

FACILITY CONDITION ASSESSMENT

City of Mobile

NTP-PL220-16

Facility No: 201

Civic Center Arena

401 Civic Center Drive

Mobile, Alabama 36602

Project No. PC60828394 - 201



Facility Assessment – Consultative Solutions

www.cbre.com/assessment

CBRE



FACILITY CONDITION ASSESSMENT

City of Mobile

Prepared For

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Project

Facility No: 201
Civic Center Arena
401 Civic Center Drive
Mobile Alabama

Prepared By

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CBRE Project No.: PC60828394

Site Visit Dates

March 28, 29, May 10 & 23, 2017

Report Date

November 9, 2017
Revised April 25, 2018

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SALIENT ASSIGNMENT INFORMATION	
Project No.:	PC60828394-201
Project Name:	Mobile Civic Center Arena
Property Address:	401 Civic Center Drive
City, State, and Zip:	Mobile, Alabama 36602
Primary Use:	Recreation/Entertainment
Building Age:	Opened in 1964: 53 Years Old; Renovated in 1989; 28 Years Old
Facility Management:	SMG
Duration of Current Management:	1990/1991; 17 Years.
Reported Site Area:	21.86 Total Acres (Survey) Parcel 1: 0.11-Acres Parcel 2: N/A Parcel 3: 12.3-Acres Parcel 4: 1.545-Acres Parcel 5: 7.6-acre Parcel 6: 0.160-Acres Parcel 7: 0.1-Acres
Reported Occupancy:	100% But Utilization Varies
Reported Building Size:	400,760 SF Total Complex (Reported) Arena: 10,072 Seats, 289,570-SF (Reported)
Number of Buildings:	One
Number of Stories:	2 (Equivalent of 7 Stories in Height)
Basement/Basement/Crawl Space:	Slab on Grade; Partial Crawl Space, Utility Tunnels
On-Site Parking Spaces:	1,400 On Site Total Spaces, including 22 total accessible spaces, approximately 400 are fenced off and currently used for Cruise Ship Overflow Parking. An off-site auxiliary grass lot, under the Interstate, owned by the State of Alabama provides 300-400 temporary spaces, but is beyond the scope of this study.
Currently Enforced Building Code:	2012 International Building Code with Amendments
Date of Site Visit:	March 28, 29, May 10 & 23, 2017
Field Observers:	Terry Bailey
POC/Escorted By:	Joe DeLaronde, Director of Operations was our POC. Our primary escort was Paul Buchanan, Stage Manager who accompanied us during the entire interior portion of the visit. We were joined by Joe DeLaronde, and Mike Forbes, Maintenance Technician for portions of the site visits.
Weather:	Sunny to Partly Cloudy, 75 to 85 degrees F
Potable Water Service Provider:	Mobile Area Water & Sewer System (MAWSS).
Sanitary Sewer Service Provider:	MAWSS
Storm Water Management Provider:	MAWSS
Natural Gas Service Provider:	Mobile Gas
Electrical Service Provider:	Alabama Power

EXECUTIVE SUMMARY

PURPOSE

The City of Mobile, (The "Client") contracted with CBRE | Assessment Consulting Services, to conduct a Facility Condition Assessment (FCA) for the purposes of rendering an opinion of the Subject's general physical condition as of the day of our site visit, in accordance with the scope and terms of our agreement with the Client and to prepare an FCA. An FCA cannot wholly eliminate the uncertainty regarding the presence of physical deficiencies and/or the performance of the Subject property's building systems. This was a "walkthrough" survey. It was not the intent of this survey to be technically exhaustive, nor to identify every existing physical deficiency. Preparation of this FCA is intended to reduce, but not eliminate, the uncertainty regarding the potential for component or systems failure and to reduce the potential that such component or system may not be initially observed. There may be physical deficiencies that were not easily accessible for discovery, readily visible, or which could have been inadvertently overlooked. The results of our observations, together with the information gleaned from our research and interviews, were extrapolated to form both the general opinions of the Subject's physical condition and the Short-Term Costs to remedy the physical deficiencies. This FCA must be used in its entirety, which is inclusive by reference to the agreement and limiting conditions under which it was prepared.

GENERAL DESCRIPTION

The Mobile Civic Center is a 400,760-SFG complex with three interconnected buildings located on a 21.86-acre parcel in the downtown business district in Mobile, Alabama. The complex includes the Arena, Expo Hall and the Theater structures. The Expo Hall and Theater are detailed in separate reports. The Complex is made up of seven land parcels, including the 12.3-acre Parcel 3, which consists of most of the site, and the 7.6-acre Parcel 5, which includes the three main buildings of the Civic Center Complex. The other parcels making up the site include parcels 1, 2, 4, 6, and 7. Specifically, the site is located on the south side of Civic Center Drive, between South Lawrence Street and South Claiborne Street and is bounded to the south by Canal Street approximately 1/3 mile from Mobile Bay. The Subject borders a neighborhood of single family residences to the west and south, a neighborhood of small commercial buildings to the north and the I-10 corridor to the east. The complex is owned by the City of Mobile, with Property Management provided by SMG. Overall, the site can be described as an irregular 5-sided pentagon in shape and the equivalent of six city blocks in size. The buildings of the complex are all oriented toward the street front along Civic Center Drive where drop off and pedestrian access to the building is provided via symbolic main entrances. The southern 2/3's of the site is developed as a parking lot with 1,400 parking spaces. Vehicular access is provided via three curb cuts; two from South Claiborne Street and one from South Lawrence Street. The arena is serviced from a single truck type loading dock accessed through the parking lot. Of importance, the complex serves as a Post Hurricane Shelter for Alabama Power, Mobile EMA, and Red Cross Central Staging and Distribution.

The Subject of this report is the Civic Center Arena, which is a 53-year old, (completed in 1964; renovated in 1989), 289,570-SFG, 10,072-seat, multi-purpose arena. The arena was constructed simultaneously with the theater in 1964 as part of the first phase of the complex. The arena includes 6,046 permanent seats with capacity for an additional 4,026 folding seats. The Arena can also provide 80,000-SF of space for sporting events and trade shows which are accessed from two primary levels. The height of the arena interior space is approximately 7 stories in height. The arena floor is improved with an in-slab ice making system. Other features include 15 meeting rooms and four pre-function areas including two concourse exhibit areas, four locker/band rooms, eight concession stands, and a commercial kitchen. Additional portable point of sale concession stands can be provided.

The building is founded on a system of concrete piles, pile caps with grade beams and grade supported concrete floor slabs. The superstructure is constructed of a steel-reinforced concrete frame, composed of cast in place concrete columns supporting concrete beams, concrete elevated floors, and roof decks. The dome is spanned with steel rib trusses with a center tensioning ring and pin connections at the concrete columns. The superstructure is constructed with a steel frame consisting of steel columns, beams, and rib trusses. The exterior sidewalls are primarily clad with brick veneer over a CMU back-up system with conventional aluminum framed glass storefront entrance systems. A secondary sidewall cladding system consisting of EIFS is provided at the front entrance marquee. The subject has multiple roof areas including a high visibility dome roof covered with a metal batten system. Other roof areas are covered with a combination of coal tar and BUR systems.

Heating and cooling is primarily provided by 36 AHU's equipped with hot and chilled water coils using hot and chilled water generated at the central plant. The AHU's include a mix of floor and ceiling mounted units. Additional heating and cooling is provided by four package units located on the roof. Hot water for heating is generated by two gas-fired boilers. Chilled water is generated by two chillers and heat rejection is provided by three cooling towers. The system is controlled via pneumatic controls and a Metasys BMS system manufactured by Johnson Controls.

The primary electric service is provided to the arena central plant underground from an on-site Alabama Power substation. Each connection is 277/480 volts, 3-phase, 4-wire. Main disconnect switches consist of two 4,000-amp, two 1,600-amp, and one 1,200-amp sections serving different areas of the complex. The main switchgear is located in one corner of the central plant. Emergency electrical power for emergency lighting is provided by a single diesel-fired emergency generator. A second individually metered site service is provided overhead to serve utility pedestals provided along the south property line.

Fire protection is primarily provided by wall mounted fire extinguishers and a wet standpipe system. A partial fire sprinkler system provides limited coverage in backstage storage areas and the commercial kitchen. Fire detection is provided by a fire alarm system that is monitored by a central station. The system supervises smoke detectors, duct detectors, pull stations, horn/strobe devices, tamper and flow switches, magnetic release doors, kitchen hood systems, and a mechanical shut-down.

Vertical circulation is provided by two hydraulic elevators (one passenger, one freight) and a single reversible escalator.

PHYSICAL CONDITION

A study of the site infrastructure is being performed by Driven Engineering. The findings of the independent study may affect the scope of any work recommended within this FCA. Revisions to the FCA may be required once the scope of services has been performed and the findings are disclosed.

The Subject was found to be in fair to poor condition and will require a major intervention if the complex is to continue in its current use. The Subject exhibits years of accrued deferred maintenance which has reached a point where catastrophic failures of certain systems could occur at any time. Specifically, the air conditioning system is increasingly at risk for rendering the building un-usable for contracted events and the fire alarm system is one breakdown from building having to operate under a manual fire watch. Long term failures of the canopy roofs have resulted in damage to the affected concrete roof decks with delaminating and falling material that have required the erection of pedestrian barriers in some locations. During our walk-through, maintenance personnel had to be called to service egress doors that were that were inoperable.

Many systems are now at, or have long exceeded, their expected useful lives and will require extensive replacements. Note that CBRE's observations do not preclude the Subject from having system or component specific physical deficiencies, deficiencies that may be costly to remedy, or that deficiencies that may require further study. There are numerous deferred maintenance items and physical deficiencies that must be corrected in the short term. These items are listed under the Short-Term Cost section of this report. In addition, budgeting for the repair or replacement of the major property components (e.g. exterior sidewalls interior finishes, etc.) is also advised.

It is our opinion that the Subject can be used for its intended purposes, provided that; the recommended repairs identified within this report are completed; physical improvements receive continuing maintenance; and the various components and/or systems are replaced or repaired in a timely basis as needed. Costs to perform the repairs and replacements described within this Report are for budgetary purposes, and may change as after the scope of the work is further defined, detailed drawings and contract documents are prepared, and bids from qualified contractors are solicited.

Moisture or Mold Issues

Based on representative observations, CBRE did observe significant visual indications of moisture infiltration issues and conditions that tend to promote microbial growth, but did not observe the presence of microbial growth itself. Both current and past moisture infiltration-related issues were reported by property management.

This assessment does not constitute a preliminary or comprehensive mold survey of the buildings. The reported observations and conclusions are based solely on interviews with management personnel available on-site and conditions as observed in readily accessible areas of the buildings on the assessment date.

ACM Survey and Abatement

Based on the age of the building and the materials installed it is possible asbestos containing materials (ACM) may be located throughout the facility. In no way has the CBRE field observer conducted an asbestos survey or visibly identified there are ACMs within the building. It is our understanding that the nature of the current and future occupancies will require repairs and replacement of the building structures, systems and finishes, therefore, testing will be required as part of any alteration work and proper filing, with all municipalities having jurisdiction, is recommended

Lead Paint Testing

Based on the age of the building it is possible that lead based paint may be located throughout the facility. In no way has the CBRE field observer conducted a lead survey or visibly identified there is lead based paint within the building. It is our understanding that the nature of the current and future occupancies will require repairs and replacement of the building structures, systems and finishes, therefore, testing will be required as part of any alteration work and proper documentation and contractor worker protection is required by OSHA. All lead containing materials must be properly removed and disposed of as per the Resource Conservation and Recovery Act (RCRA). RCRA regulates the management of solid waste (e.g., garbage), hazardous waste, and underground storage tanks holding petroleum products or certain chemicals.

SUMMARY, COST, ADA AND RESERVE SCHEDULES

Terminology

Many of the terms used in this report to describe the condition of the Subject's readily observable components and systems are listed and defined below. It should be noted that a term applied overall to a system does not preclude that a part, section, or component of the system may differ significantly in condition.

Good - Component or system is sound and performing its function. Although it may show signs of normal wear and tear commensurate with its age, some minor remedial work may be required.

Fair - Component or system is performing adequately at this time but exhibits deferred maintenance, evidence of previous repairs, and workmanship not in compliance with commonly accepted standards, is obsolete, or is approaching the end of its typical EUL. Repair or replacement is required to prevent its further deterioration, restore it to good condition, prevent its premature failure, or to prolong its EUL. Component or system exhibits an inherent deficiency the cost of which to remedy is not commensurate with the deficiency but that is best addressed by a program of increased preventive maintenance or periodic repairs.

Satisfactory - Component or system is performing adequately at this time but exhibits normal wear and tear expected for: the specific type of material, component, or equipment; the Subject's use; and exposure to the elements for the given locale, if applicable. Other than routine preventive maintenance, no repairs or improvements are required at this time.

Poor - Component or system has either failed or cannot be relied upon to continue performing its original function as a result of: having realized or exceeded its typical EUL, excessive deferred maintenance, a state of disrepair, an inherent design deficiency or workmanship. Present condition could contribute to or cause the deterioration of contiguous elements or systems. Repair or replacement is required. *The Buildings observed in poor condition should be monitored by, annual or bi-annual inspection, should not all of the deficiencies identified be addressed in that same time interval.*

Acceptable - Component or system is basically performing its original function in consideration of its age, overall quality of the asset, and any inherent design and/or construction defects. Such inherent defects coupled with normal wear and tear do not warrant the component to be classified as either in good or fair condition.

Serviceable - Component or system can accommodate either repairs or an increased level of proactive preventive maintenance so as to either realize or extend its RUL.

Physical Deficiencies - Defined by the ASTM as ". . . conspicuous defects or significant deferred maintenance of a subject property's material systems, components, or equipment as observed during the field observer's walk-through survey. Included within this definition are material life-safety/building code violations and, material systems, components, or equipment that are approaching, have reached, or have exceeded their typical EUL or whose RUL should not be relied upon in view of actual or EFF AGE, abuse, excessive wear and tear, exposure to the elements, lack of proper or routine maintenance, etc. This definition specifically excludes deficiencies that: may be remedied with routine maintenance, miscellaneous minor repairs, normal operating maintenance, etc., and excludes de minimis conditions that generally do not constitute a material physical deficiency of the subject property."

No Further Action Required - Component or system exhibits normal wear and tear considering its age, purpose and extent of use, and exposure to the elements. Prudent ownership would not immediately expend additional, significant monies in relation to the Subject's appraised value to remedy the observed physical deficiencies.

Summary Table of Costs

Project Number:	PC60828394 - 201
Project Name:	Civic Center - Arena
Location:	401 Civic Center Drive, Mobile, Alabama
Description:	
Date:	November 9, 2017

SECTION NO.	DESCRIPTION	OPINIONS OF COST	
		SHORT TERM	UNINFLATED RESERVES
3.1	Site	\$1,941,424	\$378,760
3.2	Structural System	\$60,000	\$0
3.3	Exteriors	\$587,765	\$312,950
3.4	Roofing	\$5,536,575	\$777,000
3.5	Interiors	\$1,566,250	\$6,474,916
3.6	Plumbing Systems	\$48,300	\$115,019
3.7	Heating, Ventilation & Air Conditioning	\$3,380,313	\$963,016
3.8	Electrical System	\$866,800	\$260,000
3.9	Fire Protection and Life Safety	\$598,140	\$0
3.10	Garages and Carports	\$0	\$0
3.11	Elevators	\$30,000	\$276,000
TOTAL		\$14,615,567	\$9,557,661

SECTION NO.	DESCRIPTION	OPINIONS OF ADA COST
4.5	ADA Modifications	\$81,980
TOTAL		\$81,980

CAPITAL RESERVE SCHEDULE	TOTALS
Aggregate Reserves (Uninflated)	\$9,557,661
Aggregate Reserves (Inflated)	\$10,549,544
Uninflated Reserve/SFG/Year	\$3.30
Inflated Reserve/SFG/Year	\$3.64

Opinions of Costs

Deferred Maintenance Existing Deficiencies

Project Number:	PC60828394 - 201
Project Name:	Civic Center - Arena
Location:	401 Civic Center Drive, Mobile, Alabama
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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
		SITE					
1		<p>Full Depth Asphalt Pavement Replacement ^ ^ The age of the asphalt paving is unknown but advanced. Deficiencies include faded striping, scattered cracks, root damage around tree wells including the curbing, potholes, numerous previously patched areas and past trenched areas, and eroded fines throughout. The paving has exceeded its EUL and many of the other site repairs are expected to require parking lot excavation. Full depth asphalt paving replacement and re-striping will be required in conjunction with other site repairs including areas of curbing replacement and replacement and rewiring of site lighting throughout the complex in the short term, and ongoing pavement maintenance will be required during the reserve term.</p>	479,000	SF	\$3.50	\$1,140,020	
2		<p>Concrete Pavement ^ ^ Concrete paving at the covered pedestrian walkways that extend into the parking lot is encumbered with numerous cracks and broken areas. Additionally, the sidewalk at the Theatre curbside loading area is cracked and breaking up; most probably as a result of vehicular traffic using the sidewalk as a driveway/loading platform. The affected flatwork should be removed and replaced with new concrete paving with a paving section appropriate for vehicular traffic. Provide compressible pre-molded expansion joints between existing and old flatwork and every 20 LF of paving.</p>	5,000	SF	\$25.00	\$85,000	

Opinions of Costs

Deferred Maintenance Existing Deficiencies

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Location:	401 Civic Center Drive, Mobile, Alabama
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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
3		<p>Concrete Curb Replacement ^ ^ Damaged concrete curbs were noted around many of the parking lot tree wells. We recommend removal of damaged portions and replacement with new curbs to match existing. Provide compressible pre-molded expansion joints between existing and old curbing and every 20 LF of curb.</p>	5,000	LF	\$24.00	\$81,600	
4		<p>Parking Study ^ ^ The existing striped parking currently provided at the Subject is inadequate by today's standards for the originally intended uses. This deficiency may be a contributing factor in the inability to draw the kinds of large events the facility has in the past. A parking study is recommended to evaluate facility utilization and parking needs and make appropriate recommendations regarding an adequate parking count.</p>	1	LS	\$25,000.00	\$17,000	
5		<p>Replace Lighting Standards, 15'-30' ^ ^ Lighting standards are 53 years old, at the end of their EUL's, and in poor condition with many that are inoperable. Deficiencies include failed underground wiring, deteriorated protective finish coatings and obsolete lamping. Lighting standards and underground wiring should be replaced.</p>	14	EA	\$5,000.00	\$47,600	

Opinions of Costs

Deferred Maintenance Existing Deficiencies

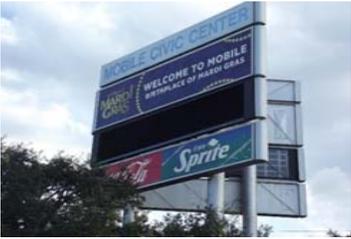
Project Number:	PC60828394 - 201
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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
6		<p>Replace Lighting Standards, 45'-60' ^ ^ Lighting standards are 53 years old, at the end of their EUL's, and in poor condition with many that are inoperable. Deficiencies include failed underground wiring, deteriorated protective finish coatings and obsolete lamping. Lighting standards and underground wiring should be replaced.</p>	11	EA	\$10,000.00	\$74,800	
7		<p>Refurbish Decorative Gas Lighting ^ ^ Decorative gas lighting standards are of unknown but advanced age and the finish at the standards has failed. The decorative lighting standards should be refurbished.</p>	34	EA	2,500	\$57,800	

Opinions of Costs

Deferred Maintenance Existing Deficiencies

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
8		<p>Civil Engineering/Storm water Control Study ^ ^ The Subject predates passage of the Clean Water Act and today's much more stringent storm water control and management environment and significant sitework at the Subject is likely to trigger requirements for compliance with contemporary standards. A civil engineer should be retained to perform a storm water control code study.</p>	1	EA	\$20,000.00	\$13,600	None Currently Provided
9		<p>Refurbish Pylon Sign The computer for the message center at the pedestal sign at the southeast corner of site is not working and the paint finish at the frame is failing and starting to rust. The incandescent lighting, other panels, and the frame are all in fair but serviceable condition and the frame can support an updated LED message center display. The inoperable message center should be updated with an LED display and frame and back panels prepped, primed, and painted at this time.</p>	1	LS	\$50,000.00	\$34,000	
10		<p>Paint or Update Pedestal Signage Pedestal signage providing directions around the complex and at vehicular entrances is faded and discolored with peeling paint. Re-painting or updating signage is recommended at this time.</p>	1	ALLOW	\$25,000.00	\$17,000	

Opinions of Costs

Deferred Maintenance Existing Deficiencies

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
11		<p>Replace Concrete Sidewalk Sections (25%) ^ ^ Much of the concrete sidewalk throughout the complex is believed to date from the original construction, is encumbered with eroded fines, and is encumbered with cracks and deterioration. Remove deteriorated sections, prepare bed, and install new 4" thick sidewalks. Sidewalk sections that exhibit cracks but that do not warrant replacement should have all cracks pointed with a non-shrinking grout.</p>	20,900	SF	\$15.00	\$213,180	
12		<p>Re-set Settled Brick Pavers, 25% ^ ^ Brick pavers located at the Arena passenger drop off along Civic Center Drive are encumbered with cracks and spalled or broken brick. Additionally, areas of precast pavers in the paver courtyard between the Theatre and Arena have settled around some of the catch basins. The damaged/settled pavers should be removed and reset or replaced as required.</p>	1,000	SF	\$22.00	\$14,960	
13		<p>Chain Link Fence Repairs/Replacements ^ ^ The age of the chain link perimeter fence including parking lot entry gates is unknown but advanced and the finish system is failing with developing rust. The system has not been maintained and much of it is overgrown. Several sections of the site perimeter fencing were found to be damaged and displaced. Repair and/or replace affected sections to improve curb appeal.</p>	2,200	LF	\$26.00	\$38,896	

Opinions of Costs

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
14		<p>Camera Inspection of Storm water Drain Lines ^ ^ Management reported that catch basins along Lawrence Street, scattered areas of the parking lot, and the brick paver courtyard between the Arena and Theatre have recurrent back-ups and seem to be slow draining. The storm water system is believed to date from the original construction and be over 50 years old. The reported symptoms may be indicative of underground pipe collapses or restricted flow. Given the age of the system, and the scope of anticipated repairs a full camera inspection of the site storm water system is recommended at this time.</p>	1	LS	\$4,500.00	\$3,060	
15		<p>Clean Catch Basins of Leaves & Debris ^ ^ Many catch basins were noted to be filled with leaves and debris. Specifically, this condition was noted in the corner of the parking lot between the Theatre and the Arena. Clean all catch basins and pressure force-clean all exiting storm drains to ensure that good flow prevails.</p>	1	CD	\$3,500.00	\$2,380	
16		<p>Tree & Landscape Trimming ^ ^ Some of the trees and landscape plantings around the site were observed to be overgrown and in contact with building sidewalls and fencing. The affected plantings should be trimmed back.</p>	8	CD	\$1,200.00	\$6,528	

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17		<p>Utility Pedestals</p> <p>Utility pedestals around the parking lot are advanced in age and starting to rust, which may be indicative of the internal condition. Budgeting for replacements is recommended.</p>	38	EA	\$1,500.00	\$57,000	
18		<p>Planter Waterproofing</p> <p>Waterproofing at the planter along the front elevation of the building is original, over 50 years old, and exceeded its EUL. Although management reported no known leaks or evidence of water entry into the sidewalls, given the advanced age of the system budgeting for installation of a new waterproofing membrane is recommended. Scope of work will include removal and replacement of planter soils and plant materials.</p>	1,200	SF	\$30.00	\$36,000	
19		<p>Remove and Permanently Cap Off In-Ground Lighting</p> <p>In-ground up lights around the towers at the ends of the pedestrian walkways have previously flooded and have failed and some of the lenses have cracked or broken. An electrician should be retained to remove the fixtures and permanently cap off the electrical wiring. Upon completion of the electrical work the openings should be patched in.</p>	2	MD	\$500.00	\$1,000	
		Subtotal Site				\$1,941,424	

Opinions of Costs

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	3.2	STRUCTURAL SYSTEM					
20		<p>Overhead Concrete Patching, 10% Missing, loose, and detaching spall areas and exposed re-bar were observed at the underside of the projecting concrete canopies and the column supported covered bus walkways at the arena and protective barriers have been erected at the east canopy. Deteriorated areas at the undersides of the canopies/walkways should be sounded and deteriorated material removed down to sound substrates. Exposed re-bar should be wire brushed and repaired as necessary under the direction of a structural engineer. The affected areas should then be patched to match the existing concrete.</p>	800	SF	\$60.00	\$48,000	
21		<p>Load Analysis Traveling shows have been requesting an updated structural load analysis of what the arena roof structure can support for suspended loads for their lighting, sound, and customized stage rigging. As examples the Bon Jovi show of 1990 needed 115,000 lbs. and the Cary Underwood show of 2008/09 needed 68,000 lbs. A load analysis by a structural engineering firm specializing in theatrical productions is recommended.</p>	1	LS	\$12,000.00	\$12,000	
		Subtotal Structural System				\$60,000	

Opinions of Costs

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
	3.3	EXTERIORS					
22		<p>Replace Storefront System The Subject's anodized aluminum framed, single(tempered) glazed storefront system was found to be worn and dated. The entire system should be replaced to improve overall curb appeal and energy efficiency of the retail property.</p>	2,000	SF	\$65.00	\$130,000	
23		<p>Clean Masonry Façade of Mildew, Stains and Grime Portions of the elevations are stained with mildew and grime. To improve the general aesthetics of the building and to remove airborne chemical contaminants that may deteriorate mortar joint and the limestone, clean all masonry surfaces. Test panels should be prepared by the contractor for the owner's representative to judge the efficacy of the cleaning method selected.</p>	51,500	SF	\$1.50	\$77,250	
24		<p>Re-Point Brick Façades, 10% Approximately 10% of the brick sidewalls exhibit open mortar joints, deteriorated joints or brick/mortar separation. This condition was specifically observed at the cooling tower enclosure, and at brick and stone panels around the front entrance as well as other locations. Rake-out all deteriorated mortar and point with new mortar to match existing with respect to mortar pigment and joint type.</p>	5,200	SF	\$25.00	\$130,000	

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
25		<p>Repair Spalled/Damaged Brick Façade Sections, 5%</p> <p>The exterior sidewalls exhibit areas of cracks and spalling. Cutting out of the damaged brick section and replacement with new brick is recommended. All mortar and brick should closely match the surrounding existing areas.</p>	2,600	SF	\$50.00	\$130,000	
26		<p>Re-Seal Building Joints</p> <p>Sealant/caulking materials are advanced in age, dried out, and cracked and crazed. The old material should be removed and the joints re-sealed with color matched flexible sealants installed over a backer rod.</p>	1,200	LF	\$5.00	\$6,000	
27		<p>Repainting Rusting Lintels</p> <p>As a result of our site visit, the window lintels were observed to be rusting. Wire brush, prime and repaint all affected areas.</p>	300	LF	\$5.00	\$1,500	

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
28		<p>Repaint Rusting Metal Fascia & Soffit System Brick sidewalls around the arena terminate with a corrugated metal fascia system that returns to the brick masonry sidewall below with flat metal soffits. The paint system at the metal soffits has failed with extensive peeling and corrosion at the flat metal. The soffit system should be wire brushed, checked and repaired as necessary, and treated with a rust inhibitor. Upon completion of this work the soffit and corrugated metal fascia's should be primed and painted with two coats of rust inhibitive paint.</p>	6,500	SF	\$5.00	\$32,500	
29		<p>Repaint Cooling Tower Screen System Brick sidewalls around the arena terminate with a corrugated metal fascia system that returns to the brick masonry sidewall below with flat metal soffits. The paint system at the metal soffits has failed with extensive peeling and corrosion at the flat metal. The soffit system should be wire brushed, checked and repaired as necessary, and treated with a rust inhibitor. Upon completion of this work the soffit and corrugated metal fascia's should be primed and painted with two coats of rust inhibitive paint.</p>	6,200	SF	\$3.50	\$21,700	
30		<p>EIFS, Re-coat Acrylic Finish The exterior insulation and finish system (EIFS) at the front entry marquee wall is deteriorated with peeling paint. All affected areas should be patch repaired if any scarring, prepped and re-coated with acrylic surfacing.</p>	2,500	SF	\$1.50	\$3,750	

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31		<p>Decorative Marquee Lighting Allowance Decorative neon lighting at the marquee has not been maintained and has been vandalized over the years. Replacement with LED feature lighting is recommended.</p>	1	Allow	\$25,000.00	\$25,000	
32		<p>Expand Loading Dock The show floor is currently serviced via a single exterior loading dock accessed by a single overhead door and the existing dock configuration is reported to be inadequate. The dock can be expanded by extending the dock deck, providing a new masonry opening, and adding a second overhead door.</p>	1	LS	\$30,000.00	\$30,000	
		Subtotal Exteriors				\$587,765	

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
	3.4	ROOFING					
33		<p>Replace BUR Roof at Dome Gutter</p> <p>The dome gutter roof is encumbered with numerous blisters and soft spots indicative of entrapped moisture. A particularly large area of entrapped moisture was noted at approximately 2:00 from due north. The roof and all areas of compromised insulation should be removed, the decking checked for damage and the roof replaced. Staging logistics and the high proportion of flashings are expected to significantly impact costs for this work.</p>	8,100	SF	\$13.00	\$105,300	
34		<p>Replace Canopy Roofs</p> <p>Coal tar canopy roofs around the arena have failed and causing damage to the projecting cantilevered cast in place concrete roof decks. The roofs should be stripped to deck and replaced as an immediate repair.</p>	3,400	SF	\$13.00	\$44,200	

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
35		<p>Refurbish Standing Seam Metal Dome Roof</p> <p>The highly visible 50+ year old standing seam metal dome roof is stained, discolored, has some scatter punctures and the mechanical fasteners are backing out of the system. The roof has reached the end of its EUL and replacement is recommended at this time. The replacement cost is being provided as an allowance. A study of the roof system is recommended to determine the most cost effective way to approach the roof repair or replacement.</p>	118,000	SF	\$45.00	\$5,310,000	
36		<p>Install Traffic Deck Coating</p> <p>Exposed concrete roofs at the bus canopies are aging. Installation of a traffic deck coating is recommended at the roof surfaces.</p>	4,800	SF	\$5.00	\$24,000	
37		<p>Point All Open Cast Stone Coping Joints</p> <p>Cast stone coping joints were noted to be deteriorated and open in areas allowing both water and moisture penetration into the parapet wall system. Point all joints to within 3/8" of coping surface the apply a sealant neatly tooled to seal all joints against water entry.</p>	775	LF	\$5.00	\$3,875	

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38		<p>Paint Rooftop Metals</p> <p>The paint finish systems at many rooftop metals has failed with peeling, blistering paint, and corrosion at the metal substrates. This condition is a particular concern at rooftop access ladders as well as other items. Rooftop metals should be wire brushed, primed, and painted with two coats of rust inhibitive paint.</p>	12	MD	\$350.00	\$4,200	
38A		<p>Provide Analysis</p> <p>For the purposes of this Report, CBRE has included an estimate for full replacement with like kind materials, other restoration and replacements may be possible. It is likely a restoration or overlay can be completed at a significant cost savings. It is recommended an invasive roof assessment with moisture survey and test cuts be completed to determine the underlying conditions at the site. The assessment should be completed by an Registered Roof Consultant (RRC) and provided options for the repair, restoration and/or replacement of the roof systems.</p> <p>At the time of roof replacement, it is recommended that a Registered Roof Consultant (RRC) or Architect be retained to provide design of the new system. The RRC will need to determine the specific design requirements to meet the minimum code requirements for the Authority Having Jurisdiction (AHJ). These requirements are unforeseen to CBRE and were not investigated as part of the scope of this Report. The design criteria, current building and energy code requirements may significantly impact the cost of the roof replacement/restoration.</p> <p>Many factors influence the choice of an appropriate roof system and will affect the final design of the new system. If requested, CBRE can provide recommendations to meet project specific design and budget requirements. Additionally, CBRE can prepare design documents and assist with quality assurance during installation of the new roof system(s).</p>	1	LS	\$45,000.00	\$45,000	

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		Subtotal Roofing				\$5,536,575	
	3.5	INTERIORS					
39		<p>Refurbish Toilet Room/Locker Room Fixtures/Finishes Toilet room fixtures/finishes at public toilet rooms, locker rooms, and dressing rooms are original and have exceeded their useful lives. The toilet rooms should be renovated with a scope of work to include replacement of piping including the problematic copper urinal drain lines, valves, fixtures, finishes, and reconfiguration of the plumbing access hatches.</p>	16,900	SF	\$85.00	\$1,436,500	
40		<p>Arena Soft Goods Replacement The arena stage curtain system dates from 1989, is 32 years old, and the fabrics are torn and threadbare. The side panels and curtain should be replaced.</p>	1	Set	\$100,000.00	\$100,000	
41		<p>Arena Fall Arrest System The arena fall arrest system has not been updated for many years and portions of the catwalk system only have handrails on one side. Updating for current OCSEA compliance is recommended at this time.</p>	1	LS	\$15,000.00	\$15,000	

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42		Install Guardrail at Perimeter Catwalk The existing perimeter catwalk system has no guardrail/handrail. Installation of a guardrail barrier is recommended at this time.	590	LF	\$25.00	\$14,750	
Subtotal Interiors						\$1,566,250	
3.6		PLUMBING SYSTEMS					
43		Install Backflow Preventer, 8" The building is not currently equipped with a backflow prevention device to protect the municipal water system against inadvertent contamination. Installation of a backflow preventer is recommended from a risk management perspective.	1	EA	\$25,000.00	\$25,000	
44		Pipe Testing, 33% ^ ^ Although no systematic pipe failures were reported, the sanitary piping is original to the building and 56 years old. Untreated domestic water can be quite corrosive. Cast iron sanitary and vent piping has an EUL of 45 to 80 years and is subject to internal corrosion. It becomes increasingly brittle and difficult to work with over time. We recommend an ultrasound or wall thickness testing as well as some destructive test cuts to determine the condition of key areas of the piping. Budget is pro-rated in thirds for arena, theater, and expo hall.	1	LS	\$10,000.00	\$3,300	

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
45		<p>Replace Domestic Hot Water Boilers</p> <p>The domestic hot water boilers date from a 1993 installation, are 24 years old, and have outlived their statistical EUL's. Budgeting for replacements is recommended.</p>	2	LS	\$10,000.00	\$20,000	
Subtotal Plumbing Systems						\$48,300	
3.7		HEATING, VENTILATION & AIR CONDITIONING					
46		<p>Replace AHU's</p> <p>The existing AHU's are original to the building, 56 years old, with deteriorated and leaking condensate pans and coils that are in poor condition. Several units are currently inoperable. Full replacement of the units is recommended at this time pending further engineering input.</p>	424,950	CFM	\$5.00	\$2,124,750	
47		<p>Replace 2 RTU's (30 tons each)</p> <p>The existing RTU's date from the 1989 renovation, are 28 years old, and have reached the end of their EUL's. RTU-2 is currently inoperable, has a leaking condensate pan, and is tarped because of active ongoing leaks into the building. RTU 1 is functional, but has exceeded its EUL and appears to receive minimal maintenance. Full replacement of the unit is recommended at this time.</p>	60	Ton	\$2,000.00	\$120,000	

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48		<p>Replace 2 RTU's (18 tons each)</p> <p>The existing RTU's date from the 1989 renovation, are 28 years old, and have reaching the EUL's. The RTUs are functional, but have exceeded their EUL and appears to receive minimal maintenance. Full replacement of the unit is recommended at this time.</p>	35	Ton	\$2,000.00	\$70,000	
49		<p>Overhaul Chillers</p> <p>The existing 500-ton chiller dates from 2002 and is 15 years old while the 400-ton chiller dates from 1997 and is 20 years old. Oil analysis and vibration testing indicate the internal condition of the units is viable. The life of the chillers can be extended with an overhaul at this time. Disassemble machine and replace seals, gaskets, damaged tubes, and overhaul compressors.</p>	2	EA	\$35,000.00	\$70,000	
50		<p>Ultrasound and/or Destructive Testing on Main Condenser and Chilled Water Lines, 33% ^ ^</p> <p>Except for modifications to accommodate equipment change outs in the machine room, chilled and condenser water lines are generally original and 56 years old. The history of any replacements or testing is unknown, however water circulated within the closed systems has not been treated leaving the system susceptible to internal corrosion if undetected leaking valves have been systematically replenished via the make-up water system. Ultrasound and destructive testing at key areas of the heating and cooling systems is recommended at the present time. Budget is pro-rated in thirds for arena, theater, and expo hall.</p>	1	LS	\$20,000.00	\$6,600	

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51		<p>Replace Building Energy Management System</p> <p>The existing BMS system is more than 25 years old and antiquated. The computerized side of the system is antiquated. The existing pneumatic control system is original, 53 years old and the valves are badly corroded with systematic leak issues. The entire control system should be replaced. Install a new automatic temperature control system with an energy management computer and DDC (direct digital control) dampers, AHU's, fan coil units, and major equipment.</p>	289,570	SF	\$1.25	\$361,963	
52		<p>Replace Motor Control Center</p> <p>The motor control center at the central plant is original to the building, 56 years old, and parts are no longer manufactured for it. The motor control center should be replaced or the switches re-built by a specialist firm.</p>	44	Switch	\$3,000.00	\$132,000	
53		<p>Replace Machine Room Exhaust Fans</p> <p>High volume exhaust fans at the machine room are believed to be original to the building, 56 years old, and have reaching their EUL's. Replacement is recommended at this time.</p>	3	EA	\$21,000.00	\$63,000	

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54		<p>Replace High Volume Exhaust Fan</p> <p>Several high volume fans are believed to be original to the building, 56 years old, and have reaching their EUL's. Replacement is recommended at this time.</p>	3	EA	\$15,000.00	\$45,000	
55		<p>Replace Rooftop Exhaust Fans</p> <p>Mushroom type rooftop exhaust fans serving toilet rooms and other areas appear to have been taken out of service and abandoned in place. Numerous units are missing motors, covers, or other parts. Exhaust fans should be surveyed and all inoperable fans replaced at this time.</p>	28	EA	\$1,000.00	\$28,000	
56		<p>Water Treatment</p> <p>Water treatment is not currently provided for closed loop systems. Only the cooling towers are currently, but only after having incurred extensive scaling that required significant repair work approximately 5 years ago. Untreated water is highly corrosive with algae and hard water deposits posing common issues. Given that a water treatment system/test station is already set up, we recommend expanding the vender service package to also address the closed systems; boilers/heating hot water, and chilled water loop.</p>	1	EA	\$5,000.00	\$5,000	

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57		<p>Drain In-Floor Ice System</p> <p>The in-slab ice system for the arena ice rink was last used in 2011, but the brine solution has not been drained. The corrosive brine solution should be drained to prevent further damage to the in-slab refrigerant piping system.</p>	1	EA	\$4,000.00	\$4,000	
58		<p>In-Floor Ice Making System Restoration Allowance</p> <p>The under slab manifolds and refrigerant main lines are badly corroded, the 212-ton chiller and related equipment is inoperable and has been abandoned in place, the cooling tower relocated and repurposed, the Zamboni ice maintenance machine sold off. Restoration of the system will require replacement of the chiller, cooling tower, as well as the circulation pumps, Zamboni and water treatment and water heaters. Portions of the in-slab ice system were known to be obstructed when the system was last operated and Significant work at the manifold of unknown scope would be required. Given the unknowns of the in-slab portions of the system, full removal and replacement must be assumed.</p>	1	Allow	\$350,000.00	\$350,000	
59		<p>Overhaul Chiller</p> <p>The chillers date from a 1997 and 2002 installations, are 15 and 20 years old, and operating as intended. Life of the units can be extended by proper maintenance including recommended mid-life overhauls. No information on the maintenance history on the chillers was available. Budgeting for an overhaul is recommended at this time pending further verification. Budget includes dissembling machine to replace seals, gaskets, damaged tubes, and overhaul compressors.</p>	2	EA	\$35,000.00	\$70,000	

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
60		<p>Refurbish Cooling Towers</p> <p>The cooling towers dates from 2006 and 2011 installations. The equipment is only 6 and 11 years old and is currently operating as intended, but show evidence of rust and accelerated aging and we understand that the facility operated without a water treatment program until recent years when accelerated aging of the equipment was identified as an issue. No other information on recent repairs was available. Budgeting for an overhaul is recommended at this time pending further verification of the recent repair history. Budget includes replacement of the PVC fill, internal support and pan repairs or replacement.</p>	1,584	Ton	\$100.00	\$158,400	
61		<p>Boiler Testing & Seasonal Servicing</p> <p>The boilers are 15 years old and reported to be performing as intended, however water treatment has never been provided for the heating loop. Verification of the internal condition of the equipment is recommended in conjunction with this years annual servicing. Perform ultrasonic testing of the boiler employing straight beam techniques by calibrated ultrasonic tester. Perform normal seasonal overhaul of boilers. The seasonal overhaul includes disassembly of all heat generating equipment, testing equipment and controls and replacing parts as required.</p>				\$0	
		Subtotal Heating, Ventilation & Air Conditioning				\$3,380,313	

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	3.8	ELECTRICAL SYSTEM					
62		<p>Infrared Survey, Commercial Scale</p> <p>No information was available as to when the last infrared survey was conducted of the electrical switchgear. An thermographic survey should be performed at this time to identify developing hot spots. These surveys should be conducted on a periodic basis going forward in accordance with best practices.</p>	2	EA	\$7,000.00	\$14,000	
63		<p>Identify Electrical Disconnect Switches</p> <p>Electrical disconnect switches are not identified as per the National Electrical Code.</p>	4	MD	\$700.00	\$2,800	
64		<p>Arena Lighting Control System</p> <p>The arena Color Tran lighting system dating from the 1989 renovation is obsolete and the dimmer rack is not wired to match the fixtures. The entire system should be budgeted for replacement at this time including pulling all new wiring.</p>	1	EA	\$250,000.00	\$250,000	
65		<p>Arena Sound System</p> <p>The mono JBL cluster sound system at the arena is inadequate and the Soundcraft 400 B sound console is functioning but obsolete. The system should be budgeted for replacement at this time, however many arena shows travel with their own systems that partly mitigates this need. If sound systems become subject to value engineering, precedence should be given to short term replacement of the theater sound system.</p>	1	Allow	\$250,000.00	\$250,000	

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
66		<p>Upgrade Existing 4,000 Amp Electrical Service</p> <p>The existing electrical service and switchgear is inadequate and/or obsolete. Provide a new service and switchgear to the building while maintaining operations. Upon bringing the new service on-line, the existing switchgear should be removed. Budget provided does not address design fees to confirm proper service sizing.</p>	1	Allow	\$350,000.00	\$350,000	Refer to Photos Above
67		<p>Upgrade Existing 1,200 Amp Electrical Service</p> <p>The existing electrical service serving RV utility pedestals at the south side of the parking lot is advanced in age, rusted, and weathering. Provide a new service and switchgear to the building while maintaining operations. Upon bringing the new service on-line, the existing switchgear should be removed. Budget provided does not address design fees to confirm proper service sizing.</p>	1	Allow	\$100,000.00	\$100,000	
68		<p>Replace Transformers</p> <p>Many of the transformers are original to the building and have exceeded their EUL's and some of the transformers such as the 440 volt units are no longer working. Budgeting for a replacement program is recommended.</p>	289,570	SF	\$0.30	\$86,871	Refer to Photos Above

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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
69		<p>Distribution Panel Replacement Program</p> <p>Many of the electric distribution panels are original to the building and have exceeded their EUL's and most of the others are advanced in age. Although still functioning as intended breaker switches/replacement parts are no longer available. Budgeting for a replacement/parts salvage program is recommended.</p>	289,570	SF	\$0.30	\$86,871	Refer to Photos Above
70		<p>Lighting Retrofit</p> <p>Light fixtures throughout the building are dated and may be original to the building with older, energy inefficient lamping compared to the high efficiency LED fixtures now available. Ownership may want to consider a lighting conversion project as the cost savings can be substantial with a short return on investment period. No cost is provided as this is considered a discretionary improvement.</p>	289,570	SF	\$5.00	\$1,447,850	
		Subtotal Electrical System				\$866,800	
	3.9	FIRE PROTECTION AND LIFE SAFETY					
71		<p>Replace Panic Hardware</p> <p>Panic hardware at some of the common exit doors was found to have damaged or missing panic hardware and parts for some of the hardware are no longer available. All exit doors should be surveyed and the hardware refurbished or replaced as required.</p>	56	EA	\$250.00	\$14,000	

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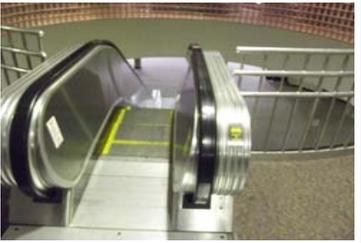
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NO.	SECTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF COST SHORT TERM	Deficiency Photo
72		<p>Upgrade Fire Alarm Panel and System</p> <p>The fire alarm control panel manufactured by Harrington is obsolete and no longer supported by the manufacturer. Parts are currently being obtained through the salvage market. The fire alarm system should be modernized at this time.</p>	289,570	SF	\$2.00	\$579,140	
73		<p>Fire Standpipe & Sprinkler Pipe Testing, 50% ^ ^</p> <p>Although no systematic pipe failures at the fire standpipe and sprinkler systems were reported, the piping is original to the building and 56 years old. Untreated domestic water can be quite corrosive. We recommend an ultrasound or wall thickness testing as well as some destructive test cuts to determine the condition of key areas of the piping. Budget is pro-rated in thirds for arena, theater, and expo hall. Budget is pro-rated for Arena and Theater buildings.</p>	1	LS	\$5,000.00	\$5,000	
		Subtotal Fire Protection and Life Safety				\$598,140	
	3.10	GARAGES AND CARPORTS					
		No Items Required				\$0	
		Subtotal Garages and Carports				\$0	

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	3.11	ELEVATORS					
74		Install Skirt Brushes at Escalators The existing escalator is not currently equipped with brushes that are required under current codes. Installation of this safety feature is recommended and likely to be required in conjunction with any building renovation.	EA	LS	15,000	\$15,000	
		Subtotal Elevators				\$30,000	
				Total		\$14,615,567	

* - COST OMITTED: Work can be completed in-house or by an outside contractor at minimal cost.

** - COST OMITTED: Recommendation only.

*** - COST OMITTED: Tenant responsibility.

^ - COST OMITTED: Work already budgeted as part of Capital Program

Opinions of ADA Modifications

Project Number:	PC60828394 - 201
Project Name:	Civic Center - Arena
Location:	401 Civic Center Drive, Mobile, Alabama
Description:	
Date:	November 9, 2017

NO.	SECTION NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	OPINIONS OF ADA COST	DEFICIENCY PHOTO
	4.5	ADA MODIFICATIONS					
1		<p>ADA Survey</p> <p>During our site survey, we noted that the Subject provides limited handicapped accessibility. The law became effective for existing buildings classified as "Public Accommodations" on January 26, 1992. We recommend that an ADA survey be conducted to identify all barriers and any readily achievable improvements/modifications.</p>	1	LS	\$7,500.00	\$7,500	
2		<p>Re-Stripe ADA Parking Spaces</p> <p>The number of standard sized accessible parking spaces provided is slightly above requirements, however striping is faded and illegible and many of the spaces provided lack the required 60" side aisle. Re-striping is recommended for all accessible parking spaces and the required side aisles. No cost is provided, as this would be covered as part of the anticipated re-paving project.</p>	15	SPACE	\$250.00	\$0*	
3		<p>Add Handicap Van Parking Spaces</p> <p>A sufficient number of van sized accessible parking spaces with 96" wide side aisles are provided, however striping at the existing spaces is faded and illegible. Re-striping is recommended to add an additional van accessible space and re-strip existing van spaces. No cost is provided, as this would be covered as part of the anticipated re-paving project.</p>	2	Each	\$250.00	\$0*	

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4		<p>Install Accessible Parking Stall Signage The Subject was found to be fitted with an adequate number of handicapped accessible parking stalls and van stalls but a few stalls share common signs and each stall is presently not equipped with an individual posted sign. According to ADAAG, each handicapped accessible parking stall should be marked with both pavement striping and international symbol and a posted sign mounted directly in front of the stall. All colors should be contrasting.</p>	2	EA	\$150.00	\$300	
5		<p>Add Marked Crossing Aisles Although an adequate number of accessible parking spaces are provided, the accessible route from many of those spaces to building entrances crosses traffic lanes and aisles without marked crossings. Marked crossings are required under the ADA for the safety of wheelchair users who are lower/less visible than a typical walking pedestrian. All accessible routes that enter or cross traffic lanes/aisles should be provided with marked crossing aisles.</p>	3	Each	\$250.00	\$0*	Refer to Photos Above
6		<p>Installation of Concrete Curb Cut, Flared Sides Many of the accessible parking spaces provided do not provide direct access from the side aisle to a sidewalk or accessible route to the entry as a result of existing curb configurations. Cuts through many parking lot planter islands are not currently provided. Additionally, curb cuts should be provided at both covered pedestrian walkway towers and at every perimeter sidewalk curb cut and intersection. A survey of individual parking spaces will be required and should be coordinated with the placement of crossing aisles. A combination of curb cuts with flared sides and flat cuts through planters is expected to be required. At flared curb cuts the scope of work will include 1:10 maximum slope of flared sides, 1:12 slope of curb cut.</p>	20	EA	\$1,000.00	\$20,000	Refer to Photos Above

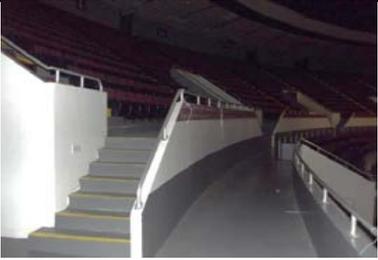
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7		<p>Install Detectable Warnings at Walkways While on-site, several locations requiring detectable warning strips or textures were noted. Specifically this condition was noted at the curb cut on the south side of the Expo Hall, and outside the south entrances to the Arena. These devices/surfaces will aid in alerting a blind pedestrian of a walkway end/change of direction, ramps or other hazardous area.</p>	40	SF	\$25.00	\$1,000	
8		<p>Install Ramp Handrails at Main Arena Entrance (Pipe Rail in Concrete) Currently a handrail is only provided on one side of the wheelchair ramp accessing the Arena entrance from Civic Center Drive. Full ADA compliance requires handrails at both sides of wheelchair ramps.</p>	40	LF	\$48.00	\$1,920	

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9		<p>Repave Concrete Ramp to Shallower Slope **</p> <p>Presently, spot checks at the concrete ramp at the southeast Arena entrance found slopes of 7/8" to 1" per foot. Technically, this exceeds the ADA allowable 1:12 (3/4" per foot) but may be considered nominally compliant. Scope of work for technical compliance would include removal of existing pavement/handrails, repaving of concrete ramp and installation of handrails. No cost is included as this is advisory only.</p>	125	LF	\$117.00	\$0 **	
10		<p>Create Accessible Auditorium Seating</p> <p>The Subject includes a common-use assembly area with fixed seating, accessible seating is limited to approximately 22 wheelchair spaces above the stage at the south side of the arena. Based on 6,120 fixed seats, ADA requires a total of 63 accessible seats. We recommend creating additional accessible seating by removal of fixed seating to be replaced with level seating areas for wheelchairs. This work may require modification of some of the concrete guardrails around the main perimeter aisle. Scope of the work includes removal of chair, cast in place concrete, and signage.</p>	41	EA	\$360.00	\$14,760	

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11		<p>Install Interior Wheelchair Lift</p> <p>The arena stage area requires several steps up for access so is not currently accessible. Installation of an interior hydraulic lift at this location could provide full compliance.</p>	1	EA	\$15,000.00	\$15,000	
12		<p>Assistive Listening System (Magnetic Induction Loop)</p> <p>Presently, areas within the Subject where audible information is integral to the use of the space are not equipped with an adequate number of assistive listening devices. We recommend installation of a magnetic induction loop assistive listening system in these areas.</p>	1	EA	\$6,000.00	\$6,000	Not Currently Provided
13		<p>Lower Urinal for Handicapped Access</p> <p>At present, the common toilet rooms are equipped with only standard mounting height wall urinals without grab bars. One (1) urinal should be lowered or removed and replaced with a lower mounted wall urinal to provide handicapped access. Installation should include grab bars and patching of all affected wall surfaces during installation. No cost is provided as this item would be covered in the toilet room renovation budget.</p>	4	EA	\$1,700.00	\$0 ^	

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14		<p>Install New ADA Sink The common toilet rooms are equipped with standard height sinks which do not allow easy roll-up access. One (1) of the sinks should be lowered or replaced with an ADA compatible sink with paddle faucet, shelf and tilted mirror. No cost is provided as this item would be covered in the toilet room renovation budget.</p>	8	EA	\$2,500.00	\$0 ^	
15		<p>Install Under-Stair Barrier Installation of an under-stair barrier is required under the staircase located at the southeast concourse. ADA requirements state that a barrier must be placed before headroom is less than 80". We recommend placing a 4'x4'x2' square wood planter.</p>	1	EA	\$1,500.00	\$1,500	
16		<p>Install Audible/Visual Fire Alarms Alarm/strobe devices to the extent they are provided, are believed to predate the ADA and probably do not meet its requirements with respect to visibility and sound levels. A project to update the devices is warranted and expected to include new audible/visual alarms and required wiring. No cost is provided as this item would be covered under the fire alarm system replacement budget.</p>	60	Each	\$326.00	\$0 ^	Not Currently Provided
17		<p>Install Braille Signage Install Braille signage for (rest room, elevator, telephone, stairway, etc.) mounted with self-stick foam tape, Velcro or in frame.</p>	40	EA	\$30.00	\$1,200	Not Currently Provided

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18		<p>Installation ADA Compliant Drinking Fountains Existing drinking fountains are not ADA compliant. Where drinking fountains are provided, the ADA recommends having approximately half are low fountains for wheelchair accessibility and the other half mounted at standing height.</p>	4	EA	\$3,200.00	\$12,800	
		Subtotal ADA Modifications				\$81,980	
				Total		\$81,980	

Capital Reserve Schedule

Project Number:	PC60828394 - 201
Project Name:	Civic Center - Arena
Location:	401 Civic Center Drive, Mobile Alabama
Description:	
Date:	November 9, 2017

Reserve Term:	10
Inflation Rate (%):	2.50%
Building Age:	53
No. of Buildings:	1
SFG:	289,570

COMPONENT OR SYSTEM	AVG EUL (Yr)	EFF AGE (Yr)	RUL (Yr)	QUANTITY	UNIT	UNIT COST (\$)	CYCLE REPLMNT COST	PROBABLE REPLACEMENT DATES & ESTIMATED EXPENDITURES (\$)										Total Reserve Item
								2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
								1	2	3	4	5	6	7	8	9	10	
SITE																		
Pavement and Curbing - Allowance ^ ^	1	0	1	1	ALLOW	9,000.00	6,120	6,120	6,120	6,120	6,120	57,800	6,120	6,120	6,120	6,120	57,800	164,560
Site Concrete Repairs, (25%) ^ ^	15	7	8	21,000	SF	15.00	214,200	0	0	0	0	0	0	0	214,200	0	0	214,200
STRUCTURAL SYSTEM																		
No Required Items Observed	1	0	1		SF	0.00		0	0	0	0	0	0	0	0	0	0	0
EXTERIORS																		
Re-Point Brick/CMU Façades, 10%	10	0	10	5,200	SF	25.00	130,000	0	0	0	0	0	0	0	0	0	130,000	130,000
Repair Cracked/Spalling Brick, 2%	10	0	10	2,100	SF	50.00	105,000	0	0	0	0	0	0	0	0	0	105,000	105,000
Clean/Re-Coat EIFS Surfaces	10	0	10	2,500	LF	2.50	6,250	0	0	0	0	0	0	0	0	0	6,250	6,250
Replace Perimeter Joint Sealants	7	0	7	1,200	LF	5.00	6,000	0	0	0	0	0	0	6,000	0	0	0	6,000
Re-Paint Metal Coping Fascia	10	0	10	6,500	SF	5.00	32,500	0	0	0	0	0	0	0	0	0	32,500	32,500
Re-Paint Lintels	10	0	10	300	LF	5.00	1,500	0	0	0	0	0	0	0	0	0	1,500	1,500
Re-Paint Cooling Tower Screen Wall	10	0	10	6,200	EA	3.50	21,700	0	0	0	0	0	0	0	0	0	21,700	21,700
Replace Overhead Loading Doors	20	12	8	2	EA	5,000.00	10,000	0	0	0	0	0	0	0	10,000	0	0	10,000
ROOFING																		
BUR-Remove & Replace System, Office	20	17	3	54,000	SF	13.00	702,000	0	0	702,000	0	0	0	0	0	0	0	702,000
Roof Maintenance	1	0	1	1	ALLOW	5,000.00	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	50,000

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								2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
								1	2	3	4	5	6	7	8	9	10		
INTERIORS																			
Upgrade Lobby Finishes	10	8	2	24,000	SF	95.00	2,280,000	0	2,280,000	0	0	0	0	0	0	0	0	0	2,280,000
Refurbish Common Area & Exhibit Halls	10	8	2	40,300	SF	40.00	1,612,000	0	806,000	806,000	0	0	0	0	0	0	0	0	1,612,000
Refurbish Seats	25	23	2	10,072	EA	45.00	453,240	0	45,324	45,324	45,324	45,324	45,324	45,324	45,324	45,324	45,324	45,324	407,916
Upgrade Toilet Room Fixtures/Finishes	10	0	10	17,000	SF	85.00	1,445,000	0	0	0	0	0	0	0	0	0	0	1,445,000	1,445,000
Upgrade Commercial Kitchen Finishes	10	8	2	6,000	SF	75.00	450,000	0	450,000	0	0	0	0	0	0	0	0	0	450,000
Upgrade Office Area Finishes	10	8	2	8,000	SF	35.00	280,000	0	280,000	0	0	0	0	0	0	0	0	0	280,000
PLUMBING SYSTEMS																			
Replace Hot Water Storage Tanks	15	13	2	2	EA	5,000.00	10,000	0	5,000	5,000	0	0	0	0	0	0	0	0	10,000
Replace Sump Pump at West Door Cross Aisle	10	8	2	2	HP	1,250.00	2,500	0	2,500	0	0	0	0	0	0	0	0	0	2,500
Clean Commercial Kitchen Drain Lines	1	0	1	1	EA	500.00	500	500	500	500	500	500	500	500	500	500	500	500	5,000
Replace Legacy Sanitary Piping	45	44	1	1	LS	250,000.00	250,000	5,556	5,556	5,556	5,556	5,556	5,556	5,556	5,556	5,556	5,556	5,556	55,556
Replace Legacy Domestic Water Piping	55	54	1	1	LS	200,000.00	200,000	3,636	3,636	3,636	3,636	3,636	3,636	3,636	3,636	3,636	3,636	3,636	36,364
Replace Individual Tank Type DWHs, Concession Stands	15	14	1	7	EA	1,200.00	8,400	560	560	560	560	560	560	560	560	560	560	560	5,600
HEATING, VENTILATION & AIR CONDITIONING																			
Replace Central, Gas-Fired Heating Boiler	25	15	10	2,400	MBH	200.00	480,000	0	0	0	0	0	0	0	0	0	0	480,000	480,000
Replace 10 HP HW Pumps	15	14	1	20	HP	1,250.00	25,000	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	20,833
Replace 3 HP HW Return/Recirculating Pumps	20	15	5	6	HP	1,250.00	7,500	0	0	0	0	7,500	0	0	0	0	0	0	7,500
Replace Heat Exchanger	20	15	5	1	EA	25,000.00	25,000	0	0	0	0	25,000	0	0	0	0	0	0	25,000

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								2019	2020	2021	2022	2023	2024	2025	2026	2027	2028				
								1	2	3	4	5	6	7	8	9	10				
Replace Chillers	20	0	20	900	Ton	850.00	765,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Cooling Towers	2	1	1	3	EA	5,000.00	15,000	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	75,000
Refurbish Cooling Towers	20	11	9	787	Ton	100	78,700	0	0	0	0	0	0	0	0	0	78,700	0	0	0	78,700
Refurbish Cooling Towers	20	6	14	800	Ton	100	80,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replace Chilled Water Pumps	25	24	1	150	HP	1,250.00	187,500	15,625	15,625	15,625	15,625	15,625	15,625	15,625	15,625	15,625	15,625	15,625	15,625	15,625	156,250
Refurbish AHU's	20	0	20	424,950	CFM	2.50	1,062,375	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replace RTU (20-35 Tons +)	25	0	25	60	TON	2,500.00	150,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replace RTU (15-30 Tons)	20	0	20	35	TON	2,000.00	70,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replace Legacy HW & CHW Piping	45	44	1	1	LS	200,000.00	200,000	4,444	4,444	4,444	4,444	4,444	4,444	4,444	4,444	4,444	4,444	4,444	4,444	4,444	44,444
Upgrade BMS	5	0	5	289,570	SF	0.13	37,644	0	0	0	0	37,644	0	0	0	0	0	0	0	37,644	75,288
Replace Building Energy Management System	25	0	25	289,570	SF	1.25	361,963	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ELECTRICAL SYSTEM																					
Upgrade Electrical Service (2,000-amp)	45	0	45	3	EA	350,000.00	1,050,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Overhaul Emergency Generator	10	2	8	1	EA	50,000.00	50,000	0	0	0	0	0	0	0	0	50,000	0	0	0	0	50,000
Replace Emergency Generator (#)	40	21	19	35	KW	400.00	14,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conduct Infra-Red Survey	1	0	1	3	EA	7,000.00	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	210,000
FIRE PROTECTION AND LIFE SAFETY																					
Replace/Upgrade Fire Alarm System, Arena	20	0	20	289,570	ALLOW	2.00	579,140	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GARAGES AND CARPORTS																					
No Required Items Provided	1	0	1		EA	0.00		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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								2019	2020	2021	2022	2023	2024	2025	2026	2027	2028			
								1	2	3	4	5	6	7	8	9	10			
ELEVATORS																				
Replace Hydraulic Pump/Motor	15	13	2	2	EA	8,000.00	16,000	0	16,000	0	0	0	0	0	0	0	0	0	0	16,000
Replace Hydraulic Elevator Cylinder Sleeve	30	28	2	2	Stop	25,000.00	50,000	0	50,000	0	0	0	0	0	0	0	0	0	0	50,000
Modernize Service Elevator	20	17	3	1	EA	185,000.00	185,000	0	0	185,000	0	0	0	0	0	0	0	0	0	185,000
Replace Cab Finishes	10	8	2	1	EA	10,000.00	10,000	0	10,000	0	0	0	0	0	0	0	0	0	0	10,000
Overhaul Escalator	20	11	9	1	ALLOW	15,000.00	15,000	0	0	0	0	0	0	0	0	0	15,000	0	15,000	
	ANNUAL REQUIREMENTS (UNINFLATED)							\$72,025	\$4,016,849	\$1,815,349	\$117,349	\$239,173	\$117,349	\$123,349	\$391,549	\$211,049	\$2,453,623	\$9,557,661		
	INFLATION RATE FACTOR @ 2.50 %							1	1.0250	1.0506	1.0769	1.1038	1.1314	1.1597	1.1887	1.2184	1.2489			
	ANNUAL REQUIREMENTS (INFLATED)							\$72,025	\$4,117,270	\$1,907,251	\$126,372	\$264,002	\$132,769	\$143,047	\$465,428	\$257,142	\$3,064,239	\$10,549,544		
	UNINFLATED RESERVE/SFG/YEAR							\$3.30												
	INFLATED RESERVE/SFG/YEAR							\$3.64												

AVG EUL: Average Expected Useful Life

EFF AGE: Effective Age

RUL: Remaining Useful Life

* - COST OMITTED: Work can be completed in-house or by an outside contractor at minimal cost.

** - COST OMITTED: Recommendation only.

*** - COST OMITTED: Tenant responsibility.

^ - COST OMITTED: Work already budgeted as part of Capital Program

Site systems

The sections that follow describe the major existing building systems and summarize their overall condition. For further detail, refer to the cost worksheets.

TOPOGRAPHY, DRAINAGE, AND FLOOD HAZARD



The building pad is generally flat but has been graded for drainage with gentle slopes outward from the building. Overall differences in elevation appears to be less than 4', however, several low concrete retaining walls, such as the one outside the south side of Expo Hall, are incorporated into the landscaping. The floor of the building is set above the elevation of the surrounding streets. Access from the Civic Center Drive street front entrances of each the buildings within the complex is via a symbolic stair up from the street. Stormwater drains via sheet-flow to the adjacent curbs and to a system of onsite catch basins which drain into the municipal system. Roof drains are piped underground and feed into the system.

The Subject, as is most of the downtown Mobile Business District, is located near the base of the local watershed approximately 1/3 mile from Mobile Bay. The flood hazard is considered to be moderate to low risk. The site is located in Flood Hazard Zone X (shaded) and Flood Zone X (unshaded) per FEMA Flood Insurance Rate Map Panel No. 01097C0558K dated March 17, 2010. Zone X (shaded) is the flood insurance rate zone defined as: Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. Zone X (unshaded) is defined as an area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level and outside the 5—year flood and protected by levee from 100-year flood. No Base Flood Elevations or depths are shown within this zone. Insurance purchase is not required in this zone according to FEMA. The survey shows a flood zone boundary line between Flood Zone X (shaded)/Flood Zone X (unshaded) running through part of the Arena, the northwest corner of the Theater and between the Arena and the Expo Hall.

Observations & Comments

A study of the site infrastructure is being performed by Driven Engineering. The findings of the independent study may affect the scope of any work needed within this FCA. Updates to the FCA may be required once the scope of services has been performed and the findings are disclosed.

The site and surrounding area are only few feet above the local water table. Storm drainage in the downtown area is reported to be generally slow during the regions many torrential rains when the system operates at capacity. Grade around the building perimeters seems to provide positive drainage away from the façade and building foundations. Storm water drainage from the site appears to be adequate with no areas of standing water or erosion observed during several site visits, however, management did report basins along Lawrence Street, scattered areas of the parking lot, and the brick paver courtyard between the Arena and Theater, have recurrent back-ups and seem to be slow draining. The stormwater system is believed to date from the original construction and be over 50 years old. The reported symptoms may be indicative of underground pipe collapses or restricted flow. Given the age of the system, and the scope of anticipated repairs a full camera inspection of the site stormwater system is recommended at this time to better inform the development of any repair scope.

The Subject predates passage of the Clean Water Act and today's much more stringent stormwater control and management environment. Significant sitework at the Subject is likely to trigger requirements for compliance with contemporary stormwater control standards. A civil engineer should be retained to perform a stormwater control code study at this time.

PAVEMENT, CURBING, LIGHTING, SIDEWALKS, FLATWORK, PARKING, LANDSCAPING

Vehicular pavements on site consist of asphalt drive lanes and parking surfaces with concrete pads at the Arena loading areas on the south side of the Building. Concrete curbs and gutters are provided on the pavement perimeters throughout.

The site south of the buildings, including the parking lot, is enclosed with a chain link fence. On-site parking for a total of 1,400 cars is reported. This count includes 400 spaces which have been leased as dedicated overflow parking for the Cruise Ship terminal that has been separately fenced off within the lot. Of the total 1,400 spaces provided, 26 are accessible spaces including 12 spaces on the southeast side serving the Arena/Theater and 14 spaces on the southwest side serving the Arena/Expo Hall.



Management reported that in the past auxiliary off-site parking in a state owned un-striped grass lot under the Interstate has provided some 300-400 overflow parking spaces, however this parking area was outside the scope of this report.

Vehicular entry to the Site is via three manually operated gates, including a main gate halfway near the center of the east side of the parking lot, another at the northeast corner, and one near the northwest corner of the parking lot. Another area within the parking lot has been fenced off with chain link fencing as Cruise Terminal Overflow Parking.

Walkways are primarily of cast-in-place concrete with areas of brick and precast pavers. Brick pavers are provided at the Arena passenger drop off on Civic Center Drive and brick pavers are provided at portions of the north/south walkway between the Arena and Theater. Walkways incorporate various concrete stairs and ramps.

Site lighting at Building entrances is provided by soffit or building-mounted fixtures. In addition to perimeter street lighting, site lighting is provided using a combination of decorative gas-lamps, an assortment of 15', 30' 45', and 90' lighting standards and a few flood lights mounted on wood poles. Additionally, the Arena dome is illuminated by roof mounted lighting standards. Landscaping utilizes a mix of grass side yards, trees, and foundation plantings as well as trees in tree wells at the parking lots. A landscape irrigation system is not provided. Site/ retaining walls include: raised stoops at many of the building entrances, raised masonry foundation planters along the north wall of the Arena; masonry screen walls at the south property line, loading docks, cooling tower and electrical substation enclosure.



Site amenities include two covered pedestrian walkways which extend into the parking lot, a display shed which houses a historic mule-pulled Street Car in the east yard of the Theater, a fountain in front of the Expo Hall building, and RV utility pedestals with water and power at portions of the parking lot. Other site improvements include a parking lot attendant booth, site entrance and directional signage, and a large pedestal sign located in the southeast corner of the site.

Observations & Comments

Site improvements generally date from the original construction in 1964 or the renovation of 1989. Some improvements were added at other times including the construction of the Expo Hall in 1973 and the erection of the Street Car display shed in 1969. Various repairs have also been made including asphalt patching and flatwork repairs.

Overall, improvements are generally either 53 or 28 years old and have long exceeded their expected useful lives. Some systems such as site lighting are in poor condition and exhibiting wiring and finish failures as well as obsolete fixturing. Many other systems including asphalt and flatwork are still functioning as intended with specific deficiencies, but are exhibiting advanced wear, cracks, and surface deterioration with increasing risks of failure. Additionally, access to address underground infrastructure including underground wiring and piping systems will require significant removals of surfacing systems as well. Conditions are such that extensive repairs and wholesale replacements of many of site systems will now be required and additional replacements of flatwork are anticipated during the reserve term.

The age of the asphalt paving is unknown but advanced. Deficiencies include faded striping, scattered cracks, root damage around tree wells including the curbing, potholes, numerous previously patched areas and past trenched areas, and eroded fines throughout. The paving has exceeded its EUL and many of the other site repairs are expected to require parking lot

excavation. Full depth asphalt paving replacement and re-striping will be required in conjunction with other site repairs including areas of concrete paving replacement, curbing replacement, and replacement and rewiring of site lighting throughout the complex in the short term, and ongoing pavement maintenance will be required during the reserve term.

Site planter walls, retaining walls, and stoops were generally observed to be in fair condition, however, loose caps and gaps and cracks in the mortar joints were observed in the masonry and are budgeted as part of the sidewall masonry repairs.

BUILDING SYSTEMS

SUBSTRUCTURE AND SUPERSTRUCTURE

Within the authorized scope of this survey, absolute determination of the foundation and structural framing systems was not possible. Although preliminary design documents were provided, CBRE had no access to certified as-built drawings, and did not perform destructive testing or invasive observations. Our non-invasive observations follow:

The Building is founded on a system of concrete piles and pile caps with grade beams, foundation walls, and grade supported concrete floor slabs. No sublevel is provided except for utility tunnels. A dirt floor crawl space is provided under the dressing/locker rooms and cast in place utility tunnels extend to the theater building and under the ice-making floor at the Arena. The superstructure is constructed of a steel-reinforced concrete frame, composed of cast in place concrete columns supporting concrete beams, concrete elevated floors, and roof decks. The dome is spanned with steel rib trusses with a center tensioning ring and pin connections at the concrete columns.



Observations & Comments

Of note, our documents search and review did not turn up a geotechnical report for the Subject, but the files are extensive and construction of this scale would typically require such a report.

Drawings indicate the presence of a moisture/ vapor barrier beneath the ground floor slabs, however, the type of foundation wall waterproofing system could not be determined based on the provided documents.

Missing, loose, detaching spall areas and exposed re-bar were observed at the underside of the projecting concrete canopies and the column supported covered parking lot walkways at the arena. Protective barriers have been erected at the east canopy location. Deteriorated areas at the undersides of the canopies/walkways should be sounded and deteriorated material removed down to sound substrates. Exposed re-bar should be wire brushed and repaired as necessary under the direction of a structural engineer. The affected areas should then be patched to match the existing concrete.

Aside from the issues referenced above, based on our representative areas of observation, the building did not reveal any other evidence of apparent structural distress. The building's foundation appears stable with no visible indications of adverse subsoil conditions such as subsidence. Our general observations of the rooflines and sidewalls revealed them to be level and plumb, respectively, to the unaided eye. Generally, the structural framing for the floors and roof, based on the areas surveyed, appeared to be generally in good condition. There were no excessive deflections noted that would affect the serviceability of the framing systems. No other significant expenditures beyond routine maintenance are anticipated for the Building structure and foundations during the evaluation term.

EXTERIOR WALLS, DOORS, LOADING DOCKS, WINDOWS AND ROOFING

The arena can be described as a 5-story drum topped with a domed roof. These are very powerful forms and are of a scale which establishes a real presence on the local skyline and were meant to be observed from a distance.

The auxiliary spaces which serve the arena are housed in a series of smaller 2-story spaces radiating out from that center around the periphery. The exterior sidewalls are primarily clad with brick veneer over a CMU back-up system that extends from grade to the top of the parapets. At the 5-story walls of the arena below the dome, which are not actually curved but consist of segmented straight sections of wall, the cast in place concrete columns are exposed and project out approximately 30" beyond the face of the brick. At the top of the wall, the concrete columns meet the parapet with a curbed ring that projects 6" to 8" beyond the face of the columns. This fascia ring and its soffit are clad with painted sheet metal panels and is approximately 8' high. The purpose of the projecting columns and soffits is to emphasize the scale and round geometry of the arena and conceal the segmentation of the masonry walls of which it is



constructed. In contrast, the 2-story walls of the auxiliary spaces are clad with unembellished brick and concealed structural members.

The experience of the building is different at the street front elevation where the drum and dome of the arena are set back far enough behind the deep lobby that they recede in perspective. The street front wall of the building essentially parallels the street with the 2-story porch that projects out toward the street above the raised plinth (platform) created by a stair up from street level. The lower half of the porch consists of a column arcade that supports a curved overhead wall. The columns of this arcade are clad with pink granite and the wall above is clad with EIFS (exterior insulation finish system) embellished with recessed horizontal reveals and neon lighting. The EIFS system and neon lighting reportedly date from the 1989 renovation.

On the parking lot side of the arena, two column-supported cast in place concrete entrance canopies extend out into the parking lot to the southeast and to the southwest. The canopies each terminate at a 2-story tower element, clad with brick and EIFS embellished with neon lighting. The EIFS system and neon lighting reportedly date from the 1989 renovation. Other public entrances around the building are protected by cantilevered cast in place concrete canopies on story above grade. Additional finishes include a painted open cell CMU screen wall around the exterior cooling tower enclosure.

Public entrances typically consist of aluminum framed glass storefront doors set into natural aluminum finished conventional storefront systems while service doors are of hollow metal. Windows, to the extent that they are provided, generally consist of conventional storefront glazing systems with aluminum frames. Storefront systems are single glazed with fixed inoperable lites. The exterior doors are manually operated; however, the main and employee entrances are equipped with automatic doors to provide an accessible route of travel.



Loading and unloading at the Arena is provided by two designated loading areas on the south side of the Building. On the southeast side, a single exterior truck height dock accessed via a motorized roll-up overhead door is provided for show loading and unloading. Additional direct drive-in access to the arena floor is provided by two vehicular entrances on the south side of the building. An additional exterior loading dock serves the commercial kitchen. That dock is also truck height and wide enough to accommodate two dock stations, one of which is currently used as a trash dock. Dock access is provided to the exterior platform by a single overhead roll-up door.

The building has multiple roof areas including a high visibility dome roof covered with a metal batten system. Aside from the dome, the other roofs are typically low pitch (flat imperceptibly pitched) and primarily covered with replacement mineral surfaced BUR systems installed over tapered insulation over concrete or lightweight concrete roof decks. There are also multiple small canopy roofs provided over public entrances that are covered by legacy gravel surfaced coal tar BUR systems. Additionally, the covered walkways that extend into the parking lots are covered with sloped concrete roof decks that are exposed to the sky and the towers at the ends of these walkways are covered with standing seam metal roofs in a hip roof configuration.



The tapered insulation provides slopes directing storm water to a system of roof drains and internal drain leaders that are piped down through the Building and below grade into the storm water management system. A system of secondary drainage tied to the municipal system is provided at the dome gutter roof. Brick parapet walls typically extend up past the roof plane around the perimeter at many of the street front facades, but also terminate as a combination of low curb wall roof edge details. The inboard surface of the parapet wall most typically consists of exposed brick masonry and are capped with a combination of replacement factory finished sheet metal or legacy cast stone copings. The roofing membrane typically returns up the inboard side of the parapet wall and terminates at a combination of replacement aluminum and legacy copper counter flashings. Rooftop appurtenances include: plumbing vents, exhaust and supply fans, lightning protection systems, RTU's mounted on curbs, retractable lighting standards. The Subject is not improved with fall protection or davit system.

The table below summarizes the roofs sections.

ROOF SCHEDULE						
Area	Location	Area (SF)	Type	Installed	Age	RUL
1	Arena Office & Service Areas	53,200	Torch Grade MS BUR	1998	19	3
2	Arena Dome	118,000	Metal Batten	1964	53	15
3	Dome Gutter	8,100	Torch Grade MS BUR	2003	14	0
4	Canopies	3,400	Coal Tar BUR	1964	53	0
5	Covered Walkways	4,800	Exposed Concrete Deck (Installation of a Traffic Deck Coating Is Now Recommended)	1964	53	0
6	Walkway Towers	500	Standing Seam	1989	28	22

Observations & Comments

The exterior sidewalls were found to be in fair condition with years of accrued deferred maintenance including areas of distressed brick, failed sealant joints, and EIFS systems that are cracked and have open joints. An assortment of sidewall repairs is required at this time to address deficiency conditions at brick masonry, parapets, steel lintels, sealants, and EIFS. Other systems, such as the storefront entry systems, have long exceeded their EUL’s, and should be replaced at this time. Other systems that will reach the end of their EUL’s during the term are budgeted as part of an ongoing program of capital repairs and maintenance during the reserve term.

The roofing systems vary from fair to poor, are nearing, or have reached the end of their EUL’s and are causing damage to the affected structure. A combination of replacements and repairs is required in the short term. Budgeting for an ongoing maintenance program and additional replacements is recommended during the term as systems reach their expected useful lives.

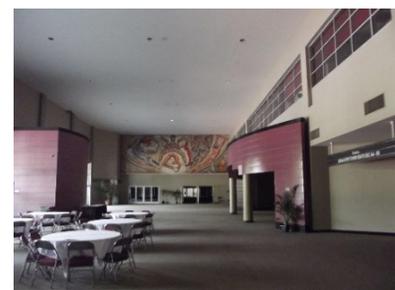
For the purposes of this Report, CBRE has included an estimate for full replacement with like kind materials, other restoration and replacements may be possible. It is likely a restoration or overlay can be completed at a significant cost savings. It is recommended an invasive roof assessment with moisture survey and test cuts be completed to determine the underlying conditions at the site. The assessment should be completed by a Registered Roof Consultant (RRC) and provided options for the repair, restoration and/or replacement of the roof systems.

At the time of roof replacement, it is recommended that a Registered Roof Consultant (RRC) or Architect be retained to provide design of the new system. The RRC will need to determine the specific design requirements to meet the minimum code requirements for the Authority Having Jurisdiction (AHJ). These requirements are unforeseen to CBRE and were not investigated as part of the scope of this Report. The design criteria, current building and energy code requirements may significantly impact the cost of the roof replacement/restoration.

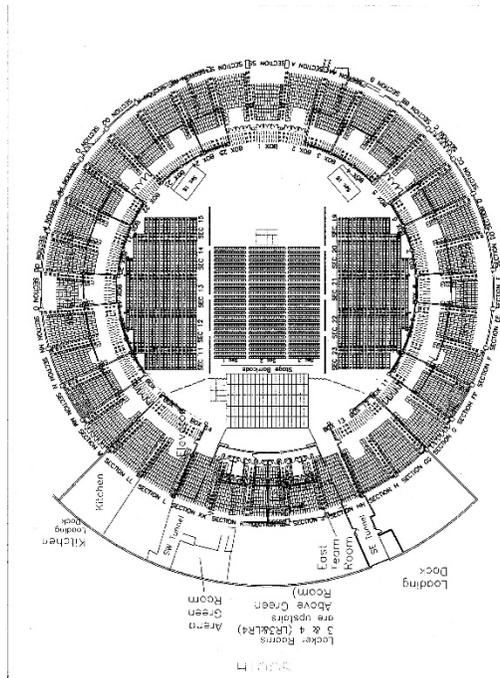
Many factors influence the choice of an appropriate roof system and will affect the final design of the new system. If requested, CBRE can provide recommendations to meet project specific design and budget requirements. Additionally, CBRE can prepare design documents and assist with quality assurance during installation of the new roof system(s).

INTERIORS: LOBBY & FRONT OF HOUSE, ASSEMBLY SPACE, TOILET ROOMS, BACKSTAGE / BACK OF HOUSE

A two-story lobby with ticket office and an adjacent security office serves the main entrance from Civic Center Drive. The lobby provides entry to the Arena straight ahead, as one enters via ground and second floor concourses that encircle the actual auditorium, which is round in plan. The upper level concourse is accessed via an escalator centered in the lobby or a single passenger elevator in an alcove to the right. The main lobby is internally connected to the Theater to the east and the Expo Hall to the west by the East and West Exhibit Halls respectively. Each of the Exhibit Halls can be set up as pre-function areas. The entrances to the Exhibit Halls from the main lobby are denoted by exuberantly colored soffit murals of ceramic mosaic tile themed on the early founders of Mobile’s carnival movement.



Civic Center offices located on the second floor overlook the lobby with a combination of windows and glass block. Lobby finishes include commercial carpet squares installed over the original terrazzo, with marble wainscot and painted gypsum or plaster walls and ceilings. Although the presence of terrazzo was not confirmed in these areas, the rest of the lobby finishes extend into the Exhibit Halls, which also have areas defined by dropped soffits and coffered ceilings.



A total of 6,046 fixed seats with access from the second floor Concourse are provided in the Arena area. Fixed seating is organized in 18 sections A-H, and J-S associated with a corresponding entrance from the Concourse and each section is subdivided into two subsections typically designated A and AA, or B and BB, etc. Access from the Upper Level Concourse to the auditorium is via a ramp that slopes up to an interior ring aisle near the front of the seating banks that extends around the full perimeter of the auditorium. The floor of the fixed seating banks is stepped at each seating row with the rows in front of the ring aisle stepping down and the rows behind the ring aisle stepping up. Access up and down each seating bank is via concrete stairs that incline in line with the seating rows. Seats are of metal and fabric construction. Each of the auditorium entrances is framed with reinforced concrete walls and guardrails. Finishes in the fixed seating areas consist of sealed concrete floors, painted concrete and CMU walls, and open overhead structure with smaller secondary areas of acoustic tile ceilings. Open cell acoustic CMU walls are provided at the perimeter and service booth walls. Overhead structure is painted out in black.

The ground floor of the Arena is accessed from the ground floor concourse. The floor at the grade level of the auditorium consists of a flat slab that can be set up for different shows or functions ranging from the circus, hockey or sporting events, or concerts using movable equipment. Vehicular access to the main Arena floor is provided by two “tunnels” with drive-in entrances; the southeast tunnel has an overhead clearance of 13’-6” and the southwest tunnel has an overhead clearance of 12’-6”.

Temporary seating for as many as 4,026 seats can be set up using folding chairs and two banks of telescoping seating platforms: East Sections 11-15 and West Sections 19-23. A small raised platform stage is provided against the ring wall on the side of the building, but can be expanded with a portable stage system to varied sizes or configurations as needed. With a stage configuration, seating sections GG through LL are typically taken out of service for the event. The stage can be semi enclosed and framed with stage and side curtains when desired. Arena finishes at this level consist of sealed concrete slab floor, open faced acoustic CMU at the perimeter ring wall, and open structure overhead. Overhead structure is painted out in black.

As mentioned, the Arena is accessed via the perimeter concourses at the ground and second floors. The concourses are vertically connected by monumental open stairs near the northeast corner of the management office suite and another at the southeast side of the building. The stairs are constructed with steel stringers and terrazzo treads and aluminum guardrails although the stair by the management offices has been covered with carpet. The stair at the southwest concourse was originally an open riser design but subsequently retrofitted to close the risers. The ground floor Concourse is finished with VCT installed over terrazzo, painted ceramic faced CMU and painted plaster walls and ceilings. Finishes at the 2nd floor Concourse are similar, but with legacy VCT floors and acoustic tiles set in a suspended metal grid at the ceilings. Interspersed along the concourses are concession stands, toilet rooms, meeting rooms, and emergency egress stairs.



A total of 15 meeting rooms are provided including rooms 1-6 along the Lower East Concourse and 7-12 along the Lower West Concourse. Meeting Rooms 14 and 15 are located off the south side of the West Exhibit Area and Meeting Room 16 is located off the south side of the East Exhibit Area. Meeting rooms are finished with commercial carpet installed over the original terrazzo, with painted plaster walls and acoustic tile ceilings.

A total of eight built-in concession stands including four on each level are provided and an additional mobile unit can be set up in the lobby using rolling equipment. The built-in concession stands typically consist of a 2-room set up including an outer serving station with Concourse serving window equipped with a roll-down security gates, and in inner work space screened from view with a partition. Concession stand finishes typically consist of 1" x 1" ceramic tile floors, painted ceramic faced CMU, and painted plaster ceilings. Fixtures include a hand wash sink, double basin sink, and a utility sink and local domestic hot water for each concession stand is typically provided by a single electric resistance water heater in the service rooms. Dumbwaiters are provided but have reportedly been abandoned in place for many years.

A suite of management offices is provided on the upper level overlooking the main lobby. Offices are finished with carpet, painted plaster or drywall walls, and acoustic tile ceilings. Service areas have VCT floors.

There are two pairs of public multi-user men's and women's toilet rooms on each floor, totaling four sets. The toilet rooms are equipped with floor-mounted toilets with automatic flushometers, wall-mounted flush-valve urinals, and wall mounted sinks. The stacked restrooms are all similar in nature. Toilet rooms are finished with 1" x 1" ceramic tile flooring, painted ceramic faced CMU walls, and painted plaster ceilings. Accessories typically consist of plate glass mirrors with an over sink shelf and plastic laminate toilet partitions. Lighting is provided by recessed ceiling-mounted fixtures. Additionally, smaller secondary toilet rooms are provided at the management office suite and various service areas.



Also provided are four "team" rooms (band or locker rooms) and 8 dressing rooms with private toilet/showers, and a Green Room, which are located on the south side of the building. Two team locker rooms are provided on each level. Provided fixtures include floor-mounted toilets with automatic flushometers at the lower level and wall mounted toilets at the upper level, wall-mounted flush-valve urinals, and wall mounted sinks. Bradley Wash Fountain showers are provided at the lower level locker rooms. Changing areas are finished with commercial carpet or VCT, ceramic block walls, and painted plaster or gypsum ceilings. Shower and toilet rooms are finished with 1" x 1" ceramic tile flooring, painted ceramic faced CMU walls, and painted plaster ceilings. Accessories include plate glass mirrors and powder coated metal toilet partitions.

Finishes at the dressing rooms consist of commercial carpeting, painted plaster or gypsum, and acoustic tile ceilings. The associated private toilet rooms are each equipped with floor mounted toilets, wall mounted sinks, and a built-in shower and are finished with ceramic tile floors and walls, and painted gypsum or plaster ceilings. Finishes at the Green Room consist of commercial carpeting, ceramic faced CMU, and acoustic tile ceilings.

The arena is also improved with a commercial kitchen located off the southwest "tunnel", which serves the entire complex. Finishes include painted concrete floors, painted ceramic faced CMU walls, and washable acoustic tile ceilings. The kitchen is equipped with range hoods and stainless-steel counters and fixtures including two walk-in coolers and a walk-in refrigerator. An additional walk-in cooler is provided at Room 14 behind the concession stand.

Many of the interstitial spaces under the stepped arena seating house building mechanical systems and storage areas. Finishes typically include vinyl tile or exposed concrete flooring; ceramic faced or unpainted CMU walls, and acoustical tiles in a suspended metal grid, or exposed structure at the ceilings. Of significance, much of the available storage space is on the upper level, with most of the portable equipment stored on the lower level.

Observations & Comments

Common area finishes generally date the last renovation in 1989 and are 28 years old with the expected wear and tear. Although generally still servicable, common area carpeting and painted concrete floor areas are stained, worn, and have a tired appearance. Finish upgrades of public areas and some support areas throughout are now required.

It is worth pointing out that many of the original finishes were chose for their extended life expectancies and high durability. These finishes included ceramic faced CMU walls and terrazzo flooring. In an apparent attempt to provide an updated appearance, the 1989 "face lift" installed material with much shorter life expectancies and less durable finishes over the more durable original finishes. Namely carpet, over the terrazzo flooring and paint over the cermaic faced CMU. The extent to which the more durable finishes remain in place is unclear since they are now largely concealed, but they can be seen in selective areas of the Arena Lobby and Lower Councouse. Further investigation may be warranted if restoration of these materials is to be considered as an option.

In any case, toilet rooms, locker rooms, and dressing rooms finishes are generally in poor condition with many of the plumbing, plumbing fixtures, and finishes dating from the original construction and in poor condition with deteriorated showers, shower drains, and recurrent plumbing leaks. Full gut renovations of these areas are now required as a priority item. The commercial kitchen likewise largely dates from the original construction and requires modernization.

SUPPLY AND WASTE PIPING AND DOMESTIC HOT WATER

Domestic water service enters the Arena below grade at the southwest side of the building. The meter and shut off valve are located in a pit in the southwest yard between the parking lot and building. The water service consists of a dedicated 6" black iron line. Water distribution within the complex is pressurized using street pressure. Piping is generally concealed, however, domestic water risers and laterals are reported to be copper and observed piping was consistent with that report. Water pressure and distribution is reportedly adequate for current building needs.

Sanitary waste and vent piping was observed and reported to consist of cast iron with copper waste lines provided at the Arena urinals. Waste in the building drains via gravity into the municipal system. Sump pumps are provided at the exterior by the west doors. An underground grease trap serving the commercial kitchen is located in the sideyard outside the commercial kitchen. Roof drainage for the flat roof areas is provided using roof drains connected to interior leaders with emergency overflow drainage provided by secondary drains. Interior leaders consist of cast iron with PVC replacements at elbows below many of the roof drains.

Natural gas serves the commercial kitchen and domestic water and heating boilers. Gas regulators and meters are located outside the areas they serve with observed locations outside the machine room, the ice making equipment room, and the commercial kitchen on the southwest side of the building. Natural gas piping was observed to be black steel.

Domestic hot water for the building is provided by two commercial quality gas-fired boilers located in the central plant machine room and individual electric water heaters located at the concession stands. The boilers were both manufactured by Raypack with rated capacities of 1,202,940 BTU/HR and 419,430 BTU/HR respectively, are connected to a pair of small circulating pumps and upright steel hot water storage tanks of unknown capacity. The units both date from a 1993 installation and are 24 years old. The individual water heaters vary in age and manufacturer. Hot water loop piping was noted to be insulated wherever observed. A listing of the equipment is provided in the exhibits.



Observations & Comments

Copper piping drain manifolds at arena urinals are reported to be major source of recurrent leaks on an annual basis and require opening tile/masonry walls as a result of inadequate access. Additionally, management reported and we observed numerous replacements of cast iron elbows at roof drains attributed to pipe rot at these locations.

Although no other systematic pipe failures were reported, building piping largely dates from the original construction and is 53 years old. Affected systems include domestic water, sanitary and vent lines, storm water, and fire protection and sprinkler piping. Untreated domestic water can be quite corrosive with significant impacts on domestic water and fire protection/sprinkler systems. Cast iron sanitary and vent piping has an EUL of 45 to 80 years and subject to internal corrosion. It becomes increasingly brittle and difficult to work with over time. Additionally, although the presence of galvanized steel piping was not reported, scattered areas of galvanized steel piping were observed. Galvanized steel piping has an EUL of 40 to 60 years that reduces flow volumes.

Specific deficiencies should also be addressed in the short term. Many of the toilet rooms have never been renovated and have now long exceeded their EUL's. Shower enclosures and bases are an issue to be addressed throughout the complex. Given the proportion of re-plumbing costs that are related to accessing piping concealed within the walls, it will be prudent to address piping issues in conjunction as wet areas of the building are renovated and given the age of the plumbing systems, significant re-re-piping may be required. We recommend an ultrasound or wall thickness testing as well as some destructive test cuts to determine the condition of key areas of the piping at this time. Additionally, we recommended budgeting for ongoing legacy piping replacements for the rest of the building across the reserve term.

HEATING, COOLING AND VENTILATION

Heating and cooling for the Arena is primarily provided by 36 AHU's equipped with hot and chilled water coils using hot and chilled water generated at the central plant. The AHU's include a mix of floor and ceiling mounted units. Many of the larger built-up type units are located in second floor mechanical rooms set under the inclined floor of the arena seating. Some smaller package type units are hung from overhead structure just inside the exterior sidewalls and accessed via catwalks for servicing. Most of the AHU's date from the original construction and are now 53 years old. Additional heating and cooling is provided by four RTU's located on the roof. Those units date from the 1989 renovation and are 28 years old.



Hot water for heating is generated by two gas-fired boilers at the central plant. The boilers each have rated capacities of 1,200,000 BTU/Hr., and were manufactured by Hurst. They are equipped with Hurst Burners that are original to the 2002 boiler replacement and are 15 years old. Hot water is distributed through the system via two primary, and two return/recirculating pumps. The system is complete with a heat recovery shell and tube type heat exchanger on the return line and a pair of condensate return pumps.

Chilled water for building cooling is generated by two chillers. Chiller No. 1 is a 500-ton, screw type unit which utilizes R-134A refrigerant, was manufactured by Carrier, is 15 years old and dates back to a 2002 replacement. Chiller No. 2 is a 400-ton centrifugal unit manufactured by Trane that utilizes R-123A refrigerant and dates from a 1997 replacement and is 20 years old. The equipment is located in the main machine room at the central plant. The system is complete with a pair of 75-HP chilled water pumps which distribute chilled water throughout the arena and a pair of 15-HP booster pumps which distribute chilled water to the Expo Hall. The system is complete with two air compressors and a small Ingersoll Rand R-134A refrigerant dryer.



Heat rejection is provided by three cooling towers located in a screened exterior mechanical enclosure outside the central plant machine room. The towers are all set in a shared concrete containment well covered by wood planking. The first two are a paired set with rated capacities of 400-tons each manufactured by Evapco which date from a 2011 replacement. The third tower has a rated capacity of 784 tons, was manufactured by Marley, and dates from a 2006 replacement. Water is circulated between the towers and chillers by a pair of 40-HP cooling tower loop pumps. The system is complete with a water treatment station inside the machine room. Water treatment services for the cooling tower loop are provided by AquaChem.

Heating and cooling equipment is powered from a motor control center manufactured by GE that dates from the original construction. The heating and cooling systems are controlled via pneumatic controls by a Metasys BMS version 5.2.5.10100 system by Johnson controls. The system uses the graphics package version 1.0.0.1220 and does not have an internet connection. A legacy Honeywell controller panel dating from the 1964 construction remains in place with numerous control lights that are still operating, however, staff reported no knowledge how that panel is tied into the current BMS system. A schedule of the main equipment is attached as an exhibit to this report.



Observations & Comments

The mechanical systems exhibit years of accrued deferred maintenance that has reached a point where significant pieces of mechanical equipment are inoperable and catastrophic failures of certain, still operable, systems can occur at any time. Specifically, the air conditioning system is increasingly at risk for rendering the building un-usable for contracted events. Certain systems, including most of the AHU's, the pneumatic control system, chilled and hot water piping, and the motor control system, date from the original construction and are 53 years old. Legacy coils at the AHU's are in poor condition and condensate pans are severely corroded. The pneumatic control system valves have rusted out and the system shows evidence of systematic past failures. Parts are no longer available for the motor control center. Chilled and hot water piping systems are reported to have systematic problems which are most likely attributable to a combination of age and

the years of operation without an effective water treatment program. Although some major mechanical equipment has previously been replaced, rooftop package units dating from the 1989 renovation are all inoperable and the BMS system is more than 20 years old and at the end of its useful life. Other systems including chillers, cooling towers, and pumps are all mid-life cycle with a mixture of deficiencies. A major mechanical modernization program is required in the short term and additional equipment should be budgeted for replacement during the term as life cycles are realized.

The existing chillers are 15 and 20 years old and functioning as intended. Chillers can have a life expectancy of approximately 35 years provided they are properly maintained including a mid-life overhaul. Although the chillers are now of an age where significant advances in design efficiency have been achieved since they were manufactured, those improvements have been partially offset by reduced efficiencies of currently recommended refrigerants. Many building owners are currently choosing to continue operating equipment of this age in the hope of major advances in efficiency with the development of the next generation of refrigerants in coming years.



Overall, the cooling towers are 8 and 11 years old and in fair condition. Diligent maintenance including water treatment is required to prevent premature replacement of the towers. We understand that the general history of the property is that water treatment has not been provided. That includes both the closed loop systems and the cooling towers, but that water treatment was adopted in recent years when accelerated deterioration was observed at the towers. From the interviews, we were able to conduct, it was unclear if the last cycle of cooling tower replacements were required by that deterioration or if accelerated deterioration was observed after the towers were newly installed. In any case, the units are still relatively young and functioning as intended. Although we were not able to observe the underside of the

panels due to the shared well configuration, none of the typical problems were observed by our limited survey such as “bleeding,” damaged fill, or an excessively corroded pan. Given its age, an overhaul of the unit is recommended during the term. If proper preventive maintenance is exercised with proper overhauls, the units should provide approximately another 20 years of service before they realize their typical expected useful lives according to the American Society of Heating and Air Conditioning Engineers. Besides preventive maintenance, there are other factors which impact the condition of cooling towers, such as the quality of the surrounding air and the amount of use or operation. Essentially, a cooling tower “washes” or scrubs the air and any pollutants, dust, insects, etc. are then washed out of the air and into the water. Such pollutants along with other airborne particles have a corrosive effect on the tower.

In the 1970s, scientific researchers traced a deadly outbreak of the so-called Legionnaire’s Disease (legionella bacteria) to a cooling tower with an open basin and louver design. Evidently, the legionella bacteria flourished within the basin, and airborne bacteria entered the building’s fresh air intake louvers. Keeping the cooling tower water treated and free of harmful bacteria along with maintaining a proper distance from any fresh air intake louver should be adhered to as a precautionary measure. This need was emphasized by a more recent larger outbreak of Legionella in New York in 2014/2015.

As of June 2015, a new set of national guidelines was put together by ASHRAE along with CDC and the Cooling Tower Institute, the ASHRAE 188-2015 standard (Legionellosis: Risk Management for Building Water Systems). Among other requirements all building cooling towers need to be tested weekly by building personnel and the results from the water treatment company must include free chlorine levels so as to provide confirmation of the biocide program. Working within ASHRAE 188 is considered ‘good practice’ and is not a law. This is considered an operational expense and no costs are included. CBRE was not engaged to provide services for the inspection, testing or treatment of the cooling tower system. Of note, CBRE was not provided copies of the current testing, cleaning or maintenance records.

IN-FLOOR ICE SYSTEM

The arena is improved with an in-slab ice making system in the auditorium floor utilizing a brine of ice water and Calcium Chloride. The original design included such a system, but it is believed to have been value engineered out of the original construction. Our escorts reported that the system in place dates from a 1995 installation to secure a minor league expansion hockey team (Mobile Mysticks based in Mobile 1995-2002) when the original auditorium slab was removed and refrigerant piping was cast into a replacement slab. Prior to that installation, the facility hosted ice events including the Ice Capades and Disney on Ice using temporary ice making rigs. The events basically traveled with mobile chillers mounted on tractor trailers parked outside the building and rubber refrigerant tubing was set down on top of the existing floor slab. This temporary method of ice-making is probably no longer cost effective given that there are competitive permanent ice making installations in both Biloxi and Pensacola.

The existing in-slab refrigerant system is concealed and not available for direct observation. As described to us, it consists of PVC refrigerant piping cast into the floor slab. The system is fed from 8" main distribution lines that are run through a 3' to 4' high pipe tunnel that runs under the center of the auditorium. The main distribution lines and possibly the manifolds from the distribution lines to the in-slab refrigerant grid are reported to consist of steel piping.

Chilled water for ice-making is generated by a single chiller: a 212-ton unit manufactured by Cimco Lewis which is in a dedicated mechanical room on the southeast side of the building. The chiller that dates from a 1995 installation, is 22 years old and utilizes R-22 refrigerant. The unit has three compressors. Circulation pumps for the chiller were not observed. Heat rejection for the system is not currently provided and was previously provided by a single 258-ton cooling tower manufactured by Evapco. The unit was located in the cooling tower enclosure outside the Arena central plant. The unit was relocated to dunnage on the Theater backstage roof and is being used to provide heat rejection for that building. The cooling tower was reported to have been relocated to its present location and use, approximately 3-4 years ago. The unit dates from a 1995 replacement and is 22 years old. Circulation pumps for the previous cooling tower were not observed. Additionally, provided as part of the equipment for the ice making plant, are a pair of water softener tanks and two gas-fired hot water heaters which generated domestic hot water for use in the Zamboni ice maintenance machine. The water heaters have 100 gallon capacities each and were manufactured by A.O. Smith.

Observations & Comments

The ice making system was in regular use during the Mysticks home team tenure in the building which drew 5,000 people per game, but the system fell into only periodic use when they relocated to Georgia in 2002. Brine solutions are highly corrosive and corrosion issues quickly developed in the steel portions of the system and the corroded material started to flake, delaminate, and create obstructions in the in-slab piping. The system was last used in 2011 for a Disney on Ice show and \$100,000 in repairs was spent attempting to address soft/wet spots in the ice field to as a result of the obstructions to meet contract obligations for the show. The system was abandoned in place when that show closed without draining the brine solution from the chiller or the in-slab piping system. The Zamboni was subsequently sold off and refrigerants are reported to have been removed from the chiller. The cooling tower was relocated and repurposed approximately 3-4 years ago to serve the Theater Building. At this time, full replacement of the system would have to be assumed if ice-making capability is to be provided.

ELECTRICAL SERVICE, METERING, DISTRIBUTION AND EMERGENCY POWER

The primary electric service is provided to the arena central plant underground from an on-site Alabama Power substation next the exterior cooling tower enclosure on the south side of the building. Each connection is 277/480 volts, 3-phase, 4-wire. Main disconnect switches consist of two 4,000-amp, two 1,600-amp, and one 1,200-amp sections serving different areas of the complex. The main switchgear is located in one corner of the central plant. A second individually metered site service is provided overhead to serve utility pedestals provided along the south property line. Distribution panels are provided throughout the facility and range in capacity from 100-amps to 400-amps. Voltage is stepped down via dry-type transformers located in close proximity to the distribution panels.



Emergency electrical power for emergency lighting is provided by a single diesel-fired emergency generator manufactured by Onan. The unit is located in the main machine room of the central plant and has a capacity rating of 50 kW, 3-phase service and has a 100-gallon belly tank. The unit dates from a 1996 installation and is 21 years old. The unit is maintained by the City Garage staff and is exercised weekly, but our escort indicated SMG has no knowledge of the schedule for PM's and load bank testing.

Observations & Comments

The main switchgear is original to the building and 53 years old. Many of the electric transformers and distribution panels are also original to the building and have exceeded their EUL's and most of the others are advanced in age. Although still functioning as intended, breaker switches/replacement parts are no longer available. Budgeting for a replacement/parts salvage program is recommended.

The emergency generator appeared to be in good condition and well maintained. Based on EUL we recommend refurbishment/ overhaul of the emergency generator during the reserve term. In addition, generator load bank testing, and infrared surveys of the major electrical equipment should be performed on an annual basis.

FIRE SPRINKLER, STANDPIPES, EMERGENCY EGRESS AND FIRE ALARMS

Fire protection is primarily provided by wall mounted fire extinguishers and a wet standpipe system. A partial fire sprinkler system provides limited coverage in backstage storage areas and the commercial kitchen. An Ansul system is also provided at range hoods. Piping is black iron with mechanical couplings utilized for connecting larger pipe sizes, and threaded couplings for the smaller sizes. Manual fire extinguishers were observed throughout the building. Fire detection is provided by a zoned fire alarm system that is monitored by a central station. The system utilizes a Harrington HS-2101 fire alarm control panel located in the central plant machine room which supervises smoke detectors, duct detectors, pull stations, horn/strobe devices, tamper and flow switches, magnetic release doors, kitchen hood systems, and a mechanical shut-down. A Silent Knight communications panel was also observed.



Vertical circulation is provided by three sets of open stairs; (two at the lobby and one at the southeast concourse) and eight fire rated stairs located around the perimeter. Stairs are constructed of concrete with steel pans. The fire rated stairwells are utilized primarily for emergency egress and open to the building exterior.

Observations & Comments

The fire sprinkler and fire alarm systems were working as intended at the time of our survey. No leaks in the standpipe or fire sprinkler systems were reported or observed. Inspection tags at the fire extinguishers were found to be current and the



Ansul system at the commercial kitchen is inspected on a bi-annual basis in January and July. The fire alarm control panel is obsolete, is no longer supported by the manufacturer and the parts are currently being obtained through the salvage market. The fire alarm system is suspect and if it becomes inoperable, the building will have to operate under a manual fire watch. Modernization of the panel and devices is recommended as an immediate priority. Ongoing inspections and maintenance will be required going forward.

A survey of in-place sprinkler heads was beyond the scope of work, however, no heads recently subject to recall were observed in the spares cabinet. Management did report that sprinkler heads at the theater were replaced several years ago, but it was unknown if this was in response to a recall or other issue.

PARKING GARAGES AND UNDERBUILDING PARKING

The Subject is without any parking garages or underbuilding parking.

ELEVATORS

Vertical circulation is provided by two hydraulic elevators, including a single passenger elevator and a single freight elevator. Additionally, a single reversible escalator is provided in the main lobby and serves as the primary vertical transportation to the second floor. The reversible function maximizes traffic flow as crowds assemble and disperse for events. The unit was manufactured by Montgomery Escalator in 1964 and refurbished in 2006.



The passenger elevator is located to the right side of the main lobby as one enters the building. The unit has a rated capacity of 2,500-lbs and was manufactured by Montgomery Elevator. It was added to provide access for persons with disabilities to the second floor as part of the 1989 renovation and is now 28 years old. The unit has not been the recipient of any upgrades. The controls and motors are located in a second-floor equipment room. Cab finishes consist of commercial carpet flooring, plastic laminate wall panels, stainless-steel control panels and plastic egg crate ceilings.

The freight elevator is located on the north side of the building near the commercial kitchen loading dock and is designed with a grade level machine room. The unit was manufactured by Montgomery Elevator, has a rated capacity of 8,000-lbs, and provides food service access to the second level. The unit is equipped with a pair of manually operated vertical opening doors. The unit dates from the original construction in 1964 and is 54 years old. Other than replacement of a safety door within the last year or two at a cost of \$10,000, the elevator has not been modernized. Cab finishes consist of a diamond plate steel floor, painted steel panel side panels and an open mesh ceiling. The equipment is reportedly maintained under service agreements. It was reported that Kone maintains the elevators and Otis maintains the escalator.

The table below summarizes the equipment observed.

ELEVATOR SCHEDULE						Installed	Refurbished
Car Number	Type	Drive	Stops	Capacity (lbs)	Speed (fpm)		
Car 1	Freight	Hydraulic	2	8,000	N/A	1964	None
Car 2	Passenger	Hydraulic	2	2,500	N/A	1989	None
Escalator	Passenger	Reversible	2	2,500	N/A	1964	2006

Observations & Comments

Overall, the elevators were considered to be in fair, but serviceable condition and are currently under a service contract with Kone Elevators. The escalator was also found in fair condition and under a service agreement with Otis Elevator. The building mainly relies on the use of stairs and the escalator to access the upper level for access to most of the arena seating areas. Although this was not reported as an issue, this seems inadequate. Typically, service contracts provide for routine replacement of parts or equipment which fail while the contract is in force, therefore, ongoing maintenance should be

covered within the service contracts. The rides we took aligned properly, operated smoothly and are without excessive vibration. Based on EUL modernization of elevator motors and controls is anticipated later in the reserve term.

We contacted Kone Elevator and spoke with elevator technician Kerry Dupree about the condition of the equipment. Mr. Dupree reported the equipment to be in serviceable condition. He indicated that the installation of brushes had been recommended at the escalator, but, a proposal for that work had not been accepted. He expressed the belief that the jack at the hydraulic elevator dates from the 1964 construction and was not aware of any past replacement although he also reported no leak issues at the piston. Elevator cab finishes were considered to be in fair condition, however, finish replacements are recommended.

AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act of 1990 (ADA) is a Federal law that became effective on January 26, 1992, this act was amended by the ADA Amendments Act of 2008 (ADAAA). As defined under Title III of the ADA, existing facilities considered to be “public accommodations” must take steps to remove architectural and communication barriers that are deemed “readily achievable” under the retroactive requirements. The term “readily achievable” is somewhat subjective. New case law is always developing as to its interpretation. Our walk-through survey for ADA general compliance included only a limited scope visual review with respect to the Subject’s compliance with Title III of the ADA in compliance with the ASTM guideline presented in ASTM E 2018-15. CBRE did not take any measurements or counts as part of this survey. The scope of our survey was limited to the determination of general compliance with physical attributes of the property, which affect exterior access to the building: accessible exterior route, accessible parking, entrances, etc. While some of CBRE’s comments regard the reported or observed accessibility of common area interior spaces, such as toilet facilities, we did not specifically evaluate each and every area as part of our walk-through survey; only representative observations were conducted. The decision as to which actions are to be undertaken as “readily achievable” is to be determined by building ownership in consultation with its accountants, attorneys, and design/construction professionals.

Based on conducting a limited scope visual survey, we did observe barriers. Costs have been included in the Opinions of ADA Modifications.

ACRONYMS AND DEFINITIONS

This FCA uses various acronyms and abbreviations to describe site, building, or system components. Not all acronyms or abbreviations are applicable to every FCA. Refer to the definitions below.

Acronym	Definition	Acronym	Definition
ABA	Architectural Barriers Act		
ABS	Acrylonitrile Butadiene Styrene	HVAC	Heating, Ventilating and Air Conditioning
ACM	Asbestos Containing Material	IAQ	Indoor Air Quality
ADA	Americans with Disabilities Act	IBC	International Building Code
ADAAG	ADA Accessibility Guidelines	ICC	International Code Council
AHU	Air Handling Unit	LED	Light Emitting Diode
Amp	Ampere	LEED	Leadership in Energy and Environmental Design
ASTM	American Society for Testing and Materials	LF	Linear Feet
ACT	Acoustical Ceiling Tile	LS	Lump Sum
AVG	Average	MAP	HUD Multifamily Accelerated Processing
BMS	Building Management System	MAU	Makeup Air Unit
BOMA	Building Owners and Managers Association	MBH	Thousands of British Thermal Units
BTU	British Thermal Unit	MD	Man Day
BTUH	British Thermal Units per Hour	MDP	Main Distribution Panel
BUR	Built-up Roofing	MEP	Mechanical, Electrical and Plumbing
CAV	Constant Air Volume	MRL	Machine Room-Less (Elevator)
CBS	Concrete Block and Stucco	NFPA	National Fire Protection Association
CD	Crew Day	NLA	Net Leasable Area
CMU	Concrete Masonry Unit	OSB	Oriented Strand Board
CO	Certificate of Occupancy	OS&Y	Outside Screw and Yoke
CO	Change Order	OWJ	Open Web Joist
CO/ALR	Copper to Aluminum, Revised	PCA	Property Condition Assessment
CPVC	Chlorinated Polyvinyl Chloride	PCR	Property Condition Report
DWH	Domestic Water Heater	PML	Probable Maximum Loss
DWV	Drainage, Waste and Vent	PSI	Pounds per Square Inch
DX	Direct Expansion	PTAC	Packaged Terminal Air Conditioner
EA	Each	PVC	Polyvinyl Chloride
EFF	Effective	RPZ	Reduced Pressure Zone
EIFS	Exterior Insulation and Finish System	RTU	Rooftop Unit
EMF	Electromagnetic Field	RUL	Remaining Useful Life
EMS	Energy Management System	SEL	Scenario Expected Loss
EPDM	Ethylene Propylene Diene Monomer	SF	Square Feet
EUL	Expected Useful Life	SFG	Square Foot Gross
FCU	Fan Coil Unit	SFR	Square Foot Rentable
FEMA	Federal Emergency Management Agency	SOG	Slab-on-Grade
FFHA	Federal Fair Housing Act	STC	Sound Transmission Classification
FHA	Forced Hot Air	SUL	Scenario Upper Loss
FHW	Forced Hot Water	TPO	Thermoplastic Polyolefin
FIRM	Flood Insurance Rate Map	UBC	Uniform Building Code
FM	Factory Mutual	UFAS	Uniform Federal Accessibility Standards
FOIA	Freedom of Information Act	UL	Underwriters Laboratories
FOIL	Freedom of Information Letter	V	Volt
FRP	Fiber Reinforced Panel	VAV	Variable Air Volume
FRT	Fire Retardant Treated	VCT	Vinyl Composition Tile
GFCI	Ground Fault Circuit Interrupter (or GFI)	VWC	Vinyl Wall Covering
GFRC	Glass Fiber Reinforced Concrete	W	Watt
GLA	Gross Leasable Area		
GPM	Gallons Per Minute		
GWB	Gypsum Wall Board		
HID	High Intensity Discharge		
HUD	U.S. Department of Housing and Urban Development		

EXHIBITS

This supplement to the report entitled “Facility Condition Assessment, Draft, City of Mobile, NTP-PL220-16, Facility No: 201, Civic Center Arena dated September 15, 2017 summarizes the findings of an assessment of the existing utility infrastructure at the Mobile Civic Center.

The public and utility infrastructure surrounding the Civic Center consists of water, sewer, gas, electrical power, and telephone and internet. The providers are as follows:

Water and Sewer:	MAWSS
Electrical Power:	Alabama Power
Gas:	Spire Inc. (formerly Mobile Gas)
Internet and Telephone:	ATT
Stormwater:	City of Mobile

WATER AND SEWER

The site is serviced by a 10-inch watermain, 16-inch watermain and a 12-inch sewer main in addition to smaller mains located within the Civic Center parking area. The site’s existing daily average water usage and sewer load is 20,000 gallons per day. Additional capacity for both the water and sewer is 100,000 gallons per day that would be considered sufficient for urban uses such as retail, restaurants, hotels and high density residential development that would be considered compatible to the downtown area.

Relocation of the existing water and sewer lines are subject to the ultimate use and configuration of any new development or additional structures on the existing site. It is estimated the cost of utility relocation(s) are approximately \$1,000,000.

ELECTRICAL POWER

The site is served by two (2) 23 kv power lines. There is sufficient capacity for most alternate uses that would be considered for this site such as retail, restaurants, hotels and high density residential development that would be considered compatible to the downtown area. If a third redundancy is required, the operator will be required to fund the effort.





GAS

The site has numerous gas lines surrounding the site in sizes that range from 4-inch to 16-inch. There is sufficient capacity for most alternate uses that would be considered for this site such as retail, restaurants, hotels and high density residential development that would be considered compatible to the downtown area. .

INTERNET AND TELEPHONE

Internet and telephone providers are ATT, among others. Current data transmission speeds for ATT are 10 Mbps which would be considered slow by most standards. High speed internet if required can be routed to the site by various providers.

STORMWATER

The site generally drains to the north and south. The northern portion of the site discharges to a 24" stormwater culvert at Civic Center Drive and connects to a four (4) foot high seven (7) foot wide culvert at Government Street and ultimately discharges to the Mobile River near Government Street. This pipe is near capacity during small rainfall events and has no additional capacity available.

The southern portion of the site discharges to a 27" culvert at Canal Street and ultimately discharges through a four (4) foot six (6) inch high eight (8) foot wide culvert at the Mobile River at Canal Street. This pipe is over capacity during small rainfall events and has no additional capacity available.

The City of Mobile uses a 1984 existing development as a benchmark for mitigation of additional runoff from development activities. Since this site was developed prior to 1984, it may qualify for limited to nil stormwater runoff mitigation. However, because the offsite municipal underground system is over capacity and the area is generally known for flooding issues, some level of scrutiny may be employed for any proposed changes to the system or changes in land use. Given the site is near 100% impervious, it is doubtful any redevelopment for alternate uses would generate any additional rainfall.

This supplement to the report entitled "Facility Condition Assessment, Draft, City of Mobile, NTP-PL220-16, Facility No: 201, Civic Center Arena dated September 15, 2017 details the findings of an assessment of the water and waste water infrastructure at the Mobile Civic Center. The results of the assessment indicate there is sufficient capacity in the sewer system for similar site use and additional system capacity of at least 100,000 gallons per day.

The Civic Center site lies within an old subdivision shown on early 1900's maps. At that time Mobile had functioning water and sewer system. The water and sewer infrastructure remain in its original alignments and are functioning. In addition to the water and sewer lines, gas lines also exist in these old alignments. No underground electrical lines were found within the old roadways which would be consistent with Mobile's large amount of overhead electrical lines.

Within the site's perimeter roads are moderately sized infrastructure consisting of a four (4) inch, eight (8) inch and 16-inch gas main(s), 10 inch and 16 inch water mains and 12 inch sanitary sewer mains. A 16" water main and 12" sewer main as well as various smaller mains are interior to the site within the old road alignments south of the Civic Center buildings. The existing utility infrastructure that surrounds the site is sufficient to accommodate existing uses and additional urban uses such as retail, restaurants, hotels and high density residential development that would be considered compatible to the downtown area.

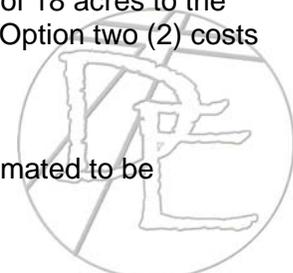
The 12" sewer line and 16" water line are located just south of the existing Civic Center buildings and then turn south just east of the apparent north-south centerline of the site. To provide a future development area within the existing confines of the entire site, the 12" sewer line and 16" water line will be required to be relocated.

The 16" waterline that operates under pressure and the realignment is subject to ultimate development schemes and costs. Budget cost of relocation is estimated to be \$400,000 to \$600,000 depending on ultimate locations of the alignment and impacts to existing surface and underground infrastructure. Demolition costs are estimated to be \$70,000.

The 12" sewer line operates with no pressure and relies on some amount fall from upstream to downstream. Relocating this sewer to the perimeter of the site would lessen this fall and could diminish the capacity of the main or have an increased rate of maintenance. Discussions with the utility provider have indicated a lift station would not be an acceptable solution due to operational and maintenance costs.

Two (2) generally acceptable options are likely available to lessen the existing encumbrances. Option one (1) would be to extend the sewer along its existing east west alignment to Claiborne Street. This option would require a up to a 50-foot easement centered on the sewer line which would be incorporated in to a green space for ground level activities providing for two (2) distinct development spaces of 12 acres to the north and nine (9) acres to the south. Option two (2) bisects the site diagonally with the same easement requirements allowing redevelopment spaces of 18 acres to the north and 3 acres to the south. Option one (1) cost are estimated to be \$170,00. Option two (2) costs are estimated to be \$340,000. Demolition costs are estimated to be \$50,000

Estimated relocation and demolition costs for both water and sewer mains are estimated to be \$1,000,000.



This supplement to the report entitled “Facility Condition Assessment, Draft, City of Mobile, NTP-PL220-16, Facility No: 201, Civic Center Arena dated September 15, 2017 summarizes the findings of an assessment of the existing utility infrastructure at the Mobile Civic Center.

The public and utility infrastructure surrounding the Civic Center consists of water, sewer, gas, electrical power, and telephone and internet. The providers are as follows:

Water and Sewer:	MAWSS
Electrical Power:	Alabama Power
Gas:	Spire Inc. (formerly Mobile Gas)
Internet and Telephone:	ATT
Stormwater:	City of Mobile

WATER AND SEWER

The site is serviced by a 10-inch watermain, 16-inch watermain and a 12-inch sewer main in addition to smaller mains located within the Civic Center parking area. The site’s existing daily average water usage and sewer load is 20,000 gallons per day. Additional capacity for both the water and sewer is 100,000 gallons per day that would be considered sufficient for urban uses such as retail, restaurants, hotels and high density residential development that would be considered compatible to the downtown area.

Relocation of the existing water and sewer lines are subject to the ultimate use and configuration of any new development or additional structures on the existing site. It is estimated the cost of utility relocation(s) are approximately \$1,000,000.

ELECTRICAL POWER

The site is served by two (2) 23 kv power lines. There is sufficient capacity for most alternate uses that would be considered for this site such as retail, restaurants, hotels and high density residential development that would be considered compatible to the downtown area. If a third redundancy is required, the operator will be required to fund the effort.





GAS

The site has numerous gas lines surrounding the site in sizes that range from 4-inch to 16-inch. There is sufficient capacity for most alternate uses that would be considered for this site such as retail, restaurants, hotels and high density residential development that would be considered compatible to the downtown area. .

INTERNET AND TELEPHONE

Internet and telephone providers are ATT, among others. Current data transmission speeds for ATT are 10 Mbps which would be considered slow by most standards. High speed internet if required can be routed to the site by various providers.

STORMWATER

The site generally drains to the north and south. The northern portion of the site discharges to a 24" stormwater culvert at Civic Center Drive and connects to a four (4) foot high seven (7) foot wide culvert at Government Street and ultimately discharges to the Mobile River near Government Street. This pipe is near capacity during small rainfall events and has no additional capacity available.

The southern portion of the site discharges to a 27" culvert at Canal Street and ultimately discharges through a four (4) foot six (6) inch high eight (8) foot wide culvert at the Mobile River at Canal Street. This pipe is over capacity during small rainfall events and has no additional capacity available.

The City of Mobile uses a 1984 existing development as a benchmark for mitigation of additional runoff from development activities. Since this site was developed prior to 1984, it may qualify for limited to nil stormwater runoff mitigation. However, because the offsite municipal underground system is over capacity and the area is generally known for flooding issues, some level of scrutiny may be employed for any proposed changes to the system or changes in land use. Given the site is near 100% impervious, it is doubtful any redevelopment for alternate uses would generate any additional rainfall.

This supplement to the report entitled “Facility Condition Assessment, Draft, City of Mobile, NTP-PL220-16, Facility No: 201, Civic Center Arena dated September 15, 2017 details the findings of an assessment of the stormwater infrastructure at the Mobile Civic Center. The results of the assessment indicate there is no additional capacity in the onsite or offsite stormwater system.

The Civic Center site lies within flood zone “x” as shown on flood map number 01097C0566K, dated 3/17/2010. The flood zone designation is defined as “*areas determined to be outside 500-year floodplain determined to be outside the 1% (100 year) and 0.2% (500 year) annual chance floodplains*”.

The site is generally drained via surface flows and underground drainage. The underground drainage system is generally sufficient to provide drainage for very low-level rainfalls. Anything greater will pond and eventually flow on to the perimeter streets. Some ponding occurring where a landscape area was converted to parking has no drainage and is trapped until evaporation dries the area. Internal to the building, an atrium area has ongoing drainage issues that are generally due to low areas that can be regraded to the existing catch basin with the area.

The Civic Center stormwater drainage consists of a series of at grade catch basins and stormwater pipes that ultimately discharge to the municipal system located in Civic Center Drive at the northern portion of the site and in Canal Street located at the southern portion of the site. Using commonly used rainfall data and the Ration Method, the total site runoff to the municipal system is as follows:

NORTH SITE CATCHMENT					
2 Year	5 Year	10 Year	25 Year	50 Year	100 Year
24 cfs	31 cfs	35 cfs	38 cfs	43 cfs	47 cfs

SOUTH SITE CATCHMENT					
2 Year	5 Year	10 Year	25 Year	50 Year	100 Year
71 cfs	89 cfs	103 cfs	112 cfs	126 cfs	137 cfs

The northern system accounts for approximately 18% of the flows from the site. It discharges to a 24” stormwater culvert at Civic Center Drive and connects to a four (4) foot high seven (7) foot wide culvert at Government Street and ultimately discharges to the Mobile River near Government Street. In addition to the runoff from on-site sources, the contributing off-site catchment generates an additional flow amount generally equal to the onsite flows. These combined flows are approximately 51 cfs for the two (2) year event as compared to a surcharged pipe capacity of approximately 68 cfs. No analysis was made to determine backwater effect that could impact the pipe ability to convey the runoff from the site.

The southern system accounts for approximately 82% of the flow from the site. It discharges to a 27” culvert at Canal Street and ultimately discharges through a four (4) foot six (6) inch high eight (8) foot wide culvert at the Mobile River at Canal Street. In addition to the runoff from on-site sources, the contributing offsite catchment generates an additional flow amount of 136 cfs. These combined flows are approximately 207cfs for the two (2) year event as compared to a surcharged pipe capacity of approximately 75 cfs. No analysis was made to determine backwater effect that could impact the pipe ability to convey the runoff from the site.



The City of Mobile uses a 1984 existing development as a benchmark for mitigation of additional runoff from development activities. Since this site was developed prior to 1984, it may qualify for limited to nil stormwater runoff mitigation. However, because the offsite municipal underground system is over capacity and the area is generally known for flooding issues, some level of scrutiny may be employed for any proposed changes to the system or changes in land use. Given the site is near 100% impervious, it is doubtful any redevelopment for alternate uses would generate any additional rainfall.

This supplement to the report entitled "Facility Condition Assessment, Draft, City of Mobile, NTP-PL220-16, Facility No: 201, Civic Center Arena dated September 15, 2017 details the findings of a pavement inspection conducted at the Mobile Civic Center.

A pavement inspection of the parking areas was conducted from October 18, 2017 to October 27, 2017 to assess the condition of the existing asphalt pavement. Methods used were taken from ASTM 6433, Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys, and MOT SP-024, Manual for Condition of Flexible Pavements Distress Manifestations. 320 observations were documented over 85 individual locations. Observations specifically assessed raveling and aggregate loss, rippling and shoving, wheel track rutting, distortion, longitudinal cracking, transverse cracking, asphalt joint cracking, and alligator cracking. No level of service assessment was conducted or a substantiation of useful life for the pavement. For purposes of this report a standard 15-year useful life will be used. However, this will be reduced to 10 years based on site drainage and routine maintenance.

Each observation was assigned a numeric score based on the severity and density of the distress. The numeric score was then compared to the standard ASTM PCI rating (Figure 1) and graphed (Figure 2) to relate the aggregate PCI to near term and long-term restoration activities.

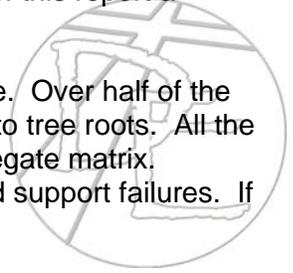
The findings indicate fifty four percent of the pavement condition is from poor to pavement this is considered failed. Thirty seven percent of the pavement is in fair condition. However, much of this pavement will begin to deteriorate more rapidly in the near term than experienced previously. Nine (9) percent of the pavement can be considered in satisfactory to good condition. A majority of the distress type were aggregate loss / polished aggregate and cracking. Portions of the pavement showed signs of inadequate drainage which will decrease the overall useful life likely requiring increased maintenance or premature resurfacing.

It can be expected ten to twenty percent of the pavement has failed structurally will require full depth rebuilding. The remainder of the asphalt can be overlaid. If pavement restoration is not conducted with the next two (2) years, most of the pavement will be in the poor to failed condition rating. It can be expected full depth restoration as a percentage will increase with associated cost increases. If the existing use of the facility is expected to continue, it is recommended that structural repairs to the underlying base materials take place and one hundred percent of the asphalt be replaced with the next two (2) years..

Condition inspections were also conducted of the concrete curbing and sidewalks. Observations specifically assessed structurally failed concrete and concrete that has lost its surface matrix exposing the concrete aggregate.

Over half of the concrete sidewalks surrounding the site have signs of structural failure. These failures are related to tree roots and failed base support. No level of service assessment was conducted or a substantiation of useful life for the concrete sidewalks and curbing. For purposes of this report a standard 30-year useful life will be used.

Based on available data most of the concrete is near or has exceeded its useful life. Over half of the concrete curbing around the tree wells have failed. Much of this can be attributed to tree roots. All the concrete shows signs of loss of the surface concrete exposing the concrete / aggregate matrix. Concrete sidewalks that have structural failures are mainly due to underling ground support failures. If





the existing use of the facility is expected to continue, it is recommended that structural repairs to the underlying base materials take place and one hundred percent of the concrete sidewalks and concrete curb be replaced within the next three (3) years.

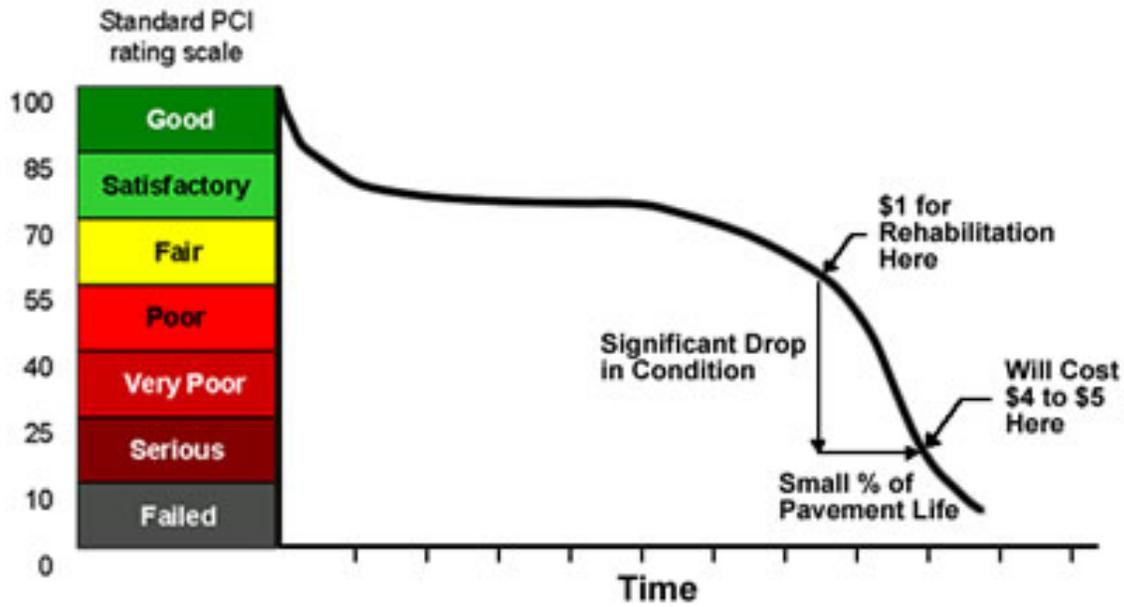


Figure 1

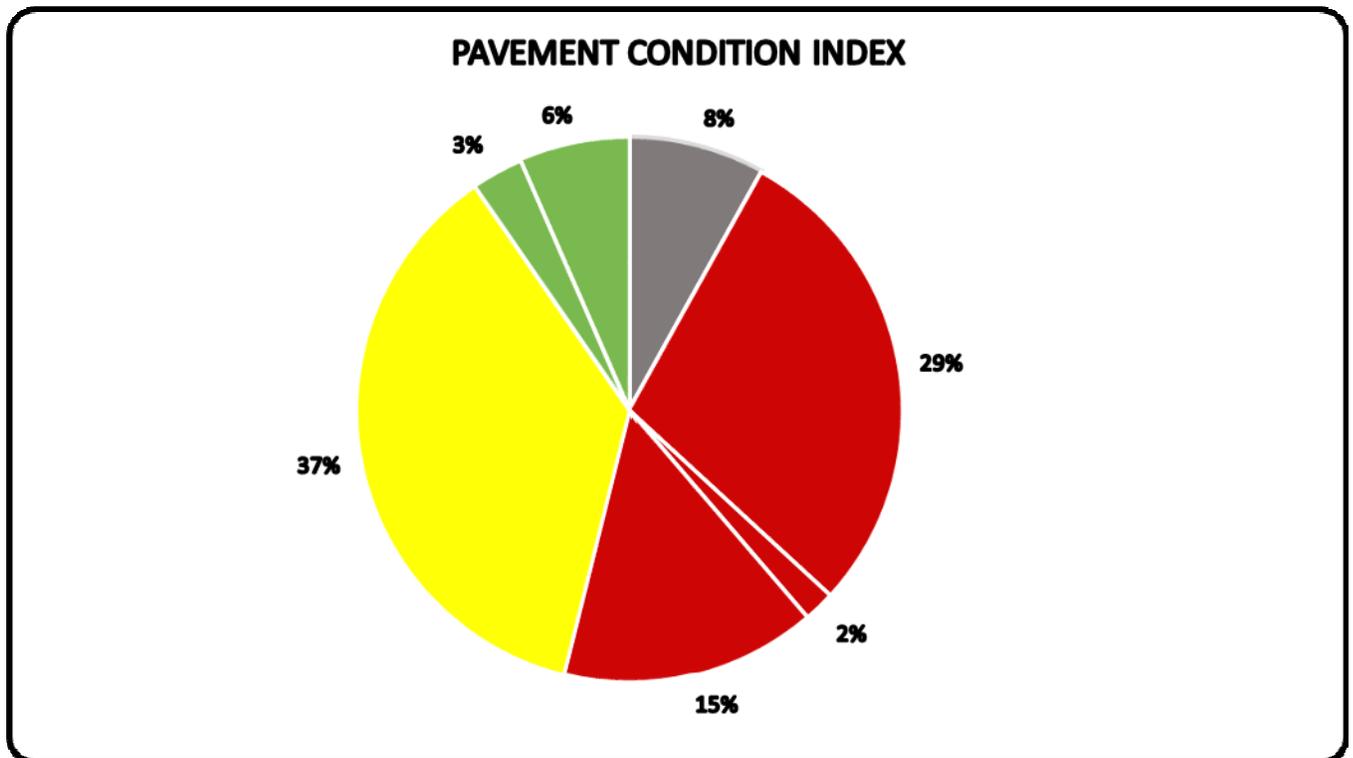


Figure 2



Maintenance costs for a ten (10) year term have been assessed for the concrete works and asphalt pavement if the replacement recommendations are accepted. Maintenance includes reactive and planned maintenance work activities. Planned activities are as follows:

- Annual maintenance will consist of cleaning and crack sealing. Keeping pavement free of debris and sealing cracks and joints annually will help prevent standing water that can cause damage for both concrete and asphalt.
- 5 Year Maintenance will consist of annual maintenance plus seal coat for 4 the asphalt.

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
\$9,000	\$9,000	\$9,000	\$9,000	\$85,000	\$9,000	\$9,000	\$9,000	\$9,000	\$85,000

16062
18 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION	5											
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
		ALLIGATOR	7	✓					✓				
	CENTRE LINE	SINGLE AND MULTIPLE	8		✓								✓
		ALLIGATOR	9	✓					✓				
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
		ALLIGATOR	11										
	TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓	
		ALLIGATOR	13										
	LONGITUDINAL MEANDER AND MIDLANE		14										
	RANDOM		15										

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AGILE 10 LANE 2 PKG 1 - GI - EXCESSIVE RAVELING

AREA 1 - AGILE 10 LANE 2, AGILE 9 LANE 1

16062
18 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL, 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %																	
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH													
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100													
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓																					
	FLUSHING	2																							
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3																							
	WHEEL TRACK RUTTING	4																							
	DISTORTION	5																							
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6																						
		ALLIGATOR	7	✓						✓															
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓																				
		ALLIGATOR	9	✓						✓															
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10																						
		ALLIGATOR	11																						
	TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓																			
		ALLIGATOR	13																				✓		
	LONGITUDINAL MEANDER AND MIDLANE		14																						
	RANDOM		15																						

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 2 — AISLE 10 LANE 2, AISLE 7 LANE 1

16062
18 OCT 12

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
	GOOD
6	COMFORTABLE
	FAIR
4	UNCOMFORTABLE
	POOR
2	VERY ROUGH AND BUMPY
	VERY POOR
0	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	EXTENT OF OCCURRENCE, %				
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7	✓				✓				
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							
		ALLIGATOR	9	✓				✓				✓
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM		15									

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 3 - AISLE 10 LANE 2, AISLE 9 LANE 1

16062
18 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %						
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH		
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100		
			1	2	3	4	5	1	2	3	4	5		
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓	
	FLUSHING	2												
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3												
	WHEEL TRACK RUTTING	4												
	DISTORTION	5												
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6											
		ALLIGATOR	7	✓					✓					
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓									✓
		ALLIGATOR	9	✓					✓					
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10											
		ALLIGATOR	11											
	TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓							✓	
		ALLIGATOR	13											
	LONGITUDINAL MEANDER AND MIDLANE		14											
	RANDOM		15											

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 4

16062
18 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION	5											
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6											
	ALLIGATOR	7	✓					✓					
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓									✓
	ALLIGATOR	9	✓					✓					
PAVEMENT EDGE	SINGLE AND MULTIPLE	10											
	ALLIGATOR	11											
TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓							✓	
	ALLIGATOR	13											
LONGITUDINAL MEANDER AND MIDLANE		14											
RANDOM		15											

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 6

16062
20 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMME, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %						
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH		
			1	2	3	4	5	< 10 1	10-20 2	20-50 3	50-80 4	80-100 5		
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓
	FLUSHING	2												
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3												
	WHEEL TRACK RUTTING	4												
	DISTORTION	5												
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6												
	ALLIGATOR	7	✓						✓					
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓										✓
	ALLIGATOR	9	✓						✓					
PAVEMENT EDGE	SINGLE AND MULTIPLE	10												
	ALLIGATOR	11												
TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓								✓	
	ALLIGATOR	13												
LONGITUDINAL MEANDER AND MIDLANE RANDOM		14												
		15												

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 7

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

16062
2008117

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
GOOD	
6	COMFORTABLE
FAIR	
4	UNCOMFORTABLE
POOR	
2	VERY ROUGH AND BUMPY
VERY POOR	
0	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7	✓					✓				
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9	✓					✓				
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓	
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM		15										

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA B

16062
20 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	EXTENT OF OCCURRENCE, %				
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7	✓				✓				
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							
		ALLIGATOR	9	✓				✓				
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM		15									

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 9

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

16062
20 Oct 17

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SEVERE	VERY SEVERE	FEW < 10	INTERMITTENT 10-20	FREQUENT 20-50	EXTENSIVE 50-80	THROUGH 80-100
PAVEMENT			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOving	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7	✓				✓				
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							✓
		ALLIGATOR	9	✓				✓				
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM		15									

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

ARGA 10

16062
2000117

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

- 10 EXCELLENT
- 8 SMOOTH AND PLEASANT
- GOOD
- 6 COMFORTABLE
- FAIR
- 4 UNCOMFORTABLE
- POOR
- 2 VERY ROUGH AND BUMPY
- VERY POOR
- 0 DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	EXTENT OF OCCURRENCE, %				
PAVEMENT												
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7	✓					✓				
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9	✓					✓				
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓	
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM		15										

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 11

16062
23 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	FAIR
2	POOR
0	VERY POOR
	DANGEROUS AT 80 KM/H

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7	✓				✓				
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							
		ALLIGATOR	9	✓				✓				✓
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM		15									

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

ASILE 8 LANE 1 ASILE 7 LANE 2
ASILE 8 LANE 1 PARKING SPACE 7

SERVING DEFORMATION 1 HOUR TIME

AREA 12

16062
2306417

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	EXTENT OF OCCURRENCE, %				
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7	✓				✓				
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							
		ALLIGATOR	9	✓				✓				
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13			✓						✓
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM		15									

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

FORM 13

16067
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	EXTENT OF OCCURRENCE, %				
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOving	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7	✓					✓			
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							
		ALLIGATOR	9	✓					✓			
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM		15									

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 141

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

16062
23 OCT 17

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

- 10 EXCELLENT
- 8 SMOOTH AND PLEASANT
- GOOD
- 6 COMFORTABLE
- FAIR
- 4 UNCOMFORTABLE
- POOR
- 2 VERY ROUGH AND BUMPY
- VERY POOR
- 0 DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7	✓					✓				
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9	✓					✓				
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓	
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM		15										

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

Area 16

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

16062
23 OCT 11

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7	✓				✓				
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							
		ALLIGATOR	9	✓				✓				
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM		15									

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

16062
2306117

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %						
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH		
			1	2	3	4	5	< 10 1	10-20 2	20-50 3	50-80 4	80-100 5		
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓
	FLUSHING	2												
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3												
	WHEEL TRACK RUTTING	4												
	DISTORTION	5												
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6												
	ALLIGATOR	7	✓						✓					
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓										✓
	ALLIGATOR	9	✓						✓					
PAVEMENT EDGE	SINGLE AND MULTIPLE	10												
	ALLIGATOR	11												
TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓								✓	
	ALLIGATOR	13												
LONGITUDINAL MEANDER AND MIDLANE		14												
RANDOM		15												

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PONDING

AREA 18

16022
23 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %						
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH		
			1	2	3	4	5	< 10 1	10-20 2	20-50 3	50-80 4	80-100 5		
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓
	FLUSHING	2												
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3												
	WHEEL TRACK RUTTING	4												
	DISTORTION <i>TAXI ROOTS</i>	5					✓	✓						
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6												
	ALLIGATOR	7	✓					✓						
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓										✓
	ALLIGATOR	9	✓					✓						
PAVEMENT EDGE	SINGLE AND MULTIPLE	10												
	ALLIGATOR	11												
TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓								✓	
	ALLIGATOR	13												
CRACKING	LONGITUDINAL MEANDER AND MIDLANE	14												
	RANDOM	15												

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 19

16002
2300117

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION <i>TRAIL ROOTS</i>	5	✓					✓				
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7	✓					✓				
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9	✓					✓				
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12			✓						✓	
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM		15										

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

HEAVY EQUIPMENT DAMAGE TO ASPHALT SURFACE

Area 20

16062
25 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION <i>Tree Roots</i>	5	✓					✓				
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7										
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM <i>MAI³ CRACKING</i>		15		✓				✓				

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 21

16062
23 Dec 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %							
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH			
			1	2	3	4	5	< 10 1	10-20 2	20-50 3	50-80 4	80-100 5			
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓	
	FLUSHING	2													
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3													
	WHEEL TRACK RUTTING	4													
	DISTORTION	5													
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6												
		ALLIGATOR	7												
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓										✓
		ALLIGATOR	9												
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10												
		ALLIGATOR	11												
	TRANSVERSE	HALF, FULL AND MULTIPLE	12												
		ALLIGATOR	13												
	LONGITUDINAL MEANDER AND MIDLANE		14												
	RANDOM	<i>MAP CRACKING</i>	15		✓										✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 22

16062
23 Dec 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SEVERE	VERY SEVERE	FEW < 10	INTERMITTENT 10-20	FREQUENT 20-50	EXTENSIVE 50-80	THROUGH 80-100
PAVEMENT			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION <i>Tree Roots</i>	5		✓				✓				
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7										
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM <i>Map Cracking</i>		15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

16062
23 Dec 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7										
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM <i>MAP CRACKLINE</i>		15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 25

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

16062
25 OCT 17

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

- 10 EXCELLENT
- 8 SMOOTH AND PLEASANT
- 6 GOOD
- 4 FAIR
- 2 UNCOMFORTABLE
- 0 POOR
- VERY ROUGH AND BUMPY
- VERY POOR
- DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	EXTENT OF OCCURRENCE, %				
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION <i>TREX ROAD</i>	5	✓					✓				
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7										
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9	✓					✓				
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM		15										

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

POUNTS

AREA 26

16062
25 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7										
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM		15										

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 27

16062
25 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SEVERE	VERY SEVERE	FEW < 10	INTERMITTENT 10-20	FREQUENT 20-50	EXTENSIVE 50-80	THROUGH 80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							✓
		ALLIGATOR	9		✓				✓			
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM		15									

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

Positive

16062
2500417

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
9	SMOOTH AND PLEASANT
8	GOOD
7	COMFORTABLE
6	FAIR
5	UNCOMFORTABLE
4	POOR
3	VERY ROUGH AND BUMPY
2	VERY POOR
1	DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							
		ALLIGATOR	9									
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM		15									

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

A25A 29

16062
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
9	SMOOTH AND PLEASANT
8	GOOD
7	COMFORTABLE
6	FAIR
5	UNCOMFORTABLE
4	POOR
3	VERY ROUGH AND BUMPY
2	VERY POOR
1	DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
								< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION	5											
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
		ALLIGATOR	7										
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8	✓									
		ALLIGATOR	9										✓
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
		ALLIGATOR	11										
	TRANSVERSE	HALF, FULL AND MULTIPLE	12										
		ALLIGATOR	13										
	LONGITUDINAL MEANDER AND MIDLANE		14										
	RANDOM	MAP CRACKING	15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 3D

16062
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SEVERE	VERY SEVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOving	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION	5											
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6											
	ALLIGATOR	7											
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓									✓
	ALLIGATOR	9											
PAVEMENT EDGE	SINGLE AND MULTIPLE	10											
	ALLIGATOR	11											
TRANSVERSE	HALF, FULL AND MULTIPLE	12											
	ALLIGATOR	13											
LONGITUDINAL MEANDER AND MIDLANE		14											
RANDOM	<i>MAP CRACKING</i>	15		✓									✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PONDING

AREA 31

16062
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW < 10	INTERMITTENT 10-20	FREQUENT 20-50	EXTENSIVE 50-80	THROUGH 80-100	
PAVEMENT			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓	
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOVING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION	5											
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
		ALLIGATOR	7										
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
		ALLIGATOR	9										
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
		ALLIGATOR	11										
	TRANSVERSE	HALF, FULL AND MULTIPLE	12										
		ALLIGATOR	13										
	LONGITUDINAL MEANDER AND MIDLANE		14										
	RANDOM	MAP CRACKING	15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PONDING

AREA 32

16062
25 Oct 14

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOving	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION <i>Tree Roots</i>	5					✓	✓				
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7		✓				✓				
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM		15										

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

Ponding

AREA 34

16062
25 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %							
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH			
								< 10	10-20	20-50	50-80	80-100			
1	2	3	4	5	1	2	3	4	5						
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓	
	FLUSHING	2													
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3													
	WHEEL TRACK RUTTING	4													
	DISTORTION <i>Tree Roots</i>	5				✓	✓								
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6												
		ALLIGATOR	7												
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓										✓
		ALLIGATOR	9												
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10												
		ALLIGATOR	11												
	TRANSVERSE	HALF, FULL AND MULTIPLE	12												
		ALLIGATOR	13												
	LONGITUDINAL MEANDER AND MIDLANE		14												
	RANDOM		15												

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 35

16062
250017

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOVIING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION	5											
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
		ALLIGATOR	7		✓						✓		
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8										
		ALLIGATOR	9			✓							✓
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
		ALLIGATOR	11										
	TRANSVERSE	HALF, FULL AND MULTIPLE	12										
		ALLIGATOR	13										
	LONGITUDINAL MEANDER AND MIDLANE		14										
	RANDOM		15										

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PENDING

AREA 37

16062
25 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION <i>Tree Roots</i>	5			✓			✓				
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7										
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM		15										

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 38

16062
23 Oct 14

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
GOOD	
6	COMFORTABLE
FAIR	
4	UNCOMFORTABLE
POOR	
2	VERY ROUGH AND BUMPY
VERY POOR	
0	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓	
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOVIING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION	5											
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
		ALLIGATOR	7										
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
		ALLIGATOR	9										
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
		ALLIGATOR	11										
	TRANSVERSE	HALF, FULL AND MULTIPLE	12										
		ALLIGATOR	13										
	LONGITUDINAL MEANDER AND MIDLANE		14										
	RANDOM MAN CRACKING		15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 39

16060
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							
		ALLIGATOR	9									
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM	Major Cracking	15		✓							✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 40

16062
23 Dec 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %							
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH			
			1	2	3	4	5	< 10 1	10-20 2	20-50 3	50-80 4	80-100 5			
PAVEMENT															
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓	
	FLUSHING	2													
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3													
	WHEEL TRACK RUTTING	4													
	DISTORTION	5													
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6												
		ALLIGATOR	7												
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓										✓
		ALLIGATOR	9												
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10												
		ALLIGATOR	11												
	TRANSVERSE	HALF, FULL AND MULTIPLE	12												
		ALLIGATOR	13												
	LONGITUDINAL MEANDER AND MIDLANE		14												
	RANDOM	<i>MAP CRACKING</i>	15		✓										✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 42

16062
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %						
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH		
			1	2	3	4	5	< 10 1	10-20 2	20-50 3	50-80 4	80-100 5		
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓
	FLUSHING	2												
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3												
	WHEEL TRACK RUTTING	4												
	DISTORTION	5												
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6												
	ALLIGATOR	7		✓					✓					
CENTRE LINE LINE	SINGLE AND MULTIPLE	8												
	ALLIGATOR	9												
PAVEMENT EDGE	SINGLE AND MULTIPLE	10												
	ALLIGATOR	11												
TRANSVERSE	HALF, FULL AND MULTIPLE	12												
	ALLIGATOR	13												
LONGITUDINAL MEANDER AND MIDLANE		14												
RANDOM	<i>N/A CRACKING</i>	15		✓										✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 43

16062
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10 **EXCELLENT**
SMOOTH AND PLEASANT
8 **GOOD**
COMFORTABLE
6 **FAIR**
UNCOMFORTABLE
4 **POOR**
VERY ROUGH AND BUMPY
2 **VERY POOR**
DANGEROUS AT 80 KM/H
0

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION <i>TRIA ROOT</i>	5			✓			✓				
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7										
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓						✓		
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM	<i>MOJ CRACKING</i>	15		✓							✓	

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 44

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %													
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH									
								< 10	10-20	20-50	50-80	80-100									
1	2	3	4	5	1	2	3	4	5												
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓																	
	FLUSHING	2																			
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3																			
	WHEEL TRACK RUTTING	4																			
	DISTORTION <i>TREE ROOT</i>	5		✓				✓													
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6																			
	ALLIGATOR	7																			
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓																	
	ALLIGATOR	9																			
PAVEMENT EDGE	SINGLE AND MULTIPLE	10																			
	ALLIGATOR	11																			
TRANSVERSE	HALF, FULL AND MULTIPLE	12																			
	ALLIGATOR	13																			
LONGITUDINAL MEANDER AND MIDLANE		14																			
RANDOM <i>MAP CRACKING</i>		15		✓																	

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 45

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %						
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH		
			1	2	3	4	5	< 10 1	10-20 2	20-50 3	50-80 4	80-100 5		
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓
	FLUSHING	2												
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3												
	WHEEL TRACK RUTTING	4												
	DISTORTION	5												
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6												
	ALLIGATOR	7												
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓										
	ALLIGATOR	9									✓			
PAVEMENT EDGE	SINGLE AND MULTIPLE	10												
	ALLIGATOR	11												
TRANSVERSE	HALF, FULL AND MULTIPLE	12												
	ALLIGATOR	13												
LONGITUDINAL MEANDER AND MIDLANE		14												
RANDOM	<i>MAP CRACKING</i>	15		✓							✓			

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA H6

16062
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %							
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH			
								< 10	10-20	20-50	50-80	80-100			
1	2	3	4	5	1	2	3	4	5						
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓	
	FLUSHING	2													
SURFACE DEFORMATIONS	RIPPLING AND SHOVIING	3													
	WHEEL TRACK RUTTING	4													
	DISTORTION	5													
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6		✓				✓						
		ALLIGATOR	7												
	CENTRE LINE	SINGLE AND MULTIPLE	8		✓										✓
		ALLIGATOR	9	✓					✓						
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10												
		ALLIGATOR	11												
	TRANSVERSE	HALF, FULL AND MULTIPLE	12												
		ALLIGATOR	13												
	LONGITUDINAL MEANDER AND MIDLANE		14												
	RANDOM	<i>Major CRACKING</i>	15		✓										✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

Patch Work < 10%

AREA 49

1606a
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION <i>Trail Routs</i>	5	✓					✓				
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7										
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓				✓				
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM <i>MAP CRACKING</i>		15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PATCH W/GRK < 10%

AREA 50

16062

23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %												
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH								
			1	2	3	4	5	< 10 1	10-20 2	20-50 3	50-80 4	80-100 5								
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓																
	FLUSHING	2																		
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3																		
	WHEEL TRACK RUTTING	4																		
	DISTORTION	5																		
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6																		
	ALLIGATOR	7																		
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓						✓										
	ALLIGATOR	9	✓							✓										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10																		
	ALLIGATOR	11																		
TRANSVERSE	HALF, FULL AND MULTIPLE	12																		
	ALLIGATOR	13																		
LONGITUDINAL MEANDER AND MIDLANE		14																		
RANDOM	<i>MAP CRACKING</i>	15		✓																

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 52

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							
		ALLIGATOR	9									
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM	<i>MAP CRACKING</i>	15		✓							✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 52

16062

24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION <i>TREE ROOTS</i>	5	✓	-				✓					
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6											
	ALLIGATOR	7											
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓									✓
	ALLIGATOR	9											
PAVEMENT EDGE	SINGLE AND MULTIPLE	10											
	ALLIGATOR	11											
TRANSVERSE	HALF, FULL AND MULTIPLE	12											
	ALLIGATOR	13											
LONGITUDINAL MEANDER AND MIDLANE		14											
RANDOM	<i>Map Cracking</i>	15		✓									✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

POTHOLE WORK < 10%

AREA 54

16062

24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
	SMOOTH AND PLEASANT
8	GOOD
	COMFORTABLE
6	FAIR
	UNCOMFORTABLE
4	POOR
	VERY ROUGH AND BUMPY
2	VERY POOR
	DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7										
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM		15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 55

16062

24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
	SMOOTH AND PLEASANT
8	GOOD
	COMFORTABLE
6	FAIR
	UNCOMFORTABLE
4	POOR
	VERY ROUGH AND BUMPY
2	VERY POOR
	DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓	
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION	5											
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
		ALLIGATOR	7										
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓								✓
		ALLIGATOR	9										
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
		ALLIGATOR	11										
	TRANSVERSE	HALF, FULL AND MULTIPLE	12										
		ALLIGATOR	13										
	LONGITUDINAL MEANDER AND MIDLANE		14										
	RANDOM	<i>MAP CRACKING</i>	15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 56

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE	SINGLE AND MULTIPLE	8		✓				✓			
		ALLIGATOR	9									
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM	Map CRACKING	15		✓							✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PATCH WORK < 10%

AREA 58

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION <i>TRUCK ROOL</i>	5		✓				✓					
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6											
	ALLIGATOR	7											
CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓									✓
	ALLIGATOR	9											
PAVEMENT EDGE	SINGLE AND MULTIPLE	10											
	ALLIGATOR	11											
TRANSVERSE	HALF, FULL AND MULTIPLE	12											
	ALLIGATOR	13											
CRACKING	LONGITUDINAL MEANDER AND MIDLANE	14											
	RANDOM <i>MAP CRACKING</i>	15		✓									✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 60

16062
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %							
			VERY SLIGHT	SLIGHT	MODERATE	SEVERE	VERY SEVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH			
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100			
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓											
	FLUSHING	2													✓
SURFACE DEFORMATIONS	RIPPLING AND SHOving	3													
	WHEEL TRACK RUTTING	4													
	DISTORTION	5													
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6		✓										
		ALLIGATOR	7	✓						✓					
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8			✓					✓				
		ALLIGATOR	9												
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10												
		ALLIGATOR	11												
	TRANSVERSE	HALF, FULL AND MULTIPLE	12												
		ALLIGATOR	13												
	LONGITUDINAL MEANDER AND MIDLANE		14												
	RANDOM	MAJ CRACKING	15	✓											✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

DATA WORK < 10%

AREA 61

16062
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
	ALLIGATOR	7										
CENTRE LINE LINE	SINGLE AND MULTIPLE	8	✓					✓				
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12										
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM	MAP CRACKING	15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 62

16062
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %								
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH				
								< 10	10-20	20-50	50-80	80-100				
1	2	3	4	5	1	2	3	4	5							
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓												
	FLUSHING	2													✓	
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3														
	WHEEL TRACK RUTTING	4														
	DISTORTION <i>TREE ROOT</i>	5	✓					✓								
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6													
		ALLIGATOR	7													
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8	✓					✓							
		ALLIGATOR	9													
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10													
		ALLIGATOR	11													
	TRANSVERSE	HALF, FULL AND MULTIPLE	12													
		ALLIGATOR	13													
	LONGITUDINAL MEANDER AND MIDLANE		14													
	RANDOM	<i>MAP CRACKING</i>	15	✓											✓	

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 64

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
								< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION <i>TRIP ROAD</i>	5	✓					✓					
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6											
	ALLIGATOR	7											
CENTRE LINE LINE	SINGLE AND MULTIPLE	8	✓						✓				
	ALLIGATOR	9	✓					✓					
PAVEMENT EDGE	SINGLE AND MULTIPLE	10											
	ALLIGATOR	11											
TRANSVERSE	HALF, FULL AND MULTIPLE	12											
	ALLIGATOR	13											
LONGITUDINAL MEANDER AND MIDLANE		14											
RANDOM <i>MAP CRACKING</i>		15		✓									✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

POOR WORK < 10

AREA 65 AISLE 3 & AISLE 2

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
	SMOOTH AND PLEASANT
8	GOOD
	COMFORTABLE
6	FAIR
	UNCOMFORTABLE
4	POOR
	VERY ROUGH AND BUMPY
2	VERY POOR
	DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8	✓					✓			
		ALLIGATOR	9	✓					✓			
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM		15	✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PONDING

AREA 66

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %						
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH		
			1	2	3	4	5	< 10 1	10-20 2	20-50 3	50-80 4	80-100 5		
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓
	FLUSHING	2												
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3												
	WHEEL TRACK RUTTING	4												
	DISTORTION <i>TREE ROOT</i>	5	✓					✓						
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6											
		ALLIGATOR	7											
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8	✓					✓					
		ALLIGATOR	9											
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10											
		ALLIGATOR	11											
	TRANSVERSE	HALF, FULL AND MULTIPLE	12											
		ALLIGATOR	13											
	LONGITUDINAL MEANDER AND MIDLANE		14											
	RANDOM <i>MAP CRACKING</i>		15	✓										✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PATCH WORK < 10%

AREA 67

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOving	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8	✓					✓			
		ALLIGATOR	9									
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM	11 AP CRACKING	15		✓							✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 72

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

16062
23 Oct 17

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	FAIR
2	POOR
0	VERY POOR
	DANGEROUS AT 80 KM/H

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION <i>TREK ROOT</i>	5			✓			✓				
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6		✓								
	ALLIGATOR	7									✓	
CENTRE LINE LINE	SINGLE AND MULTIPLE	8										
	ALLIGATOR	9										
PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
	ALLIGATOR	11										
TRANSVERSE	HALF, FULL AND MULTIPLE	12	✓					✓				
	ALLIGATOR	13										
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM <i>Map Cracking</i>		15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 73

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

16062
23 Oct 17

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SEVERE	VERY SEVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							✓
		ALLIGATOR	9									
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM	MAP CRACKING	15		✓							✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PAVEMENT WORK < 10%

AREA 75

16062
23 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL, 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5										
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓							✓
		ALLIGATOR	9		✓					✓		
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM	MAP CRACKING	15		✓							✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PONDING

AREA 76

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
9	SMOOTH AND PLEASANT
8	GOOD
7	COMFORTABLE
6	FAIR
5	UNCOMFORTABLE
4	POOR
3	VERY ROUGH AND BUMPY
2	VERY POOR
1	DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5		✓				✓				
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE	SINGLE AND MULTIPLE	8									
		ALLIGATOR	8									
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
LONGITUDINAL MEANDER AND MIDLANE		14										
RANDOM <i>MAP CRACKING</i>		15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PATCH WORK, DISTORTION FROM NEW HOLE OVERLAY

AREA 7B

16062
21 Oct 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %				
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW < 10	INTERMITTENT 10-20	FREQUENT 20-50	EXTENSIVE 50-80	THROUGH 80-100
			1	2	3	4	5	1	2	3	4	5
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓								✓
	FLUSHING	2										
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3										
	WHEEL TRACK RUTTING	4										
	DISTORTION	5		✓				✓				
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6									
		ALLIGATOR	7									
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8									
		ALLIGATOR	9									
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10									
		ALLIGATOR	11									
	TRANSVERSE	HALF, FULL AND MULTIPLE	12									
		ALLIGATOR	13									
	LONGITUDINAL MEANDER AND MIDLANE		14									
	RANDOM	MAP CRACKING	15		✓							✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)
POST HOLES

PATCH WORK, DISTORTION FROM MANHOLE LIDSET OVERLAY

AREA 79

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMESE, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %						
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH		
			1	2	3	4	5	< 10 1	10-20 2	20-50 3	50-80 4	80-100 5		
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓
	FLUSHING	2												
SURFACE DEFORMATIONS	RIPPLING AND SHOving	3												
	WHEEL TRACK RUTTING	4												
	DISTORTION	5	✓						✓					
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6											
		ALLIGATOR	7											
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8											
		ALLIGATOR	9											
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10											
		ALLIGATOR	11											
	TRANSVERSE	HALF, FULL AND MULTIPLE	12											
		ALLIGATOR	13											
	LONGITUDINAL MEANDER AND MIDLANE		14											
	RANDOM	<i>MAP CRACKING</i>	15		✓									✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

DISTORTION FROM TREES / PATCHWORK <10%

AREA B7

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

16062
24 OCT 17

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION	5											
LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6											
	ALLIGATOR	7											
CENTRE LINE LINE	SINGLE AND MULTIPLE	8											
	ALLIGATOR	9											
PAVEMENT EDGE	SINGLE AND MULTIPLE	10											
	ALLIGATOR	11											
TRANSVERSE	HALF, FULL AND MULTIPLE	12											
	ALLIGATOR	13											
LONGITUDINAL MEANDER AND MIDLANE		14											
RANDOM <i>MAP CRACKING</i>		15		✓									✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

PAV WORK 10-20%

AREA 81

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

16062
24 Oct 17

10	EXCELLENT
8	SMOOTH AND PLEASANT
6	GOOD
4	COMFORTABLE
2	FAIR
0	UNCOMFORTABLE
	POOR
	VERY ROUGH AND BUMPY
	VERY POOR
	DANGEROUS AT 80 KM/H

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %								
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH				
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100				
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓												
	FLUSHING	2													✓	
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3														
	WHEEL TRACK RUTTING	4														
	DISTORTION	5														
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6													
		ALLIGATOR	7			✓			✓							
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8		✓											
		ALLIGATOR	9													✓
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10													
		ALLIGATOR	11													
	TRANSVERSE	HALF, FULL AND MULTIPLE	12													
		ALLIGATOR	13													
	LONGITUDINAL MEANDER AND MIDLANE		14													
	RANDOM	MAP CRACKING		15		✓									✓	

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

POUNDING

AREA B2

16062
24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMEES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT
8	SMOOTH AND PLEASANT
	GOOD
6	COMFORTABLE
	FAIR
4	UNCOMFORTABLE
	POOR
2	VERY ROUGH AND BUMPY
	VERY POOR
0	DANGEROUS AT 80 KM/H

			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %					
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH	
PAVEMENT			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100	
			1	2	3	4	5	1	2	3	4	5	
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓									✓
	FLUSHING	2											
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3											
	WHEEL TRACK RUTTING	4											
	DISTORTION	5											
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6										
		ALLIGATOR	7										
	CENTRE LINE	SINGLE AND MULTIPLE	8	✓					✓				
		ALLIGATOR	9										
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10										
		ALLIGATOR	11										
	TRANSVERSE	HALF, FULL AND MULTIPLE	12										
		ALLIGATOR	13										
	LONGITUDINAL MEANDER AND MIDLANE		14										
	RANDOM	<i>Map CRACKING</i>	15		✓								✓

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

Area 84

16062

24 OCT 17

DRIVEN ENGINEERING, INC.
8005 MORRIS HILL ROAD
SEMMES, AL. 36575

**RIDE
CONDITION
RATING
(AT 80 KM/H)**

10	EXCELLENT SMOOTH AND PLEASANT
8	GOOD COMFORTABLE
6	FAIR UNCOMFORTABLE
4	POOR VERY ROUGH AND BUMPY
2	VERY POOR DANGEROUS AT 80 KM/H
0	

PAVEMENT			SEVERITY OF DISTRESS					DENSITY OF DISTRESS EXTENT OF OCCURRENCE, %						
			VERY SLIGHT	SLIGHT	MODERATE	SERVERE	VERY SEWRVERE	FEW	INTERMITTENT	FREQUENT	EXTENSIVE	THROUGH		
			1	2	3	4	5	< 10	10-20	20-50	50-80	80-100		
SURFACE DEFECTS	RAVELLING & C. AGG. LOSS	1		✓										✓
	FLUSHING	2												
SURFACE DEFORMATIONS	RIPPLING AND SHOIVING	3												
	WHEEL TRACK RUTTING	4												
	DISTORTION <i>TREE ROOTS</i>	5			✓		✓							
CRACKING	LONGITUDINAL WHEEL TRACK	SINGLE AND MULTIPLE	6											
		ALLIGATOR	7											
	CENTRE LINE LINE	SINGLE AND MULTIPLE	8	✓				✓						
		ALLIGATOR	9											
	PAVEMENT EDGE	SINGLE AND MULTIPLE	10											
		ALLIGATOR	11											
	TRANSVERSE	HALF, FULL AND MULTIPLE	12											
		ALLIGATOR	13											
	LONGITUDINAL MEANDER AND MIDLANE		14											
	RANDOM <i>MAD CRACKING</i>		15		✓							✓		

DISTRESS COMMENTS (ITEMS NOT COVERED ABOVE)

AREA 85

EQUIPMENT LIST

Asset Name	Asset Location	Manufacturer	Model #	Serial #	Capacity		Year Manuf	Condition
Boiler 1	Machine Rm	Hurst	53-G-100-30W		1,200,000	BTU/HR	2002	Fair
Boiler 2	Machine Rm	Hurst	53-G-100-30W		1,200,000	BTU/HR	2002	Fair
HX-1	Machine Rm							Fair
HW Pump 1	Machine Rm				10	HP	<2002	Poor
HW Pump 2	Machine Rm				10	HP	<2002	Poor
HWR Pump 1	Machine Rm				3	HP	<2002	Fair
HWR Pump 2	Machine Rm				3	HP	<2002	Fair
Boiler 3 (HW)	Machine Rm	Raypack		9312112311	1,202,940	BTU/HR	1993	Fair
Boiler 4 (HW)	Machine Rm	Raypack	Wi-0514A-BCDRDAA	9303106738	419,430	BTU/HR	1993	Fair
Dom WH-1	Concession Stand	Bradford White	M14056DS13	ZA2668364	40	Gallons	2003	Fair
Chiller 1	Machine Rm	Carrier (R-134A)	02XR-384CPHC4	57902	500	Ton	2002	Fair
Chiller 2	Machine Rm	Trane (R-123A)	CVHE50011OFA2L03UL2256Q7D	L97F04522	400	Ton	1997	Fair
CHW Pump-1	Machine Rm				75	HP	1997	Fair
CHW Pump-2	Machine Rm				75	HP	1997	Fair
EH Booster-1	Machine Rm				15	HP	1989	Fair
EH Booster-2	Machine Rm				15	HP	1989	Fair
CT-1A	CT Enclosure	Evapco	AT-12-512A	911572M	400	Tons	2011	Fair
CT-1B	CT Enclosure	Evapco	AT-12-512A	911572M similar	400	Tons	2011	Fair
CT-2	CT Enclosure	Marley	NC8310G1GM	NC242941-A1	784	Tons	2006	Fair
CW Pump-1	CT Enclosure				40	HP		
CW Pump-2	CT Enclosure				40	HP		
CW Pump-3	CT Enclosure					HP		
Ice Making Chiller	Icemaking Equip. Rm.	Cimco Lewis	Manufacturer's Plates not found		212	Tons	1995	N.I.S.
Ice Making WH-1	Icemaking Equip. Rm.	A.O. Smith	Abandoned in place		100	Gallons		N.I.S.
Ice Making WH-1	Icemaking Equip. Rm.	A.O. Smith	Abandoned in place		100	Gallons		N.I.S.
AHU-1	MR 225				3,930	CFM	1964	Fair to Poor
AHU-2	MR 212				5,240	CFM	1964	Fair to Poor
AHU-3	MR 207				2,620	CFM	1964	Fair to Poor
AHU-4	MR265				2,620	CFM	1964	Fair to Poor
AHU-5	MR250				5,240	CFM	1964	Fair to Poor
AHU-6	MR 246				3,930	CFM	1964	Fair to Poor
AHU-7	MR 227				6,580	CFM	1964	Fair to Poor
AHU-8	MR 209				5,370	CFM	1964	Fair to Poor
AHU-9	MR 263				6,360	CFM	1964	Fair to Poor
AHU-10	Clg Rm 243				5,830	CFM	1964	Fair to Poor
AHU-11	Clg Rm 78				7,625	CFM	1964	Fair to Poor
AHU-12	Clg Rm 73				9,190	CFM	1964	Fair to Poor
AHU-13	Clg Rm 149				9,950	CFM	1964	Fair to Poor
AHU-14	Clg Rm 143				10,200	CFM	1964	Fair to Poor
AHU-15	Clg Rm 59				11,050	CFM	1964	Fair to Poor
AHU-16	Clg Rm 15				11,860	CFM	1964	Fair to Poor
AHU-17	Clg Rm 201				15,100	CFM	1964	Fair to Poor
AHU-18	Clg Rm 201				15,100	CFM	1964	Fair to Poor
AHU-19	Clg Rm 28				8,700	CFM	1964	Fair to Poor
AHU-20	Clg Rm 3				10,100	CFM	1964	Fair to Poor
AHU-21	Clg Rm 19				1,475	CFM	1964	Fair to Poor
AHU-22	Clg Rm 84				3,940	CFM	1964	Fair to Poor



1. The building has a visible presence on the city skyline.



2. The property includes a two-sided lighted pedestal sign located on the corner of South Claiborne and Canal Street.



3. Parking for 1,400 cars is provided in asphalt-paved surface lots which are shared by the entire Civic Center complex.



4. Site amenities include two covered pedestrian walkways that extend into the parking lot on the southeast and southwest sides of the arena.



5. A dedicated exterior loading dock is serviced through a single overhead door which serves the commercial kitchen.



6. Servicing for events/shows is provided by a single exterior loading dock accessed by a single overhead door.



7. Two drive-in doors provide direct access to the main arena floor.



8. Site improvements include water and power utility pedestals for traveling vendors along the south side of the arena, along the north edge of the parking lot, and along the south side of the parking lot.



9. Looking east at the Arena street front entrance and passenger drop off.



10. The main entrance is denoted by an EIFS clad porch accessed via a monumental stair.



11. The Arena is connected to the Theatre and Expo Hall by two linear exhibit halls to either side. North elevation of the east Exhibit Hall.



12. North elevation of the west Exhibit Hall. Exterior sidewalls are clad with brick veneer over a CMU back-up system. Note exterior planters.



13. Southeast elevation of the arena viewed from the theatre roof.



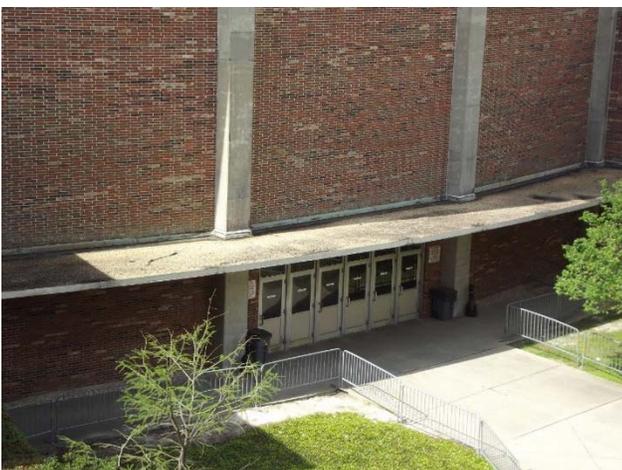
14. Looking southwest at the east elevation.



15. Northwest elevation of the arena viewed from the Expo Hall roof.



16. Looking northwest at the Arena lobby and portions of the East Exhibit Hall.



17. Projecting cast in place concrete canopies are provided over secondary public entrances.



18. Detail view of the southwest cast in place concrete pedestrian walkway.



19. Overview of the domed arena roof. Note dome lighting standards have hinged connections for servicing.



20. The dome roof is covered with a metal batten roofing system that dates from the original construction and is 53 years old.



21. Detail view at batten transition.



22. Detail view at metal panel joints.



23. All water from the dome drains to the Dome Gutter roof, which is clad with a BUR system with a mineralized cap sheet.



24. The outboard side of the dome gutter parapet is clad with a metal panel system.



25. South side service area roof. Lobby and service areas are covered with BUR roofing systems with mineralized cap sheets.



26. Projecting canopies over the secondary public entrances are covered with gravel surfaced coal tar roofs believed to date from the original construction and are 53 years old.



27. Typical lobby finishes. Colorful mosaic tile murals are provided over entrances to the east and west Exhibit Halls.



28. Lobby improvements include a single reversible escalator connecting the first and second floors.



29. Access to the arena seating areas is provided by first and second floor Concourses. Note refreshment stand at left.



30. First and second floor concourses are connected by periodic enclosed fire stairs and a single open monument stair near the southeast entrance.



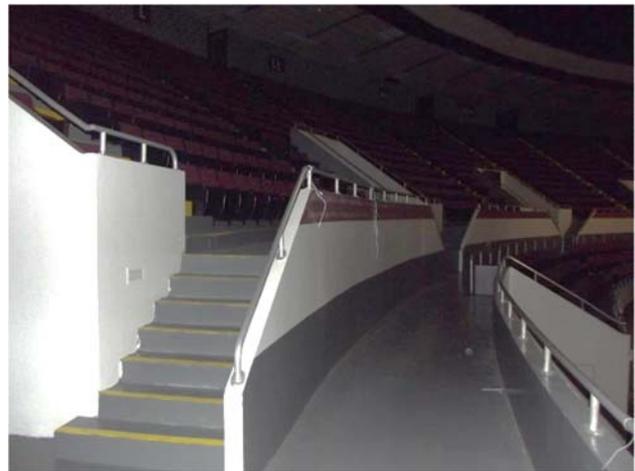
31. Overview of arena interior. Note stage curtain at left.



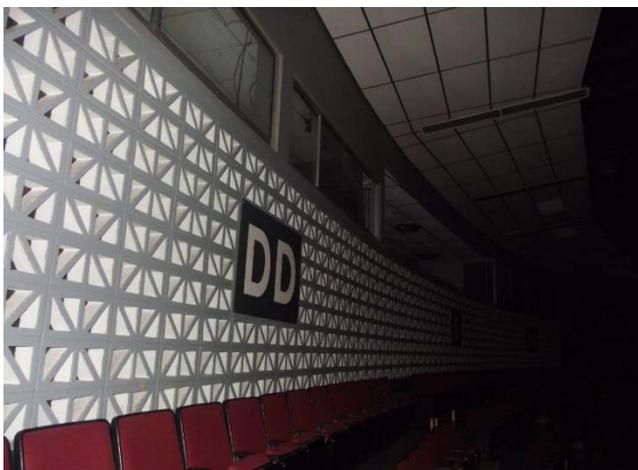
32. Overview of arena interior. Note portable stage being erected at lower left.



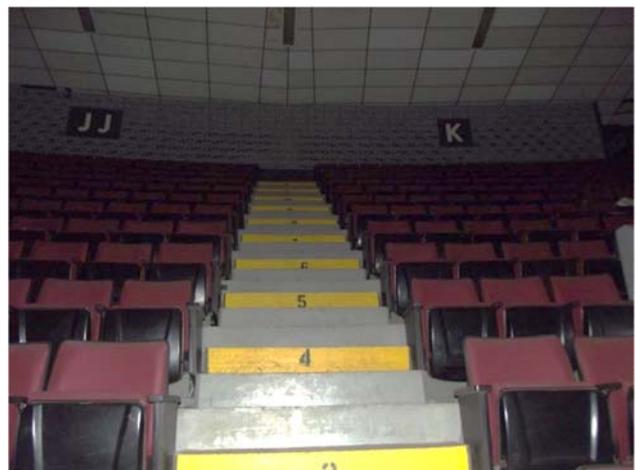
33. Typical arena entrance from the upper level concourse.



34. Seating sections are accessed by a continuous interior walkway. The widest section of the walkway provided above the stage area is used for wheelchair seating.



35. The perimeter wall is typically finished with acoustic materials protected by open cell CMU block.



36. Typical seating access stair.



37. The arena is improved with a small built-in stage that can be extended using a portable stage system.



38. Improvements include a total of 15 meeting rooms.



39. Concession service/work room. A total of eight concession stands typically set up with two work spaces are provided.



40. Typical concession serving counter.



41. Two pairs of public toilet rooms are provided on each level.



42. Typical toilet room finishes.



43. Backstage facilities include a green room with a dedicated toilet room.



44. A total of eight dressing rooms with private toilet facilities are provided.



45. A total of four team/band locker rooms with multi-user toilet rooms are provided.



46. Showers are provided at the team/bank locker rooms.



47. The commercial kitchen is finished with painted concrete floors, painted ceramic faced block and washable acoustic tile ceilings.



48. Interior view of the arena loading dock.



49. Lighting and sound control booths are located at the upper tier at the perimeter.



50. Two main catwalk systems within the roof framing provide lighting and rigging access the equivalent of 6 stories above the arena floor.



51. Gas service at the central plant.



52. Domestic water is believed to be supplied by a single 6" service with a meter pit outside the central plant but the other service connections cannot be ruled out.



53. Domestic Hot Water Boiler 3. Domestic hot water is primarily generated by two gas-fired water heaters.



54. Domestic Hot Water Boiler 4.



55. Heating and cooling for the building is delivered via AHU's equipped with steam and chilled water coils. Units are most typically located in mechanical units below arena seating banks.



56. Some of the AHU's are in conventional mechanical rooms/areas.



57. Some of the AHU's are ceiling hung and accessed via catwalks.



58. Steam for heating is generated by a pair of gas-fired boilers manufactured by Hurst.



59. Chilled water is generated by two chillers. The 400-ton Unit (R-123A) manufactured by Trane dates from a 1997 installation.



60. A 500-ton Unit utilizing R-134 refrigerant was manufactured by Trane dates from a 2002 installation.



61. Chilled water pumps.



62. Cooling tower loop pumps.



63. Heat rejection is partially provided by a paired set of 2011 cooling towers with rated capacities of 400-tons each manufactured by Evapco.



64. The third cooling tower has a rated capacity of 784 tons, was manufactured by Marley, and dates from a 2006 replacement.



65. The central plant is complete with various air compressors and dryers for the control system.



66. A water treatment station for the cooling towers is also provided.



67. The motor control center at the central plant dates from the original construction and is 53 years old.



68. Central plant equipment is controlled by a Johnson Controls Metasys BMS system using pneumatic controls partially run through a control panel dating from the original construction.



69. Chilled water for ice-making was generated by a single 212-ton chiller manufactured by Cimco Lewis that dates from a 1995 installation.



70. Water treatment and hot water generating equipment for the ice-making function have been abandoned in place.



71. Electrical power is fed directly from an on-site Alabama Power substation located next to the exterior cooling tower enclosure.



72. Main electrical switchgear at the central plant has disconnects rated as follows: 1 each at 4,000 and 1,200 amps, and 2 at 1,600 amps at 480 volts.



73. Electrical distribution is via circuit breaker panels that are generally original to the building and 53 years old.



74. Emergency power for emergency and egress lighting is provided by a single 35 kW diesel fired generator manufactured by Onan.



75. The Color Tran theatrical lighting control system for the arena dates from 1989.



76. The building is improved with a JBL Cluster sound system that dates from 1989.



77. Fire protection is primarily provided by a standpipe system with limited sprinklers provided at backstage, storage, and commercial kitchen areas.



78. A fire alarm system supervises the standpipe and limited sprinkler systems and is monitored by a central station.



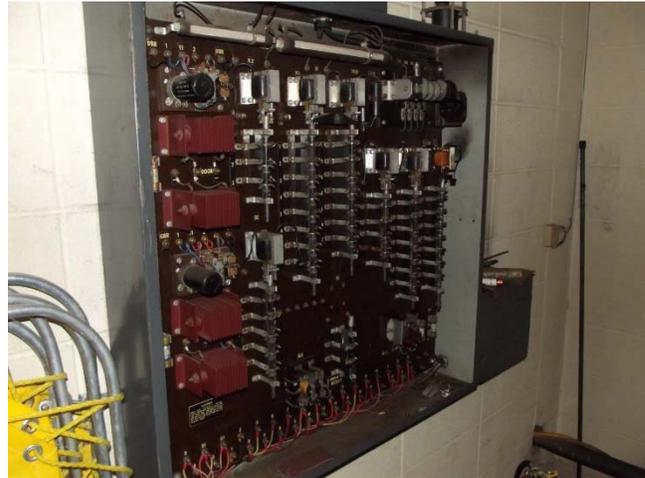
79. Emergency egress is primarily provided by stairs in fire-rated enclosures.



80. Vertical transportation includes a single hydraulic freight elevator with a rated capacity of 8,000 lbs. that is original to the building and has a manually operated door.



81. Elevator machine for the freight car.



82. The freight car is controlled using relay type controls.



83. The single hydraulic passenger elevator has a capacity of 2,500 lbs. Finishes consist of commercial carpet and plastic laminate wall panels.



84. The hydraulic passenger elevator machine and controls date from a 1989 installation.