

| 8 833 833 | LEGEND | | | | | | | | |
|------------|---|----------------|--|--|--|--|--|--|--|
| 27777 | Type 3 Borricode | | Channelizing Devices | | | | | | |
| Цþ | Heavy Work Vehicle | | Truck Mounted Attenuator (TMA) | | | | | | |
| | Trailer Mounted Flashing Arrow:Boord | M | Portable Changeable Message Sign (PCMS) | | | | | | |
| _ | Sign | \diamondsuit | Traffic Flow | | | | | | |
| \Diamond | Flag | ЦO | Flagger | | | | | | |

| Speed | Formula | ** | | | | d Maximum ng of lizing ices | Minimum Sign Specing "X" | Suggested Longitudina! Buffer Space |
|-------|-----------------------|---------------|---------------|------|-----|--------------------------------------|-----------------------------------|---|
| * | | 10' Offset | 11' Offset | | | On a Tangent | Distance | "B" |
| 30 | | 150' | 165' | 180' | 30' | 60' | 120' | 90' |
| 35 | $L = \frac{WS^2}{60}$ | 205' | 225' | 245' | 35' | 70' | 160' | 120′ |
| 40 | 00 | 265' | 295' | 320' | 40' | 80' | 240' | 155' |
| 45 | | 450' | 495' | 540' | 45' | 90' | 320' | 195' |
| 50 | | 500' | 550' | 600' | 50' | 100' | 400' | 240' |
| 55 | L=₩S | 550' | 605′ | 660' | 55' | 110' | 500' | 295' |
| 60 | E - H S | 600' | 660' | 7201 | 60' | 1201 | 600' | 350' |
| 65 | | 650' | 715' | 780' | 65' | 130' | 700' | 410' |
| 70 | | 700' | 770' | 840' | 70′ | 140' | 800, | 475′ |
| 75 | | 750' | 825' | 900' | 75′ | 150' | 900' | 540' |

X Conventional Roads Only

** Toper lengths have been rounded off.

L=Length of Toper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

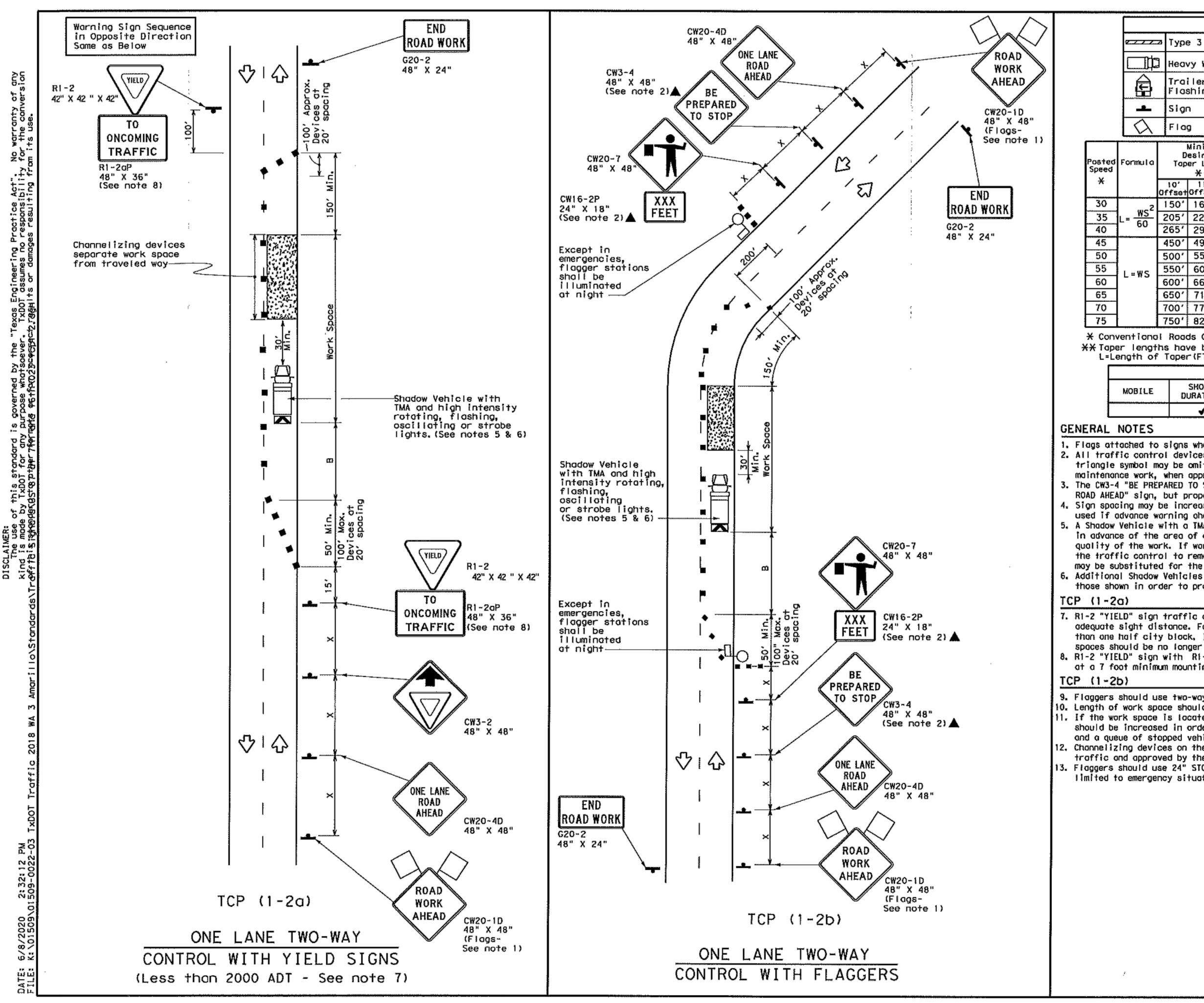
| 1 - 53 E 41 - 3 - 61 - 12 27 E - E E E E E E E E E E E E E E E E E | TYPICAL USAGE | | | | | | |
|--|-------------------|--------------------------|---------------------------------|-------------------------|--|--|--|
| MOBILE | SHORT DURATION | SHORT TERM STATIONARY | INTERMEDIATE TERM STATIONARY | LONG TERM STATIONARY | | | |
| | 1 | 1 | | | | | |

GENERAL NOTES

1. Flogs attached to signs where shown ore 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 opproved by the Engineer.
- Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
- 4. 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 offecting 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.
 5. Additional Shadow Vehicles with TMAs may be positioned off the paved
- Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
 See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
- CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roodways.

| | Texas Department | of Transp | ortation | Traffic Operations Division Standard |
|---------------------------------|-------------------------------|-----------|----------|---|
| > | TRAFFIC C CONVENT SHOUL | IONA | L ROA | 1.0 |
| CW20-1D 48" X 48" (Flags- | TCP (| | _ | |
| 48" X 48" | TCP (| | _ | CXI |
| 18" X 48" Flags- | TCP (| 1 - 1 2 |) - 18 | CX1 HEGHNAY |



| [| | (TTTT | | | LEGE | ND | | | | |
|-----|--------------------|---------------|-----------------------------------|---------------|-----------------|--|--|--|--|-------------------------------|
| | <u></u> | ⊿ Тур | e 3 Bo | rrica | de | | CI | hannelizi | ing Devices |] |
| | 口 |] Hea | vy Wor | k Veh | lcle | | Truck Mounted Attenuator (TMA) | | | |
| | Ê | | iler M shing | | d Board | M | Portable Changeable Message Sign (PCMS) | | | |
| ĺ | 🛋 Sign | | ļ | \Diamond | Т | raffic F | low | | | |
| | \bigtriangleup | Fla | g | | n : | | | lagger | ************************************** | |
| F | ormula | D | Minimur esirob er Len ** | le | Spaci Channe | ggested Maximum Spacing of Channelizing Devices | | Sign Suggested Spacing Longituding) | | Stopping Sight Distance |
| | | 10' Offset | 11' Offset | 12' Offset | On a Toper | On a Tangen | t | Distance | "B" | |
| | | 150' | 1651 | 180' | 30' | 60' | | 120' | 90' | 200' |
|]L | $=\frac{WS^2}{60}$ | 205' | 225' | 245' | 35′ | 70' | | 1601 | 120' | 250' |
| | | 265' | 295' | 320' | 40' | 80' | | 240' | 1551 | 305' |
| | | 450' | 495' | 540′ | 45' | 90' | | 320' | 1951 | 360' |
| | | 500' | 550' | 600' | 50' | 100' | | 400' | 240′ | 425' |
| | L≃₩S | 550' | 6051 | 660' | 55' | 110' | | 5001 | 2951 | 495′ |
| ן י | - "" | 600' | 660' | 720' | 60' | 120' | | 600' | 350' | 570' |
| | : | 650' | 715′ | 780' | 65 <i>°</i> | 130' | | 700′ | 410' | 645′ |
| | | 700' | 770' | 840' | 70' | 140' | | 800' | 475' | 730' |
| Ŀ | | 750' | 825' | 900' | 75' | 150' | | 900' | 540' | 820' |

* Conventional Roads Only

XX Toper 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 | INTERMEDIATE TERM STATIONARY | LONG 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 ofter the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.

4. Sign spacing may be increased or an additional CW20-10 "ROAD WORK AHEAD" sign may be used if advance warning chead of the flagger or R1-2 "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. R1-2 "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.

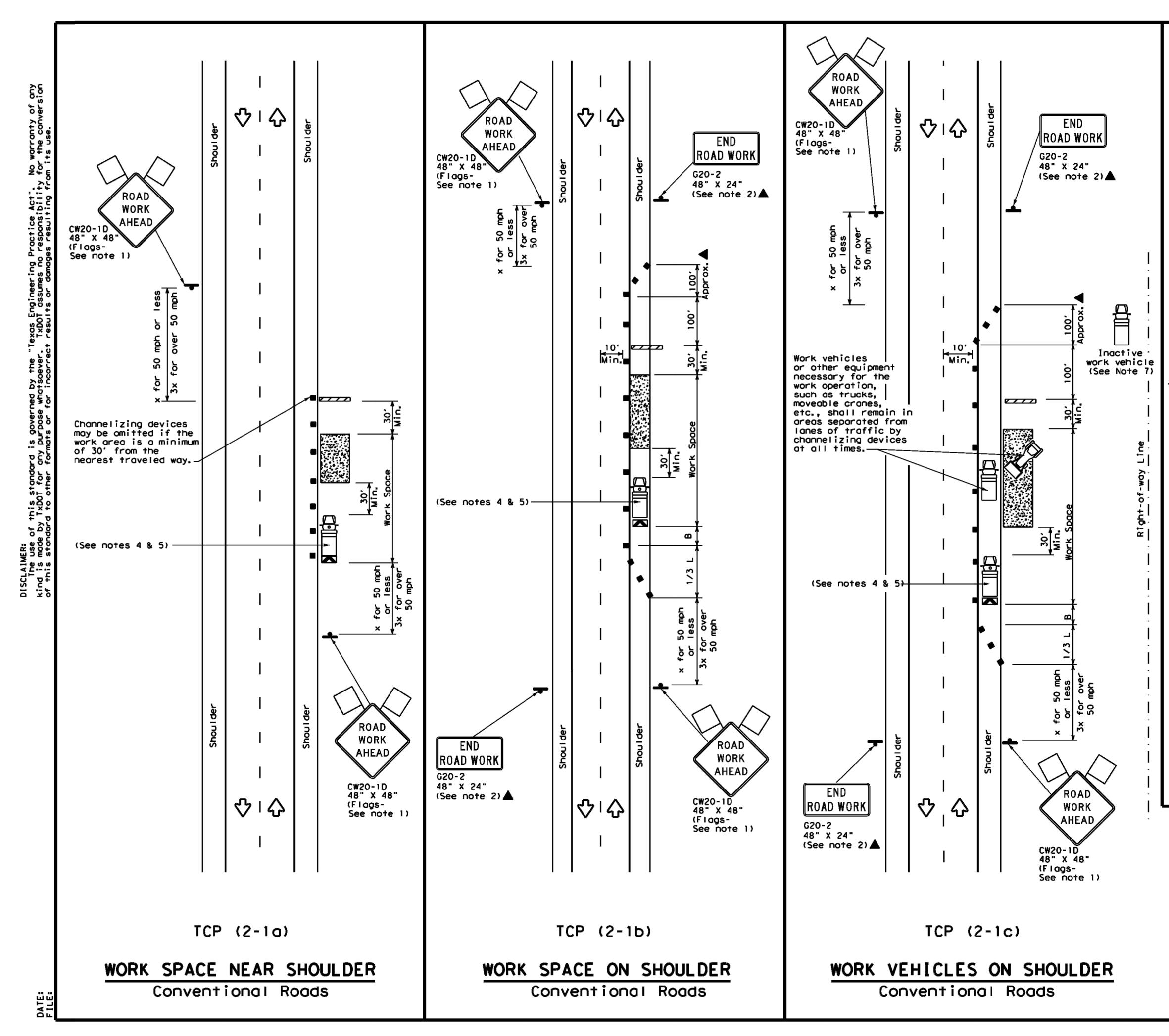
8. R1-2 "YIELD" sign with R1-20P "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

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" ST

| Texas Departmen | t of Tra | nsp | ortatio | 7 | Trai Opera Divis Stan | tions sion |
|--|----------|-----|-------------------------|----|--------------------------------|---------------|
| TRAFFIC | CON | ITF | ROL | PI | LAN | |
| ONE-LANE TWO-WAY | | | | | | |
| TRAFFIC CONTROL | | | | | | |
| TRAFF | IC | C0 | NTR | OL | | |
| TRAFF | IC | C0 | NTR | OL | | |
| TRAFF TCP | | | | | • | |
| | | | | | | :K= |
| TCP | (1- | |) - 1 | 8 | | |
| TCP FILE: tcp1-2-18.dgn © TxDOT December 1985 REVISIONS | (1 - | 2 |) – 1 ^{CK3} | 8 | - [c | |
| TCP Filles top1-2-18.dgn © TxDOT December 1985 | (1 - | 2 |) – 1 ^{CK3} | 8 | L HICH | |



| LEGEND | | | | | | | |
|-------------------|---|------------|--|--|--|--|--|
| | Type 3 Barricade | | Channelizing Devices | | | | |
| Ē | Heavy Work Vehicle | K | Truck Mounted Attenuator (TMA) | | | | |
| (II) | Trailer Mounted Flashing Arrow Board | | Portable Changeable Message Sign (PCMS) | | | | |
| 4 | Sign | \diamond | Traffic Flow | | | | |
| $\langle \rangle$ | Flag | ٩ | Flagger | | | | |

| Posted Speed X | Formula | D | Minimur esirob er Leng X X | le gths | Spacin Channe Dev | izing ices | Minimum Sign Spacing "X" | Suggested Longitudina Buffer Space |
|---------------------------------|-----------------------|---------------|-------------------------------------|---------------|-------------------------|----------------------------|-----------------------------------|--|
| * | | 10' Offset | 11' Offset | 12' Offset | | On a On a Taper Tangent | | "B" |
| 30 | | 150' | 1651 | 180' | 30' | 60′ | 1201 | 90' |
| 35 | $L = \frac{WS^2}{60}$ | 2051 | 225' | 245′ | 35' | 70' | 1601 | 120' |
| 40 | 60 | 265' | 2 9 5' | 320' | 40' | 80' | 240' | 155' |
| 45 | | 450' | 49 5′ | 540' | 45′ | 90' | 320' | 1951 |
| 50 | | 500 <i>'</i> | 550ʻ | 600' | 50' | 100' | 400' | 240′ |
| 55 | L=WS | 550' | 605 <i>'</i> | 660 <i>'</i> | 55 <i>'</i> | 110′ | 5001 | 295′ |
| 60 | L - # 3 | 600′ | 660' | 720' | 60′ | 120′ | 600' | 350' |
| 65 | | 650 <i>'</i> | 715′ | 780' | 651 | 130' | 700' | 410' |
| 70 | | 700' | 770' | 840′ | 70' | 140′ | 800' | 475′ |
| 75 | | 750' | 825′ | 900' | 75′ | 150' | 900' | 540′ |

X Conventional Roads Only

XX 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 | INTERMEDIATE TERM STATIONARY | LONG TERM STATIONARY | | | |
| | 1 | ✓ | 1 | 4 | | | |

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.

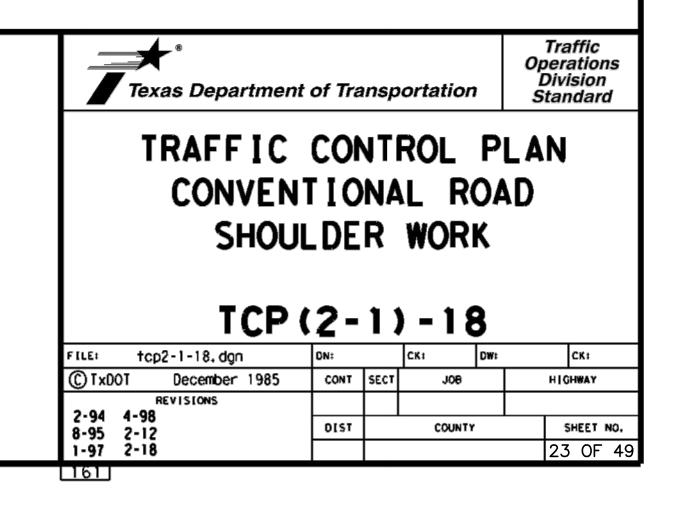
 All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated in the plans, or for routine maintenance work, when approved by the Engineer.

 Stockpiled material should be placed a minimum of 30 feet from nearest traveled way.

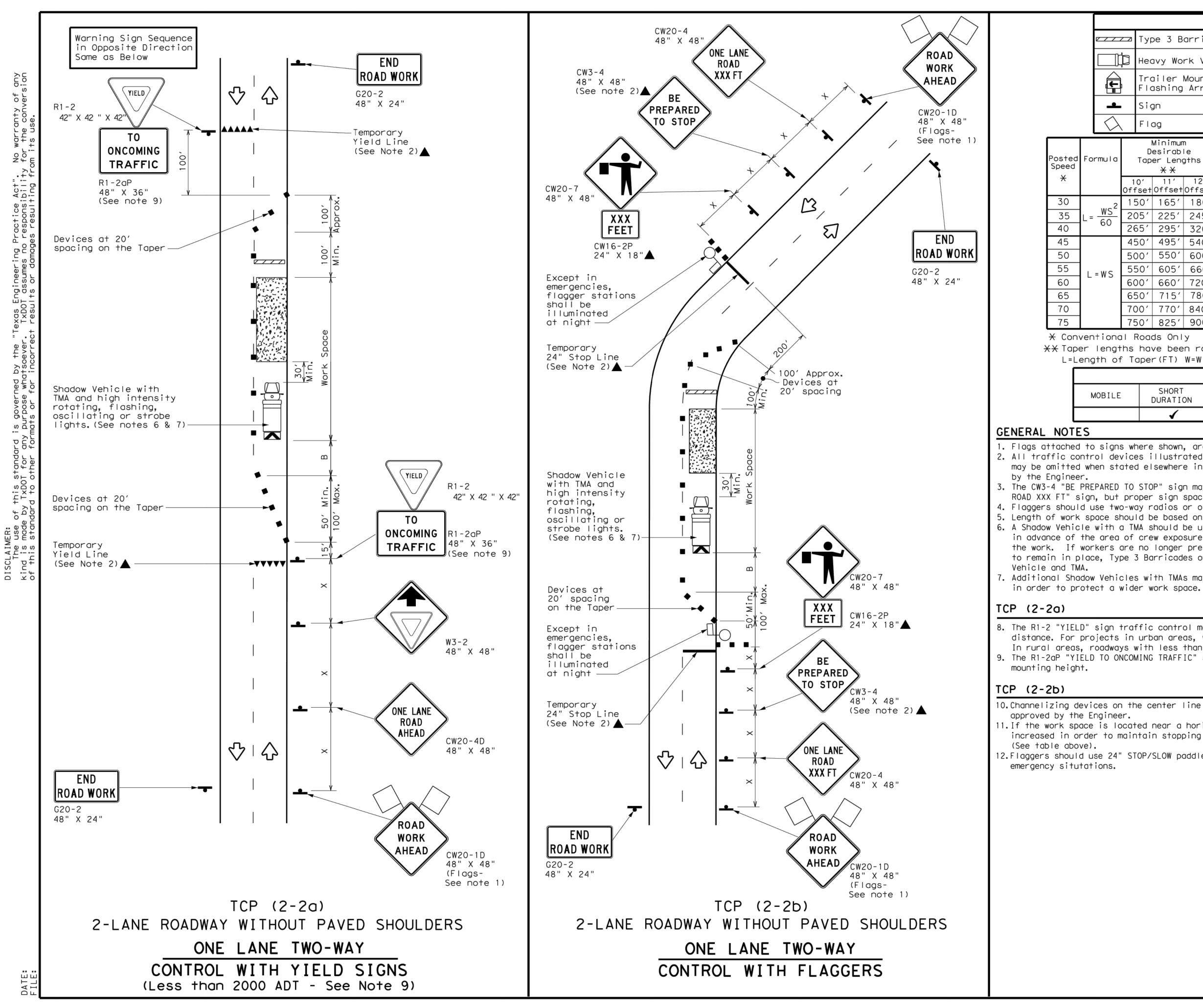
4. Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers 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 a wider work space.
 See TCP(5-1) for shoulder work on divided highways, expressways and

- freeways. 7. Inactive work vehicles or other equipment should be parked near the
- right-of-way line and not parked on the paved shoulder. 8. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D
- "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.



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| _ | 🖂 Ту | pe 3 B | arrico | de | | С | hanneliz | ing Devices | |
| ן | Heavy Work Vehicle | | | | | ruck Mour ttenuator | | | |
| | Trailer Mounted Flashing Arrow Board | | | M | Portable Changeable Message Sign (PCMS) | | | | |
| | | gn | | | \bigcirc | Т | raffic F | low |] |
| Z | , F I | ag | | Flagger | | | |] | |
| ו | | Minimur Desirab Der Leng XX | le | Suggested Maximum Spacing of Channelizing Devices | | μ | Minimum Sign Spacing "X" | Suggested Longitudinal Buffer Space | Stopping Sight Distance |
| | 10′ Offse | 11' Offset | 12' Offset | On a Taper | On a Tangen [.] | t | Distance | "B" | |
| > | 150′ | 165′ | 180′ | 30' | 60′ | | 120′ | 90′ | 200′ |
| - | 205′ | 225′ | 245′ | 35' | 70′ | | 160′ | 120′ | 250′ |
| | 265′ | 295′ | 320′ | 40' | 80′ | | 240′ | 155′ | 305′ |
| | 450′ | 495′ | 540′ | 45' | 90′ | | 320′ | 195′ | 360′ |
| | 500' | 550′ | 600′ | 50ʻ | 100′ | | 400′ | 240′ | 425′ |
| | 550' | 605′ | 660′ | 55' | 110′ | | 500 <i>1</i> | 295 <i>′</i> | 495′ |
| | 600 <i>′</i> | 660 <i>′</i> | 720′ | 60' | 120′ | | 600 <i>′</i> | 350′ | 570′ |
| | 650 <i>′</i> | 715′ | 780′ | 65′ | 130′ | | 700′ | 410′ | 645 <i>'</i> |
| | 700 <i>′</i> | 770' | 840′ | 70′ | 140′ | | 800′ | 475′ | 730′ |
| | 750′ | 825′ | 900′ | 75 <i>'</i> | 150′ | | 900′ | 540 <i>′</i> | 820′ |

XX Taper lengths have been rounded off.

L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

| | TYPICAL USAGE | | | | | | | | |
|---|-------------------|--------------------------|---------------------------------|-------------------------|--|--|--|--|--|
| E | SHORT DURATION | SHORT TERM STATIONARY | INTERMEDIATE TERM STATIONARY | LONG TERM STATIONARY | | | | | |
| | ✓ | 1 | 4 | | | | | | |

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

3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4 "ONE LANE ROAD XXX FT" sign, but proper sign spacing shall be maintained. 4. Flaggers should use two-way radios or other methods of communication to control traffic. 5. Length of work space should be based on the ability of flaggers to communicate. 6. 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

7. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown

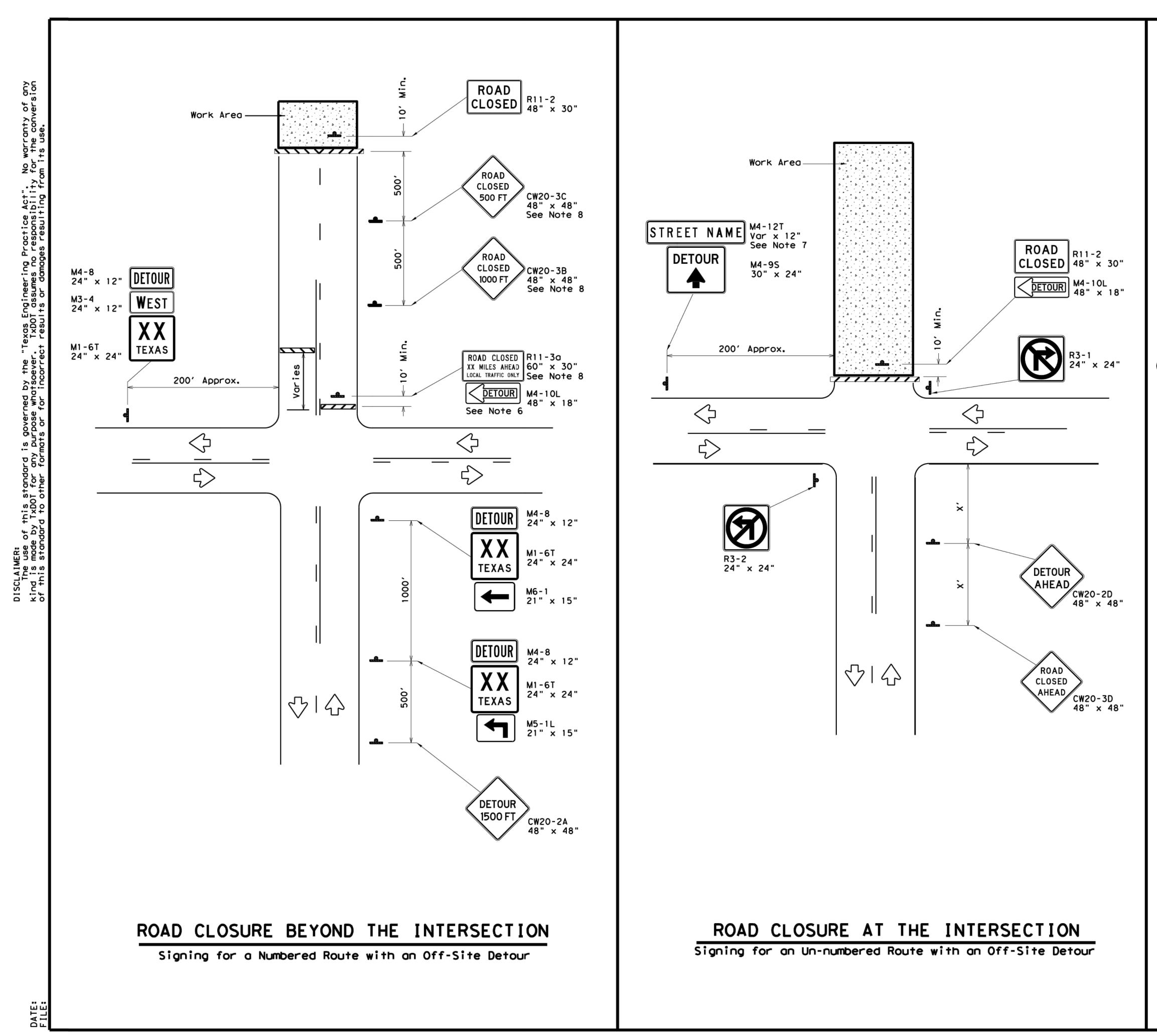
8. The R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work space should be no longer than one half city block. In rural areas, roadways with less than 2000 ADT, work space should be no longer than 400 feet. 9. The R1-2aP "YIELD TO ONCOMING TRAFFIC" sign shall be placed on a support at a 7 foot minimum

10. Channelizing devices on the center line may be omitted when a pilot car is leading traffic and

11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain stopping sight distance to the flagger and a queue of stopped vehicles.

12. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to

| Texas Department | , | Traffic Operations Division Standard | | | | | | |
|---|------|---|-----|-----|---------|--|--|--|
| TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL TCP (2-2)-18 | | | | | | | | |
| FILE: tcp2-2-18.dgn | DN: | | CK: | DW: | CK: | | | |
| © TxDOT December 1985 | CONT | SECT | JOB | | HIGHWAY | | | |
| | | + | | | | | | |



| LEGEND | | | | | |
|------------------|------------------|--|--|--|--|
| <u>~ ~ ~ ~ ~</u> | Type 3 Barricade | | | | |
| - | Sign | | | | |

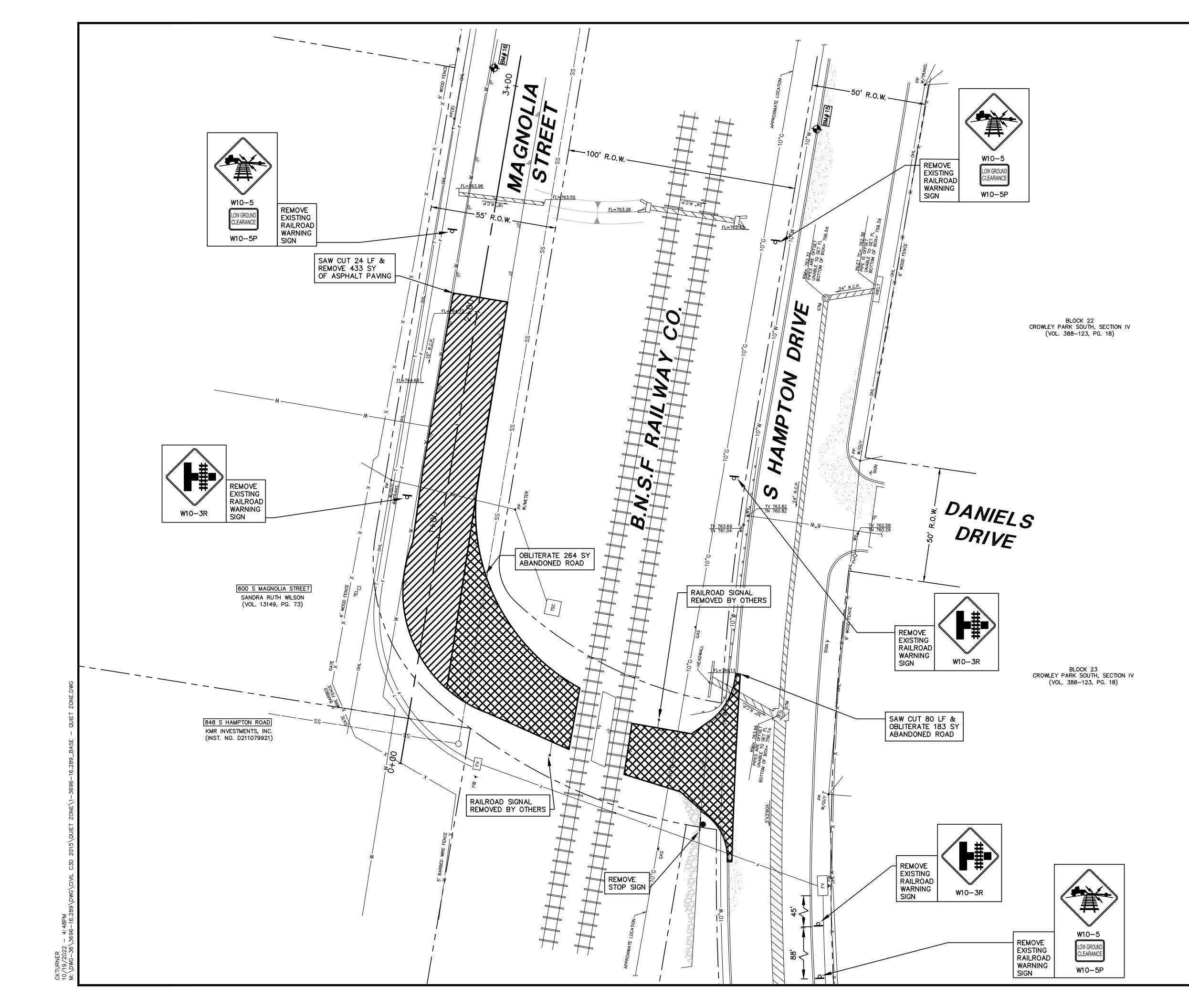
| Posted Speed X | Minimum Sign Spacing "X" Distance |
|---------------------------------|---|
| 30 | 120' |
| 35 | 160' |
| 40 | 240′ |
| 45 | 320' |
| 50 | 400′ |
| 55 | 500′ |
| 60 | 600 <i>′</i> |
| 65 | 700' |
| 70 | 800′ |
| 75 | 900′ |

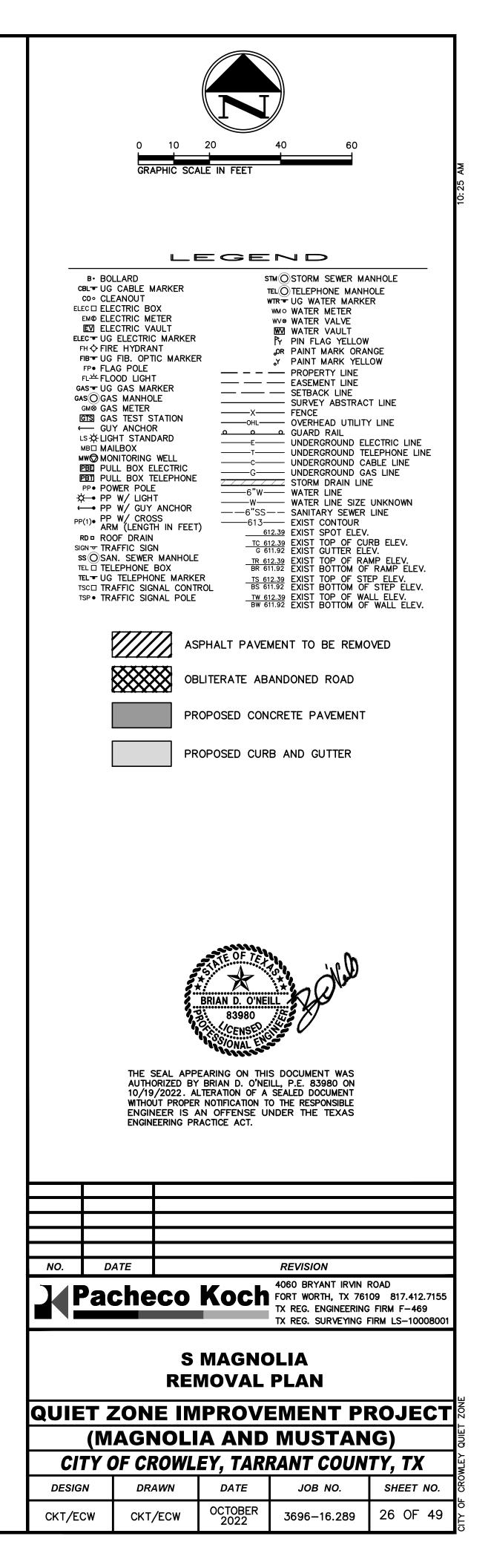
* Conventional Roads Only

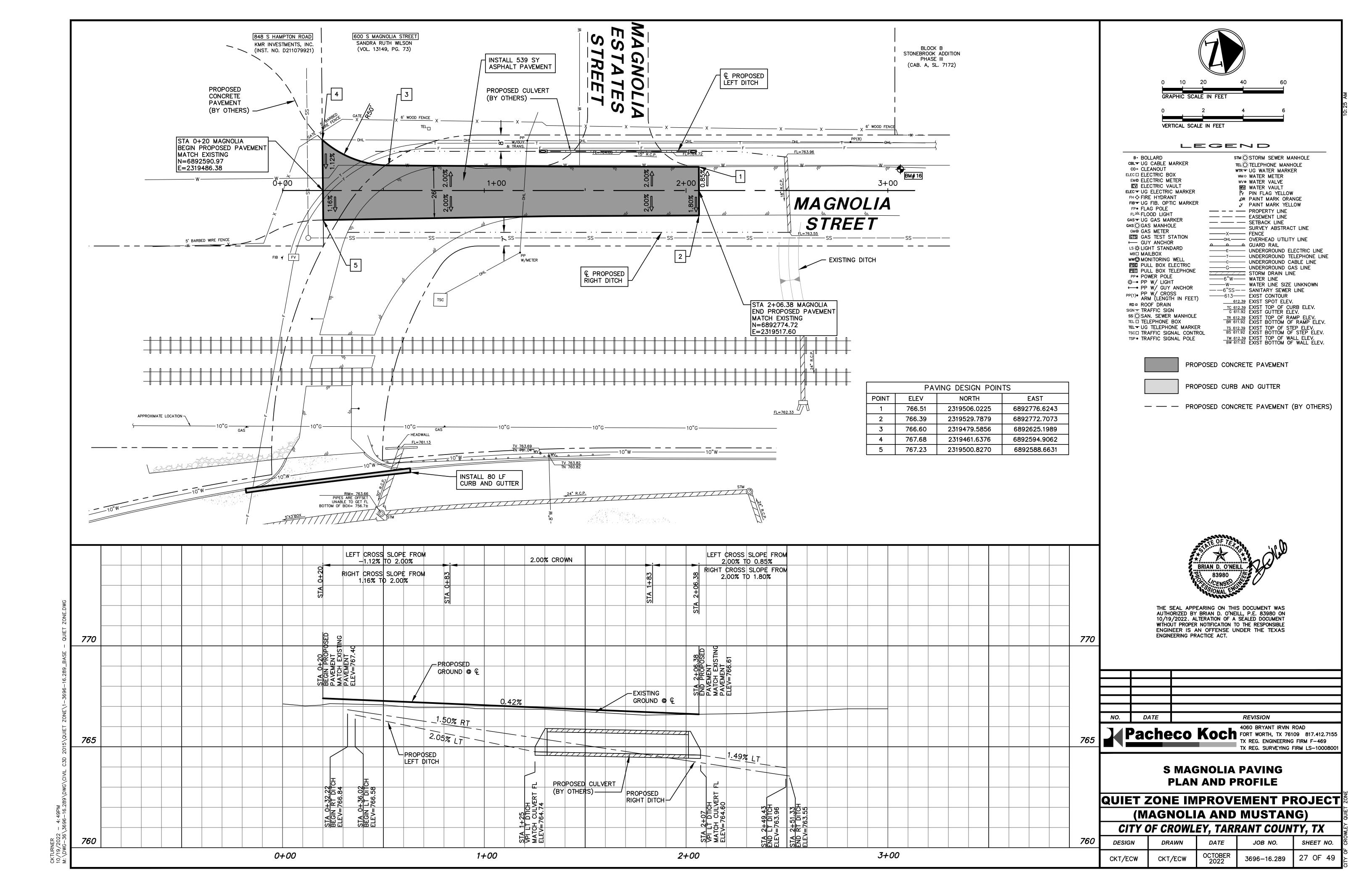
GENERAL NOTES

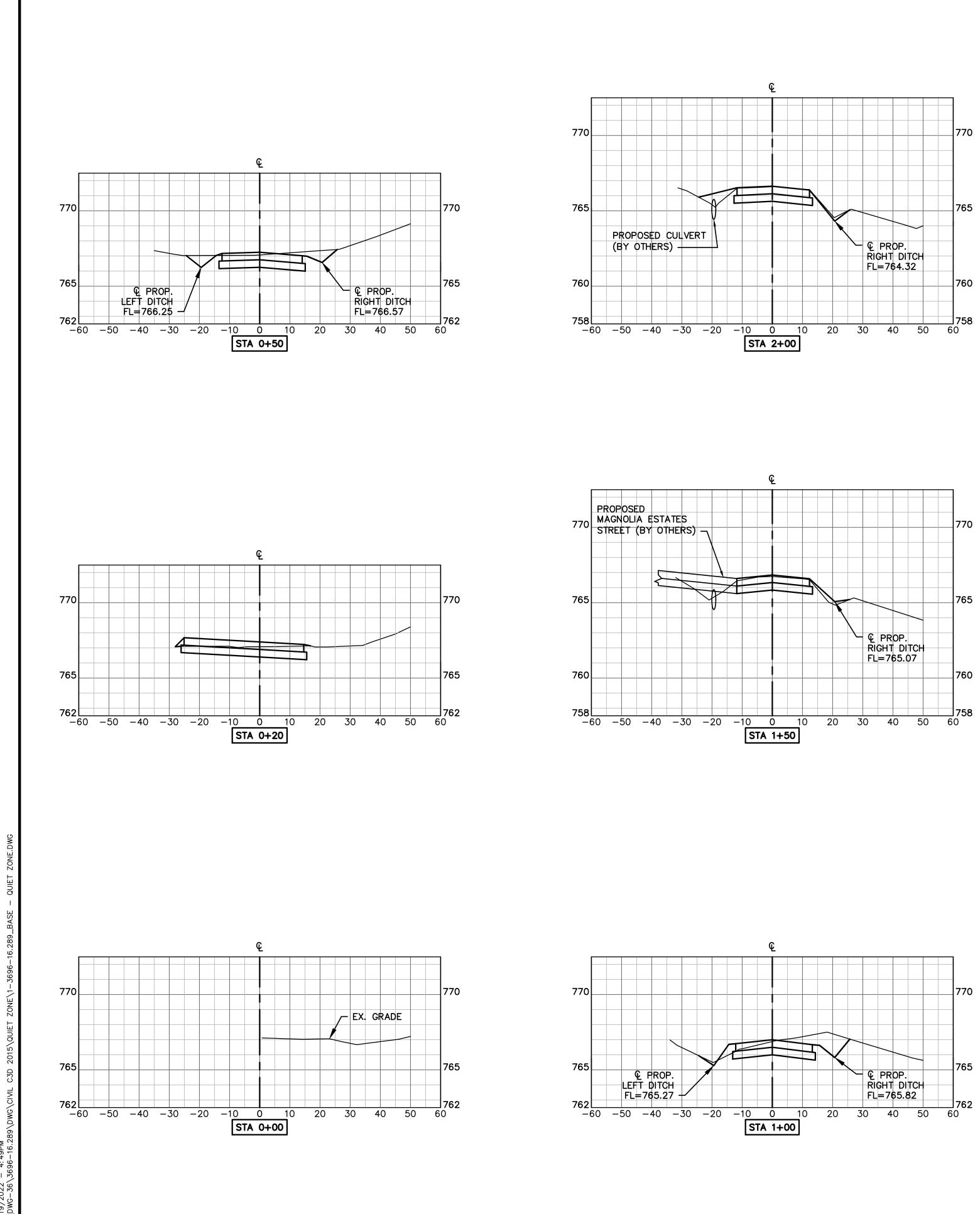
- This sheet is intended to provide details for temporary work zone road closures. For permanent road closure details see the D&OM standards.
- 2. Barricades used shall meet the requirements shown on Barricade and Construction Standard BC(10) and listed on the Compliant Work Zone Traffic Control Devices list (CWZTCD).
- 3. Stockpiled materials shall not be placed on the traffic side of barricades.
- 4. Barricades at the road closure should extend from pavement edge to pavement edge.
- 5. Detour signing shown is intended to illustrate the type of signing that is appropriate for numbered routes or un-numbered routes as labeled. It does not indicate the full extent of detour signing required. Detour routes should be signed as shown elsewhere in the plans.
- 6. If the road is open for a significant distance beyond the intersection or there are significant origin/destination points beyond the intersection, the signs and barricades at this location should be located at the edge of the traveled way.
- 7. The Street Name (M4-12T) sign is to be placed above the DETOUR (M4-9S) sign.
- 8. For urban areas where there is a shorter distance between the intersection and the actual closure location, the ROAD CLOSED XX MILES AHEAD (R11-3a) sign may be replaced with a ROAD CLOSED TO THRU TRAFFIC (R11-4) sign. If adequate space does not exist between the intersection and the closure a single ROAD CLOSED AHEAD (CW20-3D) sign spaced as per the table above may replace the ROAD CLOSED 1000 FT (CW20-3B) and ROAD CLOSED 500 FT (CW20-3C) signs.
- Signs and barricades shown shall be subsidiary to Item 502. Locations where these details will be required shall be as shown elsewhere in the plans.

| Te | * ® exas Department | of Tra | nsp | ortation | | Oper Div | affic ration rision ndaro | | |
|---|-------------------------------|--------|-------------|-----------|-----|-------------|------------------------------------|-----|--|
| WORK ZONE ROAD CLOSURE DETAILS WZ (RCD) - 13 | | | | | | | | | |
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| © TxDOT | August 1995 | CONT | SECT | JOB | | HIGHWAY | | | |
| | REVISIONS | | | | | | | | |
| | 7-13 | DIST | DIST COUNTY | | | | SHEET NO. | | |
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| 113 | | | | | | | | | |

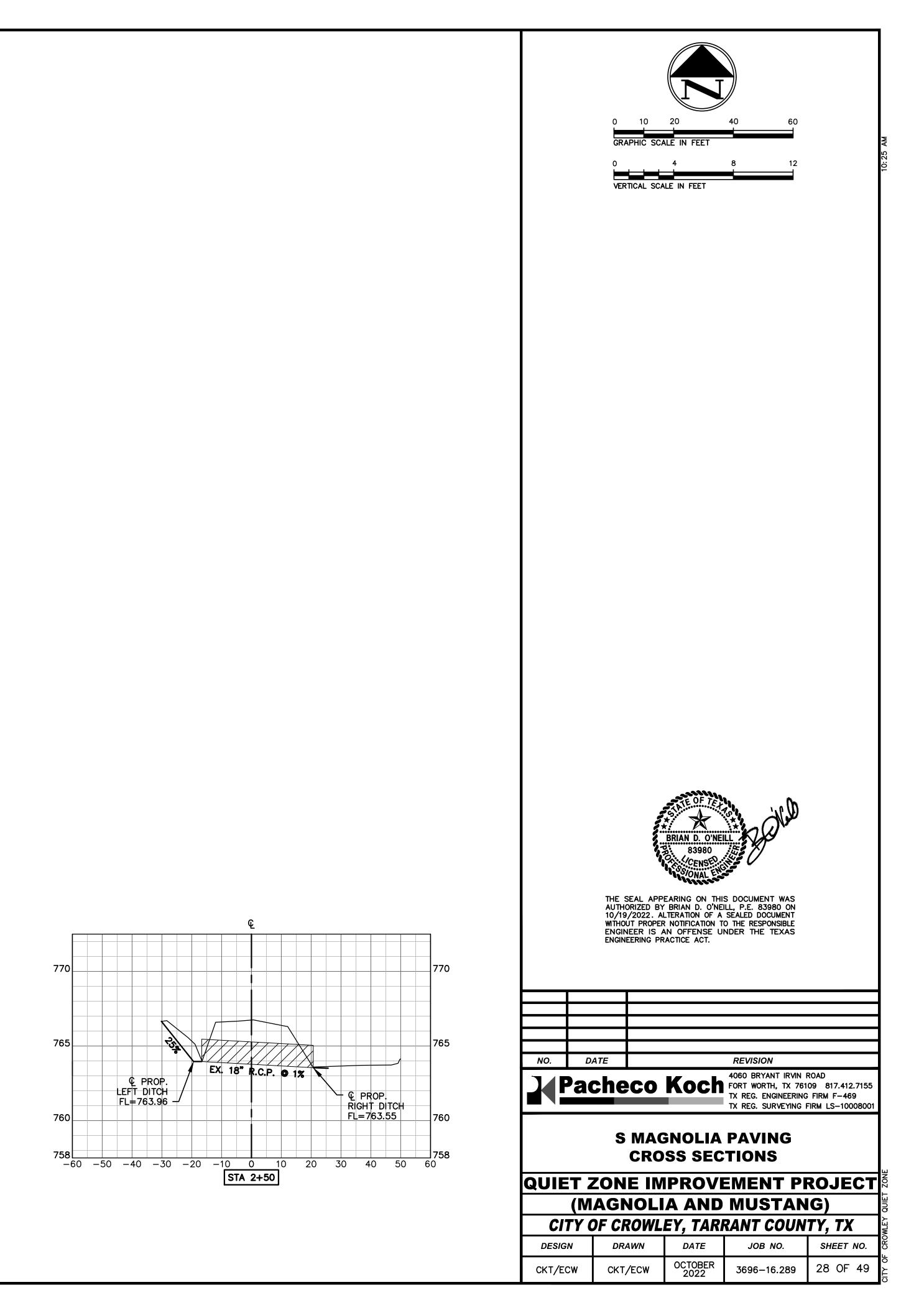


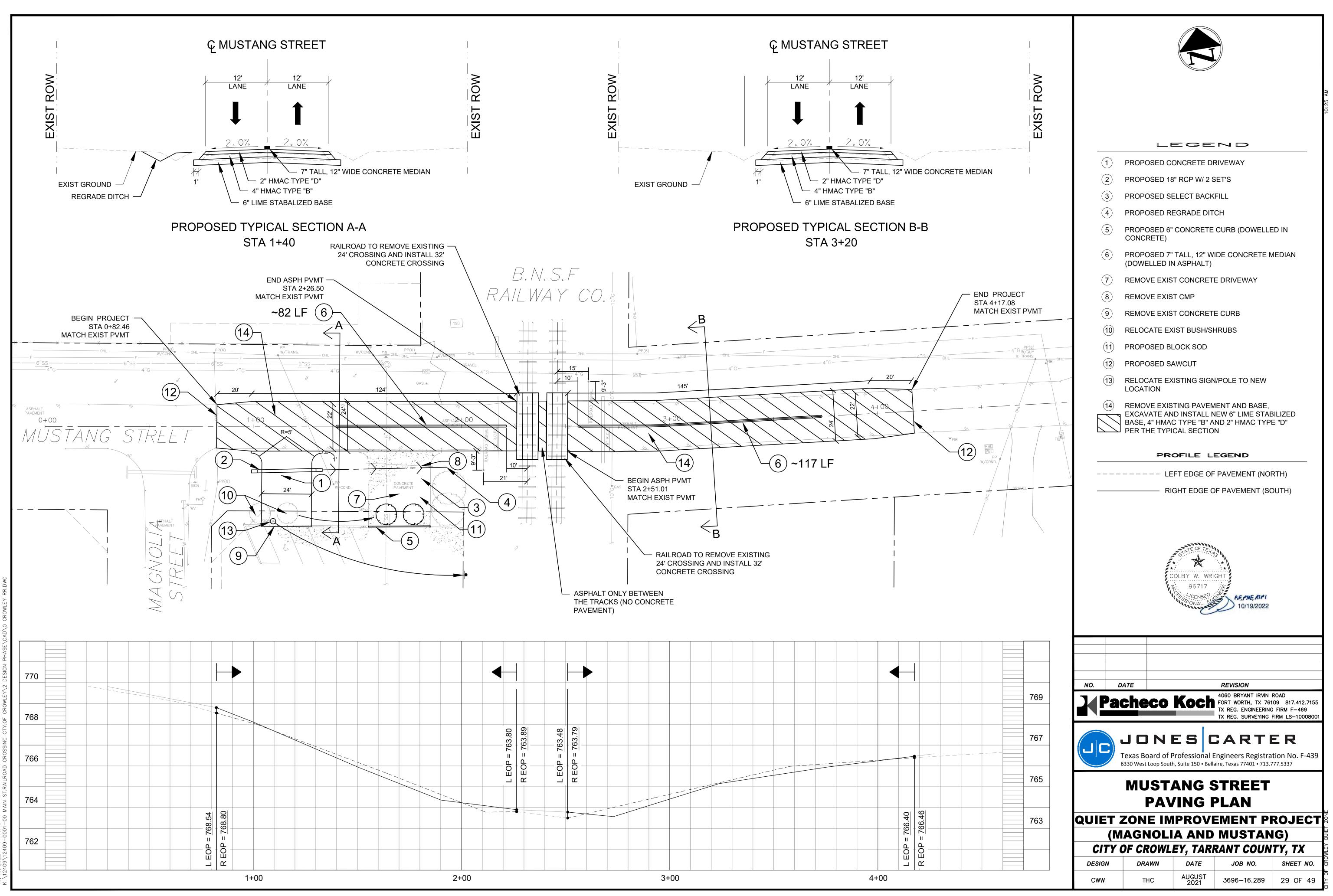






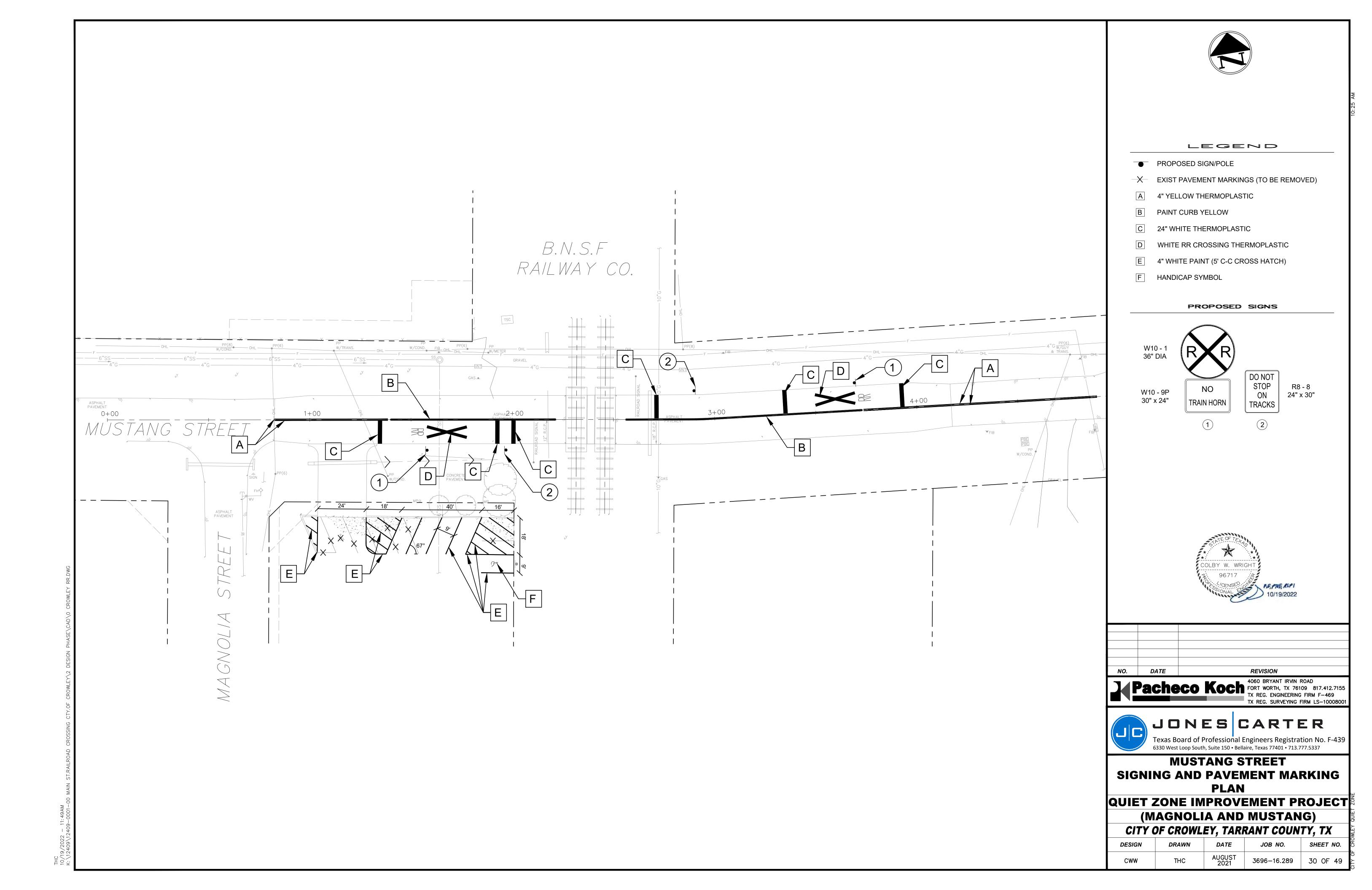
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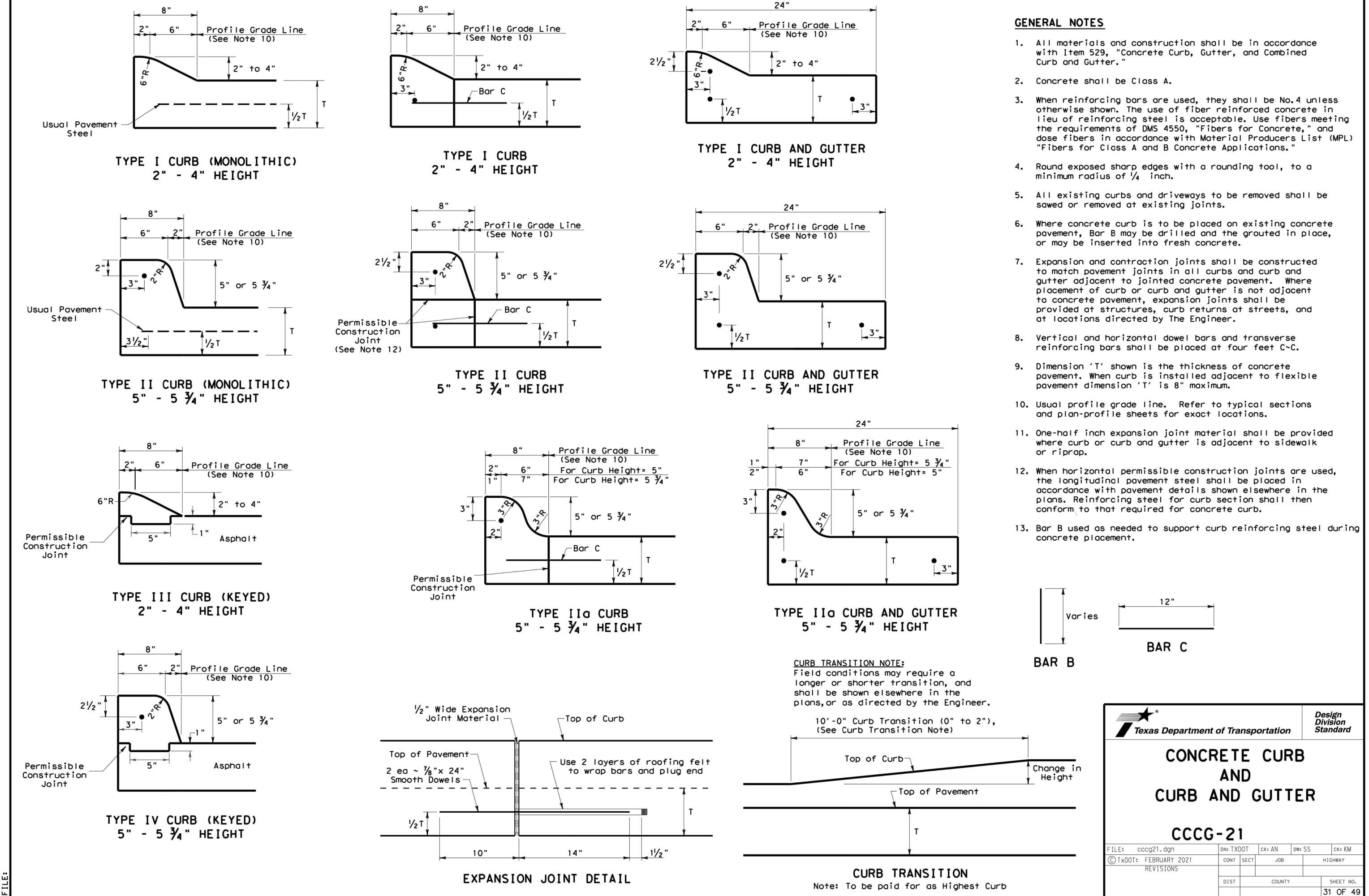


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