2019 SUPPLEMENTAL SPECIFICATIONS
FOR THE
2018 IDAHO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

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ON PAGES 14, 15, 16, AND 17, SUBSECTION 101.03.2 – ACRONYMS

Add COD Contractor-Obligated Defects

Add MARV Minimum Average Roll Values

Add NCOD Noncontractor-Obligated Defects

Add PTFE Polytetrafluoroethylene

Add TCS Traffic Control Supervisor

ON PAGE 27, SUBSECTION 102.04 – PREPARATION OF A PROPOSAL

In the second paragraph, replace "Expedite" with "Project Bids".

Add the following to the last paragraph:

as specified in 67-2310, Idaho Code.

ON PAGE 29, SUBSECTION 102.12 – PROTESTING A PROPOSAL

Delete 102.12 and replace with:

To protest a determination made by the Department regarding the regularity or irregularity of a bid, submit a written protest to the Chief Engineer within 5 calendar days (40-902, Idaho Code) of the official results being posted to the Department's website (https://apps.itd.idaho.gov/Apps/contractors/br.htm). The protest must set forth in specific terms the reasons why the Department's determination is thought to be erroneous.

Protest by Apparent Low. If the protest is made by the apparent low bidder, the protest will be addressed by the Chief Engineer.

Third-Party Protest. If the protest is made by other than the apparent low bidder, the Chief Engineer will assign a hearing officer for a contested case hearing followed by a final decision by the Chief Engineer.

ON PAGE 38, SUBSECTION 105.04 – COORDINATION OF CONTRACT DOCUMENTS

Delete subsection 105.04, in its entirety, and replace with:

The specifications, plans, special provisions, and supplementary documents are all essential parts of the contract. In case of discrepancy between contract documents, the discrepancy is resolved by following this order of precedence (i.e., 1 presiding over 2, 3, 4, 5, 6, and 7; 2 presiding over 3, 4, 5, 6, and 7; etc.):

1. Bid schedule.
2. Addenda.
3. Special provisions.
4. Quality assurance special provision.
5. Plan details.
6. Plan sheets.
7. Standard Supplementals.

8. Standard Specifications.
9. Standard drawings.
10. Quality Assurance manual.
11. Electronic files.

Calculated dimensions govern over scaled dimensions.

Immediately notify the Engineer of an apparent error or omission encountered in the contract documents. Do not take advantage of errors or omissions in the contract documents. The Engineer will determine if an error or omission exists, interpret and correct the error or omission to fulfill the intent of the contract documents, and determine if a contract revision is required as a result of the error or omission as specified in 104.02.

If any discrepancies are found between the plans and the electronic files, the information in the plans presides over the electronic files.

ON PAGE 42, SUBSECTION 105.14.D – MAINTENANCE DURING CONSTRUCTION

Delete 105.14.D and replace with:

D. Maintenance of Traffic.

Maintain the road for use by traffic and minimize traffic delays during roadway construction, unless otherwise directed.

Before starting the work, provide a temporary traffic control plan for approval. Include the following information:

1. Construction phasing and work areas.
2. Phasing and sequencing for implementing the temporary traffic control plan and transitioning between phases.
3. Proposed detours.
4. Emergency vehicle and school bus route accommodations.
5. Pedestrian and bicycle accommodations.
6. Plan for preserving access to cross streets and approaches.
7. Temporary traffic control devices.

Submit changes to the approved temporary traffic control plan for approval. Allow at least 2 business days for review and approval.

Provide and maintain access to cross streets and approaches at no additional cost to the Department.

ON PAGE 61, SUBSECTION 106.06 – STORAGE AND HANDLING OF MATERIAL

Add the following after the first sentence:

When applicable store and handle all materials in accordance with the manufacturer's recommendations. Improperly stored or handled materials are subject to rejection.

ON PAGE 77, SUBSECTION 107.19.5 – SURVEY MONUMENT PRESERVATION

Under subsection 5, delete the second full sentence beginning with "Obtain and complete the …"

ON PAGE 78, SUBSECTION 107.19.7 – SURVEY MONUMENT PRESERVATION

Under subsection 7, Preliminary Procedure, delete subsections 107.19.7.b through 107.19.7.e and replace with the following:

b. Control points or benchmarks set by agencies of the United States government, the state of Idaho, counties, cities, or private surveyors.
c. Right of way monuments that may be disturbed by the work.
d. A list of known survey monuments will be provided in the contract.

ON PAGE 78, SUBSECTION 107.19.9.a – SURVEY MONUMENT PRESERVATION

Under subsection 9.a, add the following at the beginning of the subsection:

For each survey monument shown in the plans, follow recommended actions.

ON PAGE 78, SUBSECTION 107.19.9.b – SURVEY MONUMENT PRESERVATION

Under subsection 9.b, delete the second and third full sentences beginning with "A survey monument set or adjustment…" and replace with the following:

Any survey monument set or adjusted will be in accordance to 54-1227, Idaho Code and for Public Land Survey System (PLSS) corner monuments will be surmounted with a cap of such material and size that it can be permanently and legibly marked in accordance with the current Manual of Surveying Instructions published by the United States Department of the Interior, Bureau of Land Management.

ON PAGE 78, SUBSECTION 107.19.9.c – SURVEY MONUMENT PRESERVATION

Under subsection 9.c, delete the second sentence beginning with "In the case of NGS survey monuments…" and replace with the following:

In the case of NGS survey monuments, the Idaho's NGS Geodetic Coordinator on staff at Idaho State University (ISU), if available, or the NGS Northwest Regional Geodetic Advisor in Seattle, Washington will be consulted before the removal and reestablishment of any NGS or United States Coast and Geodetic Survey monument.

ON PAGE 79, SUBSECTION 107.19.9.d – SURVEY MONUMENT PRESERVATION

Under subsection 107.19.9.d. delete the subsection and replace with the following:

d. Survey monuments lying within the paved portions that will or may be disturbed during the work will be treated as follows:
   (1) Installations for street monuments within the paved portions of the roadway and more than 1 foot inside the edge of the asphalt shoulder (edge of oil) that will or may be disturbed will conform to the specifications for a street monument as specified in 618.
   (2) If an existing survey monument meets the minimum requirements of 54-1227, Idaho Code, it can be retained or adjusted vertically in place as determined by the PLS.
   (3) If an existing survey monument does not meet the minimum requirements of 54-1227, Idaho Code, a new survey monument which meets or exceeds the minimum

requirements of 54-1227, Idaho Code or the standards of the original monumenting agency, whichever is a superior monument, will be installed by or under the direct supervision of the PLS.

(4) If an existing survey monument must be removed for the work, a new survey monument which meets or exceeds the minimum requirements of 54-1227, Idaho Code or the standards of the original monumenting agency, whichever is a superior monument, will be installed by or under the direct supervision of the PLS.

(5) All state highway system right of way monuments disturbed will conform to the specifications for a right of way marker as specified in 618.

ON PAGE 79, SUBSECTION 107.19.9.g – SURVEY MONUMENT PRESERVATION

Under subsection 107.19.9.g., delete the subsection and replace with the following:

Any survey monument not intended to be replaced by the work but that was willfully or carelessly disturbed or destroyed by the Contractor, or as a result of the contracted work work, will be re-established and re-monumented as specified in this section.

ON PAGE 79, SUBSECTION 107.19.10 – SURVEY MONUMENT PRESERVATION

Under subsection 107.19.10, delete the subsection and replace with the following:

10. Documentation.

Following the completion of the work, the PLS will verify the monument positions, stamp the survey monuments, and verify the vaults (casings) have been installed, if required.

a. If public land corner monuments were adjusted or replaced, or if any accessories to the public land corner monuments have been established, the PLS will file the appropriate documentation in the county or counties where the project site is located in accordance with 55-16, Idaho Code.

b. If private land corner monuments, centerline monuments, or right of way monuments were adjusted or replaced, a record of survey will be filed in accordance with 55-19, Idaho Code. Before filing the record of survey, submit drawing to the District Land Surveyor for review, complete all corrections noted and resubmit as indicated, and file the record of survey when approved.

c. The PLS will submit a copy of all documents recorded at the county offices.

d. If NGS survey monuments were disturbed and/or reset, the PLS will submit copies of the monument reset information as provided to and approved by the NGS.

e. The PLS will submit a written report, which documents all actions taken by him/her or the Contractor to preserve or restore each survey monument within the project site.

(1) Before construction, include the Geodetic or State Plane coordinate positions (including coordinate system, datum, and project combination factor used) of each survey monument within the project site.

(2) After the work has been completed, include the Geodetic or State Plane coordinate positions of each survey monument.

(3) Include the actions taken by the Contractor and the PLS to preserve, adjust, or replace each and every survey monument.

(4) The PLS will seal and sign this document.

ON PAGE 80, SUBSECTION 107.19.11 – SURVEY MONUMENT PRESERVATION

Under subsection 107.19.11 MCPD submittal, delete the subsection and replace with the following:

11. MCPD Submittal.

    The PLS will obtain and complete the MCPD master template form, in its entirety, with global positions (e.g., WGS-84 latitude, longitude, and orthometric height) and with State Plane Coordinates of all survey monuments located, referenced, and tied during and checked after the work. The PLS will submit the completed MCPD template directly to the MCPD Data Steward at ISU (mcpd@isu.edu) and submit a copy to the Engineer. The MCPD template is available at http://giscenter.isu.edu/research/Techpg/GC/zip/MCPD_MASTER_TEMPLATE.zip. In the submittal of the MCPD to ISU, include a letter of transmittal signed and sealed by the PLS.

ON PAGE 80, SUBSECTION 107.19 – SURVEY MONUMENT PRESERVATION

Under subsection 107.19, delete the last paragraph of the subsection, replace with the following:

Survey monument preservation work to locate, reference, reestablish, replace, install, adjust, or reconstruct survey monuments and vaults, and to obtain and complete the MCPD template for submittal will be paid by force account as specified in 109.03.C.5.f.

Payment for this work will be withheld until copies of field notes and diaries documenting the work, the written Survey Monument Preservation report, and copies of all documents filed with County Recorders are submitted to the Engineer.

ON PAGE 83, SUBSECTION 108.03.A – PROJECT SCHEDULE

Add the following to number 6 under part A:

unless allowed by the Engineer.

Delete the second sentence in number 7 under part A and replace with:

Leads and lags may be used when applicable.

ON PAGE 108, SUBSECTION 110.01 – CIVIL RIGHTS/GENERAL REQUIREMENTS

Delete section 110.01 replace with:

For federal-aid contracts, the Contractor will comply with 110 per Special Equal Employment Opportunity Responsibilities under 23 CFR 140 and 23 CFR 230, Subpart A and D (also refer to United States Department of Transportation (USDOT) form FHWA-1273 attached to each contract).

The Contractor will take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375. The Contractor must ensure compliance with the Uniformed Services Employment and Reemployment Rights Act (USERRA) and the Vietnam Era Veterans' Readjustment Assistance Act (VEVRAA) where appropriate.

ON PAGE 108, SUBSECTION 110.02 – CIVIL RIGHTS/EQUAL EMPLOYMENT OPPORTUNITY

Delete section 110.02 replace with:

The Contractor will establish and administer wages, working conditions, employee benefits, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and

termination, in a non-discriminatory manner. When advertising to hire employees, the Contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer". All advertisements will be published in newspapers or other publications having a large circulation among women and minority groups in the project area where the work force would normally be sourced.

ON PAGE 113 OF 571, SUBSECTION 110.03.B.1, DISADVANTAGED BUSINESS ENTERPRISE FOR RACE/GENDER – CONSCIOUS CONTRACTS

Delete the second sentence in the first full paragraph and replace with:

The Contractor must use ITD-2396 form, with all supporting documentation to the Department's Office of Civil Rights by 5:00 pm MT on the day of bid opening or the Contractor's bid will be deemed irregular as specified in 102.10.

ON PAGE 114 OF 571, SUBSECTION 110.03.B.4, DISADVANTAGED BUSINESS ENTERPRISE FOR RACE/GENDER – CONSCIOUS CONTRACTS

Delete the first sentence in the first paragraph and replace with:

The Department requires all bidders to furnish DBE commitments on the ITD-2396 and all supporting documentation for a construction contract by 5:00 pm MT on the day of bid opening.

ON PAGE 114 OF 571, SUBSECTION 110.03.B.4.c, DISADVANTAGED BUSINESS ENTERPRISE FOR RACE/GENDER – CONSCIOUS CONTRACTS

Add the following below the first paragraph:

The statement(s) of confirmation must include the date, project identifier (project name and/or project number), DBE work items, DBE subcontractor total, and a written statement that they are committed to performing the work quoted, if selected. This information may be in the form of a quote or estimate, so long as all bid items are included.

ON PAGE 123, SUBSECTION 203.03.D – MISCELLANEOUS REMOVALS/CONSTRUCTION REQUIREMENTS

Replace Part D with the following:

D. Remove Sign Assembly. This includes signs, sign posts, and sign post foundations. If the sign is to be reinstalled, protect signs during transportation and storage to prevent damage.

ON PAGE 125, SUBSECTION 203.05 – MISCELLANEOUS REMOVALS/BASIS OF PAYMENT

Delete the first two pay items and replace with:

Removal of Miscellaneous Items……..Each, ft, SF, SY, LS

Removal of _____.....Each, ft, SF, SY, LS

ON PAGE 127, SUBSECTION 205.02 – EXCAVATION AND EMBANKMENT/MATERIALS

B. Granular Borrow. Delete "greater than" from the second sentence and replace with "a minimum of" to be consistent with other references to the sand equivalent test and to be more mathematically consistent with the intent.

Replace Part D with the following:

D. Shoulder Materials. Provide ¾-inch aggregate for untreated base that meets 703.04.

ON PAGE 129, SUBSECTION 205.03.E – EXCAVATION AND EMBANKMENT/CONSTRUCTION REQUIREMENTS

Delete the last sentence of the first paragraph under part E and add the following:

Excavate down 2 feet minimum from the top of the roadbed or to the lines and grades as directed.

ON PAGE 131, SUBSECTION 205.03.G – EXCAVATION AND EMBANKMENT/CLASSES OF COMPACTION AND DENSITY REQUIREMENTS

In Table 205.03-1 – Class A Compaction, delete "205.03.E.2" and replace with "205.03.F.2".

ON PAGE 138, SUBSECTION 205.04 – EXCAVATION AND EMBANKMENT/METHOD OF MEASUREMENT

Add the following to the end:

10. Shoulder aggregate will be measured by the cubic yard or by the ton.
11. Excavation and soft spot repair will be measured by the cubic yard of excavated material in its original position.

ON PAGES 143-145, SECTION 210 – STRUCTURE EXCAVATION AND COMPACTING BACKFILL

Delete section 210, in its entirety, and replace with:

210.01 Description. Excavate and dispose of materials required for the construction of structures, unless otherwise specified as structural excavation. Include necessary drainage, pumping, bailing, sheeting, shoring, and the construction and removal of cribs and cofferdams. Remove old structures or parts as required. Place and compact backfill material as compacting backfill. Include sloping and cleaning up the sites.

The contract pay item structure excavation schedule no. 1 includes excavation for bridges, boxes, and stiffleg culverts. The contract pay item structure excavation schedule no. 2 includes excavation for other structures.

210.02 Materials. The Engineer will test material for backfill in accordance with AASHTO T 310 Method B, excluding materials too granular to test.

210.03 Construction Requirements.

A. General. Remove and dispose of unsuitable foundation material below the designed elevation as directed. Use suitable surplus excavated material in the construction of embankments. Replace material removed below the designed elevation with approved material.

Sheet and brace trenches if necessary. Do not remove sheeting or bracing until backfill has progressed enough to prevent damage to pipelines or structures.

Remove sheeting and bracing used in supporting structure excavation.

Where rock, hardpan, or other unyielding material is encountered and a yielding material is required, remove the unyielding material below the grade specified and backfill as directed.

Do not begin structure construction or backfill placement until the foundation has been approved. Do not use frozen material as backfill, and do not place backfill on snow-covered or frozen surfaces.

Place backfill consisting of suitable material in layers of 8 inches or less and compact to Class A compaction as specified in 205.03.G.

For backfill material placed within 3 feet of a concrete structure or retaining wall, uniformly distribute the backfill material in layers of no more than 8 inches and compact with lightweight compacting equipment having an impact force of 1,000 to 3,000 pounds. Compact the backfill to the density requirements for Class A compaction as specified in 205.03.G, before successive layers are placed. For backfill material determined by the Engineer as too granular to test, apply at least 5 overlapping compacting equipment passes per 8-inch lift or less.

Compact backfill in areas not within a roadway prism, or special backfill around pipe underdrains not requiring a higher degree of compaction for some other purpose, to approximately the same density as the adjacent undisturbed soil or gravel. Perform compaction by any effective means.

B. Conduit and Structural Plate Arch. Place and compact pipe bedding in maximum 6" loose lifts, and ensure that bedding completely fills the area under the pipe haunches. Carefully hand tamp under the lower ¼ of the overall pipe diameter, then compact for the balance of the pipe height and for the specified amount of bedding to be placed over the pipe.

Backfill pipe culvert and other conduit trenches with approved material.

C. Structures. For structures or retaining walls founded on rock**,** excavate rock to the elevation shown in the plans. Remove any weathered, highly broken rock at the excavation bottom. Level excavated rock surfaces to the plan elevation with Class 15 or higher class concrete before constructing the structure or wall foundations.

Use appropriate equipment and take precautions to ensure that structure and retaining wall foundation soils are not disturbed during excavation that may affect their bearing capacity. Remove disturbed, soft or unsuitable materials from the excavation and backfill with granular borrow or other approved material to the plan elevation. Replace material disturbed by the Contractor's operations at no additional cost to the Department.

Compact the bottom of soil excavations with a minimum of 5 overlapping passes with an approved compactor.

Take precaution when pumping water from foundation enclosure interiors to prevent the possibility of concrete materials being carried away. Do not pump during the placing of concrete or for at least 24 hours after, unless it is done from a suitable sump or well point separated from the concrete work.

When placing backfill material under water, place backfill in layers not thicker than 2 feet. Compaction is not required for this placement type.

Do not place backfill against newly constructed masonry or concrete structures before meeting the requirements in Table 502.03-5.

210.04 Method of Measurement. The Engineer will measure acceptably completed work by the cubic yard based on planned quantity.

The Engineer will measure structure excavation as the volume of material within prism-limiting planes as follows:

1. Structures:
    a. The bottom of the foundation.

b. The vertical planes 2 feet outside of and parallel to the outside lines of the structure, in the case of bents with individual column footings, the entire bent are considered as 1 structure.

c. With upper limits as follows:

(1) In embankment sections, the existing ground surface as cross-sectioned.

(2) In roadway cut sections or channel changes, the planes of the roadway cut or channel change as excavated.

The Engineer will measure compacting backfill by the cubic yard of backfill material placed and as follows:

1. Structures:

a. Below the original ground surface. A volume equal to the volume of structure excavation less the volume of the permanent structure, including the opening, contained within the limits of measurement for structure excavation.

b. Above the original ground surface. The volume contained between the outside walls of the structure and vertical planes 4 feet outside the original ground surface or the horizontal plane 1 foot above the top of the structure or of the subgrade, whichever is less.

c. Volumes of backfill placed through water around abutments, wing walls, and piers will not be included in the measurement of quantities for compacting backfill.

210.05 Basis of Payment. The Department will pay for acceptable quantities at the contract unit prices as follows:

Pay Item	Pay Unit
Structure Excavation Schedule No. 1	CY
Structure Excavation Schedule No. 2	CY
Compacting Backfill	CY

When the contract does not include a contract pay item for structure excavation or compacting backfill, this work is incidental and included in other contract pay items.

The Department will pay for required structure backfill or bedding material whose source is other than structure excavation at the contract unit price for the material being used or as extra work if no unit price was established.

If the Contractor is directed to remove material below the elevation specified, the Department will pay for the excavation work at the contract unit price or as extra work.

The Department will pay for Class 15 concrete used to backfill rock excavation below the bottom of the design footing grade based on the actual quantity used, but not to exceed a prism 1 foot outside the footing neat lines with an average depth of 1 foot below the bottom of footing.

Payment will not be made by the Department to excavate, backfill, and compact material removed for safety purposes or foundation soils that become disturbed due to the Contractor's operations.

The Department will pay using plan quantities as specified in 109.01.

ON PAGE 161, SUBSECTION 303.03.A – AGGREGATE BASIS/CONSTRUCTION REQUIREMENTS

Delete 1-4.

ON PAGE 199, SUBSECTION 405.03.J – SUPERPAVE HOT MIX ASPHALT/CONSTRUCTION REQUIREMENTS/PRODUCTION PAVING

Add "2" before Documentation/Control Charts.

ON PAGE 200, SUBSECTION 405.03.J.2.d – SUPERPAVE HOT MIX ASPHALT/CONSTRUCTION REQUIREMENTS/PRODUCTION PAVING

Delete the second sentence and replace with:

The 2 determinations must not vary by more than 0.012.

ON PAGE 222, SUBSECTION 409.03.H.b.(3) – PORTLAND CEMENT CONCRETE PAVEMENT/CONSTRUCTION REQUIREMENTS/JOINTS/LOAD TRANSFER DEVICES/DOWEL BAR ASSEMBLIES

Replace "TFE" with "PTFE".

ON PAGE 237, SUBSECTION 415.03.A – MICROSURFACING/CONSTRUCTION REQUIREMENTS/MIX DESIGN

Add the following:

Provide an optimized emulsion content for the microsurfacing mix design, using no less than 3 emulsion contents spread over a range not to exceed 2.0 percent residual.

ON PAGE 238, SUBSECTION 415.03.F – MICROSURFACING/CONSTRUCTION REQUIREMENTS/AUXILIARY EQUIPMENT

Add the following:

Screen the aggregate when loading units going from the stockpile area to the lay down operation.

ON PAGE 238, SUBSECTION 415.03.G – MICROSURFACING/CONSTRUCTION REQUIREMENTS/CALIBRATION

Add the following:

In the Engineer's or their representative's presence, demonstrate that the calibration data has been entered into the computerized control unit used to print the pay ticket.

ON PAGE 240, SUBSECTION 415.03.R – MICROSURFACING/CONSTRUCTION REQUIREMENTS/PRODUCTION MICROSURFACING

Replace 5 with:

5. Limit the emulsion content to within 1.0 percent of the job-mix design, not to exceed specifications.

ON PAGE 257, SUBSECTION 415.03.S – MICROSURFACING/CONSTRUCTION REQUIREMENTS/REPORTING

Replace 1 with:

1. Maintain quality control documentation and make available to the Engineer upon request or at completion of daily work. This includes machine counts for aggregate, emulsion and water.

ON PAGE 241, SUBSECTION 415.04 – MICROSURFACING/METHOD OF MEASUREMENT

Replace this section with:

The printouts from the calibrated computerized monitoring will be used to measure the pay items. Microsurfacing aggregate will be measured by the ton (dry weight basis). Polymer-modified emulsified asphalt will be measured by the ton, as delivered to the project site. Submit printouts daily. Make daily machine counts available for verification of Contractor supplied printouts.

ON PAGE 274, SUBSECTION 502.03 – CONCRETE/CONSTRUCTION REQUIREMENTS

Add note [c] to the 4th row (Bridge decks, top slabs of concrete box culverts or stifflegs) of Table 502.03-5.

Add the following note to the "Minimum Days" column

[f] 1 day = 24 hours.

ON PAGE 313, SECTION 507 – BRIDGE BEARINGS (NEW SECTION)

A. Description. Provide and place bearings including plain unreinforced elastomeric pads, reinforced elastomeric pads with steel laminates, or polytetrafluoroethylene (PTFE) pads with stainless steel mating surface that meet AASHTO Specifications for Highway Bridges at girder supports as specified in the plans.

Provide bearings with the dimensions, material properties, elastomer grade, and type of laminates specified. Show the design load specified and testing requirements.

If filled PTFE sheet is used, only glass-fiber filler will be approved.

B. Materials. Provide bearings as specified in:

Elastomeric Bearings 720.02

Polytetrafluoroethylene (PTFE) Bearings 720.03

Provide manufacturer certificates of compliance for materials used in the bearings.

C. Construction Requirements.

1. Fabrication. Fabricate bearings as specified in 720.02.
2. Testing. Test materials for elastomeric bearings and finished bearings as specified in 720.02.
3. Installation. Install bearings as specified in 720.02.

D. Method of Measurement. The Engineer will measure acceptably completed work by the each.

E. Basis of Payment. The Department will pay for acceptable quantities as follows:

Pay Item	Pay Unit
Elastomeric Bearings – Plain	Each
Elastomeric Bearings – Laminated	Each
PTFE Bearings	Each

ON PAGE 337, SUBSECTION 521.03.A – DYNAMIC PILE TESTING AND CAPWAP ANALYSIS/CONSTRUCTION REQUIREMENTS/TESTING/GENERAL.

Delete "additional".

ON PAGE 337, SUBSECTION 521.03.B – DYNAMIC PILE TESTING AND CAPWAP ANALYSIS/CONSTRUCTION REQUIREMENTS/TESTING/TESTING AND REPORTING.

Delete "1. Blows per foot of pile penetration" replace with

1. Blows per foot (or inch) of pile penetration.

Delete "2. Stroke heights for single acting hammers or blows per minute for other hammer types" and replace with:

2. Average stroke heights per foot (or inch) of penetration for single acting hammers or blows per minute for other hammer types.

Delete the last paragraph and replace with:

The Contractor will submit a final CAPWAP analysis report to the Engineer that is sealed and signed by an Idaho licensed professional engineer within 2 working days after the test(s) completion for each project site visit. The report will contain the required information and the CAPWAP analysis. The report must include the project key number, and information on the test pile, soil conditions, pile driving hammer, field test results (including the pile hammer stroke height at the hammer blow used for the CAPWAP analysis and the interval pile hammer blow count), and CAPWAP analysis with any comments that the consultant may have on the results.

ON PAGE 337, SUBSECTION 521.03.B – TESTING AND REPORTING

Add to the end of the second numbered list:

4. Graphs showing RMX, BLC, CSI, STK, and FMX by depth of penetration.
5. The hammer stroke and blow count when the CAPWAP analysis is performed will also be included.

ON PAGE 346, SUBSECTION 551.03.B.2.a – POLYESTER POLYMER CONCRETE (PPC) OVERLAY/CONSTRUCTION REQUIREMENTS/TRIAL OVERLAY

Delete the first paragraph and replace with:

Trial Overlay. Meet all the requirements for a trial overlay given in 551.03.B.1 except the minimum plan dimensions of the concrete pad and trial overlay are 12 feet in width and 75 feet in length. The trial overlay must meet the following additional requirements:

ON PAGE 352, SUBSECTION 553.02 – EPOXY OVERLAY/MATERIALS

Delete the last sentence, Table 553.02-2, and Table 553.02-3 and replace with:

Provide aggregate as shown in the plans and that meets the properties of Table 553.02-2 or 553.02-3. If aggregate is not specified, either aggregate is acceptable. Provide an aggregate with gradation that meets the requirements of Table 553.02-4.

TABLE 553.02-2 – Calcined Bauxite Aggregate Requirements

Property	Requirement	Test Method
Resistance to Degradation - LA Abrasion Test	20% maximum	AASHTO T96 or ASTM C131 "D" Grading
Resistance to Degradation - Micro-Deval Abrasion Test	5% maximum	AASHTO T327 or ASTM D6928
Moisture Content	0.2% maximum	AASHTO T255
Aluminum Oxide	87% minimum	ASTM C25
Mohs Scale Hardness	8 minimum	------

TABLE 553.02-3 – Standard Aggregate Requirements

Properties	Requirement	Test Method
Resistance to Degradation - LA Abrasion Test	20% maximum	AASHTO T96 or ASTM C131, "D" Grading
Resistance to Degradation - Micro-Deval Abrasion Test	10% maximum	AASHTO T327 or ASTM D6928
Moisture Content	0.2% maximum	AASHTO T255
Mohs Scale Hardness	7 minimum	------

ON PAGE 367, SECTION 576 – GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCEMENT

Delete the entire section and replace with:

576.01 Description. Provide and place glass fiber reinforced polymer (GFRP) as specified.

576.02 Materials. Provide GFRP reinforcement meeting ASTM D7957/D7957M. Provide GFRP reinforcement that is deformed and/or sand coated.

A. Submittals. Provide 2 copies of written certifications that the GFRP reinforcement meets this specification. In addition, list the test values and test procedures used to determine the physical properties of the GFRP reinforcement in the certification and provide the identifying lot information. Provide certifications bearing the notarized signature of a manufacturer's representative having quality control responsibility. Identify each bundle of GFRP reinforcement with a durable tag displaying the corresponding lot numbers.

B. Repair Material. Comply with the bar manufacturer's requirements for the material used to repair the cut ends of GFRP reinforcement. Perform all repairs of cut ends at the GFRP reinforcement manufacturer's plant unless otherwise approved.

576.03 Construction Requirements.

A. Material Handling. When handling GRFP reinforcement, use equipment that avoids damaging or abrading the GFRP reinforcement. Do not drop or drag the GFRP reinforcement.

B. Storage. Store GFRP reinforcement above the ground surface on platforms, skids, or other supports as close as possible to the point of placement. Cover the bars with opaque plastic or other types of cover to protect the bars from the external environment. Prevent exposure of GFRP reinforcing bars to temperatures above 120 °F during storage.

C. GFRP Placement. Secure GFRP reinforcement firmly in place before and during concrete placement by means of bar supports adequate in strength and number to prevent displacement and to keep the reinforcing at the proper distance from the forms and as specified in 503.03.D. Steel tie wires, bar chairs, supports, or clips must be fully coated with either epoxy or plastic. Provide adequate vertical restraint of GFRP reinforcement to prevent upward movement in the fresh concrete due to buoyancy.

When placed in the work, reinforcement must be free from dirt, paint, grease, oil, or other foreign materials deleterious to bonding with surrounding concrete. Before placing concrete, remove foreign materials by cleaning the bars using methods and materials recommended by the bar manufacturer and Engineer approved.

D. Field Cutting. Field cutting GFRP reinforcement will not be permitted, except with Engineer's prior approval. Shear cutting and flame cutting are not permitted methods of field cutting. Coat field cut ends as described in this specification. Repair all surface damage due to field cutting GFRP reinforcement as described below or replace the bar with an undamaged bar.

E. Bending. If bent GFRP reinforcement is required, the bends must be pre-fabricated. Field bending or straightening of GFRP reinforcement is not permitted.

F. Repair of Bar Damage. Repair all visible damage to the accepted GFRP reinforcement. Repair damaged areas using materials and procedures specified by the GFRP manufacturer.

G. Concrete Placement. If the reinforcement is not adequately supported or tied to resist settlement, floating upward, or movement in any direction during concrete placement, halt concrete placement until corrective measures are taken.

576.04 Method of Measurement. The Engineer will measure GFRP reinforcement by the foot.

576.05 Basis of Payment. The Department will pay for accepted quantities at the contract unit price as follows:

Pay Item	Pay Unit
Glass Fiber Reinforced Polymer (GFRP) Reinforcement	ft

Ties, bar chairs, supports, or clips used for fastening GFRP reinforcement in place are incidental.

ON PAGE 370, SUBSECTION 577.03.B – PILE SLEEVES/CONSTRUCTION REQUIREMENTS/SHELL OR H-PILES

Delete "Shell or" from letter B.

Add letter C:

C. Shell Piles. Fill the lower 5 feet of the sleeves with coarse aggregate before placing and compacting the MSE backfill, and after the pile is lowered into the predrilled hole but before pile driving begins. Ensure the inside sleeve is not closer than 2 inches from the steel pile.

ON PAGE 372, SUBSECTION 578.03 – PRECAST CONCRETE CULVERT/CONSTRUCTION REQUIREMENTS

Add the following sentence to the end of the second paragraph:

Ensure that dimensional tolerances meet ASTM C1577, Section 12.

ON PAGE 396, SECTION 602 – CULVERTS

Delete section 602, in its entirety, and replace with:

602.01 Description. Provide and install culverts.

602.02 Materials. Provide materials as specified in 601.

Provide pipe joints that are either silt-tight or leak-resistant as specified in 601.02.

Provide size No. 1, 2a, or 2b coarse aggregate for concrete as specified in 703.02 and ¾ inch minus aggregate for untreated base as specified in 703.04.

Controlled density fill as specified in 522.

602.03 Construction Requirements. Install pipes as specified in 601.03.

In continuous water flow situations (e.g., creek crossings), place controlled density fill in the bedding zone for 3 feet of culvert length at the upstream end.

602.04 Method of Measurement. The Engineer will measure acceptably completed work by the foot along pipe centerline. The Engineer will allow an additional 1 foot for each connecting band used in making an authorized extension of existing corrugated metal pipe. The Engineer will include culvert sections attached to aprons in culvert measurements.

Pipe aprons required only because PVC or PE pipe is used will not be measured or paid for separately when other pipe material is acceptable.

602.05 Basis of Payment. The Department will pay for accepted quantities as follows:

Pay Item	Pay Unit
_____ Pipe Culverts	ft
_____ Pipe Arch	ft

Structure excavation, compacting backfill, trench zone backfill and pipe bedding zone material are all incidental and included in the culvert contract unit price.

ON PAGE 397, SECTION 603 – PIPE SIPHONS

Delete section 603, in its entirety, and replace with:

603.01 Description. Provide and install pipe siphons.

603.02 Materials. Provide materials as specified in 601.

Provide pipe joints that are leak-resistant with a maximum working pressure of 10 psi as specified in 601.02.

Provide size No. 1, 2a, or 2b coarse aggregate for concrete as specified in 703.02 and ¾ inch minus aggregate for untreated base as specified in 703.04.

603.03 Construction Requirements. Install metal pipe siphons as specified in 601.03.

Completely fill the siphon with water and repair leaks that develop before backfilling, using approved methods. If there are leaks around joints in rubber-gasketed concrete pipe, encase the joint using an approved reinforced concrete collar. Only 2 collar and joint repairs are allowed for each 150 feet of pipe. Empty the siphon of water before making repairs and then refill, retest, and obtain approval before backfilling.

603.04 Method of Measurement. The Engineer will measure acceptably completed work by the foot along pipe centerline. The Engineer may calculate the length from the dimensions of the approved siphon layout.

603.05 Basis of Payment. The Department will pay for acceptable quantities as follows:

Pay Item	Pay Unit
__ Pipe Siphon	ft

Structure excavation, compacting backfill, and trench zone backfill and pipe bedding zone material are all incidental, and included in the pipe siphon contract unit price.

ON PAGE 398, SECTION 604 – IRRIGATION PIPELINES

Delete section 604, in its entirety, and replace with:

604.01 Description. Provide and install irrigation pipelines.

604.02 Materials. Provide materials as specified in 601.

Provide pipe joints that are leak-resistant with a maximum working pressure of 10 psi as specified in 601.02.

Provide Size No. 1, 2a, or 2b coarse aggregate for concrete as specified in 703.02 and ¾ inch minus aggregate for untreated base as specified in 703.04.

604.03 Construction Requirements. Install pipe as specified in 601.03.

Test for leaks by closing off a section with suitable water bulkheads, filling the line with water, and applying pressure to the line equal to the maximum static head the finished line will be subjected to at the point of testing. Locate and repair leaks as approved.

604.04 Method of Measurement. The Engineer will measure acceptably completed work by the foot along pipe centerline. The Engineer will allow an additional 1 foot for each connecting band used in making an authorized extension of existing corrugated metal pipe.

604.05 Basis of Payment. The Department will pay for accepted quantities as follows:

Pay Item	Pay Unit
__ Irrigation Pipe	ft

Structure excavation, compacting backfill, and trench zone backfill and pipe bedding zone material are all incidental, and included in the irrigation pipeline contract unit price.

ON PAGES 399-401, SECTION 605 – SEWERS, MANHOLE AND VALVE COVERS

Delete section 605, in its entirety, and replace with:

605.01 Description. Construct sewers with manholes, inlets, connections, and other appurtenances to carry stormwater or sewage. Adjust and repair manhole and valve covers.

605.02 Materials. Provide materials as specified in:

Gaskets for Concrete Pipe	706.11
Rubber Gaskets for Corrugated Metal Pipe	706.12
Manhole Covers and Rings, Grates, Catch Basins, Inlets, etc	708.22
Portland Cement	701
Metals	708
Concrete Curing Compounds and Admixtures	709
Concrete	509
Reinforcing Steel	708.02

Provide pipe joints that are silt-tight or leak-resistant as specified in 601.02.

Provide other materials as specified in 601.

Corrugated PE pipe may only be used for storm sewers as specified in 706 and with the following additions:

1. Use Type S pipe.
2. Do not subject a pipeline with couplings to pressure flow.

Use only precast concrete manufacturers that hold current certificaton under the NPCA Plant Certification Program, the PCAA Plan Certification Program, the ACPA QCast Plant Cerifications Program, or the PCI Plant Certification Program.

Provide size No. 1, 2a, or 2b coarse aggregate for concrete as specified in 703.02 and ¾ inch minus aggregate for untreated base as specified in 703.04.

605.03 Construction Requirements. The Contractor may tunnel or jack to cross under cross walks, house drives, or service pipes. Excavate and compact backfill as specified in 210.

Lay concrete pipe for sanitary sewer lines beginning at the lower (downstream) end with the receiving end upstream and with ends fully joined using suitable means to prevent air circulation within the pipeline. Provide and install rubber-gasketed joints as specified in 601.03.

Install pipes as specified in 601.03.

Test the line for leaks before accepting the sewer line as specified in 601.03.

Install spiral rib corrugated steel pipe and ABS pipe in accordance with the manufacturer's written instructions.

Test the line for leaks before accepting the sewer line as follows:

1. Close off a section with suitable watertight bulkheads.
    a. Fill the line with water.
    b. Apply 4 feet of head pressure to the line measured from the top of the pipe at the upstream end, and supplying water to the section under test so the water loss may be measured.

The Engineer will not accept the sewer line if the water loss exceeds 200 gallons per inch of pipe diameter per mile per day. Locate and correct any leaks if the loss exceeds the volume allowed.

The Contractor may test by the low pressure air method as an acceptable alternate to hydraulic testing as follows:

1. Test installation on runs or sections. The Department will allow preliminary testing before backfilling. Test when the pipe is in a wet condition.
2. Use an approved apparatus and method recommended by the pipe manufacturer.
3. Prepare the installation being tested, between its plugged ends, by pressurizing it to an internal pressure of 4 psi. Air pressure is defined as the pressure in excess of back pressure on the installation that would occur if the pipe were submerged in water. Hold an air pressure of 4 psi for at least 2 minutes or as long as needed for the pressure to stabilize.
4. The tested section, when tested on the air pressure drop method, will be if the time required for the pressure to drop from 3.5 to 2.5 psi coincides with ASTM C924.

The Contractor may test connections to inlet and outlet structures by blocking off a pipe section of the outlet, filling the structure with water, and observing the water surface drop. To be acceptable, water loss must not exceed 0.002 gallons per inch of inside perimeter of connection per foot of structure height or length per hour with no outside back pressure.

Construct manholes, catch basins, inlets, sediment and oil trap manholes, and sediment control catch basins as specified in 708.22.

A. Adjusting Manhole and Valve Covers.

Adjust the existing manhole and valve covers to conform to the new finished pavement grade. Exercise care in all operations in order to not damage the structures, equipment, or utilities (e.g., water, gas, power). Any damage occurring to the utilities due to the Contractor's operation will be repaired at no additional cost to the Department. Make any masonry adjustment by using bricks, concrete blocks, or placed concrete.

Coordinate with the utility owner 5 business days before lowering the manhole or valve covers. Locate and lower the manhole or valve covers before excavation and adjust to match the finished pavement grade. Where excavation is necessary to adjust to the design elevation, place backfill in 3-inch lifts and tamp by hand.

Place concrete collars around manholes and valve covers as specified. The concrete collar will be 1 foot wide, measured from the metal cover edge to the cut pavement edge. A 10-foot straightedge will be used to determine the completed installation surface smoothness. Place concrete collars ¼ inch below the finished grade. Adjust any high points by grinding.

B. Manholes, Valves, Catch Basins, and Inlets.

Construct manholes, valve frames and covers, catch basins, and inlets.

Adjust existing manhole and valve frames and covers to the finished pavement grade. Coordinate with the utility owner 5 business days before making adjustments. Replace damaged manhole or valve frames and covers.

Install concrete collars around manhole and valve frames. Use Idaho IR 87 to test surface smoothness.

605.04 Method of Measurement. The Engineer will measure the acceptably completed work as follows:

1. By the foot along pipe centerline, excluding the distance across catch basins, manholes, inlets, and other structures where the pipe, or a portion of pipe, is not actually incorporated in the finished product.
2. Manholes, valve frames and covers, catch basins, and inlets by the each.
3. Manhole and valve frame and cover adjustment and replacement by the each.

The Engineer will not measure structure excavation and backfill.

605.05 Basis of Payment. The Department will pay for acceptable quantities as follows:

Pay Item	Pay Unit
_____ Storm Sewer Pipe	ft
_____ Sanitary Sewer Pipe	ft
Manholes, Type __	Each
Catch Basins, Type __	Each
Inlets, Type __	Each
Sediment and Oil Trap Manhole	Each
Sediment Control Catch Basin	Each
Adjust Manhole Covers	Each
Adjust Valve Covers	Each
Replace Damaged Manhole Frame	Each
Replace Damaged Valve Risers	Each

Structure excavation, compacting backfill, and trench zone backfill and pipe bedding zone material are all incidental, and included in the sewer, manhole and valve cover contract unit price.

ON PAGE 411, SUBSECTION 612.03.A – GUARDRAIL/CONSTRUCTION REQUIREMENTS/GUARDRAIL

Add the following after paragraph 4:

Install guardrail terminals in accordance with the manufacturer's written installation instructions. Provide and install self-adhesive object marker sheeting to the end of guardrail terminals or provide an object marker for each guardrail terminal.

ON PAGE 418, SUBSECTION 616.04 – SIGNS AND SIGN SUPPORTS/METHOD OF MEASUREMENT

Add the following after item 6:

7. Reinstalled signs will be per each sign reinstallation. Sign posts and foundations will be paid by their respective pay items. .

ON PAGE 421, SUBSECTION 618.03 – MARKER POSTS, WITNESS POSTS, AND STREET MONUMENTS

Delete the last sentence of the first paragraph starting with "Mark right of way…" and replace with the following:

Mark right of way and centerline monuments with station and offset.

ON PAGE 422, SUBSECTION 618.05 – MARKER POSTS, WITNESS POSTS, AND STREET MONUMENTS

At the end of the subsection add the following:

Payment for marker posts and street monuments required under 107.19 are not included in the quantities of work under this section.

ON PAGE 425, SUBSECTION 619.03.D – ILLUMINATION/CONSTRUCTION REQUIREMENTS/POLES

In the last paragraph, delete "Formula No. 14" and replace with "Formula No. 2".

ON PAGE 429, SUBSECTION 621.01 – SEEDING/DESCRIPTION

To the end of the first paragraph, add "specified".

ON PAGE 431, SUBSECTION 621.03.D – SEEDING/CONSTRUCTION REQUIREMENTS/SEEDING

Delete from the third paragraph "The Department will provide seed at no cost to the Contractor unless otherwise specified".

ON PAGE 434, SUBSECTION 621.03.G – CONSTRUCTION REQUIREMENTS/WATERING

Replace "May 30 and September 15" with "May 1 and October 14".

ON PAGES 440-443, SECTION 626 – TEMPORARY TRAFFIC CONTROL

Delete section 626, in its entirety, and replace with:

626.01 Description. Provide, install, maintain, remove, and relocate temporary traffic control devices.

626.02 Materials. Provide material as specified in:

Guardrail and Concrete Barrier 612

Crash Cushions..... 613

Signs and Sign Supports..... 616

Pavement Markings 630

Retroreflective Sheeting..... 712.02

Ensure temporary traffic control devices are in acceptable or marginal conditions as defined in American Traffic Safety Services Association's (ATSSA) Quality Guidelines for Temporary Traffic Control Devices and Features.

A. Temporary Traffic Control Signs. Provide temporary traffic control signs meeting 616.

B. Channelizing Devices. Provide weighted base tubular markers, surface-mounted tubular markers, vertical panels, drums, barricades, or other channelizing devices.

Provide weighted base or surface-mounted tubular markers that are at least 36 inches high and have at least 3 inches width when facing traffic.

Attach surface-mounted tubular markers with an adhesive in accordance with the manufacturer's written installation instructions. Do not nail or bolt tubular markers to the pavement.

Provide barricades that have the following minimum lengths:

1. Type 1: 2 feet.
2. Type 2: 2 feet.
3. Type 3: 7 feet.

C. Temporary Pavement Markings. Provide temporary pavement marking tape, temporary waterborne pavement marking paint, or temporary raised pavement markers.

When used, ensure temporary pavement marking tape is retroreflective, white or yellow, adheres to concrete or asphalt pavements with precoated with pressure-sensitive adhesive, 4 inches wide, and is capable of conforming to the pavement surface. When used for broken-line pavement markings, use 2-foot long line segments.

Provide 2-sided temporary flexible raised pavement markers when used on undivided highways. Install in accordance with the manufacturer's written installation instructions.

Provide reflectorized rigid raised pavement markers for temporary applications. Provide 2-sided markers when used on undivided highways. Install in accordance with the manufacturer's written installation instructions. Ensure that markers are removable without the use of heat, grinding, or blasting.

D. Floodlights. Provide floodlights capable of illuminating flagger stations, work areas, and equipment crossings with at least 5 foot-candles or greater. Ensure floodlights are equipped with a meter that records hours of operation.

E. Arrow Boards. Provide arrow boards with a meter that records hours of operation.

F. Portable Changeable Message Signs (PCMS). Provide portable changeable message signs with message sign, control system, power source, and mounting and transporting equipment components. Ensure that PCMS are equipped with a meter that records hours of operation.

G. Temporary Concrete Barrier. Provide temporary concrete barrier meeting 612.

H. Temporary Crash Cushion. Provide temporary crash cushions meeting 613. Provide test-level 2 or 3 temporary crash cushions when the highway posted speed is less than 45 mph. Provide test-level 3 temporary crash cushions when the highway posted speed is greater than or equal to 45 mph.

I. Truck Mounted Attenuator. Provide a truck mounted attenuator attached to a shadow vehicle. Provide test level 2 or 3 truck-mounted attenuators when the highway posted speed is less than 45 mph.

Provide test-level 3 truck mounted attenuators when the highway posted speed is greater than or equal to 45 mph.

J. Miscellaneous Temporary Traffic Control Items. Provide miscellaneous temporary traffic control items.

K. Flagger Equipment. Ensure flaggers wear high-visibility safety apparel and are provided a STOP/SLOW paddle.

L. Pilot Car. Provide a vehicle with a PILOT CAR FOLLOW ME sign mounted on the rear of the pilot vehicle. Show the company name of the pilot car contractor on both sides of the vehicle.

626.03 Construction Requirements. Identify a project traffic control supervisor (TCS) certified by ATSSA or Evergreen Safety Council to direct the installation, modification and maintenance of temporary traffic control devices. Provide contact information for the TCS. Provide a schedule and contact information for personnel working under the direction of the TCS that can be contacted will respond 24 hours per day during the duration of the temporary traffic control operations to provide temporary traffic control maintenance.

Under the direction of the TCS, install temporary traffic control devices before changing traffic patterns. Do not use devices for purposes other than those for which they are intended. Cover or remove temporary traffic control devices when not applicable.

Keep temporary traffic control zones as short as practical. Restore normal traffic operations to the extent practical during non-working hours and during planned or unplanned work stoppages. Ensure individual traffic delays do not exceed 15 minutes and traffic delays do not exceed a total of 30 minutes through the length of the project site, unless otherwise approved in writing. Implement remedial action to eliminate the excess traffic delays.

Ensure temporary traffic control devices are in acceptable or marginal condition as defined in the ATSSA Quality Guidelines for Temporary Traffic Control Devices and Features. Repair or replace devices that are unacceptable as defined in the ATSSA guidelines. Ensure temporary traffic control devices remain in place and serviceable during the time their use is required.

Ensure signs remaining in place for more than 3 days are installed on breakaway sign posts, as specified in 616, at the following heights:

- Five (5) feet from the bottom of the sign to the elevation of the near edge of the pavement in rural areas.
- Seven (7) feet from the bottom of the sign to the top of the curb where parking or pedestrian movements are likely to occur.
- Secondary signs mounted below another sign may be 1 foot less than the heights describe above.

Provide additional temporary traffic control signs if traffic queues extend upstream of the first temporary traffic control device. Remove or cover the signs when no longer needed.

Monitor and maintain the temporary traffic control plan and devices during the duration of the temporary traffic control operations. Temporary traffic control maintenance includes repairing, replacing, and cleaning temporary traffic control devices, restoring displaced devices, and removing and resetting devices for different phases. Final removal of temporary traffic control is incidental. Coordinate temporary traffic control maintenance operations before performing the work.

Provide weighted bases when necessary to ensure that channelizing devices remain in place.

Install temporary markings as soon as practical. For temporary pavement markings, omit the test strip when waterborne paint is used. Use temporary flexible raised pavement markers or temporary rigid raised pavement markers to supplement or as a substitution for other pavement markings. Use 2 raised pavement markers placed side by side to mark double-width lines. The Engineer may require additional markers placed at a reduced spacing. Ensure pavement markings are visible in the day and night. Repair damaged markings.

Remove surface-mounted tubular markers, temporary paving market tape, temporary raised pavement markers, and rigid raised pavement markers without damaging pavement surface.

Obtain approval before removing temporary traffic control.

Illuminate flagger stations, work areas, and equipment crossings when nighttime work is being performed. Provide floodlights 30 minutes before sunset and up to 30 minutes after sunrise when workers or operational equipment are present. Ensure floodlighting does not produce a glare condition for approaching road users, flaggers, or workers.

Provide an extra floodlight onsite for backup. When a flagger station is moved, use the backup floodlight to illuminate the new station.

Secure the PCMS control system with a lock and change the default control system password to prevent tampering.

When necessary for construction phasing, remove, store, and reset temporary concrete barrier. Store the removed barrier outside the highway clear zone. Replace damaged sections of temporary concrete barrier. Provide temporary traffic control until the temporary concrete barrier is reset.

When necessary for construction phasing, remove, store, and reset temporary crash cushion in accordance with the manufacturer's installation instructions. Store removed crash cushions outside the highway clear zone. Replace damaged crash cushions. Provide temporary traffic control until the temporary crash cushion is reset.

Perform flagger control with certified flaggers. Certified flaggers have completed a flagger training course from a Department-approved source and carry a current certificate of training. Certifications issued by other state Departments of Transportation that have a reciprocity agreement with the Department are acceptable. Coordinate flagging operations before performing the work.

Coordinate pilot car operations before performing the work.

626.04 Method of Measurement. The Engineer will measure acceptably completed work as follows:

1. Temporary traffic control signs will be by the square foot of sign.
2. Weighted based tubular markers, surface-mounted tubular markers, vertical panels, drums, and barricades will be per each.
3. Temporary pavement marking tape and temporary pavement marking waterborne paint will be by the foot and will include removal when applicable.
4. Temporary flexible raised pavement markers and temporary rigid raised pavement markers will be per each.
5. Floodlights will be by the hour or day.

6. Arrow boards will be by the hour or day.
7. Portable changeable message signs will be by the hour or day.
8. Temporary concrete barrier and removing and resetting temporary concrete barrier will be by the foot.
9. Temporary crash cushions, removing and resetting temporary crash cushions, and truck-mounted attenuators will be per each.
10. Miscellaneous temporary traffic control items will be measured and paid by force account as specified in 109.03.C.5.
11. Temporary traffic control maintenance will be by the hour.
12. Flagger control will be by the hour and is limited to the actual number of hours flagging stations are staffed.
13. Pilot car operation will be by the hour.

Maintain a daily record of hours for temporary traffic control maintenance, flagger control, and/or pilot car usage. Provide the records weekly for approval of hours recorded. If allowed by the Engineer, no additional payment will be made for temporary traffic control plan changes, flagging and pilot car operations for the Contractor's sole convenience.

626.05 Basis of Payment. The Department will pay for accepted quantities at the contract unit prices as follows:

Pay Item	Pay Unit
Temporary Traffic Control Signs	SF
Weighted Base Tubular Markers	Each
Surface-Mounted Tubular Markers	Each
Vertical Panels	Each
Drums	Each
Barricade, Type ___	Each
Temporary Pavement Marking Tape	ft
Temporary Flexible Raised Pavement Markers	Each
Temporary Rigid Raised Pavement Markers	Each
Temporary Pavement Marking – Waterborne	ft
Floodlights	Hour or day
Arrow Board, Type ___	Hour or day
Portable Changeable Message Sign (PCMS)	Hour or day
Temporary Concrete Barrier	ft
Remove and Reset Temporary Concrete Barrier	ft
Temporary Crash Cushion	Each

Remove and Reset Temporary Crash Cushion ..... Each

Truck Mounted Attenuator ..... Each

Miscellaneous Temporary Traffic Control Items ..... CA

Temporary Traffic Control Maintenance ..... Hour

Flagger Control ..... Hour

Pilot Car ..... Hour

Lights and flags on signs and sign posts are incidental and included in the contract price for temporary traffic control signs.

ON PAGE 463, SUBSECTION 641.02 – BIAXIAL GEOGRID/MATERIALS

Delete the third paragraph and replace with:

Provide the test dates on the certification. As a means of identification, provide tags on the product rolls with the manufacturer's name, full product name, style or product code number, and lot and/or roll number, which will permit field determination of the product delivered to the project site is covered by the certification.

Delete the footnote in Table 641.02-1 and replace with:

(a) Minimum Average Roll Values (MARV) in the weakest direction. The geogrid type is shown on the plans. When the geogrid type is not shown, use Type II.

ON PAGE 464, SUBSECTION 641.03 – BIAXIAL GEOGRID/CONSTRUCTION REQUIREMENTS

In the last paragraph, delete "by construction activity".

ON PAGE 465, SUBSECTION 645.01 – FIELD LABORATORIES/DESCRIPTION

Add the following to the first paragraph:

If the Engineer, or consultant working under the Engineer's direction, is responsible for damage to the field laboratory or its equipment beyond what is expected during normal use, the Engineer will reimburse the Contractor for the damage at a reasonable replacement or maintenance cost. The Contractor must demonstrate to the Engineer that the damage was beyond normal wear and tear before the Engineer will reimburse the Contractor for damage.

ON PAGE 508, SUBSECTION 703.03 – MICROSURFACING AGGREGATE

In the table, change the method for the Sand Equivalent Test to read "AASHTO T176 Modified Alternate Method No. 2 Pre-Wet".

ON PAGE 509, SUBSECTION 703.03 – MICROSURFACING AGGREGATE

Add to Table Header with Stockpile Tolerances to read:

Stockpile Tolerance from the Mix Design Gradation

And add the following:

The gradation of the aggregate stockpile must not vary by more than the stockpile tolerance from the mix design gradation while also remaining within the specification gradation band. The percentage of aggregate passing any 2 successive sieves must not change from one end of the specified range to the other end.

ON PAGE 523, SUBSECTION 706.19 – POLYPROPYLENE PIPE

Replace ASTM F2881 with ASTM F2764.

Delete the third sentence.

ON PAGE 549, SUBSECTION 711.21 – COMPOST SOCKS

Replace 711.18 with 654.

ON PAGE 550, SUBSECTION 712.02 – RETROREFLECTIVE SHEETING

Change numbers 1 and 2 as follows:

1. Sheet Aluminum and Plywood Sign. Provide Type IV direct applied retroreflective sheeting for signs with white backgrounds. Provide Type XI direct applied retroreflective sheeting for all other background colors. Provide Type XI direct applied retroreflective sheeting for white sign legends.
2. Extruded Aluminum Sign Panels. Provide Type XI direct applied retroreflective sheeting for the background and legend.

ON PAGE 568, SUBSECTION 720.03 – POLYTETRAFLUOROETHYLENE BRIDGE BEARING PADS

Delete all references to “TFE”.