County:

Highway:

**********GENERAL NOTES**********
2024 Specification Book (Revised May 15, 2025)

All of the following notes shown in red are for the designer. Please remove prior to submitting the final version.

========== **Basis of Estimate** ==========

Item	Description	Rate/Area	Quant-Unit
____	_____	____Rate/____Area	_____
____	_____	____Rate/____Area	_____

- The Following Is For Information Only - Non Pay-

____	_____	____Rate/____Area	
____	_____	____Rate/____Area	

========== **Asphalt Concrete Pavement** ==========

Type	Location	Depth	Rate/Area	Quant-Tons
____	Main Rdwy	_____	____lbs/_____sy	_____
____	_____	_____	____lbs/_____sy	_____

========== **Surface Treatment Data** ==========

Description	1st Course	2nd Course
Area	_____ sy	_____ sy

-----See Bid Item-----

Asphalt—rate (gal/sy)	___/1 = ___ gal	___/1 = ___ gal
Aggregate--type/gr	ty __/gr __	ty __/gr __
Aggregate—rate (cy/sy)	1/___ = ___ cy	1/___ = ___ cy

--General--

G-1 The following State, District, Local and/or Utility Standards have been modified: _____, _____, _____.

G-2 Contact the Engineer or the City when construction operations are within 400 feet of a signalized intersection to determine/verify the location of loop detectors, conduit, ground-boxes, etc. Repair or replace any signal equipment damaged by construction operations. The method of repair or replacement shall be pre-approved and inspected. Depending on the type and extent of

the damage, the Engineer reserves the right to perform the repair or replacement work and the Contractor will be billed for this work.

City of San Antonio: (210) 207-8642
City of New Braunfels: (830) 221-4049

G-3 Any materials removed and not reused and determined to be salvageable shall be stored within the project limits at an approved location or delivered undamaged to the storage yard as directed. Deface traffic signs so that they will not reappear in public as signs.

G-4 Any sign panels that are adjusted or removed and replaced, shall be done the same workday unless otherwise approved. This work shall be considered subsidiary to Item 502.

G-5 Notify the Engineer at least two weeks prior to a proposed traffic pattern change(s) that will require a revision to traffic signals.

G-6 Locate and reference all manholes and valves within the construction area with station and offset or GPS. Each manhole and valve shall be identified by its owner (SAWS, CPS, etc.). No roadwork will begin until this list has been submitted. All valves and manhole covers have to be accessible at all times, therefore; temp. CTB, material stockpiles, etc. cannot be placed over these valves or covers.

G-7 The Contractor has the option to adjust or construct all manholes and valves to final pavement elevations prior to the final mat of HMA or after final mat of HMA. If between the final elevation adjustment and the final mat of HMA, the manholes and valves are going to be exposed to traffic, place temporary asphalt around the manhole and valve to provide a +/- 50:1 taper. The cost of elevation adjustment and the concrete apron around the manhole and valve will be part of the manhole and valve work. The asphalt tapers are part of the HMA work.

G-8 Hurricane Evacuation
Note G-8 is required on all projects.

Hurricane Season is from June 1 thru November 30. As the closest metropolitan city inland from the Texas Coast, the City of San Antonio is a major shelter destination during mandatory hurricane evacuations. As such, planned work zone lane or road closures may be restricted and/or suspended during mandatory hurricane evacuation operations. The District will coordinate these restrictions at a minimum H-120 from any projected impact to the Texas Coast.

No time charges will be made if the Engineer determines that work on the project was impacted by the hurricane.

The Engineer may order changes in the Traffic Control Plan to accommodate evacuation traffic, and may suspend the work, all or in part, to ensure timely completion of this work. All work to

implement changes in the Traffic Control Plan will be paid through existing bid prices or through Item 9.5, Force Account. However, the Department will not entertain any request for delay damages, loss of efficiency that may be attributed to the restriction or suspension of road or lane closures, or to changes in the Traffic Control Plan.

G-9 The Contractor should be aware that the "City Public Service" (CPS) will be consulted by the Engineer in matters concerning the execution of the work, materials and testing related to the CPS work. As such, a CPS employee may be observing the construction and related operations as they progress.
Required on projects with joint bid CPS utility work.

G-10 If a sanitary sewer overflow (SSO) occurs:

1. Attempt to eliminate the source of the SSO.
2. Contain sewage from the SSO to the extent possible to prevent contamination of waterways.
3. Call SAWS at (210) 233-2015.

This note is required when the project is located within the SAWS service area.

G-11 The Contractor should be aware that the “San Antonio Water System” (SAWS) will be consulted by the Engineer in matters concerning the execution of the joint bid Water and/or Sanitary work. This may include reviewing material submittals and testing related to this work, as well as inspection and observation of the actual work. As such, a SAWS employee may be reviewing submittals and test results as well as observing the construction and related operations as they progress.
Required on projects with joint bid SAWS utility work.

G-12 Submit locate request for SAWS water and sewer to TXDOTlocates@saws.org.

G-13 In accordance with the Underground Facility Damage Prevention Act (One Call Bill) the phone number for a utility locator is 811. It is the Contractor's responsibility to plan for utility locators as needed.

G-14 Underground utilities owned by the Texas Department of Transportation may be present within the Right-Of-Way. Call or email the TxDOT offices listed below 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 incurred to the above-mentioned utilities when working without having the utilities located prior to excavation.

For signal and ITS locates call TransGuide at 210-731-5136 or email sat_its_locates@txdot.gov for ITS locates and signal.request@txdot.gov for signal locates.

G-15 Contractor questions on this project are to be addressed to the following individual(s):

Area Engineer, e-mail address
Assistant Area Engineer, e-mail address
Contact the Area Engineer to determine the individuals to be listed here. The individuals listed here must have approval to access the FTP site.

Contractor questions will be accepted through email, phone and in person by the above individuals. Questions may also be submitted via the Letting Pre-Bid Q&A web page. This webpage can be accessed from the Notice to Contractors dashboard located at the following Address:
https://tableau.txdot.gov/views/ProjectInformationDashboard/NoticetoContractors

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

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

G-16 The Contractor must measure the vertical clearance at each structure after the final surface of the roadway is completed and provide the vertical clearance measurement to the Engineer.

--Item 2--

2-1 The Contractor is to take note that this project is based off A+B bid contracting (see Item 2 Article 11.5.2). Incentive/Disincentive provisions will apply to this project as per Special Provision to Item 8 (008—XXX) for both substantial completion of work and any milestone work. See notes under Items 2 and 8 below for the number of working days for the substantial completion of the project and any additional details.
Note G-1 is required on all projects with A+B bid contracting. A+B bidding requires approval by the District Engineer.

2-2 Notes for A+B Bidding
The maximum number of days allowed for substantial completion will be ___ working days.

The minimum number of days allowed for substantial completion will be ___ working days.
The default for minimum number of days allowed is 100 days unless the maximum number of days allowed for substantial completion is 100 days or less.
Note 2-2 is required on all projects with A+B bid contracting.

Refer to, "Accelerated Construction Guidelines," on the Construction Division site at www.txdot.gov for information and guidance.

--Item 5--

5-1 Taper ACP placed at curb inlets, traffic inlets and slotted drains.

5-2 A horizontal boom or equivalent equipment is required for construction in the vicinity of the CPS Energy electric lines to provide vertical clearance of equipment during construction. Contact CPS Energy Utility Coordination Group sixteen (16) week in anticipation of pole bracing. The estimated duration for pole bracing is 6 to 10 weeks (or longer if temporary construction easements are required) after invoice is paid. For de-energizing or sleeving of the overhead electrical lines depicted on the plans, please contact CPS Energy Utility Coordination Group sixteen (16) week in anticipation of needed de-energization. The estimated duration for de-energizing is approximately 4 to 6 weeks (after invoice is paid) but could vary on system scenario and back feed requirements. De-energizing may not be possible in all instances or may be restricted during specific periods of time due to load demand. Contractor will be reimbursed for the invoice cost for pole bracing and/or de-energizing or sleeving through force account.

5-3 Prevention of Migratory Bird Nesting
The following notes for Prevention of Migratory Bird Nesting are required on all projects

It is anticipated that migratory birds, a protected group of species, may try to nest on bridges, culverts, vegetation, or gravel substrate, at any time of the year. The preferred nesting season for migratory birds is from February 15 through October 1. When practicable, schedule construction operations outside of the preferred nesting season. Otherwise, nests containing migratory birds must be avoided and no work will be performed in the nesting areas until the young birds have fledged.

Structures

Bridge and culvert construction operations cannot begin until swallow nesting prevention is implemented, until after October 1 if it's determined that swallow nesting is actively occurring, or until it's determined swallow nests have been abandoned. If the State installed nesting deterrent on the bridges and culverts, maintain the existing nesting deterrent to prevent swallow nesting until October 1 or completion of the bridge and culvert work, whichever occurs earlier. If new nests are built and occupied after the beginning of the work, do not perform work that can interfere with or discourage swallows from returning to their nests. Prevention of swallow nesting can be performed by one of the following methods:

1. By February 15 begin the removal of any existing mud nests and all other mud placed by swallows for the construction of nests on any portion of the bridge and culverts. The Engineer will inspect the bridges and culverts for nest building activity. If swallows begin nest building, scrape, or wash down all nest sites. Perform these activities daily unless the Engineer determines the need to do this work more frequently. Remove nests and mud through October 1 or until bridge and culvert construction operations are completed.

2. By February 15 place a nesting deterrent (which prevents access to the bridge and culvert by swallows) on the entire bridge (except deck and railing) and culverts. This work is subsidiary to the various bid items.

No extension of time or compensation payment will be granted for a delay or suspension of work caused by nesting swallows.

5-4 Provide a non-intrusive back-up alarm system on all heavy equipment used in close proximity to residential areas. This item is subsidiary to various bid items.
Include this note if the construction site is within a residential area.

5-5 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.
This note is required on all projects with concrete structure elements.

5-6 Excavation within 5 feet of an existing CPS Energy pole will require pole bracing. Contact CPS Energy utility coordination to request pole bracing (Customer Engineering 210-353-4050). The estimated duration for the pole bracing process is approximately 10 to 15 weeks.

--Item 6--

6-1 Show the stockpile lot and/or sub lot numbers on all tickets for all materials.

6-2 Steel Wrapped or Asbestos Utility Lines:

Existing steel wrapped natural gas and/or asbestos cement (AC) water lines that will no longer be in service are usually abandoned in place (AIP). However, if any of these lines have to be removed for whatever reason (in the way of other construction, to make tie-ins, etc.), comply with Item 6.

If removal of AC water lines is included in the construction contract, then notify the Engineer of proposed dates of removal of the AC water lines in accordance to Item 6. Excavate to the top of the AC water line to allow a separate contractor hired by the State to remove the AC water line. The excavation for the AC water line removal is subsidiary to the work that created the need for the removal (excavation for structures, roadway, a new line, tie-ins, etc.).

6-3 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.

This note is required on all Federal projects and also required for any State funded projects that were cleared as part of a corridor under a single NEPA decision with any federal funding on past or future projects within that corridor.

--Item 7--

7-1A The project's total disturbed area is _____. The disturbed area in all project locations and Contractor project specific locations (PSL's), within 1/4 mile of the project limits, will further establish the authorization requirements for storm water discharges. The department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. Obtain any required authorization from the TCEQ for any PSL's on or off the ROW. When the total area disturbed on the project and PSL's within 1/4 mile of the project exceeds 5 acres, provide a copy of the Contractor NOI for PSL's to the Engineer (to the appropriate MS4 operator when the project is on an off-state system route).

OR

7-1B The total disturbed area within the project is anticipated at less than one (1) acre. Due to this type of construction, the project qualifies for exclusion under the Construction General Permit (CGP) issued by the Texas Commission on Environmental Quality (TCEQ). However, should the sum of the Engineer's anticipated disturbances and the Contractor's (On ROW and off ROW) PSL's equal or exceed the one (1) acre threshold; both TxDOT and the Contractor have project responsibilities under the CGP that reverts to non-exclusion status. Obtain approval for all non-depicted areas of disturbance that increases the initial soil and vegetation disturbed area estimates before work starts at these locations.

7-2 Notify the Engineer of the disturbed acreage within one (1) mile of the project limits. Obtain authorization from the TCEQ for Contractor PSL's for construction support activities on or off ROW.

7-3A No significant traffic generators events identified.

OR

7-3B Roadway closures during the following key dates and/or special event are prohibited.
See the general notes under Item 502 for these dates.
Note 7-3A or 7-3B is required on all projects to comply with requirements of Senate Bill 312. When a proposed improvement requires the closing of a highway, the department will need to coordinate the closure with public officials from municipalities affected by the closure. The construction contract must contain a provision identifying the days that a highway may not be closed (Special Provision to Item 7 is required). In addition, the department must determine the estimated economic impact of the closure during periods of increased travel on holidays and other periods of high commercial activity. The economic impact is only required for a full highway or ramp closure.

The general notes under Item 502 list standard dates and/or events that a highway or lanes may not be closed in San Antonio. If it is necessary to add dates and/or events that a highway or

lanes may not be closed in San Antonio, then add them to the list in the general notes under Item 502. If the project location is outside of San Antonio, then you must coordinate with the public officials from municipalities affected by a highway or lane closure and add and/or delete dates and/or events in the general notes under Item 502 that a highway or lanes may not be closed.

Refer to Memo with subject, "Senate Bill 312, Section 25 – Requirements for Highway Closures during Certain Periods," and refer to the Word document, "Guidelines for Road Closures During Certain Periods", found on the Crossroads Design Site.

7-4 Law Enforcement patrol vehicles must be marked as "Police".
This note is required on all projects.

--Item 8--

8-1 Working days will be computed and charged in accordance with Article 8.3.1.____:____-Day work week.

8-2A The Start Work Date is _____.
This will require the use of SP008-XXX and TxDOT Administrative approval. Contact Plan Review to request the approval of SP008-XXX per the TxDOT Delayed Project Start SOP.

OR

8-2B A Special Provision to Item 8 for a delayed authorized date to begin work has been included in the contract. The reason for including the Special Provision is for material processing or contractor mobilization.
You must receive approval from the Area Engineer to use this note. According to the Standard Operating Procedures for Item 8 Delayed Start Provisions, delayed start shall not exceed 90 days unless prior approval is granted by Administration. Refer to the TxDOT Delayed Project Start SOP for the appropriate delay SP to be used (Convenience or Compulsory)

8-3 Create and maintain a _____ schedule.
Show either Bar Chart or Critical Path Method (CPM).

8-3A The CPM schedule shall be created and maintained using software fully compatible with Primavera Project Planner version P6 Professional R15.2 .
This note is required when you have chosen to require a Critical Path Method (CPM).

8-3B Provide a Project Schedule Summary Report.
Should only be used on larger projects with complex TCP.

8-4 A lane closure assessment fee will be assessed as per the "Lane Closure Assessment Fee Table" in the plans.
This note requires the Districtwide Special Provision to Item 8 for Lane Closure Assessment Fees.

8-5 Incentive using road-user cost or contract administration liquidated damage values and disincentive using road-user cost will be paid in accordance with special provision 008---XXX.
Include this note when Incentive Using Road-User Cost or Contact Administration Liquidated Damages (CALD) Values and Disincentive Using Road-User Cost are required for a project. Include SP 008---XXX.

8-6 The road-user cost liquidated damages shall be $_____ per day.
Use this note if required by Form 2699 and use with Special Provision to Item 000 Schedule of Liquidated Damages.

8-7 Notes for Substantial Completion of Work for the Project
Include Special Provision to Item 8 for Incentive Using Road-User Cost or Contract Administration Liquidated Damage Values and Disincentive Using Road-User Cost.

Substantial Completion of Work is defined in Special Provision to Item 8.

The daily road-user cost for incentive and disincentive for Substantial Completion of Work for the project will be $_____ per day.

The contractor will have a maximum of ____ working days for Substantial Completion of Work for the project.

Working day time charges for Substantial Completion of Work for the project will be computed and charged in accordance with Article 8.3.1.____:____-Day.

The time charges for the purpose of computing incentive and disincentive for Substantial Completion of Work for the project will begin when time charges begin for the project.

The time charges for the purpose of computing incentive and disincentive for Substantial Completion of Work for the project will end when all project work is completed according to the definition of Substantial Completion of Work in Special Provision to Item 8.
If more description is required for end time charges for Substantial Completion of Work for the project, then provide the description here, but be consistent with the definition of Substantial Completion of Work in Special Provision to Item 8.

The maximum number of working days for computing the incentive credit for Substantial Completion of Work for the project will be ___ days. The maximum credit allowable for early completion is **$**_____.
The maximum credit allowable is the maximum number of working days for computing the incentive credit multiplied by the daily road-user cost for Substantial Completion of Work for the project.

Failure of Substantial Completion of Work for the project within the established number of working days shown above will result in the assessment of disincentives using the daily road-user costs shown above for each working day more than those allowed for Substantial Completion of Work for the project.

8-8 Notes for Milestones

When setting up milestones on a project it is necessary to provide a detailed description of the work considered to be included in each milestone or phase. This must be done in the traffic control plans (TCP). The description should be clear, easily identified, and based on the shifting of traffic in the particular phases. It is especially important in establishing the beginning and ending of phases to base them on the shifting of traffic and not on general work areas.

Include Special Provision to Item 8 for Incentive Using Road-User Cost or Contract Administration Liquidated Damage Values and Disincentive Using Road-User Cost.

Refer to, "Accelerated Construction Guidelines," on the Construction Division site at www.txdot.gov for information and guidance.

Substantial Completion of Work is defined in Special Provision to Item 8.

Milestone 1
See the traffic control plans (TCP) for a detailed description of the work included in Milestone 1.

The daily road-user cost for incentive and disincentive for Milestone 1 will be $_____ per day.

The contractor will have ___ working days for Substantial Completion of Work for Milestone 1.

Working day time charges for Milestone 1 will be computed and charged in accordance with Article 8.3.1.____:____-Day.

The time charges for the purpose of computing incentive and disincentive for Milestone 1 will begin when traffic is moved to the lane arrangement shown in the TCP for Milestone 1.

The time charges for the purpose of computing incentive and disincentive for Milestone 1 will end with Substantial Completion of Work for Milestone 1.

If more detailed description is required for when time charges begin and end for each milestone, then you may describe it here in the general notes but be consistent with the definition of Substantial Completion of Work in Special Provision to Item 8.

The maximum number of working days for computing the incentive credit for Milestone 1 will be ___ days. The maximum credit allowable for early completion of Milestone 1 is $_____.

The maximum credit allowable is the maximum number of working days for computing the incentive credit multiplied by the daily road-user cost for Milestone 1.

Failure of Substantial Completion of Work for Milestone 1 within the established number of working days shown above will result in the assessment of disincentives using the daily road-user costs shown above for each working day more than those allowed for Milestone 1.

Repeat as necessary.

8-9 Notes for A+B Bidding

An 800 item should be added for the contractor to be able to bid the number of days to substantially complete the project, or multiple items should be added for bidding the number of days to complete milestones (phases) of the project. The description for the item will be "NO. OF WORKING DAYS" and the item will have a unit of "$/D" for the daily road-user cost. Please note that in A+B the contractor will bid the days to substantial completion and will not bid the total time. The reason for bidding the days to substantial completion is because the daily road-user cost values are based on substantial completion. Therefore, you must include the notes for Substantial Completion of Work for the Project with A+B Bidding and include Special Provision to Item 8 for Incentive Using Road-User Cost or Contract Administration Liquidated Damage Values and Disincentive Using Road-User Cost.

When A+B Bidding provisions are included in the Contract, use the notes within 8-9 and delete the notes in 8-7 for Substantial Completion of Work for the project.

Refer to, "Accelerated Construction Guidelines," on the Construction Division site at www.txdot.gov for information and guidance.

Substantial Completion of Work is defined in Special Provision to Item 8.

The daily road-user cost for Substantial Completion of Work for the project will be $_____ per day, which will be assessed as an incentive for the early Substantial Completion of Work for the project under the number of working days bid by the Contractor and will be assessed as a disincentive for failure of Substantial Completion of Work for the project within the established number of working days bid by the Contractor.

Working day time charges for Substantial Completion of Work for the project will be computed and charged in accordance with Article 8.3.1.____:____-Day.

The time charges for the purpose of computing incentive and disincentive for Substantial Completion of Work for the project will begin when time charges begin for the project.

The time charges for the purpose of computing incentive and disincentive for Substantial Completion of Work for the project will end when all project work is completed according to the definition of Substantial Completion of Work in Special Provision to Item 8.
If more description is required for end time charges for Substantial Completion of Work for the project, then provide the description here, but be consistent with the definition of Substantial Completion of Work in Special Provision to Item 8.

The maximum number of working days for computing the incentive credit for Substantial Completion of Work for the project will be ___ days. The maximum credit allowable for early completion is **$**_____.
The maximum credit allowable is the maximum number of working days for computing the incentive credit multiplied by the daily road-user cost for Substantial Completion of Work for the project.

The number of working days for final acceptance will be ___ working days after the Substantial Completion of Work date for the project. Failure of completing the work within this established number of working days will result in the assessment of disincentives using the schedule of liquidated damages and any additional road user cost specified by Special Provision to Item 000 and general notes to Item 8 for each working day more than those allowed for final acceptance of the project.
Use this note if the Area Office wants the option of setting the time between substantial completion and project acceptance. If the Area Office chooses the option of setting the total time for the project regardless of the time bid by the contractor, then that number of days will be placed on the cover sheet as, "It is further understood that the work is to be completed in full in ___ working days." When the time between substantial completion and project acceptance is specified by general note, then an asterisk will be placed in the blank.

--Item 9--

9-1 When approved, provide uniformed, off-duty law enforcement officers with marked vehicles during work that requires a lane closure. The officer in marked vehicles shall be located as approved to monitor or direct traffic during the closure. The method used to direct traffic at signalized intersections shall be as approved. Additional officers and vehicles may be provided when approved or directed.

Complete the daily 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.

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

All law enforcement personnel used in Work Zone Traffic Control shall be trained for performing duties in work zones and are required to take "Safe and Effective Use of Law Enforcement Personnel in Work Zones" (Course #133119) which can be found online at the following site: www.nhi.fhwa.dot.gov

Certificates of completion should be available to all who finish the course. These should be kept by the officers to substantiate completion when reporting to the work site.

Minimums, scheduling fees, etc. will not be paid; TxDOT will consider paying cancellation fees on a case-by-case basis.
Need to show in the estimate Contractors Force Account Work "Furnish Police Officer and Cruiser".

9-2 Repair existing cable barrier system of the type _____ when directed by the Engineer. This work will be paid by force account method.
This note is required when existing cable barrier is within the project limits and is for the purpose of facilitating repairs needed when the barrier is damaged by errant vehicles during the period of time the project is under construction. Need to show the type of cable barrier system in the note above and need to show in the estimate Contractors Force Account Work "Repair Cable Barrier System".

--Item 100--

100-1 Trim and remove brush and trees within the stations noted in the plans and as needed for construction operations. Unless shown otherwise in the plans or a designated non-mow area, perform trimming or removal for areas to the ROW limits. Trim or remove to provide minimum of 5 ft. of horizontal clearance and 7 ft. of vertical clearance for the following: sidewalks, paths, guard fence, rails, signs, object markers, and structures. Trim to provide a minimum of 12 ft. vertical clearance under all trees.

Obtain approval for proposed method of tree and brush trimming and removal. Vertical flailing equipment is not allowed. Treat damaged or cut branches, roots and/or stumps of all oak trees with a commercial tree wound dressing. Disinfect all pruning tools with a solution of 70% alcohol before moving from one tree to another. Unless otherwise approved remove all resulting vegetative debris from the ROW within 24 hours. The Engineer can stop all construction operations if the dressing, cut and removal requirements are not followed.

100-2 Removal and disposal of existing abandoned utilities that were unable to be identified before letting required to support this project's construction shall be performed under the overall Preparing Right of Way. If you are uncertain whether the utility is active, contact the District Utility Section.

--Item 132--

132-1 *If using TY C embankment material, add note for the material specifications under this Item.*

--Item 160--

160-1 Approximately _____ CY of existing topsoil may be windrowed or stockpiled (as approved) for later use under this Item. Place erosion control measures for the stockpile and/or windrow.

--Item 161--

161-1 Approximately _____ CY of existing topsoil may be salvaged and windrowed or stockpiled (as approved) for later use as Compost Manufactured Topsoil (CMT). Place erosion control measures for the stockpile and/or windrow.

--Item 162--

162-1 Furnish and place _____ grass sod.
In drought conditions do not place sod as vegetation. Check with the area office in charge of the construction of the project.

--Item 164--

164-1 Drill seeding of permanent grasses requires the use of approved grass seeding equipment capable of properly storing and metering the release of small seeds (such as Bermuda grass) separately from fluffy type seeds (such as bluestems). Equipment manufactured for planting grain crops is acceptable for planting temporary cool season seeds, but not for planting the permanent seed mix.

If performing a permanent seeding in an area with established temporary grass cover and mowing is performed instead of tilling, seed and fertilizer may be distributed simultaneously during "Broadcast Seeding" operations, provided each component is applied at the specified rate.

--Item 166--

166-1 Use a fertilizer with an analysis of 13-13-13 (50% of the total N must be sulfur coated urea) to apply 60 lbs of actual N per acre. This requires 460 lbs of 13-13-13 per acre or .095 lbs per SY of area.

--Item 168--

168-1 Apply vegetative watering as needed to supplement natural rainfall during the vegetation establishment period. Plan quantity of irrigation water is based on the application of a total of 1.3 gal of water each week for each sq. yd. of area that is sodded or seeded. Establishment time is estimated to be 12 weeks for both sod and permanent seed mixes. Temporary seeding will require less time for establishment. Provide a schedule and coordinate watering cycles and rates per cycle with the Engineer. Obtain approval if the quantity of water to be applied is expected to exceed the plan quantity. Adjust the amount of water applied with each cycle and the number of cycles each wk. according to actual site conditions. Drought or other conditions, as determined by the Engineer, may require the application of supplemental irrigation during hours other than normal working hours.

--Item 247--

247-1 There is no minimum PI requirement for this project.

247-2 *If you are using a Grade 4, then you must provide the material requirements here in the general notes.*

--Item 275--

275-1 The Engineer will designate a target cement content and optimum moisture content necessary to produce a stabilized mixture that meets the strength requirements and moisture susceptibility requirements shown in Table 1. The Contractor shall furnish the Engineer with representative samples of the materials to be used in production of the cement treated base.

Table 1
Requirements for Cement Treatment

Description	Minimum	Maximum
Cement Content (by dry weight of base)	2%	5%
	Procedure	Minimum
7-Day Unconfined Compressive Strength	Tex-120-E, Part I	150 psi
Retained Strength after Moisture Conditioning	Tex-120-E, Part I (Submerged in water for 24 hrs. after seven days of curing)	80% of 7—Day Unconfined Compressive Strength

Microcracking will be required in accordance with Item 275.4.7.

--Item 302--

302-1 Previously tested aggregates found to contain excessive quantities of dust (more than 0.5 percent passing the No. 40 sieve) during precoating, stockpiling or hauling operations, may be rejected. Use Test Method Tex-200-F, Part I for testing.

302-2 Precoated Aggregate Type PE shall consist of crushed slag, crushed stone or natural limestone rock asphalt.

--Item 305--

305-1A All reclaimable asphalt pavement (RAP) material will remain the property of the State and shall be stockpiled at _____.

OR

305-1B All reclaimable asphalt pavement (RAP) material will be retained by the Contractor.

--Item 316--

316-1 Asphalt season will be year-round but meet temperature limitations specified in the standard specifications for Item 316.
To be used on construction projects only. Not intended for seal coats.

316–2 Ensure that the asphalt for precoating the aggregate and the asphalt used for the surface treatment will not result in a reaction that may adversely affect the bonding of the aggregate and asphalt during the surface treatment operation.
Do not add bag house fines in the production of precoated material.

316-3 Clean all concrete curbs, islands, medians, etc. that get coated with asphalt.

--Item 320--

320-1 Construct all longitudinal ACP joints adjacent to a travel lane with a joint maker device that will create a 3:1 to 6:1 taper. For placement of 2 inches or more, the device shall provide a maximum ½ inch vertical edge. Taper outside edges (next to the grass) or backfill (shoulder-up) the same day.

320-2 Provide a material transfer device capable of providing a continuous flow of material to the paver. The material transfer device will consist of a windrow elevator or better.
Required on all projects with surface mixes.

320-3 When placing Item 346 mixtures, 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.

--Item 330-

330-1 If LRA is stockpiled where it might get contaminated with foreign materials, the bottom of the stockpile cannot be used. A set of standard truck scales will be used to determine the quantity of contaminated material that will be deducted. Unless approved, do not stockpile LRA more than 10 days prior to lay-down operations.

--Item 341, 342, 344, 346, 347 & 348 --

1. Submit a copy of the Tex 233-F production charts on a weekly basis. At the end of the ACP work, provide all originals.

2. Crushing of aggregate for hot mix and immediate use for production of the mix is not allowed. Stockpile the aggregate until enough material is available for five days of production unless prior approval is provided

3. Hold a pre-paving meeting one month prior to the placement of the hot mix. The date and time of pre-paving meeting should be coordinated with the Engineer prior to scheduling.

4. Do not use diesel or solvents as asphalt release agents in production, transportation, or construction. A list of approved asphalt release agents is available from the District Laboratory.

5. No more than one hot mix lot will be open for any specific type of hot mix, unless authorized. After a lot is open and the Contractor gets approval to change plants, the previous lot will be closed, and a new lot will be opened. The numbering for the lots produced at the new plant will start with No. 1. If allowed to switch back to the original or previous plant, the next lot from that plant will resume numbering sequentially from the last lot produced by that plant.

6. No binder substitution allowed when PG 76-22 binders are specified, regardless of the pavement layer in which it is used. *This note is required to be included for **all projects** using Item 341 and/or Item 344.*

--Item 354--

354-1A Planed material shall be delivered and stockpiled at _____.

OR

354-1B Retain planed material.

354-2 Take precaution to avoid damage to existing bridge decks and armor joints. Repair any damage to the bridge decks and/or armor joints as approved. This work will not be paid directly but will be performed at the Contractor's expense.

354-3 Any asphaltic material deposited on bridge or abutment caps must be removed.

--Item 401--

401-1 A shrinkage compensator is not required for when used for backfilling pipes.

--Item 420--

420-1 Mass concrete will be measured in place.

420-2 Pier and Bent Concrete will be paid for as "Plans Quantity".

--Item 421--

421-1 Use an automated ticket that contains the same information as shown in the standard specification. Submit the ticket for approval prior to use. The concrete producer will contact the District Laboratory or the Engineer's Office (outside the San Antonio area) to inform TxDOT of scheduled structural concrete batching. The Engineer may suspend concrete operations if ticket information is incomplete/incorrect.

421-2 Entrained air is allowed for Class P and Class HES concrete only. Air content testing is waived for all classes of concrete.

421-3 The curing facilities and strength testing equipment is not required for this project.
Verify with the Area Engineer if a Concrete Field Laboratory and Equipment are needed. Sometimes the Area Office has a location for curing facilities and strength testing equipment,

and they do not need the facilities and equipment on the project site. If the curing facilities and strength testing equipment is required, then delete this note and include note 504-2.

421-4 Poly-fiber reinforced concrete may be used as an option, with the approval by the Engineer, for riprap, sidewalk, curb/gutter, and mow strip. Use a TxDOT approved manufacturer or producer for the poly-fiber. The poly-fibers shall be combined with the concrete in proportions as recommended by the manufacturer. A concrete mix design must be approved by the Engineer.

--Item 423--

423-1 The backfill material for precast retaining walls shall be approved before placement. Build stockpile(s) in lifts not to exceed 2 feet and a minimum working face of not less than 10 feet, but not more than 20 feet.

423-2 Use the approved Concrete Block Retaining wall systems listed at:
Concrete block retaining wall systems (txdot.gov)

423-3 Use the approved Mechanically Stabilized Earth (MSE) wall systems listed at:
Mechanically stabilized earth (txdot.gov)

TxDOT does not allow the use of experimental systems on projects with over 50,000 square feet, walls over 25 ft. tall, or walls supporting or immediately adjacent to US and interstate highways.

When proprietary wall systems are used, a qualified representative of the retaining wall manufacturer must be available upon request during wall construction. As requested, or required the manufacturer's representative must be on site to assist with the initial stages of wall construction, provide training to the Contractor wall crew and ensure proper interpretation of MSE wall shop drawings and details. Specific attention must be given to nonstandard wall installation details. The Contractor's wall crew foreman must be on site for the duration of wall construction. Any change to the wall crew foreman may require additional training by the wall supplier. The Contractor will ensure that the retaining walls are installed per the details presented in the construction drawings and as per the proprietary wall system requirements. The Engineer reserves the right to suspend wall construction activities due to any construction issue encountered.

Horizontal and vertical nail spacing on temp or permanent soil nail walls shall not exceed 4 ft.

Type DS material will be required on MSE walls in the area of the reinforcement mats.

--Item 425--

425-1 Vertical clearance over roadway at the following location(s) is(are) less than or equal to 20 feet. Provide Bars C and CH for the full length of the girder per the IGD standard.

List the locations where the vertical clearance for a bridge over the roadway is less than or equal to 20 feet.

--Item 427--

427-1 Provide _____ to Surface Area _____.
Contact the District Landscape Architect. Use this note when you are not applying the guidelines for the San Antonio District Urban Design Themes for Bexar and Outlying Counties, and you need to specify a type of surface finish to specific concrete surface areas. The designer must show in the plans all areas where to apply the surface finish(es) (paint, form liners, etc.). This also includes painting existing concrete if the designer determines the existing concrete surface requires paint. The designer must design and detail for each specific project and provide a Professional Engineer's seal and signature on these detail sheets.

427-2 Provide concrete paint finish and form liner finishes to Surface Area IV (areas designated on the plans). Apply the base color shown in the plans to all surfaces unless otherwise noted. Apply the accent color shown in the plans on only the areas designated on the plans.
Contact the District Landscape Architect. The designer must include the details for the base and accent colors, and the form liner finishes in the plans. The designer must show in the plans all areas where to apply the base color, accent color, and form liner surface finishes. This also includes painting existing concrete if the designer determines the existing concrete surface requires paint. The designer should refer to the guidelines for the San Antonio District Urban Design Themes for Bexar and Outlying Counties and apply these guidelines to each specific project. The guidelines are not to be used as standards in the PS&E, and the designer must design and detail for each specific project and provide a Professional Engineer's seal and signature on these detail sheets.

--Item 462--

462-1 The following structures shall be cast-in-place:
_____.

462-2 The following structures shall be pre-cast:
_____.

--Item 465--

465-1 Concrete Class B invert shaping is required at all inlets, manholes and junction boxes to insure positive flow. The material and work performed for the placement of the inverts shall be considered subsidiary to this item.

--Item 496--

496-1 The Contractor will submit a demolition plan for all structures to be replaced and/or removed in accordance with Item 496.
Required on all projects removing or replace a bridge structure.

496-2 The structure(s) to be removed have surface coatings that contain hazardous materials as follows:

_____

Provide for the safety and health of employees and abide by all OSHA Standards and Regulations. All costs incurred for proper management, shall be subsidiary to this Item.

--Item 500--

500-1 "Materials on Hand" payments will not be considered in determining percentages for mobilization payments.

--Item 502--

502-1 General

502-1A In addition to providing a Contractor's Responsible Person and a phone number for emergency contact, have an employee available to respond on the project for emergencies and for taking corrective measures within 2 hours or within a reasonable time frame as specified by the Engineer.

502-1B Treat the pavement drop-offs as shown in the TCP.

502-1C Avoid placing stockpiles, equipment, and other construction materials within the roadway's horizontal clear zone or at any location that will constitute a hazard and will endanger traffic. If a stockpile is placed within the clear zone, address in accordance with the TMUTCD.

502-1D If Nighttime work is required and work is not behind positive barrier then full Class 3 reflective gear is required to be worn by all workers, hard hat halos are required to be worn by the flaggers at flagging stations, TY III barricades are required to be spaced at 500 ft, and a mandatory night work meeting is required.

502-1E 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.
Required on all projects. Need to show Contractors Force Account Work "Safety Contengecy". Estimated @ 2% of the total Barricades cost. $1,000 minimun; round up to the nearest $100 thereafter.

502-1F Mounting and moving the mailbox as needed for the various construction phases is subsidiary to Item 502.

502-1G Access to adjoining property must be maintained at all times.

502-2 Barricades, Signs, and Traffic Control Devices

502-2A When advanced warning flashing arrow panels and/or changeable message sign is specified, have one standby unit in good condition at the job site. Standby time shall be considered subsidiary to the bid item.

502-2B After written notification, the time frame is provided on the Form 599 to provide properly maintained signs and barricades before considered in non-compliance with this item.

502-2C Temporary Rumble Strips are to be used according to WZ (RS)-22.

Use ____ number of rumble strip arrays.

See General Notes on WZ state standard for Temporary Rumble Strips before use.

502-2D Moving an existing sign to a temporary location is subsidiary to Item 502. Installations with permanent supports at permanent locations will be paid for under the applicable bid item(s).

502-2E Cover permanent signs if not used. This is subsidiary to Item 502.

502-3 Lane and Ramp Closures and Detours

502-3A Notify the Engineer in writing 10 business days in advance of any temporary or permanent lane, ramp, connector, etc. closures/detours, restrictions to lane widths, alterations to vertical clearances, or modifications to radii. Any other modifications to the roadway that may adversely affect the mobility of oversized/overweight trucks also require 10 business days advance written notice to the Engineer. At least one lane must always remain open.

502-3B For closures not listed in the TCP; the lane closures are limited to between the hours of _____ _____, and at least one lane must remain open at all times.

502-3C At no time shall two consecutive intersecting roadways be closed at one time during construction.

502-3D At no time shall two consecutive ramps be closed at one time during construction or overlay operations.

502-3E Unless otherwise noted in the plans and/or as directed by the Engineer, daily lane closures shall be limited according to the following restrictions:

Nighttime: *Include days and hours here.*

(With uniformed off duty law enforcement officers)
Ask the Area Engineer for the days and hours for nighttime work if the Area Engineer agrees to nighttime work.

Weekend closures when approved by the Engineer: *Include days and hours here.*
Ask the Area Engineer for the days and hours for weekend closures if the Area Engineer agrees to weekend closures.

No lane closures will be permitted for the following dates and/or special events:
Between December 15 and January 1
Fiesta Week and Sales Tax Holidays (Bexar County Only)
Wednesday before Thanksgiving thru the Sunday after Thanksgiving
Saturday and Sunday before Memorial Day and Labor Day
Saturday or Sunday when July 4 falls on a Friday or Monday
Election days (Bexar County Only)
During major events at the Frost Bank Center (Spurs home games, Rodeo, concerts, etc.)
Alamodome, and/or Convention Center (Bexar County Only)
Call out specific dates for Easter weekend here

If it is necessary to add dates and/or events that a highway or lanes may not be closed in San Antonio, then add them to the list above. If the project location is outside of San Antonio, then you must coordinate with the public officials from municipalities affected by a highway or lane closure and add and/or delete dates and/or events to or from the above list that a highway or lanes may not be closed.

Refer to Memo with subject, "Senate Bill 312, Section 25 – Requirements for Highway Closures during Certain Periods," and refer to the Word document, "Guidelines for Road Closures During Certain Periods", found on the Crossroads Design Site.

502-4 Traffic Signals

502-4A There are traffic signals at the intersection of _____, and _____. Always keep the signals in operation except when necessary for specific installation operations, including any modifications to existing signal heads to always maintain clear visibility. Adjustment of any signal head will be subsidiary to Item 502. When it is necessary for a signal to be turned off, or when left-turn lanes are closed, hire off duty police officers to control the traffic until the signals are back in satisfactory condition.

502-4B Moving or adjustment of traffic signal heads, VIVDS, and radar detection for the purpose of alignment with the shifting of lanes in conjunction with the traffic control plan will be subsidiary to various bid items.

502-4C Coordinate with the appropriate entity (City of San Antonio, City of New Braunfels, etc.) or TxDOT when left-turn lanes are closed and/or for signal timing revisions as necessary.

502-5 Hauling

502-5A The use of rubber-tired equipment will be required for moving dirt or other materials along or across pavement surfaces. Where the contractor desires to move any equipment not licensed for operation on public highways, on or across pavement, they shall protect the pavement from damage as directed/approved by the Engineer.

502-5B Throughout construction operations, the Contractor will be required to conduct their hauling operations in a manner such that vehicles will not haul over previously recompacted subgrade or compacted base material, except in short sections for dumping manipulations.

502-5C The Contractor shall keep the roadway clean and free of dirt or other materials during hauling operations. If the Contractor does not maintain a clean roadway, they shall cease all construction operations, when directed by the Engineer, to clean the roadway to the satisfaction of the Engineer.

--Item 504--

504-1A For field office Type E Structure. Provide at least ____ sq. ft. of gross floor area in rooms 8 ft. high. Partition the floor area into at least __ interconnected rooms with doors, 2 exterior doors, and at least 2 windows in each room. Provide at least _ parking spaces for pull-through parking.
Ask the Area Engineer if they will require a field office. Ask the Area Engineer how many inspectors are anticipated for the project. If the number of inspectors is 2 to 5, then specify 1200 sq. ft., at least 4 interconnected rooms, and 10 parking spaces. If the number of inspectors is greater than 5, then specify 1400 sq. ft., at least 6 interconnected rooms, and 12 parking spaces.

504-1B Enclose the field office, laboratory and the parking area as shown in 504.2.1.1 and provide security lighting.
Include this note if a field office is required.

504-1C Provide high speed internet service with WIFI signal and a laser jet printer/scanner/copier as directed.
Include this note if a field office is required.

504-1D Provide essential supplies, including: toilet paper, hand soap, paper towels, printing paper, potable water, and printer ink.
Include this note if a field office is required.

504-2 Provide a Type E Structure for a Concrete Field Laboratory with at least 200 sq. ft. of gross floor area in a room 8 ft. high, furnished with an exterior door and at least 2 windows. Provide required equipment for testing (moist cabinet, moist room, or water storage tank in accordance with Tex-498-A, Table 32 and Concrete Compression Testing Machine in accordance with Tex-

498-A, Table 18). Provide associated calibration documents, as outlined in Tex-498-A, for all contractor provided testing equipment.
Ask the Area Engineer if they will require this Type E Structure for a Concrete Field Laboratory and laboratory equipment. If the laboratory and laboratory equipment is required, then delete the note 421-3.

504-3 A Type D Structure (Asphalt Mix Control Laboratory) is required for all projects that do not have a previously approved laboratory structure for TxDOT's exclusive use. The structure will include high speed internet service with WIFI signal, one desk, two chairs, and one file cabinet.
This note should be included for all projects with any type of HMA or asphalt item.

504-4 All labs and offices will include cleaning at least once a week. The cleaning will include sweeping and mopping of floors, cleaning the toilet and lavatory, and emptying wastebaskets. Space heaters are not considered adequate heating.
Include this note if a field office is required.

--Item 505--

505-1 ___ shadow vehicles with TMA will be required for this project. The TMA's will be measured and paid for by the DAY for each TMA/TA set up and operational on the worksite. 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 TMA's needed for the project. See TMA and TA Summary sheet in the plans.

--Item 506--

506-1A An Inspector will perform a regularly scheduled SWP3 inspection every 7 calendar days.
Need to show in the estimate Contractors Force Account Work "Erosion Control Maintenance".

OR

506-1B The Storm Water Pollution Prevention Plan (SWP3) consists of temporary erosion control measures needed and provided for under this Item. The disturbed area is less than one acre and use of erosion control measures is not anticipated. If physical conditions encountered at the job site require necessary controls, BMP installation, maintenance, and removal will be paid as extra work on a force account basis per Articles 4.4 and 9.7. An Inspector will perform a regularly scheduled SW3P inspection every 7 calendar days if erosion control measures are installed.

506-2 Failure to address items noted on the SW3P inspection report within two report cycles may result in the Department stopping all construction operations, exclusive of time charges, or withholding that month's estimate until the SW3P deficiencies are corrected unless the Engineer determines that the area is too wet to correct SW3P deficiencies.

506-3 Failure to correctly maintain daily monitoring reports and submitting to TxDOT on a daily/weekly basis may result in the monthly estimate being withheld.

--Item 510--

510-1 The length of the one-way traffic control section is limited to ____ miles.
The district preferred methods for one-way traffic control are Pilot Car Method and Portable Traffic Signal Method. Get permission from the Area Office for Flagger Control Method and be sure to pay for each flagger.

510-2 For Pilot Car Method, additional flaggers other than the 2 required on each approach, when directed by the Engineer, will be measured by the Flagger Control Method. This may involve stationing additional flaggers at all intersections, public driveways, and commercial driveways as determined by the Engineer.
Required when using Pilot Car Method for One-Way Traffic Control. The Designer is responsible for showing the locations of the Flaggers and determining the number of Flaggers and hours in the plans. The Designer should also show the signs required for flagging operations in the Schedule of Barricades.

--Item 512--

512-1 ____ LF of portable concrete traffic barrier (PCTB) will be furnished by the State. Pick up the barriers at _____ and transport to the project.

512-2 Only Single Slope shape CTB may be furnished on the inside shoulder/inside median of the Interstate or Freeway Main Lanes.

More than one shape type of CTB may be furnished on a project, although no mixing of CTB shape types will be permitted along a continuous segment of CTB.

512-3 CTB reflectors will not be paid for directly but will be considered subsidiary to the barrier.

--Item 514--

514-1 The Type 3 CTB taper from the Type 2 at obstructions (OSB's, bridge, columns, etc.) shall be 40:1. If gravel is used between the barriers as shown by the Standard Sheet, the top six inches shall be CL A concrete.

514-2 Any permanent CTB requiring conduit for illumination must be cast in place or slip formed.

--Item 529--

529-1 Curb inlets and extensions are based on an exposed curb height of 7 inches. The roadway curb height and shape will be transitioned to the inlet's curb with a 40: 1 taper.

--Item 531--

531-1 The curb ramp locations shown in the plans have considered the geometric features of the intersection, traffic signals, and the pavement markings. If anything changes during construction, the location of curb ramps must be adjusted to ensure they meet TAS requirements.

--Item 533--

533-1 Use Option __ and a width of ___ inches for Edgeline Continuous Milled Rumble Strips as shown on the RS standard sheets for edgelines.
This note should be included when using Continuous Milled Rumble Strips for edgelines (See RS standard sheets). Use Option 1 or 2, and an 8 inch width, or use Option 6 with Profile Edgeline Markings if the shoulder is 4 feet or less on non-freeways for bicycle comfort and safety. Consult with the District Traffic Section. Refer to Note 10 on the RS standard sheets for Edgeline Rumble Strips for roadways with high bicycle activity.

--Item 540--

540-1 Guard fence posts placed in proposed and/or existing areas of riprap, sidewalks or other concrete shall have an 18 inch +/- (square or round) leave-out in the concrete as shown in the state standard for MBGF Mow Strip. After the posts are installed, fill the leave-outs with a Grout mixture as shown in the state standard for MBGF Mow Strip.

540-2 When connecting a Thrie-Beam to a concrete wingwall, bridge rail, CTB, etc., drill the holes for bolt placement using rotary or core type equipment. Use a core type drill when reinforcing steel is encountered. Do not use percussion or impact drilling. Repair damage to the concrete and spalls exceeding ½" from the edge of the hole.

--Item 542--

542-1 Salvage all undamaged/acceptable radius guardrail and deliver to the TxDOT maintenance section yard.
Ask the Area Engineer if they want to salvage and stockpile the radius guardrail.

--Item 543--

543-1 Withing 15 days of Notice to Proceed, Contractor shall provide correspondence from post and cable supplier on expected delivery date of material. Contractor shall execute the work to complete all work except the post and cable installation. Time will be suspended when this work is complete. Time will resume when installation of post and cable begins, within 20 days upon receipt of post and cable material, or within 20 days upon expected delivery date of material; whichever comes first.
Only to be used on Cable Median Barrier standalone projects.

--Item 545--

545-1 See the Crash Cushion Summary Sheet.
For Bexar County Projects only, the following CCA's are required for permanent CCA installation. Contact Plan Review if the below options will not work for the project.
Narrow Options: TAU(M)(N)-19, QGUARD (M10) (N)-20
Wide Options: SMTC(W)-16, QGELITE (M10) (W)-20

545-2 Use a reinforced concrete pad for the foundation and anchoring.
Include this note for Bexar County projects only.

--Item 556--

556-1 Coarse Aggregate Grade 3 meeting requirements of Item 421, Table 4, is acceptable for Filter Material.
Contact the Lab Engineer if there is a need to remove the note above.

--Item 585--

585-1A Use Surface Test Type B, pay adjustment schedule _____ to evaluate ride quality of travel lanes.
See "Guidance Document for" Item 585 "Ride Quality for Pavement Surfaces" and contact the Pavement Engineer and Area Engineer to determine which Surface Test Type is appropriate for the travel lanes.

OR

585-1B Use Surface Test Type A for travel lanes.
Contact the Pavement Engineer and Area Engineer to determine which Surface Test Type is appropriate for the travel lanes.

--Item 610--

610-1 Ballast/capacitors removed from the light assembly, will remain the property of the State. Assume all ballast/capacitors contain Polychlorinated Biphenyl (PCB), unless a notation appears on the outside of the unit that specifies it does not contain PCB's. All ballast/capacitors with PCB's shall be placed in 55 gallon open top drum in accordance with Department of Transportation (DOT) specifications. Place six (6) inches of sawdust or other absorbent material in the bottom of the drum. Furnish and place a DOT approved PCB warning label on the outside of the drum. Do not fill a drum more than ¾ of capacity. Avoid rupturing the ballast/capacitor(s). If a ballast/capacitor is ruptured, use proper procedures, specialist trained staff and personal protective equipment for the clean-up operations.

610-2 The lamps in light fixtures may contain hazardous levels of mercury, halide, and sodium vapors. Observe and comply with all federal, state, and local laws, ordinances, and regulations regarding the management of these lamps. Prevent the breakage of the lamps. At a minimum, package all lamps removed from the light fixture(s) in a container that minimizes the breakage of the lamps. Broken lamps shall be collected in a sealed plastic bag (i.e. Ziploc). Broken lamps shall be stored in separate containers from unbroken lamps. Furnish a suitable container and attach a label stating "Universal Waste Lamps" on the container. Write the date the first lamp was placed in the container on the "Universal Waste Lamp" label. Within one (1) week after the first lamp is placed in a container, notify the Engineer. The lamps and PCB containing ballast/capacitors, placed in properly labeled containers, will remain the property of the State. Place the container in an area where it is protected from damage and the elements. The Engineer will plan to collect, transport, and dispose/recycle the container. The ballast/capacitor and lamp's removal and storage are subsidiary to this item.

610-3 Stencil each illumination assembly with the circuit, light and relay service in black paint on the roadway side of the pole at a 45-degree angle. The numbers shall be in 3" tall and begin 6' from the top of the foundation. This work will be considered subsidiary to this item.

610-4 Provide and install steel, locking, theft-deterrent doors on transformer bases to protect against copper theft. Return standard t-base doors to TxDOT.

--Item 614--

614-1 Copies of the standard shop drawings are on file with Traffic Safety Division, Bridge Division, and the Materials Section of Construction Division. Additional shop drawings for high mast illumination assemblies built in accordance with these drawings are not required. Pre-approved shop drawing manufacturers and assembly model numbers can be found on the Materials Produce list of the Construction Divisions (CST) web site.

--Item 618--

618-1 It might be necessary to cut concrete for placement of conduit. Saw cut existing concrete, remove the concrete from the steel reinforcement (bars or fabric) and bend the steel to install the conduit. After the conduit has been placed, bend the steel back to its original position and back-fill the trench with an approved concrete. This work is subsidiary to this Item.

618-2 The conduit depth for illumination under the City of San Antonio streets is 36 inches.

--Item 628--

628-1 Make all arrangements for electrical service, and compliance with local standards and practices for proper installations.

628-2 Refer to the San Antonio District guide for "Establishing Electrical Service with CPSE".
Add this note to projects located within the CPSE service area.

--Item 644--

644-1 The wedge anchor system shown on State Standard Sheet SMD (TWT) is not allowed.

644-2 Triangular Slipbase Systems with set screws are not allowed.
This note was added because the set screw type triangular slipbase system doesn't have enough surface contact/friction to keep the wind from causing the signs to rotate and eventually stripping the set screw.

--Item 666--

666-1 Use TY II markings (vs. an acrylic or epoxy) on asphalt surfaces as the sealer for the TY I markings, unless otherwise approved by the Engineer.

--Item 672--

672-1 Place all adhesive material directly from the heated dispenser to the pavement. Do not use portable or non-heated containers. Use adhesive of sufficient thickness so that when the marker is pressed into the adhesive, 1/8" or more adhesive will remain under 100% of the marker. The adhesive should extend not less than 1/2" but not more than 1 1/2" beyond the perimeter of the marker.

--Item 677--

677-1 Obtain approval before using the mechanical method for the elimination of existing thermoplastic pavement markings.

677-2 *If you need a specific method for elimination of existing pavement markings from the list of approved methods shown in the standard specification, then show the method here in the general notes.*

--Item 680--

680-1 Furnish and install all required materials and equipment necessary for the complete and operating traffic signal installation at the following intersections:
_____.

680-2 The locations shown on the plans for signal pole foundations, controller foundations, conduit and other items may be adjusted to better fit field conditions as approved.

680-3 Furnish and install a new Henke Enterprises or Mobotrex eight-phase NEMA TS2 Type 2 controller and cabinet, meeting the requirements of Departmental Materials Specifications DMS-11170. Provide detector panel toggle switches that additionally permit the user to disconnect the detector. For both ground and pole-mount cabinets, provide cabinet configuration with 16 position load bay.
Use this note for TxDOT and City of New Braunfels maintained traffic signals.

Furnish and install a new City of San Antonio Type 332 Cabinet and 2070 controller with Intelight Maxtime software.
Use this note for CoSA maintained traffic signals.

680-4 Deliver TS type 2 controller cabinet and assembly to the TxDOT San Antonio district signal shop for programming and testing two weeks in advance prior to contractor installing equipment in the field. Coordinate drop off and pick up with Mark Perez (210) 218-7430.
Use this note for TxDOT maintained traffic signals.

Deliver TS type 2 controller cabinet and assembly to the City of New Braunfels streets and drainage division shop for programming and testing two weeks in advance prior to contractor installing equipment in the field. Coordinate drop off and pick up with Chris Nowak (830) 221-4049.
Use this note for CoNB maintained traffic signals.

Deliver controller cabinet and assembly to the City of San Antonio signal shop for programming and testing two weeks in advance prior to contractor installing equipment in the field. Connect all field wiring to the controller assembly into the polyphaser. The City of San Antonio Signal Shop representative will assist in determining how the detection cables are to be connected, and will also program the controller for operation, hook up the malfunction management unit (MMU) or conflict monitor, detector units, and other equipment, and turn on the controller. Have a qualified technician on the project site to place the traffic signals in operation.
Use this note for CoSA maintained traffic signals.

680-5 Connect all field wiring to the controller assembly into the polyphaser. The Signal Shop representative will assist in determining how the detection cables are to be connected, and will also program the controller for operation, hook up the malfunction management unit (MMU) or conflict monitor, detector units, and other equipment, and turn on the controller. Have a qualified technician on the project site to place the traffic signals in operation.
Use this note for TxDOT maintained traffic signals.

680-6 Once final punch list is complete, contractor is allowed to begin flashing signal operations. Signal shall flash for a minimum of 7 days prior to full operation, unless otherwise approved by the Engineer.

680-7 Use LED lamps from the prequalified material producer lists as shown on the Texas Department of Transportation (TxDOT) – Construction Division's (CST) material producer list. Category is "Roadway Illumination and Electrical Supplies." under item 610. No substitutions will be allowed for materials found on this list.

680-8 Demonstrate that the field wiring is properly installed. Install the electrical equipment in a neat and workmanlike manner.

680-9 Use the following wiring sequence when connecting signal sections to the cabinet:

Conductor No.	Base Color	Tracer Color	Signal Face
1	Black		Yellow Ball
2	White		Neutral
3	Red		Red Ball
4	Green		Green Ball
5	Orange		Yellow Arrow
6	Blue		Green

			Arrow
7	White	Black	Spare

680-10 All existing signal equipment with the exception of the signal controller and related equipment become the property of the Contractor. Deliver the controller and related equipment to the Signal shop, located at 4615 NW Loop 410 (corner of IH 410 and Callaghan Road) in San Antonio, Texas or to the Area Office as directed.
Use this note for TxDOT maintained traffic signals.

All existing signal equipment with the exception of the signal controller and related equipment become the property of the Contractor. Deliver the controller and related equipment to the City of San Antonio Signal shop, located at Northwest Service Center, 6939 W Loop 1604 N) in San Antonio, Texas or to the Area Office as directed.
Use this note for CoSA maintained traffic signals.

680-11 Use qualified personnel to respond to and diagnose all trouble calls during the thirty-day test period. Repair any malfunction to Contractor-supplied signal equipment. Provide to the Engineer a local telephone number, not subject to frequent changes and available on a 24-hour basis, for reporting trouble calls. Response time to reported calls must be less than 2 hours. Make appropriate repairs within 24 hours. Place a logbook in the controller cabinet and keep a record of each trouble call reported. Notify the Engineer of each trouble call. Do not clear the error log in the conflict monitor or MMU during the thirty-day test period without approval.

680-12 Integrate the proposed traffic signal(s) into the existing Advanced Traffic Management System (ATMS) as shown on the plans. Centracs ATMS software, which utilizes Econolite controllers, is currently in use in the San Antonio District. Provide controllers on this project that fully communicate with the existing ATMS software.
For use when signal controller is furnished by contractor.

680-13 This project includes the installation of at least one cellular modem at the location(s) specified in the plans. Cellular modem(s) and power supply(s) will be furnished by the contractor. Provide all materials not supplied by the department necessary for the cellular modem installation. All materials provided by the contractor must be new unless otherwise shown on the plans. Equipment provided by the department shall be stored by the department for pick up at the TxDOT San Antonio TransGuide Office, 3500 NW Loop 410 San Antonio, TX 78229. Prevent damage to all cellular modem components supplied by the department. Replace any component that is damaged or lost during transportation or installation at the contractor's expense. Verify operation of the cellular modem(s) together with operation of its links; demonstrate that data can be transmitted at a satisfactory rate from the field location to the central location. Demonstrate that the cellular modem(s) data packets are being received at the central site via a networked

computer. Transportation, installation and incidentals for installation of the cellular modem(s) shall be considered subsidiary to item 680.
For use when a cellular communication link will be established to TransGuide. Include a Contractor Force Account item to compensate the contractor for the purchasing of the communication package when items are not available.

680-14 Provide a submittal compliance matrix with all traffic signal submittals.

680-15 Field verify the depths of the drill shafts to meet the minimum clearances specified in the plans before ordering materials.

680-16 Ensure that all TMS (Traffic Management System) equipment furnished and installed is completely compatible with the existing hardware and software located within the TransGuide operations center (i.e. TransGuide central software). The contractor shall contact the traffic management engineer for details on the system network architecture.

680-17 Contractor shall be responsible for integrating and testing all new TMS equipment and any existing TMS equipment that is relocated into the existing network management system, subsidiary to the various bid items.

Signal heads shall have a minimum of 19.0 feet clearance above roadway surface.

Contractor shall remove and deliver any equipment deemed salvageable by TxDOT to TxDOT SAT HQ located at 4615 NW Loop 410, contact Mark Perez at (210) 218-7430.

Contractor shall contact the TxDOT Signal Shop and Area Office a minimum of 7 days prior to beginning construction.
Use this note when a TxDOT maintained signal exists.

Contractor shall contact the TxDOT Signal Shop and Area Office a minimum of 14 days prior to the traffic signal turn on and schedule a final traffic signal inspection.
Use this note when a TxDOT maintained signal exists.

--Item 682--

682-1 Pedestrian signals may be by a different manufacturer than the vehicle signal heads.

682-2 Cover all signal faces until placed in operation. This work is subsidiary to various bid items.

682-3 All mounting attachments shall be constructed of steel pipe and mounted as shown on the plans.

682-4 All signal head backplates shall be vented aluminum with a retroreflective border.

682-5 All pedestrian signal heads shall be LED countdown.

--Item 684--

684-1 Provide an extra 10’ for each cable terminating in the controller cabinet. All cables must be continuous without splices from terminal point to terminal point. All proposed signal cable must be #12 AWG stranded copper.

--Item 686 & 687--

686-1 Provide all signal poles from the same manufacturer. Pedestrian poles may be from a different manufacturer.

--Item 688--

688-1 The sealant used for vehicle loop wire must be approved.

688-2 The button placement must be coordinated with the concrete pad to access the button according to ADA and TAS. If any mounting modifications are needed (extensions, brackets, etc.) to meet ADA and TAS requirements the adjustment will be subsidiary to Item 688. The concrete pad (if required) will be paid separately.

688-3 The pedestrian push button must be wired with a 2/C#14 loop detector cable in lieu of a #12 A.W.G. XHHW wire.

688-4 Furnish and install new Polara Enterprises accessible pedestrian signals (APS) push buttons or approved equivalent.

--Item 730--

730-1 Mow full-width and hand trim the right of way, including newly seeded or sodded areas, when vegetation reaches a height of 16” or when directed. Removal of brush sprouts growing within guardrail, concrete barriers or at other locations where mowing or hand trimming is done within the limits of construction is required and subsidiary to this item. Mowing may be required more often in newly sodded or seeded areas than in other parts of the project because of the supplemental irrigation these areas receive and the resulting weed growth. Coordinate mowing to avoid rutting or compaction of the soil when mowing where supplemental irrigation is being used. Use mowing equipment that will not adversely affect soil retention blankets or mulches that have been applied. Work performed under this item does not replace the mowing required when placing permanent seeding in an area that has established temporary seeding as described in Article 164.3, Construction.

If this work is set up to be paid on a Federal Aid Project, this payment will be Non-Federal-Participation. Mowing should be used on projects with duration of 6 months or longer, excluding overlay projects, traffic operations projects, sidewalk projects, landscape projects, and seal coat projects. Mowing should be paid by the cycle at 4 cycles per year. Use the districtwide Special Provision to Item 730 to add measurement and payment option by the cycle.

--Item 734--

734-1 Perform Litter Removal once a month or as directed by the Engineer.
If this work is set up to be paid on a Federal Aid Project, this payment will be Non-Federal-Participation. This item should be used on projects with duration of 6 months or longer, excluding overlay projects, traffic operations projects, sidewalk projects, landscape projects, and seal coat projects. Litter Removal should be paid by the cycle at a rate of 1 cycle per month. If the project is on a hurricane evacuation route and the project schedule overlaps with hurricane season (June – October), regardless of type of project and duration, then include this item to clear right of way of litter and debris for contra-flow events.

734-2 During hurricane season (June-October), special attention should be given to remove and dispose of litter and debris from the right of way.
If the project is on a hurricane evacuation route and the project schedule overlaps with hurricane season (June – October), regardless of type of project and duration, then include this item and note to clear right of way of litter and debris for contra-flow events.

--Item 735--

735-1 Perform Debris Removal as directed by the Engineer.
If this work is set up to be paid on a Federal Aid Project, this payment will be Non-Federal-Participation. This item and note should be used on projects with duration of 6 months or longer, excluding overlay projects, traffic operations projects, sidewalk projects, landscape projects, and seal coat projects. If the project is on a hurricane evacuation route and the project schedule overlaps with hurricane season (June – October), regardless of type of project and duration, then include this item and note to clear Center Medians and Mainlanes, Frontage Roads, Entrance and Exit Ramps, High Occupancy Vehicle (HOV) Lane, and/or Direct Connector Ramp of litter and debris for contra-flow events. Debris Removal should be paid by the right of way center mile of the type (Center Medians and Mainlanes, Frontage Roads, Entrance and Exit Ramps, High Occupancy Vehicle (HOV) Lane, and/or Direct Connector Ramp, and at a rate of 1 right of way centerline mile for each type per month with the exception for the type, Center Medians and Mainlanes. For the type, Center Medians and Mainlanes, use a rate of 2 right of way centerlane miles per month.

735-2 During hurricane season (June-October), special attention should be given to keep center medians, mainlanes, HOV lanes, shoulders, frontage roads, entrance and exit ramps, and direct connector ramps clear of debris.
If the project is on a hurricane evacuation route and the project schedule overlaps with hurricane season (June – October), regardless of type of project and duration, then include this item and this note to clear Center Medians and Mainlanes, Frontage Roads, Entrance and Exit Ramps, High Occupancy Vehicle (HOV) Lane, and/or Direct Connector Ramp of litter and debris for contra-flow events.

--Item 738--

738-1 Perform Cleaning and Sweeping Highways once a month or as directed by the Engineer.

If this work is set up to be paid on a Federal Aid Project, this payment will be Non-Federal-Participation. This item should be used on projects with duration of 6 months or longer, excluding overlay projects, traffic operations projects, sidewalk projects, landscape projects, and seal coat projects. Cleaning and Sweeping Highways should be paid by the cycle of the type (Center Median, Outside Mainlane, Frontage Road, Entrance and Exit Ramp, Direct Connector, and/or HOV lane) at a rate of 1 cycle per month. If the project is on a hurricane evacuation route and the project schedule overlaps with hurricane season (June – October), regardless of type of project and duration, then include this item and note to clear Center Median, Outside Mainlane, Frontage Road, Entrance and Exit Ramp, Direct Connector, and/or HOV lane of litter and debris for contra-flow events.

738-2 During hurricane season (June-October), special attention should be given to keep center medians, mainlanes, HOV lanes, shoulders, frontage roads, entrance and exit ramps, and/or direct connector ramps clear of debris.

If the project is on a hurricane evacuation route and the project schedule overlaps with hurricane season (June – October), regardless of type of project and duration, then include this item and note to clear Center Medians and Mainlanes, Frontage Roads, Entrance and Exit Ramps, High Occupancy Vehicle (HOV) Lane, and/or Direct Connector Ramp of litter and debris for contra-flow events.

--Item 3006 & 3007 --

The minimum application rates are listed in Table UC/BC. The Engineer may adjust the application rates taking into consideration the existing pavement surface conditions.

Table UC/BC

	Recommended Application Rate Gal/SY	
Material	Underseal	Bonding Course
TRAIL - Emulsified Asphalt	N/A	0.12
TRAIL - Hot Asphalt	0.17	0.12
Spray Applied Underseal Membrane	0.30	0.15
Seal Coat - Emulsion (CHFRS-2P, CRS-2P)	0.35	N/A
Seal Coat - Asphalt (AC-15P, AC-20-5TR, AC-20XP, AC10-2TR)	0.27	N/A
Aggregate for Seal Coat Options TY PB GR 4 (AC) or TY B GR 4 (Emulsion)	1 CY:120 SY	N/A

This note is to be used to allow the contractor to choose the underseal or bonding course for Items **341, 344, and 346** *on a mill and fill operation. An exception to using this special*

specification is if you are allowing traffic to drive on the underseal for an extended period during construction in which case you should specify a one course surface treatment.

-- Item 4019--

4019-1 Install bridge identification numbers shown below for each of the following listed bridges in accordance with the special specification and San Antonio District Standard. Install the bridge identification number on two locations as shown on the plans, or as directed. For bridges in a two-way condition, install the bridge identification number on each outside beam on the upstream side of traffic. For bridges in a one-way condition, install the bridge identification number on each side, opposite corners on each outside beam. For culverts, install the bridge identification number on the headwall on upstream and downstream location.
Ask the District Bridge Engineer if the existing structures within the projects will need stenciling of permanent structure numbers.

--Item 6008--

6008-1 Radar presence detection device must utilize true-presence detection. Systems using locking algorithms to attempt presence detection will not be accepted. In addition, radar systems will not be allowed to use extensions/delays or place the controller on locking detection to aid in presence detection.

6008-2 Radar presence detection device must be able to detect up to 10 lanes with a minimum offset of 6’ and have at least 16 zones and channels per unit.

6008-3 Radar presence detection device must be mounted on the same side of the intersection as the lanes it is set to detect.

6008-4 Final placement of radar devices must be approved by the engineer.

6008-5 Furnish and install new Wavetronix SmartSensor Matrix, or approved equivalent, for radar presence detectors and Wavetronix SmartSensor Advance, or approved equivalent, for radar advanced detection devices.

--TMS General Notes--
(Contact Jorge Ramos if project contains TMS items)