

Control	2121-03-171, ETC.
Project	C 2121-3-171, ETC.
Highway	IH 10
County	EL PASO

ADDENDUM ACKNOWLEDGMENT

Each bidder is required to acknowledge receipt of an addendum issued for a specific project. This page is provided for the purpose of acknowledging an addendum.

FAILURE TO ACKNOWLEDGE RECEIPT OF AN ADDENDUM WILL RESULT IN THE BID NOT BEING READ.

In order to properly acknowledge an addendum place a mark in the box next to the respective addendum.

- ADDENDUM NO. 1
- ADDENDUM NO. 2
- ADDENDUM NO. 3
- ADDENDUM NO. 4
- ADDENDUM NO. 5

In addition, the bidder by affixing their signature to the signature page of the proposal is acknowledging that they have taken the addendum(s) into consideration when preparing their bid and that the information contained in the addendum will be included in the contract, if awarded by the Commission or other designees.

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PROPOSAL TO THE TEXAS TRANSPORTATION COMMISSION

2014 SPECIFICATIONS WORK CONSISTING OF LANDSCAPE DEVELOPMENT EL PASO COUNTY, TEXAS

The quantities in the proposal are approximate. The quantities of work and materials may be increased or decreased as considered necessary to complete the work as planned and contemplated.

This project is to be completed in 360 working days and will be accepted when fully completed and finished to the satisfaction of the Executive Director or designee.

Provide a proposal guaranty in the form of a Cashier's Check, Teller's Check (including an Official Check) or Bank Money Order on a State or National Bank or Savings and Loan Association, or State or Federally chartered Credit Union made payable to the Texas Transportation Commission in the following amount:

EIGHTY-TWO THOUSAND (Dollars) (\$82,000)

A bid bond may be used as the required proposal guaranty. The bond form may be detached from the proposal for completion. The proposal may not be disassembled to remove the bond form. The bond must be in accordance with Item 2 of the specifications.

Any addenda issued amending this proposal and/or the plans that have been acknowledged by the bidder, become part of this proposal.

By signing the proposal the bidder certifies:

1. the only persons or parties interested in this proposal are those named and the bidder has not directly or indirectly participated in collusion, entered into an agreement or otherwise taken any action in restraint of free competitive bidding in connection with the above captioned project.
2. in the event of the award of a contract, the organization represented will secure bonds for the full amount of the contract.
3. the signatory represents and warrants that they are an authorized signatory for the organization for which the bid is submitted and they have full and complete authority to submit this bid on behalf of their firm.
4. that the certifications and representations contained in the proposal are true and accurate and the bidder intends the proposal to be taken as a genuine government record.

• **Signed:** **

(1) _____ (2) _____ (3) _____

Print Name:

(1) _____ (2) _____ (3) _____

Title:

(1) _____ (2) _____ (3) _____

Company:

(1) _____ (2) _____ (3) _____

- Signatures to comply with Item 2 of the specifications.

**Note: Complete (1) for single venture, through (2) for joint venture and through (3) for triple venture.

* **When the working days field contains an asterisk (*) refer to the Special Provisions and General Notes.**

NOTICE TO CONTRACTORS

ANY CONTRACTORS INTENDING TO BID ON ANY WORK TO BE AWARDED BY THIS DEPARTMENT MUST SUBMIT A SATISFACTORY “AUDITED FINANCIAL STATEMENT” AND “EXPERIENCE QUESTIONNAIRE” AT LEAST TEN DAYS PRIOR TO THE LETTING DATE.

UNIT PRICES MUST BE SUBMITTED IN ACCORDANCE WITH ITEM 2 OF THE STANDARD SPECIFICATIONS OR SPECIAL PROVISION TO ITEM 2 FOR EACH ITEM LISTED IN THIS PROPOSAL.

TEXAS DEPARTMENT OF TRANSPORTATION

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS,

That we, (Contractor Name) _____

Hereinafter called the Principal, and (Surety Name) _____

a corporation or firm duly authorized to transact surety business in the State of Texas, hereinafter called the Surety, are held and firmly bound unto the Texas Department of Transportation, hereinafter called the Oblige, in the sum of not less than two percent (2%) of the department's engineer's estimate, rounded to the nearest one thousand dollars, not to exceed one hundred thousand dollars (\$100,000) as a proposal guaranty (amount displayed on the cover of the proposal), the payment of which sum will and truly be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the principal has submitted a bid for the following project identified as:

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NOW, THEREFORE, if the Oblige shall award the Contract to the Principal and the Principal shall enter into the Contract in writing with the Oblige in accordance with the terms of such bid, then this bond shall be null and void. If in the event of failure of the Principal to execute such Contract in accordance with the terms of such bid, this bond shall become the property of the Oblige, without recourse of the Principal and/or Surety, not as a penalty but as liquidated damages.

Signed this _____ Day of _____ 20_____

By: _____
(Contractor/Principal Name)

(Signature and Title of Authorized Signatory for Contractor/Principal)

*By: _____
(Surety Name)

(Signature of Attorney-in-Fact)

Impressed
Surety Seal
Only

*Attach Power of attorney (Surety) for Attorney-in-Fact

This form may be removed from the proposal.

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BIDDER'S CHECK RETURN

IMPORTANT

The space provided for the return address must be completed to facilitate the return of your bidder's check. Care must be taken to provide a legible, accurate, and complete return address, including zip code. A copy of this sheet should be used for each different return address.

NOTE

Successful bidders will receive their guaranty checks with the executed contract.

RETURN BIDDERS CHECK TO (PLEASE PRINT):

Control 2121-03-171, ETC.
Project C 2121-3-171, ETC.
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IMPORTANT

PLEASE RETURN THIS SHEET IN ITS ENTIRETY

Please acknowledge receipt of this check(s) at your earliest convenience by signing below in longhand, in ink, and returning this acknowledgement in the enclosed self addressed envelope.

Check Received By: _____ Date: _____

Title: _____

For (Contractor's Name): _____

Project _____ County _____

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NOTICE TO THE BIDDER

In the space provided below, please enter your total bid amount for this project. Only this figure will be read publicly by the Department at the public bid opening.

It is understood and agreed by the bidder in signing this proposal that the total bid amount entered below is not binding on either the bidder or the Department. It is further agreed that **the official total bid amount for this proposal will be determined by multiplying the unit bid prices for each pay item by the respective estimated quantities shown in this proposal and then totaling all of the extended amounts.**

\$ _____
Total Bid Amount

Control 0001-03-030
 Project STP 2000(938)HES
 Highway SH 20
 County EL PASO

ALT	ITEM	DESC	SP	Bid Item Description	Unit	Quantity	Bid Price	Amount	Seq
	I04	509	X	REMOV CONC (SDWLK)	MSY	266.400	\$10.000	\$2,664.00	1
						Total Bid Amount	\$2,664.00		

Signed _____
 Title _____
 Date _____

Additional Signature for Joint Venture:

Signed _____
 Title _____
 Date _____

EXAMPLE OF BID PRICES SUBMITTED BY COMPUTER PRINTOUT

EXAMPLE

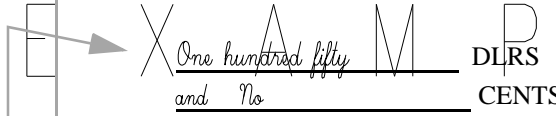
EXAMPLE

EXAMPLE


EXAMPLE

EXAMPLES

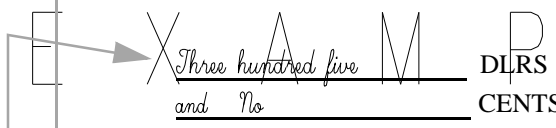
BID PRICES SUBMITTED BY HAND WRITTEN FORMAT

ALT	ITEM-CODE			UNIT BID PRICE <u>ONLY</u> WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC NO	S.P. NO.				
	190	026		RED OAK 1 1/2 - 1 3/4 GAL BB 	EA	9.000	1

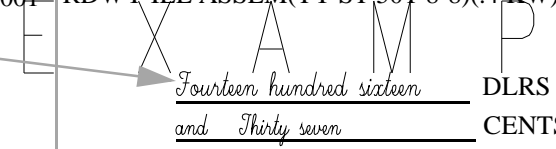
Unit price for each plant in place

	249	014		FLEX BASE(DEL)(DENSOT)(TY A GR4 CL2) 	TON	56,787.00	14
--	-----	-----	--	--	-----	-----------	----

Unit price for each ton of Flexible Base

	430	001	001	CL A CONC FOR EXT STR (CULV) 	CY	45.000	27
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Unit price for each cubic yard of Concrete

	610	007	001	RDWY ILL ASSEM(TY ST 50T-8-8)(.4 KW)S 	EA	13.000	7
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Unit price of each Roadway Illumination Assembly

EXAMPLE

EXAMPLE

EXAMPLE

EXAMPLE

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ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	104	6009		REMOVING CONC (RIPRAP) DOLLARS and CENTS	SY	541.000	1
	104	6045		REMOVE CONC (MISC) DOLLARS and CENTS	EA	227.000	2
	104	6067		REMOVING CONC (SAWCUT) DOLLARS and CENTS	LF	1,931.000	3
	110	6003		EXCAVATION (SPECIAL) DOLLARS and CENTS	CY	1,667.000	4
	132	6011		EMBANKMENT (ORIGINAL)(ORD COMP)(TY B) DOLLARS and CENTS	CY	458.000	5
	132	6013		EMBANKMENT (ORIGINAL)(ORD COMP)(TY C) DOLLARS and CENTS	CY	644.000	6
	161	6012		GENERAL USE COMPOST DOLLARS and CENTS	CY	82.000	7
	170	6001		IRRIGATION SYSTEM DOLLARS and CENTS	LS	1.000	8
	192	6014		PLANT SOIL MIX DOLLARS and CENTS	CY	582.000	9
	192	6015		LANDSCAPE EDGE DOLLARS and CENTS	LF	4,488.000	10
	192	6016		PLANT BED PREPARATION DOLLARS and CENTS	SY	2,036.000	11

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	192	6017		VEGETATION BARRIER DOLLARS and CENTS	SY	2,035.000	12
	192	6030		PLANT MATERIAL (3 GAL) (SHRUB) DOLLARS and CENTS	EA	370.000	13
	192	6031		PLANT MATERIAL (5 GAL) (SHRUB) DOLLARS and CENTS	EA	272.000	14
	192	6046		PLANT MATERIAL (MIN 3" CAL) (B&B) DOLLARS and CENTS	EA	42.000	15
	192	6055		PLANT MATERIAL (MIN 4'HT) (BARE ROOT) DOLLARS and CENTS	EA	34.000	16
	193	6001		PLANT MAINTENANCE DOLLARS and CENTS	MO	12.000	17
	193	6004		PLANT REPLACEMENT (3-GAL) DOLLARS and CENTS	EA	56.000	18
	193	6005		PLANT REPLACEMENT (5-GAL) DOLLARS and CENTS	EA	41.000	19
	193	6007		IRRIGATION SYSTEM OPER AND MAINT DOLLARS and CENTS	MO	12.000	20
	193	6016		PLANT REPLACEMENT (45 GAL) DOLLARS and CENTS	EA	7.000	21
	420	6002	001	CL A CONC (MISC) DOLLARS and CENTS	CY	7.000	22
	427	6002	003	CONCRETE PAINT FINISH DOLLARS and CENTS	SF	98,761.000	23

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	432	6001		RIPRAP (CONC)(4 IN) DOLLARS and CENTS	CY	211.000	24
	432	6041		RIPRAP (SPECIAL) DOLLARS and CENTS	CY	23.000	25
	500	6001		MOBILIZATION DOLLARS and CENTS	LS	1.000	26
	502	6001	008	BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	18.000	27
	506	6038	002	TEMP SEDMT CONT FENCE (INSTALL) DOLLARS and CENTS	LF	2,214.000	28
	506	6039	002	TEMP SEDMT CONT FENCE (REMOVE) DOLLARS and CENTS	LF	2,214.000	29
	506	6041	002	BIODEG EROSN CONT LOGS (INSTL) (12") DOLLARS and CENTS	LF	5,791.000	30
	506	6043	002	BIODEG EROSN CONT LOGS (REMOVE) DOLLARS and CENTS	LF	5,791.000	31
	618	6023		CONDT (PVC) (SCH 40) (2") DOLLARS and CENTS	LF	60.000	32
	618	6024		CONDT (PVC) (SCH 40) (2") (BORE) DOLLARS and CENTS	LF	3,115.000	33
	620	6007		ELEC CONDR (NO.8) BARE DOLLARS and CENTS	LF	731.000	34
	620	6008		ELEC CONDR (NO.8) INSULATED DOLLARS and CENTS	LF	1,462.000	35

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	620	6009		ELEC CONDR (NO.6) BARE DOLLARS and CENTS	LF	2,444.000	36
	620	6010		ELEC CONDR (NO.6) INSULATED DOLLARS and CENTS	LF	5,388.000	37
	624	6001		GROUND BOX TY A (122311) DOLLARS and CENTS	EA	42.000	38
	624	6009		GROUND BOX TY D (162922) DOLLARS and CENTS	EA	6.000	39
	624	6010		GROUND BOX TY D (162922)W/APRON DOLLARS and CENTS	EA	6.000	40
	628	6013		ELC SRV TY A 120/240 060(SS)SS(E)GC(O) DOLLARS and CENTS	EA	6.000	41
	1002	6002		LANDSCAPE AMENITY (TY 1) DOLLARS and CENTS	EA	2.000	42
	1002	6003		LANDSCAPE AMENITY (TY 2) DOLLARS and CENTS	EA	2.000	43
	1002	6004		LANDSCAPE AMENITY (TY 3) DOLLARS and CENTS	EA	8.000	44
	1005	6001		LOOSE AGGR FOR GROUNDCOVER (TYPE I) DOLLARS and CENTS	CY	168.000	45
	1005	6002		LOOSE AGGR FOR GROUNDCOVER (TYPE II) DOLLARS and CENTS	CY	140.000	46
	4230	6001		ORNAMENTAL STEEL STRUCTURE DOLLARS and CENTS	SF	960.000	47

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6001	6001		PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	DAY	90.000	48
	6185	6002	002	TMA (STATIONARY) DOLLARS and CENTS	DAY	692.000	49
	6517	6001		DECORATIVE WALL LIGHTING (DOWN- LIGHT) DOLLARS and CENTS	EA	56.000	50
	6524	6001		DECORATIVE METALWORK LED BACKLTG (TY 1) DOLLARS and CENTS	EA	2.000	51
	6524	6002		DECORATIVE METALWORK LED BACKLTG (TY 2) DOLLARS and CENTS	EA	10.000	52
	6524	6003		DECORATIVE METALWORK LED BACKLTG (TY 3) DOLLARS and CENTS	EA	4.000	53
	6525	6001		DECORATIVE MEDALLION W/LED BACK- LIGHTING DOLLARS and CENTS	EA	16.000	54

CERTIFICATION OF INTEREST IN OTHER BID PROPOSALS FOR THIS WORK

By signing this proposal, the bidding firm and the signer certify that the following information, as indicated by checking "Yes" or "No" below, is true, accurate, and complete.

- A. Quotation(s) have been issued in this firm's name to other firm(s) interested in this work for consideration for performing a portion of this work.

_____ YES

_____ NO

- B. If this proposal is the low bid, the bidder agrees to provide the following information prior to award of the contract.

1. Identify firms which bid as a prime contractor and from which the bidder received quotations for work on this project.
2. Identify all the firms which bid as a prime contractor to which the bidder gave quotations for work on this project.

ENGINEER SEAL

Control 2121-03-171, ETC.
Project C 2121-3-171, ETC.
Highway IH 10
County EL PASO

The enclosed Texas Department of Transportation Specifications, Special Specifications, Special Provisions, General Notes and Specification Data in this document have been selected by me, or under my responsible supervision as being applicable to this project. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.



The seal appearing on this document was authorized by
Antonio Romero Ramirez, P.E.
APRIL 11, 2024

COUNTY: EL PASO

HIGHWAY: IH-10

******* General Notes *******
2014 Specification Book

General Requirements

Maintain the entire project area in a neat and orderly manner throughout the duration of the work. Remove all construction litter and undesirable vegetation within the right of way inside the project limits. This work will be subsidiary to the various bid Items.

General Project Description:

This project consists of the construction of Aesthetics and Landscape improvements at scattered locations along IH-10 in from FM-2316 (McRae Blvd) to Don Haskins Drive in El Paso County, Texas. The work includes construction of different type of planters, install ornamental metal structures, removal of vegetation, cap irrigation system, landscape amenities, installation of LED illumination, plant schemes, irrigation system, riprap and paint new planters and existing rip rap.

Traffic

Inform the Engineer and the respective utility companies, when it becomes apparent that the utility lines will interfere with the work in progress.

Contact the Department's El Paso District Signal Shop at txdotelplocates@txdot.gov to request all Department utility line locates within the project limits. The Signal Shop will locate one time only. Record locates for the purpose of refreshing and maintaining all markings throughout the duration of the project.

Contractor questions on this project are to be addressed to the following individual(s):

East Area Office:

Rene Romero, P.E.
East El Paso Area Engineer
Rene.Romero@txdot.gov

Aldo Madrid, P.E.
Director of Construction
Aldo.Madrid@txdot.gov

Monica Ruiz, P.E.
District Construction Engineer
Monica.Ruiz@txdot.gov

Questions may be submitted via the Letting Pre-Bid Q&A web page. This webpage can be accessed from the Notice to Contractors dashboard located at the following Address:

<https://tableau.txdot.gov/views/ProjectInformationDashboard/NoticetoContractors>.

All contractor questions will be reviewed by the Engineer. All questions and any corresponding responses that are generated will be posted through the same Letting Pre-Bid Q&A web page.

The Letting Pre-Bid Q&A web page for each project can be accessed by using the dashboard to navigate to the project you are interested in by scrolling or filtering the dashboard using the

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controls on the left. Hover over the blue hyperlink for the project you want to view the Q&A for and click on the link in the window that pops up.

Item 4 – Scope of Work

Schedule and perform all work to ensure proper drainage during the course of construction or maintenance operations. All labor, tools, equipment, and supervision required, to ensure drainage, removal, and handling of water shall be considered incidental work.

Item 5 – Control of Work

Plan datum for this project is NAD 83 for horizontal.

Keep traveled surfaces used in hauling operations clear and free of dirt or other material.

Prior to construction, meet with Engineer in the field to flag existing trees designated in the plans to remain for identification and treat as described below.

Coordinate with respective utility owners before adjusting existing utility meters, valve covers, etc.

Coordinate to complete all required adjustments within project duration acceptable to the Department and each applicable Utility Agency.

Existing pavement, utilities, structures, etc. damaged as a result of construction operations will be repaired at no additional cost to the Department.

Protect from damage and destruction all areas of the right of way, which are not included in the actual limits of the proposed construction areas. Exercise care to prevent damage to trees, vegetation, irrigation system and other natural features.

Protect trees, shrubs, and other landscape features from abuse, marring, or damage within the actual construction and/or fenced protection areas designated for preservation. Restore any area disturbed or damaged to a condition “as good as” or “better than” prior to start of construction operation. This work will be at the Contractor’s expense.

Precast Alternate Proposals.

When a precast or cast-in-place concrete element is included in the plans, a precast concrete alternate may be submitted in accordance with “Standard Operating Procedure for Alternate Precast Proposal Submission” found online at <https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/publications/bridge.html#design>

Acceptance or denial of an alternate is at the sole discretion of the Engineer. Impacts to the project schedule and any additional costs resulting from the use of alternates are the sole responsibility of the Contractor.

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Item 6 – Control of Materials

To comply with the latest provisions of Build America, Buy America Act (BABA Act) of the Bipartisan Infrastructure Law, the contractor must submit an original of the TxDOT Construction Material Buy America Certification Form for all Items classified as construction materials. This form is not required for materials classified as a manufactured product.

Refer to the Buy America Material Classification Sheet for clarification on material categorization. The Buy America Material Classification Sheet is located at the link below. <https://www.txdot.gov/business/resources/materials/buy-america-material-classification-sheet.html> for clarification on material categorization.

An experienced well known metal sculpture fabricator for the construction of ornamental steel structures, anodized metal treatment, holographic 3D effect, metal medallion work or metal sculptures such as ISI (Industrial Stainless International), Custom Stainless Steel Fabricators or approved equal is required for the fabrication of metal structures on this project.

Item 7 – Legal Relations and Responsibilities

Comply with all requirements of the Environmental Permits Issues and Commitments (EPIC) Sheet.

Do not discharge any liquid pollutant from vehicles onto the roadside. Immediately clean spills and dispose in compliance with local, state, and federal regulations to the satisfaction of the Engineer at no additional cost to the Department.

Occupational Safety & Health Administration (OSHA) regulations prohibit operations that bring people or equipment within 10 ft. of an energized electrical line. Where workers and/or equipment may be close to an energized electrical line, notify the electrical power company and make all necessary adjustments to ensure the safety of workers near the energized line.

No significant traffic generator events identified. Unless otherwise approved, no lane closure that restricts or interferes with traffic shall be allowed from noon on the day preceding to 10:00PM on the day after the following holiday schedule.

- a) New Year's Eve and New Year's Day (December 31 through January 1);
- b) Easter Holiday Weekend (Friday through Sunday);
- c) Memorial Day Weekend (Friday through Monday);
- d) Independence Day (July 3 through noon on July 5);
- e) Labor Day Weekend (Friday through Monday);
- f) Thanksgiving Holiday (Wednesday through Sunday); and
- g) Christmas Holiday (December 23 through December 26).

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Law Enforcement Personnel

Coordinate with TxDOT Engineer for off-duty Law enforcement assistance when needed to direct traffic during significant closures and detours, as approved unless otherwise directed by the Engineer. The officer shall monitor or direct traffic during the closure as directed by the Engineer. Patrol vehicles must be clearly marked to correspond with the officer's agency and equipped with appropriate lights to identify them as law enforcement. For patrol vehicles not owned by a law enforcement agency, markings will be retroreflective and legible from 100 ft. from both sides and the rear of the vehicle. Lights will be high intensity and visible from all angles.

Contractor to submit a written request at least 48 hrs. prior to the need for law enforcement to the Engineer. The Engineer will make arrangements with the respective entity to formally request the services.

Fees resulting from contractor-initiated cancellations shall be the Contractor's responsibility.

The method used to direct traffic at signalized intersections shall be as approved. Additional officers and vehicles may be provided when approved or directed.

Show proof of certification by the Texas Commission on Law Enforcement Standards.

Complete the daily tracking form provided by the department and submit proof of payment such as cancelled checks for the approved invoices that have been billed to the project no later than 30 days from the invoice date.

No payment will be made for law enforcement personnel needed for moving equipment or payment for drive time to/from the event site.

Minimums, scheduling fees, etc. will not be paid; TxDOT will consider paying cancellation fees on a case-by-case basis.

Item 8 – Prosecution and Progress

Working days will be calculated in accordance with Section 8.3.1.4, "Standard Workweek."

Create and maintain a Bar Chart schedule.

Submit baseline schedule and obtain approval prior to beginning construction. The monthly progress payment will be held if the monthly update is not submitted.

Provide a Project Schedule Summary Report on a monthly basis along with the monthly progress schedule.

All work and lane closures are restricted to non-peak hours from 9 AM to 4 PM Monday to Friday unless otherwise directed in writing.

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All work will be allowed during the workday with the appropriate TCP as shown on plans and approved by the Engineer.

The Contractor must coordinate the fabrication of curtain steel structures and any other steel structures with the fabricator. It is the Contractor's responsibility to contact the Fabricator, so that Items can be ordered adequately with respect to time.

Project includes a 90-day convenience delay start for acquisition of materials needed for the amenities, LED lighting, and fabrication of the metal structures.

The Contractor must submit shop drawings for all Amenity Items with long lead times immediately after the award, so that these materials can be ordered on time and the project can be on schedule.

Item 9 – Measurement and Payment

Monthly progress payments will be made for Items of work completed by the 27th day of each month. Any work completed after the 27th will be included for payment in the subsequent monthly progress payment.

Submit Material on Hand (MOH) payment requests at least **two (2)** working days prior to the 27th of the month for payment consideration on that month's estimate.

Item 104 – Removing Concrete

All work Items described under Item 104.3 required to saw-cut, as shown on the plans, or as directed is considered subsidiary to this Item.

Remove and dispose of properly of all concrete riprap, and header curb from all planting beds during initial grading subsidiary to this Item.

Item 110 – Excavation

This Item shall be used to remove from existing grade level within the existing planter areas, the top 12" of existing to include shrubs, trees, roots and dead stumps, soil material, all existing rock, weeds, tree stakes, vegetation barrier, buried concrete and any other Items not designated for preservation. All excavation and removals shall be as shown on the "Removal Layout" sheets during initial grading. Preserve trees, plants, and irrigation system PVC lines located within the planter area, as shown in the plans unless noted on the plans to be removed or cut and cap.

Prepare area as shown on the "Removal Layout" and "Section Detail" sheets. The contractor shall remove soil to the depth shown on the plans.

Removal of existing loose aggregate and any other materials deleterious to plant growth encountered within the limits during initial grading is subsidiary to this Item.

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Any uncontaminated loose aggregate will remain the property of the state and shall be wasted in the designated areas within the project as directed by the Engineer, this will be subsidiary to the various Items. All contaminated or excess loose aggregate removed, and not accepted by the Engineer will become property of the contractor and should be disposed in accordance local, state and any federal ordinances.

The contractor shall preserve existing irrigation PVC lines encountered during removal activities when existing irrigation lines that are determined to continue to be used. Cap/abandon or removal of any existing irrigation PVC lines will be subsidiary to Item 170.

The contractor shall remove and dispose of properly of all materials at approved locations off the right of way in accordance with local, state, and federal requirements. Disposal of materials is subsidiary to this Item.

Item 132 – Embankment

Embankment Type B will be used where existing planters will be removed and patched with rip rap. Ordinary manual compaction equipment is required to achieve a compaction level equal to 95% of the maximum dry density.

After removal of the first top 12-inch of existing planter soil, scarify and compact existing soil prior to placing new 4-in rip rap on top of the 8-inch Embankment Type B into the patch of existing planters as shown in the plans and as directed by the Engineer. The scarification work is subsidiary to this Item. This will be used at the rip rap filling areas as shown on the plans.

Sprinkling and compaction operations shall be required during the embankment ty B construction and will not be measured or paid for directly but will be considered subsidiary to this Item.

Embankment Type C will be used on Amenities 1, 2, and 3 to fill the planters as shown on plans. Embankment Type C will consist of loamy material. Ordinary compaction equipment is required to achieve a compaction level equal to 85% of maximum dry density.

Provide embankment materials that does not exceed a sulfate concentration of 1,000 ppm when tested in accordance with Tex-145-E.

Item 170 – Irrigation System

Install a drip system and new irrigation components in the areas shown on the Irrigation Layout sheets. Special care should be taken to protect plant roots. Install proposed emitters as shown on the Irrigation Details sheet. All work, materials, and labor required for connection are subsidiary to this Item.

Provide Schedule 80 PVC rated for direct sunlight exposure for all above ground pipes including risers and swing-joint components.

Install irrigation system using the bore method when crossing existing roadways and driveways.

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Measure pressure on the outflow side of meter and provide information to the Engineer to verify system function.

Drawings are generally diagrammatic and indicative of the work to be installed. Contractor to provide signed a sealed drawings 11x17 by a license architect/Engineer/irrigator for any of the proposed irrigation installation, repairs and improvements for approval by the department. Show all system changes, rerouting of main and lateral lines, size of water meters installed along with the location address and meter number.

The contractor shall preserve existing irrigation PVC lines during removal activities when existing irrigation lines will continue in use, and only cap/abandon the existing irrigation PVC lines that will no longer be in use, this will be subsidiary to Item 170.

Due to the scale of the drawings, it is not possible to indicate all offsets, fittings, and sleeves that may be required. Investigate site conditions affecting all work and plan accordingly, furnishing such offsets, fittings, borings, and sleeves as may be required to meet site conditions as approved by the Engineer. This work and materials are subsidiary to this Item.

Contact City of El Paso Streets and Maintenance Department at 915-212-0118 and the El Paso Water Utilities to coordinate and verify water meter locations prior to installation. The Contractor shall obtain all required permits and licenses and pay applicable fees for tapping into City main line and new water meters. The Contractor shall pay for the water meter, and necessary fees required for installation and operation of the proposed irrigation system.

Provide all manufacturer literature and warranty documents for the irrigation system components for submission to the agency responsible for maintenance. Provide instructions covering full operation, care, and maintenance of the equipment, including a schedule showing the length of time each valve is to be open to provide a determined amount of water. Instruct designated personnel of proper operation of the system. This work is subsidiary to this Item.

Sleeve all pipes installed under paved areas. Extend sleeves 24 in. beyond the edge of hard surfaces. Temporarily wrap PVC pipe ends with 4 mm. quality adhesive plastic tape to prevent debris, dirt, or other contaminants. Duct tape is not acceptable.

Secure approval for any alternative locations before installation.

All fittings incorporated into the system shall be of the same type and class material as the irrigation pipe and regularly manufactured parts (reducers, bushings, and other appurtenances).

All pipe cuts shall be flush and removed of all burrs prior to gluing. Pipes that are 3 in. or larger must have a filed, beveled edge a minimum of 1/4 the width of pipe wall to assure a proper solvent weld.

Perform pipe solvent welding procedures on all joints as follows: First use IPS (Iron Pipe Size) weld-on purple primer P68 or P10; then use IPS weld-on Gray Glue #711 heavy duty or approved equal. Wipe off all excess cement. Set and cure times shall be as per manufacturer's recommendations.

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Once the weld is set, do not move pipe for any reason until set time is achieved and do not turn water on until cure time is achieved.

Provide drip emitters with an application rate of 0.5 gal. per hour such as Rainbird Xeri-Tube-PC, Orbit Irrigation, The Toro Company, or an approved equal. Use distribution line consisting of 1/2 in. (nominal) low density linear polyethylene tubing. Provide emitters that independently regulate constant discharge rates throughout the run of the tubing. Discharge rates may range between 0.5 to 2.0 gal. per hour when pressure ranges between 5 psi to 50 psi. Provide emitters that continuously clean themselves while in operation. Provide dripper-line connections made with approved insert or compressed fittings.

Provide Rainbird "PEB," Orbit Irrigator, or The Toro Company remote control valves of the sizes indicated on the plans or an approved equal. Furnish valve manufacturer specifications for approval prior to beginning work. Provide three program battery-operated remote-control units.

Mount all gate valves, remote control valves, and quick coupling valves below grade in Ametek or approved equal valve boxes. Install with the top flush with finished grade. Increase the size of box as directed when more than one valve occupies the same box in order to provide easy access to valves and controller for maintenance.

Provide two-piece, single lug operated brass quick coupling valves with 3/4 in. IPS connection and 1/2 in. IPS discharge at the key (Rainbird 33DRC, Orbit Irrigation, The Toro Company, or an approved equal). Furnish one key complete with a hose swivel fitting for each quick coupling valve as shown on the plans.

Separate field wiring in a separate trench with expansion loops every 200 ft. Do not stretch wire tightly. Use standard colors: red (hot) and white (neutral) for valve wire and label at controller and in valve box. Color code all low voltage control wire and provide waterproof compression clamps covered with fusion bonding epoxy or fine powder coating, an approved electrical coating varnish such as Scotchkote, Rilsan, or an approved equal for all connections.

Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ), www.tceq.texas.gov

Inspection and Repair of Existing Irrigation.

Existing water meter, valves, and lines to be inspected for broken, worn-out, or damaged parts, cracks, proper functionality, leaks, unusual noises and/or signs or rust.

Replace meters and valve units with brand new one as needed or as directed by the Engineer. If it is determined during field inspection existing water meter will not provide enough pressure to new lines and plants, then a replacement is warranted with a bigger size or as directed by the Engineer. Replacement will be paid under this Item.

After inspection, it is determined that existing main and or lateral lines have visible damaged cracks or leaks and that repair is necessary for proper function of the system, then perform repairs or replaces lines as necessary or as directed by the Engineer.

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Inspection, new meters, new valves, repairs, materials, tools, incidentals required to perform repairs or replacements will not be paid for separately but will be paid under this Item.

Item 192 – Landscape Planting

Protect existing native areas and existing plants to remain within the work zone with orange plastic tape fence and stakes, or as directed by the Engineer. Materials and labor are subsidiary to this Item.

Plant material: Provide quality plants of the size, and condition at nursery and when delivered at job site will be in accordance with American Standard for Nursery Stock, current edition, as published by The American Association of Nurserymen and the Texas Association of Nurserymen requirements.

Provide written assurance that all materials necessary to complete the project as specified have been located.

Plants or trees shall not interfere with existing structures or a utility box.

Do not place trees with the potential of blocking a sign or in front of the face of any sign. Trees shall be moved or transferred to another location within the planting area to avoid obstruction.

Plant material substitutions are not allowed without the written permission of the Engineer. Requests for substitutions must be submitted no later than 2 weeks prior to the initiation of work. The sum of materials differing in kind and quality or size from that specified will be allowed only after proving that all means of obtaining the specified materials have been exhausted.

Provide nursery grown plants that are tagged with nursery labels indicating species and variety. Remove nursery tags after acceptance of planted material at site.

Remove all protective material such as burlap, strings, wire, etc. before placing plant in plant pits and completion of all planting work.

Notify Engineer when plant material is available for inspection at the nursery prior to delivery and before and after planting at the job site.

Irrigation systems shall be fully functional before the installation of any plant or vegetation.

The Engineer will be the judge of the quality and acceptability of all plant materials. All rejected material will be immediately removed from the site and replaced with acceptable materials as specified under this Item and no additional cost to the Department.

Provide plants typical of their species or variety and have normal, well-developed branches and vigorous root systems that are sound, healthy, free from defects, disfiguring knots, bark abrasions, sunscald injuries, plant diseases, insect eggs, borers, and all other forms of infections.

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Provide plant material that has a uniform shape around its complete circumference. Plant material with irregular branching patterns or with branching patterns more highly developed on one side than the other sides are not acceptable.

Ensure that the container grown plant material has been established in its delivery container no less than six months but not more than two years. Root-bound material will not be accepted.

Unless specifically noted on the plans, provide single-trunk trees that are straight, free of “dog-legs,” “crooks,” “y-crotches,” or other disfiguring shapes, and that the central leader has not been pruned. Trees with double leaders are not acceptable unless specified as multi-trunked.

Provide tree material that has a solid ball of earth and is held in place securely by burlap and a stout twine or rope. Broken or loose balls will be rejected.

Remove all protective material such as burlap, strings, wire, etc. before placing plant in plant pits and completion of all planting work.

Plant Replacement: Remove and dispose of any vegetation as per Item 192.3.15.9. Replace plants that do not flourish or show signs of good health, disease, or insects within the first 90 days of planting as per this Item 192.

At the end of the 90-day maintenance period of Item 192, and prior to beginning Item 193, “Plant Establishment,” replace all dead or damaged plants that are considered unacceptable, as directed. Item 193 will begin after all work is complete and in-place, and all punch list Items have been corrected, as directed and approved.

Plant mix:

For plant mix requirements at the newly planted area and vertical planters, mix and cultivate a 4” layer of plant mix (30% General use compost (GUC) and 70% plant mix) and 2” layer top soil into the first 4” of the embankment at each planter. Obtain approximate 10” layer of mixture for plant growth and root development. All work, materials, tools, labor, and incidentals will be subsidiary to this Item.

Avoid using potting soil that is mostly compounded of large bark pieces and wood chips. Use potting soil that is compounded of organic materials that is appropriate for trees and plants vegetation.

Fertilizer: Use time-release fertilizer release in granular form with a NPK of 15-20-10 or equal parts. Carefully work fertilizer into the soil prior to placing plants. Avoid spreading fertilizer on the plant leaf’s or tree trunks. Fertilizer will be paid under this Item.

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Weed barrier: A minimum of 30-mm woven polypropylene vegetative barrier or approved equal is to be placed under loose aggregate, as shown on the plans. Weed barrier will be paid under this Item.

Excessive overlapping of weed barrier causing an over-usage of material will not be paid for separately but it is subsidiary to this Item. Vegetation barrier will be paid for as the quantity provided on the estimate sheet. Keep weed barrier overlaps at a minimum of 6 inches to a maximum of 12 inches between fabric overlays.

Plant Pit Excavation and basins: Excavate plant pits as shown in the "Planting Details" sheets and as per Item 192.3.4. Construct plant basins as per Item 192.3.6 and as shown on the "Planting Details" sheet. Plant pits and basins will not be paid for separately but is subsidiary to this Item 192.

Plant Bed Preparation: Prepare planting areas on the limits shown on the "Proposed Landscaping Layout" sheets. Use this Item to prepare the planting areas by removing sticks, rocks, weeds, grasses, trash, and any foreign material that is detrimental to plant growth. Cultivate a 6-inch layer of the native soil with plant mix to cover the entire planter areas.

Use a 50% native soil and 50% plant mix ratio to cultivate the plant bed areas. Place a 3" layer of the newly prepared plant mix at the entire planter bed area and work (mix it) it into the native soil (down to 3" depth from top of new grade. This is to provide a 6-inch layer of cultivated soil with a 50% native soil and 50% plant mix ratio.

Thoroughly cultivate (mix) the plant mixture into the plant bed areas to a depth of 6-inches below new grade creating a loose friable soil within the planting area before placing the plants. Complete this task several days before weed barrier and plant installation.

Existing plant material deemed for preservation damaged during construction activities will be replaced with a similar type and size of plant at no additional cost to the Department.

Protect tree root systems from damage due to noxious materials caused by runoff or spillage while mixing, placing, or storing construction materials; flooding, eroding, or excessive wetting caused by watering operations.

The Contractor shall not excavate within drip line of existing trees unless otherwise indicated. Maintain original grades within drip line around existing trees. Minimize site disturbance during all grading operations.

Comply and follow vegetation maintenance during the required establishment period as stated under Item 193, "Plant Maintenance".

Protect newly graded areas from traffic and erosion.

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Item 193 – Landscape Establishment

Begin this Item after final payment is approved in accordance with Article 192.5.4, “Final Payment”.

In addition to the maintenance activities listed under this Item; removal of litter, debris, and other operations will be necessary for the health of the planted stock and the general appearance of the landscaped areas.

This Item of Landscape Establishment and Maintenance shall apply to the project limits from FM 2316 (McRae Blvd) to Don Haskins Dr along the project area on IH-10.

The contractor shall provide maintenance for all existing and proposed vegetation within the project limits. Furnishing and operating equipment for litter pickup, mowing, trimming, edging, pruning, fertilizer, labor, material, tools, and incidental are subsidiary to this Item.

Plant Replacement: Remove and replace plants selected by the Engineer as per Item 193.3.2.

Maintenance: Inspect plants and planter beds, rock, and mulch at least every two weeks. Maintenance includes vegetative watering, weeding, cultivating, removal of dead material and debris, resetting of trees to upright positions and such other operations as may be necessary for the health of the planted stock and the general appearance of the landscaped areas. Plant protection and health shall include the care of the planted stock from damages resulting from overwatering or lack of watering, root rot, apparent maintenance neglect, erosion of rock, disease and the like.

Apply pesticides under the supervision of a person possessing a license issued by the Texas Department of Agriculture. Inspect for pests and dead vegetation and apply pesticide as needed. Perform required maintenance in accordance with Section 193.3 “Work Methods”.

Notify the Engineer in writing of problems with insects, diseases or animals as problem arise. Apply herbicide for insects and animal control as needed or as directed. This labor, tools and incidentals needed to perform this work are subsidiary to this Item.

Exercise care when applying herbicide, any damage incurred due to Contractor negligence will be Contractor’s responsibility.

Apply fertilizer uniformly to all plants as part of the **12-month** maintenance period and as indicated on the schedule chart on the “Planting Details” sheet.

Remove litter, weeds and debris from landscaped areas as part of the maintenance duties under Item 193.3 “Work Methods”. Plants shall be trimmed, edged and weeds removed under this Item.

The contractor shall remove soil and prepare the area for the proposed planter bed area as per Item 192.

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Vegetative Watering: Adjust water during heavy rainfall and monsoon season. Water frequency to be adjusted as needed for desert and cactus plants to avoid root rot and excessive watering for desert plants.

Plant Replacement: Use quantities shown for plant replacement on the “General Summary” and “Plant Specifications” sheets to replace vegetation that does not flourish due to Contractor’s negligence, “Acts of God”, or die during the plant establishment period.

Maintenance to Irrigation Systems: Existing and newly installed Irrigation systems within the project limits are to be inspected once a month for high or low water pressure to include valves, water meter functions, backflow preventer and leaks. Inspect all valves, pipes, connection points, check for broken, clogged, or missing drip emitters, and sunken heads that have dipped below ground. Inspection includes but is not limited to checking for broken pipes or fittings above or below ground.

Contractor to inform the Area Office of any failure that requires water shut off. Inform Area Office when vandalism of irrigation system is apparent so as to take the necessary action to replace parts or repair system. Leaks, broken pipes, fittings, missing valves or any Items that impede proper irrigation system function shall be repaired or replaced in a timely manner or as directed.

It is the Contractor’s responsibility to repair or replace parts or components of the system due to contractor’s actions or neglect.

Irrigations system new parts replacement and repair shall be performed as per Item 193.3.4

Item 427 – Surface Finishes for Concrete

Provide a test area of 9 sq. ft. samples for each paint scheme for approval, prior to application.

In locations where existing riprap is to be painted, the contractor shall apply one layer of grey color paint on the areas shown on the plans. The second paint layer shall consist of two coats of paint of the designated color as specified in the plans. The Engineer will determine if an additional paint coat is needed for the desired even tone surface is acquired. Final approval must be provided by the Engineer.

For the riprap finish at FM-659 (Zaragoza Rd.) shall be exposed aggregate to match existing rock size and color mix conditions.

Match color of coating with the Federal Standard 595C Colors Swatch. Due to color variation, contractor must have approval from the Engineer before the application of paint coating.

Paint the riprap areas as shown in the plans and as per Item 427.

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Paint colors are:

Grey – Federal Standard # 35630

Sand – Federal Standard # 13578

Royal Blue- Federal Standard # 35190

Sepia- Federal Standard # 30318

Match color for Lee Trevino - Federal Standard # 31433

Obtain approval for paint samples from the Engineer prior to paint application.

Item 432 – Riprap

This Item will be used to patch existing riprap at the locations where existing planters are to be removed and filled as shown on the plans.

Wire mesh and fibers for concrete will not be allowed for concrete riprap in accordance with Item 432.3.1, "Concrete Riprap" on this project for this Item. Reinforce all concrete riprap using bar reinforcement conforming to Item 440, "Reinforcement for Concrete," as shown on the plans, or as directed.

Apply concrete paint finish and surface finishes to existing and proposed concrete riprap per the manufacturer's specifications.

Concrete paint shall be applied to the concrete riprap with a smooth surface as per Item 427 and at locations as shown in the plans. Paint shall be paid under Item 427.

Exposed aggregate finish shall be applied to the proposed special riprap at the locations and to the details as shown in the plans. Match the existing exposed aggregate size and color mix condition on the proposed special riprap and to the requirements of Item 427.4.3.6.

Exposed aggregate finish will not be paid for directly but will be subsidiary to Item 432-Special riprap.

Item 446 – Field Cleaning and Painting Steel

This Item will only be used to repair any damaged to painted or treated areas of the metal/steel sculptures that are damaged from transport or during construction. This repair work will not be paid for directly but will be subsidiary to the various bid Items.

Item 464 – Reinforced Concrete Pipe

Use Class I or Class II RCP for this project. All RCP shall be new and will be obtained from manufacturer/supplier or as approved by the Engineer.

Any RCP damaged during transport or installation shall be replaced at the contractor's expense.

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Cracked or hairline damaged RCP will not be allowed for use on the project.

The contractor shall provide a careful attention to the installation of RCP to avoid breaking or damaging the pipe. Install RCP in the location and to the depth and details as shown in the plans or as directed and approved by the Engineer.

Item 502 – Barricades, Signs, and Traffic Handling

Prior to beginning construction, the Engineer will approve the routing of traffic and sequence of work.

Additional signs and barricades, placed as directed, will be considered subsidiary to this Item.

In accordance with Section 7.2.6.1, designate, in writing, a Contractor Responsible Person (CRP) and a CRP alternate to take full responsibility for the set-up, maintenance, and necessary corrective measures of the traffic control plan. The CRP or CRP alternate must be present at site and implement the initial set up of every traffic control phase/stage, at each location, and/or each call out, for the entire duration of the project.

At the written request of the Engineer, immediately remove the CRP or CRP alternate from the project if, in the opinion of the Engineer, is not competent, not present at initial TCP set-ups, or does not perform in a proper, skillful, or safe manner. These individuals shall not be reinstated without written consent of the Engineer.

CRP and CRP alternate must be trained using Department approved training. Provide a copy of the certificate of completion to the Engineer for project records.

All contractor workers involved with the traffic control implementation and maintenance must participate and complete a department approved training course. Provide a copy of the certificate of completion to the Engineer for project records. Refer to "Traffic Control Training" Material Producer List <https://ftp.txdot.gov/pub/txdot-info/cmd/mpl/tct.pdf> for Department approved training.

Contractor may choose to train workers involved with the traffic control implementation and maintenance with a contractor developed training in lieu of Department approved training. Contractor developed training must be equivalent to the Department approved training. Provide the Engineer a copy of the course curriculum for pre-approval, prior to conducting the contractor developed training. Provide the Engineer a copy of the log of attendees after training completion for project records.

Existing regulatory signs, route marker auxiliaries, guide signs, and warning signs that must be removed due to widening shall be relocated temporarily and erected on approved supports at locations shown in the plans, or as directed. This work will not be paid for directly but is considered subsidiary to this Item.

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Notify the Department officials when major traffic changes are to be made, such as detours. Coordinate with the Department on all traffic changes. Advance notification for the following week's work must be made by 5 P.M. on Wednesdays.

If Law Enforcement Personnel is required by the Engineer, coordinate with local law enforcement as directed or agreed. Complete the weekly tracking form provided by the Department and submit invoices with 5% allowance for Law Enforcement payments by Contractor that agrees with the tracking form for payment at the end of each month where approved services were provided.

Any approved change to the sequence of work or TCP, must be signed and sealed by a Contractor's Licensed Professional Engineer assuming full responsibility for any additional barricade signs and devices needed.

Use portable changeable message signs (PCMS) to alert public of construction two weeks prior to construction.

Use flaggers when directed. Provide two-way radio communication for all flaggers.

Place and maintain sufficient additional warning signs, beacons, delineators, and barricades to warn and guide the public of all hazards in the construction zone limits at all times, and as directed.

Use flashing arrow boards on all tapers for each lane closure.

Some signs, barricades, and channelization devices may not be shown at the precise or measured position. Place the barricades, devices, or signs, with approval, in positions to meet field conditions.

Use Type A flashing warning lights or delineators to mark open excavation, footings, foundations, or other obstructions near lanes that may be open to traffic, as directed.

Remove or cover signs that do not apply to current conditions at the end of each day's work.

Repair or replace all signs damaged by the public or due to weather events.

All project signs shall be maintained free of litter, debris, or sediment build-up at the base supports. This work is subsidiary to this Item of work.

All project limits signs shown on BC (2) or on the project line diagram shall be installed using ground mounted supports unless otherwise approved by the Engineer. Fill any holes left by barricade or sign supports and restore the area to its original condition.

Safety Contingency

The contractor Force Account "Safety Contingency" that has been established for this project is intended to be utilized for work zone enhancement, to improve the effectiveness of the TCP that

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could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor's Responsible Person based on weekly or more frequent traffic management reviews on the project. The Engineer may choose to use existing bid Items if it does not slow the implementation of enhancement.

Item 506 – Temporary Erosion, Sedimentation, and Environmental Controls

Refer to SWP3 Sheets for total acres of disturbed area. Establish the authorization requirements for Storm Water Discharges for soil disturbed area in this project, all project locations in the Contract, and Contractor Project Specific Locations (PSLs), within one mile of the project limits. Both the Department and the Contractor shall obtain an authorization to discharge storm water from TCEQ for the construction activities shown on the plans. Obtain required authorization from the TCEQ for any Contractor PSLs for construction support activities on or off the right of way.

Best Method Practices (BMP's) may be adjusted to meet field conditions, or as directed. The Engineer will verify all locations prior to placement of BMPs. Keep all inlets functional within the project limits throughout the entire length of the project to accept storm water as part of the Storm Water Pollution Prevention Plan (SWP3), as directed.

Place rain gauge(s) at locations as designated.

Grading operations will be limited to the catch point of the proposed cross-section.

Preserve any vegetation outside these limits.

Review SWP3 plans prior to placement with Engineer.

The Storm Water Pollution Prevention Plan (SWP3) consists of temporary erosion control measures needed and provided for under this Item. The disturbed area is less than one acre and use of erosion control measures is not anticipated. If physical conditions encountered at the job site require necessary controls, BMP installation, maintenance, and removal will be paid as extra work on a force account basis per *Articles 4.4 and 9.7*.

Item 618 – Conduit

The location of conduit is diagrammatic and may be varied to meet local conditions upon approval of the Engineer.

All bore Items shall be directional.

Item 620 – Electrical Conductors

At every accessible point, bond together the grounding conductors that share the same conduit, junction box, ground box, or structure in accordance with the electrical detail sheets and the latest edition of the National Electrical Code.

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For both transformer and shoe-base type illumination poles, provide double-pole breakaway fuse holder as shown on the Department's Materials Producers List under "Roadway Illumination and Electrical Supplies" category. Fuse holder is shown on the list under Item 610, "Roadway Illumination Assemblies," and Item 620, "Electrical Conductors." Provide 10-amp time delay fuses.

Bond metal junction boxes and metal conduit to the circuit grounding conductors in accordance with the National Electrical Code.

Refer to Article 7.18, "Electrical Requirements," for electrical certification and electrical licensing requirements.

Item 624 – Ground Boxes

The location of all ground boxes is diagrammatic and may be shifted to accommodate field conditions only as approved by the Engineer.

Stake all foundations and locations approved by the Engineer prior to commencement of drilling operations in order to ensure no conflicts with utility lines. Coordinate with the Utility companies for utility location within the project limits.

Install expansion joint material approved by the Engineer between the ground box and concrete riprap apron. This material and work will be subsidiary to this pay Item.

Field verify all existing ground boxes, conduit, and conductors.

The Contractor shall remove all ground boxes and conductors that are connected to existing Illumination, Traffic Signal and Traffic Management poles or as shown on the plans.

Item 628 – Electrical Services

Meet at the service locations with representatives of the Department, El Paso Electric Company, at least twelve weeks before electric power is needed to finalize exact service pole placement and resolve any issues.

Coordinate with the utility company at the beginning of the project for the delivery of electric power poles to the project site.

Item 1002 – Landscape Amenities

Landscape Amenity 1: Circular Planters –

The Amenity 1 consists of RCP pipes placed vertically next to each other and painted as shown on the plans.

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All embankment, planting soil mix and loose aggregate needed to fill proposed amenity (RCP pipe) to the details shown on the plans will be paid under the pertinent Item 132, Item 192, and Item 1005 respectively.

Plants, plant bed preparation, vegetation barrier, general use compost and plant soil mix will be paid for under Item 192

Paint the RCP pipes as shown in the plans and as per Item 427 and as per paint manufacture recommendations, and as directed by the Engineer. Match paint colors with the Federal Standard 595C Colors Swatch.

Paint colors are:

Sand – Federal Standard # 13578

Sepia – Federal Standard # 30318

The contractor shall provide a careful attention to the installation of RCP to avoid breaking or damaging the pipe. Install RCP in the location and to the depth and details as shown in the plans or as directed and approved by the Engineer.

All Materials including all RCP pipe, paint for RCP Pipe, Equipment, Labor, and Incidentals, and all other aesthetic treatments not mentioned here but shown on Amenity 1 details sheets will be subsidiary to this Item.

Landscape Amenity 2: Franklin Mountain Monument –

The Amenity 2 consists of painted concrete structure with attached decorative pre- perforated and solid Corten steel sheets in the form of a mountain with LED light illumination at the perimeter of the top of the mountain. Concrete structure will be in the shape a rectangular planter with attached gabion pillars on each side facing the roadway as shown on the plans.

Ornamental Steel Structure, LED Illumination systems, controllers, electrical wiring, junction boxes, conduit, will be paid under Item 4230. Ornamental Steel panels with LED lighting will become part of the Amenity 2 to completely build the structure but will not be paid under this Item.

Concrete shall be class A.

Plants, plant bed preparation, vegetation barrier, general use compost and plant soil mix will be paid for under Item 192.

Embankment material will be paid under Item 132.

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Contractor shall saw cut existing riprap to the neat lines and dimensions, preventing damages to the adjacent existing riprap. Any damage to the existing riprap past the proposed amenity limits shall be repaired at the contractor's expense.

Gabion baskets shall be installed and anchored in accordance to the detail shown in the plans.

All wire mesh for the gabions shall be gage 4 galvanized. Galvanized wire mesh, galvanized steel hardware, rock for gabion, and square steel tubing an all material needed to build gabions will be subsidiary to Item 1002.

Materials including concrete, gabion baskets, rocks for gabions, footings, anchors, reinforcing steel, paint, welds, equipment, labor, and incidentals, and all other aesthetic treatments not mentioned here but included on the amenity details shown on the plans will be paid for under Item 1002.

Landscape Amenity 3: Franklin Mountain Planter –

The Amenity 3 consists of colored concrete block in a box shaped planter with attached gabion pillars on each side facing the roadway. The planter has attached to the front face a Decorative Medallion (Texas Star) Assembly with illuminated with LED light as shown in the plan and details.

Plants, plant bed preparation, vegetation barrier, general use compost and plant soil mix will be paid for under Item 192.

Embankment material will be paid under Item 132.

Decorative Medallion (Texas Star) Assembly and LED Illumination systems, controllers, electrical wiring, junction boxes, conduit for the Texas Star in color dark bronze will be paid under Item 6525.

Concrete shall be class A.

Contractor shall saw cut existing riprap to the neat lines and dimensions, preventing damages to the adjacent existing riprap. Any damage to the existing riprap past the proposed amenity limits shall be repaired at the contractor's expense.

Gabion column shall be installed and anchored in accordance to the details shown in the plans.

All wire mesh for the gabions shall be gage 4 galvanized. Galvanized wire mesh, galvanized steel hardware, rock for gabion, and square steel tubing an all material needed to build gabions will be subsidiary to Item 1002.

All Materials including concrete, concrete blocks, gabion cages, rocks for gabions, footings, steel posts, bolts, reinforcing steel, paint for planters, welds, attachments, equipment, labor, and

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incidentals, and all other aesthetic treatments not mentioned here but included on amenities details, shown on the plans will be subsidiary to this Item.

Item 1005 – Loose Aggregate for Ground Cover

All aggregate used for groundcover shall be as clean as possible to the satisfaction and approval by the Engineer prior to placement. This work will be subsidiary to this Item.

Protect newly graded areas from traffic and erosion.

Secure locally quarried aggregate rock that is clean, free from foreign materials and debris prior to placement and approved by the Engineer.

For Type I aggregate use crushed rhyolite rock graded to range from 3/4 inch to 1-1/2-inch rock size placed in a 4" layer. Provide Salt and Pepper rock consisting of 50%-50% mix of grey and padre red color rock. Rock mixture to be approved by the Engineer prior to placement.

Type II aggregate will be used as a finish grade for the planters at FM 656 (Zaragoza Rd).

For Type II aggregate use crushed rhyolite rock graded to range from 3/4 inch to 1-1/2-inch rock size placed in a 4" layer. Provide a color: Franklin Red rock color to be approved by the Engineer prior to placement. Type II aggregate will be utilized as a finish grade for the planters at FM 656

Place rock at the locations shown on the plans or as directed.

Provide a sample of each aggregate color to the project Engineer for approval.

Keep aggregate 1-in below top of steel landscape edge and 3-in below top of amenity 1, 2 and 3 edge.

Aesthetic aggregate colors will not be changed to match Contractor's aggregate.

Item 4230 – Ornamental Steel Structure

Item will pay for all Ornamental Steel Structure (Mountain - Corten steel panels), attachment, welds, LED lighting fixtures, junction box, ground box, conduit and other necessary electrical accessories shown on the plans. Install Ornamental Steel Structure and LED lighting to the detail shown in the plans.

Damages incurred by the contractor while handling and installing the Corten steel shall be repair at the contractor's expense. Any damage to the Ornamental Steel Structure monument during transport or installation shall be replaced at the contractor's expense.

Contractor shall ensure all anchor steel plates are properly embedded in the concrete before attaching any of the ornamental steel structure.

COUNTY: EL PASO

HIGHWAY: IH-10

During handling installation contractor shall exercise care not to damage any of the surrounding structures, damages to any structure shall be repaired at the contractor's expense.

Ornamental Steel Structure (Corten steel panels) with LED lighting will become part of the Amenity 2 to completely build the structure but will be paid under this Item.

Item 6001 – Portable Changeable Message Sign

Portable Changeable Message Sign to be available as deemed necessary.

Provide messages as directed.

Item 6185 – Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)

All TMA Operators must participate in a TMA workshop to be conducted by the El Paso District Safety Office, on the proper use of TMAs, prior to working on Department Right of Way (ROW). A certificate of completion will be issued to TMA Operators that successfully complete the TMA workshop. The certificate of completion must be carried by TMA Operators at all times while working in the Department right of way.

Acquire the TCP and TMA Operator's certificates of completion prior to the authorization to begin work. No time suspension will be granted, and no traffic control work will be allowed without certificates of completion.

In addition to the shadow vehicles with Truck Mounted Attenuator (TMA) that are specified as being required on the traffic control plan for this project, provide 1 additional shadow vehicle(s) with TMA for TCP (1-5)-18, as detailed on General Notes 5 of this standard sheet, and TCP (6-1 to 5)-12.

Therefore, 2 total shadow vehicles with TMA will be required for this type of work. The contractor will be responsible for determining if one or more of these operations will be ongoing at the same time to determine the total number of TMAs needed for the project.

COUNTY: EL PASO

HIGHWAY: IH-10

The supporting vehicle for the TMA shall have a minimum gross (i.e., ballasted) vehicular weight of 19,000 pounds.

Basis of Estimate for Stationary TMAs				
Phase	Standard	Required	Additional	TOTAL
1	TCP(1-5)-18	1	1	2
1	TCP(6-1)-12	1	1	2
1	*TCP(5-1)-18	1	0	1
1	*TCP(6-2)-12	1	0	1
1	*TCP(6-3)-12	1	0	1
1	*TCP(6-4)-12	1	0	1
1	*TCP(6-5)-12	1	0	1

*Optional

Item 6524 – Decorative Metalwork LED Backlighting

Damages incurred by the contractor while handling and installing the Corten steel or aluminum structures shall be repaired at the contractor's expense. Any damage to the Corten steel or aluminum structures during transport or installation shall be replaced at the contractor's expense.

The contractor shall ensure all anchor steel plates are properly embedded in the concrete before attaching any of the sun beam ray structures into the riprap. The contractor shall coordinate with the fabricator to ensure seamless fabrication and installation of the metal structures. Connection of the metal structure pieces shall maintain alignment and symmetry to look continuous and seamless, as approved by the Engineer.

During transportation, handling, and installation, the contractor shall exercise care not to damage any of the surrounding structures, riprap, and amenities, damages to any structure shall be repaired at the contractor's expense.

All steel hardware shall be galvanized steel.

The sun beams structures will be metal surface treated to obtain a color treatment within the range of the sunset shades ranging from brass, copper, amber, yellow or as approved by the engineer.

Contractor to provide samples with color treatment before applying and finalizing the treatment to the aluminum and steel supports surface.

COUNTY: EL PASO

HIGHWAY: IH-10

Item 6525 - Decorative Medallion Assembly with Light-Emitting Diode (LED) Backlighting

This Item shall pay for Texas Star Medallion, LED Lighting mounted on Amenity 3 planter and hollow planters.

During transportation, handling, and installation, the contractor shall exercise care not to damage any of the surrounding structures, riprap, and amenities, damages to any structure shall be repaired at the contractor's expense.

All steel hardware shall be galvanized steel.

Item 6534 – Decorative Lighting Assembly

Lighting assembly projection angle to be adjusted in the field to meet optimum projection into the Monuments and other planters were shown on the plans.

Any light assembly damaged during installation shall be replaced at the contractor's expense.

All steel hardware shall be galvanized steel.

Installation of Opti-color Cluster LED lamp and hardware shall be installed in accordance to this Item and as per the manufactured specifications. Contractor to provide manufacturer specifications and other assembly and mounting details in accordance with this Item.

Opti-color Cluster LED lamp, controllers, electrical wiring, junction boxes, conduit and other materials required for the installation and proper function of the lighting will be paid under this Item.

CONTROL : 2121-03-171, ETC
PROJECT : C 2121-3-171, ETC
HIGHWAY : IH 10
COUNTY : EL PASO

TEXAS DEPARTMENT OF TRANSPORTATION

GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF
----- TRANSPORTATION NOVEMBER 1, 2014.
STANDARD SPECIFICATIONS ARE INCORPORATED
INTO THE CONTRACT BY REFERENCE.

ITEMS 1 TO 9 INCL., GENERAL REQUIREMENTS AND COVENANTS
ITEM 104 REMOVING CONCRETE
ITEM 110 EXCAVATION (132)
ITEM 132 EMBANKMENT (100) (160) (204) (210) (216) (260) (400)
ITEM 160 TOPSOIL (168)
ITEM 161 COMPOST (160)
ITEM 170 IRRIGATION SYSTEM (402) (403) (618) (620) (622) (624) (628)
ITEM 192 LANDSCAPE PLANTING (161) (166) (168)
ITEM 193 LANDSCAPE ESTABLISHMENT (166) (192)
ITEM 420 CONCRETE SUBSTRUCTURES (400) (404) (421) (422) (426) (427)
(440) (441) (448)
ITEM 427 SURFACE FINISHES FOR CONCRETE (420)
ITEM 432 RIPRAP (247) (420) (421) (431) (440)
ITEM 500 MOBILIZATION
ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING
ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL
CONTROLS (161) (432) (556)
ITEM 618 CONDUIT (400) (476)
ITEM 620 ELECTRICAL CONDUCTORS (610) (628)
ITEM 624 GROUND BOXES <302> (420) (421) (432) (440) (618) (620)
ITEM 628 ELECTRICAL SERVICES (441) (445) (449) (618) (620) (627) (656)

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE
----- PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED
HEREON WHEREVER IN CONFLICT THEREWITH.

SPECIAL LABOR PROVISIONS FOR STATE PROJECTS (000---008)
SPECIAL PROVISION "NONDISCRIMINATION" (000---002)

SPECIAL PROVISION "SMALL BUSINESS ENTERPRISE IN STATE FUNDED PROJECTS
" (000---009)

SPECIAL PROVISION "CERTIFICATE OF INTERESTED PARTIES (FORM 1295)"
(000--1019)

SPECIAL PROVISION "SCHEDULE OF LIQUIDATED DAMAGES" (000--1243)

SPECIAL PROVISION "NOTICE OF CONTRACTOR PERFORMANCE EVALUATIONS"
(000---659)

SPECIAL PROVISIONS TO ITEM 2 (002---013) (002---014) (002---015)

SPECIAL PROVISIONS TO ITEM 3 (003---011) (003---013)

SPECIAL PROVISIONS TO ITEM 5 (005---002) (005---003)

SPECIAL PROVISIONS TO ITEM 6 (006---001) (006---012) (006---040)

SPECIAL PROVISIONS TO ITEM 7 (007---004) (007---008) (007---010)
(007---011) (007---013)

SPECIAL PROVISIONS TO ITEM 8 (008---030) (008---033) (008---054)
(008---056)

SPECIAL PROVISIONS TO ITEM 9 (009---010) (009---016)

SPECIAL PROVISION TO ITEM 247 (247---005)

SPECIAL PROVISION TO ITEM 302 (302---003)

SPECIAL PROVISION TO ITEM 420 (420---001)

SPECIAL PROVISION TO ITEM 421 (421---012)

SPECIAL PROVISION TO ITEM 426 (426---005)

SPECIAL PROVISION TO ITEM 427 (427---003)

SPECIAL PROVISION TO ITEM 440 (440---005)

SPECIAL PROVISION TO ITEM 441 (441---004)

SPECIAL PROVISION TO ITEM 442 (442---001)

SPECIAL PROVISION TO ITEM 446 (446---005)

SPECIAL PROVISION TO ITEM 448 (448---001)

SPECIAL PROVISION TO ITEM 449 (449---002)

SPECIAL PROVISION TO ITEM 502 (502---008)

SPECIAL PROVISION TO ITEM 506 (506---002)

SPECIAL PROVISION TO ITEM 656 (656---001)

SPECIAL PROVISION TO SPECIAL SPECIFICATION ITEM 6185 (6185--002)

SPECIAL SPECIFICATIONS:

ITEM 1002 LANDSCAPE AMENITY

ITEM 1005 LOOSE AGGREGATE FOR GROUND COVER

ITEM 4230 ORNAMENTAL STEEL STRUCTURE (WALL- AND GROUND-MOUNTED)

ITEM 6001 PORTABLE CHANGEABLE MESSAGE SIGN

ITEM 6185 TRUCK MOUNTED ATTENUATOR (TMA) AND TRAILER ATTENUATOR (TA)

ITEM 6517 DECORATIVE WALL LIGHTING (DOWNLIGHT) <616><618><620>

ITEM 6524 DECORATIVE METALWORK LED BACKLIGHTING <441><442><446>
<616><618><620>

ITEM 6525 DECORATIVE MEDALLION ASSEMBLY WITH LIGHT-EMITTING DIODE
(LED) BACKLIGHTING <441><442><446><616><618><620>

GENERAL: THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH
----- PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER
PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-
LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL
PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFI-

CATIONS FOR THIS PROJECT.

Control **2121-03-171, ETC.**
Project **C 2121-3-171, ETC.**
Highway **IH 10**
County **EL PASO**

SMALL BUSINESS ENTERPRISE REQUIREMENTS

The following goal for small business enterprises is established:

SBE
0.0%

CHILD SUPPORT STATEMENT

Under Section 231.006, Family Code, the vendor or applicant certifies that the individual or business entity named in this contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate.

CONFLICT OF INTEREST CERTIFICATION

Pursuant to Texas Government Code Section 2261.252(b), the Department is prohibited from entering into contracts in which Department officers and employees have a financial interest.

By signing the Contract, the Contractor certifies that it is not prohibited from entering into a Contract with the Department as a result of a financial interest as defined under Texas Government Code Section 2261.252(b), and that it will exercise reasonable care and diligence to prevent any actions or conditions that could result in a conflict of interest with the Department.

The Contractor also certifies that none of the following individuals, nor any of their family members within the second degree of affinity or consanguinity, owns 1% or more interest or has a financial interest as defined under Texas Government Code Section 2261.252(b) in the Contractor:

- Any member of the Texas Transportation Commission; and
- The Department's Executive Director, General Counsel, Chief of Procurement and Field Support Operations, Director of Procurement, and Director of Contract Services.

Violation of this certification may result in action by the Department.

E-VERIFY CERTIFICATION

Pursuant to Texas Transportation Code §223.051, all TxDOT contracts for construction, maintenance, or improvement of a highway must include a provision requiring Contractors and subcontractors to use the U.S. Department of Homeland Security's E-Verify system to determine employment eligibility. By signing the contract, the Contractor certifies that prior to the award of the Contract:

- the Contractor has registered with and will, to the extent permitted by law, utilize the United States Department of Homeland Security's E-Verify system during the term of the Contract to determine the eligibility of all persons hired to perform duties within Texas during the term of the agreement; and
- the Contractor will require that all subcontractors also register with and, to the extent permitted by law, utilize the United States Department of Homeland Security's E-Verify system during the term of the subcontract to determine the eligibility of all persons hired to perform duties within Texas during the term of the agreement.

Violation of this requirement constitutes a material breach of the Contract, subjects a subcontractor to removal from the Contract, and subjects the Contractor or subcontractors to possible sanctions in accordance with Title 43, Texas Administrative Code, Chapter 10, Subchapter F, "Sanctions and Suspension for Ethical Violations by Entities Doing Business with the Department."

Certification Regarding Disclosure of Public Information

Pursuant to Subchapter J, Chapter 552, Texas Government Code, contractors executing a contract with a governmental body that results in the expenditure of at least \$1 million in public funds must:

- 1) preserve all contracting information* as provided by the records retention requirements applicable to Texas Department of Transportation (TxDOT) for the duration of the contract,
- 2) on request of TxDOT, promptly provide any contracting information related to the contract that is in the custody or possession of the entity, and
- 3) on completion of the contract, either:
 - A. provide, at no cost to TxDOT, all contracting information related to the contract that is in the custody or possession of the entity, or
 - B. preserve the contracting information related to the contract as provided by the records retention requirements applicable to TxDOT

The requirements of Subchapter J, Chapter 552, Government Code, may apply to this contract, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

By entering into Contract, the Contractor agrees to:

- provide, or make available, to TxDOT and any authorized governmental investigating or auditing agency all records, including electronic and payment records related to the contract, for the same period provided by the records retention schedule applicable to TxDOT, and
- ensure that all subcontracts include a clause requiring the same.

* As defined in Government Code §552.003, "Contracting information" means the following information maintained by a governmental body or sent between a governmental body and a vendor, contractor, potential vendor, or potential contractor:

- 1) information in a voucher or contract relating to the receipt or expenditure of public funds by a governmental body;
- 2) solicitation or bid documents relating to a contract with a governmental body;
- 3) communications sent between a governmental body and a vendor, contractor, potential vendor, or potential contractor during the solicitation, evaluation, or negotiation of a contract;
- 4) documents, including bid tabulations, showing the criteria by which a governmental body evaluates each vendor, contractor, potential vendor, or potential contractor responding to a solicitation and, if applicable, an explanation of why the vendor or contractor was selected; and
- 5) communications and other information sent between a governmental body and a vendor or contractor related to the performance of a final contract with the governmental body or work performed on behalf of the governmental body.

CERTIFICATION TO NOT BOYCOTT ISRAEL

Pursuant to Texas Government Code §2271.002, the Department must include a provision requiring a written verification affirming that the Contractor does not boycott Israel, as defined in Government Code §808.001, and will not boycott Israel during the term of the contract. This provision applies to a contract that:

- 1) is with a Contractor that is not a sole proprietorship,
- 2) is with a Contractor with 10 or more full-time employees, and
- 3) has a value of \$100,000 or more.

By signing the contract, the Contractor certifies that it does not boycott Israel and will not boycott Israel during the term of this contract. "Boycott" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes.

Violation of this certification may result in action by the Department.

CERTIFICATION TO NOT BOYCOTT ENERGY COMPANIES

Pursuant to Texas Government Code §2274.002, the Department must include a provision requiring a written verification affirming that the Contractor does not boycott energy companies, as defined in Government Code §809.001, and will not boycott energy companies during the term of the contract. This provision applies to a contract that:

- 1) is with a Contractor that is not a sole proprietorship,
- 2) is with a Contractor with 10 or more full-time employees, and
- 3) has a value of \$100,000 or more.

By signing the contract, the Contractor certifies that it does not boycott energy companies and will not boycott energy companies during the term of this contract. "Boycott" means taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company: (1) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or (2) does business with a company described by (1).

Violation of this certification may result in action by the Department.

CERTIFICATION TO NOT DISCRIMINATE AGAINST FIREARM ENTITIES OR FIREARM TRADE ASSOCIATIONS

Pursuant to Texas Government Code §2274.002, the Department must include a provision requiring a written verification affirming that the Contractor:

- 1) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, as defined in Government Code §2274.001, and
- 2) will not discriminate against a firearm entity or firearm trade association during the term of the contract.

This provision applies to a contract that:

- 1) is with a Contractor that is not a sole proprietorship,
- 2) is with a Contractor with 10 or more full-time employees, and
- 3) has a value of \$100,000 or more.

By signing the contract, the Contractor certifies that it does not discriminate against a firearm entity or firearm trade association as described and will not do so during the term of this contract. "Discriminate against a firearm entity or firearm trade association" means, with respect to the entity or association, to: (1) refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association; (2) refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or (3) terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association. "Discriminate against a firearm entity or firearm trade association" does not include: (1) the established policies of a merchant, retail seller, or platform that restrict or prohibit the listing or selling of ammunition, firearms, or firearm accessories; (2) a company's refusal to engage in the trade of any goods or services, decision to refrain from continuing an existing business relationship, or decision to terminate an existing business relationship to comply with federal, state, or local law, policy, or regulations or a directive by a regulatory agency, or for any traditional business reason that is specific to the customer or potential customer and not based solely on an entity's or association's status as a firearm entity or firearm trade association.

Violation of this certification may result in action by the Department.

PROHIBITION ON CERTAIN TELECOMMUNICATIONS EQUIPMENT OR SERVICES

The Federal Register Notice issued the Final Rule and states that the amendment to 2 CFR 200.216 is effective on August 13, 2020. The new 2 CFR 200.471 regulation provides clarity that the telecommunications and video surveillance costs associated with 2 CFR 200.216 are unallowable for services and equipment from these specific providers. OMB's Federal Register Notice includes the new 2 CFR 200.216 and 2 CFR 200.471 regulations.

<https://www.federalregister.gov/documents/2020/08/13/2020-17468/guidance-for-grants-and-agreements>

Per the Federal Law referenced above, use of services, systems, or services or systems that contain components produced by any of the following manufacturers is strictly prohibited for use on this project. Therefore, for any telecommunications, CCTV, or video surveillance equipment, services or systems cannot be manufactured by, or have components manufactured by:

- Huawei Technologies Company,
- ZTE Corporation (any subsidiary and affiliate of such entities),
- Hytera Communications Corporation,
- Hangzhou Hikvision Digital Technology Company,
- Dahua Technology Company (any subsidiary and affiliate of such entities).

Violation of this prohibition will require replacement of the equipment at the contractor's expense.

Special Provision to Item 000

Special Labor Provisions for State Projects



1. GENERAL

This is a "Public Works" Project, as provided under Government Code Title 10, Chapter 2258, "Prevailing Wage Rates," and is subject to the provisions of the Statute. No provisions in the Contract are intended to be in conflict with the provisions of the Statute.

The Texas Transportation Commission has ascertained and indicated in the special provisions the regular rate of per diem wages prevailing in each locality for each craft or type of worker. Apply the wage rates contained in the specifications as minimum wage rates for the Contract.

2. MINIMUM WAGES, HOURS AND CONDITIONS OF EMPLOYMENT

All workers necessary for the satisfactory completion of the work are within the purview of the Contract.

Whenever and wherever practical, give local citizens preference in the selection of labor.

Do not require any worker to lodge, board or trade at a particular place, or with a particular person as a condition of employment.

Do not charge or accept a fee of any from any person who obtains work on the project. Do not require any person who obtains work on the project to pay any fee to any other person or agency obtaining employment for the person on the project.

Do not charge for tools or equipment used in connection with the duties performed, except for loss or damage of property. Do not charge for necessary camp water.

Do not charge for any transportation furnished to any person employed on the project.

The provisions apply where work is performed by piece work, station work, etc. The minimum wage paid will be exclusive of equipment rental on any shipment which the worker or subcontractor may furnish in connection with his work.

Take responsibility for carrying out the requirements of this specification and ensure that each subcontractor working on the project complies with its provisions.

Any form of subterfuge, coercion or deduction designed to evade, reduce or discount the established minimum wage scales will be considered a violation of the Contract.

The Fair Labor Standards Acts (FLSA) established one and one-half (1-1/2) pay for overtime in excess of 40 hours worked in 1 week. Do not consider time consumed by the worker in going to and returning from the place of work as part of the hours of work. Do not require or permit any worker to work in excess of 40 hours in 1 week, unless the worker receives compensation at a rate not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 40 hours in the workweek.

The general rates of per diem wages prevailing in this locality for each class and type of workers whose services are considered necessary to fulfill the Contract are indicated in the special provisions, and these rates govern as minimum wage rates on this Contract. A penalty of \$60.00 per calendar day or portion of a calendar day for each worker that is paid less than the stipulated general rates of per diem wages for any work done under the Contract will be deducted. The Department, upon receipt of a complaint by a worker,

will determine within 30 days whether good cause exists to believe that the Contractor or a subcontractor has violated wage rate requirements and notify the parties involved of the findings. Make every effort to resolve the alleged violation within 14 days after notification. The next alternative is submittal to binding arbitration in accordance with the provisions of the Texas General Arbitration Act (Art. 224 et seq., Revised Statutes).

Notwithstanding any other provision of the Contract, covenant and agree that the Contractor and its subcontractors will pay each of their employees and contract labor engaged in any way in work under the Contract, a wage not less than what is generally known as the "federal minimum wage" as set out in 29 U.S.C. 206 as that Statute may be amended from time to time.

Pay any worker employed whose position is not listed in the Contract, a wage not less than the per diem wage rate established in the Contract for a worker whose duties are most nearly comparable.

3. RECORD AND INSPECTIONS

Keep copies of weekly payrolls for review. Require subcontractors to keep copies of weekly payrolls for review. Show the name, occupation, number of hours worked each day and per diem wage paid each worker together with a complete record of all deductions made from such wages. Keep records for a period of 3 years from the date of completion of the Contract.

Where the piece-work method is used, indicate on the payroll for each person involved:

- Quantity of piece work performed.
- Price paid per piece-work unit.
- Total hours employed.

The Engineer may require the Contractor to file an affidavit for each payroll certifying that payroll is a true and accurate report of the full wages due and paid to each person employed.

Post or make available to employees the prevailing wage rates from the Contract. Require subcontractors to post or make available to employees the prevailing wage rates from the Contract.

The wage rates listed herein are those predetermined by the Secretary of Labor and State Statute and listed in the United States Department of Labor's (USDOL) General Decisions dated 01-05-2024 and are the minimum wages to be paid accordingly for each specified classification. To determine the applicable wage rate zone, a list entitled "TEXAS COUNTIES IDENTIFIED BY WAGE RATE ZONES" is provided in the contract. Any wage rate that is not listed herein and not in the USDOL's general decision, must be requested by the contractor through the completion of an Additional Classification and Wage Rate Request and be submitted for approval. IMPORTANT NOTICE FOR STATE PROJECTS: only the controlling wage rate zone applies to the contract. Effective 01-05-2024.

CLASS. #	CLASSIFICATION DESCRIPTION	ZONE TX02 *(TX20240002)	ZONE TX03 *(TX20240003)	ZONE TX04 *(TX20240004)	ZONE TX05 *(TX20240005)	ZONE TX06 *(TX20240006)	ZONE TX07 *(TX20240007)	ZONE TX08 *(TX20240008)	ZONE TX24 *(TX20240024)	ZONE TX25 *(TX20240025)	ZONE TX27 *(TX20240027)	ZONE TX28 *(TX20240028)	ZONE TX29 *(TX20240029)	ZONE TX30 *(TX20240030)	ZONE TX37 *(TX20240037)	ZONE TX38 *(TX20240038)	ZONE TX42 *(TX20240042)
1428	Agricultural Tractor Operator						\$12.69					\$12.35			\$11.75		
1300	Asphalt Distributor Operator	\$14.87	\$13.48	\$13.88	\$15.72	\$15.58	\$15.55	\$15.72	\$13.28	\$15.32	\$15.62	\$14.36	\$14.25	\$14.03	\$13.75	\$14.06	\$14.40
1303	Asphalt Paving Machine Operator	\$13.40	\$12.25	\$12.35	\$13.87	\$14.05	\$14.36	\$14.20	\$13.26	\$13.99	\$14.68	\$12.92	\$13.44	\$12.53	\$14.00	\$14.32	\$12.99
1106	Asphalt Raker	\$12.28	\$10.61	\$12.02	\$14.21	\$11.65	\$12.12	\$11.64	\$11.44	\$12.69	\$12.05	\$11.34	\$11.67	\$11.40	\$12.59	\$12.36	\$11.78
1112	Batching Plant Operator, Asphalt																
1115	Batching Plant Operator, Concrete																
1214	Blaster																
1615	Boom Truck Operator						\$18.36										
1444	Boring Machine Operator																
1305	Broom or Sweeper Operator	\$11.21	\$10.33	\$10.08	\$11.99		\$11.04	\$11.62		\$11.74	\$11.41	\$10.30		\$10.23	\$10.60	\$12.68	\$11.05
1144	Communications Cable Installer																
1124	Concrete Finisher, Paving and Structures	\$13.55	\$12.46	\$13.16	\$12.85	\$12.64	\$12.56	\$12.77	\$12.44	\$14.12	\$13.04	\$13.38	\$12.64	\$12.80	\$12.79	\$12.98	\$13.32
1318	Concrete Pavement Finishing Machine Operator				\$16.05		\$15.48			\$16.05		\$19.31				\$13.07	
1315	Concrete Paving, Curing, Float, Texturing Machine Operator											\$16.34				\$11.71	
1333	Concrete Saw Operator				\$14.67					\$14.48	\$17.33					\$13.99	
1399	Concrete/Gunite Pump Operator																
1344	Crane Operator, Hydraulic 60 tons or less				\$18.22		\$18.36			\$18.12	\$18.04	\$20.21			\$18.63	\$13.86	
1345	Crane Operator, Hydraulic Over 80 Tons																
1342	Crane Operator, Lattice Boom 80 Tons or Less	\$16.82	\$14.39	\$13.85	\$17.27		\$15.87			\$17.27		\$14.67			\$16.42	\$14.97	\$13.87
1343	Crane Operator, Lattice Boom Over 80 Tons				\$20.52		\$19.38			\$20.52		\$17.49			\$25.13	\$15.80	
1306	Crawler Tractor Operator	\$13.96	\$16.63	\$13.62	\$14.26		\$15.67			\$14.07	\$13.15	\$13.38			\$14.60	\$13.68	\$13.50
1351	Crusher or Screen Plant Operator																
1446	Directional Drilling Locator						\$11.67										
1445	Directional Drilling Operator				\$20.32		\$17.24										
1139	Electrician	\$20.96		\$19.87	\$19.80		\$26.35		\$20.27	\$19.80		\$20.92				\$27.11	\$19.87
1347	Excavator Operator, 50,000 pounds or less	\$13.46	\$12.56	\$13.67	\$17.19		\$12.88	\$14.38	\$13.49	\$17.19		\$13.88			\$14.09	\$12.71	\$14.42
1348	Excavator Operator, Over 50,000 pounds		\$15.23	\$13.52	\$17.04		\$17.71			\$16.99	\$18.80	\$16.22				\$14.53	\$13.52
1150	Flagger	\$9.30	\$9.10	\$8.50	\$10.28	\$8.81	\$9.45	\$8.70		\$10.06	\$9.71	\$9.03	\$8.81	\$9.08	\$9.90	\$10.33	\$8.10
1151	Form Builder/Setter, Structures	\$13.52	\$12.30	\$13.38	\$12.91	\$12.71	\$12.87	\$12.38	\$12.26	\$13.84	\$12.98	\$13.07	\$13.61	\$12.82	\$14.73	\$12.23	\$12.25
1160	Form Setter, Paving & Curb	\$12.36	\$12.16	\$13.93	\$11.83	\$10.71	\$12.94			\$13.16	\$12.54	\$11.33	\$10.69		\$13.33	\$12.34	\$13.93
1360	Foundation Drill Operator, Crawler Mounted				\$17.99					\$17.99						\$17.43	
1363	Foundation Drill Operator, Truck Mounted		\$16.86	\$22.05	\$21.51		\$16.93			\$21.07	\$20.20	\$20.76		\$17.54	\$21.39	\$15.89	\$22.05
1369	Front End Loader Operator, 3 CY or Less	\$12.28	\$13.49	\$13.40	\$13.85		\$13.04	\$13.15	\$13.29	\$13.69	\$12.64	\$12.89			\$13.51	\$13.32	\$12.17
1372	Front End Loader Operator, Over 3 CY	\$12.77	\$13.69	\$12.33	\$14.96		\$13.21	\$12.86	\$13.57	\$14.72	\$13.75	\$12.32			\$13.19	\$13.17	\$13.02
1329	Joint Sealer																
1172	Laborer, Common	\$10.30	\$9.86	\$10.08	\$10.51	\$10.71	\$10.50	\$10.24	\$10.58	\$10.72	\$10.45	\$10.30	\$10.25	\$10.03	\$10.54	\$11.02	\$10.15
1175	Laborer, Utility	\$11.80	\$11.53	\$12.70	\$12.17	\$11.81	\$12.27	\$12.11	\$11.33	\$12.32	\$11.80	\$11.53	\$11.23	\$11.50	\$11.95	\$11.73	\$12.37
1346	Loader/Backhoe Operator	\$14.18	\$12.77	\$12.97	\$15.68		\$14.12			\$15.18	\$13.58	\$12.87		\$13.21	\$14.13	\$14.29	\$12.90
1187	Mechanic	\$20.14	\$15.47	\$17.47	\$17.74	\$17.00	\$17.10			\$17.68	\$18.94	\$18.58	\$17.00	\$16.61	\$18.46	\$16.96	\$17.47

CLASS. #	CLASSIFICATION DESCRIPTION	ZONE TX02 *(TX20240002)	ZONE TX03 *(TX20240003)	ZONE TX04 *(TX20240004)	ZONE TX05 *(TX20240005)	ZONE TX06 *(TX20240006)	ZONE TX07 *(TX20240007)	ZONE TX08 *(TX20240008)	ZONE TX24 *(TX20240024)	ZONE TX25 *(TX20240025)	ZONE TX27 *(TX20240027)	ZONE TX28 *(TX20240028)	ZONE TX29 *(TX20240029)	ZONE TX30 *(TX20240030)	ZONE TX37 *(TX20240037)	ZONE TX38 *(TX20240038)	ZONE TX42 *(TX20240042)
1380	Milling Machine Operator Motor Grader Operator,	\$15.54	\$14.64	\$12.22	\$14.29		\$14.18			\$14.32	\$14.35	\$12.86			\$14.75	\$13.53	\$12.80
1390	Fine Grade	\$17.49	\$16.52	\$16.88	\$17.12	\$18.37	\$18.51	\$16.69	\$16.13	\$17.19	\$18.35	\$17.07	\$17.74	\$17.47	\$17.08	\$15.69	\$20.01
1393	Motor Grader Operator, Rough	\$16.15	\$14.62	\$15.83	\$16.20	\$17.07	\$14.63	\$18.50		\$16.02	\$16.44	\$15.12	\$16.85	\$14.47	\$17.39	\$14.23	\$15.53
1413	Off Road Hauler			\$10.08	\$12.26		\$11.88			\$12.25		\$12.23			\$13.00	\$14.60	
1196	Painter, Structures Pavement Marking Machine Operator					\$21.29	\$18.34						\$21.29			\$18.62	
1396	Operator	\$16.42		\$13.10	\$13.55		\$19.17	\$12.01		\$13.63	\$14.60	\$13.17		\$16.65	\$10.54	\$11.18	\$13.10
1443	Percussion or Rotary Drill Operator																
1202	Piledriver															\$14.95	
1205	Pipelayer		\$11.87	\$14.64	\$13.17	\$11.17	\$12.79		\$11.37	\$13.24	\$12.66	\$13.24	\$11.17	\$11.67		\$12.12	\$14.64
1384	Reclaimer/Pulverizer Operator	\$12.85			\$11.90		\$12.88			\$11.01		\$10.46					
1500	Reinforcing Steel Worker	\$13.50	\$14.07	\$17.53	\$16.17		\$14.00			\$16.18	\$12.74	\$15.83		\$17.10		\$15.15	\$17.72
1402	Roller Operator, Asphalt	\$10.95		\$11.96	\$13.29		\$12.78	\$11.61		\$13.08	\$12.36	\$11.68			\$11.71	\$11.95	\$11.50
1405	Roller Operator, Other	\$10.36		\$10.44	\$11.82		\$10.50	\$11.64		\$11.51	\$10.59	\$10.30		\$12.04	\$12.85	\$11.57	\$10.66
1411	Scraper Operator	\$10.61	\$11.07	\$10.85	\$12.88		\$12.27		\$11.12	\$12.96	\$11.88	\$12.43		\$11.22	\$13.95	\$13.47	\$10.89
1417	Self-Propelled Hammer Operator																
1194	Servicer	\$13.98	\$12.34	\$14.11	\$14.74		\$14.51	\$15.56	\$13.44	\$14.58	\$14.31	\$13.83		\$12.43	\$13.72	\$13.97	\$14.11
1513	Sign Erector Slurry Seal or Micro-Surfacing Machine Operator																
1708	Machine Operator																
1341	Small Slipform Machine Operator									\$15.96							
1515	Spreader Box Operator	\$12.60		\$13.12	\$14.71		\$14.04			\$14.73	\$13.84	\$13.68		\$13.45	\$11.83	\$13.58	\$14.05
1705	Structural Steel Welder															\$12.85	
1509	Structural Steel Worker						\$19.29									\$14.39	
1339	Subgrade Trimmer																
1143	Telecommunication Technician																
1145	Traffic Signal/Light Pole Worker Trenching Machine Operator,						\$16.00										
1440	Heavy						\$18.48										
1437	Trenching Machine Operator, Light																
1609	Truck Driver Lowboy-Float	\$14.46	\$13.63	\$13.41	\$15.00	\$15.93	\$15.66			\$16.24	\$16.39	\$14.30	\$16.62	\$15.63	\$14.28	\$16.03	\$13.41
1612	Truck Driver Transit-Mix				\$14.14					\$14.14							
1600	Truck Driver, Single Axle Truck Driver, Single or Tandem Axle Dump Truck	\$12.74	\$10.82	\$10.75	\$13.04	\$11.61	\$11.79	\$13.53	\$13.16	\$12.31	\$13.40	\$10.30	\$11.61		\$11.97	\$11.46	\$10.75
1606	Truck Driver, Tandem Axle Tractor with Semi Trailer	\$11.33	\$14.53	\$11.95	\$12.95		\$11.68		\$14.06	\$12.62	\$11.45	\$12.28		\$13.08	\$11.68	\$11.48	\$11.10
1607	Tunneling Machine Operator, Heavy	\$12.49	\$12.12	\$12.50	\$13.42		\$12.81	\$13.16		\$12.86	\$16.22	\$12.50			\$13.80	\$12.27	\$12.50
1441	Tunneling Machine Operator, Light																
1706	Welder		\$14.02		\$14.86		\$15.97		\$13.74	\$14.84					\$13.78		
1520	Work Zone Barricade Servicer	\$10.30	\$12.88	\$11.46	\$11.70	\$11.57	\$11.85	\$10.77		\$11.68	\$12.20	\$11.22	\$11.51	\$12.96	\$10.54	\$11.67	\$11.76

Notes:

*Represents the USDOL wage decision.

Any worker employed on this project shall be paid at the rate of one and one half (1-1/2) times the regular rate for every hour worked in excess of forty (40) hours per week.

For reference, the titles and descriptions for the classifications listed here are detailed further in the AGC of Texas' *Standard Job Classifications and Descriptions for Highway, Heavy, Utilities, and Industrial Construction in Texas* posted on the AGC's Web site for any contractor.

**TEXAS COUNTIES IDENTIFIED BY
WAGE RATE ZONES: 2, 3, 4, 5, 6, 7, 8, 24, 25, 27, 28, 29, 30, 37, 38, 42**

County Name	Zone	County Name	Zone	County Name	Zone	County Name	Zone
Anderson	28	Donley	37	Karnes	27	Reagan	37
Andrews	37	Duval	30	Kaufman	25	Real	37
Angelina	28	Eastland	37	Kendall	7	Red River	28
Aransas	29	Ector	2	Kenedy	30	Reeves	8
Archer	25	Edwards	8	Kent	37	Refugio	27
Armstrong	2	El Paso	24	Kerr	27	Roberts	37
Atascosa	7	Ellis	25	Kimble	37	Robertson	7
Austin	38	Erath	28	King	37	Rockwall	25
Bailey	37	Falls	28	Kinney	8	Runnels	37
Bandera	7	Fannin	28	Kleberg	27	Rusk	4
Bastrop	7	Fayette	27	Knox	37	Sabine	28
Baylor	37	Fisher	37	Lamar	28	San Augustine	28
Bee	27	Floyd	37	Lamb	37	San Jacinto	38
Bell	7	Foard	37	Lampasas	7	San Patricio	29
Bexar	7	Fort Bend	38	LaSalle	30	San Saba	37
Blanco	27	Franklin	28	Lavaca	27	Schleicher	37
Borden	37	Freestone	28	Lee	27	Scurry	37
Bosque	28	Frio	27	Leon	28	Shackelford	37
Bowie	4	Gaines	37	Liberty	38	Shelby	28
Brazoria	38	Galveston	38	Limestone	28	Sherman	37
Brazos	7	Garza	37	Lipscomb	37	Smith	4
Brewster	8	Gillespie	27	Live Oak	27	Somervell	28
Briscoe	37	Glasscock	37	Llano	27	Starr	30
Brooks	30	Goliad	29	Loving	37	Stephens	37
Brown	37	Gonzales	27	Lubbock	2	Sterling	37
Burleson	7	Gray	37	Lynn	37	Stonewall	37
Burnet	27	Grayson	25	Madison	28	Sutton	8
Caldwell	7	Gregg	4	Marion	28	Swisher	37
Calhoun	29	Grimes	28	Martin	37	Tarrant	25
Callahan	25	Guadalupe	7	Mason	27	Taylor	2
Cameron	3	Hale	37	Matagorda	27	Terrell	8
Camp	28	Hall	37	Maverick	30	Terry	37
Carson	2	Hamilton	28	McCulloch	37	Throckmorton	37
Cass	28	Hansford	37	McLennan	7	Titus	28
Castro	37	Hardeman	37	McMullen	30	Tom Green	2
Chambers	38	Hardin	38	Medina	7	Travis	7
Cherokee	28	Harris	38	Menard	37	Trinity	28
Childress	37	Harrison	42	Midland	2	Tyler	28
Clay	25	Hartley	37	Milam	28	Upshur	4
Cochran	37	Haskell	37	Mills	37	Upton	37
Coke	37	Hays	7	Mitchell	37	Uvalde	30
Coleman	37	Hemphill	37	Montague	37	Val Verde	8
Collin	25	Henderson	28	Montgomery	38	Van Zandt	28
Collingsworth	37	Hidalgo	3	Moore	37	Victoria	6
Colorado	27	Hill	28	Morris	28	Walker	28
Comal	7	Hockley	37	Motley	37	Waller	38
Comanche	37	Hood	28	Nacogdoches	28	Ward	37
Concho	37	Hopkins	28	Navarro	28	Washington	28
Cooke	37	Houston	28	Newton	28	Webb	3
Coryell	7	Howard	37	Nolan	37	Wharton	27
Cottle	37	Hudspeth	8	Nueces	29	Wheeler	37
Crane	37	Hunt	25	Ochiltree	37	Wichita	5
Crockett	8	Hutchinson	37	Oldham	37	Wilbarger	37
Crosby	2	Irion	2	Orange	38	Willacy	30
Culberson	8	Jack	28	Palo Pinto	28	Williamson	7
Dallam	37	Jackson	27	Panola	28	Wilson	7
Dallas	25	Jasper	28	Parker	25	Winkler	37
Dawson	37	Jeff Davis	8	Parmer	37	Wise	25
Deaf Smith	37	Jefferson	38	Pecos	8	Wood	28
Delta	25	Jim Hogg	30	Polk	28	Yoakum	37
Denton	25	Jim Wells	27	Potter	2	Young	37
DeWitt	27	Johnson	25	Presidio	8	Zapata	30
Dickens	37	Jones	25	Rains	28	Zavala	30
Dimmit	30			Randall	2		

Special Provision to Item 000

Nondiscrimination



1. DESCRIPTION

All recipients of federal financial assistance are required to comply with various nondiscrimination laws including Title VI of the Civil Rights Act of 1964, as amended, (Title VI). Title VI forbids discrimination against anyone in the United States on the grounds of race, color, or national origin by any agency receiving federal funds.

Texas Department of Transportation, as a recipient of Federal financial assistance, and under Title VI and related statutes, ensures that no person shall on the grounds of race, religion (where the primary objective of the financial assistance is to provide employment per 42 U.S.C. § 2000d-3), color, national origin, sex, age or disability be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any Department programs or activities.

2. DEFINITION OF TERMS

Where the term “contractor” appears in the following six nondiscrimination clauses, the term “contractor” is understood to include all parties to contracts or agreements with the Texas Department of Transportation.

3. NONDISCRIMINATION PROVISIONS

During the performance of this contract, the contractor agrees as follows:

- 3.1. **Compliance with Regulations.** The Contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, “DOT”) Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- 3.2. **Nondiscrimination.** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- 3.3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- 3.4. **Information and Reports:** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Texas Department of Transportation to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the Recipient, or the Texas Department of Transportation as appropriate, and shall set forth what efforts it has made to obtain the information.

- 3.5. **Sanctions for Noncompliance.** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Recipient shall impose such contract sanctions as it or the Texas Department of Transportation may determine to be appropriate, including, but not limited to:
- withholding of payments to the contractor under the contract until the contractor complies, and/or
 - cancellation, termination or suspension of the contract, in whole or in part.
- 3.6. **Incorporation of Provisions.** The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Recipient or the Texas Department of Transportation may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Recipient to enter into such litigation to protect the interests of the Recipient, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Special Provision to Item 000

Small Business Enterprise in State Funded Projects



1. DESCRIPTION

The purpose of this Special Provision is to carry out the Texas Department of Transportation's policy of ensuring that Small Business Enterprise (SBE) has an opportunity to participate in the performance of contracts. If the SBE goal is greater than zero, Article A of this Special Provision shall apply to this Contract; otherwise, Article B of this Special Provision applies. The percentage goal for SBE participation in the work to be performed under this contract will be shown in the proposal.

2. DEFINITIONS

Small Business Enterprise (SBE) is a firm (including affiliates) certified by the Department whose annual gross receipts do not exceed the U.S. Small Business Administration's size standards for 4 consecutive years. Firms certified as Historically Underutilized Businesses (HUBs) by the Texas Comptroller of Public Accounts and as Disadvantaged Business Enterprises (DBEs) by the Texas Uniform Certification Program automatically qualify as SBEs.

2.1. Article A - SBE Goal is Greater than Zero.

2.1.1. **Policy.** The Department is committed to providing contracting opportunities for small businesses. In this regard, it is the Department's policy to develop and maintain a program in order to facilitate contracting opportunities for small businesses. Consequently, the requirements of the Department's Small Business Enterprise Program apply to this contract as follows:

2.1.1.1. The Contractor shall make a good faith effort to meet the SBE goal for this contract.

2.1.1.2. The Contractor and any Subcontractors shall not discriminate on the basis of race, color, national origin, age, disability or sex in the award and performance of this contract. These nondiscrimination requirements shall be incorporated into any subcontract and purchase order.

2.1.1.3. After a conditional award is made to the low bidder, the Department will determine the adequacy of a Contractor's efforts to meet the contract goal, as is outlined under Section 2, "Contractor's Responsibilities." If the requirements of Section 2 are met, the contract will be forwarded to the Contractor for execution.

The Contractor's performance, during the construction period of the contract in meeting the SBE goal, will be monitored by the Department.

2.1.2. **Contractor's Responsibilities.** These requirements must be satisfied by the Contractor. A SBE Contractor may satisfy the SBE requirements by performing at least 25% of the contract work with its own organization as defined elsewhere in the contract.

2.1.2.1. The Contractor shall submit a completed SBE Commitment Agreement Form for each SBE they intend to use to satisfy the SBE goal so as to arrive in the Department's Office of Civil Rights (OCR) in Austin, Texas not later than 5:00 p.m. on the 10th business day, excluding national holidays, after the conditional award of the contract. When requested, additional time, not to exceed 7 business days, excluding national holidays, may be granted based on documentation submitted by the Contractor.

2.1.2.2. A Contractor who cannot meet the contract goal, in whole or in part, shall document the good faith efforts taken to meet the SBE goal. The Department will consider as good faith efforts all documented explanations

that are submitted and that describe a Contractor's failure to meet a SBE goal or obtain SBE participation, including:

- 2.1.2.2.1. Advertising in general circulation, trade association, and/or minority/women focus media concerning subcontracting opportunities,
- 2.1.2.2.2. Dividing the contract work into reasonable portions in accordance with standard industry practices,
- 2.1.2.2.3. Documenting reasons for rejection or meeting with the rejected SBE to discuss the rejection,
- 2.1.2.2.4. Providing qualified SBEs with adequate information about bonding, insurance, plans, specifications, scope of work, and the requirements of the contract,
- 2.1.2.2.5. Negotiating in good faith with qualified SBEs, not rejecting qualified SBEs who are also the lowest responsive bidder, and;
- 2.1.2.2.6. Using the services of available minorities and women, community organizations, contractor groups, local, state and federal business assistance offices, and other organizations that provide support services to SBEs.
- 2.1.2.3. The good faith effort documentation is due at the time and place specified in Subarticle 2.(a). of this Special Provision. The Director of the DBE & SBE Programs Section will evaluate the Contractor's documentation. If it is determined that the Contractor has failed to meet the good faith effort requirements, the Contractor will be given an opportunity for reconsideration by the Department.
- 2.1.2.4. Should the bidder to whom the contract is conditionally awarded refuse, neglect or fail to meet the SBE goal and/or demonstrate to the Department's satisfaction sufficient efforts to obtain SBE participation, the proposal guaranty filed with the bid shall become the property of the State, not as a penalty, but as liquidated damages to the Department.
- 2.1.2.5. The Contractor must not terminate a SBE subcontractor submitted on a commitment agreement for a contract with an assigned goal without the prior written consent of the Department.
- 2.1.2.6. The Contractor shall designate a SBE contact person who will administer the Contractor's SBE program and who will be responsible for submitting reports, maintaining records, and documenting good faith efforts to use SBEs.
- 2.1.2.7. The Contractor must inform the Department of the representative's name, title and telephone number within 10 days of beginning work.
- 2.1.3. **Eligibility of SBEs.**
- 2.1.3.1. The Department certifies the eligibility of SBEs.
- 2.1.3.2. The Department maintains and makes available to interested parties a directory of certified SBEs.
- 2.1.3.3. Only firms certified at the time of letting or at the time the commitments are submitted are eligible to be used in the information furnished by the Contractor required under Section 2.(a) above.
- 2.1.3.4. Certified HUBs and DBEs are eligible as SBEs.
- 2.1.3.5. Small Business Size Regulations and Eligibility is referenced on e-CFR (Code of Federal Regulations), Title 13 – Business Credit and Assistance, Chapter 1 – Small Business Administration, Part 121 – Small Business Size Regulations, Subpart A – Size Eligibility Provisions and Standards.
- 2.1.4. **Determination of SBE Participation.** SBE participation shall be counted toward meeting the SBE goal in this contract in accordance with the following:

- 2.1.4.1. A Contractor will receive credit for all payments actually made to a SBE for work performed and costs incurred in accordance with the contract, including all subcontracted work.
- 2.1.4.2. A SBE Contractor or subcontractor may not subcontract more than 75% of a contract. The SBE shall perform not less than 25% of the value of the contract work with its own organization.
- 2.1.4.3. A SBE may lease equipment consistent with standard industry practice. A SBE may lease equipment from the prime contractor if a rental agreement, separate from the subcontract specifying the terms of the lease arrangement, is approved by the Department prior to the SBE starting the work in accordance with the following:
- 2.1.4.3.1. If the equipment is of a specialized nature, the lease may include the operator. If the practice is generally acceptable with the industry, the operator may remain on the lessor's payroll. The operator of the equipment shall be subject to the full control of the SBE, for a short term, and involve a specialized piece of heavy equipment readily available at the job site.
- 2.1.4.3.2. For equipment that is not specialized, the SBE shall provide the operator and be responsible for all payroll and labor compliance requirements.
- 2.1.5. **Records and Reports.**
- 2.1.5.1. The Contractor shall submit monthly reports, after work begins, on SBE payments, (including payments to HUBs and DBEs). The monthly reports are to be sent to the Area Engineer's office. These reports will be due within 15 days after the end of a calendar month.
- These reports will be required until all SBE subcontracting or supply activity is completed. The "SBE Progress Report" is to be used for monthly reporting. Upon completion of the contract and prior to receiving the final payment, the Contractor shall submit the "SBE Final Report" to the Office of Civil Rights and a copy to the Area Engineer. These forms may be obtained from the Office of Civil Rights and reproduced as necessary. The Department may verify the amounts being reported as paid to SBEs by requesting, on a random basis, copies of invoices and cancelled checks paid to SBEs. When the SBE goal requirement is not met, documentation supporting Good Faith Efforts, as outlined in Section 2.(b) of this Special Provision, must be submitted with the Final Report.
- 2.1.5.2. SBE subcontractors and/or suppliers should be identified on the monthly report by SBE certification number, name and the amount of actual payment made to each during the monthly period. **These reports are required regardless of whether or not SBE activity has occurred in the monthly reporting period.**
- 2.1.5.3. All such records must be retained for a period of 3 years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the Department.
- 2.1.6. **Compliance of Contractor.** To ensure that SBE requirements of this contract are complied with, the Department will monitor the Contractor's efforts to involve SBEs during the performance of this contract. This will be accomplished by a review of monthly reports submitted by the Contractor indicating his progress in achieving the SBE contract goal and by compliance reviews conducted by the Department.
- A Contractor's failure to comply with the requirements of this Special Provision shall constitute a material breach of this contract. In such a case, the Department reserves the right to employ remedies as the Department deems appropriate in the terms of the contract.
- 2.2. **Article B - No SBE Goal.**
- 2.2.1. **Policy.** It is the policy of the Department that SBEs shall have an opportunity to participate in the performance of contracts. Consequently, the requirements of the Department's Small Business Enterprise Program apply to this contract as specified in Section 2-5 of this Article.

- 2.2.2. **Contractor's Responsibilities.** If there is no SBE goal, the Contractor will offer SBEs an opportunity to participate in the performance of contracts and subcontracts.
- 2.2.3. **Prohibit Discrimination.** The Contractor and any subcontractor shall not discriminate on the basis of race, color, national origin, religion, age, disability or sex in the award and performance of contracts. These nondiscrimination requirements shall be incorporated into any subcontract and purchase order.
- 2.2.4. **Records and Reports.**
- 2.2.4.1. The Contractor shall submit reports on SBE (including HUB and DBE) payments. The reports are to be sent to the Area Engineer's office. These reports will be due annually by the 31st of August or at project completion, whichever comes first.
- These reports will be required until all SBE subcontracting or supply activity is completed. The "SBE Progress Report" is to be used for reporting. Upon completion of the contract and prior to receiving the final payment, the Contractor shall submit the "SBE Final Report" to the Office of Civil Rights and a copy to the Area Engineer. These forms may be obtained from the Office of Civil Rights and reproduced as necessary. The Department may verify the amounts being reported as paid to SBEs by requesting copies of invoices and cancelled checks paid to SBEs on a random basis.
- 2.2.4.2. SBE subcontractors and/or suppliers should be identified on the report by SBE Certification Number, name and the amount of actual payment made.
- 2.2.4.3. All such records must be retained for a period of 3 years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the Department.

Special Provision 000

Certificate of Interested Parties (Form 1295)



Submit a notarized Form 1295, "Certificate of Interested Parties," in the following instances:

- at Contract execution for Contracts awarded by the Commission;
- at Contract execution for Contracts awarded by the District Engineer or Chief Engineer with an award amount of \$1,000,000 or more; at any time an existing Contract awarded by the District Engineer or Chief Engineer increases in value to \$1,000,000 or more due to changes in the Contract; at any time there is an increase of \$1,000,000 or more to an existing Contract (change orders, extensions, and renewals); or
- at any time there is a change to the information in Form 1295, when the form was filed for an existing Contract.

Form 1295 and instructions on completing and filing the form are available on the Texas Ethics Commission website.

Special Provision 000

Important Notice to Contractors



For Dollar Amount of Original Contract		Dollar Amount of Daily Contract Administration Liquidated Damages per Working Day
From More Than	To and including	
0	1,000,000	618
1,000,000	3,000,000	832
3,000,000	5,000,000	940
5,000,000	15,000,000	1317
15,000,000	25,000,000	1718
25,000,000	50,000,000	2411
50,000,000	Over 50,000,000	4265

In addition to the amount shown in Table 1, the Liquidated Damages will be increased by the amount shown in Item 8 of the General Notes for Road User Cost (RUC), when applicable.

Special Provision 000

Notice of Contractor Performance Evaluations



1. GENERAL

In accordance with Texas Transportation Code §223.012, the Engineer will evaluate Contractor performance based on quality, safety, and timeliness of the project.

2. DEFINITIONS

- 2.1. **Project Recovery Plan (PRP)**—a formal, enforceable plan developed by the Contractor, in consultation with the District, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct project-specific performance deficiencies.

In accordance with Title 43, Texas Administrative Code (TAC), §9.23, the District will request a PRP if the Contractor's performance on a project is below the Department's acceptable standards and will monitor the Contractor's compliance with the established plan.

- 2.2. **Corrective Action Plan (CAP)**—a formal, enforceable plan developed by the Contractor, and proposed for adoption by the Construction or Maintenance Division, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct statewide performance deficiencies.

In accordance with 43 TAC §9.23, the Division will request a CAP if the average of the Contractor's statewide final evaluation scores falls below the Department's acceptable standards for the review period and will monitor the Contractor's compliance with the established plan.

3. CONTRACTOR EVALUATIONS

In accordance with Title 43, Texas Administrative Code (TAC) §9.23, the Engineer will schedule evaluations at the following intervals, at minimum:

- Interim evaluations—at or within 30 days after the anniversary of the notice to proceed, for Contracts extending beyond 1 yr., and
- Final evaluation—upon project closeout.

In case of a takeover agreement, neither the Surety nor its performing Contractor will be evaluated.

In addition to regularly scheduled evaluations, the Engineer may schedule an interim evaluation at any time to formally communicate issues with quality, safety, or timeliness. Upon request, work with the Engineer to develop a PRP to document expectations for correcting deficiencies.

Comply with the PRP as directed. Failure to comply with the PRP may result in additional remedial actions available to the Engineer under Item 5, "Control of the Work." Failure to meet a PRP to the Engineer's satisfaction may result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Engineer will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a PRP, including consideration of sufficient time.

Follow the escalation ladder if there is a disagreement regarding an evaluation or disposition of a PRP. The Contractor may submit additional documentation pertaining to the dispute. The District Engineer's decision

on a Contractor's evaluation score and recommendation of action required in a PRP or follow up for non-compliance is final.

4. DIVISION OVERSIGHT

Upon request of the Construction or Maintenance Division, develop and submit for Division approval a proposed CAP to document expectations for correcting deficiencies in the performance of projects statewide.

Comply with the CAP as directed. The CAP may be modified at any time up to completion or resolution after written approval of the premise of change from the Division. Failure to meet an adopted or revised adopted CAP to the Division's satisfaction within 120 days will result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Division will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a CAP, including consideration of sufficient time and associated costs as appropriate.

5. PERFORMANCE REVIEW COMMITTEE

The Performance Review Committee, in accordance with 43 TAC §9.24, will review at minimum all final evaluations, history of compliance with PRPs, any adopted CAPs including agreed modifications, any information about events outside a Contractor's control contributing to the Contractor's performance, and any documentation submitted by the Contractor and may recommend one or more of the following actions:

- take no action,
- reduce the Contractor's bidding capacity,
- prohibit the Contractor from bidding on one or more projects,
- immediately suspend the Contractor from bidding for a specified period of time, by reducing the Contractor's bidding capacity to zero, or
- prohibit the Contractor from being awarded a Contract on which they are the apparent low bidder.

The Deputy Executive Director will determine any further action against the Contractor.

6. APPEALS PROCESS

In accordance with 43 TAC §9.25, the Contractor may appeal remedial actions determined by the Deputy Executive Director.

Special Provision to Item 2

Instructions to Bidders



Item 2, "Instructions to Bidders" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 3., "Issuing Proposal Forms," is supplemented by the following:

The Electronic State Business Daily (ESBD), the Integrated Contractor Exchange (iCX) system, and the project proposal are the official sources of advertisement and bidding information for the State and Local Lettings. Bidders should bid the project using the information found therein, including any addenda. These sources take precedence over information from other sources, including TxDOT webpages, which are unofficial and intended for informational purposes only.

Special Provision to Item 2

Instructions to Bidders



Item 2, "Instructions to Bidders," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 2.8.2., "Proposal Guaranty," third paragraph is replaced by the following.

It is the Bidder's responsibility to ensure the electronic bid bond is issued in the name or Department vendor identification numbers of the Bidder or Bidders.

Special Provision to Item 2

Instructions to Bidders



Item 2, "Instructions to Bidders," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 2.3., "Issuing Proposal Forms," is supplemented by the following:

- the Bidder or affiliate of the Bidder that was originally determined as the apparent low Bidder on a project but was deemed nonresponsive for failure to register or participate in the Department of Homeland Security's (DHS) E-Verify system as specified in Article 2.15., "Department of Homeland Security (DHS) E-Verify System," is prohibited from rebidding that specific project.

Article 2.7., "Nonresponsive Bid," is supplemented by the following:

- the Bidder failed to participate in the Department of Homeland Security's (DHS) as specified in Article 2.15., "Department of Homeland Security (DHS) E-Verify System."

Article 2.15., "Department of Homeland Security (DHS) E-Verify System," is added.

The Department will not award a Contract to a Contractor that is not registered in the DHS E-Verify system. Remain active in E-Verify throughout the life of the Contract. In addition, in accordance with paragraph six of Article 8.2., "Subcontracting," include this requirement in all subcontracts and require that subcontractors remain active in E-Verify until their work is completed.

If the apparent low Bidder does not appear in the DHS E-Verify system before award, the Contractor must submit documentation showing that they are compliant within 5 calendar days after bid opening. A Contractor that fails to comply or respond within the deadline will be declared nonresponsive. The Bidder forfeiting the proposal guaranty will not be considered in future proposals for the same work unless there has been a substantial change in the scope of the work.

The Department may recommend that the Commission:

- reject all bids, or
- award the Contract to the new apparent low Bidder, if the Department is able to verify the Bidder's participation in the DHS E-Verify system.

If the Department is unable to verify the new apparent low Bidder's participation in the DHS E-Verify system:

- the new apparent low Bidder will not be deemed nonresponsive,
- the new apparent low Bidder's guaranty will not be forfeited,
- the Department will reject all bids,
- the new apparent low Bidder will remain eligible to receive future proposals for the same project, and
- the proposal guaranty of the original low bidder will become the property of the State, not as a penalty, but as liquidated damages.

Special Provision to Item 3 Award and Execution Contract



Item 3, Award and Execution of Contract," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 4.3, "Insurance." The first sentence is voided and replaced by the following:

For construction and building Contracts, submit a certificate of insurance showing coverages in accordance with Contract requirements. For routine maintenance Contracts, refer to Article 8, "Beginning of Work."

Article 8, "Beginning of Work." The first sentence is supplemented by the following:

For a routine maintenance Contract, do not begin work until a certificate of insurance showing coverages in accordance with the Contract requirements is provided and accepted.

Special Provision to Item 3

Award and Execution of Contract



Item 3, "Award and Execution of Contract" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 4.3 "Insurance" is being amended by the following:

Table 2
Insurance Requirements

Type of Insurance	Amount of Coverage
Commercial General Liability Insurance	Not Less Than: \$600,000 each occurrence
Business Automobile Policy	Not Less Than: \$600,000 combined single limit
Workers' Compensation	Not Less Than: Statutory
All Risk Builder's Risk Insurance (For building-facilities contracts only)	100% of Contract Price

Special Provision to Item 5

Control of the Work



Item 5, "Control of the Work," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 5.1, "Authority of Engineer," is voided and replaced by the following.

The Engineer has the authority to observe, test, inspect, approve, and accept the work. The Engineer decides all questions about the quality and acceptability of materials, work performed, work progress, Contract interpretations, and acceptable Contract fulfillment. The Engineer has the authority to enforce and make effective these decisions.

The Engineer acts as a referee in all questions arising under the terms of the Contract. The Engineer's decisions will be final and binding.

The Engineer will pursue and document actions against the Contractor as warranted to address Contract performance issues. Contract remedies include, but are not limited to, the following:

- conducting interim performance evaluations requiring a Project Recovery Plan, in accordance with Title 43, Texas Administrative Code (TAC) §9.23,
- requiring the Contractor to remove and replace defective work, or reducing payment for defective work,
- removing an individual from the project,
- suspending the work without suspending working day charges,
- assessing standard liquidated damages to recover the Department's administrative costs, including additional project-specific liquidated damages when specified in the Contract in accordance with 43 TAC §9.22,
- withholding estimates,
- declaring the Contractor to be in default of the Contract, and
- in case of a Contractor's failure to meet a Project Recovery Plan, referring the issue directly to the Performance Review Committee for consideration of further action against the Contractor in accordance with 43 TAC §9.24.

The Engineer will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards, including consideration of sufficient time.

Follow the issue escalation ladder if there is disagreement regarding the application of Contract remedies.

Special Provision to Item 5

Control of the Work



Item 5, "Control of the Work" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 5.4, "Coordination of Plans, Specifications, and Special Provisions," the last sentence of the last paragraph is replaced by the following:

Failure to promptly notify the Engineer will constitute a waiver of all contract claims against the Department for misunderstandings or ambiguities that result from the errors, omissions, or discrepancies.

Special Provision to Item 6

Control of Materials



For this project, Item 6, "Control of Materials," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 4., "Sampling, Testing, and Inspection," is supplemented by the following:

Meet with the Engineer and choose either the Department or a Department-selected Commercial Lab (CL) for conducting the subset of project-level sampling and testing shown in Table 1, "Select Guide Schedule Sampling and Testing." Selection may be made on a test by test basis. CLs will meet the testing turnaround times shown (includes test time and time for travel/sampling and reporting) and in all cases issue test reports as soon as possible.

If the Contractor chooses a Department-selected CL for any Table 1 sampling and testing:

- notify the Engineer, District Lab, and the CL of project scheduling that may require CL testing;
- provide the Engineer, District Lab, and CL at least 24 hours' notice by phone and e-mail;
- reimburse the Department for CL Table 1 testing using the contract fee schedule for the CL (including mileage and travel/standby time) at the minimum guide schedule testing frequencies;
- reimburse the Department for CL Table 1 testing above the minimum guide schedule frequencies for retesting when minimum frequency testing results in failures to meet specification limits;
- agree with the Engineer and CL upon a policy regarding notification for testing services;
- give any cancellation notice to the Engineer, District Lab, and CL by phone and e-mail;
- reimburse the Department a \$150 cancellation fee to cover technician time and mileage charges for previously scheduled work cancelled without adequate notice, which resulted in mobilization of technician and/or equipment by the CL; and
- all CL charges will be reimbursed to the Department by a deduction from the Contractor's monthly pay estimate.

If the CL does not meet the Table 1 turnaround times, testing charge to the Contractor will be reduced by 50% for the first late day and an additional 5% for each succeeding late day.

Approved CL project testing above the minimum testing frequencies in the Guide Schedule of Sampling and Testing, and not as the result of failing tests, will be paid by the Department.

Other project-level Guide Schedule sampling and testing not shown on Table 1 will be the responsibility of the Department.

Table 1
Select Guide Schedule Sampling and Testing (Note 1)

TxDOT Test	Test Description	Turn-Around Time (Calendar days)
SOILS/BASE		
Tex-101-E	Preparation of Soil and Flexible Base Materials for Testing (included in other tests)	
Tex-104-E	Liquid Limit of Soils (included in 106-E)	
Tex-105-E	Plastic Limit of Soils (included in 106-E)	
Tex-106-E	Calculating the Plasticity Index of Soils	7
Tex-110-E	Particle Size Analysis of Soils	6
Tex-113-E	Moisture-Density Relationship of Base Materials	7
Tex-114-E	Moisture-Density Relationship of Subgrade and Embankment Soil	7
Tex-115-E	Field Method for In-Place Density of Soils and Base Materials	2
Tex-116-E	Ball Mill Method for the Disintegration of Flexible Base Material	5
Tex-117-E, Part II	Triaxial Compression Tests For Disturbed Soils and Base Materials (Part II)	6
Tex-113-E w/ Tex-117-E	Moisture-Density Relationship of Base Materials with Triaxial Compression Tests For Disturbed Soils and Base Materials (Part II)	10
Tex-140-E	Measuring Thickness of Pavement Layer	2
Tex-145-E	Determining Sulfate Content in Soils - Colorimetric Method	4
HOT MIX ASPHALT		
Tex-200-F	Sieve Analysis of Fine and Coarse Aggregate (dry, from ignition oven with known correction factors)	1 (Note 2)
Tex-203-F	Sand Equivalent Test	3
Tex-206-F, w/ Tex-207-F, Part I, w/ Tex-227-F	(Lab-Molded Density of Production Mixture – Texas Gyrotory) Method of Compacting Test Specimens of Bituminous Mixtures with Density of Compacted Bituminous Mixtures, Part I - Bulk Specific Gravity of Compacted Bituminous Mixtures, with Theoretical Maximum Specific Gravity of Bituminous Mixtures	1 (Note 2)
Tex-207-F, Part I &/or Part VI	(In-Place Air Voids of Roadway Cores) Density of Compacted Bituminous Mixtures, Part I- Bulk Specific Gravity of Compacted Bituminous Mixtures &/or Part VI - Bulk Specific Gravity of Compacted Bituminous Mixtures Using the Vacuum Method	1 (Note 2)
Tex-207-F, Part V	Density of Compacted Bituminous Mixtures, Part V- Determining Mat Segregation using a Density-Testing Gauge	3
Tex-207-F, Part VII	Density of Compacted Bituminous Mixtures, Part VII - Determining Longitudinal Joint Density using a Density-Testing Gauge	4
Tex-212-F	Moisture Content of Bituminous Mixtures	3
Tex-217-F	Deleterious Material and Decantation Test for Coarse Aggregate	4
Tex-221-F	Sampling Aggregate for Bituminous Mixtures, Surface Treatments, and LRA (included in other tests)	
Tex-222-F	Sampling Bituminous Mixtures (included in other tests)	
Tex-224-F	Determination of Flakiness Index	3
Tex-226-F	Indirect Tensile Strength Test (production mix)	4
Tex-235-F	Determining Draindown Characteristics in Bituminous Materials	3
Tex-236-F (Correction Factors)	Asphalt Content from Asphalt Paving Mixtures by the Ignition Method (Determining Correction Factors)	4
Tex-236-F	Asphalt Content from Asphalt Paving Mixtures by the Ignition Method (Production Mixture)	1 (Note 2)
Tex-241-F w/ Tex-207-F, Part I, w/ Tex-227-F	(Lab-Molded Density of Production Mixture – Superpave Gyrotory) Superpave Gyrotory Compacting of Specimens of Bituminous Mixtures (production mixture) with Density of Compacted Bituminous Mixtures, Part I- Part I - Bulk Specific Gravity of Compacted Bituminous Mixtures, with Theoretical Maximum Specific Gravity of Bituminous Mixtures	1 (Note 2)
Tex-242-F	Hamburg Wheel-Tracking Test (production mix, molded samples)	3
Tex-244-F	Thermal Profile of Hot Mix Asphalt	1
Tex-246-F	Permeability of Water Flow of Hot Mix Asphalt	3
Tex-280-F	Flat and Elongated Particles	3
Tex-530-C	Effect of Water on Bituminous Paving Mixtures (production mix)	4

AGGREGATES		
Tex-400-A	Sampling Flexible Base, Stone, Gravel, Sand, and Mineral Aggregates	3
Tex-410-A	Abrasion of Coarse Aggregate Using the Los Angeles Machine	5
Tex-411-A	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate	12
Tex-461-A	Degradation of Coarse Aggregate by Micro-Deval Abrasion	5
CHEMICAL		
Tex-612-J	Acid Insoluble Residue for Fine Aggregate	4
GENERAL		
HMA Production Specialist [TxAPA – Level 1-A] (\$/hr)		
HMA Roadway Specialist [TxAPA – Level 1-B] (\$/hr)		
Technician Travel/Standby Time (\$/hr)		
Per Diem (\$/day – meals and lodging)		
Mileage Rate (\$/mile from closest CL location)		
Note 1– Turn-Around Time includes test time and time for travel/sampling and reporting. Note 2 – These tests require turn-around times meeting the governing specifications. Provide test results within the stated turn-around time. CL is allowed one additional day to provide the signed and sealed report.		

Special Provision to Item 6

Control of Materials



Item 6, "Control of Materials" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 6.10., "Hazardous Materials," is voided and replaced by the following:

Comply with the requirements of Article 7.12., "Responsibility for Hazardous Materials."

Notify the Engineer immediately when a visual observation or odor indicates that materials on sites owned or controlled by the Department may contain hazardous materials. Except as noted herein, the Department is responsible for testing, removing, and disposing of hazardous materials not introduced by the Contractor. The Engineer may suspend work wholly or in part during the testing, removing, or disposing of hazardous materials, except in the case where hazardous materials are introduced by the Contractor.

Use materials that are free of hazardous materials. Notify the Engineer immediately if materials are suspected to contain hazardous materials. If materials delivered to the project by the Contractor are suspected to contain hazardous materials, have an approved commercial laboratory test the materials for the presence of hazardous materials as approved. Remove, remediate, and dispose of any of these materials found to contain hazardous materials. The work required to comply with this section will be at the Contractor's expense if materials are found to contain hazardous materials. Working day charges will not be suspended and extensions of working days will not be granted for activities related to handling hazardous material introduced by the Contractor. If suspected materials are not found to contain hazardous materials, the Department will reimburse the Contractor for hazardous materials testing and will adjust working day charges if the Contractor can show that this work impacted the critical path.

10.1. Painted Steel Requirements. Coatings on existing steel contain hazardous materials unless otherwise shown on the plans. Remove paint and dispose of steel coated with paint containing hazardous materials in accordance with the following:

10.1.1. Removing Paint From Steel For contracts that are specifically for painting steel, Item 446, "Field Cleaning and Painting Steel" will be included as a pay item. Perform work in accordance with that item.

For projects where paint must be removed to allow for the dismantling of steel or to perform other work, the Department will provide for a separate contractor (third party) to remove paint containing hazardous materials prior to or during the Contract. Remove paint covering existing steel shown not to contain hazardous materials in accordance with Item 446, "Field Cleaning and Painting Steel."

10.1.2. Removal and Disposal of Painted Steel. For steel able to be dismantled by unbolting, paint removal will not be performed by the Department. The Department will remove paint, at locations shown on the plans or as agreed, for the Contractor's cutting and dismantling purposes. Utilize Department cleaned locations for dismantling when provided or provide own means of dismantling at other locations.

Painted steel to be retained by the Department will be shown on the plans. For painted steel that contains hazardous materials, dispose of the painted steel at a steel recycling or smelting facility unless otherwise shown on the plans. Maintain and make available to the Engineer invoices and other records obtained from the facility showing the received weight of the steel and the facility name. Dispose of steel that does not contain hazardous material coatings in accordance with federal, state and local regulations.

10.2. Asbestos Requirements. The plans will indicate locations or elements where asbestos containing materials (ACM) are known to be present. Where ACM is known to exist or where previously unknown ACM has been found, the Department will arrange for abatement by a separate contractor prior to or during the Contract. Notify the Engineer of proposed dates of demolition or removal of structural elements with ACM at least 60 days before beginning work to allow the Department sufficient time for abatement.

The Department of State Health Services (DSHS), Asbestos Programs Branch, is responsible for administering the requirements of the National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 61, Subpart M and the Texas Asbestos Health Protection Rules (TAHPR). Based on EPA guidance and regulatory background information, bridges are considered to be a regulated "facility" under NESHAP. Therefore, federal standards for demolition and renovation apply.

The Department is required to notify the DSHS at least 10 working days (by postmarked date) before initiating demolition or renovation of each structure or load bearing member shown on the plans. If the actual demolition or renovation date is changed or delayed, notify the Engineer in writing of the revised dates in sufficient time to allow for the Department's notification to DSHS to be postmarked at least 10 days in advance of the actual work.

Failure to provide the above information may require the temporary suspension of work under Article 8.4., "Temporary Suspension of Work or Working Day Charges," due to reasons under the control of the Contractor. The Department retains the right to determine the actual advance notice needed for the change in date to address post office business days and staff availability.

10.3. Lead Abatement. Provide traffic control as shown on the plans, and coordinate and cooperate with the third party and the Department for managing or removing hazardous materials. Work for the traffic control shown on the plans and coordination work will not be paid for directly but will be subsidiary to pertinent Items.

Special Provision to Item 6

Control of Materials



Item 6, "Control of Materials" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 1.1. "Buy America,." This section is voided and replaced by the following:

- 1.1. **Buy America.** Comply with the latest provisions of Build America, Buy America Act (BABA Act) of the Bipartisan Infrastructure Law and applicable CFR, which restrict funds being made available from Federal financial assistance programs unless all the iron products, steel products, manufactured products, and construction materials used in the project are produced in the United States. Use iron or steel products, manufactured products, or construction materials produced in the United States for all permanently installed materials and products except when defined in Section 1.1.5., "Buy America Exceptions."

A material is solely classified based on its status at the time it is brought to the work site as either an iron or steel product, construction material, manufactured product, or Section 70917(c) material. Refer to the Buy America Material Classification Sheet found in the general notes or txdot.gov for additional clarification on material classification.

- 1.1.1. **Iron or Steel.** Iron or steel products means articles, materials, or supplies that consist of iron or steel or a combination of both. For iron or steel products, manufacturing includes any process that modifies the chemical content, physical shape or size, or final finish of a product. The manufacturing process begins with initial melting and mixing and continues through fabrication (cutting, drilling, welding, bending, etc.) and coating (paint, galvanizing, epoxy, etc.).

For iron or steel products submit a notarized original FORM D-9-USA-1 (Department Form 1818) with the proper attachments for verification of compliance.

- 1.1.2. **Section 70917(c) Materials.** Section 70917(c) materials mean cement and cementitious material; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. Section 70917(c) materials do not require domestic sourcing or Buy America certification.

- 1.1.3. **Construction Materials.** Construction materials are classified as articles, materials, or supplies that consist of only one of the items listed in bullets below. Minor additions (as determined by plans or Engineer) to any of the items listed is still a construction material.

- non-ferrous metals,
- plastic and polymer-based products (including polyvinyl chloride, composite building materials, and polymers used in fiber optic cables),
- glass (including optic glass),
- fiber optic cable (including drop cable),
- optical fiber,
- lumber,
- engineered wood, or
- drywall.

For construction materials, submit a Construction Material Buy America Certification Form (Department Form 2806) for verification of compliance that all manufacturing processes, as required, occurred in the

United States. Each construction material has specific certification requirements stated below. Provide additional documentation as requested.

Details shown on the plans provide additional clarification on Buy America requirements.

For non-ferrous metals, certification requires all manufacturing processes, from initial smelting or melting through final shaping, coating, and assembly, occurred in the United States.

For plastic and polymer-based products (including polyvinyl chloride, composite building materials, and polymers used in fiber optic cables), certification requires all manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form, occurred in the United States.

For glass (including optic glass), certification requires all manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting, occurred in the United States.

For fiber optic cable (including drop cable), certification requires all manufacturing processes, from the initial ribboning (if applicable), through buffering, fiber stranding and jacketing, occurred in the United States. All manufacturing processes also include the standards for glass and optical fiber, but not for non-ferrous metals, plastic and polymer-based products, or any others.

For optical fiber, certification requires all manufacturing processes, from the initial preform fabrication stage through the completion of the draw, occurred in the United States.

For lumber, certification requires all manufacturing processes, from initial debarking through treatment and planing, occurred in the United States.

For engineered wood, certification requires all manufacturing processes from the initial combination of constituent materials until the wood product is in its final form, occurred in the United States.

For drywall, certification requires all manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels, occurred in the United States.

1.1.4. **Manufactured Products.** Materials classified as a manufactured product are currently waived from Buy America requirements by an FHWA general waiver and are not required to be domestically sourced. However, iron or steel products incorporated into manufactured products must meet iron and steel compliance requirements.

1.1.5. **Buy America Exceptions.** Use of iron, steel, construction materials, and manufactured products manufactured in the United States is required unless the material meets an exception below.

- A waiver exists exempting the material from Buy America compliance.
- The total value of the non-compliant products (other than iron or steel products) is no more than the lesser of \$1,000,000 or 5% of Total Applicable Costs for the project. Total Applicable Cost means the actual cost of all materials requiring Buy America compliance including iron, steel, or other materials that are within the scope of existing waivers. Contractor must provide documentation showing under threshold in advance for Engineer's consideration.
- The total value of foreign iron and steel products, including delivery, does not exceed 0.1% of the total Contract cost or \$2,500, whichever is greater. Contractor must provide documentation showing under threshold in advance for Engineer's consideration.
- Foreign steel may be allowed when the Contract contains an alternate item for a foreign source iron or steel product and the Contract is awarded based on the alternate item.

- The materials are temporarily installed or are supplies, tools and equipment not incorporated into the project. Temporarily installed means the materials and products must be removed at the end of the project or may be removed at the contractor's convenience with Engineers approval.

Special Provision to Item 7

Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 7.7.2., "Texas Pollutant Discharge Elimination System (TPDES) Permits and Storm Water Pollution Prevention Plans (SWP3)," is voided and replaced by the following:

7.2. Texas Pollution Discharge Elimination System (TPDES) Permits and Storm Water Pollution Prevention Plans (SWP3).

7.2.1. Projects with less than one acre of soil disturbance including required associated project specific locations (PSL's) per TPDES GP TXR 150000.

No posting or filing will be required for soil disturbances within the right of way. Adhere to the requirements of the SWP3.

7.2.2. Projects with one acre but less than five acres of soil disturbance including required associated PSL's per TPDES GP TXR 150000.

The Department will be considered a primary operator for Operational Control Over Plans and Specifications as defined in TPDES GP TXR 150000 for construction activity in the right of way. The Department will post a small site notice along with other requirements as defined in TPDES GP TXR 150000 as the entity of having operational control over plans and specifications for work shown on the plans in the right of way.

The Contractor will be considered a Primary Operator for Day-to-Day Operational Control as defined in TPDES GP TXR 150000 for construction activity in the right of way. In addition to the Department's actions, the Contractor will post a small site notice along with other requirements as defined in TPDES GP TXR 150000 as the entity of having day-to-day operational control of the work shown on the plans in the right of way. This is in addition to the Contractor being responsible for TPDES GP TXR 150000 requirements for on- right of way and off- right of way PSL's. Adhere to all requirements of the SWP3 as shown on the plans. The Contractor will be responsible for Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed.

7.2.3. Projects with 5 acres or more of soil disturbance including required associated PSL's per TPDES GP TXR 150000.

The Department will be considered a primary operator for Operational Control Over Plans and Specifications as defined in TPDES GP TXR 150000 for construction activities in the right of way. The Department will post a large site notice, file a notice of intent (NOI), notice of change (NOC), if applicable, and a notice of termination (NOT) along with other requirements per TPDES GP TXR 150000 as the entity having operational control over plans and specifications for work shown on the plans in the right of way.

The Contractor will be considered a primary operator for Day-to-Day Operational Control as defined in TPDES GP TXR 150000 for construction activities in the right of way. In addition to the Department's actions, the Contractor shall file a NOI, NOC, if applicable, and NOT and post a large site notice along with other requirements as the entity of having day-to-day operational control of the work shown on the plans in the right of way. This is in addition to the Contractor

being responsible for TPDES GP TXR 150000 requirements for on- right of way and off- right of way PSL's. Adhere to all requirements of the SWP3 as shown on the plans.

Special Provision to Item 7

Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 19.1., Minimum Wage Requirements for Federally Funded Contracts. The second paragraph is voided and replaced by the following:

Submit electronic payroll records to the Engineer using the Department's payroll system.

Section 19.2., Minimum Wage Requirements for State Funded Contracts. The second paragraph is voided and replaced by the following:

Submit electronic payroll records to the Engineer using the Department's payroll system.

Special Provision to Item 7

Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 7.2.4., "Public Safety and Convenience." The first paragraph is deleted and replaced by the following.

Ensure the safety and convenience of the public and property as provided in the Contract and as directed. Keep existing roadways open to traffic or construct and maintain detours and temporary structures for safe public travel. Manage construction to minimize disruption to traffic. Maintain the roadway in a good and passable condition, including proper drainage and provide for ingress and egress to adjacent property.

If the construction of the project requires the closing of a highway, as directed, coordinate the closure with the Engineer and work to ensure all lanes and ramps possible are available during peak traffic periods before, during, and after significant traffic generator events to avoid any adverse economic impact on the municipalities during:

- dates or events as shown on the plans, and
- other dates as directed.

Special Provision to Item 007

Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities," of the Standard Specifications is amended with respect to the clauses cited below.

Section 2.6., "Barricades, Signs, and Traffic Handling," the first paragraph is voided and replaced by the following:

- 2.6. **Barricades, Signs, and Traffic Handling.** Comply with the requirements of Item 502 "Barricades, Signs, and Traffic Handling," and as directed. Provide traffic control devices that conform to the details shown on the plans, the TMUTCD, and the Department's Compliant Work Zone Traffic Control Device List maintained by the Traffic Safety Division. When authorized or directed, provide additional signs or traffic control devices not required by the plans.

Section 2.6.1., "Contractor Responsible Person and Alternative," is voided and replaced by the following:

- 2.6.1. **Contractor Responsible Person and Alternative.** Designate in writing, a Contractor's Responsible Person (CRP) and an alternate to be the representative of the Contractor who is responsible for taking or directing corrective measures regarding the traffic control. The CRP or alternate must be accessible by phone 24 hr. per day and able to respond when notified. The CRP and alternate must comply with the requirements of Section 2.6.5., "Training."

Section 2.6.2, "Flaggers," the first paragraph is voided and replaced by the following:

- 2.6.2. **Flaggers.** Designate in writing, a flagger instructor who will serve as a flagging supervisor and is responsible for training and assuring that all flaggers are qualified to perform flagging duties. Certify to the Engineer that all flaggers will be trained and make available upon request a list of flaggers trained to perform flagging duties.

Section 2.6.5, "Training," is voided and replaced by the following:

- 2.6.5. **Training.** Train workers involved with the traffic control using Department-approved training as shown on the "Traffic Control Training" Material Producer List.

Coordinate enrollment, pay associated fees, and successfully complete Department-approved training or Contractor-developed training. Training is valid for the period prescribed by the provider. Except for law enforcement personnel training, refresher training is required every 4 yr. from the date of completion unless otherwise specified by the course provider. The Engineer may require training at a frequency instead of the period prescribed based on the Department's needs. Training and associated fees will not be measured or paid for directly but are considered subsidiary to pertinent Items.

Certify to the Engineer that workers involved in traffic control and other work zone personnel have been trained and make available upon request a copy of the certification of completion to the Engineer. Ensure the following is included in the certification of completion:

- name of provider and course title,
- name of participant,
- date of completion, and
- date of expiration.

Where Contractor-developed training or a Department-approved training course does not produce a certification, maintain a log of attendees. Make the log available upon request. Ensure the log is legible and includes the following:

- printed name and signature of participant,
- name and title of trainer, and
- date of training.

2.6.5.1. **Contractor-developed Training.** Develop and deliver Contractor-developed training meeting the minimum requirements established by the Department. The outline for this training must be submitted to the Engineer for approval at the preconstruction meeting. The CRP or designated alternate may deliver the training instead of the Department-approved training. The work performed and materials furnished to develop and deliver the training will not be measured or paid for directly but will be considered subsidiary to pertinent Items.

2.6.5.1.1. **Flagger Training Minimum Requirements.** A Contractor's certified flagging instructor is permitted to train other flaggers.

2.6.5.1.2. **Optional Contractor-developed Training for Other Work Zone Personnel.** For other work zone personnel, the Contractor may provide training meeting the curriculum shown below instead of Department-approved training.

Minimum curriculum for Contractor-provided training is as follows:

Contractor-developed training must provide information on the use of personnel protection equipment, occupational hazards and health risks, and other pertinent topics related to traffic management. The type and amount of training will depend on the job duties and responsibilities. Develop training applicable to the work being performed. Develop training to include the following topics.

- The Life You Save May Be Your Own (or other similar company safety motto).
- Purpose of the training.
 - It's the Law.
 - To make work zones safer for workers and motorist.
 - To understand what is needed for traffic control.
 - To save lives including your own.
- Personal and Co-Worker Safety.
 - **High Visibility Safety Apparel.** Discuss compliant requirements; inspect regularly for fading and reduced reflective properties; if night operations are required, discuss the additional and appropriate required apparel in addition to special night work risks; if moving operations are underway, discuss appropriate safety measures specific to the situation and traffic control plan.
 - **Blind Areas.** A blind area is the area around a vehicle or piece of construction equipment not visible to the operators, either by line of sight or indirectly by mirrors. Discuss the "Circle of Safety" around equipment and vehicles; use of spotters; maintain eye contact with equipment operators; and use of hand signals.
 - **Runovers and Backovers.** Remain alert at all times; keep a safe distance from traffic; avoid turning your back to traffic and if you must then use a spotter; and stay behind protective barriers, whenever possible. Note: It is not safe to sit on or lean against a concrete barrier, these barriers can deflect four plus feet when struck by a vehicle.
 - Look out for each other, warn co-workers.
 - Be courteous to motorists.
 - Do not run across active roadways.
 - Workers must obey traffic laws and drive courteously while operating vehicles in the work zones.
 - Workers must be made aware of company distracted driving policies.
- **Night Time Operations.** Focus should be placed on projects with a nighttime element.

- **Traffic Control Training.** Basics of Traffic Control.
 - Identify work zone traffic control supervisor and other appropriate persons to report issues to when they arise.
 - Emphasize that work zone traffic control devices must be in clean and in undamaged condition. If devices have been hit but not damaged, put back in their correct place and report to traffic control supervisor. If devices have been damaged, replace with new one and report to traffic control supervisor. If devices are dirty, faded or have missing or damaged reflective tape clean or replace and report to traffic control supervisor. Show examples of non-acceptable device conditions. Discuss various types of traffic control devices to be used and where spacing requirements can be found.
 - **Channelizing Devices and Barricades with Slanted Stripes.** Stripes are to slant in the direction you want traffic to stay or move to; demonstrate this with a device.
 - **Traffic Queuing.** Workers must be made aware of traffic queuing and the dangers created by it. Workers must be instructed to immediately notify the traffic control supervisor and other supervisory personnel if traffic is queuing beyond advance warning sign and devices or construction limits.
 - **Signs.** Signs must be straight and not leaning. Report problems to the traffic control supervisor or other as designated for immediate repair. Covered signs must be fully covered. If covers are damaged or out of place, report to traffic control supervisor or other as designated.

Special Provision to Item 7

Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 7.20., "Security Incidents," is added.

- 20.1. Reporting of Security Incidents.** Immediately notify the Department's [Cyber Security Operations Center \(CSOC\) via the Report Cybersecurity Incident Page](#) on www.txdot.gov, of any potential cybersecurity incident or breach involving Department data. A breach of system security is the unauthorized acquisition of computerized data that compromises the security, confidentiality, or integrity of sensitive personal information maintained by a person, including data that is encrypted if the person accessing the data has the key required to decrypt the data.
- 20.2. Liability for costs incurred.** The Department reserves the right to hold the Contractor liable for all costs incurred by the Department to resolve a security incident introduced by the Contractor, their Subcontractors, or their Suppliers.

Special Provision to Item 8 Prosecution and Progress



Item 8, "Prosecution and Progress" of the Standard Specification is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 8.2., "Subcontracting," is supplemented by the following paragraph, which is added as paragraph six to this article:

The Contractor certifies by signing the Contract that the Contractor will not enter into any subcontract with a subcontractor that is not registered in the Department of Homeland Security's (DHS) E-Verify system. Require that all subcontractors working on the project register and require that all subcontractors remain active in the DHS E-Verify system until their work is complete on the project.

Special Provision to Item 8 Prosecution and Progress



Item 8, "Prosecution and Progress" of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Article 8.7.2., "Wrongful Default," is revised and replaced by the following:

If it is determined after the Contractor is declared in default, that the Contractor was not in default, the rights and obligations of all parties will be the same as if termination had been issued for the convenience of the public as provided in Article 8.8 "Termination of Contract."

Special Provision to Item 8 Prosecution and Progress



Item 8, "Prosecution and Progress" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 3., "Computation of Contract Time for Completion." The second paragraph is voided and replaced by the following:

The development of the conceptual time determination is intended to establish the number of working days on the Contract. Upon request, the Engineer will provide the conceptual time determination schedule to the Contractor for informational purposes only. The schedule assumes generic resources, production rates, sequences of construction, and average weather conditions based on historic data. Schedule labor, equipment, procurement of materials, subcontractor work, and all other necessary means to prosecute the work within the number of working days specified by the Contract.

Special Provision to Item 8 Prosecution and Progress



Item 8, "Prosecution and Progress," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 8.1., "Prosecution of Work." The article is voided and replaced by the following.

Begin work within 90 calendar days after the authorization date to begin work. Prosecute the work continuously to completion within the working days specified. Unless otherwise shown on the plans, work may be prosecuted in concurrent phases if no changes are required to the traffic control plan or if a revised traffic control plan is approved. Notify the Engineer at least 24 hr. before beginning work or before beginning any new operation. Do not start new operations to the detriment of work already begun. Minimize interference to traffic.

For Contracts with callout work and work orders, begin work in the right of way within the specified time and continuously prosecute the work until completion.

Special Provision to Item 009

Measurement and Payment



Item 009 "Measurement and Payment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 9.5., "PROGRESS PAYMENTS" is supplemented with the following:

It is the Department's desire to pay a Contractor for work through the last working day of the month; however, the use of early cut-off dates for monthly estimates and MOH is a project management practice to manage workload at the Area Office level. Approval for using early cut-off dates is at the District's discretion. The earliest cut-off date for estimates is the 25th of the month.

Article 9.6., "PAYMENT FOR MATERIAL ON HAND (MOH)" first paragraph is amended as follows:

If payment for MOH is desired, request compensation for the invoice cost of acceptable nonperishable materials that have not been used in the work before the request, and that have been delivered to the work location or are in acceptable storage places. Nonperishable materials are those that do not have a shelf life or whose characteristics do not materially change when exposed to the elements. Include only materials that have been sampled, tested, approved, or certified, and are ready for incorporation into the work. Only materials which are completely constructed or fabricated on the Contractor's order for a specific Contract and are so marked and on which an approved test report has been issued are eligible. Payment for MOH may include the following types of items: concrete traffic barrier, precast concrete box culverts, concrete piling, reinforced concrete pipe, and illumination poles. Any repairs required after fabricated materials have been approved for storage will require approval of the Engineer before being made and will be made at the Contractor's expense. Include only those materials and products, when cumulated under an individual item or similar bid items, that have an invoice cost of at least \$1,000 in the request for MOH payment (e.g. For MOH eligibility, various sizes of conductor are considered similar bid items and may be cumulated to meet the threshold; for small roadside signs, the sign supports, mounting bolts, and the sign face is considered one bid item or similar bid items for more than one pay item for sign supports.) Requests for MOH are to be submitted at least two days before but not later than the estimate cutoff date unless otherwise agreed. If there is a need to request MOH after the established cut-off date, the district can make accommodation as the need arises. This needed accommodation is to be the exception, though, and not the rule.

Special Provision to Item 9

Measurement and Payment



Item 9, "Measurement and Payment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 7.1.4.3., "Standby Equipment Costs," is voided and replaced by the following:

7.1.4.3. **Standby Equipment Costs.** Payment for standby equipment will be made in accordance with Section 9.7.1.4., "Equipment." The 15% markup will be paid when standby is associated with extra work but will not be paid when standby is associated with damages.

Section 7.1.4.3.1., "Contractor-Owned Equipment," is voided and replaced by the following:

7.1.4.3.1. **Contractor-Owned Equipment.** For Contractor-owned equipment:

- Standby will be paid at 50% of the monthly Rental Rate Blue Book rate after the regional and age adjustment factors have been applied. Operating costs will not be allowed. Calculate the standby rate as follows.

$$\text{Standby rate} = (\text{FHWA hourly rate} - \text{operating costs}) \times 50\%$$

- If an hourly rate is needed, divide the monthly Rental Rate Blue Book rate by 176.
- No more than 8 hr. of standby will be paid during a 24-hr. day period, nor more than 40 hr. per week.
- Standby costs will not be allowed during periods when the equipment would have otherwise been idle.

Special Provision to Item 247

Flexible Base



Item 247, "Flexible Base," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 247.2.1., "Aggregate." This Section is voided and replaced by the following.

Furnish aggregate of the type and grade shown on the plans and meeting the requirements shown in Table 1. Each source must meet Table 1 requirements for liquid limit, plasticity index, and wet ball mill for the grade specified. Do not use additives, such as but not limited to cement, emulsion, foamed asphalt, or lime, to modify aggregates to meet the requirements of Table 1, unless otherwise shown on the plans.

Unless otherwise shown on the plans, the unconfined compressive strength is waived when the flexible base material meets the #200 sieve requirement.

Table 1
Material Requirements

Property	Test Method	Grade 1–2 ³	Grade 3	Grade 4	Grade 5 ³
Master gradation sieve size (cumulative % retained)		–	–		–
2-1/2"		0	0		0
1-3/4"		0–10	0–10		0–5
7/8"	Tex-110-E	10–35	–		10–35
3/8"		30–65	–		35–65
#4		45–75	45–75		45–75
#40		65–90	50–85		70–90
#200 ^{1, 2}		85–95	–		–
Liquid limit, % Max	Tex-104-E	40	40	As shown on the plans	35
Plasticity index, Max		10	12		10
Plasticity index, Min	Tex-106-E	As shown on the plans	As shown on the plans		As shown on the plans
Wet ball mill, % Max		40	–		40
Wet ball mill, % Max increase passing the #40 sieve	Tex-116-E	20	–		20
Min compressive strength ² , psi		–	–		–
lateral pressure 0 psi	Tex-117-E	35	–		–
lateral pressure 3 psi		–	–		90
lateral pressure 15 psi		175	–		175

1. The #200 sieve test is only required to meet the waiver of the unconfined compressive strength. The #200 sieve test requirement is only applicable to stockpile samples from Section 247.2.4.
2. Compressive strength and #200 sieve test requirements are waived when the flexible base is mixed with or without existing material and treated with cement, emulsion, foamed asphalt, or lime, unless otherwise shown on the plans.
3. Grade 3 may be substituted for Grade 1–2 or Grade 5 when the flexible base is mixed with or without existing material and treated with cement, emulsion, foamed asphalt, or lime, as approved. The Grade 3 flexible base must meet the wet ball mill requirements of Grade 1–2 or Grade 5.

Section 247.2.1.2.4., "Type D." The third sentence is voided and replaced by the following.

Crushed concrete must meet the requirements in Section 247.2.1.3., "Recycled Material," and be managed in a way to provide for uniform quality.

Section 247.2.1.3., "Recycled Material." This Section is voided and replaced by the following.

Reclaimed asphalt pavement (RAP) and other recycled materials may be used as shown on the plans. Request approval to blend two or more sources of recycled materials. When RAP is allowed, do not exceed 20% RAP by weight, unless otherwise shown on the plans. The percentage limitations for other recycled materials are as shown on the plans.

Provide recycled materials, other than RAP, that have a maximum sulfate content of 3,000 ppm when tested in accordance with [Tex-145-E](#). Certify accordance with [DMS-11000](#), "Evaluating and Using Nonhazardous Recyclable Materials Guidelines." In addition, recycled materials must be free of reinforcing steel and other objectionable material and have at most 1.5% deleterious material when tested in accordance with [Tex-413-A](#). The liquid limit, plasticity index, wet ball mill, and compressive strength for all recycled materials are waived. When using RAP, crush RAP so that 100% passes the 2-in. sieve and does not exceed a maximum percent loss from decantation of 5.0% when tested in accordance with [Tex-406-A](#). Test RAP without removing the asphalt. The final product must meet the requirements shown in Table 1 for the grade specified, except when the Department requires a specific amount of Department-furnished RAP be added to the blend, unless otherwise shown on the plans.

The Contractor is responsible for uniformly blending the recycled material with the flexible base material to build a stockpile to meet the percentages required. Any Contractor-furnished surplus of recycled materials must remain the property of the Contractor. Remove Contractor-owned recycled materials from the project, and dispose of them in conformance with federal, state, and local regulations before project acceptance.

Section 247.2.4., "Stockpile Approval." This Section is added.

Stockpile is approved when the Engineer's test results meet the material requirements shown in Table 1.

Section 247.2.4.1., "Sampling." This Section is added.

The Contractor and the Engineer will sample flexible base from completed stockpiles in accordance with [Tex-100-A](#). Personnel conducting sampling must be certified by the Department-approved soils and base certification program.

Sampling stockpiles may be located at the production site or at the project location. The Contractor must witness the Engineer's sampling and sample the stockpile for their own testing, and label as deemed necessary.

Sample the stockpile for the Engineer as shown on the plans. When the Contractor samples the stockpile for the Engineer, the Engineer will witness the sampling of material designated for the Engineer and the Materials and Tests Division (MTD). The Engineer will label their sampling containers as "Engineer" and "MTD," or as deemed necessary.

The Engineer will take immediate possession of the sample containers for the Engineer and MTD. The Engineer will maintain custody of the samples until all testing and reporting are completed.

Section 247.2.4.2., "Referee Testing." This Section is added.

Referee testing is applicable for stockpile testing only. MTD is the referee laboratory. MTD may designate a laboratory from the Department's MPL for *Commercial Laboratories Approved for Flexible Base Referee Requests* as the referee laboratory as deemed necessary. The designated laboratory must not perform any testing under this Item for the Engineer or Contractor.

The Contractor may request referee testing when the Engineer's test results fail to meet any of the material requirements shown in Table 1 and when the Contractor's sample from Section 247.2.4.1., "Sampling," for the same failing Department test passes. The tests must be performed by a laboratory on the Department's MPL for *Commercial Laboratories Approved for Flexible Base Referee Requests*. Submit the request by email within 5 working days after receiving failing test results from the Engineer. Include completed test reports passing the applicable requirements shown in Table 1 in the email.

Record and submit completed test reports electronically on Department-provided templates in their original format meeting the applicable material requirements shown in Table 1. Use Department-provided templates to record and calculate all test data. The Engineer and the Contractor will provide any available test results to the other party when requested.

Section 247.4.3., "Compaction." The first paragraph is voided and replaced by the following.

Compact using density control unless otherwise shown on the plans. Multiple lifts are permitted as shown on the plans or approved. Bring each layer to the moisture content directed. When necessary, sprinkle the material in accordance with Item 204, "Sprinkling." Maintain moisture during compaction within $\pm 2.0\%$ of the optimum moisture content as determined in accordance with [Tex-113-E](#).

Section 247.4.3.2., "Density Control." This Section is voided and replaced by the following.

Compact to at least 100% of the maximum dry density and within $\pm 2.0\%$ of the optimum moisture content as determined in accordance with [Tex-113-E](#), unless otherwise shown on the plans. Provide the Engineer with the beginning and ending station numbers of the area completed for testing. The Engineer will determine roadway density and moisture content of completed sections in accordance with [Tex-115-E](#), Part I. The Engineer will determine random locations for testing in accordance with [Tex-115-E](#), Part IV. Do not achieve density by drying the material after compaction.

When the density is less than 100% of the maximum dry density, the Engineer may perform additional testing to determine the extent of the area to correct. The Engineer may accept the section if no more than one of the five most recent density tests is below the specified density and the failing test is no more than 3 pcf below the specified density.

Section 247.4.3.3., "Miscellaneous and Small Areas." This Section is added.

Miscellaneous areas are those that typically involve handwork or discontinuous paving operations, such as temporary detours, driveways, mailbox turnouts, crossovers, gores, spot level-up areas, and other similar areas. Miscellaneous and small areas are not subject to random sampling procedure but may be tested as directed.

Section 247.4.6., "Ride Quality." This Section is voided and replaced by the following.

Measurement of ride quality only applies to the final travel lanes that receive a one- or two-course surface treatment for the final riding surface, unless otherwise shown on the plans. Measure the ride quality of the base course either before or after the application of the prime coat, as directed, and before placement of the surface treatment. Use a certified profiler operator on the Department's MPL. When requested, furnish the Engineer with documentation for the person certified to operate the profiler.

Provide all profile data to the Engineer in electronic data files within 3 days of measuring the ride quality using the format specified in [Tex-1001-S](#). The Engineer will use Department software to evaluate longitudinal profiles to determine areas requiring corrective action. Correct 0.1-mi. sections with an average international roughness index (IRI) value greater than 100 in. per mile to an IRI value of 100 in. per mile or less, unless otherwise shown on the plans. Re-profile and correct sections that fail to maintain ride quality before the placement of the surface treatment, as directed. Unless ride deterioration is due to environmental impact, traffic, or other incidents outside the Contractor's control, perform this work at no additional expense to the Department, as approved.

Special Provision to Item 302

Aggregates for Surface Treatments



Item 302, "Aggregates for Seal Coats," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 2.1., "Aggregate." Tables 2 and 3 are voided and replaced by the following.

Table 2
Aggregate Gradation Requirements (Cumulative % Retained¹)

Sieve	Grade								
	1	2	3S ²	3		4S ²	4	5S ²	5
				Non-Lightweight	Lightweight				
1"	-	-	-	-	-	-	-	-	-
7/8"	0-2	0	-	-	-	-	-	-	-
3/4"	20-35	0-2	0	0	0	-	-	-	-
5/8"	85-100	20-40	0-5	0-5	0-2	0	0	-	-
1/2"	-	80-100	55-85	20-40	10-25	0-5	0-5	0	0
3/8"	95-100	95-100	95-100	80-100	60-80	60-85	20-40	0-5	0-5
1/4"	-	-	-	95-100	95-100	-	-	65-85	-
#4	-	-	-	-	-	95-100	95-100	95-100	50-80
#8	99-100	99-100	99-100	98-100	98-100	98-100	98-100	98-100	98-100

1. Round test results to the nearest whole number.
2. Single-size gradation.

Table 3
Aggregate Quality Requirements

Property	Test Method	Requirement ¹	
		Minimum	Maximum
SAC	AQMP	As shown on the plans	
Deleterious Material ² , %	Tex-217-F , Part I	-	2.0
Decantation, %	Tex-406-A	-	1.5
Flakiness Index, %	Tex-224-F	-	17
Gradation	Tex-200-F , Part I	Table 2 Requirements	
Los Angeles Abrasion, %	Tex-410-A	-	35
Magnesium Sulfate Soundness, 5 Cycle, %	Tex-411-A	-	25
Micro-Deval Abrasion, %	Tex-461-A	Note 3	
Coarse Aggregate Angularity ⁴ , 2 Crushed Faces, %	Tex-460-A , Part I	85	-
Additional Requirements for Lightweight Aggregate			
Dry Loose Unit Wt., lb./cu. ft.	Tex-404-A	35	60
Pressure Slaking, %	Tex-431-A	-	6.0
Freeze-Thaw Loss, %	Tex-432-A	-	10.0
Water Absorption, 24hr., %	Tex-433-A	-	12.0

1. Material requirements are listed below, unless otherwise shown on the plans.
2. Not required for lightweight aggregate.
3. Used to estimate the magnesium sulfate soundness loss in accordance with Section 2.1.1.
4. Only required for crushed gravel.

Section 2.1.1., “Micro-Deval Abrasion,” is added.

The Engineer will perform a minimum of one Micro-Deval abrasion test in accordance with [Tex-461-A](#) for each coarse aggregate source per project that has a Rated Source Soundness Magnesium (RSSM) loss value greater than 15 as listed in the BRSQC. The Engineer may waive all Micro-Deval testing based on a satisfactory test history of the same aggregate source.

The Engineer will estimate the magnesium sulfate soundness loss for each coarse aggregate source, when tested, using the following formula.

$$Mg_{est.} = (RSSM)(MD_{act.}/RSMD)$$

where:

$Mg_{est.}$ = magnesium sulfate soundness loss

$MD_{act.}$ = actual Micro-Deval percent loss

$RSMD$ = Rated Source Micro-Deval

When the estimated magnesium sulfate soundness loss is greater than the maximum magnesium sulfate soundness loss specified, the coarse aggregate source will not be allowed for use unless otherwise approved by the Engineer. The Engineer may require additional testing before granting approval.

Section 2.2., “Precoating.” The third paragraph is voided and replaced by the following.

The Engineer retains the right to remove precoat material from aggregate samples in accordance with [Tex-210-F](#), or as recommended by the Construction Division, and test the aggregate to verify compliance with Table 2 and Table 3 requirements. Gradation testing may be performed with precoat intact.

Section 2.3., “Sampling,” is added.

Personnel who conduct sampling and witnessing of sampling must be certified by the Department-approved certification program. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning construction and when personnel changes are made. At any time during the project, the Engineer may perform production tests as deemed necessary in accordance with Item 5, “Control of the Work.”

The Engineer will sample aggregate from stockpiles located at the production site, intermediate distribution site, or project location in accordance with [Tex-221-F](#), Section 3.2.3. The Engineer will split each sample into 2 equal portions in accordance with [Tex-200-F](#), Section 3.3, and label these portions “Engineer” and “Contractor” or “Supplier.” Witness the sampling and splitting, and take immediate possession of the samples labeled “Contractor” or “Supplier”.

Section 2.4., “Reporting and Responsibilities,” is added.

The Engineer will provide test results to the Contractor and Supplier within 10 working days from the date the stockpile was sampled for sources listed on the Department’s Bituminous Rated Source Quality Catalog (BRSQC), unless otherwise directed. The Engineer will provide test results for the LA Abrasion ([Tex-410-A](#)) and Magnesium Sulfate Soundness ([Tex-411-A](#)) tests within 30 calendar days for sources not listed on the BRSQC, or for sources not meeting the requirements of Section 2.1.1., “Micro-Deval Abrasion.” The Engineer will report to the other party within 24 hours when any test result does not meet the requirements listed in Table 2 or Table 3.

Special Provision to Item 420

Concrete Substructure



Item 420, "Concrete Substructures" of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Article 420.6., "Payment." The first paragraph is replaced by the following:

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for the class of concrete and element identified and by the special designation when appropriate. This price is full compensation for furnishing, hauling, and mixing concrete materials; furnishing, bending, fabricating, splicing, welding and placing the required reinforcement; clips, blocks, metal spacers, ties, wire, or other materials used for fastening reinforcement in place; placing, finishing, and curing concrete; mass placement controls; applying ordinary surface finish; furnishing and placing drains, metal flashing strips, and expansion-joint material; excavation, subgrade preparation; and forms and falsework, equipment, labor, tools, and incidentals.

Special Provision to Item 421

Hydraulic Cement Concrete



Item 421, "Hydraulic Cement Concrete" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 421.2., "Materials," the second sentence of the first paragraph is voided and replaced by the following.

Provide aggregates from sources listed in the Department's Concrete Rated Source Quality Catalog (CRSQC).

Article 421.2.2., Supplementary Cementing Materials (SCM), is voided and replaced with the following.

Supplementary Cementitious Materials (SCM).

- **Coal Ash.** Furnish sources of fly ash, , Modified fly ash (MFA), harvested coal ash, and Ground Bottom Ash (GBA) conforming to [DMS-4610](#), "Coal Ash."
- **Slag Cement.** Furnish Slag Cement in accordance with [DMS-4620](#), "Slag Cement."
- **Silica Fume.** Furnish silica fume in accordance with [DMS-4630](#), "Silica Fume."
- **Natural Pozzolans.** Furnish Natural Pozzolans in accordance with [DMS-4635](#), "Natural Pozzolans."

Article 421.3.1.3., "Agitators and Truck and Stationary Mixers," the first paragraph is voided and replaced by the following.

Provide stationary and truck mixers capable of combining the ingredients of the concrete into a thoroughly mixed and uniform mass and capable of discharging the concrete so that the requirements of [Tex-472-A](#) are met.

Article 421.3.1.3., "Agitators and Truck and Stationary Mixers," is supplemented with the following.

Truck mixers with automated water and chemical admixture measurement and slump and slump flow monitoring equipment meeting the requirement of ASTM C94 will be allowed. Provide data every 6 mo. substantiating the accuracy of slump, slump flow, temperature, water, and chemical admixture measurements. The slump measured by the automated system must be within 1 in. of the slump measured in accordance with [Tex-415-A](#). The concrete temperature measured by the automated system must be within 1°F of concrete temperature measured in accordance with [Tex-422-A](#). The Engineer will not use the automated measurements for acceptance.

Article 421.4.2., "Mix Design Proportioning," Table 8 is voided and replaced by the following.

Table 8
Concrete Classes

Class of Concrete	Design Strength, ¹ Min f'_c (psi)	Max w/cm Ratio	Coarse Aggregate Grades ^{2,3,4}	Cement Types	Mix Design Options	Exceptions to Mix Design Options	General Usage ⁵
A	3,000	0.60	1-4, 8	I, II, I/II, IL, IP, IS, IT, V	1, 2, 4, & 7	When the cementitious material content does not exceed 520 lb./cu. yd., any coal ash or natural pozzolan listed in the MPL may be used at a cement replacement of 20% to 50%.	Curb, gutter, curb & gutter, conc. retards, sidewalks, driveways, back-up walls, anchors, non-reinforced drilled shafts
B	2,000	0.60	2-7				Riprap, traffic signal controller foundations, small roadside signs, and anchors
C ⁶	3,600	0.45	1-6	I, II, I/II, IP, IL, IS, IT, V	1-8		Drilled shafts, bridge substructure, traffic rail, culverts except top slab of direct traffic culverts, headwalls, wing walls, inlets, manholes, traffic barrier
E	3,000	0.50	2-5	I, II, I/II, IL, IP, IS, IT, V	1-8	When the cementitious material content does not exceed 520 lb./cu. yd., any coal ash or natural pozzolan listed in the MPL may be used at a cement replacement of 20% to 50%.	Seal concrete
F ⁶	Note ⁷	0.45	2-5	I, II, I/II, IP, IL, IS, IT, V			Railroad structures; occasionally for bridge piers, columns, bents, post-tension members
H ⁶	Note ⁷	0.45	3-6	I, II, I/II, III, IP, IL, IS, IT, V	1-4, 8	<p>Mix design options 1-8 allowed for cast-in-place concrete and the following precast elements unless otherwise stated in the plans:</p> <ul style="list-style-type: none"> ■ Bridge Deck Panels, ■ Retaining Wall Systems, ■ Coping, ■ Sound Walls, ■ Wall Columns, ■ Traffic Rail, ■ Traffic Barrier, ■ Long/Arch Span Culverts, and ■ precast concrete products included in Item 462, "Concrete Box Culverts and Drains, Item 464, "Reinforced Concrete Pipe," and Item 465, "Junction Boxes, Manholes, and Inlets." <p>Do not use Type III cement in mass placement concrete. Up to 20% of blended cement may be replaced with listed SCMs when Option 4 is used for precast concrete. Options 6, & 7 allowed for cast-in-place Class H concrete.</p>	Precast concrete, post-tension members
S ⁶	4,000	0.45	2-5	I, II, I/II, IP, IL, IS, IT, V	1-8		Bridge slabs, top slabs of direct traffic culverts, approach slabs

Class of Concrete	Design Strength, ¹ Min f_c (psi)	Max w/cm Ratio	Coarse Aggregate Grades ^{2,3,4}	Cement Types	Mix Design Options	Exceptions to Mix Design Options	General Usage ⁵
P	See Item 360, "Concrete Pavement."	0.50	2-3	I, II, I/II, IL, IP, IS, IT, V	1-8	When the cementitious material content does not exceed 520 lb./cu. yd., any coal ash or natural pozzolan listed in the MPL's may be used at a cement replacement of 20% to 50%.	Concrete pavement
CO ⁶	4,600	0.40	6	I, II, I/II, IP, IL, IS, IT, V	1-8		Bridge deck concrete overlay
LMC ⁶	4,000	0.40	6-8		Latex-modified concrete overlay		
SS ⁶	3,600	0.45	4-6	I, II, I/II, IP, IL, IS, IT, V	1-8	Use a Min cementitious material content of 658 lb./cu. yd. of concrete. Limit the alkali loading to 4.0 lbs./cu. yd. or less when using Option 7.	Slurry displacement shafts, underwater drilled shafts
K ⁶	Note ⁷	0.40	Note ⁷	I, II, I/II, III, IP, IL, IS, IT, V	1-8		Note ⁷
HES	Note ⁷	0.45	Note ⁷	I, IL, II, I/II, III		Mix design options do not apply. 700 lb. of cementitious material per cubic yard limit does not apply.	Concrete pavement, concrete pavement repair
"X" (HPC) <small>6,8,9</small>	Note ¹⁰	0.45	Note ¹⁰	I, II, I/II, III, IP, IL, IS, IT, V	1-4, & 8	Max coal ash replacement for Option 3 may be increased to 50%. Up to 20% of a blended cement may be replaced with listed SCMs for Option 4. Do not use Option 8 for precast concrete.	
"X" (SRC) <small>6,8,9</small>	Note ¹⁰	0.45	Note ¹⁰	I/II, II, IP, IL (MS or HS), IS, IT (MS or HS), V	1-4, & 7	When using coal ash, only use coal ashes allowed for SRC as listed in the Coal Ash MPL. Type III-MS may be used where allowed. Type I, Type IL, and Type III cements may be used when natural pozzolans are used or when coal ashes allowed for SRC as listed in the Coal Ash MPL are used, and with a Max w/cm of 0.40. Up to 20% of blended cement may be replaced with listed SCMs when Option 4 is used for precast concrete. Use Option 7 for precast concrete where allowed.	

- Design strength must be attained within 56 days.
- Do not use Grade 1 coarse aggregate except in massive foundations with 4 in. Min clear spacing between reinforcing steel bars, unless otherwise permitted. Do not use Grade 1 aggregate in drilled shafts.
- Use Grade 8 aggregate in extruded curbs unless otherwise approved.
- Other grades of coarse aggregate maybe used in non-structural concrete classes when allowed by the Engineer.
- For information only.
- Structural concrete classes.
- As shown on the plans or specified.
- "X" denotes class of concrete shown on the plans or specified.
- (HPC): High Performance Concrete, (SRC): Sulfate Resistant Concrete.
- Same as class of concrete shown on the plans.

Article 421.4.2.2., “Aggregates,” is supplemented by the following.

Use the following equation to determine if the aggregate combination meets the sand equivalency requirement when blending fine aggregate or using an intermediate aggregate:

$$\frac{(SE_1 \times P_1) + (SE_2 \times P_2) + (SE_{ia} \times P_{ia})}{100} \geq 80\%$$

where:

SE_1 = sand equivalency (%) of fine aggregate 1

SE_2 = sand equivalency (%) of fine aggregate 2

SE_{ia} = sand equivalency (%) of intermediate aggregate passing the 3/8 in. sieve

P_1 = percent by weight of fine aggregate 1 of the fine aggregate blend

P_2 = percent by weight of fine aggregate 2 of the fine aggregate blend

P_{ia} = percent by weight of intermediate aggregate passing the 3/8 in. sieve

Article 421.4.2.3., Chemical Admixtures,” the second paragraph is voided and replaced with the following.

Use a 30% calcium nitrite solution when a corrosion-inhibiting admixture is required. Dose the admixture at the rate of gallons of admixture per cubic yard of concrete shown on the plans. Use set retarding admixtures, as needed, to control setting time to ensure concrete containing corrosion inhibiting admixtures remain workable for the entire duration of the concrete placement. Perform setting time testing and slump loss testing during trial batch testing.

Article 421.4.2.5., “Slump,” the second paragraph is voided and not replaced. Table 9 is voided and replaced with below:

Table 9
Placement Slump Requirements

General Usage	Placement Slump Range, ^{1,2} in.
Walls (over 9 in. thick), caps, columns, piers	3 – 7
Bridge slabs, top slabs of direct traffic culverts, approach slabs, concrete overlays, latex-modified concrete for bridge deck overlays	3 – 6
Inlets, manholes, walls (less than 9 in. thick), bridge railing, culverts, concrete traffic barrier, concrete pavement (formed)	4 – 6
Precast concrete	4 – 9
Underwater concrete placements	6 – 8-1/2
Drilled shafts, slurry displaced and underwater drilled shafts	See Item 416, “Drilled Shaft Foundations.”
Curb, gutter, curb and gutter, concrete retards, sidewalk, driveways, seal concrete, anchors, riprap, small roadside sign foundations, concrete pavement repair, concrete repair	As approved

1. Max slump values may be increase above these values shown using chemical admixtures, provided the admixture treated concrete has the same or lower water-to-cementitious ratio and does not exhibit segregation or excessive bleeding. Request approval to increase slump limits in advance for proper evaluation by the Engineer.
2. For fiber reinforced concrete, perform slump before addition of fibers.

Article 421.4.2.6., “Mix Design Options,” is voided and replaced with the following.

Option 1. Replace cement with at least the minimum dosage listed in the MPL for the coal ash or natural pozzolan used in the mixture. Do not replace more than 50% of the cement. Conduct Option 8 testing as listed on the MPL.

Option 2. Replace 35% to 50% of the cement with slag cement.

Option 3. Replace 35% to 50% of the cement with a combination of coal ash, slag cement, natural pozzolan, or at least 3% silica fume; however, no more than 10% may be silica fume.

Option 4. Use Type IP, Type IS, or Type IT cement as allowed in Table 8 for each class of concrete. When replacing blended cements with additional SCM's, the replacement limits in Option 3 will apply to the final cementitious mixture. When using coal

ash or natural pozzolans not having a minimum dosage listed in the MPL in the final cementitious mixture, perform Option 8 testing.

Option 5. Option 5 is left intentionally blank.

Option 6. Use a lithium nitrate admixture at a minimum dosage determined by testing conducted in accordance with [Tex-471-A](#). Before use of the mix, provide an annual certified test report signed and sealed by a licensed professional engineer, from a laboratory listed on the MPL, certified by the Materials and Tests Division as being capable of testing according to [Tex-471-A](#).

Option 7. Ensure the total alkali contribution from the cement in the concrete does not exceed 3.5 lb. per cubic yard of concrete when using hydraulic cement not containing SCMs calculated as follows:

$$\text{lb. alkali per cu. yd.} = \frac{(\text{lb. cement per cu. yd.}) \times (\% \text{ Na}_2\text{O equivalent in cement})}{100}$$

In the above calculation, use the maximum cement alkali content reported on the cement mill certificate.

Option 8. Use Table 10 when deviating from Options 1–3 or when required by the Coal Ash MPL. Perform required testing annually and submit results to the Engineer. Laboratories performing ASTM C1260, ASTM C1567, and ASTM C1293 testing must be listed on the MPL. Before use of the mix, provide a certified test report signed and sealed by a licensed professional engineer demonstrating the proposed mixture in accordance with the requirements of Table 10.

Provide a certified test report signed and sealed by a licensed professional engineer, when HPC is required, and less than 20% of the cement is replaced with SCMs, demonstrating ASTM C1876 test results indicate the uniaxial resistivity of the concrete is greater than 15.6 kΩ-cm tested immediately after either of the following curing schedules:

- Moisture cure specimens 56 days at 73°F.
- Moisture cure specimens 7 days at 73°F followed by 21 days at 100°F.

Table 10
Option 8 Testing and Mix Design Requirements

Scenario	ASTM C1260 Result		Testing Requirements for Mix Design Materials or Prescriptive Mix Design Options
	Mix Design Fine Aggregate	Mix Design Coarse Aggregate	
A	> 0.10%	> 0.10%	Determine the dosage of SCMs needed to limit the 14-day expansion of each aggregate ¹ to 0.10% when tested individually in accordance with ASTM C1567.
B	≤ 0.10%	≤ 0.10%	Use the Min replacement listed in the Coal Ash MPL, or when Option 8 is listed on the MPL, use a Min of 40% coal ash with a Max CaO ² content of 25%, or use any ternary combination which replaces 35% to 50% of cement.
	≤ 0.10%	ASTM C1293 1 yr. Expansion ≤ 0.04%	Use a minimum of 20% of any coal ash; or Use any ternary combination which replaces 20% to 50% of cement.
C	≤ 0.10%	> 0.10%	Determine the dosage of SCMs needed to limit the 14-day expansion of coarse and intermediate ¹ aggregate to ≤0.10% when tested individually in accordance with ASTM C1567.
D	> 0.10%	≤ 0.10%	Use the Min replacement listed in the Coal Ash MPL, or when Option 8 is listed on the MPL, use a Min of 40% coal ash with a Max CaO ² content of 25%, or use any ternary combination which replaces 35% to 50% of cement.
	> 0.10%	ASTM C1293 1 yr. Expansion ≤ 0.04%	Determine the dosage of SCMs needed to limit the 14-day expansion of each fine aggregate to ≤0.10% when individually tested in accordance with ASTM C1567.

1. Intermediate size aggregates will fall under the requirements of mix design coarse aggregate.
2. Average the CaO content from the previous ten values as listed on the test certificate.

Article 421.4.2.7., “Optimized Aggregate Gradation (OAG) Concrete,” the first sentence of the first paragraph is voided and replaced by the following.

The gradations requirements in Table 4 and Table 6 do not apply when OAG concrete is specified or used by the Contractor unless otherwise shown on the plans.

The fineness modulus for fine aggregate listed in Table 5, does not apply when OAG concrete is used,

Article 421.4.6.2., Delivering Concrete,” the third paragraph is supplemented by the following.

When truck mixers are equipped with automated water or chemical admixture measurement and slump or slump flow monitoring equipment, the addition of water or chemical admixtures during transit is allowed. Reports generated by this equipment must be submitted to the Engineer daily.

Article 421.4.6.2., “Delivering Concrete,” the fifth paragraph is voided and replaced with the following. Begin the discharge of concrete delivered in truck mixers within the times listed in Table 14. Concrete delivered after these times, and concrete that has not begun to discharge within these times will be rejected.

Article 421.4.8.3., “Testing of Fresh Concrete,” is voided and replaced with the following.

Testing Concrete. The Engineer, unless specified in other Items or shown on the plans, will test the fresh and hardened concrete in accordance with the following methods:

- Slump. [Tex-415-A](#);
- Air Content. [Tex-414-A](#) or [Tex-416-A](#);
- Temperature. [Tex-422-A](#);
- Making and Curing Strength Specimens. [Tex-447-A](#);
- Compressive Strength. [Tex-418-A](#);
- Flexural Strength. [Tex-448-A](#); and
- Maturity. [Tex-426-A](#).

Flexural strength and maturity specimens will not be made unless specified in other items or shown on the plans.

Concrete with slump less than minimum required after all addition of water withheld will be rejected, unless otherwise allowed by the Engineer. Concrete with slump exceeding maximum allowed may be used at the Contractor's option. If used, Engineer will make, test, and evaluate strength specimens as specified in Article 421.5., "Acceptance of Concrete." Acceptance of concrete not meeting air content or temperature requirements will be determined by Engineer. Fresh concrete exhibiting segregation and excessive bleeding will be rejected.

Article 421.4.8.3.1., "Job-Control Testing," is voided and not replaced.

Special Provision to Item 426

Post-Tensioning



Item 426, "Post-Tensioning" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 2.1., "Prestressing Steel." The first bullet is voided and replaced with the following.

- Seven-wire steel strand meeting [DMS-4500](#), "Steel Strand, Uncoated Seven-Wire Low Relaxation for Prestressed Concrete," or

Section 2.2., "Post-Tensioning System." The second bulleted item is voided and replaced with the following:

- Provide pre-packaged grouts in accordance with [DMS-4670](#), "Grouts for Post-Tensioning." Do not use grouts that exceed the manufacturers' recommended shelf life or 6 mo. after date of manufacture, whichever is less.

Section 4.2., "Required Submittals." The section is voided and replaced with the following.

4.2. **Required Submittals.** Submit information required in this Section for post-tensioned elements, in addition to forming and falsework plans required by Item 420, "Concrete Substructures," and Item 424, "Precast Concrete Structural Members (Fabrication)." Include all necessary construction information in these submittals for cast-in-place and precast construction including, but not limited to the information required in this Section.

4.2.1. **Design Calculations.** Provide design procedures, coefficients, allowable stresses, tendon spacing, and clearances in accordance with the AASHTO LRFD *Bridge Design Specifications* and PTI/ASBI M50 unless otherwise shown on the plans. Submit enough calculations to support the proposed system and method of post-tensioning including friction loss diagrams. When the required jacking force for a particular type of tendon, duct, and configuration is furnished on the plans, design calculations are not required except to adjust for conditions different from those shown on the plans.

4.2.2. **Post-Tensioning Details.** Provide drawings with details that meet the requirements of PTI/ASBI M50 and this Specification.

4.2.3. **Grouting Plan.** Submit for approval written grouting procedures at least four weeks before the start of the element's construction. Include items required by PTI M55.

Include the names of people responsible for PT installation and grouting operations, with the foreman of each grouting crew certified as a PTI Level 2 Bonded PT Field Specialist and ASBI Certified Grouting Technician.

4.2.4. **Stressing Safety Plan.** Provide a plan to protect the public, workers, and Department personnel on and around the vicinity where post-tensioning operations are occurring.

Submit for approval, a detailed safety plan which identifies potential risk associated with post-tensioning operations, including but not limited to:

- tendon alignment,
- temporary shoring,
- ram operations, and
- stand anchorage.

Section 4.3., “Design Calculations.” The section is voided and replaced with the following.

- 4.3. **Packaging, Storing, and Handling of Post-Tensioning Components.** Package, store, and handle post-tensioning steel, grout, duct, and other accessories in accordance with PTI/ASBI M50 and PTI M55 unless otherwise indicated. Acceptance and rejection criteria for strand will follow PTI/ASBI M50 and PTI M55.

The following exceptions apply:

- grout storage onsite will be limited to 30 days unless approval by the Engineer is given in advance of material delivery,
- install grout caps and ensure vents are closed at all times so that water and other contaminants cannot enter the duct before strand installation, and
- do not flush ducts at any time.

Section 4.4., “Packaging, Storing, and Handling of Post-Tensioning Components.” The section is voided and replaced with the following.

- 4.4. **Duct and Prestressing Steel Installation for Post-Tensioning.** Follow PTI/ASBI M50 for duct and prestressing steel installation procedures and requirements unless otherwise specified. Verify that concrete strength requirements on the plans are met for stressing and staged loading of post-tensioned structural elements.

Stress the tendons within seven days of installing the strand in the ducts unless otherwise approved in advance. Follow the tensioning procedure noted in the approved post-tensioning details.

Section 4.5., “Duct and Prestressing Steel Installation for Post-Tensioning.” The section is voided and replaced with the following.

- 4.5. **Grouting.** Grout in accordance with PTI M55.

Grout within 14 days of tendon stressing unless otherwise specified or approved. Obtain approval to extend the grouting time before stressing tendons.

Do not allow the grout temperature to exceed 85°F during mixing and pumping. Do not grout when the ambient temperature is below 35°F. Field-test the grout in accordance with Table 1 during grout installation. Perform field-testing by trained personnel at the Contractor’s expense while witnessed by the Engineer. Pump at the lowest pressure possible that will maintain a continuous flow of grout.

Table1
Requirements for Field-Testing of Grout

Test	Frequency	Requirement
Schupak Pressure Bleed Test (ASTM C1741)	1 per day	Per DMS-4670
Fluidity test (Tex-437-A , Method 2)	2 every 2 hr. 2 min. per day	per DMS-4670
Compressive Strength test (3" × 6" cylinders)	1 per day	per DMS-4670
Mud Balance test (Tex-130-E , Part II) ^{1,2}	2 per day	per PTI M55

1. Take one sample from the mixer and one sample from the farthest duct outlet.
2. Verify wet density is within the range established by the department.

Section 4.6., “Grouting.” The section is voided and not replaced.

Article 5., “MEASUREMENT AND PAYMENT.” The section is voided and replaced with the following.

5. **MEASUREMENT**

This Item will be measured by the each PT element or member. An element or member is defined by one of the following individual components.

- PT Cap

- PT Column
- PT Bent
- Other elements shown in the plans.

The PT may extend into other elements which is subsidiary to the main element being post-tensioned.

6.

PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "PT" for the member type shown on the plans. This price is full compensation for submittals, mock-ups, prestressing steel, post-tensioning, ducts, grout fittings, grout, end anchorages, bearing plates, equipment, labor, materials, tools, and incidentals. Materials furnished for testing will not be paid for directly.

Post-tensioning of precast members, tensioned at a fabrication plant, will not be paid for directly but will be subsidiary to pertinent Items.

Special Provision to Item 427

Surface Finishes for Concrete



Item 427, "Surface Finishes for Concrete" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 427.2.1 "Coatings," is supplemented with the following:

Epoxy Waterproofing. Provide Type X Epoxy per [DMS-6100](#) "Epoxies and Adhesives." Match color of coating with Federal Standard 595C color 35630, concrete gray, unless otherwise shown on the plans.

Article 427.4.2.2 "Application," is supplemented with the following:

Epoxy Waterproofing. Mix epoxy per manufacturer's instructions. Apply the coating on a dry surface at a maximum application rate of 100 sq. ft per gallon. Apply a thin uniform film of mixed epoxy to the substrate by the use of a short nap roller or brush. The epoxy may be sprayed following the thinning requirements of the manufacturer. No more than 15% reduction is permitted.

Match the color of the applied coating with the color standard shown on the plans. Apply when ambient temperature is between 50°F and 100°F.

Article 427.6 "Payment," the second paragraph is voided and replaced in its entirety with:

When a surface finish for concrete is specified as a pay item, the work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Adhesive Grout Finish," "Concrete Paint Finish," "Opaque Sealer Finish," "Silicone Resin Paint Finish," "Epoxy Waterproof Finish," or "Blast Finish." This price is full compensation for materials; cleaning and preparing surfaces; application of materials; and equipment, labor, tools, and incidentals.

Special Provision to Item 440

Reinforcement for Concrete



Item 440, "Reinforcement for Concrete," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 440.2., "Materials," is supplemented with the following.

- 2.7. **Welded Deformed Bar Mat Reinforcement.** Provide welded deformed bar mats in accordance with ASTM A184 except as otherwise noted in this Specification. Fabricate welded bar mats from deformed steel bars in accordance with ASTM A706 by securely connecting every intersection with a process of electrical resistance welding that employs the principle of fusion combined with pressure. The bars must be assembled by automatic machines or by other suitable mechanical means that will assure accurate spacing and alignment of all bars of the finished product.
- 2.14. **Zinc-Coated, Hot-Dip Galvanized Class I or Class II Steel Reinforcement.** Provide zinc-coated, hot-dip galvanized Class I or Class II steel reinforcement in accordance with ASTM A767, Grade 60 or Grade 75, when shown on the plans and as allowed.
- 2.15. **Continuously Hot-Dip Galvanized Reinforcement (CGR).** Provide CGR in accordance with ASTM A1094 steel reinforcement, Grade 60 or Grade 75, when shown on the plans and as allowed.

Section 440.2.1., "Approved Mills." The second paragraph is voided and not replaced.

Section 440.2.5., "Weldable Reinforcing Steel," is supplemented with the following.

All welding operations must be performed before hot-dip galvanizing.

Section 440.2.8., "Mechanical Couplers," is voided and replaced with the following.

Use couplers of the type specified in [DMS-4510](#), "Mechanical Couplers for Reinforcing Steel," Section 4510.6.1., "General Requirements," when mechanical splices in reinforcing steel bars are shown on the plans.

Furnish only couplers pre-qualified in accordance with [DMS-4510](#), "Mechanical Couplers for Reinforcing Steel." Ensure sleeve-wedge type couplers are not used on coated reinforcing. Sample mechanical couplers in accordance with [Tex-743-I](#) for testing before use on individual projects. Test the mechanical couplers for every project in which mechanical couplers are used in accordance with [Tex-744-I](#). Furnish couplers only at locations shown on the plans.

Furnish couplers for stainless reinforcing steel with the same alloy designation as the reinforcing steel.

Provide hot-dip or mechanically galvanized couplers when splicing galvanized reinforcing or CGR.

Section 440.2.11., "Low Carbon/Chromium Reinforcing Steel." The first sentence is voided and replaced by the following.

Provide deformed steel bars in accordance with ASTM A1035, Grade 100, Type CS, when low-carbon, chromium-reinforcing steel is required on the plans. Type CM will be permitted only if specified on the plans.

Section 440.3.1., "Bending," is supplemented with the following.

Do not bend hot-dip galvanized reinforcement. Only minor positioning adjustments are permitted.

Bending of CGR is permitted after galvanizing.

Section 440.3.5., “Placing.” The following will be added to the fourth paragraph.

Use Class 1 or Class 1A supports with CGR. Provide epoxy- or plastic-coated tie wires and clips for use with epoxy-coated reinforcing steel.

Section 440.3.6.3., “Repairing Coating,” is supplemented with the following:

Repair damaged galvanized surfaces in accordance with Section 445.3.5.2., “Repair Processes.”

Special Provision to Item 441

Steel Structures



Item 441, "Steel Structures" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 441.2.2., "Approved Electrodes and Flux-Electrode Combinations," is voided and replaced with the following:

Use only electrodes and flux-electrode combinations conforming to AWS A5 specifications, and pertinent classifications for the applicable welding processes. When requested, submit a current Certificate of Conformance (COC) containing all test results as required by the applicable AWS A5 specification and welding code. Provide proof of Buy America compliance for welding consumables when requested. For bridge main member fabrication, submit the COC annually.

Section 441.2.3., "High-Strength Bolts," is revised and replaced by the following:

Use fasteners that meet Item 447, "Structural Bolting." Use galvanized fasteners on field connections of bridge members when ASTM F3125-Grade A325 bolts are specified, and steel is painted.

Section 441.3.1.5.1., "Plants," The second and third paragraphs are voided and replaced with the following:

Fabrication plants that produce the following non-bridge steel members must be approved in accordance with DMS-7380, "Steel Non-Bridge Member Fabrication Plant Qualification."

- Item 610, "Roadway Illumination Poles"
- Item 613, "High Mast Illumination Poles"
- Item 614, "High Mast Rings and Support Assemblies"
- Item 650, "Overhead Sign Support Structures"
- Item 654, "Sign Walkways"
- Item 686, "Traffic Signal Poles"
- Special Specification 6064, "Intelligent Transportation System (ITS) Poles."

The Materials and Tests Division (MTD) maintains a list of approved non-bridge fabrication plants on the Department MPL that produce these members.

Section 441.3.1.6.1., "Erection Drawings," the third paragraph is voided and replaced with the following:

Perform erection engineering evaluation of the structural adequacy and stability of constructing the bridge system for each step of the steel erection.

Section 441.3.1.5.3., "Nondestructive Testing (NDT)," is voided and replaced with the following:

Personnel performing NDT must be qualified in accordance with the applicable AWS code and the employer's Written Practice. Level III personnel who qualifies Level I and Level II technicians must be certified by ASNT for which the NDT Level III is qualified. In addition, NDT technicians must pass hands-on tests that MTD administers. This will remain current provided they continue to perform testing on Department materials as evidenced by test reports requiring their signature. A technician who fails any of the hands-on tests must wait 3 mo. or as approved otherwise before retesting. Qualification to perform NDT will be revoked when the technician's employment is terminated or when the technician goes 6 mo. without performing a test on a Department project. The technician must pass a new hands-on test to be re-certified. Testing of similar weld joints for non-Department projects may be considered by the Engineer instead of re-testing provided enough documentation is submitted with the signature of the project's Engineer. These requirements also apply to testing agencies, and individual third-party contractors.

Section 441.3.1.5.4., “Welding Procedure Specification Qualification Testing,” is voided and replaced by the following:

For Fabricators qualified in accordance with DMS-7370, DMS-7380, or DMS-7395, laboratories performing procedure qualification testing for welding procedure specifications (WPSs) must be accredited by a nationally recognized agency that performs testing in accordance with ISO/International Electrotechnical Commission (IEC) 17025 in the mechanical field of testing.

Section 441.3.1.9., “Material Identification,” is amended to include the following paragraph:

Low-stress stencil marks must have a radius instead of a sharp point. Acceptable stencils include dot, vibration, and rounded-V stencils. Label these stencils so that they are easily distinguishable from other stencils that are not low-stress.

Section 441.3.2.4.1., “Flange Tilt,” the last sentence is voided and replaced with the following:

Minor jacking that does not deform the material will be permitted.

Section 441.3.2.5.3., “Magnetic Particle Testing,” is voided and replaced with the following:

Use alternating current (AC) when using the yoke method unless otherwise approved. Welds may be further evaluated with half-wave rectified DC for subsurface indications. Centerline cracking may be detected with aluminum prod method when approved.

Section 441.3.5.8., “Hammering,” is added to state the following:

Do not perform hammering on any portion of the member that causes the material to permanently deform. Avoid damage to the material by measures such as use of brass or aluminum hammers or by padding the area to be hammered.

Section 441.3.8.1., “Shop Painting,” is amended to include with the following paragraph:

Measure the anchor profile after blast cleaning at random locations along the thermal cut surfaces. If specified anchor profile is not achieved over the entire flame cut surface, grind the edges and re-blast to achieve the required anchor pattern.

Section 441.3.9., “Handling and Storage of Materials,” The second sentence of the second paragraph is replaced by the following:

Keep materials clean and avoid damaging of the applied coating.

Special Provision to Item 442

Metal for Structures



Item 442, "Metal for Structures" of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Section 442.2.1.3.3., "Fasteners." The first sentence of the first paragraph is replaced by the following:

Fasteners. Provide high-strength bolts that meet ASTM F3125-Grade A325 unless otherwise shown on the plans.

Section 442.2.1.3.3., "Fasteners." The third paragraph is deleted and not replaced.

Special Provision to Item 446

Field Cleaning and Painting Steel



For this project, Item 446, "Field Cleaning and Painting Steel," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 446.4.1., "Qualification," the first and second paragraphs are voided and replaced by the following:

Submit to the Engineer documentation verifying SSPC QP 1 or NACE NIICAP AS-1 certification for work requiring the removal or application of coatings. Additionally, submit to the Engineer documentation verifying SSPC QP 2 Cat A or NACE NIICAP AS-2 certification when work requires removal of coatings containing hazardous materials. Maintain certifications throughout the project. No work may be performed without current and active certifications unless otherwise shown on the plans. The Engineer may waive certification requirements for minor, touch-up repair work and coating steel members repaired in accordance with Item 784, "Steel Member Repair."

The Engineer may waive certification requirements, when stated on the plans, for the purpose of qualification in either contractor certification program if the project has been accepted as a qualification project as part of the process for obtaining SSPC QP1 Cat A or NACE NIICAP AS-1 certification. Submit certification applications and proof of acceptance before beginning work or provide SSPC QP 7 certification when required on the plans.

Section 446.4.7.3.2., "Classes of Cleaning," is amended with the following:

Prepare all surfaces of painted steel members subsequently exposed from structural operations, such as deck removal or steel repair, in accordance with this Item. Prevent loose or damaged paint from entering the environment.

Special Provision to Item 448

Structural Field Welding



Item 448, "Structural Field Welding" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 448.2., "Materials," the third paragraph is voided and replaced with the following:

Use only electrodes and flux-electrode combinations conforming to AWS A5 specifications and pertinent classifications for the applicable welding processes. When requested, submit a current Certificate of Conformance (COC) containing acceptable wording indicating Buy America compliance and all tests required by the applicable AWS specifications and welding codes. Tests must be conducted on electrodes of the same class, size, and brand; and manufactured by the same process and with the same materials as the electrodes to be furnished.

Special Provision to Item 449

Anchor Bolts



Item 449, "Anchor Bolts" of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Section 449.2.1., "Bolts and Nuts." Table 1 is replaced by the following:

Table 1
Bolt and Nut Standards

Specified Anchor Bolt Category	Bolt Standards	Nut Standards
Mild steel	ASTM A307 Gr. A, F1554 Gr. 36, or A36	ASTM A563
Medium-strength, mild steel	ASTM F1554 Gr. 55 with supplementary requirement S1	ASTM A194 Gr. 2 or A563 Gr. D or better
High-strength steel	ASTM F3125-Grade A325 or ASTM A449 ¹	ASTM A194 or A563, heavy hex
Alloy steel	ASTM A193 Gr. B7 or F1554 Gr. 105	ASTM A194 Gr. 2H or A563 Gr. DH, heavy hex

1. If headed bolts are specified, ASTM A449 bolts must be heavy hex head.

Section 449.3.3.1, "Anchor Bolt Thread Lubricant Coating," The first sentence of the first paragraph is voided and replaced by the following.

Coat anchor bolt threads before installing nuts with an electrically conducting lubricant compound described in Section 449.3.3.2.1., "Definitions," for traffic signal poles, roadway illumination poles, high mast illumination poles, intelligent transportation system poles, overhead sign support structures, and steel electrical service supports.

Section 449.3.3.2, "Anchor Bolt Tightening Procedure," The first sentence of the first paragraph is voided and replaced by the following.

Tighten anchor bolts for traffic signal poles, shoe base and concrete traffic barrier base roadway illumination poles, high mast illumination poles, intelligent transportation system poles, and overhead sign support structures in accordance with this Section.

Special Provision to Item 502

Barricades, Signs and Traffic Handling



Item 502, "Barricades, Signs and Traffic Handling" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 502.1., "Description," is supplemented by the following:

Temporary work-zone (TWZ) traffic control devices manufactured after December 31, 2019, must have been successfully tested to the crashworthiness requirements of the 2016 edition of the Manual for Assessing Safety Hardware (MASH). Such devices manufactured on or before this date and successfully tested to NCHRP Report 350 or the 2009 edition of MASH may continue to be used throughout their normal service lives. An exception to the manufacture date applies when, based on the project's date of letting, a category of MASH-2016 compliant TWZ traffic control devices are not approved, or are not self-certified after the December 31, 2019, date. In such case, devices that meet NCHRP-350 or MASH-2009 may be used regardless of the manufacture date.

Such TWZ traffic control devices include: portable sign supports, barricades, portable traffic barriers designated exclusively for use in temporary work zones, crash cushions designated exclusively for use in temporary work zones, longitudinal channelizers, truck and trailer mounted attenuators. Category I Devices (i.e., lightweight devices) such as cones, tubular markers and drums without lights or signs attached however, may be self-certified by the vendor or provider, with documentation provided to Department or as are shown on Department's Compliant Work Zone Traffic Control Device List.

Article 502.4., "Payment," is supplemented by the following:

Truck mounted attenuators and trailer attenuators will be paid for under Special Specification, "Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)." Portable Changeable Message Signs will be paid for under Special Specification, "Portable Changeable Message Sign." Portable Traffic Signals will be paid for under Special Specification, "Portable Traffic Signals."

Special Provision to Item 506

Temporary Erosion, Sedimentation, and Environmental Controls



For this project, Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 506.1., "Description," is voided and replaced by the following:

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3) or as directed. Ensure the installation and maintenance of control measures is performed in accordance with the manufacturer's or designer's specifications. Erosion and sediment control devices must be selected from the "Erosion Control Approved Products" or "Sediment Control Approved Products" lists. Perform work in a manner to prevent degradation of receiving waters, facilitate project construction, and comply with applicable federal, state, and local regulations.

Article 506.3., "Qualifications, Training, and Employee Requirements," is voided and not replaced.

Section 506.4.1., "Contractor Responsibilities," Section 506.4.2., "Implementation," and Section 506.4.3., "General," are voided and replaced by the following:

4.1. **Contractor Responsibilities.** Implement the SWP3 for the project site in accordance with the plans and specifications, and as directed. Coordinate storm water management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Department's right of way in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site.

4.2. **Implementation.**

4.2.1. **Commencement.** Implement the SWP3 as shown and as directed. Contractor proposed recommendations for changes will be allowed as approved. Do not implement changes until approval has been received and changes have been incorporated into the plans by the Engineer. Minor adjustments to meet field conditions are allowed and will be recorded by the Engineer in the SWP3.

Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract.

Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

4.3. **General.**

4.3.1. **Temporary Alterations or Control Measure Removal.** Altering or removal of control measures is allowed when control measures are restored within the same working day.

- 4.3.2. **Stabilization.** Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site has temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice as approved.
- 4.3.3. **Finished Work.** Upon the Engineer's acceptance of vegetative cover or other stabilization practice, remove and dispose of all temporary control measures unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained as approved.
- 4.3.4. **Restricted Activities and Required Precautions.** Do not discharge onto the ground or surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment on site in a manner as to prevent actual or potential water pollution. Manage, control, and dispose of litter on site such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only in approved contained areas. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e. dewatering). Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

Section 506.4.4., "Installation, Maintenance, and Removal Work." The first paragraph is voided and replaced by the following.

Perform work in accordance with the SWP3, and according to the manufacturers' guidelines. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place or the disturbed area has been adequately stabilized as determined by the Engineer.

Section 506.4.5., "Monitoring and Documentation," is voided and not replaced.

Section 506.6.5.2., "Maintenance Earthwork for Erosion and Sediment Control for Cleaning and/or Restoring Control Measures," is voided and replaced by the following:

Earthwork needed to remove and obliterate of erosion-control features will not be paid for directly but is subsidiary to pertinent Items unless otherwise shown on the plans.

Sprinkling and rolling required by this Item will not be paid for directly but will be subsidiary to this Item.

Special Provision to Item 656

Foundations for Traffic Control Devices



Item 656, "Foundations for Traffic Control Devices" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 3. "Construction," the first paragraph is supplemented by the following:

Ensure the top of the foundation and anchor bolts meet specified requirements in relation to the final grade.

Special Provision to Special Specification 6185

Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)



Item 6185, "Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 4. "Measurement", is voided and replaced by the following:

- 4.1. **Truck Mounted Attenuator/Trailer Attenuator (Stationary).** This Item will be measured by the day. TMA/TAs must be set up in a work area and operational before a calendar day can be considered measurable. A day will be measured for each TMA/TA set up and operational on the worksite.
- 4.2. **Truck Mounted Attenuator/Trailer Attenuator (Mobile Operation).** This Item will be measured by the hour or by the day. The time begins once the TMA/TA is ready for operation at the predetermined site and stops when notified by the Engineer. When measurement by the hour is specified, a minimum of 4 hr. will be paid each day for each operating TMA/TA used in a mobile operation. When measurement by the day is specified, a day will be measured for each TMA/TA set up and operational on the worksite.

Special Specification 1002

Landscape Amenity



1. DESCRIPTION

Install landscape amenity as shown on the plans or as directed.

2. MATERIALS

Furnish materials and use construction methods in accordance with the plans.

3. CONSTRUCTION

Use construction methods in accordance with the plans.

4. MEASUREMENT

This Item will be measured by the each.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Landscape Amenity" or "Landscape Amenity" of type specified. This price is full compensation for furnishing all materials, equipment, labor, and incidentals.

Special Specification 1005

Loose Aggregate for Groundcover



1. DESCRIPTION

Furnish and install loose aggregate for groundcover as shown on the plans or as directed.

2. MATERIALS

Furnish material in accordance with the plans.

3. CONSTRUCTION

Use construction methods in accordance with the plans.

4. MEASUREMENT

This Item will be measured by the cubic yard or square yard of the depth specified.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Loose Aggregate for Groundcover" of type specified. This price is full compensation for furnishing all materials, equipment, labor, and incidentals.

Special Specification 4230

Ornamental Steel Structure (Wall- and Ground-Mounted)



1. DESCRIPTION

Fabricate, erect, install, and test all elements required for the complete operation of the ornamental element consisting of assembled steel structural panels with light-emitting diode (LED) systems resembling mountain scenery in conformance with the details shown on the plans and as directed.

2. MATERIALS

Provide new materials conforming to the pertinent requirements of the following.

- Item 400, "Excavation and Backfill for Structures"
- Item 416, "Drilled Shaft Foundations"
- Item 420, "Concrete Substructures"
- Item 421, "Hydraulic Cement Concrete"
- Item 440, "Reinforcement for Concrete"
- Item 441, "Steel Structures"
- Item 442, "Metal for Structures"
- Item 445, "Galvanizing"
- Item 446, "Field Cleaning and Painting Steel"
- Item 447, "Structural Bolting"
- Item 448, "Structural Field Welding"
- Item 449, "Anchor Bolts"
- Item 616, "Performance Testing of Lighting Systems"
- Item 618, "Conduit"
- Item 620, "Electrical Conductors"
- Item 624, "Ground Boxes"
- Item 628, "Electrical Services"
- [DMS-4640, "Chemical Admixtures for Concrete"](#)
- [DMS-6100, "Epoxies and Adhesives"](#)
- [DMS-6310, "Joint Sealants and Fillers"](#)

2.1. **Steel Members.** Provide high-yield carbon structural steel specified for ornamental structures meeting ASTM A36.

2.2. **LED Systems.**

2.2.1. **Description.** Surface-mounted, exterior luminaire, 2700K warm white LED, asymmetric wall wash optics, die-cast low-copper content extruded aluminum housing, zirconium pretreatment completed with corrosion-resistant primer and electrostatically applied polyester color powder-coated, leader cable as required, tempered glass lens, IP67, and UL-listed.

Provide Lumenfacade Pure continuous-run surface-mount LED fixtures according to the following Specifications.

- **Type.** Continuous-run.
- **Input Voltage.** 120V–277V.

- **Minimum Lumen Output.** 920 lm/ft.
- **Minimum Allowable Efficacy.** 92 lm/W.
- **Lumen Maintenance.** L70 (10K) >60,000 hr. Ta 25°C (TM-21 reported). L70 >150,000 hr. Ta 25°C (projected).
- **Wattage.** 10W/ft.
- **Control.** On/off control.
- **Inrush Current.** Meet NEMA-410 requirements.
- **Dimensions.** 48 in. × 2.19 in. × 3.25 in.
- **Weight.** 12.5 lb.
- **Color Temperature and Consistency.** 2700K with maximum 2 SDCM.
- **Color Rendering.** Minimum 80CRI.
- **Optics.** Integral optics with asymmetric wall wash.
- **Lens.** Tempered glass.
- **Housing.** Extruded low-copper content, high-pressure die-cast aluminum with stainless steel hardware.
- **Operating Temperature.** -40°F–122°F.
- **Environment.** IP67, wet location, vibration-rated.
- **Humidity.** 0%–95% noncondensing.
- **Vibration Rating.** ANSI 136.31 2018 at 3GV vibration rating for bridge applications.
- **Mounting.** Fixed mounting.
- **Impact Resistance.** Minimum IK07.
- **Warranty.** 5-yr. minimum.

2.2.2. **Luminaires.** Provide luminaires free of any cracks or porosity, foreign materials, or cosmetic filters. Install fixtures in a continuous-run interconnected series. Contractor must provide leader and jumper cables in standard lengths, as required, for a complete operational system.

3. SUBMITTALS AND SHOP DRAWINGS

Provide the following.

- Product data for components and accessories.
- Shop drawings showing steel panel layout, dimensions, spacing of drill shafts and steel posts, steel frame components, and anchorage and installation details. Include details for steel fabrication, including structural field welding, finishing, and fastening.
- Submittals for components of electrical equipment and lighting systems that identify the equipment for which they apply on each submittal sheet.
- 8-in. × 10-in. minimum size sample of steel panels illustrating design, fabrication workmanship, and selected color coating.
- 10-yr. warranty for factory finish against cracking, peeling, and blistering under normal use.
- Upon completing construction, one set of reproducible as-built drawings.

4. FINISH

4.1. **Steel Panels.** Provide steel panels, steel framing, anchors, and posts that are hot-dip galvanized with 1.25-oz. per square foot minimum zinc coating in accordance with ASTM A123.

Panels designated to create the aesthetic scenery must be of rust color or as approved.

4.2. **Painting Steel.** The Contractor must furnish all materials and labor for painting the designated sections of steel with color designated in the plans or drawings or approved.

5. CONSTRUCTION

Erect ornamental steel structures to the lines and grades shown on the plans. The overall height of the aesthetic feature when erected is the height above the grade as shown.

Before fabrication, field-verify required dimensions. Install steel panels in accordance with manufacturer's installation instructions and approved shop drawings.

For aluminum frame and panel, submit signed and sealed design drawings in accordance with *AASHTO LRFD Bridge Design Specifications*, ninth edition. The plans must govern places where plans and shop drawings conflict.

5.1. Mounting Types.

- 5.1.1. **Ground Mount.** At the location shown on the plans, install steel posts or beams plumb and level by setting the posts or beams in the hole cored in concrete and grouting it solid. Temporarily brace fence posts using 2-in. x 4-in. wood supports until the grout is set, if necessary. Do not install bent, bowed, or otherwise damaged panels. Remove damaged components from the site and replace. Secure steel frames with standard stainless steel bolts or field-welding to steel posts after the posts have been set in ground location or top of concrete rail. Touch-up damaged finish with paint supplied by the manufacturer and matching the original coating.

Contractor must exercise care to avoid damaging any underground appurtenances, such as utilities, ITS, drainage systems, and retaining wall footings. Any damages must be repaired at Contractor's expense.

- 5.1.2. **Wall Mount.** At the location shown on the plans, use construction methods, workmanship, equipment, and materials in accordance with the various Standard Specifications that normally govern items of work under this Contract and as shown on the plans. Exercise care not to damage existing walls when preparing to mount proposed steel structures. Repair any damage to existing structures at no expense to the Department.

For mounting hardware, anchor bolts must be medium-strength, mild steel in accordance with Item 449. Anchor bolt types and installation must be as specified on the plans.

Ground mounts are required in conjunction with wall mounts at the locations shown on the plans.

- 5.2. **LED Illumination Systems.** Test installed roadway illumination assemblies in accordance with Item 616.

6. MEASUREMENT

Ornamental steel structure (wall- and ground-mounted) will be measured by the square foot of steel panels installed complete with the specified lighting fixtures and systems, required mounting type (wall- or ground-mounted), and necessary anchorage as specified on the plans.

7. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Ornamental Steel Structure." This price is full compensation for fabricating, shipping, handling, and installing galvanized steel panels, steel bars, rods, posts, fasteners, wall anchors, steel frames, and other components; for concrete and steel footings of posts; for repairs to painted surfaces; for procuring LED lighting fixtures; for LED housing, LED drivers, transformers, internal conductors, conduit, junction boxes, ground boxes, and connections; for system performance testing; and for furnishing labor, tools, equipment, and incidentals.

Drilled shaft foundations and concrete riprap placed around foundations, conduit, electrical conductors, ground boxes, and power source providing power to LEDs will be subsidiary to this Item and will be accounted for in the unit price bid for "Ornamental Steel Structure."

Special Specification 6001

Portable Changeable Message Sign



1. DESCRIPTION

Furnish, operate, and maintain portable trailer mounted changeable message sign (PCMS) units.

2. MATERIALS

Furnish new or used material in accordance with the requirements of this Item and the details shown on the plans. Provide a self-contained PCMS unit with the following:

- Sign controller
- Changeable Message Sign
- Trailer
- Power source

Paint the exterior surfaces of the power supply housing, supports, trailer, and sign with Federal Orange No. 22246 or Federal Yellow No. 13538 of Federal Standard 595C, except paint the sign face assembly flat black.

- 2.1. **Sign Controller.** Provide a controller with permanent storage of a minimum of 75 pre-programmed messages. Provide an external input device for random programming and storage of a minimum of 75 additional messages. Provide a controller capable of displaying up to 3 messages sequentially. Provide a controller with adjustable display rates. Enclose sign controller equipment in a lockable enclosure.
- 2.2. **Changeable Message Sign.** Provide a sign capable of being elevated to at least 7 ft. above the roadway surface from the bottom of the sign. Provide a sign capable of being rotated 360° and secured against movement in any position.
- Provide a sign with 3 separate lines of text and 8 characters per line minimum. Provide a minimum 18 in. character height. Provide a 5 × 7 character pixel matrix. Provide a message legibility distance of 600 ft. for nighttime conditions and 800 ft. for normal daylight conditions. Provide for manual and automatic dimming light sources.
- The following are descriptions for 3 screen types of PCMS:
- **Character Modular Matrix.** This screen type comprises of character blocks.
 - **Continuous Line Matrix.** This screen type uses proportionally spaced fonts for each line of text.
 - **Full Matrix.** This screen type uses proportionally spaced fonts, varies the height of characters, and displays simple graphics on the entire sign.
- 2.3. **Trailer.** Provide a 2 wheel trailer with square top fenders, 4 leveling jacks, and trailer lights. Do not exceed an overall trailer width of 96 in. Shock mount the electronics and sign assembly.
- 2.4. **Power Source.** Provide a diesel generator, solar powered power source, or both. Provide a backup power source as necessary.
- 2.5. **Cellular Telephone.** When shown on the plans, provide a cellular telephone connection to communicate with the PCMS unit remotely.

3. CONSTRUCTION

Place or relocate PCMS units as shown on the plans or as directed. The plans will show the number of PCMS units needed, for how many days, and for which construction phases.

Maintain the PCMS units in good working condition. Repair damaged or malfunctioning PCMS units as soon as possible. PCMS units will remain the property of the Contractor.

4. MEASUREMENT

This Item will be measured by each PCMS or by the day used. All PCMS units must be set up on a work area and operational before a calendar day can be considered measurable. When measurement by the day is specified, a day will be measured for each PCMS set up and operational on the worksite.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Portable Changeable Message Sign." This price is full compensation for PCMS units; set up; relocating; removing; replacement parts; batteries (when required); fuel, oil, and oil filters (when required); cellular telephone charges (when required); software; and equipment, materials, tools, labor, and incidentals.

Special Specification 6185

Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)



1. DESCRIPTION

Furnish, operate, maintain and remove upon completion of work, Truck Mounted Attenuator (TMA) or Trailer Attenuator (TA).

2. MATERIALS

Furnish, operate and maintain new or used TMAs or TAs. Assure used attenuators are in good working condition and are approved for use. A list of approved TMA/TA units can be found in the Department's Compliant Work Zone Traffic Control Devices List. The host vehicle for the TMA and TA must weigh a minimum of 19,000 lbs. Host vehicles may be ballasted to achieve the required weight. Any weight added to the host vehicle must be properly attached or contained within it so that it does not present a hazard and that proper energy dissipation occurs if the attenuator is impacted from behind by a large truck. The weight of a TA will not be considered in the weight of the host vehicle but the weight of a TMA may be included in the weight of the host vehicle. Upon request, provide either a manufacturer's curb weight or a certified scales weight ticket to the Engineer.

3. CONSTRUCTION

Place or relocate TMA/TAs as shown on the plans or as directed. The plans will show the number of TMA/TAs needed, for how many days or hours, and for which construction phases.

Maintain the TMA/TAs in good working condition. Replace damaged TMA/TAs as soon as possible.

4. MEASUREMENT

4.1. **Truck Mounted Attenuator/Trailer Attenuator (Stationary).** This Item will be measured by the each or by the day. TMA/TAs must be set up in a work area and operational before a calendar day can be considered measurable. When measurement by the day is specified, a day will be measured for each TMA/TA set up and operational on the worksite.

4.2. **Truck Mounted Attenuator/Trailer Attenuator (Mobile Operation).** This Item will be measured by the hour. The time begins once the TMA/TA is ready for operation at the predetermined site and stops when notified by the Engineer. A minimum of 4 hr. will be paid each day for each operating TMA/TA used in a mobile operation.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Truck Mounted Attenuators/Trailer Attenuators (Stationary)," or "Truck Mounted Attenuators/Trailer Attenuators (Mobile Operation)." This price is full compensation for furnishing TMA/TA: set up; relocating; removing; operating; fuel; and equipment, materials, tools, labor, and incidentals.

Special Specification 6517

Decorative Wall Lighting (Downlight)



1. DESCRIPTION

Furnish and install decorative wall lighting (downlight) illumination assemblies as shown on plans.

The term “decorative wall lighting (downlight)” means the complete assemblage of fixtures, mounting arms, equipment, and miscellaneous components, installed as shown on the plans and in accordance with these Specifications, forming a complete and independent lighting assembly, including extra concrete and forming.

2. MATERIALS

Provide new materials that comply with the details shown on the plans, the requirements of this Item, and the pertinent requirements of the following Items.

- Item 616, “Performance Testing of Lighting Systems”
- Item 618, “Conduit”
- Item 620, “Electrical Conductors”

Provide a digital PDF submittal showing the light-emitting diode (LED) lighting assembly and mounting details to the Engineer for approval. Obtain the Engineer’s approval on the submittals before initiating purchase of materials and beginning work. Furnish a digital PDF of the completed material identification form to the Engineer before beginning fabrication.

Provide shop drawings of the complete assembly and mounting details in accordance with the plans, including fixtures (type, manufacturer, and catalog designations noted), controls, mounting provisions, and anticipated lead times for delivery of equipment.

Ensure materials are UL-listed; meet NEMA, NEC, and AASHTO requirements; and are in accordance with the electrical detail standard sheet.

The manufacturer must provide a certification document stating that each LED lighting assembly satisfies all Specifications included herein.

- 2.1. **Wall Luminaire.** Provide surface-mount, high-output, color-changing LED luminaire that has tilt and locking capabilities, is die-cast, and has aluminum housing integral with the lens. Provide fixture with a junction box for wiring connections with two 1/2-in. National Pipe Thread conduit taps with removable plugs. Protect housing and junction box with coating matching complete assembly. Install fixtures in a continuous interconnected series along top of wall as indicated.

Provide ColorGraze Powercore Intellihue by Color Kinetics according to the following Specifications.

- **Beam.** Wall Washing, 30° × 60°.
- **Lumens.** 1893.
- **Efficacy (LuMens per Watt [lm/W]).** 38.5–38.9.
- **LED Channels.** Red, Green, Blue, Mint White.
- **Input Voltage.** 100 VAC–277 VAC, auto ranging, 50/60 Hz.
- **Power.** 74W.
- **Interface.** Data Enabler Pro (DMX or Ethernet).
- **Control Channels.** Four channels per luminaire.
- **Control Systems.** Full range of controllers.

- **Dimensions.** 48 in. × 2.7 in. × 2.85 in., as shown on plans.
- **Weight.** 9.3 lb.
- **Housing Material.** Extruded anodized aluminum, gray powder-coated finish.
- **Lens.** Ultraviolet-Protected Clear Lens.
- **Temperature Ranges.** -40°F–176°F.
- **Environment.** IP66, dry/damp/wet conditions, no salt spray.
- **Vibration Resistance.** ANSI C 136.31, 3G.
- **Corrosion Resistance.** No salt spray.
- **Thermal Protection.** Enabled.
- **Warranty.** Five years limited.

Ensure the door frame is die-cast, low-copper aluminum. Secure the door frame to the housing with four captive stainless steel countersunk socket head screws. Provide gaskets between the door frame and housing, and between the junction box and housing. Ensure fixtures are UL-listed for wet locations and are rated IP66. Provide one-piece optical module.

Color must be gray, powder-coated, 1.5-mil nominal thickness. Ensure the outside coatings are uniform in appearance and free of scratches. Repair coating in accordance with manufacturer's recommendations and to the satisfaction of the Engineer.

Ensure electrical module has all components UL- and Canadian Standards Association-recognized, mounted on a single plate and factory-rewired with quick-disconnect plugs. Module must include a driver, thermal control device, and surge protector.

Ensure the submittal contains enough information to verify compliance with Specifications.

3. CONSTRUCTION

Perform work in accordance with the details shown on the plans and the requirements of this Item.

Prevent scarring or marring of the fixtures. Replace damaged components. Repair damaged galvanizing in accordance with Section 445.3.5.2, "Repair Processes." Repair damaged painted areas in accordance with Item 446, "Field Cleaning and Painting Steel."

Cast each illumination assembly in place as shown on the plans and according to manufacturer's instructions. The Department may shift an assembly's location, if necessary, to secure a more desirable location.

4. MEASUREMENT

This Item will be measured by each decorative wall lighting (downlight) illumination assembly installed.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Decorative Wall Lighting (Downlight)."

This price is full compensation for furnishing, installing, and testing illumination assemblies; waterproof junction boxes, liquid-tight flexible metal conduit, LEDs, drivers, mounting plates, and connections; system performance testing; and furnishing labor, tools, equipment, and incidentals.

New conduit will be paid for under Item 618. New electrical conductors will be paid for under Item 620. New ground boxes will be paid for under Item 624, "Ground Boxes." New electrical services will be paid for under Item 628, "Electrical Services."

Special Specification 6524

Decorative Metalwork LED Backlighting



1. DESCRIPTION

Furnish the decorative painted metalwork, light-emitting diode (LED) backlighting, materials, equipment, and labor necessary for installing decorative metalwork with LED backlighting (Type 1), (Type 2), and (Type 3) as shown on the plans and as directed.

2. MATERIALS

Provide new materials that comply with the details shown on the plans, the requirements of this Item, and the pertinent requirements of the following Items.

- Item 441, "Steel Structures"
- Item 442, "Metal for Structures"
- Item 446, "Field Cleaning and Painting Steel"
- Item 616, "Performance Testing of Lighting Systems"
- Item 618, "Conduit"
- Item 620, "Electrical Conductors"

Provide and install decorative stainless steel wall-mounted and concrete foundation-mounted metalwork sculptures as indicated on drawings, shop-prepared and painted with fluoroethylene vinyl ether resin fluoropolymer coating system. Colors as indicated on drawings. Submit shop drawings of all metalwork with anchoring and fasteners coordinated with layout and mounting of LED backlighting system.

- **Decorative Metalwork LED Backlighting (Type 1).** Wall-mounted water-fowl laser-cut steel plate sculptures with LED backlighting.
- **Decorative Metalwork LED Backlighting (Type 2).** Wall-mounted wildflower, grasses, birds, and butterfly steel plate sculptures with LED backlighting.
- **Decorative Metalwork LED Backlighting (Type 3).** Concrete foundation-mounted laser-cut steel plate three-dimensional box sculptures with frosted white polycarbonate backing and internal LED backlighting. Metalwork laser-cut steel plate subject matter must contain text in addition to wildflower, grasses, birds, and butterfly shapes as indicated on drawings.

Unless otherwise shown on the plans, provide new materials that comply with the requirements of the NEC, UL, and NEMA.

Provide basis of design (BOD) LED backlighting product with salient characteristics indicated or accepted equal product. Provide a continuous 1/2-in. wide, low-profile, flexible, linear, solid-state, dimmable, IP67 wet location, LED light strip system in silicone sleeve that emits at least 149.34 lumens per linear foot to outline and backlight each separate decorative metalwork piece mounted to retaining walls or mounted on a concrete foundation where indicated. BOD LED backlighting product is Aquaflex HCRI by MODA Light, (702) 407-7775, www.modalight.com. Aquaflex HCRI is an exterior white LED 3,500K two-step MacAdam ellipse dimmable light strip system, 149.34 lumens per linear foot, 12V DC input voltage, 1.4W per linear foot, dimming 100–277V 0–10V and magnetic low voltage, with 5-yr. limited warranty.

Materials include conduit, conductors, cables, fixtures, enclosures, LED drivers, LED strips, decorative medallion, distribution box, transformer, mounting assemblies, and incidental components for installation of the decorative metalwork LED backlighting system.

Provide digital PDF shop drawing submittals showing the decorative metalwork with LED backlighting (Type 1), (Type 2), and (Type 3) assemblies for approval. Obtain approval on the submittals before initiating purchase of materials and beginning work. Furnish two copies of the completed material identification form to the Engineer before beginning fabrication.

Provide shop drawings showing layout, dimensions, spacing of components, anchorage, and installation details. Include details for steel fabrication, including structural welding, finishing, and fastening.

3. CONSTRUCTION

Install the decorative metalwork and LED backlighting (Type 1), (Type 2), and (Type 3) in accordance with the details and dimensions shown on the plans and as directed. Conduits and lighting components must remain hidden from view in all cases. Visible conduits and lighting components are not acceptable.

Ensure all circuits test clear of faults, grounds, and open circuits. Ensure the system will conform to NEC requirements.

Final acceptance of the system will not be made until the system operates satisfactorily for 14 days (this includes energizing and de-energizing the lighting circuits at dusk and dawn).

4. MEASUREMENT

This Item will be measured as each unit, with LED backlighting, of the type indicated.

5. PAYMENT

The work performed and material furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Decorative Metalwork LED Backlighting" of the type indicated. This price is full compensation for shop drawings and approval process; fabricating, furnishing, and installing decorative metalwork sculptures; furnishing, installing, and testing LEDs; LED drivers, distribution box, transformer, fixtures, conduit, conductors, cables, enclosures, mounting assemblies, and internal connections of equipment; and manipulations, labor, tools, equipment, and incidentals necessary to complete the work.

New conduit from the electrical service to the decorative metalwork assemblies will be paid for under Item 618. New conductors from the electrical service to the decorative metalwork assemblies will be paid for under Item 620. New ground boxes will be paid for under Item 624 "Ground Boxes." New electrical services will be paid for under Item 628 "Electrical Services."

Special Specification 6525

Decorative Medallion Assembly with Light-Emitting Diode (LED) Backlighting



1. DESCRIPTION

Furnish the materials, equipment, and labor for installing decorative medallion assembly with light-emitting diode (LED) backlighting as shown on the plans and as directed.

2. MATERIALS

Provide new materials that comply with the details shown on the plans, the requirements of this Item, and the pertinent requirements of the following Items.

- Item 441, "Steel Structures"
- Item 442, "Metal for Structures"
- Item 446, "Field Cleaning and Painting Steel"
- Item 616, "Performance Testing of Lighting Systems"
- Item 618, "Conduit"
- Item 620, "Electrical Conductors"

Provide and install decorative stainless steel metalwork sculptures as indicated on drawings, shop-prepared and painted with fluoroethylene vinyl ether resin fluoropolymer coating system. Colors as indicated on drawings. Submit shop drawings of all metalwork coordinated with layout and mounting of LED backlighting system.

Unless otherwise shown on the plans, provide new materials that comply with the requirements of the NEC, UL, and NEMA.

- 2.1 **Basis of Design (BOD) Lighting Product.** Provide a continuous 1/2-in. wide, low-profile, flexible, linear, solid-state, dimmable, IP67 wet location, LED light strip system in silicone sleeve that emits a minimum of 149.34 lumens per linear foot to outline and backlight each separate decorative metalwork piece mounted to retaining walls where indicated. BOD product is Aquaflex HCRI by MODA Light, (702) 407-7775, www.modalight.com. Aquaflex HCRI is an exterior white LED 3,500K two-step MacAdam ellipse dimmable light strip system, 149.34 lumens per linear foot, 12V DC input voltage, 1.4W per linear foot, dimming 100-277V 0-10V and magnetic low voltage, with 5-yr. limited warranty.

Materials include conduit, conductors, cables, fixtures, enclosures, LED drivers, LED strips, decorative medallion, distribution box, transformer, mounting assemblies, and other components for installation of the decorative medallion assembly with LED backlighting system.

Provide a digital PDF shop drawing submittal showing the decorative medallion assembly with LED backlighting assembly for approval. Obtain approval on the submittals before initiating purchase of materials and beginning work. Furnish two copies of the completed material identification form to the Engineer before beginning fabrication.

Provide shop drawings showing layout, dimensions, spacing of components, anchorage, and installation details. Include details for steel fabrication including structural welding, finishing, and fastening.

3. CONSTRUCTION

Install the decorative medallion assembly with LED backlighting in accordance with the details and dimensions shown on the plans and as directed. Conduits and lighting components must remain hidden from view in all cases. Visible conduits and lighting components are not acceptable.

Ensure all circuits test clear of faults, grounds, and open circuits. Ensure the system will conform to NEC requirements.

Final acceptance of the system will not be made until the system operates satisfactorily for 14 days (this includes energizing and de-energizing the lighting circuits at dusk and dawn).

4. MEASUREMENT

This Item will be measured as each unit.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Decorative Medallion Assembly with LED Backlighting." This price is full compensation for shop drawings and approval process; fabricating, furnishing, and installing decorative medallion sculptures; furnishing, installing, and testing LEDs; LED drivers, distribution box, transformer, fixtures, conduit, conductors, cables, enclosures, mounting assemblies, and internal connections of equipment; and manipulations, labor, tools, equipment, and incidentals necessary to complete the work.

New conduit from the electrical service to the decorative medallion assembly will be paid for under Item 618. New conductors from the electrical service to the decorative medallion assembly will be paid for under Item 620. New ground boxes will be paid for under Item 624, "Ground Boxes." New electrical services will be paid for under Item 628, "Electrical Services."

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