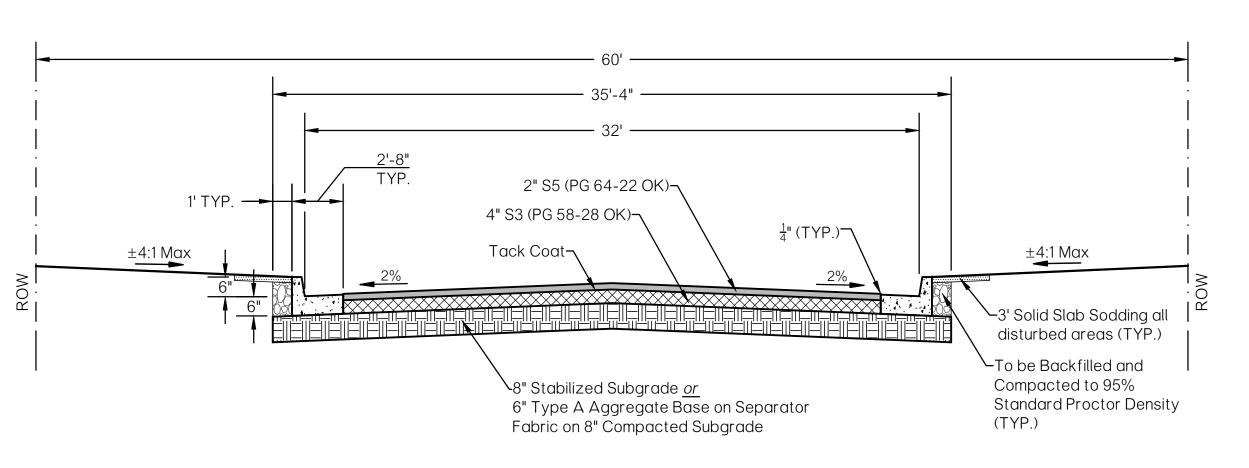




 $\mathbf{C}$ 

Detail Number

D-100B



# TYPICAL SECTION 32' HOT MIX ASPHALT PAVING

RESIDENTIAL COLLECTOR

• 110 •

LEGEND

S5 (PG 70-28 OK) <u>or</u> S5 (PG 64-22 OK)

Backfill

Compacted Subgrade

S3 (PG 64-22 OK) <u>or</u> S3 (PG 58-28 OK)

S3 (PG 58-28 OK)

Cement Treated Base <u>or</u> S3 (PG 58-28 OK)

P.C. Concrete

Stabilized Subgrade <u>or</u>

Type A Aggregate Base

Leveling Course

Sodding

Type A Aggregate Base (95% SPD Compaction)

RESIDENTIAL TYPICAL NOTE:

S3 BASE COURSES AND S5 SURFACE COURSES SHALL USE BINDER GRADE PG 58-28 OK WITH A

MAXIMUM OF 15% RECLAIMED ASPHALT PAVEMENT (RAP).

S5 SURFACE COURSE SHALL USE BINDER GRADE PG 64-22 OK WITH A VIRGIN MIX (NO RAP). COURSE DESIGN MIXES, INCLUDING ACCEPTABLE TEST RESULTS, INDICATING A FINAL PERFORMANCE

GRADE OF PG 64-22 OK MAY BE REQUIRED PRIOR TO APPROVAL OF A MIX FOR USE IN THE CITY OF OKLAHOMA CITY.

2" S5 (PG 70-28 OK)¬ 4" S3 (PG 58-28 OK)¬ 1' TYP. ——  $2\frac{1}{2}$ " S3 (PG 58-28 OK) \( \)  $\frac{1}{4}$ " (TYP.) ±4:1 Max ±4:1 Max B' Solid Slab Sodding all disturbed areas (TYP.) ←To be Backfilled and -Tack Coat Compacted to 95% Standard Proctor Density 10" Stabilized Subgrade <u>or</u> 8" Type A Aggregate Base on Separator Fabric on 8" Compacted Subgrade (TYP.)

# TYPICAL SECTION 32' HOT MIX ASPHALT PAVING

COMMERCIAL

• 111 •

COMMERCIAL/INDUSTRIAL TYPICAL NOTE:

S3 BASE COURSES SHALL USE BINDER GRADE PG 58-28 OK WITH A MAXIMUM OF 15% RECLAIMED ASPHALT PAVEMENT (RAP).

S5 SURFACE COURSE SHALL USE BINDER GRADE PG 70-28 OK WITH A VIRGIN MIX (NO RAP). . COURSE DESIGN MIXES, INCLUDING ACCEPTABLE TEST RESULTS, INDICATING A FINAL PERFORMANCE GRADE OF PG 64-22 OK MAY BE REQUIRED PRIOR TO APPROVAL OF A MIX FOR USE IN THE CITY OF

OKLAHOMA CITY.

TYPICAL SECTION 32' HOT MIX ASPHALT PAVING INDUSTRIAL • 112 •

1' TYP. →

±4:1 Max

2" S5 (PG 70-28 OK)-\

<sup>1</sup>/<sub>4</sub>" (TYP.)

¬

**└**Tack Coat

±4:1 Max

3' Solid Slab Sodding all

Standard Proctor Density

disturbed areas (TYP.)

-To be Backfilled and

Compacted to 95%

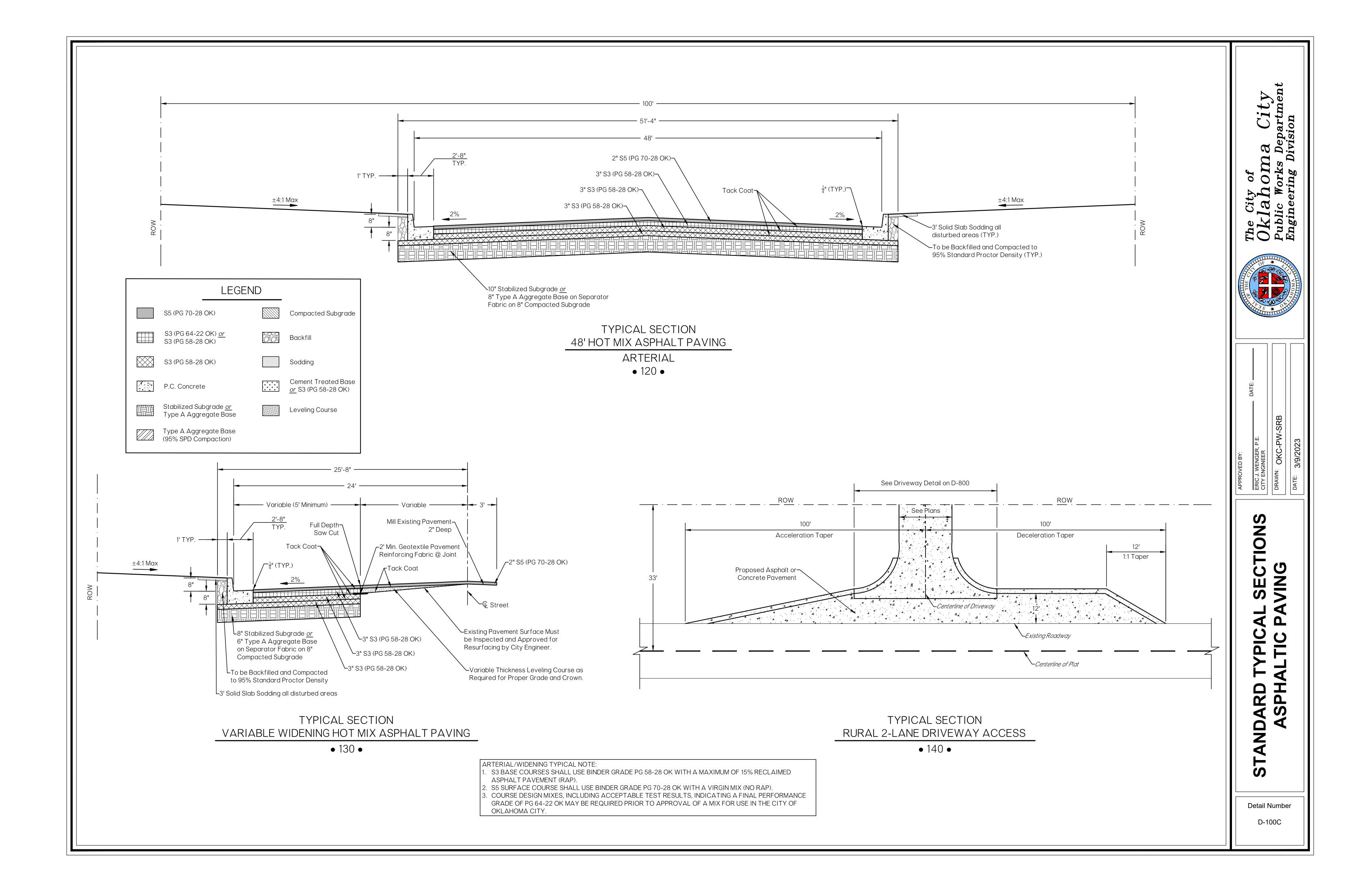
(TYP.)

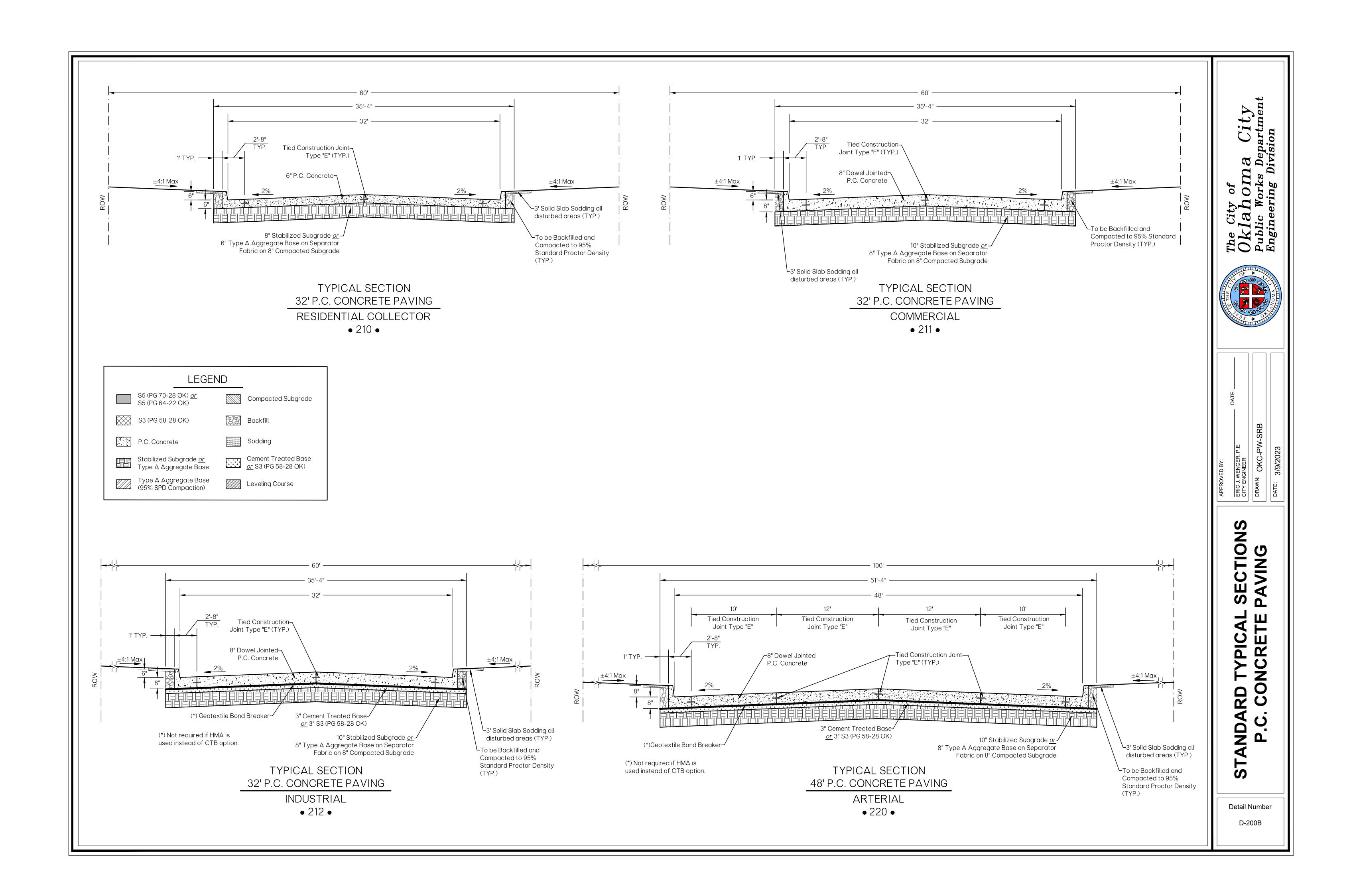
3" S3 (PG 58-28 OK)¬

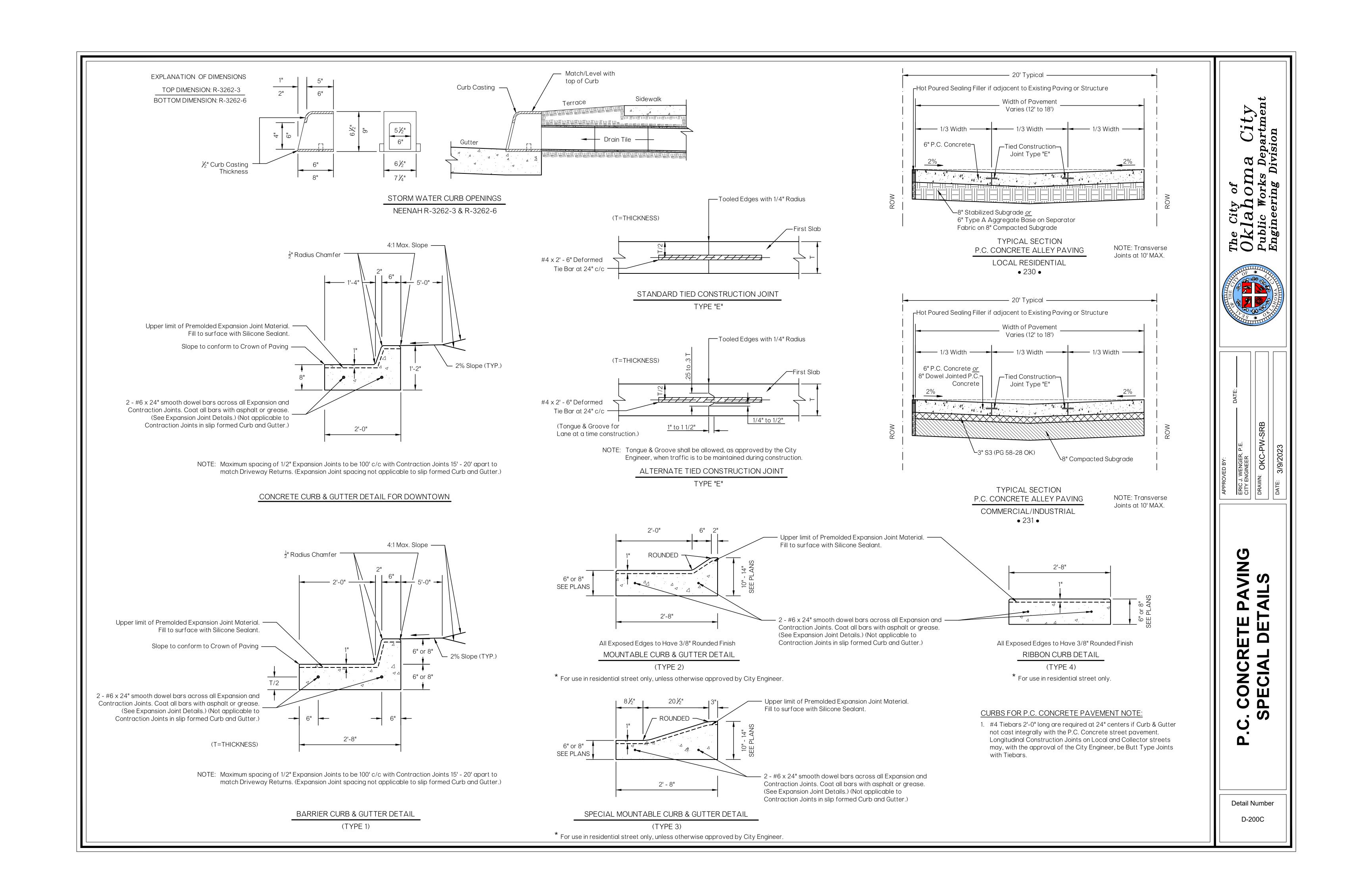
8" Type A Aggregate Base on Separator Fabric on 8" Compacted Subgrade

3" S3 (PG 58-28 OK)-

└10" Stabilized Subgrade <u>or</u>







**Detail Number** 

D-200D

SEE DETAILS FOR SAWED AND SEALED CONTRACTION JOINTS.

NON-DOWELED CONTRACTION JOINT

SEE DETAILS FOR SAWED AND SEALED SEE DETAIL D-200E FOR DOWEL BAR DETAILS CONTRACTION JOINTS. DOWEL BAR & SUPPORT

→ DOWELED CONTRACTION JOINT

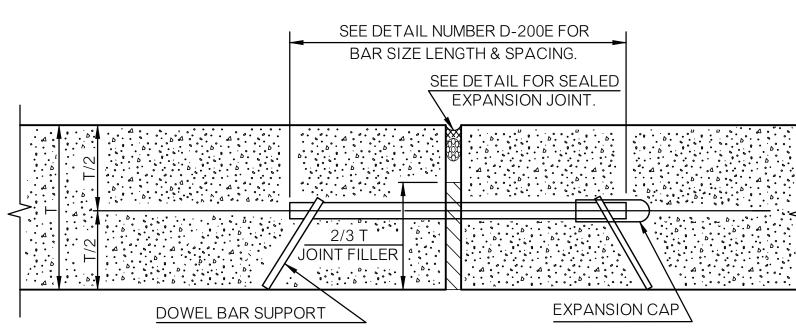
THE TIE BARS SHALL NOT BE SEE DETAILS FOR SAWED AND SEALED PLACED CLOSER THAN 24" TO AN LONGITUDINAL JOINTS. EVENTUAL TRANSVERSE JOINT  $^\prime$  NO.4 DEF. TIE BARS; 2'-6" LONG @ 2'-6" C/C.

TO BE SUPPORTED AT EACH END BY AN APPROVED BAR SUPPORT OR PLACED BY AN APPROVED MECHANICAL DEVICE INTO THE FRESH CONCRETE.

LONGITUDINAL JOINT

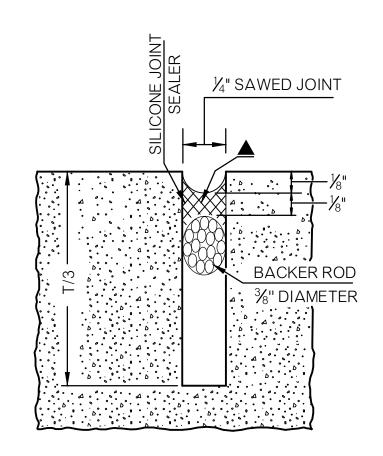
THE TIE BARS SHALL NOT NO. 5 DEFORMED TIE BARS NO SAWING BE PLACED CLOSER THAN 2'-6" LONG @ 3'-0" C/C. OR SEALING 24" TO AN EVENTUAL TO BE OMITTED WHEN IS REQUIRED TRANSVERSE JOINT. NON-TIED JOINT IS SPECIFIED. 

> TIED BUTT JOINT LONGITUDINAL CONSTRUCTION JOINT

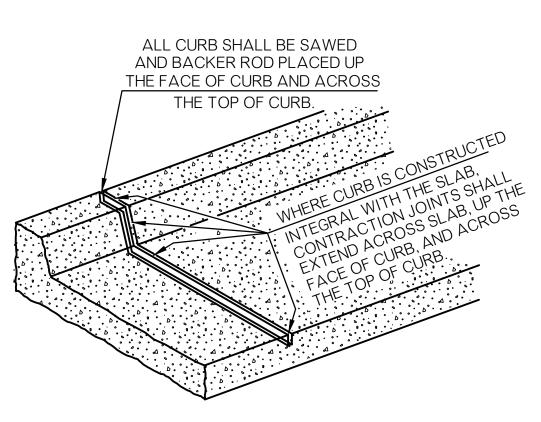


EXPANSION JOINT / ISOLATION JOINT

OMIT DOWEL BARS, CAPS & SUPPORTS FOR ISOLATION JOINTS SEE STANDARD DRAWING NUMBER D-200E, LOAD TRANSFER UNITS, FOR DETAILS OF ALTERNATE TYPES OF DOWEL BAR SUPPORTS.



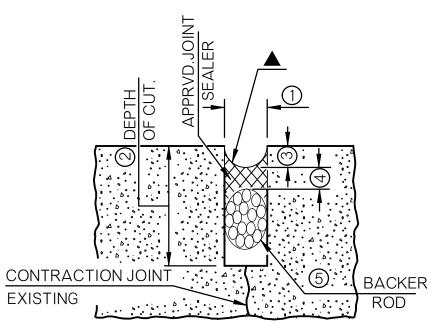
ALTERNATE DETAILS SAWED AND SEALED CONTRACTION, AND LONGITUDINAL JOINTS



CONTRACTION JOINT WITH INTEGRAL CURB

# EXPANSION JOINT, & FILLER

SEALED EXPANSION JOINT



JOINT REHABILITATION DETAILS

JOINT REHABILITATION TREATMENT TABLE							
JOINT WIDTH	DEPTH OF CUT	SEALANT RECESS DEPTH	SEALANT THICKNESS	BACKER ROD DIAMETER			
INCHES  ①	INCHES  2	INCHES	INCHES  4	INCHES  (5)			
1/4"	11/8"	½" (MIN.)	1/4"	3/8"			
3/8"	11/4"	⅓" (MIN.)	3/8"	1/2"			
1/2"	13/4"	⅓" (MIN.)	1/2"	5/8"			
3/4"	13/4"	⅓" (MIN.)	3/4"	7/8"			
7/8"	1 3/4"	½" (MIN.)	7/8"	1"			
1"	2"	_		11/8"			
OVER 1"	OVER 2"	_	_	11/4" +			

JOINT REHABILITATION - POLYMER SEALANT

JOINT REHABILITATION TREATMENT TABLE						
JOINT WIDTH	DEPTH OF CUT	SEALANT RECESS DEPTH	SILICONE SEALANT THICKNESS	BACKER ROD DIAMETER		
INCHES	INCHES	INCHES	INCHES	INCHES		
(1)	2	3	4	(5)		
3/8"	11/4"	1/4"	<sup>3</sup> / <sub>16</sub> "	1/2"		
1/2"	1 <sup>3</sup> / <sub>4</sub> "	1/4"	1/4"	5/8"		
3/4"	1 3/4"	1/4"	3/8"	7/8"		
7/8"	1 3/4"	1/2"	7/16"	1"		
1"	2"	1/2"	1/2"	11/8"		
OVER 1"	OVER 2"	1/2"	1/2"	1 1/4"		

JOINT REHABILTIATION - SILICONE SEALANT

	EXP	EXPANSION JOINT / ISOLATION JOINT TREATMENT TABLE					
	JOINT WIDTH	SEALANT RECESS DEPTH	SILICONE SEALANT THICKNESS ③	BACKER ROD DIAMETER			
	INCHES	INCHES	INCHES	INCHES			
	1/2"	1/4"	1/4"	5/8"			
	3/4"		3/8"	7/8"			
	1"		1/2"	11/4"			
			1/2"	2"			
	2"	1/2"	3/4"	2½"			

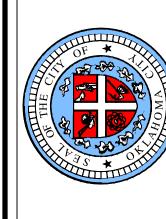
DETAILS FOR SEALED EXPANSION / ISOLATION JOINT

EXPANSION OR ISOLATION JOINT WIDTH SHALL BE 1/2", UNLESS OTHERWISE SPECIFIED ON THE PLANS. TABLE VALUES, AS SHOWN THIS TABLE, SHALL BE USED IN THOSE SPECIFIED CASES.

#### GENERAL NOTES

- 1. ALL CONSTRUCTION AND MATERIALS REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE OKC STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS.
- 2. ONLY SILICONE SEALANT MEETING REQUIREMENTS OF THE OKC STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS SHALL BE ACCEPTABLE FOR USE.
- 3. ALL JOINTS SHALL BE CLEANED IN ACCORDANCE WITH THE OKC STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS. WATER FLUSHING AND AIR CLEANING OF JOINT SHALL BE IN ONLY ONE DIRECTION-FORWARD. SANDBLASTING SHALL BE PERFORMED IN TWO PASSES, ONE FOR EACH FACE OF THE JOINT.
- 4. THE SHAPE FACTOR COMBINED WITH JOINT CLEANNESS IS THE CRITICAL COMBINATION NECESSARY TO GUARANTEE DESIRED BONDING AND FUNCTION OF SEALED JOINTS NO TOLERANCE EXCEPT THOSE SHOWN HERE WILL BE ALLOWED.
- ▲ 5. THE JOINT SHAPE FACTOR IS DEFINED AS THE FINAL PRESSED SHAPE OF THE SILICONE MATERIAL. THE TOOLING OPERATION WILL FIRMLY PRESS THE FRESHLY APPLIED MATERIAL INTIMATELY AGAINST THE CUT SIDES OF THE RECESS AND THE BACKER ROD SURFACES. THE ROUNDED SHAPE ON TOP AND BOTTOM OF THE SILICONE ALLOWS THE SEALANT TO PROPERLY FLEX BUT MAINTAIN ADHERANCE TO THE PAVING.
- 6. ON JOINTED PORTLAND CEMENT CONCRETE PAVEMENTS, DOWELLED CONTRACTION JOINTS SHALL BE USED ON DRIVING LANES ONLY. CONCRETE SHOULDERS SHALL NOT BE DOWELLED UNLESS SPECIFIED ON THE PLANS.
- 7. LONGITUDINAL JOINTS BETWEEN PAVEMENT AND TIED CONCRETE SHOULDERS SHALL NOT BE SAWED OR SEALED UNLESS OTHERWISE SHOWN ON THE PLANS.
- 8. ON ALL SAWED JOINTS, THE KERF DEPTH SHALL CLEAR DOWEL BARS, TIE BARS AND/OR REINFORCING STEEL BY A MINIMUM OF 1/2".
- 9. CONTRACTION JOINTS IN JOINTED P. C. PAVEMENT SHALL BE AT APPROXIMATELY 15'-0" CENTERS, UNLESS OTHERWISE SPECIFIED ON THE PLANS.





**Detail Number** 

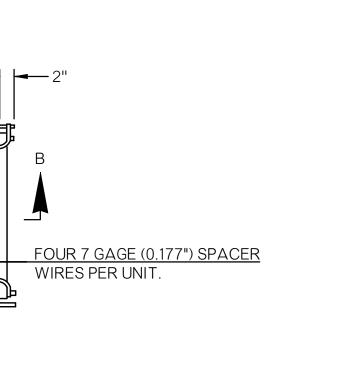
D-200E

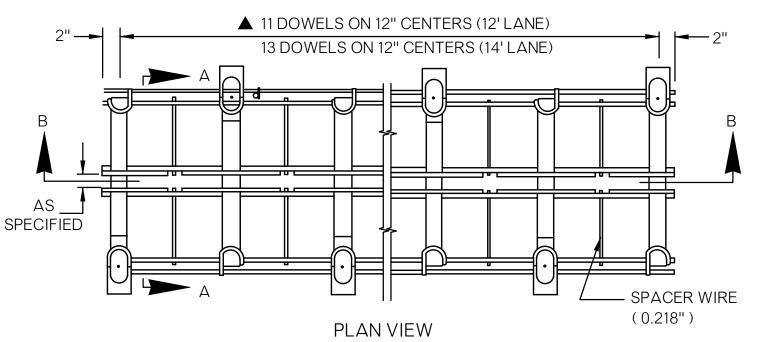
13 DOWELS ON 12" CENTERS (14' LANE) DOWEL BARS ▲ SPACING & SIZE DATA (D) TOTAL C/C DOWEL DOWEL DOWEL DIA. LENGTH SPACING DEPTH 12" 18" 1 1/4" 10 1/2"& UP 1½" | 18" | 12"

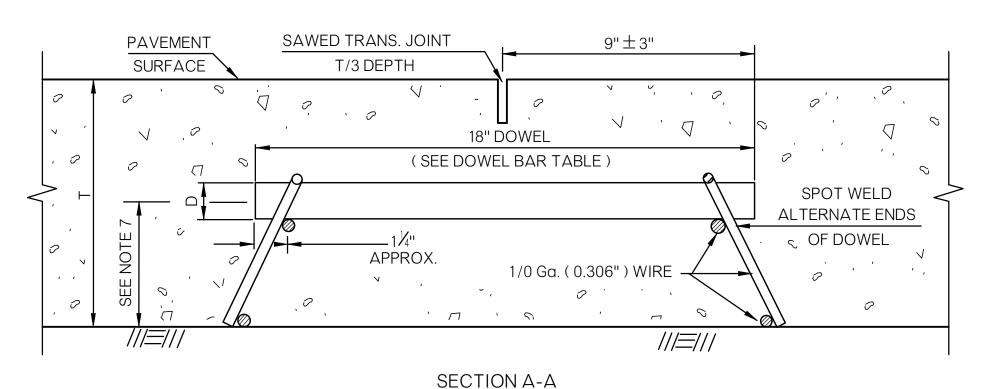
> DOWEL DIAMETER WILL BE DETERMINED BY THE SLAB DEPTH ( T ) OR THE NOMINAL DEPTH WHEN SLAB DEPTH VARIES. WHEN NOMINAL DEPTH VALUE IS TO BE USED, THE CALCULATED NOMINAL DEPTH WILL BE SHOWN ON THE PLANS.

# GENERAL NOTES

- 1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE OKC STANDARD SPECIFICIATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS.
- 2. ANY DEVICE USED FOR SUPPORTING DOWELS SHALL HAVE SUFFICIENT RIGIDITY AND BE HELD IN PLACE DURING CONCRETE PLACEMENT SO THAT DOWELS WILL BE IN SPECIFIED POSITION IN THE FINISHED PAVEMENT. ANY DEVICE NOT PRODUCING THE SPECIFIED RESULTS SHALL BE REJECTED.
- 3. PRODUCER AND CONTRACTOR SHALL AVOID PATENT INFRINGEMENT OF THE BASKET AND SHALL SAVE THE CITY HARMLESS IN THE USE OF ANY BASKET.
- 4. THE CONTRACTOR MAY SELECT THE TYPE OF BASKET TO BE USED. AFTER THE SELECTION IS MADE, THE SAME TYPE BASKET SHALL BE USED THROUGHOUT THE PROJECT, UNLESS APPROVED OTHERWISE BY THE CITY ENGINEER.
- 5. COLD-DRAWN STEEL WIRE, USED FOR DOWEL BASKETS, SHALL BE ACCEPTED BY VISUAL FIELD INSPECTION, AS PROVIDING SUFFICIENT DOWEL BAR SUPPORT DURING PAVING PROCESS.
- ▲ 6. DOWEL BARS SHALL BE GRADE 60 PLAIN BARS. DOWEL BARS SHALL BE CENTERED ON THE BASKET REGARDLESS OF THE WIDTH OF THE BASKET OR THE LENGTH OF THE DOWEL BAR.
- 7. THE HEIGHT OF THE LOAD TRANSFER UNIT ( MEASURED TO THE CENTER OF THE DOWEL BAR FROM THE PAVEMENT SURFACE) SHALL BE 1/2 THE THICKNESS OF THE PAVEMENT, PLUS OR MINUS 1/2 THE DIAMETER OF DOWEL BAR OF THE UNIT.
- 8. DOWEL BARS SHALL HAVE A SHOP APPLIED EPOXY COATING OVER THEIR ENTIRE LENGTH (ENDS EXCEPTED). ADDITIONALLY, DOWELS SHALL BE COMPLETELY COATED WITH A FORM RELEASE AGENT (OR APPROVED EQUIVALENT BOND BREAKER) APPLIED IN THE FIELD, IMMEDIATELY PRIOR TO PAVING. THE FORM RELEASE AGENT SHALL NOT BE ALLOWED TO EVAPORATE FROM THE BARS PRIOR TO PAVING.
- 9. FOR EXPANSION JOINTS, THE DOWEL BARS SHALL HAVE EXPANSION CAPS WITH A MINIMUM 1" AND A MAXIMUM 2" AIR SPACE IN THE END OF THE EXPANSION CAPS (EXPANSION JOINT ASSEMBLIES).
- 10. THE CONTRACTOR SHALL DEMONSTRATE TO THE CITY ENGINEER A STAKING PATTERN THAT SHALL SECURE ALL DOWEL BASKETS SUCH THAT THE FINAL DOWEL POSITION IS WITHIN SPECIFICATION LIMITS.
- 11. FOR EXPANSION JOINTS, IN ADDITION TO THE SUPPORTS INDICATED, THE CONTRACTOR SHALL PROVIDE SUITABLE INSTALLING DEVICES AND SUCH ADDITIONAL STAKES AS MAY BE REQUIRED TO HOLD THE JOINT FILLER VERTICAL AND SECURELY IN LINE AND POSITION. THE CONTRACTOR WILL ALSO BE REQUIRED TO SATISFACTORILY FORM THE UPPER PORTION OF THE JOINT FOR RECEIVING THE SEAL. SEE ATTACHED DETAIL NUMBER D-200D.







12'-0" PAVING LANE (11 BARS)

14'-0" PAVING LANE (13 BARS)

SECTION B-B

///<del>=</del>///

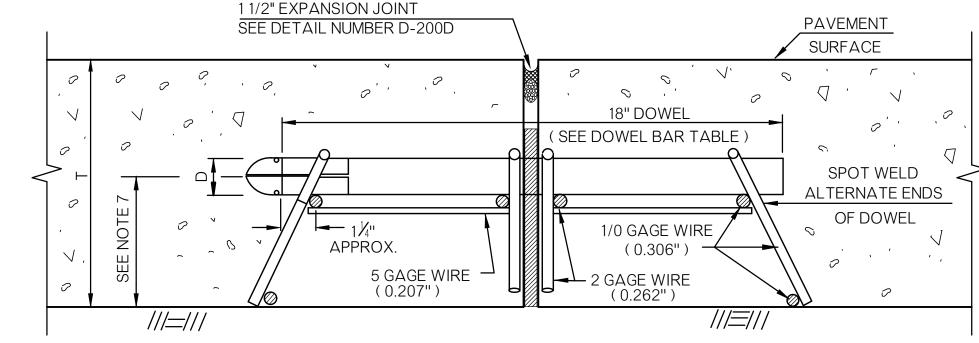
EDGE OF PAVING

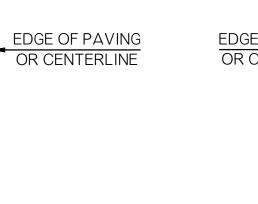
OR CENTERLINE

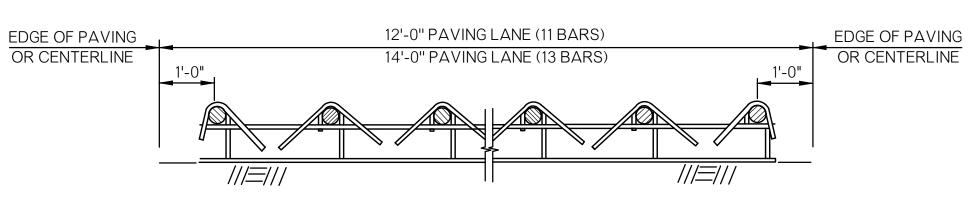
11 DOWELS ON 12" CENTERS (14' LANE)

PLAN VIEW

13 DOWELS ON 12" CENTERS (14' LANE)

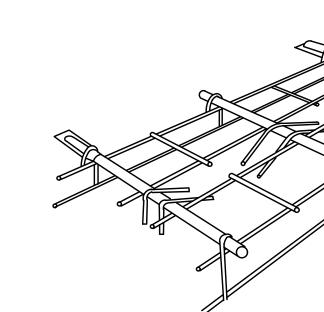


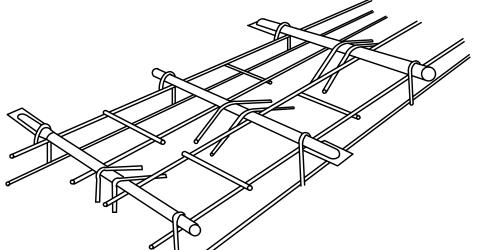




SECTION B-B

SECTION A-A



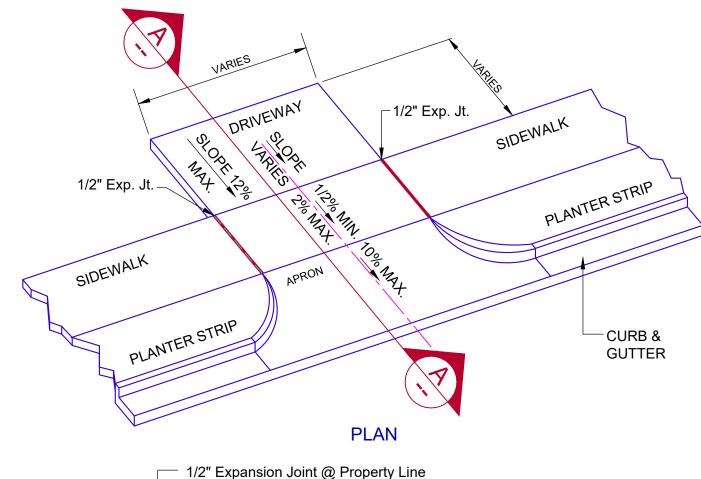


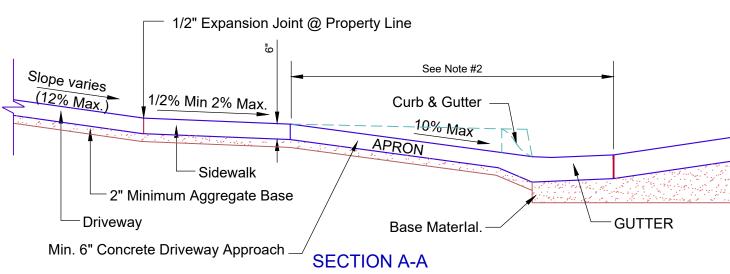
WELDED CONTRACTION JOINT ASSEMBLY

WELDED EXPANSION JOINT ASSEMBLY

**Drawing Number** 

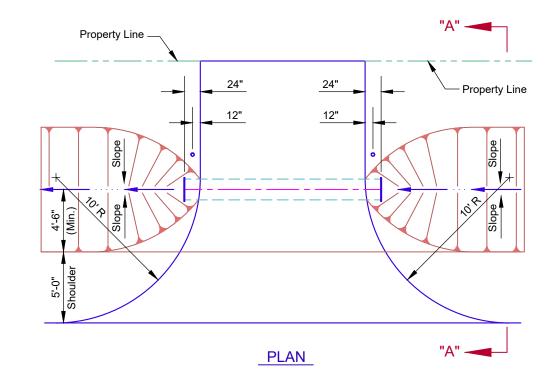
REVISION 3-2017

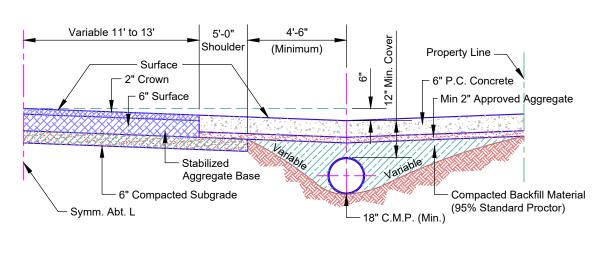




- 1. A 5' 0" minimum radius is approved for one & two family residences not abutting a limited access or major street. All other Driveways will have a 10' 0 " minimum radius.
- 2. The Driveway Contractor shall saw cut & remove the complete Curb and Gutter section. Saw cuts shall be 2" or 1/3 the depth of the gutter, whichever is greater. Saw cuts shall include the top & face of curb as well as the gutter. Saw cuts shall be made prior to the removal of concrete.
- 3. If a gutter holds water prior to any construction by driveway Contractor, he should notify the City Engineer of the situation before doing any work. The completed driveway work will not be accepted if the gutter holds water due to poor construction by the Contractor.
- 4. It is recognized that this driveway detail will not cover every possible situation encountered in construction. Additional expansion joints will be required as needed.
- 5. Clean and seal all joints and saw cuts in accordance with standard specifications.
- 6. Longitudinal Joint required for drives 16' wide & greater. Saw cut 2" deep and fill with silicone sealant. Transverse Joints Required at 15' Maximum Spacing.
- 7. Do not turn radius in front of adjacent property without written permission from adjacent property owner.
- 8. Commercial an industrial driveway approaches may be thicker or approved by the City Engineer.

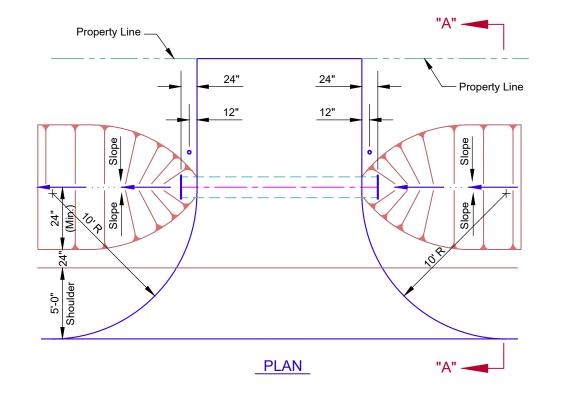
•310•

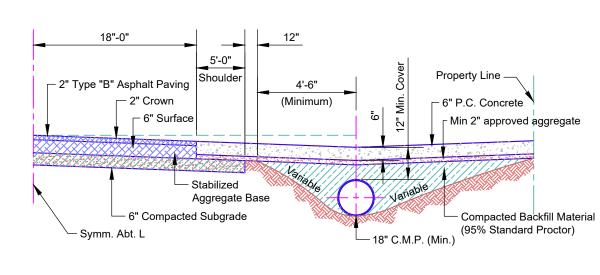




## SECTION "A - A"

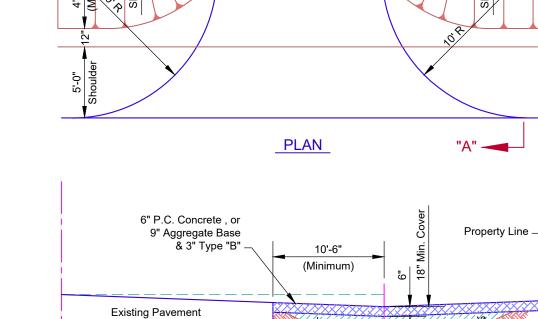
DRIVEWAY DETAILS FOR RURAL ESTATES DEVELOPMENT





## SECTION "A - A"

DRIVEWAY DETAILS FOR AGRICUTURAL ESTATES R -1 ZONING • 330 •



Compacted Backfill Material (95% Standard Proctor) –

SECTION "A - A" TO BE REMOVED IMMEADENTLY UPON COMPLETION OF DRILLING OPERATIONS

TEMPORARY DRIVEWAY DETAILS FOR OIL FIELD DEVELOPMENT ACCESS • 340 •

DRIVEWAY DETAILS

NOTES:

D-300

ပ DMG

36:26

- 1. VERTICAL STEEL PIPE TO BE SET ON 6' CENTERS, 4" CLEAR FROM BACK EDGE OF SIDEWALK.
- 2. MATERIALS SHALL BE COMPLY WITH THE STD. SPECIFICATIONS. SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO FABRICATION.

- 1. A PIPERAIL SHALL BE PLACED ON RETAINING WALLS AND PIPE HEADWALLS WITHIN PUBLIC ROW OR UTILITY / DRAINAGE EASEMENT
- 2. WELDED CONNECTIONS MAY BE USED FOR PIPERAILS. WELDED CONNECTIONS SHALL BE THOROUGHLY CLEANED OF ALL LOOSE SCALE, GROUND SMOOTH AND SPOT PAINTED WITH TWO COATS OF ZINC RICH PAINT.
- 1. ALL CONSTRUCTION AND MATERIAL SHALL BE IN ACCORDANCE WITH THE OKLAHOMA CITY STANDARD SPECIFICATIONS
- 2. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" CHAMFER.
- 3. ALL CONCRETE SHALL BE CLASS "A" CONCRETE 3000 PSI.
- 4. EXPANSION JOINTS SHALL BE AT A MAXIMUM OF 30'-0" INTERVALS.
- 5. ALL REINFORCING STEEL BARS SHALL BE DEFORMED BARS COLD BENT, NO WELDS PERMITTED.
- 6. ALL EXPOSED CONCRETE SURFACES SHALL HAVE A VERTICAL LIGHT BROOM FINISH.
- 7. ALL PEDESTRIAN GUARDRAIL AND PIPERAIL MATERIAL SHALL BE GALVANIZED OR POWDER COATED.

3" STEEL PIPERAIL

CONCRETE

**PIPERAIL** ATTACHMENT DETAIL

<u>.</u>

5" MIN

WELDED TO STEEL PLATE

4" x 4" x 3/8" STEEL PLATE

WELDED TO #8 REBAR

RETAINING WALL OR

PIPE HEAD WALL

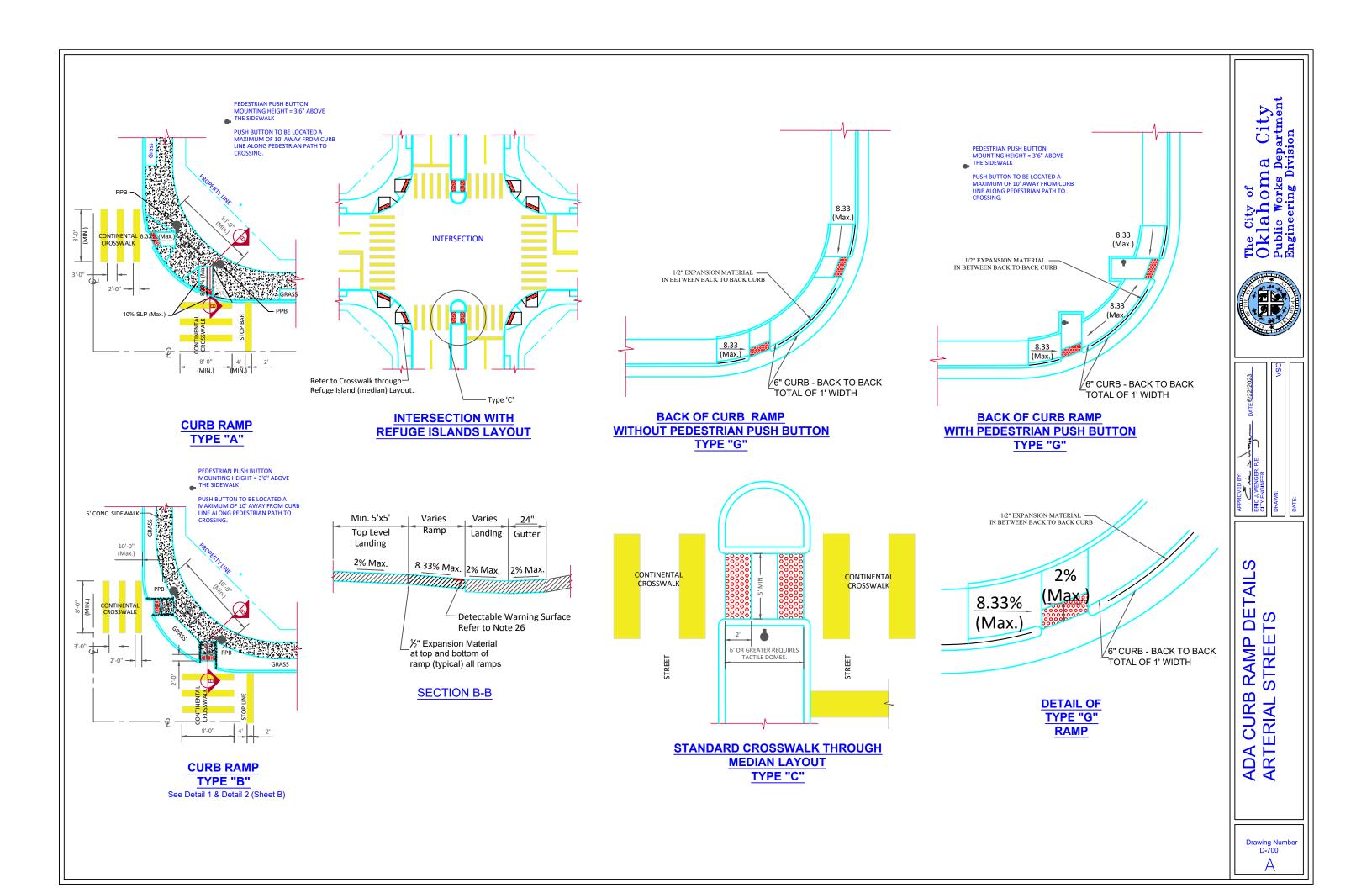


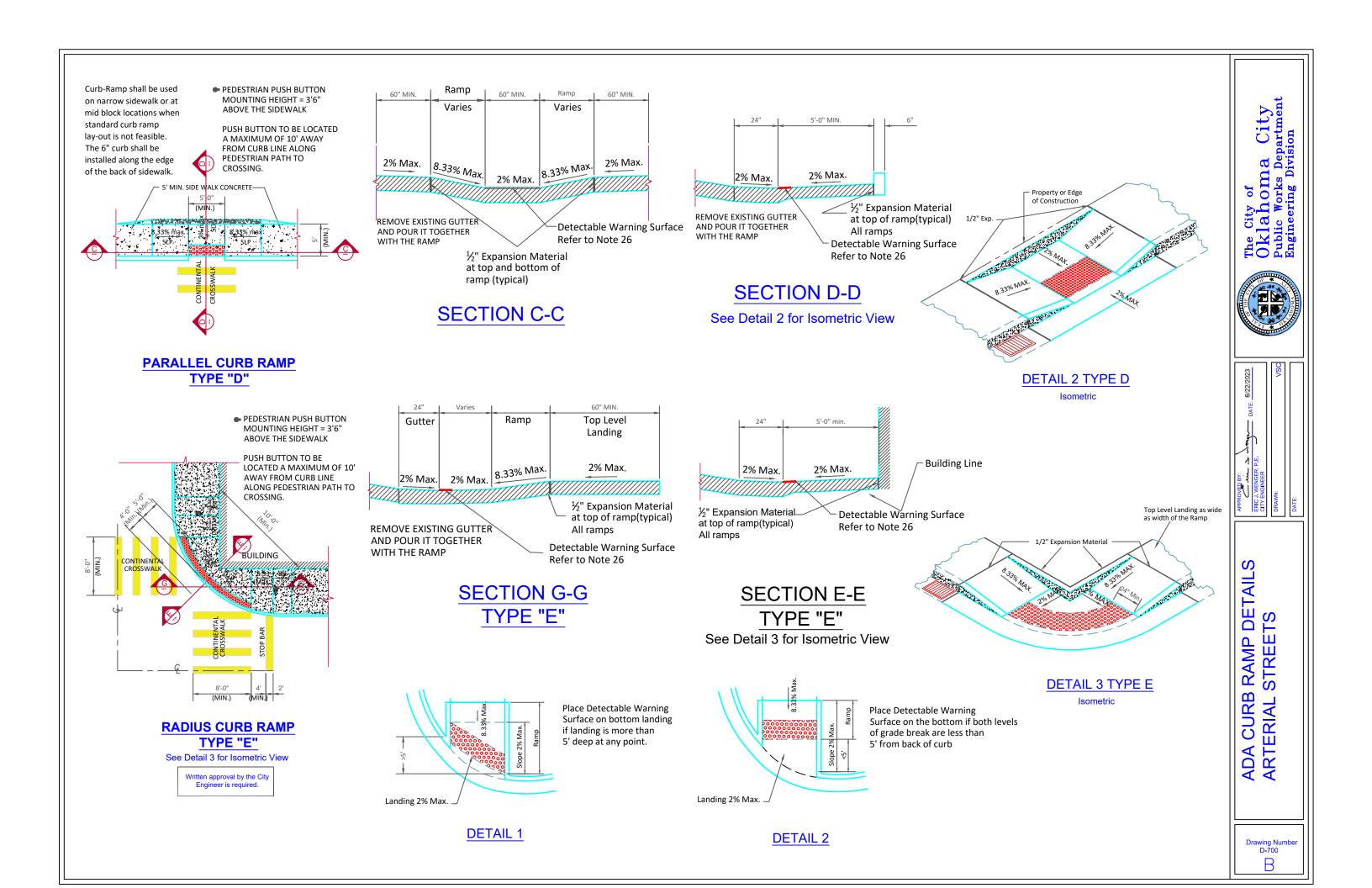
AND

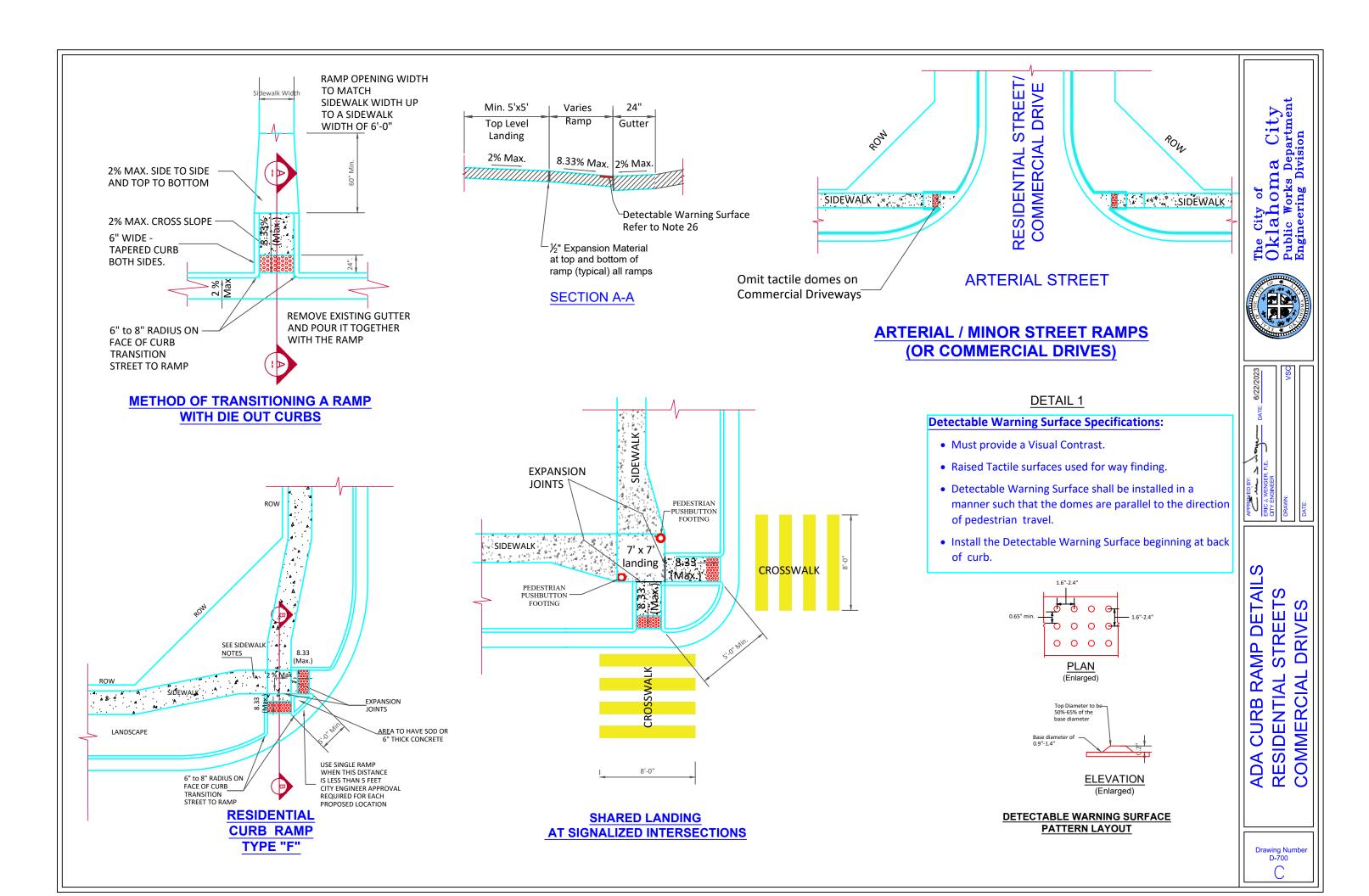
GUARDRAIL DETAIL **PIPERAIL** STRIAN 

Drawing Number

D-505







#### **Sidewalk Notes:**

- 1. All work must meet current Americans with Disabilities Act (ADA) requirements.
- 2. Minimum sidewalk width shall be as follows: residential, 5'-0" at curb, 4'-0" at property line; commercial, 6'-0" at curb, 5'-0" at property line.
- 3. Sidewalk cross slope shall be a maximum of 2% and a minimum of 1/2% cross slope.
- 4. Whenever the width of the sidewalk is less than 5'-0", a 5' x 5' passing area with a maximum 2% slope and minimum 1/2% slope in any direction at intervals of 200' shall be installed.
- 5. Whenever changing direction in a sidewalk, install a 5' x 5' passing area with maximum 2% slope and minimum 1/2% slope in any direction.
- 6. Objects such as tree branches, signs, water fountains, etc. shall not protrude into the sidewalk more than 4" at the heights between 27" and 80".
- 7. Sidewalk shall be constructed of 4" thick concrete with medium broom finish on top of 2" of 1.5" crusher run,  $\frac{3}{6}$ " rock screenings, 1.5" clean recycled concrete or approved equal. Developers of Residential Neighborhoods are allowed the usage of 2" of sand instead of the required crusher run.
- 8. All obstructions into the walk, such as power poles, hydrants, sign posts, etc. must have at least 48" of clear travel space around the obstruction.
- 9. Sidewalk running grade shall not exceed 5% unless the sidewalk is contained in the R-O-W and then cannot exceed the general grade established for the adjacent street.

#### **General Notes:**

- 10. Any deviation from the standard curb-ramp plans shall be approved by the City Engineer or his designee on a case by case basis.
- 11. The standard curb-ramp drawings supersede all previous drawings and shall be a part of the new curb ramp standard drawings.
- 12. All alternate ramps shall be approved by the City Engineer or his designee prior to construction
- 13. Seal all sawed joints on sidewalks, landings and ramps. Width of expansion joint shall be 1/8"

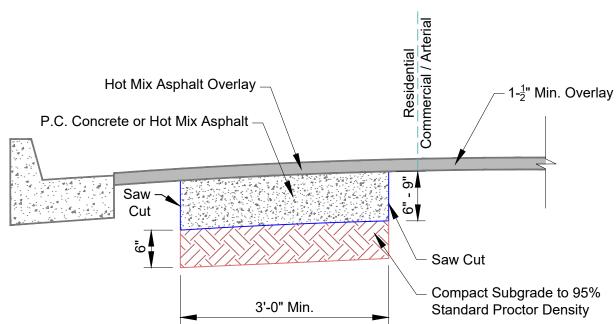
#### **Pedestrian Signals Notes:**

- 14. Push button must be located adjacent to and accessible from a landing.
- 15. A clear space of 30" x 48" minimum dimension must be next to the push button.
- 16. Maximum reach to a push button can not exceed 10".

#### **Curb Ramp Notes:**

- 17. A curb ramp is defined as the entire concrete surface which includes the ramp and flared sides. The minimum 4' wide center portion, including the Detectable Warning Surface, shall have a sloped plane of 8.33% (1:12) maximum, and cross slope, not to exceed 2%. The "flared side" of the ramp shall lie on a slope of 10% (1:10) maximum measured along the curb. The curb ramp shall have a surface tolerance of ½" per 10 foot straight edge maximum.
- 18. The ramp center line and path of travel should be parallel to the sidewalk whenever possible. The full width of the ramp shall lie within the crosswalk area. It is desirable that the location of the ramp be as close as possible to the center of the crosswalk.
- 19. Curb Ramps shall not exceed 15' in length unless otherwise directed by the City Engineer.
- 20. Existing utility boxes and covers shall be adjusted flush with the curb ramp surface and shall not straddle any change in plane or material. Existing utility box frames and covers shall have matching surface finish on the entire frame and cover. New utility boxes shall not be placed within the accessible pathway.
- 21. The surface of the curb ramp and Detectable Warning Surface material shall be stable, firm and slip resistant. The concrete curb ramp surface shall be medium broom finished transverse to the axis of the ramp and shall be slightly rougher than the finish of the adjacent sidewalk surface.
- 22. A level landing 5'-0" deep, with a 2% maximum slope in each direction shall be provided at the upper end of each curb ramp to allow safe egress from the ramp surfaces. The width of the level landing shall be at least as wide as the width of the ramp. A clear space of a minimum of 30" wide x 48" deep shall be provided at pedestrian push buttons at signalized crossings. This space may be contained in the landing.
- 23. Existing vertical utility poles or street light poles may be incorporated into the flared sides, if necessary. The vertical obstruction shall be a minimum of 6"away from edge of the ramp. Pedestrian crosswalks push button poles, fire department call boxes and other poles with activated devices, may not be placed in the curb-ramp at any time. No new vertical obstructions may be located in the curb ramp or the accessible pathway.
- 24. Ramp opening shall be the same width as the sidewalk up to 6'-0" wide.
- 25. Curb Ramp shall be constructed with 8" thick concrete at collector and arterial streets; and with 6" thick concrete at residential streets. All on top of 2" of 1.5"crusher run,  $\frac{3}{8}$ " rock screenings, 1.5" recycled concrete or approved equal. The 6" thick concrete will extend the maximum length of 6' from the face of curb and the 8" thick concrete will extend the maximum length of 8' from the face of curb. The remainder of the ramp will be constructed of 4" thick concrete and paid as sidewalk. All landings and incidental connections will be paid as sidewalk and will be constructed of 4" thick concrete. A 6" concrete curb will be constructed on each side of the ramp where 1:10 concrete slopes are not used.
- 26. For new construction all Detectable Warning Surfaces are to be set in concrete. Surface applied domes require special written approval by the City Engineer.
- 27. Curb ramp pay items shall only be used at street intersections, signalized driveways or alleys with tactile
- 28. Where feasible, ramps shall align in such a way that the pedestrian travel path shall provide a direct path to corresponding ramp. Ramps that require pedestrians to change direction of travel in the street or driveway shall require City Engineer approval.
- 29. Where a ramp ties into an existing curb and gutter, the entire curb and gutter shall be removed and replaced extending 2 feet past the width of the ramp on each side.

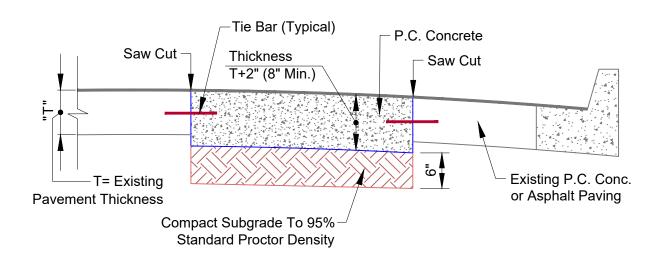
S



#### NOTES:

- 1. Pavement repairs includes removal of Asphalt or P.C. Concrete Pavement
- depending on existing conditions, saw cut should be included in price.
- 2. Hot Mix Asphalt shall meet density specification

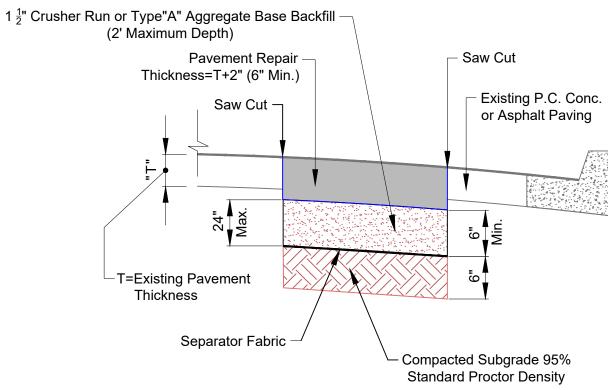
## PAVEMENT REPAIR DETAILS



#### NOTES:

- 1. Remove existing concrete paving, to be included in price. Partial panel replacement not permitted, saw cut should be included in price.
- 2. When utility trench is the reason for pavement repair, see typical permanent repair section for details on reinforcing steel, backfill material, and trench width, etc.
- 3. Tie bars to be 1" dia. deformed bars (1  $\frac{1}{4}$ " dia. for pavement 8" thick and greater)
- 18" length and spaced at 18" centers. Anchored with epoxy.
- 4. For Transverse joints, use smooth bars with same dimensions as shown above. Only One end anchored with epoxy.
- 5. Concrete panel to be double sawed 6" apart to protect the pavement edge during
- 6. Use black colored concrete when repairing asphalt paving. Use Soloman Color's Color #920 and apply at 25 lbs per 2 CY of concrete.

## **EXISTING ASPHALT OR CONCRETE BASE REPAIR DETAIL**

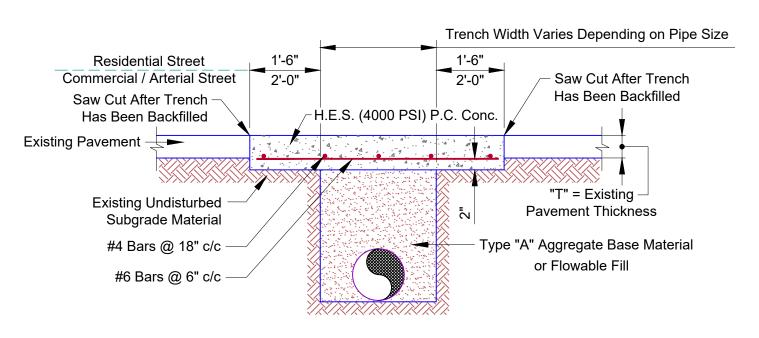


### NOTE:

- 1. Excavation and aggregate base backfill begins at the bottom of the existing
- pavement and extends downward to a maximum depth of 2 feet.
- 2. The contractor shall not begin the backfill operation until measurement of the excavation has been made and agreed upon by the engineer and the contractor. 3. Backfill material will be placed in lifts not to exceed six inches (6") and compacted
- to 95% Standard Proctor Density. 4. Subgrade compaction saw cut and separator fabric will not be paid for separately. Include cost in price bid for other items of work.
- 5. Use black colored concrete when repairing asphalt paving. Use Soloman Color's Color #920 and apply at 25 lbs per 2 CY of concrete.

## UTILITY PAVEMENT CUT AND PERMANENT TRENCH REPAIR

### TYPICAL REPAIR SECTION FOR CITY STREET



#### **NOTES**:

- 1. Aggregate base to be compacted 95% Standard Proctor Density in 6" lifts.
- 2. The City Engineer may require full P.C. Concrete panel replacement depending on street location and functional classification.
- 3. Thickness of repair shall be "T" + 2", but shall not be less than 10 inches.
- 4. The cost of saw cut, removal, rebar and placement of compacted back fill to be included in price bid per square yard of repair unless otherwise stated in the contract documents.
- 5. Use black colored concrete when repairing asphalt paving. Use Soloman Color's Color #920 and apply at 25 lbs per 2 CY of concrete.

#### Saw Cut -1/2" Expansion Joint Material 3-#6 Smooth Tie Bars Property Line (1'-6" Long) (Typical) Property Line 10'-0" Sidewalk Minimum −Saw Cut if "X" is >10 ft. 6" Concrete, 5' Long - For Radius on Each Side of Drive Way See Note Below 2" Deep Saw Cut 2" Deep Saw Cut 450 Longitudinal Joint (Typical) Back of Curb Saw Cut - See Note Below ∠1/2" Expansion Joint with 2-#6 1/2" Expansion Joint Smooth Tie Bars (1'-6" Long) (Typical) at Property Line See Note #2 Saw Cut -Slope Varies $\frac{1}{2}$ % Min. 12% Max. Curb & Gutter 2% Max. 10% Max. 2% Max −6" Sidewalk - Gutter -Minimum 2" Approved Aggregate └─4" Thick Driveway (Typical) Base Material SECTION "A - A"

**DRIVEWAY DETAIL** 

## NOTES:

- 1. A 5' 0" minimum radius is approved for one & two family residences not abutting a
- limited access or major street. All other Driveways will have a 10' 0" minimum radius. 2. The Driveway Contractor shall saw cut & remove the complete Curb and Gutter section. Saw cuts shall be 2" or 1/3 the depth of the gutter, whichever is greater, include the top & face of curb as well as the gutter, be made prior to the removal of concrete, and be full depth for removal and 2" or 1/3 the depth for crack control, whichever is greater.
- 3. If a gutter holds water prior to any construction by driveway Contractor, he should notify the City Engineer of the situation before doing any work. The completed driveway work will not be accepted if the gutter holds water due to poor construction by the Contractor.
- 4. It is recognized that this driveway detail will not cover every possible situation
- encountered in construction. Additional expansion joints will be required as needed. 5. Clean and seal all joints and saw cuts in accordance with standard specifications.
- 6. Longitudinal and Transverse Joints, required for drives greater than 12' wide. Saw cut 2" or 1/3 depth and fill with silicone sealant.
- 7. Do not turn radius in front of adjacent property without written permission from adjacent property owner.
- 8. When connecting a new sidewalk to an existing steep driveway, which cannot be made ADA compliant, the transition panel on each side of the driveway shall not be more than 5' in length, unless approved by the engineer.
- 9. For a residential or commercial structure located below street level, the high point of the sidewalk where it crosses the driveway shall be at least 6" above the street gutter elevation.

## ADJUSTMENT OF VALVE BOX TO GRADE

1. The valve box shall be set to grade and concrete collar poured after

existing pavement grade, both longitudinally and transversely.

placing concrete.

of the manhole ring.

resurfacing operations. The top of the valve box must match exactly the

2. Concrete base shall be H.E.S. Class AA 4000 PSI P.C. Concrete (3000

PSI in 24 hours). Concrete must be thoroughly vibrated. Contractor

3. The work shall be protected by barriers and lights meeting MUTCD and

shall not be removed for a period of 24 hours after the pour is made.

5. All excavation at the corners of the concrete collar must be removed so

6. Place one #5 reinforcing steel diagonal at each corner 4" from the edge

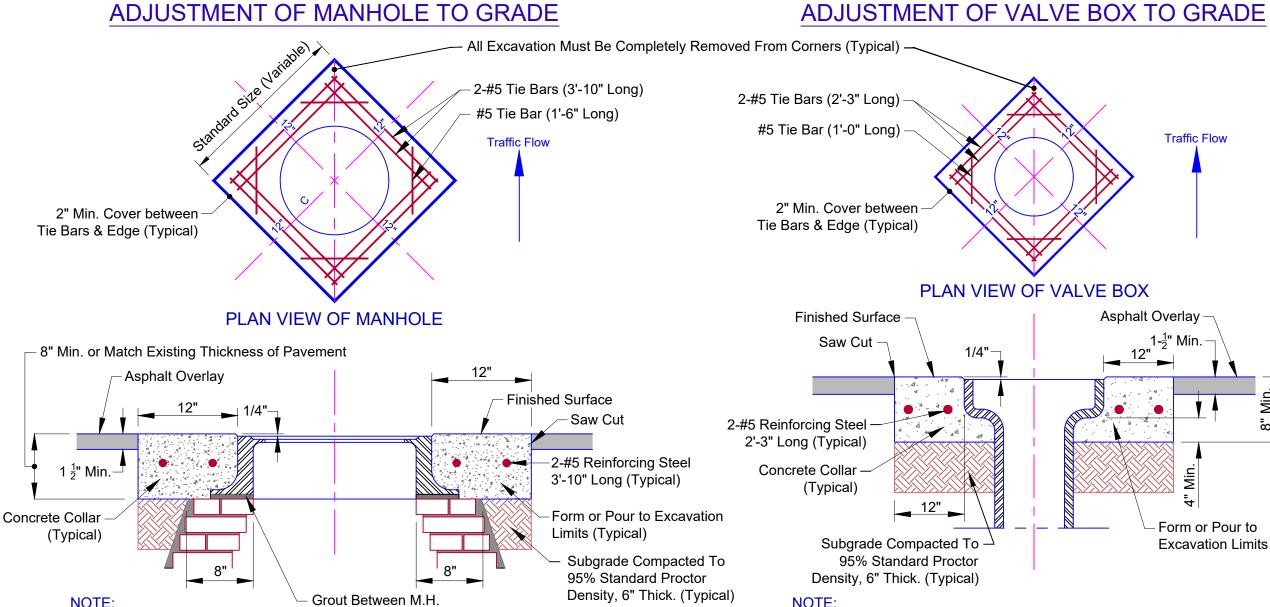
that it is a minimum of 8" thick for the full extent of the collar.

with mechanical compactor such as the "Wacker Packer" before placing

4. Subgrade outside the limits of the manhole cone, must be compacted

concrete. The subgrade must be firm and unyielding.

must call for inspection for verification of structure & dimensions before



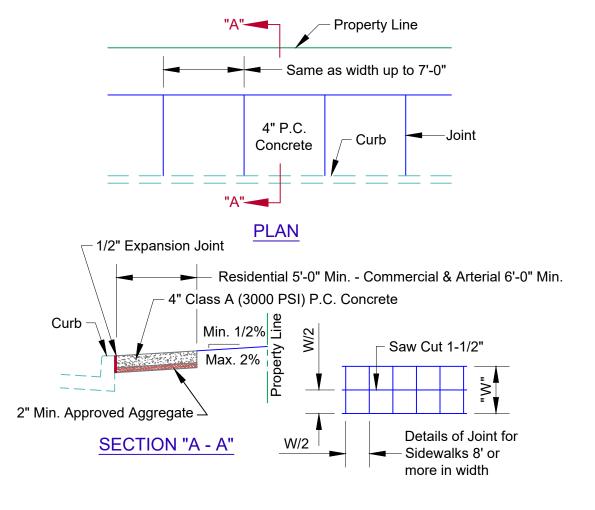
#### 1. The manhole frame shall be set to grade and concrete collar poured after surfacing operations. Existing ring and lid must be replaced with Deeter Foundry, Inc., shown on drawing number 1197-0110 and 1197-2100 respectively, or approved equal. The top of the ring and lid must match exactly the existing pavement grade, both longitudinally and transversely

Framework & Brickwork

NOTE:

- 2. Concrete collar shall be H.E.S. Class AA 4000 PSI P.C. Concrete (3000 PSI in 24 hours). Concrete must be thoroughly vibrated. Contractor must call for inspection for verification of structure & dimensions before placing concrete.
- 3. The work shall be protected by barriers and lights meeting MUTCD and shall not be removed for a period of 24 hours after the pour is made.
- 4. Subgrade outside the limits of the manhole cone, must be compacted with mechanical compactor such as the "Wacker Packer" before placing concrete. The subgrade must be firm and unyielding.
- 5. All excavation at the corners of the concrete collar must be removed so that it is a minimum of 8" thick for the full extent of the collar.
- 6. Place one #5 reinforcing steel diagonal at each corner 4" from the edge of the manhole ring.

## **DETAILS FOR SIDEWALK LOCATED AT CURB**

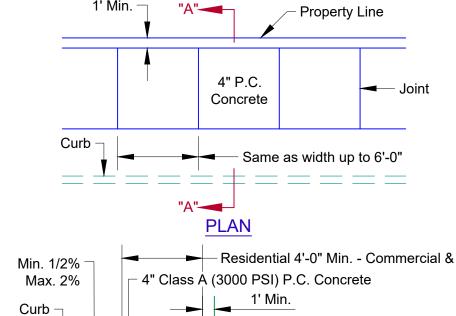


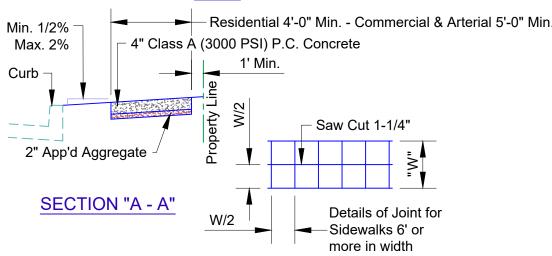
#### NOTES:

- 1. 1/2" x 4" premolded expansion material around Power Poles or other structures in walk, with at least 36" of clear travel space.
- 2. Expansion joints maximum distance = 100', use 1/2" x 4"
- premolded expansion material. 3. Transverse contraction joints maximum distance = 5', saw cut or
- Tool 1 1/4" deep.
- 4. Saw cut joints within 24 hours or 12 hours if temperature is above 85°F. 5. Use 1/2" x 4" premolded expansion joint behind curb or
- attached to curb.
- 6. Medium broom finish (transverse). 7. Use edger tool on all edges.

# **DETAILS FOR SIDEWALK**

LOCATED AWAY FROM CURB





### NOTES:

- 1. Place 1/2" premolded expansion material around Power Poles or other structures in walk, with at least 36" of clear travel space.
- 2. Expansion joints maximum distance = 100', use 1/2" x 4" premolded
- expansion material. 3. Transverse Contraction joints maximum distance = 5', saw cut or tool
- $1-\frac{1}{4}$ " deep.
- 4. Saw cut joints within 24 hours or 12 hours if temperature is above 85°F.
- 5. Medium broom finish (transverse).
- 6. Use edger tool on all edges.

**Drawing Number** 

D-800