INDEX OF SHEETS SOUTHLAND BOULEVARD ROADWAY IMPROVEMENTS SEE SHEET NO. 2 CITY OF SAN ANGELO \_\_\_\_\_0 PLANS OF PROPOSED LOCAL ROADWAY IMPROVEMENTS SOUTHLAND BLVD TOM GREEN COUNTY ROADWAY = 645.41 FT = 0.122 MI BRIDGE = 0 FT = 0 MI TOTAL = 645.41 FT = 0.122 MI NET LENGTH OF PROJECT LIMITS: SOUTHLAND BLVD US 67 TO WALMART DRIVE TEXP FOR THE HMAC WIDENING, MILL AND OVERLAY OF A NON-FREEWAY CONSISTING OF GRADING, BASE, STRUCTURES, AND TRAFFIC SIGNALS CITY OF SAN ANGELO CITY COUNCIL: Mayor Council Member District 1 Council Member District 2 Council Member District 3 Council Member District 4 Council Member District 5 Council Member District 5 Dwain Morrison Bill Richardson Marty Self Harry Thomas Lucy Gonzales Lane Carter Charlotte Farmer Council Member District 6 PUBLIC WORKS DEPARTMENT ENGINEERING SERVICES: SAN ANGELO City Engineer Russell Pehl, P.E. BEGIN PROJECT SOUTHLAND BLVD STA 10+44.59 LATITUDE 31°25'37.81" LONGITUDE 100°30'45.99" SOUTHIAND END PROJECT WALMART DRIVE STA 16+90.00 LATITUDE 31°25'41.90" LONGITUDE 100°30'41.90"

PROJECT LAYOUT

EXCEPTIONS NONE EQUATIONS NONE RAILROAD CROSSINGS NONE



#### No. Sheet Title

A 54-5H

#### GENERAL INFORMATION

- TITLE SHEET
- INDEX OF SHEETS HORIZONTAL ALIGNMENT LAYOUT, AND PROJECT CONTROLS TYPICAL SECTIONS GENERAL NOTES

#### SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES

#### TRAFFIC CONTROL DETAILS

- CONSTRUCTION SEQUENCE AND TYPICAL SECTIONS
- TRAFFIC CONTROL PLAN PHASE 1 TRAFFIC CONTROL PLAN PHASE 2 9
  - TRAFFIC CONTROL STANDARDS
- 10-21 # BC(1)-14 BC(12)-14 ~ BARRICADE AND CONSTRUCTION
- # TCP(2-1)-12 ~ TRAFFIC CONTROL PLAN, CONVENTIONAL ROAD, SHOULDER WORK 22
- # TCP(3-3)-14 ~ TCP MOBILE OPERATIONS RAISED PAVEMENT MARKER INSTALLATION/REMOVAL # TCP(3-4)-13 ~ TCP MOBILE OPERATIONS FOR ISOLATED WORK AREAS UNDIVIDED HIGHWAYS 23
- 24
- 25 # TREATMENT FOR VARIOUS EDGE CONDITIONS
- 26 # WZ(STPM)-13 ~ WORK ZONE SHORT TERM PAVEMENT MARKINGS
- 27 # WZ(BTS-1)-13 ~ TRAFFIC SIGNAL WORK TYPICAL DETAILS
- 28 # WZ(BTS-2)-13 ~ TRAFFIC SIGNAL WORK BARRICADES AND SIGNS
- # WZ(UL)-13 ~ SIGNING FOR UNEVEN LANES 29

### ROADWAY DETAILS

- 30 ROADWAY REMOVAL LAYOUT
- 31-32 INTERSECTION PLAN AND PROFILE
- DRIVEWAY DETAILS 33

#### ROADWAY STANDARDS

- 34 # CCCG-12 ~ CONCRETE CURB AND CURB AND GUTTER
- 35-38 # PED-12A ~ PEDESTRIAN FACILITIES CURB RAMPS

#### DRAINAGE DETAILS

- OVERALL DRAINAGE AREA MAP 39
- 40 DRAINAGE PLAN

#### DRAINAGE STANDARDS

- 41-42 # SCP-3&4 ~ SINGLE BOX CULVERTS, CAST-IN-PLACE, O' TO 30' FILL 43 # SCC-MD ~ SINGLE BOX CULVERTS, CAST-IN-PLACE, MISCELLANEOUS DETAILS
- 44-45 # SETB-PD ~ SAFETY END TREATMENT, FOR BOX CULVERTS

### UTILITY DETAILS

46 EXISTING UTILITY LAYOUT

#### SIGNALS DETAILS

- EXISTING SIGNAL CONDITIONAS AT SAM'S/WALMART DRIVEWAY 47
- SIGNAL MODIFICATION AT SAM'S/WALMART DRIVEWAY 48

#### TRAFFIC SIGNAL STANDARDS

- 49-52 # ED(1)-14 ED(8)-14 ~ ELECTRICAL DETAILS
- # TS-FD-12 ~ TRAFFIC SIGNAL POLE FOUNDATION 53

#### SIGNING & PAVEMENT MARKINGS DETAILS

- 54 SIGNING AND PAVEMENT MARKING LAYOUT
- 55 PAVEMENT MARKING DETAILS

#### SIGNING & PAVEMENT MARKINGS STANDARDS

- 56-58 # PM(1)-12 PM(3)-12 ~ TYPICAL STANDARD PAVEMENT MARKINGS
- # SMD(GEN)-08 ~ SIGN MOUNTING DETAILS, SMALL ROADSIDE SIGNS, GENERAL NOTES & DETAILS 59
- 60-62 # SMD(SLIP-1)-08 SMD(SLIP-3)-08 ~ SIGN MOUNTING DETAILS

#### ENVIRONMENTAL DETAILS

- 63 SW3P INDEX
- STORM WATER, POLLUTION PREVENTION PLAN 64
- BIODEGRADABLE EROSION CONTROL LOG DETAILS 65

#### ENVIRONMENTAL STANDARDS

- 66 # EC(1)-09 ~ TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES, FENCE & BALED HAY
- 67 # EC(2)-93 ~ TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES, ROCK FILTER DAMS
- 68 # EC(3)-93 ~ TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES, CONSTRUCTION EXITS

1/11/201 05:40 ц ц

# THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE BY A # HAVE BEEN ISSUED BY ME AND ARE APPLICABLE TO THIS PROJECT.

MICHAEL C. COYLE,PE

1/11/2017

DATE





PM 160

100% SUBMITTAL





Item

Estimated

County: Tom Green City: San Angelo **Roadway:** Southland Boulevard

The following Standard Sheets have been modified: none

Locate the project bulletin board at an approved location within the project limits such as at a field office, staging area, or stockpile, and make accessible to the public at all times. Do not remove the bulletin board from the project until approved. If a construction site notice is required for the project, post a copy at each geographically separated work location.

In those instances where fixed features require, vary the governing slopes indicated in these plans from within the limits to the extent determined.

If Contractor elects to establish a pit within 200 ft. of a public road, construct a barrier or other device in accordance with Natural Resources Code, Chapter 133, and Section 133.041.

Do not use salt water with solids in excess of 10.000 parts per million, as determined by evaporation.

In order to integrate traffic signals on Southland Blvd into the City network, this project is approved for sole source procurement for traffic signal equipment listed below:

- One (1) 5.8 GHz communication system
- One (1) 5-port minimum switch
- One (1) EDI MMU 16-LEip SmartMonitor

#### Item 2, "Instructions to Bidders"

For questions, contact:

Julia Antilley, Division Manager Purchasing Division 72 West College Avenue San Angelo, Texas 76903 (325) 657-4219 sapurch@cosatx.us

#### Item 5, "Control of the Work"

Place a row of 4 blue-tops at each station throughout the length of the proposed roadway for both subgrade and top lift of base course.

Responsibility for construction surveying shall conform to Section 5.9.3., "Method C."

Make suitable advance notification to affected non-participating municipalities regarding Class B underground facilities, call COSA at (325) 657-4295 to have the City's existing utilities located. A copy of the cross-sections and earthwork data may be obtained by qualified bidders by sending a request to the following email address: sapurch@cosatx.us. Cross-sections and earthwork data as provided is for non-construction purposes only and it is the responsibility of the prospective bidder to validate this information with the appropriate plans and Specifications.

Sh	eet	5A
<u> </u>		· · ·

**BASIS OF ESTIMATE** Description A .....

No.	Description	Usage	Ar	Area		Rate	Quantity		
150	Blading		6.46	STA	3.9	HR/STA	25	HR	
168	Vegetative Watering	Side Slope	803	SY	20	GAL/SY	0.016	MG	
310	Prime Coat	Asphalt	4381	SY	0.3	GAL/SY	1095	GAL	
316	Seal Coat	Asphalt	4381	SY	0.4	GAL/SY	1533	GAL	
316	Seal Coat	Aggregate	4381	SY	100	CY/SY	44	CY	
341	НМА	Surface Course	7744	SY	220	LB/SY	852	TON	
341	HMA	Base Course	4381	SY	330	LB/SY	723	TON	

# **COMPACTION REQUIREMENTS**

ltem No.	Description	Course	Percent Minimum Density
112	Subgrade Widening	all	95%
247	Flexible Base	all	95%
400	Excavation and Backfill for Structures	all	95%

Note: Density will be tested in accordance with Tex-113-E, Tex-114-E, and Tex-115-E.

## **GENERAL NOTES**

Sheet 5B

County: Tom Green City: San Angelo Roadway: Southland Boulevard

Sheet: 5C

#### Item 7, "Legal Relations and Responsibilities"

All motor vehicle equipment having an obstructed view to the rear shall have a reverse signal alarm audible above the surrounding noise level.

#### Item 8, "Prosecution and Progress"

Submit the sequence of work and estimated progress schedule on paper or as a Portable Document Format (PDF) electronic file compatible with Adobe Systems Incorporated "Acrobat Reader X".

Restricted work hours are from 7:30 A.M to 8:30 A.M. and from 5:00 P.M. to 6:00 P.M.

#### Item 9, "Measurement and Payment"

Provide a conversion rate for units of payment for work subcontracted to disadvantaged business enterprises if units of payments differ from those shown on the plans.

The progress payment period shall end two working days before the last working day of the month. Deliver invoices to be paid as material on hand on or before the end of the progress payment period.

#### Item 247, "Flexible Base"

Stockpile flexible base produced for this project separately from any other stockpiled material and label stockpile with project number, material type, and grade.

Place flexible base in lifts of 4 in. maximum.

#### Item 310, "Prime Coat"

If planing operations expose base material:

- 1. Refinish exposed base material in accordance with Item 251, Type D. This work will not be measured or paid for separately, but will be considered as included in payment for Item 310.
- 2. Place prime coat on refinished base material in accordance with Item 310.
- 3. Place one-course seal coat on primed base material in accordance with Item 316.

Refinish material that does not receive prime coat within one working day following acceptance of flexible base.

#### Item 316, "Seal Coat"

Cure the first surface treatment course a minimum of 2 days before placing the second course.

If cutback asphalt is used for the first surface treatment course, a minimum of 2 days curing time shall be required before placing the second course. COSA will assume interim maintenance of

General Notes

County: Tom Green City: San Angelo Roadway: Southland Boulevard

the first course during the curing period provided that other items of work including clean-up have been completed as directed.

Cover or protect the following, as applicable: railings, bridge joints, utility covers, railroad crossings, and exposed concrete such as curbs, bridge approach slabs, bridge decks, sidewalks, mow strips, and concrete pavement.

Do not place wet aggregate.

Use medium pneumatic rollers that meet the requirements of Item 210, "Rolling." If trap rock aggregate is used, the Engineer may require steel wheel rollers.

#### Item 354, "Planing and Texturing Pavement"

Remove and dispose of existing raised pavement markers, jiggle bars, and traffic buttons before planing.

Mark and saw cut straight lines at the boundaries of planed areas. Do not saw cut pavement until the lines are approved.

#### Item 496, "Removing Structures"

This item shall include the complete removal and proper disposal of existing structures, including but not limited to the following: culvert barrels, railing, wingwalls, headwalls, retaining walls, safety end treatments, pipe runners, riprap, deck, overlay, approach slabs, joints, beams, bracing, drains, conduits, pipes, bents, abutments, columns, pilings, footings, web-walls, drilled shafts, reinforcing steel, bridge protective assemblies, clearance signs, etc. Portions of the structure at least 2 ft. below the permanent ground line may be left in place as directed.

Structures to be removed have surface coatings which may contain hazardous materials. Follow applicable safety standards.

Steel railing posts to be removed have surface coatings which contain hazardous materials. Removal of the existing railing posts shall be accomplished by unscrewing existing nuts and removing the steel posts. The use of a cutting torch or any other means that will produce fumes or stripping of paint shall not be used. Proper disposal is required for all of the railing elements. Follow applicable safety standards.

### Item 502, "Barricades, Signs and Traffic Handling"

Provide flaggers at such times and locations as directed to ensure the safe passage of traffic through construction areas. When flaggers are used to control traffic, furnish and install signs CW20-7 "FLAGGER SYMBOL", CW20-7aD "FLAGGER AHEAD", and CW3-4 "BE PREPARED TO STOP". Flaggers shall use 24 in. STOP/SLOW paddles.

Warning reflectors mounted on plastic drums may be substituted in place of Type C steady burn warning lights.

Install orange plastic construction fencing around the perimeter of trenches and excavations to remain open at night, and at other locations shown on the plans or as directed. Construction fence shall be orange plastic, highly visible, 4 ft. high, and as approved. Construction fence supports shall be steel t-posts with safety caps, wooden posts having minimum dimension of 1 1/2 in, or

General Notes

# Sheet: 5D

Sheet 5D

plastic drums. Embed steel or wooden posts sufficiently as directed. Steel or wooden supports shall extend to top of construction fence. Attach construction fence to supports sufficiently as directed. Do not exceed 8 ft. between supports. Do not use steel reinforcing bars as supports for construction fence.

As directed, furnish and install signs R9-8 "PEDESTRIAN CROSSWALK", R9-9 "SIDEWALK CLOSED", R9-10DBL "SIDEWALK CLOSED ↔ USE OTHER SIDE", R9-11L(R) "SIDEWALK CLOSED AHEAD  $\leftarrow$  CROSS HERE", and R9-11aL(R) "SIDEWALK CLOSED  $\leftarrow$  CROSS HERE". Place other additional appropriate warning or protective devices as directed for pedestrian safety. Do not obstruct pedestrian paths unless designated for closure.

Furnish and install anti-skid steel road plates suitable for pedestrian and vehicular traffic to cross trenches as needed for access to adjacent property and where directed. Where steel road plates are used, furnish and install signs CW8-24 "STEEL PLATE AHEAD".

Prior to each work day, make provisions to exclude vehicles from parking within work areas.

Temporarily relocate existing permanent sign assemblies to temporary supports as shown on the plans, or as directed.

Omit advance warning signs and furnish and install reduced size signs CW20-1 "ROAD WORK AHEAD" mounted back to back with reduced size signs G20-2 "END ROAD WORK" signs at intersecting city streets and county roads.

Furnish and install signs CW20-1D "ROAD WORK AHEAD", G20-1aT "ROAD WORK ←NEXT X MILES, NEXT X MILES $\rightarrow$ ", and G20-2 "END ROAD WORK" at intersecting state highways.

### Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls"

The Migratory Bird Treaty Act of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, or egg in part or in whole, without a federal permit issued in accordance with the Act's policies and regulations. Migration patterns would not be affected by the proposed project. Remove non-active migratory bird nests from structures where work would be performed from September 1 through the end of February. Prevent migratory birds from building nests from March 1 to August 31. In the event that migratory birds are encountered on-site during project construction, avoid adverse impacts on protected birds, active nests, eggs, and/or young.

### Item 618, "Conduit"

Where PVC, duct cable, and HDPE conduit 1 in. diameter and larger is allowed and installed as per COSA and TxDOT standards, optionally provide PVC elbows in place of the galvanized rigid metal elbows required by the Electrical Details standard sheets. Provide PVC elbows of the same schedule rating as the conduits to which they connect. Use only a flat, high tensile strength polyester fiber pull tape for pulling conductors through the PVC conduit system that uses PVC elbows.

Secure permission from the proper authority before cutting into or removing any walks or curbs.

Install conduit under existing pavement by an approved boring method unless otherwise directed. Do not construct boring pits within 2 ft. of the edge of the pavement unless otherwise directed.

County: Tom Green City: San Angelo Roadway: Southland Boulevard

When conduits are bored, the vertical and horizontal tolerances shall not exceed 18 in. as measured from the intended target point.

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

Install a pull rope in conduit runs in excess of 60 ft.

Furnish and install duct seal at ends of conduits.

Optionally substitute HDPE conduit meeting the requirements of Item 622, "Duct Cable" for bores requiring PVC Schedule 40 and Schedule 80 conduit when approved. HDPE shall be the same size as the PVC conduit shown on the plans. No additional compensation will be paid when HDPE is substituted for this purpose.

Install a continuous bare or green insulated copper wire number 8 AWG or larger in every conduit throughout the electrical system in accordance with the electrical detail sheets and the NEC.

#### Item 620, "Electrical Conductors"

Grounding conductors that share the same conduit, junction box, ground box or structure shall be bonded together at every accessible point in accordance with the NEC.

#### Item 644, "Small Roadside Sign Assemblies"

Where foundations protrude through riprap or other concrete areas, wrap the foundation with 1/4in, thick bituminous fiber sheets before placing concrete or repairing the concrete area. Bituminous fiber sheet tubes may be used for forming sign foundations instead of removable forms and shall be left in place below the finished concrete or riprap surface. Neatly trim the bituminous fiber sheets flush with the finished surface after the concrete has cured.

Drill and pour small roadside sign foundations on the same day or suitably cover the drilled hole.

Signs indicated to be mounted on the back of another sign or on a traffic signal pole or mast arm may require punch spacing different from that shown on the Standard Sheets. Adjust punch spacing on affected signs.

Cover each unfinished sign base with a reflectorized traffic cone.

Materials determined salvageable shall remain property of COSA. Deliver to the COSA's maintenance section which has responsibility for the project area.

Before removal from the project site, spray-paint (with an oil-based paint), an "X" across the face of non-salvageable signs as directed.

#### Item 662, "Work Zone Pavement Markings"

Do not use temporary flexible-reflective roadway marker tabs to delineate stop bars, crosswalks, symbols, or words.

Item 666, "Retroreflectorized Pavement Markings"

**General Notes** 

General Notes

Sheet: 5G

**Glass Bead Rates** Asphalt Concrete Pavement, Glass Bead Microsurfacing, Marking (Double Drop) Surface Concrete Treatment Pavement Types Types 12 LB per 100 6 LB per 100 SF Type II SF TYI markings 12 LB per 100 Type III 6 LB per 100 SF SF 12 LB per GAL Type II 6 LB per GAL TY II markings Type III 12 LB per GAL 6 LB per GAL

Place glass beads for pavement markings in accordance with the following table:

Apply TY II marking material at a rate of 25 gallons per mile.

The striper speed shall not exceed 5 MPH during application. Convert to gravity-flow beaders (if not in use) to obtain optimum bead application, when directed.

Clean striper tanks before use if there is a build-up of dry paint, as directed. Flush lines and guns before use.

Reference existing markings before performing work that disturbs the markings, so that the markings can be re-established.

Provide a double-drop of Type II and Type III glass beads.

### Item 668, "Prefabricated Pavement Markings"

When applying Type C specialty markings (symbols, words, etc.) over existing thermoplastic markings, first apply heat to the surface of the existing markings and roughen the surface with a shovel. Remove existing Type A, B, or C prefabricated markings prior to placing the new Type C markings.

### Item 684, "Traffic Signal Cables"

Leave a minimum of 3 ft. of each signal cable in each signal pole base and controller enclosure.

Terminate the multiconductor signal cable shown on the plans on the terminal strip in the hand hole. Do not splice the conductors at the hand hole.

Identify each cable as shown on the plans with permanent marking labels using a double-tie strap label at each ground box, pole base and controller.

#### Item 686, "Traffic Signal Pole Assemblies (Steel)"

Set anchor bolts for signal poles so that two are in tension and two are in compression.

**General Notes** 

w beaders (if	
nes and guns	

County: Tom Green City: San Angelo Roadway: Southland Boulevard

Traffic signal pole heights and mast arm lengths are shown on the plans for bidding purposes only. Before fabrication, make field measurements to determine the actual pole height necessary to ensure a vertical clearance between 17'-6" and 19'-0" from the roadway surface to the bottom of the lowest point on the signal head assembly or mast arm, and to determine the mast arm lengths required to mount the traffic signal heads over the travel lanes. The mast arm shall be straight and level in the span area where the signal heads are attached. These field measurements and elevations shall be determined from the actual field locations of the pole foundations, considering above- and below-ground utilities and the existing roadway elevations and widths.

#### Item 687, "Pedestal Pole Assemblies"

Inside each breakaway base, provide breakaway fuse-holders conforming to Material/Producer List, "Item 620 – Electrical Conductors" for ungrounded cables, neutral breakaway connectors for neutral cable, and pedestrian button cables.

# Sheet: 5H

	SUMMARY OF	REMOVAL ITEMS												
LOCATION	104	104	104	104	496	105	644	677	677	677	677	677	677	677
	6001	6009	6022	6036	6004	6011	6076	6001	6003	6005	6007	6008	6009	6012
	REMOVING CONC (PAV)	REMOVING CONC (RIPRAP)	REMOVING CONC (CURB AND GUTTER)	REMOVING CONC (SIDEWALK OR RAMP)	REMOV STR (SET)	REMOVING STAB BASE AND ASPH PAV (2"-6")	REMOVE SM RD SN SUP&AM	ELIM EXT PAV MRK & MRKS (4")	ELIM EXT PAV MRK & MRKS (8")	ELIM EXT PAV MRK & MRKS (12")	ELIM EXT PAV MRK & MRKS (24")	ELIM EXT PAV MRK & MRKS (ARROW)	ELIM EXT PAV MRK & MRKS (DBL ARROW)	ELIM EXT PAV MRK & MRKS (WORD)
	SY	SY	LF	SY	EA	SY	EA	LF	LF	LF	LF	EA	EA	EA
REMOVAL LAYOUT		10												
SHEET 1 OF 1	415		668	66	3	120		11	141		364	1		1
PROJECT TOTALS	415		668	66	3	120		11	141		364	1		1

	SUMMARY OF PA	VEMENT MARKING	G ITEMS	_						_				
LOCATION	666	666	666	666	666	666	668	668	668	672	672	672	644	644
	6030	6036	6048	6300	6303	6315	6019	6020	6027	6007	6009	6010	6068	6070
	REFL PAV MRK TYI (W)8"(DOT) (120MIL)	REFL PAV MRK TYI (W)8"(SLD) (120MIL)	REFL PAV MRK TYI (W)24"(SLD) (120MIL)	RE PM W/RET REQ TY I (W)4"(BRK) (120MIL)	RE PM W/RET REQ TY I (W)4"(SLD) (120MIL)	RE PM W/RET REQ TY I (Y)4"(SLD) (120MIL)	PREFAB PAV MRK TY B (W) (ARROW)	PREFAB PAV MRK TY B (W) (DBL ARROW)	PREFAB PAV MRK TY B (W) (WORD)	REFL PAV MRKR TY I-C	REFL PAV MRKR TY II-A-A	REFL PAV MRKR TY II-C-R	RELOCATE SM RD SN SUP&AM TY 10BWG	RELOCATE SM RD SN SUP&AM TY S80
	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA
SIGNING AND PAVEMENT MARKING LAYOUT														
SHEET 1 OF 1	120	390	1,047	165	0	900	3	2	3	35	22	0	1	3
PROJECT TOTALS	120	390	1,047	165		900	3	2	3	35	22		1	3

	SUMMARY (	F ROADWAY	ITEMS															
LOCATION	110	132	150	247	260	260	310	316	316	341	341	354	529	530	531	531	531	5001
	6001	6001	6002	6041	6002	6027	6005	6001	6224	6008	6031	6045	6008	6004	6002	6004	6013	600
	EXCAVATION (ROADWAY)	EMBANKMENT (FINAL) (O RD COMP) (TY A)	BLADING	FL BS (CMP IN PLC)(TYA GR1-2)(F NAL POS)	LIME (HYDRATED LIME (SLURRY))	LIME TRT (EXST MATL)(8")	PRIME COAT (AE-P)	ASPH (MULTI OPTION)	AGGR(TY-P B GR-4 SAC-B)	D-GR HMA TY-B PG64-22	D-GR HMA TY-C PG76-22	PLANE ASPH CONC PAV (2")	CONC CURB & GUTTER (TY II)	DRIVEWAY S (CONC)	CONC SIDEWAL KS (5")	CURB RAMPS (TY 1)	CURB RAMPS (TY 10)	GEOGR BASE REINFO EMENT I)
	CY	CY	HR	CY	TON	SY	GAL	GAL	CY	TON	TON	SY	LF	SY	SY	EA	EA	SY
OADWAY ITEMS							ļ ļ											
SHEET 1 OF 1	6	667	25	608	17	1,774	254	356	10	852	723	3,363	511	289	296	4	2	1,77
OJECT TOTALS	6	667	25	608	17	1774	254	356	10	852	723	3363	511	289	296	4	2	177

	SUMMARY OF DRAI	NAGE ITEMS
	462	467
	6003	6133
LOCATION	CONC BOX CULV (4FT X 2 FT)	SET (TY I) (S= 4FT) (HW= 2FT) (4:1) (P)
	LF	EA
DRAINAGE ITEMS		
SHEET 1 OF 1	45	3
PROJECT TOTALS	45	3

 SUMMARY OF
 EROSION
 CONTROL
 ITEMS

 160
 164
 168
 6003
 6027
 6001

SY

803

803

VEGETATIVE WATERING

MG

0.0161

0.0161

FURNISHING CELL FBR AND MLCH PLACING SEED TOPSOIL (VPERM) (4") (URBAN) (CLAY)

SY

803

803

	5				
	506	506	506	506	506
	6002	6041	6043	6038	6039
	ROCK FILTER DAMS (INSTALL) (TY 2)	BIODEG EROSN CONT LOGS (INSTL) (12")	BIODEG EROSN CONT LOGS (REMOVE)	TEMP SEDMT CONT FENCE (INSTALL)	TEMP SEDMT CONT FENCE (REMOVE)
	LF	LF	LF	LF	LF
	70	500	500	50	50
ŀ	70	500	500	50	50

BASIS	OF	ESTIMATE

14						
[tem No.	Description	Usage	Area			
150	Blading		6.46 ST/			
168	Vegetative Watering	Side Slope	803 SY			
310	Prime Coat	Asphalt	4381 SY			
316	Seal Coat	Asphalt	4381 SY			
316	Seal Coat	Aggregate	4381 SY			
341	НМА	Surface Course	7744 SY			
341	HMA	Base	4381 SY			

\* FOR CONTRACTOR'S INFORMATION ONLY

1/11/2017	\CADD\SHEETS\02-General\SB-GS
AM	601
4	7/1
16:	235
i i	:

LOCATION

SW3P

SHEET 1 OF 1

PROJECT TOTALS



#### PROPOSED SEQUENCE OF CONSTRUCTION

#### GENERAL

- SET PROJECT LIMIT BARRICADES AND SIGNING AT THE PROJECT LIMITS IN ACCORDANCE WITH THE BARRICADE AND CONSTRUCTION STANDARD SHEETS.
   COMPLETE EACH PHASE BEFORE BEGINNING WORK ON SUBSEQUENT PHASES.

- APPROVED BY THE ENGINEER OR THE CITY OF SAN ANGELO.

- PHASE 1 WIDENING OF SOUTHLAND BLVD. INSTALL BARRICADES AND TRAFFIC CONTROL DEVICES IN ADVANCE OF PHASE 1 CONSTRUCTION OR AS DIRECTED BY THE ENGINEER
- INSTALL SW3P FOR PHASE 1
- PERFORM REMOVAL OF PORTIONS OF SOUTHLAND BLVD.
- PERFORM CULVERT EXTENSIONS.
- INSTALL TRAFFIC SIGNAL POLE. CONSTRUCT OUTSIDE WIDENING OF SOUTHLAND BLVD. AND SIDEWALK.

#### PHASE 2 MILL AND INLAY

- INSTALL BARRICADES, TRAFFIC CONTROL DEVICES, AND PORTABLE CHANGEABLE MESSAGE SIGN IN ADVANCE OF PHASE 2 CONSTRUCTION OR AS DIRECTED BY
- THE ENGINEER.
- INSTALL SW3P FOR PHASE 2
- MILL AND INLAY OF EXISTING PAVEMENT AREAS, OVERLAY OF WIDENED PAVEMENT AREAS AND MAINTAIN TRAFFIC AS A MOBILE OPERATION.
- PLACE FINAL PAVEMENT MARKINGS.









PHASE 1 US 67 US 67 AT SOUTHLAND BLVD



#### LEGEND

*V////* 

PAVEMENT CONSTRUCTED THIS PHASE

NOTES:

- 1. A MINIMUM OF ONE THROUGH LANE EACH DIRECTION SHALL BE MAINTAINED ON SOUTHLAND BLVD. DURING ALL PHASES.
- 2. WORK DURING NIGHT TIME OR DURING LIMITED VISIBILITY IS PROHIBITED UNLESS DIRECTED BY THE ENGINEER.
- 3. DURING NON-WORKING HOURS, ALL DROP OFFS ARE TO BE FILLED OR PROTECTED. REFER TO WZ(UL)-13 AND TREATMENT FOR VARIOUS EDGE CONDITIONS AND DETAILS OR AS DIRECTED BY THE ENGINEER.
- 4. REFER TO TXDOT STANDARD SHEET TCP(2-1)-12 FOR WORK ZONE CHANNELIZATIONS AND SIGNAGE REQUIREMENTS OR AS DIRECTED BY THE ENGINEER.

	DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION BIDDING, OR PERMIT PURPOSES. MICHAEL C. COYLE,PE 95634 TEXAS SERIAL NO. 1/11/2017 DATE			
	NOT TO SCALE			
	REV. NO.	01/11/2017 DATE	DRIVEWAY CONSTRAINT DESCRIPTION	MCC BY
	LJA Engineering, Inc.			
	SHEET	1 OF 1		SHEET NO. 7