
**NOTIFICATION ADDENDUM
TO
EXCAVATION WORK PLAN**

**300 OHIO STREET SITE
SITE NO. C915257
BUFFALO, NEW YORK**

July 2018

0136-018-010

Prepared for:

4216 Group, LLC
295 Main Street, Suite 210
Buffalo, New York

EXCAVATION WORK PLAN

300 Ohio Street Site
Buffalo, New York

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EXCAVATION WORK PLAN

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1.0 INTRODUCTION

This document presents the proposed scope of work and implementation procedures for intrusive activities in accordance with the New York State Department of Environmental Conservation (NYSDEC or Department) approved Site Management Plan (SMP) for the 300 Ohio Street Site, located at 300 Ohio Street, Buffalo, New York (Site), which was remediated under the Brownfield Cleanup Program (BCP) Site (C915257).

This excavation notification is being submitted in accordance with the Department's approved Site Management Plan (SMP) dated December 2017. An electronic copy of the SMP's Excavation Work Plan is included within Appendix A.

1.1 Background

The completed environmental remediation of the Site was undertaken by 4216 Group, LLC as a non-responsible party under the NYSDEC's BCP. Environmental investigations found that the Site had been contaminated by petroleum-related volatile organic compounds (VOCs) and semi volatile organic compounds (SVOCs), and cleanup efforts were completed at the Site between 2014 and 2016. After review and approval of the Final Engineering Report (FER) and implementation of the SMP, the NYSDEC issued a Certificate of Completion (COC) on December 29, 2017, to 4216 Group, LLC.

1.2 Purpose

The purpose of this work plan is to notify the NYSDEC of intrusive activities that are planned which may encounter remaining contamination on-Site during redevelopment activities. This work plan has been prepared in accordance with the Department's approved SMP (December 2017) and NYSDEC DER-10 (May 2010).

Intrusive activities will comply with the existing SMP, which includes the Excavation Work Plan (EWP); and in accordance with 29 CFR 1910.120.

1.3 Project Schedule

A tentative project schedule is presented below.

- **July-December 2018** – Excavation and grading activities for building footers and utilities and subgrades; placement of concrete footers/foundations and floor slabs.
- **April-September 2019** – Completion of asphalt and concrete, and landscaping elements of cover system; cover system restoration.
- **October-December 2019** – Preparation of Construction Closeout Report (as part of the Periodic Review Report) and updated Site Management Plan

2.0 SITE DESCRIPTION

2.1 General

The BCP Site is located in the County of Erie, Buffalo, New York and is comprised of 11 adjoining parcels, totaling approximately 4.85 acres. This project includes six (6) parcels, totaling approximately 1.5 acres of the BCP Site, identified as:

- 11 Chicago Street, SBL 122.10-2-15
- 71 Chicago Street, SBL 122.10-2-17
- 73 Chicago Street, SBL 122.10-2-18
- 75 Chicago Street, SBL 122.10-2-16.2
- 49 Mackinaw Street, SBL 122.10-2-19
- 53 Mackinaw Street, SBL 122.10-2-20

The Site is bounded by Mackinaw Street to the north, and Chicago Street to the west with Ohio Street to the south, and City of Buffalo – Conway Park to the east. The Buffalo River is located approximately 250-feet to the west of the Site (see Figures 1 and 2). The Site is currently vacant with no standing structures remaining on-Site.

This project will include the construction of a mixed use building, and associated parking, walkways and landscaping as part of the larger project including the non-BCP 55 Chicago Street parcel. This Notification Addendum and all associated procedures are specific to work being completed on the BCP-parcels.

2.2 Site History

Historically, the majority of the site was utilized as an automobile filling station and fuel distribution operation since at least 1925, with grossly contaminated petroleum soils (GCPS) present on Site. 4216 Group, LLC, entered the BCP in November 2011 and subsequently investigated and remediated the Site under the oversight of NYSDEC from 2014 through 2017. The Site Management Plan was approved by the NYSDEC in December 2017.

2.3 Summary of Remedial Actions

Previous environmental investigations identified the presence of petroleum contamination on-Site. Remedial activities commenced in 2014 and were completed in 2016. A brief summary of the remedial activities is presented below.

- Excavation, cleaning and removal of 16 USTs, eight (8) former pump islands, and associated distribution lines.
- Excavation and off-site disposal of approximately 18,650-tons GCPS. The excavation was continued from surface to approximately 13-ft, and backfilled with department approved gravel.
- Excavation and off-site disposal of approximately 222 tons of non-hazardous PAH contaminated soil/fill in the vicinity of MW-1.
- Excavation and off-site disposal of approximately 387 tons of non-hazardous metal contaminated soil-fill from the vicinity of TP-13.
- Excavation and off-site disposal of approximately 770 tons of shallow non-hazardous metal contaminated soil/fill in the vicinity of SS-10.
- Placement of clean gravel across the site to meet the 1-foot thick commercial cover system requirements per DER-10.

2.3.1 Remaining Contamination

The 300 Ohio Street Site was remediated to address GCPS, metals and PAH, and achieved a Track 4 Commercial Use Cleanup, which is consistent with the intended use of the Site.

Residual contamination remaining at the Site includes soil/fill located beneath the cover system site wide, though potential exposure is mitigated due to the depth of the contaminant, completion of the remedial activities, and placement of a Site cover system. Based on the planned location, depth of building foundations and utilities excavations, it is likely that redevelopment activities will encounter remaining contamination beneath the cover system during shallow excavation activities. The approved SMP will be followed during redevelopment activities.

3.0 REDEVELOPMENT ACTIVITIES

A portion of the BCP Site will be redeveloped as part of the adjoining 55 Chicago Street, Buffalo New York project. The overall project includes the construction of an approximately 43,000 sq-ft mixed-use building with associated parking areas on the BCP site and an adjoining parcel. The approved construction drawings, including site plan, utility plan, and grading plan are attached electronically.

3.1 Site Preparation

3.1.1 Utility Clearance

Dig Safely New York (Call 811) will be contacted by the site contractor a minimum of three business days in advance of the work and informed of the intent to perform excavation work at the Site.

3.1.2 City of Buffalo Permits

The Site redevelopment contractor will acquire the necessary City of Buffalo building permits prior to initiation of the associated phase of the redevelopment.

3.2 Waste Characterization

Soil/fill waste characterization samples will be collected and analyzed prior to off-Site disposal at a permitted disposal facility, as necessary.

3.3 Excavation Activities

Planned excavations related to building foundation, on-Site utilities, and storm water conveyance systems are expected to reach a depth of approximately 9 feet below ground surface (fbgs). Groundwater is not expected to be encountered. If groundwater is encountered, it will be handled in accordance with the SMP. Site civil drawings (prepared by others) are provided electronically in Appendix A, as they relate to the new building site plan and construction details. Figure 3 identifies the portion of the redevelopment planned within the 300 Ohio Street BCP boundary.

3.4 Backfill Materials

3.4.1 On-Site Reuse

As described in the approved SMP, the reuse of material that originates at the site and which does not leave the Site during the excavation. The criteria under which soil/fill originating on-Site may be used on-Site are presented below.

- **Clean Cover stone:** Approved cover stone above the demarcation layer will be removed and stockpiled on-Site, as necessary. Cover stone will be reused, as needed for backfill for the redevelopment, and/or cover system restoration above demarcation layer.
- **Excavated, Non-Impacted On-Site Soil/Fill:** Non-impacted soil/fill (i.e., soil/fill that does not exhibit visible evidence of contamination, and is not grossly contaminated (as described in Part 375), and does not exhibit PID readings that exceed 50 parts per million (ppm) that is excavated from the Site, may be used on-Site as subgrade backfill beneath the cover system without special handling. The qualified environmental professional will ensure that procedures defined for materials reuse in the SMP are followed and that unacceptable material does not remain on-Site.
- **Excavated, Potentially Impacted on-Site Soil/Fill:** Potentially impacted soil/fill (i.e., soils that exhibit field visual and/or olfactory evidence of contamination, or with elevated PID readings above 50 ppm) may not be used on-Site unless tested and determined to meet the chemical criteria for Commercial Use SCOs per 6NYCRR Part 375. Potentially impacted material will be segregated, as described below and in the SMP, and sampled to determine acceptance for reuse. The material reuse analytical results will be discussed with the Department, and may include those constituents identified in 6NYCRR Part 375 for VOCs, SVOCs, metals, PCBs, pesticides and herbicides, in accordance with applicable USEPA SW846 analytical methodology.

The environmental professional will ensure that procedures defined for materials reuse in the SMP are followed. Excavated material that is acceptable for reuse on-site will be placed below the cover system (demarcation layer or impervious surface), and will not be

reused within a cover soil layer, within landscaping berms. No grossly-impacted materials shall be reused onsite; such materials must be disposed of offsite in accordance with applicable local, state, and federal regulations.

3.4.2 Imported Backfill

Imported soil backfill from an off-site source must meet the Restricted Residential Use criteria as presented in Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil in DER-10. Imported material will also meet the following criteria:

- Off-site soil/fill will originate from known sources having no evidence of disposal or releases of hazardous substances, hazardous, toxic or radioactive wastes, or petroleum.
- No off-site materials meeting the definition of a solid waste as defined in 6NYCRR, Part 360-1.2(a) shall be used as backfill.

3.4.2.1 Soil Characterization Requirements

In addition to the above criteria, backfill materials which requires laboratory analysis, will be subject to the following DER-10 characterization requirements:

- Off-site material will be sampled according to the following schedule:
 - 1 composite per 500 cubic yards of soil for the first 1,000 cubic yards
 - 1 composite per 1,000 cubic yards of soil thereafter.

Each composite will be comprised of a minimum of three grab samples (samples for VOC analysis will be collected as individual grabs in lieu of composites). Samples will be analyzed for the following constituents in accordance with USEPA SW-846 methodology:

- Target Compound List (TCL) VOCs - Method 8260B
- TCL SVOCs - Method 8270C
- TCL Organochlorine Pesticides and PCBs - Method 8081A/8082
- TAL Metals – Method 6010B
- Cyanide - Method 9013
- Herbicides – Method 8051A

Only materials that contain concentrations of these organic compounds and metals at or below concentrations for Restricted Residential Use found in Appendix 5 of DER-10 will be permitted. Characterization testing for off-site sources will be performed by an independent, NYSDOH ELAP-approved laboratory.

3.4.3 Sub-grade Stone

Potential sources of off-site sub-grade backfill material are listed below. In accordance with DER-10, Section 5.4(e)(5)(i and ii), the sources will not require chemical testing.

- Structural stone / 2" Run of Crush – New Enterprise (Buffalo Crushed Stone), Wehrle Pit. This is the same approved virgin-source stone that was used during remedial activities.

3.5 Non-reusable Excavated Material

Any excavated material, which is deemed unacceptable for reuse as backfill beneath the cover system, is planned for off-Site reuse in accordance with DER-10, and/or disposal at Waste Management's, Chaffee Landfill, located in Chaffee New York, Landfill disposal documents will be provided to the Department.

4.0 EXCAVATION WORK PLAN SUPPORT DOCUMENTS

During intrusive activities, a copy of the EWP will be located on-Site.

4.1 Health and Safety Protocols

The approved SMP includes an example Health and Safety Plan (HASP). The HASP, provided in Appendix E of the SMP, includes the following site-specific information:

- A hazard assessment.
- Training requirements.
- Definition of exclusion, contaminant reduction, and other work zones.
- Monitoring procedures for site operations.
- Safety procedures.
- Personal protective clothing and equipment requirements for various field operations.
- Disposal and decontamination procedures.

The HASP also includes an Emergency Response Plan (ERP) included as Appendix A, that addresses potential site-specific emergencies.

4.2 Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) was prepared as part of the approved SMP for the Site. The CAMP describes the required particulate and vapor monitoring to protect the neighboring community during intrusive activities is included in Appendix C of the SMP. The Excavation Work Plan, which includes the CAMP, has been included for reference within Appendix B of this Addendum electronically.

5.0 REPORTING

Upon completion of the redevelopment activities, a comprehensive report will be completed summarizing the tasks completed as described below.

5.1.1 Construction Monitoring

Standard daily reporting procedures will include preparation of a daily report and, when appropriate, problem identification and corrective measures reports. Information that may be included on the daily report form includes:

- Processes and locations of construction under way.
- Equipment and personnel working in the area, including subcontractors.
- Number and type of truckloads of soil/fill removed from the site.
- A description of off-site materials received, if any

The completed reports will be included as part of the Construction Closeout Report. The NYSDEC will be promptly notified of problems requiring modifications to this Work Plan prior to proceeding or completion of the construction item.

Photo documentation of the intrusive activities will be prepared by TurnKey throughout the duration of the project as necessary to convey typical work activities and whenever changed conditions or special circumstances arise.

5.1.2 Construction Closeout

A summary of the construction will be included in the report submitted to the NYSDEC. The report will include:

- A Site or area planimetric map showing the parcel;
- Summaries of unit quantities, including: volume of soil/fill excavated; disposition of excavated soil/fill; and volume/type/source of backfill.
- Text describing that the excavation activities were performed in accordance with this Work Plan.

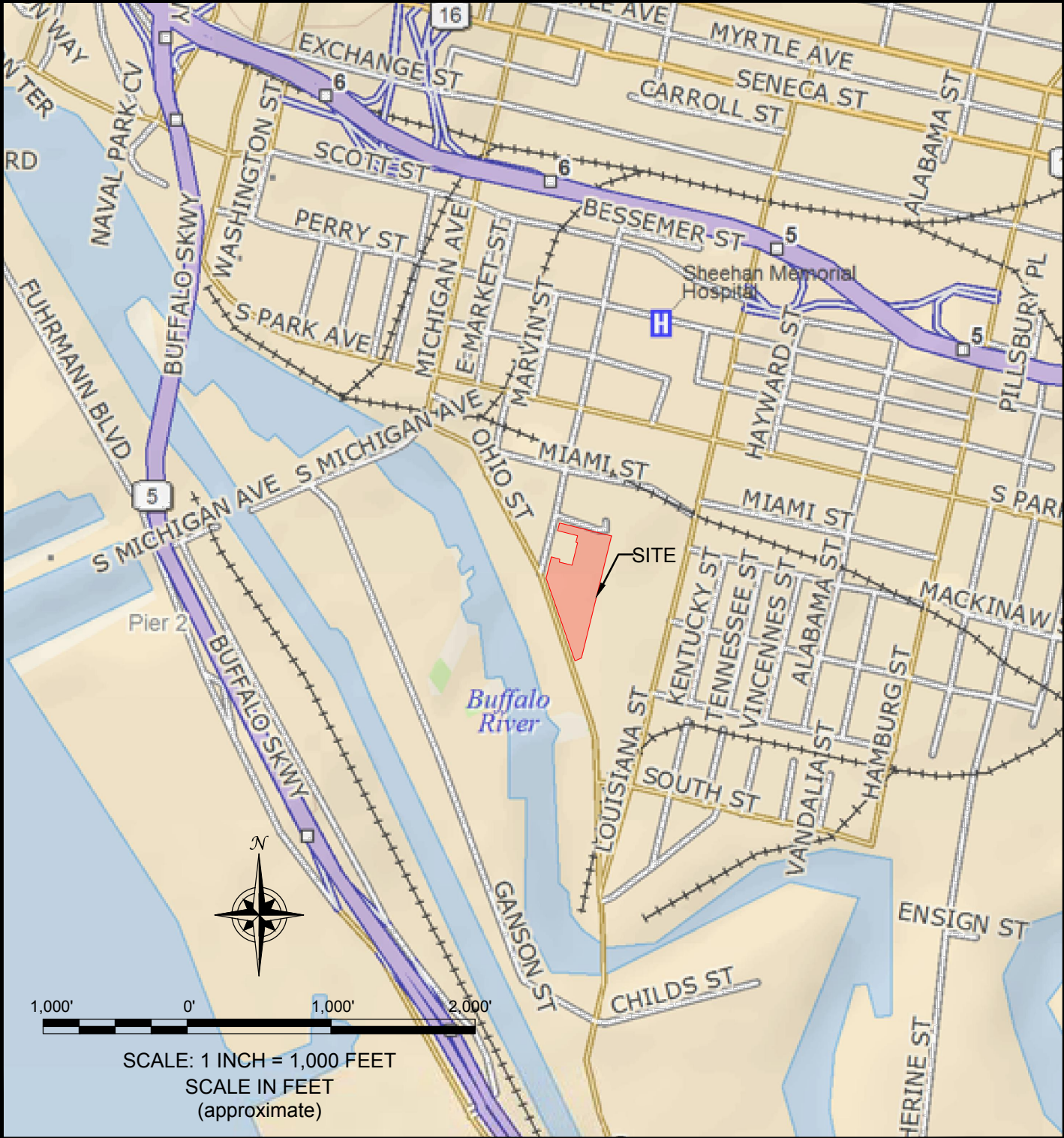
6.0 REFERENCES

1. New York State Department of Environmental Conservation. *DER-10; Technical Guidance for Site Investigation and Remediation*. May 2010.
2. Benchmark Environmental Engineering & Science, PLLC, TurnKey Environmental Restoration, LLC. *Brownfield Cleanup Program Site Management Plan, 300 Ohio Street Site, NYSDEC Site Number: C915257, Buffalo, New York*. December 2017.

FIGURES

FIGURE 1

F:\CAD\TurnKey\Elliott_Development\300 Ohio Street\FER\Figure 1: Site Location and Vicinity Map rev.dwg



BENCHMARK
 ENVIRONMENTAL
 ENGINEERING &
 SCIENCE, PLLC

2558 HAMBURG TURNPIKE
 SUITE 300
 BUFFALO, NY 14218
 (716) 856-0599

PROJECT NO.: 0136-037-102

DATE: OCTOBER 2017

DRAFTED BY: BLR-CMC

SITE LOCATION AND VICINITY MAP
 POST COC NOTIFICATION ADDENDUM TO
 EXCAVATION WORK PLAN

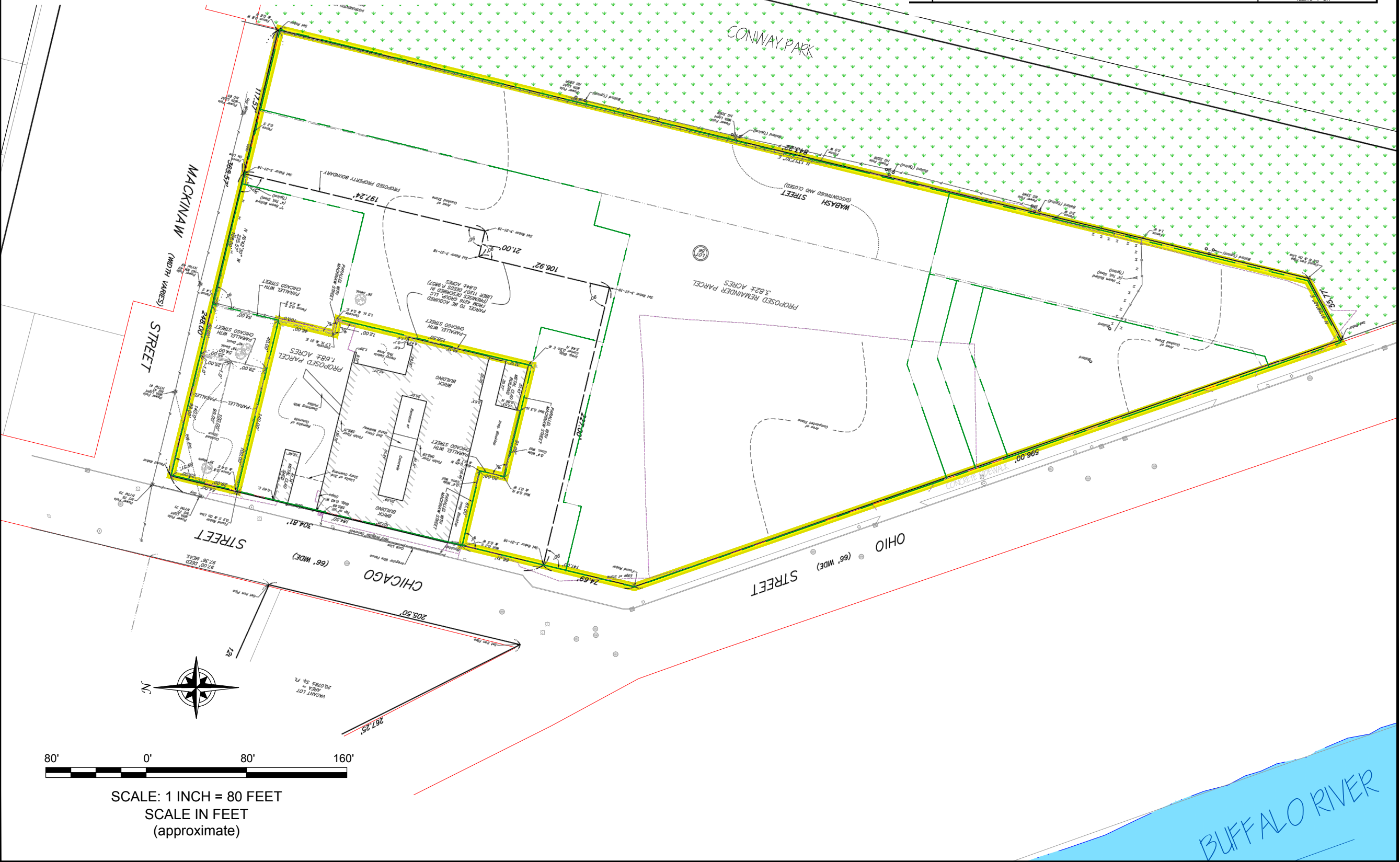
300 OHIO STREET SITE
 BCP SITE NO. C915257
 BUFFALO, NEW YORK
 PREPARED FOR
 4216 GROUP, LLC

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LEGEND:

- BCP SITE BOUNDARY
- - - - PARCEL BOUNDARY

<small>THIS SURVEY MAP WAS PREPARED IN ACCORDANCE WITH THE CURRENT STANDARDS FOR LAND SURVEYS ADOPTED BY THE BNS ASSOCIATION OF ERIE COUNTY AT THE REQUEST OF Elliott Development</small> <small>FRANCIS C. DELLES NYSPLS No. 050477</small>	©COPYRIGHT 2018 BY: Millard, MacKay & Delles LAND SURVEYORS, LLP 150 AERO DRIVE BUFFALO, NEW YORK 14225 PHONE (716) 631-5140 ~ FAX 631-3811	AMEND: SURVEY DATE: 2-26-18 DRAWING DATE: 3-28-18 SCALE: 1" = 30' "ALL RIGHTS RESERVED"
	THIS MAP VOID UNLESS EMBOSSED WITH NEW YORK STATE LICENSED LAND SURVEYOR'S SEAL. ALTERING ANY ITEM ON THIS MAP IS A VIOLATION OF THE LAW EXCEPT AS PROVIDED IN SECTION 7209, PART 2 OF THE NEW YORK STATE EDUCATION LAW.	
PROPOSED LOT DIVISION		
PART OF LOT 56&62 SECTION _____ TOWNSHIP _____ RANGE _____ OF THE: Outer Lots SURVEY - Erie COUNTY, N.Y.		
SURVEY OF: 286,300,326,328,340&354 Ohio St., 11,55,71,73&75 Chicago St. & 49&53 Mackinaw St., City of Buffalo		SBL No. 122.10-2-10to15 & 16.1to19 122.10-1-21



SITE PLAN & SURVEY

POST COC NOTIFICATION ADDENDUM TO EXCAVATION WORK PLAN

300 OHIO STREET SITE
 BCP SITE NO. C915257
 BUFFALO, NEW YORK
 PREPARED FOR

4216 GROUP, LLC

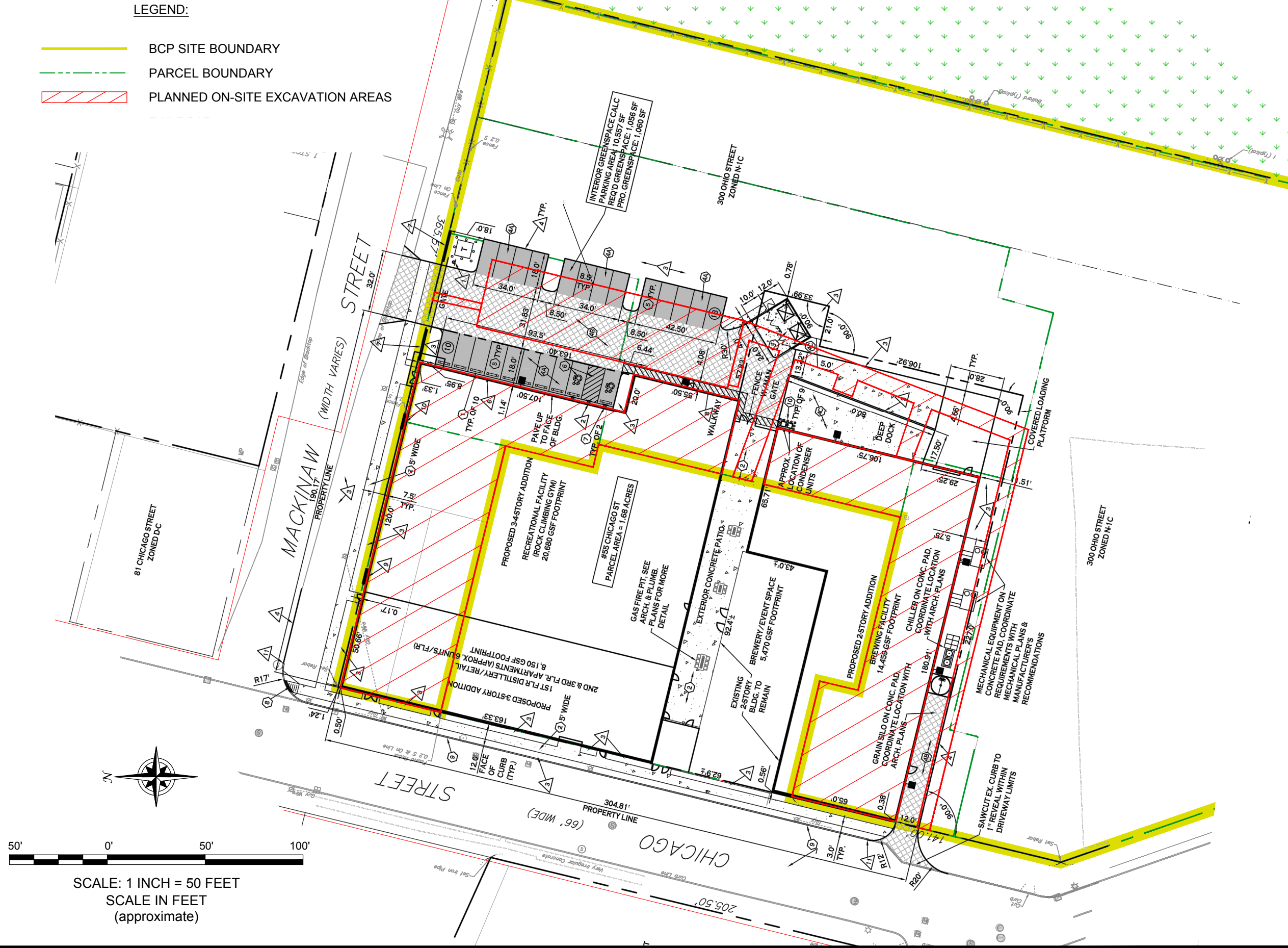


2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0136-037-102

FIGURE 2

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PLANNED ON-SITE EXCAVATION AREAS

POST COC NOTIFICATION ADDENDUM TO EXCAVATION WORK PLAN

300 OHIO STREET SITE
BCP SITE NO. C915257
BUFFALO, NEW YORK
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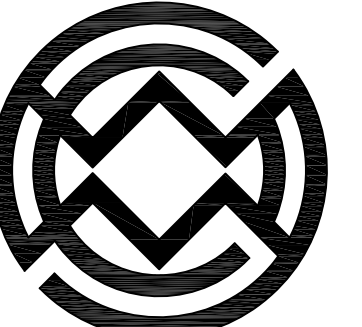
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FIGURE 3

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APPENDIX A

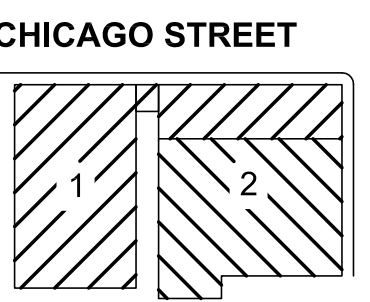
CIVIL CONSTRUCTION DRAWINGS AND DETAILS



**Carmina
Wood
Morris**^{INC}

487 Main Street Suite 500
Buffalo, New York 14203
P 716.842.3165
F 716.842.0263

NOT FOR
CONSTRUCTION
BID DOCUMENTS
ONLY



KEY PLAN

ELLICOTT DEVELOPMENT
THE COOPERAGE
55 CHICAGO ST.
BUFFALO, NY, 14204

REV. #	DESCRIPTION	DATE

**BID PACKAGE
JUNE 22, 2018**

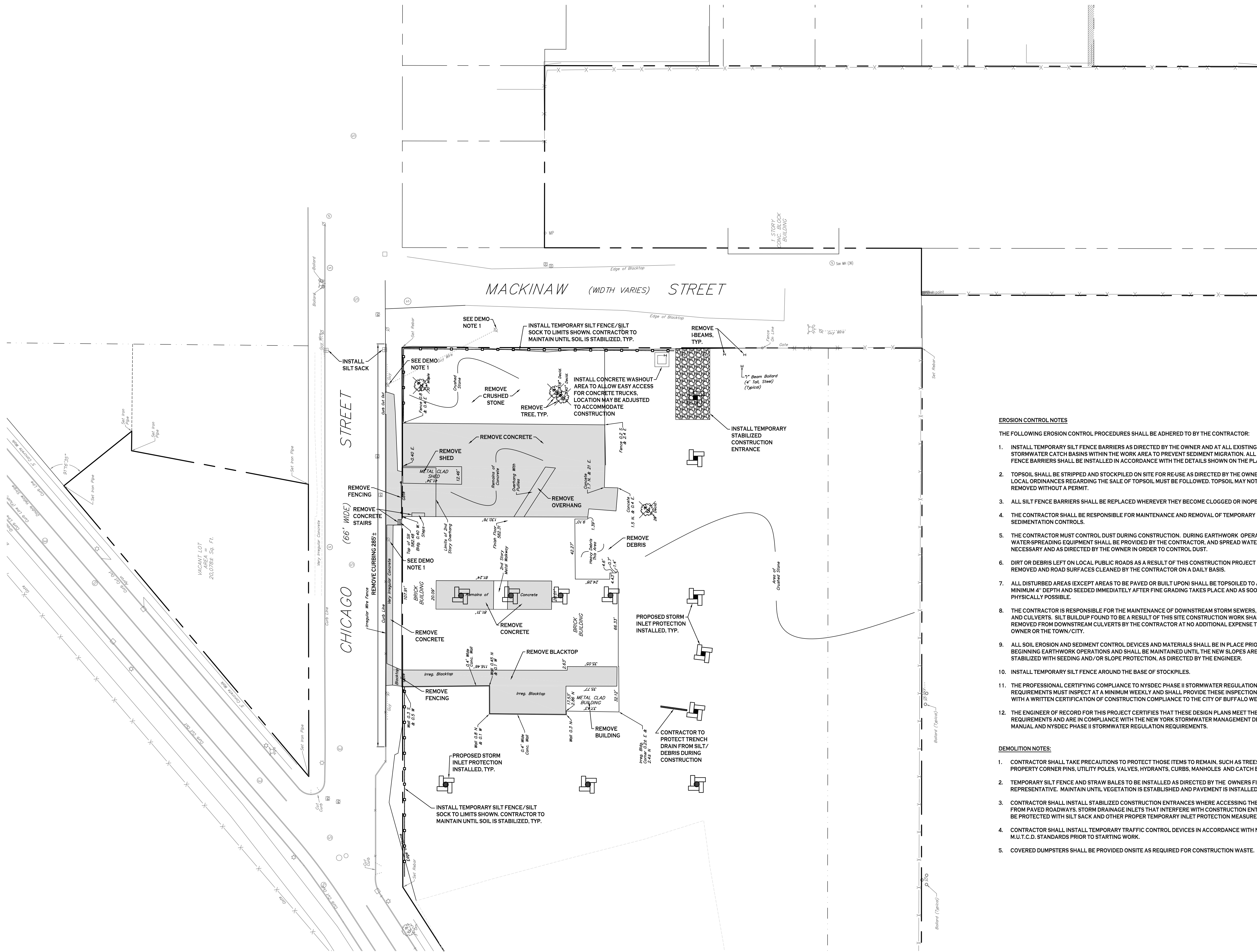
JOB NO.	1807
SCALE	As Noted
ISSUE DATE	05/22/18
DRAWN BY	P. Sheedy
CHECKED BY	C. Wood

THIS IS A SINGLE SHEET OF A COBWEB SET OF CONSTRUCTION DOCUMENTS (INCLUDING DRAWINGS AND SPECIFICATIONS). INTERPRETATION OF THE INFORMATION AS PRESENTED SHOULD BE BASED ON THE ENTIRE SET OF DOCUMENTS.

DRAWING TITLE
Demolition & Erosion Control Plan

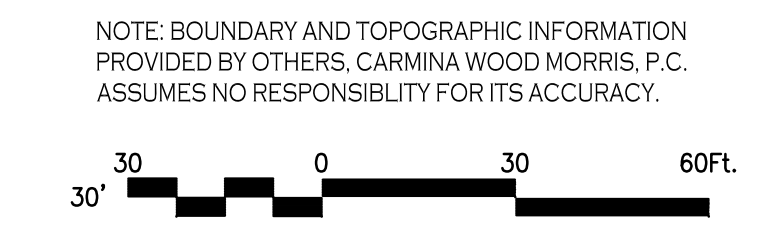
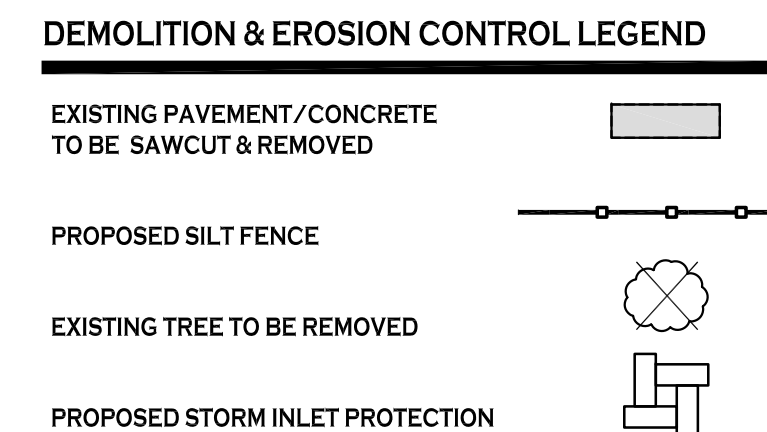
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PERMIT SET

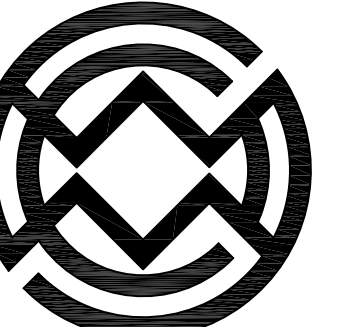


- EROSION CONTROL NOTES**
- THE FOLLOWING EROSION CONTROL PROCEDURES SHALL BE ADHERED TO BY THE CONTRACTOR:
- INSTALL TEMPORARY SILT FENCE BARRIERS AS DIRECTED BY THE OWNER AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT FENCE BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
 - TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR REUSE AS DIRECTED BY THE OWNER. ALL LOCAL ORDINANCES REGARDING THE SALE OF TOPSOIL MUST BE FOLLOWED. TOPSOIL MAY NOT BE REMOVED WITHOUT A PERMIT.
 - ALL SILT FENCE BARRIERS SHALL BE REPLACED WHEREVER THEY BECOME CLOGGED OR INOPERABLE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
 - THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER-SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, AND SPREAD WATER AS NECESSARY AND AS DIRECTED BY THE OWNER IN ORDER TO CONTROL DUST.
 - DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED AND ROAD SURFACES CLEANED BY THE CONTRACTOR ON A DAILY BASIS.
 - ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH AND SEEDED IMMEDIATELY AFTER FINE GRADING TAKES PLACE AND AS SOON AS PHYSICALLY POSSIBLE.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES, AND CULVERTS. SILT BUILDUP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE TOWN/CITY.
 - ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION, AS DIRECTED BY THE ENGINEER.
 - INSTALL TEMPORARY SILT FENCE AROUND THE BASE OF STOCKPILES.
 - THE PROFESSIONAL CERTIFYING COMPLIANCE TO NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS MUST INSPECT AT A MINIMUM WEEKLY AND SHALL PROVIDE THESE INSPECTION REPORT WITH A WRITTEN CERTIFICATION OF CONSTRUCTION COMPLIANCE TO THE CITY OF BUFFALO WEEKLY.
 - THE ENGINEER OF RECORD FOR THIS PROJECT CERTIFIES THAT THESE DESIGN PLANS MEET THE REQUIREMENTS AND ARE IN COMPLIANCE WITH THE NEW YORK STORMWATER MANAGEMENT DESIGN MANUAL AND NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS.

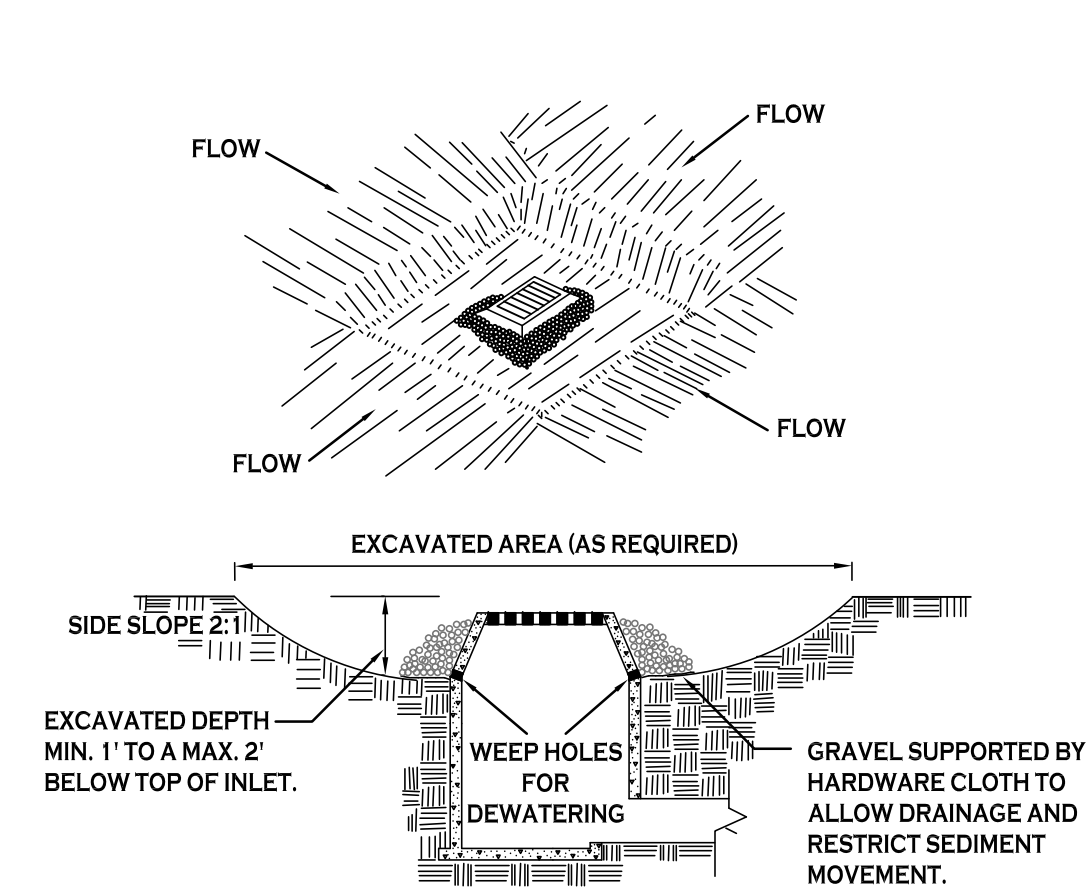
- DEMOLITION NOTES:**
- CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THOSE ITEMS TO REMAIN, SUCH AS TREES, PROPERTY CORNER PINS, UTILITY POLES, VALVES, HYDRANTS, CURBS, MANHOLES AND CATCH BASINS.
 - TEMPORARY SILT FENCE AND STRAW BALES TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
 - CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCES WHERE ACCESSING THE SITE FROM PAVED ROADWAYS. STORM DRAINAGE INLETS THAT INTERFERE WITH CONSTRUCTION ENTRANCE TO BE PROTECTED WITH SILT SACK AND OTHER PROPER TEMPORARY INLET PROTECTION MEASURES.
 - CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH NYS M.U.T.C.D. STANDARDS PRIOR TO STARTING WORK.
 - COVERED DUMPSTERS SHALL BE PROVIDED ONSITE AS REQUIRED FOR CONSTRUCTION WASTE.



DEMOLITION & EROSION CONTROL PLAN
SCALE: 1"=30'



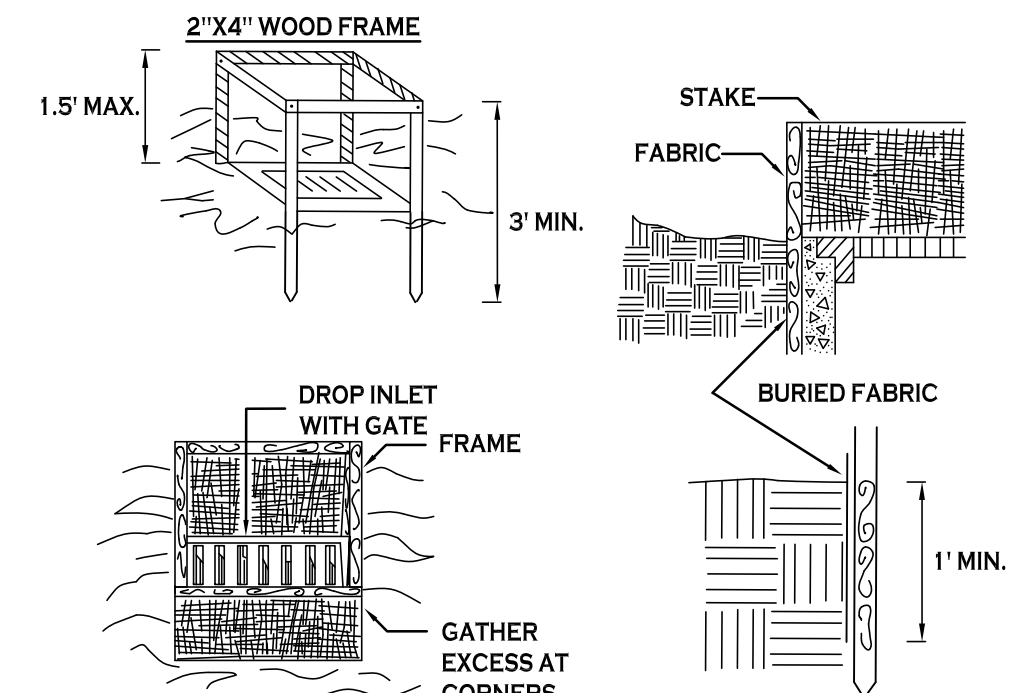
NOT FOR
CONSTRUCTION
BID DOCUMENTS
ONLY



CONSTRUCTION SPECIFICATIONS

- CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
 - GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
 - WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
 - UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.
- MAXIMUM DRAINAGE AREA 1 ACRE

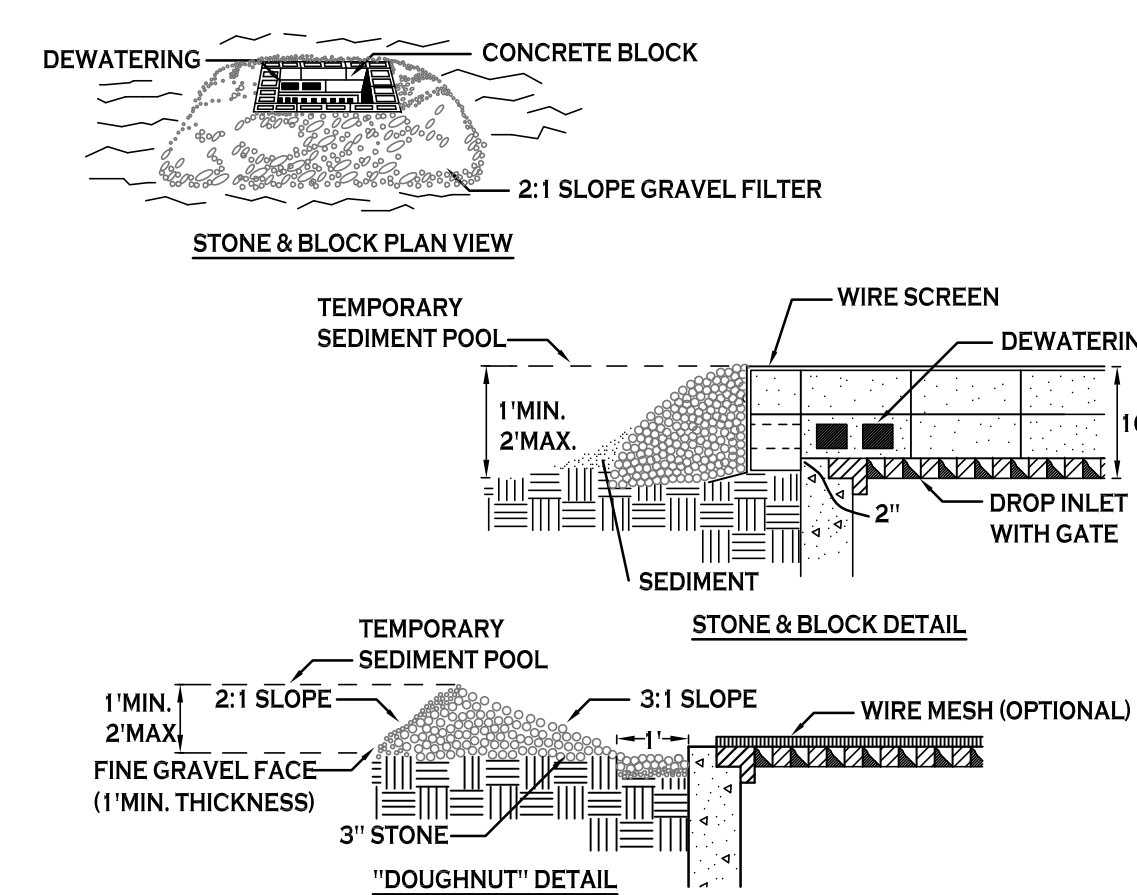
INLET PROTECTION DETAIL 1
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

- FILTER FABRIC SHALL HAVE AN EOS OF 4085. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
 - CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
 - STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
 - SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
 - FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
 - A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
- MAXIMUM DRAINAGE AREA 1 ACRE

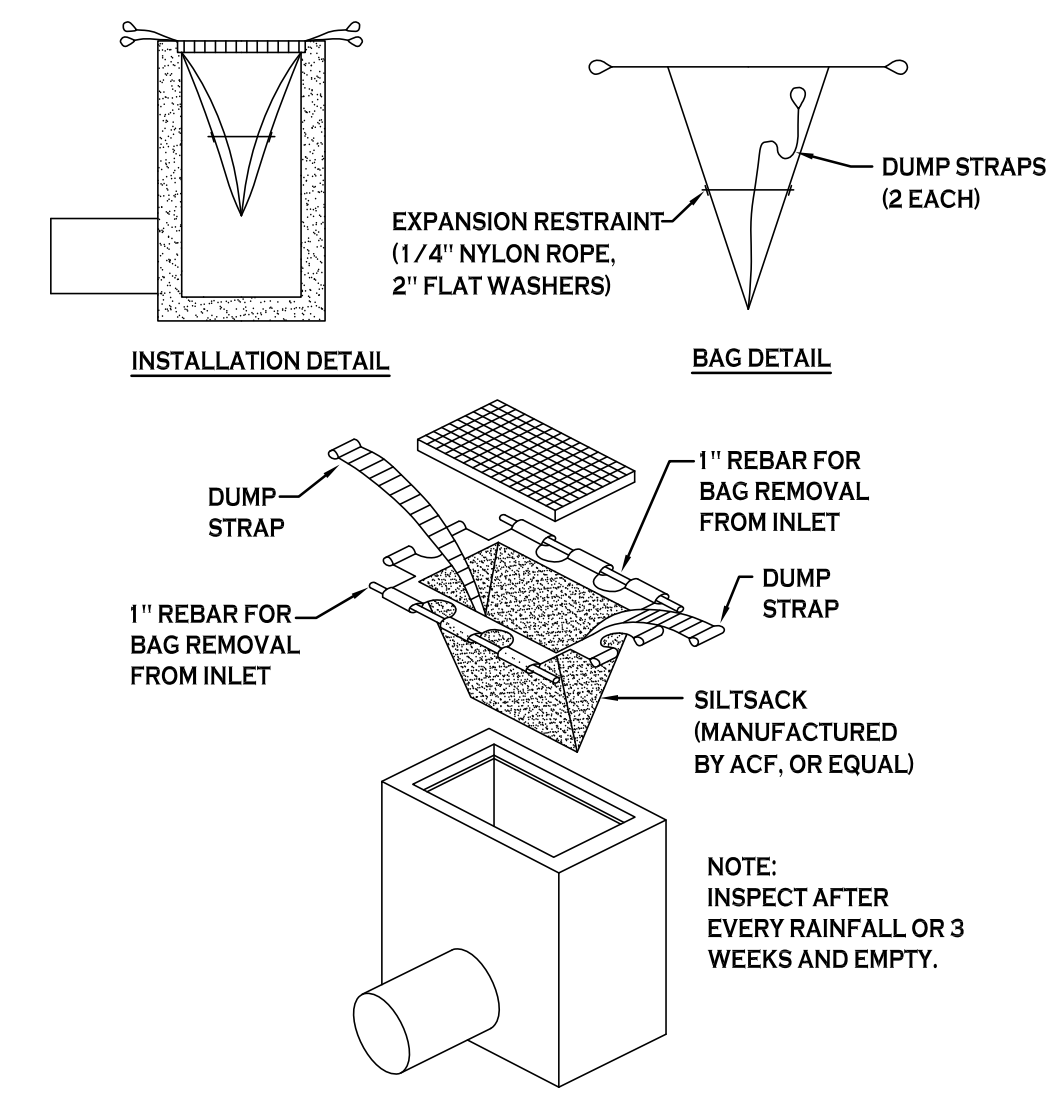
INLET PROTECTION DETAIL 2
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

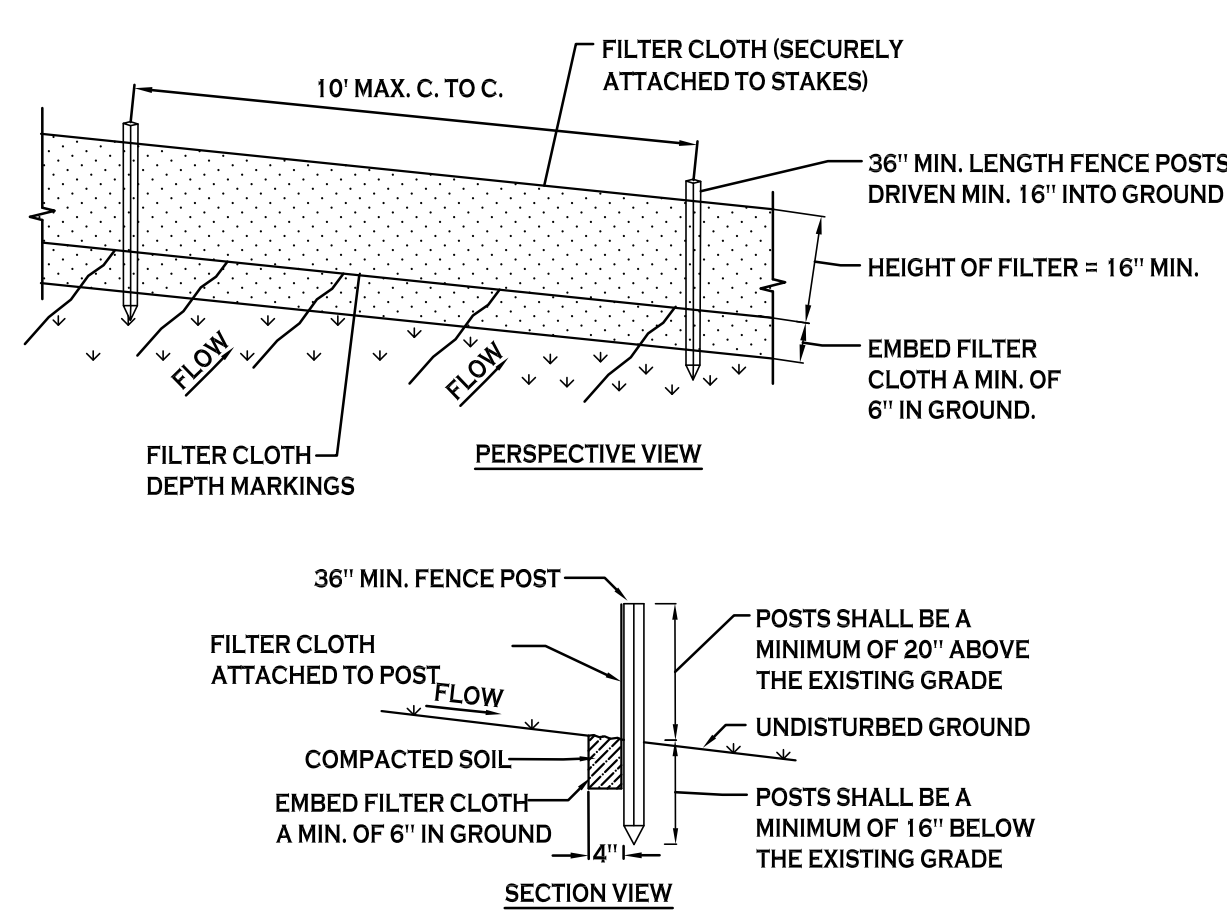
- LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
 - HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
 - USE CLEAN STONE OR GRAVEL 1/23/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
 - FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.
- MAXIMUM DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 3
NOT TO SCALE



SILT SACK DETAIL
NOT TO SCALE

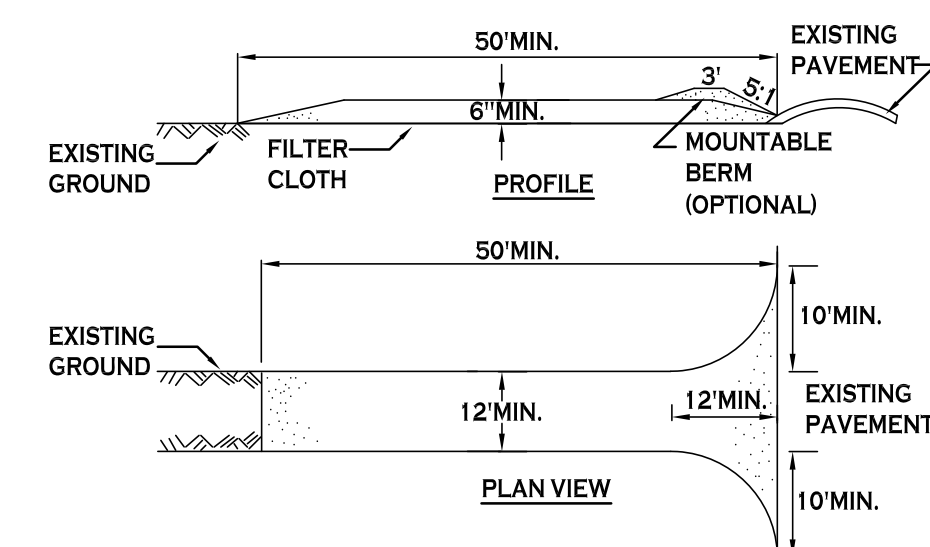
NOTE: INSTALL ONE OF THE INLET PROTECTION OPTIONS SHOWN PRIOR TO CONSTRUCTION



CONSTRUCTION SPECIFICATIONS

- WOVEN FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

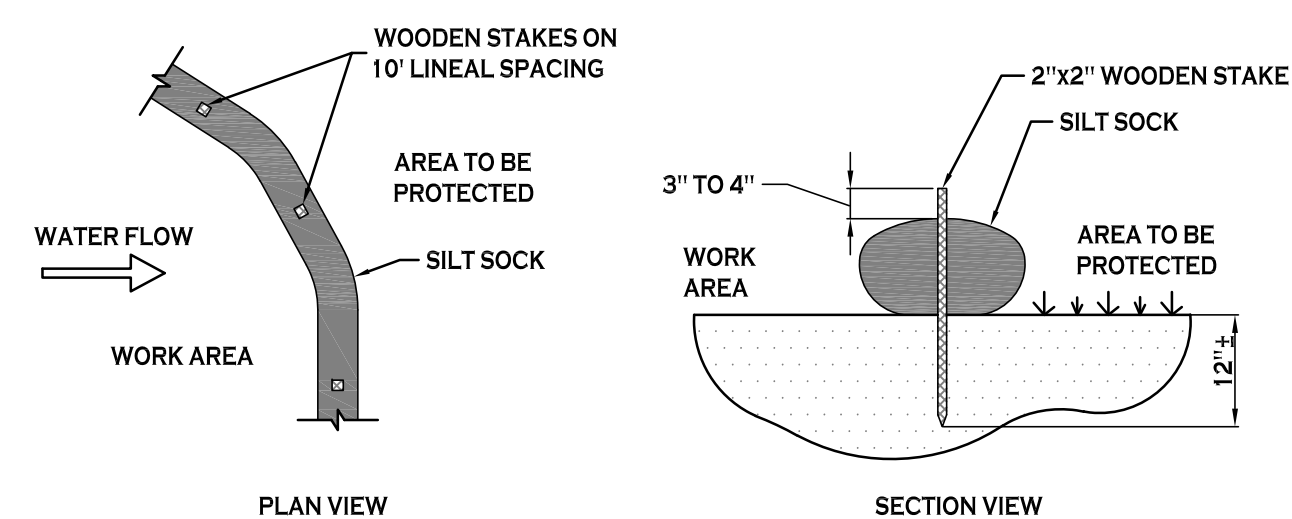
SILT FENCE DETAIL
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



NOTES:

CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED 1/2 OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION. PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

SILT SOCK DETAIL
NOT TO SCALE



KEY PLAN

ELLCOTT DEVELOPMENT
THE COOPERAGE
55 CHICAGO ST.
BUFFALO, NY, 14204

REV. #	DESCRIPTION	DATE

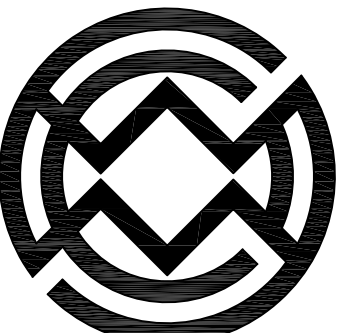
**BID PACKAGE
JUNE 22, 2018**

JOB NO.	1807
SCALE	As Noted
ISSUE DATE	05/22/18
DRAWN BY	P. Sheedy
CHECKED BY	C. Wood

THIS IS A SINGLE SHEET OF A COHERIVE SET OF CONSTRUCTION DOCUMENTS (INCLUDING DRAWINGS AND SPECIFICATIONS). INTERPRETATION OF THE INFORMATION AS PRESENTED SHOULD BE BASED ON THE ENTIRE SET OF DOCUMENTS.

DRAWING TITLE
**Demolition & Erosion
Control Details**

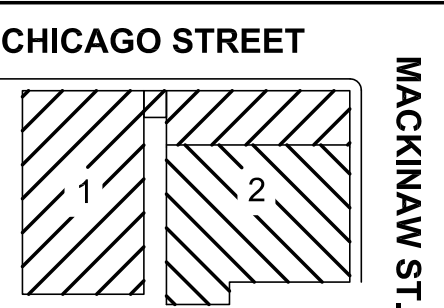
C-002
PERMIT SET



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KEY PLAN

ELLICOTT DEVELOPMENT
THE COOPERAGE
55 CHICAGO ST.
BUFFALO, NY, 14204

REV. #	DESCRIPTION	DATE

**BID PACKAGE
JUNE 22, 2018**

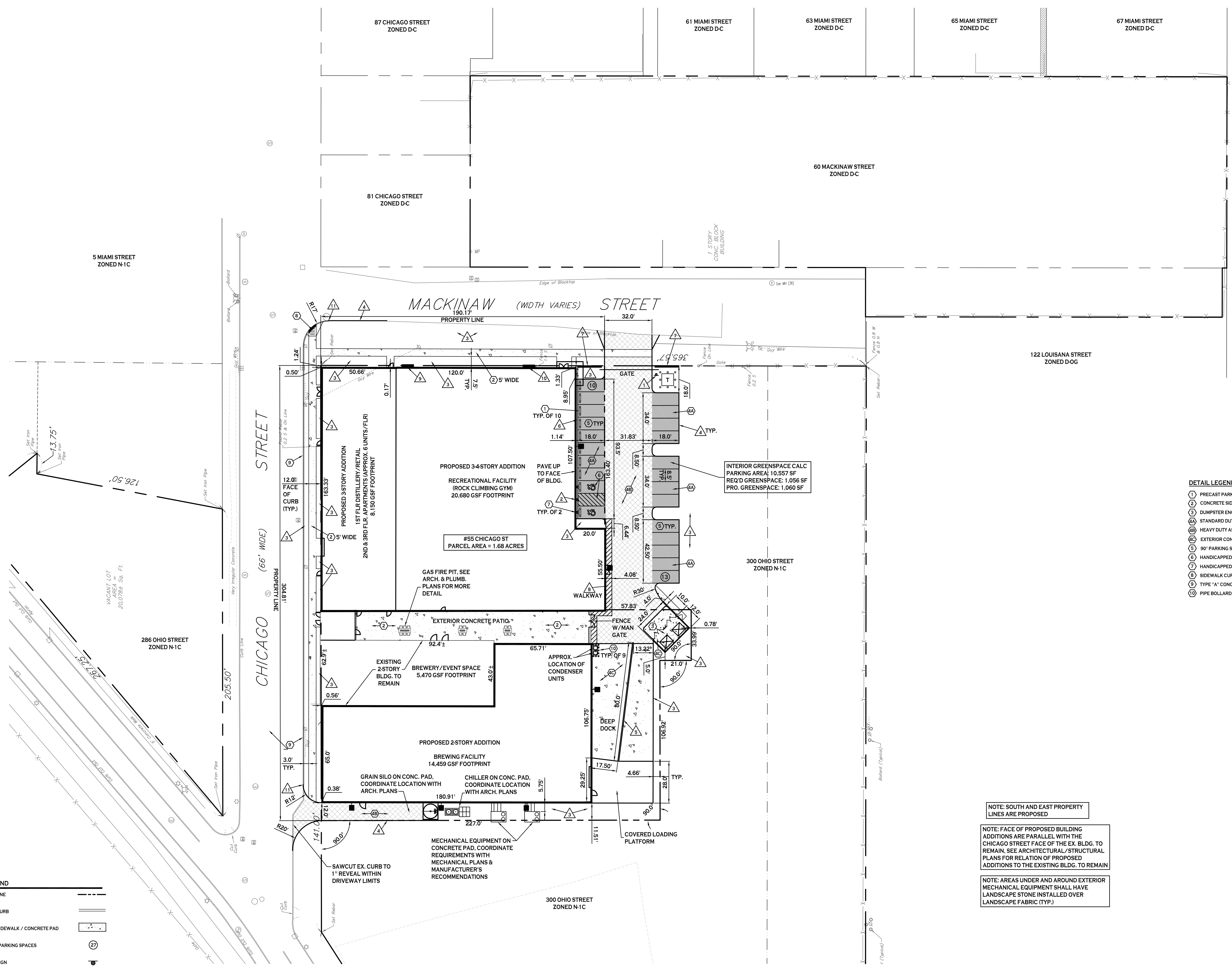
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ISSUE DATE	05/22/18
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DRAWING TITLE
Site Plan

C-100

PERMIT SET



SITE LEGEND

PROPERTY LINE	---
PROPOSED CURB / CONCRETE PAD	=====
PROPOSED SIDEWALK / CONCRETE PAD	-----
NUMBER OF PARKING SPACES	⊙
PROPOSED SIGN	■
PROPOSED BLDG. MOUNTED LIGHT	■
PROPOSED STANDARD DUTY ASPHALT PAVT.	▨
PROPOSED HEAVY DUTY ASPHALT PAVT.	▩

DETAIL LEGEND SEE DETAIL SHEET

① PRECAST PARKING BUMPER	△ INSTALL STOP SIGN, M.U.T.C.D. SIGN NO. R1-1C
② CONCRETE SIDEWALK	△ INSTALL "NO PARKING" SIGN, M.U.T.C.D. SIGN NO. R7-1C
③ BUMPSTER ENCLOSURE	△ LANDSCAPED AREA- SEE LANDSCAPE PLAN, IF NO PLANTINGS, INSTALL TOPSOIL & SEED
④ STANDARD DUTY ASPHALT PAVEMENT	△ EDGE OF PAVEMENT
⑤ HEAVY DUTY ASPHALT PAVEMENT	△ CONCRETE RETAINING WALL W/ GUIDERAIL, SEE ARCH./STRUCTURAL PLANS
⑥ EXTERIOR CONCRETE SLAB ON GRADE	△ 4" WIDE YELLOW PAVEMENT STRIPE
⑦ 90° PARKING STALL	△ 16" LONG x 2.5" HIGH DECORATIVE WALL, SEE PLAN BY OTHERS
⑧ HANDICAPPED PAVEMENT MARKINGS	△ INFILL WITH 4" WIDE YELLOW PAVEMENT STRIPES @ 2' O.C. & 45°
⑨ HANDICAPPED PARKING SIGN	△ APPROX. GAS METER BANK LOCATION, COORDINATE WITH PLUMBING PLANS BY OTHERS
⑩ SIDEWALK CURB RAMP	△ APPROX. ELECTRIC SWITCH GEAR LOCATION, COORDINATE WITH ELECTRICAL PLANS BY OTHERS
⑪ TYPE "A" CONCRETE CURB	△ LIMIT OF NEW CURB, MATCH EX. OR RUN OUT IN 3'
⑫ PIPE BOLLARD	

- NOTES:**
- ALL RADI SHALL BE 3'-0" UNLESS OTHERWISE NOTED.
 - ALL DISTURBED AREAS SHALL HAVE 4" MIN. OF TOPSOIL AND SEED.
 - ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
 - CENTER ENTRANCE SIDEWALKS ON DOOR OPENINGS.
 - BUILDING DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.

- GENERAL NOTES:**
- INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
 - SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
 - WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
 - VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
 - CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
 - CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.

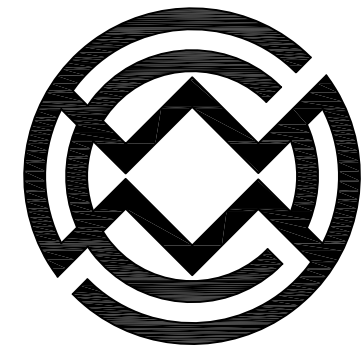
NOTE: SOUTH AND EAST PROPERTY LINES ARE PROPOSED

NOTE: FACE OF PROPOSED BUILDING ADDITIONS ARE PARALLEL WITH THE CHICAGO STREET FACE OF THE EX. BLDG. TO REMAIN. SEE ARCHITECTURAL/STRUCTURAL PLANS FOR RELATION OF PROPOSED ADDITIONS TO THE EXISTING BLDG. TO REMAIN

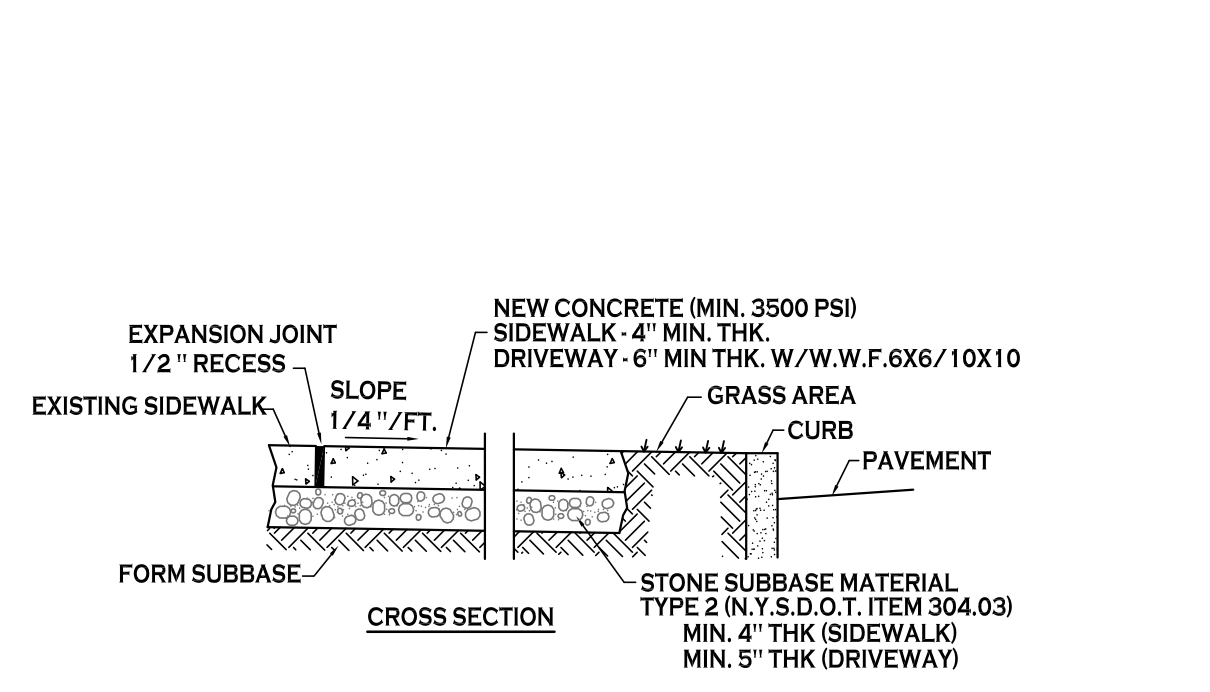
NOTE: AREAS UNDER AND AROUND EXTERIOR MECHANICAL EQUIPMENT SHALL HAVE LANDSCAPE STONE INSTALLED OVER LANDSCAPE FABRIC (TYP.)

SITE PLAN
SCALE: 1"=30'

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

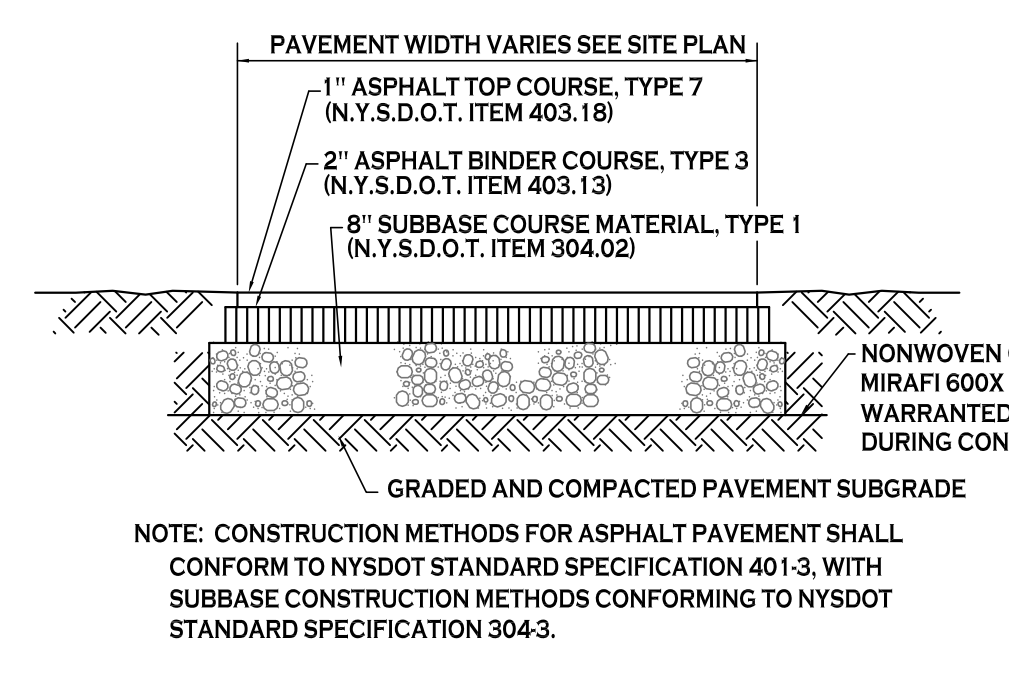


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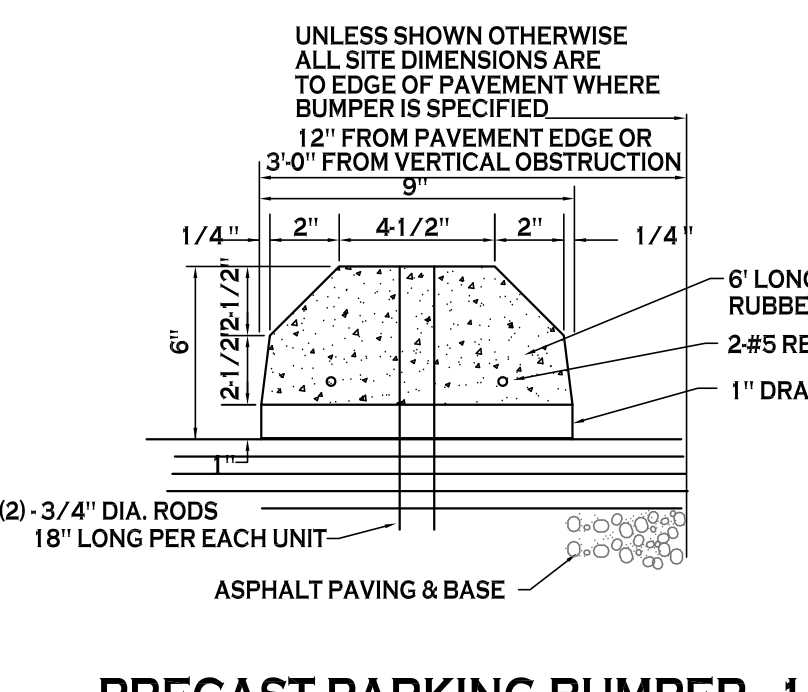


- NOTES:**
- CONTROL JOINTS TO BE AT 5'-0" O.C., BOTH WAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYS DOT 702-0700.
 - CONCRETE SIDEWALK AND DRIVEWAY MATERIAL SHALL CONFORM TO NYS DOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM TO NYS DOT STANDARD SPECIFICATION 608.3.
 - SUBBASE GRADE SHALL FOLLOW THE PROPOSED GRADE OF THE SIDEWALK AND SLOPE AWAY FROM BUILDING WHERE APPLICABLE. PROVIDE CONTINUOUS STONE PATH TO CURB UNDER DRAIN WHERE PROVIDED.
 - FULL DEPTH EXPANSION JOINTS SHALL BE INSTALLED EVERY 20' O.C., BOTH WAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYS DOT 702-0700.
 - SEE CURB DETAIL FOR DOWLING REQUIREMENTS WHERE ABUTTING CURB.
 - INSTALL 6" LONG #3 DOWELS @ 12" O.C. WHERE SIDEWALK ABUTS A BUILDING WALL AT AN ENTRANCE. THICKEN SIDEWALK TO 6" AT BUILDING WALL AND INSTALL DOWEL CENTERED IN THE 6" DEPTH. DOWELS AND THICKENING OF SIDEWALK SHALL EXTEND 18" EITHER SIDE OF ENTRANCE.
 - INSTALL 1/2" PREMOLDED EXPANSION JOINT WITH BACKER ROD & SEALANT WHERE SIDEWALK ABUTS BUILDING OR OTHER STRUCTURE.

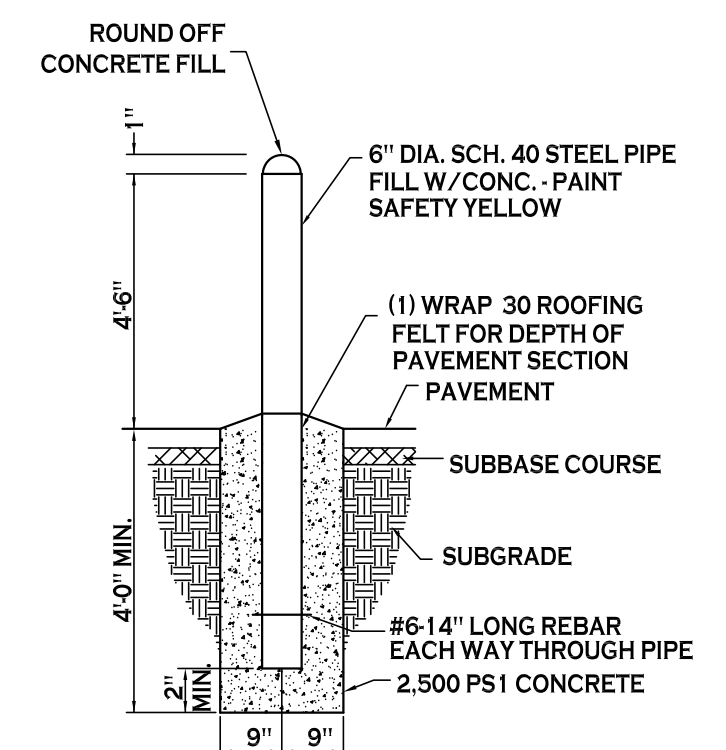
CONCRETE SIDEWALK - 2
NOT TO SCALE



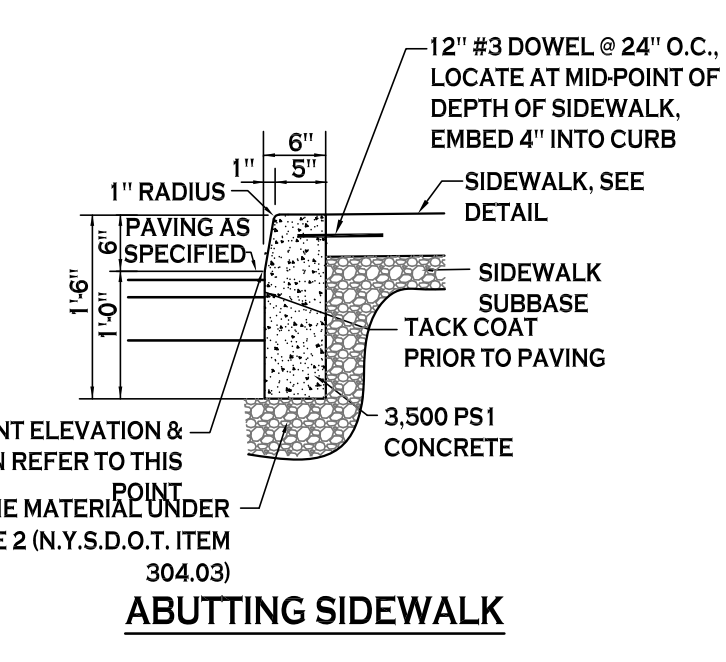
STANDARD DUTY ASPHALT SECTION - 4A
NOT TO SCALE



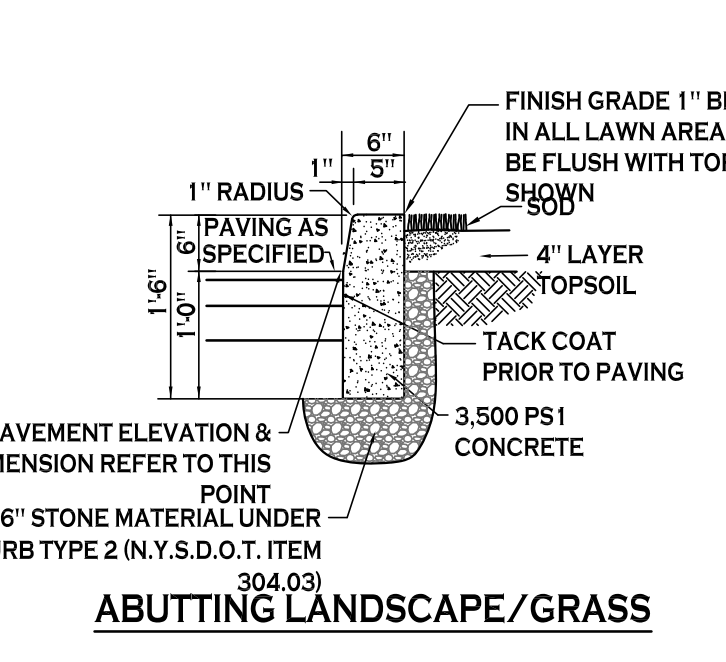
PRECAST PARKING BUMPER - 1
NOT TO SCALE



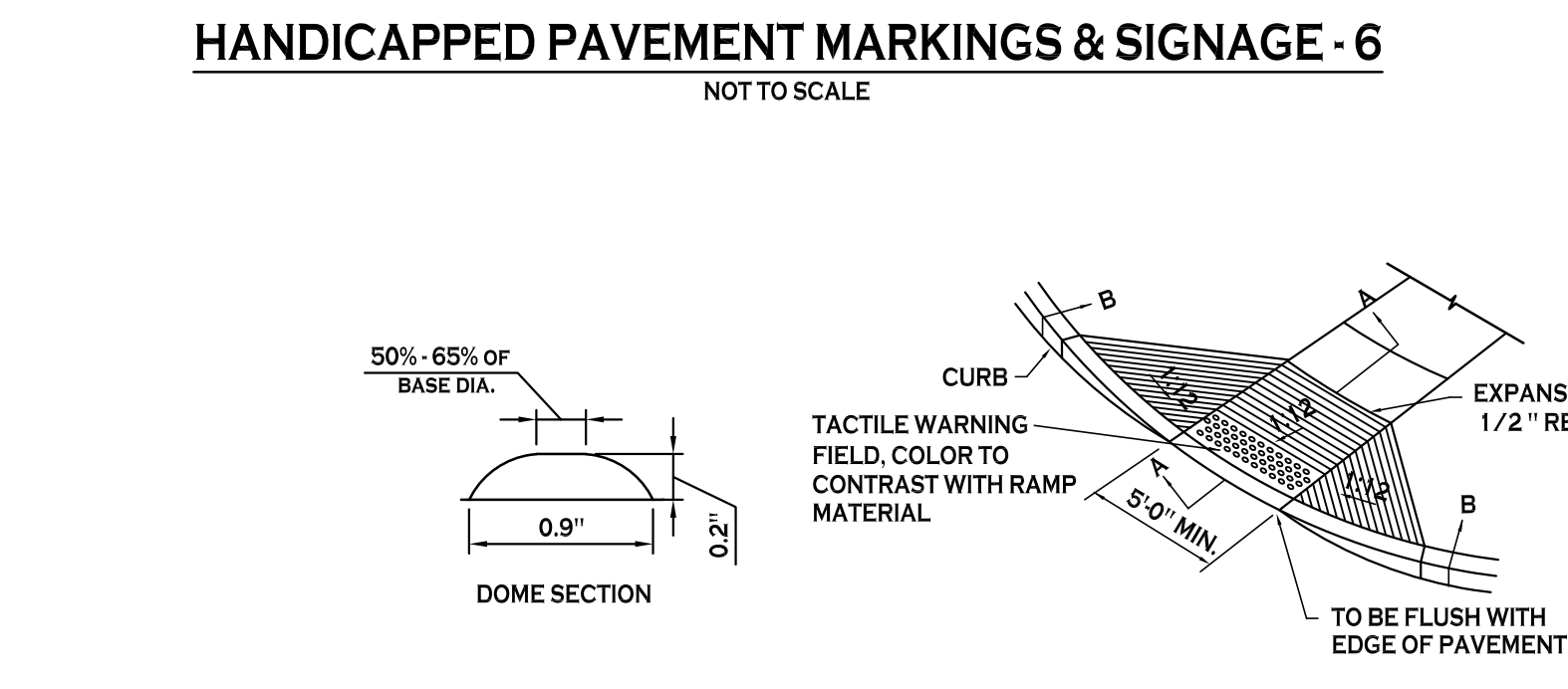
PIPE BOLLARD - 10
NOT TO SCALE



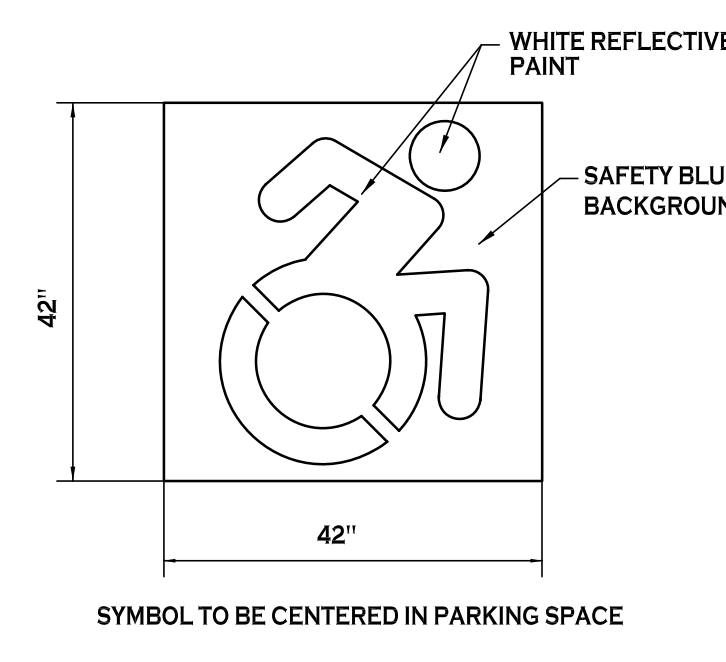
ABUTTING SIDEWALK
NOT TO SCALE



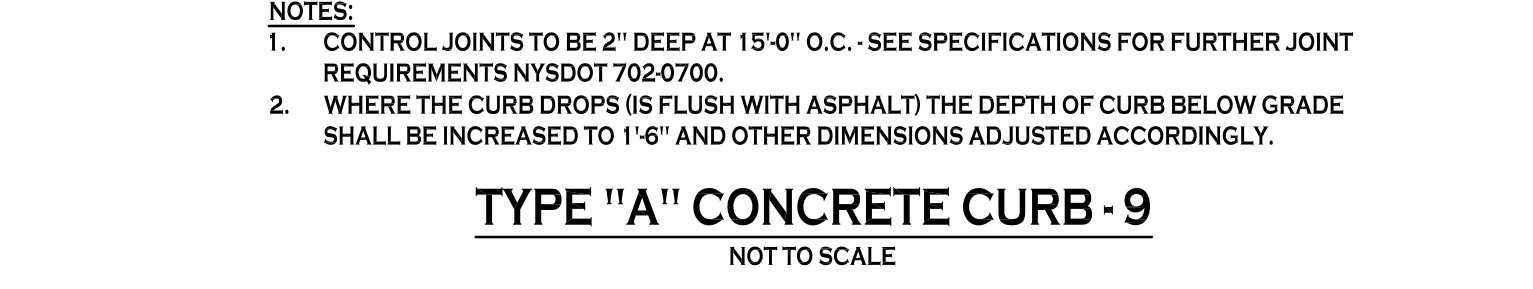
ABUTTING LANDSCAPE/GRASS
NOT TO SCALE



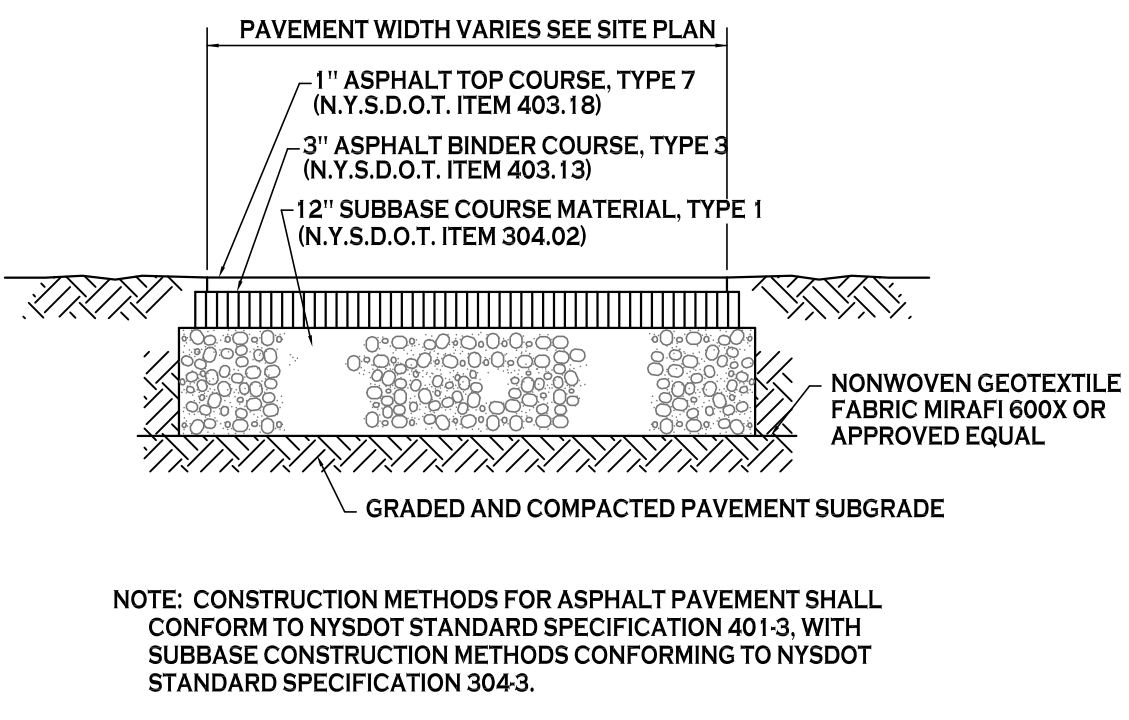
HANDICAPPED PAVEMENT MARKINGS & SIGNAGE - 6
NOT TO SCALE



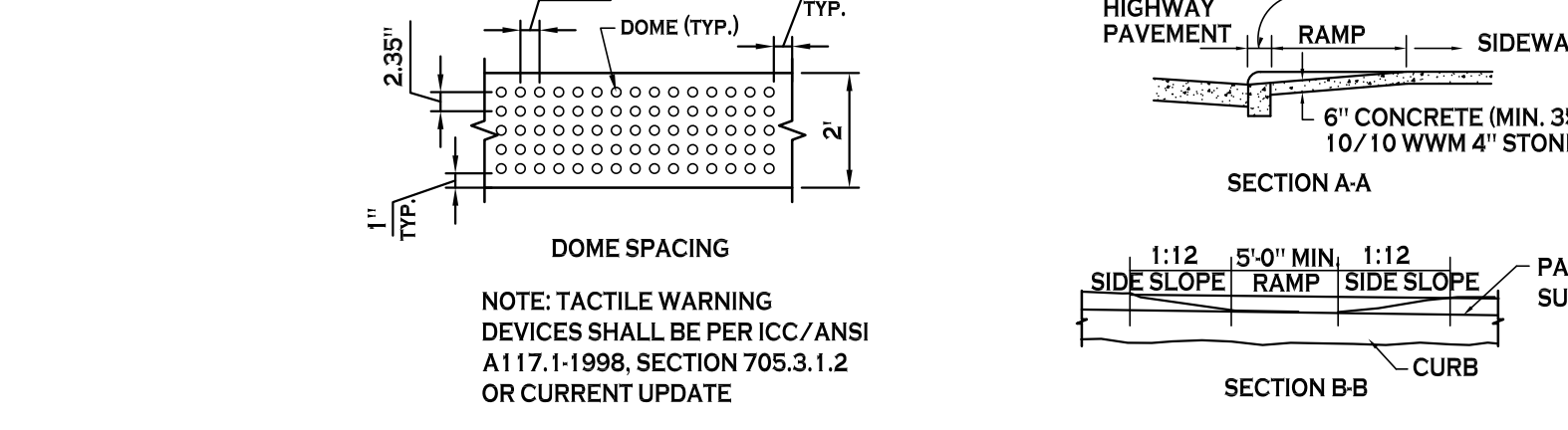
INTERNATIONAL HANDICAP SYMBOL - 6A
NOT TO SCALE



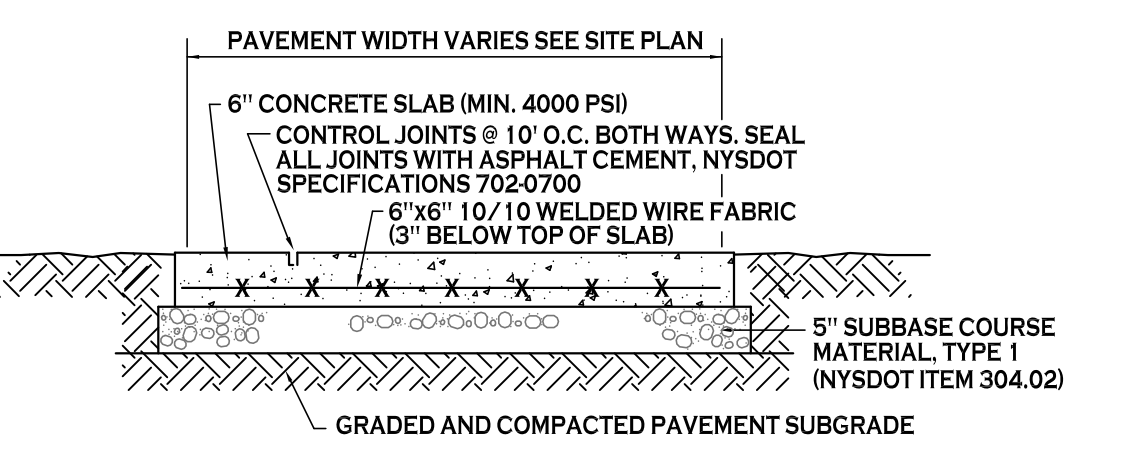
TYPE 'A' CONCRETE CURB - 9
NOT TO SCALE



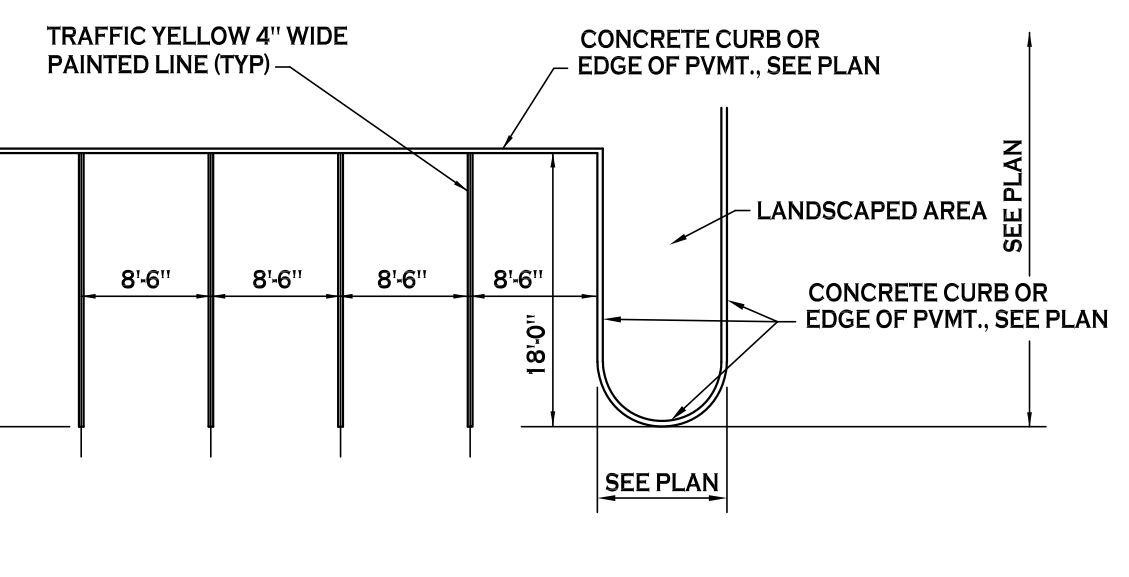
HEAVY DUTY ASPHALT SECTION - 4B
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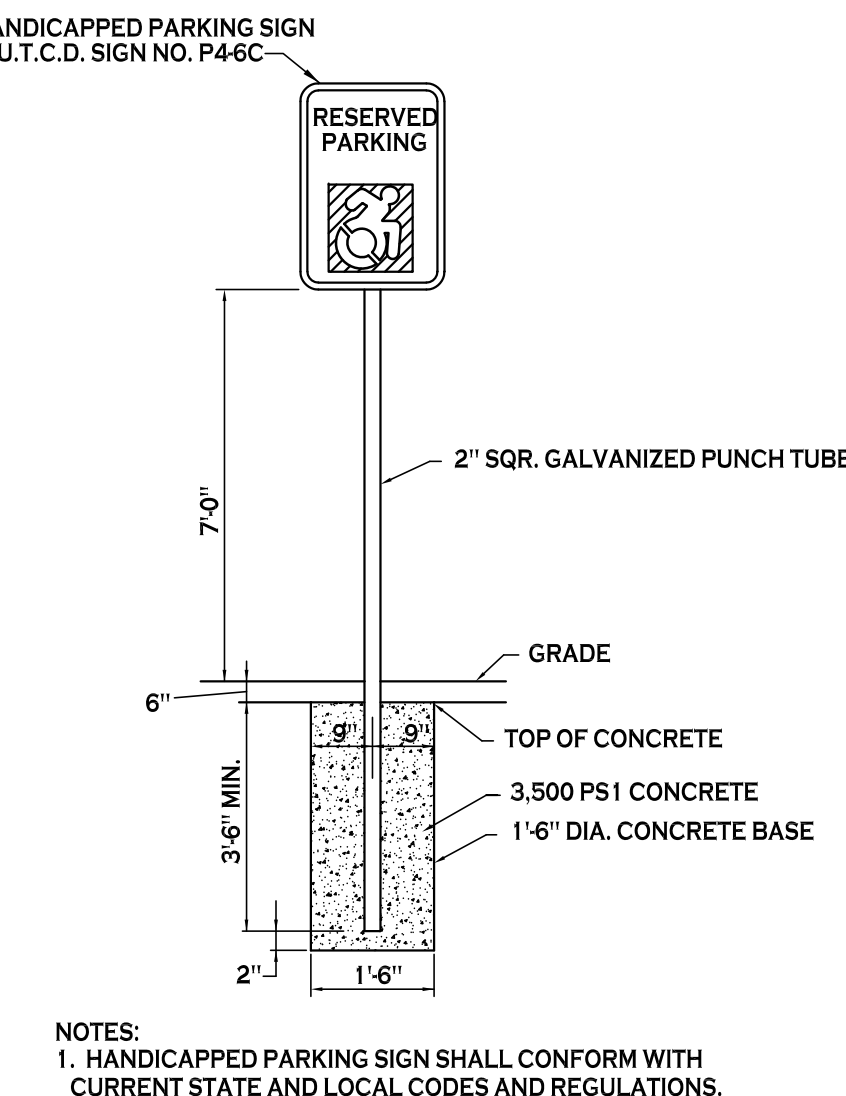
SIDEWALK CURB RAMP - 8
NOT TO SCALE



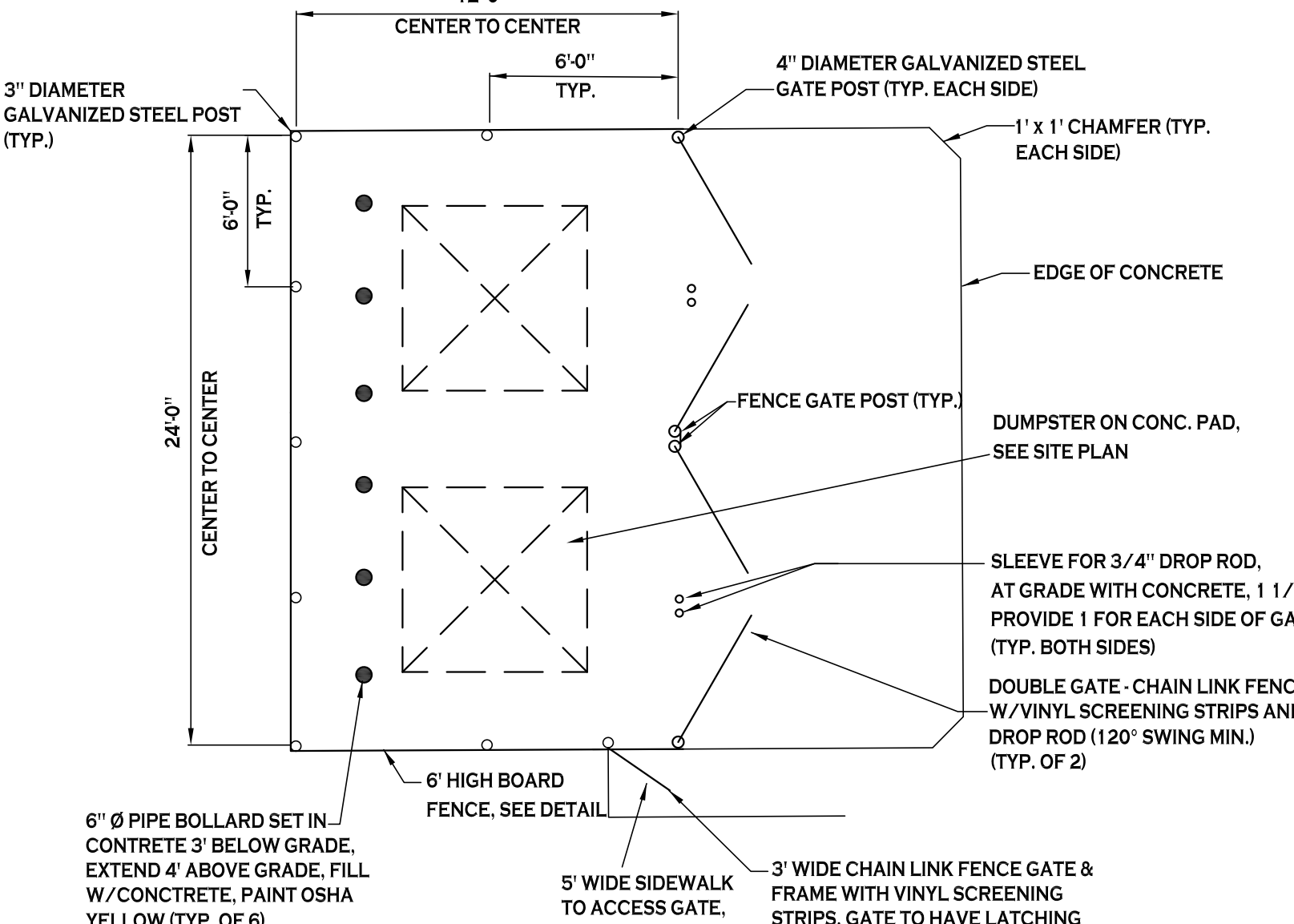
EXTERIOR CONCRETE SLAB-ON-GRADE SECTION - 4C
NOT TO SCALE



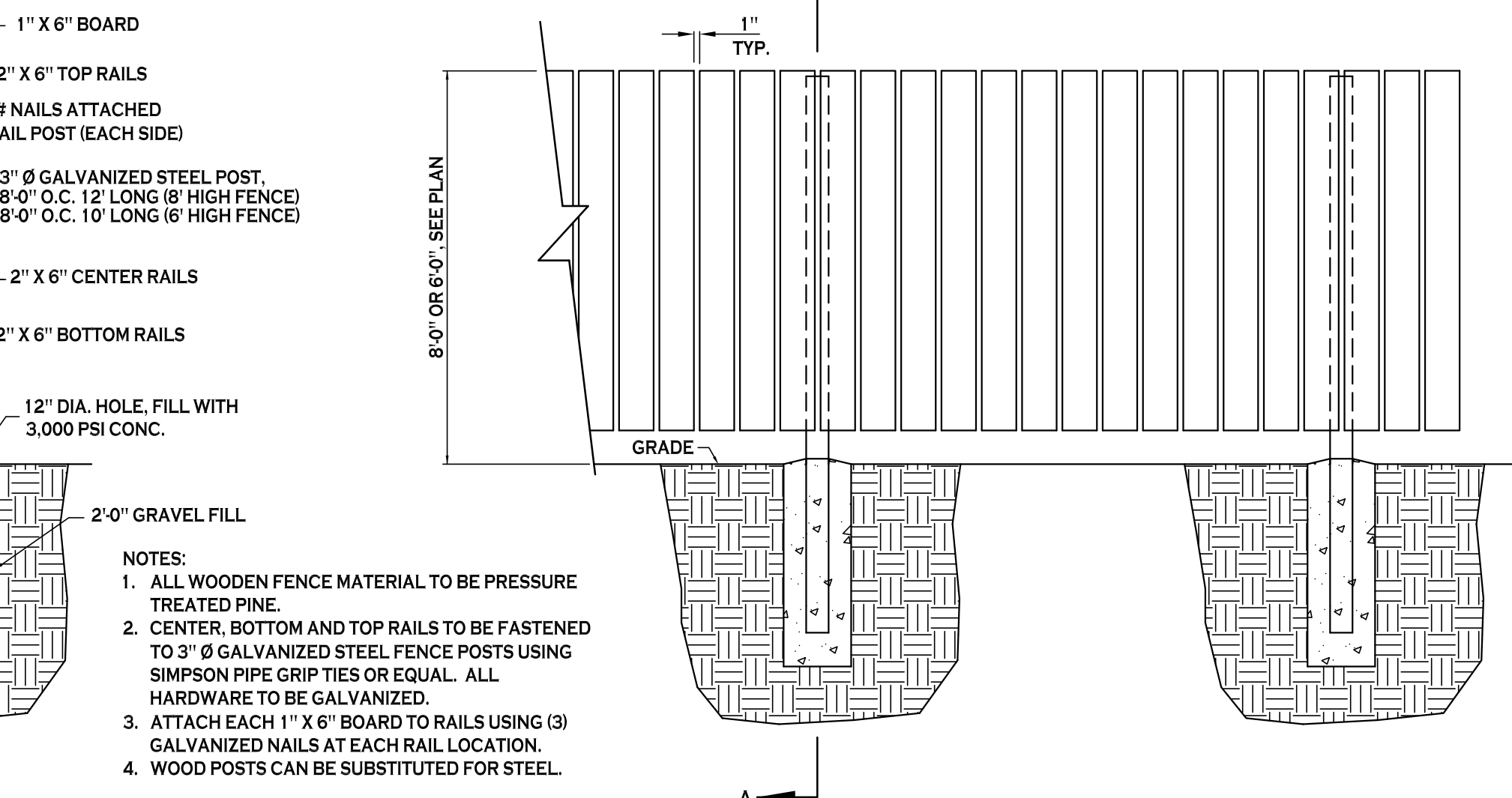
90° PARKING STALL LAYOUT - 5
NOT TO SCALE



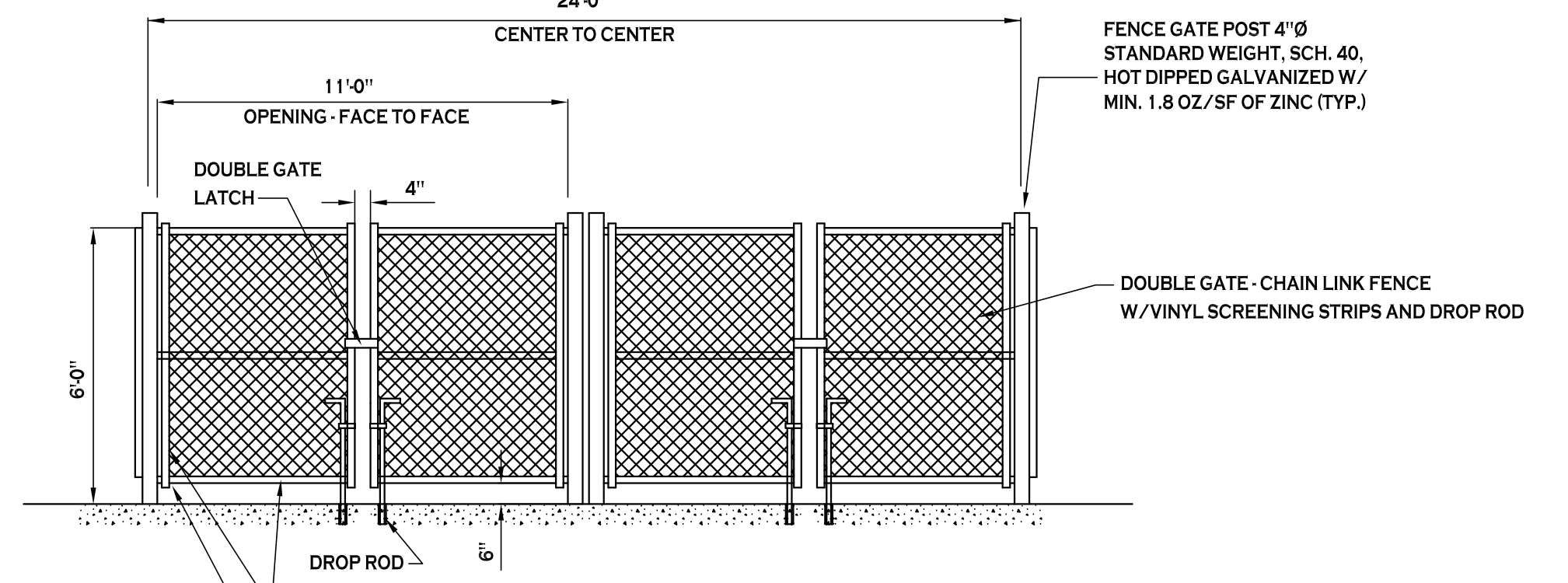
HANDICAPPED PARKING SIGN - 7
NOT TO SCALE



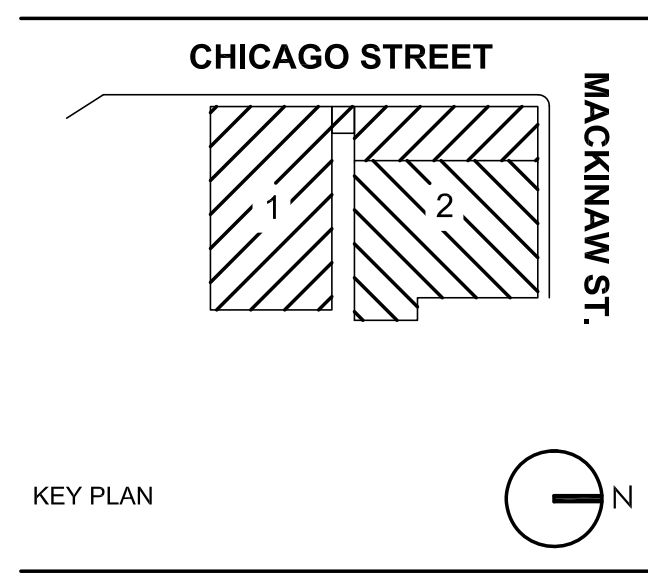
DUMPSTER ENCLOSURE - 3
NOT TO SCALE



6' BOARD ON BOARD FENCE FOR DUMPSTER ENCLOSURE
NOT TO SCALE



DUMPSTER ENCLOSURE - 3
NOT TO SCALE



ELLICOTT DEVELOPMENT
THE COOPERAGE
55 CHICAGO ST.
BUFFALO, NY, 14204

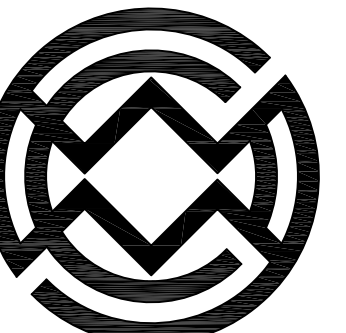
REV. #	DESCRIPTION	DATE

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JOB NO.	1807
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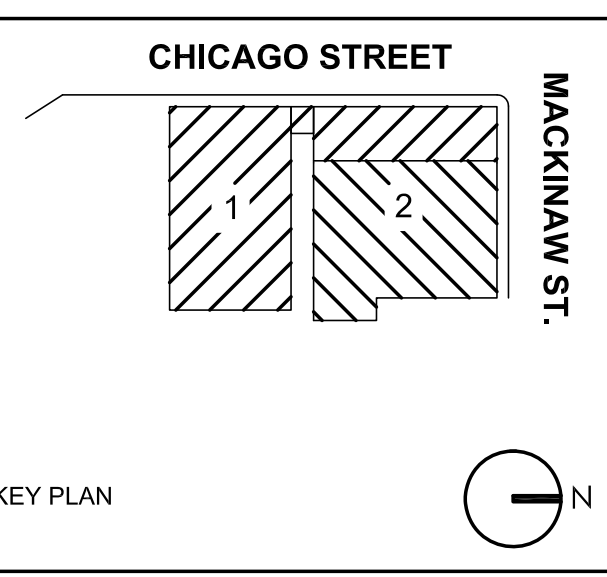
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DRAWING TITLE
Site Details



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ELLICOTT DEVELOPMENT
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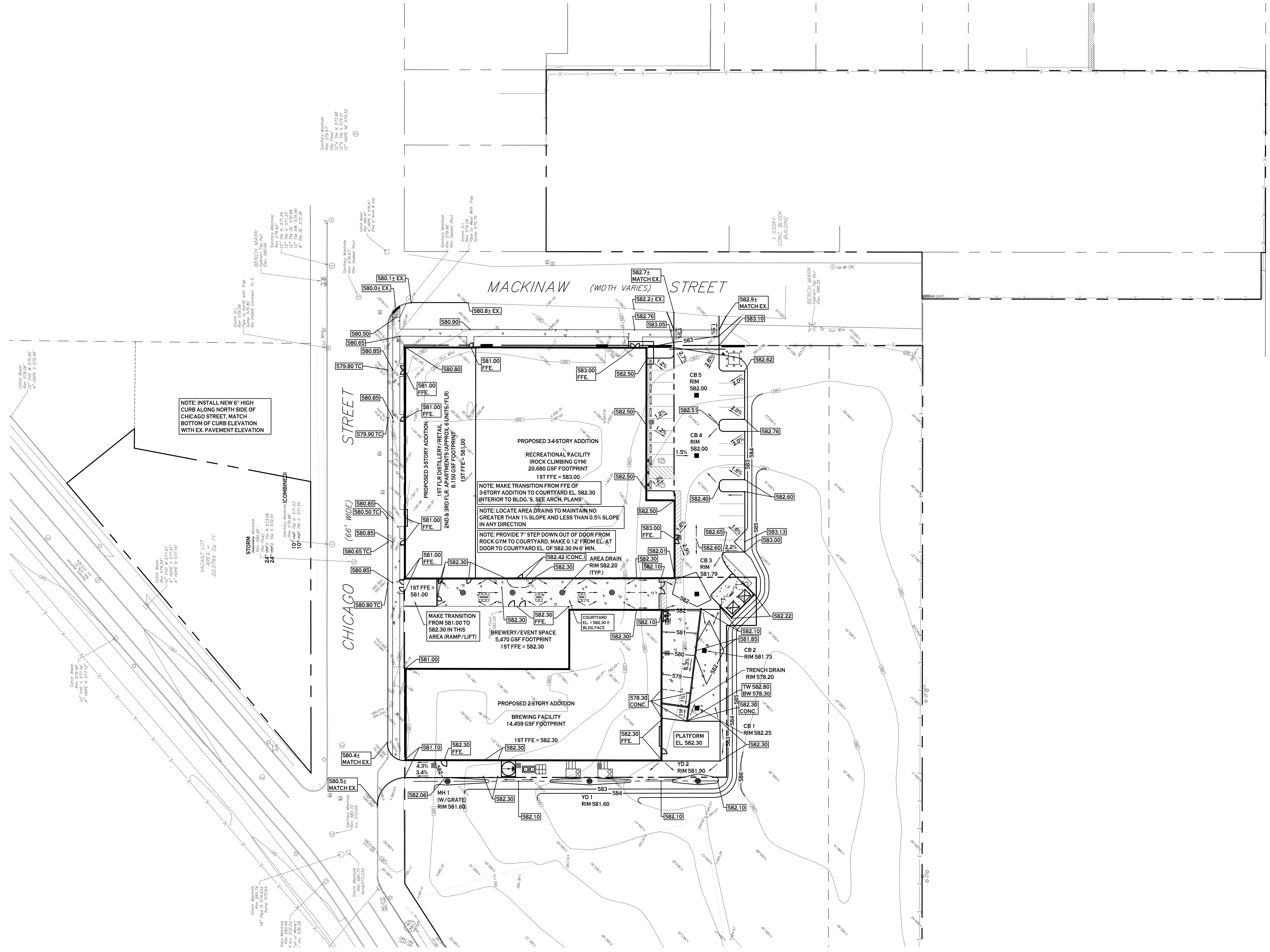
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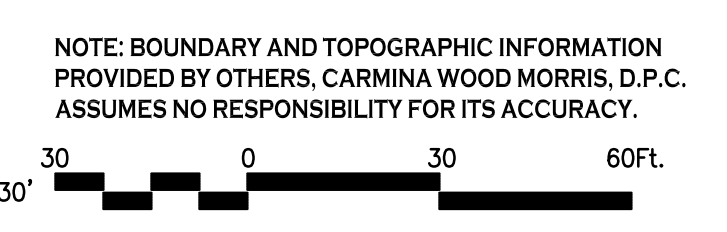
DRAWING TITLE
Grading Plan

C-200
PERMIT SET

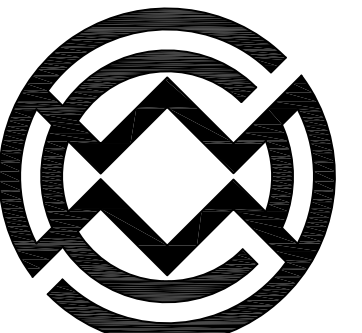


PROPOSED GRADING LEGEND

- PROPOSED CONTOUR — 101 —
- PROPOSED SPOT ELEVATION 100.80
- PROPOSED TOP/BOTTOM OF CURB ELEV. TC 100.50
BC 100.00
- PROPOSED CATCH BASIN ■ CB
- PAVEMENT/GROUND SLOPE —
- PROPOSED YARD DRAIN ● YD
- PROPOSED MANHOLE ● MH



GRADING PLAN
SCALE: 1"=30'

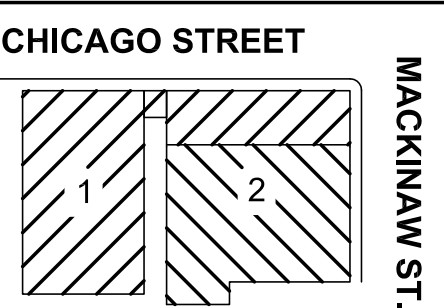


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KEY PLAN

ELLICOTT DEVELOPMENT
THE COOPERAGE
55 CHICAGO ST.
BUFFALO, NY, 14204

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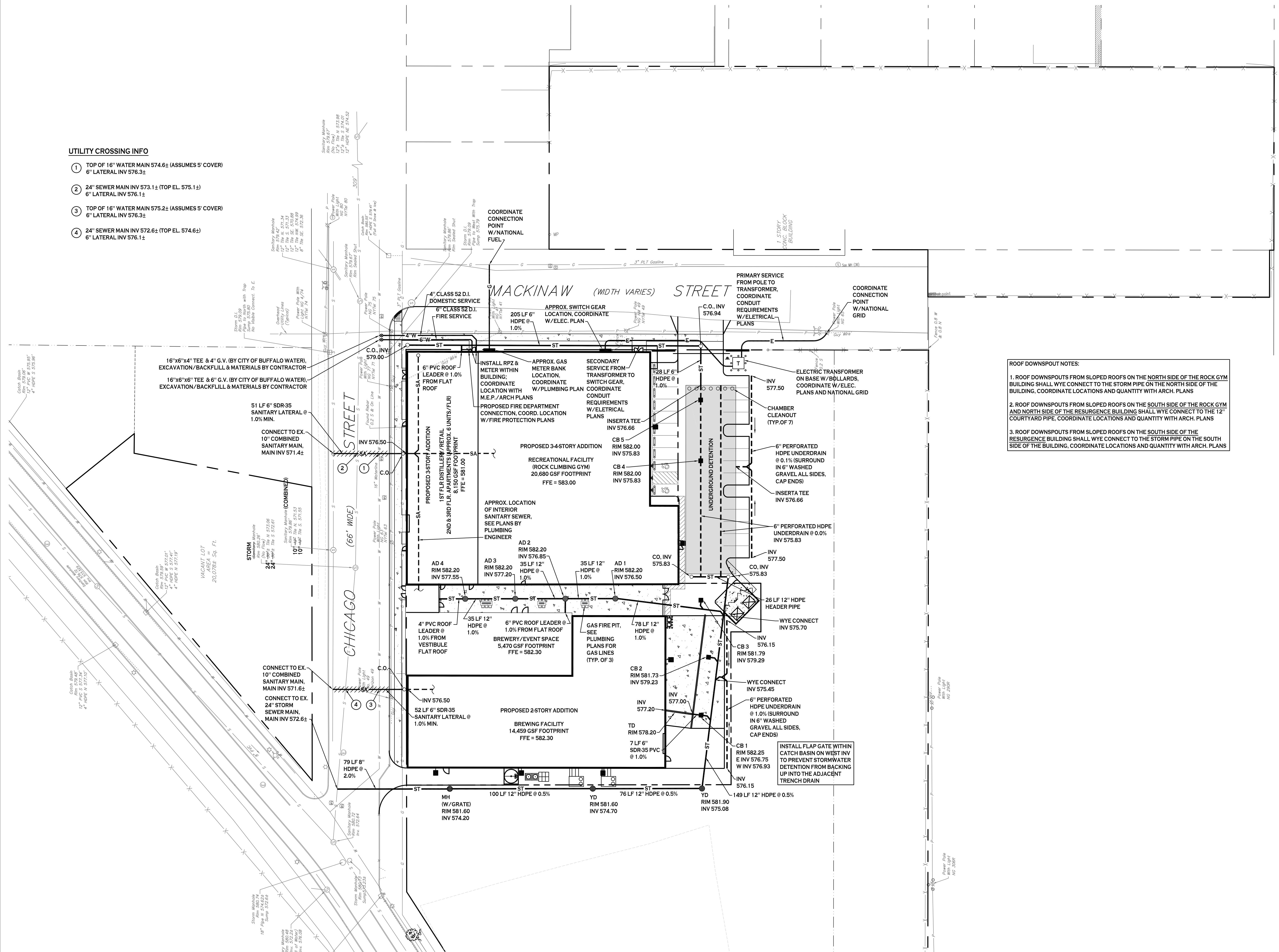
DRAWING TITLE
Utility Plan

C-300

PERMIT SET

UTILITY CROSSING INFO

- TOP OF 16" WATER MAIN 574.6; (ASSUMES 9" COVER)
6" LATERAL INV 576.3
- 24" SEWER MAIN INV 573.1; (TOP EL. 575.1)
6" LATERAL INV 576.1
- TOP OF 16" WATER MAIN 575.2; (ASSUMES 9" COVER)
6" LATERAL INV 576.3
- 24" SEWER MAIN INV 572.6; (TOP EL. 574.6)
6" LATERAL INV 576.1



ROOF DOWNSPOUT NOTES:

- ROOF DOWNSPOUTS FROM SLOPED ROOFS ON THE NORTH SIDE OF THE ROCK GYM BUILDING SHALL WYE CONNECT TO THE STORM PIPE ON THE NORTH SIDE OF THE BUILDING. COORDINATE LOCATIONS AND QUANTITY WITH ARCH. PLANS
- ROOF DOWNSPOUTS FROM SLOPED ROOFS ON THE SOUTH SIDE OF THE ROCK GYM AND NORTH SIDE OF THE RESURGENCE BUILDING SHALL WYE CONNECT TO THE 12" COURTYARD PIPE. COORDINATE LOCATIONS AND QUANTITY WITH ARCH. PLANS
- ROOF DOWNSPOUTS FROM SLOPED ROOFS ON THE SOUTH SIDE OF THE RESURGENCE BUILDING SHALL WYE CONNECT TO THE STORM PIPE ON THE SOUTH SIDE OF THE BUILDING. COORDINATE LOCATIONS AND QUANTITY WITH ARCH. PLANS

existing
Prepared by (enter your company name here)
HydroCAD 10.00-18, 10/08/2018, 10/08/2018, 10/08/2018, 10/08/2018
Type II 24-hr 100-Year Rainfall=5.23"
Printed 4/25/2018

Events for Subcatchment 1B: Existing

Event	Runoff (cfs)	Volume (cu-ft)	Depth (inches)
1-Year	5.23	9,729	1.45
2-Year	6.35	11,877	1.77
3-Year	7.03	13,093	2.25
5-Year	8.27	15,985	2.89
10-Year	11.83	22,709	3.38
25-Year	19.82	39,970	4.52
100-Year	18.89	31,874	4.78

proposed
Prepared by (enter your company name here)
HydroCAD 10.00-18, 10/08/2018, 10/08/2018, 10/08/2018, 10/08/2018
Type II 24-hr 100-Year Rainfall=5.23"
Printed 4/25/2018

Events for Pond 2P: Underground Detention

Event	Inflow (cfs)	Primary Ellevation (ft)	Storage (cu-ft)
1-Year	5.23	2.11	576.54
2-Year	6.35	2.17	576.71
3-Year	6.97	2.28	577.05
5-Year	8.48	2.34	577.28
10-Year	11.61	2.47	577.75
25-Year	19.87	2.57	578.24
100-Year	18.89	2.89	578.53

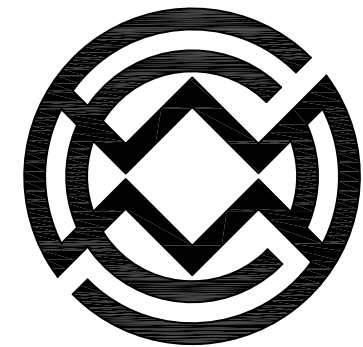
PROPOSED UTILITY LEGEND

- PROPOSED STORM SEWER — ST —
- PROPOSED SANITARY SEWER — 6" SA —
- PROPOSED WATERLINE — 1" W —
- PROPOSED GAS (G), ELECTRIC (E), CABLE (C), & TELEPHONE (T) — — —
- PROPOSED CATCH BASIN ■ CB
- PROPOSED YARD DRAIN ● YD
- PROPOSED MANHOLE ● MH
- PROPOSED HYDRANT ASSEMBLY ●
- PROPOSED GATE VALVE ⊕ GV

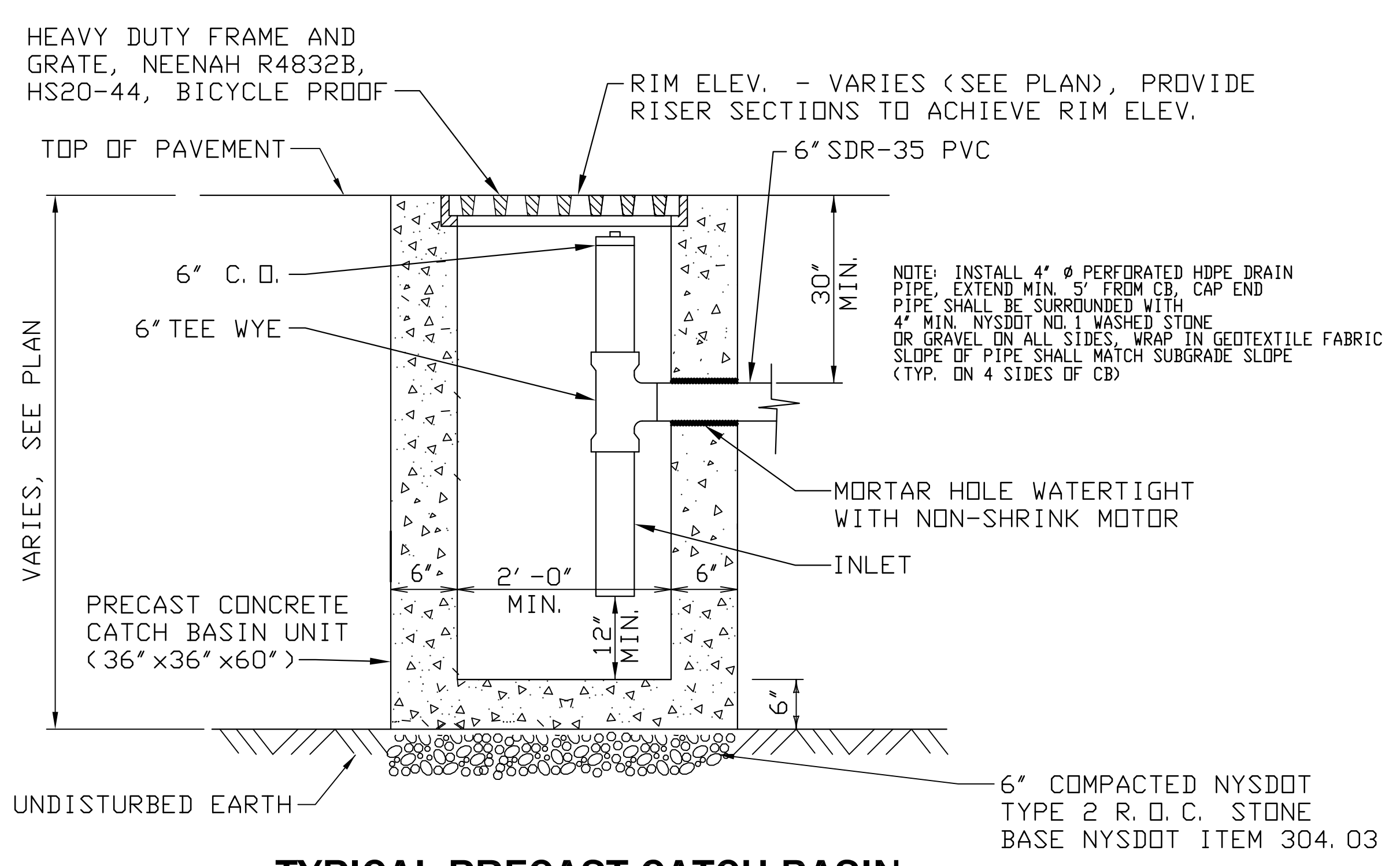
NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS. CARMINA WOOD MORRIS, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.



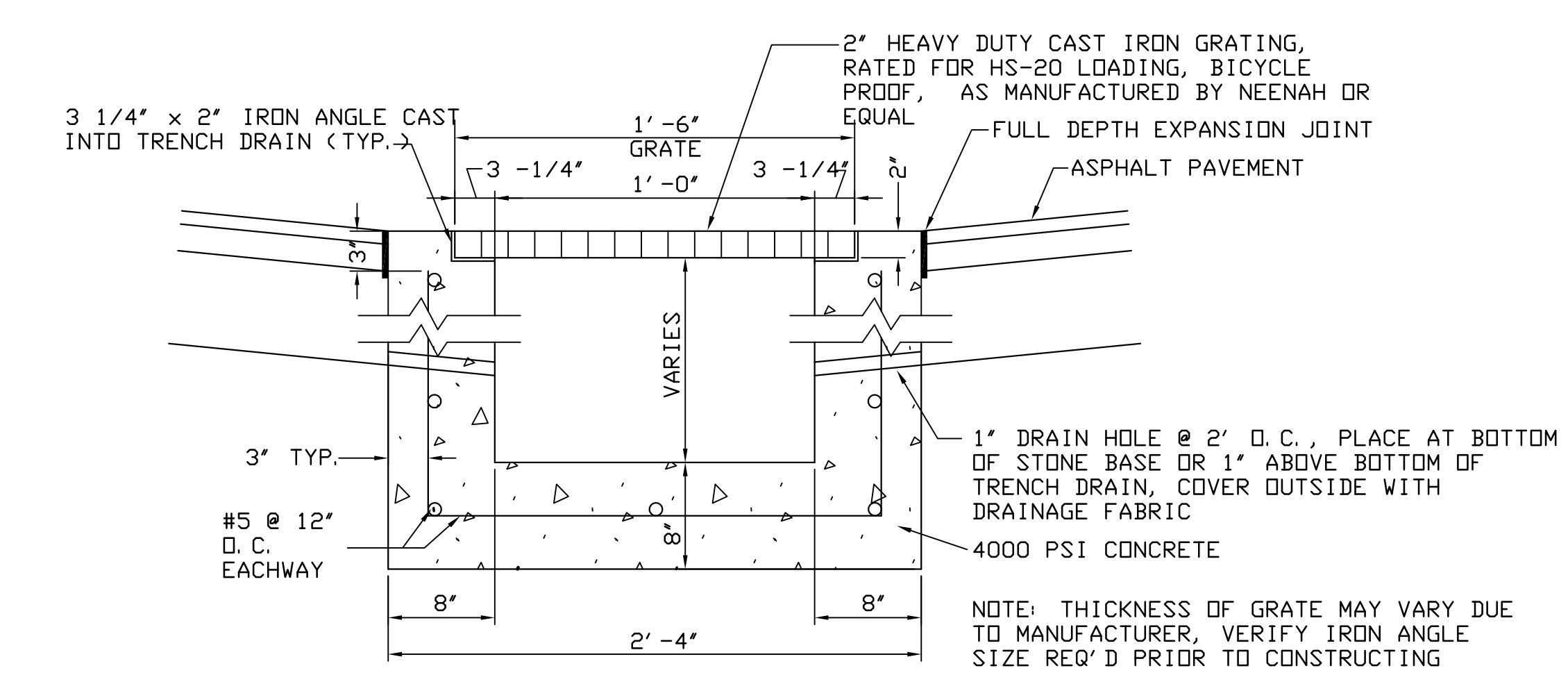
UTILITY PLAN
SCALE: 1"=30'



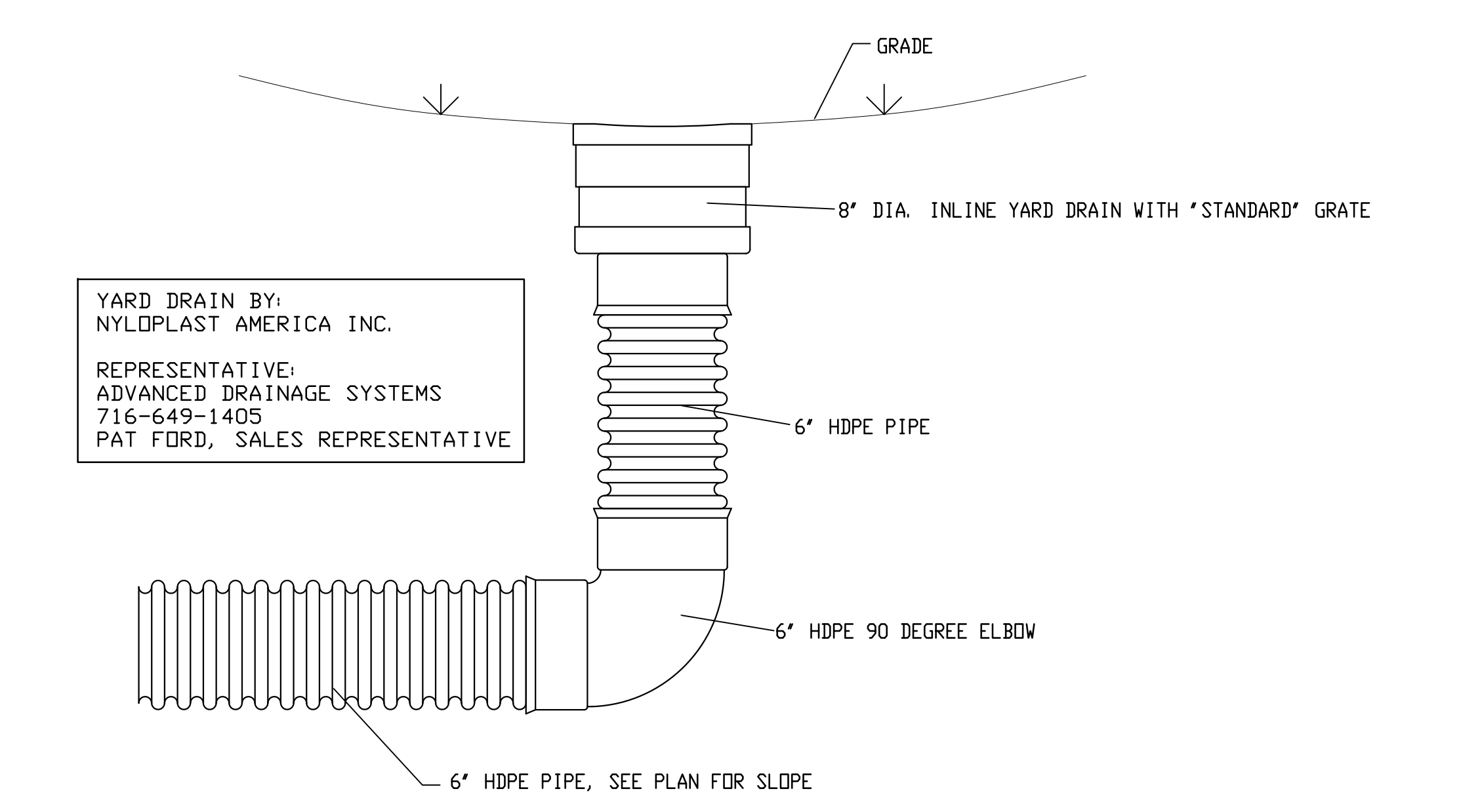
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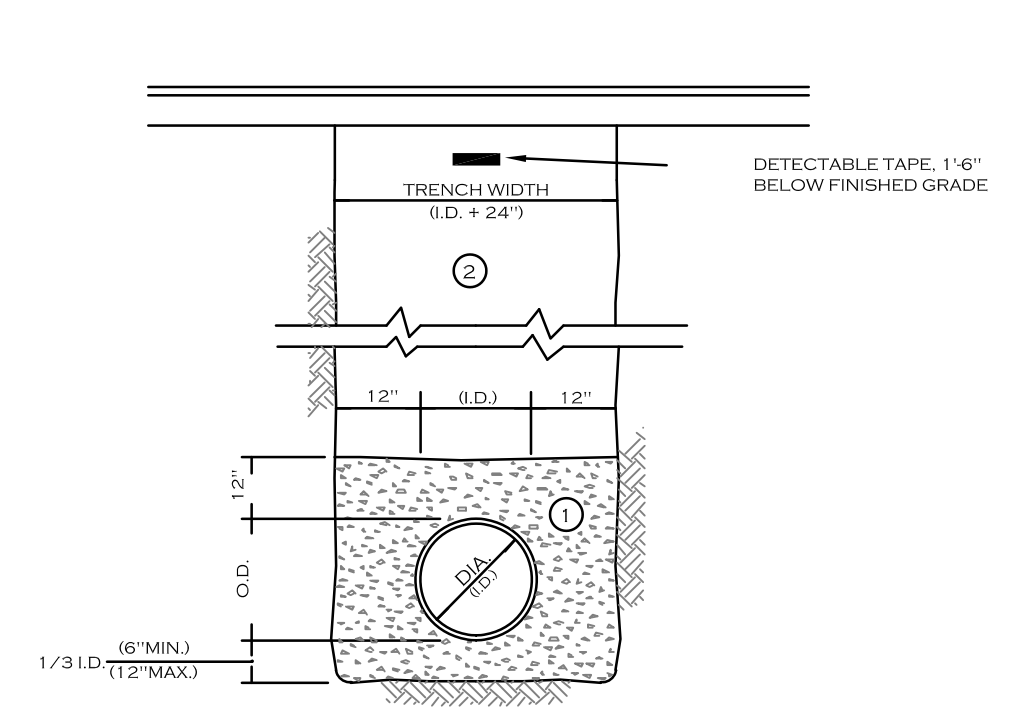
TYPICAL PRECAST CATCH BASIN
N. T. S.



TYPICAL TRENCH DRAIN SECTION

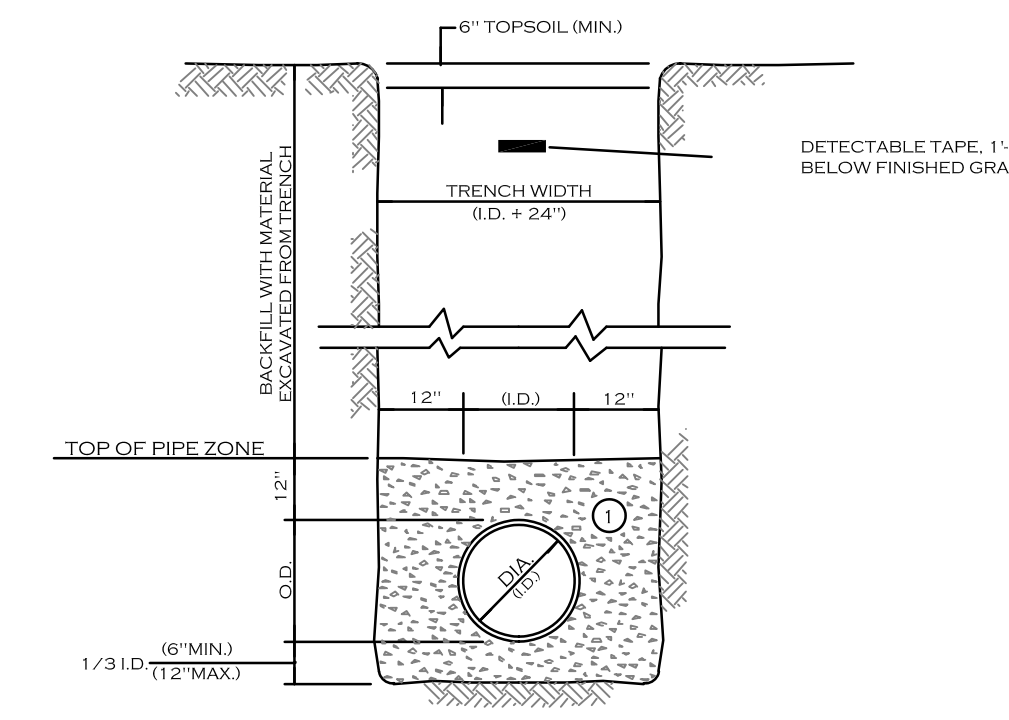


TYPICAL YARD DRAIN DETAIL



NOTES:
A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.
C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.
D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNPAVED TRENCH AREAS.

MATERIALS
PIPE BEDDING MATERIAL (OUTSIDE LATEST EDITION)
RECOMMENDATIONS:
1. NO. 1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN 1" AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.
SELECT MATERIAL BACKLIT (OUTSIDE LATEST EDITION)
2. NO. 2 RUN OF CRUSHED STONE OR NO. 2 RUN OF CRUSHER GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 4 AND NYSDOT SECTION 703-02. (COMPACTED IN 6" LIFTS TO 90% DENSITY)
NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS 1 AND 2.

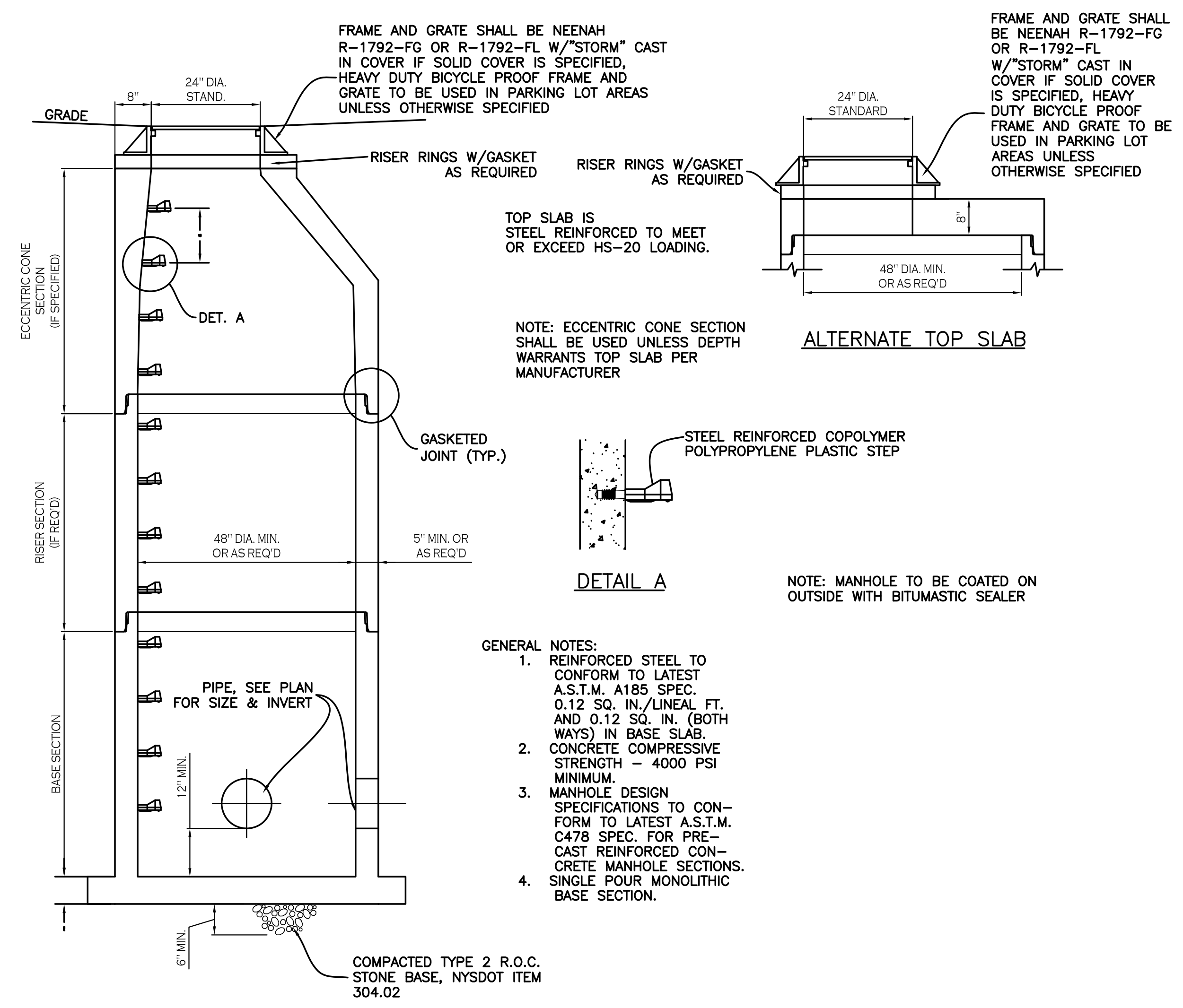


NOTES:
A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.
C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.
D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNPAVED TRENCH AREAS.

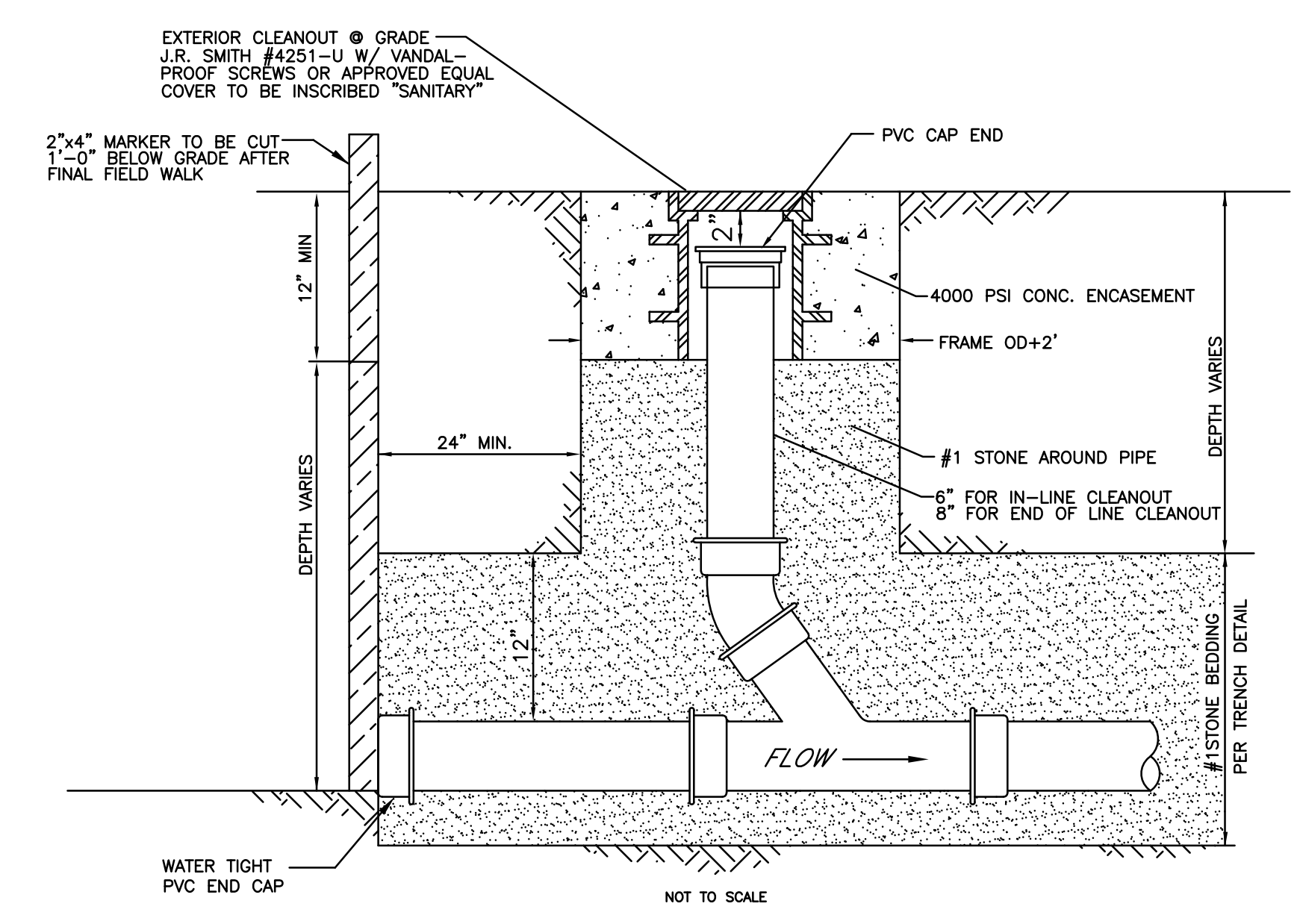
MATERIALS
PIPE BEDDING MATERIAL (OUTSIDE LATEST EDITION)
RECOMMENDATIONS:
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SELECT MATERIAL BACKLIT (OUTSIDE LATEST EDITION)
2. NO. 2 RUN OF CRUSHED STONE OR NO. 2 RUN OF CRUSHER GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 4 AND NYSDOT SECTION 703-02. (COMPACTED IN 6" LIFTS TO 90% DENSITY)
NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS 1 AND 2.

UTILITY TRENCH SECTION IN PAVED AREAS

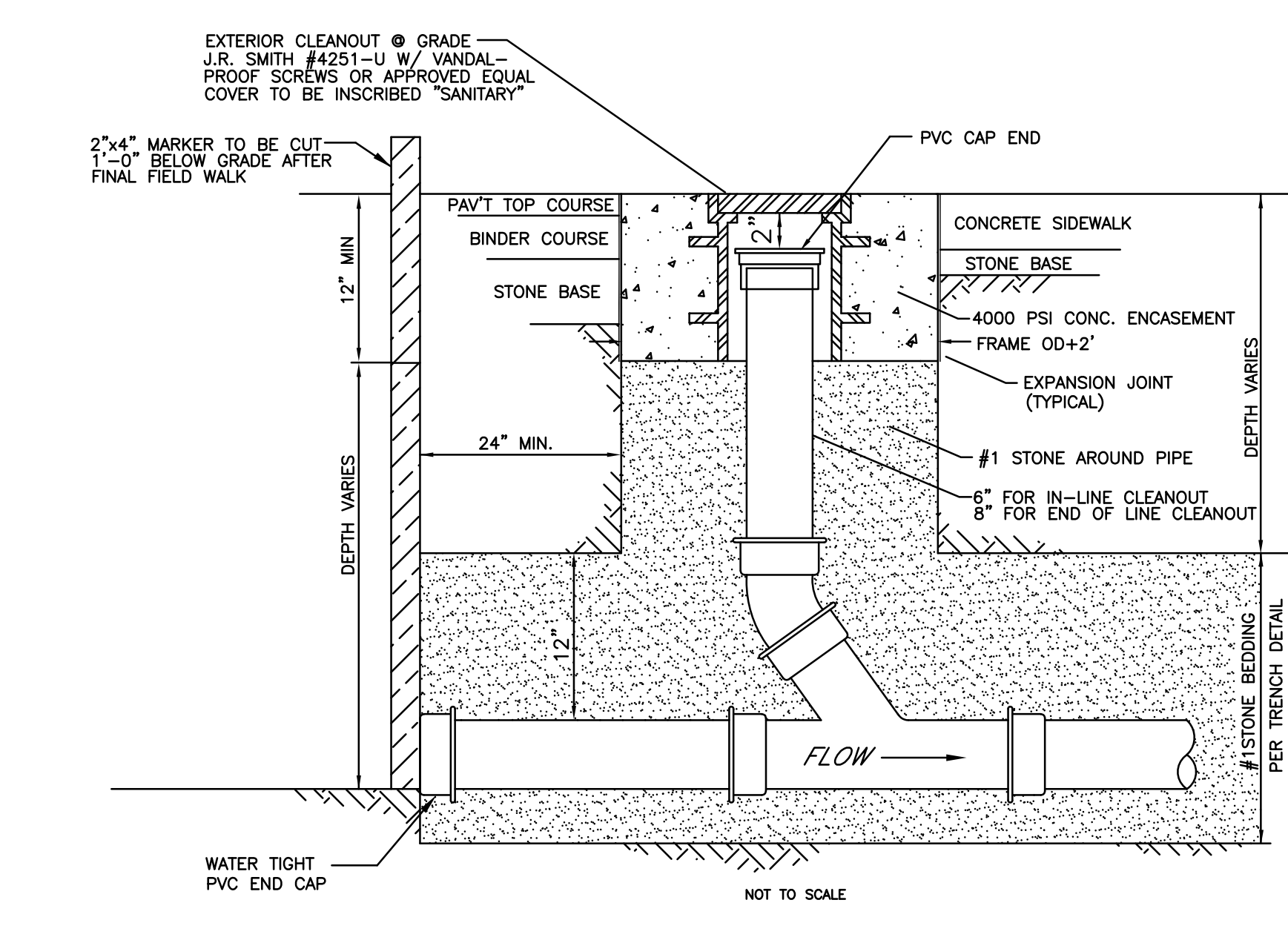
UTILITY TRENCH SECTION IN UNPAVED AREAS



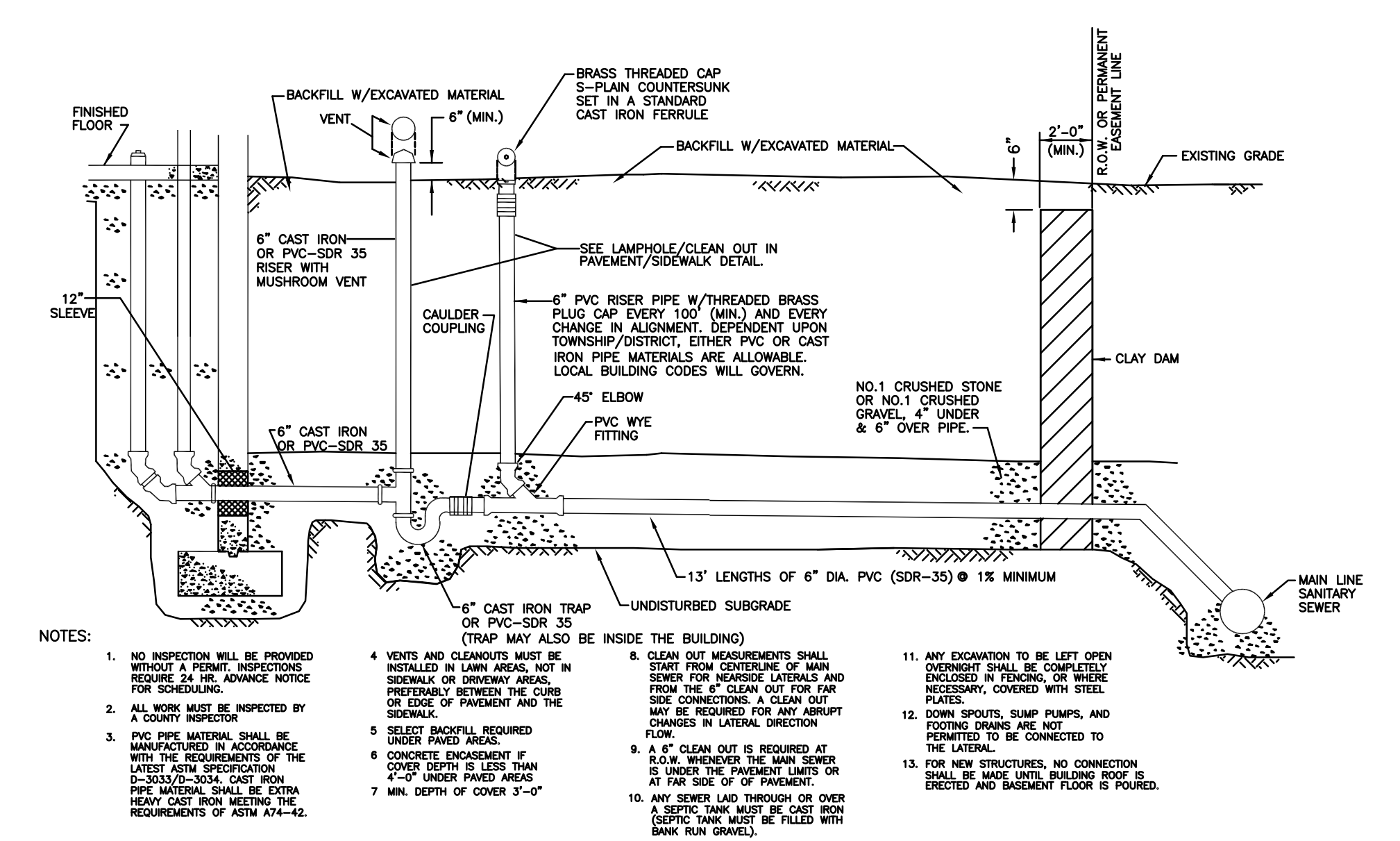
TYPICAL STORM MANHOLE DETAIL



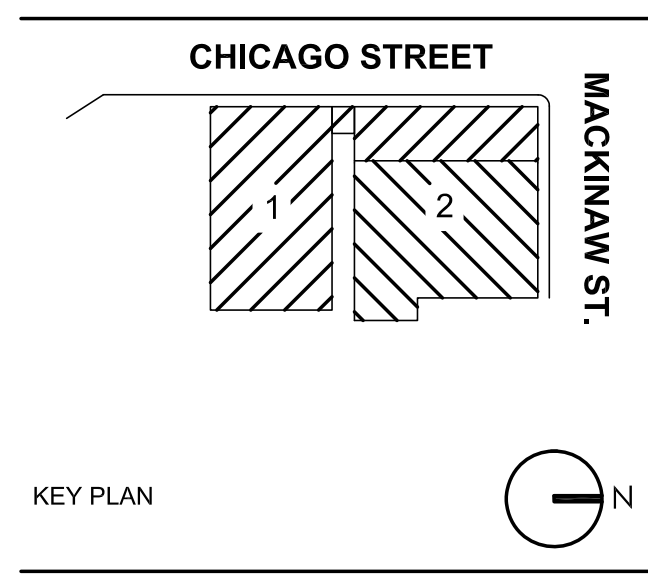
**CLEANOUT IN LAWN/FIELD AREAS
NON RESIDENTIAL AND COMMERCIAL PROJECTS**



**CLEANOUT IN PAVEMENT/SIDEWALKS
NON RESIDENTIAL AND COMMERCIAL PROJECTS**



TYPICAL COMMERCIAL SERVICE WITHOUT BASEMENT DETAIL



ELLICOTT DEVELOPMENT
THE COOPERAGE
55 CHICAGO ST.
BUFFALO, NY, 14204

REV. #	DESCRIPTION	DATE

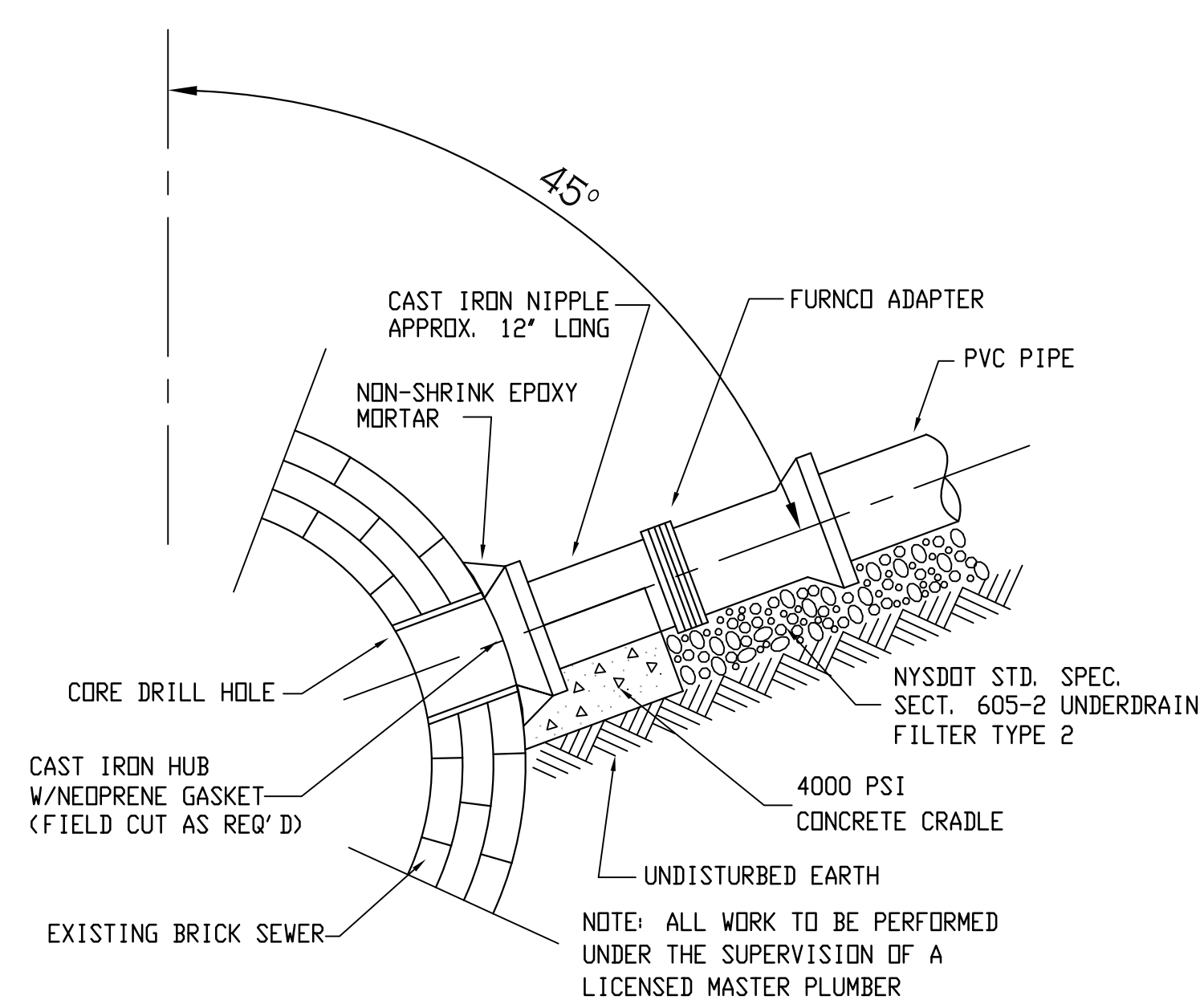
BID PACKAGE
JUNE 22, 2018

JOB NO.	1807
SCALE	As Noted
ISSUE DATE	05/22/18
DRAWN BY	P. Sheedy
CHECKED BY	C. Wood

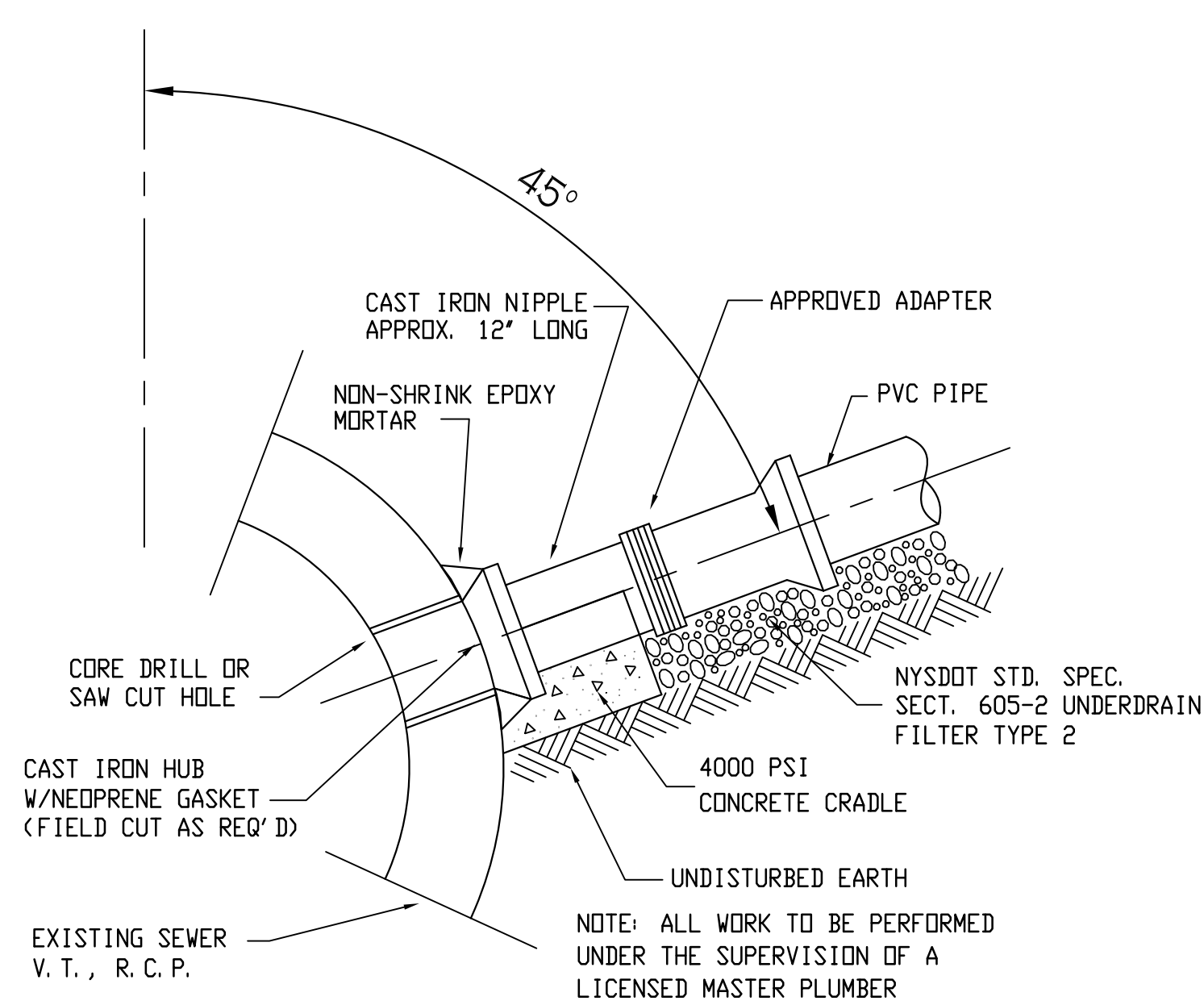
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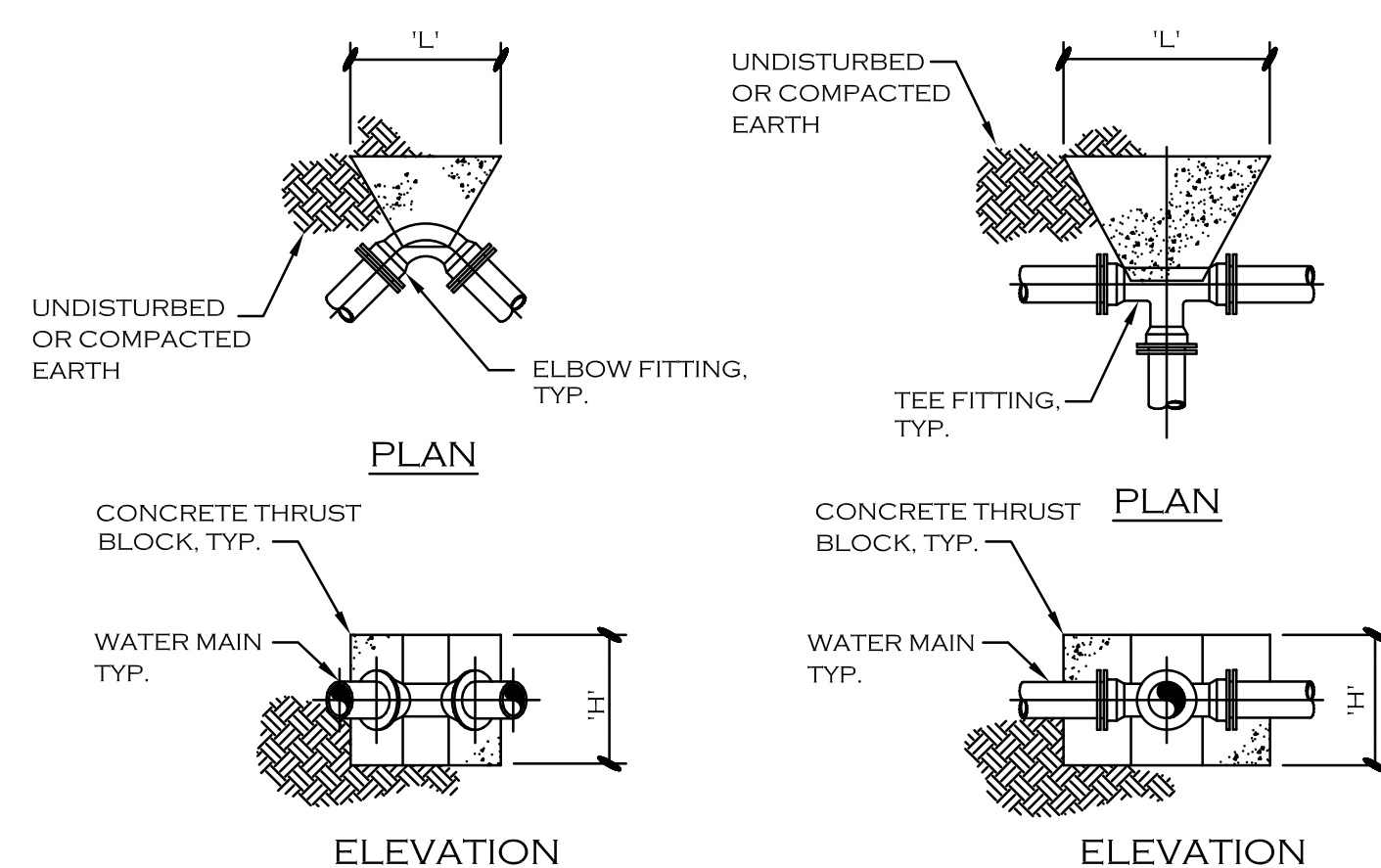
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TYPICAL CONNECTION TO EXISTING BRICK SEWER
N. T. S.



TYPICAL CONNECTION TO EXISTING SEWER
N. T. S.



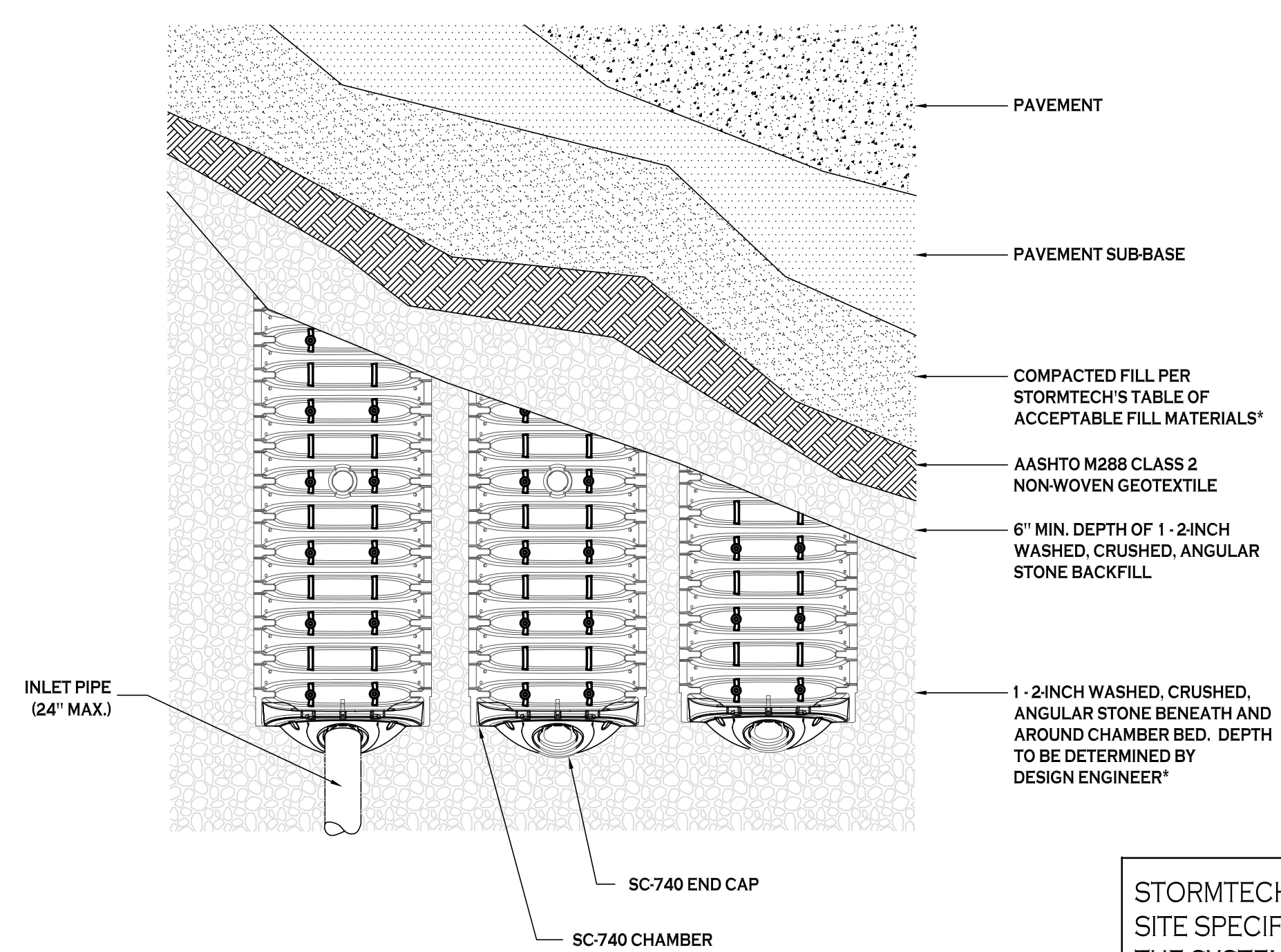
DIMENSION SCHEDULE

PIPE SIZE	90° ELBOW		45° ELBOW		22.5° ELBOW		11.25° ELBOW	
	H'	L'	H'	L'	H'	L'	H'	L'
4"	1.5'	2.0'	1.0'	2.0'	1.0'	1.0'	1.0'	1.0'
6"	2.0'	2.5'	1.5'	2.0'	1.0'	1.5'	1.0'	1.5'
8"	2.5'	3.5'	2.0'	2.5'	1.5'	1.5'	1.0'	2.0'
10"	3.0'	4.5'	2.5'	3.0'	1.5'	3.0'	1.0'	2.5'
12"	3.5'	5.0'	3.0'	3.5'	2.5'	2.5'	1.5'	2.5'

DIMENSION SCHEDULE

PIPE SIZE	TEE OR TAP SLEEVE	
	H'	L'
4"	1.5'	1.0'
6"	1.5'	2.5'
8"	1.5'	3.5'
10"	2.5'	3.5'
12"	3.5'	3.5'

THRUST BLOCK SCHEDULE
WATER MAIN

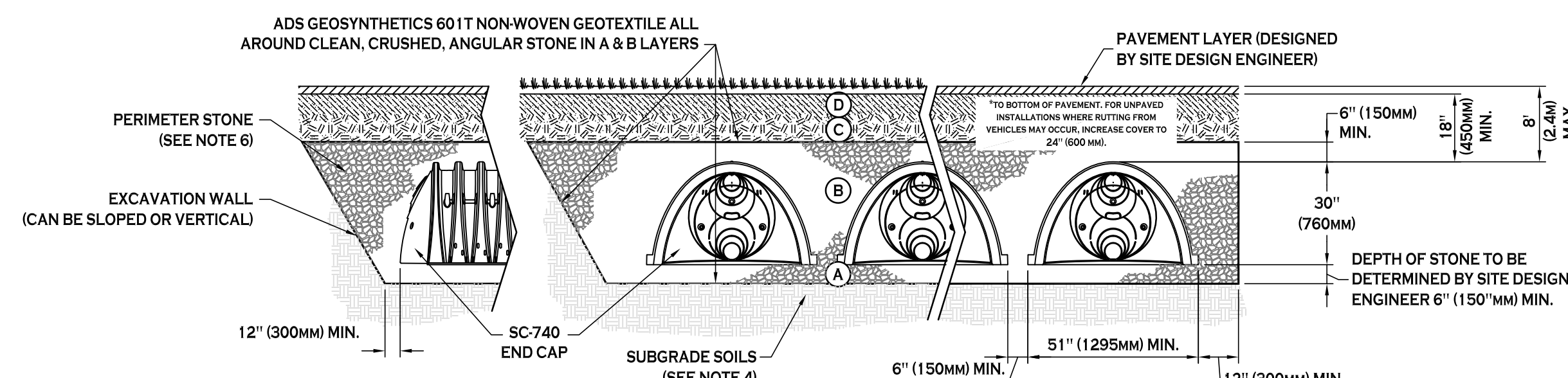


STORMTECH DETAILS SHOWN FOR REFERENCE ONLY. SITE SPECIFIC SHOP DRAWINGS AND DETAILS FOR THE SYSTEM PROPOSED SHALL BE SUBMITTED FOR ENGINEER'S APPROVAL PRIOR TO ORDERING

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION/DENSITY REQUIREMENT
D	FINAL FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 LBS (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

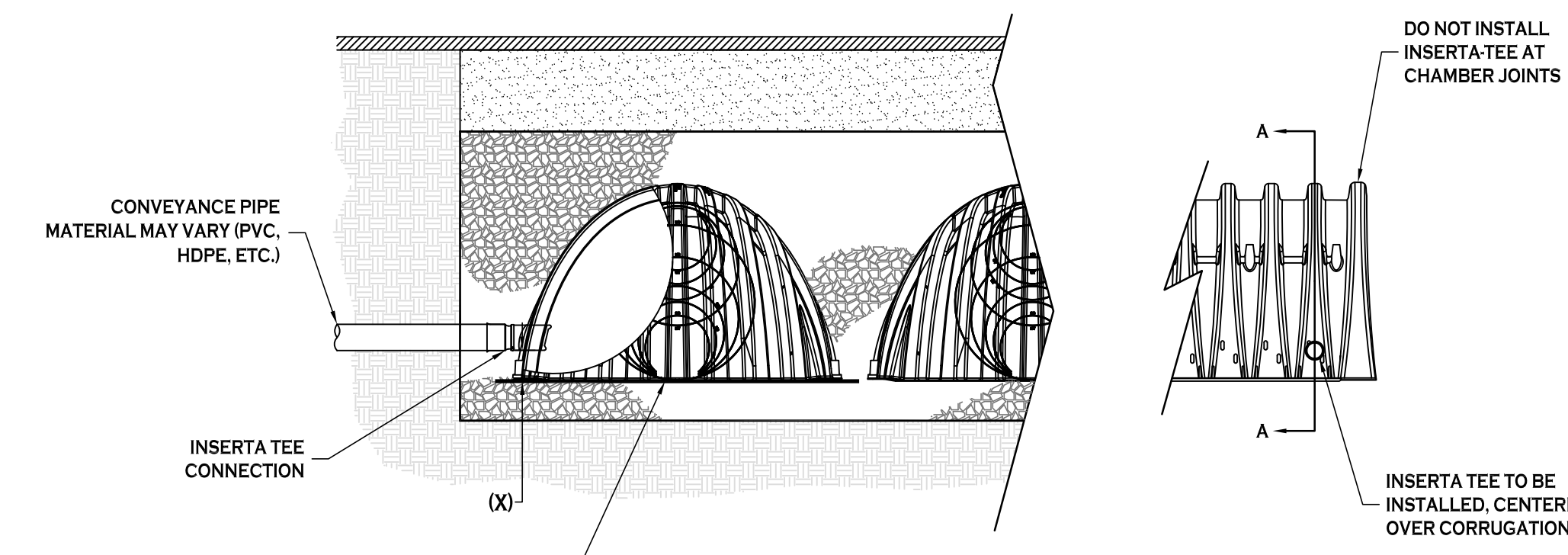


- NOTES:
- SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
 - THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
 - PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

INSPECTION AND MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLON LAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

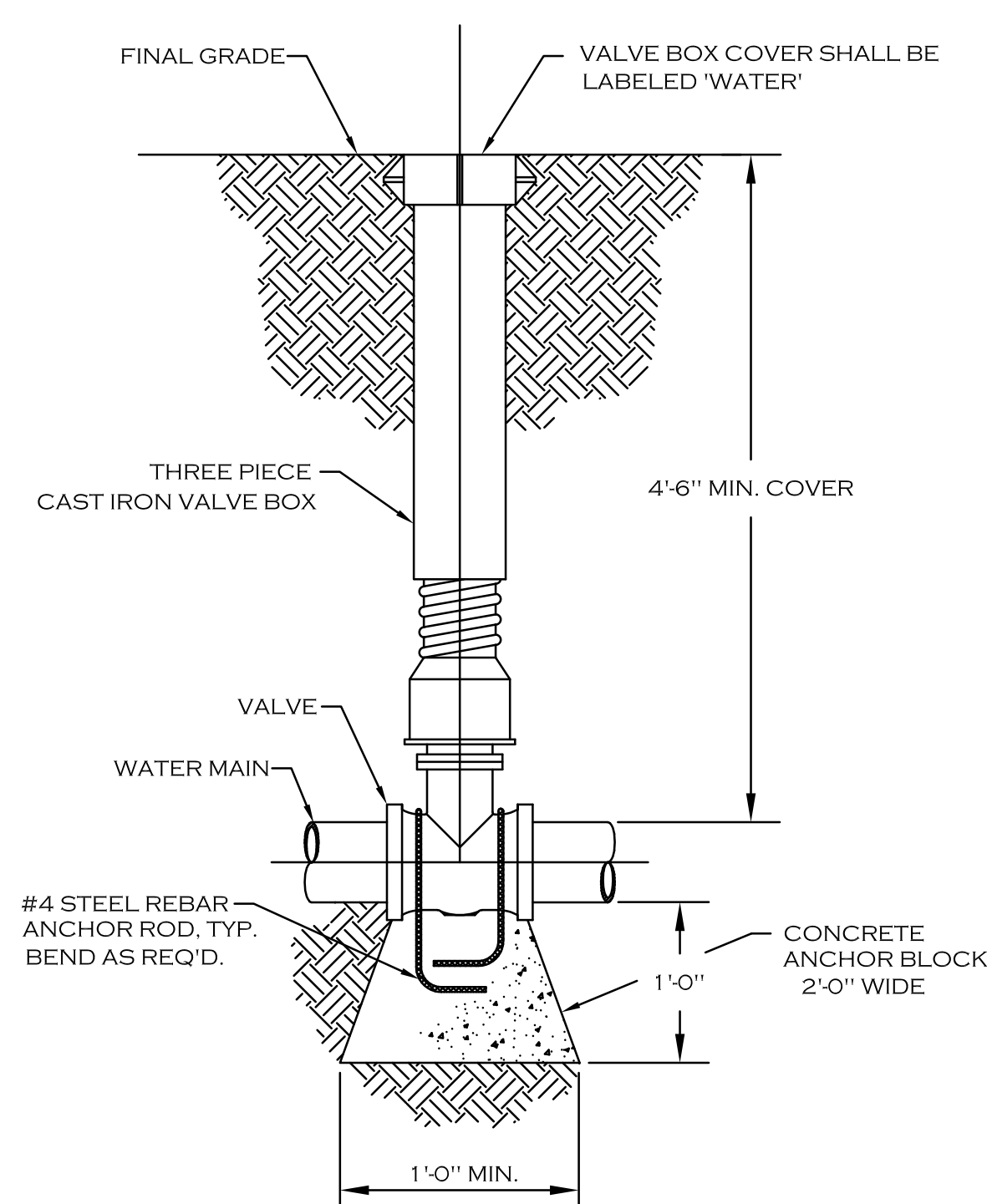
- NOTES:
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
 - CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



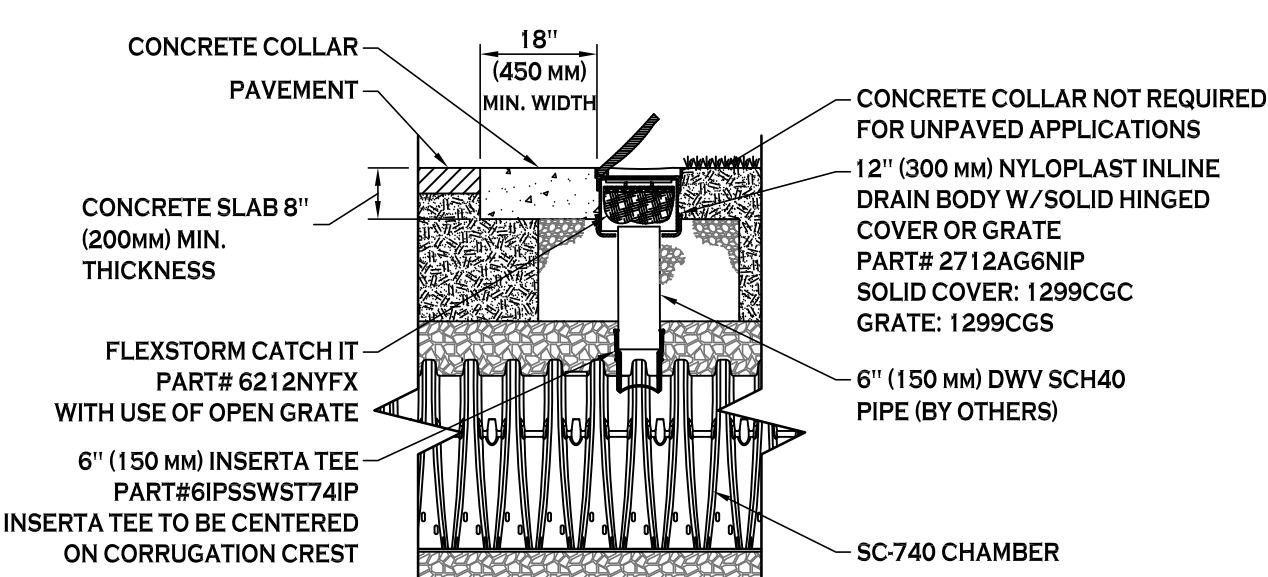
CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON

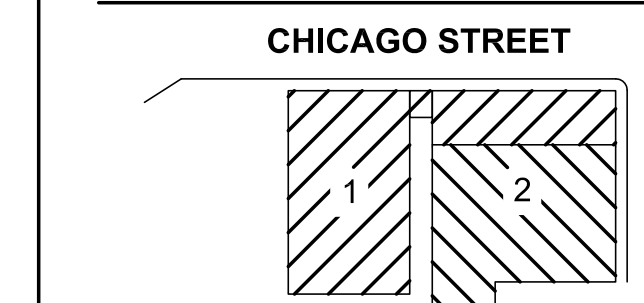
INSERTA TEE DETAIL
NOT TO SCALE



TYPICAL GATE VALVE DETAIL



SC-740 6\"/>



KEY PLAN

ELLICOTT DEVELOPMENT
THE COOPERAGE
55 CHICAGO ST.
BUFFALO, NY, 14204

REV. #	DESCRIPTION	DATE

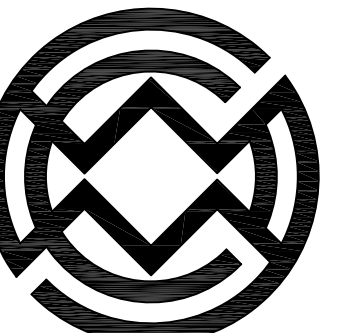
BID PACKAGE
JUNE 22, 2018

JOB NO.	1807
SCALE	As Noted
ISSUE DATE	05/22/18
DRAWN BY	P. Sheedy
CHECKED BY	C. Wood

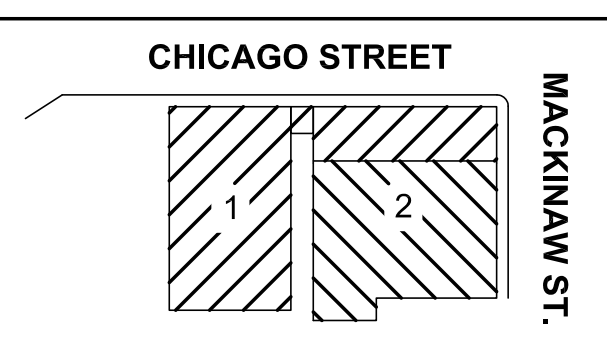
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DRAWING TITLE
Utility Details

C-302
PERMIT SET



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KEY PLAN

ELLICOTT DEVELOPMENT
THE COOPERAGE
55 CHICAGO ST.
BUFFALO, NY, 14204

REV. #	DESCRIPTION	DATE

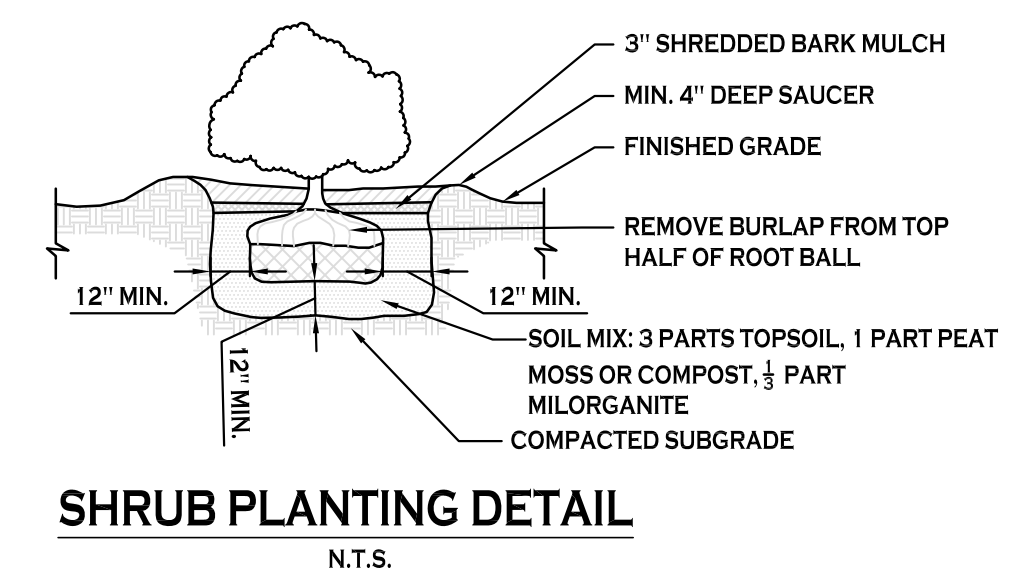
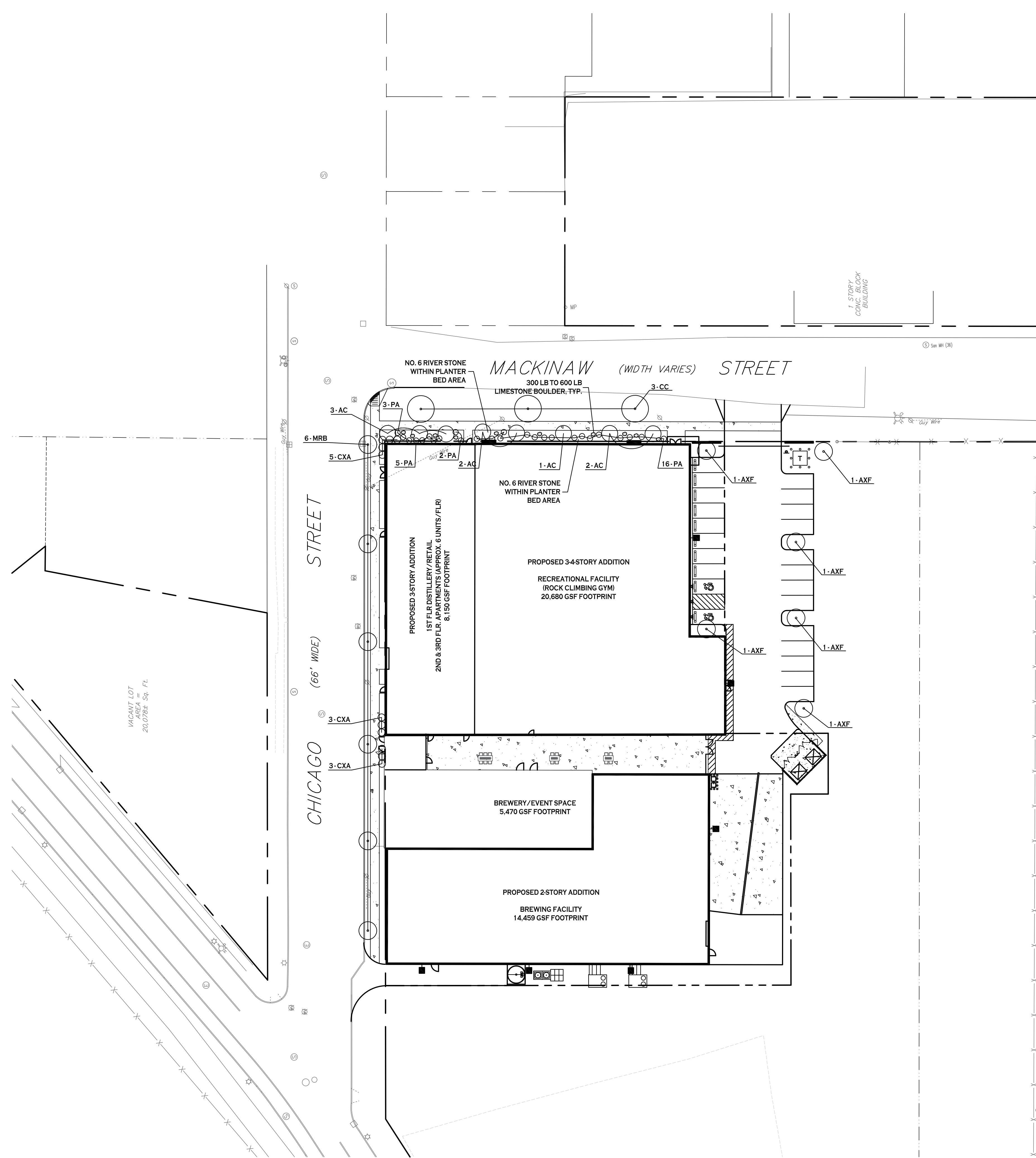
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DRAWING TITLE
Landscape Plan

L-100
PERMIT SET

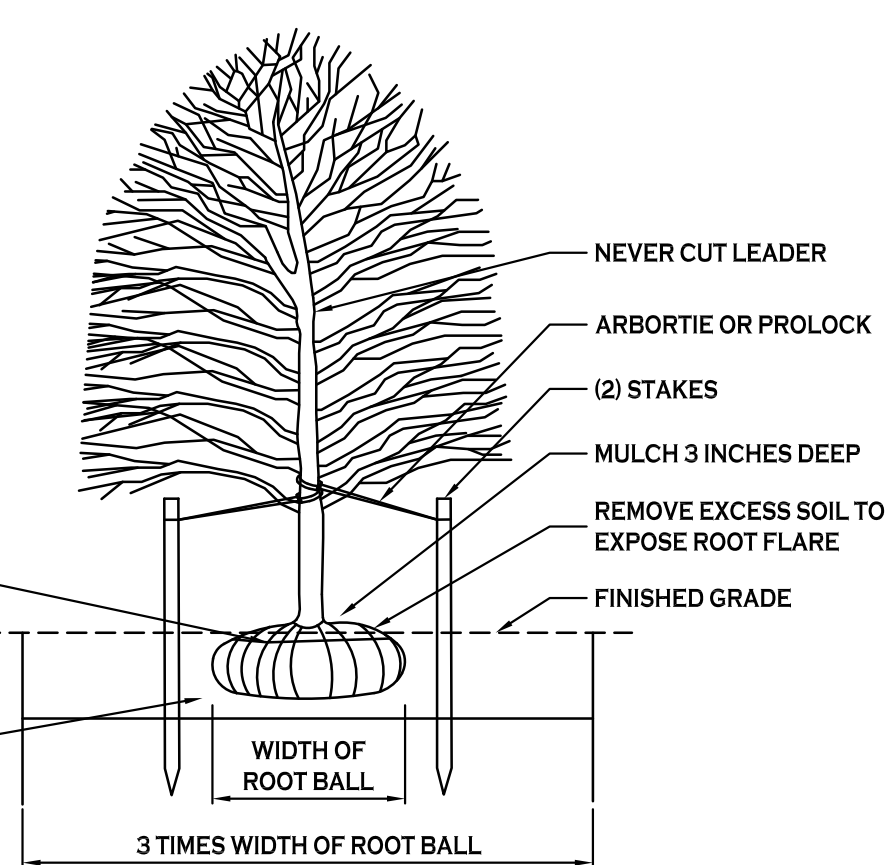


PLANTING NOTES:

- ALL INTERIOR LANDSCAPED AREAS SHALL HAVE A MINIMUM PLANTING SOIL DEPTH OF THREE (3) FEET AND BE FREE FROM ALL FORMS OF CONSTRUCTION DEBRIS AND FOREIGN MATERIAL.
- ALL TREE PIT SAUCERS, SHRUB BEDS, ORNAMENTAL GRASS BEDS, AND PERENNIAL FLOWER BEDS SHALL RECEIVE THREE (3) INCHES DEPTH OF DARK SHREDDED HARDWOOD BARK MULCH.
- ALL SEASONAL FLOWER BEDS SHALL BE A MINIMUM OF TWELVE (12) INCHES DEEP WITH A WELL-BLENDED MIXTURE OF 50% PEAT MOSS & 50% SCREENED TOPSOIL. NO MULCH SHALL BE INSTALLED IN THE SEASONAL FLOWER BEDS.
- ALL DECIDUOUS AND EVERGREEN TREES SHALL BE STAKED WITH TWO (2) TREE STAKES AS PER THE CITY OF BUFFALO TREE PLANTING DETAIL.

NOTES:

- ROOT FLARE OF TREE SHALL BE SET AT 2 INCHES ABOVE FINISHED GRADE.
- ALL TREES TO BE STAKED.
- WHERE TREES OCCUR IN EXISTING GRAVEL AREAS, EXCAVATE TREE PIT THROUGH GRAVEL, BACKFILL AND COMPACT PLANTING SOIL.



PLANTING SCHEDULE - 55 CHICAGO STREET, BUFFALO NY

KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
DECIDUOUS TREES					
AXF	6	ACER x FREEMANII "JEFFERSRED"	AUTUMN BLAZE MAPLE	2 1/2" - 3" CAL.	B&B
CC	3	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2 1/2" - 3" CAL.	B&B
SMALL/ORNAMENTAL TREES					
AC	8	AMELANCHER CANADENSIS	SERVICEBERRY	8" HT. MIN.	B&B, MULTI-STEM
MRB	6	MALLUS RED BARON	ROYAL RAINDROPS CRABAPPLE	1 3/4" - 2" CAL.	B&B
PERENNIALS/ORNAMENTAL GRASSES					
CXA	11	CALAMAGROSTIS X ACUTIFLORA	KARL FOERSTER FEATHER REED GRASS	NO. 5 CONTAINER	CLUMP
PA	26	PENNISETUM ALOPECUROIDES "HAMELN"	DWARF FOUNTAIN GRASS	NO. 2 CONTAINER	CLUMP