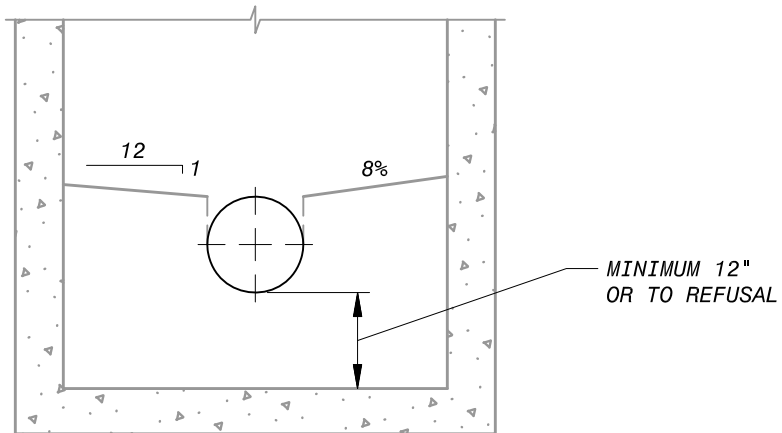


MINIMUM RADIUS OF MANHOLE CHANNEL

EXAMPLE: FOR A 48-INCH DIAMETER MANHOLE FOR 8-INCH SEWERS, MINIMUM CENTERLINE CHANNEL RADIUS EQUALS TWO (2) FEET



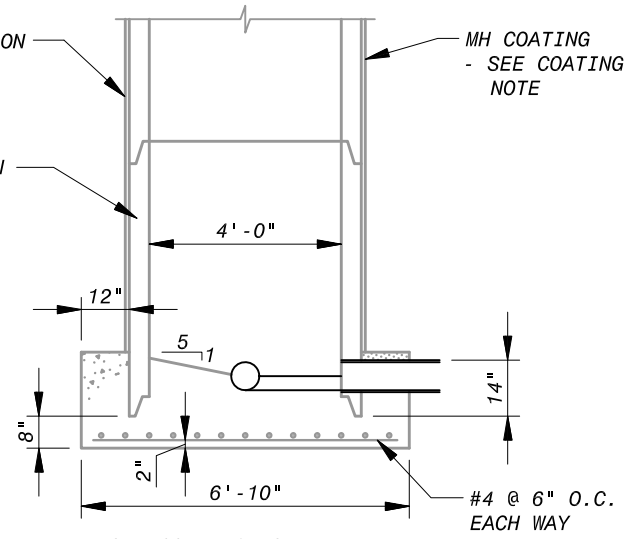
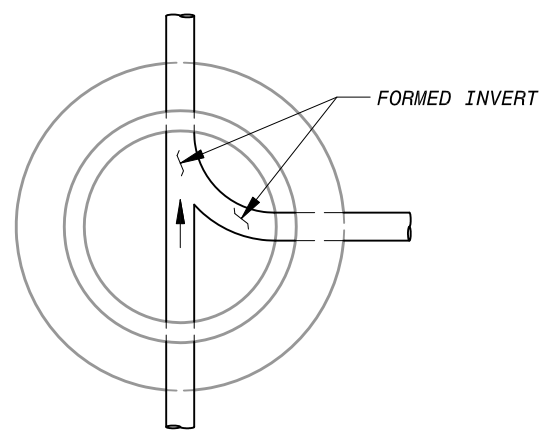
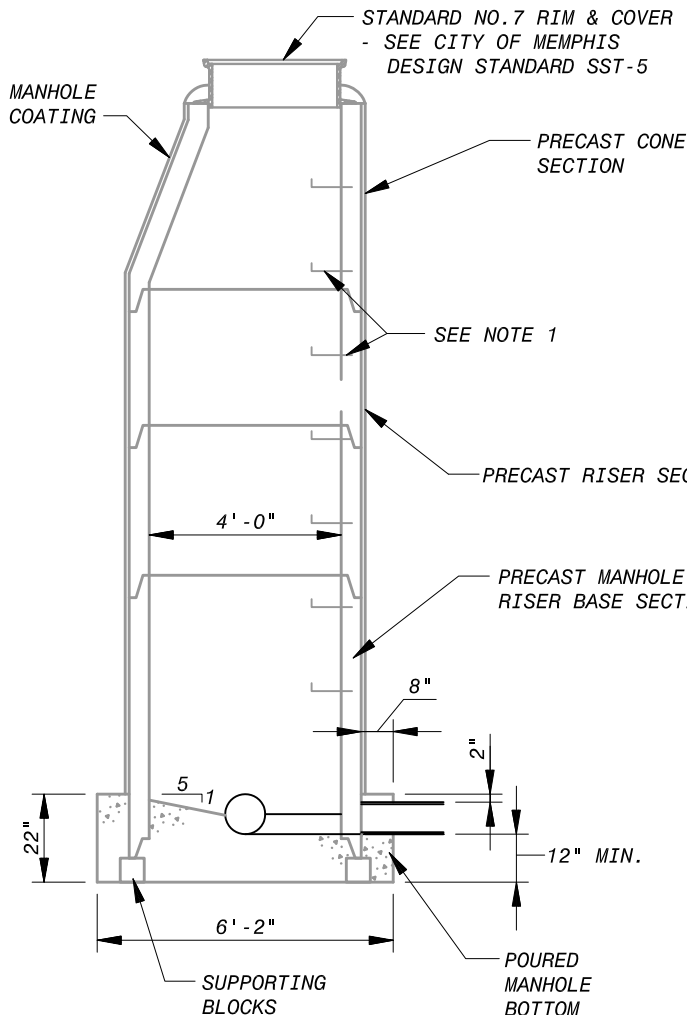
NOTES:

1. CHANNEL SHALL BE POURED WITH 3,000 PSI CONCRETE.
2. INSTALL HYDROPHILIC NEOPRENE GASKET AROUND PERIMETER OF MANHOLE, 2 INCHES TO 4 INCHES BELOW FINAL CONCRETE ELEVATION (E.G. LMK INSIGNIA END SEAL SLEEVE).
3. INVERT OF NEW MANHOLE CHANNEL SHALL BE FINISHED WITH CONSISTENT SLOPING GRADE FROM INCOMING PIPELINE INVERT TO OUTGOING PIPELINE INVERT, IF APPLICABLE WITH EXISTING INVERT ELEVATIONS.
4. RADIUS OF CHANNEL:
 - A. FOR SEWER PIPELINES SMALLER THAN 12-INCH DIAMETER, PROVIDED A MINIMUM RADIUS OF THE CENTERLINE OF THE CHANNEL OF ONE-HALF (1/2) THE INSIDE DIAMETER (ID) OF THE MANHOLE.
 - B. FOR SEWER PIPELINES 12-INCH AND LARGER, PROVIDE A MINIMUM RADIUS OF THE OUTER CHANNEL WALL OF ONE-HALF (1/2) THE INSIDE DIAMETER (ID) OF THE MANHOLE.
 - C. DESIGN THE CHANNELS TO HAVE A UNIFORM CURVE, WITH NO REVERSE CURVES WITHIN THE MANHOLE.
5. WIDTH OF CHANNEL:
 - A. THE CHANNEL WIDTH FOR SEWER PIPELINES HAVING THE SAME DIAMETER ENTER AND EXIT A MANHOLE IS THE SAME AS THE PIPE INSIDE DIAMETER.
 - B. THE CHANNEL WIDTH FOR SEWER PIPELINES HAVING DIFFERENT DIAMETER, IS TAPERED FROM ONE PIPE SIZE TO THE OTHER.
6. TOP OF BENCH ELEVATION:
 - A. WHEN BOTH THE INCOMING AND OUTGOING PIPES ARE THE SAME DIAMETER, SET THE TOP OF THE BENCH AT THE SAME ELEVATION AS THE TOP OF THE PIPE.
 - B. WHEN THE INCOMING AND OUTGOING OF THE PIPES HAVE DIFFERENT DIAMETERS, SET THE TOP OF PIPE ELEVATION OF THE HIGHEST PIPE WITHIN THE MANHOLE, EXCEPT WHEN A MANHOLE DROP CONNECTION IS DESIGNED. WHEN A SEWER HOUSE CONNECTION (SHC) ENTERING THE MANHOLE IS SIGNIFICANTLY HIGHER THAN THE MAINLINE SEWER, THE BENCH ON THE SIDE WHERE THE SHC ENTERS MAY BE ELEVATED, AND THE BENCH ON THE OPPOSITE SIDE MAY MATCH THE TOP OF THE MAINLINE SEWER FOR MORE CONVENIENT ACCESS.
7. WIDTH AND SLOPE OF THE TOP OF THE BENCH:
 - A. THE BENCH SHOULD PROVIDE GOOD FOOTING FOR A WORKER AND A PLACE WHERE TOOLS AND EQUIPMENT CAN BE LAID AND MUST BE PROVIDED WITH ADEQUATE SLOPE TO DRAIN.
 1. INSTALL THE TOP OF BENCH WITH AN EIGHT (8%) PERCENT OR 1-INCH PER FOOT SLOPE FROM THE WALL TO THE CHANNEL'S EDGE.
 2. INSTALL THE WIDTH OF THE BENCH TO HAVE A MINIMUM OF 12-INCH ON EACH SIDE OF THE CHANNEL, IF POSSIBLE.



SARP10

BENCH & CHANNEL REPLACEMENT DETAIL



MANHOLE COATING NOTE:
 OUTSIDE COATING OF MANHOLE SHALL BE WITH ASPHALTIC BLACK, AS AVAILABLE AT UNITED PAINT COMPANY.



METHOD OF APPLICATION SHALL BE PERFORMED BY BRUSH OR BY LOW PRESSURE SPAYER.

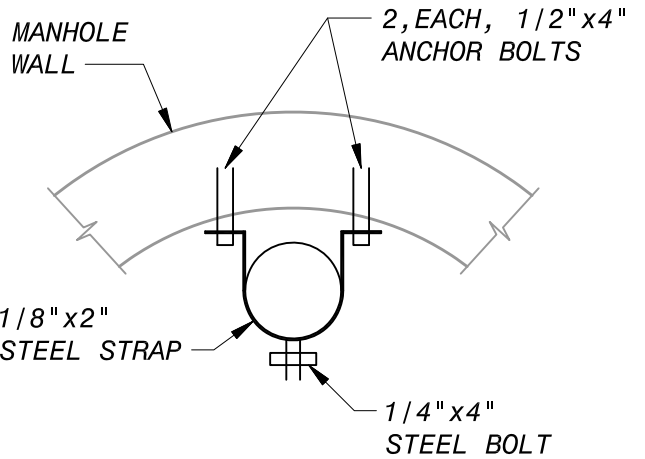
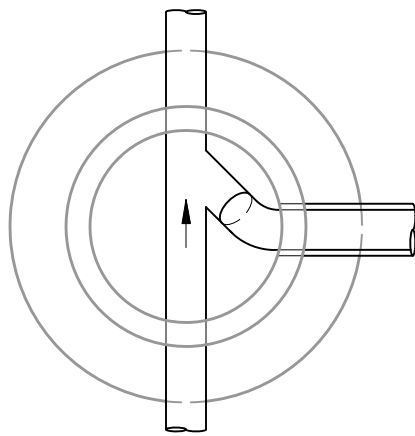
- NOTES:**
1. CAST IRON STEPS STAGGERED Laterally 12" C-C & UNIFORMLY SPACED VERTICALLY AT 16" O.C. MAXIMUM - SEE "MANHOLE STEPS" NOTE BELOW

TYPICAL PRECAST MANHOLE

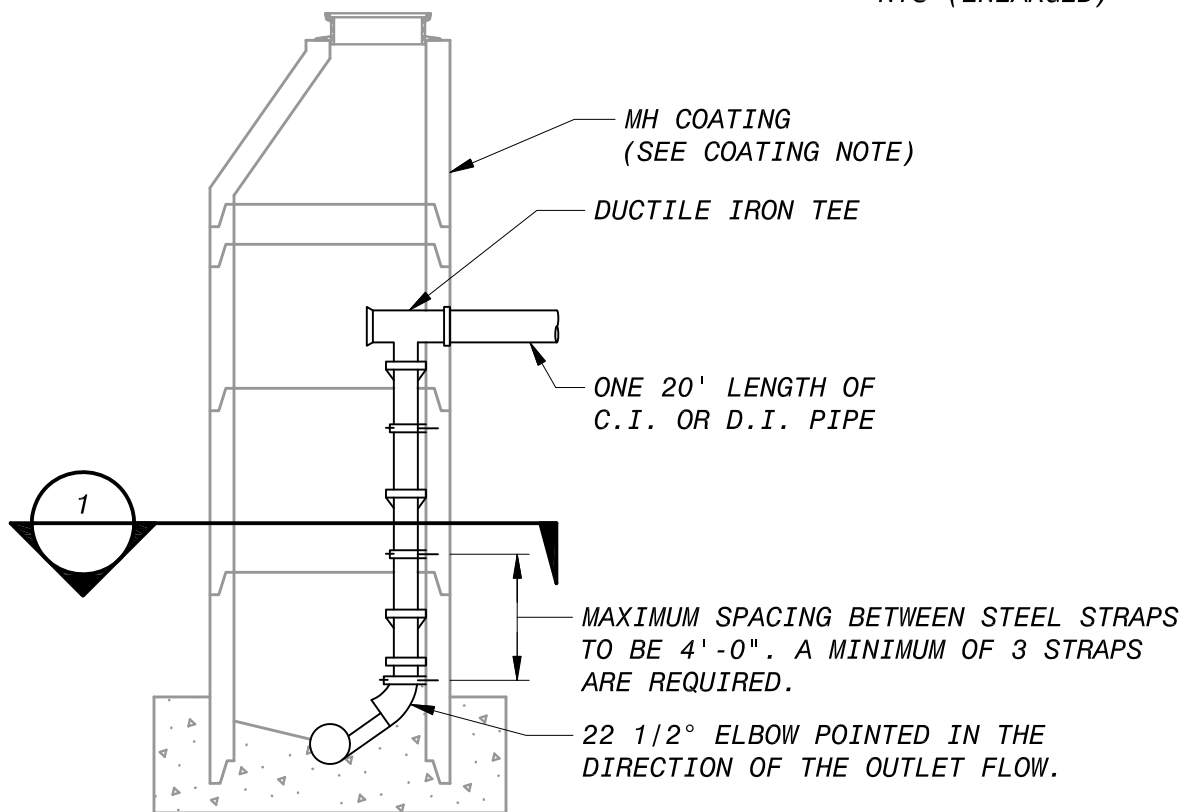
ALTERNATE (MANHOLES IN EXCESS OF 20' DEEP)

- JOINT SEALANT:** CONCRETE MORTAR SHALL BE USED TO SEAL JOINTS AFTER THE INSTALLATION OF AN APPROVED GASKET MATERIAL BETWEEN ALL PRECAST MANHOLE SECTIONS.
- BASE SECTIONS:** MANHOLE BOTTOM SHALL NOT BE POURED UNTIL PRECAST BASE SECTION OF MANHOLE AND PIPE STUBS OUT & IN ARE IN PLACE. PIPE STUBS OUTSIDE OF MANHOLE SHALL HAVE A MINIMUM LENGTH OF 12" AND A MAXIMUM LENGTH OF 15" FROM OUTSIDE OF MANHOLE TO THE FIRST JOINT OF PIPE. CONCRETE USED TO FORM BASES AND INVERTS SHALL BE 3,000 p.s.i.
- SUBSTITUTES:** POURED-IN-PLACE MANHOLES MAY BE SUBSTITUTED FOR PRECAST MANHOLES, PROVIDED A FORMAL, WRITTEN REQUEST HAS BEEN SUBMITTED TO & APPROVED BY THE ENGINEER OF DESIGN. ALL POURED-IN-PLACE MANHOLES SHALL CONFORM TO CITY OF MEMPHIS STANDARD DRAWINGS NO. SST-6 AND SST-7.
- MANHOLE STEPS:** THE FOLLOWING MANHOLE STEPS HAVE BEEN APPROVED FOR USE:
1. TOWER GROVE MH STEP NO. B-1096 BY TOWER GROVE FOUNDRY CO.
 2. M.A. MANHOLE STEPS BY M.A. INDUSTRIES, INC., EAST POINT, GA.
 3. WEDGE-LOK SAFETY STEP BY DELTA PIPE PRODUCTS, INC., ATLANTA, GA.

	<h1 style="font-size: 2em; margin: 0;">SARP10</h1> <h2 style="font-size: 1.5em; margin: 0;">PRECAST SANITARY MANHOLE SST-1</h2>
	<p>REV 0.0</p> <p>DATE: 06/04/15</p>



SECTION
NTS (ENLARGED)



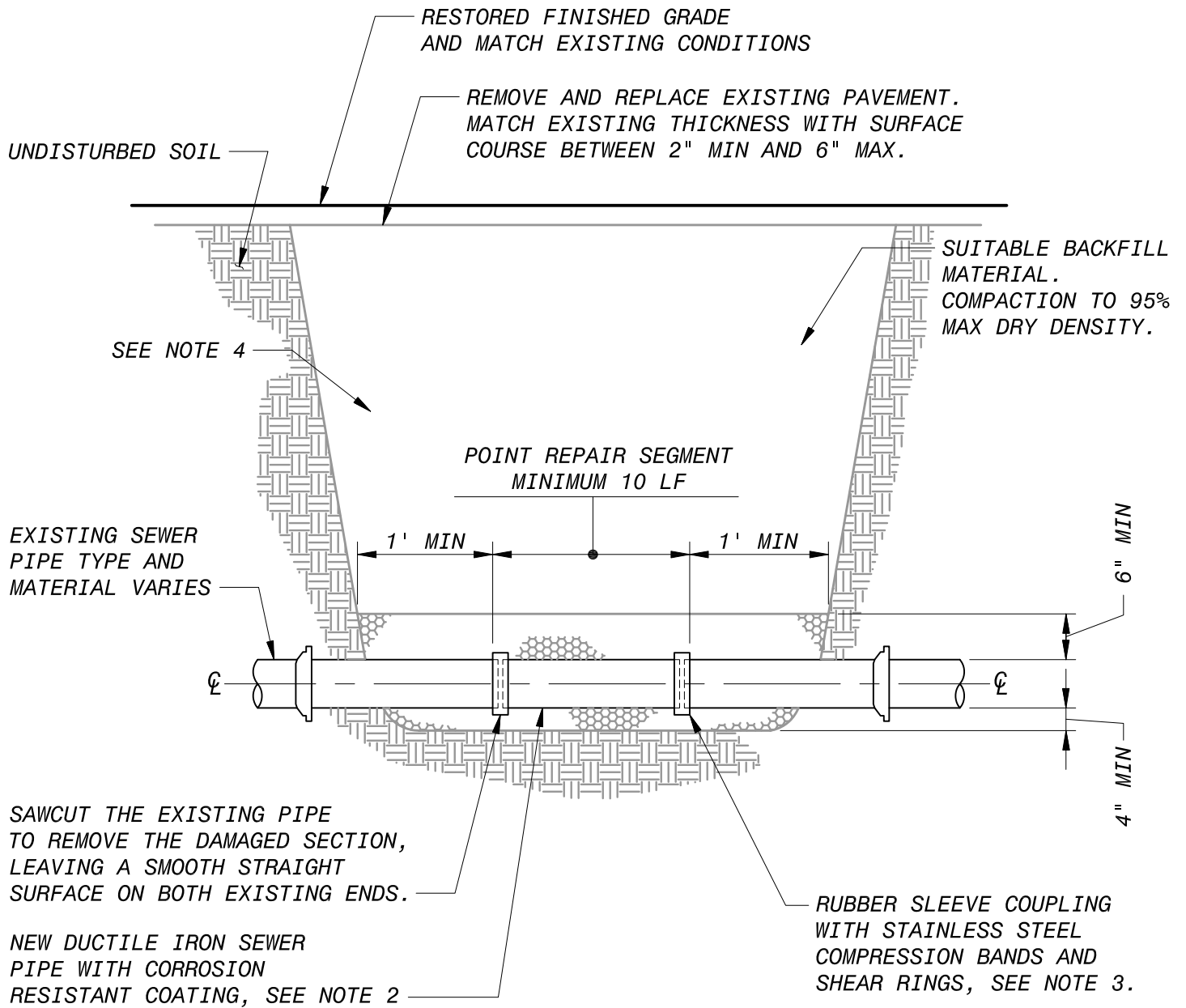
INSIDE DROP
(SEE NOTE 2)

- NOTES:**
1. TO BE USED, WHERE REQUIRED, ON NEW MANHOLES.
 2. TO BE USED ON ALL EXISTING MH'S, WHERE REQUIRED.



SARP10

**SANITARY MANHOLE DROP
CONSTRUCTION SST-2**



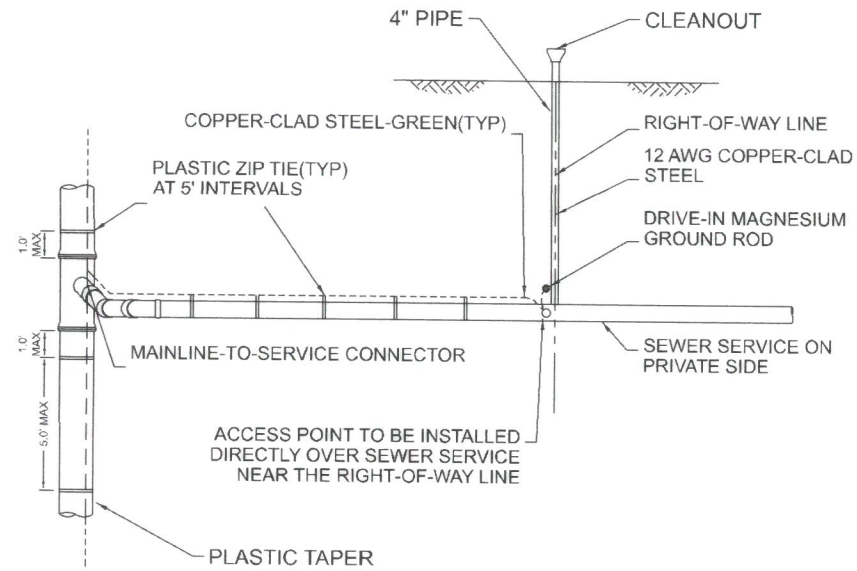
NOTES

1. CONSULT WITH SARP10 CONSTRUCTION MANAGER BEFORE MAKING REPAIRS REQUIRING MORE THAN 10 LF.
2. INSTALL NEW DUCTILE IRON SEWER PIPE, IN ACCORDANCE WITH CITY OF MEMPHIS STANDARD CONSTRUCTION SPECIFICATION SECTION 02530-SEWER PIPE INSTALLATION.
3. INSTALL FERNCO SERIES 5000RC SHIELDED COUPLINGS WITH NUT AND BOLT CLAMP, MISSION "FLEX-SEAL" ADJUSTABLE SHIELDED REPAIR COUPLINGS, OR APPROVED EQUAL.
4. REMOVE EXCAVATED MATERIAL UNDER PAVED SURFACES AND BACKFILL WITH CRUSHED LIMESTONE OR RECYCLED CRUSHED CONCRETE PER CITY OF MEMPHIS STANDARD SPECIFICATIONS.



SARP10

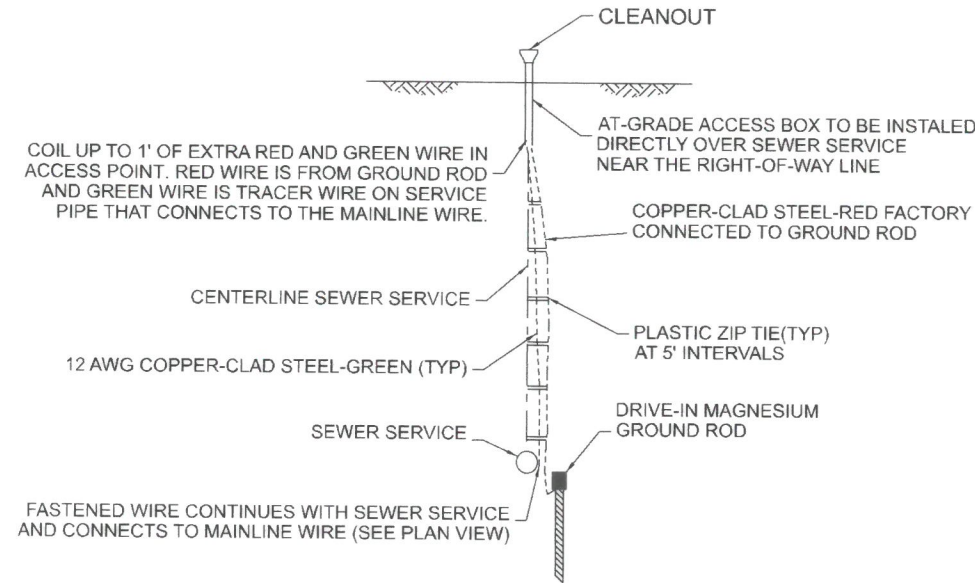
**SANITARY
SEWER POINT REPAIR**



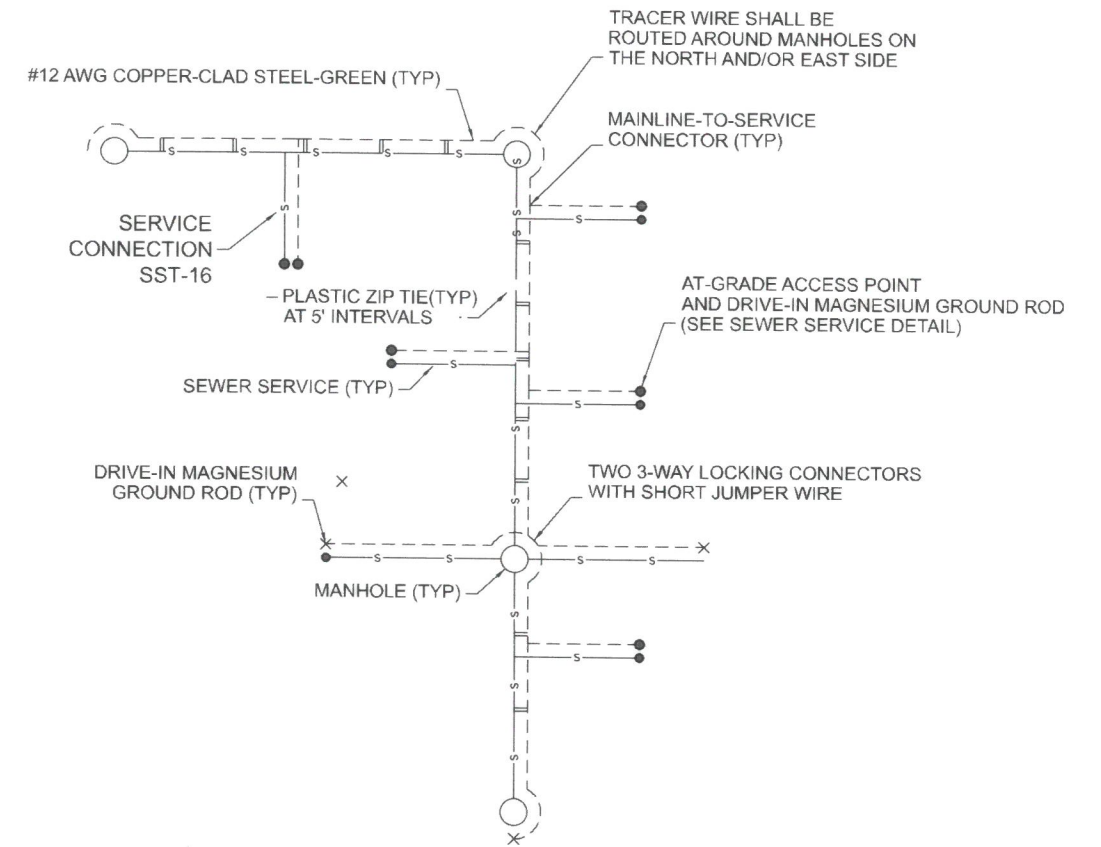
NOTE 1:

1. WIRE SHOWN AWAY FROM PIPE FOR CLARITY.
2. WIRE SHALL BE INSTALLED IMMEDIATELY ADJACENT TO THE SERVICE PIPE.
3. THE WIRE SHALL BE FASTENED TO THE PIPE AND SERVICE CONNECTION WITH PLASTIC TIES AT 5' INTERVALS.

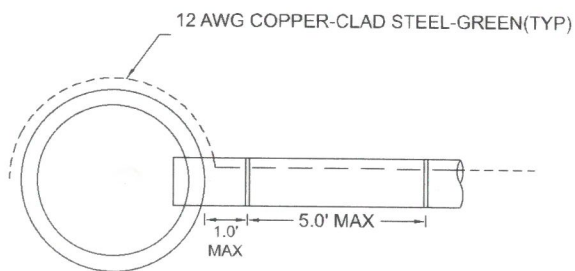
SEWER SERVICE CONNECTION (SST-16) - PLAN VIEW
NO SCALE



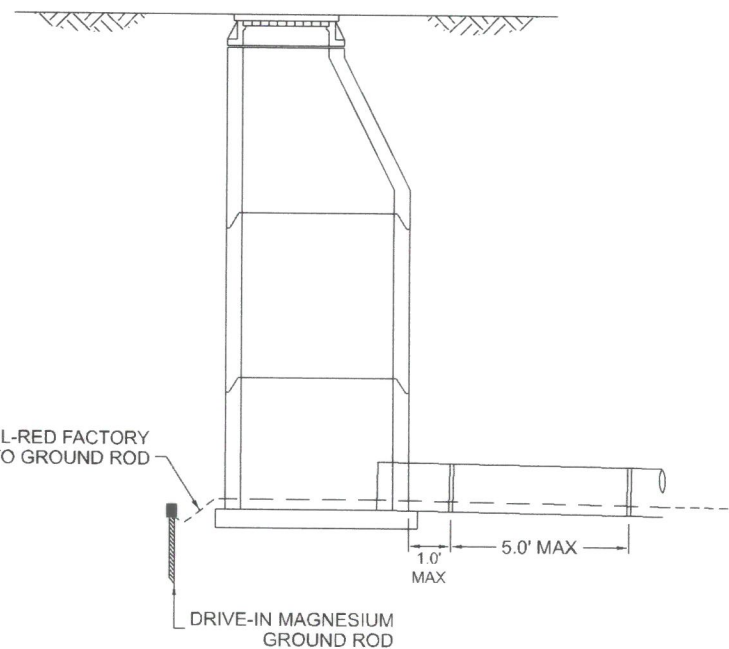
SEWER SERVICE CONNECTION (SST-16) - SECTION VIEW
NO SCALE



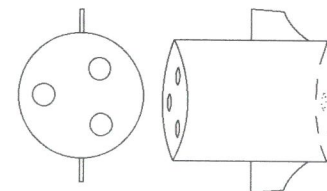
SAMPLE PLAN (SEWER)
NO SCALE



SEWER MANHOLE - PLAN VIEW
NO SCALE



SEWER MANHOLE - SECTION VIEW
NO SCALE



LOCKING CONNECTOR
NO SCALE

NOTE 2:

ALL TWO-TERMINAL TRACER WIRE ACCESS POINTS MUST INCLUDE A MANUALLY INTERRUPTIBLE CONDUCTIVE/ CONNECTIVE LINK BETWEEN THE TERMINAL FOR THE TRACER WIRE CONNECTION AND THE TERMINAL FOR THE GROUND ROD WIRE CONNECTION. ALL AT-GRADE ACCESS POINTS SHALL INCLUDE AN ENCAPSULATED MAGNET MOLDED INTO THE TOP PORTION OF THE TUBE, TO ALLOW FOR DETECTION BY A FERROUS METAL DETECTOR. ON BOTH PUBLIC AND PRIVATE PROPERTIES, TRACER WIRE SHALL TERMINATE AT AN APPROVED AT-GRADE, TWO-TERMINAL ACCESS BOX NEAR THE SEWER CLEAN-OUT.

NOTE 3:

FOR SEWER LINES OVER 500 LINEAR FEET WITHOUT SERVICE LATERALS, TRACER WIRE ACCESS MUST BE PROVIDED UTILIZING AN APPROVED GRADE LEVEL/IN-GROUND TRACER WIRE ACCESS BOX, LOCATED AT THE EDGE OF THE ROAD RIGHT-OF-WAY, AND OUT OF THE ROADWAY. THE GRADE LEVEL/IN-GROUND TRACER WIRE ACCESS BOX SHALL BE DELINEATED USING A MINIMUM 48" POLYETHYLENE MARKER POST, GREEN IN COLOR. ALL AT-GRADE ACCESS POINTS SHALL BE SUPPLIED WITH ANTI-CORROSION WAX-GEL TO PROTECT WIRES.

CITY OF MEMPHIS
DIVISION OF ENGINEERING

DESIGN STANDARD
FOR
TRACER WIRE

hig
Choo Chew
DEPUTY CITY ENGINEER
WB 4/29/22
CITY ENGINEER

4/29/22
DATE
4/29/22
DATE

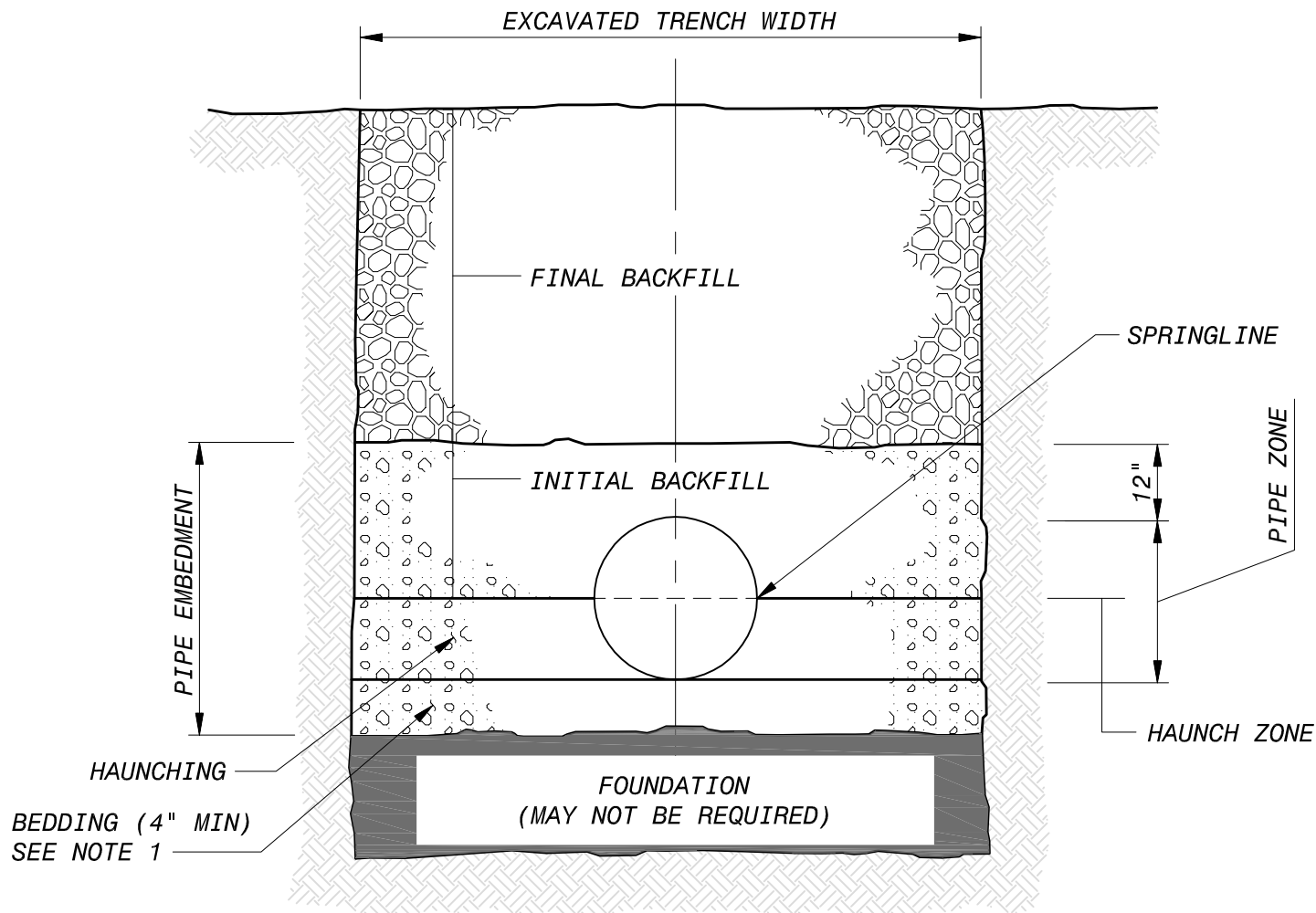


FIGURE 1

TRENCH CROSS SECTION SHOWING TERMINOLOGY - PIPE REPLACEMENT

NOTES

1. INSTALL CRUSHED LIMESTONE ASTM D-448-54 TABLE 1, #67 FOR BEDDING AND HAUNCHING MATERIAL. THE QUANTITY OF CRUSHED LIMESTONE FOR BEDDING AND HAUNCHING IS PART OF THE "SEWER POINT REPAIR" LINE ITEM AND NO SEPARATE PAYMENT WILL BE MADE.
2. INSTALL EITHER CRUSHED LIMESTONE OR RECYCLED CRUSHED CONCRETE FOR INITIAL BACKFILL AND FINAL BACKFILL PER CITY OF MEMPHIS SPECIFICATIONS.



SARP10

TRENCH CROSS SECTION
SHOWING TERMINOLOGY
- PIPE REPLACEMENT

REMOVE EXISTING PAVEMENT
AND BASE AND REPLACE
WITH NEW (MATCH EXISTING)

EXISTING PAVEMENT

INSTALL RISER
RINGS TO BRING
COVER TO GRADE

5" OR LESS

EXISTING FRAME
AND COVER

22"

EXISTING MANHOLE

NOTES

1. CITY OF MEMPHIS WILL SUPPLY RISER RINGS. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR PICK UP.

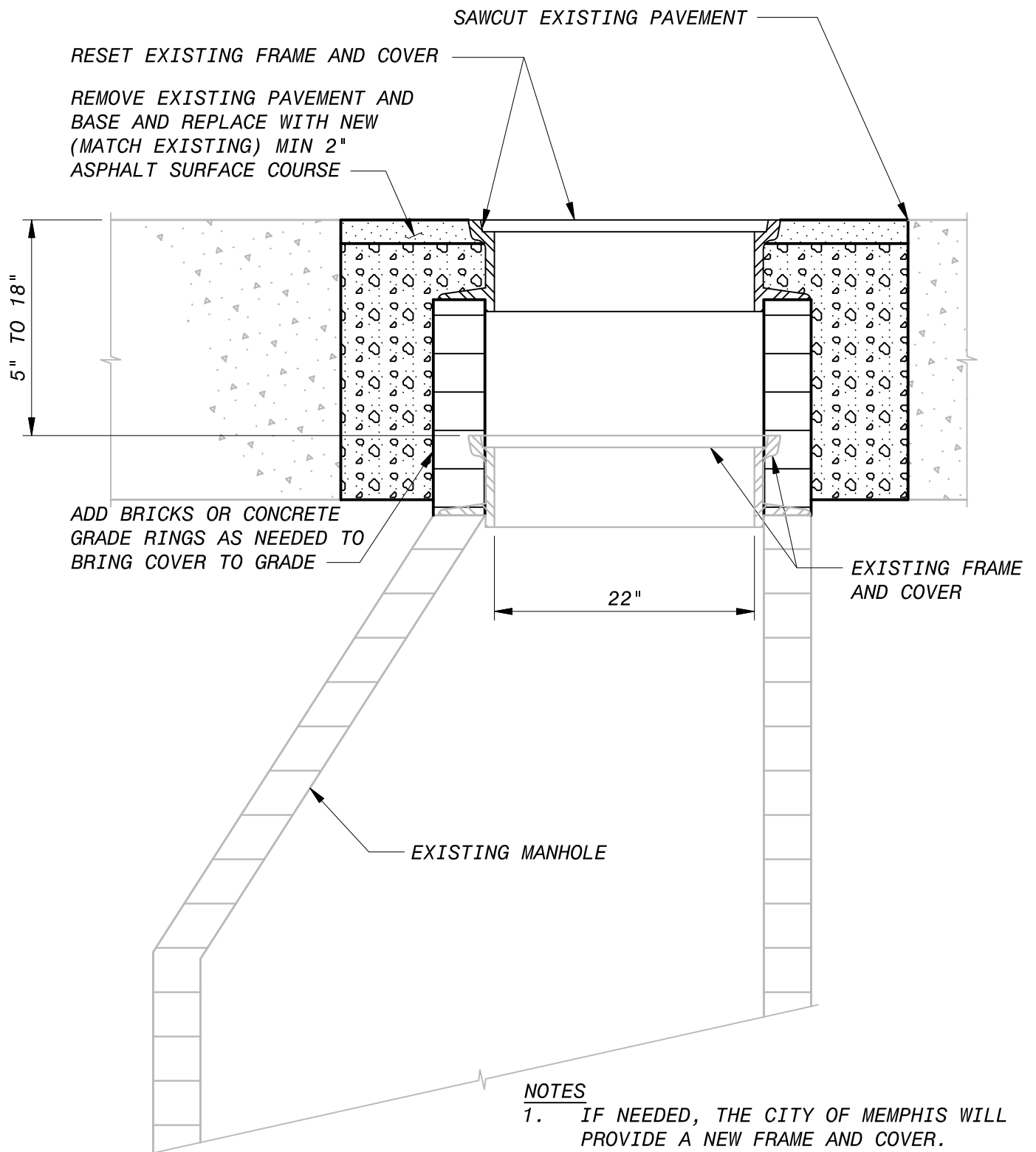


SARP10
ADJUSTING
MANHOLE FRAME AND COVER
UP TO 5 INCHES
SECTION / PROFILE

SCALE: NOT TO SCALE

REV 0.0

DATE: 04/07/14



NOTES

1. IF NEEDED, THE CITY OF MEMPHIS WILL PROVIDE A NEW FRAME AND COVER. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR PICK UP.

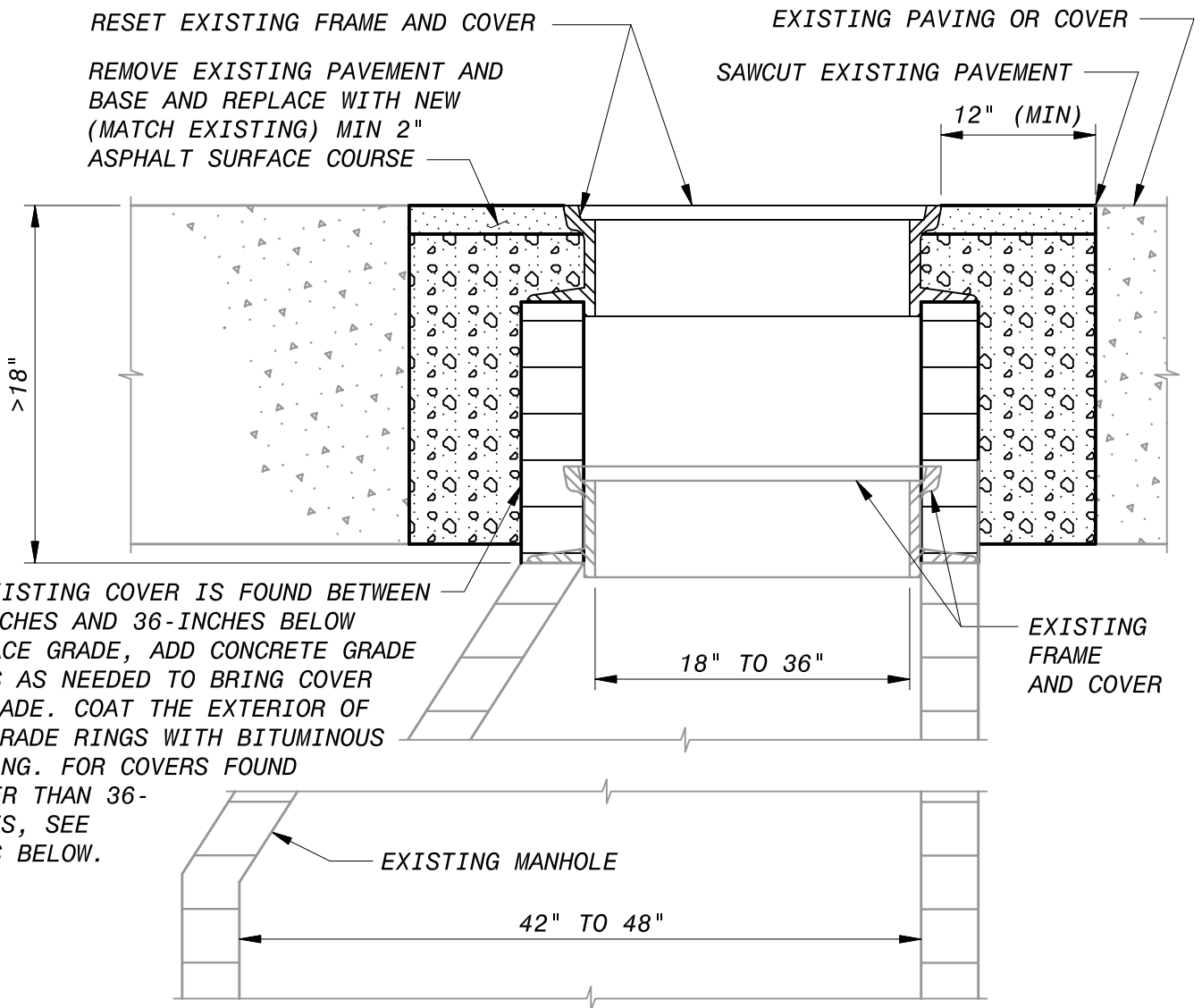


SARP10
 ADJUSTING
 MANHOLE FRAME AND COVER
 5 TO 18 INCHES
 SECTION / PROFILE

REV 0.0

DATE: 04/07/14

SCALE: NOT TO SCALE



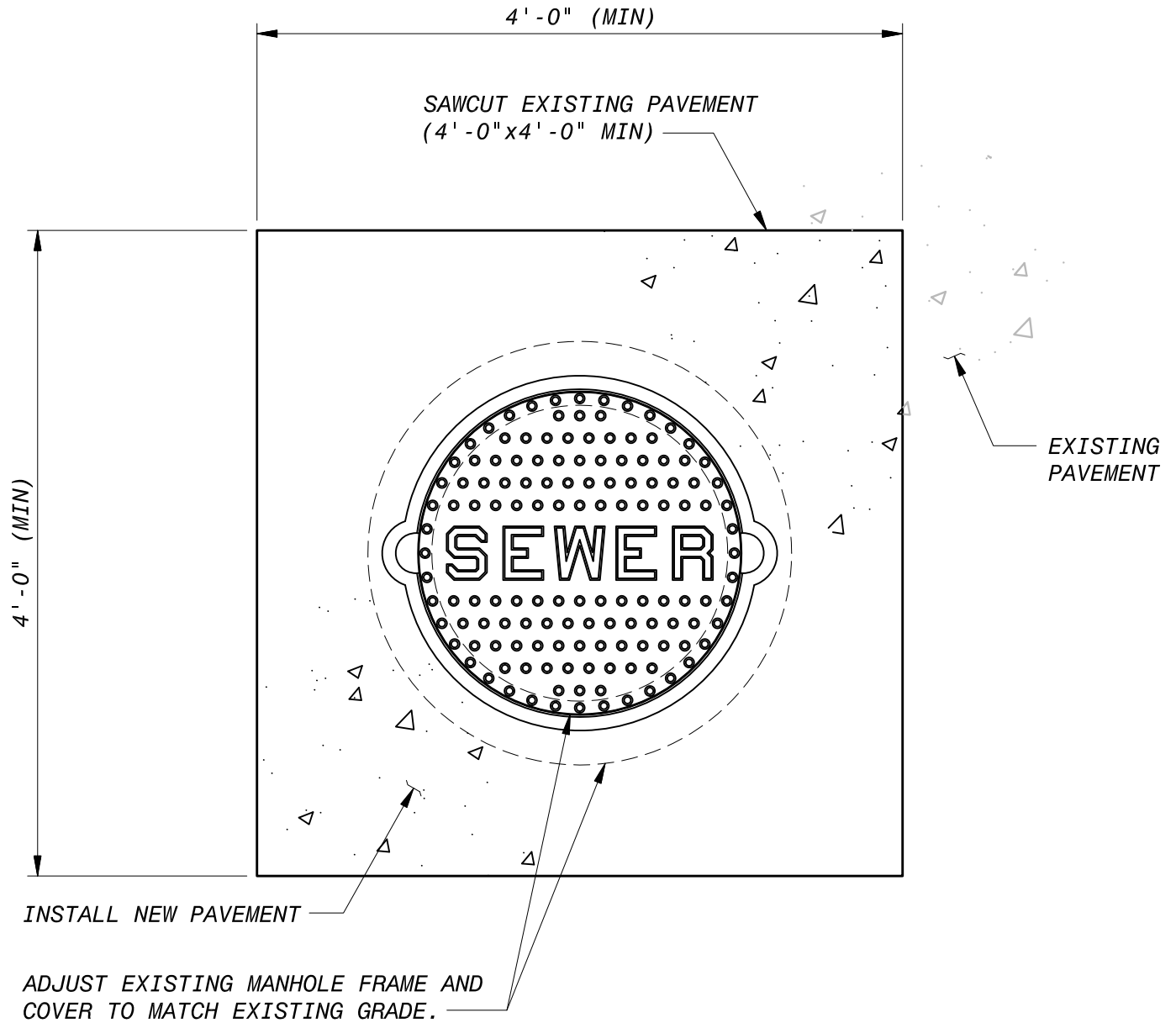
IF EXISTING COVER IS FOUND BETWEEN 18-INCHES AND 36-INCHES BELOW SURFACE GRADE, ADD CONCRETE GRADE RINGS AS NEEDED TO BRING COVER TO GRADE. COAT THE EXTERIOR OF THE GRADE RINGS WITH BITUMINOUS COATING. FOR COVERS FOUND DEEPER THAN 36-INCHES, SEE NOTES BELOW.

NOTES:

1. REMOVE EXISTING COVER OR PAVEMENT AND EXCAVATE TO LOCATE ACTUAL DEPTH OF EXISTING MH FRAME AND COVER.
2. DETERMINE REQUIRED ADJUSTMENT TO BRING COVER TO SURFACE GRADE.
 - A. IF LESS THAN 36-INCHES, RAISE THE FRAME AND COVER IN ACCORDANCE WITH SARP10 DETAIL "ADJUSTING MANHOLE FRAME & COVER 5 TO 18 INCHES"
 - B. IF GREATER THAN 36-INCHES, PROCEED WITH THE FOLLOWING NOTES.
3. DETERMINE FULL DIAMETER OF THE MANHOLE. IF BETWEEN 42 AND 48 INCHES NOMINALLY, REMOVE SUFFICIENT DEPTH OF EXISTING BRICK CORBEL (SLOPING WALLS) UNTIL MANHOLE WALLS ARE STRAIGHT AND ARE ABLE TO SUPPORT A PRECAST MANHOLE CORBEL 4 FEET HIGH, 48 INCHES IN DIAMETER.
4. PREPARE BED OF CONCRETE TO RECEIVE AND SUPPORT THE PRECAST CORBEL AND SEAT THE NEW CORBEL TO THE EXISTING BRICK WALLS.
5. INSTALL THE NEW FRAME TO THE PRECAST CONCRETE CORBEL AND ADJUST TO MEET SURFACE GRADE. IF ASPHALT ROAD, REPLACE WITH NEW (MATCH EXISTING) MINIMUM 2" ASPHALT SURFACE COURSE.
6. IF EXISTING MANHOLE DIAMETER IS LESS THAN 42 INCHES, REPLACE THE ENTIRE MANHOLE IN ACCORDANCE WITH CITY OF MEMPHIS SD #13.
7. IF NEEDED, THE CITY OF MEMPHIS WILL PROVIDE A NEW FRAME AND COVER. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR PICK UP.



SARP10
 ADJUST MANHOLE
 >18 INCHES DEEP
 SECTION / PROFILE



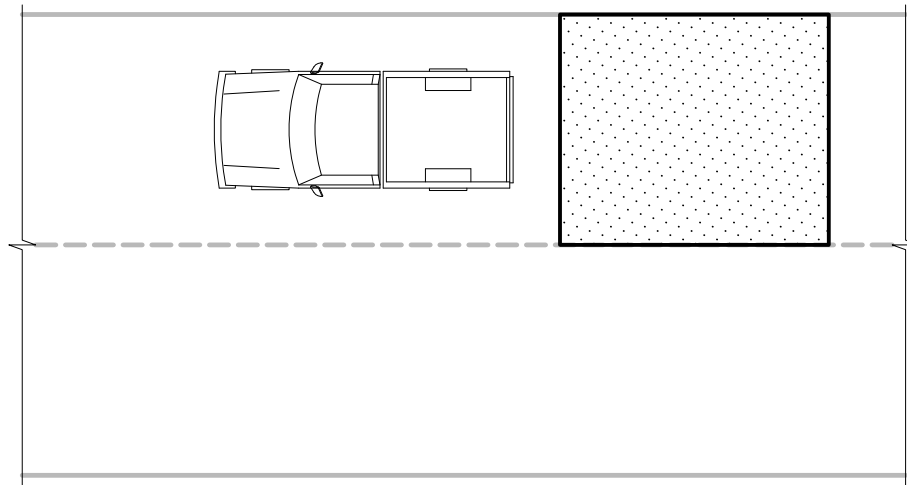
NOTES

1. IF NEEDED, THE CITY OF MEMPHIS WILL PROVIDE A NEW FRAME AND COVER. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR PICK UP.

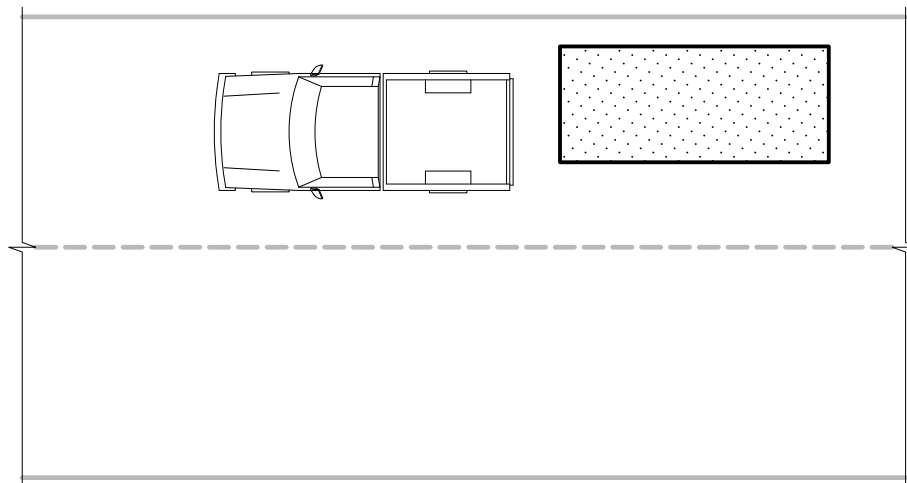


SARP10

**ADJUSTING
MANHOLE FRAME AND COVER
PAVING PLAN**



ACCEPTABLE



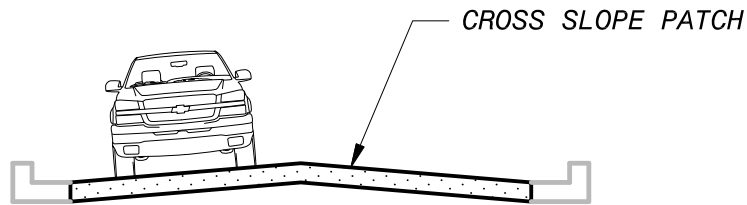
NOT ACCEPTABLE

NOTES

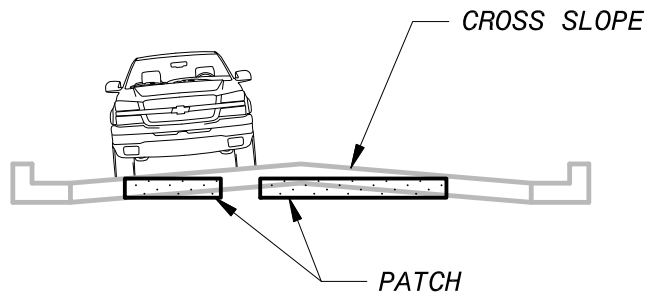
1. EXISTING PAVEMENTS SHALL BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.



SARP10
 PAVEMENT REPAIR
 SINGLE LANE
 DETAILS



ACCEPTABLE



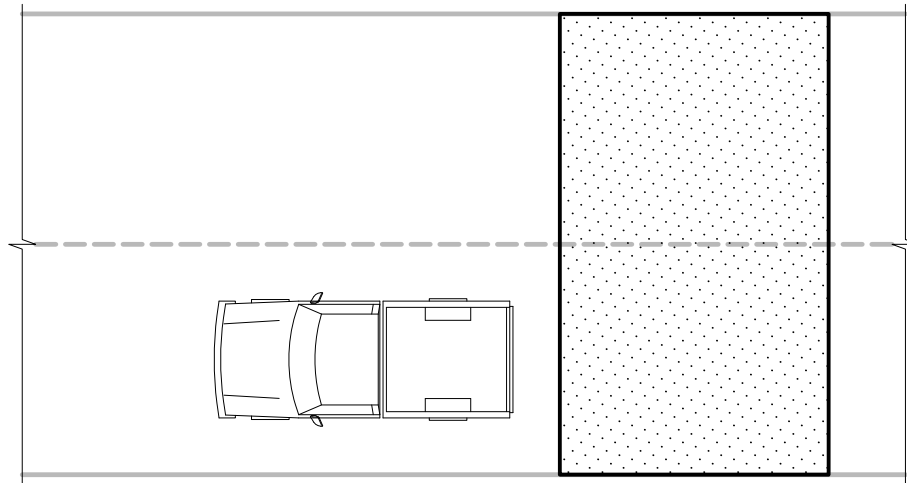
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NOTES

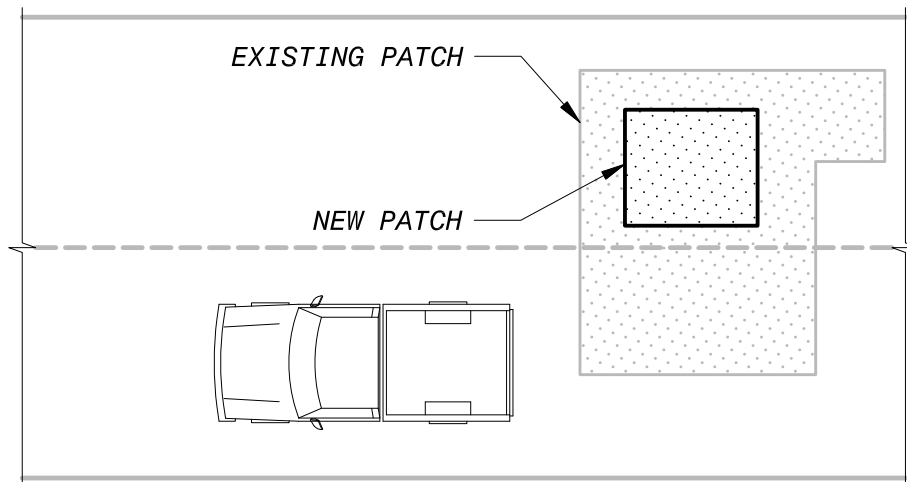
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5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. PATCHES SHALL HAVE A SMOOTH LONGITUDINAL GRADE CONSISTENT WITH THE EXISTING ROADWAY.
7. PATCHES SHALL ALSO HAVE A CROSS SLOPE OR CROSS SECTION CONSISTENT WITH THE DESIGN OF THE EXISTING ROADWAY.



SARP10
 PAVEMENT REPAIR
 CROSS SLOPE
 DETAILS



ACCEPTABLE



NOT ACCEPTABLE

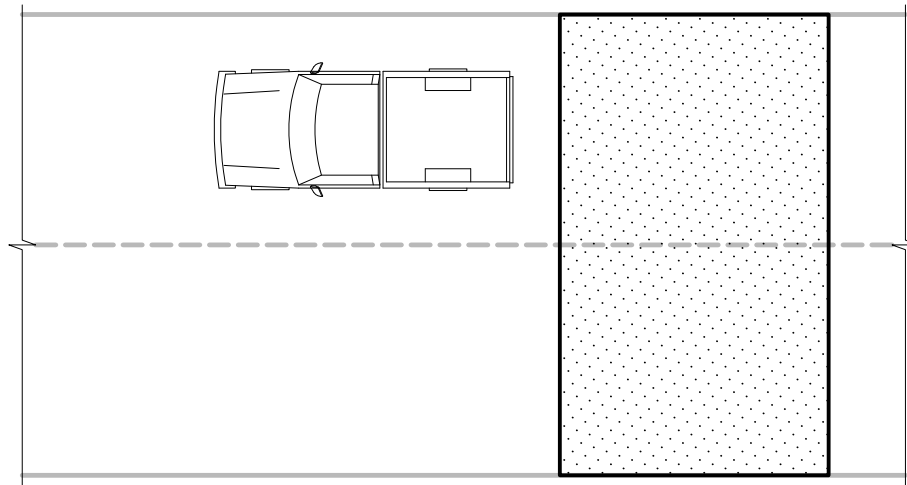
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5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. AVOID PATCHES WITHIN PATCHES. IF THIS CANNOT BE AVOIDED, MAKE THE BOUNDARIES OF THE PATCHES COINCIDE.

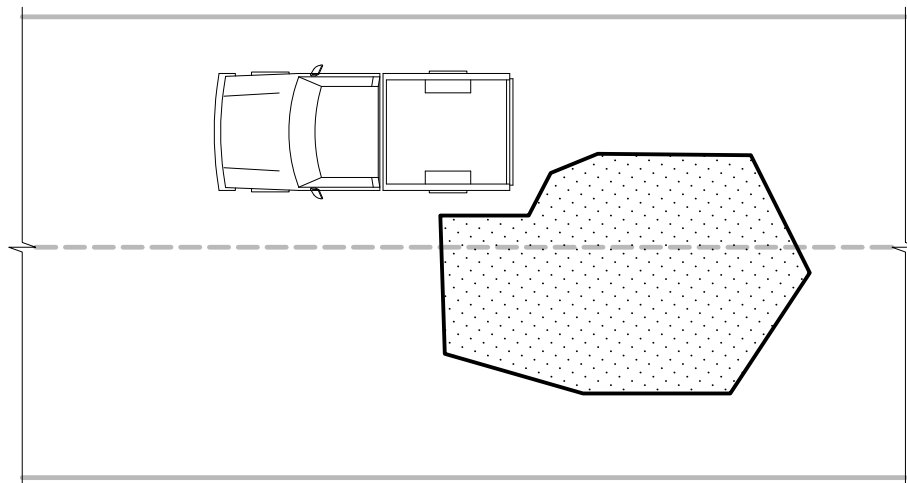


SARP10

PAVEMENT REPAIR
PATCH INSIDE A PATCH
DETAILS



ACCEPTABLE



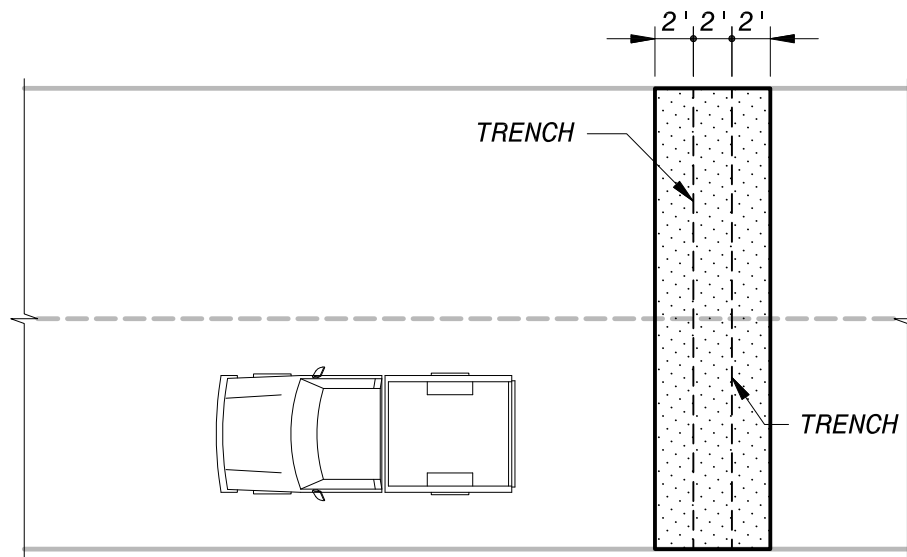
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NOTES

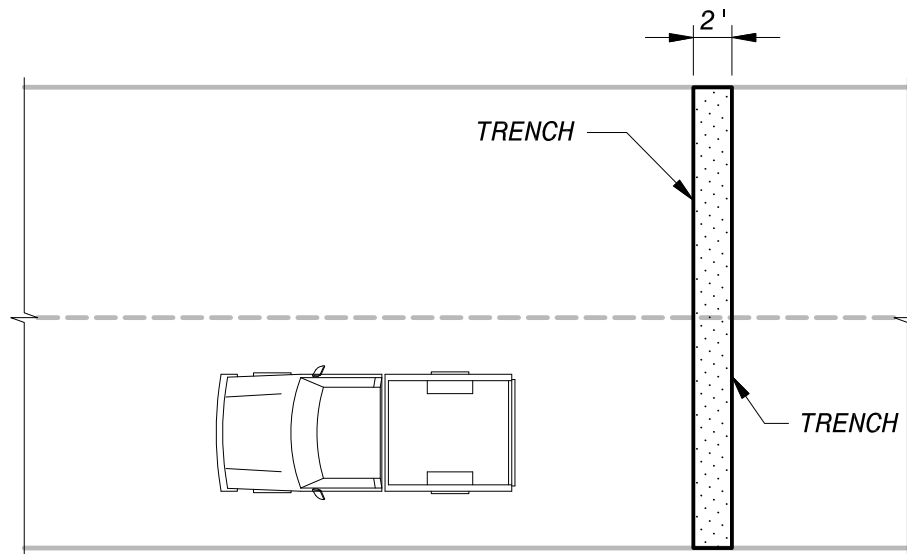
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5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.



SARP10
 PAVEMENT REPAIR
 MULTI-LANE
 DETAILS



ACCEPTABLE



NOT ACCEPTABLE

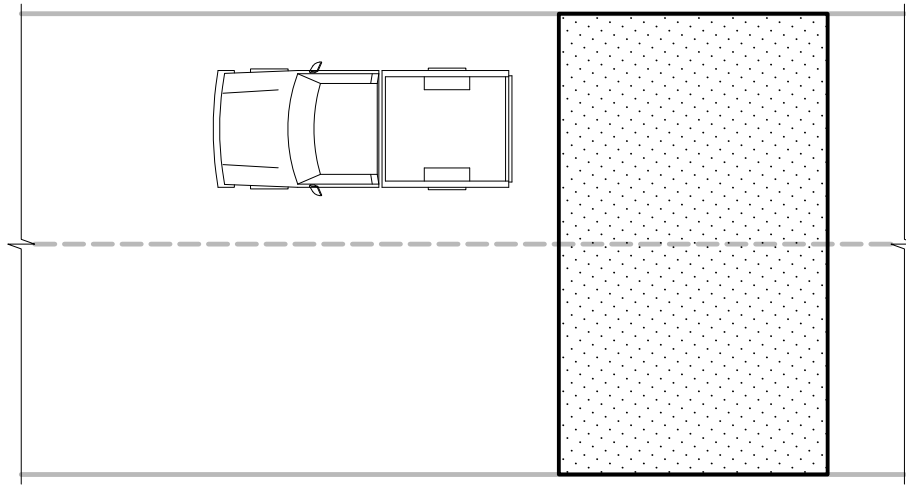
NOTES

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5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. TRAVERSE PATCHES SHALL BE OVERLAID ACROSS THE ENTIRE STREET WIDTH FOR A DISTANCE OF TWO (2) FEET MINIMUM ON ALL SIDES OF THE TRENCH.

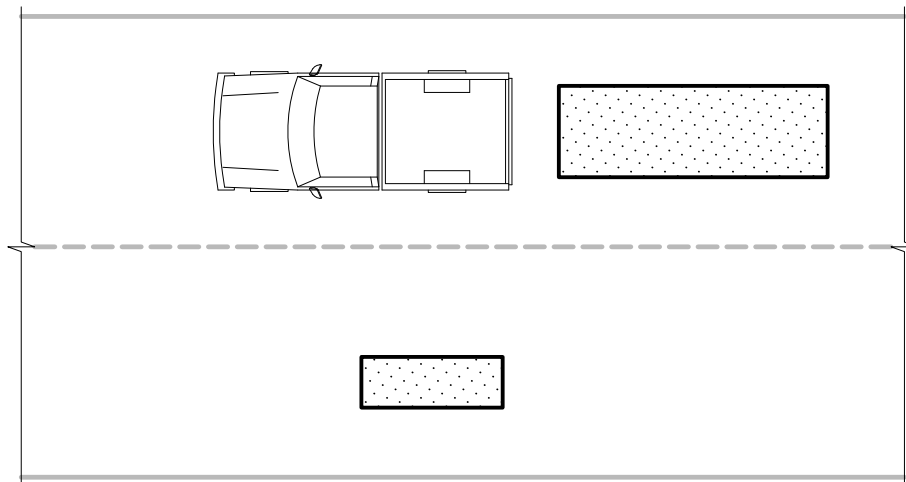


SARP10

**PAVEMENT REPAIR
TRAVERSE PATCHES
DETAILS**



ACCEPTABLE



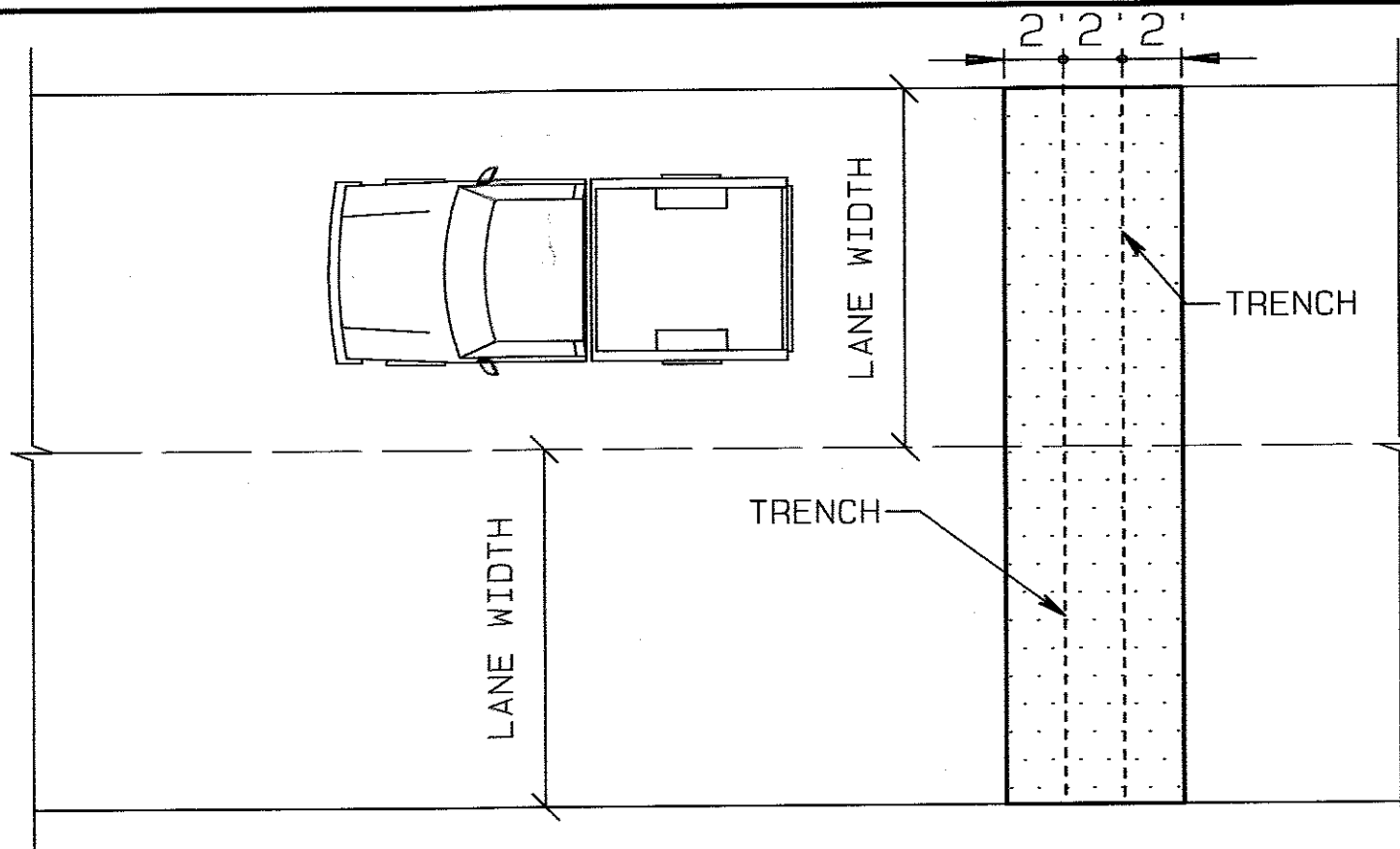
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NOTES

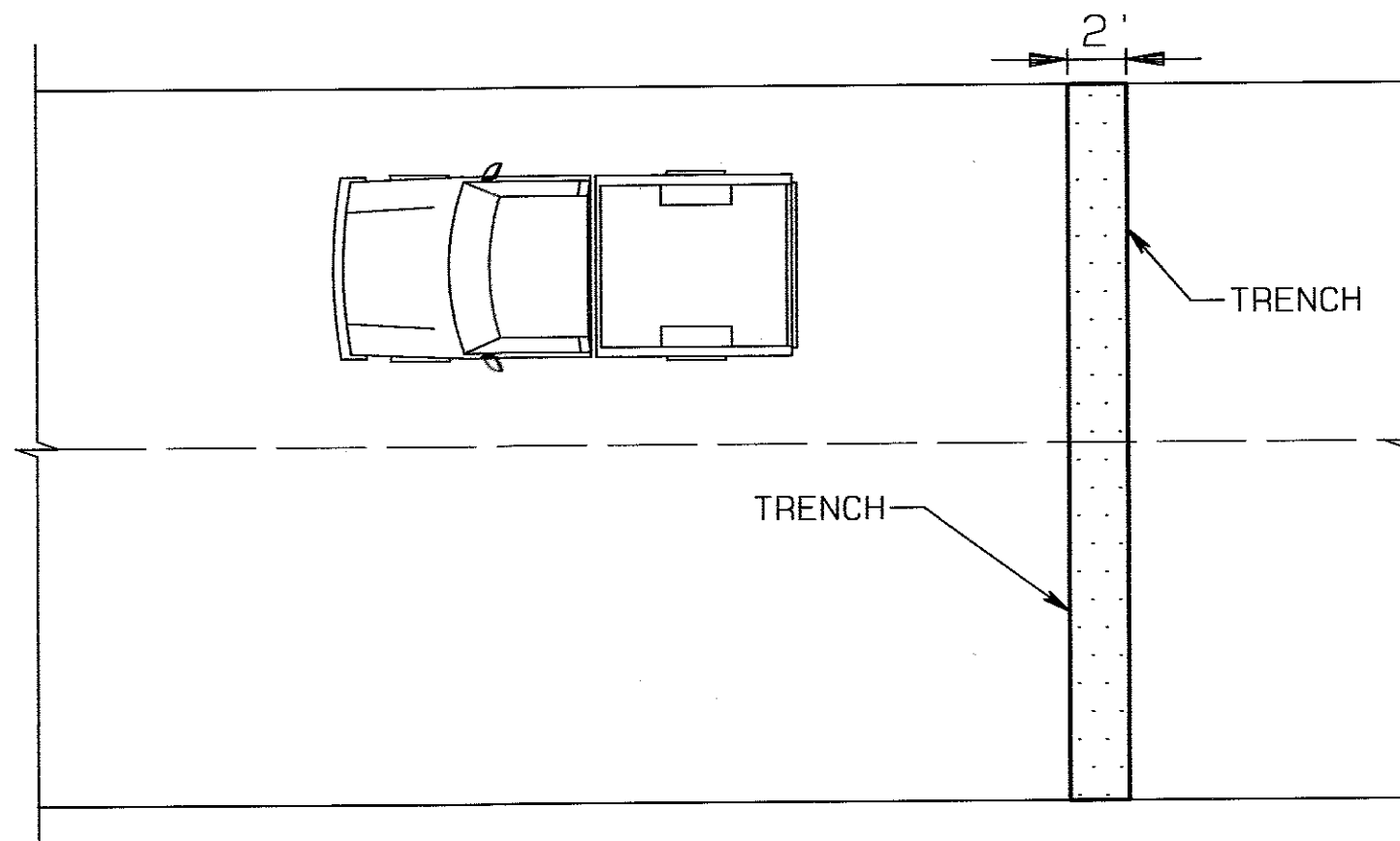
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6. TRAVERSE PATCHES SHALL BE OVERLAID ACROSS THE ENTIRE STREET WIDTH FOR A DISTANCE OF TWO (2) FEET MINIMUM ON ALL SIDES OF THE TRENCH.
7. DO NOT ALLOW THE EDGES OF PATCHES TO FALL IN EXISTING WHEEL PATHS.
8. THE EDGES OF PATCHES PARALLEL TO THE DIRECTION OF TRAFFIC SHALL BE LIMITED TO THE BOUNDARIES OF LANES OR TO THE CENTERLINE OF TRAVEL LANES.



SARP10
 PAVEMENT REPAIR
 WHEEL PATH
 DETAILS



ACCEPTABLE



NOT ACCEPTABLE

REVISIONS			
NO.	DATE	BY	REMARKS

NOTES

1. EXISTING PAVEMENTS SHALL BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. TRAVERSE PATCHES SHALL BE OVERLAID ACROSS THE ENTIRE STREET WIDTH FOR A DISTANCE OF TWO (2) FEET MINIMUM ON ALL SIDES OF THE TRENCH.

NOT TO SCALE

**CITY OF MEMPHIS
DIVISION OF ENGINEERING**

**DESIGN STANDARD
FOR
PAVEMENT REPAIR TRAVERSE
PATCHES DETAILS**

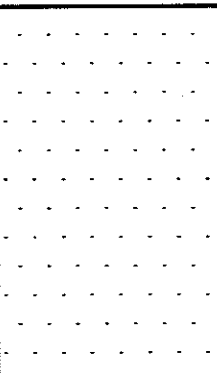
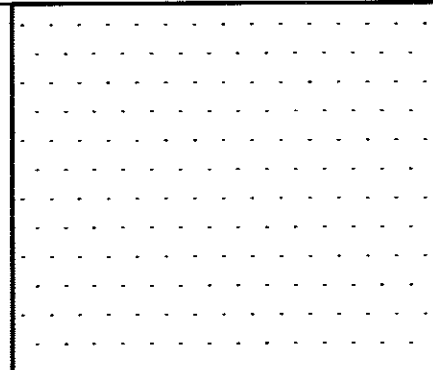
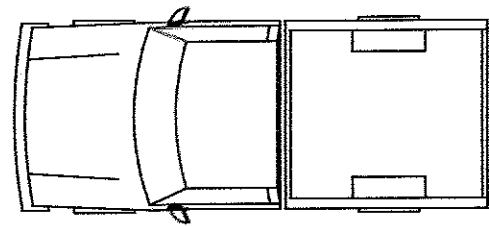
<i>Chee Chew</i> CIVIL DESIGN ENGINEER	12-11-19 DATE
<i>WE</i> 12/11/19 CITY ENGINEER	DATE

REVISIONS

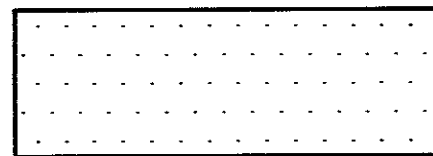
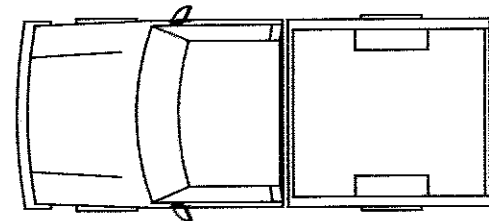
NO.	DATE	BY	REMARKS

NOTES

1. EXISTING PAVEMENTS SHALL BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. TRAVERSE PATCHES SHALL BE OVERLAID ACROSS THE ENTIRE STREET WIDTH FOR A DISTANCE OF TWO (2) FEET MINIMUM ON ALL SIDES OF THE TRENCH.
8. THE EDGES OF PATCHES PARALLEL TO THE DIRECTION OF TRAFFIC SHALL BE LIMITED TO THE BOUNDARIES OF LANES OR TO THE CENTERLINE OF TRAVEL LANES.



ACCEPTABLE



NOT ACCEPTABLE

NOT TO SCALE

CITY OF MEMPHIS
DIVISION OF ENGINEERING

DESIGN STANDARD
FOR
PAVEMENT REPAIR
WHEEL PATH DETAILS

Chew Chew
CIVIL DESIGN ENGINEER

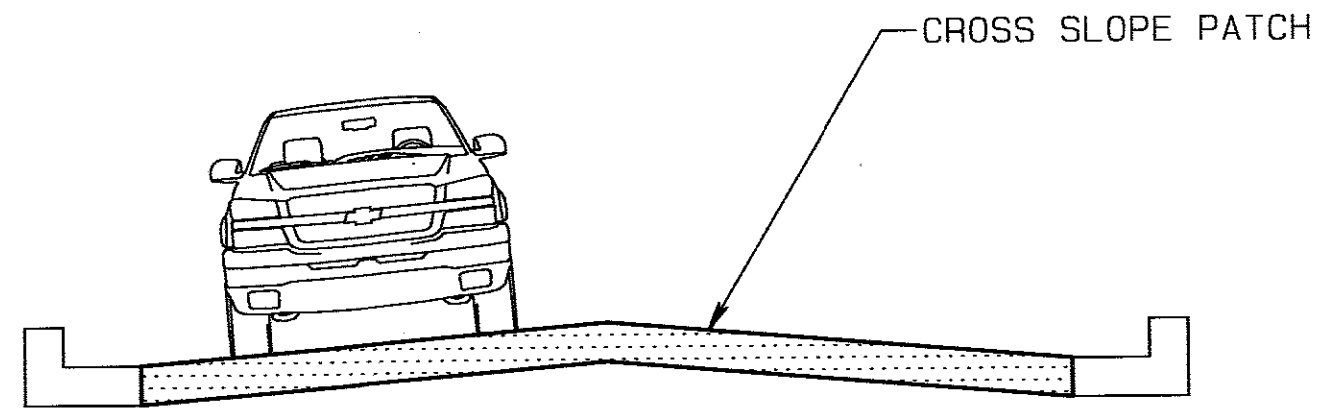
12.11.19

DATE

WZ 12/16/19
CITY ENGINEER

DATE

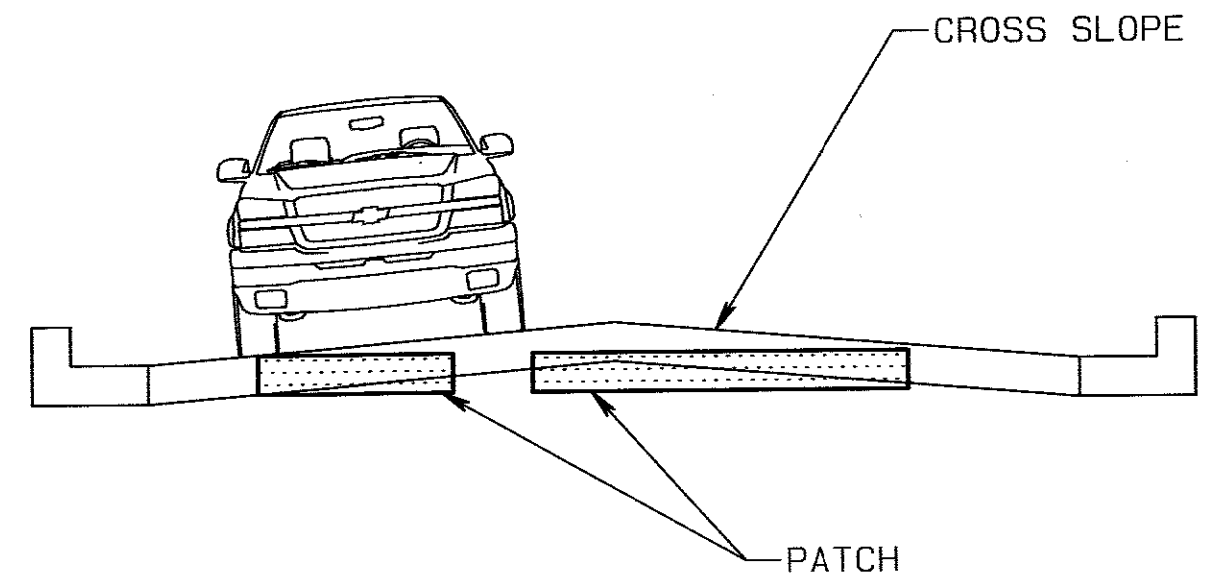
REVISIONS			
NO.	DATE	BY	REMARKS



ACCEPTABLE

NOTES

1. EXISTING PAVEMENTS SHALL BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. PATCHES SHALL HAVE A SMOOTH LONGITUDINAL GRADE CONSISTENT WITH THE EXISTING ROADWAY.
7. PATCHES SHALL ALSO HAVE A CROSS SLOPE OR CROSS SECTION CONSISTENT WITH THE DESIGN OF THE EXISTING ROADWAY.



NOT ACCEPTABLE

NOT TO SCALE

**CITY OF MEMPHIS
DIVISION OF ENGINEERING**

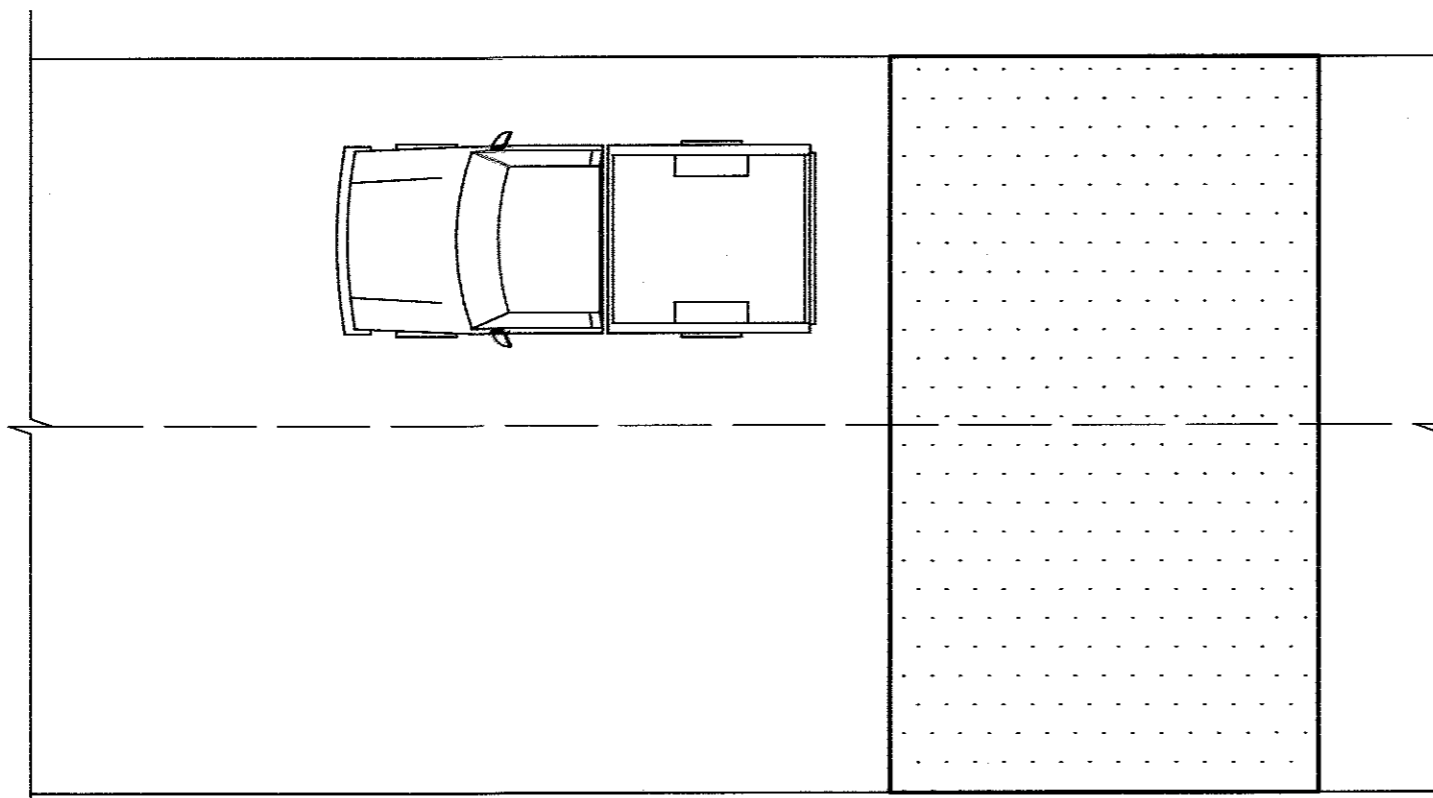
**DESIGN STANDARD
FOR
PAVEMENT REPAIR
CROSS SLOPE DETAILS**

<i>Chew Chew</i>	12.11.19
<small>CIVIL DESIGN ENGINEER</small>	<small>DATE</small>
<i>WZ</i>	12/11/19
<small>CITY ENGINEER</small>	<small>DATE</small>

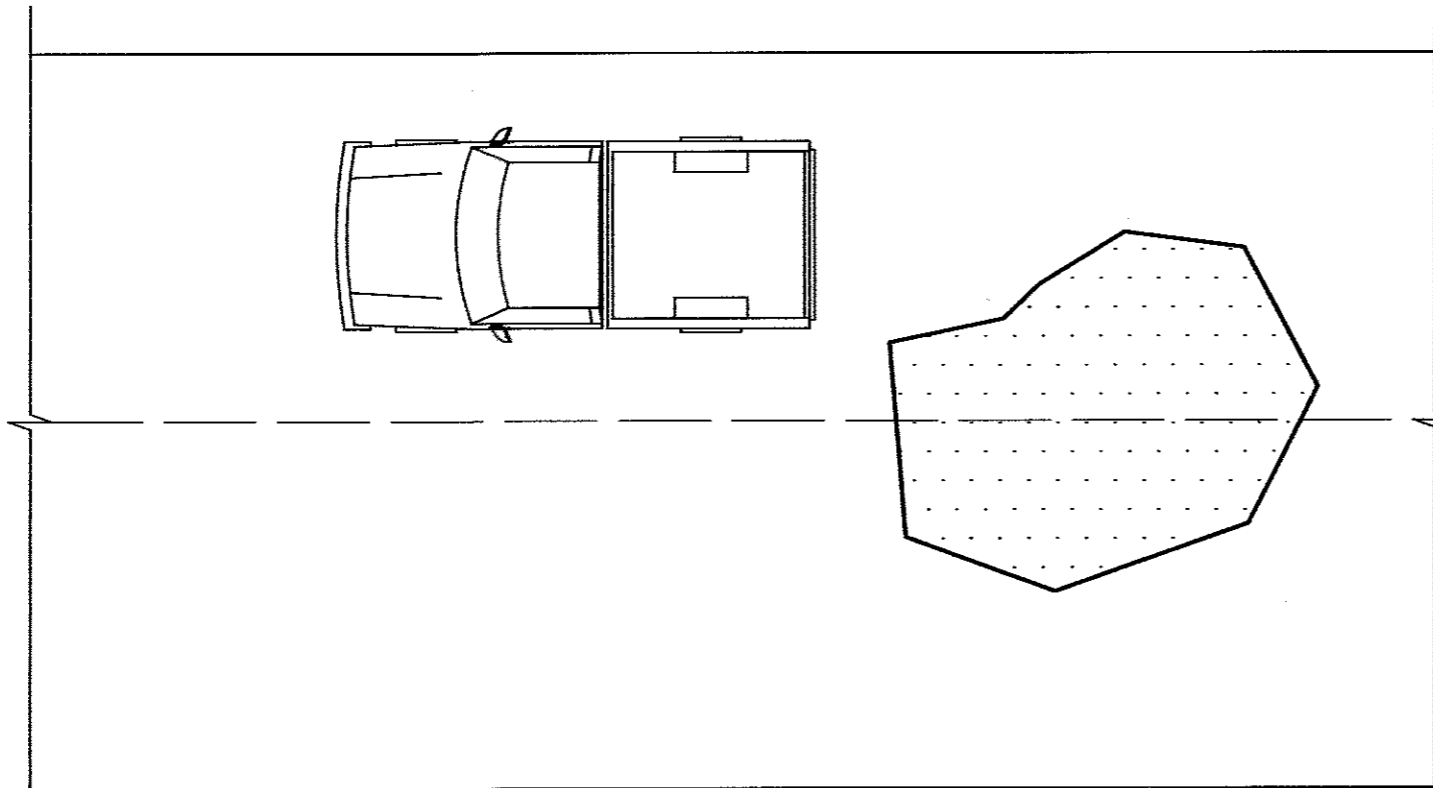
REVISIONS			
NO.	DATE	BY	REMARKS

NOTES

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2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.



ACCEPTABLE



NOT ACCEPTABLE

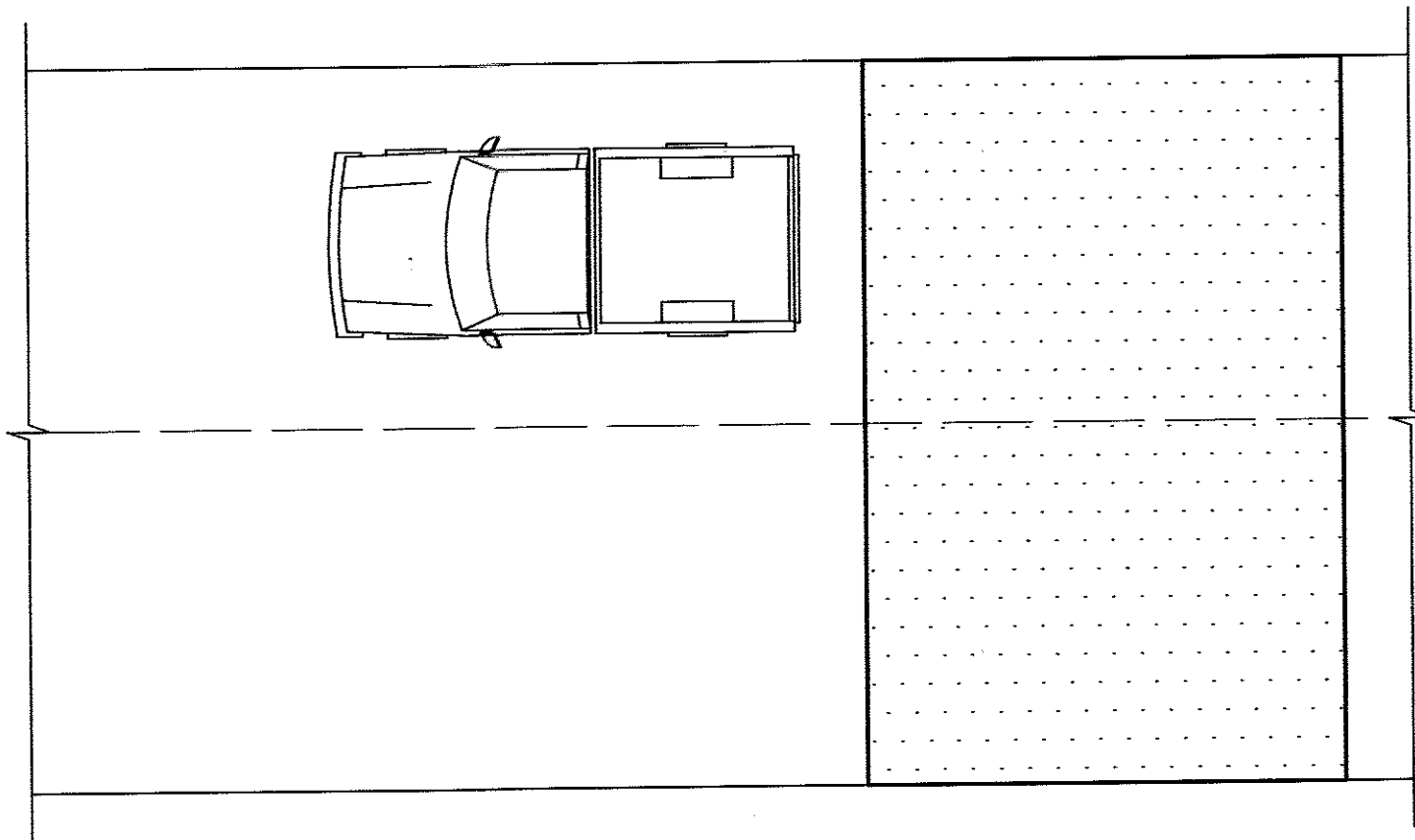
NOT TO SCALE

CITY OF MEMPHIS DIVISION OF ENGINEERING	
DESIGN STANDARD FOR PAVEMENT REPAIR MULTI-LANE DETAILS	
<i>Choo Chew</i> CIVIL DESIGN ENGINEER	12.11.19 DATE
<i>WZ</i> CITY ENGINEER	12/16/19 DATE

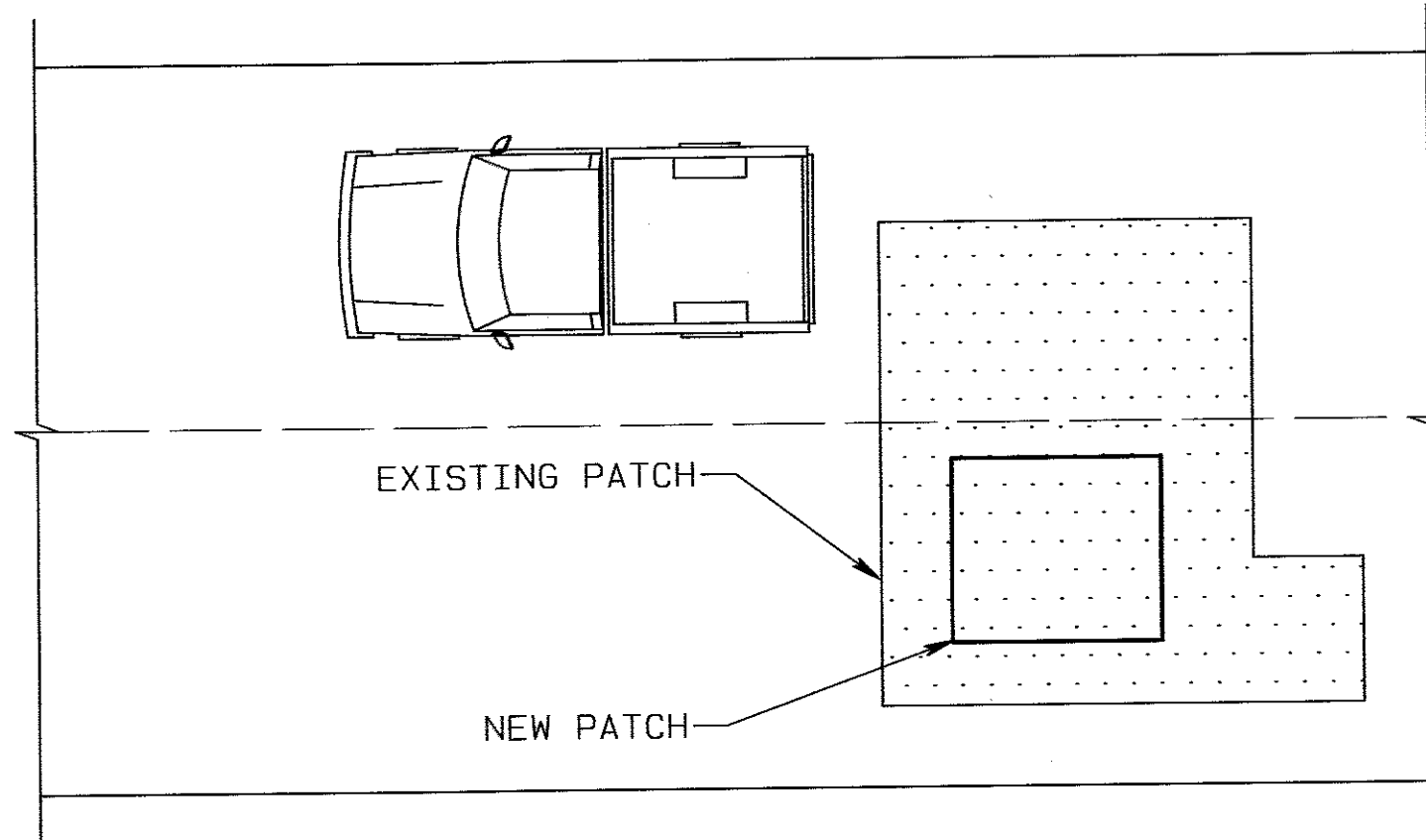
REVISIONS			
NO.	DATE	BY	REMARKS

NOTES

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2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. AVOID PATCHES WITHIN PATCHES. IF THIS CANNOT BE AVOIDED, MAKE THE BOUNDARIES OF THE PATCHES COINCIDE.



ACCEPTABLE



NOT ACCEPTABLE

**CITY OF MEMPHIS
DIVISION OF ENGINEERING**

**DESIGN STANDARD
FOR
PAVEMENT REPAIR PATCH
INSIDE A PATCH DETAILS**

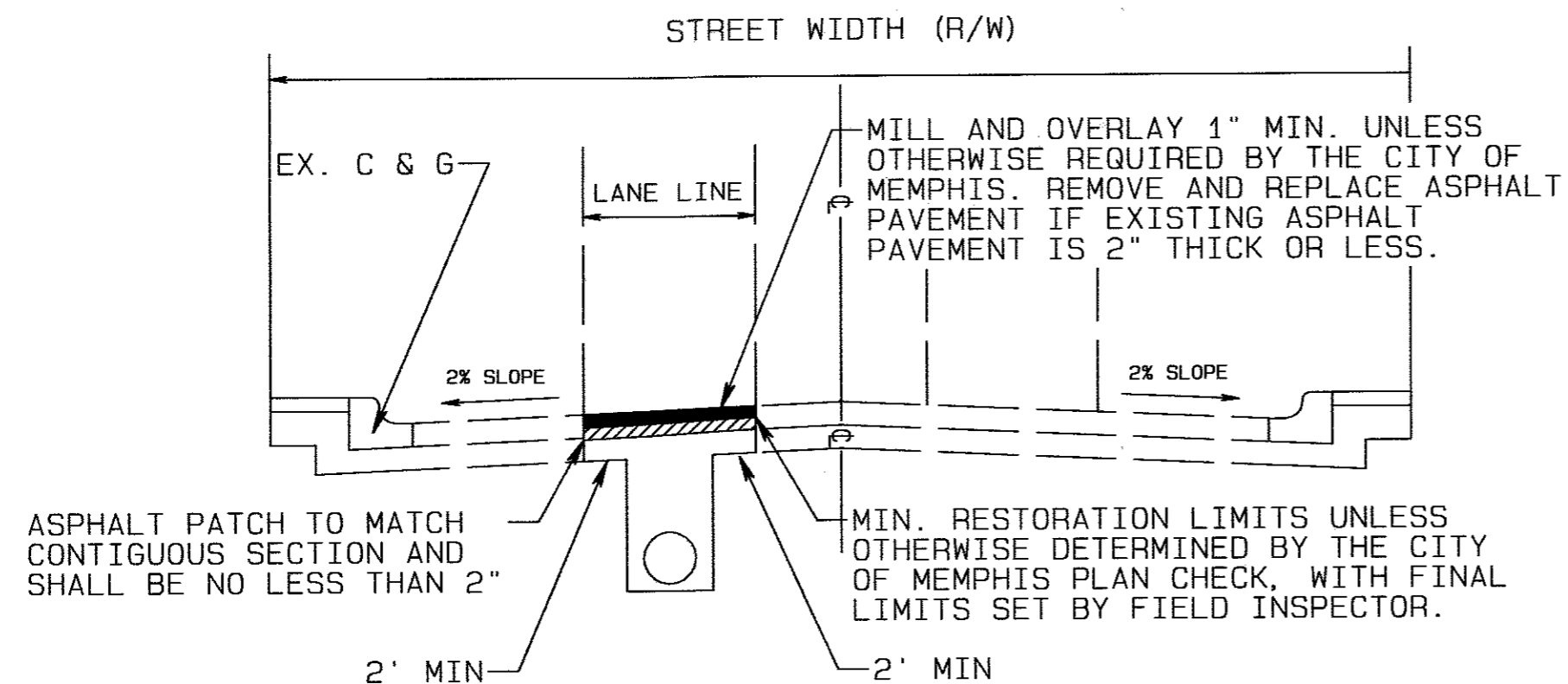
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CIVIL DESIGN ENGINEER
12.11.19
DATE

WS
CITY ENGINEER
12/11/19
DATE

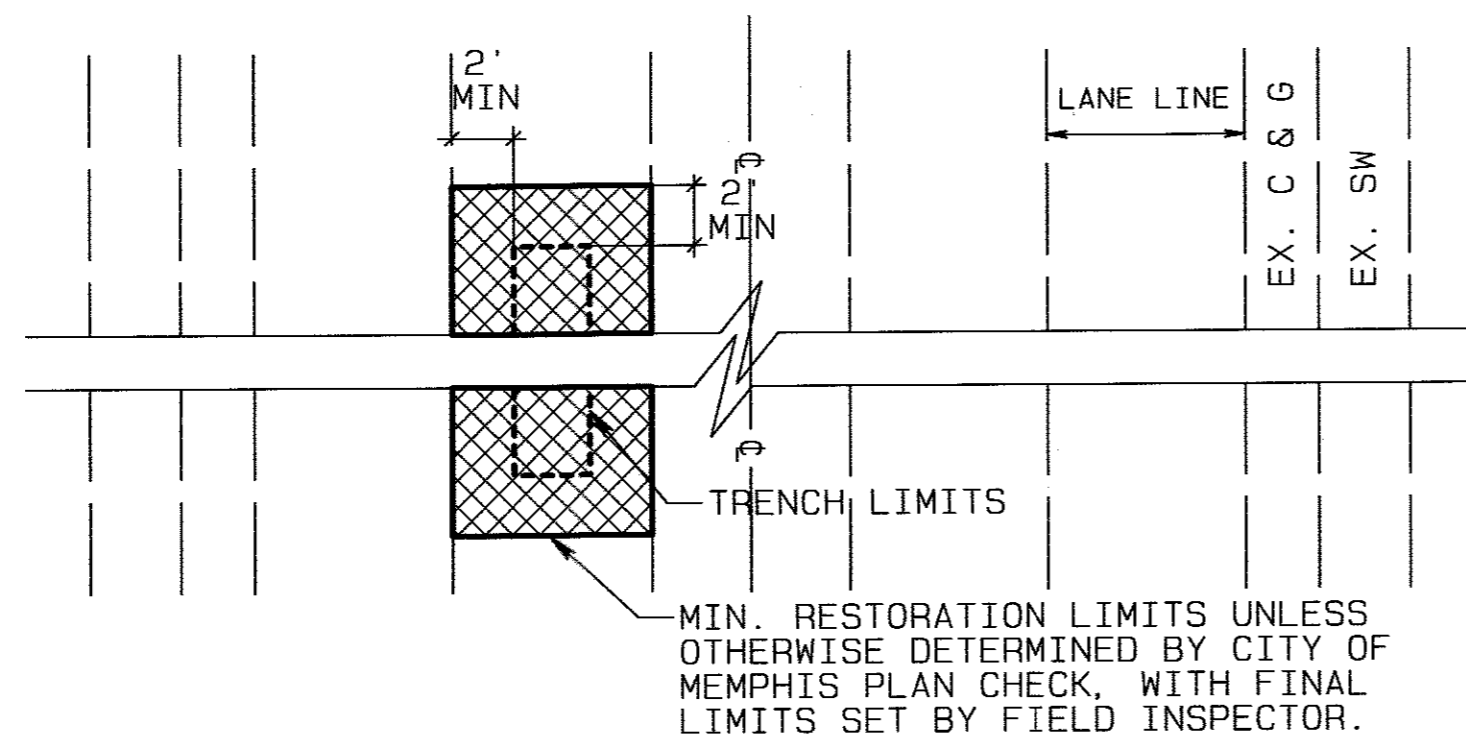
NOT TO SCALE

REVISIONS

NO.	DATE	BY	REMARKS



CUT RESTORATION



PLAN VIEW

NOT TO SCALE

NOTES

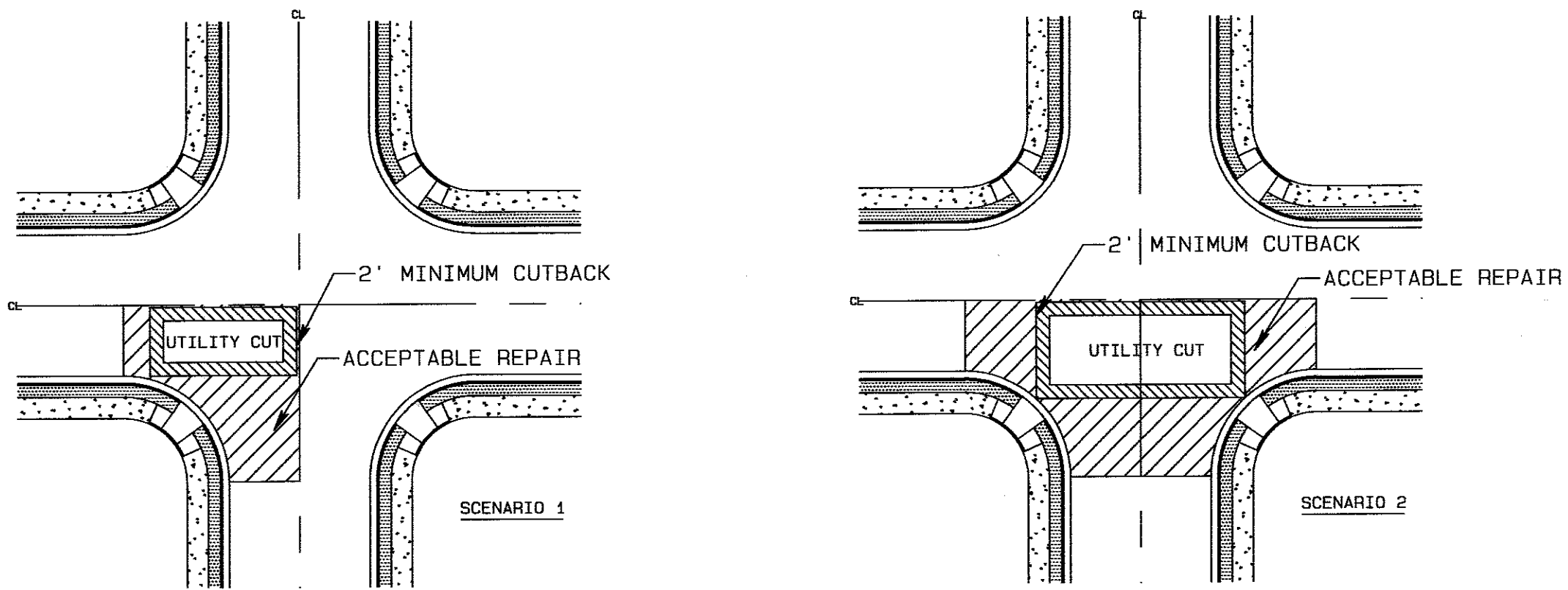
1. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.
2. THE ENTITY'S REQUIREMENTS TAKE PRECEDENCE OVER ANY MINIMUM REQUIREMENTS SHOWN HEREON.

**CITY OF MEMPHIS
DIVISION OF ENGINEERING**

**DESIGN STANDARD
FOR
PAVEMENT REPAIR CUT
RESTORATION DETAIL**

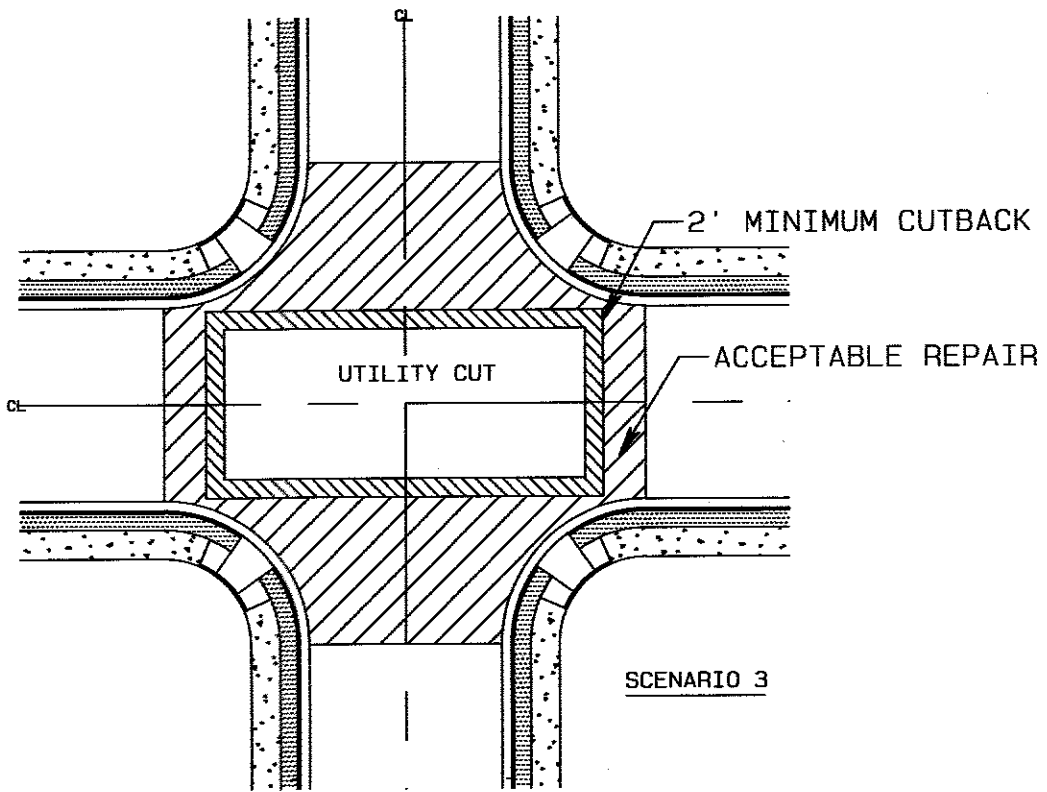
<i>Choo Chew</i>	12.11.19
CIVIL DESIGN ENGINEER	DATE
CITY ENGINEER	DATE

REVISIONS			
NO.	DATE	BY	REMARKS



NOTES

1. SEE "DESIGN STANDARD FOR TYPICAL REPAIR OF UTILITY CUTS IN PAVEMENT", CITY STANDARD DRAWING NO. 32.



NOT TO SCALE

**CITY OF MEMPHIS
DIVISION OF ENGINEERING**

**DESIGN STANDARD
FOR
UTILITY CUT LOCATIONS
AT INTERSECTIONS**

Choo Chew 12.11.19
CIVIL DESIGN ENGINEER DATE

WZ 12/11/19
CITY ENGINEER DATE

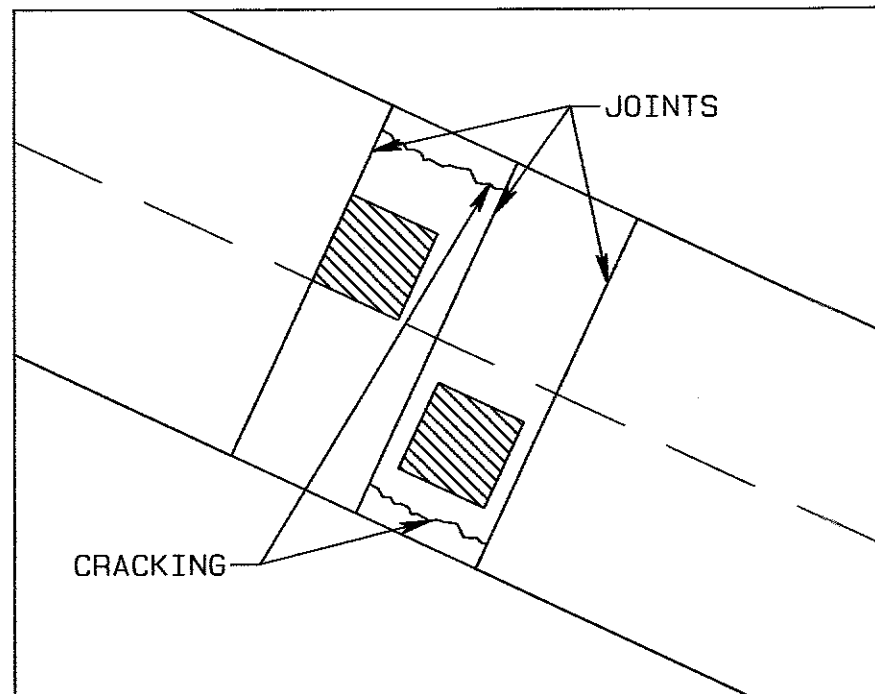
REVISIONS

NO.	DATE	BY	REMARKS

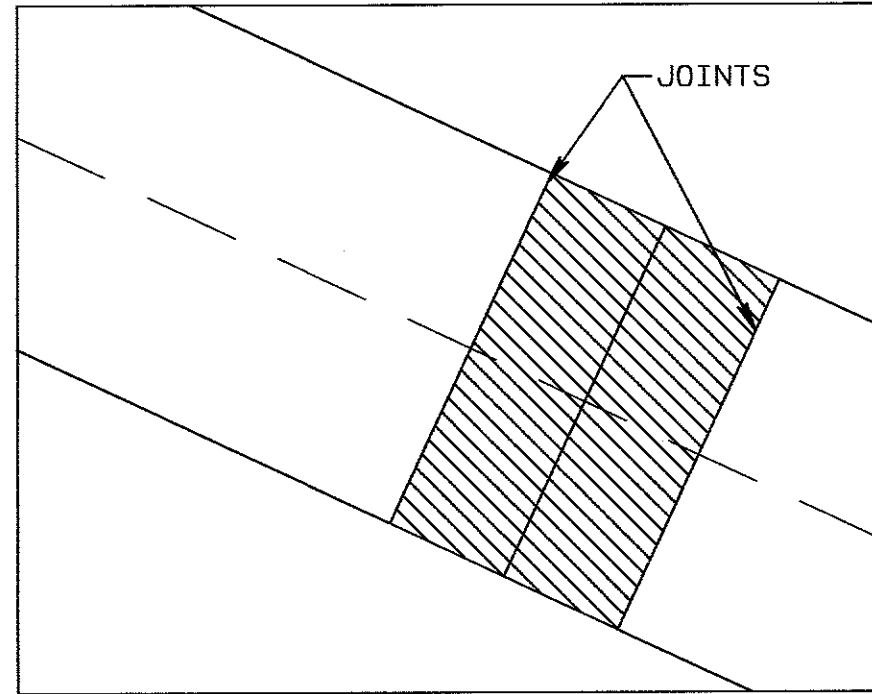
NOTES

1. IN CONCRETE PAVEMENTS, REMOVE SECTIONS TO EXISTING JOINTS, OR NEW SAW CUT JOINTS AT MID-SLAB, THAT ARE IN GOOD REPAIR. IN DAMAGED CONCRETE, THE LIMITS OF REMOVAL SHOULD BE DETERMINED IN THE FIELD BY CITY INSPECTIONS.

NOT ACCEPTABLE



ACCEPTABLE



NOT TO SCALE

CITY OF MEMPHIS
DIVISION OF ENGINEERING

DESIGN STANDARD
FOR
CONCRETE PAVEMENT REPAIR

Chae An
CIVIL DESIGN ENGINEER

12-11-19
DATE

WE 12/11/19
CITY ENGINEER

DATE

REVISIONS

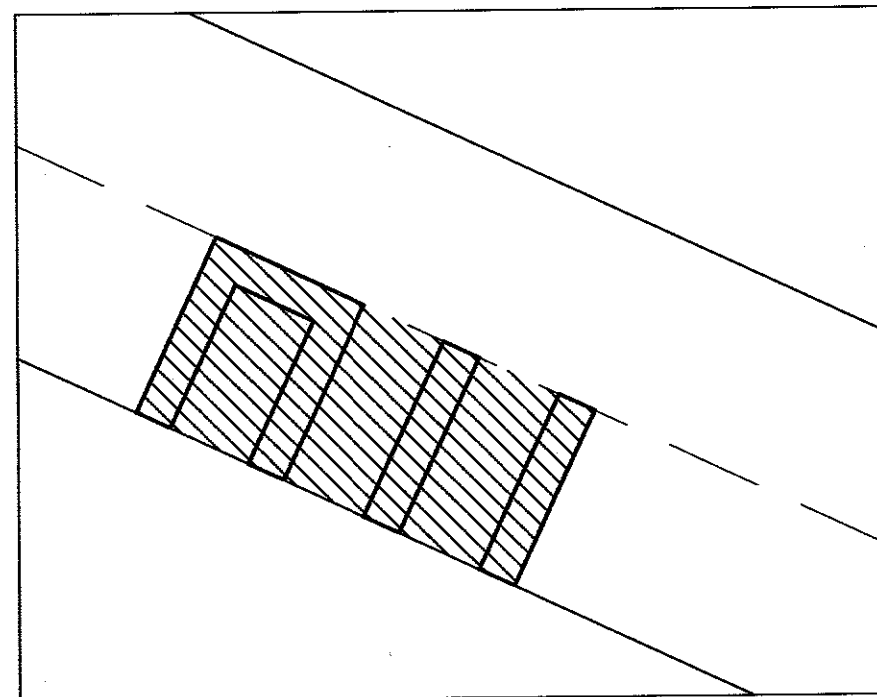
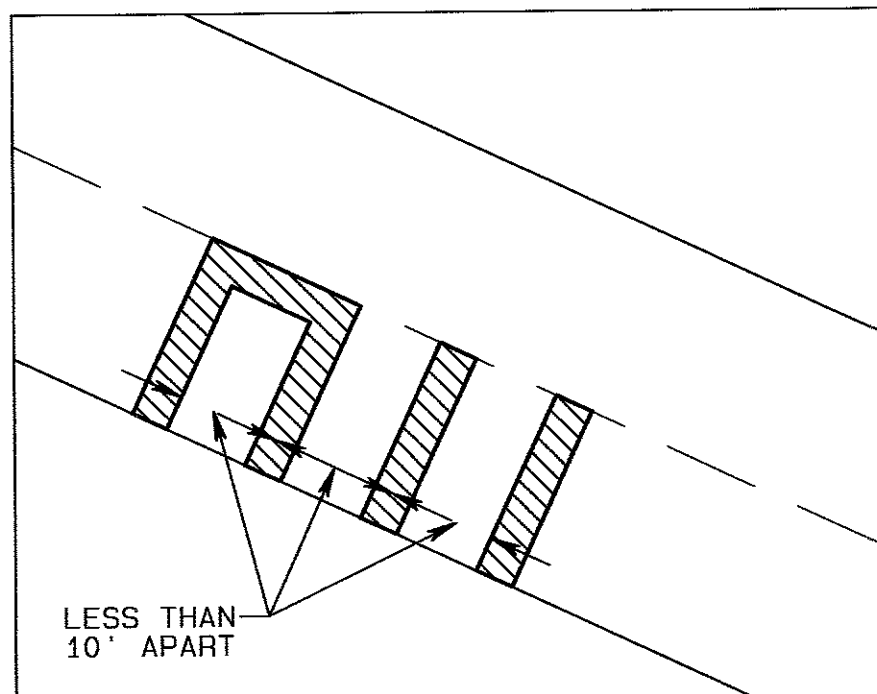
NO.	DATE	BY	REMARKS

NOTES

1. IN THE CASE OF A SERIES OF PATCHES OR PATCHES FOR SERVICE LINES OFF A MAIN TRENCH, REPAIR THE PAVEMENT OVER THE PATCHES BY GRINDING AND OVERLAY WHEN THE SPACING BETWEEN THE PATCHES IS LESS THAN 10 FEET. IN CASES WHERE THE EXISTING PAVEMENT IS IN POOR CONDITION (IN THE STRATEGIC PAVING PLAN) AND MAY REQUIRE OVERLAY WITHIN THE NEXT FEW YEARS, THIS REQUIREMENT MAY BE MODIFIED OR WAIVED BY THE CITY ENGINEER.

NOT ACCEPTABLE

ACCEPTABLE



NOT TO SCALE

CITY OF MEMPHIS
DIVISION OF ENGINEERING

DESIGN STANDARD
FOR
PAVEMENT REPAIR PATCHES IN SERIES

Choo Chew
CIVIL DESIGN ENGINEER

12.11.19
DATE

WVZ 12/11/19
CITY ENGINEER

DATE