



**O. 15-819 Approval and authorization of Final Acceptance for the public improvements of Jim Norton Chevrolet located at 3131 North Aspen Avenue**

**P. 15-825 Approval of the Broken Arrow City Council Claims List for January 5, 2016**

**6. Consideration of Items Removed from Consent Agenda**

There were no items removed from the Consent Agenda. No action was required or taken.

**7. Public Hearings, Appeals, Presentations, Recognitions, Awards**

**A. 15-808 A public hearing regarding the annexation of property located on 39 acres of land located in Section One (1), Township 17 North, Range 14 East of Indian Base and Meridian, Tulsa County, State of Oklahoma**

Specifying that the property is situated south of East Tucson Street and west of County Line Road, Mayor Thurmond called on City Planner, Mr. Farhad Daroga, to provide some background. Mr. Daroga explained that the property would be annexed for future single-family residential development. He added that a zoning application would follow the annexation.

Mayor Thurmond stated that there were two people who had signed up to speak.

Ms. Carolyn Craft, of Broken Arrow, said that she wished to point out that the property had formerly been a dump that the EPA had closed. She inquired how many houses would be built behind hers and how the traffic pattern would be affected.

Mayor Thurmond replied that an application for annexation had not been submitted as yet, nor had the property been zoned.

Mr. Daroga reiterated that it would be a single-family residential subdivision and went on to mention one similar in design, in the City limits to the north of the site.

Ms. Craft remarked, in closing, that there were pits on the land.

Mr. Gary Stevens, of Broken Arrow, explained that the property had been excavated extensively by the previous owner for his fill dirt business. He expressed concern about the large hole on the site, adjacent to his own property, and asked whether the hole would be filled or subdivision houses built at the bottom of the hole. He asked how far back to his own fence line the houses would be built, if they were to be built at the bottom of the hole, and he raised the possibility that his fences could fall into the hole with the first heavy rains. Mr. Stevens stated that if the developers created a cliff next to his property he would sue the buyers of the property.

Mayor Thurmond said that the annexation hearing would be held during the current Council meeting, and that zoning and engineering design would be decided later, if the property were annexed.

Mayor Thurmond then opened the Public Hearing.

Mayor Thurmond asked if anyone else wished to speak regarding the annexation.

Mayor Thurmond called a second time for anyone who wished to speak regarding the annexation.

Mayor Thurmond called a third time for anyone who wished to speak regarding the annexation.

There was no one else who wished to speak.

Mayor Thurmond closed the public hearing.

**8. Citizens' Opportunity to Address the Council on General Topics Related to City Business or Services (No action may be taken on matters under this item)**

No citizens signed up to speak.

**9. General Council Business**

**A. 15-830 Presentation and discussion regarding the weather event December 26-28, 2015, and damage to City streets, retaining walls and other public facilities and infrastructure and discussions and possible direction regarding repairs to city facilities**

Mr. Doug Tiffany, Director of Broken Arrow Engineering/Construction, addressed the Council, giving a presentation on infrastructure damage caused by the storms. With regard to Hillside Drive, on Tuesday, December 29<sup>th</sup>, he said a report was received by the Police Department of significant damage to the sidewalk and curb. Upon prompt inspection of the site, Engineering/Construction, along with the Streets and Stormwater Department, recommended that Hillside Drive be closed. Mr. Tiffany said it was observed that the base of the retaining wall had slid outward along the tallest section of the wall, causing the curb and sidewalk to heave upward approximately 18 inches. The

wall as a whole appeared to still be structurally intact, but the entire system was deemed possibly compromised. The following day, Engineering/Construction enlisted the help of Olsson and Associates, a consulting firm out of Kansas City, to assist in assessing the damage from the rain. On Thursday, December 31<sup>st</sup>, the consultant engineer visited onsite with Engineering/Construction staff to evaluate the wall and a report by them would be forthcoming.

Mayor Thurmond commented that they must be examining hydraulic pressure and seismic activity considerations too. Mr. Tiffany confirmed this and stated that Olsson and Associates came promptly after the call was made and that their quick response was appreciated. He went on to say that the consultant's detailed assessment of what was observed on December 31<sup>st</sup> was forthcoming and would be on hand, hopefully, that week. Mr. Tiffany presented a series of photos of the damage including one of the westbound curb line of Hillside Drive, which was projected to have heaved from the wall, sliding to the south; another photo, with a view from above, illustrated where the reinforcement zone behind the wall had begun to settle and slide away from the existing embankment, causing an incipient vertical and horizontal separation. A photo illustrating the potential failure modes of segmented retaining walls was shown. The sliding failure illustration was highlighted since it figured primarily in the preliminary analysis by Olsson and Associates. From the screen, Mr. Tiffany read, "Sliding failure is simply a sliding of the wall system away from the backfill when there is shearing failure at the base of the wall." He explained that water got in behind the wall and went down underneath the cohesive clay and shale causing supersaturated, friction which caused cohesion between the two levels of soil to be lost, this then caused a slip plane which, with the mass of the wall, allowed it to slide. Another illustration, further detailing the sliding failure showed how new soil, which had cracked at the top, allowed the water to come in and work around to create slip planes that could allow the wall to move forward. Using illustrations, Mr. Tiffany then informed the Council on actions that had been taken and future actions to be taken. He stated that City personnel would coordinate a meeting with the design engineer of record, Miller Brothers Engineering Company. Broken Arrow Engineering/Construction had started evaluating their work and had also given the report to Olsson for review, but had not heard back from them yet. Meetings with the general contractor would be held, as well as with Olsson and Associates. He reported that Engineering/Construction's detailed evaluation of the retaining wall would be ongoing and that construction information was being gathered for Olsson, including photographs and testing procedures done while the wall was under construction. Determination of the structural capacity and a proposed course of action were being developed. He said until then, it was Engineering/Construction's recommendation that the section of Hillside Drive impacted by the retaining wall remain closed to through traffic. Mr. Tiffany told the Council that after coordinating with Olsson to devise a timeline, it was estimated that it would take about a month to design a retrofit and repair. He said construction would start in April 2016 and take about two months, at a preliminary estimated cost of \$300,000 to \$500,000. He explained that Streets and Stormwater, working in conjunction with Engineering/Construction would evaluate a detour and design signage around the corridor, in order to facilitate travel for the public, and provide clear directions to restaurants and shopping centers along Hillside Drive.

Mr. Tiffany said another site that had been impacted by the storms was the Liberty Trails segmented block retaining wall, constructed under the project name of South Loop Trails, with final acceptance of the project in 2006/2007. He said the main contractor had been Crossland Heavy Construction. The damage was located just north of the Creek Turnpike. Mr. Tiffany provided a timeline, reporting that on December 29, 2015, the Parks Department and Streets and Stormwater personnel were onsite to make observations of the wall and trail sections. It was determined at that time that a portion of the trail should be closed to the general public. On December 30<sup>th</sup>, Engineering/Construction visited the site, as requested by the Parks Department, and it was determined at that time that an outside consultant should be contacted. Olsson and Associates had already been approached with regard to Hillside Drive and they were taken to the Liberty Trails site on December 30<sup>th</sup>. He said Olsson would provide an evaluation in their same report on Hillside Drive. Photos of the Liberty Trails damage were shown, including an interior pipe of the storm drainage system. Mr. Tiffany explained that the northern face of the retaining wall water had gotten behind the pipe in-section and penetrated along the pipe, which allowed sediment to be released, causing voids and material on top of the pipe to collapse. The failure in pipe had allowed more water to get in and erode a lot of soil behind the wall, assisting in the wall's failures. In other photos shown a bulge in the wall and a patch in the topside of the trail, made in the past by Parks and Streets and Stormwater, where it had settled where observed. Mr. Tiffany explained that with continued rain events the settlement had deteriorated even further. A diagram was shown of the Liberty Trails retaining wall between Elm Place and County Line Road which illustrated the apparent internal restraint failure. Mr. Tiffany recommended that due to the condition of the HDPE storm pipe and the modular block retaining wall, the entire retaining wall should be removed and reconstructed. The

City would coordinate with the Oklahoma Turnpike Authority on the project since the site was actually on turnpike property that had been leased to the City.

On the subject of the Tiger Hill earth slide construction timeline, Mr. Tiffany provided an aerial photo indicating the area as part of the construction of Flight Safety in 2011, with Crossland Construction as the contractor. He explained that the area affected was on the southwest corner of Tiger Hill, south of the City of Broken Arrow's access road to the water tanks. On December 28, 2015, Mr. Lowell Faulkenberry, with Flight Safety, contacted Mr. Michael Skates, Director of Development Services, concerning the slope on the south side of Tiger Hill. On December 29<sup>th</sup>, Mr. Skates contacted Engineering/Construction, requesting an investigation into the cause and remediation of the issue, and requesting they contact Mr. Faulkenberry, as well. He said Engineering/Construction arrived onsite on December 30<sup>th</sup> to examine the reported slope failure with Mr. Faulkenberry. It was decided at that time to bring in an outside consultant and on December 31<sup>st</sup>, Olsson, once again, appeared onsite to investigate the slope failures. Mr. Tiffany presented some photos highlighting the situation and explained that dirt had been moved and cuts had been made when the site was prepared. With excessive rain of eight to ten inches over the course of the weekend, the soil became saturated to the point where it could not hold up its own weight. The earth slide was currently under review by the consultant and recommendations for remediation would be made.

Upon conclusion of his report, Mr. Tiffany asked if there were any questions or comments. With regard to Tiger Hill, Councilor Mike Lester inquired whether Flight Safety had suggested that, because of all the rain and their replacing their own wall, the City of Broken Arrow was responsible for the walls failure when the earth gave way and slide occurred. Mr. Tiffany replied that the portion of the site in question had nothing to do with the retaining wall, being totally independent of it, and illustrated his point by referring back to the aerial photo. Mr. Tiffany went on to say that in sharing the report of Engineering/Construction's geotechnical engineer, they would just be coordinating with Flight Safety, for Fire Safety's information.

Regarding Hillside Drive, Councilor Lester asked if Engineering/Construction reviewed the general contractor's design plans prior to starting construction. Mr. Tiffany answered that he knew it was part of the submittal that had been approved. Councilor Lester clarified his question, asking if it was their responsibility to review and approve the general contractor's design plans for correctness. Mr. Tiffany replied that he was not there at the time and could not say what they had done, but that normally the review requires acknowledgement not approval

City Attorney, Beth Anne Wilkening, interjected that considerable staff time had been spent on this and because it was a project that was completed a couple of years ago, it was her understanding that Engineering/Construction would be pulling all of the construction documents, including testing, the primary focus being safety of the travelling public. The documents collected would be evaluated and the City Council would be provided with an update on the facts regarding the plans.

Mr. Tiffany affirmed that they were in the process of giving all the documentation to Olsson and Associates for their review of the design. Councilor Lester asked Mr. Tiffany if he were aware of the difference in the design of the Hillside wall, as compared to the wall on Albany Street by the Conference Center. He wondered why the Albany Street wall was not having problems. Mr. Tiffany replied that the Albany wall, as he understood it, had failed once previously. Councilor Lester commented that it was not the same degree of damage. Mr. Tiffany stated that he was unaware of the extent of the Albany wall damage. He went on to say that the wall on Hillside Drive, as a unit, was intact. He said it was surmised, before it was determined with certainty, that although it was still together as a unit, it had received so much water that had just moved out. Councilor Lester argued that the wall on Albany Street had received the exact same amount of water. Mr. Tiffany said he was correct but that when the repairs were made previously to the Albany wall; it had been put back with more rock in the reinforcement zone than was the case on Hillside. Councilor Lester said it begged the question why more rock was not put on Hillside. Mr. Tiffany stated that there are different design parameters for the two walls and that the design parameters had specified a certain design, in accordance with the "Engineering Design Criteria Manual." The Federal Highway Administration had used other criteria and was much more conservative, but it was Engineering/Construction's choice to utilize the National Concrete Masonry Association's requirements, which were widely used and approved.

Councilor Johnnie Parks asked if the design engineers of the Albany Street wall and the wall on Hillside Drive had expertise in building walls. Mr. Tiffany replied in the affirmative. Councilor Parks then stated it would be on the strength of the engineer's expertise that Mr. Tiffany would accept whatever engineering recommendations had been

made and asked if that were correct. Ms. Wilkening commented that it is not known yet if that were true. Councilor Parks stated that his aim was to get some answers, given the money involved, and he wanted to make sure that the engineer on the project had expertise since there had been a number of walls that had failed.

Doug Tiffany affirmed that retaining walls were indeed Miller's specialty.

City Manager, Michael Spurgeon, stated that one of the meetings to which Mr. Tiffany referred, would be with the design engineer and contractor, to make them aware of the problem and let them know that they must come up with a solution to fix it, as it is their responsibility. If they choose not to do that then the City will have to take the appropriate action to repair the wall, in order to make sure it is safe for vehicular and pedestrian traffic, and then the City will have to review its options. It was pointed out that there was no performance bond to fall back on. He added that the design engineers had sent a letter the day before, which the City attorneys were reviewing.

Councilor Scott Eudey inquired as to what the report being prepared by Olsson was supposed to reveal. Mr. Spurgeon answered that Mr. Tiffany had contacted another expert in the field and it was the same company the Council chose in September to look at Tiger Hill. He expressed confidence in the company, which would conduct a more detailed analysis to determine if, in fact, there had been an issue with how the wall was built. Although it is yet unknown what they will find, the initial concern they verbalized was that the wall had moved, it's a serious matter of safety.

Mr. Tiffany informed the Council that a phone conference with Mr. Miller was set for the following day, and that Miller was in communication with them and was making himself available. He also stated that Olsson had been asked to give the City a recommendation on what they should do differently in their design standards for retaining walls.

Councilor Lester suggested that going forward; perhaps Olsson should be hired to review the designs for the City's retaining walls.

Mr. Tiffany replied that he did not think that necessary. What had been utilized in the past was one set of standard parameters in the building of retaining walls, and then with a lot of rainfall naturally everything becomes supersaturated. Following another set of standard parameters and building a wall with all rock in the back cost anywhere from 25% to 50% more. In preliminary planning with Olsson, they have committed verbally to providing an analysis and determination of what would be the best construction plan to follow concerning walls that are over ten feet tall. He said Engineering/Construction, together with Olsson, were looking at going with the more costly design and construction and utilizing the Federal Highway Administration's design guidelines for taller walls.

Mr. Spurgeon agreed that consultant experts from outside should be brought in to confirm this, given Broken Arrow's history with retaining walls.

Mayor Thurmond commented that the segmented block walls, which date back to Roman times, when installed properly should last, but when you consider walls of certain heights different standards apply. He said something different, such as poured in place walls or solid granite semi blocks, may be required. He related that aside from hydrostatic pressure, his past experience of working in a number 4 seismic zone alerted him to the fact that there could be seismic issues that factor in, as well. If that is determined to be the case, then the segmented block walls may not be a good solution and the right standard must be found. Mr. Tiffany stated he was in agreement.

Addressing Jim Beavers, Chairman of the Broken Arrow Development Corporation, Mr. Spurgeon expressed his immediate concern that a road that had become a major thoroughfare to the commercial center would be closed for approximately five months. He said closing the road would have a devastating effect on business and would have a potential for further harm. Mr. Spurgeon said the City planned an outreach to the businesses affected which would support these businesses by doing press releases, interviews, and providing periodic updates. The City would do its best for the businesses affected by providing detours and notices adding that alternative ways people had used to get to these businesses a couple of years ago still existed, and while not ideal, it was the City's responsibility to make sure that the community understood that the area was very much open for business. It was hoped that the road would be open by the end of May, but a five-month window had been projected, dependent upon the weather. Although it was possible that it could be completed sooner, Mr. Spurgeon added that he wanted to assure those present that repairs to the heavily used portion the trail along Liberty Trails were moving forward quickly.

Responding to a question by Councilor Lester, Mr. Tiffany stated that they would have to coordinate everything regarding Liberty Trails with the Oklahoma Turnpike Authority (OTA), to make sure they were in agreement. He said that additional erosion on the

downstream side where the pipe comes through a big inlet would probably be addressed with OTA as well.

Mayor Thurmond asked if there were any other questions, and there being none, he thanked Mr. Tiffany.

Mayor Thurmond inquired of Mr. Spurgeon if there was any action required. Mr. Spurgeon replied no. Councilor Lester requested Mr. Spurgeon to keep the Council posted.

**A. 15-804**

**Consideration, discussion and possible approval of the appointment of Dianna Yingst to the Convention and Visitors Bureau**

Mayor Thurmond called on Tourism Director, Ms. Lori Hill, to speak. Ms. Hill addressed the Council, wishing them a happy new year and informing them of Councilor Eudey's recommendation that Miss Dianna Yingst be appointed to the position that became open after Ms. Tiffani Bruton resigned. She said if appointed, Ms. Yingst's term would expire September 30, 2016, fulfilling the unexpired term left by Ms. Bruton. Giving some background on the candidate, Ms. Hill related that Ms. Yingst had lived in Broken Arrow for 30 years and was very active in the community. She is a member of the Broken Arrow Chamber of Commerce, serving on their Ambassador Club, and active in their Rooster Days Council, as well. She was an independent insurance agent with Aflac. Convention and Visitors Bureau staff recommended that Ms. Yingst's appointment be approved, with a term expiring September 30, 2016. Ms. Hill concluded by asking if there were any questions.

MOTION: A motion was made by Scott Eudey, seconded by Richard Carter. Mayor Thurmond opened for discussion but no one cared to speak.

**Move to appoint Dianna Yingst to the Convention and Visitors Bureau**

The motion carried by the following vote:

**Aye: 5 -** Scott Eudey, Johnnie Parks, Mike Lester, Richard Carter, and Craig Thurmond

**10. Preview Ordinances**

There were no Preview Ordinances.

**11. Ordinances**

**A. 15-807**

**Consideration, discussion and possible adoption of Ordinance Number 3377, an ordinance annexing property located on 39 acres of land located in Section One (1), Township 17 North, Range 14 East of the Indian Base and Meridian, Tulsa County, state of Oklahoma, according to the United States Government Survey thereof and located south of East Tucson Street (East 121<sup>st</sup> Street South) and west of County Line Road (South 193<sup>rd</sup> East Avenue), repealing all ordinances to the contrary; and declaring an emergency**

Ms. Wilkening specified that this was the ordinance that effectuates annexation of the property on which a Public Hearing was held earlier in the meeting. All legal notices that were required have been published in accordance with law. It was recommended that the ordinance be adopted and the emergency clause be approved.

Councilor Eudey left the room.

MOTION: A motion was made by Mike Lester, seconded by Johnnie Parks.

**Move to adopt Ordinance No. 3377**

The motion carried by the following vote:

**Aye 4 -** Johnnie Parks, Mike Lester, Richard Carter, and Craig Thurmond  
**Recused 1 -** Scott Eudey

MOTION: A motion was made by Johnnie Parks, seconded by Mike Lester.

**Move to approve the Emergency Clause for Ordinance 3377**

The motion carried by the following vote:

**Aye: 4 -** Johnnie Parks, Mike Lester, Richard Carter, and Craig Thurmond  
**Recused 1 -** Scott Eudey

**12. Remarks and Inquiries by Governing Body Members**

There were no remarks and inquiries by Governing Body Members.

Councilor Eudey returned at 7:12 p.m.

**13. Remarks by City Manager**

Mr. Spurgeon said that he had spent the previous day with a number of the City's departmental directors, with reference to the implementation of the Vision 2025 tax which the voters supported in November 2015. The purpose of the meeting had been for the Legal Department to review the ordinance again because of decisions that have to be made with regard to the percentage of the budget allocated for the Police and Fire

Departments, respectively. Passage of the tax, as well as the actual recruitment plan under discussion during the public education campaign, were covered at the meeting also. Mr. Spurgeon said another aspect concerned funds that will be available for capital improvements, in conjunction with the recruitment. Both the Police Department and the Fire Department need the funds in order to provide outstanding services. A lot of time has been spent in exchanging thoughts, bringing everyone onto the same page. In the next month or two Mr. Spurgeon said he plans to bring individual members of the City departments mentioned, along with Streets and Stormwater separately, to address the City Council. The Council would be apprised of the tentative plan regarding use of tax, and would hear recommendations with a view of facilitating the goal of 20 firefighters and 20 police officers, as told to the public. The other discussion related to fully utilizing the funds for the maintenance of Broken Arrow's streets and Mr. Steve Arant, Director of Streets and Storm Water, would provide details to the Council. Mr. Spurgeon added that discussions would start in the next week about prioritizing the remaining bond projects that need to be sold over the next couple of years from 2014. Mr. Spurgeon said he is very busy with day-to-day operations and that he was still learning how business is done. He said he would make a PowerPoint presentation to the Council on February 2<sup>nd</sup>, touching on matters he mentioned at the previous month's Chamber meeting and listing the Administration's ideas and suggestions for the Council, in terms of priorities for the next two years.

**14. Executive Session**

Mayor Thurmond stated that there would be no Executive Session.

**15. Adjournment**

The meeting adjourned at approximately 7:15 p.m.

MOTION: A motion was made by Scott Eudey, seconded by Mike Lester.

**Move to adjourn**

The motion carried by the following vote:

**Aye: 5 -** Scott Eudey, Johnnie Parks, Mike Lester, Richard Carter, and Craig Thurmond

**ATTEST:**

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Mayor

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Acting City Clerk