HYGGE ADAPTIVE THINKING

INTEGRATING LEED AND WELL STANDARDS WITHIN ADAPTIVE REUSE

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Our society's philosophy has shifted away from mending what we already have to creating afresh all the time. We have become a very consumerist society that discards the "old" in favor of the "new". Recent trends have created a mass exodus from existing historical buildings due to growth, downsizing, appearances, and more recently, remote working environments. As a result, we have very habitable buildings being neglected, and resulting in condemnation and destruction, only to be replaced with parking lots or new developments that tend to promote urban sprawl.

! The focus of this thesis is to bring awareness to the necessity of adaptive reuse projects within a community and whether addressing ! LEED and WELL criteria helps or hinders an adaptive reuse project. The project consists of, but is not limited to, an indoor farmers market | with rooftop bar and restaurant, rock climbing gym with daycare, indoor skatepark, children's play place, rooftop gardens, and more. The emphasis of this project is certification according to LEED and WELL standards in the context of reusing the old water treatment plant in downtown Grand Forks. The reuse of these buildings is to promote the ' accomplished through indoor recreational activities for all ages.



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PRECONDITIONS CHART

APPLICABLE ACHIEVED

WELL STANDARDS SCORING TABLE

OPTIMIZATIONS CHART

APPLICABLE 📕 ACHIEVED 📗 CONCEPT SCORES

ACHIEVED APPLICABLE ACHIEVED

41 41 59 23 51

3 10

20 40

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7 4 7

5 12 3 6



OPTIMIZE ENERGY AND PERFORMANCE



DESIGN OPTION 1: THIS DESIGN SOUGHT TO BRING NATURAL LIGHT INTO GLASS ROOF SYSTEM ON BOTH BUIL NGS. THIS CONSIDERATION ALLOWED TOO MUCH UNCONTROLLABLE SUNLIGHT INTO THE BUILDING WHICH IN TURN CAUSED TOO MUCH SOLAR HEAT

DESIGN OPTION 2: THIS DESIGN OPTION PLAYED WITH THE IDEA OF A BUTTERFLY ROOF WITH GEC METRIC GLASS PANELS. THIS ROOF WOULD HAVE WORKED WELL BUT PROVED TO ALLOW TOO MUCH LIGHT IN WITH THE GLASS ENTRANCES CONSID ERED. BOTH OPTION 1 AND 2 HAD A PROPOSED S JUMP THAT WAS DROPPED FOR THE ROOFTOP BAR AND RESTAURANT.

ANCE AS WELL AS THE FUNCTIONALITY BETWEE WITH THE SITE. WITH A PATIO OPENING UP TO THE HE RIVER, HYGGE BRINGS "A FOR



LEED Credit Schedule

LEED Implementation

Occupants in the Building Have a View to the Outdoors for 75% of all Regularly Occupied Floor Area 90% of Regularly Occupied Floor Area Has an Illuminance Level Between 300 Lux and 3,000 Lux at Both 9 a.m. and 3 p.m.

Receiving This Credit Removes All Other Points in This Category and Awards This Category 12 Points for Meeting LEED Gold

Earned 3 Regional Priority Credits: Optimize Energy Performance, Rainwater Management, and Sensitive Land Protection

WATER EFFICIENCY
Install Permanent Water Meters for Indoor Plumbing Fixtures and Domestic Hot Water
REMAINING LEED IMPLEMENTATION NOT COLORED OR ON THE BOARD WILL BE
HIGHLIGHTED DURING PRESENTATION.

Y AND ATMOSPHERE

DOOR ENVIRONMENTAL QUALIT

OCATION & TRANSPORTATION

Building is Located on Previously Developed Land

Within a 1/2-Mile Walking Distance of Bus Stop

ERIALS AND RESOURCES

REGIONAL PRIORITY

NABLE SITES

entation of ASHRAE 90.1 Standards Within

Applied Strategies 1, 3, and 4 Used 4 Product Categories of Materials on the Building Interior

Electric Vehicle Supply Equipment in 5% of All Parking Spaces

aintained 60% of Existing Walls, Floors, and Roofs and 3 Different Products Sourced and Certified by the FSC

Green Roof/Roof Drainage/Roof Rain Gardens Dutdoor Space Greater Than or Equal to 30% of Total Site Area

cklight-Uplight-Glare Rating Method - Maximum Uplight Rating of U1

Option 2. Waste Prevention Through Salvaging and Reusing Brick from Building

Credit Title

Surrounding Density and Diverse Uses 3/

Optimize Energy Performance

Enhanced Indoor Air Quality Strategies

Low-Emitting Materials

Quality Views

Electric Vehicles

Regional Priority

Rainwater Management Open Space Light Pollution Reduction

Sensitive Land Protection

LEED for Neighborhood Development Location

Building Life-Cycle Impact Reduction Sourcing of Raw Materials

Construction and Demolition Waste Management

Access to Quality Transit

Point Earned





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10 20 40

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SURROUNDING DENSITY AND DIVERSE USES

WALK SCORE OF 70 OR HIGHER

I ELECTRIC VEHICLE SUPPLY EQUIPMENT IN 5% OF ALL PARKING SPACES







IMPLEMENTATION OF ASHRAE 90.1 STANDARDS WITHIN THIS CATEGORY

NEW BUILDING BENCHMARK I EXISTING BUILDING BENCHMARK













EAST ELEVATION







BUILDING LIFE-CYCLE IMPACT REDUCTION

MAINTAINED 60% OF EXISTING WALLS, FLOORS, AND ROOFS



SUSTAINABLE SITES

RAINWATER MANAGEMENT

GREEN ROOF / ROOF DRAINAGE / ROOF RAIN GARDENS OUTDOOR SPACE GREATER THAN OR EQUAL TO 30% OF TOTAL SITE AREA



SOUTH ELEVATION

