September 14, 2015

ADDENDUM #2 to Bid Documents for the
Hidalgo County Regional Mobility Authority
US 281/BSIF CONNECTOR PROJECT CONTRACT NO. 0220-01-023, Etc.
Advertised August 2, August 9, and August 16, 2015

BACKGROUND ON THE CHANGES TO BID DOCUMENTS

1. **2015-09-03 US281 Project Memorandum (not a bid document)**
    - Explains Engineer's response to RFIs and other QA items.
2. **2015-09-14 US 281 Addendum #2 (Plan Sheet Mod Summary) (not a bid document)**
    - Provided by the GEC to summarize: the total sheets modified; the RFI that may have originated the change; name of the sheet; whether it is an additional sheet or a sheet replacement; and a reason for modification.

CHANGES TO BID DOCUMENTS

1. **Replace Section E of the "Bid Proposal" in its entirety**
    - Updated quantities highlighted in yellow in the bid tab and in the Construction Plan Set Estimate Summary sheets.

2. **Replace sheets within the "Plans for Proposed Roadway Improvements" with its corresponding replacement sheet listed below (as well as add new sheets denoted with an asterisk* by the sheet number):**
    - US 281 & BSIF CONNECTOR INDEX OF SHEETS SHEET 1 OF 1 **(SHEET NO. 2)**
    - ESTIMATE SUMMARY **(SHEET NO. 25, 25A, 25B, AND 25C)**
    - US 281 ROADWAY QUANTITY SUMMARY SHEETS SHEET 1 OF 1 **(SHEET NO. 28)**
    - US 281 & BSIF CONNECTOR SW3P & REMOVAL SUMMARY SHEETS SHEET 1 OF 1 **(SHEET NO. 30)**
    - US 281 & BSIF CONNECTOR DRAINAGE & IRRIGATION SUMMARY SHEET 1 OF 1 **(SHEET NO. 32)**
    - US 281 OVERPASS AT SH 365 ESTIMATED QUANTITIES SHEET 1 OF 1 **(SHEET NO. 33)**
    - US 281 TRAFFIC CONTROL PLAN PHASE I STA. 10180+00 TO STA. 10190+00 SHEET 4 OF 7 **(SHEET NO. 51)**
    - ENERGY ABSORPTION ACZ-350 CRASH CUSHION (TEMPORARY, WORK ZONE) ACZ (350)-13 **(SHEET NO. 92A*)**
    - US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE STA. 10150+00 TO STA. 10160+00 SHEET 4 OF 11 **(SHEET NO. 107)**
    - US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE STA. 10160+00 TO STA. 10170+00 SHEET 5 OF 11 **(SHEET NO. 108)**
    - US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE STA. 10170+00 TO STA. 10180+00 SHEET 6 OF 11 **(SHEET NO. 109)**
    - US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE STA. 10180+00 TO STA. 10190+00 SHEET 7 OF 11 **(SHEET NO. 110)**
    - US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE STA. 10190+00 TO STA. 10200+00 SHEET 8 OF 11 **(SHEET NO. 111)**
    - US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE STA. 10200+00 TO STA. 10210+00 SHEET 9 OF 11 **(SHEET NO. 112)**
    - US 281 INTERSECTION LAYOUT US 281 & SH 365 SHEET 1 OF 3 **(SHEET NO. 129)**
    - US 281 INTERSECTION LAYOUT "I" ROAD / SP 29 SHEET 3 OF 3 **(SHEET NO. 131)**

CHANGES TO BID DOCUMENTS (Continued)

2. **Replace sheets within the "Plans for Proposed Roadway Improvements" with its corresponding replacement sheet listed below (as well as add new sheets denoted with an asterisk* by the sheet number):**
    - US 281 MAINLANES UTILITIES & DRAINAGE STA. 10120+00 TO STA. 10130+00 SHEET 1 OF 11 **(SHEET NO. 175)**
    - US 281 MAINLANES UTILITIES & DRAINAGE STA. 10130+00 TO STA. 10140+00 SHEET 2 OF 11 **(SHEET NO. 176)**
    - US 281 MAINLANES UTILITIES & DRAINAGE STA. 10150+00 TO STA. 10160+00 SHEET 4 OF 11 **(SHEET NO. 178)**
    - US 281 MAINLANES UTILITIES & DRAINAGE STA. 10168+00 TO STA. 10180+00 SHEET 5 OF 11 **(SHEET NO. 179)**
    - US 281 MAINLANES UTILITIES & DRAINAGE STA. 10190+00 TO STA. 10200+00 SHEET 8 OF 11 **(SHEET NO. 182)**
    - US 281 MAINLANES UTILITIES & DRAINAGE STA. 10210+00 TO STA. 10220+00 SHEET 10 OF 11 **(SHEET NO. 184)**
    - US 281 MAINLANES UTILITIES & DRAINAGE STA. 10220+00 TO END SHEET 11 OF 11 **(SHEET NO. 185)**
    - US 281 WESTBOUND FRONTAGE ROAD UTILITIES AND DRAINAGE STA. 30192+00 TO STA. 30202+00 SHEET 4 OF 4 **(SHEET NO. 193)**
    - US 281 SAN JUAN SOUTH CONNECTOR UTILITIES AND DRAINAGE STA. 10+00.00 TO STA 14+65.00 SHEET 1 OF 1 **(SHEET NO. 198A)**
    - US 281 IRRIGATION CROSSING #1 CROSSING STA. 10135+34 SHEET 1 OF 9 **(SHEET NO. 201)**
    - US 281 IRRIGATION CROSSING #2 STA. 10162+63 SHEET 2 OF 9 **(SHEET NO. 202)**
    - US 281 IRRIGATION CROSSING #3 CROSSING STA. 10183+65 SHEET 3 OF 9 **(SHEET NO. 203)**
    - US 281 IRRIGATION CROSSING #4 STA. 10196+89.67 SHEET 4 OF 9 **(SHEET NO. 204)**
    - US 281 IRRIGATION CROSSING #5 STA. 10210+15 SHEET 5 OF 9 **(SHEET NO. 205)**
    - US 281 IRRIGATION CROSSING #6 CROSSING STA. 1297+20 SHEET 6 OF 9 **(SHEET NO. 206)**
    - BSIF CONNECTOR IRRIGATION CROSSING #7 CROSSING STA. 1318+81 SHEET 7 OF 9 **(SHEET NO. 207)**
    - BSIF CONNECTOR IRRIGATION CROSSING #8 CROSSING STA. 1328+77 SHEET 8 OF 9 **(SHEET NO. 208)**
    - BSIF CONNECTOR IRRIGATION CROSSING #9 CROSSING STA. 1333+77 SHEET 9 OF 9 **(SHEET NO. 209)**
    - BSIF CONNECTOR IRRIGATION LAYOUT SHEET 1 OF 1 **(SHEET NO. 209B*)**
    - US 281 OVERPASS AT SH 365 BRIDGE LAYOUT SHEET 1 OF 1 **(SHEET NO. 226)**
    - US 281 OVERPASS AT SH 365 ESTIMATED QUANTITIES & BEARING SEAT ELEVATION SHEET 1 OF 1 **(SHEET NO. 228)**

END OF ADDENDUM

TEDSI INFRASTRUCTURE GROUP
TEDSI
TBPE F-1640
Consulting Engineers
1201 East Expressway 83 ♦ Mission, Texas 78572
Tel: (956) 424-7898
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Project Memorandum

PROJECT: US281	**TEDSI JOB NO.:** 2012-1115-04
CLIENT: HCRMA	**DATE:** 2015-09-03
SUBJECT: Comments and Responses	
FROM: TEDSI	
DISTRIBUTION: DEC	

1. Indicate on page 129 and/or 130 the limits of concrete pavement construction quantified on the plans (summary table).

   Will add note END CONCRETE PAVEMENT (BSIF)

2. Item 496-6018 Remove Str. (3 ea.) is quantified on page 30, but not indicated on pages 97 and 98.

   Item 496-6018 us quantified on Sheet 32 and indicated on Sheet 207

3. Item 400-6003 Structural Excavation (Pipe) quantity is 873 cy or 378 cy? please check

   Item 400-6003 Structural Excavation (Pipe) quantity will by review and corrected on EQ Sheet

4. TCP pages 44 & 45 show the proposed pipe crossings under pavement, need to be shown extended beyond. Is the construction of the drainage possible this close to the CTB??

   Yes, Construction is possible. Contractor will need to use appropriate trench protection.

5. There is a “canasta” detail on page 185 without outside dimensions. Does not have locations where it is being used.

   Will add dimension and location of use.

6. Irrigation Crossing details show “concrete collars”, however, proposed pipes are PVC, please correct.

   Will correct connection callouts.

7. Cut and Restore detail indicates placing flex base with lime, this is not practical, please provide alternative.

   Will change to TY B GR 3 flexbase with no LIME

8. The proposed 72” culvert crossing on page 174 is indicated to be constructed on top of existing 30”, if done in phases how will you assure continuous flow?

   Will address. Existing 30” RCP will remain place until Phase II TCP

9. Item 400-6003 Structural Excavation (Pipe) summary quantity on page 31 shows 515 cy, but is missing on pages 175 and 176.

   ITEM 400-6003 Structural Excavation (Pipe) will added to Sheets 175,176

10. Temporary Crash Cushion ACZ-350 is an equal alternative to the SLED and approved by TxDOT but not indicated as an option, please include.

    Standard ACZ-350 will be added

11. Page 269 indicated SSCB(4) is a 10-ft section of rail at each luminaire, there are 19 poles, therefore there should be 190-lf of Ty 4 SSCB.

    Will correct and add Item 514-6004 to P&P, Summary table, and EQ sheet

12. Page 226 (Bridge Layouts) indicate the Rail across the bridge to be Ty 1 CTB, however, the pay item indicates 512-6004 Perm CTB (Sgl Slope) (Ty 4)(42in), which one is it?

    Will correct and add Item 514-6001

13. Additional comments corrected

    Modified Index sheet – added 92A ACZ-350 Standard and added 209B Irrigation Layout

    Modified Irrigation Crossing 1-6 as per HCID #2 direction

    Added connection detail to Irrigation Crossing 7-9 as per HCID #2 direction

    Added Irrigation Layout 209B- as per HCID#2 direction

    Due to Irrigation Crossings a Manhole was added to U&D's layout 179,182,184,&193

    Proposed Right of way correction on PP sheets 107, intersection layout 131, & UD 178

US 281 / BSIF PROJECT

ADDENDUM # 2 - PLAN SHEETS MODIFICATION SUMMARY

Dannenbaum Engineering **Monday, September 14, 2015**

# of Pages	Plan Sheet Numbers	RFI #	New Page ?	Title of Sheet	Reason for Modification
1	2		No	Index of Sheets	Added new sheets
4	25,25A,25B,25C		No	Estimate Summary	Added new items and quantities
1	28	11	No	Roadway Quantity Summary Sheet	Modified Quantities
1	30		No	SW3P & Removal Sheet	Modified Quantities
1	32	2, 3	No	Drainage and Irrigation Summary Sheet	Modified Quantities
1	33		No	US 281 Overpass- Estiamted Quantities	Modified Quantities
1	51	8	No	TCP Phase-1 Sta.10180+00 to Sta.10190+00	Added note on Irrigation Crossing
1	92A	10	Yes	ACZ (350) Crash Cushion standard	Added option
6	107-112	11	No	US 281 Plan and Profile Sheets	Changes to ROW line,
1	129	1	No	US 281 Intersection Details	Added notes regarding end of concrete pavement
1	131		No	US 281 "I" Road/ SP29 Intersection layout sheet	Modified ROW line on the south side
2	175, 176	9	No	US 281 Mainlanes U&Ds	Added Manhole Due to Irrigation Changes
2	178, 179		No	US 281 Mainlanes U&Ds	Added Manhole Due to Irrigation Changes
1	182		No	US 281 Mainlanes U&Ds	Added Manhole Due to Irrigation Changes
2	184, 185	5	No	US 281 Mainlanes U&Ds	Added Dimensions and locations to Cansta Detail
1	193		No	US 281 Mainlanes U&Ds	Added Manhole Due to Irrigation Changes
1	198A		No	San Juan South Connector U&D	Added additional waterline callouts and irrigation callouts
1	201	6, 7	No	US 281 Irrigation Crossing Sta. 10135+34	Modify Irrigation Crossing as per HCID #2 and added Detail
1	202	6, 7	No	US 281 Irrigation Crossing Sta. 10162+63	Modify Irrigation Crossing as per HCID #2 and added Detail
1	203	6, 7	No	US 281 Irrigation Crossing Sta. 10183+65	Modify Irrigation Crossing as per HCID #2 and added Detail
1	204	6, 7	No	US 281 Irrigation Crossing Sta. 10196+89.67	Modify Irrigation Crossing as per HCID #2 and added Detail
1	205	6, 7	No	US 281 Irrigation Crossing Sta. 10210+15	Modify Irrigation Crossing as per HCID #2 and added Detail
1	206	6, 7	No	US 281 Irrigation Crossing Sta. 1297+20	Modify Irrigation Crossing as per HCID #2 and added Detail
1	207	2, 6, 7	No	BSIF Connector Irrigation Crossing Sta. 1318+81	Added Connection Detail as per HCID #2
1	208	6, 7	No	BSIF Connector Irrigation Crossing Sta. 1328+77	Added Connection Detail as per HCID #2
1	209	6, 7	No	BSIF Connector Irrigation Crossing Sta. 1333+77	Added Connection Detail as per HCID #2
1	209B	7	Yes	BSIF Connector Irrigation Layout	Created layout as per HCID #2 direction
1	226	12	No	US 281 Bridge Layout Sheet	Added CTB TY 1 and removed rail from callout
1	228	12	No	Estimated Quantities & Bearing Seat Elevation	Added CTB TY 1 Quantities and modify CTB TY 4 Quantities
40	= TOTAL NUMBER OF PAGES				

Hidalgo County Regional Mobility Authority

US 281/BSIF CONNECTOR PROJECT

CONTRACT NO. 0220-01-023, Etc.

US 281

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E. BID

To: Hidalgo County Regional Mobility Authority

Attn: Pilar Rodriguez, P.E.

118 South Cage Boulevard, 4th Floor

Pharr, Texas 78577

Directors:

I/we, the undersigned, declare: that I/we have carefully examined the Plans, Standard Specifications, Special Provisions, and all other documents pertaining to this Contract which form a part of this Bid as if set forth at length herein; that I/we understand that the quantities of items shown herein below are approximate only; that I/we have examined the location of the proposed work; that I/we agree to bind myself/ ourselves, upon award to me/us by Hidalgo County Regional Mobility Authority under this Bid, to enter into and execute a Contract, with the necessary bonds, for the project named above; that I/we agree to start work not later than the date stated in the written Notice to Proceed, to furnish all necessary materials, provide all necessary labor, equipment, tools and plant, pay for all required insurance, bonds, permits, fees and service, and do all required work in strict compliance with the terms of all documents comprising said Contract, and to substantially complete the entire project within five hundred and thirty five (535) calendar days after initial notice to proceed (NTP) and up to an additional thirty (30) calendar days for Final Acceptance; and that I/we agree to accept as full compensation for the satisfactory prosecution of this project the following unit prices bid resulting in the Official Total Bid Amount for the various scheduled items of work.

EXAMPLES

BID PRICES SUBMITTED BY HAND WRITTEN FORMAT

ALT	ITEM-CODE ITEM NO	DESC NO	S.P. NO.	UNIT BID PRICE ONLY WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	190	026		RED OAK 1 1/2" - 1 3/4" GAL BB One hundred fifty DLRS and No CENTS	EA	9.000	1

Unit price for each plant in place

	249	014		FLEX BASE(DEL)(DENSCOT)(TY A GR4 CL2) Seven DLRS and Fifty three CENTS	TON	56,787.00	14

Unit price for each ton of Flexible Base

	430	001	001	CL A CONC FOR EXT STR (CULV) Three hundred five DLRS and No CENTS	CY	45.000	27

Unit price for each cubic yard of Concrete

	610	007	001	RDWY ILL ASSEM(TY ST 50T-8-8)(.4 KW)S Fourteen hundred sixteen DLRS and Thirty seven CENTS	EA	13.000	7

Unit price of each Roadway Illumination Assembly

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	100	6002		PREPARING ROW _____ DOLLARS and _____ CENTS	Per	STATION	STA	141.000
	104	6009		REMOVING CONC (RIPRAP) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	25.000
	104	6017		REMOVING CONC (DRIVEWAYS) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	288.000
	104	6022		REMOVING CONC (CURB AND GUTTER) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1646.000
	104	6028		REMOVING CONC (MISC) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	175.000
	106	6002		OBLITERATING ABANDONED ROAD _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	4399.000
	110	6001		EXCAVATION (ROADWAY) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	68078.000
	132	6006		EMBANKMENT (FINAL)(DENS CONT)(TY C) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	174574.000
	160	6005		FURNISHING AND PLACING TOPSOIL _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	100.000
	164	6035		DRILL SEEDING (PERM) (RURAL) (CLAY) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	85892.000
	164	6041		DRILL SEEDING (TEMP) (WARM) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	85892.000
	168	6001		VEGETATIVE WATERING _____ DOLLARS and _____ CENTS	Per	1000 GAL	MG	1500.000
	169	6001		SOIL RETENTION BLANKETS (CL 1) (TY A) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	13008.000
	204	6003		SPRINKLING (DUST CONTROL) _____ DOLLARS and _____ CENTS	Per	1000 GAL	MG	556.000
	247	6225		FL BS (RDWY DEL)(TY E GR 4)(FNAL POS) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	25902.000
	251	6056		RWRK BS MTL(TY B)(8")(DEN CNT)(ORG POS) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	5636.000
	260	6011		LIME TRT (EXST MATL) (12") _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	142256.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	260	6015		LIME TRT (NEW BASE)(8") _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	3403.000
	260	6043		LIME (HYD, COM OR QK)(SLURRY) _____ DOLLARS and _____ CENTS	Per	TON	TON	2863.000
	260	6055		LIME TRT (NEW BASE)(22") _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	305.000
	275	6001		CEMENT _____ DOLLARS and _____ CENTS	Per	TON	TON	1042.000
	275	6031		CEMENT TREAT (NEW BASE) (10") _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	109817.000
	310	6009		PRIME COAT (MC-30) _____ DOLLARS and _____ CENTS	Per	GALLON	GAL	28118.000
	341	6076		D-GR HMA TY B SAC-B PG (64-22) _____ DOLLARS and _____ CENTS	Per	TON	TON	21905.000
	346	6014		STONE-MTRX-ASPH SMA-D SAC-A PG76-22 _____ DOLLARS and _____ CENTS	Per	TON	TON	9104.000
	346	6018		STONE-MTRX-ASPH SMA-D SAC-B PG76-22 _____ DOLLARS and _____ CENTS	Per	TON	TON	20046.000
	346	7001		STONE-MTRX-ASPH SMA-D SAC-B PG64-22 _____ DOLLARS and _____ CENTS	Per	TON	TON	11456.000
	354	6041		PLANE ASPH CONC PAV (1.5") _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	1581.000
	360	6014		CONC PVMT (CONT REINF - CRCP) (11.5") _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	25688.000
	400	6003	001	STRUCT EXCAV (PIPE) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	1165.000
	400	6005	001	CEM STABIL BKFL _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	462.000
	400	6006	001	CUT & RESTORING PAV _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	185.000
	400	6011	001	SAND BACKFILL _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	1639.000
	402	6001		TRENCH EXCAVATION PROTECTION _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	11288.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	416	6001		DRILL SHAFT (18 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	252.000
	416	6002		DRILL SHAFT (24 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	48.000
	416	6004		DRILL SHAFT (36 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1038.000
	416	6006		DRILL SHAFT (48 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	132.000
	416	6007		DRILL SHAFT (54 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	77.000
	416	6008		DRILL SHAFT (60 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	640.000
	416	6029		DRILL SHAFT (RDWY ILL POLE) (30 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	56.000
	420	6013		CL C CONC (ABUT) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	114.800
	420	6029		CL C CONC (CAP) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	198.000
	420	6037		CL C CONC (COLUMN) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	75.600
	422	6001		REINF CONC SLAB _____ DOLLARS and _____ CENTS	Per	SQUARE FEET	SF	23360.000
	425	6039		PRESTR CONC GIRDER (TX54) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	2835.000
	432	6001		RIPRAP (CONC)(4 IN) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	588.000
	432	6002		RIPRAP (CONC)(5 IN) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	124.000
	432	6006		RIPRAP (CONC)(CL B) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	2.450
	432	6045		RIPRAP (MOW STRIP)(4 IN) _____ DOLLARS and _____ CENTS	Per	CUBIC YARD	CY	90.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	450	6023		RAIL (TY SSTR) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	656.000
	454	6001		SEALED EXPANSION JOINT (4 IN) (SEJ - A) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	158.000
	464	6025		RC PIPE (CL V)(18 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	227.000
	464	6026		RC PIPE (CL V)(24 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	576.000
	464	6028		RC PIPE (CL V)(42 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	112.000
	464	6029		RC PIPE (CL V)(48 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	227.000
	464	6038		RC PIPE (CL III)(18 IN)(SPL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1810.000
	464	6039		RC PIPE (CL III)(24 IN)(SPL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1280.000
	464	6040		RC PIPE (CL III)(30 IN)(SPL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	2877.000
	464	6041		RC PIPE (CL III)(36 IN)(SPL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1501.000
	464	6042		RC PIPE (CL III)(42 IN)(SPL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1232.000
	464	6043		RC PIPE (CL III)(48 IN)(SPL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	2011.000
	464	6044		RC PIPE (CL III)(54 IN)(SPL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1267.000
	464	7001		RC PIPE (CL III)(72 IN)(SPL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	443.000
	464	7002		RC PIPE (CL V)(72 IN)(SPL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	430.000
	465	6005		JCTBOX(COMPL)(PJB)(3FTX3FT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	465	6006		JCTBOX(COMPL)(PJB)(4FTX4FT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	465	6009		JCTBOX(COMPL)(PJB)(5FTX5FT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	5.000
	465	6011		JCTBOX(COMPL)(PJB)(6FTX6FT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	465	6012		JCTBOX(COMPL)(PJB)(8FTX8FT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	465	6037		INLET (COMPL)(PCU)(5FT)(NONE) _____ DOLLARS and _____ CENTS	Per	EACH	EA	33.000
	465	6038		INLET (COMPL)(PCU)(5FT)(LEFT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	4.000
	465	6040		INLET (COMPL)(PCU)(5FT)(BOTH) _____ DOLLARS and _____ CENTS	Per	EACH	EA	5.000
	465	6048		INLET (COMPL)(POD)(FG)(3FTX3FT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	8.000
	465	7001		INLET (COMP) TY F (SPL) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	467	6363		SET (TY II) (18 IN) (RCP) (6: 1) (P) _____ DOLLARS and _____ CENTS	Per	EACH	EA	10.000
	496	6002		REMOV STR (INLET) _____ DOLLARS and _____ CENTS	Per	EACH	EA	3.000
	496	6003		REMOV STR (MANHOLE) _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	496	6004		REMOV STR (SET) _____ DOLLARS and _____ CENTS	Per	EACH	EA	31.000
	496	6005		REMOV STR (WINGWALL) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	496	6006		REMOV STR (HEADWALL) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	496	6007		REMOV STR (PIPE) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	3888.000
	496	6018		REMOVE STR (CONC) _____ DOLLARS and _____ CENTS	Per	EACH	EA	3.000
	500	6001		MOBILIZATION _____ DOLLARS and _____ CENTS	Per	LUMP SUM	LS	1.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	502	6001		BARRICADES, SIGNS AND TRAFFIC HANDLING _____ DOLLARS and _____ CENTS	Per	MONTH	MO	18.000
	506	6001	001	ROCK FILTER DAMS (INSTALL) (TY 1) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	76.000
	506	6011	001	ROCK FILTER DAMS (REMOVE) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	76.000
	506	6021	001	CONSTRUCTION EXITS (INSTALL) (TY 2) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	360.000
	506	6024	001	CONSTRUCTION EXITS (REMOVE) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	360.000
	506	6041	001	BIODEG EROSN CONT LOGS (INSTL) (12") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1185.000
	506	6043	001	BIODEG EROSN CONT LOGS (REMOVE) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1185.000
	508	6001		CONSTRUCTING DETOURS _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	7137.000
	512	6001		PORT CTB (FUR & INST)(SGL SLOPE)(TY 1) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	9182.000
	512	6025		PORT CTB (MOVE)(SGL SLP)(TY 1) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	8722.000
	512	6049		PORT CTB (REMOVE)(SGL SLP)(TY 1) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	9182.000
	514	6001		PERM CTB (SGL SLOPE) (TY 1) (42) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	3886.000
	514	6004		PERM CTB (SGL SLOPE) (TY 4) (42) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	190.000
	528	6004		LANDSCAPE PAVERS _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	2613.000
	529	6003		CONC CURB (TY II A) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	2089.000
	529	7001		CONC CURB & GUTTER (TY II A) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	2216.000
	529	6028		CONC CURB & GUTTER (TY B)(MOUNTABLE) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	16196.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	529	7002		CONC CURB (TY B) (MOUNTABLE) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	11772.000
	530	6004		DRIVEWAYS (CONC) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	212.000
	530	6005		DRIVEWAYS (ACP) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	947.000
	531	6004		CURB RAMPS (TY 1) _____ DOLLARS and _____ CENTS	Per	EACH	EA	16.000
	536	6002		CONC MEDIAN _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	549.000
	540	6001		MTL W-BEAM GD FEN (TIM POST) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1545.000
	540	6006		MTL BEAM GD FEN TRANS (THRIE-BEAM) _____ DOLLARS and _____ CENTS	Per	EACH	EA	4.000
	540	6016		DOWNSTREAM ANCHOR TERMINAL SECTION _____ DOLLARS and _____ CENTS	Per	EACH	EA	9.000
	542	6001		REMOVE METAL BEAM GUARD FENCE _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	267.000
	544	6001		GUARDRAIL END TREATMENT (INSTALL) _____ DOLLARS and _____ CENTS	Per	EACH	EA	9.000
	544	6003		GUARDRAIL END TREATMENT (REMOVE) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	545	6001		CRASH CUSH ATTEN (INSTL) _____ DOLLARS and _____ CENTS	Per	EACH	EA	18.000
	545	6003		CRASH CUSH ATTEN (MOVE & RESET) _____ DOLLARS and _____ CENTS	Per	EACH	EA	10.000
	545	6005		CRASH CUSH ATTEN (REMOVE) _____ DOLLARS and _____ CENTS	Per	EACH	EA	16.000
	560	6007		MAILBOX INSTALL-S (WC-POST) TY 3 _____ DOLLARS and _____ CENTS	Per	EACH	EA	6.000
	560	6013		MAILBOX INSTALL-M (TWW-POST) TY 4 _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	610	6106		IN RD IL (U/P) (TY 2) (150W EQ) LED _____ DOLLARS and _____ CENTS	Per	EACH	EA	8.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	610	6191		IN RD IL (TY SP) 38S-8-8 (250W EQ) LED _____ DOLLARS and _____ CENTS	Per	EACH	EA	19.000
	610	6214		IN RD IL (TY SA) 40T-8 (250W EQ) LED _____ DOLLARS and _____ CENTS	Per	EACH	EA	5.000
	618	6016		CONDT (PVC) (SCH 40) (1") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	140.000
	618	6023		CONDT (PVC) (SCH 40) (2") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	7155.500
	618	6033		CONDT (PVC) (SCH 40) (4") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	892.000
	618	6062		CONDT (RM) (3/4") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	306.000
	620	6005		ELEC CONDR (NO.10) BARE _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	306.000
	620	6006		ELEC CONDR (NO.10) INSULATED _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	612.000
	620	6007		ELEC CONDR (NO.8) BARE _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	6631.500
	620	6008		ELEC CONDR (NO.8) INSULATED _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	11025.000
	620	6009		ELEC CONDR (NO.6) BARE _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	329.000
	620	6010		ELEC CONDR (NO.6) INSULATED _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	678.000
	621	6005		TRAY CABLE (4 CONDR) (12 AWG) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1663.000
	624	6001		GROUND BOX TY A (122311) _____ DOLLARS and _____ CENTS	Per	EACH	EA	20.000
	624	6002		GROUND BOX TY A (122311)W/APRON _____ DOLLARS and _____ CENTS	Per	EACH	EA	7.000
	624	6007		GROUND BOX TY C (162911) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	628	6050		ELC SRV TY A 240/480 060(NS)SS(T)TP(O) _____ DOLLARS and _____ CENTS	Per	EACH	EA	5.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	628	6300		ELC SRV TY T 120/240 000(NS)GS(L)TP(O) _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	636	6001		ALUMINUM SIGNS (TY A) _____ DOLLARS and _____ CENTS	Per	SQUARE FEET	SF	108.000
	636	6003		ALUMINUM SIGNS (TY O) _____ DOLLARS and _____ CENTS	Per	SQUARE FEET	SF	925.000
	644	6027		IN SM RD SN SUP&AM TYS80(1)SA(P) _____ DOLLARS and _____ CENTS	Per	EACH	EA	70.000
	644	6030		IN SM RD SN SUP&AM TYS80(1)SA(T) _____ DOLLARS and _____ CENTS	Per	EACH	EA	22.000
	644	6033		IN SM RD SN SUP&AM TYS80(1)SA(U) _____ DOLLARS and _____ CENTS	Per	EACH	EA	3.000
	644	6034		IN SM RD SN SUP&AM TYS80(1)SA(U-1EXT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	644	6038		IN SM RD SN SUP&AM TYS80(1)SA(U-EXAL) _____ DOLLARS and _____ CENTS	Per	EACH	EA	5.000
	644	6064		IN BRIDGE MNT CLEARANCE SGN ASSM(TY N) _____ DOLLARS and _____ CENTS	Per	EACH	EA	4.000
	644	6076		REMOVE SM RD SN SUP&AM _____ DOLLARS and _____ CENTS	Per	EACH	EA	33.000
	647	6003		REMOVE LRSA _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	650	6025		INS OH SN SUP(25 FT CANT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	650	6032		INS OH SN SUP(30 FT CANT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	3.000
	650	6038		INS OH SN SUP(35 FT CANT) _____ DOLLARS and _____ CENTS	Per	EACH	EA	3.000
	658	6001		INSTL DEL ASSM (D-SW)SZ 1(FLX)GND _____ DOLLARS and _____ CENTS	Per	EACH	EA	26.000
	658	6013		INSTL DEL ASSM (D-SW)SZ (BRF)CTB _____ DOLLARS and _____ CENTS	Per	EACH	EA	8.000
	658	6026		INSTL DEL ASSM (D-SY)SZ (BRF)CTB _____ DOLLARS and _____ CENTS	Per	EACH	EA	236.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	658	6036		INSTL DEL ASSM (D-DW)SZ 1(FLX)GND _____ DOLLARS and _____ CENTS	Per	EACH	EA	41.000
	658	6048		INSTL OM ASSM (OM-2Z)(FLX)GND _____ DOLLARS and _____ CENTS	Per	EACH	EA	6.000
	658	6061		INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2 _____ DOLLARS and _____ CENTS	Per	EACH	EA	19.000
	662	6004		WK ZN PAV MRK NON-REMOV (W)4"(SLD) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	39360.000
	662	6034		WK ZN PAV MRK NON-REMOV (Y)4"(SLD) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	39800.000
	662	6050		WK ZN PAV MRK REMOV (REFL) TY II-A-A _____ DOLLARS and _____ CENTS	Per	EACH	EA	964.000
	662	6063		WK ZN PAV MRK REMOV (W)4"(SLD) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	2310.000
	662	6095		WK ZN PAV MRK REMOV (Y)4"(SLD) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	2845.000
	662	6109		WK ZN PAV MRK SHT TERM (TAB)TY W _____ DOLLARS and _____ CENTS	Per	EACH	EA	1108.000
	662	6111		WK ZN PAV MRK SHT TERM (TAB)TY Y-2 _____ DOLLARS and _____ CENTS	Per	EACH	EA	2146.000
	666	6030	002	REFL PAV MRK TY I (W)8"(DOT)(100MIL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	50.000
	666	6036	002	REFL PAV MRK TY I (W)8"(SLD)(100MIL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	5793.000
	666	6048	002	REFL PAV MRK TY I (W)24"(SLD)(100MIL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	378.000
	666	6224	002	PAVEMENT SEALER 4" _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	15726.000
	666	6226	002	PAVEMENT SEALER 8" _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	2675.000
	666	6230	002	PAVEMENT SEALER 24" _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	291.000
	666	6300	002	RE PM W/RET REQ TY I (W)4"(BRK)(100MIL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	4280.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	ITEM NO	DESC CODE	S.P. NO.					
	666	6303	002	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	34293.000
	666	6312	002	RE PM W/RET REQ TY I (Y)4"(BRK)(100MIL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	2000.000
	666	6315	002	RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	38262.000
	668	6005		PREFAB PAV MRK TY B (W)(4")(BRK)CNTST _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	140.000
	668	6077		PREFAB PAV MRK TY C (W) (ARROW) _____ DOLLARS and _____ CENTS	Per	EACH	EA	25.000
	668	6080		PREFAB PAV MRK TY C (W) (UTURN ARROW) _____ DOLLARS and _____ CENTS	Per	EACH	EA	3.000
	668	6085		PREFAB PAV MRK TY C (W) (WORD) _____ DOLLARS and _____ CENTS	Per	EACH	EA	20.000
	668	6092		PREFAB PAV MRK TY C (W) (36")(YLD TRI) _____ DOLLARS and _____ CENTS	Per	EACH	EA	45.000
	672	6006		REFL PAV MRKR TY I-A _____ DOLLARS and _____ CENTS	Per	EACH	EA	37.000
	672	6007		REFL PAV MRKR TY I-C _____ DOLLARS and _____ CENTS	Per	EACH	EA	164.000
	672	6008		REFL PAV MRKR TY I-R _____ DOLLARS and _____ CENTS	Per	EACH	EA	28.000
	672	6009		REFL PAV MRKR TY II-A-A _____ DOLLARS and _____ CENTS	Per	EACH	EA	825.000
	672	6010		REFL PAV MRKR TY II-C-R _____ DOLLARS and _____ CENTS	Per	EACH	EA	415.000
	677	6001		ELIM EXT PAV MRK & MRKS (4") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	11700.000
	677	6003		ELIM EXT PAV MRK & MRKS (8") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	120.000
	677	6007		ELIM EXT PAV MRK & MRKS (24") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	640.000
	677	6008		ELIM EXT PAV MRK & MRKS (ARROW) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	677	6012		ELIM EXT PAV MRK & MRKS (WORD) _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	680	6002		INSTALL HWY TRF SIG (ISOLATED) _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	680	6004		REMOVING TRAFFIC SIGNALS _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	682	6001		VEH SIG SEC (12")LED(GRN) _____ DOLLARS and _____ CENTS	Per	EACH	EA	14.000
	682	6002		VEH SIG SEC (12")LED(GRN ARW) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	682	6003		VEH SIG SEC (12")LED(YEL) _____ DOLLARS and _____ CENTS	Per	EACH	EA	14.000
	682	6004		VEH SIG SEC (12")LED(YEL ARW) _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	682	6005		VEH SIG SEC (12")LED(RED) _____ DOLLARS and _____ CENTS	Per	EACH	EA	14.000
	682	6018		PED SIG SEC (LED)(COUNTDOWN) _____ DOLLARS and _____ CENTS	Per	EACH	EA	12.000
	682	6023		BACK PLATE (12")(3 SEC) _____ DOLLARS and _____ CENTS	Per	EACH	EA	4.000
	684	6010		TRF SIG CBL (TY A)(12 AWG)(5 CONDR) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1582.000
	684	6012		TRF SIG CBL (TY A)(12 AWG)(7 CONDR) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	3381.000
	684	6028		TRF SIG CBL (TY A)(14 AWG)(2 CONDR) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	3039.000
	686	6035		INS TRF SIG PL AM(S)1 ARM(32')LUM _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	686	6043		INS TRF SIG PL AM(S)1 ARM(40')LUM _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	686	6183		INS TRF SIG PL AM(S)2 ARM(50-32')LUM _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	686	6191		INS TRF SIG PL AM(S)2 ARM(50 - 40')LUM _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000

US 281 / BSIF Connector – Bid Tab

ALT	ITEM-CODE ITEM NO	DESC CODE	S.P. NO.	UNIT BID PRICE ONLY. WRITTEN IN WORDS			UNIT of MEASURE-MENT	APPROX QUANTITIES
	687	6001		PED POLE ASSEMBLY _____ DOLLARS and _____ CENTS	Per	EACH	EA	8.000
	688	6001		PED DETECT PUSH BUTTON (APS) _____ DOLLARS and _____ CENTS	Per	EACH	EA	12.000
	688	6003		PED DETECTOR CONTROLLER UNIT _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	688	6004		VEH LP DETECT (SAWCUT) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1270.000
	1007	6004		IRRIGATION WELL (24") _____ DOLLARS and _____ CENTS	Per	EACH	EA	1.000
	1007	6005		IRRIGATION WELL (30") _____ DOLLARS and _____ CENTS	Per	EACH	EA	2.000
	1007	7001		IRRIGATION VALVE (12") _____ DOLLARS and _____ CENTS	Per	EACH	EA	3.000
	1008	6001		PRSSR IRRIG PVC PIPE (18") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	1344.000
	1008	6002		PRSSR IRRIG PVC PIPE (24") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	120.000
	1008	6003		PRSSR IRRIG PVC PIPE (12") _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	375.000
	1008	7001		PRESS IRRIG PVC (15 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	878.000
	1008	7002		PRESS IRRIG PVC (21 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	100.000
	1008	7003		PRESS IRRIG PVC (30 IN) _____ DOLLARS and _____ CENTS	Per	LINEAR FEET	LF	203.000
	5001	6001		GEOGRID BASE REINFORCEMENT (TY I) _____ DOLLARS and _____ CENTS	Per	SQUARE YARD	SY	111633.000

The quantities shown in the above schedule of items are derived from the estimate and quantity (E&Q) sheets contained in the final construction plans. Hidalgo County Regional Mobility Authority may increase or decrease the amount of any item or portion of the work as may be deemed necessary or expedient. Any increase or decrease in the amount of any item or portion of work will be added or deducted from the total contract bid price on the basis of the unit price provided and the associated quantity for that specific item or work. Hidalgo County Regional Mobility Authority reserves the right to delete, in whole or in part, without prejudice prior to the award of the Contract, any items listed in the Bid. An increase or decrease in the quantity for any unit price item will not be regarded as sufficient ground for an increase or decrease in the unit price, nor in the time allowed for the completion of the work, except as provided for in the Specifications.

The cost of any work performed, materials furnished, services provided or expenses incurred, whether or not specifically delineated in the Contract document but which are incidental to the scope, intent and completion of this Contract, have been included in the price bid for the various items scheduled hereinabove.

Accompanying this Bid is a Bid Guaranty consisting of <u>either</u> a Bid Guaranty Check in the amount of at least five (5) percent of the Total Bid Amount <u>or</u> a Bid Bond (on the form provided) in the amount of at least five (5) percent of the Total Bid Amount. The bid Guarantee Check is a cashier's check, money order, or teller's check issued by a state or national bank, savings and loan association, or a state or federally chartered credit union and made payable to Hidalgo County Regional Mobility Authority. The Bid Guarantee Check is dated on or before the letting date and is less than 90 days old. It is hereby understood and agreed that said check or bond is to be forfeited as liquidated damages in the event that, on the basis of this Bid, Hidalgo County Regional Mobility Authority should award this Contract to me/us and that I/we should fail to execute and deliver said Contract and the prescribed Contract Bond, together with the required progress schedule, proof of proper insurance coverage and other necessary documents, all within the fifteen (15) calendar days after award of the contract; otherwise, said check or bond is to be returned to the undersigned.

Business Name of Bidder _____

Type of Organization: Individual ☐
Partnership ☐
Corporation ☐
Company ☐

Texas Business Entity Registration No.: _____

Or

Texas Foreign Entity Registration No.: _____

Address of Bidder: _____

_____

Signature of Authorized Representative: _____

Title: _____

Date: _____

Witness or Attest _____ (Affix Corporate Seal Here)

NOTE: ONLY A TXDOT PREQUALIFIED BIDDER MAY USE THIS BIDDING FORM. BIDDING FORMS ARE NOT TRANSFERABLE.

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100% SUBMITTAL

SHEET NO.	GENERAL
1	TITLE SHEET
2	INDEX OF SHEETS
3	PROJECT LAYOUT
4 - 13	TYPICAL SECTIONS
14 - 20	OMITTED
21 - 24	GENERAL NOTES
25-25C	ESTIMATE AND QUANTITIES SHEET
26	PAVEMENT SUMMARY
27	OMITTED
28	ROADWAY SUMMARY
29	TRAFFIC CONTROL SUMMARY
30	REMOVAL AND SW3P SUMMARY
31 - 32	DRAINAGE SUMMARY
33	BRIDGE SUMMARY
34	ILLUMINATION & SIGNING SUMMARY
35	PAVEMENT MARKING SUMMARY
36	TRAFFIC SIGNAL SUMMARY BASE
37 - 41	EARTHWORKS SUMMARY

SHEET NO.	TRAFFIC CONTROL PLAN
42	TRAFFIC CONTROL GENERAL NOTES
43	CONSTRUCTION SEQUENCE OF WORK NARRATIVE
44 - 45	TYPICAL SECTIONS
46	ADVANCE WARNING SIGNS PHASE I
47	PHASE I DETOUR
48 - 54	PHASE I LAYOUTS
55	ADVANCE WARNING SIGNS PHASE II
56 - 64	PHASE II LAYOUTS

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SHEET NO.	TRAFFIC CONTROL STANDARDS
65 - 76	(S)-BC(1 THRU 12)-14
77 - 81	(S)-TCP(2-1)-(2-4)&(2-8)-12
82	(S)-TCP(3-1)-13
83	(S)-TCP(3-3)-14
84	(S)-TCP(3-4)-13
85	(S)-WZ(BRK)-13
86	(S)-WZ(BTS-1)-13
87	(S)-WZ(BTS-2)-13
88	(S)-WZ(RCD)-13
89	(S)-WZ(STPM)-13
90	(S)-WZ(TD)-13
91	(S)-WZ(UL)-13
92	(S)-SLED CRASH CUSHION-14
92A	(S) - ACZ-350 CRASH CUSHION-13

SHEET NO.	ROADWAY DETAILS
93 - 94	SURVEY CONTROL SHEETS
95 - 96	ALIGNMENT DATA
97 - 103	REMOVAL LAYOUTS
104 - 128	PLAN & PROFILE SHEETS
129 - 131	INTERSECTION LAYOUTS
132	DRIVEWAY TABLE

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SHEET NO.	ROADWAY STANDARDS
133 - 134	(S)-CONTINUOUSLY REINFORCED CONCRETE PAVMENT-13
135 - 136	(S)-CONCRETE PAVEMENT DETAILS CONTRACTION DESIGN-14
137	(S)-CONCRETE CURB AND CURB AND GUTTER-12
138	(S)-CONCRETE PAVING DETAILS JOINT SEALS-14
139	(D)-CURB AND GUTTER DETIALS (ALTERNATE BID)
140	(D)-CURB DETAILS (ALTERNATE BID)
141 - 143	(D)-DRIVEWAY STANDARDS
144	(S)-METAL BEAM GUARD FENCE
145	(S)-METAL BEAM GUARD FENCE (DOWNSTRAM ANCHOR TERMINAL)
146	(S)-METAL BEAM GUARD FENCE TRANSITION (THRIE BEAM)
147	(S)-METAL BEAM GUARD FENCE (MOW STRIP)
148	(S)-SINGLE GUARDRAIL TERMINAL(WOOD POST)
149	(S)-CRASH CUSHION ATTENUATOR REACT(N)-13
150	(S)-CRASH CUSHION ATTENUATOR SMTC(N)-13
151	(S)-CRASH CUSHION ATTENUATOR TRACC(N)-13
152 - 156	(S)-SINGLE SLOPE CONCRETE BARRIER STANDARDS
157	(S)-TAPERED EDGE DETAILS HMAC PAVEMENT
158	(S)-CONCRETE RIPRAP(TYPE RR8 & RR9)
159	(D)-LANDSCAPE PAVER
160 - 163	(S)-MAILBOX-14
164 - 166	(S)-MAILBOX-PLACEMENT & SPACING-14
166A	(D)- BUS BAY DETAILS (MOD)
166B	(S)-CRASH CUSHION SUMMARY SHEET

SHEET NO.	DRAINAGE DETAILS
167 - 169	HYDROLOGIC CALCULATIONS
170	LARGE DRAINGE AREAS
171 - 173	SMALL DRAINAGE AREAS
174	CULVERT LAYOUT
175 - 198A	UTILITY & DRAINAGE PLAN & PROFILE
199 - 200	OMITTED
201 - 209	IRRIGATION CROSSINGS
209A	TY "F" INLET (SPL-1) DETAILS
209 B	IRRIGATION LAYOUT

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SHEET NO.	DRAINAGE STANDARDS
210	(S)-PRECAST BASE (PB)
211	(S)-PRECAST ROUND MANHOLE (PRM)
212 - 213	(S)-PRECAST CURB INLET UNDER ROADWAY (PCU)
214 - 215	(S)-PRECAST SLAB LID(PSL)
216	(S)-PRECAST AREA ZONE DRAIN(PAZD)
217	(S)-PRECAST JUNCTION BOX(PJB)
218	(S)-DESIGN DATA FOR PRECAST BSE AND JUNCTIN BOX (PDD)
219	(S)-CURB AND GUTTER TRANSITION DETAILS FOR PCU INLET(CGT-PCU)
220	OMITTED
221	(D)-IRRIGATION CROSSING DETAILS
222	(D)-IRRIGATION STEM GATE DETAILS
223	(D)-IRRIGATION ACCESS HATCH DETAILS
224	(D)-MISCELLANEOUS PIPE DETAILS
225	OMITTED

SHEET NO.	BRIDGE DETAILS
226	BRIDGE LAYOUT
227	BRIDGE TYICAL SECTION
228	ESTIMATED QUANTITIES &BEARING SEAT ELEVATIONS
229	FOUNDATION LAYOUT
230	DRILLED SHAFT DETAILS
231	BENT FOUNDATION DETAILS
232	ABUTMENT 1 PLAN & ELEVATION
233	ABUTMENT 1 DETAILS
234	ABUTMENT 4 PLAN & ELEVATION
235	ABUTMENT 4 DETAILS
236 - 238	BENT 2 & 3 PLAN & ELEVATION
239 - 240	FORM LINER DETAILS
241	FORM LINER FOOTING DETAILS
242	GIRDER LAYOUT
243 - 244	292' PRESTRESSED CONCRETE GIRDER UNIT
245	PRESTRESSED CONCRETE I-GIRDER DESIGN (IGNS)

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SHEET NO.	BRIDGE STANDARDS
246 - 247	(S)-PRESTRSSED CONCRETE I-GIRDER DESIGN
248 - 250	(S)-ELASTOMERIC BEARING AND GIRDER END DETAILS
251 - 252	(S)-MISCELLANEOUS SLAB DETAILS (IGMS)(MOD)
253	(S)-IGTS THICKEND SLAB END DETAILS (IGMS)(MOD)
254 - 255	(S)-MINIMUM ERECTION AND BRACING REQUIRMENTS (MEBRC)
256	(S)-TRAFFIC RAIL FOUNDATION AND MISCELLANEOUS DETAILS (TRF)
257 - 260	(S)-PRESTRESSED CONCRETE PANELS
261	(S)-PRESTRESSED CONCRETE PANEL FABRICATION DETAIL (PCP-FAB)
262 - 263	(S)-PERMANENT METAL DECK FORMS (PMDF)
264 - 265	(S)-SEALED EXPANSION JOINT (SEJ-A)
266 - 267	(S)-TRAFFIC RAIL SINGLE SLOPE
268	(S)-SINGLE SLOPE CONCRETE BARRIER (SSCB(1))
269	(S)-SINGLE SLOPE CONCRETE BARRIER (SSCB(4))
270 - 272	(S)-BRIDGE MOUNTED CLEARANCE SIGN ASSEMBLY (BMCS)
273	(S)-CEMENT STABLIZED ABUTMENT BACKFILL (CSAB)
274	(S)-OPTIONAL DRILLED SHAFT REINFORCING (ODSR)
275	(S)-CONCRETE RIP RAP (CRR)

SHEET NO.	SIGNAL LAYOUT
276	EXISTING CONDITIONS US 281 AT VETERANS BLVD/"I" ROAD
277	EXISTING CONDITIONS US 281 AT SAN JUAN RD
278 - 282	PROPOSED SIGNAL LAYOUT US 281 AT SAN JUAN RD
283	ELECTRICAL SERVICE DATA

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SHEET NO.	SIGNAL STANDARDS
284 - 285	SMA-100(1)-12 THRU SMA-100(2)-12
286 - 290	LMA(1)-12 THRU LMA(5)-12
291	MA-C-12
292	MA-D-12
293	MA-DPD-12
294	LUM-A-12
295	CFA-12
296 - 297	LD(1)-03 THRU LD(2)-03
298	TS-FD-12
299 - 301	TRAFFIC SIGNAL CONSTRUCTION DETAILS
302	TSTD3

SHEET NO.	ILLUMINATION
303 - 309A	ILLUMINATION LAYOUT
310	ILLUMINATION DETAIL
311	ILLUMINATION CIRCUITS
312	ILLUMINATION ELECTRICAL SERVICE DATA

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SHEET NO.	ILLUMINATION STANDARDS
313 - 318	ED(1) THRU ED(6)-14
319	ED(8)-14
320	ED(10)-14
321 - 322	RID(LUM1)-07 THRU RID(LUM2)-07
323 - 326	RIP(1)-11 THRU RIP(4)-11
327	RID(FND)-11
328	RID(UP)-14

SHEET NO.	SIGNING
329 - 339	SIGNING LAYOUT
340	SMALL SIGN PANEL DETAILS
341 - 343	SUMMARY OF PROPOSED SMALL SIGNS
344	SUMMARY OF EXISTING SMALL SIGNS TO BE REMOVED
345	LARGE SIGN PANEL DETAILS
346 - 352	OVERHEAD SIGN STRUCTURE DETAILS
353 - 355	SUMMARY OF PROPOSED LARGE SIGNS
356	SUMMARY OF EXISTING LARGE SIGNS TO BE REMOVED

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SHEET NO.	SIGNING STANDARDS
357 - 361	TSR(1)-13 THRU TSR (5)-13
362	SMD (GEN)-08
363	SMD(SLIP-1)-08
364	SMD(SLIP-2)-08
365	SMD(SLIP-3)-08
366	D & OM (1)-15
367	D & OM (2)-15
368	D & OM (3)-15A
369	D & OM (4)-15
370	D & OM (VIA)-15
371	SMD (2-1)-08
372	SMD (2-4)-08
373	COSS-SE
374	COSS-Z1-10
375 - 376	COSSD
377	COSSF
378	COSS-FD
379	WV & IZ-14
380	WV & IZ (LTS2013)-14

SHEET NO.	PAVEMENT MARKINGS
381 -392	PAVEMENT MARKINGS LAYOUTS

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SHEET NO.	PAVEMENT MARKINGS STANDARDS
393 -396	PM(1)-12 THRU PM(4)-12
397	FPM(1)-12
398	FPM(2)-12
399	CPM(1)-14

SHEET NO.	ENVIRONMENTAL
400 - 401	EPIC_SHEET
402	SW3P
403 - 410	SW3P LAYOUTS

★ ·

SHEET NO.	ENVIRONMENTAL STANDARDS
411	EC293
412	EC393
413	TECLOG

TxDOT STANDARD SHEETS ★ · HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

06-18-2015
DATE
MARK CORBITT P.E.

TxDOT STANDARD SHEETS ⊛ · HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

06-18-2015
DATE
JOSE A. SANCHEZ, P.E.

TxDOT STANDARD SHEETS ⊙ · HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

06-18-2015
DATE
FRANK WANG P.E.

TxDOT STANDARD SHEETS ⊕ · HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

06-18-2015
DATE
YARA CORBITT P.E.

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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Texas Department of Transportation

PROGRAM MANAGEMENT CONSULTANT
DANNENBAUM
ENGINEERING CORPORATION
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1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

TEDSI INFRASTRUCTURE GROUP
TEDSI
TBPE F-1640
Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281 & BSIF CONNECTOR
INDEX OF SHEETS

SHEET 1 OF 1

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	2
TR:				
CK TR:				

DATE: 6/18/2015 1:51:28 PM
FILE: c:\projectwise\dannenbaum-hcrma\workdir\jose.vasquez\dms28864\SH365_0033_Index.dgn

ESTIMATE SUMMARY

COUNTY:				COUNTY:				COUNTY:				COUNTY: Hidalgo				COUNTY: Hidalgo				ALT	ITEM-CODE			DESCRIPTION	UNIT	TOTAL	
C.S.J.:				C.S.J.:				C.S.J.:				C.S.J.: 0921-02-337				C.S.J.: 0220-01-023											
HIGHWAY:				HIGHWAY:				HIGHWAY:				HIGHWAY: BSIF				HIGHWAY: 281											
ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS			ITEM NO.	DESC CODE	SP NO.				
EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL							EST.	FINAL
												36.00				105.00					100	6002		PREPARING ROW	STA	141.0	
																25.00					104	6009		REMOVING CONC (RIPRAP)	SY	25.0	
																288.00					104	6017		REMOVING CONC (DRIVEWAYS)	SY	288.0	
																1,646.00					104	6022		REMOVING CONC (CURB AND GUTTER)	LF	1646.0	
																175.00					104	6028		REMOVING CONC (MISC)	SY	175.0	
																4,399.00					106	6002		OBLITERATING ABANDONED ROAD	SY	4399.0	
												7,639.00				60,439.00					110	6001		EXCAVATION (ROADWAY)	CY	68078.0	
												2,845.00				171,729.00					132	6006		EMBANKMENT (FINAL)(DENS CONT)(TY C)	CY	174574.0	
												50.00				50.00					160	6005		FURNISHING AND PLACING TOPSOIL	CY	100.0	
												18,282.00				67,610.00					164	6035		DRILL SEEDING (PERM) (RURAL) (CLAY)	SY	85892.0	
												18,282.00				67,610.00					164	6041		DRILL SEEDING (TEMP) (WARM)	SY	85892.0	
												500.00				1,000.00					168	6001		VEGETATIVE WATERING	MG	1500.0	
																13,008.00					169	6001		SOIL RETENTION BLANKETS (CL 1) (TY A)	SY	13008.0	
												136.00				420.00					204	6003		SPRINKLING (DUST CONTROL)	MG	556.0	
																5,636.00					251	6056		RWRK BS MTL(TY B)(8")(DEN CNT)(ORG POS)	CY	5636.0	
												757.00				25,145.00					247	6225		FL BS (RDWY DEL)(TY E GR 4)(FNAL POS)	CY	25902.0	
												17,022.00				125,234.00					260	6011		LIME TRT (EXST MATL) (12")	SY	142256.0	
												366.00				2,497.00					260	6043		LIME (HYD, COM OR QK)(SLURRY)	TON	2863.0	
																305.00					260	6055		LIME TRT (NEW BASE)(22")	SY	305.0	
												3,403.00									260	6015		LIME TRT (NEW BASE)(8")	SY	3403.0	
																1,042.00					275	6001		CEMENT	TON	1042.0	
																109,817.00					275	6031		CEMENT TREAT (NEW BASE) (10")	SY	109817.0	
												3,383.00				24,735.00					310	6009		PRIME COAT (MC-30)	GAL	28118.0	
												1,849.00				20,056.00					341	6076		D-GR HMA TY B SAC-B PG (64-22)	TON	21905.0	
												354.00				8,750.00					346	6014		STONE-MTRX-ASPH SMA-D SAC-A PG76-22	TON	9104.0	
																20,046.00					346	6018		STONE-MTRX-ASPH SMA-D SAC-B PG76-22	TON	20046.0	
																11,456.00					346	7001		STONE-MTRX-ASPH SMA-D SAC-B PG64-22	TON	11456.0	
																1,581.00					354	6041		PLANE ASPH CONC PAV (1.5")	SY	1581.0	
												12,693.00				12,995.00					360	6014		CONC PVMT (CONT REINF - CRCP) (11.5")	SY	25688.0	
												319.00				846.00					400	6003		STRUCT EXCAV (PIPE)	CY	1165.0	
																		462.00			400	6005		CEM STABIL BKFL	CY	462.0	
																185.00					400	6006		CUT & RESTORING PAV	SY	185.0	
												757.00				882.00					400	6011		SAND BACKFILL	CY	1639.0	
												271.00				11,017.00					402	6001		TRENCH EXCAVATION PROTECTION	LF	11288.0	
																		252.00			416	6001		DRILL SHAFT (18 IN)	LF	252.0	
																48.00					416	6002		DRILL SHAFT (24 IN)	LF	48.0	
																30.00		1,008.00			416	6004		DRILL SHAFT (36 IN)	LF	1038.0	
																132.00					416	6006		DRILL SHAFT (48 IN)	LF	132.0	
																77.00					416	6007		DRILL SHAFT (54 IN)	LF	77.0	
																		640.00			416	6008		DRILL SHAFT (60 IN)	LF	640.0	
												16.00				40.00					416	6029		DRILL SHAFT (RDWY ILL POLE) (30 IN)	LF	56.0	
																		114.80			420	6013		CL C CONC (ABUT)	CY	114.8	
																		198.00			420	6029		CL C CONC (CAP)	CY	198.0	
																		75.60			420	6037		CL C CONC (COLUMN)	CY	75.6	
																		23,360.00			422	6001		REINF CONC SLAB	SF	23360.0	
																		2,835.00			425	6039		PRESTR CONC GIRDER (TX54)	LF	2835.0	
																235.00		353.00			432	6001		RIPRAP (CONC)(4 IN)	CY	588.0	
																124.00					432	6002		RIPRAP (CONC)(5 IN)	CY	124.0	
												0.70				1.75					432	6006		RIPRAP (CONC)(CL B)	CY	2.5	
																90.00					432	6045		RIPRAP (MOW STRIP)(4 IN)	CY	90.0	
																		656.00			450	6023		RAIL (TY SSTR)	LF	656.0	
																		158.00			454	6001		SEALED EXPANSION JOINT (4 IN) (SEJ - A)	LF	158.0	
																227.00					464	6025		RC PIPE (CL V)(18 IN)	LF	227.0	
																227.00					464	6029		RC PIPE (CL V)(48 IN)	LF	227.0	
												272.00				1,538.00					464	6038		RC PIPE (CL III)(18 IN)(SPL)	LF	1810.0	
												80.00				1,200.00					464	6039		RC PIPE (CL III)(24 IN)(SPL)	LF	1280.0	
																2,877.00					464	6040		RC PIPE (CL III)(30 IN)(SPL)	LF	2877.0	
																1,501.00					464	6041		RC PIPE (CL III)(36 IN)(SPL)	LF	1501.0	

ESTIMATE AND QUANTITY SHEET

STATE DIST. NO.	COUNTY	PROJECT NO.	SHEET NO.
21	HIDALGO	CSJ: 0220-01-023, etc.	25

ESTIMATE SUMMARY

COUNTY:				COUNTY:				COUNTY:				COUNTY: Hidalgo				COUNTY: Hidalgo				ALT	ITEM-CODE			DESCRIPTION	UNIT	TOTAL	
C.S.J.:				C.S.J.:				C.S.J.:				C.S.J.: 0921-02-337				C.S.J.: 0220-01-023											
HIGHWAY:				HIGHWAY:				HIGHWAY:				HIGHWAY: BSIF				HIGHWAY: 281											
ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS			ITEM NO.	DESC CODE	SP NO.				
EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL							EST.	FINAL
												40.00				1,192.00					464	6042		RC PIPE (CL III)(42 IN)(SPL)	LF	1232.0	
																2,011.00					464	6043		RC PIPE (CL III)(48 IN)(SPL)	LF	2011.0	
																1,267.00					464	6044		RC PIPE (CL III)(54 IN)(SPL)	LF	1267.0	
																443.00					464	7001		RC PIPE (CL III)(72 IN)(SPL)	LF	443.0	
																430.00					464	7002		RC PIPE (CL V)(72 IN)(SPL)	LF	430.0	
																2.00					465	6005		JCTBOX(COMPL)(PJB)(3FTX3FT)	EA	2.0	
																1.00					465	6006		JCTBOX(COMPL)(PJB)(4FTX4FT)	EA	1.0	
																5.00					465	6009		JCTBOX(COMPL)(PJB)(5FTX5FT)	EA	5.0	
																2.00					465	6012		JCTBOX(COMPL)(PJB)(8FTX8FT)	EA	2.0	
																33.00					465	6037		INLET (COMPL)(PCU)(5FT)(NONE)	EA	33.0	
																4.00					465	6038		INLET (COMPL)(PCU)(5FT)(LEFT)	EA	4.0	
																5.00					465	6040		INLET (COMPL)(PCU)(5FT)(BOTH)	EA	5.0	
																8.00					465	6048		INLET (COMPL)(POD)(FG)(3FTX3FT)	EA	8.0	
																2.00					465	7001		INLET (COMP) TY F (SPL)	EA	2.0	
												10.00									467	6363		SET (TY II) (18 IN) (RCP) (6:1) (P)	EA	10.0	
																3.00					496	6002		REMOV STR (INLET)	EA	3.0	
																1.00					496	6003		REMOV STR (MANHOLE)	EA	1.0	
																31.00					496	6004		REMOV STR (SET)	EA	31.0	
																2.00					496	6005		REMOV STR (WINGWALL)	EA	2.0	
																2.00					496	6006		REMOV STR (HEADWALL)	EA	2.0	
												271.00				3,617.00					496	6007		REMOV STR (PIPE)	LF	3888.0	
												3.00									496	6018		REMOVE STR (CONC)	EA	3.0	
																1.00					500	6001		MOBILIZATION	LS	1.0	
																18.00					502	6001		BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	18.0	
																76.00					506	6001	001	ROCK FILTER DAMS (INSTALL) (TY 1)	LF	76.0	
																76.00					506	6011	001	ROCK FILTER DAMS (REMOVE)	LF	76.0	
																360.00					506	6021	001	CONSTRUCTION EXITS (INSTALL) (TY 2)	SY	360.0	
																360.00					506	6024	001	CONSTRUCTION EXITS (REMOVE)	SY	360.0	
												300.00				885.00					506	6041	001	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	1185.0	
												300.00				885.00					506	6043	001	BIODEG EROSN CONT LOGS (REMOVE)	LF	1185.0	
																7,137.00					508	6001		CONSTRUCTING DETOURS	SY	7137.0	
																9,182.00					512	6001		PORT CTB (FUR & INST)(SGL SLOPE)(TY 1)	LF	9182.0	
																8,722.00					512	6025		PORT CTB (MOVE)(SGL SLP)(TY 1)	LF	8722.0	
																9,182.00					512	6049		PORT CTB (REMOVE)(SGL SLP)(TY 1)	LF	9182.0	
																180.00		10.00			514	6004		PERM CTB (SGL SLOPE) (TY 4) (42)	LF	190.0	
																3,604.00		282.00			514	6001		PERM CTB (SGL SLOPE) (TY 1) (42)	LF	3886.0	
																2,613.00					528	6004		LANDSCAPE PAVERS	SY	2613.0	
																2,089.00					529	6003		CONC CURB (TY II A)	LF	2089.0	
																2,216.00					529	7001		CONC CYRB & GUTTER (TY II A)	LF	2216.0	
																16,196.00					529	6028		CONC CURB & GUTTER (TY B)(MOUNTABLE)	LF	16196.0	
																11,772.00					529	7002		CONC CURB (TY B) (MOUNTABLE)	LF	11772.0	
																212.00					530	6004		DRIVEWAYS (CONC)	SY	212.0	
												133.00				814.00					530	6005		DRIVEWAYS (ACP)	SY	947.0	
																16.00					531	6004		CURB RAMPS (TY 1)	EA	16.0	
																549.00					536	6002		CONC MEDIAN	SY	549.0	
																1,545.00					540	6001		MTL W-BEAM GD FEN (TIM POST)	LF	1545.0	
																4.00					540	6006		MTL BEAM GD FEN TRANS (THRIE-BEAM)	EA	4.0	
																9.00					540	6016		DOWNSTREAM ANCHOR TERMINAL SECTION	EA	9.0	
																267.00					542	6001		REMOVE METAL BEAM GUARD FENCE	LF	267.0	
																9.00					544	6001		GUARDRAIL END TREATMENT (INSTALL)	EA	9.0	
																2.00					544	6003		GUARDRAIL END TREATMENT (REMOVE)	EA	2.0	
																18.00					545	6001		CRASH CUSH ATTEN (INSTL)	EA	18.0	
																10.00					545	6003		CRASH CUSH ATTEN (MOVE & RESET)	EA	10.0	
																16.00					545	6005		CRASH CUSH ATTEN (REMOVE)	EA	16.0	
																6.00					560	6007		MAILBOX INSTALL-S (WC-POST) TY 3	EA	6.0	
																1.00					560	6013		MAILBOX INSTALL-M (TWW-POST) TY 4	EA	1.0	
																8.00					610	6106		IN RD IL (U/P) (TY 2) (150W EQ) LED	EA	8.0	
																19.00					610	6191		IN RD IL (TY SP) 38S-8-8 (250W EQ) LED	EA	19.0	

ESTIMATE AND QUANTITY SHEET

STATE DIST. NO.	COUNTY	PROJECT NO.	SHEET NO.
21	HIDALGO	CSJ: 0220-01-023, etc.	25A

ESTIMATE SUMMARY

COUNTY:				COUNTY:				COUNTY:				COUNTY: Hidalgo				COUNTY: Hidalgo				ALT	ITEM-CODE			DESCRIPTION	UNIT	TOTAL	
C.S.J.:				C.S.J.:				C.S.J.:				C.S.J.: 0921-02-337				C.S.J.: 0220-01-023											
HIGHWAY:				HIGHWAY:				HIGHWAY:				HIGHWAY: BSIF				HIGHWAY: 281											
ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS			ITEM NO.	DESC CODE	SP NO.				
EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL							EST.	FINAL
																5.00					610	6214		IN RD IL (TY SA) 40T-8 (250W EQ) LED	EA	5.0	
																140.00					618	6016		CONDT (PVC) (SCH 40) (1")	LF	140.0	
												32.00				7,123.50					618	6023		CONDT (PVC) (SCH 40) (2")	LF	7155.5	
																892.00					618	6033		CONDT (PVC) (SCH 40) (4")	LF	892.0	
																306.00					618	6062		CONDT (RM) (3/4")	LF	306.0	
																306.00					620	6005		ELEC CONDR (NO.10) BARE	LF	306.0	
																612.00					620	6006		ELEC CONDR (NO.10) INSULATED	LF	612.0	
												32.00				6,599.50					620	6007		ELEC CONDR (NO.8) BARE	LF	6631.5	
												64.00				10,961.00					620	6008		ELEC CONDR (NO.8) INSULATED	LF	11025.0	
																329.00					620	6009		ELEC CONDR (NO.6) BARE	LF	329.0	
																678.00					620	6010		ELEC CONDR (NO.6) INSULATED	LF	678.0	
																1,663.00					621	6005		TRAY CABLE (4 CONDR) (12 AWG)	LF	1663.0	
																20.00					624	6001		GROUND BOX TY A (122311)	EA	20.0	
												2.00				5.00					624	6002		GROUND BOX TY A (122311)W/APRON	EA	7.0	
																2.00					624	6007		GROUND BOX TY C (162911)	EA	2.0	
												2.00				3.00					628	6050		ELC SRV TY A 240/480 060(NS)SS(T)TP(O)	EA	5.0	
																1.00					628	6300		ELC SRV TY T 120/240 000(NS)GS(L)TP(O)	EA	1.0	
																108.00					636	6001		ALUMINUM SIGNS (TY A)	SF	108.0	
																925.00					636	6003		ALUMINUM SIGNS (TY O)	SF	925.0	
																1.00					650	6025		INS OH SN SUP(25 FT CANT)	EA	1.0	
																3.00					650	6032		INS OH SN SUP(30 FT CANT)	EA	3.0	
																3.00					650	6038		INS OH SN SUP(35 FT CANT)	EA	3.0	
												22.00				48.00					644	6027		IN SM RD SN SUP&AM TYS80(1)SA(P)	EA	70.0	
												2.00				20.00					644	6030		IN SM RD SN SUP&AM TYS80(1)SA(T)	EA	22.0	
																3.00					644	6033		IN SM RD SN SUP&AM TYS80(1)SA(U)	EA	3.0	
												1.00				1.00					644	6034		IN SM RD SN SUP&AM TYS80(1)SA(U-1EXT)	EA	2.0	
												2.00				3.00					644	6038		IN SM RD SN SUP&AM TYS80(1)SA(U-EXAL)	EA	5.0	
																4.00					644	6064		IN BRIDGE MNT CLEARANCE SGN ASSM(TY N)	EA	4.0	
																33.00					644	6076		REMOVE SM RD SN SUP&AM	EA	33.0	
																1.00					647	6003		REMOVE LRSA	EA	1.0	
																26.00					658	6001		INSTL DEL ASSM (D-SW)SZ 1(FLX)GND	EA	26.0	
																8.00					658	6013		INSTL DEL ASSM (D-SW)SZ (BRF)CTB	EA	8.0	
																236.00					658	6026		INSTL DEL ASSM (D-SY)SZ (BRF)CTB	EA	236.0	
																41.00					658	6036		INSTL DEL ASSM (D-DW)SZ 1(FLX)GND	EA	41.0	
																6.00					658	6048		INSTL OM ASSM (OM-2Z)(FLX)GND	EA	6.0	
																19.00					658	6061		INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2	EA	19.0	
																39,360.00					662	6004		WK ZN PAV MRK NON-REMOV (W)4"(SLD)	LF	39360.0	
																39,800.00					662	6034		WK ZN PAV MRK NON-REMOV (Y)4"(SLD)	LF	39800.0	
																964.00					662	6050		WK ZN PAV MRK REMOV (REFL) TY II-A-A	EA	964.0	
																2,310.00					662	6063		WK ZN PAV MRK REMOV (W)4"(SLD)	LF	2310.0	
																2,845.00					662	6095		WK ZN PAV MRK REMOV (Y)4"(SLD)	LF	2845.0	
												88.00				1,020.00					662	6109		WK ZN PAV MRK SHT TERM (TAB)TY W	EA	1108.0	
												118.00				2,028.00					662	6111		WK ZN PAV MRK SHT TERM (TAB)TY Y-2	EA	2146.0	
																4,280.00					666	6300		RE PM W/RET REQ TY I (W)4"(BRK)(100MIL)	LF	4280.0	
												4,146.00				30,147.00					666	6303		RE PM W/RET REQ TY I (W)4"(SLD)(100MIL)	LF	34293.0	
																50.00					666	6030		REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF	50.0	
												334.00				5,459.00					666	6036		REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	5793.0	
												27.00				351.00					666	6048		REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	378.0	
																2,000.00					666	6312		RE PM W/RET REQ TY I (Y)4"(BRK)(100MIL)	LF	2000.0	
												6,104.00				32,158.00					666	6315		RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL)	LF	38262.0	
												10,250.00				5,476.00					666	6224		PAVEMENT SEALER 4"	LF	15726.0	
												334.00				2,341.00					666	6226		PAVEMENT SEALER 8"	LF	2675.0	
												27.00				264.00					666	6230		PAVEMENT SEALER 24"	LF	291.0	
																140.00					668	6005		PREFAB PAV MRK TY B (W)(4")(BRK)CNTST	LF	140.0	
												2.00				23.00					668	6077		PREFAB PAV MRK TY C (W) (ARROW)	EA	25.0	
																3.00					668	6080		PREFAB PAV MRK TY C (W) (UTURN ARROW)	EA	3.0	
												2.00				18.00					668	6085		PREFAB PAV MRK TY C (W) (WORD)	EA	20.0	
																45.00					668	6092		PREFAB PAV MRK TY C (W) (36")(YLD TRI)	EA	45.0	

ESTIMATE AND QUANTITY SHEET

STATE DIST. NO.	COUNTY	PROJECT NO.	SHEET NO.
21	HIDALGO	CSJ: 0220-01-023, etc.	25B

ESTIMATE SUMMARY

COUNTY:				COUNTY:				COUNTY:				COUNTY: Hidalgo				COUNTY: Hidalgo				ALT	ITEM-CODE			DESCRIPTION	UNIT	TOTAL	
C.S.J.:				C.S.J.:				C.S.J.:				C.S.J.: 0921-02-337				C.S.J.: 0220-01-023											
HIGHWAY:				HIGHWAY:				HIGHWAY:				HIGHWAY: BSIF				HIGHWAY: 281											
ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS		ROADWAY ITEMS		BRIDGE ITEMS			ITEM NO.	DESC CODE	SP NO.				
EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL							EST.	FINAL
												37.00									672	6006		REFL PAV MRKR TY I-A	EA	37.0	
												17.00				147.00					672	6007		REFL PAV MRKR TY I-C	EA	164.0	
																28.00					672	6008		REFL PAV MRKR TY I-R	EA	28.0	
												130.00				695.00					672	6009		REFL PAV MRKR TY II-A-A	EA	825.0	
												37.00				378.00					672	6010		REFL PAV MRKR TY II-C-R	EA	415.0	
																11,700.00					677	6001		ELIM EXT PAV MRK & MRKS (4")	LF	11700.0	
																120.00					677	6003		ELIM EXT PAV MRK & MRKS (8")	LF	120.0	
																640.00					677	6007		ELIM EXT PAV MRK & MRKS (24")	LF	640.0	
																2.00					677	6008		ELIM EXT PAV MRK & MRKS (ARROW)	EA	2.0	
																1.00					677	6012		ELIM EXT PAV MRK & MRKS (WORD)	EA	1.0	
																1.00					680	6002		INSTALL HWY TRF SIG (ISOLATED)	EA	1.0	
																2.00					680	6004		REMOVING TRAFFIC SIGNALS	EA	2.0	
																14.00					682	6001		VEH SIG SEC (12")LED(GRN)	EA	14.0	
																2.00					682	6002		VEH SIG SEC (12")LED(GRN ARW)	EA	2.0	
																14.00					682	6003		VEH SIG SEC (12")LED(YEL)	EA	14.0	
																2.00					682	6004		VEH SIG SEC (12")LED(YEL ARW)	EA	2.0	
																14.00					682	6005		VEH SIG SEC (12")LED(RED)	EA	14.0	
																12.00					682	6018		PED SIG SEC (LED)(COUNTDOWN)	EA	12.0	
																4.00					682	6023		BACK PLATE (12")(3 SEC)	EA	4.0	
																1,582.00					684	6010		TRF SIG CBL (TY A)(12 AWG)(5 CONDR)	LF	1582.0	
																3,381.00					684	6012		TRF SIG CBL (TY A)(12 AWG)(7 CONDR)	LF	3381.0	
																3,039.00					684	6028		TRF SIG CBL (TY A)(14 AWG)(2 CONDR)	LF	3039.0	
																1.00					686	6035		INS TRF SIG PL AM(S)1 ARM(32')LUM	EA	1.0	
																1.00					686	6043		INS TRF SIG PL AM(S)1 ARM(40')LUM	EA	1.0	
																1.00					686	6183		INS TRF SIG PL AM(S)2 ARM(50-32')LUM	EA	1.0	
																1.00					686	6191		INS TRF SIG PL AM(S)2 ARM(50 - 40')LUM	EA	1.0	
																8.00					687	6001		PED POLE ASSEMBLY	EA	8.0	
																12.00					688	6001		PED DETECT PUSH BUTTON (APS)	EA	12.0	
																1.00					688	6003		PED DETECTOR CONTROLLER UNIT	EA	1.0	
																1,270.00					688	6004		VEH LP DETECT (SAWCUT)	LF	1270.0	
												924.00				420.00					1008	6001		PRSSR IRRIG PVC PIPE (18")	LF	1344.0	
												198.00				680.00					1008	7001		PRESS IRRIG PVC (15 IN)	LF	878.0	
																120.00					1008	6002		PRSSR IRRIG PVC PIPE (24")	LF	120.0	
																100.00					1008	7002		PRESS IRRIG PVC (21 IN)	LF	100.0	
												73.00				130.00					1008	7003		PRESS IRRIG PVC (30 IN)	LF	203.0	
																1.00					1007	6004		IRRIGATION WELL (24")	EA	1.0	
												2.00									1007	6005		IRRIGATION WELL (30")	EA	2.0	
												3.00									1007	7001		IRRIGATION VALVE (12")	EA	3.0	
												375.00									1008	6003		PRSSR IRRIG PVC PIPE (12")	LF	375.0	
																111,633.00					5001	6001		GEOGRID BASE REINFORCEMENT (TY I)	SY	111633.0	
																576.00					464	6026		RC PIPE (CL V)(24 IN)	LF	576.0	
																112.00					464	6028		RC PIPE (CL V)(42 IN)	LF	112.0	
																2.00					465	6011		JCTBOX(COMPL)(PJB)(6FTX6FT)	EA	2.0	
																					0	0					
																					0	0					
																					0	0					
																					0	0					
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																					0	0					

ESTIMATE AND QUANTITY SHEET

STATE DIST. NO.	COUNTY	PROJECT NO.	SHEET NO.
21	HIDALGO	CSJ: 0220-01-023, etc.	25C

100% SUBMITTAL

US 281 ROADWAY SUMMARY

PLAN SHEET NO.	STATION TO STATION	0354 6041 PLANE ASPH CONC PAV (1.5") SY	0432 6002 RIPRAP (CONC)(5 IN) CY	0432 6045 RIPRAP (MOW STRIP)(4 IN) CY	0514 6001 PERM CTB (SGL SLOPE) (TY 1) (42) LF	0514 6004 PERM CTB (SGL SLOPE) (TY 4) (42) LF	0528 6004 LANDSCAPE PAVERS SY	0536 6002 CONC MEDIAN SY	0529 6028 CONC CURB & GUTTER (TY B)(MOUNTABLE) LF	0529 7002 CONC CURB (TYB) (MOUNTABLE) LF	0529 7001 CONC CURB & GUTTER (TY II A) LF	0529 6003 CONC CURB (TY II A) LF	0530 6004 DRIVEWAYS (CONC) SY	0530 6005 DRIVEWAYS (ACP) SY
US 281-(ROADWAY)														
104	10127+00 TO 10130+00	182		12					600					51
105	10130+00 TO 10140+00			8					2000				88	
106	10140+00 TO 10150+00			8					1996				58	16
107	10150+00 TO 10160+00								2018				66	233
108	10160+00 TO 10170+00		36	8	736	40			1599	400				157
109	10170+00 TO 10180+00			8	960	40				2000				
110	10180+00 TO 10190+00			22	668	40				1416				
111	10190+00 TO 10200+00		28		960	40			653	1350				
112	10200+00 TO 10210+00			8	280	20			2000					60
113	10210+00 TO 10220+00								700					74
114	10220+00 TO 10224+00	1399		16										84
115	20161+00 TO 20171+00								300	300				
116	20171+00 TO 20181+00								803	798	200	175		77
117	20181+00 TO 20201+00								702	699				62
118	20191+00 TO 20201+00								586	588				
119	30162+00 TO 30172+00								400	400				
120	30172+00 TO 30182+00								815	811				
121	30182+00 TO 30192+00								541	538	213	213		
122	30192+00 TO 30202+00								484	487				
130			60				2613				1803	1701		
131								549		1985				
PROJECT TOTALS		1581	124	90	3604	180	2613	549	16196	11772	2216	2089	212	814

US 281 ROADWAY SUMMARY

PLAN SHEET NO.	STATION TO STATION	0531 6004 CURB RAMPS (TY 1)	0540 6001 MTL W-BEAM GD FEN (TIM POST) LF	0544 6001 GUARDRAIL END TREATMENT (INSTALL) EA	0540 6006 MTL BEAM GD FEN TRANS (THRIE-BEAM) EA	0540 6016 DOWNSTREAM ANCHOR TERMINAL SECTION EA	0545 6001 CRASH CUSH ATTEN (INSTL) EA	0560 6007 MAILBOX INSTALL-S (WC-POST) TY 3 EA	0560 6013 MAILBOX INSTALL-M (TWW-POST) TY 4 EA
US 281-(ROADWAY)									
104	10127+00 TO 10130+00		265	1		1			
105	10130+00 TO 10140+00		130	1		1		2	
106	10140+00 TO 10150+00		130	1		1		1	1
107	10150+00 TO 10160+00							1	
108	10160+00 TO 10170+00		130	1		1	1	1	
109	10170+00 TO 10180+00		78	1		1			
110	10180+00 TO 10190+00		422	1	4	1			
111	10190+00 TO 10200+00					1			
112	10200+00 TO 10210+00		130	1			1		
113	10210+00 TO 10220+00							1	
114	10220+00 TO 10224+00		260	2		2			
115	20161+00 TO 20171+00								
116	20171+00 TO 20181+00								
117	20181+00 TO 20201+00								
118	20191+00 TO 20201+00								
119	30162+00 TO 30172+00								
120	30172+00 TO 30182+00								
121	30182+00 TO 30192+00								
122	30192+00 TO 30202+00								
130		16							
131									
PROJECT TOTALS		16	1545	9	4	9	2	6	1

BSIF CONNECTOR & SAN JUAN CONNECTORS ROADWAY SUMMARY

PLAN SHEET NO.	STATION TO STATION	0530 6005 DRIVEWAYS (ACP) SY
BSIF CONNECTOR (ROADWAY)		
123	1302+00 TO 1312+00	94
124	1312+00 TO 1322+00	
125	1322+00 TO 1332+00	
126	1332+00 TO 1337+67	
127	10+19 TO 14+65	39
PROJECT TOTALS		133

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HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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TEDSI INFRASTRUCTURE GROUP
TEDSI
TBPE F-1640
Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281
ROADWAY QUANTITY
SUMMARY SHEETS

SHEET 1 OF 1

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	28
TR:				
CK TR:				

DATE: 9/8/2015 2:42:49 PM
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100% SUBMITTAL

US 281 REMOVAL ITEMS

PLAN SHEET NO.	STATION TO STATION	0100 6002 PREPARING ROW	0104 6009 REMOVING CONC (RIPRAP)	0104 6017 REMOVING CONC (DRIVEWAYS)	0104 6022 REMOVING CONC (CURB AND GUTTER)	0104 6028 REMOVING CONC (MISC)	0106 6002 OBLITERATING ABANDONED ROAD	0496 6002 REMOV STR (INLET)	0496 6003 REMOV STR (MANHOLE)	0496 6004 REMOV STR (SET)	0496 6005 REMOV STR (WINGWALL)	0496 6006 REMOV STR (HEADWALL)	0496 6007 REMOV STR (PIPE)	0542 6001 REMOVE METAL BEAM GUARD FENCE	0544 6003 GUARDRAIL END TREATMENT (REMOVE)
		STA	SY	SY	LF	SY	SY	EA	EA	EA	EA	EA	REMOV STR	LF	EA
US 281-(REMOVAL)															
97	10127+00 TO 10140+00	13	25	152	1646	28		2		5			1338	267	2
98	10140+00 TO 10160+00	20		136		147		1	1	14		2	835		
99	10160+00 TO 10180+00	20								4			282		
100	10180+00 TO 10200+00	20											387		
101	10200+00 TO 10220+00	20								8	2		239		
102	10220+00 TO 10224+00	4													
103	1295+85.69 TO 1299+20.00	8					4399								
PROJECT TOTALS		105	25	288	1646	175	4399	3	1	31	2	2	3081	267	2

US 281 SW3P ITEMS

PLAN SHEET NO.	STATION TO STATION	0160 6005 FURNISHING AND PLACING TOPSOIL	0164 6035 DRILL SEEDING (PERM) (RURAL) (CLAY)	0164 6041 DRILL SEEDING (TEMP) (WARM)	0169 6001 CL 1 TYA SOIL RETENTION BLANKETS	0168 6001 VEGETATIVE WATERING	0204 6003 SPRINKLING (DUST CONTROL)	0506 6001 ROCK FILTER DAMS (INSTALL) (TY 1)	0506 6011 ROCK FILTER DAMS (REMOVE)	0506 6021 CONSTRUCTION EXITS (INSTALL) (TY 2)	0506 6024 CONSTRUCTION EXITS (REMOVE)	0506 6041 BIODEG EROSN CONT LOGS (INSTL) (12")	0506 6043 BIODEG EROSN CONT LOGS (REMOVE)
		CY	SY	SY	SY	MG	MG	LF	LF	SY	SY	LF	LF
US 281 (SW3P)													
403	10120+00 TO 10140+00		1977	1977				20	20	144	144	90	90
404	10140+00 TO 10160+00		5285	5285								120	120
405	10160+00 TO 10180+00		23590	23590	5199			10	10			225	225
406	10180+00 TO 10190+00		14592	14592	7809			34	34	72	72	180	180
407	10190+00 TO 10210+00		16358	16358								120	120
408	10210+00 TO 10230+00		5808	5808				12	12	144	144	150	150
PROJECT TOTALS		50	67610	67610	13008	1000	420	76	76	360	360	885	885

BSIF SW3P ITEMS

PLAN SHEET NO.	STATION TO STATION	0100 6002 PREPARING ROW	0160 6005 FURNISHING AND PLACING TOPSOIL	0164 6035 DRILL SEEDING (PERM) (RURAL) (CLAY)	0164 6041 DRILL SEEDING (TEMP) (WARM)	0168 6001 VEGETATIVE WATERING	0204 6003 SPRINKLING (DUST CONTROL)	0506 6041 BIODEG EROSN CONT LOGS (INSTL) (12")	0506 6043 BIODEG EROSN CONT LOGS (REMOVE)
		STA	CY	SY	SY	MG	MG	LF	LF
BSIF CONNECTOR (SW3P)									
409	1302+00 TO 1314+00	12		8047	8047			150	150
410	1314+00 TO END	24		10235	10235			150	150
PROJECT TOTALS		36	50	18282	18282	500	136	300	300

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TBPE F-1640
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281 & BSIF CONNECTOR
SW3P & REMOVAL
SUMMARY SHEETS

SHEET 1 OF 1

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	30
TR:				
CK TR:				

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IRRIGATION SUMMARY (US 281)

PLAN SHEET NO.	0400 6003 STRUCT EXCAV (PIPE)	0400 6006 CUT & RESTORING PAV	0400 6011 SAND BACKFILL	0402 6001 TRENCH EXCAVATION PROTECTION	0464 6039 RC PIPE (CL III)(24 IN)(SPL)	0464 6041 RC PIPE (CL III)(36 IN)(SPL)	1008 7001 IRRIGATION PVC PIPE (15 IN)	1008 6001 IRRIGATION PVC PIPE (18 IN)	1008 7002 IRRIGATION PVC PIPE (21 IN)	1008 6002 IRRIGATION PVC PIPE (24 IN)	1008 7003 IRRIGATION PVC PIPE (30 IN)	1007 6004 IRRIGATION WELL (24 IN)	0496 6007 REMOV STR (PIPE)	0464 6026 RC PIPE (CL V)(24 IN)	0464 6028 RC PIPE (CL V)(42 IN)	0465 6011 JCTBOX(COMPL) (PJB)(6FTX6FT)	0465 6012 JCTBOX(COMPL) (PJB)(8FTX8FT)
	CY	SY	CY	LF	LF	LF	LF	LF	LS	LF	LF	EA	LF	LF	LF	EA	EA
201	22	50	65	100		96			100				100				
202	32	35	128	130							130		130		112		1
203	93	35	253	420				420						392			
204	50	30	125	220			220						186	184		1	
205	32	35	111	120		100				120			120			1	
206	102		200	460	224		460					1					
PROJECT TOTALS	**331**	**185**	**882**	**1450**	**224**	**196**	**680**	**420**	**100**	**120**	**130**	**1**	**536**	576	112	2	1

IRRIGATION SUMMARY (BSIF CONNECTOR)

PLAN SHEET NO.	0400 6003 STRUCT EXCAV (PIPE)	0400 6011 SAND BACKFILL	04020 6001 TRENCH EXCAVATION PROTECTION	0464 6039 RC PIPE (CL III)(24 IN)(SPL)	0464 6042 RC PIPE (CL III)(42 IN)(SPL)	1008 7001 IRRIGATION PVC PIPE (15 IN)	1008 7003 IRRIGATION PVC PIPE (30 IN)	1007 7001 12" VALVE	0496 6007 REMOV STR (PIPE)	0496 6018 REMOVE STR (CONC)	0464 6038 RC PIPE (CL III)(18 IN)(SPL)	1007 6005 IRRIGATION WELL (30 IN)	1008 6001 IRRIGATION PVC PIPE (18 IN)	1008 6003 IRRIGATION PVC PIPE (12 IN)
	CY	CY	LF	LF	LF	LF	LF	EA	LF	EA	LF	EA	LF	LF
207	18	33	86	40		86		1	86	3				
208	20	65	73		40		73		73					
209	23	52	112	40		112		1	112					
209B	258	607						1			80	2	924	375
PROJECT TOTALS	**319**	**757**	**271**	**80**	**40**	**198**	**73**	**3**	**271**	**3**	80	2	924	375

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PROGRAM MANAGEMENT CONSULTANT
DANNENBAUM
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US 281 BSIF CONNECTOR
DRAINAGE & IRRIGATION
SUMMARY

SHEET 1 OF 1

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	32
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CK TR:				

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SUMMARY OF ESTIMATED QUANTITIES - US 281 OVERPASS SH 365

ITEM / DESCRIPTION	400-6005	416-6001	416-6004	416-6008	420-6013	420-6029	420-6037	422-6001	425-6039	432-6001	450-6023	454-6001	514-6001	514-6004
	CEMENT STAB BKFL	DRILLED SHAFTS	DRILLED SHAFTS	DRILLED SHAFTS	CL C CONC	CL C CONC	CL C CONC	REINF CONCRETE SLAB	PRESTR CONC GIRDER	CONC RIPRAP	RAILING	SEALED EXPANSION JOINT (4") (SEJ-A)	SINGLE SLOPE CONC. BARRIER	SINGLE SLOPE CONC. BARRIER
		(18")	(36")	(60")	(ABUT)	(CAP)	(COLUMN)		(TX 54)	(4")	TY-SSTR		(SSCB)	(SSCB)
	CY	LF	LF	LF	CY	CY	CY	SF	LF	CY	LF	LF	LF	LF
ABUTMENT 1	231	122	488		57.4					177	36.0	79		
BENT 2				320		99.0	37.8							
BENT 3				320		99.0	37.8							
ABUTMENT 4	231	130	520		57.4					176	36.0	79		
1 - 292' PRESTR CONC GIRDER UNIT								23360	2835.00		584.0		282.0	10.0
TOTAL	462	252	1008	640	114.8	198.0	75.6	23360	2835.00	353	656.0	158	282.0	10.0

HL 93 LOADING

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UNINTECH CONSULTING ENGINEERS, INC.
2431 E. EVANS ROAD
SAN ANTONIO, TEXAS 78259
PHONE: (210) 641-6003 FAX: (210) 641-8279
TBPE Reg. No. F-5499
TBPLS Firm No. 10051100
WWW.UNINTECH.COM

US 281 OVERPASS AT SH 365

ESTIMATED QUANTITIES

SCALE: N.T.S. SHEET 1 OF 1

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC.	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	33
TR:				
CK TR:				

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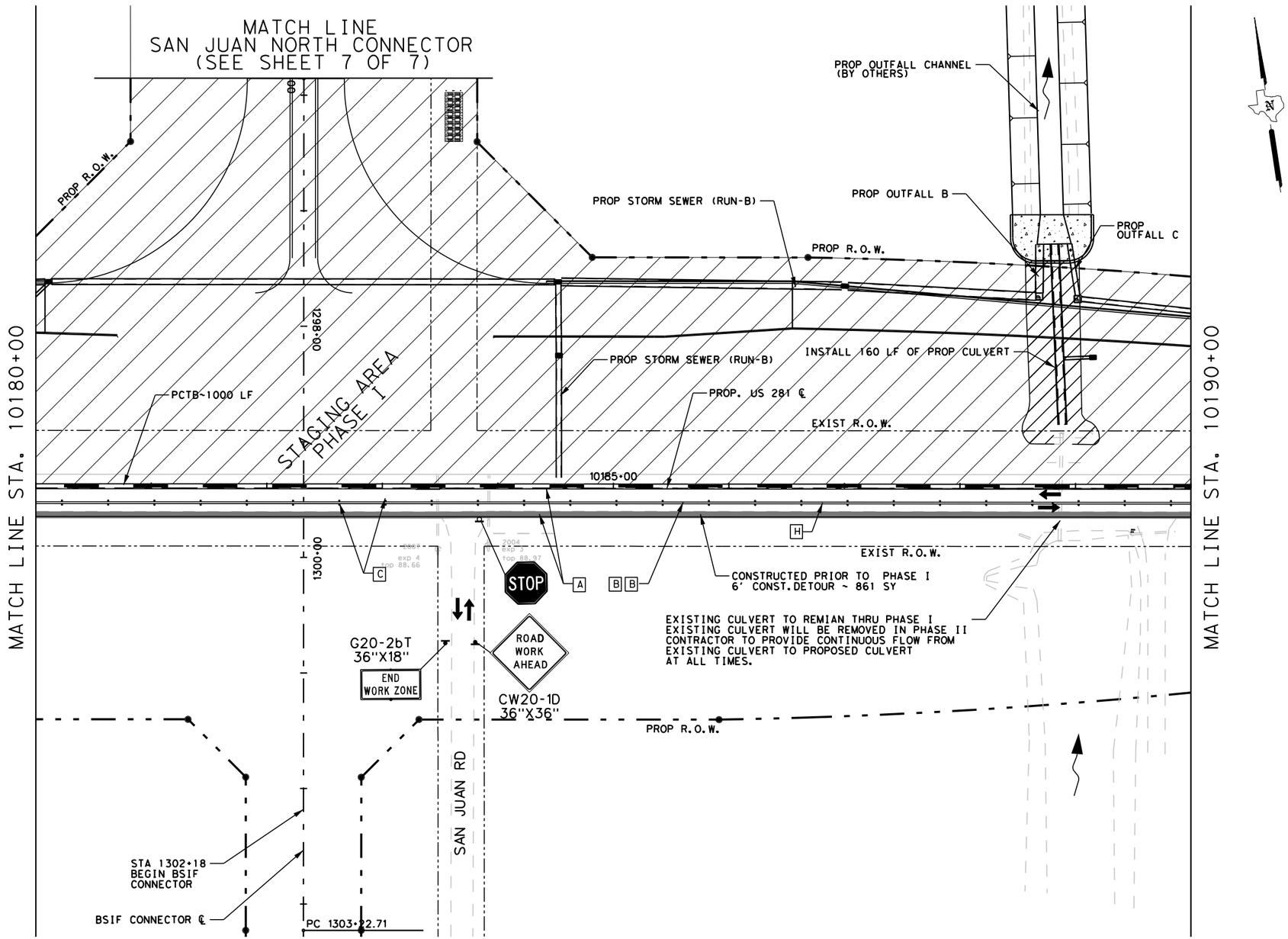
SHEET SUMMARY

STATION LIMITS	ITEM 508	ITEM 512	ITEM 512	ITEM 512	ITEM 545	ITEM 545	ITEM 545	ITEM 558	PAVEMENT MARKINGS (ITEM 662)							(ITEM 677)			
									NON-REMOVABLE					REMOVABLE		ELIMINATING EXISTING PAVEMENT MARKINGS			
	CONSTRUCTING DETOURS (SY)	PORT CTB (FUR & INST) (SNGL SLP) (TY 1) (LF)	PORT CTB (MOVE) (SNGL SLP) (TY 1) (LF)	PORT CTB (STKPL) (REMOVE) (TY 1) (LF)	CRASH CUSH ATTEN (INSTL) (WORKZONE) (EA)	CRASH CUSH ATTEN (MOVE/RESET) (WORKZONE) (EA)	CRASH CUSH ATTEN (REMOVE) (WORKZONE) (EA)	INSTL DEL ASSM (DY) SZ 1 (TYC) (CTB) (EA)	4"WHITE SOLID (LF)	TYPE II AA REF CL B (EA)	TYPE A CLASS 1 WRN REF (EA)	4"YELLOW SOLID (LF)		4"WHITE SOLID (LF)	4"YELLOW SOLID (LF)	4"PAV'MT MARKINGS (LF)	8"PAV'MT MARKINGS (LF)	24"PAV'MT MARKINGS (LF)	RAISED * MARKINGS (EA)
	861	1000						26	2000	50		2000				1250			12
TOTAL																			



LEGEND	
	WORK AREA
A	WORK ZONE PVMT MARK (NON-REM) 4" WHITE SOLID
B	WORK ZONE PVMT MARK (NON-REM) 4" YELLOW SOLID
B B	WORK ZONE PVMT MARK (NON-REM) 4" DOUBLE YELLOW SOLID
C	TYPE II-AA REFLECTIVE CL B
D	WORK ZONE PVMT MARK (REM) WHITE 4" (SOLID)
E	WORK ZONE PVMT MARK (REM) 4" YELLOW SOLID
F	WORK ZONE PVMT MARK (REM) 4" YELLOW (DOT)
G	WORK ZONE PVMT MARK (NON-REM) 24" WHITE SOLID
H	REMOVE EXISTING STRIPING
	CONSTRUCTION EXIT TY 2
	DIRECTION OF TRAFFIC FLOW
	TYPE III BARRICADE
	CHANNELIZING DEVICE
	CONSTRUCTION SIGN
FL	TYPE A FLASHING WARNING LIGHT (MOUNTED ON SIGN SUPPORT)
R	TYPE A CLASS 1 WARNING REFLECTOR
N-R	(NON-REMOV)
R	(REMOV)
	TEMP CONCRETE TRAFFIC BARRIER
	TEMP PAVEMENT

NOTES:
1. DELINEATOR AND SIGN SPACING SHALL BE IN ACCORANCE WITH TMUTCD AND TXDOT STANDARDS

2. REMOVAL OF TEMPORARY PAVEMENT IS SUBSIDARY TO INSTALLATION

*-SUBSIDIARY TO ITEM 677

STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

MARK D. CORBITT 9/3/2015
DATE

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US 281
TRAFFIC CONTROL PLAN
PHASE I
STA. 10180+00 TO STA. 10190+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 4 OF 7

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	51
TR:				
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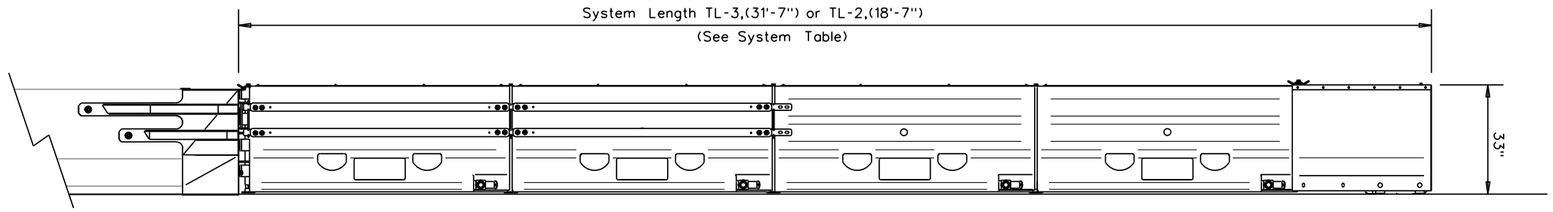
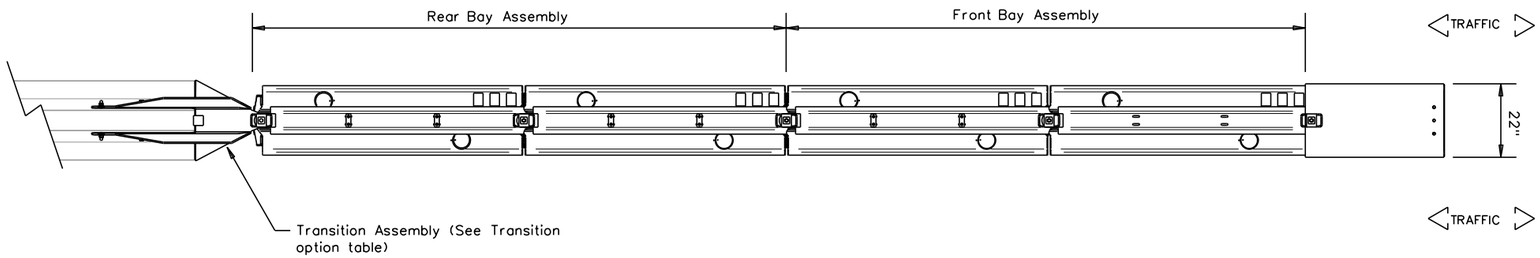


ELEVATION



PLAN

Bi-Directional traffic flow shown.

GENERAL NOTES

1. For additional information contact: Energy Absorption Systems Inc. 35 E. Wacker Dr. Suite 1100 Chicago, IL. 60601. 1(888)323-6374.
2. Refer to Installation manual and configuration chart for specific system assembly and element orientation.
2. The ACZ 350 system is approved for use in temporary (Work Zone) locations. The ACZ 350 is a water filled non-redirective, gating crash cushion that does not need to be attached to a foundation and can be installed on top of concrete, asphalt, or any surface capable of bearing the weight of the system.
3. The ACZ 350 system consist of four major components, the transition assembly, rear bay assembly, front bay assembly, and nose assembly. See manufacturer's installation manual for details.
4. Maximum permissible cross-slope is 8% .
5. The installation area should be free from curbs, elevated objects, or depressions.
6. The ACZ 350 should be approximately parallel with the barrier or C of merging barrier.

PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
1	3595601-0000	FRONT BAY ASSY,ACZ-350,TL-3	1
2	3595601-0000	REAR BAY ASSY,ACZ-350,TL-3	1
* 3	3595608-*000	NOSE,ACZ-350, (See Below)	1
4	SEE TABLE	TRANSITION ASSEMBLY	1

*See details below for nose delineation

TRANSITION ASSEMBLY OPTIONS

PART NO.	BARRIER
3595616-0000	CTB SAFETY SHAPE (8" TOP)
3595618-0000	CSB F-SHAPE (9 1/2" TOP)
3595620-0000	SSCB SINGLE SLOPE (8" TOP)

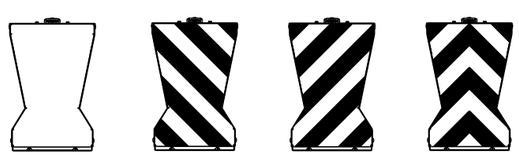
TRANSITION OPTIONS

The ACZ 350 system is approved for use at bi-directional sites, additional hardware may be required. (See the Manufacurer's product manual)

Backup and Transition types are shown elsewhere on the plans (i.e. Attenuator location details or in the general notes).

ACZ-350 (NARROW) SYSTEM

TEST LEVEL	SYSTEM LENGTH
TL-2	18'- 7"
TL-3	31'- 7"



3595608-0000 NO STRIPING | 3595608-1000 TRAFFIC PASSES ON THE RIGHT | 3595608-2000 TRAFFIC PASSES ON THE LEFT | 3595608-3000 TRAFFIC PASSES ON BOTH SIDES

Texas Department of Transportation — Design Division Standard

ENERGY ABSORPTION ACZ-350 CRASH CUSHION (TEMPORARY, WORK ZONE)

ACZ(350)-13

FILE: acz35013.dgn	DN: TxDOT	CK: AM	DW: BD	CK:
© TxDOT March 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS REVISED JUNE, 2013 (VP)	0220	01	023,ETC	US 281
	DIST	COUNTY		SHEET NO.
	PHR	HIDALGO		92A

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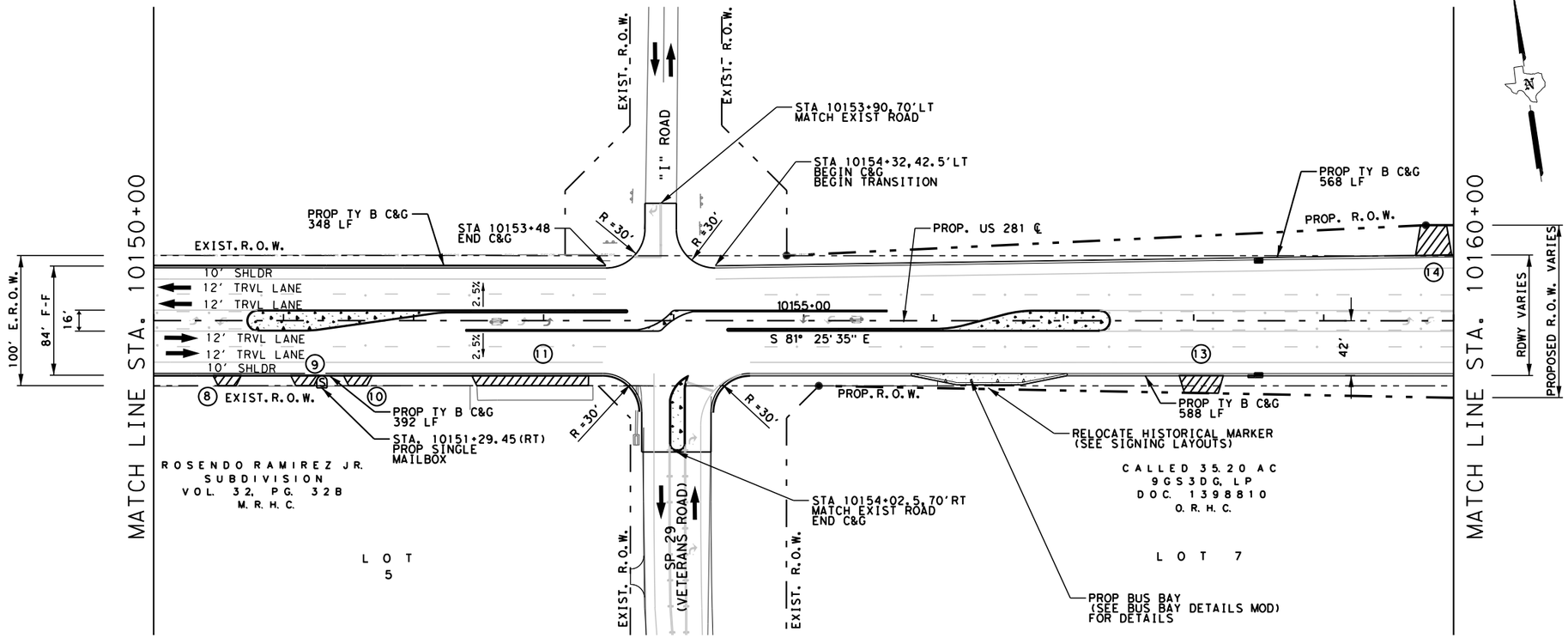


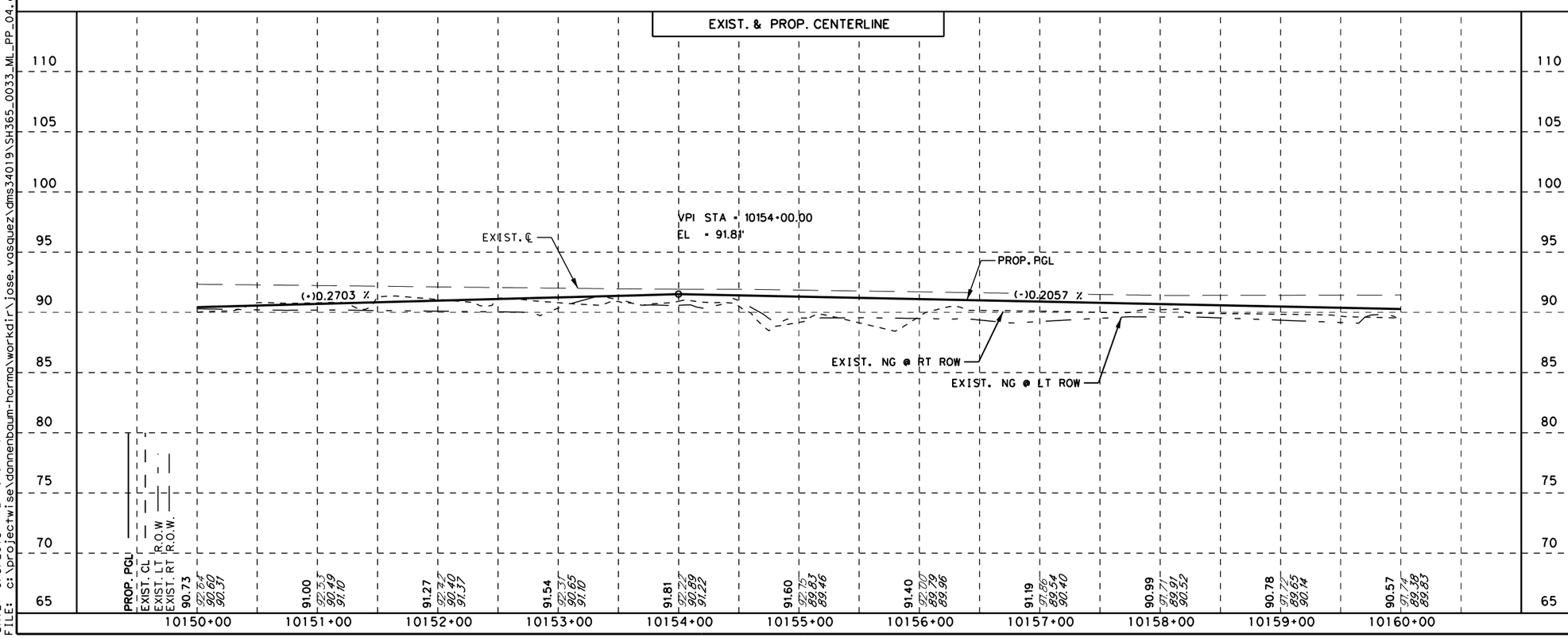
SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QTY
0529	CONC CURB & GUTTER (TY B)(MOUNTABLE)	LF	2018
0530	DRIVEWAYS (CONC)	SY	66
0530	DRIVEWAYS (ACP)	SY	295
0560	MAILBOX INSTALL-S (WC-POST) TY 3	EA	1

LEGEND:

- PROP. DRIVEWAY OR TURNOUT (SEE DRIVEWAY/TURNOUT TABLE FOR DIMENSIONS, RADIUS & QUANTITIES)
- PROPOSED PLANING (0-3")
- PROPOSED CURB RAMPS (TY I)
- DRIVEWAY NUMBER
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- (S) SINGLE MAILBOX
- (M) MULTIPLE MAILBOX

NOTES:
1. SEE ALIGNMENT DATA SHEET FOR PROP. & EXIST. CENTERLINE DATA.
2. SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.
3. FOR DRAINAGE & UTILITIES INFORMATION SEE U&D's SHEETS
4. SEE REMOVAL SHEETS FOR OBLITERATE ROAD



STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 9/3/2015
MARK D. CORBITT DATE

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US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE
STA. 10150+00 TO STA. 10160+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 4 OF 11

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST	COUNTY		SHEET NO.
PHR	HIDALGO		107

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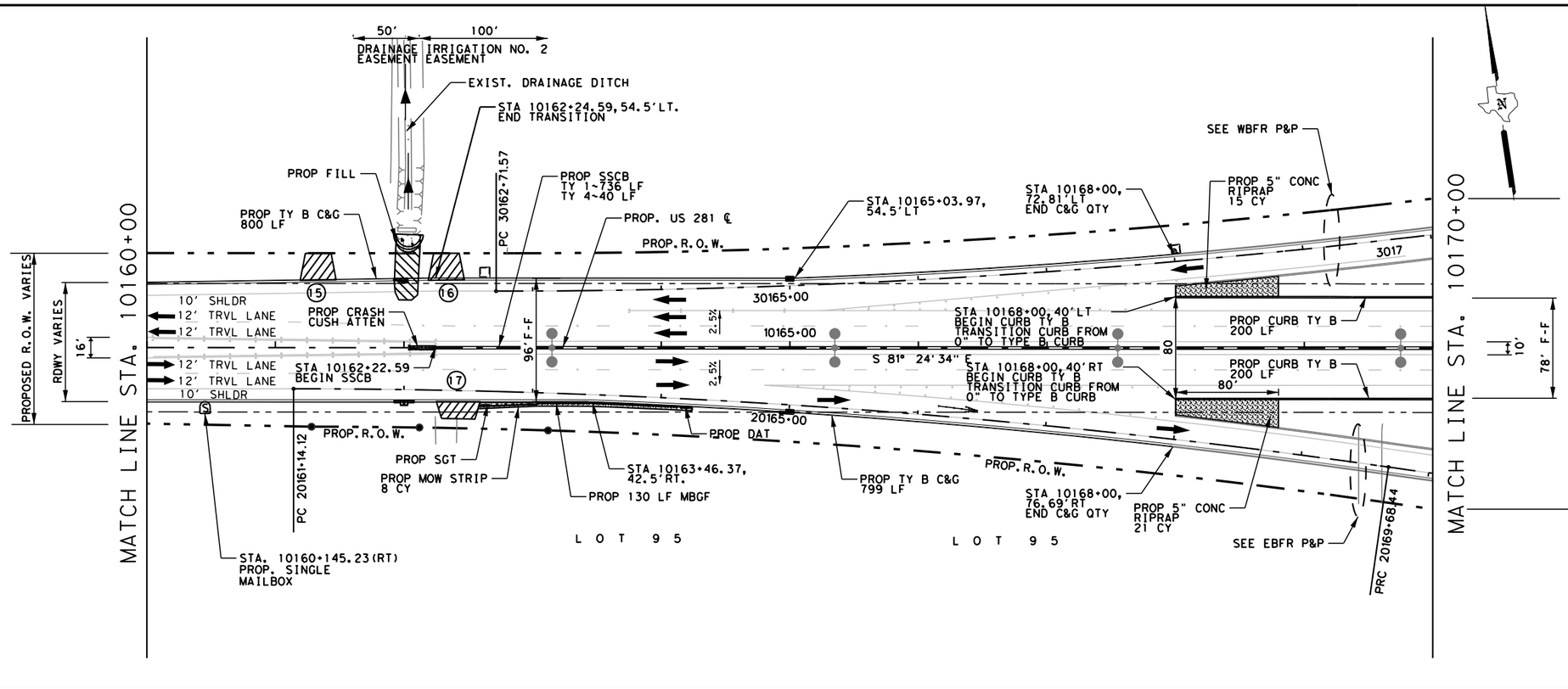


SHEET SUMMARY

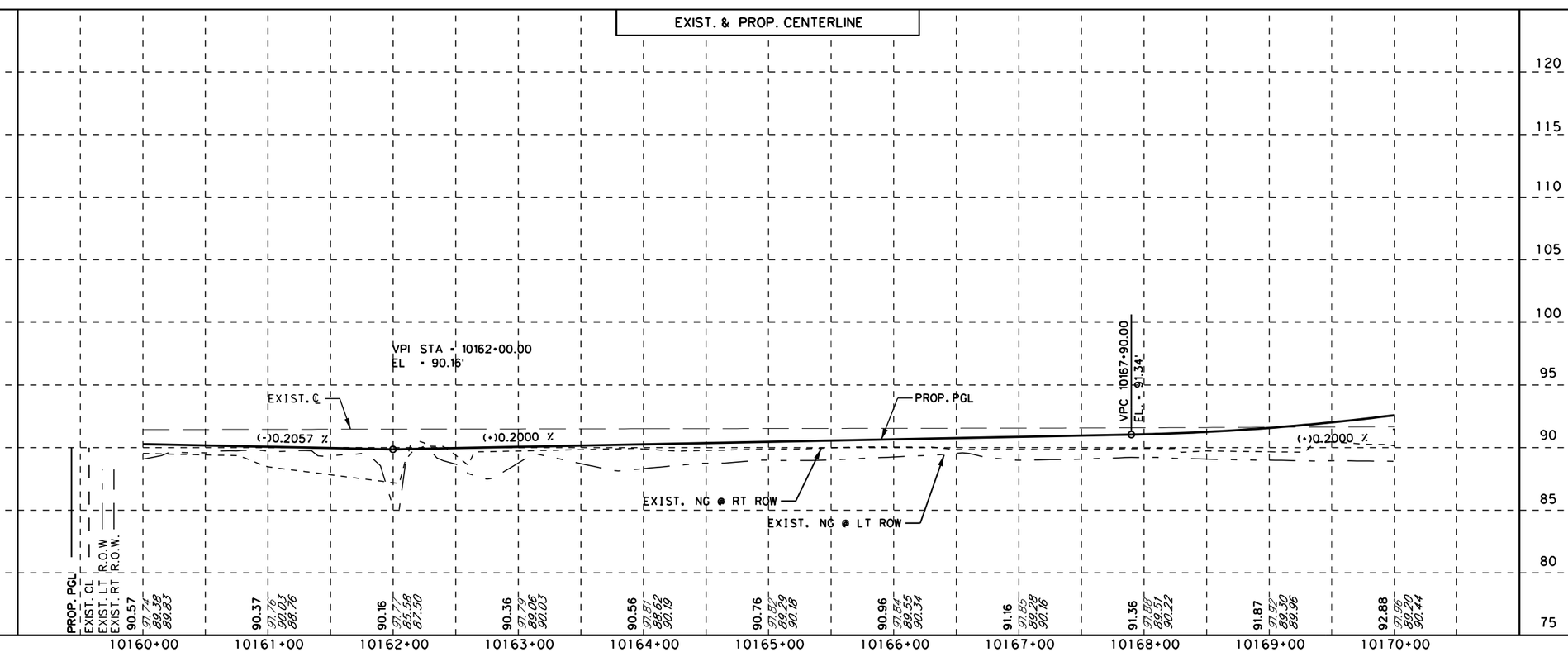
ITEM	DESCRIPTION	UNIT	QTY
0432	RIPRAP (CONC)(5 IN)	CY	36.0
0514	PERM CTB (SGL SLOPE) (TY 1) (42)	LF	736
0514	PERM CTB (SGL SLOPE) (TY 4) (42)	LF	40
0529	CONC CURB & GUTTER (TY B)(MOUNTABLE)	LF	1599
0530	DRIVEWAYS (ACP)	SY	157
0545	CRASH CUSH ATTEN (INSTL)	EA	1
0560	MAILBOX INSTALL-S (WC-POST) TY 3	EA	1
0529	CONC CURB (TYB) (MOUNTABLE)	LF	400
0432	RIPRAP (MOW STRIP)(4 IN)	CY	8
0540	MTL W-BEAM GD FEN (TIM POST)	LF	130
0544	GUARDRAIL END TREATMENT (INSTALL)	EA	1
0540	DOWNSTREAM ANCHOR TERMINAL SECTION	EA	1

LEGEND:

- PROP. DRIVEWAY OR TURNOUT (SEE DRIVEWAY/TURNOUT TABLE FOR DIMENSIONS, RADIUS & QUANTITIES)
- PROPOSED PLANING (0-3")
- PROPOSED CURB RAMPS (TY I)
- DRIVEWAY NUMBER
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- SINGLE MAILBOX
- MULTIPLE MAILBOX

NOTES:

1. SEE ALIGNMENT DATA SHEET FOR PROP. & EXIST. CENTERLINE DATA.
2. SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.
3. FOR DRAINAGE & UTILITIES INFORMATION SEE U&D's SHEETS
4. SEE REMOVAL SHEETS FOR OBLITERATE ROAD



STATE OF TEXAS
MARK D. CORBITT
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LICENSED PROFESSIONAL ENGINEER

MARK D. CORBITT — DATE 9/3/2015

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US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE

STA. 10160+00 TO STA. 10170+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 5 OF 11

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	108

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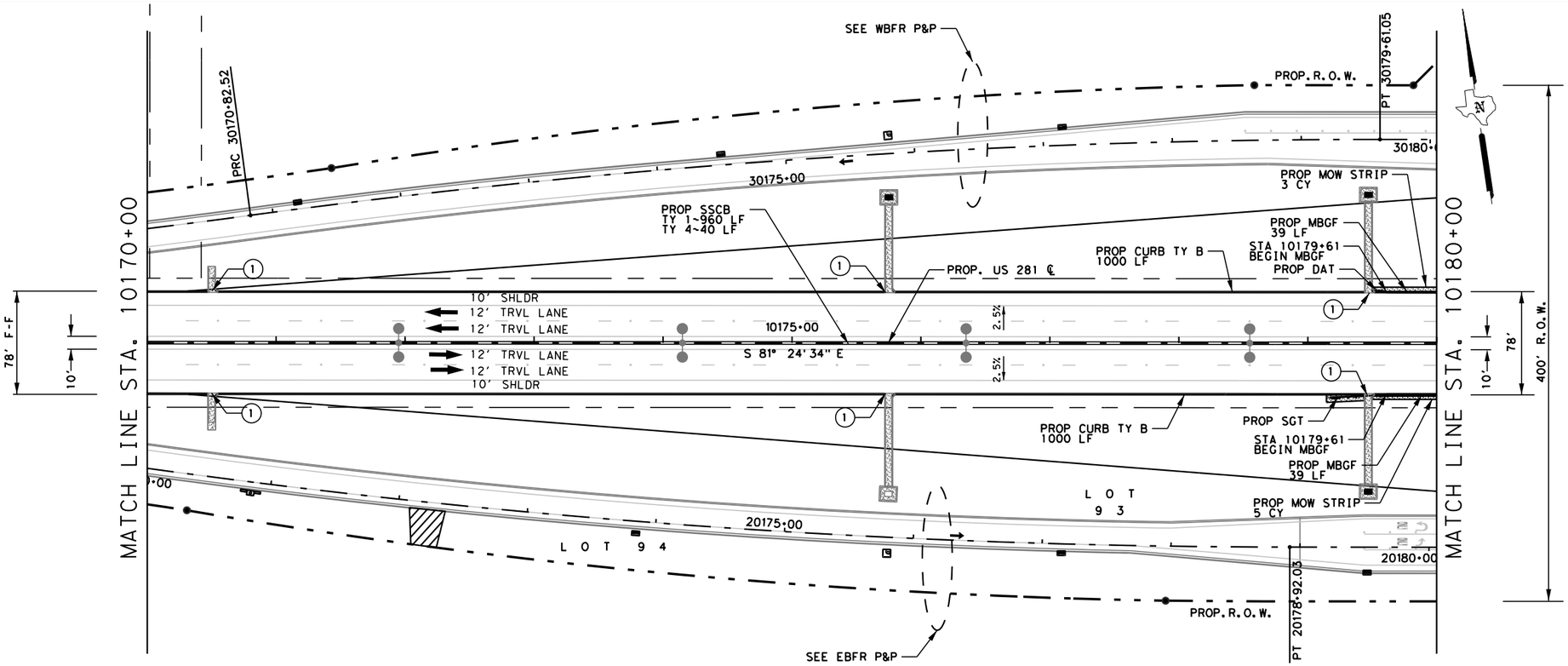


SHEET SUMMARY

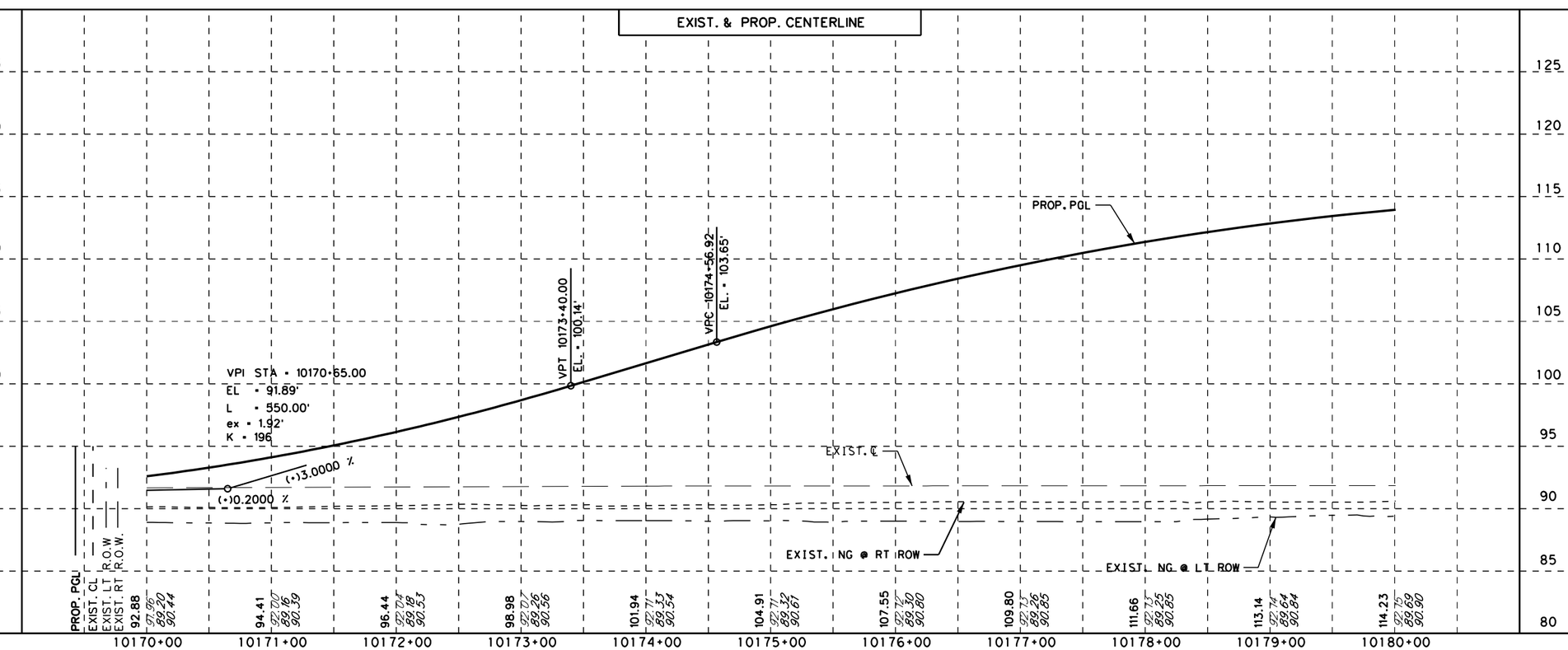
ITEM	DESCRIPTION	UNIT	QTY
0432	RIPRAP (MOW STRIP)(4 IN)	CY	8
0514	PERM CTB (SGL SLOPE) (TY 1) (42)	LF	960
0514	PERM CTB (SGL SLOPE) (TY 4) (42)	LF	40
0540	MTL W-BEAM GD FEN (TIM POST)	LF	78
0544	GUARDRAIL END TREATMENT (INSTALL)	EA	1
0540	DOWNSTREAM ANCHOR TERMINAL SECTION	EA	1
0529	CONC CURB (TYB) (MOUNTABLE)	LF	2000

LEGEND:

- PROP. DRIVEWAY OR TURNOUT (SEE DRIVEWAY/TURNOUT TABLE FOR DIMENSIONS, RADIUS & QUANTITIES)
- PROPOSED PLANING (0-3")
- PROPOSED CURB RAMPS (TY I)
- DRIVEWAY NUMBER
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- SINGLE MAILBOX
- MULTIPLE MAILBOX
- (1) PROP CURB CUT WITH 10' CURB TRANSITIONS (SEE CONC RIPRAP AND SHOULDER DRAINS DETAIL SHEET 158)

NOTES:

1. SEE ALIGNMENT DATA SHEET FOR PROP. & EXIST. CENTERLINE DATA.
2. SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.
3. FOR DRAINAGE & UTILITIES INFORMATION SEE U&D's SHEETS
4. SEE REMOVAL SHEETS FOR OBLITERATE ROAD



STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 9/3/2015
MARK D. CORBITT DATE

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US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE

STA. 10170+00 TO STA. 10180+00

SCALE:
HOR: 1" = 100'
VER: 1" = 10'

SHEET 6 OF 11

DN:
CK DN:
DW:
CK DW:
TR:
CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	109

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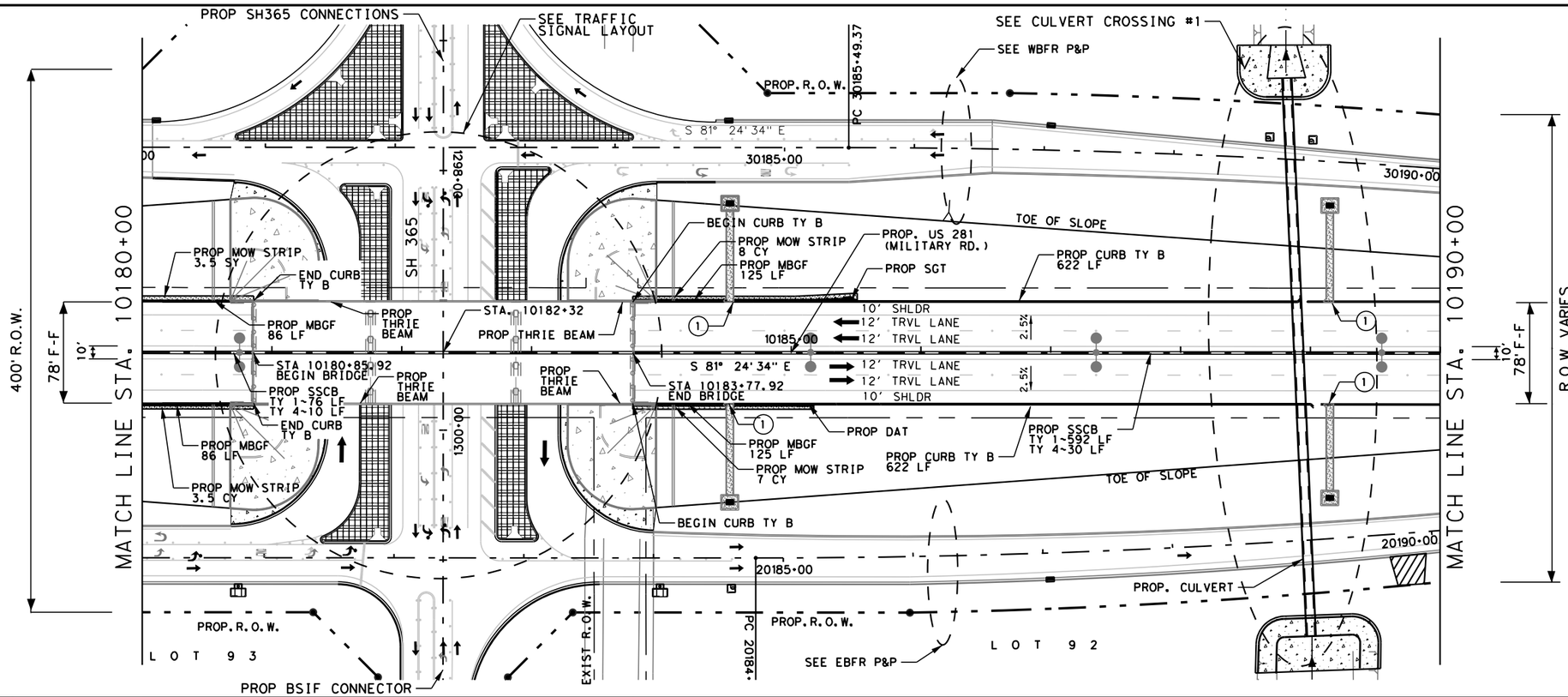


SHEET SUMMARY

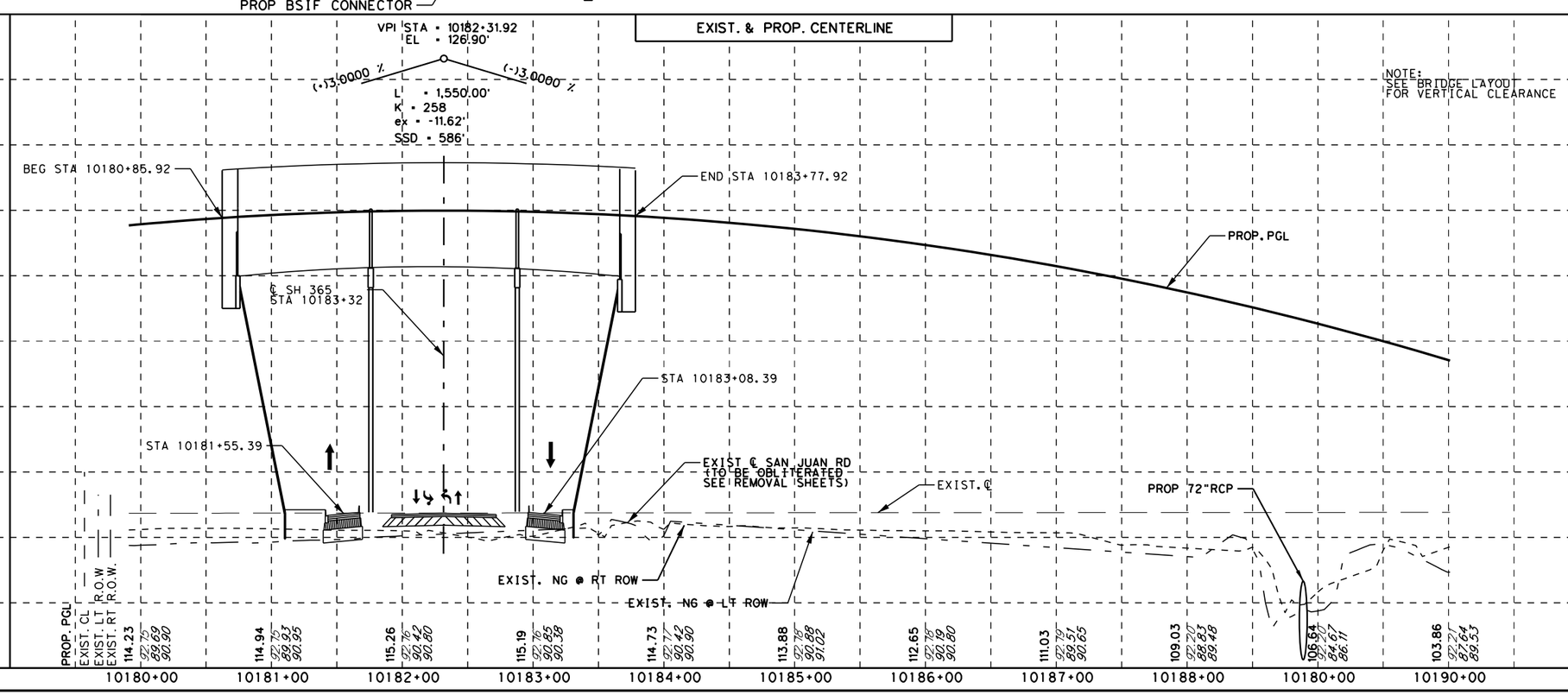
ITEM	DESCRIPTION	UNIT	QTY
0432	RIPRAP (MOW STRIP)(4 IN)	CY	22
0514	PERM CTB (SGL SLOPE) (TY 1) (42)	LF	668
0514	PERM CTB (SGL SLOPE) (TY 1) (42)	LF	40
0540	MTL W-BEAM GD FEN (TIM POST)	LF	422
0544	GUARDRAIL END TREATMENT (INSTALL)	EA	1
0540	MTL BEAM GD FEN TRANS (THRIE-BEAM)	EA	4
0540	DOWNSTREAM ANCHOR TERMINAL SECTION	EA	1
0529	CONC CURB (TYB) (MOUNTABLE)	LF	1416

LEGEND:

- PROP. DRIVEWAY OR TURNOUT (SEE DRIVEWAY/TURNOUT TABLE FOR DIMENSIONS, RADIUS & QUANTITIES)
- PROPOSED PLANING (0-3")
- PROPOSED CURB RAMPS (TY I)
- DRIVEWAY NUMBER
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- SINGLE MAILBOX
- MULTIPLE MAILBOX
- PROP CURB CUT WITH 10' CURB TRANSITIONS (SEE DETAIL CONC RIPRAP AND SHOULDER DRAIN SHEET 158)

NOTES:

1. SEE ALIGNMENT DATA SHEET FOR PROP. & EXIST. CENTERLINE DATA.
2. SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.
3. FOR DRAINAGE & UTILITIES INFORMATION SEE U&D's SHEETS
4. SEE REMOVAL SHEETS FOR OBLITERATE ROAD



STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 9/3/2015
MARK D. CORBITT DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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PROGRAM MANAGEMENT CONSULTANT
DANNENBAUM
ENGINEERING CORPORATION
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1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

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1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE
STA. 10180+00 TO STA. 10190+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 7 OF 11

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	110
TR:				
CK TR:				

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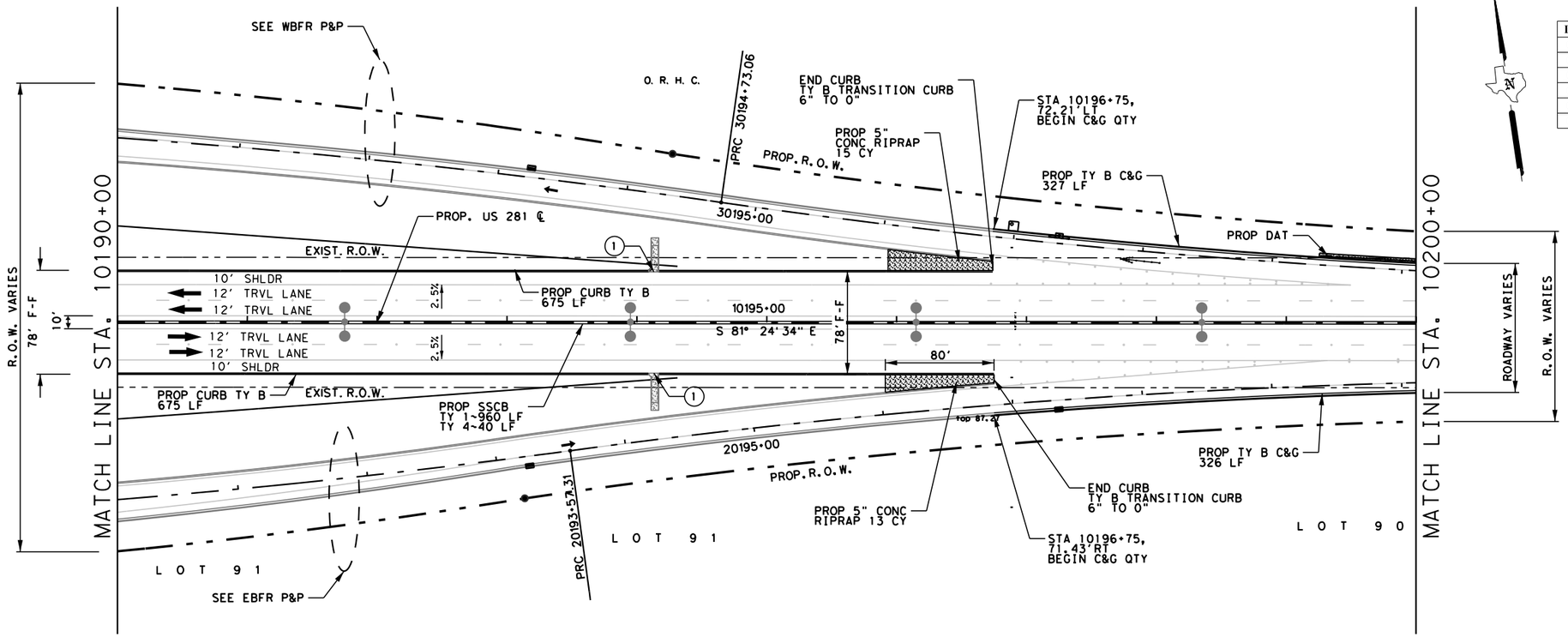


SHEET SUMMARY

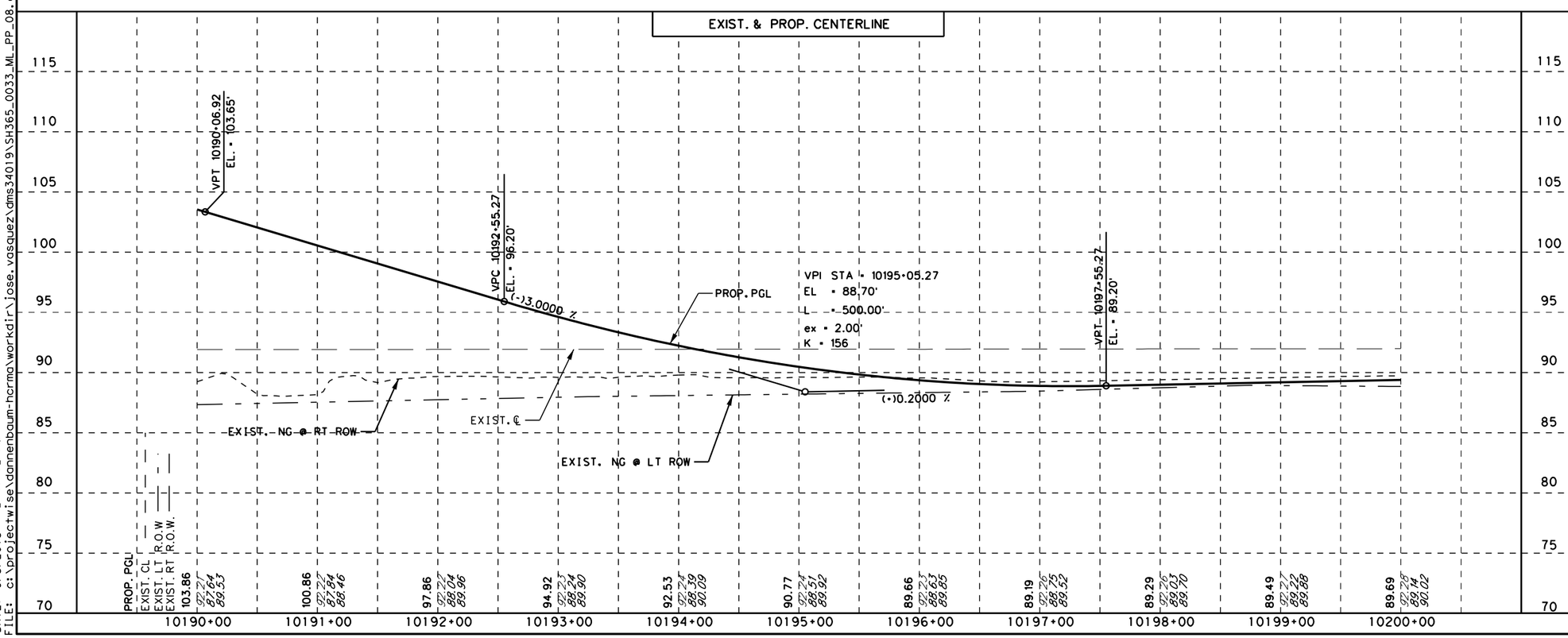
ITEM	DESCRIPTION	UNIT	QTY
0432	RIPRAP (CONC)(5 IN)	CY	28.0
0514	PERM CTB (SGL SLOPE) (TY 1) (42)	LF	960
0514	PERM CTB (SGL SLOPE) (TY 4) (42)	LF	40
0529	CONC CURB & GUTTER (TY B)(MOUNTABLE)	LF	653
0529	CONC CURB (TYB) (MOUNTABLE)	LF	1350
0540	DOWNSTREAM ANCHOR TERMINAL SECTION	EA	1

LEGEND:

- PROP. DRIVEWAY OR TURNOUT (SEE DRIVEWAY/TURNOUT TABLE FOR DIMENSIONS, RADIUS & QUANTITIES)
- PROPOSED PLANING (0-3")
- PROPOSED CURB RAMPS (TY I)
- DRIVEWAY NUMBER
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- SINGLE MAILBOX
- MULTIPLE MAILBOX
- PROP CURB CUT WITH 10' CURB TRANSITIONS (SEE DETAIL CONC RIPRAP AND SHOULDER DRAIN SHEET 158)

NOTES:

1. SEE ALIGNMENT DATA SHEET FOR PROP. & EXIST. CENTERLINE DATA.
2. SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.
3. FOR DRAINAGE & UTILITIES INFORMATION SEE U&D's SHEETS
4. SEE REMOVAL SHEETS FOR OBLITERATE ROAD



STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED
PROFESSIONAL ENGINEER

Mark Corbitt 9/3/2015
MARK D. CORBITT DATE

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(956) 424-7898

US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE

STA. 10190+00 TO STA. 10200+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 8 OF 11

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	111

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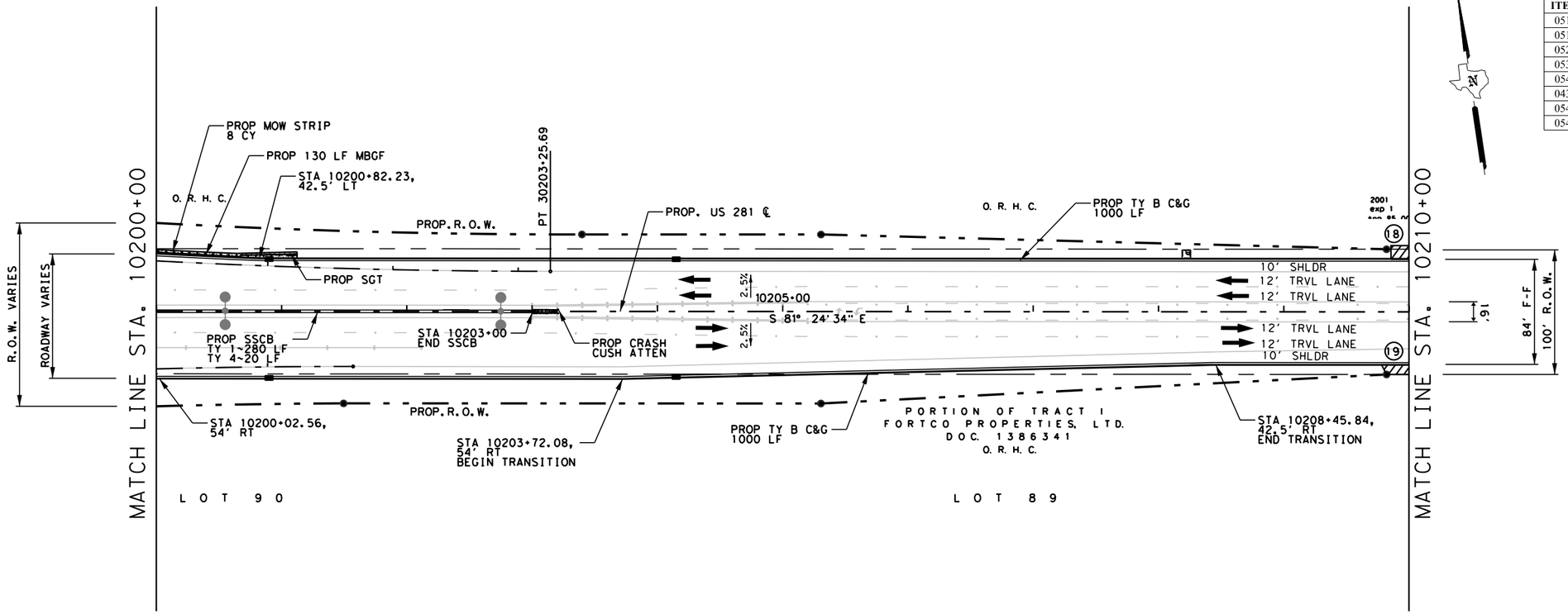


SHEET SUMMARY

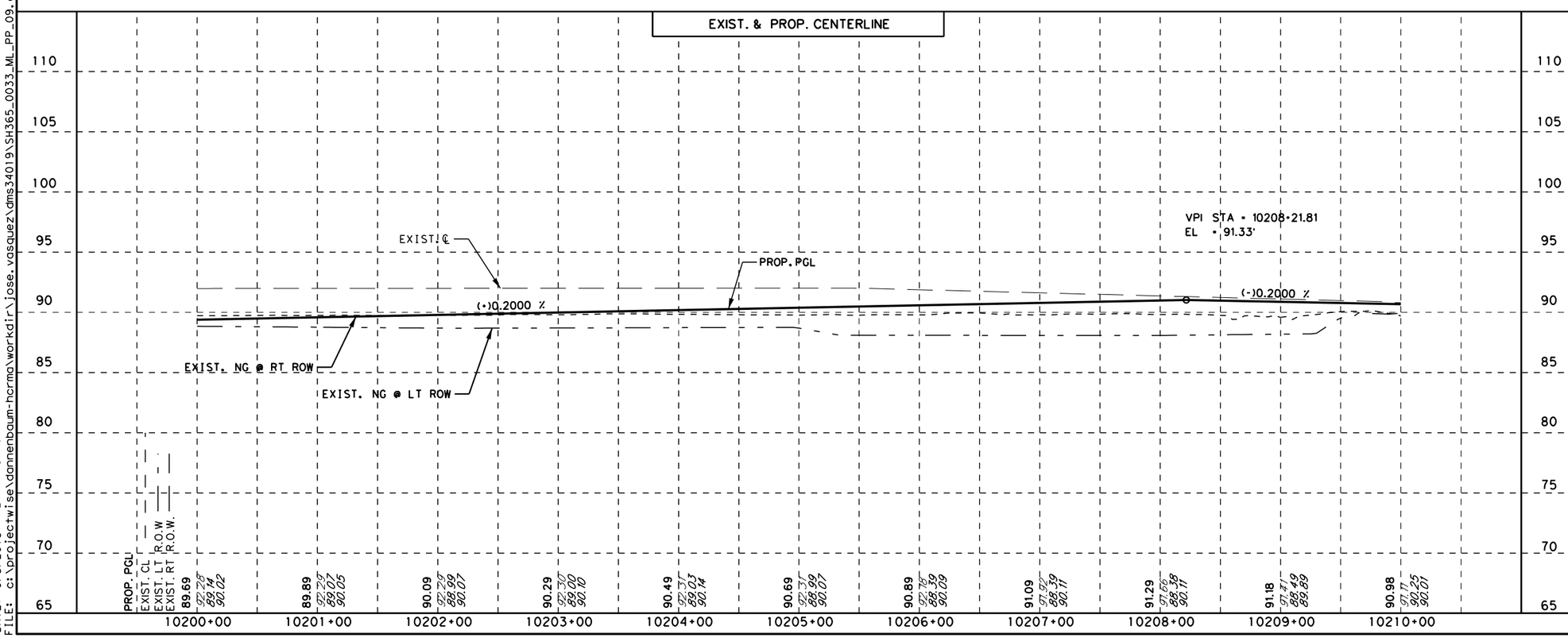
ITEM	DESCRIPTION	UNIT	QTY
0514	PERM CTB (SGL SLOPE) (TY 1) (42)	LF	280
0514	PERM CTB (SGL SLOPE) (TY 4) (42)	LF	20
0529	CONC CURB & GUTTER (TY B)(MOUNTABLE)	LF	2000
0530	DRIVEWAYS (ACP)	SY	60
0545	CRASH CUSH ATTEN (INSTL)	EA	1
0432	RIPRAP (MOW STRIP)(4 IN)	CY	8
0540	MTL W-BEAM GD FEN (TIM POST)	LF	130
0544	GUARDRAIL END TREATMENT (INSTALL)	EA	1

LEGEND:

- PROP. DRIVEWAY OR TURNOUT (SEE DRIVEWAY/TURNOUT TABLE FOR DIMENSIONS, RADIUS & QUANTITIES)
- PROPOSED PLANING (0-3")
- PROPOSED CURB RAMPS (TY I)
- DRIVEWAY NUMBER
- REMOVAL, RELOCATION AND INSTALLATION OF MAILBOXES ITEM 560
- SINGLE MAILBOX
- MULTIPLE MAILBOX

NOTES:

1. SEE ALIGNMENT DATA SHEET FOR PROP. & EXIST. CENTERLINE DATA.
2. SEE SURVEY DATA SHEET FOR BM STATIONS, OFFSET, ELEV. ETC.
3. FOR DRAINAGE & UTILITIES INFORMATION SEE U&D's SHEETS
4. SEE REMOVAL SHEETS FOR OBLITERATE ROAD



STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 9/3/2015
MARK D. CORBITT DATE

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Mission, Texas 78572
(956) 424-7898

US 281 (MILITARY ROAD) MAINLANES PLAN AND PROFILE

STA. 10200+00 TO STA. 10210+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 9 OF 11

DN:
CK DN:
DW:
CK DW:
TR:
CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	112

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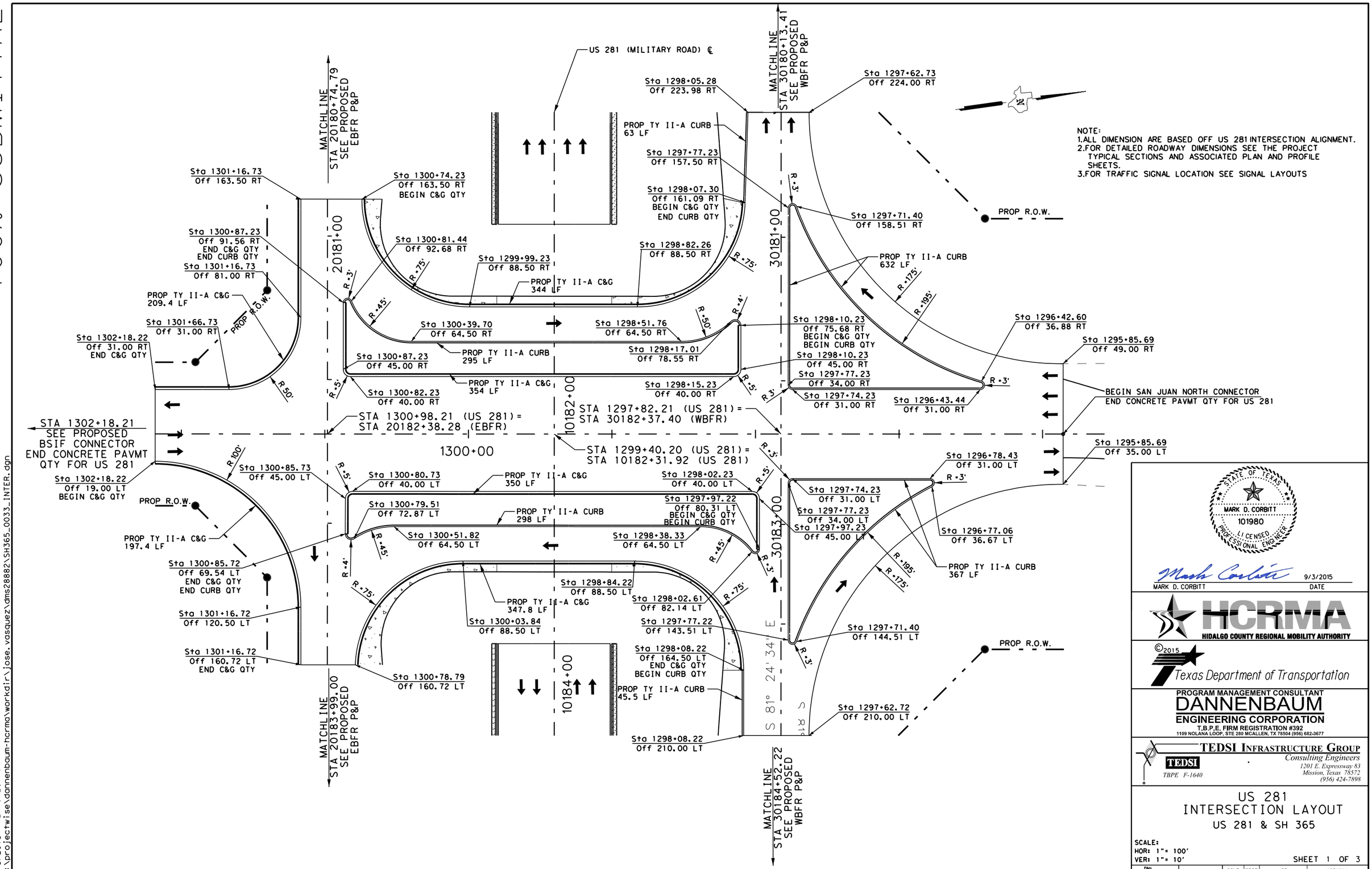

NOTE:
1. ALL DIMENSION ARE BASED OFF US 281 INTERSECTION ALIGNMENT.
2. FOR DETAILED ROADWAY DIMENSIONS SEE THE PROJECT TYPICAL SECTIONS AND ASSOCIATED PLAN AND PROFILE SHEETS.
3. FOR TRAFFIC SIGNAL LOCATION SEE SIGNAL LAYOUTS

STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 9/3/2015
MARK D. CORBITT DATE

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Consulting Engineers
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Mission, Texas 78572
(956) 424-7898

US 281 INTERSECTION LAYOUT
US 281 & SH 365

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 1 OF 3

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	129
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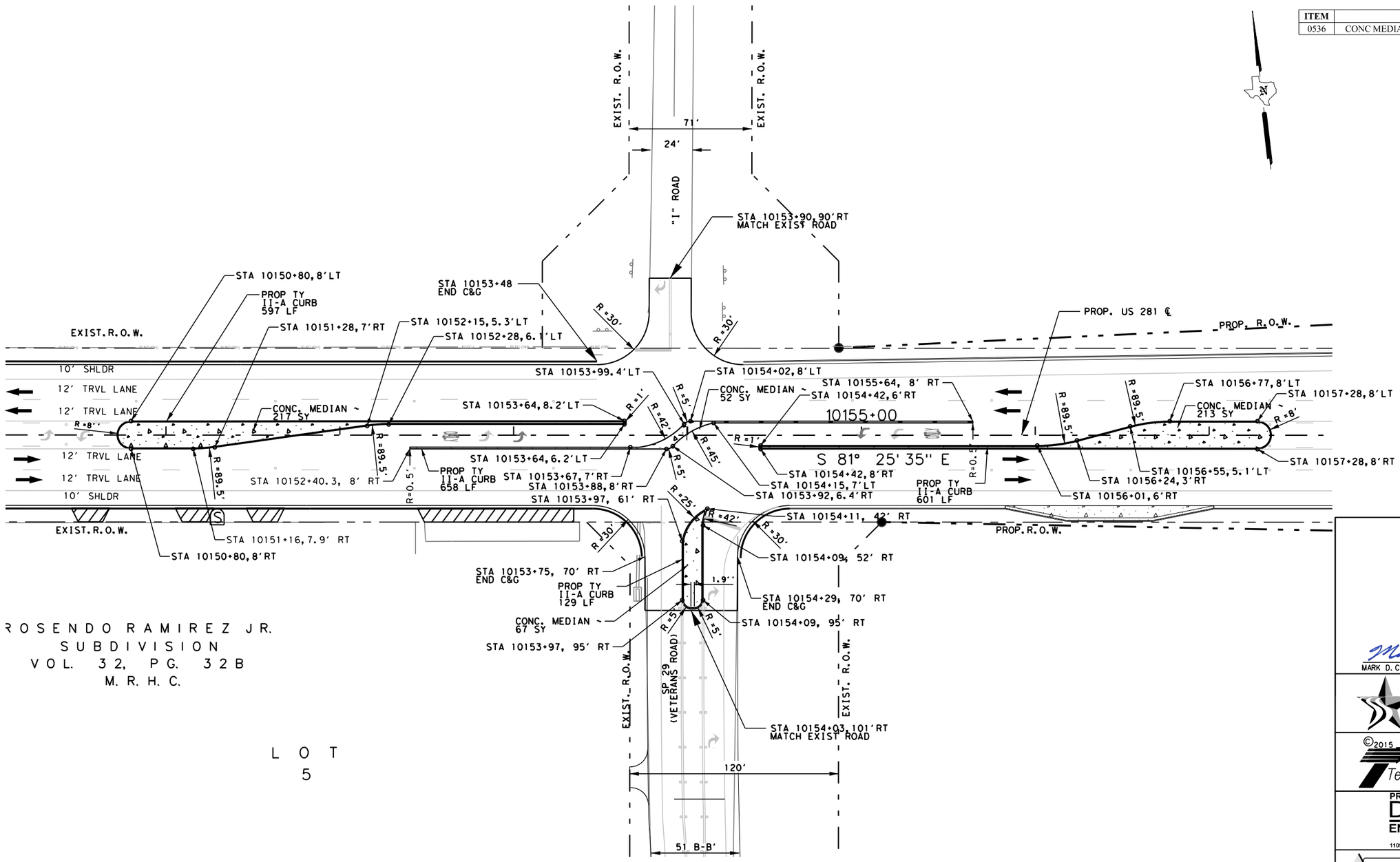
SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QTY
0536	CONC MEDIAN	SY	549



STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED
PROFESSIONAL ENGINEER

Mark Corbitt 9/3/2015
MARK D. CORBITT DATE

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HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281
INTERSECTION LAYOUT
"I" ROAD / SP 29

SCALE:
HOR: 1"= 60'

SHEET 3 OF 3

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	131
TR:				
CK TR:				

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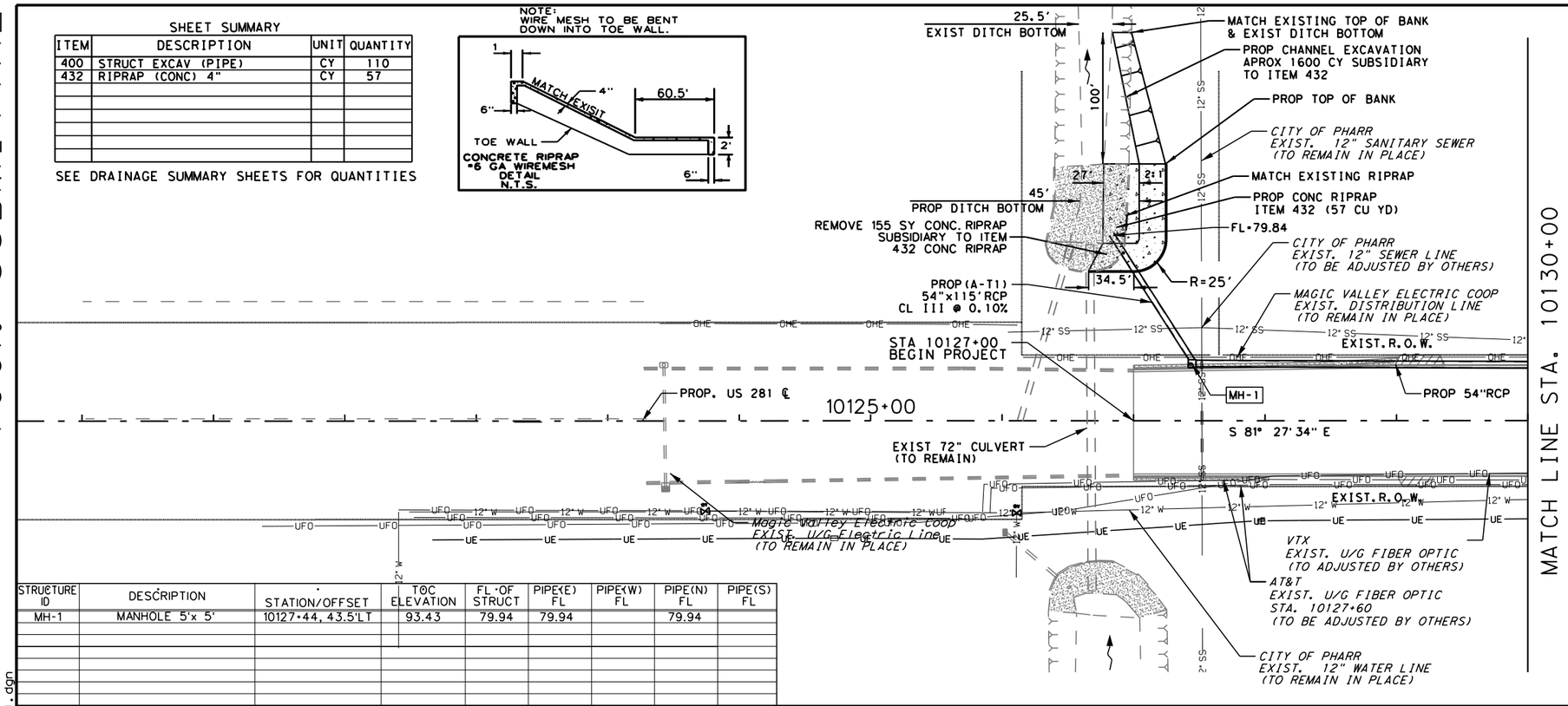
SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAV (PIPE)	CY	110
432	RIPRAP (CONC) 4"	CY	57

SEE DRAINAGE SUMMARY SHEETS FOR QUANTITIES

NOTE:
WIRE MESH TO BE BENT DOWN INTO TOE WALL.



STRUCTURE ID	DESCRIPTION	STATION/OFFSET	TOC ELEVATION	FL OF STRUCT	PIPE(E) FL	PIPE(W) FL	PIPE(N) FL	PIPE(S) FL
MH-1	MANHOLE 5'x 5'	10127+44, 43.5'LT	93.43	79.94	79.94		79.94	

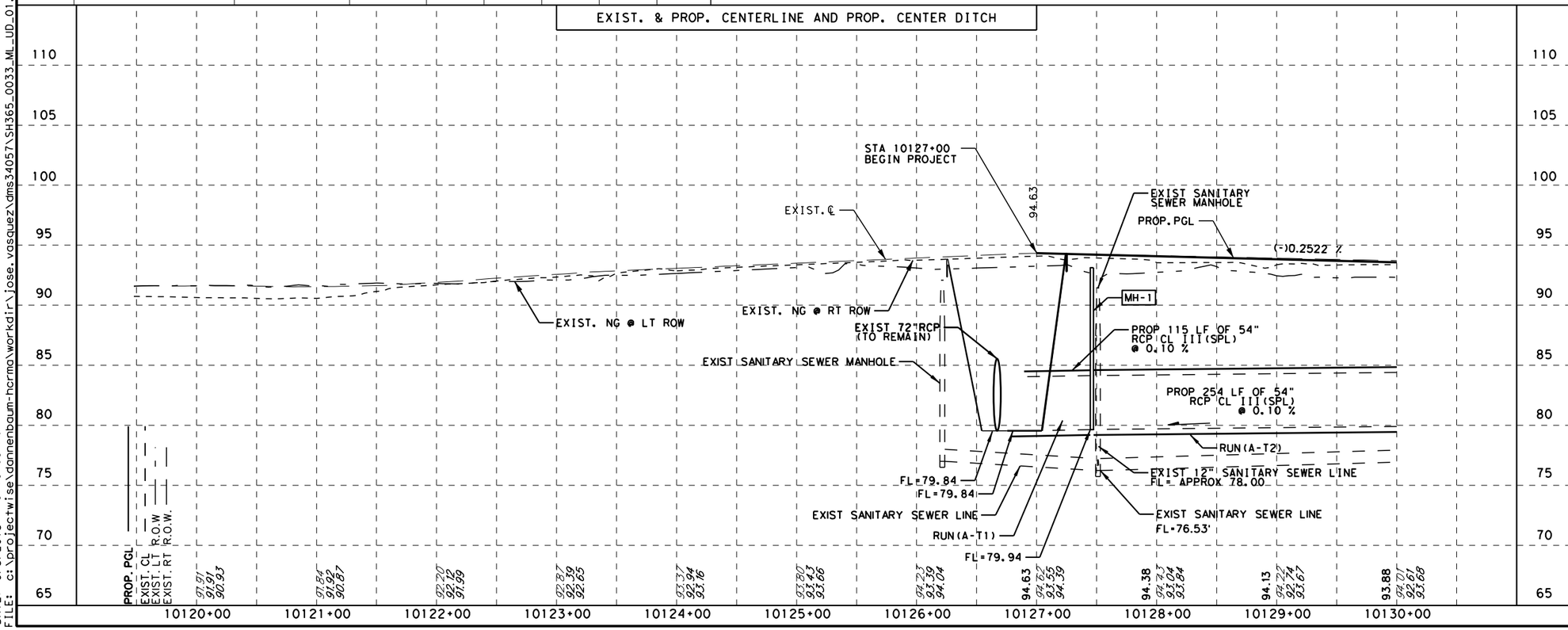
LEGEND:

- SEE P&P SHEETS
- EXIST. ITEM TO BE REMOVED UNDER ITEM 496
- PROP. CONC. PLUG (NON-PAY ITEM)
- DIRECTION OF FLOW IN DITCH
- AREA OF CONFLICT

NOTES:

1. SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.
2. ALL RCP SHALL BE CL III UNLESS OTHERWISE NOTED.
3. SEE DRAINAGE STRUCTURE STANDARD SHEETS FOR DESCRIPTION OF OFFSET IN STORM DRAIN TABLE.
4. RECONNECTION OF EXISTING STORM DRAIN SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. SEE "HYDRAULIC DATA SHEETS FOR PAYMENT OF ALL PROPOSED DRAINAGE STRUCTURES.
6. FOR OTHER DITCH GRADES SEE PLAN ABD PROFILE SHEETS
7. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

# W	EXIST. # (DIAM INCH) WATER LINE
# SS	EXIST. # (DIAM INCH) SANITARY SEWER LINE
# G	EXIST. # (DIAM INCH) GAS PIPELINE
UFO	EXIST. UNDEGROUND FIBER OPTIC CABLE
UT	EXIST. UNDERGROUND CABEL/TELE LINE
OHE	EXIST. OVERHEAD ELECTRIC LINE
HVTL	EXIST. HIGH VOLTAGE TRANSMISSION LINE
UE	EXIST. UNDERGROUND ELECTRIC LINE
OHEC	EXIST. OVERHEAD ELECTRIC LINE WITH CABLE LINE ATTACHED
OHEFC	EXIST. OVERHEAD ELECTRIC LINE WITH FIBER OPTIC AND CABLE LINE ATTACHED



STATE OF TEXAS
YARA M. CORBITT
100129
LICENSED
PROFESSIONAL ENGINEER

Y.M. Corbitt, PE — 09-08-2015
YARA M. CORBITT — DATE

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HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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PROGRAM MANAGEMENT CONSULTANT
DANNENBAUM
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T.B.P.E. FIRM REGISTRATION #392
1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

Cortran
ENGINEERING, PLLC
TBPE FIRM NO. 13219

US 281
MAINLANES
UTILITIES & DRAINAGE
STA. 10120+00 TO STA. 10130+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 1 OF 11

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	175
TR:				
CK TR:				

DATE: 9/3/2015 3:13:03 PM
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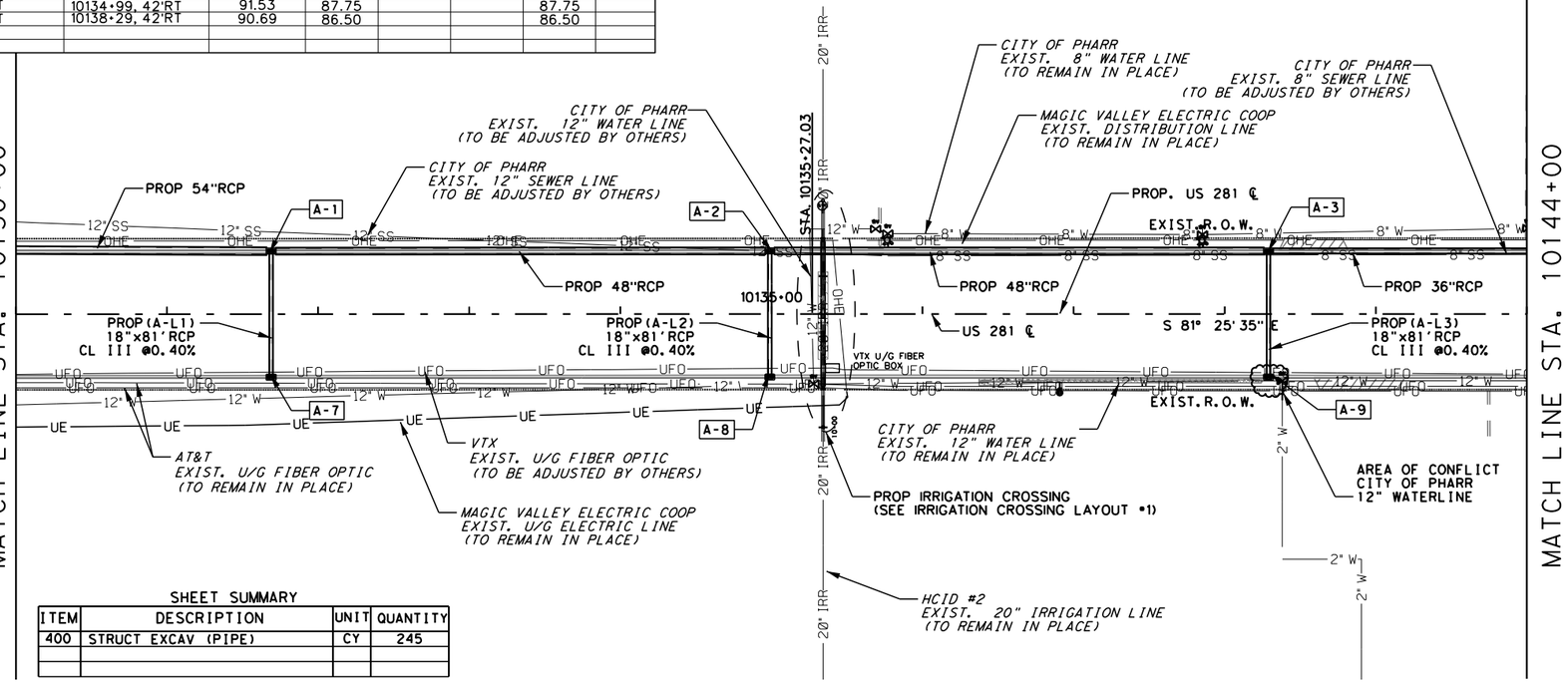
STRUCTURE ID	DESCRIPTION	STATION/OFFSET	TOC ELEVATION	FL OF STRUCT	PIPE(E) FL	PIPE(W) FL	PIPE(N) FL	PIPE(S) FL
A-1	(PCU) INLET	10131+69, 42'LT	92.36	80.36	80.36	80.36		87.75
A-2	(PCU) INLET	10134+99, 42'LT	91.53	80.86	80.86	80.86		87.21
A-3	(PCU) INLET	10138+29, 42'LT	90.69	81.19	81.19	81.19		86.25
A-7	(PCU) INLET	10131+69, 42'RT	92.36	88.00			88.00	
A-8	(PCU) INLET	10134+99, 42'RT	91.53	87.75			87.75	
A-9	(PCU) INLET	10138+29, 42'RT	90.69	86.50			86.50	



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCT EXCAV (PIPE)	CY	245

SEE DRAINAGE SUMMARY SHEETS FOR QUANTITIES

LEGEND:

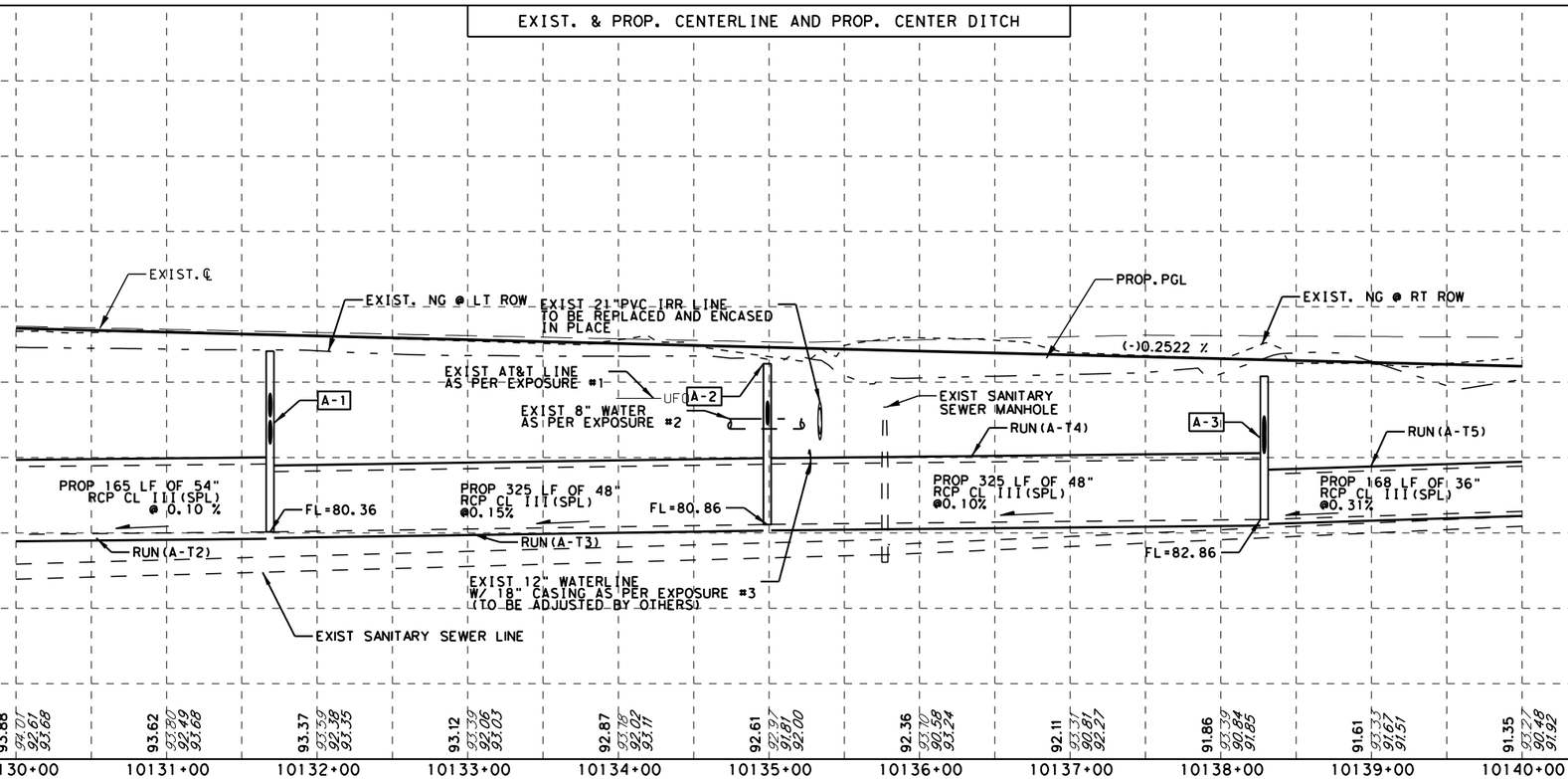
- SEE P&P SHEETS
- EXIST. ITEM TO BE REMOVED UNDER ITEM 496
- PROP. CONC. PLUG (NON-PAY ITEM)
- DIRECTION OF FLOW IN DITCH
- AREA OF CONFLICT

NOTES:

1. SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.
2. ALL RCP SHALL BE CL III UNLESS OTHERWISE NOTED.
3. SEE DRAINAGE STRUCTURE STANDARD SHEETS FOR DESCRIPTION OF OFFSET IN STORM DRAIN TABLE.
4. RECONNECTION OF EXISTING STORM DRAIN SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. SEE "HYDRAULIC DATA SHEETS FOR PAYMENT OF ALL PROPOSED DRAINAGE STRUCTURES.
6. FOR OTHER DITCH GRADES SEE PLAN ABD PROFILE SHEETS
7. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

- # W — EXIST. # (DIAM INCH) WATER LINE
- # SS — EXIST. # (DIAM INCH) SANITARY SEWER LINE
- # G — EXIST. # (DIAM INCH) GAS PIPELINE
- UFO — EXIST. UNDEGROUND FIBER OPTIC CABLE
- UT — EXIST. UNDERGROUND CABEL/TELE LINE
- OHE — EXIST. OVERHEAD ELECTRIC LINE
- HVTL — EXIST. HIGH VOLTAGE TRANSMISSION LINE
- UE — EXIST. UNDERGROUND ELECTRIC LINE
- OHEC — EXIST. OVERHEAD ELECTRIC LINE WITH CABLE LINE ATTACHED
- OHEFC — EXIST. OVERHEAD ELECTRIC LINE WITH FIBER OPTIC AND CABLE LINE ATTACHED

EXIST. & PROP. CENTERLINE AND PROP. CENTER DITCH



STATE OF TEXAS
YARA M. CORBITT
100129
LICENSED PROFESSIONAL ENGINEER

YARA M. CORBITT, PE — 09-08-2015
YARA M. CORBITT — DATE

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T.B.P.E. FIRM REGISTRATION #392
1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

Cortrau
ENGINEERING, PLLC
TBPE FIRM NO. 13219

US 281
MAINLANES
UTILITIES AND DRAINAGE
STA. 10130+00 TO STA. 10140+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 2 OF 11

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	176

DATE: 9/3/2015 3:13:06 PM
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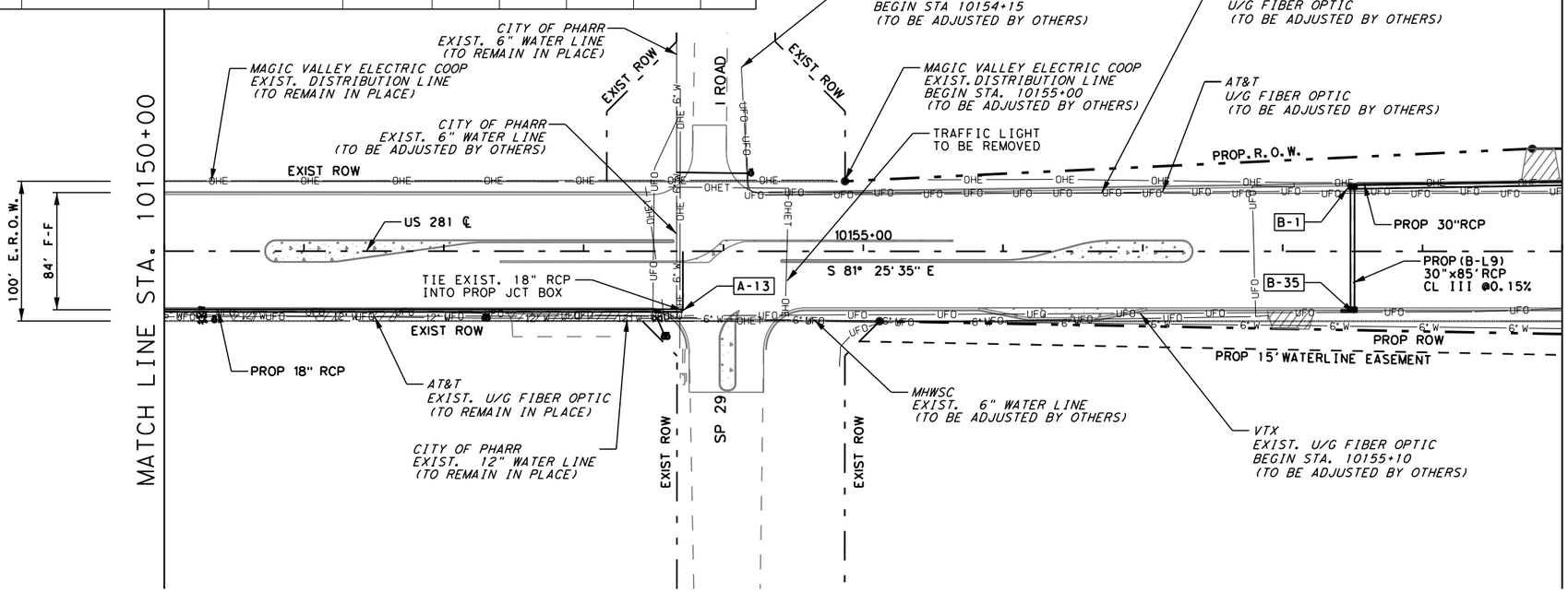
STRUCTURE ID	DESCRIPTION	STATION/OFFSET	TOC ELEVATION	FL OF STRUCT	PIPE(E) FL	PIPE(W) FL	PIPE(N) FL	PIPE(S) FL
A-13	JUNCTION BOX	10153+71, 42.5'RT		85.60		85.60		
B-1	(PCU) INLET	10158+80, 42'LT	89.79	85.10	85.10			85.10
B-35	(PCU) INLET w/EXT	10158+80, 42'RT	89.79	85.23			85.23	



LEGEND:

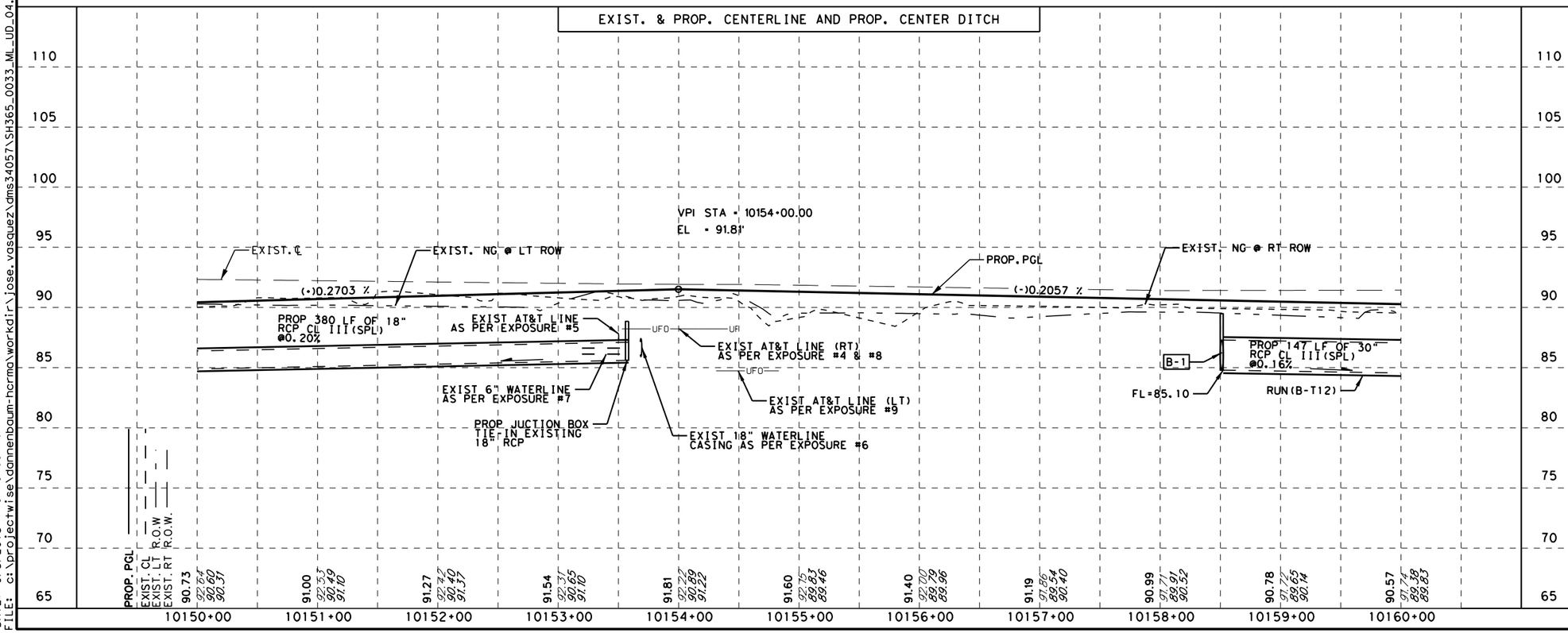
- SEE P&P SHEETS
- EXIST. ITEM TO BE REMOVED UNDER ITEM 496
- PROP. CONC. PLUG (NON-PAY ITEM)
- DIRECTION OF FLOW IN DITCH
- AREA OF CONFLICT

NOTES:

1. SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.
2. ALL RCP SHALL BE CL III UNLESS OTHERWISE NOTED.
3. SEE DRAINAGE STRUCTURE STANDARD SHEETS FOR DESCRIPTION OF OFFSET IN STORM DRAIN TABLE.
4. RECONNECTION OF EXISTING STORM DRAIN SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. SEE "HYDRAULIC DATA SHEETS FOR PAYMENT OF ALL PROPOSED DRAINAGE STRUCTURES.
6. FOR OTHER DITCH GRADES SEE PLAN ABD PROFILE SHEETS
7. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

# W	EXIST. # (DIAM INCH) WATER LINE
# SS	EXIST. # (DIAM INCH) SANITARY SEWER LINE
# G	EXIST. # (DIAM INCH) GAS PIPELINE
UFO	EXIST. UNDEGROUND FIBER OPTIC CABLE
UT	EXIST. UNDERGROUND CABEL/TELE LINE
OHE	EXIST. OVERHEAD ELECTRIC LINE
HVTL	EXIST. HIGH VOLTAGE TRANSMISSION LINE
UE	EXIST. UNDERGROUND ELECTRIC LINE
OHEC	EXIST. OVERHEAD ELECTRIC LINE WITH CABLE LINE ATTACHED
OHEFC	EXIST. OVERHEAD ELECTRIC LINE WITH FIBER OPTIC AND CABLE LINE ATTACHED

EXIST. & PROP. CENTERLINE AND PROP. CENTER DITCH



STATE OF TEXAS
YARA M. CORBITT
100129
LICENSED PROFESSIONAL ENGINEER

YARA M. CORBITT, PE — 09-08-2015
YARA M. CORBITT — DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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Texas Department of Transportation

PROGRAM MANAGEMENT CONSULTANT
DANNENBAUM ENGINEERING CORPORATION
T.B.P.E. FIRM REGISTRATION #392
1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

Cortrau ENGINEERING, PLLC
TBPE FIRM NO. 13219

US 281
MAINLANES
UTILITIES AND DRAINAGE
STA. 10150+00 TO STA. 10160+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 4 OF 11

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	178

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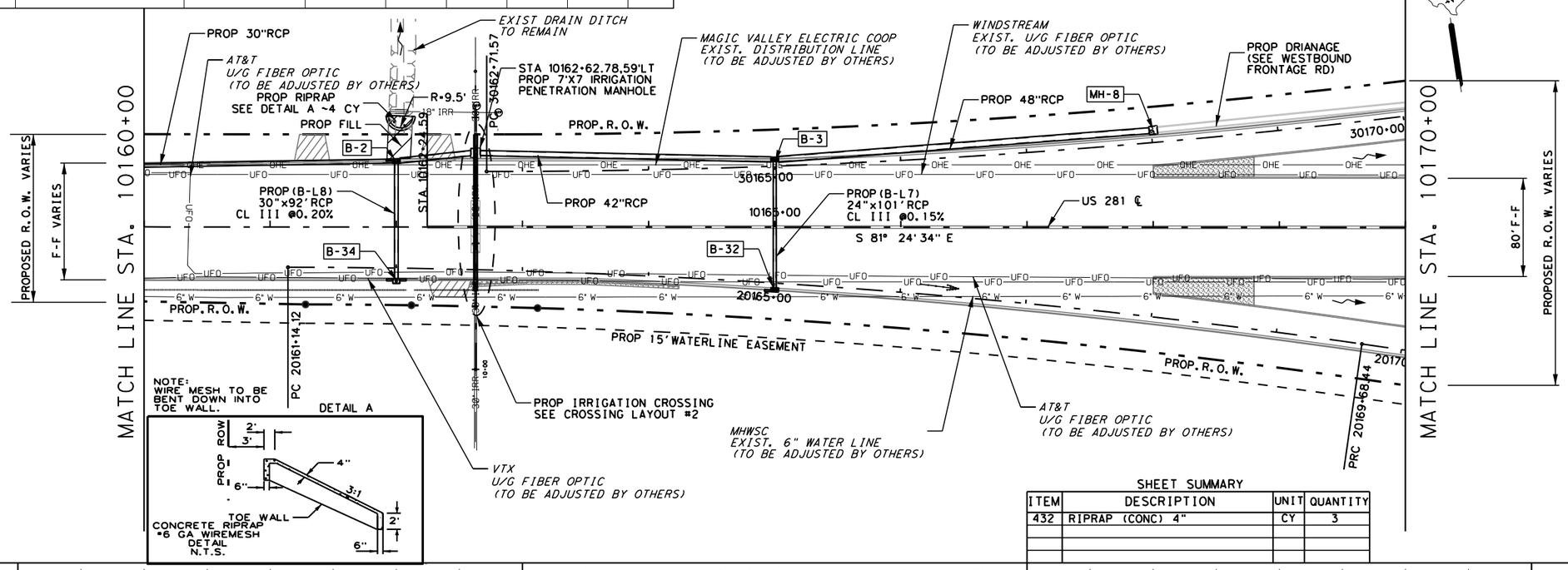
100% SUBMITTAL

STRUCTURE ID	DESCRIPTION	FLOC STATION/OFFSET	TOC@FOC ELEVATION	FL OF STRUCT	PIPE(E) FL	PIPE(W) FL	PIPE(N) FL	PIPE(S) FL
B-2	(PCU) INLET W/EXT	10162+00, 52.5'LT	89.07	83.52	83.52	84.53		84.00
B-3	(PCU) INLET	10165+00, 54'LT	89.67	82.92	82.92	82.92		84.84
MH-8	MANHOLE 5'X5'	10168+00, 77'LT	89.94	82.56	82.56	82.56		
B-34	(PCU) INLET W/2-EXT	10162+00, 41'RT	89.07	84.19			84.19	
B-32	(PCU) INLET W/EXT	10165+00, 50'RT	89.67	85.00			85.00	

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
432	RIPRAP (CONC) 4"	CY	4



SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
432	RIPRAP (CONC) 4"	CY	3

LEGEND:

- SEE P&P SHEETS
- EXIST. ITEM TO BE REMOVED UNDER ITEM 496
- PROP. CONC. PLUG (NON-PAY ITEM)
- DIRECTION OF FLOW IN DITCH
- AREA OF CONFLICT

NOTES:

1. SEE ALIGNMENT DATA SHEET FOR PROPOSED CENTERLINE DATA.
2. ALL RCP SHALL BE CL III UNLESS OTHERWISE NOTED.
3. SEE DRAINAGE STRUCTURE STANDARD SHEETS FOR DESCRIPTION OF OFFSET IN STORM DRAIN TABLE.
4. RECONNECTION OF EXISTING STORM DRAIN SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
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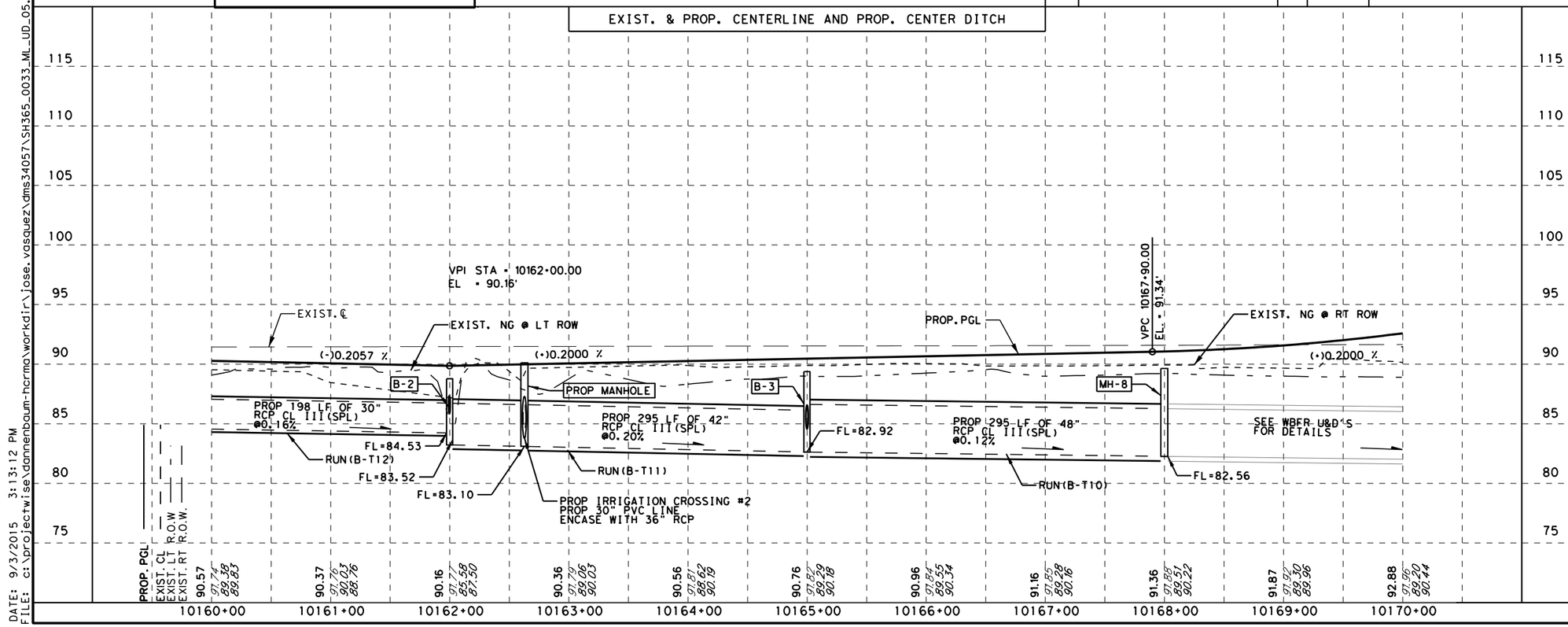
EXIST. & PROP. CENTERLINE AND PROP. CENTER DITCH



STATE OF TEXAS
YARA M. CORBITT
100129
LICENSED PROFESSIONAL ENGINEER

YARA M. CORBITT, PE — 09-08-2015
YARA M. CORBITT — DATE

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Cortrau ENGINEERING, PLLC
TBPE FIRM NO. 13219

US 281
MAINLANES
UTILITIES AND DRAINAGE
STA. 10168+00 TO STA. 10180+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 5 OF 11

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST	COUNTY		SHEET NO.
PHR	HIDALGO		179

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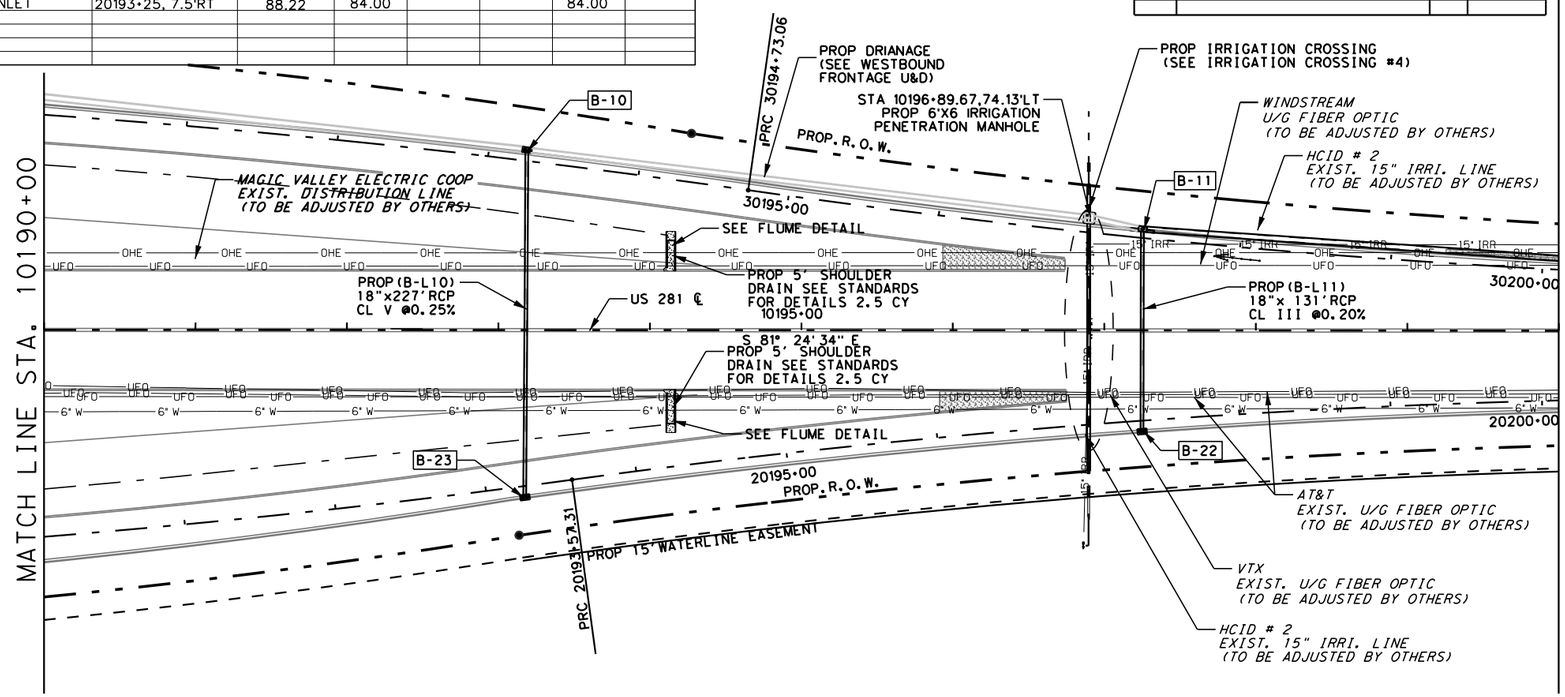
100% SUBMITTAL

STRUCTURE ID	DESCRIPTION	STATION/OFFSET	TOC ELEVATION	FL OF STRUCT	PIPE(E) FL	PIPE(W) FL	PIPE(N) FL	PIPE(S) FL
B-10	(PCU) INLET	30193+25, 7.5'LT	88.02	80.91	80.99	80.91		83.43
B-11	(PCU) INLET W/2-EXT	10197+25, 65'LT	88.08	82.01	82.01	82.11		83.10
B-22	(PCU) INLET	10197+25, 67'RT	88.08	83.50			83.50	
B-23	(PCU) INLET	20193+25, 7.5'RT	88.22	84.00			84.00	

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
432	RIPRAP (CONC) 4"	CY	5



LEGEND:

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- PROP. CONC. PLUG (NON-PAY ITEM)
- DIRECTION OF FLOW IN DITCH
- AREA OF CONFLICT

NOTES:

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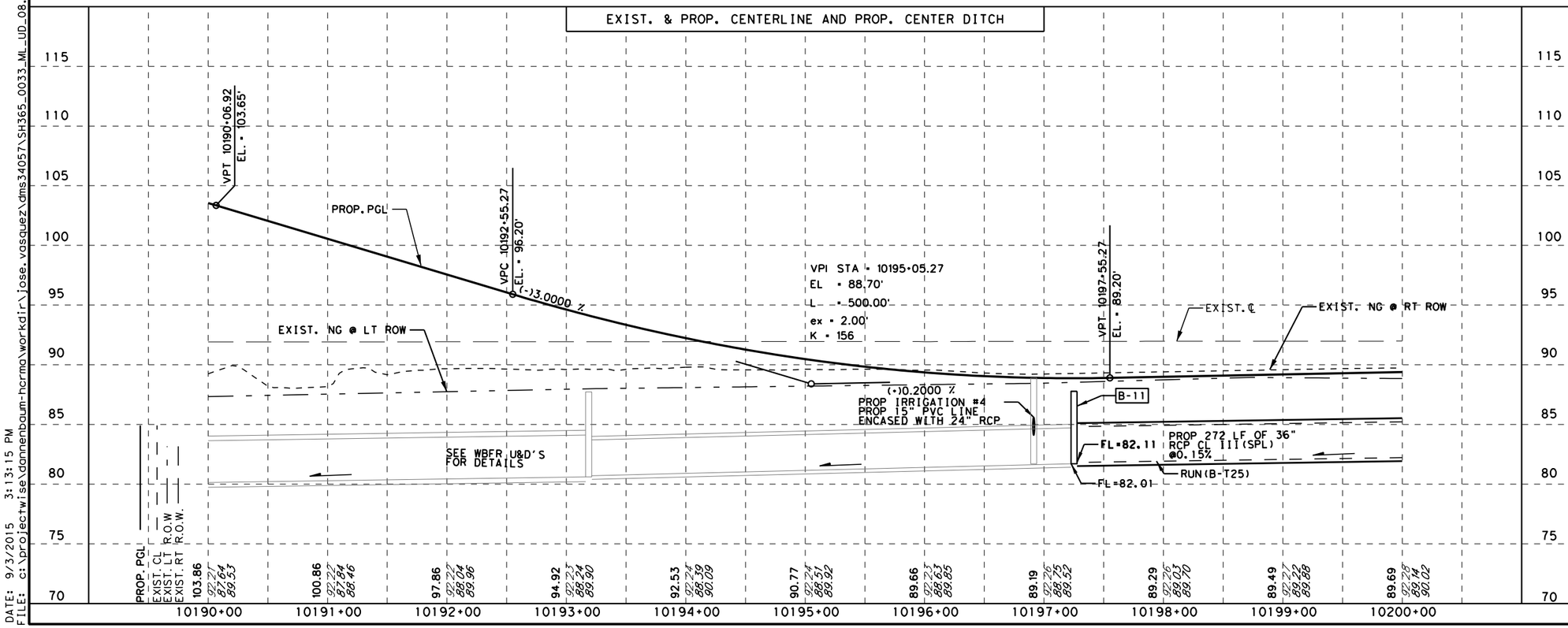
EXIST. & PROP. CENTERLINE AND PROP. CENTER DITCH



STATE OF TEXAS
YARA M. CORBITT
100129
LICENSED PROFESSIONAL ENGINEER

YARA M. CORBITT, PE — 09-08-2015
YARA M. CORBITT — DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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Cortrau ENGINEERING, PLLC
TBPE FIRM NO. 13219

US 281
MAINLANES
UTILITIES AND DRAINAGE
STA. 10190+00 TO STA. 10200+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 8 OF 11

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	182

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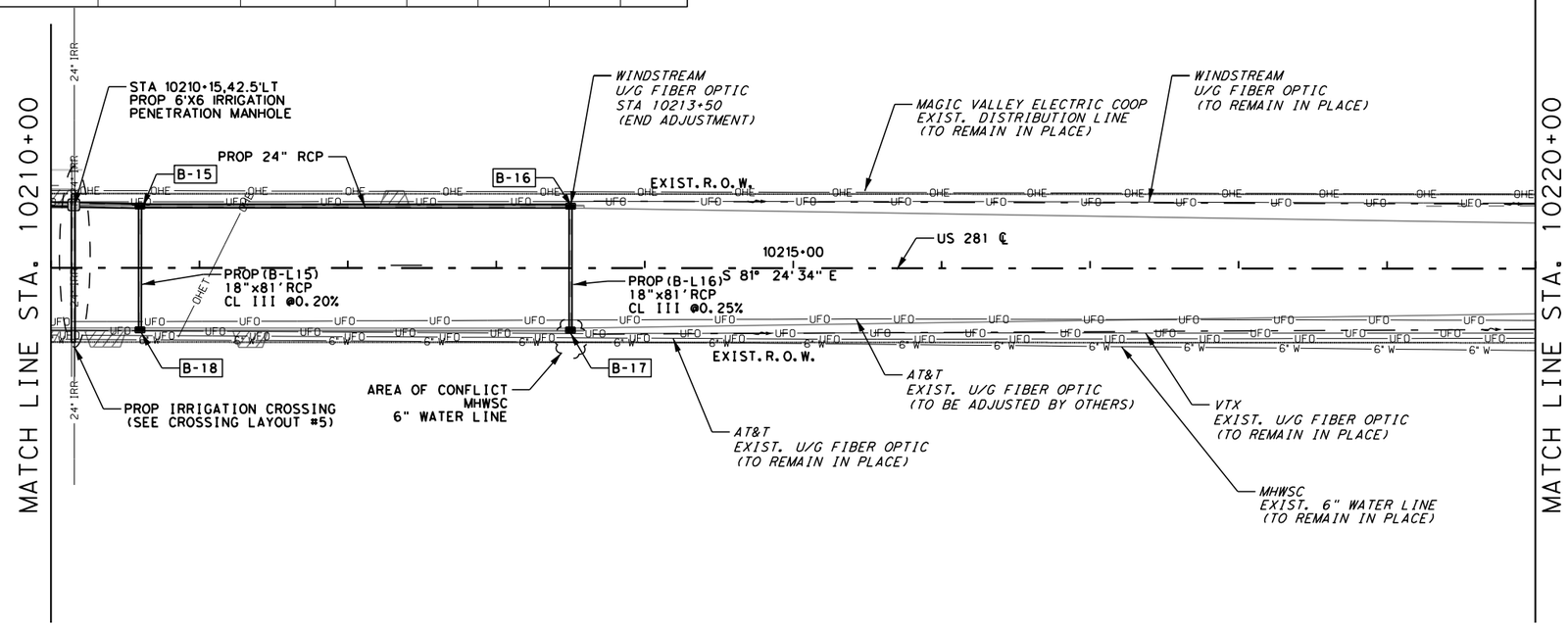
100% SUBMITTAL

STRUCTURE ID	DESCRIPTION	STATION/OFFSET	TOC ELEVATION	FL OF STRUCT	PIPE(E) FL	PIPE(W) FL	PIPE(N) FL	PIPE(S) FL
B-15	(PCU) INLET	10210+60, 42'LT	89.77	84.27	84.27	84.27		84.83
B-16	(PCU) INLET	10213+50, 42'LT	89.19	85.28		85.28		85.28
B-17	(PCU) INLET	10210+60, 42'RT	89.19	85.50			85.50	
B-18	(PCU) INLET	10213+50, 42'RT	89.77	85.00			85.00	



LEGEND:

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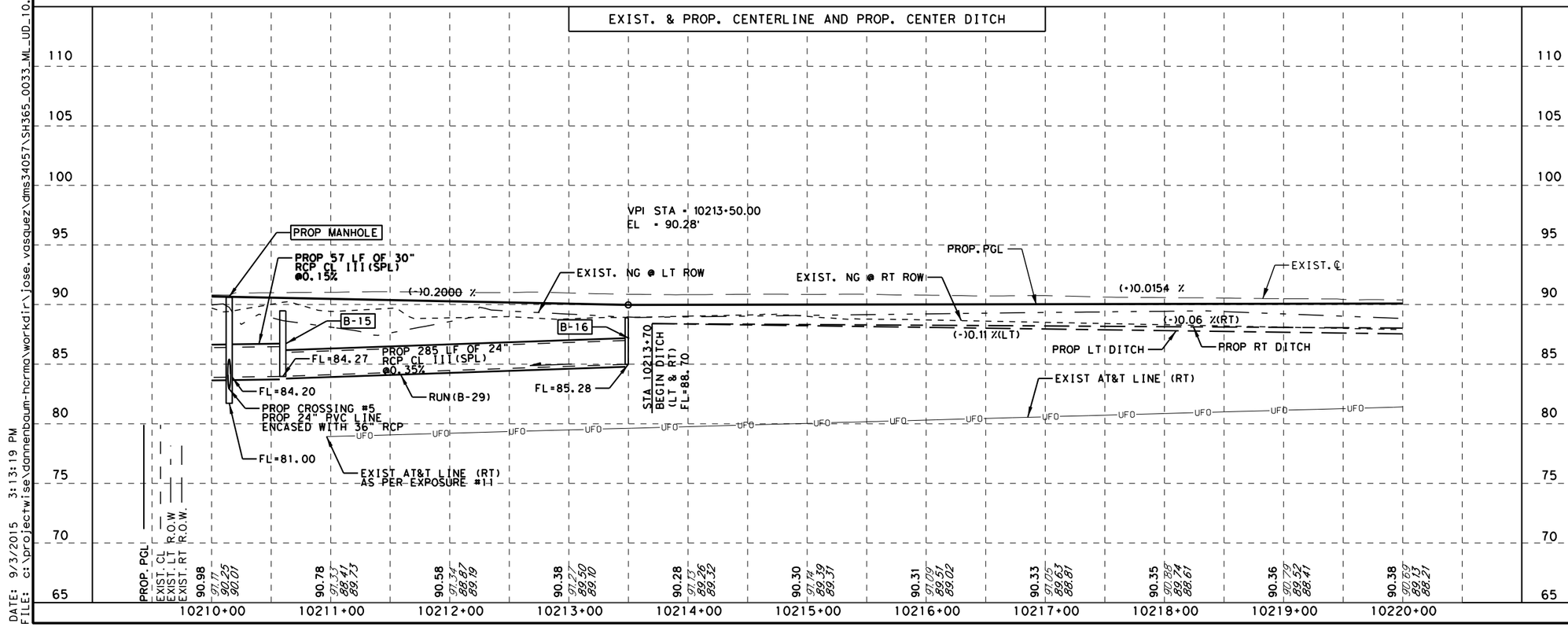

STATE OF TEXAS
YARA M. CORBITT
100129
LICENSED PROFESSIONAL ENGINEER

YARA M. CORBITT, PE — 09-08-2015 DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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PROGRAM MANAGEMENT CONSULTANT
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Cortrau
ENGINEERING, PLLC
TBPE FIRM NO. 13219

US 281
MAINLANES
UTILITIES AND DRAINAGE
STA. 10210+00 TO STA. 10220+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 10 OF 11

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	184
TR:				
CK TR:				

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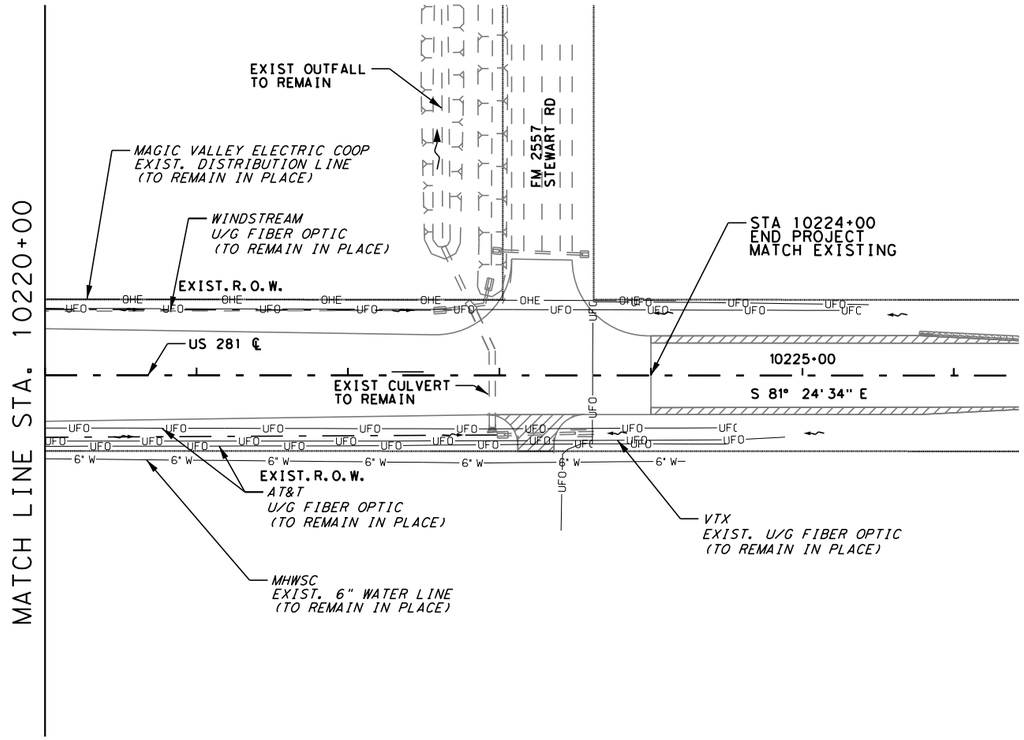

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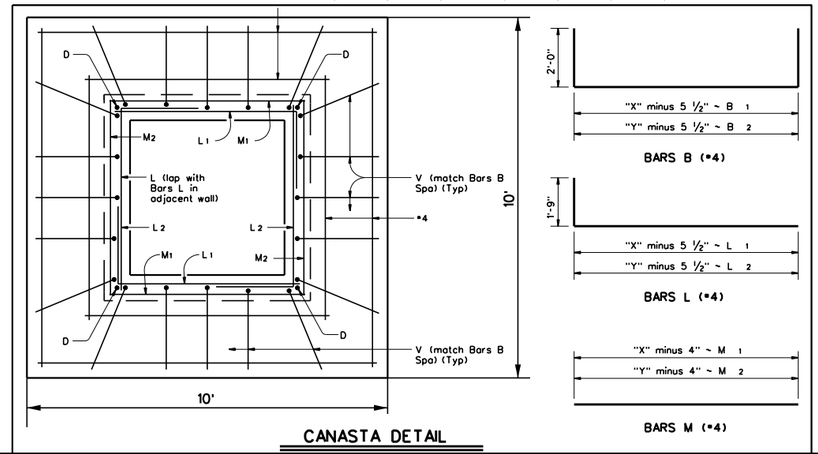

CANASTA DETAIL

LEGEND:

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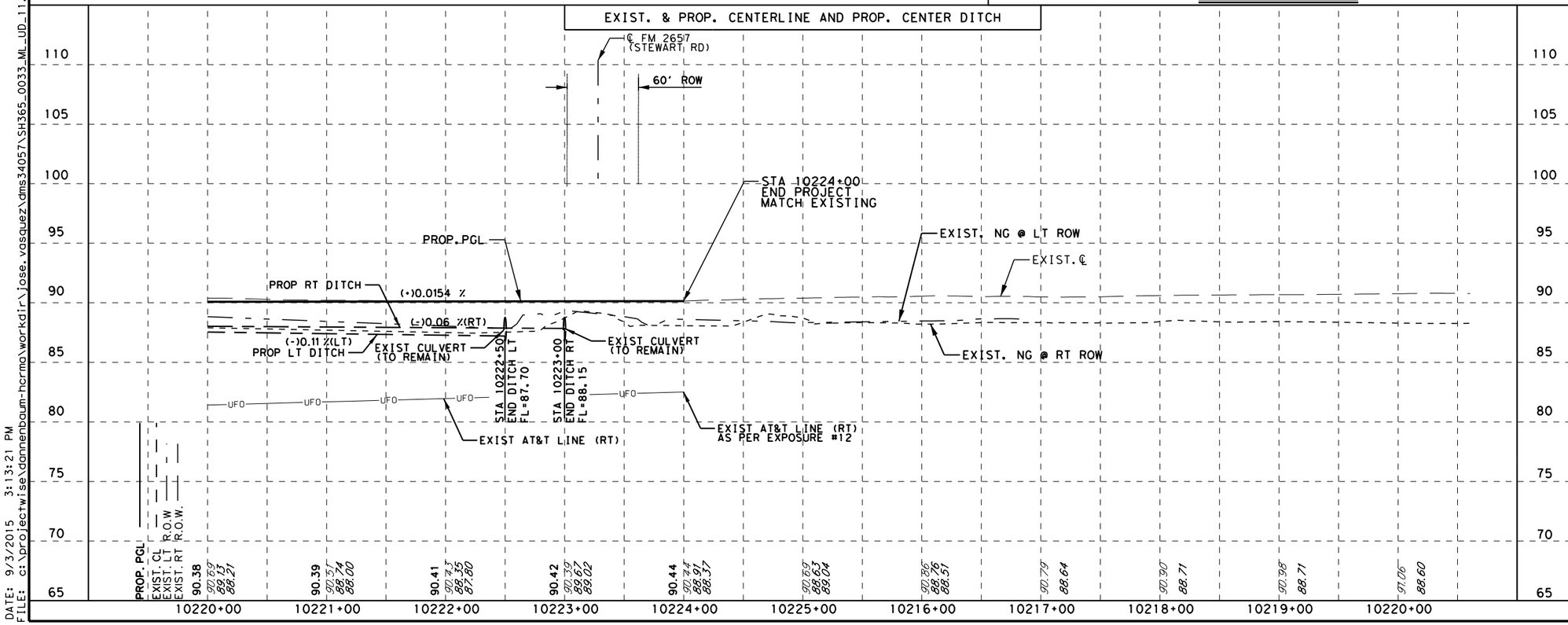

STATE OF TEXAS — YARA M. CORBITT — 100129 — LICENSED PROFESSIONAL ENGINEER

YARA M. CORBITT, PE — 09-08-2015 DATE

HCRMA HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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Cortran ENGINEERING, PLLC TBPE FIRM NO. 13219

US 281
MAINLANES
UTILITIES AND DRAINAGE
STA. 10220+00 TO END

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 11 OF 11

DN:	CK DN:	DW:	CK DW:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	185

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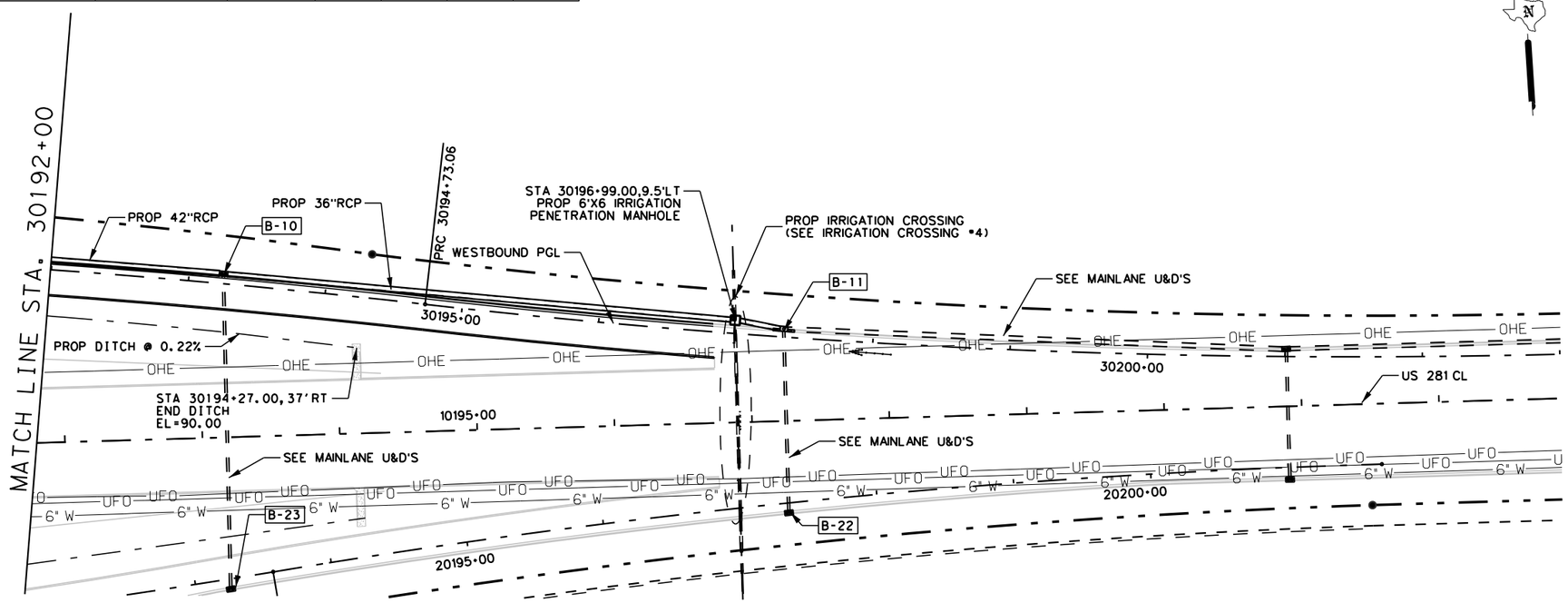
100% SUBMITTAL

STRUCTURE ID	DESCRIPTION	STATION/OFFSET	TOC ELEVATION	FL OF STRUCT	PIPE(E) FL	PIPE(W) FL	PIPE(S) FL
* B-10	(PCU) INLET	30193+25, 7.5'LT	88.02	80.91	81.00	80.91	83.43
* B-11	(PCU) INLET W/EXT	10197+25, 65'LT	88.08	82.01	82.01	82.01	83.10

* SHOWN FOR REFERENCE ONLY NOT QUANTIFIED



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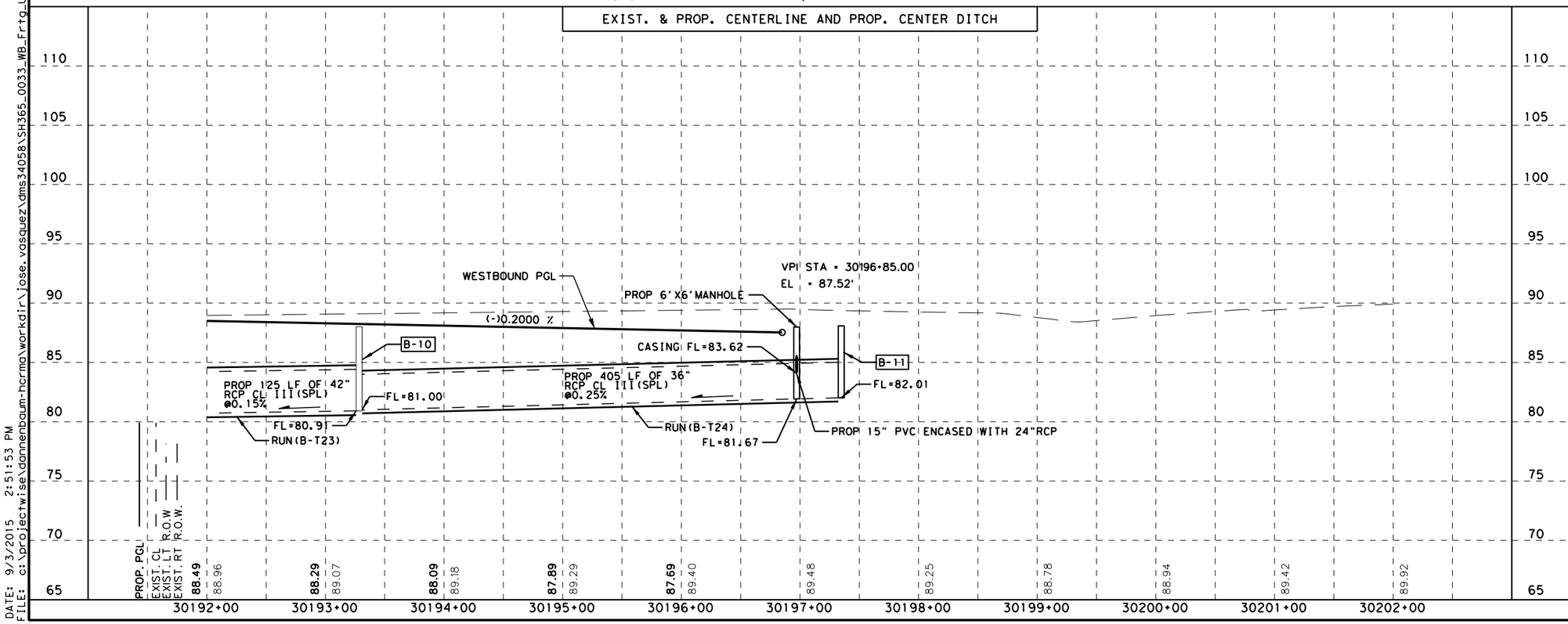

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YARA M. CORBITT
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Cortrau ENGINEERING, PLLC
TBPE FIRM NO. 13219

US 281
WESTBOUND FRONTAGE ROAD
UTILITIES AND DRAINAGE
STA. 30192+00 TO STA. 30202+00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 4 OF 4

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	193
TR:				
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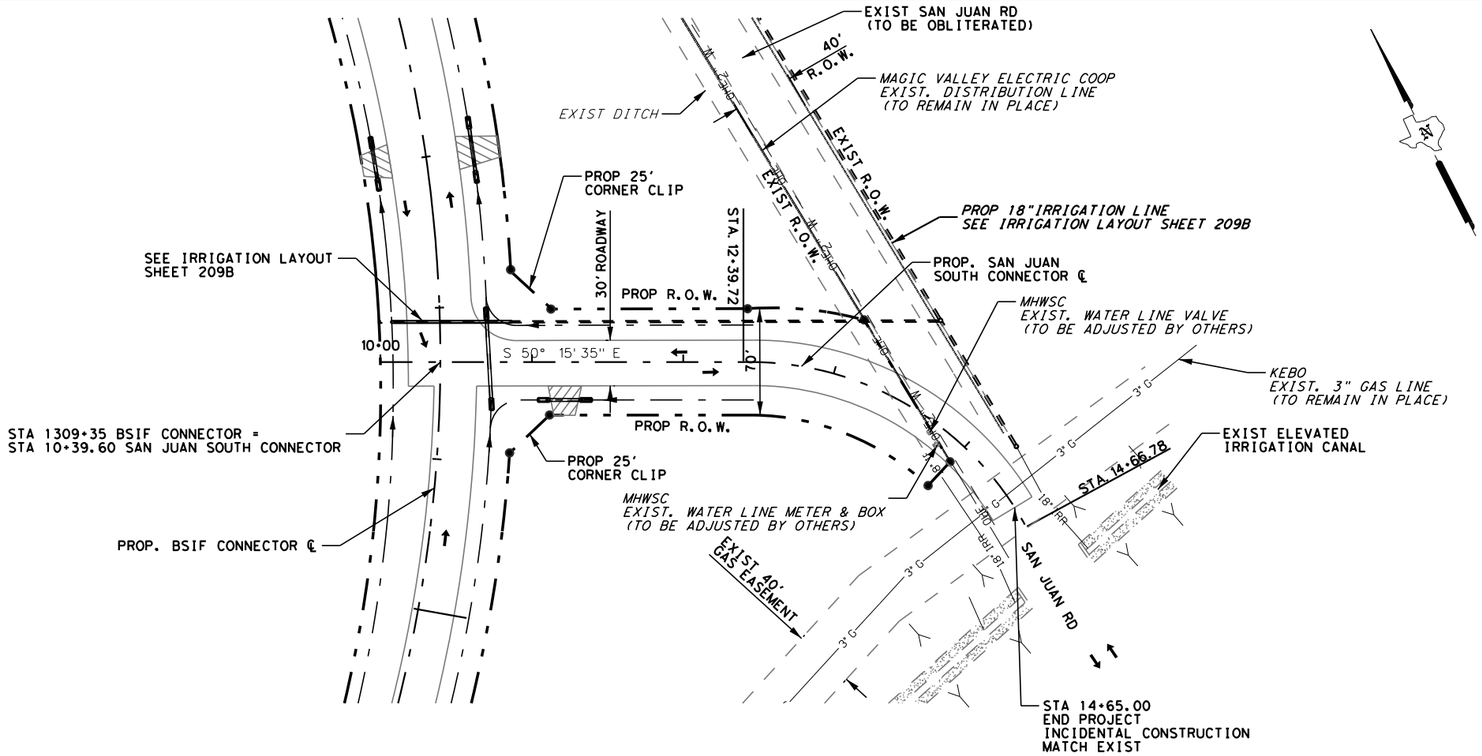

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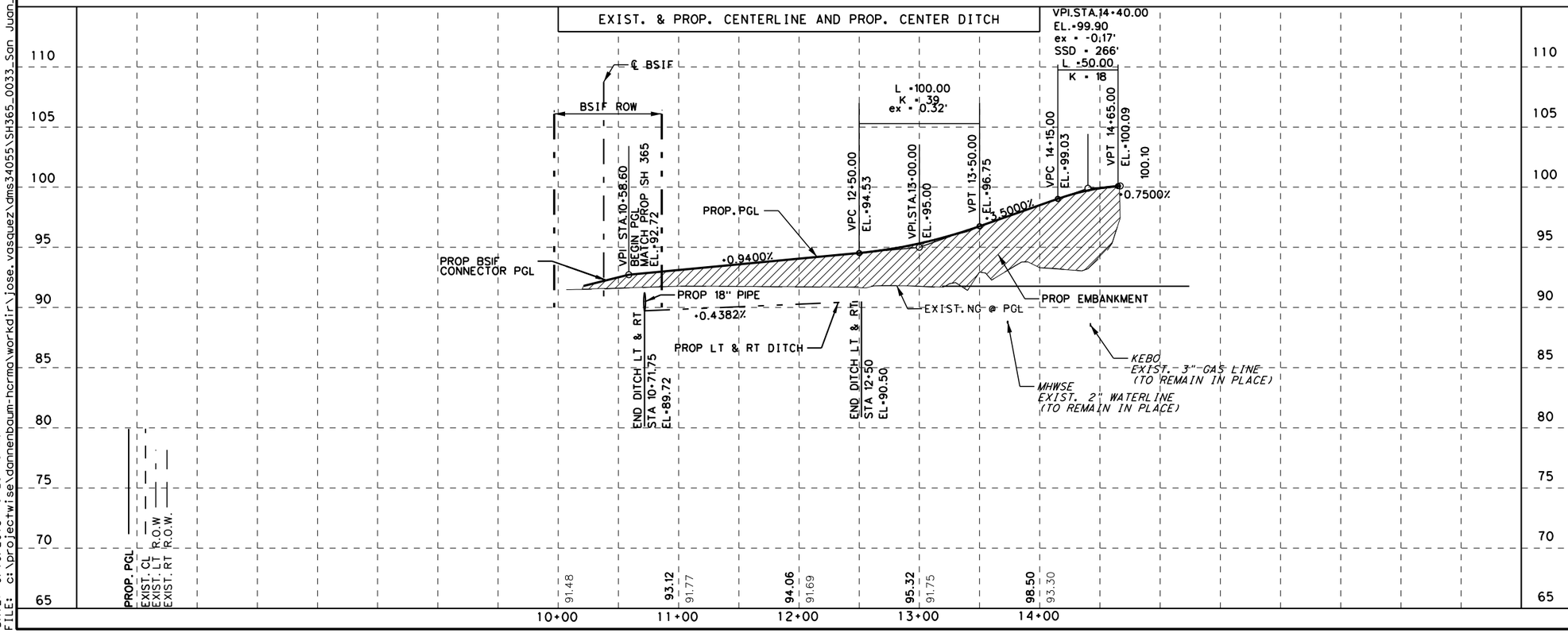
UT	EXIST. UNDERGROUND CABEL/TELE LINE
OHE	EXIST. OVERHEAD ELECTRIC LINE
HVTL	EXIST. HIGH VOLTAGE TRANSMISSION LINE
UE	EXIST. UNDERGROUND ELECTRIC LINE
OHEC	EXIST. OVERHEAD ELECTRIC LINE WITH CABLE LINE ATTACHED
OHEFC	EXIST. OVERHEAD ELECTRIC LINE WITH FIBER OPTIC AND CABLE LINE ATTACHED



STATE OF TEXAS
YARA M. CORBITT
100129
LICENSED PROFESSIONAL ENGINEER

YARA M. CORBITT, PE — 09-10-2015
YARA M. CORBITT — DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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Texas Department of Transportation

PROGRAM MANAGEMENT CONSULTANT
DANNENBAUM
ENGINEERING CORPORATION
T.B.P.E. FIRM REGISTRATION #392
1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

Cortrau
ENGINEERING, PLLC
TBPE FIRM NO. 13219

US 281
SAN JUAN SOUTH CONNECTOR
UTILITIES AND DRAINAGE
STA. 10+00.00 TO STA. 14+65.00

SCALE:
HOR: 1"= 100'
VER: 1"= 10'

SHEET 1 OF 1

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	198A
TR:				
CK TR:				

DATE: 9/10/2015 9:29:40 AM
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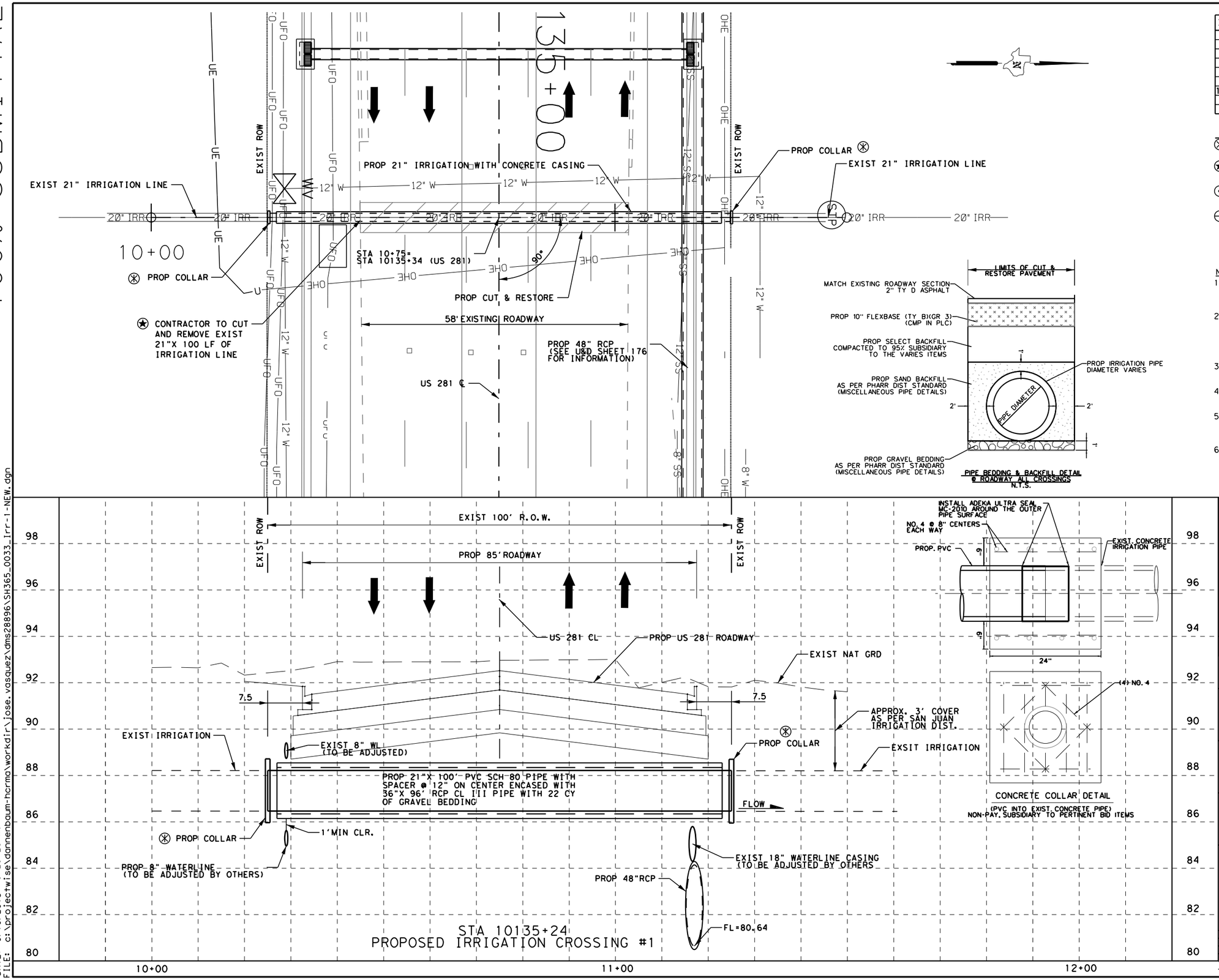

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	CUT & RESTORE PAV	SY	50
400	STRUCTURAL EXCAVATION	CY	22
400	SAND BACKFILL	CY	65
402	TRENCH PROTECTION	LF	100
464	RCP PIPE CL III(36 IN)	LF	96
496	REMOV STR PIPE	LF	100
1008	IRRIGATION PVC PIPE(21IN)	LF	100

LEGEND:

- ⊛ NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.
- ✪ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- ⊙ NON-PAY ITEM. FOR CONTRACTORS' INFORMATION ONLY.
- ⊕ THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPE IS AT THE SAME ELEVATION AS THE EXISTING STANDPIPE
- RFD ROCK FILTER DAM TY 2
- T.O.S. - TOP OF STRUCTURE

NOTES:

1. THE CONTRACTOR WILL COORDINATE WITH H.C.I.D. NO.2 48 HOURS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES.
2. PRIOR TO WORKING OUTSIDE THE ROW THE CONTRACTOR SHALL NOTIFY PROPERTY OWNER(S). CAUTION SHALL BE TAKEN NOT TO DAMAGE EXISTING FENCES, TREES, ETC. ANY DAMAGES DONE TO THEIR PROPERTY SHALL BE PREPARED AT CONTRACTORS EXPENSE.
3. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
4. ALL PVC ELBOWS, COLLARS, CONNECTIONS, AND SPACERS SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. DURING CUT & RESTORE OPERATIONS, CONTRACTOR SHALL UTILIZE ADEQUATE TRAFFIC CONTROL MEASURES INCLUDING A FLAG PERSON.
6. ALL CONNECTIONS SHALL BE SUBSIDIARY TO THE PERTINENT BID ITEMS.

STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 09-10-2015
MARK D. CORBITT DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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Texas Department of Transportation

PROGRAM MANAGEMENT CONSULTANT
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T.B.P.E. FIRM REGISTRATION #392
1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

TEDSI INFRASTRUCTURE GROUP
TEDSI
TBPE F-1640
Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281
IRRIGATION CROSSING #1
CROSSING
STA. 10135+34

SCALE:
HOR: 1"= 20'
VER: 1"= 5'

SHEET 1 OF 9

DN:	CK DN:	DH:	CK DH:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	201

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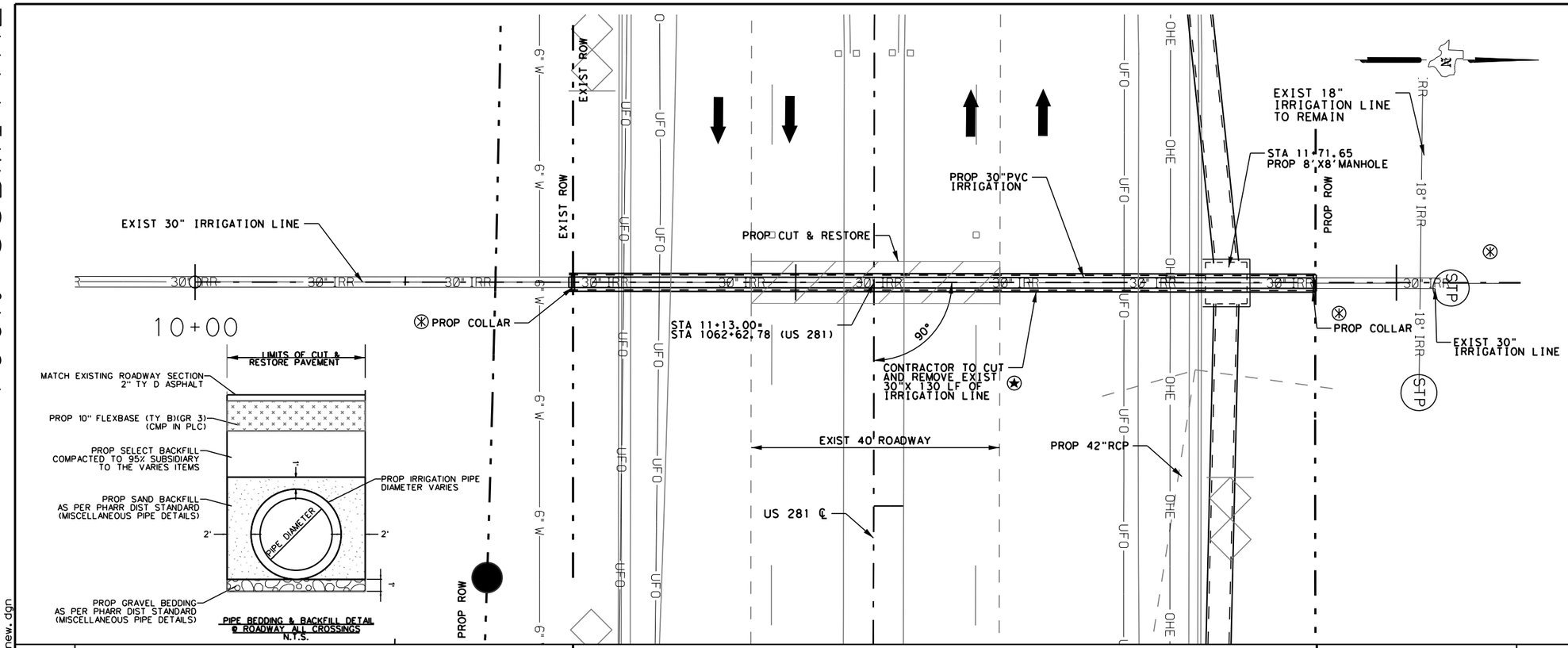

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	CUT & RESTORE PAV	SY	35
400	STRUCTURAL EXCAVATION	CY	32
400	SAND BEDDING	CY	128
402	TRENCH PROTECTION	LF	130
464	RCP CL V 42"	EA	112
465	MANHOLE 8'X 8'	EA	1
496	REMOV STR PIPE	LF	130
1008	PRSSR IRRIG PVC PIPE(30")	LF	130

LEGEND:

- ⊛ NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.
- ★ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- ⊙ NON-PAY ITEM. FOR CONTRACTORS' INFORMATION ONLY.
- ⊕ THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPE IS AT THE SAME ELEVATION AS THE EXISTING STANDPIPE
- RFD ROCK FILTER DAM TY 2
- T.O.S. - TOP OF STRUCTURE

NOTES:

1. THE CONTRACTOR WILL COORDINATE WITH H.C.I.D. NO.2 48 HOURS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES.
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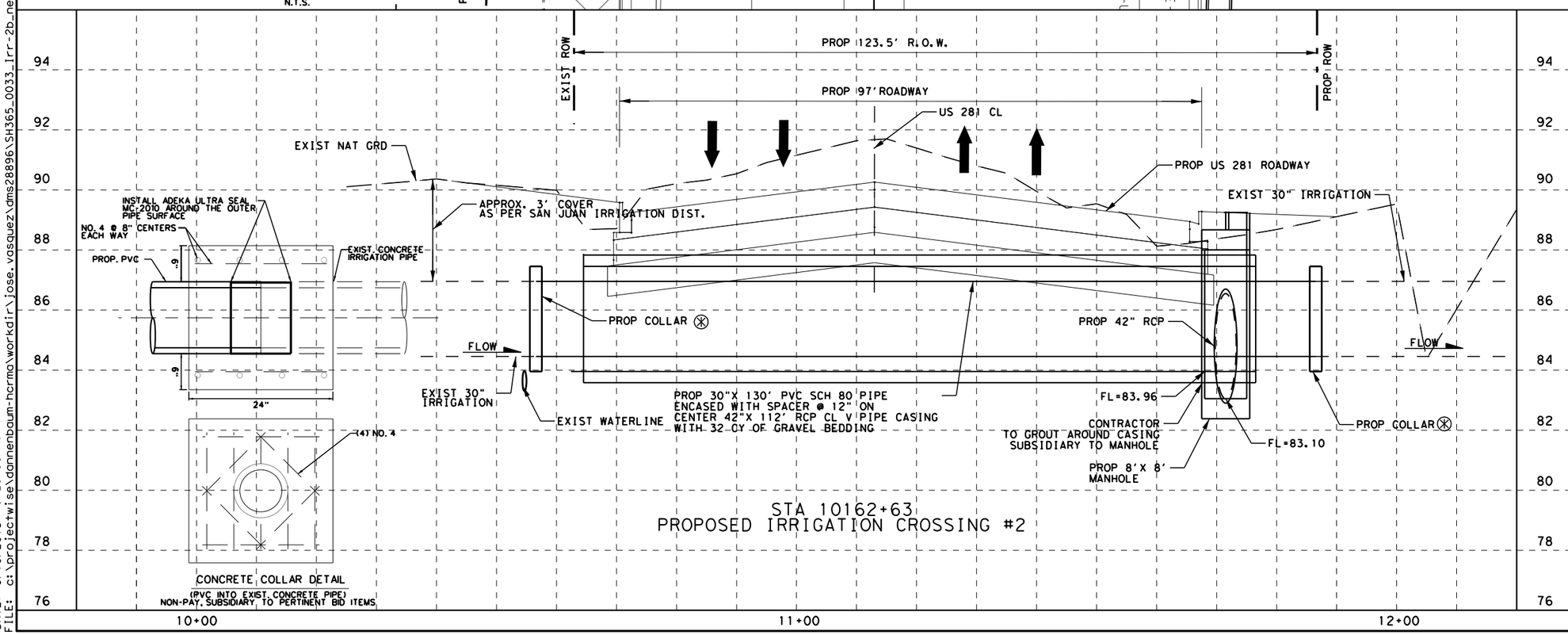
5. DURING CUT & RESTORE OPERATIONS, CONTRACTOR SHALL UTILIZE ADEQUATE TRAFFIC CONTROL MEASURES INCLUDING A FLAG PERSON.
6. ALL CONNECTIONS SHALL BE SUBSIDIARY TO THE PERTINENT BID ITEMS.



STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 09-14-2015
MARK D. CORBITT DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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PROGRAM MANAGEMENT CONSULTANT
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1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

TEDSI INFRASTRUCTURE GROUP
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TBPE F-1640
Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281
IRRIGATION CROSSING #2

STA. 10162+63

SCALE:
HOR: 1"= 20'
VER: 1"= 5'

SHEET 2 OF 9

DN:	CK DN:	DH:	CK DH:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	202

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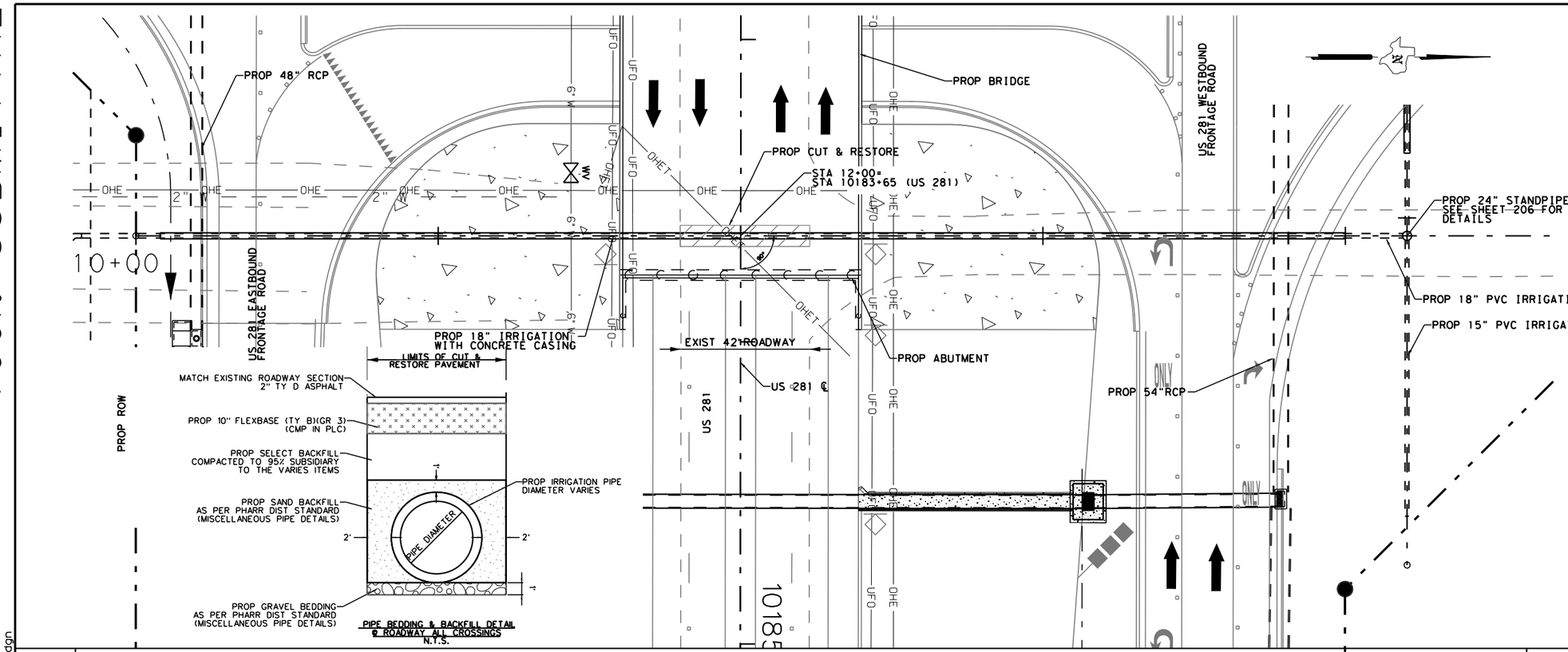

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	CUT & RESTORE PAV	SY	35
400	STRUCTURAL EXCAVATION	CY	93
400	SAND BACKFILL	CY	253
402	TRENCH PROTECTION	LF	420
464	RCP PIPE CL V(24 IN)	LF	392
1008	IRRIGATION PVC PIPE(18IN)	LF	420

LEGEND:

- NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
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- RFD — ROCK FILTER DAM TY 2

T.O.S. - TOP OF STRUCTURE

NOTES:

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6. ALL CONNECTIONS SHALL BE SUBSIDIARY TO THE PERTINENT BID ITEMS.

STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 09-14-2015
MARK D. CORBITT DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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PROGRAM MANAGEMENT CONSULTANT
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T.B.P.E. FIRM REGISTRATION #392
1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

TEDSI INFRASTRUCTURE GROUP
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Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281 IRRIGATION CROSSING #3 CROSSING STA. 10183+65

SCALE:
HOR: 1"= 20'
VER: 1"= 5'

SHEET 3 OF 9

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DH:	DIST		COUNTY	SHEET NO.
CK DH:	PHR		HIDALGO	203
TR:				
CK TR:				

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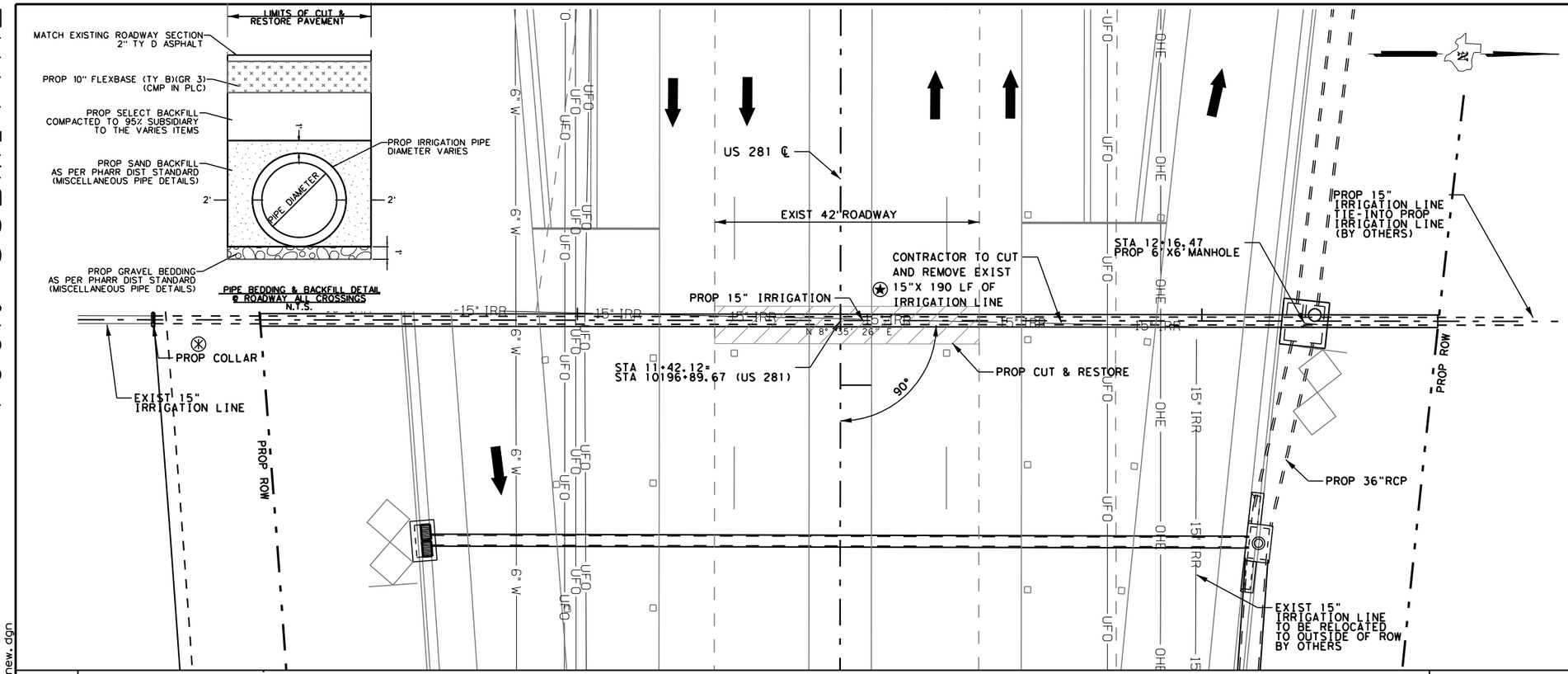

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	CUT & RESTORE PAV	SY	30
400	STRUCTURAL EXCAVATION	CY	50
400	SAND BACKFILL	CY	125
402	TRENCH PROTECTION	LF	220
464	RCP PIPE CL V (24 IN)	LF	184
465	MANHOLE 6x6	EA	1
496	REMOV STR PIPE	LF	186
1008	PRSSR IRRIG PVC PIPE 15"	LF	220

LEGEND:

- ⊗ NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.
- ⊛ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- ⊙ NON-PAY ITEM. FOR CONTRACTORS' INFORMATION ONLY.
- ⊕ THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPE IS AT THE SAME ELEVATION AS THE EXISTING STANDPIPE
- RFD ROCK FILTER DAM TY 2
- T.O.S. - TOP OF STRUCTURE

NOTES:

1. THE CONTRACTOR WILL COORDINATE WITH H.C.I.D. NO.2 48 HOURS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES.
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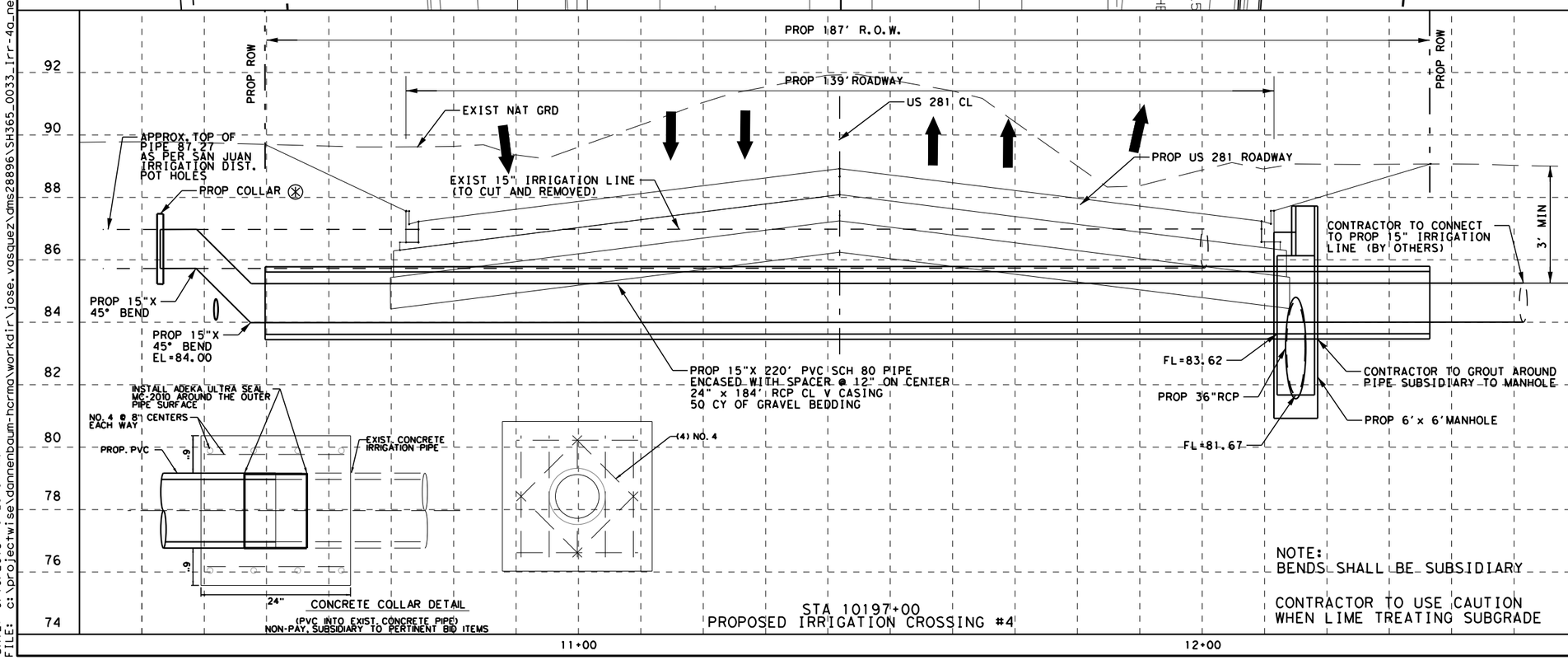
6. ALL CONNECTIONS SHALL BE SUBSIDIARY TO THE PERTINENT BID ITEMS.



STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED
PROFESSIONAL ENGINEER

Mark Corbitt 09-14-2015
MARK D. CORBITT DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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T.B.P.E. FIRM REGISTRATION #392
1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

TEDSI INFRASTRUCTURE GROUP
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TBPE F-1640
Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281
IRRIGATION CROSSING #4

STA. 10196+89.67

SCALE:
HOR: 1"= 20'
VER: 1"= 5'

SHEET 4 OF 9

DN:	CK DN:	DH:	CK DH:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	204

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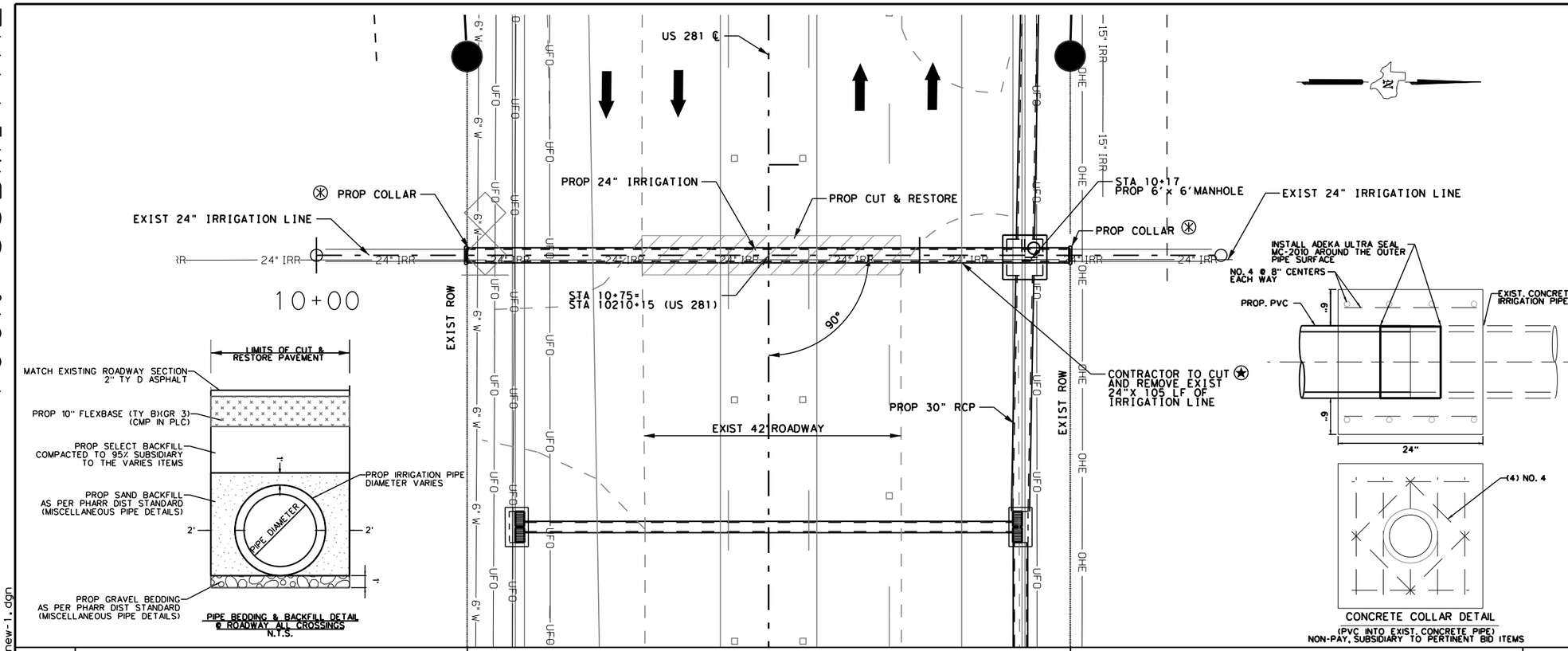

PIPE BEDDING & BACKFILL DETAIL @ ROADWAY ALL CROSSINGS
N.T.S.

CONCRETE COLLAR DETAIL
(PVC INTO EXIST. CONCRETE PIPE)
NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	CUT & RESTORE PAV	SY	35
400	STRUCTURAL EXCAVATION	CY	32
400	SAND BACKFILL	CY	111
402	TRENCH PROTECTION	LF	120
464	RC PIPE (CL III) 36IN	LF	100
465	MANHOLE 6X6	EA	1
496	REMOV STR PIPE	LF	120
1008	PRSSR IRRIG PVC PIPE(24")	LF	120

LEGEND:

- ⊛ NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.
- ⊛ TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- ⊙ NON-PAY ITEM. FOR CONTRACTORS' INFORMATION ONLY.
- ⊕ THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPE IS AT THE SAME ELEVATION AS THE EXISTING STANDPIPE
- RFD ROCK FILTER DAM TY 2

T.O.S. - TOP OF STRUCTURE

NOTES:

1. THE CONTRACTOR WILL COORDINATE WITH H.C.I.D. NO.2 48 HOURS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES.
2. PRIOR TO WORKING OUTSIDE THE ROW THE CONTRACTOR SHALL NOTIFY PROPERTY OWNER(S). CAUTION SHALL BE TAKEN NOT TO DAMAGE EXISTING FENCES, TREES, ETC. ANY DAMAGES DONE TO THEIR PROPERTY SHALL BE PREPARED AT CONTRACTORS EXPENSE.
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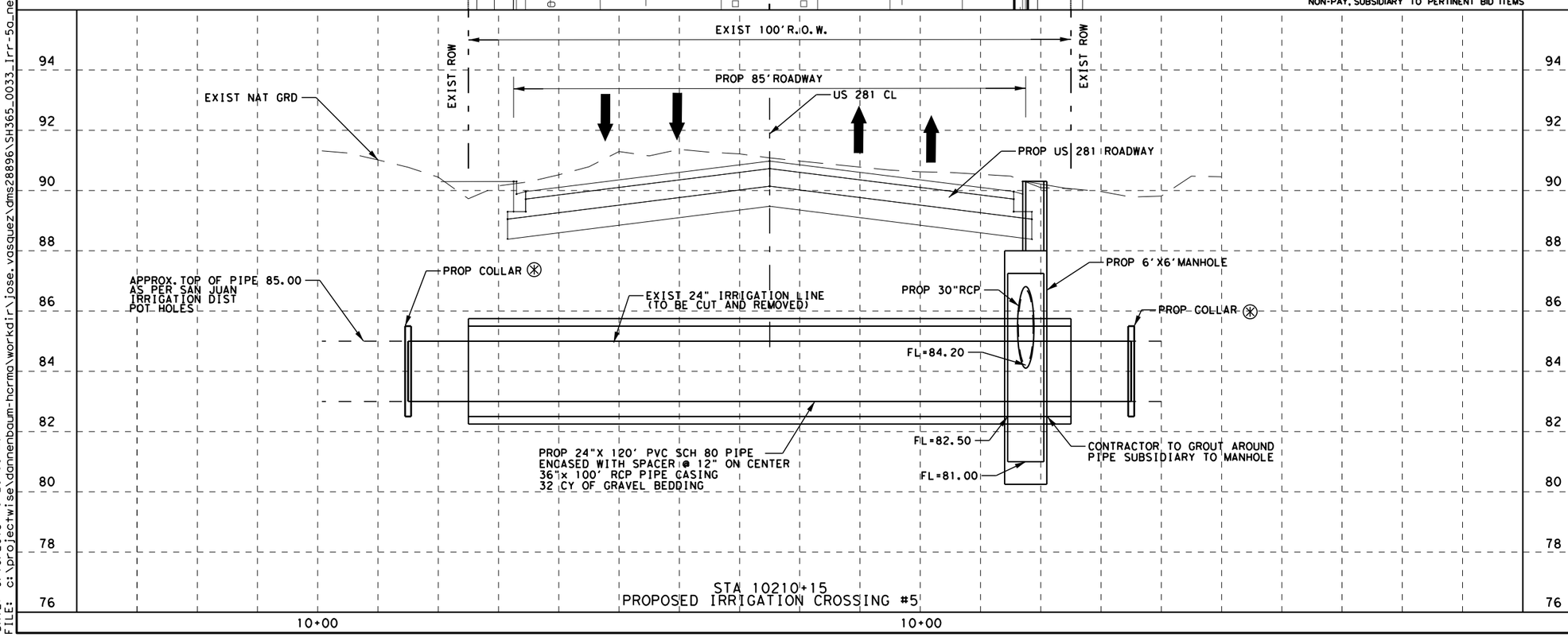
6. ALL CONNECTIONS SHALL BE SUBSIDIARY TO THE PERTINENT BID ITEMS.



STA 10210+15
PROPOSED IRRIGATION CROSSING #5

STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 09-14-2015
MARK D. CORBITT DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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PROGRAM MANAGEMENT CONSULTANT
DANNENBAUM
ENGINEERING CORPORATION
T.B.P.E. FIRM REGISTRATION #392
1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

TEDSI INFRASTRUCTURE GROUP
TEDSI
TBPE F-1640
Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281
IRRIGATION CROSSING #5

STA. 10210+15

SCALE:
HOR: 1"= 20'
VER: 1"= 5'

SHEET 5 OF 9

DN:	CK DN:	DN:	CK DN:	TR:	CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	205

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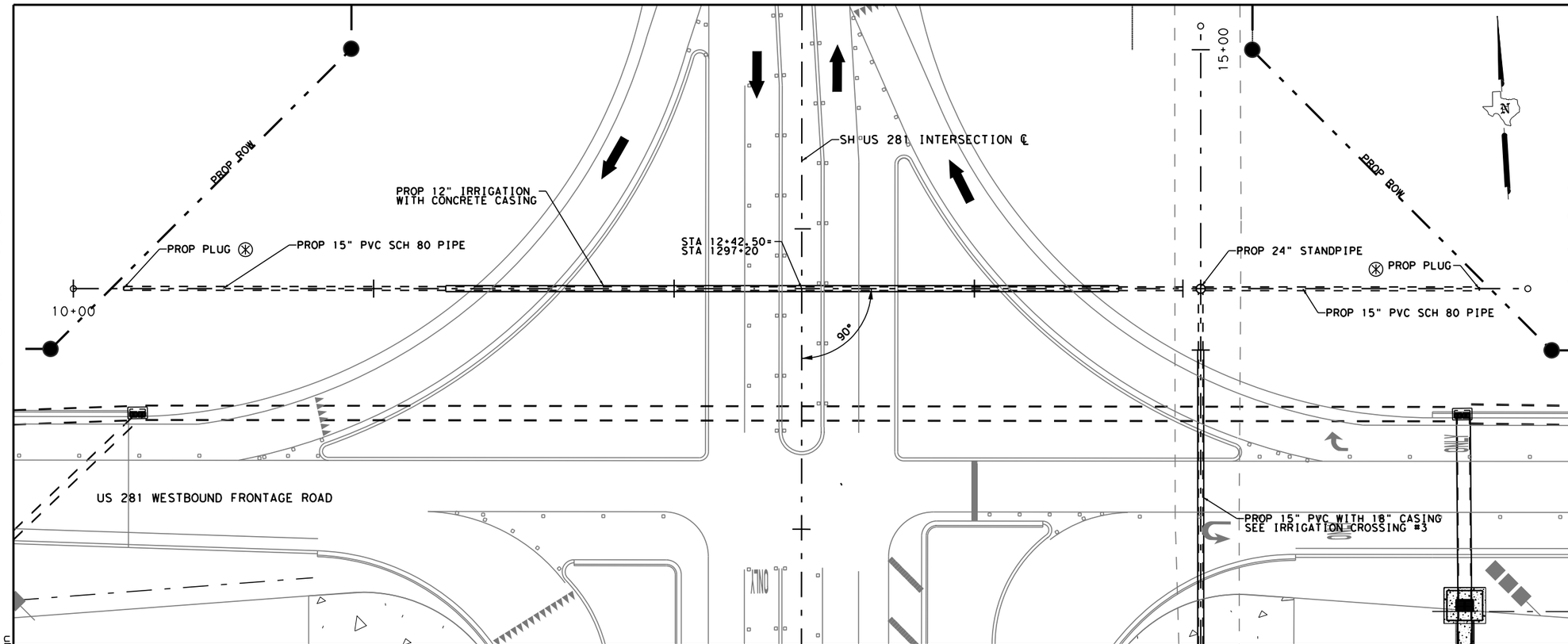

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCTURAL EXCAVATION	CY	102
400	SAND BACKFILL	CY	200
402	TRENCH PROTECTION	LF	460
464	RCP PIPE CL III(24 IN)	LF	224
1008	IRRIGATION PVC PIPE(15IN)	LF	460
1007	IRRIGATION STANDPIPE (24)	EA	1

LEGEND:

- NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
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T.O.S. - TOP OF STRUCTURE

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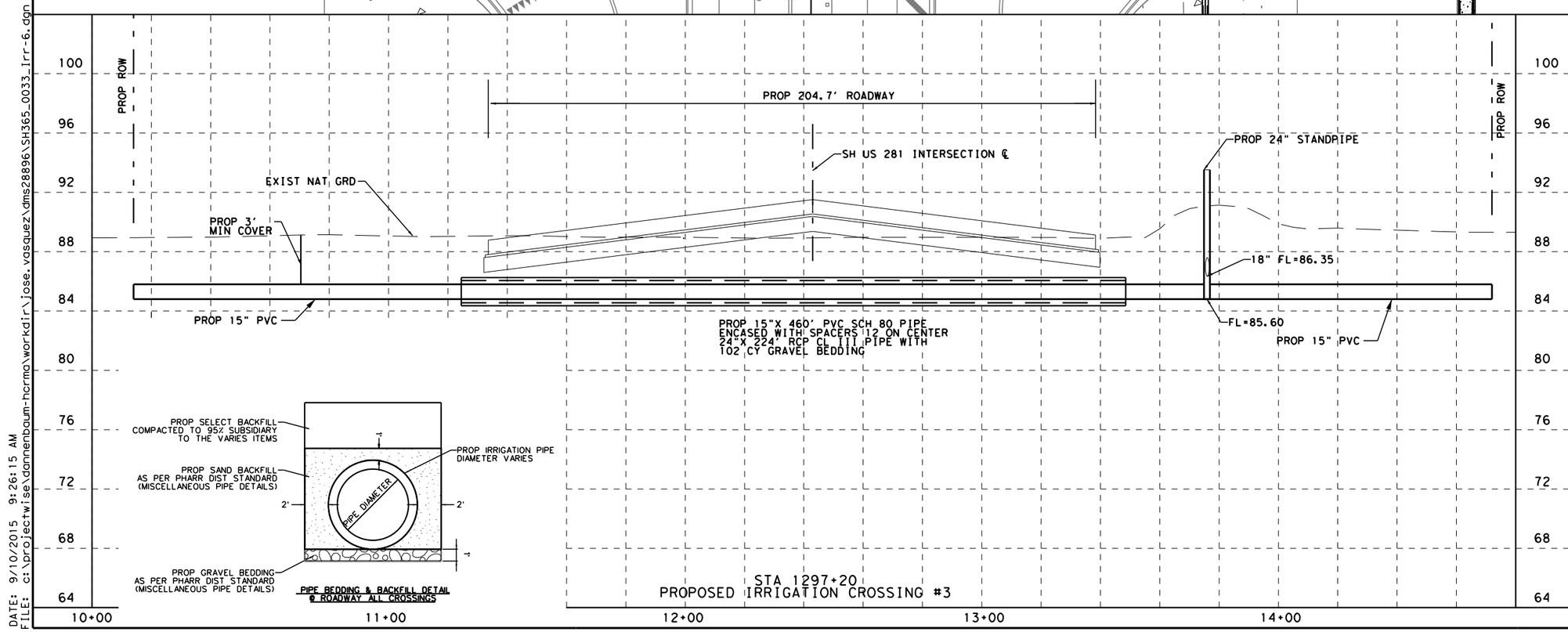

STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED
PROFESSIONAL ENGINEER

Mark Corbitt 09-14-2015
MARK D. CORBITT DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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TEDSI INFRASTRUCTURE GROUP
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TBPE F-1640
Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

US 281
IRRIGATION CROSSING #6
CROSSING
STA. 1297+20

SCALE:
HOR: 1"= 40'
VER: 1"= 5'

SHEET 6 OF 9

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	206
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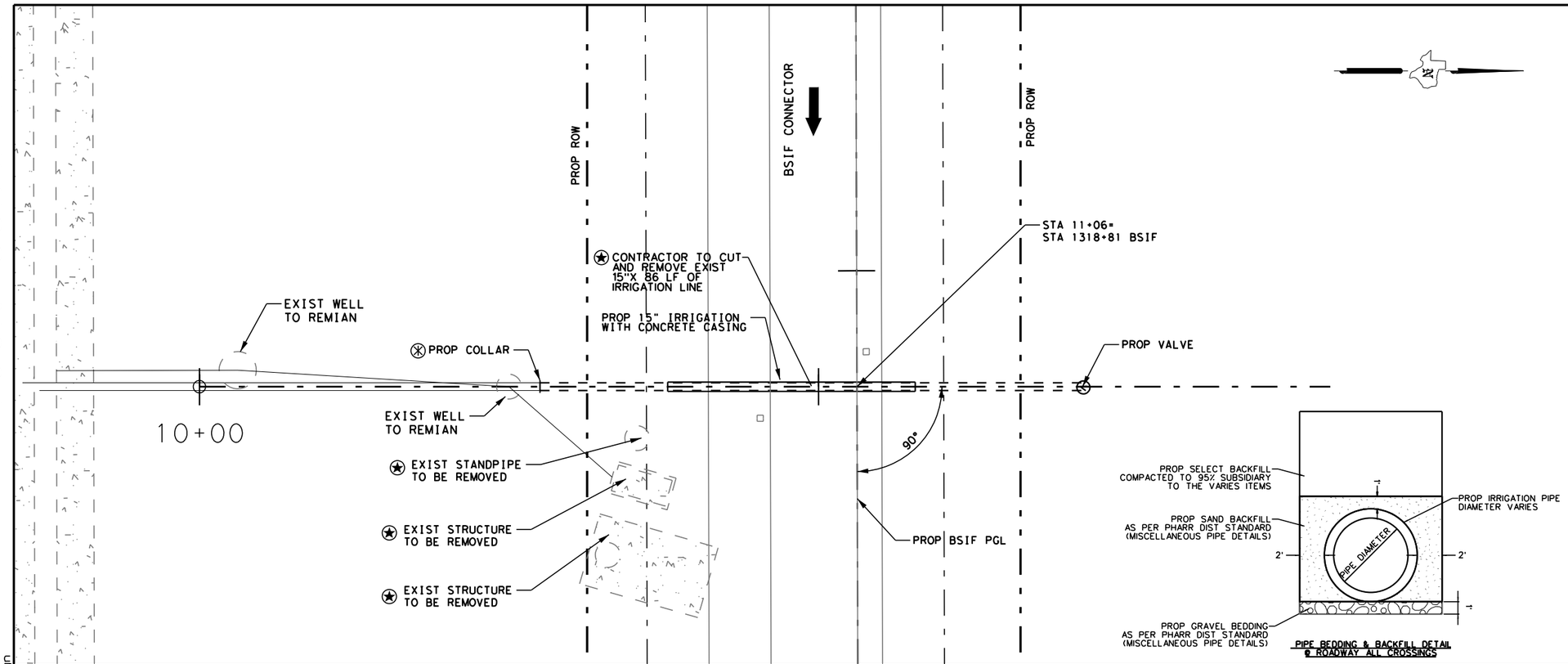
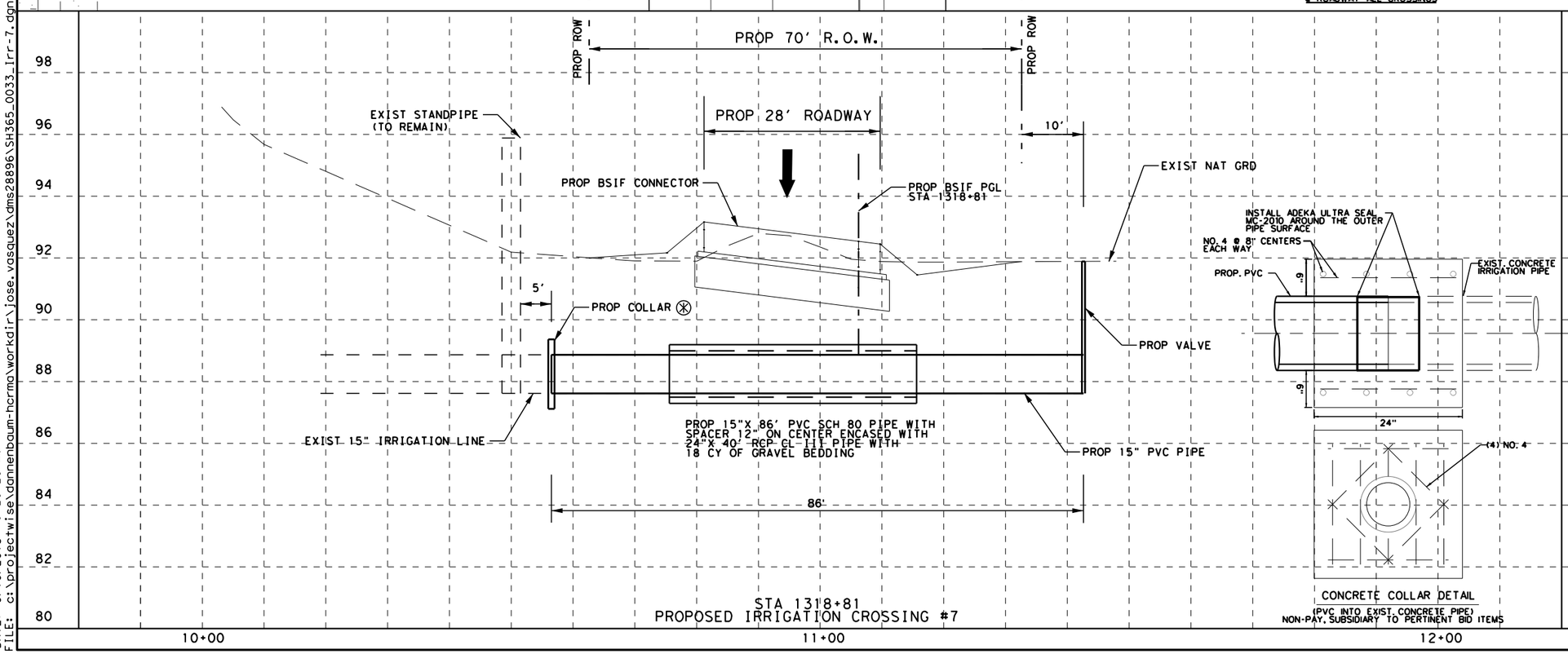


PIPE BEDDING & BACKFILL DETAIL @ ROADWAY ALL CROSSINGS



STA 1318+81
PROPOSED IRRIGATION CROSSING #7

CONCRETE COLLAR DETAIL
(PVC INTO EXIST. CONCRETE PIPE)
NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCTURAL EXCAVATION	CY	18
400	SAND BACKFILL	CY	33
402	TRENCH PROTECTION	LF	86
464	RCP PIPE CL III(24 IN)	LF	40
496	REMOV STR PIPE	LF	86
1008	IRRIGATION PVC PIPE(15IN)	LF	86
1007	12" IRRIGATION VALVE	EA	1
496	REMOV STR CONC	EA	3

LEGEND:

- NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.
- TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- NON-PAY ITEM. FOR CONTRACTORS' INFORMATION ONLY.
- THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPE IS AT THE SAME ELEVATION AS THE EXISTING STANDPIPE
- RFD ROCK FILTER DAM TY 2

T.O.S. - TOP OF STRUCTURE

NOTES:

1. THE CONTRACTOR WILL COORDINATE WITH H.C.I.D. NO.2 48 HOURS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES.
2. PRIOR TO WORKING OUTSIDE THE ROW THE CONTRACTOR SHALL NOTIFY PROPERTY OWNER(S). CAUTION SHALL BE TAKEN NOT TO DAMAGE EXISTING FENCES, TREES, ETC. ANY DAMAGES DONE TO THEIR PROPERTY SHALL BE PREPARED AT CONTRACTORS EXPENSE.
3. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
4. ALL PVC ELBOWS, COLLARS, CONNECTIONS, AND SPACERS SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. DURING CUT & RESTORE OPERATIONS, CONTRACTOR SHALL UTILIZE ADEQUATE TRAFFIC CONTROL MEASURES INCLUDING A FLAG PERSON.
6. ALL CONNECTIONS SHALL BE SUBSIDIARY TO THE PERTINENT BID ITEMS.

STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 09-14-2015
MARK D. CORBITT DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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Texas Department of Transportation

PROGRAM MANAGEMENT CONSULTANT
DANNENBAUM
ENGINEERING CORPORATION
T.B.P.E. FIRM REGISTRATION #392
1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

TEDSI INFRASTRUCTURE GROUP
TEDSI
TBPE F-1640
Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

BSIF CONNECTOR IRRIGATION CROSSING #7 CROSSING STA. 1318+81

SCALE:
HOR: 1"= 20'
VER: 1"= 5'

SHEET 7 OF 9

DN:
CK DN:
DW:
CK DW:
TR:
CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	207

DATE: 9/10/2015 9:26:26 AM
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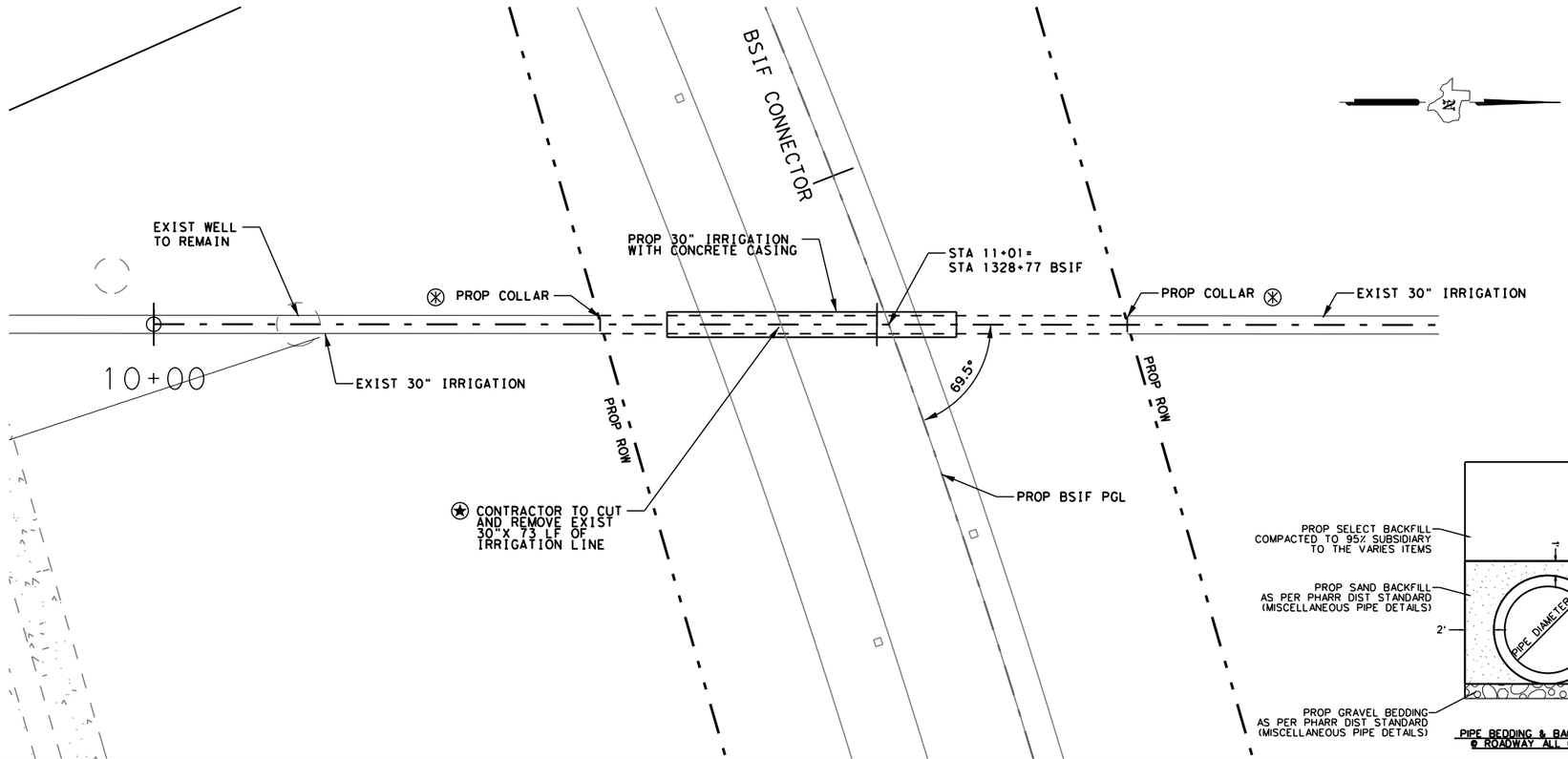
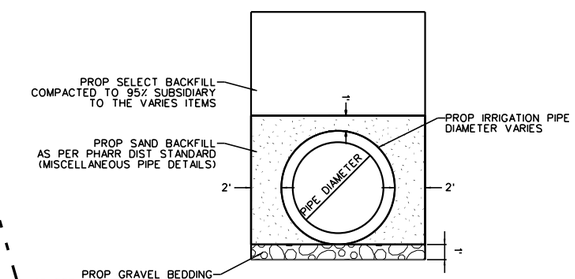
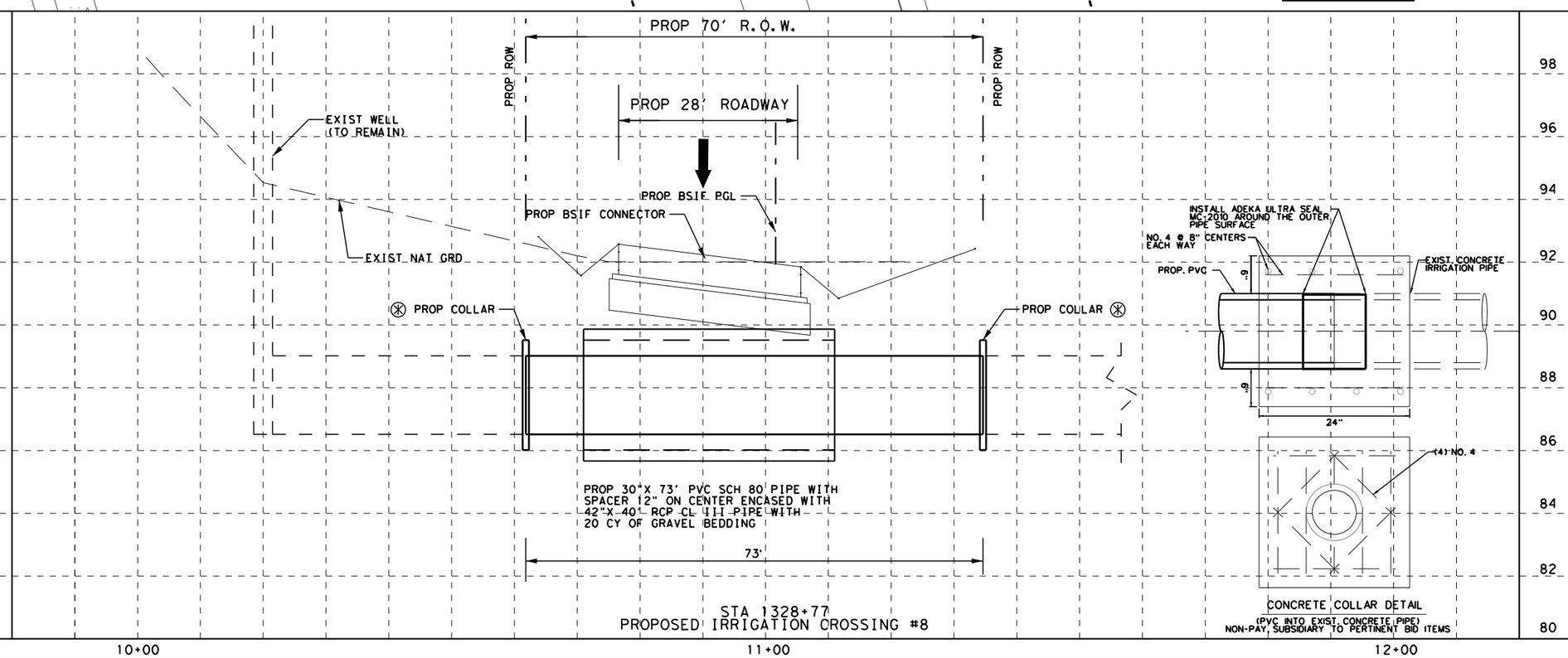




PIPE BEDDING & BACKFILL DETAIL @ ROADWAY ALL CROSSINGS



STA 1328+77
PROPOSED IRRIGATION CROSSING #8

CONCRETE COLLAR DETAIL
(PVC INTO EXIST. CONCRETE PIPE)
NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCTURAL EXCAVATION	CY	20
400	SAND BACKFILL	CY	65
402	TRENCH PROTECTION	LF	73
464	RCP PIPE CL III(42 IN)	LF	40
496	REMOV STR PIPE	LF	73
1008	IRRIGATION PVC PIPE(30N)	LF	73

LEGEND:

- (⊗) NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.
- (★) TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- (⊙) NON-PAY ITEM. FOR CONTRACTORS' INFORMATION ONLY.
- (⊕) THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPE IS AT THE SAME ELEVATION AS THE EXISTING STANDPIPE
- (RFD) ROCK FILTER DAM TY 2
- T.O.S. - TOP OF STRUCTURE

NOTES:

1. THE CONTRACTOR WILL COORDINATE WITH H.C.I.D. NO.2 48 HOURS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES.
2. PRIOR TO WORKING OUTSIDE THE ROW THE CONTRACTOR SHALL NOTIFY PROPERTY OWNER(S). CAUTION SHALL BE TAKEN NOT TO DAMAGE EXISTING FENCES, TREES, ETC. ANY DAMAGES DONE TO THEIR PROPERTY SHALL BE PREPARED AT CONTRACTORS EXPENSE.
3. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
4. ALL PVC ELBOWS, COLLARS, CONNECTIONS, AND SPACERS SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. DURING CUT & RESTORE OPERATIONS, CONTRACTOR SHALL UTILIZE ADEQUATE TRAFFIC CONTROL MEASURES INCLUDING A FLAG PERSON.
6. ALL CONNECTIONS SHALL BE SUBSIDIARY TO THE PERTINENT BID ITEMS.

STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 09-14-2015
MARK D. CORBITT DATE

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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T.B.P.E. FIRM REGISTRATION #392
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TEDSI INFRASTRUCTURE GROUP
TEDSI
TBPE F-1640
Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

BSIF CONNECTOR
IRRIGATION CROSSING #8
CROSSING
STA. 1328+77

SCALE:
HOR: 1"= 20'
VER: 1"= 5'

SHEET 8 OF 9

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	208
TR:				
CK TR:				

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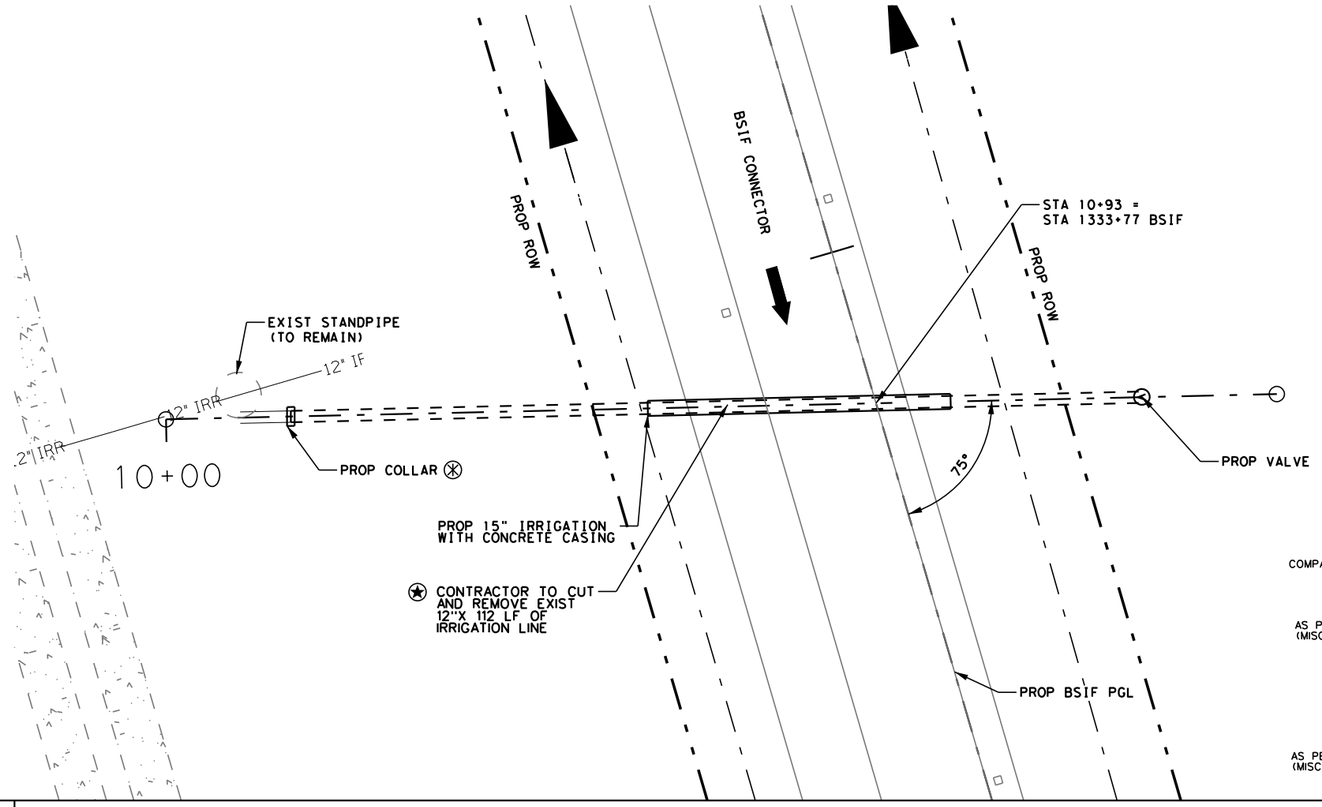
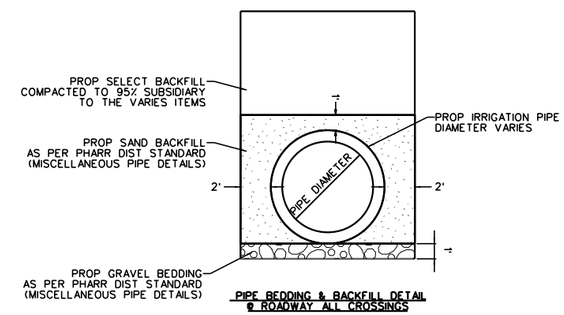
100% SUBMITTAL





PIPE BEDDING & BACKFILL DETAIL
@ ROADWAY ALL CROSSINGS

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCTURAL EXCAVATION	CY	23
400	SAND BACKFILL	CY	52
402	TRENCH PROTECTION	LF	112
464	RCP PIPE CL III(24 IN)	LF	40
496	REMOV STR PIPE	LF	112
1008	IRRIGATION PVC PIPE(15IN)	LF	112
1007	12" IRRIGATION VALVE	EA	1

LEGEND:

- (⊗) NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.
- (★) TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- (⊙) NON-PAY ITEM. FOR CONTRACTORS' INFORMATION ONLY.
- (⊕) THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPE IS AT THE SAME ELEVATION AS THE EXISTING STANDPIPE
- (RFD) ROCK FILTER DAM TY 2

T.O.S. - TOP OF STRUCTURE

NOTES:

1. THE CONTRACTOR WILL COORDINATE WITH H.C.I.D. NO.2 48 HOURS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES.
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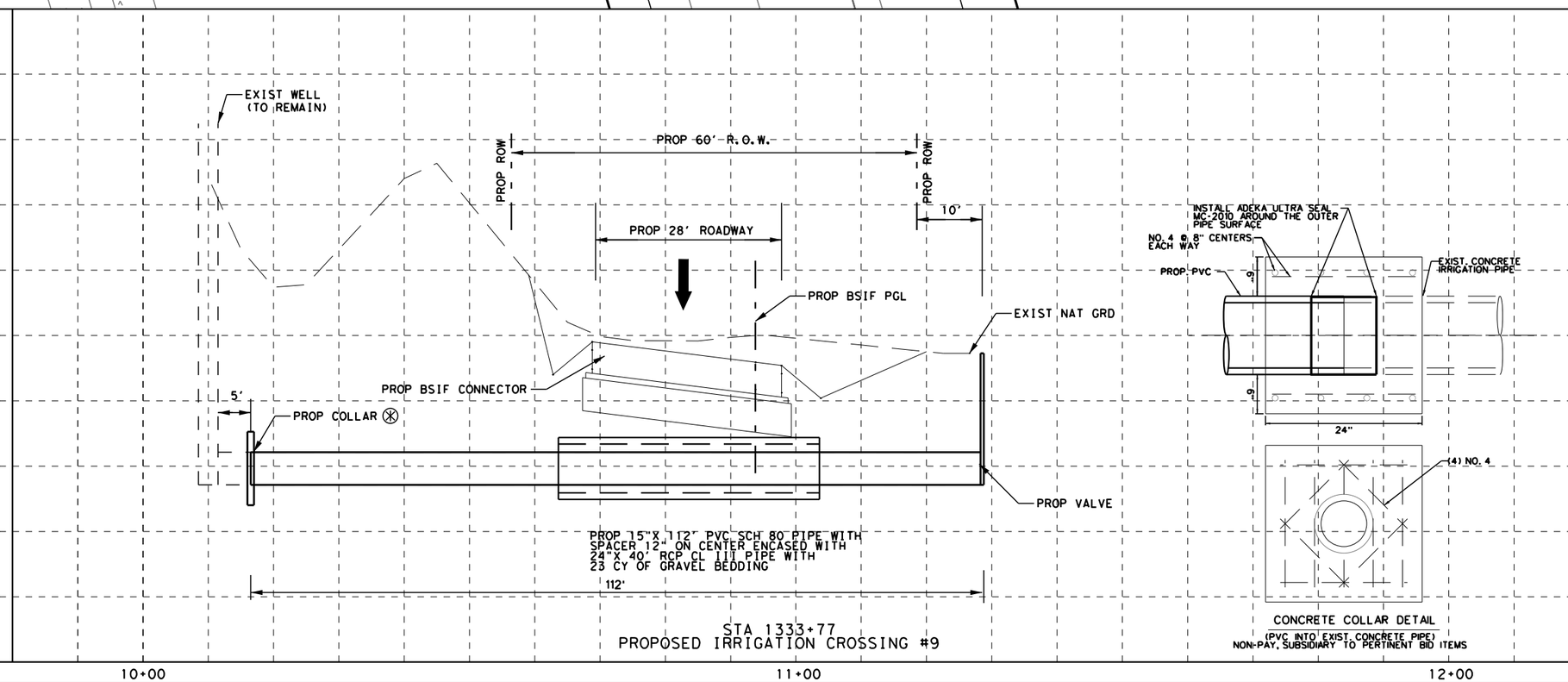
6. ALL CONNECTIONS SHALL BE SUBSIDIARY TO THE PERTINENT BID ITEMS.



STA 1333+77
PROPOSED IRRIGATION CROSSING #9

CONCRETE COLLAR DETAIL
(PVC INTO EXIST. CONCRETE PIPE)
NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS

STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED
PROFESSIONAL ENGINEER

Mark Corbitt 09-14-2015
MARK D. CORBITT DATE

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HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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PROGRAM MANAGEMENT CONSULTANT
DANNENBAUM
ENGINEERING CORPORATION
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TEDSI INFRASTRUCTURE GROUP
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Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

BSIF CONNECTOR
IRRIGATION CROSSING #9
CROSSING
STA. 1333+77

SCALE:
HOR: 1"= 20'
VER: 1"= 5'

SHEET 9 OF 9

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	209
TR:				
CK TR:				

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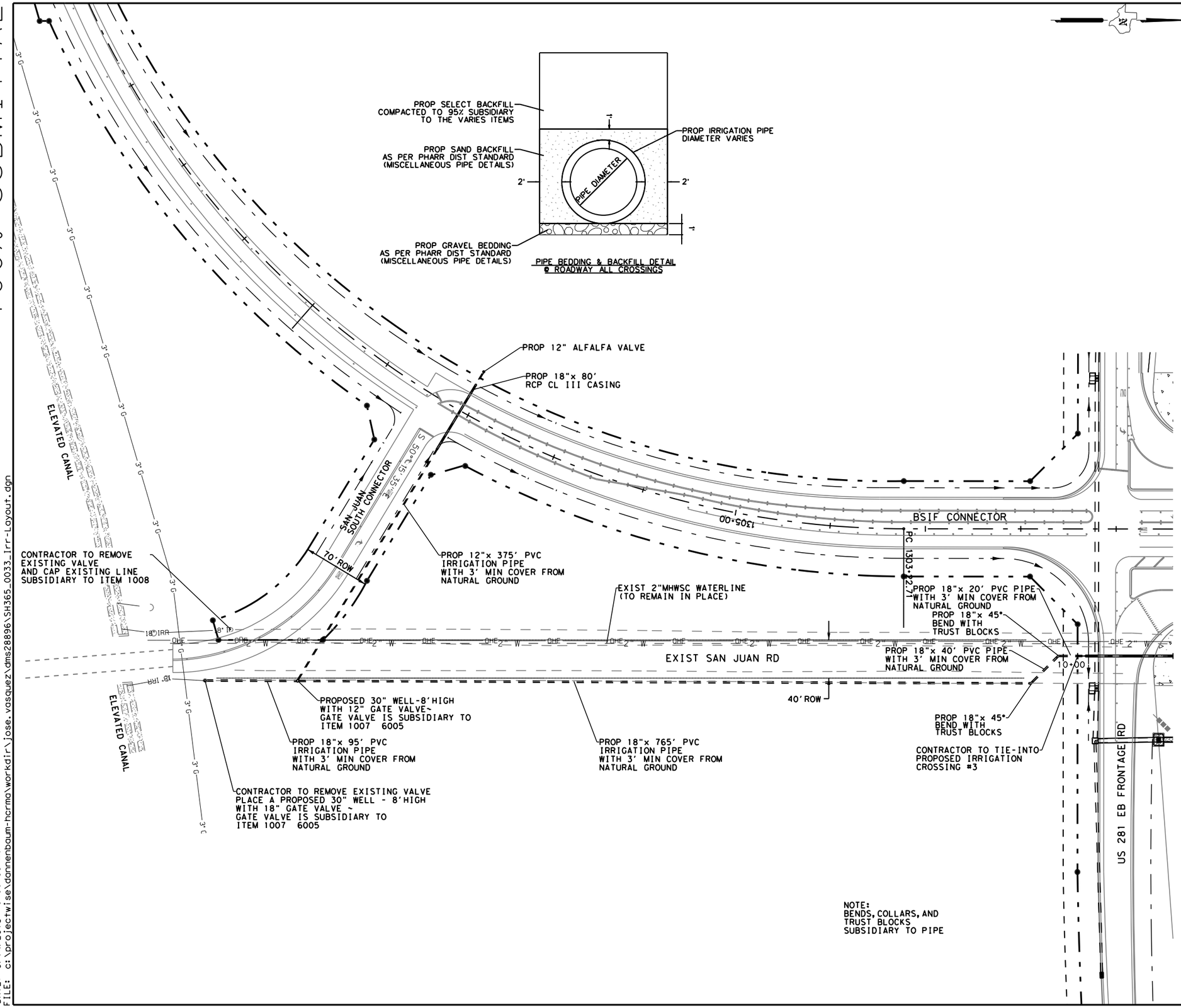

SHEET SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
400	STRUCTURE EXCAVATION	CY	258
400	SAND BACKFILL	CY	607
464	RCP PIPE CL III 18"	LF	80
1007	IRRIGATION WELL (30")	EA	2
1007	IRRIGATION VALVE (12")	EA	1
1008	PRSSR IRRIG PVC PIPE 18"	LF	924
1008	PRSSR IRRIG PVC PIPE 12"	LF	375

LEGEND:

- (⊗) NON-PAY, SUBSIDIARY TO PERTINENT BID ITEMS.
- (★) TO BE REMOVED UNDER ITEM 496. INCLUDES PAYMENT FOR REMOVAL OF ALL APPURTENANCES.
- (⊙) NON-PAY ITEM. FOR CONTRACTORS' INFORMATION ONLY.
- (⊕) THE CONTRACTOR SHALL CONFIRM THAT THE TOP ELEVATION ON THE PROPOSED STANDPIPE IS AT THE SAME ELEVATION AS THE EXISTING STANDPIPE
- —<RFD>— ROCK FILTER DAM TY 2
- T.O.S. - TOP OF STRUCTURE

NOTES:

1. THE CONTRACTOR WILL COORDINATE WITH H.C.I.D. NO.2 48 HOURS PRIOR TO ANY WORK DONE ON OR NEAR THE IRRIGATION STRUCTURES.
2. PRIOR TO WORKING OUTSIDE THE ROW THE CONTRACTOR SHALL NOTIFY PROPERTY OWNER(S). CAUTION SHALL BE TAKEN NOT TO DAMAGE EXISTING FENCES, TREES, ETC. ANY DAMAGES DONE TO THEIR PROPERTY SHALL BE PREPARED AT CONTRACTORS EXPENSE.
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4. ALL PVC ELBOWS, CONNECTIONS, AND SPACERS SHALL BE SUBSIDIARY TO PERTINENT BID ITEMS.
5. DURING CUT & RESTORE OPERATIONS, CONTRACTOR SHALL UTILIZE ADEQUATE TRAFFIC CONTROL MEASURES INCLUDING A FLAG PERSON.
6. ALL CONNECTION SHALL BE SUBSIDIARY TO THE PERTINENT BID ITEMS.

STATE OF TEXAS
MARK D. CORBITT
101980
LICENSED PROFESSIONAL ENGINEER

Mark Corbitt 09-14-2015
MARK D. CORBITT DATE

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HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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TEDSI INFRASTRUCTURE GROUP
TEDSI
TBPE F-1640
Consulting Engineers
1201 E. Expressway 83
Mission, Texas 78572
(956) 424-7898

BSIF CONNECTOR IRRIGATION LAYOUT

SCALE:
HOR: 1"= 100'

SHEET 1 OF 1

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	209B
TR:				
CK TR:				

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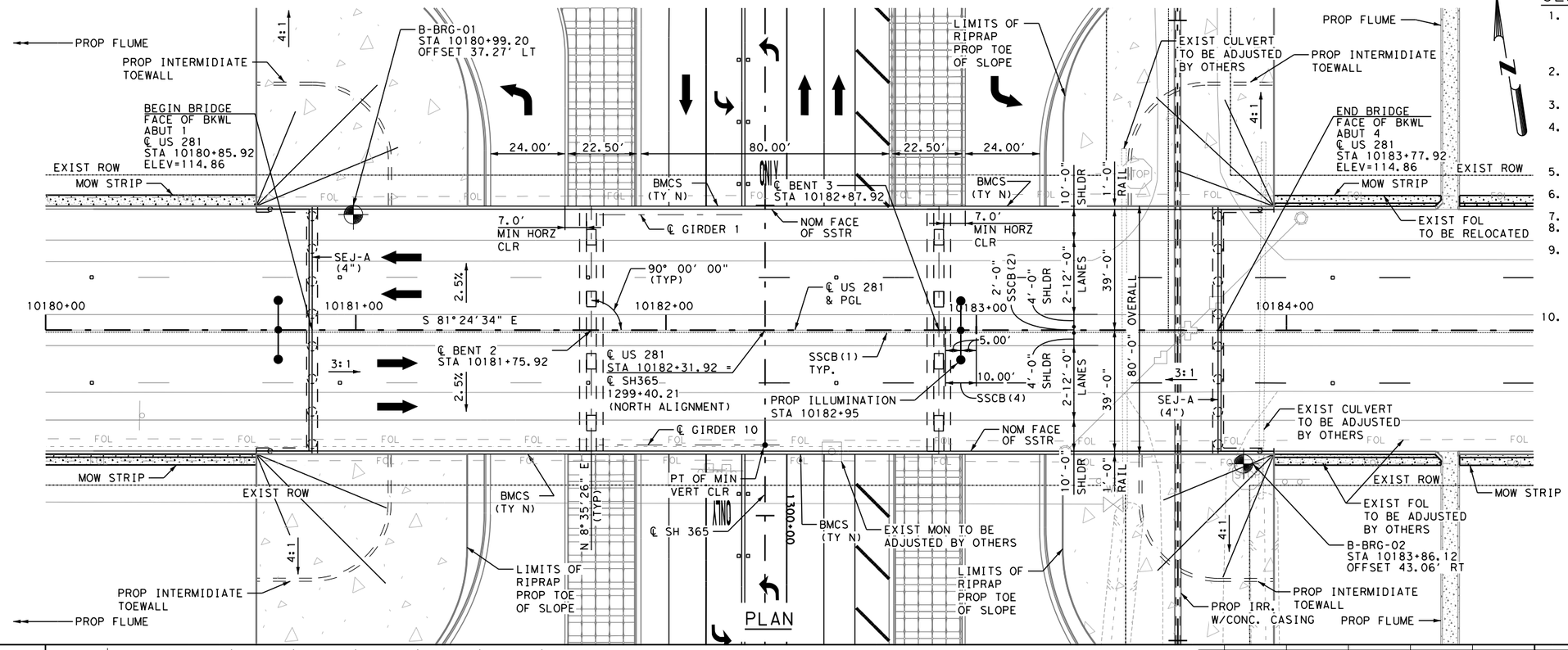


GENERAL NOTES:

1. DESIGNED FOR HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE SPECIFICATIONS, SIXTH EDITION, WITH 2012 INTERIM REVISIONS, AS MODIFIED BY THE TXDOT BRIDGE DESIGN MANUAL - LRFD, MARCH 2013 AND TXDOT BRIDGE DETAILING GUIDE AUGUST 2014.
2. GIRDER END CONDITIONS:
   D - DENOTES SLOTTED ALIGNMENT DEVICE IN SLAB.
   BLANK - DENOTES NO ALIGNMENT DEVICE IN SLAB.
3. SEE "BRIDGE TYPICAL SECTION" SHEET FOR BRIDGE TYPICAL SECTION.
4. CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF ALL UTILITY PRIOR TO CONSTRUCTION AND FABRICATION. SEE UTILITY PLANS FOR DISPOSITIONS OF ALL EXISTING UTILITIES.
5. ALL DIMENSIONS ARE EITHER HORIZONTAL OR VERTICAL AND MUST BE CORRECTED FOR GRADE.
6. ALL EDGES OF SLAB ARE PARALLEL AND CONCENTRIC TO THE CENTER LINE OF US 281.
7. SEE ROADWAY PLAN AND PROFILE FOR CONCRETE RIPRAP.
8. REFER TO RAIL STANDARD SHEETS, TYPE SSTR AND TYPE SSCB(1) FOR RAIL DETAILS.
9. REFER TO TYPE SSCB(4) STANDARD FOR ANCHOR BARS REQUIRED FOR TYPE 4 BARRIER ON BRIDGE DECK AT LIGHT POLE LOCATION. SEE ILLUMINATION SHEETS FOR EXACT LIGHT POLE LOCATION. THE ANCHOR BARS NEED TO BE CAST IN THE PRESTRESSED PANEL DURING THE PANEL FABRICATION.
10. REFER TO GEOTECHNICAL INVESTIGATION REPORT BY L&G ENGINEERING LABORATORY, DATED 12/13/13 FOR BORING INFORMATION & FOUNDATION RECOMMENDATIONS.

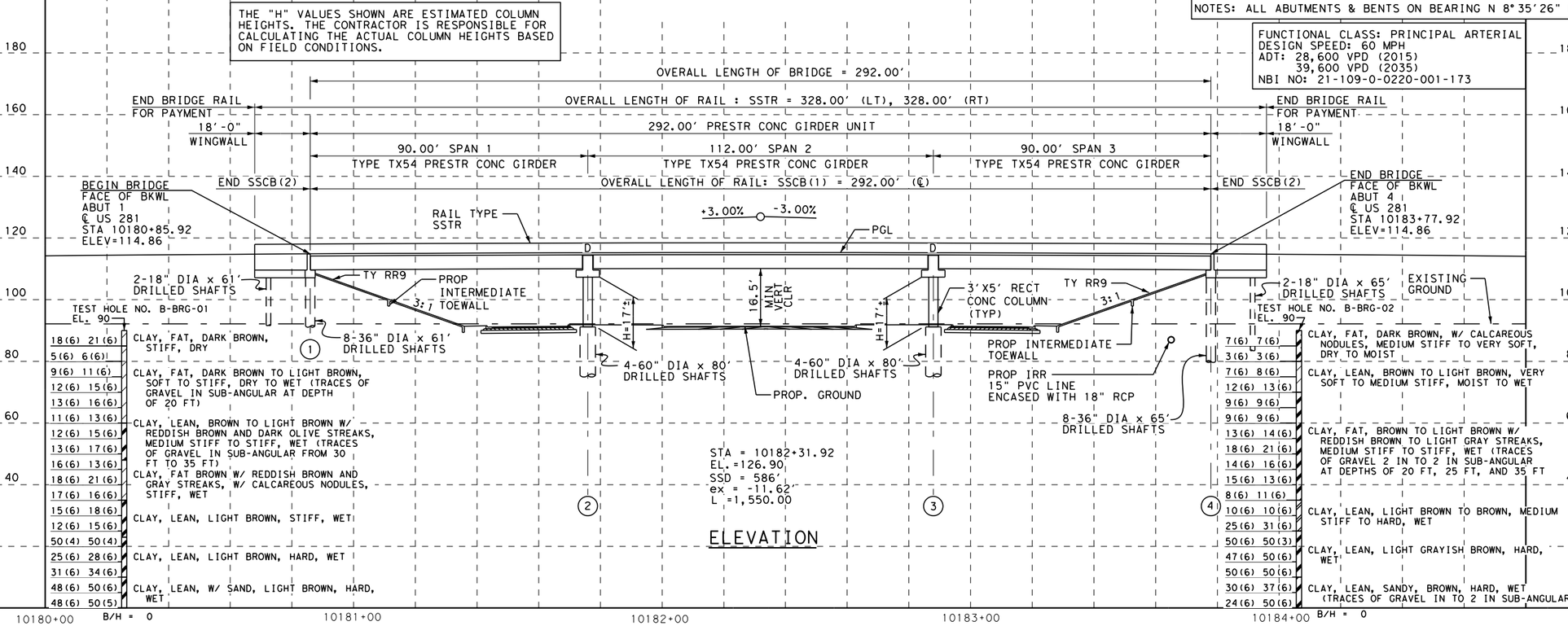
LEGEND:

- BORING HOLE
- TRAFFIC FLOW ARROW
- ILLUMINATION ASSEMBLY (BARRIER MOUNTED)

THE "H" VALUES SHOWN ARE ESTIMATED COLUMN HEIGHTS. THE CONTRACTOR IS RESPONSIBLE FOR CALCULATING THE ACTUAL COLUMN HEIGHTS BASED ON FIELD CONDITIONS.

NOTES: ALL ABUTMENTS & BENTS ON BEARING N 8°35'26" E

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL
DESIGN SPEED: 60 MPH
ADT: 28,600 VPD (2015)
39,600 VPD (2035)
NBI NO: 21-109-0-0220-001-173



STATE OF TEXAS
TAO WANG
103820
REGISTERED PROFESSIONAL ENGINEER
8/31/2015

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HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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PROGRAM MANAGEMENT CONSULTANT
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UNINTECH CONSULTING ENGINEERS, INC.
2431 E. EVANS ROAD
SAN ANTONIO, TEXAS 78259
PHONE: (210) 641-6003 FAX: (210) 641-8279
TBPE Reg. No. F-5499
TBPLS Firm No. 10051100
WWW.UNINTECH.COM

US 281 OVERPASS AT SH 365

BRIDGE LAYOUT

SCALE:
HOR: 1"= 40'
VER: 1"= 40'

SHEET 1 OF 1

DN:	CONT	SECT	JOB	HIGHWAY
CK DN:	0220	01	023, ETC	US 281
DW:	DIST		COUNTY	SHEET NO.
CK DW:	PHR		HIDALGO	226
TR:				
CK TR:				

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100% SUBMITTAL

SUMMARY OF ESTIMATED QUANTITIES - US 281 OVERPASS SH 365

ITEM / DESCRIPTION	400-6005 CEMENT STAB BKFL	416-6001 DRILLED SHAFTS (18")	416-6004 DRILLED SHAFTS (36")	416-6008 DRILLED SHAFTS (60")	420-6013 CL C CONC (ABUT)	420-6029 CL C CONC (CAP)	420-6037 CL C CONC (COLUMN)	422-6001 REINF CONCRETE SLAB	425-6039 PRESTR CONC GIRDER (TX 54)	432-6001 CONC RIPRAP (4")	450-6023 RAILING TY-SSTR	454-6001 SEALED EXPANSION JOINT (4") (SEJ-A)	514-6001 SINGLE SLOPE CONC. BARRIER SSCB(1)	514-6004 SINGLE SLOPE CONC. BARRIER SSCB(4)
	CY	LF	LF	LF	CY	CY	CY	SF	LF	CY	LF	LF	LF	LF
ABUTMENT 1	231	122	488		57.4					177	36.0	79		
BENT 2				320		99.0	37.8							
BENT 3				320		99.0	37.8							
ABUTMENT 4	231	130	520		57.4					176	36.0	79		
1 - 292' PRESTR CONC GIRDER UNIT								23360	2835.00		584.0		282.0	10.0
TOTAL	462	252	1008	640	114.8	198.0	75.6	23360	2835.00	353	656.0	158	282.0	10.0

BEARING SEAT ELEVATION

	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6	BEAM 7	BEAM 8	BEAM 9	BEAM 10
ABUT 1 (FWD)	108.377	108.584	108.790	108.996	109.202	109.202	108.996	108.790	108.584	108.377
	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6	BEAM 7	BEAM 8	BEAM 9	BEAM 10
BENT 2 (BK)	108.718	108.294	109.130	109.336	109.543	109.543	109.336	109.130	108.924	108.718
(FWD)	108.729	108.936	109.142	109.348	109.554	109.554	109.348	109.142	108.936	108.729
	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6	BEAM 7	BEAM 8	BEAM 9	BEAM 10
BENT 3 (BK)	108.729	108.936	109.142	109.348	109.554	109.554	109.348	109.142	108.936	108.729
(FWD)	108.718	108.924	109.130	109.336	109.543	109.543	109.336	109.130	108.924	108.718
	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6	BEAM 7	BEAM 8	BEAM 9	BEAM 10
ABUT 4 (BK)	108.377	108.584	108.790	108.996	109.202	109.202	108.996	108.790	108.584	108.377

HL 93 LOADING

STATE OF TEXAS
TAO WANG
103820
REGISTERED PROFESSIONAL ENGINEER

9/2/2015

HCRMA
HIDALGO COUNTY REGIONAL MOBILITY AUTHORITY

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PROGRAM MANAGEMENT CONSULTANT
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1109 NOLANA LOOP, STE 280 MCALLEN, TX 78504 (956) 682-3677

UNINTECH CONSULTING ENGINEERS, INC.
2431 E. EVANS ROAD
SAN ANTONIO, TEXAS 78259
PHONE: (210) 641-6003 FAX: (210) 641-8279
TBPE Reg. No. F-5499
TBPLS Firm No. 10051100
WWW.UNINTECH.COM

US 281 OVERPASS AT SH 365

ESTIMATED QUANTITIES & BEARING SEAT ELEVATION

SCALE: N.T.S.

SHEET 1 OF 1

DN:
CK DN:
DW:
CK DW:
TR:
CK TR:

CONT	SECT	JOB	HIGHWAY
0220	01	023, ETC.	US 281
DIST		COUNTY	SHEET NO.
PHR		HIDALGO	228

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