



BENSON POLYTECHNIC HIGH SCHOOL | OPEN HOUSE

PORTLAND PUBLIC SCHOOLS | MAY 31, 2016



TEAM INTRODUCTION | PORTLAND PUBLIC SCHOOLS

Debbie Pearson, Capital Project Director

Jen Sohm, Design Quality Manager

Rolando Aquilizan, Capital Project Coordinator



TEAM INTRODUCTION | DOWA-IBI GROUP



Dan Hess
Principal-in-Charge



Karina Ruiz
Principal, Planner



Marc Nordean
Project Designer

THE TEAM

Consultants: Architectural
DOWA-IBI Group

Historic
Peter Meijer Architect

Building Envelope
Morrison Hershfield

Site Utilities
KPFF

Landscape
Percival Landscape Architecture

Structural
ABHT

Mechanical
Interface Engineering

Electrical & Fire Alarm
Reyes Engineering

Building Technology
Interface Engineering

Theater
PLA Associates

Food Service
Halliday Associates

TEAM INTRODUCTION | MASTER PLANNING COMMITTEE

PAUL ANTHONY

School Board Representative,
Benson Parent

DALE BAJEMA

Alumni, Benson Boosters,
Benson Site Council

MAYA BROWN

Benson Student

ILSA BRUER

Benson Teacher

KEVIN B. CLARK

Benson Alumni,
Business Association,
Higher Ed/Business for STEM

ANGEL DAWSON

Benson Parent

MICHELLE FUSAK

Benson Parent

BRIAN GERBER

Teacher, Benson Cluster Parent

REUBEN GILMORE

Benson Parent, Alumni

TAMMY HITE

Teacher, Alumni, Partners

ANGELA JARVIS HOLLAND

Benson Parent, Students of All
Abilities

LUKE HOTCHKISS

Benson Teacher, Alumni

ERIC HUTCH

Benson Alumni

JANAE JAMISON

Benson Teacher

ROB JOHNS

Alumni, Business Association,
Legacy Graduate

KRISTIN KENNEDY

Benson Teacher

DAVE KETAH, CO-CHAIR

Benson Cluster Parent,
Neighborhood Association, Parent

JACOB M. MASTERS

Benson Student

IRINA PHILLIPS

Neighborhood Association, Benson
Parent

JIM PIRO

Alumni, Industry

ED RAILEY

Benson Teacher

CHRISTINA RAM

Benson Alumni

LEIGH ANNE SCHERER

Benson PTSA

JAMES TOMPKINS

Benson Student

JULIE TONROY, CO-CHAIR

Business Association, Partners

MATT PELLICO

Benson Teacher

BRYAN SMITH

Benson Teacher

RICHARD (DICK) SPIES

Alumni, Partner

LISA WHITE

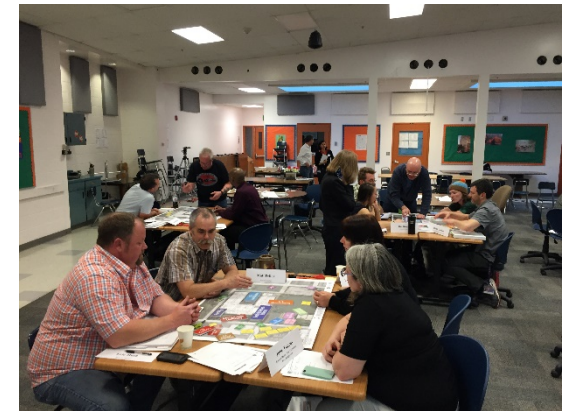
Benson Parent, Boosters

CURTIS WILSON JR.

Benson Principal

REBECCA ZICH

Benson Student



WHAT IS A MASTER PLAN?

Gathering Information

- Public Process
- Due Diligence Work
- Review of Historically & Culturally Significant Elements
- Educational Specification Development

Master Planning / Design

- Possibilities / visioning identification of key goals and themes

Development of options

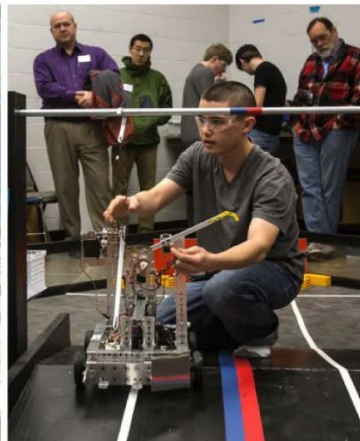
- Input & Feedback from community
- Development of Preferred Option

Conclusions & Next Steps

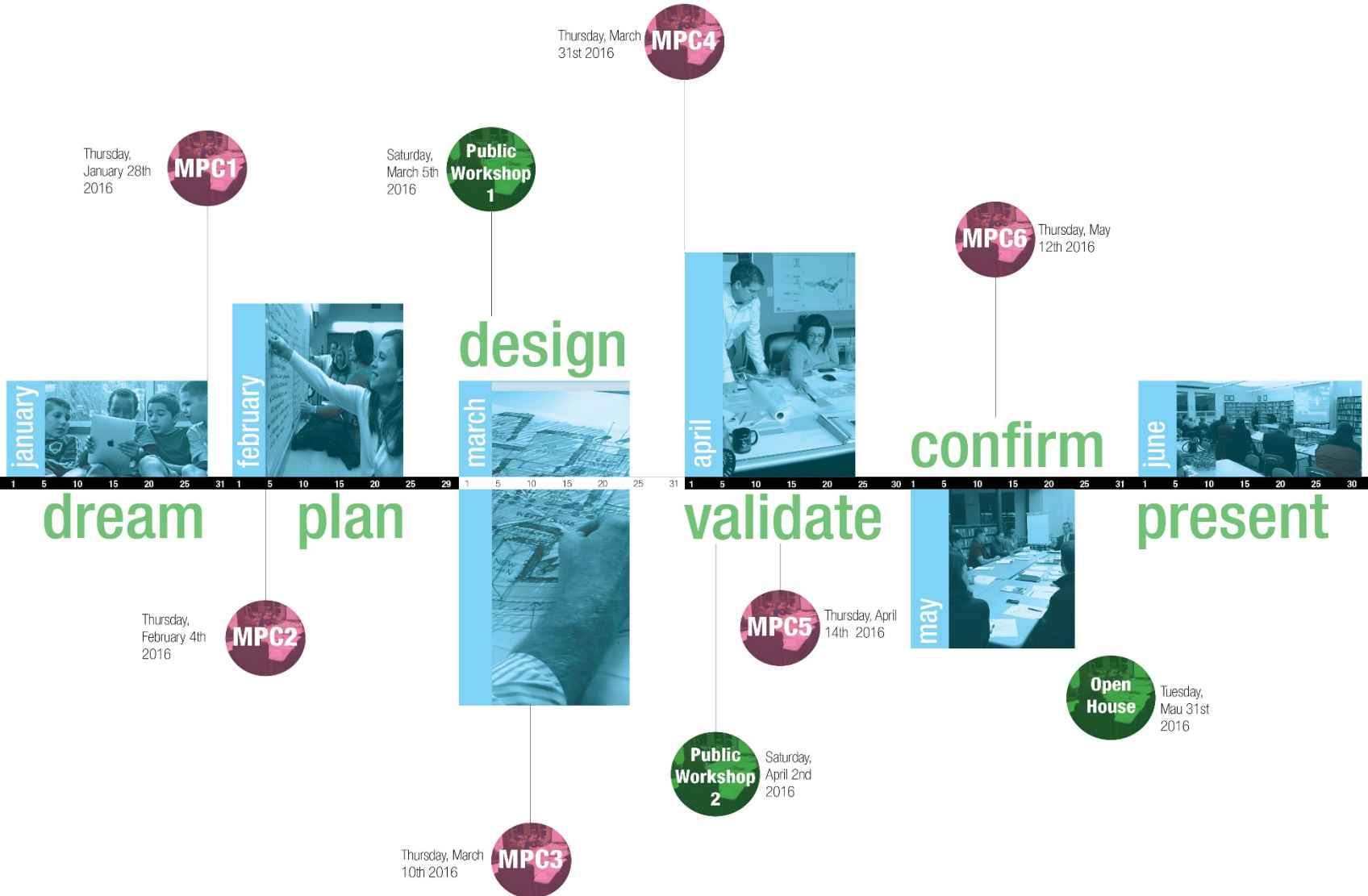
- Board Presentation
- School Bond

MASTER PLANNING COMMITTEE OUTCOMES

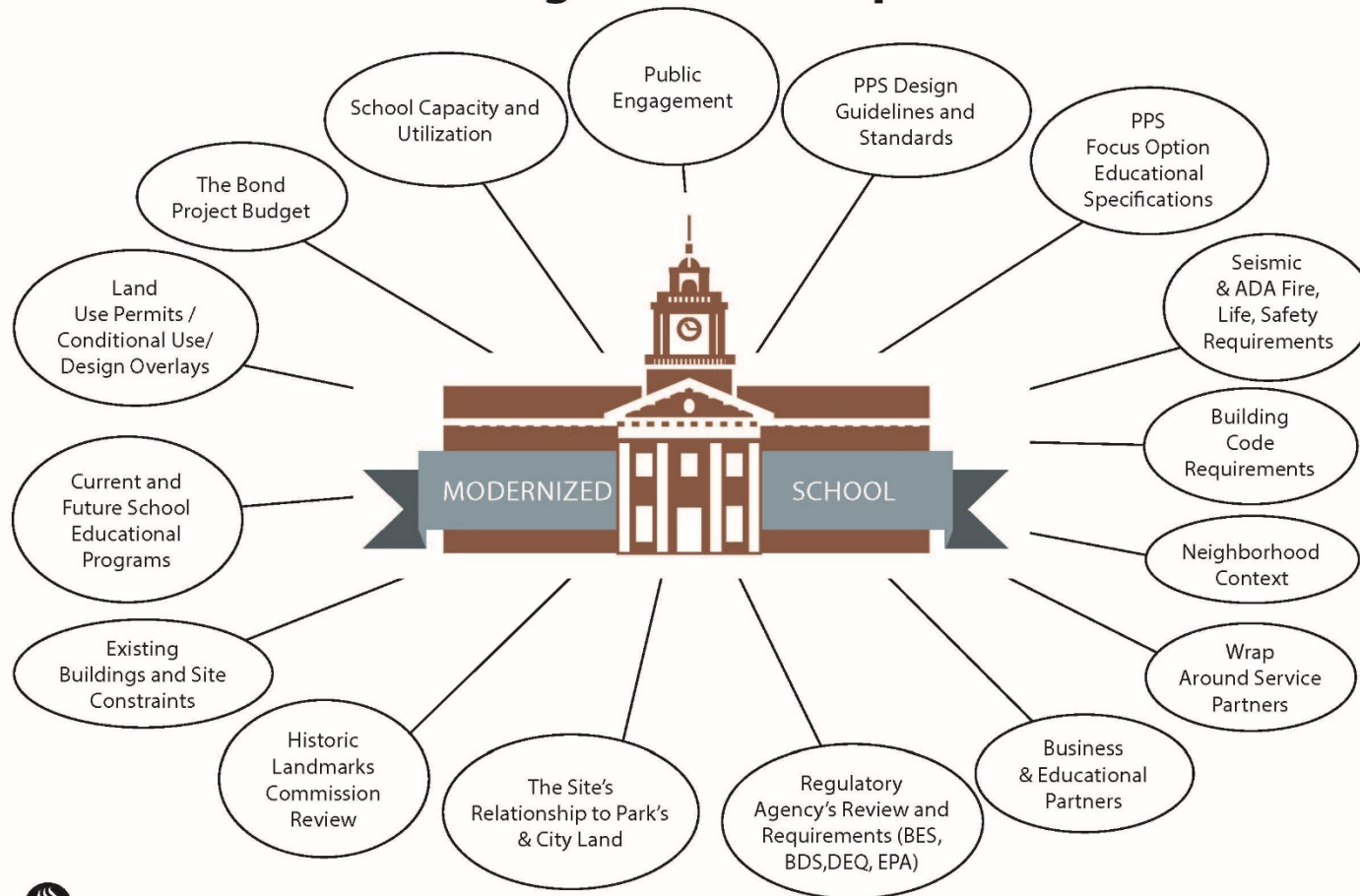
- Understand Benson Polytechnic High School Needs and Wants
- Ensure all Voices are Heard
- Prepare for the Next Generation Learner
- Build Community Within and Beyond Benson Polytechnic High School
- Create a Foundation on Which to Build
- Provide Clarity and Transparency



PROCESS & SCHEDULE



Factors Influencing Benson Campus Master Plan



PORTLAND PUBLIC SCHOOLS • OFFICE OF SCHOOL MODERNIZATION

DUE DILIGENCE

- **Architecture & Structure**

- Original building contains Unreinforced Masonry & requires significant seismic upgrades to meet current code
- Universal Access is not consistent throughout
- Classrooms are too small and feel very crowded

- **Building Systems**

- The entire mechanical system is well beyond the end of its service life and should be replaced. There are issues of indoor air quality as well as thermal comfort for building occupants
- The majority of the building's plumbing system is well beyond the end of its service life
- Electrical & low voltage systems are outdated and do not comply with current code.

NEXT GEN LEARNER PRESENTATION

THE NEW LEARNING PARADIGM

GENERATION Z: CONNECTED FROM BIRTH.

Born mid-1990s to 2010.

*Generation Z data compiled by Sparks & Honey



Introducing the New Generation: "Gen Z"
People born after Gen Y (from 1995 to present) who are currently under the age of 18.

WHO ARE THESE KIDS?

60%

of Gen Z want to have an impact on the world with their jobs (compared to 39% millennials)

26%

of 16 to 19 year olds are currently volunteering



They intend to change the world.

HOW ARE THEY DIFFERENT FROM THEIR PREDECESSORS?

72%

of high school students want to start a business someday (compared to 64% of college students)

61%

Of high school students want to be an entrepreneur rather than an employee (compared to 43% of college students)



Entrepreneurship is in their DNA.

HOW ARE THEY DIFFERENT FROM THEIR PREDECESSORS?

Their attention spans are getting shorter.

8 SEC

Is the average American attention span (down from 12 sec in 2000)

11%

Of children 4-17 years old have been diagnosed with adhd (up from 7.8% in 2003)



Gen Z are the ultimate consumers of snack media. They communicate in bite sizes. Research studies suggest that their brains have evolved to process more information at faster speeds, and cognitively more nimble to handle bigger mental challenges. But, getting and keeping their attention is challenging.

Source: national center for biotechnology information, U.S. National library of medicine, the associate press

Source: Millennial Branding and Internship.com, 2014, Mintel 2014

THE NEW LEARNING PARADIGM

Communication

Collaboration

Critical Thinking

Creativity

Character

Cultural Competency

We're taking teaching and learning
Above & Beyond

Today's students are moving beyond the basics and embracing the 4C's — “super skills” for the 21st century!

Communication
Sharing thoughts, questions, ideas, and solutions

Collaboration
Working together to reach a goal — putting talent, expertise, and smarts to work

Critical Thinking
Looking at problems in a new way, linking learning across subjects & disciplines

Creativity
Trying new approaches to get things done equals innovation & invention

For more 4C resources from the Partnership for 21st Century Skills, including the animated film ABOVE & BEYOND by Peter H. Reynolds & FableVision, journey to www.p21.org/4Cs

PARTNERSHIP FOR 21ST CENTURY SKILLS

FableVision

The Four C's + Two

VIRTUAL TOUR



Engineering /
Electronics



Health / Biomedicine



Dental Medicine / Hygiene



Construction Technology

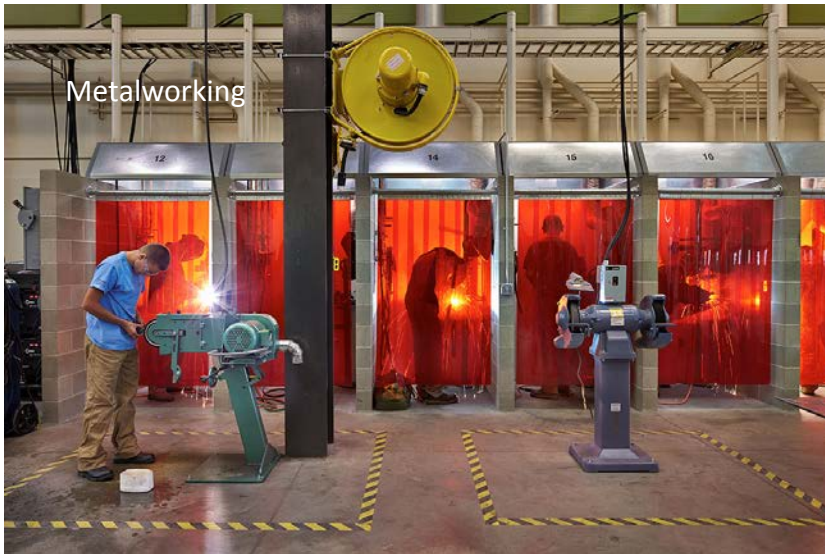
VIRTUAL TOUR



Manufacturing



CAD | Design & Architecture



Metalworking



Woodworking

VIRTUAL TOUR



VIRTUAL TOUR



VIRTUAL TOUR

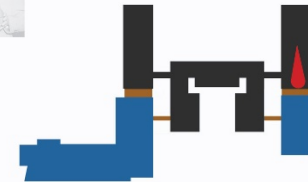


Media Center



1916 1956 1916 1916 1916 1915 1916 1916 1956 1916 1956

fhs franklin high school modernization and addition



GUIDING PRINCIPLES

HONOR THE UNIQUE HISTORY AND CULTURE OF BENSON POLYTECHNIC HIGH SCHOOL:

Benson Polytechnic High School students, staff and community are proud of the school's rich history extending over 100 years. The modernization of this historic facility presents an opportunity to honor the past while embracing the future. The renovated facility will retain the historic character of the stately school, yet be entirely modern in its approach to delivering integrated academic and career technical education and opportunities to students.



GUIDING PRINCIPLES

ENGAGE WITH THE LOCAL BUSINESS, GOVERNMENT AND POSTSECONDARY PARTNERS TO CREATE A STRONG CONNECTION BETWEEN EDUCATION AND INDUSTRY:

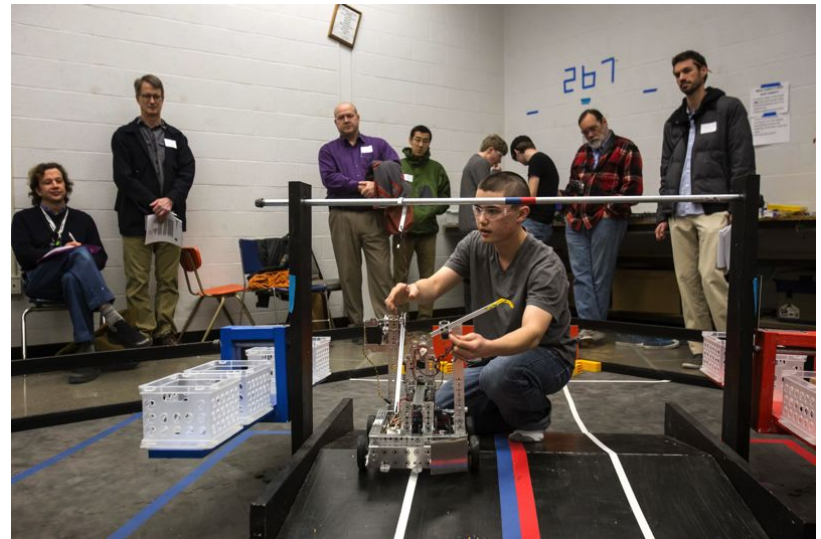
Benson Polytechnic High School's programs should support reciprocal partnerships with industry, government, and postsecondary education, linking educational content to real-life applications and providing career relevance. Industry and postsecondary connections enhance career pathways, strengthening the connection between course content and career goals. Benson Tech's CTE spaces should be designed to mimic real-world work environments, reflect industry needs and meet applicable certification requirements.



GUIDING PRINCIPLES

PROVIDE HANDS-ON, PROJECT-BASED LEARNING OPPORTUNITIES THAT ARE IMBUED WITH RIGOR AND RELEVANCY:

Benson Tech’s modernized facility will include spaces designed to accommodate hands-on, problem-based learning activities, providing students with access to state of the art & industry-standard tools, materials, equipment, and technology to support an investigative mindset. Benson Tech should ignite a passion for “learning by doing” through experiential learning opportunities. These approaches will help students understand the relevancy of core content to their future career paths, allowing students to conceptualize the real world application of abstract academic concepts.



GUIDING PRINCIPLES

PROVIDE AGILE, FLEXIBLE AND ADAPTABLE FACILITIES THAT SUPPORT CHANGING EDUCATIONAL AND INDUSTRY NEEDS

Benson Tech's modernized facility must be designed as adaptable to changing needs based on economic shifts, industry advances, and new equipment needs.

Classrooms and other learning areas should serve as flexible spaces that can be easily reconfigured to support different instructional approaches. School spaces should encourage collaboration by offering a variety of group settings with flexible furnishings to invite interaction. These areas should be designed as open and inviting spaces that draw students in and serve as centers of activity and discussion.



GUIDING PRINCIPLES

CELEBRATE DIVERSITY AND PROVIDE A SENSE OF INCLUSION AND BELONGING AMONG STUDENTS AND FAMILIES

Benson Polytechnic High School is enriched and strengthened by the diversity of students, parents, teachers and staff. Benson Tech's school environment should reflect an appreciation of different cultures, socioeconomic backgrounds, and learning modalities. Benson Tech should promote socioeconomic equity among students by ensuring that all students have access to the resources needed to succeed in their educational and career goals.



GUIDING PRINCIPLES

POSITION BENSON POLYTECHNIC AS THE NATIONAL MODEL FOR STEAM AND CAREER TECHNICAL EDUCATION

Benson Polytechnic High School aspires to become a nationally-recognized institution that integrates career technical education and STEAM instruction. Students, alumni, business and the community should feel a sense of pride when speaking of their school's exemplary programs and innovative learning approaches.



GUIDING PRINCIPLES

PROVIDE LEARNING ENVIRONMENTS THAT INSPIRE CREATIVITY AND COLLABORATION AMONG STUDENTS

Benson Tech’s modernized facility should include spaces and features that inspire exploration, collaboration and creativity, and open up a world of possibilities to students. Benson Tech’s modernized facility should include multisensory environments that inspire students to explore, design, create and “tell their stories”.



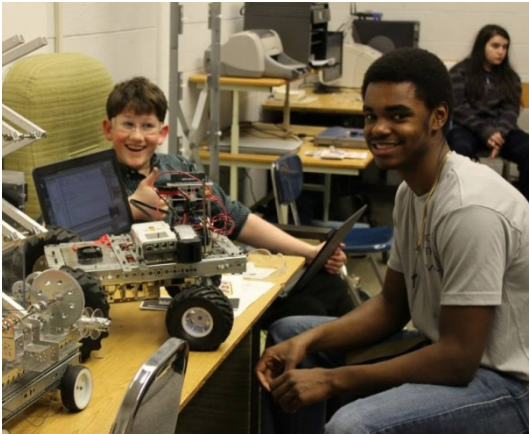
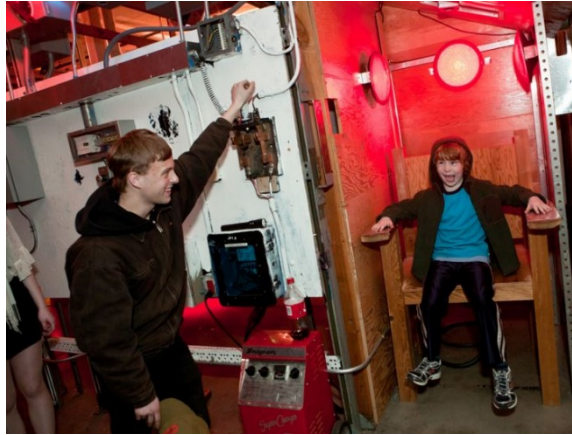
GUIDING PRINCIPLES

SUPPORT A COMPREHENSIVE EDUCATIONAL EXPERIENCE FOR STUDENTS

Benson Polytechnic High School strives to provide a comprehensive educational and cultural experience for students. Benson Tech's campus should include sufficient onsite resources to allow students to conveniently access school-based sports and/or performing & fine arts programs. Students' educational experiences are bolstered through their participation in expanded elective courses and extracurricular opportunities.



TECH SHOW



COMMUNITY WORKSHOP



COMMUNITY WORKSHOP



MPC MAPPING



WHAT IS MOST SIGNIFICANT ASPECT OF THE BENSON EXPERIENCE THAT SHOULD BE CARRIED FORWARD INTO THE FUTURE?

MPC-02

- Learning is connected to real world experiences ●●
- Depth and variety of CTE opportunities ●●●●●●●●
- Opportunities for student growth in both CTE and academic programs ●●●●●●●●

WHAT IS THE GREATEST CHALLENGE TO STUDENT SUCCESS AT BENSON CURRENTLY?

- Appropriate and adequate space for learning ●●●●●●●●
- Out-of-date equipment and technology ●●●●●●●●
- Limited variety of non-CTE curriculum ●●●●●●●●



HOW WILL WE DEFINE SUCCESS?

- Student centered and forward looking: ●●●●
 - Students want to be here ●●●●
 - Teachers want to be here, ●●●●
- Benson reputation grows as a unique center of excellence ●●●●
- Community connections are strengthened - neighborhood, alumni, business and educational partners ●●●●●●
- Benson Pride - school feels like home ●●●●
- Sense of Ownership - teachers and students want to be here ●●●●
- Innovation and collaboration happen naturally ●●●●
- Recognized as flagship for CTE in Oregon and nationally ●●●●●●●●●●



GREATEST FEAR

MPC-02

- Benson staff won't be listened to in the process ●
- Inadequate teaching spaces and lack of collaboration opportunities ●●
- Extra-curricular activities considered as non-essential ●●●●
- Not having a secure campus ●
- Key decisions will be made by others not participating in this process ●●●●●●●●
- Schedule and budget will cause poor long term decision making ●●●●
- Process will erode trust and pride in Benson ●●●●

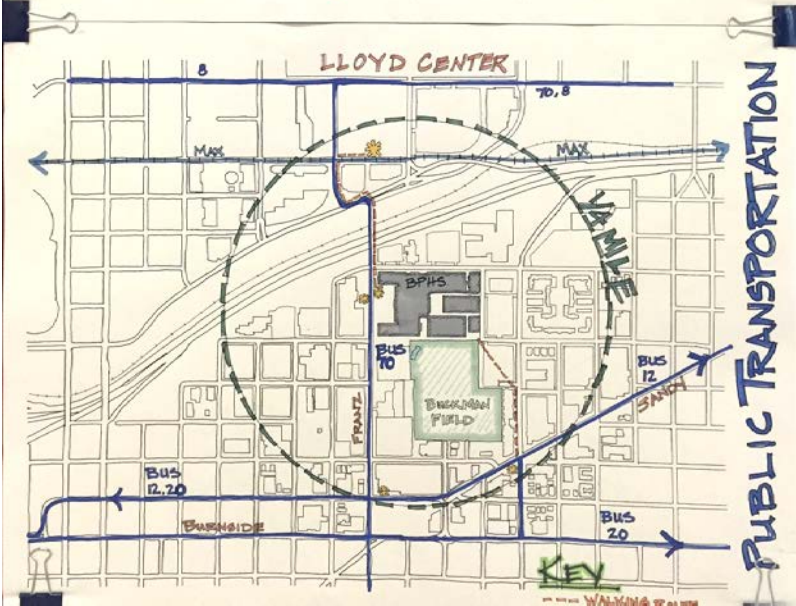
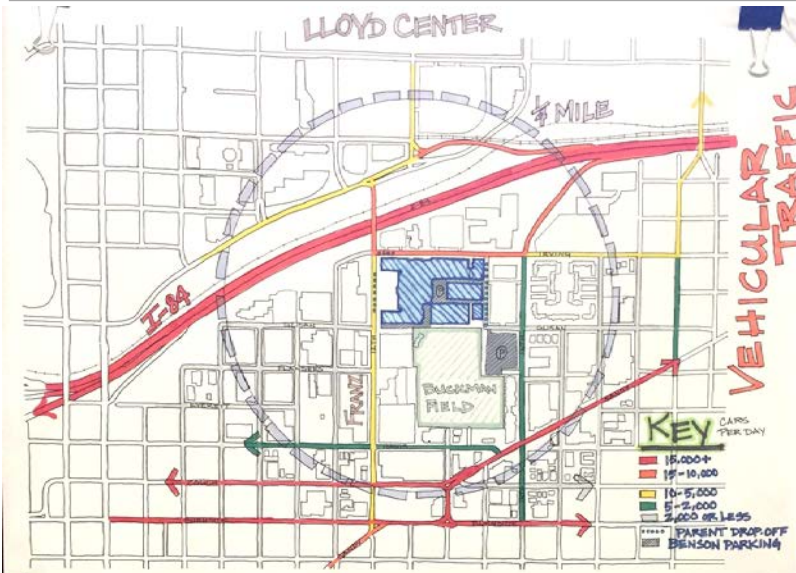


GREATEST WISH?

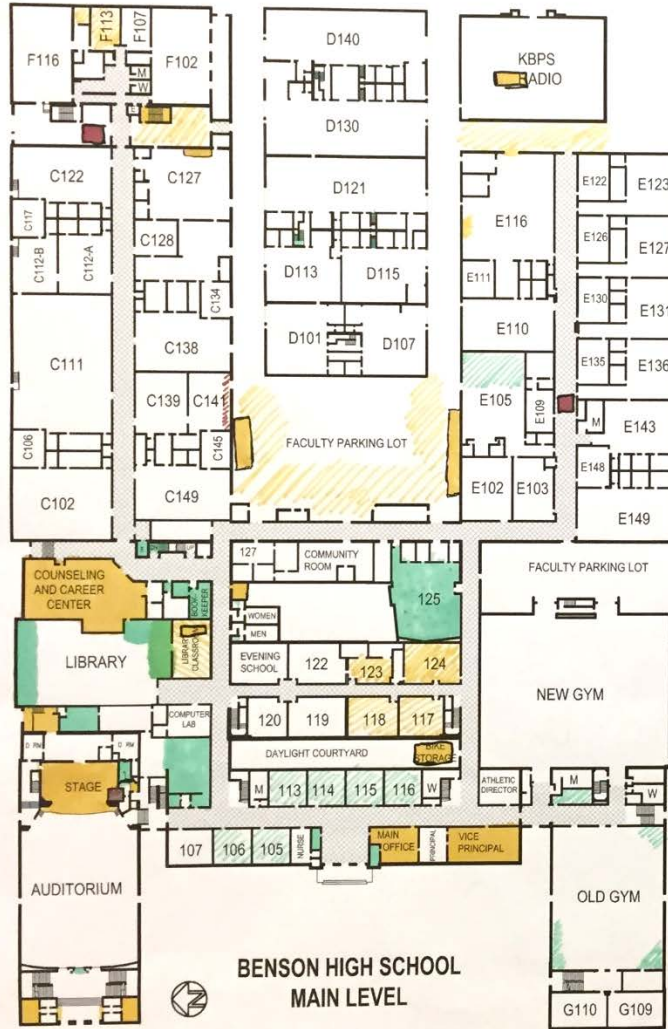
- A sustainable outcome both for the educational program and the building itself ●●●●●●●●●●
- Focus is on the students, socially and academically ●●●●●●●●
- Transparency in process and outcomes ●●●●
- Benson history and legacy serves as foundation for the future growth of the school ●●●●●●●●●●



STUDENT MAPPING



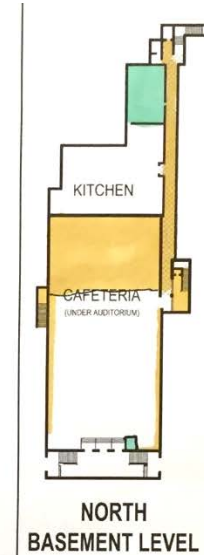
STUDENT MAPPING



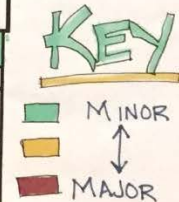
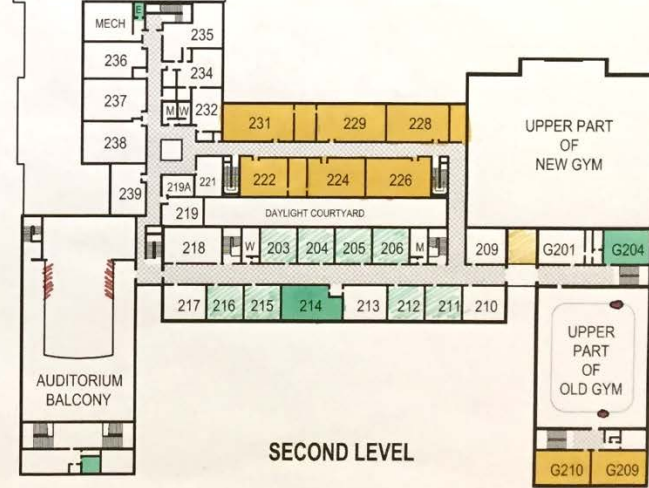
• THINGS LIKE HEATING, AIR QUALITY, LIGHTING, ACCESSIBILITY, FINISHES, PARKING, AND WATER LEAKS ARE PROBLEMS ALL OVER THE SCHOOL.

• MANY CLASSROOMS ARE TOO SMALL TO HOLD THE AVERAGE CLASS SIZE.

• MUCH OF THE BUILDING HAS YET TO BE UPGRADED TO WITH STAND EARTHQUAKES.



BUILDING ISSUES



STUDENT MAPPING



Benson: Building Issues



Inadequate storage in the school.



Problems around the school and old Equipment.



Parking areas all around the school grounds even ones that aren't real parking areas.



Lighting systems all around the school.



MPC CHARRETTE



MPC CHARRETTE



COMMUNITY WORKSHOP

PROGRAM INTEGRATION

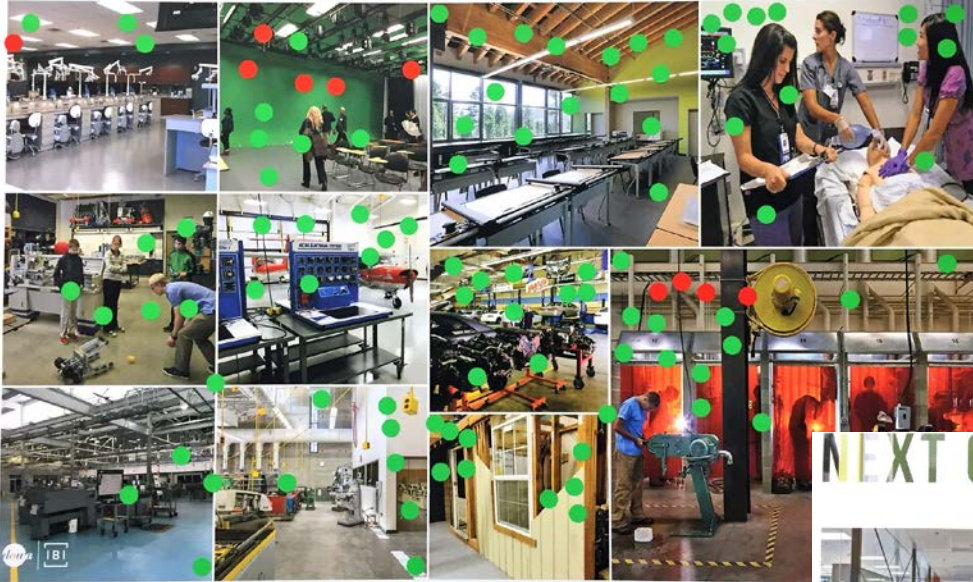


SUSTAINABILITY

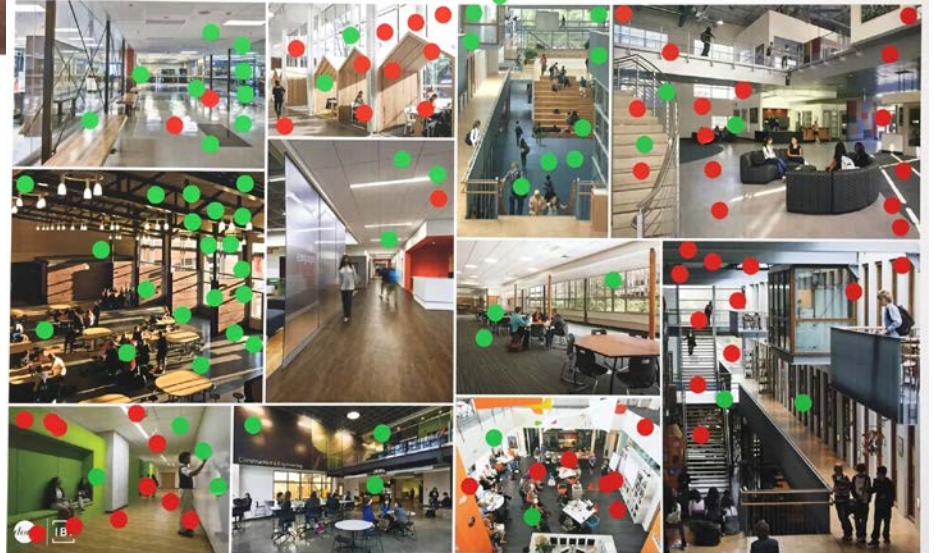
Rank	Strategies	Considerations	Priorities
●●	Stormwater Design Bioswales, Rainwater Collection & Reuse	- RAINWATER GARDEN - FRONT YARD AS BIOSWALE - CATCH RAINWATER ON THE ROOF	
●●	Water Use Reduction Low Flow Fixtures, Rainwater Collection and Reuse, Water Efficient Landscaping	- USE SUSTAINABLE REGRASS WATER - SYSTEM TO CAPTURE STORMWATER	
●●●	Energy Conservation Solar PV, Solar Thermal, Sunshades, Light Fixtures, Natural Ventilation, Energy Efficient Building	- COMMUNITY HEAT - SUSTAINABLE ENERGY - INSULATE ROOF HANGERS - LED LIGHTS - CENTRAL SOUTH LIGHT	- WIND POWER
●●●	Biophilia Views to Nature, Gardens	- FOOD PRODUCTION / GARDENING - RAISE GARDEN / GREENSPACE - CONNECTION TO NATURE WORLD	
●●●	Daylighting Windows	- LARGE WINDOWS - CLIMATEWISE LIGHT FIXTURES - SUSTAINABLE SKY LIGHTS OR SHIPS	
●●●	Healthy Learning Environment Low VOC Materials, Acoustics, Views to Nature, Natural Ventilation	- EASY TO CLEAN - SAFETY FOR KIDS	VENTILATION OF FILTERING AIR
●●	Building Reuse Reduce Waste, Retain Cultural Resources, Preserve Historical Resources, Conserve Natural Resources	- BIO HAZARD WASTE PROCEDURES - RECYCLING SCHOOL WIDE	
●●	School as a Teaching Tool Sustainable Features Incorporated into Curriculum, Informative Signage, Community Educational Resources	- PRODUCTION / BUSINESS PARTNERSHIPS	
✓	Alternative Transportation Options Car Charging Stations, Bicycle Parking, Limited Car Parking	- CHARGING STATIONS FOR CARS & BIKES - HUB FOR BIKES SHARING PROGRAM - 2ND STORY FOR BIKES PARKING	

COMMUNITY WORKSHOP

CTE LEARNING SPACES



NEXT GENERATION LEARNING SPACES



COMMUNITY WORKSHOP

PARTNERSHIPS



Potential Partnerships

ZIBA (Industrial Design)
 LAIKA (stop action film)
 PRECISION TOOLS (MANUFACTURING)
 FIRST (ORTOP)
 MCKENZIE ARCHITECTS
 PDX ART MUSEUM, OMST
 OREGON COLLEGE OF ARTS & CRAFTS
 HOFFMAN CONSTRUCTION
 DAIMLER TRANSPORTATION TECH.
 FORD ETC. (BOEING)
 MAKERSPACE CADX,
 NATIONAL LABORATORIES, PNML
 LOCAL BUSINESS
 NATIONAL INSTITUTES HEALTH
 NIST (STANDARDS TECHNOLOGY)
 NASA
 LOCAL THEATRE
 SILTRONICS
 FREEGEEK
 HP, INTEL, TECHTRONICS
 UTILITY (PGE, PACIFIC, BPA)
 CONSTRUCTION, ELECTRICAL -
 PRIVATE UNIONS IBEW 48
 HEALTH CARE (PROVIDENCE, LEGACY)
 BIG PHARMA (PHIZER, ETC.)
 HIGHER ED (REED, OHSU, OIT, PSU,
 CASCADIA, PCC, MHCC) OSU, UO
 NIKE, ADIDAS
 BOEING
 BES

Program Opportunities

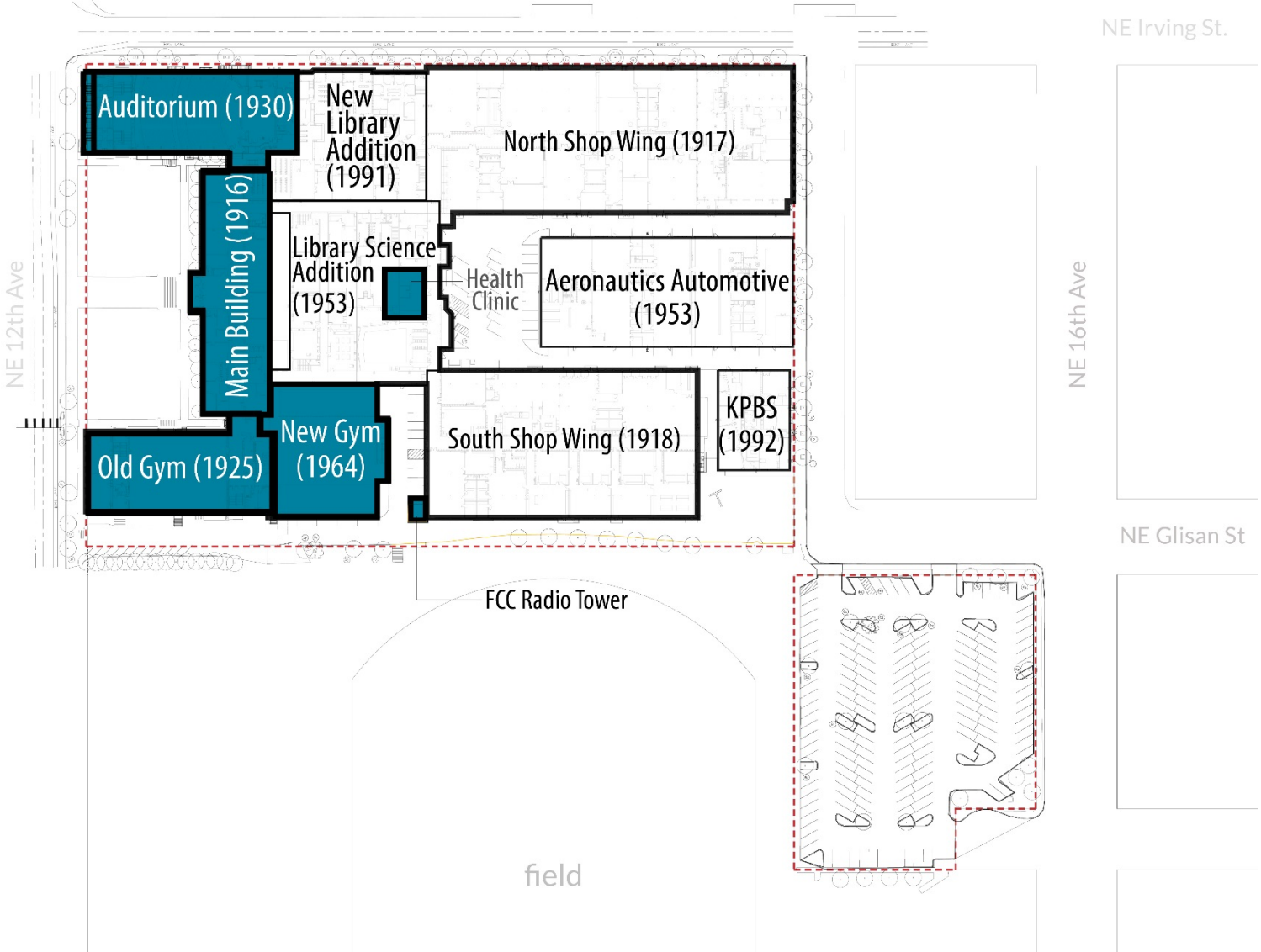
APPRENTICESHIPS
 INTERNSHIPS, Potential Consult on Design
 INTERNSHIPS, Design Consult
 INTERNSHIPS, Design Consult.
 AFTERSCHOOL / COMPETITION / SCHOLARSHIPS
 HOUSE DESIGN
 T.A. SHOP WORK
 INTERNS
 # PARTNERS, APPRENTICESHIP
 ACADEMIC TECHNOLOGY SHARING
 - SHARED POWER, STEAM, ENERGY / EDUCATION
 CAPITAL # "
 " STAGECRAFT
 TECHNOLOGY, DESIGN CONSULT, DONOR, TRAINING
 SOLAR, ELEC. VEHICLES, INSTRUCTIONAL + CAPITAL #
 CROSS LEARNING.
 EDUCATION COLLEGE TOURS
 SUCH AS GREEN ROOF TECHNOLOGIES

Examples to Draw From

Laika teaching @ Sat. Academy
 EXISTING
 SOME EXISTING
 EXIST, PARTNERS
 DART (FLORIDA DESIGN HIGH SCHOOL)
 CUS - DETROIT. SEI PROGRAM
 FENCIBLE
 BENSON POLYTECHNIC HIGH SCHOOL | APRIL 2, 2016

Banfield I-84

NE Irving St.



NE Glisan St

NE 16th Ave

NE Glisan St

NE Flanders St

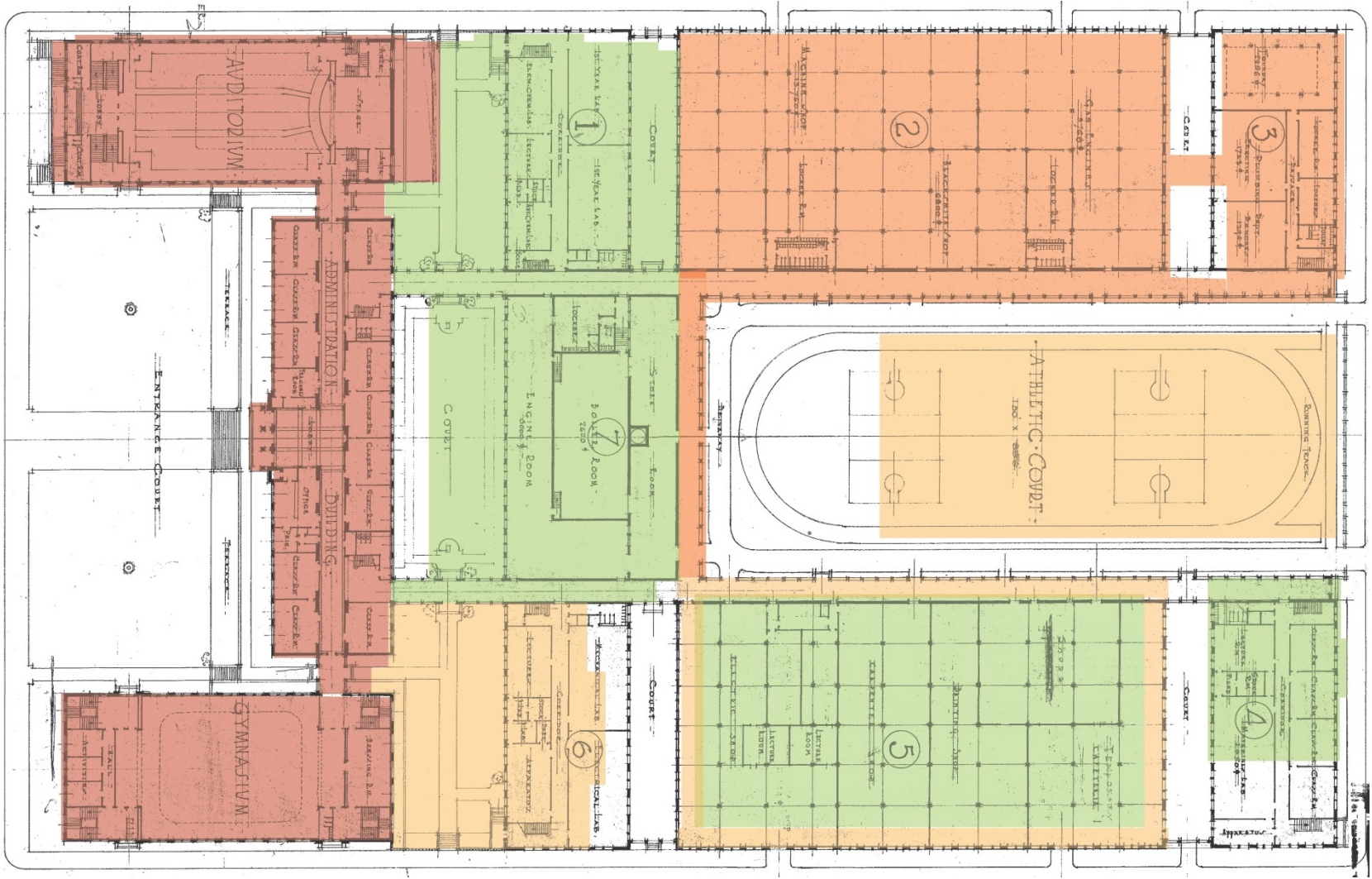
FCC Radio Tower

field



EXISTING BUILDINGS TO REMAIN

HISTORICAL LANDMARK

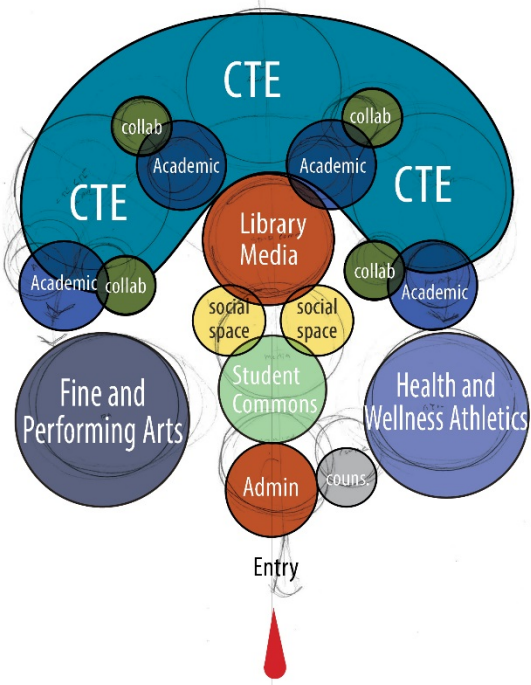


Contributing High Significance

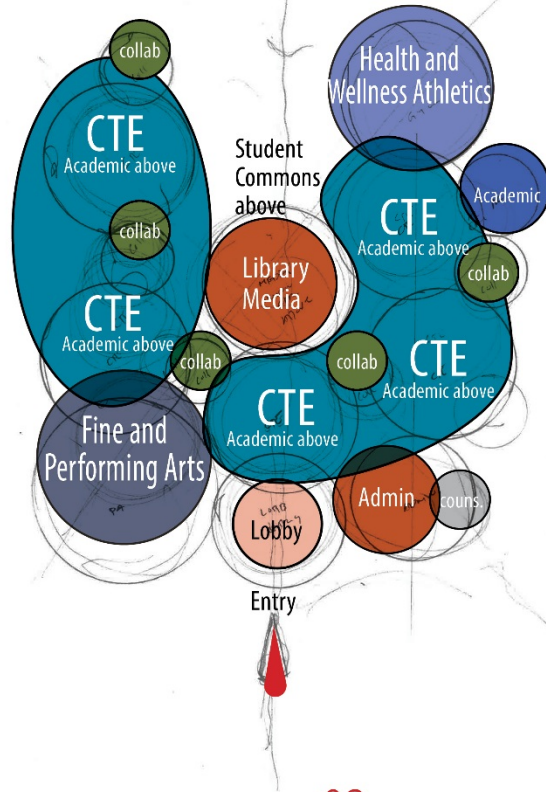
Contributing Moderately Significance

Contributing Low Significance

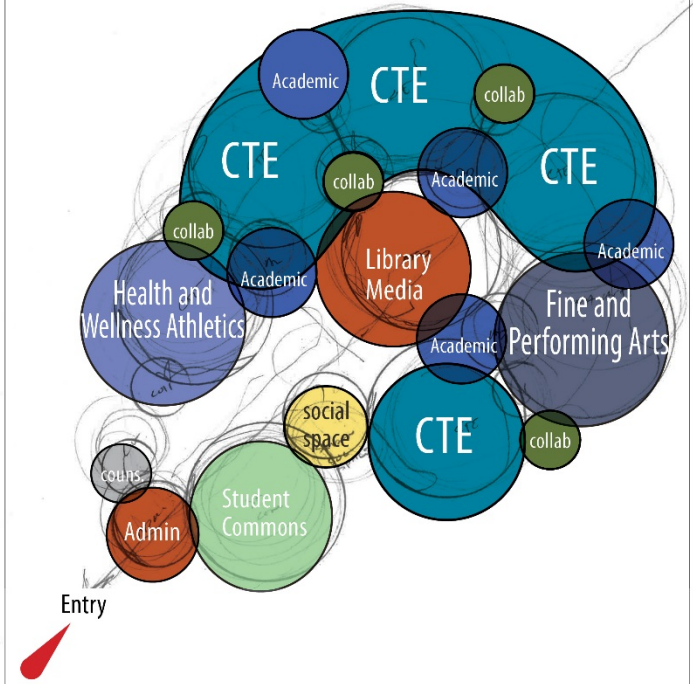
Non Contributing/ Non Historic



Concept diagram 01



Concept diagram 02



Concept diagram 03

Community Workshop – Committee Impressions

- Integrated academic with CTE, disbursed collaboration spaces
- Pod clusters that contain academic, CTE, collaboration areas, social spaces
- Concern about pod approach causing long travel distance between academic classes
- Use of green spaces as a compliment to academic/school environment

- Common idea of Health Occ adjacent to PE/Wellness; also would be nice to have Health Occ near other CTE programs
- Display windows on Irving Street – great idea, showcases the programs (11k-12k cars per day)
- Defined front door / back door concept is a good idea
- Grouping of public spaces at front of the building is a good concept (public spaces up front, private spaces in back)

TOUR HIGHLIGHTS

- Franklin HS
- Roosevelt HS



- HeLa High
- Washington HS



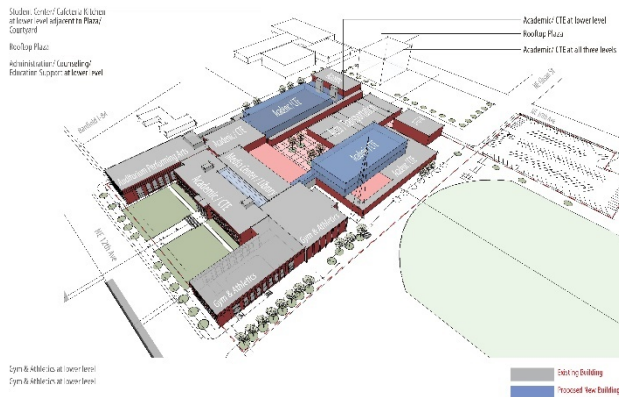
PROPOSED MASTER PLAN CONCEPTS



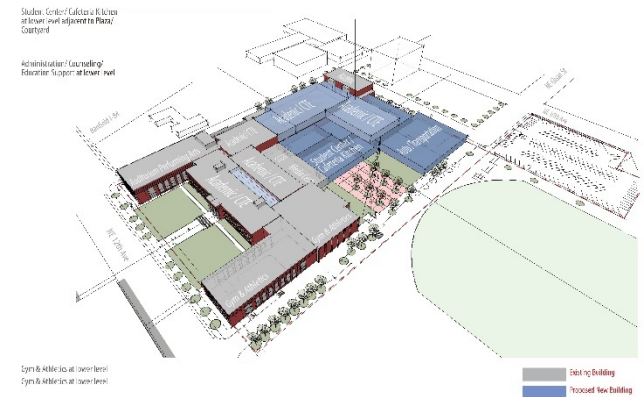
MASTER PLAN PREFERENCES

Which Master Plan Concept represents the best vision for the future of Benson Polytechnic HS?

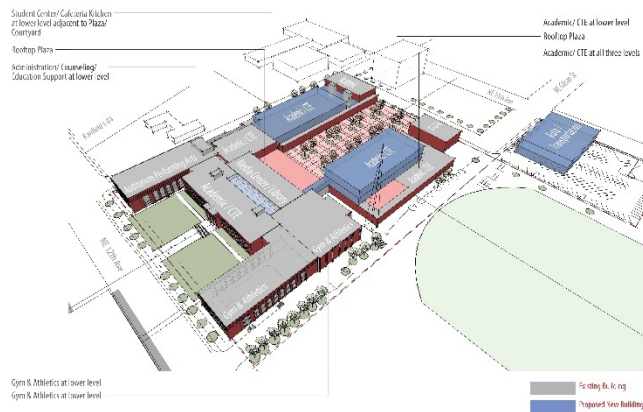
MP Concept A



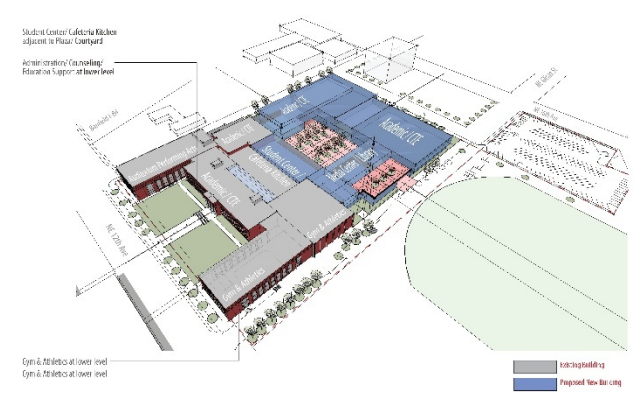
MP Concept B

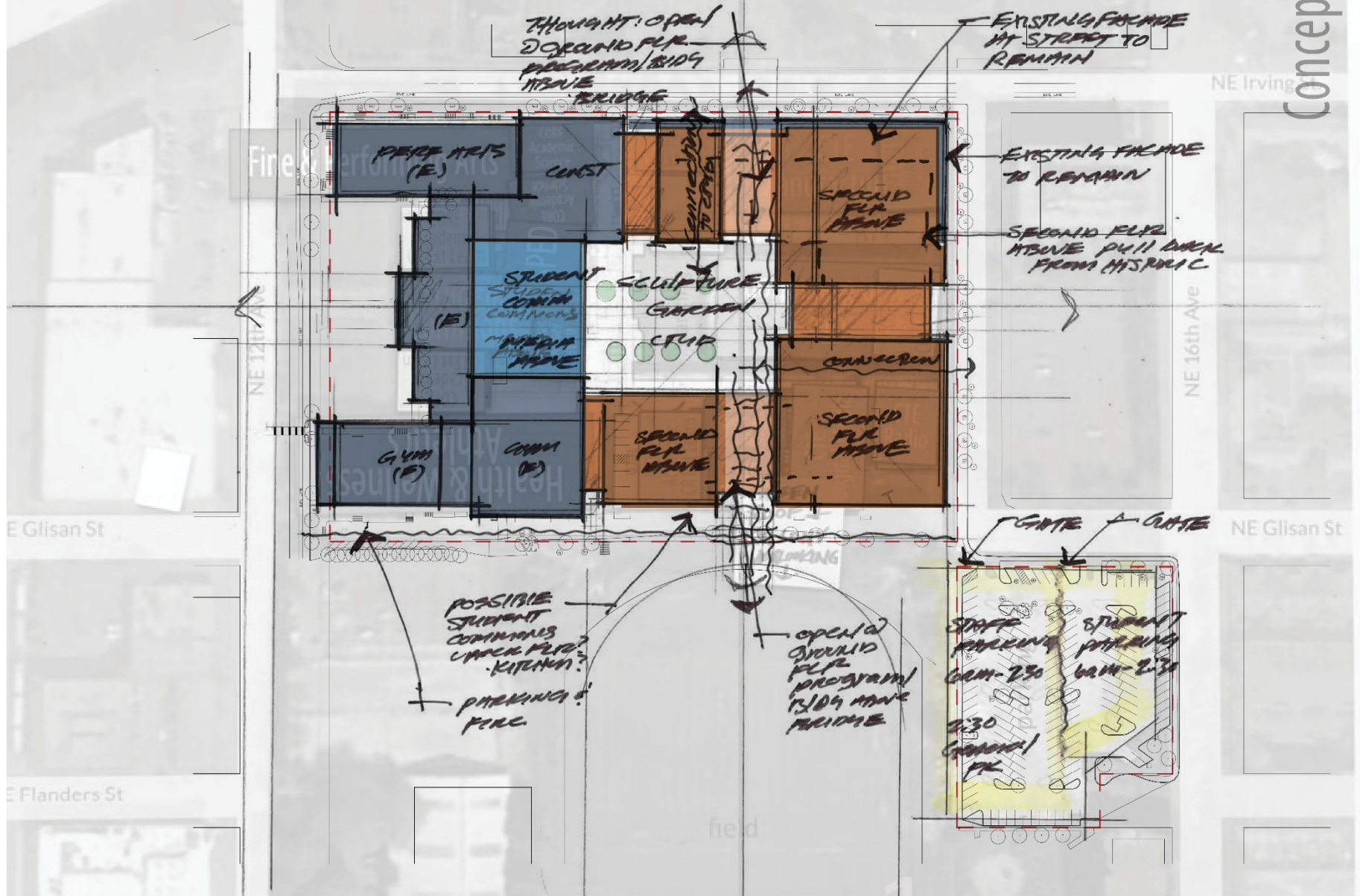


MP Concept C

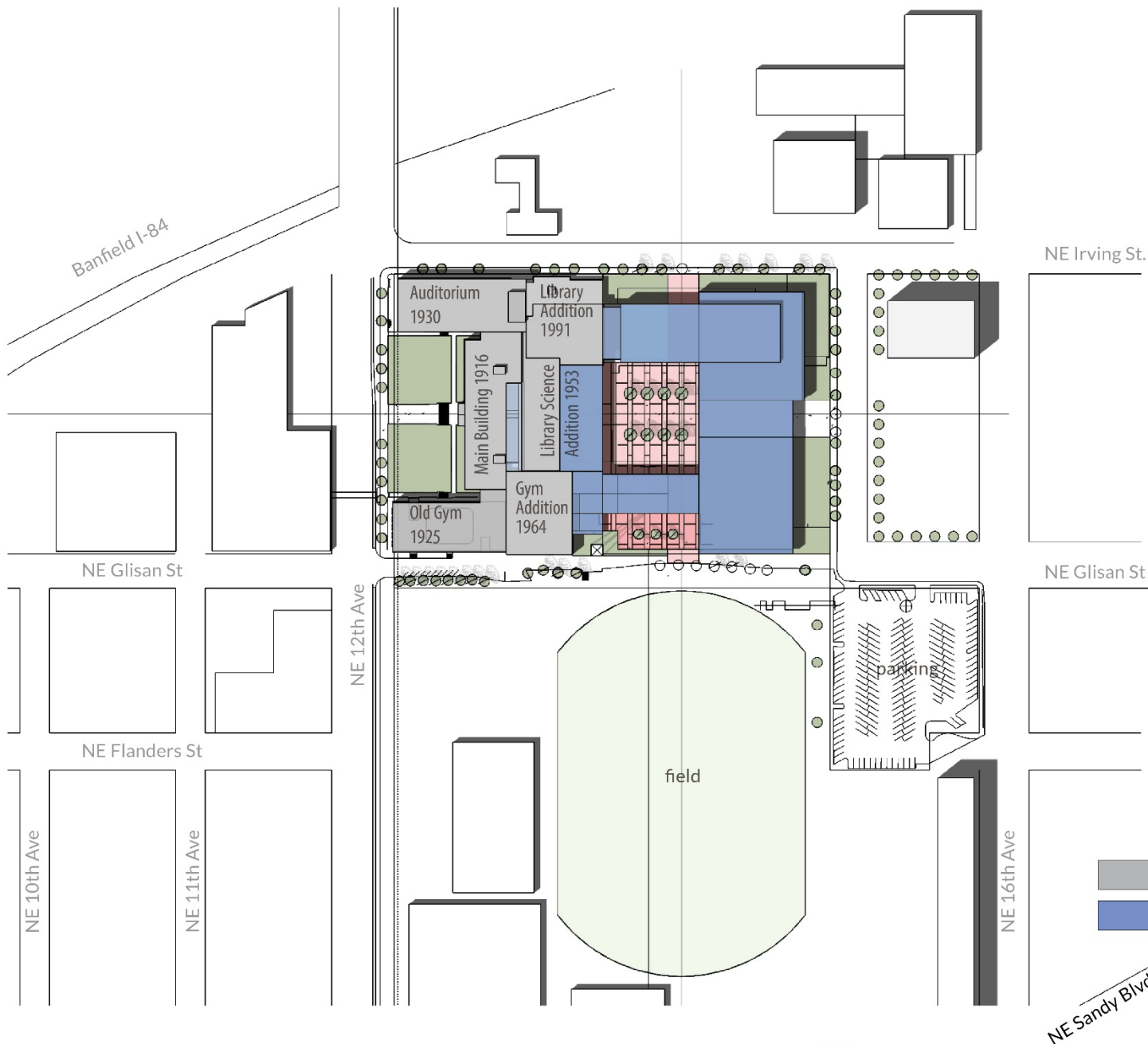


MP Concept D



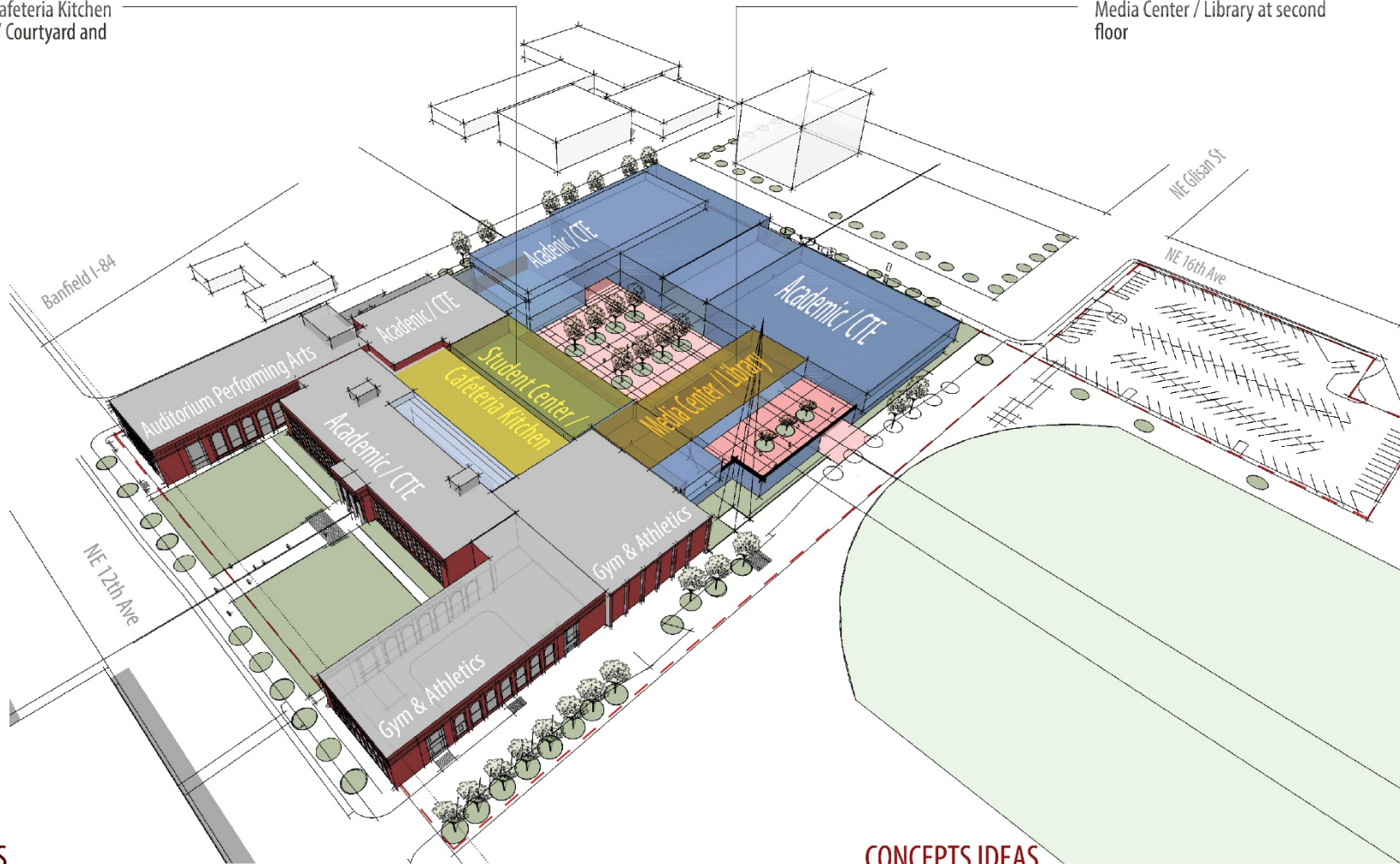


Concept



Student Center/ Cafeteria Kitchen adjacent to Plaza/ Courtyard and Lobby

Media Center / Library at second floor



CONSISTENT THEMES

Maintain presence of iconic NE 12th Avenue portions of the building (Theater, Main Classroom Wing, Old Gym)

Plaza as a gathering space for entire campus

Provide connections between academic and CTE learning

CONCEPTS IDEAS

- 3 significant public spaces combine to create the heart of the school: Student Center, Library, Plaza
-
- Makes connections to surrounding urban context

- Connects building and field to create a unified campus
-
- Provides greater flexibility for re-imagining CTE spaces

Existing Building
 Proposed New Building