

THE CHILDREN'S MUSEUM OF CLEVELAND GREEN INFRASTRUCTURE PROJECT

3813 EUCLID AVENUE CLEVELAND, OH 44115

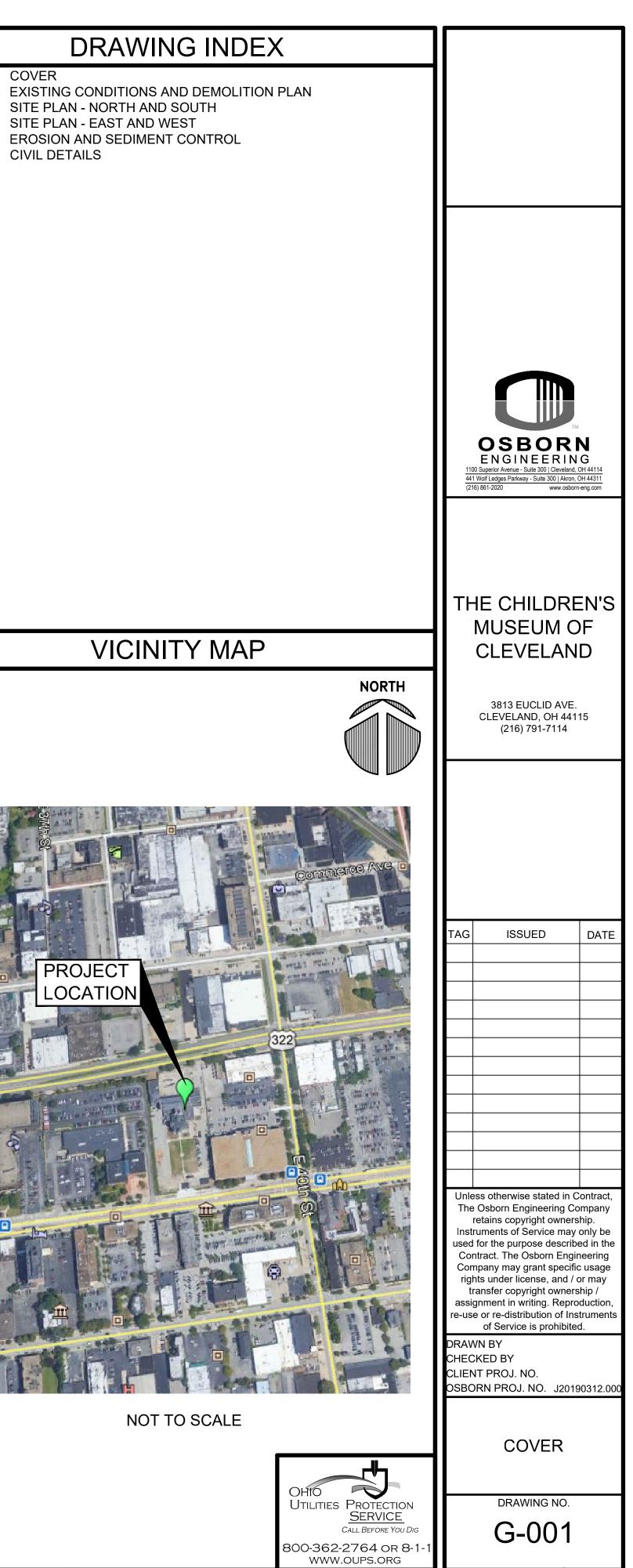
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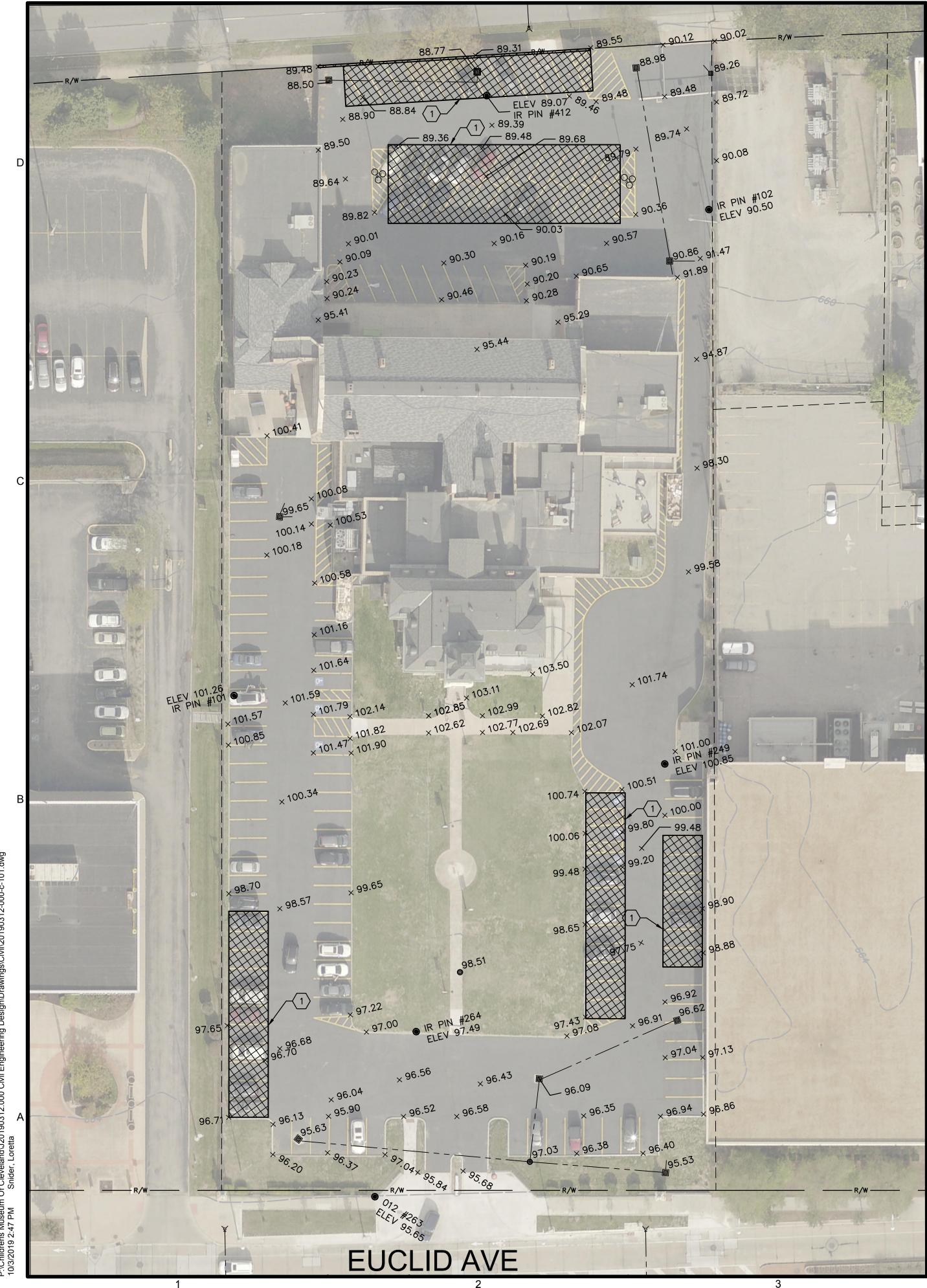
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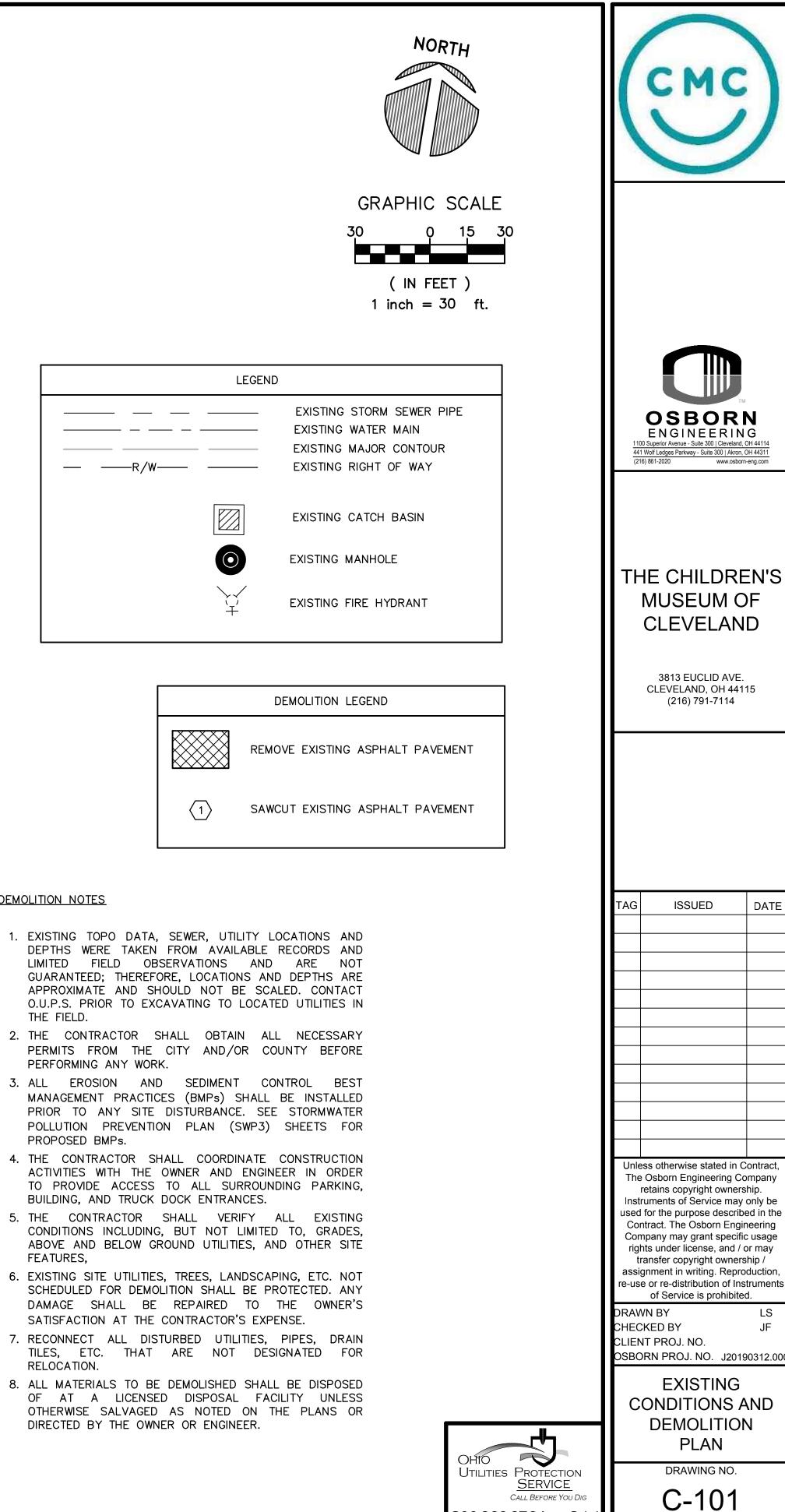
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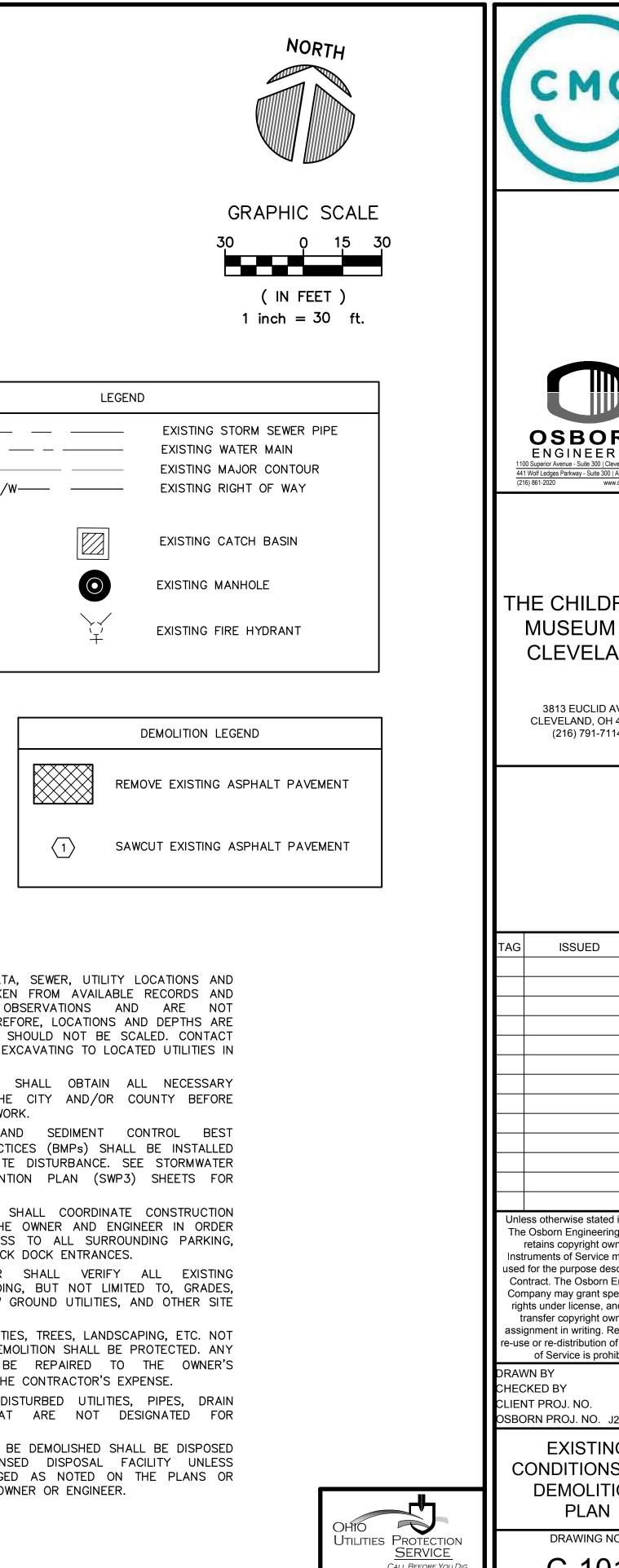
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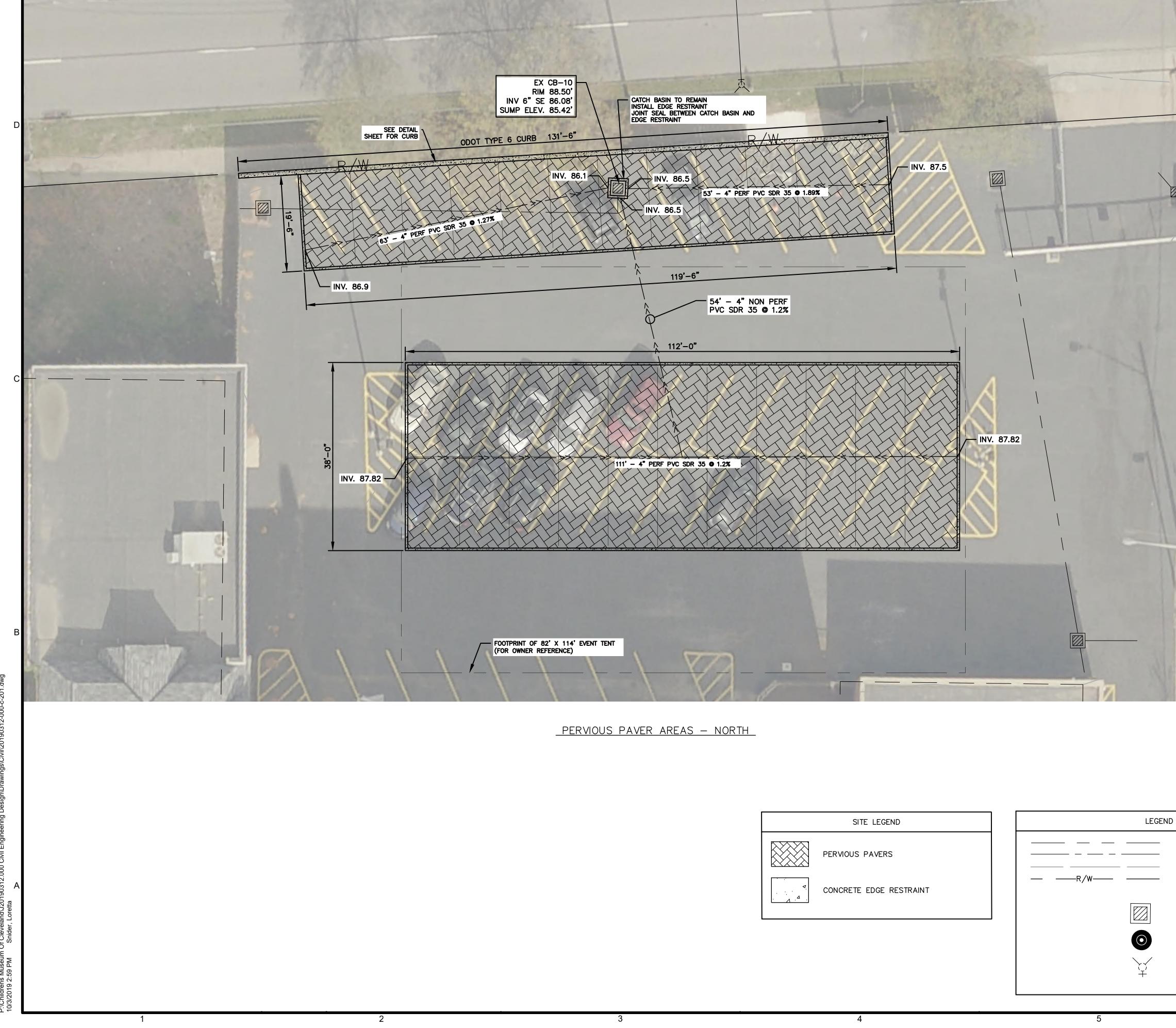
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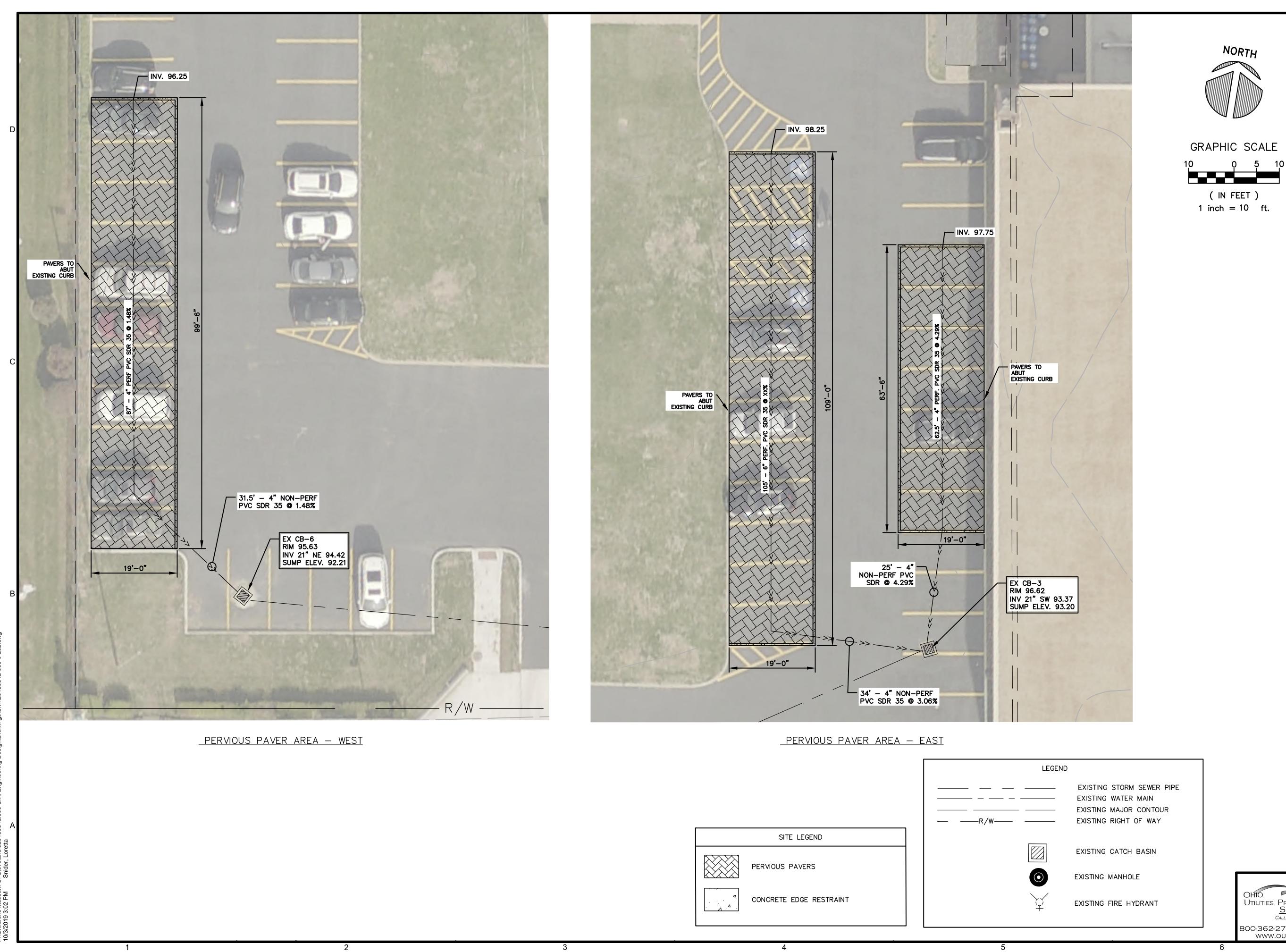
DEMOLITION NOTES

- THE FIELD.
- PERFORMING ANY WORK.
- PROPOSED BMPs.
- FEATURES,
- RELOCATION.

800-362-2764 or 8-1-WWW.OUPS.ORG



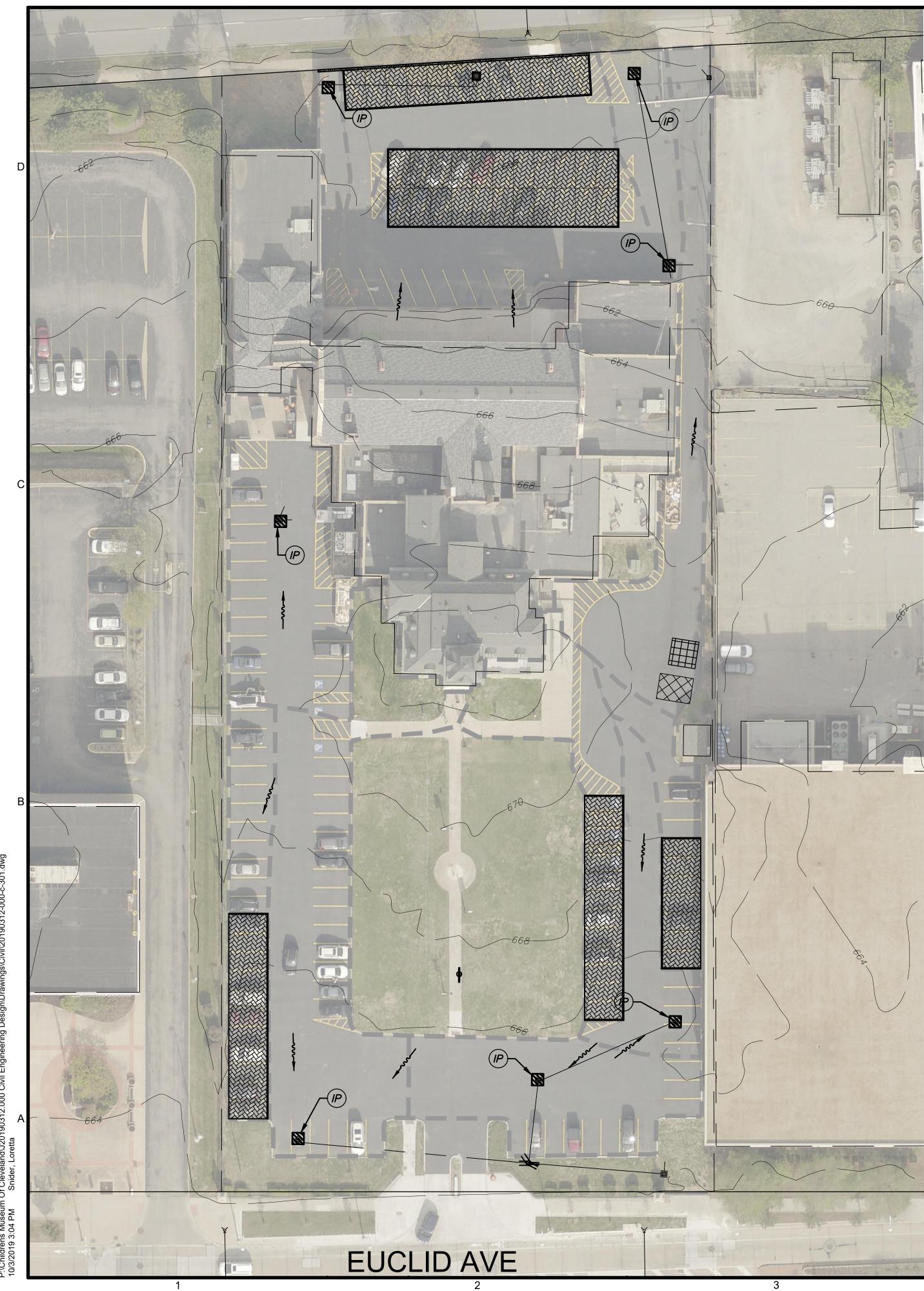
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	10	APHIC SCALE 0 5 10 (IN FEET) inch = 10 ft.				
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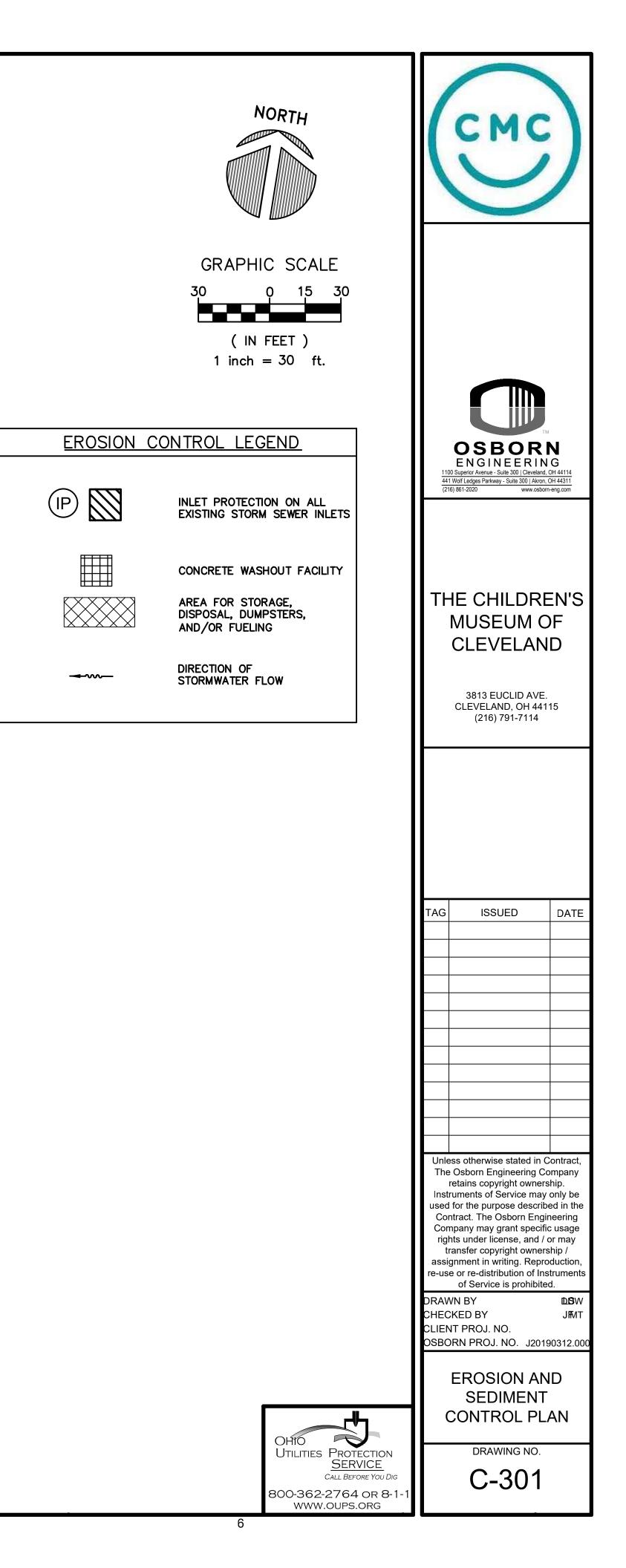


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TO SUPERIOR OF A CONTRACTOR OF
THE CHILDREN'S MUSEUM OF CLEVELAND 3813 EUCLID AVE. CLEVELAND, OH 44115 (216) 791-7114
TAG ISSUED DATE
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SITE INFORM	<u>SEDIMENT CONTROL GENERAL NOTES</u> .TION:
	IILDRENS MUSEUM OF CLEVELAND
CLEVEL CONTA	UCLID AVE. AND, OH 44115 CT: MARIA CAMPANELLI (216) 791—7114 EXT. 16
	POSED IMPROVEMENTS INCLUDE REMOVING AND REPLACING EXISTING ASPHALT PAVEMENT PARKING WITH PERMEABLE
	II. ITE AREAS ARE ANTICIPATED TO BE IMPACTED AS A PART OF THE PLAN. EXCESS SOIL (IF ENCOUNTERED) SHALL BE FROM THE SITE AND DISPOSED OF AT A LAWFUL FACILITY.
	A INFORMATION: DISTURBED AREA: 0.30 AC
AME AND L	DCATION OF RECEIVING STREAM, SURFACE WATER, OR MS4: CITY OF CLEVELAND COMBINED SEWERS CONSTRUCTION SEQUENCING:
. PERFORM	EROSION AND SEDIMENT CONTROL MEASURES INCLUDING SILT FENCE/SILT SOCK AND INLET PROTECTION. I CLEARING AND GRUBBING INCLUDING EXCAVATION AND DEMOLITION WORK. UNDERGROUND UTILITIES.
. INSTALL . INSTALL	PERMEABLE PAVER SYSTEM. PERMANENT SEEDING AND MULCHING. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ONCE PERMANENT SEEDING HAS BEEN ESTABLISHED.
. LAND-DI LAND-DI AUTHORI	STURBING ACTIVITIES MUST COMPLY WITH ALL APPLICABLE LOCAL CODES, REGULATIONS AND ORDINANCES. ALL STURBING ACTIVITIES SHALL BE SUBJECT TO INSPECTION AND SITE INVESTIGATION BY THE LOCAL JURISDICTIONAL TY AND/OR THE STATE EPA. FAILURE TO COMPLY WITH LOCAL CODES, REGULATIONS AND/OR ORDINANCES IS
DISCHAR	TO LÉGAL ENFORCEMENT ACTION. NO SOLID OR LIQUID WASTE, INCLUDING BUILDING MÀTERIALS, SHALL BE GED IN STORMWATER RUNOFF. SION AND SEDIMENT CONTROL PRACTICES ARE SUBJECT TO FIELD MODIFICATION AT THE DISCRETION OF THE LOCAL
JURISDIC	TIONAL AUTHORITY, THE OWNER OR OWNER'S REPRESENTATIVE, THE ENGINEER, AND/OR THE STATE EPA.
ENSURE MAINTEN	CONTINUED PERFORMANCE OF THE INTENDED FUNCTION. IF THE CONTROL PRACTICE IS IN NEED OF REPAIR OR ANCE, IT MUST BE REPLACED OR REPAIRED AS SOON AS POSSIBLE.
SITES SU	ATERING FLOWS SHALL BE SILT-FREE PRIOR TO DISCHARGE, AND DISCHARGE SHALL BE DIRECTED TO STABILIZED ICH AS STREAMS, PONDS, STORM SEWERS OR EXISTING GRASSED DRAINAGE WAYS ACCEPTABLE TO THE OWNER. DO CHARGE ONTO EXPOSED SOILS OR ANY OTHER SITE WHERE FLOWS COULD CAUSE EROSION.
SHRUBS	ATION SHALL TAKE PRECEDENCE OVER REMOVAL WITHIN THE TEMPORARY WORK LIMITS. REMOVE ONLY THOSE TREES, AND STRUCTURES NECESSARY TO COMPLETE CONSTRUCTION AND MAINTAIN THE NEW FACILITIES. REPLACEMENT "OF REMOVED ITEMS SHOULD OCCUR WHEREVER POSSIBLE.
	ED TOPSOIL AND MATERIALS SHALL BE PROTECTED WITH EROSION CONTROL BARRIERS OR TEMPORARY SEEDING.
OF TREE	TOPSOIL OR HEAVY EQUIPMENT SHALL BE STORED WITHIN 200 FEET OF A STREAM BANK OR WITHIN THE DRIPLINE AREAS. TURBED VEGETATION IS TO BE RESEEDED AS PART OF RESTORATION UNLESS THE AREAS WILL BE PAVED OR
OCCUPIE	
. CONTRAC	TOR SHALL INSPECT ALL INSTALLATIONS OF SOIL EROSION AND SEDIMENTATION CONTROL METHODS DAILY. ANY
THE PRO) OR NON-FUNCTIONAL CONTROLS SHALL BE REPAIRED IMMEDIATELY AND MAINTAINED THROUGH THE DURATION OF JECT OR UNTIL STABILIZED VEGETATION IS ESTABLISHED. IRNING OF BRUSH, FELLED TREES OR SITE DEBRIS IS STRICTLY PROHIBITED.
2. THE COI	ATRACTOR SHALL PROVIDE REGULAR SWEEPING OF ADJACENT STREETS DURING CONSTRUCTION AND REMOVE ANY AUSED BY CONSTRUCTION ACTIVITY.
3. NOTE TH STORM N STORM S	AT NO SOLID (OTHER THAN SEDIMENT) OR LIQUID WASTE, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED IN VATER RUNOFF. UNDER NO CIRCUMSTANCE SHALL CEMENT TRUCKS WASH—OUT DIRECTLY INTO A DRAINAGE CHANNEL, IEWER OR SURFACE WATERS OF THE STATE. A SHALLOW EXCAVATION OR DIKED AREA IS REQUIRED FOR CONTROL OF
4. CONSTRU	ATERIALS. PROVIDE A DESIGNATED LOCATION FOR THE CONTROL OF NON-SEDIMENT POLLUTANTS. ICTION ENTRANCE(S) AND ACCESS DRIVE(S) LOCATION SHOWN MAY VARY IF THE CONTRACTOR PREFERS AN TE LOCATION AND IS APPROVED BY THE OWNER AND GOVERNING INSPECTOR.
PECIFICATIO	IS FOR MULCH:
MULCH S	HALL CONSIST OF ONE OF THE FOLLOWING:
(TWO TO SURFACE	- STRAW SHALL BE UNROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/AC. OR 90LBS/1,000 SQ. FT. THREE BALES). THE STRAW MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL IS HAND-SPEAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQ FT SECTIONS AND PLACE TWO 45-LB. BALES W IN EACH SECTION.
	EDERS – WOOD CELLULOSE FIBER SHOULD BE USED AT 2,000 LB/AC OR 46 LB/1,000 SQ. FT.
	– OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING TO MANUFACTURER'S ENDATIONS OR WOOD CHIPS APPLIED AT 10–20 TONS/AC.
	NCHORING - MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR RUNOFF.
. MECHANI MATERIA	LOWING ARE ACCEPTABLE METHODS FOR ANCHORING MULCH. CAL – USE A DISK, CRIMPER, OR SIMILAR TYPE TOOL SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH L INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT BE LEFT GENERALLY THAN 6 INCHES.
. MULCH	NETTINGS – USE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, FOLLOWING ALL PLACEMENT AND NG SUGGESTIONS. USE IN AREAS OF WATER CONCENTRATION AND STEEP SLOPES TO HOLD MULCH IN PLACE.
	EMULSION – FOR STRAW MULCH, APPLY AT THE RATE OF 160 GAL/AC (0.1 GAL/SY) INTO THE MULCH AS IT IS PPLIED OR AS RECOMMENDED BY THE MANUFACTURE.
SYNTHET	IC BINDERS – FOR STRAW MULCH, SYNTHETIC BINDERS AS ACRYLIC DLR(AGRI-TAC), DCA-70, PETROSET, TERRA EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.
. WOOD C	ELLULOSE FIBER — WOOD CELLULOSE FIBER MAY ME USED FOR ANCHORING STRAW. THE FIBER BINDER SHALL BE AT A NET DRY WEIGHT OF 750 LB.AC. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE
MIXTURE	SHALL CONTAIN A MAXIMUM OF 50 LB/100 GAL OF WOOD CELLULOSE FIBER.
LANTING TIN	IS FOR PERMANENT SEEDING: IE: PROCEED WITH AND COMPLETE LAWN WORK AS RAPIDLY AS PORTIONS OF THE SITE BECOME AVAILABLE, WORKING
MTHIN SEASO	ONAL LIMITATIONS FOR EACH TYPE OF LANDSCAPE WORK REQUIRED. NORMAL SEEDING TIMES ARE AS FOLLOWS: 5 TO JUNE 10 15 TO OCTOBER 1

PROVIDE FRESH, CLEAN, NEW CROP SEED COMPLYING WITH TOLERANCE FOR PURITY AND GERMINATION ESTABLISHED CIAL SEED ANALYSTS OF MINIMUM PERCENTAGES OF PURITY, GERMINATION AND MAXIMUM PERCENTAGES OF WEED LOWS: OLIGER SEED COMPANY (330) 724-1266 FESCUE PLUS MIX.

AL AND NAME MILLENNIUM	PERCENTAGE BY WEIGHT (MINIMUM)	PERCENTAGE PURITY (MIMIMUM)	PERCENTAGE GERMINATION (MINIMUM)	PERCENTAGE WEED SEED (MINIMUM)	
SCUE	20%	85%	80%	1.00%	
TALL FESCUE	20%	85%	80%	1.00%	
RE II TALL FESCUE	20%	85%	80%	1.00%	
TALL FESCUE	20%	85%	80%	1.00%	
AR SLT AL RYEGRASS	10%	85%	80%	1.00%	
WN YBLUEGRASS	10%	85%	80%	1.00%	

LIMING, FERTILIZING, RAKING, AND COMPACTING OPERATIONS ONLY AT TIMES WHEN LOCAL WEATHER AND OTHER FFECTING SUCH WORK ARE NORMAL AND FAVORABLE TO THE PROPER PROSECUTION OF THE PARTICULAR WORK ATES SPECIFIED OR WITHIN AN EXTENDED PERIOD OF TIME APPROVED BY THE OWNER'S REPRESENTATIVE.

ND LIMING: THE CONTRACTOR SHALL INTRODUCE A 10–20–10 FERTILIZER AT THE RATE OF 20 POUNDS PER 100 LIME OR OTHER ADDITIVES AT THE RATE APPROVED BY THE LANDSCAPE ARCHITECT. THE ABOVE ITEMS SHALL BE THE TOP 2 INCHES OF SOIL AND SMOOTHED TO GRADE TO PREPARE A PROPER BED FOR SEEDING.

THE RATE OF 5 POUNDS PER 1000 SQUARE FEET FOR EACH AREA, UNIFORMLY, AND BY BROADCAST, DRILL, OR METHOD. IMMEDIATELY AFTER SOWING, RAKE DRAG, OR OTHERWISE TREAT THE AREA SO AS TO COVER THE SEED OF APPROXIMATELY 1/4 INCH.

SHALL BE DONE DURING WINDY WEATHER OR WHEN THE GROUND SURFACE IS MUDDY, FROZEN OR OTHERWISE

CAPE WORK IS COMPLETED, INCLUDING MAINTENANCE, THE LANDSCAPE ARCHITECT WILL MAKE AN INSPECTION TO CCEPTABILITY.

ED AREAS WITHIN 50 FEET OF A STREAM AT FINAL GRADE, PERMANENT EROSION CONTROLS SHALL BE APPLIED 'S OF REACHING FINAL GRADE.

ED AREAS REMAINING DORMANT FOR OVER 1 YEAR OR AT FINAL GRADE, PERMANENT EROSION CONTROL MEASURES PLIED WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE.

DEBRIS DUMPSTER:

MATERIALS WILL BE COLLECTED AND DISPOSED OF INTO METAL TRASH DUMPSTER LOCATED IN THE MATERIALS AS. DUMPSTER WILL HAVE A SECURE WATERTIGHT LID, BE PLACED AWAY FROM STORM WATER CONVEYANCES AND MEET ALL FEDERAL, STATE AND MUNICIPAL REGULATIONS. ONLY TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SITED INTO THE DUMPSTER. NO CONSTRUCTION MATERIALS WILL BE BURIED ON-SITE. NOTICES THAT STATE THESE HALL BE FOLLOWED SHALL BE POSTED IN THE OFFICE TRAILER. THE INDIVIDUAL WHO MANAGES DAY TO DAY WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE DUMPSTER WILL BE INSPECTED IMMEDIATELY AFTER STORM EVENTS. THE DUMPSTER WILL BE EMPTIED WEEKLY. IF THE TRASH AND CONSTRUCTION EXCEEDING THE DUMPSTER CAPACITY THEN THE DUMPSTER WILL BE EMPTIED MORE FREQUENTLY. ALL CONSTRUCTION BE DISPOSED OF AT AN OHIO EPA APPROVED LANDFILL AS REQUIRED BY ORC TITLE 37, CHAPTER 3714.

VASTE MANAGEMENT:

US WASTE MATERIALS SUCH AS OIL FILTERS, PETROLEUM PRODUCTS, PAINT AND EQUIPMENT MAINTENANCE FLUIDS RED STRUCTURALLY SOUND AND SEALED IN SHIPPING CONTAINERS, WITHIN A DESIGNATED HAZARDOUS WASTE ORAGE AREA. HAZARDOUS WASTE MATERIALS WILL BE STORED IN APPROPRIATE AND CLEARLY MARKED CONTAINERS ATED FROM OTHER NON-HAZARDOUS WASTE MATERIALS. SECONDARY CONTAINMENT WILL BE PROVIDED FOR ALL FRIALS IN THE HAZARDOUS MATERIALS STORAGE AREA AND WILL CONSIST OF COMMERCIALLY AVAILABLE SPILL DITIONALLY, ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND ATIONS. HAZARDOUS WASTE MATERIALS WILL NOT BE DISPOSED OF INTO ON-SITE DUMPSTERS. NOTICES THAT STATE DURES WILL BE POSTED IN THE OFFICE TRAILER AND THE INDIVIDUAL WHO MANAGES DAY TO DAY OPERATIONS WILL BLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED. THE HAZARDOUS WASTE MATERIALS STORAGE AREAS WILL WEEKLY AND AFTER STORM EVENTS. THE STORAGE AREAS WILL BE KEPT CLEAN, WELL ORGANIZED AND EQUIPPED CLEANUP SUPPLIES AS APPROPRIATE FOR THE MATERIALS BEING STORED. MATERIAL SAFETY DATA SHEETS, VENTORY AND EMERGENCY CONTACT NUMBERS WILL BE MAINTAINED IN THE OFFICE TRAILER.

D SOILS MUST BE TREATED AND/OR DISPOSED IN OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITIES OR VASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES.

S. CARDBOARD BOXES AND OTHER RECYCLABLE CONSTRUCTION SCRAPS SHALL BE RECYCLED.

AGING AREA:

EQUIPMENT AND MAINTENANCE MATERIALS WILL BE STORE AT THE STAGING AND MATERIALS STORAGE AREAS. BERMS OR SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER TO DESIGNATE THE STAGE AND MATERIALS EA. A WATERTIGHT SHIPPING CONTAINER WILL BE USED TO STORE HAND TOOLS, SMALL PARTS AND OTHER MATERIALS, IF NEEDED.

OUS BUILDING MATERIALS SUCH AS PACKAGING MATERIALS (WOOD, PLASTIC, GLASS) AND CONSTRUCTION SCRAP RICK, WOOD, STEEL, METAL SCRAPS AND PIPE CUTTINGS) WILL BE STORED IN SEPARATE COVERED STORAGE FACILITY THE SHIPPING CONTAINER. ALL HAZARDOUS WASTE MATERIALS SUCH AS OIL FILTERS, PETROLEUM PRODUCTS, PAINT NT MAINTENANCE FLUIDS WILL BE STORED IN STRUCTURALLY SOUND AND SEALED CONTAINERS UNDER COVER WITHIN US MATERIALS STORAGE AREA.

ITEMS SUCH AS FRAMING MATERIALS AND STOCKPILES LUMBER, WILL BE STORED IN THE OPEN MATERIAL STORAGE MATERIALS WILL BE ELEVATED ON WOOD BLOCKS TO MINIMIZE CONTACT WITH RUNOFF.

TEWATER/LEACHATE MANAGEMENT:

WASTEWATERS (E.G. EQUIPMENT WASHING, LEACHATE ASSOCITAED WITH ON-SITE WASTE DISPOSAL, AND CONCRETE SHALL BE COLLECTED AND DISPOSED OF PROPERLY.

SHOUT FACILITY:

) TEMPORARY, ABOVE-GRADE CONCRETE WASHOUT AREA WILL BE CONSTRUCTED ON THE SITE. THE TEMPORARY ASHOUT AREA WILL BE CONSTRUCTED AS SHOWN IN THE PLANS, WITH A RECOMMENDED MINIMUM LENGTH AND TH OF IO FEET, BUT WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE Y WASHOUT OPERATIONS. THE WASHOUT AREA WILL BE LINED WITH PLASTIC SHEETING AT LEAST 10 MILS THICK AND HOLES OR TEARS. SIGNS WILL BE POSTED MARKING THE LOCATION OF THE WASHOUT AREA TO ENSURE THAT UIPMENT OPERATORS USE THE PROPER FACILITY.

URS WILL NOT BE CONDUCTED DURING OR BEFORE AN ANTICIPATED STORM EVENT. CONCRETE MIXER TRUCKS AND BE WASHED IN THE DESIGNATED AREA OR CONCRETE WASTES WILL BE PROPERLY DISPOSED OF OFF-SITE. WHEN THE ASHOUT AREA IS NO LONGER NEEDED FOR THE CONSTRUCTION PROJECT. THE HARDENED CONCRETE AND MATERIALS STRUCT THE AREA WILL BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.

AREAS WILL BE INSPECTED DAILY TO ENSURE THAT ALL CONCRETE WASHING IS BEING DISCHARGED INTO THE EA, NO LEAKS OR TEARS ARE PRESENT, AND TO IDENTIFY WHEN CONCRETE WASTE NEED TO BE REMOVED. THE WASHOUT AREAS WILL BE CLEANED OUT ONCE THE AREA IS FILLED TO 75 PERCENT OF THE HOLDING CAPACITY. ONCE THE AREA'S HOLDING CAPACITY HAS BEEN REACHED, THE CONCRETE WASTES WILL BE ALLOWED TO HARDEN; THE CONCRETE WILL BE BROKEN UP, REMOVED, AND DISPOSED OF. THE PLASTIC SHEETING WILL BE REPLACED IF TEARS OCCUR DURING REMOVAL OF CONCRETE WASTES FROM THE WASHOUT AREA.

EQUIPMENT/VEHICLE FUELING AND MAINTENANCE PRACTICES:

SEVERAL TYPES OF VEHICLES AND EQUIPMENT MAY BE USED ON-SITE THROUGHOUT THE PROJECT, INCLUDING GRADERS, SCRAPERS, EXCAVATORS, LOADERS, PAVING EQUIPMENT, ROLLERS, TRUCKS AND TRAILERS, BACKHOES, AND FORKLIFTS. ALL MAJOR EQUIPMENT/VEHICLE FUELING AND MAINTENANCE WILL BE PERFORMED OFFSITE.

DRIP PANS WILL BE PLACED UNDER ALL EQUIPMENT RECEIVING MAINTENANCE AND VEHICLES AND EQUIPMENT PARKED OVERNIGHT.

INSPECT EQUIPMENT/VEHICLE STORAGE AREAS AND FUEL TANKS WEEKLY AND AFTER STORM EVENTS. VEHICLES AND EQUIPMENT WILL BE INSPECTED ON EACH DAY OF USE. LEAKS WILL BE REPAIRED IMMEDIATELY, OR THE PROBLEM VEHICLE(S) OR EQUIPMENT WILL BE REMOVED FROM THE PROJECT SITE. KEEP AMPLE SUPPLY OF SPILL-CLEANUP MATERIALS ON-SITE AND IMMEDIATELY CLEAN UP SPILLS AND DISPOSE OF MATERIALS PROPERLY.

SPILL PREVENTION AND CONTROL PLAN:

VEHICLE MAINTENANCE: VEHICLES AND EQUIPMENT WILL BE MAINTAINED OFF-SITE. ALL VEHICLES AND EQUIPMENT INCLUDING SUBCONTRACTOR VEHICLES WILL BE CHECKED FOR LEAKING OIL AND FLUIDS. VEHICLES LEAKING FLUIDS WILL NOT BE ALLOWED ON-SITE. DRIP PANS WILL BE PLACED UNDER ALL VEHICLES AND EQUIPMENT THAT ARE PARKED OVERNIGHT.

HAZARDOUS MATERIAL STORAGE: HAZARDOUS MATERIALS WILL BE STORED IN ACCORDANCE WITH FEDERAL AND MUNICIPAL REGULATIONS.

ON-SITE PROJECT TRAILER.

BEST MANAGEMENT PRACTICES FOR GOOD HOUSEKEEPING:

IN ACCORDANCE WITH THE EPA, THE CONTRACTOR SHALL IMPLEMENT GOOD HOUSEKEEPING PRACTICES IN AN EFFORT TO KEEP POLLUTANTS FROM CONTACTING RAIN AND TO KEEP POLLUTANTS FROM BEING DUMPED OR POURED INTO STORM DRAINS.

THE FOLLOWING ITEMS INCLUDE BUT ARE NOT LIMITED TO RECOMMENDED BEST MANAGEMENT PRACTICES FOR HOUSEKEEPING:

PAVEMENT CLEANING: • SWEEP PARKING LOTS AND OTHER PAVED AREAS PERIODICALLY TO REMOVE DEBRIS. DISPOSE OF DEBRIS IN THE DUMPSTER. • IF OUTDOOR PAVEMENT CLEANING WITH DETERGENT IS REQUIRED, COLLECT WASH WATER AND DISPOSE IN INDOOR SINKS OR DRAINS FOR DISCHARGE TO THE SANITARY SEWER. CONTACT YOUR LOCAL WASTEWATER TREATMENT AGENCY.

WASTE DISPOSAL:

- CONTAINERS. • COVER DUMPSTERS AND OTHER WASTE CONTAINERS.
- NEVER DISPOSE OF WASTE PRODUCTS IN STORM DRAIN INLETS. • RECYCLE WASTES OR DISPOSE PROPERLY.

MATERIALS STORAGE:

• STORE MATERIALS SUCH AS GREASE, PAINTS, DETERGENTS, METALS, AND RAW MATERIALS IN APPROPRIATE, LABELED CONTAINERS. • MAKE SURE ALL OUTDOOR STORAGE CONTAINERS HAVE LIDS, AND THAT THE LIDS ARE ADEQUATELY CLOSED.

RAIN.

TRAINING: • TRAIN EMPLOYEES REGULARLY ON GOOD HOUSEKEEPING PRACTICES. • ASSIGN A PERSON TO BE RESPONSIBLE FOR EFFECTIVE IMPLEMENTATION OF BMPS.

EQUIPMENT/VEHICLE CLEANING:

- MAINTAIN EQUIPMENT AND VEHICLES REGULARLY. CHECK FOR AND FIX LEAKS. • USE DRIP PANS TO COLLECT LEAKS OR SPILLS DURING MAINTENANCE ACTIVITIES.

SPILL KITS: SPILL KITS WILL BE WITHIN THE MATERIALS STORAGE AREA AND CONCRETE WASHOUT AREAS.

SPILLS: ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. SPENT ABSORBENT MATERIALS AND RAGS WILL BE HAULED OFF-SITE IMMEDIATELY AFTER THE SPILL IS CLEANED UP FOR DISPOSAL AT A LANDFILL. SPILLS LARGE ENOUGH TO DISCHARGE TO SURFACE WATER WILL BE REPORTED TO THE NATIONAL RESPONSE CENTER AT 1-800-424-8802.

MATERIAL SAFETY DATA SHEETS, A MATERIAL INVENTORY, AND EMERGENCY CONTACT INFORMATION WILL BE MAINTAINED AT THE

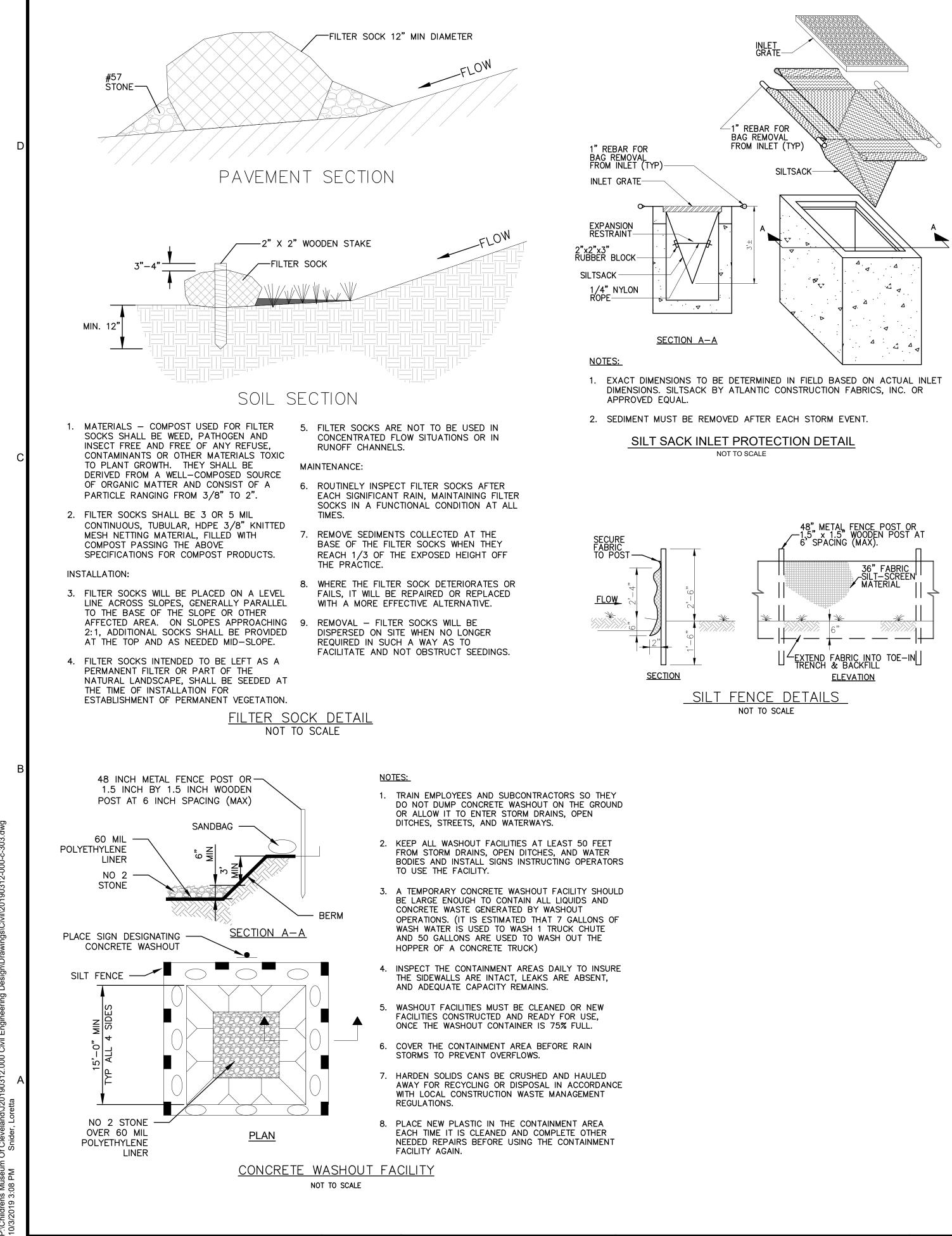
DISPOSAL OF BRICKS, HARDENED CONCRETE, OR SOIL SHALL BE FREE FROM CONTAMINATION THAT MAY LEACH TO WATERWAYS.

• INSPECT DUMPSTERS AND OTHER WASTE CONTAINERS PERIODICALLY. REPAIR OR REPLACE LEAKY DUMPSTERS AND

• STORE STOCKPILED MATERIALS INSIDE A BUILDING, UNDER A ROOF, OR COVERED WITH A TARP TO PREVENT CONTACT WITH

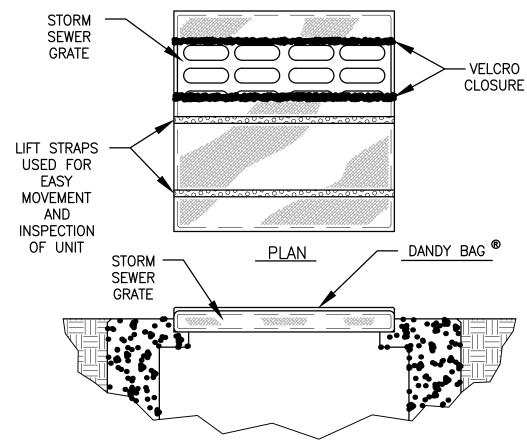
• WASH EQUIPMENT/VEHICLES IN A DESIGNATED AND/OR COVERED AREA WHERE THE WASH WATER IS COLLECTED TO BE RECYCLED OR DISCHARGED TO THE SANITARY SEWER. CONTACT YOUR LOCAL WASTEWATER TREATMENT AGENCY.

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SECTION

SPECIFICATIONS										
Mechanical Properties	Test Method	Units	MARV							
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (2							
Grab Tensile Elongation	ASTM D 4632	%	24 X 10							
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)							
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)							
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (7							
UV Resistence	ASTM D 4355	%	90							
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)							
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	5907 (145)							
Permittivity	ASTM D 4491	Sec ⁻¹	2.1							
NOTES										

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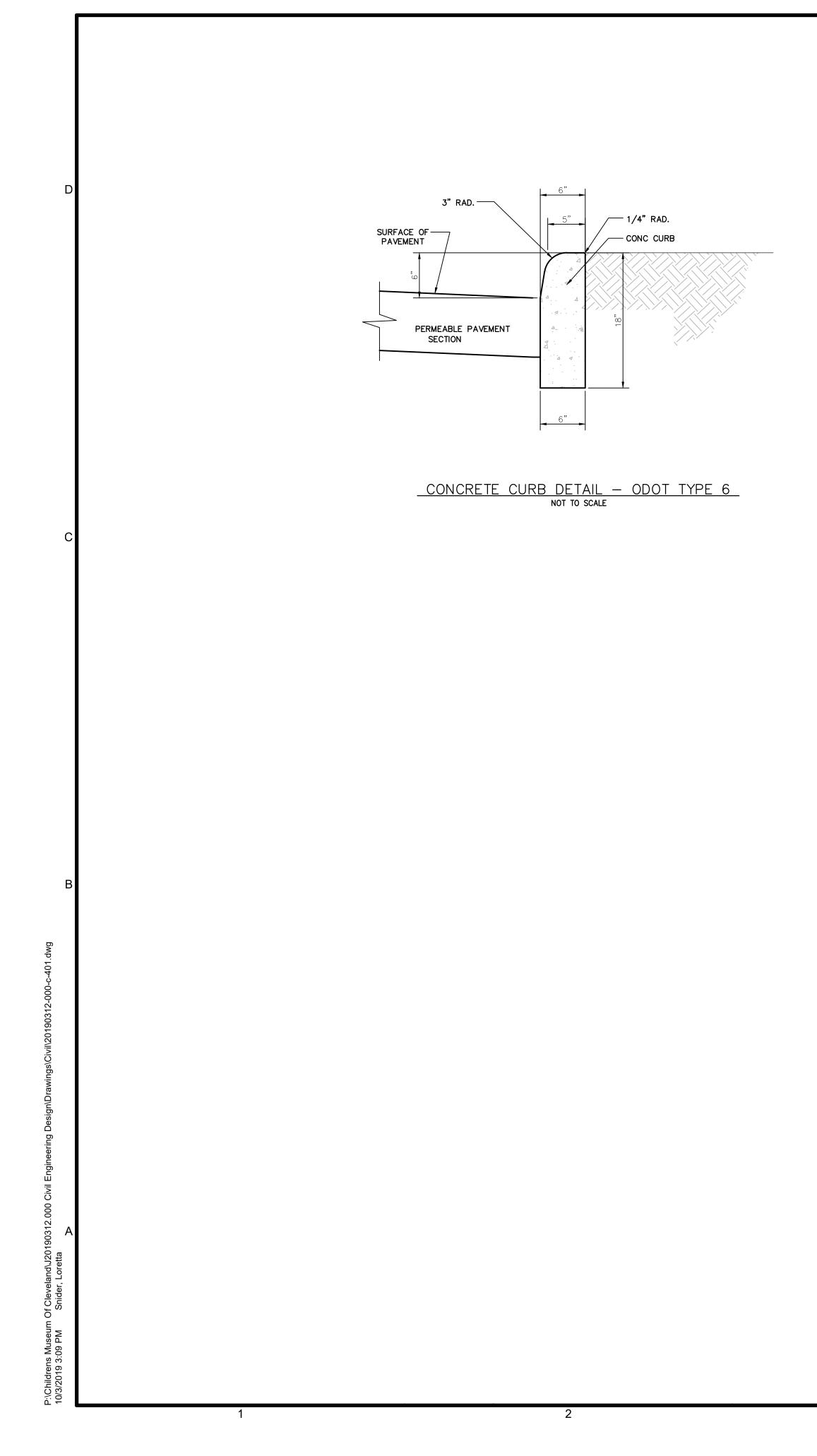
THE DANDY BAG WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE INCLUDED SPECIFICATIONS:

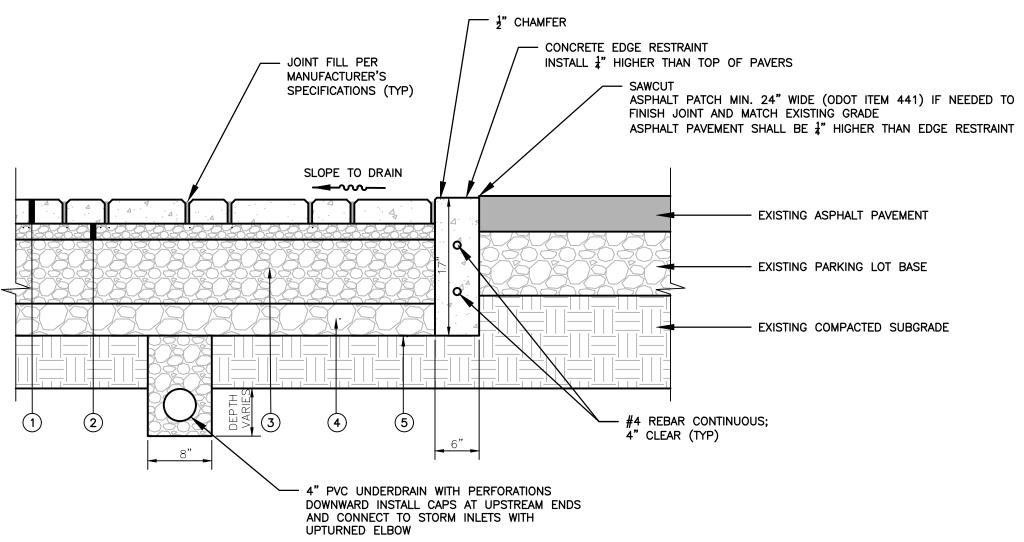
ALL DANDY BAGS CAN BE ORDERED WITH OPTIONAL OIL ABSORBENT PILLOWS

DANDY BAG INLET PROTECTION NOT TO SCALE

200) (75)

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1100 S 441 W	OSBOR ENGINEERIN uperior Avenue - Suite 300 Cleveland olf Ledges Parkway - Suite 300 Akron	I, OH 44114
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E	ROSION AN SEDIMENT ONTROL PL NOTES DRAWING NO. C-303	ND -





PERMEABLE PAVER NOTES

- 1. CONSTRUCTION OF THE PERMEABLE PAVEMENT SHALL BEGIN ONLY AFTER ALL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED (I.E. ESTABLISHED VEGETATION OR PAVED) IN ORDER TO PREVENT CONTAMINATION WITH SEDIMENTS.
- 2. THE CONTRACTOR SHALL NOT ALLOW SEDIMENT-LAYDEN STORMWATER TO FLOW ONTO THE PAVEMENT SURFACE, THE SUBGRADE OR WITHIN THE STONE BED. A NON-WOVEN GEOTEXTILE MAY BE FOLDED OVER THE EDGE OF THE PAVEMENT TO REDUCE THE LIKELIHOOD OF SEDIMENT DEPOSITION. CONSTRUCTION MATERIALS THAT ARE CONTAMINATED BY SEDIMENTS MUST BE REMOVED AND REPLACED WITH CLEAN MATERIALS. SURFACE SEDIMENT SHALL BE REMOVED AS SOON AS POSSIBLE USING A VACUUM SWEEPER.
- 3. THE CONTRACTOR SHALL CONSTRUCT THE PERMEABLE PAVEMENT DURING DRY WEATHER TO AVOID COMPACTION OR SMEARING OF THE SUBGRADE. DO NOT EXCAVATE IN WET CONDITIONS OR IF WET WEATHER IS FORECASTED FOR THE CONSTRUCTION PERIOD OR BEFORE THE AREA CAN BE FILLED. EXCAVATE IN DRY SOIL MOISTURE CONDITIONS AND AVOID EXCAVATING IMMEDIATELY AFTER STORMS WITHOUT A SUFFICIENT DRYING PERIOD.
- 4. THE CONTRACTOR SHALL CLEAR AND EXCAVATE THE AREA FOR PAVEMENT AND BASE COURSE IN A MANNER THAT MAINTAINS THE INFILTRATIVE CAPACITY TO THE GREATEST EXTENT POSSIBLE. COMPACTION OF THE SUBGRADE SOILS WILL BE INCREASED BY WORKING IN WET CONDITIONS.
- 5. FINAL GRADE OF THE SUBGRADE SOIL SURFACE SHALL BE LEVEL.
- 6. THE CONTRACTOR SHALL NOT ALLOW EQUIPMENT OR HAUL ROUTES TO CROSS THE PLANNED PAVEMENT AREA. STATION AND OPERATE EXCAVATING EQUIPMENT FROM OUTSIDE THE PLANNED PAVEMENT AREA OR FROM UNEXCAVATED PORTIONS OF THE AREA.
- 7. LEAVE 6 TO 12 INCHES OF UNDISTURBED SOIL ABOVE THE SUBGRADE ELEVATION IF BASE MATERIAL PLACEMENT WILL BE DELAYED.
- 8. EXCAVATE THE FINAL 9 TO 12 INCHES BY USING TEETH OF THE BUCKET TO LOOSEN SOIL AND AVOID SMEARING THE SUBGRADE SOIL SURFACE. FINAL GRADING OF THE SUBGRADE SHALL BE DONE BY HAND TOOLS.
- 9. PRIOR TO INSTALLING SUBBASE AGGREGATE, THE CONTRACTOR SHALL MEASURE THE SUBGRADE INFILTRATION RATE AND PROVIDE THE RESULTS TO THE OWNER AND ENGINEER.

PERMEABLE PAVERS TYPICAL SECTION DETAIL NOT TO SCALE

6

NOTE: ALL AGGREGATE MUST BE WASHED

(5.) UNCOMPACTED SUBGRADE CONSTRUCT SURFACE AT 0% SLOPE

STEP SUBGRADE 6" FOR PERMEABLE PAVER AREAS

1.) PERMEABLE PAVERS UNILOCK ECO-PRIORA

(2.) 2" BEDDING ASTM No. 8

(4) 4" SUBBASE ASTM No. 1 & 2

(3.) 8" BASE ASTM No. 57

ON SLOPE

LEGEND

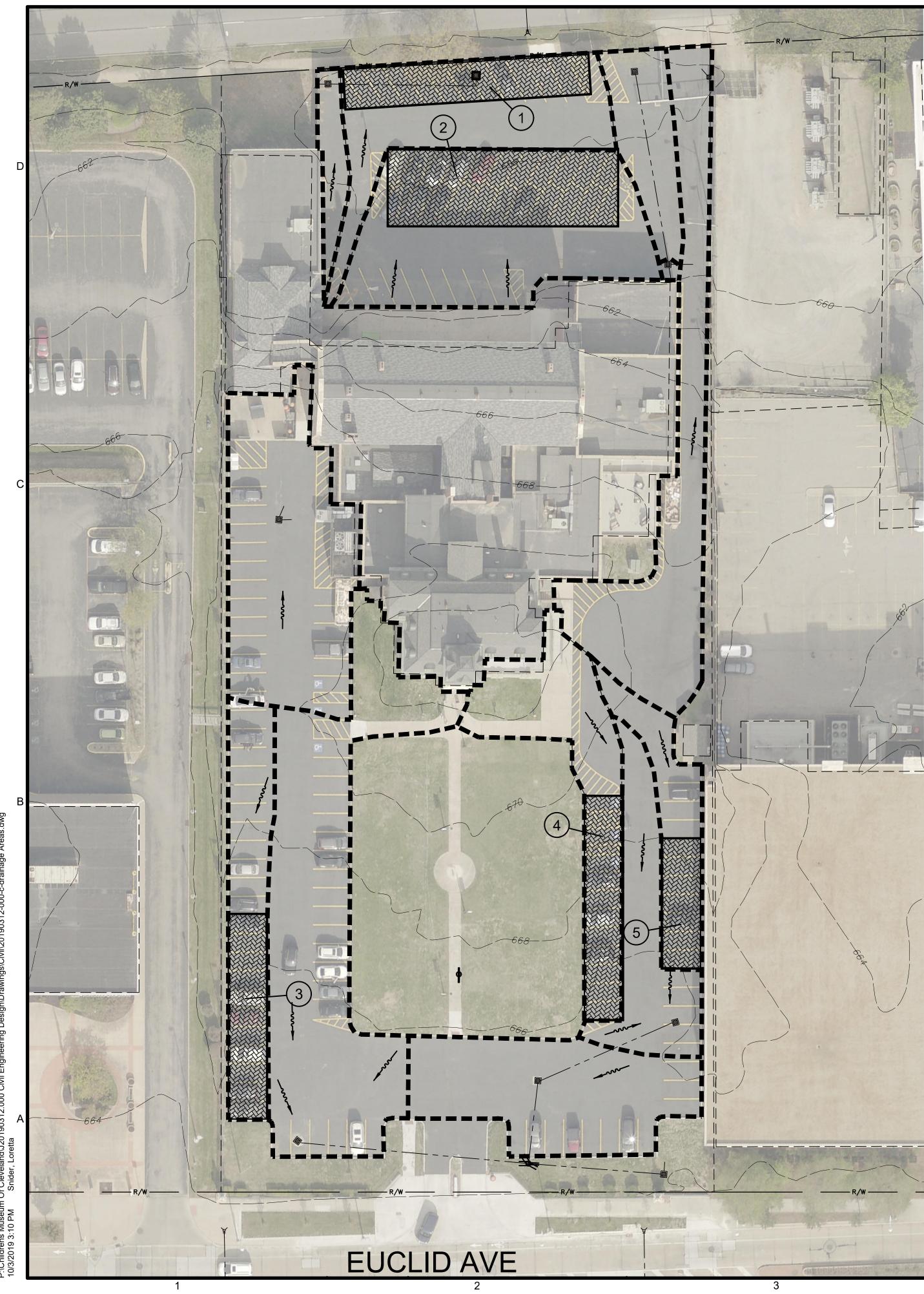
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 1100 Superior Avenue - Suite 300 | Cleveland, OH 44114

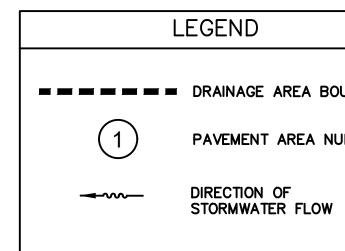
 441 Wolf Ledges Parkway - Suite 300 | Akron, OH 44311

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FULL-INFILTRATION PERVIOUS PAVER SYSTEM DESIGN

$V_w = P(A_p) + R(A_c) - I(T_s)A_1$

Where:

- V_w = Volume of water that can be stored in base/subbase (cu ft).
- P = Design storm rainfall depth (in).
- I = Field measured infiltration rate (in/hr).

A_p = Surface area of the permeable inerlocking concrete pavement (sf).

R = Run-on depth from the contributing area (ft) which is the design storm (P)

- multiplied by the runoff coefficient (C) of the contributing area. R < P.
- A_c = Surface area of the adjacent contributing area (sf).

 I_d = Design infiltration rate (in/hr). Design rate is 0.5 times the field measured rate.

- T_s = Duration of the storm event (hr). Typically 24-hr.
- A₁ = Area of subgrade infiltration (sf).

P (in) = <u>3.4</u>	Value of 10-yr 24-hr storm event
l (in/hr) = <u>4.0</u>	Value from B-1 (PSI 7/5/18 Infiltration Testing Report)
l (in/hr) = <u>3</u> .5	Value from B-2 (PSI 7/5/18 Infiltration Testing Report)

Pavement

Area Number	С	l _d (in/hr)	A _p (sf)	A _c (sf)	A _I (sf)	V _w (cu ft)*
1	0.98	1.75	2,235	4,107	2,235	-6,048.9
2	0.98	1.75	4,107	5,542	4,107	-11,672.0
3	0.98	2.00	1,832	2,195	1,832	-6,197.6
4	0.98	2.00	1,998	3,363	1,998	-6,492.1
5	0.98	2.00	1,156	1,520	1,156	-3,874.4
			11,328	16,727		

* If V_w is less than or equal to zero, the pavement thickness required for structural capacity will govern the design. If Vw is greater than zero, the drain time must be checked to ensure the subgrade does not remain saturated.

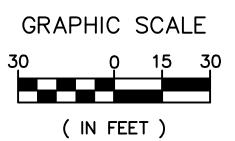
Source: ASCE Standard 68-18, Permeable Interlocking Concrete Pavement

WATER QUALITY VOLUME AND DRAIN TIME CALCULATIONS

									Volumetric	Water	Required Depth	30% Porosity	Water Quality
	Design			Existing			Post	Fraction	Runoff	Quality	to Store Water	Adjusted WQv	Drain Time (Td)
Pavement	Infiltration	Drainage	Drainage	Impervious	Pervious	Pervious	Impervious	Impervious	Coefficient	Volume	Quality Volume	depth (Dagg-	Must be less
Area Number	Rate	Area	Area	Area	Paver Area	Paver Area	Area	(i)	(Rv)	(WQv)	(DWQv)	WQv)	than 48 hrs
	in/hr	sf	ac	ac	sf	ac	ac			ac-in	in	in	hr
1	1.75	6,342	0.146	0.15	2,235	0.05	0.146	1.00	0.950	0.124	2.4	8.09	1.39
2	1.75	9,649	0.222	0.22	4,107	0.09	0.222	1.00	0.950	0.189	2.0	6.70	1.15
3	2.0	4,027	0.092	0.09	1,832	0.04	0.092	1.00	0.950	0.079	1.9	6.27	0.94
4	2.0	5,361	0.123	0.107	1,998	0.05	0.107	0.87	0.831	0.092	2.0	6.69	1.00
5	2.0	2,676	0.061	0.06	1,156	0.03	0.061	1.00	0.950	0.053	2.0	6.60	0.99

BOUNDARY	
NUMBER	

NORTH



1 inch = 30 ft.

4	
	OHIO UTILITIES PROTECTION SERVICE CALL BEFORE YOU DIG
	800-362-2764 or 8-1-1 WWW.OUPS.ORG

CMC				
Image: Constraint of the system of the sy				
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PERVIOUS PAVER DRAINAGE AREAS AND				
CALCULATIONS				
DRAWING NO. 1 of 1				