



**PERMIT APPLICATION REVIEW FORM FOR  
CABLE, CONDUIT, AND POLE LINE ACTIVITY  
IN FORT BEND COUNTY**

**Fort Bend County  
Engineering Department**  
301 Jackson Suite 401  
Richmond, Texas 77469  
281.633.7500  
[Permits@fortbendcountytx.gov](mailto:Permits@fortbendcountytx.gov)

- ☒ **Right of Way Permit**  
☐ **Commercial Driveway Permit**

Permit No: 2017-14015

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

**(1) COMPLETE APPLICATION FORM:**

- |                                     |                                                          |
|-------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> | a. Name of road, street, and/or drainage ditch affected. |
| <input checked="" type="checkbox"/> | b. Vicinity map showing course of directions             |
| <input checked="" type="checkbox"/> | c. Plans and specifications                              |

**(2) BOND:**

- |                                     |                                            |                                                                                 |                     |
|-------------------------------------|--------------------------------------------|---------------------------------------------------------------------------------|---------------------|
| <input type="checkbox"/>            | County Attorney, approval when applicable. |                                                                                 |                     |
| <input checked="" type="checkbox"/> | Perpetual bond currently posted.           | Bond No: <span style="background-color: black; color: black;">[REDACTED]</span> | Amount: \$50,000.00 |
| <input type="checkbox"/>            | Performance bond submitted.                | Bond No: _____                                                                  | Amount: _____       |
| <input type="checkbox"/>            | Cashier's Check                            | Check No: _____                                                                 | Amount: _____       |

**(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):**

\_\_\_\_\_  
Drainage District Approval

\_\_\_\_\_  
Date

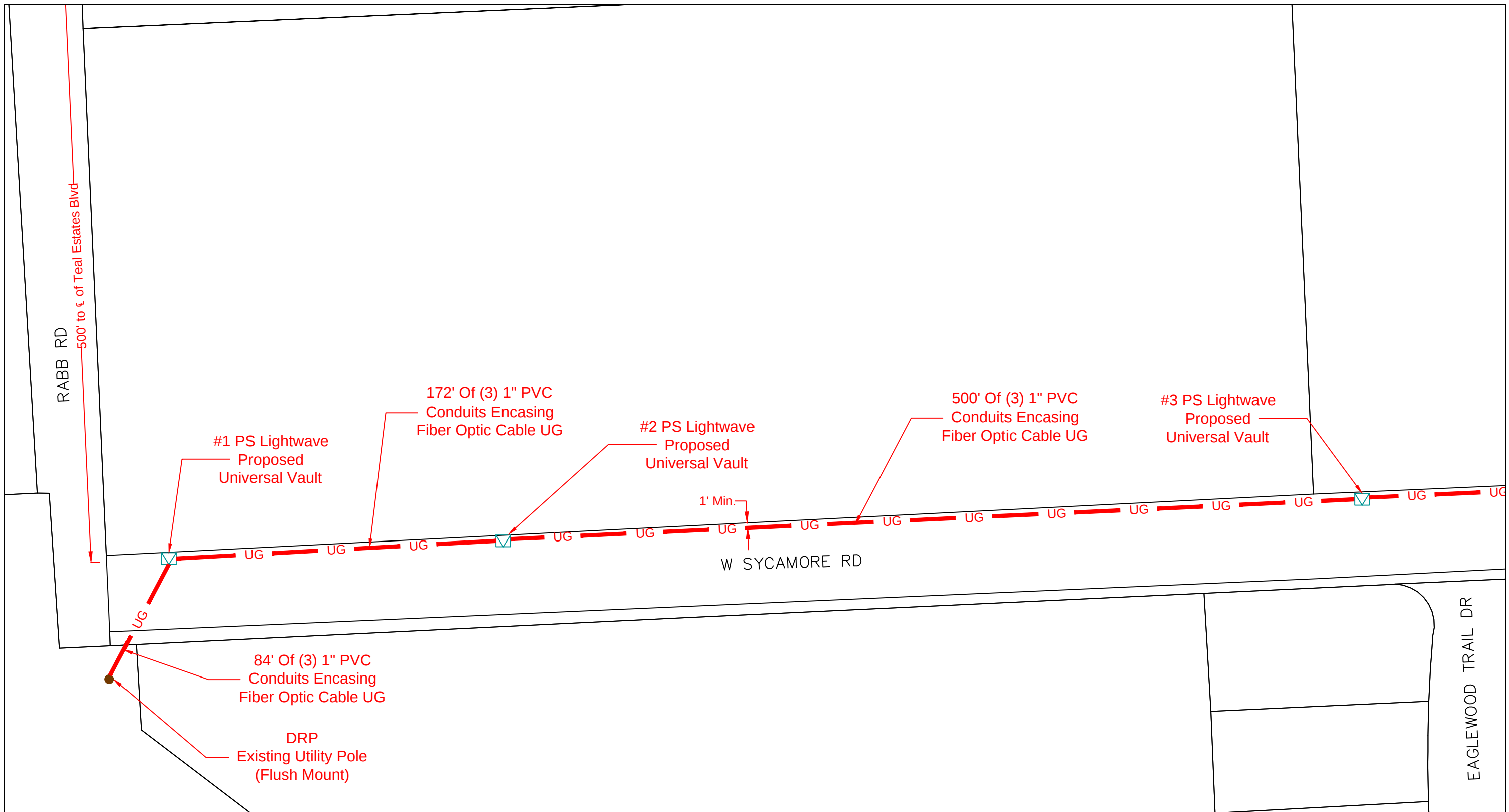
**We have reviewed this project and agree it meets minimum requirements.**

*Charles O. Ay*

\_\_\_\_\_  
Permit Administrator

\_\_\_\_\_  
Date

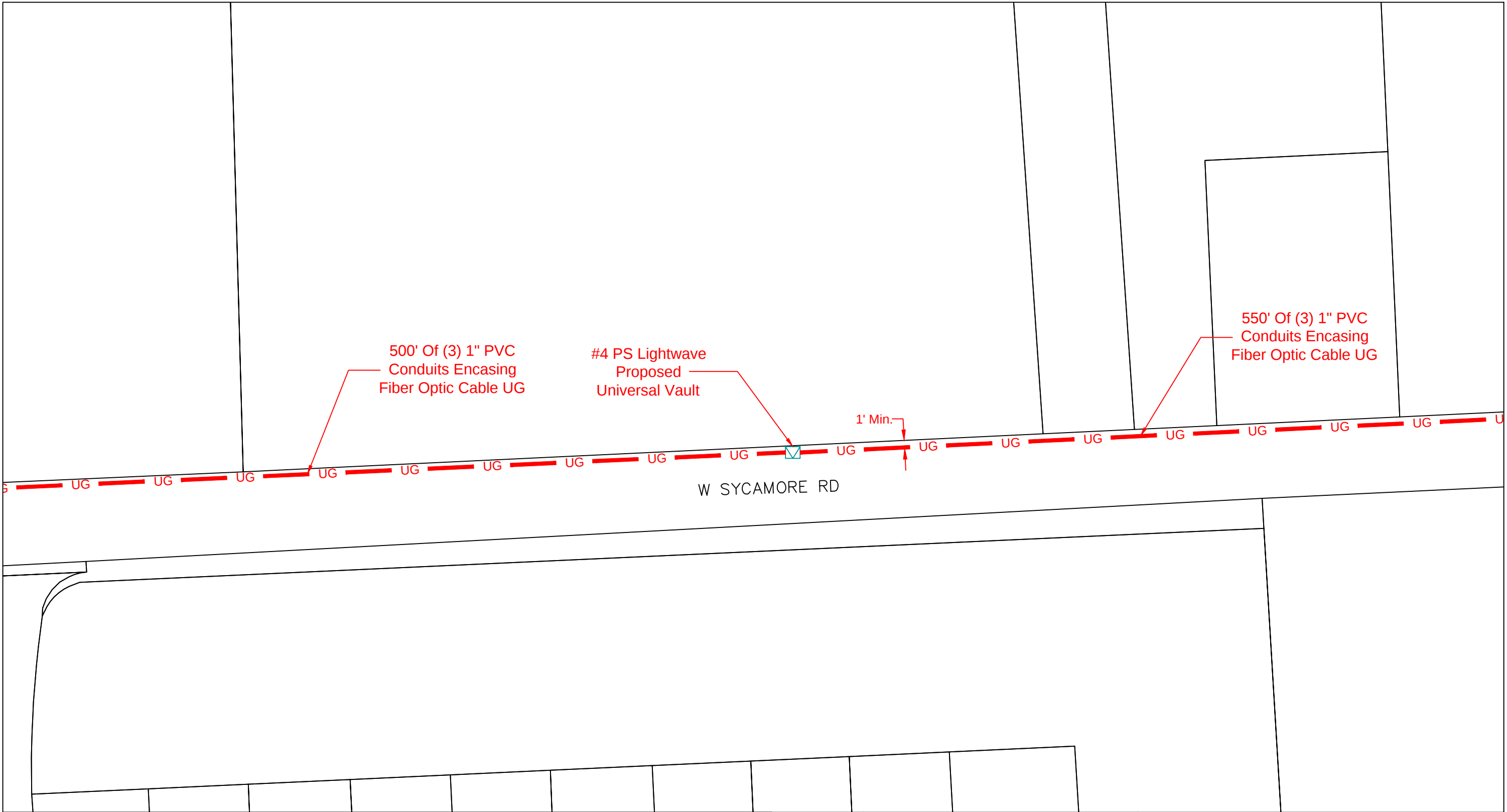
Deputy



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |                                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>LEGEND</div> <div><div><div>UG</div><div>3(1") HDPE W/ F.O. CABLE</div></div><div><div>UG</div><div>3(1.25") HDPE W/ F.O. CABLE</div></div><div><div>UG</div><div>1(2") HDPE W/ F.O. CABLE</div></div><div><div>UG</div><div>1(4") HDPE W/ 3(1.25")HDPE</div></div><div><div></div><div>FLEX INNERDUCT (INSIDE)</div></div><div><div>AIR</div><div>AERIAL FIBER OPTIC CABLE</div></div><div><div>CAT5</div><div>CAT5 CABLE</div></div></div> <div><div><div></div><div>PROPOSED CONDUIT</div></div><div><div></div><div>EXISTING CONDUIT</div></div><div><div>EMT</div><div>1.25" EMT</div></div><div><div>R/W</div><div>RIGHT-OF-WAY</div></div><div><div>EOP</div><div>EDGE-OF-PAVEMENT</div></div><div><div></div><div>FENCE</div></div><div><div></div><div>RACK LOCATION</div></div></div> <div><div><div></div><div>PSLW SET POLE</div></div><div><div></div><div>EXISTING SET POLE</div></div><div><div></div><div>EXISTING UTILITY POLE</div></div><div><div></div><div>PROPOSED PSLW VAULT (24"x36"x24")</div></div><div><div></div><div>EXISTING VAULT</div></div><div><div></div><div>PULLBOX</div></div><div><div></div><div>MDF LOCATION</div></div></div> |  |  | <div><div><div></div><div>PSLIGHTWAVE</div><div>PROPRIETARY INFORMATION - PROPERTY OF PS LIGHTWAVE</div></div><div><div>SCALE: 1"=50'</div><div>PAGE: 1</div><div>OF: 7</div></div></div> |  | <div><div><div>REVISION#1: Rev#1</div><div>DATE: Rev#1 Date</div></div><div><div>REVISION#2: Rev#2</div><div>DATE: Rev#2 Date</div></div><div><div>REVISION#3: Rev#3</div><div>DATE: Rev#3 Date</div></div><div><div>REVISION#4: Rev#4</div><div>DATE: Rev#4 Date</div></div></div> | <div><div>CUSTOMER ID:<br/>JOB# 0616-688 PLW</div><div>CUSTOMER: Notice of Proposed Utility Installation</div><div>ADDRESS: 1100 W Sycamore Rd</div><div><div>CITY/ZIP: Fresno, TX 77545</div><div>COUNTY: Fort Bend</div></div><div><div>TENANTS:</div><div># OF FLOORS:</div><div>DWG#:</div><div>KEY MAP: 651C</div></div><div><div>WO#: 94652</div><div>JOB#: 0616-688</div><div>DRAWN BY: GG</div><div>DATE: 05/18/17</div></div><div><div>APPROVED BY:</div><div>DATE:</div></div></div> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



|                         |                             |                  |                       |               |                   |                                                   |              |                |              |                  |
|-------------------------|-----------------------------|------------------|-----------------------|---------------|-------------------|---------------------------------------------------|--------------|----------------|--------------|------------------|
| LEGEND                  |                             |                  |                       |               |                   | CUSTOMER ID: JOB# 0616-688 PLW                    |              |                |              |                  |
| UG                      | 3(1") HDPE W/ F.O. CABLE    | PROPOSED CONDUIT | PSLW SET POLE         |               |                   | CUSTOMER: Notice of Proposed Utility Installation |              |                |              |                  |
| UG                      | 3(1.25") HDPE W/ F.O. CABLE | EXISTING CONDUIT | EXISTING SET POLE     |               |                   |                                                   |              |                |              |                  |
| UG                      | 1(2") HDPE W/ F.O. CABLE    | EMT              | EXISTING UTILITY POLE |               |                   |                                                   |              |                |              |                  |
| UG                      | 1(4") HDPE W/ 3(1.25")HDPE  | R/W              | EXISTING VAULT        |               |                   |                                                   |              |                |              |                  |
| FLEX INNERDUCT (INSIDE) |                             | EOP              | PULLBOX               |               |                   |                                                   |              |                |              |                  |
| AIR                     | AERIAL FIBER OPTIC CABLE    | FENCE            | MDF LOCATION          |               |                   |                                                   |              |                |              |                  |
| CAT5                    | CAT5 CABLE                  | RACK LOCATION    |                       |               |                   |                                                   |              |                |              |                  |
|                         |                             |                  |                       | SCALE: 1"=50' | REVISION#1: Rev#1 |                                                   |              |                |              | DATE: Rev#1 Date |
|                         |                             |                  |                       | PAGE: 2       | REVISION#2: Rev#2 | DATE: Rev#2 Date                                  | TENANTS:     | # OF FLOORS:   | DWG#:        | KEY MAP: 651C    |
|                         |                             |                  |                       | OF: 7         | REVISION#3: Rev#3 | DATE: Rev#3 Date                                  | WO#: 94652   | JOB#: 0616-688 | DRAWN BY: GG | DATE: 05/18/17   |
|                         |                             |                  |                       |               | REVISION#4: Rev#4 | DATE: Rev#4 Date                                  | APPROVED BY: |                | DATE:        |                  |



UG

3(1") HDPE W/ F.O. CABLE

UG

3(1.25") HDPE W/ F.O. CABLE

UG

1(2") HDPE W/ F.O. CABLE

UG

1(4") HDPE W/ 3(1.25")HDPE

FLEX INNERDUCT (INSIDE)

AIR

AERIAL FIBER OPTIC CABLE

CAT5

CAT5 CABLE

PROPOSED CONDUIT

EXISTING CONDUIT

EMT

1.25" EMT

R/W

RIGHT-OF-WAY

EOP

EDGE-OF-PAVEMENT

FENCE

RACK LOCATION

PSLW SET POLE

EXISTING SET POLE

EXISTING UTILITY POLE

PROPOSED PSLW VAULT (24"x36"x24")

EXISTING VAULT

PULLBOX

MDF LOCATION

SCALE: 1"=50'

PAGE: 3

OF: 7

PSLIGHTWAVE

PROPRIETARY INFORMATION - PROPERTY OF PSLIGHTWAVE

REVISION#1: Rev#1

DATE: Rev#1 Date

REVISION#2: Rev#2

DATE: Rev#2 Date

REVISION#3: Rev#3

DATE: Rev#3 Date

REVISION#4: Rev#4

DATE: Rev#4 Date

CUSTOMER ID:  
JOB# 0616-688 PLW

CUSTOMER: Notice of Proposed Utility Installation

ADDRESS: 1100 W Sycamore Rd

CITY/ZIP: Fresno, TX 77545

COUNTY: Fort Bend

TENANTS:

# OF FLOORS:

DWG#:

KEY MAP: 651C

WO#: 94652

JOB#: 0616-688

DRAWN BY: GG

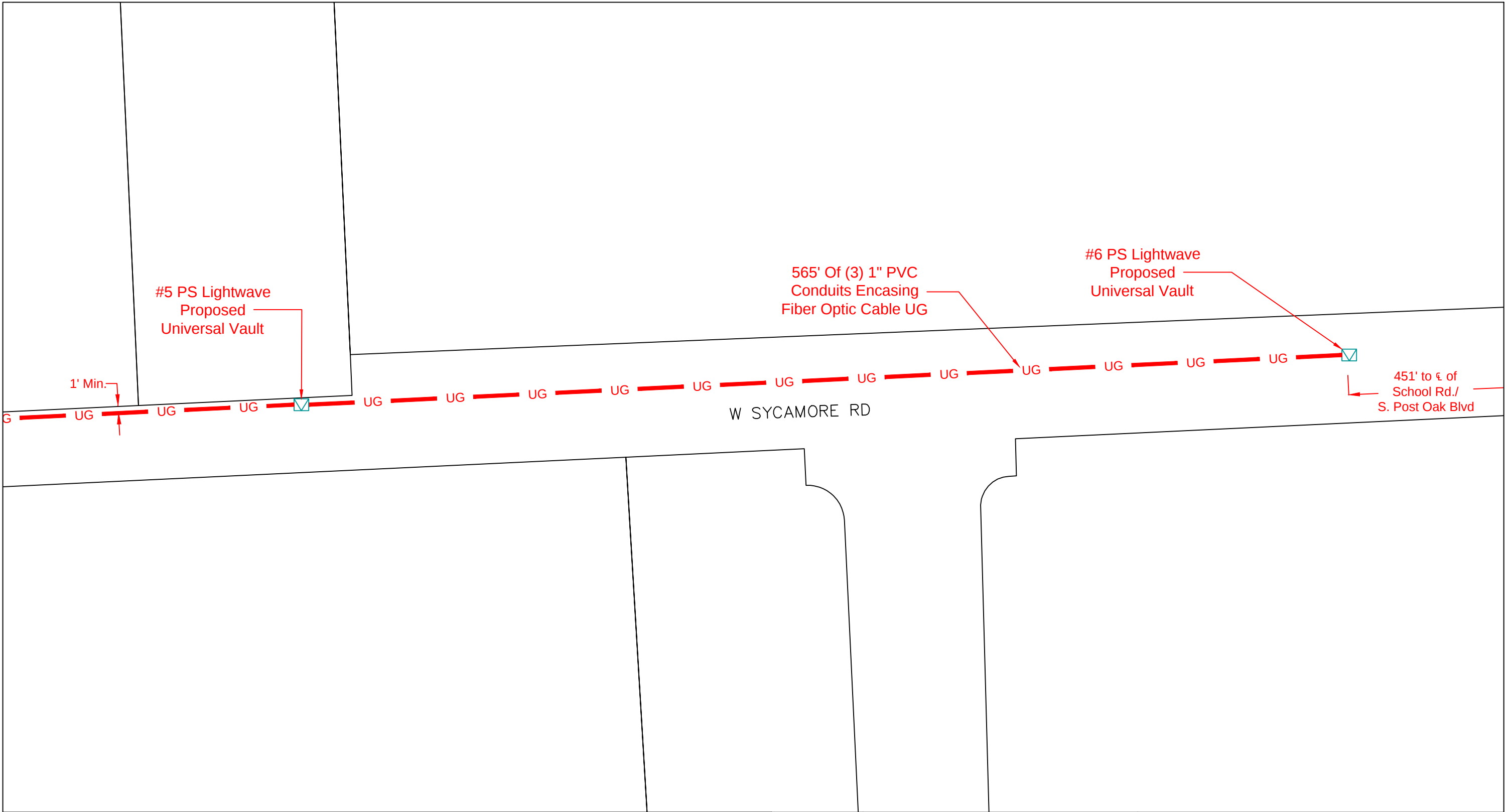
DATE: 05/18/17

APPROVED BY:

DATE:



|                                                                                                             |  |                                                                                                          |  |                                                                                                      |  |                                                                                                                         |  |                                                                                                      |  |                                                                                       |                                                                                       |                                |  |                |  |
|-------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------|--|----------------|--|
| LEGEND                                                                                                      |  |                                                                                                          |  |                                                                                                      |  |                                                                                                                         |  |                                                                                                      |  |  |  | CUSTOMER ID: JOB# 0616-688 PLW |  |                |  |
|  UG                      |  | 3(1") HDPE W/ F.O. CABLE                                                                                 |  |  PROPOSED CONDUIT |  |  PSLW SET POLE                     |  | CUSTOMER: Notice of Proposed Utility Installation                                                    |  |                                                                                       |                                                                                       |                                |  |                |  |
|  UG                      |  | 3(1.25") HDPE W/ F.O. CABLE                                                                              |  |  EXISTING CONDUIT |  |  EXISTING SET POLE                 |  | ADDRESS: 1100 W Sycamore Rd                                                                          |  |                                                                                       |                                                                                       |                                |  |                |  |
|  UG                      |  | 1(2") HDPE W/ F.O. CABLE                                                                                 |  |  EMT 1.25" EMT    |  |  EXISTING UTILITY POLE             |  | CITY/ZIP: Fresno, TX 77545                                                                           |  |                                                                                       |                                                                                       |                                |  |                |  |
|  UG                      |  | 1(4") HDPE W/ 3(1.25")HDPE                                                                               |  |  R/W RIGHT-OF-WAY |  |  PROPOSED PSLW VAULT (24"x36"x24") |  |  EXISTING VAULT |  | COUNTY: Fort Bend                                                                     |                                                                                       |                                |  |                |  |
|  FLEX INNERDUCT (INSIDE) |  |  EOP EDGE-OF-PAVEMENT |  |  FENCE            |  |  PULLBOX                           |  |  MDF LOCATION   |  | TENANTS:                                                                              |                                                                                       |                                |  |                |  |
|  AIR                     |  | AERIAL FIBER OPTIC CABLE                                                                                 |  |  RACK LOCATION    |  |                                                                                                                         |  |                                                                                                      |  | # OF FLOORS:                                                                          |                                                                                       |                                |  |                |  |
|  CAT5                    |  | CAT5 CABLE                                                                                               |  |                                                                                                      |  |                                                                                                                         |  |                                                                                                      |  | DWG#:                                                                                 |                                                                                       |                                |  |                |  |
|                                                                                                             |  |                                                                                                          |  |                                                                                                      |  |                                                                                                                         |  |                                                                                                      |  | KEY MAP: 651C                                                                         |                                                                                       |                                |  |                |  |
| SCALE: 1"=50'                                                                                               |  |                                                                                                          |  |                                                                                                      |  |                                                                                                                         |  |                                                                                                      |  | REVISION#1: Rev#1                                                                     |                                                                                       | DATE: Rev#1 Date               |  | WO#:           |  |
| PAGE: 4                                                                                                     |  |                                                                                                          |  |                                                                                                      |  |                                                                                                                         |  |                                                                                                      |  | REVISION#2: Rev#2                                                                     |                                                                                       | DATE: Rev#2 Date               |  | JOB#:          |  |
| OF: 7                                                                                                       |  |                                                                                                          |  |                                                                                                      |  |                                                                                                                         |  |                                                                                                      |  | REVISION#3: Rev#3                                                                     |                                                                                       | DATE: Rev#3 Date               |  | DRAWN BY: GG   |  |
|                                                                                                             |  |                                                                                                          |  |                                                                                                      |  |                                                                                                                         |  |                                                                                                      |  | REVISION#4: Rev#4                                                                     |                                                                                       | DATE: Rev#4 Date               |  | DATE: 05/18/17 |  |
|                                                                                                             |  |                                                                                                          |  |                                                                                                      |  |                                                                                                                         |  |                                                                                                      |  |                                                                                       |                                                                                       | APPROVED BY:                   |  | DATE:          |  |



UG

3(1") HDPE W/ F.O. CABLE

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3(1.25") HDPE W/ F.O. CABLE

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1(2") HDPE W/ F.O. CABLE

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1(4") HDPE W/ 3(1.25")HDPE

FLEX INNERDUCT (INSIDE)

AIR

AERIAL FIBER OPTIC CABLE

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CAT5 CABLE

PROPOSED CONDUIT

EXISTING CONDUIT

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1.25" EMT

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PROPOSED PSLW VAULT (24"x36"x24")

EXISTING VAULT

PULLBOX

MDF LOCATION

SCALE: 1"=50'

PAGE: 5

OF: 7

PS LIGHTWAVE

PROPRIETARY INFORMATION - PROPERTY OF PS LIGHTWAVE

|                   |                  |
|-------------------|------------------|
| REVISION#1: Rev#1 | DATE: Rev#1 Date |
| REVISION#2: Rev#2 | DATE: Rev#2 Date |
| REVISION#3: Rev#3 | DATE: Rev#3 Date |
| REVISION#4: Rev#4 | DATE: Rev#4 Date |

|                                                   |                |                   |                |
|---------------------------------------------------|----------------|-------------------|----------------|
| CUSTOMER ID: JOB# 0616-688 PLW                    |                |                   |                |
| CUSTOMER: Notice of Proposed Utility Installation |                |                   |                |
| ADDRESS: 1100 W Sycamore Rd                       |                |                   |                |
| CITY/ZIP: Fresno, TX 77545                        |                | COUNTY: Fort Bend |                |
| TENANTS:                                          | # OF FLOORS:   | DWG#:             | KEY MAP: 651C  |
| WO#: 94652                                        | JOB#: 0616-688 | DRAWN BY: GG      | DATE: 05/18/17 |
| APPROVED BY:                                      |                | DATE:             |                |

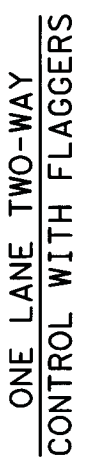
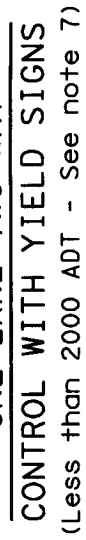


- 1) Surface to be restored to its original condition in compliance with Fort Bend County Standards.
- 2) Contractors shall provide and install traffic control devices in conformance with part VI of Texas manual on Uniform Traffic Control Devices (TMUTCD—Latest Edition with Revisions) during construction.
- 3) No Lanes shall be blocked 7am—9am and 4pm—6:30pm Monday thru Friday.



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |                                                       |  |  |                                                                                                                                                                                                              |  |  |                                                                                                                                                                                                                                               |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |                                                       |  |  |                                                                                                                                                                                                              |  |  | Job#<br><b>JOB# 0616-688 PLW</b>                                                                                                                                                                                                              |  |  |
| <b>LEGEND</b><br><b>UG</b> 3(1") HDPE W/ F.O. CABLE<br><b>UG</b> 3(1.25") HDPE W/ F.O. CABLE<br><b>UG</b> 1(2") HDPE W/ F.O. CABLE<br><b>UG</b> 1(4") HDPE W/ 3(1.25")HDPE<br><b>FLEX</b> INNERDUCT<br><b>AIR</b> AERIAL FIBER OPTIC CABLE<br><b>CAT5</b> CAT5 CABLE<br><b>PROPOSED CONDUIT</b><br><b>EXISTING CONDUIT</b><br><b>EMT</b> 1.25" EMT<br><b>RIGHT-OF-WAY</b><br><b>EDGE-OF-PAVEMENT</b><br><b>FENCE</b><br><b>RACK LOCATION</b><br><b>PSLW SET POLE</b><br><b>EXISTING SET POLE</b><br><b>EXISTING UTILITY POLE</b><br><b>PROPOSED PSLW VAULT (24"x36"x24")</b><br><b>EXISTING VAULT</b><br><b>PULLBOX</b><br><b>MDF LOCATION</b> |  |  | SCALE: <b>N.T.S</b><br>PAGE: <b>7</b><br>OF: <b>7</b> |  |  | REVISION#1: <b>Rev#1</b> DATE: <b>Rev#1 Date</b><br>REVISION#2: <b>Rev#2</b> DATE: <b>Rev#2 Date</b><br>REVISION#3: <b>Rev#3</b> DATE: <b>Rev#3 Date</b><br>REVISION#4: <b>Rev#4</b> DATE: <b>Rev#4 Date</b> |  |  | CITY/ZIP: <b>Fresno, TX 77545</b> COUNTY: <b>Fort Bend</b><br>TENANTS:      # OF FLOORS:      DWG#:      KEY MAP: <b>651C</b><br>WO#: <b>94652</b> JOB#: <b>0616-688</b> DRAWN BY: <b>GG</b> DATE: <b>05/18/17</b><br>APPROVED BY:      DATE: |  |  |

DATE:  
FILE:



| Posted Speed<br>*<br>* | Formula               | Minimum Desirable Taper Lengths<br>** |          |          | Suggested Maximum Spacing of Channelizing Devices |                 | Minimum Sign Spacing<br>*X*<br>Distance | Suggested Longitudinal Buffer Space<br>"g"<br>" | Stopping Sight Distance |
|------------------------|-----------------------|---------------------------------------|----------|----------|---------------------------------------------------|-----------------|-----------------------------------------|-------------------------------------------------|-------------------------|
|                        |                       | 10'<br>Offset                         | 11'<br>" | 12'<br>" | On a<br>Taper                                     | On a<br>Tangent |                                         |                                                 |                         |
| 30                     | $L = \frac{WS^2}{60}$ | 150'                                  | 165'     | 180'     | 30'                                               | 60'             | 120'                                    | 90'                                             | 200'                    |
| 35                     |                       | 205'                                  | 225'     | 245'     | 35'                                               | 70'             | 160'                                    | 120'                                            | 250'                    |
| 40                     |                       | 265'                                  | 295'     | 320'     | 40'                                               | 80'             | 240'                                    | 155'                                            | 305'                    |
| 45                     |                       | 450'                                  | 495'     | 540'     | 45'                                               | 90'             | 320'                                    | 195'                                            | 360'                    |
| 50                     |                       | 500'                                  | 550'     | 600'     | 50'                                               | 100'            | 400'                                    | 240'                                            | 425'                    |
| 55                     |                       | 550'                                  | 605'     | 660'     | 55'                                               | 110'            | 500'                                    | 295'                                            | 495'                    |
| 60                     | $L = WS$              | 600'                                  | 660'     | 720'     | 60'                                               | 120'            | 600'                                    | 350'                                            | 570'                    |
| 65                     |                       | 650'                                  | 715'     | 780'     | 65'                                               | 130'            | 700'                                    | 410'                                            | 645'                    |
| 70                     |                       | 700'                                  | 770'     | 840'     | 70'                                               | 140'            | 800'                                    | 475'                                            | 730'                    |
| 75                     |                       | 750'                                  | 825'     | 900'     | 75'                                               | 150'            | 900'                                    | 540'                                            | 820'                    |

| TYPICAL USAGE |                |                       |
|---------------|----------------|-----------------------|
| MOBILE        | SHORT DURATION | SHORT TERM STATIONARY |
|               | ✓              | ✓                     |

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
4. Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or RI-2 "YIELD" sign is less than 1500 feet.
5. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
6. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

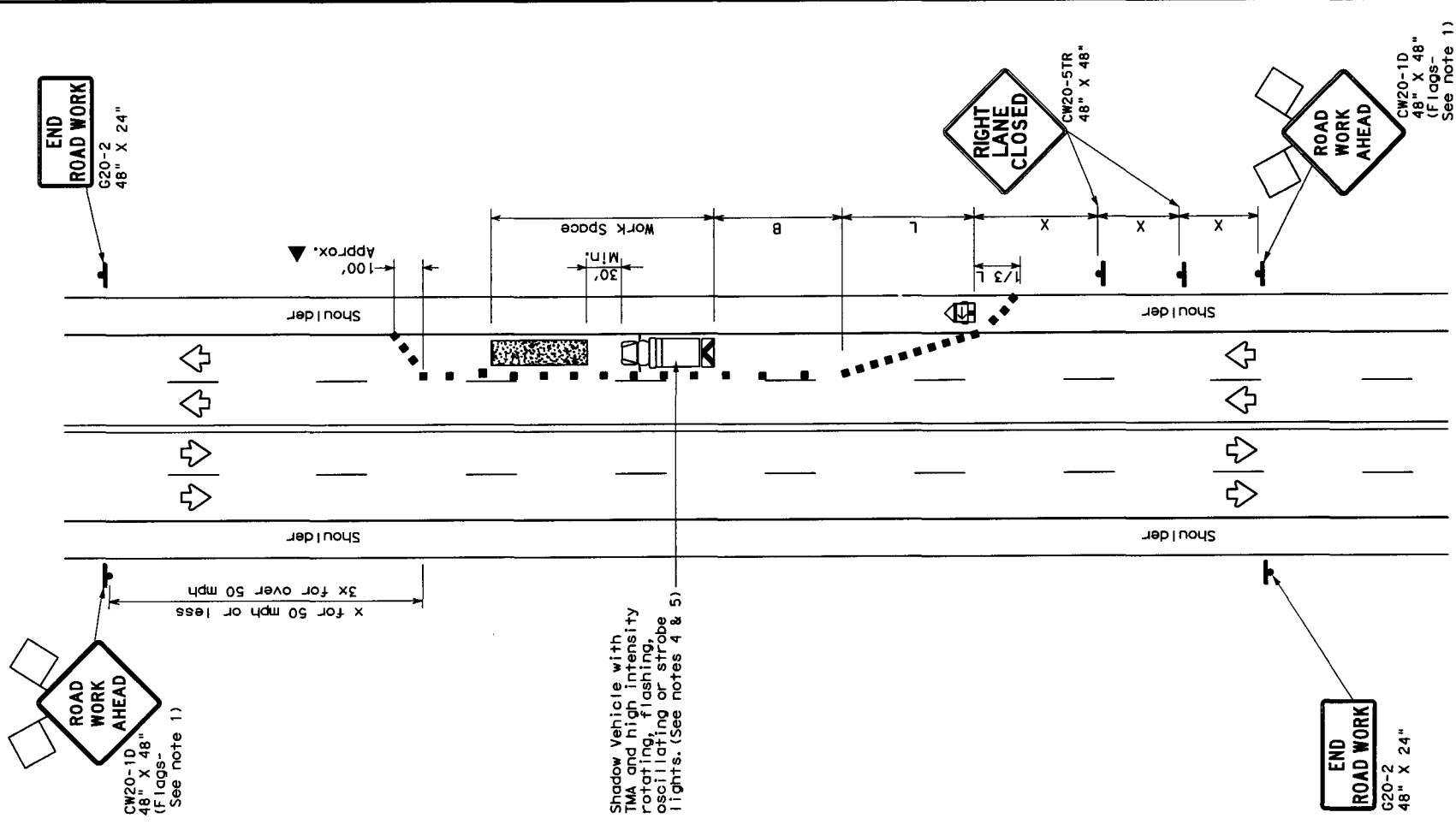
7. RI-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
8. RI-2 "YIELD" sign with RI-2op "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

9. Flaggers should use two-way radios or other methods of communication to control traffic.
10. Length of work space should be based on the ability of flaggers to communicate.
11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see Table above).
12. Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
13. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

**Texas Department of Transportation**  
Traffic Operations Division

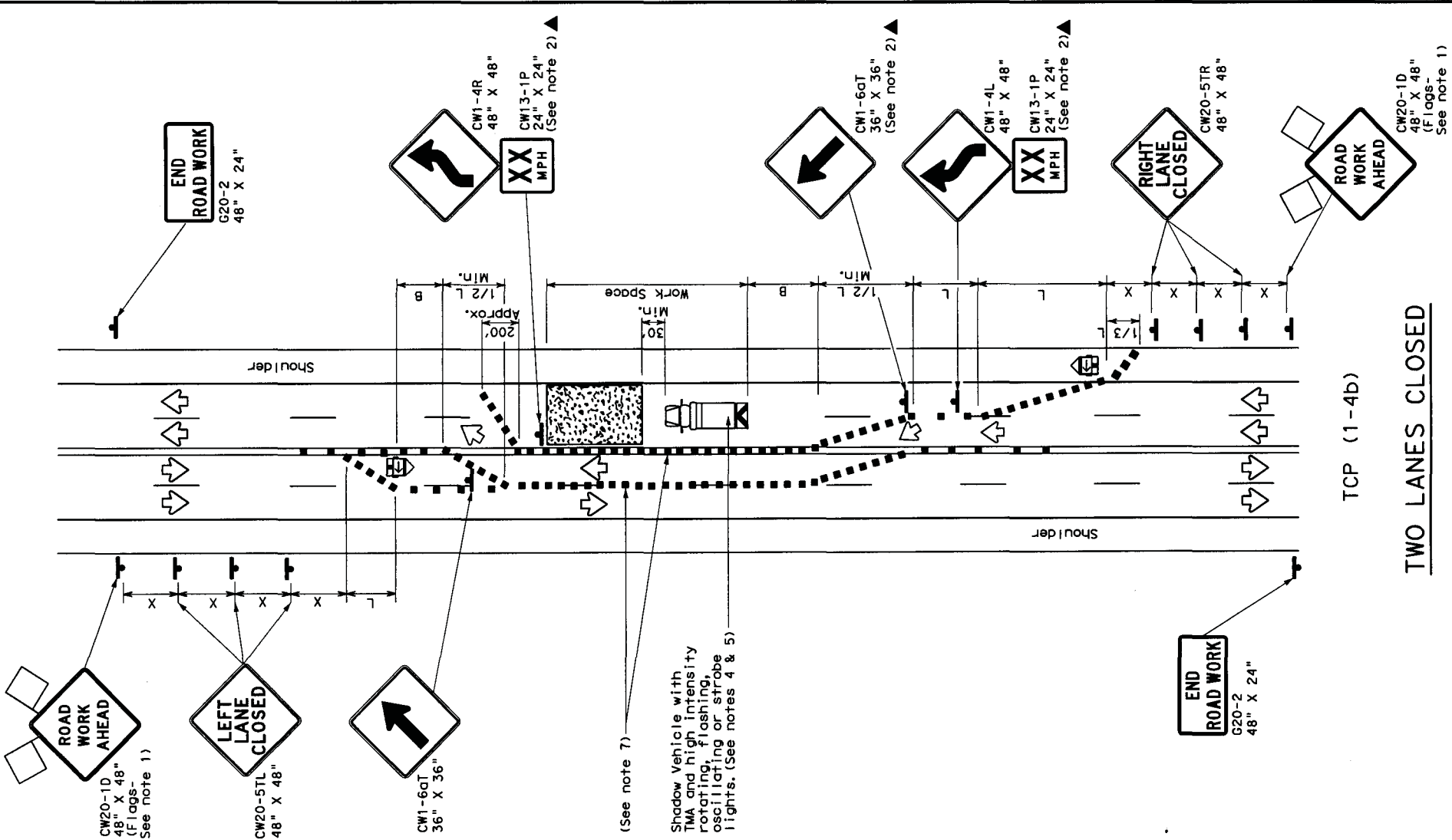
## TCP(1-2)-12

[illegible]



TCP (1-4a)

ONE LANE CLOSED



TCP (1-4b)

TWO LANES CLOSED

| LEGEND                               |                                         |
|--------------------------------------|-----------------------------------------|
| Type 3 Barricade                     | Channelizing Devices                    |
| Heavy Work Vehicle                   | Truck Mounted Attenuator (TMA)          |
| Trailer Mounted Flashing Arrow Board | Portable Changeable Message Sign (PCMS) |
| Sign                                 | Traffic Flow                            |
| Flag                                 | Flagger                                 |

| Posted Speed * | Formula               | Minimum Desirable Taper Lengths ** | Suggested Maximum Spacing of Channelizing Devices | Minimum Sign Spacing "X" | Suggested Longitudinal Buffer Space "B" |
|----------------|-----------------------|------------------------------------|---------------------------------------------------|--------------------------|-----------------------------------------|
| 30             | $L = \frac{WS^2}{60}$ | 10', 11', 12'                      | On a Tangent                                      | On a Tangent             | 90'                                     |
| 35             |                       | 150', 165', 180'                   | 30'                                               | 60'                      | 120'                                    |
| 40             |                       | 205', 225', 245'                   | 35'                                               | 70'                      | 160'                                    |
| 45             |                       | 265', 295', 320'                   | 40'                                               | 80'                      | 240'                                    |
| 50             |                       | 450', 495', 540'                   | 45'                                               | 90'                      | 320'                                    |
| 55             |                       | 500', 550', 600'                   | 50'                                               | 100'                     | 400'                                    |
| 60             |                       | 550', 605', 660'                   | 55'                                               | 110'                     | 500'                                    |
| 65             |                       | 600', 660', 720'                   | 60'                                               | 120'                     | 600'                                    |
| 70             |                       | 650', 715', 780'                   | 65'                                               | 130'                     | 700'                                    |
| 75             |                       | 700', 770', 840'                   | 70'                                               | 140'                     | 800'                                    |
|                |                       | 750', 825', 900'                   | 75'                                               | 150'                     | 900'                                    |

\* Conventional Roads Only  
\*\* Taper lengths have been rounded off.  
L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

| TYPICAL USAGE |                |                       |                      |
|---------------|----------------|-----------------------|----------------------|
| MOBILE        | SHORT DURATION | SHORT TERM STATIONARY | LONG TERM STATIONARY |
|               | ✓              | ✓                     |                      |

- GENERAL NOTES**
- Flags attached to signs where shown are REQUIRED.
  - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
  - The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.
  - A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
  - Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

**TCP (1-4a)**

6. If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.

**TCP (1-4b)**

7. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

Texas Department of Transportation  
Traffic Operations Division

## TRAFFIC CONTROL PLAN

### LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

# TCP (1-4) -12

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REVISIONS

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For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for item 502, Barricades, Signs and Traffic Handling.

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