



**Request for Bid
Phase 1 Sewer Rehab Group 2 Relay Addendum No. 1 to
RFB No. 400421.71.0391
November 12, 2021**



The following information encompasses Addendum No. 1 for the above referenced RFB. Bidders shall fully consider and acknowledge this Addendum in the preparation and submittal of its formal Bid. Failure to do so may result in the rejection of the Bid.

Section 1 – Questions Received to Date, Mandatory Pre-Bid Meeting Attendance Sheet

Section 2 – Updates to 00170.11 Interpretations and Addenda

Section 3 – Updates to 00571.1 Notices and Correspondence

Section 4 – Updates to 00672.4 Equal Business Opportunity Program

Section 5 – Updates to Technical Specifications

All other conditions and requirements remain unchanged.

**Section 1
Mandatory Pre-Bid Meeting Attendance Sheet**

(no questions received to date)



Mandatory Pre-Bid Meeting Attendee List



Program: SARP10	Meeting Date: November 10, 2021
Project: Phase 1 Sewer Rehab Group 2 Relay	Time: 10:30 AM
Facilitator: Josh Grabowski	Place/Room: Online via Microsoft Teams

Name	Company	Phone	E-Mail
Nicholas Stellmack	Garney Construction	408-826-1593	nicholas.stellmack@garney.com
Terrell Richards	W&T Contracting Corp	901-331-1780	terrellrichards@wtcontractingcorp.com
Wiley Richards	W&T Contracting Corp	901-497-1291	wileyrichards@wtcontractingcorp.com
Nathan Stengel	W&T Contracting Corp	901-326-3558	nathanstengel@wtcontractingcorp.com
Janie Rodriguez	Oscar Renda Contracting	817-4912703	bidding@southlandholdings.com
Luke Bell	Magnolia Underground Construction	901-661-3578	lbell@magnoliaunderground.us
Mario Vela	Acuff Enterprises	901-386-1981	mario@acuffenterprises.com
Justin Avent	Gresham Smith	901-849-6554	justin.avent@greshamsmith.com
James Hinte	Magnolia Underground Construction	901-238-7985	jhinte@magnoliaunderground.us
J. Borrero	Black & Veatch	813-482-6926	borreroj@bv.com
Josh Grabowski	Allworld Project Management	901-514-1719	jgrabowski@allworldmail.com
Thomas Kalonji	Allworld Project Management	901-376-2077	tkalonji@allworldmail.com
Scott McAmis	Gresham Smith	901-562-0111	scott.mcamis@greshamsmith.com
Jerry Caldwell	Black & Veatch	901-530-1805	caldwellj@bv.com
Ivan Tamayo	Black & Veatch	901-495-2637	tamayoip@bv.com
Nolan Mills	Black & Veatch	919-779-8004	millsw@bv.com



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**Section 2
Updates to 00170.11 Interpretations and Addenda**

- Study and carefully correlate the Respondent's observations and responses with the Bid Documents.
- Notify Purchaser of all conflicts, errors and discrepancies, if any; in the Bid Document submitted.
- Review the Loss Control Manual and State Revolving Fund (SRF) Documents.

Respondents by and through the submission of their Response, agree that they shall be held responsible for having therefore familiarized themselves with the nature and extent of the requirements in the Bid Documents.

00170.11 Interpretations and Addenda

If any prospective Firm is in doubt as to the true meaning of any part of the Requirements for Preparing and Submitting Bid Submittal for the requested services, they may submit a written request (verbal requests will not be accepted) for an interpretation before the Last Date for Bidder Questions; as stated in 00170.16. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addendum transmitted to each party receiving a set of such documents. Purchaser will not be responsible for any other explanations or interpretations of the proposed documents. Any requests not submitted within this time period will be deemed waived.

SUBMIT ALL QUESTIONS BY E-MAIL TO:

Attn: Josh Grabowski

jgrabowski@allworldmail.com

Cc: Ginny Dorsey

DorseyV@bv.com

Cc: Jerry Caldwell

~~CaldwellJ@bv.com~~ CaldwellJ@bv.com

(Reference: SARP10 Program **Phase 1 Sewer Rehab Group 2 Relay**, BID No. **400421.71.0391**)

All requests or questions should be clearly marked and must be received by Last Date for Bidder Questions, as stated in 00170.16. A response will be returned via addendum to all Firms along with the original question(s).

There shall be no communication between the Firm, their employees or subcontractors concerning this Bid to anyone within Black & Veatch, Overland Contracting, Allen & Hoshall, Allworld Project Management, Gresham Smith, Carter-Malone Group, or City of Memphis employee or any such person's spouse, child, parent, brother, sister, dependent or person assuming a relationship being the substantially equivalent of the above except through Bently Green – Program Director or Jerry Caldwell – Project Manager. **Failure to comply with this requirement will be grounds for disqualification.**

00170.12 Modification or Withdrawal of Bid Submittals

Responses may be modified or withdrawn by an appropriate document duly executed (in the same manner that a Response must be executed) and delivered to the place where Responses are to be submitted at any time prior to the submission deadline. A request for withdrawal or a modification must be in writing and signed by an authorized person. Evidence of such authority must accompany the request for withdrawal or modification. Withdrawal of a Response will not prejudice the rights of a Responder to submit a new Response prior to the Response deadline. After expiration of the period for receiving Responses, only Purchaser may request clarifications or additional information.

00170.13 Rejection of Responses

To the extent permitted by applicable local, state and federal laws and regulations, Purchaser reserves the right to reject any and all Responses, to waive any and all informalities not involving price, time, or changes in the Work with the successful Respondent, and the right to disregard all non-conforming, non-responsive, unbalanced or conditional Responses. Also, Purchaser reserves the right to reject a Response, in its sole discretion, if the City of Memphis believes that it would not be in its best interest to make an award to that Respondent.





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Section 3
Updates to 00571.1 Notices and Correspondence

00571 - Supplementary Terms and Conditions

00571.1 Notices and Correspondence

The parties agree to send all notices arising out of or related to this Subcontract by one of the following methods: (a) personal delivery; (b) certified mail with return receipt; (c) nationally recognized overnight mail or courier service, with delivery receipt requested; or (d) email. The parties may send routine correspondence by email or first-class mail, each without confirmation of receipt. The parties agree to address notices and correspondence as indicated in this article. Subcontractor agrees that delivery of a notice or of correspondence by Purchaser to Subcontractor's at the jobsite constitutes personal delivery.

Electronic Technical Correspondence

Addressed to Purchaser:

To: Jerry Caldwell
~~CaldwellJ@bv.com~~ CaldwellJ@bv.com
Cc: Joe Collins
CollinsJJ@overlandcontracting.com

Addressed to Subcontractor:

To:

Cc:

Non-Electronic Technical Correspondence

Addressed to Purchaser:

Overland Contracting Inc.
845 Crossover Lane, Suite 120
Memphis, TN 38117
Attention: Jerry Caldwell
400421.71.0391

Addressed to Subcontractor:

Attention:
400421.71.0391

Electronic Commercial Correspondence (excluding invoices)

Addressed to Purchaser:

To: Ginny Dorsey
Dorsey@bv.com

Addressed to Subcontractor:

To:

Cc:

Non-Electronic Commercial Correspondence (excluding invoices)

Addressed to Purchaser:

Overland Contracting Inc.
8400 Ward Parkway
Kansas City, MO 64114
Attention: Ginny Dorsey
400421.71.0391

Addressed to Subcontractor:

Attention:
400421.71.0391

Electronic Invoices

Subcontractor will submit invoices via the web-based project management platform, Prolog. Invoices will be reviewed, and either approved or returned to Subcontractor for correction. The OCI Project Manager will forward invoices to Black & Veatch Accounts Payable, once they are approved.

In accordance with section 00572.4 Invoicing and Payment, each invoice must clearly show the invoice number, the complete Subcontract project number, the Purchase Order number, the Work covered by the invoice, taxes, and the billing period (if applicable).





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Section 4
Updates to 00672.4 Equal Business Opportunity Program

00672.4 Equal Business Opportunity Program

This form must be submitted with Bidder's bid. Failure to execute and submit this document with Bidder's bid may cause the Bid to be rejected as non-conforming. In addition, each Sub-Subcontractor must execute the form.

This Subcontract will be subject to the requirements of the City of Memphis Ordinance #5384 which establishes the Equal Business Opportunity ("EBO") Program. It is up to the Respondent to ensure that all requirements of this ordinance are met. The Ordinance may be accessed on the City's website at www.memphistn.gov under "Business – Contract Compliance". The intent of the EBO Program is to increase the participation of locally owned minority and women owned business enterprises ("M/WBE"). Toward achieving this objective, the overall M/WBE participation goal for this solicitation is 15%. The percentage of overall M/WBE participation is defined as the dollar value of subcontracts awarded to certified (as identified by the City of Memphis EBO list) minority and/or women business enterprises divided by the total proposed base bid amount.

Additionally, in accordance with federal executive Order 11625 and 12138, the local government must make a good faith effort to include participation from Disadvantage Business enterprises (DBE) in sub-agreement awards. The SRF Fair Share DBE goal for this project is a minimum of **2.6%** s WBE and minimum of **2.6%** MBE (as identified by the Tennessee Uniform Certification Program list, other State or Federal DBE lists, or the City of Memphis EBO list). **Please note Subcontractor must meet both percentages independently to satisfy the requirements.**

SRF Fair Share DBE Goals:

MBE goal – Construction **2.6%**

WBE goal – Construction **2.6%**

(Vendors from the TDOT TNUCP DBE list, other State or Federal DBE lists, or the City of Memphis EBO list)

SARP10 DBE Participation Goal:

MBEWBE minimum **15%**

(Vendors from the City of Memphis EBO list only)

Participation Plan

The Participation Plan must include: (1) level and dollar amount of participation your firm anticipates achieving in the performance of contract resulting from this RFB; (2) the type of work to be performed by the M/WBE participation; and (3) the names of the M/WBE and/or DBE firm(s) the Respondent plans to utilize in the performance of the contract resulting from this RFB.

Eligible M/WBE and/or DBE Firms

To qualify as a M/WBE firm, per the requirements of City of Memphis Ordinance #5384, a firm must be included on the City of Memphis EBO list of certified M/WBE firms. All contractors identified as an SRF Fair Share M/WBE firm must be on the Tennessee Uniform Certification Program (TNUCP) List, other State or Federal DBE lists, or the City of Memphis EBO list at the time of the bid opening.

A list of the City's eligible M/WBE firms may be requested from Purchaser as a guide only. If a Bidder desires to utilize an M/WBE firm not included on the list, it is the Bidder's responsibility to confirm that the desired firm is certified by the City of Memphis. Such confirmation must be obtained from the City's Contract Compliance Office, in writing, before the bid/response due date. Requests for verification must be submitted to the City's Contract Compliance Office listed below:

~~Joann Massey~~ **Ken Moody**

City of Memphis, Contract Compliance Office

125 North Main Street, Suite 546

Memphis, TN 38103

Phone: (901) 576-6210

Fax: (901) 576-6560

Email: ~~joann.massey@memphistn.gov~~ ken.moody@memphistn.gov

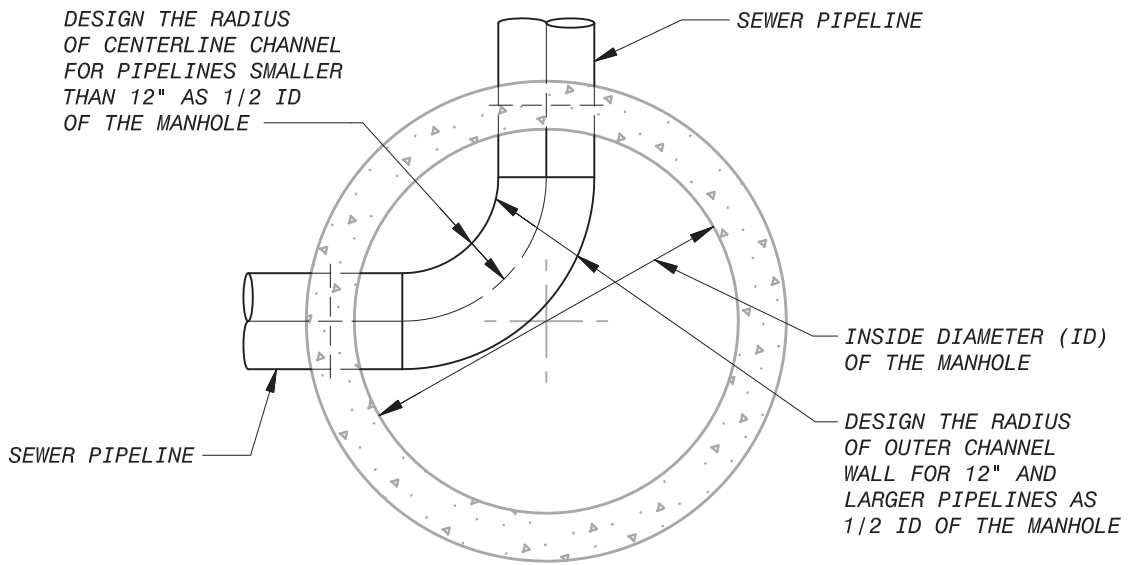




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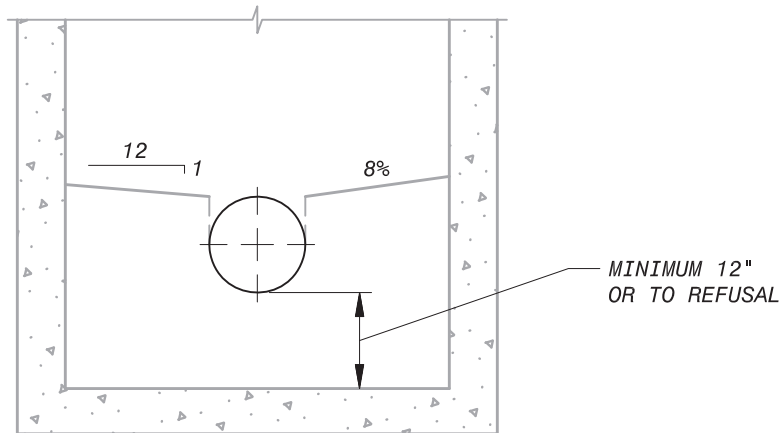


Section 5
Updates to Technical Specifications



MINIMUM RADIUS OF MANHOLE CHANNEL

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



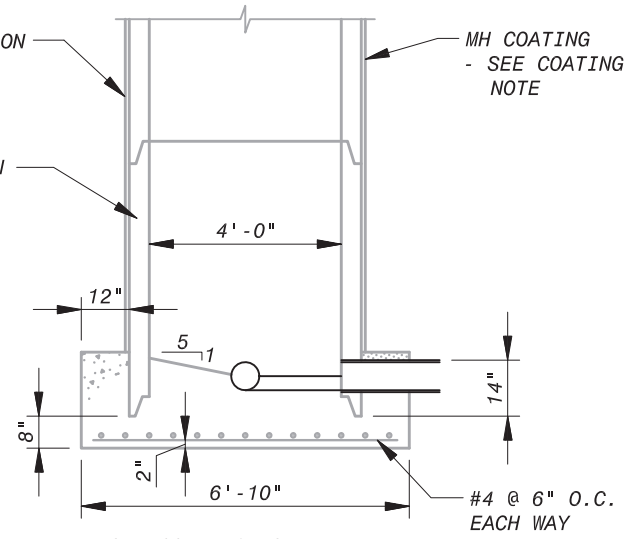
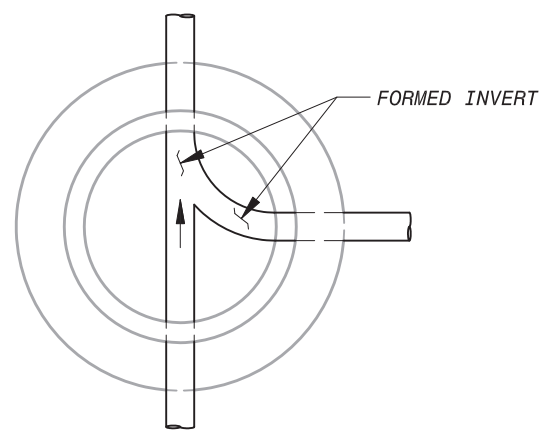
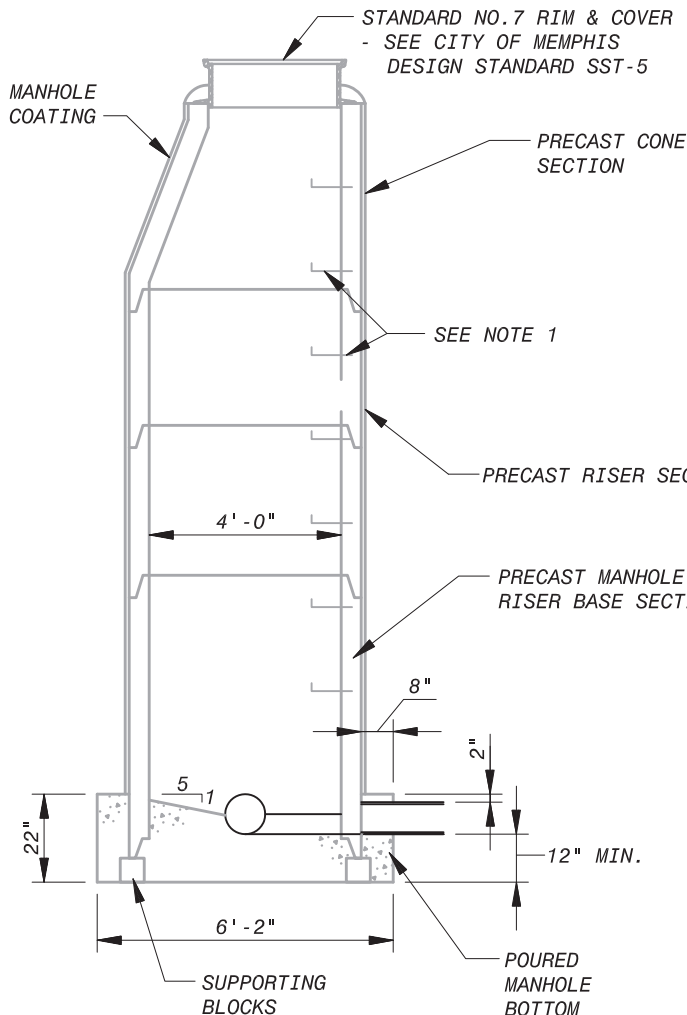
NOTES:

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.

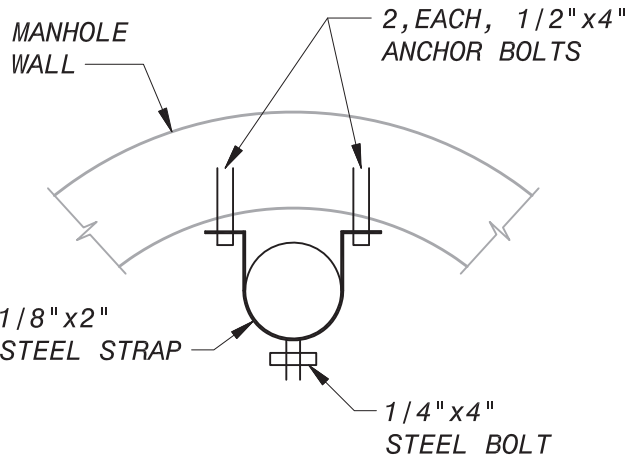
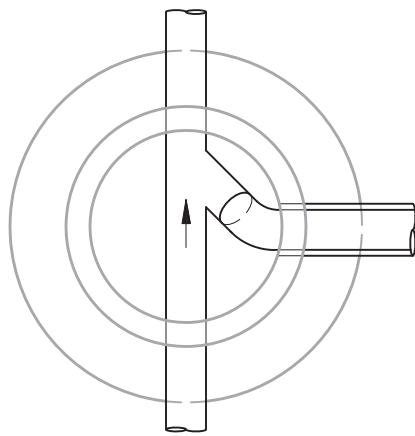
- NOTES:**
1. CAST IRON STEPS STAGGERED LATERALLY 12" C-C & UNIFORMLY SPACED VERTICALLY AT 16" O.C. MAXIMUM - SEE "MANHOLE STEPS" NOTE BELOW

TYPICAL PRECAST MANHOLE

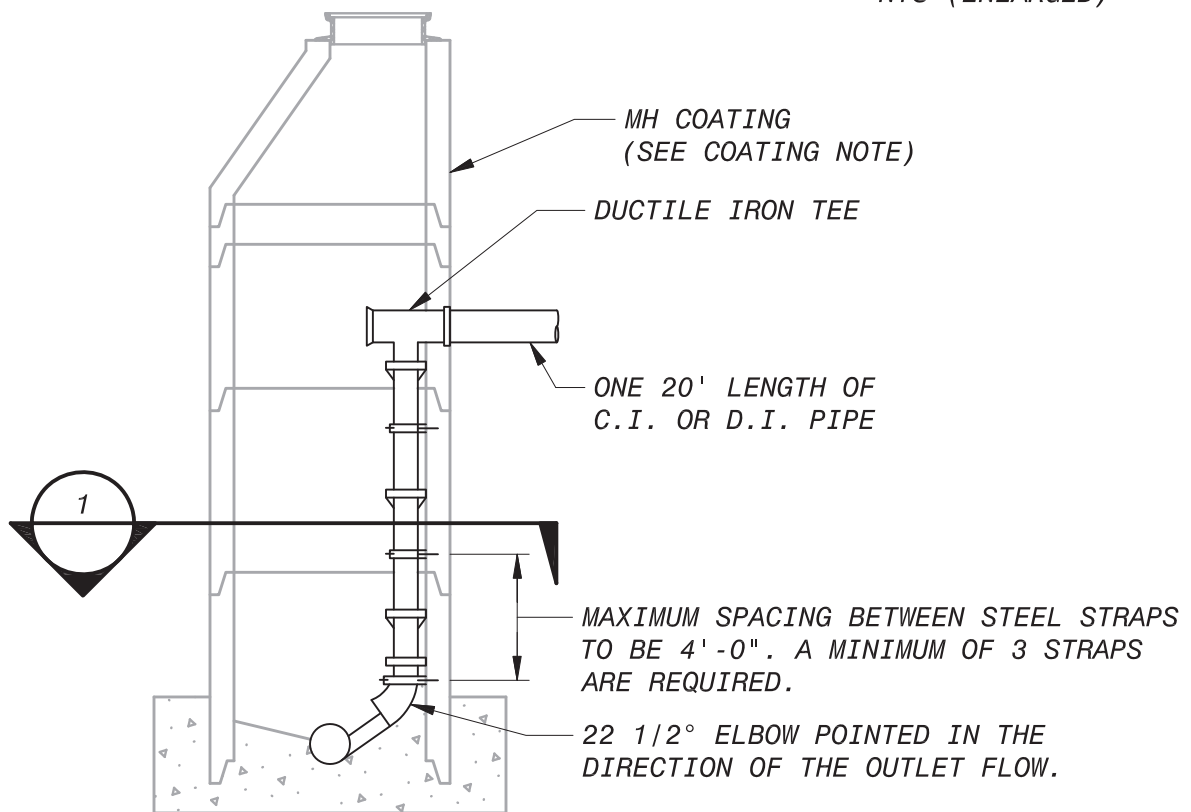
ALTERNATE (MANHOLES IN EXCESS OF 20' DEEP)

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



SECTION 1
NTS (ENLARGED)



INSIDE DROP
(SEE NOTE 2)

* OPENING IN MH WALL TO BE GROUTED WITH HIGH STRENGTH, QUICK SETTING, NON-SHRINKING CEMENT GROUT.

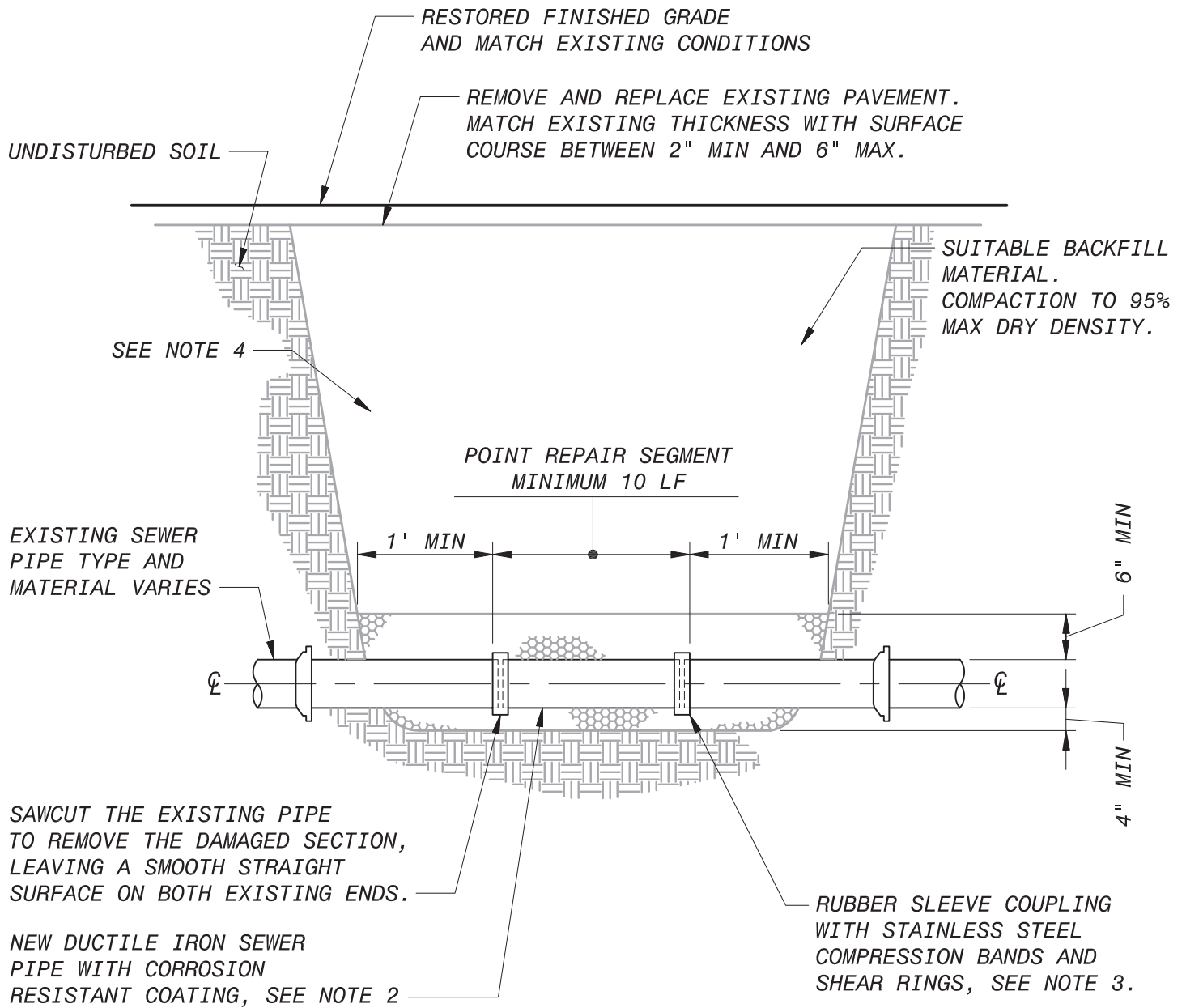
NOTES:

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**

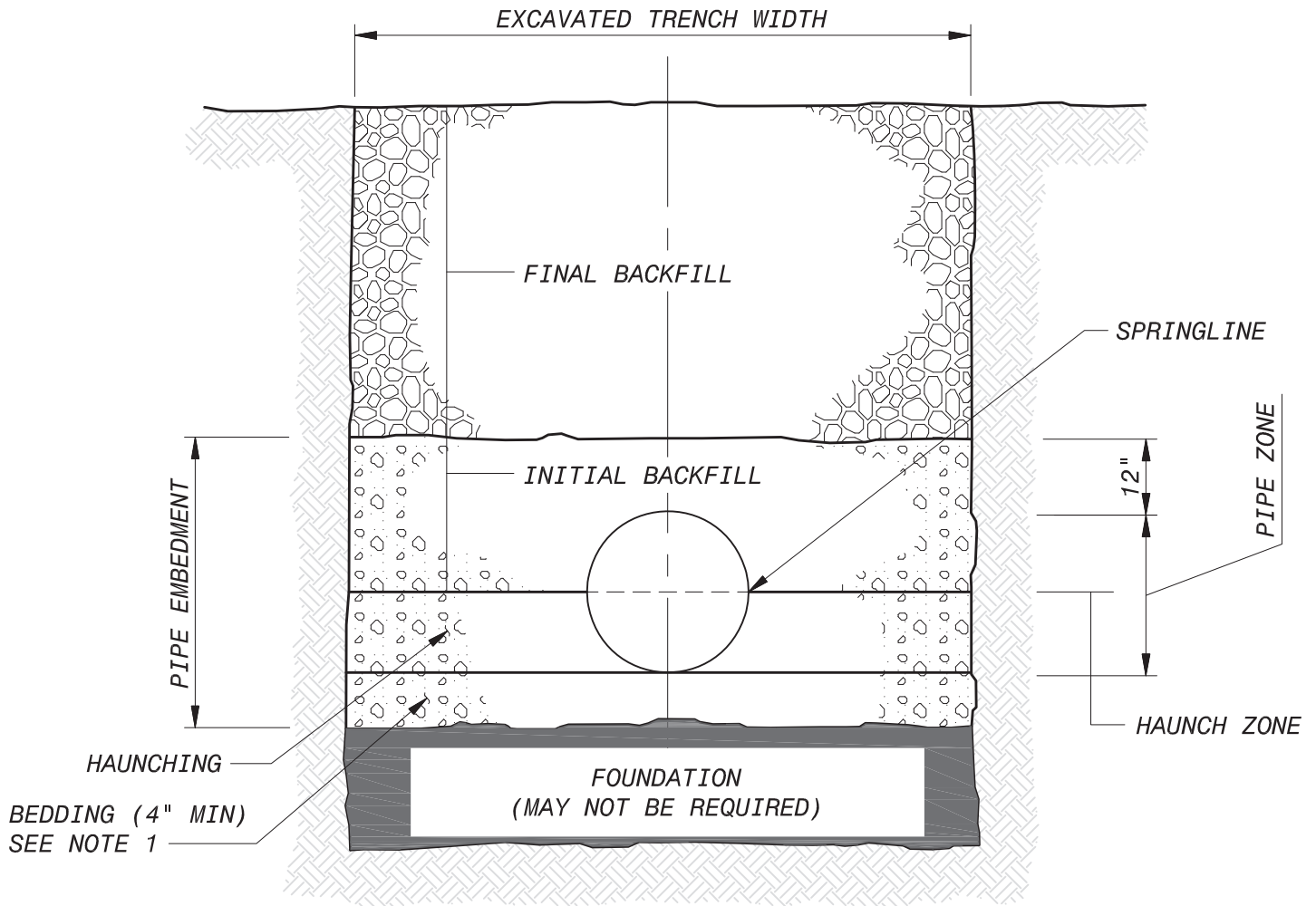


FIGURE 1

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"

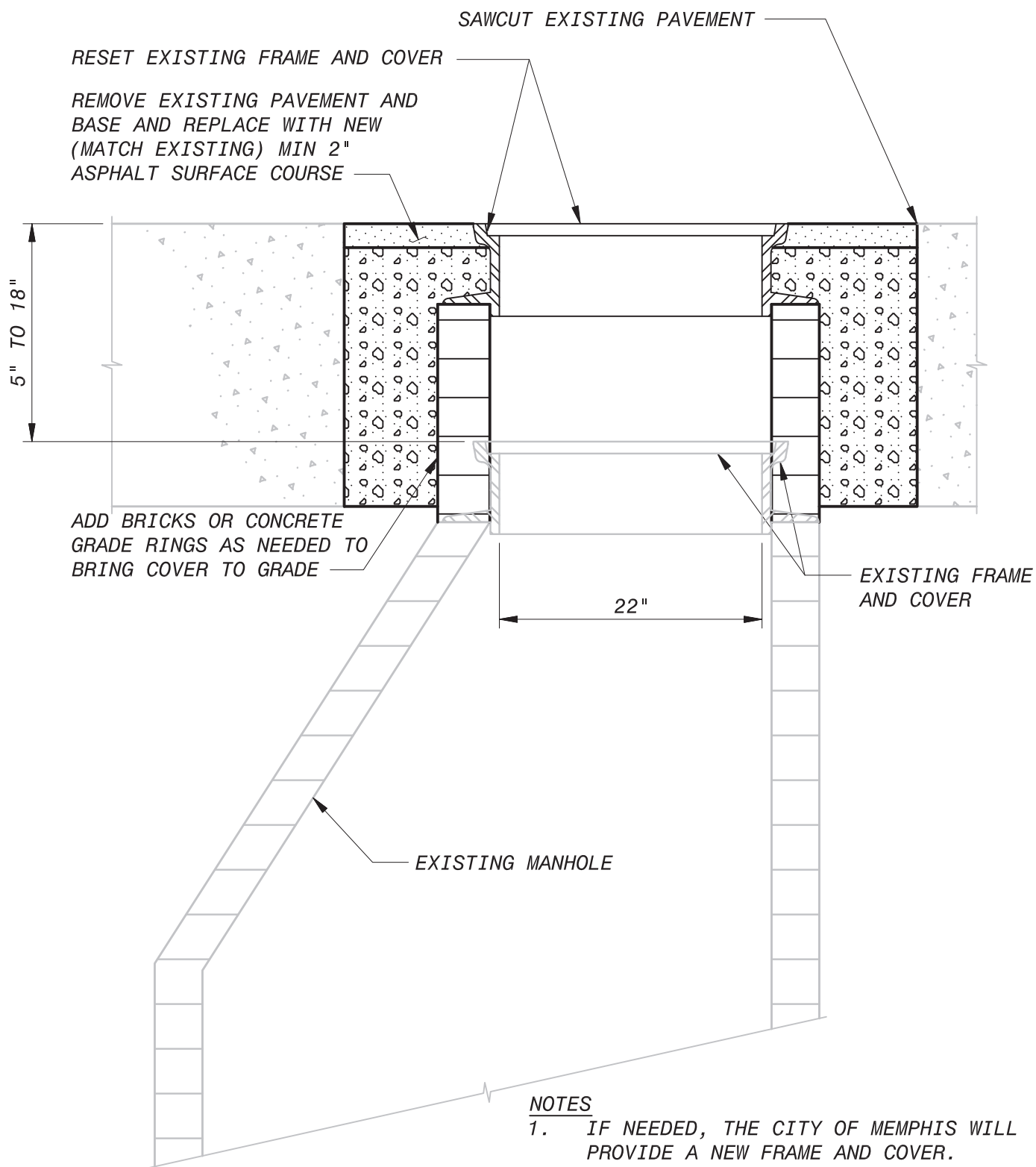
EXISTING MANHOLE

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

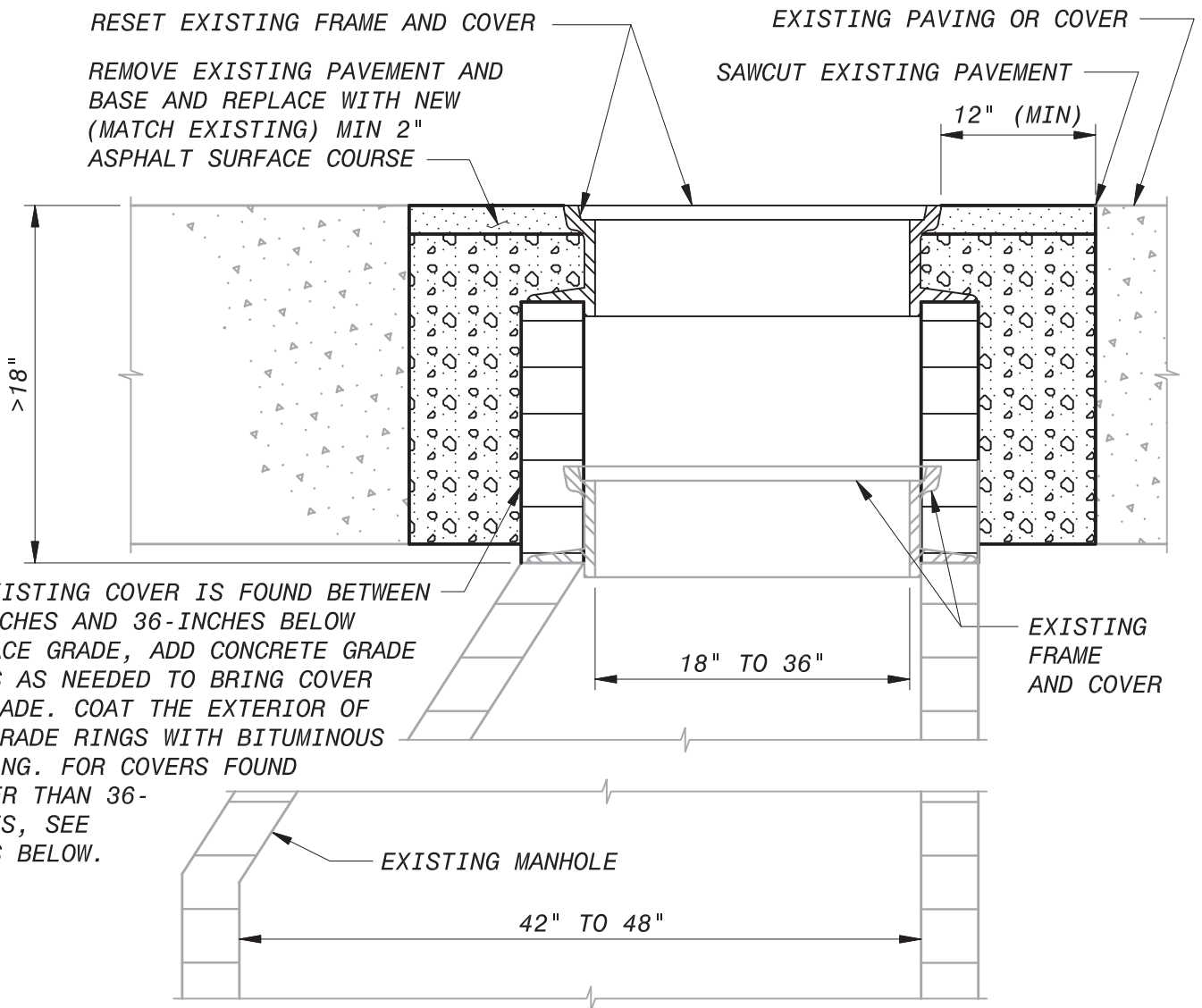


NOTES

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



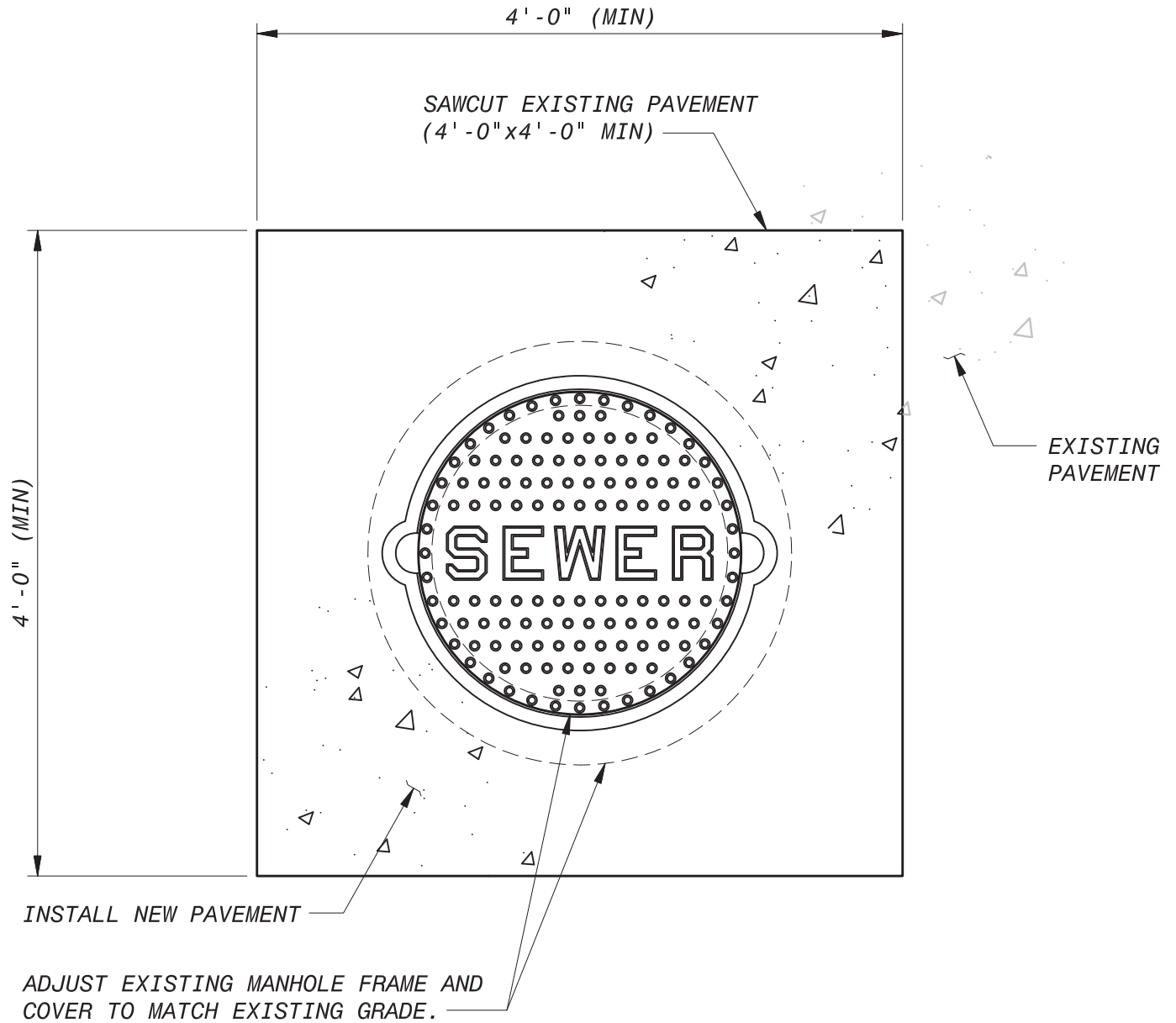
IF EXISTING COVER IS FOUND BETWEEN 18-INCHES AND 36-INCHES BELOW SURFACE GRADE, ADD CONCRETE GRADE RINGS AS NEEDED TO BRING COVER TO GRADE. COAT THE EXTERIOR OF THE GRADE RINGS WITH BITUMINOUS COATING. FOR COVERS FOUND DEEPER THAN 36-INCHES, SEE NOTES BELOW.

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



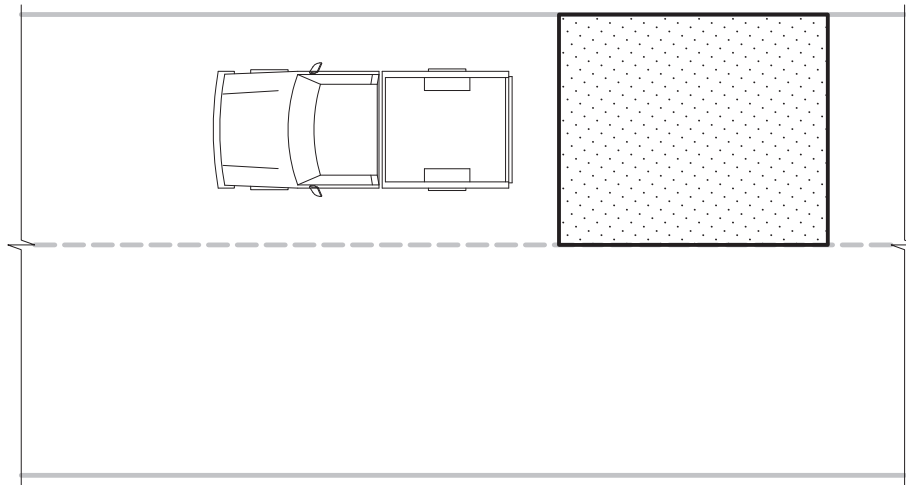
NOTES

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

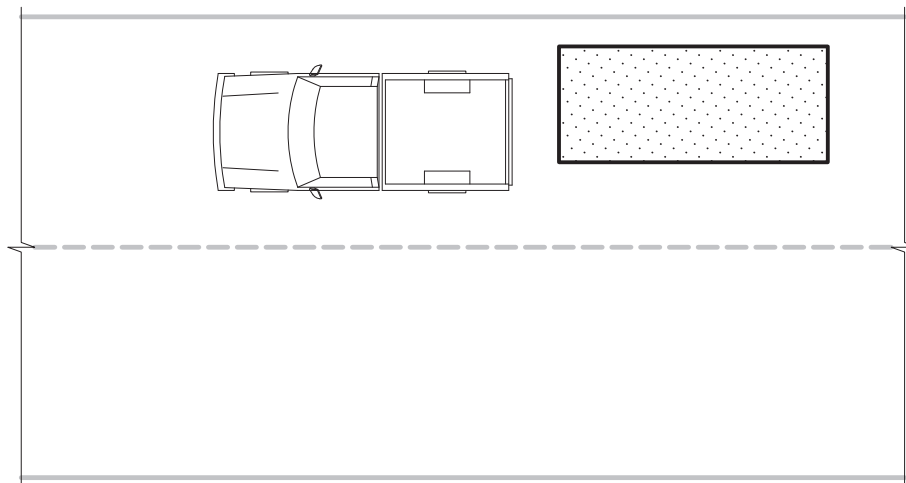


SARP10

ADJUSTING
MANHOLE FRAME AND COVER
PAVING PLAN



ACCEPTABLE



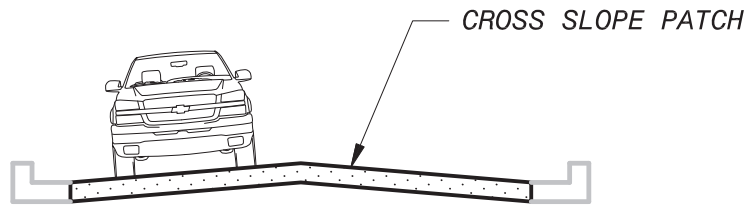
NOT ACCEPTABLE

NOTES

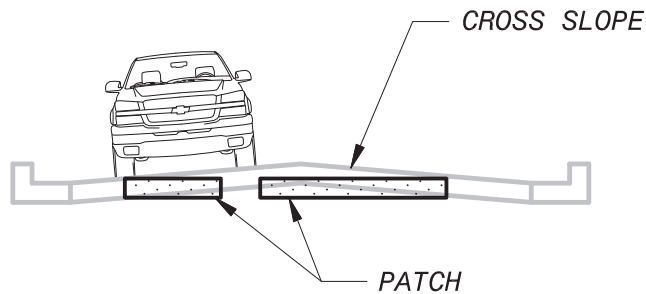
1. EXISTING PAVEMENTS SHALL BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE 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



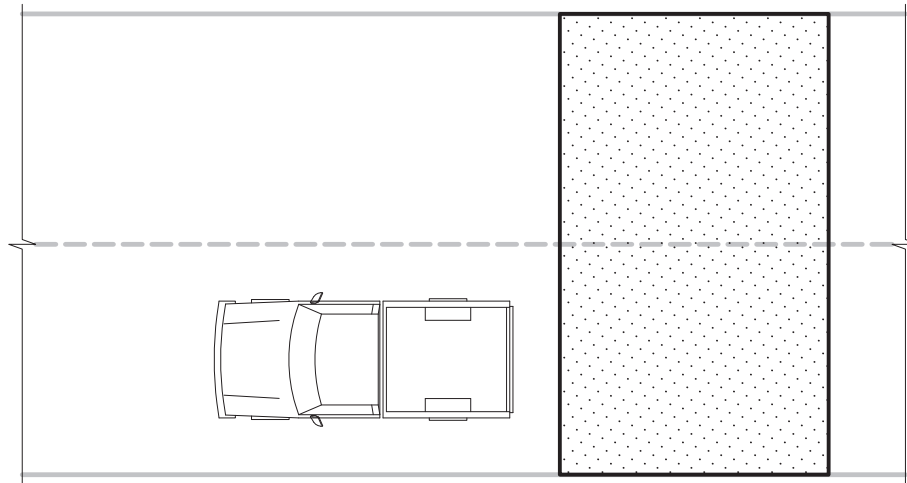
NOT ACCEPTABLE

NOTES

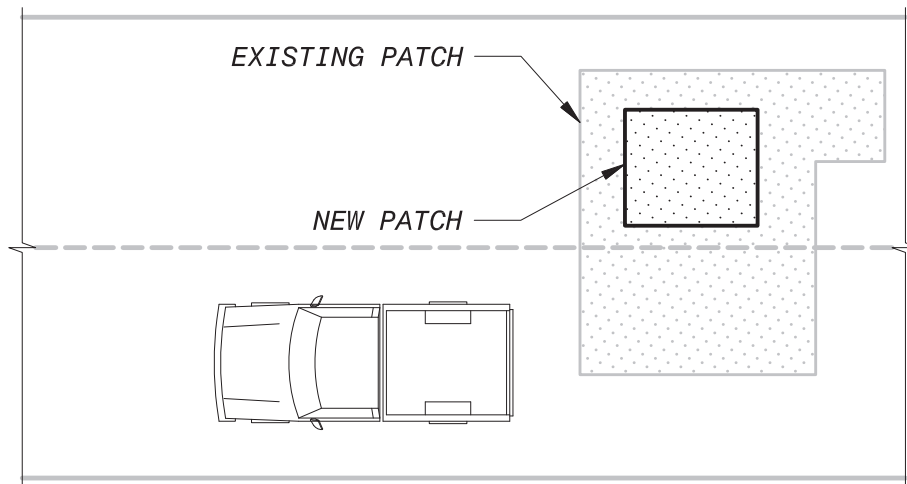
1. EXISTING PAVEMENTS SHALL BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE 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.
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



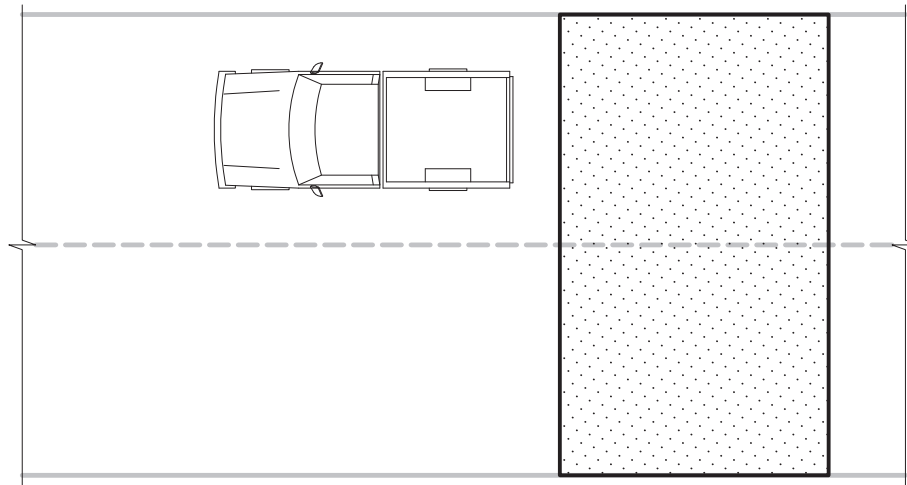
NOT ACCEPTABLE

NOTES

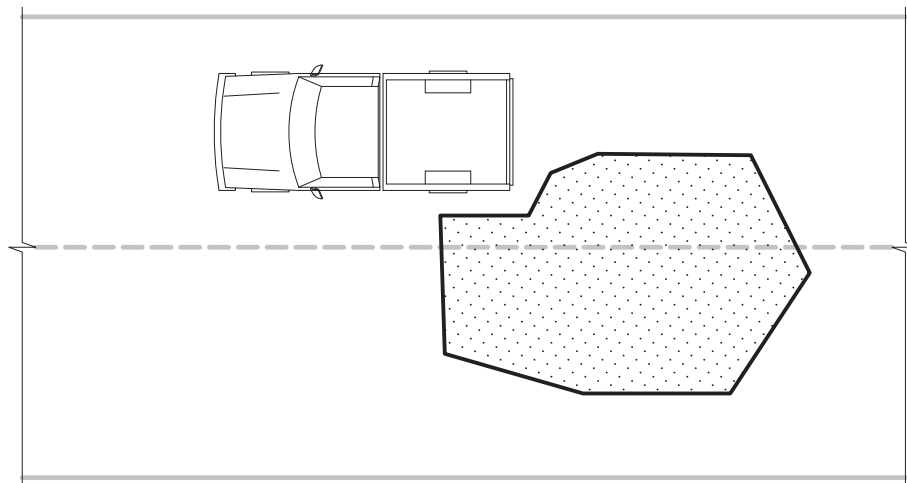
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6. AVOID PATCHES WITHIN PATCHES. IF THIS CANNOT BE AVOIDED, MAKE THE BOUNDARIES OF THE PATCHES COINCIDE.



SARP10
 PAVEMENT REPAIR
 PATCH INSIDE A PATCH
 DETAILS



ACCEPTABLE



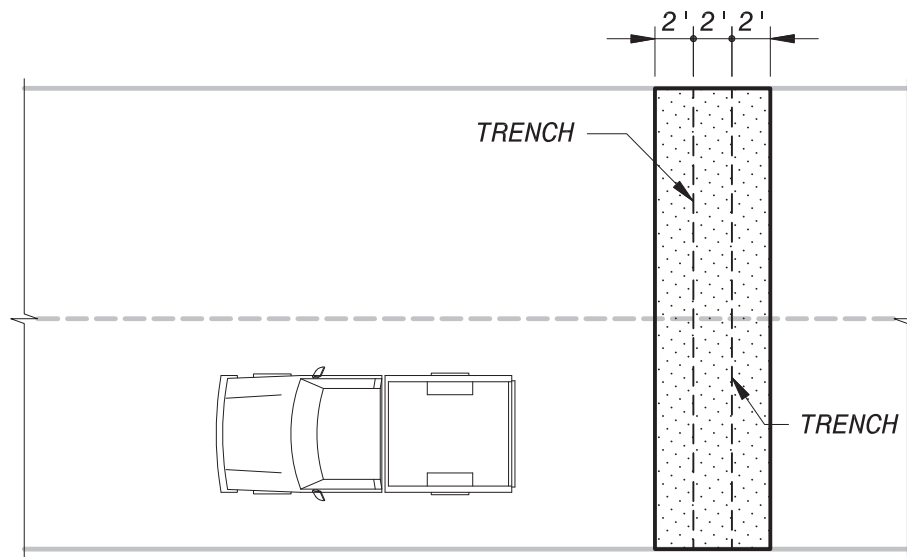
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NOTES

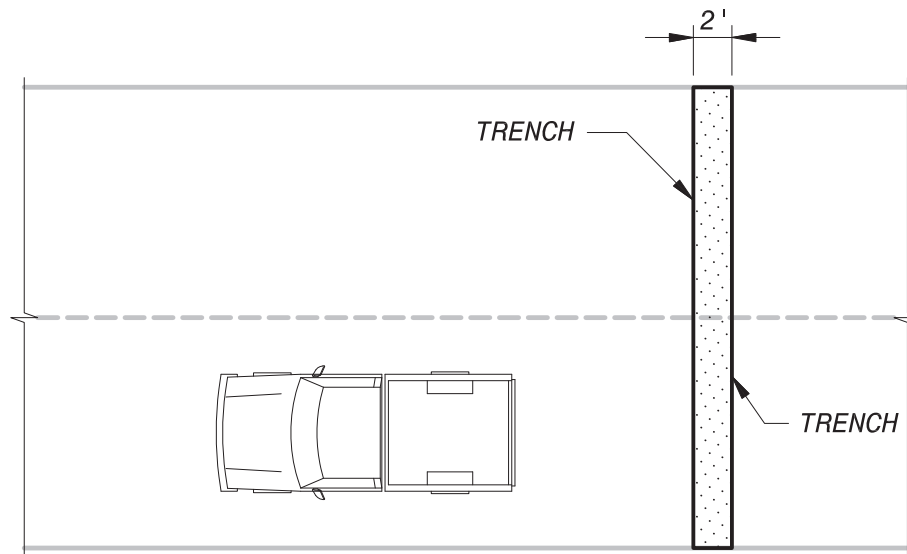
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SARP10
 PAVEMENT REPAIR
 MULTI-LANE
 DETAILS



ACCEPTABLE



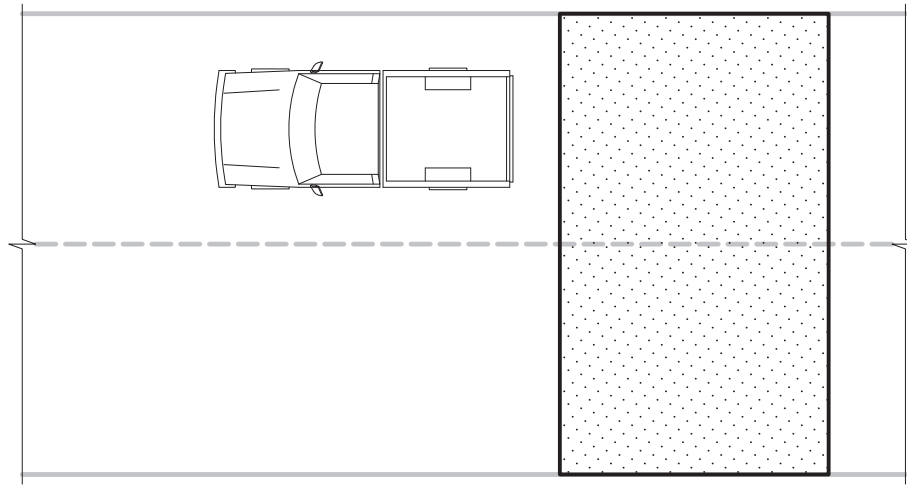
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NOTES

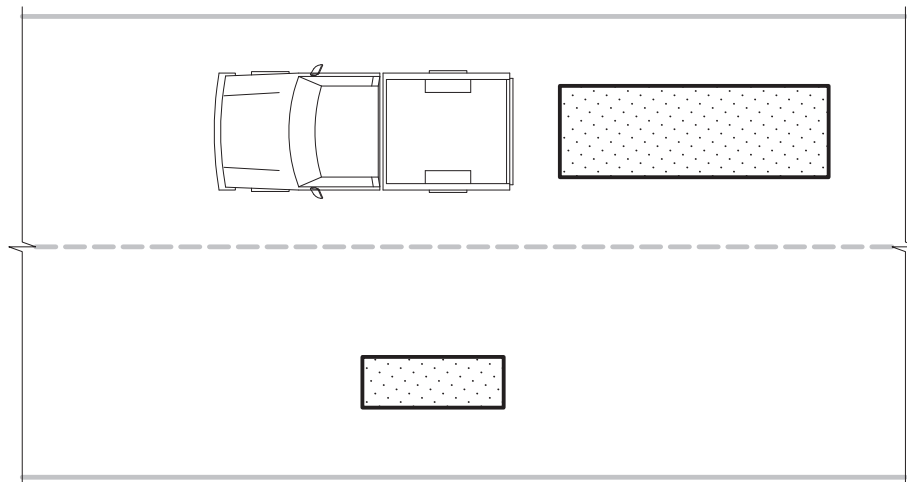
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6. TRAVERSE PATCHES SHALL BE OVERLAID ACROSS THE ENTIRE STREET WIDTH FOR A DISTANCE OF TWO (2) FEET MINIMUM ON ALL SIDES OF THE TRENCH.



SARP10
 PAVEMENT REPAIR
 TRAVERSE PATCHES
 DETAILS



ACCEPTABLE



NOT ACCEPTABLE

NOTES

1. EXISTING PAVEMENTS SHALL BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
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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.



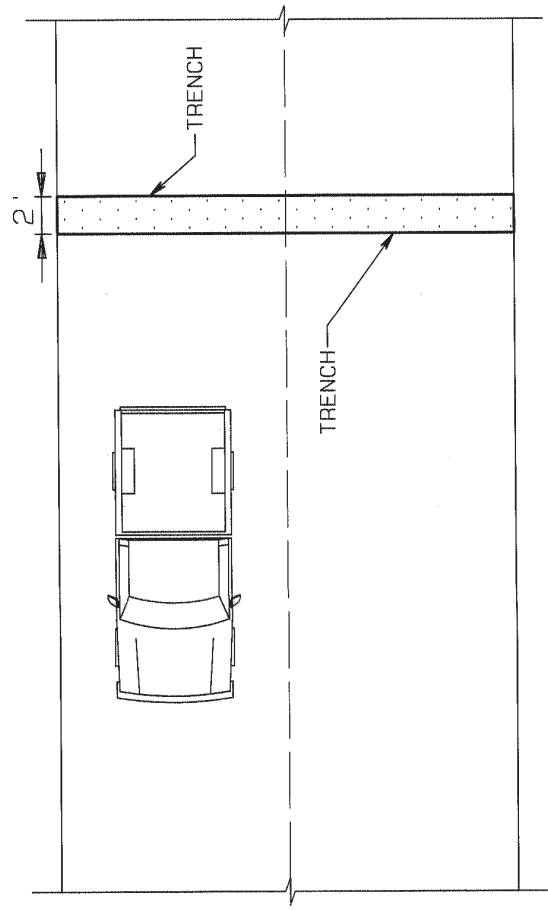
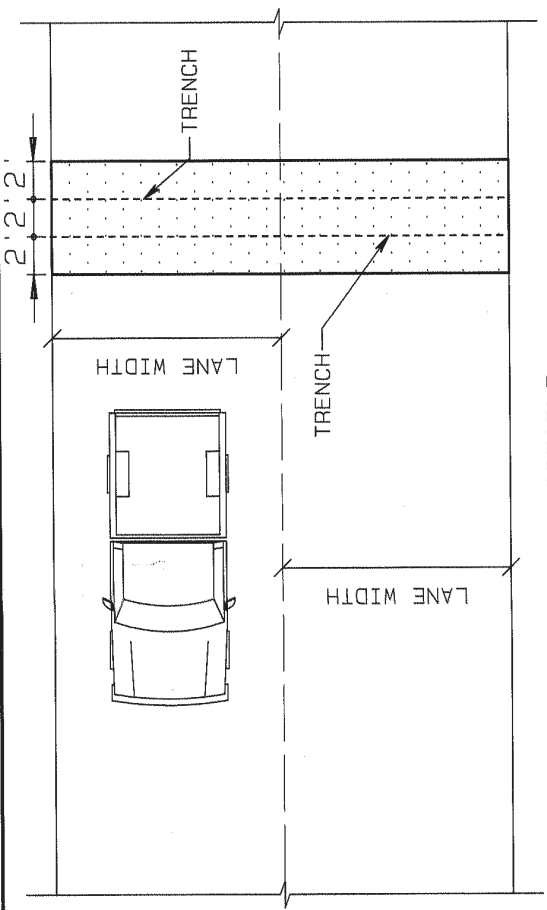
SARP10
 PAVEMENT REPAIR
 WHEEL PATH
 DETAILS

REVISIONS

NO.	DATE	BY	REMARKS

NOTES

1. EXISTING PAVEMENTS SHALL BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
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NOT TO SCALE

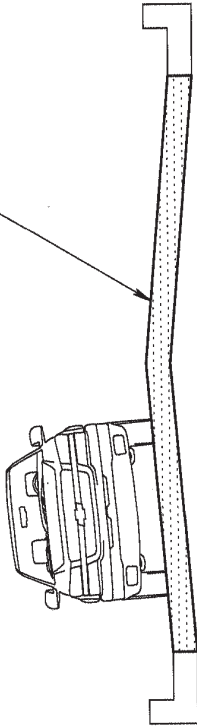
CITY OF MEMPHIS
DIVISION OF ENGINEERING

DESIGN STANDARD
FOR
PAVEMENT REPAIR TRAVERSE
PATCHES DETAILS

Chae Chew
 CIVIL DESIGN ENGINEER
WME 12/16/19
 DATE 12-11-19
 DATE
 CITY ENGINEER

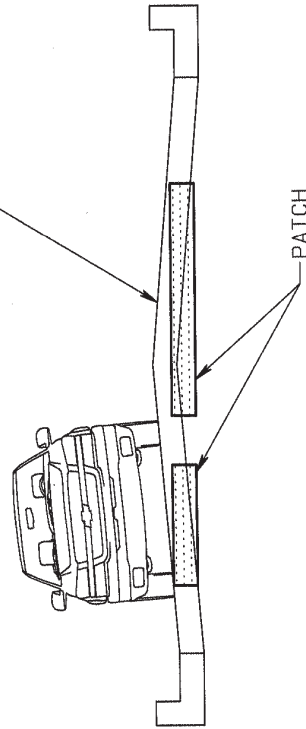
DWG. NO. 53 A

CROSS SLOPE PATCH



ACCEPTABLE

CROSS SLOPE



NOT ACCEPTABLE

REVISIONS

NO.	DATE	BY	REMARKS

NOTES

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CITY OF MEMPHIS
DIVISION OF ENGINEERING

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

Chae Chew
 CIVIL DESIGN ENGINEER
WWS 12/16/19
 DATE
 DATE
 CITY ENGINEER

DWG. NO. 53 C

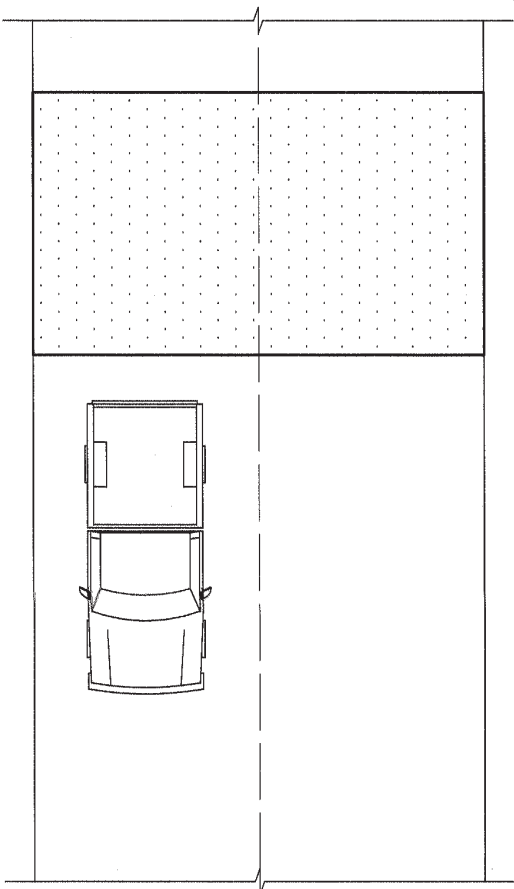
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REVISIONS

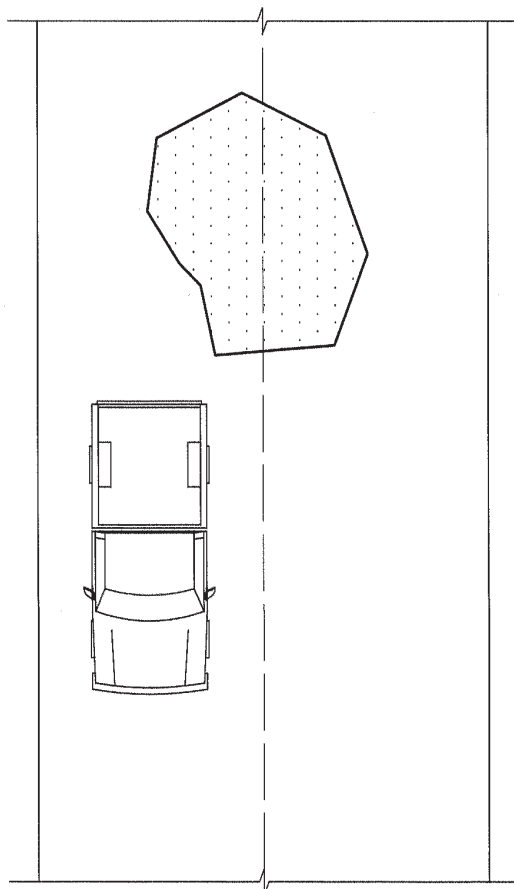
NO.	DATE	BY	REMARKS

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ACCEPTABLE



NOT ACCEPTABLE

NOT TO SCALE

CITY OF MEMPHIS
DIVISION OF ENGINEERING

DESIGN STANDARD
FOR
**PAVEMENT REPAIR
MULTI-LANE DETAILS**

Chae Chew
CIVIL DESIGN ENGINEER
12/16/19
DATE

12.11.19
DATE

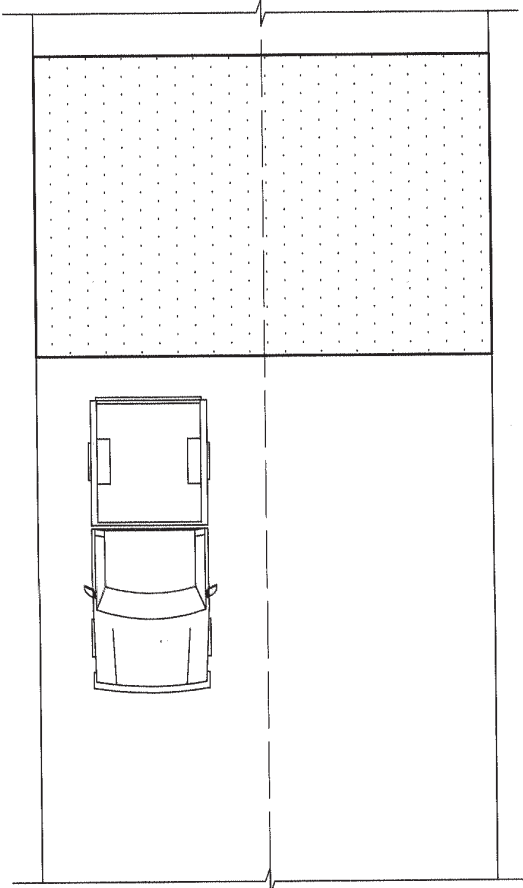
CITY ENGINEER

REVISIONS

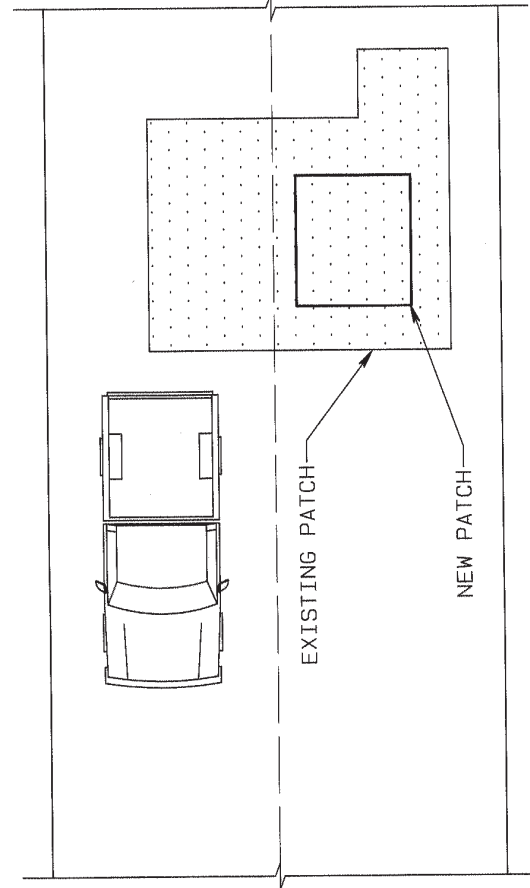
NO.	DATE	BY	REMARKS

NOTES

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- AVOID PATCHES WITHIN PATCHES. IF THIS CANNOT BE AVOIDED, MAKE THE BOUNDARIES OF THE PATCHES COINCIDE.



ACCEPTABLE



NOT ACCEPTABLE

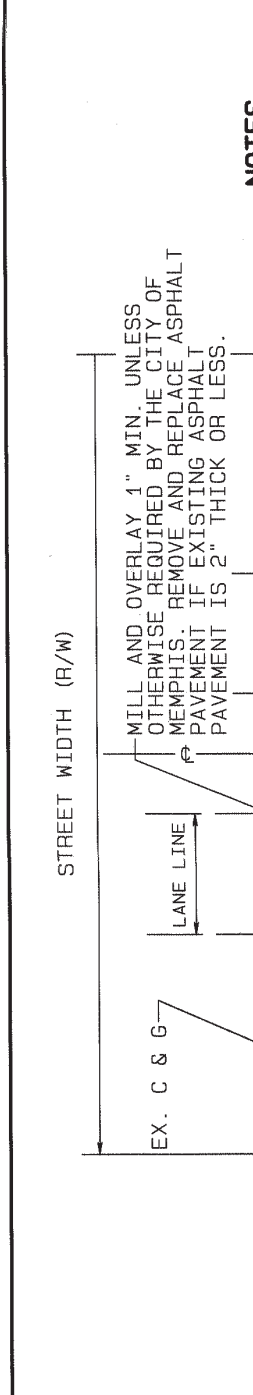
CITY OF MEMPHIS
DIVISION OF ENGINEERING

DESIGN STANDARD
FOR
PAVEMENT REPAIR PATCH
INSIDE A PATCH DETAILS

Chen Chen
CIVIL DESIGN ENGINEER
DATE 12/11/19
CITY ENGINEER
12.11.19
DATE
DWG. NO. 53 E

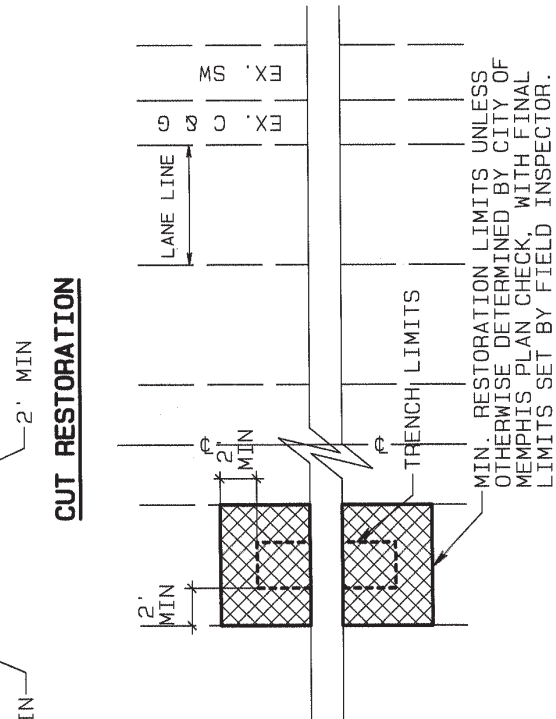
NOT TO SCALE

REVISIONS	
NO.	DATE



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.



PLAN VIEW

NOT TO SCALE

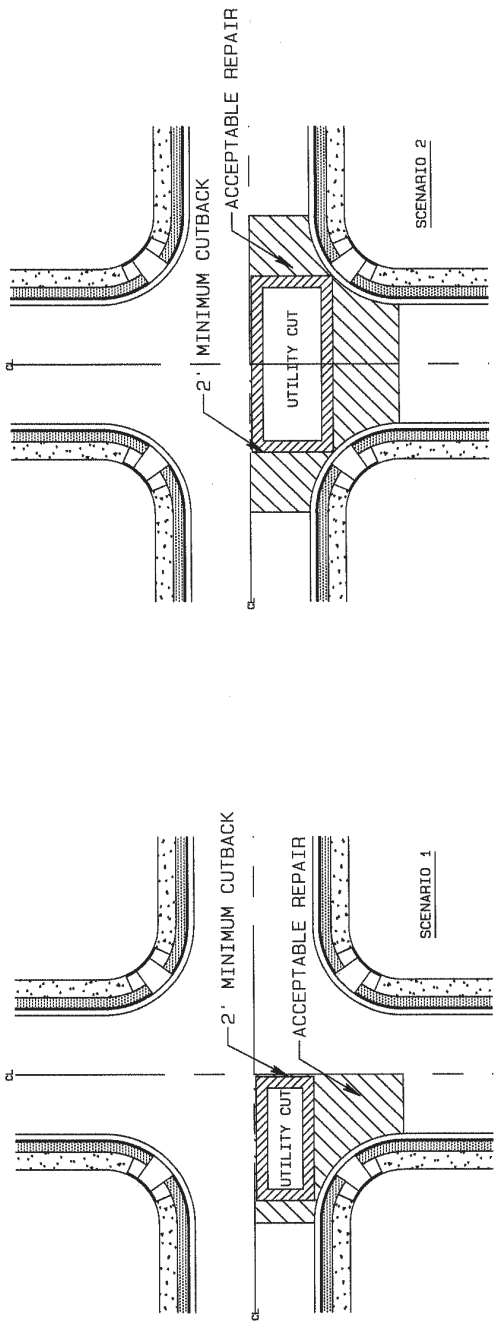
CITY OF MEMPHIS
DIVISION OF ENGINEERING

DESIGN STANDARD
FOR
PAVEMENT REPAIR CUT
RESTORATION DETAIL

Chae Chea
CIVIL DESIGN ENGINEER
JWS
CITY ENGINEER
12.11.19
12.11.19
DATE
DATE

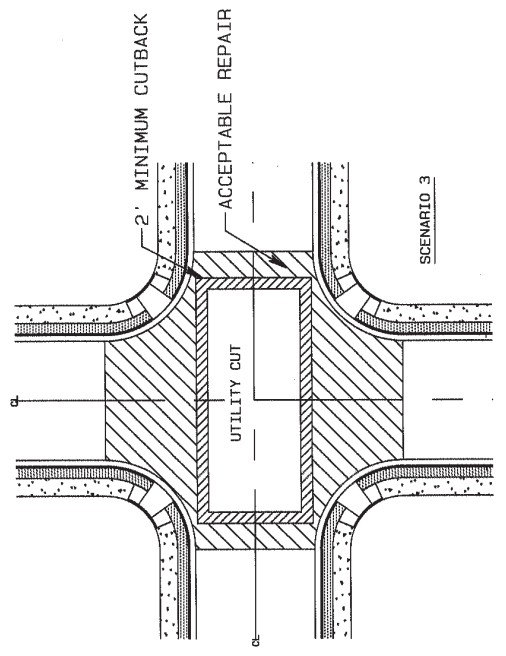
REVISIONS	
NO.	DATE

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	
<i>Chae Chen</i> CIVIL DESIGN ENGINEER 12/11/19	12.11.19 DATE
<i>WZ</i> CITY ENGINEER	DATE

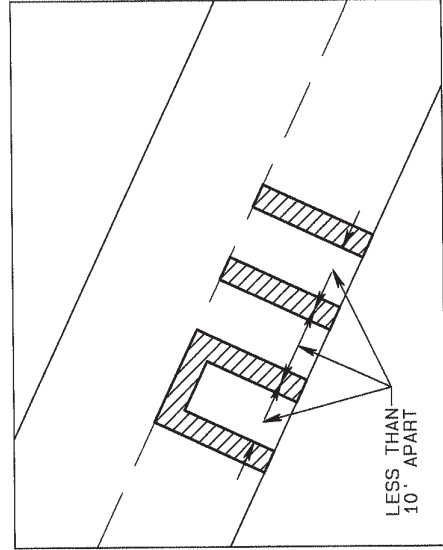
REVISIONS

NO.	DATE	BY	REMARKS

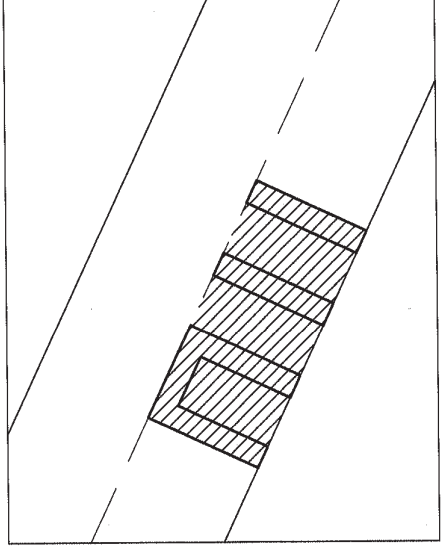
NOTES

- 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



**CITY OF MEMPHIS
DIVISION OF ENGINEERING**

DESIGN STANDARD

FOR
PAVEMENT REPAIR PATCHES IN SERIES

Chae Chew
 CIVIL DESIGN ENGINEER
JWS 12/14/19
 CITY ENGINEER

12.11.19
DATE

DATE

NOT TO SCALE