CITY OF NEW BRAUNFELS
KLEIN RD PH 2
RECONSTRUCTION PROJECT
S WALNUT AVE TO FM 725

FINAL DESIGN SUBMITTAL
VOLUME II

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE
BIDDER AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY
AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS
AND HAVE FOUND THEM COMPLETE AND FREE FROM AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE
INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS AND
MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN
ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE CONTRACTOR SHALL CONTACT EACH OF THE INDIVIDUAL UTILITIES FOR ASSISTANCE IN DETERMINING
THE LOCATION OF ALL EXISTING UTILITY CROSSINGS PRIOR TO BEGINNING CONSTRUCTION.  THE
LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD
INFORMATION ONLY AND MAY NOT MATCH LOCATION AND/OR DEPTHS AS CONSTRUCTED.  THE
CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL EXISTING UTILITY CROSSINGS PRIOR TO BEGINNING CONSTRUCTION.

IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE
WORK OF THE ENGINEER OF RECORD.  ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD.

GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS.  NO GAS IMPROVEMENTS
PROPOSED.

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, NOVEMBER 1, 2014

NATHAN GARZA, CAPITAL PROJECTS MANAGER

VOLUME I

STA 102+28.77
AT S WALNUT AVE
BEGIN KLEIN RD

STA 152+85.25
AT FM 725
END KLEIN RD

DATE
1/17/2023

105193

STAGE 6

DISTRICT 4

DISTRICT 5

DISTRICT 6

DISTRICT 3

DISTRICT 2

DISTRICT 1

MAJOR AT LARGE

ANDRES CAMPIS

S T O E G E R  D R

DESIGN SUBMITTAL
FINAL

DESIGN SPEED - 40 MPH

S T A T E  O F  T E X AS

DISTRICT 1

DISTRICT 2

DISTRICT 3

DISTRICT 4

DISTRICT 5

DISTRICT 6

CITY MANAGER

ROBERT CAMARANO

PAPE-DAWSON
ENGINEERS

SAN ANTONIO / AUSTIN / HOUSTON / FORT WORTH / DALLAS
3233 WILLOW LOOP RD | SAN ANTONIO, TX 78228 | 210.370.8800
FEDERAL ID #83-6138358 | LICENSED IN TEXAS

MAYOR AT LARGE

DISTRICT 1

DISTRICT 2

DISTRICT 3

DISTRICT 4

DISTRICT 5

DISTRICT 6

CITY COUNCIL

JOHN A. TYLER
JOHN A. TYLER, P.E.

VOLUME II
1. For additional details see PDD Typical Standard Sheets.
2. Existing features are shown screened back.
3. All reflective pavement markings shall receive a FY 1 and FY 11 application.
4. All dimensions are to face of curb and/or center of pavement markings, unless otherwise indicated.

Legend:
- REFLECTIVE PAVEMENT MARKINGS SHALL RECEIVE A FY 1 AND FY 11 APPLICATION.
- EXISTING FEATURES ARE SHOWN SCREENED BACK.
- WHITE ARROW - FUTURE PAVEMENT MARKING SIDE BY SIDE

NOTES:
- 4" SLD STRIPE
- 4" SLD STRIPE
- 24" SLD STRIPE
- 2" SLD ON SPEED LIMITER

Drawings by Pape-Dawson Engineers

Design Firm: Pape-Dawson Engineers

Scale: 1" = 30'
MATCH LINE STA 142+50
MATCH LINE STA 145+50
MATCH LINE STA 148+50

MATCH LINE STA 142+50 TO STA 148+50

SHEET 9 OF 9

DESIGNER: JOHN A. TYLER, P.E.

8107 Circle Drive
Houston, TX 77072

1/16/2023

KLEIN ROAD PHASE 2

SIGNING AND PAVEMENT MARKING LAYOUT

STA 142+50 TO STA 148+50

LEGEND

1. FOR ADDITIONAL DETAILS SEE TxDOT TYPICAL STANDARD SHEETS.
2. ALL REFLECTIVE PAVEMENT MARKINGS SHALL RECEIVE A Y-1, Y-2 OR Y-3 APPLICATION.
3. ALL DIMENSIONS ARE TO FACE OF CURB AND/OR CENTER OF PAVEMENT MARKINGS, UNLESS OTHERWISE INDICATED.
4. ALL REFLECTIVE PAVEMENT MARKINGS SHALL RECEIVE A Y-1, Y-2 OR Y-3 APPLICATION.
5. PROP PAVEMENT MARKING

REFERENCES

1. FOR ADDITIONAL DETAILS SEE TxDOT TYPICAL STANDARD SHEETS.
2. ALL REFLECTIVE PAVEMENT MARKINGS SHALL RECEIVE A Y-1, Y-2 OR Y-3 APPLICATION.
3. ALL DIMENSIONS ARE TO FACE OF CURB AND/OR CENTER OF PAVEMENT MARKINGS, UNLESS OTHERWISE INDICATED.

NOTE: ITEMS OF PAVEMENT MARKINGS, UNLESS OTHERWISE INDICATED.

PAVE-DAWSON ENGINEERS

THE WORK CITED ABOVE HAS BEEN PERFORMED BY THE ENGINEER SIGNS FOR THE PROPERLY QUALIFIED INDIVIDUALS.

PAVE-DAWSON ENGINEERS

NOTES

1. FOR ADDITIONAL DETAILS SEE TxDOT TYPICAL STANDARD SHEETS.
2. ALL REFLECTIVE PAVEMENT MARKINGS SHALL RECEIVE A Y-1, Y-2 OR Y-3 APPLICATION.
3. ALL DIMENSIONS ARE TO FACE OF CURB AND/OR CENTER OF PAVEMENT MARKINGS, UNLESS OTHERWISE INDICATED.

NOTE: ITEMS OF PAVEMENT MARKINGS, UNLESS OTHERWISE INDICATED.
Reflective raised pavement markers for vehicle positioning guidance

Centerline for all two-lane roadways

Centerline and lane lines for two-way left turn lane

Centerline and lane lines for four-lane two-way highways

Lane lines for one-way roadway (non-freeway facilities)

General Notes:
1. All raised pavement markers placed in brown lines shall be placed in line with one another.
2. On concrete pavements, raised pavement markers shall be placed to one side of the longitudinal joint.

Material specifications:
- Pavement markers (reflectORIZED)
- Epoxy and adhesives
- Bituminous adhesive for pavement markers
- Traffic paint
- Hot applied thermoplastic
- Permanent reflectORIZED pavement markings

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

Position guidance using raised markers

ReflectORIZED profile markings

General:
- ReflectORIZED profile
- Center or edgeline

Using reflective profile pavement markings:
- 12° ± 1°
- 1° ± 2°
- 6° ± 1°
- 5° ± 1°
- 3° ± 1°
- 1° or 2°

ReflectORIZED profile pattern detail

Centerline and edgeline

A quick field check for the thickness of base line and profile design is approximately equal to the thickness of 5 quarters to a maximum height of 7 quarters.

NOTE:
- ReflectORIZED markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.
RURAL LEFT TURN BAYS
DIVIDED HIGHWAYS AND TWO-WAY LEFT TURN LANES
PAVEMENT MARKINGS FOR

Texas Department of Transportation

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

F I L E :  
D A T E :  

Traffic Operations Division
April 1998

GENERAL NOTES
1. Refer elsewhere in plans for additional RPM placement and details.

2. Lane use word and arrow markings shall be used wherever through lanes approaching an intersection or two-way left-turn lane are indicated. Lane use word and arrow markings shall be used in auxiliary lanes of substantial length. Other crosswalk patterns or word and arrow markings may be used in other lanes, but their size for visibility, width, and type should be consistent with the standard highway sign designs for Texas.

3. When lane used word and arrow markings are used, other crosswalk patterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used.

4. Other crosswalk patterns used in the "Texas Manual on Uniform Traffic Control Devices" may be used.

5. Paved pavement markers only if the pavement is surfaced.

6. A "TYING TO" symbol is shown for each paved pavement marking along with the required description and symbols as specified by the plans.

TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE

TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP

TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN LANE DROP

TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS

TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

PAVEMENT MARKINGS FOR TWO-WAY LEFT TURN LANES DIVIDED HIGHWAYS AND RURAL LEFT TURN BAYS

PM(3)-12

MATERIAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>SPECIFICATION</th>
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</thead>
<tbody>
<tr>
<td>EPOXY AND ADHESIVES</td>
<td>DMS-6130</td>
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<tr>
<td>HOT APPLIED THERMOPLASTIC</td>
<td>DMS-4200</td>
</tr>
<tr>
<td>PERMANENT PREFABRICATED PAVEMENT MARKINGS</td>
<td>DMS-8200</td>
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<tr>
<td>PAVEMENT MARKERS (REFLECTORIZED)</td>
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<tr>
<td>BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS</td>
<td>DMS-8240</td>
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</table>

TEXAS DEPARTMENT OF TRANSPORTATION

2-10

PM(3)-12

TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS

TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE

TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP

TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS

TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY
GENERAL NOTES

1. Longitudinal crosswalk lines should not be placed in the wheel path of vehicles. Center the crosswalk lines on travel lanes, lane lines, and shoulder lines (if present).

2. A minimum 6" clear distance shall be provided to the curb face. If the last crosswalk line falls within this distance it must be omitted.

3. For divided roadways, adjustments in spacing of the crosswalk lines should be made in the median so that the crosswalk lines are maintained in their proper location across the travel portion of the roadway.

4. At skewed crosswalks, the crosswalk lines are to remain parallel to the line lines.

5. Each crosswalk shall be a minimum of 6" wide.

6. The High-Visibility Longitudinal Crosswalk is the preferred crosswalk pattern on State Highways. Other crosswalk patterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used. All crosswalk designs and dimension shall comply with the "Texas Manual on Uniform Traffic Control Devices."

7. Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field.

MATERIAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>MATERIAL SPECIFICATIONS</th>
<th>ITEM NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAVEMENT MARKERS (REFLECTORIZED)</td>
<td>DMS-4200</td>
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<tr>
<td>EPOXY AND ADHESIVES</td>
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<tr>
<td>BITUMINOUS ADHESIVE FOR PAVEMENT</td>
<td>DMS-6130</td>
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<tr>
<td>MARKINGS</td>
<td>DMS-6200</td>
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<tr>
<td>HOT APPLIED THERMOPLASTIC</td>
<td>DMS-6220</td>
</tr>
<tr>
<td>PERMANENT PREFABRICATED PAVEMENT</td>
<td>DMS-6240</td>
</tr>
</tbody>
</table>

All pavement marking materials shall be approved by the Engineer in the field.

NOTES:

1. Use stop bars with "Stop Here for Pedestrians" signs at unsignalized mid block cross walks.

2. Use stop bars with "Stop Here on Red" signs at mid block crosswalks controlled by traffic signals or pedestrian hybrid beacons.

UN SIGNALIZED MID BLOCK HIGH VISIBILITY LONGITUDINAL CROSSWALK

CROSSWALK PAVEMENT MARKINGS

PM(4)-22
**SIGN SUPPORT DESCRIPTIVE CODES**

<table>
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<tr>
<th>Description</th>
<th>Code</th>
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<tr>
<td>Post Type</td>
<td>ST</td>
</tr>
<tr>
<td>Number of Sign Posts</td>
<td>1 or 2</td>
</tr>
<tr>
<td>Anchor Type</td>
<td>1, 2</td>
</tr>
</tbody>
</table>

**REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT**

<table>
<thead>
<tr>
<th>Sign Location</th>
<th>Clearances</th>
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<tbody>
<tr>
<td>Less than 6 ft wide</td>
<td>3 1/2 or 4&quot;</td>
</tr>
<tr>
<td>Greater than 6 ft wide</td>
<td>3 or 3 1/2&quot;</td>
</tr>
</tbody>
</table>

**SIGN MOUNTING DETAILS**

- **SM RD SGN ASSM TY**
- **SM RD SGN ASSM TY**
- **SM RD SGN ASSM TY**
- **SM RD SGN ASSM TY**

**SIGN LOCATION**

- **PAVED SHOULDERS**
- **INTERIOR GUARDRAIL**
- **CONCRETE GUARDRAIL**
- **CONCRETE BARRIER**

**SIGN ATTACHMENT DETAIL**

- **TYPICAL SIGN ATTACHMENT DETAIL**
- **SMALL ROADSIDE SIGNS**
- **GENERAL NOTES & DETAILS**

**SIGN MOUNTING DETAILS**

- **SMO (GEN) - 08**

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- The website address is: http://www.txdot.gov/publications/traffic.htm
- The information is intended for informational purposes only and is not to be relied upon for any reason.
TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS

NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems.

The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

1. Slip base shall be permanently marked to indicate manufacturer, model, and function. A list of marking is subject to approval of the local Traffic Standards Board.

2. Slip base is used as per the Texas AASHTO Standard. The following specifications shall apply:
   - 10/32" (3.2 mm) nut and bolt,:
   - 5/8" (15.9 mm) diameter:
   - 20% minimum elongation in 2" (50 mm):
   - 70,000 psi (480 MPa) minimum yield strength:
   - 75,000 psi (517 MPa) minimum ultimate strength:
   - 0.134" nominal wall thickness:
   - 70,000 psi (480 MPa) minimum tensile strength:
   - 55,000 psi (379 MPa) minimum yield strength:
   - 62,000 psi (428 MPa) minimum tensile strength:
   - 20% minimum elongation in 2":
   - Seamless or electric-resistance welded steel tubing or pipe
   - 0.122" to 0.138" wall thickness
   - 2.867" to 2.883" outside diameter
   - 0.248" to 0.304" wall thickness

3. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is:
   http://www.txdot.gov/publications/traffic.htm

4. Sign supports shall not be used unless specified by the Engineer. Sign support assemblies shall not be specified by the Engineer.

5. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is:
   http://www.txdot.gov/publications/traffic.htm

ASSEMBLY PROCEDURE:

1. Foundation - Foundation shall be 12-inch diameter by 42-inch deep. If solid rock is encountered, the depth of the foundation shall be increased to ensure that the foundation is embedded a minimum of 18 inches into the solid rock.

2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed upon approval by the Engineer.

3. The triangular slipbase system is multidirectional and is designed to release when struck from any direction. Each sign support post shall be installed with Type II anchors and washers. The anchor shall be inserted into the concrete until it is between 2 to 4 inches above the ground.

4. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

5. Cut the slip plate so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway. The cut shall be plumb and straight.

6. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground. Ensure the minimum clearance between each sign is maintained.

CONCRETE ANCHOR:

Concrete anchor consists of 5/8" (15.9 mm) diameter bolt or screw, 30 BWG Tubing (2.875" outside diameter)

Foundation:

- 12" Dia
- 24" max.
- 12" min.

Support:

- 5/8" diameter Concrete Anchor - ø screws should be driven 5 1/2" and forge to ring, of 500-900 psi, water may be exchanged as necessary.
**Wedge Anchor Steel System**

**Wedge Anchor High Density Polyethylene (HDPE) System**

**Universal Anchor System with Thin-Walled Tubing Post**

**Sign Installation Using a Prefabricated T-Bracket for Thin-Wall Tubing Post**

**Note:**

The design should be inspected per manufacturer's recommendations. Installation procedures should be provided to the Engineer by Contractor.

**Wedge Anchor**

- Steel system
- Concrete anchor
- Non-reinforced concrete
- Foundation

**High Density Polyethylene (HDPE)**

- Concrete anchor
- Non-reinforced concrete
- Foundation

**Concrete Anchor**

- Consists of 3/4" diameter stud bolt with two opposite anchor plates.
- Stud shall be 3" minimum embedment and 3/4" minimum embedment.
- Anchor plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

**Concrete anchor consists of 3/4" diameter stud bolt with two opposite anchor plates.**

- Stud shall be 3" minimum embedment and 3/4" minimum embedment.
- Anchor plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

**Installation Procedure**

1. **Preparation:**
   - Clean the socket/stub to ensure a minimum clearance.
   - The foundation shall extend to the depth of the socket/stub.
   - The foundation shall extend to the depth of the socket/stub.

2. **Insertion:**
   - Insert the sign post into the socket and align sign face with roadway.
   - Stand the sign post with a minimum embedment of 4 1/2" when used with the Bolt Down Universal Anchor System.

3. **Installation:**
   - The sign post shall be installed with a minimum embedment of 4 1/2" when used with the Bolt Down Universal Anchor System.
   - The sign post shall be installed with a minimum embedment of 4 1/2" when used with the Bolt Down Universal Anchor System.

4. **Final Adjustments:**
   - Tighten the compression ring to ensure a minimum embedment of 4 1/2" when used with the Bolt Down Universal Anchor System.
   - Tighten the compression ring to ensure a minimum embedment of 4 1/2" when used with the Bolt Down Universal Anchor System.

5. **Inspection:**
   - Inspect the sign post for any signs of damage or misalignment.
   - Inspect the sign post for any signs of damage or misalignment.

6. **Completion:**
   - Ensure the sign post is securely fastened.
   - Ensure the sign post is securely fastened.

**General Notes:**

- **Material:**
  - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
  - Seamless or electric-resistance welded steel tubing
  - Outside diameter (uncoated) shall be within the range of 2.369" to 2.381"
  - 18% minimum elongation in 2"

- **Concrete Anchor:**
  - Consists of 5/8" diameter stud bolt with a minimum embedment of 3" when used with the Bolt Down Universal Anchor System.
  - Anchor plate shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively.
  - Nuts, bolts and stud bolts shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi.

- **Plastic Insert:**
  - 1/2" x 7 1/2"
  - Wedge Anchor System

- **Wedge Anchor System:**
  - For optimal placement, the wedge anchor shall be used with the Bolt Down Universal Anchor System.
  - The wedge anchor shall be used with the Bolt Down Universal Anchor System.

- **Anchor - 4 Places:**
  - 1/2" x 7 1/2"
  - Wedge Anchor System

- **Concrete Anchor Consists:**
  - 3/4" Diameter Stud Bolt with Two Opposite Anchor Plates
  - Stud shall be 3" minimum embedment and 3/4" minimum embedment.
  - Anchor Plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

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  - Stud shall be 3" minimum embedment and 3/4" minimum embedment.
  - Anchor Plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

**Additional Notes:**

- **Concrete Anchor Consists:**
  - 3/4" Diameter Stud Bolt with Two Opposite Anchor Plates
  - Stud shall be 3" minimum embedment and 3/4" minimum embedment.
  - Anchor Plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

- **Concrete Anchor Consists:**
  - 3/4" Diameter Stud Bolt with Two Opposite Anchor Plates
  - Stud shall be 3" minimum embedment and 3/4" minimum embedment.
  - Anchor Plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

**Technical Details:**

- **Concrete Anchor Consists:**
  - 3/4" Diameter Stud Bolt with Two Opposite Anchor Plates
  - Stud shall be 3" minimum embedment and 3/4" minimum embedment.
  - Anchor Plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

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  - 3/4" Diameter Stud Bolt with Two Opposite Anchor Plates
  - Stud shall be 3" minimum embedment and 3/4" minimum embedment.
  - Anchor Plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

**Notes:**

- **Concrete Anchor Consists:**
  - 3/4" Diameter Stud Bolt with Two Opposite Anchor Plates
  - Stud shall be 3" minimum embedment and 3/4" minimum embedment.
  - Anchor Plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

- **Concrete Anchor Consists:**
  - 3/4" Diameter Stud Bolt with Two Opposite Anchor Plates
  - Stud shall be 3" minimum embedment and 3/4" minimum embedment.
  - Anchor Plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

**Wedge Anchor Polyethylene:**

- Concrete anchor consists of 3/4" diameter stud bolt with two opposite anchor plates.
- Stud shall be 3" minimum embedment and 3/4" minimum embedment.
- Anchor plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

**Wedge Anchor Polyethylene:**

- Concrete anchor consists of 3/4" diameter stud bolt with two opposite anchor plates.
- Stud shall be 3" minimum embedment and 3/4" minimum embedment.
- Anchor plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.

**Wedge Anchor Polyethylene:**

- Concrete anchor consists of 3/4" diameter stud bolt with two opposite anchor plates.
- Stud shall be 3" minimum embedment and 3/4" minimum embedment.
- Anchor plate shall be a minimum of 4 1/2" when used with the Bolt Down Universal Anchor System.
<table>
<thead>
<tr>
<th>TYPE 1 - MULTI LOCKABLE AND XL MAILBOX</th>
<th>TYPE 2/4 - SINGLE LOCKABLE MAILBOX</th>
<th>TYPE 2/4 - SINGLE XL MAILBOX</th>
</tr>
</thead>
</table>
| **Multiple Mailbox Post** 45057255055 for 12 gauge steel | **L-bracket (X4)** NIGP: 45057252255  
**Plate Washer (X3)** NIGP: 45057255055  
**Bolt, 5/8" x 3 1/2"** Hex (X2) NIGP: 32020561117 | **Plate Washer (X2)** NIGP: 45057252255  
**Bolt, 1/4" x 3 1/2"** Hex (X2) NIGP: 32020561117  
**Bolt, 5/16" x 3 1/2"** Hex (X2) NIGP: 32020561117 |
| **Single Mailbox Bracket** NIGP: 45057250350 | ** Bolt, 1/4" x 3 1/2"** Hex (X2) NIGP: 32020561117  
**Plate Washer (X2)** NIGP: 45057252350 | **Plate Washer (X2)** NIGP: 45057250263  
**Bolt, 5/8" x 3 1/2"** Hex (X2) NIGP: 32020561117 |

**NOTE:** Follow same configuration when mounting an XL mailbox on a Type 4 multi post.

**XL AND LOCKABLE ARCHITECTURAL MAILBOX ASSEMBLY**

**MB(2)-21**

**SHEET 2 OF 4**
**TYPE 1 - SUPPORT/FOUNDATION**
Thin Wall Tube w/Wedge Anchor System

**TYPE 2 - SUPPORT/FOUNDATION**
Thin Wall Tube w/Wedge Anchor System

**TYPE 3 - SUPPORT/FOUNDATION**
Winged Channel Post

**TYPE 4 - SUPPORT/FOUNDATION**
Multiple Mailbox Post

**TYPE 5 - SUPPORT/FOUNDATION**
Winged Channel Post

**TYPE 6 - TEMPORARY MAILBOX SUPPORT**

**GENERAL NOTES:**

1. Erect post plumb or vertical.
2. When galvanized part is required, galvanize in accordance with Item 445.
3. Use a concrete footing as shown or when directed. Concrete footing will be required when soils do not provide a stable condition, only on Type 1, Type 2, and Type 4.
4. Disclaimers made by TxDOT for whatever purpose. TxDOT assumes no responsibility for the conversion.
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**NOTES:**

- Place on approved plastic drum as shown in the Contractor Work Zone Traffic Control Devices (CWZTCD).
- Existing attachment hardware shall be used unless damaged. Damaged hardware shall be replaced.
- 3. Use a concrete footing as shown or when directed. Concrete footing will be required when soils do not provide a stable condition, only on Type 1, Type 2, and Type 4.
<table>
<thead>
<tr>
<th>Type</th>
<th>Configuration</th>
<th>Description</th>
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<td>V-Loc</td>
<td>Single or Double</td>
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<tr>
<td>Ty 2</td>
<td>Wedge Anchor Plastic System</td>
<td>Single</td>
<td>45057252343 (Double Mount Bracket)</td>
</tr>
<tr>
<td>Ty 3</td>
<td>Winged Channel Post</td>
<td>Single</td>
<td>55083571053 (Socket)</td>
</tr>
<tr>
<td>Ty 4</td>
<td>Wedge Anchor Steel System</td>
<td>Single</td>
<td>55083571004 (Socket)</td>
</tr>
<tr>
<td>Ty 5</td>
<td>Wing Channel Post</td>
<td>Single</td>
<td>5508357253002 (Bracket Extension)</td>
</tr>
<tr>
<td>Ty 6</td>
<td>Mailbox Bracket</td>
<td>Single</td>
<td>5508357252251 (Mailbox Bracket)</td>
</tr>
</tbody>
</table>

**NOTES:**
1. Type 2 object marker in accordance with Traffic Engineering Standard Delineators & Object Markers.
2. A light weight receptacle for newspaper delivery can be attached to mailbox posts if the receptacle does not exceed 40 inches high, present no hazard to motorists, or interfere with other advertising, except the publication title.

**BID CODES FOR CONTRACTS**
- MB-4 "3 " (x2) for Type 3 Wing Channel Post
- 12" Conformable Reflective Yellow Sheeting for Flexible Posts

**NIGP PARTS LIST AND COMPATIBILITY**

**TxDOT**
CASE 1. OFF TRAVEL WAY DELIVERY

CASE 2. BACK SIDE DELIVERY

CASE 3. DELIVERY NEAR RIGHT OF WAY LINE

GENERAL NOTES:
1. CASE 1 IS THE MOST COMMON METHOD.

2. TURN OUT BEHIND MAILBOX FOR CASE 2 WILL NORMALLY BE ALLOWED FOR
   NATURAL TERRAIN THAT WILL SERVE AS AN ALL WEATHER SURFACE.

3. ALL WEATHER DRIVEWAYS FOR CASE 3 MAILBOXES LOCATED AT THE RIGHT
   OF WAY LINE SHOULD NORMALLY BE PLACED IN CONJUNCTION WITH
   COUNTY ROADS OR OTHER CONNECTING COMMUNITY ROADS OR STREETS.
   WHEN 3 OR MORE MULTI-RACKS ARE ANTICIPATED, THE USE OF AN NDCBU
   IS RECOMMENDED, ONLY RURAL PATRONS LOCATED ON STATE
   MAINTAINED HIGHWAYS MAY HAVE A MAILBOX OR NDCBU SLOT ON TXDOT
   RIGHT OF WAY.

MAIL DELIVERY VEHICLE TRAVEL DIRECTION
MAILBOX PLACEMENT AT RURAL LOCATIONS

THROUGH HIGHWAY SPEEDS
LESS THAN 55 MPH

150 FT PREFERRED, 90 FT MIN.
200 FT MIN.
300 FT PREFERRED, 70 FT MIN.

MAILBOX PLACEMENT AT RURAL LOCATIONS

THROUGH HIGHWAY SPEEDS
GREATER THAN OR EQUAL TO 55 MPH

60 FT MIN.
90 FT PREFERRED,
100 FT MIN.

NOTES:

1. A NON-TRAVERSABLE SURFACE MUST BE INSTALLED NEAR THE MAILBOX (NATURAL VEGETATION OR OTHER) IN THE BUFFER ZONE. ALTERNATIVELY, A BASE WITH A MINIMUM HEIGHT OF 2.5 INCHES MAY BE INSTALLED SO THAT THE EDGE OF THE MAILBOX DOES NOT EXTEND OUT MORE THAN 4 INCHES HORIZONTALLY BEYOND THE BASE.

2. THE SIDEWALK WIDTH MAY BE REDUCED TO 4 FOOT FOR SHORT DISTANCES AROUND THE MAILBOX IF NEEDED.

3. MAINTAIN A MINIMUM OF 5 FEET BETWEEN OBSTRUCTIONS IN THE PEDESTRIAN ACCESS ROUTE.
NOTES:
1. All dimensions are in feet unless specified otherwise.
2. Contractor shall coordinate all removal of traffic-related equipment and signs with TxDOT.
3. Existing pavement markings to be removed shall be ground-off and sealed prior to application of new pavement markings.
4. All traffic equipment deemed salvageable by City Inspector shall be delivered to City Reclamation office located at 400 Northwest Loop 410, San Antonio, Texas 78250.
5. Utilities shown are approximate. Contractor shall call for locations prior to commencing excavation for utility locations shall be verified in the field by the contractor,
6. All items not specifically called out on these plans to be removed, small repair.
7. Existing traffic signals shall remain operational until temporary signal is turned on.

CADMAN: THE CONTRACTOR IS SPECIFICALLY CAUGHT THAT UNDERGROUND UTILITIES INCLUDING GAS ARE KNOWN TO EXIST IN THE VICINITY OF THE WORK. CONTRACTOR IS ADVISED TO CALL FOR UTILITY LOCATION AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.

EXCAVATION. ALL UTILITY LOCATIONS SHALL BE SHOWN PRIOR TO COMMENCING EXCAVATION FOR USE ON TEMPORARY CONTROL AND ELEC. SERVICES.

DESCRIPTION SHEET NO.
REMOVING TRAFFIC SIGNALS

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBX</td>
<td>6</td>
<td>E</td>
</tr>
</tbody>
</table>
1. All dimensions shown are in feet unless specified otherwise, all existing features are shown scaled back 1/4" = 1'-0".
2. Contractor to provide signal pole locations near underground utilities prior to installing pole foundation.
3. Battery back up system (BBS) complete shall be installed per TxDOT Special Provision 6053.
4. Location of traffic signal poles, controller assemblies, and electrical service shall be verified and approved by the City of New Braunfels prior to construction. The contractor shall supply and install the address in permanent numbers and letters to the streets side of the device enclosure. Said address shall also be recorded and given to the City of New Braunfels for the city’s records.
5. The contractor is specifically cautioned that underground utilities including gas are known to exist in the vicinity of the proposed traffic signal head locations. The contractor shall use caution when installing signal equipment including pole foundations and conduits.
6. Utilities shown are approximate. Contractor shall call for locates prior to digging. Contractor shall contact Texas-811 for utility location before digging. Contractor shall report the found utilities to the City of New Braunfels through Texas-811. The contractor shall call for locates prior to digging and shall report the found utilities to the City of New Braunfels through Texas-811.
7. Sidewalk shall be extended up to the mast arm poles, as needed, to provide pedestrian access to the pedestrian push buttons.
8. Utilities shown are approximate. Contractor shall call for locates prior to digging. Contractor shall contact Texas-811 for utility location before digging. Contractor shall report the found utilities to the City of New Braunfels through Texas-811. The contractor shall call for locates prior to digging and shall report the found utilities to the City of New Braunfels through Texas-811.
9. Pedestrian access to the pedestrian push buttons.
10. Signal operation will be monitored after construction and modified as necessary.
11. All signal heads shall have back plates.

Caution:
- Contractor shall call for locates prior to digging. Contractor shall report the found utilities to the City of New Braunfels through Texas-811. The contractor shall call for locates prior to digging and shall report the found utilities to the City of New Braunfels through Texas-811.
- All signal heads shall have back plates.

Proposed Traffic Signs:
- Klein
- HWY 725

Proposed Traffic Signal Heads:
- 12" LED Signal Heads
  - Traffic Signal Pole
  - Traffic Controller Box
  - Warning Sign
  - Pedestrian Push Button
  - Pedestrian Signal Head
  - Road Name Sign
  - CCTV Camera

Proposed Traffic Signal Poles:
- Klein Rd
- Prop Row
- Klein Rd Phase 2

Legend:
- Electric Service
- Pedestrian Push Button
- Traffic Signal Pole
- Traffic Controller Box
- Warning Sign
- Pedestrian Signal Head
- Road Name Sign
- CCTV Camera
- Pole
- Cable/Conduit Run
- Equipment Location
- Identifier
- Cut-Off Date

Design Firm: Pape-Dawson Engineers

New Braunfels City Project

Tanggal: 1/16/2023

JUSTIN W. CLARK, P.E.
CSP 23-004

KLEIN RD
Proposed Speed 40 MPH

Proposed Traffic Signal Layout

12" LED Signal Heads

12" LED Signal Heads

12" LED Signal Heads

12" LED Signal Heads
Klein Rd

HWY 725

SIGN DETAILS:

10' Radius, 2½' Border, White on Green,
"Klein", ClearviewHwy-3-W; "Rd", ClearviewHwy-3-W.

INSTALL 40FT ANSI CLASS 2 TIMBER POLE W/ 2 DOWN GUYS AND TWO VIVDS CAMERA POLE.

Electrical Service Data

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>CONDUIT SIZE</th>
<th>NO. CONDUIT</th>
<th>UNIT LENGTH</th>
<th>RUN NO.</th>
<th>TOTAL LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLE</td>
<td>3 + 8</td>
<td>2</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>POLE</td>
<td>4 + 7</td>
<td>2</td>
<td>100</td>
<td>100</td>
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</tr>
<tr>
<td>POLE</td>
<td>4 + 7</td>
<td>2</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>POLE</td>
<td>4 + 7</td>
<td>2</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Pole & Equipment Information

- INSTALL 10' ALUMINUM PEDESTAL POLE ON 6 FT DRILLED SHAFT FND. (24-A) WITH ONE APS PUSH BUTTON AND LUMINAIRE ARM.
- INSTALL NBU PEDESTAL SERVICE AND METER WITH TXDOT TYPE D SERVICE

Electrical Service

- 120/240 70 (NS) AL
- #6 BARE (SOLID)
- #6 XHHW (SOLID)

Conduit Schedule

<table>
<thead>
<tr>
<th>CONDUIT SIZE</th>
<th>CONDUCTOR NO.</th>
<th>CONDUCTOR SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 + 5</td>
<td>4 COND. #12 AWG</td>
<td></td>
</tr>
<tr>
<td>2 + 5</td>
<td>2 COND. #14 AWG</td>
<td></td>
</tr>
<tr>
<td>120-240</td>
<td>2 COND. #12 AWG</td>
<td></td>
</tr>
<tr>
<td>2 COND. #12 AWG</td>
<td>2 COND. #14 AWG</td>
<td></td>
</tr>
<tr>
<td>2 COND. #12 AWG</td>
<td>2 COND. #14 AWG</td>
<td></td>
</tr>
<tr>
<td>2 COND. #12 AWG</td>
<td>2 COND. #14 AWG</td>
<td></td>
</tr>
</tbody>
</table>

Plan Date: 2/1/2021

Design: JUSTIN W. CLARK, P.E.

Approval: DAVID E. GASTON, P.E.
1. Contractor shall coordinate with new energized power lines to meet minimum NEC clearance. Contractor shall also coordinate with communications provider to ensure minimal communication cables do not obstruct signal equipment.

2. Pedestrian pole details.

3. All signal heads shall have back plates.

4. Minimum clearance of 40" radius from neutral and 10' radius from roadway surface.


6. Down guy for pole assembly.

7. Signal heads shall have a minimum of 18.5 feet clearance above roadway surface.

8. See "Single Mast Arm Assembly (SMA-80)" and "Dual Mast Arm Assembly (DMA)" standards for signal pole and mast arm details.

9. Contractor shall coordinate with NBU aerial communication cables. Do not obstruct signal equipment.

10. Contract shall coordinate with utilities prior to installing pole foundation.

11. Maximum clearance of 45" radius from neutral and 10" radius from roadway surface.

12. All signal heads shall have back plates.

13. See "Single Mast Arm Assembly (SMA-80)" and "Dual Mast Arm Assembly" (SMA) standards for signal pole and mast arm details.


15. See "Vivds Detection Camera Assembly" for signal pole and mast arm details.

16. Signal heads shall have a minimum of 18.5 feet clearance above roadway surface.

17. Down guy for pole assembly.


19. Contractor shall coordinate with new energized power lines to meet minimum NEC clearance. Contractor shall also coordinate with communications provider to ensure minimal communication cables do not obstruct signal equipment.

20. Pedestrian pole details.

21. All signal heads shall have back plates.

22. Minimum clearance of 40" radius from neutral and 10' radius from roadway surface.


24. Down guy for pole assembly.

25. Signal heads shall have a minimum of 18.5 feet clearance above roadway surface.

26. See "Single Mast Arm Assembly (SMA-80)" and "Dual Mast Arm Assembly (DMA)" standards for signal pole and mast arm details.

27. Contractor shall coordinate with NBU aerial communication cables. Do not obstruct signal equipment.

28. Contract shall coordinate with utilities prior to installing pole foundation.
GENERAL NOTES FOR ALL ELECTRICAL WORK

1. The location of all conduits, junction boxes, ground boxes, and electrical services is to be in accordance with the plans and in accordance with the NEC. Properly sized conduit entries may be installed in accessible field locations. The junction box system, when generalized, should be specified for in accordance with the requirements and code of the box. Any conduit that is listed by Underwriters Laboratories (UL) or a nationally recognized testing laboratory (NRTL) must be used. All conduit systems must be properly sized and will be factory tested or field tested prior to installation.

2. Provide new and unused materials. Ensure that all materials and connections comply with the applicable standards of the National Electrical Code (NEC). NEC standards and other applicable standards for the installation of electrical systems. All conduit systems must be listed by Underwriters Laboratories (UL) or an applicable organization. All conduit systems must be properly sized and will be factory tested or field tested prior to installation.

3. Install conduit systems in accordance with the NEC. Ensure all conduit systems are installed in accordance with the NEC and all NEC requirements are met. All conduit systems must be properly sized and will be factory tested or field tested prior to installation.

4. Junction boxes with an internal volume of less than 100 cu. in. and supported by connection of two or more rigid metal conduits. Secure all junction boxes with special fasteners, and bonding jumpers are subsidiary to the various bid items. Junction boxes with an internal volume of less than 100 cu. in. and supported by connection of two or more rigid metal conduits. Secure all junction boxes with special fasteners, and bonding jumpers are subsidiary to the various bid items.

5. Provide hot dipped galvanized cast iron or sand cast aluminum outlet boxes for conduit entries are on the same side. Mechanically secure all junction boxes with special fasteners, and bonding jumpers are subsidiary to the various bid items.

6. Provide stranded bare copper or green insulated grounding conductors. Provide grounding as shown on the plans and in accordance with the NEC. Ensure all grounding systems are installed in accordance with the NEC and all NEC requirements are met. All grounding systems must be properly sized and will be factory tested or field tested prior to installation.

7. Provide conduit entries into the top of any enclosure is waterproof by installing conduit sealing hubs or using boxes with threaded bosses. This includes surface mounted safety switches, meter cans, service enclosures, auxiliary enclosures and junction boxes. Grounding bushings on water tight sealing hubs are not required.

8. When required, provide High-Density Polyethylene (HDPE) conduit with factory installed internal terminations. Supply manufacturer’s specification sheets for HDPE conduit. Upon request by the project Engineer, supply manufacturer’s specification sheet for expansion joints. HDPE conduit is suitable for use in all applications. HDPE conduit is suitable for use in all applications.

9. When required, provide High-Density Polyethylene (HDPE) conduit with factory installed internal terminations. Supply manufacturer’s specification sheets for HDPE conduit. Upon request by the project Engineer, supply manufacturer’s specification sheet for expansion joints. HDPE conduit is suitable for use in all applications. HDPE conduit is suitable for use in all applications.

10. Install conduit systems in accordance with the NEC. Ensure all conduit systems are installed in accordance with the NEC and all NEC requirements are met. All conduit systems must be properly sized and will be factory tested or field tested prior to installation.

11. Provide conduit entries into the top of any enclosure is waterproof by installing conduit sealing hubs or using boxes with threaded bosses. This includes surface mounted safety switches, meter cans, service enclosures, auxiliary enclosures and junction boxes. Grounding bushings on water tight sealing hubs are not required.

12. Place conduits entering ground boxes so that the conduit openings are between 3 in. and 6 in. from the ground. When placing conduit in the sub-grade of new roadways, backfill all trenches with excavated material unless otherwise noted on the plans. When placing conduit in the sub-grade of new roadways, backfill all trenches with excavated material unless otherwise noted on the plans. When placing conduit in the sub-grade of new roadways, backfill all trenches with excavated material unless otherwise noted on the plans.
A. MATERIAL INFORMATION

1. Install temporary conductors in accordance with Departmental Material Specifications, unless otherwise specified.

2. Use only those Listed Screw Type or Listed Compression Type pressure connectors, specific splicing materials, and Listed Buss Splice Covers.

3. Use hot melt adhesive tape to protect wire insulation from sharp edges during assembly of splices and connections.

4. Use listed corrosion or acid-proof type connectors, terminal blocks, or bushing-type connectors for connections within enclosures.

5. Use listed conductors (EHC) in all conduits that contain circuit wiring of 50 volts or more.

6. Protect the grounding electrode conductor (EGC) with a minimum of 6 in. of the conductor's insulation with half laps of tape.

7. Color code insulated conductors as listed on the Material Producers List (MPL) on the Department web site.

8. Insulate all non-conductive coatings such as concrete splatter from the roof of the splicing box with 2" of tubing past the end of the splicing box.

B. CONSTRUCTION METHODS

1. Furnish auxiliary ground rods for lightning protection and install in soil, ground rods according to DMS 11040 and the plans. Larger diameter or longer ground rods may be called for in some conditions, deicing and ice melting equipment and any other conditions may cause ground resistance to increase.

2. Do not place ground rods in the same drilled hole as a timber pole.

3. Install ground rods so the imprinted part number is at the upper end of the ground rod. Ground messenger wires that support power conductors in the vertical clearance to ground is at least 18 ft. when measured at the area of the structure.

4. Remove all non-conductive coatings such as concrete splatter from the rod with a wire brush or sharp edge tool.

5. Use listed conductors in accordance with Departmental Material Specifications, unless otherwise specified.

6. Insulate all non-conductive coatings such as concrete splatter from the rod of the splicing box with tubing past the end of the splicing box.

C. TEMPORARY WIRING

1. Install temporary conductors and electrical equipment in accordance with Departmental Material Specifications, unless otherwise specified.

2. Color code insulated conductors as listed on the Material Producers List (MPL) on the Department web site.

3. Where two or more circuits are present in one conduit or enclosure, permanently identify the individual circuits using color coding and/or labels in accordance with Departmental Material Specifications, unless otherwise specified.

4. Use listed compression or screw type pressure connectors, terminal blocks, or bushing-type connectors for connections within enclosures.

5. Use hot melt adhesive tape to protect wire insulation from sharp edges during assembly of splices and connections.

6. Use listed conductors (EHC) in all conduits that contain circuit wiring of 50 volts or more.

7. Provide and inspect a separate ground wire for lightning protection. Each conductor in the system shall be insulated. See Figure 1 shows the size of the ground conductor. The ground conductor shall be connected to the concrete encased grounding electrode (EGC) at the structure.

8. Insulate all non-conductive coatings such as concrete splatter from the rod of the splicing box with tubing past the end of the splicing box.

9. Use listed conductors in accordance with Departmental Material Specifications, unless otherwise specified.

C. MATERIAL INFORMATION

1. Use only those Listed Screw Type or Listed Compression Type pressure connectors, specific splicing materials, and Listed Buss Splice Covers.

2. Use hot melt adhesive tape to protect wire insulation from sharp edges during assembly of splices and connections.

3. Use listed corrosion or acid-proof type connectors, terminal blocks, or bushing-type connectors for connections within enclosures.

4. Use listed conductors (EHC) in all conduits that contain circuit wiring of 50 volts or more.

B. CONSTRUCTION METHODS

1. Furnish auxiliary ground rods for lightning protection and install in soil, ground rods according to DMS 11040 and the plans. Larger diameter or longer ground rods may be called for in some conditions, deicing and ice melting equipment and any other conditions may cause ground resistance to increase.

2. Do not place ground rods in the same drilled hole as a timber pole.

3. Install ground rods so the imprinted part number is at the upper end of the ground rod. Ground messenger wires that support power conductors in the vertical clearance to ground is at least 18 ft. when measured at the area of the structure.

4. Remove all non-conductive coatings such as concrete splatter from the rod with a wire brush or sharp edge tool.

5. Use listed conductors in accordance with Departmental Material Specifications, unless otherwise specified.

6. Insulate all non-conductive coatings such as concrete splatter from the rod of the splicing box with tubing past the end of the splicing box.

C. TEMPORARY WIRING

1. Install temporary conductors and electrical equipment in accordance with Departmental Material Specifications, unless otherwise specified.

2. Color code insulated conductors as listed on the Material Producers List (MPL) on the Department web site.

3. Where two or more circuits are present in one conduit or enclosure, permanently identify the individual circuits using color coding and/or labels in accordance with Departmental Material Specifications, unless otherwise specified.

4. Use listed compression or screw type pressure connectors, terminal blocks, or bushing-type connectors for connections within enclosures.

5. Use hot melt adhesive tape to protect wire insulation from sharp edges during assembly of splices and connections.

6. Use listed conductors (EHC) in all conduits that contain circuit wiring of 50 volts or more.

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1. Furnish auxiliary ground rods for lightning protection and install in soil, ground rods according to DMS 11040 and the plans. Larger diameter or longer ground rods may be called for in some conditions, deicing and ice melting equipment and any other conditions may cause ground resistance to increase.

2. Do not place ground rods in the same drilled hole as a timber pole.

3. Install ground rods so the imprinted part number is at the upper end of the ground rod. Ground messenger wires that support power conductors in the vertical clearance to ground is at least 18 ft. when measured at the area of the structure.

4. Remove all non-conductive coatings such as concrete splatter from the rod with a wire brush or sharp edge tool.

5. Use listed conductors in accordance with Departmental Material Specifications, unless otherwise specified.

6. Insulate all non-conductive coatings such as concrete splatter from the rod of the splicing box with tubing past the end of the splicing box.

C. TEMPORARY WIRING

1. Install temporary conductors and electrical equipment in accordance with Departmental Material Specifications, unless otherwise specified.

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3. Where two or more circuits are present in one conduit or enclosure, permanently identify the individual circuits using color coding and/or labels in accordance with Departmental Material Specifications, unless otherwise specified.

4. Use listed compression or screw type pressure connectors, terminal blocks, or bushing-type connectors for connections within enclosures.

5. Use hot melt adhesive tape to protect wire insulation from sharp edges during assembly of splices and connections.

6. Use listed conductors (EHC) in all conduits that contain circuit wiring of 50 volts or more.
No.3
Reinforcing

No. 3

Ground

steel

Reinforcing

box

GROUND BOXES

10"

steel

(typ)

10"

A

Grounding

A

(typ)

1. Provide polymer concrete ground boxes measuring 16x30x24 in. (WxLxD) or smaller in

(2)

(1)

(when required)

FILE: H:\Projects\510\30\03\Design\Civil\Standards\Traffic

No warranty of any
The use of this standard is governed by the "Texas Engineering Practice Act".

Concrete Apron

10"(typ)

of this standard to other formats or for incorrect results or damages resulting from its use.
Signals\ed4-14.dgn

kind is made by TxDOT for any purpose whatsoever.

3:44:52 PM
DATE: 1/16/2023

DISCLAIMER:

TxDOT assumes no responsibility for the conversion

A. MATERIALS
Class A

bushing for

Apron-Full

accordance with Departmental Material Specification (DMS) 11070 "Ground Boxes" and

Depth of box

Item 624 "Ground Boxes."

3" to 6"
2. Provide Type A, B, C, D, and E ground boxes as shown in the plans, and as listed on

RMC. Bell end
fitting for

9" Aggregate

the Material Producers List (MPL) on the Department web site under "Roadway Illumination

PVC (4)

fill (3)

and Electrical Supplies," Item 624.

Ground

3. Ensure ground box cover is correctly labeled in accordance with DMS 11070.

box
Conduit

Conduit or

4. Provide larger ground boxes in accordance with Item 624 and as shown in the plans.

ell

duct cable

2"

2"

B. CONSTRUCTION METHODS
1. Remove all gravel and dirt from conduit. Cap all conduits prior to placing aggregate
and setting ground box. Provide Grade 3 or 4 coarse aggregate as shown on Table 2 of
Item 302 "Aggregates for Surface Treatments." Ensure aggregate bed is in place and at

PLAN VIEW

least 9 inches deep, prior to setting the ground box. Install ground box on top of

SECTION A - A

aggregate.
2. Cast ground box aprons in place. Reinforcing steel may be field bent. Ensure the depth

APRON FOR GROUND BOX

of concrete for the apron extends from finished grade to the top of the aggregate bed
under the box. Ground box aprons, including concrete and reinforcing steel, are
subsidiary to ground boxes when called for by descriptive code.

(1) Uniformly space ends of conduits within the ground box. Position ends of conduits so
3. Keep bolt holes in the box clear of dirt. Bolt covers down when not working in ground

that ground box walls do not interfere with the installation of grounding bushings

boxes.

or bell end fittings.

4. Install all conduits and ells in a neat and workmanlike manner. Uniformly space

(2) Maintain sufficient space between conduits to allow for proper installation of bushing.

conduits so grounding bushings and bell end fittings can easily be installed.
(3) Place aggregate under the box, not in the box. Aggregate should not encroach on the
5. Temporarily seal all conduits in the ground box until conductors are installed.

interior volume of the box.

6. Permanently seal conduits immediately after the completion of conductor installation

(4) Install a grounding bushing on the upper end of all RMC terminating in a ground box.
Ground RMC elbows when any part of the elbow is less than 18 in. below the bottom of

and pull tests. Permanently seal the ends of all conduits with duct seal, expandable

the ground box. Install a PVC bushing or bell end fitting on the upper end of all PVC

foam, or other method as approved. Do not use duct tape as a permanent conduit sealant.

conduits terminating in a ground box.

Do not use silicone caulk as a sealant.
7. When a ground rod is present in a ground box, bond all equipment grounding conductors
together and to the ground rod with listed connectors.
8. When a type B or D ground box is stacked to meet volume requirements, it is allowable
to cut an appropriately sized hole for conduit entry in the side wall at least 18 inches
below grade.

GROUND BOX DIMENSIONS

9. If an existing ground box in the contract has a metal cover, bond the cover to the
equipment grounding conductor with a 3 ft. long stranded bonding jumper the same size
as the grounding conductor. The bonding jumper is subsidiary to various bid items.

OUTSIDE DIMENSIONS (INCHES)
TYPE

Verify existing ground boxes with metal covers are shown on the plans, with notes
fully describing the work required.

(Width x Length X Depth)

10. If other ground boxes with metal covers are within the project limits but are not part

A

12 X 23 X 11

B

12 X 23 X 22

C

16 X 29 X 11

D

16 X 29 X 22

E

12 X 23 X 17

of the contract, the Engineer may direct the Contractor to bond the metal covers,
identifying the specific boxes in writing. This work will be paid for separately.
11. Bond metal ground box covers to the grounding conductor with a tank ground type lug.

L
Hole for •"
bolt with

GROUND BOX COVER DIMENSIONS

recess

Traffic
Operations
Division
Standard

H

for head

N

DIMENSIONS (INCHES)
TYPE

K

J

H

I

J

K

L

M

N

P

I

M
A, B & E

23 ‚

23

13 ƒ

13 •

9 ‡

5 „

30 •

30 ‚

17 •

17 ‚

13 ‚

6 ƒ

1 …

2

1 …

2

P

ELECTRICAL DETAILS

For cover logo

C & D

and labeling

GROUND BOXES

requirements.
See DMS 11070

PLAN VIEW

END

SIDE

ED(4)-14
GROUND BOX COVER

FILE:

C TxDOT

ed4-14.dgn
October 2014

DN:

TxDOT

CONT

SECT

CK: TxDOT

DW:

TxDOT

JOB

REVISIONS

71D

CK: TxDOT

HIGHWAY

KLEIN RD
DIST

COUNTY

SAT

GUADALUPE

SHEET NO.

292


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**DATE:**

**ELECTRICAL SERVICES NOTES**

1. Provide new metallic, pressboard, or metal-foil conduits with 3/4" cold-rolled steel, 1" schedule 40, and 1 1/4" Schedule 80 steel conduit with electrical conductors. No electrically non-conductive conduit is used.

2. Provide all electrical service work in accordance with the Electrical Service Data Sheet. The information shown in the plans is correct.

3. Provide conduit, service, and branch circuit details as specified in the plans. For special conduits, consult the Engineer.

4. Provide rigid metal conduit (RMC) for all conduits on service, except for the service entrance conduit and any branch circuit entry to enclosures. For an underground service feed, all service conduit and conductors after the service entrance shall be buried in concrete or maintain a minimum of 6 inches above the ground surface.

5. Identify all conduits entering the electric service enclosure with a conduit sealing hub or threaded boss, such as a meter base hub. For Type C enclosures, the conduit sealing hub shall be located on the outside of the enclosure. For Type T enclosures, the conduit sealing hub shall be located on the inside of the enclosure.

6. Enclosures with external disconnects that de-energize all equipment inside the enclosure. Master Lock #2195 keys and locks become property of the State.

7. Provide aluminum (AL) and stainless steel (SS) enclosures for Types A, C, and T services that do not use an enclosure mounted disconnect or T/L for lighting contactor. Provide SS enclosures in accordance with TxDOT standards.

8. Provide photocell mounting location as shown in the plans. Mount photocell facing north when practical. Mount top of photocell at least 6 inches above the ground surface.

9. All electrical service conduit and conductors attached to the electric service enclosure shall be identified. The insulators shall be provided by the manufacturer of the electric service enclosure and shall be provided with the service entrance conductors. The insulators shall be used to hold the service entrance conductors in place.

10. Provide rigid metal conduit (RMC) for all conduits on service, except for the service entrance conduit and any branch circuit entry to enclosures. For an underground service feed, all service conduit and conductors after the service entrance shall be buried in concrete or maintain a minimum of 6 inches above the ground surface.

11. Provide all service entrance conduit and any branch circuit entry to enclosures shall be identified. The insulators shall be provided by the manufacturer of the electric service enclosure and shall be provided with the service entrance conductors. The insulators shall be used to hold the service entrance conductors in place.

12. Ensure all mounting hardware and installation details of services conform to utility company specifications.

13. For all electrical service enclosures listed under Item 628 on the MPL, the UL 508 standard for control panels shall be used.

### ELECTRICAL SERVICE DATA

<table>
<thead>
<tr>
<th>Service Voltage</th>
<th>Safety Amps</th>
<th>Panelbd/Amp Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>120/240</td>
<td>000</td>
<td>N/A</td>
</tr>
<tr>
<td>120/240</td>
<td>100</td>
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<td>120/240</td>
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<tr>
<td>120/240</td>
<td>200</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### SERVICE NOTES & DATA

**EXPLANATION OF ELECTRICAL SERVICE DESCRIPTIVE CODE**

- **ELEC SERV TY**
  - **T** - Type T Service
  - **A** - Type A Service
  - **C** - Type C Service
  - **D** - Type D Service

- **Service Voltage**
  - **120/240**
  - **240/480**
  - **480/850**

- **Enclosure Type**
  - **M** - Master Service Enclosure
  - **P** - Pedestal Service Enclosure
  - **S** - Service on Traffic
  - **G** - Granite Concrete
  - **C** - Cast In Concrete

- **Photocell Mounting Location**
  - **T** - Top of Photocell
  - **F** - Flange-mounted Remote Operator Handle

**NEC Compliance:**

- **1.** Field drill flange-mounted remote operator handle if needed, to verify that the available fault current is less than the circuit current rating.

### ELECTRICAL DETAILS

**SERVICE NOTES & DATA**

- **Responsibility:**
  - **ELEC SERV TY**
  - **T** - Type T Service
  - **A** - Type A Service
  - **C** - Type C Service
  - **D** - Type D Service

- **Service Voltage**
  - **120/240**
  - **240/480**
  - **480/850**

- **Enclosure Type**
  - **M** - Master Service Enclosure
  - **P** - Pedestal Service Enclosure
  - **S** - Service on Traffic
  - **G** - Granite Concrete
  - **C** - Cast In Concrete

- **PHOTOELECTRIC CONTROL**
  - **1.** Provide photocell on the top of pole, above, except, to relieve any stressful condition from any affected traffic area.

- **Service Notes & Data**
  - **Responsibility:**
  - **ELEC SERV TY**
  - **T** - Type T Service
  - **A** - Type A Service
  - **C** - Type C Service
  - **D** - Type D Service

- **Service Voltage**
  - **120/240**
  - **240/480**
  - **480/850**

- **Enclosure Type**
  - **M** - Master Service Enclosure
  - **P** - Pedestal Service Enclosure
  - **S** - Service on Traffic
  - **G** - Granite Concrete
  - **C** - Cast In Concrete

- **PHOTOELECTRIC CONTROL**
  - **1.** Provide photocell on the top of pole, above, except, to relieve any stressful condition from any affected traffic area.
1. Do not pass luminaire conductors through the signal controller cabinet.

2. Install an equipment grounding conductor in all conductors throughout the electrical system. Bond all exposed metal parts to the grounding conductor.

3. Include an equipment grounding conductor in all conduits placed under a roadway, as required. Bond all exposed metal parts to the grounding conductor.

4. For all conduits, ensure the burial depth is a minimum of 18". Ensure the conduit ends are sealed with duct seal or expanding foam. Do not use silicone to seal conduit ends.

5. Bond anchor bolts to rebar cage in two locations using #3 bars or stranded copper conductors rated for embedment in concrete.

6. Drill and tap signal poles for 1/4" x 13 UNC tank ground fitting. Provide and install tank ground fitting 4 ft. above grade. As shown below, the electrical service enclosure should be bolted to the tank ground fitting. Ensure electrical service enclosure is as short and straight as possible from the enclosure to the tank ground fitting. See TS-CF standard for further information. See Note 6 - Service entrance conduit and branch circuit conduit as shown in the diagram.

7. Mount electrical service enclosure and service entrance conduit to the pole with stainless steel bands. Ensure bands are a minimum width of 1/4". Secure enclosures on signal pole shown as an example. See TS-CF standard for further information. See Note 7 - Entrance Service to Bands using two-bolt brackets. Install brackets near top and bottom of signal pole for securing conduit.

8. Terminate conduits entering the top of enclosures with a conduit-sealing hub. Install properly sized stainless steel washers on each bolt to bands using two-bolt brackets. Install brackets near top and bottom of signal pole for securing conduit.

9. Lock all enclosures and bolt down all ground box covers before applying power to the signal installation.

10. Terminate conduits entering the top of enclosures with a conduit-sealing hub or bell bushing to the ground fitting. Ensure all conduits and glands are insulated to the grounded fitting. Provide properly sized hole through the electrical service enclosure. Provide and install tank ground fitting 4 in. to 6 in. directly below signal pole for attaching conduit.

11. Do not pass luminaire conductors through the signal controller cabinet. Ensure the minimum burial depth for conduit is 24".
### Foundation Design Table

<table>
<thead>
<tr>
<th>Type</th>
<th>Bolt Circle Diameter (in)</th>
<th>Length Combinations</th>
<th>MAX Single Arm Length (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>36-A</td>
<td>12 x 12</td>
<td>24' x 28'</td>
<td>48'</td>
</tr>
<tr>
<td>30-A</td>
<td>10 x 10</td>
<td>20' x 24'</td>
<td>48'</td>
</tr>
<tr>
<td>24-A</td>
<td>8 x 8</td>
<td>16' x 20'</td>
<td>48'</td>
</tr>
</tbody>
</table>

**Typical Application:**
- For design wind speed, foundation 36-A can support up to a 32' arm with another arm of 28'.
- For 100mph design wind speed, foundation 36-A can support a single 36' mast arm.

### Notes:
1. Anchor bolt design ensures the foundation stability, given under Final Design Loads.
2. Foundation Design Loads are the allowable moments and shears at the base of the structure.
3. Foundations may be noted separately in the Preliminary Design - Details & Section Information only.
4. Field measurement readings or a depth of approximately 3 to 5 feet may be used for field data.
5. If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.
6. Decimals in Design Table are for informational purposes for other foundation values.

### Foundation Details
- Concrete shall be Class C.
- Steel shall be conforming to Item 446, "Steel Sections".
- Reinforcing steel shall conform to Item 440, "Reinforcing Steel".

### Typical Strain Pole Assembly

- Conduit: Cast Iron, 2-1/2" OD, 1/2" Thk.
- Bolt Circle Diameter: 12 x 12 in.
- Threaded: 1" B. bolts for 36' mast arm.
- Anchor bolts with nuts and washers.
- Depth of embedment: 48".
- Conduit: 1-1/2" Min.
- Anchors: Hooked or Nut Type.
- Concrete: Type N.

### General Notes
Design conforms to 1994 AASHTO Standard Specifications for Structural Steel for Highway Bridges, Design and Construction, Reinforced Concrete and Steel Precast Prestressed Concrete Structures, and Interim Revisions Therein.

### Fabrication Notes
- Design and fabrication of concrete structures.
- Concrete shall be Class C.
- Steel shall be conforming to Item 446, "Steel Sections".
- Reinforcing steel shall conform to Item 440, "Reinforcing Steel".
- Anchor bolts shall be noted as per Item 449, "Anchor Bolts".

### Foundation Summary Table

<table>
<thead>
<tr>
<th>Foundation Type</th>
<th>Bolt Circle Diameter (in)</th>
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<td>48'</td>
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**Notes:**
- Anchor bolt design ensures the foundation stability, given under Final Design Loads.
- Foundation Design Loads are the allowable moments and shears at the base of the structure.
- Foundations may be noted separately in the Preliminary Design - Details & Section Information only.
- Field measurement readings or a depth of approximately 3 to 5 feet may be used for field data.
- If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.
## LUMINAIRE MAST ARM FITTING ASSEMBLY FOR CLAMP ON

**GENERAL NOTES:**

1. Pole simplex shall be ASTM A27 GR65-35 or A148 GR80-50 or A576 GR1021. ASTM A576 must be preapproved weld procedures which the Fabricator must obtain prior to fabrication. In the absence of specific fabrication tolerances, all welds shall be within the tolerances generally obtainable in normal fabrication practices.

2. All parts shall be galvanized after fabrication in accordance with Item 445, "Galvanizing." The throat of the simplex shall be made free of all rough or sharp edges resulting from the galvanizing process.

3. Each simplex fitting shall be supplied with 2 ASTM A325 bolts, 1/2" x 1 1/2", one 12" clamp. The bolts and lock washers shall be secured to the clamp with the other hardware items. The Fabricator shall ship clamp assembly together in a single package, including all bolts, nuts, and washers required for the clamp and simplex fitting.

4. Design conforms to 1994 AASHO "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals" and interim revisions thereto. Design wind speed equals 80 mph plus a 1.3 gust factor. Crossarms are designed to support a 60 lb. luminaire having an effective projected area, times drag coefficient, of 1.2 sq. ft., 10 ft. minimum arm length.

5. Each assembly shall consist of one upper piece simplex fitting having a smooth lip and one lower piece simplex fitting with the lip removed. Approximately 2 in. diameter hole in upper mast arm clamp.

6. Approximately 2 in. diameter hole in upper mast arm clamp.

**POLE SIMPLEX DETAILS**

- **Threads:** 13NC tapped
- **L:** 1/2" holes, 3/8" tapped threads

**CLAMP DETAIL**

- **Approx. 5" Approx.**
- **La-3** (Typ. both sides)
- **La-2** (2 req'd)
- **3g x 7" A36**
- **A572 GR50 or A572 GR50 (Typ.)**
- **Clamp C 3/4" x 6"**
- **ASME B18.5**
- **2 Lock washers (2 nuts, 3 washers, one lock washer per bolt)**
- **Approx. 5" Approx.**
- **Approx. 5" Approx.**

**PROJECTION**

For 8.9 - 12 inch diameter Signal Poles (Two req'd for each mast arm)
**GENERAL NOTES:**

1. Backplates are optional for traffic signals and pedestrian hybrid beacons. When backplates are used, a 2-inch wide fluorescent yellow AASHTO Type B or C retroreflective border conforming to TxDOT DMS-8300 is required. Place on all approaches when used.

2. Signal head and backplate compatibility must be verified by the contractor prior to installation.

3. When using backplates on signal heads, venting is preferred to reduce cyclic vibration stress.

4. When a vented backplate is used, the retroreflective border must not be placed over the louvers.

5. This standard sheet applies to all signal heads with backplates, including but not limited to:
   - Pole mounted
   - Overhead mounted
   - Span wire mounted
   - Mast arm mounted
   - Vertical signal heads
   - Horizontal signal heads
   - Clustered signal heads
   - Pedestrian hybrid beacons

**BACKPLATE HEAD WITH BACKPLATE**

**THREE-SECTION HEAD**
- Horizontal or vertical
- Backplate with retroreflective border
- Vented backplate with retroreflective border

**FOUR-SECTION HEAD**
- Horizontal or vertical
- Backplate with retroreflective border
- Vented backplate with retroreflective border

**FIVE-SECTION HEAD**
- Horizontal or vertical
- Backplate with retroreflective border
- Vented backplate with retroreflective border

**FIVE-SECTION HEAD CLUSTER**
- Vertical
- Backplate with retroreflective border
- Vented backplate with retroreflective border

**PEDESTRIAN HYBRID BEACON**
- Horizontal
- Backplate with retroreflective border
- Vented backplate with retroreflective border
**TYPICAL MAST ARM INSTALLATION**

Backplates are not shown for clarity.

**NOTES**

1. **Conduit Encased Loops**
   - Install conduit encased loops at the locations shown on the plans. Use 3/4" diameter PVC schedule 40 or at no additional cost 1" diameter PVC schedule 80.
   - Loop locations may be staggered slightly (6") to accommodate home run placement.
   - Individual home run conduits shall be extended to the ground box shown on the plans for each loop installed.
   - The number of loop wire turns shall be as shown on the Typical Loop Detector Details.

**Controller Mount Notes**

All wiring terminating in the controller shall be labeled in a manner that can be identified when the controller is installed. The controller shall connect the field wiring to the controller.

Concrete shall be tested as miscellaneous concrete.

All materials shown and labor to install the controller foundation shall be considered subordinate to permanent work. Controller foundation shall be as shown on the plans, unless otherwise directed by the engineer.

**Typical Controller Mount Details**

**Typical Pedestal Pole Assembly**
TYPICAL SIDEWALK GUY 
3/8" MESSNER CABLE 

POLE PLATE 
2" PIPE, LENGTH AS REQUIRED 

END FITTING & CLAMP FOR SIDEWALK GUY 

SERVIILE 
HEAVY DUTY 3 BOLT CLAMP 
5/8" X 8" ANCHOR ROD 

8" - 4 WAY EXPANDING ANCHOR 

TYPICAL STANDARD GUY 
3/8" MESSNER CABLE 

TYPICAL SIDEWALK GUY 
3/8" MESSNER CABLE 

1' - 0" MAX. 

SAG = 5% OF SPAN 

ANGLES 5/8" DIA. THIMBLE-EYE BOLT 
WITH CURVED WASHER AND NUT 

HEAVY DUTY 3 BOLT CLAMP 
5/8" MESSNER CABLE 

ANGLE 5/8" DIA. THIMBLE-EYE BOLT 
WITH CURVED WASHER, DOWN GUY PLATE AND NUT 

8" - 6" MIN 
10" 

NOTES: 
1. 3/16" MESSNER CABLE SHALL BE USED FOR SPANS. 
2. ALL LOOSE ENDS OF MESSNER CABLE SHALL BE SERVED WITH SERVIILE. 
3. SIGNAL CABLE SHALL BE ATTACHED TO MESSNER (SPAN) CABLE WITH LASHING WIRE USING THE CABLE SPANNING METROS WITH A MIMIMUM OF ONE TURN PER FOOT. 
4. 3/8" MESSNER CABLE SHALL BE USED FOR DOWN GUYS. 
5. LINEMEN SHALL BE ATTACHED TO THE SIGNAL POLE AS APPROVED BY THE ENGINEER. 
6. DETERMINE THE MOUNTING HEIGHT OF THE SIGNAL SPAN AND THE PLACEMENT OF THE WEATHER HEADS. 
7. ALL SLACK CABLE COILS SHALL HAVE A MINIMUM OF 6" IN DIAMETER AND SHALL HAVE A MINIMUM OF 9 IN TURNS. 
8. THE SIDEWALK GUY METHOD IS NORMALLY USED WHERE SPACE TO LIMIT AND AN ACCEPTABLE ANGLE CANNOT BE OBTAINED ON THE STANDARD TYPE GUY. 
9. INSTALL ANCHOR RODS A MAXIMUM OF 6' ABOVE GRADE. 
10. STAKE THE TRAFFIC SIGNAL POLE LOCATIONS FOR VERIFICATION BY THE ENGINEER.
1. LEAD - IN CABLE FROM CONTROLLER TO SIGNAL HEAD.
2. CAST ALUMINUM SPAN WIRE CLAMP AND CLEVIS ADAPTER, SECURE CLEVIS PIN WITH A WASHER (BOTH ENDS) AND HUMP BACK COTTER PIN, DRILL CLEVIS PIN OPENINGS AND FIT WITH A SPLIT BUSHING, CLEVIS PIN WASHER, COTTER PIN, AND SPLIT BUSHING TO BE STAINLESS STEEL.
3. BREAKAWAY TETHER ASSEMBLY.
4. 1/2 ALUM. PIPE (TYP).
5. ALL SLACK CABLE COILS SHALL BE A MINIMUM OF 6" IN DIAMETER AND SHALL HAVE A MINIMUM OF TWO TURNS.

NOTE: BACKPLATES OMITTED FOR CLARITY.
SETSCREWS SHALL BE INSTALLED IN ALL PIPE FITTINGS.
SIGNAL CABLE AND DETECTOR CABLE SHALL BE ATTACHED TO MESSERENGER (SPAN) CABLE WITH LASHING WIRE USING THE CABLE SPINNING METHOD WITH A MINIMUM OF ONE TURN PER FOOT.
SEE FLASHING BEACON STRAIN POLE OR TIMBER POLE INSTALLATION DETAILS FOR ADDITIONAL INFORMATION.
LOOP DETECTOR PLACEMENT DETAILS

55 MPH (A=231', B=95')  60 MPH (A=281', B=100')
65 MPH (A=326', B=110')  70 MPH (A=356', B=125')

35 MPH (A=96', B=100')  40 MPH (A=116', B=130')
45 MPH (A=181', B=115')  50 MPH (A=226', B=130')

30 MPH

VIDEO DETECTION PLACEMENT DETAILS

SETBACK DETECTION ZONE SPACING
(Speeds greater than or equal to 45 MPH)
45 MPH (A=210', B=350')  50 MPH (A=235', B=390')
55 MPH (A=255', B=430')  60 MPH (A=280', B=470')
65 MPH (A=305', B=510')  70 MPH (A=330', B=550')

NOTE: SPEEDS EQUAL OR GREATER THAN 45 MPH WILL REQUIRE THE USE OF TWO VIVOS CAMERAS.

UPL UTILIZATION OF CAMERA ONE FOR STOP BAR DETECTION AND CAMERA TWO FOR SET BACK DETECTION ZONES.

STOP BAR DETECTION ZONES SHALL BE PROVIDED FOR EACH LANE OF EACH APPROACH.

STOP BAR DETECTION AND SET BACK DETECTION SHOULD DRIVE A SEPARATE DETECTOR INPUT INTO THE CONTROLLER.

IN ADDITION, DETECTORS IN EXCLUSIVE TURN LANES SHOULD DRIVE A SEPARATE DETECTOR INPUT INTO THE CONTROLLER.

SEE TYPICAL LAYOUT BELOW.

VEHICLE DETECTOR PLACEMENT DETAILS

NOTE: ALL DETECTOR PLACEMENTS ARE BASED ON THE POSTED SPEED LIMIT.
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SWP ITEMS. THE ENGINEER MAY ADJUST AS FIELD CONDITIONS REQUIRE.
2. SWP LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXIT/ENTRANCE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 30 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SWP PHASES UNLESS OTHERWISE NOTED.

PEP-DESIGN

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>0506-6020</td>
<td>1) (TY INSTALL) EXITS CONSTRUCTION EXIT</td>
<td>SY</td>
<td>111</td>
</tr>
<tr>
<td>0506-6024</td>
<td>2) REMOVE EXITS CONSTRUCTION EXIT</td>
<td>SY</td>
<td>111</td>
</tr>
</tbody>
</table>

SHEET 1 OF 5

DATE 1/16/2023

DESIGNER

APPROVED

CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
NOTES:
1. The measures shown are suggested placements of SWP items, the Engineer may modify as field conditions permit.
2. SWP layouts corresponding with design no.
3. Location of construction entrances/exit to be determined by the Engineer.
4. Sediment control fences shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoils locations are only permitted within the construction area.
6. Per SWP requirements, disturbed areas on which construction activities have ceased temporarily or permanently shall be stabilized within 14 days unless activity resumes within 21 days. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SWP phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.
Notes:
1. The measures shown are suggested placements of SW3P items. The engineer may modify as field conditions permit.
2. SW3P layouts correspond with TCP phasing.
3. Location of construction entrance to be determined by the engineer.
4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoils locations are only permitted within the construction area.
6. Per TPDES requirements, distributed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 48 days unless activity resumes within 7 days. Seeding does not constitute as stabilization.

Legend:
- Traffic flow arrows
- Flow arrow
- Sandbags
- Sediment control fence
- Ty 2 rock filter dam
- Ty 3 rock filter dam
- Construction exit
- Erosion control log
- Construction phase
- Refill area

<table>
<thead>
<tr>
<th>ITEM ID</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QTY</th>
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<tbody>
<tr>
<td>0506-6002</td>
<td>2) (TY INSTALL) DAMS ROCK FILTER</td>
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<tr>
<td>0506-6003</td>
<td>3) (TY INSTALL) DAMS ROCK FILTER</td>
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<td>0506-6011</td>
<td>(REMOVE) DAMS ROCK FILTER</td>
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<td>0506-6038</td>
<td>(INSTALL) FENCE TEMP SEDIMENT</td>
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<td>0506-6043</td>
<td>(REMOVE) LOGS CONSTRUCTION BIODEGRADABLE</td>
<td>LF</td>
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</table>

Design: Pape-Dawson Engineers

Project No.: CSP 23-004

Date: 1/16/2023

John A. Tyler, P.E.

New Braunfels, TX 78130

CSP 23-004

KLEIN RD PHASE 2

SW3P LAYOUT

PHASE 1 STEP 1
NOTES:
1. The measures shown are suggested placements of SW3P items and may vary as field conditions require.
2. SW3P layouts corresponding with project phases.
3. Location of construction and/or drainage to be determined by the engineer.
4. SW3P control fences should be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Per SW3P requirements, distributed areas on which construction activities have ceased permanently or temporarily shall be stabilized within 14 days unless activity resumes within 30 days. Seeding does not constitute stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

LEGEND
- = TRAFFIC FLOW ARROWS
- - - = FLOW ARROW
=- = SANDBAGS
- - - = SEDIMENT CONTROL FENCE
- - - - = TY 2 ROCK FILTER DAM
- - - - = TY 3 ROCK FILTER DAM
- - - - = CONSTRUCTION EXIT
- - - - = EROSION CONTROL LOG
- - - - = CONSTRUCTION PHASE
- - - - = REFRAIN AREA

<table>
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<td>0506-6037</td>
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<td>0506-6039</td>
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<td>0506-6043</td>
<td>LOGS CONT EROSIN BIODEG</td>
<td>LF</td>
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NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXISTENCE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONSTRUCTION AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

ITEM | DESCRIPTION | UNIT | QTY
--- | --- | --- | ---
0506-6020 | 1) (TY INSTALL) EXITS CONSTRUCTION | SY | 111
0506-6024 | (REMOVE) EXITS CONSTRUCTION | SY | 111
0506-6038 | (INSTALL) FENCE CONT SEDMT TEMP LF | | 25
0506-6039 | (REMOVE) FENCE CONT SEDMT TEMP LF | | 25
0506-6041 | (12") INSTL LOGS CONT EROSN BIODEG LF | | 16
0506-6043 | (REMOVE) LOGS CONT EROSN BIODEG LF | | 16

LEGEND
- TRAFFIC FLOW ARROWS
- FLOW ARROW
- SANDBAGS
- SEDIMENT CONTROL FENCE
- TY 2 ROCK FILTER DAM
- TY 3 ROCK FILTER DAM
- CONSTRUCTION EXIT
- EROSION CONTROL LOG
- CONSTRUCTION PHASE
- WETLAND AREA

P & E
PAPE-DAWSON ENGINEERS
KLEIN RD PHASE 2
SW3P LAYOUT
PHASE 1 STEP 1

DESIGN
PROJECT NO.
PLAN SCALE: 1"=30'

DRAWN:
SHEET NO.
CHECKED:
APPROVED:
DATE
1/16/2023

KLEIN RD EXIST ROW

MATCH LINE STA 14250

PROP ROW

EXIST ROW

SEEDMNT CONTROL FENCE

EST @ 25 LF

EST @ 20 LF

EST @ 111 SY

CONSTRUCTION EXIT

EROSION CONTROL LOG

CONSTRUCTION PHASE

TEXAS COUNTY DESCRIPTION

SHEETS 5 OF 5
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS, THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXIT/ENTRANCE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER SW3P REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS; SEEDING DOES NOT CONSTITUTE STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

ITEM | DESCRIPTION | UNIT | QTY
--- | --- | --- | ---
0506-6002 | 2) (TY INSTALL) ROCK FILTER DAMS | LF | 15
0506-6011 | REMOVE ROCK FILTER DAMS | LF | 15
0506-6041 | (12") INSTL EROSION CONTROL LOGS | CONT | 20
0506-6043 | REMOVE LOGS CONT | CONT | 20
NOTES:
1. MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION DEPENDS ON THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONSTRUCTION AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TCP REQUIREMENTS, DISTRIBUTE AREAS ON WHICH CONSTRUCTION ACTIVITY OCCURS WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS, SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.
9. FIELD CONDITIONS REQUIRE.
10. PROJECT NO.
11. PLAN SCALE:
1" = 30'
NOTES:

1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXIT/ENTRANCE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.
NOTES:

1. The measures shown are suggested placements of SW3P items, and the engineer may modify as field conditions require.

2. SW3P layouts correspond with TCP phasing.

3. Location of construction exits and entrances shall be determined by the engineer.

4. SEDIMENT CONTROL FENCE shall be installed by contractor as needed in subsequent phases of construction.

5. Staging, storage, and spoil locations are only permitted within the construction area.

6. PET RIBES REQUIREMENTS. DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.

7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.

8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.
NOTES:
1. The measures shown are suggested placements of SW3P items. The Engineer may modify as field conditions require.
2. SW3P layouts correspond with TCP phasing as determined in the field by the Engineer.
3. Location of construction excavation to be determined in the field by the Engineer.
4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoils locations are only permitted within the construction area.
6. Per SW3P requirements, distributed areas on which construction activities have ceased temporarily or permanently shall be stabilized within 48 days unless activity resumes within 48 days. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

TABLE

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<td>0506-6011</td>
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SW3P LAYOUT
PHASE 2 STEP 1
KLEIN RD PHASE 2

LEGEND
- TRAFFIC FLOW ARROWS
- FLOW ARROW
- SEDIMENT CONTROL FENCE
- TY 2 ROCK FILTER DAM
- TY 3 ROCK FILTER DAM
- SAND BAG
- CONSTRUCTION EXIT
- EROSION CONTROL LOG
- CONSTRUCTION PHASE
- REFRAIL AREA
- DESIGN

PAPA-DAWSON ENGINEERS

KLEIN RD PHASE 2
SW3P LAYOUT
PHASE 2 STEP 1
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
3. LOCATION OF CONSTRUCTION EXCEPETMENT TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. CONSTRUCTION EXIT/ENTRANCE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PHYTOS RECOMMENDS DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.
NOTES:
1. The measures shown are suggested placements of items, the engineer may modify as field conditions require.
2. Sediment control fences shall be replaced by contractor as needed in subsequent phases of construction.
3. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
4. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Per TDP requirements, disturbed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 45 days unless necessary Remain within 28 days. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.

ITEM | DESCRIPTION | UNIT | QTY
--- | --- | --- | ---
0506-6002 | (TY 2 INSTALL) ROCK FILTER DAMS | LF | 10
0506-6011 | (REMOVE) ROCK FILTER DAMS | LF | 10
0506-6020 | (TY 1 INSTALL) CONSTRUCTION EXITS | SY | 156
0506-6024 | (REMOVE) CONSTRUCTION EXITS | SY | 156
0506-6041 | (12") (INSTL) EROSION CONTROL LOGS | LF | 20
0506-6043 | (REMOVE) EROSION CONTROL LOGS | LF | 20

LEGEND
- TRAFFIC FLOW ARROWS
- FLOW ARROW
- SEDIMENT CONTROL FENCE
- TY 2 ROCK FILTER DAM
- SAND BAG
- TY 3 ROCK FILTER DAM
- CONSTRUCTION EXIT
- EROSION CONTROL LOG
- CONSTRUCTION PHASE
- REFIND AREA

EXIST ROW
PROP ROW
MATCH LINE STA 112+50
MATCH LINE STA 115+50

KLEIN RD PHASE 2
SW3P LAYOUT
PHASE 2 STEP 1

DESIGN APPROVAL
GUADALUPE KLEIN RD
STATE SHEET NO.
TEXAS COUNTY
DESCRIPTION
DATE
REV NO.
CHECK
DWG.
SHEET NO.
DGN.
CIVIL SW3P
PHASE 2
DESIGN
FILE NAME:
\\
PROJ:

PROJECT NO.
PLAN SCALE:
1" = 30'
PHASE

DATE
1/16/2023

SIGNATURE:

DESIGNER:

APPROVER:

DATE
1/16/2023

PAP-DAWSON ENGINEERS

KLEIN RD

SHEET 5 OF 18
NOTES:
1. The measures shown are suggested placements of SW3P items, the engineer may modify as field conditions require.
2. Strip layouts coincide with TCP phasing.
3. Location of construction/exit/entrance to be determined by the engineer.
4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoils locations are only permitted within the construction area.
6. Per SW3P requirements, distributed areas on which construction activities are ceased temporarily or permanently shall be stabilized within 48 days unless accessibility remains within 48 days. Seeding does not constitute stabilization.
7. Erosion control logs must remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

SW3P ITEMS

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<td>(REMOVE) ROCK FILTER DAMS</td>
<td>LF</td>
<td>10</td>
</tr>
<tr>
<td>0506-6041</td>
<td>(12&quot;) CONSTRUCTION EXIT</td>
<td>LF</td>
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<tr>
<td>0506-6043</td>
<td>CONSTRUCTION PHASE</td>
<td>LF</td>
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<tr>
<td></td>
<td>EROSION CONTROL LOG</td>
<td>LF</td>
<td>20</td>
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LEGEND

- Traffic flow arrows
- Flow arrow
- Sediment control fence
- TY 2 Rock filter dam
- Sand bag
- TY 3 Rock filter dam
- Construction exit
- Erosion control log
- Construction phase
- Refill area

DESIGN

KLEIN RD PHASE 2
SW3P LAYOUT
PHASE 2 STEP 1

PAPÉ-DAWSON ENGINEERS

DESIGN FILE: KLEIN RD PHASE 2 SW3P LAYOUT PHASE 2 STEP 1

APPROVED 8/22/2023

SHEET 6 OF 18
NOTES:
1. The measures shown are suggested placements of SW3P items. The engineer may modify as field conditions require.
2. SW3P layout corresponds with TCP phasing.
3. Location of construction entrance to be determined by the engineer.
4. Erosion control log shall be replaced by sediment control fence as needed in subsequent phases of construction.
5. Staging, storage, and slope locations are only permitted within the construction area.
6. Paved areas requirements, distributed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 48 days unless otherwise shown by engineer. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

LEGEND
- Traffic flow arrows
- Flow arrow
- Sediment control fence
- Ty 2 rock filter dam
- Sand bag
- Ty 3 rock filter dam
- Construction exit
- Erosion control log
- Construction phase
- Refill area

Sheet 8 of 18

KLEIN RD PHASE 2
SW3P LAYOUT
PHASE 2 STEP 1

PAPE-DAWSON ENGINEERS
SOUTHWEST OFFICE
11300 HALLANDALE BEACH BLVD.
HALLANDALE, FL 33009
954-753-1500
WWW.PAPE-DAWSON.COM
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SWAP ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SWAP LAYERS CORRESPOND WITH TOP PAVING.
3. LOCATION OF CONSTRUCTION EXISTENCE TO BE DETERMINED BY THE FIELD ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE PLACED BY CONTRACTOR AS REQUIRED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED IN THE CONSTRUCTION AREA.
6. PER SWAP REQUIREMENTS, DISTRIBUTED AREAS ON CONSTRUCTION ACTIVITIES MAY BE REUSED TEMPORARILY OR PERMANENTLY IF NEEDED TO STABILIZE WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 Days. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. CONSTRUCTION EXIT DOORS TO REMAIN UNLOCKED UNTIL THE COMPLETION OF SEDIMENT CONTROL PHOTOGRAPHIC REPORTS, UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT ROAD OF PAVEMENT.
**NOTES:**

1. **Per TPDES Requirements:** All Silt Fence Areas to be Stabilized Within 14 Days Unless Activity Resumes Within 21 Days. Seeding Does Not Constitute Stabilization. The Engineer May Modify as Needed in Subsequent Phases of Construction.

2. Sediment Control Fence Shall Be Replaced By Contractor As Needed In Subsequent Phases of Construction.

3. Location of Construction Exit/Entrance to Be Determined By the Engineer.

4. Erosion Control Logs to Remain In Place Until The Completion of All SW3P Phases Unless Otherwise Noted.

5. Top Of Rock Filter Dams Shall Not Be Constructed Higher Than Adjacent Edge of Pavement.
1. The measures shown are suggested placements of SW3P items. The Engineer may modify as field conditions require.
2. SW3P layouts correspond with TCP phasing.
3. Location of construction exit/entrance to be determined by the Engineer.
4. Sediment control fence shall be replaced by Contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Per TxDOT requirements, distributed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 48 days unless activity resumes within 48 days. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.
1. The measures shown are suggested placements of SW3P items. The engineer may modify as field conditions require.

2. Location of construction exit/entrance to be determined in the field by the engineer.

3. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.

4. Staging, storage, and spoil locations are only permitted within the construction area.

5. Per TPDES requirements, distributed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 48 days unless activity resumes within 21 days; seeding does not constitute as stabilization.

6. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.

7. Top of rock filter dams shall not be constructed higher than adjacent road or pavement.
NOTES:

1. The measures shown are suggested placements of SW3P items, the Engineer may modify as field conditions permit.

2. Seed layouts corresponding with TCP phasing shall be replaced by contractor as needed in subsequent phases of construction.

3. Location of construction entrance to be determined by the Engineer.

4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.

5. Staging, storage, and spoil locations are only permitted within the construction area.

6. Per TCP requirements, distributed areas on which construction activities have ceased temporarily or permanently shall be stabilized within 14 days unless necessary beyond 30 days. Seeding does not constitute as stabilization.

7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.

8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

9. Distribution of SW3P items. The Engineer may modify as field conditions permit.

10. Construction exit to be determined in the field by the Engineer.

11. Location of construction entrance to be determined by the Engineer.

12. Seed layouts corresponding with TCP phasing shall be replaced by contractor as needed in subsequent phases of construction.

13. Staging, storage, and spoil locations are only permitted within the construction area.

14. Per TCP requirements, distributed areas on which construction activities have ceased temporarily or permanently shall be stabilized within 14 days unless necessary beyond 30 days. Seeding does not constitute as stabilization.

15. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.

16. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

LEGEND

- Traffic flow arrows
- Flow arrow
- Sediment control fence
- Ty 2 rock filter dam
- Sand bag
- Ty 3 rock filter dam
- Construction exit
- Erosion control log
- Construction phase
- Refill area

DESIGN

APPROVAL

GUADALUPE

KLEIN RD

STATE

DGN:

DWG:

SHEET NO.

TEXAS

DGN:

CHK

DWG:

CHK

COUNTY

BY

DESCRIPTION

DATE

REV.NO.

Design and Engineering by Pape-Dawson Engineers

CSP 23-004

DATE

1/16/2023

JOHN A. TYLER

JOHN A. TYLER, P.E.

DATE

1/16/2023

TYLER PAYNE DUBE, P.E.

DATE

1/16/2023

Note: This is a schematic representation of the construction plans for KLEIN RD PHASE 2 SW3P LAYOUT PHASE 2 STEP 1. The diagram includes temporary and permanent construction features, such as sediment control fences, construction phases, and erosion control logs, and notes the locations of existing rows and construction exit points. The plans are subject to modifications as field conditions require.
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION CEIL/EXITS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGES OF PAVEMENT.
NOTES:

1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXIT/ENTRANCE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TEDB REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 48 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

LEGEND

- TRAFFIC FLOW ARROWS
- FLOW ARROW
- SEDIMENT CONTROL FENCE
- TY 2 ROCK FILTER DAM
- TY 3 ROCK FILTER DAM
- SAND BAG
- CONSTRUCTION EXIT
- EROSION CONTROL LOG
- CONSTRUCTION PHASE
- REFILL AREA

INDEX

LINE | DESCRIPTION | UNIT | QTY
0506-6038 | 1(12") FENCE CONT | LF | 275
0506-6039 | 1(12") LOGS CONT | LF | 20
0506-6041 | 1(12") BIOLOG CONT | LF | 20
0506-6043 | 1(12") BIOLOG CONT | LF | 20

SHEET OF 18

KLEIN RD PHASE 2 SW3P LAYOUT PHASE 2 STEP 1
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS.
2. SWIM LAYOUTS CORRESPOND WITH DD PLANNING.
3. LOCATION OF CONSTRUCTION EDGE WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REMOVED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. NOT PERTINENT TO THE ACTUAL CONSTRUCTION OUTLINE SHOWN.
7. TEMP SEDIMENT CONTROL FENCE MATERIAL TO BE REMOVED.
8. ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.
9. TOP OF ROCK FILTER DAMS SHALL NOT BE SELECTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

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<tr>
<td>0506-6043</td>
<td>REMOVE LOGS</td>
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LEGEND
- TRAFFIC FLOW ARROWS
- FLOW ARROW
- SEDIMENT CONTROL FENCE
- TY 2 ROCK FILTER DAM
- TY 3 ROCK FILTER DAM
- SAND BAG
- CONSTRUCTION EXIT
- EROSION CONTROL LOG
- CONSTRUCTION PHASE
- REFLEX AREA
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXIT TO BE DETERMINED BY THE ENGINEER.
4. CONSTRUCTION EXIT FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

LEGEND
- TRAFFIC FLOW ARROWS
- FLOW ARROW
- FENCE
- CONSTRUCTION EXIT
- EROSION CONTROL LOG
- CONSTRUCTION PHASE
- REFILL AREA
- SEDIMENT CONTROL FENCE

<table>
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<td>153</td>
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<td>0506-6041</td>
<td>INSTALL LOGS</td>
<td>CONT</td>
<td>40</td>
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<tr>
<td>0506-6043</td>
<td>REMOVE LOGS</td>
<td>CONT</td>
<td>40</td>
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</tbody>
</table>
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS, THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXITS/ENTRANCES TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCES SHALL BE REPLACED BY CONSTRUCTION AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

ITEM | DESCRIPTION | UNIT | QTY |
--- | --- | --- | --- |
0506-6020 | (TY INSTALL) CONSTRUCTION EXIT | SY | 111 |
0506-6024 | (REMOVE) CONSTRUCTION EXIT | SY | 111 |
0506-6041 | (12") Erosion control log | CONT | 20 |
0506-6043 | (REMOVE) Erosion control log | CONT | 20 |
NOTES:
1. The measures shown are suggested placements of SW3P items. The engineer may modify as field conditions require.
2. SW3P layouts correspond with topography.
3. Location of construction entrance to be determined by the engineer.
4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Per SW3P requirements, disturbed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 48 days unless activity resumes within 21 days. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXIT/ENTRANCE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES WERE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 48 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

- DESIGN
- CSP 23-004
- DATE 1/16/2023
- JOHN A. TYLER, P.E.
- JOHN A. TYLER
- TYLER PAYNE DUBE, P.E.
- PROJECT NO.
- PLAN SCALE: 1"= 30'
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TPDES PHASING.
3. LOCATION OF CONSTRUCTION EXISTENCE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONSTRUCTION AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. AREAS REQUIREMENT: DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.

- EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
- SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONSTRUCTION AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
- STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
NOTES:

1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXIT/ENTRANCE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES WERE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 48 DAYS UNLESS ACTIVITY RESUMES WITHIN 48 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.
9. EROSION CONTROL LOGS TO REMAIN IN PLACE UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
NOTES:

1. The measures shown are suggested placements of sw3p items. the engineer may modify as field conditions require.
2. Sw3p layouts corresponding with top paving.
3. Location of construction entrance to be determined by the field of the engineer.
4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Per tpdes requirements, distributed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 14 days unless activity resumes within 30 days. seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all sw3p phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.
NOTES:
1. The measures shown are suggested placements of SW3P items. The engineer may modify as field conditions require.
2. SW3P layouts correspond with TPDES phasing.
3. SW3P layouts correspond with TCP phasing.
4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Per TPDES requirements, distributed areas on which construction activities have ceased temporarily or permanently shall be stabilized within 14 days unless activity resumes within that 14-day period. Seeding does not constitute as stabilization.
7. Sediment control fence to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

SW3P LAYOUT
PHASE 2
KLEIN RD

ITEM
DESCRIPTION
0506-6041
LOGS
CONT EROS
BIODEGR LF
20
0506-6043
LOGS
CONT EROS
BIODEGR LF
20

LEGEND
- - - - - TRAFFIC FLOW ARROWS
- - - - FLOW ARROW
- - - SEDIMENT CONTROL FENCE
- - TY 2 ROCK FILTER DAM
- - TY 3 ROCK FILTER DAM
- - CONSTRUCTION EXIT
- - EROSION CONTROL LOG
- - CONSTRUCTION PHASE
- - REFLECTING AREA

PAPE-DAWSON ENGINEERS
FIRM NO. 1128

KLEIN RD - PHASE 2
SW3P LAYOUT
PHASE 2 - STEP 2

DESIGN
1/16/2023

CHECKS
1/16/2023

JOHN A. TYLER
P.O. BOX 1444
NEW BRAUNFELS, TX 78131
(830) 829-0628

CSP 23-004
DATE 1/16/2023
105193

P A P E - D A W S O N
E N G I N E E R S

NEW BRAUNFELS, TEXAS 78131
830-829-0628

KLEIN RD PHASE 2
SW3P LAYOUT
PHASE 2 - STEP 2

NOTE

Sheet 1 of 18
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXIT/ENTRANCE TO BE DETERMINED BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

LEGEND
- TRAFFIC FLOW ARROWS
- FLOW ARROW
- SEDIMENT CONTROL FENCE
- TY 2 ROCK FILTER DAM
- TY 3 ROCK FILTER DAM
- CONSTRUCTION EXIT
- EROSION CONTROL LOG
- CONSTRUCTION PHASE
- REFLECTION AREA

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NOTES:
1. The measures shown are suggested placements of items, as field conditions require.
2. Silt fences may be modified as needed in subsequent phases of construction.
3. Construction exit/entrance to be determined by the engineer.
4. Erosion control logs shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoils locations are only permitted within the construction area.

6. Per TPDES requirements, distributed areas on which construction activities are ceased temporarily or permanently shall be stabilized within 14 days unless activity resumes within 7 days. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

<table>
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DESIGN APPROVAL
GUADALUPE KLEIN RD
TEXAS COUNTIES
DATE 1/16/2023

PHASE 2 STEP 2
SW3P LAYOUT
KLEIN RD PHASE 2

PAPE-DAWSON ENGINEERS
800 PぺPE ROAD, AUSTIN, TEXAS 78704
(512) 441-1400 - FAX (512) 441-1410
WWW.PADENGINEERS.COM
NOTES:
1. The measures shown are suggested placements of SW3P items. The engineer may modify as field conditions require.
2. SW3P layouts correspond with table postings.
3. Location of construction excavation to be determined by the field of the engineer.
4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Per SW3P requirements, distributed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 14 days unless activity resumes within 21 days. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

<table>
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**SW3P LAYOUT**

**KLEIN RD PHASE 2**

**SW3P LAYOUT PHASE 2 STEP 2**
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXIT/ENTRY TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

<table>
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**LEGEND**
- **TRAFFIC FLOW ARROWS**
- **FLOW ARROW**
- **SEDIMENT CONTROL FENCE**
- **TY 2 ROCK FILTER DAM**
- **TY 3 ROCK FILTER DAM**
- **CONSTRUCTION EXIT**
- **EROSION CONTROL LOG**
- **CONSTRUCTION PHASE**
- **REFLECTIVE AREA**

**DESIGN**

**PAPÉ-DAWSON ENGINEERS**

**KLEIN RD PHASE 2 SW3P LAYOUT PHASE 2 STEP 2**

**CSP 23-004**

**DATE** 1/16/2023

**REVISION DATE**

**PMO**

**SHEET NO.** 10 OF 18

**DRAWN BY**

**CHECKED BY**

**APPROVED BY**

**PROJECT NO.** 5103003

**SCALE** 1"= 30'
NOTES:
1. The measures shown are suggested placements of SW3P items, the engineer may modify as field conditions require.
2. SW3P layouts correspond with TCP phasing.
3. Location of construction exit/entrance to be determined by the engineer.
4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Per SW3P requirements, distributed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 48 days unless activity resumes within 21 days; seeding does not constitute stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Rock filter dams shall not be constructed higher than adjacent edge of pavement.
9. Permitted within the construction area.

<table>
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**LEGEND**
- **TRAFFIC FLOW ARROWS**
- **Sediment Control Fence**
- **TY 2 Rock Filter Dam**
- **TY 3 Rock Filter Dam**
- **Construction Exit**
- **Erosion Control Log**
- **Construction Phase**
- **Wetland Area**

**DESIGN**
- **John A. Tyler, P.E.**
- **Tyler Payne Dube, P.E.**

**DATE**
- 1/16/2023
NOTES:
1. The measures shown are suggested placements of SW3P items. The engineer may modify as field conditions require.
2. SW3P layouts correspond with TCP phasing.
3. Location of construction entrance to be determined by the field of the engineer.
4. Sediment control fences shall be the responsibility of the contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Wetland areas and other areas of high rates of erosion shall be protected.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

LEGEND
- Traffic flow arrows
- Sediment control fence
- TY 2 rock filter dam
- TY 3 rock filter dam
- Construction exit
- Erosion control log
- Construction phase
- Wetland area

DESIGN
APPROVAL
GUADALUPE
KLEIN RD
STATE
DGN:
DWG:
SHEET NO.
TEXAS
DGN:
CHK
DWG:
CHK
COUNTY
DESCRIPTION
DATE
REV.NO.
REv. SIG:
D ESIGN
F ile
name:
H:
P r oj ect:
5 1 0
3 0
0 3
D es ign
C iv il
S W 3 P
P h a s e:
5 1 0
3 0
0 3
D es ign
P l ot
do:
1 /1 6 /2 0 2 3
D ESIGN
F ile
name:
H:
P r oj ect:
5 1 0
3 0
0 3
D es ign
C iv il
S W 3 P
P h a s e:
5 1 0
3 0
0 3
D es ign
P l ot
do:
1 /1 6 /2 0 2 3
NOTES:

1. The measures shown are suggested placements of SW3P items. The Engineer may modify as field conditions require.
2. SW3P layouts corresponding with CP phasing.
3. Location of construction entrance or exit to be determined by the Engineer.
4. Sediment control fence shall be provided by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Per TPDES requirements, distributed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 14 days unless activity resumes within 21 days. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

LEGEND

- TRAFFIC FLOW ARROWS
- FLOW ARROW
- SEDIMENT CONTROL FENCE
- TY2 ROCK FILTER DAM
- TY3 ROCK FILTER DAM

CONSTRUCTION PHASE

EROSION CONTROL LOG

CONSTRUCTION EXIT

WETLAND AREA
NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXITS/EINGE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 48 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

**LEGEND**
- TRAFFIC FLOW ARROWS
- SEDIMENT CONTROL FENCE
- TY 2 ROCK FILTER DAM
- TY 3 ROCK FILTER DAM
- CONSTRUCTION EXIT
- EROSION CONTROL LOG
- CONSTRUCTION PHASE
- REFINE AREA

**DESIGN**
- JOHN A. TYLER, P.E.
- TYLER PAYNE DUBE, P.E.

**DATE**
- 1/16/2023

**PROJECT NO.**
- KLEIN RD PHASE 2

**SCALE:**
- 1" = 30'
NOTES:
1. The measures shown are suggested placements of SW3P items. The Engineer may modify as field conditions require.
2. SW3P layouts correspond with topographic.
3. Location of construction entrance to be determined by the Engineer.
4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. Per TPC requirements, distributed areas on which construction activities were ceased temporarily or permanently shall be stabilized within 48 days unless activity resumes within 48 days. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

LEGEND
- Traffic Flow Arrows
- Flow Arrow
- Sediment Control Fence
- TY 2 Rock Filter Dam
- TY 3 Rock Filter Dam
- Construction Exit
- Erosion Control Log
- Construction Phase
- Wetland Area
- Roadway

ITEM | DESCRIPTION | UNIT | QTY
--- | --- | --- | ---
0506-6020 | Construction Exit - F T | SY | 1
0506-6021 | Construction Exit - H T | SY | 1
0506-6029 | Construction Exit - H T | SY | 1
0506-6098 | Bridge Rock Cut Loss - Phase 1 | LF | 20
0506-6028 | Bridge Rock Cut Loss - Phase 2 | LF | 20

DESIGN
Pape-Dawson Engineers

CSP 23-004
1/16/2023

KLEIN RD PHASE 2
SW3P LAYOUT
PHASE 2 STEP 2

Sheet 15 of 18
**NOTES:**

1. The measures shown are suggested placements of SW3P items, the Engineer may modify as field conditions require.
2. SWP layouts corresponding with TPDES.
3. Location of construction entrance to be determined by the Engineer.
4. Sediment control fences shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoils locations are only permitted within the construction area.

6. Per TPDES requirements, distributed areas on which construction activities have ceased temporarily or permanently shall be stabilized within 48 hours unless activity resumes within 21 days. Seeding does not constitute as stabilization.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filters dams shall not be constructed higher than adjacent edge of pavement.

**KEY:**
- **SW3P LAYOUT**
- **CONSTRUCTION PHASE**
- **REFRAIN AREA**
- **EXIST ROW**
- **PROP ROW**
- **WETLAND AREA**
- **CONSTRUCTION EXIT**
- **SAFETY BARRIERS**
- **CONSTRUCTION PHASE**
- **TRAFFIC FLOW ARROWS**
- **SEDIMENT CONTROL FENCE**
- **TY 2 ROCK FILTER DAM**
- **TY 3 ROCK FILTER DAM**
- **CONSTRUCTION PHASE**
- **WETLAND AREA**
- **EXIST ROW**
- **PROP ROW**

**ITEMS:**

<table>
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<td>0506-6043</td>
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NOTES:
1. THE MEASURES SHOWN ARE SUGGESTED PLACEMENTS OF SW3P ITEMS. THE ENGINEER MAY MODIFY AS FIELD CONDITIONS REQUIRE.
2. SW3P LAYOUTS CORRESPOND WITH TCP PHASING.
3. LOCATION OF CONSTRUCTION EXIT/ENTRANCE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. SEDIMENT CONTROL FENCE SHALL BE REPLACED BY CONTRACTOR AS NEEDED IN SUBSEQUENT PHASES OF CONSTRUCTION.
5. STAGING, STORAGE, AND SPOILS LOCATIONS ARE ONLY PERMITTED WITHIN THE CONSTRUCTION AREA.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CAUSED TEMPORARILY OR PERMANENTLY.Serializable WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS, SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.
8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

PUEBLO COUNTY, COAL COUNTY, HAYS COUNTY, DAVISON COUNTY, SHERRILL COUNTY, COWLEY COUNTY, AND WISE COUNTY, TX

LEGEND

- - - - - - TRAFFIC FLOW ARROWS
- - - - - - FLOW ARROW
- - - - - - SEDIMENT CONTROL FENCE
- - - - - - TY 2 ROCK FILTER DAM
- - - - - - TY 3 ROCK FILTER DAM
- - - - - - CONSTRUCTION EXIT
- - - - - - CONSTRUCTION PHASE
- - - - - - REFUND AREA

DESIGN

APPROVED BY:

SIGNATURE:

PAPY DAWSON ENGINEERS

NEW BERN BARRIERS

NEW BERN, TX 78154

JANUARY 16, 2023

SCALE: 1" = 30'

NEW BERN BARRIERS

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JANUARY 16, 2023

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7. EROSION CONTROL LOGS TO REMAIN UNTIL THE COMPLETION OF ALL SW3P PHASES UNLESS OTHERWISE NOTED.

8. TOP OF ROCK FILTER DAMS SHALL NOT BE CONSTRUCTED HIGHER THAN ADJACENT EDGE OF PAVEMENT.

ITEM
DESCRIPTION
UNIT
QTY

0506-6020
CONSTRUCTION EXIT EXIST ROW
SY

1)

0506-6024
CONSTRUCTION EXIT PROP ROW
SY

111

SYMBOL LEGEND

- - - - - TRAFFIC FLOW ARROWS

- - - - FLOW ARROW

- - - - SEDIMENT CONTROL FENCE

- - - - TY 2 ROCK FILTER DAM

- - - - TY 3 ROCK FILTER DAM

- - - - CONSTRUCTION EXIT

- - - - EROSION CONTROL LOG

- - - - CONSTRUCTION PHASE

- - - - REFLECT AREA

LEGEND

- - - - TRAFFIC FLOW ARROWS

- - - - FLOW ARROW

- - - - SEDIMENT CONTROL FENCE

- - - - TY 2 ROCK FILTER DAM

- - - - TY 3 ROCK FILTER DAM

- - - - CONSTRUCTION EXIT

- - - - EROSION CONTROL LOG

- - - - CONSTRUCTION PHASE

- - - - REFLECT AREA

NOMENCLATURE

KLEIN RD

MATERIAL SPECIFICATION

STATE NO.

PROPERTY NO.

COUNTY

DESCRIPTION

DATE

REV.

ACTION

STATE OF TEXAS

DESIGN

APPROVAL

DATE

1/17/2023

PLANNED DATE

NDX 1/17/2023

KLEIN RD

CONSTRUCTION EXIT EXIST ROW

SY

111

SY

18 SHEET OF 18

188

SW3P LAYOUT PHASE 2 STEP 2

KLEIN RD PHASE 2

PAPE-DAWSON ENGINEERS

KLEIN RD

TYPICAL ROW

PROP ROW

EXIST ROW

PROP ROW

MATCH LINE STA 151+50

NOTE

(1) EXIT ROW

(2) PROPR ROW

(3) EXIST ROW

FM 725

KLEIN RD

KLEIN RD

FM 725
NOTES:

1. The measures shown are suggested placements of SW3P items. The Engineer may modify as field conditions require.
2. SW3P layouts correspond with TPDES.
3. Location of construction exit/entrance to be determined by the Engineer.
4. Sediment control fence shall be replaced by contractor as needed in subsequent phases of construction.
5. Staging, storage, and spoil locations are only permitted within the construction area.
6. PER TPDES REQUIREMENTS, DISTRIBUTED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED TEMPORARILY OR PERMANENTLY SHALL BE STABILIZED WITHIN 48 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE STABILIZATION.
7. Erosion control logs to remain until the completion of all SW3P phases unless otherwise noted.
8. Top of rock filter dams shall not be constructed higher than adjacent edge of pavement.

DESIGN

APPROVAL

CSP 23-004

DATE

1/16/2023

105193

STATE

TEXAS

COUNTY

KLEIN RD

PROJECT NO.

MATCH LINE STA 102-30

LEGEND

TRAFFIC FLOW ARROWS

FLOW ARROW

SEDIMENT CONTROL FENCE

TY 2 ROCK FILTER DAM

TY 3 ROCK FILTER DAM

CONSTRUCTION EXIT

EROSION CONTROL LOG

CONSTRUCTION PHASE

REFLECT AREA

ITEM

DESCRIPTION

UNIT

QTY

0506-6043

LOGS

CONT

EROSN

BIODEG

LF

62

1

2

3

4

5
NOTES:
1. The measures shown are suggested placements of SW3P items, the engineer may adjust as needed in the field.
2. Erosion control fences shall be replaced by construction as needed in subsequent phases of construction.
3. Staging, storage, and spoil locations are only permitted within the construction area.
4. Sediment control fences shall be constructed higher than adjacent edge of pavement.
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6. Erosion control fences shall be replaced by construction as needed in subsequent phases of construction.
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8. Top of rock filter dams shall not be constructed between adjacent edges of pavement.
9. Erosion control fences shall be replaced by construction as needed in subsequent phases of construction.
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SEDIMENT CONTROL FENCE USAGE GUIDELINES

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contoured or Tiered tiered sediment from overland runoff. A 2-year storm frequency may be used to calculate the flow rate to be filtered. Sediment control fence should be placed to filter a maximum flow through rate of 100 gpm/m. Sections of fences are not recommended to control erosion from a drainage area larger than 2 acres.

GENERAL NOTES

1. Vertical tracking is required on projects where soil disturbing activities have occurred unless otherwise directed.

2. Perform vertical tracking on slopes >5% to permanently stabilize soil.

3. Provide equipment with a track undercarriage capable of producing linear soil impressions measuring a minimum of 12" in length by 2" to 4" in width by 1/2" to 2" in depth.

4. Do not exceed 12" between track impressions.

5. Provide continuous linear track impressions where the minimum 12" length impressions are perpendicular to the slope or direction of water flow.

LEGEND

Sediment Control Fence

SEC. 1 - 16

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCE & VERTICAL TRACKING

TxDOT:

GD/SP:

EC(1)-16

GADALUPE COUNTY:

SHEET NO.

351

DATE:

1/16/2023

FILE:

ec116

JULY 2016

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contoured or Tiered sediment from overland runoff. A 2-year storm frequency may be used to calculate the flow rate to be filtered. Sediment control fence should be placed to filter a maximum flow through rate of 100 gpm/m. Sections of fences are not recommended to control erosion from a drainage area larger than 2 acres.
ROCK FILTER DAM USAGE GUIDELINES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated. Use rock and/or apron-type drainage structures, and in roadway ditches and channels for control of sediment.

2. Materials ( aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for Rock Filter Dams for Erosion and Sedimentation Control.

3. The rock filter dam dimensions shall be as indicated on the SAP plans.

4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have side slopes of 3:1 or flatter.

5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams on embankments.

6. Filter dams should be embedded a minimum of 4" into existing ground.

7. The sediment trap for ponding of sediment laden runoff shall be as shown on the plans.

8. Rock filter dam Types 2 & 3 shall be secured with 3/8" dual-twisted hexagonal weave chicken wire mesh. The aggregate shall be placed on top of the mesh to the height & slopes specified.

9. Sack Gabions should be staked down with 1/4" dia. rebar stakes, and have a double-twisted hexagonal mesh with a nominal mesh opening of 2" x 3". OR

10. Flow outlets should be onto a stabilized area (vegetation, rock, etc.).

11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
1. The length of the type 1 construction exit shall be as indicated on the plans, or as directed by the Engineer.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
5. The construction exit approach transition shall be #2 grade min., and should be free from large and loose knots.
6. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
7. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
8. The construction exit shall be graded to allow drainage to a sediment trapping device.

GENERAL NOTES (TYPE 3)
1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans, as indicated on the plans, or as directed by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown herein are suggestions only and may be modified by the Engineer.

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
CONSTRUCTION EXITS
EC(3)-16

TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use. The use of this standard is governed by the "Texas Engineering Practice Act," and in all cases of errors, omissions, or mistakes, the Texas Transportation Commission assumes no responsibility or liability. No warranty of any kind is made by TxDOT for any purpose whatsoever.
GENERAL NOTES:
1. Erosion control logs shall be installed in accordance with manufacturer's recommendations, or as directed by the engineer.
2. Lengths of erosion control logs shall be in accordance with manufacturer's recommendations and as required for the purpose intended.
3. Unless otherwise specified, use permanently biodegradable containment mesh only where log fill is designed in place as part of a temporary system. For temporary installation, use flexible containment system.
4. Full length of containment material to achieve the minimum compacted diameter specified in the plans, without excessive deformation.
5. Secures shall be 2' x 2' x 8' (1' on center) max. Needed such that no portion of log, or as directed by the engineer.
6. Do not place staves through containment mesh.
7. Compost cradle material is biodegradable and will not be paid for separately.
8. Sandbags used as anchors shall be placed on top of logs and shall be of sufficient size to hold logs in place.
9. Log filling at curb, or log upstream to prevent runoff from flowing around the log.
10. For heavy runoff events, additional upstream staking may be necessary to keep log from floating in overflow.

Sediment Basin & Trap Usage Guidelines:
An erosion control log sections 2.5 dia. may be used as a filter system. 4.5 dia. or larger may be used as a filter system. 2.5 dia. or smaller may be used as a filter system. Do not install on an inclined area.

Control logs should be installed in the following locations:
1. Within drainage ditches and swales.
2. Immediately preceding and after manholes or catch basins.
3. At the top of embankments.
4. Just before the drainage leaves the right-of-way.
5. In areas where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter. Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.
TOE OF SLOPE
5'-0" ABOVE
STAGGER JOINTS
5'-0" TO 10'-0"

STAKE NOTCH DETAIL
4"
STAKE
ROPE
NOTCH

EROSION CONTROL LOG SPACING TABLE

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STAKE AND TRENCHING ANCHORING DETAIL

TRENCH DEPTH TABLE

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EROSION CONTROL LOGS ON SLOPES

END SECTION RAP DETAIL

STAKE AND TRENCHING ANCHORING DETAIL

EROSION CONTROL LOGS ON SLOPES

STAKE AND LASHING ANCHORING DETAIL

EROSION CONTROL LOGS ON SLOPES

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Erosion Control Log at Drop Inlet

Erosion Control Log at Curb Inlet

Erosion Control Log at Curb & Grade Inlet

Note:
Erosion control logs used at curb inlets should only be used if they will not impede traffic or flood the roadway or when the storm sewer system is not fully functional.
### BEARING SEAT ELEVATIONS

<table>
<thead>
<tr>
<th>Grid 1</th>
<th>Grid 2</th>
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<th>Grid 5</th>
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*REV. NO. DATE DESCRIPTION RV*

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**M&S ENGINEERING**
CIVIL | ELECTRICAL | STRUCTURAL | IMF

**KLEIN Rd PH 2**

BEARING SEAT ELEVATIONS
SPANS 1 - 5
STA 134+60 TO STA 137+05

**SHEET 1 OF 4**

**DESIGN BY**: TEXAS A&M University, College Station, TX 77843

**DRAWN BY**: TEXAS A&M University, College Station, TX 77843

**CHECKED BY**: TEXAS A&M University, College Station, TX 77843

**AMENDED BY**: TEXAS A&M University, College Station, TX 77843

**DATE**: TEXAS A&M University, College Station, TX 77843

**REVISION**: TEXAS A&M University, College Station, TX 77843
CORNER DETAILS

BARS V
BARS S
BARS U

RACKWALL
CAP

Dimensions:
- 8" length
- 3" height
- 2.5" width
- 2.4" depth
OPTION 1 - PLAN WITH WINGWALLS
Cash-in-place retaining walls similar.

OPTION 1 - PLAN WITH MSE RETAINING WALLS

GENERAL NOTES:
See the Bridge Layout for selected Option. Option 2 is intended for new construction requiring high plasticity embankment fill with a plasticity index (PI) greater than 30 or pavement built in poor native soil. Pavement fills are defined as high plasticity clays or expansive clays.
Option 1 is intended for construction only requiring PI less than 30 or pavement fills constructed to specifications in order to construct the pavement.

In Option 1, cement stabilized backfill is placed in two stages, with a second layer placed on the first layer.

In Option 2, the backfill is placed in one stage.

If required elsewhere in the plans, provide Flowable Backfill meeting the requirements of Item 401. Flowable Backfill is placed in one stage as shown.

These details do not apply when Concrete Block retaining walls are used in lieu of wingwalls.

SHEET 1 OF 2

CEMENT STABILIZED ABUTMENT BACKFILL
BRIDGE ABUTMENT

CSAB
PARTIAL PLANS WITH NO SKEW
Shearing shear keys on 3'-0" wide caps. 4'-0" caps similar.

PARTIAL PLANS WITH 15° SKEW
Shearing shear keys on 3'-0" wide caps. 4'-0" caps similar.

PARTIAL PLANS WITH 30° SKEW
Shearing shear keys on 3'-0" wide caps. 4'-0" caps similar.

PARTIAL PLANS WITH 45° SKEW
Shearing shear keys on 3'-0" wide caps. 4'-0" caps similar.

CONSTRUCTION NOTES:
Provide Class C (minimum Fy = 36 ksi). Provide Class C1 (HPC)
if shown elsewhere on the plans.

Provide Grade 60 reinforcing steel.

Provide epoxy coated reinforcing steel for shear key or abutment.

Provide Ultra High Molecular Weight (UHMW) polyethylene wear pads in accordance with ASTM D6875.

GENERAL NOTES:
Designed according to ADPTF UHM Bridge Design Specifications.

Details showing stereotypes are shown showing right forward skew. See Bridge Design for vertical skew situations.

These details are limited to bridges shown as 45 degrees and less.

This standard is only applicable for I-Girders.

Details for bearing conditions and girder spacing not shown on this elevation. Details do not account for side plate or

PART SECTION
ULTRA HIGH MOLECULAR WEIGHT (UHMW) POLYETHYLENE WEAR PAD DETAILS

BARS M (#5)
1/2 Cap width - 3/4" Cos Skew.

BARS Na (#5)
For abutments.

Texas Department of Transportation
Bridge Design Standards
PRESTRESSED CONCRETE I-GIRDERS
SHEAR KEY DETAILS
ULTRA HIGH MOLECULAR WEIGHT (UHMW)
POLYETHYLENE WEAR PAD DETAILS

BARS Nb (#5)
For interior notes

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.

W/2" 1/2" shear key
Shallowed by 1/2" cos skew.
RAIL DATA FOR HORIZONTAL CURVES

CONSTRUCTION NOTES:
This rail may be specified if approved by the Engineer when anchor bolt anchors are used. If the Contractor's option anchor bolts may be cast with the parapet. See "Material Notes". The parapet's anchor bolts are cast unless otherwise directed by the Engineer. Rail shall not be specified if anchor bolts are used.

MATERIAL NOTES:
Galvanize all metal components of steel rail systems. Apply additional galvanization when shown elsewhere on the plans. When shown, require paint over galvanized. For casting galvanized steel, Item 446. Galvanizing and when field painting, Item 446. Galvanize all metal components of steel rail systems. Apply additional galvanization prior to painting and after painting unless directed otherwise by the Engineer.

FIELD NOTES:
Increase "Z" for structures with walls.

Optional Welded Wire Reinforcement (WWR)

ELEVATION

SECTION THRU SIDE SLOT DRAIN

CAST-IN-PLACE ANCHOR BOLT OPTIONS

COMBINATION RAIL

TYPE C402

Sheet 4 of 4

Texas Department of Transportation

Bridge Design Standard

Cover dimensions are clear dimensions, unless otherwise noted. Reinforcing bars shown are out-of-the-bar.
To control top flange cracking that may occur during form removal, additional top flange reinforcing may be placed as shown in girder ends at the fabricator's option. 

OPTIONAL TOP FLANGE REINFORCING DETAIL

Reinforcing patterns shown are provided as guides to determine reinforcement placement in skewed ends. Place Bars S as close to girder end as cover requirements permit, which may prevent them to be handled with Bars R. 

Bars may be cut or bent at skewed end as required. 

Increase as necessary for bars at skewed end. 

No portion of bar less than 10 ft. 

For Welded Wire Reinforcement (WWR) option, area of Bars R may be required in proportion to the increase in reinforcement, proof strength over 60 ksi. Yield strength of WWR is limited to 75 ksi.

OPTIONAL WELDED WIRE REINFORCEMENT (WWR) DETAIL
1. See Layout for joint type.
2. Dowels OD (1#10) spaced at 3 ft Max. See Inv-T stems for quantity and location.
3. Space Bars Y (#4) at 12" Max. Use 2 and cover. Number of Bars Y must satisfy sawing limit. Place parallel to bent.
4. Space Bars W at 2" Max (6" from end of cap). Tilt if necessary to maintain cover requirements. Place parallel to longitudinal slab reinforcement.
5. See Span details for type of joint and joint locations.

---

**ShowinG Expansion JointS**

**ShowinG Const its or ControLled its**

**Reinforcement Over Inv-T Bents**

**Drip Bead Detail**

**Chamfer Limits Detail**

See elsewhere for additional reinforcement not shown.

Slab reinforcement not shown for clarity. (PSL)

See elsewhere for additional reinforcement not shown.

NOTES:

- Chamfer overhang from top of slab to edge of girder, at all construction joints or controlled joints.
- Chamfer at controlled joints (See Chamfer Limits Detail).
- No chamfer

Perpendicular (For skews over 15°)

Lesser of 2-Dry at edge of flange

- 1/8" Chamfer (See Chamfer Limits Detail).

- 1/8" Kinal or plastic joint filler (Stress Cap. Zip Strip. Stress Lock. or equal as approved by the Engineer)

- Maintain continuous thru the joint.

**Controlled Joint Detail**

See-casting is not allowed.

**Sheet 2 of 2**

**Texas Department of Transportation**

**Bridge Design Standard**

**MISCELLANEOUS SLAB DETAILS**

**PRESTR CONCRETE I-GIRDERS**

**IGMS**
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST
   GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND NOTIFY PRIOR TO EXCAVATION

SCALE: 1" = 10'
1" = 20'

KLEIN RD
CROSS SECTIONS
STA 102+50,000 TO STA 102+50,000

EX COMM
EX GAS LINE
EX 12" W
EX COMM
EX COMM
EX 12" W

Design File Name: 08/30/2021.stp.45 (Rev. 1/31/2021).stp
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED X-SECTION (X). GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND NOTIFY OWNER PRIOR TO EXCAVATION

SCALE: 1"= 20'  1"= 10'  

KLEIN RD

CROSS SECTIONS

STA 102+66.4232 TO STA 102+66.4232
NOTES:
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

CROSS SECTIONS:

STA 103+00.000 TO STA 103+00.000

SCALE: 1" = 10'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 2 DEGREES CURVATURE
   GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DESIGNS PRIOR TO EXCAVATION

CROSS SECTIONS

STA 103+43.0000 TO STA 103+43.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFORM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS

STA 103+50,0000 TO STA 103+50,0000

SCALE: 1" = 10'
1" = 20'

PAPEN-DAWSON
ENGINEERS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

STA 104+00.0000 TO STA 104+00.0000

SCALE: 1"=10' 1"=20'

CROSS SECTIONS

KLEIN RD

KLEIN CL

EX ROW

EX ROW

PR ROW

PR ROW

KLEIN EX ROW

KLEIN EX ROW

EX 12" W

DESIGN ENGINEER: KEVIN H.
DESIGNER: KEVIN H.
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED DEPT 20314
   GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND REVERT PLOT TO EXCAVATION

SCALE: 1"=10'
1"=20'

KLEIN RD
CROSS SECTIONS
STA 104+08,5368 TO STA 104+08,5368

Pape-Dawson Engineers
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

STA 104+47.4067 TO STA 104+47.4067

SCALE: H=1“=10’
V=1“=20’
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AND ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

STA 104+50.0000 TO STA 104+50.0000

SCALE: 1" = 10'  1" = 20'

PAPÉ-DAWSON ENGINEERS

KLEIN RD
CROSS SECTIONS

STA 104+50.0000 TO STA 104+50.0000

DESIGNER: KLEIN RD

SIGNATURE: SEE BLUEPRINTS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   PRASHAN'S 2019 GIS. 
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

CROSS SECTIONS
STA 105+00.0000 TO STA 105+00.0000

SCALE: 1"= 20'

KLEIN RD
ROADWAY: 1/16
EX COMM: 1/16
EX COMM: 1/16
EX 12" W
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPT 3X1.5 GRUDGE, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DELINEATION PRIOR TO EXCAVATION

STA 105+50.0000 TO STA 105+50.0000

SCALE: 1"=20' 1"=10'

KLEIN RD
CROSS SECTIONS

STA 105+50.0000 TO STA 105+50.0000

DESIGNER: M. B. BENNET
REVIEWED: A. RICHARDS
CHECKED: P. D. HOFFMAN
CERTIFIED: E. E. WARD

DATE: 02/28/2023
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 2' DEPTH.

   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND SETTLING prior TO EXCAVATION.

CROSS SECTIONS

STA 105+70, 2011 TO STA 105+70, 2011
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION

CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

STA 106+00.0000 TO STA 106+00.0000

SCALE: 1"=20'

DESIGNER

P. DAWSON

P. DAWSON

KLEIN RD

CROSS SECTIONS

STA 106+00.0000 TO STA 106+00.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT APPROVED DEPT. LOCATIONS
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEFINES PLOW TO EXCAVATION

SCALE: 1" = 10'

KLEIN RD
CROSS SECTIONS
STA 106+19.4209 TO STA 106+19.4209

DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]

DATE: [Date]
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED DEPTH IN-excavation
ground, CONTRACTOR SHALL
CONFIRM ALL UTILITY LOCATIONS
AND DEPTH PRIOR TO EXCAVATION

SCALE: 1" = 20'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   CONSTRUCTION CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION
   GROUND, CONTRACTOR SHALL ASSUME 3' BELOW EXISTING UTILITIES SHOWN

CROSS SECTIONS

STA 107+00.000 TO STA 107+00.000

SCALE: H: 1"=10' V: 1"=20'

KLEIN RD

NEW BRAUNFELS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED DEPT, DWG.
   CONFORM ALL UTILITY LOCATIONS
   AND DEPT PRIOR TO EXCAVATION

SCALE: 1"=10'  1"=20'

KLEIN RD
CROSS SECTIONS
STA 107+49,1237 TO STA 107+49,1237

Design Firm Name: Pape-Dawson Engineers

Drawing: DS2021057

Drawing No: 1280000

Printed on: 06/05/2021
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPTH.
   OWNER, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

STA 107+50.0000 TO STA 107+50.0000

SCALE: 1"=10'
1"=20'

CROSS SECTIONS

STA 107+50,0000 TO STA 107+50,0000

KLEIN RD

PAPÉ-DAWSON ENGINEERS

1/16/2023

Design File Name: 16-000501-KLEIN-RD-CROSS-SECTION.dgn
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 108+00.0000 TO STA 108+00.0000

DESIGN FIRM:
- VIZIO905 LLC
- 512.313.3616

PROJECT NO.
- 645

SCALE:
- 1" = 10'
- 1" = 20'

CSP 23-004

NEW BRAUNFELS

PAPEDAWSON
ENGINEERS

H:\DESIGN FILES\NEW BRAUNFELS\KLEIN RD\KLEIN-CROSS-SECTIONS-108.jpg
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT APPROXIMATE DEPTH 3' BELOW EXIST GROUND. CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

SCALE
1" = 10'  
1" = 20'

CROSS SECTIONS
STA 108+47,000 TO STA 108+47,000

DESIGNER / DATE
PAPÉ-DAWSON ENGINEERS

KLEIN RD
CROSS SECTIONS
STA 108+47,000 TO STA 108+47,000

DESIGNER / DATE
PAPÉ-DAWSON ENGINEERS
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPT X-RAY OR UNDERGROUND
   CONDUIT. CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DETAILS PRIOR TO EXCAVATION.

CROSS SECTIONS

STA 108+53,3895 TO STA 108+53,3895

Scale: 1" = 10' 1" = 20'

Pape-Dawson Engineers

KLEIN RD
CROSS SECTIONS

STA 108+53,3895 TO STA 108+53,3895
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AS DETERMINED BY OWNER. CONFORM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 109+00.000 TO STA 109+00.000

SCALE: 1"=20' V:

1/16

DESIGN

KLEIN RD

PROJECT NO.
COUNTY
CITY

SHEET NO.

dwg:
DGN:

SHEET NO.
COUNTY
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FILE:

DESIGN

SCALE: 1"=10' H:

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DESIGN

KLEIN RD

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KLEIN RD

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SHEET NO.
COUNTY
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FILE:
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSESSED DEPT DIM LIM
   GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND REMAIN MATION TO EXCAVATION

SCALE 1" = 10' 1" = 20'

STA 109+50,000 TO STA 109+50,000

KLEIN RD
CROSS SECTIONS
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. ECOD UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 2 DEGREE TOLERANCE
   GROUND CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEMANDワイン TO EXCAVATION

CROSS SECTIONS

STA 110+00,000 TO STA 110+00,000

KLEIN RD

SCALE: 1"= 10'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED DEPTH
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

STA 110+50.0000 TO STA 110+50.0000

SCALE: 1"=20'
1"=10'
NOTES
1. BARGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DOMINION TO EXCAVATION

STA 111+00.0000 TO STA 111+00.0000

SCALE: 1" = 10'
H: V:

PAPER SIZE: Sheet 1 of 6
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 7 DEGREES PERCH
   CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

Cross Sections

1/16/2023

1" = 10'
1" = 20'

Scale:
H:
V:

KLEIN RD
CROSS SECTIONS
STA 111+50,0000 TO STA 111+50,0000
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   - ASSUMED 3' BELOW EXIST.
   - CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS.

BALANCE TO EXCAVATION.

SCALE: 1"=20'

Pape-Dawson Engineers

KLEIN RD

CROSS SECTIONS

STA 111+74,1074 TO STA 111+74,1074
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITY SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED DEPTH 28314
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEFINITE PRIOR TO EXCAVATION

CROSS SECTIONS

STA 112+00.0000 TO STA 112+00.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED DEPTH 0.333
   GROUNDS, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

SCALE: N:\1\20
V:\120

CROSS SECTIONS
STA 112+35,0000 TO STA 112+35,0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 2 DEEP
   GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

SCALE: 1"=10’

EX COMM
EX 12” W

KLEIN RD
CROSS SECTIONS
STA 112+50,000 TO STA 112+50,000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEFER PRIOR TO EXCAVATION

DESIGNER: B. RAY

SCALE: 1"= 20'

DESIGN FIRM:

KLEIN RD

CROSS SECTIONS

STA 113+00.0000 TO STA 113+00.0000

EX COMM

EX 12" W

EX COMM
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

CROSS SECTIONS

STA 113+17.0148 TO STA 113+17.0148

SHEET NO.

TEXAS

COUNTY

CITY

PROJECT NO.

H: 1" = 10'

V: 1" = 20'

SCALE:

PAPE-DAWSON
ENGINEERS

KLEIN RD

EX COMM

EX 12" W

EX COMM

STA 113+17.0148
NOTES AND DEPTHS PRIOR TO EXCAVATION
CONFIRM ALL UTILITY LOCATIONS
GROUND, CONTRACTOR SHALL
AT ASSUMED 3' BELOW EXIST
BEST AVAILABLE INFORMATION
EXIST UTILITIES SHOWN FROM

1.
2.

CROSS SECTIONS

KLEIN RD

SCALE: 1"= 10'
1"= 20'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASST. 7 DEG 23’34’’
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND SUBMIT PLAN TO EXCAVATION

CROSS SECTIONS
STA 113+76.6115 TO STA 113+76.6115
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 7 DEGREES TO EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEMAS MENTION TO EXCAVATION

CROSS SECTIONS
STA 114+00.0000 TO STA 114+00.0000

SCALe: H: 1" = 10'
V: 1" = 20'

DESIGNER: GLENN ROY
NOTES
1. BRIDGE GIRDER NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED DEPTH 23'3" BELOW GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

Cross Sections
STA 114+37.1791 TO STA 114+37.1791

Scale: 1"=10'
1"=20'
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

CROSS SECTIONS

STA 114+38.6122 TO STA 114+38.6122

SCALE: 1" = 10'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPTH.
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

STA 114+50.0000 TO STA 114+50.0000

CROSS SECTIONS

SCALE: 1"=20'

PAPÉ-DAWSON ENGINEERS

KLEIN RD

CSP 23-004
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS

STA 114+68.1892 TO STA 114+68.1892
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT TIME OF設計 4:39
   GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DETAILS PRIOR TO EXCAVATION

SCALE: 1"=10'  1"=20'

EX COMM
EX AT&T LINE

KLEIN RD
CROSS SECTIONS

STA 115+00.0000 TO STA 115+00.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM
   BEST AVAILABLE INFORMATION
   AT ASSIGNED DEPTH
CONTRACTOR SHALL
CONFIRM ALL UTILITY LOCATIONS
AND DEPART PRIOR TO EXCAVATION

STA 115+50.0000 TO STA 115+50.0000

SCALE: 1" = 10'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. BEST AVAILABILTY SHOWN FROM BEST AVAILABLE INFORMATION
   AS ANNUED 2 DEW 2018
   GROUND, CONTRACTOR SHALL
   CONFORM ALL UTILITY LOCATIONS
   AND DETAILS PRIOR TO EXCAVATION

SCALE: 1"= 10'
1"= 20'

KLEIN RD
CROSS SECTIONS
STA 116+00.0000 TO STA 116+00.0000

-100  -90  -80  -70  -60  -50  -40  -30  -20  -10    0    10    20    30    40    50    60    70    80    90    100    110

Design Filing No.: 12/03/2018
Graphic Filing No.: 12/03/2018
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEMARcation PRIOR TO EXCAVATION

SCALE: 1"= 10'

CROSS SECTIONS

STA 116+50,0000 TO STA 116+50,0000

EX COMM
EX AT&T LINE

KLEIN RD

PAPE-DAWSON ENGINEERS

KLEIN RD

1/16/2023

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NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AS ASSIGNED TO DEPT 6354.
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEFINES PROFILE TO EXCAVATION.

SCALE: 1" = 10'
1" = 20'

KLEIN RD
CROSS SECTIONS
STA 116+87.3973 TO STA 116+87.3973
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AS ASSESSED. DEVIATION IN EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION. CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

STA 117+00.0000 TO STA 117+00.0000

1" = 10'
1" = 20'
SCALE:

PAPE-DAWSON ENGINEERS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ATKINS J. DOWSON INC.
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

CROSS SECTIONS
STA 117+50.0000 TO STA 117+50.0000

SCALE: 1"=10'
1"=20'

KLEIN RD
NEW BRAUNFELS
TEXAS
COUNTY
STATE
DGN:
CERT:
DWG:

EX COMM
EX AT&T LINE
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 118+00.0000 TO STA 118+00.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3' BELOW EXIST GROUND. CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 118+50.0000 TO STA 118+50.0000

KLEIN RD
CROSS SECTIONS

STANDARD SCALES:
1"= 10'
1"= 20'

SCALE:
H: EX COMM
V: EX COMM

EX AT&T LINE
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED GROUND ELEVATION

EXIST UTILITIES SHOWN FROM
BEST AVAILABLE INFORMATION
AND DESCRIBED PRIOR TO EXCAVATION

STA 119+00.0000 TO STA 119+00.0000

Scale: 1" = 10'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITY LOCATIONS SHOWN FROM BEST AVAILABLE INFORMATION
   AT CURRENT LOCATION
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND SETTLE PRIOR TO EXCAVATION

CROSS SECTIONS

KLEIN RD

SCALE: 1"= 10' 1"= 20'

EX COMM
EX COMM
EX AT&T LINE

STA 119+20,000 TO STA 119+20,000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

SCALE: 1"= 10'
1"= 20'

KLEIN RD
CROSS SECTIONS
STA 119+26.1093 TO STA 119+26.1093

EX AT&T LINE
EX COMM
EX COMM

DESIGN: G. M. DODGE
CHECK: J. W. DAVIES
DATE: 5/20/2021
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND SUBMITS PLOT TO EXCAVATION

SCALE 1" = 10'
1" = 20'

STA 120+00.0000 TO STA 120+00.0000

KLEIN RD
CROSS SECTIONS

Design Firm: Engineer...  (Signature)  Date: 1/16/2023

CSP 23-004
PROJECT NO.

STATE DGN:

COUNTY

CITY

ROADWAY

ROADWAY

EX COMM

EX COMM

EX AT&T LINE

EX 12" W

EX COMM

EX 12" W

EX COMM
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   CONFIRM ALL UTILITY LOCATIONS AND SETTLEMENT PRIOR TO EXCAVATION.

NEW BRAUNFELS
CSP 23-004

1. STA 120+16.6015 TO STA 120+16.6015

2. SCALE 1"=20'

KLEIN RD
CROSS SECTIONS
STA 120+16.6015 TO STA 120+16.6015
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLEARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEFERS PATION TO EXCAVATION

SCALE: 1" = 20'

KLEIN RD
CROSS SECTIONS
STA 120+50.0000 TO STA 120+50.0000

DESIGN: KLEIN RD EX COMM
6:1 2% 2% 2% 6:1

1"= 10'
1"= 20'

45° MAIN LINE
EX COMM
EX AT&T LINE
EX 12" W
EX COMM

DESIGN: KLEIN RD EX COMM
6:1 2% 2% 2% 6:1
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 2 DECEMBER 2021
   GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS

STA 120+53.971 TO STA 120+53.971

1/16
1/20
1/40
1/60
1/120
1/240
1/480

SCALE: 1" = 10'
1" = 20'

KLEIN RD

KLEIN RD FILL

NEW BRAUNFELS
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION

CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

STA 121+00.0000 TO STA 121+00.0000

SCALE: 1" = 20'

EX COMM
EX COMM
EX COMM
EX COMM
EX 12" W
EX 12" W

KLEIN RD
CROSS SECTIONS

PAPE-DAWSON
ENGINEERS
NOTES
AND DEPTHS PRIOR TO EXCAVATION
CONFIRM ALL UTILITY LOCATIONS
GROUND, CONTRACTOR SHALL
ASSUMED 3' BELOW EXIST
BEST AVAILABLE INFORMATION
EXIST UTILITIES SHOWN FROM
2.
CLARITY
BRIDGE GIRDERS NOT SHOWN FOR
1.
STA 121+05.0856 TO STA 121+05.0856
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EX ROW
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2%
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2%
2%
6:1

CROSS SECTIONS
KLEIN RD

DESIGN
FILM
Klein, TX
0023
12/2003

NOTICE: DRAWINGS AND PLANS ARE THE PROPERTY OF THE ENGINEERS AND ARE PROVIDED FOR THE USE OF OUR CLIENTS. IDENTITY OF THE ENGINEERS MAY BE DISCLOSED TO THIRD PARTIES AS PART OF THE ENGINEERS' BUSINESS RELATIONSHIP WITH OUR CLIENTS. THE ENGINEERS ARE RESPONSIBLE FOR THE ACCURACY OF THE DRAWINGS AND PLANS. THE ENGINEERS SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO, DIRECT, INDIRECT, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES, ARISING OUT OF OR IN CONNECTION WITH THE USE OR INABILITY TO USE THE DRAWINGS AND PLANS. THE ENGINEERS RESERVE THE RIGHT TO DISCLAIM ANY WARRANTY OR REPRESENTATION IN RESPECT TO THE DRAWINGS AND PLANS.
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 3' BELOW GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DESCRIBE POINT OF EXCAVATION.

CROSS SECTIONS

STA 121+50,000 TO STA 121+50,000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AND ASSUMED 3' BELOW EXISTING GROUND. CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

CROSS SECTIONS

STA 122+00,000 TO STA 122+00,000

SCALE: 1"=10'

DESIGNER
DATE
CHECKED
DRAWN

PAPE-DAWSON ENGINEERS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS

STA 122+50.0000 TO STA 122+50.0000

SCALE: 1"= 10'
1"= 20'
STADIA

KLEIN RD
CROSS SECTIONS
STA 122+50.0000 TO STA 122+50.0000

DESIGNER: NEW BRAUNFELS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT TIME OF DESIGN
   CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

KLEIN RD
CROSS SECTIONS

STA 122+55.4992 TO STA 122+55.4992

SCALE: 1" = 10'
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED DEPTH & SIZE
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND VERIFY PRIOR TO EXCAVATION

STA 123+00.0000 TO STA 123+00.0000

SCALE: 1"=20'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT AREA SHOWN. CONSTRUCTION SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEFERS TO EXCAVATION

SCALE: 1"=20'

KLEIN RD

CROSS SECTIONS

STA 123+04.6106 TO STA 123+04.6106

EX COMM
EX 12" W
EX AT&T LINE

EX COMM
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT LEAST 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND VERIFY PRIOR TO EXCAVATION

SCALE: 1" = 10'
1" = 20'

EX COMM
EX COMM
EX AT&T LINE
EX COMM

STA 123+05.4719 TO STA 123+05.4719

KLEIN RD
CROSS SECTIONS
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   CONFIRM ALL UTILITY LOCATIONS
   GOOD, CONTRACTOR SHALL
   AT ASSUMED 3' BELOW EXIST
   BEST AVAILABLE INFORMATION

STA 123+20.0000 TO STA 123+20.0000

SCALE: 1" = 10'

1" = 20'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DRAWING FILING TO EXCAVATION

SCALE: 1"=20'

KLEIN RD
CROSS SECTIONS

STA 123+92.7019 TO STA 123+92.7019

EX COMM
EX AT&T LINE
EX 12" W
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION. ADDITIONAL HOLE LOCATIONS TO BE CONFIRMED. CONTRACTOR SHALL CONFORM ALL UTILITY LOCATIONS AND DEMOLISH PRIOR TO EXCAVATION.

SCALE: 1"= 10'
1"= 20'
H: V: W:

EX COMM
EX 12" W
EX AT&T LINE

STA 124+00.0000 TO STA 124+00.0000

KLEIN RD
CROSS SECTIONS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   CONFIRM ALL UTILITY LOCATIONS.
   GROUND, CONTRACTOR SHALL AT ASSUMED 3' BELOW EXIST UTILITIES SHOWN FROM
   BEST AVAILABLE INFORMATION.

CROSS SECTIONS

STA 124+50.0000 TO STA 124+50.0000

SCALE: 1"=10'
NOTES
1. Bridge Girders not shown for clarity
2. Existing utilities shown from best available information
   at assumed 3' below exist ground, Contractor shall
   confirm all utility locations and depths prior to excavation

STA 124+55.0769 to STA 124+55.0769

CROSS SECTIONS

Scale: 1" = 10'
NOTES

1. Bridge girders not shown for clarity.

2. Existing utilities shown from best available information.
   Assume 2 feet below existing ground. Contractor shall confirm all utility locations and depths prior to excavation.

CROSS SECTIONS

STA 125+00.0000 TO STA 125+00.0000

SCALE: 1"=10'
1"=20'

DESIGNER: NEW BRAUNFELS

PAPE-DAWSON
ENGINEERS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

CROSS SECTIONS

STA 125+17.4146 TO STA 125+17.4146

SCALE: 1" = 10'
1" = 20'

EX COMM
EX AT&T LINE
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3' BELOW GROUND. CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DELIVER PLANS TO EXCAVATOR.

CROSS SECTIONS
STA 125+50.0000 TO STA 125+50.0000

SCALE: 1"=10'  1"=20'

KLEIN RD
CROSS SECTIONS

EX COMM
EX 12" W
EX AT&T LINE
### NOTES

1. Bridge girders not shown for clarity.

2. Existing utilities shown from best available information at assumed 3' below ground. Contractor shall conform all utility locations and depths prior to excavation.

### Cross Sections

#### STA 126+00.0000 to STA 126+00.0000

<table>
<thead>
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### Dimensions

- EX COMM
- EX 12" W
- EX AT&T LINE
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEFERS PLOW TO EXCAVATION

CROSS SECTIONS

STA 126+50,000 TO STA 126+50,000

KLEIN RD

SCALE: W1"=20'
H: 1"=10'
V: 1"=10'

DESIGN: PAPÉ-DAWSON ENGINEERS

NEW BRAUNFELS

STA 126+50,000 TO STA 126+50,000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNMENT DATE
   CONFORM ALL UTILITY LOCATIONS
   AND DETAILS Prior To Excavation

SCALE: 1" = 10'  1" = 20'

KLEIN RD
CROSS SECTIONS

STA 126+81.7584 TO STA 126+81.7584
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3’ BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 127+00,0000 TO STA 127+00,0000

KLEIN RD

EX COMM
EX AT&T LINE
EX 12" W
EX 12" W
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED FLOOR ELEVATION
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

SCALE: 1"= 20'

KLEIN RD

CROSS SECTIONS

STA 127+50,0000 TO STA 127+50,0000

Design File Name: CR20050156.dgn
Print Date: 1/16/2021
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED P R I O R I T I E S
   OWNER, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

SCALE

1" = 10' 1" = 20' 1" = 50'

KLEIN RD CROSS SECTIONS STA 128+00.0000 TO STA 128+00.0000

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NEW BRAUNFELS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DETERMINE PROPER EXCAVATION DEPTHS PRIOR TO EXCAVATION

SCALE: 1"=20'

CROSS SECTIONS

KLEIN RD

EX COMM
0019-0002

STA 128+50.0000 TO STA 128+50.0000
NOTES
1. BRIDGE GIRDER NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 3 DECEMBER 2330.
   GROUND, CONTRACTOR SHALL
   CONFORM ALL UTILITY LOCATIONS
   AND DEMONS PRIOR TO EXCAVATION.

CROSS SECTIONS
1/16/2023

STA 129+00,000 TO STA 129+00,000

SCALE: 1"= 20'
NOTES
1. BARGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGN 2 DEPTH 8’ BELOW GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS

STA 129+50,000 TO STA 129+50,000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

SCALE: 1"=10'
1"=20'

EX COMM
EX 12" W
EX AT&T LINE

KLEIN RD
CROSS SECTIONS
STA 130+00,000 TO STA 130+00,000
NOTES:
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT)==' M' 'R'X'))

STA 130+50.0000 TO STA 130+50.0000

SCALE: 1"= 10'

EX COMM
EX AT&T LINE

CROSS SECTIONS

KLEIN RD

DESIGN FIRM:
PAPE-DAWSON
ENGINEERS

NEW BRAUNFELS
NOTES

1. BRIDGE GIRDERS NOT ShOWN FOR CLARITY

2. EXIST UTILITY LOCATIONS ShOWN FROM BEST AVAILABLE INFORMATION
   AS ADEQUATELY DETERMINED. CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION.

CROSS SECTIONS

STA: 130+98.0000 TO STA: 130+98.0000

SCALE: 1" = 20'

1" = 10'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT TIME OF DRAWING
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION
   BEST AVAILABLE INFORMATION
   EXIST UTILITIES SHOWN FROM
   1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
   2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
      AT TIME OF DRAWING
      CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
      AND DEPTHS PRIOR TO EXCAVATION

KLEIN RD
CROSS SECTIONS
STA 131+00.0000 TO STA 131+00.0000

EX COMM
EX 12" W
EX AT&T LINE
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   BASED ON BEST AVAILABLE INFORMATION

STA 131+50.000 TO STA 131+50.000
"EX COMM"

SCALE: 1"= 10'  1"= 20'

KLEIN RD
CROSS SECTIONS

POLICY:
READER TO END OF SHEET

PAPe-DAWSON
ENGINEERS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

STA 132+00.0000 TO STA 132+00.0000

SCALE: 1"=10'

EX COMM

EX AT&T LINE

KLEIN RD

CROSS SECTIONS

STA 132+00.0000 TO STA 132+00.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPT R3114
CONFIRM ALL UTILITY LOCATIONS AND DÊTERMINE PRIOR TO EXCAVATION

CROSS SECTIONS
STA 132+24.9759 TO STA 132+24.9759

DESIGN ENGINEER: G. D. ZOUZAS

SCLARE, M.T. RD

PAPE-DAWSON ENGINEERS

NEW BRAUNFELS, TX 78130-1942

DATE: 1/25/2021
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED DEPTH 23'-0".
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION.

STA 132+30.0000 TO STA 132+30.0000

SCALE: 1" = 10'
1" = 20'
H: V:

KLEIN RD
CROSS SECTIONS

STA 132+30,0000 TO STA 132+30,0000

DESIGN ENGINEERS

KLEIN RD
12/30/00

PAPY-DAWSON
ENGINEERS
NOTES
1. BRIDGE GIRDER NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND NOTIFY OWNER TO EXCAVATION

CROSS SECTIONS
STA 132+50.0000 TO STA 132+50.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

CROSS SECTIONS

STA 132+60.6892 TO STA 132+60.6892

SCALE: 1"=20'

H: V:

PAPE-DAWSON ENGINEERS
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   CONFIRM ALL UTILITY LOCATIONS AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEFERS PISON TO EXCAVATION.

SCALE: 1"=20'

KLEIN RD
CROSS SECTIONS
STA 132+64.2279 TO STA 132+64.2279
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DESCRIBE PATTERN TO EXCAVATION.

CROSS SECTIONS
STA 132+78.5000 TO STA 132+78.5000

SCALE: 1" = 20'
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITY LOCATIONS SHOWN FROM BEST AVAILABLE INFORMATION
   ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS

CROSS SECTIONS

STA 132+94,7438 TO STA 132+94,7438

SCALE: 1'=20'

1% = 10'
2% = 5'
4% = 2'
8% = 1'

EX COMM
EX AT&T LINE
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT OR BELONG TO EXISTING STRUCTURES
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEMEAN TON TO EXCAVATION

STA 133+00.000

SCALE: 1"=10'
1"=20'

KLEIN RD
CROSS SECTIONS
STA 133+00.000 TO STA 133+00.000
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLEARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS

STA 133+50,0000 TO STA 133+50,0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   ASSUMING 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 134+00.0000 TO STA 134+10.000

SCALE: 1" = 10'
1" = 20'
H: V:

KLEIN RD
KLEIN RD
EX COMM
EX 12" W
EX AT&T LINE

Pape-Dawson
Engineers

New Braunfels
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT APPROXIMATE LOCATION
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 134+06.3454 TO STA 134+06.3454

SCALE: 1" = 10'
1" = 20'
EX 12" W
EX AT&T LINE
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPTH USING BEST AVAILABLE INFORMATION FROM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS

STA 134+09.9923 TO STA 134+09.9923

SCALE: 1" = 10'
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION

CONFIRM ALL UTILITY LOCATIONS AND GROUND, CONTRACTOR SHALL AT ASSUMED 3' BELOW EXIST UTILITIES SHOWN FROM 2.

KLEIN RD
CROSS SECTIONS

STA 134+13.5000 TO STA 134+13.5000
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 2 DEEP ATX STAGE (SHOULD CONFIRM ALL UTILITY LOCATIONS)
   AND DETERMINE PATTERN TO EXCAVATION

SCALE: 1" = 10'

1" = 20'

KLEIN RD
CROSS SECTIONS
STA 134+42,3849 TO STA 134+42,3849
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEFIES PLOW TO EXCAVATION

CROSS SECTIONS
STA 135+00.0000 TO STA 135+00.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

1. STA 135+50.0000 TO STA 135+50.0000
2. 1"=10'
3. 1"=20'
4. EX COMM
5. EX AT&T LINE
6. EX ROW
7. PR ROW
8. EX ROW
9. KP 1
10. KP 16/20
11. KP 23
12. SCALE: H: V:
13. CROSS SECTIONS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   CONFIRM ALL UTILITY LOCATIONS AND ABOVE GROUND, CONTRACTOR SHALL
   AT ASSUMED 3' BELOW EXISTING UTILITIES SHOWN FROM THE BEST AVAILABLE INFORMATION.

CROSS SECTIONS
STA 136+00.000 TO STA 136+00.000

1" = 10'
1" = 20'

SCALE: W: 70' H: 100'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 3' BELOW GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEMINISH PROFILE TO EXCAVATION

SCALE H: 1" = 10'
V: 1" = 20'

KLEIN RD
CROSS SECTIONS
STA 136+30,000 TO STA 136+30,000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 2 DEGREES 31 MINutes GRADE, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

STA 136+50,000 TO STA 136+50,000

KLEIN RD
CROSS SECTIONS

1/64 = 1'-0"
1/32 = 2'-0"
1/16 = 4'-0"

SCALE: M = 1/2" 60'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEMAS PRIORITY TO EXCAVATION

STA 137+00.0000 TO STA 137+00.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3' BELOW
EXIST UTILITIES SHOWN FROM GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
AND NOTIFY D.O.T. PRIOR TO EXCAVATION

STA 137+14.0000 TO STA 137+14.0000

SCALE: 1" = 10'
1" = 20'
SCALE: W: 20' H: 20'

NEW BRAUNFELS: 5/2/2023
PAPER: 8.5" X 11"
1. Bridge girder(s) not shown for clarity.
2. Existing utilities shown from best available information. At assumed 3' below exist ground, Contractor shall confirm all utility locations and depths prior to excavation.

CROSS SECTIONS
STA 137+81.0000 TO STA 137+81.0000

[Diagram of cross sections with coordinates and annotations]
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 3' DEPTH EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DELETE PRIOR TO EXCAVATION

CROSS SECTIONS

STA 138+50.0000 TO STA 138+50.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSEMBLY LEVEL 55KS4 GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DETERMINE Prior TO EXCAVATION

CROSS SECTIONS
STA 138+64.4251 TO STA 138+64.4251

SCALE: 1" = 10'
H: 1"
V: 20'

KLEIN RD
NEW BRAUNELS

PAPE-DAWSON
ENGINEERS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

STA 139+00.0000 TO STA 139+00.0000

SCALE: 1"= 10'  1"= 20'

KLEIN RD
CROSS SECTIONS

1/16/2023

PAPE-DAWSON ENGINEERS

NEW BRAUNFELS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

STA 139+00.1270 TO STA 139+00.1270

SCALE: 1" = 20'

DESIGNER: J. R. BURKE

PAPE-DAWSON ENGINEERS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DERIVE PLAN TO EXCAVATION

CROSS SECTIONS
STA 139+11.0000 TO STA 139+11.0000

DESIGNER: SPK REED
CHECKER: KLEIN RD

PAP E-DAWSON ENGIN EERS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   CONTACTS FOR DETAILS
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEFINES PRIOR TO EXCAVATION

CROSS SECTIONS
STA 139+23,8511 TO STA 139+23,8511

SCALE: 1"=10'
1"=20'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ADVANCE NOTICE
   CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 139+50.0000 TO STA 139+50.0000

SCALE: 1"=10'  1"=20'

DESIGN: DAVEstial YKL
DRAWN: DAVID D.
CHECKED: KIRK W.
PRINTED: 1/16/2023

PAPD
Pape-Dawson Engineers
San Antonio, TX
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DESCRIBE PATTERN OF EXCAVATION.

CROSS SECTIONS
STA 139+91,2613 TO STA 139+91,2613
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AS ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEFERS PLOW TO EXCAVATION

CROSS SECTIONS

SCALE: 1" = 10'
1" = 20'

KLEIN RD
CROSS SECTIONS
STA 140+00.000 TO STA 140+00.000

EX COMM
EX AT&T LINE
EX COMM
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DETERMINE DEPTH PRIOR TO EXCAVATION

SCALE: 1" = 20' 1" = 10'

CROSS SECTIONS
STA 140+50,000 TO STA 140+50,000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEMAND PION TO EXCAVATION

SCALE: W: 1"=20' H: 1"=20'

CROSS SECTIONS

STA 140+62,2775 TO STA 140+62,2775

KLEIN RD
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

SCALE: 1" = 10'

EX 12" W
EX COMM
EX AT&T LINE
EX COMM
EX COMM

STA 140+90.0000

CROSS SECTIONS
STA 140+90,0000 TO STA 140+90,0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPT AND CLARITY.
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPT PRIOR TO EXCAVATION

CROSS SECTIONS
STA 141+00,000 TO STA 141+00,000

Scale: 1"=10'
1"=20'

Pape-Dawson Engineers
San Antonio, TX
3/15/2021

New Braunfels
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITY SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 141+07.0000 TO STA 141+07.0000

SCALE: 1"=10'

DESIGN FIRM:
PEAPE-DAWSON ENGINEERS
CROSS SECTIONS

STA 141+50,0000 TO STA 141+50,0000

NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPTH
   THE CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

SCALE: 1" = 10'
NOTES:

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPT. LOCATIONS.

GROUND, CONTRACTOR SHALL AT ASSUMED 3' BELOW EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AND DEFERR TO EXCAVATION.

CROSS SECTIONS:

STA 142+00.0000 TO STA 142+00.0000

SCALE: 1"=10'

DESIGNED BY: NEW BRAUNELS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AS ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFORM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

SCALE: H: 1" = 10'   V: 1" = 20'

KLEIN RD
CROSS SECTIONS
STA 142+50,000 TO STA 142+50,000

PAPE-DAWSON
ENGINEERS

Design File Name: 103-000008-01-KLEIN-CROSS.dgn
Print Date: 1/4/2021

NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION.

STA 143+19.5791 TO STA 143+19.5791

1" = 10'
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 3' BELOW EXIST GROUND. CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

SCALE: 1"= 10' 1"= 20'

KLEIN RD
CROSS SECTIONS

STA 143+50.0000 TO STA 143+50.0000

DESIGNER: GLENN WILBER
PDATE: 6-21-01
SIGNATURE: NEIL HANDELMAN

APPROVED:
G. W. KEEN
4-16-01

Pape-Dawson Engineers

6500 Sanchor, Suite 300
San Antonio, TX 78210-3194

Toll Free: 800-538-4663
Phone: 210-733-4511
Fax: 210-733-4491
E-Mail: info@pdce.com
Website: www.pdce.com

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New Braunfels
CSP 23-004

STA 143+50.0000 TO STA 143+50.0000
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPTH AND FROM ALL AVAILABLE INFORMATION. CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

SCALE: 1"=10'

NEW BRAUNFELS

KLEIN RD

CROSS SECTIONS

STA 143+57,0000 TO STA 143+57,0000

Design Firm: Pape-Dawson Engineers
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEFER PRIOR TO EXCAVATION

CROSS SECTIONS

STA 144+00.0000 TO STA 144+00.0000

Scale: 1" = 20'

KLEIN RD

Pape-Dawson Engineers

Design File: 1156/21

Printed on: 11/6/2021
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASIGNED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 144+50.0000 TO STA 144+50.0000

SCALE: 1" = 10' 1" = 20'

KLEIN RD
EX COMM
EX 12" W
EX AT&T LINE
EX COMM
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 0 FEET DEPTH
   GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS

STA 145+00.0000 TO STA 145+00.0000

SCALE: 1" = 10'
1" = 20'

DESIGN: PAPE-DAWSON
ENGINEERS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3’ BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS

CROSS SECTIONS
STA 145+18.4005 TO STA 145+18.4005

1/16
1/20

KLEIN RD
CROSS SECTIONS

KLEIN RD
SCALE: 1"=10'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSESSED DEPT.
GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND SETTLE PRIORITY OF EXCAVATION

SCALE: 1" = 20'

KLEIN RD
CROSS SECTIONS
STA 145+50.0000 TO STA 145+50.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

STA 146+00.0000 TO STA 146+00.0000
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTH PRIOR TO EXCAVATION

STA 146+50.0000 TO STA 146+50.0000

SCALE: 1" = 1' 0"
1" = 20'

H: V:

EX COMM
EX AT&T LINE
EX 12" W
NOTES
1. BRIDGE GIRDER NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS 
   DATE: 02-18-2021
   TIME: 11:59 AM

SCALE: H:\"= 10\'
V:\"= 10\'
H:\"= 20\'
V:\"= 20\'

KLEIN RD
CROSS SECTIONS
STA 147+00.0000 TO STA 147+00.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND. CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

CROSS SECTIONS
STA 147+23.5130 TO STA 147+23.5130
NOTES
1. BRIDGE GIRDER NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AS ASSIGNED BY ADMINISTRATION OFFICER
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEPTH PRIOR TO EXCAVATION

STA 147+50.0000 TO STA 147+50.0000

SCALE: 1" = 20'
NOTES

1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO EXCAVATION

STA 147+69.1782 TO STA 147+69.1782

CROSS SECTIONS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   AT ASSIGNED 2' BELOW 637.54.
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS.
   AND DEPTHS PRIOR TO EXCAVATION.

STA 148+00.0000 TO STA 148+00.0000

SCALE 1"=1'-0"
1"=20'

KLEIN RD
CROSS SECTIONS

EX COMM
EX 12" W
EX AT&T LINE
EX COMM
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITY LOCATIONS SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPTH (3')
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS

CROSS SECTIONS
STA 148+50,000 TO STA 148+50,000

SCALE: 1" = 10'
1" = 20'

SCALE: 1" = 10'
1" = 20'

DESIGNER: PAPERWORK ENGINEERS

KLEIN RD
CROSS SECTIONS
STA 148+50,000 TO STA 148+50,000

SCALE: 1" = 10'
1" = 20'

DESIGNER: PAPERWORK ENGINEERS

KLEIN RD
CROSS SECTIONS
STA 148+50,000 TO STA 148+50,000

SCALE: 1" = 10'
1" = 20'

DESIGNER: PAPERWORK ENGINEERS

KLEIN RD
CROSS SECTIONS
STA 148+50,000 TO STA 148+50,000

SCALE: 1" = 10'
1" = 20'

DESIGNER: PAPERWORK ENGINEERS
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION,
   AMENDED WHERE CONSTRUCTION AUTHORITY REQUESTS,
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DEMO PRIOR TO EXCAVATION

CROSS SECTIONS
STA 149+00.0000 TO STA 149+00.0000

SKEW KLEIN RD EX COMM EX ROW EX 12" W EX AT&T LINE EX COMM
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 3' BELOW EXIST
   GROUND, CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DELIVER METER TO EXCAVATION

CROSS SECTIONS
STA 149+22.0861 TO STA 149+22.0861
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASIAN 2 DEPT 435
   GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DESCRIBE PWM TO EXCAVATION

STA 150+00.000 TO STA 150+00.000

CROSS SECTIONS

SCALE: 1"=10'
1"=20'

KLEIN RD

EX COMM
EX ROW
EX COMM
EX ROW

DESIGNER: NEAL BAINWELL
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEFEND PRIOR TO EXCAVATION.

CROSS SECTIONS
STA 150+00.0596 TO STA 150+00.0596

SCALE: 1" = 10'

DESIGNER:
PAPÉ-DAWSON ENGINEERS

KLEIN RD
CROSS SECTIONS
STA 150+00.0596 TO STA 150+00.0596
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY.
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION.
   DISAGREEMENT BETWEEN EXIST UTILITIES ShOWN FROM BEST AVAILABLE INFORMATION AND
   CONTRACTOR'S OBSERVATIONS SHALL ARBITER RESOLVE.

STA 150+50.0000 TO STA 150+50.0000

SCALE: 1"= 10'
1"= 20'
H: 5/8" V: 1/4"

EX COMM
EX 12" W
EX AT&T LINE
EX COMM

KLEIN RD
CROSS SECTIONS
STA 150+50,0000 TO STA 150+50,0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED GRID DISTANCE.
CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DEMISE PRIOR TO EXCAVATION.

STA 151+00.0000 TO STA 151+00.0000

KLEIN RD
CROSS SECTIONS

SCALE: 1" = 20'

DESIGN ENGINEER: KLEIN RD
SHEET NO: 1/6
DATE: 11/30/2021
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AND ASSUMED 3' BELOW EXIST GROUND. CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DETERMINE MOUND TO EXCAVATION.
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT TIME OF DESIGN
   CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   BEFORE EXCAVATION
3. BRIDGE GIRDERS NOT SHOWN FOR CLARITY

STA 151+30.0596 TO STA 151+30.0596

SCALE: 1"= 10'
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION AT ASSIGNED DEPT X-RADS
   GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS AND DIMENSIONS PRIOR TO EXCAVATION

SCALE: 1"= 10'

CROSS SECTIONS
STA 151+50,000 TO STA 151+50,000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXISTING UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSIGNED 3" DEEP X 3' ABOVE GROUND. CONTRACTOR SHALL
   CONFIRM ALL UTILITY LOCATIONS
   AND DECLINE prior TO EXCAVATION

CROSS SECTIONS
STA 152+00.0000 TO STA 152+00.0000
NOTES
1. BRIDGE GIRDERS NOT SHOWN FOR CLARITY
2. EXIST UTILITIES SHOWN FROM BEST AVAILABLE INFORMATION
   AT ASSUMED 3' BELOW EXIST GROUND, CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS
   AND DESIGNS PRIOR TO EXCAVATION

SCALE: 1" = 10'

CROSS SECTIONS
STA 152+08.4245 TO STA 152+08.4245

1/20 1/10 1/6

KLEIN RD

PAPE-DAWSON ENGINEERS