



Environment

Prepared For:
United Technologies Corp.
Shared Remediation Services
Farmington, CT

Prepared by:
AECOM
Buffalo, NY
60340856
July 2017

TR-3 NORTH WALL / SWTP AREA

UTC/CARRIER SITE

THOMPSON ROAD, SYRACUSE, NY

Interim Remedial Measure

Sheet Piling and Groundwater Extraction

Construction Completion Report

Corrective Action Order - Index CO 7-20051118-4

NYSDEC Site Registry #734043





AECOM
257 West Genesee St.
Buffalo, NY 14202

716-856-5636 tel

July 14, 2017

Harry D. Warner, P.E.
Regional Hazardous Waste Remediation Engineer
NYSDEC Region 7
Division of Environmental Remediation
615 Erie Blvd. West
Syracuse, New York 13204-2400

Subject: Carrier Corporation, Thompson Road Facility, Syracuse, New York
Corrective Action Order — Index CO 7-20051118-4
Site Registry No.: 734043
TR-3 North Wall / SWTP IRM Construction Completion Report

Dear Mr. Warner

On behalf of United Technologies Corporation (UTC), AECOM Technical Services, Inc. (AECOM) is hereby submitting the attached TR-3 North Wall / SWTP IRM Construction Completion Report. This report is being submitted in compliance with Section 5.8 of the New York State Department of Environmental Remediation DER-10 / Technical Guidance for Site Investigation and Remediation.

Sincerely,

A handwritten signature in cursive script that reads "Robert E. Murphy".

Robert E. Murphy, PE
Project Manager

Robert.E.Murphy@AECOM.com

cc: Michael Belveg, NYSDEC
John Wolski, UTC
Kathleen McFadden, UTC
Joe Basile, Carrier Corporation



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TR-3 NORTH WALL / SWTP AREA UTC/CARRIER SITE THOMPSON ROAD, SYRACUSE, NY

Interim Remedial Measure Sheet Piling and Groundwater Extraction Construction Completion Report

Corrective Action Order - Index CO 7-20051118-4
NYSDEC Site Registry #734043

Prepared for:



UTC Shared Remediation Services
9 Farm Springs Road
Farmington, Connecticut 06032

Prepared By:

AECOM USA, Inc.
257 West Genesee Street, Suite 400
Buffalo, New York 14202



Contents

CERTIFICATION	1
1. Background and Site Description	1
2. Summary of Remedy	1
3. Remedial Contract	2
4. Utility Relocation	2
5. Remedial Actions	2
5.1. Sheet Pile Cut-off Wall	2
5.2. Horizontal Well.....	3
5.3. Pump and Conveyance System.....	3
5.4. Restoration.....	3
6. Permits.....	3
7. Community Air Monitoring	3
8. Waste Disposal	4
9. Deviations from Design	6
9.1. Sheet Piling.....	6
9.2. Utility Penetrations	6
9.3. Horizontal Well.....	6

Tables

Table 1 - Quantity of Disposed Solid Waste

Table 2 – Quantity of Disposed Liquid Waste

Appendices

Appendix A	Photographs
Appendix B	As-Built Drawings
Appendix C	NYSDOT Permit

CERTIFICATION

I Robert E. Murphy certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the construction activities were completed in substantial conformance with the Interim Remedial Measures drawings set titled *TR-3 North Wall / SWTP Sheet Piling and Groundwater Extraction*, dated September 2016.

Respectfully submitted,



Registered Professional Engineer
New York License No. 065031

July 14, 2017

Date

AECOM Technical Services, Inc.
257 West Genesee Street Suite 400
Buffalo, New York 14202



1. Background and Site Description

United Technologies Corporation (UTC) is performing environmental remediation activities at the Carrier Thompson Road Facility (Site) in the Town of DeWitt. The work is being performed in accordance with the Corrective Action Order on Consent (CO) dated January 4, 2006.

In the vicinity of the Former TR-3 Building North Wall / Storm Water Treatment Plant (TR-3/SWTP) area, the potential existed for groundwater (impacted by volatile organic compounds [VOCs], polychlorinated biphenyls [PCBs] and petroleum based oil) to migrate to Sanders Creek. As an Interim Remedial Measure (IRM), UTC proposed to perform a two-step remedy to mitigate this potential. The IRM is described in AECOM's December 2015 Document titled *TR-3 North Wall / SWTP Area Proposed Interim Remedial Measure*, approved by the New York State Department of Environmental Conservation (NYSDEC) in December 2015.

This Construction Completion Report (CCR) has been prepared in compliance with NYSDEC Division of Environmental Remediation (DER) 10 Section 5.8.1(a).1.

2. Summary of Remedy

The two step IRM approach is as follows:

Step 1 (prior to Sanders Creek remediation):

- Relocation of utilities as required to accommodate the IRM,
- Installing a sheet pile wall north of the TR-3 North Wall. The sheet pile wall will act as a barrier to groundwater (shallow zone) migration.
- Installing a groundwater extraction system south (up gradient) of the TR-3 North Wall, with the collected groundwater conveyed to the SWTP for treatment.
- Delineation of the limits of soil impacts along the south bank of Sanders Creek (between the creek bank and the TR-3 North Wall and the SWTP).

Step 2 (either in advance of, or concurrent with Sanders Creek remediation):

- Remediation of impacted soil along the south bank of Sanders Creek, between the creek bank and the TR-3 North Wall and the SWTP.
- Final utility relocation /abandonment /replacement/ protection.
- Site restoration.

Step 1 of the IRM began with a predesign investigation conducted by AECOM during January, April and May of 2016. The results are presented in the AECOM report titled *IRM PDI Sampling and Analysis Report, July 2016*. Based on the results of the investigation, design drawings for the sheet piling and groundwater extraction components of the remedy were prepared. They were submitted to NYSDEC in

September 2016. The construction work for these elements was performed between November 2016 and February 2017 with Site restoration activities performed in April and May 2017.

Existing utilities were identified both within the south bank of Sanders Creek, and south of the TR-3 North Wall that would be impacted by the IRM. A plan to relocate, abandon, replace or protect was developed during Phase 1 of the IRM. However, the utility relocation work is facility related and not a component of the remedy. Therefore, these activities are not discussed in detail in this CCR.

This CCR represents substantial completion of Step 1 of the IRM. Step 2 will be performed concurrent with the upcoming Sanders Creek Remediation.

Appendix A presents representative photographs of major remedial elements and Appendix B presents the as-built drawings.

3. Remedial Contract

The construction work was performed by AECOM as the prime contractor, supported by the following subcontractors:

- Tioga Construction Co., Inc. – Sheet piling
- Directional Technologies Inc. – Direction drilling / horizontal well
- O'Rourke, Inc. – Mechanical
- Huen Electric – Electrical
- Clean Harbors Environmental Services (under direct contract to UTC) – Waste disposal

4. Utility Relocation

Utility relocation activities included installation of a temporary above-grade HDPE force main from Pump Station 2 to the SWTP. This allowed for temporary diversion of flow during sheet pile construction when the existing force main needed to be breached at the location where sheet piling crossed its alignment. A sheet pile wall penetration was constructed at this location.

5. Remedial Actions

The remedial actions consisted of the following main elements:

5.1. Sheet Pile Cut-off Wall

Sheet Piling

A steel sheet pile wall was installed as a barrier to groundwater flow. The alignment, profile, joint details and materials of construction are shown on the as-built drawings presented in Appendix B. Deviations from the original design are discussed in Section 9.

Utility Penetrations

Utility penetrations through the sheet pile wall were constructed for Outfall 001, Outfall 005 and the force main. The details of construction including location, plan, profile and section views, joint details, and materials of construction are shown on the as-built drawings presented in Appendix B. Deviations from the design are discussed in Section 9.

5.2. Horizontal Well

A horizontal well was installed south of the sheet pile wall for collection of groundwater. It consisted of a perforated four-inch diameter high density polyethylene (HDPE) pipe installed by directional drilling. The alignment, profile, and materials of construction are shown on the as-built drawings presented in Appendix B. Deviations from the design are discussed in Section 9.

5.3. Pump and Conveyance System

An air operated, double diaphragm pump was installed in the SWTP for the extraction of groundwater from the horizontal well. The suction line leading to the well head was heat traced and insulated. The suction line was installed in the well to the invert elevation, along with a pressure transducer that will provide the height of groundwater above the suction line to control the operation of the diaphragm pump. The on and off set points of the pump are controlled and can be manipulated at the supervisory control and data acquisition (SCADA) system.

An oil-water separator was installed for removal of incidental light nonaqueous phase liquid (LNAPL) and dense nonaqueous phase liquid (DNAPL) in the groundwater prior to reaching the SWTP system. A process and instrumentation diagram, as well as materials of construction, equipment make-and-model information is provided on the as-built drawings presented in Appendix B. Deviations from the design are discussed in Section 9.

5.4. Restoration

At this time the sheet piling has been left at approximately 7 feet above grade to allow for shoring/bracing as needed during soil excavation during under Step 2. As shown on the as-built drawings, a section was cut to grade to allow access behind the wall.

The temporary force main remains in place. It will be utilized during excavation of soils under Step 2 when flow will be diverted from the existing force main to allow for its removal and replacement.

Outfalls 001 and 005 remain operational, consistent with the details of the wall penetrations shown on the as-built drawings. Also, storm water runoff resulting from infiltration into backfill installed over the former Building TR-3 floor has been diverted to an existing storm water basin by plugging the existing weep holes in the TR-3 North Wall and installing an intercepting trench drain located south of the TR-3 North Wall.

6. Permits

The construction work to be performed did not involve any new buildings and affected only UTC/Carrier facilities on UTC property. Therefore no construction permits were required. The extracted groundwater will be treated by the SWTP system and discharged to surface water under the existing State Pollutant Discharge Elimination System Permit.

A NYSDOT permit was procured for construction of an access road and crane pad. The permit is presented in Appendix C.

7. Community Air Monitoring

There was excavation into potentially impacted soil during this project; therefore a Community Air Monitoring Plan was developed and implemented during construction. No exceedances were observed.

8. Waste Disposal

Soils excavated during the project were disposed of by Clean Harbors Environmental Services, under a contract with UTC.

Cuttings from directional drilling were collected in a roll-off and sent off site as a liquid waste for disposal by Clean Harbors Environmental Services, under a contract with UTC.

Water generated from excavation dewatering, and from temporary pumping from the horizontal well was collected in a Frac tank where it was allowed to settle, and then was pumped to a storm water pond (Pond 3) prior to treatment by the SWTP. Oil absorbent booms were put in place to prevent free product sheens from entering the pond. Residual sediment in the frac tank was sent offsite for disposal

Prior to offsite disposal, wastes were sampled for profiling. Based on the analytical results, and in-place PCB data, all solid wastes were characterized as non-hazardous and were disposed of at the Casella Ontario County Landfill in Stanley, NY, except for 13 drums of sediment from the frac tank that went to Clean Harbor's Spring Grove facility in Ohio. Liquid wastes were sent to Clean Harbor's Baltimore Waste Water Treatment Facility.

Table 1 lists the solid wastes shipped offsite and Table 2 lists the liquid wastes shipped offsite.

Table 1
Quantity of Disposed Soil Wastes

Manifest #	Roll Off/ Dump	Date	Quantity (TON)	Facility
BOL1197202	Roll Off	10/21/16	15	Ontario County Landfill
BOL1036012	Roll Off	10/24/16	18	Ontario County Landfill
BOL1036013	Roll Off	10/24/16	13	Ontario County Landfill
BOL1036014	Roll Off	10/24/16	18	Ontario County Landfill
BOL1197203	Roll Off	10/24/16	17	Ontario County Landfill
BOL1197206	Roll Off	10/28/16	6	Ontario County Landfill
BOL1197204	Roll Off	10/31/16	14	Ontario County Landfill
BOL1036009	Dump Trailer	10/26/16	40	Ontario County Landfill
BOL1036010	Dump Trailer	10/26/16	27	Ontario County Landfill
BOL1036011	Dump Trailer	10/26/16	36	Ontario County Landfill
BOL1197210	Dump Trailer	10/26/16	32	Ontario County Landfill
BOL1197205	Roll Off	10/28/16	15	Ontario County Landfill
BOL1197207	Roll Off	11/03/16	15	Ontario County Landfill
BOL1197208	Roll Off	11/03/16	15	Ontario County Landfill
BOL1197220	Roll Off	11/04/16	15	Ontario County Landfill
BOL1197221	Roll Off	11/04/16	16	Ontario County Landfill
BOL158162	Dump Trailer	1/10/17	36	Ontario County Landfill
BOL158163	Dump Trailer	1/10/17	37	Ontario County Landfill
BOL158164	Dump Trailer	1/10/17	38	Ontario County Landfill
BOL158165	Dump Trailer	1/10/17	34	Ontario County Landfill
BOL158166	Dump Trailer	1/10/17	36	Ontario County Landfill
BOL158167	Dump Trailer	1/10/17	39	Ontario County Landfill
BOL158168	Dump Trailer	1/10/17	40	Ontario County Landfill
BOL158169	Dump Trailer	1/10/17	34	Ontario County Landfill
BOL158306	Dump Trailer	1/11/17	33	Ontario County Landfill
BOL158307	Dump Trailer	1/11/17	35	Ontario County Landfill
BOL158308	Dump Trailer	1/11/17	38	Ontario County Landfill
BOL158309	Dump Trailer	1/11/17	33	Ontario County Landfill
BOL158310	Dump Trailer	1/11/17	33	Ontario County Landfill
BOL158311	Dump Trailer	1/11/17	39	Ontario County Landfill
BOL158312	Dump Trailer	1/11/17	14	Ontario County Landfill
BOL158317	Dump Trailer	1/24/17	14	Ontario County Landfill
BOL 1012585	Dump Trailer	6/6/17	25	Ontario County Landfill
BOL 1179356	Drums (13)	6/23/17	4.5	Spring Grove
BOL158106	Drums (1)	6/26/17	0.2	Spring Grove
Total			874.7	

Table 2
Quantity of Disposed Liquid Waste

Bill of Lading 158385	Vacuum Truck	2/9/17	1,089 Gal.	Baltimore
--------------------------	--------------	--------	------------	-----------

9. Deviations from Design

9.1. Sheet Piling

The actual waterproofing sealant used for sheeting joints was SealBoss Swell Caulk.

9.2. Utility Penetrations

The actual waterproofing sealant used for utility penetrations was SealBoss Swell Caulk.

The seep collar embedded in the concrete for Outfall 001 varied from the design drawings. The design drawings showed a square seep collar. As shown on the as built drawings, the seep collar was circular.

For the Outfall 005 pipe the design drawings shows a reduction from the existing 30-inch reinforced concrete pipe to a 12-inch PVC pipe. The as-built drawings illustrate how this was achieved using a brick and mortar bulkhead, hydraulic cement, a waterproofing sealant and encapsulation in a low, strength, low permeability concrete.

9.3. Horizontal Well

The actual length of the well and the location of the east and west well heads are as shown on the as-built drawings. The west entrance point and the east exit point were both shifted east as required by field conditions. The groundwater model developed during design was utilized to verify that the as-constructed location would serve the intended purpose. Also, the well head structures were modified to those shown on the as-built drawings.

The actual oil/water separator installed is a 25 gallon per minute (gpm) unit, as opposed the 20 gpm unit shown in the design drawings. Also, as shown on the as-built drawings, the double diaphragm pump proposed to convey DNAPL/sediment from the oil/water separator was eliminated along with the associated hose and storage drum. Carrier will remove DNAPL/sediment manually via gravity or suction.

The as-built drawings also document the following changes:

- The ball valve and sample port shown for the influent side of the diaphragm pump was determined to be redundant and was not installed.
- In lieu of the flexible connector shown on the on the effluent side of the diaphragm pump, a polyvinyl chloride (PVC) pipe loop was installed.
- The 2-inch diameter hose for conveying LNAPL from the oil water separator was replaced with Schedule 80 PVC piping.



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APPENDIX A

PHOTO LOG

TR-3 North Wall / SWTP Area IRM
Photo Log



Temporary HDPE Forcemain



West End of Sheetting

TR-3 North Wall / SWTP Area IRM
Photo Log



North Wall and Sheetting



Installation of Sheetting – East end of TR-3 North Wall

TR-3 North Wall / SWTP Area IRM
Photo Log



Sheeting Install East of SWTP



Sheeting From Creek Side View

TR-3 North Wall / SWTP Area IRM
Photo Log



Sheet Return Wall at East End



Eastern End Access Window

TR-3 North Wall / SWTP Area IRM
Photo Log



Outfall 005 Penetration



Force Main Penetration

TR-3 North Wall / SWTP Area IRM
Photo Log



Outfall 001 Penetration



Completed Outfall 001

TR-3 North Wall / SWTP Area IRM
Photo Log



Entrance for Directional Drilling of Horizontal Well (West End)

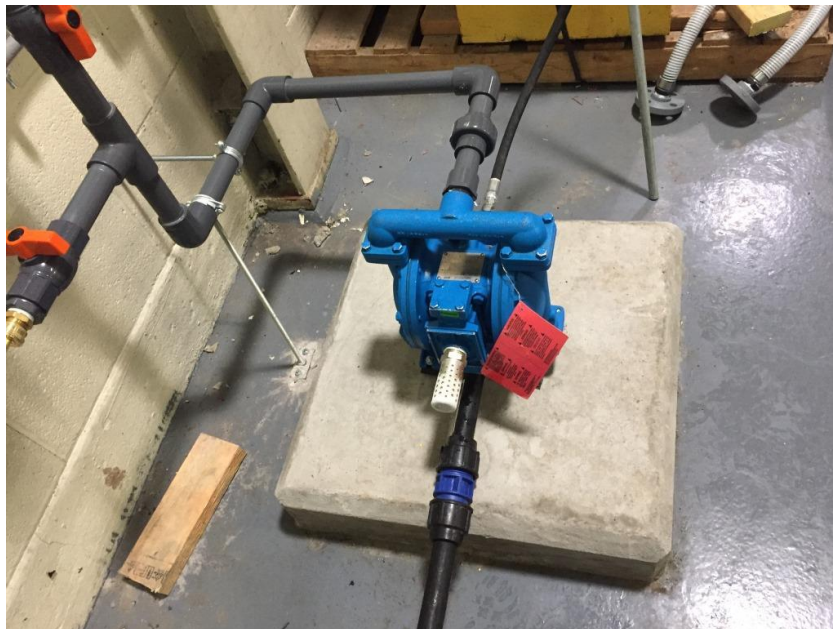


TR-3 North Wall / SWTP Area IRM
Photo Log

Exit of Directional Drilling for Horizontal Well (East End)



Horizontal Well Conduit Containing Suction Hose, Transducer Cable and Heat Tracing Cable



Horizontal Well Pump

TR-3 North Wall / SWTP Area IRM
Photo Log



Oil Water Separator



Restored TR3 Lawn Area



Environment

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APPENDIX B

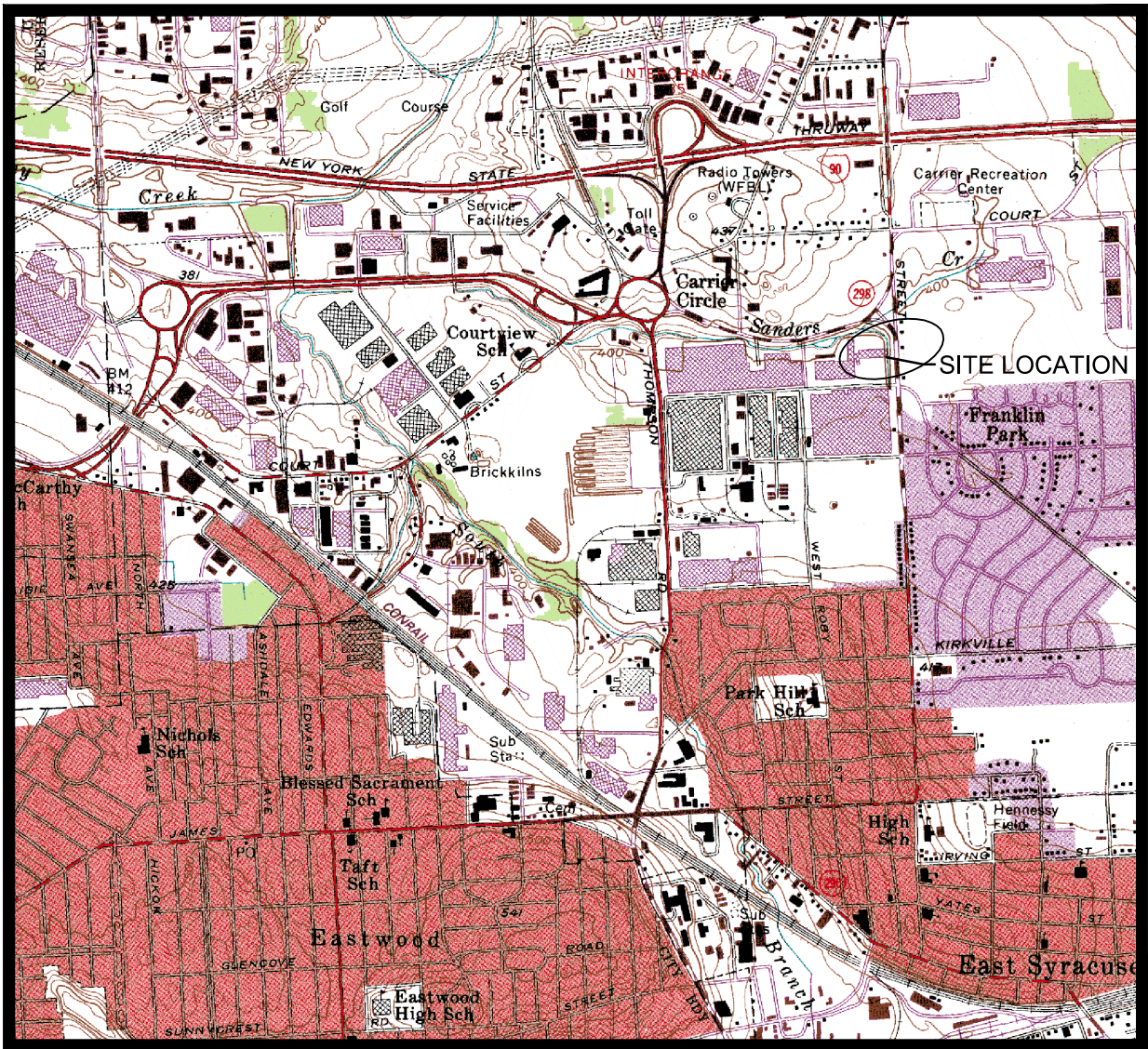
AS BUILT DRAWINGS

TR-3 NORTH WALL / SWTP SHEET PILING & GROUNDWATER EXTRACTION

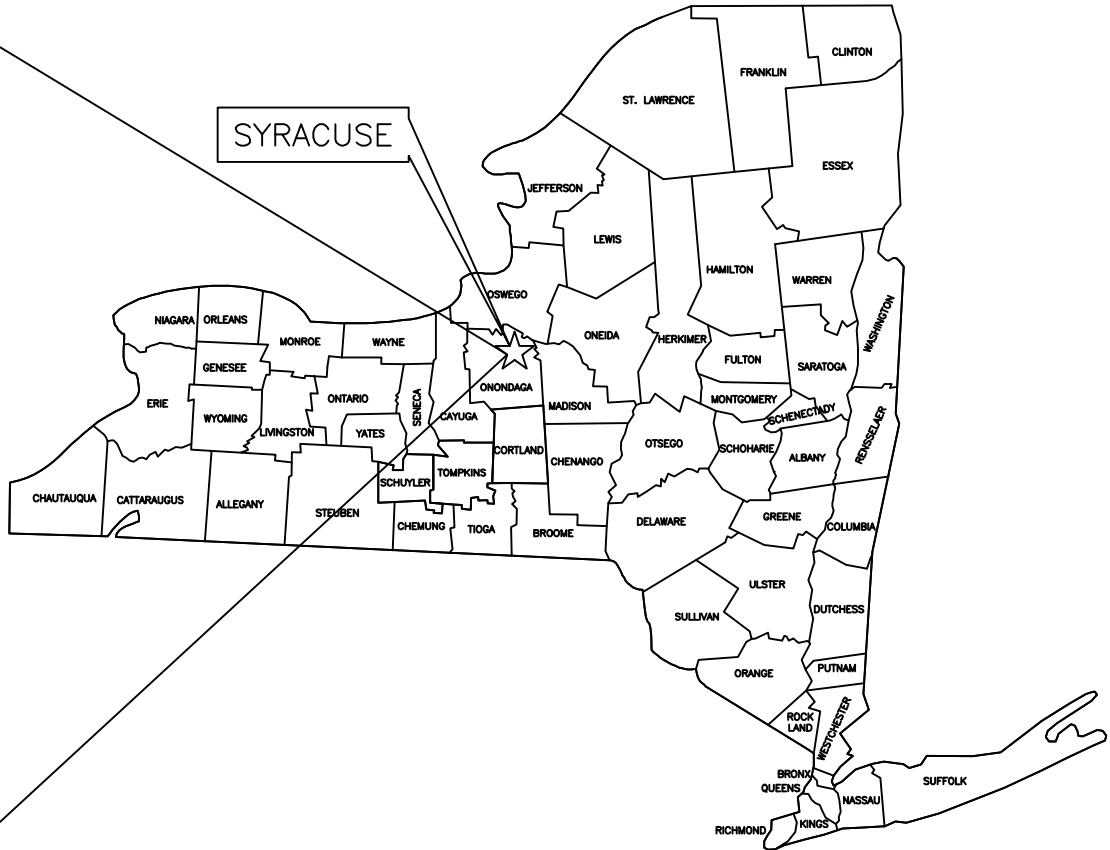
UTC/CARRIER SITE
Thompson Road, Syracuse, New York
Corrective Action Order - Index CO 7-20051118-4
NYSDEC Site Registry #734043



SITE PLAN



SITE LOCATION MAP



Prepared by:

AECOM

257 West Genesee Street, Suite 400, Buffalo, New York 14202
(716)856-5636 phone (716)856-2545 fax

JUNE 2017

INDEX OF DRAWINGS	
DWG. NO.	DESCRIPTION
	COVER SHEET AND INDEX OF DRAWINGS
G-001	LEGEND, ABBREVIATIONS AND GENERAL NOTES
C-001	PRE-CONSTRUCTION CONDITIONS PLAN
C-002	SHEET PILE AND GW EXTRACTION PLAN
C-003	EXISTING FOUNDATION PLAN
C-004	SHEET PILE AND GW EXTRACTION WELL PROFILES
C-005	SHEET PILE SECTIONS AND DETAILS
C-006	SHEET PILE SECTIONS AND DETAILS
C-007	GROUNDWATER EXTRACTION PROCESS & INSTRUMENTATION DIAGRAM

**AS-BUILT
DRAWINGS**

TR-3 NORTH WALL / SWTP
SHEET PILING & GROUNDWATER EXTRACTION
UTC/CARRIER SITE

























AECOM

Thompson Road, Syracuse, New York

DATE: JUNE 2017

AECOM PROJECT NO. 60487967

LEGEND:

	MAJOR CONTOUR
	MINOR CONTOUR
	EDGE OF WOODS
	EDGE OF WATER
	EDGE OF GRAVEL
	GUIDE RAIL
	CENTERLINE OF ROAD
	CHAIN LINK FENCE
	GAS VALVE
	WATER VALVE
	FIRE HYDRANT
	MANHOLE
	UTILITY POLE
	GUY WIRE
	LIGHT POLE
	TREE
	SIGN
	TELEPHONE PEDESTAL BOX
	POST/BOLLARD
	SPOT ELEVATION
	EXISTING MONITORING WELL (BY OTHERS)
	APPROXIMATE PROPERTY BOUNDARY - FROM TAX MAPPING
	APPROXIMATE EXISTING / FORMER DRAINAGE SYSTEM
	CONCEPTUAL SHEETPILE ALIGNMENT

ABBREVIATIONS:

A.I.P.	ABANDON IN PLACE	RCP	REINFORCED CONCRETE PIPE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	RIM	RIM OF MANHOLE
BGS	BELOW GROUND SURFACE	ROW	RIGHT-OF-WAY
BLDG.	BUILDING	S	SOUTH
BM	BENCH MARK	SAN	SANITARY SEWER
CB	CATCH BASIN	SBL	SECTION-BLOCK-LOT
CIP	CAST IRON PIPE	SCH.	SCHEDULE
CL	CENTER LINE	SE	SOUTHEAST
CO	CLEANOUT	SS	STAINLESS STEEL
CONC.	CONCRETE	ST	STORM SEWER
CMP	CORRUGATED METAL PIPE	STA.	STATION
DIA./Ø	DIAMETER	STL	STEEL
DIP	DUCTILE IRON PIPE	SW	SOUTHWEST
DWG.	DRAWING	SWTP	STORM WATER TREATMENT PLANT
E	EAST /ELECTRIC	T	TELEPHONE/TOP
ELEC	ELECTRIC	TSHH	TRAFFIC SIGNAL HAND HOLE
EL, ELEV	ELEVATION	TG	TOP OF GRADE
EP	EDGE OF PAVEMENT	TYP.	TYPICAL
EXIST.	EXISTING	UG	UNDERGROUND
FM	FORCE MAIN	UMH	UTILITY MANHOLE
FO	FIBER OPTIC	UP	UTILITY POLE
FO/T	FIBER OPTIC AND TELEPHONE	US	UNITED STATES
FP	FLAG POLE	VLT	VAULT
FT	FOOT	VTP	VITRIFIED TILE PIPE
G	GAS	W	WEST/WIDTH/WATER
HDPE	HIGH DENSITY POLYETHYLENE	WV	WATER VALVE
HORIZ	HORIZONTAL		
HYD	HYDRANT		
ID	INSIDE DIAMETER		
IN	INCH		
INV.	INVERT		
MAX.	MAXIMUM		
MH	MANHOLE		
MIN.	MINIMUM		
MW	MONITORING WELL		
N	NORTH		
NE	NORTH EAST		
N.O.	NUMBER		
NW	NORTH WEST		
O.C.	ON CENTER		
OD	OUTSIDE DIAMETER		
OHW	OVERHEAD WIRE		
P	PROPERTY LINE		
PCB	POLYCHLORINATED BIPHENYL		
PLR	PARKING LOT R		
PROP	PROPOSED		
PSI	POUNDS PER SQUARE INCH		
PTFE	POLYTETRAFLUOROETHYLENE		
PVC	POLYVINYL CHLORIDE		

SURVEY NOTES

- THIS SURVEY IS REFERENCED HORIZONTALLY TO THE NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT (NAD83/2011) AND PROJECTED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM (CENTRAL ZONE), AND VERTICALLY TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88-GEOID 09).
- NORTH ARROW AS SHOWN INDICATES GRID NORTH REFERENCED TO NAD83 AND PROJECTED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM (CENTRAL ZONE).
- THE REFERENCE HORIZONTAL AND VERTICAL CONTROL STATION IS A COOPERATIVE BASE NETWORK CONTROL STATION DESIGNATED AS "MINOA". MINOA IS A HIGH ACCURACY REFERENCE NETWORK (HARN) CONTROL STATION ESTABLISHED BY THE NATIONAL GEODETIC SURVEY IN 1995. ELEVATION 420.83 FEET.
- LOCATION OF SPOT ELEVATION IS INDICATED BY THE TICK "*" MARK LOCATED ADJACENT TO THE ELEVATION.
- ELEVATIONS AND CONTOURS SHOWN REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88-GEOID09)
- CONTOURS SHOWN HEREON WERE GENERATED FROM A DIGITAL TERRAIN MODEL UTILIZING AUTODESK CIVIL 3D SURVEYING AND ENGINEERING SOFTWARE.
- TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN HEREON WERE MAPPED UTILIZING PHOTOGRAMMETRIC MAPPING TECHNIQUES PERFORMED BY THEW ASSOCIATES LAND SURVEYORS. THE AERIAL PHOTOGRAPHY WAS OBTAINED ON NOVEMBER 16, 2013. A FIELD EDIT WAS PERFORMED BY THEW ASSOCIATES LAND SURVEYORS ON JANUARY 3, 2014 TO VERIFY THE ACCURACY AND COMPLETENESS OF THE PHOTOGRAMMETRIC MAPPING.

SITE BENCHMARKS

BENCHMARK NO. 1

BENCHMARK NO. 1 IS A HIGH VISIBILITY YELLOW BENCH TIE SET 2.0 FEET ABOVE GRADE IN THE WESTERLY FACE OF UTILITY POLE NO. NM 64 NYT 68, LOCATED ON THE WESTERLY SIDE OF KINNE STREET AND APPROXIMATELY 470 FEET SOUTHERLY OF NEW YORK STATE ROUTE 298. NORTHING 1,124,995, EASTING 955,106, ELEVATION 404.48 FEET (SHEET 6).

BENCHMARK NO. 2

BENCHMARK NO. 2 IS A HIGH VISIBILITY YELLOW BENCH TIE SET 2.0 FEET ABOVE GRADE IN THE WESTERLY FACE OF UTILITY POLE NO. NM 167-1, LOCATED ON THE WESTERLY SIDE OF THOMPSON ROAD AND APPROXIMATELY 950 FEET SOUTHERLY OF NEW YORK STATE ROUTE 298. NORTHING 1,124,185, EASTING 952,020, ELEVATION 403.94 FEET (SHEET 8).

PRIOR DRAWING DATUM CONVERSION

EXISTING RECORD DRAWINGS USE THE CITY OF SYRACUSE DATUM TO IDENTIFY ELEVATIONS OF CONSTRUCTED FACILITIES. TO CONVERT TO NAVD 88 ADD 361.413 FT TO THE CITY OF SYRACUSE DATUM.



PROJECT

TR-3 NORTH WALL / SWTP
SHEET PILING AND GW EXTRACTION

UTC/CARRIER SITE
Thompson Road
Syracuse, New York

CLIENT

United Technologies

UTC Shared Remediation Services
9 Farm Springs Road
Farmington, Connecticut 06032

CONSULTANT

AECOM
257 West Genesee Street, Suite 400
Buffalo, New York 14202
716.856.5636 tel 716.856.2545 fax
www.aecom.com

REGISTRATION

ISSUE/REVISION

1	2017-06-05	AS-BUILT DRAWINGS
I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

AECOM #60487967

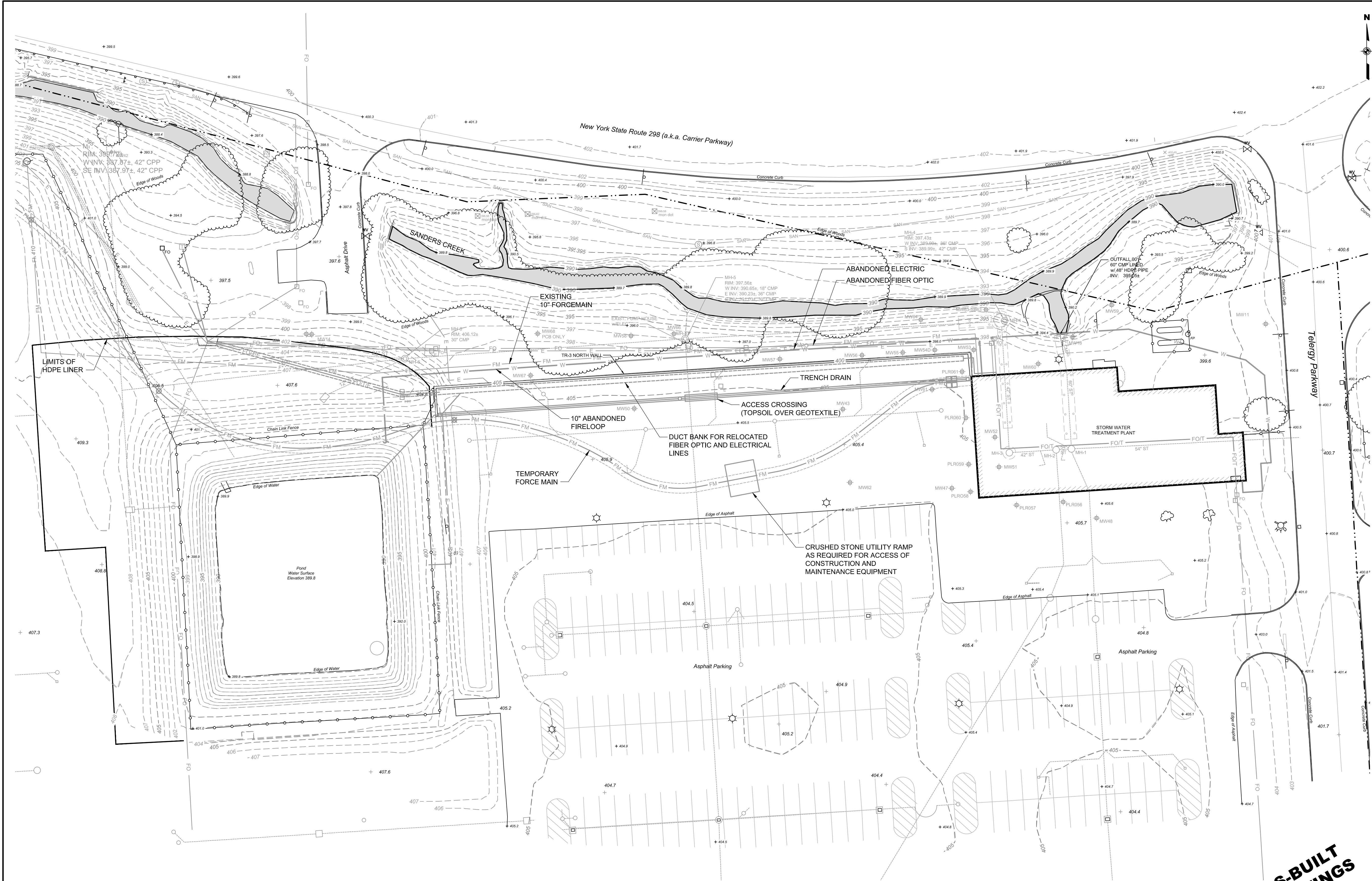
SHEET TITLE

LEGEND, ABBREVIATIONS
AND GENERAL NOTES

SHEET NUMBER

G-001

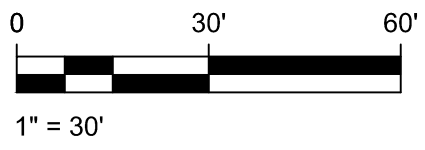
AS-BUILT
DRAWINGS



PRE-CONSTRUCTION CONDITIONS PLAN
SCALE: 1" = 30'-0"

NOTES:

1. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN HEREON WERE MAPPED UTILIZING PHOTOGRAMMETRIC MAPPING TECHNIQUES PERFORMED BY THEW ASSOCIATES LAND SURVEYORS. THE AERIAL PHOTOGRAPHY WAS OBTAINED ON NOVEMBER 16, 2013. A FIELD EDIT WAS PERFORMED BY THEW ASSOCIATES LAND SURVEYORS ON JANUARY 3, 2014 TO VERIFY THE ACCURACY AND COMPLETENESS OF THE PHOTOGRAMMETRIC MAPPING.
2. EXISTING STORM SEWER MANHOLE RIM AND INVERT ELEVATIONS TAKEN FROM ENSAFE'S "TR-3 WALL INVESTIGATION REPORT", FIGURE 1, DATED JANUARY 2015. ELEVATIONS ADJUSTED TO CURRENT DATUM.



AS-BUILT
DRAWINGS



PROJECT

TR-3 NORTH WALL /
SWTP
SHEET PILING AND
GW EXTRACTION

UTC/CARRIER SITE
Thompson Road
Syracuse, New York

CLIENT

United Technologies

UTC Shared Remediation Services
9 Farm Springs Road
Farmington, Connecticut 06032

CONSULTANT

AECOM
257 West Genesee Street, Suite 400
Buffalo, New York 14202
716.856.5636 tel 716.856.2545 fax
www.aecom.com

REGISTRATION

ISSUE/REVISION

1	2017-06-05	AS-BUILT DRAWINGS
I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

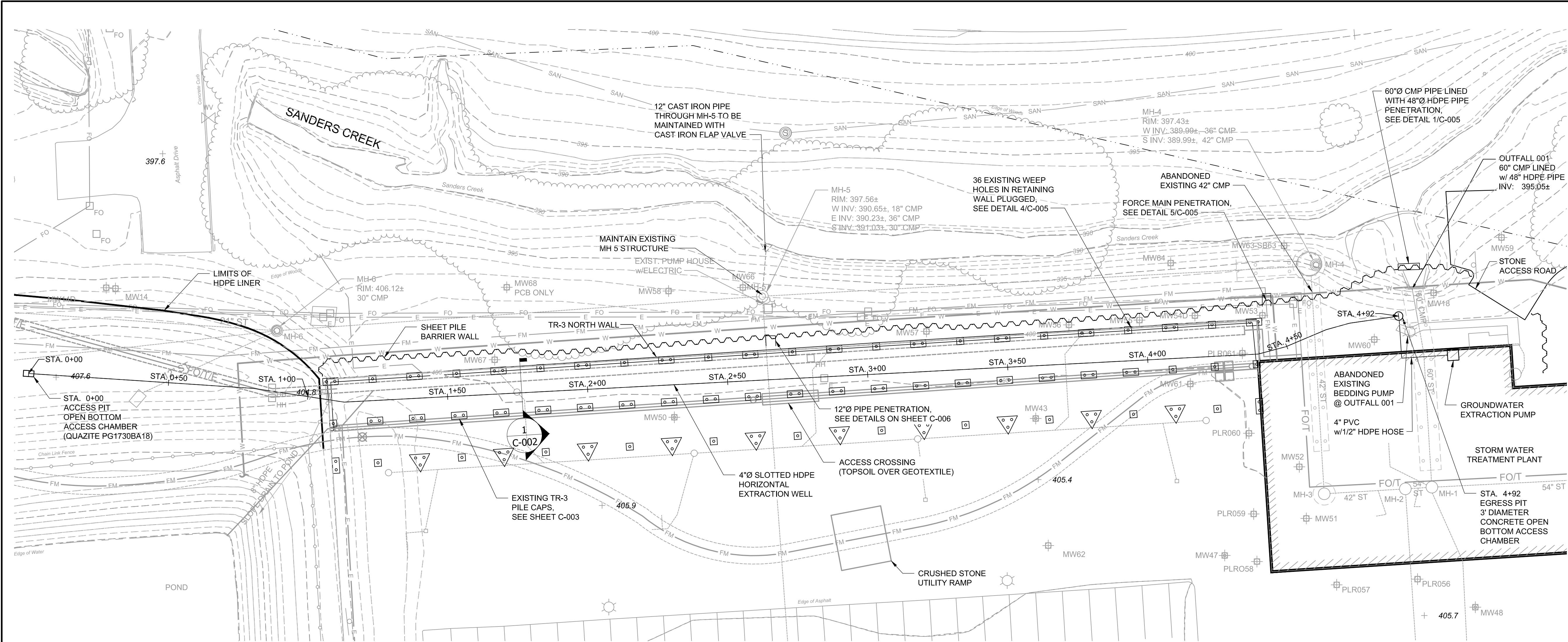
AECOM #60487967

SHEET TITLE

PRE-CONSTRUCTION
CONDITIONS PLAN

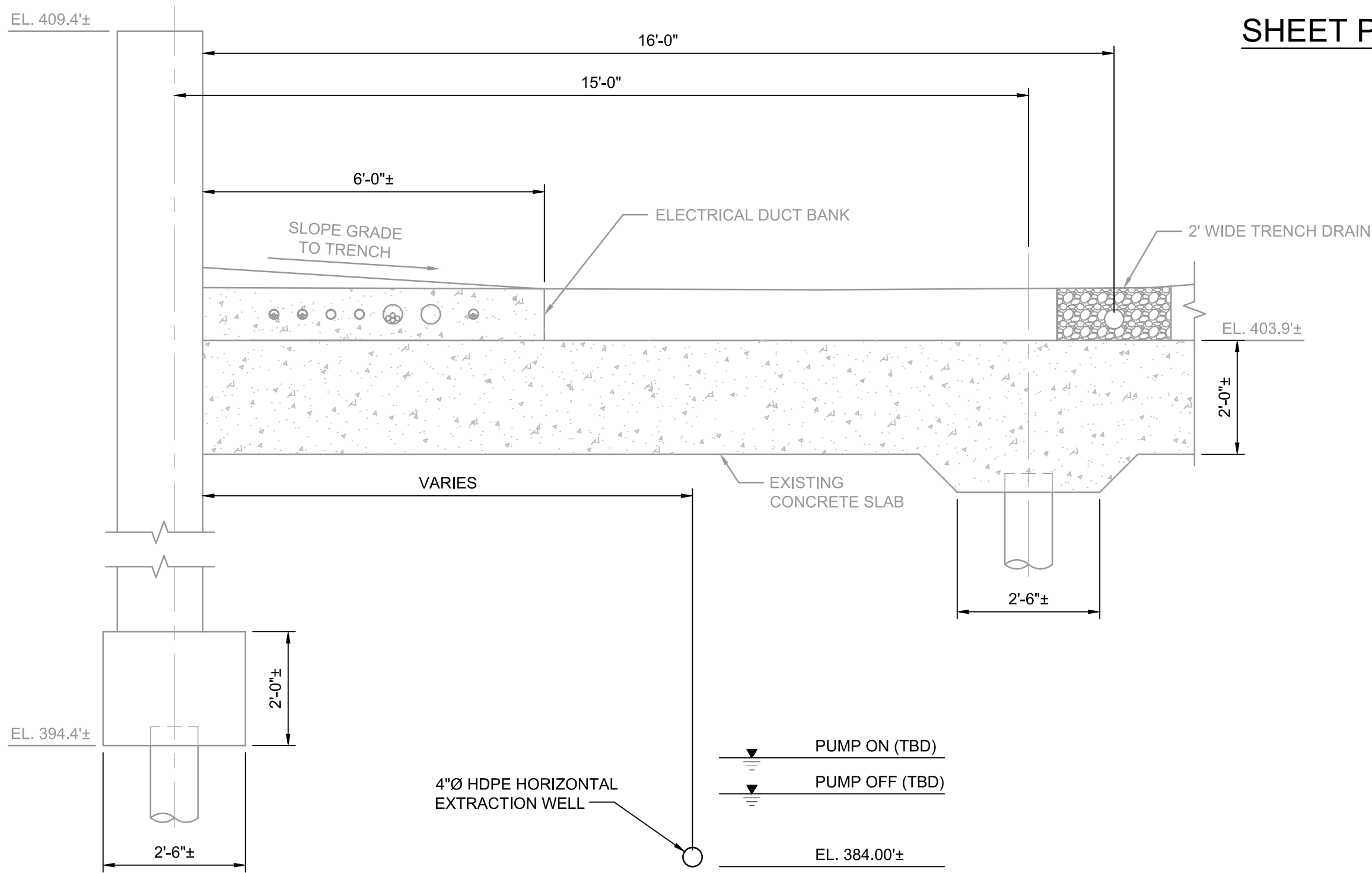
SHEET NUMBER

C-001



SHEET PILE AND GW EXTRACTION PLAN

SCALE: 1" = 20'-0"



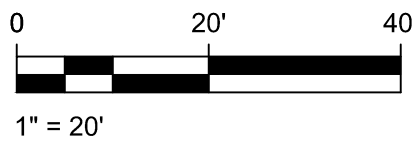
SECTION AT TR-3 WALL

SCALE: N.T.S.

NOTES:

- TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN HEREON WERE MAPPED UTILIZING PHOTOGRAMMETRIC MAPPING TECHNIQUES PERFORMED BY THEW ASSOCIATES LAND SURVEYORS. THE AERIAL PHOTOGRAPHY WAS OBTAINED ON NOVEMBER 16, 2013. A FIELD EDIT WAS PERFORMED BY THEW ASSOCIATES LAND SURVEYORS ON JANUARY 3, 2014 TO VERIFY THE ACCURACY AND COMPLETENESS OF THE PHOTOGRAMMETRIC MAPPING.
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**AS-BUILT
DRAWINGS**



AECOM

PROJECT

**TR-3 NORTH WALL /
SWTP
SHEET PILING AND
GW EXTRACTION**

UTC/CARRIER SITE
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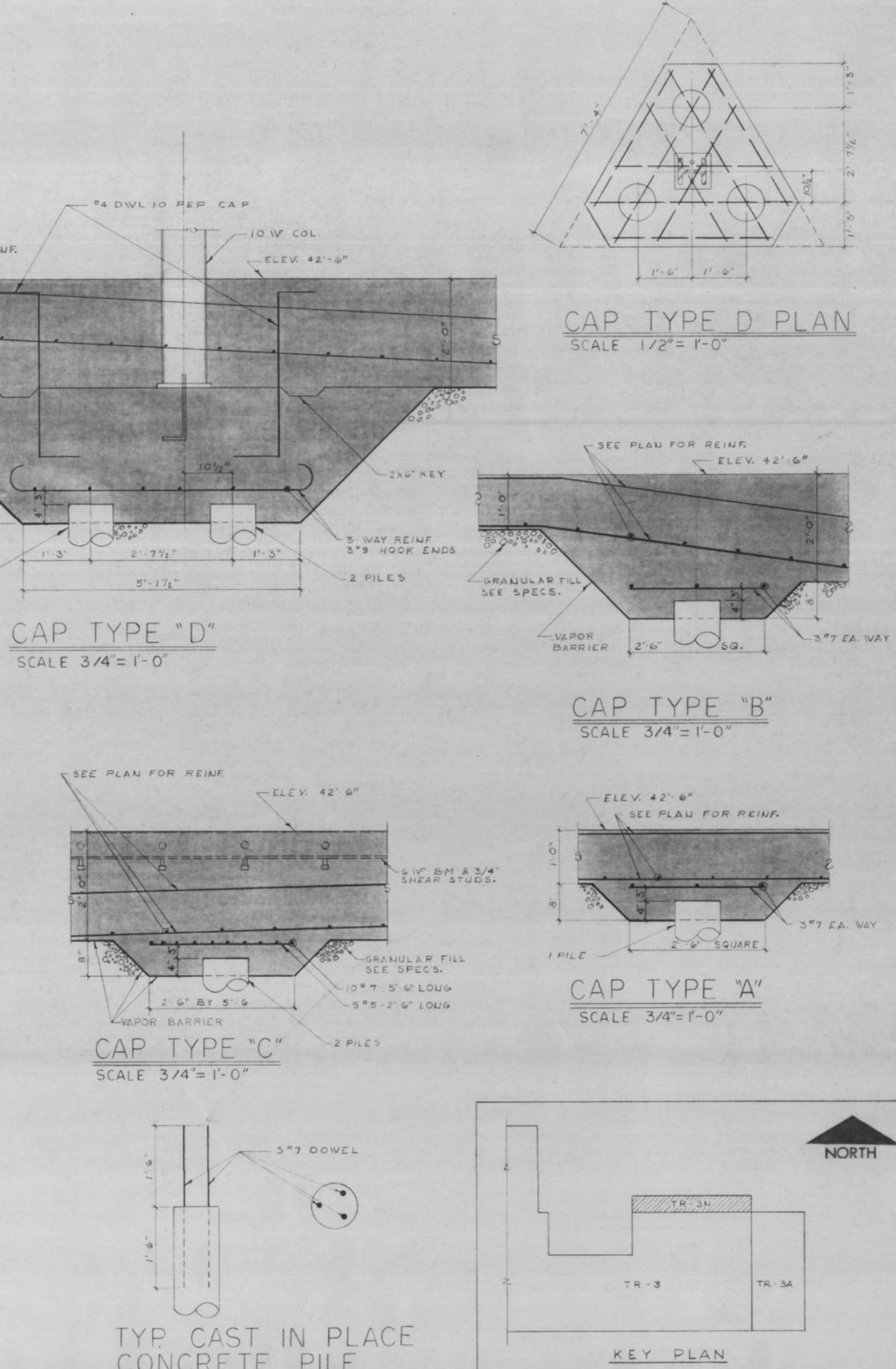
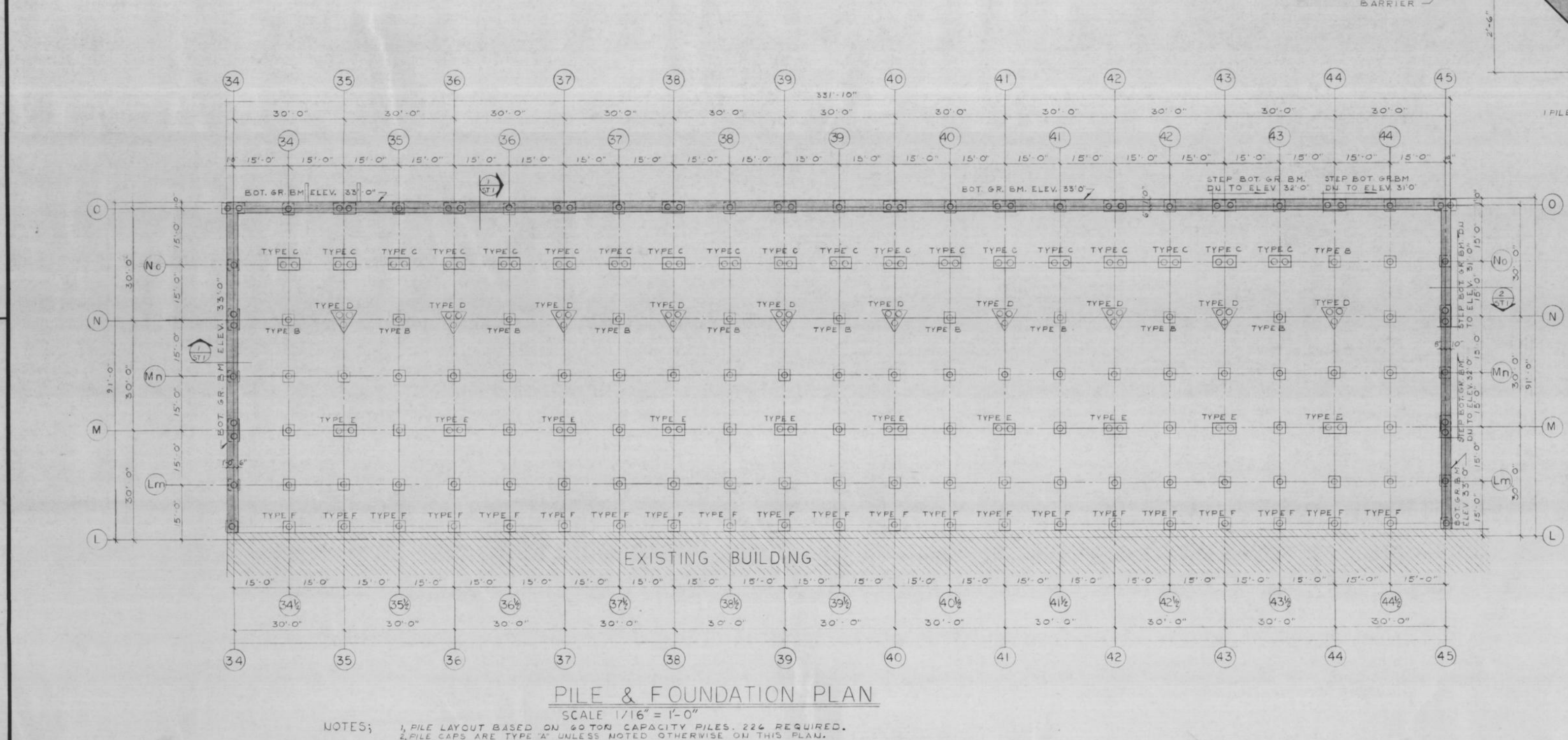
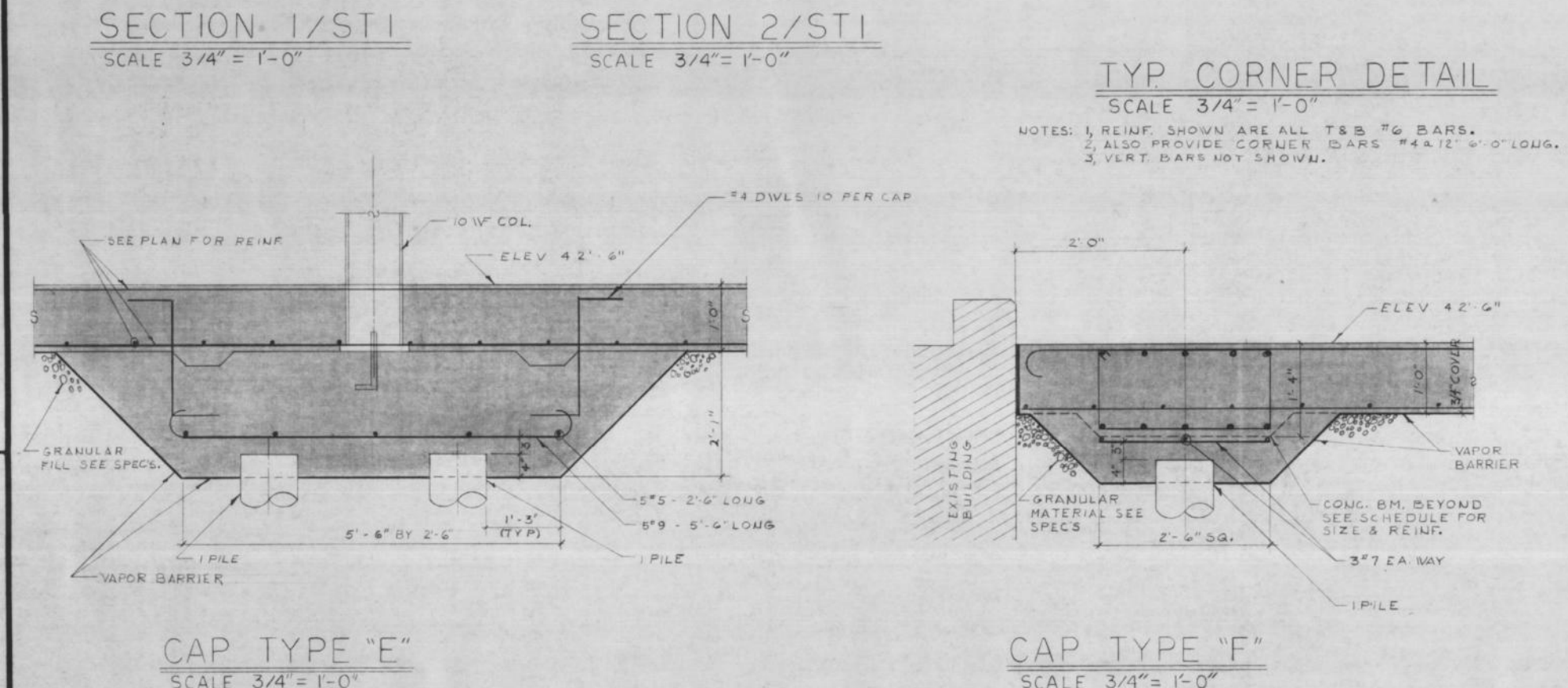
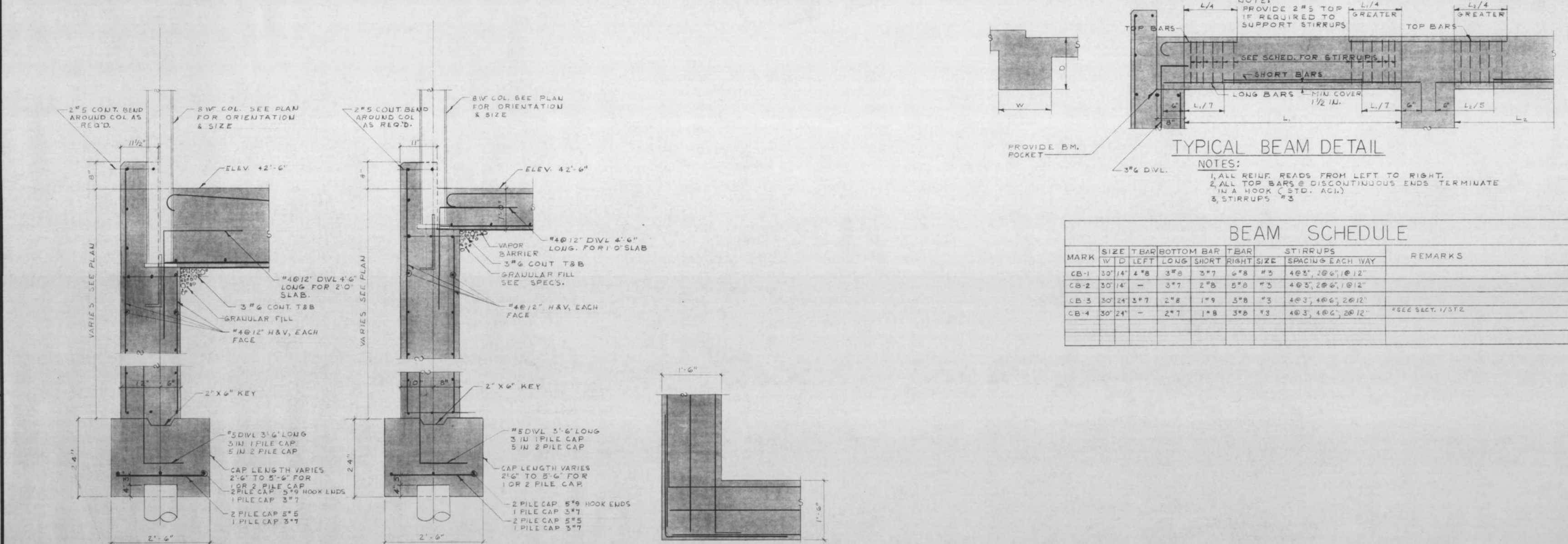
AECOM #60487967

SHEET TITLE

SHEET PILE AND
GW EXTRACTION PLAN

SHEET NUMBER

C-002



BEAM SCHEDULE										
MARK	SIZE		T BAR	BOTTOM BAR		SHEAR	BARS		STIRRUPS	REMARKS
	W	D		LEFT	RIGHT		SIZE	SPACING		
CB-1	30	41	4 #8	3 #8	3 #7	4 #8	5 #5	40 C, 20 G, 10 V		
CB-2	30	41	-	3 #7	4 #8	5 #8	7 #5	40 C, 20 G, 10 V		
CB-3	30	42	3 #7	2 #8	1 #8	5 #8	7 #5	40 C, 40 G, 20 V		
CB-4	30	41	-	2 #7	1 #8	3 #8	7 #5	40 C, 40 G, 20 V		FREE SECT. 1/25/12

11. GENERAL CONCRETE & FOUND. NOTES

1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI
28 DAYS.

2. REINFORCING BARS TO BE DEFORMED BARS MEETING A.S.T.M. A-615,
GRADE 60, MINIMUM YIELD STRENGTH 28,000 PSI.

3. PROVIDE 2" BARS AROUND ALL OPENINGS IN CONCRETE FOUNDATION.

4. PROVIDE COUNTER BARS 4"x12" O.C. 2' LONG AT ALL CORNERS.

5. PROVIDE ALL REINFORCING BARS WITH 6" MINIMUM CLEARANCE FROM
WALL CONCRETE STRUCTURAL SLABS ON EARTH FORM TO REST ON
STRENGTHENED NON-CONTINUOUS BEUT BARS IN ACCORDANCE WITH A.C.I. CODE B-
18. PROVIDE 12" MINIMUM CLEARANCE FROM WALL TO REINFORCING BARS.

6. ALL SLAB & BEAM STEEL SHALL HAVE A MINIMUM EXTENSION INTO SUPPORT
WALLS.

7. REINFORCED CONCRETE BEAMS TO HAVE A MINIMUM BEARING.

8. PROVIDE 12" MINIMUM CLEARANCE FROM WALL TO REINFORCING BARS.

9. ALL CONCRETE FLOOR BEAMS TO BE MONOLITHIC WITH FLOOR SLAB.
3" SPALL.

10. FILL ALL COLUMN POCKETS WITH CONCRETE AFTER COLUMNS
ERECTED.

11. PROVIDE ALL OPENINGS IN FLOOR MECHANICAL TRAYS, OPENINGS
TO BE 12" MINIMUM CLEARANCE FROM WALLS. 12" MIN. DIA.
CLOSALLY AT ALL CORNERS.

12. PROVIDE 12" MINIMUM CLEARANCE FROM WALL AT THE SAME TIME,
WALL CONTINUOUS BEAMS & SLABS EXTEND REINFORCING TO 1/4 FOOT
FROM WALL.

13. SEE THE SLAB & BEAM DETAILS FOR REINFORCING LENGTH &
PLACEMENT.

14. RAISED RUNNING HORIZONTAL IN SLABS SHALL NOT HAVE AN O.D. LARGER
THAN 1/8" SLAB THICKNESS AND SHALL NOT BE SPACED CLOSER
TOGETHER THAN 18" CENTER TO CENTER.

BUILDING TR-3N
CARRIER AIR CONDITIONING COMPANY

BUILDING TR-3N

PROJECT 69 - 56

**SARGENT
WEBSTER
CRENSHAW
& FOLLEY**

WATERLOO
ON

ARCHITECTS ENGINEERS PLANNERS
SCHEMATIC DESIGN SAN JUAN, PUERTO RICO

DATE	REVISION	BY
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT THE SITE AND PROMPTLY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES.		

Bredin & Co.

LAUGHLIN	11/13/63
DATE	SCALE
5 Dec. 63	AS NOTED
FILE & FOLIO	

DATE PLAN & DETAILS

SHEET NO.

ST-1

DEA-TR3U-214-E

**AS-BUILT
DRAWINGS**

PROJECT

TR-3 NORTH WALL /
SWTP
SHEET PILING AND
GW EXTRACTION

UTC/CARRIER SITE
Thompson Road
Syracuse, New York

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KEY PLAN

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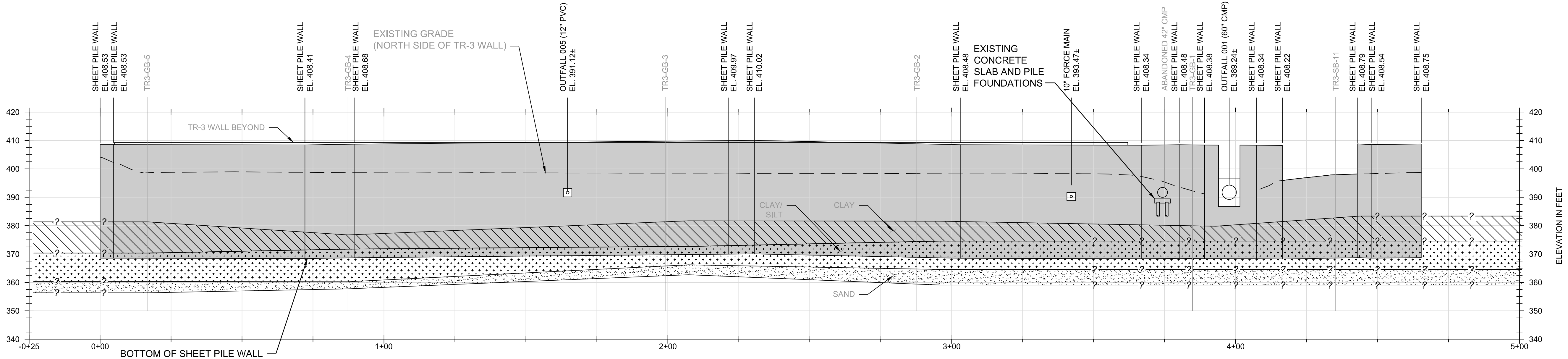
AECOM #60487967

SHEET TITLE

EXISTING FOUNDATION PLAN

SHEET NUMBER

C 003

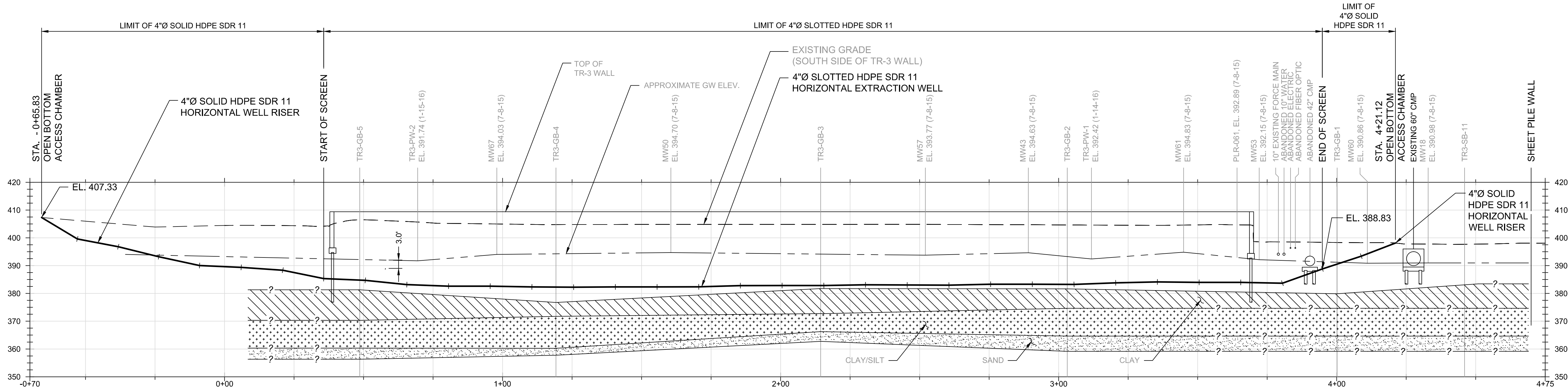


SHEET PILE PROFILE

SCALE: 1" = 20'-0"

NOTES:

- FLUCTUATION IN GROUNDWATER ELEVATION ALONG PROFILE ARE PARTLY THE RESULT OF MONITORING WELL MEASUREMENTS TAKEN AT DIFFERENT TIMES AND DIFFERENT OFFSETS. (TR3-PW-1 AND TR3-PW-2 ON 1/16) (MW-43, 50, 53, 57, 60, 61, AND 67 ON 7/15)



GW EXTRACTION WELL PROFILE

SCALE: 1" = 20'-0"

SHEET PILE BARRIER WALL

MATERIALS

- THE SHEET PILES SHALL BE HOT ROLLED AND SHALL BE 40 FEET LONG HOESCH 1807, GRADE 60, OR EQUIVALENT.
- THE SHEET PILES SHALL BE DELIVERED TO THE SITE AS WELDED PAIRS. WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY D1.1.
- THE WATER-PROOFING SEALANT SHALL BE SWELLSEAL, AS MANUFACTURED BY DENEUF, OR APPROVED EQUAL.

HORIZONTAL EXTRACTION WELL

MATERIALS

- THE HDPE PIPE SHALL CONFORM TO AWWA C901 FOLLOWING THE REQUIREMENTS OF ASTM D3035. HDPE MATERIAL USED TO MANUFACTURE THE PIPE SHALL BE PE 3408 MEETING ASTM D3350 FOR CELL CLASSIFICATION 445574C AND CLEARLY MARKED AS SUCH. THE PIPE SHALL HAVE A MINIMUM HYDROSTATIC DESIGN BASIS OF 1,600 PSI AT 73°F WHEN TESTED IN ACCORDANCE WITH PPI TR-3 AND SHALL BE LISTED IN THE NAME OF PIPE FITTING MANUFACTURER IN PPI TR-4. THE PIPE SHALL BE BLUE STRIPE SDR 11 AS MANUFACTURED BY JM EAGLE, OR AN APPROVED EQUAL.

WELL ACCESS POINTS

MATERIALS

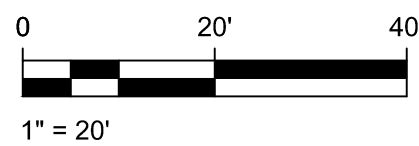
- THE EASTERN PREFABRICATED CONCRETE STRUCTURE SHALL BE FABRICATED WITH 4000 PSI CONCRETE AND REINFORCED TO ACCOMMODATE H20 LOADS. THE INSIDE DIMENSIONS SHALL BE 3'Ø CIRCULAR CONCRETE MANHOLE WITH 6" WALLS. THE MAN WAY OPENING SHALL BE AT LEAST 30" DIAMETER.
- THE WESTERN PREFABRICATED ACCESS STRUCTURE SHALL BE FABRICATED WITH 4000 PSI CONCRETE AND REINFORCED TO ACCOMMODATE H20 LOADS. THE INSIDE DIMENSIONS SHALL BE 3'Ø CIRCULAR CONCRETE MANHOLE WITH 6" WALLS. THE MAN WAY OPENING SHALL BE AT LEAST 30" DIAMETER.
- THE FRAMES AND COVERS SHALL FIT IN THE TOP SLAB OPENING OF THE PREFABRICATED STRUCTURE. THE FRAME AND LID SHALL BE WATERTIGHT, MODEL FL90 AS MANUFACTURED BY FIBRELITE, OR AN APPROVED EQUAL.

LEGEND:

- GRAY CLAY
- CLAYEY SILT
- F-M SAND

NOTE:

- UTILITY LOCATIONS ARE APPROXIMATE.



AS-BUILT
DRAWINGS

AECOM

PROJECT

TR-3 NORTH WALL / SWTP SHEET PILING AND GW EXTRACTION

UTC/CARRIER SITE
Thompson Road
Syracuse, New York

CLIENT

United Technologies

UTC Shared Remediation Services
9 Farm Springs Road
Farmington, Connecticut 06032

CONSULTANT

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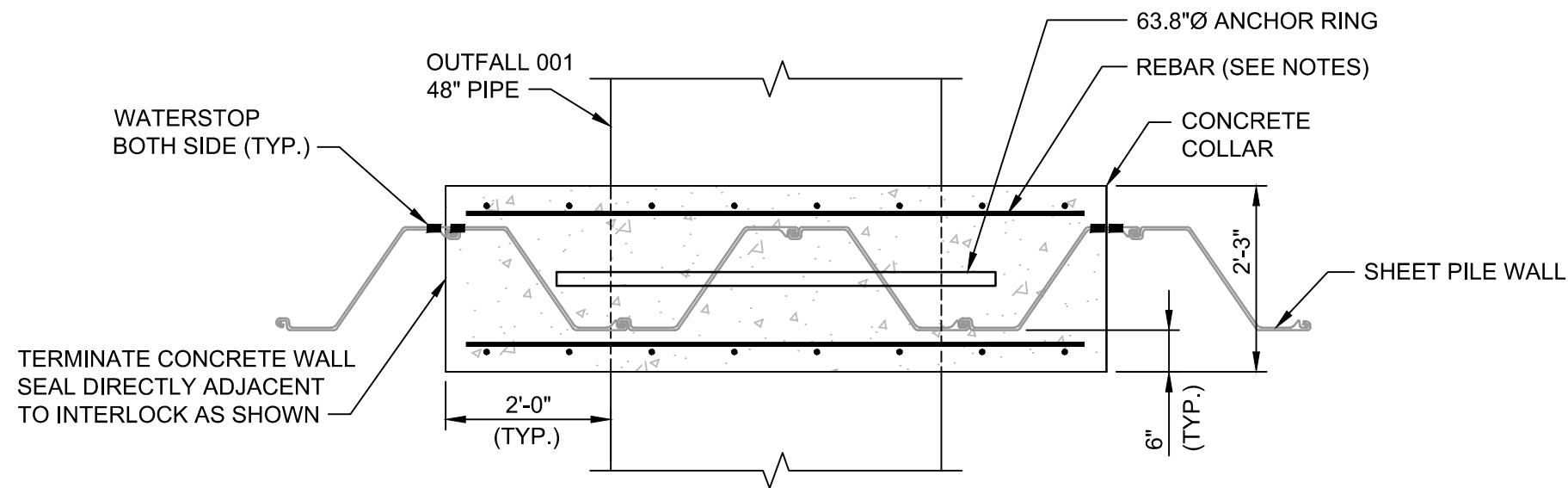
AECOM #60487967

SHEET TITLE

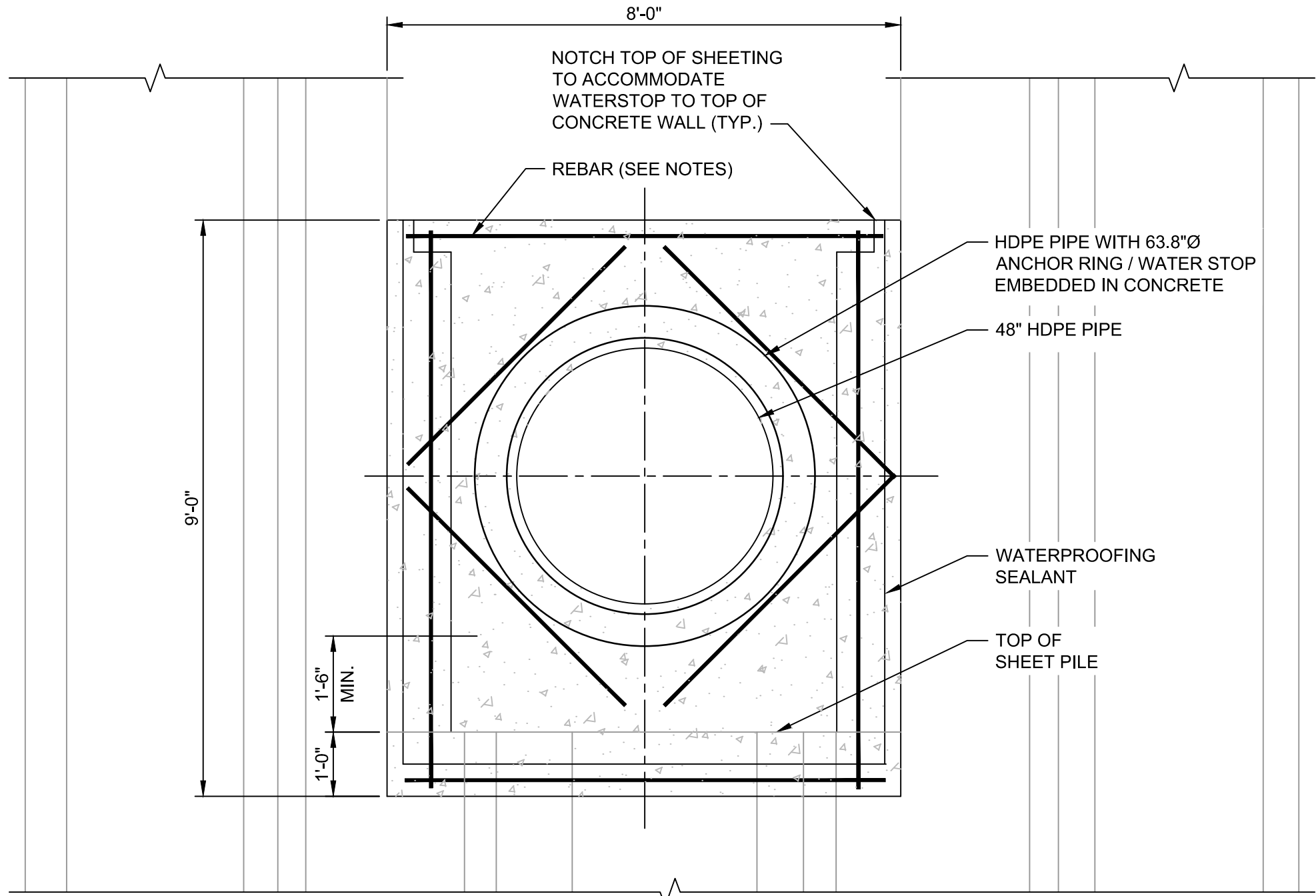
SHEET PILE AND
GW EXTRACTION WELL
PROFILES

SHEET NUMBER

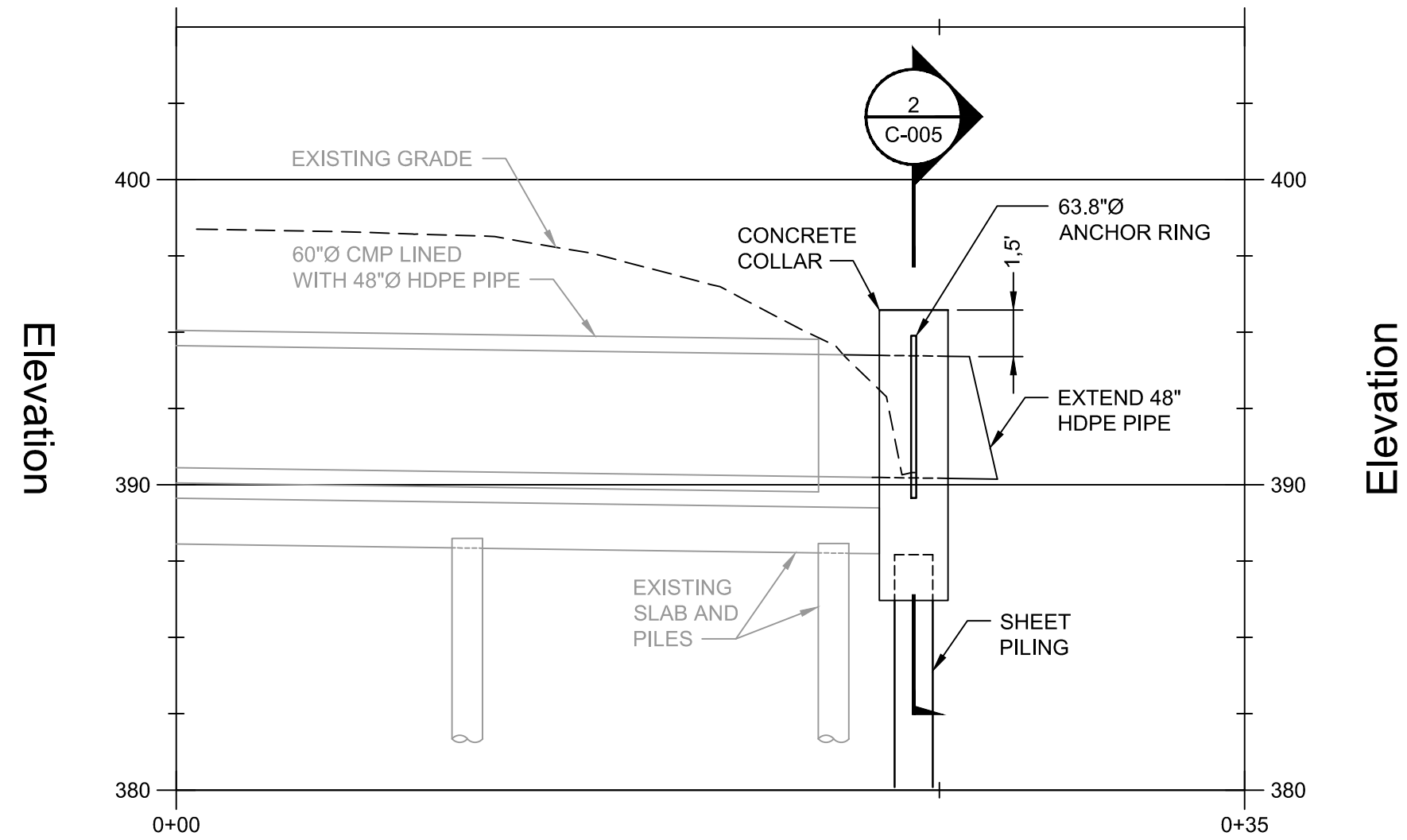
C-004



1 PLAN
C-005 SCALE: 1/2"=1'-0"



2 SECTION
C-005 SCALE: 1/2"=1'-0"

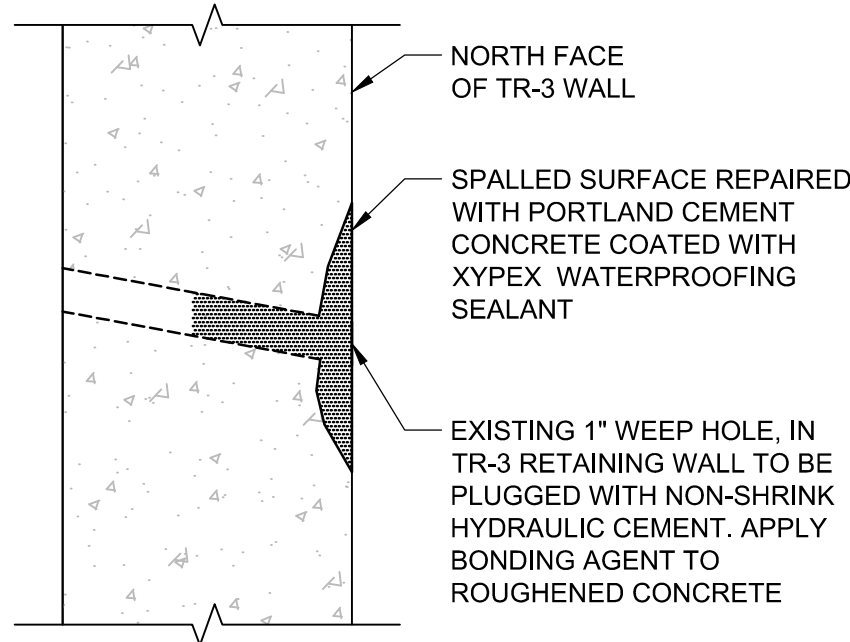


3 PROFILE @ OUTFALL 001
C-005 SCALE: 1"=5'-0"

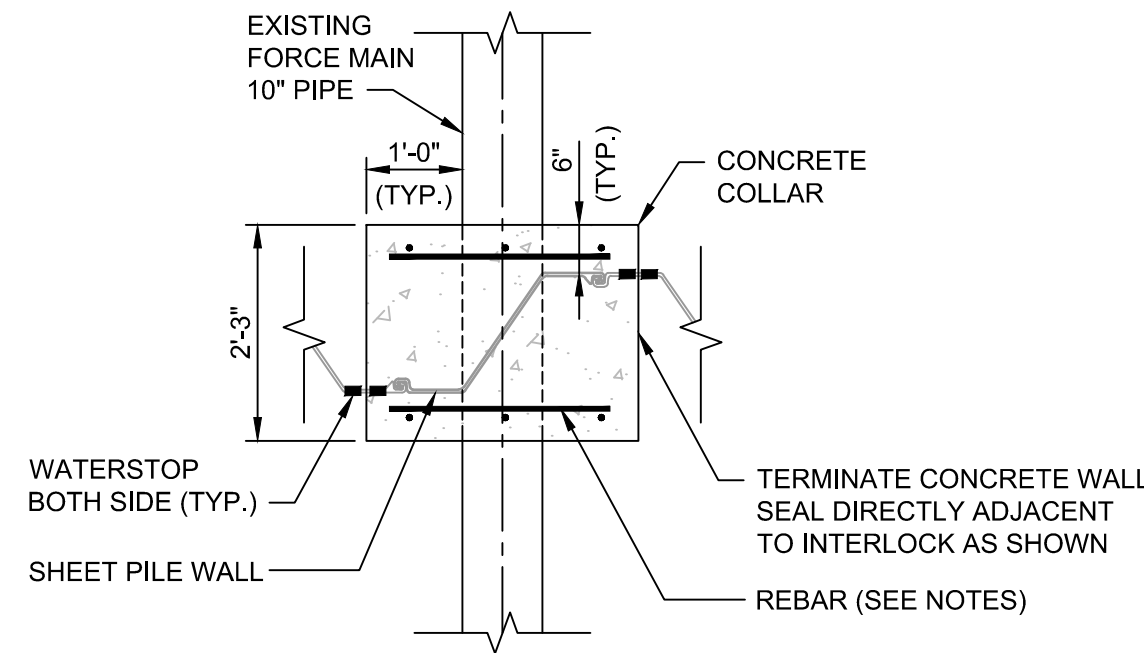
60" PIPE PENETRATION DETAILS @ OUTFALL 001

CONCRETE COLLAR NOTES:

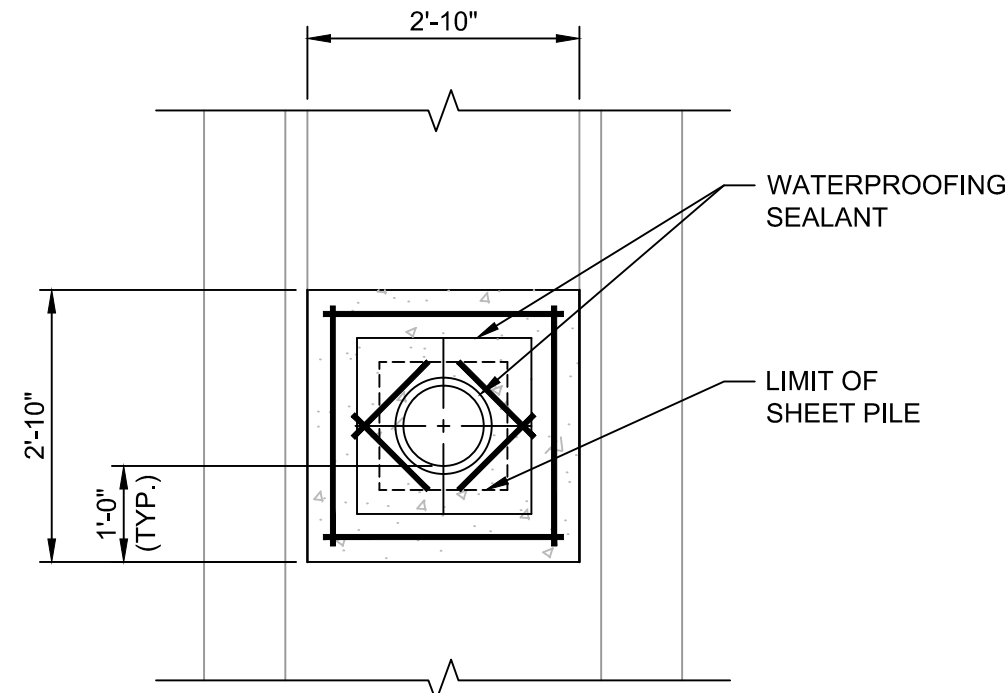
- CONCRETE: 4000 PSI
- CONCRETE WATERPROOFING ON INSIDE FACE OF CONCRETE COLLAR (PERMA-CRETE 4-808, OR AN APPROVED EQUAL).
- REINFORCING STEEL: ASTM A615, GRADE 60, EPOXY COATED ASTM A775.
- REINFORCEMENT: #5 @ 12" O.C., EACH WAY, EACH FACE
- MINIMUM 3" CONCRETE COVER ON REINFORCING.



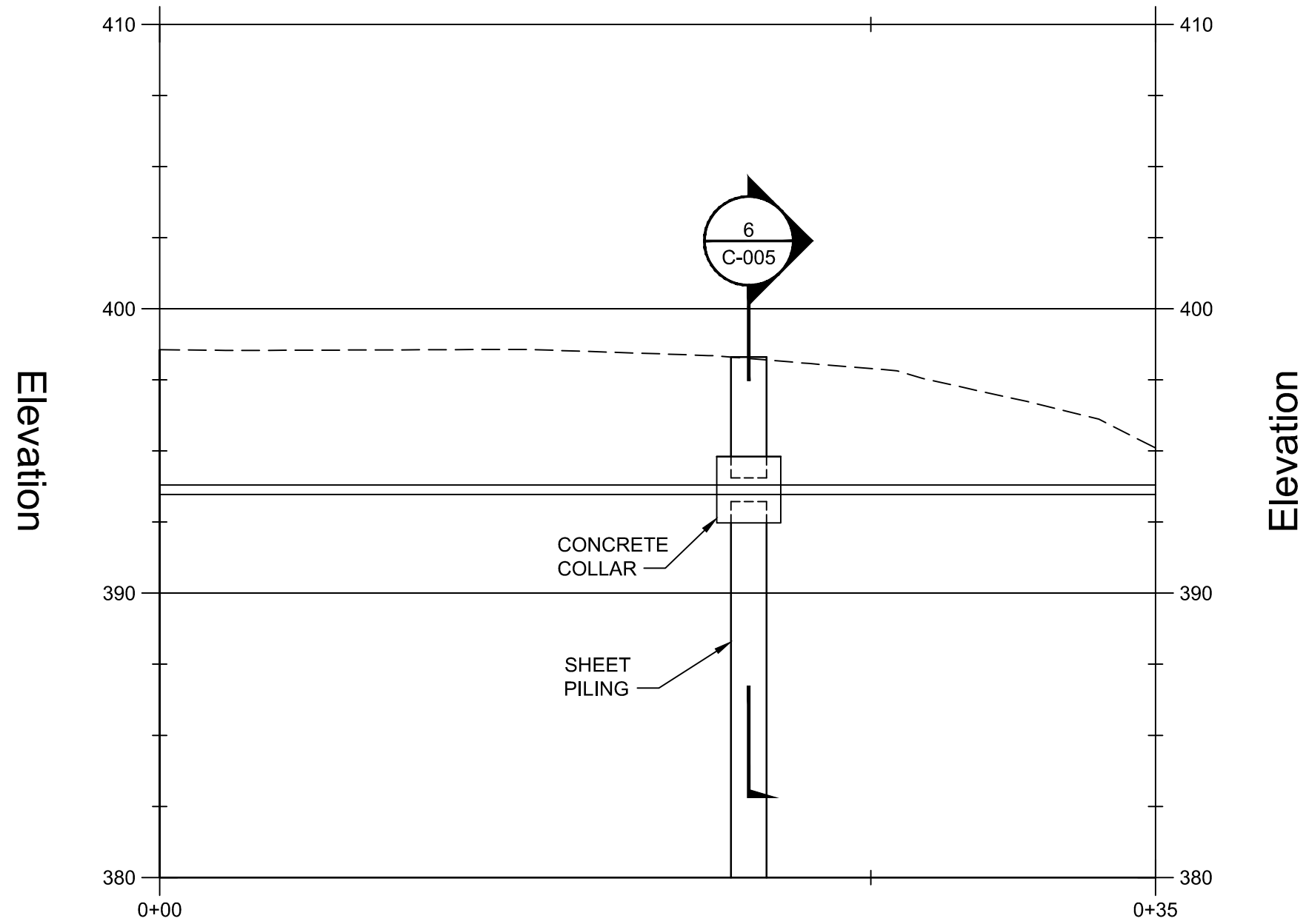
4 WEEP HOLE PLUG DETAIL
C-006 SCALE: N.T.S.



5 PLAN
C-005 SCALE: 1/2"=1'-0"



6 SECTION
C-005 SCALE: 1/2"=1'-0"



7 PROFILE @ FORCE MAIN
C-007 SCALE: 1"=5'-0"

10" PIPE PENETRATION DETAILS @ FORCE MAIN

AECOM

PROJECT

TR-3 NORTH WALL /
SWTP
SHEET PILING AND
GW EXTRACTION

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AECOM #60487967

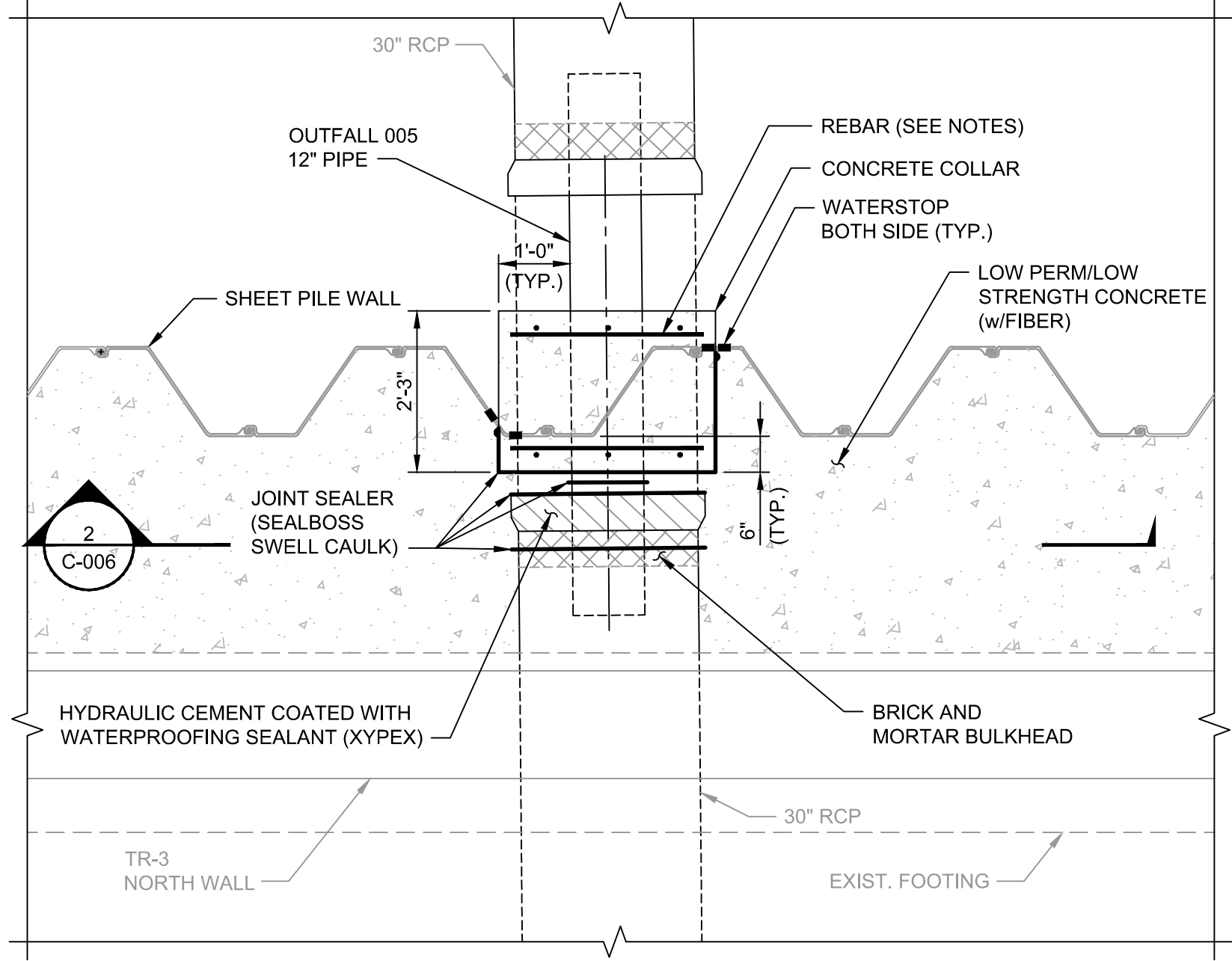
SHEET TITLE

SHEET PILE
SECTIONS AND DETAILS

SHEET NUMBER

C-005

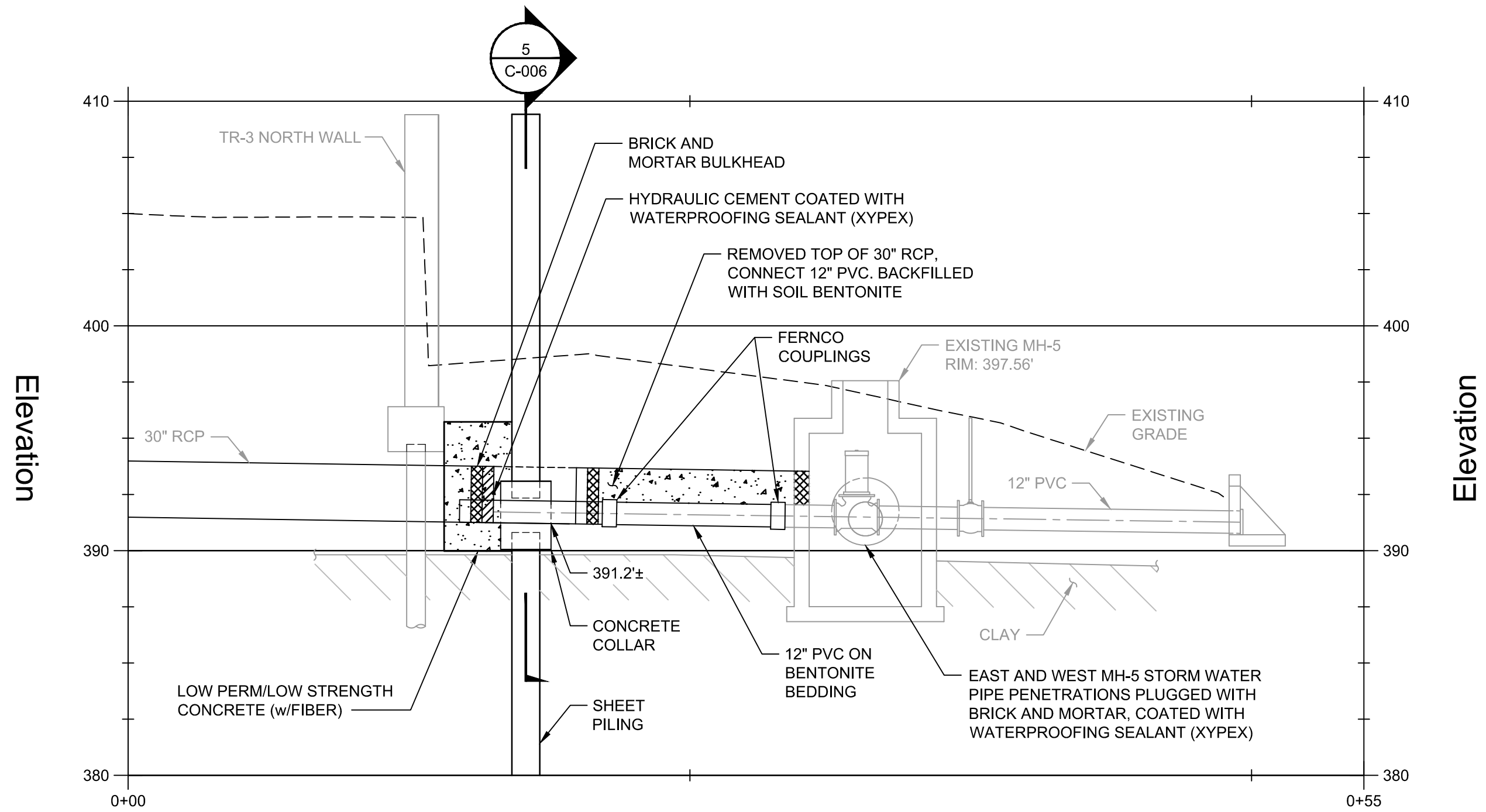
AS-BUILT
DRAWINGS



1 PLAN
C-006 SCALE: 1/2"=1'-0"

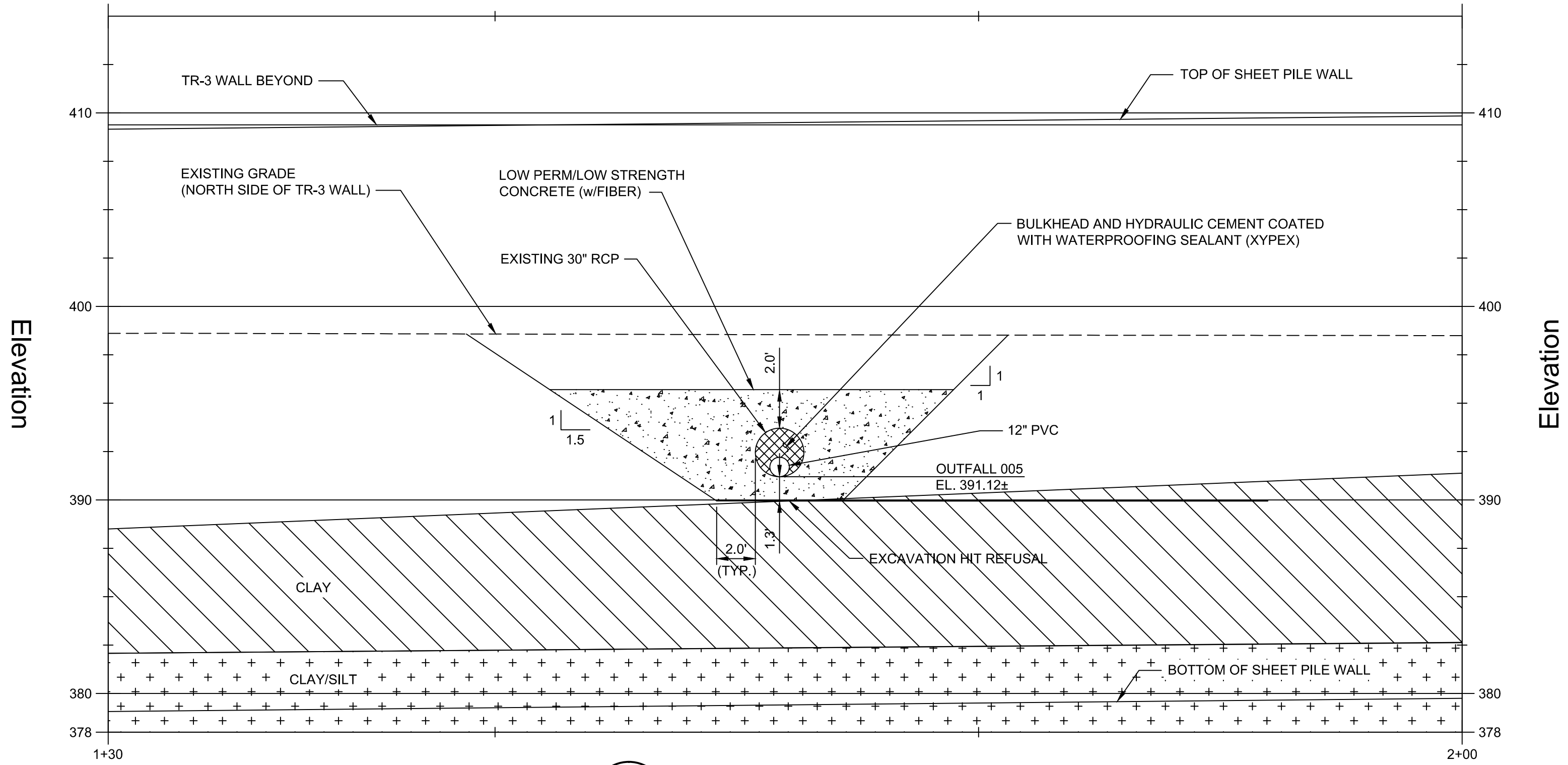
CONCRETE COLLAR NOTES:

1. CONCRETE: 4000 PSI
2. CONCRETE WATERPROOFING ON INSIDE FACE OF CONCRETE COLLAR (PERMA-CRETE 4-808, OR AN APPROVED EQUAL).
3. REINFORCING STEEL: ASTM A615, GRADE 60, EPOXY COATED ASTM A775.
4. REINFORCEMENT: #5 @ 12" O.C., EACH WAY, EACH FACE
5. MINIMUM 3" CONCRETE COVER ON REINFORCING.

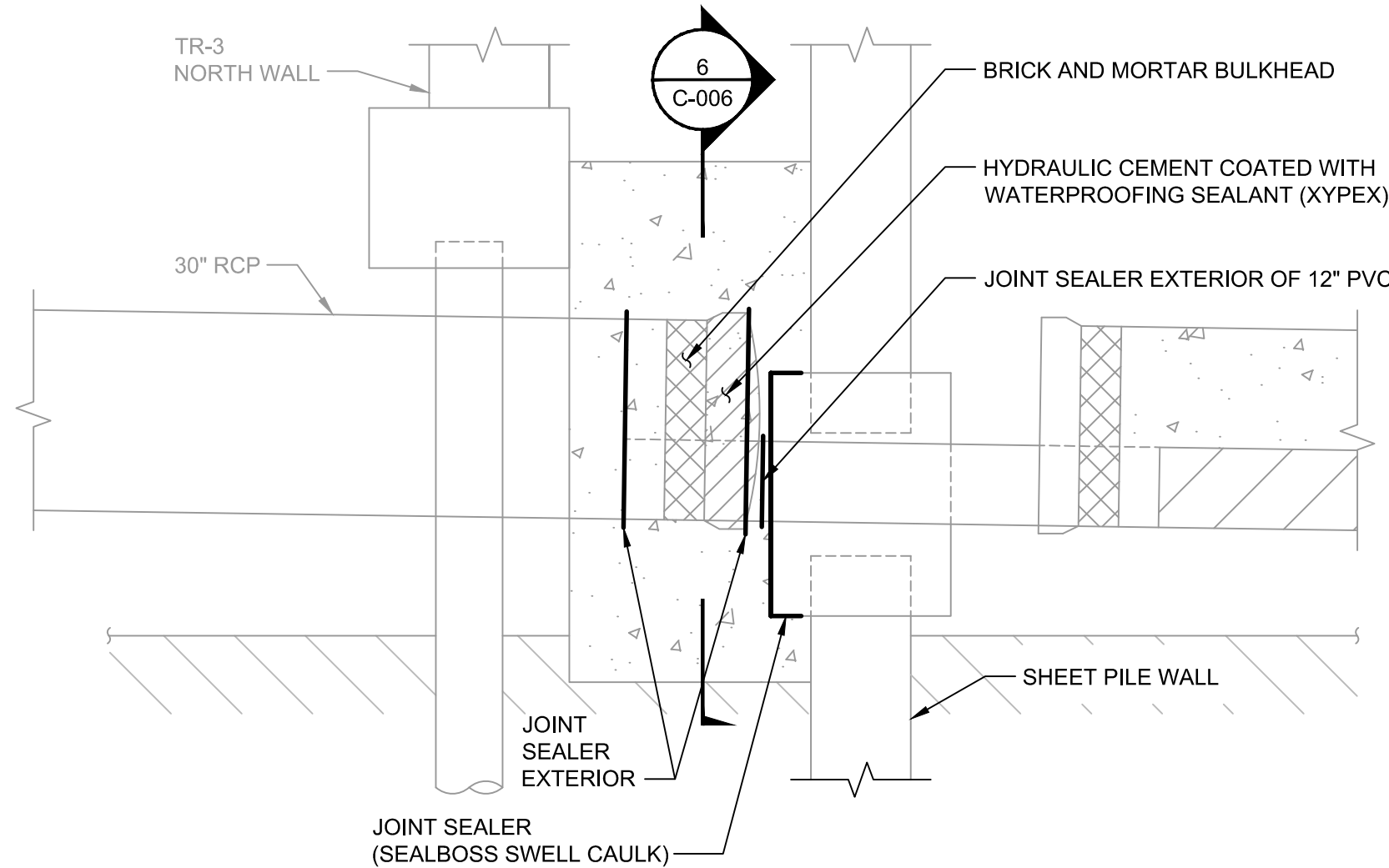


3 PROFILE @ OUTFALL 005
C-006

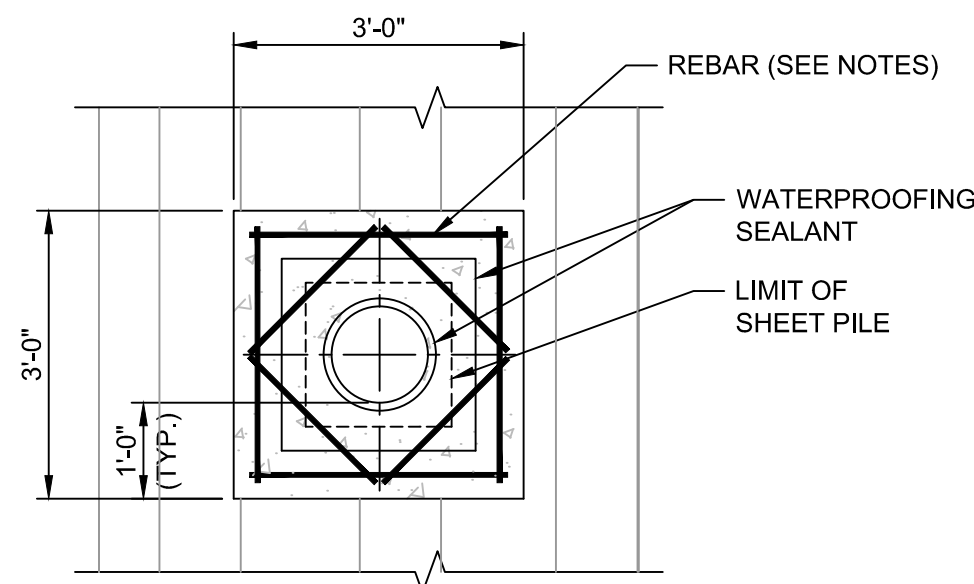
12" PIPE PENETRATION DETAILS @ OUTFALL 005



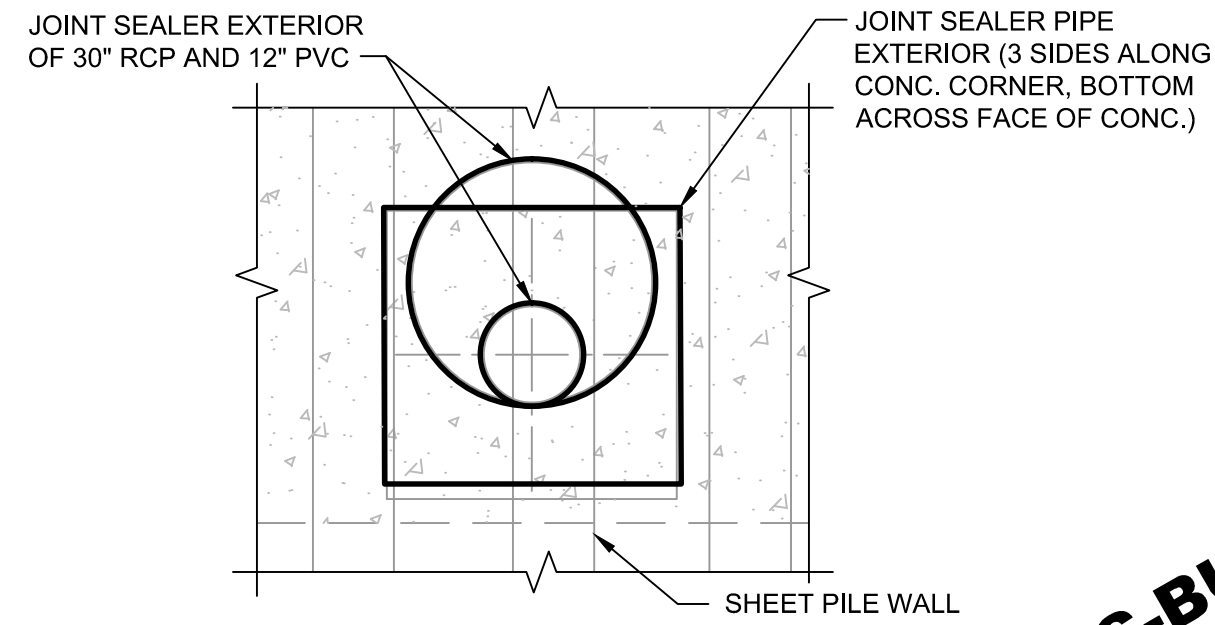
2 SECTION
C-006 SCALE: 1/2"=1'-0"



4 ELEVATION AT OUTFALL 005
C-006 SCALE: 1/2"=1'-0"



5 SECTION
C-006 SCALE: 1/2"=1'-0"



6 SECTION
C-006 SCALE: 1/2"=1'-0"

AS-BUILT
DRAWINGS

AECOM

PROJECT

TR-3 NORTH WALL / SWTP SHEET PILING AND GW EXTRACTION

UTC/CARRIER SITE
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Syracuse, New York

CLIENT

United Technologies

UTC Shared Remediation Services
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PROJECT NUMBER

AECOM #60487967

SHEET TITLE

SHEET PILE
SECTIONS AND DETAILS

SHEET NUMBER

C-006

**AS-BUILT
DRAWINGS**



Environment

Prepared For:
United Technologies Corp.
Shared Remediation Services
Farmington, CT

Prepared by:
AECOM
Buffalo, NY
60340856
July 2017

APPENDIX C

NYSDOT Permit

PERM 42 (09/09)

**State of New York
Department of Transportation**

Highway Work Permit



Permit No.: 20160360182

Date Issued: 11/21/2016

Project ID No.:

Expiration Date: 04/01/2017

***Permittee 1:**

CARRIER CORPORATION

CARRIER PARKWAY, BDG TR-7, PO BOX 4808

400

SYRACUSE, NY 13221

Emergency Contact:

NELSON
WONG

Emergency Number:

315-432-6900

***Permittee 2:**

AECOM

257 WEST GENESEE STREET, SUITE

BUFFALO, NY 14202

Emergency Contact: ROBERT
MURPHY

Emergency Number: 716-923-1165

Under the provisions of the Highway Law or Vehicle & Traffic Law, permission is hereby granted to the permittee to:

TEMPORARY ACCESS OFF OF TERERGY PARKWAY. A PERMIT WAS NEEDED SINCE THE WORK ENCROACHES INTO NYSDOT R.O.W. NO WORK IS TO BE DONE WITHIN THE NYS ROADWAY.

THE PERMITTEE IS RESPONSIBLE FOR TEMPORARY TRAFFIC CONTROL IN ACCORDANCE WITH THE NATIONAL MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE NYS SUPPLEMENT. ANYONE WORKING WITHIN THE HIGHWAY RIGHT-OF-WAY SHALL WEAR HIGH-VISIBILITY APPAREL MEETING THE ANSI 107-2004 CLASS II STANDARDS AND A HARD HAT.

County	Municipality	State Hwy	State Route	Beg Ref	End Ref
ONONDAGA	SYRACUSE	-	298	298 33012019	298 33012031

as set forth and represented in the attached application at the particular location or areas, or over the routes as stated therein, if required; and pursuant to the conditions and regulations general or special, and methods of performing work, if any; all of which are set forth in the application and form of this permit. See additional conditions on PAGE 2.

THIS PERMIT IS ISSUED BASED ON ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS BEING SATISFIED.

Dated at: Syracuse Date Signed: 11/21/2016 Commissioner of Transportation *For: Diana Graser*

IMPORTANT:

THIS PERMIT, WITH APPLICATION AND DRAWING (OR COPIES THEREOF) ATTACHED, SHALL BE PLACED IN THE HANDS OF THE CONTRACTOR BEFORE ANY WORK BEGINS. THE HIGHWAY WORK PERMIT SHALL BE AVAILABLE AT THE SITE DURING CONSTRUCTION.

BEFORE WORK IS STARTED AND UPON ITS COMPLETION, THE PERMITTEE ABSOLUTELY MUST NOTIFY:

Eric Hansen, Resident Engineer 315-458-1910

"UPON COMPLETION OF WORK", SECOND TO LAST PAGE, MUST BE COMPLETED, SIGNED BY THE PERMITTEE, AND DELIVERED TO THE RESIDENT ENGINEER.

The issuing authority reserves the right to suspend or revoke this permit at its discretion without a hearing or the necessity of showing cause, either before or during the operations authorized.

The Permittee will cause an approved copy of the application to be and remain attached hereto until all work under the permit is satisfactorily completed, in accordance with the terms of the attached application. All damaged or disturbed areas resulting from work performed pursuant to this permit will be repaired to the satisfaction of the Department of Transportation.

*** Upon completion of the work within the state highway right-of-way authorized by the work permit, the person, firm, corporation, municipality, or state department or agency, and his/her or its successors in interest, shall be responsible for the maintenance and repair of such work or portion of such work as set forth within the terms and conditions of the work permit.**

Permit Fee : \$200.00

Insurance Fee: \$0.00

Total Fees: \$200.00

Amt Rec'd 1: \$200.00 Check Num: 1023 Check Date: 11-NOV-16

UOF: App 1: No App 2: No

Attachments and additional requirements to this Highway Work Permit include:

PERM 33 - Highway Work Permit Application for Non_Utility Work

Plans signed and stamped by a Licensed PE R. Murphy

END OF ATTACHMENTS

PERM 42 (09/09)

**State of New York
Department of Transportation****Highway Work Permit****Permit No.:** 20160360182**Date Issued:** 11/21/2016**Project ID No.:****Expiration Date:** 04/01/2017**Return this page to:****Eric Hansen, Resident Engineer****5430 S. Bay Road
North Syracuse, NY 13212****Permittee 1: CARRIER CORPORATION
CARRIER PARKWAY, BDG TR-7, PO BOX 4808****SYRACUSE, NY 13221 -****UPON COMPLETION OF WORK AUTHORIZED, THIS PAGE OF THE PERMIT MUST BE COMPLETED, SIGNED BY THE PERMITTEE, AND DELIVERED TO THE RESIDENT ENGINEER.****Work authorized by this permit has been completed. Refund of deposit or return/release of bond is requested.**DATE
any)

PERMITTEE

AUTHORIZED AGENT (if

TO BE COMPLETED BY NYSDOT:**Work authorized by this permit has been satisfactorily completed and is accepted. Inspection Report must be completed.**

- ☐ Refund of Deposit is authorized
- ☐ Return of Bond is authorized
- ☐ Unable to meet schedule as specified in bid proposal
- ☐ Amount charged against Bond may be released.
- ☐ Retain bond for future permits
- ☐ Forfeit of Guarantee Deposit is authorized
- ☐ Other

DATE

RESIDENT ENGINEER

- ☐ Mailing address of refund has been verified.
- If different, list new address:

The Regional Office will forward this form to the Main Office with the appropriate box checked.

- ☐ Permit closed
- ☐ Bond returned/released
- ☐ Refund of Guarantee Deposit on this permit is authorized
- ☐ Forfeit Guarantee Deposit to NYSDOT
- ☐ Other

DATE

REGIONAL TRAFFIC ENGINEER

INSPECTION REPORT

For each Highway Work Permit issued, inspections will be performed. The following report must be completed for each site visit, indicating the date, inspector, and hours spent on inspection. **If the total inspection time exceeds 1 hour, then a FIN 12 (PERMIT INSPECTION FOR DEPARTMENT SERVICES) is REQUIRED.**

INSPECTION REPORT LOG

HOURS WORKED BY DATE									HOURS	
Inspector Name	Date Inspected								Regular	Overtime
	Regular									
	Overtime									
Inspector Name	Date Inspected								Regular	Overtime
	Regular									
	Overtime									
Inspector Name	Date Inspected								Regular	Overtime
	Regular									
	Overtime									

Complete hours for each date inspected.

Add regular hour numbers across rows, and then overtime hours across rows.

Add hour columns down for total hours of permit inspection time.

COMMENTS/OBSERVATIONS:

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED ABOVE IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

NAME

TITLE

Revision Date: 5/5/2016



Date: November 11, 2016

Ms. Kristina Crowley
Permit Engineer
New York State Department of Transportation – Region 3
Highway Work Permits
333 E. Washington Street
Syracuse, New York 13202

RE: Carrier/UTC, Thompson Road Facility

Syracuse, Onondaga County, New York
NYSDEC Corrective Action Order – Index CO 7-20051118-4
Sanders Creek UTC/Carrier, Site #734043
Request for Non-Utility Highway Work Permit (PERM 33)

Dear Ms. Crowley:

AECOM is providing engineering services to United Technology Corporation (UTC) at the Carrier Thompson Road Facility in Syracuse, New York. AECOM, on behalf of Carrier/UTC Corporation, is requesting a Non-Utility Highway Work Permit, Type 5a6, per New York State Department of Transportation (NYSDOT) Form PERM 33. The permit is for construction and use of a temporary access road within and adjacent to NYSDOT right-of-way (ROW) in support of environmental remediation. The work is being conducted under a New York Department of Environmental Conservation (NYSDEC) Corrective Action Order - Index Consent Order CO 7-20051118-4 dated February 13, 2006.

The proposed work will be just west of Telergy Parkway, located south of New York State Route 298 (NYS 298). The area falls within reference markers 298/3301/2019 to 298/3301/2031. Although the work will be performed on UTC/Carrier property, access to the adjoining DOT property (see attached Figure) is needed for equipment staging and operation. This will include construction and use of a stone access road. It is UTC/Carrier's intent to leave the access road in place for use during future remediation activities in 2018. A separate permit will be submitted at that time. The access road will be removed and the site restored following completion of remediation activities.

To construct the temporary access road, one tree, an approximately 20-foot tall crab apple tree, will need to be removed (see attached photographs). The tree will be replaced during site restoration.

Access

Access to the temporary access road location will be via Telergy Parkway on UTC/Carrier property. No staff or vehicles will access the temporary road via NYS 298.

Safety

All staff will wear high visibility apparel and steel toed boots. Hard hats will also be worn when working within the NYSDOT ROW. No obstructions will be left following completion of the work. No work will be done that will obstruct or divert Sanders Creek or other water courses in the work area.



As none of the work will occur within or immediately adjacent to state highways, no impacts to traffic will occur. Therefore, no traffic protection and maintenance activities are proposed.

Schedule

Access road construction is anticipated to be completed in five days and an additional 30 days will be required to complete the sheet pile wall work. We anticipate that the work will begin shortly after receipt of the permit from NYSDOT. Considering that the work needs to be performed when the weather conditions are favorable and the work can be done in a safe manner, the work is expected to begin in mid-November 2016. To be conservative, should severe weather preclude completion until spring, the estimated work duration is from November 2016 through May 2017.

Enclosures

Enclosed are three copies of the following:

- Highway Work Permit Application for Non-Utility Work (PERM 33);
- Certificate of Insurance with NYSDOT named as additional insured (ACORD 25);
- New York Construction Certificate of Liability Insurance Addendum (ACORD 855);
- Proof of Worker's Compensation Insurance (Form C-105.2);
- Proof of Disability Benefits Coverage (Form DB120-1);
- Figure 1 – TR3 North Wall -Sheet Pile Installation - Construction Staging Layout;
- Engineer's Estimate - Temporary Access Road Construction and Restoration; and
- Photographs of tree to be removed.

Also enclosed is a check in the amount of \$200.00 payable to New York State Department of Transportation.

If you have any questions or require additional information, please contact me at (716) 923-1150.

Thank you for your attention to this matter.

Sincerely,

Robert E. Murphy
Project Manager
Robert.E.Murphy@AECOM.com

Enclosures: Figures – 3 copies
 PERM 33 Application – 3 copies
 ACORD 25 - 3 copies
 ACORD 855 – 3 copies
 Form C-105.2 – 3 copies
 Form DB-120.1 – 3 copies
 Check #1023 (\$200.00)

cc: Mr. John Wolski – Project Manager, UTC
 File



Form PERM 33 (July 2015) Highway Work Permit Application for Non-Utility Work

Instructions and Form

(For Commercial Driveways, use Form PERM 33-COM)

INSTRUCTIONS FOR COMPLETING THE APPLICATION

FRONT OF APPLICATION

Three (3) copies of the entire application, work plans and all other supporting documents must be submitted. At the time of application, certain information relative to fees and deposits may be contingent upon determinations to be made by the Department. In such cases, the information may be left blank and remittance withheld until a determination is made.

Please complete the following:

- Permittee name, address, phone and email address. Provide joint applicant contact information, if appropriate. If there are additional applicants, attach contact information on a separate sheet.
- Name and phone number(s) of emergency contact person.
- If permit is to be returned to someone other than the applicant, complete this section.
- If the guarantee deposit or bond is to be returned to someone other than applicant, complete this section.
- Estimate the cost of work being performed in the state highway right-of-way and provide this figure.
- Indicate anticipated duration of work to be performed with starting date and ending date.
- Indicate the form of insurance coverage to be provided.
- Give a brief description of the work that is proposed to be done under this permit.
- Indicate whether any overhead and/or underground work (5 foot or greater depth) is included in the proposed work.
- Plans and specifications should accompany this application for any work that involves construction within the state highway right-of-way. Place a check mark on the lines for plans and specifications if they are attached to this application.
- Location of the project should be identified by State Route, highway reference marker(s), and the municipality and county in which work area is located.
- In regard to State Environmental Quality Review (SEQR), indicate the type of action, the name of the Lead Agency, and what date the final determination was made, if available.
- Signature of applicant and date.
- Signature of second applicant, if any, and date.

BACK OF APPLICATION

- Check type of work that will be performed.
- In the appropriate column, indicate total amount of permit fees (Include insurance fee for residential work)
- Indicate type of performance security provided (bond, deposit, letter of credit), if required.
- Indicate check number of deposit or bond number.

RESPONSIBILITIES OF PERMITTEE PURSUANT TO NON-UTILITY HIGHWAY WORK PERMITS

NOTE: FAILURE TO OBTAIN A PERMIT OR FAILURE TO COMPLY WITH THE TERMS OF A PERMIT MAY RESULT IN THE DEPARTMENT HALTING THE ACTIVITY FOR WHICH A PERMIT IS REQUIRED UNTIL ADEQUATE CORRECTIONS HAVE BEEN MADE.

1. LIMITATIONS ON USE: The specific site identified in this Highway Work Permit, and only that site identified, will be available for use by Permittee only for the purpose stated in this Permit and only on the date(s) and for the duration designated in this permit. This Permit does not authorize any infringement of federal, state or local laws or regulations, is limited to the extent of the authority of NYSDOT and is transferable and assignable only with the written consent of the Commissioner of Transportation. The Commissioner reserves the right to modify fees and to revoke or annul the Permit at any time, at his/her discretion without a hearing or the necessity of showing cause.

2. CONDITIONS OF USE: NYSDOT makes no affirmation that the state-owned site used for the work has been designed, constructed, or maintained for the purpose of the conduct of the work. The Permittee assumes full responsibility for planning and conducting a safe and orderly project that does not expose workers or the public to any unreasonable hazards and that involves a minimal disruption of the normal uses of the state and local highway systems. It shall be the sole obligation of the Permittee to determine whether the site is suitable for the purpose of safely conducting the work. The Permittee assumes all responsibility for assuring that the use of the highway/property conforms to applicable requirements of law, including, but not limited to those set forth herein.

Permittee agrees to assure compliance with New York Labor Law, industrial regulations, and OSHA regulations, and to assure the safety of all workers who will be engaged to do the permitted work.

3. INSURANCE COVERAGE: Permittee must have the insurance that is required for the type and extent of the work being performed.

Permittee agrees to maintain liability insurance in full force and effect throughout the term of the highway work permit. Expiration of, or lack of, liability insurance automatically terminates the permit.

To comply with this requirement, an applicant must furnish the Department with one of the following:

- A completed **Certificate of Insurance** evidencing the required types and limits of insurance coverage, with New York State Department of Transportation named as an additional insured on the commercial general liability policy. An industry standard **ACORD 25** form with an **ACORD 855** Addendum is acceptable evidence of the required coverage. Certificate Holder should be indicated as New York State Department of Transportation, with the address of the issuing office.
- A fully executed **Undertaking Agreement** may be provided by Municipalities, Public Utilities, Transportation Corporations, Public Service Corporations or Railroads, as an alternative to providing proof of commercial general liability the insurance.
- **Homeowners** applying for a residential work permit (driveways, improvements or tree work) and performing their own work have the option to pay a **\$25 Insurance Fee**, and waive the requirement to provide insurance coverage. Any contractor doing work on the homeowner's behalf must be listed on the permit and provide satisfactory proof of insurance as set forth below.

See "PERM 33 Submission Package Requirements" on page 4 for more detailed guidance on insurance coverage.

4. COMPENSATION AND DISABILITY INSURANCE COVERAGE: Permittee is required to have compensation insurance and disability coverage as noted in the provisions of the Worker's Compensation Law and Acts amendatory thereof for the entire period of the permit, or the permit will be invalid. Applicant must provide proof of coverage (Form C-105.2, U-26.3 or SI-12 for Worker's Compensation, and DB-120.1 or DB-155 for Disability Benefits), or provide proof of exemption from this requirement (Form CE-200).

5. INDEMNIFICATION: Permittee agrees that, in addition to any protection afforded to NYSDOT under any available insurance, NYSDOT shall not be liable for any damage or injury to the Permittee, its agents, employees, or to any other person, or to any property, occurring on the site or in any way associated with Permittee's activities or operations; whether undertaken by Permittee's own forces or by contractor or other agents working on Permittee's behalf. To the fullest extent permitted by law, the Permittee agrees to defend, indemnify and hold harmless the State of New York, NYSDOT and their agents from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of any claim, including but not limited to claims for personal injuries, property damage or wrongful death and/or environmental claims, in any way associated with the Permittee's activities or operations, no matter how caused.

6. NOTIFICATION: The following should be notified at the appropriate time as shown below:

- Commissioner of Transportation, through the NYSDOT regional office, one week prior to commencing work.
- Area gas distributors, 72 hours prior to any blasting.
- Utility companies with facilities in work areas, before starting work (in accordance with Industrial Code 53).
- Permission from utility company must be obtained before commencing work affecting the utilities' facilities.
- NYSDOT regional signal maintenance shop, 3 days prior to starting work (traffic signal work).
- NYSDOT regional office, at conclusion of work, and return original copy of permit to Resident Engineer.

NOTIFICATION FOR ANNUAL PERMITS: Notify by phone, the Regional or Resident Engineer's Office, one week in advance, each time regular maintenance work is to be performed. In emergencies, notification by phone, fax or email should be made as soon as is practical, no later than the next business day.

7. SITE CARE AND RESTORATION: A bond, deposit (bank cashier's check), or a Letter of Credit, in an amount designated by the Department of Transportation, may be required before a permit is issued, in order to guarantee restoration of the site to its original condition. A fully executed Undertaking Agreement may be accepted as an alternative security, where applicable. If the Department is obliged to restore the site to its original condition, the costs to the Department will be deducted from the amount of the permittee's deposit at the conclusion of the work. Costs in excess of the bond/deposit on file will be billed directly to the permittee. If permittee posts a Letter of Credit, the Department may elect to have a contractor restore the site, and issue a draft drawn against the Letter of Credit as payment.

- Anyone working within state highway right-of-way must wear **high visibility apparel** and **hard hat** meeting ANSI Class 2 requirements.
- No unnecessary obstruction is to be left on the pavement or the state highway right-of-way, or in such a position as to block warning signs during non-working hours.
- No work shall be done to obstruct drainage or divert creeks, water courses or sluices onto the state highway right-of-way.
- All false work must be removed and all excavations must be filled in and restored to the satisfaction of the Regional Maintenance Engineer.

8. COSTS INCURRED BY ISSUANCE OF THIS PERMIT: All costs beyond the limits of any liability insurance, surety deposits, etc. are the responsibility of the permittee. The State shall be held free of any costs incurred by the issuance of this permit, direct or indirect.

9. SUBMITTING WORK PLANS: The applicant will submit three (3) copies of work plans and/or maps as required by the Department. This shall include (but not limited to) such details as: measurements of driveways with relation to nearest property corner; location of existing and proposed poles, guide rail, signal equipment, trees or drainage structures; positions of guys supporting poles; a schedule of the number of poles and feet of excavation necessary for completion of work on the State right-of-way. A description of the proposed method of construction will be included.

- Plan work with future adjustments in mind, as any relocation, replacement or removal of the installation authorized by this permit and made necessary by future highway maintenance, reconstruction or new construction, will be the responsibility of the permittee.
- Driveway plans should be prepared in accordance with NYSDOT POLICY AND STANDARDS FOR ENTRANCES TO STATE HIGHWAYS.
- The permittee must coordinate the work with any State construction being conducted.

10. TRAFFIC MAINTENANCE: A plan detailing how the permittee intends to maintain and protect traffic shall be submitted with work plans. Traffic shall be maintained on the highway in a safe manner during working and non-working hours until construction is completed. The permittee is responsible for traffic protection and maintenance, including adequate use of signs, barriers, and flag persons during working and non-working hours until construction is completed. All sketches will be stamped with "MAINTENANCE OF TRAFFIC SHALL BE IN CONFORMANCE WITH THE NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

11. COST OF INSPECTION AND SUPERVISION: Prior to issuance of the Highway Work Permit, the permittee may be required to sign an INSPECTION PAYMENT AGREEMENT FOR HIGHWAY WORK PERMITS (FORM PERM 50) agreeing to the payment of construction inspection charges, based on the number of work days involved. In certain cases, the permittee may also be required to sign a PAYMENT AGREEMENT FOR HIGHWAY WORK PERMITS DESIGN REVIEW (FORM PERM 51) agreeing to design review charges, based on the number of work hours in which Department employees were engaged in design review activity.

12. SCOPE:

- **Areas Covered:** Permits issued are for highways, bridges and culverts over which the New York State Department of Transportation has jurisdiction. (Local governments issue permits for highways under their jurisdiction.) Work locations must be approved by the Department.
- **Maintenance:** Unless noted otherwise, applicant shall be fully responsible for the maintenance of all items installed and/or altered as shown on the approved permit plans and documents. Property owners having access to a state highway shall be fully responsible for the maintenance of their driveway in accordance with POLICY AND STANDARDS FOR ENTRANCES TO STATE HIGHWAYS.
- **Work Commencement:** The Permittee shall have a copy of the permit available at the site during the construction period. Work should start within 30 days from validation date of permit or said permit may be revoked.

13. REPORTING ACCIDENTS: Permittee is required to report any accidents that occur during the course of the permit work to their insurance company, and to provide the Department with a copy of any such report.

14. COMPLETION OF PROJECT: Upon completion of the work within the State highway right-of-way authorized by the work permit, the person and his or its successors in interest shall be responsible for the maintenance and repair of such work or portion of such work as set forth within the Terms and Conditions of the Highway Work Permit.

PERM 33 Submission Package Requirements

Submit three (3) copies of the final submission package: Submission package must include the entire PERM 33 with all work plans and supporting documents, including the following (check all that apply):

<input type="checkbox"/>	Stamped Final Plans – Submit in PDF file format on CD, with three (3) paper copies (1" = 50'), or as requested
<input checked="" type="checkbox"/>	ACORD 25 - Certificate of Insurance, with NYSDOT named as Additional Insured (See line 3 below).
<input checked="" type="checkbox"/>	ACORD 855 - New York Construction Certificate of Liability Insurance Addendum (See line 3 below).
<input type="checkbox"/>	PERM 1, 2, 6 or 16 - Undertaking Agreement, if applicable (See line 4 below).
<input type="checkbox"/>	PERM 36 - Attachment to Highway Work Permit – Consultant Inspection, if applicable
<input type="checkbox"/>	PERM 44 - Surety Bond – Performance bond in Applicant's name, or deposit (Bank cashier's check required)
<input type="checkbox"/>	PERM 50 – Inspection/Supervision Payment Agreement, if applicable
<input checked="" type="checkbox"/>	Proof of Worker's Compensation Insurance (Form C-105.2, U-26.3 or SI-12), or proof of exemption (Form CE-200)
<input checked="" type="checkbox"/>	Proof of Disability Benefits Coverage (Form DB-120.1 or DB-155), or proof of exemption (Form CE-200)
<input checked="" type="checkbox"/>	Permit Fee (Include \$25 Insurance Fee for residential operations)
<input type="checkbox"/>	Other (specify):

Insurance Requirements

- 1) In most cases, Permittee must provide proof of **Commercial General Liability** insurance coverage with limits of liability not less than **\$1,000,000** per claim/occurrence, unless any of the following circumstances exist, in which case the limits of liability shall not be less than **\$5,000,000** per claim/occurrence:
 - (a) The estimated value of permitted work in state right-of-way is \$250,000 or more (see line 6 below);
 - (b) The permitted work requires or includes the construction, alteration or maintenance of underground features at any depth five feet or more below grade;
 - (c) The permitted work requires or includes the construction, alteration or maintenance of overhead features that include, but are not limited to, traffic signals, overhead sign structures, retaining walls or other grade separation structures.
- 2) Exceptions to the above liability limits include: (a) Annual maintenance permits require limits of liability not less than \$5,000,000 per claim/occurrence; (b) Permits for vegetation control activities require limits of liability not less than \$1,000,000 per claim/occurrence; (c) Residential driveway permits require limits of liability not less than \$500,000 per claim/occurrence; and (d) Adopt-a-Highway permits are exempt.
- 3) **ACORD 25** with **ACORD 855** (New York Construction Addendum) shall be submitted as an acceptable proof of liability coverage. New York State Department of Transportation should be named as Additional Insured and as the Certificate Holder at the address of the issuing office.
- 4) Municipalities, public utilities, public authorities and railroads may elect to provide a fully executed Undertaking Agreement as a substitute for providing proof of insurance coverage, or any other financial security otherwise required.
- 5) Homeowners may pay a \$25 Insurance Fee in lieu of providing proof of insurance, however any contractor performing on behalf of a homeowner and who is named on the permit must provide proof of insurance as outlined above.
- 6) When the estimated cost of work being performed in the right-of-way equals or exceeds \$250,000, Permittee must additionally provide proof of a **Protective Liability (OCP)** insurance policy with a minimum liability limit of \$1,000,000 per occurrence, with New York State Department of Transportation as Named Insured.

Permittee agrees to maintain liability insurance in full force and effect throughout the term of the highway work permit. Expiration of, or lack of, liability insurance coverage automatically terminates the permit.

For more information on insurance requirements, go to: www.dot.ny.gov/permits-insurance

**STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION
HIGHWAY WORK PERMIT APPLICATION FOR NON-UTILITY WORK**

Application is hereby made for a highway work permit:

Name Carrier Corporation
Address Carrier Parkway, BDG TR-7, PO Box 4808
City Syracuse State NY Zip 13221
Applicant Phone (315) 432-6900
Applicant Email Address Nelson.Wong@carrier.utc.com
Emergency Contact Nelson Wong
Emergency Phone (315) 432-6900

For Joint application, name and address of Applicant 2 below:

Name AECOM
Address 257 West Genesee Street, Suite 400
City Buffalo State NY Zip 14202
Applicant 2 Phone (716) 923-1165
Applicant 2 Email Address robert.e.murphy@aecom.com

RETURN PERMIT TO: (if different from Permittee)

Name Robert E. Murphy - AECOM
Address 257 West Genesee Street, Suite 400
City Buffalo State NY Zip 14202

RETURN DEPOSIT/BOND TO: (if different from Permittee)

Name N/A
Address _____
City _____ State _____ Zip _____

DESCRIPTION OF PROPOSED WORK:

Temporary gravel access road construction for work associated with planned Sanders Creek
remediation. One tree will need to be removed. The temporary road will be removed during a future
phase of the project, at the completion of which, the area will be restored. See attached cover letter.

Estimated cost of work being performed in highway right-of-way: \$ \$10,000

Anticipated duration of work: From 11/16 to 5/17 (applies to the operations indicated on the reverse side)

WILL OVERHEAD OR UNDERGROUND (5'+) OPERATIONS BE INVOLVED IN THE PROPOSED WORK? YES ☒ NO ☐

ATTACHED: Plans ☒ Specifications ☐

LOCATION: State Route: 298 Located Between Reference Markers 298/3301/2019 and 298/3301/2031

City/Town/Village of Syracuse County of Onondaga

SEQR REVIEW (select one)

☒ Type II ☐ Type I ☐ Unlisted LEAD AGENCY: _____ DATE OF DETERMINATION: _____

Insurance (check one): ☒ General Liability Insurance ☐ Undertaking ☐ Insurance Fee (residential operations only)

NOTE: PERMIT IS ISSUED CONTINGENT UPON ALL LOCAL REQUIREMENTS BEING SATISFIED

ACKNOWLEDGMENT: ON BEHALF OF THE APPLICANT, I HEREBY REQUEST A HIGHWAY WORK PERMIT, AND DO ACKNOWLEDGE AND AGREE TO THE RESPONSIBILITIES OF PERMITTEE AND THE OTHER OBLIGATIONS SET FORTH IN THIS PERMIT AND WARRANT COMPLIANCE THEREWITH.

Applicant Signature Nelson Wong

Date 11/10/16

Applicant 2 Signature Robert E. Murphy

Date 11/10/16

Approval recommended by Resident Engineer _____

Res No _____ Date _____

Approved by Regional Traffic Engineer _____

Reg No _____ Date _____

Operational Type and Description			Permit Fee	Insurance Fee	Total Fees
					\$ 200.00
DRIVEWAYS					
<input type="checkbox"/>	5a1	Residential Driveway (includes field entrances)	15	25	
<input checked="" type="checkbox"/>	5a6	Temporary access road or street	200		200
For Commercial Driveways and subdivisions streets, use form PERM 33-COM					
IMPROVEMENTS					
<input type="checkbox"/>	5b1	Residential	15	25	
<input type="checkbox"/>	5b2a	Commercial- Sidewalk, curb paving, drainage, etc.	200		
<input type="checkbox"/>	5b2b	Commercial – Grade, seed, improve land contour, clear brush	100		
<input type="checkbox"/>	5b2c	Commercial – Resurface existing road or driveway	50		
<input type="checkbox"/>	5b2d1	Annual resurfacing of roadways and driveways – PER COUNTY	150		
		Number of counties:			
<input type="checkbox"/>	5b2d2	Annual resurfacing of roadways and driveways – PER REGION	400		
TREE WORK					
<input type="checkbox"/>	5c1	Residential	15	25	
<input type="checkbox"/>	5c2a	Commercial removal or planting	25		
<input type="checkbox"/>	5c2b	Commercial pruning, applying chemicals to stumps	25		
<input type="checkbox"/>	5c3	Vegetation control for advertising signs – PER SIGN	150		
		Number of Signs:			
MISCELLANEOUS CONSTRUCTION AND WORK OPERATIONS					
<input type="checkbox"/>	5d1	Beautify ROW (civic groups only)	N/C		
<input type="checkbox"/>	5d2a	Temporary signs, banners, décor (not-for-profit organizations)	N/C		
<input type="checkbox"/>	5d2b	Temporary signs, banners, décor (other organizations)	25		
<input type="checkbox"/>	5d3	Traffic control signals	500		
<input type="checkbox"/>	5d4	Warning and entrance signs	25		
<input type="checkbox"/>	5d5	Miscellaneous – Requiring substantial review (describe below)	400		
<input type="checkbox"/>	5d6	Miscellaneous (describe below)	25		
OTHER TYPES OF HIGHWAY WORK PERMITS					
<input type="checkbox"/>	6	Encroachment caused by DOT acquisition of property	25		
<input type="checkbox"/>	7a1	Compulsory permit required for demolition requested by DOT	N/C		
<input type="checkbox"/>	7a2	Compulsory permit required for moving requested by DOT	N/C		
<input type="checkbox"/>	7b	Improvement to meet Department standards	N/C		
<input type="checkbox"/>	8	Miscellaneous (describe below)	25		
<input type="checkbox"/>	9	Adopt-a-Highway (exempt from insurance requirement)	N/C		
Description of Miscellaneous Operation:					

PERFORMANCE SECURITY (Select one): Guarantee Deposit - Cash ☐ Performance Bond ☐ Letter of Credit ☐

Guarantee Deposit Amount: _____

Guarantee Deposit Check Number or Bond Number _____

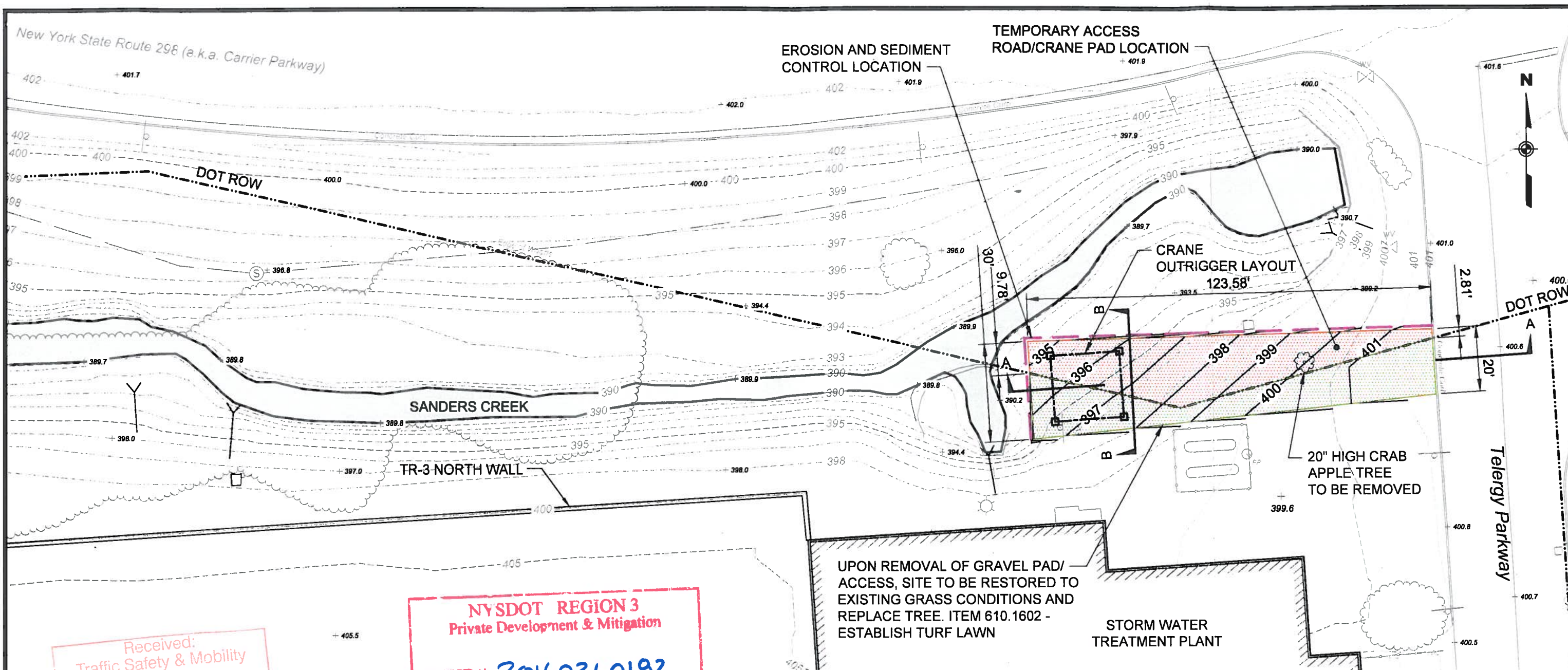
(To be completed by NYSDOT issuing office)

Project Identification Number _____

Highway Work Permit No. _____

State Highway (SH) Number _____

Record ID Number _____



UPON REMOVAL OF GRAVEL PAD/
ACCESS, SITE TO BE RESTORED TO
EXISTING GRASS CONDITIONS AND
REPLACE TREE. ITEM 610.1602 -
ESTABLISH TURF LAWN

STORM WATER
TREATMENT PLANT

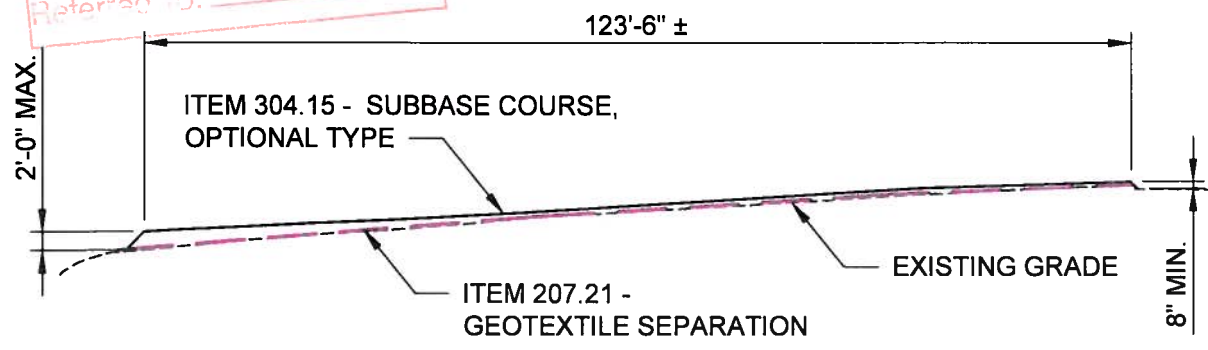
Telergy Parkway

Received:
Traffic Safety & Mobility
NOV 15 2016
Referred To:

NYS DOT REGION 3
Private Development & Mitigation
HWP# 20160360182
AMENDMENT #

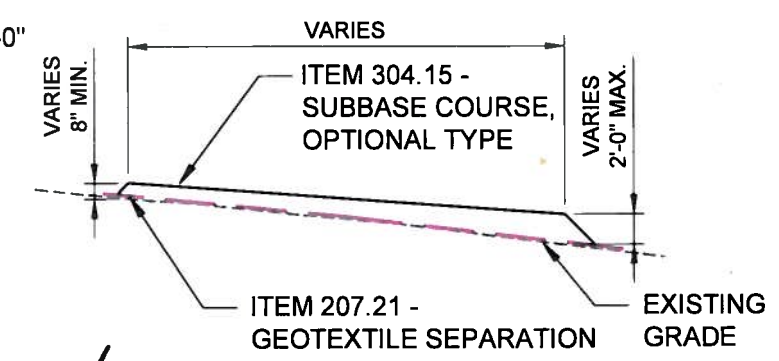
PLAN

SCALE: 1" = 30'-0"



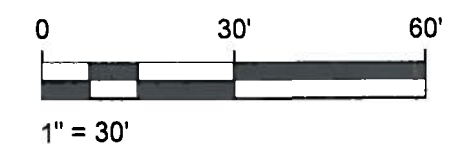
SECTION A-A

N.T.S.



SECTION B-B

N.T.S.



LEGEND:

- EROSION AND SEDIMENT CONTROL LOCATION
- STONE ACCESS ROAD (CARRIER PROPERTY)
- STONE ACCESS ROAD (NYS DOT PROPERTY)

TR-3 NORTH WALL
SHEET PILE INSTALLATION
CONSTRUCTION STAGING LAYOUT

AECOM

FIGURE 1



UTC/CARRIER
DOT PERM 33 REQUEST



Photograph 1 – View east. Crab apple tree in area of proposed temporary access road.



Photograph 2 – Close-up view of crab apple tree.

UNITED TECHNOLOGIES CORPORATION
TEMPORARY ACCESS ROAD CONSTRUCTION AND RESTORATION
TR-3 North Wall, Syracuse, NY
ENGINEER's ESTIMATE

Payment Item	Description	DOT Pay Item #	Quantity	Unit	Average Unit Cost	Total Cost
1	Tree Removal - 18 to 24 inch diameter, stump grubbed	614.060404	1	EA	\$725.01	\$725.01
2	Geotextile	207.21	200	SY	\$1.19	\$238.00
3	Subbase Course	304.15	92	CY	\$34.16	\$3,142.72
4	Grading	304.00010018	1780	SF	\$0.55	\$979.00
5	Excavation and Disposal	203.02	92	CY	\$15.58	\$1,433.36
6	Establish TurfLawn	310.1602	1780	SY	\$1.48	\$2,634.40
TOTAL BID AMOUNT						\$9,152.49

NOTE:

1. Quantities are based on the Stone Access Road area within NYSDOT property on Figure 1
2. Unit costs are average costs from bids approved on the NYSDOT Pay Item Catalog from the past year



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
03/16/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Marsh Risk & Insurance Services CA License #0437153 777 South Figueroa Street Los Angeles, CA 90017 Attn: LosAngeles.CertRequest@Marsh.Com 06510-*ECOM--16-17 Buffal GL 04 2019				CONTACT NAME: PHONE (A/C, No. Ext): E-MAIL ADDRESS:		FAX (A/C, No):
INSURED AECOM AECOM USA, Inc. 257 West Genesee Street, Suite 400 Buffalo, NY 14202				INSURER(S) AFFORDING COVERAGE		NAIC #
				INSURER A: Zurich American Insurance Company		16535
				INSURER B: N/A		N/A
				INSURER C: N/A		N/A
				INSURER D:		
				INSURER E:		
				INSURER F:		

COVERAGES

CERTIFICATE NUMBER:

LOS-001990248-02

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:			GLO 5965891 08	04/01/2016	04/01/2017	EACH OCCURRENCE \$ 5,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 5,000,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 5,000,000 GENERAL AGGREGATE \$ 5,000,000 PRODUCTS - COMP/OP AGG \$ 5,000,000
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	N/A				PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: AECOM Project No. 04103369.

New York State Department of Transportation is named as additional insured for GL coverage, but only as respects work performed by or on behalf of the named insured.

CERTIFICATE HOLDER

CANCELLATION

New York State Department of Transportation Region 3 Highway Works Permits 333 E. Washington Street Syracuse, NY 13202	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE of Marsh Risk & Insurance Services James L. Vogel
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NEW YORK CONSTRUCTION CERTIFICATE OF LIABILITY INSURANCE ADDENDUM

 DATE (MM/DD/YYYY)
10/13/2016

THIS ADDENDUM SUMMARIZES SOME OF THE POLICY PROVISIONS IN THE REFERENCED INSURANCE POLICIES AND IS ISSUED AS A MATTER OF INFORMATION ONLY; IT CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. ALL TERMS, EXCLUSIONS AND CONDITIONS IN THE ACTUAL POLICY SHOULD BE CONSULTED FOR A MORE DETAILED ANALYSIS OF COVERAGE, AS THIS ADDENDUM DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES.

AGENCY Marsh Risk & Insurance Services		NAMED INSURED(S) AECOM, AECOM USA, Inc.	
POLICY NUMBER GLO 5965891 08	EFFECTIVE DATE 04/01/2016	CARRIER Zurich American Insurance Company	NAIC CODE 16535

ADDENDUM INFORMATION CERTIFICATE NUMBER: LOS-001990248-04 REVISION NUMBER:

A. Insurer

- ☒ Admitted / authorized
- ☐ Excess line or free trade zone

B. General Liability (GL) policy form

- ☒ ISO / ISO modified
- ☐ Other

C. Specific operations excluded or restricted (GL policy)

- ☐ Location: _____
- ☐ Type of construction: _____
- ☐ Building height: _____
- ☐ Classifications [see attached declarations / endorsement]
- ☐ Designated work [see attached endorsement]

D. Additional insured endorsement (GL policy)

- ☐ CG 20 10 ☒ CG 20 26 ☐ CG 20 32 ☐ CG 20 33 ☐ CG 20 37 ☐ CG 20 38
- ☐ Other: # _____ Title: _____

E. According to the terms of this GL policy, the additional insured has primary and noncontributory coverage

- ☒ Yes ☐ No and ☐ no other option is available with this insurer

F. Additional insured will receive advance notice if insurer cancels (GL policy)

- ☐ Yes ☒ No and ☐ no other option is available with this insurer

G. Blanket contractual liability located in the "insured contract" definition (Section V, Number 9, Item f. in the ISO CGL policy) is removed or restricted

- ☐ Yes and ☐ no other option is available with this insurer ☒ No changes made

H. "Insured contract" exception to the employers liability exclusion is removed or modified (GL policy)

- ☐ Yes and ☐ no other option is available with this insurer ☒ No changes made

I. GL policy (including endorsements) does not cover the additional insured for claims involving injury to employees of the named insured or subcontractors (not workers' compensation)

- ☐ Yes and ☐ no other option is available with this insurer ☒ No changes made

J. Earth movement, excavation or explosion / collapse / underground property damage is excluded or restricted (GL policy)

☐ Yes and ☐ no other option is available with this insurer ☒ No changes made

K. Insured vs. insured suits (cross liability in the ISO CGL policy) are excluded or restricted (other than named insured vs. named insured)

☐ Yes and ☐ no other option is available with this insurer ☒ No changes made

L. Property damage to work performed by subcontractors (exception to the "damage to your work" exclusion in the ISO CGL policy) is excluded or restricted

☐ Yes and ☐ no other option is available with this insurer ☒ No changes made

M. Excess / umbrella policy is primary and non-contributory for additional insureds

☐ Yes, by specific policy provision ☒ Yes, by endorsement ☐ No and ☐ no other option is available with this insurer

U/A

Laura Malhara

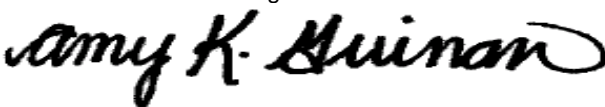
AUTHORIZED REPRESENTATIVE SIGNATURE

10/14/16

DATE (MM/DD/YYYY)

STATE OF NEW YORK
WORKERS' COMPENSATION BOARD

CERTIFICATE OF INSURANCE COVERAGE UNDER THE NYS DISABILITY BENEFITS LAW

PART 1. To be completed by Disability Benefits Carrier or Licensed Insurance Agent of that Carrier	
1a. Legal Name and Address of Insured (Use street address only) AECOM USA Inc 100 Park Ave New York, New York 10017 Legal Name and Address of Division/Location requesting certification: AECOM USA Inc 257 West Genesee Street Buffalo, New York 14202	1b. Business Telephone Number of Insured 1c. NYS Unemployment Insurance Employer Registration Number of Insured 1d. Federal Employer Identification Number of Insured or Social Security Number 13-5511947
2. Name and Address of the Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder) New York State Department of Transportation-Region 3 Highway Works Permits 333 E. Washington Street Syracuse, New York 13202	3a. Name of Insurance Carrier CIGNA LIFE INSURANCE COMPANY OF NEW YORK 3b. Policy Number of entity listed in box "1a": NYD075345 3c. Policy effective period: 01/01/2016 to 01/01/2017
4. Policy covers: <input checked="" type="checkbox"/> a. All of the employer's employees eligible under the New York Disability Benefits Law <input type="checkbox"/> b. Only the following class or classes of the employer's employees: <p>Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has NYS Disability Benefits insurance coverage as described above.</p> <div style="text-align: center; margin: 10px 0;"></div> <p>Date Signed January 25, 2016 By _____</p> <p style="text-align: center; font-size: small;">(Signature of insurance carrier's authorized representative or NYS Licensed Insurance Agent of that insurance carrier)</p> <p>Telephone Number <u>1.866-761-4236</u> Title <u>Underwriting Director</u></p> <p>IMPORTANT: If box "4a" is checked, and this form is signed by the insurance carrier's authorized representative or NYS Licensed Insurance Agent of that carrier, this certificate is COMPLETE. Mail it directly to the certificate holder. If box "4b" is checked, this certificate is NOT COMPLETE for purposes of Section 220, Subd. 8 of the Disability Benefits Law. It must be mailed for completion to the Workers' Compensation Board, DB Plans Acceptance Unit, 328 State Street, Schenectady, New York 12305.</p>	
PART 2. To be completed by NYS Workers' Compensation Board (Only if box "4b" of Part 1 has been checked)	
State Of New York Workers' Compensation Board	
According to information maintained by the NYS Workers' Compensation Board, the above-named employer has complied with the NYS Disability Benefits Law with respect to all of his/her employees.	
Date Signed _____ By _____ (Signature of NYS Workers' Compensation Board Employee)	
Telephone Number _____ Title _____	

Please Note: Only insurance carriers licensed to write NYS disability benefits insurance policies and NYS licensed insurance agents of those insurance carriers are authorized to issue Form DB-120.1. Insurance brokers are NOT authorized to issue this form.

Additional Instructions for Form DB-120.1

By signing this form, the insurance carrier identified in box "3" on this form is certifying that it is insuring the business referenced in box "1a" for disability benefits under the New York State Disability Benefits Law. The Insurance Carrier or its licensed agent will send this Certificate of Insurance to the entity listed as the certificate holder in box "2". ***This Certificate is valid for the earlier of one year after this form is approved by the insurance carrier or its licensed agent, or the policy expiration date listed in box "3c".***

Please Note: Upon the cancellation of the disability benefits policy indicated on this form, if the business continues to be named on a permit, license or contract issued by a certificate holder, the business must provide that certificate holder with a new Certificate of NYS Disability Benefits Coverage or other authorized proof that the business is complying with the mandatory coverage requirements of the New York State Disability Benefits Law.

DISABILITY BENEFITS LAW

§220. Subd. 8

(a) The head of a state or municipal department, board, commission or office authorized or required by law to issue any permit for or in connection with any work involving the employment of employees in employment as defined in this article, and notwithstanding any general or special statute requiring or authorizing the issue of such permits, shall not issue such permit unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that the payment of disability benefits for all employees has been secured as provided by this article. Nothing herein, however, shall be construed as creating any liability on the part of such state or municipal department, board, commission or office to pay any disability benefits to any such employee if so employed.

(b) The head of a state or municipal department, board, commission or office authorized or required by law to enter into any contract for or in connection with any work involving the employment of employees in employment as defined in this article, and notwithstanding any general or special statute requiring or authorizing any such contract, shall not enter into any such contract unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that the payment of disability benefits for all employees has been secured as provided by this article.

STATE OF NEW YORK
WORKERS' COMPENSATION BOARD

CERTIFICATE OF NYS WORKERS' COMPENSATION INSURANCE COVERAGE

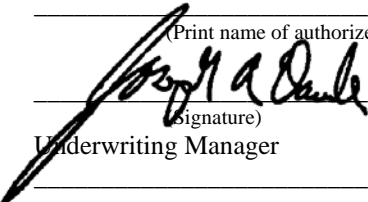
1a. Legal Name & Address of Insured (Use street address only) AECOM USA 257 W. Genesee St., Suite 400 Buffalo, NY 14202 Work Location of Insured (Only required if coverage is specifically limited to certain locations in New York State, i.e., a Wrap-Up Policy) AECOM Project Number: 04103369	1b. Business Telephone Number of Insured (718) 856-5636 1c. NYS Unemployment Insurance Employer Registration Number of Insured 45-943619 1d. Federal Employer Identification Number of Insured or Social Security Number 94-1716908
2. Name and Address of the Entity Requesting Proof of Coverage (Entity Being Listed as the Certificate Holder) New York State Department of Transportation-Region3 Highway Works Permits 333 E. Washington Street Syracuse, NY 13202	3a. Name of Insurance Carrier Insurance Company of the State of Pennsylvania 3b. Policy Number of entity listed in box "1a" WC 014268026 and WC 014268028 3c. Policy effective period 01/01/2016 to 01/01/2017 3d. The Proprietor, Partners or Executive Officers are <input checked="" type="checkbox"/> included. (Only check box if all partners/officers included) <input type="checkbox"/> all excluded or certain partners/officers excluded.

This certifies that the insurance carrier indicated above in box "3" insures the business referenced above in box "1a" for workers' compensation under the New York State Workers' Compensation Law. **(To use this form, New York (NY) must be listed under Item 3A on the INFORMATION PAGE of the workers' compensation insurance policy).** The Insurance Carrier or its licensed agent will send this Certificate of Insurance to the entity listed above as the certificate holder in box "2".

The Insurance Carrier will also notify the above certificate holder within 10 days IF a policy is canceled due to nonpayment of premiums or within 30 days IF there are reasons other than nonpayment of premiums that cancel the policy or eliminate the insured from the coverage indicated on this Certificate. (These notices may be sent by regular mail.) Otherwise, this Certificate is valid for one year after this form is approved by the insurance carrier or its licensed agent, or until the policy expiration date listed in box "3c", whichever is earlier.

Please Note: Upon the cancellation of the workers' compensation policy indicated on this form, if the business continues to be named on a permit, license or contract issued by a certificate holder, the business must provide that certificate holder with a new Certificate of Workers' Compensation Coverage or other authorized proof that the business is complying with the mandatory coverage requirements of the New York State Workers' Compensation Law.

Under penalty of perjury, I certify that I am an authorized representative or licensed agent of the insurance carrier referenced above and that the named insured has the coverage as depicted on this form.

Approved by: Joseph A. Davide
(Print name of authorized representative or licensed agent of insurance carrier)
01/27/2016
Approved by:  (Signature)
(Date)
Underwriting Manager
Title: 212-458-3628

Telephone Number of authorized representative or licensed agent of insurance carrier: _____

Please Note: Only insurance carriers and their licensed agents are authorized to issue Form C-105.2. Insurance brokers are NOT authorized to issue it.

Workers' Compensation Law

Section 57. Restriction on issue of permits and the entering into contracts unless compensation is secured.

1. The head of a state or municipal department, board, commission or office authorized or required by law to issue any permit for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, and notwithstanding any general or special statute requiring or authorizing the issue of such permits, shall not issue such permit unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter. Nothing herein, however, shall be construed as creating any liability on the part of such state or municipal department, board, commission or office to pay any compensation to any such employee if so employed.

2. The head of a state or municipal department, board, commission or office authorized or required by law to enter into any contract for or in connection with any work involving the employment of employees in a hazardous employment defined by this chapter, notwithstanding any general or special statute requiring or authorizing any such contract, shall not enter into any such contract unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that compensation for all employees has been secured as provided by this chapter.

