17	$1,825.50	0	$0.00	0	$0.00	0	$0.00	150	$1,825.50
17	40101-1000	Superpave Pavement: 3/4" Nominal Max 0.3-<3 Mil ESAL	46,400	TON	$62.33	$2,892,112.00	0	$0.00	0	$0.00	0	$0.00	46,400	$2,892,112.00
18	40105-3000	Antistrip Additive, Type 3	465	TON	$210.00	$97,650.00	0	$0.00	0	$0.00	0	$0.00	465	$97,650.00
19	41101-1000	Prime Coat, Grade CMS-2	0	TON	$0.00	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
20	41105-0000	Blotter	2,000	TON	$0.00	$0.00	0	$0.00	0	$0.00	0	$0.00	2,000	$0.00
21	41201-1000	Tack Coat Grade CSS-1, CSS-1H, SS-1, or SS-1H	236	TON	$350.72	$82,769.92	0	$0.00	0	$0.00	0	$0.00	236	$82,769.92
22	60901-2100	Curb, Asphalt, 4 inch depth	350	LNFT	$8.35	$2,922.50	0	$0.00	0	$0.00	0	$0.00	350	$2,922.50
23	61701-1200	Guardrail System G4, Type 2, Class A Steel Posts	3,650	LNFT	$29.00	$105,850.00	0	$0.00	0	$0.00	0	$0.00	3,650	$105,850.00
24	61702-0600	Terminal Section, Type Flared	7	EA	$2,500.00	$17,500.00	0	$0.00	0	$0.00	0	$0.00	7	$17,500.00
25	61702-0800	Terminal Section, Type Tangent	7	EA	$2,900.00	$20,300.00	0	$0.00	0	$0.00	0	$0.00	7	$20,300.00
26	62201-1000	Wheel Loader, 4 Cubic Yard Minimum Capacity	30	HOUR	$120.43	$3,612.90	0	$0.00	0	$0.00	0	$0.00	30	$3,612.90
27	62201-2050	Roller	30	HOUR	$102.83	$3,084.90	0	$0.00	0	$0.00	0	$0.00	30	$3,084.90
28	62201-2850	Motor Grader, 12 Foot Minimum Blade	30	HOUR	$145.43	$4,362.90	0	$0.00	0	$0.00	0	$0.00	30	$4,362.90
29	62301-0000	General Labor	90	HOUR	$39.27	$3,534.30	0	$0.00	0	$0.00	0	$0.00	90	$3,534.30
30	63302-0000	Sign System	660	SQFT	$38.00	$25,080.00	0	$0.00	0	$0.00	0	$0.00	660	$25,080.00
31	63309-0200	Delineator, Type 2	450	EA	$26.00	$11,700.00	0	$0.00	0	$0.00	0	$0.00	450	$11,700.00
32	63401-0300	Pavement Markings, Type B, Solid Yellow	280,500	LNFT	$0.04	$11,220.00	0	$0.00	0	$0.00	0	$0.00	280,500	$11,220.00
33	63401-0300	Pavement Markings, Type B, Solid White	374,000	LNFT	$0.04	$14,960.00	0	$0.00	0	$0.00	0	$0.00	374,000	$14,960.00
34	63401-0400	Pavement Markings, Type B, Broken Yellow	93,500	LNFT	$0.02	$1,870.00	0	$0.00	0	$0.00	0	$0.00	93,500	$1,870.00
35	63502-0400	Temporary Traffic Control, Barricade Type 1	20	EA	$35.00	$700.00	0	$0.00	0	$0.00	0	$0.00	20	$700.00
36	63502-0600	Temporary Traffic Control, Barricade Type 3	12	EA	$75.00	$900.00	0	$0.00	0	$0.00	0	$0.00	12	$900.00
37	63502-100	Temporary Traffic Control, Cone, Type 36 Inch	600	EA	$7.00	$4,200.00	0	$0.00	0	$0.00	0	$0.00	600	$4,200.00
38	63502-1300	Temporary Traffic Control, Drum	120	EA	$18.00	$2,160.00	0	$0.00	0	$0.00	0	$0.00	120	$2,160.00
39	63504-1000	Temporary Traffic Control, Construction Sign	2,050	SQFT	$4.25	$8,712.50	216	$918.00	72	$306.00	288	$1,224.00	1,762	$7,488.50
40	63506-0600	Temporary Traffic Control, Pilot Car	250	HOUR	$59.00	$14,750.00	0	$0.00	0	$0.00	0	$0.00	250	$14,750.00
41	63507-0700	Temporary Traffic Control, Traffic and Safety Supervisor	110	DAY	$450.00	$49,500.00	4	$1,800.00	16	$7,200.00	20	$9,000.00	90	$40,500.00
42	63509-1000	Temporary Traffic Control, Flagger	2,900	HOUR	$47.00	$136,300.00	36	$1,692.00	249	$11,703.00	285	$13,395.00	2,615	$122,905.00
43	MOH-40101-1000	Material on Hand for Superpave Aggregate	1	LS	$171,250.00	$171,250.00	0	$0.00	1	$171,250.00	1	$171,250.00	0	$0.00
	Percent Retainage	Totals				$4,895,746.91		$62,823.19		$326,286.11		$389,109.30		$4,506,637.61
	0.0%	Retainage				$0.00		$0.00		$0.00		$0.00		$0.00
		Totals Minus Retainage				$4,895,746.91		$62,823.19		$326,286.11		$389,109.30		$4,506,637.61

QL PAY EXAMPLE

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Central Federal Lands Highway Division
12300 W. Dakota Ave. Lakewood, Colorado 80228

Item Quantity Pay Note Sheet

Date: 10-10-10

Project Number: SD PFH 17-1(6) Project Name: Hill City to Lead

Account: Schedule A

Pay Note Information:

Pay Item #: 30101-0000 Item Description: Agg. Base Lot 1 Material Incentive Pay Unit: TON

Item Line #: N/A (for EEBACS only) Item Type: QM

Pay Note #: 142 Pay Period: 5

Pay Note Entry:

Work Start Date: 9/02/10 Work End Date: 10/02/10

Location/Description:

Material placed under 30101-0000 from 9/2/10 to 10/2/10. See Item for locations

Remarks/Calculations:

From Location/Description:
Total quantity (TONS) = 250.84 + 240.03 + 230.64 + 250.68 + 250.92 + 210.99 + 250.08 = 1,720.18 TONS = Lot 1

1,720.18 TONS WERE PAID ON ESTIMATE 4, 10/02/10. PER ATTACHED QL-PAY REPORT DATED 10/10/10, THE CONTRACTOR IS SUBMITTING FOR ADDITIONAL COMPENSATION FOR THIS LOT DUE TO A CALCULATED 1.03 PAY FACTOR.
(1.03 X $22.45) = $23.12 (new unit bid price for Lot 1)
1720.18 TONS x ($23.12 new unit bid price - $22.45 previously paid) = 1720.18 TONS x ($0.67) = $1,152.52

Support Documentation/References:

QL-PAY calculation sheet for Lot 1, 30101-0000 unit price

Measured By: Joe the Inspector & Bob the Contractor

TOTAL QUANTITY: 1720.18 ton@$0.67

☒ Interim Measurement ☐ Final Measurement

By signature below, I hereby certify that the measurements and calculations shown above are correct to the best of my knowledge and that the quantity being measured is subject to direct payment for the identified item under contract.

Contractor Representative (Print): Bob the Contractor Date: 10/10/10

Contractor Representative (Signature):

Approved by FHWA Representative (Print): Joe the Inspector Date: 10/11/10

Approved by FHWA Representative (Signature):

Checked by FHWA Representative (Signature): Jane the Project Engineer Date: 10/13/10

Central Federal Lands Highway Division

QUALITY LEVEL ANALYSIS & PAY FACTOR COMPUTATIONS

Project Name: Hill City to Lead
Project Number: SD PFH 17-1(6)
Project ID: DTFH68-10-C-00010

Item Number: 30101-0000
Lot Number: 1
Lab: Contractor Lab

Quality Levels and Pay Factors

Quality Charac-teristic	Actual Target Value		Mean	Standard Deviation	PWL	Pay Factor
1"	info		100.00	0.000	---	---
3/4"	94.91	+,- 6.0	94.91	1.446	100	1.00
1/2"	info		78.82	2.857	---	---
3/8"	70.73	+,- 6.0	70.73	3.379	94	1.03
#4	54.18	+,- 6.0	54.18	3.430	94	1.03
#40	14.55	+,- 4.0	14.55	1.128	100	1.00
#200	7.00	+,- 3.0	9.02	0.665	94	1.03

TESTING COMPLETED
FINAL PAY FACTOR: 1.03

A- 7

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
30101-0000	AGGREGATE BASE		
	5,810 TON	22.45	130,434.50
40301-0000	HOT ASPHALT CONCRETE PAVEMENT		
	2,445 TON	88.78	217,067.10
40920-1000	FOG SEAL, EMULSIFIED ASPHALT GRADE CSS-1 OR CSS-1H, SS-1 OR SS-1H		
	3 TON	969.40	2,908.20
41101-0000	PRIME COAT		
	10 TON	918.38	9,183.80
41105-0000	BLOTTER		
	50 TON	102.04	5,102.00
41201-1000	TACK COAT GRADE CSS-1, CSS-1H, SS-1, OR SS-1H		
	3 TON	1,122.46	3,367.38
60103-0000	CONCRETE, HEADWALL AND WINGWALLS		
	2 EACH	24,490.08	48,980.16
60103-0000	CONCRETE, HEADWALL (PRECAST)		
	2 EACH	1,020.42	2,040.84
60201-0600	18-INCH PIPE CULVERT		
	165 LNFT	27.04	4,461.60
60201-0800	24-INCH PIPE CULVERT (CONCRETE)		
	90 LNFT	45.92	4,132.80
60201-0900	30-INCH PIPE CULVERT		
	65 LNFT	45.92	2,984.80
60210-0600	END SECTION FOR 18-INCH PIPE CULVERT		
	4 EACH	255.11	1,020.44
60210-0800	END SECTION FOR 24-INCH PIPE CULVERT (CONCRETE)		
	2 EACH	1,045.93	2,091.86

Appendix A
Example Quality Control Plan
(Modified by Central Federal Lands
Highway Division on 1/4/99)

ABC Construction Company
P. O. Box 357
Red River, CA 94781

August 18, 1997

Federal Highway Administration
P. O. Box 78
Sutterville, CA 94832

Gentlemen:

Re: CA FH 93-1(3), Gold Rush Highway
Quality Control Plan

The following items comprise our Quality Control Plan (QCP) required by Subsection 153.02 of the Contract.

1. All work will be performed in accordance with the contract requirements. ABC will maintain an inspection system which assures compliance with the contract requirements. Any indication of system deficiencies whether discovered as a result of the Government's or ABC's checks and tests, will result in modifications to the system to correct these deficiencies.

2. This QCP does not endeavor to repeat or summarize contract requirements. It describes the process which ABC will use to assure compliance with those requirements. The QCP documents broad categories of contract work in accordance with Subsection 153.02. Necessary details dealing with minor items that may be overlooked in this plan will be addressed informally between the Quality Control Technician (QCT) and the Project Engineer (PE), as the work progresses; and will be documented in writing if so requested by the PE. It is understood that the level of QC accountability and control exercised by ABC on these items will be consistent with the details of this plan.

3. The Project Superintendent, Mr. Ralph Altway has overall responsibility for the successful completion of the project work. Mr. Altway has had similar responsibilities on other Federal (Corps of Engineers) and State (CALTRANS) projects.

4. Mr. Leon Williams will be the QCT for the project. He will report directly to Mr. Altway. Mr. Williams is also a NICET Level IV Technician and Certified by CALTRANS and Nevada DOT as a QC Technician. He has been employed in this role by ABC for nearly three years. He will be responsible for overseeing day-to-day construction operations from a QC standpoint. He will assure that all required tests and documentation are completed, and that the results are furnished to the Government in the time frame required. Mr. Williams is empowered to suspend any operations which he deems to be in noncompliance with the contract, and/or order corrective measures to assure compliance. Mr. Williams will complete the Inspector's Daily Record required by Subsection 153.04.

5. As the number of operations or their dispersion on the project starts to overextend Mr. Williams, QC responsibilities will specifically be assigned to ABC's supervisory personnel specifically responsible for given operations; or an assistant to him will be provided. In either case, standards of application of the QCP will be the same. The names, experience and qualifications of any personnel assuming QCP responsibilities will be provided to the Government in advance.

6. ABC has an experienced and highly professional staff that is used to the responsibility entailed by the QC requirements. We therefore do not anticipate any personnel or training problems in complying with them. If any such problems occur, ABC will take whatever actions are necessary to correct them including retraining, providing more supervision or removal of poorly functioning personnel.

7. Grading

Preparatory Phase -

QCT will go over erosion control requirements with Project Engineer and order silt fence and other authorized materials at least two weeks before work starts.

QCT will go over clearing limits and slope limits with PE and Grading Foreman.

Startup Phase -

ABC will Install silt fences and temporary culverts as necessary along pioneer road.

QCT will obtain materials samples for T-99 or T 180 proctor tests as soon as cuts are started. Provide PE with splits of samples. Provide completed proctor worksheets within 48 hours.

Grading Foreman's name will be provided to Government as soon as known.

QCT will go over lift thickness and other contract requirements with Grading Foreman.

Production Phase -

After startup, Grading Foreman will be responsible for continuous monitoring of QC.

QCT will monitor the work and density with a nuclear gauge. These tests will be at the minimum levels as required by the contract for non-rock material. The QCT will require additional proctors to be performed when test results indicate the proctor being used may not be correct, or when the material changes. One-point proctors will be performed as needed to verify the use of the proper proctor. If appropriate to the material being tested, the proctor will contain a rock correction and/or a moisture correction. Only moisture corrections supported by laboratory testing will be used when testing the compacted material with a density gauge. QCT will advise the Grading Foreman of test results.

Failing tests will be followed by appropriate corrective [reworking/recompaction] efforts, and retesting. If the rate of initial failing tests exceeds one out of five, the QCT and Grading Foreman will meet and formally document the corrective actions to the embankment construction process which will be taken to resolve the problem.

Grading Foreman will order drying operations or more water when compaction tests or appearance of fills material indicate that moisture is a problem.

Density tests will be documented in tabular form showing date, time, location, offset, depth below grade and test result. Results will be provided to PE by the next working day.

Each day QCT will plot test results on control charts in the ABC project lab.

8. Drainage

Preparatory Phase -

QCT will obtain survey crews' stakeout notes and review culvert design prior to submittal to PE for approval. QCT will obtain approved designs and order culvert and end section materials.

Precast inlets and similar items will be obtained from Williams Precast Co. of Susanville. Copies of their materials data, mix designs and QC plan will be obtained and furnished to PE 30 days prior to start of work.

Cast-in-place concrete will be furnished under Section 601 and obtained from Sutterville Quality Concrete (SQC). QCT will obtain documentation from SQC. QCT will go over their procedures with them before production.

QCT will identify a source of backfill material to be used if natural material is too rocky or otherwise unsuitable. QCT will test the material (proctor) and provide results to PE.

QCT will inspect culvert materials upon arrival and obtain valid materials certifications and submit to PE.

QCT will go over stakeout notes and contract requirements with pipe crew foreman prior to start of work. Pipe foreman will be identified to PE prior to start of work.

Startup Phase -

QCT will work nearly continuously with the pipe crew on the first day to verify layout procedures, bedding preparation and assembly.

QCT will go over proctor data and operation of nuclear gauge with pipe foreman. They will agree on what passing density readings are for the borrow backfill and other possible backfill materials.

QCT will go over backfill, lift thickness and density monitoring procedures.

For cast-in-place concrete, QCT will be at plant to verify QC procedures at the start of production. QCT will perform required QC at the site.

Production Phase -

Pipe foreman will be responsible for QC during construction.

The pipe foreman is trained and certified to operate a nuclear density gauge. The pipe foreman will monitor work and density with a nuclear gauge during backfill operations, and will perform density testing at the minimum rate required by the contract. QCT will visit each installation on a random basis to take density tests to verify the pipe foreman's results. A new proctor will be performed when test results indicate the proctor being used may not be correct, or when the material changes. One-point proctors will be performed as needed to verify the use of the proper proctor. Moisture corrections will not be used unless supported by laboratory data. Record of density tests will be furnished to the PE by the following working day.

Failing tests will be followed by appropriate corrective efforts and retesting. If the rate of initial failing tests exceeds one out of five, the QCT and pipe foreman will meet and formally document the corrective actions to the embankment construction process which will be taken to resolve the problem.

For cast-in-place concrete QCT will obtain all required documentation and furnish to PE. QCT will be at placement site enough to perform required QC tests. QCT will go over QC procedures with foreman, who will be responsible for QC when the QCT is absent.

9. Subgrade

Preparatory Phase -

QCT will coordinate with grading foreman and survey crew as to how subgrade will be staked, controlled and finished.

QCT will go over with grading foreman, any problems with subgrade materials quality - rocky material, clay or other unsuitable. Such materials will be used in other than subgrade locations.

Startup Phase -

QCT will coordinate with grading foreman and PE, the acceptable standards and tolerances for subgrade finishing.

Production Phase -

Grading foreman will be responsible for day to day QC.

Grading foreman will advise PE when each segment of subgrade is ready for acceptance.

QCT will take subgrade density tests at required frequency using nuclear gauge. One point proctors will be run whenever materials change or when there are questions as to the suitability of the proctor being used.

Test results will be plotted on control charts by QCT and also furnished to the PE by the next working day.

10. Base Course

Preparatory Phase -

Base course will be obtained from Whippel Mountain Aggregates, Inc. (WMA)

QCT will obtain suppliers quality tests and samples of material for the PE at least 30 days prior to base work beginning.

QCT will perform proctor tests on base course. QCT will also perform initial gradation tests on stockpile just prior to startup.

QCT will review supplier's QC procedures including stockpiling, moisture control, process control testing, and weighing.

QCT will develop dumping spread sheets for base course foreman.

Startup Phase -

QCT will go over delivery and dumping procedures with base course foreman.

QCT will go over spreading and compaction procedures with base course foreman.

Base course will be pugmill mixed and delivered at optimum moisture and in nonsegregated condition so that processing on the grade will be minimal.

Production Phase -

WMA will be responsible for plant QC. WMA will perform at least one gradation test per day as long as at least 80% of tests pass. Frequency will be increased if there are more failing tests.

Grading foreman will be responsible for receiving, dumping, tabulating tonnages and delivering receiving reports to PE at the end of each day.

Grading foreman will perform occasional (at least one per day) depth checks to verify spread rates.

QCT will obtain gradation samples at the required frequency. Samples will be split, with the splits delivered to the PE.

11. Asphalt Items

Preparatory Phase -

All asphalt items will be furnished by Allied Paving (AP) of Sutterville. Materials will be hauled to the site by ABC's hauling sub, and paving or installation of materials will be by ABC.

AP has a lab certified by Caltrans at the plant. Lab supervisor is William Brown, Certified Asphalt Technician in California.

QCT will obtain required mix design submittals and samples from AP and deliver to PE at least 30 days before work is scheduled to start. AP's QC/Mix Design technician is Allen Rockford who has 15 years in this position and is a certified asphalt technician in California and Nevada. Mr. Rockford will be the contact for any technical discussions during the mix approval process.

With the mix designs, AP will furnish a separate QC plan dealing with their plant operations, personnel, etc.

Startup Phase -

QCT will review all specification requirements with paving foreman prior to start of work.

QCT will be in charge of production start up procedures. Documentation and tests will be at his directions and submitted to the PE. Full production will start when approved by PE.

Production Phase -

Paving foreman will be responsible for QC on a daily basis. QCT will conduct periodic inspections.

QCT or designee will obtain mix sample and cores. Splits will be provided to PE for acceptance. Contractor samples will be delivered to AP's plant lab for testing. Results will be provided through the QCT by the following day. We will attempt to set up a system to provide results by FAX.

AP will obtain AC samples at the plant and deliver (through QCT) to PE for testing.

Test results will be plotted on control charts in ABC's onsite lab. QCT will run QL Pay at the end of each day, or the beginning of the next. Quality problems evident either from inspections or test results will be dealt with under the direction of the QCT. Work will be suspended if problems cannot be resolved expeditiously.

12. Structural Concrete

Preparatory Phase -

Wahoo Readymix in Martin, CA will provide PC concrete under Section 552 for the box culverts. Wahoo's plant is certified by CalTrans as is their Quality Supervisor, Mr. Larry Ryland. Mr. Ryland will provide documentation [through ABC's QCT]of proposed mix design (previously approved by CalTrans) and all materials 30 days or more prior to first delivery. Wahoo will also be responsible for all plant QC and inspection of trucks.

QCT will be responsible for onsite QC operations other than the concrete mix itself, e.g. resteel, forming, concrete placement, finishing, etc. Resteel will be inspected upon delivery for proper certification, dimensions, storage, etc. QCT will be responsible for stakeout and foundation preparation prior to forming.

Startup Phase -

QCT will coordinate with Wahoo to schedule delivery operations. Wahoo will send one or more certified concrete technicians to each concreting operations. Technicians will be responsible for any final mix adjustments, delivery ticket validation, screening (air, slump, temperature) and acceptance testing as required by FHWA inspector. Cylinders will be cured onsite at ABC's lab, and taken to Wahoo's lab for breaking. QCT will advise FHWA of scheduled breaks and provide opportunity for witnessing.

QCT will inspect forming and resteel operations from their inception and work with crews to assure acceptable tolerances and other compliance. QCT will inspect placement operations including vibrating and finishing. QCT will inspect curing operations and work with ABC crews to resolve any

problems. All required documentation will be completed by QCT and delivered to FHWA by the day following each placement operation.

Production Phase -

Wahoo will continue to provide onsite QC for each concrete delivery.

Once resteel and forming crews are lined out, QCT will make spot checks of their operations, plus a final inspections two hours or so prior to each placement. QCT will inspect curing QCT will inspect all surfaces upon stripping and go over any necessary repairs and finishing operations.

13. Miscellaneous Items

This covers items, mostly involving installation of manufactured items such as guardrail, delineators, fencing, etc.

Preparatory Phase -

QCT will verify all certification requirements, inspect material upon delivery and submit certifications and other documentation to PE.

QCT will work with survey crew and PE to verify exact stakeout requirements and resolve any potential stakeout problems.

Startup Phase -

QCT will go over the specification requirement and stakeout data with the foreman in charge of installation.

QCT will normally be present when any operation begins to resolve problems and verify specification compliance.

Production Phase -

Foreman will normally be responsible for QC during production. QCT will make spot checks approximately once a day or more frequently if there are problems.

QCT will perform tests required by the contract and furnish results to PE. QCT will advise PE when segments of the work are ready for acceptance.

The overall goal of ABC Construction Company's quality control program is to conduct consistent and effective processes such that work performed naturally conforms to the contract requirements. Testing and inspection will be performed and documented for the purpose of evaluating the effectiveness of our work processes, identifying and correcting non-conforming work, and ensuring the quality of the work is not compromised.

Please advise me if there are any additions or supplements you would like us to make to this QCP. If there are changes to any items (personnel, suppliers, etc.) we will attempt to provide the PE notice in advance of their impact on the work.

We need concurrence to proceed with at least the clearing and grading portion of the work by June 1 in order to stay on our schedule.

Sincerely yours,

Ralph Altway

Ralph Altway
Superintendent