City of San Antonio

TRANSPORTATION AND CAPITAL IMPROVEMENTS

ADDENDUM No. 1

PROJECT NAME: Citywide Bridge Replacement - Shaenfield Road

DATE: March 4, 2014

This addendum is separated into sections for convenience; however, all contractors, subcontractors, material men, and other parties shall be responsible for reading the entire addendum. The failure to list an item or items in all affected sections of this addendum does not relieve any party affected from performing as per instructions, providing that the information is set forth one time any place in this addendum. These documents shall be attached to and become part of the Contract Documents for this project. The contractor shall be required to sign an acknowledgement of the receipt of this addendum and submit with their bid.

Addendum No. 1 is issued to notify, add, revise and replace the following:

1. **Form 010 – Formal Invitation For Bids and Contract, revisions include:**
   A. **Deadline to Bid:** 2:00 P.M. on Tuesday, **March 18, 2014**
   B. **Calendar Days**: It is understood and agreed that the work is to be substantially completed on Or before **210** calendar days.
   C. **Deadline for Questions:** 4:00 P.M. on Friday, **March 7, 2014**
2. **Form 025 – Unit Pricing Form**
   A. Remove the original 025 Pricing Form in its entirety and replace with the attached "025 Unit Pricing Form." Revisions include:
      a. Revised units for sequence no. 5
      b. Deleted sequence no. 66
      c. Added an allowance for tree planting and maintenance, sequence no. 53. Planting plan to be provided later.
      d. Clarified item no. origin
      e. Revised quantities for sequence nos. 4 & 15
3. **General Conditions:**
   a. Section 1.1.11 of the General Conditions for City of San Antonio Construction Contracts is deleted and replaced in its entirety with following:

1.1.11 "Day as used in the Contract Documents shall mean Calendar Day, unless otherwise specifically defined. A Calendar Day is a day of 24 hours, measured from midnight to the next midnight, unless otherwise specifically stipulated. A Working Day is measured from **sunrise to sundown** Monday through Saturday, except legal holidays, or the hours during which Contractor has been authorized and/or directed to work by Owner.

b. Section 3.10.5 of the General Conditions for City of San Antonio Construction Contracts will be modified to **ADD** the following:

3.10.5.4. Contractor shall perform work Six (6) days each week, Monday through Saturday, from sunrise to sundown, unless otherwise directed by the City.

c. Section 3.10.6.3 of the General Conditions for City of San Antonio Construction Contracts is deleted and replaced in its entirety with the following:

3.10.6.3. Work shall be scheduled based upon Contractor's standard six (6) day work week, utilizing the appropriate calendar assignments and using compatible Project Scheduling Software.

General Conditions posted on the City's website http://www.sanantonio.gov/rfplistings/ have been amended to include the above changes.

4. Special Provisions:

A. Insert Special Provisions to CoSA Standard Specifications.

B. Insert Special Provisions to CoSA Standard Specifications - Item 804 New Tree & Shrub Planting and Maintenance.

5. Drawings:

A. Remove sheet nos. 3 & 4, ESTIMATED QUANTITIES, and replace with revised sheet nos. 3 & 4. Revisions include:
   a. Revised units for item no. 103.4
   b. Added tree planting & maintenance
   c. Deleted the first item no. 442
   d. Revised quantities for item nos. 103.3, 502.1 & 0531-2007

B. Remove sheet no. 5, ROADWAY SUMMARY SHEET, and replace with revised sheet no. 5. Revisions include:
   a. Revised quantities for items 103.3, 502.1, 0531-2007

C. Remove sheet no. 6, TYPICAL SECTION, and replace with revised sheet no. 6. Revisions include:
   a. Added note

D. Remove sheet no. 11, SUPPLEMENTAL GENERAL NOTES, and replace with revised sheet no. 11. Revisions include:
   a. Revised SAWS phone number

E. Remove sheet nos. 22-25, PLAN & PROFILE SHEET, and replace with revised sheet nos. 22-25. Revisions include:
   a. Revised ROW line
   b. Revise pedestrian ramp

Note that revisions to the ROW affects the following sheets which are not included in Addendum No. 1: 7, 15, 25A, 36, 38, 39, 80, 81, 82, 98, 98A, 99, 105, 106, 131.

F. Remove sheet no. 35, PROPOSED DRAINAGE AREA MAP, and replace with revised sheet no. 35. Revisions include:

a. Revised number of bridge sidewalk drains
b. Revised quantity of metal for bridge sidewalk drains

G. Remove sheet no. 132, EXISTING UTILITY LAYOUT, and replace with revised sheet no. 132. Revisions include:

a. Revised proposed south ROW limits

H. Remove interim review sheet nos. 133-137, SAWS WATER PLANS, and replace with signed/sealed sheet nos. 133-137.

6. **Addendum Acknowledgement Form:**

A. Insertion of **Addendum No. 1 Acknowledgment Form**. Submit signed and dated form with the bid proposal package indicating receipt of Addendum.

STATE OF TEXAS
ERNEST JOSEPH MECHE
72209
REGISTERED
PROFESSIONAL ENGINEER

Structural Engineering Associates, Inc.
Firm Registration No. F-199

Ernest Joseph Meche

Ernest Joseph Meche, P.E.

3/4/2014
Date

END OF ADDENDUM No. 1

City of San Antonio

TRANSPORTATION AND CAPITAL IMPROVEMENTS

RECEIPT OF ADDENDUM NUMBER(S) 1 IS HEREBY ACKNOWLEDGED FOR THE PROJECT:

CITYWIDE BRIDGE REPLACEMENT – SHAENFIELD ROAD

FOR WHICH BIDS WILL BE OPENED ON: **TUESDAY, MARCH 18, 2014 AT 2:00 P.M. CST**

***** THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID PACKAGE *****

Company Name: _____

Address: _____

City/State/Zip Code: _____

Date: _____

_____

Signature

_____

Print Name/Title

CITY OF SAN ANTONIO

Issued By: Transportation and Capital Improvements **Date Issued: February 10, 2014**
ID NO.: 40-00294 **Page 1 of 1**

FORMAL INVITATION FOR BIDS (IFB) and CONTRACT
Citywide Bridge Replacement – Shaenfield Road

Sealed bids, subject to the Terms and Conditions of this Invitation for Bids and other contract provisions, will be received at the Office of the City Clerk, City Hall, 100 Military Plaza, 2nd floor San Antonio, Tx 78205 until **2:00 P.M. CST** on **Tuesday, March 18, 2014** and publicly read aloud in **City Council Chambers at 114 W. Commerce, Municipal Plaza Building**. This is the *solicitation deadline*. Bids must be submitted in a sealed envelope and clearly marked with the due date of bid, bidder name, Project Name and ID NO. The City is not responsible for submissions not clearly and appropriately marked. Late submissions will be rejected and returned to bidder. A Non-Mandatory Pre-bid meeting will be held at 114 W. Commerce, San Antonio, TX 78205 in the 9th fl. conference room on Wednesday, February 19, 2014 at 2:00 P.M.

TABLE A - This invitation includes the following Contract Documents:

010	Invitation for Bids and Contract Signature Page	060	Supplemental Conditions
020	Bid Form	075	Performance Bond
025	Unit Pricing Form	076	Payment Bond
040	Standard Instructions to Respondent	081	General Conditions for Construction Contracts
050.01	SBEDA Guidelines	095	SAWS Special Conditions
◘	Subcontractor/Supplier Utilization Plan	◘	Heavy/Hwy Wage Decision

Plans, Specifications and Special Conditions may be purchased at a cost of **$110.00** per set (tax included) from the office of Structural Engineering Associates, Inc., 3838 NW Loop 410, San Antonio, TX 78229, Phone (210) 735-9202. No refund will be made for plan sets that are returned. Addenda will be posted on the web at www.sanantonio.gov/rfplistings along with this solicitation. Changes to Plans, Specifications and Special Conditions will be included in an addendum and may be obtained from the office of Structural Engineering Associates, Inc. **Deadline for questions: 4:00 P.M., Friday March 7, 2014.** Questions must be in writing and emailed to the consultant. Bidder understands and agrees that bidder is responsible for obtaining addenda and adhering to all requirements in addenda. City is not responsible for incorrect information obtained through other sources.

The following documents (fully completed and with original signatures) constitute the required information to be submitted as a part of the bid proposal clearly marked on the outside of the sealed envelope with the due date of bid, bidder name, Project Name and ID NO as follows:

1.)	010	Invitation for Bids and Contract Signature Page	4.)	Bid Bond
2.)	020	Bid Form	5.)	Subcontractor/Supplier Utilization Plan
3.)	025	Unit Pricing Form	6.)	Signed Addenda Acknowledgement Forms

It is understood and agreed that the work is to be substantially completed on or before **210** calendar days. This project does not include hazardous environmental work. This project requires 1 project sign.

Respondents must demonstrate commitment to satisfy an eighteen percent **(18%) SBE subcontracting goal** and a fifteen percent **(15%) MWBE subcontracting goal.** In the absence of a waiver granted by the Small Business Office, failure of a Respondent to commit to satisfying the SBE and MWBE subcontracting goals shall render its response NON-RESPONSIVE.

This is a Public Works Contract and chapter 2258 of the Texas Government Code requires that not less than the prevailing wage rate for work of a similar character in this locality shall be paid all laborers, workmen, and mechanics employed in the construction thereof. The Wage Decision Number **TX140016 01/03/2014 TX16** shall be used on this contract, which is available on the web at http://www.wdol.gov/dba.aspx#0.

The undersigned, by his/her signature, represents that he/she is authorized to bind the bidder to fully comply with Contract Documents for the amount(s) shown on the accompanying bid sheet(s). The work proposed to be done shall be accepted when fully completed and finished to the entire satisfaction of the City. The undersigned certifies all prices contained in this bid have been carefully checked and are submitted as correct and final. The Bidder by submitting this bid and signing below, acknowledges that he/she has received & read the entire Bid and Contract document and agrees to be bound by the terms therein, has received all Addenda, and agrees to the terms, conditions, and requirements of the bidder's bid proposal and all documents listed in TABLE A above and the enabling Ordinance and associated documentation that form the entire Contract upon approval by the City Council.

Official Name of Company
legal):_____

_____/_____ Signer's Name: _____
Original Signature of Person Authorized to Sign Bid/Contract Date (Please Print or Type)

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Shaenfield Road Bridge
PROJECT NO. 40-00294

COSA

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
				The City only will accept bid pricing to the hundredths. Any pricing extended out to three decimal points will be truncated to two decimal points in the City's favor.					
	COSA 100.1			Mobilization (11%)	LS	1			1
	COSA 101			Preparing Right of Way (4%)	LS	1			2
	COSA 103.1			Remove Concrete Curb	LF	85			3
	COSA 103.3			Remove Sidewalks and Driveways	SF	3425			4
	COSA 103.4			Remove Miscellaneous Concrete	SF	330			5
	COSA 104.1			Street Excavation	CY	227			6
	COSA 105.1			Channel Excavation (150 CY<X<5000 CY)	CY	1600			7
	COSA 107.1			Embankment (Final)	CY	5232			8
	COSA 108.1			Lime Treated Subgrade (inches compacted depth)	SY	2995			9
	COSA 108.2			Lime	TON	37.1			10
	COSA 205.2		SP205	Hot Mix Asphaltic Pavement, Type B 7 in pvmnt thick	SY	2999			11
	COSA 205.4		SP205	Hot Mix Asphaltic Pavement, Type D 2 in pvmnt thick	SY	4525			12
	COSA 302.1			Metal For Structures (<500 LBS.)	LBS	650			13
	COSA 500.1			Concrete Curb	LF	778			14
	COSA 502.1		SP502	Concrete Sidewalks Conventionally Formed	SY	647			15
	COSA 502.3		SP502	Sidewalk Drain	EA	4			16
	COSA 503.4		SP503	Asphaltic Concrete Driveway	SY	164			17
	COSA 505.1		SP505	Concrete Riprap (5" THICK) (<100 SY)	SY	38			18
	COSA 507.1			Chain Link Fence (4ft. High)	LF	1250			19
	COSA 515.1			Topsoil	CY	1150			20
	COSA 516.1			Bermuda Sodding	SY	5450			21
	COSA 520.1		SP520	Hydromulching	SY	3263			22
	COSA 530.1			Barricades, Signs & Traffic Handling ($2,500/MO)	LS	1			23
	COSA 531.13			R3-7 LEFT LANE MUST TURN LEFT or RIGHT LANE MUST TURN RIGHT (30" x 30")(HIGH DENSITY)	EA	1			24
	COSA 531.3			R1-1 STOP* (30")	EA	3			25
	COSA 531.34			S1-1 School Crossing (36" x 36")	EA	2			26
	COSA 531.6			R2-1 Speed Limit* (24" x 30")	EA	1			27
	COSA 531.66			S5-2A, End School Zone* (24" x 9")	EA	1			28
	COSA 531.68			R3-17 (BIKE LANE)* (30" x 24")	EA	1			29
	COSA 531.7			R3-17b (ENDS)* (30" x 12")	EA	1			30

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Shaenfield Road Bridge
PROJECT NO. 40-00294

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
	COSA 531.XX			S4-1 24x8	EA	1			31
	COSA 531.YY			S4-3 24x8	EA	1			32
	COSA 531.ZZ			W16-7PL 24x12	EA	1			33
	COSA 535.1			4 inch wide yellow line	LF	2987			34
	COSA 535.12			Word "ONLY"	EA	4			35
	COSA 535.16			Straight White Arrow Bicycle Facility	EA	2			36
	COSA 535.17			Bicycle Rider Symbol	EA	2			37
	COSA 535.4			8 inch wide white line	LF	2373			38
	COSA 535.5			12 inch wide white line	LF	50			39
	COSA 535.7			24 inch wide white line	LF	400			40
	COSA 535.8			Right White Arrow	EA	1			41
	COSA 535.9			Left White Arrow	EA	3			42
	COSA 536.X			24 inch Wide Yellow Line	LF	322			43
	COSA 537.8			Pavement Marker (Type II A-A)	EA	80			44
	COSA 540.1			Rock Filter Dams (Install) (Type 3)	LF	213			45
	COSA 540.1			Rock Filter Dams (Remove) (Type 3)	LF	213			46
	COSA 540.6			Construction Exits (Install/Remove)	SY	225			47
	COSA 540.9			Temporary Sediment Control Fence	LF	1650			48
	DSD 801.1			Level I Protective Fencing Tree Trunk Protection	LF	3119			49
	DSD 801.2			Level II A Protective Fencing Tree Trunk Protection	LF	1480			50
	DSD 801.3			Level II B Protective Fencing Tree Trunk Protection	LF	139			51
	DSD 802.2			Level II Pruning	LS	1			52
	DSD 804			New Tree Planting and Maintenance (Plan provided later)	LS	1	$100,000.00	$100,000.00	53
	TxDOT 164	2009		Broadcast Seed (Temp)(Warm)	SY	3000			54
	TxDOT 164	2011		Broadcast Seed (Temp)(Cool)	SY	3000			55
	TxDOT 354	2045		Plane Asph Conc Pav (2")	SY	1805			56
	TxDOT 400	2023	SP400-004	Cem Stab Bkfl (Behind Abutment)	CY	256			57
	TxDOT 416	2001	SP416-001	Drill Shaft (18 In)	LF	80			58
	TxDOT 416	2004	SP416-001	Drill Shaft (36 In)	LF	1272			59
	TxDOT 420	2003	SP420-002	Cl. C Conc (Abut)	CY	85.4			60
	TxDOT 420	2004	SP420-002	Cl. C Conc (Bent)	CY	197.5			61
	TxDOT 420	2034	SP420-002	Cl. S Conc (Bridge Sdwlk)	CY	220.5			62
	TxDOT 422	2001		Reinf Conc Slab	SF	29750			63
	TxDOT 425	2068	SP425-001	Prestr Conc Girder (Tx54)	LF	3980.88			64

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Shaenfield Road Bridge
PROJECT NO. 40-00294

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
	TxDOT 432	2002		Riprap (Conc) (5 In)	CY	147			65
									66
	TxDOT 442	2048	SP442-016	Structural Steel (MISC Non Bridge)	LB	4245			67
	TxDOT 450	2064	SP450-001	Rail (Ty C221)	LF	1056			68
	TxDOT 454	2001	SP454-003	Sealed Expansion Joint (4IN) (SEJ-A)	LF	136			69
	TxDOT 531	2006		Curb Ramps (TY 2)	EA	1			70
	TxDOT 531	2007		Curb Ramps (TY 3)	EA	7			71
	TxDOT 531	2013		Curb Ramps (TY 20)	EA	1			72
	TxDOT 531	2044		Curb Ramps (TY 10)	EA	2			73
	TxDOT 610			Ins Rd Il Am (Ty SA) 25T-12 (.25Kw)S	EA	4			74
	TxDOT 610			Ins Rd Il Am (Ty SA) 25S-12 (.25Kw)S	EA	5			75
	TxDOT 618	2020		Conduit (2-1/2 inch/pvc Schedule 40)	LF	1667			76
	TxDOT 618	2036		Conduit (2-1/2 inch/pvc Schedule 80)	LF	6			77
	TxDOT 620	2003		Electrical Conductors (No. 2)(Alum)(Insulated)	LF	3400			78
	TxDOT 620	2009		Electrical Conductors (No. 6)(Alum)(Bare)	LF	1727			79
	TxDOT 628	2056		Elc Srv Ty D 120/240 060 (NS)Al(E)Tp(O)	EA	1			80
	TxDOT 644	2063		INS SM RD SN SUP&AM (Rail Mount)	EA	1			81

SAWS - Water

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
	SAWS 100			Mobilization (10%)	LS	1			82
	SAWS 101			Preparing Right of Way (5%)	LS	1			83
	SAWS 550			TRENCH EXCAVATION SAFETY PROTECTION	LF	475			84
	SAWS 814			16" DUCTILE IRON PIPE (RESTRAINED)	LF	475			85
	SAWS 826			VALVE BOX ADJUSTMENT	EA	5			86
	SAWS 836			PIPE FITTINGS, ALL SIZES AND TYPES	TON	1			87
	SAWS 840			16" WATER TIE-IN	EA	2			88
	SAWS 841			HYDROSTATIC TESTING	EA	1			89
	SAWS 844			2" BLOWOFF, TEMPORARY	EA	1			90
	SAWS 846			1" AIR RELEASE ASSEMBLIES	EA	1			91
	SAWS 858			CONCRETE ENCASEMENT, CRADLES, SADDLES AND COLLARS	CY	21			92

CITY OF SAN ANTONIO

025 UNIT PRICING FORM

PROJECT NAME: Shaenfield Road Bridge
PROJECT NO. 40-00294

Total COSA Bid Amount:	
Total SAWS - Water Bid Amount:	
Total Bid Amount:	

_____certifies that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out.
_____Acknowleged and agrees that the total bid amount shown will be read as its total bid and further agrees that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities shown in the proposal and then totaling all of the extended amounts. _____ agrees to the terms, conditions, and requirements of the bidder's bid proposal.

Signed: _____ Date: _____

Title: _____

City of San Antonio
Department of Transportation & Capital Improvements

Shaenfield Road Bridge

TCI Project No. 40-00294
March 4, 2014

Responses to Contractor Questions (received as of February 28, 2014):

Q1: What is the name of the developer that is constructing the neighboring project?
Response: Rick Sheldon

Q2: What part of the project will CPS Energy be responsible for?
Response: CPS Energy will pull the wires and energize the system.

Q3: Please verify the following quantities for the Shaenfield Road Bridge Project.

Bid item 442 Metal for Structures(3/4 X 18-1/2, 48plf)

Is this for the 12 each bridge drains shown on plan sheets 48 and 49?

Based on the standard sheet 53 the quantity I come up with is 3,721 LB (sidewalk width = 6.75-.29=6.46 length of drain cover plate X 48plf = 310LB X 12 each = **3,721**LB)

Bid item 442 Structural Steel(Misc Non-Bridge)

Is this for the sidewalk cover plate at the expansion joints?

Based on the standard sheet 54 the quantity I come up with is 525LB (sidewalk width = 6.75-.50=6.25 length of drain cover plate X 14plf = 87.5LB X 6 each = **525**LB)

Response: Your math is correct. If you add up your subtotals of 3,721 and 525 you get a total of 4,246, which is within one pound of the quantity shown for steel expansion plates and drains ***on*** *the bridge. (TxDOT Item no. 442). Off the bridge, there is an additional 650lbs (CoSA Item no. 302.1) for sidewalk drains, not located on the bridge. Refer to revised sheet nos. 4, 35 and bid unit pricing. Sheet no. 4 was revised to remove the first item 442, 2304 lbs. Sheet no. 35 was revised to modify the TxDOT item 442 (quantity for bridge drain steel) to 3,720 lbs.*

Q3: I had a question with regards to bid item 103.4 Remove Miscellaneous Concrete. The COSA Specs indicate that measurement of payment will be in SF. The project currently has the bid item is LF.

What is that LF referring to?

Response: The quantity is correct, but the unit should read SF. This item is for removal of the concrete median in front of the school.

Update: December 2013

THE FOLLOWING ITEMS ARE SPECIAL PROVISIONS TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED JUNE 2008

1. Item 106 Box Culvert Excavation and Backfilling	Page 2
2. Item 205 Hot Mix Asphaltic Concrete Pavement	Page 2
3. Item 401 Reinforced Concrete Pipe	Page 2
4. Item 402 High Density Corrugated Polyethylene Pipe	Page 3
5. Item 403 Storm Sewer Junction Boxes and Inlets	Page 3
6. Item 404 Corrugated Metal Pipe	Page 4
7. Item 405 Fiber Reinforced Concrete Pipe	Page 5
8. Item 502 Concrete Sidewalks	Page 5
9. Item 503 Asphaltic Concrete, Portland Cement Concrete and Gravel Driveways	Page 5
10. Item 505 Concrete Riprap	Page 6
11. Item 520 Hydromulching	Page 6
12. Item 523 Adjusting of Vehicular & Pedestrian Gates	Page 7 & 8
13. Bid Item Summary Revisions	Page 9

General

Throughout the City of San Antonio Standard Specifications for Construction (June 2008) replace the following:

- "Item 407 Frames, Grates, Rings and Covers" with "Item 409 Cast Iron Castings"
- "Item 304 Expansion Joint Material" with "Item 307.2.E, Expansion Joint Material"
- "Item 305, Membrane Curing" with "Item 307.2.H, Membrane Curing"

Item 106 Box Culvert Excavation and Backfilling

Section 106.4 Construction. D. Backfilling:
Delete 1st paragraph.

Add:
Backfilling to 12 inches above the top of the box culvert (initial backfill) shall be completed by one of the four methods 1., 2., 3., or 4. below. Backfilling (initial backfill) shall be no less than 12 inches above the top of the box culvert for the entire width of the trench. Backfilling from the 12 inches above the top of the culvert to the top of the trench (secondary backfill), or proposed subgrade elevations, shall be completed in accordance with Item 400, "Excavation, Trenching, and Backfilling." Backfill behind cast-in-place culvert walls shall not begin until the concrete has attained a compressive strength of 2,000 psi. Backfill on top of cast-in-place supporting slabs shall not begin until the concrete has attained a compressive strength of 3,000 psi. Avoid wedging action of backfill against structures. If necessary to prevent such action, step or serrate slopes bounding the excavation. Place backfill along both sides of culverts equally and in uniform layers.

Item 205 Hot Mix Asphaltic Concrete Pavement

Section 205.4. G. Placement, 3. Placement Operations:

Delete: When approved by the Engineer, level-up courses may be spread with a motor grader.

Add:
The use of a lay down machine shall be the primary method used for the placement of all HMAC. The use of a motor grader is not permitted unless approved by the Engineer.

Item 401 Reinforced Concrete Pipe

Delete in its entirety:

Section 401.6 Payment
Add:
Section 401.6 Payment:
The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Reinforced Concrete Pipe", "Reinforced Concrete Pipe (Arch)", or "Reinforced Concrete Pipe (Elliptical)" of the size and D-load specified or of the size and class specified. This price is full compensation for excavation and backfilling; constructing, furnishing, transporting, placing and joining pipes; shaping the bed; cutting pipes on skew or slope; connecting to new or existing structures; breaking back, removing and disposing of portions of the existing structure; replacing portions of the existing structure; cutting

pipe ends skew or slope; and equipment, labor, tools and incidentals required to complete the work.

Protection methods for excavations greater than 5 ft. deep will be measured and paid for as required under Item 550, "Trench Excavation Safety Protection", or Item 551, "Special Shoring". When jacking, boring, or tunneling is used at the Contractor's option, payment will be made under this Item. When jacking, boring, or tunneling is required, payment will be made under Item 406, "Jacking, Boring or Tunneling Pipe or Box".

Item 402 High Density Corrugated Polyethylene Pipe

Delete in its entirety:
Section 402.7 Payment A & B

Add:
Section 402.7 Payment:
The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "High Density Corrugated Polyethylene Pipe" of the size and backfill specified. This price is full compensation for excavation and backfilling; furnishing, transporting, placing and joining pipes; shaping the bed; cutting pipes on skew or slope; connecting to new or existing structures; breaking back, removing and disposing of portions of the existing structure; replacing portions of the existing structure; cutting pipe ends skew or slope; and equipment, labor, tools and incidentals required to complete the work.

Protection methods for excavations greater than 5 ft. deep will be measured and paid for as required under Item 550, "Trench Excavation Safety Protection", or Item 551, "Special Shoring". When jacking, boring, or tunneling is used at the Contractor's option, payment will be made under this Item. When jacking, boring, or tunneling is required, payment will be made under Item 406, "Jacking, Boring or Tunneling Pipe or Box".

Item 403 Storm Sewer Junction Boxes and Inlets

Add:
Item 403.1 Description:
Construct pre-cast manhole vertical stack, including excavation, and backfilling; furnishing and installing frames, rings and covers.

Item 403.2 Materials:
H. Manhole vertical stacks that are required on top of box culverts as shown on the plans and quantity summary are to be pre-cast.

Item 403.3 Construction:
J. Manhole vertical stack construction on box culverts shall be the same as the city standard for junction boxes. Please refer to standard junction box details.

Item 403.4 Measurement:
Manhole vertical stacks on top of box culverts shall be measured as per each.

Item 403.5 Payment:
D. Payment for manhole vertical stacks on top of a box culvert will be made at the unit price bid for "Manhole Vertical Stack".

Section 403.6 Bid Item
Delete:
Items 403.7 – 403.14

Add:
Item 403.7 – Inlet Type I (Complete)(10 ft)
Item 403.8 – Inlet Type II (Complete)(10 ft)
Item 403.9 – Inlet Extensions (10 ft)
Item 403.10 – Inlet (Complete)(5')(TxDOT)
Item 403.11 – Inlet (Extension)(5')(TxDOT)
Item 403.12 – Special Inlet (Complete)
Item 403.15 – Manhole Vertical Stack

Note: See Bid Item Summary revisions.

Item 404 Corrugated Metal Pipe

Delete in its entirety:
Section 404.6 Payment

Add:
Section 404.6 Payment:
The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Corrugated Metal Pipe," "Corrugated Metal Pipe Arch," "Spiral Rib Corrugated Metal Pipe," or "Spiral Rib Corrugated Metal Pipe Arch" of the type, size and coating specified. This price is full compensation for excavation and backfilling; furnishing, transporting, placing and joining pipes; shaping the bed; cutting pipes on skew or slope; connecting to new or existing structures; breaking back, removing and disposing of portions of the existing structure; replacing portions of the existing structure; cutting pipe ends skew or slope; and equipment, labor, tools and incidentals required to complete the work.

Protection methods for excavations greater than 5 ft. deep will be measured and paid for as required under Item 550, "Trench Excavation Safety Protection", or Item 551, "Special Shoring". When jacking, boring, or tunneling is used at the Contractor's option, payment will be made under this Item. When jacking, boring, or tunneling is required, payment will be made under Item 406, "Jacking, Boring or Tunneling Pipe or Box".

Item 405 Fiber Reinforced Concrete Pipe

Delete in its entirety:
Section 405.6 Payment

Add:
Section 405.6 Payment:
The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Fiber Reinforced Concrete Pipe" of the backfill type, size and D-load class specified. This price is full compensation for excavation and backfilling for Type I, Type II and Type III; constructing, furnishing, transporting, placing and joining pipes; shaping the bed; cutting pipes on skew or slope; connecting to new or existing structures; breaking back, removing and disposing of portions of the existing structure; replacing portions of the existing structure; cutting pipe ends skew or slope; and equipment, labor, tools and incidentals required to complete the work.

Item 502 Concrete Sidewalks

Delete first paragraph from 502.4.F.Joints:

Add : Section 502.4.F Joints:
Unless otherwise specified on the plans or as agreed to by the Engineer, tooled joints with rounded edges will be placed at intervals equal to the sidewalk width and will be opened with one-half inch(1/2") radius by one and one-half inch (1 ½") depth and closed by one-half inch (1/2") radius by one-inch (1") depth.

Section 502.6 Payment:
Delete from first paragraph: "removal and disposal of existing concrete;"

Item 503 Asphaltic Concrete, Portland Cement Concrete and Gravel Driveways

Section 503.6 Payment
Add : Section 503.6 Payment:
The work performed as prescribed by this item will be paid for at the contract unit price bid per square yard for "Portland Cement Concrete Driveway", Portland Cement Concrete Driveway – Commercial", "Asphaltic Concrete Driveway", or "Gravel Driveway", which price shall be full compensation for preparing the subgrade, for furnishing and placing all materials, manipulations, labor, tools, equipment and incidentals necessary to complete the work.

Item 505 Concrete Riprap

Delete in its entirety:
Section 505.4.A Concrete Reinforcement

Add : Section 505.4.A Concrete Reinforcement:
Unless otherwise shown on the plans, reinforce concrete riprap with 6 x 6 – W6 x W6 welded wire fabric or with No. 4 reinforcing bars spaced at a maximum of 18 in. in each direction unless otherwise shown. A combination of welded wire fabric and reinforcing bars may be provided when both are permitted. Provide a minimum 6-in. lap at all splices. At the edge of the riprap, provide a minimum horizontal cover of 1 in. and a maximum cover of 3 in. Place the first parallel bar no more than 6 in. from the edge of concrete. Use approved supports to hold the reinforcement approximately equidistant from the top and bottom surface of the slab. Adjust reinforcement during concrete placement to maintain correct position. Reinforcement protruding from existing riprap shall be thoroughly cleaned.

Item 520 Hydromulching

Section 520.4 Construction (D) Slurry:
Delete: "Annual Ryegrass (Oct. through March 15) 20 lbs per 1,000 sqft".

Add: "Annual Ryegrass (Oct. through March 15) 5-10 lbs per 1,000 sqft".

Item 523 Adjusting of Vehicular & Pedestrian Gates

Delete in its entirety:
Item 523 Adjusting of Vehicular & Pedestrian Gates

Add:

523.1. DESCRIPTION: *This item shall govern for the adjustment of manual or motorized, chain link or wrought iron, vehicular or pedestrian gates made necessary by the construction of new driveways or sidewalk entrances.*

523.2. MATERIALS: Additional materials needed to perform chain link fences gate adjustments shall conform to those specified in Item 507, "Chain Link Wire Fence". Materials used to adjust wrought iron gates shall be of the same type of material and configuration as the existing gate including any masonry. A combination of new and existing materials may be used if approved by the Engineer and property owner.

523.3. EQUIPMENT: Provide the machinery, tools and equipment necessary for proper prosecution of the work. All machinery, tools and equipment used shall be maintained in a satisfactory and workmanlike manner.

523.4. CONSTRUCTION: Approval from the property owner and Engineer shall be obtained by the Contractor in order to perform the necessary work required. The Contractor shall adjust gates vertically and or relocated gates horizontally by removing the existing gate from the gate posts and relocating and/or replacing (if necessary) the existing hinges, sliding mechanism, or rollers at a level such that the gate shall be provided with the necessary clearance to operate properly. Contractor shall coordinated extent of adjustments to be made with the property owner and Engineer prior to commencing any gate adjustments. Contractor shall notify property owner or tenant 48 hours in advance of any gate adjustments.

All fabric, posts, braces, gates, fittings, bolts, tension wire, tracks, wheels, rollers, operating mechanism, electrical service, wiring and miscellaneous hardware shall be carefully removed in such a manner that they will not be marred or damaged. After removal of the existing gate has been complete, any material deemed not useable shall be replaced by the Contractor with new material of the same design and quality as the existing material. A new gate constructed of the same type of material and configuration as the existing gate may be installed if so desired by the Contractor. All fences and gates shall be cut and welded by a qualified welder.

If necessary, the existing fence may be extended, reinforced, or offset in a manner that will not detract from the decorative appeal of the fence. All extensions and offsets of existing fences and gates shall be approved by the property owner.

All gates adjusted vertically shall be extended vertically so that the height of the gate will match existing fence height. Gates that are adjusted vertically shall be provided with a concrete channel for track, gate, sliding mechanism as detailed on plans or as approved by the Engineer and property owner.

All welding will be performed in a workman-like manner with solid joints of minimum protrusion. The adjusted gate will be constructed in such a manner to have minimal flexure.

Any excessive splatter of the weld will be ground off. Existing wrought iron fences and gates will be cleaned and any surface imperfections, any rust and paint will be removed completely. All surfaces of the existing gates will be roughened to accept a new coat of paint. All newly added areas will be completely primed and painted to match existing paint. A second coat will be required to cover any holidays or spots of insufficient coverage. The existing fence and gate will be spot primed in areas where surface imperfections or rust have been removed.

Painting will be by hand or spray. Areas to be painted shall be primed in accordance with paint manufacturer's recommendations. Two coats of point shall be applied to the existing fence and gate and all newly added parts. The final surface will be of even color with out streaks, drips bubbles, or any other surface imperfection. Paint used shall match existing paint in color and texture. Color shall be approved in writing by the property owner.

523.5 MEASUREMENT: Vehicular and pedestrian gates will be measured for each driveway or sidewalk entrance and/or exit of each type that is adjusted. Additional fencing that may be required for relocation or adjustment of gates will be subsidiary to gate adjustments or gate relocation and will not be measured as a separate pay item.

523.6 PAYMENT: The work performed and the materials furnished as prescribed by this item will be paid for at the bid price per gate for "Adjusting of Vehicular & Pedestrian Gates," which price shall be full compensation for removing and installing the existing gate and for furnishing all additional materials, all labor, tools, equipment and incidentals necessary to complete the work.

523.7 Bid Item:

Item 523.1 – Adjusting Chain Link Vehicular Gate – Each
Item 523.2 – Adjusting Chain Link Vehicular Gate (Motorized) – Each
Item 523.3 – Adjusting Chain Link Pedestrian Gate – Each
Item 523.4 – Adjusting Wrought Iron Vehicular Gate – Each
Item 523.5 – Adjusting Wrought Iron Vehicular Gate (Motorized) – Each
Item 523.6 – Adjusting Wrought Iron Pedestrian Gate – Each

Bid Item Summary Revisions

Replace Item 403.7 with Item 403.7 – Inlet Type I (Complete)(10 ft) – Each
Replace Item 403.8 Item 403.8 – Inlet Type II (Complete)(10 ft) - Each
Replace Item 403.9 Item 403.9 – Inlet Extensions (10 ft) - Each
Replace Item 403.10 Item 403.10 – Inlet (Complete)(5')(TxDOT) - Each
Replace Item 403.11 Item 403.11 – Inlet (Extension)(5')(TxDOT) - Each
Replace Item 403.12 Item 403.12 – Special Inlet (Complete) - Each
Delete Items 403.13 & 403.14
Add Item 523.1 – Adjusting Chain Link Vehicular Gate – Each
Add Item 523.2 – Adjusting Chain Link Vehicular Gate (Motorized) - Each
Add Item 523.3 – Adjusting Chain Link Pedestrian Gate – Each
Add Item 523.4 – Adjusting Wrought Iron Vehicular Gate – Each
Add Item 523.5 – Adjusting Wrought Iron Vehicular Gate (Motorized) - Each
Add Item 523.6 – Adjusting Wrought Iron Pedestrian Gate – Each
Replace Item 682.1 with Item 682.1 – Install Vehicle Signal Section with Back Plate (3 second) – Each
Replace Item 682.2 with Item 682.2 – Install Vehicle Signal Section with Back Plate (4 second) – Each
Replace Item 682.3 with Item 682.3 – Install Vehicle Signal Section with Back Plate (5 second) – Each
Replace Item 682.4 with Item 682.4 – Install Pedestrian Signal Section (12 inch) LED (2 Ind) – Each
Add Item 682.5 – Louver (12 inch)(Adjustable) – Each

Update: November 2013

THE FOLLOWING ITEMS ARE SPECIAL PROVISIONS TO
THE CITY OF SAN ANTONIO
STANDARD SPECIFICATIONS FOR CONSTRUCTION
DATED NOVEMBER 2013

1. Item 804 New Tree & Shrub Planting and Maintenance.....4 pages

General

1. None

Standard Specifications

1. Adding Item 804 – New Tree & Shrub Planting and Maintenance Specifications (dated November 2013) in its entirety.

ITEM

804 New Tree & Shrub Planting and Maintenance

804.1 DESCRIPTION: *This item shall govern the procedure for selecting planting and maintaining trees and other vegetation to be used as enhancements or for mitigation on a construction project*

804.2 SELECTION OF TREES:

A. Size-grading of trees is in accordance with the Texas Association of Nurseryman Grades and Standards. Following is a summary (caliper is measured by a "slot" type caliper, "pincer" type caliper or a diameter tape):
B. For Shade trees caliper takes precedence. Caliper is measured at 6 inches above soil level in the pot ground for trees up to and including 4 inch caliper size, and 12 inches above the ground for larger trees
C. For flowering trees, height takes precedence for trees up to 6 feet in height and then caliper
D. Trees will be a minimum of 2 inch caliper and/or 6 feet in height unless specified.
E. Trees will be straight, single trunked unless specified or approved.
F. Trees will be containerized/boxed /balled and burlaped/b&b
G. No species substitution unless authorized
H. Trees will be free of insect and diseases with a well-developed rootball no girdling roots
I. For palm trees, measurement will be by overall height or trunk height and will specify to species or to type; palmate or pinnate
    - If a tree transplant or ball and burlap is approved or specified, it must have been grown out in a nursery for at least 2 growing seasons and ball size must comply with ANSI

804.3 PLANTING:

A. Excavate pits, beds and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage
B. Depth of the excavated area is to be the same as the length of the root ball so that the top of the root flare is at the ground surface level. Minimum depths shall be measured from finished grade
C. Width of excavation must be a minimum of 3 times the diameter of the root ball.
D. Loosen hard subsoil in bottom of excavation
E. Fill excavation for tree/plant with water and allow it to percolate out before planting.
F. Use excavated parent soil material in the backfill mixture at a ratio of 70:30 with the soil amendment as specified in item 802. Particle size of backfill material must be less than 4 inch diameter

G. Saturate with water when the pit or bed is half full of backfill and again when full.
H. Cover excavation area with mulch as specified in item 802
I. Water to prevent soil from dying out
J. Plants will be rejected if the ball of earth surrounding roots has been disturbed or damaged prior to or during installation. Replacement tree/plant to be of equal or better quality
K. Control growth of weeds. Apply a glyphosate type (Round-up 41%) herbicide in the excavated area in accordance with manufacture's label instructions

804.4 QUALITY ASSURANCE:

A. All tree installation work shall be performed by a single firm specializing in tree transplanting work, with a minimum of 3 years experience in the acceptable performance of similar work to that specified. The firm performing the work shall have the following minimum certifications.
B. Texas Nurseryman & Landscape Association (TNLA) certification
C. Be licensed for application and use of pesticides
D. Meet state requirements for insurance
E. Must be bonded

804.5 TREE MAINTENANCE POST TRANSPLATATION:

WATERING THE TREE:

A. The key to newly planted tree survival is providing adequate water
B. Contractor shall water the newly planted trees weekly until the end of the one-year warranty. Contractor shall provide a schedule and method of watering the trees to the City for the project
C. Initially, a newly planted tree needs to be properly watered with an adequate amount to pack the soil, to remove root-drying air and to moisten the root ball.
D. On adequately draining soils, 5 gallons of initial water should be enough.
E. Fast draining soils may need more frequent watering than a slow draining soil.
F. Critical period to provide adequate water during the annual growing season, between late spring and autumn
G. Use of Gatorbags is acceptable method of irrigation. Follow prescribed irrigation schedule for proper establishment

804.6 MULCHING THE TREE:

A. Mulching a newly planted tree ensures that moisture is available to roots over time and reduces grass competition
B. Good mulch (organic materials like leaves, bark, needles and fine wood chips) should ring the tree base (over the critical root zone) but never touch the trunk of the tree. Use local/native hardwood mulch. No fertilizer is necessary when quality composted mulch is used
C. Maintain the mulch level with no more than 4 inches of material over the roots; mulch should not touch the trunk of the tree. A 3' to 6'minimum radius of mulch should be placed around the tree (the wider the better)

804.7 STAKING THE TREE:

A. Not all newly planted trees need staking to remain standing straight. Stake only if the root ball is unstable or the tree trunk is bending. Use only loosely-tied wide straps (recommend use of 'Chain-Lock' staking system) and limit the number of straps to a minimum for support
B. Use tree stakes only when needed. Every tree does not require automatic staking.
C. Inspect all stakes and straps during spring and autumn for loose fit and alter to prevent trunk damage. All straps should be removed after the first or second year

804.8 INSPECTING TREE HEALTH:

A. Checking a tree's health should be done by a certified arborist, a Landscape Architect or registered Landscape Professional an expert. Things that can be done to alert of tree health problems
B. When inspecting a tree consider the following:
C. Is the current year's growth much less than past years' growth? Although fast growth does not necessarily mean good health, a dramatic reduction in growth rate may be an indication of poor health
D. Are there dead limbs, odd colors on leaves and bark or a patchy canopy. These tree symptoms can be the first indicators that a tree is unhealthy and should be inspected in detail
E. Remember that planting a healthy tree in the beginning is the best way to assure its future health

804.9 PRUNING THE TREE:

A. Prune only critical branches that are either dead or broken after planting. Remove multiple leaders to leave only one central stem. (may be best to postpone pruning to avoid transplanting shock due to loss of leaves)
B. Prune only critical branches and/or eliminate extra leaders in the tree's first year. Prune lightly in Year 2 or 3

804.10 REPLACEMENT:

A. Any dead trees or shrubs during the warranty period shall be replaced by the contractor at no cost to the city
B. At the end of the one-year warranty, any tree or shrub that is not in good condition as determined by the city arborist and project manager shall be replaced by the contractor at no cost to the city

804.11 MEASUREMENT:

Tree installations will be measured by the number and size of trees/plants (cost should include installation, warranty, mulch, irrigation/gatorbags, monitoring/treatments as needed, staking, etc.)

804.12 PAYMENT:

Payment shall be made per each of the type and size of tree specified on the bid proposal

804.13 BID ITEM:

Item 804 – New Tree & Shrub Planting and Maintenance

ESTIMATED QUANTITIES

CITY OF SAN ANTONIO				ROADWAY SHEETS							DRAINAGE SHEETS							SW3P & ENVIRONMENTAL SHEETS								TRAFFIC SHEETS						TOTAL QUANTITIES
ITEM NO.	DESC CODE	BID ITEM DESCRIPTION	UNIT	22	23	24	25	25A			35	36						98	98A	99	105-106											
100.1		MOBILIZATION (11%)	LS						1																							1.00
101		PREPARING RIGHT OF WAY (4%)	LS						1																							1.00
103.1		REMOVE CONCRETE CURB	LF				85																									85.00
103.3		REMOVE SIDEWALKS AND DRIVEWAYS	SF			855	2570																									3425.00
103.4		REMOVE MISCELLANEOUS CONCRETE	SF				330																									330.00
104.1		STREET EXCAVATION	CY			227																										227.00
105.1		CHANNEL EXCAVATION (150 CY<X> 5000 CY)	CY									1600																				1600.00
107.1		EMBANKMENT (FINAL)	CY			5232																										5232.00
108.1		LIME TREATED SUBGRADE (INCHES COMPACTED DEPTH)	SY	178		2210	607																									2995.00
108.2		LIME	TON	2.2		27.4	7.5																									37.10
205.2		HOT MIX ASPHALTIC PAVEMENT TYPE B 7in PAVMNT THICK	SY	182		2210	607																									2999.00
205.4		HOT MIX ASPHALTIC PAVEMENT TYPE D 2in PAVMNT THICK	SY	244		2019	2262																									4525.00
302.1		METAL FOR STRUCTURES (<500 LBS.)	LBS								650																					650.00
500.1		CONCRETE CURB	LF	58		660	60																									778.00
502.1		CONCRETE SIDEWALKS CONVENTIONALLY FORMED	SY	44		453	150																									647.00
502.3		SIDEWALK DRAIN	EA								4																					4.00
503.4		ASPHALTIC CONCRETE DRIVEWAY	SY			107	57																									164.00
505.1		CONCRETE RIPRAP (5" THICK) (<100SY)	SY								38																					38.00
507.1		CHAIN LINK FENCE (4ft. HIGH)	LF					1250																								1250.00
515.1		TOPSOIL	CY									545						173	254	178												1150.00
516.1		BERMUDA SODDING	SY															1559	2288	1603												5450.00
520.1		HYDROMULCHING	SY									3263																				3263.00
530.1		BARRICADES, SIGNS, & TRAFFIC HANDLING ($2,5000/MO)	LS						1																							1.00
531.13		R3-7 LEFT LANE MUST TURN LEFT OR RIGHT LANE MUST TURN RIGHT (30"x30")(HIGH DENSITY)	EA				1																									1.00
531.3		R1-1 STOP* (30")	EA			1	2																									3.00
531.34		S1-1 SCHOOL CROSSING (36"x36")	EA		1		1																									2.00
531.6		R2-1 SPEED LIMIT* (24"x30")	EA			1																										1.00
531.66		S5-2A, END SCHOOL ZONE* (24"x9")	EA			1																										1.00
531.68		R3-17 (BIKE LANE)* (30"x24")	EA	1																												1.00
531.70		R3-17b(ENDS)* (30"x12")	EA	1																												1.00
531.XX		S4-1 24x8	EA			1																										1.00
531.YY		S4-3 24x8	EA			1																										1.00
531.ZZ		W16-7PL 24x12	EA		1		1																									1.00
531.1		4 INCH WIDE YELLOW LINE	LF	520	1600	867																										2987.00
535.12		WORD "ONLY"	EA			2	2																									4.00
535.16		STRAIGHT WHITE ARROW BICYCLE FACILITY	EA			2																										2.00
535.17		BICYCLE RIDER SYMBOL	EA			2																										2.00
535.4		8 INCH WIDE WHITE LINE	LF	260	800	1040	273																									2373.00
535.5		12 INCH WIDE WHITE LINE	LF				50																									50.00
535.7		24 INCH WIDE WHITE LINE	LF			40	360																									400.00
535.8		RIGHT WHITE ARROW	EA				1																									1.00
535.9		LEFT WHITE ARROW	EA			2	1																									3.00
536.X		24 INCH WIDE YELLOW LINE	LF	85	237																											322.00
537.8		PAVEMENT MARKER (TYPE II A-A)	EA	14	40	22	4																									80.00
540.1		ROCK FILTER DAMS (INSTALL) (TYPE 3)	LF																213													213.00
540.1		ROCK FILTER DAMS (REMOVE) (TYPE 3)	LF																213													213.00
540.6		CONSTRUCTION EXITS (INSTALL/REMOVE)	SY															112		113												225.00
540.9		TEMPORARY SEDIMENT CONTROL FENCE	LF															297	551	802												1650.00
801.1		LEVEL I PROTECTIVE FENCING TREE TRUNK PROTECTION	LF																		3119											3119.00
801.2		LEVEL II A PROTECTIVE FENCING TREE TRUNK PROTECTION	LF																		1480											1480.00
801.3		LEVEL II B PROTECTIVE FENCING TREE TRUNK PROTECTION	LF																		139											139.00
802.2		LEVEL II PRUNING	LS																			1										1.00
804		NEW TREE & SHRUB PLANTING AND MAINTENANCE	LS																			1										1.00

STATE OF TEXAS
ALVARO J. LOPEZ
102216
REGISTERED PROFESSIONAL ENGINEER
3/4/14
FIRM REG. NO. F-199

SHEET 1 OF 2

STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS
TBPE REG. NO. F-199

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

SHAENFIELD ROAD

ESTIMATED QUANTITIES

SEQ. #G03

100 % SUBMITTAL | PROJECT NO.: 40-00294 | DATE: 04 Mar 2014
DRWN. BY: SZT | DSGN. BY: AJL | CHKD. BY: EJM | SHEET NO. 3 OF 137

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04 Mar 2014

ESTIMATED QUANTITIES

TXDOT BID ITEMS				ROADWAY SHEETS					DRAINAGE SHEETS				ENVIRONMENTAL & SW3P SHEETS					ILLUMINATION SHEETS					STRUCTURAL SHEETS									TOTAL QUANTITIES
ITEM NO.	DESC CODE	BID ITEM DESCRIPTION	UNIT	22	23	24	25	25A	35				98	98A	99			80	80-81	80-82	82		38	39	42	43	45	46	47	48	49	
164	2009	BROADCAST SEED (TEMP)(WARM)	SY										850	1250	900																	3000.00
164	2011	BROADCAST SEED (TEMP)(COOL)	SY										850	1250	900																	3000.00
354	2045	PLANE ASPH CONC PAV (2")	SY	98			1707																									1805.00
400	2023	CEM STAB BKFL (BEHIND ABUTMENT)	CY																						128	128						256.00
416	2001	DRILL SHAFT (18 IN)	LF																						40	40						80.00
416	2004	DRILL SHAFT (36 IN)	LF																						186	186	900					1272.00
420	2003	CL C CONC (ABUT)	CY																						42.7	427						85.40
420	2004	CL C CONC (BENT)	CY																								197.50					197.50
420	2034	CL S CONC (BRIDGE SDWLK)	CY						8																					85	127.5	220.50
422	2001	REINF CONC SLAB	SF																											11900	17850	29750.00
425	2068	PRESTR CONC GIRDER (Tx54)	LF																									1592.40	2388.48			3980.88
432	2002	RIPRAP (CONC) (5 IN)	CY																				53.9	92.4								147.00
442	2048	STRUCTURAL STEEL (MISC NON BRIDGE)	LB																											2830	1415	4245.00
450	2064	RAIL (TY C221)	LF																											428	628	1056.00
454	2001	SEALED EXPANSION JOINT (4 IN) (SEJ-A)	LF																						45.17	45.17	45.17					136.00
531	2006	CURB RAMPS (TY 2)	EA				1																									1.00
531	2007	CURB RAMPS (TY 3)	EA			2	5																									7.00
531	2013	CURB RAMPS (TY 20)	EA				1																									1.00
531	2044	CURB RAMPS (TY 10)	EA				2																									2.00
610		INS RD II AM (TY SA) 25T-12 (.25Kw)S	EA																4													4.00
610		INS RD II AM (TY SA) 25S-12 (.25Kw)S	EA																		5											5.00
618	2020	CONDUIT (2-1/2 INCH/PVC SCHEDULE 40)	LF																	1667												1667.00
618	2036	CONDUIT (2-1/2 INCH/PVC SCHEDULE 80)	LF															6														6.00
620	2003	ELECTRICAL CONDUCTORS (NO. 2) (ALUM)(INSULATED)	LF																		3400											3400.00
620	2009	ELECTRICAL CONDUCTORS (NO. 6) (ALUM)(BARE)	LF																		1727											1727.00
628	2056	ELC SRV TY D 120/240 060 (NS)AL(E)Tp(O)	EA															1														1.00
644	2063	INS SM RD SN SUP & AM (RAIL MOUNT)	EA		1																											1.00

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04 Mar 2014

STATE OF TEXAS
ALVARO J. LOPEZ
102216
REGISTERED PROFESSIONAL ENGINEER
3/4/14
FIRM REG. NO. F-199

SHEET 2 OF 2

STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS
TBPE REG. NO. F-199

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

SHAENFIELD ROAD

ESTIMATED QUANTITIES

SEQ. #G04

100 % SUBMITTAL	PROJECT NO.: 40-00294		DATE: 04 Mar 2014
DRWN. BY: SZT	DSGN. BY: AJL	CHKD. BY: EJM	SHEET NO.: 4 OF 137

ITEM-DESC	103.1	103.3	103.4	104.1	107.1	108.1	108.2	205.2	205.4	500.1
SHEET	Remove Concrete Curb	Remove Sidewalks and Driveways	Remove Miscellaneous Concrete	Street Excavation	Embankment (Final)	Lime Treated Subgrade (inches compacted depth)	Lime	Hot Mix Asphaltic Pavement Type B 7 in pvmnt thick	Hot Mix Asphaltic Pavement Type D 2 in pvmnt thick	Concrete Curb
	LF	SF	LF	CY	CY	SY	TON	SY	SY	LF
1						178	2.2	182	244	58
2										
3		855		227	5232.00	2210	27.4	2210	2019	660
4	85	2570	330			607	7.5	607	2262	60
FENCE										
TOTALS	85	3425	330	227	5232.00	2995	37.1	2999	4525	778

ITEM-DESC	502.1	503.4	507.1	531.13	531.3	531.34	531.6	531.66	531.68	535.1
SHEET	Concrete Sidewalks Conventionally Formed	Asphaltic Concrete Driveway	Chain Link Wire Fence (4 ft. high)	R3-7 LEFT LANE MUST TURN LEFT or RIGHT LANE MUST TURN RIGHT* (30" x 30")	RI-1 STOP* (30")	S1-1 Advance School Crossing and School Crossing**(36" x 36")	R2-1 Speed Limit* (24" x 30")	S5-2A, End School Zone* (24" x 9")	R3-17 (BIKE LANE)* (30" X 24")	4 inch wide yellow line
	SY	SY	LF	EA	EA	EA	EA	EA	EA	LF
1	44								1	520
2						1				1600
3	453	107			1		1	1		867
4	150	57		1	2	1				
FENCE			1250							
TOTALS	647	164	1250	1	3	2	1	1	1	2987

ITEM-DESC	535.12	535.16	535.17	535.4	535.5	535.7	535.8	535.9	537.8	++ 0354-2045
SHEET	Word "ONLY"	Straight White Arrow Bicycle Facility	Bicycle Rider Symbol	8 inch wide white line	12 inch wide white line	24 inch wide white line	Right White Arrow	Left White Arrow	Pavement Marker (Type II A A)	PLANE ASPH CONC PAV (2")
	EA	EA	EA	LF	LF	LF	EA	EA	EA	SY
1				260					14	98
2				800					40	
3	2	2	2	1040		40		2	22	
4	2			273	50	360	1	1	4	1707
FENCE										
TOTALS	4	2	2	2373	50	400	1	3	80	1805

ITEM-DESC	++0531-2006	++0531-2007	++0531-2013	++0531-2044	++0644-2063	531.70	531.XX	531.YY	531.ZZ	536.X
SHEET	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)	CURB RAMPS (TY 20)	CURB RAMPS (TY 10)	INS SM RD SN SUP&AM (RAIL MOUNT)	R3-17b (ENDS)(30"X12")	S4-1 24x8	S4-3 24x8	W16-7PL 24x12	24 inch wide yellow line
	EA	EA	EA	EA	EA	EA	EA	EA	EA	LF
1						1				85
2					1				1	237
3		2					1	1		
4	1	5	1	2					1	
FENCE										
TOTALS	1	7	1	2	1	1	1	1	2	322

++ DENOTES TXDOT BID ITEMS

SEA STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS
TBPE REG NO F-108

PAPE-DAWSON ENGINEERS
555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.9000 FAX: 210.375.9010
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

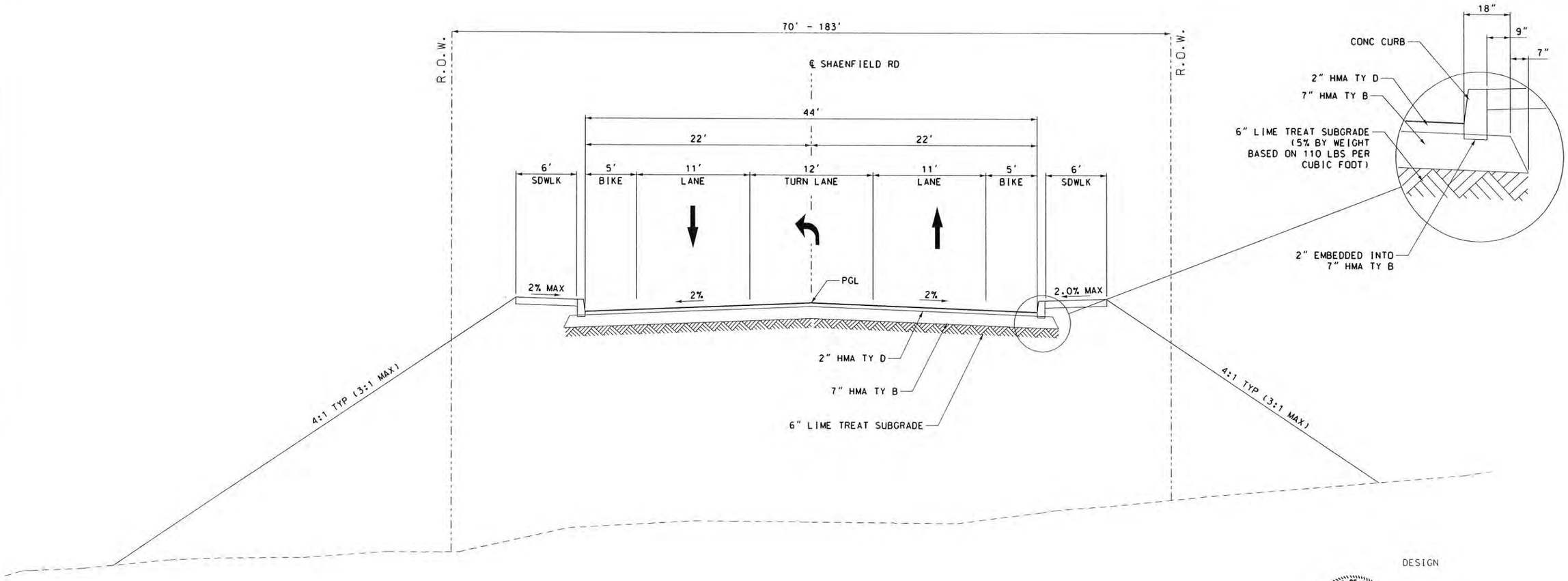
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

SHAENFIELD ROAD

ROADWAY SUMMARY SHEET

SEQ #G05

100 % SUBMITTAL	PROJECT NO 40-00201		DATE FEB 2014
DRWN BY LR	DSGN BY LR	CHKD BY	SHEET NO 5 OF 137



PROPOSED TYPICAL SECTION
STA 30+90 - STA 39+95
N.T.S.

NOTE: MACHINE LAY IS PRIMARY METHOD FOR TY B PLACEMENT. BLADE LAY IS ONLY BY ENGINEER'S APPROVAL.

DESIGN

STATE OF TEXAS LUKE REED 101242 LICENSED PROFESSIONAL ENGINEER

LUKE REED, P.E. 2/25/14 DATE

REVIEW AND APPROVAL

STATE OF TEXAS JAMES A. LUTZ 84722 LICENSED PROFESSIONAL ENGINEER

JAMES A. LUTZ, P.E. 2/25/14 DATE

SEA STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS
TBPE REG NO F-199

PAPE-DAWSON ENGINEERS
555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.9000 FAX: 210.375.9010
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

SHAENFIELD ROAD

TYPICAL SECTION

SEQ #G06

100 % SUBMITTAL	PROJECT NO 40-00294		DATE FEB 2014
DRWN BY LR	DSGN BY LR	CHKD BY JL	SHEET NO 6 OF 137

$FILES

$DATES

THE FOLLOWING CHANGES ARE MADE TO THE CITY OF SAN ANTONIO'S GENERAL NOTES:

ADDITIONAL NOTES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL REQUIRED STORM WATER PERMITS, FEES, AND APPROVALS. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PERMITS REQUIRED FOR CONSTRUCTION IN DRAINAGE EASEMENTS, RIGHT-OF-WAY, AND FLOODPLAINS.

2. THE CONTRACTOR SHALL NOTIFY STORM WATER ENGINEERING AT LEAST 24 HOURS PRIOR TO THE INSTALLATION OF ANY DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET RIGHT-OF-WAY NOT INDICATED ON THE CONSTRUCTION PLANS.

3. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING DRAINAGE FACILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING DRAINAGE SYSTEMS, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AT HIS EXPENSE. THE CONTRACTOR SHALL NOTIFY STORM WATER ENGINEERING AT 210-207-8052 AS SOON AS CONFLICTS WITH UTILITIES ARE ENCOUNTERED OR ANY DRAINAGE SYSTEM IS DAMAGED DURING CONSTRUCTION.

4. CONSTRUCTION SPOILS WILL NOT BE ALLOWED TO BE DEPOSITED ANYWHERE WITHIN A DRAINAGE EASEMENT, RIGHT-OF-WAY OR FLOODPLAIN WITHIN THE LIMITS OF THE PROJECT AND SHALL BE DISPOSED OFFSITE IN COMPLIANCE WITH CURRENT APPLICABLE REGULATIONS.

5. NO STRUCTURE, FENCES, WALLS, LANDSCAPING, OR OTHER OBSTRUCTIONS THAT IMPEDE DRAINAGE SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THE CONSTRUCTION DOCUMENTS.

6. UPON COMPLETION OF TRENCHING, THE AREA WILL BE BACKFILLED AND COMPACTED TO ITS ORGINAL CONDITION. TRENCHES/BORE PITS OPEN AND UNATTENDED LONGER THAN 24 HOURS SHALL BE PROTECTED TO WITHSTAND ALL HYDRODYNAMIC AND HYDROSTATIC FORCES AND PREVENT DOWNSTREAM IMPACTS. TRENCHES/BORE PITS TO BE OPEN LONGER THAN 30 DAYS AFTER STARTING EXCAVATION SHALL BE BACKFILLED WITH A SEMI-PERMANENT REPAIR BACKFILL.

7. IMPROVED SECTIONS OF EARTHEN CHANNELS AND/OR WATERWAYS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE.

8. SAWS WATER LINE MUST BE RELOCATED BEFORE CONSTRUCTION OF BRIDGE DRILLED SHAFTS BEGINS.

NOTE MODIFICATIONS

1. MODIFY NOTE NO. 1 – ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATER. ALL BRIDGE CONSTRUCTION SHALL CONFORM TO TxDOT'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES, 2004.

2. MODIFY NOTE NO. 10 – CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION:

SAN ANTONIO WATER SYSTEM (SAWS)	233-2009
COSA DRAINAGE	207-8052
COSA SIGNAL OPERATIONS	207-7720
TEXAS STATE WIDE ONE CALL LOCATOR	811
– CITY PUBLIC SERVICE ENERGY	
– TIME WARNER	
– AT&T	
– MCI	

STATE OF TEXAS
ALVARO J. LOPEZ
102216
REGISTERED PROFESSIONAL ENGINEER
2/26/14
FIRM REG. NO. F-199

HL93 LOADING

STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS
TBPE REG. NO. F-199

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

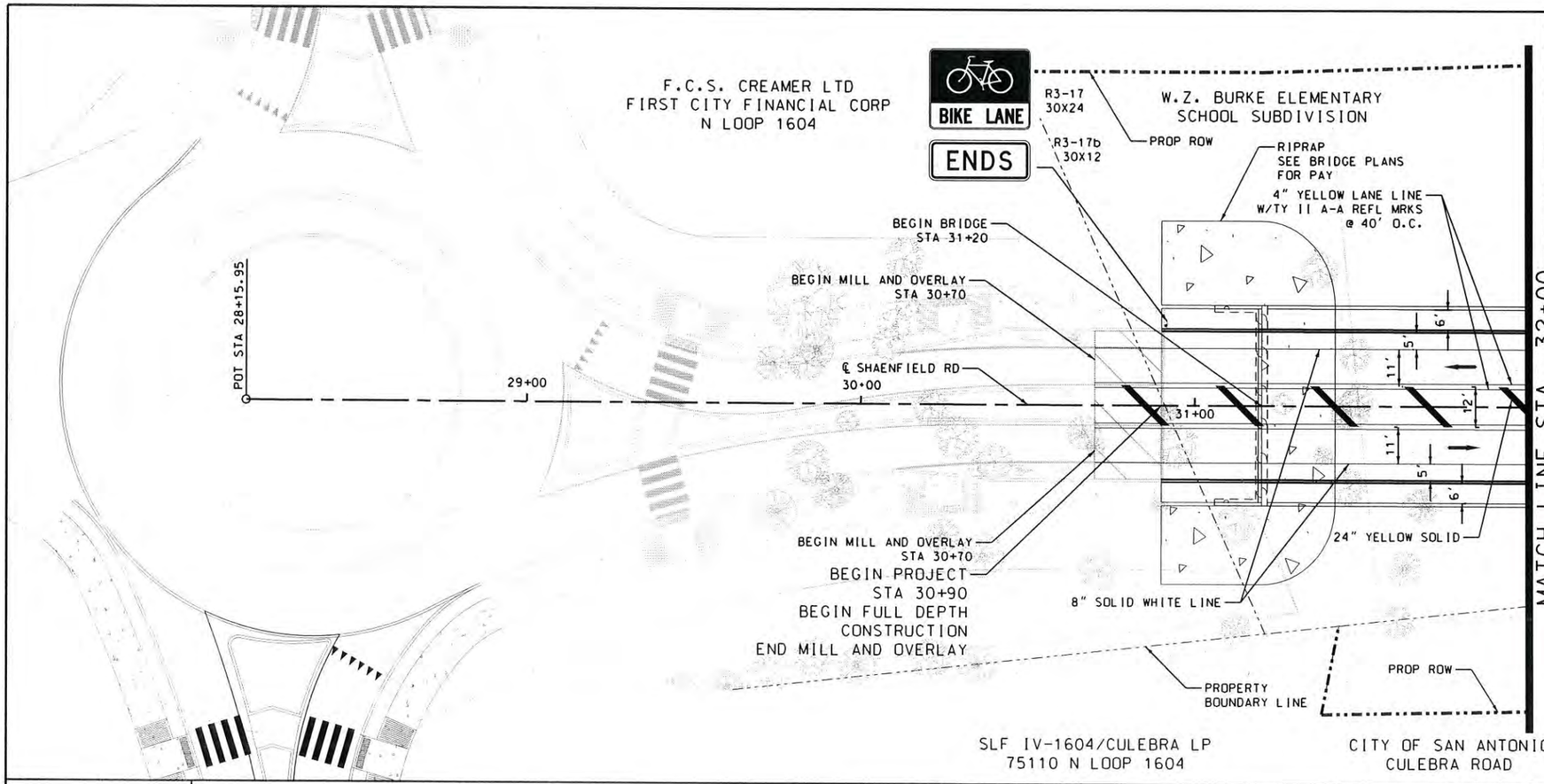
SHAENFIELD ROAD

SUPPLEMENTAL GENERAL NOTES

SEQ. #G11

100 % SUBMITTAL	PROJECT NO.: 40-00294		DATE: 26 Feb 2014
DRWN. BY: SZT	DSGN. BY: AJL	CHKD. BY: EJM	SHEET NO. 11 OF 137

26 Feb 2014 K:\San Antonio City Projects\Shaenfield Road\General\G10_suppgennotes.dgn Sonya T

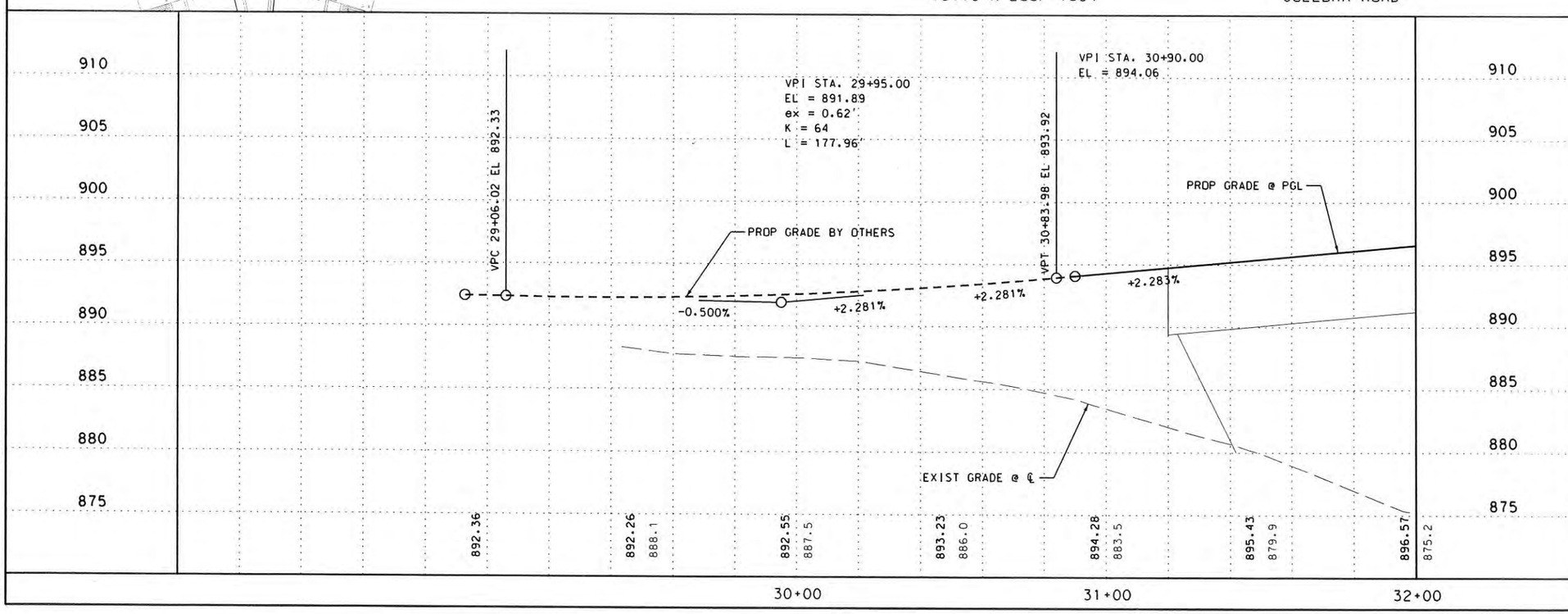


ITEM	DESCRIPTION	UNIT	QTY
108.1	Lime Treated Subgrade (inches compacted depth)	SY	178
108.2	Lime	TON	2.2
205.2	Hot Mix Asphaltic Pavement Type B 7 in pvmnt thick	SY	182
205.4	Hot Mix Asphaltic Pavement Type D 2 in pvmnt thick	SY	244
500.1	Concrete Curb	LF	58
502.1	Concrete Sidewalks Conventionally Formed	SY	44
531.68	R3-17 (BIKE LANE)* (30" X 24")	EA	1
535.1	4 inch wide yellow line	LF	520
535.4	8 inch wide white line	LF	260
537.8	Pavement Marker (Type II A A)	EA	14
0354-2045	PLANE ASPH CONC PAV (2")	SY	98
531.70	R3-17b (ENDS) (30"X12")	EA	1
536.X	24 inch wide yellow line	LF	85

1. EXISTING FEATURES ARE SHOWN SCREENED BACK, I.E. FADED.
2. SHORING OF EXIST POLES SUBSIDIARY TO EXCAVATION ITEMS.
3. REFER TO DRIVEWAY DETAIL AND TABLE SHEETS FOR ADDITIONAL DRIVEWAY INFO.

LEGEND

℄	CENTER LINE
PGL	PROFILE GRADE LINE
⟵	TRAFFIC FLOW ARROW
ROW	RIGHT OF WAY LINE
	SIGN
	WHEELCHAIR RAMP
(X)	DRIVEWAY



DESIGN

STATE OF TEXAS
LUKE REED
101242
LICENSED PROFESSIONAL ENGINEER

LUKE REED, P.E. 2/25/14 DATE

REVIEW AND APPROVAL

STATE OF TEXAS
JAMES A. LUTZ
84722
LICENSED PROFESSIONAL ENGINEER

JAMES A. LUTZ, P.E. 2/25/14 DATE

SCALE: PLAN 1" = 40'
PROFILE 1" = 10'

SEA STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS
TBPE REG NO F 199

PAPE-DAWSON ENGINEERS
555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.9000 FAX: 210.375.9010
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

SHAENFIELD ROAD

PLAN & PROFILE SHEET

BEGIN PROJECT TO STA 32+00

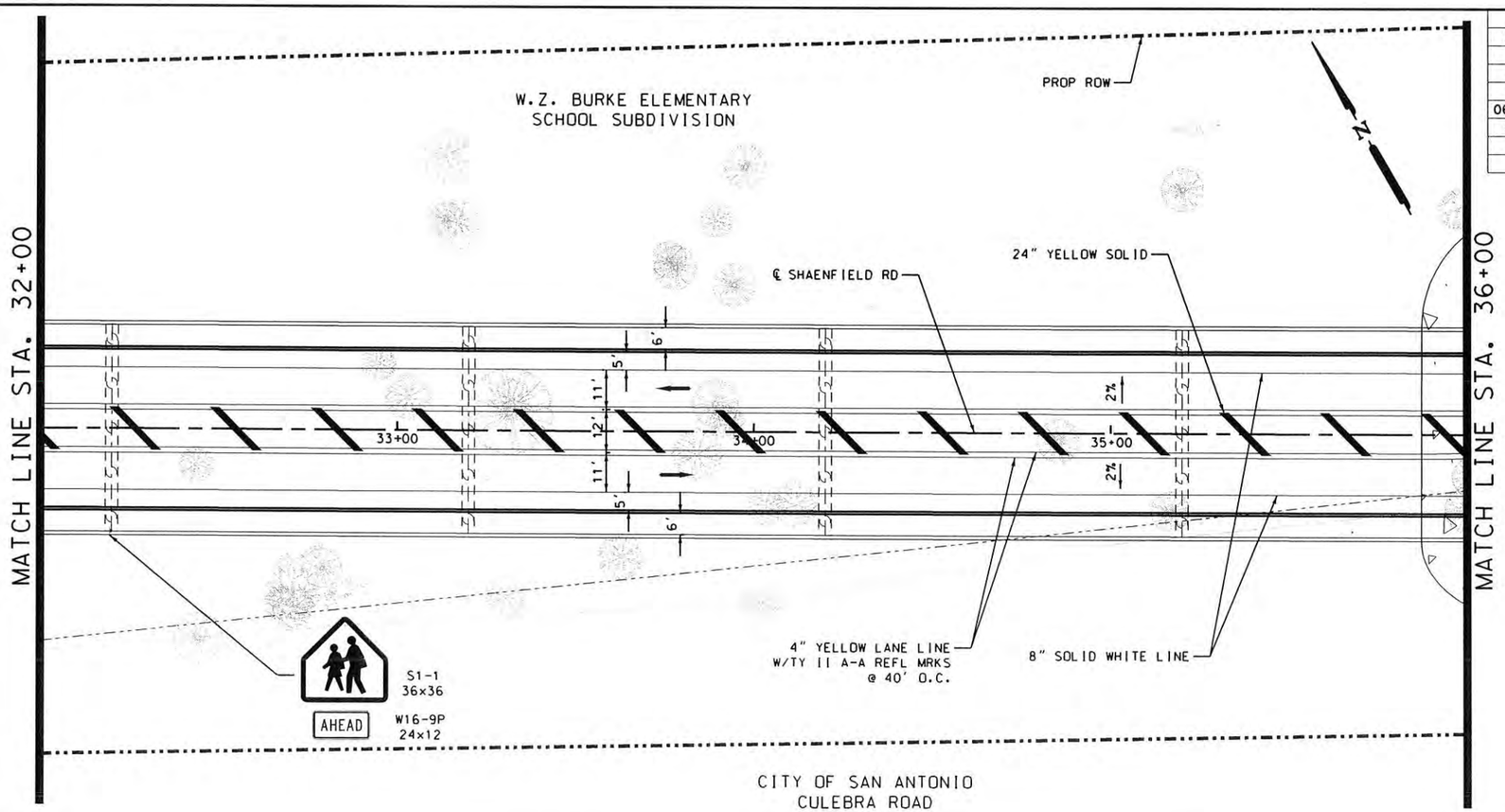
SEQ #R03

100 % SUBMITTAL	PROJECT NO. 40-00294		DATE FEB 2014
DRWN BY LR	DSGN BY: LR	CHKD BY: JL	SHEET NO 22 OF 137

SFILES

SDATES

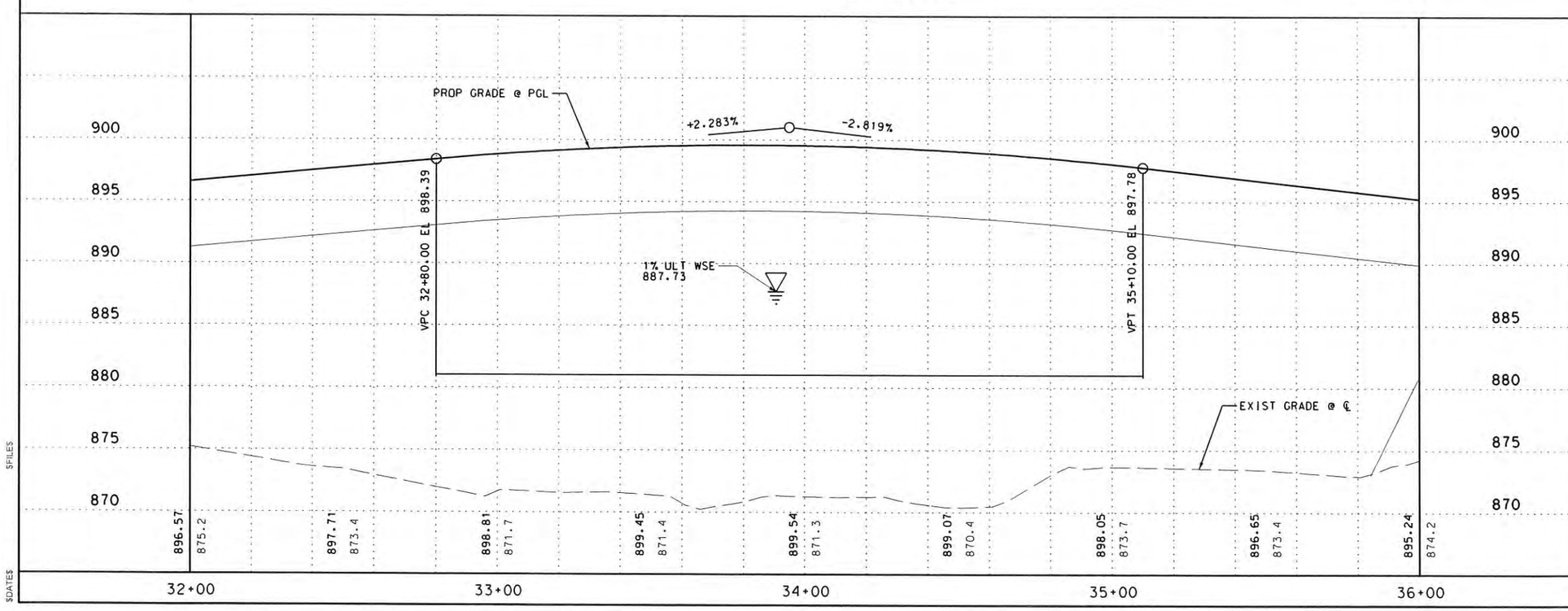
ITEM	DESCRIPTION	UNIT	QTY
531.34	S1-1 Advance School Crossing and School Crossing** (36	EA	1
535.1	4 inch wide yellow line	LF	1600
535.4	8 inch wide white line	LF	800
537.8	Pavement Marker (Type II A A)	EA	40
0644-2063	INS SM RD SN SUP&AM (RAIL MOUNT)	EA	1
531.ZZ	W16-7PL 24x12	EA	1
536.X	24 inch wide yellow line	LF	237



1. EXISTING FEATURES ARE SHOWN SCREENED BACK, I.E. FADED.
2. SHORING OF EXIST POLES SUBSIDIARY TO EXCAVATION ITEMS.
3. REFER TO DRIVEWAY DETAIL AND TABLE SHEETS FOR ADDITIONAL DRIVEWAY INFO.

LEGEND

℄	CENTER LINE
PGL	PROFILE GRADE LINE
⟵	TRAFFIC FLOW ARROW
ROW	RIGHT OF WAY LINE
	SIGN
	WHEELCHAIR RAMP
(X)	DRIVEWAY



DESIGN

LUKE REED
101242
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS

LUKE REED, P.E. — 2/25/14 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ
84722
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS

JAMES A. LUTZ, P.E. — 2/25/14 DATE

SCALE: PLAN 1" = 40'
PROFILE 1" = 10'

STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS
TBPE REG NO. F-199

PAPE-DAWSON ENGINEERS
555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.9000 FAX: 210.375.9010
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

SHAENFIELD ROAD

PLAN & PROFILE SHEET

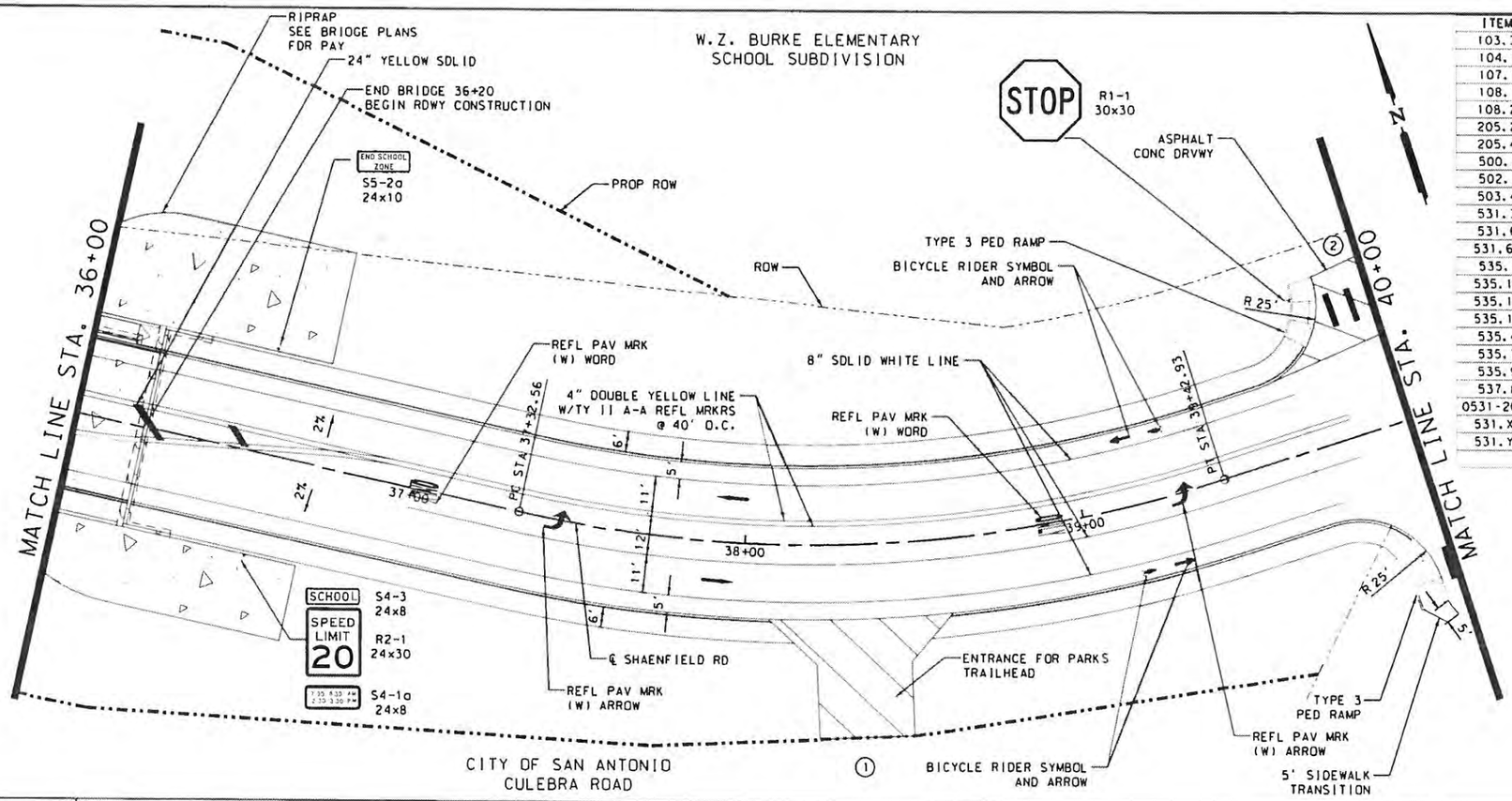
STA 32+00 TO 36+00

SEQ #R04

100 % SUBMITTAL	PROJECT NO 40-00294		DATE FEB 2014
DRWN BY LR	DSGN BY LR	CHKD BY JL	SHEET NO 23 OF 137

$FILES

$DATES

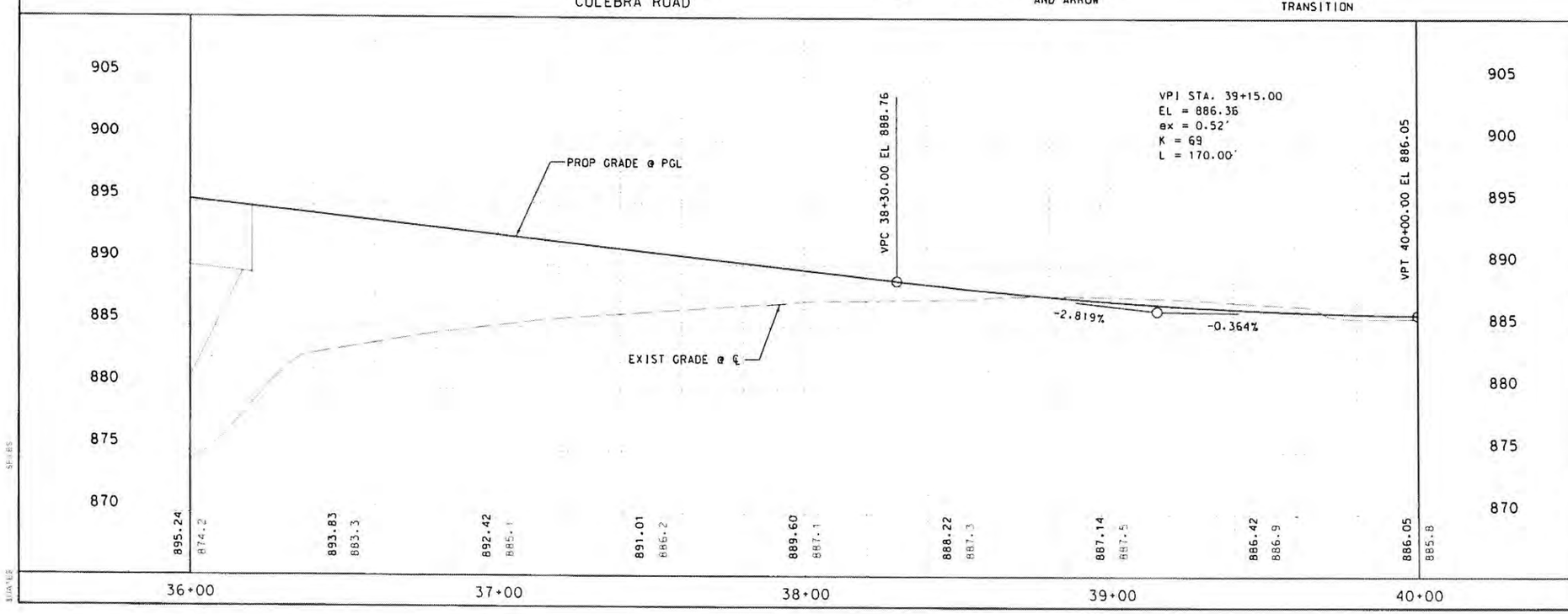


ITEM	DESCRIPTION	UNIT	QTY
103.3	Remove Sidewalks and Driveways	SF	855
104.1	Street Excavation	CY	227
107.1	Embankment (Final)	CY	5232
108.1	Lime Treated Subgrade (inches compacted depth)	SY	2210
108.2	Lime	TON	27.4
205.2	Hot Mix Asphaltic Pavement Type B 7 in pvmnt thick	SY	2210
205.4	Hot Mix Asphaltic Pavement Type D 2 in pvmnt thick	SY	2019
500.1	Concrete Curb	LF	660
502.1	Concrete Sidewalks Conventionally Formed	SY	453
503.4	Asphaltic Concrete Driveway	SY	107
531.3	R1-1 STOP* (30")	EA	1
531.6	R2-1 Speed Limit* (24" x 30")	EA	1
531.66	S5-2A, End School Zone* (24" x 9")	EA	1
535.1	4 inch wide yellow line	LF	867
535.12	Word "ONLY"	EA	2
535.16	Straight White Arrow Bicycle Facility	EA	2
535.17	Bicycle Rider Symbol	EA	2
535.4	8 inch wide white line	LF	1040
535.7	24 inch wide white line	LF	40
535.9	Left White Arrow	EA	2
537.8	Pavement Marker (Type II A A)	EA	22
0531-2007	CURB RAMPS (TY 3)	EA	2
531.XX	S4-1 24x8	EA	1
531.YY	S4-3 24x8	EA	1

1. EXISTING FEATURES ARE SHOWN SCREENED BACK, I.E. FADED.
2. SHORING OF EXIST POLES SUBSIDIARY TO EXCAVATION ITEMS.
3. REFER TO DRIVEWAY DETAIL AND TABLE SHEETS FOR ADDITIONAL DRIVEWAY INFO.

LEGEND

℄	CENTER LINE
PGL	PROFILE GRADE LINE
▬▬	TRAFFIC FLOW ARROW
ROW	RIGHT OF WAY LINE
	SIGN
	WHEELCHAIR RAMP
(X)	DRIVEWAY



DESIGN

STATE OF TEXAS
LUKE REED
101244
LICENSED
PROFESSIONAL ENGINEER

LUKE REED, P.E. 2/25/14 DATE

REVIEW AND APPROVAL

STATE OF TEXAS
JAMES A. LUTZ
84722
LICENSED
PROFESSIONAL ENGINEER

JAMES A. LUTZ, P.E. 2/25/14 DATE

SCALE: PLAN 1" = 40'
PROFILE 1" = 10'

STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS

PAPE-DAWSON ENGINEERS
555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.9000 FAX: 210.375.9010
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

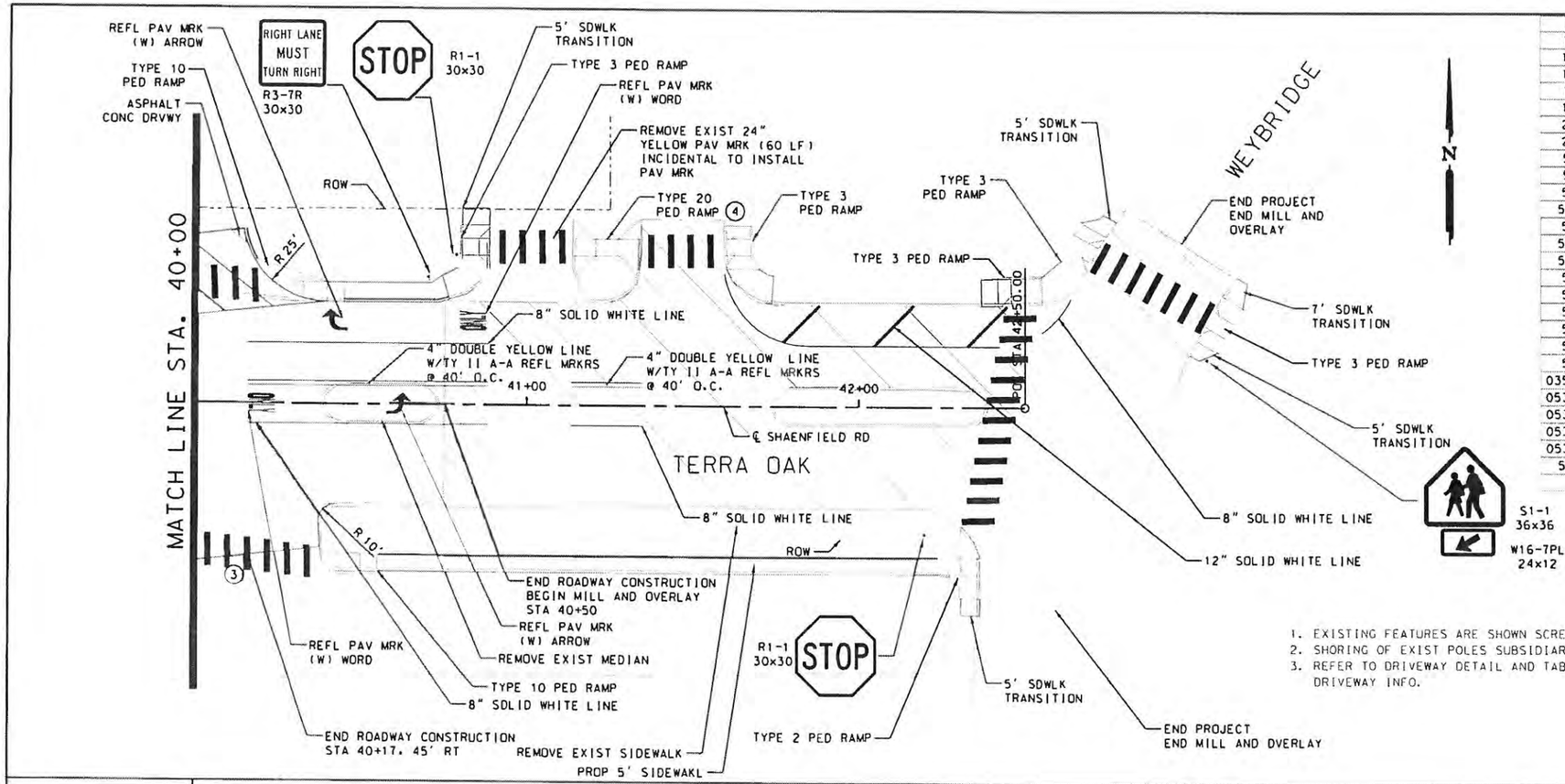
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

SHAENFIELD ROAD

PLAN & PROFILE SHEET

STA 36+00 TO STA 40+00

SUBMITTAL	PROJECT NO.	DATE	
DRAWN BY: JR	DSGN BY: JR	CHKD BY:	SHEET NO.

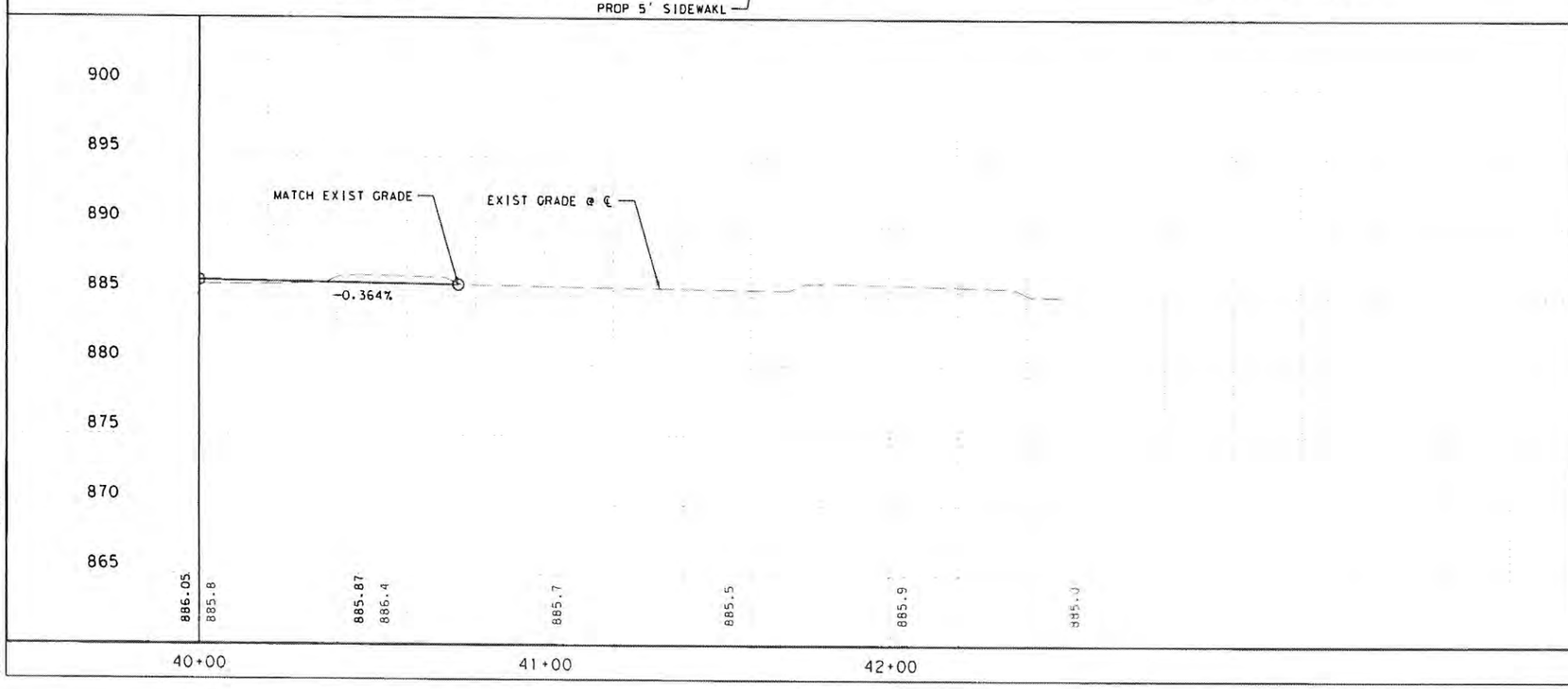


ITEM	DESCRIPTION	UNIT	QTY
103.1	Remove Concrete Curb	LF	85
103.3	Remove Sidewalks and Driveways	SF	2570
103.4	Remove Miscellaneous Concrete	LF	330
108.1	Lime Treated Subgrade (inches compacted depth)	SY	607
108.2	Lime	TON	7.5
205.2	Hot Mix Asphaltic Pavement Type B 7 in pvmnt thick	SY	607
205.4	Hot Mix Asphaltic Pavement Type D 2 in pvmnt thick	SY	2262
500.1	Concrete Curb	LF	60
502.1	Concrete Sidewalks Conventionally Formed	SY	150
503.4	Asphaltic Concrete Driveway	SY	57
531.13	R3-7 LT LANE MUST TURN LT or RT LN MUST TURN RT	EA	1
531.3	R1-1 STOP* (30")	EA	2
531.34	S1-1 Advance School Crossing and School Crossing**(36	EA	1
535.12	Word "ONLY"	EA	2
535.4	8 inch wide white line	LF	273
535.5	12 inch wide white line	LF	50
535.7	24 inch wide white line	LF	360
535.8	Right White Arrow	EA	1
535.9	Left White Arrow	EA	1
537.8	Pavement Marker (Type II A A)	EA	4
0354-2045	PLANE ASPH CONC PAV (2")	SY	1707
0531-2006	CURB RAMPS (TY 2)	EA	1
0531-2007	CURB RAMPS (TY 3)	EA	5
0531-2013	CURB RAMPS (TY 20)	EA	1
0531-2044	CURB RAMPS (TY 10)	EA	2
531.22	W16-7PL 24x12	EA	1

1. EXISTING FEATURES ARE SHOWN SCREENED BACK, I.E. FADED.
2. SHORING OF EXIST POLES SUBSIDIARY TO EXCAVATION ITEMS.
3. REFER TO DRIVEWAY DETAIL AND TABLE SHEETS FOR ADDITIONAL DRIVEWAY INFO.

LEGEND

℄	CENTER LINE
PGL	PROFILE GRADE LINE
⟶	TRAFFIC FLOW ARROW
ROW	RIGHT OF WAY LINE
	SIGN
	WHEELCHAIR RAMP
(X)	DRIVEWAY



DESIGN

STATE OF TEXAS LUKE REED 101242 LICENSED PROFESSIONAL ENGINEER

LUKE REED, P.E. 2/25/14 DATE

REVIEW AND APPROVAL

STATE OF TEXAS JAMES A. LUTZ 84722 LICENSED PROFESSIONAL ENGINEER

JAMES A. LUTZ, P.E. 2/25/14 DATE

SCALE: PLAN 1" = 40'
PROFILE 1" = 10'

STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS
TBPE-FIRM NO. F-10

PAPE-DAWSON ENGINEERS
555 EAST RAMSEY | SAN ANTONIO, TEXAS 78216 | PHONE: 210.375.9000 FAX: 210.375.9010
TEXAS BOARD OF PROFESSIONAL ENGINEERS, FIRM REGISTRATION # 470

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

SHAENFIELD ROAD

PLAN & PROFILE SHEET

STA 40+00 TO END PROJECT

BY: SASITTA | PROJECT NO. 10-05201 | DATE: FEB 2014
DRAWN BY: LH | REVIEW BY: JR | CHECK BY: JL | SHEET NO.

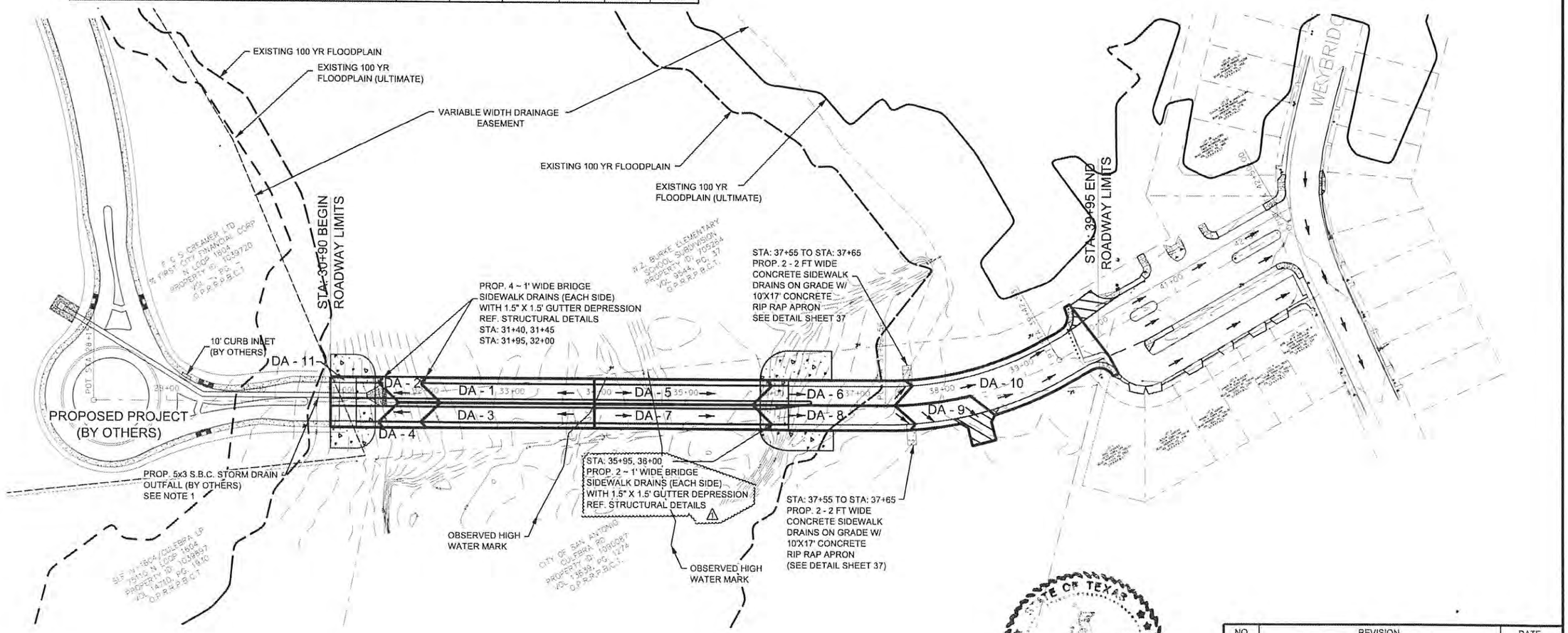
Shaenfield Rd. Proposed Drainage Area Calculations

ID	Comp C Value	Area (AC)	Time of Concentration (MIN)	T_c Used	Intensity I_{25} (in/hr)	Intensity I_{100} (in/hr)	Discharge Q_{25} (cfs)	Discharge Q_{100} (cfs)	Tc - Concentrated Flow (Gutter) Length	Vel (f/s)	Tc (MIN)
DA-1	0.95	0.13	0.64	5	11.10	13.54	1.33	1.62	200.00	5.20	0.64
DA-2	0.95	0.03	0.19	5	11.10	13.54	0.35	0.42	70.47	6.20	0.19
DA-3	0.95	0.12	0.64	5	11.10	13.54	1.31	1.60	200.00	5.20	0.64
DA-4	0.95	0.03	0.19	5	11.10	13.54	0.34	0.42	70.47	6.20	0.19
DA-5	0.95	0.13	0.55	5	11.10	13.54	1.38	1.69	200.00	6.10	0.55
DA-6	0.95	0.11	0.37	5	11.10	13.54	1.14	1.39	150.00	6.80	0.37
DA-7	0.95	0.13	0.55	5	11.10	13.54	1.34	1.63	200.00	6.10	0.55
DA-8	0.95	0.11	0.37	5	11.10	13.54	1.15	1.41	150.00	6.80	0.37
DA-9	0.95	0.08	0.24	5	11.10	13.54	0.82	1.00	75.00	5.20	0.24
DA-10	0.95	0.26	0.6	5	11.10	13.54	2.78	3.39	225.00	6.20	0.60
DA-11	0.95	0.09	0.19	5	11.10	13.54	0.90	1.09	60.00	5.20	0.19

ESTIMATED SHEET QUANTITIES

COSA ITEM	TXDOT ITEM	TITLE	UNIT	QNTY
302.1		METAL FOR STRUCTURES (<500 LBS)	LBS	650
502.3		SIDEWALK DRAIN	EA	4
505.1		CONCRETE RIP RAP (5" THICK) (<100 SY)	SY	38
	420	CLASS S CONCRETE (BRIDGE SIDEWALK DRAIN)	CY	8
	442	METAL FOR STRUCTURES (3/4 X 18-1/2, 48 PLF)	LBS	3,720 △1

SCALE 1" = 120'



Shaenfield Rd. Proposed Drainage Inlet Hydraulics Calculations (Q25)

ID	Station	Type	Profile Type	Discharge (cfs)	Capacity (cfs)	By Pass Flow (cfs)	By Pass Flow Into (cfs)	By Pass Node ID	Inlet Length (ft)	Length Required (ft)	Computed Ponded Width (ft)	Computed Ponded Depth (ft)
1	32+00.00	BRIDGE DRAIN	On Grade	1.33	0.07	1.26	0.00	2	1.00	32.87	6.12	0.12
2	31+40.00	BRIDGE DRAIN	On Grade	0.35	0.04	0.44	0.00	0	1.00	21.49	4.19	0.08
3	32+00.00	BRIDGE DRAIN	On Grade	1.31	0.07	1.24	0.00	4	1.00	32.66	6.09	0.12
4	31+40.00	BRIDGE DRAIN	On Grade	0.35	0.04	0.45	0.00	0	1.00	21.57	4.2	0.08
5	36+00.00	BRIDGE DRAIN	On Grade	1.38	0.07	1.31	0.00	6	1.00	33.35	6.22	0.12
6	37+60.00	SIDEWALK DRAIN	On Grade	2.45	0.37	2.07	1.31	0	2.00	22.69	7.7	0.15
7	36+00.00	BRIDGE DRAIN	On Grade	1.34	0.07	1.26	0.00	8	1.00	32.87	6.14	0.12
8	37+60.00	SIDEWALK DRAIN	On Grade	2.42	0.37	2.05	1.26	0	2.00	22.55	7.67	0.15

NOTES

1. PROJECT WILL REQUIRE COORDINATION WITH ADJACENT DEVELOPMENT PROJECT IN ORDER TO COMPLETE PROPOSED STORM DRAIN AND OUTFALL STRUCTURE.

STATE OF TEXAS
JOHN T. MCKNIGHT
92[illegible]
PROFESSIONAL ENGINEER
2/28/14

DON DURDEN, INC.
d.b.a. CIVIL ENGINEERING CONSULTANTS
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-6440
REGISTRATION #F-2214

NO.	REVISION	DATE
△1	REVISED QUANTITY FOR BRIDGE SIDEWALK DRAINS	2-28-14

STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS
TBPE REG. NO. F-199

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

SHAENFIELD ROAD

PROPOSED DRAINAGE AREA MAP

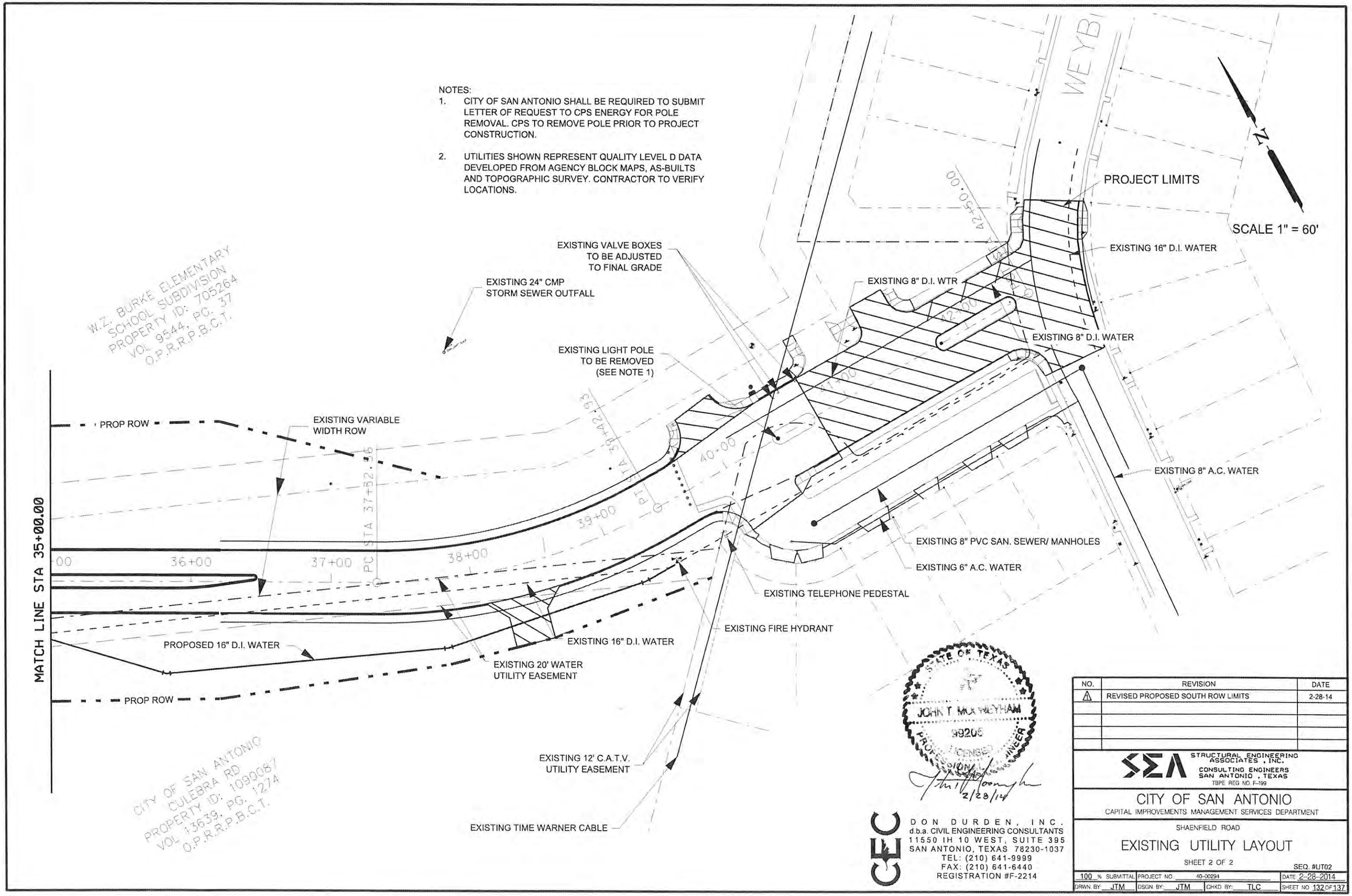
SEQ. #DR02

100% % SUBMITTAL | PROJECT NO. 40-00294 | DATE 2-28-2014
DRWN. BY JTM | DSGN. BY: JTM | CHKD. BY: TLC | SHEET NO. 35 OF 137

2/27/2014 9:13:23 AM SUSER:\data\pw\cwrks\Projects\E0420800_Shaenfield_Rd\cadd\Sheets\Prop Drainage Area Map.dgn E0420800_Shaenfield_Rd.pltcfg

NOTES:

1. CITY OF SAN ANTONIO SHALL BE REQUIRED TO SUBMIT LETTER OF REQUEST TO CPS ENERGY FOR POLE REMOVAL. CPS TO REMOVE POLE PRIOR TO PROJECT CONSTRUCTION.
2. UTILITIES SHOWN REPRESENT QUALITY LEVEL D DATA DEVELOPED FROM AGENCY BLOCK MAPS, AS-BUILTS AND TOPOGRAPHIC SURVEY. CONTRACTOR TO VERIFY LOCATIONS.



STATE OF TEXAS
JOHN T. MOONEYHAM
99206
LICENSED PROFESSIONAL ENGINEER
2/28/14

DON DURDEN, INC.
d.b.a. CIVIL ENGINEERING CONSULTANTS
11550 IH 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9999
FAX: (210) 641-6440
REGISTRATION #F-2214

NO.	REVISION	DATE
1	REVISED PROPOSED SOUTH ROW LIMITS	2-28-14

SEA STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
SAN ANTONIO, TEXAS
TBPE REG NO. F-199

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

SHAENFIELD ROAD

EXISTING UTILITY LAYOUT

SHEET 2 OF 2

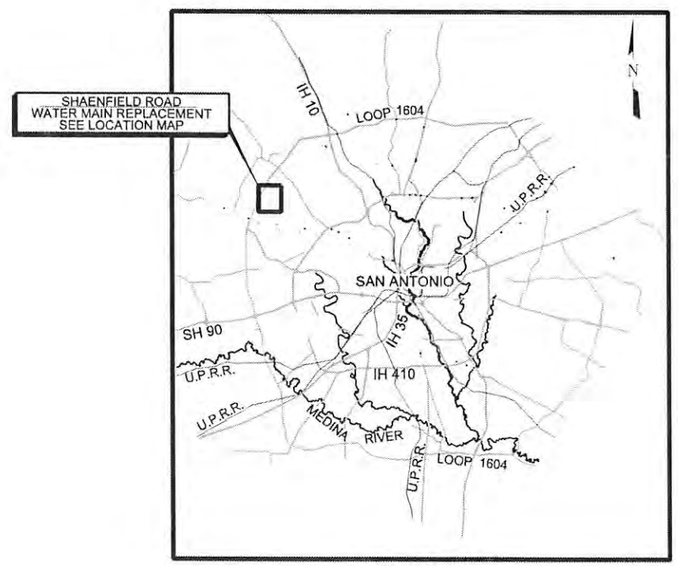
SEQ. #UT02

100 % SUBMITTAL	PROJECT NO. 40-00294		DATE 2-28-2014
DRWN BY: JTM	DSGN BY: JTM	CHKD BY: TLC	SHEET NO 132 OF 137

SAN ANTONIO WATER SYSTEM

SHAENFIELD ROAD BRIDGE PROJECT
SAWS WATER PLANS

SAWS JOB NO. 12-5106 (WATER)



VICINITY MAP
N.T.S.

CEC

CIVIL ENGINEERING CONSULTANTS
DON DURDEN, INC.
11550 I.H. 10 WEST, SUITE 395
SAN ANTONIO, TEXAS 78230
P) 210.641.9999
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Web: www.CECTEXAS.com
T.B.P.E. REGISTRATION NO. F-2214

CEC PROJECT NO. E0420800
FEBRUARY 2014

STATE OF TEXAS
JOHN T. MOONEYHAM
99205
LICENSED
PROFESSIONAL ENGINEER
2/28/14

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JOHN T. MOONEYHAM, P.E. 99205

GENERAL NOTES

1. All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:

   A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.

   B. Current Texas Department of Transportation (TXDOT) "Standard Specifications for Construction of Highways, Streets and Drainage."

   C. Current San Antonio Water System "Standard Specifications for Water and Sanitary Sewer Construction."

   D. Current City of San Antonio "Standard Specifications for Public Works Construction."

   E. Current City of San Antonio "Utility Excavation Criteria Manual"

2. The Contractor is to make arrangements with the SAWS Construction Inspection Division at 233-3500 and provide notification procedures the contractor will use to notify affected home residents and/or property owners 48 hours prior to excavation.

3. Locations and depths of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor 48 hours prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.

4. The Contractor shall verify the exact location of underground utilities and drainage structures at least 48 hours prior to construction whether shown on plans or not. The following contact information are supplied for verification purposes:

   SAWS Utility Locates: 233-2009
   SAWS Production Control Center: 233-2016
   COSA Drainage: 207-8048
   COSA Traffic Signal Operations: 207-7720
   Texas State Wide One Call Locator: 1-800-545-6005 or 811

5. The Contractor shall comply with City of San Antonio or other governing Municipality's tree ordinances when excavating near trees.

6. The Contractor shall not place any waste materials or spoils in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.

7. Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-3500 and/or SAWS Production groups at least two weeks in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.

8. Where water lines and new sewer lines are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC 217.53(d) (Pipe Design) and 30 TAC 290.44(e) (Water Distribution).

9. Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), may be located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs, Payment for such work is to be made under Special Specification Item for Asbestos Cement Pipe.

10. Any work completed without prior written authorization which is not included in these plans and specifications will not be compensated by the San Antonio Water System.

WATER CONSTRUCTION NOTES

1. ALL EXCAVATION IS TO BE TO A DEPTH AS TO PROVIDE A MINIMUM OF 4 FEET OF COVER OVER THE TOP OF PIPE, UNLESS OTHERWISE SHOWN ON PLANS.

2. SAWS SHALL MACHINE CHLORINATE NEW WATER MAINS IF THE MAIN IS GREATER THAN 750 FEET. CONTRACTOR SHALL CHLORINATE NEW MAINS WITH HTH IF THE WATER MAIN LENGTH IS 750 FEET OR LESS. THE LENGTH REFERS TO THE LENGTH OF INTERCONNECTING MAINS AND NOT NECESSARILY THE TOTAL LENGTH OF THE NEW MAIN

3. CONTRACTOR TO FURNISH AND INSTALL TEMPORARY BLOW-OFFS IN ACCORDANCE WITH SAWS STANDARDS DRAWING DD-844-01, SHEET 1 OF 4, AND JUMPER CONNECTIONS AS REQUIRED OR AS DIRECTED BY THE CONSTRUCTION INSPECTOR AS SPECIFIED IN SAWS SPECIFICATION ITEM 844.

4. CONTRACTOR SHALL RELAY EXISTING SERVICE LINES AND RELOCATE METER BOXES WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE CONSTRUCTION INSPECTOR.

5. AFTER THE NEW MAINS HAVE BEEN RELEASED FOR SERVICE AND SERVICE LINES HAVE BEEN TRANSFERRED TO THE NEW MAINS, ABANDON EXISTING MAINS WHERE SHOWN ON PLANS.

6. CONTRACTOR TO SALVAGE EXISTING FIRE HYDRANT(S) AND OTHER MATERIALS AS DIRECTED BY THE CONSTRUCTION INSPECTOR AND TRANSPORT TO DESIGNATED STORAGE LOCATION.

7. ANCHORAGE BLOCKING AND RESTRAINED JOINTS PIPING SYSTEM (NSPI).

   A. THRUST BLOCKS FOR WATER LINES SHALL BE USED IN ACCORDANCE WITH SAWS STANDARD DRAWINGS DD-839-01, DD-839-04, DD-839-05, DD-839-06, DD-839-07, AND DD-839-08.

   B. JOINT RESTRAINT FOR FITTINGS SHALL BE USED IN ACCORDANCE WITH SAWS STANDARD DRAWING SERIES DD-839-01 AS SHOWN ON THE WATER PLANS.

   C. JOINT RESTRAINT SYSTEMS SHALL HAVE U.L. FACTORY CERTIFICATIONS, SHALL MEET ASTM F-1674-96 (PVC) AND U.L. 194 (D.I.) AND SHALL BE UNI-FLANGE SERIES 1390C OR ROMAC GRIP RING SERIES, OR APPROVED EQUAL. THEY SHALL BE INSTALLED PER MANUFACTURER INSTRUCTIONS, SHALL BE PACKAGED SEPARATELY WITH INSTRUCTIONS, SHALL HAVE RETAINER BANDS AND COLOR CODED GASKETS THAT MEET ASTM A536-80 (GRADE 65-45-12), SHALL MEET REQUIREMENTS OF DUCTILE IRON FITTINGS INCLUDED IN SAWS SPECIAL SPECIFICATION "WATER MAINS AND SERVICE LINES" AND SHALL BE CAPABLE OF TEST PRESSURE OF 2 TIMES THE WORKING PRESSURE (200 PSI).

8. WATER MAIN TIE-INS:

   A. PRIOR TO THE SHUTDOWN AND TIE-IN OF ANY SIZE WATER MAIN, CONTRACTOR SHALL COORDINATE WITH SAWS INSPECTIONS AND SAWS PRODUCTION CONTROL CENTER AT LEAST ONE WEEK IN ADVANCE OF BEGINNING THE WORK (NSPI). CONTRACTOR SHALL PROVIDE SAWS WITH A SEQUENCE OF WORK RELATED TO THE TIE-INS (NSPI). ALL TIE-INS SHALL CONFORM TO SAWS SPECIFICATION ITEM 840.

9. AIR RELEASE VALVES SHALL BE INSTALLED IN CONFORMANCE WITH SAWS STANDARD DRAWING DD-846-02 AND SAWS SPECIFICATION ITEM 846.

10. PROPOSED TOP OF PIPE ELEVATIONS FOR THE NEW MAIN AS SHOWN ON THE PLANS ARE ESTIMATED. CONTRACTOR TO VERIFY CLEARANCE BETWEEN NEW WATER MAIN AND OTHER EXISTING AND/OR PROPOSED UTILITIES PRIOR TO INSTALLATION OF THE NEW WATER MAIN.

INDEX OF SHEETS

SHEET NO.	TITLE
1	GENERAL NOTES, QUANTITIES & INDEX
2	PROJECT OVERALL
3	16" WATER MAIN PLAN & PROFILE (1 OF 2)
4	16" WATER MAIN PLAN & PROFILE (2 OF 2)

OVERALL SUMMARY OF QUANTITIES

ITEM NO.	TITLE	UNIT	QUANTITY
100	MOBILIZATION	LS	1
101	PREPARING RIGHT-OF-WAY	LS	1
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	475
814	16" DUCTILE IRON PIPE	LF	475
826	EX. VALVE BOX ADJUSTMENT	EA	5
836	PIPE FITTINGS, ALL SIZES AND TYPES	TON	1
836	16" WATER TIE-INS	EA	2
841	HYDROSTATIC TESTING	EA	1
844	2" BLOWOFF, TEMPORARY	EA	1
846	1" AIR RELEASE ASSEMBLIES	EA	1
858	CONCRETE ENCASEMENT, CRADLES, SADDLES AND COLLARS	CY	21

STATE OF TEXAS
JOHN T. MOONEYHAM
99205
LICENSED
PROFESSIONAL ENGINEER
2/28/14

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JOHN T. MOONEYHAM, P.E. 99205

SHEET NO. 134 OF 137 SEQ. # W01

CEC
CIVIL ENGINEERING CONSULTANTS
DON DURDEN, INC.
11550 IH 10 WEST, SUITE 355
SAN ANTONIO, TEXAS 78230-1037
TEL: (210) 641-9559 | FAX: (210) 641-6440
TBPE REGISTRATION NO. : F-2214
TBPLS REGISTRATION NO. : 100410-00

No.	Revision	Drawn	Approved	Date

REVISIONS

SHAENFIELD ROAD BRIDGE PROJECT

GENERAL NOTES, QUANTITIES & INDEX

DEVELOPER:
CONT. BUDGET PROJ.
SUBMITTED
APPROVED

MAP NO. 098-608
SECT. No.
DR. CK. JOB No. 12-5106
SHEET 1 OF 4

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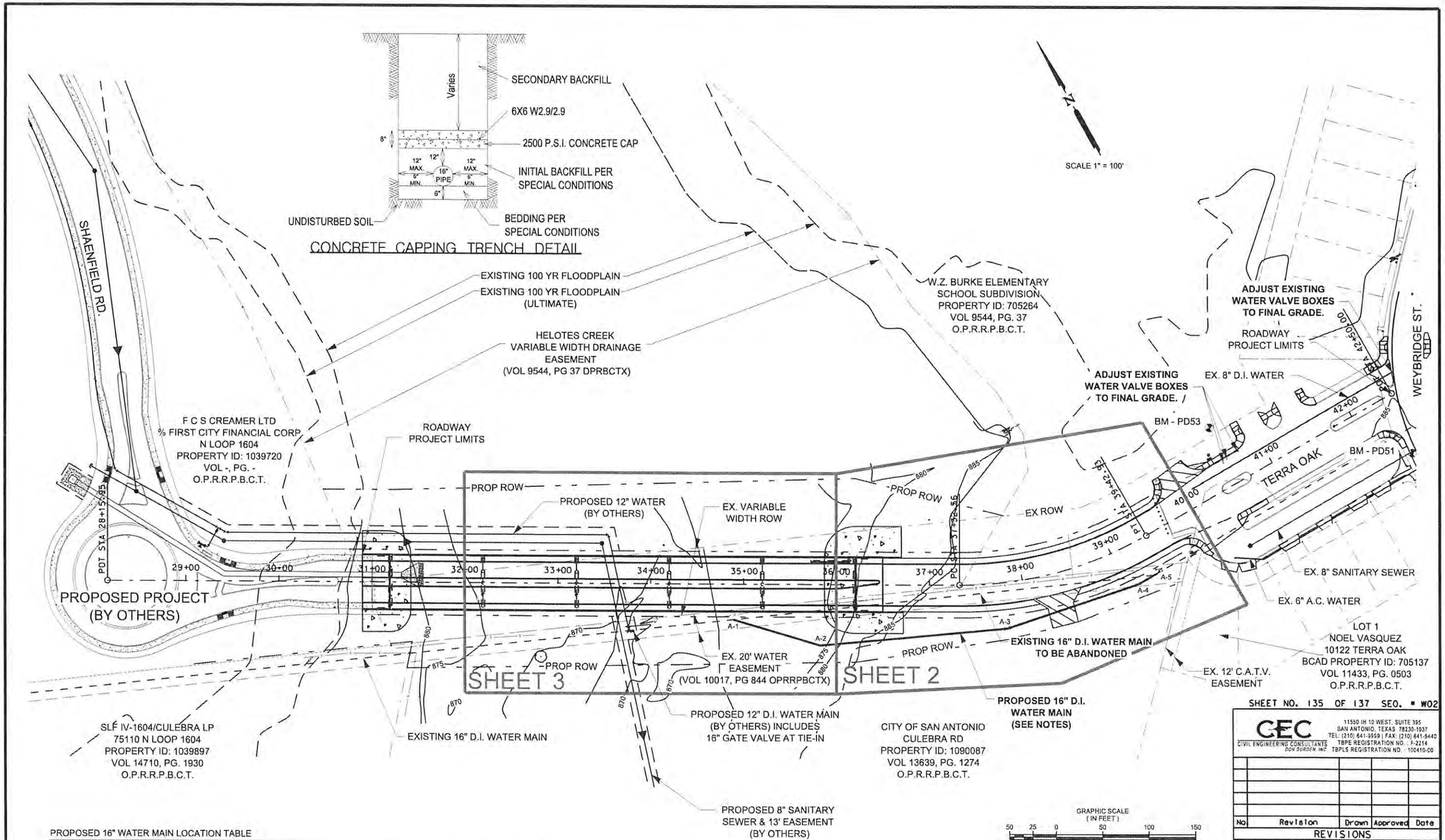

PROPOSED 16" WATER MAIN LOCATION TABLE

POINT NAME	NORTHING	EASTING	ROADWAY STATION
A-1	13734328.7361	2066849.4416	STA. 34+89 O/S 38' RT
A-2	13734257.9943	2066916.5000	STA. 35+82.5 O/S 65.3' RT
A-3	13734173.0667	2067099.9300	STA. 37+78.2 O/S 49.1' RT
A-4	13734143.2740	2067245.9810	STA. 39+12.5 O/S 42.3' RT
A-5	13734143.1417	2067269.7942	STA. 39+34 O/S 41.2' RT

ESTIMATED SHEET QUANTITIES

ITEM NO.	TITLE	UNIT	QUANTITY
100	MOBILIZATION	LS	1
101	PREPARING RIGHT-OF-WAY	LS	1
826	EX. VALVE BOX ADJUSTMENT	EA	5

HORIZONTAL AND VERTICAL CONTROL POINTS TABLE

BENCHMARK	NORTHING	EASTING	ELEVATION	DESCRIPTION
PD51	13734116.8800	2067574.4300	884.92	PK NAIL IN PAVEMENT AT SE CORNER OF TERRA OAK AND LES HARRISON
PD52	13733704.1100	2067534.5700	882.69	PK NAIL WITH WASHER SET APPROXIMATELY 62' NORTH OF PEBBLESTONE ON LES HARRISON ST.
PD53	13734249.9457	2067397.1921	888.14	SQUARE CHISLED ON CONCRETE WATER VAULT SOUTHEAST OF BURKE ELEM. PARKING LOT

NOTES:

1. CONTRACTOR SHALL NOTIFY SAWS INSPECTOR AND OPERATIONS AT LEAST 48 HOURS PRIOR TO THE PLANNED TIE-IN.
2. TIE-IN TO EXISTING 16" D.I. MAIN SHALL BE COMPLETED WITHIN 4 HOURS.
3. REFERENCE CITY OF SAN ANTONIO PLANS FOR TREE REMOVAL AND PROTECTION REQUIREMENTS.
4. UTILITIES SHOWN REPRESENT QUALITY LEVEL D INFORMATION DERIVED FROM AGENCY BLOCK MAPS, AS-BUILTS AND TOPOGRAPHIC SURVEY. CONTRACTOR TO VERIFY ALL LOCATIONS AND DEPTHS.

STATE OF TEXAS — JOHN T. MOONEYHAM — 99205 — LICENSED PROFESSIONAL ENGINEER — 2/28/14

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JOHN T. MOONEYHAM, P.E. 99205

SHEET NO. 135 OF 137 SEQ. # W02

CEC — CIVIL ENGINEERING CONSULTANTS — DON DURDEN INC — 11550 IH 10 WEST, SUITE 395, SAN ANTONIO, TEXAS 78230-1037, TEL: (210) 641-9559 | FAX: (210) 641-5440, TBPE REGISTRATION NO. F-2214, TBPLS REGISTRATION NO. 100410-00

No.	Revision	Drawn	Approved	Date

REVISIONS

SHAENFIELD ROAD BRIDGE PROJECT PROJECT LAYOUT

DEVELOPER:
CONT. | BUDGET PROJ.
SUBMITTED
APPROVED
MAP No.
SECT. No.
DR. | CK. | JOB No. 12-5106 | SHEET 2 OF 4

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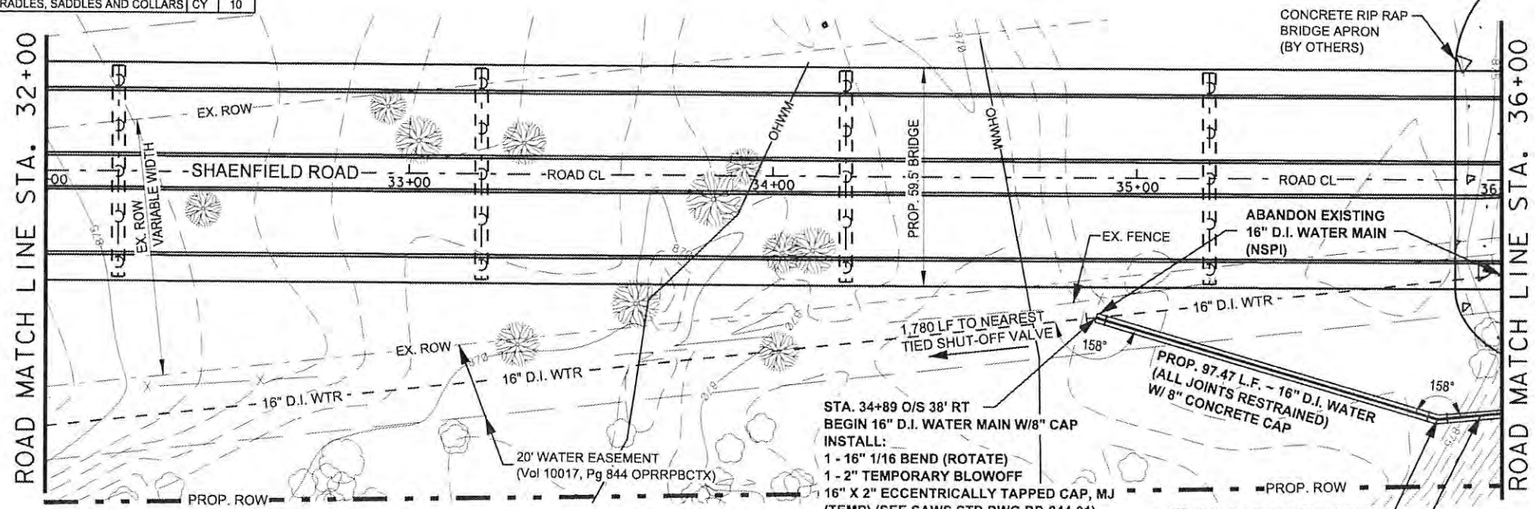
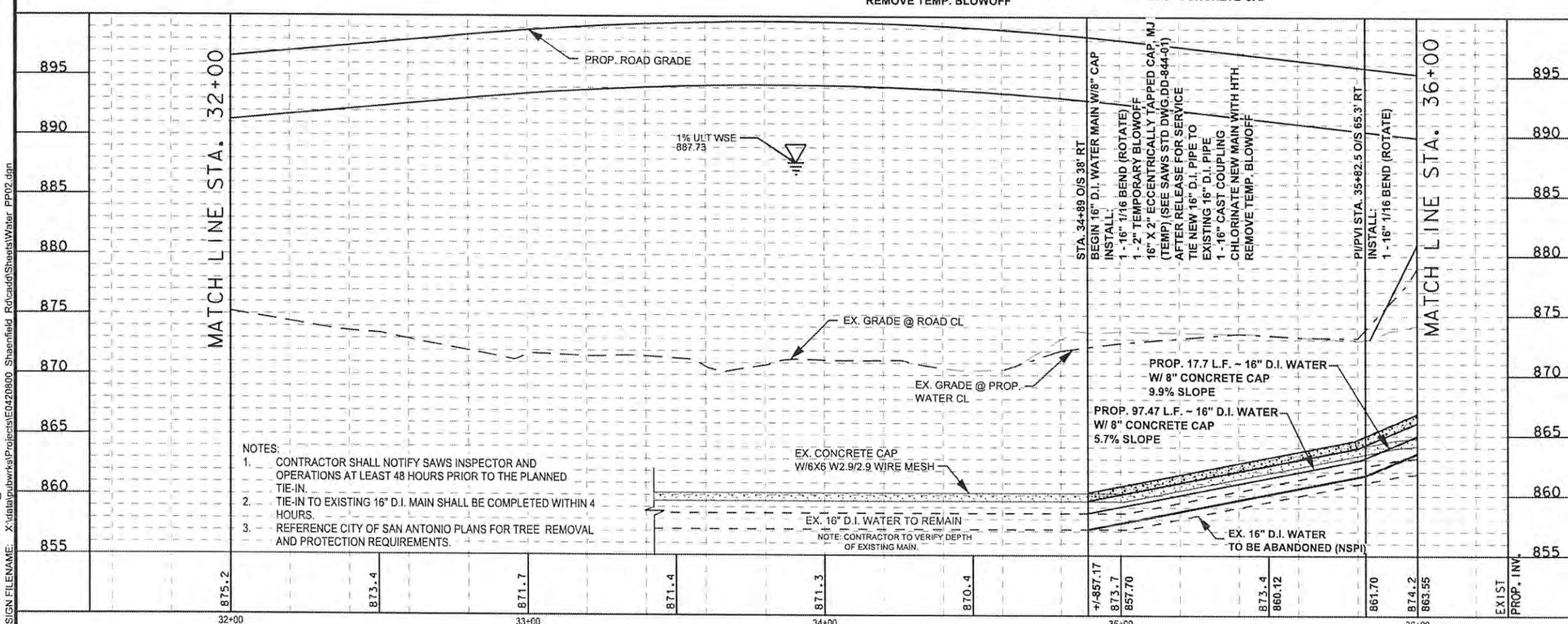
ESTIMATED SHEET QUANTITIES			
ITEM NO.	TITLE	UNIT	QNTY
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	116
814	16" DUCTILE IRON PIPE	LF	116
836	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.4
836	16" WATER TIE-INS	EA	1
841	HYDROSTATIC TESTING	EA	1
844	2" BLOWOFF, TEMPORARY	EA	1
858	CONCRETE ENCASEMENT, CRADLES, SADDLES AND COLLARS	CY	10





NOTES:
1. CONTRACTOR SHALL NOTIFY SAWS INSPECTOR AND OPERATIONS AT LEAST 48 HOURS PRIOR TO THE PLANNED TIE-IN.
2. TIE-IN TO EXISTING 16" D.I. MAIN SHALL BE COMPLETED WITHIN 4 HOURS.
3. REFERENCE CITY OF SAN ANTONIO PLANS FOR TREE REMOVAL AND PROTECTION REQUIREMENTS.

LEGEND

PROP. WATER MAIN
EXIST. WATER MAIN
GAS MAIN
SANITARY SEWER
STORM SEWER
UTILITY POLE LINE
ELECTRIC CABLE
TELEPHONE CABLE
DUAL BRANCH SERV.
NEW UNMETERED SERVICE:
3/4" SINGLE
1" DUAL
SERVICE RECONNECT:
3/4"
1" OR LARGER
SERVICE RELAY:
3/4"
1" OR LARGER
SERVICE RELOCATE:
3/4"
1" OR LARGER
RELOCATE METER
NEW SERVICE:
3/4"
1" OR LARGER

NOTES:

DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING, SUPPORTING, AND PROTECTING ALL OVERHEAD AND UNDERGROUND FACILITIES IN WORK AREA.

TRENCH EXCAVATION SAFETY PROTECTION SHALL BE ACCOMPLISHED AS REQUIRED BY THE MOST RECENT POVISIONS OF PART 1926, SUBPART P - EXCAVATIONS, TRENCHING, AND SHORING OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS AND INTERPRETATIONS, AS MAY BE AMENDED.

GRAPHIC SCALE (IN FEET)
20 10 0 20 40 60
Horz: 1" = 40'
Vert: 1" = 10'

STATE OF TEXAS
JOHN T. MOONEYHAM
99205
LICENSED
PROFESSIONAL ENGINEER
2/27/14

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JOHN T. MOONEYHAM, P.E. 99205

SHEET NO. 136 OF 137 SEQ. # W03

CEC
CIVIL ENGINEERING CONSULTANTS
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11550 IH 10 WEST, SUITE 395
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TEL. (210) 641-9999 | FAX: (210) 641-6440
TBPE REGISTRATION NO. : F-3214
TBPLS REGISTRATION NO. : 10041O-00

No	Revision	Drawn	Approved	Date

REVISIONS

SHAENFIELD ROAD BRIDGE PROJECT
16-INCH WATER MAIN PLAN & PROFILE

DEVELOPER:
CONT. | BUDGET PROJ.

SUBMITTED
APPROVED

MAP No. 098-608 | SHEET 3
SECT. No. | OF 4
DR. | CK. | JOB No. 12-5106

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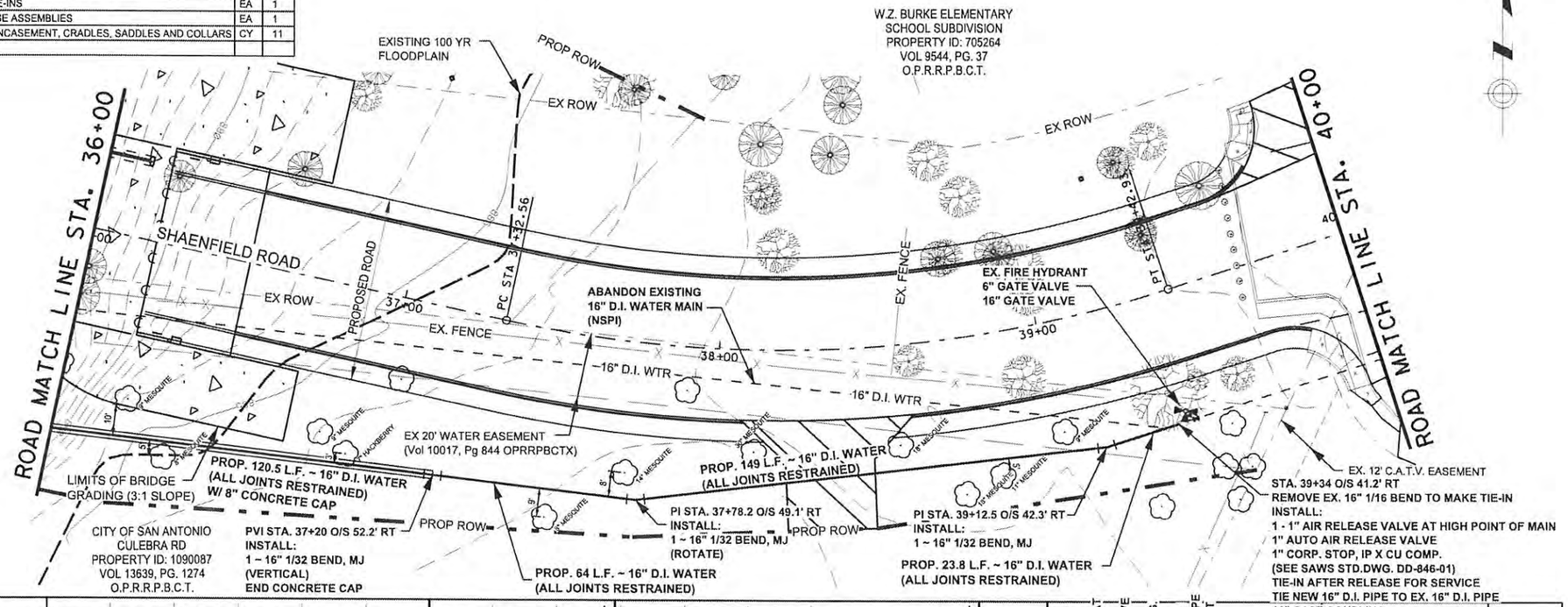
ESTIMATED SHEET QUANTITIES

ITEM NO.	TITLE	UNIT	QNTY
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	359
814	16" DUCTILE IRON PIPE	LF	359
836	PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.6
836	16" WATER TIE-INS	EA	1
846	1" AIR RELEASE ASSEMBLIES	EA	1
858	CONCRETE ENCASEMENT, CRADLES, SADDLES AND COLLARS	CY	11



LEGEND

PROP. WATER MAIN
EXIST. WATER MAIN
GAS MAIN
SANITARY SEWER
STORM SEWER
UTILITY POLE LINE
ELECTRIC CABLE
TELEPHONE CABLE
DUAL BRANCH SERV.
NEW UNMETERED SERVICE:
3/4" SINGLE
1" DUAL
SERVICE RECONNECT:
3/4"
1" OR LARGER
SERVICE RELAY:
3/4"
1" OR LARGER
SERVICE RELOCATE:
3/4"
1" OR LARGER
RELOCATE METER
NEW SERVICE:
3/4"
1" OR LARGER

NOTES:

DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

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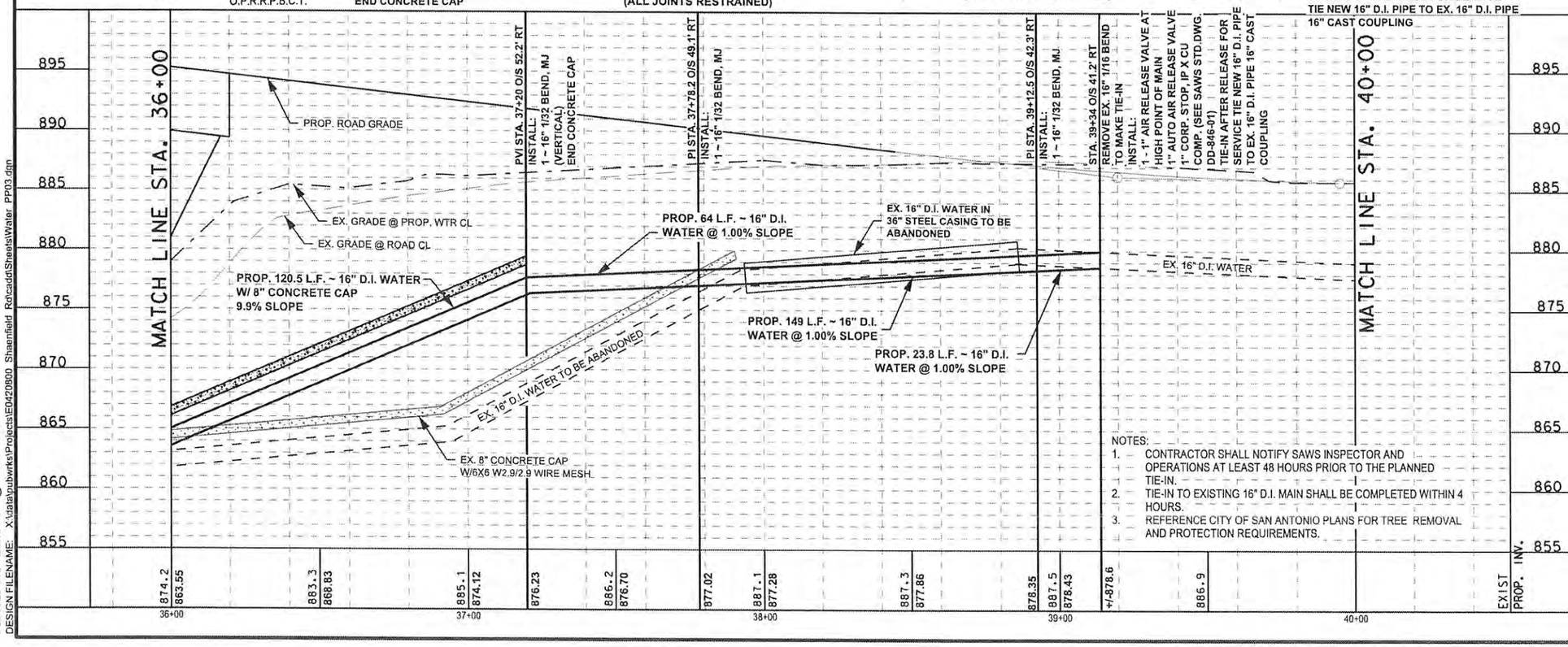
TRENCH EXCAVATION SAFETY PROTECTION SHALL BE ACCOMPLISHED AS REQUIRED BY THE MOST RECENT POVISIONS OF PART 1926, SUBPART P - EXCAVATIONS, TRENCHING, AND SHORING OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS AND INTERPRETATIONS, AS MAY BE AMENDED.



NOTES:

1. CONTRACTOR SHALL NOTIFY SAWS INSPECTOR AND OPERATIONS AT LEAST 48 HOURS PRIOR TO THE PLANNED TIE-IN.
2. TIE-IN TO EXISTING 16" D.I. MAIN SHALL BE COMPLETED WITHIN 4 HOURS.
3. REFERENCE CITY OF SAN ANTONIO PLANS FOR TREE REMOVAL AND PROTECTION REQUIREMENTS.

GRAPHIC SCALE (IN FEET)
20 10 0 20 40 60
Horz: 1" = 40'
Vert: 1" = 10'

STATE OF TEXAS — JOHN T. MOONEYHAM 99205 LICENSED PROFESSIONAL ENGINEER 2/28/14

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JOHN T. MOONEYHAM, P.E. 99205

SHEET NO. 137 OF 137 SEQ. # W04

CEC
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TEL: (210) 641-9999 | FAX: (210) 641-6440
TBPE REGISTRATION NO : F-2214
TBPLS REGISTRATION NO : 100410-00

No	Revision	Drawn	Approved	Date

REVISIONS

SAWS

SHAENFIELD ROAD BRIDGE PROJECT
16-INCH WATER MAIN PLAN & PROFILE

DEVELOPER:
CONT. | BUDGET PROJ.
SUBMITTED
APPROVED
MAP No. 098-608 | SHEET 4
SECT. No.
DR. | CK. | JOB No. 12-5106 | OF 4

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