



LPISD

# The New Planetarium

Board Meeting Presentation

January 24, 2017

**PRK**



# Background

## ▶ The Current Planetarium:

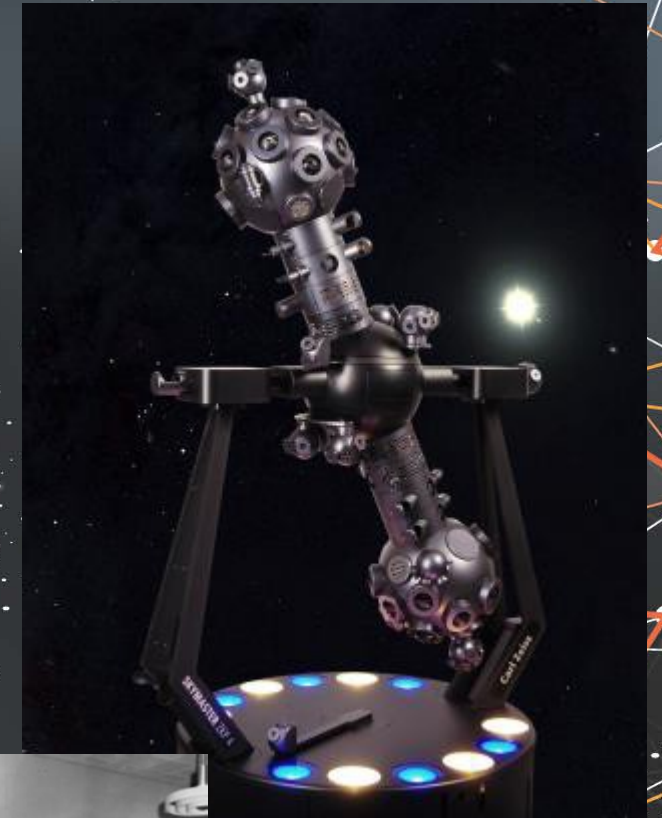
- Originally Constructed in 1964
- One of only 13 in School Districts Across the State
- 683 Square Feet of Instructional Space
- Powered by a Spitz AP3 Projector with Capacity to Project up to 1100 Stars/Planets on the Surface of the 24-foot Diameter Dome
- System Capabilities were Limited to Night-Time Sky with Constellations
- Requires Entry from Main Campus Interior Hallway





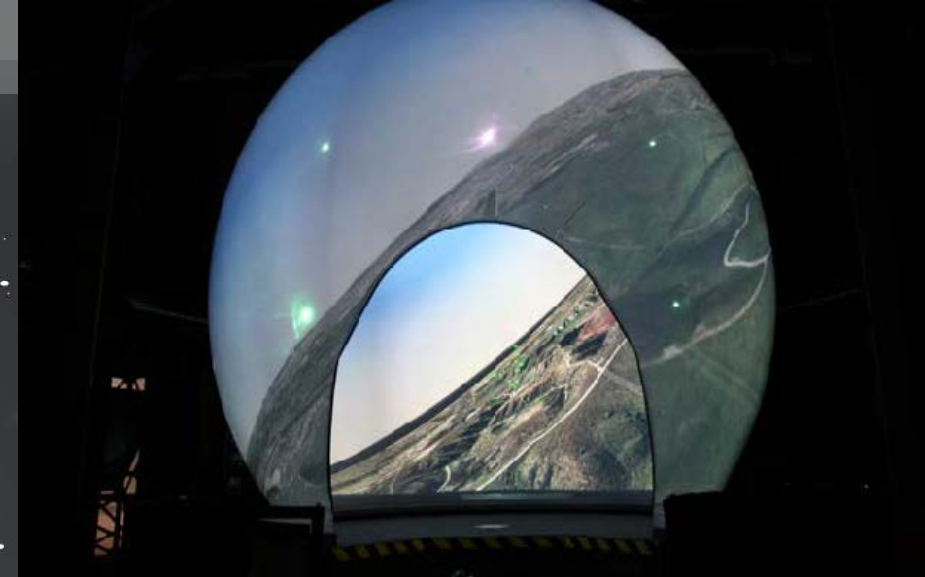
# Background

- ▶ **Limitations of Current Planetarium:**
  - **Limited Instructional Space**
  - **Access limited to Interior Campus Hallway**
  - **Archaic Projector Technology is No Longer Supportable and Limits Instructional Effectiveness and Adaptability**
  - **Renovation to Space will Require Significant Life-Safety Upgrades**
  - **Original Dome Requires Repairs and Asbestos Abatement**



# Proposed Planetarium

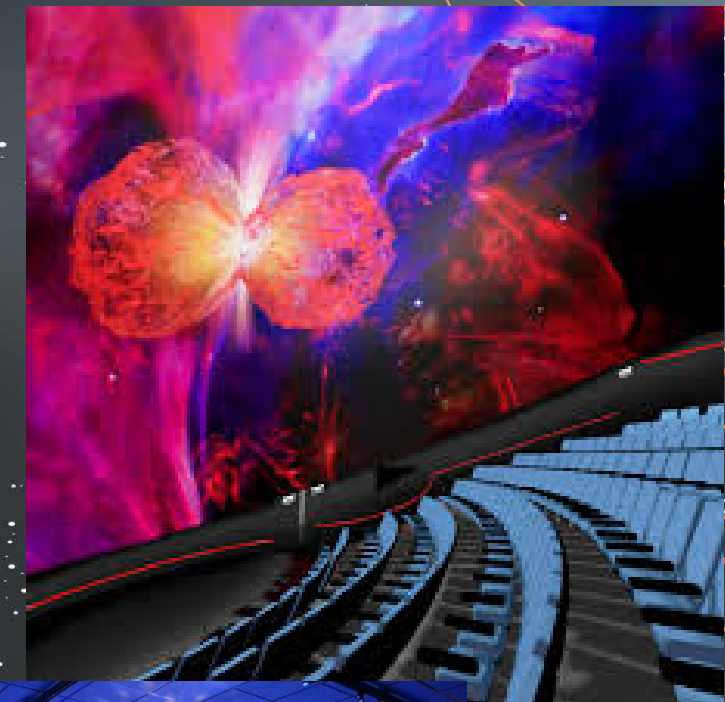
- ▶ **New Construction Adjacent to Math-Science Building**
- ▶ **1160 Square Feet of Instructional Space**
- ▶ **New Projector - Full Dome Projection System SZ-PSGNL90-1 BARCO Laser Projector Capable of Producing -**
  - **Traditional Night Sky Projection**
  - **Multimedia Programs from Space Exploration Simulations**
  - **Imagery Projection of Art Work and Documentary Presentations**
- ▶ **New Construction 24' Diameter, 160-degree Astro-Tec Dome**
- ▶ **ZEISS Planetarium Control Console**
- ▶ **Seating Capacity of 30 Students with Moveable Seating**
- ▶ **LED Cove Lighting**
- ▶ **5.1 Surround Sound Audio System**
- ▶ **Preserving the Heritage of Original Planetarium and Providing Inspiration for Students and Community**





# The New Planetarium

- ▶ Research based Case Study/Inspiration performed by the Project Team, conducted while visiting the Houston Museum of Natural Science - Burke Baker Planetarium:
  - The Only State-of-the-Art Planetarium in the Houston Area
  - Recently Renovated in March 2016
  - Burke Baker Planetarium Boasts:
    - 60' Dome
    - Seating Capacity of 285
    - Six Cove-Mounted Projectors
- ▶ Existing and New Locations of the Planetarium Noted on the Following Site Plan:
  - Existing Location
  - New Location

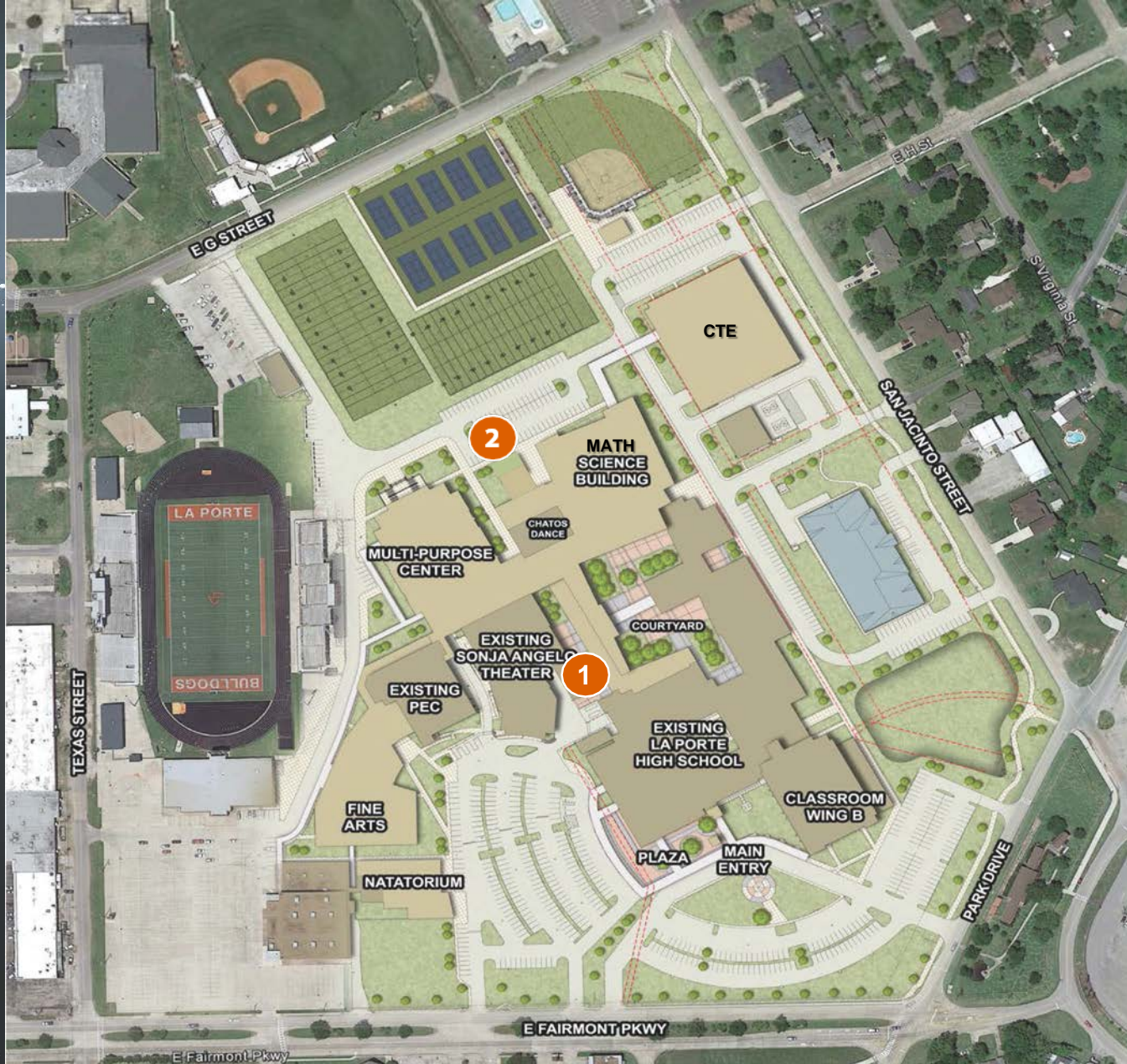






# SITE PLAN

# Existing & New Locations



1. Existing Planetarium to be Renovated
2. New Planetarium in Chatos and PE Dance Entry Location

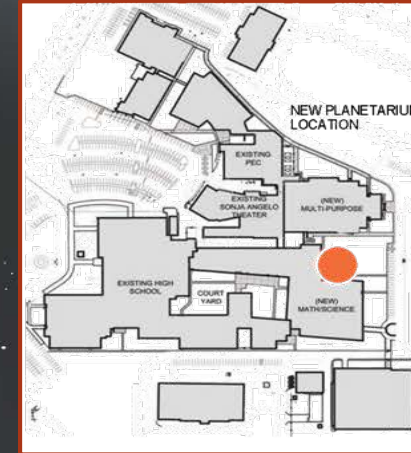
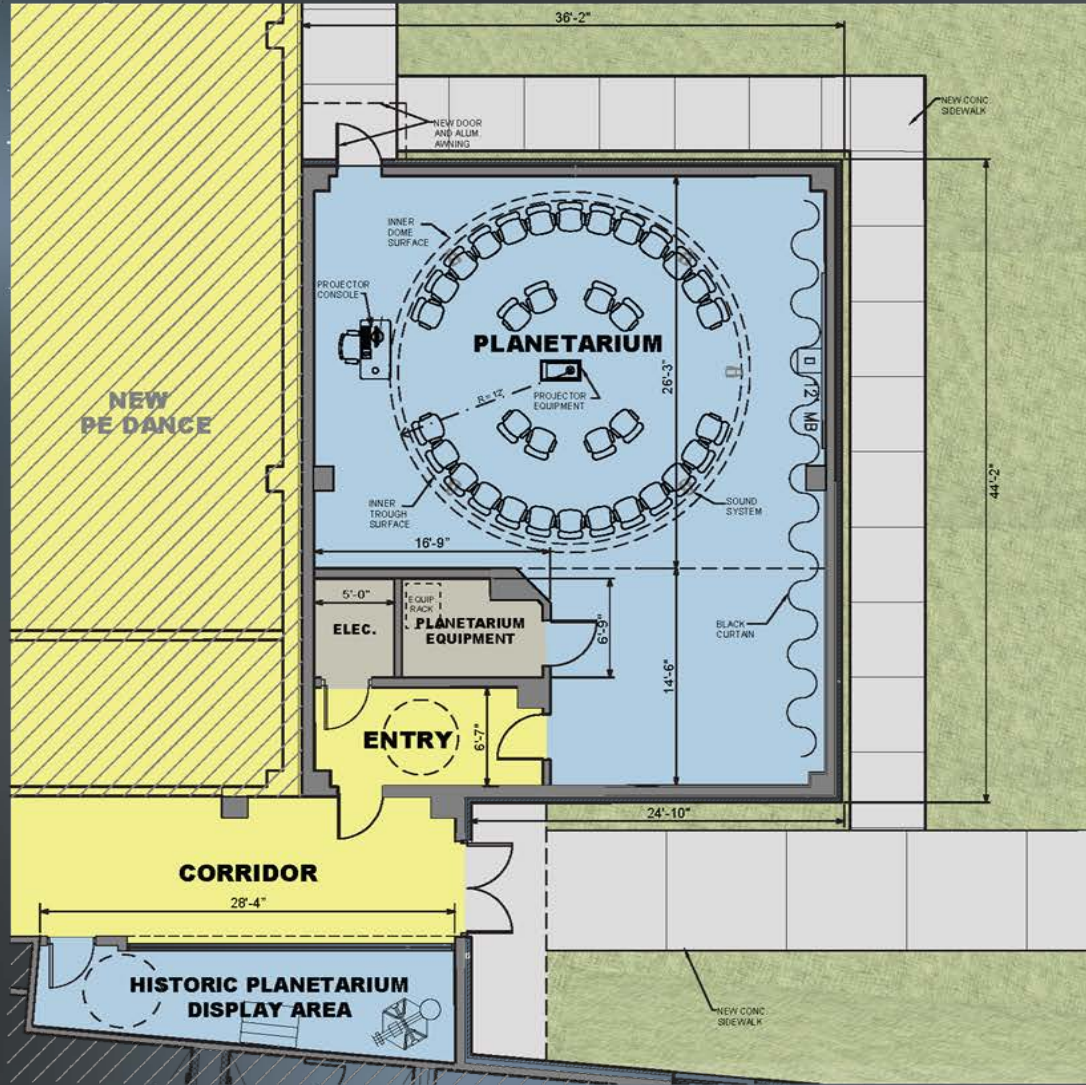






# New LPISD Planetarium

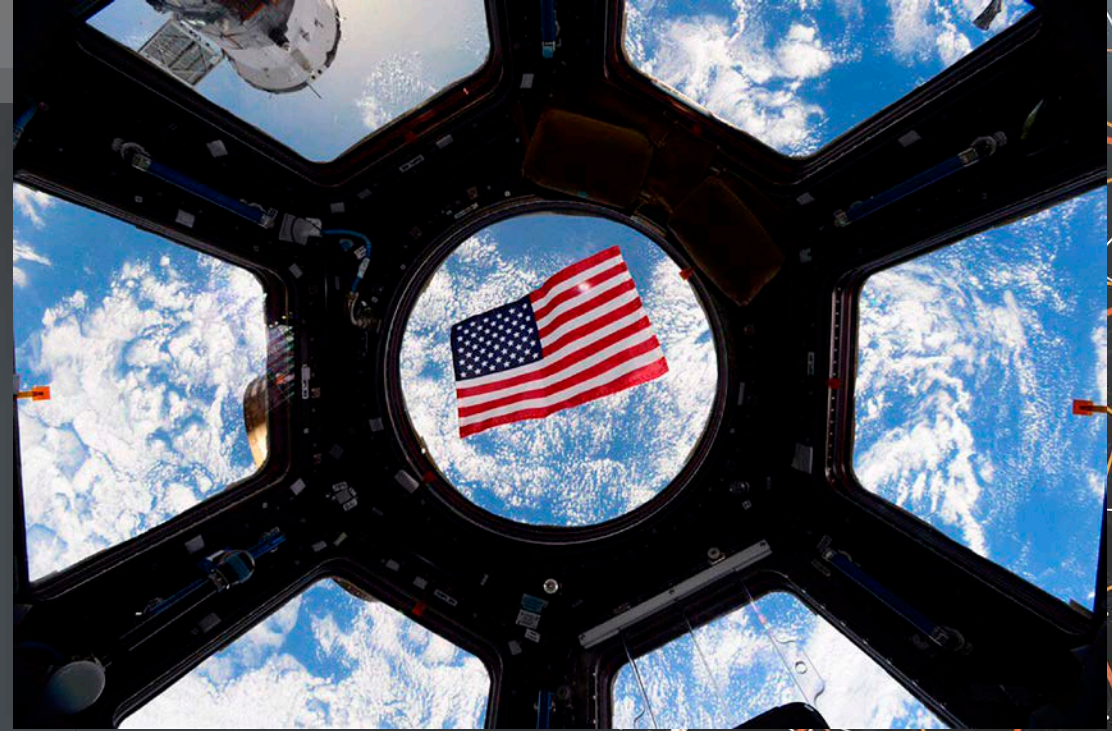
## FLOOR PLAN





# Instructional Applications

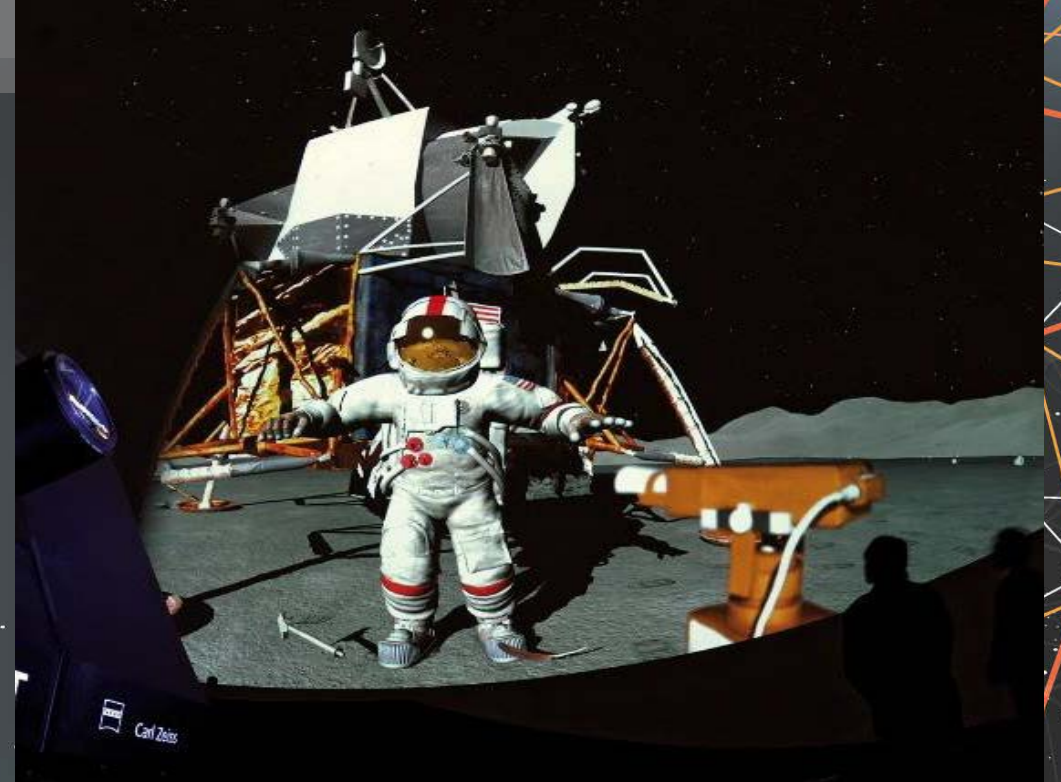
- ▶ **Astronomy – Upper Level Science for 10<sup>th</sup> – 12<sup>th</sup> Grade Students**
- ▶ **Key Curriculum Themes:**
  - **History of Astronomy**
  - **Modern Astronomers**
  - **Scale of the Universe**
  - **Solar System: Inner and Outer Planets**
  - **Extra-Solar Objects: Comets, Asteroids**
  - **Night-Time Sky: Constellations, Planets, Eclipses**
  - **Outer Cosmos: Stars, Galaxies, Nebulas**
  - **Space Travel and Exploration**





# Cross-Curricular Applications

- ▶ **Science:**
  - Physics of Space Travel
  - Theories of Origin of Universe
- ▶ **Math:**
  - Scale of Universe
  - Time and Distance Calculations
- ▶ **Social Studies:**
  - Cultural Studies: Native American Astronomy
  - World History: Ancient World Exploration using Celestial Navigation
- ▶ **Theater with Exceptional, High Fidelity Video and Audio**



# Partnerships

- ▶ **Johnson Space Center (JSC):**

- High Resolution Graphics
- Space Program Artifacts
- JSC Astronomical Society
  - Technical Expertise
  - Guest Speakers

- ▶ **Lunar Planetary Institute:**

- High Resolution Graphics
- Planetarium Shows





# District & Community Applications

- ▶ **This Facility will be a State-of-the-Art Planetarium Unique to High Schools in the Area**
- ▶ **It will Preserve the “Space Age” Heritage of the Original Planetarium and Serve the Following Functions:**
  - **Field Trips by Students from Across the District**
  - **Regional School Field Trips**
  - **Community Programs**



# Long Range Plans

- ▶ Pursuit of Unique and Cutting Edge Planetarium Programming
- ▶ Exterior Plaza – Observatory:
  - Outside Learning Space Graphically Depicting:
    - Earth's Home:
      - ✓ Solar System
      - ✓ Milky Way Galaxy
    - Key Constellations
    - Polaris (North Star)



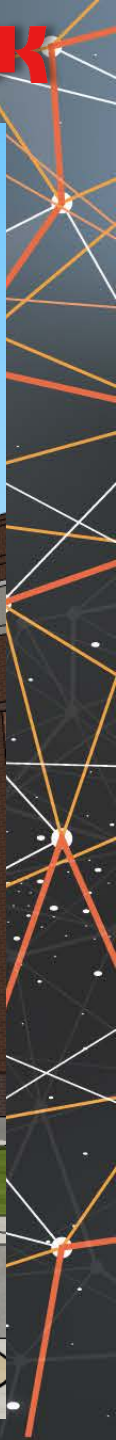


# Future Proposed Planetarium Plaza





# Future Proposed Plaza - Galaxy Wall







# Questions/ Discussion

