Central High School Redevelopment Project

DRAFT AUAR (Alternative Urban Areawide Review)

Public Comments and RGU Responses to Comments

AUAR Guidelines: The final AUAR document must include a section specifically responding to each timely and substantive comment on the draft that indicates the way in which the comment has been addressed. Similar comments may be combined for purposes of responding. Minnesota Environmental Quality Board (EQB) Guidance (A Citizen's Guide: Commenting on Environmental Review Projects) provides that: Substantive comments address the content or issue raised in the AUAR. Furthermore, the guidance states that public comments are particularly valuable and helpful to the Responsible Governmental Unit (RGU), the City of Duluth in this instance, when they: list inaccuracies in the AUAR; speak to potential environmental impacts that have not been identified; speak to environmental impacts that have been identified but have not been adequately addressed or suggest possible mitigation measures that should be added.

The Central High School Redevelopment Project Draft Alternative Urban Areawide Review (Draft AUAR) was prepared for the City of Duluth and distributed to the Environmental Quality Board (EQB) and persons and agencies on the official EQB mailing list in accordance with EQB rules on February 20, 2024.

Notices concerning the availability of the document and comment period were posted in the Duluth News Tribune on February 21, 24, March 2 and 9, 2024. The document was made available in the Duluth Public Library and on the City of Duluth website at https://duluthmn.gov/planning-development/environmental/environmental-reviews/. The Duluth City Planning Commission held a public hearing on March 12, 2024. Responses to two oral comments were provided during the meeting are included in the meeting minutes and a recording of the meeting. Commentators also provided written comments that summarize the oral comments provided during the meeting and are addressed in this document.

The 30-day comment period expired on March 21, 2024. Four agency, three organizational, and fifteen citizen comment letters were received on the Draft AUAR.

Agency/Organization/Citizen	Letter Dated	Signatory
Minnesota Pollution Control Agency (MPCA)	March 19, 2024	Chris Green, Project Manager Environmental Review Unit
Minnesota Department of Transportation (MNDOT)	March 21, 2024	Maren Webb
The City of Duluth, Minnesota	March 14, 2024	Mindy Granley, Sustainability Officer
The City of Duluth, Minnesota	March 20, 2023	Joe Jurewicz, Senior Engineer
Starry Skies North	March 21, 2024	Todd Burlet
Superior Hiking Trail Association	March 21, 2024	Lisa Luokkala

University of Minnesota Duluth, Climate and Energy Justice	March 22, 2024 (late)	Morgan Hegman
Commentor #1 - Tamburro	February 21, 2024	Tamburro
Commentor #2 – Uecker	February 21, 2024	Uecker
Commentor #3 – S. Johnson	February 23, 2024	S. Johnson
Commentor #4 - McLaughlin	March 16, 2024	McLaughlin
Commentor #5 – Ritter	March 18, 2024	Ritter
Commentor #6 – Enberg	March 19, 2024	Enberg
Commentor #7 – Tellekson	March 21, 2024	Tellekson
Commentor #8 – Desotelle	March 21, 2024	Desotelle
Commentor #9 – M. Johnson	March 21, 2024	M. Johnson
Commentor #10 – Host	March 21, 2024	Host
Commentor #11 – Schimpf	March 21, 2024	Schimpf
Commentor #12 – Klukkert	March 21, 2024	Klukkert
Commentor #13 – Ecklund and C. Johnson	March 22, 2024 (late)	Ecklund and C. Johnson
Commentor #14 – Goulet and Kauti	March 22, 2024 (late)	Goulet and Kauti
Commentor #15 – Peterson	March 22, 2024 (late)	Peterson

Comments received by these agencies and the public are summarized below by commenter and subject matter. Copies of all comments submitted are included in Appendix A.

Item 10. Land Use

1. **Comment:** I thought it might be nice to have half a dozen tiny home tucked back near the tree line. Not in a row, but for people on lower incomes. Perhaps Habitat for Humanity or One Roof Community Housing could participate in this planning? I would prefer lower income housing not just be setting aside a minimum number of units larger structures.

   Commenting Party: Commentor #2 - Uecker

   Response: Thank you for your comments on this AUAR. The development scenarios do not define the proportion of housing units that would be low-income or market rate. The AUAR would not preclude consideration of low-income housing.

Item 11. Geology, Soils and Topography/Land Forms

1. **Comment:** In addition to the reference to the Geological Atlas of St. Louis County on p. 18, consider consultation of the map by Green and Miller, which is more geographically focused. By coincidence, it includes a transect (B—B') that passes through the center of the project site, depicting the inferred layering of the surface bedrock units, which could be useful for the geotechnical work. The transect is not on the Geological Atlas of St. Louis County map.

Commenting Party: Commentor #11 – Schimpf

Response: Thank you for commenting on this AUAR. We have verified the geologic mapping by Green and Miller was incorporated into the Geologic Atlas of St. Louis County (Plate 2 Appendix B) and the two documents consistently describe the geology of the project site. We have confirmed that the vertical layering of the surface bedrock units is captured with the text in the Draft AUAR except for the angle of dip of the bedrock units. This additional information will be provided in the Final AUAR text.

Item 12. Water Resources

1. **Comment:** I offer the following suggestions to make sure it is valuable through the future and does not add unnecessarily to climate change. Please require the following of the new development, at the very least:
    - Porous parking and streets to allow rain to be absorbed and all run off.
    - a cistern system to collect and use rain water on green spaces
    - include a system to capture and reuse "grey water" within the structure

    Commenting Party: Commentor #7 - Tellekson

    Response: Thank you for commenting on this AUAR. The City will work with developers towards accomplishing the Actions and Strategies set out in the Duluth Climate Action Work Plan 2022-2027, specifically Phase I, Strategy 5, Action 2.4 *Develop a stormwater management plan that integrates resilience and identifies financing opportunities and includes these elements: […] Reduced stormwater runoff flow and volume through green infrastructure and on-site stormwater management; Recommendations to incorporate green infrastructure into the unified development chapter; Continued collaboration with the Regional Stormwater Protection Team and other key partners to advance stormwater adaptation strategies.*

2. **Comment:** As for stormwater, the site should be designed not to consider, but to plan for extreme storm events. Being at the top of the watershed on 80 acres is the perfect location to store and "slow the flow" before it reaches Clarkhouse and Brewery Creeks. This not only protects erosion, but filters the water and cools it before entering these creeks. Recall that Brewery Creek blew out in the 2012 storm. This development adds additional impervious surface and there is an opportunity now to help prevent future problems during extreme storm events. In addition, design lawns where people play, but the rest of the green space should be native trees, shrubs and even pollinator gardens.

    Commenting Party: Commentor #8 – Desotelle

    Response: Thank you for your comments on this AUAR. It is acknowledged that current and future climate trends will likely result in an increase in the volume and frequency of large rainfall event over time, and it is recommended in the mitigation strategies to maximize green infrastructure during the design of future developments. Language has been added to the mitigation strategies under Item 12 (Water Resources) that proposed stormwater infrastructure and BMPs should be designed to accommodate an increase in

stormwater discharge and emergency overflows associated with an increased frequency of large rainfall events. Mitigation measures included in Item 14 (Fish, Wildlife, Plant Communities and Sensitive Ecological Resources), include recommendations to incorporate native plants into vegetation plans for landscaping open spaces within the AUAR area.

3. **Comment:** All of my comments pertain to Scenario B. I am unable to tell from the maps in Exhibits 1 and 2 or the Figures in Appendix E where snow would be piled. What is the estimated maximum cumulative mass of snow per winter to be moved from travel and parking surfaces at full buildout? How much space is needed to hold it? If snow is to be deposited in runoff detention basins, these need to be positioned where snow-hauling equipment can reach them. For each of the two watersheds, snow needs to be piled in the same watershed in which it settled.

   On p. 30 is mentioned the possible need for additional City distribution infrastructure for potable water. Would that happen away from the site? Would it be part of what the tax increment financing is for? Or would water customers throughout the City have to pay for it? Also, "Opportunities for using water efficient fixtures and equipment … should be considered." This needs to be implemented, which would shave off some volume load for the wastewater treatment facility and marginally increase its potential for avoiding release of untreated sewage as a result of extreme rainfall.

   Table 5 shows no planned tree removal. What about tree removal or trimming for the enhancement or maintenance of the view on the lakeward edge of the site?

   Commenting Party: Commentor #11 – Schimpf

   Response: Thank you for commenting on this AUAR.

   Snow removal plans would be determined for each specific, proposed project as part of local approval processes in compliance with City requirements. Deposition of snow from snow removal operations is specifically prohibited by the City's Engineering Guidelines (Page 20).

   There currently exist potable water pipes along the north and west sides of the AUAR Area. According to the City's Engineering Guidelines, the cost to extend water infrastructure further would be the responsibility of the developer and would not be borne by other Duluth water customers. Construction of water infrastructure is an eligible expense for which tax increment financing reimbursements may be used.

   The City has identified strategies in the Climate Action Plan including accelerating sustainable building design (Action Item 3.1). Furthermore, water reduction considerations are encouraged through the City's sustainable development standards. Per the City's Sustainability Design Standards (City Code Section 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points

to adhere to the City's sustainable design requirements. Points may be earned by implementing building water use reductions and efficiencies.

As described in Item 8 (Cover Types), existing wooded areas are primarily present along the edges of the AUAR area that are not developable due to the slope and elevation of these areas. It is anticipated that these wooded areas would be largely preserved. The development scenarios intend to avoid tree removal to the extent possible. Currently, there are no plans for tree removal or substantial trimming. Each specific, proposed project would be required to obtain local approvals for developments and adhere to the tree preservation and replacement requirements found in City Code Section 50-25.9.

Item 13. Contamination/Hazardous Materials/Wastes

1. **Comment:** I offer the following suggestions to make sure it is valuable through the future and does not add unnecessarily to climate change. Please require the following of the new development, at the very least: […]
   - low-flow toilets or composting toilets […]
   - install and use composting for all food and compostable waste - can also be designed to heat the buildings

   Commenting Party: Commentor #7 – Tellekson

   Response: Thank you for your consideration of this AUAR. The City has identified strategies in the Climate Action Plan including accelerating sustainable building design (Action Item 3.1). Furthermore, water reduction considerations are encouraged through the City's sustainable development standards. Per the City's Sustainability Design Standards (City Code Section 50-29) all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing building water use reductions and efficiencies.

Item 14. Fish. Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)

1. **Comment:** I would like to submit comment on the housing development plan at the former Central High School. The development of several large buildings in the prominent location on the hill poses a serious threat to migratory birds in Duluth. I work for Hawk Ridge Bird Observatory, and while I do not represent this organization with these comments, I witness firsthand the magnitude of bird migration here and understand the damage these buildings could do. The American Bird Conservancy estimates that nearly 1 billion birds die each year from window strikes (https://abcbirds.org/blog/truth-about-birds-and-glass-collisions/). Since 2007, myself and others have counted birds from mid August thru the end of November from Hawk Ridge, as well as on the lake shore. On average, 275,000+ birds migrate in daylight hours through Duluth (see attached spreadsheet). Additionally, millions more birds migrate at night, posing a greater threat to birds as artificial light can disorient and distract them. Cornell Labs tracks nocturnal bird migration on BirdCast (https://dashboard.birdcast.info/region/US-MN-137?night=2023-09-

01). This link depicts just one night in early September when over 6 million birds passed through the county.

Because of the immense migration that occurs in Duluth, on the lake shore and on the hillside, new development always poses a risk. […] The number one way to diminish the threat of window strikes is the installation of bird safe windows. Windows that still function normally but prevent the reflection that can cause so many birds to not see it, and fly directly into it (https://www.audubon.org/news/what-does-bird-safe-glass-even-mean).

I would like to strongly encourage the council to reevaluate Chester Creek View LLC and Incline Plaza Development LLC's AUAR to include more information about the immense migration that takes place in Duluth, and how this development will mitigate that threat. […] (https://www.theguardian.com/us-news/2023/oct/07/chicago-mccormick-place-building-bird-deaths-windows#:~:text=From%20late%20Wednesday%2C%204%20October,varieties%20of%20songbirds%20 were%20recovered). […] Duluth should and can be a place of bird conservation and safe bird-friendly development.

I strongly encourage a reevaluation of the AUAR and the inclusion of risk analysis of bird migration in Duluth.

Commenting Party: Commentor #4 - McLaughlin

Response: Thank you for your informative comments on this AUAR. As described in Item 14 (Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources), it is understood that large numbers of migrating birds pass over or near the AUAR area given the proximity of the location within one mile of Lake Superior. Duluth is located within the Mississippi Flyway, one of four major migration paths used by birds during spring and fall migration. Migration is a highly variable occurrence and while manmade structures and lighting may impact migration patterns, there are a number of governing factors affecting migration behaviors and patterns including weather, opportunities for rest, avoidance of predators. As it pertains to the height at which birds fly, they choose a flight altitude dependent upon the best wind conditions.

The AUAR area is located within a previously developed site in which high school buildings and lighting associated with the buildings, parking lots, and athletic facilities were present. Additionally, there are multiple guyed and free-standing broadcast and communications towers immediately adjacent to the AUAR area. Commercial development is present along the Central Entrance corridor. The development scenarios would not substantially change the existing lighting and noise conditions of the surrounding area, nor substantially increase lighting and noise conditions that were associated with the former use of the site.

Consideration of bird-safe building design measures in accordance with Minnesota B3 Guidelines are included in the mitigation strategies to address potential impacts to migratory birds. The City will strongly encourage developers to incorporate bird-safe

building performance measures to the extent possible to minimize potential impacts to migratory birds.

2. **Comment:** 1. Tree removal is a given to make space for buildings, roads, and parking areas. This will impact habitat availability for the two species of endangered bats and other wildlife dependent on trees for shelter and food. Follow-up landscaping plans should be designed around native trees and herbal plants to accommodate the needs of the wildlife that lives in this area. A list has already been developed designating these organisms, so referring to this list for specific planting for these organisms will not be difficult. A diversity of nesting boxes and platforms could supplement wildlife shelter needs.

   Commenting Party: Commentor #5 - Ritter

   Response: Thank you for your comments on this AUAR. The AUAR proposes that the existing 27.2 acres of wooded/forest land within the AUAR area would be largely preserved in both development scenarios. City Code section 50-25.9 provides for the preservation and replacement of any trees removed during redevelopment of the AUAR area, should limited tree removal be necessary. City Code Section 50-25.2.B requires that any landscaping installed at time of site development be from the City's approved tree and shrub list and that all plant material be hardy for use in northeast Minnesota, suitable for the site, fee of disease and insects, and conform to the American Standard for Nursery Stock of the American Nursery and Landscape Association.

   As described in the Draft AUAR, in the event that future development cannot avoid tree removal, it is recommended in the Item 14 Mitigation Strategies to restrict tree removal activities to the bat inactive season (November 15 to March 31). It is also recommended in the mitigation strategies to incorporate native plants into vegetation plans for landscaping open spaces within the AUAR area.

3. **Comment:** Lighting and bird survival is of particular significance because of Duluth's location along the Central Migratory Flyway. Night lighting means life or death for millions of birds each year, especially during migration as the Flyway concentrates birds along the shores of Lake Superior. Inappropriate lighting confuses especially song birds as they fly mostly at night to avoid raptors migrating along the same flight paths. Hundreds to thousands of birds can be killed each night simply because of lighting. The location of Incline Village along a main flyway ridge could make it a most precarious place for birds flying through if the lighting isn't correctly designed. For what future reputation are we planning this project, as environmentally considered, or as another indifferent development in an urban setting?

   Commenting Party: Commentor #5 - Ritter

   Response: Thank you for your comments. As described in the response to the preceding Comment No. 1 pertaining to Item 14 of the Draft AUAR, it is understood that large numbers of migrating birds pass over or near the AUAR area given the proximity of the location within one mile of Lake Superior. As described in the Draft AUAR, Duluth is

located within the Mississippi Flyway, one of four major migration paths used by birds during spring and fall migration. Migration is a highly variable occurrence and while manmade structures and lighting may impact migration patterns, there are a number of governing factors affecting migration behaviors and patterns including weather, opportunities for rest, avoidance of predators. As it pertains to the height at which birds fly, they choose a flight altitude dependent upon the best wind conditions.

The location of the AUAR area is adjacent to other commercial and residential developments. The development scenarios propose redeveloping a site that was previously developed and consisted of high school buildings, parking lots, and athletic facilities. Additionally, there are multiple guyed and free-standing broadcast and communications towers immediately adjacent to the AUAR area. The development scenarios would not substantially change the existing lighting and noise conditions of the surrounding area, nor substantially increase lighting and noise conditions that were associated with the former use of the site.

Development Scenario B assumes buildings may be constructed up to a 7-story maximum. The specific building materials are not prescribed in the Draft AUAR. Residential and commercial buildings proposed within the AUAR would be required to obtain all required local approvals and permits. As part of these processes, project design plans would be reviewed by City staff for consistency with City Ordinances.

Exterior lighting would meet or exceed requirements in the City's zoning code (Chapter 50) Article 4, section 50-31, which includes the following standards for outdoor lighting: Any light source or lamp that emits more than 900 lumens (13 watt compact fluorescent or 60 watt incandescent) shall be concealed or shielded with an Illuminations Engineering Society of North America (IESNA) full cut-off style fixture with an angle not exceeding 90 degrees, with 90 percent of the light below 80 degrees. Exterior lighting shall be designed, constructed, and maintained in a manner that minimizes off-site glare, light trespass . . .; The maximum height of any lighting pole serving a residential use is 20 feet (plus up to 30-inch-tall base) and 25 feet for lighting poles serving other uses. The use of search lights, flickering, or flashing lights is prohibited. All outdoor lights not necessary for security purposes shall be reduced to 30 percent of design levels or less, activated by motion sensors, or turned off during non-operating hours. Any upward directed architectural, landscape, or decorative lighting direct light emissions shall be contained by the buildings and not visible above the building roof line and shall be turned off between 10 p.m. and 6 a.m. Light fixtures may not exceed a correlated color temperature (CCT) of 3,000 Kelvin (K).

Per the AUAR mitigation plan, the City will strongly encourage developers to incorporate bird-safe building performance measures to the extent possible to minimize potential impacts to migratory birds.

4. **Comment:** All of my comments pertain to Scenario B. Birds Have a Big Problem. The number of birds in North America has declined substantially. The causes of this include loss of suitable habitat space, reduction in prey abundance because of insecticide use,

poisoning, invasions of new viral diseases, and fatal collisions with man-made structures, inter alia. [2, 3, 4]

The Site is in a Migration Travel Path. The greatest wildlife significance for the site is as a space through which migrating birds fly, much more so than as a site for their breeding, wintering, or a brief migration stop. Duluth is one place where the broad North American migration gets geographically compressed, as birds change course to avoid flying over Lake Superior. This is so for all land bird groups, not just hawks, and for spring as well as fall. Lengthy observer records have been made during daytime at Hawk Ridge, Enger Park, and Thompson Hill because the top of the steep side of the bluff has the most consistent concentration of migrants. The observation records are in a North American registry (hawkcount.org). The observers note that the bulk of the migration can be seen sometimes passing closer to Lake Superior or the St. Louis River, sometimes farther to the northwest, and sometimes right over these three sites, depending on the winds at the time. The Central High site is topographically analogous to these three observation points. Nocturnal migration is known generally to be a major component of total migration, although much less local observation of this has been done. Radar records indicate that a relatively large biomass of nocturnal fall migrants is in the Duluth area as a daytime stopover[5].

What Kinds of Birds? The bird species of conservation concern, the focus in the Draft AUAR, are important, but the bird species that have larger numbers do the bulk of the predation on insects that damage the trees of the north woods. Birds migrating through Duluth include the groups that are the most vulnerable to window collisions[6].

Collision Mortality. Collisions of birds with man-made structures contribute significantly to reduced bird numbers. Cities are places where collision mortality is greater because of their concentration of artificial lighting and large number of windows. Taller buildings add collisions of birds flying at greater heights to the many collision mortalities that happen closer to the ground. Windows are hazards both day and night because birds respond to them as if they are clear airspace (including at night if the building interior or window exterior is lit). Lights attract migrants at night or during daytime fog, often toward structures. Lights on the project site could be expected to sometimes increase the number of migrants that collide with the communication towers and their support cables clustered on the nearby "antenna farm". Past attempts to investigate collision mortality there failed because access permission was denied.

Patterns of Mortality. Collision mortality rates are sporadic in space and time. Larger cities are infamous for their occasional mass mortality events because of their density of taller artificially lit buildings. Migration is concentrated into a minority of days within the season, as shown by daytime observation records and nocturnal images from weather radar BirdCast[7]. As a result, one cannot just look for bird carcasses at an arbitrary time and validly deduce the hazard there. Even when a mass mortality event takes place, carcasses are soon taken by scavenger animals, so a search must be immediate. Also, some impacted birds survive to fly away, but soon drop dead or become easier prey

because of their injury. The need for Scenario B mitigation is justified by experience in many locations at various times, not by local data, which do not exist for this project site.

Mitigation. The problem is being mitigated by various cities. New York City (Initiative 1482/ Local Law 15) and Madison (Ordinance 28.129) instituted policies that mandate bird-friendlier standards for new construction. No handful of cities can solve the problem alone. It is necessary for many cities to do their part. Collisions will still happen after mitigation measures are implemented; the goal is to reduce their number to the extent possible. The residences of Scenario B would be advertised for the views, commanding prices at the top of the Duluth market, with customers from out of town able to pay them. Therefore, additional costs that would be incurred through mitigation measures should not be an argument against mitigation. Buildings of six or seven stories on the high hilltop will be prominent obstructions for migrants, among the highest above the Duluth bluff line other than the antenna farm, major power lines, and a few water towers. Each time a tower crane is in place for construction will add substantially to the height. No specifics were given about the height of the proposed hotel, but at a projected 75,000 square feet, it, too, could be tall enough to be built with a tower crane.

Measures, every one unless it is not applicable, that need to be taken for Scenario B are:

- Use of fritted glass, as mentioned in the Draft AUAR. The new Essentia hospital in Duluth has done this. More detailed glass information is available from American Bird Conservancy[8].
- Residences that want clearer views than fritted glass allows should have venetian blinds; for rental apartments, these could be the between-the-panes type, which reduces potential wear and obviates cleaning. Occupants should be encouraged to close the blinds at night, at least when BirdCast indicates a concentration of migrants is expected. Recommend that residents leave household lights off while they are asleep overnight. Hotel guest rooms should have opaque drapery.
- Operable windows should be the sorts that have their screens on the outside, which reduces trauma from collision.
- Any photovoltaic panels installed on the site should be a type that has a matte finish.
- The FAA may require tower cranes to have aircraft obstruction lighting, even if they do not stand at least 200 feet above ground, inasmuch as the site is directly up a steep grade from the hospital heliports. If so, it should be a flashing red light. The helicopters may have flown over the site to avoid the antenna farm nearby.
- Avoid shining security lighting during construction from high positions; find out if flashing lights would be allowed.
- On the finished buildings, avoid designs that have decorative lighting on high positions.

Invasive Species Mitigation. The Draft AUAR treats invasive species problems as if they are a concern only during construction-related activity. To minimize potential increase of invasive species problems post-construction, trees and shrubs planted on the site should all be species native to Minnesota or non-natives that are known not to spread from cultivation in this climate. There are no locally relevant publications for the non-natives, but I would provide free consultation on an ad hoc basis.

Note: Commentor's sources (footnoted) can be found in comment letter in Appendix A.

Commenting Party: Commentor #11 – Schimpf

Response: Thank you for your informative comments and mitigation suggestions pertaining to the Draft AUAR. As described in the response to the preceding Comment No. 1 pertaining to Item 14 of the Draft AUAR, it is acknowledged that large numbers of migrating birds pass over or near the AUAR area given the proximity of the location within one mile of Lake Superior. As described in the Draft AUAR, Duluth is located within the Mississippi Flyway, one of four major migration paths used by birds during spring and fall migration. Migration is a highly variable occurrence and while manmade structures and lighting may impact migration patterns, there are a number of governing factors affecting migration behaviors and patterns including weather, opportunities for rest, avoidance of predators. As it pertains to the height at which birds fly, they choose a flight altitude dependent upon the best wind conditions.

The location of the AUAR area is adjacent to other commercial and residential developments. The development scenarios propose redeveloping a site that was previously developed and consisted of high school buildings, parking lots, and athletic facilities. Additionally, there are multiple guyed and free-standing broadcast and communications towers immediately adjacent to the AUAR area. The development scenarios would not substantially change the existing lighting and noise conditions of the surrounding area, nor substantially increase lighting and noise conditions that were associated with the former use of the site.

Development Scenario B assumes buildings may be constructed up to a 7-story maximum. The specific building materials are not prescribed in the Draft AUAR. Residential and commercial buildings proposed within the AUAR would be required to obtain all required local approvals and permits. As part of these processes, project design plans and building materials would be reviewed. Per the AUAR mitigation plan, the City will strongly encourage developers to incorporate bird-safe building performance measures , to the extent possible to minimize potential impacts to migratory birds. Recommendations would be dependent on the specific conditions of projects proposed within the AUAR area. Bird-safe building performance measures may include reducing use of high risk surfaces, implementing light management, and implementing a setback of landscaping and vegetation from taller buildings.

5. **Comment:** […] 4. Bird strike reduction: There are many pathways to reduce bird strikes, including limiting the size of uninterrupted window glass. A sustainable design menu for bird-safe windows, especially on the south-facing side, is included in Resources, page 2. […]

   Commenting Agency: Mindy Granley, Sustainability Office, City of Duluth*

   **Note: The City of Duluth Department of Planning and Economic Development (PED) has led the preparation of the AUAR, including obtaining comments on the*

Draft AUAR from other City departments during the Draft AUAR public comment period.

Response: Thank you for your Draft AUAR comment regarding bird strike reduction. The City of Duluth Department of Planning and Economic Development (PED) has considered the inclusion of best practices as a part of the mitigation measures to be addressed in the AUAR; however, in the absence of established City, State, or Federal requirements or policies that directly address reducing bird strikes and given that the AUAR evaluates conceptual development scenarios, crafting objective standards as AUAR mitigation measures is difficult given the wide range of potential strategies to be incorporated into the many possible building types and styles that could be constructed within the AUAR area. Residential and commercial buildings proposed within the AUAR would be required to obtain all required local approvals and permits. As part of these processes, project design plans and building materials would be reviewed and opportunities to consider bird-safe design measures would be considered as warranted.

The City's zoning code (Chapter 50) Article 4, section 50-31, includes lighting requirements described above under Item 14, Comment Response #3, that will reduce unnecessary light. Per the AUAR mitigation plan, the City will strongly encourage developers to incorporate bird-safe building performance measures, such as reducing use of high-risk surfaces and implementing light management, to the extent possible to minimize potential impacts to migratory birds. Recommendations would be dependent on the specific conditions of projects proposed within the AUAR area.

6. **Comment:** I didn't see the rusty patched bumblebee mentioned, but we can create habitat for these important pollinators even if the map didn't touch this site.

   Commenting Agency: Commentor #8 – Desotelle

   Response: Thank you for your comment on this AUAR. The rusty patched bumble bee (RPBB) was not mentioned as it was not identified as a species potentially affected by activities at the location of the AUAR area based on review of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) review tool. Additionally, a review of USFWS RPBB designated high potential zones determined that no high potential zones are within or in close proximity to the AUAR area; however, consideration of incorporating native plants in landscaping plans for future development within the AUAR area is identified in the mitigation measures under Item 14. The City will work with developers to consider opportunities for landscape designs that provide habitat for pollinators.

Item 16. Visual

1. **Comment:** Light is a major source of pollution for any city and is a problem exponentially growing for Duluth as human developments expand. This one problem that can be minimized so easily and economically within the city of Duluth, and in Incline Village. Studies abound addressing the safety and crime issues related to night lighting for private

and public buildings and spaces. Starry Skies North (https://starryskiesnorth.org) and DarkSky International (https://darksky.org) provide a plethora of information about the need for maintaining dark skies for human and planetary health. They also provide easily understood guidelines for conducting lighting audits for cities and private properties, and suggestions for specific forms of replacement lighting. We have several schools of higher education in the area who could well be interested in conducting such a study for this project. Take advantage of the situation! Duluth's skyglow extends miles beyond the city limits and significantly impacts our attractiveness as a destination for astrotourism.

Commenting Party: Commentor #5 - Ritter

Response: Thank you for your informative comments and suggestions on this AUAR. Exterior lighting would meet or exceed requirements in the City's zoning code (Chapter 50) Article 4, section 50-31, which includes standards for outdoor lighting listed above under Item 14, Comment Response #3.

Comment: Careful lighting design, conducted by a team with formal training in outdoor lighting, performed in close partnership with local stakeholders, is essential for development of projects that benefit all members of the community while minimizing light's potentially negative impacts.

This project is located on the heights overlooking Duluth, which will afford its residents and visitors a commanding view of the region, but it also means that residents across the region will be exposed to any excess lighting, light trespass, and skyglow from the development.

Therefore, the board of Starry Skies North respectfully submits the following recommendations:

1. The project adheres to the lighting best practices outlined in the 2022 Responsible Outdoor Lighting At Night (ROLAN) Manifesto, which calls for community engagement and the use of lighting designers with training in outdoor lighting best practices.
2. The project follows the sustainability best practices outlined in the Minnesota Pollution Control Agency's GreenStep Cities program.
3. The project follows the best practices defined in Minnesota's B3MN standards, regardless of whether they are required by law to follow B3MN.
4. The project rigorously adheres to the 5 principles of responsible lighting, jointly developed by DarkSky International and the Illuminating Engineering Society (IES):
    a. Start with Darkness, and only add light where necessary.
    b. Lights should be fully shielded to prevent glare, light trespass, and waste. This is especially true for the project's hilltop location.
    c. Lights should be as bright as needed for their intended purpose, but no brighter.
    d. Lights should be warm-white, with color temperatures at or below 2700 Kelvin.

e. Lights should use adaptive controls such as timers, dimmers, and motion detectors to take advantage of LED's instant-on and dimmability features, to provide light whenever it is needed, and reduce or remove light whenever it is not needed.

Commenting Group: Starry Skies North

Response: Thank you for commenting on this AUAR. The location of the AUAR area is adjacent to other commercial and residential developments. The development scenarios propose redeveloping a site that was previously developed and consisted of high school buildings, parking lots, and athletic facilities. Additionally, there are multiple guyed and free-standing broadcast and communications towers immediately adjacent to the AUAR area. The development scenarios would not substantially change the existing lighting and noise conditions of the surrounding area, nor substantially increase lighting and noise conditions that were associated with the former use of the site.

Proposed exterior lighting would be required to meet or exceed outdoor lighting requirements in the City's zoning code (Chapter 50) Article 4, Section 50-31, as described above under Item 14, Comment Response #3. In addition to the language referenced above, Section 50-31 addresses light intensities with the following requirements: All lighting shall have the intensities and uniformity ratio consistent with the IESNA lighting handbook, and shall be designed and located so that the illumination measured in footcandles at the finished grade shall comply with the standards in Table 50-31-1, Minimum and Maximum Illumination Values (see table at https://duluthmn.gov/media/15540/50-31-exterior-lighting.pdf). All exterior lighting shall meet the requirements of the Minnesota State Energy Code.

Per the AUAR mitigation plan, the City will encourage developers to consider incorporation of sustainable design measures in accordance with Minnesota B3 Guidelines, such as implementing light management.

Item 18. Greenhouse Gas (GHG) Emissions/Carbon Footprint

Comment: […] Energy efficiency investments in multifamily buildings can provide long-term operational savings, along with being environmentally-friendly.

Mitigation measures I recommend be focused on for the greenhouse gas emissions portion of the AUAR include:
1. Expertise: A dedicated and qualified energy engineer, consultant, or certified energy manager should be an integral part of project planning.
2. Efficiency: The most important part of energy is efficiency. Building envelope is key, along with efficient heating, cooling, and heat-recovery ventilation systems.
a. Tax incentives exist to help offset the up-front costs of these solutions, see Resources on page 2, including the § 45L Tax Credits for Home Builders. The Minimum Energy Star Standard for Minnesota for Multifamily homes is MFNC National v1.1Ci
3. Clean energy: The AUAR already mentioned solar on rooftops. However, there are Federal Tax Credits for solar and many other clean energy technologies, see Resources,

page 2. New developments are an unique opportunity to deploy clean energy technologies. For example: a networked geothermal heat loop (eligible for Inflation Reduction Act incentives) could provide a low-carbon heating solution that is quiet, efficient, and resilient to extreme weather.
[…]
This is a great opportunity to set an example for future development and redevelopment in Duluth. I've listed Resources on Page 2, including funding incentives, local rebate programs, and more.

Commenting Agency: Mindy Granley, Sustainability Office, City of Duluth

Response: Thank you to our City colleague for this comment. The following responses are provided for each subpoint:

1. While the City Department of Planning and Economic Development (PED) cannot require that a developer use a dedicated and qualified energy engineer, consultant, or certified energy manager as part of project planning, PED will recommend this to developers.

2. Effective 2024, the MN Commercial Energy Code follows ASHRAE 90.1-2019. The US Department of Energy ruled that this version improved energy savings and carbon emissions by roughly 4.2-4.7 percent from the 90.1-2016 version.

   Legislation now mandates the Minnesota Commercial Energy Code to be reviewed at each new model code publication and to amend the model code to incrementally increase efficiency to reach net-zero energy ready new construction for commercial buildings by 2036.

   Per Section 50-29 of the City's Zoning Code, all new residential development with three or more units and non-residential development with a gross floor area of 10,000 square feet or more are required to comply with the section. Section 50-29 states a minimum point system that the new development must follow, with residential development minimum requirements at 3 points for 3-29 units and 4 points for 30 plus units, and non-residential development at 3 points for 10,000 to 25,000 square feet and 4 points for over 25,000 square feet. This point system rewards efficient heating, cooling, heat-recovery ventilation systems as well as building envelope design meeting ASHRAE standard 189.1.

   The City will work with the developer to encourage consideration of these factors, even beyond those set out by the State of Minnesota building code and energy code. The additional resources (i.e., tax incentives) you have referenced will be shared by the City with developers.

3. The City will work with developers to consider clean energy opportunities. Again, we appreciate the reference to funding incentives, local rebate programs, etc.

   In addition, for electricity purchased for the location, which is within the Midwest Reliability Organization West (MROW) region, 40 percent of electricity is from solar

power and other renewable sources. The utility company for the area, Minnesota Power, has 50 percent of its electricity from renewable energy sources, which is above the MROW region average. Minnesota Power has a goal of 100 percent carbon-free electricity from renewable energy resources, with a 70 percent from renewable energy resources goal by 2030.

Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

1. **Comment:** The new development should take advantage of solar and wind power.

   Commenting Party: Commentor #3 – S. Johnson

   Response: Thank you for your comment on this AUAR. For electricity purchased for the location, which is in the Midwest Reliability Organization West (MROW) region, 40 percent of electricity is from solar power and other renewable sources. In addition, the utility company for the area, Minnesota Power, has 50 percent of its electricity coming from renewable energy sources, which is above the MROW region average. Minnesota Power has a goal of 100 percent carbon-free electricity from renewable energy resources, with a 70 percent from renewable energy resources goal by 2030.

   Additionally, per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

   The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures. The City will work with developers during the project planning and permitting process to explore opportunities to incorporate renewable energy when feasible.

   Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

2. **Comment:** The Central High School Redevelopment Plan is an important opportunity to redevelop an already disturbed site and add much needed housing stock. The AUAR

was commissioned to examine the environmental aspects of the project and was paid for by the developer. I find serious deficiencies in the report as listed below with a list of suggested actions to remedy these deficiencies. The AUAR is a 237 page document which lays out in considerable detail the climate outlook for Duluth including rising temperatures with corresponding heavier rain events. Unfortunately, the AUAR authors failed to draw the obvious conclusion from this climate data and seemed to defer to the use of natural gas. The authors also made errors with regards to the fugitive emissions rate for the natural gas system which should be closer to 2%. Natural gas is mostly methane and methane which leaks from the system (fugitive emissions) is 80 times more powerful than CO2 for the first 20 years and 36 times more powerful a century later. Clearly, the actions we take today will have impacts for generations down the line. It is our obligation to ourselves and future generations to extirpate the use of natural gas in the economy. The City of Duluth's Climate Action Work Plan 2022-2027 requires that the City, "Assess economically feasible, clean energy alternatives to natural gas through partnerships with the electric utility and Comfort Systems". 78% of Duluth's emissions are derived from buildings. Duluth burns 5 billion cubic feet of natural gas per year. This is 302,000 tons of CO2 and with the leaked methane, 484,000 tons of CO2 equivalent. The proposed project will add another 12,335 tons of CO2 equivalent annually which is a 4% increase at a time when we need to eliminate the natural gas use we already have. The Social Cost of Carbon is now set by the U.S. EPA at $190 per ton of CO2 which means that this project would cost the community/country $2,343,650 annually in climate damage and health effects. Citywide, the current Social Cost of Carbon for natural gas use is a staggering $57,380,000 annually or over half of the City budget. The attitude of the authors towards these emissions was dismissive. They breezily state that the project's annual natural gas-related emissions will be insignificant not only on a state scale but even on a city scale. I suppose one could argue relative scales and assessments but for a person who is working very hard to eliminate fossil fuels in home heating, a four percent rise in emissions is a huge step backward. Once this natural gas infrastructure is in place and the developer has left town with its profits, it will be very difficult to do the right thing through a retrofit. We must do right by our children. Not only do our children have to bear the brunt of the climate change we have set in motion, natural gas is anything but clean or safe when used in a home and impacts young lungs. Natural gas is mostly methane but contains nearly 300 other chemicals, 11 of which are carcinogenic, such as benzene and toluene. Natural gas use in the home is a major cause of childhood asthma. The lowly gas range leaks one percent of the gas sent to it even when not in use. Nitrogen and oxygen gas comprise 99% of our atmosphere and in the presence of a natural gas flame combine to form various nitrogen-oxygen compounds known as NOx. This is a major class of pollutants. In a small or unvented kitchen, NOx levels rise quickly to unacceptable levels with gas range use. If we fail to insist that these 925 square foot apartments be completely electrified, we are condemning children and others to needlessly polluted air. My wife and I have a number of young adult children who live in Duluth. They love it here but are always complaining about the cost of gasoline. I, of course, helpfully point out that my gently pre-owned electric vehicle combined with the solar array we built ourselves can push the car 100 miles for only 72 cents while it takes them $12 dollars of gasoline to do the same. They would like to get electric vehicles but they are renters right now and they have absolutely no way to charge an EV overnight. I

was therefore very disappointed to see that the AUAR lacked a firm commitment for EV charging and solar energy. Failure to address both points in this project and others going forward will miss an opportunity for Duluth to become a destination for that most desired demographic, the young family. The AUAR does have a list of possible climate-friendly actions the developer might take, when feasible. This lack of commitment borders on greenwashing and we will not be mollified by it. It is the duty of the planning commission and the city council to hold this developer's feet to the fire and demand firm commitments. Fortunately, we have many options out of this mess, we merely have to exercise the political will to make it happen. The foremost principle to keep in mind is that we need to do this project the right way the first time. Retrofits are expensive and as laid out above are costly to the climate, human health and to the wallets of those who will live and work there. Therefore a commitment to not having natural gas anywhere on the premises needs to be made. The whole project, from residential to commercial and industrial needs to natural gas-free. Consider the following technologies to build a world-class redevelopment project: Networked geothermal, EV charging for every parking space, ample use of solar and battery storage. Networked geothermal involves drilling holes 800 feet into bedrock, lowering water-containing tubing into the borehole and filling the hole with grout. The tubes are connected in a network connected to a heat pump which uses a small amount of electricity to move and concentrate the heat for space heating, in summer the heat pump reverses for air conditioning. This would also work for hot water. Electric vehicle charging infrastructure needs to be done at every parking space. No one will be driving an internal combustion vehicle in the near future and we will all benefit from a health, cost and climate perspective. Again, a retrofit would look ugly and be more expensive than doing it right the first time. With EV charging I am confident that this will be a "build it and they will come" addition to the project. Finally, solar modules are so inexpensive now that they can be used everywhere. Arrays over parking lots are obvious applications but also on top of the buildings or even as cladding. Multiple companies offer such products.

Commenting Party: Commentor #6 - Enberg

Response: Thank you for your suggestions to this AUAR. Opportunities to install plug ins for electric/hybrid cars will be encouraged where feasible. The development scenarios do not specifically prescribe sources of energy to be used for future projects such as geothermal energy to heat/cool the buildings. As ongoing development of the location progresses, future opportunities to address climate change with solutions such as geothermal, electric, etc. will be considered. Current greenhouse gas calculations assume natural gas usage as a conservative estimate. In addition, natural gas emissions are calculated via standard Environmental Protection Agency (EPA) tool, Simplified GHG Emissions Calculator (SGEC).

The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures. The City will work with developers during the

project planning and permitting processes to explore opportunities to incorporate renewable energy when feasible.

Per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

3. **Comment:** I offer the following suggestions to make sure it is valuable through the future and does not add unnecessarily to climate change. Please require the following of the new development, at the very least: […]
   - install and use networked geothermal and heat pumps to heat and cool the structure
   - install solar panels across all of the roof space. Any other available roof space should include a green roof
   - electrify the whole place - install induction stove & oven ranges in all units or at the very least, electric (not gas) ranges

   […]
   - electric vehicle charging stations are necessary
   - reserve space for and install "solar powered clothes dryers," otherwise known as clotheslines. At least don't have rules against the traditional, free practice of drying laundry outside!!

   Commenting Party: Commentor #7 – Tellekson

   Response: Thank you for your suggestions to this AUAR. Installation of energy-efficient appliances and opportunities to install plug ins for electric/hybrid cars will be encouraged where feasible. The development scenarios do not specifically prescribe sources of energy to be used for future projects such as geothermal energy to heat/cool the buildings, solar panels/green roofs, or installation of clotheslines. As ongoing development of the location progresses, future opportunities to address climate change with solutions such as geothermal, solar panels, green roofs, etc. will be considered.

   Additionally, per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures. The City will work with developers during the project planning and permitting processes to explore opportunities to incorporate renewable energy when feasible.

Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

4. **Comment:** I have reviewed the Central HS AUAR and have a few comments that I hope you will seriously consider not only for this development, but all future developments in the City of Duluth. The City has an approved climate plan that calls for a green house gas emissions goal of ZERO by 2050. We now have the opportunity to put this into practice by designing this huge development for just that. This means no longer considering, but putting in heat pumps and geothermal, using this space to support a solar garden (what a perfect location not only to generate electricity but to hook up to the grid), installing EV chargers (not just a few but all stalls) and building for maximum use of thermal energy. Federal and state funding should provide those incentives as well as the City and demand that existing and future development be designed for renewable energy now when it is the most practical and least costly.

   Commenting Party: Commentor #8 – Desotelle

   Response: Thank you for your comments on this AUAR. Per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

   The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures.

   Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

5. **Comment:** Incline Village Development and the 237 page AUAR. It's a fact that Duluth needs new housing badly. 1,590 apartments and townhomes will help a lot. At the same time we have an opportunity to use the latest technology of geothermal energy and electricity to heat this complex in a way that's good for the environment. With a project like this there's some huge advantage of economies of scale and the unlocking of federal, state, and local grant money, and tax credits which should benefit the developer. Please make it a stipulation to require exploring a more low emission way to heat these units before final approval of this project.

   Commenting Party: Commentor #9 – M. Johnson

   Response: Thank you for commenting on this AUAR. Per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

   The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures. The City will work with developers during the project planning and permitting processes to explore opportunities to incorporate renewable energy when feasible.

   Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

6. **Comment:** Regarding the Central High School Redevelopment project I believe it is imperative that two factors be considered. First, the development should include as much renewable energy as possible to address climate change issues. Second, as an long-time owner of two electric vehicles, it is important to include significant charging infrastructure, which would be easier to install during the construction phase. Thanks you and best wishes for moving forward on this important project.

   Commenting Party: Commentor #10 – Host

   Response: Thank you for your comments on this AUAR. There are plans in place to use energy-efficient appliances and plug ins for electric/hybrid cars where feasible. As the development furthers, there is an opportunity for renewable resource usage.

   Per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a

gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures. The City will work with developers during project planning and permitting process to explore opportunities to incorporate renewable energy when feasible.

Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

7. **Comment:** The estimates for on-site natural gas consumption look reasonable to me when I use the CBECS 2018 figures with the square footages in Appendix E. However, the CBECS 2018 figures are presumably averages of past consumption from numerous buildings that individually use natural gas for various combinations of space heating, water heating, laundry drying, and cooking, which may not be in the same proportions as for the project buildings. Will the project buildings avoid using natural gas for domestic hot water, laundry drying, cooking, and decorative fireplaces in accordance with anticipated societal expectations to limit fugitive methane and indoor air pollution?

   The estimates for purchased electricity look high to me. Is this because it is anticipated that there will be extensive use of electric and plug-in hybrid vehicles by residents? The per-square-foot rates that are given in the Appendix (and I have used) may be based on past patterns when such vehicles were rare. If all cooking, domestic hot water, and laundry drying are electrical, the estimates may not be so high.

   The mitigation strategies on p. 68 include using renewable energy sources, but where would these be? Would they be a new community solar installation somewhere else? Would there be photovoltaic arrays on the site itself?

   The estimate of electricity consumption is incomplete, in that it includes only what would be measured through electricity meters. Consumption of potable water also represents consumption of electrical power, disguised as a water bill instead of an electricity bill. The EQB process would probably term this an indirect effect. By my calculations[9], pumping 518,000 gallons per day up to the Woodland tank requires about 2500 kWh per day, or 912,500 kWh per year. This adds about 3.7% to the projected total annual purchased electrical usage, ranking third after apartments and hotel. The Woodland tank is a 900-foot vertical lift from Lake Superior, more than the height of the IDS tower in Minneapolis. There would be further electrical usage to treat the additional raw lake water and to

treat the additional sewage it becomes. The requirement of water-efficient fixtures and equipment (e.g., laundry and dish washers) would shave off some greenhouse gas emissions, in addition to reducing wastewater volume as noted above for Section 12.

That said, it can be mentioned that the figures in the Draft AUAR for natural gas, electricity, and water are gross increases in consumption, not necessarily net increases. If some of the occupants will be using their residence as a supplemental home, this will diminish usage at their habitual residence or other residential address(es) while they are in their Central High abode. That will make the net society-wide consumption of energy and water less than it would be if all residences on the site were lived in full-time by their occupants while all of the places that they had moved from became full-time residences for other persons.

Commenting Party: Commentor #11 – Schimpf

Response: Thank you for commenting on this AUAR. Impacts presented in AUAR are conservative, based on regional averages, and adheres to EQB's EAW Guidance (July 2023). Current greenhouse gas emission calculations are based off of market-based calculations and conservatively assume natural gas usage. Market-based calculations are calculations that are based on current market conditions for the region - it encompasses the current mixture of sources for electricity (example: natural gas, solar, wind, etc.) for the region. The calculations were prepared for the conceptual development scenarios and not project-level specific design details. Future projects that include renewable energy sources may result in lower GHG emissions.

The mitigation measures included in the AUAR accommodate a range of potential renewable energy measure that could be considered. Specific renewable energy sources would be project dependent.

In addition, electricity usage for the AUAR analysis follows EBQ's EAW Guidance (July 2023). The recommended Simplified GHG Emissions Calculator (SGEC) Tool from the Environmental Protection Agency (EPA) was used to estimate electricity consumption. Electricity from the consumption of portable water is not required to be evaluated in accordance with the EQB EAW Guidance.

8. **Comment:** Given the mandate of Duluth's Climate Action Work Plan 2022- 2027, one would expect that this project would incorporate "economically feasible, clean-energy alternatives to natural gas through partnerships with the electric utility and Comfort Systems." Clearly the February 2024 ARAU does not.

   I am disappointed that the AUAR of February 2024 relies far too much on the use of natural gas, while failing to make firm commitments to geothermal Heating & Cooling, and to Solar Power usage. Given this poor planning, one is not surprised that this plan lacks a firm commitment to electric vehicle charging stations.

The use of natural gas, inevitably leads to pollutants vented to the larger environment, and as the public is increasingly aware, contributes to pollution of interior spaces. The indoor pollutants from gas use can cause asthma, and severely impact the health of children, the elderly and others with respiratory illness. According to a NY Times article of 14 January 2023, "In addition to asthma, there are other health dangers associated with gas stoves: Researchers who collected 234 samples of unburned natural gas from 69 homes around Boston found 21 toxic pollutants in the gas, including benzene, a known carcinogen, said Dr. Bernstein, who participated in the study."

I strongly urge the Planning Commission to turn back this project as currently designed. A new plan is required, one which embraces "economically feasible, clean-energy alternatives to natural gas through partnerships with the electric utility and Comfort Systems," and fully utilizes networked geothermal below, parking and electric-vehicle charging at ground level, and solar overhead.

Commenting Party: Commentor #12 – Klukkert

Response: Thank you for your informative comments on this AUAR. The GHG calculations in the AUAR were intended to be conservative; therefore, the calculations assumed usage of natural gas. If other mitigations are used, then the calculations could be adjusted to reflect other scenarios (such as more renewable energy usage).

The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures. The City will work with developers during the project planning and permitting processes to explore opportunities to incorporate renewable energy when feasible.

Per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

9. **Comment:** The Central High residential development is the perfect time for Duluth to do the right thing when it comes to a just energy transition because it is a large development built from the ground up.

The continued use of methane gas for heating in this development does not do what we need to do to secure a more sustainable future. It would support the continued dumping of harmful chemicals and GHGs into the atmosphere.

Solar on rooftops is also important because it allows a very powerful energy source right on the site. This will be much cheaper in the long run instead of having to keep up long distribution lines.

Putting the upfront costs to install these renewables throughout the development instead of just "where feasible" will pay for itself in the long run. It will also help support a sustainable future and city that young people like us will want to continue to grow and invest in.

Commenting Party: University of Minnesota Duluth, Climate and Energy Justice

Response: Thank you for your consideration of this AUAR. The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures. The City will work with developers during the project planning and permitting processes to explore opportunities to incorporate renewable energy when feasible.

Per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

10. **Comment:** The lack of demand for phasing out methane gas is concerning to us as geothermal energy is cheaper and has more benefits than methane gas. Methane gas is a potent greenhouse gas that will affect our future and our health, also the next generation as we are in a climate crisis. All we ask is to at least don't make the problem worse.

    Commenting Party: Commenter #13 – Ecklund and C. Johnson

    Response: Thank you for your consideration of this AUAR. As project specific plans for development in the AUAR area proceed, there will be opportunities for the City to work with developers to consider opportunities for renewable energy sources through the

local approval and permitting processes. Current greenhouse gas calculations assume natural gas usage as a conservative estimate.

The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures. The City will work with developers during the project planning and permitting processes to explore opportunities to incorporate renewable energy when feasible.

Per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

11. **Comment:** If Duluth permits this development plan without pushing for a phase-out of methane gas infrastructure, it would result in increased greenhouse gas emissions that will put Duluth behind on its Climate Action Work Plan goals. In addition to this, there will be significant environmental and human health impacts. Including solar pv on rooftop and parking canopies in this project will help to pave the way for a clean energy transition by providing renewable energy and by accommodating those with electric vehicles. If Duluth pushes for more sustainable infrastructure including solar panels and heat pumps in this project, 10 years from now we will see a decrease in greenhouse gas emissions, more renewable energy, and more opportunities for electric vehicle use. We can also expect to see a reduction in air-quality related illnesses and improved quality of life. Duluth is also a climate refuge city and might experience population growth in the near future. In order to accommodate a growing population, Duluth will need to implement more sustainable housing.

    Commenting Party: Commentor #14 – Goulet and Kauti

    Response: Thank you for your comments on this AUAR. As specific project plans for development in the AUAR area proceed, there will be opportunities for the City to work with developers to consider opportunities for renewable energy sources and green technology. Current greenhouse gas calculations assume natural gas usage as a conservative estimate.

The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures. The City will work with developers during the project planning and permitting processes to explore opportunities to incorporate renewable energy when feasible.

Per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

12. **Comment:** Creating a housing development heated by "natural" (methane) gas will only result in increased emissions of the greenhouse gas. Residential energy use is responsible for about 20% of total greenhouse gas emissions in the US, and Northern Minnesota is a place that needs heating more than most. The solution is to heat this new development with a geothermal heating system. This would not only create more jobs and lower emissions, it would also be a golden example for other cities to follow. Multiple expansive college campuses have implemented similar systems, such as Carleton College, Princeton University, and Ball State University, so it is more than possible to do so here.

    Commenting Party: Commentor #15 – Peterson

    Response: Thank you for your comments on this AUAR. As specific project plans for development in the AUAR area proceed, there will be opportunities for the City to work with developers to consider opportunities for renewable energy sources and green technology. Current greenhouse gas calculations assume natural gas usage as a conservative estimate.

    The City will encourage future developers to consider renewable energy consistent with local adopted planning documents. The City Council has adopted two planning documents, including the City's Comprehensive Land Use Plan and Climate Action Plan, which establish policies and goals to promote opportunities to invest in renewable energy and energy conservation measures. The City will work with developers during the project planning and permitting processes to explore opportunities to incorporate renewable energy when feasible.

Per the City's sustainable development standards (City Code 50-29), all new developments containing three or more units and all non-residential development with a gross floor area of 100,000 square feet or more are required to achieve minimum points to adhere to the City's sustainable design requirements. Points may be earned by implementing energy efficiency and alternative energy (solar, wind, etc.) into project designs.

Additional mitigation strategies have been added to AUAR Item 18 (GHG Emissions) pertaining to the City's sustainable design standard requirements and City's commitment to work with developers during project planning and permitting to explore opportunities to incorporate renewable energy when feasible.

Item 20. Transportation

1. **Comment:** For ten years I was a regular visitor to the central site as I had four children attending school there. Based on that experience I have the following comments about the proposed development.

   1. Who is responsible for road maintenance both from central entrance and Blackman I assume the school district does that now but they should not be responsible once development starts. If it is the city due to the tif will it mean the general population will pay but those in the development will not.

   2. Ice fell at times from the towers onto cars in the central parking lot and I assume with 7 story buildings there will be an increased chance this will happen.

   3. Will residents be able to use Blackman. When it was a school this was not allowed. For safety and traffic they should be able to use it.

   4. Did the review account for the increased traffic due to school district development.

   Commenting Party: Commentor #3 – S. Johnson

   Response: Thank you for your comments on this AUAR.

   1. Portia Johnson Drive from ISD 709's administrative offices northeast to H. Courtney Drive and including H. Courtney Drive down to Central Entrance is a public roadway. Portia Johnson Drive to Blackman Avenue is a private street owned and maintained by ISD 709. All other streets proposed in the scenarios would be private streets owned and maintained by the developer(s). As is the case in the City of Duluth and other municipalities, when a public roadway needs maintenance, etc., the municipality would be the primary responsible party. It is typical for the City to assess the local beneficiaries for the majority of the costs to reconstruct the roadway in the future.

   2. The developer, who is working with the City of Duluth, is also working with a local, long time Duluth architect who the City anticipates will approach the City with building plans

that take into consideration the local weather conditions including snow and ice. The City's building permit review process will be completed for development of the site as it is for all building permits issued in the City.

3. As described in the AUAR, it is anticipated that Portia Johnson Drive would ultimately be converted to a public roadway and then at that time, there would be a connection to Blackman Avenue. The specific timing of this is not known at this time. The traffic study, completed for the AUAR, accounted for trips generated by the recent school district development including a new District Service Center building and Transportation Building on the property adjacent to the northwestern boundary of the AUAR area.

4. The traffic impact study prepared for the AUAR incorporated traffic associated with the recent school district development.

2. **Comment:** A major increase in traffic will have a huge impact on the surrounding environment, from air pollution to wildlife fatalities. Road ecology is the study of roads and their role and impact on the surrounding environment. […]Are our city planners adopting this vital aspect of development planning?

   The AUAR made vague reference to the vehicular air pollution along the busy roads. I think better data could be gathered through data gained from previous similar scenarios to better account for this future contamination.

   Wildlife and heavy traffic always result in wildlife fatalities that really aren't acceptable. Studies have indicated that fencing along both sides of the roads can significantly help keep wildlife off the roads and funneled into safe wildlife crossing corridors if the fencing is appropriately built and maintained. Safer wildlife movement can be accommodated with:

   a. Landscaped overpasses that provide cover for animal sheltering and blocks direct light from traffic.
   b. Lit underpasses and tunnels
   c. Culverts that can allow some animals to slink under the road unimpeded.
   d. Ariel wildlife crossings

   Some kinds of fencing can also help shield from traffic-produced noise pollution. Noise can be disorienting to migrating birds. As a result, birds will avoid the area and the insects upon which they usually feed will continue safely eating the trees without fear of predator interference. As we well know, too heavy feeding by insects can eventually lead to the death of trees.

   I did not see any reference to accommodations for pedestrian or bicycle traffic along the roads. Is this a development for car owners only?

   Commenting Party: Commentor #5 - Ritter

Response: Thank you for your informative suggestions on this AUAR. It is acknowledged that wildlife fatalities from vehicle collisions can detrimentally affect wildlife populations and that high-speed roadways are the most detrimental. Phase I development would largely utilize existing low speed roads that pose a lower risk for wildlife roadway fatalities. As part of the full buildout, a potential new roadway that would connect to the residential neighborhood southeast of the AUAR area at Lake Avenue is shown at a conceptual level. At the time that this new connection may occur, avoidance, minimization, and mitigation measures would be evaluated to reduce the potential for wildlife vehicular collisions as part of future environmental permitting and review requirements.

It is a priority of the City to enhance pedestrian and bicycle infrastructure through installation of sidewalks along roadways and interconnecting buildings as well as making accommodations for bicycles within development areas. Per Scenario B, existing trail facilities, including the Duluth Traverse and Central Entrance Trails, would remain and improvements to these facilities would be incorporated into proposed future development. Additionally, a trailhead and small park facility are proposed.

3. **Comment:** MnDOT District 1 provided comment on the Transportation chapter of the Scoping EAW for this project, to ensure that the AUAR would look at what traffic impacts would be for each phase of the development buildout (known or projected) and the resulting mitigations that may be needed to minimize or mitigate project related transportation effects. The Draft AUAR provides this information for the Phase 1 development, but it does not include any of the future phases, including what the traffic impact would be of the full buildout besides identifying the projected volumes. These full buildout volumes are not insignificant for this corridor, exceeding most other intersecting road AADTs along the corridor and is approximately equal to the AADT of TH 53/Trinity Road in 2017 (before the Twin Ports Interchange detour was in place). As currently written, the AUAR relies on the future reconstruction of Central Entrance/MN 194 to address any future mitigations measures needed as a result of this site redevelopment. MnDOT is incorporating these projected volumes into the study for the future reconstruction of the corridor. Yet, it is not yet a programmed project and the years of construction are not yet known. In the 2024-2033 Capital Highway Investment Plan (CHIP), the reconstruction project was planned for 2028; however, in the 2025-2034 CHIP under development, it will be no sooner than 2029. It is not likely that the MnDOT project would be completed before the new AUAR is required (in 5 years). Therefore, this AUAR needs to include the evaluation of the impacts of the next phase or phases of buildout with the existing transportation infrastructure conditions, as was done with the 2025 analysis for Phase 1. The draft AUAR identifies 2045 as a date for a full buildout, so this should be included when evaluating traffic impacts and needed mitigations, as well as potential interim phases. Since these specific details are not yet known, it would be prudent to choose some assumptions about what may occur and the timing, such as 30% developed by 2030, 60% developed by 2035, etc. This would provide some indication of the traffic impacts that the development will be incrementally adding. The analysis should assume that no changes are made on Central Entrance to provide an

indication of what can be expected for traffic impacts and what mitigation measures would be if the Central Entrance corridor project moves or changes.

Commenting Agency: MNDOT

Response: Thank you for commenting on this AUAR. The Development Scenarios evaluated in the Draft AUAR were intended to conservatively capture the maximum potential development of the AUAR area. However, Future development phases beyond Phase I are unknown at this time. Given the uncertainties of future development phases and that the timing and preferred design alternative MnDOT has planned for Central Entrance are unknown, it would be premature to develop for the AUAR potential mitigation measure recommendations for multiple theoretical scenarios as the assumptions would be highly speculative.

The AUAR project team met with MnDOT District 1, City, and County staff in September 2023 to discuss the scope of the traffic study for the AUAR. Following this meeting, trip generation estimates for the development scenarios were shared with MnDOT District 1 and their consultant to inform the selection of a preferred alternative in the Central Entrance Corridor Study. The City and developers will continue to coordinate with MnDOT District 1 as future phases develop that warrant additional traffic analysis.

Once the AUAR is adopted, it is required to be updated at least every five years including revised mitigation measures. As part of this future update, the traffic study would be updated to reflect planned future development known at that time and incorporate the preferred alternative design of Central Entrance into the traffic study. Once it becomes clear that the development will extend past Phase 1, discussions with the City and MnDOT about the traffic study update would occur to determine the scope and roadway network assumptions for the future phase.

4. **Comment:** The consultant should edit the traffic study to adjust the traffic distribution in the first phase as limited to exit to Central Entrance at the existing signal only.

Commenting Party: Joe Jurewicz, City of Duluth, Public Works & Utilities Department, Engineering Division*

**Note: The City of Duluth Department of Planning and Economic Development (PED) has led the preparation of the AUAR, including obtaining comments on the Draft AUAR from other City departments during the Draft AUAR public comment period.*

Response: Thank you for your Draft AUAR comment regarding the traffic study. The traffic study assumed minimal trips (5 trips in the a.m. peak hour and 6 trips in the p.m. peak hour) may utilize Blackman Avenue via Portia Johnson Drive to access the AUAR area. This is also consistent with the traffic model assumptions applied for the Central Entrance Corridor Study being conducted by MnDOT, which assigned minimal trips to Blackman Avenue. The intent of this approach was to realistically capture future trip

distribution associated with the development scenarios and ensure consistency with concurrent traffic modeling analyses.

5. **Comment:** Once development proceeds past the initial 200 residential units proposed in the study document, an update to the traffic study would be required.

   Commenting Party: Joe Jurewicz, City of Duluth, Public Works & Utilities Department, Engineering Division

   Response: Thank you for your comments on this AUAR. The need to conduct a traffic study once development exceeds the initial Phase I (200 residential units) has been clarified in the transportation section mitigation strategies. The traffic study would be updated at the time that this occurs or once the five years from the date of the AUAR adoption, whichever occurs first.

Item 21. Cumulative Potential Effects

1. **Comment:** How will the mixed business residential plan affect the housing situation in Duluth?
   WIll the plan increase the divide between liveable affordable low income and middle class homes with respect to fancy very expensive homes that only people from out of town making giant six figures can afford or will it gap that divide and provide low and middle income solutions?

   How will the residential affect property tax on the whole in the community?
   Which plan will cost the taxpayers more?
   Where can we see the plan? and who is doing the research?

   Commenting Party: Commentor #1 - Tamburro

   Response: Thank you for commenting on this AUAR. The purpose of the AUAR is to evaluate the potential impacts and mitigation for the proposed development scenarios. The development scenarios do not define the proportion of residential development that would be available to people with lower –incomes or those who can afford market rate homes.

General Comments

1. **Comment:** Thank you for the opportunity to review and comment on the Alternative Urban Areawide Review (AUAR) for the Central High School Redevelopment project (Project) located in Duluth, Saint Louis County, Minnesota. […] Minnesota Pollution Control Agency (MPCA) staff has reviewed the AUAR and have no comments at this time.

   […] Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit actions by the

MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions.

Commenting Agency: MPCA

Response: Thank you for commenting on this AUAR. We recognize that the MPCA has no further comments at this time and that the comment letter from MPCA does not constitute approval by MPCA of any or all elements of the Project for the purpose of pending or future permit actions by MPCA.

2. **Comment:** Using native species of plants for future landscaping should alleviate a lot of the need for pesticide maintenance and supplementary watering. Animals and humans are equally susceptible to contact with toxic lawn care chemicals. Using electric tools and equipment for future maintenance of the grounds will be more energy efficient, eliminate a major source of air pollution, and help minimize noise pollution.

   Commenting Party: Commentor #5 - Ritter

   Response: Thank you for your comments on this AUAR. Chapter 50-25 of the City's Legislative Code establishes landscaping and tree preservation requirements. Pursuant to Section 50-25.5, buffer areas are required to be provided when specific types of differing land uses occur adjacent to each other, including where boundaries of mixed-use properties are adjacent to a residential zone district. A landscape buffer may consist of natural landscape materials or an opaque wall, berm, fence or dense vegetative screen is required. Mitigation measures included in Item 14 (Fish, Wildlife, Plant Communities and Sensitive Ecological Resources), include recommendations to incorporate native plants into vegetation plans for landscaping open spaces within the AUAR area.

   We recognize that use of electric tools and equipment for future maintenance of the grounds may take advantage of more energy efficient tools and equipment, that come with lower air emissions and noise; however, it is beyond the scope of the AUAR to specify the type of service, specific equipment, and service providers that the owners and operators of this AUAR study area will utilize.

3. **Comment:** Twenty years ago the SHTA [Superior Hiking Trail Association] worked with the City to secure a critical trail easement on Central High School's property to ensure that someday we would be able to bring the Superior Hiking Trail through that property, and provide the scenic ridgeline experience the SHT [Superior Hiking Trail] is known for. Unfortunately, in the early 2000s it proved difficult to secure the permissions of this ridgeline alignment, so the SHT was brought down to the lesser desired urban core by a series of road walks and City-owned paved pathways.

   Since that time COGGS and Parks & Recreations were able to identify the missing pieces for the uphill trail corridor. SHTA has spent the last two years working with these partners to re-establish the Superior Hiking Trail on this alignment. We refer to this as the "Great Northern Route."

This trail corridor is easily the most complicated, resource consuming and long-awaited corridor to be established in the City. […] The current trail alignment follows best practices and has been optimized within the available corridor for sustainability, drainage, and multi-use sight lines.

Because of this, we request that no change be made to the existing trail alignment. We also request the preservation of viewsheds from the trail, which are a vital component of the scenic trail experience. […]We would also request a vegetative buffer of 100' to ensure the integrity of trail experience is not compromised.

Lastly, I would like to point out that this neighborhood has historically been under-served by trail connectivity. That was identified over a decade ago in Parks Master Plan, and again in the recently completed two years ago in the updated Master Plan. We've worked so hard to establish this Trail.

Commenting Organization: Superior Hiking Trail Association

Response: Thank you for you for providing this information. Both Scenarios A and B provide for the continuation of the trail through the property. Furthermore, it is the intent of Scenario B to enhance the existing trail with additional pedestrian facilities and trail connections. It is not anticipated that trail facilities would be removed as a result of Scenario B. The City will work with future developers to minimize potential impacts to and encourage improvements to trail features within the AUAR area including possible provision of a Type 1 Trailhead as recommended in the City's Duluth Traverse Mini Master Plan.

APPENDIX A: Public Comments

MINNESOTA POLLUTION CONTROL AGENCY

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300

800-657-3864 | Use your preferred relay service | info.pca@state.mn.us | Equal Opportunity Employer

March 19, 2024

Adam Fulton, Deputy Director
City of Duluth
411 West First Street, Room 160
Duluth, MN 55802
planning@duluthmn.gov

RE: Central High School Redevelopment – Alternative Urban Areawide Review

Dear: Adam Fulton

Thank you for the opportunity to review and comment on the Alternative Urban Areawide Review (AUAR) for the Central High School Redevelopment project (Project) located in Duluth, Saint Louis County, Minnesota. The Project consists of an approximately 80-acre area on the site of the former Central High School near Central Entrance and H. Courtney Drive in the City of Duluth, St. Louis County, Minnesota. Two development scenarios will be evaluated as part of the AUAR which include a business park scenario consistent with the city's adopted Comprehensive Plan, and a mixed residential and commercial use scenario. Minnesota Pollution Control Agency (MPCA) staff has reviewed the AUAR and have no comments at this time.

We appreciate the opportunity to review this project. **Please provide the notice of decision on the need for an Environmental Impact Statement.** Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit actions by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this AUAR, please contact me by email at Chris.Green@state.mn.us or by telephone at 507-476-4258.

Sincerely,

Chris Green

This document has been electronically signed.

Chris Green
Project Manager
Environmental Review Unit
Resource Management and Assistance Division

CG:rs

cc: Dan Card, MPCA
Tom Estabrooks, MPCA
Aaron Hinz, MPCA
Joe Braun, MPCA
William Wilde, MPCA
Kirsten Barta, MPCA
Deepa deAlwis, MPCA

Megen Kuhl-Stennes, MPCA
Innocent Eyoh, MPCA
Jeff Udd, MPCA

Kyle Deming

From: Webb, Maren (She/Her/Hers) (DOT) <Maren.Webb@state.mn.us>
Sent: Thursday, March 21, 2024 9:45 AM
To: Kyle Deming
Cc: Anderson, Bryan (DOT); Miles, James (DOT); Kerfeld, Douglas (DOT); Lind, Katherine (DOT)
Subject: Central High School Draft AUAR

Good morning,

Please find below the comment from MnDOT District 1.

Thank you,
Maren

MnDOT District 1 provided comment on the Transportation chapter of the Scoping EAW for this project, to ensure that the AUAR would look at what traffic impacts would be for each phase of the development buildout (known or projected) and the resulting mitigations that may be needed to minimize or mitigate project related transportation effects. The Draft AUAR provides this information for the Phase 1 development, but it does not include any of the future phases, including what the traffic impact would be of the full buildout besides identifying the projected volumes. These full buildout volumes are not insignificant for this corridor, exceeding most other intersecting road AADTs along the corridor and is approximately equal to the AADT of TH 53/Trinity Road in 2017 (before the Twin Ports Interchange detour was in place). As currently written, the AUAR relies on the future reconstruction of Central Entrance/MN 194 to address any future mitigations measures needed as a result of this site redevelopment. MnDOT is incorporating these projected volumes into the study for the future reconstruction of the corridor. Yet, it is not yet a programmed project and the years of construction are not yet known. In the 2024-2033 Capital Highway Investment Plan (CHIP), the reconstruction project was planned for 2028; however, in the 2025-2034 CHIP under development, it will be no sooner than 2029. It is not likely that the MnDOT project would be completed before the new AUAR is required (in 5 years). Therefore, this AUAR needs to include the evaluation of the impacts of the next phase or phases of buildout with the existing transportation infrastructure conditions, as was done with the 2025 analysis for Phase 1. The draft AUAR identifies 2045 as a date for a full buildout, so this should be included when evaluating traffic impacts and needed mitigations, as well as potential interim phases. Since these specific details are not yet known, it would be prudent to choose some assumptions about what may occur and the timing, such as 30% developed by 2030, 60% developed by 2035, etc. This would provide some indication of the traffic impacts that the development will be incrementally adding. The analysis should assume that no changes are made on Central Entrance to provide an indication of what can be expected for traffic impacts and what mitigation measures would be if the Central Entrance corridor project moves or changes.

MnDOT District 1 planning and traffic engineering staff are available for questions, as needed.

Maren Webb, MPP
she/her/hers
Principal Planner | District 1

Minnesota Department of Transportation
1123 Mesaba Avenue
Duluth, MN 55811
218-725-2742
maren.webb@state.mn.us

mndot.gov/

DEPARTMENT OF TRANSPORTATION

DRIVING TRANSPORTATION RESEARCH
TECHNICAL ADVISORY PANEL MEMBER

From: Sejkora, Erin <Erin.Sejkora@stantec.com>
Sent: Tuesday, February 20, 2024 9:59 AM
To: Roos, Stephan (MDA) <stephan.roos@state.mn.us>; Kirsch, Raymond (COMM) <raymond.kirsch@state.mn.us>; MN_MDH_Review <Health.Review@state.mn.us>; Townley, Jill (DNR) <jill.townley@state.mn.us>; Green, Chris (MPCA) <chris.green@state.mn.us>; King, Melissa (BWSR) <Melissa.King@state.mn.us>; Lind, Katherine (DOT) <Katherine.Lind@state.mn.us>; OSA, MN (ADM) <mn.osa@state.mn.us>; Cerda, Melissa (MIAC) <melissa.cerda@state.mn.us>; MN_ADM_ENV Review SHPO <ENReviewSHPO@state.mn.us>; govdoc@hclib.org; shauna_marquardt <shauna_marquardt@fws.gov>; usace_requests_mn@usace.army.mil; R5NEPA@epa.gov; ahubley@ardc.org; smyers@duluthmn.gov; sbarlow@duluthmn.gov; Webb, Maren (She/Her/Hers) (DOT) <Maren.Webb@state.mn.us>; rigneyd@stlouiscountymn.gov; JablonskyD@stlouiscountymn.gov; rchicka@ardc.org
Cc: Kyle Deming <kdeming@DuluthMN.gov>; Ryan Pervenanze <rpervenanze@DuluthMN.gov>; Bot, Courtnay <Courtnay.Bot@stantec.com>; Walburg, Lauren <Lauren.Walburg@stantec.com>
Subject: Central High School Redevelopment Project - Notice of Draft AUAR Comment Period

Good morning,

The City of Duluth is studying the potential for future redevelopment of the former Central High School site and adjacent lands to evaluate environmental impacts through an Alternative Urban Areawide Review (AUAR) process. The AUAR includes an approximately 80-acre area encompassing the former Central High School site near Central Entrance and H. Courtney Drive in the City of Duluth, St. Louis County.

An AUAR consists of three steps: Scoping Environmental Assessment Worksheet (EAW), Draft AUAR and Final AUAR. A Scoping EAW was published in the EQB Monitor on December 5, 2023, initiating a 30-day comment period that concluded on January 4, 2024. A Final AUAR Order was subsequently adopted on January 9, 2024. Comments received on the Scoping EAW were considered in the preparation of this Draft AUAR.

The Draft AUAR is available to view at the City's website at: https://duluthmn.gov/planning-development/environmental/environmental-reviews/

The Draft AUAR will be available for public comment starting **Tuesday, February 20, 2024**. Please provide electronic comments to **Kyle Deming** at kdeming@DuluthMN.gov with *Central High School Draft AUAR* in the subject line. Comments must be received by the end of the public comment period on **Thursday, March 21, 2024 at 4:00 p.m**.

Written comments should be submitted to:

City of Duluth
Attn: Kyle Deming, Senior Planner

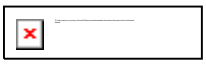
City Hall, Room 160
411 West First Street
Duluth, MN, 55802

Please let me know if you have any questions. Thank you for your time and consideration.

Erin Sejkora, AICP
Associate, Project Manager
Senior Environmental Planner
She/Her

Direct: 763.252.6802
Mobile: 612.258.6937
Erin.Sejkora@stantec.com

One Carlson Parkway, Suite 100
Plymouth, MN 55447



THE CITY OF DULUTH MINNESOTA

Mindy Granley
Sustainability Officer

Room 422
411 West First Street
Duluth, Minnesota 55802

218-730-5334
mgranley@duluthmn.gov

March 14, 2024

To: City of Duluth Planning and Economic Development

Re: greenhouse gas emissions portion of AUAR for the 80-acre area on the site of the former Central High School near Central Entrance and H. Courtney Drive in the City of Duluth

Buildings account for nearly 40% of energy consumption in the United States. (*U.S. Energy Information Administration: "Buildings Energy Data Book")* In Climate Zone 7, heating energy dominates costs and carbon emissions. According to a recent study by the National Multifamily Housing Council, 84% of millennials and 74% of baby boomers consider sustainability a crucial factor when choosing a rental property. (*National Multifamily Housing Council: "Sustainable Living in Multifamily Rental Housing - Insights from the 2017 NMHC/Kingsley Renter Preferences Survey")*

Energy efficiency investments in multifamily buildings can provide **long-term operational savings**, along with being **environmentally-friendly**. Energy-efficient buildings typically have operating costs that are 20% lower than their less efficient counterparts. Sustainable properties can provide other economic benefits too, like higher tenant **retention rates**, increased **market value**, and improved financial performance and investment returns. (Source: *Institute for Market Transformation: "The Financial Case for High Performance Buildings")*

Mitigation measures I recommend be focused on for the greenhouse gas emissions portion of the AUAR include:

1. **Expertise**: A dedicated and qualified energy engineer, consultant, or certified energy manager should be an integral part of project planning.
2. **Efficiency**: The most important part of energy is efficiency. Building envelope is key, along with efficient heating, cooling, and heat-recovery ventilation systems.
    a. Tax incentives exist to help offset the up-front costs of these solutions, see Resources on page 2, including the **§ 45L Tax Credits for Home Builders**. The Minimum Energy Star Standard for Minnesota for Multifamily homes is MFNC National v1.1
3. **Clean energy**: The AUAR already mentioned solar on rooftops. However, there are Federal Tax Credits for solar and many other clean energy technologies, see Resources, page 2. New developments are an unique opportunity to deploy clean energy technologies. For example: a networked geothermal heat loop (eligible for Inflation Reduction Act incentives) could provide a low-carbon heating solution that is quiet, efficient, and resilient to extreme weather.
4. **Bird strike reduction**: There are many pathways to reduce bird strikes, including limiting the size of uninterrupted window glass. A sustainable design menu for bird-safe windows, especially on the south-facing side, is included in Resources, page 2.

This is a great opportunity to set an example for future development and redevelopment in Duluth. I've listed Resources on Page 2, including funding incentives, local rebate programs, and more.

Mindy Granley
Sustainability Officer

THE CITY OF DULUTH MINNESOTA

Mindy Granley
Sustainability Officer

Room 422
411 West First Street
Duluth, Minnesota 55802

218-730-5334
mgranley@duluthmn.gov

Resources

- Federal Tax Credits for builders of **energy efficient homes, including multifamily**:
  - https://www.energystar.gov/about/federal-tax-credits/ss-45l-tax-credits-home-builders
  - The Minimum Energy Star Standard for Minnesota Multifamily developments is "MFNC National v1.1", for Climate Zone 7: https://www.energystar.gov/partner_resources/residential_new/homes_prog_reqs/minnesota?mfpath=eri

- Federal Tax Credits for **solar and clean energy solutions** in the Inflation Reduction Act
  - https://www.irs.gov/inflation-reduction-act-of-2022

- Incentives and advising are available to Minnesota Power's commercial building customers, see the Customized Projects and New Construction Rebates at:
  - https://www.mnpower.com/ProgramsRebates/BusinessIncentives

- Energy consultants who specialize in multifamily buildings can help identify savings pathways. One resource is through the Minnesota Clean Energy and Environment:
  - https://www.mncee.org/multifamily-buildings
  - https://www.mncee.org/new-construction-services

- The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has provided a new **design guide** to help contractors and designers develop a viable plan for attaining zero energy multifamily buildings.
  - The guide was developed in partnership with the U.S. Department of Energy's (DOE) Building Technologies Office, ASHRAE, the American Institute of Architects (AIA), the Illuminating Engineering Society (IES) and the U.S. Green Building Council (USGBC).
  - The *Advanced Energy Design Guide for Multifamily Buildings-Achieving Zero Energy* guide is available at: https://ashrae.org/technical-resources/aedgs

- B*ird-friendly window* practices:
  - *Bird-Friendly-Best-Practices for Glass:* https://www.toronto.ca/wp-content/uploads/2017/08/8d1c-Bird-Friendly-Best-Practices-Glass.pdf
  - *The Yale Bird-Friendly Building Initiative:* https://bird-friendly.yale.edu/usa-policy-database

- The Minnesota Sustainable Housing Initiative (MNSHI) is a web-based portal for information and research conducted by the Center for Sustainable Building Research, with funding provided by the McKnight Foundation. It aims to inform and support the creation of affordable, healthy, durable, and resource and energy efficient homes throughout the state and region.
  - https://design.umn.edu/center-sustainable-building-research/projects/mn-sustainable-housing-initiative-multifamily-prototypes

Kyle Deming

From: Joseph Jurewicz
Sent: Wednesday, March 20, 2024 3:18 PM
To: Kyle Deming
Subject: Central HS AUAR Comments

Kyle-

Traffic comments for adding to the official list:

1. The consultant should edit the traffic study to adjust the traffic distribution in the first phase as limited to exit to Central Entrance at the existing signal only.
2. Once development proceeds past the initial 200 residential units proposed in the study document, an update to the traffic study would be required.

Joe Jurewicz, P.E. | Senior Engineer | City of Duluth, MN | jjurewicz@duluthmn.gov | 218-730-5095

Joe Jurewicz, PE (MN, WI, FL)
Senior Engineer

City of Duluth – Public Works & Utilities
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jjurewicz@duluthmn.gov

Kyle Deming

From: todd@starryskiesnorth.org
Sent: Thursday, March 21, 2024 3:28 PM
To: Kyle Deming
Subject: Central High School Draft AUAR

Senior Planner Kyle Deming,

The Board of Directors of Minnesota non-profit Starry Skies North respectfully submits the following comments to the Central High School Redevelopment Project Draft Alternative Urban Areawide Review (AUAR).

Modern LED lighting offers great advantages to our modern society. It helps keep drivers and pedestrians safe on our roadways, it can help us find homes and businesses, and it lets us enjoy outdoor sports at night. LED lighting is a powerful tool, but like any tool it must be used wisely and carefully.

All too often, developers make the baseless assumption that 'more is better' for outdoor lighting at night, particularly in regard to personal and property safety. These assumptions persist despite decades of careful research that show no clear connection between increased lighting and increased safety. Indeed, in some cases research shows that adding light can reduce safety and increase crime.

Careful lighting design, conducted by a team with formal training in outdoor lighting, performed in close partnership with local stakeholders, is essential for development of projects that benefit all members of the community while minimizing light's potentially negative impacts. Well-designed lightscapes can support vibrant, engaged communities while protecting the natural ecosystems that residents of the Duluth region value. Poorly designed lightscapes that disregard best practices and community preferences can waste energy, reduce the mobility of our seniors, reduce driver and pedestrian safety, impact human health and wellness, degrade ecosystems, fragment habitats, and break our cultural connections to the night sky while denying residents of their right to experience a natural night sky.

This project is located on the heights overlooking Duluth, which will afford its residents and visitors a commanding view of the region, but it also means that residents across the region will be exposed to any excess lighting, light trespass, and skyglow from the development. To borrow a phrase: with great altitude comes great responsibility -responsibility to use light carefully and intentionally, and only where and when it adds value.

Therefore, the board of Starry Skies North respectfully submits the following recommendations:

1) The project adheres to the lighting best practices outlined in the 2022 Responsible Outdoor Lighting At Night (ROLAN) Manifesto, which calls for community engagement and the use of lighting designers with training in outdoor lighting best practices.
2) The project follows the sustainability best practices outlined in the Minnesota Pollution Control Agency's GreenStep Cities program.
3) The project follows the best practices defined in Minnesota's B3MN standards, regardless of whether they are required by law to follow B3MN.
4) The project rigorously adheres to the 5 principles of responsible lighting, jointly developed by DarkSky International and the Illuminating Engineering Society (IES):
    a. Start with Darkness, and only add light where necessary.
    b. Lights should be fully shielded to prevent glare, light trespass, and waste. This is especially true for the project's hilltop location.
    c. Lights should be as bright as needed for their intended purpose, but no brighter.
    d. Lights should be warm-white, with color temperatures at or below 2700 Kelvin.
    e. Lights should use adaptive controls such as timers, dimmers, and motion detectors to take advantage of LED's instant-on and dimmability features, to provide light whenever it is needed, and reduce or remove light whenever it is not needed.

Starry Skies North is an all-volunteer 501(c)3 non-profit corporation conducting educational outreach across Minnesota and the upper Midwest regarding the myriad impacts of Light Pollution, and the win-win solutions that balance the

many benefits of outdoor lighting with its potential harms. We are available to share our expertise with developers, communities, and residents.

Respectfully,

Todd Burlet
Co-founder, Board Member and President, Starry Skies North
Delegate, DarkSky International
763-370-0994
todd@starryskiesnorth.org

To learn more about IDA's work visit www.darksky.org

Superior Hiking Trail Association
PO Box 315, Two Harbors, MN 55616-0315 (218) 834-2700

March 30, 2024

To Whom It May Concern:

The Superior Hiking Trail Association (SHTA) would like to formally submit the following comments on the proposed development at the old Central School Site. Twenty years ago the SHTA worked with the City to secure a critical trail easement on Central High School's property to ensure that someday we would be able to bring the Superior Hiking Trail through that property, and provide the scenic ridgeline experience the SHT is known for. Unfortunately, in the early 2000s it proved difficult to secure the permissions of this ridgeline alignment, so the SHT was brought down to the lesser desired urban core by a series of road walks and City-owned paved pathways.

Since that time COGGS and Parks & Recreations were able to identify the missing pieces for the uphill trail corridor. SHTA has spent the last two years working with these partners to re-establish the Superior Hiking Trail on this alignment. We refer to this as the "Great Northern Route."

This trail corridor is easily the most complicated, resource consuming and long-awaited corridor to be established in the City. It represents both a designated National Scenic Trail and an International Mountain Bike Gold Ride Center. Two of the most prestigious designations you can obtain in the trails world. The current trail alignment follows best practices and has been optimized within the available corridor for sustainability, drainage, and multi-use sight lines.

Because of this, we request that no change be made to the existing trail alignment. We also request the preservation of viewsheds from the trail, which are a vital component of the scenic trail experience. We are opposed to any development that disrupts views from the trail toward the lake. We would also request a vegetative buffer of 100' to ensure the integrity of trail experience is not compromised.

Lastly, I would like to point out that this neighborhood has historically been under-served by trail connectivity. That was identified over a decade ago in Parks Master Plan, and again in the recently completed two years ago in the updated Master Plan. We've worked so hard to establish this Trail.

It is anticipated that this development will greatly benefit from the high quality recreational amenities outside their front door. Guaranteed access to the SHT and COGGS trails will be shared widely in their marketing as they attract renters/owners. I encourage the City to prioritize protecting, not diminish, the very reason why Duluth's image has drawn the demand for new housing and retail -- the recreational amenities that represent our high quality of life and abundant access to the outdoors.

Sincerely,

Lisa Luokkala
Executive Director

Kyle Deming

Subject: FW: Duluth Planning Commision

From: Morgan Hegman < >
Sent: Thursday, March 21, 2024 4:39 PM
To: planning <planning@DuluthMN.gov>
Subject: Duluth Planning Commision

Dear Duluth Planning Division,

We hope our email finds you in good health. We are students at the University of Minnesota Duluth in a course that focuses on energy and climate justice.

The Central High residential development is the perfect time for Duluth to do the right thing when it comes to a just energy transition because it is a large development built from the ground up. There is no need for retrofitting or adapting existing complexes. We have known for years that we need to make changes in how we produce and use energy.

The continued use of methane gas for heating in this development does not do what we need to do to secure a more sustainable future. It would support the continued dumping of harmful chemicals and GHGs into the atmosphere.

Removing the use of methane gas for a renewable option is a step in the right direction.

Solar on rooftops is also important because it allows a very powerful energy source right on the site. This will be much cheaper in the long run instead of having to keep up long distribution lines.

Putting the upfront costs to install these renewables throughout the development instead of just “where feasible” will pay for itself in the long run. It will also help support a sustainable future and city that young people like us will want to continue to grow and invest in.

Thank you for your consideration and attention,

The students of University of Minnesota Duluth, Climate and Energy Justice

Kyle Deming

Subject: FW: ? for the Central High School Redevelopment Project Draft

From: Carla Tamburro <>
Sent: Wednesday, February 21, 2024 11:39 AM
To: Kyle Deming <kdeming@DuluthMN.gov>
Subject: ? for the Central High School Redevelopment Project Draft

How will the mixed business residential plan affect the housing situation in Duluth?
WIll the plan increase the divide between liveable affordable low income and middle class homes with respect to fancy very expensive homes that only people from out of town making giant six figures can afford or will it gap that divide and provide low and middle income solutions?

Housing is horrible here. Much of the housing stock is unlivable and the prices are out of control. You can get beautiful homes in the Twin Cities for less. How does that affect residents who have spent their lives or most of their lives here. Does anyone care?

How will the residential affect property tax on the whole in the community?

Which plan will cost the taxpayers more?

Where can we see the plan? and who is doing the research?

Kyle Deming

Subject: FW: Old Central location thoughts

From: Carol Uecker <>
Sent: Wednesday, February 21, 2024 4:42 PM
To: Kyle Deming <kdeming@DuluthMN.gov>
Subject: Old Central location thoughts

Hello,
I thought it might be nice to have half a dozen tiny home tucked back near the tree line. Not in a row, but for people on lower incomes. Perhaps Habitat for Humanity or One Roof Community Housing could participate in this planning? I would prefer lower income housing not just be setting aside a minimum number of units larger structures. Carol Uecker

Kyle Deming

Subject: FW: The Form 'Boards - Planning Commission' was submitted

From: City of Duluth MN <no-reply@DuluthMN.gov>
Sent: Thursday, March 21, 2024 11:30 AM
To: planning <planning@DuluthMN.gov>
Subject: The Form 'Boards - Planning Commission' was submitted

First Name
Scot

Last Name
Johnson

Message
RE: Incline Village Development and the 237 page AUAR. It's a fact that Duluth needs new housing badly. 1,590 apartments and townhomes will help a lot. At the same time we have an opportunity to use the latest technology of geothermal energy and electricity to heat this complex in a way that's good for the environment. With a project like this there's some huge advantage of economies of scale and the unlocking of federal, state, and local grant money, and tax credits which should benefit the developer. Please make it a stipulation to require exploring a more low emission way to heat these units before final approval of this project. Sincerely, Scot Johnson Duluth,MN

From: Sean McLaughlin <>
Date: March 16, 2024 at 09:31:58 CDT
To: Council <Council@duluthmn.gov>
Subject: Incline Village AUAR Environmental Review

My name is Sean McLaughlin, I reside in Duluth at 102 S 17th Ave E, 55812.

I would like to submit comment on the housing development plan at the former Central High School. The development of several large buildings in the prominent location on the hill poses a serious threat to migratory birds in Duluth. I work for Hawk Ridge Bird Observatory, and while I do not represent this organization with these comments, I witness firsthand the magnitude of bird migration here and understand the damage these buildings could do. The American Bird Conservancy estimates that nearly 1 billion birds die each year from window strikes (https://abcbirds.org/blog/truth-about-birds-and-glass-collisions/). Since 2007, myself and others have counted birds from mid August thru the end of November from Hawk Ridge, as well as on the lake shore. On average, 275,000+ birds migrate in daylight hours through Duluth (see attached spreadsheet). Additionally, millions more birds migrate at night, posing a greater threat to birds as artificial light can disorient and distract them. Cornell Labs tracks nocturnal bird migration on BirdCast (https://dashboard.birdcast.info/region/US-MN-137?night=2023-09-01). This link depicts just one night in early September when over 6 million birds passed through the county.

Because of the immense migration that occurs in Duluth, on the lake shore and on the hillside, new development always poses a risk. It is not my job or position to oppose this development, but rather encourage it will be as bird friendly as possible. The number one way to diminish the threat of window strikes is the installation of bird safe windows. Windows that still function normally but prevent the reflection that can cause so many birds to not see it, and fly directly into it (https://www.audubon.org/news/what-does-bird-safe-glass-even-mean).

I would like to strongly encourage the council to reevaluate Chester Creek View LLC and Incline Plaza Development LLC's AUAR to include more information about the immense migration that takes place in Duluth, and how this development will mitigate that threat. If this does not occur, events like the bird strike event in Chicago last fall may become common place (https://www.theguardian.com/us-news/2023/oct/07/chicago-mccormick-place-building-bird-deaths-windows#:~:text=From%20late%20Wednesday%2C%204%20October,varieties%20of%20songbirds%20were%20recovered). This story reached national news outlets and public outcry from people across the country. Duluth should and can be a place of bird conservation and safe bird-friendly development.

If the goal of this project is also to attract new residents to the city, one group the council must consider is birders. According to the USFWS, there are nearly 45 million Americans who call themselves a birder (https://www.nationalgeographic.com/travel/article/could-a-boom-in-us-birding-help-fund-conservation#:~:text=According%20to%20the%20U.S.%20Fish,to%20their%20homes%20and%20neighborhoods). By attracting young birders and their families with a bird safe neighborhood development, the city targets a new and diverse population. Already, tens of thousands of visitors travel to Duluth to visit Hawk Ridge and the Sax-Zim Bog, world renowned birding locations. Why not attract these visitors to stay with a development that protects something we all care about: birds?

I strongly encourage a reevaluation of the AUAR and the inclusion of risk analysis of bird migration in Duluth.

Thanks for listening to my words.
Best,
Sean McLaughlin

3750 Huckleberry Lane, Duluth, MN 55803

March 18, 2024

City of Duluth Planning Commission

Dear Planning Commissioners,

I have reviewed the AUAR for the Central High School Redevelopment Project and appreciate your invitation to share my continuing concerns about this project.

Duluth is known for its location as a gateway into greater northern wilderness, specifically the Boundary Waters Canoe Area Wilderness and International Dark Sky Sanctuary. Duluth has been an enticing place to live and visit due to its proximity to other surrounding parks, relatively dark skies, climate, and Lake Superior. In recent years Duluth has been starting to lose its appeal as a wilderness steppingstone as it is now being sold as a climate change sanctuary. In preparation for this status, more housing and businesses are being built with little regard to safeguarding and retaining our green spaces. We are removing the very habitat that has made and will keep this area climate resilient. We certainly can prepare this city to accommodate more people, but we are going to have to be wiser in planning to preserve the city's positive and unique qualities. Here is a list of suggestions I have to offer to keep Duluth a desirable place to live for humans and co-habiting wildlife:

1. Tree removal is a given to make space for buildings, roads, and parking areas. This will impact habitat availability for the two species of endangered bats and other wildlife dependent on trees for shelter and food. Follow-up landscaping plans should be designed around native trees and herbal plants to accommodate the needs of the wildlife that lives in this area. A list has already been developed designating these organisms, so referring to this list for specific planting for these organisms will not be difficult. A diversity of nesting boxes and platforms could supplement wildlife shelter needs.
2. Using native species of plants for future landscaping should alleviate a lot of the need for pesticide maintenance and supplementary watering. Animals and humans are equally susceptible to contact with toxic lawn care chemicals. Using electric tools and equipment for future maintenance of the grounds will be more energy efficient, eliminate a major source of air pollution, and help minimize noise pollution.
3. Light is a major source of pollution for any city and is a problem exponentially growing for Duluth as human developments expand. This one problem that can be minimized so easily and economically within the city of Duluth, and in Incline Village. Studies abound addressing the safety and crime issues related to night lighting for private and public buildings and spaces. Starry Skies North (https://starryskiesnorth.org) and DarkSky International (https://darksky.org) provide a plethora of information about the need for maintaining dark skies for human and planetary health. They also provide easily understood guidelines for conducting lighting audits for cities and private properties, and suggestions for specific forms of replacement lighting. We have several schools of higher education in the area who could well be interested in conducting such a study for this project. Take advantage of the situation! Duluth's skyglow extends miles beyond the city limits and significantly impacts our attractiveness as a destination for astrotourism.

Lighting and bird survival is of particular significance because of Duluth's location along the Central Migratory Flyway. Night lighting means life or death for millions of birds each year, especially during migration as the Flyway concentrates birds along the shores of Lake Superior. Inappropriate lighting confuses especially song birds as they fly mostly at night to avoid raptors migrating along the same flight paths. Hundreds to thousands of birds can be killed each night simply because of lighting. The location of Incline Village along a main flyway ridge could make it a most precarious place for birds flying through if the lighting isn't correctly designed. For what future reputation are we planning this project, as environmentally considered, or as another indifferent development in an urban setting?

4. A major increase in traffic will have a huge impact on the surrounding environment, from air pollution to wildlife fatalities. **Road ecology** is the study of roads and their role and impact on the surrounding environment. In "Crossings: How Road Ecology is Shaping the Future of Our Planet", by Ben Goldfarb, "Road ecology is an act of interspecies imagination that requires ecologists to think like wild animals and develop an empathy manifested as science." Are our city planners adopting this vital aspect of development planning? Barry Lopez has noted that "we treat the attrition of lives on the road like the attrition of lives in war. Horrifying, unavoidable, and justified." Will the planning of Incline Village continue this outdated kind of planning mentality for this city we call 'home'?
   The AUAR made vague reference to the vehicular air pollution along the busy roads. I think better data could be gathered through data gained from previous similar scenarios to better account for this future contamination. Maybe it's time to think out of the box about how to minimize this impact?
   Wildlife and heavy traffic always result in wildlife fatalities that really aren't acceptable. Studies have indicated that fencing along both sides of the roads can significantly help keep wildlife off the roads and funneled into safe wildlife crossing corridors if the fencing is appropriately built and maintained. Safer wildlife movement can be accommodated with:
   a. Landscaped overpasses that provide cover for animal sheltering and blocks direct light from traffic.
   b. Lit underpasses and tunnels
   c. Culverts that can allow some animals to slink under the road unimpeded.
   d. Ariel wildlife crossings

   Insurance companies will thank you for this development feature.

   Some kinds of fencing can also help shield from traffic-produced noise pollution. Noise can be disorienting to migrating birds. As a result, birds will avoid the area and the insects upon which they usually feed will continue safely eating the trees without fear of predator interference. As we well know, too heavy feeding by insects can eventually lead to the death of trees.

   I did not see any reference to accommodations for pedestrian or bicycle traffic along the roads. Is this a development for car owners only? Why? I can't imagine that people living there would not want to take walks at least sometimes. Yes, there will be trails going through the property, but maybe folks want to walk or bicycle to other shopping destinations? After being at work all day, I'm sure people would love to get out and about to take in some fresh air and exercise.

I think Incline Village could be a fun and spectacular place to live, shop, and go to school. It would be satisfying to know that it was designed with integrity and could be a crown jewel that shows the world that Duluth really is a climate and environmental refuge.

Sincerely,

Dr. Martha M. Ritter

Kyle Deming

Subject: FW: The Form 'Boards - Planning Commission' was submitted

From: City of Duluth MN <no-reply@DuluthMN.gov>
Sent: Tuesday, March 19, 2024 6:03 PM
To: planning <planning@DuluthMN.gov>
Subject: The Form 'Boards - Planning Commission' was submitted

First Name
Eric

Last Name
Enberg

Message
Central High School Redevelopment Plan: Comments on the AUAR By Eric Enberg, MD of Citizens' Climate Lobby, Duluth Climate and Energy Network, and Health Professionals for a Healthy Climate The Central High School Redevelopment Plan is an important opportunity to redevelop an already disturbed site and add much needed housing stock. The AUAR was commissioned to examine the environmental aspects of the project and was paid for by the developer. I find serious deficiencies in the report as listed below with a list of suggested actions to remedy these deficiencies. The AUAR is a 237 page document which lays out in considerable detail the climate outlook for Duluth including rising temperatures with corresponding heavier rain events. Unfortunately, the AUAR authors failed to draw the obvious conclusion from this climate data and

seemed to defer to the use of natural gas. The authors also made errors with regards to the fugitive emissions rate for the natural gas system which should be closer to 2%. Natural gas is mostly methane and methane which leaks from the system (fugitive emissions) is 80 times more powerful than CO2 for the first 20 years and 36 times more powerful a century later. Clearly, the actions we take today will have impacts for generations down the line. It is our obligation to ourselves and future generations to extirpate the use of natural gas in the economy. The City of Duluth's Climate Action Work Plan 2022-2027 requires that the City, "Assess economically-feasible, clean energy alternatives to natural gas through partnerships with the electric utility and Comfort Systems". 78% of Duluth's emissions are derived from buildings. Duluth burns 5 billion cubic feet of natural gas per year. This is 302,000 tons of CO2 and with the leaked methane, 484,000 tons of CO2 equivalent. The proposed project will add another 12,335 tons of CO2 equivalent annually which is a 4% increase at a time when we need to eliminate the natural gas use we already have. The Social Cost of Carbon is now set by the U.S. EPA at $190 per ton of CO2 which means that this project would cost the community/country $2,343,650 annually in climate damage and health effects. Citywide, the current Social Cost of Carbon for natural gas use is a staggering $57,380,000 annually or over half of the City budget. The attitude of the authors towards these emissions was dismissive. They breezily state that the project's annual natural gas-related emissions will be insignificant not only on a state scale but even on a city scale. I suppose one could argue relative scales and assessments but for a person who is working very hard to eliminate fossil fuels in home heating, a four percent rise in emissions is a huge step backward. Once this natural gas infrastructure is in place and the developer has left town with its profits, it will be very difficult to do the right thing through a retrofit. We must do right by our children. Not only do our children have to bear the brunt of the climate change we have set in motion, natural gas is anything but clean or safe when used in a home and impacts young lungs. Natural gas is mostly

methane but contains nearly 300 other chemicals, 11 of which are carcinogenic, such as benzene and toluene. Natural gas use in the home is a major cause of childhood asthma. The lowly gas range leaks one percent of the gas sent to it even when not in use. Nitrogen and oxygen gas comprise 99% of our atmosphere and in the presence of a natural gas flame combine to form various nitrogen-oxygen compounds known as NOx. This is a major class of pollutants. In a small or unvented kitchen, NOx levels rise quickly to unacceptable levels with gas range use. If we fail to insist that these 925 square foot apartments be completely electrified, we are condemning children and others to needlessly polluted air. My wife and I have a number of young adult children who live in Duluth. They love it here but are always complaining about the cost of gasoline. I, of course, helpfully point out that my gently pre-owned electric vehicle combined with the solar array we built ourselves can push the car 100 miles for only 72 cents while it takes them $12 dollars of gasoline to do the same. They would like to get electric vehicles but they are renters right now and they have absolutely no way to charge an EV overnight. I was therefore very disappointed to see that the AUAR lacked a firm commitment for EV charging and solar energy. Failure to address both points in this project and others going forward will miss an opportunity for Duluth to become a destination for that most desired demographic, the young family. The AUAR does have a list of possible climate-friendly actions the developer might take, when feasible. This lack of commitment borders on greenwashing and we will not be mollified by it. It is the duty of the planning commission and the city council to hold this developer's feet to the fire and demand firm commitments. Fortunately, we have many options out of this mess, we merely have to exercise the political will to make it happen. The foremost principle to keep in mind is that we need to do this project the right way the first time. Retrofits are expensive and as laid out above are costly to the climate, human health and to the wallets of those who will live and work there. Therefore a commitment to not having natural gas anywhere on the premises needs to be made. The whole

project, from residential to commercial and industrial needs to natural gas-free. Consider the following technologies to build a world-class redevelopment project: Networked geothermal, EV charging for every parking space, ample use of solar and battery storage. Networked geothermal involves drilling holes 800 feet into bedrock, lowering water-containing tubing into the borehole and filling the hole with grout. The tubes are connected in a network connected to a heat pump which uses a small amount of electricity to move and concentrate the heat for space heating, in summer the heat pump reverses for air conditioning. This would also work for hot water. Electric vehicle charging infrastructure needs to be done at every parking space. No one will be driving an internal combustion vehicle in the near future and we will all benefit from a health, cost and climate perspective. Again, a retrofit would look ugly and be more expensive than doing it right the first time. With EV charging I am confident that this will be a “build it and they will come” addition to the project. Finally, solar modules are so inexpensive now that they can be used everywhere. Arrays over parking lots are obvious applications but also on top of the buildings or even as cladding. Multiple companies offer such products.

Recaptcha

Kyle Deming

Subject: FW: Incline Village

From: Linnea Swenson Tellekson < >
Sent: Thursday, March 21, 2024 7:51 AM
To: planning <planning@DuluthMN.gov>
Subject: Incline Village

Dear Planning Commissioners,
I approve of plans to add much-needed housing on the former Central High School site.

I offer the following suggestions to make sure it is valuable through the future and does not add unnecessarily to climate change. Please require the following of the new development, at the very least:

- Porous parking and streets to allow rain to be absorbed and all run off.
- a cistern system to collect and use rain water on green spaces
- include a system to capture and reuse "grey water" within the structure
- install and use networked geothermal and heat pumps to heat and cool the structure
- install solar panels across all of the roof space. Any other available roof space should include a green roof
- electrify the whole place - install induction stove&oven ranges in all units or at the very least, electric (not gas) ranges
- low-flow toilets or composting toilets (Why do we use drinking-grade water to flush valuable materials???)
- install and use composting for all food and compostable waste - can also be designed to heat the buildings
- electric vehicle charging stations are necessary
- reserve space for and install "solar powered clothes dryers," otherwise known as clotheslines. At least don't have rules against the traditional, free practice of drying laundry outside!!

For additional details, Fresh Energy offers many resources on how to create an equitable transition to electrification and a carbon-free future.

Thank you for your work on making this a truly future-forward development!

Sincerely,
Linnea Swenson Tellekson

Linnea Swenson Tellekson, Ed.D., 612-730-9688
"It is in collectives that we find reservoirs of hope and optimism." Angela Y. Davis

Kyle Deming

Subject: FW: Central HS AUAR Comments

From: Diane Desotelle <
Sent: Thursday, March 21, 2024 9:42 AM
To: planning <planning@DuluthMN.gov>
Subject: Central HS AUAR Comments

Dear Planning Commission

I have reviewed the Central HS AUAR and have a few comments that I hope you will seriously consider not only for this development, but all future developments in the City of Duluth. The City has an approved climate plan that calls for a green house gas emissions goal of ZERO by 2050. We now have the opportunity to put this into practice by designing this huge development for just that. This means no longer considering, but putting in heat pumps and geothermal, using this space to support a solar garden (what a perfect location not only to generate electricity but to hook up to the grid), installing EV chargers (not just a few but all stalls) and building for maximum use of thermal energy. Federal and state funding should provide those incentives as well as the City and demand that existing and future development be designed for renewable energy now when it is the most practical and least costly.

As for stormwater, the site should be designed not to consider, but to plan for extreme storm events. Being at the top of the watershed on 80 acres is the perfect location to store and "slow the flow" before it reaches Clarkhouse and Brewery Creeks. This not only protects erosion, but filters the water and cools it before entering these creeks. Recall that Brewery Creek blew out in the 2012 storm. This development adds additional impervious surface and there is an opportunity now to help prevent future problems during extreme storm events. In addition, design lawns where people play, but the rest of the green space should be native trees, shrubs and even pollinator gardens. I didn't see the rusty patched bumblebee mentioned, but we can create habitat for these important pollinators even if the map didn't touch this site.

This land is one area where it is tricky to keep our green open spaces connected for natural resource protection. I am glad to see the tree areas are remaining. This site does sit on a bedrock outcrop, but there is opportunity to plant especially in connection with the solar gardens I hope get installed.

Thank you for the opportunity to comment
Diane Desotelle
Duluth resident

Kyle Deming

Subject: FW: Central site environmental review

From: mj.johnson <>
Sent: Friday, February 23, 2024 9:51 AM
To: Kyle Deming <kdeming@DuluthMN.gov>
Subject: Central site environmental review

Mr Deming

For ten years I was a regular visitor to the central site as I had four children attending school there. Based on that experience I have the following comments about the proposed development.
1. Who is responsible for road maintenance both from central entrance and Blackman
I assume the school district does that now but they should not be responsible once development starts. If it is the city due to the tif will it mean the general population will pay but those in the development will not.

2. Ice fell at times from the towers onto cars in the central parking lot and I assume with 7 story buildings there will be an increased chance this will happen.

3. Will residents be able to use Blackman. When it was a school this was not allowed. For safety and traffic they should be able to use it.

4. Did the review account for the increased traffic due to school district development.

5. The new development should take advantage of solar and wind power

Thankyou for the opportunity to comment. I generally support this project.

Mark Johnson
Duluth Mn

Kyle Deming

Subject: FW: The Form 'Boards - Planning Commission' was submitted

From: City of Duluth MN <no-reply@DuluthMN.gov>
Sent: Thursday, March 21, 2024 1:13 PM
To: planning <planning@DuluthMN.gov>
Subject: The Form 'Boards - Planning Commission' was submitted

First Name
George

Last Name
Host

Message
Regarding the Central High School Redevelopment project I believe it is imperative that two factors be considered. First, the development should include as much renewable energy as possible to address climate change issues. Second, as an long-time owner of two electric vehicles, it is important to include significant charging infrastructure, which would be easier to install during the construction phase. Thanks you and best wishes for moving forward on this important project.

Comments on Draft AUAR, Central High School Redevelopment Project PL 23-127
David Schimpf, 1125 Brainerd Avenue, Duluth, MN 55811 dschimpf@d.umn.edu 21 March 2024
All of my comments pertain to Scenario B

Section 11 In addition to the reference to the Geological Atlas of St. Louis County on p. 18, consider consultation of the map[1] by Green and Miller, which is more geographically focused. By coincidence, it includes a transect (B—B') that passes through the center of the project site, depicting the inferred vertical layering of the surface bedrock units, which could be useful for the geotechnical work. The transect is not on the Geological Atlas of St. Louis County map.

Section 12 I am unable to tell from the maps in Exhibits 1 and 2 or the Figures in Appendix E where snow would be piled. What is the estimated maximum cumulative mass of snow per winter to be moved from travel and parking surfaces at full buildout? How much space is needed to hold it? If snow is to be deposited in runoff detention basins, these need to be positioned where snow-hauling equipment can reach them. For each of the two watersheds, snow needs to be piled in the same watershed in which it settled.

On p. 30 is mentioned the possible need for additional City distribution infrastructure for potable water. Would that happen away from the site? Would it be part of what the tax increment financing is for? Or would water customers throughout the City have to pay for it? Also, "Opportunities for using water efficient fixtures and equipment … should be considered." This needs to be implemented, which would shave off some volume load for the wastewater treatment facility and marginally increase its potential for avoiding release of untreated sewage as a result of extreme rainfall.

Table 5 shows no planned tree removal. What about tree removal or trimming for the enhancement or maintenance of the view on the lakeward edge of the site?

Section 14 **Birds Have a Big Problem.** The number of birds in North America has declined substantially. The causes of this include loss of suitable habitat space, reduction in prey abundance because of insecticide use, poisoning, invasions of new viral diseases, and fatal collisions with man-made structures, inter alia.[2, 3, 4]

[1]Green, J. C., and J. D. Miller, Jr. (2008) Bedrock Geology of the Duluth Quadrangle, St. Louis County, Minnesota M-182 conservancy.umn.edu/handle/11299/58225

[2]Farnsworth, A., K. G. Horton, and P. P. Marra. (2024) To Mitigate Bird Collisions, Enforce the Migratory Bird Treaty Act. *Proceedings of the National Academy of Sciences, U. S. A*. 121 (9) e2320411121. https://doi.org/10.1073/pnas.2320411121

[3]United Nations Environment Programme - World Conservation Monitoring Centre. (2024) State of the World's Migratory Species. UNEP-WCMC, Cambridge, UK.
https://www.cms.int/sites/default/files/publication/State%20of%20the%20Worlds%20Migratory%20Species%20report_E.pdf

[4]U. S. Fish and Wildlife Service. (no date) Avoiding and Minimizing Incidental Take of Migratory Birds
https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

The Site is in a Migration Travel Path. The greatest wildlife significance for the site is as a space through which migrating birds fly, much more so than as a site for their breeding, wintering, or a brief migration stop. Duluth is one place where the broad North American migration gets geographically compressed, as birds change course to avoid flying over Lake Superior. This is so for all land bird groups, not just hawks, and for spring as well as fall. Lengthy observer records have been made during daytime at Hawk Ridge, Enger Park, and Thompson Hill because the top of the steep side of the bluff has the most consistent concentration of migrants. The observation records are in a North American registry (hawkcount.org). The observers note that the bulk of the migration can be seen sometimes passing closer to Lake Superior or the St. Louis River, sometimes farther to the northwest, and sometimes right over these three sites, depending on the winds at the time. The Central High site is topographically analogous to these three observation points. Nocturnal migration is known generally to be a major component of total migration, although much less local observation of this has been done. Radar records indicate that a relatively large biomass of nocturnal fall migrants is in the Duluth area as a daytime stopover[5].

What Kinds of Birds? The bird species of conservation concern, the focus in the Draft AUAR, are important, but the bird species that have larger numbers do the bulk of the predation on insects that damage the trees of the north woods. Birds migrating through Duluth include the groups that are the most vulnerable to window collisions[6].

Collision Mortality. Collisions of birds with man-made structures contribute significantly to reduced bird numbers. Cities are places where collision mortality is greater because of their concentration of artificial lighting and large number of windows. Taller buildings add collisions of birds flying at greater heights to the many collision mortalities that happen closer to the ground. Windows are hazards both day and night because birds respond to them as if they are clear airspace (including at night if the building interior or window exterior is lit). Lights attract migrants at night or during daytime fog, often toward structures. Lights on the project site could be expected to sometimes increase the number of migrants that collide with the communication towers and their support cables clustered on the nearby "antenna farm". Past attempts to investigate collision mortality there failed because access permission was denied.

Patterns of Mortality. Collision mortality rates are sporadic in space and time. Larger cities are infamous for their occasional mass mortality events because of their density of taller artificially lit buildings. Migration is concentrated into a minority of days within the season, as shown by daytime observation records and nocturnal images from weather radar BirdCast[7]. As a result,

[5]Guo, F., J. J. Buler, J. A. Smolinsky, and D. S. Wilcove. (2023) Autumn Stopover Hotspots and Multiscale Habitat Associations of Migratory Landbirds in the Eastern United States. *Proceedings of the National Academy of Sciences, U. S. A*. 120 (3) e2230511120 https://doi.org/10.1073/pnas.2230511120

[6]Loss, S. R., T. Will, S. S. Loss, and P. P. Marra. (2014) Bird–building Collisions in the United States: Estimates of Annual Mortality and Species Vulnerability. *The Condor* 116: 8-23. https://academic.oup.com/condor/article/116/1/8/5153098

[7]BirdCast https://birdcast.info/

one cannot just look for bird carcasses at an arbitrary time and validly deduce the hazard there. Even when a mass mortality event takes place, carcasses are soon taken by scavenger animals, so a search must be immediate. Also, some impacted birds survive to fly away, but soon drop dead or become easier prey because of their injury. The need for Scenario B mitigation is justified by experience in many locations at various times, not by local data, which do not exist for this project site.

Mitigation. The problem is being mitigated by various cities. New York City (Initiative 1482/ Local Law 15) and Madison (Ordinance 28.129) instituted policies that mandate bird-friendlier standards for new construction. No handful of cities can solve the problem alone. It is necessary for many cities to do their part. Collisions will still happen after mitigation measures are implemented; the goal is to reduce their number to the extent possible. The residences of Scenario B would be advertised for the views, commanding prices at the top of the Duluth market, with customers from out of town able to pay them. Therefore, additional costs that would be incurred through mitigation measures should not be an argument against mitigation. Buildings of six or seven stories on the high hilltop will be prominent obstructions for migrants, among the highest above the Duluth bluff line other than the antenna farm, major power lines, and a few water towers. Each time a tower crane is in place for construction will add substantially to the height. No specifics were given about the height of the proposed hotel, but at a projected 75,000 square feet, it, too, could be tall enough to be built with a tower crane.

Measures, <u>every one unless it is not applicable</u>, that need to be taken for Scenario B are:
● Use of fritted glass, as mentioned in the Draft AUAR. The new Essentia hospital in Duluth has done this. More detailed glass information is available from American Bird Conservancy[8].
● Residences that want clearer views than fritted glass allows should have venetian blinds; for rental apartments, these could be the between-the-panes type, which reduces potential wear and obviates cleaning. Occupants should be encouraged to close the blinds at night, at least when BirdCast indicates a concentration of migrants is expected. Recommend that residents leave household lights off while they are asleep overnight. Hotel guest rooms should have opaque drapery.
● Operable windows should be the sorts that have their screens on the outside, which reduces trauma from collision.
● Any photovoltaic panels installed on the site should be a type that has a matte finish.
● The FAA may require tower cranes to have aircraft obstruction lighting, even if they do not stand at least 200 feet above ground, inasmuch as the site is directly up a steep grade from the hospital heliports. If so, it should be a flashing red light. The helicopters may have flown over the site to avoid the antenna farm nearby.
● Avoid shining security lighting during construction from high positions; find out if flashing lights would be allowed.

[8]American Bird Conservancy. (no date) Glass Collisions: Preventing Bird Window Strikes. American Bird Conservancy, The Plains, Virginia. https://abcbirds.org/glass-collisions/

● On the finished buildings, avoid designs that have decorative lighting on high positions.

Invasive Species Mitigation. The Draft AUAR treats invasive species problems as if they are a concern only during construction-related activity. To minimize potential increase of invasive species problems post-construction, trees and shrubs planted on the site should all be species native to Minnesota or non-natives that are known not to spread from cultivation in this climate. There are no locally relevant publications for the non-natives, but I would provide free consultation on an ad hoc basis.

Section 18 The estimates for on-site natural gas consumption look reasonable to me when I use the CBECS 2018 figures with the square footages in Appendix E. However, the CBECS 2018 figures are presumably averages of past consumption from numerous buildings that individually use natural gas for various combinations of space heating, water heating, laundry drying, and cooking, which may not be in the same proportions as for the project buildings. Will the project buildings avoid using natural gas for domestic hot water, laundry drying, cooking, and decorative fireplaces in accordance with anticipated societal expectations to limit fugitive methane and indoor air pollution?

The estimates for purchased electricity look high to me. Is this because it is anticipated that there will be extensive use of electric and plug-in hybrid vehicles by residents? The per-square-foot rates that are given in the Appendix (and I have used) may be based on past patterns when such vehicles were rare. If all cooking, domestic hot water, and laundry drying are electrical, the estimates may not be so high.

The mitigation strategies on p. 68 include using renewable energy sources, but where would these be? Would they be a new community solar installation somewhere else? Would there be photovoltaic arrays on the site itself?

The estimate of electricity consumption is incomplete, in that it includes only what would be measured through electricity meters. Consumption of potable water also represents consumption of electrical power, disguised as a water bill instead of an electricity bill. The EQB process would probably term this an indirect effect. By my calculations[9], pumping 518,000 gallons per day up to the Woodland tank requires about 2500 kWh per day, or 912,500 kWh per year. This adds about 3.7% to the projected total annual purchased electrical usage, ranking third after apartments and hotel. The Woodland tank is a 900-foot vertical lift from Lake Superior, more than the height of the IDS tower in Minneapolis. There would be further electrical usage to treat the additional raw lake water and to treat the additional sewage it becomes. The requirement of water-efficient fixtures and equipment (e.g., laundry and dish washers) would shave off some greenhouse gas emissions, in addition to reducing wastewater

[9] 518,00 gallons ≅ 2 megaliters; 1 megaliter requires 9 kWh to be raised 1 meter with an electric pump that is around 70% efficient; 900 vertical feet ≅ 275 vertical meters. https://cottoninfo.com.au/sites/default/files/documents/Fundamentals%20EnergyFS_A_3a.pdf

volume as noted above for Section 12.

That said, it can be mentioned that the figures in the Draft AUAR for natural gas, electricity, and water are gross increases in consumption, not necessarily net increases. If some of the occupants will be using their residence as a supplemental home, this will diminish usage at their habitual residence or other residential address(es) while they are in their Central High abode. That will make the net society-wide consumption of energy and water less than it would be if all residences on the site were lived in full-time by their occupants while all of the places that they had moved from became full-time residences for other persons.

From: Jim Klukkert <>
Sent: Thursday, March 21, 2024 2:47 PM
To: planning <planning@DuluthMN.gov>
Subject: Citizen Comment regards Central High School Redevelopment Project Draft Alternative Urban Areawide Review (AUAR) of February 2024

I am writing as a citizen of Duluth to comment on the Central High School Redevelopment Project Draft Alternative Urban Areawide Review (AUAR) of February 2024.

The old adage is a stitching time saves nine, but with the rapid pace of climate change, today's adage should be a stitch in time saves a thousand. In case common wisdom is not clear, let mew state that a project of this scale must be built right the first time, or it will suffer costly rebuilding and remediation for years to come!

Given the mandate of Duluth's Climate Action Work Plan 2022- 2027, one would expect that this project would incorporate "economically feasible, clean-energy alternatives to natural gas through partnerships with the electric utility and Comfort Systems." Clearly the February 2024 ARAU does not.

I am disappointed that the AUAR of February 2024 relies far too much on the use of natural gas, while failing to make firm commitments to geothermal
Heating & Cooling, and to Solar Power usage. Given this poor planning, one is not surprised that this plan lacks a firm commitment to electric vehicle charging stations.

The use of natural gas, inevitably leads to pollutants vented to the larger environment, and as the public is increasingly aware, contributes to pollution of interior spaces. The indoor pollutants from gas use can cause asthma, and severely impact the health of children, the elderly and others with respiratory illness. According to a NY Times article of 14 January 2023, "**In addition to asthma, there are other health dangers associated with gas stoves: Researchers who collected 234 samples of unburned natural gas from 69 homes around Boston found 21 toxic pollutants in the gas, including benzene, a known carcinogen, said Dr. Bernstein, who participated in the study."**

I strongly urge the Planning Commission to turn back this project as currently designed. A new plan is required, one which embraces "economically feasible, clean-energy alternatives to natural gas through partnerships with the electric utility and Comfort Systems," and fully utilizes networked geothermal below, parking and electric-vehicle charging at ground level, and solar overhead.

Thank you.

Jim Klukkert
206 N. 11th Avenue W.
Duluth, MN 55806
505.577.2483

Kyle Deming

Subject: FW: The Form 'Boards - Planning Commission' was submitted

From: City of Duluth MN <no-reply@DuluthMN.gov>
Sent: Thursday, March 21, 2024 4:27 PM
To: planning <planning@DuluthMN.gov>
Subject: The Form 'Boards - Planning Commission' was submitted

First Name
Courtney, Daniel

Last Name
Johnson, Ecklund

Message
Duluth Planning Commission To whom it may concern, Our names are Courtney Johnson and Daniel Ecklund and we are students at UMD and currently reside in Duluth. I would like to express my concerns with the development plan concerning the Central High residential development. The lack of demand for phasing out methane gas is concerning to us as geothermal energy is cheaper and has more benefits than methane gas. Methane gas is a potent greenhouse gas that will affect our future and our health, also the next generation as we are in a climate crisis. All we ask is to at least don't make the problem worse. Contact us at joh21410@d.umn.edu ecklu088@d.umn.edu

Kyle Deming

Subject: FW: The Form 'Boards - Planning Commission' was submitted

From: City of Duluth MN <no-reply@DuluthMN.gov>
Sent: Thursday, March 21, 2024 4:26 PM
To: planning <planning@DuluthMN.gov>
Subject: The Form 'Boards - Planning Commission' was submitted

First Name
Olivia

Last Name
Goulet

Message
Olivia Goulet and Mikka Kauti We are students at the University of Minnesota Duluth studying energy and sustainability and we are writing to address the proposed Central High Residential plan. This is an opportunity for Duluth to make significant progress in alignment with the City's Climate Action Work Plan. . If Duluth permits this development plan without pushing for a phase-out of methane gas infrastructure, it would result in increased greenhouse gas emissions that will put Duluth behind on its Climate Action Work Plan goals. In addition to this, there will be significant environmental and human health impacts. Including solar pv on rooftop and parking canopies in this project will help to pave the way for a clean energy transition by providing renewable energy and by accommodating those with electric vehicles. If Duluth

pushes for more sustainable infrastructure including solar panels and heat pumps in this project, 10 years from now we will see a decrease in greenhouse gas emissions, more renewable energy, and more opportunities for electric vehicle use. We can also expect to see a reduction in air-quality related illnesses and improved quality of life. Duluth is also a climate refuge city and might experience population growth in the near future. In order to accommodate a growing population, Duluth will need to implement more sustainable housing.

Kyle Deming

Subject: FW: The Form 'Boards - Planning Commission' was submitted

From: City of Duluth MN <no-reply@DuluthMN.gov>
Sent: Thursday, March 21, 2024 4:23 PM
To: planning <planning@DuluthMN.gov>
Subject: The Form 'Boards - Planning Commission' was submitted

First Name
Joshua

Last Name
Peterson

Message
We are students at the University of Minnesota, Duluth that is studying the energy transition in various classes such as ANTH 3300. An issue exists regarding the upcoming development at the Central High School site that can set a bad precedent for future projects and generations. Creating a housing development heated by “natural” (methane) gas will only result in increased emissions of the greenhouse gas. Residential energy use is responsible for about 20% of total greenhouse gas emissions in the US, and Northern Minnesota is a place that needs heating more than most. The solution is to heat this new development with a geothermal heating system. This would not only create more jobs and lower emissions, it would also be a golden example for other cities to follow. Multiple expansive college campuses have implemented similar

systems, such as Carleton College, Princeton University, and Ball State University, so it is more than possible to do so here.