Stormwater Pollution Prevention Plan

Starbucks & Panda Express Development

Excel Project# *2178020*

Lincoln Way E

Massillon, OH 44646

Operator(s):

Tim Kaufmann

AKG Development

34 N Brentwood Blvd.

Suite 201

St Louis, MO, 63105

314.280.2540

tim@akgdevelopment.com

SWPPP Preparation Date:

January 20, 2023

Estimated Project Dates:

Start Date: April 1, 2023

Completion Date: October 1, 2023

Contents

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SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 Project/Site Information

Project/Site Name: Proposed Starbucks & Panda Express Development

Project Street/Location: Lincoln Way E

City: Massillon | State: Ohio
County or Similar Subdivision: Stark

Latitude/Longitude

Latitude:	Longitude:
40.79 º	-81.49 º

1.2 Contact Information/Responsible Parties

Operator(s):

Company Name: AKG Development
Contact Name: Tim Kaufmann
Street/Mailing Address:
34 N Brentwood Blvd
Suite 201
City, State, Zip Code: St Louis, MO 63105
Telephone: 314.280.2540
Email: tim@akgdevelopment.com

Project Manager(s) or Site Supervisor(s):
**Operator shall complete prior to construction

Company or Organization Name:
Manager or Supervisor Name:
Address:
City, State and Zip Code:
Telephone:
Fax:
Email:
Area of Control/Responsibility:

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SWPPP Contact(s):

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Contact Name: Tim Kaufmann
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Subcontractor(s):
**Operator shall complete prior to construction

Company Name:
Contact Name:
Address:
City, State, and Zip Code:
Telephone Number:
Fax:
Email:

Subcontractor(s):
**Operator shall complete prior to construction

Company Name:
Contact Name:
Address:
City, State, and Zip Code:
Telephone Number:
Fax:
Email:

1.3 Nature and Sequence of Construction Activity

General Project Description

The proposed development project is located directly south of Lincoln Way E and centrally between the intersections of Lincoln Way E and 24th/25th streets in the City of Massillon, Ohio. The 2.27-acre project site is bound by Lincoln Way E to the north and is surrounded on all other sides by adjacent residential properties. The existing site is currently vacant/open land consisting of maintained lawn cover. It appears that residential homes may have historically existed on the subject site, but recent aerial photography indicates a consistent use of vacant/open land. The site currently drains overland from north to south with approximately 15 feet of elevation drop occurring from the northern extent of the site to the southern-most portion of the site. Regionally, the general area continues to topographically slope in the southwest direction and is located within the overall watershed of the Tuscarawas River.

The proposed development project involves construction of a new Panda Express quick-serve restaurant and Starbucks coffeehouse with associated site improvements. Site improvements include new paved parking areas, concrete drive-thru lanes, internal sidewalk networks, and new refuse enclosures. The project will result in approximately 2.37 acres of disturbed site area, which includes off-site utility trenching areas. Stormwater from the proposed development will be conveyed via onsite inlets and storm sewer network to a proposed underground detention system that will serve to meet the water quality and quantity requirements set forth by state and local requirements. The underground stormwater detention system will discharge via a new storm sewer connection to the City of Massillon storm sewer network located within 25th street. This system drains south and discharges southeast of McDonald Cir SE which is consistent with the existing overland drainage route.

1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns

Soil type(s):

Site specific soil borings have not yet been completed as of the time of this SWPPP preparation. Web Soil Survey indicates Canfield-Urban Land Complex (2 to 6% slopes) as the primary soil present onsite.

Drainage Patterns:

The site currently drains overland from north to south. The proposed site will drain to an underground stormwater detention system and discharge to the City of Massillon storm sewer network located in 25th street.

Vegetation:

The site is currently a vacant parcel with grass cover.

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1.5 Construction Site Estimates

The following are estimates of the construction site.

Total project area:	***2.27*** **acres**
Construction site area to be disturbed:	***2.37*** **acres**
Percentage impervious area before construction:	**0%**
Percentage impervious area after construction:	**63.9%**

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1.6 Potential Sources of Pollution

Construction Site Pollutants

Pollutant-Generating Activity	Stormwater Pollutants	Location
Grading & excavation	Sediment	See grading/erosion control plan
Vehicle tracking	Sediment	Entire site
Vehicles, minor equipment maintenance, sanitary facilities	Fuel, grease, oil, and hazardous waste	Staging areas, construction equipment
Concrete paving	Curing compounds	Proposed concrete areas
Washout areas	Concrete, curing compounds, plaster	Designated washout area
Asphalt paving	Oil, petroleum distillates	Proposed asphalt areas
Building construction	Paints, glue, adhesives, plaster	Proposed buildings
Seeded lawns/fertilizing	Fertilizer	All areas of disturbance

1.7 Maps

General and site map(s) are located in Appendices A and B.

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SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

2.1 Minimize Disturbed Area and Protect Natural Features and Soil

The following practices will be used to protect existing natural features and site soils:

BMP Description: Topsoil control/ Topsoil stockpile	
Installation Schedule:	• Stockpiles will be established once grading activities begin. • Silt fence will be installed before construction begins at the site and around topsoil stockpiles once they have been established.
Maintenance and Inspection:	• Stockpiles shall be inspected weekly and after storm events. Ensure the stockpile is covered and sand bags are still in place. Inspect tarp for holes or tears. • Inspect silt fence as described below
Responsible Staff:	AKG Development and General/Sub Contractors

2.2 Control Stormwater Flowing onto and through the Project

The following BMPs will be used to control stormwater flowing onto and through this project:

BMP Description: Ditch Checks	
Installation Schedule:	Fiber rolls shall be installed once conveyance channels have reached final grade.
Maintenance and Inspection:	• Check dams shall be inspected weekly and after storm events. • Sediment shall be removed from behind the check dam once it accumulates to one-half the original height of the check dam.
Responsible Staff:	AKG Development and General/Sub Contractors

2.3 Stabilize Soils

BMP Description: Mulching	
Installation Schedule:	Mulch must be applied on all disturbed portions of the construction site that will not be re-disturbed for more than 14 days.
Maintenance and Inspection:	Additional mulching is necessary to cover exposed soil conditions when observed during routine maintenance inspections.
Responsible Staff:	AKG Development and General/Sub Contractors

BMP Description: Permanent stabilization	
Installation Schedule:	Permanent stabilization will be done immediately after the final design grades are reached but no later than 7 days after construction ceases.
Maintenance and Inspection:	Permanent stabilization shall be completed as soon as possible but no later than 7 days after construction activity ceases.
Responsible Staff:	AKG Development and General/Sub Contractors

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2.4 Protect Slopes

The following BMPs will be used to protect slopes at this site:

BMP Description: Geotextile erosion control blankets	
Installation Schedule:	Erosion blankets will be installed once vegetated swales or down-gradient areas have reached final grade
Maintenance and Inspection:	• Good contact with the soil must be maintained and erosion should not occur under the blanket. If it does not, the blanket shall be repaired or replaced. • The erosion control blanket shall be inspected weekly and immediately after storm events to determine if there are cracks, tears, or breaches in the fabric. If so, the fabric will be repaired or replaced.
Responsible Staff:	AKG Development and General/Sub Contractors

2.5 Protect Storm Drain Inlets

Installation Schedule:	Inlet protection shall be installed on existing inlets adjacent to the site before construction/grading activity begins. Newly installed inlets shall be protected with inlet protection immediately upon installation.
Maintenance and Inspection:	• Inlet protection shall be inspected on a regular basis and especially after rainfall events. Debris shall be cleared and inlet protection shall be repaired or replaced as needed.
Responsible Staff:	AKG Development and General/Sub Contractors

2.6 Establish Perimeter Controls and Sediment Barriers

BMP Description: Silt Fence	
Installation Schedule:	Silt fence will be installed before construction begins at the site and around topsoil stockpiles once they have been established.
Maintenance and Inspection:	• Sediment shall be removed before it accumulates to half the height of the fence. • If accumulated sediment is creating noticeable strain on the fabric and the fence might fail from a sudden storm event, the sediment shall be removed more frequently. • If there are gaps or tears along the fence, it shall be repaired or replaced immediately. • Silt fence shall be inspected weekly and immediately after storm events to ensure it is intact.
Responsible Staff:	AKG Development and General/Sub Contractors

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2.7 Establish Stabilized Construction Exits

Construction entrance and exit locations: A construction entrance will be located on Lincoln Way E.

The following controls will be used to stabilize construction exits:

BMP Description: Construction Entrance	
Installation Schedule:	• Stone tracking pads shall be installed before construction beings on the site and remain until all areas of the site have been stabilized.
Maintenance and Inspection:	• Where sediment has been tracked-out from the site onto the surface of off-site streets, other paved areas, and sidewalks, the deposited sediment must be removed by the end of the same work day in which the track-out occurs or by the end of the next work day if track-out occurs on a non-work day. • Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. • It is prohibited to use hosing or sweeping tracked-out sediment into any stormwater conveyance (unless it is connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface water.
Responsible Staff:	AKG Development and General/Sub Contractors

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SECTION 3: GOOD HOUSEKEEPING BMPS

Although sediment is the primary pollutant of concern resulting from construction activity, other pollutants need to be considered as well. These include petrochemicals: fuel, oil, and asphalt; and construction chemicals and materials: paints, solvents, fertilizer, soil additives, concrete wash water, etc. Also included are solid wastes and construction debris. Keeping these substances from polluting runoff can be accomplished to a large extent through good housekeeping and following the manufacturer's recommendations for their use and disposal.

Wastes generated by construction activities (i.e. construction materials such as paints, solvents, fuels, concrete, wood, etc.) must be disposed of in accordance with ORC 3734 and ORC 371 4. Hazardous and toxic substances are used on virtually all construction-sites. Good management of these substances is always needed.

Good erosion and sediment control will prevent some pollutants in addition to sediment from leaving the site; however, pollutants carried in solution or as surface films on runoff water will be carried through most erosion and sediment control practices. These pollutants become nearly impossible to control once carried offsite in runoff. Adding to the problem is the fact that construction wastes, many containing toxic chemicals, are routinely buried on-site, dumped on the ground, poured down a storm drain, or disposed of with construction debris. So while typical erosion and sediment-control practices are important for controlling other pollutants, additional preventative measures are needed.

3.1 Material Handling and Waste Management

1. Educate Construction Personnel, including subcontractors who may use or handle hazardous or toxic materials, making them aware of the following general guidelines:

2. Disposal and Handling of Hazardous and Other Construction Waste

DO:

- Prevent spills
- Use products up
- Follow label directions for disposal
- Remove lids from empty bottles and cans when disposing in trash
- Recycle wastes whenever possible

DON'T:

- Don't pour into waterways, storm drains or onto the ground
- Don't pour down the sink, floor drain or septic tanks
- Don't bury chemicals or containers
- Don't burn chemicals or containers
- Don't mix chemicals together

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3. Waste disposal containers shall be provided for the proper collection of all waste material including construction debris, sanitary garbage, petroleum products and any hazardous materials to be used on-site. Containers shall be covered and not leaking. All waste material shall be disposed of at facilities approved for that material. Construction Demolition and Debris (CD&D) waste must be disposed of in accordance with ORC 3714 at an approved Ohio EPA CD&D landfill.

4. No construction related waste materials are to be buried on-site. By exception, clean fill (bricks, hardened concrete, soil) may be utilized in a way that does not encroach upon natural wetlands, streams or their floodplains. Filling of stream side areas is Fill may not result in the contamination of waters of the state unless prohibited by local ordinance or zoning.

5. Construction and Demolition Debris (CD&D) Disposal. CD&D waste must be disposed of in accordance with ORC 3714 at an approved Ohio EPA CD&D landfill. CD&D waste is defined as all materials attached to a structure, which is being demolished. (for materials containing asbestos see Item 12).

6. Handling Construction Chemicals. Mixing, pumping, transferring or other handling of construction chemicals such as fertilizer, lime, asphalt, concrete drying compounds, and all other potentially hazardous materials shall be performed in an area away from any watercourse, ditch or storm drain.

3.2 Establish Proper Building Material Staging Areas

Pollution Prevention Practice

Description

- All construction equipment, maintenance materials, and building materials will be stored in the staging and materials storage areas. Gravel bags shall be installed around the perimeter to designate the staging and material storage areas. Watertight containers will be used to store small tools, parts and other construction materials.
- All building materials such as wood, plastic and glass along with construction scrap materials like brick, wood, steel metal, and pipes, will be kept in a separate covered storage area.
- Hazardous waste materials (oil filters, fuel, paint and equipment fluids, etc) will be stored in a structurally sound and sealed containers in the covered hazardous materials storage area.
- Any large construction materials too large to fit within the covered areas shall be kept in an open materials storage area. These materials shall be elevated on wood blocks to minimize contact with stormwater.

Installation

- Installation of the material storage areas shall happen prior to any infrastructure onsite.

Maintenance Requirements

- Material storage areas shall be inspected weekly and after storm events. Storage areas shall be organized, clean, and have ample cleanup supplies. Any perimeter controls, storage materials, and covers shall be repaired or replaced as necessary to maintain proper function.

3.3 Designated Washout Areas; Equipment/Vehicle Washing

All contractors shall be made aware that Ohio EPA's Construction General Permit only allows the discharge of storm water. Other waste streams/discharges including but not limited to vehicle and/or equipment washing, leachate associated with on-site waste disposal, concrete wash outs, etc are a process wastewater. They are not authorized for discharge under the General Storm Water Permit associated with Construction Activities. All process wastewaters must be collected and properly disposed at an approved disposal facility.

Concrete Wash Water/Wash Outs.
Concrete wash water shall not be allowed to flow to streams, ditches, storm drains, or any other water conveyance. A sump or pit with no potential for discharge shall be constructed if needed to contain concrete wash water. Field tile or other subsurface drainage structures within reach of the sump shall be cut and plugged. For small projects, truck chutes may be rinsed on the lot away from any water conveyances.

Equipment/Vehicle Washing.
Equipment and vehicle washing should be conducted in a manner so that no runoff is generated. At a minimum, wash area soils will be covered with plastic and surrounded by impermeable barriers. Collection devices will be installed to collect runoff. Runoff will be properly disposed at an off-site facility.

3.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

Equipment Fueling and Maintenance, oil changing, etc., shall be performed away from watercourses, ditches or storm drains, in an area designated for that purpose. The designated area shall be equipped for recycling oil and catching spills. Secondary containment shall be provided for all fuel oil storage tanks. These areas must be inspected every seven days and within 2 4 hrs. of a 0.5 inch or greater rain event to ensure there are no exposed materials which would contaminate storm water. Site operators must be aware that Spill Prevention Control and Countermeasures (SPCC) requirements may apply. An SPCC plan is required for sites with one single aboveground tank of 660 gallons or more, accumulative aboveground storage of 1 330 gallons or more, or 42,000 gallons of underground storage. Soils that have become contaminated must be disposed of accordance with Item 8 "Contaminated Soils".

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3.5 Spill Prevention and Control Plan

Site operators must be aware that Spill Prevention Control and Countermeasures (SPCC) requirements may apply. An SPCC plan is required for sites with one single aboveground tank of 660 gallons or more, accumulative aboveground storage of 1330 gallons or more, or 42,000 gallons of underground storage. Soils that have become contaminated must be disposed of accordance with "Contaminated Soils" below. Spills on pavement shall be absorbed with sawdust, kitty litter or other absorbent material and disposed of with the trash at a licensed sanitary landfill. Hazardous or industrial wastes such as most solvents, gasoline, oil-based paints, and cement curing compounds require special handling. Spills shall be reported to Ohio EPA (-800-82 -9378). Spills of 25 gallons or more of petroleum products shall be reported to Ohio EPA (1-800-282-9378), the local fire department, and the Local Emergency Planning Committee within 30 min. of the discovery of the release. All spills, which result in contact with waters of the state, must be reported to OHIO EPA's Hotline.

***Contaminated Soils*.** If substances such as oil, diesel fuel, hydraulic fluid, antifreeze, etc. are spilled, leaked, or released onto the soil, the soil should be dug up and disposed of at licensed sanitary landfill or other approved petroleum contaminated soil remediation facility (not a construction/demolition debris landfill). Please be aware that storm water runoff associated with contaminated soils are not authorized under Ohio EPA's General Storm Water Permit associated with

Construction Activities. In the event there are large extensive areas of contaminated soils additional measures above and beyond the conditions of Ohio EPA's General Construction Storm Water Permit will be required. Depending on the extent of contamination, additional treatment and/or collection and disposal may be required. All storm water discharges associated with the contaminated soils must be authorized under an alternate NPDES (National Pollutant Discharge Elimination System) Permit.

3.6 Any Additional BMPs

Open Burning. No materials may be burned which contain rubber, grease, asphalt, or petroleum products such as tires, cars, auto parts, plastics or plastic coated wire. (See OAC 3745-9) Open burning is not allowed in restricted areas. Restricted areas are defined as: 1) within corporation limits; 2) within 1000 feet outside a municipal corporation; and 3) a one mile zone outside of a corporation of 10,000 or more. Outside a restricted area, no open burning can take place within a 1,000 feet of an inhabited building located off the property where the fire is set. Open burning is permissible in a restricted area for the following activities: heating tar, welding and acetylene torches, smudge pots and similar occupational needs, and heating for warmth or outdoor barbeques. Outside of restricted areas, open burning is permissible for landscape wastes (plant material), land-clearing wastes (plant material, with prior written permission from Ohio EPA), and agricultural wastes (material generated by crop, horticultural, or livestock production practices. This includes fence posts and scrap lumber, but not buildings).

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Dust Control/Suppressants.
Dust control is required to prevent nuisance conditions. Dust controls must be used in accordance with the manufacturer's specifications and not be applied in a manner, which would result in a discharge to waters of the state. Isolation distances from bridges, catch basins, and other drainage ways must be observed. Application (excluding water) may not occur when precipitation is imminent as noted in the short term forecast. Used oil may not be applied for dust control.

Other Air Permitting Requirements:
All contractors and sub contractors must be made aware that certain activities associated with construction will require air permits. Activities including but not limited to mobile concrete batch plants, mobile asphalt plants, concrete crushers, large generators, etc., will require specific Ohio EPA Air Permits for installation and operation. These activities must seek authorization from the corresponding district of Ohio EPA. Notification for Restoration and Demolition must be submitted to Ohio EPA for all commercial sites to determine if asbestos corrective actions are required.

3.7 Allowable Non-Stormwater Discharge Management

List of Allowable Non-Stormwater Discharges Present at the Site

Type of Allowable Non-Stormwater Discharge	Likely to be Present at Your Site?
Discharges from emergency fire-fighting activities	☐ YES ☒ NO
Fire hydrant flushing	☒ YES ☐ NO
Landscape irrigation	☒ YES ☐ NO
Waters used to wash vehicles and equipment	☒ YES ☐ NO
Water used to control dust	☒ YES ☐ NO
Potable water including uncontaminated water line flushings	☒ YES ☐ NO
Routine external building wash down	☒ YES ☐ NO
Pavement wash waters	☒ YES ☐ NO
Uncontaminated air conditioning or compressor condensate	☒ YES ☐ NO
Uncontaminated, non-turbid discharges of ground water or spring water	☐ YES ☒ NO
Foundation or footing drains	☐ YES ☒ NO
Construction dewatering water	☒ YES ☐ NO

SECTION 4: SELECTING POST-CONSTRUCTION BMPs

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Vegetated Buffers

Description of BMP

- Vegetated buffers will be provided at the perimeters of the site to slow/filter stormwater. The maximum slopes in the lawn areas will be 4:1. The side slopes of the lawn areas will be vegetated with erosion resistant grasses and erosion control blankets immediately after final grade has been reached. For more information about the design, see the construction plans.

Installation

- Installed during site grading.

Maintenance Requirements

- All lawn areas showing signs of erosion, scour, channelization, debris, or sediment shall be repaired, reinforced, and vegetated immediately. Remove any debris and sediment immediately.
- Mowing shall take place no less than twice per year at a height of no less than three inches. Grasses shall not be allowed to grow to a height that permits branching or bending. Mowing shall only take place when the ground is dry and able to support machinery.

Underground Detention System

Description of BMP

- Stormwater from the post-development site will drain via a new onsite storm sewer network to a proposed underground stormwater detention system that will serve to reduce post-development peak flows to the pre-development conditions prior to discharging to the City of Massillon public storm sewer system. The underground detention system will consist of perforated 84" CMP pipe along with associated aggregate bedding and cover material. The voids within the aggregate will also act as temporary stormwater storage for the system. The system will discharge through an outlet control structure consisting of a storm manhole with an internal weir plate. The internal weir plate will have multiple orifice openings at varying elevations to control post-development peak flow rates to the pre-development conditions. See Section 8 and Appendices K-N for design information.

Installation

- The system shall be installed early in the construction process.

Maintenance Requirements

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- Standpipes, outlet structures, inlet and outlet pipes, and chambers shall be kept clear of debris at all times. Non-structurally sound devices shall be replaced. Special attention shall be given to the system outlet structure to ensure that orifice openings are clear of debris. These appurtenances shall be inspected semi-annually, in the spring and fall seasons. Follow underground detention system manufacturer's specifications for maintenance procedures. Contractor to remove all sediment and debris from the system prior to completing the storm system installation. Sediment shall be regularly removed from the system in accordance with manufacturers recommendations. Cleaning, removal, and deposit of silt from the underground stormwater quality system shall be done by means and methods acceptable to the local jurisdiction.

SECTION 5: INSPECTIONS

5.1 Inspections (To be determined)

1. ***Inspection Personnel:***

   a.
   b.

2. ***Inspection Schedule and Procedures:***

   Inspection Schedule and Recordkeeping:
   The BMPs will be inspected weekly by a qualified inspector (identified above). Inspections will also occur after every rain event that equals or exceeds 0.5 inches in a 24 hour period. An inspection report will be completed and signed for each inspection type (routine or storm related). These inspection reports will be maintained on site and will be available for review by MSD inspection personnel, representatives from Ohio EPA and local soil and erosion control authorities with jurisdiction over this site.

   A copy of the SWPPP Inspection Report is included as Attachment F.

5.2 Delegation of Authority

Duly Authorized Representative(s) or Position(s):

Company Name:

Contact Name:
Position:
Address:
City, State, Zip Code:
Telephone:
Fax:
Email:

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A copy of the signed delegation of authority form is included as Attachment L.

5.3 Corrective Action Log

BMP deficiencies will be noted on the inspection form. A corrective action for each deficiency will also be recorded at the time of the inspection. It is the responsibility of the Contractor to address any noted deficiencies as soon as is practicable. A Corrective Action Log will be maintained by the Contractor.

A copy of the Corrective Action Log is included as Attachment G.

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SECTION 6: RECORDKEEPING AND TRAINING

6.1 Recordkeeping

The following list of records will be kept at the project site available for inspectors to review.

- Dates of grading, construction activity, and stabilization (which is covered in Sections 2 and 3)
- A copy of the construction general permit (attach)
- The signed and certified NOI form or permit application form (attach)
- A copy of the letter from EPA or/the state notifying you of their receipt of your complete NOI/application (attach)
- Inspection reports (attach)
- Records relating to endangered species and historic preservation (attach)

Records will be retained for a minimum period of at least 3 years after the permit is terminated.

Other recordkeeping:

Date(s) when major grading activities occur:

See Appendix J

Date(s) when an area is either temporarily or permanently stabilized:

See Appendix J

6.2 Log of Changes to the SWPPP

Log of changes and updates to the SWPPP

See Appendix H

6.3 Training

Project Training Record

Detailed Training Records are included as **Appendix K**.

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SECTION 7: CERTIFICATION AND NOTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

Name: _____ Title: _____

Signature: _____ Date: _____

Name: _____ Title: _____

Signature: _____ Date: _____

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SECTION 8: POST CONSTRUCTION OPERATION AND MAINTENANCE PLAN

The owner of the property affected shall inspect and maintain the following stormwater management systems frequently, especially after heavy rainfalls, but at least on an annual basis unless otherwise specified.

STORMWATER FACILITY	TYPE OF ACTION
1. Lawn and Landscaped Areas	All lawn areas shall be kept clear of any materials that block the flow of stormwater. Rills and small gullies shall immediately be filled and seeded or have sod placed in them. The lawn shall be kept mowed, tree seedlings shall be removed, and litter shall be removed from landscaped areas.
2. Swales	All grassed swales showing signs of erosion, scour, or channelization shall be repaired, reinforced, and revegetated immediately. All swales shall be repaired to the original plan requirements. Mowing shall take place no less than twice per year at a height of no less than three inches. Grasses shall not be allowed to grow to a height that permits branching or bending. Mowing shall only take place when the ground is dry and able to support machinery.
3. Catch Basin/Curb Inlet Grates	The grate openings to these structures must be kept clear of any clogging or the blocking of stormwater flow.
4. Catch Basin/Curb Inlet Sumps	Sumps shall visually be inspected every 3 months. Siltation shall be removed and disposed of offsite when the sump depth is within 3" of the outlet pipe invert elevation. The removal of siltation should occur a minimum of once per year.
5. Underground Stormwater System	Standpipes, outlet structures, inlet and outlet pipes, and chambers shall be kept clear of debris at all times. Non-structurally sound devices shall be replaced. Special attention shall be given to the system outlet structure to ensure that orifice openings are clear of debris. These appurtenances shall be inspected semi-annually, in the spring and fall seasons. Follow underground detention system manufacturer's specifications for maintenance procedures. Contractor to remove all sediment and debris from the system prior to completing the storm system installation. Sediment shall be regularly removed from the system in accordance with manufacturers recommendations. Cleaning, removal, and deposit of silt from the underground stormwater quality system shall be done by means and methods acceptable to the local jurisdiction.
6. Contech Cascade Hydrodynamic Separator	Inspection of the structure shall be completed annually at a minimum by qualified maintenance personnel. Sediment in the bottom of the structure shall be inspected to verify sediment is less than 16" deep. If sediment is greater than 16" deep, the sediment shall be removed per Contech guidelines and the structure shall be inspected by qualified personnel.
7. Record of Maintenance	The operation and maintenance plan shall remain onsite and be available for inspection when requested by the local governing agency. When requested, the owner shall make available for inspection all maintenance records to the department or agent for the life of the system.

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SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Appendix A – General Location Map (Can use contract plan sheets)

Appendix B – Site Maps (Can use contract plan sheets)

Appendix C – Construction Plans

Appendix D – Construction General Permit (incorporated by reference – Copy to be kept on site)

Appendix E – NOI and Acknowledgement Letter from EPA/State

Appendix F – Inspection Report Form

Appendix G – Corrective Action Log (or in Part 5.3)

Appendix H – SWPPP Amendment Log (or in Part 6.2)

Appendix I – Subcontractor Certifications/Agreements

Appendix J – Grading and Stabilization Activities Log (or in Part 6.1)

Appendix K – Training Log

Appendix A: General Location Map

Stark County Webmap

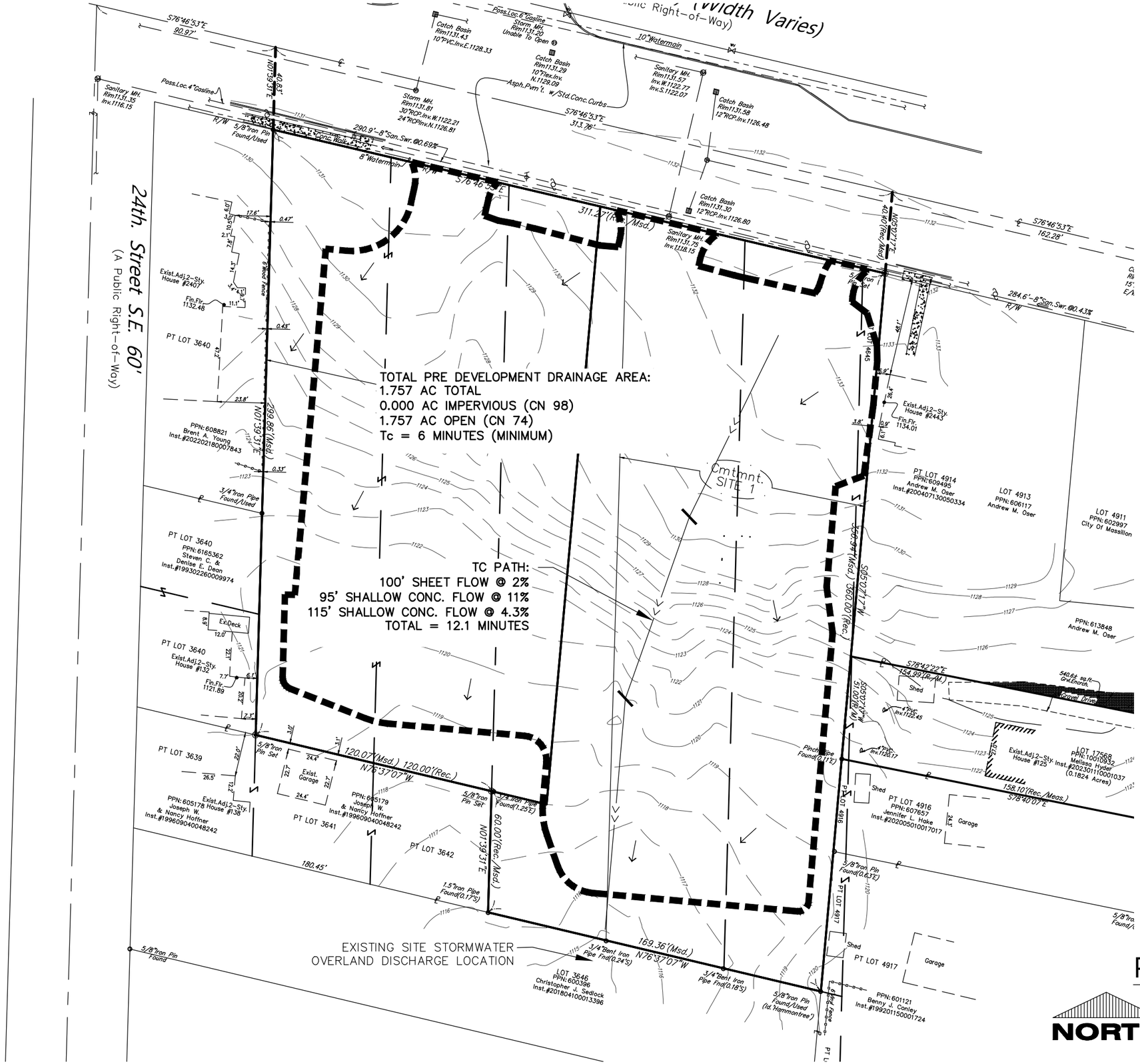
SITE CONTACT:

TIM KAUFMANN
AKG DEVELOPMENT
tim@akgdevelopment.com
314.280.2540

0 0.05 0.1 0.2 mi
0 0.040.09 0.18 km
N

Stark GIS

Appendix B: Site Map(s)



PRE-DEVELOPMENT BASIN AREA(S)

POST DEVELOPMENT UNDETAINED PAVEMENT AREAS:
0.040 AC TOTAL
0.040 AC IMPERVIOUS (CN 98)
0.00 AC OPEN (CN 74)
Tc = 6 MINUTES (MINIMUM)

POST DEVELOPMENT DRAINAGE AREA TO UNDERGROUND STORAGE:
1.717 AC TOTAL
1.404 AC IMPERVIOUS (CN 98)
0.313 AC OPEN (CN 74)
Tc = 6 MINUTES (MINIMUM)

SITE STORMWATER DISCHARGE LOCATION: CITY OF MASSILLON STORM SEWER SYSTEM

UNDERGROUND CMP STORMWATER STORAGE SYSTEM

24th. Street S.E. 60'
(A Public Right-of-Way)

25th. Street S.E. 40'
(A Public Right-of-Way)

PROPOSED STARBUCKS 2,250 SQ. FT. FOOTPRINT CRWL FF = 1132.50 ARCH FF = 100.00

PROPOSED PANDA EXPRESS 1,700 SQ. FT. FOOTPRINT CRWL FF = 1132.50 ARCH FF = 100.00

POST-DEVELOPMENT BASIN AREA(S)

NORTH

1"= 50'

50' 0 50' 100'

SCALE 1"=50' (11X17) FEET

Appendix C: Construction Plans

(Drawings and Specifications are from ***Rainwater and Land Development, 2006 Edition*, Ohio Department of Natural Resources** unless otherwise noted.)

PROPOSED DEVELOPMENT FOR:
STARBUCKS & PANDA EXPRESS
MASSILLON, OHIO

EXCEL LEGEND

- 000.00 — PROPOSED SPOT ELEVATIONS (FLOW LINE OF CURB UNLESS OTHERWISE SPECIFIED)
- 000.00 EG — EXISTING GRADE SPOT ELEVATIONS
- 000.00 BG / 000.00 FG — PROPOSED SPOT ELEVATIONS (REFERENCE R-WALL DETAIL) BG=FINISHED SURFACE GRADE AT BACK OF WALL FG=FINISHED SURFACE GRADE AT FRONT OF WALL
- 000.00 TC / 000.00 FL — PROPOSED SPOT ELEVATIONS (TOP OF CURB, FLOWLINE OF CURB)
- 000.00 TW / 000.00 BW — PROPOSED SPOT ELEVATIONS (TOP OF WALK, BOTTOM OF WALK @ FLOWLINE)
- PROPOSED WATER VALVE IN BOX
- PROPOSED STORM CATCH BASIN – ST CB
- PROPOSED STORM FIELD INLET – ST FI
- PROPOSED STORM CURB INLET – ST CI
- PROPOSED DRAINAGE FLOW
- PROPOSED APRON END SECTION
- EROSION MATTING
- IP — PROPOSED INLET PROTECTION
- PROPOSED WELL
- PROPOSED LIGHT POLE
- PROPOSED SIGN
- CENTER LINE
- PROPOSED HANDICAP PARKING STALL
- SOIL BORING
- PROPOSED PROPERTY LINE
- ST — PROPOSED STORM SEWER AND MANHOLE – ST MH
- SA — PROPOSED SANITARY SEWER AND MANHOLE – SAN MH
- W — PROPOSED WATER LINE AND HYDRANT
- PROPOSED CURB AND GUTTER
- GRADING/SEEDING LIMITS
- RIGHT-OF-WAY LINE
- INTERIOR PROPERTY LINE
- RAILROAD TRACKS
- 800 — EXISTING GROUND CONTOUR
- 800 — PROPOSED GROUND CONTOUR

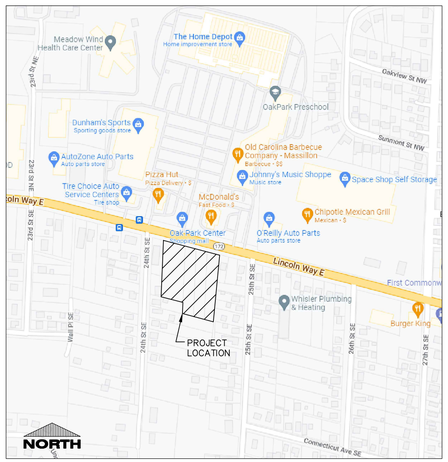
CIVIL SHEET INDEX

CONTACTS

CIVIL ENGINEER
EXCEL ENGINEERING
100 CAMELOT DRIVE
FOND DU LAC, WISCONSIN 54935
CONTACT: JASON DAYE, PE
P: (920) 926-9800
F: (920) 926-9801
jason.d@excelengineer.com

OHIO 811 Before You Dig

CONTRACTOR SHALL CALL OUPS AT 1-800-362-2764 AT LEAST 48 HOURS BUT NO MORE THAN 10 WORKING DAYS PRIOR TO EXCAVATION ON SITE.



PROJECT LOCATION MAP

PLAN SPECIFICATIONS (BASED ON CSI FORMAT)

DIVISION 31 EARTH WORK

31 10 00 SITE CLEARING (DEMOLITION)

A. CONTRACTOR SHALL CALL OHIO ONE CALL AND CONDUCT A PRIVATE UTILITY LOCATE AS REQUIRED TO ENSURE THAT ALL UTILITIES HAVE BEEN LOCATED BEFORE STARTING SITE DEMOLITION. DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.
B. DEMOLITION PLAN IS AN OVERVIEW OF DEMOLITION TO TAKE PLACE ON SITE. CONTRACTOR TO FIELD VERIFY EXISTING SITE CONDITIONS PRIOR TO BIDDING. CONTRACTOR SHALL REMOVE, REPLACE, OR DEMOLISH ALL ITEMS AS NEEDED DURING CONSTRUCTION.
C. CONTRACTOR TO PROTECT EXISTING IMPROVEMENTS THAT ARE SCHEDULED TO REMAIN. ANY DAMAGE TO EXISTING FACILITIES SHALL BE REPLACED AT CONTRACTORS EXPENSE.
D. ALL CONCRETE NOTED TO BE REMOVED SHALL BE REMOVED TO THE NEAREST CONTROL JOINT.

31 20 00 EARTH MOVING

A. CONTRACTOR SHALL CALL OHIO ONE CALL AND CONDUCT A PRIVATE UTILITY LOCATE AS REQUIRED TO ENSURE THAT ALL UTILITIES HAVE BEEN LOCATED BEFORE STARTING EXCAVATION. DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.
B. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT FOR ALL EXCAVATION, GRADING, FILL AND BACKFILL WORK AS REQUIRED TO COMPLETE THE GENERAL CONSTRUCTION WORK. ALL EXCAVATION AND BACKFILL FOR ELECTRICALS AND MECHANICALS ARE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTOR UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS.
C. ALL ORGANIC TOPSOIL INSIDE THE BUILDING AREA, UNDER PAVED AREAS, AND AT SITE FILL AREAS SHALL BE REMOVED. PROOF ROLL SUBGRADES BEFORE PLACING FILL WITH HEAVY PNEUMATIC-TIRED EQUIPMENT, SUCH AS A FULLY-LOADED TANDEM AXLE DUMP TRUCK. TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. CONTRACTOR SHALL VERIFY TOPSOIL DEPTHS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW AND FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND ACCOUNT FOR EXISTING CONDITIONS PRIOR TO SUBMITTING BID FOR THE PROJECT. EXCESS MATERIALS SHALL BE REMOVED FROM THE SITE UNLESS OTHERWISE DIRECTED IN THE PLANS OR BY LOCAL ZONING REQUIREMENTS.
D. PLACE AND COMPACT FILL MATERIAL IN LAYERS TO REQUIRED ELEVATIONS. UNIFORMLY MOISTEN OR AERATE SUBGRADE AND EACH SUBSEQUENT FILL OR BACKFILL LAYER BEFORE COMPACTION AS RECOMMENDED TO ACHIEVE SPECIFIED DRY DENSITY. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, OTHERWISE SATISFACTORY SOIL MATERIAL THAT IS TOO WET TO COMPACT TO SPECIFIED DRY DENSITY.
E. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
F. COMPACT THE SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY ACCORDING TO ASTM D 698, STANDARD PROCTOR TEST. FILL MAY NOT BE PLACED ON FROZEN GROUND AND NO FROZEN MATERIALS MAY BE USED FOR BACK FILL. APPLY THE MORE STRINGENT REQUIREMENTS WHEN COMPARING BETWEEN THE FOLLOWING AND THE GEOTECHNICAL REPORT.
   1. UNDER FOUNDATIONS - SUBGRADE, AND EACH LAYER OF BACKFILL OR FILL MATERIAL, TO NOT LESS THAN 98 PERCENT.
   2. UNDER INTERIOR SLAB-ON-GRADE WHERE GROUNDWATER IS MORE THAN 3 FEET BELOW THE SLAB - PLACE A DRAINAGE COURSE LAYER OF 3/4" CRUSHED STONE, WITH 5% TO 12% FINES, PER THICKNESS INDICATED ON FOUNDATION PLANS ON PREPARED SUBGRADE. COMPACT THE SUBGRADE AND DRAINAGE COURSE TO NOT LESS THAN 95 PERCENT.
   3. UNDER INTERIOR SLAB-ON-GRADE WHERE GROUNDWATER IS WITHIN 3 FEET OF THE SLAB SURFACE- PLACE A DRAINAGE COURSE LAYER OF CLEAN 3/4" CRUSHED STONE, WITH NO MORE THAN 5% FINES, PER THICKNESS INDICATED ON FOUNDATION PLANS ON PREPARED SUBGRADE. COMPACT THE SUBGRADE AND DRAINAGE COURSE TO NOT LESS THAN 95 PERCENT.
   4. UNDER EXTERIOR CONCRETE AND ASPHALT PAVEMENTS - COMPACT THE SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 95 PERCENT.
   5. UNDER WALKWAYS - COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 95 PERCENT.
   6. UNDER LAWN OR UNPAVED AREAS - COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 85 PERCENT.
G. CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS. CONTRACTOR SHALL PROVIDE DOCUMENTATION OF PASSING DENSITY TESTING AND PROOF-ROLLING TO ENGINEER UPON COMPLETION. IT IS SUGGESTED THAT THE GEOTECHNICAL FIRM USED TO PERFORM THE SUBSURFACE SOIL INVESTIGATION BE ENGAGED FOR THE FIELD QUALITY CONTROL TESTS.
H. ALLOW THE TESTING AGENCY TO TEST AND INSPECT SUBGRADES AND EACH FILL OR BACKFILL LAYER. PROCEED WITH SUBSEQUENT EARTHWORK ONLY AFTER TEST RESULTS FOR PREVIOUSLY COMPLETED WORK COMPLY WITH REQUIREMENTS. PROVIDE ONE TEST FOR EVERY 2000 SQUARE FEET OF PAVED AREA OR BUILDING SLAB, ONE TEST FOR EACH SPREAD FOOTING, AND ONE TEST FOR EVERY 50 LINEAR FEET OF WALL STRIP FOOTING.
I. WHEN THE TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED; RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.
J. THE BUILDING SITE SHALL BE GRADED TO PROVIDE DRAINAGE AWAY FROM THE BUILDING AS INDICATED ON THE PLANS. SITE EARTHWORK SHALL BE GRADED TO WITHIN 0.10' OF REQUIRED EARTHWORK ELEVATIONS ASSUMING POSITIVE DRAINAGE IS MAINTAINED IN ACCORDANCE WITH THE GRADING PLAN.

31 30 00 EROSION CONTROL/STORMWATER MANAGEMENT & POLLUTION PREVENTION

A. THE DESIGN ENGINEER SHALL PREPARE A SITE SPECIFIC EROSION CONTROL AND A STORMWATER MANAGEMENT PLAN PURSUANT TO THE REQUIREMENTS OF THE OHIO EPA PERMIT NO OH000005 (CONSTRUCTION GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES). THE DESIGN ENGINEER SHALL ALSO FILE A CONSTRUCTION NOTICE OF INTENT WITH THE OHIO EPA.
B. THE CONTRACTOR SHALL KEEP THE NOTICE OF INTENT PERMIT, APPROVED EROSION CONTROL AND STORMWATER MANAGEMENT PLANS, SWPPP, AND PLAN AMENDMENTS ON THE CONSTRUCTION SITE AT ALL TIMES PURSUANT TO OHIO EPA REQUIREMENTS UNTIL PERMIT COVERAGE IS TERMINATED.
C. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL EROSION CONTROL PERMITS.
D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE MONITORING, MAINTENANCE, AND REPORTING REQUIREMENTS OF THE CONSTRUCTION GENERAL PERMIT. INSPECTIONS OF IMPLEMENTED EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MUST AT A MINIMUM BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A PRECIPITATION EVENT OF 0.5" OR MORE. A PRECIPITATION EVENT MAY BE CONSIDERED TO BE THE TOTAL AMOUNT OF PRECIPITATION RECORDED IN ANY CONTINUOUS 24-HOUR PERIOD. THE CONTRACTOR SHALL REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL AS NECESSARY WITHIN 24 HOURS OF AN INSPECTION OR AFTER A DEPARTMENT NOTIFICATION WHERE REPAIR OR REPLACEMENT IS REQUESTED.
E. THE CONTRACTOR SHALL MAINTAIN, AT THE CONSTRUCTION SITE OR AVAILABLE VIA AN INTERNET WEBSITE, WEEKLY WRITTEN REPORTS OF ALL INSPECTIONS CONDUCTED. INSPECTION LOGS FOUND WITHIN THE SITE SPECIFIC SWPPP SHALL BE USED. WEEKLY INSPECTION REPORTS SHALL INCLUDE ALL OF THE FOLLOWING:
   1. THE DATE, TIME, AND LOCATION OF THE CONSTRUCTION SITE INSPECTION.
   2. THE NAME OF THE INDIVIDUAL WHO PERFORMED THE INSPECTION.
   3. AN ASSESSMENT OF THE CONDITION OF THE EROSION AND SEDIMENT CONTROLS.
   4. A DESCRIPTION OF ANY EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE IMPLEMENTATION AND MAINTENANCE PERFORMED.
   5. A DESCRIPTION OF THE PRESENT PHASE OF LAND DISTURBING CONSTRUCTION ACTIVITY AT THE CONSTRUCTION SITE.
F. EROSION AND SEDIMENT CONTROL IMPLEMENTED DURING CONSTRUCTION SHALL STRICTLY COMPLY WITH THE GUIDELINES AND REQUIREMENTS SET FORTH IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL. THE METHODS AND TYPES OF EROSION CONTROL WILL BE DEPENDENT ON THE LOCATION AND TYPE OF WORK INVOLVED. ALL SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION, AND INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL. BELOW IS A LIST OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES TO ACHIEVE THE PERFORMANCE STANDARDS REQUIRED.
   1. SILT FENCE SHALL BE PLACED ON SITE AT LOCATIONS SHOWN ON THE EROSION CONTROL PLAN. SILT FENCE SHALL ALSO BE PROVIDED AROUND THE PERIMETER OF ALL SOIL STOCKPILES THAT WILL EXIST FOR MORE THAN 7 DAYS. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.
   2. DITCH CHECKS SHALL BE PROVIDED TO REDUCE THE VELOCITY OF WATER FLOWING IN DITCH BOTTOMS. PLACE AT LOCATIONS SHOWN ON THE EROSION CONTROL PLAN. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.
   3. STONE TRACKING PADS AND TRACKOUT CONTROL PRACTICES SHALL BE PLACED AT ALL CONSTRUCTION SITE ENTRANCES AND SHALL BE INSTALLED PRIOR TO ANY TRAFFIC LEAVING THE CONSTRUCTION SITE. SEE THE EROSION CONTROL PLAN FOR LOCATIONS. SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. OTHER TRACKOUT CONTROL PRACTICES INCLUDING STABILIZED WORK SURFACES, MANUFACTURED TRACKOUT CONTROL DEVICES, TIRE WASHING, AND STREET/PAVEMENT CLEANING SHALL BE IMPLEMENTED AS NECESSARY TO MITIGATE THE TRACKOUT OF SEDIMENT OFFSITE. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.
   4. STORM DRAIN INLET PROTECTION SHALL BE PROVIDED FOR ALL NEW AND DOWNSTREAM STORM CATCH BASINS AND CURB INLETS. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.
   5. DUST CONTROL MEASURES SHALL BE PROVIDED TO REDUCE OR PREVENT THE SURFACE AND AIR TRANSPORT OF DUST DURING CONSTRUCTION. CONTROL MEASURES INCLUDE APPLYING MULCH AND ESTABLISHING VEGETATION, WATER SPRAYING, SURFACE ROUGHENING, APPLYING POLYMERS, SPRAY-ON TACKIFIERS, CHLORIDES, AND BARRIERS. SOME SITES MAY REQUIRE AN APPROACH THAT UTILIZES A COMBINATION OF MEASURES FOR DUST CONTROL. FOLLOW PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.
   6. THE USE, STORAGE, AND DISPOSAL OF CHEMICALS, CEMENT, AND OTHER COMPOUNDS AND MATERIALS USED ON SITE SHALL BE MANAGED DURING THE CONSTRUCTION PERIOD TO PREVENT THEIR TRANSPORT BY RUNOFF INTO WATERS OF THE STATE.
   7. CONTRACTOR SHALL PROVIDE AN OPEN AGGREGATE CONCRETE TRUCK WASHOUT AREA ON SITE. CONTRACTOR TO ENSURE THAT CONCRETE WASHOUT SHALL BE CONTAINED TO THIS DESIGNATED AREA AND NOT BE ALLOWED TO RUN INTO STORM INLETS OR INTO THE OVERLAND STORMWATER DRAINAGE SYSTEM. WASHOUT AREA SHALL BE REMOVED UPON COMPLETION OF CONSTRUCTION.
   8. TEMPORARY SITE RESTORATION SHALL TAKE PLACE IN DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH LAND DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 14 DAYS AND REQUIRES VEGETATIVE COVER FOR LESS THAN ONE YEAR. THIS TEMPORARY SITE RESTORATION REQUIREMENT ALSO APPLIES TO SOIL STOCKPILES THAT EXIST FOR MORE THAN 7 DAYS. PERMANENT RESTORATION APPLIES TO AREAS WHERE PERENNIAL VEGETATIVE COVER IS NEEDED TO PERMANENTLY STABILIZE AREAS OF EXPOSED SOIL. PERMANENT STABILIZATION SHALL OCCUR WITHIN 3 WORKING DAYS OF FINAL GRADING. TOPSOIL, SEED, AND MULCH SHALL BE IN GENERAL CONFORMANCE WITH THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL RECOMMENDATIONS AND SHALL MEET THE SPECIFICATIONS FOUND IN THE LANDSCAPING AND SITE STABILIZATION SECTION OF THIS CONSTRUCTION DOCUMENT. ANY SOIL EROSION THAT OCCURS AFTER FINAL GRADING AND/OR FINAL STABILIZATION MUST BE REPAIRED AND THE STABILIZATION WORK REDONE.
   9. IF SITE DEWATERING IS REQUIRED FOR PROPOSED CONSTRUCTION ACTIVITIES, ALL SEDIMENT LADEN WATER GENERATED DURING THE DEWATERING PROCESS SHALL BE TREATED TO REMOVE SEDIMENT PRIOR TO DISCHARGING OFF-SITE OR TO WATERS OF THE STATE. FOLLOW ALL PROCEDURES FOUND IN THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL.
   10. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION WORK OR A STORM EVENT SHALL BE CLEANED UP BY THE END OF EACH WORKING DAY. DUST CONTROL REQUIREMENTS SHALL BE FOLLOWED PER THE OHIO EPA RAINWATER AND LAND DEVELOPMENT MANUAL. FLUSHING SHALL NOT BE ALLOWED.
G. EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL THE AREA(S) SERVED HAVE ESTABLISHED VEGETATIVE COVER.
H. ONCE THE CONSTRUCTION SITE HAS BEEN FULLY STABILIZED AND TEMPORARY EROSION CONTROL BEST MANAGEMENT PRACTICES HAVE BEEN REMOVED, THE CONTRACTOR SHALL FILE A CONSTRUCTION NOTICE OF TERMINATION WITH THE OHIO EPA IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.
I. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL GIVE THE OWNER COPIES OF THE EROSION CONTROL AND STORM WATER MANAGEMENT PLANS, SWPPP, AMENDMENTS TO PLANS, SUPPORTING PLAN DATA, AND CONSTRUCTION SITE EROSION CONTROL INSPECTION REPORTS. THE OWNER SHALL RETAIN THESE FOR A PERIOD OF 3 YEARS FROM THE DATE OF TERMINATING COVERAGE UNDER THE OHIO EPA GENERAL PERMIT.
J. ALL POST CONSTRUCTION STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES SHALL BE CONSTRUCTED BEFORE THE SITE HAS UNDERGONE FINAL STABILIZATION.

DIVISION 32 EXTERIOR IMPROVEMENTS

32 10 00 AGGREGATE BASE & ASPHALT PAVEMENT

A. CONTRACTOR TO PROVIDE COMPACTED AGGREGATE BASE AND HOT MIX ASPHALT PAVEMENT WHERE INDICATED ON THE PLANS. ALL AGGREGATE PROVIDED MUST COMPLY WITH ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION). PROVIDE HOT MIX ASPHALT MIXTURE TYPES PER ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION). CONTRACTOR SHALL OBTAIN AND REVIEW SOILS REPORT FOR RECOMMENDATIONS FOR GEO-GRID / GEOTEXTILE BELOW CRUSHED AGGREGATE (IF APPLICABLE). CONTRACTOR TO PROVIDE AGGREGATE BASE AND HOT MIX ASPHALT PAVEMENT TYPES AND DEPTHS AS INDICATED BELOW OR PER GEOTECHNICAL RECOMMENDATIONS:

HEAVY ASPHALT PAVING SECTION:
1-1/2" SURFACE COURSE
TACK COAT
2-1/2" BINDER COURSE
12" OF 1-1/4" CRUSHED AGGREGATE

B. CONTRACTOR TO COMPACT THE AGGREGATE BASE, ASPHALT BINDER COURSE, AND ASPHALT SURFACE COURSE TO AN AVERAGE DENSITY PER ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION). ALL ASPHALT PAVEMENT AREAS SHALL BE PAVED TO WITHIN 0.05' OF DESIGN SURFACE GRADES WITH POSITIVE DRAINAGE BEING MAINTAINED IN ACCORDANCE WITH DESIGN PLANS. A MINIMUM OF 1.5% SLOPE SHALL BE MAINTAINED IN ALL ASPHALT PAVEMENT AREA.
C. HOT MIX ASPHALT CONSTRUCTION TO BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF GEOTECHNICAL REPORT OR CONSTRUCTION DOCUMENTS.
D. CONTRACTOR TO PROVIDE 4" WIDE WHITE PAINTED STRIPING FOR PARKING STALLS, TRAFFIC LANES, AND NO PARKING AREAS. PAINT MARKINGS SHALL ALSO BE PROVIDED FOR H.C. ACCESSIBLE SYMBOLS, TRAFFIC ARROWS, AND TRAFFIC MESSAGES.

32 20 00 CONCRETE AND AGGREGATE BASE

A. CONTRACTOR TO PROVIDE CRUSHED AGGREGATE BASE AND CONCRETE WHERE INDICATED ON THE PLANS.
B. ALL AGGREGATE PROVIDED MUST COMPLY WITH ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION). ALL AGGREGATE PLACED MUST BE COMPACTED TO AN AVERAGE DENSITY PER ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION).
C. DESIGN AND CONSTRUCTION OF ALL CAST-IN-PLACE EXTERIOR CONCRETE FLAT WORK SHALL CONFORM TO ACI 330R-08 & ACI 318-08.
D. EXTERIOR CONCRETE FLAT WORK CONSTRUCTION TO BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF THE GEOTECHNICAL REPORT OR THIS SPECIFICATION. CONCRETE FLAT WORK CONSTRUCTION IS AS FOLLOWS:
   1. SIDEWALK CONCRETE - 4" OF CONCRETE OVER 4" OF 3/4" CRUSHED AGGREGATE BASE. CONTRACTION JOINTS SHALL CONSIST OF 1/8" WIDE BY 1" DEEP TOOLED JOINT WHERE INDICATED ON THE PLANS.
   2. HEAVY DUTY/DRIVE-THRU/DUMPSTER PAD CONCRETE (TRUCK TRAFFIC) - 6" OF CONCRETE OVER 6" OF 3/4" CRUSHED AGGREGATE. CONCRETE SHALL BE REINFORCED WITH #3 REBARS ON CHAIRS AT 3'-0" C. REBAR SHALL BE PLACED IN THE UPPER 1/3 TO ½ OF THE SLAB. CONTRACTION JOINTS SHALL BE SAWCUT 1.5" IN DEPTH AND BE SPACED A MAXIMUM OF 15' ON CENTER.
   3. LIGHT DUTY CONCRETE (PASSENGER CAR TRAFFIC) - 5" OF CONCRETE OVER 4" OF 3/4" CRUSHED AGGREGATE. CONTRACTION JOINTS SHALL BE SAWCUT 1.5" IN DEPTH AND BE SPACED A MAXIMUM OF 12.5' ON CENTER.
      a. CONCRETE SHALL BE STEEL REINFORCED AS FOLLOWS:
         1) TIE BARS AT OUTERMOST CONTRACTION JOINT (FIRST JOINT FROM EDGE OR AT CURB JOINT) AROUND PERIMETER OF CONCRETE. TIE BARS SHALL BE #4 REBAR 24" LONG PLACED AT 30" O.C.
         2) TYPICAL POUR CONTROL JOINT - POUR CONTROL JOINT SHALL BE PROVIDED WITH 1/4" X 4-1/2" X 4-1/4" DIAMOND SHAPED TAPERED PLATE DOWELS MANUFACTURED PER ASTM A36. INSTALL PER MANUFACTURERS SPECIFICATIONS.
E. DESIGN MIXES SHALL BE IN ACCORDANCE WITH ASTM C94
   1. STRENGTH TO BE MINIMUM OF 4,500 PSI AT 28 DAYS FOR EXTERIOR CONCRETE.
   2. MAXIMUM WATER/CEMENT RATIO SHALL BE 0.45.
   3. SLUMP SHALL NOT EXCEED 4" FOR EXTERIOR CONCRETE FLAT WORK
   4. SLUMP SHALL BE 2.5" OR LESS FOR SLIP-FORMED CURB AND GUTTER.
   5. SLUMP SHALL BE BETWEEN 1.5" TO 3" FOR NON SLIP-FORMED CURB AND GUTTER.
   6. ALL EXTERIOR CONCRETE SHALL BE AIR ENTRAINED WITH 4% TO 7% AIR CONTENT. NO OTHER ADMIXTURES SHALL BE USED WITHOUT APPROVAL OF EXCEL ENGINEERING, INC. CALCIUM CHLORIDE SHALL NOT BE USED.
   7. MAXIMUM AGGREGATE SIZE FOR ALL EXTERIOR CONCRETE SHALL BE 0.75 INCHES
F. VERIFY EQUIPMENT CONCRETE PAD SIZES WITH RESPECTIVE CONTRACTORS. PADS SHALL HAVE FIBERMESH 300 FIBERS AT A RATE OF 1.5 LBS/CU. YD. OR 6 X 6-W1.4 X W1.4 WELDED WIRE MESH WITH MINIMUM 1 INCH COVER. EQUIPMENT PADS SHALL BE 3.5 INCHES THICK WITH 1 INCH CHAMFER UNLESS SPECIFIED OTHERWISE. COORDINATE ADDITIONAL PAD REQUIREMENTS WITH RESPECTIVE CONTRACTOR.
G. ALL CONCRETE FLAT WORK SURFACES AND CONCRETE CURB FLOWLINES SHALL BE CONSTRUCTED TO WITHIN 0.05' OF DESIGN SURFACE AND FLOWLINE GRADES ASSUMING POSITIVE DRAINAGE IS MAINTAINED IN ACCORDANCE WITH THE DESIGN PLANS.
H. CONCRETE FLAT WORK SHALL HAVE CONSTRUCTION JOINTS OR SAW CUT JOINTS PLACED AS INDICATED ON THE PLANS OR PER THIS SPECIFICATION. SAWCUTS SHALL BE DONE AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS AFTER CONCRETE IS PLACED. CONCRETE CURB AND GUTTER JOINTING SHALL BE PLACED EVERY 10' OR CLOSER (± MIN.). IF CONCRETE PAVEMENT IS ADJACENT TO CONCRETE CURB, JOINTING IN THE PAVEMENT AND CURB SHALL ALIGN. ALL EXTERIOR CONCRETE SHALL HAVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE. A UNIFORM COAT OF A HIGH SOLIDS CURING COMPOUND MEETING ASTM C309 SHOULD BE APPLIED TO ALL EXPOSED CONCRETE SURFACES. ALL CONCRETE IS TO BE CURED FOR 7 DAYS. EXTERIOR CONCRETE SHALL BE SEPARATED FROM BUILDINGS WITH CONTINUOUS 0.5 INCH FIBER EXPANSION JOINT AND/OR 0.25 INCH FIBER EXPANSION JOINT AT DECORATIVE MASONRY UNITS.
I. ALL REINFORCING BARS SHALL BE ASTM A615 GRADE 60. THICKNESS OF CONCRETE COVER OVER REINFORCEMENT SHALL BE NOT LESS THAN 3" WHERE CONCRETE IS DEPOSITED AGAINST THE GROUND WITHOUT THE USE OF FORMS AND NOT LESS THAN 1.5" IN ALL OTHER LOCATIONS. ALL REINFORCING SHALL BE LAPPED 36 DIAMETERS FOR UP TO #6 BARS, 60 DIAMETERS FOR #7 TO #10 BARS OR AS NOTED ON THE DRAWINGS AND EXTENDED AROUND CORNERS WITH CORNER BARS. PLACING AND DETAILING OF STEEL REINFORCING AND REINFORCING SUPPORTS SHALL BE IN ACCORDANCE WITH CRSI AND ACI MANUAL AND STANDARD PRACTICES. THE REINFORCEMENT SHALL NOT BE PAINTED AND MUST BE FREE OF GREASE/OIL, DIRT OR DEEP RUST WHEN PLACED IN THE WORK. ALL WELDED WIRE FABRIC SHALL MEET THE REQUIREMENTS OF ASTM A 185. WELDED WIRE FABRIC SHALL BE PLACED 2" FROM TOP OF SLAB, UNLESS INDICATED OTHERWISE.
J. CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO SAMPLE MATERIALS, PERFORM TESTS, AND SUBMIT TEST REPORTS DURING CONCRETE PLACEMENT. TESTS WILL BE PERFORMED ACCORDING TO ASTM C 31/C 31M. CAST AND LABORATORY CURE ONE SET OF FOUR STANDARD CYLINDERS FOR EACH COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIX EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. PERFORM COMPRESSIVE-STRENGTH TESTS ACCORDING TO ASTM C 39. TEST TWO SPECIMENS AT 7 DAYS AND TWO SPECIMENS AT 28 DAYS. PERFORM SLUMP TESTING ACCORDING TO ASTM C 143. PROVIDE ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE. BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIX. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.
K. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. IN HOT, DRY, AND WINDY WEATHER, APPLY AN EVAPORATION-CONTROL COMPOUND ACCORDING TO MANUFACTURER'S INSTRUCTIONS AFTER SCREEDING AND BULL FLOATING, BUT BEFORE POWER FLOATING AND TROWELLING.
L. LIMIT MAXIMUM WATER-CEMENTITIOUS RATIO OF CONCRETE EXPOSED TO FREEZING, THAWING AND DEICING SALTS TO 0.45.
M. TEST RESULTS WILL BE REPORTED IN WRITING TO THE DESIGN ENGINEER, READY-MIX PRODUCER, AND CONTRACTOR WITHIN 24 HOURS AFTER TESTS. REPORTS OF COMPRESSIVE STRENGTH TESTS SHALL CONTAIN THE PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING SERVICE, CONCRETE TYPE AND CLASS, LOCATION OF CONCRETE BATCH IN STRUCTURE, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIX PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7-DAY TESTS AND 28-DAY TESTS.
N. CONTRACTOR TO PROVIDE 4" WIDE WHITE PAINTED STRIPING FOR PARKING STALLS, TRAFFIC LANES, AND NO PARKING AREAS. PAINT MARKINGS SHALL ALSO BE PROVIDED FOR H.C. ACCESSIBLE SYMBOLS, TRAFFIC ARROWS, AND TRAFFIC MESSAGES.

SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

EXISTING CONDITIONS NOTE:

EXISTING CONDITIONS SURVEY WAS PROVIDED TO EXCEL BY ALBAN SURVEYING CO. DATED 04/20/2022. APPLICABLE SURVEY NOTES & LEGEND ARE PROVIDED BELOW FOR REFERENCE.

SURVEY CONTACT:
JOHN ALBAN
ALBAN SURVEYING CO.
38052 EUCLID AVENUE, SUITE 200
WILLOUGHBY, OHIO 44094
216-702-7875

DEMOLITION NOTE:

DEMOLITION PLAN IS AN OVERVIEW OF DEMOLITION TO TAKE PLACE ON SITE. CONTRACTOR TO FIELD VERIFY EXISTING SITE CONDITIONS PRIOR TO BIDDING. CONTRACTOR SHALL REMOVE, REPLACE, OR DEMOLISH ALL ITEMS AS NEEDED DURING CONSTRUCTION.

UTILITY NOTES:

The size and location, both horizontal and vertical of the underground utilities shown hereon, have been obtained by a search of available records. Verification by field observation has been conducted where practical.This survey is subject to change upon receipt of any additional obtainable underground utility information. Therefore, Alban Surveying Company can not guarantee the completeness nor accuracy thereof.

Before excavating in this area, call "OUPS" at 800-362-2764 for field locations of any underground utility facilities.

BASIS OF BEARING:

Bearings are based on Ohio State Plane North Zone (NAV88) by GPS observations.

NOTE:

All pins set are 5/8" x 30" rebar with yellow cap marked "J. Alban 7651".

FLOOD ZONE INFORMATION:

The subject parcel is located in Flood Zone "X", 'areas determined to be outside of the 0.2% annual chance floodplain', as shown on FEMA #39151C0191F, with an effective date of September 14, 2018.

Symbol Legend

- Catch Basin
- Water Valve
- Power Pole
- Traffic Signal Pole
- Storm Manhole
- Sanitary Manhole

NORTH

1"= 20' SCALE 20' 0 20' 40' FEET

CIVIL EXISTING SITE AND DEMOLITION PLAN

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100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

PROPOSED DEVELOPMENT FOR:

STARBUCKS & PANDA EXPRESS

LINCOLN WAY E • MASSILLON, OH 44646

PROFESSIONAL SEAL

PRELIMINARY DATES

JAN. 17, 2023
JAN. 20, 2023

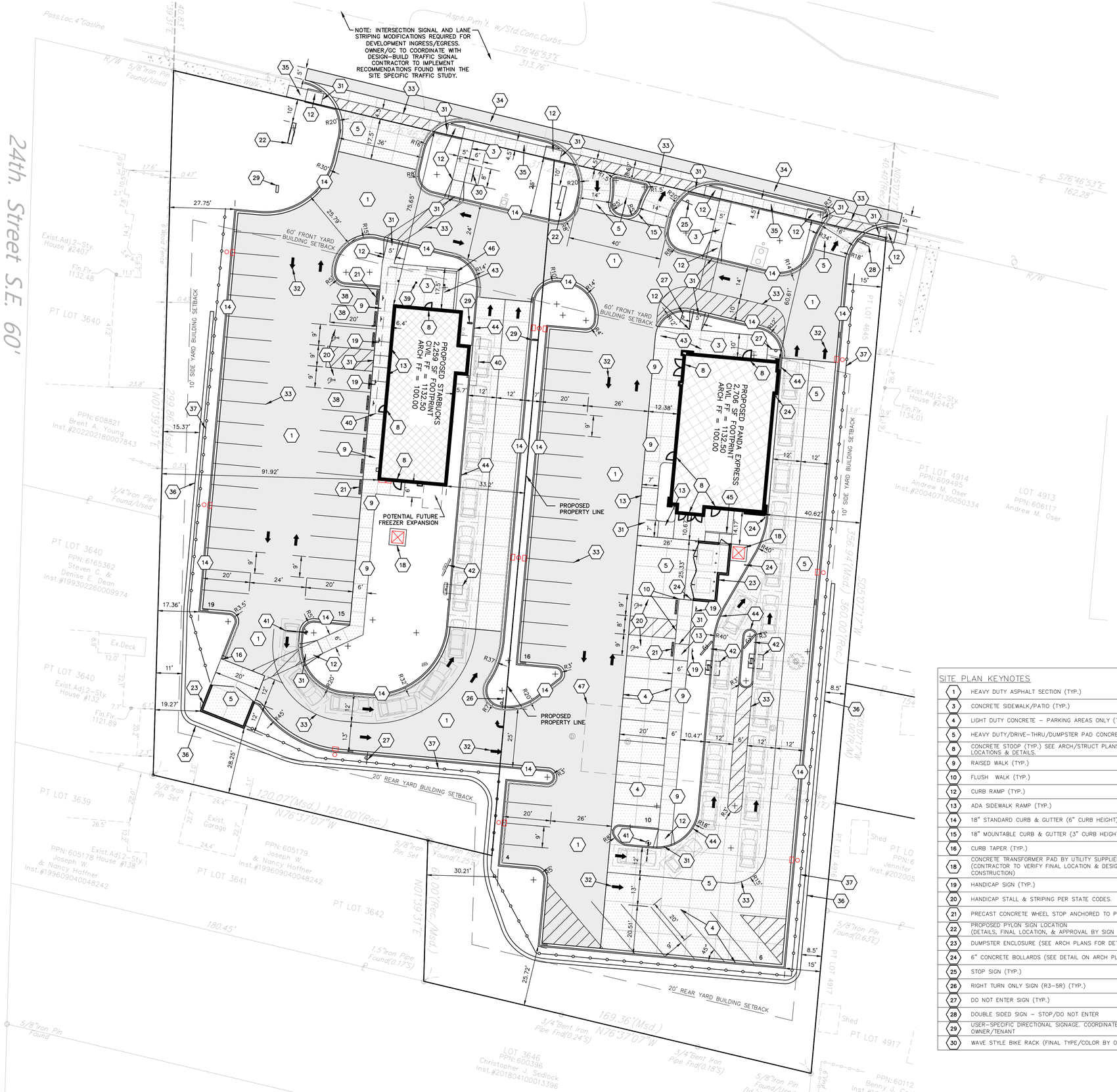
NOT FOR CONSTRUCTION

JOB NUMBER

2178020

SHEET NUMBER

C1.0



SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

SITE INFORMATION:

EXISTING SITE PARCEL NUMBERS: 600764, 607402, 612594, 601670

PROPERTY AREA (TOTAL): 98,935 S.F. (2.27 ACRES)
PROPOSED PANDA SITE = 52,720 S.F. (1.21 AC)
PROPOSED STARBUCKS SITE = 46,215 S.F. (1.06 AC)

EXISTING ZONING: RM-1

PROPOSED ZONING: B-3 (REZONE COMPLETED)

PROPOSED USE: QUICK SERVE RESTAURANTS WITH DRIVE-THRU SERVICE

AREA OF SITE DISTURBANCE: 103,181 SF (2.37 AC)

SETBACKS: BUILDING: FRONT = 60'
SIDE = 10'
REAR = 20'

PAVEMENT: OFF-STREET PARKING PERMITTED IN REQUIRED YARDS

MAX. BLDG HEIGHT ALLOWED: 30'

PARKING REQUIRED: 1 SPACE PER 150 S.F. GFA

STARBUCKS: 2230 SF = 15 SPACES REQUIRED
PANDA EXPRESS: 2664 SF = 18 SPACES REQUIRED

PARKING PROVIDED:

STARBUCKS: 34 TOTAL SPACES PROVIDED; 2 HC STALLS
PANDA EXPRESS: 36 TOTAL SPACES PROVIDED; 2 HC STALLS

EXISTING SITE DATA (OVERALL DEVELOPMENT)

	AREA (AC)	AREA (SF)	RATIO
PROJECT SITE	2.27	98,935	
BUILDING FLOOR AREA	0.00	0	0.0%
PAVEMENT (ASP. & CONC.)	0.00	0	0.0%
TOTAL IMPERVIOUS	0.00	0	0.0%
LANDSCAPE/ OPEN SPACE	2.27	98,935	100.0%

PROPOSED SITE DATA (OVERALL DEVELOPMENT)

	AREA (AC)	AREA (SF)	RATIO
PROJECT SITE	2.27	98,935	
BUILDING FLOOR AREA	0.11	4,965	5.0%
PAVEMENT (ASP. & CONC.)	1.34	58,287	58.9%
TOTAL IMPERVIOUS	1.45	63,252	63.9%
LANDSCAPE/ OPEN SPACE	0.82	35,683	36.1%

CURB & GUTTER MARKING KEY:
- INVERTED CURB & GUTTER
- SHEDDING CURB & GUTTER

PAVEMENT HATCH KEY:
- STANDARD ASPHALT
- CONCRETE; SEE PLAN & C0.1 FOR DETAILS/SPECIFIED THICKNESS

SITE PLAN NOTES:
- A KNOX BOX (MODEL 3200) SHALL BE PROVIDED AT THE PRIMARY ENTRANCE TO ALL NEW BUILDINGS AT A HEIGHT OF 4-6" FROM FINAL GRADE. COORDINATE ADDITIONAL REQUIREMENTS WITH LOCAL BUILDING INSPECTOR/FIRE DEPARTMENT AS NEEDED.
- GC TO COORDINATE WITH SITE SPECIFIC OWNER/TENANT PRIOR TO CONSTRUCTION TO REVIEW ANY ADDITIONAL SITE SPECIFIC REQUIREMENTS/SCOPES OF WORK AS NEEDED.

SITE PLAN KEYNOTES

1	HEAVY DUTY ASPHALT SECTION (TYP.)
3	CONCRETE SIDEWALK/PATIO (TYP.)
4	LIGHT DUTY CONCRETE - PARKING AREAS ONLY (TYP.)
5	HEAVY DUTY/DRIVE-THRU/DUMPSTER PAD CONCRETE (TYP.)
8	CONCRETE STOOP (TYP.) SEE ARCH/STRUCT PLANS FOR FINAL LOCATIONS & DETAILS.
9	RAISED WALK (TYP.)
10	FLUSH WALK (TYP.)
12	CURB RAMP (TYP.)
13	ADA SIDEWALK RAMP (TYP.)
14	18" STANDARD CURB & GUTTER (6" CURB HEIGHT) (TYP.)
15	18" MOUNTABLE CURB & GUTTER (3" CURB HEIGHT) (TYP.)
16	CURB TAPER (TYP.)
18	CONCRETE TRANSFORMER PAD BY UTILITY SUPPLIER (CONTRACTOR TO VERIFY FINAL LOCATION & DESIGN PRIOR TO CONSTRUCTION)
19	HANDICAP SIGN (TYP.)
20	HANDICAP STALL & STRIPING PER STATE CODES.
21	PRECAST CONCRETE WHEEL STOP ANCHORED TO PAVEMENT (TYP.)
22	PROPOSED PYLON SIGN LOCATION (DETAILS, FINAL LOCATION, & APPROVAL BY SIGN VENDOR)
23	DUMPSTER ENCLOSURE (SEE ARCH PLANS FOR DETAILS)
24	6" CONCRETE BOLLARDS (SEE DETAIL ON ARCH PLANS)
25	STOP SIGN (TYP.)
26	RIGHT TURN ONLY SIGN (R3-5R) (TYP.)
27	DO NOT ENTER SIGN (TYP.)
28	DOUBLE SIDED SIGN - STOP/DO NOT ENTER
29	USER-SPECIFIC DIRECTIONAL SIGNAGE. COORDINATE WITH OWNER/TENANT
30	WAVE STYLE BIKE RACK (FINAL TYPE/COLOR BY OWNER/TENANT)
31	DETECTABLE WARNING PLATE
32	TRAFFIC FLOW ARROWS. COLOR TO MATCH PARKING STALL STRIPING.
33	PAINT STRIPING (TYP). COLOR TO MATCH PARKING STALL STRIPING.
34	REPLACE ASPHALT PAVEMENT PER CITY OF MASSILON/OH DOT STANDARDS AS NEEDED FOR PROPOSED SITE IMPROVEMENTS. (TYP.)
35	CONCRETE SIDEWALK PER LOCAL STANDARDS. (TYP.)
36	VERSA-LOK OR EQUIVALENT MODULAR BLOCK RETAINING WALL SYSTEM. COLOR/STYLE TO BE COORDINATED WITH OWNER/TENANT. REFERENCE SHEET C1.2 FOR PROPOSED WALL HEIGHTS AND C2.0 FOR GENERAL RETAINING WALL DETAIL. FINAL DESIGN DETAILS & SPECIFICATIONS BY WALL SUPPLIER. WALL DESIGNER TO ACCOUNT FOR SITE FEATURES SUCH AS LIGHT POLES, FENCES, UTILITIES, ETC NEAR OR ADJACENT TO RETAINING WALL.
37	6' TALL MINIMUM OPAQUE FENCE. FINAL COLOR/STYLE BY OWNER/TENANT. CONTRACTOR TO COORDINATE FENCING REQUIREMENTS WITH RETAINING WALL SUPPLIER AS NEEDED.
38	DEDICATED MOBILE ORDER PICK-UP PARKING SPACE. COORDINATE WITH OWNER/TENANT FOR SPECIFIC SIGNAGE AND/OR PAVEMENT MARKINGS. (TYP.)
39	COLUMN. (TYP.) (SEE ARCH/STRUCT PLANS FOR DETAILS)
40	CANOPY. (TYP.) (SEE ARCH PLANS)
41	CLEARANCE BAR. COORDINATE WITH OWNER/TENANT FOR SITE SPECIFIC DRIVE-THRU EQUIPMENT REQUIREMENTS.
42	MENU BOARD & SPEAKER POST SYSTEM. COORDINATE WITH OWNER/TENANT FOR FINAL LOCATIONS, FOUNDATION DETAILS, CONDUIT REQUIREMENTS, ETC.
43	CONTRACTOR TO COORDINATE WITH OWNER/TENANT FOR FINAL PATIO LAYOUT. SEE SHEET C1.2 FOR PROPOSED PATIO GRADING/DRAINAGE.
44	6" DRIVE-THRU VERTICAL CURB. (TYP.)
45	6" CURB, SEE SHEET C1.2 FOR PROPOSED GRADES.
46	CONCRETE WALL, SEE ARCH/STRUCT PLANS. PROVIDE THRU-WALL DRAINAGE OPENINGS AS NEEDED TO DRAIN PATIO AREA.
47	APPROXIMATE EXTENT OF UNDERGROUND DETENTION AREA. SEE SHEET C1.3.

NORTH
1"= 20' SCALE
20' 0 20' 40' FEET

CIVIL SITE PLAN

EXCEL
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Fond du Lac, WI 54935
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excelengineer.com

PROJECT INFORMATION

PROPOSED DEVELOPMENT FOR:
STARBUCKS & PANDA EXPRESS
LINCOLN WAY E • MASSILLON, OH 44646

PROFESSIONAL SEAL

PRELIMINARY DATES
DEC. 8, 2022
JAN. 10, 2023
JAN. 17, 2023
JAN. 20, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2178020

SHEET NUMBER
C1.1

SPECIFICATION NOTE:

SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

NOTES:

1. HANDICAP STALL AND ACCESS AISLES SHALL NOT EXCEED A SLOPE OF 1.50% IN ANY DIRECTION. HANDICAP STALL & ACCESS AISLES SHALL CONFORM TO ADA REQUIREMENTS (CURRENT EDITION)
2. ALL SIDEWALKS SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 1.50% AND RUNNING SLOPE OF 4.50% UNLESS OTHERWISE SPECIFIED.

INLET PROTECTION NOTE:

IP

CONTRACTOR SHALL PROVIDE TEMPORARY INLET PROTECTION FOR ALL CURB INLETS & CATCH BASINS ONSITE & OFFSITE IMMEDIATELY DOWNSTREAM OF THE PROJECT SITE PER LOCAL CODE.

STABILIZED CONSTRUCTION ENTRANCE NOTE:

CONTRACTOR SHALL PROVIDE STABILIZED CONSTRUCTION ENTRANCE AT CONSTRUCTION ENTRANCE FOR PROPOSED IMPROVEMENTS AS REQUIRED PER CODE.

CONCRETE WASHOUT NOTE:

CONTRACTOR SHALL PROVIDE CONCRETE WASHOUT AS REQUIRED PER CODE. FINAL LOCATION TBD BY CONTRACTOR.

OVERALL SITE STORMWATER DISCHARGE:

PROJECT SITE WILL DISCHARGE TO CITY STORM SEWER IN 25TH STREET ROW. SITE IS WITHIN OVERALL WATERSHED OF TUSCARAWAS RIVER

EROSION/SEDIMENT CONTROL NOTE:

THE CONTRACTOR SHALL PREVENT AND/OR REDUCE AND CONTROL SOIL EROSION RESULTING FROM THE PROPOSED IMPROVEMENTS. THE USE OF SILT FENCING, JUTE MATTING, TEMPORARY SEEDING, SILT CHECKS, INLET PROTECTION AROUND ALL CATCH BASINS, STABILIZED CONSTRUCTION ENTRANCES, ETC. WILL BE REQUIRED. SEDIMENT CONTROL STRUCTURES/DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL RAINWATER AND LAND DEVELOPMENT – OHIO'S STANDARDS FOR STORMWATER MANAGEMENT, LAND DEVELOPMENT, AND URBAN STREAM PROTECTION. SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS SET FORTH ON THE APPROVED STORM WATER POLLUTION PREVENTION PLAN IF APPLICABLE, OR AS DETAILED ON THE CONSTRUCTION PLANS, AS SPECIFIED BY THE CITY OF MASSILLON.

SURVEY NOTES

BASIS OF BEARING:

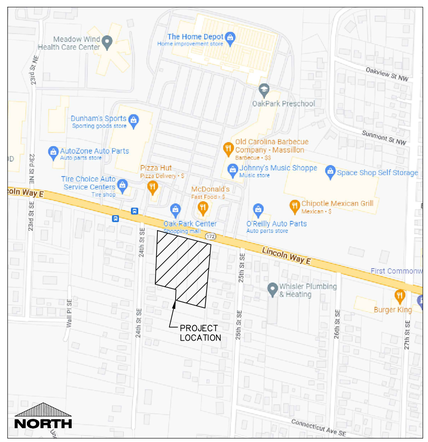
Bearings are based on Ohio State Plane North Zone (NAV88) by GPS observations.

NOTE:

All pins set are 5/8" x 30" rebar with yellow cap marked "J. Alban 7651".

FLOOD ZONE INFORMATION:

The subject parcel is located in Flood Zone "X", 'areas determined to be outside of the 0.2% annual chance floodplain', as shown on FEMA #39151C0191F, with an effective date of September 14, 2018.



PROJECT LOCATION MAP

NORTH

1"= 20' SCALE

20' 0 20' 40' FEET

CIVIL GRADING AND EROSION CONTROL PLAN

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PROJECT INFORMATION

PROPOSED DEVELOPMENT FOR:

STARBUCKS & PANDA EXPRESS

LINCOLN WAY E • MASSILLON, OH 44646

PROFESSIONAL SEAL

PRELIMINARY DATES

DEC. 19, 2022
JAN. 10, 2023
JAN. 17, 2023
JAN. 20, 2023

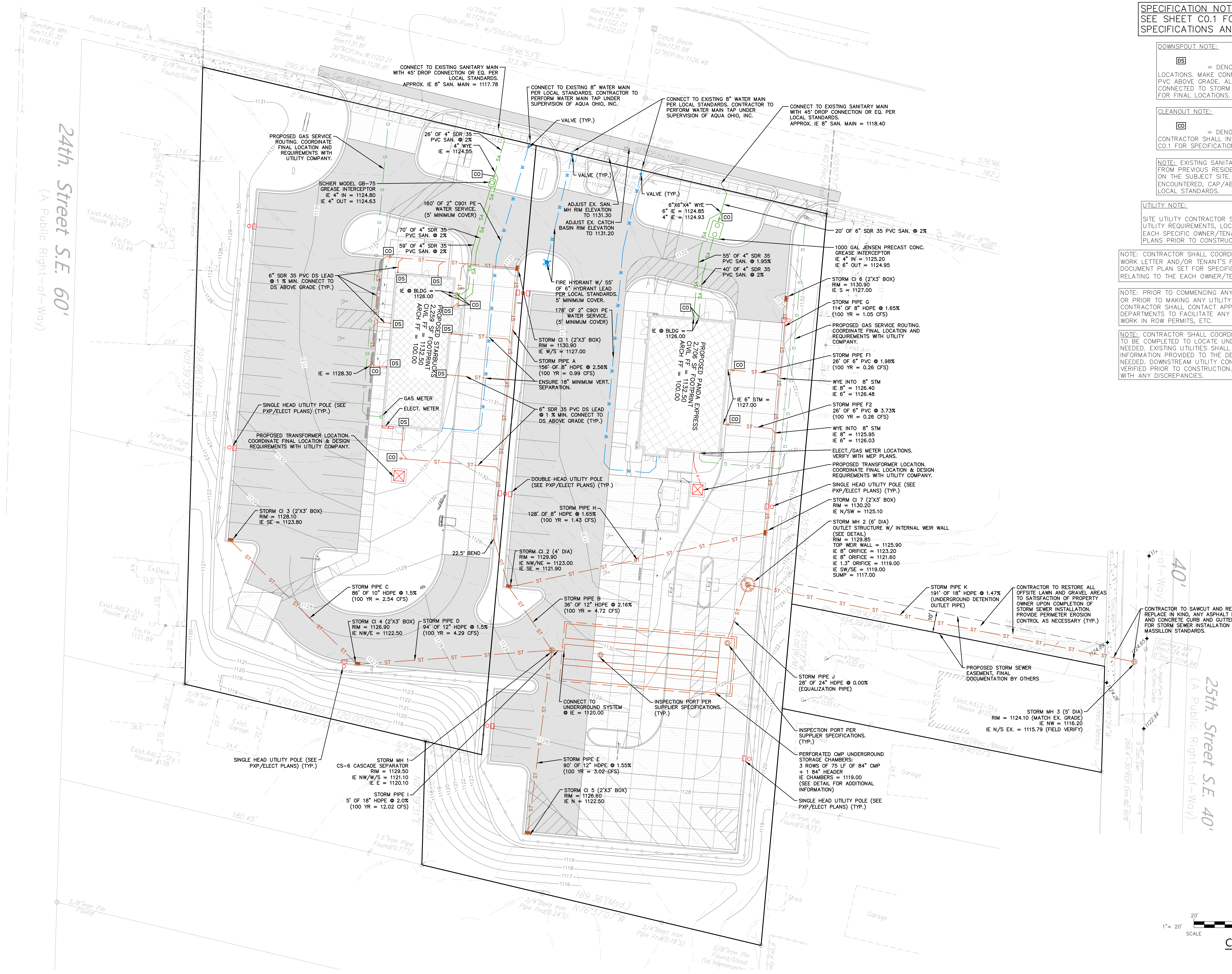
NOT FOR CONSTRUCTION

JOB NUMBER

2178020

SHEET NUMBER

C1.2



SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

DOWNSPOUT NOTE:

DS = DENOTES DOWNSPOUT LOCATIONS. MAKE CONNECTION TO DS WITH 6" PVC ABOVE GRADE. ALL DOWNSPOUTS SHALL BE CONNECTED TO STORM SEWER. SEE ARCH PLANS FOR FINAL LOCATIONS.

CLEANOUT NOTE:

CO = DENOTES LOCATIONS WHERE CONTRACTOR SHALL INSTALL CLEANOUTS, SEE C0.1 FOR SPECIFICATION.

NOTE: EXISTING SANITARY AND WATER LATERALS FROM PREVIOUS RESIDENTIAL HOMES MAY EXIST ON THE SUBJECT SITE. IF THESE SERVICES ARE ENCOUNTERED, CAP/ABANDON SERVICES PER LOCAL STANDARDS.

UTILITY NOTE:

SITE UTILITY CONTRACTOR SHALL COORDINATE FINAL UTILITY REQUIREMENTS, LOCATIONS, AND DEPTHS WITH EACH SPECIFIC OWNER/TENANT'S INTERNAL PLUMBING PLANS PRIOR TO CONSTRUCTION.

NOTE: CONTRACTOR SHALL COORDINATE WITH LANDLORD WORK LETTER AND/OR TENANT'S FINAL CONSTRUCTION DOCUMENT PLAN SET FOR SPECIFIC SITE REQUIREMENTS RELATING TO THE EACH OWNER/TENANT'S SCOPES OF WORK.

NOTE: PRIOR TO COMMENCING ANY WORK WITHIN CITY ROW OR PRIOR TO MAKING ANY UTILITY TAPS/CONNECTIONS, CONTRACTOR SHALL CONTACT APPROPRIATE PUBLIC UTILITY DEPARTMENTS TO FACILITATE ANY NECESSARY INSPECTIONS, WORK IN ROW PERMITS, ETC.

NOTE: CONTRACTOR SHALL COORDINATE A PRIVATE LOCATE TO BE COMPLETED TO LOCATE UNDERGROUND UTILITIES AS NEEDED. EXISTING UTILITIES SHALL BE FIELD VERIFIED AND INFORMATION PROVIDED TO THE DESIGN ENGINEER AS NEEDED. DOWNSTREAM UTILITY CONNECTIONS MUST BE VERIFIED PRIOR TO CONSTRUCTION. NOTIFY DESIGN ENGINEER WITH ANY DISCREPANCIES.

CIVIL UTILITY PLAN

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PROJECT INFORMATION

PROPOSED DEVELOPMENT FOR:
STARBUCKS & PANDA EXPRESS
LINCOLN WAY E • MASSILLON, OH 44646

PROFESSIONAL SEAL

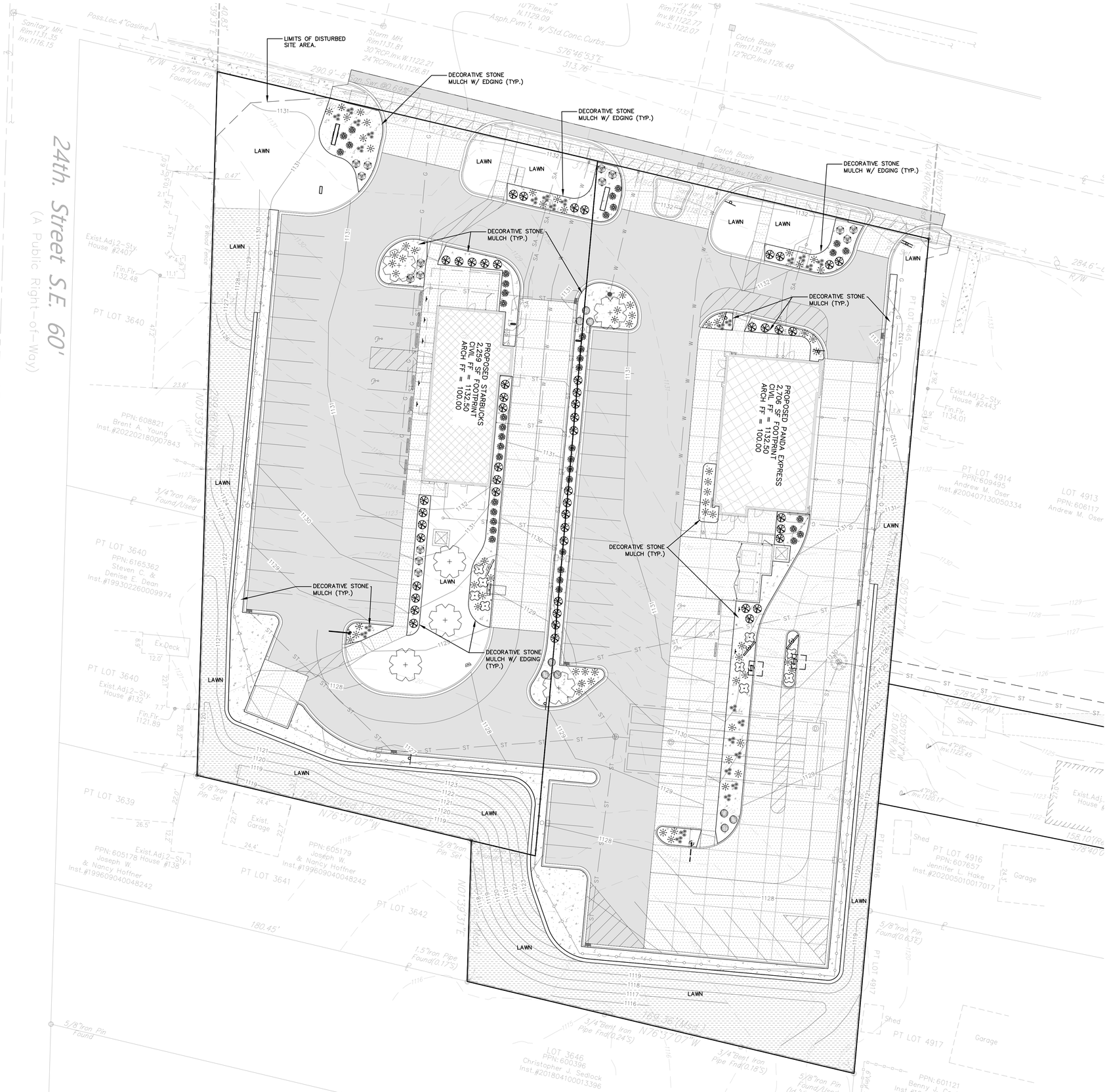
PRELIMINARY DATES

JAN. 10, 2023
JAN. 17, 2023
JAN. 20, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2178020

SHEET NUMBER
C1.3



SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

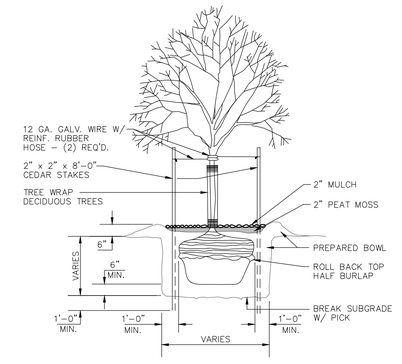
EROSION MATTING LOCATION

LANDSCAPING PLANTING SCHEDULE

SYMBOL	COMMON NAME	BOTANICAL NAME	PLANTED SIZE	QUANTITY
	DECIDUOUS TREES			
	Jack Flowering Pear	Pyrus calleryana 'Jaczam'	2" CAL	6
	DECIDUOUS SHRUBS			
	Gro-Low Fragrant Sumac	Rhus aromatica 'Gro-Low'	12"-24"	9
	Knockout Rose Bush	Rosa 'Radtko'	12"-24"	15
	Little Lime Hydrangea	Hydrangea paniculata 'Jane'	12"-24"	9
	Show Off Sugar Baby	Forsythia 'Nimbus'	12"-24"	41
	EVERGREEN SHRUBS			
	Taunton Yew	Tauntonii	24"	51
	PERENNIALS			
	Karl Foerster Feather Reedgrass	Calamagrotis x acutiflora 'Karl Foerster'	24"	26
	Landscaper to provide a variety of Grass species for diversity and disease resistance			
	Daylilies 'Stella de Ora'	Hemerocallis 'Stella de Ora'	1 gal pot	67
	Landscaper to provide a variety of Daylily species for diversity and disease resistance			

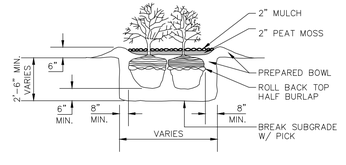
NOTE: LANDSCAPE CONTRACTOR SHALL REVIEW PROPOSED PLANTINGS WITH OWNER/TENANT PRIOR TO INSTALLATION. PROVIDE ALTERNATE PLANTINGS OR SUBSTITUTIONS AS DIRECTED BY THE OWNER/TENANT.

IRRIGATION NOTE: IRRIGATION SYSTEM SHALL BE PROVIDED ONSITE IN ACCORDANCE WITH OWNER/TENANT'S SPECIFIC IRRIGATION REQUIREMENTS. DESIGN-BUILD LANDSCAPE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL DESIGN AND LAYOUT OF THE IRRIGATION SYSTEM.



TREE PLANTING DETAIL
NO SCALE

NOTE:
FOR MASS PLANTINGS EXCAVATE ENTIRE BED & BACKFILL W/ PREPARED SOIL.



SHRUB PLANTING DETAIL
NO SCALE

NORTH
1"= 20'
20' 0 20' 40'
SCALE FEET

CIVIL LANDSCAPE AND RESTORATION PLAN

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PROJECT INFORMATION

PROPOSED DEVELOPMENT FOR:
STARBUCKS & PANDA EXPRESS
LINCOLN WAY E • MASSILLON, OH 44646

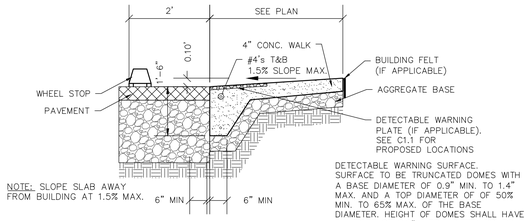
PROFESSIONAL SEAL

PRELIMINARY DATES
JAN. 20, 2023

NOT FOR CONSTRUCTION

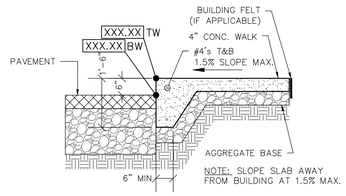
JOB NUMBER
2178020

SHEET NUMBER
C1.4

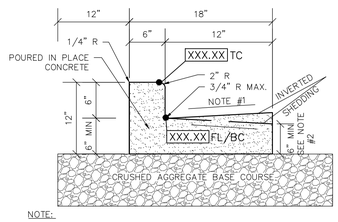


DETECTABLE WARNING SURFACE. SURFACE TO BE TRUNCATED DOMES WITH A BASE DIAMETER OF 0.9" MIN. TO 1.4" MAX. AND A TOP DIAMETER OF OF 50% MIN. TO 65% MAX. OF THE BASE DIAMETER. HEIGHT OF DOMES SHALL HAVE A HEIGHT OF 0.2". TRUNCATED DOMES SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6" MIN. AND 2.4" MAX. AND A BASE-TO-BASE SPACING OF 0.65" MIN. MEASURED BETWEEN THE MOST ADJACENT DOMES ON THE GRID. DOMES SHALL BE ALIGNED IN A SQUARE GRID PATTERN.

FLUSH WALK DETAIL
NO SCALE



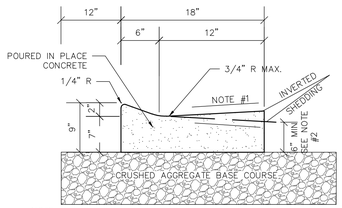
RAISED WALK DETAIL
NO SCALE



NOTE:

1. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MIN. GUTTER THICKNESS IS MAINTAINED.
3. SEE SITE PLAN & GRADING PLAN FOR INVERTED & SHEDDING CURB LOCATIONS

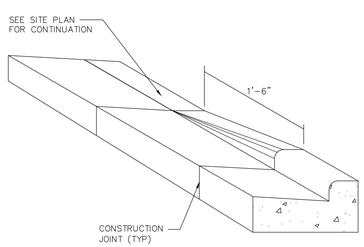
18" CONCRETE CURB & GUTTER DETAIL
NO SCALE



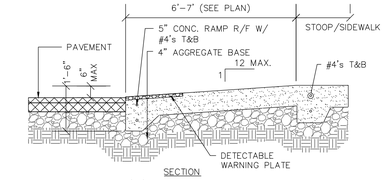
NOTE:

1. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MIN. GUTTER THICKNESS IS MAINTAINED.
3. SEE SITE PLAN & GRADING PLAN FOR INVERTED & SHEDDING CURB LOCATIONS

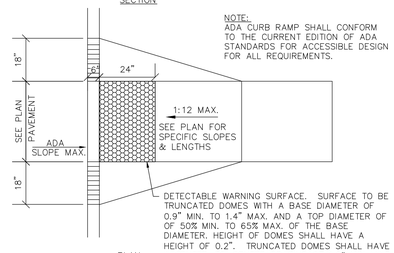
18" MOUNTABLE CURB & GUTTER DETAIL
NO SCALE



CURB TAPER DETAIL
NO SCALE



SECTION

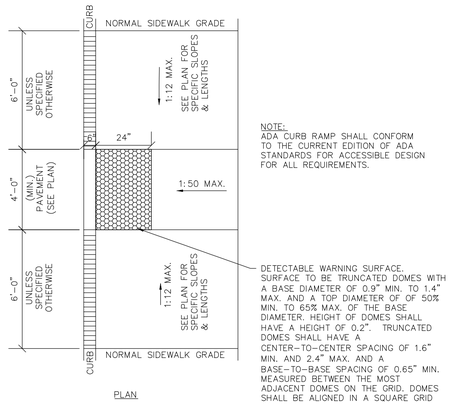


PLAN

NOTE:
ADA CURB RAMP SHALL CONFORM TO THE CURRENT EDITION OF ADA STANDARDS FOR ACCESSIBLE DESIGN FOR ALL REQUIREMENTS.

DETECTABLE WARNING SURFACE. SURFACE TO BE TRUNCATED DOMES WITH A BASE DIAMETER OF 0.9" MIN. TO 1.4" MAX. AND A TOP DIAMETER OF OF 50% MIN. TO 65% MAX. OF THE BASE DIAMETER. HEIGHT OF DOMES SHALL HAVE A HEIGHT OF 0.2". TRUNCATED DOMES SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6" MIN. AND 2.4" MAX. AND A BASE-TO-BASE SPACING OF 0.65" MIN. MEASURED BETWEEN THE MOST ADJACENT DOMES ON THE GRID. DOMES SHALL BE ALIGNED IN A SQUARE GRID PATTERN.

CURB RAMP DETAIL
NO SCALE

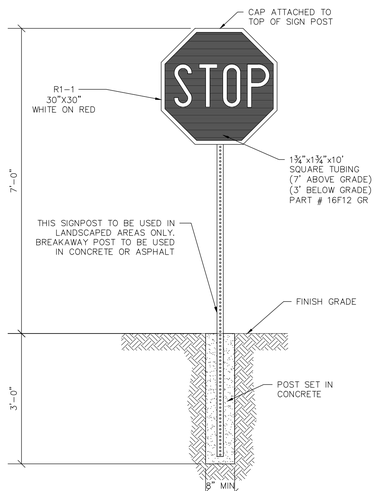


PLAN

NOTE:
ADA CURB RAMP SHALL CONFORM TO THE CURRENT EDITION OF ADA STANDARDS FOR ACCESSIBLE DESIGN FOR ALL REQUIREMENTS.

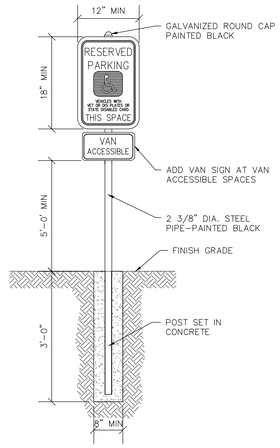
DETECTABLE WARNING SURFACE. SURFACE TO BE TRUNCATED DOMES WITH A BASE DIAMETER OF 0.9" MIN. TO 1.4" MAX. AND A TOP DIAMETER OF OF 50% MIN. TO 65% MAX. OF THE BASE DIAMETER. HEIGHT OF DOMES SHALL HAVE A HEIGHT OF 0.2". TRUNCATED DOMES SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6" MIN. AND 2.4" MAX. AND A BASE-TO-BASE SPACING OF 0.65" MIN. MEASURED BETWEEN THE MOST ADJACENT DOMES ON THE GRID. DOMES SHALL BE ALIGNED IN A SQUARE GRID PATTERN.

ADA SIDEWALK RAMP DETAIL
NO SCALE

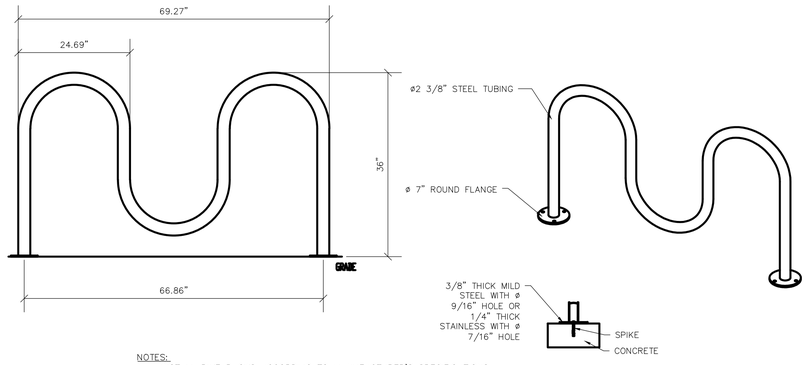


STOP SIGN WITH CONCRETE BASE DETAIL
NO SCALE

SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN
SPECIFICATIONS AND REQUIREMENTS

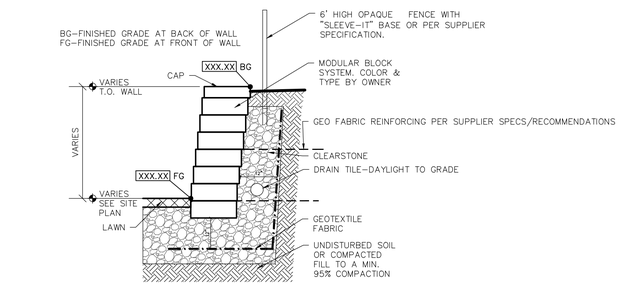


HANDICAP SIGNAGE WITH CONCRETE BASE DETAIL
NO SCALE



NOTES:
1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. OWNER SHALL SELECT COLOR & FINISH
3. SEE SITE PLAN FOR APPROX. LOCATION. COORDINATE W/ OWNER PRIOR TO CONSTRUCTION.
4. MANUFACTURED BY MADRAX; PRODUCT: CS200-5-IG(SF); DESCRIPTION: CAPITAL SQUARE BIKE RAKE 5 BIKE

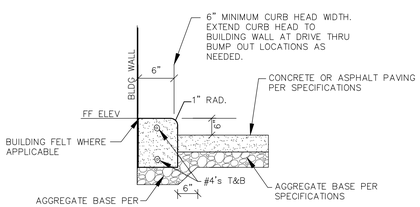
5 BIKE RACK DETAIL-WAVE TYPE
NO SCALE



NOTE:

THIS DETAIL IS INFORMATIONAL ONLY AND IS NOT FOR CONSTRUCTION PURPOSES. THE WALL MANUFACTURER/SUPPLIER IS RESPONSIBLE FOR FINAL DESIGN AND CONSTRUCTION DETAILS. WALL DESIGNER SHALL ACCOUNT FOR SITE IMPROVEMENTS LOCATED NEAR/ADJACENT TO WALL INCLUDING FENCE, LIGHT POLES, UTILITIES, ETC (SEE PLAN FOR LOCATIONS). CONTRACTOR TO COORDINATE PROVIDING STAMPED PLANS TO AHJ AS REQUIRED.

RETAINING WALL DETAIL
NO SCALE



DRIVE THRU VERTICAL CURB DETAIL
NO SCALE

CIVIL DETAILS

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

PROPOSED DEVELOPMENT FOR:
STARBUCKS & PANDA EXPRESS
LINCOLN WAY E • MASSILLON, OH 44646

PROFESSIONAL SEAL

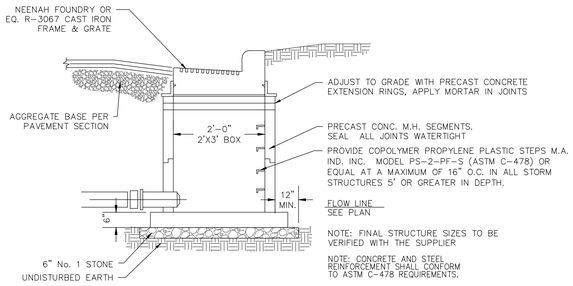
PRELIMINARY DATES
JAN. 20, 2023

NOT FOR CONSTRUCTION

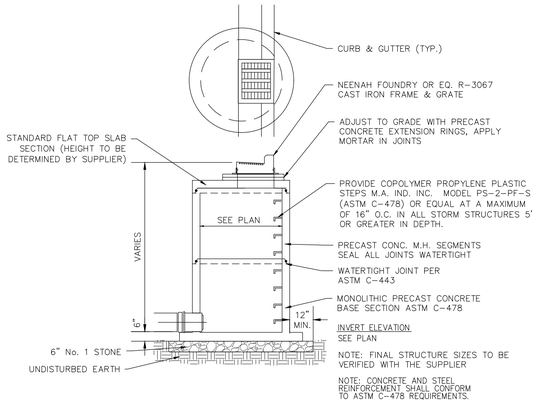
JOB NUMBER
2178020

SHEET NUMBER
C2.0

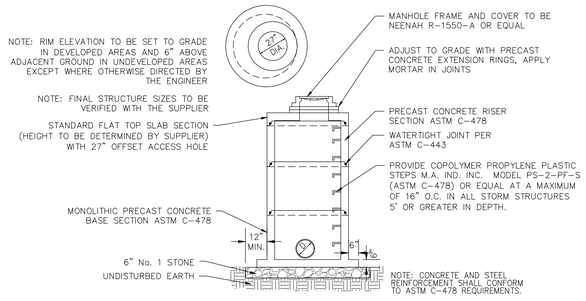
SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS



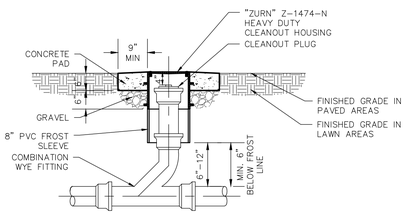
STORM CURB INLET DETAIL
NO SCALE



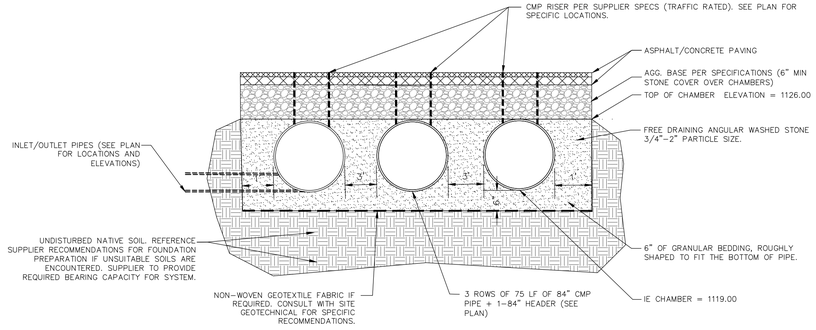
STORM CURB INLET W/ ROUND STRUCTURE DETAIL
NO SCALE



STORM MANHOLE DETAIL
NO SCALE



CLEANOUT TO GRADE DETAIL
NO SCALE



MINIMUM STORAGE REQUIREMENTS:

MINIMUM CHAMBER STORAGE = 9,700 CF
MINIMUM STONE STORAGE = 3,430 CF
MINIMUM TOTAL STORAGE = 13,130 CF

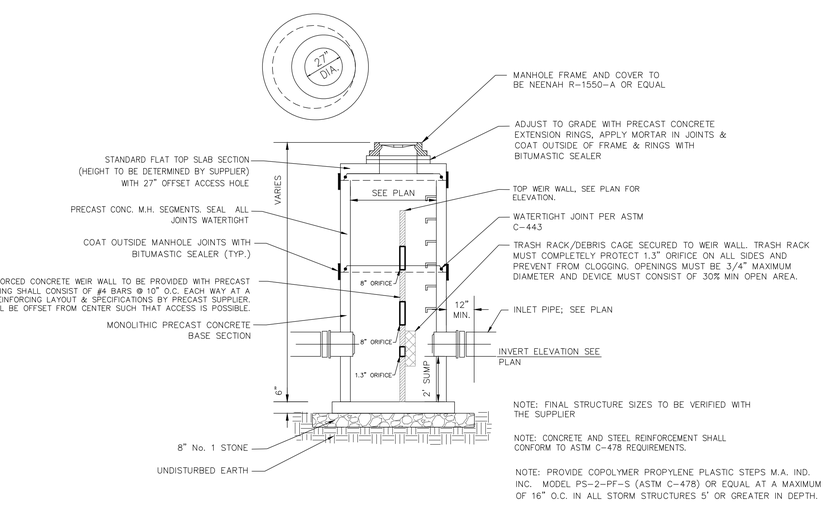
NOTES:

THIS DETAIL IS FOR REFERENCE ONLY. FINAL DESIGN & SPECIFICATIONS SHALL BE PROVIDED BY THE PIPE SUPPLIER/MANUFACTURER.

CONTRACTOR SHALL PROVIDE ADDITIONAL TEMPORARY EARTH COVER OVER CMP SYSTEM THROUGHOUT CONSTRUCTION UNTIL FINAL PAVING IS COMPLETED. FOLLOW SUPPLIER GUIDELINES.

SUPPLIER REPRESENTATIVE SHALL BE ONSITE FOR INSPECTION DURING INSTALLATION.

UNDERGROUND STORAGE CHAMBERS DETAIL
NO SCALE



NOTE: REFER TO SHEET C1.3 FOR ORIFICE/WEIR ELEVATIONS.

STORM MANHOLE OUTLET STRUCTURE
NO SCALE

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

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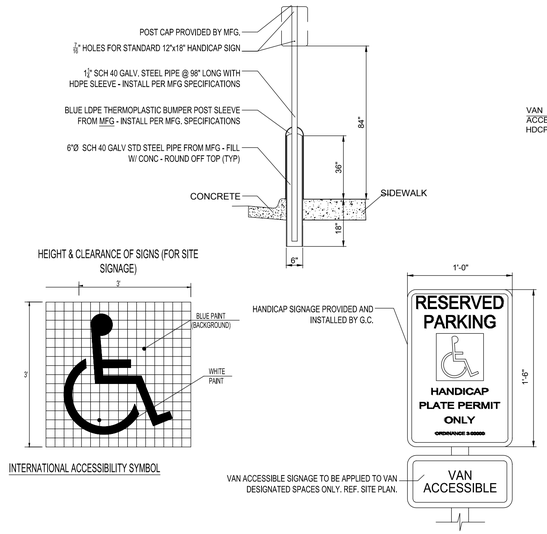
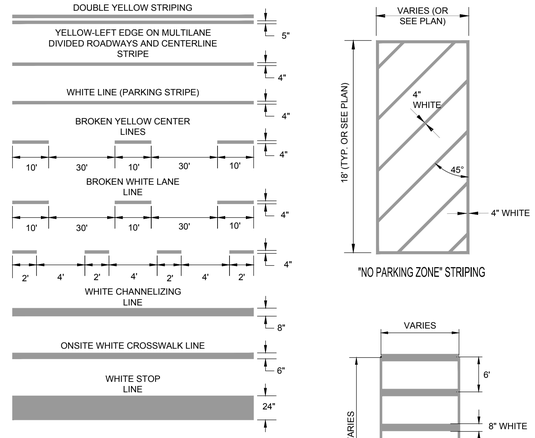


TYPICAL PANDA EXPRESS ACCESSIBLE AREA DETAIL (REFERENCE PLANS FOR SITE SPECIFIC INFORMATION)

NO SCALE



SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

TYPICAL PANDA EXPRESS PAVEMENT STRIPING AND MARKING

NO SCALE

PANDA EXPRESS GENERAL CONSTRUCTION NOTES:

CONTRACTOR SHALL COORDINATE FINAL LOCATION WITH SIGN COMPANY AND PANDA EXPRESS PM FOR FINAL LOCATION OF DRIVE THRU ELEMENTS (MENU BOARD, ORDER CANOPY, CLEARANCE BAR, AND DIRECTIONAL SIGNAGE) PRIOR TO INSTALLATION. CONTRACTOR SHALL ENSURE THAT PROPOSED UTILITIES, INCLUDING SITE LIGHTING CONDUIT ARE NOT INSTALLED SO THAT THEY WOULD CONFLICT WITH THE PLACEMENT OF THE DRIVE THRU ELEMENTS AND FOOTINGS.

CONTRACTOR SHALL PROVIDE CONCRETE PAVING BETWEEN FACE OF BUILDING AND BACK OF CURB ALONG DRIVE-THRU LANE AND ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING.

CONTRACTOR SHALL COORDINATE AND ADJUST LOCATION OF LOOP DETECTORS TO AVOID UTILITY CONFLICTS PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL INSTALL GENERAL UTILITY CONDUITS TO PLANTERS AROUND BUILDING AND PATIO. SEE ARCHITECTURAL/MEP PLANS FOR CONTINUATION.

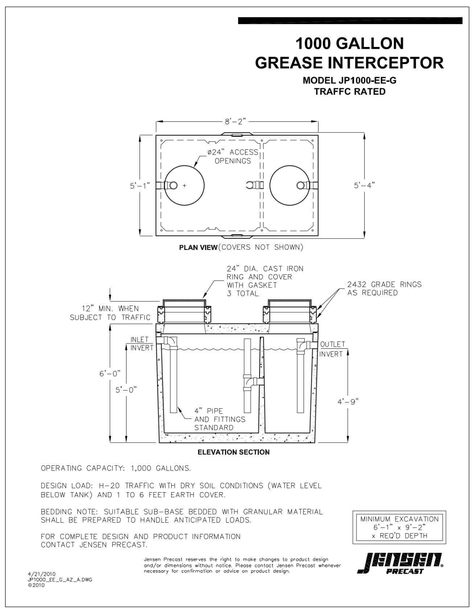
CONTRACTOR SHALL ENSURE 100% COVERAGE OF ALL LANDSCAPED AREAS WITHIN LIMITS OF WORK, INCLUDING POTENTIAL OFFSITE AREAS. COVERAGE SHALL INCLUDE BOTH LANDSCAPING AND IRRIGATION.

CONTRACTOR SHALL PROTECT ALL ITEMS OUTSIDE LIMITS OF CONSTRUCTION UNLESS OTHERWISE NOTED IN THE CONSTRUCTION PLANS OR SPECIFICATIONS.

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES (LOCATIONS AND ELEVATIONS) PRIOR TO STARTING CONSTRUCTION AND ALERT ENGINEER TO ANY DISCREPANCIES IMMEDIATELY.

THE GEOTECHNICAL INVESTIGATION AND ANY SUBSEQUENT ADDENDUMS IS CONSIDERED PART OF THE CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE REPORT'S RECOMMENDATIONS AND FINDINGS WITH THE OWNER, ENGINEER AND ARCHITECT PRIOR TO CONSTRUCTION. IMPLEMENTATION OF THE REPORT'S RECOMMENDATIONS MAY REQUIRE THE CONTRACTOR TO PERFORM ADDITIONAL WORK NOT SHOWN ON THE CIVIL PLANS INCLUDING BUT NOT LIMITED TO: EXCAVATION, REMEDIATION, DEWATERING, COMPACTION ETC.

THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL LOCAL, STATE, AND FEDERAL CERTIFICATION AND LICENSING REQUIREMENTS FOR CONSTRUCTION, INCLUDING BUT NOT LIMITED TO: LAND DISTURBANCE PERMITS, BUILDING PERMITS, DEMOLITION PERMITS, NPDES PERMITS, DEWATERING PERMITS, ETC.



1000 GAL GREASE TRAP

NO SCALE

PANDA EXPRESS IRRIGATION SPECIFICATIONS

GENERAL

A. GENERAL
1. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE INSTALLED AND OPERATIONAL BY THE TIME OF FINAL INSPECTION. THE ENTIRE IRRIGATION SYSTEM SHALL BE INSTALLED BY A LICENSED AND QUALIFIED IRRIGATION CONTRACTOR.
2. THE IRRIGATION SYSTEM WILL OPERATE ON POTABLE WATER, AND THE SYSTEM SHALL HAVE A REDUCED-PRESSURE BACKFLOW PREVENTION DEVICE INSTALLED TO PREVENT CONTAMINATION OF THE POTABLE SOURCE. THE BACKFLOW DEVICE SHALL BE ENCLOSED IN A VANDAL-RESISTANT ENCLOSURE.
3. ALL NON-TURF PLANTED AREAS SHALL BE DRIP IRRIGATED. SODDED AND SEEDED AREAS SHALL BE IRRIGATED WITH SPRAY OR ROTOR HEADS AT 100% HEAD-TO-HEAD COVERAGE.
4. ALL PLANTS SHARING SIMILAR HYDROZONE CHARACTERISTICS (WATER NEEDS, SUN EXPOSURE, ETC.) SHALL BE PLACED ON A VALVE DEDICATED TO PROVIDE THE NECESSARY WATER REQUIREMENTS SPECIFIC TO THAT HYDROZONE. THE PLANTING PLAN SHALL BE THE BASIS OF IRRIGATION DESIGN, AND THE IRRIGATION CONTRACTOR SHALL OBTAIN AND THOROUGHLY REVIEW A COPY OF THE PLANTING PLAN PRIOR TO SUBMITTING A BID FOR IRRIGATION DESIGN/BUILD SERVICES.
5. THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED, TO THE MAXIMUM EXTENT POSSIBLE, TO CONSERVE WATER BY USING THE FOLLOWING DEVICES AND SYSTEMS: MATCHED PRECIPITATION RATE TECHNOLOGY ON ROTOR AND SPRAY HEADS, RAIN SENSORS, AND MULTI-PROGRAM COMPUTERIZED IRRIGATION CONTROLLERS FEATURING SENSORY INPUT CAPABILITIES.
6. THE DESIGN OF SPRAY AND ROTOR AREAS SHALL ACHIEVE A DISTRIBUTION UNIFORMITY OF 0.7 OR BETTER.

B. SCOPE OF WORK
1. WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES, FEES, AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND/OR SHOWN ON THE IRRIGATION PLANS, NOTES, AND DETAILS.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS ENFORCED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS. IN CASE OF CONFLICT BETWEEN THESE PLANS AND LOCAL AND/OR STATE CODES, CODES SHALL PREVAIL.
3. THE INTENT OF THE IRRIGATION SYSTEM IS TO PROVIDE 100% COVERAGE OF ALL LANDSCAPE AREAS. THE IRRIGATION PLAN IS GENERALLY DIAGRAMMATIC; COORDINATE IRRIGATION INSTALLATION WITH UTILITY INSTALLATIONS. ACTUAL LOCATION OF CONTROLLER, BACKFLOW DEVICE, PIPING, VALVES, SPRAY HEADS, DRIP IRRIGATION, AND RELATED EQUIPMENT MAY NEED TO BE ADJUSTED BASED ON ACTUAL SITE CONDITIONS.

C. QUALIFICATIONS OF IRRIGATION CONTRACTOR
1. ALL WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE IRRIGATION CONTRACTING FIRM SPECIALIZING IN IRRIGATION SYSTEMS. SEE THE IRRIGATION PLAN FOR SPECIFIC EQUIPMENT AND SYSTEM LAYOUT.
2. THE IRRIGATION CONTRACTOR MUST HAVE ON ITS STAFF A TEXAS LICENSED IRRIGATOR, AS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY. A LICENSED IRRIGATOR OR LICENSED IRRIGATION INSTALLER SHALL BE PRESENT AT THE PROJECT SITE AT ALL TIMES AS WORK IS IN PROGRESS. THE CONTRACTOR SHALL DEMAND THAT WORK STOP UNTIL THE LICENSED IRRIGATOR OR LICENSED IRRIGATION INSTALLER TO BE PRESENT AT THE PROJECT SITE AND SUPERVISING ALL IRRIGATION WORK.
3. 3. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.

PRODUCTS

A. ALL MATERIALS SHALL BE NEW AND WITHOUT FLAWS OR DEFECTS OF ANY TYPE AND SHALL BE THE BEST OF THEIR CLASS AND KIND. ALL MATERIALS SHALL HAVE A MINIMUM GUARANTEE OF ONE YEAR AGAINST MATERIAL DEFECTS OR DEFECTIVE WORKMANSHIP. ALL MATERIALS SHALL BE OF THE FOLLOWING BRANDS: RAINBIRD, TORO, NETAFIM. OTHER MANUFACTURERS MAY BE PROPOSED TO THE OWNER, AS MAY BE APPROPRIATE.

B. THE BACKFLOW PREVENTION DEVICE SHALL BE REDUCED-PRESSURE TYPE, SIZED TO MEET IRRIGATION DEMAND AND MINIMIZE PRESSURE LOSSES. INSTALL BACKFLOW PREVENTION UNITS IN ACCORDANCE WITH IRRIGATION CONSTRUCTION DETAILS AND ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.

C. PIPING
1. PRESSURE SUPPLY LINES, DOWNSTREAM OF THE POINT-OF-CONNECTION:
   a. SCHEDULE 40 PVC FOR ALL PIPE 1-1/2" OR LESS
   b. CLASS 315 PVC FOR ALL PIPE 2" TO 2-1/2".
2. NON-PRESSURE LATERAL LINES (DOWNSTREAM FROM VALVES): CLASS 200 PVC
2. SLEEVES: SCHEDULE 40 PVC
3. FITTINGS: SCH. 40 PVC, EXCEPT AS NOTED OTHERWISE.

D. VALVES AND DRIP VALVE ASSEMBLIES: EACH VALVE SHALL BEAR A PRE-MANUFACTURED, NUMBERED WATERPROOF TAG BEARING A NUMBER CORRESPONDING TO ITS VALVE SEQUENCE OF OPERATION ON THE CONTROLLER.
1. VALVES FOR SPRAY AND ROTOR CIRCUITS SHALL BE COMMERCIAL-GRADE, GLOBE-TYPE, NORMALLY CLOSED.
2. VALVES SHALL HAVE A ONE-PIECE SOLENOID DESIGN AND FLOW CONTROL HANDLE.

E. QUICK COUPLERS: ¾", TWO-PIECE BODY, WITH LATCHING COVER.

F. BALL VALVES:
1. BRASS BALL VALVES SHALL BE INSTALLED WHEREVER PRESSURIZED MAINLINE CROSSES VEHICULAR AREAS, AND INSTALLED ON THE UPSTREAM SIDE OF THE MAINLINE.
2. PVC BALL VALVES SHALL BE INSTALLED AT THE ENDS OR DRIP RUNS, FOR FLUSHING DRIP LINES.
3. ALL BALL VALVES SHALL BE FULL-PORT, LINE-SIZE, AND INSTALLED IN THEIR OWN 9" ROUND VALVE BOXES.

G. VALVE BOXES: ALL VALVES BOXES SHALL BE LOCKING BOLT-DOWN TYPE, FURNISHED WITH LIDS AND BOLTS. BOXES SHALL BE OF A SIZE TO CONTAIN THE ENTIRE VALVE AND/OR VALVE ASSEMBLY. THE VALVE BOX LID SHALL HAVE THE VALVE STATION NUMBER HEAT-BRANDED INTO THE LID WITH 2" HIGH LETTERS. ONLY ONE VALVE SHALL BE INSTALLED PER VALVE BOX.

H. FIXED SPRAY HEADS AND ROTORS: PLASTIC BODY POP-UP, WITH A REMOVABLE PLASTIC SPRAY NOZZLE. NOZZLES SHALL BE HIGH-EFFICIENCY

I. INTEGRAL EMITTER DRIP TUBING: TUBING WITH INTEGRAL EMITTERS WELDED TO THE INSIDE WALL OF THE TUBING AS AN INTEGRAL PART OF THE TUBING ASSEMBLY.
1. IN GENERAL, THE FOLLOWING EMITTER FLOW RATES AND SPACING SHALL BE USED:
   a. CLAY AND CLAY LOAM SOILS: 0.6 GPH, EMITTERS SPACED AT 12" O.C., PARALLEL TUBING RUNS SPACED AT 18" O.C.
   b. MEDIUM-TEXTURE LOAM SOILS: 0.9 GPH, EMITTERS SPACED AT 12" O.C., PARALLEL TUBING RUNS SPACED AT 18" O.C.
   c. SANDY AND SANDY LOAM SOILS: 0.9 GPH, EMITTERS SPACED AT 12" O.C., PARALLEL TUBING RUNS SPACED AT 12" O.C.
2. CONTRACTOR SHALL GUARANTEE A MINIMUM OF TWO EMITTERS PER #1 OR #5 CONTAINER PLANT.

J. AUTOMATIC CONTROLLER: COMMERCIAL-GRADE MODULAR CONTROLLER, SIZE AS APPROPRIATE FOR THE NUMBER OF PERMANENT VALVES, PLUS ADDITIONAL MODULES AS NEEDED FOR ANY TEMPORARY IRRIGATED AREAS (SUCH AS NATIVE SEED). PROVIDE VANDAL-PROOF ENCLOSURE FOR ALL EXTERIOR INSTALLATIONS. PROVIDE LINE-VOLTAGE DISCONNECT SWITCH WITH GROUND FAULT PROTECTION.

K. 24 VOLT VALVE WIRE SHALL BE A MINIMUM OF #14 GAUGE, U.F. APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR IRRIGATION WIRE. EACH CONTROLLER SHALL HAVE A DIFFERENT COLOR STATION AND COMMON WIRE.
1. STATION WIRE - RED
2. COMMON WIRE - WHITE
3. EXTRA COMMON WIRES - BLUE

K. WIRE SPLICES SHALL BE ENCASED IN A WATERPROOF COMPOUND OR GEL. ALL FIELD SPLICES SHALL BE LOCATED IN A 6 INCH ROUND VALVE BOX.

L. RAIN SENSOR: WIRELESS RAIN/FREEZE SENSOR.

METHODS

A. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL ABOVE-GRADE IRRIGATION EQUIPMENT WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION, OR IRRIGATION CONTRACTOR MAY BE REQUIRED TO MOVE SUCH ITEMS AT HIS OWN COST. ENSURE FIELD COORDINATION IS MADE EARLY ON IN THE CONSTRUCTION PHASE SO PLACEMENT LOCATION IS CORRECT.

B. THE IRRIGATION CONTRACTOR SHALL MEET WITH THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK, AND SHALL OBTAIN ALL ENGINEERING, LANDSCAPE, AND OTHER APPLICABLE PLANS & DOCUMENTS. THE CONTRACTOR SHALL THOROUGHLY REVIEW THE PLANS AND REPORT ANY CONFLICTS OR DISCREPANCIES TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.

C. THE IRRIGATION CONTRACTOR SHALL NOT WILFULLY INSTALL ANY PORTION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADES OR DIMENSIONS EXIST. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS AND NECESSARY COSTS.

D. SEE UTILITY PLANS FOR IRRIGATION POINTS OF CONNECTION (TAP) AND DOMESTIC WATER SUPPLY.

E. THE IRRIGATION CONTRACTOR SHALL PAY ANY AND ALL FEES AND PERMITS ASSOCIATED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM.

F. AT LEAST SEVEN DAYS BEFORE BEGINNING WORK, CONFIRM THE STATIC WATER PRESSURE IS AT LEAST 55 PSI AND LESS THAN 70 PSI. IF STATIC WATER PRESSURE IS OUTSIDE OF THIS STATED RANGE, DO NOT PROCEED WITHOUT FIRST NOTIFYING THE OWNER IN WRITING, AND OBTAINING SUBSEQUENT DIRECTION FOR CORRECTIONAL MEASURES. SHOULD THE IRRIGATION CONTRACTOR CHOOSE TO BEGIN THE INSTALLATION WITHOUT SUCH NOTIFICATION, THE IRRIGATION CONTRACTOR WILL ASSUME THE RESPONSIBILITY FOR ALL COSTS INCURRED TO ENSURE THE SYSTEM IS WORKING PROPERLY. NO CHANGE ORDERS WILL BE AUTHORIZED IN SUCH CIRCUMSTANCES.
1. SHOULD STATIC WATER PRESSURE BE BELOW 55 PSI, A PUMP MAY BE REQUIRED FOR PROPER OPERATION OF THE IRRIGATION SYSTEM. THE IRRIGATION CONTRACTOR SHALL DISCUSS THE NEED FOR A PUMP WITH THE OWNER, AND PROPOSE OPTIONS FOR THE PROPER FUNCTIONING OF THE IRRIGATION SYSTEM.

G. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATIONS OF WALLS, STRUCTURES AND UTILITIES.

H. COORDINATE WITH THE OWNER THE PROPOSED LOCATIONS OF THE AUTOMATIC CONTROLLER AND ANY REQUIRED SLEEVES THROUGH THE BUILDING FOR CONTROL WIRES.

I. TRENCHING NEAR EXISTING TREES:
1. CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES, AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK, WITH A RADIUS EQUAL TO 1' FOR EVERY 1" OF TRUNK DIAMETER-AT-BREAST-HEIGHT (4.5' ABOVE THE AVERAGE GRADE AT THE TRUNK).
2. ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE EXCAVATION OR TRENCHING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ.
3. ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCHES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS.
4. ALL SEVERED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY. DO NOT USE ANY SORT OF SEALERS OR WOUND PAINTS.

J. BACKFILL
1. ALL BACKFILL MATERIAL SHALL BE SUBJECT TO APPROVAL BY THE OWNER. BACKFILL MATERIAL SHALL BE FREE FROM RUBBISH, ROCK LARGER THAN 1", LARGE STONES, BRUSH, SOD, FROZEN MATERIAL OR OTHER UNSUITABLE SUBSTANCES THAT MAY DAMAGE PIPE DURING THE BACKFILLING OPERATIONS. SEPARATE OUT ROCKS LARGER THAN 1 INCH IN ANY DIRECTION FROM EXCAVATED MATERIAL, AND REMOVE FROM AREAS TO RECEIVE LANDSCAPING. COVER FOR BOTH TOP AND SIDES OF PIPE SHALL BE A MINIMUM OF 2 INCHES OF ROCK-FREE SOIL, SAND, OR OTHER APPROVED MATERIAL.
2. IN THE EVENT THAT THE MATERIAL FROM THE EXCAVATION OR TRENCHING IS FOUND TO BE UNSUITABLE FOR USE IN BACKFILL, IT SHALL BE REMOVED FROM THE SITE AND PROPERLY AND LEGALLY DISPOSED OF BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL THEN PURCHASE AND AND FURNISH SUITABLE BACKFILL MATERIAL CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND OR OTHER APPROVED MATERIALS FREE OF DEBRIS.

K. BACKFLOW PREVENTER INSTALLATION: CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER SOURCES AT LOCATION SHOWN ON PLANS AND AS APPROVED BY THE OWNER, AND SHALL MAKE ANY MINOR CHANGES IN LOCATION AS MAY BE NECESSARY DUE TO ACTUAL SITE CONDITIONS. BACKFLOW PREVENTER HEIGHT SHALL BE AS PER LOCAL CODES AND MANUFACTURER'S INSTRUCTIONS. INSTALL A BRASS BALL VALVE IMMEDIATELY UPSTREAM OF THE BACKFLOW DEVICE TO SERVE AS AN ISOLATION VALVE. TO EVERY EXTENT POSSIBLE, INSTALL BACKFLOW PREVENTER IN A LOCATION SCREENED FROM PUBLIC VIEW (SUCH AS BEHIND A SHRUB ROW).

L. PIPING:
1. PIPE SIZE SHALL CONFORM TO THE STANDARD OF CARE FOR PIPE SIZES. THE IRRIGATION CONTRACTOR SHALL ENSURE THAT THE FLOW THROUGH ANY PIPE DOES NOT EXCEED 5 FPS.
2. MAINLINE PIPE AND WIRES SHALL BE INSTALLED WITH A MINIMUM COVER OF 18 INCHES. LATERAL PIPE SHALL BE INSTALLED WITH A MINIMUM COVER OF 12 INCHES.
3. ASSEMBLE ALL THREADED FITTINGS WITH TEFLON TAPE, WHICH SHALL BE APPLIED TO MALE THREADS ONLY.
4. ALL SOLVENT-WELD CONNECTIONS SHALL BE MADE WITH APPROVED SOLVENT-WELD PRIMER AND GLUE.
5. PIPE SHALL BE INSTALLED WITH A MINIMUM OF 4" HORIZONTAL CLEARANCE FROM ANY OTHER PIPE AND 2" VERTICAL CLEARANCE FROM ANY PIPES THAT CROSS OVER OR UNDER.

M. VALVES
1. VALVES SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS.
2. VALVE BOXES SHALL BE INSTALLED FLUSH WITH THE GRADE, WITH CLEAN PEA GRAVEL LOCATED BELOW THE VALVE. LOCATE BOXES WITHIN 12 TO 24" OF SIDEWALKS OR LANDSCAPE EDGES, WITH TOPS OF BOXES 1" ABOVE FINISH GRADE IN TURF, AND 3" ABOVE FINISH GRADE IN SHRUB AREAS (TO AVOID BEING COVERED BY MULCH).
3. EACH VALVE BOX COVER SHALL BE HEAT-BRANDED WITH THE CONTROLLER STATION NUMBER.

N. DRIP IRRIGATION EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS.
1. DRIP LINES IN AREAS WITH ORGANIC MULCH, SUCH AS SHREDDED WOOD, SHALL BE BURIED, NO MORE THAN 2" BELOW FINISH GRADE.
2. DRIP LINES IN AREAS WITH ROCK MULCH SHALL BE MOUNTED ON GRADE AND BENEATH LANDSCAPE FABRIC, AND SECURED IN PLACE WITH WIRE STAPLES AT A MAXIMUM OF 48" ON CENTER.

O. SPRAY, ROTOR, AND BUBBLER HEADS:
1. ALL SPRAY AND ROTOR HEAD LOCATIONS SHALL BE STAKED, FLAGGED AND/OR OTHERWISE CLEARLY MARKED ON THE GROUND PRIOR TO INSTALLATION. SPRINKLER HEAD STAKING SHALL BE INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE INSTALLATION.
2. ALL SPRAY HEADS SHALL BE CONNECTED WITH A 12 INCH MINIMUM LENGTH OF ½ INCH FLEX PVC. THE FLEX PVC SHALL BE SOLVENT WELDED TO SCHEDULE 40 PVC FITTINGS WITH WELD-ON #795 SOLVENT AND #P-70 PRIMER. ALL ROTORS SHALL BE CONNECTED TO LATERAL LINES WITH PRE-MANUFACTURED SWING JOINTS.
3. ALL ROTOR, SPRAY AND BUBBLER HEADS SHALL BE SET PERPENDICULAR AND FLUSH TO FINISH GRADE AND WITH A CLEARANCE OF FOUR INCHES (MINIMUM) FROM THE EDGE OF ANY BUILDINGS, WALLS, BOULDERS, AND HARDSCAPE, UNLESS OTHERWISE SPECIFIED.
4. ALL ROTOR, SPRAY AND BUBBLER HEADS AND VALVES SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM COVERAGE WITH MINIMUM OVERSPRAY ON WALKS, STREETS, WALLS, ETC.

P. AUTOMATIC CONTROLLER:
1. INSTALL THE CONTROLLER AT THE LOCATION INDICATED BY THE OWNER. INSTALL CONTROLLER WITH A BACKUP BATTERY AS RECOMMENDED BY THE MANUFACTURER.
2. THE IRRIGATION CONTRACTOR SHALL COORDINATE 120 V.A.C. ELECTRICAL POWER TO CONTROLLER AND DEDICATE ONE (1) 20-AMP BREAKER FOR EACH CONTROLLER. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL SOURCE TO THE CONTROLLER UNIT ONLY.
3. NO WIRE SPLICES SHALL BE ALLOWED EXCEPT AT VALVES AND CONTROLLER. WHERE SPLICES MAY BE NECESSARY DUE TO EXCESSIVELY LONG WIRE RUNS, THE CONTRACTOR SHALL MAKE ALL SPLICES IN 6" ROUND VALVE BOXES WITH 3M'S "DBY-DIRECT BURIAL SPLICE KIT". THE CONTRACTOR SHALL LABEL ALL WIRES WITH WATERPROOF TAGS AND MARKERS AT ALL SPLICES AND VALVE MANIFOLDS, AND SHALL LEAVE A 24" COIL OF EXCESS WIRE AT EACH CONNECTION.
4. PROVIDE #10 COMMON WIRE, DIRECT BURIAL, TO ALL REMOTE CONTROL VALVES.
5. CONNECT ALL DIRECT BURIAL WIRES TO VALVES USING 3M'S "DBY-DIRECT BURIAL SPLICE KIT" (UNLESS OTHERWISE SPECIFIED).
6. PROVIDE THREE ADDITIONAL IRRIGATION CONTROL WIRES ALONG EACH BRANCH OF MAINLINE FOR FUTURE EXPANSION. STUB ADDITIONAL CONTROL WIRES INTO BACK OF IRRIGATION CONTROLLERS.
7. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL CONTROL WIRE SLEEVES AND PIPE SLEEVES UNDER PAVED AREAS PRIOR TO PAVING - SEE SLEEVING NOTES.

Q. INSTALL THE RAIN SENSOR IN THE VICINITY OF THE CONTROLLER, AND COORDINATE LOCATION WITH THE OWNER. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THE RAIN SENSOR IS PLACED IN A LOCATION WHERE IT CAN RECEIVE ADEQUATE RAINFALL WITHOUT OBSTRUCTIONS. IF IT IS PLACED IN AN INADEQUATE LOCATION, THE IRRIGATION CONTRACTOR MAY BE REQUIRED TO RELOCATE IT AT NO ADDITIONAL COST TO THE OWNER.

R. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

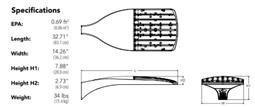
S. QUALITY CONTROL
1. PERFORM COVERAGE TESTS AFTER IRRIGATION SYSTEM IS COMPLETED, BUT PRIOR TO ANY PLANTING AND PERFORM TESTING IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
2. TEST SYSTEM TO ASSURE THAT ALL PLANTING AREAS ARE WATERED COMPLETELY AND UNIFORMLY.
3. MAKE ALL NECESSARY ADJUSTMENTS TO PROVIDE COMPLETE COVERAGE, INCLUDING REALIGNMENT OF HEADS AND REPLACEMENT OF NOZZLES.

T. CLEAN UP
1. DURING IRRIGATION EXCAVATION AND INSTALLATION, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION.
2. DISPOSED LEGALLY OF ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.

U. INSPECTION AND ACCEPTANCE
1. UPON COMPLETION OF THE WORK, THE IRRIGATION CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE IRRIGATION CONTRACTOR SHALL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.
2. WHEN THE INSPECTED WORK DOES NOT COMPLY WITH THESE REQUIREMENTS, THE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION WITHIN 24 HOURS.
3. THE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.
4. CONTROLLER CHART: THE IRRIGATION CONTRACTOR SHALL PROVIDE A 11" X 17" COLOR-CHART, LAMINATED COPY OF THE IRRIGATION LAYOUT AND PLACE IT IN THE CONTROLLER'S COVER. THE CONTROLLER CHART SHALL CLEARLY DELINEATE THE AREAS COVERED BY EACH VALVE, USING A SEPARATE COLOR FOR EACH ZONE.
5. TURN THE FOLLOWING ITEMS IN TO THE OWNER UPON COMPLETION OF THE INSTALLATION:
   a. QUICK COUPLER KEYS (2)
   b. CONTROLLER MANUAL (1)
   c. CONTROLLER KEYS (2)
   d. A MINIMUM OF (2) COPIES OF RECORD DRAWINGS. A RECORD DRAWING I

Specifications

EPA:	0.69 ft² (0.06 m²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.9 kg)



Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information **EXAMPLE:** DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature[1]	Color Rendering Index[1]	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P6 P2 P7 P3 P8 P4 P9 P5 **Rotated optics** P10° P12° P11° P13°	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K (this section 80CRI only, extended lead times apply) 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T1S Type I short T2M Type II medium T3M Type III medium T3LG Type III low-glare[2] T4M Type IV medium T4LG Type IV low-glare[2] TFTM Forward throw medium T5M Type V medium T5LG Type V low-glare T5W Type V wide BLC3 Type III Backlight control[3] BLC4 Type IV Backlight control[3] LCCO Left corner cutoff[3] RCCO Right corner cutoff[3]	MVOLT (120V-277V)[4] HVOLT (347V-480V)[4,5] XVOLT (277V - 480V)[5,6]	**Shipped included** SPA Square pole mounting (Ø3 drilling) RPA Round pole mounting (Ø3 drilling) SPA15 Square pole mounting Ø1.625drilling[7] RPA15 Round pole mounting Ø1.625drilling[7] SPA686 Square narrow pole mounting Ø3 drilling WBA Wall bracket[8]

Control options		Other options	Finish (required)
Shipped installed NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8' mounting height, ambient sensor enabled at 2fc[9,10,11] PIR High/low, motion/ambient sensor, 8–40' mounting height, ambient sensor enabled at 2fc[9,10,11] PER NEMA twist-lock receptacle only (controls ordered separately)[12] PER5 Five-pin receptacle only (controls ordered separately)[12,13]	PER7 Seven-pin receptacle only (controls ordered separately)[12,13] FAO Field adjustable output[14,15] BL30 Bi-level switched dimming, 30%[14,15] BL50 Bi-level switched dimming, 50%[14,15] DMG 0–10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[15] DS Dual switching[14,15,16]	**Shipped installed** SPD20KV 20kV surge protection HS Houseside shield (black finish standard)[17] LWG Left rotated optics[1] RWG Right rotated optics[1] CCE Coastal Construction[18] **Shipped separately** BSO External Glare Shield (reversible, field install required, matches housing finish) BS Bird Spikes (field install required)	DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

LITHONIA LIGHTING
COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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DSX1 LED
Rev. 11/10/22
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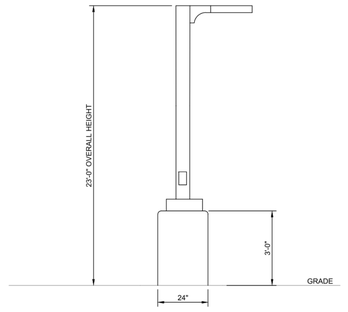

LIGHT POLE DETAIL

NO SCALE

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	Wattage
	L14	3	Lithonia Lighting	DSX1 LED P6 40K 80CRI T4M	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Type 4 Medium	1	19126	0.9	165.25	
	L24	2	Lithonia Lighting	DSX1 LED P6 40K 80CRI T4M	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Type 4 Medium	1	19126	0.9	330.5	
	WP2	1	Lithonia Lighting	WST LED P2 30K VW MVOLT	WST LED, Performance package 2, 3000 K, visual comfort wide, MVOLT	1	3276	0.9	25	
	C16	16	LEDRA BRANDS	NU3-RAPH-SW-16LM-27K-90CRI-D50	NU3 Round Adjustable Pinhole Static White 50D,No Accessory	1	1084	0.9	12.5	
	WP3	1	GAMA SONIC	GS-101PIR-G	8W LED SOLAR SECURITY LIGHT	1	860	0.9	8	
	L14H	4	Lithonia Lighting	DSX1 LED P6 40K 80CRI T4M HS	D-Series Size 1 Area Luminaire P6 Performance Package 4000K CCT 80 CRI Type 4 Medium Houseside Shield	1	16453	0.9	165.2497	

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #3	+	1.1 fc	18.5 fc	0.0 fc	N/A	N/A
PARKING LOT	X	2.1 fc	15.4 fc	0.5 fc	30.8:1	4.2:1

NORTH

1"= 20' SCALE 20' 0 20' 40' FEET

CIVIL SITE PHOTOMETRIC PLAN & DETAILS

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

PROPOSED DEVELOPMENT FOR:

STARBUCKS & PANDA EXPRESS

LINCOLN WAY E • MASSILLON, OH 44646

PROFESSIONAL SEAL

PRELIMINARY DATES
JAN. 17, 2023
JAN. 20, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2178020

SHEET NUMBER
C3.1

Appendix D: Construction General Permit

(Incorporated by reference – copy available on site. OR Included here in its entirety.)

Ohio EPA Permit No: OHC000003
Effective Date:
Expiration Date:

Ohio EPA
Authorization for Storm Water Discharges Associated with Construction Activity Under the National Pollutant Discharge Elimination System

Appendix E: Construction General Storm Water Permit Notice of Intent (NOI) and Acknowledgement Letter from Ohio EPA

Ohio Environmental Protection Agency

Mike DeWine, Governor
Jon Husted, Lt. Governor
Anne M. Vogel, Director

January 20, 2023

AKG Development
Tim Kaufmann
34N. Brentwood Blvd., Suite 201
Clayton MO 63105

Re: Approval Under Ohio EPA National Pollutant Discharge Elimination System (NPDES) – Construction Site Stormwater General Permit – OHC000005

Dear Applicant,

Your NPDES Notice of Intent (NOI) application is approved for the following facility/site. Please use your Ohio EPA Facility Permit Number in all future correspondence.

Facility Name:	AKG Development-Massillon-2178020
Facility Location:	Lincoln Way East & 24th Street SE
City:	Massillon
County:	Stark
Ohio EPA Facility Permit Number:	3GC13853*AG
Permit Effective Date:	January 20, 2023
Permit Expiration Date:	April 22, 2023

Please read and review the permit carefully. The permit contains requirements and prohibitions with which you must comply. A copy of the general permit may be viewed or downloaded from here. Coverage under this permit will remain in effect until a renewal of the permit is issued by the Ohio EPA.

If more than one operator (defined in the permit) will be engaged at the site, each operator shall seek coverage under the general permit. Additional operator(s) shall submit a Co-Permittee NOI to be covered under this permit. There is no fee associated with the Co-Permittee NOI form.

Please be aware that this letter only authorizes discharges in accordance with the above referenced General Permit. The placement to fill into regulated waters of the state may require a 401 Water Quality Certification and/or Isolated Wetlands Permit from Ohio EPA. Failure to obtain the required permits in advance is a violation of Ohio Revised Code 6111 and potentially subjects you to enforcement and civil penalties.

If you need assistance or have questions, please call (614) 644-2001 and ask for Construction Site Stormwater General Permit support or visit our website at epa.ohio.gov.

Sincerely,

Anne M Vogel

Anne M. Vogel
Director

Appendix F: Inspection Reports

General Information (see reverse for instructions)					
Name of Project		**Tracking No.**		**Inspection Date**	
Inspector Name, Title & Contact Information					
Inspection Location					

Inspection Frequency *(Note: you may be subject to different inspection frequencies in different areas of the site. Check all that apply.)*

Standard Frequency: ☐ Weekly ☐ Every 14 days and within 24 hours of a 0.25" rain

Increased Frequency: ☐ Every 7 days and within 24 hours of a 0.25" rain (for areas of sites discharging to sediment or nutrient-impaired waters or to waters designated as Tier 2, Tier 2.5, or Tier 3)

Reduced Frequency:

- ☐ Once per month (for stabilized areas)
- ☐ Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought)
- ☐ Once per month (for frozen conditions where earth-disturbing activities are being conducted)

Was this inspection triggered by a 0.25" storm event? ☐ Yes ☐ No

If yes, how did you determined whether a 0.25" storm event has occurred?

☐ Rain gauge on site ☐ Weather station representative of site. Specify weather station source:

Total rainfall amount that triggered the inspection (in inches)**:**

Unsafe Conditions for Inspection

Did you determine that any portion of your site was unsafe for inspection per CGP Part 4.1.5? ☐ Yes ☐ No

If "yes", complete the following:

- Describe the conditions that prevented you from conducting the inspection in this location:

- Location(s) where conditions were found:

Instructions for Filling Out "General Information" Section

Condition and Effectiveness of Erosion and Sediment (E&S) Controls (CGP Part 2.1) (see reverse for instructions)				
Type/Location of E&S Control [Add an additional sheet if necessary]	**Repairs or Other Maintenance Needed?***	**Corrective Action Required?***	**Date on Which Maintenance or Corrective Action First Identified?**	**Notes**
1. Stabilized Construction Exits	☐Yes ☐No	☐Yes ☐No		
2. Silt Fence	☐Yes ☐No	☐Yes ☐No		
3. Staging/Materials Storage Area	☐Yes ☐No	☐Yes ☐No		
4. Sanitary Facilities	☐Yes ☐No	☐Yes ☐No		
5. Topsoil Stockpile	☐Yes ☐No	☐Yes ☐No		
6. Storm Drain Inlets	☐Yes ☐No	☐Yes ☐No		
7. Concrete Washout Area	☐Yes ☐No	☐Yes ☐No		
8. Fiber Rolls	☐Yes ☐No	☐Yes ☐No		
9. Dumpsters	☐Yes ☐No	☐Yes ☐No		
10. Vegetated Swale	☐Yes ☐No	☐Yes ☐No		
11. Riprap Spillway at Stormwater Discharge Points	☐Yes ☐No	☐Yes ☐No		
12. Other	☐Yes ☐No	☐Yes ☐No		
13. Other	☐Yes ☐No	☐Yes ☐No		

*** Note:** The permit differentiates between conditions requiring repairs and maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition and requires repairs if controls are not operating as intended. Corrective actions are triggered only for specific, more serious conditions, which include: 1) A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or 3; 2) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1; 3) One of the prohibited discharges in Part 2.3.1 is occurring or has occurred; or 4) EPA requires corrective actions as a result of a permit violation found during an inspection carried out under Part 4.2. If a condition on your site requires a corrective action, you must also fill out a corrective action form found at www.epa.gov/npdes/stormwater/swppp. See Part 5 of the permit for more information.

Instructions for Filling Out the "Erosion and Sediment Control" Table

Condition and Effectiveness of Pollution Prevention (P2) Practices (CGP Part 2.3) (see reverse for instructions)				
Type/Location of P2 Practices	**Repairs or Other Maintenance Needed?***	**Corrective Action Required?***	**Date on Which Maintenance or Corrective Action First Identified?**	**Notes**
1. Area all slopes and disturbed areas not actively being worked properly stabilized?	☐Yes ☐No	☐Yes ☐No		
2. Area perimeter controls and sediment barriers adequately installed?	☐Yes ☐No	☐Yes ☐No		
3. Are discharge points free of any sediment deposits?	☐Yes ☐No	☐Yes ☐No		
4. Are storm drain inlets properly protected?	☐Yes ☐No	☐Yes ☐No		
5. Is the construction exit preventing sediment from being tracking into the street?	☐Yes ☐No	☐Yes ☐No		
6. Is trash from work areas collected and placed in covered dumpsters?	☐Yes ☐No	☐Yes ☐No		
7. Are washout facilities available, clearly marked, and maintained?	☐Yes ☐No	☐Yes ☐No		
8. Are vehicle/equipment fueling, maintenance, and cleaning areas free of spills, leaks, or any other material?	☐Yes ☐No	☐Yes ☐No		
9. Are materials that are potential stormwater contaminants stored inside or under cover?	☐Yes ☐No	☐Yes ☐No		
10. Are non-stormwater discharges properly controlled?	☐Yes ☐No	☐Yes ☐No		
11. Other	☐Yes ☐No	☐Yes ☐No		
12. Other	☐Yes ☐No	☐Yes ☐No		

Stabilization of Exposed Soil (CGP Part 2.2) (see reverse for instructions)			
Stabilization Area **[Add an additional sheet if necessary]**	**Stabilization Method**	**Have You Initiated Stabilization?**	**Notes**
1.		☐ YES ☐ NO If yes, provide date:	
2.		☐ YES ☐ NO If yes, provide date:	
3.		☐ YES ☐ NO If yes, provide date:	
4.		☐ YES ☐ NO If yes, provide date:	
5.		☐ YES ☐ NO If yes, provide date:	

Description of Discharges (CGP Part 4.1.6.6) (see reverse for instructions)	
Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? ☐ Yes ☐ No **If "yes", provide the following information for each point of discharge:**	
Discharge Location **[Add an additional sheet if necessary]**	**Observations**
1.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
2.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:

Contractor or Subcontractor Certification and Signature
(see reverse for instructions)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor: _____ **Date:**

Printed Name and Affiliation: _____

Certification and Signature by Permittee
(see reverse for instructions)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Permittee or
"Duly Authorized Representative": _____ **Date:**

Printed Name and Affiliation: _____

Appendix G – Corrective Action Log

Project Name:
WWIP #:
SWPPP Contact:

Inspector Date	Inspector Name(s)	Description of BMP Deficiency	Corrective Action Needed (including planned date/responsible person)	Date Action Taken/Responsible person

Appendix H – SWPPP Amendment Log

Project Name:
WWIP #:
SWPPP Contact:

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

Appendix I – Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

_____

_____

Signature: _____

Title: _____

Date: _____

Appendix J – Grading and Stabilization Activities Log

Project Name:
WWIP #:
SWPPP Contact:

Date Grading Activity Initiated	Description of Grading Activity	Date Grading Activity Ceased (Indicate Temporary or Permanent)	Date When Stabilization Measures are Initiated	Description of Stabilization Measure and Location

Appendix K – SWPPP Training Log

Stormwater Pollution Prevention Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- ❑ **Erosion Control BMPs**
- ❑ **Emergency Procedures**
- ❑ **Sediment Control BMPs**
- ❑ **Good Housekeeping BMPs**
- ❑ **Non-Stormwater BMPs**

Specific Training Objective:_____

_____

Attendee Roster: *(attach additional pages as necessary)*

No.	**Name of Attendee**	**Company**
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Appendix L – Delegation of Authority Form

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in _____ (Reference State Permit), and that the designee above meets the definition of a "duly authorized representative" as set forth in _____ (Reference State Permit).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _

Company: _

Title: _____

Signature: _____

Date: _____