Additions & Renovations to Cohoes High School

Cohoes, New York

2013 EXHIBITION OF SCHOOL PLANNING AND ARCHITECTURE
INDIANAPOLIS, INDIANA

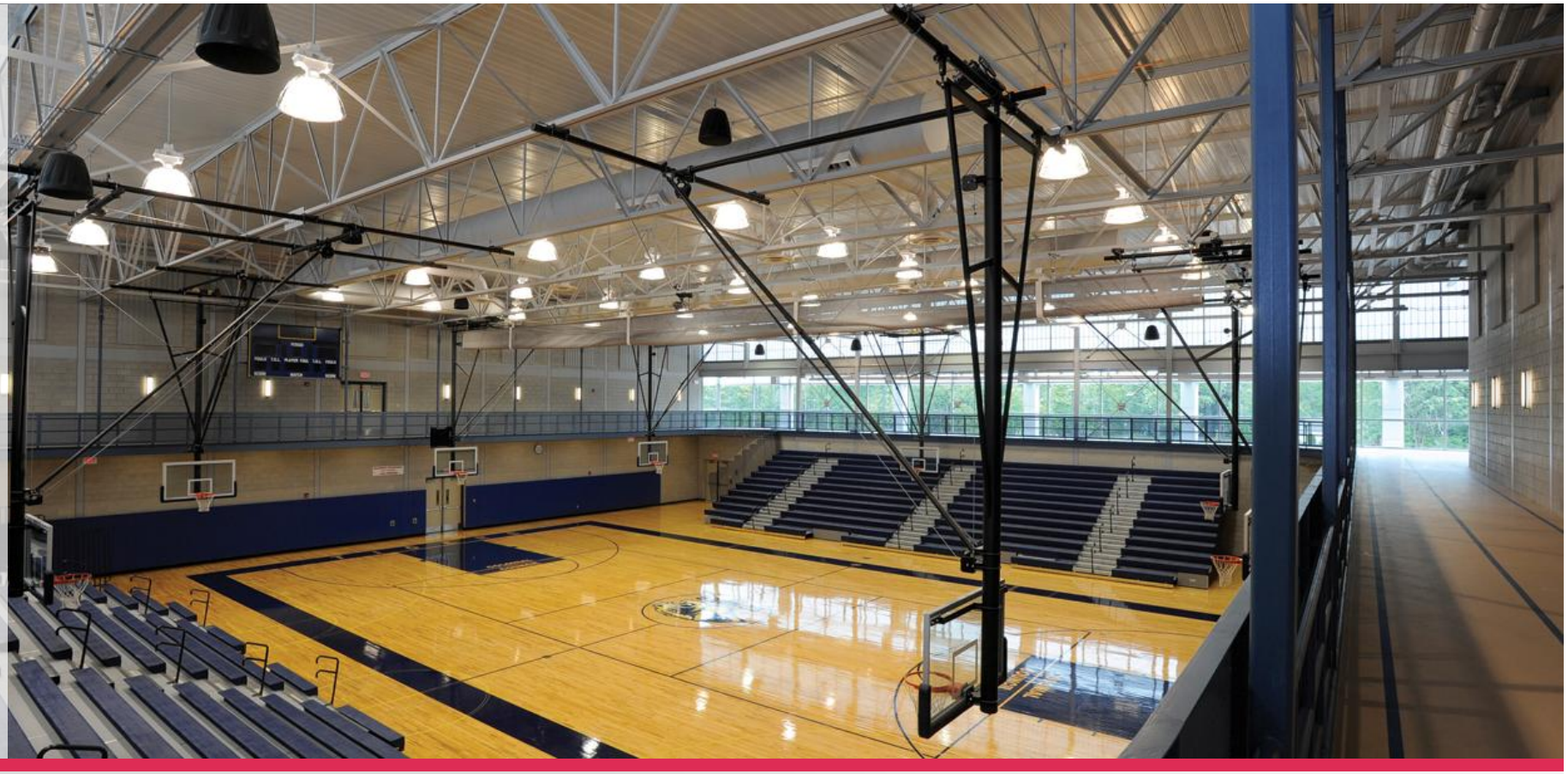
community environment

A BEACON TO THE COMMUNITY

Formerly a post-war, 1960's-era high school, this comprehensive project reinvented the building into a 21st century learning institution. The project improved circulation, organization, security, and expanded educational programs, team sports and community events.

Tasked with beautifying the exterior, the project team designed a glazed façade that allows natural daylight to penetrate the new athletic center and lobby. When evening arrives, the illuminated facility acts as a beacon to the community and ignites a new sense of school pride, which is demonstrated by an increase in student and faculty attendance.

community environment



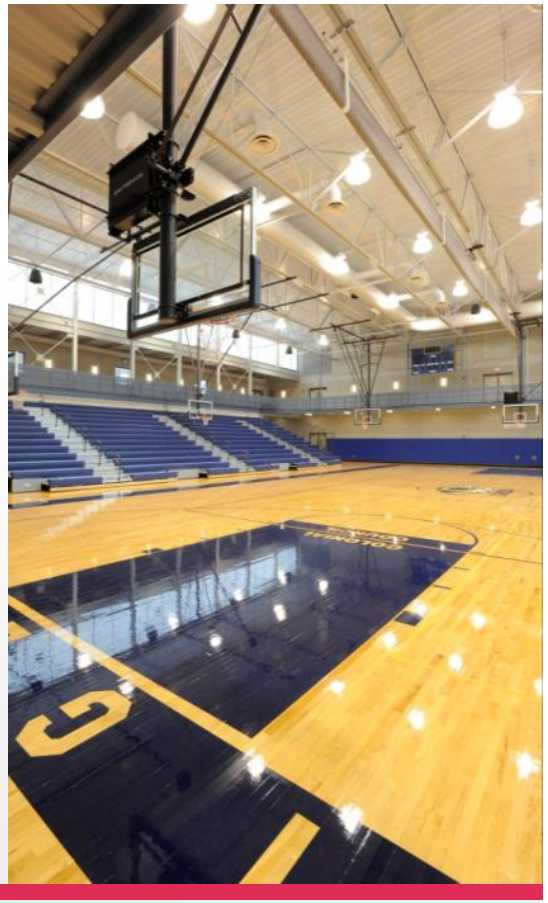
RENEWED SPIRIT AND COMMUNITY PARTICIPATION

Forty five thousand square feet of new construction houses the competition athletic center, elevated fitness track, administrative suites and large classrooms. The new athletic complex accommodates growing programs and spectator-viewing by seating 800 occupants, and featuring a 94-foot court and suspended track.

Renewing school spirit and community participation in sporting events, the new athletic complex exists as a gathering space for the community to rally in support of the school.

The complex also serves the public with space for community theatre and a track open for community use.

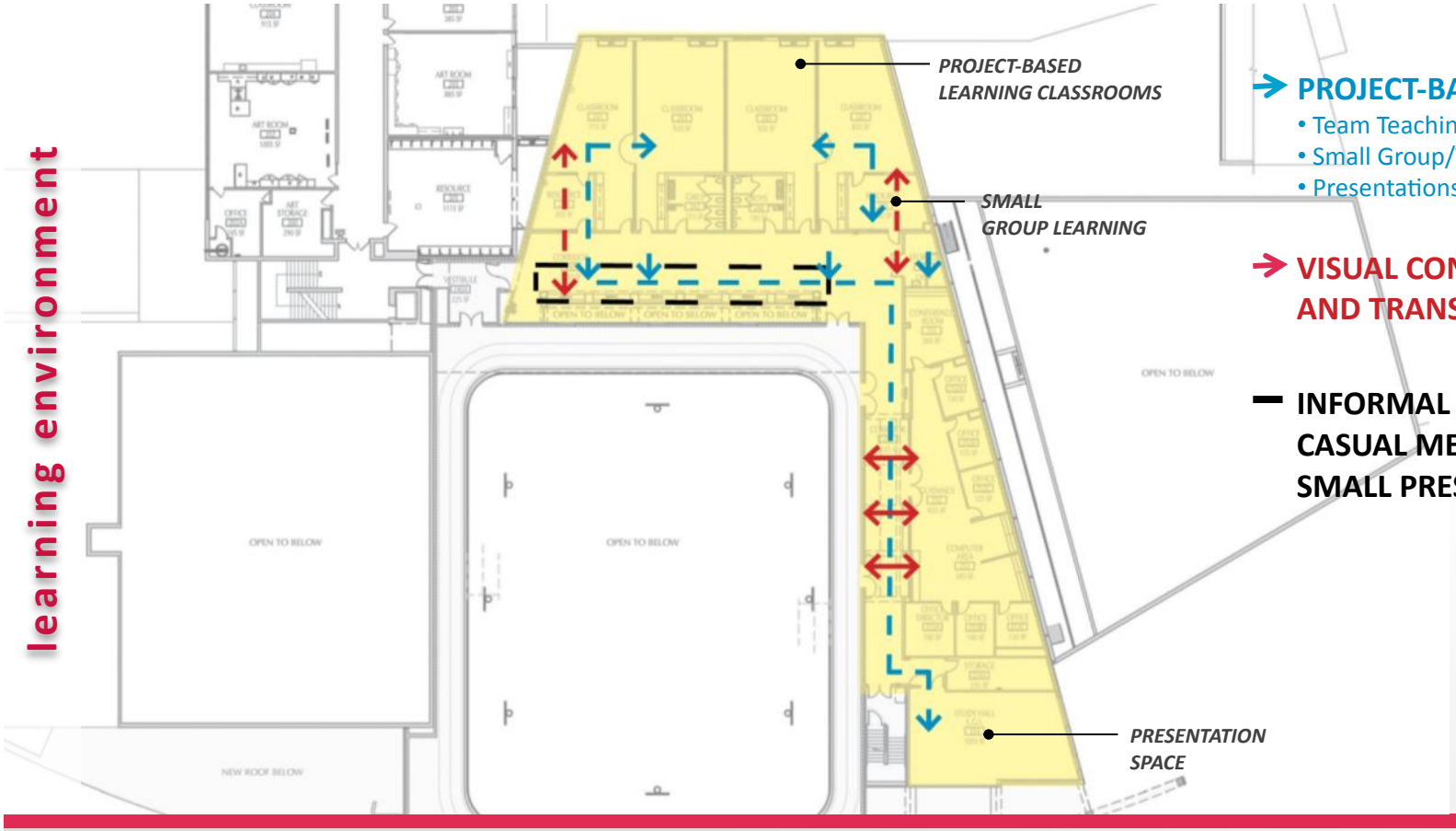
learning environment



DESIGNED FOR EXPANDING PHYSICAL EDUCATION PROGRAMS

The new athletic complex serves students' physical education needs and takes into consideration student insecurities and child and young adult health issues, including obesity, diabetes and poor nutrition. The design of this complex accommodates students who may find themselves uncomfortable participating in routine sporting games; and instead provides the option to enjoy exercise around the elevated fitness track. The view of the outdoor scenery motivates and inspires track users while connecting them to their community. And from the outside looking in, students and the community get a sense of the activity and energy within.

learning environment



PROJECT-BASED LEARNING
- Team Teaching
- Small Group/Team Meeting
- Presentations

VISUAL CONNECTIVITY AND TRANSPARENCY

INFORMAL DISCUSSION
CASUAL MEETING SPACE
SMALL PRESENTATION SPACE

FLEXIBLE CLASSROOM ENVIRONMENTS

New project-based learning and large group instruction classrooms provide flexible furniture arrangements and state-of-the-art interactive presentation boards to accommodate the goal of adaptable spaces. Classroom spaces were designed to increase the flow and use of space and provide dual functionality: Learning and presenting. By use of transparency, the project offers visual connectivity between different learning environments.

physical environment

CREATING A SENSE OF PLACE

The lobby entrance – situated efficiently between the auditorium and gymnasium – provides improved security and direct access to the new main office suites. Upon entering, the subtle curve of the auditorium leads you along display cases to a double-height light well, washing the walls and illuminating the floors. The light well also offers daylight to the second floor hallways connecting to the new classrooms and guidance suite.

The addition's palette of materials contrasts the building's existing brick, placing more emphasis on community space. A white colonnade – constructed of composite panel rain-screen – provides a sense of procession between the athletic fields and complex, and it provides a link between the fields, renovated gym and community spaces that front the building. Honed concrete block forms the shell of the new athletic center.

physical environment

SUSTAINABILITY A PRIORITY

Energy efficient systems and design techniques were identified as a priority early on and was implemented by:

1. Panelized rain-screen cladding
2. Aluminum and glass curtain-wall that opens the façade for daylight and offers views of the lobby, connectors and fitness track
3. A rooftop-mounted 50kW solar photovoltaic system with power inverter
4. Low-E glazing, heat recovery
5. A cold water chiller that cools the existing auditorium and gymnasium, but was downsized, as both spaces do not require simultaneous air conditioning

IDENTIFYING PROGRAM GOALS

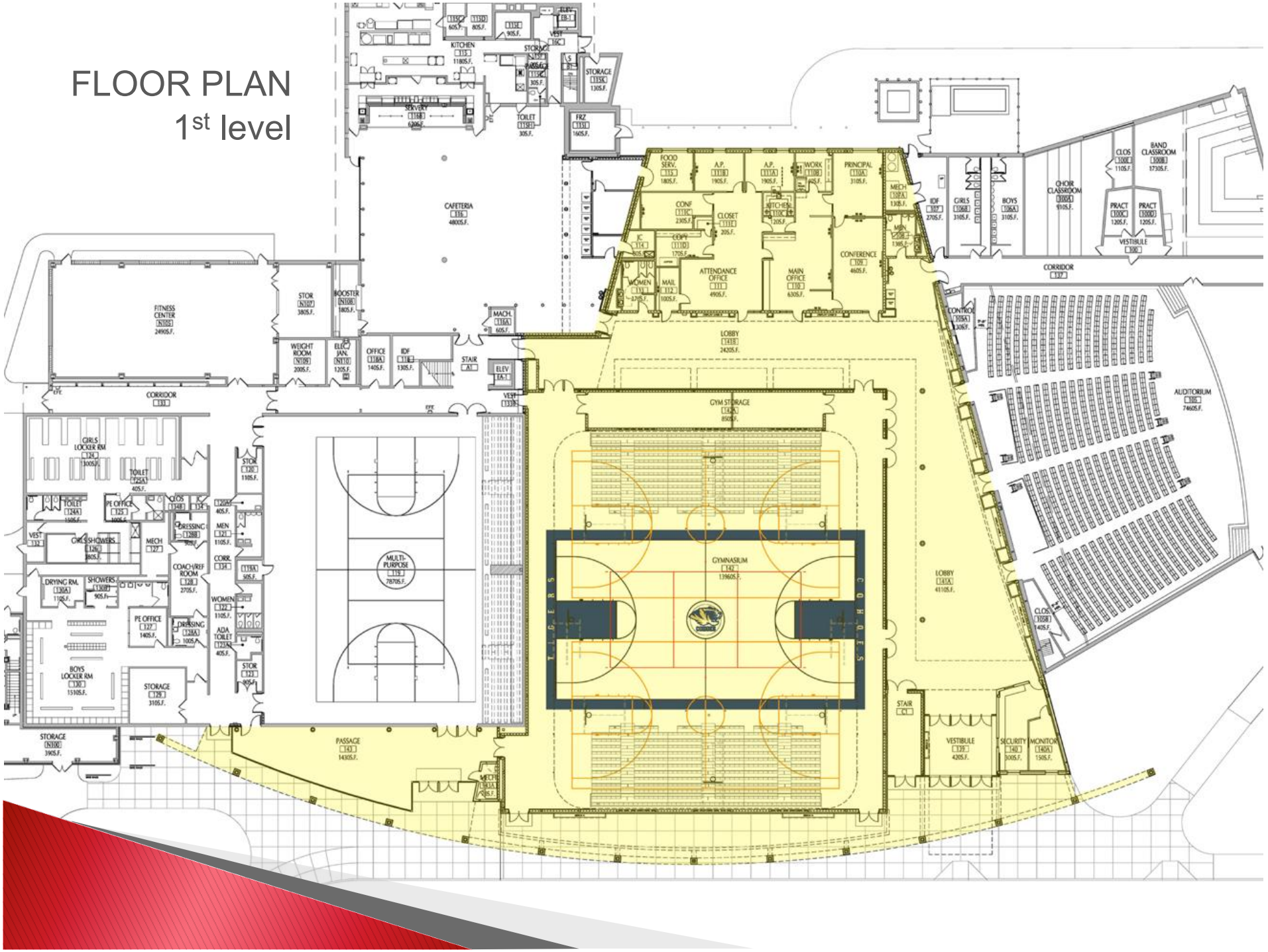
The district commissioned a long-range plan that focused on operations and maintenance. The list of deficient systems included the roofs, exterior envelope, security, etc. The project was born to address these issues.

As the project developed, the design team welcomed inside and outside stakeholders into a process that would unearth major deficiencies in the educational program. They included a deficiency in athletic space, both for physical education and the community use; a music and theater facility that was inadequate; a guidance department so cramped that students could not gather; and academic classrooms that were not properly designed for project-based learning.

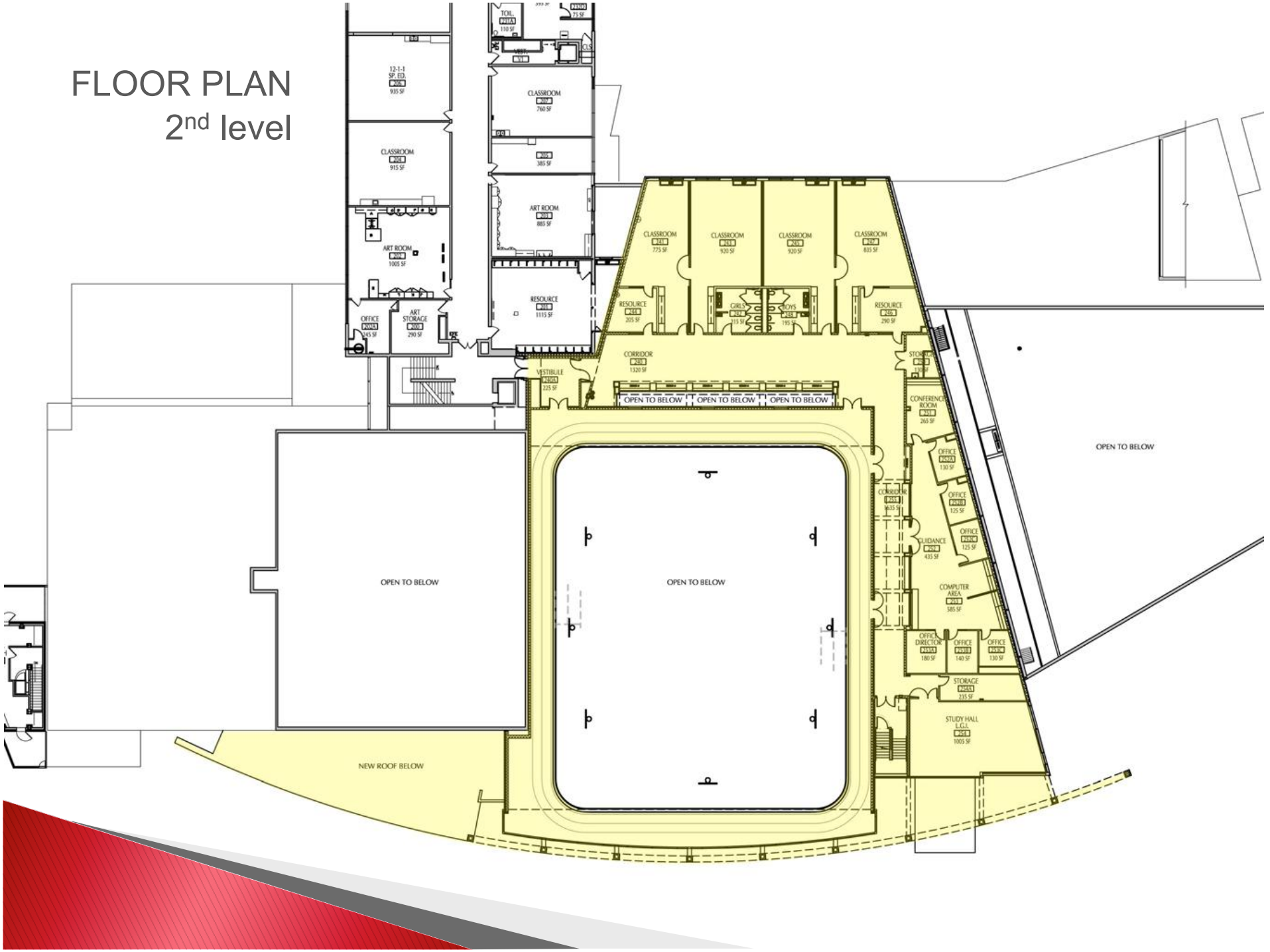
A COLLABORATIVE EFFORT

The solution reflects input from stakeholders, including academic departments, the students, and city residents. Everyone worked together to see that all interests were addressed. Of course, money was not unlimited. Naturally, compromises were made to keep within budget; none to the detriment of the project's functionality. For example, since the theater and gymnasium wouldn't simultaneously host events, the new, large lobby performed double-duty between the gym and auditorium. Likewise, the air conditioning systems were designed to switch between the gym and the auditorium as needed, saving the district substantial costs. Construction took place during school session and was completed on schedule. The project is phase 1 of on-going improvement projects.

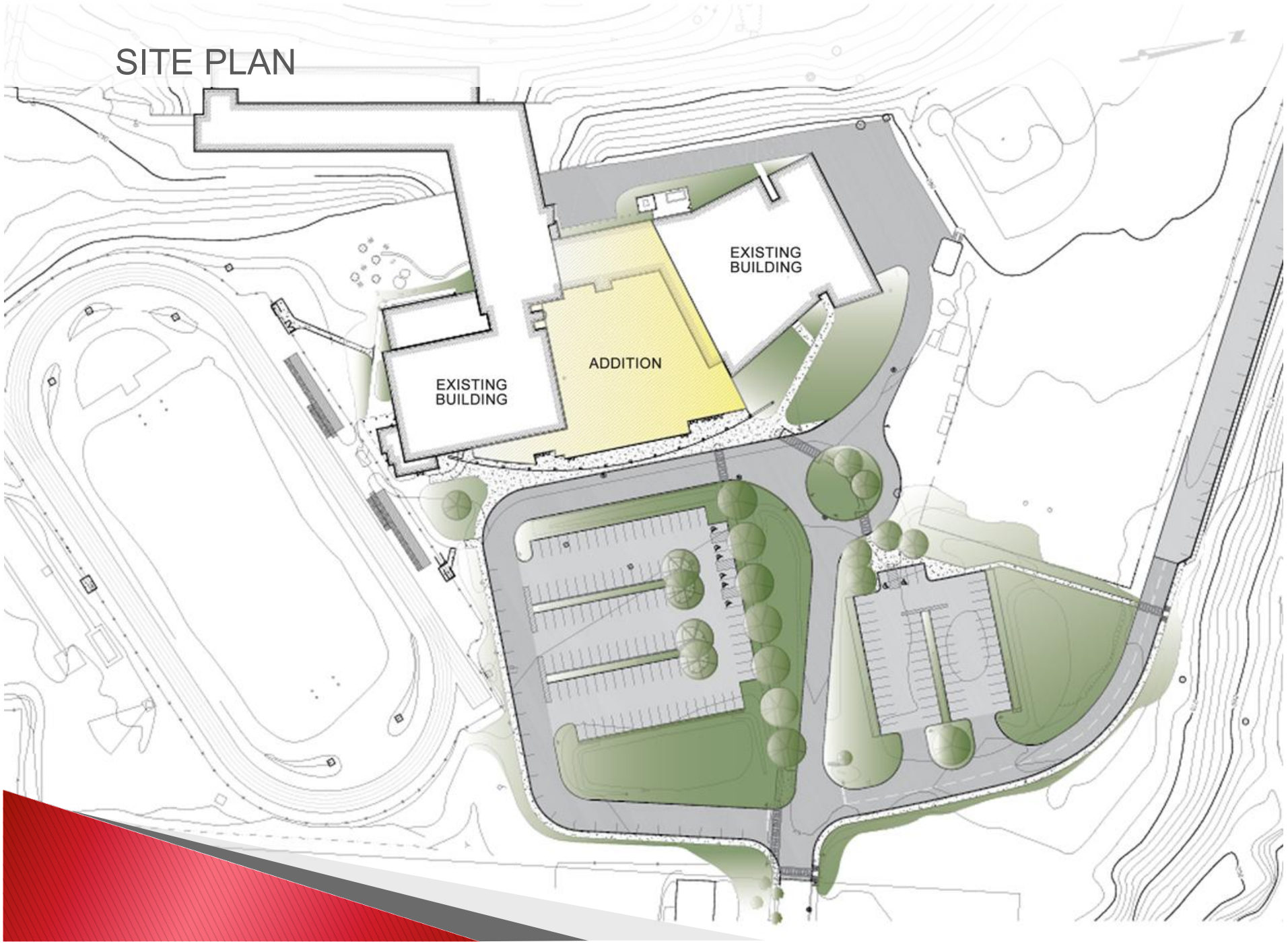
FLOOR PLAN
1st level



FLOOR PLAN
2nd level



SITE PLAN



PROJECT DATA

SUBMITTING FIRM: CSArch-Architecture | Engineering | Construction Management
PROJECT ROLE: Architecture
PROJECT CONTACT: Robert Libby
TITLE: Superintendent
ADDRESS: 4 Bevan Street
CITY, STATE OR PROVINCE, COUNTRY: Cohoes, New York, United States
PHONE: 518.237.0100

JOINT PARTNER FIRM: Ryan-Biggs Associates
PROJECT ROLE: Structural Engineering
PROJECT CONTACT
TITLE
ADDRESS: 257 Ushers Road
CITY, STATE OR PROVINCE, COUNTRY: Clifton Park, New York, United States
PHONE518.406.5506

OTHER FIRM: Excel Engineering, P.C.
PROJECT ROLE: MEP Engineering
PROJECT CONTACT
TITLE
ADDRESS: 52 James Street
CITY, STATE OR PROVINCE, COUNTRY: Albany, New York, United States
PHONE: 518.464.0412

CONSTRUCTION FIRM: Turner Construction
PROJECT ROLE: Construction Manager
PROJECT CONTACT
TITLE
ADDRESS: 22 Corporate Woods Blvd. 4th Floor
CITY, STATE OR PROVINCE, COUNTRY: Albany, New York, United States
PHONE: 518.432.0277

PROJECT DETAILS

PROJECT NAME: Additions and Renovations to Cohoes High School
CITY: Cohoes
STATE: New York
DISTRICT NAME: Cohoes City School District
SUPERINTENDENT: Robert Libby
OCCUPANCY DATE: Completed over 18 months, construction took place during school sessions and was completed on schedule, Nov. 2011
GRADES HOUSED: 9-12
CAPACITY: 650 students
SITE SIZE (ACRES): 48 acres
GROSS AREA (SQ FT): 45,000
PER OCCUPANT (PUPIL): 264 sf/student
GROSS/NET PLEASE INDICATE: Gross
DESIGN AND BUILD?
IF YES, TOTAL COST?
INCLUDES:
IF NO
SITE DEVELOPMENT: $1,234,000
BUILDING CONSTRUCTION: $11,766,000
FIXED EQUIPMENT: $274,000
OTHER:
TOTAL: 13,274,000