SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: F 2023(704) CONTROL: 0197-03-078

COUNTY: KAUFMAN

LETTING: 06/27/2023

REFERENCE NO: 0615

PROPOSAL ADDENDUMS

_ PROPOSAL COVER

X BID INSERTS (SH. NO.: ALL)

X GENERAL NOTES (SH. NO.: ALL)

_ SPEC LIST (SH. NO.:)

_ SPECIAL PROVISIONS:

ADDED:

DELETED:

_ SPECIAL SPECIFICATIONS:

ADDED:

DELETED:

X OTHER: SEE CHANGES OUTLINED BELOW

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

***** BID INSERTS *****
REVISED QUANTITIES FOR THE FOLLOWING BID ITEMS:
502-6001
ADDED THE FOLLOWING BID ITEMS:
6027-6008
DELETED THE FOLLOWING BID ITEMS:
636-6001, 6027-6006
ALL SHEETS REPLACED DUE TO THE ABOVE CHANGES AND LINE SHIFTS
***** GENERAL NOTES *****
ITEM 8 - CHANGED MAXIMUM AND MINIMUM NUMBER OF WORKING DAYS
ALL SHEETS REPLACED DUE TO THE ABOVE CHANGES AND LINE SHIFTS
***** PLAN SHEETS *****
14,14A-14M,15B,15C,15E,22,26,220,341, 342, 344, 346
SHEETS REPLACED DUE TO THE ABOVE CHANGES
_____.

SPECIFICATION DATA

Table 1: Soil Constants Requirements

Item	Description	Plasticity Index		Note
		Max	Min	
132	EMBANKMENT (FINAL) (DENS CONT) (TY C1)	40	8	1,2
132	EMBANKMENT (FINAL) (DENS CONT) (TY C2)	20	8	3

Note 1: Material excavated from the project must meet the PI requirements when used in the top 10 feet of embankment that supports the pavement structure or other locations shown in the plans. Do not use shale and obtain approval to incorporate shaley clay produced by the construction project.

Note 2: Use as a non-select embankment backfill as defined under Item 423.2.4.1. Use as an embankment to backfill behind abutments to the extent of the approach slab or to backfill areas enclosed by an abutment and / or retaining walls or other locations as shown in the plans.

Note 3: Use as backfill in pavement subgrade overexcavation areas at locations shown in the plans.

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Table 2: Basis of Estimate for Permanent Construction

Item	Description	Thickness	Rate		Quantity
162	Block Sod	N/A	See Specifications		27,007 SY
164	Drill Seed (Perm) (R) (C/S)	N/A	See Specifications		138,273 SY
166 *	Fertilizer (12-6-6)	N/A	500	Lbs./Ac	8.52 Ton
168	Vegetative Watering (Warm)**	N/A	12	MG/Ac/Day	24,590 MG
260	Hydrated Lime (slurry)	8“ 12”		8%	3869 Ton
310	Prime Coat	N/A	0.20	Gal/SY	24,551 Gal
3077	SP MIXES SP-B PG64-22 SP MIXES SP-C SAC-A PG70-22 SP MIXES SP-C SAC-B PG64-22 SP MIXES SP-D SAC-A PG70-22	See Plans	110	Lbs./SY/In	23,672 Ton 5,272 Ton 11,875 Ton 2,384 Ton
3077	Tack Coat (Undiluted Application Rate)	New HMA	0.06	Gal/SY	6,461 Gal

*For contractor’s information only
**Use Summer rate for calculation, adjust for actual field conditions/temperatures as necessary. See Vegetation Establishment Plan Sheet for estimated daily rates.
***Portland Concrete Cement

Note: (1) Base material weight based on 1.50 Ton/CY (dry- compacted)
(2) Asphalt weight based on 110 Lbs./SY/In
(3) Subgrade weight based on 1.35 Ton/CY (dry-compacted)

Table 3: Basis of Estimate for Temporary Erosion Control Items				
Item	Description	Rate		Quantity
164	Drill Seeding (Temp) (Warm or Cool)	See Specifications		165,280 SY
166*	Fertilizer (12-6-6)	500	Lb/Ac	8.52 Ton
168	Vegetative Watering (Warm)**	12	MG/Ac/Day	24,590 MG

*For Contractor's Information Only.
**Use Summer rate for calculation, adjust for Actual Field Conditions/Temperatures as Necessary. See Vegetation Establishment Sheet for estimated daily rates.

Table 4: Basis of Estimate for Finish Colors (Items 427 & 446) [1]		
Element	Color	Specification Number [2]
CTB	Sand	23722
Columns	Sand	23722
Bent caps	Sand	23722
Striated retaining wall surfaces	Sand	23722
Retaining wall coping and other components except striated surfaces	Sand	23722
Abutment (all parts)	Sand	23722
Prestressed concrete girders and structural steel	Sand	23722
Bottom of slab overhang and slab edge	Sand	23722
Concrete rail parts except outside lower 18"	Sand	23722
Lower outside 18" of concrete rails	Red Brown	20109

1. Unless otherwise noted, it is the intent of these plans that all exposed surfaces (concrete or steel) of bridges, retaining walls, concrete traffic railing and concrete traffic barrier be given a tinted coating as shown or as directed. Such coating shall meet the applicable provisions of Item 427 or Item 446.

2. Federal Standard 595 colors.

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GENERAL

The construction, operation and maintenance of the proposed project will be consistent with the state implementation plan as prepared by the Texas Commission on Environmental Quality.

The disturbed area for this project, as shown on the plans is 57.5 acres. However, the Total Disturbed Area (TDA) will establish the required authorization for storm water discharges. The TDA of this project will be determined by the sum of the disturbed area in all project locations in the contract, and all disturbed area on all Project-Specific Locations (PSL) located in the project limits and/or within 1 mile of the project limits. The department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction site as shown on the plans, according to the TDA of the project. The contractor will obtain any required authorization from the TCEQ for the discharge of storm water from any PSL for construction support activities on or off of the project row according to the TDA of the project. When the TDA for the project exceeds 1 acre, provide a copy of the appropriate application of permit (NOI, or Construction Site Notice) to the engineer, for any PSL located in the project limits or within 1 mile of the project limits. Follow the directives and adhere to all requirements set forth in the TCEQ, Texas Pollution Discharge Elimination System, Construction General Permit (TPDES, CGP).

This project required permits with environmental resource agencies as outlined in the plan set's Environmental Permits, Issues and Commitments (EPIC) Sheet. There is a high probability that an environmentally sensitive area could be encountered on the contractor designated Project-Specific Locations (PSL) for this project (haul roads, equipment staging areas, borrow pits, disposal sites, field offices, storage areas, parking areas, etc.). Item 7.6 "Project-Specific Locations", provides a listing of regulatory agencies that may need to be contacted regarding this project.

Install traffic marking signs prior to sealcoat application and remove within three days after placement of traffic markings.

Leave all right of way areas undisturbed until actual construction is to be performed in said areas.

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

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

Area Engineer (AE) – Lane Selman Lane.Selman@txdot.gov
Assistant Area Engineer (Assistant AE)– Nicholas Wadlington Nicholas.Wadlington@txdot.gov

Contractor questions will be accepted through email, phone, and in person by the above individuals.

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 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.

Paper copies of cross-sections may be produced by using the provided .pdf file located on the above FTP Website at the bidders' expense and at copying companies. This data is for non-construction purposes only and it is the responsibility of the prospective bidder to validate the enclosed data with appropriate plans, specifications and estimate for the project(s).

The following standard detail sheets have been modified*:* RW(MSE)DD MOD, RW (RI)SUP (MOD)

Item 5:
Underground utilities owned by the Texas Department of Transportation may be present within the Right-Of-Way on this project. For signal, illumination, surveillance, and communications & control maintained by TxDOT, call the TxDOT Traffic Signal Office (214-320-6682) for locates a minimum of 48 hours in advance of excavation. For irrigation systems, call TxDOT Landscape Office (214-320-6205) for locates a minimum of 48 hours in advance of excavation. If city or town owned irrigation facilities are present, call the appropriate department of the local city or town a minimum of 48 hours in advance of excavation. The Contractor is liable for all damages when utilities are damaged due to Contractor's negligence including, but not limited to, repair or replacement at the Contractor's expense.

For the project to be deemed complete, permanently stabilize all unpaved disturbed areas of the project with a vegetative cover at a minimum of 70% density for the control of erosion.

Submit all shop drawings, working drawings, or other documents which require review sufficiently in advance of scheduled construction to allow no less than thirty (30) calendar days for review and response.

Locate all utilities, both underground and above ground, in the project area prior to beginning work so that conflicts are avoided.

Provide to the Engineer, in addition to any submittals required by the specifications and elsewhere in the general notes, a list of pre-qualified material to be used on the project.

Place construction stakes/station markings at intervals of no more than 100 feet or as directed by the Engineer. Place stakes and markings so as not to interfere with normal construction operations.

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:
To comply with the latest provisions of Build America, Buy America Act (BABA Act) of the Bipartisan Infrastructure Law, the contractor must submit a notarized 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 below link. https://www.txdot.gov/business/resources/materials/buy-america-material-classification-sheet.html for clarification on material categorization.

Item 7:
Repair or replace any structures and utilities that might have been damaged by negligence or a failure to have utility locates performed.

Perform all electrical work in accordance with the National Electrical Code and Texas Department of Transportation Specifications.

Consult with appropriate electric company representatives according to their respective area to coordinate electrical services installations.

Holiday restrictions – the engineer may decide that no lane closures or construction operations shall be allowed during the restricted periods listed in the following holiday schedule. TxDOT has the right to lengthen, shorten, or otherwise modify these restricted periods as actual, or expected, traffic conditions may warrant. Working days will not be charged for these restricted periods. No additional compensation will be allowed for these closures (i.e., overhead, delays, stand-by, barricades or any other associated cost impacts).

- New Year's Eve and Day (noon on December 31 thru 10:00 pm January 1)
- Easter Holiday weekend (noon on Friday thru 10:00 pm Sunday)
- Memorial Day weekend (noon on Friday thru 10:00pm Monday)
- Independence Day (noon on July 3 thru 10:00 pm on July 5)
- Labor Day weekend (noon on Friday thru 10:00 pm Monday)
- Thanksgiving Holiday (noon on Wednesday thru 10:00 pm Sunday)
- Christmas Holiday (noon on December 23 thru 10:00 pm December 26)

Roadway closures during the following key dates and/or special events are prohibited in Kaufman County.

•The University of Texas vs. University of Oklahoma football game (no lane closures beginning 4 hr. prior to the event and ending 3 hr. following event completion).

Item 8:
This Project will be a Five-Day Workweek in accordance with Article 8.3.1.1.

Nighttime work is allowed in accordance with Article 8.3.3.

Provide the engineer with a daily work schedule of planned work. Meet weekly with the engineer to notify him or her of planned work for the upcoming week.

Critical Path Method (CPM) schedule in P6 format will be required for this project. Submit baseline schedule and obtain approval prior to beginning construction. The Estimate will be held if monthly schedule update is not submitted.

The minimum number of working days allowable for bid (B part) is 630.

The maximum number of working days is 735 days was calculated using a conceptual time determination schedule that assumed generic resources, production rates, sequence of construction and average weather conditions. The time determination schedule is provided for informational use only and is not intended for bidding or construction purposes.

Substantial completion of the contract is defined as the point in time at which the roadway and the cross streets are in their final geometric configuration and traffic is following the lane arrangement as shown in the plans for the finished roadway. All pavement construction is complete with traffic control devices and pavement markings in their final position.

The daily road-user cost incentive/disincentive for substantial completion of the project is $5,000 per working day. The road user cost disincentive shall be limited to a maximum of 250 working days of damages charged to the contractor. The early substantial completion of work incentive shall be limited to a maximum of 120 working days. The road-user cost disincentive deductions will be in addition to any contract administration liquidated damages. The number of days for final completion, excluding vegetation and landscaping maintenance, will be 26 working days after the substantial completion of the project.

Item 100:
Remove the existing roadway small signs, delineators and object markers as shown on the plans, or as directed, during construction within the right of way. Small sign, delineator and object marker removals are subsidiary to this Item.

The limits of preparing right of way will be measured from FM148 Sta. 101+00.00 to Sta. 183+11.88 and US 175 Sta. 277+00.00 to Sta. 315+50.00 along the centerline of construction.

Item 104:
In those areas where the pavement is not to be overlaid, provide a smooth surface after the curb removal. Planing or grinding is considered an acceptable method at these locations. Measurement and payment is in accordance with this item.

Sawing of concrete is not paid for directly, but is considered subsidiary to this item.

Item 105:
Saw existing asphalt along neat lines where portions are to be left in place temporarily or permanently. Sawing is not paid for directly, but is subsidiary to this item.

Take possession of recycled asphalt pavement from the project and recycle the material.

Properly dispose of unsalvageable material at your own expense.

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Item 110:
Excavated shale is not an acceptable material for embankment.

Items 110 and 132:
Scarify and loosen the excavated areas, unpaved surface areas, except rock, to a depth of at least 8 inches and compact in accordance with the specifications.

Excavation and embankment for driveways, sleeper slabs, alleys and intersections will not be paid for directly, but will be considered subsidiary to these items.

Item 132:
Excavated material from the project site has not been determined to be suitable for embankment. The bidder assumes all risk for the use of excavated materials for embankment and is expected to meet all material requirements for embankment regardless of the source.

Perform Tex-106-E (Plasticity Index) by an approved laboratory on excavated soils from sources outside right of way when used in roadway embankment. Provide the test results at no expense to the department. The engineer will sample and test soils produced by the construction project for specification requirements or material sources specified in the plans.

Earth embankments Type C1 and C2, are mainly composed of material other than shale. Furnish material that is free from vegetation or other objectionable material and that conforms to the requirements of Table 1 (Sheet A). If necessary, treat material with lime slurry in accordance with Item 260, “Lime Treatment (Road-Mixed)” in order to meet these requirements. Use Tex-121-E, figure 1, page 4 to calculate the amount of lime required. When lime treated subgrade is specified, 3000 PPM is the maximum allowed sulfate content in the top 3 feet when material comes from borrow source. Follow recommendations of 260.4.4 for mixing and mellowing. The engineer will test material placed or excavated to a depth of one foot below and laterally to one foot outside the proposed treatment limit. Lime treatment of this material will not be paid for directly, but will be considered subsidiary to this item.

Do not use shaley clays in embankment unless approved in writing.

Use embankment material Type C1 described in Table 1 “Soil Constants Requirements” for embankments behind bridge abutments to the extent of the bridge approach slabs, and other embankments enclosed by an abutment and / or retaining walls.

Use embankment material Type C2 described in Table 1 “Soil Constants Requirements” for backfill of pavement subgrade overexcavation areas as shown in the plans.

Settlement is anticipated under the embankment placed on US 175 for the construction of the grade separation. Refer to Section 6.13 and 6.15 in the Geotechnical Engineering Report for further details regarding the anticipated settlement.

Foundation soil settlements should be monitored using settlement plates installed before starting the embankment construction. The contractor shall install five settlement plates as follows:

- One settlement plate at each bridge abutment location (4). Settlement plates shall be installed at following locations to monitor foundation soil settlements at each abutment;
  - US 175 Station 294+55, Offset 25' Left
  - US 175 Station 299+35, Offset 25' Left
  - US 175 Station 294+55, Offset 25' Right
  - US 175 Station 299+35, Offset 25' Right
- and one more at the existing 3-10'x10' box culvert crossing US 175 at Anthony Branch (1). Settlement plate shall be installed at US 175 Station 306+00, Offsett 25' Left, west of the box culvert.

Foundation soil Settlement Monitoring: During fill placement settlement readings are required after each placement of two feet of fill. The fill elevation above the settlement plates and the settlement plate elevations are to be recorded and reported. After the fill is complete, at least monthly measurements are to continue until the placement of asphalt pavement. The duration and frequency of measurements may need to be changed based on the settlement measurements.

The settlement measurements are to be graphed to plot settlements versus time. Settlement time shall be plotted in logarithmic scale. Settlement rate shall be calculated from the slope of the settlement vs. time plot.

The asphalt pavement shall be placed when one inch or settlement is remaining at bridge abutments to reduce bump at the bridge ends and bump over culvert due to embankment foundation soil settlements. The time to reach one-inch remaining foundation settlement ($T_{one\text{-}inch}$) shall be estimated from settlement-time plot prepared using on-site measured settlements. Following equation shall be used to estimate the time to reach one-inch remaining settlement in the foundation soils.

$$T_{one\text{-}inch} = T_{EC}+((S_{Total} - 1) - S_{EC})/\Delta_{slope}$$

Where,

$T_{one\text{-}inch}$ = Approximate time to reach one-inch remaining foundation settlement in months. This time is from the time the embankment construction started.

T_{EC} = Time to complete the embankment at abutment and culvert locations in months

S_{Total} = Estimated total foundation soil settlement in inches. Total estimated foundation soil settlement is estimated to be 5 to 6 inches.

S_{EC} = Measured foundation soil settlement at the end of embankment completion in inches.

Δ_{slope} = Slope from the Settlement vs.Log Time plot prepared from on-site measured settlements in inch/month. Slope shall be calculated from the approximately linear portion of the Settlement vs. Log Time plot after completion of embankment construction.

Settlement plates and monitoring are to be completed by the contractor and cost associated with this is subsidiary to this bid item.

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Item 134:
Start backfilling pavement edges as soon as possible after the surface course is started.

Backfill and compact the pavement edges to produce a smooth surface adjacent to the pavement with no vertical edges.

Use Type "A" or "B" material to backfill pavement edges as shown in plans. Type "A" or "B" material shall consist of suitable material that when compacted will support the pavement edge. Rap is considered suitable Type "A" or "B" material.

Blade the existing vegetation into a neat wind-row prior to overlay. After placing Ty A or Ty B backfill and placing seeding, the material from the wind-row shall be replaced on the completed slopes. Emulsion shall be placed at a 50/50 solution of water to emulsion over disturbed area. Emulsion rate=0.15 Gal/SY residual. This work, materials and equipment shall be subsidiary to Item 134.

Item 160:
Sequence construction operations to salvage topsoil from one location and spread on areas ready to receive topsoil. Keep stockpiling of topsoil to a minimum.

Use fertile clay or loam from the project site not more than six inches below natural grade as topsoil.

Item 161:
Provide tickets representing quantity of compost delivered to site.

Item 169:
Hydraulically apply Flexterra FGM, CocoFlex ET-FGM, or Earth Guard or install North American Green SC150 for erosion control on the specified slopes or areas in the construction plan. Apply as required per manufacturer's recommendations. Use Tables under Item 164 to determine type of seeds to be used. Water for application, seeding, labor, equipment, tools, supplies, materials, fertilizer and incidentals will not be paid for directly but will be subsidiary to this Item.

Item 247:
Construct uniform layer thickness of 12 inches, or less with the required density and moisture content. Minimum PI is equal to three (3) for all grades.

Place blue top and survey hubs for elevation and alignment verification every 100 feet.

Item 260:
Furnish and distribute MS-2 smoothly and evenly at the rate of 0.20 gallons per square yard to cure lime, as directed.

Provide Hydrated Lime Slurry and apply lime by slurry placement method.

Place blue top and survey hubs for elevation and alignment verification every 100 feet.

Item 301:
Provide liquid antistripping agents unless otherwise directed. Add the minimum dosage determined by the manufacturer or higher dosage determined by design requirement and try subsequent trials at 0.25% increments.

Item 320:
Use a self-propelled wheel mounted MTV capable of receiving mix from the haul trucks, separate from the paver. It shall have a minimum storage capacity of approximately 25 tons. It shall be equipped with a pivoting discharge conveyor and shall completely and thoroughly remix the material prior to placement. The effectiveness of the MTV's remixing ability is subject to the approval of the Engineer. In addition, the paver shall have a surge storage insert with a minimum capacity of 20 tons.

The use of windrow pick-up equipment is allowed except on the first course of roadway material placed over the subgrade.

Item 400:
Structural Excavation is not paid for directly but is considered subsidiary to pertinent Items.
When placing concrete storm drain pipe on slopes of greater than 10 percent, provide cement stabilized backfill to a depth shown on the plans.

Item 416:
Provide a minimum of one core per bent, regardless of placement method.

Extend drilled shaft foundations for overhead sign structures five feet into rock at locations where rock is encountered at a depth less than the drilled shaft lengths shown in the plans.

Provide a formed smooth finish for all portions of drill shafts extending above proposed ground. Include cost for this work in the unit bid price for this item.

Base all drilled shaft foundations for overhead sign structures on the lengths shown on the plans or as approved in writing. Make calculations for measurement of foundations in accordance with Article 9.1 of the standard specifications. Measure increase or decreases in the quantities required by change in design as specified and the revised quantities will be the basis for payment.

Use concrete classified as "miscellaneous concrete" for ground mounted sign foundations, with the exception of large roadside signs and overhead sign structures.

Do not install PVC and/or rigid metal conduit in sign foundations for sign structures without sign lights.

Traffic signal pole and/or illumination pole foundations will be paid for once regardless of extra work caused by obstructions.

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Concrete removal required for installation of drilled shafts will be subsidiary to Item 416.

Item 420:
Mass concrete is a plans quantity item.

Apply an ordinary surface finish to all concrete surfaces within 30 days after form removal.

Form columns to a point a minimum of one foot below the proposed future or existing bottom of channel elevation indicated on the bridge layouts by an acceptable method. This form work is not paid for directly, but is considered subsidiary to this item.

BENT NUMBERING:
For bridges with four or more spans, number every third bent (counting the abutments) on the up-station and down-station faces of the outside column(s) at approximately the mid height of the column. For structures with three columns or less per bent, place numbers on column A. Where there are four or more columns per bent, place numbers on both outside columns. Bent numbers shall be as shown on the bridge layout.

All materials, labor and incidentals associated with placing bent numbers are subsidiary to the various bid items.
For bridges with aesthetic treatments, the numbering will be incorporated into the aesthetics package.

NATIONAL BRIDGE INVENTORY NUMBERS:
Provide National Bridge Inventory (NBI) numbers on all bridge structures and bridge class culverts.

Where beam types allow access to the face of abutment backwall, place NBI numbers on the face of each abutment backwall using 3" block numbers. Locate NBI numbers between the outside beams at opposite corners of the bridge.

Where beam types do not allow access to the face of abutment backwall, place NBI numbers on the face of each abutment cap using 3" block numbers. Locate NBI numbers below the outside beams at opposite corners of the bridge.

Where a bridge begins, ends or contains a bent common to multiple structures, place NBI numbers on both faces near both ends of the common bent cap. The number placed at each of the four locations will correspond to the NBI number assigned to the bridge immediately above the number. Locate NBI numbers below the outside beam. Place using 3" Block Numbers.

For Bridge Class Culverts, place National Bridge Inventory numbers at the middle of the downstream headwall using 3" block letters.

For Bent Numbering and NBI Numbering, furnish materials that conform to the pertinent requirements of the following items:

- Stencil ink, black 11 oz., spray can (lead, CFC, and CFHC free). Black spray will be waterproof, weather resistance and dry instantly on all surfaces, without smearing, smudging or rippling and
- Die cut stencils or
- Brass stencil, 3 in., numbers and letters, adjustable interlocking stencil, set content 92 piece numbers and letters, legend height 3 in., symbol height 3 in. Stencils must be industrial grade and interlocking.

All materials, labor and incidentals associated with placing NBI numbers are subsidiary to the various bid items.

Item 421:
Furnish mix designs to the Engineer in a format compatible to the latest version of the Department's Construction Management System (Site Manager). Mix Design templates will be provided by the Engineer.

Provide High Performance Concrete (HPC) of the class specified for the following bridge components: approach slabs, abutments, bents, columns, slabs, sidewalks and medians.

Provide High Performance Concrete (HPC) of the class specified for all railing and permanent concrete traffic barrier placed on bridges or approach slabs. HPC concrete is not required for portions of rail or concrete traffic barrier not located on a bridge.

Provide sulfate resistant concrete for box culverts and all drilled shafts.

Strength evaluation using maturity testing, Tex-426-A, may be used for all concrete elements except drilled shafts and mass concrete pours.

Provide a digital hydraulic compression testing Machine and accessories. The machine shall have a minimum testing range of 2500 pounds force to 250,000 pounds force with a hydraulic switching valve to allow for rapid advancing, hold, controlled advancing and rapid retracting. The machine shall have a load cell to measure compressive forces within the testing range and shall be calibrated and verified in accordance with ASTM latest version. The Machine can meet or exceed the following when approved by the Engineer:

ELE International ACCU-TEK250 Digital Compression Tester including accessories or Forney F-250EX Standard Compression Machine including accessories or TxDOT approved equal.

Supply the Engineer with a list of certified personnel and copies of their current ACI certificates before beginning production and when personnel changes are made. Supply hard copies of calibration reports for testing equipment when required by the Engineer.

Item 423:
For Mechanically Stabilized Earth (MSE) walls, provide a system from one of the following approved suppliers:

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Name	Manufacturer	Phone
Reinforced Earth Walls	The Reinforced Earth Company 1331 Airport Freeway, Suite 302 Euless, TX 76040-4150	(817) 283-5503
Reinforced Soil Embankment Walls	Texas Welded Wire, Inc. 645 W. Hurst Blvd. Hurst, TX 76053	(817) 282-4560
Retained Earth Walls	Foster Geotechnical 901 North Highway 77 Hillsboro, TX 76645	(254) 580-9100
Stabilized Earth Wall	Visit-A-Wall Systems, LLC 650 Justice Lane Mansfield, TX 76063	(817) 507-0200
Strengthened Soil Walls	ROSCH Earth Technologies 18390 Wings Corporate Drive Chesterfield, MO 63005	(636) 519-7770
Structural Embankment, LLC	Structural Embankment, LLC P.O. Box 220 Weatherford, TX 76086	(817) 599-5700
Tricon Retained Soil Walls	Tricon Precast, Ltd. 15055 Henry Road Houston, TX 77060	(281) 931-9832
VP Wall System	Valley Prestress Products, Inc 1520 Calhoun Road P.O. Box 309 Eagle Lake, TX 77434	(956) 584-5701
MSE Plus*	SSL Construction Products 4740 Scotts Valley Drive, Suite E Scotts Valley, CA 95066	(831) 430-9300
Sine Wall*	Inventure Civil 2705 Dougherty Ferry Road Suite 207 St. Louis, MO 63122	(636) 349-2231
Tensar ARES Retaining Wall System*	Tensar Earth Technologies, Inc. 2500 Northwinds Parkway Suite 500 Alpharetta, GA 30009	(770) 344-2090
TriWeb Retained Soil Wall System*	Tricon Precast, Ltd. 15055 Henry Road Houston, TX 77060	(281) 931-9832

*Experimental Status: Systems on experimental status have been reviewed and approved by TxDOT, but have not yet constructed walls on TxDOT projects. The supplier may be contacting districts and asking to be included on upcoming projects. These systems are expected to perform acceptably and should be considered for inclusion on projects.

All retaining walls will have a uniform texture and appearance.

Unless otherwise noted in the plans, the top of the leveling pad is located 2 feet below the proposed ground.

Square foot surface area of retaining wall is measured from the top of retaining wall to the top of the leveling pad. Footing adjustments made to accommodate the available optional retaining walls are not measured.

Unless otherwise shown on the plans, provide Type AS backfill as defined under this item for permanent MSE or concrete block (CB) walls not subject to inundation. Unless otherwise shown on the plans, provide type DS backfill as defined under this item for permanent MSE or CB walls subject to inundation.

Supply drainage aggregate meeting the requirements of this item for use as filter material with the retaining wall.

Cement-Stabilized Backfill (CSB) is not permitted.
Unless otherwise noted on the plans, provide flowable backfill meeting the requirements of Item 401 between the back of panels and inlets or drainage pipes where the required compaction can not be achieved. Flowable backfill used for this purpose is subsidiary to this item.

Provide earth reinforcements with a minimum length of 8' or longer as required by RW(MSE)-DD. Earth reinforcement length is measured perpendicular to the wall. Adjust skewed earth reinforcements as necessary of obtain required length.

Submit design calculations supporting the details necessary to incorporate coping, railing, inlets, drainage, electrical conduits and any additional necessary features.

The contractor has the option of constructing any of the types of retaining walls for which details and specifications are included in the plans. Footing adjustments made to accommodate the available optional retaining walls are not measured. Regardless of option or options chosen, use the same fascia pattern throughout the entire project, including cast in place full height retaining walls or retaining wall type abutments.

Submit detailed drawings depicting the patterns and matching of precast with cast-in-place for approval.

Unless otherwise shown on the plans, form the map of Texas emblem into a wall panel next to each bridge abutment. Engineer approval of the exact location of each emblem is required. The cost of forming emblems is considered subsidiary to this item. Inset the map of Texas a minimum of ¾ inch into the face of the panel, and provide a smooth finish with an engineer approved contrasting color.

At contractor's expense, repair all damage to the precast units (such as chips) as required to match the fascia pattern.

Use Embankment Type C2 as non-select embankment backfill as defined under Item 423.2.4.1. For non-select embankment fill behind retaining walls provide and install fill in accordance with Item 132, Type C2.

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For cut walls, the backfill between the select fill zone and the existing ground shall be either select material as required for the select fill zone or backfill meeting or exceeding the requirements of Item 132, type C2. Place material in accordance with Item 132, Type C2 requirements. If existing ground is laid back (i.e. not vertical), the lay back shall be done as a series of equal height benches so as to prevent the formation of a smooth surface at the material interface.

Avoid distinct vertical joints between select backfill and embankment (Non-Select) backfill as required by Section 423.3.4. This may be conveniently done by providing a zone of material behind the strap zone (1' min width) in which alternating lifts of select and non-select materials are interlaced.

Items 423 and 427:
Unless otherwise noted on the plans, provide a striated finish on all retaining walls and retaining wall type bridge abutments. Supply form liners providing a finish similar to that derived from Ashlar Stone Formliner on all retaining walls and retaining wall type bridge abutments. Supply form liners providing a finish similar to that derived from Pattern No. 16986 "Georgetown Ashlar", by Fitzgerald Formlines 1.5" deep, Pettern No. 460 "Ashlar Cut Stone", by Greenstreak, Pattern "Ashlar Stone" 1.5" Deep, by Scott System or equal. Maximum depth of the striations is 1.5 inches.

Retaining wall colors are shown elsewhere in the plans.

Item 425:
Vertical clearance is less than or equal to 20 feet, provide Bars C and CH for the full length of the girder per the IGD standard.

Repair "Safety Harness Pole Holes" in beams in accordance with Item 429 prior to placement of the Bridge Slab. This work is considered subsidiary to the various bid items.

Item 427:
Finish concrete structures surface area I with an opaque sealer of the color(s) shown elsewhere in the plans in accordance Item 427.

Apply a 4-SF sample of each color on the project surfaces for approval. Adjust color as required by Engineer to compensate for surroundings and natural lighting conditions on the project site.

Ensure that surfaces are free of weak surface material, curing compounds and other surface contaminants prior to coating.

FORM LINER FINISHES: Place architectural concrete treatments as shown. Placement is subsidiary to this item.

Where used, provide fractured fin/ribs/striations that are continuous with no apparent curves or discontinuities. Variations of the fractured ribs from true vertical exceeding ¼" for each 4'-0" of panel height are not acceptable.

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Provide form liners that release without leaving pieces of liner material on the concrete and without pulling or breaking concrete from the textured surface. Provide form release agents as recommended by the manufacturer. Replace form liners as directed that have become damaged or worn. Replacement of form liners is considered incidental to the work and no additional compensation is provided.

No horizontal splices in the form liner are permitted. Vertical splices may occur only in valleys between fractured ribs.

Provide sample panels a minimum of ten days in advance of starting construction of the textured concrete surfaces. Construct sample panel(s) in accordance with Item 427.4.3.5 “Form Liner Finish” using each type of approved form liner. Sample panels must meet the requirements of the plans and specifications and be approved before any construction form liners may be ordered, obtained or used. Provide panels having a textured portion at least 5'-0" by 5'-0" with a representative un-textured surrounding surface. If directed, construct and finish additional test panels until a satisfactory concrete surface texture is obtained.

The approved sample panel is the standard of comparison for the production concrete surface texture. If directed, build a new test panel to demonstrate acceptability of any proposed change in construction method.

Tool or replace areas requiring surface treatment that do no match their associated sample panels. Upon completion, tooled or replaced panels must match the associated sample panel. Tooling or replacement is at the contractor's expense.

For proper placement of the expansion joint behind the rail, omit surface finish from the top of T551 (RW) (DAL) rail to bottom of panel as directed.
Joint reveal details and location may vary slightly from what is shown to match the adjacent MSE walls as directed. No additional compensation will be allowed.

Item 440:
Provide reinforcing steel with epoxy coating meeting the requirements of item 440 for the following bridge components: approach slab, slab, sidewalk, median, concrete traffic barrier, and rail.

Epoxy coated reinforcing is not required for portions of rail or concrete traffic barrier not located on a bridge.

Reinforcing for abutments, bents and columns are not required to be epoxy coated.

R-bars (I-beams, U-beams, X-Beams and TX Girders), Z-bars (boxes), and H-bars (Slab beams) are not required to be epoxy coated**.**

All ties, chairs and other appurtenances used with epoxy coated reinforcing shall be epoxy coated or non-metallic.

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Fiber Reinforced Concrete (FRC) can be used as a substitute for Non-Structural Class Reinforced Concrete in Mow-Strip and Rip Rap Items as approved. FRC may also be used for other Non-Structural Class Reinforced Concrete Items as approved.

Item 441:
Submit erection drawings for rolled-beam units.

Item 442:
Use temperature Zone 1 for CVN testing.

Item 446:
Paint all structural steel using protective “System II" paint in accordance with Item 446. Paint colors are shown elsewhere in the plans.

After all concrete placement has been completed, remove any concrete or other contaminate from the beam by hand cleaning methods so as not to damage the primer and then water blast / wash with a minimum of 2,500 psi pressure.

Item 449:

Use Thomas & Betts Kopr-Shield, MG Chemicals #846, MG Chemicals #8463, NYOGEL #756G, Pro-Shield #7308, Cho-Lube #4220, or other approved electrically conducting lubricant compound.

Item 464:
The concrete collars and the connections of pipes to existing or proposed concrete boxes or pipe will not be paid for directly but will be considered subsidiary to the various bid items.

At locations where storm drains dead-end, plug with a concrete plug of a thickness equal to 1 ½ inches per foot of diameter of pipe with a minimum thickness of 3 inches. The cost of the plugs shall be included in the unit price bid per foot of the various storm drain pipes.

Item 465:
All manholes, junction boxes and inlets will require inverts unless otherwise directed.

Item 471:
Tackweld all inlet grates and manhole covers to the frame with two 1-inch welds. Supply un-painted cast iron inlet grate and frame and/or cast iron manhole frame and cover.

Item 479:
Accept ownership of inlet grates and manhole covers and properly dispose of them outside the limits of the right of way in accordance with federal, state and local regulations.

Submit a plan detailing proposed methods of handling phased construction at manholes and water valves.

Payment for the phase construction will be considered subsidiary to this item.

Item 496:
Concrete pavement removed as a result of removing the inlets will not be paid for directly but will be considered as subsidiary to Item 496.

Inlet grates and manhole covers become the property of the contractor for disposal.

Item 500:
Material On Hand (MOH) will not be used in calculating partial payments for Mobilization.

Item 502:
The Contractor Force Account "Safety Contingency" that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that 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.

Access will be provided to all business and residences at all times. Where turning radii are limited during phased construction at intersections, provide all weather surfaces such as RAP or base in turning movements to accommodate and to protect the traffic from edge drop-offs. Materials, labor, maintenance and removal for these temporary accesses and radii will not be paid for directly but will be considered subsidiary to the various bid items.

Provide a person on the project at all times (24 hours/day, 7 days/week) to patrol, monitor, and maintain the traffic control devices and signs. The person must be knowledgeable of TxDOT Guidelines for traffic control devices and signs.

Provide written proposed lane closure information by 1:00 PM on the business day prior to the proposed closures. Do not close lanes when this requirement is not met.

When excavation is required next to a pavement lane carrying traffic and the widening is not completed by the end of the work day, backfill against the edge of the pavement with at least a 3:1 slope using an acceptable material to support vehicular traffic. Carefully remove and dispose of this material when work resumes. Backfilling pavement edges, and the materials required for the work will be subsidiary to this item.

Place barricades and signs in locations that do not obstruct the sight distance of drivers entering the highway from driveways or side streets.

Provide rectangular shape (CW12-2P) Temporary Clearance Signs on all bridges where the existing vertical clearance has changed. Install Signs to the satisfaction of the Engineer prior to opening to traffic. Plywood sign blanks will have minimum dimensions of 84" X 12". Work performed and materials are subsidiary to this item.

Do not operate or park any equipment/machinery closer than 30 feet from the traveled roadway after sunset unless authorized by the engineer.

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When moving unlicensed equipment on or across any pavement or public highways, protect the pavement from all damage using an acceptable method.

As approved by the Engineer, provide uniformed off duty police officers and squad cars during lane or ramp closures, night time work or other situations that indicate a need for additional traffic control to protect the traveling public or the construction workforce. Provide documentation such as payroll, log sheets with signatures and badge number, or invoices from the government entity providing the officers for reimbursement. Complete the weekly tracking form provided by the department and submit invoices that agree with the tracking form for payment at the end of each month approved services were provided. Reimbursement will not be made for coordination fees charged by any party.

The Contractor may only close 1 lane of the US 175 EBML/WBML from 9 AM to 3:30 PM, and 8 PM to 6 AM. Full freeway closure are not allowed unless otherwise approved in writing by the Engineer.

The lane closure disincentive fee is shown on the following table. The fee applies to the Contractor for closure that are outside the times specified above for each hour, regardless of the length of the lane closure or obstruction.

Main Lane Disincentive

*No. of ML's closed	**Cost Deduction/Hr.
1	$1,000.00
2	$2,000.00
3	$3,000.00
4	$4,000.00
5+	$5,000.00

* Main Lanes include all Thru lanes including HOV/Managed Lanes
** Deducted costs will be prorated by rounding up to the nearest 15-minute increment.

Limit lane closure along US 175 Frontage Roads and FM 148 to the hour between 9:00 AM and 3:30 PM. Work in other areas of the project is not restricted to this time frame.

Traffic Control Plans with Lane Closures causing backups of 20 minutes or greater in duration will be modified by the Engineer.

Additional lanes may be closed during Off Peak Times or Lowest Times with written permission of the Engineer. Lane Closures during Off Peak Times may be started earlier or be extended later with written permission of the Engineer.

Item 504:
Furnish one Field Office and Laboratory (Type B) for this project.

Chain link fencing (6-ft. chain-link fence, a top-mounted 3-strand barbed wire, and separate 16-ft. entrance and exit gates to facilitate pull through maneuvers of the vehicles), area dimensioned as directed by the Engineer, will be provided around TxDOT field office/laboratory and parking areas separate from contractor areas. Keep Contractor and TxDOT parking

separate. No Contractor vehicles, equipment, dumpsters, storage, etc. is allowed in TxDOT parking area.

Allow for space to accommodate a minimum of “5” pull through parking spaces.

All field office layouts must be approved by the Engineer prior to installation.

The Engineer reserves the right to modify the layout.

A 10 lb. ABC fire extinguisher with up-to-date inspection tag, working smoke detector, first aid kit and an eye wash station shall be installed in all facilities used by TxDOT personnel. They shall be mounted on a wall that is easily accessible and not blocked by any permanent furniture.

Inspect the fire extinguishers, smoke detectors, eye wash stations and first aid kits every month. Make necessary corrections or updates as needed or as directed within 7 calendar days.

Provide a broadband internet connection with a minimum speed of 50 Mbps download and 50 Mbps upload, unless otherwise approved.

Provide an all in one color printer/scanner/copier that will print, scan and copy 11”x17” and 8.5”X11” sheets with software that is compatible with TxDOT equipment. This is subsidiary to the various bid items.

Item 506:
Take all practicable precautions to prevent debris from being discharged into the Waters of Texas or a designated wetland. Install Best Management Practices before demolition begins and maintain them during the demolition. Remove any debris or construction material that escapes containment devices and are discharged into the restricted areas, before the next rain event or within 24 hours of the discharge.

If temporary construction stream crossings are allowed under a Nationwide Permit, submit in writing for approval the type and location of each temporary stream crossing. Use temporary bridges, timber mats, or other structurally sound and non-eroding material for temporary stream crossings. A temporary culvert crossing will consist of storm sewer pipes and 4- to 8-inch nominal size rock. Temporary stream crossings must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal degradation of water quality. Remove the temporary stream crossings in their entirety and return the affected areas to their pre-existing elevation. All work and materials use for temporary construction stream crossings will not be paid for directly but are subsidiary to pertinent Items.

Provide SW3P Signs. Obtain from the Engineer a copy of the project’s completed TPDES Storm Water Program Construction Site Notice and Contractor Site Notice. Laminate the sheets and bond with adhesive to 36" X 36" plywood sign blanks. Ensure the sheets remain dry. Apply Type C Blue reflective sheeting as the background and add the text “SW3P” in 5" white lettering, centered at the top. Attach the signs to approved temporary mounts and locate at each of the project limits just inside the right of way line at a readable height or as directed by the Engineer. If the sign cannot be placed outside the clear zone, it must adhere to the TMUTCD. SW3P

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signs, maintenance, and reposting (for replacement or as needed to ensure readability) will be subsidiary to Item 502.

Concrete Washouts are required per the CGP. The Concrete Washout Area(s) structural controls must consist of temporary berms, temporary shallow pits, and/or temporary storage tanks to prevent contaminated runoff and must be lined as to prevent contamination of underlying soil. Ensure pits properly maintained including removal of concrete as not to allow over flow. The location(s) of washout area will be approved by the Engineer. When washout pits are no longer needed, they will be removed and area will be restored to original condition. This work, materials and labor will not be measured or paid for directly but will be subsidiary to Item 506, “Temporary Erosion, Sedimentation, and Environmental Controls.”

Item 508:
Testing of materials used in the construction of a temporary detour may be waived when approved by the Engineer.

Item 512:
The contractor will furnish pre-cast F Shape Barriers for traffic control, and remove and retain possession of non-permanent barriers at the end of the project. Pre-cast F Shape Barriers must have drainage slots as detailed on the Concrete Safety Barrier Standards. Submit for approval the type of barrier joint connection proposed for the project.

Item 514:
Provide High Performance Concrete (HPC) and epoxy coated reinforcing for all Permanent Concrete Traffic Barrier located on bridge approaches or bridge slabs.

Item 529:
Provide grooved joints at 10-foot intervals and ¾ inch expansion joint material for doweled curb at the same locations as on the existing pavement.
For Curb and Gutter sections, provide grooved joints at 10-foot intervals and ¾ inch expansion joint material at a maximum of 50-foot centers and at all radius points and inlets.

Curb and Gutter transitions will be paid for by the foot at the unit price for the corresponding curb or curb and gutter section.

Saw joints at the same location as on the existing pavement.

Item 531:
Joint sealant is required when shown in the plans. This work will not be paid for directly but will be considered subsidiary to this Item.

Item 540:
Furnish one type of post throughout the project except as specifically noted in the plans.

Item 556:
Place bell and spigot type pipe with an open joint of approximately ¾ inch.

In the event that Type 5 Underdrain Pipe is bid, make the connection as shown in the plans. The cost of making the connection will be considered subsidiary to this item.

The requirements for decantation of filter material are deleted for this project.

Item 585:
Use Surface Test Type A on all intersections and driveways.
Use Surface Test Type B pay adjustment schedule 1 on the travel lanes.
Use Surface Test Type B pay adjustment schedule 3 on the service roads.
Use Surface Test Type B pay adjustment schedule 1 on the ramps.

Item 610:

Make every effort to keep the jobsite lit for the duration of the project. Do not de-energize existing lighting before new lighting is operational without prior approval.

Use 480 volt electronic LED drivers for luminaires on this project.

Existing illumination circuits may be located within or adjacent to the project limits. Either verify with the Engineer or supply a video survey to the Engineer of all the lighting in and adjacent to the project limits before beginning work. Ensure that all assemblies operational at the beginning of construction are operational at the completion of the project. This work will be done at the contractor's expense.

Item 618:

The polymer concrete barrier box will not be paid for separately, but will be considered subsidiary to ITEM 618, "CONDUIT". Mount the polymer concrete junction boxes shown on the Concrete Safety Barrier (CSB) standard sheets recessed (- ¼ ", - ¾ ") and weld a ¼" steel plate to the captive bolts so that it is flush (+0", - ¼ ") with surface of concrete barrier.

The location of conduits and ground boxes are diagrammatic only and may be shifted to accommodate field conditions as directed.

Secure permission and approval from the proper authority prior to cutting into or removing any sidewalks or curbs for installation of this Item.

When holes are drilled through concrete structures, use a coring device. Do not use masonry or concrete drills.

Structurally mount junction boxes as shown on the plans.

Place conduit under existing pavement by an approved boring method. Do not place boring pits closer than 2 feet from the edge of the pavement unless otherwise directed. Do not use water jetting. When conduits are bored, do not exceed 18 inches in the vertical and horizontal tolerances as measured from the intended target point.

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Do not use a pneumatically driven device for punching holes beneath the pavement (commonly known as a "missile").

Furnish and install a non-metallic mule tape in conduit runs in excess of 50 feet. Also furnish and install non-metallic mule tape in conduit installed for future use and cap using standard weather-tight conduit caps, as approved. Furnish Garvin # PT-1250-3K, ComStar PUL 1250P3K, Ideal Part No. 31-315 or equal as approved by the Engineer. This work will not be paid for directly, but is subsidiary to this Item.

Use a colored cleaner-primer on all PVC to PVC joints before application of PVC cement.

Seal all conduit ends with a permanently soft, non-toxic duct seal. Use a duct seal that does not adversely affect other plastic materials or corrode metals.

Existing conduit is proposed for reuse in this project. Conduit prep will be paid for under Item 6027 as directed by the Engineer.

When using existing conduit, ensure that all conduits have bushings and are cleaned of mud and debris. Restrap conduit that is being relocated to new timber poles as if it were a new installation. This work will not be paid for directly, but is subsidiary to this Item.

Item 620:

The equipment grounding conductor shall be identified by a continuous green colored jacket insulation or bare wire. Grounded conductors (Neutral) shall be identified by a continuous white colored jacket. Ungrounded conductors (Hot) in a 120/240v or 240/480v system shall be identified by each pole or leg. For 240-volt branch circuit fed from 120/240 source and 480-volt branch circuit fed from 240/480 source, ensure one leg is identified by a continuous black colored jacket and the other leg by a continuous red colored jacket.

For both transformer and shoe-base type illumination poles, provide double-pole breakaway fuse holder as shown on the Texas Department of Transportation (TxDOT) - Construction Division's (CST) materials producers list. Category is "Roadway Illumination and Electrical Supplies." Fuse holder is shown on list under Items 610 & 620. Provide 10 amp time delay fuses.

Item 624:

Slack conductors required by Standard Sheet ED(3)-14 will be subsidiary to Item 624.

Concrete removal required for installation of ground boxes will be subsidiary to Item 624.

Item 628:

Contact the appropriate utility company during the first three weeks of the project lead-time period to allow adequate time for any necessary utility adjustments, transformer installation, etc.

Granite concrete service pole embedment depth shall be 10' and shall be a minimum of 25' above grade.

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Backfill Granite Concrete service poles with a Class A concrete in accordance with Item 421, "Hydraulic Cement Concrete", except consider the concrete subsidiary to Item 628 for payment purposes.

The Meter Base or Transocket shall be mounted facing the roadway and the service enclosure shall be mounted on the opposite side of the service pole or pedestal.

The Contractor shall obtain the street address of the new electrical service directly from the applicable City.

Label the service enclosures indicating service address as well as all required information as shown on the Electrical Detail (ED) standard sheets. Labeling shall be silk screening or other acceptable method. This work will not be paid for directly, but is subsidiary to this Item.

A Licensed Master Electrician shall be required to install all electrical services.

Bill the electrical service power usage to the Texas Department of Transportation.

On the outside lower front of each electrical service meter base cover, install a 12 gauge minimum thickness stainless steel, aluminum or brass placard. The placard shall be engraved or stamped with the numeric portion of the street address and permanently affixed to the cover with exterior rated adhesive so as not to interfere with the operation of the latch. This work will not be paid for directly, but is subsidiary to this Item.

Item 636:
Leave the advance guide sign and/or the exit direction sign for an interchange in place at all times unless prior written approval is given. Replace signs removed by the Contractor before the end of the work day.

Manufacture all white legends using Clearview font on overhead and large ground-mounted guide signs. This includes destinations, cardinal directions, exit information and exit numbers. Use the font shown on the current standard sheets for all route markers (including interstate shields) and “Exit Only” panel information. Letter, arrow, and number heights shall all conform to the latest edition of the Standard Highway Sign Design Manual.

Provide two (2) sets of shop drawings for signs. The shop drawings shall conform to the details shown on the plans. The shop drawings shall show the details of the panels, wind beams, stiffeners, joint backing plates, splices, fasteners, brackets, and sign support connections. The shop drawings shall show letter types and sizes, interline spacing and message arrangements.

Affix a sign identification decal to the back of all signs and mark out the installation date in accordance with Item 643.

Attach sheeting applied to extruded aluminum panels to each individual extrusion.
Install new overhead signs tilted "down" at 3º if the structure has existing signs that are not to be replaced. Otherwise the 3º bracket is not required. The 3º bracket will be mounted directly to the back of the sign and then to the truss. Furnish and obtain approval of all shop drawings detailing

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the method to accomplish this installation. All material and labor required for this special installation is considered subsidiary to Item 636.

Ensure the minimum vertical clearance, as shown in the plans, at the highpoint of the roadway after the installation of all overhead signs. Mount new overhead signs with 46% of the sign height positioned below the centerline of the truss. If new signs are mounted on a truss with existing signs, all signs shall be bottom justified using the 46% of the tallest sign to determine placement.

Place new guide signs on existing overhead sign structures and bridge rail supports. Existing attachment hardware may be reused if position of sign meets the 46% mounting criteria and if the existing hardware is large enough to accommodate the new sign. Sign support brackets may be cut or removed as directed; however do not extend or lengthen existing brackets. Furnish any additional sign attachment hardware, support brackets, etc. as required. Payment will not be made for the additional brackets, but is considered subsidiary to this Item.

All additional hat signs and plaques mounted to the top of signs shall be supported with wind beams 2.5 times the height of the sign and/or plaque.

Logo signs may be affected within the limits of this project. The statewide Logo sign program is managed for TxDOT by Lonestar Logos (www.lonestarlogos.com) under a separate contract. If Logo signs need to be relocated or removed during construction, plans (traffic control plans and signing layouts) will clarify if the contractor is to do this or if the signs are to be relocated or removed by Lonestar Logos. In some cases, smaller replacement signs may be noted. All Logo signs are property of TxDOT.

The telephone number for Lonestar Logos is (512)462-1310 and the email address for the operations manager, Tyler Starr, is tstarr@lonestarlogos.com. Contact Lonestar Logos at least 2 weeks in advance of any needed removal or replacement of Logo signs.

Signs to be relocated during construction by the contractor will be paid under a separate pay item and in accordance with the Temporary Large Roadside Signs (TLRS) standard sheets in the plans.

Items 644, 647, and 650:
Prior to taking elevations to determine lengths for fabrication of sign posts and/or sign support towers, obtain verification of all proposed locations.

All sign mounts shall have a clamp base system for all small roadside sign assemblies.

A 3 inch strip of red reflective sheeting shall be placed on all Do Not Enter sign assemblies. This sheeting shall be placed directly below the Do Not Enter sign for the entire length of the sign post facing wrong way traffic. This work will be considered subsidiary to Item 644.

The post lengths shown on the Summary of Large Signs are approximations only. After the "X" dimensions are determined, submit actual post lengths to the Engineer for approval. Post lengths and size shall be approved by the Engineer before fabrication.

Torque the anchor bolts for only the Exit Gore signs to 60 foot-pounds.

Item 650:
All towers and trusses will be match marked, by the fabricator, for erection. Use the tower heights shown in the sign summaries and on the plans for bidding purposes only. Prior to fabrication, take finished grade elevations at the tower locations and determine their exact heights for fabrication in accordance with the details shown on the plans.

Item 677:
A water blasting method approved by the Engineer will be the only method allowed for the removal of permanent and temporary pavement markings except on a sealcoat surface. A 2 foot wide sealcoat will be required on sealcoat surfaces to eliminate permanent and temporary pavement markings.

Item 730:
At the discretion of the Engineer, mow non-paved areas within the project prior to placement of permanent vegetation. Mow up to three (3) cycles per growing season.

Item 3077:
Use aggregate that meets the Surface Aggregate Classification (SAC) requirement of Class A and B.

Provide PG binder 64-22 in Type SP-B mixture.
Provide PG binder 64-22 in Type SP-C mixture.
Provide PG binder 70-22 in Type SP-D mixture.

Item 6185:
The total number of truck mounted attenuators (TMAs) or trailer attenuators (TAs) required when utilizing the traffic control standards are shown in the tables below.

TCP 1 Series	Scenario	Required TMA/TA
(1-2)-18		1

TCP 2 Series	Scenario		Required TMA/TA	
(2-1)-18 / (2-2)-18 / (2-6)-18	All		1	
(2-3)-18	A	B	1	2

TCP 3 Series	Scenario	Required TMA/TA
(3-2)-13	All	3

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TCP 5 Series	Scenario		Required TMA/TA
(5-1)-18	A	B	1

TCP 6 Series	Scenario	Required TMA/TA
(6-2)-12	All	1

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/TAs needed for the project. Additional TMAs/TAs used that are not specified in the plans in which the contractor expects compensation will require prior approval from the Engineer.

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Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0197-03-078 **DISTRICT** Dallas **COUNTY** Kaufman
HIGHWAY FM 148, US 175

			CONTROL SECTION JOB		**0197-03-078**		**0751-05-001**		TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00135359**		**A00064184**			
			COUNTY		**Kaufman**		**Kaufman**			
			HIGHWAY		**US 175**		**FM 148**			
ALT	**BID CODE**	**DESCRIPTION**		**UNIT**	EST.	FINAL	EST.	FINAL		
	100-6002	PREPARING ROW		STA	120.620				120.620	
	104-6009	REMOVING CONC (RIPRAP)		SY	3,527.000		611.000		4,138.000	
	104-6017	REMOVING CONC (DRIVEWAYS)		SY			326.000		326.000	
	104-6054	REMOVING CONCRETE(MOW STRIP)		LF	50.000				50.000	
	105-6011	REMOVING STAB BASE AND ASPH PAV (2"-6")		SY			347.000		347.000	
	105-6094	REMOVING STAB BASE & ASPH PAV(12"-27")		SY	52,066.000		6,292.000		58,358.000	
	110-6001	EXCAVATION (ROADWAY)		CY	33,180.000		88,060.000		121,240.000	
	132-6025	EMBANKMENT (FINAL) (DENS CONT) (TY C1)		CY	223,509.000		86,628.000		310,137.000	
	132-6026	EMBANKMENT (FINAL) (DENS CONT) (TY C2)		CY			28,159.000		28,159.000	
	134-6004	BACKFILL (TY A OR B)		STA	22.900				22.900	
	161-6017	COMPOST MANUF TOPSOIL (4")		SY	35,526.000		129,754.000		165,280.000	
	162-6002	BLOCK SODDING		SY			27,007.000		27,007.000	
	164-6035	DRILL SEEDING (PERM) (RURAL) (CLAY)		SY	35,526.000		102,747.000		138,273.000	
	164-6051	DRILL SEED (TEMP)(WARM OR COOL)		SY	35,526.000		129,754.000		165,280.000	
	168-6001	VEGETATIVE WATERING		MG	10,573.000		38,607.000		49,180.000	
	169-6001	SOIL RETENTION BLANKETS (CL 1) (TY A)		SY			2,967.000		2,967.000	
	216-6001	PROOF ROLLING		HR	4.000				4.000	
	247-6053	FL BS (CMP IN PLC)(TYD GR1-2)(FNAL POS)		CY	19,646.000				19,646.000	
	247-6304	FL BS (CMP IN PLACE) (TY D GR 1-2)(10")		SY	11,640.000				11,640.000	
	247-6313	FL BS (CMP IN PLC)(TY D GR1-2)(12")		SY	47,919.000		52,635.000		100,554.000	
	260-6002	LIME (HYDRATED LIME (SLURRY))		TON	1,990.000		1,879.000		3,869.000	
	260-6011	LIME TRT (EXST MATL) (12")		SY	47,919.000		52,635.000		100,554.000	
	260-6027	LIME TRT (EXST MATL)(8")		SY	11,640.000				11,640.000	
	310-6009	PRIME COAT (MC-30)		GAL	14,893.000		9,658.000		24,551.000	
	354-6020	PLANE ASPH CONC PAV(0" TO 1")		SY	41,386.000				41,386.000	
	400-6005	CEM STABIL BKFL		CY	320.000				320.000	
	402-6001	TRENCH EXCAVATION PROTECTION		LF	4,946.000		314.000		5,260.000	
	403-6001	TEMPORARY SPL SHORING		SF	36,329.000		1,066.000		37,395.000	
	416-6004	DRILL SHAFT (36 IN)		LF	3,094.000				3,094.000	
	416-6018	DRILL SHAFT (SIGN MTS) (24 IN)		LF	38.000				38.000	
	416-6022	DRILL SHAFT (SIGN MTS) (48 IN)		LF	67.000				67.000	
	416-6029	DRILL SHAFT (RDWY ILL POLE) (30 IN)		LF	48.000				48.000	
	420-6014	CL C CONC (ABUT)(HPC)		CY	116.800				116.800	
	420-6030	CL C CONC (CAP)(HPC)		CY	101.600				101.600	
	420-6038	CL C CONC (COLUMN)(HPC)		CY	78.400				78.400	
	422-6002	REINF CONC SLAB (HPC)		SF	43,500.000				43,500.000	
	422-6015	APPROACH SLAB		CY	188.000				188.000	

1 ADDENDUM #1, 06/14/2023, REPLACE SHEET

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0197-03-078 **DISTRICT** Dallas **COUNTY** Kaufman
HIGHWAY FM 148, US 175

			CONTROL SECTION JOB		**0197-03-078**		**0751-05-001**		TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00135359**		**A00064184**			
			COUNTY		**Kaufman**		**Kaufman**			
			HIGHWAY		**US 175**		**FM 148**			
ALT	**BID CODE**	**DESCRIPTION**		**UNIT**	EST.	FINAL	EST.	FINAL		
	423-6001	RETAINING WALL (MSE)		SF	116,064.000				116,064.000	
	423-6003	RETAINING WALL (TEMP WALL)		SF	53,681.000				53,681.000	
	425-6039	PRESTR CONC GIRDER (TX54)		LF	5,976.160				5,976.160	
	432-6001	RIPRAP (CONC)(4 IN)		CY	262.000		346.000		608.000	
	432-6002	RIPRAP (CONC)(5 IN)		CY			444.000		444.000	
	432-6006	RIPRAP (CONC)(CL B)		CY	2.100				2.100	
	432-6008	RIPRAP (CONC)(CL B)(RR8&RR9)		CY	152.200				152.200	
	432-6033	RIPRAP (STONE PROTECTION)(18 IN)		CY			2,072.000		2,072.000	
	432-6045	RIPRAP (MOW STRIP)(4 IN)		CY	136.000		44.000		180.000	
	450-6023	RAIL (TY SSTR)		LF	6,049.000				6,049.000	
	450-6024	RAIL (TY SSTR)(HPC)		LF	1,560.000				1,560.000	
	454-6018	SEALED EXPANSION JOINT (4 IN) (SEJ - M)		LF	224.000				224.000	
	462-6016	CONC BOX CULV (7 FT X 5 FT)		LF			125.000		125.000	
	462-6031	CONC BOX CULV (10 FT X 7 FT)		LF			489.000		489.000	
	464-6003	RC PIPE (CL III)(18 IN)		LF	83.000		197.000		280.000	
	464-6005	RC PIPE (CL III)(24 IN)		LF	4,637.000		439.000		5,076.000	
	464-6007	RC PIPE (CL III)(30 IN)		LF	283.000				283.000	
	464-6008	RC PIPE (CL III)(36 IN)		LF	815.000		118.000		933.000	
	465-6003	MANH (COMPL)(PRM)(60IN)		EA	2.000				2.000	
	465-6014	INLET (COMPL)(PCO)(3FT)(LEFT)		EA	2.000				2.000	
	465-6015	INLET (COMPL)(PCO)(3FT)(RIGHT)		EA	2.000				2.000	
	465-6054	INLET (COMPL)(PSL)(SL)(3FTX3FT)		EA	3.000				3.000	
	465-6078	INLET (COMPL)(PSL)(RG)(3FTX3FT)		EA	18.000				18.000	
	465-6079	INLET (COMPL)(PSL)(RG)(4FTX4FT)		EA	5.000				5.000	
	465-6128	INLET (COMPL)(PSL)(FG)(4FTX4FT-4FTX4FT)		EA	1.000				1.000	
	465-6130	INLET (COMPL)(PSL)(FG)(3FTX5FT-3FTX5FT)		EA	4.000				4.000	
	465-6236	INLET (COMPL)(RWI)(TY II)		EA	22.000				22.000	
	466-6153	WINGWALL (FW - 0) (HW=6 FT)		EA			1.000		1.000	
	466-6169	WINGWALL (FW - S) (HW=8 FT)		EA			2.000		2.000	
	466-6181	WINGWALL (PW - 1) (HW=6 FT)		EA			1.000		1.000	
	467-6363	SET (TY II) (18 IN) (RCP) (6: 1) (P)		EA	6.000		6.000		12.000	
	467-6395	SET (TY II) (24 IN) (RCP) (6: 1) (P)		EA			6.000		6.000	
	467-6450	SET (TY II) (36 IN) (RCP) (4: 1) (C)		EA			2.000		2.000	
	476-6006	JACK BOR OR TUN PIPE(18 IN)(RC)(CL III)		LF	184.000				184.000	
	479-6002	ADJUSTING INLETS		EA	1.000				1.000	
	496-6002	REMOV STR (INLET)		EA	12.000				12.000	
	496-6004	REMOV STR (SET)		EA			12.000		12.000	

1 ADDENDUM #1, 06/14/2023, REPLACE SHEET

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0197-03-078 **DISTRICT** Dallas **COUNTY** Kaufman
HIGHWAY FM 148, US 175

			CONTROL SECTION JOB		**0197-03-078**		**0751-05-001**		TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00135359**		**A00064184**			
			COUNTY		**Kaufman**		**Kaufman**			
			HIGHWAY		**US 175**		**FM 148**			
ALT	**BID CODE**	**DESCRIPTION**		**UNIT**	EST.	FINAL	EST.	FINAL		
	496-6005	REMOV STR (WINGWALL)		EA			2.000		2.000	
	496-6007	REMOV STR (PIPE)		LF	179.000		135.000		314.000	
	496-6008	REMOV STR (BOX CULVERT)		LF			55.000		55.000	
	500-6001	MOBILIZATION		LS	1.000				1.000	
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING		MO	35.000				35.000	
	506-6002	ROCK FILTER DAMS (INSTALL) (TY 2)		LF	150.000		907.000		1,057.000	
	506-6003	ROCK FILTER DAMS (INSTALL) (TY 3)		LF			305.000		305.000	
	506-6011	ROCK FILTER DAMS (REMOVE)		LF	150.000		1,212.000		1,362.000	
	506-6020	CONSTRUCTION EXITS (INSTALL) (TY 1)		SY	55.000		758.000		813.000	
	506-6024	CONSTRUCTION EXITS (REMOVE)		SY	55.000		758.000		813.000	
	506-6038	TEMP SEDMT CONT FENCE (INSTALL)		LF	5,637.000		5,092.000		10,729.000	
	506-6039	TEMP SEDMT CONT FENCE (REMOVE)		LF	5,637.000		5,092.000		10,729.000	
	506-6040	BIODEG EROSN CONT LOGS (INSTL) (8")		LF	506.000		682.000		1,188.000	
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)		LF	506.000		682.000		1,188.000	
	508-6001	CONSTRUCTING DETOURS		SY	3,833.000		7,158.000		10,991.000	
	512-6005	PORT CTB (FUR & INST)(F-SHAPE)(TY 1)		LF	9,210.000		3,500.000		12,710.000	
	512-6029	PORT CTB (MOVE)(F-SHAPE)(TY 1)		LF	16,290.000		2,520.000		18,810.000	
	512-6053	PORT CTB (REMOVE)(F-SHAPE)(TY 1)		LF	9,210.000		3,500.000		12,710.000	
	514-6001	PERM CTB (SGL SLOPE) (TY 1) (42)		LF	3,475.000				3,475.000	
	514-6036	PERM CTB (TRAN SSCB TO SSTR) (MOD)		LF	20.000				20.000	
	529-6008	CONC CURB & GUTTER (TY II)		LF	1,723.000		2,829.000		4,552.000	
	530-6004	DRIVEWAYS (CONC)		SY			337.000		337.000	
	530-6005	DRIVEWAYS (ACP)		SY			619.000		619.000	
	531-6004	CURB RAMPS (TY 1)		EA	4.000				4.000	
	533-6003	RUMBLE STRIPS (SHOULDER) ASPHALT		LF	14,319.000		19,315.000		33,634.000	
	533-6004	RUMBLE STRIPS (CENTERLINE) ASPHALT		LF			10,098.000		10,098.000	
	540-6001	MTL W-BEAM GD FEN (TIM POST)		LF	4,900.000		475.000		5,375.000	
	540-6006	MTL BEAM GD FEN TRANS (THRIE-BEAM)		EA	4.000				4.000	
	540-6016	DOWNSTREAM ANCHOR TERMINAL SECTION		EA	3.000				3.000	
	542-6001	REMOVE METAL BEAM GUARD FENCE		LF	5,772.000		1,100.000		6,872.000	
	544-6001	GUARDRAIL END TREATMENT (INSTALL)		EA	2.000		4.000		6.000	
	544-6003	GUARDRAIL END TREATMENT (REMOVE)		EA	1.000		4.000		5.000	
	545-6003	CRASH CUSH ATTEN (MOVE & RESET)		EA	9.000		8.000		17.000	
	545-6005	CRASH CUSH ATTEN (REMOVE)		EA	7.000		8.000		15.000	
	545-6007	CRASH CUSH ATTEN (INSTL)(L)(N)(TL3)		EA	2.000				2.000	
	545-6019	CRASH CUSH ATTEN (INSTL)(S)(N)(TL3)		EA	7.000		8.000		15.000	
	610-6004	RELOCATE RD IL ASM (TRANS-BASE)		EA	4.000				4.000	

1 ADDENDUM #1, 06/14/2023, REPLACE SHEET

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0197-03-078 **DISTRICT** Dallas **COUNTY** Kaufman
HIGHWAY FM 148, US 175

				0197-03-078		0751-05-001		TOTAL EST.	TOTAL FINAL
			CONTROL SECTION JOB						
			PROJECT ID	A00135359		A00064184			
			COUNTY	Kaufman		Kaufman			
			HIGHWAY	US 175		FM 148			
ALT	BID CODE	DESCRIPTION	UNIT	EST.	FINAL	EST.	FINAL		
	610-6009	REMOVE RD IL ASM (TRANS-BASE)	EA	8.000				8.000	
	610-6104	IN RD IL (U/P) (TY 1) (150W EQ) LED	EA	8.000				8.000	
	610-6198	IN RD IL (TY SA) 40B-8 (250W EQ) LED	EA	8.000				8.000	
	610-6214	IN RD IL (TY SA) 40T-8 (250W EQ) LED	EA	2.000				2.000	
	618-6016	CONDT (PVC) (SCH 40) (1")	LF	132.000				132.000	
	618-6023	CONDT (PVC) (SCH 40) (2")	LF	2,361.000				2,361.000	
	618-6047	CONDT (PVC) (SCH 80) (2") (BORE)	LF	659.000				659.000	
	618-6064	CONDT (RM) (1")	LF	32.000				32.000	
	620-6003	ELEC CONDR (NO.12) BARE	LF	108.000				108.000	
	620-6004	ELEC CONDR (NO.12) INSULATED	LF	216.000				216.000	
	620-6007	ELEC CONDR (NO.8) BARE	LF	4,035.000				4,035.000	
	620-6008	ELEC CONDR (NO.8) INSULATED	LF	8,070.000				8,070.000	
	624-6001	GROUND BOX TY A (122311)	EA	4.000				4.000	
	624-6002	GROUND BOX TY A (122311)W/APRON	EA	11.000				11.000	
	624-6028	REMOVE GROUND BOX	EA	4.000				4.000	
	628-6041	ELC SRV TY A 240/480 060(NS)SS(E)GC(O)	EA	1.000				1.000	
	636-6002	ALUMINUM SIGNS (TY G)	SF	160.000				160.000	
	636-6003	ALUMINUM SIGNS (TY O)	SF	466.000				466.000	
	644-6001	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	20.000		25.000		45.000	
	644-6002	IN SM RD SN SUP&AM TY10BWG(1)SA(P-BM)	EA			1.000		1.000	
	644-6004	IN SM RD SN SUP&AM TY10BWG(1)SA(T)	EA	16.000				16.000	
	644-6027	IN SM RD SN SUP&AM TYS80(1)SA(P)	EA	5.000				5.000	
	644-6028	IN SM RD SN SUP&AM TYS80(1)SA(P-BM)	EA	4.000				4.000	
	644-6030	IN SM RD SN SUP&AM TYS80(1)SA(T)	EA	2.000				2.000	
	644-6033	IN SM RD SN SUP&AM TYS80(1)SA(U)	EA			2.000		2.000	
	644-6034	IN SM RD SN SUP&AM TYS80(1)SA(U-1EXT)	EA	2.000		1.000		3.000	
	644-6035	IN SM RD SN SUP&AM TYS80(1)SA(U-2EXT)	EA	2.000				2.000	
	644-6036	IN SM RD SN SUP&AM TYS80(1)SA(U-BM)	EA			1.000		1.000	
	644-6064	IN BRIDGE MNT CLEARANCE SGN ASSM(TY N)	EA	2.000				2.000	
	644-6065	IN BRIDGE MNT CLEARANCE SGN ASSM(TY S)	EA	2.000				2.000	
	644-6074	RELOCATE SM RD SN SUP&AM(RAIL MOUNT)	EA	1.000				1.000	
	644-6076	REMOVE SM RD SN SUP&AM	EA	6.000				6.000	
	647-6001	INSTALL LRSS (STRUCT STEEL)	LB	1,864.000				1,864.000	
	647-6003	REMOVE LRSA	EA	1.000				1.000	
	647-6004	RELOCATE LRSS (SIGN ONLY)	EA	1.000				1.000	
	650-6032	INS OH SN SUP(30 FT CANT)	EA	3.000				3.000	
	658-6013	INSTL DEL ASSM (D-SW)SZ (BRF)CTB	EA	70.000				70.000	

1 ADDENDUM #1, 06/14/2023, REPLACE SHEET

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0197-03-078 **DISTRICT** Dallas **COUNTY** Kaufman
HIGHWAY FM 148, US 175

				0197-03-078		0751-05-001		TOTAL EST.	TOTAL FINAL
			CONTROL SECTION JOB						
			PROJECT ID	A00135359		A00064184			
			COUNTY	Kaufman		Kaufman			
			HIGHWAY	US 175		FM 148			
ALT	BID CODE	DESCRIPTION	UNIT	EST.	FINAL	EST.	FINAL		
	658-6027	INSTL DEL ASSM (D-SY)SZ (BRF)CTB (BI)	EA	78.000				78.000	
	658-6063	INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2(BR)	EA			8.000		8.000	
	658-6099	INSTL OM ASSM (OM-2Z)(WFLX)GND	EA			22.000		22.000	
	662-6005	WK ZN PAV MRK NON-REMOV (W)6"(BRK)	LF	950.000				950.000	
	662-6008	WK ZN PAV MRK NON-REMOV (W)6"(SLD)	LF	3,786.000		4,510.000		8,296.000	
	662-6037	WK ZN PAV MRK NON-REMOV (Y)6"(SLD)	LF	3,786.000		4,676.000		8,462.000	
	662-6050	WK ZN PAV MRK REMOV (REFL) TY II-A-A	EA			118.000		118.000	
	662-6052	WK ZN PAV MRK REMOV (REFL) TY II-C-R	EA	250.000				250.000	
	662-6064	WK ZN PAV MRK REMOV (W)6"(BRK)	LF	4,230.000				4,230.000	
	662-6067	WK ZN PAV MRK REMOV (W)6"(SLD)	LF	10,522.000		7,743.000		18,265.000	
	662-6071	WK ZN PAV MRK REMOV (W)8"(SLD)	LF	1,983.000		22.000		2,005.000	
	662-6098	WK ZN PAV MRK REMOV (Y)6"(SLD)	LF	21,382.000		7,485.000		28,867.000	
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	14,244.000		3,520.000		17,764.000	
	666-6039	REFL PAV MRK TY I (W)12"(LNDP)(100MIL)	LF	1,410.000				1,410.000	
	666-6042	REFL PAV MRK TY I (W)12"(SLD)(100MIL)	LF	1,200.000				1,200.000	
	666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	172.000		76.000		248.000	
	666-6054	REFL PAV MRK TY I (W)(ARROW)(100MIL)	EA	15.000		8.000		23.000	
	666-6078	REFL PAV MRK TY I (W)(WORD)(100MIL)	EA	19.000		8.000		27.000	
	666-6102	REF PAV MRK TY I(W)36"(YLD TRI)(100MIL)	EA	8.000				8.000	
	666-6171	REFL PAV MRK TY II (W) 6" (BRK)	LF	2,600.000				2,600.000	
	666-6174	REFL PAV MRK TY II (W) 6" (SLD)	LF	10,382.000		2,436.000		12,818.000	
	666-6178	REFL PAV MRK TY II (W) 8" (SLD)	LF	4,233.000				4,233.000	
	666-6179	REFL PAV MRK TY II (W) 12" (LNDP)	LF	207.000				207.000	
	666-6210	REFL PAV MRK TY II (Y) 6" (SLD)	LF	11,618.000		2,436.000		14,054.000	
	666-6225	PAVEMENT SEALER 6"	LF	75,931.000		42,696.000		118,627.000	
	666-6226	PAVEMENT SEALER 8"	LF	14,244.000		3,520.000		17,764.000	
	666-6228	PAVEMENT SEALER 12"	LF	2,610.000				2,610.000	
	666-6230	PAVEMENT SEALER 24"	LF	172.000		76.000		248.000	
	666-6231	PAVEMENT SEALER (ARROW)	EA	15.000		8.000		23.000	
	666-6232	PAVEMENT SEALER (WORD)	EA	19.000		8.000		27.000	
	666-6236	PAVEMENT SEALER (UTURN ARROW)	EA	4.000				4.000	
	666-6243	PAVEMENT SEALER (YLD TRI)	EA	8.000				8.000	
	666-6306	RE PM W/RET REQ TY I (W)6"(BRK)(100MIL)	LF	6,943.000		347.000		7,290.000	
	666-6309	RE PM W/RET REQ TY I (W)6"(SLD)(100MIL)	LF	35,987.000		19,315.000		55,302.000	
	666-6321	RE PM W/RET REQ TY I (Y)6"(SLD)(100MIL)	LF	33,001.000		23,034.000		56,035.000	
	668-6080	PREFAB PAV MRK TY C (W) (UTURN ARROW)	EA	4.000				4.000	
	672-6007	REFL PAV MRKR TY I-C	EA			101.000		101.000	

1 ADDENDUM #1, 06/14/2023, REPLACE SHEET

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0197-03-078 **DISTRICT** Dallas **COUNTY** Kaufman
HIGHWAY FM 148, US 175

			CONTROL SECTION JOB		**0197-03-078**		**0751-05-001**		TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00135359**		**A00064184**			
			COUNTY		**Kaufman**		**Kaufman**			
			HIGHWAY		**US 175**		**FM 148**			
ALT	**BID CODE**	**DESCRIPTION**		**UNIT**	EST.	FINAL	EST.	FINAL		
	672-6009	REFL PAV MRKR TY II-A-A		EA			610.000		610.000	
	672-6010	REFL PAV MRKR TY II-C-R		EA	912.000				912.000	
	677-6001	ELIM EXT PAV MRK & MRKS (4")		LF	19,110.000		6,934.000		26,044.000	
	677-6002	ELIM EXT PAV MRK & MRKS (6")		LF	1,930.000				1,930.000	
	677-6003	ELIM EXT PAV MRK & MRKS (8")		LF	685.000				685.000	
	678-6002	PAV SURF PREP FOR MRK (6")		LF	75,931.000		42,696.000		118,627.000	
	678-6004	PAV SURF PREP FOR MRK (8")		LF	14,244.000		3,520.000		17,764.000	
	678-6006	PAV SURF PREP FOR MRK (12")		LF	2,610.000				2,610.000	
	678-6008	PAV SURF PREP FOR MRK (24")		LF	172.000		76.000		248.000	
	678-6009	PAV SURF PREP FOR MRK (ARROW)		EA	15.000		8.000		23.000	
	678-6012	PAV SURF PREP FOR MRK (UTURN ARR)		EA	4.000				4.000	
	678-6016	PAV SURF PREP FOR MRK (WORD)		EA	19.000		8.000		27.000	
	678-6023	PAV SURF PREP FOR MRK (36")(YLD TRI)		EA	8.000				8.000	
	730-6107	FULL - WIDTH MOWING		CYC	3.000				3.000	
	3077-6001	SP MIXESSP-BPG64-22		TON	23,672.000				23,672.000	
	3077-6013	SP MIXESSP-CSAC-B PG64-22		TON	1,254.000		10,621.000		11,875.000	
	3077-6022	SP MIXESSP-CSAC-A PG70-22		TON	5,272.000				5,272.000	
	3077-6052	SP MIXESSP-DSAC-A PG70-22		TON	2,384.000				2,384.000	
	3077-6075	TACK COAT		GAL	3,563.000		2,898.000		6,461.000	
	6001-6002	PORTABLE CHANGEABLE MESSAGE SIGN		EA	2.000		2.000		4.000	
	6027-6003	CONDUIT (PREPARE)		LF	299.000				299.000	
	6027-6008	GROUND BOX (PREPARE)		EA	5.000				5.000	
	6185-6002	TMA (STATIONARY)		DAY	440.000		258.000		698.000	
	6185-6003	TMA (MOBILE OPERATION)		HR	136.000		80.000		216.000	
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)		LS	1.000				1.000	
		LAW ENFORCEMENT: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)		LS	1.000				1.000	
		EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)		LS	1.000				1.000	

1 ADDENDUM #1, 06/14/2023, REPLACE SHEET

SUMMARY OF ILLUMINATION ITEMS										
LOCATION	416 6029	432 6006	610 6004	610 6009	610 6104	610 6198	610 6214	618 6016	618 6023	618 6047
	DRILL SHAFT (RDWY ILL POLE) (30 IN)	RIPRAP (CONC) (CL B)	RELOCATE RD IL ASM (TRANS-BASE)	REMOVE RD IL ASM (TRANS-BASE)	IN RD IL (U/P) (TY 1) (150W EQ) LED	IN RD IL (TY SA) 40B-8 (250W EQ) LED	IN RD IL (TY SA) 40T-8 (250W EQ) LED	CONDT (PVC) (SCH 40) (1")	CONDT (PVC) (SCH 40) (2")	CONDT (PVC) (SCH 80) (2") (BORE)
	LF	CY	EA	EA	EA	EA	EA	LF	LF	LF
1 OF 5	16	0.7	2	2		2			837	140
2 OF 5				2		2			340	
3 OF 5										
4 OF 5	16	0.7	2	4		4			946	167
1 OF 2	16	0.7			8		2	132	238	352
PROJECT TOTALS	48	2.1	4	8	8	8	2	132	2,361	659

SUMMARY OF ILLUMINATION ITEMS											
LOCATION	618 6064	620 6003	620 6004	620 6007	620 6008	624 6001	624 6002	624 6028	628 6041	6027 6003	6027 6008
	CONDT (RM) (1")	ELEC CONDR (NO. 12) BARE	ELEC CONDR (NO. 12) INSULATED	ELEC CONDR (NO. 8) BARE	ELEC CONDR (NO. 8) INSULATED	GROUND BOX TY A (122311)	GROUND BOX TY A (122311) W/ APRON	REMOVE GROUND BOX	ELC SRV TY A 240/480 060(NS) SS(E) GC(O)	CONDUIT (PREPARE)	GROUND BOX (PREPARE)
	LF	LF	LF	LF	LF	EA	EA	EA	EA	LF	EA
1 OF 5				1,336	2,672		4	2		294	4
2 OF 5				350	700						
3 OF 5											
4 OF 5				1,169	2,338		5	2		5	1
1 OF 2	32	108	216	1,180	2,360	4	2		1		
PROJECT TOTALS	32	108	216	4,035	8,070	4	11	4	1	299	5

1 ADDENDUM #1, 6/14/2023, REPLACE SHEET

HUITT-ZOLLARS
HUITT-ZOLLARS, INC. ENGINEERING / SURVEYING
5430 LBJ Fwy, SUITE 1500 DALLAS, TEXAS 75240-2675
Firm No. F-761

Texas Department of Transportation

US 175 FROM WEST OF FM 148 BYPASS
TO EAST OF FM 148 BYPASS

SUMMARY OF ILLUMINATION

Sheet 1 of 1

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
	6	SEE TITLE SHEET		US 175
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK	TEXAS	DALLAS	KAUFMAN	22
CHECK	CONTROL	SECTION	JOB	
	0197	03	078,ETC.	

SUMMARY OF SIGNING ITEMS

LOCATION	416 6018	416 6022	636 6002	636 6003	644 6001	644 6002	644 6004	644 6027	644 6028	644 6030	644 6033	644 6034	644 6035	644 6036	644 6064	644 6065	644 6074	644 6076	647 6001	647 6003	647 6004	650 6032
	DRILL SHAFT (SIGN MTS) (24 IN)	DRILL SHAFT (SIGN MTS) (48 IN)	ALUMINUM SIGNS (TYG)	ALUMINUM SIGNS (TY0)	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	IN SM RD SN SUP&AM TY10BWG(1)SA(P-BM)	IN SM RD SN SUP&AM TY10BWG(1)SA(T)	IN SM RD SN SUP&AM TYS80(1)SA(P)	IN SM RD SN SUP&AM TYS80(1)SA(P-BM)	IN SM RD SN SUP&AM TYS80(1)SA(T)	IN SM RD SN SUP&AM TYS80(1)SA(U)	IN SM RD SN SUP&AM TYS80(1)SA(U-1EXT)	IN SM RD SN SUP&AM TYS80(1)SA(U-2EXT)	IN SM RD SN SUP&AM TYS80(1)SA(U-BM)	IN BRIDGE MNT CLEARANCE SGN ASSM(TYN)	IN BRIDGE MNT CLEARANCE SGN ASSM(TYS)	RELOCATE SM RD SN SUP&AM(RAIL MOUNT)	REMOVE SM RD SN SUP&AM	INSTALL LRSS (STRUCT STEEL)	REMOVE LRSA	RELOCATE LRSS (SIGN ONLY)	INS OH SN SUP(30 FT CANT)
	LF	LF	SF	SF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	LB	EA	EA	EA
FM 148 SHEET 1 OF 5					3																	
FM 148 SHEET 2 OF 5					6	1					2	1		1								
FM 148 SHEET 3 OF 5					3																	
FM 148 SHEET 4 OF 5					2																	
FM 148 SHEET 5 OF 5					7																	
FM 148 SHEET 6 OF 6					4																	
CSJ: 0751-05-001	0	0	0	0	25	1	0	0	0	0	2	1	0	1	0	0	0	0	0	0	0	0
us 175/FM 148 INTERSECTION SHEET 1 OF 1					6		6	1	4			1			2	2						
WBFR/COLLEGE ST INTERSECTION SHEET 1 OF 1					6		2			2												
US 175 SHEET 1 OF 17					2			2				1	2					5				
US 175 SHEET 2 OF 17																						
US 175 SHEET 3 OF 17																						
US 175 SHEET 4 OF 17																						
US 175 SHEET 5 OF 17		17		140			1															1
US 175 SHEET 6 OF 17					1		3										1					
US 175 SHEET 7 OF 17		25		166			2														1	1
US 175 SHEET 8 OF 17	24	25		160			1												1256			1
US 175 SHEET 9 OF 17							1													1		
US 175 SHEET 10 OF 17	14		160																608			
US 175 SHEET 11 OF 17																						
US 175 SHEET 12 OF 17					1			2														
US 175 SHEET 13 OF 17					2																	
US 175 SHEET 14 OF 17																						
US 175 SHEET 15 OF 17																						
US 175 SHEET 16 OF 17																						
US 175 SHEET 17 OF 17					2													1				
CSJ: 0197-03-078	38	67	160	466	20	0	16	5	4	2	0	2	2	0	2	2	1	6	1864	1	1	3
PROJECT TOTALS	38	67	160	466	45	1	16	5	4	2	2	3	2	1	2	2	1	6	1864	1	1	3

⚠1 ADDENDUM #1, 06/14/2023, REPLACE SHEET

HUITT-ZOLLARS
HUITT-ZOLLARS, INC. ENGINEERING / SURVEYING
5430 LBJ Fwy, SUITE 1500 DALLAS, TEXAS 75240-2675
Firm No. F-761

HALFF
TBPELS ENGINEERING FIRM #312
4000 FOSSIL CREEK BLVD
FORT WORTH, TEXAS
76137-2797
TEL (817) 847-1422
FAX (817) 232-9784

US 175 FROM WEST OF FM 148 BYPASS
TO EAST OF FM 148 BYPASS

SUMMARY OF SIGNING ITEMS

Sheet 1 of 1

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
HALFF	6	SEE TITLE SHEET		US 175
GRAPHICS HALFF	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK DAB	TEXAS	DALLAS	KAUFMAN	26
CHECK MER	CONTROL	SECTION	JOB	
	0197	03	078,ETC.	

WALL SUMMARY

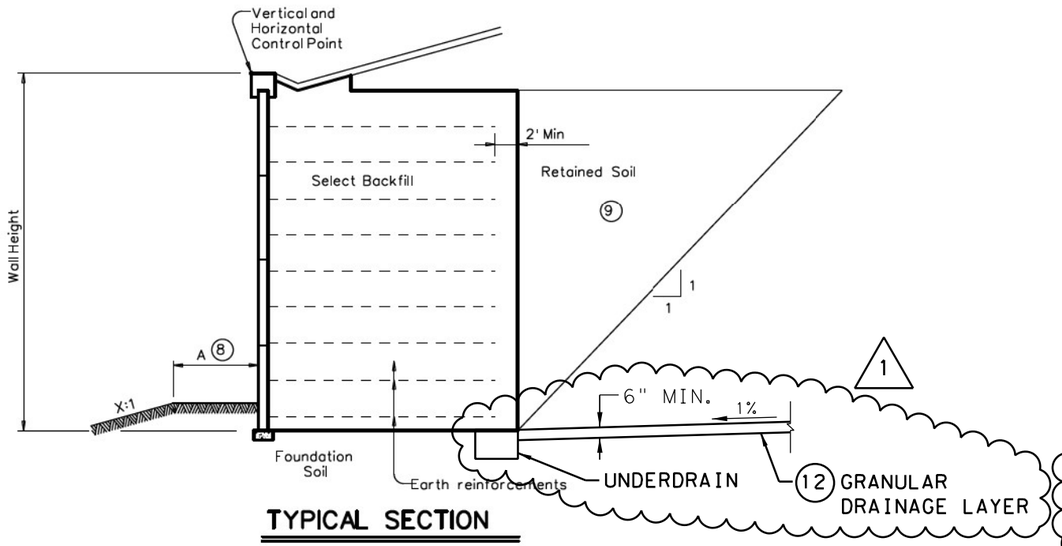
MSE Retaining Wall	Begin Station (1)	End Station (1)	Retained Soil Friction Angle (2), (9)	Foundation Soil Friction Angle (2), (10)	Ground Improvement (3)	Min Earth Reinforcement Length (4)	Min Wall Embedment (7)	Underdrain Required (5), (11)	Drawdown Analysis (6)	Bench Width (8)
RW-1	9+59.36	10+57.24	34	20	3 feet	90	2 feet	yes	No	2 feet
	10+57.24	17+90.00	34	20	4 feet	95	2 feet	yes	No	2 feet
	17+90.00	19+00.00	34	20	3 feet	90	2 feet	yes	No	2 feet
	19+00.00	23+97.00	34	20	2 feet	80	2 feet	yes	No	2 feet
	23+97.00	25+66.00	34	20	N/A	8 feet	2 feet	yes	No	2 feet
RW-2	10+00.00	12+12.00	34	20	N/A	8 feet	2 feet	yes	No	2 feet
	12+12.00	16+35.00	34	20	2 feet	80	2 feet	yes	No	2 feet
	16+35.00	18+20.00	34	20	3 feet	90	2 feet	yes	No	2 feet
	18+20.00	25+09.52	34	20	4 feet	100	2 feet	yes	No	2 feet
	25+09.52	26+07.40	34	20	3 feet	90	2 feet	yes	No	2 feet
RW-3	10+00.00	10+50.00	34	20	N/A	8 feet	2 feet	yes	No	2 feet
	10+50.00	14+40.00	34	20	2 feet	80	2 feet	yes	No	2 feet
	14+40.00	16+35.00	34	20	3 feet	90	2 feet	yes	No	2 feet
	16+35.00	23+68.98	34	20	4 feet	95	2 feet	yes	No	2 feet
	23+68.98	24+66.85	34	20	3 feet	90	2 feet	yes	No	2 feet
RW-4	9+66.32	10+64.20	34	20	3 feet	90	2 feet	yes	No	2 feet
	10+64.20	18+80.00	34	20	4 feet	100	2 feet	yes	No	2 feet
	18+80.00	19+40.00	34	20	3 feet	100	2 feet	yes	No	2 feet
	19+40.00	19+74.00	34	20	3 feet	90	2 feet	yes	No	2 feet
	19+74.00	23+36.00	34	20	2 feet	80	2 feet	yes	No	2 feet
	23+36.00	24+33.17	34	20	N/A	8 feet	2 feet	yes	No	2 feet

1

* 6" GRANULAR LAYER						
	BEGIN 6" LAYER			END 6" LAYER		** VOLUME (CY)
RW 1	STA	10+59		STA	19+00	585
RW 2	STA	17+00		STA	25+10	545
RW 3	STA	15+20		STA	23+67	590
RW 4	STA	10+66		STA	19+00	510

* GRADATION SHOULD MEET THE GRADATION CRITERIA AND FRICTION ANGLE SHOWN IN NOTE 12

** APPROXIMATE VOLUME BASED ON LIMITS AND MINIMUM EARTH REINFORCEMENT LENGTHS. FOR CONTRACTOR'S INFORMATION ONLY.



TYPICAL SECTION

(1) Indicate limits for which the stated soil design requirements/assumptions are applicable.

(2) Retained and Foundation friction angle listed should be based on local experience or measured/correlated long term strength values.

(3) Indicate if ground improvement is required or not required. If shown as required, refer to Ground Improvement Detail(s) for additional information.

(4) Indicate on table minimum length and length ratio required. The minimum default length of earth reinforcements shall be either 8'-0" or 70% of the wall height, whichever is greater. Wall height and design wall height may differ depending on project geometry and loading conditions. Note: Wall height at bridge abutments is equal to the distance between the top of leveling pad and finished grade at the bridge abutment backwall.

(5) Indicate if underdrain is required or not required.

(6) Indicate if rapid drawdown analysis is required.

(7) Guidance to wall designer of record for determination of minimum wall embedment: Unless noted elsewhere in the plans, the minimum embedment provided from the top of leveling pad to finish grade shall be 2'.

(8) Horizontal Bench width at base of wall varies. Use the following criteria to establish base width.
A - 2.0' Min for X $\geq$ 4. or
A - 4.0' Min for X $\leq$ 4.
Applicable to both drawdown and dry condition.

(9) Retained soil should consist of TxDOT item 423 AS material with a minimum friction angle of 34 degres.

(10) Foundation soil friction angle of 34 degrees can be used in sliding calculations, wherever ground improvement is recommended.

(11) Refer to Retaining Wall layouts for underdrain location.

1 (12) GRANULAR LAYER SHOULD HAVE A MINIMUM FRICTION ANGLE OF 30 DEGREES WITH ROCK SIZE NOT GREATER THAN 1 INCH IN DIAMETER AND LESS THAN 5 PERCENT PASSING SIEVE NO. 200. GRANULAR LAYER IS NOT NECESSARY WHEN EMBANKMENT HEIGHT IS LESS THAN 20 FEET. SEE TABLE FOR ESTIMATED LIMITS.

STATE OF TEXAS
SIVA P. PATHIVADA
103698
LICENSED
PROFESSIONAL ENGINEER
6/14/2023

1 ADDENDUM #1, 06/14/2023, REPLACE SHEET

Texas Department of Transportation
Bridge Division

MECHANICALLY STABILIZED EARTH RETAINING WALL DESIGN DATA

RW(MSE)DD(MOD)

FILE: rwstde16.dgn	DN: TxDOT	CK: PT	DW: DG	CK: PT	
©TxDOT 2020	DISTRICT	FEDERAL AID PROJECT			SHEET
REVISIONS	DALLAS				220
	COUNTY		CONTROL	SECT	JOB	HIGHWAY
	KAUFMAN		0197	03	078,ETC	US 175

PATH: 941754.36/rwstde16 w1-w4.dgn
6/14/2023 2:00:52 PM
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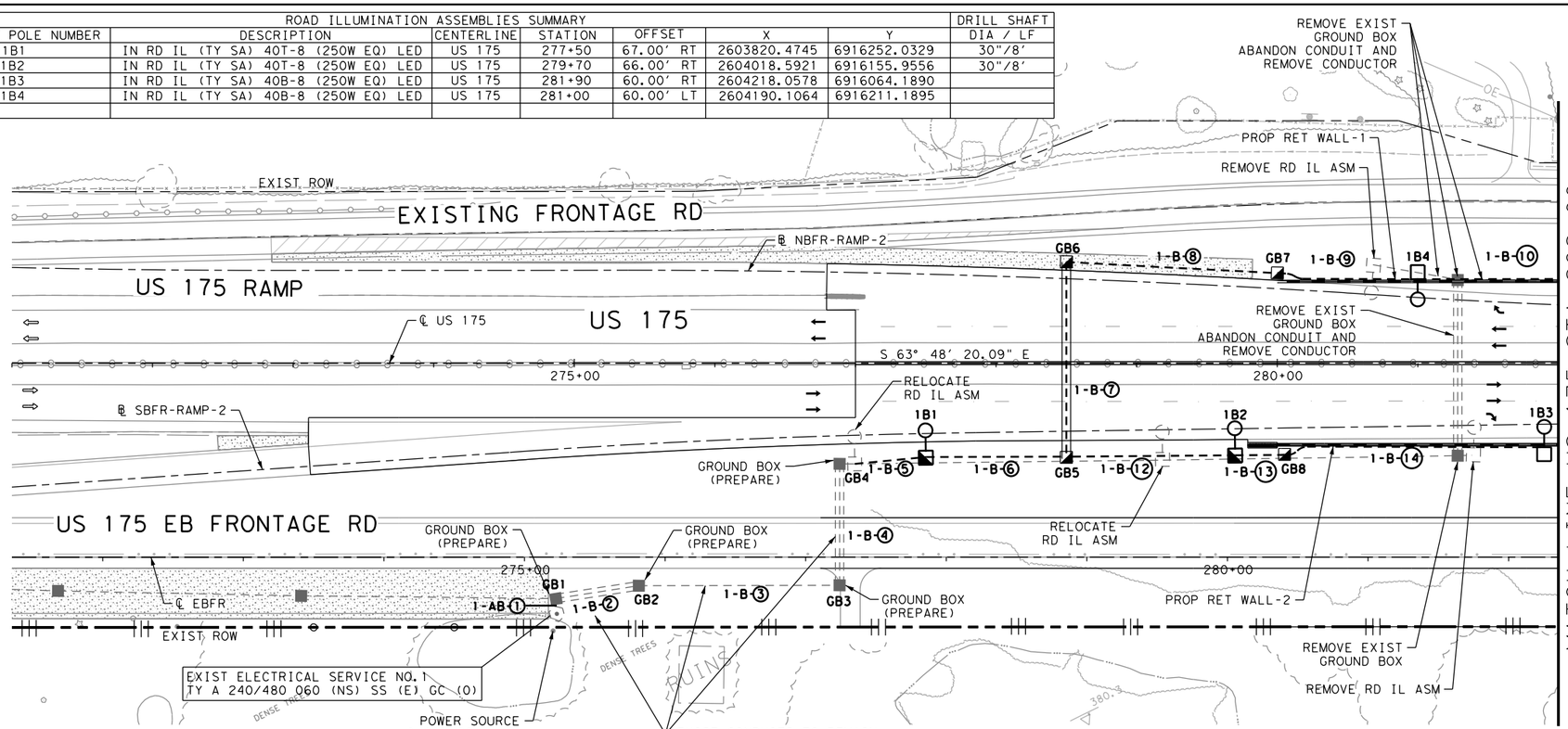
LEVELS DISPLAYED
1

ROAD ILLUMINATION ASSEMBLIES SUMMARY							DRILL SHAFT
LUMINAIRE POLE NUMBER	DESCRIPTION	CENTERLINE	STATION	OFFSET	X	Y	DIA / LF
1B1	IN RD IL (TY SA) 40T-8 (250W EQ) LED	US 175	277+50	67.00' RT	2603820.4745	6916252.0329	30"/8'
1B2	IN RD IL (TY SA) 40T-8 (250W EQ) LED	US 175	279+70	66.00' RT	2604018.5921	6916155.9556	30"/8'
1B3	IN RD IL (TY SA) 40B-8 (250W EQ) LED	US 175	281+90	60.00' RT	2604218.0578	6916064.1890	
1B4	IN RD IL (TY SA) 40B-8 (250W EQ) LED	US 175	281+00	60.00' LT	2604190.1064	6916211.1895	



LEGEND

- PROP IN RD IL (TY SA) 40T-8 (250W EQ) LED OR 40B-8 (250W EQ) LED
- EXISTING ILLUMINATION ASSEMBLY
- RELOCATED ILLUMINATION ASSEMBLY
- PROPOSED GROUND BOX TY A (W/APRON)
- PROPOSED GROUND BOX TY A
- EXISTING GROUND BOX
- PROPOSED UNDERPASS LIGHTING FIXTURE, (150 W. EQ) LED (TY 1)
- PROP DISCONNECT SWITCH
- PROPOSED JUNCTION BOX
- PROPOSED ELECTRIC SERVICE
- EXISTING ELECTRIC SERVICE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- PROPOSED CONDUIT (BORE)
- DIRECTION OF TRAFFIC FLOW
- (X) CONDUIT RUN NUMBER

RUN ID: X-X-(X) — RUN NUMBER, CIRCUIT LETTER, SERVICE NUMBER

POLE ID: XXX — POLE NUMBER, CIRCUIT LETTER, SERVICE NUMBER

NOTES:

1. LOCATE ALL UTILITIES, DRAINAGE STRUCTURES, AND OTHER POTENTIAL CONFLICTS PRIOR TO TRENCHING & BORING AND PRIOR TO INSTALLING DRILL SHAFTS AND POLES. IF NECESSARY, ADJUST LOCATIONS IN ACCORDANCE WITH TxDOT'S POLE PLACEMENT GUIDLINES AND AS DIRECTED BY THE ENGINEER. ANY UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT NO COST TO TxDOT.
2. AT LOCATIONS WHERE CONDUIT CROSSES DRAINAGE STRUCTURES OR OTHER UTILITIES, TRENCH OVER THE STRUCTURE IF SUFFICIENT COVER EXISTS (MINIMUM 18" PLUS UTILITY RECOMMENDED CLEARANCE). IF INSUFFICIENT COVER EXISTS, BORE UNDER THE STRUCTURE, PAID AS BORED CONDUIT.
3. SEE TXDOT CSJ 0197-03-054 PLANS FOR EXISTING ILLUMINATION INFORMATION.
4. SEE SHEET 3 OF 5 FOR ELECTRICAL SERVICE DATA.

SHEET SUMMARY			
ITEM	DESCRIPTION	UNIT	EST QTY
*416-6029	DRILL SHAFT (RDWY ILL POLE) (30 IN)	LF	16
432-6006	RIPRAP (CONC)(CL B)	CY	0.7
610-6004	RELOCATE RD IL ASM (TRANS BASE)	EA	2
610-6009	REMOVE RD IL ASM (TRANS BASE)	EA	2
610-6104	IN RD IL (U/P) (TY 1)(150W EQ) LED	EA	
610-6198	IN RD IL (TY SA) 40B-8 (250W EQ) LED	EA	2
610-6214	IN RD IL (TY SA) 40T-8 (250W EQ) LED	EA	
618-6023	CONDT (PVC) (SCHD 40) (2")	LF	837
618-6047	CONDT (PVC) (SCH 80) (2") (BORE)	LF	140
618-6064	CONDT (RM) (1")	LF	
620-6003	ELEC CONDR (NO. 12) BARE	LF	
620-6004	ELEC CONDR (NO. 12) INSULATED	LF	
620-6007	ELEC CONDR (NO. 8) BARE	LF	1336
620-6008	ELEC CONDR (NO. 8) INSULATED	LF	2672
624-6001	GROUND BOX TY A (122311)	EA	
624-6002	GROUND BOX TY A (122311) W/APRON	EA	4
624-6028	REMOVE GROUND BOX	EA	2
628-6041	ELC SRV TY A 240/480 060 (NS) SS (E) GC (O)	EA	
6027-6003	CONDUIT (PREPARE)	LF	294
6027-6008	GROUND BOX (PREPARE)	EA	4

* ASSUMED N=10 BLOWS/FT

CONDUIT AND CONDUCTOR SUMMARY																	
SERVICE NO	CIRCUIT LETTER	RUN NO	RUN TYPE	RUN LENGTH (FEET)	CONDUCTOR (NO & LENGTH IN FEET)(1)								CONDUIT (NO & LENGTH IN FEET)					
					620 6003 ELEC CONDR (NO. 12) BARE		620 6004 ELEC CONDR (NO. 12) INSULATED		620 6007 (GROUND) ELEC CONDR (NO. 8) BARE		620 6008 ELEC CONDR (NO. 8) INSULATED		618 6023 CONDT (PVC) (SCHD 40) (2")		618 6047 CONDT (PVC) (SCHD 80) (2") (BORE)		618 6064 CONDT (RM) (1")	
					NO	LF	NO	LF	NO	LF	NO	LF	NO	LF	NO	LF	NO	LF
1	AB	1	E	5					1	10	2	20						
1	B	2	E	60					1	65	2	130						
1	B	3	E	143					1	148	2	296						
1	B	4	E	86					1	91	2	182						
1	B	5	I	50					1	55	2	110	1	50				
1	B	6	I	100					1	105	2	210	1	100				
1	B	7	I	140					1	145	2	290			1	140		
1	B	8	I	150					1	155	2	310	1	150				
1	B	9	*I	100					1	105	4	210	1	100				
1	B	10	*I	100					1	105	2	210	1	100				
1	B	12	I	116					1	121	2	242	1	116				
1	B	13	I	35					1	40	2	80	1	35				
1	B	14	*I	186					1	191	2	382	1	186				
	TOTAL			1271						1336		2672		837		140		

(1) INCLUDES 5' TURNS IN GROUND BOXES AND POLE SUPPORTS
E = EXISTING I = INSTALL * EMBEDED IN SSTR

H: 0 50' 100'
V: 0 5' 10'

STATE OF TEXAS
DAVID ALAN NUFER
68818
REGISTERED PROFESSIONAL ENGINEER
6-14-2023

HUITT-ZOLLARS
HUITT-ZOLLARS, INC. ENGINEERING / SURVEYING
5430 LBJ Fwy, SUITE 1500 DALLAS, TEXAS 75240-2675
Firm No. F-761

Texas Department of Transportation
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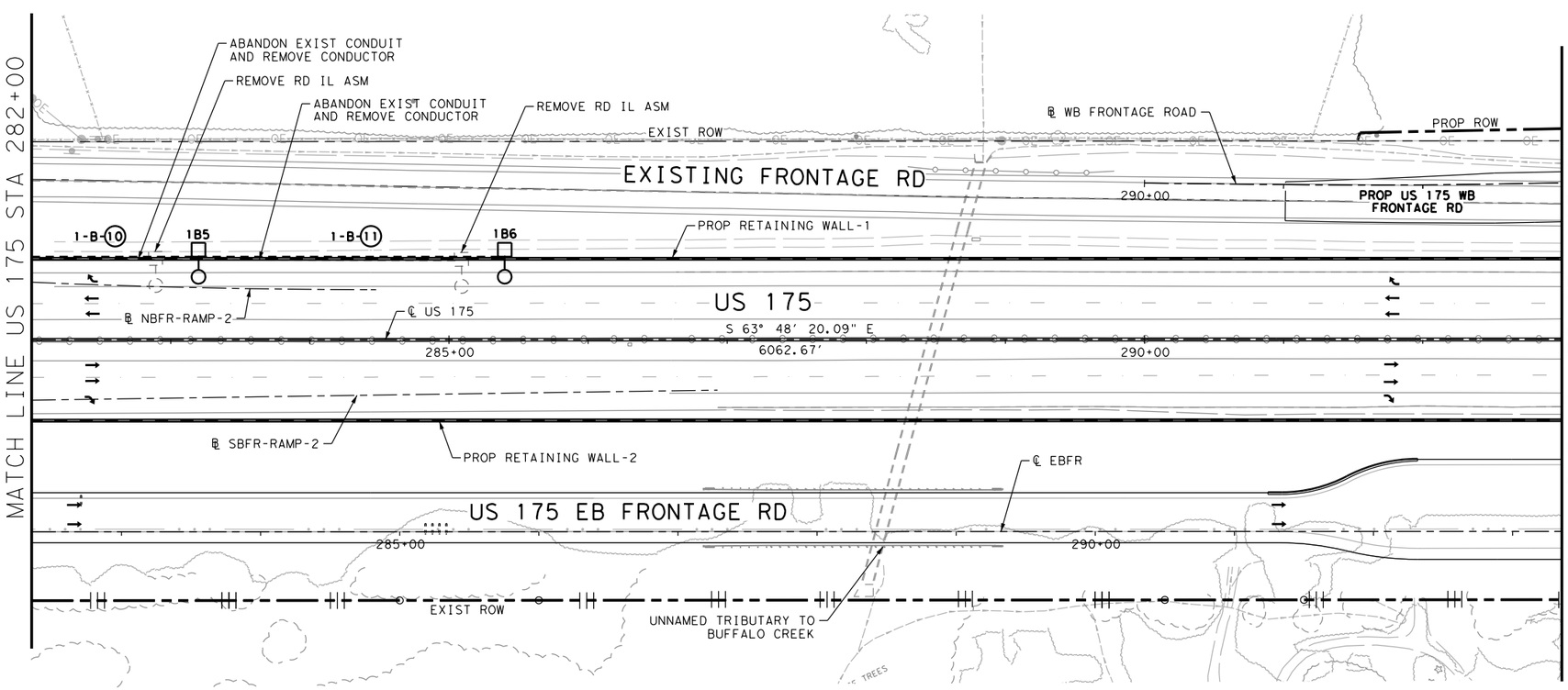
US 175 FROM WEST OF FM 148 BYPASS
TO EAST OF FM 148 BYPASS
US 175 MAINLANES ILLUMINATION LAYOUTS
BEGIN TO STA 282+00

SCALE: 1" = 100' Sheet 1 of 5

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS	6	SEE TITLE SHEET		US 175
	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK	TEXAS	DALLAS	KAUFMAN	
CHECK	CONTROL	SECTION	JOB	341
	0197	03	078,ETC.	

1 ADDENDUM #1, 6/14/2023, REPLACE SHEET



LEGEND

- PROP IN RD IL (TY SA) 40T-8 (250W EQ) LED OR 40B-8 (250W EQ) LED
- EXISTING ILLUMINATION ASSEMBLY
- RELOCATED ILLUMINATION ASSEMBLY
- PROPOSED GROUND BOX TY A (W/APRON)
- PROPOSED GROUND BOX TY A
- EXISTING GROUND BOX
- PROPOSED UNDERPASS LIGHTING FIXTURE, (150 W. EQ) LED (TY 1)
- PROP DISCONNECT SWITCH
- PROPOSED JUNCTION BOX
- PROPOSED ELECTRIC SERVICE
- EXISTING ELECTRIC SERVICE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- PROPOSED CONDUIT (BORE)
- DIRECTION OF TRAFFIC FLOW
- (X) CONDUIT RUN NUMBER

RUN ID: X-X-(X)
- RUN NUMBER
- CIRCUIT LETTER
- SERVICE NUMBER

POLE ID: XXX
- POLE NUMBER
- CIRCUIT LETTER
- SERVICE NUMBER

H: 0 50′ 100′
V: 0 5′ 10′

ROAD ILLUMINATION ASSEMBLIES SUMMARY

LUMINAIRE POLE NUMBER	DESCRIPTION	CENTERLINE	STATION	OFFSET	X	Y	DRILL SHAFT DIA / LF
1B5	IN RD IL (TY SA) 40B-8 (250W EQ) LED	US 175	283+20	60.00′ LT	2604387.6039	6916114.0828	
1B6	IN RD IL (TY SA) 40B-8 (250W EQ) LED	US 175	285+40	60.00′ LT	2604585.1038	6916016.9513	

CONDUIT AND CONDUCTOR SUMMARY

SERVICE NO	CIRCUIT LETTER	RUN NO	RUN TYPE	RUN LENGTH (FEET)	CONDUCTOR (NO & LENGTH IN FEET) (1)								CONDUIT (NO & LENGTH IN FEET)					
					620 6003 ELEC CONDR (NO. 12) BARE		620 6004 ELEC CONDR (NO. 12) INSULATED		620 6007 (GROUND) ELEC CONDR (NO. 8) BARE		620 6008 ELEC CONDR (NO. 8) INSULATED		618 6023 CONDT (PVC) (SCHD 40) (2")		618 6047 CONDT (PVC) (SCHD 80) (2") (BORE)		618 6064 CONDT (RM) (1")	
					NO	LF	NO	LF	NO	LF	NO	LF	NO	LF	NO	LF	NO	LF
1	B	10	*I	120					1	125	2	250	1	120				
1	B	11	*I	220					1	225	2	450	1	220				
	TOTAL			340						350		700		340				

(1) INCLUDES 5′ TURNS IN GROUND BOXES AND POLE SUPPORTS
E = EXISTING I = INSTALL * EMBEDED IN SSTR

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	EST QTY
*416-6029	DRILL SHAFT (RDWY ILL POLE) (30 IN)	LF	
432-6006	RIPRAP (CONC)(CL B)	CY	
610-6004	RELOCATE RD IL ASM (TRANS BASE)	EA	
610-6009	REMOVE RD IL ASM (TRANS BASE)	EA	2
610-6104	IN RD IL (U/P) (TY 1)(150W EQ) LED	EA	
610-6198	IN RD IL (TY SA) 40B-8 (250W EQ) LED	EA	2
610-6214	IN RD IL (TY SA) 40T-8 (250W EQ) LED	EA	
618-6023	CONDT (PVC) (SCHD 40) (2")	LF	340
618-6047	CONDT (PVC) (SCH 80) (2") (BORE)	LF	
618-6064	CONDT (RM) (1")	LF	
620-6003	ELEC CONDR (NO. 12) BARE	LF	
620-6004	ELEC CONDR (NO. 12) INSULATED	LF	
620-6007	ELEC CONDR (NO. 8) BARE	LF	350
620-6008	ELEC CONDR (NO. 8) INSULATED	LF	700
624-6001	GROUND BOX TY A (122311)	EA	
624-6002	GROUND BOX TY A (122311) W/APRON	EA	
624-6028	REMOVE GROUND BOX	EA	
628-6041	ELC SRV TY A 240/480 060 (NS) SS (E) GC (0)	EA	
6027-6003	CONDUIT (PREPARE)	LF	
6027-6008	GROUND BOX (PREPARE)	EA	

* ASSUMED N=10 BLOWS/FT

1 ADDENDUM #1, 6/14/2023, REPLACE SHEET

NOTES:

1. LOCATE ALL UTILITIES, DRAINAGE STRUCTURES, AND OTHER POTENTIAL CONFLICTS PRIOR TO TRENCHING & BORING AND PRIOR TO INSTALLING DRILL SHAFTS AND POLES. IF NECESSARY, ADJUST LOCATIONS IN ACCORDANCE WITH TxDOT'S POLE PLACEMENT GUIDLINES AND AS DIRECTED BY THE ENGINEER. ANY UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT NO COST TO TxDOT.
2. AT LOCATIONS WHERE CONDUIT CROSSES DRAINAGE STRUCTURES OR OTHER UTILITIES, TRENCH OVER THE STRUCTURE IF SUFFICIENT COVER EXISTS (MINIMUM 18" PLUS UTILITY RECOMMENDED CLEARANCE). IF INSUFFICIENT COVER EXISTS, BORE UNDER THE STRUCTURE, PAID AS BORED CONDUIT.
3. SEE TXDOT CSJ 0197-03-054 PLANS FOR EXISTING ILLUMINATION INFORMATION.

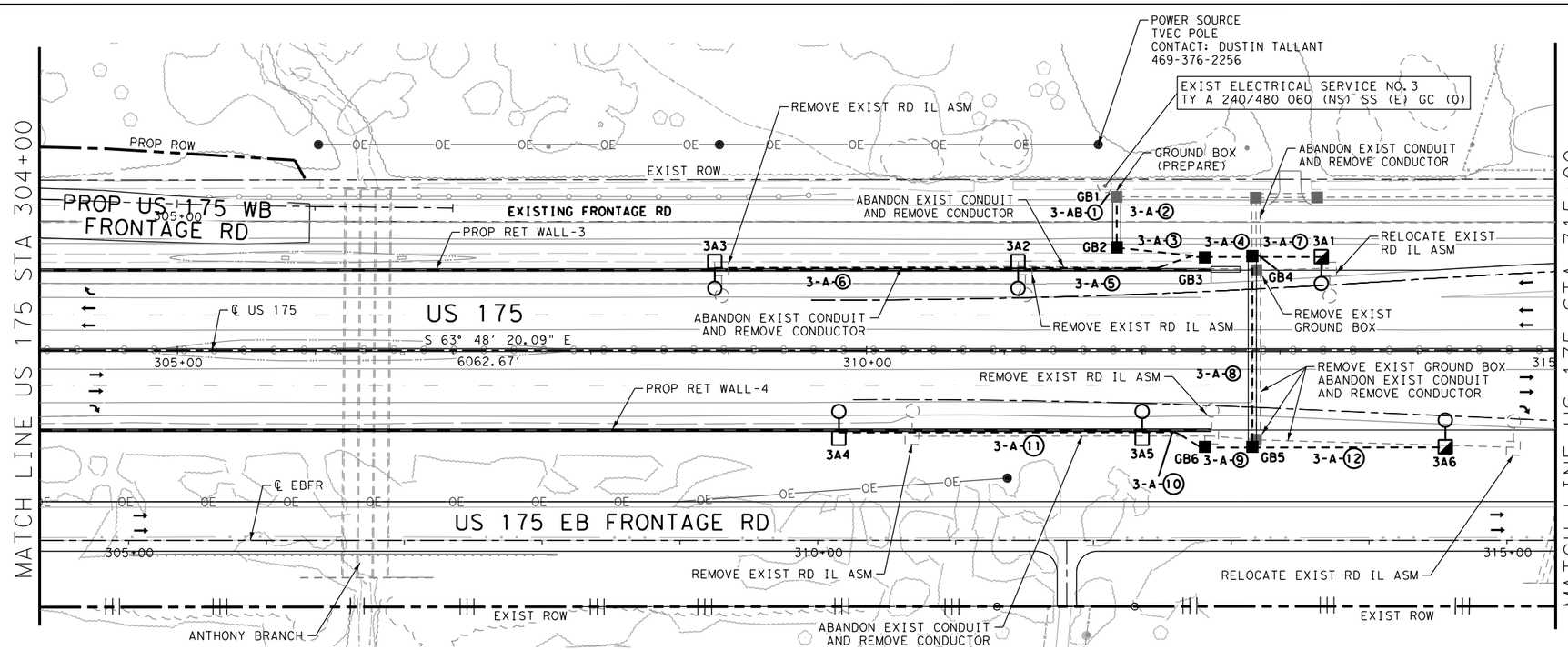
STATE OF TEXAS
DAVID ALAN NUFER
68818
REGISTERED PROFESSIONAL ENGINEER
6-14-2023

HUITT-ZOLLARS
HUITT-ZOLLARS, INC. ENGINEERING / SURVEYING
5430 LBJ Fwy, SUITE 1500 DALLAS, TEXAS 75240-2675
Firm No. F-761

US 175 FROM WEST OF FM 148 BYPASS
TO EAST OF FM 148 BYPASS
US 175 MAINLANES ILLUMINATION LAYOUTS
STA 282+00 TO STA 293+00

SCALE: 1" = 100′ Sheet 2 of 5

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS	6	SEE TITLE SHEET		US 175
	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK	TEXAS	DALLAS	KAUFMAN	342
CHECK	CONTROL	SECTION	JOB	
	0197	03	078,ETC.	



LEGEND

- PROP IN RD IL (TY SA) 40T-8 (250W EQ) LED OR 40B-8 (250W EQ) LED
- EXISTING ILLUMINATION ASSEMBLY
- RELOCATED ILLUMINATION ASSEMBLY
- PROPOSED GROUND BOX TY A (W/APRON)
- PROPOSED GROUND BOX TY A
- EXISTING GROUND BOX
- PROPOSED UNDERPASS LIGHTING FIXTURE, (150 W. EQ) LED (TY 1)
- PROP DISCONNECT SWITCH
- PROPOSED JUNCTION BOX
- PROPOSED ELECTRIC SERVICE
- EXISTING ELECTRIC SERVICE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- PROPOSED CONDUIT (BORE)
- DIRECTION OF TRAFFIC FLOW
- (X) CONDUIT RUN NUMBER

RUN ID: X-X-(X)
- RUN NUMBER
- CIRCUIT LETTER
- SERVICE NUMBER

POLE ID: XXX
- POLE NUMBER
- CIRCUIT LETTER
- SERVICE NUMBER

ROAD ILLUMINATION ASSEMBLIES SUMMARY

LUMINAIRE POLE NUMBER	DESCRIPTION	CENTERLINE	STATION	OFFSET	X	Y	DRILL SHAFT DIA / LF
3A1	IN RD IL (TY SA) 40T-8 (250W EQ) LED	US 175	313+30	68.00' LT	2607091.7001	6914792.5519	30"/8'
3A2	IN RD IL (TY SA) 40B-8 (250W EQ) LED	US 175	311+10	60.00' LT	2606891.0353	6914882.4936	
3A3	IN RD IL (TY SA) 40B-8 (250W EQ) LED	US 175	308+90	60.00' LT	2606693.5908	6914979.6245	
3A4	IN RD IL (TY SA) 40B-8 (250W EQ) LED	US 175	309+80	60.00' RT	2606721.6651	6914832.6564	
3A5	IN RD IL (TY SA) 40B-8 (250W EQ) LED	US 175	312+00	60.00' RT	2606919.1051	6914735.5938	
3A6	IN RD IL (TY SA) 40T-8 (250W EQ) LED	US 175	314+20	71.00' RT	2607111.2600	6914628.8236	30"/8'

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	EST QTY
*416-6029	DRILL SHAFT (RDWY ILL POLE) (30 IN)	LF	16
432-6006	RIPRAP (CONC)(CL B)	CY	0.7
610-6004	RELOCATE RD IL ASM (TRANS BASE)	EA	2
610-6009	REMOVE RD IL ASM (TRANS BASE)	EA	4
610-6104	IN RD IL (U/P) (TY 1)(150W EQ) LED	EA	
610-6198	IN RD IL (TY SA) 40B-8 (250W EQ) LED	EA	4
610-6214	IN RD IL (TY SA) 40T-8 (250W EQ) LED	EA	
618-6023	CONDT (PVC) (SCHD 40) (2")	LF	946
618-6047	CONDT (PVC) (SCH 80) (2") (BORE)	LF	167
618-6064	CONDT (RM) (1")	LF	
620-6003	ELEC CONDR (NO. 12) BARE	LF	
620-6004	ELEC CONDR (NO. 12) INSULATED	LF	
620-6007	ELEC CONDR (NO. 8) BARE	LF	1169
620-6008	ELEC CONDR (NO. 8) INSULATED	LF	2338
624-6001	GROUND BOX TY A (122311)	EA	
624-6002	GROUND BOX TY A (122311) W/APRON	EA	5
624-6028	REMOVE GROUND BOX	EA	2
628-6041	ELC SRV TY A 240/480 060 (NS) SS (E) GC (O)	EA	
6027-6003	CONDUIT (PREPARE)	LF	5
6027-6008	GROUND BOX (PREPARE)	EA	1

* ASSUMED N=10 BLOWS/FT

CONDUIT AND CONDUCTOR SUMMARY

SERVICE NO	CIRCUIT LETTER	RUN NO	RUN TYPE	RUN LENGTH (FEET)	CONDUCTOR (NO & LENGTH IN FEET) (1)								CONDUIT (NO & LENGTH IN FEET)					
					620 6003 ELEC CONDR (NO. 12) BARE		620 6004 ELEC CONDR (NO. 12) INSULATED		620 6007 (GROUND) ELEC CONDR (NO. 8) BARE		620 6008 ELEC CONDR (NO. 8) INSULATED		618 6023 CONDT (PVC) (SCHD 40) (2")		618 6047 CONDT (PVC) (SCHD 80) (2") (BORE)		618 6064 CONDT (RM) (1")	
					NO	LF	NO	LF	NO	LF	NO	LF	NO	LF	NO	LF	NO	LF
3	AB	1	E	5					1	10	2	20						
3	A	2	I	28					1	33	2	66			1	37		
3	A	3	I	64					1	69	2	138	1	64				
3	A	4	I	34					1	39	2	78	1	34				
3	A	5	*I	136					1	141	2	282	1	136				
3	A	6	*I	220					1	225	2	450	1	220				
3	A	7	I	50					1	55	2	110	1	50				
3	A	8	I	130					1	135	2	270			1	130		
3	A	9	I	34					1	39	4	78	1	34				
3	A	10	*I	48					1	53	2	106	1	48				
3	A	11	*I	220					1	225	2	450	1	220				
3	A	12	I	140					1	145	2	290	1	140				
	TOTAL			1109						1169		2338		946		167		

(1) INCLUDES 5' TURNS IN GROUND BOXES AND POLE SUPPORTS
E = EXISTING I = INSTALL * EMBEDED IN SSTR

NOTES:

1. LOCATE ALL UTILITIES, DRAINAGE STRUCTURES, AND OTHER POTENTIAL CONFLICTS PRIOR TO TRENCHING & BORING AND PRIOR TO INSTALLING DRILL SHAFTS AND POLES. IF NECESSARY, ADJUST LOCATIONS IN ACCORDANCE WITH TxDOT'S POLE PLACEMENT GUIDLINES AND AS DIRECTED BY THE ENGINEER. ANY UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT NO COST TO TxDOT.
2. AT LOCATIONS WHERE CONDUIT CROSSES DRAINAGE STRUCTURES OR OTHER UTILITIES, TRENCH OVER THE STRUCTURE IF SUFFICIENT COVER EXISTS (MINIMUM 18" PLUS UTILITY RECOMMENDED CLEARANCE). IF INSUFFICIENT COVER EXISTS, BORE UNDER THE STRUCTURE, PAID AS BORED CONDUIT.
3. SEE TXDOT CSJ 0197-03-054 PLANS FOR EXISTING ILLUMINATION INFORMATION.
4. SEE SHEET 3 OF 5 FOR ELECTRICAL SERVICE DATA.

H: 0 50' 100'
V: 0 5' 10'

STATE OF TEXAS
DAVID ALAN NUFER
68818
REGISTERED PROFESSIONAL ENGINEER
6-14-2023

HUITT-ZOLLARS
HUITT-ZOLLARS, INC. ENGINEERING / SURVEYING
5430 LBJ Fwy, SUITE 1500 DALLAS, TEXAS 75240-2675
Firm No. F-761

US 175 FROM WEST OF FM 148 BYPASS
TO EAST OF FM 148 BYPASS
US 175 MAINLANES ILLUMINATION LAYOUTS
STA 304+00 TO STA 315+00

SCALE: 1" = 100' Sheet 4 of 5

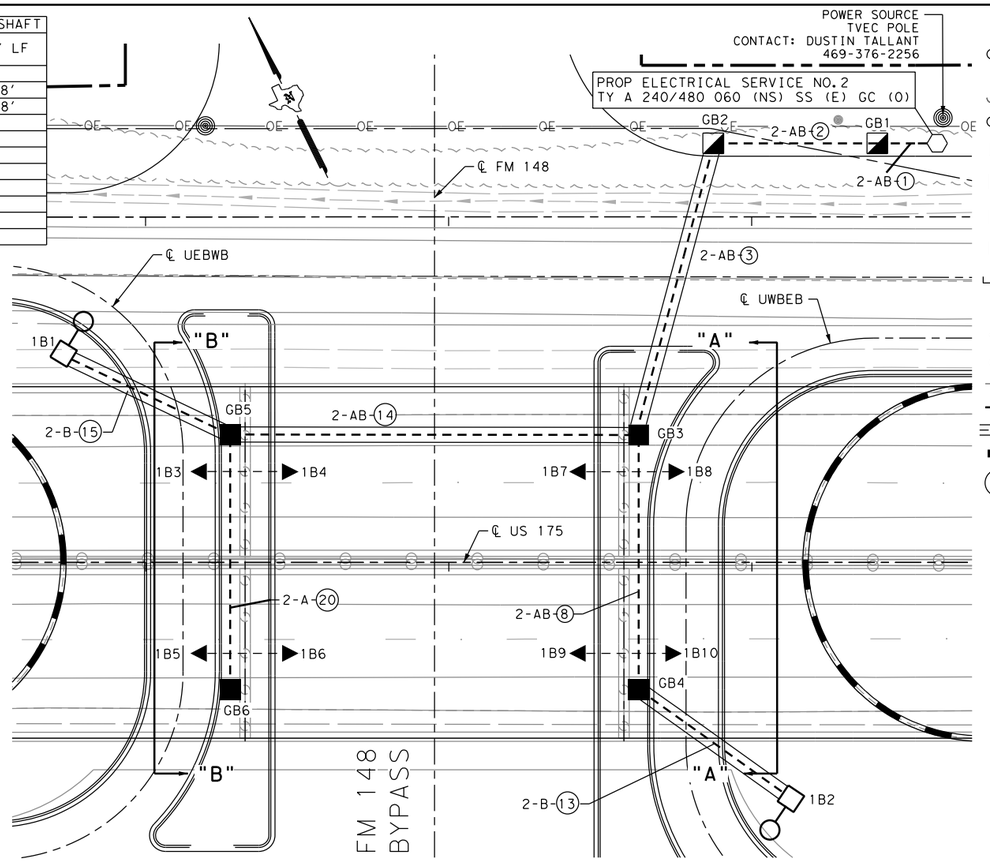
DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS	6	SEE TITLE SHEET		US 175
	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK	TEXAS	DALLAS	KAUFMAN	344
CHECK	CONTROL	SECTION	JOB	
	0197	03	078,ETC.	

1 ADDENDUM #1, 6/14/2023, REPLACE SHEET

ROAD ILLUMINATION ASSEMBLIES SUMMARY							DRILL SHAFT
LUMINAIRE POLE NUMBER	DESCRIPTION	CENTERLINE	STATION	OFFSET	X	Y	DIA / LF
1B1	IN RD IL (TY SA) 40T-8 (250W EQ) LED	US 175	295+73	69.00' LT	2605515.9076	6915569.3582	30"/8'
1B2	IN RD IL (TY SA) 40T-8 (250W EQ) LED	US 175	298+13	78.00' RT	2605666.6137	6915331.1546	30"/8'
1B3	IN RD IL (U/P) (TY 1) (150W EQ) LED	US 175	296+31	30.00' LT	2605550.8567	6915508.6792	
1B4	IN RD IL (U/P) (TY 1) (150W EQ) LED	US 175	296+35	30.00' LT	2605553.9971	6915507.1339	
1B5	IN RD IL (U/P) (TY 1) (150W EQ) LED	US 175	296+31	30.00' RT	2605524.3980	6915454.8947	
1B6	IN RD IL (U/P) (TY 1) (150W EQ) LED	US 175	296+35	30.00' RT	2605527.5384	6915453.3495	
1B7	IN RD IL (U/P) (TY 1) (150W EQ) LED	US 175	297+56	30.00' LT	2605663.0057	6915453.4741	
1B8	IN RD IL (U/P) (TY 1) (150W EQ) LED	US 175	297+60	30.00' LT	2605666.1461	6915451.9289	
1B9	IN RD IL (U/P) (TY 1) (150W EQ) LED	US 175	297+56	30.00' RT	2605636.5470	6915399.6896	
1B10	IN RD IL (U/P) (TY 1) (150W EQ) LED	US 175	297+60	30.00' RT	2605639.6874	6915398.1444	

SHEET SUMMARY			
ITEM	DESCRIPTION	UNIT	EST QTY
*416-6029	DRILL SHAFT (RDWY ILL POLE) (30 IN)	LF	16
432-6006	RIPRAP (CONC)(CL B)	CY	0.7
610-6004	RELOCATE RD IL ASM (TRANS BASE)	EA	
610-6009	REMOVE RD IL ASM (TRANS BASE)	EA	
610-6104	IN RD IL (U/P) (TY 1)(150W EQ) LED	EA	8
610-6198	IN RD IL (TY SA) 40B-8 (250W EQ) LED	EA	
610-6214	IN RD IL (TY SA) 40T-8 (250W EQ) LED	EA	2
618-6016	CONDT (PVC) (SCHD 40) (1")	LF	132
618-6023	CONDT (PVC) (SCHD 40) (2")	LF	238
618-6047	CONDT (PVC) (SCH 80) (2") (BORE)	LF	352
618-6064	CONDT (RM) (1")	LF	32
620-6003	ELEC CONDR (NO. 12) BARE	LF	108
620-6004	ELEC CONDR (NO. 12) INSULATED	LF	216
620-6007	ELEC CONDR (NO. 8) BARE	LF	1180
620-6008	ELEC CONDR (NO. 8) INSULATED	LF	2360
624-6001	GROUND BOX TY A (122311)	EA	4
624-6002	GROUND BOX TY A (122311) W/APRON	EA	2
624-6028	REMOVE GROUND BOX	EA	
628-6041	ELC SRV TY A 240/480 060 (NS) SS (E) GC (O)	EA	1
6027-6003	CONDUIT (PREPARE)	LF	
6027-6008	GROUND BOX (PREPARE)	EA	

* ASSUMED N=10 BLOWS/FT



PLAN

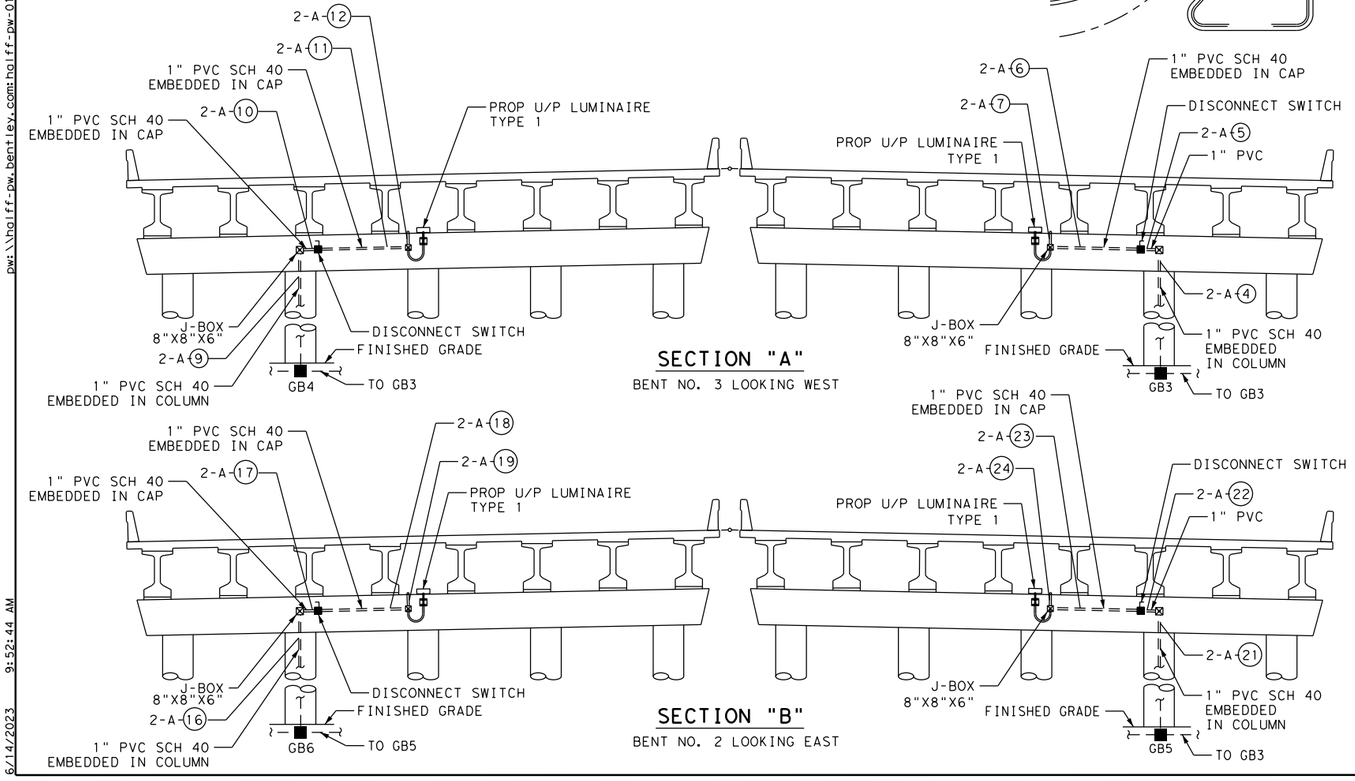
LEGEND

- PROP IN RD IL (TY SA) 40T-8 (250W EQ) LED OR 40B-8 (250W EQ) LED
- EXISTING ILLUMINATION ASSEMBLY
- RELOCATED ILLUMINATION ASSEMBLY
- PROPOSED GROUND BOX TY A (W/APRON)
- PROPOSED GROUND BOX TY A
- EXISTING GROUND BOX
- PROPOSED UNDERPASS LIGHTING FIXTURE, (150 W. EQ) LED (TY 1)
- PROP DISCONNECT SWITCH
- PROPOSED JUNCTION BOX
- PROPOSED ELECTRIC SERVICE
- EXISTING ELECTRIC SERVICE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- PROPOSED CONDUIT (BORE)
- DIRECTION OF TRAFFIC FLOW
- (X) CONDUIT RUN NUMBER

RUN ID: X - X - (X)
- RUN NUMBER
- CIRCUIT LETTER
- SERVICE NUMBER

POLE ID: XXX
- POLE NUMBER
- CIRCUIT LETTER
- SERVICE NUMBER

H: 0 25' 50'



1 ADDENDUM #1, 6/14/2023, REPLACE SHEET

SEE SHEET 2 OF 2 FOR ADDITIONAL DETAILS

SEE SHEET 5 OF 5 FOR CONDUIT & CONDUCTOR INFORMATION

STATE OF TEXAS
DAVID ALAN NUFER
68818
REGISTERED PROFESSIONAL ENGINEER
6-14-2023

HUITT-ZOLLARS
HUITT-ZOLLARS, INC. ENGINEERING / SURVEYING
5430 LBJ Fwy, SUITE 1500 DALLAS, TEXAS 75240-2675
Firm No. F-761

US 175 FROM WEST OF FM 148 BYPASS TO EAST OF FM 148 BYPASS

ILLUMINATION UNDERPASS DETAIL

SCALE: 1"= 50' Sheet 1 of 3

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS	6	SEE TITLE SHEET		US 175
	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK	TEXAS	DALLAS	KAUFMAN	346
CHECK	CONTROL	SECTION	JOB	
	0197	03	078,ETC.	