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# MEMORANDUM

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Date: March 5, 2013

To: The Honorable Chairman and Members  
Pima County Board of Supervisors

From: C.H. Huckelberry  
County Administrator *CHH*

Re: **Additional County Justice Court Complex Costs Due to Water Utility Modifications**

Attached for your review and information is my March 1, 2013 correspondence to the Tucson City Manager requesting reimbursement for excess costs to provide water service to the County's new Justice Courts Complex.

Please contact me if you have any questions regarding this matter.

CHH/mjk

Attachment

c: Reid Spaulding, Director, Facilities Management



## COUNTY ADMINISTRATOR'S OFFICE

PIMA COUNTY GOVERNMENTAL CENTER  
130 W. CONGRESS, FLOOR 10, TUCSON, AZ 85701-1317  
(520) 724-8661 FAX (520) 724-8171

C.H. HUCKELBERRY  
County Administrator

March 1, 2013

Richard Miranda, City Manager  
City of Tucson  
P. O. Box 27210  
Tucson, Arizona 85726-7210

**Re: Your February 11, 2013 Letter Regarding Costs Incurred as a Result of Water Utility Modifications Necessary to Provide Fire Flow Service to the County Justice Courts Complex**

Dear Mr. Miranda:

I appreciate your February 11, 2013 letter (Attachment 1) and ask you to reconsider City participation in our excess costs for providing adequate water service to our new Justice Courts Complex. I ask that the City of Tucson pay up to \$811,881 in excess costs for performing water utility work for Tucson Water (TW) that was excessive and largely unnecessary for the County. The County will pay the \$590,758 required to increase the TW main from 8 inches to 12 inches to provide adequate fire flow to our facility.

### Providing Public Infrastructure for Downtown Development

As you know from our previous discussions with prior City Manager Michael Letcher and in my letter dated December 20, 2010 (Attachment 2), we requested City participation in providing basic water infrastructure systems to support downtown development. The County has spent millions of dollars providing sufficient sewer flow capacity for future downtown development. We had assumed the City of Tucson, through TW, had also made necessary public infrastructure investments to support the demands on the water utility. We now understand such has not occurred.

The County now has provided what normally would be the service obligations of a public water utility. We are prepared to pay for the basic cost, including water distribution size increases, to accommodate fire flow demands; but we believe the other requests of TW

Mr. Richard Miranda

Re: **Your February 11, 2013 Letter Regarding Costs Incurred as a Result of Water Utility Modifications Necessary to Provide Fire Flow Service to the County Justice Courts Complex**

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are unreasonable and do not provide any benefit to Pima County; hence, our request for reimbursement of these excess costs.

### County Complied with City Requests and Spent Considerable Public Funds Doing So

We understand that as of this date, TW has accepted our improvements and the project is deemed complete, less mutually agreed upon punch list work. Our records indicate at least four water plan submittals were requested by TW, and only when final project plans were approved did we learn the TW field inspector(s) and City of Tucson Transportation Department could overrule and request additional items not reflected in the approved project plans. This increased our costs considerably. Two simple examples are included for your consideration.

First, GLHN's first submittal to TW proposed a specific connection to the existing 10-inch line in Alameda west of Sixth Avenue, which was rejected by TW. Three submittals later and during construction, your field inspector recommended the contractor forgo the design on the approved plans in lieu of a simpler method. He suggested the very same solution that GLHN proposed during the initial design process. As a result, GLHN was asked to prepare a revised design that returned the plans to the original design. Your letter of February 11 referred to this as "TW worked with Pima County to maintain the project schedule and adjust to existing field conditions" and "Pima County should have realized savings in labor, equipment and materials from their contractor for these changes." To the contrary, we lost time, and our consultants incurred additional engineering expenses. I have attached files of the numerous submittals and resubmittals, as well as the final approved construction plans, on the CD of project documentation included herein as Attachment 3. The CD also contains the associated Change Order Requests (CORs): COR 037, ASI 31 – Approved Offsite Water Plans, \$226,911; COR 050, ASI 31R1 – Revised Approved Offsite Water Plans, \$104,834; COR 056R1 – ASI 51 – Top Patch Back, Toole Avenue Pavement Patch, \$331,906; and COR 057 – Traffic Control and Plates T-top Patch Back, \$148,230.

Second, GLHN also redesigned the connection point to the existing 8-inch line at the intersection of Stone and Toole. This was done to avoid an existing water manhole and valve at the intersection. During construction, your water inspector asked that we redesign the connection. Apparently, the valve in the water manhole was leaking, and this was an opportunity to have it replaced. In essence, the County fixed an existing problem with your existing water distribution system. Once again, please reference the plans on the enclosed CD.

Mr. Richard Miranda

Re: **Your February 11, 2013 Letter Regarding Costs Incurred as a Result of Water Utility Modifications Necessary to Provide Fire Flow Service to the County Justice Courts Complex**

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Replacing Service Connections does not Benefit the County

Your explanation regarding the County's requirement to provide new service connections as a benefit to both Pima County and the City of Tucson is incorrect. First, we were never given any opportunity to connect the existing service connections, including copper, to the new, larger-diameter water main. We were told and required to make these new connections for all service renewals regardless of whether they were lead or copper. We would have accepted the risk outlined in your letter, as it is no risk at all, given contractor warranty periods. The County was also not given any explanation for the required increase in lateral line size from  $\frac{3}{4}$ " to 1" other than that provided by your water field inspector, which was to facilitate more accurate meter readings using their wireless meter reading system. Upgrading service connections is a responsibility of the water utility, not Pima County, and we expect reimbursement for these costs.

Normal Water Utility Requirements Would Replace Lead Service Connections as a Matter of Good Practice

Regarding lead service connections, replacement is the responsibility of the water utility, not the County. Thirty-one renewal connections were ultimately required; 9 of which were lead: 1) Stone Avenue: 8 existing services were upgraded from  $\frac{3}{4}$ " to 1"; and 2) Toole Avenue: 13 existing services were upgraded from  $\frac{3}{4}$ " to 1", 2 existing services were replaced 1" to 1", 6 existing services were replaced from 1.5" to 1.5", and 2 existing services replaced from 2" to 2". These, by number and cost, are accurately reflected in numerous pages of project documentation, which is included on the CD referenced previously as Attachment 3.

Please have TW staff review all of the documentation regarding each of the service connections replaced or abandoned. We stand by these numbers, including costs associated with sawcutting, steel plating, traffic control, concrete coverage and roadway patching.

As stated previously, the County receives absolutely no benefit from the replacement of these service connections; they are benefits that accrue to the properties being served and the water utility, TW. Hence, we expect full cost reimbursement for all of these service connections, including the concrete pavement repairs and replacements required.

Mr. Richard Miranda

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### City Pavement Replacement Requirements a Waste of Money

Despite the notes on the approved water plans, the City Transportation inspector handed our staff and contractor the Type "B" utility patch (Attachment 4) and required this type of pavement repair. This detail is dated 1967. The closest match is a Type 3 Utility Trench Patch, Detail 216 (Attachment 5). Of the pavement patches required, most (23 of 31 service connections) were in Toole Avenue where there is no concrete base. A much less costly patch, either Type 1 or 2, could have been used. Please note this utility trench patch type is for streets that have concrete as a base under existing asphalt. Why was this type of patch required over all new work, including both mains and laterals? Why was such a patch required for Toole, which has no existing concrete? Why was this requirement never reflected in the numerous submittals and resubmittals? In fact, all County submittals, both the initial as well as numerous resubmittals, clearly indicate "No permanent pavement patch required on this sheet." These are the plans approved by TW. In the fourth and final resubmittal, this is shown as Note 4/Sheet 2, Note 3/Sheet 3, Note 2/Sheet 4, Note 3/Sheet 5, and Note 1/Sheet 6.

Contrary to your February 11 letter, Attachment 4 (which was provided to us in the field) is not referenced in your current published standards, *City of Tucson and Pima County Standard Details for Public Improvements* (2003 Edition). We have confirmed that similar such work associated with water line replacements, including laterals, for the City's Modern Streetcar has not mandated such blanket requirements and are, in fact, determined on a case-by-case basis. Please see the contrasting photographs of our patches on Stone Avenue versus the Modern Streetcar utility trenches on the same roadway (Attachment 6).

### Comparison of Requirements Placed on Pima County versus Other Downtown Developments

We have inquired of other major downtown project owners and developers about their experiences regarding water service to their projects. I discussed with Mr. Jim Campbell his required investments and obligations regarding water service for the student housing project known as Cadence, at the Broadway-Toole-Congress triangle. He indicated the water service connections through 4-inch diameter pipes were provided by TW, and his only cost related to the purchase and installation of meters, a relatively small cost.

Regarding the District on 5<sup>th</sup>, we spoke with the contractor responsible for the work, who indicated the type of pavement patch required of the County was not required for either main extension or the laterals. They also do not recall a requirement for concrete coverage of any new water line work, main or service connections.

Mr. Richard Miranda

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Regarding the new Unisource Building on Broadway Boulevard, subsequent to speaking with their construction project manager, we understand concrete coverage was not required on new laterals run to the building from both Broadway Boulevard and Scott Avenue. Nor were they required to use the same pavement repair patch as Pima County.

Finally, it is our understanding from speaking with the developer of the Pima Association of Governments' new headquarters at Broadway and Stone that a combination of patch types was approved by TW for new water laterals associated with this development and probably applied correctly for the type of pavement base.

Not a single one of these new and significant developments were required to replace or upsize TW service mains – only the County. Based on this information, we are very puzzled as to why the County incurred a cost of nearly \$1.3 million providing fire flow water service to our Justice Courts Complex, an obligation typically and traditionally borne by the public water utility, particularly when the previously described development projects have incurred very minimal costs compared to those incurred by the County. For each of these developments, the fire flow requirements were met by simply tapping into the City water distribution system.

I again request reimbursement in the amount of up to \$811,881 for just the service connections and excessive pavement patching requirements. We are willing to pay the cost of the pavement patch that should have been required for Toole Avenue.

I would suggest that County staff meet with your staff to determine the cost of a) the service connections and the pavement patches required for same, and b) the cost difference between the pipeline pavement patches required on Toole versus the approved standard patch for this roadway.

Sincerely,



C.H. Huckelberry  
County Administrator

CHH/mjk

Attachments

c: Reid Spaulding, Director, Facilities Management  
Christopher Straub, Chief Civil Deputy County Attorney

# ATTACHMENT 1



CITY OF  
TUCSON

OFFICE OF THE  
CITY MANAGER

February 11, 2013

C. H. Huckelberry, County Administrator  
Pima County Governmental Center  
130 W. Congress Street  
10<sup>th</sup> Floor  
Tucson, Arizona 85701-1317

Re: Increased County Costs in Developing the New County Courts Complex

Dear Mr. Huckelberry:

I read your January 14, 2013 letter and its attached memorandum with interest, and offer the following City perspective.

The new distribution main installed by this project will be a protected main as agreed in the project's Construction Agreement per the routine business practice of Tucson Water. Approval by Tucson Mayor and Council is not required. A protected facility is a reservoir, booster station, well or other production facility that has capacity allocated to a specific group of participants. This project only included pipeline installation and is therefore not eligible for a protected facility agreement. Reimbursement for the protected main shall be at the established rates shown in Section 27-37 (4) of the Tucson Code and is based on the lineal foot frontage of the non-participating parcel. Additional construction costs of the protected main incurred during this project will not increase the amount of reimbursement as the fees prescribed in the Code are established based on applicable system-wide values. The City does not subsidize new development.

You have characterized the cost of providing water service to your building as necessary "to meet the demands of Tucson Water." Please note that the "demands of Tucson Water" are the publicly available Tucson Water Standard Specifications and Details, 2011 Edition (<http://cms3.tucsonaz.gov/water/spec-book>) applicable to all water construction activities within the water service area. Moreover, the type of pavement replacement required is based on the City of Tucson and Pima County Standard Details for Public Improvements (2003 Edition) Standard Detail 216, which requires that the new concrete base match the thickness of the existing concrete base.

There are some misstatements in the attached memorandum, which are enumerated below.

1. The project is not yet complete, as it has not received final acceptance. For this project the following items have been identified as needing to be completed prior to acceptance:

- Redo two riser pipes for valve access
- Remove all abandoned valve risers and patch per specs
- A meter box for an ARV has to be installed correctly – 200 N. Stone
- Note 13 of general notes state a plan must be submitted for the meter enclosure; this will have to be completed and approved prior to finalization.
- Please note that this list may change if other items are identified as incomplete before the actual final is issued.

To: Mr. Huckelberry

Subject: Increased County Costs in Developing the New County Courts Complex

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2. Tucson Water staff who are responsible for plan reviews, make every attempt to identify all applicable comments on the first review of construction plans, and to turn the projects around as quickly as possible. However, during the course of the review process, designs are modified by the designer or owner, and additional comments are justified to address the changes. A brief review of the project file shows that this project required additional comments. Some were due to changes in design between submittals, and some reiterated comments that had not been addressed on previous submittals. The accuracy of the plans is ultimately the responsibility of the owner's engineer, not Tucson Water.

3. The basis for requiring the change from "service tie-overs" to "service renewals" was a two-fold effort to benefit both Pima County and the City. Tucson Water was not aware of the pavement cross-section, which included a ten-inch concrete base, until construction had started. Connecting new copper service lines to existing 1960-era copper service lines with compression fittings, and placing them under ten inches of concrete as required by the roadway agency in a major street in downtown Tucson, presented concerns. If the new fitting or the existing service line were to leak, identifying the location of the leak would be extremely time-consuming and costly under the concrete pavement structure. Failure to make these changes would affect Pima County if any leaks were to occur on the newly installed portion of the work within the two year warranty time of the project's acceptance. In this case Pima County would be solely responsible for the repair of the service line and the roadway. Any repair work would negatively impact public travel and water service to the impacted customers.

Thirteen of the existing service lines were discovered to be lead services upon excavation. As stated in Note 35 of Tucson Water Standard Detail 105, all lead services shall be removed and replaced with materials included in the Approved Materials List (i.e., copper). All costs for unforeseen conditions, such as replacing lead services are paid by the developer in this case Pima County.

Comparing the originally approved plan and the most current plan through the total of two revisions, only eleven additional service renewals were added, not thirty as stated in the attached memorandum. Please see the table below. Any new service lines, including service renewals, must be installed per Tucson Water Standard Specifications and Details SD-309, which requires a minimum 1-inch service line size. Furthermore, the service line size has no relation to the accuracy of the meter readings of either direct-read meters or automatic meter reading (AMR) meters.

Original Plan (Approved May 16, 2012)			Plan as of Revision No. 2 (Approved September 6, 2012)		
Tie-Overs	Renewals	Abandonments	Tie-Overs	Renewals	Abandonments
20	12	8	0	23	7

4) The costs presented in the attached memorandum are difficult to understand. As stated above, costs for removing and replacing the thirteen lead services are not the responsibility of Tucson Water, and replacement of the lines is required to be performed in accordance with Tucson Water Standard Detail SD-309 (i.e., 1-inch minimum). It should also be noted that the construction cost estimates and material takeoffs submitted by GLHN did not accurately reflect the changes in cost between revisions. The only change made through two plan

To: Mr. Huckelberry

Subject: Increased County Costs in Developing the New County Courts Complex

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revisions was a reduction of forty feet of 12-inch pipe for a total project savings of \$3,400. The cost estimate submitted included a total of nineteen service tie-overs and no pavement replacement.

5) The attached memorandum does not describe how Tucson Water worked with Pima County to maintain the project schedule and adjust to existing field conditions. For example, Revision No. 2 modified the connections near the intersection of Stone and Toole, reducing the amount of new pipe and fittings required to be installed and eliminating the crossing of a shallow sewer, saving Pima County money. Also included on Revision No. 2 was a change to an existing tie-in at the intersection of Toole and Alameda. The original plan, as designed, included cutting in a tee to an existing pipeline to make the connection. However, cutting in a tee would have required that the line be isolated and drained for installation of the tee. Pima County should have realized savings in labor, equipment and materials from their contractor for these changes.

Where utility relocations cause increased costs to a development project because of conditions found in the field, the developer pays these costs. From small projects such as a tire warehouse having to move water mains from the planned location due to a conflict with gas mains, to large projects like this courts complex, the principle is the same.

While I understand the impact of the costs of providing water service to your building, the City is not responsible for these costs.

If you or your staff have any questions, please contact Sandy Elder at 837-2088.

Sincerely,



Richard Miranda  
City Manager

RM:AF:SE

Attachment: Letter with Attachment from Chuck Huckelberry Dated January 14, 2013

c: Alan Forrest, Director, Tucson Water  
Sandy Elder, Deputy Director, Tucson Water



## COUNTY ADMINISTRATOR'S OFFICE

PIMA COUNTY GOVERNMENTAL CENTER  
130 W. CONGRESS, FLOOR 10, TUCSON, AZ 85701-1317  
(520) 724-8661 FAX (520) 724-8171

C.H. HUCKELBERRY  
County Administrator

January 14, 2013

Richard Miranda, City Manager  
City of Tucson  
P. O. Box 27210  
Tucson, Arizona 85726-7210

**Re: Increased County Costs in Developing the New County Courts Complex**

Dear Mr. Miranda:

As we have discussed previously, the County anticipated spending over \$477,588 to improve the flow capacity of existing City of Tucson water service mains in the downtown area, particularly along Toole and Stone Avenues. These modifications were necessary to provide standard fire flow capacity necessary for the new court complex. These costs have now totaled \$1,289,469.

As you can see in the attached memorandum from our Facilities Management Director Reid Spaulding, the County has incurred an additional \$811,881 to meet the demands of Tucson Water.

This letter is to request consideration by the City for reimbursement of these excess costs and to ensure that not only the initial cost for increasing the asset of Tucson Water is included in any protected main agreement between the County and the City of Tucson, but the additional cost of \$811,881 incurred by the County is also included in the total cost for the County's protected main agreement.

We would like to proceed as quickly as possible with a protected facility agreement and have that agreement approved by the Tucson Mayor and Council and the Pima County Board of Supervisors. Hence, I would appreciate Tucson Water developing such an agreement at the earliest possible time and providing us the agreement for review by the County Attorney's Office before presentation to Board of Supervisors for their approval.

CITY MANAGER JAN 17 13 09 16

Richard Miranda, City Manager

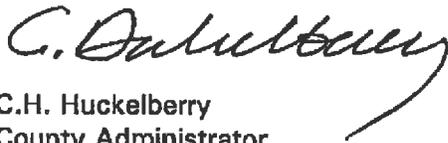
Re: Increased County Costs in Developing the New County Courts Complex

January 14, 2013

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I would appreciate your earliest attention to this matter.

Sincerely,



C.H. Huckelberry  
County Administrator

CHH/dph

Attachment

c: Reid Spaulding, Director, Facilities Management  
Christopher Straub, Chief Civil Deputy County Attorney



## Memorandum

**DATE:** January 10, 2013

**TO:** Chuck Huckelberry, County Administrator

**FROM:** Reid H. Spaulding, R.A.  
Facilities Management Director

**SUBJECT:** Downtown Courts Complex – Waterline Improvements

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We have now reached a stage in the Tower Shell and Central Plant construction where we have completed the necessary improvements as required by Tucson Water (TW) in order to provide adequate domestic and fire protection service. The necessary jurisdictional reviews, approvals, and inspection process has been both disjointed and costly. Specifically:

- Our engineering consultant (GLHN) expressed significant frustration with TW's submittal review process. The redline reviews by TW occurred multiple times whereas new "comments" from TW would appear on each successive re-submittal. I cannot comprehend a basis for the consultant to "over-modify" their drawings beyond merely incorporating previous TW's comments. Rather, the consultant alleged that each re-submittal came back with new redline comments not listed previously. This repetitive process ultimately resulted in field delays for both the CMAR and their subcontractor(s).
- There appeared to be a significant disconnect between TW plans reviewer and their field inspection team. Only upon the arrival of their field inspector did the County become aware of the need to replace over 30 laterals serving existing customers.
- The basis of TW's requirement for replacing all existing laterals was twofold:
  1. TW's insistence upon no less than 1" diameter continuous feeds between the new main and the existing meter(s), consequently creating the demand to replace functioning ¾ dia. lines.
  2. TW's insistence upon no pipe joints on any laterals. The new lateral must be continuous. I can only surmise that this requirement was to minimize any future TW cost associated with future leaks due to the extremely prohibitive cost of saw-cutting through both asphalt and 10" of underlying concrete.

As it was explained to PCFM staff, the existing ¾" dia. laterals which showed no signs of leakage were incompatible with TW's new digital meter reading system. Apparently, 1" dia. laterals offer more accurate readings.

The required replacement of over 30 laterals serving neighboring businesses added significant expense to the tax payer funded project. The total cost of TW mandated revisions now totals \$811,881.

Initial TW plan revisions	\$226,911
Upsizing laterals from ¾" to 1"	\$104,834
TW insistence upon Type B "T-type" patch and 10" concrete	\$331,906
Added costs for plates and barricades to maintain traffic flows	\$148,230
Total to date:	<hr/> \$811,881

As discussed, the County will obtain protected main status on all water main line improvements in an effort to eventually recoup some of this unanticipated cost.

Please let me know if you would like any additional supporting documentation.

# ATTACHMENT 2



## COUNTY ADMINISTRATOR'S OFFICE

PIMA COUNTY GOVERNMENTAL CENTER  
130 W. CONGRESS, TUCSON, AZ 85701-1317  
(520) 740-8661 FAX (520) 740-8171

C.H. HUCKELBERRY  
County Administrator

December 20, 2010

Mr. Michael Letcher  
City Manager  
City of Tucson  
P. O. Box 27210  
Tucson, Arizona 85726-7210

**Re: Water Infrastructure Investments Necessary to Support the Joint Justice and Municipal Courts Complex**

Dear Mr. Letcher:

As you know, we have been planning the development of the Joint Justice and Municipal Courts Complex for some time. I now understand there are a number of water infrastructure improvements necessary to support the project's water supply, in particular providing necessary fire flows for the building and proposed parking garage.

In the past, we had been working under the impression that both the City and County were cooperating to facilitate downtown development and investment. In fact, the County has now invested in excess of \$41 million to replace and enlarge the Santa Cruz interceptor, largely in response to City concerns about wastewater capacity being a limiting factor to downtown development and growth.

While we have invested millions of dollars in downtown sewer infrastructure, we would expect the same from the City regarding water infrastructure, particularly water infrastructure serving a joint City/County facility. We have been told adopted water policy states "All costs of water system facilities necessary to serve a new applicant shall be paid by that applicant." Such is contrary to our understanding as well as our actions related to sewer infrastructure expansion to serve downtown development.

We are willing to have this matter placed before the Mayor and Council and will present our case for having the City make water investments for downtown infrastructure development similar to those investments made by the County.

Mr. Michael Letcher

Re: **Water Infrastructure Investments Necessary to Support the Joint Justice and Municipal Courts Complex**

December 20, 2010

Page 2

We do not consider these particular water capacity improvements for firefighting purposes an obligation of the County and would your guidance regarding how this matter may be resolved.

Sincerely,

A handwritten signature in black ink, appearing to read "C.H. Huckelberry". The signature is fluid and cursive, with a long, sweeping tail that extends downwards and to the right.

C.H. Huckelberry  
County Administrator

CHH/mjk

c: John Bernal, Deputy County Administrator for Public Works  
Michael Gritzuk, Director, Pima County Regional Wastewater Reclamation  
Jackson Jenkins, Deputy Director, Pima County Regional Wastewater Reclamation  
Richard Miranda, Deputy City Manager, City of Tucson  
Jeff Biggs, Director, Tucson Water Department

# ATTACHMENT 3

Attachment 3 is a  
CD that contains  
substantial County  
Courts Complex cost  
information

# ATTACHMENT 4

(under 4' trench width)

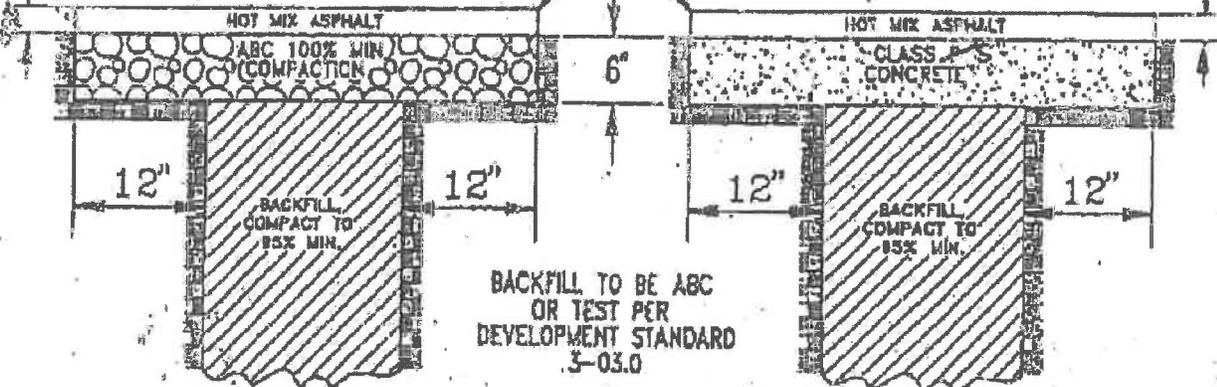
TYPE "A"

TYPE "B"

SAW CUT EXISTING  
ASPHALT ENTIRE DEPTH BOTH SIDES  
AND MATCH EXISTING SURFACE COURSE

MATCH EXISTING  
PAVEMENT THICKNESS  
NOT TO BE LESS THAN 2"

MATCH EXISTING  
PAVEMENT THICKNESS  
NOT TO BE LESS THAN 2"



SURFACE COURSES ARE:  
FINISH COURSE ASPHALT  
CHIP SEALCOAT

TYPE "B" PATCH REQUIRED FOR ALL  
STREETS ON THE MS&R MAP AND  
FOR ALL WATER CARRYING  
INVERTED STREETS

Drawn: GJK NOV 95

Scale: NO SCALE

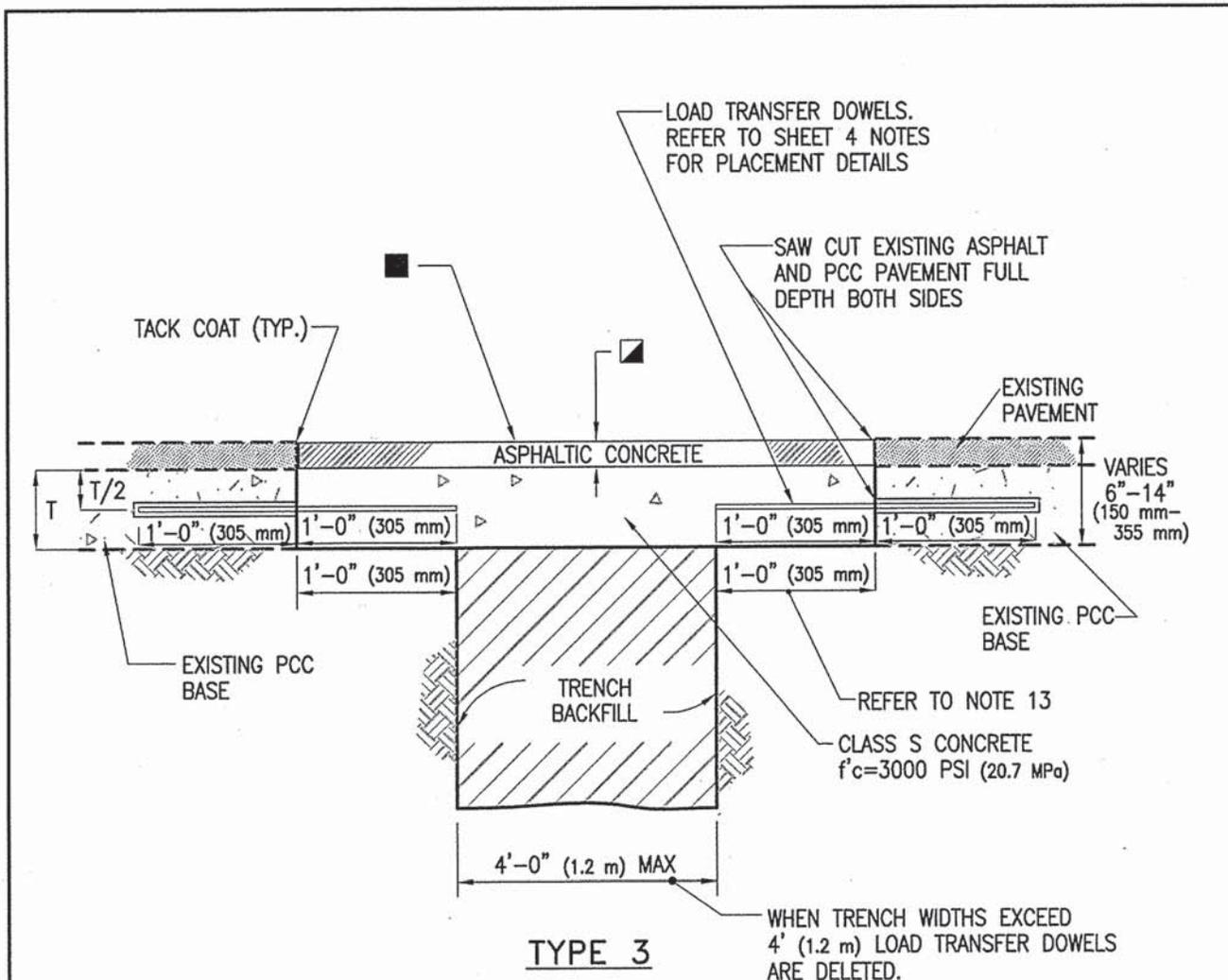
Approved: *[Signature]*  
12/95 City Engineer

TRENCH PAVEMENT PATCH

City of Tucson, Arizona  
ENGINEERING DIVISION 

PLAN # S-95-67

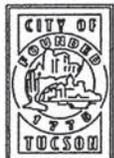
# ATTACHMENT 5



**TYPE 3**

- 2" (50 mm) MINIMUM OR THICKNESS OF EXISTING ASPHALT PAVEMENT WHICHEVER IS GREATER
- BITUMINOUS SURFACE TREATMENT (CHIP SEAL) REQUIRED ONLY FOR LONGITUDINAL TRENCHES WITH WIDTHS GREATER THAN 6' (1.8 m)

REFER TO NOTES SHEET 4 OF 4

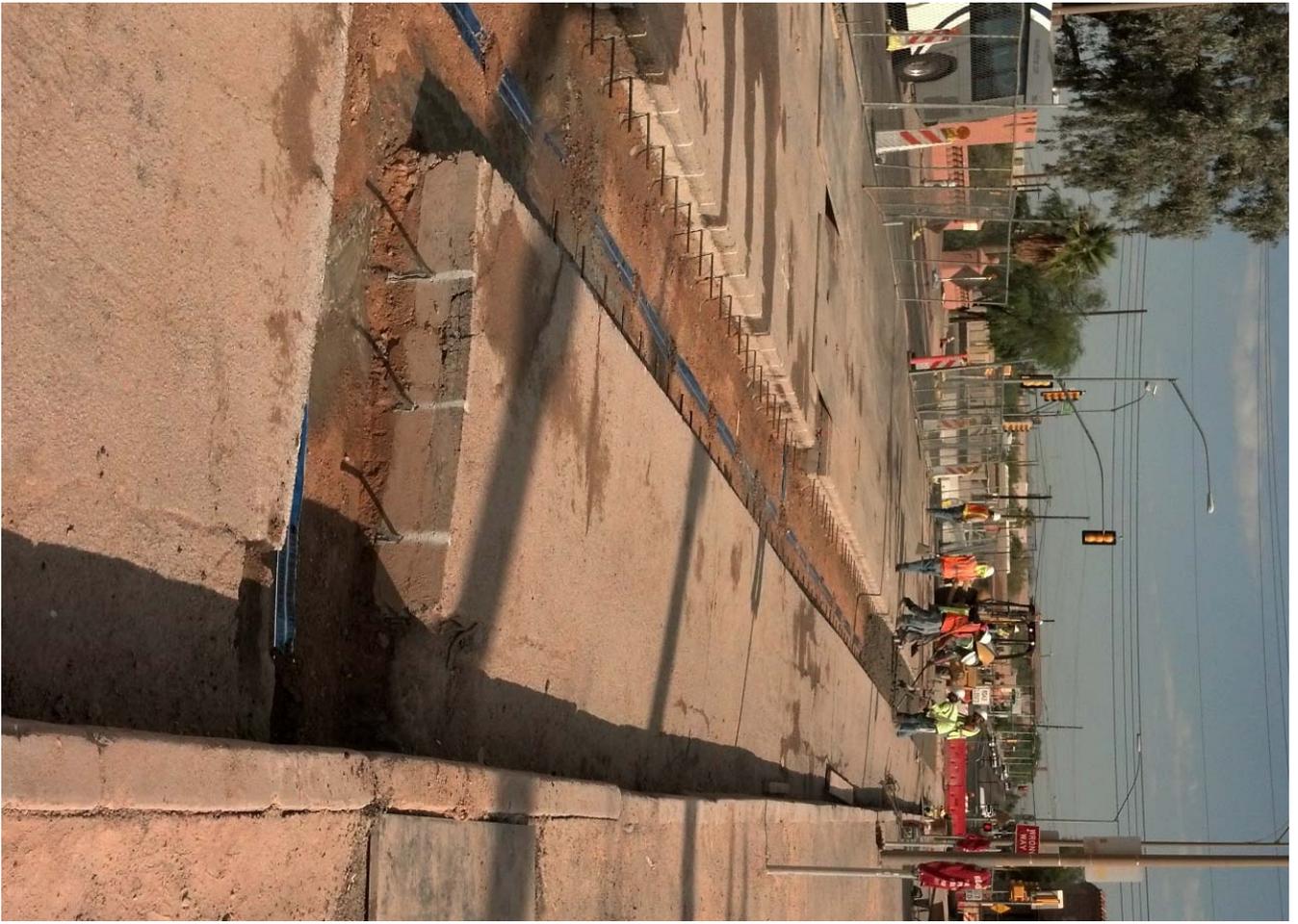
ISSUED:		STANDARD DETAIL		DETAIL NO.
1/93		<b>TYPE 3 UTILITY TRENCH PATCH</b>		<b>216</b>
REVISED 7/02		SHEET 3 OF 4		

216030.DWG 06/03/00 10:11

# ATTACHMENT 6

# Pima County Stone Avenue Patches









Modern Streetcar  
Stone Avenue  
Patches

