

Civil & Environmental Consultants, Inc.

# West DuPage Recycling and Transfer Station Local Siting Hearing Evaluation of Criterion 2, 4, 5, 7, 8 and 9

Presented By  
Civil & Environmental Consultants, Inc.

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## Regulatory Approval for IL MSW Transfer Station: A two step process

- **Step One:** Application for Local Siting Approval demonstrating that the facility meets the nine siting criteria
- **Step Two:** Illinois Environmental Protection Agency (IEPA) permitting process
  - Development Permit
  - Local Building Permits and related approvals
  - Operating Permit
- The IEPA will only issue permits to develop and operate the transfer station if all provisions of the Act and all regulatory requirements are satisfied



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EXHIBIT

tabbles

A-11

## Section 39.2 of the Act : Criterion 2

- *“The facility is so designed, located and proposed to be operated that the public health, safety and welfare will be protected”*



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## Location Standards

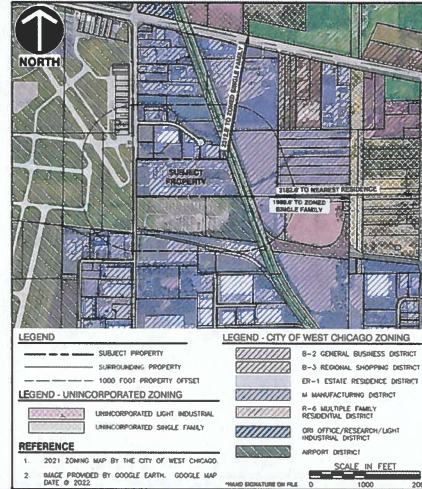
- Archaeological, Architectural or Historical Sites
- Threatened or Endangered Species
- Wild and Scenic Rivers
- Residential Setback
- Wetlands
- 100 Year Floodplain (Criterion 4)
- Regulated Recharge Area (Criterion 9)
- Airports



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# Residential Setback

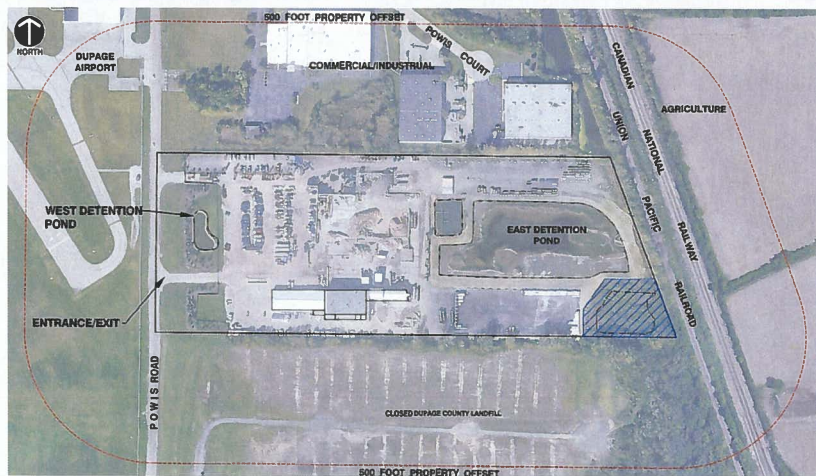
- The nearest residence is located approximately 3,180 feet to the east along Atlantic Avenue
- The nearest residentially zoned property is located over 1,000 feet to the east or northeast
- The active railroad tracks east of the property have remnant zoning of Estate Residential. Because of the impossibility of current or future estate residential use, West Chicago has determined that the 1,000 foot residential setback does not apply to the railroad properties



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# Wetlands

- On-site study performed
- Jurisdictional wetlands present in southeast portion of property
- The on-site wetland area was confirmed by DuPage County through the approval of a stormwater certification
- The wetlands are well buffered from the proposed operations and no filling of jurisdictional wetlands are proposed



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**Slide 6**

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**HJ1** Hock, John, 7/19/2020

**HJ2** INSERT S104 SHOWING SITE BOUNDARY AND OTHER LABELING

Hock, John, 7/19/2020

## Section 39.2 of the Act : Criterion 4

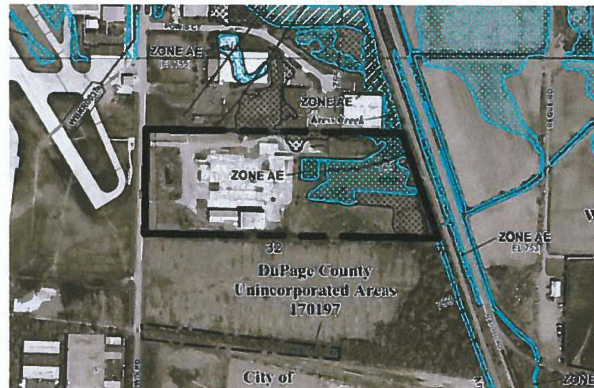
- “for a facility other than a sanitary landfill or waste disposal site, the facility is located outside the boundary of the 100-year floodplain or the site is flood-protected”



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## Floodplain Evaluation

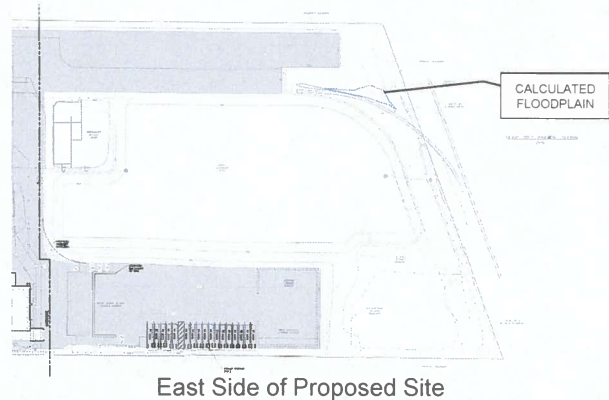
- A Flood Insurance Rate Map provides a generalized floodplain location



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## Flood Insurance Rate Map

- A Flood Insurance Study specifies a Base Flood Elevation (BFE)
- The on-site floodplain area is only 0.05 acres based on the BFE (located along the northeast perimeter of the east pond)



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## Floodplain Evaluation

- The calculated on-site floodplain area was confirmed by DuPage County through the approval of a stormwater certification
- The floors of the proposed buildings are approximately four feet higher than the Base Flood Elevation



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## Opinion – Criterion 4

- It is my professional opinion that the West DuPage RTS is located outside the boundary of the 100-year floodplain or is flood-proofed



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## Section 39.2 of the Act : Criterion 9

- “if the facility will be located within a regulated recharge area, any applicable requirements specified by the Board for such areas have been met”



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## Regulated Recharge Area (Criterion 9)

- “Regulated recharge area” means a compact geographic area whose geology renders a potable resource groundwater particularly susceptible to contamination
- Only one regulated recharge area has been established in Illinois, as of the date of this presentation, which is Pleasant Valley Public Water District (Pleasant Valley) located in Peoria County
- The West DuPage RTS is located over 100 miles northeast of Pleasant Valley



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## Opinion – Criterion 9

- It is my professional opinion that the West DuPage RTS is not located within or near a regulated recharge area



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## Airports

- The DuPage Airport is located directly west of the site.
- Transfer stations are not prohibited from being located nearby to airports.
- Federal Aviation Administration (FAA) Advisory Circular 15/5200-33B (Advisory Circular) provides guidance on certain land uses, including MSW transfer stations, that have the potential to attract hazardous wildlife on or near public-use airports.



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## Airports

- An agreement was executed between the DuPage Airport Authority (DAA), the property owner, and LRS, which, upon receiving the necessary approvals, requires the following:
  - Comply with certain design and operational features (that are same as those in this siting application)
  - Execute and grant to DAA a new avigation easement
  - Reduce the roof height of its existing transfer building to stay below the elevations in the new avigation easement
  - Pay the DAA a fee of \$0.15 for each ton of municipal waste and/or hydro excavation waste received



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# Airports

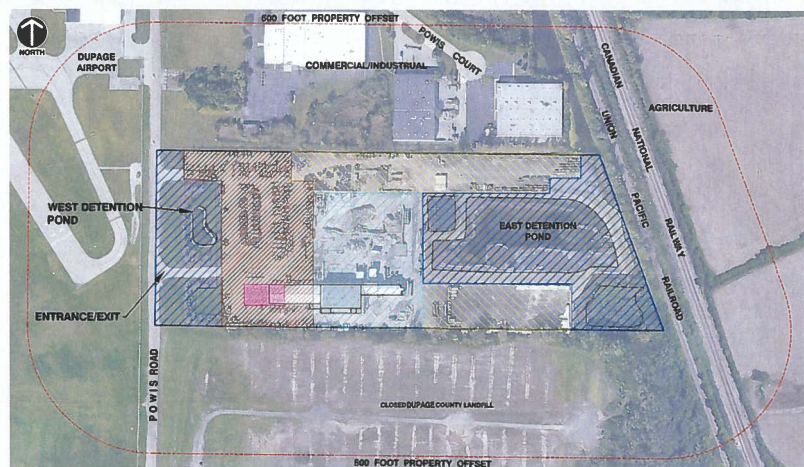
- The DAA agrees that the proposed West DuPage RTS will not pose a threat to the safe operation of the DuPage Airport
- The DAA currently has no objection and will not object to the siting approval of the West DuPage RTS
- The DAA is not currently aware of any violations of or contradictions with the guidance set forth in the FAA Advisory Circulars by the proposed construction and operation of the West DuPage RTS



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# Existing Operations

- Recycling and transfer of C&D with 75% of incoming material recycled or re-purposed
- Parking and maintenance of vehicles
- Staging and maintenance of containers, totes, and portable restrooms
- Dispatch and customer service (call center).
- Stormwater controls and buffer



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**Slide 18**

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**HJ1** Hock, John, 7/19/2020

**HJ2** INSERT S104 SHOWING SITE BOUNDARY AND OTHER LABELING

Hock, John, 7/19/2020

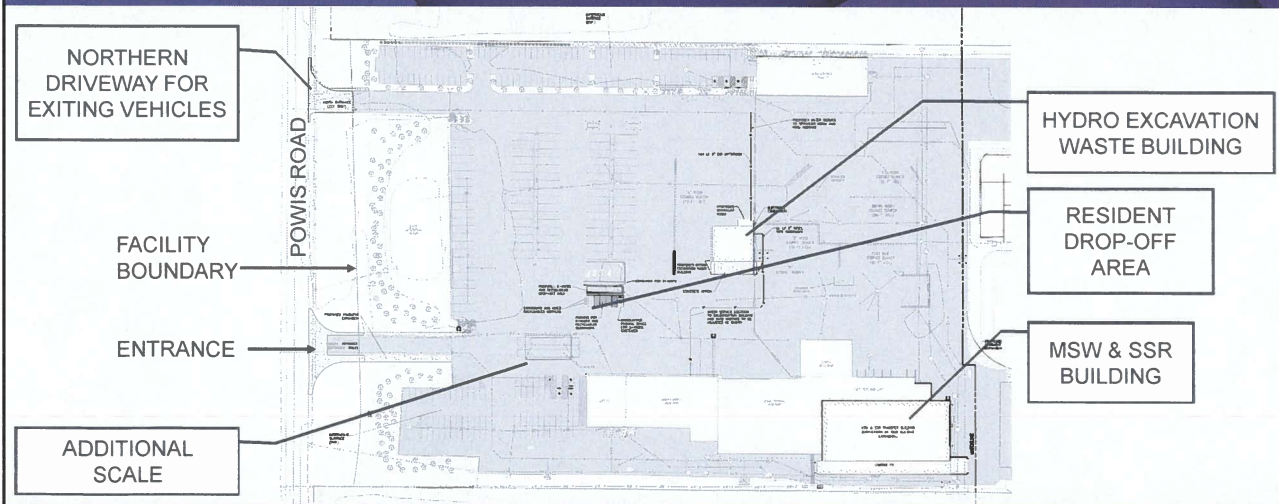
## Recycling Activities

- “A” wood (processed into mulch)
- “B” wood (hailed to landfills for use as road base)
- Asphalt shingles (hailed to beneficial re-use facilities)
- Metal such as iron, aluminum and nails (hailed to metal reclaimers)
- Concrete, brick, block, and various aggregates (hailed to recycling/crushing facilities)
- Cardboard (hailed to processing facility for baling and subsequent recycling)



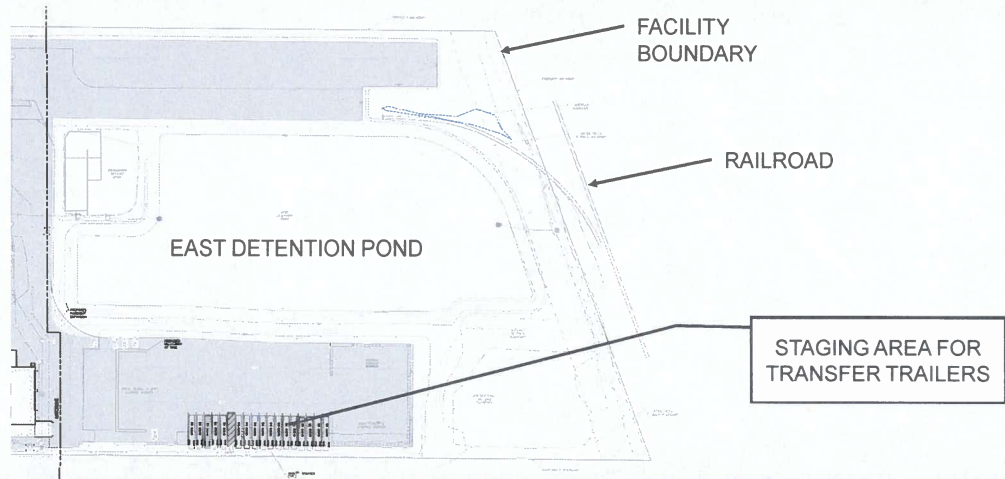
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## Proposed Facility Improvements - West



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## Proposed Facility Improvements - East



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## The Operation

- All existing operations would continue (e.g., C&D recycling, vehicle parking, container storage, customer service and dispatch)
- Loads of MSW from collection vehicles will be consolidated into larger loads for transport to an area landfill for disposal
- Loads of hydro excavation wastes (a.k.a. "mud") will be solidified and then transported to an area landfill for disposal
- Electronic waste (e-waste) from local residents will be consolidated and transported to a recovery facility
- Loads of recyclables from collection vehicles (and recyclables from resident drop off area) will be consolidated into larger loads for transport to a material recovery facility (MRF), such as LRS's MRF in Forest View, for separation and re-use as a commodity



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## Acceptable Materials

- Construction and Demolition Debris (C&D) - Uncontaminated materials (e.g., wood, concrete, shingles, metal) resulting from the construction, remodeling, repair, and demolition of utilities, structures, and roads
- Municipal Solid Waste (MSW) - Garbage, general household and commercial waste
- Hydro excavation wastes – “mud” created through a combination of pressurized water and air vacuum system
- Single-stream recyclables (SSR) – Various recyclables (e.g., paper, cardboard, bottles, cans) that are mixed together in a single bin/ container (e.g., from a household)



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## Unacceptable Wastes

- Hazardous Waste (as defined by Section 3.220 of the Act) – Criterion 7
- Potentially Infectious Medical Wastes (as defined by The Act in Section 3.84)
- Regulated Asbestos Containing Materials
- Polychlorinated biphenyls (PCB) Wastes
- Used Motor Oil, Liquid Wastes or Sludge
- White goods
- Lead-acid automotive batteries
- Used Tires
- Landscape Waste



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## Anticipated Acceptance Volumes – C&D

- The site is currently permitted to accept up to 1,250 tons per day of C&D
- LRS currently accepts an average of approximately 300 tons per day with peaks of approximately 750 tons per day, and these volumes are not anticipated to change if the acceptance of MSW is approved
- The 750-ton-per-day limit (which is reduced from the current limit of 1,250 tons per day) would accommodate the existing volume LRS accepts and a contingency for a peak day



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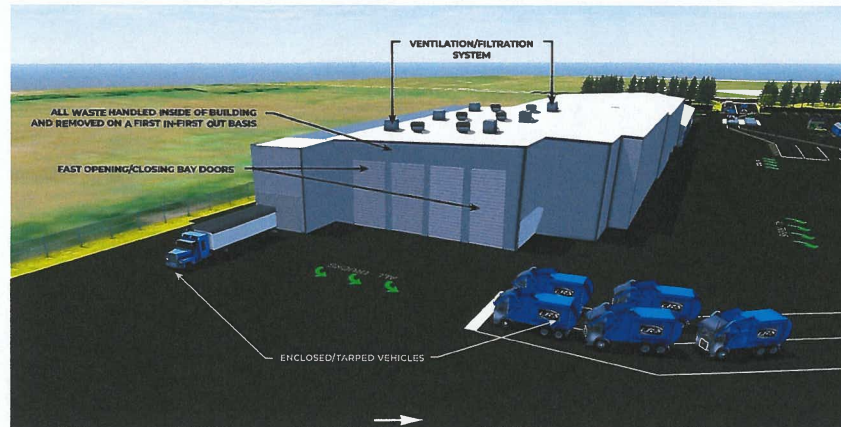
## Anticipated Acceptance Volumes – MSW and SSR

- LRS currently hauls approximately 250 tons per day of MSW and 90 tons of SSR from the Service Area
- The 650-ton-per-day limit for MSW and 250 tons per day limit for SSR would accommodate the existing volumes LRS hauls, a similar volume from other privately owned companies, reasonable growth, and a contingency for a peak day



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## MSW and SSR Transfer Building



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## Design Features of MSW and SSR Transfer Building

- Approximately 0.5 acre, 40 foot tall pre-engineered metal building
- Concrete tipping floor sloped to collect any wastewater
- Steel plate barrier walls around perimeter of interior to protect building, facilitate loading and provide temporary storage
- Transfer building has more than adequate capacity to temporarily stage MSW and SSR during peak hours at maximum volumes
- Setback approx. 800 feet from Powis Road, approx. 600 feet from the northern property boundary and approx. 900 feet from the eastern property boundary
- Building is essentially not visible from Powis Road



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## Design Features of MSW and SSR Transfer Building

- Four bay doors to allow multiple trucks to unload simultaneously
- Below floor level area for trucks being loaded to lessen time to transfer materials (Three to four incoming collection vehicles = one larger load)
- Fast opening/ closing doors at all egress locations to help control odors
- A ventilation and filtration system to help control any odors including:
  - Multiple blowers/ fans to remove air from the building
  - A duct system at the inlet of each blower/fan
  - Air treatment using ozone within each duct system to eliminate any odors from exhaust air



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## Design Features of MSW and SSR Transfer Building

- Walls between the C&D transfer/ screening building and the MSW/ SSR transfer building to separate the operations
- An access opening(s) between the buildings to facilitate the appropriate movement of applicable material from one operation to the other (e.g., non-recyclables to MSW/SSR building and recyclable C&D to the C&D building)
- A door for the access opening that will be closed when the opening is not in use



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## Litter Control

- Waste will be delivered primarily in enclosed vehicles, and tarps will be required on all non-enclosed loads
- Unloading, transferring and loading of all waste will be performed indoors
- Loaded transfer trailers will be tarped using auto tarpers prior to exiting the loading pit ramp
- The site is surrounded by fencing and will be patrolled to collect any litter
- The site has agreed that West Chicago may require the site to sweep or otherwise clean Powis Road, as needed



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## Cleaning Procedures

- No waste shall be left on the floor of the transfer station for more than twenty-four hours
- The tipping floor will be cleaned using a mechanical street sweeper with a water spray and vacuum system at least once per twenty-four-hour period
- The tipping floor and barrier walls will be cleaned with a pressure washer at least weekly to remove waste residue and further control odors
- A disinfectant may be used in the washwater to control odors
- The area behind the barrier walls will be routinely inspected and cleaned
- All excess washwaters from the tipping floor will be directed through the oil-water separator to the sanitary sewer system



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## Odor Control

- Unloading, transferring, and loading operations will be performed indoors
- Waste on-site for a only a short time (e.g., first-in, first-out)
- The cleaning procedures will help control odors
- The MSW and SSR transfer building will be equipped with:
  - A ventilation and filtration system
  - Fast opening/closing doors at all vehicle ingress/egress locations, which will open and close as vehicles enter and exit the MSW and SSR transfer building
  - The odor control procedures, including the ventilation and filtration system, was reviewed and agreed upon by the DuPage Airport Authority



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## Hydro Excavation Waste

- Hydro excavation wastes are a solid/liquid waste created through a combination of pressurized water and air vacuum system
- Generally used for construction or maintenance services, such as trenching near utilities, potholing to expose utilities, installation of utility poles, installation of piers/footings, and clean out of storm sewers
- The system cuts through soils/materials, breaks them up, and lifts the slurry from the excavation area into a debris tank



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## Hydro Excavation Equipment and Applications



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## Hydro Excavation Waste Processing

- Process will be similar as the existing operation at LRS's Heartland Recycling facility in Forest View
- Loads of hydro excavation wastes (a.k.a. "mud") will be solidified and then transported to an off-site permitted landfill for disposal
  - Absorption of excess water by solid material such as wood chips
  - Wood chips already generated by C&D recycling operations
  - Mixing performed mechanically using a hydraulic excavator or wheel loader
  - Two parts hydro excavation waste + one part wood chips = Properly solidified material for landfilling
- Acceptable wastes include hydro/vacuum excavation muds, storm sewer cleanout material, and other similar materials
- Well-established pre-approval, acceptance, inspection and record keeping protocols



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## Anticipated Acceptance Volumes – Hydro Excavation Wastes

- LRS currently accepts between 100 to 400 tons per day at its Heartland Recycling facility in Forest View
- Approximately half of this volume is anticipated to be diverted to the West DuPage RTS because customers have indicated that this approximate percentage is generated closer to West Chicago than Forest View (and they would want to take advantage of the reduced transportation costs)
- The proposed limit of 300 tons per day would accommodate the diversion of approximately 100 to 150 tons per day, reasonable growth, and a contingency for a peak day



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## Design Features of Hydro Excavation Waste Building

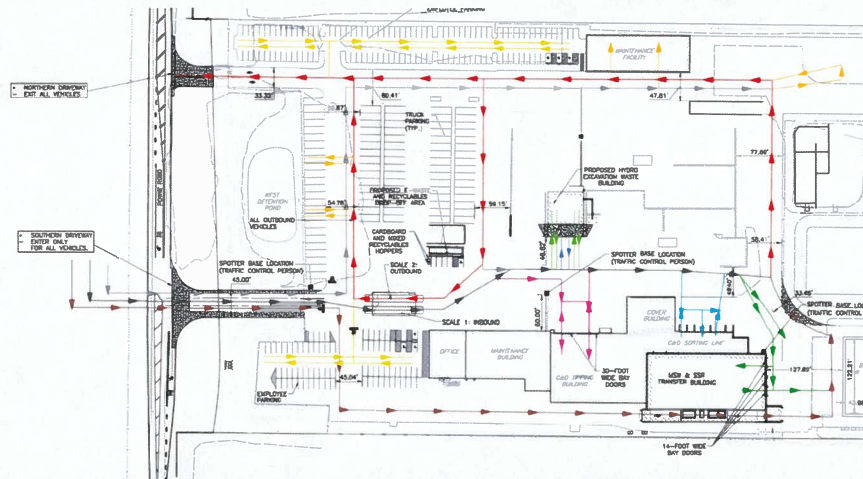
- Approximately 2,500 square foot, 29 foot tall pre-engineered metal building
- Two unloading/ mixing/ loading areas to allow simultaneous operations
- Sloped unloading/ mixing/ loading areas constructed of concrete with underlying geomembrane to contain all material
- Sized with than more than adequate capacity for peak hours at maximum volumes



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## On-Site Traffic Patterns

- Large property provides generous space for traffic movements
- On-site traffic will be directed by:
  - Signs
  - Pavement markings
  - Site staff (i.e., spotters)



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## Stormwater Improvements

- The current site stormwater management system:
  - Includes two detention ponds (east and west)
  - Contemplated the impervious nature of all of the improvements proposed in this siting application
  - Was approved by DuPage County and West Chicago as part of the recent PUD Amendment process
- The improvements approved by the PUD Amendment process on the east portion of the site have been completed and approved by West Chicago
- Thus, no additional improvements to the stormwater management system are proposed in this siting application



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## Wildlife Management

- Creation of site-specific wildlife management plan
- Trained staff
- Anti-perching devices on buildings
- Routine wildlife surveys including use of game cameras
- Odor controls
- Pond improvements including rip-rap and/or low grass height around perimeter, and grid-wire system over water areas
- Development of communication plan with DuPage Airport Authority
- All proposed protocols approved as part of agreement DuPage Airport Authority



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## Summary

- The proposed operations will allow for:
  - Improved recycling of C&D
  - More efficient management and transportation of recyclables to a MRF
  - Additional management of electronic wastes
  - Additional capacity and more efficient transportation of the management of hydro excavation wastes
  - Additional capacity and more efficient transportation of waste to a disposal facility (landfill)
- The West DuPage RTS will be a premier waste management and recycling facility in the State of Illinois



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## Opinions

- Criterion 2: It is my professional opinion that the West DuPage RTS is so designed, located and proposed to be operated that the public health, safety and welfare will be protected
- Criterion 7: It is my professional opinion that West DuPage RTS will not be treating, storing or disposing of hazardous waste, so Criterion 7 does not apply



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## Section 39.2 of the Act : Criterion 5

- “the plan of operations for the facility is designed to minimize the danger to the surrounding area from fire, spills, or other operational accidents”



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## Incident Prevention and Response Plan (Criterion 5)

### Prevention

First, the Plan presents the actions to be taken to prevent fires, spills and other operation accidents from occurring.

### Response

Second, the Plan presents an organized and coordinated course of action to be taken in responding to potential fires, spills or other operational accidents at West DuPage RTS, if any occur.



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## Safety Officer

- On-site at ALL Times
  - The Facility Manager (or duly designated equipment operator) will serve as the Safety Officer to ensure an identified Safety Officer is on-site at all times during operation
- Responsibilities
  - Implement procedures to prevent fires, spills and other operational accidents, and
  - Coordinate responses to incidents or emergencies, if any were to occur, consistent with this plan and with any government response to the incident, such as the Police and Fire District



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## Spill and Accident Prevention

- Training
- Systems and procedures to contain and collect any spilled liquids
- Personal Protective Equipment (PPE)



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## Fire Prevention

- All of the existing and proposed buildings are/will be equipped with wet or dry pipe fire suppression systems
- A second Fire Rover will be added for the MSW and SSR transfer building. The Fire Rover combines 24/7 remote thermal monitoring and an automated fire-fighting foam system that can be released quickly if a spike in temperature in the building is detected.
- A water source is located on-site (fed from a water main that loops through the site) with seven hydrants, including one just southwest of the MSW and SSR transfer building



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## Fire Prevention (cont.)

- On-site heavy equipment, such as the water truck or loaders, may also be used to help extinguish a fire
- Access has been designed to accommodate emergency vehicles, including fire trucks
- Fire extinguishers will be located in each piece of heavy equipment and the scale house



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## Opinion – Criterion 5

- It is my professional opinion that the plan of operations for the West DuPage RTS is designed to minimize the danger to the surrounding area from fire, spills or other operational accidents



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## Section 39.2 of the Act : Criterion 8

- “if the facility is to be located in a county where a county board has adopted a solid waste management plan consistent with the planning requirements of the Local Solid Waste Disposal Act or the Solid Waste Planning and Recycling Act, the facility is consistent with that plan”



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## County Solid Waste Planning

- Each county in the State must adopt a twenty-year plan for managing the MSW generated within its boundaries
- Required to include a recycling program designed to achieve a 25% recycling rate
- Plan is required to be updated and reviewed every five years



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## DuPage County Solid Waste Management Plan (SWMP)

- First approved in February 1991 and provides:
  - Estimate of DuPage County's waste generation and disposal needs
  - Recommendations regarding recycling, including C&D
  - Recommendations regarding transfer stations
- Updates to the SWMP were approved by the DuPage County Board in 1996, 2001, 2007, 2012 and 2017, and provided the status of the various recommendations



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## SWMP Summary

- The SWMP encourages recycling of C&D - The site currently is recycling C&D and the proposed West DuPage RTS would increase the amount of C&D that is recycled
- The SWMP recognizes the current challenges of implementing recycling programs for SSR - The West DuPage RTS would provide a facility for the economic transfer of SSR to a MRF(s) and serve as a drop-off location for residents
- The SWMP states that additional drop-off locations for electronics waste are needed - The West DuPage RTS would serve as a drop-off location for electronic wastes



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## SWMP Summary (cont.)

- The SWMP indicates that DuPage County has relied on transfer stations to transport non-recyclable waste and MSW to out-of-county landfills; at least half of DuPage County's waste is handled by out-of-county transfer stations; and new or expanded facilities for handling, treating, and recycling waste would be considered on a case-by-case basis - The West DuPage RTS would enhance the capability and capacity of DuPage County to handle, treat, and recycle a variety of wastes
- DuPage County provided correspondence concluding that the proposed West DuPage RTS appears to be consistent with the 2017 Update



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## Opinion – Criterion 8

- It is my professional opinion that the West DuPage Recycling and Transfer Station is consistent with the SWMP and all provisions in effect at the time of the submittal of this Siting Location Application



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