

AC	ACOUSTIC CEILING	F.E.C.	FIRE EXTINGUISHER	P.T. PTD.	PAINTED
ACT	AC		CABINET	P.R.V.	POWER ROOF VENTILATOR
AL	ALUMINUM	F.I.N.F.F.F.	FINISHED FLOOR	P.R.	POOR DRAIN
ALU	ALUMINUM	F.O.S.	FACE OF STUD	REC	RECESSED
AP	ACCESS PANEL	FRP	FIREGLASS	RECEPT.	RECEPTIONIST
A.R.	ARISE RESISTANT		RESISTANT PLASTIC	RECYCLED	RECYCLED
A.F.F.	AWB	F.R.T.	FIRE RETARDANT	REQD.	REQUIRED
	ABOVE FLOOR		FIRE TREATED	R.L.	RAIN LEADER
				R.M.	ROOM
BD.	BOARD	FTG.	FOOTING	R.O.	ROUGH OPENING
BDG.	BUILDING	F.V.	FIRE VERIFIY	RUB.	RUBBER (WALL BASE)
B.M.	BENCH MARK	F.V.	FIRE FLYVE CABINET	S.D.	SOAP DISPENSER
BRG.	BEARING	GA	GRAB BAR	S.E.C.T.	SECTION
CAB.	CABINET	G.B.	GAUGE BOARD	S.G.F.	STRUCT GLAZED
C.B.	CHALKBOARD	G.W.B.	GYP.S.W. BOARD		FACING T.
C.T.	CERAMIC TILE	GYP. BD.	GYP.SUM BOARD	S.H.	SHOWER HEAD
C.H.	CHEST	H.T.	HEIGHT	S.H.	SHEET
C.J.	CONTROL	H.C.	HAND APPEND	S.M.	SHIM
C.C.	CENTER LINE	HDW.	HARDWARE	S.M.	SURFACE MOUNTED
C.L.	CLOSING	H.M.	HOLLOW METAL	S.S.	STAND OFF
CLC.	CLOCK	HR.	HOUR	S.P.	SERVICE SINK
CLCR	CLEAR	H.P.	HIGH POINT	S.S.	STONE
C.M.U.	CONCRETE	INSUL.	INSULATION	STOR.	STORAGE
COL.	COLUMN	J. JAN.	JANITOR	STRUCT.	STRUCTURAL
CONC.	CONCRETE	JOIST	JOIST	SUSPENDED	SUSPENDED
CONST.	CONSTRUCTION	JOINT	JOINT	SYN.FL.	SYNTHETIC FLOOR
CONT.	CONTINUOUS	LAMINATE	LAMINATE	T.B.	TACKBOARD
CONC.	CONCRETE	LOW	LOW	TELEPH.	TELEPHONE
CORR.	CORRUGATED	L.P.	LAVATORY SINK	T.G.	TONGUE AND GROOVE
CPT.	CARPET	M.	MEN	THRESH.	THRESHOLD
C.R.	COLD ROLLED	M.	MEN	THRESH.	THRESHOLD
C.D.A.	CORRIDOR AREA	T.GACHING	T.GACHING	T.O.M.	TOP OF MASONRY PARAPET
DET.	DETAIL	MAINT.	MAINTENANCE	T.O.M.	TOP OF MASONRY PARAPET
D.F.	DRINKING FOUNTAIN	MAS.	MASONRY	T.P.	TOILET PAPER HOLDER
D.B.	DOUBLE	DBT.	DOUBLE	T.S.	TACK STRIP
DIA.	DIAMETER	MAX.	MAXIMUM	T.S.	TEACHING STATION
DM.	DIMENSION	MB. M.B.	MARKER BOARD	T.W.	TEACHING WALL
DISPENSER	DISPENSER	M.C.	MEDICAL CABINET	U.	UNIT
DOOR	DOOR	MECH.	MECHANICAL	U.W.	UNDERWRITERS
DRY	DRYWALL	MET. MTL.	METAL	U.S.G.	LABORATORIES
DS.	DOWNSPOUT	MET.	METAL	U.S.G.	UNLESS OTHERWISE NOT
DWG.	DRAWING	MIN.	MINIMUM	U.S.G.	U.S. GYPSUM COMPANY
E.	EACH	M.O.	MASONRY OPENING	V.A.T.	VINYL ASBESTOS TILE
E.C.	EXPANSION JOINT	M.TD	MOUNTED	V.E.T.	VINYL COMPOSITION TILE
ELEC.	ELECTRIC(AL)	M.TD	MOUNTED	V.E.T.	VINYL ASBESTOS TILE
EQ	EPOXY PAINT	NC.	NON COMBUSTIBLE	V.E.T.	VENTILATOR
EQ	EQUIPMENT	NO. #.	NUMBER	V.E.T.	VINYL REDUCER STRIP
E.W.C.	ELECTRIC WATER	N.T.S.	NOT TO SCALE	V.V.	VENT THROUGH FLOOR
		N.G.	NOT TO SCALE	W.	WOMEN
		O.D.	OUTSIDE DIAMETER	W.	WITIN
EXISTING	EXISTING	O.D.	OUTSIDE DIAMETER	WAIN.	WAINSCOT
EXP.	EXPANSION	OFF.	OFFICE	WARD.	WARD
EXT.	EXTERIOR	OP.	OPENING HAND	WARD.	WATER ROSET
F.	FIRE CODE	OPNG.	OPENING	WARD.	WOOD
F.C.U.	FAN COIL	PART.	PARTITION	WARD.	WARDROBE
F.D.	FLOOR DRAIN	PL.	PLANT	WAL.	WALL
FOUN.	FOUNDATION	PLAM, P-LAM	PLASTIC LAMINATE	W.M.	WALL-MOUNTED
FIRE	FIRE EXTINGUISHER	PLY, PWD	PLYWOOD	W.W.W.	WELDED WIRE MESH
		PS, P.S.	PROJECTOR SCREEN		

	ALL METALS-SMALL SCALE		GLAZED C.M.U.
	ACOUSTIC C.M.U. SMALL SCALE		PARTICLE BOARD
	ACOUSTIC C.M.U. LARGE SCALE		RIGID INSULATION
	BATT INSULATION		SHINGLES
	BRICK		SOLID CONCRETE MASONRY UNITS
	CAST STONE		STEEL-LARGE SCALE
	CONCRETE		STUD PARTITION
	CONCRETE MASONRY UNITS		WOOD-FINISH
	EARTH		WOOD BLOCKING
	GLASS-LARGE SCALE		

Figure 1 illustrates various symbols used in architectural drawings:

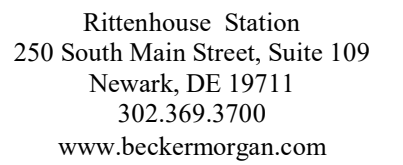
- STRUCTURAL GRID LINES:** A circle containing the number 0.
- ELEVATION:** A triangle with a circle containing the number 1 and the text A101 below it, labeled SIM.
- DETAILS IN PLAN, SECTION:** A circle with a circle inside it, containing the number 1 and the text A101 below it, labeled SIM.
- WALL TYPE, SEE A501:** A dashed line.
- ROOM NAME AND NUMBER:** A rectangle containing the text 101.
- WINDOW TAG:** A circle containing the text 11.
- DOOR TAG:** A circle containing the text 101.
- NEW WALL:** A solid line with a cross-hatch pattern.
- EXISTING WALL TO REMAIN:** A solid grey rectangle.
- EXISTING WALL TO BE REMOVED:** A dashed line.

An architectural rendering of a proposed building design. The main structure is a large, modern building with a prominent gabled roof and a large glass facade. It is situated within a fenced area, with a paved walkway leading to the entrance. The rendering shows the building's footprint and its relationship to the surrounding site.

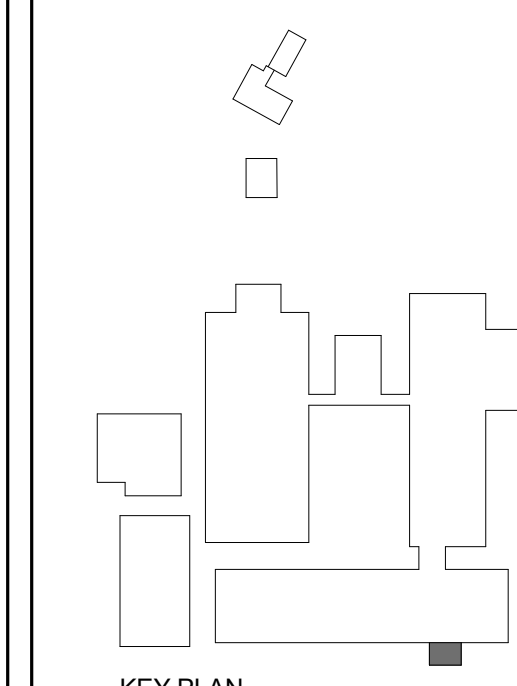
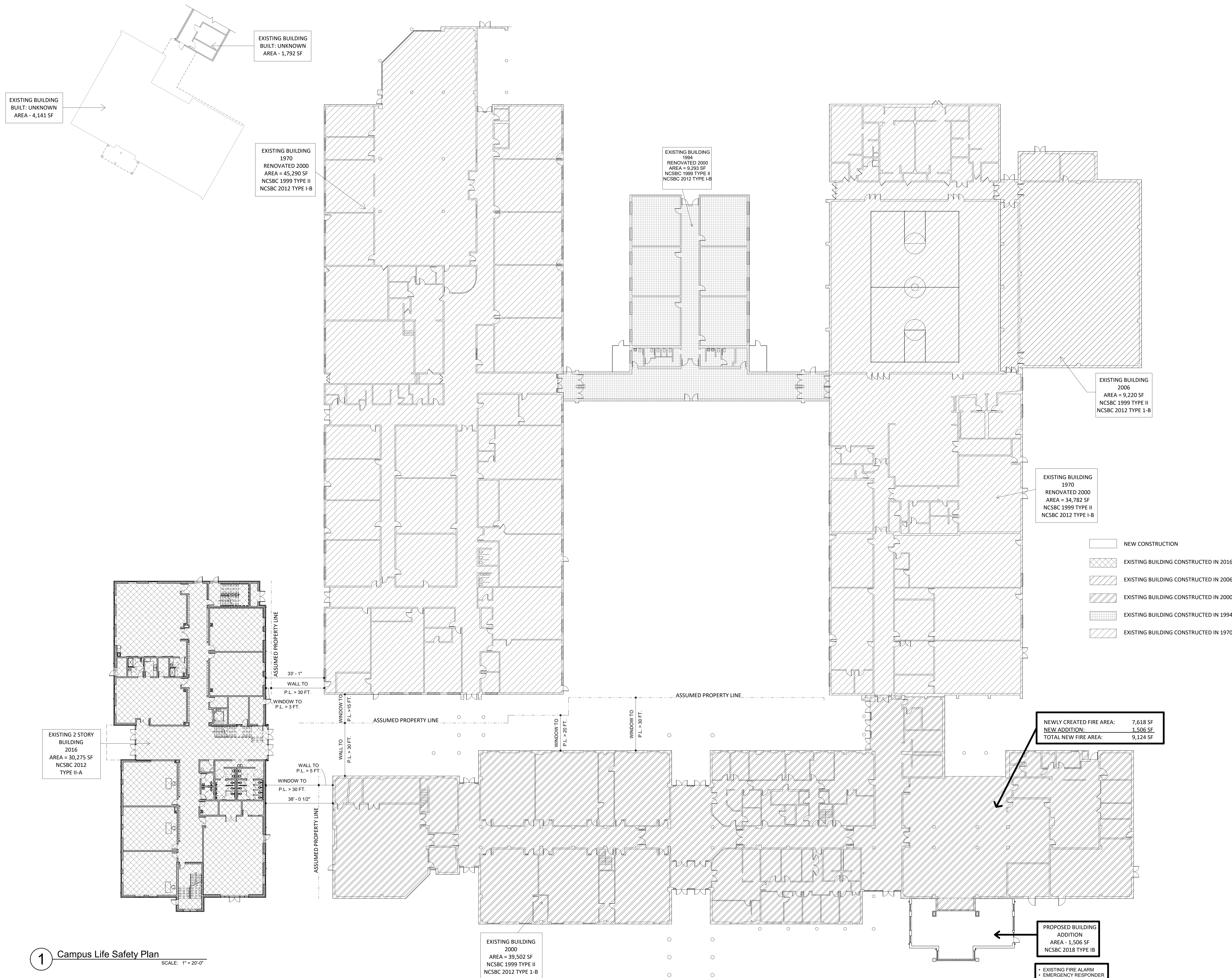
04.23.2020

ARCHITECTS
STRUCTURAL ENGINEERS
MECHANICAL, PLUMBING AND
ELECTRICAL ENGINEERS
CIVIL ENGINEERS
CONSTRUCTION MANAGERS

GENERAL	GENERAL
G001	COVER SHEET
G101	CAFETERIA ADDITION CODE SUMMARY
G200	CAMPUS LIFE SAFETY PLAN AND LIFE SAFETY SYSTEMS
G201	CAFETERIA ADDITION LIFE SAFETY PLAN
G301	ComCheck FORMS
G401	UL DETAILS
CIVIL	
C-0.1	COVER SHEET
C-1.0	GENERAL NOTES
C-1.1	GENERAL NOTES
C-2.0	DEMOLITION PLAN
C-2.1	DEMOLITION PLAN
C-2.2	DEMOLITION PLAN
C-2.3	DEMOLITION PLAN
C-2.4	SITE PLAN
C-2.5	SITE PLAN
C-2.6	SITE PLAN
C-2.7	SITE PLAN
C-2.8	SITE PLAN
C-3.0	GRADING - DRAINAGE - EC PLANS
C-3.1	GRADING - DRAINAGE - EC PLANS
C-3.2	GRADING - DRAINAGE - EC PLANS
C-3.3	GRADING - DRAINAGE - EC PLANS
C-4.0	UTILITY PLAN
C-4.1	UTILITY PLAN
C-5.0	DETAILS
C-5.1	DETAILS
C-5.2	DETAILS
C-5.3	DETAILS
LANDSCAPE	
L-1.0	LANDSCAPE PLAN
L-1.1	LANDSCAPE PLAN
L-1.2	LANDSCAPE PLAN
STRUCTURAL	
S101	GENERAL NOTES
S102	TYPICAL DETAILS
S201	FOUNDATION AND FRAMING PLAN
S301	FOUNDATION AND FRAMING SECTIONS AND DETAILS
ARCHITECTURAL	
A0101	DEMOLITION PLANS AND DETAILS
A101	CAFETERIA ADDITION FLOOR PLAN AND REFLECTED CEILING PLAN
A102	ROOF PLAN
A103	EXTERIOR ELEVATIONS
A301	CAFETERIA ADDITION BUILDING SECTIONS
A302	CAFETERIA ADDITION WALL SECTIONS AND DETAILS
A401	SCHEDULES AND DETAILS
A402	DOOR AND WINDOW DETAILS
A601	FINISH PLAN AND DETAILS
A501	PLAN AND SECTION DETAILS
A510	SECTION DETAILS
MECHANICAL	
M001	MECHANICAL ABBREVIATIONS, LEGEND, ENERGY AND MECHANICAL SUMMARY
MD101	CAFETERIA FLOOR PLANS - DEMOLITION
M101	CAFETERIA ADDITION FLOOR PLAN - ENLARGED PLANS & SECTION - HVAC
M501	HVAC DETAILS
M502	HVAC DETAILS
M601	MECHANICAL SCHEDULES
ELECTRICAL	
E001	ELECTRICAL SYMBOLS AND ABBREVIATIONS
ED101	LEVEL 1 OVERALL ELECTRICAL DEMOLITION PLAN
E101	CAFETERIA ADDITION FLOOR PLAN - POWER AND HVAC POWER
E201	CAFETERIA ADDITION PLAN - LIGHTING
E501	ELECTRICAL DETAILS
FIRE PROTECTION	
F101	CAFETERIA ADDITION FLOOR PLAN - FIRE ALARM LEGEND, NOTES AND RISER



G001



ISSUE BLOCK		
Mark	Date	Description
04.23.20	04.23.20	ISSUED FOR BIDDING
03.28.20	03.28.20	100% REVIEW SUBMISSION
10.14.19	10.14.19	NCDPI DO SUBMISSION
7.30.19	7.30.19	SD PROGRESS DRAWINGS
7.11.19	7.11.19	NCDPI SD SUBMISSION
PROJECT NO: 2019082.02		
DATE: 04.23.2020		
SCALE: 1" = 20'-0"		
DRAWN BY: LJR PROJ MGR: RMC		
G200		
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**BECKER
MORGAN**
GROUP

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PLANNING

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3333 Jocklee Drive, Suite 120
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312 West Main St, Suite 300
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Dover, DE 19904
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250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700

www.beckermorgan.com

DSP #: 100
DPI SCHOOL #: 1165

A schematic key plan of the site. It shows a large central rectangular area with several smaller rectangular areas attached to its sides. A north arrow is located at the top center. Numbered locations are marked as follows: 1 is at the top left; 2 is at the top right; 3 is at the bottom left; 4 is at the bottom right; 5 is at the top center; 6 is at the top right; 7 is at the bottom right; 8 is at the bottom center; 9 is at the bottom left; and 10 is at the bottom center.

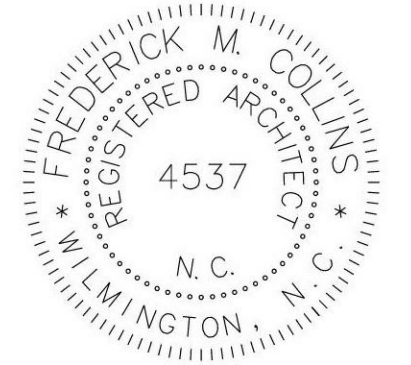
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312 West Main St, Suite 300
Salisbury, MD 21801
410.546.9100

Delaware
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Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700
www.beckermorgan.com



PROJECT TITLE

NORTH
BRUNSWICK
HIGH SCHOOL
CAFETERIA
ADDITION

114 SCORPION DRIVE N.E.
LELAND, NC 28451

DSP #: 100
DPI SCHOOL #: 1165

SHEET TITLE

ComCheck FORMS

ISSUE BLOCK		
Mark	Date	Description
	04/23/20	ISSUED FOR BIDDING
	03/26/20	100% REVIEW SUBMISSION
	10/14/19	NCDPI DD SUBMISSION
	7/30/19	SD PROGRESS DRAWINGS
	7/11/19	NCDPI SD SUBMISSION

PROJECT NO:	2019082.02
DATE:	04.23.2020
SCALE:	
DRAWN BY	Author
PROJ MG	Checker

G301

COPYRIGHT © 2000



Envelope Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	North Brunswick High School - Cafeteria Addition
Location:	Wilmington, North Carolina
Climate Zone:	3a
Project Type:	New Construction
Vertical Glazing / Wall Area:	36%

Construction Site: _____ Owner/Agent: _____ Designer/Contractor: _____

Additional Efficiency Package(s)

High efficiency HVAC. Systems that do not meet the performance requirement will be identified in the mechanical requirements checklist report.

Building Area	Floor Area
1-Cafeteria Addition (School/University) : Nonresidential	1506

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor ₀
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Cafeteria Addition] (c)	190	—	—	0.730	0.730
Roof: Insulation Entirely Above Deck, High Albedo Roof Exemption = Steep Sloped Roof, [Bldg. Use 1 - Cafeteria Addition]	868	—	27.1	0.036	0.039
Roof: Insulation Entirely Above Deck, 3-Year-Aged Solar Reflectance Index = 0.61 (d), [Bldg. Use 1 - Cafeteria Addition]	465	—	25.0	0.039	0.039
Roof: Insulation Entirely Above Deck, 3-Year-Aged Solar Reflectance Index = 0.61 (d), [Bldg. Use 1 - Cafeteria Addition]	465	—	25.0	0.039	0.039
EAST					
Ext. Wall: Steel-Framed, 16in. oc., [Bldg. Use 1 - Cafeteria Addition] (b)	364	19.0	12.4	0.46	0.664
Door - Perf. Specs.: Product ID pending ID, SHGC 0.25, Pf. 0.20, [Bldg. Use 1 - Cafeteria Addition]	21	—	—	1.250	0.770
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID pending ID, SHGC 0.25, Pf. 0.20, [Bldg. Use 1 - Cafeteria Addition] (b)	35	—	—	0.290	0.460
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID pending ID, SHGC 0.25, Pf. 0.20, [Bldg. Use 1 - Cafeteria Addition] (b)	297	19.0	12.4	0.290	0.460
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID pending ID, SHGC 0.25, Pf. 0.20, [Bldg. Use 1 - Cafeteria Addition] (b)	24	—	—	0.290	0.460
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID pending ID, SHGC 0.25, Pf. 0.20, [Bldg. Use 1 - Cafeteria Addition] (b)	297	19.0	12.4	0.46	0.664
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID pending ID, SHGC 0.25, Pf. 0.27, [Bldg. Use 1 - Cafeteria Addition] (b)	71	—	—	0.290	0.460

SOUTH

Project Title: North Brunswick High School - Cafeteria Addition
Data filename: Report date: 10/14/19
Page 1 of 8

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Cafeteria Addition]	200	19.0	12.4	0.046	0.064
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Cafeteria Addition]	489	19.0	12.4	0.046	0.064
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID pending ID, SHGC 0.25, PF 0.20, [Bldg. Use 1 - Cafeteria Addition] (b)	451	---	---	0.290	0.460
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Cafeteria Addition]	291	19.0	12.4	0.046	0.064
WEST					
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Cafeteria Addition]	364	19.0	12.4	0.046	0.064
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID pending ID, SHGC 0.25, PF 0.02, [Bldg. Use 1 - Cafeteria Addition] (b)	24	---	---	0.290	0.460
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID pending ID, SHGC 0.25, PF 0.02, [Bldg. Use 1 - Cafeteria Addition] (b)	48	---	---	0.290	0.460
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID pending ID, SHGC 0.25, PF 0.02, [Bldg. Use 1 - Cafeteria Addition] (b)	24	---	---	0.290	0.460
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Cafeteria Addition]	297	19.0	12.4	0.046	0.064
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs.: Product ID pending ID, SHGC 0.25, PF 0.27, [Bldg. Use 1 - Cafeteria Addition] (b)	71	---	---	0.290	0.460

(g) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

(h) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.

(i) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

(j) High albedo roof requirement options: 1) 3-year aged solar reflectance index ≥ 55.0 thermal emittance ≥ 0.75 , 2) 3-year aged solar reflectance index ≥ 64.0 , 3) Initial year aged solar reflectance ≥ 0.70 thermal emittance ≥ 0.75 , 4) Initial year aged solar reflectance index ≥ 82.0 .

Envelope PASSES: Design 15% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

FREDERICK COLLINS, D1A
Name - Title Signature Date 10/14/19

Project Title: North Brunswick High School - Cafeteria Addition Report date: 10/14/19
Data filename: Page 2 of 8

NORTH BRUNSWICK HIGH SCHOOL IMPROVEMENTS

114 SCORPION DRIVE NE
LELAND, NORTH CAROLINA 28451

BID DOCUMENTS

APRIL 2020

NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION.

CONTRACTORS SHALL CONTACT OVERHEAD ELECTRIC PROVIDER TO COMPLY WITH FEDERAL OSHA 1910.333 MINIMUM APPROACH DISTANCE TO ENERGIZED POWERLINES AND OSH 29 CFR 1926.1407-1411 MUST BE FOLLOWED.

CONTRACTOR SHALL CONTACT AT&T PRIOR TO ANY DEMOLITION TO ALLOW FOR AT&T TO DISCONNECT COMMUNICATIONS CABLES COMING INTO THE SITE.

CONTACT THESE UTILITIES

TOWN OF LELAND PLANNING & INSPECTIONS DEPARTMENT
ATTN: MATTHEW KIRKLAND, SENIOR PLANNER
PH: 910-332-4816

PIEDMONT NATURAL GAS
ATTN: CATHY PLEASANT
PH: 910-251-2827

**EMERGENCY DIAL 911
POLICE - FIRE - RESCUE**
ATTN: TOWN OF LELAND FIRE/RESCUE DEPARTMENT
PH: 910-371-2727

BRUNSWICK COUNTY ENGINEERING
ATTN: BRIGIT FLORA (STORMWATER)
PH: 910-253-2405

H2GO - BRUNSWICK REGIONAL WATER
ATTN: BOB WALKER
PH: 910-371-9949

TOWN OF LELAND PUBLIC SERVICES - SEWER
ATTN: LYNN VETTER
PH: 910-332-4652

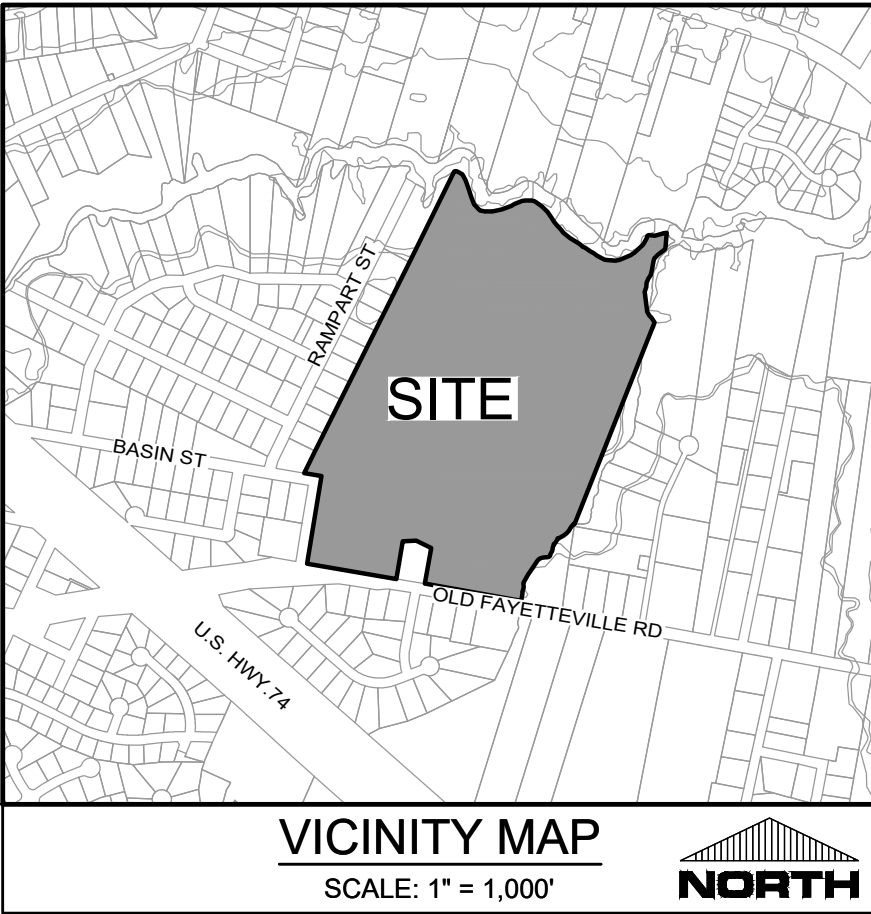
DUKE ENERGY
DISTRIBUTION CONSTRUCTION SERVICE
ALLISON WALSH
PH: 910-350-3457

TRANSMISSION AGENT
BILL WILDER
PH: 910-772-4903

AT&T/BELL SOUTH
ATTN: STEVE DAYVAULT (BUILDING ENGINEERING)
PH: 910-341-0741

ATTN: JAMES BATSON, ENGINEERING
PH: 910-341-1621

SPECTRUM
ATTN: STEVE BARNETTE
PH: 910-772-5755

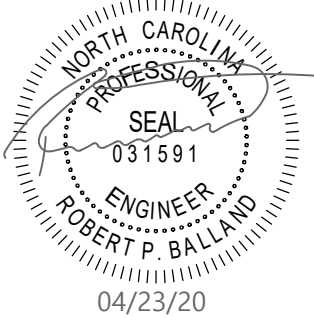


OWNER/DEVELOPER:
BRUNSWICK COUNTY SCHOOLS
35 REFERENDUM DRIVE NE
BOLIVIA, NC 28422

ENGINEER (CIVIL) & LANDSCAPE ARCHITECT:
PARAMOUNTE ENGINEERING, INC.
122 CINEMA DRIVE
WILMINGTON, NORTH CAROLINA 28403
ATTN: ROB BALLAND, P.E. (910) 791-6707 - ENGINEER
ATTN: JIM CIRELLO, LA (910) 791-6707 - LANDSCAPE

SURVEYING:
PARAMOUNTE ENGINEERING, INC.
122 CINEMA DRIVE
WILMINGTON, NORTH CAROLINA 28403
ATTN: CHRIS GAGNE, P.L.S. (910) 791-6707

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
C-0.0	COVER SHEET
C-1.0 & C-1.1	GENERAL NOTES
C-2.0 - C-2.3	DEMOLITION PLANS
C-2.4 - C-2.8	SITE PLANS
C-3.0 - C-3.3	GRADING-DRAINAGE-EC PLANS
C-4.0 & C-4.1	UTILITY PLAN
C-5.0 - C-5.3	DETAILS
L-1.0 - L-1.2	LANDSCAPE PLANS



PREPARED BY:
PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846
PROJECT # 19248.PE

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT
Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION		
Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION	
Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:	
Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none">• Temporary grass seed covered with straw or other mulches and tackifiers• Hydroseeding• Rolled erosion control products with or without temporary grass seed• Appropriately applied straw or other mulch• Plastic sheeting	<ul style="list-style-type: none">• Permanent grass seed covered with straw or other mulches and tackifiers• Geotextile fabrics such as permanent soil reinforcement matting• Hydroseeding• Shrubs or other permanent plantings covered with mulch• Uniform and evenly distributed ground cover sufficient to restrain erosion• Structural methods such as concrete, asphalt or retaining walls• Rolled erosion control products with grass seed

- POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**
1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
 2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
 3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
 4. Provide ponding area for containment of treated Stormwater before discharging offsite.
 5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

- EQUIPMENT AND VEHICLE MAINTENANCE**
1. Maintain vehicles and equipment to prevent discharge of fluids.
 2. Provide drip pans under any stored equipment.
 3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
 4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
 5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
 6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

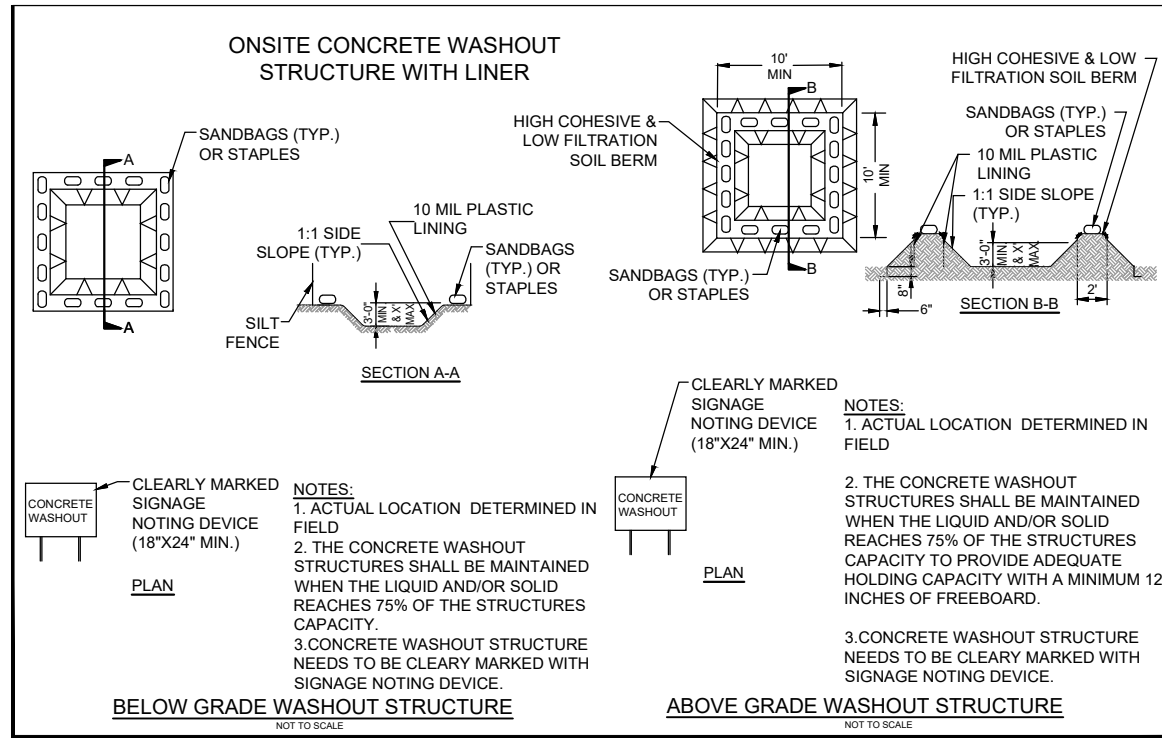
- LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**
1. Never bury or burn waste. Place litter and debris in approved waste containers.
 2. Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
 3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
 4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
 5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
 6. Anchor all lightweight items in waste containers during times of high winds.
 7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
 8. Dispose waste off-site at an approved disposal facility.
 9. On business days, clean up and dispose of waste in designated waste containers.

- PAINT AND OTHER LIQUID WASTE**
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
 2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
 3. Contain liquid wastes in a controlled area.
 4. Containment must be labeled, sized and placed appropriately for the needs of site.
 5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

- PORTABLE TOILETS**
1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
 2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
 3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

- EARTHEN STOCKPILE MANAGEMENT**
1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
 2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
 3. Provide stable stone access point when feasible.
 4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

- HAZARDOUS AND TOXIC WASTE**
1. Create designated hazardous waste collection areas on-site.
 2. Place hazardous waste containers under cover or in secondary containment.
 3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.



- CONCRETE WASHOUTS**
1. Do not discharge concrete or cement slurry from the site.
 2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
 3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
 4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
 5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
 6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
 7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
 8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
 9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
 10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

- HERBICIDES, PESTICIDES AND RODENTICIDES**
1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
 2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
 3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
 4. Do not stockpile these materials onsite.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING		
SECTION A: SELF-INSPECTION		
Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business hour. Any time when inspections were delayed shall be noted in the Inspection Record.		
Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken. If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover), 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover), 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING	
SECTION B: RECORDKEEPING	
1. E&SC Plan Documentation The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:	
Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. **Additional Documentation**
In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This general permit as well as the certificate of coverage, after it is received.
- (b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
- (c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING	
SECTION C: REPORTING	
1. Occurrences that must be reported Permittees shall report the following occurrences: (a) Visible sediment deposition in a stream or wetland. (b) Oil spills if: <ul style="list-style-type: none">• They are 25 gallons or more,• They are less than 25 gallons but cannot be cleaned up within 24 hours,• They cause sheen on surface waters (regardless of volume), or• They are within 100 feet of surface waters (regardless of volume). (c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85. (d) Anticipated bypasses and unanticipated bypasses. (e) Noncompliance with the conditions of this permit that may endanger health or the environment.	
2. Reporting Timeframes and Other Requirements After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 658-0368 or (919) 733-3300.	
Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none">• Within 24 hours, an oral or electronic notification.• Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.• If the stream is named on the NC 3303a-100 as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(d) above	<ul style="list-style-type: none">• Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none">• A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none">• Within 24 hours, an oral or electronic notification.• Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(i)(7)]	<ul style="list-style-type: none">• Within 24 hours, an oral or electronic notification.• Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(i)(6)].• Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

REVISIONS:	

BECKER MORGAN GROUP
3333 JAECKLE DRIVE, SUITE 120
WILMINGTON, NC 28403

PARAMOUNT ENGINEERING INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GENERAL NOTES
N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS
114 SCORPION DRIVE, LELAND
BRUNSWICK COUNTY, NC

PROJECT STATUS
PRELIMINARY LAYOUT
FINAL DESIGN
RELEASED FOR CONSTRUCTION

DRAWING INFORMATION
DATE: 04/23/20
SCALE: N.T.S.
DRAWN: RFE
CHECKED: RFE

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
ROBERT P. BALLARD
031591
04/23/20

C-1.1

PEI JOB#: 19248.PE

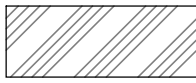

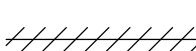
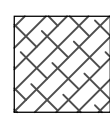
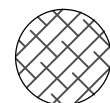
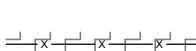
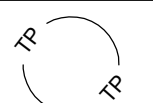




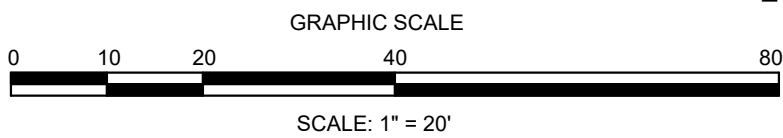
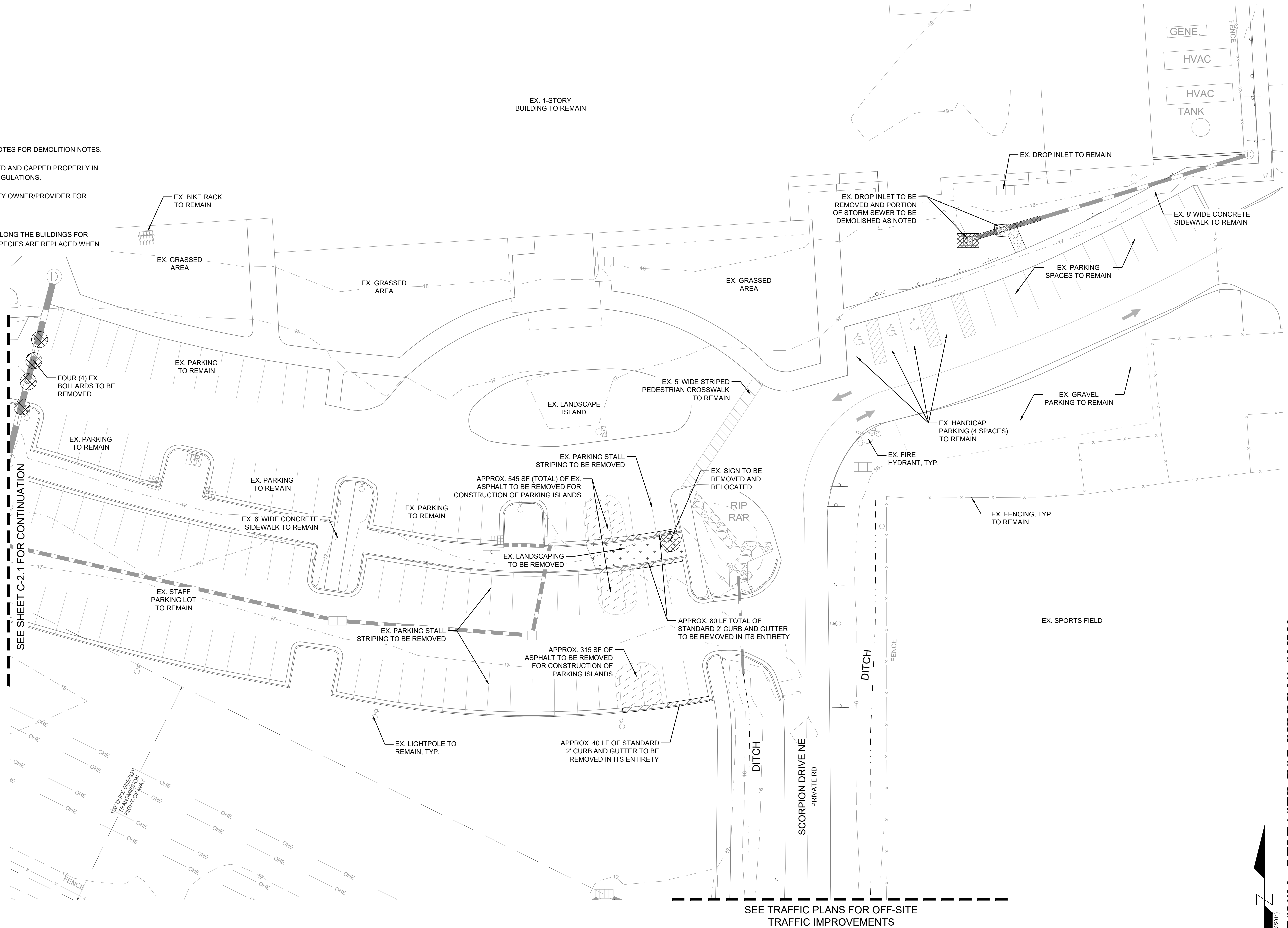
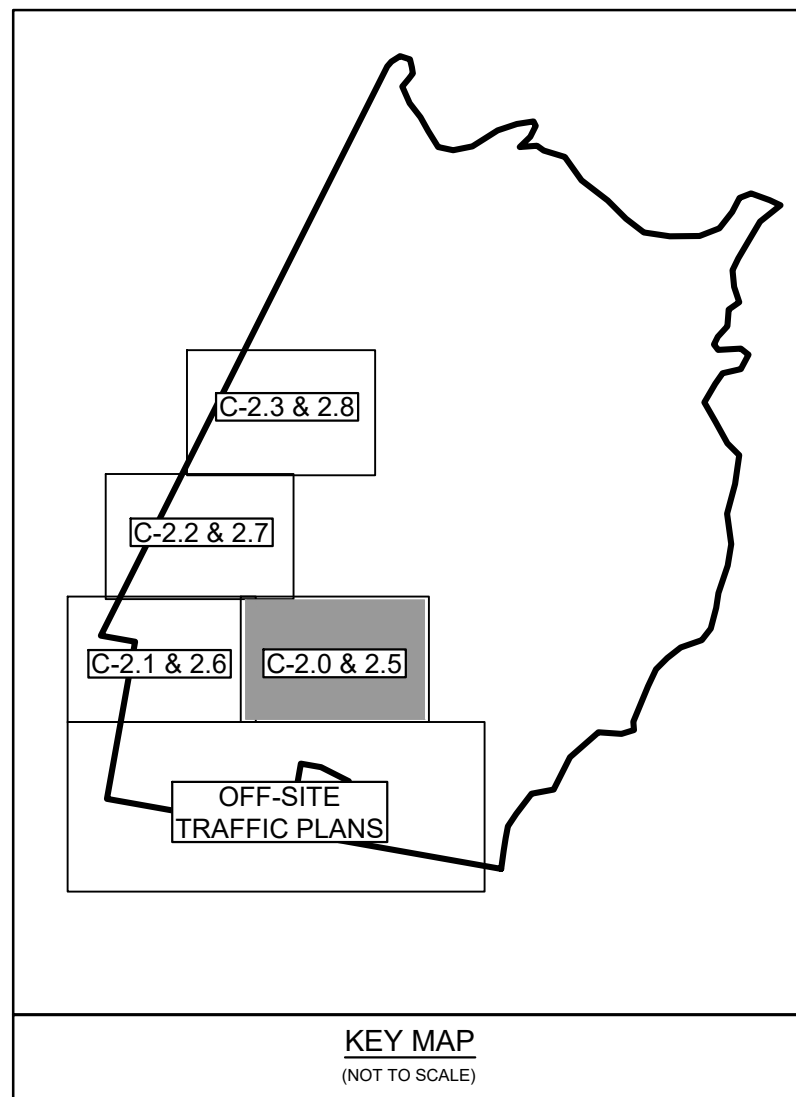
FINAL DESIGN - RELEASED FOR BIDDING ONLY



1. CONTRACTOR SHALL REFER TO SHEET C-1.0 GENERAL NOTES FOR DEMOLITION NOTES
2. ALL UTILITIES SHALL BE ABANDONED AND/OR DEMOLISHED AND CAPPED PROPERLY IN ACCORDANCE WITH THE UTILITY OWNERS RULES AND REGULATIONS.
3. CONTRACTOR SHALL COORDINATE WITH ELECTRIC UTILITY OWNER/PROVIDER FOR DEMOLITION.

1. CONTRACTOR SHALL REMOVE SHRUBS AS NECESSARY ALONG THE BUILDINGS FOR CONSTRUCTION AS LONG AS THE SAME QUANTITY AND SPECIES ARE REPLACED WHEN CONSTRUCTION IS COMPLETE.

SYMBOLS LEGEND	
	EXISTING CONCRETE TO BE REMOVED
	EXISTING ASPHALT TO BE REMOVED
	EXISTING UTILITY LINE TO BE REMOVED
	EXISTING STORM STRUCTURE TO BE REMOVED
	EXISTING SIGNAL/LIGHT/UTILITY POLE TO BE REMOVED
	EXISTING FENCE TO BE REMOVED
	TREE PROTECTION FENCING
	EXISTING TREE/SHRUBS TO BE REMOVED
	EXISTING BUILDING/STRUCTURE TO BE REMOVED

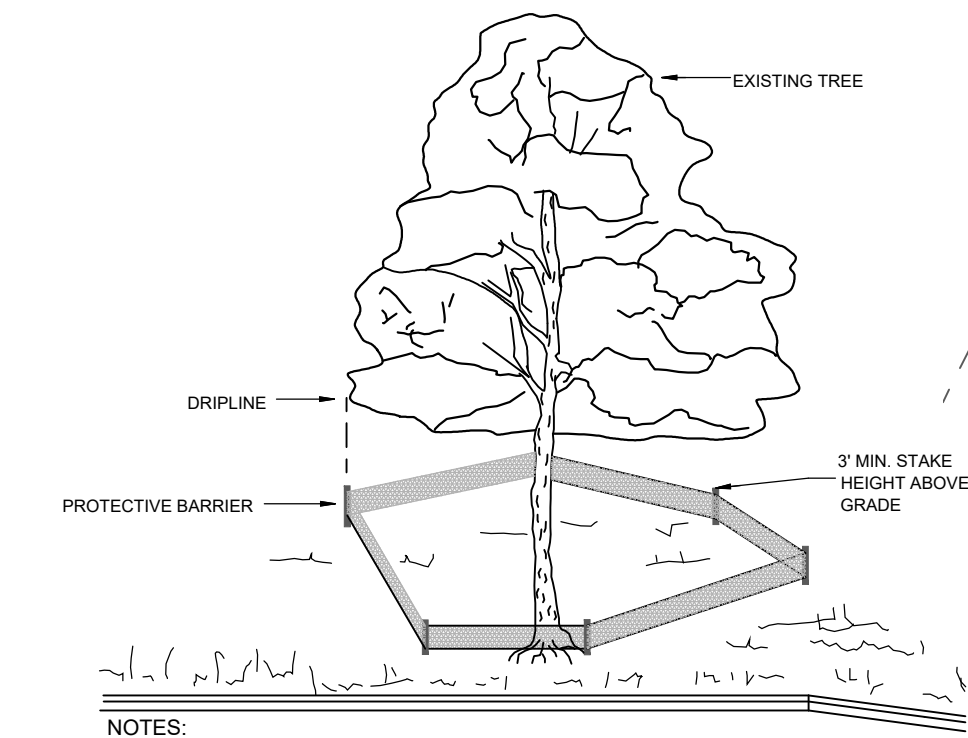
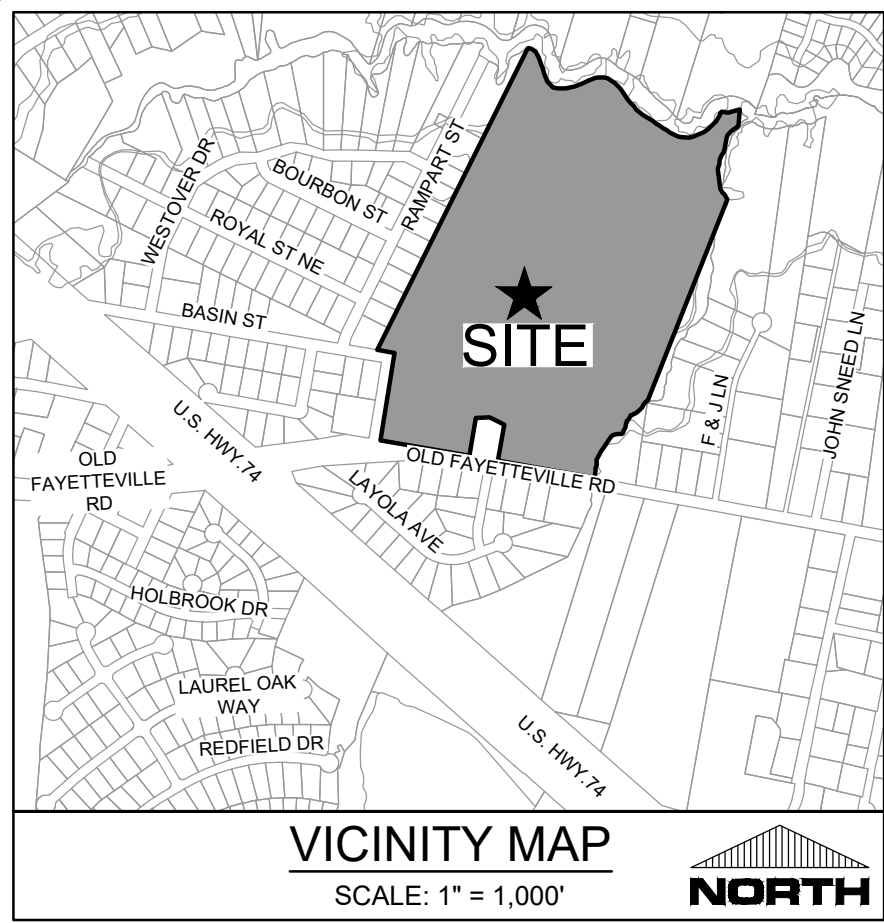


FINAL DESIGN - RELEASED FOR BIDDING ONLY

<p>PROJECT STATUS</p> <p>CONCEPTUAL LAYOUT: _____</p> <p>FINAL DESIGN: _____</p> <p>PERMITS FOR CONSTRUCTION: _____</p>		<p>DEMOLITION PLAN</p> <p>N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS</p> <p>114 SCORPION DRIVE, LELAND</p> <p>BRUNSWICK COUNTY, NC</p>		<p>REVISIONS:</p> <p>_____</p> <p>_____</p> <p>_____</p>	
<p>DRAWING INFORMATION</p> <p>DATE: 04/23/20</p> <p>DRAWN BY: JAC</p> <p>CHECKED BY: AEC</p> <p>DESIGNED BY: AEC</p> <p>DATE: 04/23/20</p>		<p>PARAMOUNT ENGINEERING, INC.</p> <p>122 Cinema Drive</p> <p>Wilmington, North Carolina 28403</p> <p>(910) 791-6707 (O) (910) 791-6760 (F)</p> <p>NC License #: C-2846</p>		<p>CLIENT INFORMATION:</p> <p>BECKER MORGAN GROUP</p> <p>3333 JAECKLE DRIVE, SUITE 120</p> <p>WILMINGTON, NC 28403</p>	
<p>PEI JOB#: 19248</p> <p>PE</p>		<p>C-2.0</p>		<p>04/23/20</p>	

PEI JOB#: 19248.PE

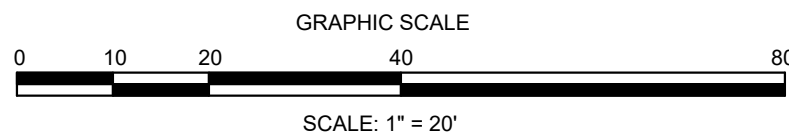
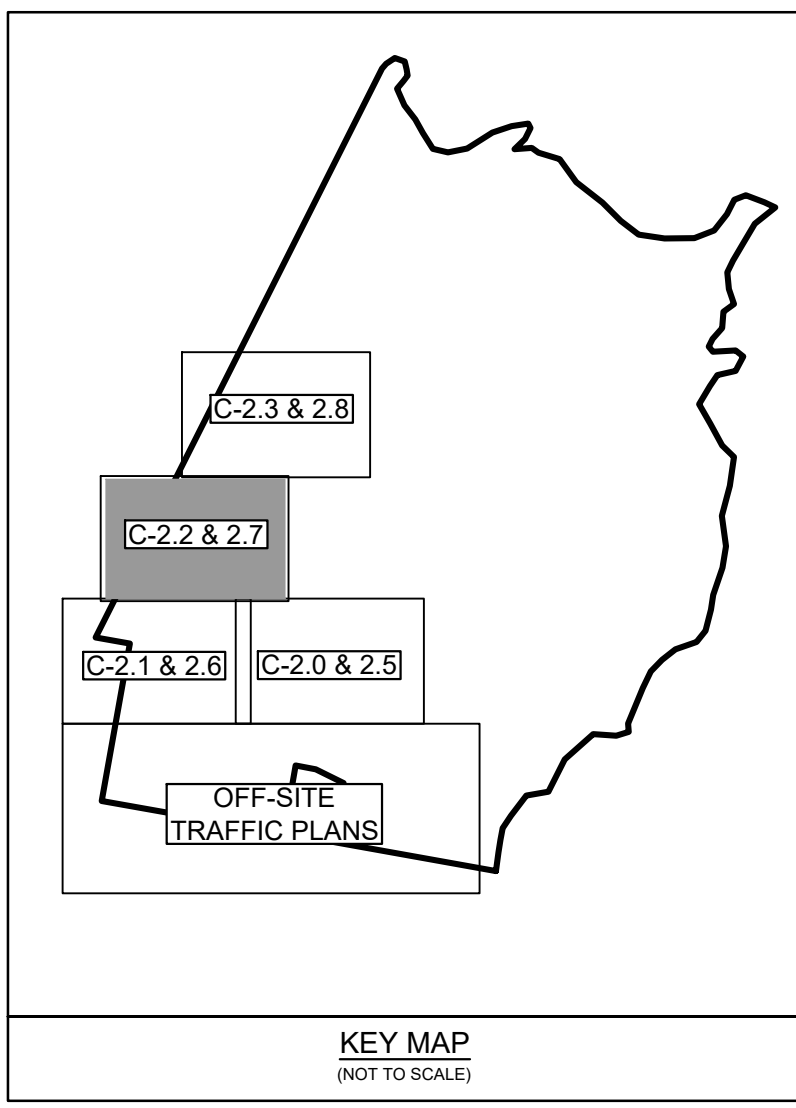
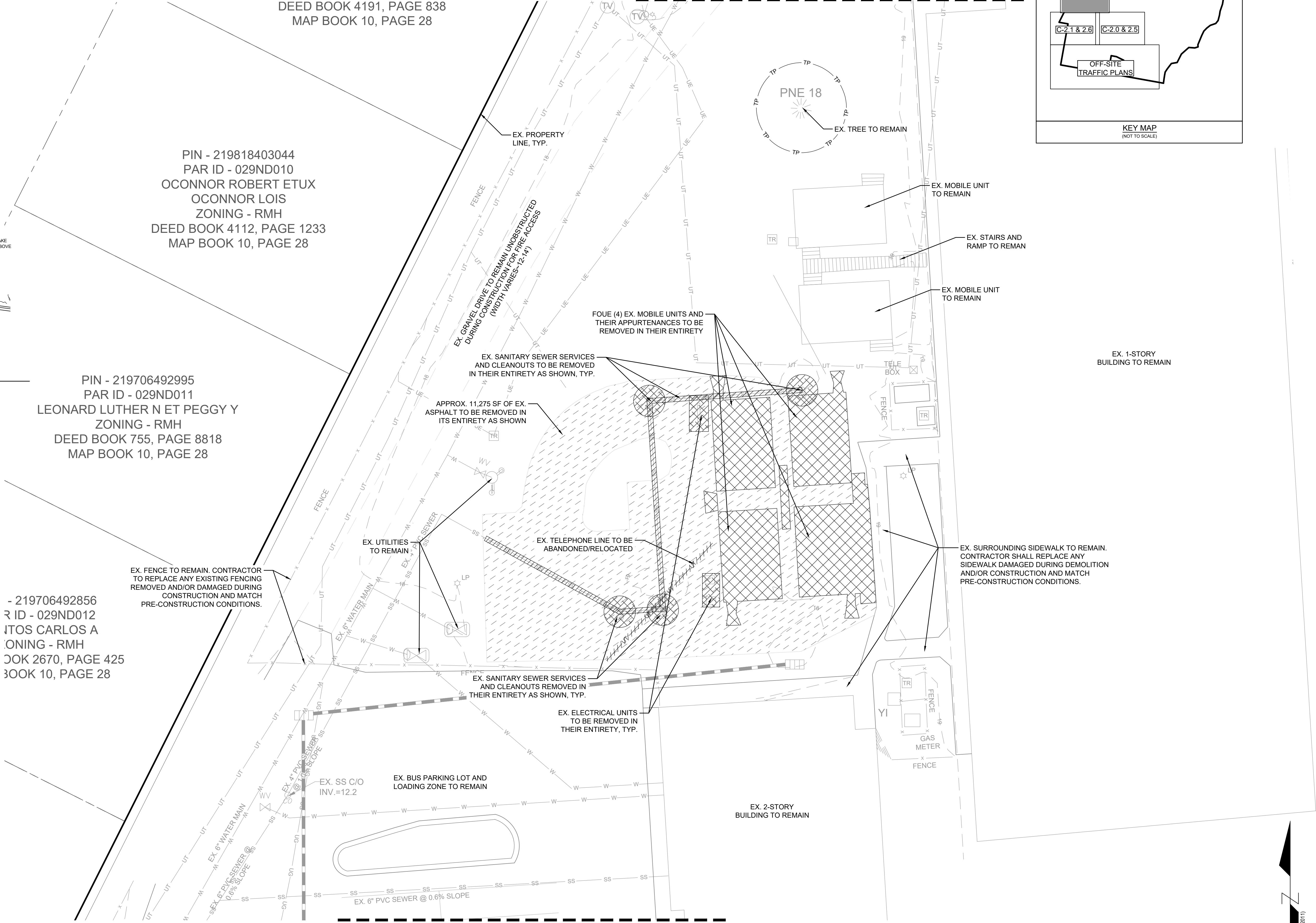
FINAL DESIGN - RELEASED FOR BIDDING ONLY



METHOD OF TREE PROTECTION DURING CONSTRUCTION
NTS

SYMBOLS LEGEND	
	EXISTING CONCRETE TO BE REMOVED
	EXISTING ASPHALT TO BE REMOVED
	EXISTING UTILITY LINE TO BE REMOVED
	EXISTING STORM STRUCTURE TO BE REMOVED
	EXISTING SIGNAL/LIGHT/UTILITY POLE TO BE REMOVED
	EXISTING FENCE TO BE REMOVED
	TREE PROTECTION FENCING
	EXISTING TREE/SHRUBS TO BE REMOVED
	EXISTING BUILDING/STRUCTURE TO BE REMOVED

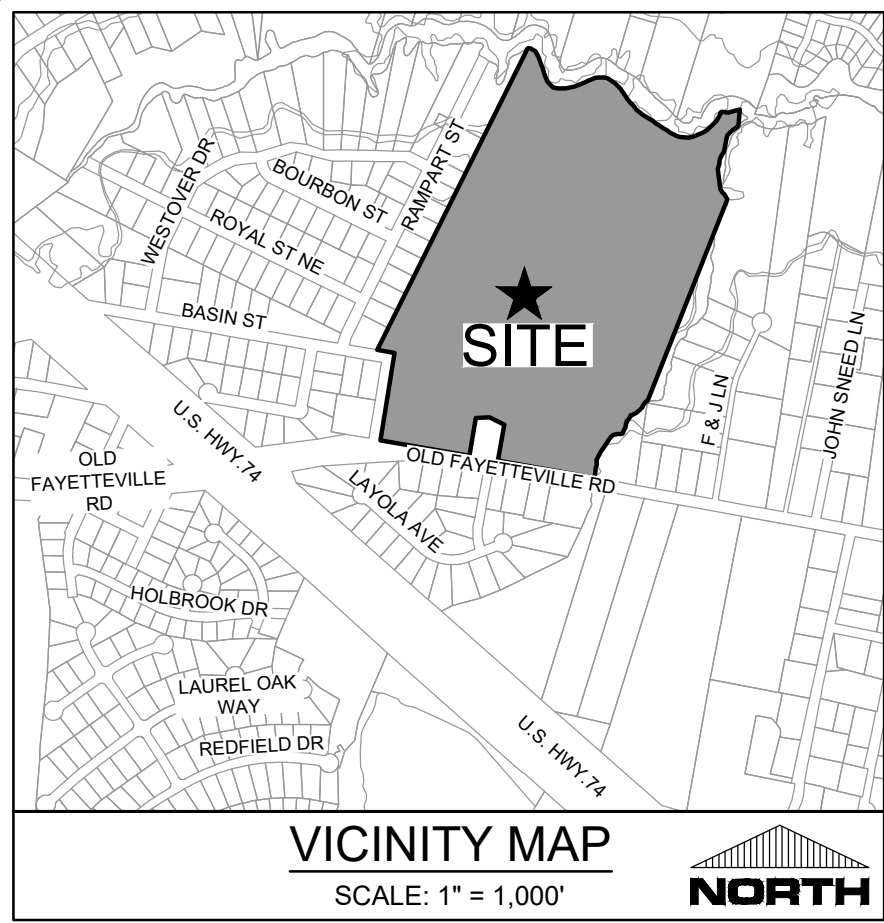
- DEMOLITION NOTES:**
- CONTRACTOR SHALL REFER TO SHEET C-1.0 GENERAL NOTES FOR DEMOLITION NOTES.
 - ALL UTILITIES SHALL BE ABANDONED AND/OR DEMOLISHED AND CAPPED PROPERLY IN ACCORDANCE WITH THE UTILITY OWNERS RULES AND REGULATIONS.
 - CONTRACTOR SHALL COORDINATE WITH ELECTRIC UTILITY OWNER/PROVIDER FOR DEMOLITION.
- EX. VEGETATION NOTES:**
- CONTRACTOR SHALL REMOVE SHRUBS AS NECESSARY ALONG THE BUILDINGS FOR CONSTRUCTION AS LONG AS THE SAME QUANTITY AND SPECIES ARE REPLACED WHEN CONSTRUCTION IS COMPLETE.



FINAL DESIGN - RELEASED FOR BIDDING ONLY

REVISIONS:	
CLIENT INFORMATION:	
BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
PARAMOUNT ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License # C-2846	
DEMOLITION PLAN N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS: DESIGNED BY: [Signature] PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR CONSTRUCTION: DATE: 04/23/20 SCALE: 1" = 20'	DRAWING INFORMATION: DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 04/23/20
SEAL NORTH CAROLINA PROFESSIONAL ENGINEER ROBERT P. BALLARD 031591 04/23/20	
C-2.2 PEI JOB#: 19248.PE	

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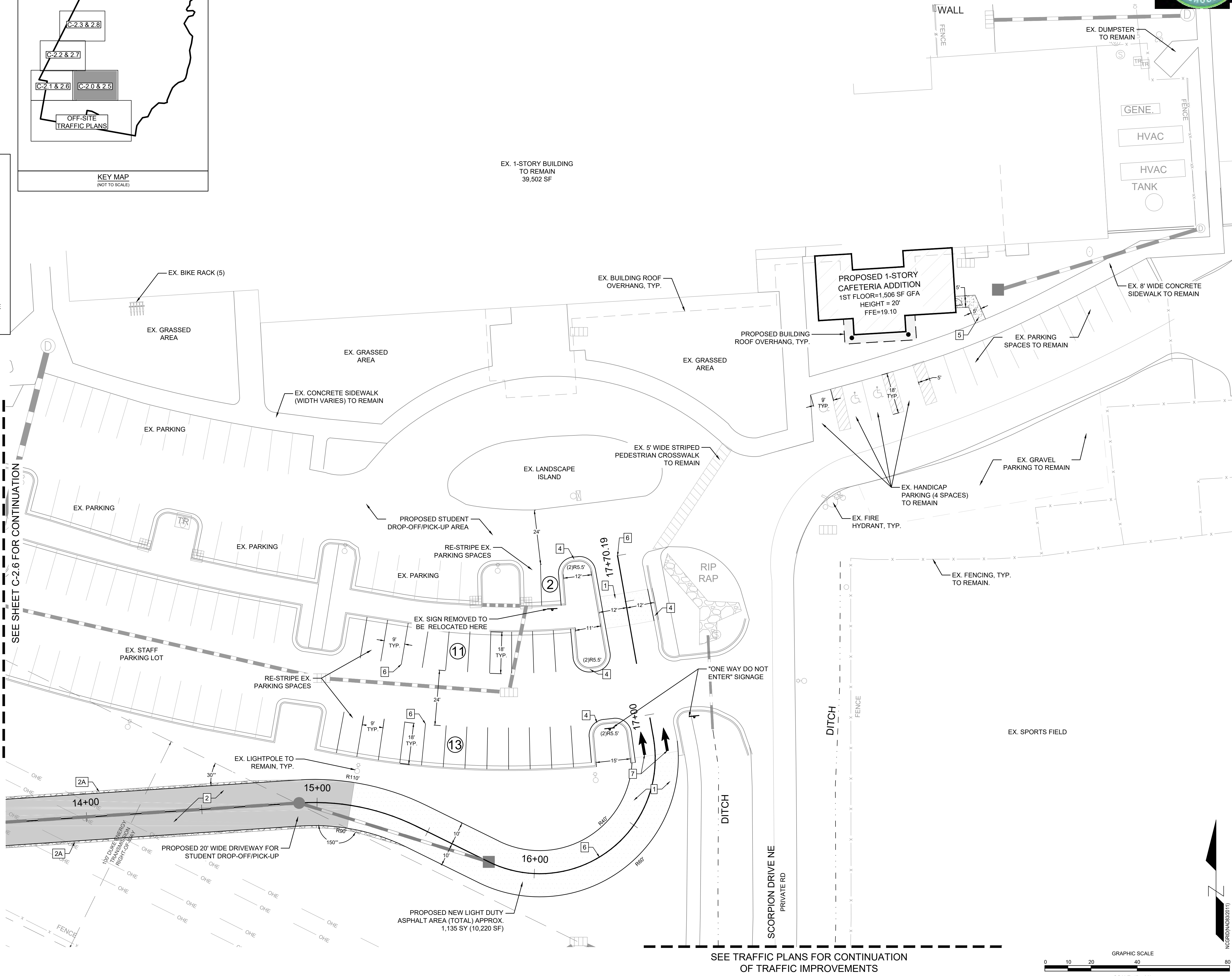
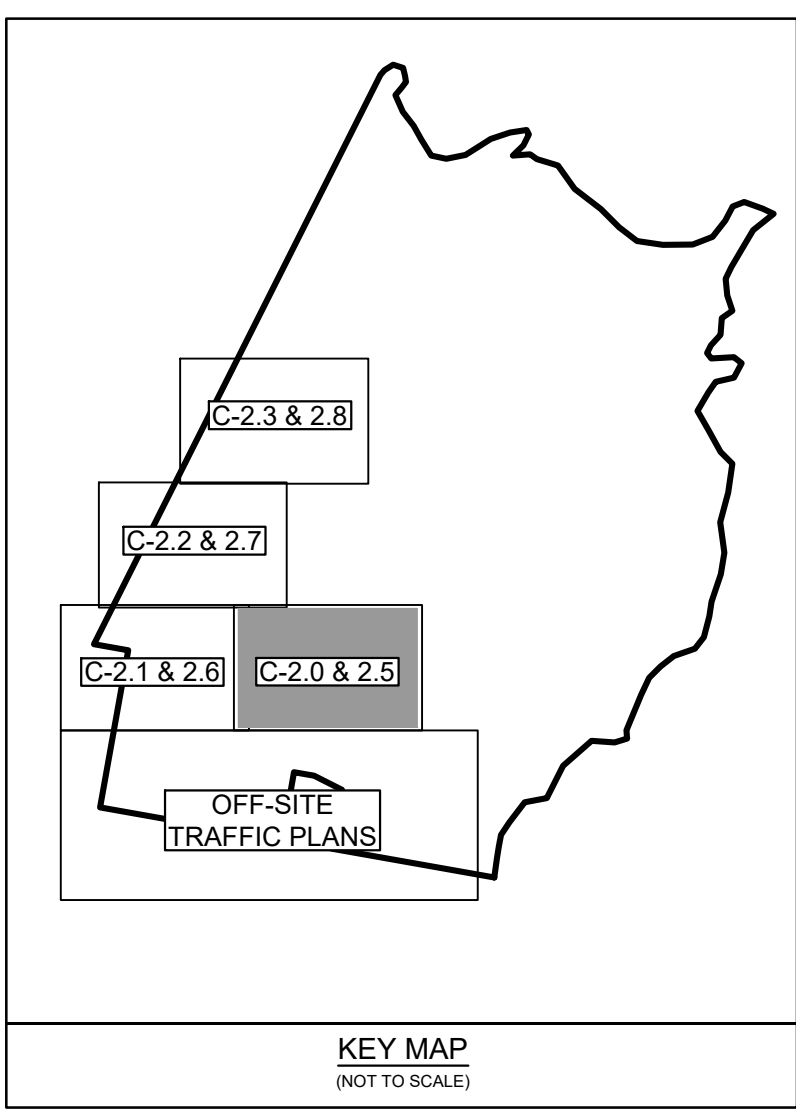


VICINITY MAP
SCALE: 1" = 1,000'



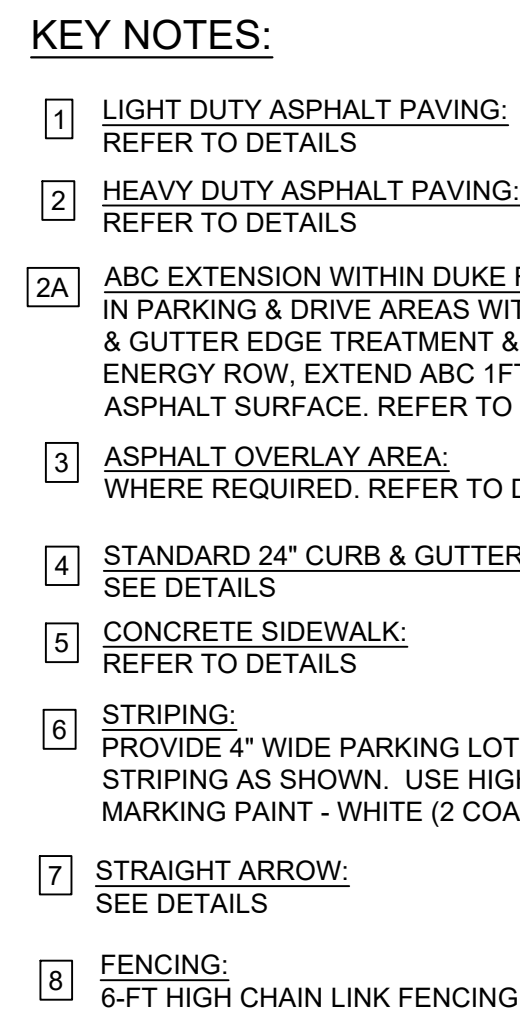
LEGEND:	
	PROPOSED ASPHALT OVERLAY
	PROPOSED LIGHT DUTY ASPHALT
	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED BUILDING
	PROPOSED ROOF OVERHANG
	PROPOSED CONCRETE
	EXISTING CONCRETE
	PROPOSED FENCE
	PROPOSED TREE PROTECTION FENCE
	EXISTING CONTOURS

- KEY NOTES:**
- 1 LIGHT DUTY ASPHALT PAVING:
REFER TO DETAILS
 - 2 HEAVY DUTY ASPHALT PAVING:
REFER TO DETAILS
 - 2A ABC EXTENSION WITHIN DUKE ROW:
IN PARKING & DRIVE AREAS WITHOUT CURB
& GUTTER EDGE TREATMENT & WITHIN DUKE
ENERGY ROW, EXTEND ABC 1FT MIN. PAST
ASPHALT SURFACE. REFER TO DETAILS
 - 3 ASPHALT OVERLAY AREA:
WHERE REQUIRED. REFER TO DETAILS.
 - 4 STANDARD 24" CURB & GUTTER:
SEE DETAILS
 - 5 CONCRETE SIDEWALK:
REFER TO DETAILS
 - 6 STRIPING:
PROVIDE 4" WIDE PARKING LOT
STRIPING AS SHOWN. USE HIGHWAY
MARKING PAINT - WHITE (2 COATS).
 - 7 STRAIGHT ARROW:
SEE DETAILS
 - 8 FENCING:
6-FT HIGH CHAIN LINK FENCING



FINAL DESIGN - RELEASED FOR BIDDING ONLY

REVISIONS:		CLIENT INFORMATION:	
		BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
		PARAMOUNT ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6700 (F) NC License # C-2846	
PROJECT STATUS:		SITE PLAN	
PROJECT STATUS: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING:		N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 1.14 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
DRAWING INFORMATION:		PROJECT STATUS: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING:	
DATE: 04/23/20 SCALE: 1" = 20' DRAWN: RPE CHECKED: RPE		PROJECT STATUS: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING:	
SEAL:		PROJECT STATUS: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING:	
NORTH CAROLINA PROFESSIONAL ENGINEER ROBERT P. BALLARD 031591 04/23/20		PROJECT STATUS: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING:	
C-2.5		PROJECT STATUS: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING:	
PEI JOB#: 19248.PE		PROJECT STATUS: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING:	



PIN - 219706491795
PAR ID - 029ND013
CHAVEZ ARTEMIO AND
MELGAR MARIA S
ZONING - RMH
DEED BOOK 4176, PAGE 884
MAP BOOK 11, PAGE 82

PIN: 219706492501
PAR ID - 037CC00901
MAHON CYNTHIA
ZONING - RMH
DEED BOOK 1065, PAGE 944
MAP BOOK H, PAGE 126

SEE TRAFFIC PLANS FOR OFF-SITE
TRAFFIC IMPROVEMENTS

SEE SHEET C-2.5 FOR CONTINUATION

[illegible]

CLIENT INFORMATION:

BECKER MORGAN GROUP
3333 JAECKLE DRIVE, SUITE 120
WILMINGTON, NC 28403

PARAMOUNT ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6700 (F)
NC License #: C-2846

SITE PLAN

N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS
1114 SCORPION DRIVE, LELAND
BRUNSWICK COUNTY, NC

<p>PROJECT STATUS</p> <p>CONCEPTUAL LAYOUT: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR CONST.:</p>	<p>DRAWING INFORMATION</p> <p>DATE: 04/23/20 SCALE: 1" = 20' AEC DESIGNED: CHECKED: RPS RPS</p>
<p>04/23/20</p>	

C-2.6

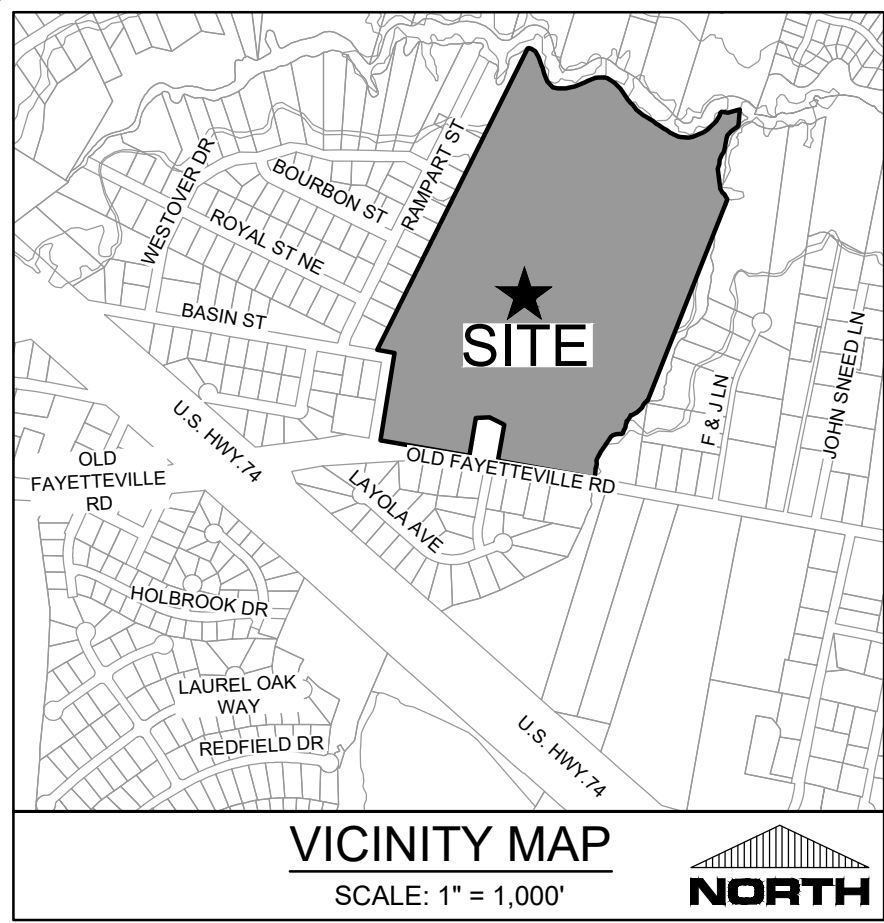
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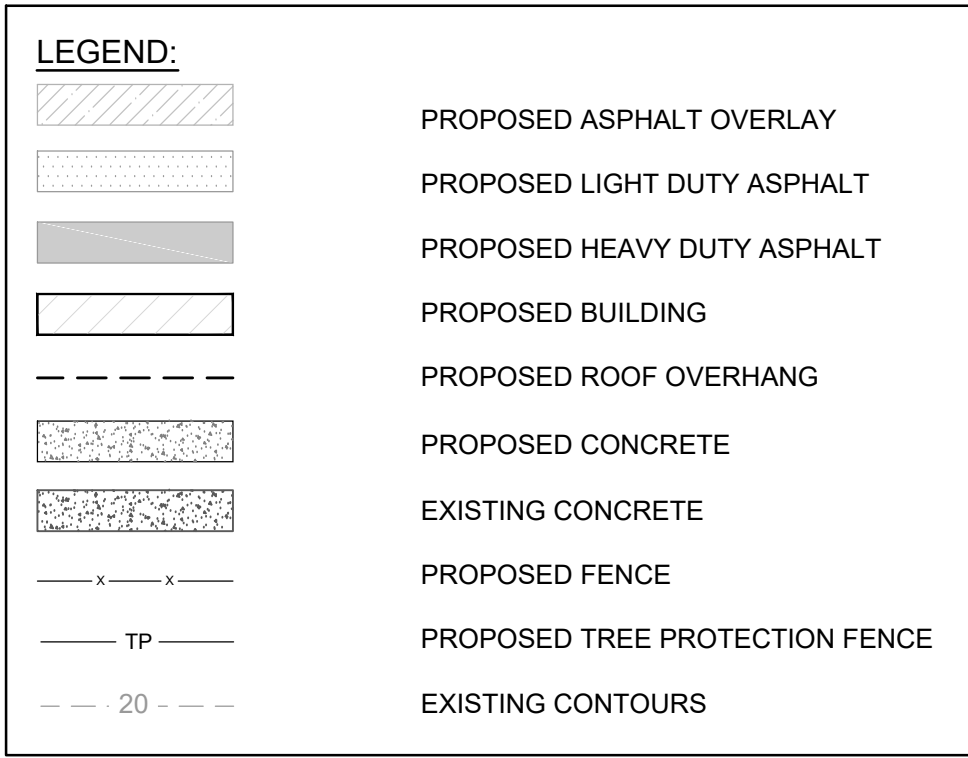
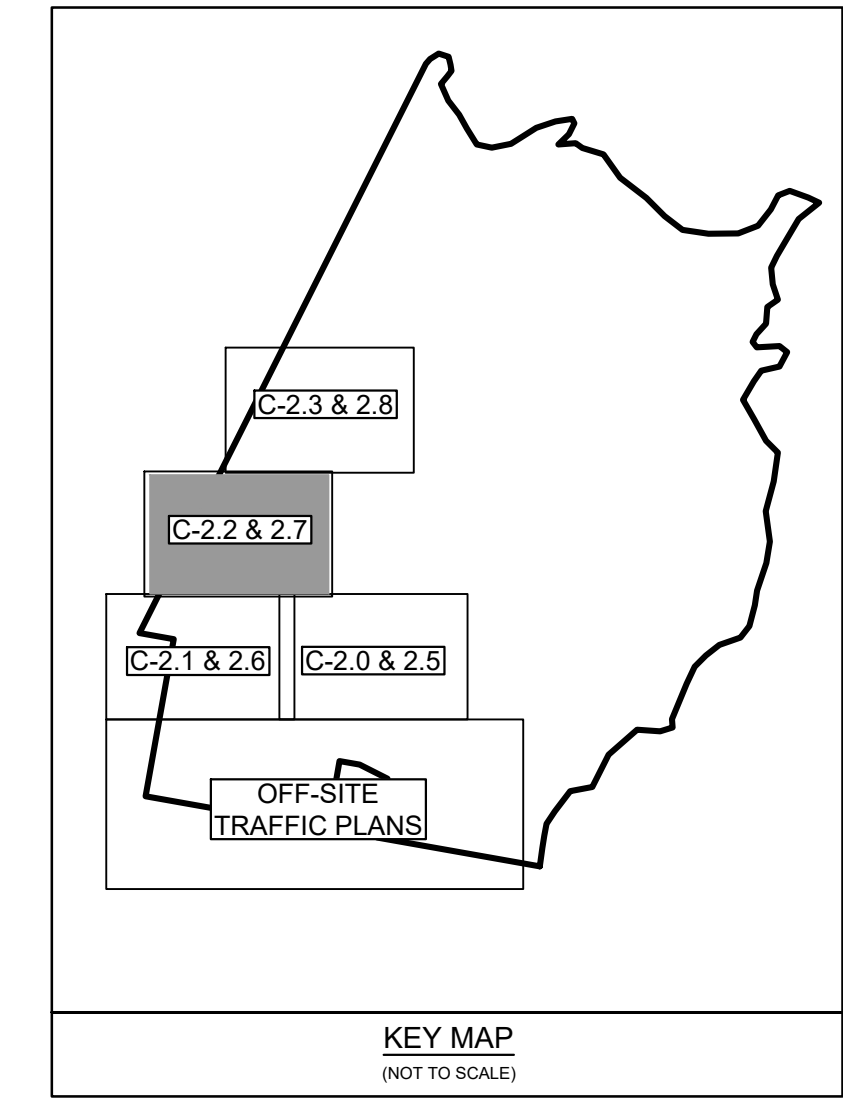
GRAPHIC SCALE

0 10 20 40

SCALE: 1" = 20'



- KEY NOTES:**
- 1 LIGHT DUTY ASPHALT PAVING:
REFER TO DETAILS
 - 2 HEAVY DUTY ASPHALT PAVING:
REFER TO DETAILS
 - 2A ABC EXTENSION WITHIN DUKE ROW:
IN PARKING & DRIVE AREAS WITHOUT CURB
& GUTTER EDGE TREATMENT & WITHIN DUKE
ENERGY ROW, EXTEND ABC 1FT MIN. PAST
ASPHALT SURFACE. REFER TO DETAILS
 - 3 ASPHALT OVERLAY AREA:
WHERE REQUIRED. REFER TO DETAILS.
 - 4 STANDARD 24" CURB & GUTTER:
SEE DETAILS
 - 5 CONCRETE SIDEWALK:
REFER TO DETAILS
 - 6 STRIPING:
PROVIDE 4" WIDE PARKING LOT
STRIPING AS SHOWN. USE HIGHWAY
MARKING PAINT - WHITE (2 COATS).
 - 7 STRAIGHT ARROW:
SEE DETAILS
 - 8 FENCING:
6-FT HIGH CHAIN LINK FENCING



DEED BOOK 4191, PAGE 838
MAP BOOK 10, PAGE 28

PIN - 219818403044
PAR ID - 029ND010
OCONNOR ROBERT ETUX
OCONNOR LOIS
ZONING - RMH
DEED BOOK 4112, PAGE 1233
MAP BOOK 10, PAGE 28

PIN - 219706492995
PAR ID - 029ND011
LEONARD LUTHER N ET PEGGY Y
ZONING - RMH
DEED BOOK 755, PAGE 8818
MAP BOOK 10, PAGE 28

- 219706492856
R ID - 029ND012
ITOS CARLOS A
ONING - RMH
OOK 2670, PAGE 425
BOOK 10, PAGE 28

EX. FENCE TO REMAIN. CONTRACTOR
TO REPLACE ANY EXISTING FENCING
REMOVED AND/OR DAMAGED DURING
CONSTRUCTION AND MATCH
PRE-CONSTRUCTION CONDITIONS.

EX. SCHOOL BUS
PARKING AND
LOADING AREA

EX. SURROUNDING SIDEWALK TO REMAIN.
CONTRACTOR SHALL REPLACE ANY
SIDEWALK DAMAGED DURING DEMOLITION
AND/OR CONSTRUCTION AND MATCH
PRE-CONSTRUCTION CONDITIONS.

EX. 2-STORY
BUILDING TO REMAIN
30,275 SF

PROPOSED
2-STORY BUILDING
1ST FLOOR = 9,995 SF
2ND FLOOR = 10,800 SF
TOTAL = 20,795 SF GFA
HEIGHT = 32'
FFE = 19.00

PROPOSED 5'
WIDE CONCRETE
DOOR LANDING

PROPOSED ROOF
OVERHANG, TYP.

SEE SHEET C-2.8 FOR CONTINUATION

PNE 18

TREE PROTECTION
FENCING, TYP.

EX. 6" WIDE CONCRETE
SIDEWALK TO REMAIN

EX. MOBILE UNIT
TO REMAIN

EX. STAIRS AND
RAMP TO REMAIN

EX. MOBILE UNIT
TO REMAIN

EX. 1-STORY BUILDING
TO REMAIN
45,290 SF

EX. TRANSFORMER
AND ELECTRICAL
UNITS TO REMAIN
TIE INTO EXISTING
8" WIDE CONCRETE
SIDEWALK

EX. LIGHTPOLE
TO REMAIN

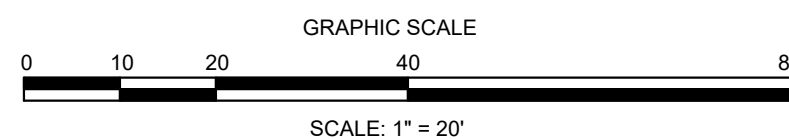
EX. SURROUNDING SIDEWALK TO REMAIN.
CONTRACTOR SHALL REPLACE ANY
SIDEWALK DAMAGED DURING DEMOLITION
AND/OR CONSTRUCTION AND MATCH
PRE-CONSTRUCTION CONDITIONS.

EX. BUILDING ROOF
OVERHANG, TYP.

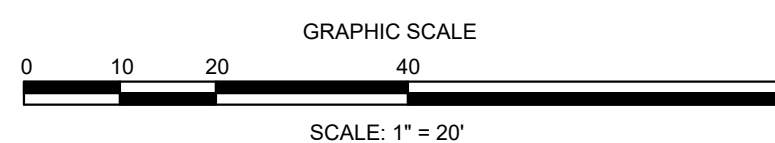
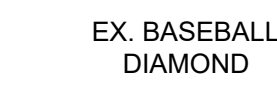
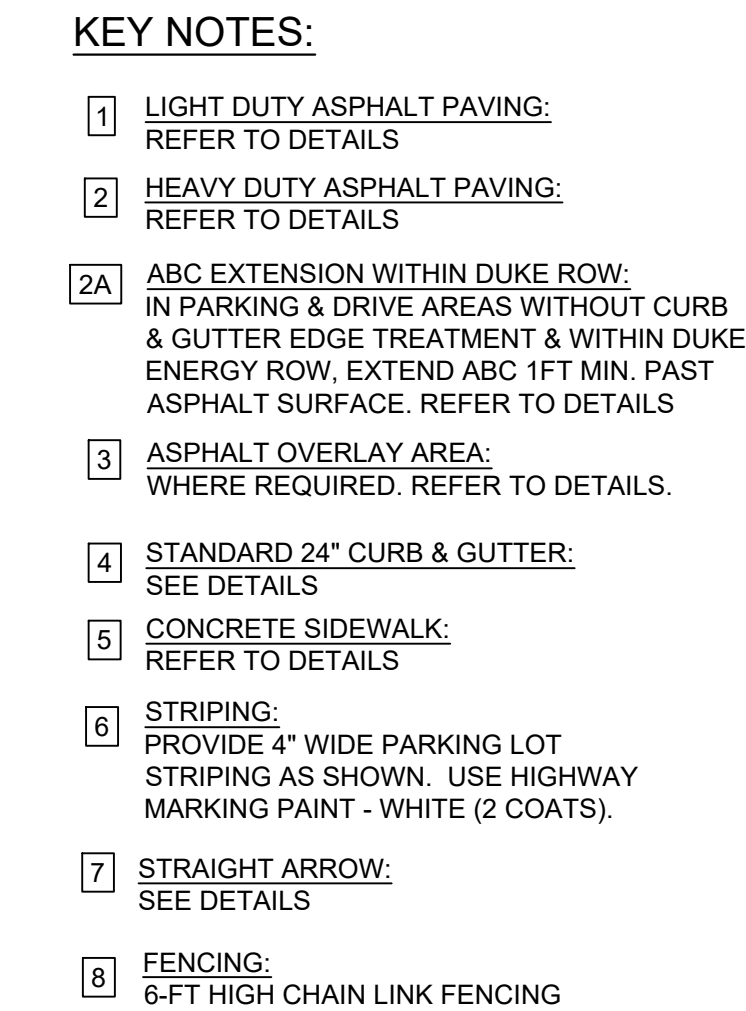
SECOND STORY PEDESTRIAN
OVERPASS. SEE ARCHITECTURAL
PLANS FOR DESIGN & DETAILS.

GAS
METER

SEE SHEET C-2.6 FOR CONTINUATION



REVISIONS:		CLIENT INFORMATION:	
		BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
PARAMOUNT ENGINEERING, INC.		122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6700 (F) NC License # C-2846	
SITE PLAN		N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS: DESIGNED BY: [Signature] PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR CONSTRUCTION:		DRAWING INFORMATION: DATE: 04/23/20 SCALE: 1" = 20' DRAWN: [Signature] CHECKED: [Signature]	
SEAL NORTH CAROLINA PROFESSIONAL ENGINEER ROBERT F. BALLARD 031591 04/23/20		C-2.7	
PEI JOB#: 19248.PE			



80 FINAL DESIGN - RELEASED FOR BIDDING ONLY

[illegible]

CLIENT INFORMATION:

BECKER MORGAN GROUP
3333 JAECKLE DRIVE, SUITE 120
WILMINGTON, NC 28403

PARAMOUNT
ENGINEERING, INC.

122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

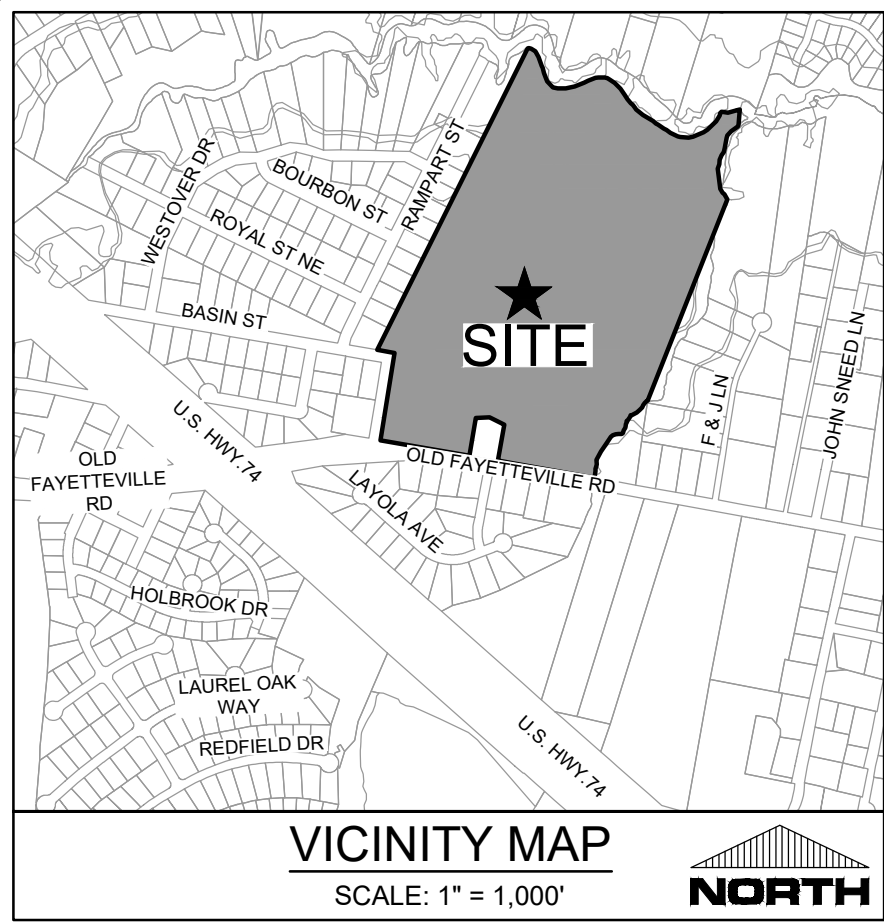
SITE PLAN

N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS
114 SCORPION DRIVE, LELAND
BRUNSWICK COUNTY, NC

PROJECT STATUS CONCEPTUAL LAYOUT; PRELIMINARY LAYOUT; FINAL DESIGN; RELEASED FOR CONST:	04/23/20 1" = 20' AEC AEC AEC RPB
DRAWING INFORMATION	DATE: SCALE: DESIGNED: DRAWN: CHECKED:

C-2.8

PEI JOB#: 19248.PE



NOTATION:

CI	=	CURB INLET
DI	=	DROP INLET
CO	=	CLEANOUT
DDI	=	DOUBLE DROP INLET
MH	=	STORM DRAIN MANHOLE
RD	=	ROOF DRAIN CLEANOUT
FFE	=	FINISHED FLOOR ELEVATION
BPE	=	BUILDING PAD ELEVATION
DS	=	DOWNSPOUT

- GENERAL NOTES:
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL STATE OF NC, TOWN OF LELAND, AND BRUNSWICK COUNTY STANDARDS AND SPECIFICATIONS.
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 - CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT OVERLAY, NEW ASPHALT AREAS, AND SIDEWALKS TO MATCH PROPOSED GRADES.
 - ALL PROPOSED SPOT ELEVATIONS SHOWN ARE PROPOSED EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
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 - CONTRACTOR SHALL STAKE SILT FENCE ALONG LIMITS OF DISTURBANCE LINE. THE SILT FENCE LINETYPE IS OFFSET ON THE DRAWING FOR CLARITY.

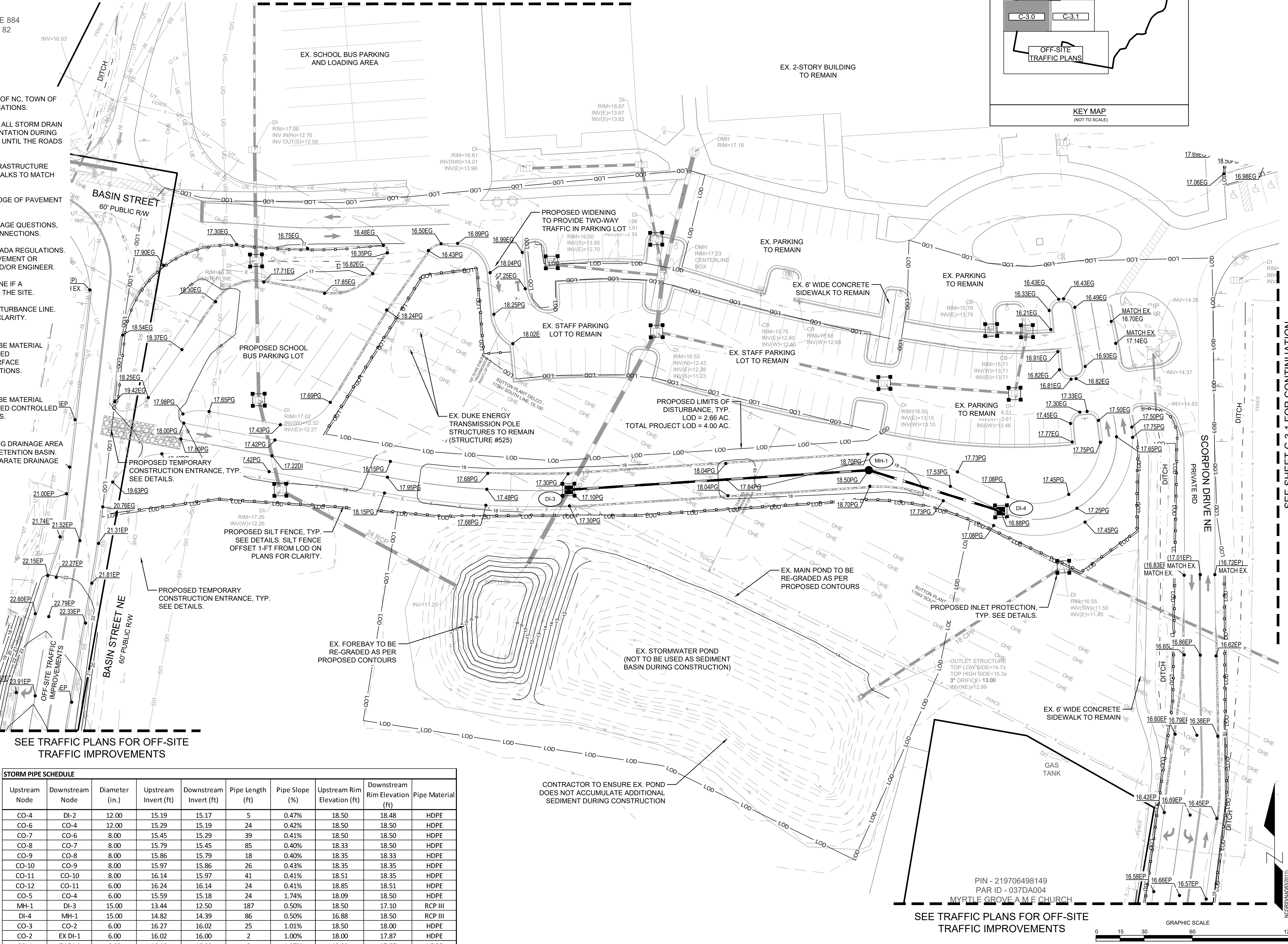
- ASPHALT AREA NOTE:
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- THE PROPOSED CLASSROOM ADDITION IS WITHIN THE EXISTING DRAINAGE AREA THAT DRAINS TO THE EXISTING ON-SITE STORMWATER WET DETENTION BASIN. THE PROPOSED ROTC AND CAFETERIA ADDITIONS ARE IN SEPARATE DRAINAGE AREAS WHICH IS A LOW DENSITY AREA.

LEGEND:

---	16	EXISTING CONTOUR
---	16	PROPOSED CONTOUR
●	25.05EG	EXISTING SPOT ELEVATION
●	25.05EP	PROPOSED EDGE OF PAVEMENT
●	25.05SW	PROPOSED SIDEWALK ELEVATION
●	25.05PG	PROPOSED GRADE
●	25.05TW	PROPOSED TOP OF WALL
●	17.15TC	EXISTING TOP OF CONCRETE
■		INLET PROTECTION
---	LOD	LIMITS OF DISTURBANCE
---	TP	SILT FENCE
---	TP	TREE PROTECTION FENCING
---	TP	DRAINAGE FLOW PATH
---	TP	DRAINAGE INLET LABEL



STORM PIPE SCHEDULE

Upstream Node	Downstream Node	Diameter (in.)	Upstream Invert (ft)	Downstream Invert (ft)	Pipe Length (ft)	Pipe Slope (%)	Upstream Rim Elevation (ft)	Downstream Rim Elevation (ft)	Pipe Material
CO-4	DI-2	12.00	15.19	15.17	5	0.47%	18.50	18.48	HDPE
CO-6	CO-4	12.00	15.29	15.19	24	0.42%	18.50	18.50	HDPE
CO-7	CO-6	8.00	15.45	15.29	39	0.41%	18.50	18.50	HDPE
CO-8	CO-7	8.00	15.79	15.45	85	0.40%	18.33	18.50	HDPE
CO-9	CO-8	8.00	15.86	15.79	18	0.40%	18.35	18.33	HDPE
CO-10	CO-9	8.00	15.97	15.86	26	0.43%	18.35	18.35	HDPE
CO-11	CO-10	8.00	16.14	15.97	41	0.41%	18.51	18.35	HDPE
CO-12	CO-11	6.00	16.24	16.14	24	0.41%	18.85	18.51	HDPE
CO-5	CO-4	6.00	15.59	15.18	24	1.74%	18.09	18.50	HDPE
MH-1	DI-3	15.00	13.44	12.50	187	0.50%	18.50	17.10	RCP III
DI-4	MH-1	15.00	14.82	14.39	86	0.50%	16.88	18.50	RCP III
CO-3	CO-2	6.00	16.27	16.02	25	1.01%	18.50	18.00	HDPE
CO-2	EX DI-1	6.00	16.02	16.00	2	1.00%	18.00	17.87	HDPE
CO-1	EX DI-1	6.00	16.10	16.00	8	1.27%	18.90	17.87	HDPE

REVISIONS:

CLIENT INFORMATION:

BECKER MORGAN GROUP
3333 JAECKLE DRIVE, SUITE 120
WILMINGTON, NC 28403

PARAMOUNT ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6700 (F)
NC License # C-2846

GRADING-DRAINAGE-EC PLAN

N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS
114 SCORPION DRIVE, LELAND
BRUNSWICK COUNTY, NC

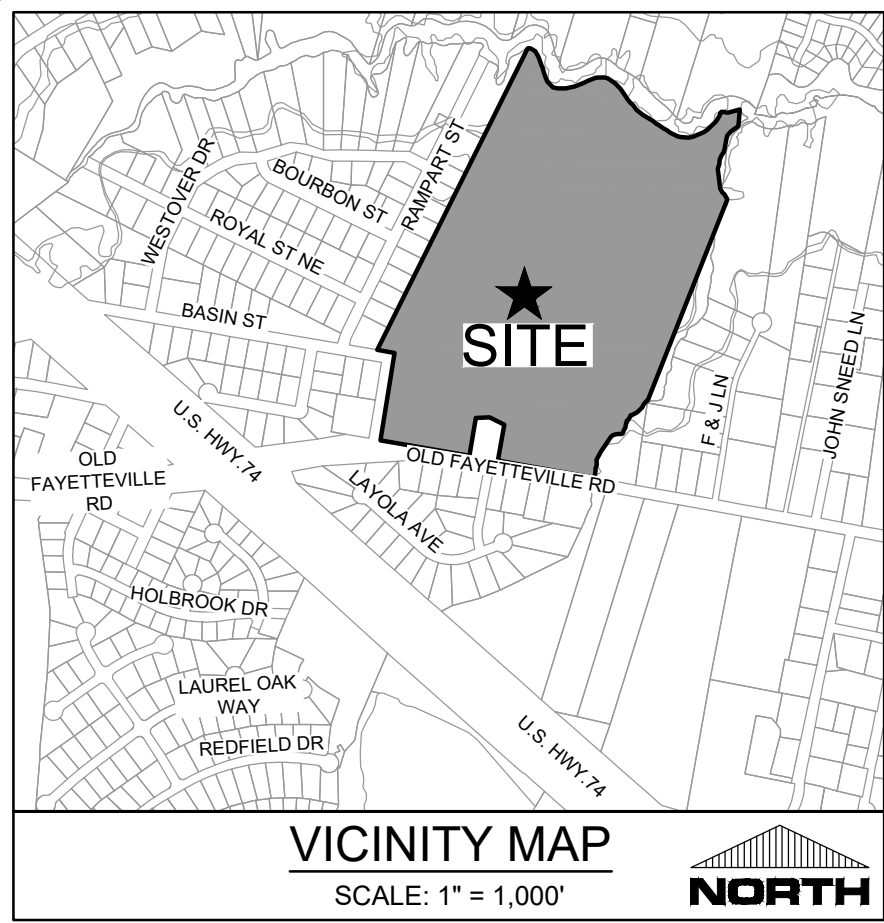
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DESIGN: PRELIMINARY LAYOUT
FINAL DESIGN: RELEASED FOR BIDDING

DRAWING INFORMATION:
DATE: 04/23/20
SCALE: 1" = 30' AEC
DRAWN: RPE
CHECKED: RPE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL
031591
ENGINEER
ROBERT P. BALLARD
04/23/20

C-3.0

PEI JOB#: 19248.PE



NOTATION:

CI = CURB INLET
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CO = CLEANOUT
DDI = DOUBLE DROP INLET
MH = STORM DRAIN MANHOLE
RD = ROOF DRAIN CLEANOUT
FFE = FINISHED FLOOR ELEVATION
BPE = BUILDING PAD ELEVATION
DS = DOWNSPOUT

LEGEND:

16 --- 16 --- EXISTING CONTOUR
16 --- PROPOSED CONTOUR
25.05EG --- EXISTING SPOT ELEVATION
25.05EP --- PROPOSED EDGE OF PAVEMENT
25.05SW --- PROPOSED SIDEWALK ELEVATION
25.05PG --- PROPOSED GRADE
25.05TW --- PROPOSED TOP OF WALL
25.05TW --- PROPOSED TOP OF WALL
17.15TC --- EXISTING TOP OF CONCRETE
LOD --- LIMITS OF DISTURBANCE
SILT FENCE
TP --- TREE PROTECTION FENCING
DRAINAGE FLOW PATH
DRAINAGE INLET LABEL

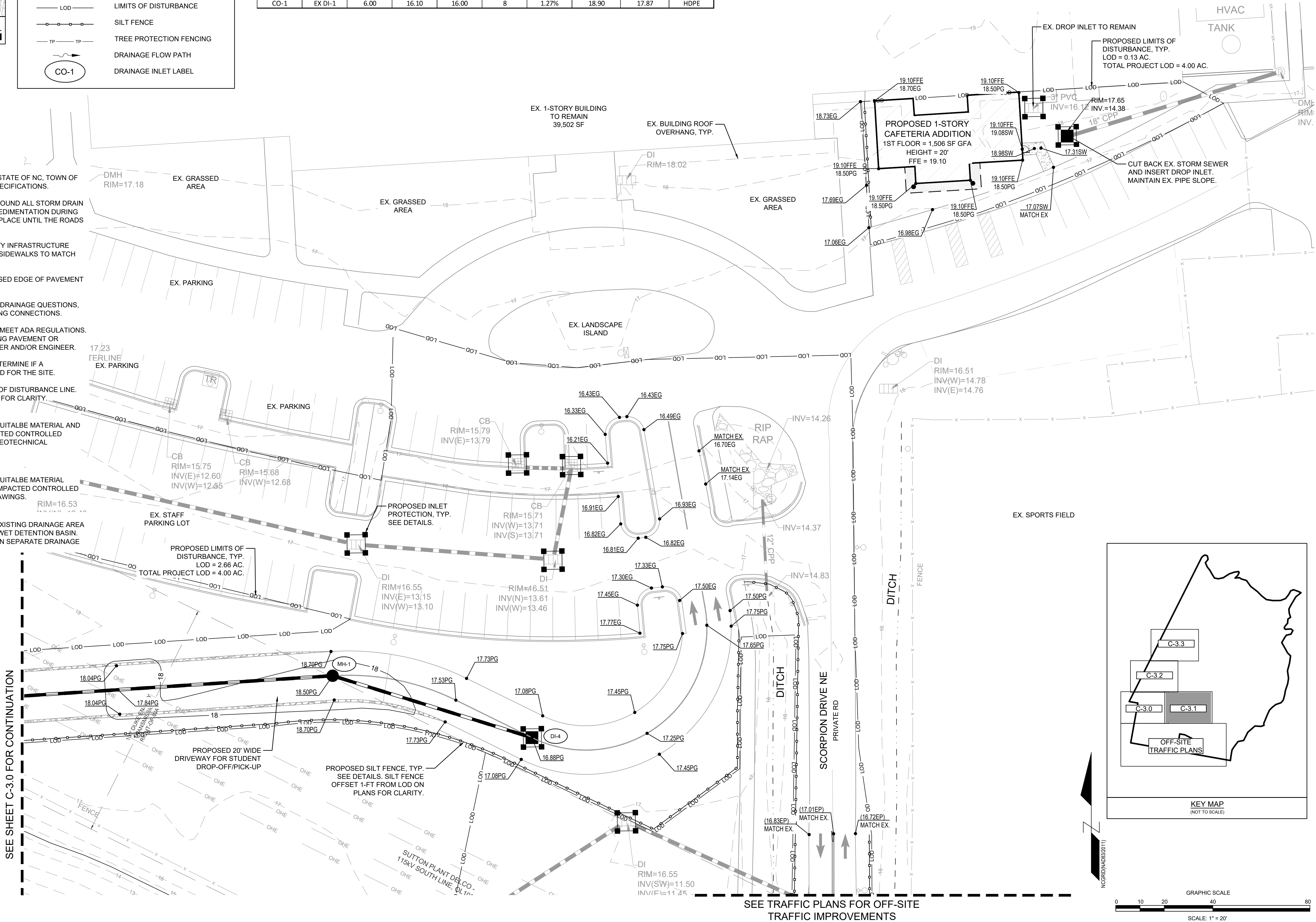
Upstream Node	Downstream Node	Diameter (in.)	Upstream Invert (ft)	Downstream Invert (ft)	Pipe Length (ft)	Pipe Slope (%)	Upstream Rim Elevation (ft)	Downstream Rim Elevation (ft)	Pipe Material
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FINAL DESIGN - RELEASED FOR BIDDING ONLY

BRUNSWICK COUNTY
SCHOOLS

BECKER MORGAN GROUP
3333 JAECKLE DRIVE, SUITE 120
WILMINGTON, NC 28403

CLIENT INFORMATION:

PARAMOUNT ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License # C-2846

GRADING-DRAINAGE-EC PLAN

N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS
1.14 SCORPION DRIVE, LELAND
BRUNSWICK COUNTY, NC

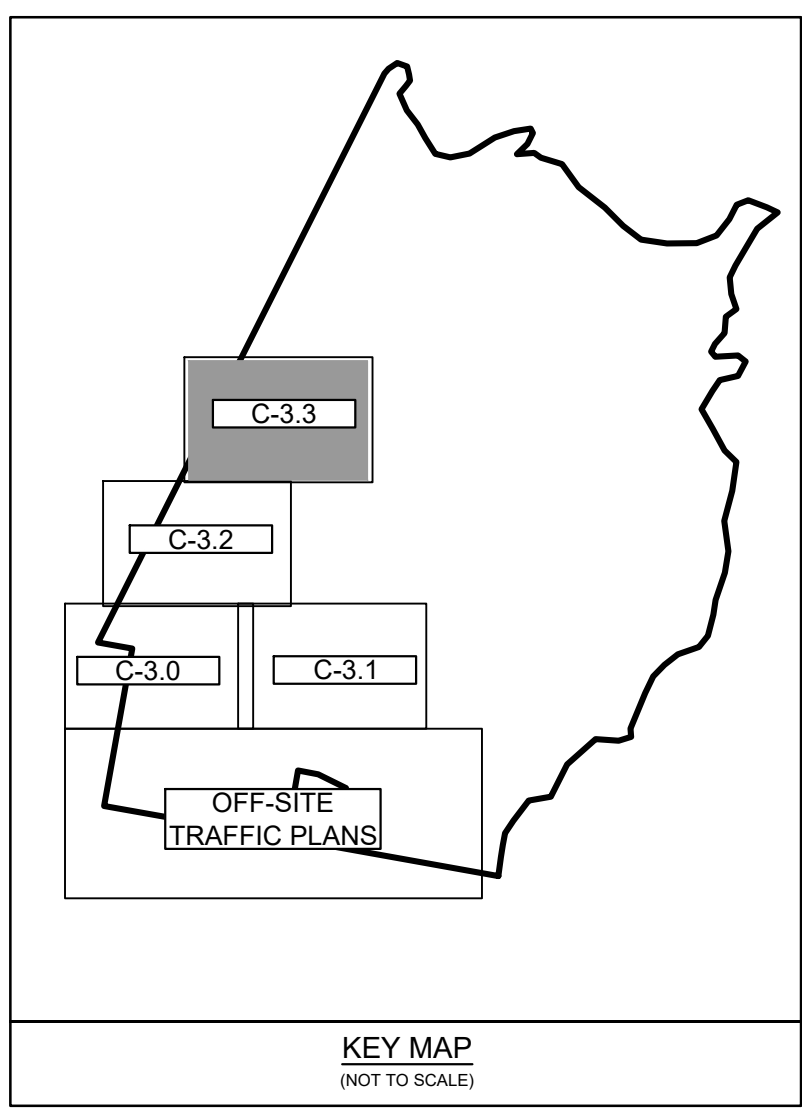
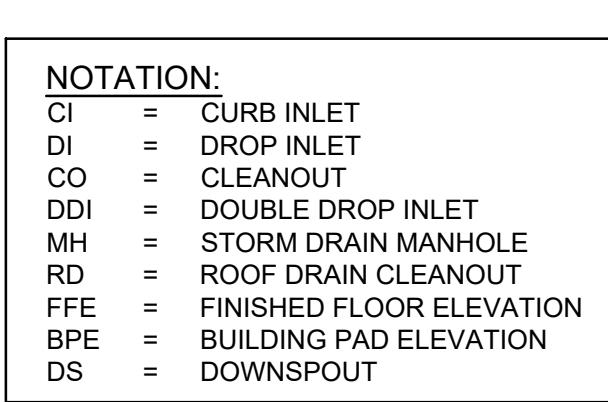
PROJECT STATUS:
DESIGN: PRELIMINARY LAYOUT
FINAL DESIGN
RELEASED FOR BIDDING

DRAWING INFORMATION:
DATE: 04/23/20
SCALE: 1" = 20'
DRAWN: RPE
CHECKED: RPE

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
ROBERT P. BALLARD
031591
04/23/20

C-3.1

PEI JOB#: 19248.PE



- STORMWATER NOTES:**
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PIN - 219818405420
PAR ID - 029ND006
WARD PAMELA
ZONING - RMH
BOOK 1262, PAGE 670
AP BOOK 10, PAGE 28

HVAC

EX. 1-STORY ROTC BUILDING TO REMAIN
4,141 SF

EX. GRAVEL DRIVE TO REMAIN UNOBSTRUCTED DURING CONSTRUCTION FOR FIRE ACCESS (WIDTH VARIES-12-20')

EX. BASEBALL DIAMOND

PROPOSED SILT FENCE, TYP.
SEE DETAILS. SILT FENCE OFFSET 1-FT FROM LOD ON PLANS FOR CLARITY.

EX. LIGHTPOLE TO REMAIN, TYP.

PROPOSED LIMITS OF DISTURBANCE, TYP.
LOD = 0.37 AC.
TOTAL PROJECT LOD = 4.00 AC.

PROPOSED DOWNSPOUT (DS) LOCATION. ROOF DRAINAGE TO BE DIRECTED TO DOWNSPOUTS AND ONTO SPLASH PADS, TYP.

EX. PROPERTY LINE, TYP. (STORMWATER PROJECT BOUNDARY)

EX. FENCE TO REMAIN

PROPOSED CONSTRUCTION ENTRANCE. SEE DETAILS.

CONTRACTOR TO REPLACE EX. FENCING REMOVED AND/OR DAMAGED DURING CONSTRUCTION AND MATCH PRE-CONSTRUCTION CONDITIONS.

PROPOSED 1-STORY ROTC BLDG
3,000 SF FOOTPRINT
HEIGHT = 16'
FFE = 19.15'

19.15FFE 18.00PG DS

19.15FFE 18.30PG DS

19.15FFE 18.65PG DS

19.15FFE 19.00PG DS

19.15FFE 19.13SW DS

19.15FFE 19.00PG DS

19.15FFE 19.13SW DS

18.95EG

18.99SW/EG MATCH EX

18.82SW/EG MATCH EX

18.89EG

EX. SSMH INV=12.94

18.82SW/EG MATCH EX

18.76SW/EG MATCH EX

18.79EG

EX. 6" WATER MAIN

EX. 6" WATER MAIN

EX. GRAVEL DRIVE (WIDTH VARIES-12-20')

EX. GRAVEL PARKING LOT TO REMAIN

FENCE

EX. 1-STORY BLDG.

DI RIM=18.32 INV IN(W)=15.44 INV IN(E)=15.37

WALL

NCGRIONAD3(2011)

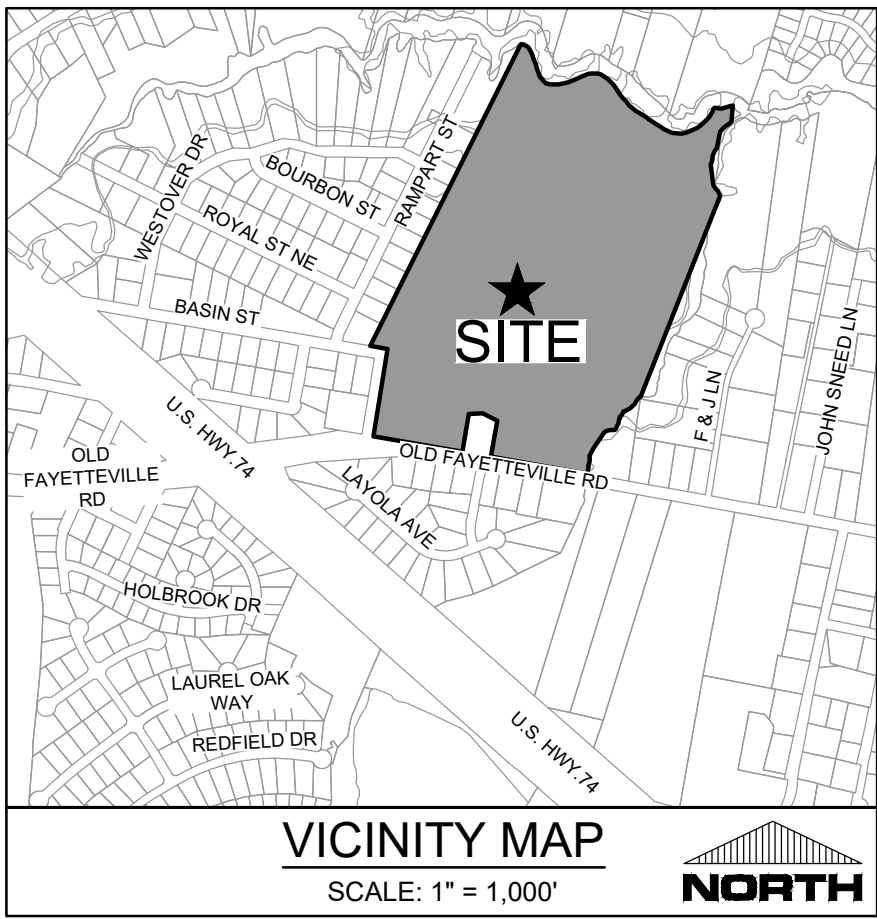
GRAPHIC SCALE

0 10 20 40 80

SCALE: 1" = 20'

FINAL DESIGN - RELEASED FOR BIDDING ONLY

PEI JOB#:	19248	PE
C-3.3	04/23/20	
PROJECT STATUS	CONCEPTUAL LAYOUT PRELIMINARY LAYOUT FINAL DESIGN RELEASED FOR CONSTRUCTION	DRAINAGE INFORMATION DATE: 04/23/20 DESIGNED: T AED CHECKED: RPB
GRADING-DRAINAGE-EC PLAN	N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403 NC License #: C-2846
REVISIONS:		
CLIENT INFORMATION:		



SITE INFORMATION
OWNER INFORMATION: BRUNSWICK COUNTY SCHOOLS
35 REFERENDUM DRIVE NE
BOLIVIA, NC 28422
NORTH BRUNSWICK HIGH SCHOOL
114 SCORPION DRIVE N.E.
LELAND, NC 28451
037DA005
219819500074
BOOK 3631, PAGE 1079
O&I
HIGH SCHOOL
HIGH SCHOOL
59.74 AC (2,602,274 SF)
THIS PARCEL LIES WITHIN AN AREA OF
MINIMAL FLOOD HAZARD (ZONE X) AS
INDICATED BY FEMA FLOOD ZONE MAP
NUMBER 3720219700K BEARING AN
EFFECTIVE DATE OF 08/28/2018.

PROJECT NAME:
PROJECT ADDRESS:
PARCEL ID:
PARCEL PIN:
RECORDED DEED BOOK:
CURRENT ZONING:
EXISTING USE:
PROPOSED USE:
TOTAL SITE AREA:
FLOOD INFORMATION:

UTILITY INFORMATION
CONTRACTOR SHALL INSTALL WATER AND SEWER SERVICES IN ACCORDANCE WITH H2GO AND TOWN OF LELAND RESPECTIVELY STANDARD DETAILS AND SPECIFICATIONS.

SANITARY SEWER
THIS PROJECT IS PROPOSING A 4" SANITARY SEWER SERVICE FOR BOTH THE ROTC AND CLASSROOM ADDITIONS. THESE SERVICES WILL BE CONNECTING TO THE EXISTING MAINS AND/OR SERVICES AS SHOWN. THERE ARE NO PROPOSED SANITARY SEWER MAINS WITH THIS PROJECT. THERE ARE NO PROPOSED SANITARY SERVICES FOR THE CAFETERIA ADDITION. ALL SANITARY SEWER ALLOCATION PROVIDED BY TOWN OF LELAND.

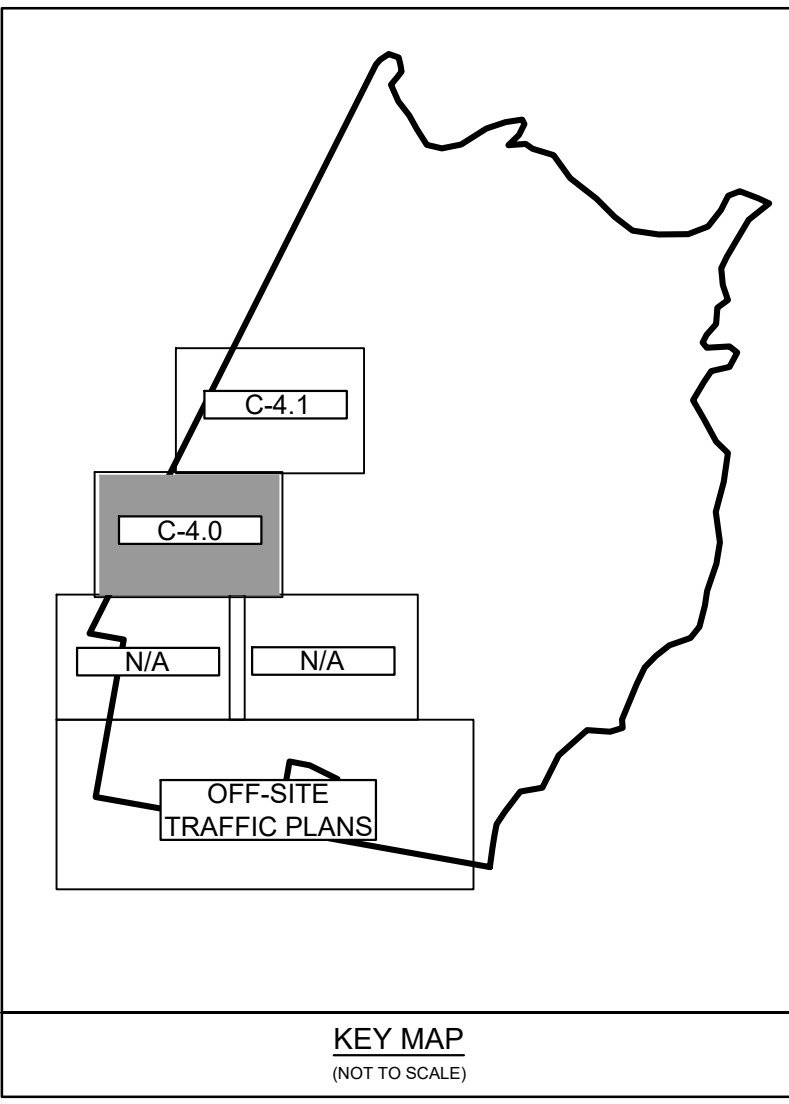
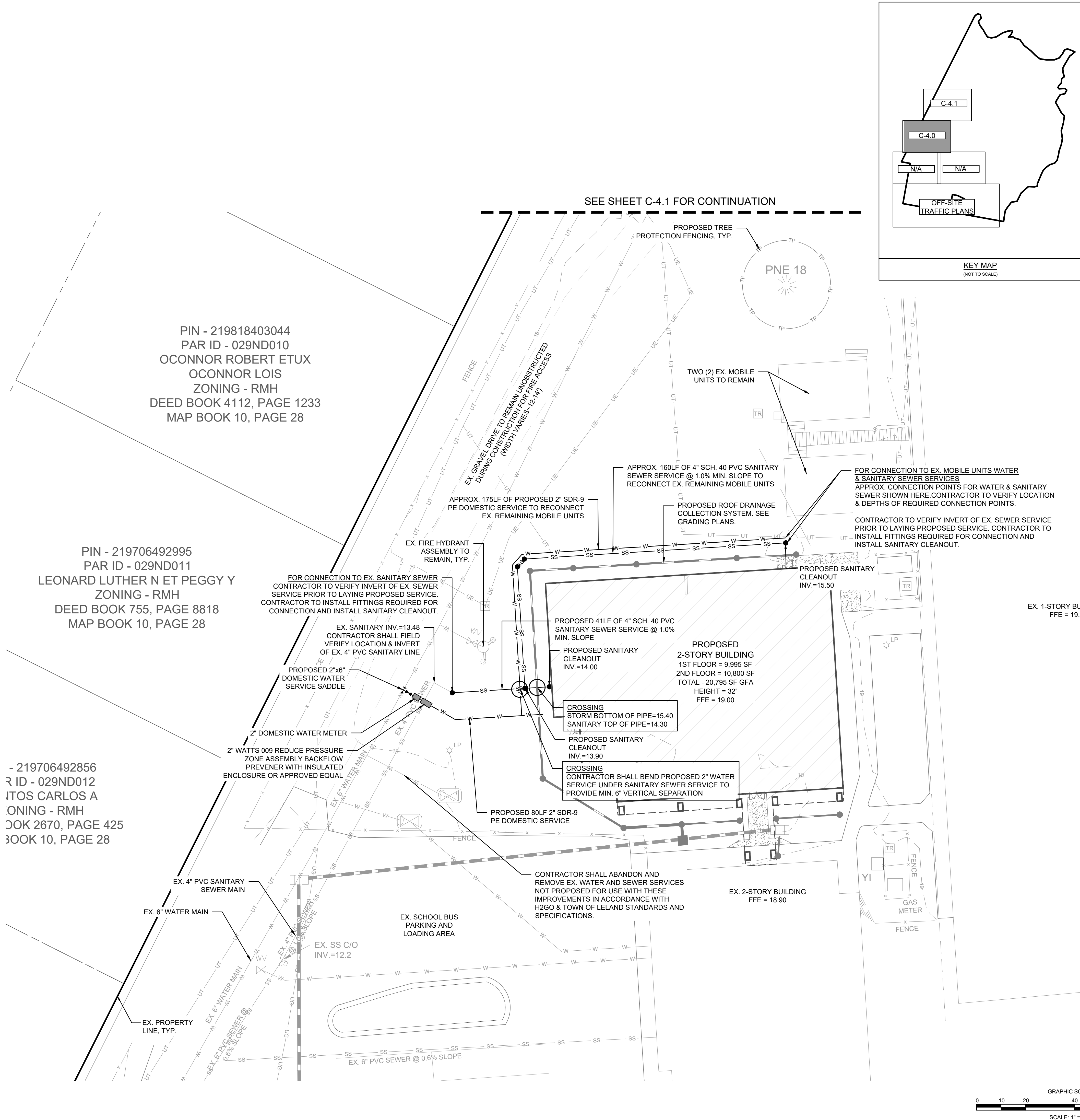
CONTRACTOR TO COORDINATE SANITARY TIE-IN TO EXISTING FACILITIES WITH TOWN OF LELAND AND BRUNSWICK COUNTY SCHOOLS. TOWN OF LELAND INSPECTOR TO BE ON-SITE DURING TAPPING OF EX. SEWER FACILITIES. SANITARY IN-LINE PLUGS ARE REQUIRED AT ALL CONNECTION POINTS TO EX. SEWER FACILITIES AND MUST REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE TOWN OF LELAND INSPECTIONS DEPARTMENT HAS COMPLETED INSPECTIONS.

WATER
THIS PROJECT IS PROPOSING A 2" DOMESTIC SERVICE FOR THE ROTC BUILDING ADDITION AND A 2" DOMESTIC SERVICE FOR THE CLASSROOM ADDITION. THESE SERVICES WILL BE CONNECTING TO EXISTING WATER MAINS AND/OR SERVICES AS SHOWN. THERE ARE NO PROPOSED WATER MAINS WITH THIS PROJECT. THERE ARE NO PROPOSED WATER SERVICES FOR THE CAFETERIA ADDITION. ALL DOMESTIC WATER ALLOCATION PROVIDED BY H2GO.

CONTRACTOR TO COORDINATE WATER TIE-IN TO EXISTING FACILITIES WITH H2GO AND BRUNSWICK COUNTY SCHOOLS. H2GO INSPECTORS ARE REQUIRED TO BE ON-SITE DURING TAPPING OF THE EX. FACILITIES.

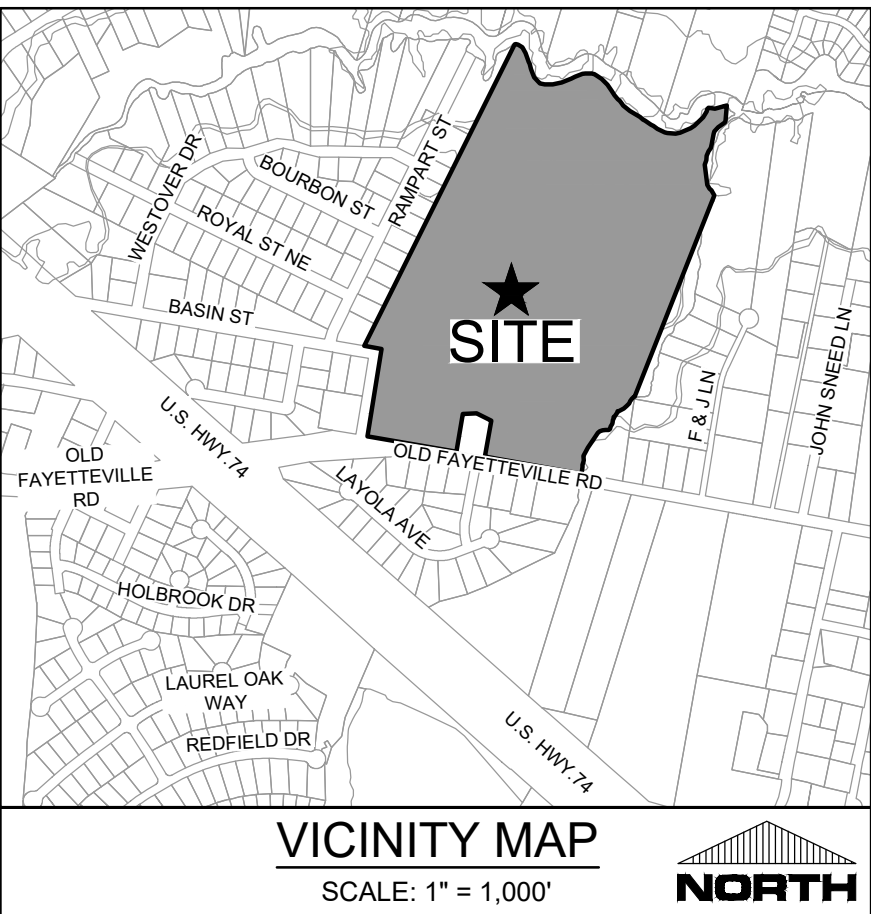
- UTILITY NOTES: (NCAC 15A.02T.0305 / T15A.18C.0906)**
1. WATER MAINS SHALL BE LAID SO AS TO PROVIDE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET FROM SEWERS. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, THE WATER MAIN CAN BE INSTALLED AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, EITHER IN A SEPARATE TRENCH, OR IN THE SAME TRENCH ON A BENCH OF UNDISTURBED EARTH.
 2. WHEN CROSSING A WATER MAIN OVER A SEWER, THE WATER MAIN SHALL BE LAID AT LEAST 18 INCHES ABOVE THE SEWER. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH JOINTS THAT MEET WATER MAIN STANDARDS. THE DUCTILE IRON PIPE SHALL EXTEND 10 FEET ON EACH SIDE OF THE CROSSING WITH A SECTION OF WATER MAIN PIPE CENTERED ON THE CROSSING.
 3. CROSSING A WATER MAIN UNDER A SEWER, WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
 4. WHERE VERTICAL CLEARANCE IS LESS THAN 24" BETWEEN SANITARY SEWER AND STORM DRAIN, SANITARY SEWER SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.
 5. WHERE VERTICAL CLEARANCE IS LESS THAN 18" BETWEEN WATER MAIN AND STORM DRAIN, WATER MAIN SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.

- FIRE & LIFE SAFETY NOTES:**
1. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS WITHIN ANY DEVELOPMENT.
 2. HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
 3. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
 4. A MINIMUM OF 4' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
 5. LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS OR ACCESS TO THESE APPARATUSES. A 3-FOOT (3') CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF HYDRANTS AND FDC.
 6. HYDRANTS SHOULD BE 18 INCHES FROM THE CENTERLINE OF THE STEAMER CONNECTION TO FINISH GRADE, THIS INCLUDES LANDSCAPING. STEAMER CONNECTIONS SHALL FACE THE STREET.
 7. FIRE HYDRANTS SHOULD NOT BE BLOCKED BY PARKING SPACES OR UTILITIES.
 8. A KNOX BOX IS REQUIRED FOR ALL NEW BUILDINGS.



FINAL DESIGN - RELEASED FOR BIDDING ONLY

REVISIONS:		CLIENT INFORMATION:	
		BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
PARAMOUNT ENGINEERING, INC.		N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS:		DRAWING INFORMATION:	
DATE: 04/23/20		SCALE: 1" = 20'	
DESIGNER: R. BALLARD		CHECKED: R. BALLARD	
DRAWN: R. BALLARD		PEI JOB#: 19248.PE	
SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER		C-4.0	



SITE INFORMATION
OWNER INFORMATION:
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NORTH BRUNSWICK HIGH SCHOOL
114 SCORPION DRIVE N.E.
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PARCEL ID:
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CURRENT ZONING:
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TOTAL SITE AREA:
FLOOD INFORMATION:

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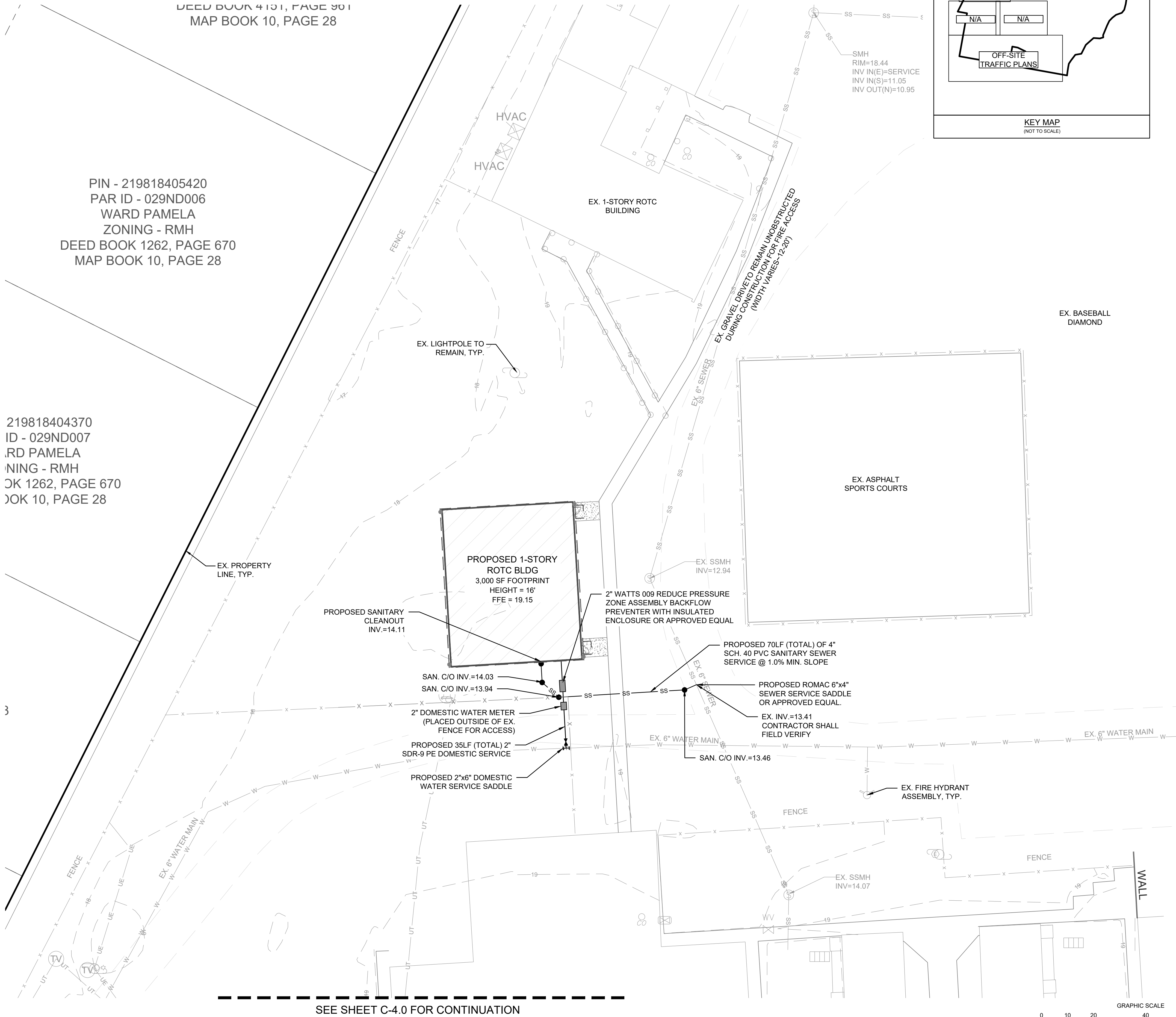
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LELAND.

CONTRACTOR TO COORDINATE SANITARY TIE-IN TO EXISTING FACILITIES WITH TOWN OF
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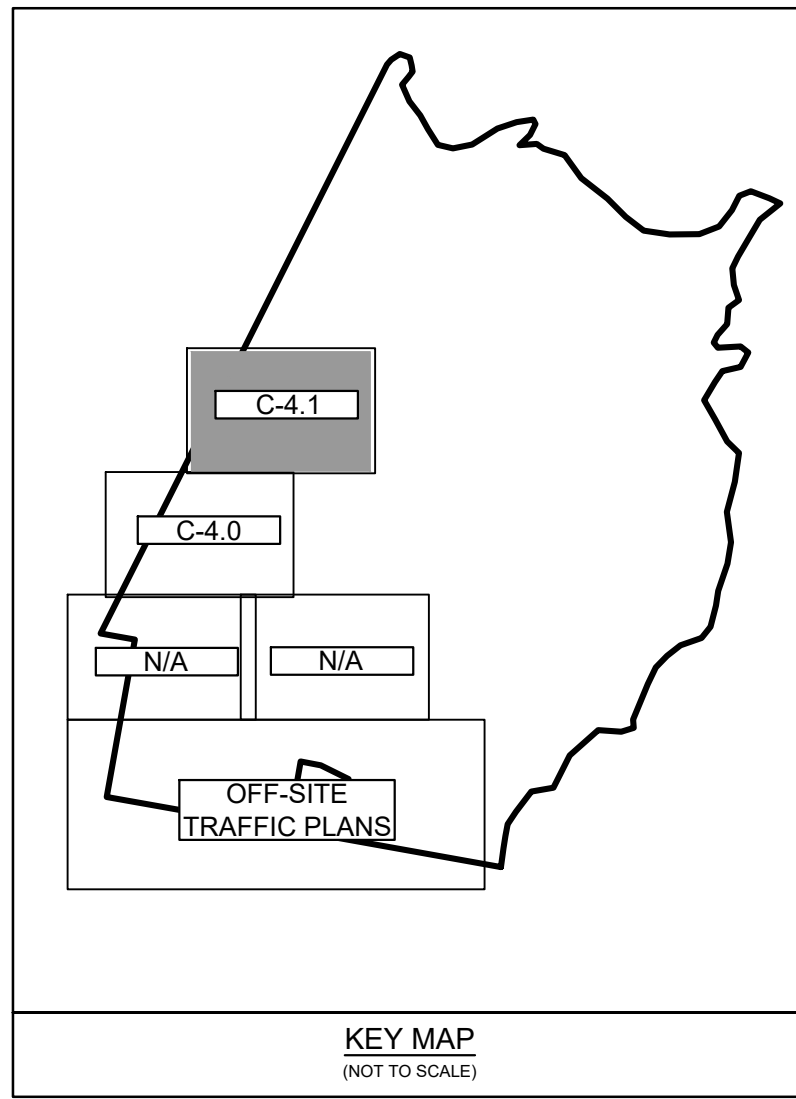
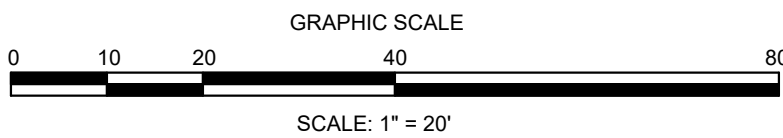
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 8. A KNOX BOX IS REQUIRED FOR ALL NEW BUILDINGS.



SEE SHEET C-4.0 FOR CONTINUATION



REVISIONS:	
CLIENT INFORMATION:	
PROJECT INFORMATION:	
UTILITY PLAN	
N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS:	DRAWING INFORMATION:
DESIGNED BY: [Signature]	DATE: 04/23/20
PREPARED BY: [Signature]	SCALE: 1" = 20'
FINAL DESIGN: [Signature]	CHECKED: [Signature]
RELEASED FOR CONSTRUCTION: [Signature]	
SEAL: [Professional Engineer Seal]	
C-4.1	
PEI JOB#: 19248.PE	



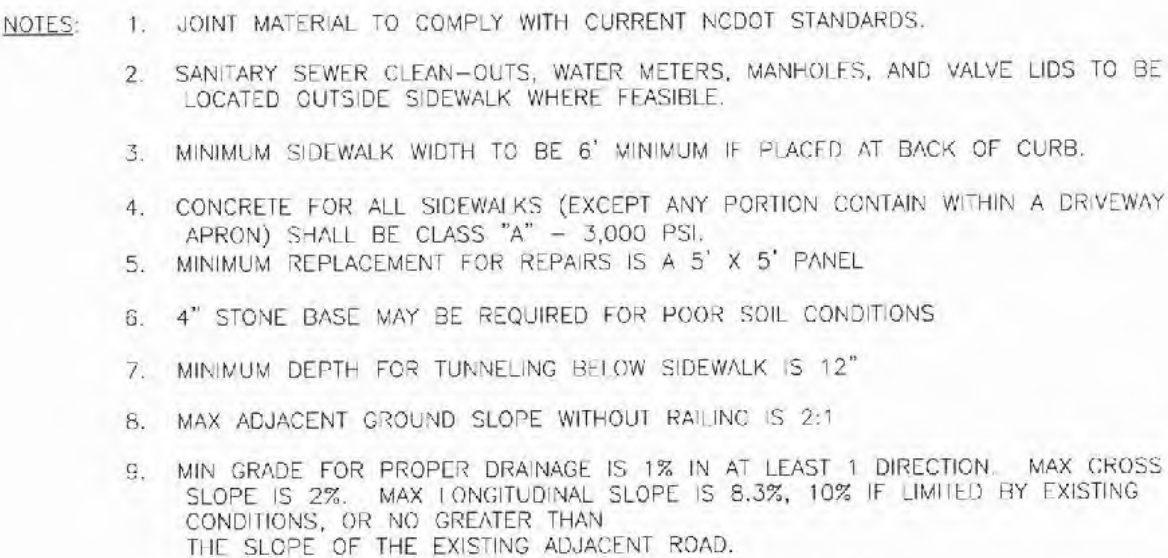
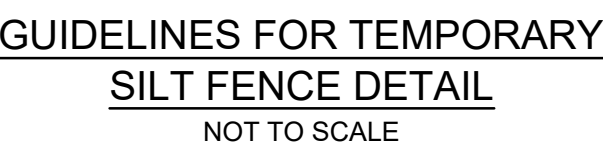
NOTE:
REFER TO THE "GEOTECHNICAL EXPLORATION REPORT FOR NBHS
BUILDING ADDITIONS" PREPARED BY SM&E DATED AUGUST 21, 2019
FOR FURTHER DETAILED PAVEMENT SECTION INFORMATION



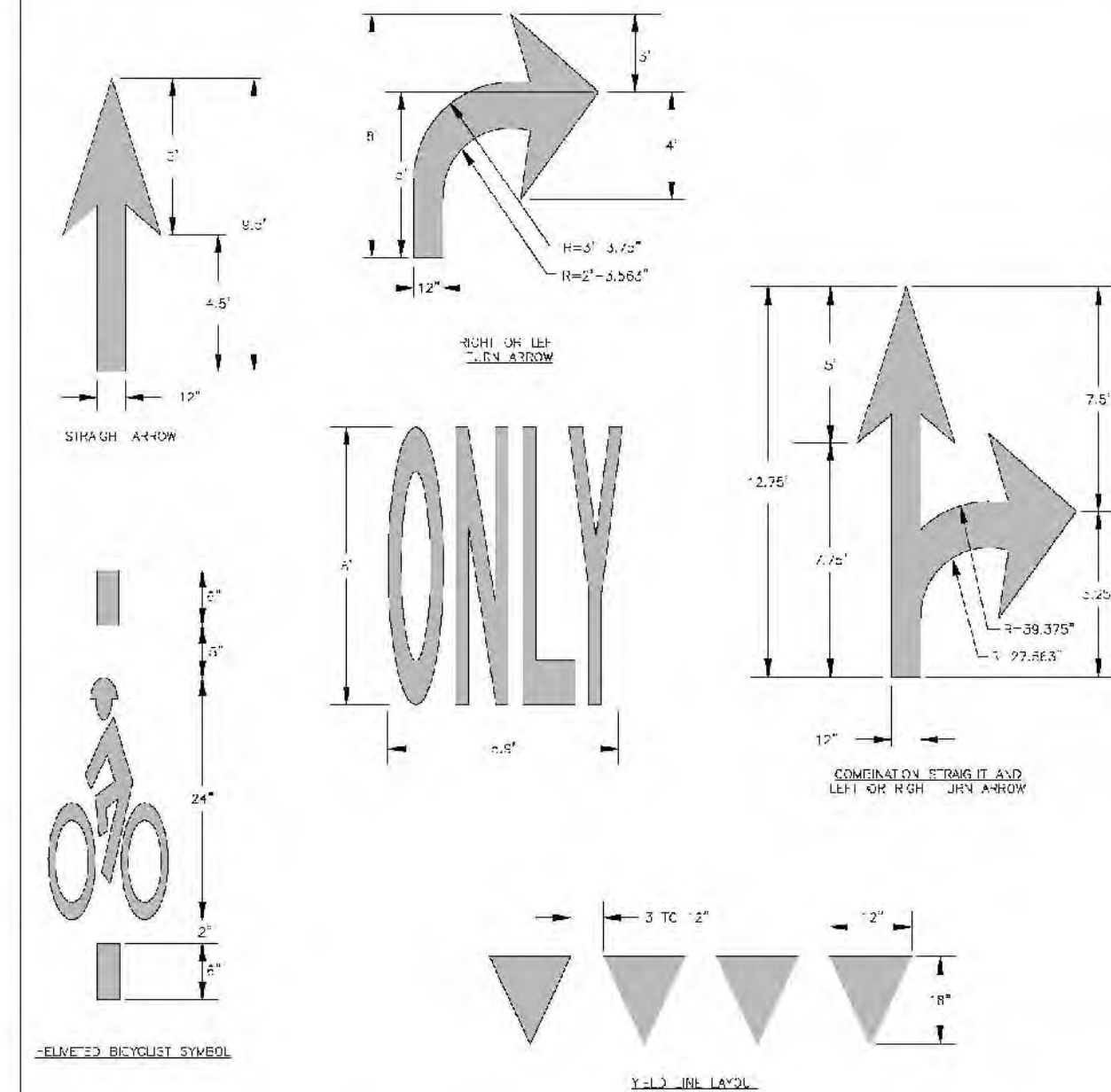
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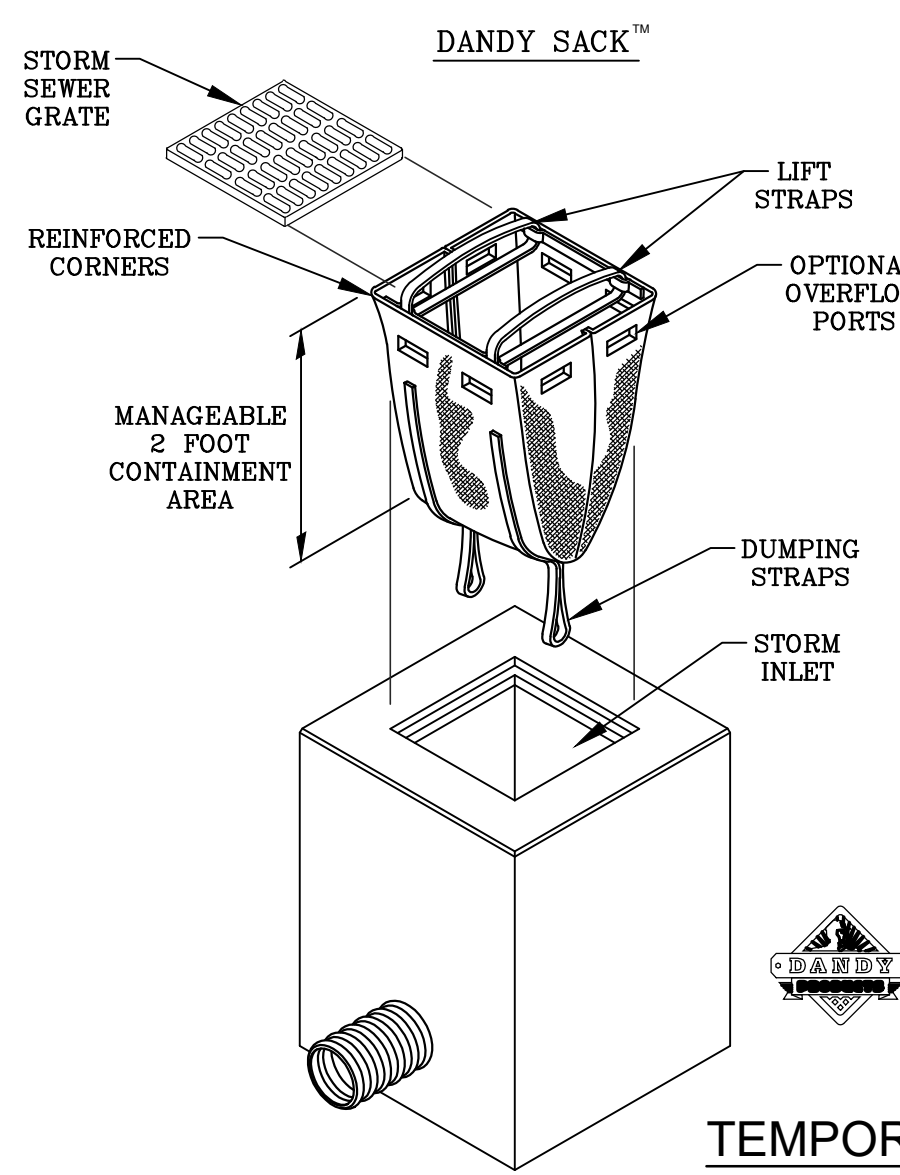
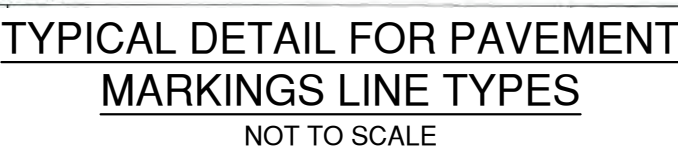
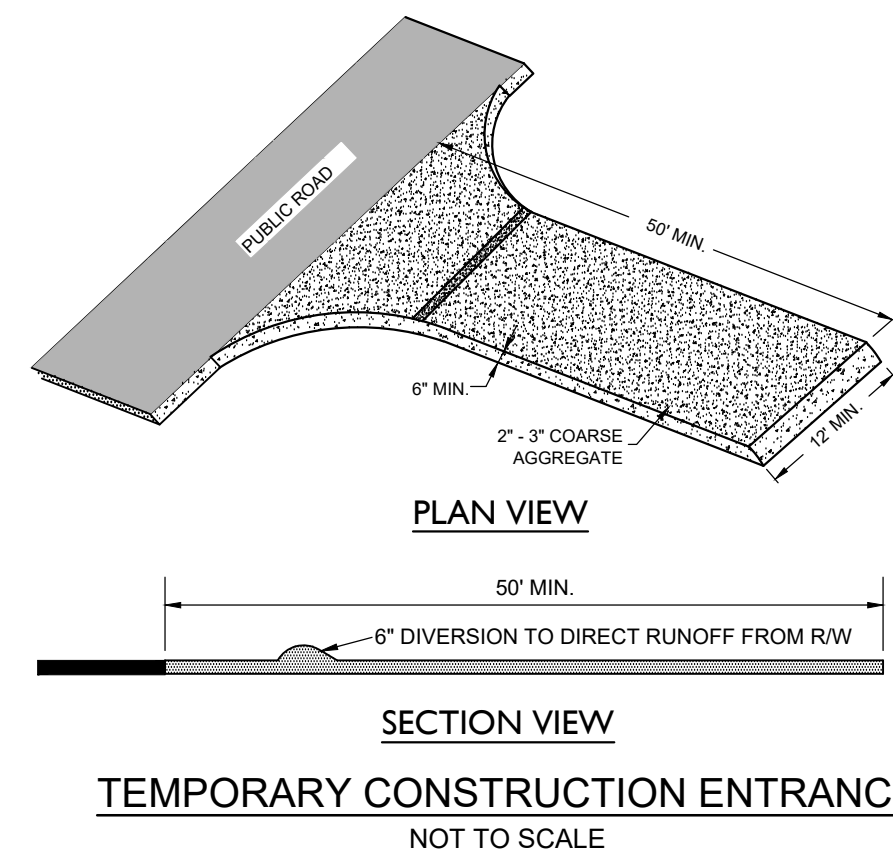
NOTE:
FOR PARKING & DRIVE AREAS WITHIN DUKE ENERGY R.O.W., THAT DO NOT HAVE CURB & GUTTER PROPOSED AS EDGE TREATMENT, EXTEND ABC & SUBGRADE MIN. 1FT PAST ACP SURFACE



TYPICAL SIDEWALK DETAIL
NOT TO SCALE

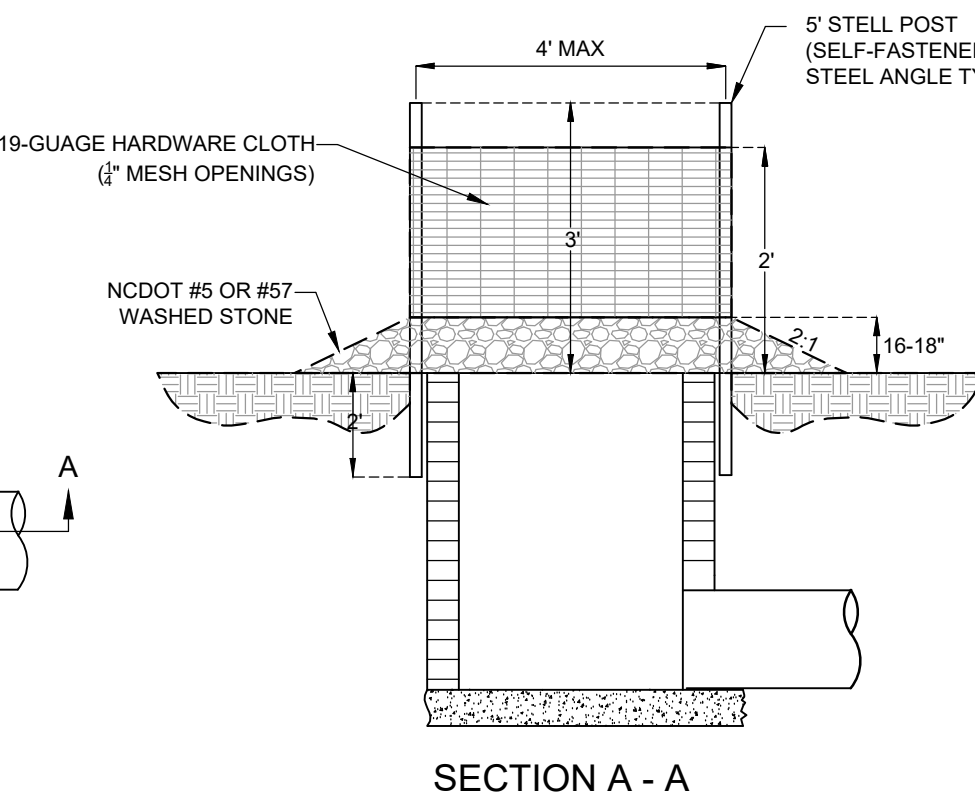
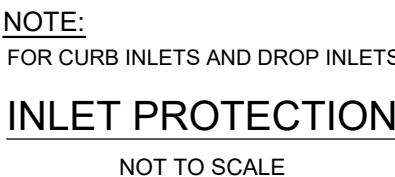


TYPICAL DETAIL FOR PAVEMENT MARKINGS & SYMBOLS



TEMPORARY DANDY SACK® INLET PROTECTION

NOTE
CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT IN A DESIGNATED DISPOSAL AREA AND NOT WITHIN LIMITS OF DISTURBANCE. SEDIMENT SHALL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL, BLOCK AND GRAVEL, OR ROCK-PIPE INLETS, WHEN IT REACHES HALF-FILLED. ROCK WILL BE CLEANED OR REPLACED WHEN NO LONGER DRAINS. SILT SACKS, BEAVER DAMS, SANDY SACKS, AND SOCKS NEED CHECKING EVERY WEEK AND AFTER RAIN.



**Know what's below.
Call before you dig.**

REGULAR FLOW DANDY SACK™ (BLACK)				
Mechanical Properties	Test Method	Units	MARV	
Grab Tensile Strength	ASTM D 4632	ksi (bs)	1.78	400 (x 140 (315))
Grab Tensile Elongation	ASTM D 4632	%	15	15
Puncture Strength	ASTM D 3786	ksi (bs)	0.67	150 (800 (150))
Mullen Burst Strength	ASTM D 3786	kPa (psi)		5508 (800)
Tripodret Tensile Strength	ASTM D 4632	ksi (bs)	0.67	150 (x 0.75 (165))
UV Resistance	ASTM D 4350	%	80	
Apparent Opening Size	ASTM D 4751	mm (US Sieve Size)	0.425	40
Flow Rate	ASTM D 491	gal/min	0.828	70 (20)
Permeability	ASTM D 491	1/min/mil (gal/min/ft²)		

HI-FLOW DANNY SACK™ (SAFETY ORANGE)				
Mechanical Properties	Test Method	Units	MARV	
Gross Tensile Strength	ASTM D 4632	kN (lbs)	1.62	365 (89) (200)
Gross Tensile Elongation	ASTM D 4632	%	10	
Puncture Strength	ASTM D 4833	kN (lbs)	0.40	90
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097	500
Tearing Strength	ASTM D 4533	kN (lbs)	0.51	113 (25) (72)
UV Resistance	ASTM D 4355	%	90	
Apparent Opening Size	ASTM D 4251	mm (US Sieve)	5925	40
Flame Retardant	ASTM D 4251	l/min/m ² (GJ/min/l ft ²)	0.427	1.45
Permeability	ASTM D 4941		2.1	

*Note: All Dandy Sacks™ can be ordered with our optional oil absorbent pillows

REVISIONS:

CLIENT INFORMATION:

PARAMOUNT

BECKER MORGAN GROUP
3333 JAECKLE DRIVE, SUITE 120
WILMINGTON, NC 28403

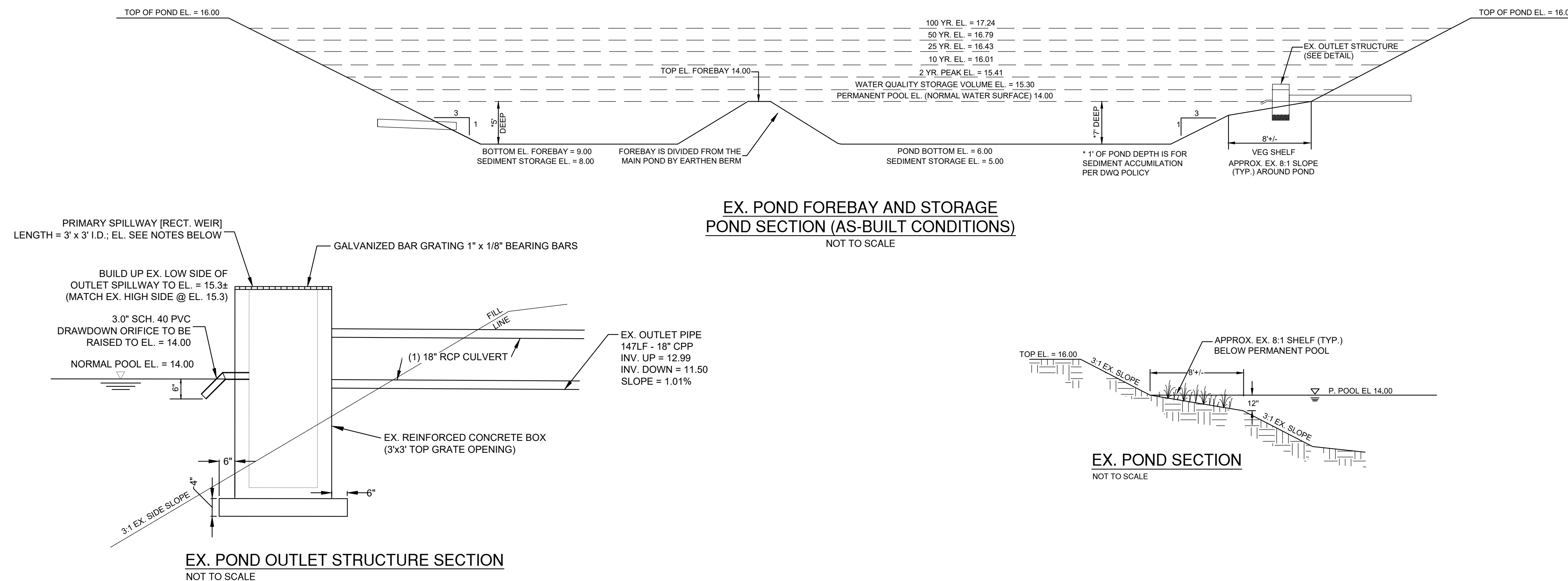
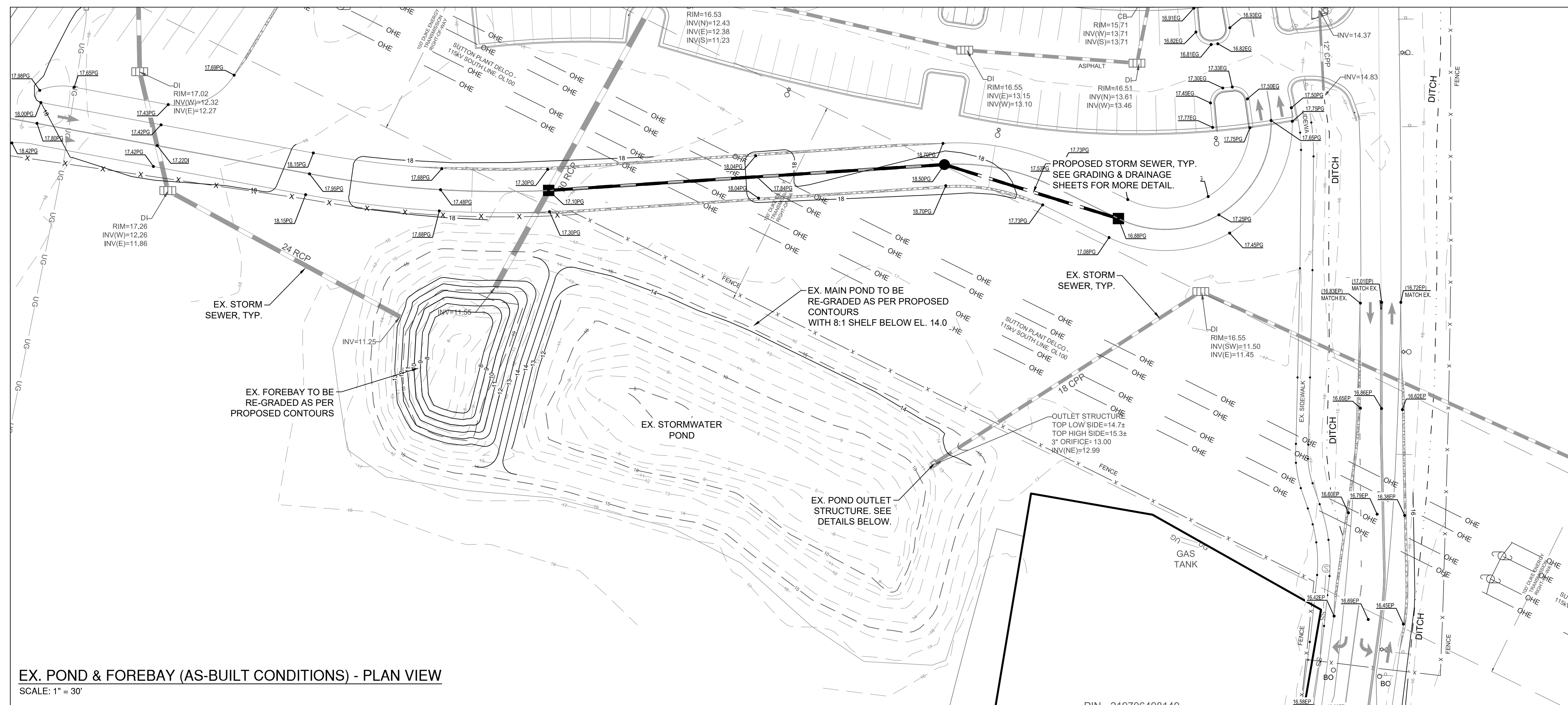
DETAILS

PROJECT STATUS

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL
031591
ENGINEER
ROBERT P. BALLAND
04/23/20

C-5.0

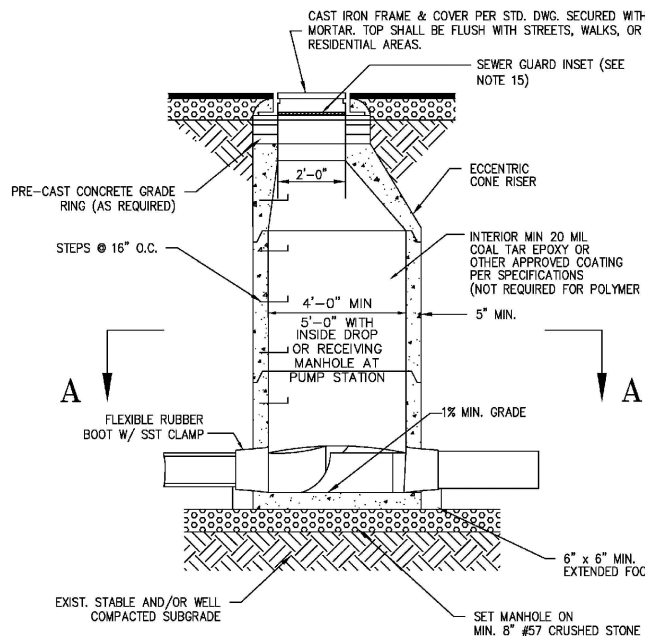
PEI JOB#: 19248.PE



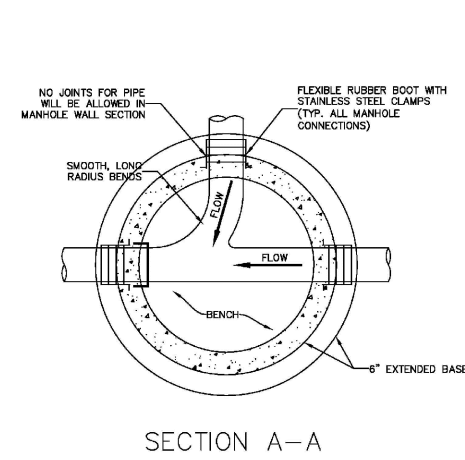
FINAL DESIGN - RELEASED FOR BIDDING ONLY

<div>PEI JOB#:</div> <div>19248.PE</div>	<div><div>04/23/20</div></div>	<div>PROJECT STATUS</div> <div>CONCEPTUAL LAYOUT:</div> <div>PRELIMINARY LAYOUT:</div> <div>RELEASED FOR CONST:</div>	<div>DETAILS</div> <div>EX. AS-BUILT POND DETAILS</div> <div>N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS</div> <div>114 SCORPION DRIVE, LELAND</div> <div>BRUNSWICK COUNTY, NC</div>	<div><div>PARAMOUNT ENGINEERING, INC.</div><div>122 Cinema Drive</div><div>Wilmington, North Carolina 28403</div><div>(910) 791-6707 (O) (910) 791-6760 (F)</div><div>NC License #: C-2846</div></div>	<div>CLIENT INFORMATION:</div> <div>BECKER MORGAN GROUP</div> <div>3333 JAECKLE DRIVE, SUITE 120</div> <div>WILMINGTON, NC 28403</div>	<div>REVISIONS:</div> <div></div> <div></div> <div></div> <div></div>
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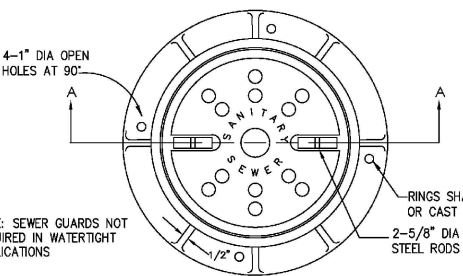
- NOTES:
1. PRECAST CONCRETE MANHOLES SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM C-138. ALL SURFACES SHALL BE SMOOTH AND EVEN EXCEPT WITH A MINIMUM OF HORIZONTAL, VERTICAL AND CORNER INTERFACES.
 2. JOINTS BETWEEN MANHOLES SETTING SHALL BE REINFORCED WITH WATERPROOFING USING EPOXY OR FIBER GLASS TAPES CONFORMING WITH ASTM C-110 AND WITH BRICK CONCRETE AND ADHESIVE TAPES.
 3. EXTERIOR JOINTS SHALL BE SEALED WITH A 4" WIDE BUTYL RUBBER JOINT.
 4. ADDITIONAL JOINTS SHALL BE INSTALLED TO PREVENT CRACKING FROM EXISTING MANHOLES SETTING DURING FROM JOINT MANHOLES PER PRECAST CONCRETE MANHOLE DETAIL S-1.
 5. HORIZONTAL JOINTS SHALL BE REINFORCED WITH 2" DIA. STEEL BARS FOR CONNECTION OF PIPE TO MANHOLE SHALL BE PRECAST OR CASTED. QUARTER OF PIPE SHALL NOT EXCEED FIFTEEN FEET.
 6. CONCRETE JOINTS SHALL BE REINFORCED WITH 2" DIA. STEEL BARS FOR CONNECTION OF PIPE TO MANHOLE SHALL BE PRECAST OR CASTED. QUARTER OF PIPE SHALL NOT EXCEED FIFTEEN FEET.
 7. MANHOLE INVERTS SHALL BE INSTALLED LONG BRICK AND MORTAR. MANHOLES SHALL BE PRECAST MANHOLES SETTING WITH POLYMER MANHOLES.
 8. ALL JOINTS SHALL BE SEALED WITH BUTYL RUBBER JOINTS. JOINTS SHALL BE SEALED WITH BUTYL RUBBER JOINTS.
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 11. SEWER MAIN PENETRATIONS AND/OR SERVICE LATERAL PENETRATIONS EXISTING AT 30" OR LESS ABOVE THE MANHOLE INVERT SHALL HAVE A SLAB CONSTRUCTED OF BRICK AND MORTAR (SEE DETAIL S-1).
 12. ALL PENETRATIONS EXISTING MANHOLE AT GREATER THAN 30" SHALL BE AN INVERT FROM MANHOLE DETAIL S-1.
 13. ALL MANHOLES SHALL BE SEALED WITH BUTYL RUBBER JOINTS. JOINTS SHALL BE SEALED WITH BUTYL RUBBER JOINTS.
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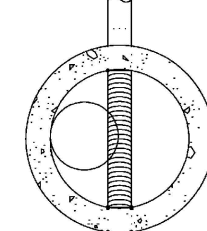
PRECAST CONCRETE MANHOLE
DETAIL S-1



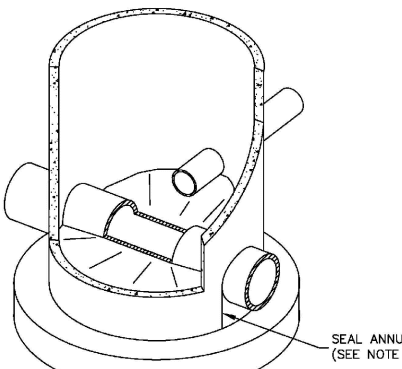
STANDARD MANHOLE RING AND COVER
DETAIL S-2



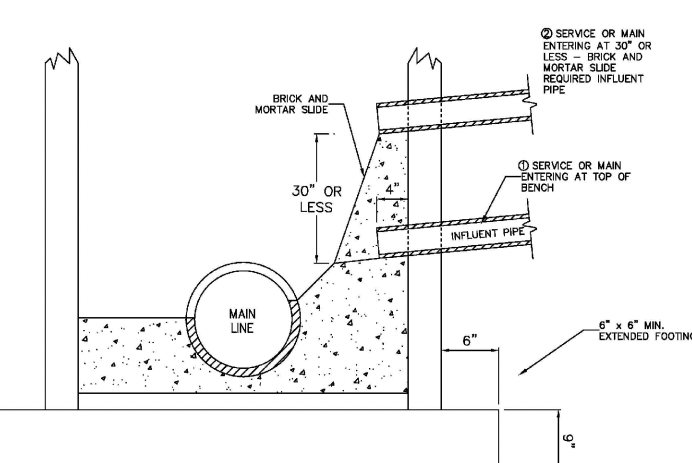
WATERTIGHT MANHOLE RING AND COVER
DETAIL S-3



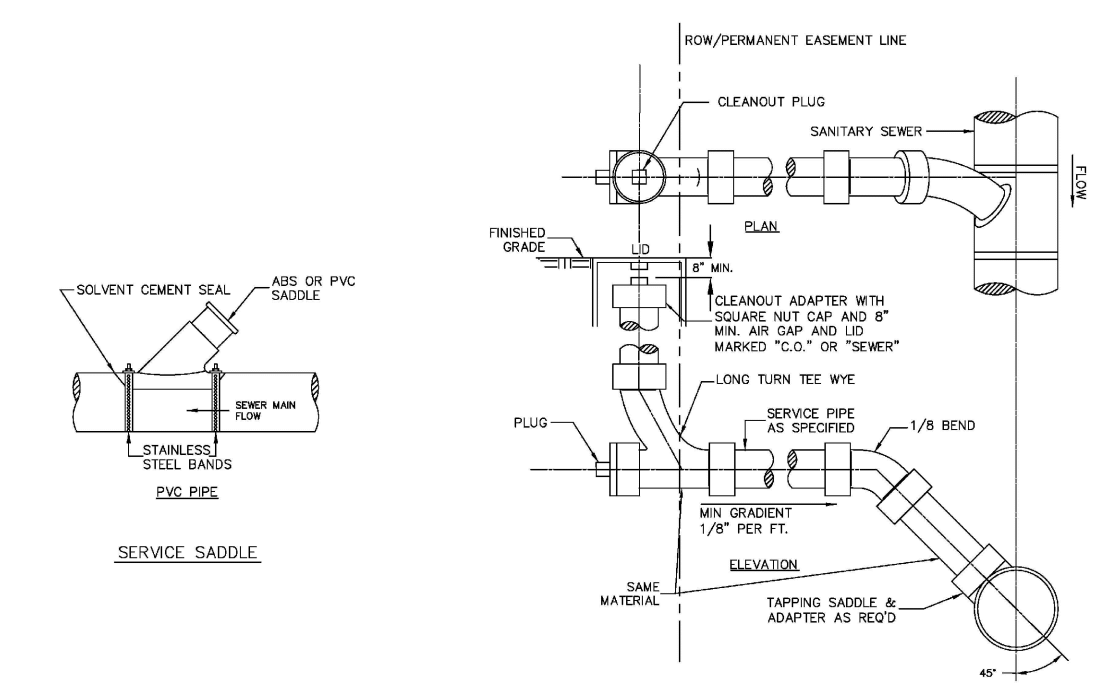
PRECAST CONCRETE DOGHOUSE MANHOLE
DETAIL S-4



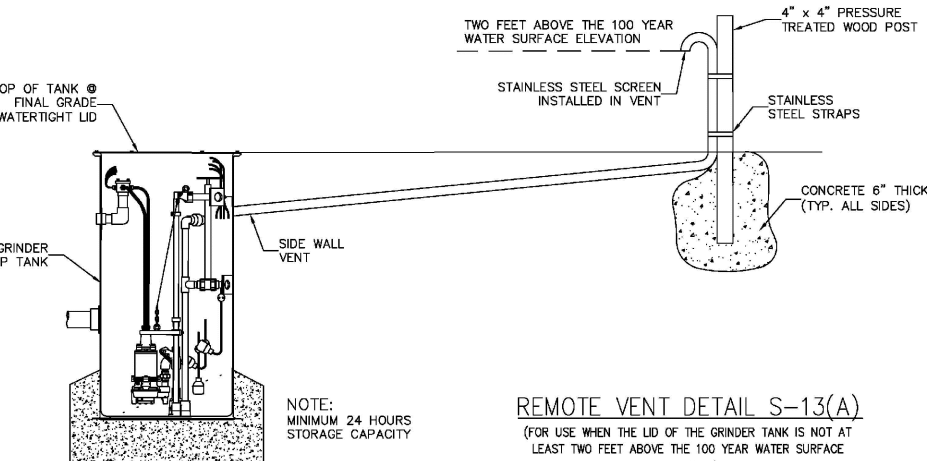
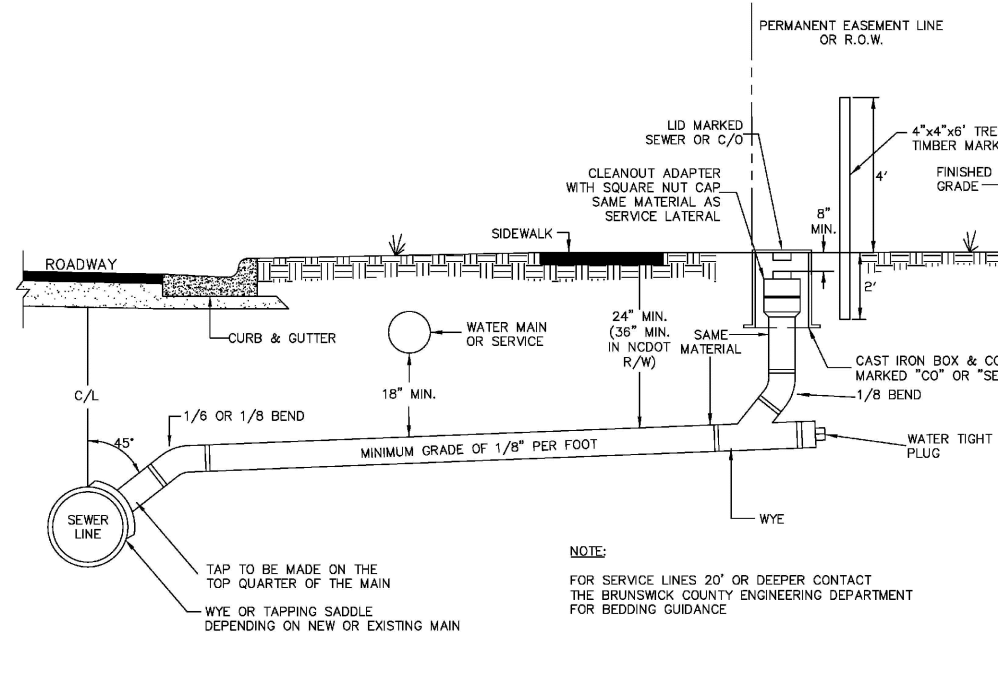
SHALLOW PRECAST CONCRETE
MANHOLE WITH FLAT TOP
DETAIL S-5



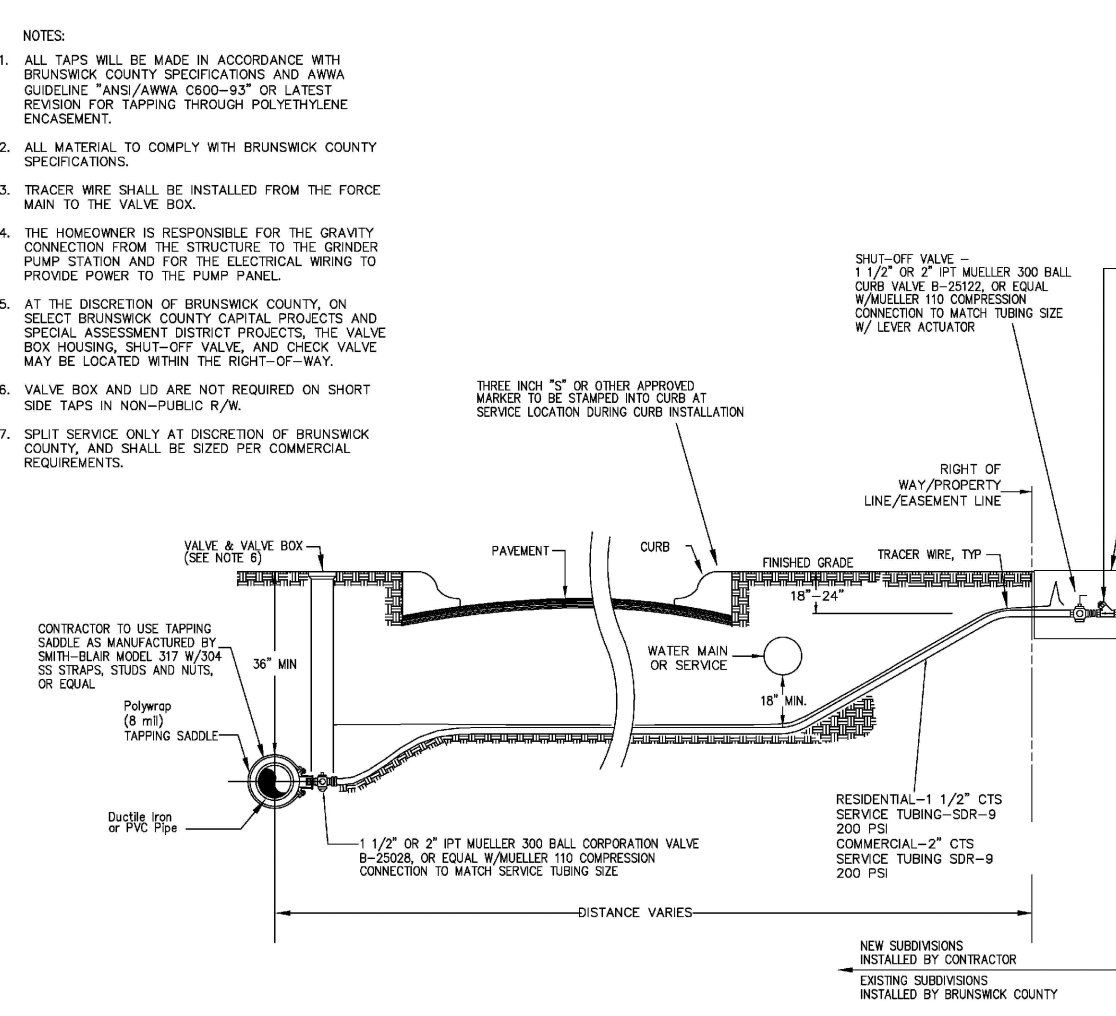
CROSS SECTION AT EXISTING MANHOLE
MAINS OR SERVICES ENTERING MANHOLE
DETAIL S-6



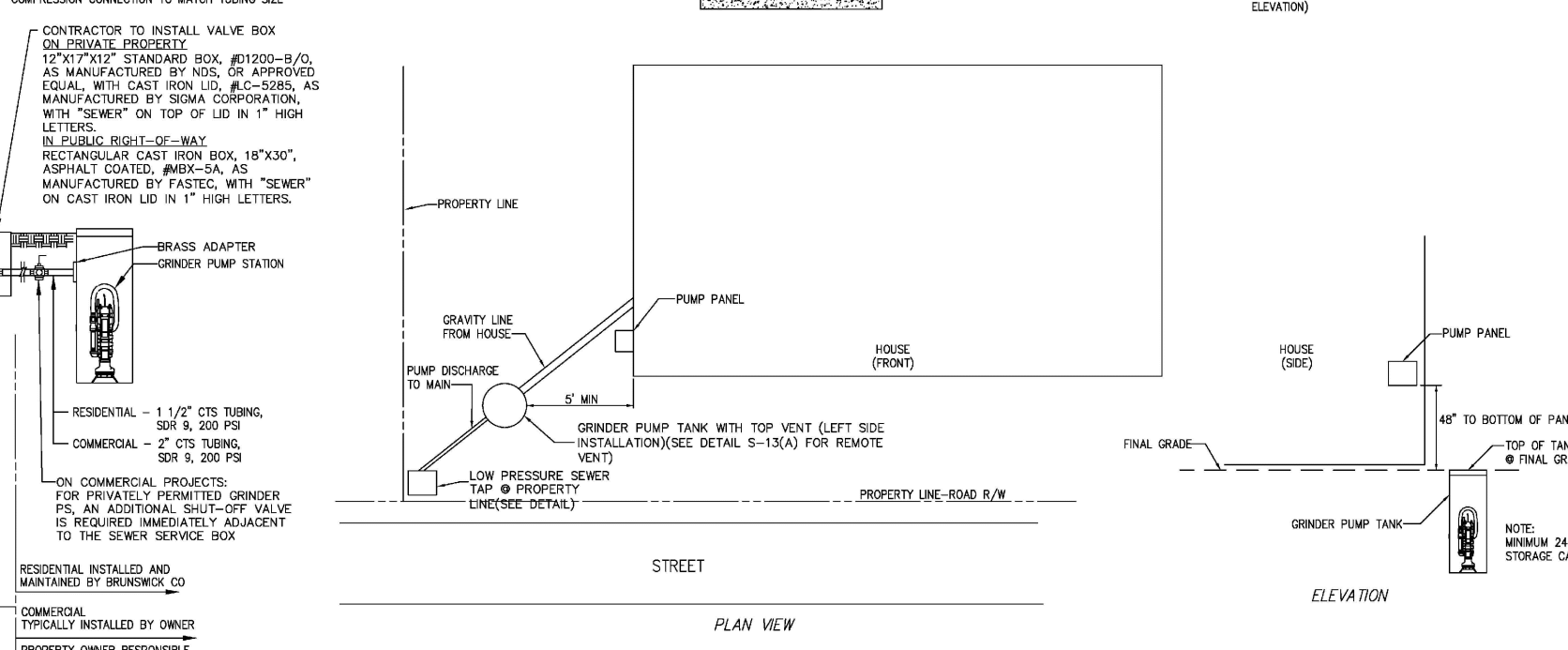
SANITARY SEWER GRAVITY TAPS & SERVICE LATERALS
DETAIL S-11



REMOTE VENT DETAIL S-13(A)



LOW PRESSURE SEWER CONNECTION
DETAIL S-12



TYPICAL RESIDENTIAL GRINDER PUMP STATION LOCATION
DETAIL S-13

MANUFACTURER	MODEL NUMBER
US FOUNDRY	725 RING / SP-550 COVER
US FOUNDRY	750 RING / SP-550 COVER
CAPITAL FOUNDRY	MH-3000
EAST GREEN IRON WORKS	20271 RING / 20274A COVER
GENERAL FOUNDRIES	07-7108 / 07-4101

COUNTY OF BRUNSWICK
BRUNSWICK COUNTY
NORTH CAROLINA

GENERAL SEWER DETAILS
BRUNSWICK COUNTY
NORTH CAROLINA

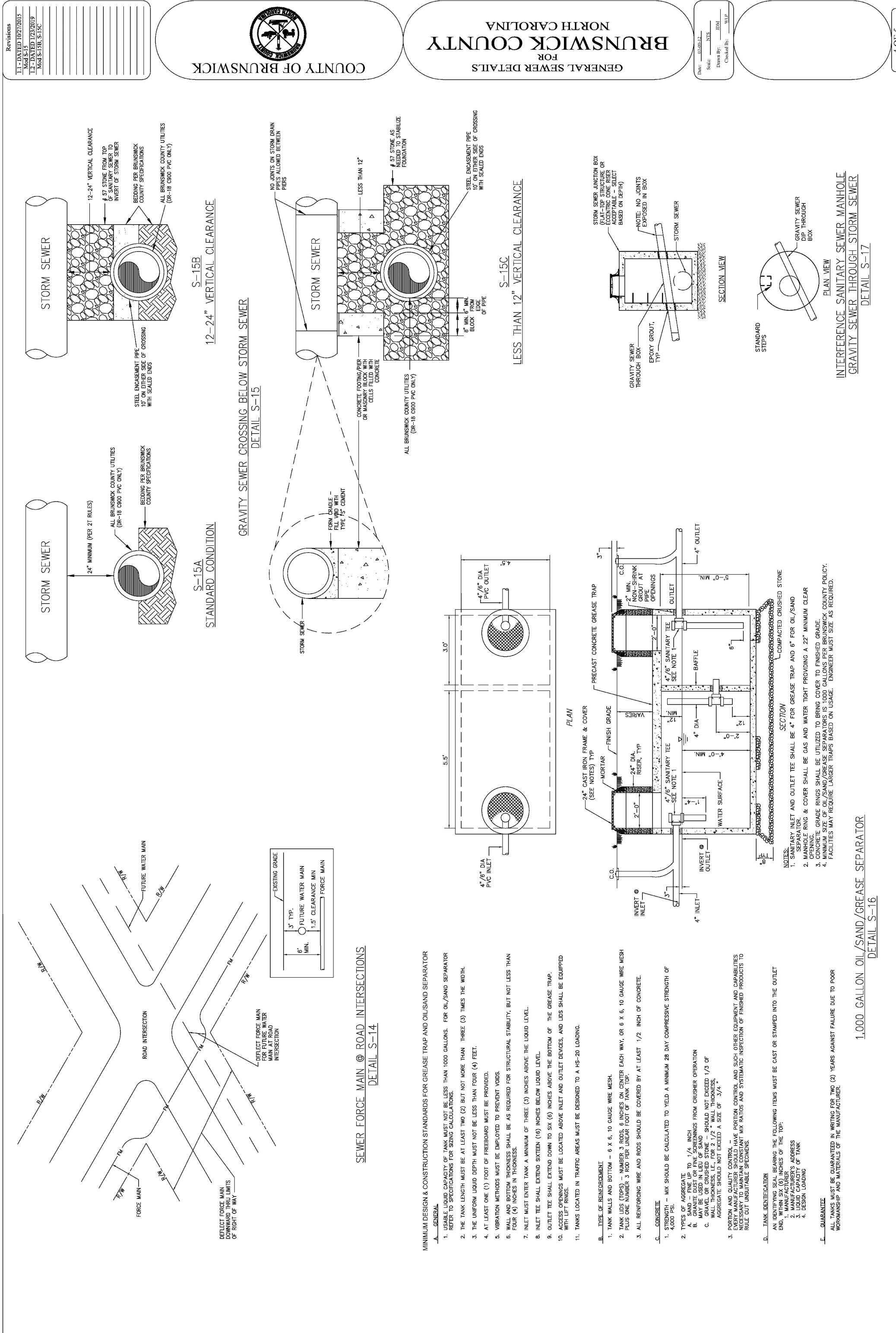
3 OF 5

MANUFACTURER	MODEL NUMBER
US FOUNDRY	725 RING / SP-550 COVER
US FOUNDRY	750 RING / SP-550 COVER
CAPITAL FOUNDRY	MH-3000-WT
EAST GREEN IRON WORKS	20271 RING / 20272 COVER

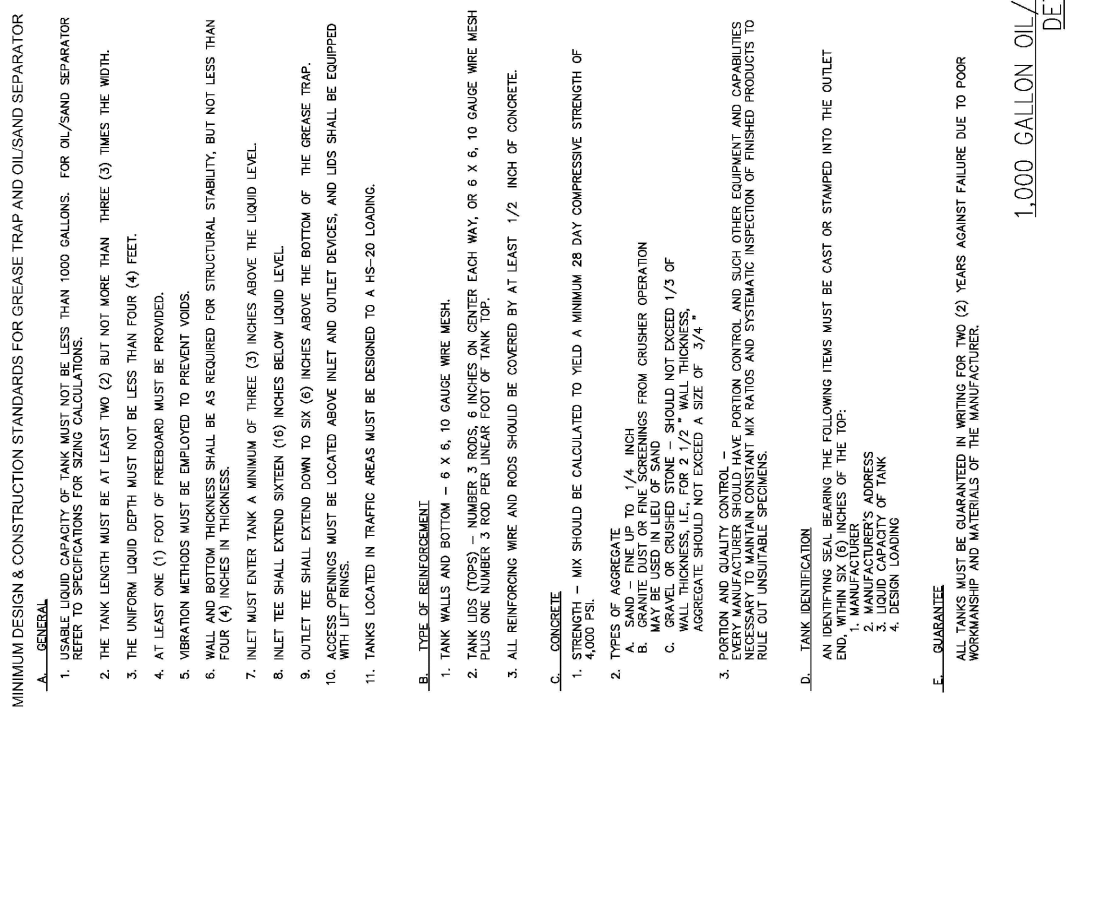
COUNTY OF BRUNSWICK
BRUNSWICK COUNTY
NORTH CAROLINA

GENERAL SEWER DETAILS
BRUNSWICK COUNTY
NORTH CAROLINA

3 OF 5



SEWER FORCE MAIN & ROAD INTERSECTIONS
DETAIL S-14



1,000 GALLON OIL/SAND/GREASE SEPARATOR
DETAIL S-15

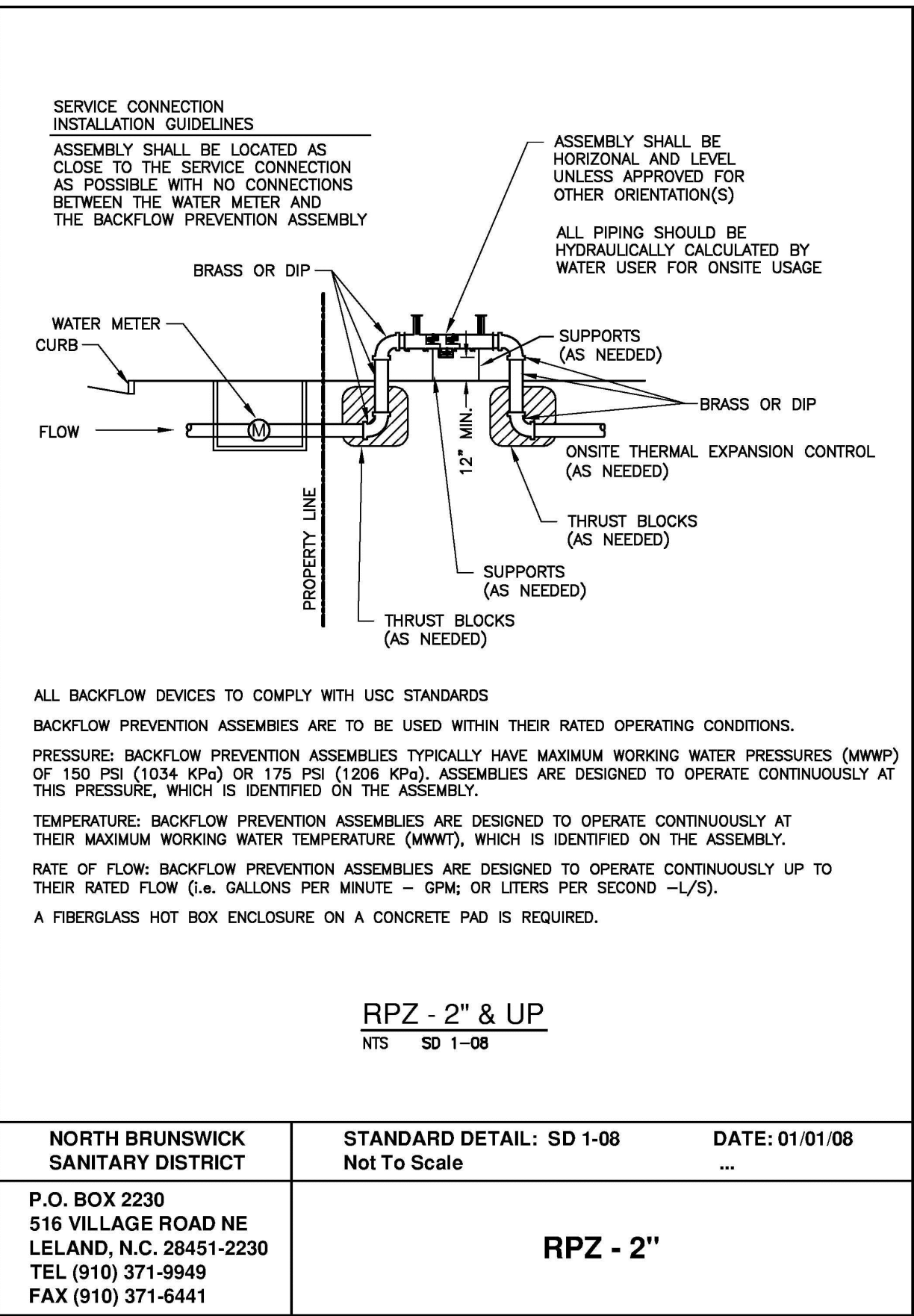
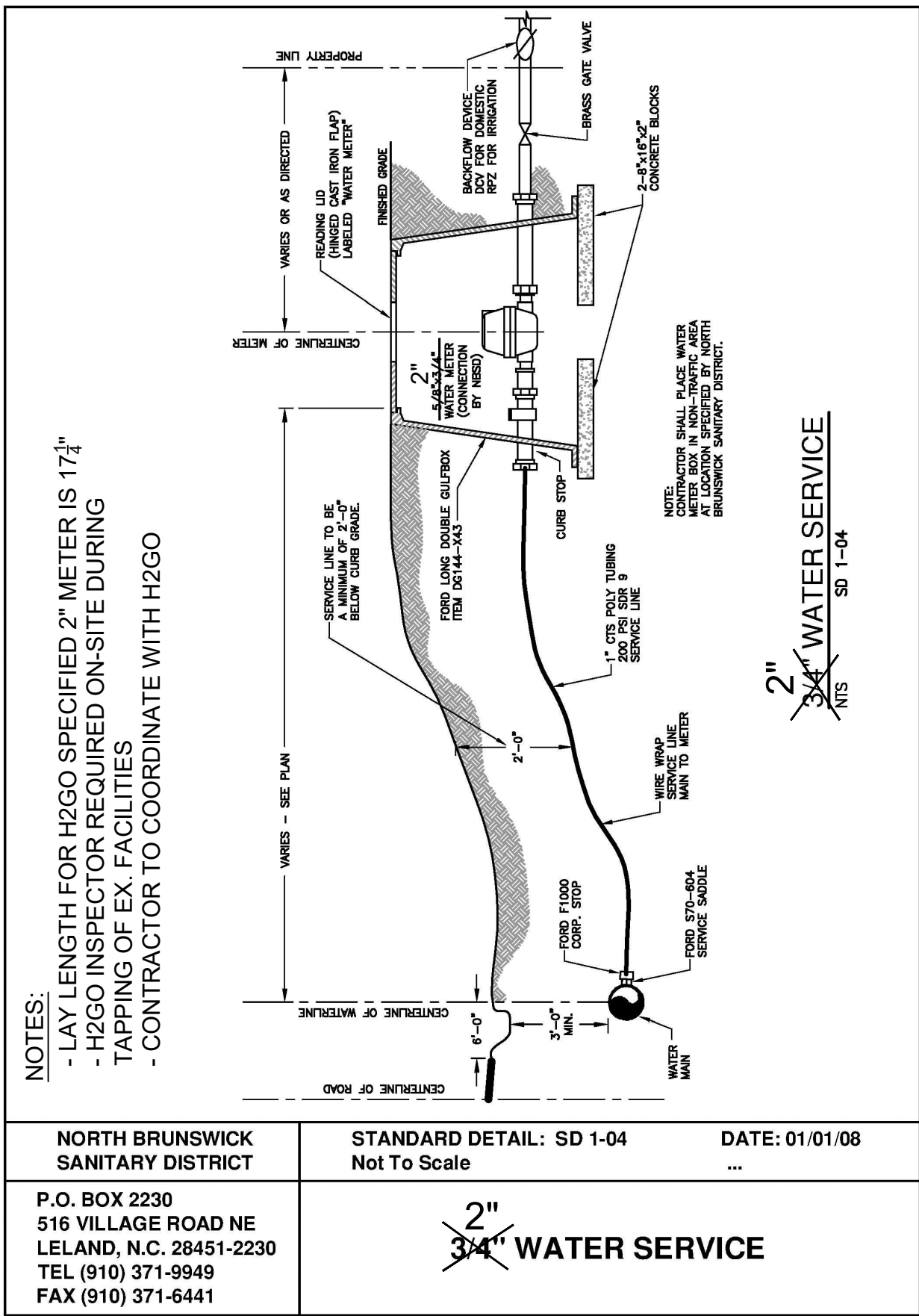
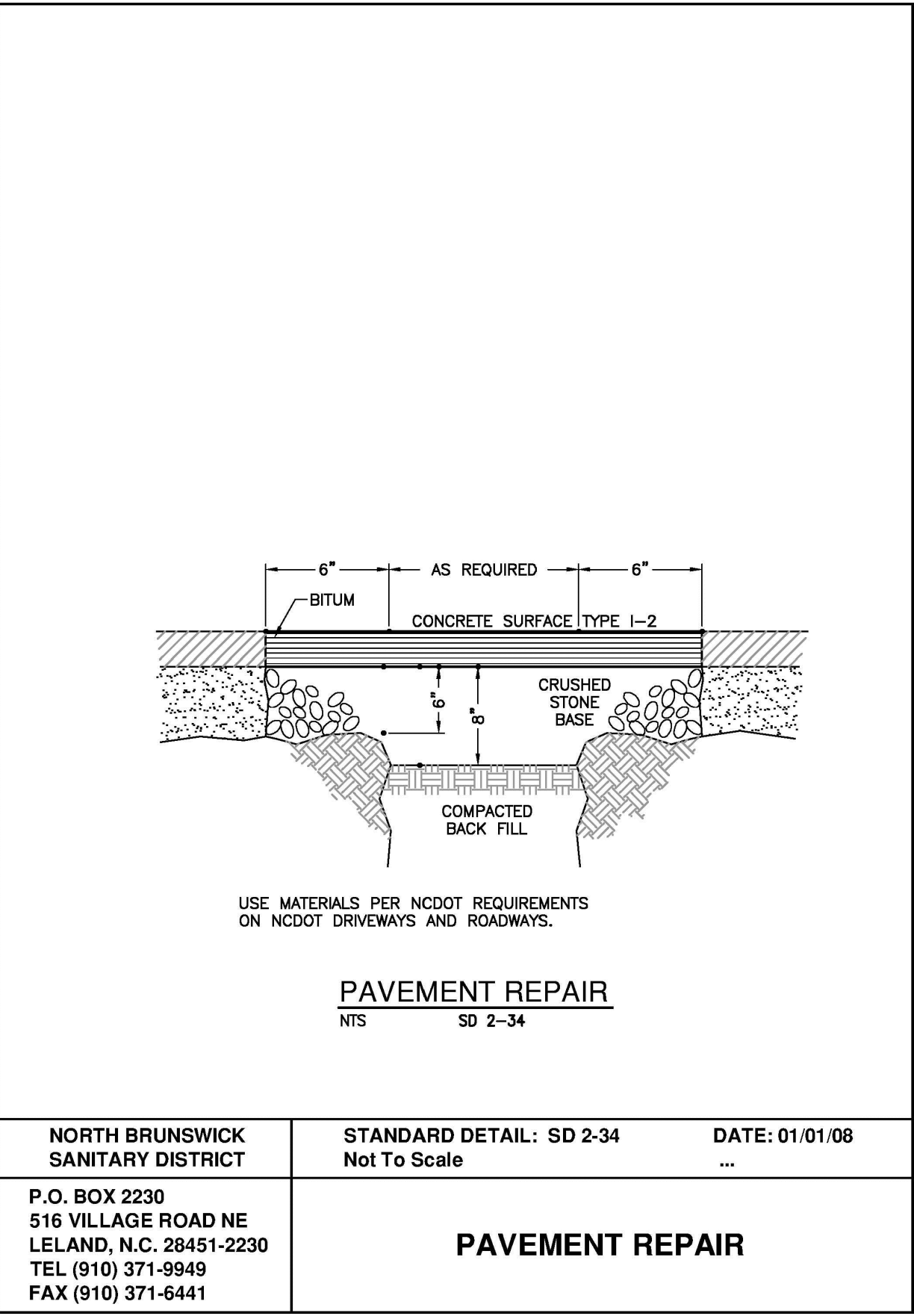
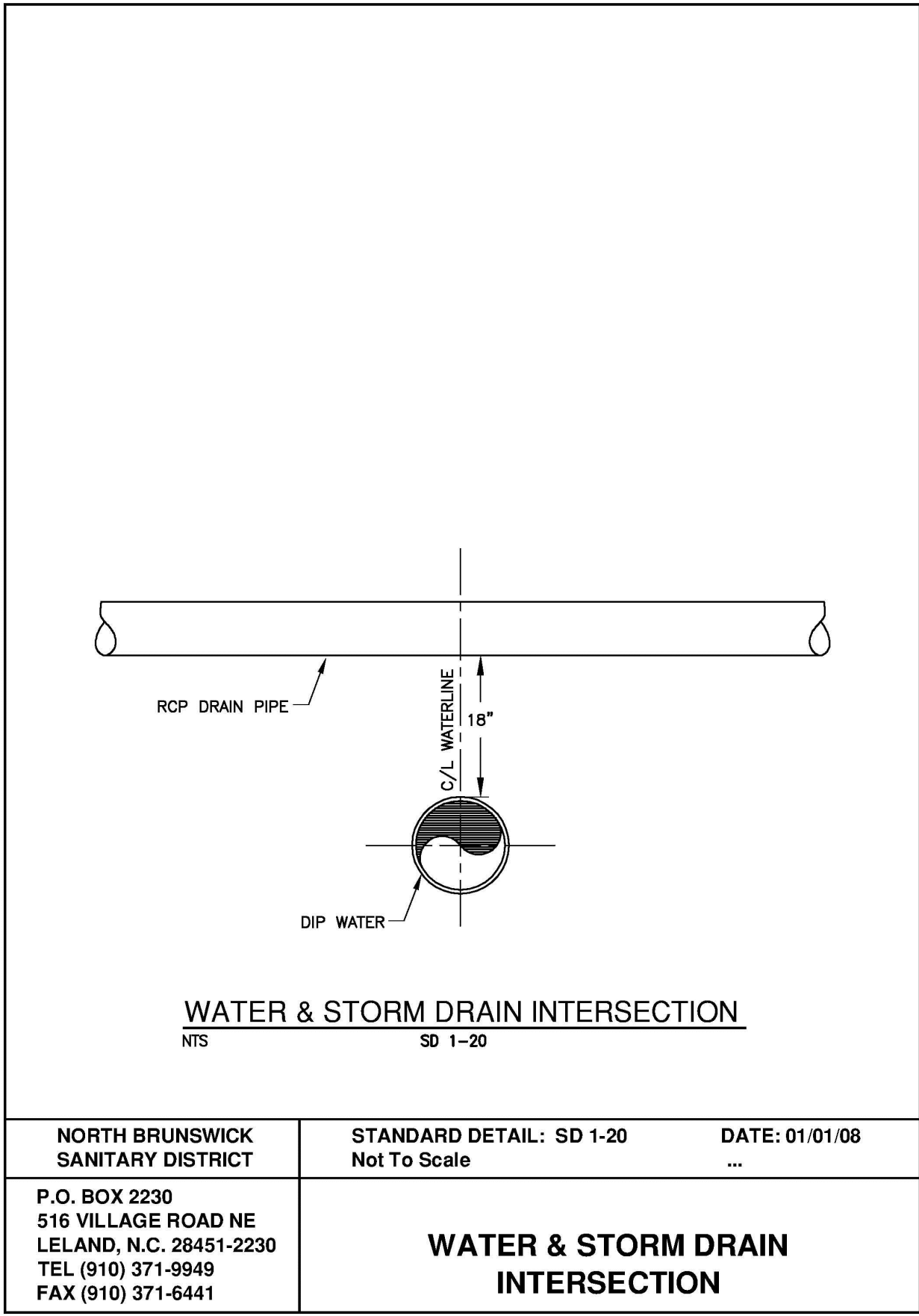
- MANHOLE DESIGN & CONSTRUCTION STANDARDS FOR GREASE TRAP AND OIL/SAND SEPARATORS
1. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 2. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 3. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 4. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 5. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 6. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 7. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 8. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 9. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 10. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 11. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 12. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 13. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 14. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 15. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 16. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 17. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 18. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 19. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:
 20. ALL MANHOLES SHALL BE CONSTRUCTED TO THE FOLLOWING STANDARDS:

NOTE:
BRUNSWICK COUNTY UTILITIES DETAILS PROVIDED AT REQUEST
OF TOWN OF LELAND. TOWN OF LELAND IS THE SANITARY SEWER
PROVIDER FOR NORTH BRUNSWICK HIGH SCHOOL



FINAL DESIGN - RELEASED FOR BIDDING ONLY

PROJECT STATUS		DRAWING INFORMATION		PEI JOB#:	
PROJECT STATUS	PRELIMINARY LAYOUT	DATE:	04/23/20	19248.PE	
PROJECT STATUS	FINAL DESIGN	SCALE:	N.T.S.		
PROJECT STATUS	RELEASED FOR BIDDING	DRAWN:	031591		
PROJECT STATUS	RELEASED FOR BIDDING	CHECKED:	04/23/20		
<p>SEAL</p> <p>BRUNSWICK COUNTY</p> <p>ENGINEER</p> <p>ROBERT P. BALLARD</p> <p>04/23/20</p>		<p>SEAL</p> <p>BRUNSWICK COUNTY</p> <p>ENGINEER</p> <p>ROBERT P. BALLARD</p> <p>04/23/20</p>		<p>C-5.2</p>	
<p>CLIENT INFORMATION:</p> <p>BECKER MORGAN GROUP</p> <p>3333 JACKIE DRIVE, SUITE 120</p> <p>WILMINGTON, NC 28403</p>		<p>DETAILS</p> <p>N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS</p> <p>114 SCORPION DRIVE, LELAND</p> <p>BRUNSWICK COUNTY, NC</p>		<p>REVISIONS:</p>	

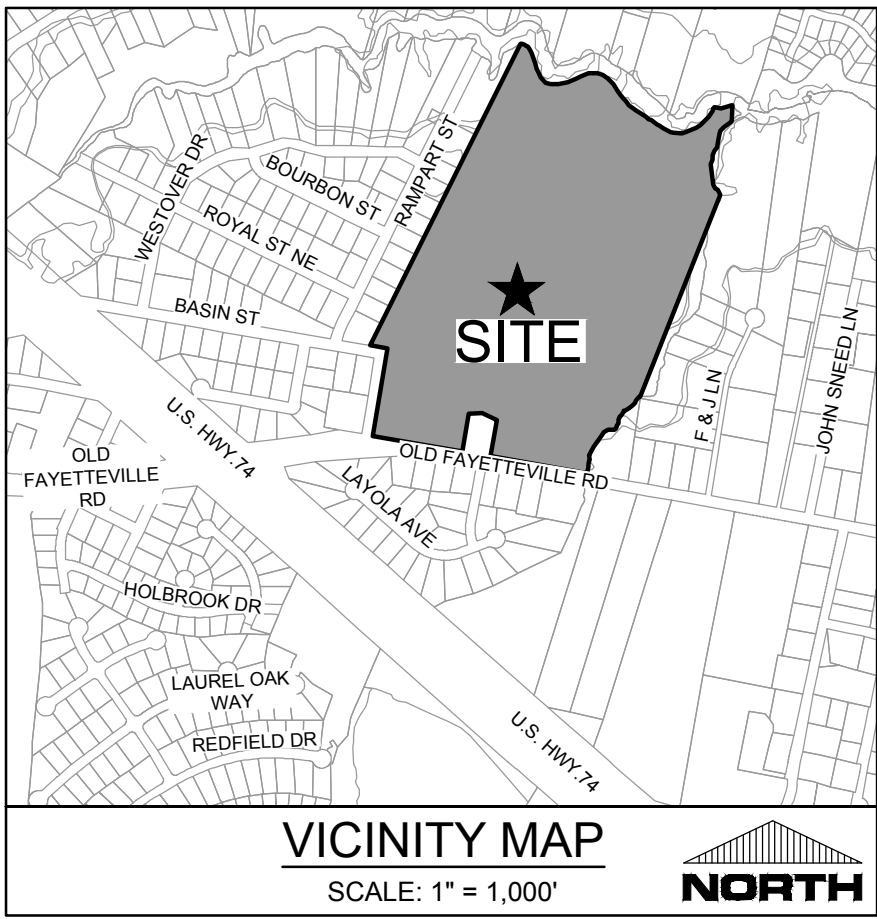


NOTE:
DETAILS PROVIDED SHOW "NORTH BRUNSWICK SANITARY
DISTRICT" WHICH IS H2GO. H2GO IS THE WATER PROVIDER FOR
NORTH BRUNSWICK HIGH SCHOOL



FINAL DESIGN - RELEASED FOR BIDDING ONLY

PROJECT STATUS: DESIGN: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING: DATE: 04/23/20 SCALE: N.T.S. DRAWN: AEC CHECKED: RBE		DETAILS N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	CLIENT INFORMATION: BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	REVISIONS:
DRAWING INFORMATION: DATE: 04/23/20 SCALE: N.T.S. DRAWN: AEC CHECKED: RBE				
PEI JOB#: 19248.PE		C-5.3		



LANDSCAPE REQUIREMENTS

PARKING LOT REQUIREMENTS

$$36,643 \text{ SF} \times .35 = 12,825 \text{ SF}$$

EXISTING LARGE MATURING TREE
EXISTING SMALL MATURING TREES

PROPOSED LARGE MATURING TREES

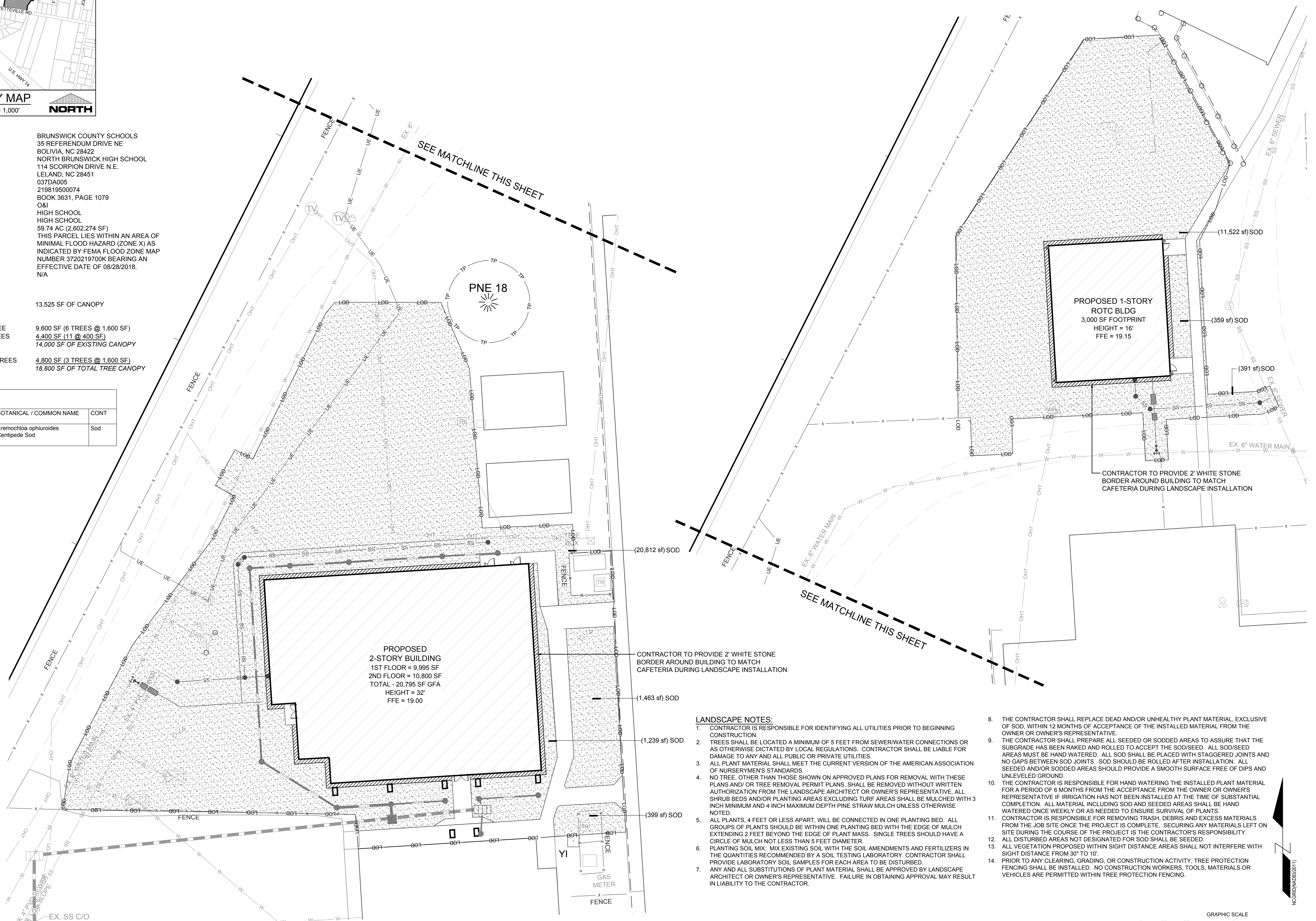
BRUNSWICK COUNTY SCHOOLS
35 REFERENDUM DRIVE NE
BOLIVIA, NC 28422
NORTH BRUNSWICK HIGH SCHOOL
114 SCORPION DRIVE N.E.
LELAND, NC 28451
037DA005
219819500074
BOOK 3631, PAGE 1079
O&I
HIGH SCHOOL
HIGH SCHOOL
59.74 AC (2,602.274 SF)
THIS PARCEL LIES WITHIN AN AREA OF
MINIMAL FLOOD HAZARD (ZONE X) AS
INDICATED BY FEMA FLOOD ZONE MAP
NUMBER 3720219700K BEARING AN
EFFECTIVE DATE OF 08/28/2018.
N/A

13,525 SF OF CANOPY

9,600 SF (6 TREES @ 1,600 SF)
4,400 SF (11 @ 400 SF)
14,000 SF OF EXISTING CANOP

4,800 SF (3 TREES @ 1,600 SF)
18,800 SF OF TOTAL TREE CANOPY

PLANT SCHEDULE L-1.0				
SOD/SEED	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	SOD	35,385 sf	Eremochloa ophiuroides Centipede Sod	Sod



LANDSCAPE NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
2. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
3. ALL PLANT MATERIAL SHALL MEET THE CURRENT VERSION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.
4. NO TREE, OTHER THAN THOSE SHOWN ON APPROVED PLANS FOR REMOVAL WITH THESE PLANS AND/OR TREE REMOVAL PERMIT PLANS, SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. ALL SHRUBS AND/OR PLANTING AREAS EXCLUDING TURF AREAS SHALL BE MULCHED WITH 3 INCH MINIMUM AND 4 INCH MAXIMUM DEPTH PINE STRAW MULCH UNLESS OTHERWISE NOTED.
5. ALL PLANTS, 4 FEET OR LESS APART, WILL BE CONNECTED IN ONE PLANTING BED. ALL GROUPS OF PLANTS SHOULD BE WITHIN ONE PLANTING BED WITH THE EDGE OF MULCH EXTENDING 2 FEET BEYOND THE EDGE OF PLANT MASS. SINGLE TREES SHOULD HAVE A CIRCLE OF MULCH NOT LESS THAN 5 FEET DIAMETER.
6. PLANTING SOIL MIX: MIX EXISTING SOIL WITH THE SOIL AMENDMENTS AND FERTILIZERS IN THE RATIO OF 10% SOIL MIX TO 90% TESTING SOIL. LABORATORY CONTRACTOR SHALL PROVIDE LABORATORY SOIL SAMPLES FOR EACH AREA TO BE DISTURBED.
7. ANY AND ALL SUBSTITUTIONS OF PLANT MATERIAL SHALL BE APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. FAILURE IN OBTAINING APPROVAL MAY RESULT IN LIABILITY TO THE CONTRACTOR.

8. THE CONTRACTOR SHALL REPLACE DEAD AND/OR UNHEALTHY PLANT MATERIAL, EXCLUSIVE OF SOD, WITHIN 12 MONTHS OF ACCEPTANCE OF THE INSTALLED MATERIAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.
9. THE CONTRACTOR SHALL PREPARE ALL SEEDED OR SODDED AREAS TO ACCEPT THE SOD/SEED. ALL SODDED AREAS MUST BE HAND WATERED. ALL SOD SHALL BE PLACED WITH STAGGERED JOINTS AND NO GAPS BETWEEN SOD JOINTS. SOD SHOULD BE ROLLED AFTER INSTALLATION. ALL SEEDED AND/OR SODDED AREAS SHOULD PREPARE A SMOOTH SURFACE FREE OF DIPS AND UNLEVELLED GROUND.
10. THE CONTRACTOR IS RESPONSIBLE FOR HAND WATERING THE INSTALLED PLANT MATERIAL FOR A PERIOD OF 6 MONTHS FROM THE ACCEPTANCE FROM THE OWNER OR OWNER'S REPRESENTATIVE IF IRRIGATION HAS NOT BEEN INSTALLED AT THE TIME OF SUBstantial COMPLETION. ALL MATERIAL INCLUDING SOD AND SEEDED AREAS SHALL BE HAND WATERED ONCE WEEKLY OR AS NEEDED TO ENSURE SURVIVAL OF PLANTS.
11. CONTRACTOR IS RESPONSIBLE FOR REMOVING TRASH, DEBRIS AND EXCESS MATERIALS FROM THE JOB SITE ONCE THE PROJECT IS COMPLETE. SECURING ANY MATERIALS LEFT ON SITE DURING THE COURSE OF THE PROJECT IS THE CONTRACTOR'S RESPONSIBILITY.
12. ALL DISTURBED AREAS NOT DESIGNATED FOR SOD SHALL BE SEEDED.
13. ALL VEGETATION PROPOSED WITHIN SIGHT DISTANCE AREAS SHALL NOT INTERFERE WITH SIGHT FROM THE ROAD FROM 10'.
14. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN TREE PROTECTION FENCING.

GRAPHIC SCALE

0 10 20 40 80

SCALE: 1" = 20'



**Know what's below.
Call before you dig.**

REVISIONS:

PARAMOUNT

122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

LANDSCAPE PLAN

N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS
1114 SCORPION DRIVE, LELAND
BRUNSWICK COUNTY, NC

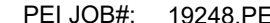
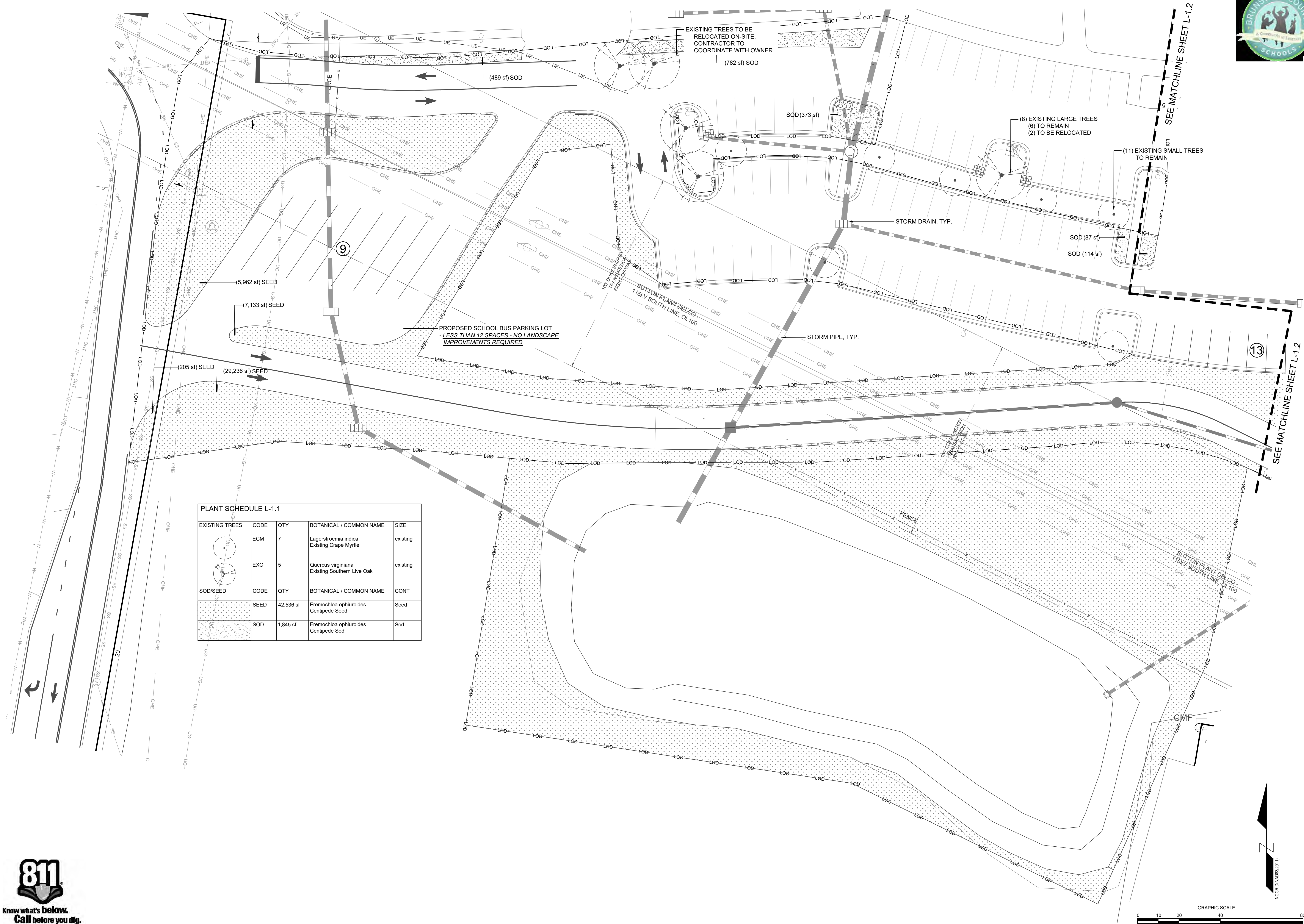
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONSTRUCTION

DRAWING INFORMATION

DATE: 04/23
SCALE: 1" = J
DESIGNED: J
DRAWN: J
CHECKED:

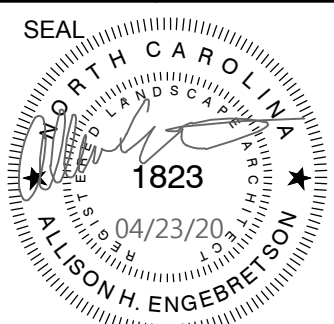
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PEI JOB#: 19248.PE

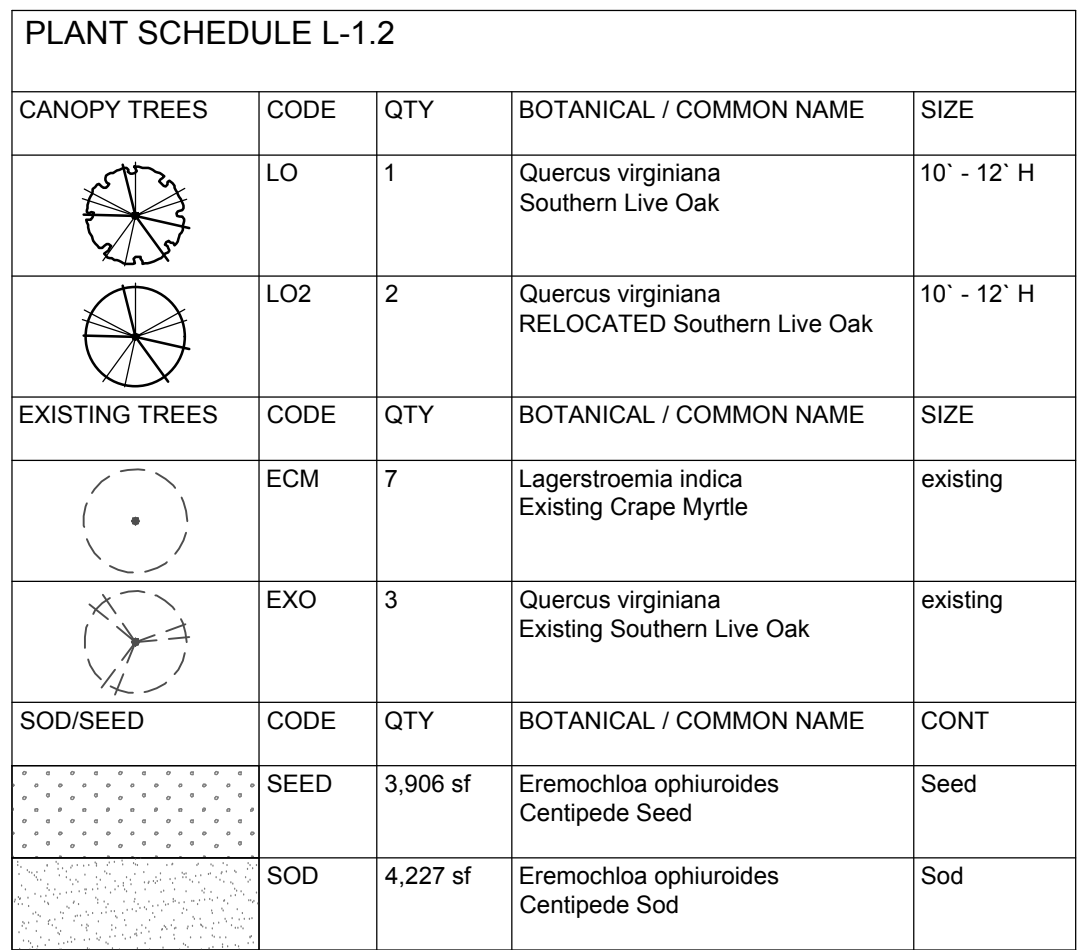






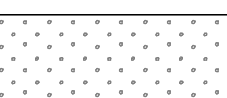



NCGRID(NAD83/2011)



PEI JOB#: 19248.PE



PLANT SCHEDULE L-1.2				
CANOPY TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
	LO	1	Quercus virginiana Southern Live Oak	10' - 12' H
	LO2	2	Quercus virginiana RELOCATED Southern Live Oak	10' - 12' H
EXISTING TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
	ECM	7	Lagerstroemia indica Existing Grape Myrtle	existing
	EXO	3	Quercus virginiana Existing Southern Live Oak	existing
SOD/SEED	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	SEED	3,906 sf	Eremochloa ophiuroides Centipede Seed	Seed
	SOD	4,227 sf	Eremochloa ophiuroides Centipede Sod	Sod

REVISIONS:

PARAMOUNT

122 Carolina Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

LANDSCAPE PLAN
N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS
114 SCORPION DRIVE, LELAND
BRUNSWICK COUNTY, NC

CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONSTRUCTION

DATE: 04/23/20
SCALE: 1" = 20'
DESIGNED: JRC
DRAWN: JRC
CHECKED: AE

PROJECT TITLE

**NORTH
BRUNSWICK
HIGH SCHOOL
CAFETERIA
ADDITION**

114 SCORPION DRIVE N.E.
LELAND, NC 28451

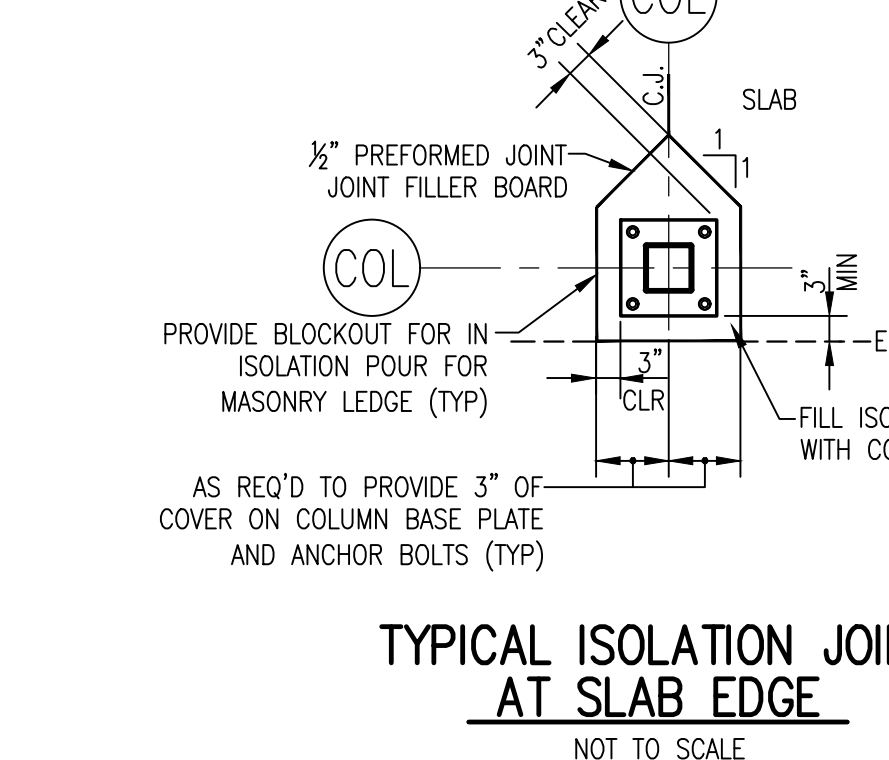
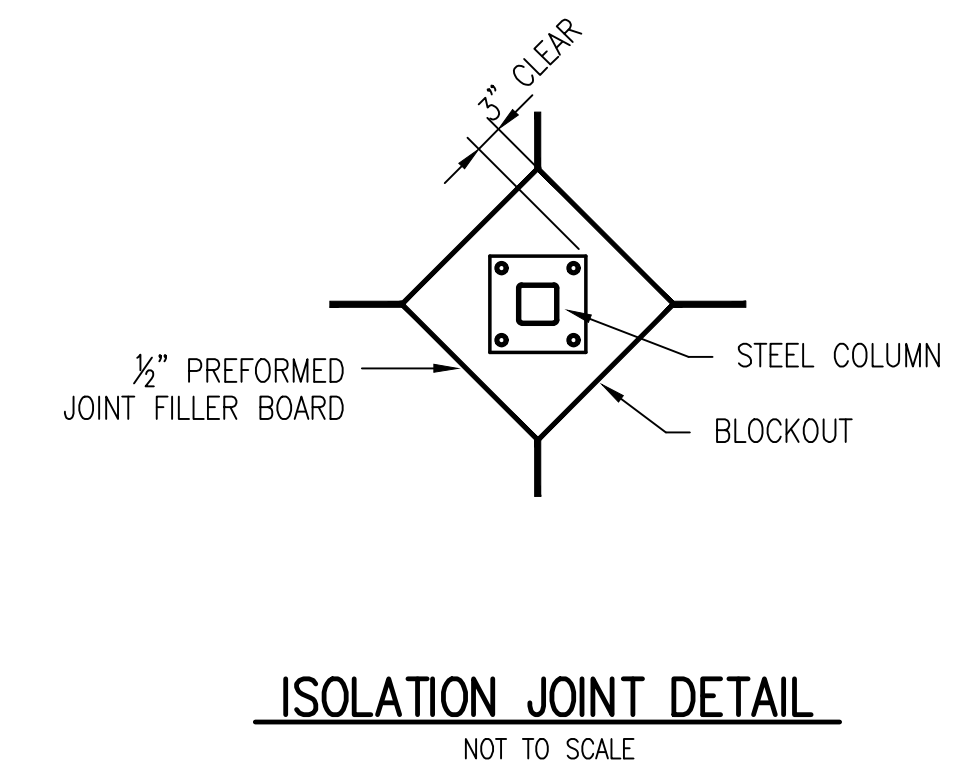
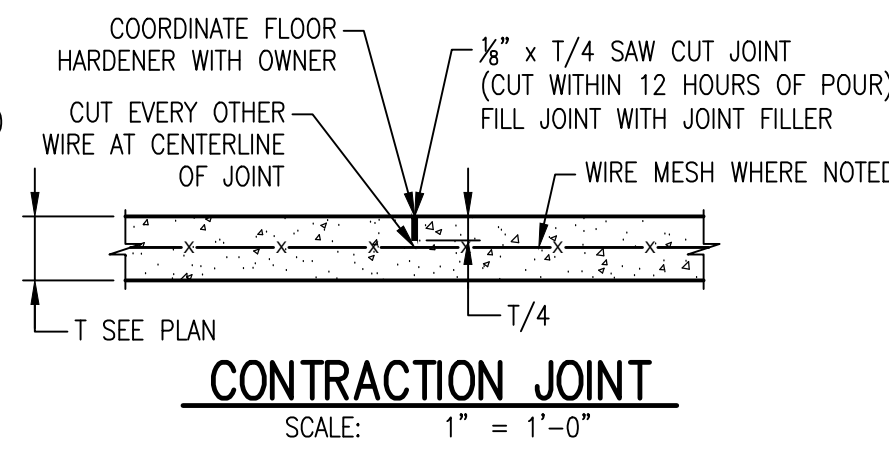
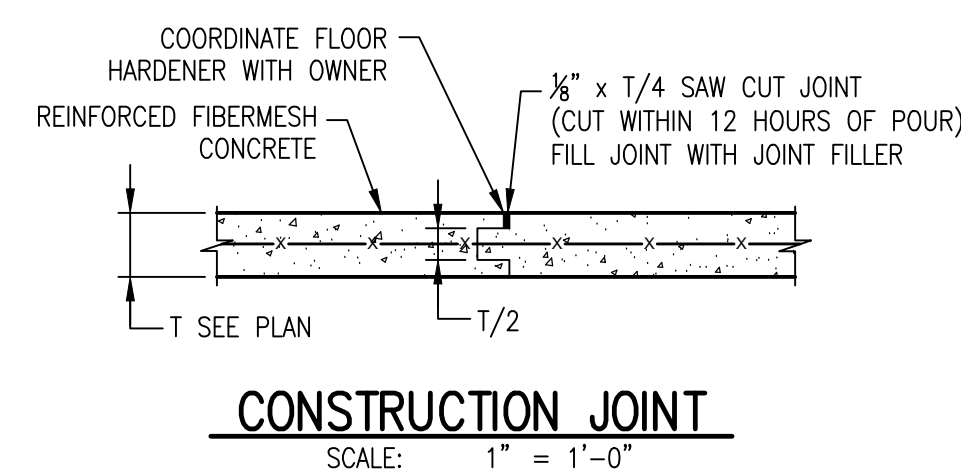
DSP # : 100
DPI SCHOOL # : 1165

SHEET TITLE

TYPICAL DETAILS

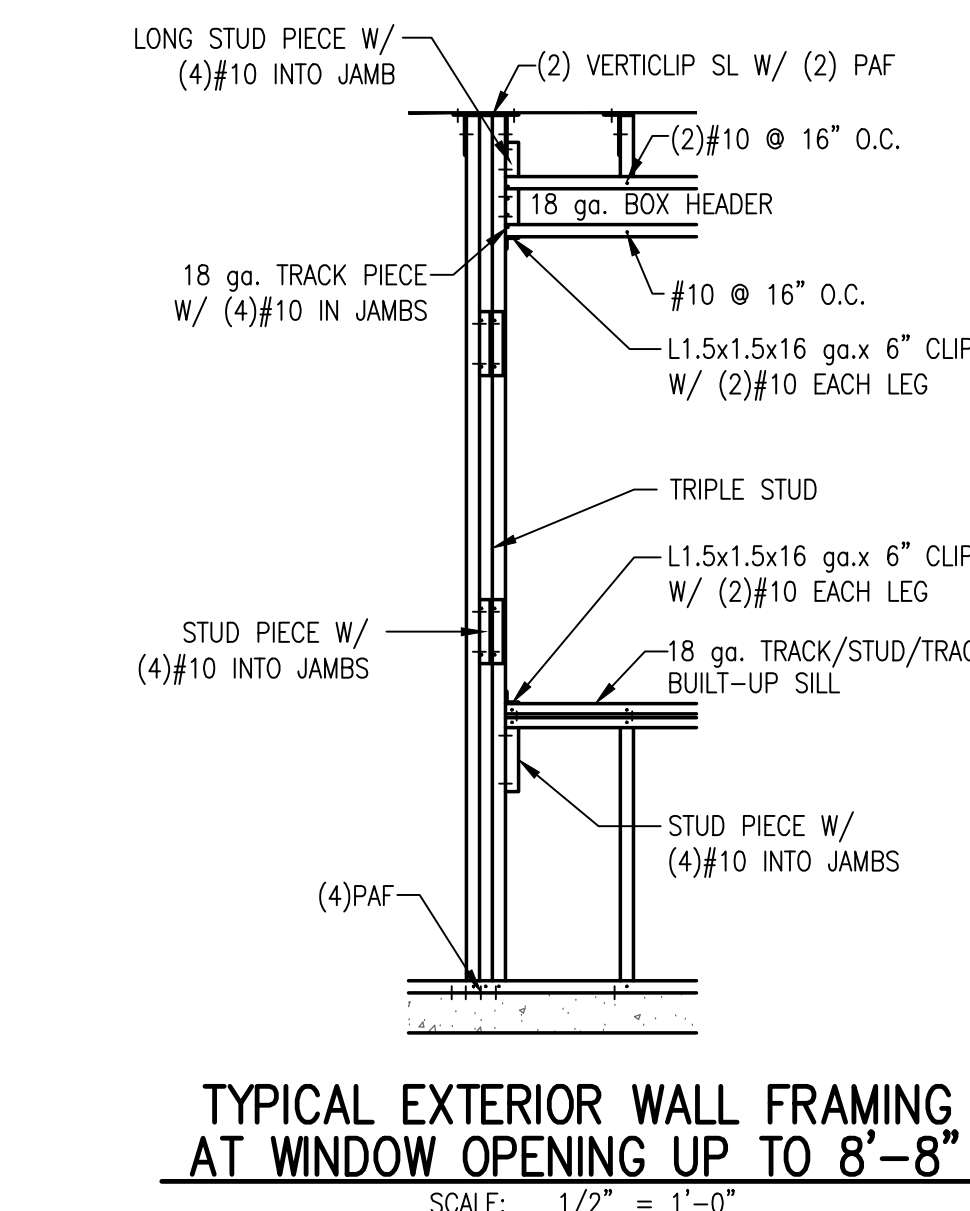
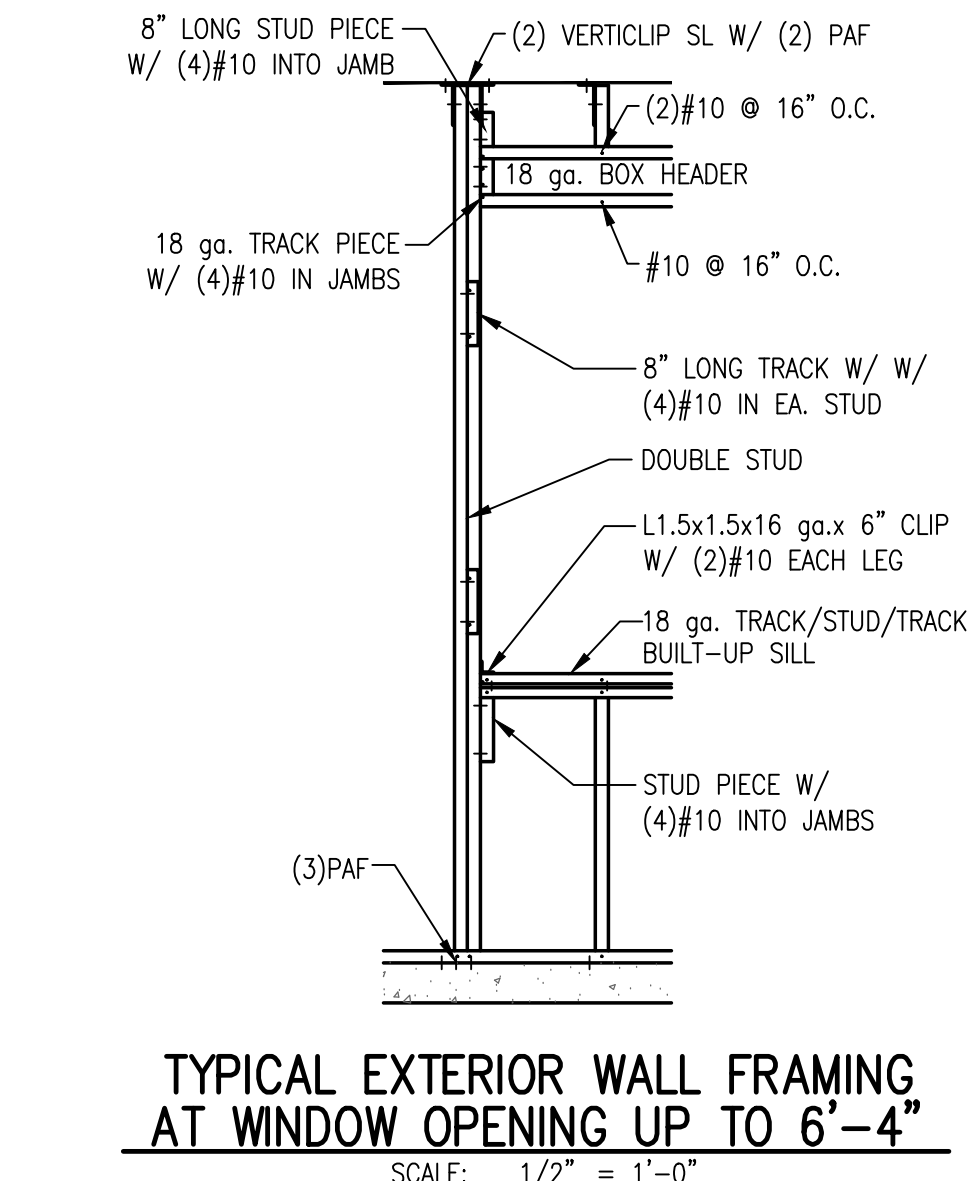
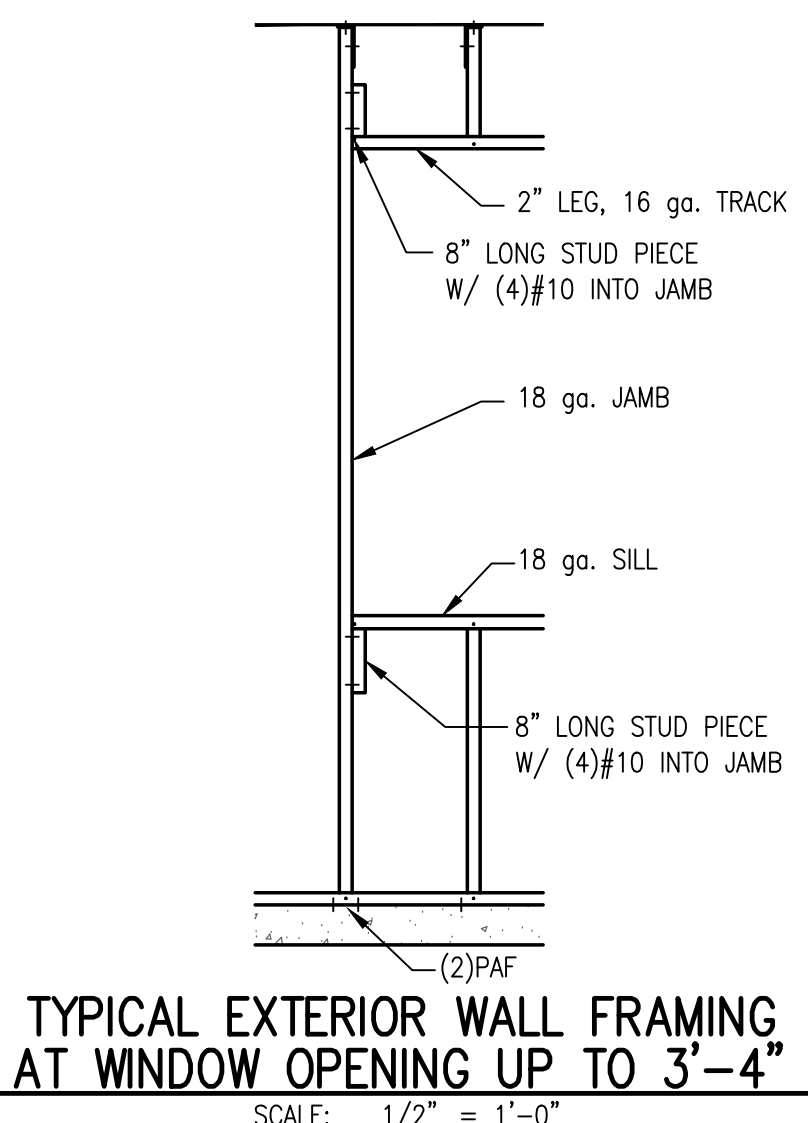
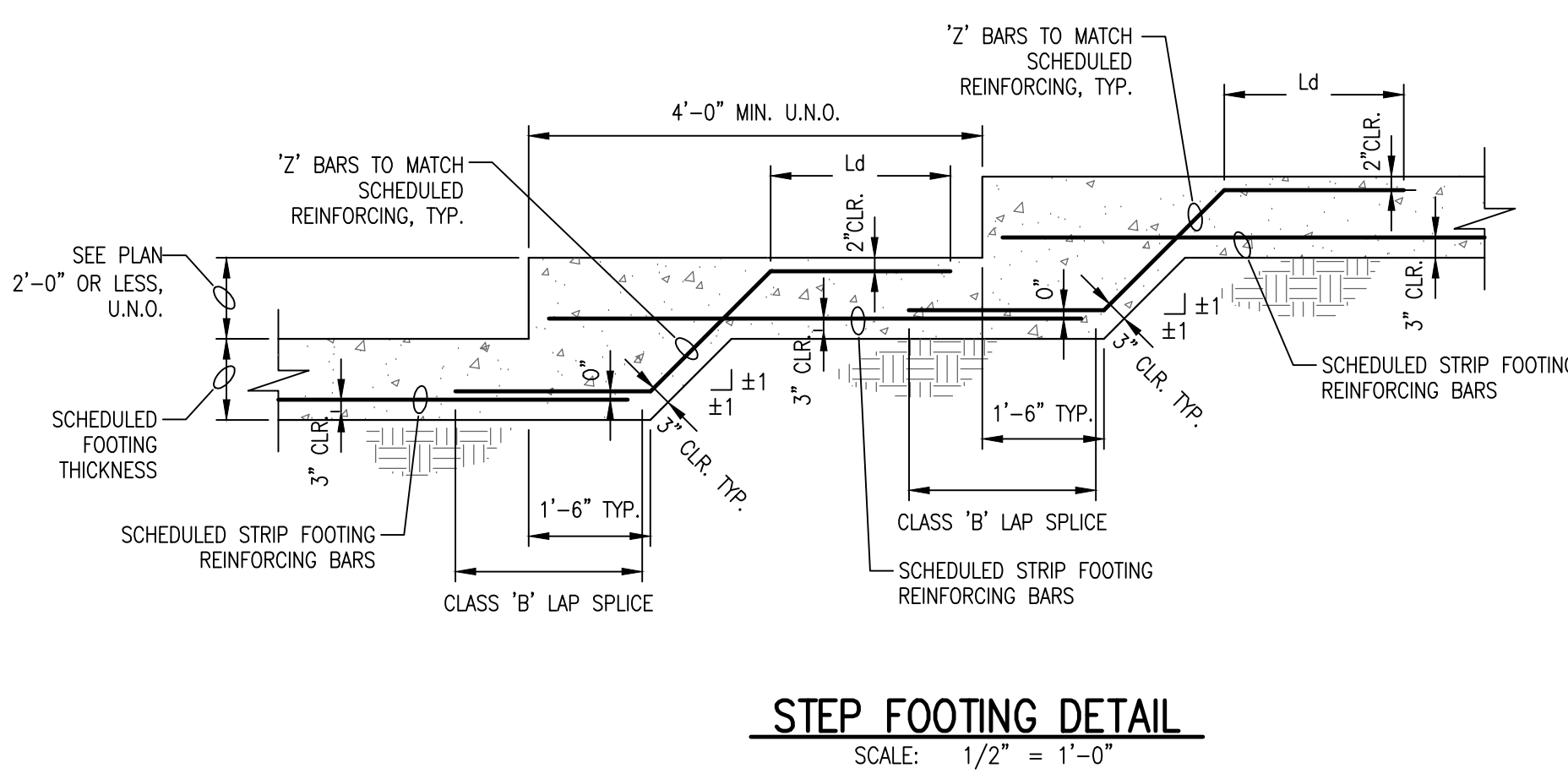
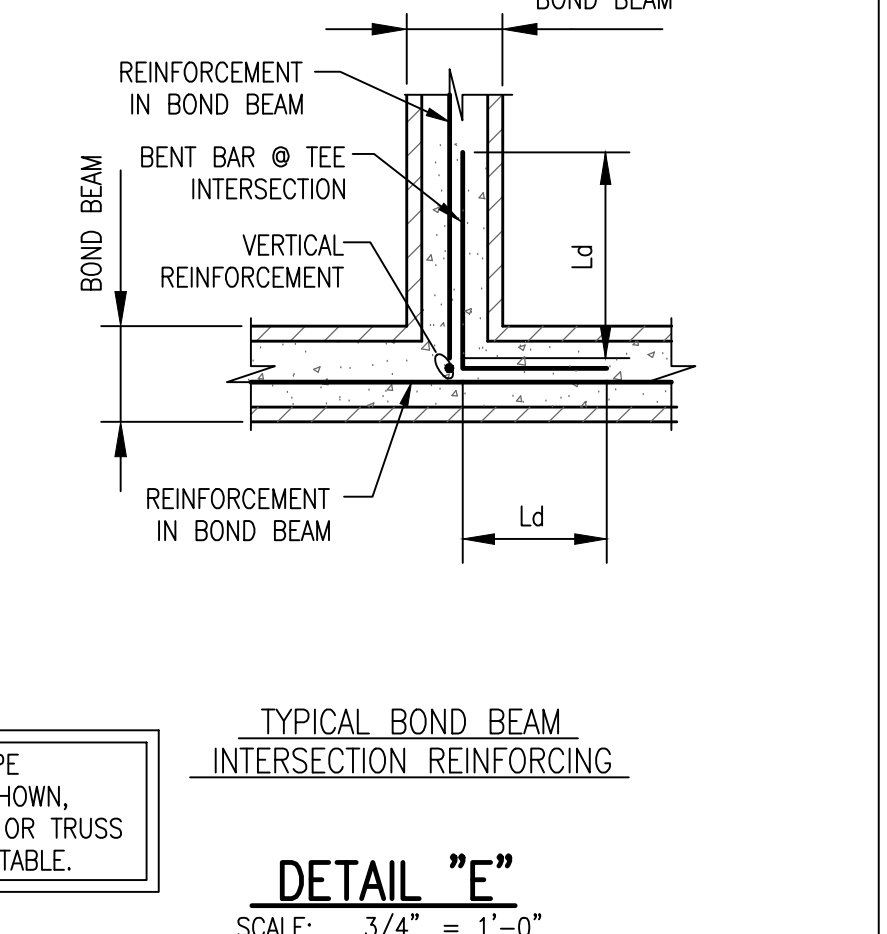
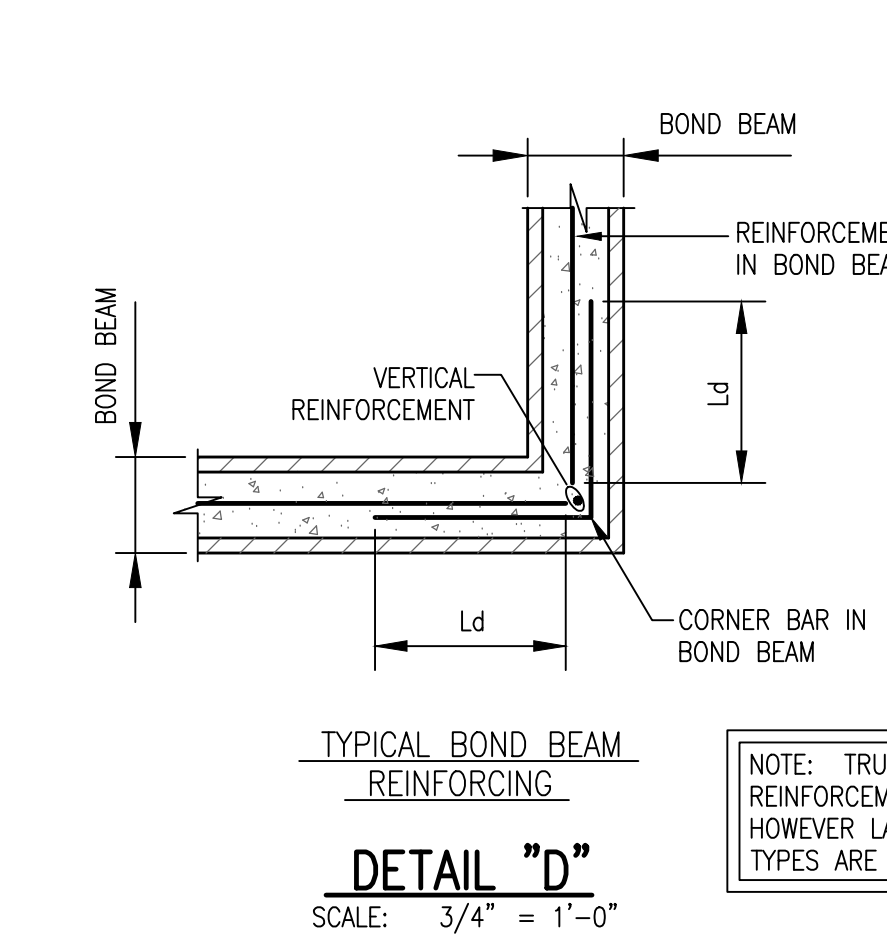
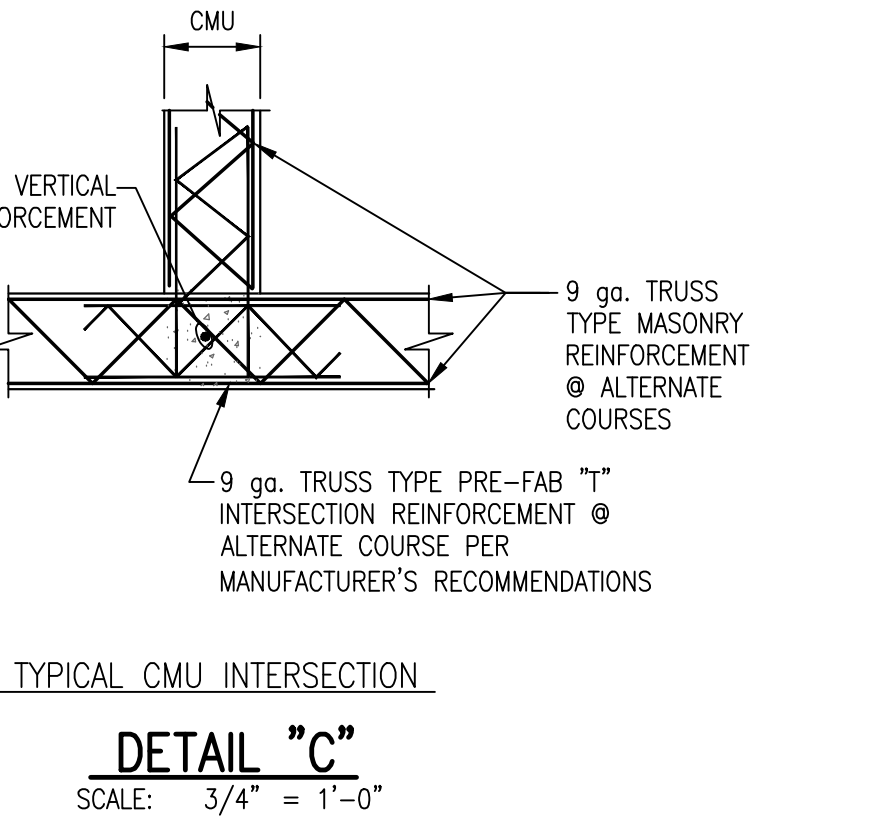
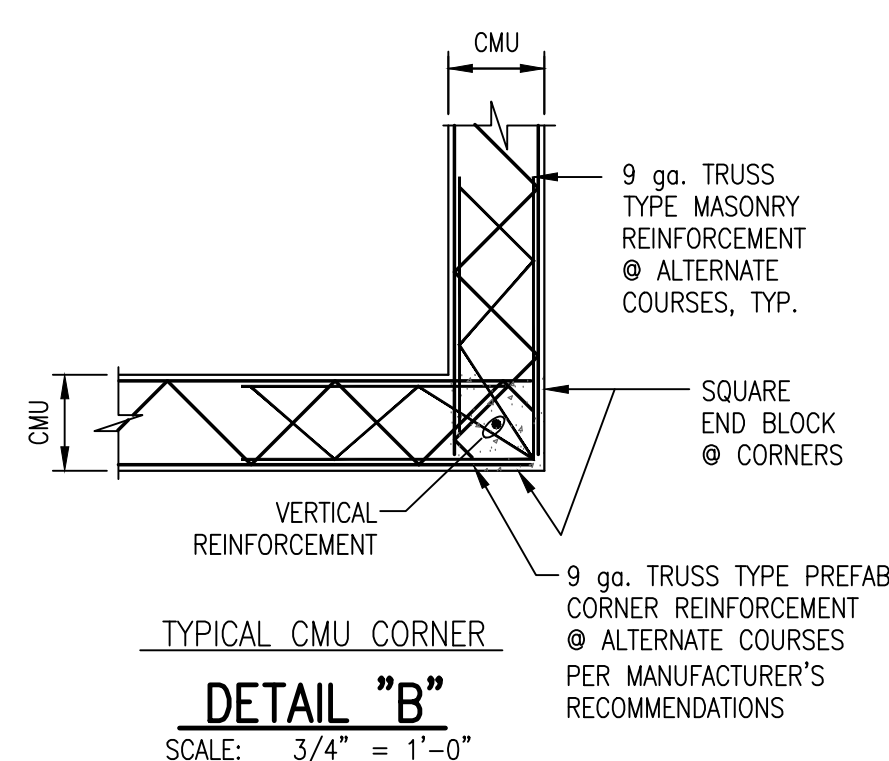
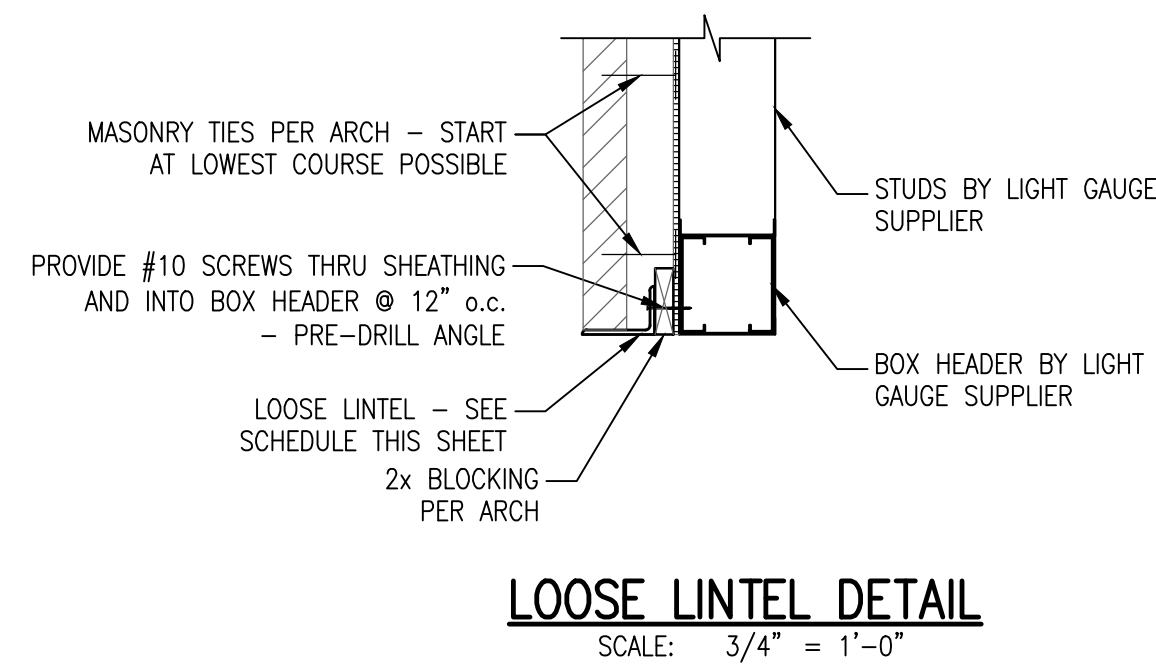
DATE	DESCRIPTION
04.23.20	ISSUED FOR BIDDING
04.23.20	100% REVIEW SUBMISSION
10.14.19	NC DPI SUBMISSION
07.30.19	SD PROGRESS DRAWINGS
07.11.19	NC DPI SUBMISSION
07.11.19	NC DPI SUBMISSION

PROJECT NO: 19-2952
DATE: 04.23.20
SCALE: AS INDICATED
DRAWN BY: MBK PROJ MGR: ALS



CLEAR OPENING	ONE ANGLE FOR EA 4" WYTHE	MIN BRG	MAX. HEIGHT OF BRICK
0'-8" TO 6'-0"	L6" x 4" x 3/8" LLH	8"	9'-0"
6'-0" TO 8'-0"	L6"x6"x3/8"	8"	9'-0"
8'-0" TO 12'-0"	L8"x6"x3/8" LLV	8"	9'-0"

- NOTES:
- WHERE LINTELS BEAR ON HOLLOW MASONRY UNITS FILL ALL CORES UNDER BEARING WITH GROUT FROM BOTTOM OF LINTEL TO 16" MINIMUM BELOW.
 - THESE LINTELS ARE NOT DESIGNED FOR MASONRY WALLS THAT CARRY FLOOR OR ROOF LOAD.
 - LINTELS ARE DESIGNED TO CARRY THE MAXIMUM HEIGHT OF BRICK LISTED IN SCHEDULE. IF STACKED BRICK HEIGHT EXCEEDS LISTED VALUE, THEN CONTACT STRUCTURAL ENGINEER FOR ALTERNATE DESIGN.
 - ALL STEEL LINTELS SHALL BE HOT DIP GALVANIZED AND PAINTED.
 - SEE DETAIL BELOW FOR REQUIREMENTS



TYPICAL LIGHT GAUGE CONSTRUCTION DETAILS FOR NON-LOAD BEARING EXTERIOR WALLS

NOTE: THESE DETAILS ARE GENERIC AND ARE FOR GENERAL INFORMATION AND BUDGET PRICING. ACTUAL DESIGN BY LIGHT GAUGE SUPPLIER AND ENGINEER.

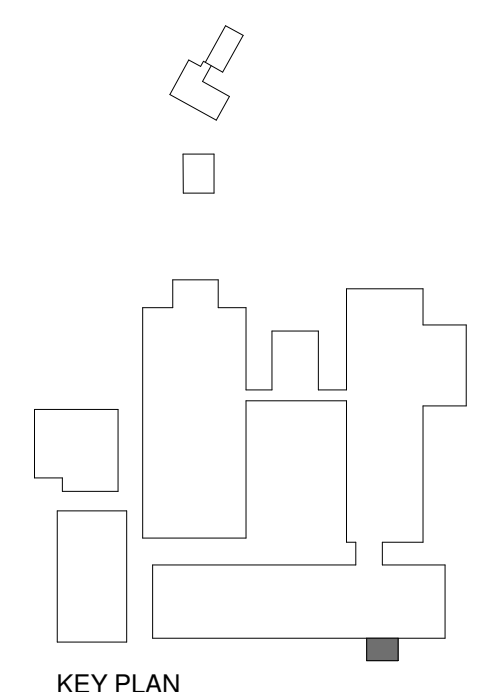
GENERAL NOTE:
DETAILS SHOWN ON THIS SHEET ARE GENERIC IN NATURE AND MAY NOT PORTRAY EXACT CONDITIONS. THESE DETAILS ARE INTENDED TO PROVIDE GENERAL GUIDELINES FOR TYPICAL CONSTRUCTION CONDITIONS.

NORTH BRUNSWICK HIGH SCHOOL ADDITION AND RENOVATION

114 SCORPION DRIVE N.E.
LELAND, NC 28451

DSP # : 100
DPI SCHOOL # : 1165

SHEET TITLE
CAFETERIA ADDITION PLANS



ISSUE BLOCK

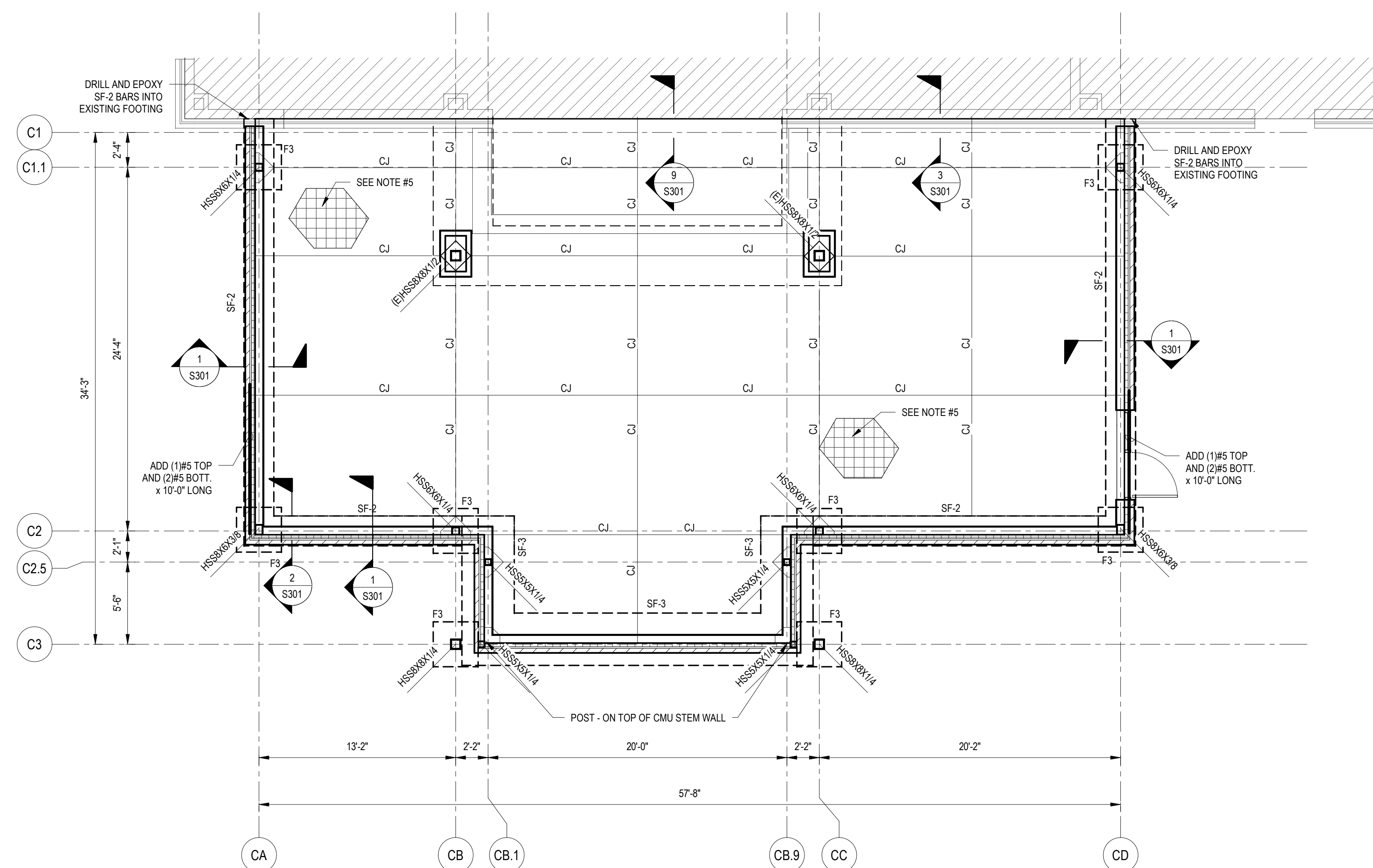
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	03.20.20	100% REVIEW SUBMISSION
	10.14.19	NCDPI DD SUBMISSION
	07.30.19	SD PROGRESS DRAWINGS
	07.11.19	NCDPI SD SUBMISSION
Mark	Date	Description

PROJECT NO:	19-2952
DATE:	04/23/20

DATE:	04.23.20
SCALE:	As indicated
DRAWN BY: MRK	PROJ MGR: ALS




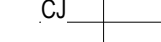

S201

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CAFETERIA ADDITION FOUNDATION PLAN

SCALE: 3/16" = 1'-0"

- | <u>LEGEND - FOUNDATION</u> | |
|---|--|
| FX | SPREAD FOOTING DESIGNATION SEE SCHEDULE THIS SHEET |
| SF-X | STRIP FOOTING DESIGNATION SEE SCHEDULE THIS SHEET |
|  | GRID DESIGNATION FOR CENTERLINE OF COLUMN |
|  | GRID DESIGNATION FOR OUTSIDE FACE OF STUD OR CMU |
|  | INDICATES CONCRETE SLAB |
|  | CONTRACTION JOINTS, SEE S1.02 FOR TYPICAL DETAILS |
|  | INDICATES STEEL COLUMN, SEE S3.0X FOR BASE PLATE |



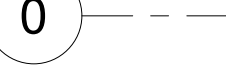



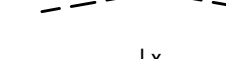

NOTES - FOUNDATION PLAN

1. SEE SHEET S1101 FOR ADDITIONAL GENERAL NOTES, FOUNDATION NOTES, CONCRETE NOTES, AND REINFORCING STEEL NOTES ALSO. SEE SHEET S101 & S104 FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. DATUM ELEVATION = +TOP OF SLAB ELEVATION
a. ASSUMED 2'-0" OTHER ELEVATIONS ARE NOTED AS (+) OR (-) FROM DATUM ELEVATION.
3. TOP OF FOOTINGS SHALL BE (-1'-4") FROM DATUM ELEVATION. U.N.O. = (PLAN AS: -X'-Y") FROM DATUM ELEVATION.
4. RELOCATE ANY UTILITY LINES THAT CONFLICT WITH THE FOUNDATIONS OR DRAP AS SHOWN ON THE FOUNDATIONS TO AN ELEVATION ABOVE THE PROPOSED UTILITIES. RELOCATE ANY GRAVITY FLOW LINES THAT CONFLICT WITH SPREAD FOOTINGS AS SHOWN ON STRUCTURAL FOUNDATION PLANS. IF A GRAVITY FLOW LINE IS IN CONFLICT WITH A FOUNDATION, THE FOUNDATION SHALL BE LOCATED THE FOOTING ELEVATION ABOVE THE PROPOSED LINE.
 - a. ENCASE THE LINE IN A STEEL PIPE 2" LARGER IN DIAMETER THAN THE LINE AND EXTEND THE PIPE 1'-0" PAST EACH END OF THE CONCRETE FOOTING. BACKFILL THE TRENCH WITH #3 STEEL. THE BEARING CAPACITY OF THIS AREA MUST MEET OR EXCEED THE ALLOWABLE SOIL BEARING CAPACITY.
5. SLAB-ON-GRADE SHALL BE 4" THICK (SEE PLAN) 3000 psi CONCRETE WITH 6x6x6w2x2 ON SUPPORT CHAIRS ON 18" max VAPOR BARRIER, ON 6" COMPACTED SELECT GRANULAR MATERIAL ON WELL COMPACTED SUBGRADE. SUBGRADE SHALL BE 10" FOUNDATION NOTES FOR COMPACTION REQUIREMENTS. VERIFY COMPACTION / QUALIFIED GEOTECHNICAL ENGINEER.
6. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER DISCIPLINE DRAWINGS FOR OPENINGS AND DEPRESSIONS NOT SHOWN ON THESE DRAWINGS.
7. G.O. TO COORDINATE STEPS IN FOUNDATION FOR PLUMBING, ELECTRICAL, AND MECHANICAL.
8. PROVIDE STEEL SLEEVE FOR PLUMBING LINES UNDER FOUNDATIONS. SLEEVE SHALL BE 2" LARGER IN DIAMETER THAN PLUMBING LINE AT THAT LOCATION.
9. DIMENSIONS ARE FROM EDGE OF SLAB (E.O.S.) AND OUTSIDE FACE OF STUD (O.F.S.) / CURTAINWALL (O.F.W.) TO COLUMN CENTER UNLESS NOTED OTHERWISE.

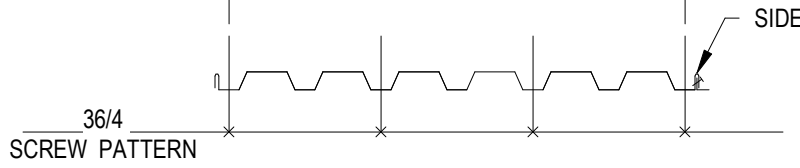
SPREAD FOOTING (FX) SCHEDULE				
MARK	WIDTH x LENGTH x THICKNESS	REINFORCEMENT		COMMENTS
		TOP BARS EACH WAY (U.N.O.)	BOTTOM BARS EACH WAY (U.N.O.)	
F3	3'-0" x 3'-0" x 1'-0"	N/A	(3) #5	

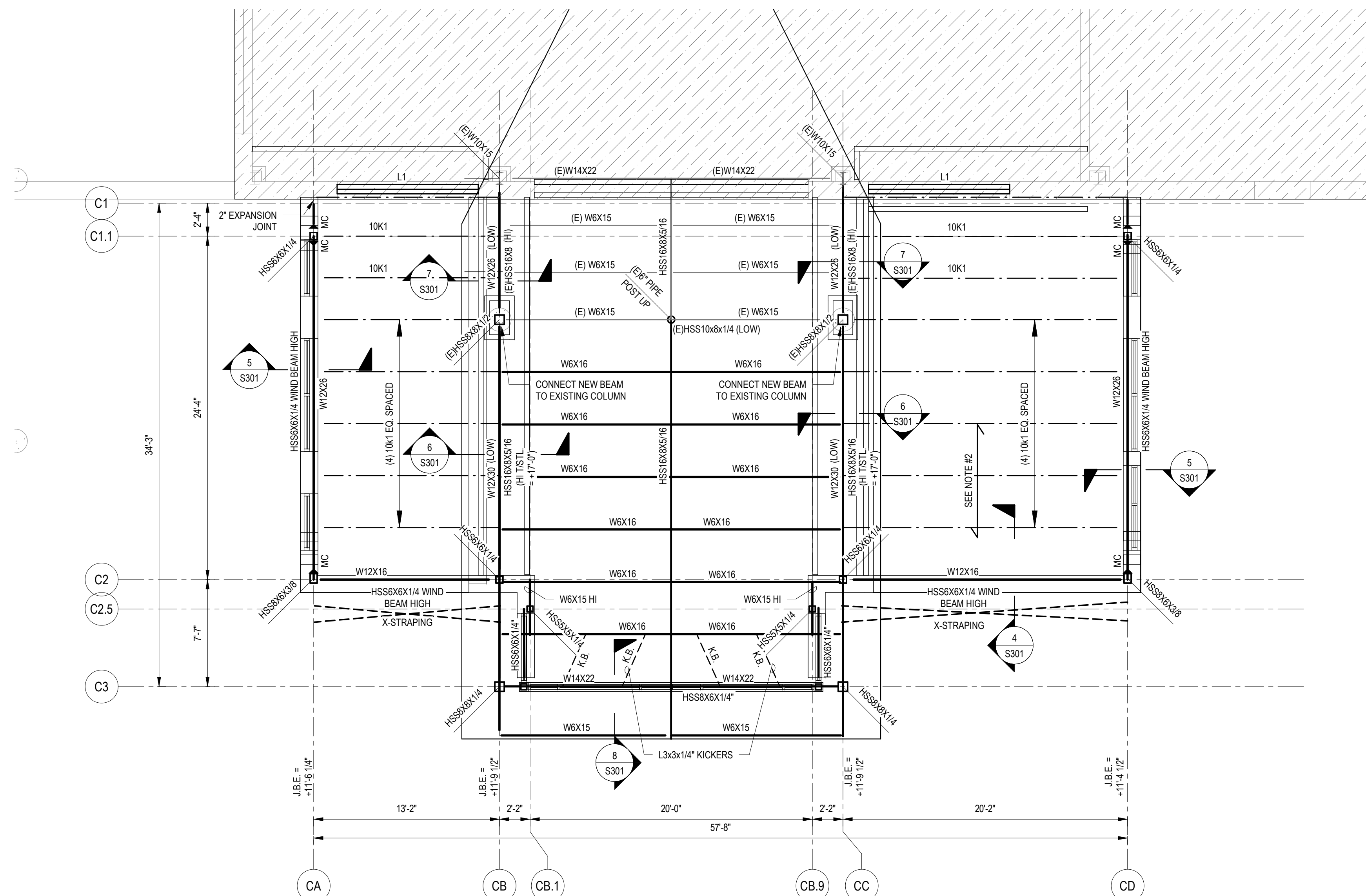
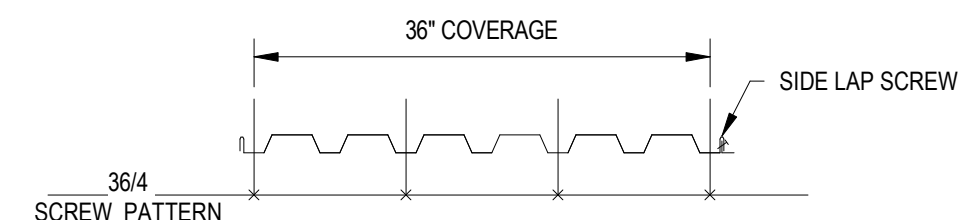
STRIP FOOTING (SF-x) SCHEDULE				
MARK	WIDTH x THICKNESS x LENGTH	REINFORCEMENT		COMMENTS
		TOP BARS	BOTTOM BARS	
SF-1	2'0" x 1'0" x CONT.		(3) #4	
SF-2	2'0" x 1'4" x CONT.	(3) #5	(3) #5	
SF-3	3'6" x 1'4" x CONT.		(4) #5	

LEGEND - ROOF FRAMING

- | | |
|---|---|
|  | INDICATES STEEL COLUMN,
SEE S3.0X FOR BASE PLATE |
|  | INDICATES STEEL BEAM, SEE PLAN
FOR SIZE AND LOCATION |
|  | GRID DESIGNATION FOR CENTERLINE OF COLUMN |
|  | GRID DESIGNATION FOR OUTSIDE FACE OF STUD OR CMU |
|  | INDICATES STEEL BEAM, SEE PLAN
FOR SIZE AND LOCATION |
|  | INDICATES MOMENT CONNECTION |
|  | INDICATES CFS X-STRAPPING SEE S3.01 |
|  | INDICATES NEW LINTEL IN EXISTING NON-LOAD
BEARING CMU WALL - SEE DETAILS ON S301
COORDINATE EXACT LOCATION AND SIZE WITH
MECHANICAL DRAWINGS |

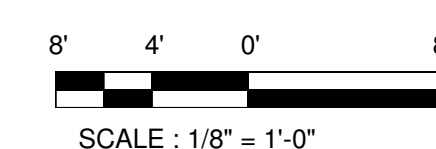
NOTES - ROOF FRAMING

1. SEE SHEET S1.01 FOR GENERAL STEEL JOIST, CEILING AND LIGHT GAUGE FRAMING NOTES. ALSO SEE SHEETS S1.02 & S1.03 FOR TYPICAL DETAILS NOT SHOWN ON PLAN.
 2. TYPICAL ROOF DECK IS 1 1/2" DEEP, 20 ga., GALVANIZED, TYPE 'B' METAL ROOF DECK.
 3. METAL ROOF DECK SHALL BE ATTACHED TO STEEL SUPPORTING MEMBERS WITH 5/8" DIA. PUDLE WELDS IN A 36/4 PATTERN. PROVIDE (1)- #10 TIE SIDELAP SCREW PER SPAN, U.N.O. ON PLAN.
- 
- 36/4
- SCREW PATTERN
- 36" COVERAGE
- SIDE LAP SCREW
4. ALL JOISTS MUST BE DESIGNED FOR A NET UPLIFT PRESSURE OF 30 psf.
 5. PROVIDE JOIST BRIDGING PER SJI RECOMMENDATIONS.
 6. ALL BEAMS, GIRDERS AND COLUMNS SHALL BE ASTM A992, GRADE 50.
 7. J.B.E. = JOIST BEARING ELEVATION. SEE BUILDING SECTIONS ON SHEETS S3.01-S3.04 FOR JOIST BEARING ELEVATIONS.
 8. T1/STL = TOP OF STEEL.



CAFETERIA ADDITION ROOF FRAMING PLAN

SCALE: 3/16" = 1'-0"



**NORTH
BRUNSWICK
HIGH SCHOOL
CAFETERIA
ADDITION**

114 SCORPION DRIVE N.E.
LELAND, NC 28451

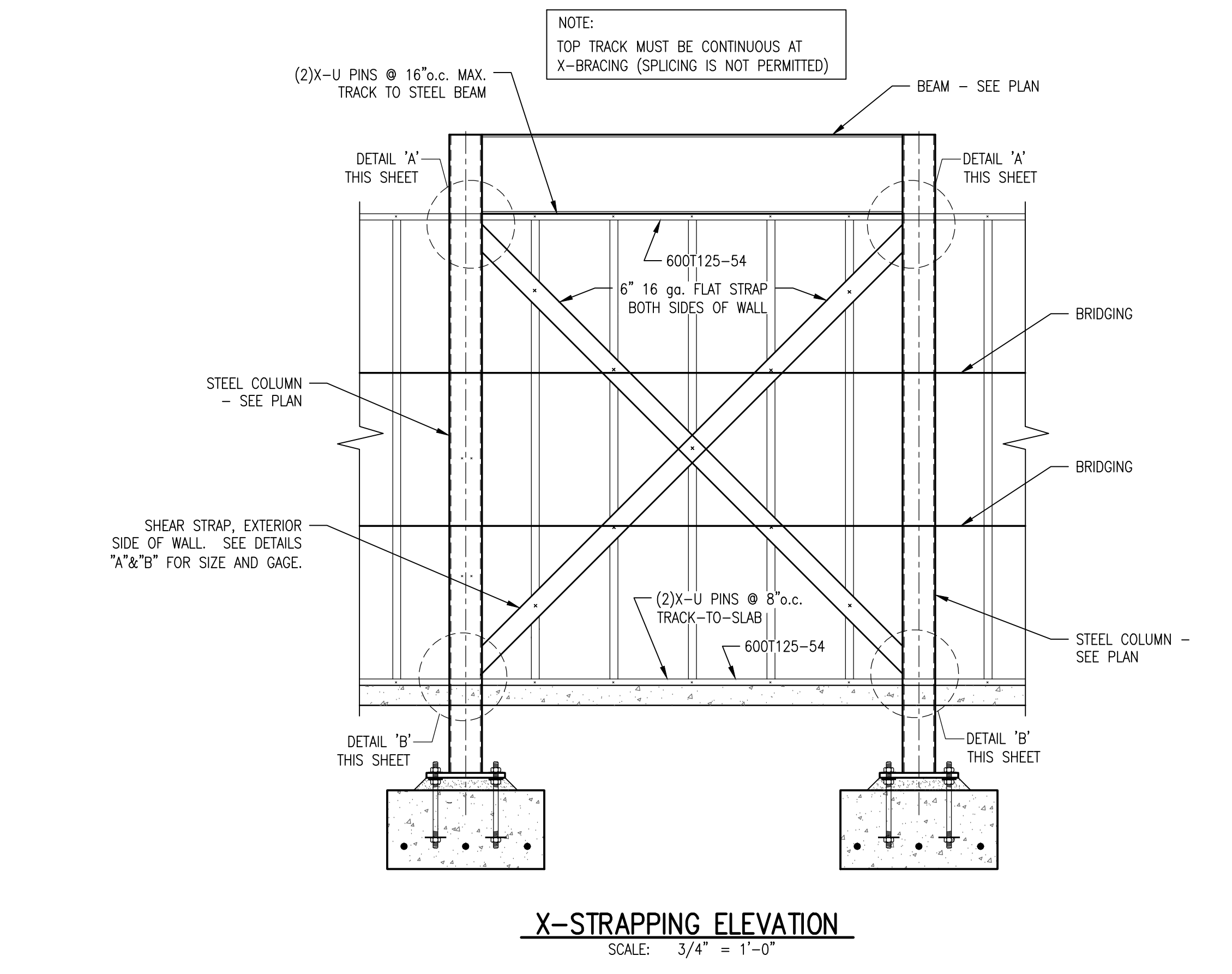
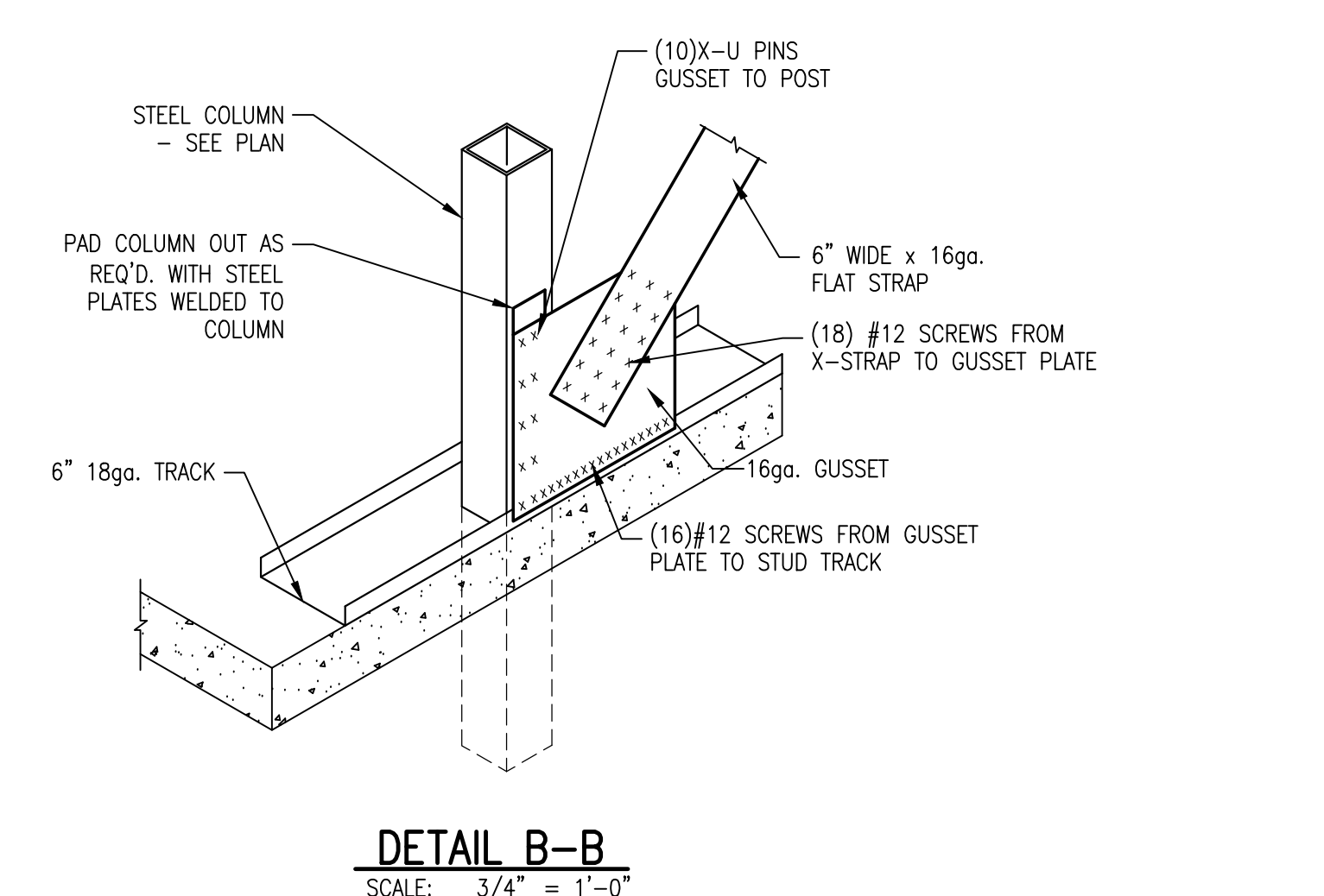
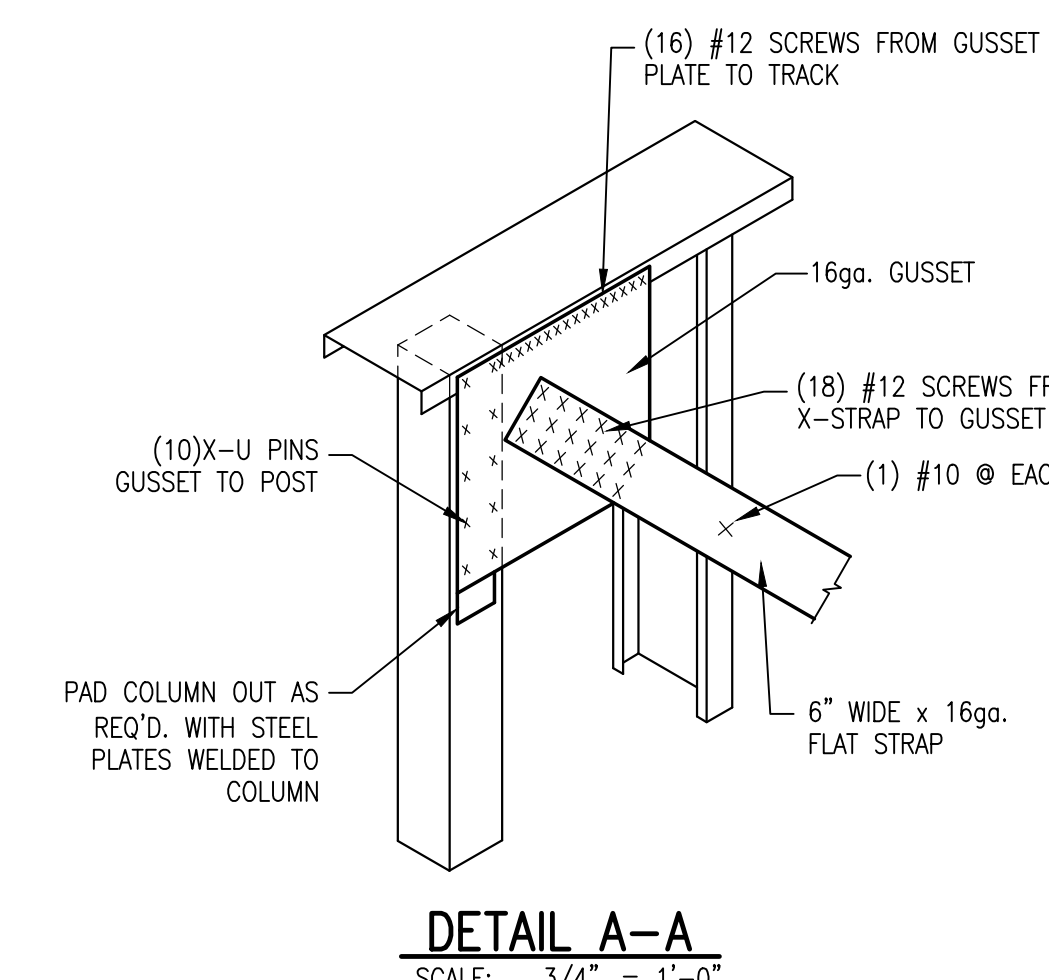
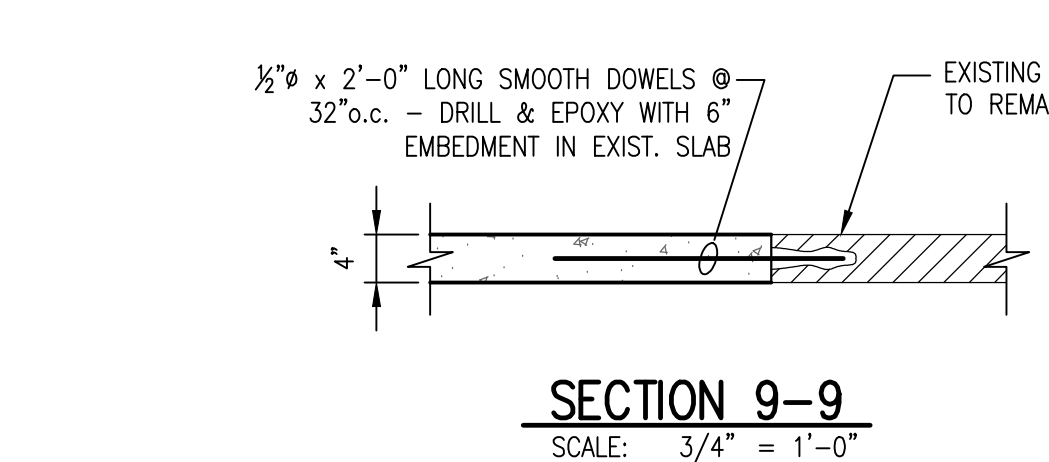
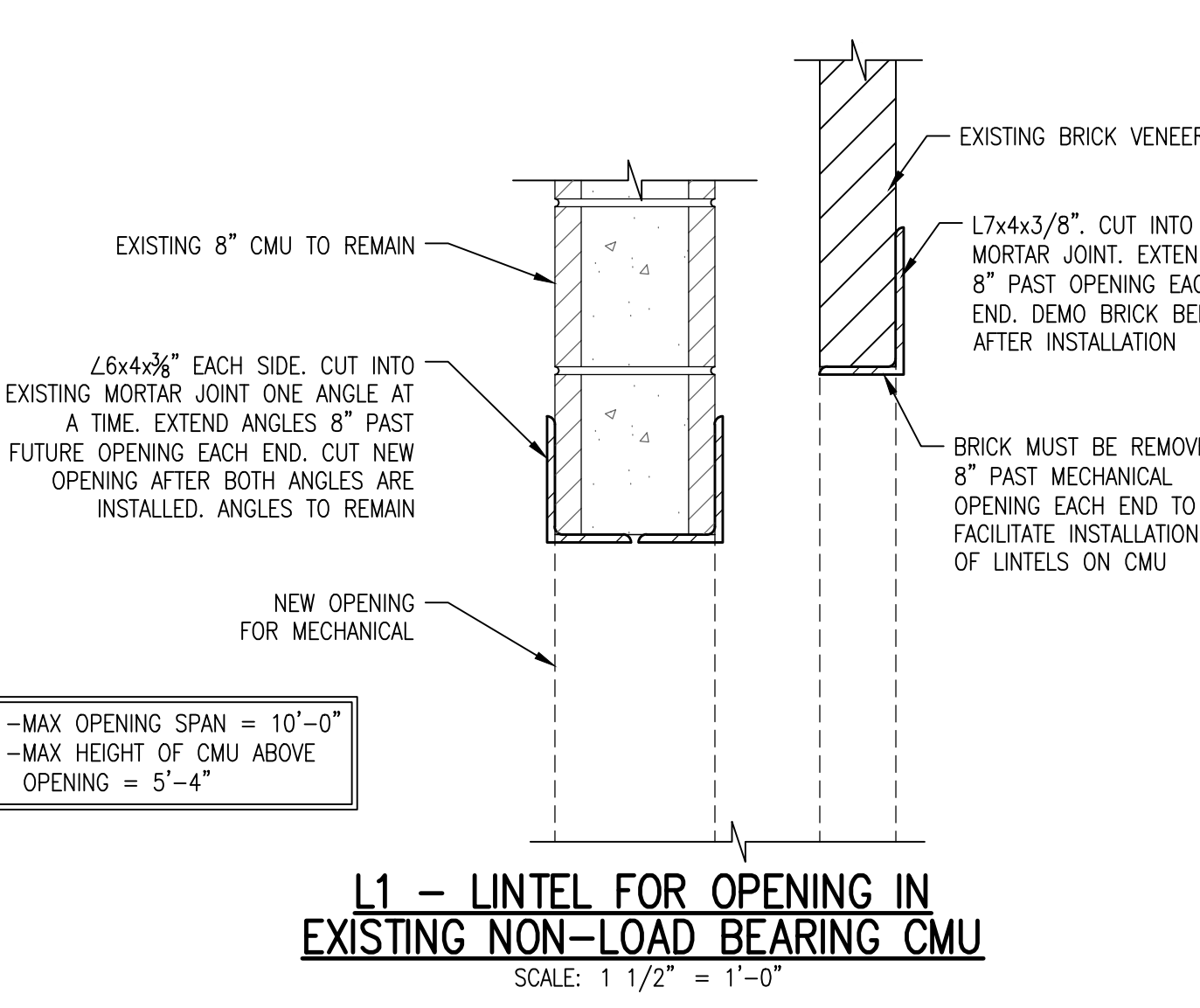
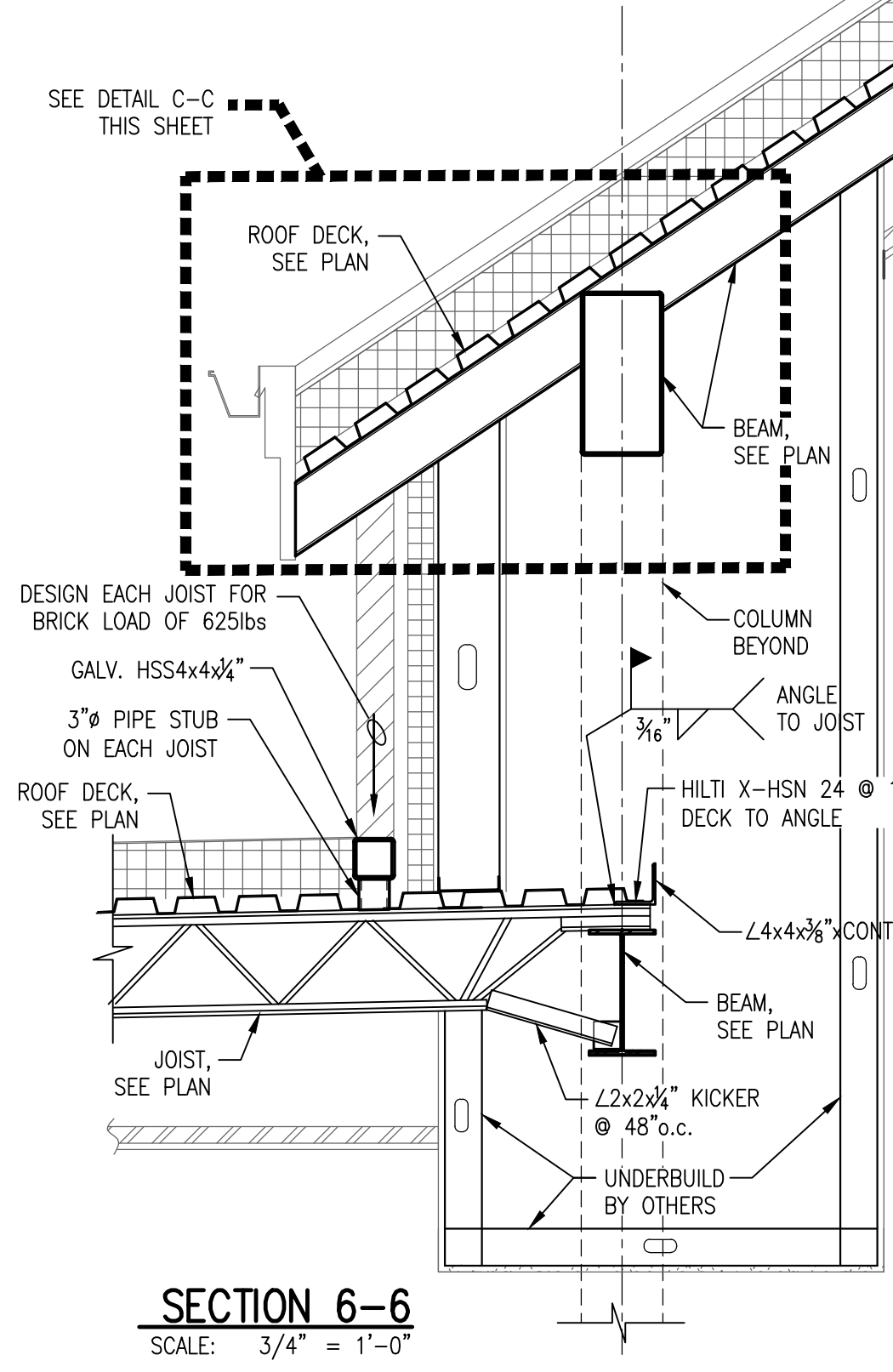
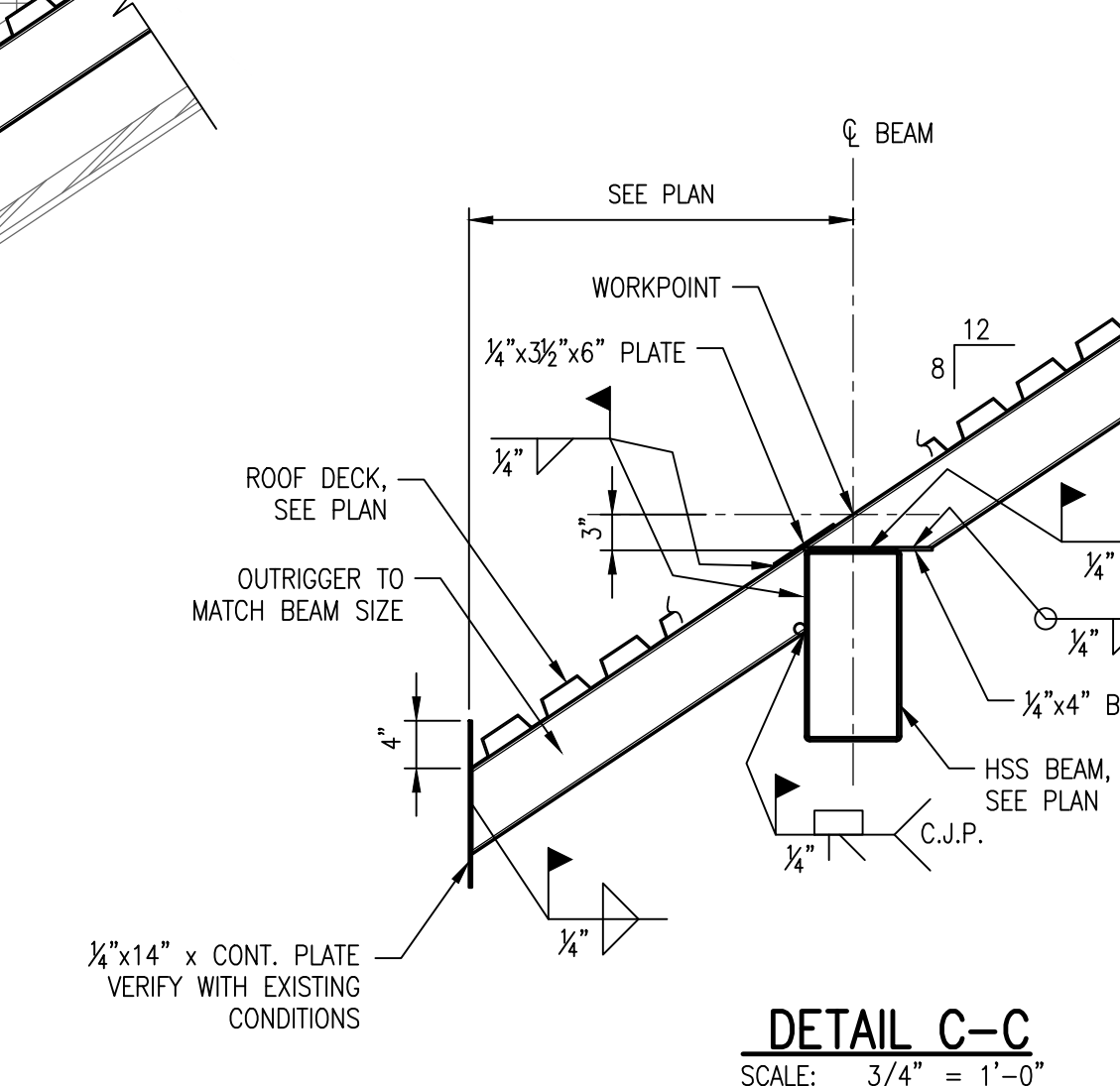
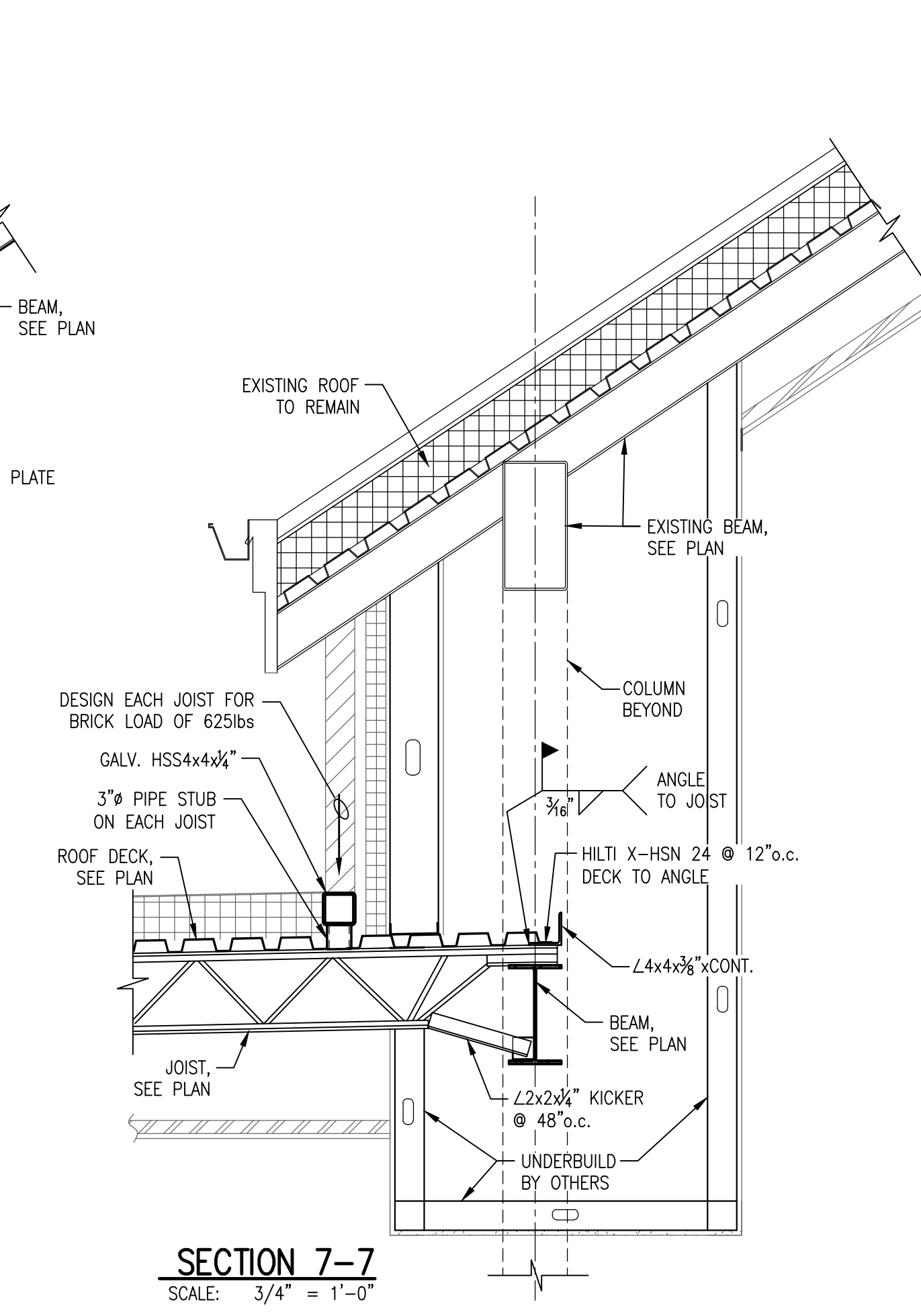
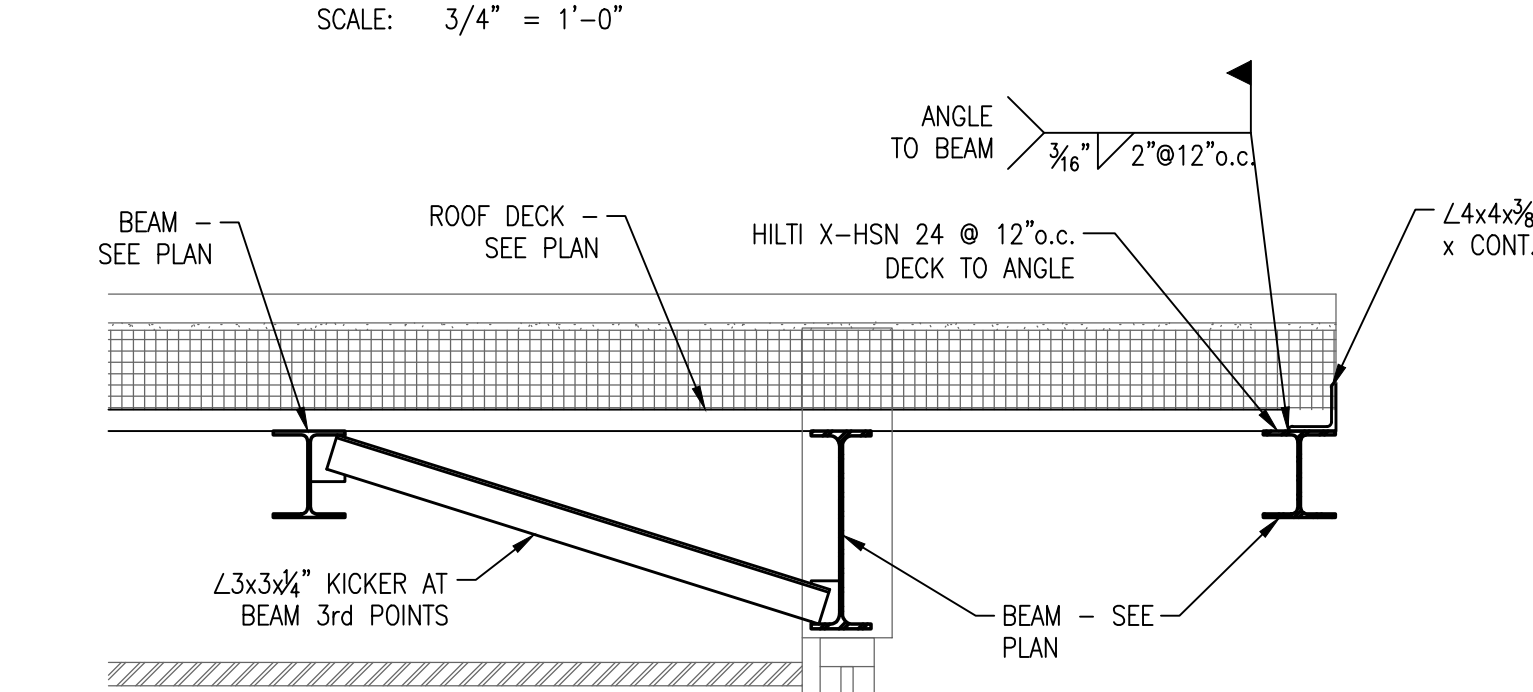
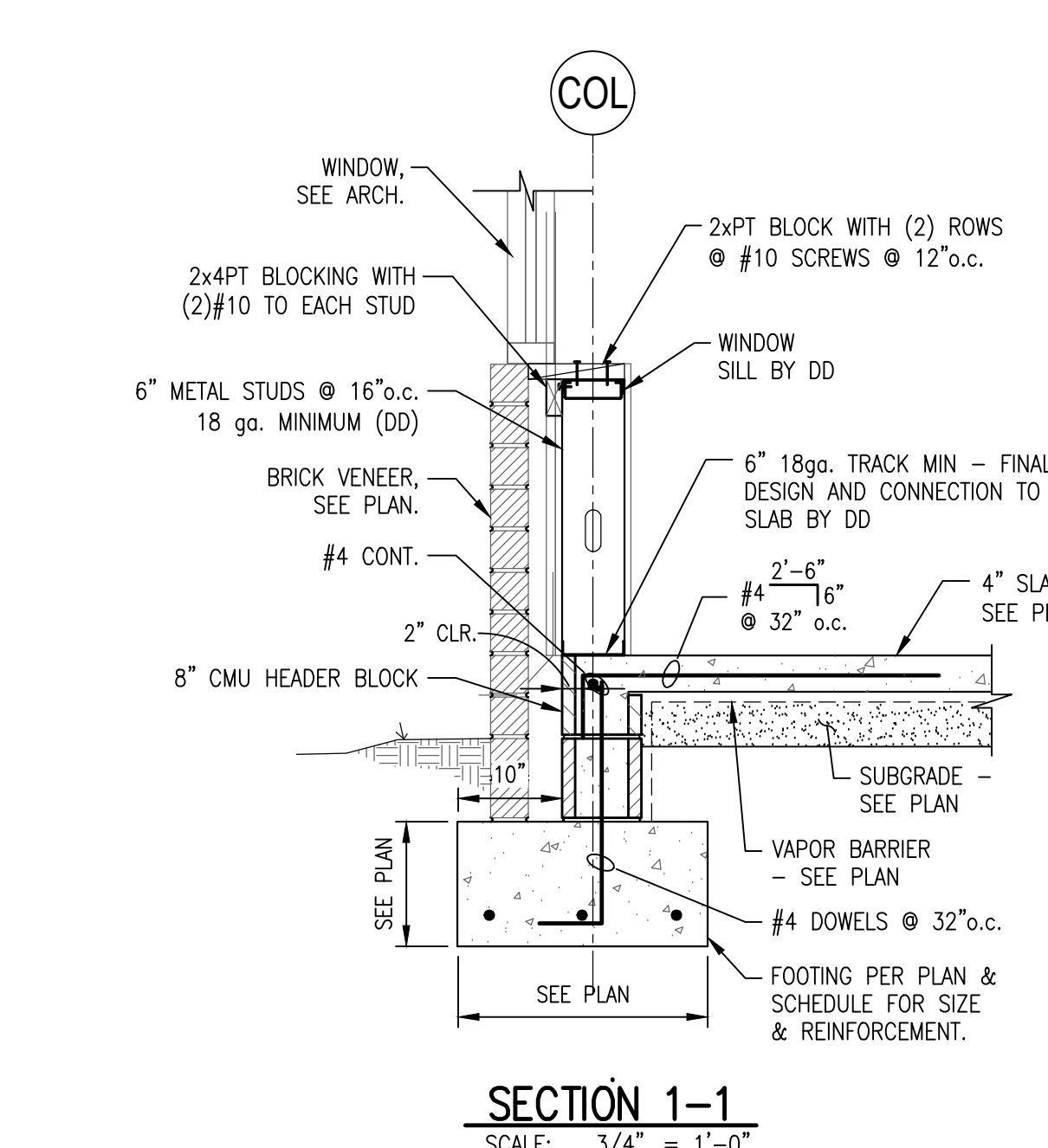
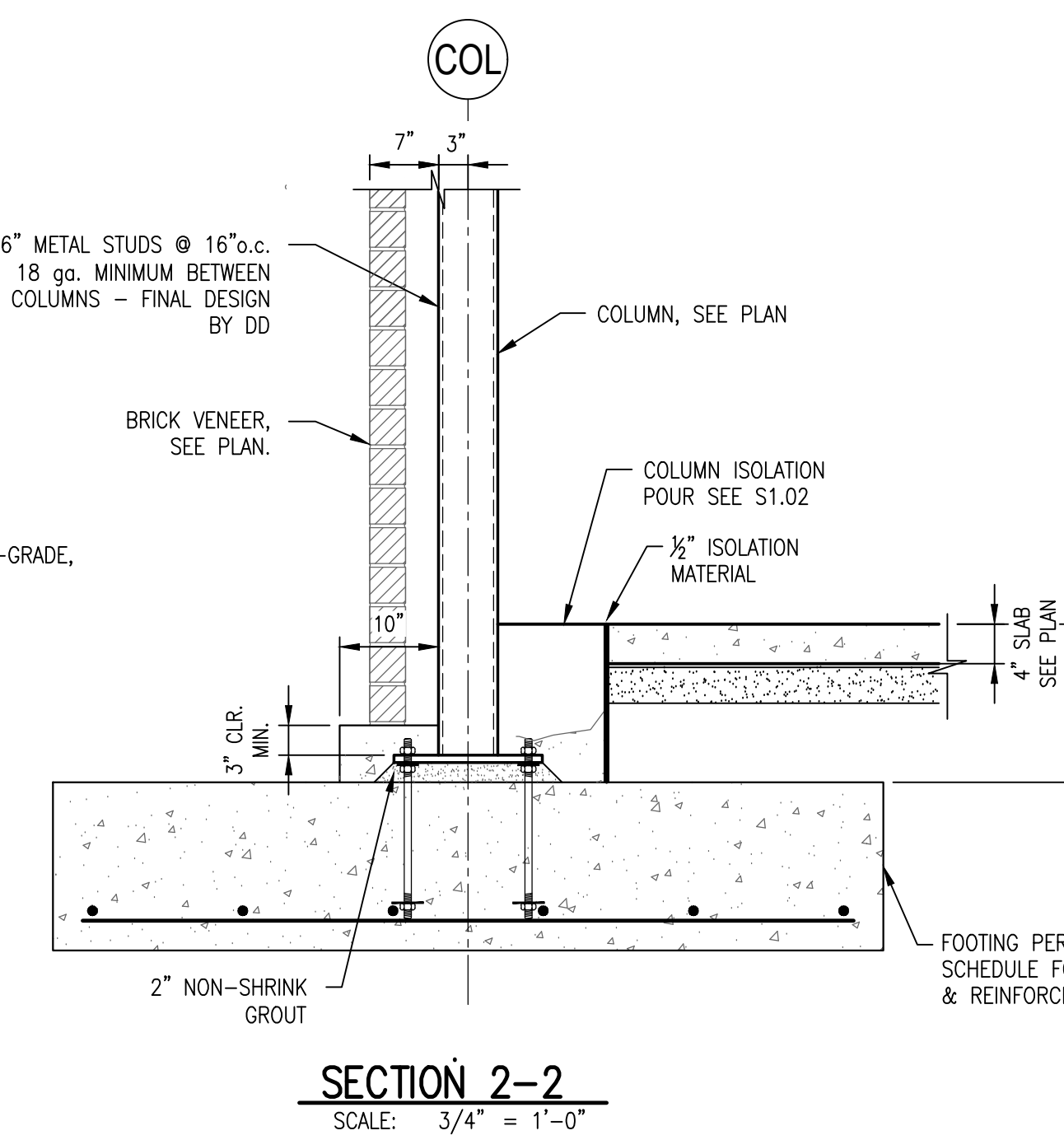
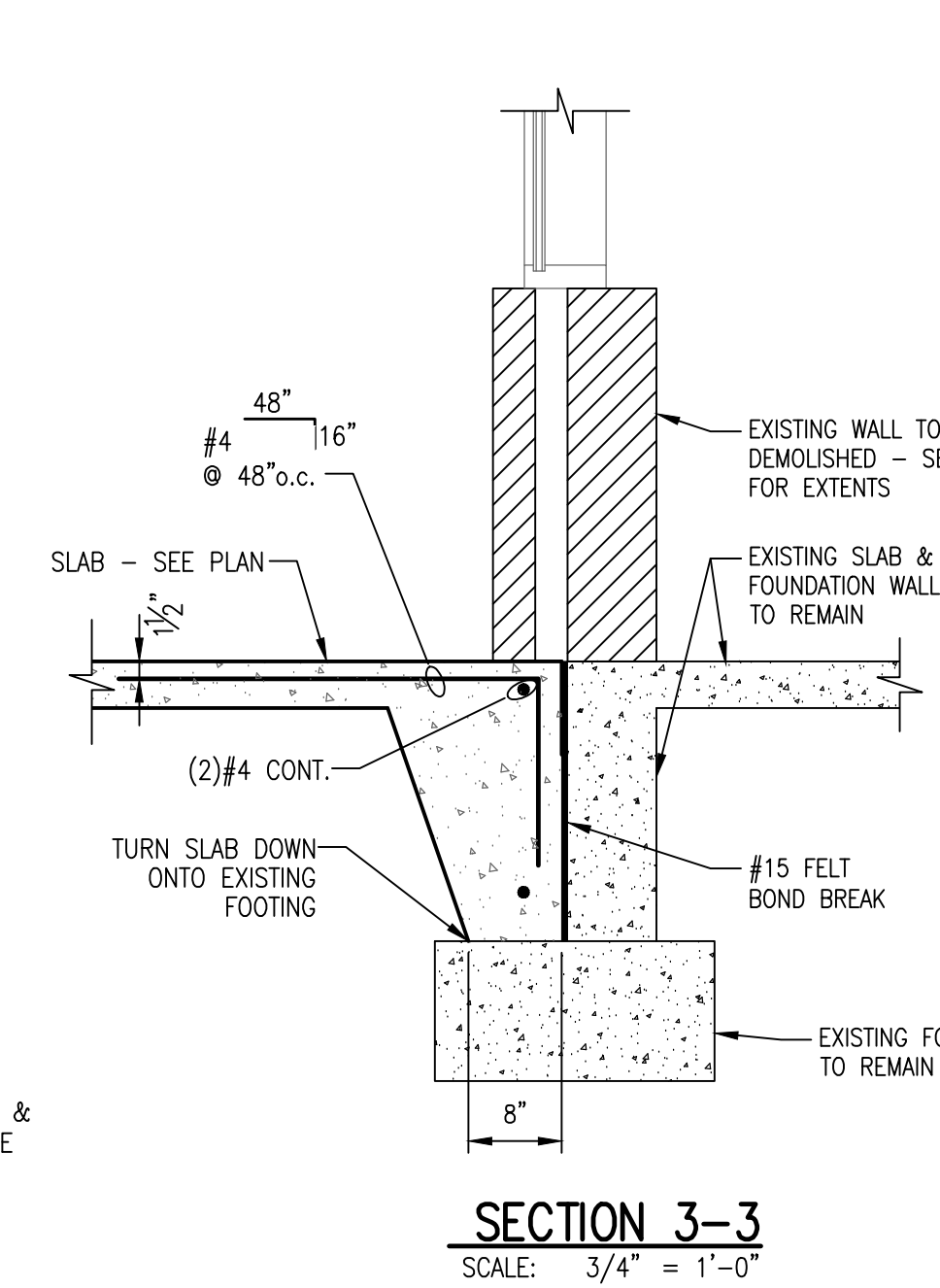
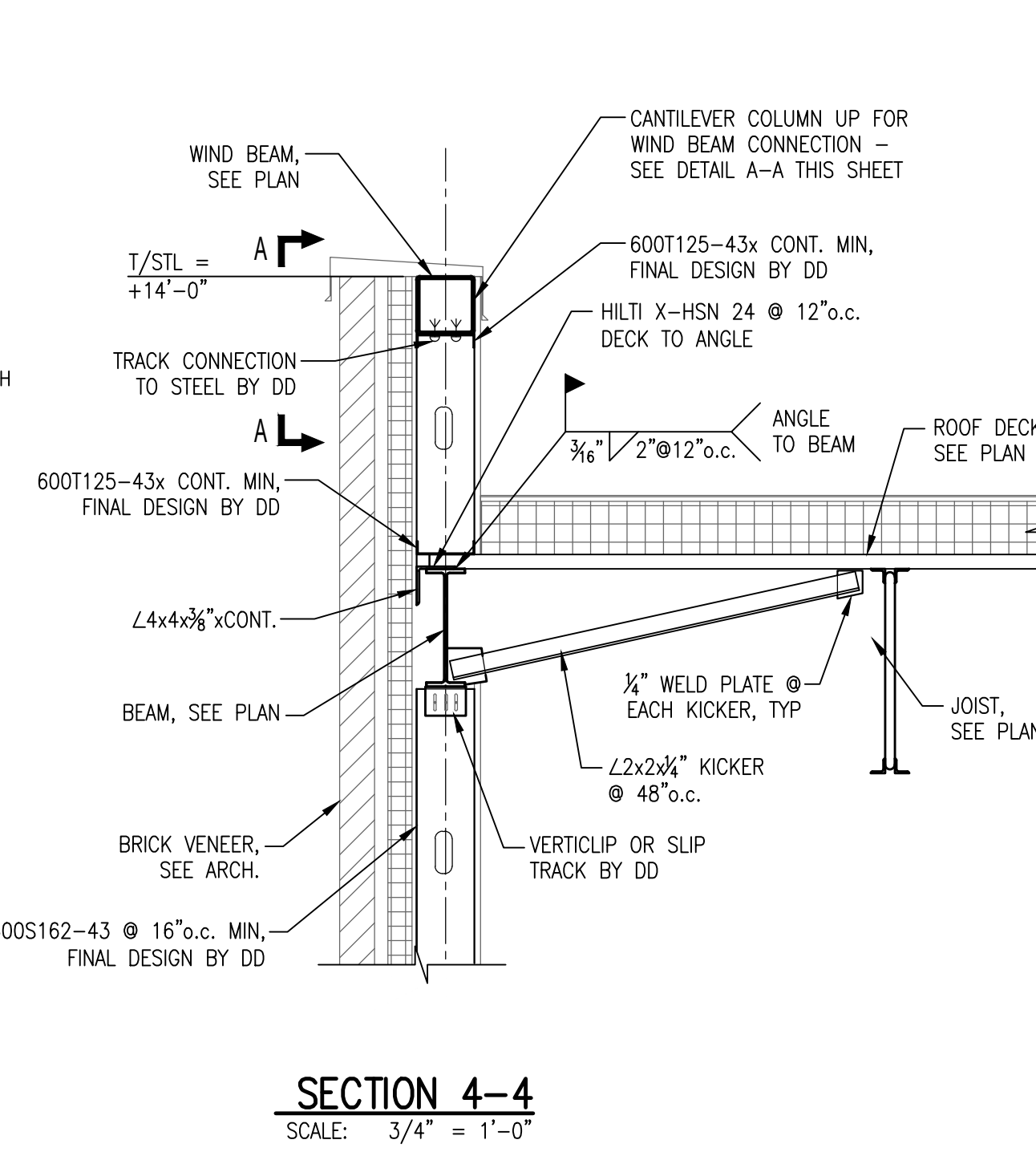
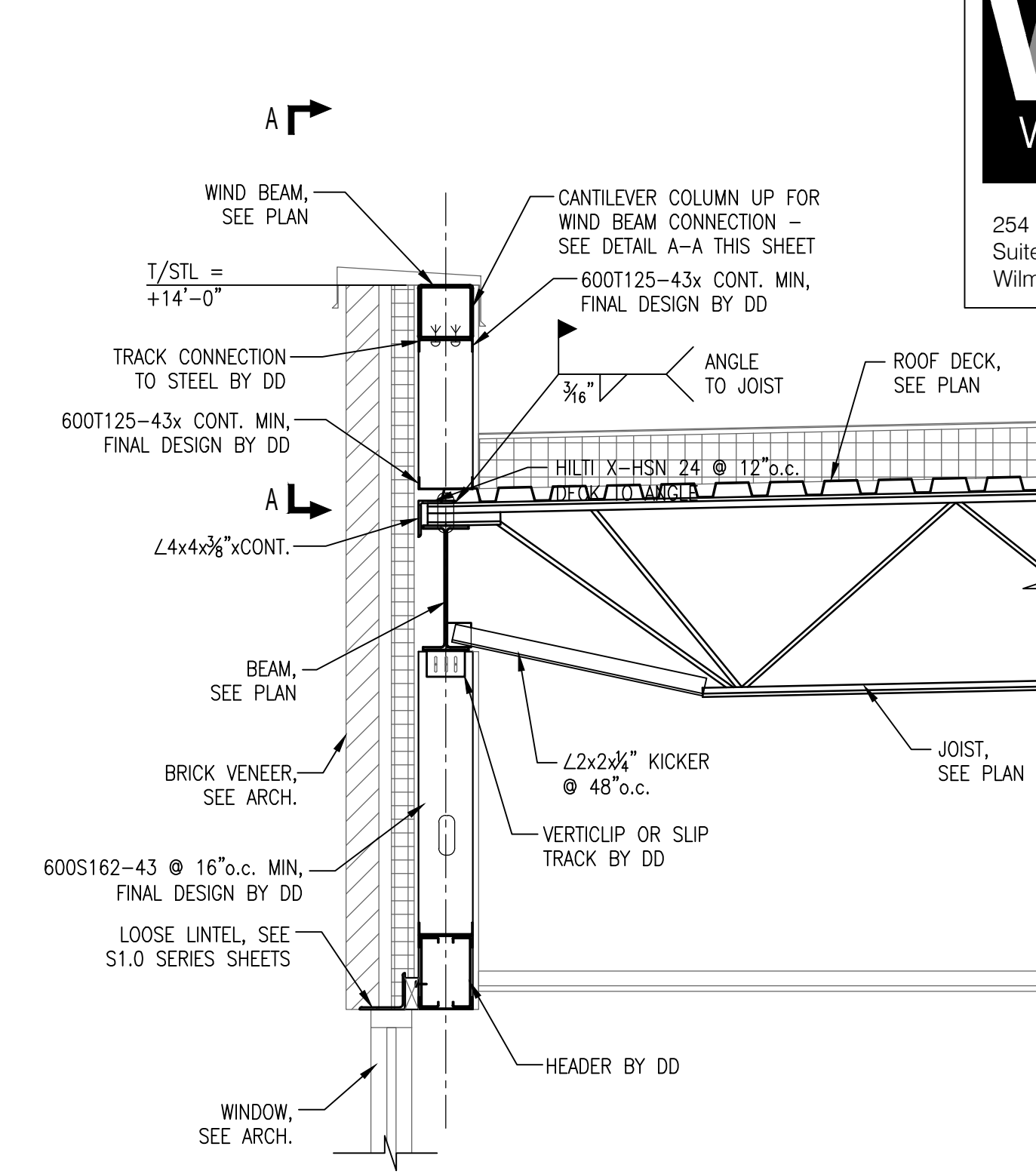
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DPI SCHOOL # : 1165

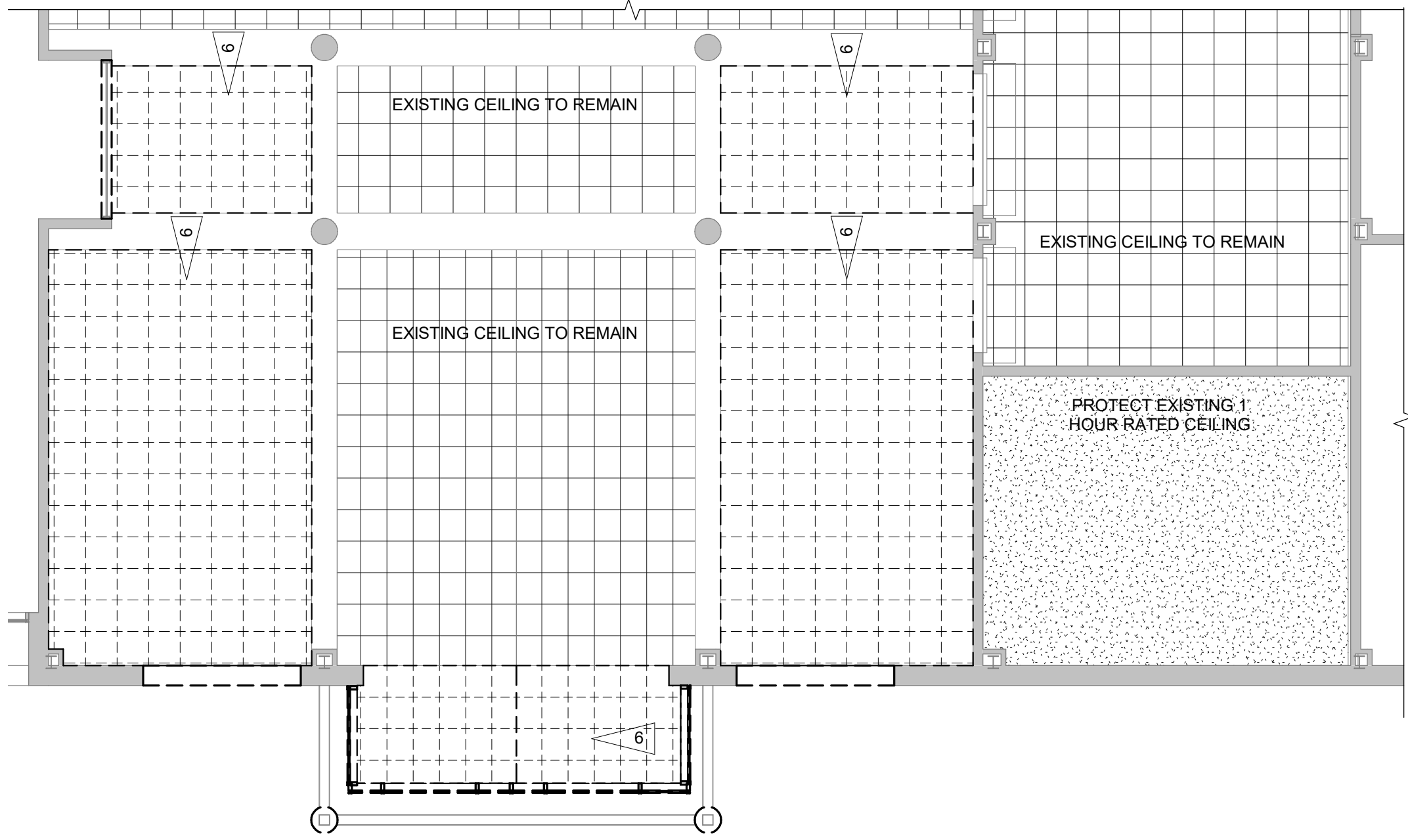
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SECTIONS AND
DETAILS**

DATE	DESCRIPTION
04.23.20	ISSUED FOR BIDDING
05.22.20	100% REVIEW SUBMISSION
10.14.19	NCORP SUBMISSION
07.30.19	SD PROGRESS DRAWINGS
07.11.19	NCORP SUBMISSION
07.11.19	NCORP SUBMISSION

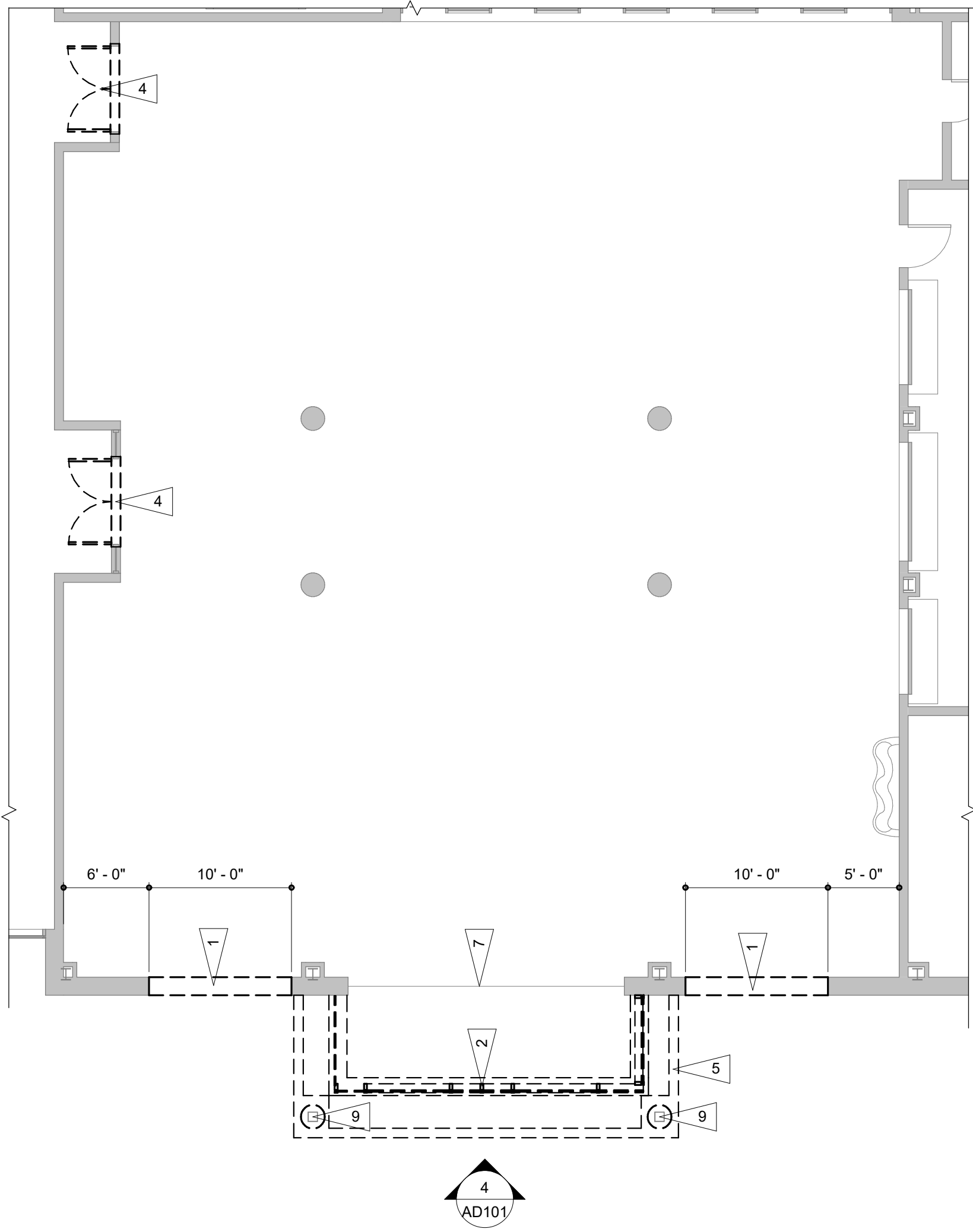
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DATE: 04.23.20
SCALE: AS INDICATED
DRAWN BY: MBK PROJ MGR: ALS

S301
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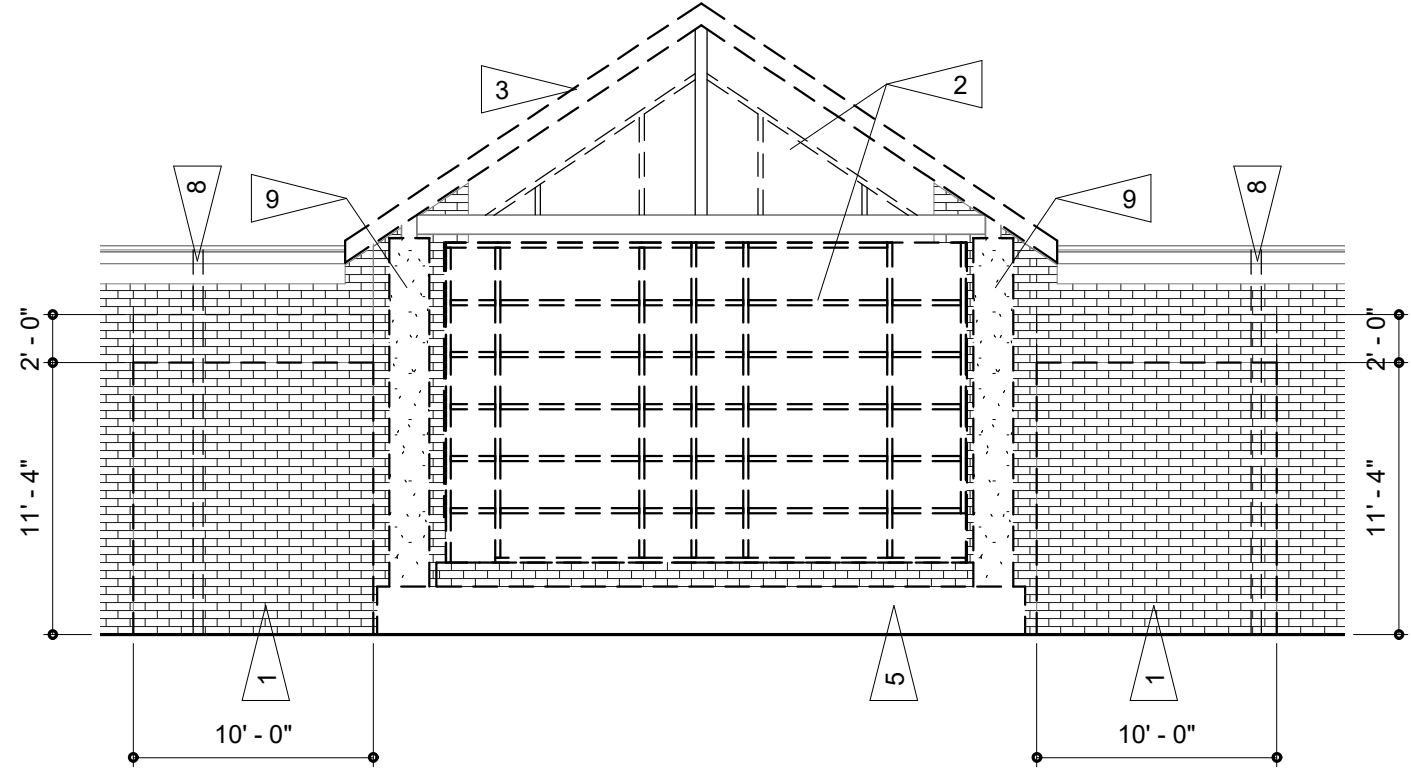


2 CAFETERIA CEILING DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

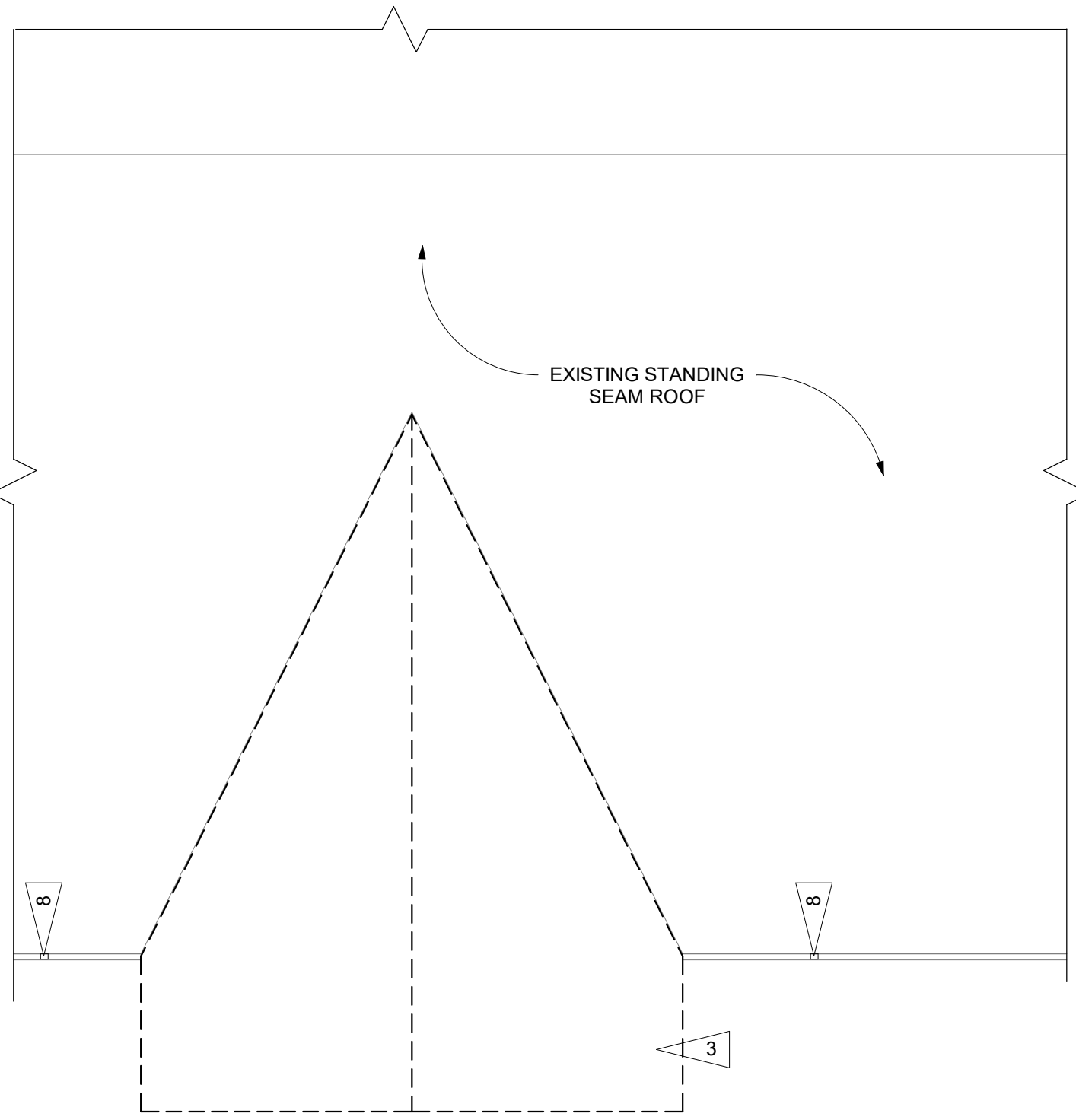


1 CAFETERIA DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

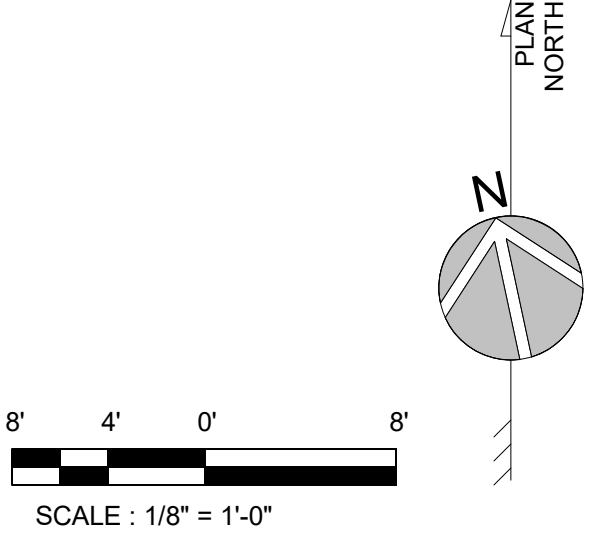
DEMOLITION KEY NOTES	DEMO LEGEND	GENERAL DEMOLITION NOTES
1. REMOVE 10' W. PORTION OF EXTERIOR WALL ; SEE NEW WORK AS REQUIRED. CMU TO BE REMOVED UP TO 11'-4" AFF. BRICK TO BE REMOVED UP TO 12'-0" AFF. PROTECT EXISTING TERRAZZO FLOOR	EXISTING WALL TO REMAIN	1. EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DEMOLITION AND CONSTRUCTION OPERATIONS.
2. REMOVE EXISTING CURTAINWALL AND MASONRY WALL	EXISTING WINDOW TO REMIAN	2. CONTRACTOR TO PROVIDE TEMPORARY BRACING AND SHORING AS REQUIRED TO ACCOMPLISH DEMOLITION ACTIVITIES AND MAINTAIN STRUCTURAL STABILITY UNTIL NEW WORK IS INSTALLED.
3. REMOVE PORTION OF EXISTING STANDING SEAM METAL ROOF. FACIA, GUTTERS, DOWNSPOUTS, ETC.	EXISTING DOOR TO REMAIN	3. COORDINATE EXTENT OF DEMOLITION WITH NEW WORK.
4. REMOVE EXISTING DOOR. EXISTING FRAME TO REMAIN	EXISTING WALL TO BE REMOVED	4. PATCH, RESTORE, AND REPAIR SURFACES AT DEMOLISHED ELEMENTS TO MATCH ADJACENT UNDAMAGED SURFACES. REFER TO "EXECUTION" SPECIFICATION.
5. REMOVE EXISTING BRICK PLANTER AND FOOTINGS	EXISTING WINDOW TO BE REMOVED	5. PROVIDE PRE-DEMOLITION PHOTOGRAPHIC OR VIDEO DOCUMENTATION. SEE SPECIFICATIONS.
6. REMOVE EXISTING ACOUSTIC CEILING TILE AND GRID AND SAVE FOR RE-INSTALLATION	EXISTING DOOR TO BE REMOVED	6. PATCH, REPAIR, AND PREP ALL WALL SURFACES TO RECEIVE NEW FINISHES.
7. REMOVE EXISTING CONCRETE SLAB AND TERRAZZO FLOOR AT DIVIDER STRIP. PROTECT FLOOR TO REMAIN	EXISTING ACT CEILING TO BE REMOVED	7. NO KNOWN HAZARDOUS MATERIALS EXIST IN THE BUILDING EXCEPT AS NOTED. REFER TO SPECIFICATION FOR HAZARDOUS MATERIALS ENCOUNTERED DURING CONSTRUCTION.
8. EXISTING DOWNSPOUT TO BE REMOVED	EXISTING ACT CEILING TO BE REMOVED	8. REFER TO SPECIFICATIONS FOR ITEMS TO SALVAGE FOR OWNER.
9. EXISTING CONCRETE COLUMN COVER TO BE REMOVED		9. REFER TO M/E/P/FP DRAWINGS FOR ADDITIONAL WORK.



4 CAFETERIA DEMOLITON ELEVATION
SCALE: 1/8" = 1'-0"



3 CAFETERIA ROOF DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



ARCHITECTURE
PLANNING

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

Maryland
312 West Main St, Suite 300
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410.546.9100

Delaware
309 S Governors Ave
Dover, DE 19904
302.734.7950

Rittenhouse Station
250 South Main Street, Suite 109
Newark, DE 19711
302.369.3700
www.beckermorgan.com

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ISSUED: 04/23/2020

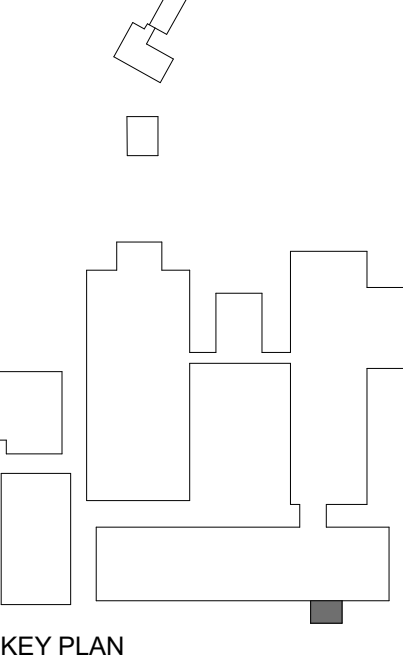


PROJECT TITLE
NORTH
BRUNSWICK
HIGH SCHOOL
CAFETERIA
ADDITION


114 SCORPION DRIVE N.E.
LELAND, NC 28451

DSP # : 100
DPI SCHOOL # : 1165

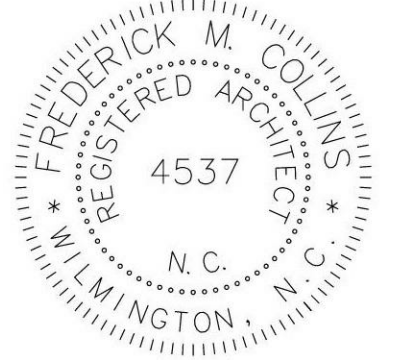
SHEET TITLE
DEMOLITION PLANS
AND DETAILS



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10.14.19	10.14.19	NCDP DO SUBMISSION
7.30.19	7.30.19	SD PROGRESS DRAWINGS
7.11.19	7.11.19	NCDP SD SUBMISSION
PROJECT NO:	2019082.02	
DATE:	04.23.2020	
SCALE:	1/8" = 1'-0"	
DRAWN BY	Author	PROJ MGChecker
AD101		
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GENERAL NOTES	
<p>1. DIMENSIONS ARE TO EXTERIOR FACE OF CONCRETE, MASONRY, OR METAL STUD UNLESS OTHERWISE NOTED.</p> <p>2. COORDINATE REQUIREMENTS OF WORK WITH ALL OTHER TRADES.</p>	
LEGEND	
	AREA N.I.C.

<div> <div> ISSUED FOR BIDDING </div> <div> NOT FOR CONSTRUCTION </div> </div>	ISSUED: 04/23/2020



PROJECT TITLE

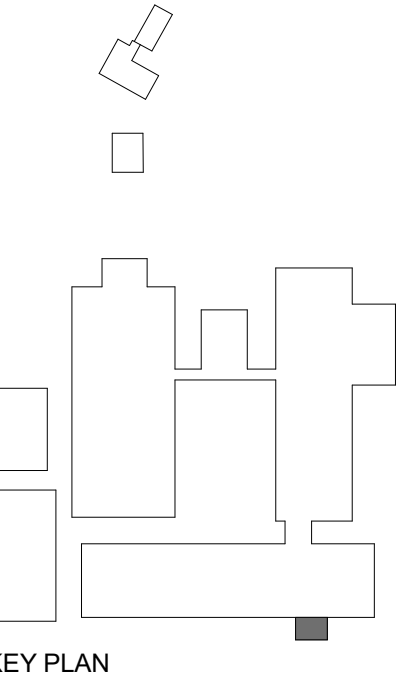
NORTH
BRUNSWICK
HIGH SCHOOL
CAFETERIA
ADDITION

114 SCORPION DRIVE N.E.
LELAND, NC 28451

DSP # : 100
DPI SCHOOL # : 1165

SHEET TITLE

CAFETERIA ADDITION FLOOR PLAN AND REFLECTED CEILING PLAN

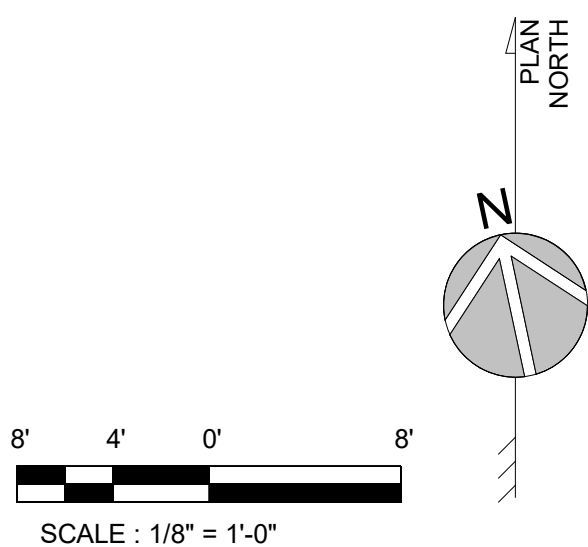
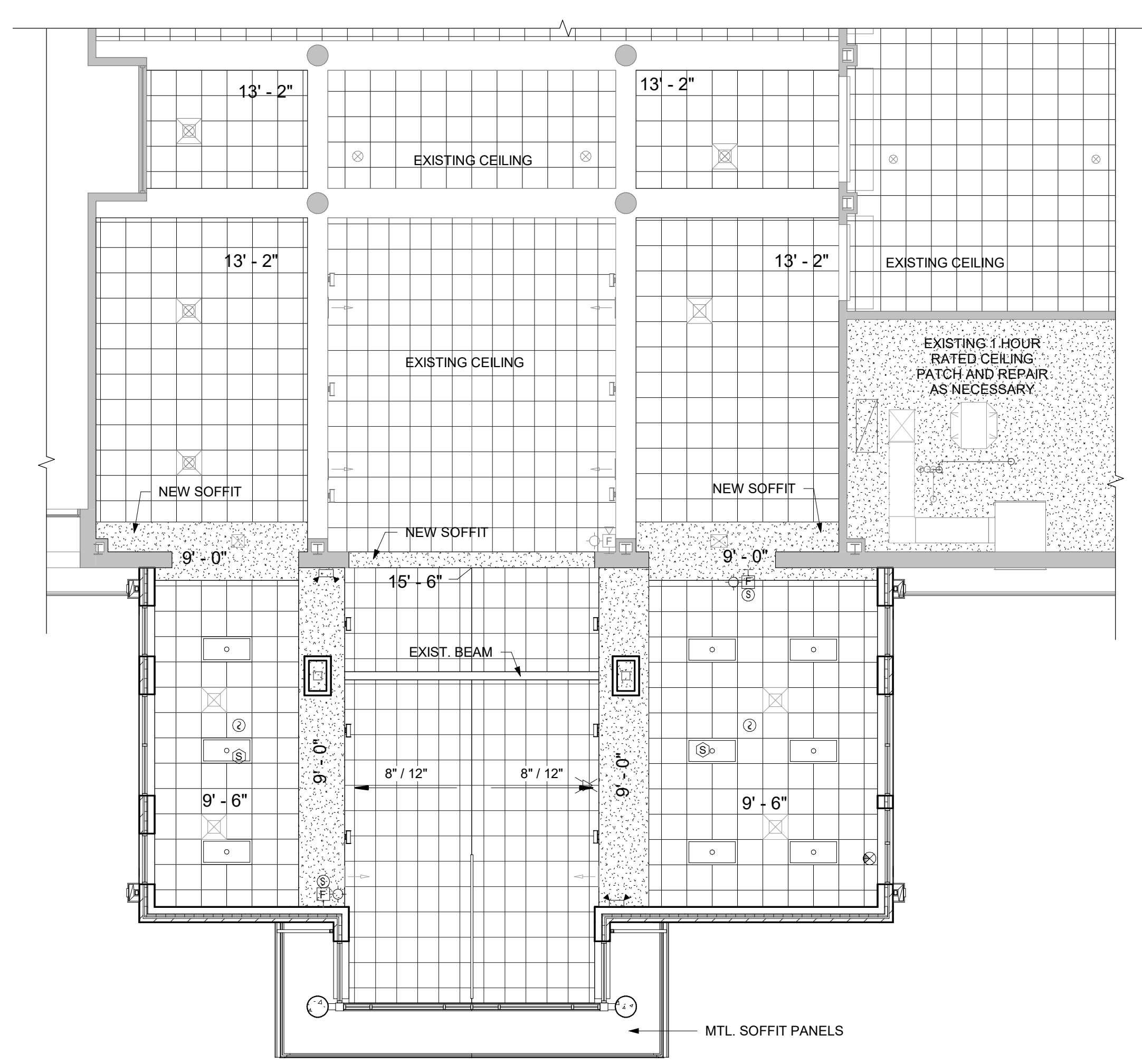
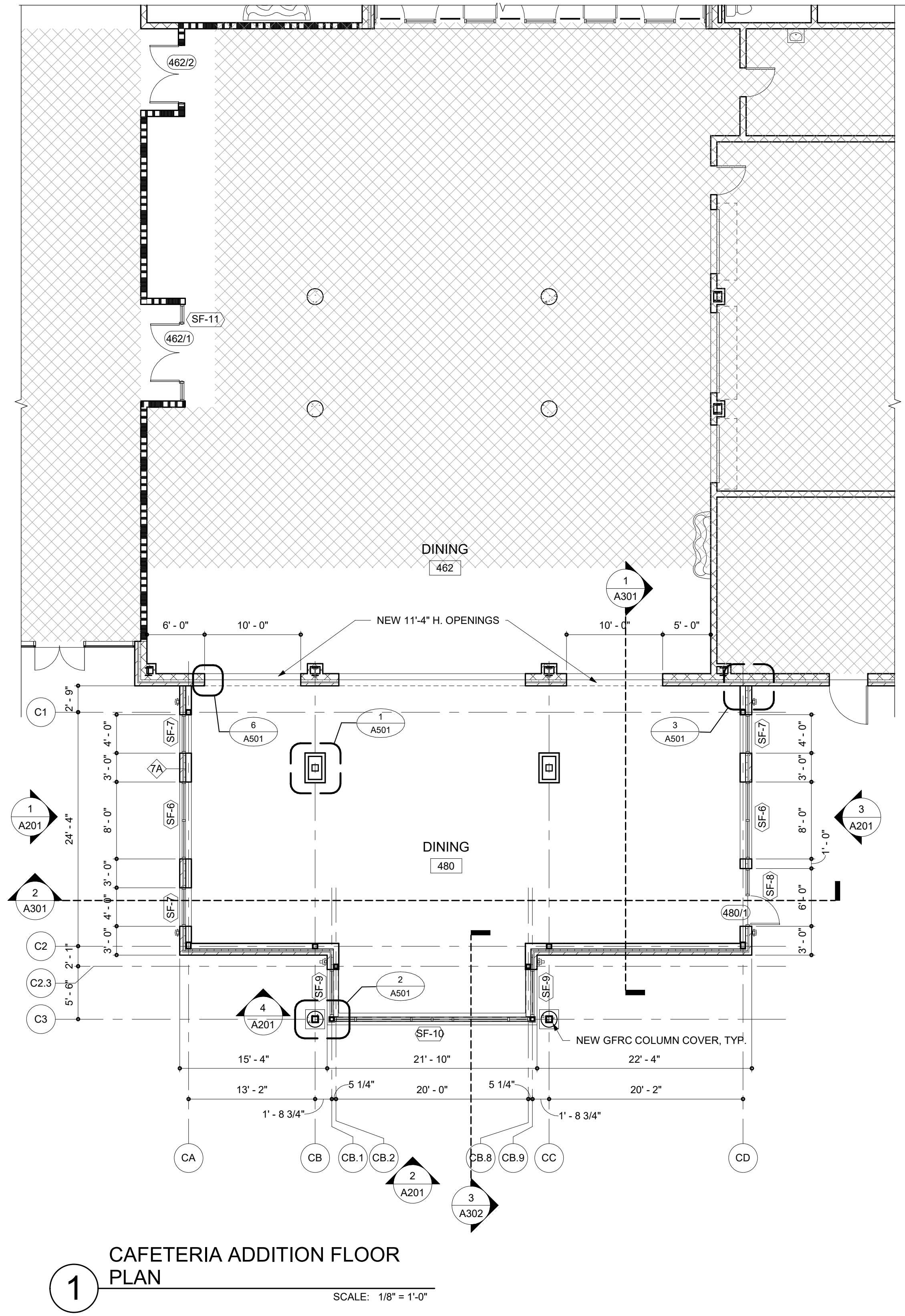


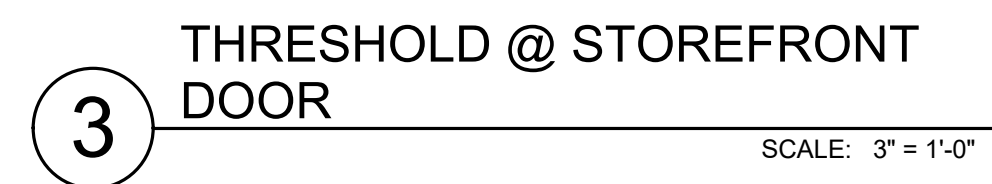
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	7.11.18	NCDP SD SUBMISSION

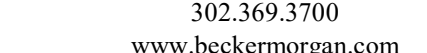
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DATE: 04_23_2020
SCALE: As indicated
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A101

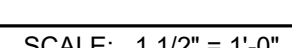
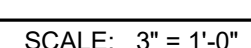
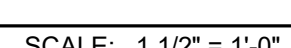
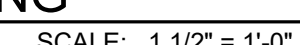
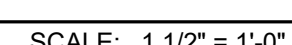
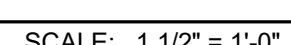
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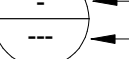


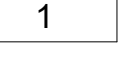
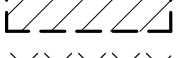



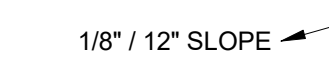












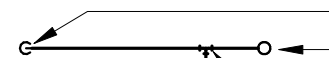





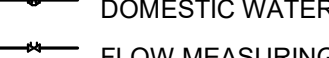
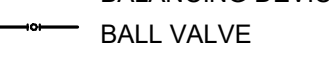

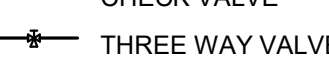


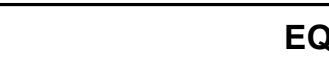




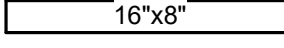
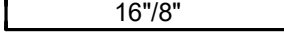
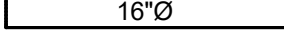
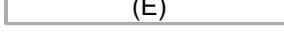
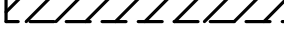
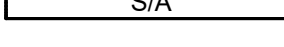
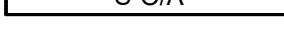
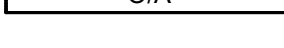
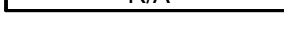



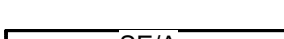


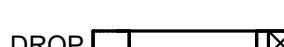
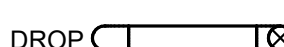
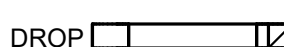
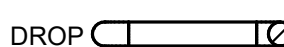
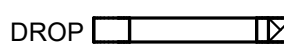
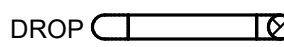








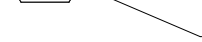

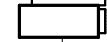
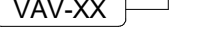


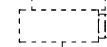
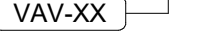





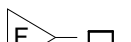




















A501



GENERAL MECHANICAL SYMBOLS		PIPING SYMBOLS		ABBREVIATIONS		MECHANICAL SUMMARY			
<div><div> REVISION NUMBER - SHOWN ON PLANS</div><div> POINT WHERE NEW CONNECTS TO EXISTING</div><div> NUMBER OF DETAIL ON SHEET NUMBER OF SHEET WHERE DETAIL APPEARS</div><div> KEYNOTE</div><div> CONTINUATION SYMBOL</div><div> ROOM NAME AND NUMBER</div><div> ITEM TO BE DEMOLISHED</div><div> AREA NOT IN CONTRACT</div></div>		<div><div> PIPE SIZE TAG (DIAMETER)</div><div> ABOVE GROUND PIPING</div><div> PIPE SLOPE TAG</div><div> BELOW GROUND PIPING</div><div> PIPE INVERT ELEVATION TAG</div><div> EXISTING PIPE TAG</div><div> PIPING BEING DEMOLISHED</div><div> CONDENSATE DRAINAGE</div><div> HEATING WATER RETURN</div><div> HEATING WATER SUPPLY</div><div> NATURAL GAS</div><div> PROPANE GAS</div><div> REFRIGERANT-LIQUID</div><div> REFRIGERANT-SUCTION</div><div> REFRIGERANT-HOT GAS</div></div>		<div><div> PIPE DROP</div><div> PIPE RISE</div><div> PIPE TEE</div><div> CAP</div><div> PLUG</div><div> REDUCING 45 DEGREE TEE</div><div> 45 DEGREE TEE</div><div> DOMESTIC WATER METER</div><div> MOTORIZED CONTROL VALVE</div><div> FLOW MEASURING AND BALANCING DEVICE</div><div> THREE WAY MOTORIZED CONTROL VALVE</div><div> PRESSURE REDUCING VALVE</div><div> BALL VALVE</div><div> CHECK VALVE</div><div> SOLENOID VALVE</div><div> THREE WAY VALVE</div><div> BUTTERFLY VALVE</div></div>		<div><div> SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)</div><div> OVAL DUCT SIZE TAG (WIDTH / HEIGHT)</div><div> ROUND DUCT SIZE TAG (DIAMETER)</div><div> EXISTING DUCT TAG</div><div> DUCT BEING DEMOLISHED</div><div> SUPPLY AIR</div><div> SUPPLY AIR (100% OUTSIDE AIR)</div><div> OUTSIDE AIR</div><div> RETURN AIR</div><div> TRANSFER AIR</div><div> EXHAUST AIR</div><div> RELIEF AIR</div><div> GREASE EXHAUST AIR</div><div> SMOKE EXHAUST AIR</div><div> EXHAUST GAS FLUE</div><div> COMBUSTION AIR</div><div> RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE</div><div> ROUND SUPPLY/OUTSIDE AIR DUCT RISE</div><div> RECTANGULAR RETURN/TRANSFER AIR DUCT RISE</div><div> ROUND RETURN/TRANSFER AIR DUCT RISE</div><div> RECTANGULAR EXHAUST/RELIEF AIR DUCT RISE</div><div> ROUND EXHAUST/RELIEF AIR DUCT RISE</div><div> SUPPLY OUTLET</div><div> RETURN/EXHAUST INLET</div><div> SECTORIZING BAFFLE OR BLANKOFF PANEL TYPE (SEE SCHEDULE)</div><div> GRILLES, REGISTERS, AND DIFFUSERS TAG</div><div> CFM</div><div> LINEAR DIFFUSER</div><div> TYPE (SEE SCHEDULE)</div><div> LINEAR DIFFUSER TAG</div><div> CFM</div><div> MECHANICAL EQUIPMENT</div><div> MECHANICAL EQUIPMENT TAG</div><div> EXISTING MECHANICAL EQUIPMENT</div><div> EXISTING MECHANICAL EQUIPMENT TAG (TYPICAL FOR ALL EXISTING TAGS)</div><div> MECHANICAL EQUIPMENT FOR REFERENCE</div><div> MECHANICAL EQUIPMENT TAG (REFER TO OTHER DISCIPLINE FOR ADDITIONAL INFORMATION)</div><div> CARBON DIOXIDE SENSOR</div><div> DUCT SMOKE DETECTOR</div><div> HUMIDITY SENSOR</div><div> E-STOP</div><div> TEMPERATURE SENSOR</div><div> FIRE DAMPER</div><div> MANUAL BALANCING DAMPER</div><div> SMOKE DAMPER</div><div> BACKDRAFT DAMPER</div><div> MOTORIZED DAMPER</div><div> COMBINATION FIRE/SMOKE DAMPER</div></div>		<div><div> AND</div><div> ROUND</div><div> AIR</div><div> ABOVE BASE</div><div> ABOVE</div><div> AIR CONDITIONING</div><div> ACOUSTICAL</div><div> AREA DRAIN</div><div> ADDENDUM</div><div></div></div>	

REMOVE / DISPOSE EXISTING HVAC INCLUDING BUT NOT LIMITED TO: AIR HANDLERS, SUPPORTS, ANCHORS, INSERTS, CONTROLS, ETC. TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING ITEMS TO REMAIN IN PLACE.

REMOVE / DISPOSE EXISTING DIFFUSERS / GRILLES. TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING ITEMS TO REMAIN IN PLACE.

REMOVE AND DISPOSE OF RETURN DUCTWORK INCLUDING, BUT NOT LIMITED TO: DUCTWORK, AIR HANDLERS, HANGERS, SUPPORTS, ANCHORS, INSERTS, INSULATION AND ACCESSORIES. TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING ITEMS TO REMAIN IN PLACE.

REMOVE AND DISPOSE OF SUPPLY DUCTWORK INCLUDING, BUT NOT LIMITED TO: DUCTWORK, AIR HANDLERS, HANGERS, SUPPORTS, ANCHORS, INSERTS, INSULATION AND ACCESSORIES. TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING ITEMS TO REMAIN IN PLACE.

6. PROTECT IN PLACE EXISTING TEMPERATURE SENSOR INCLUDING BUT NOT LIMITED TO TEMPERATURE SENSOR, CONTROL WIRING AND ELECTRICAL CESSARY. TAKE NECESSARY PRECAUTIONS TO EXISTING ITEMS TO REMAIN IN PLACE.

REMOVE / DISPOSE EXISTING CHILLED WATER SUPPLY AND RETURN PIPING INCLUDING, BUT NOT LIMITED TO CHILLED WATER SUPPLY AND RETURN PIPING, HANGERS, SUPPORTS, INSULATION, ETC. TO AVOID DAMAGE TO EXISTING ITEMS TO REMAIN IN PLACE.

REMOVE / DISPOSE EXISTING HEATING WATER SUPPLY AND RETURN PIPING INCLUDING, BUT NOT LIMITED TO HEATING WATER SUPPLY AND RETURN PIPING, HANGERS, SUPPORTS, INSULATION, ETC. TO AVOID DAMAGE TO EXISTING ITEMS TO REMAIN IN PLACE.

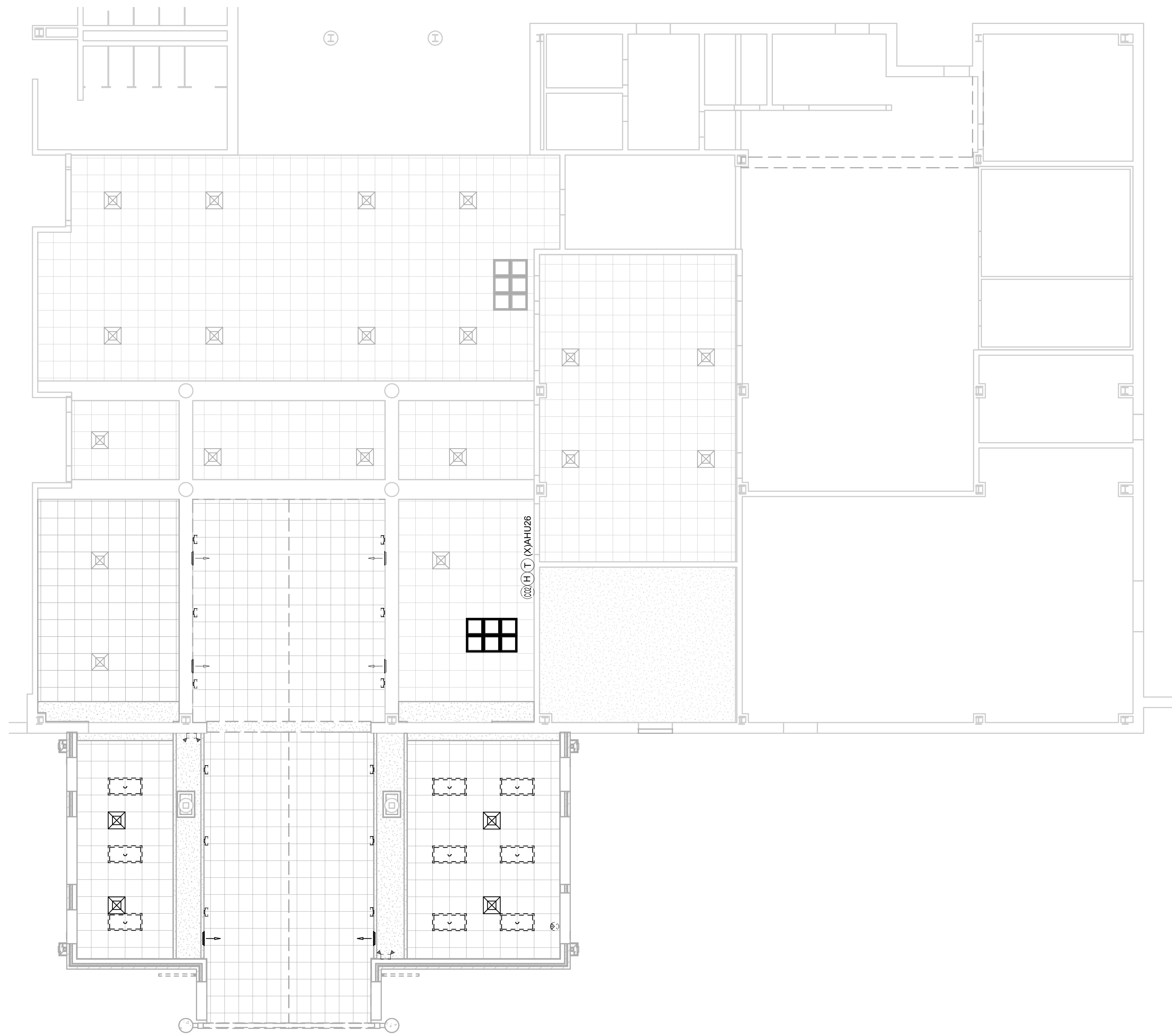


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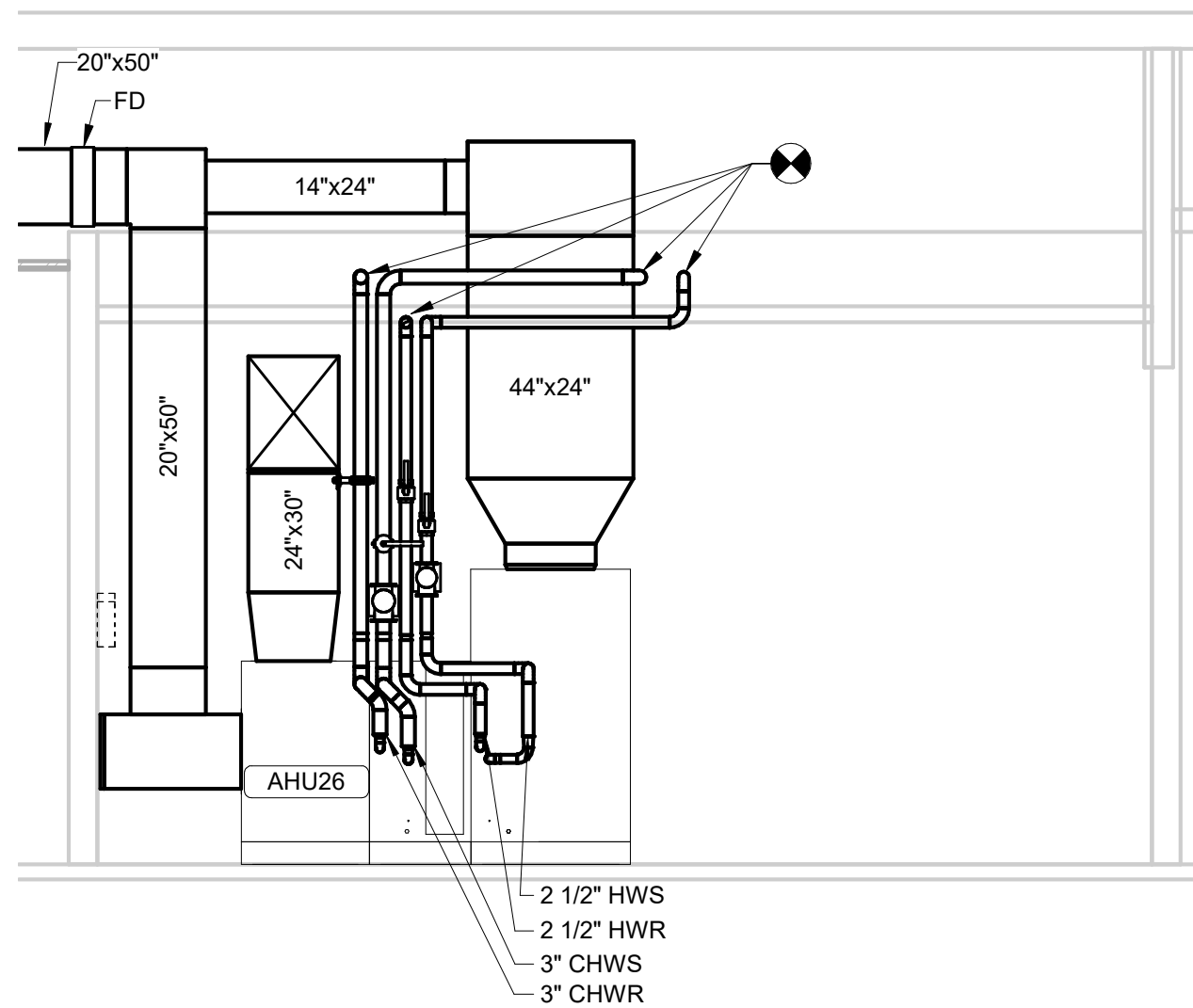


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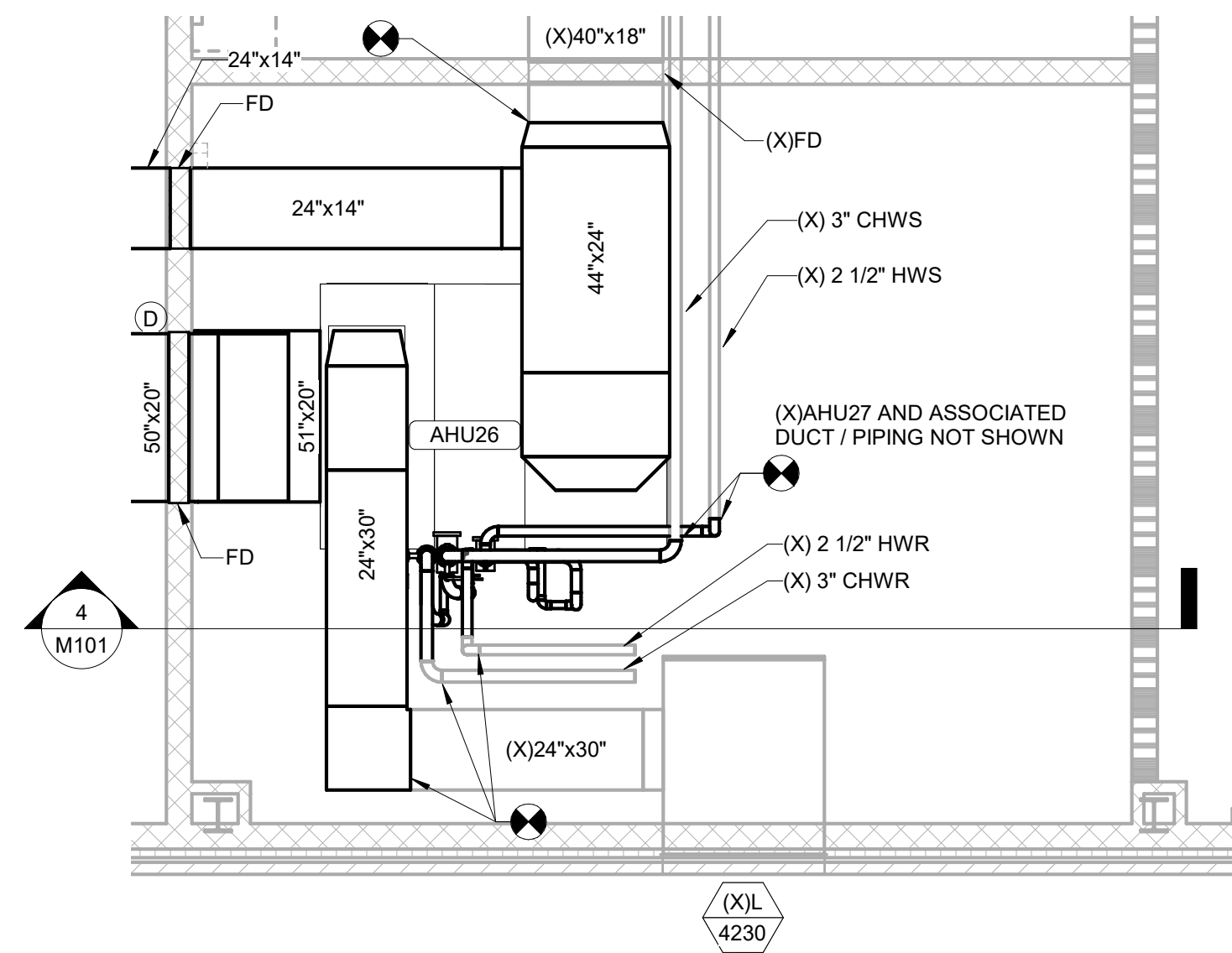
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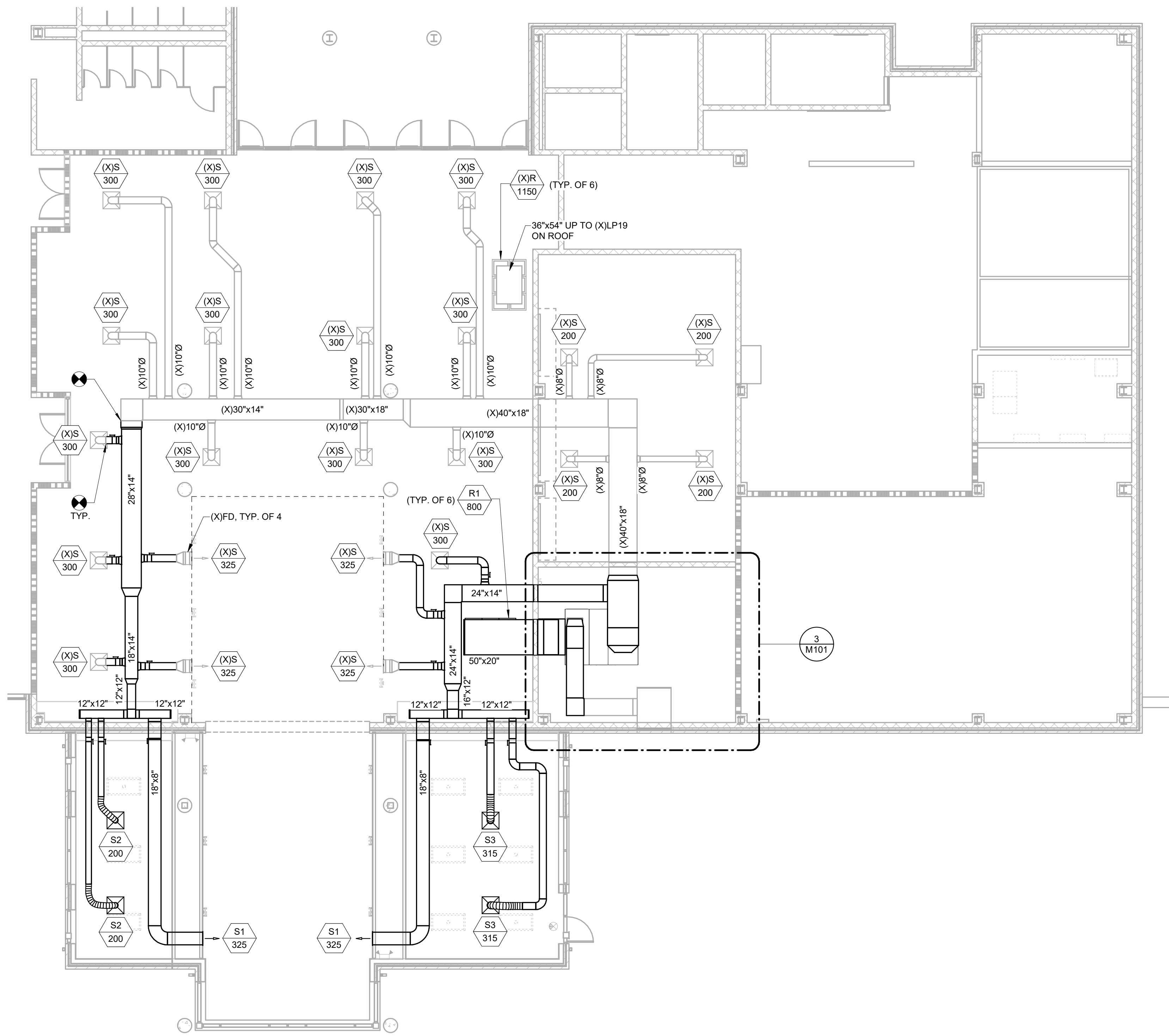
2 CAFETERIA ADDITION FLOOR PLAN - RCP
SCALE: 1/8" = 1'-0"



4 SECTION - HVAC
SCALE: 1/4" = 1'-0"



3 ENLARGED PLAN - HVAC
SCALE: 1/4" = 1'-0"



1 CAFETERIA ADDITION FLOOR PLAN - HVAC
SCALE: 1/8" = 1'-0"

FLOOR PLAN SHEET NOTES

1. MAINTAIN MANUFACTURER'S CLEARANCE REQUIREMENTS FOR INDOOR EQUIPMENT.
2. MECHANICAL CONTRACTOR TO COORDINATE WITH OTHER TRADES PRIOR TO BEGINNING WORK.
3. REFER TO ARCHITECTURAL DRAWINGS FOR RATED ASSEMBLY U/L NUMBERS (WALLS, FLOOR / CEILINGS, ETC).
4. COORDINATE CONDENSATE PIPE ROUTING WITH GENERAL CONTRACTOR AND OWNER, TYPICAL.
5. CONCERNING DIFFUSER LAYOUT AND CEILING TYPE, REFER TO ARCHITECTURAL PLANS FOR FURTHER INFORMATION.

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MORGAN
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PROJECT TITLE

NORTH
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HIGH SCHOOL
CAFETERIA
ADDITION

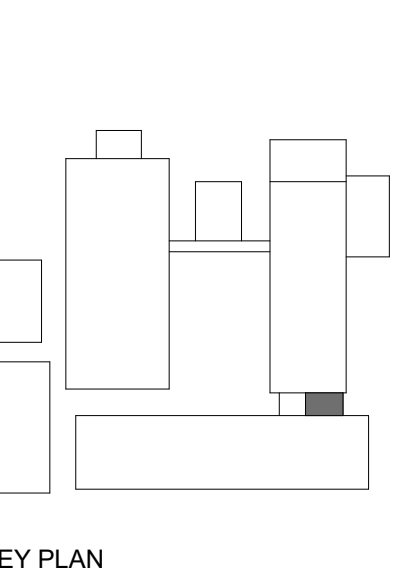
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LELAND, NC 28451

DSP # : 100
DPI SCHOOL # : 1165

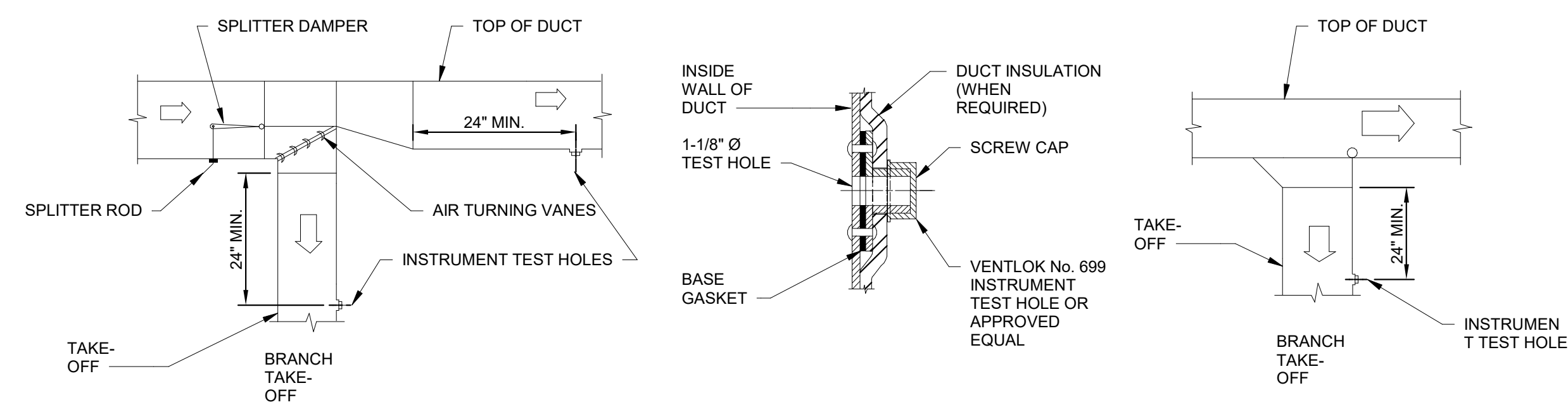
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CAFETERIA ADDITION
FLOOR PLANS,
ENLARGED PLAN &
SECTION - HVAC

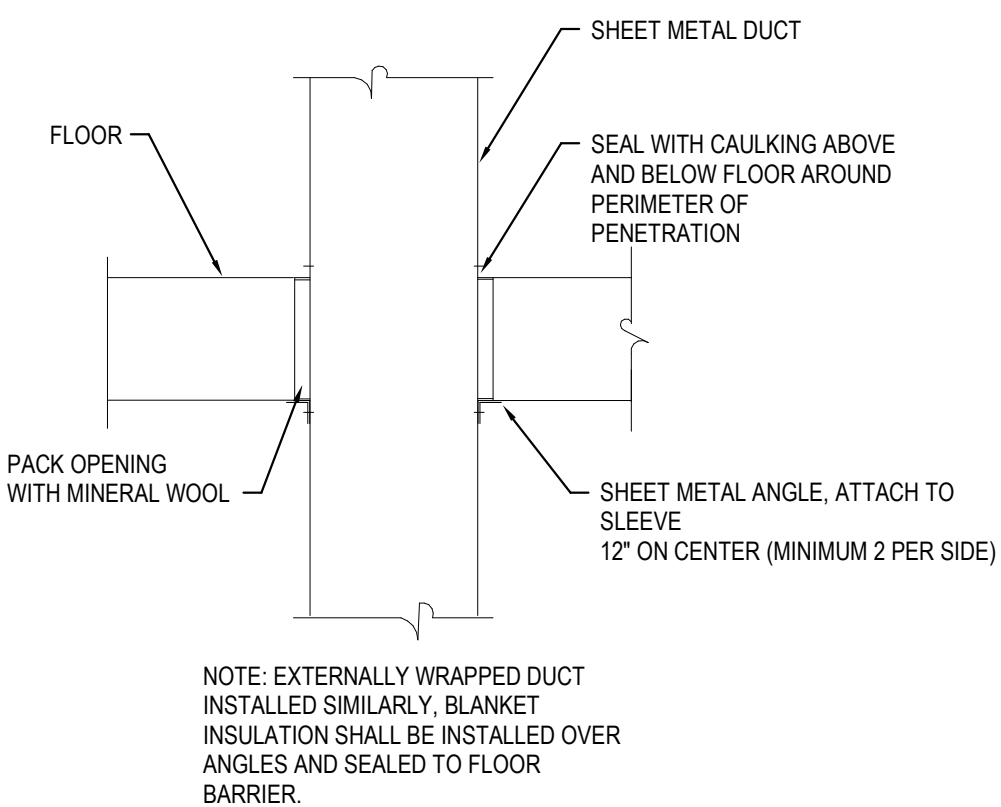
KEY PLAN



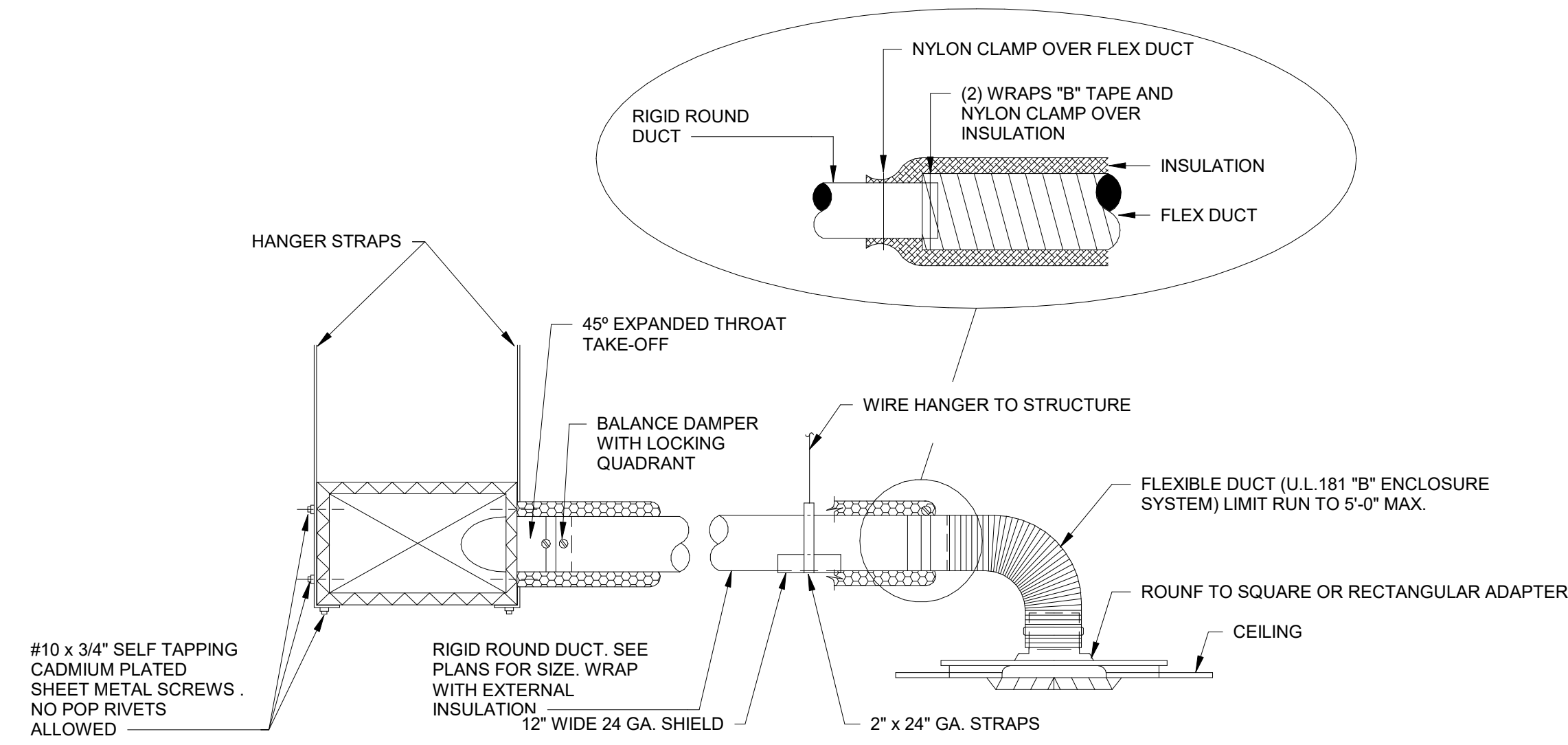
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01.22.20	60% CD PROGRESS DRAWINGS
10.14.19	NC DPI SD SUBMISSION
07.30.19	SD PROGRESS DRAWINGS
07.11.19	NC DPI SD SUBMISSION
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DATE: 10.14.2019	
SCALE: As indicated	
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M101	
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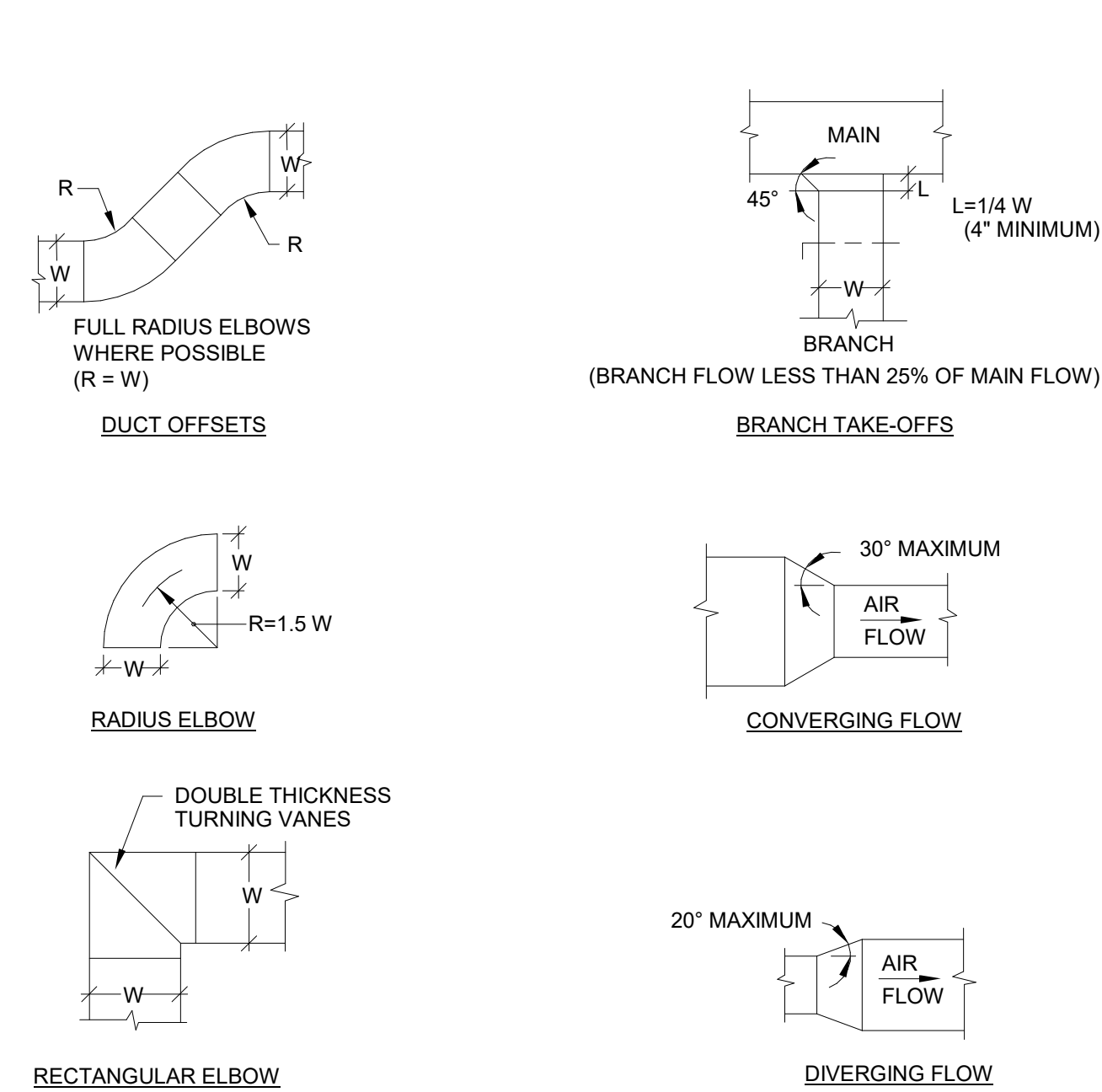
1 TYPICAL LOW PRESSURE DUCT DETAILS



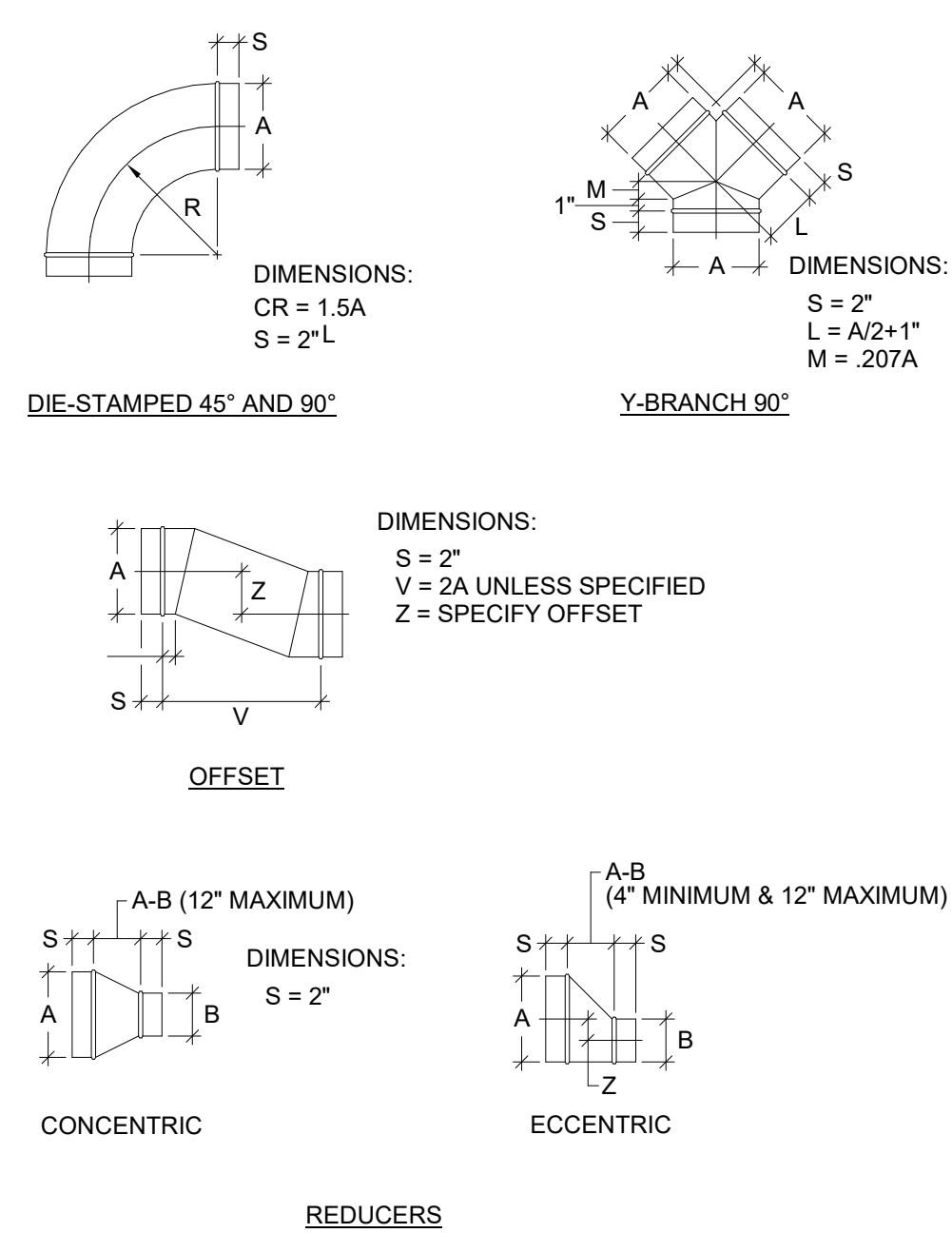
2 TYPICAL DUCT THROUGH NON-RATED WALL



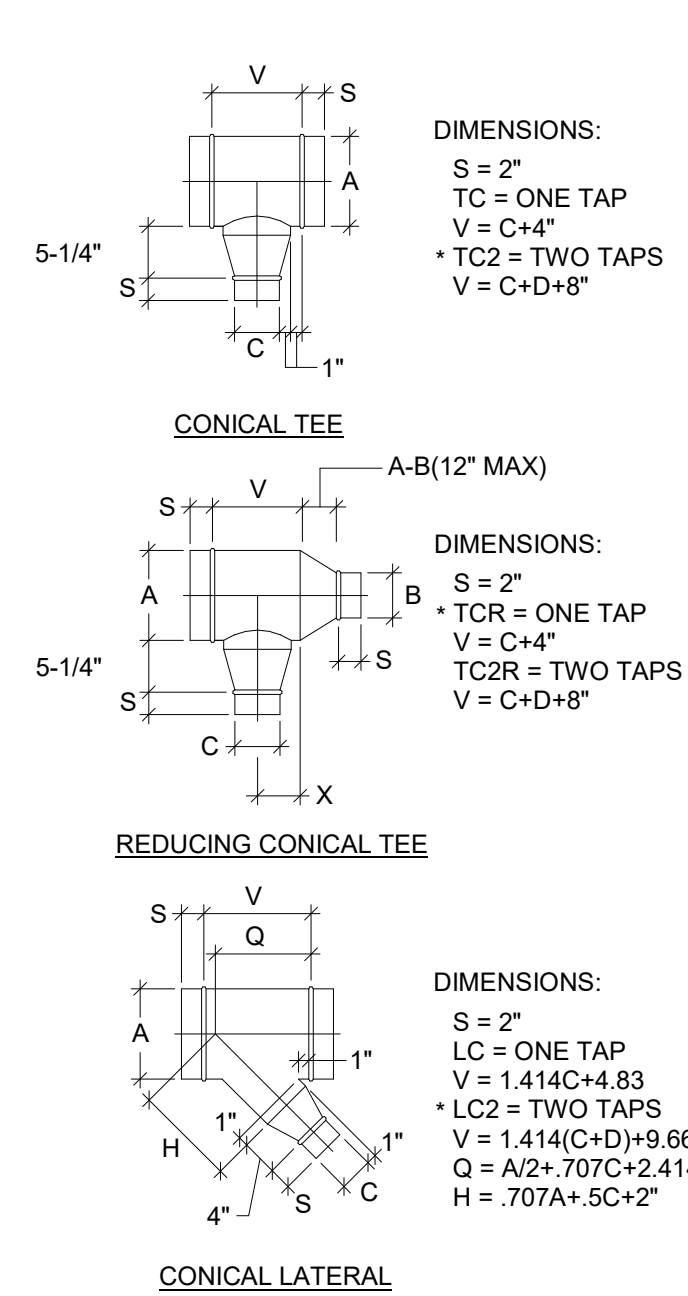
3 TYPICAL DIFFUSER CONNECTION DETAIL



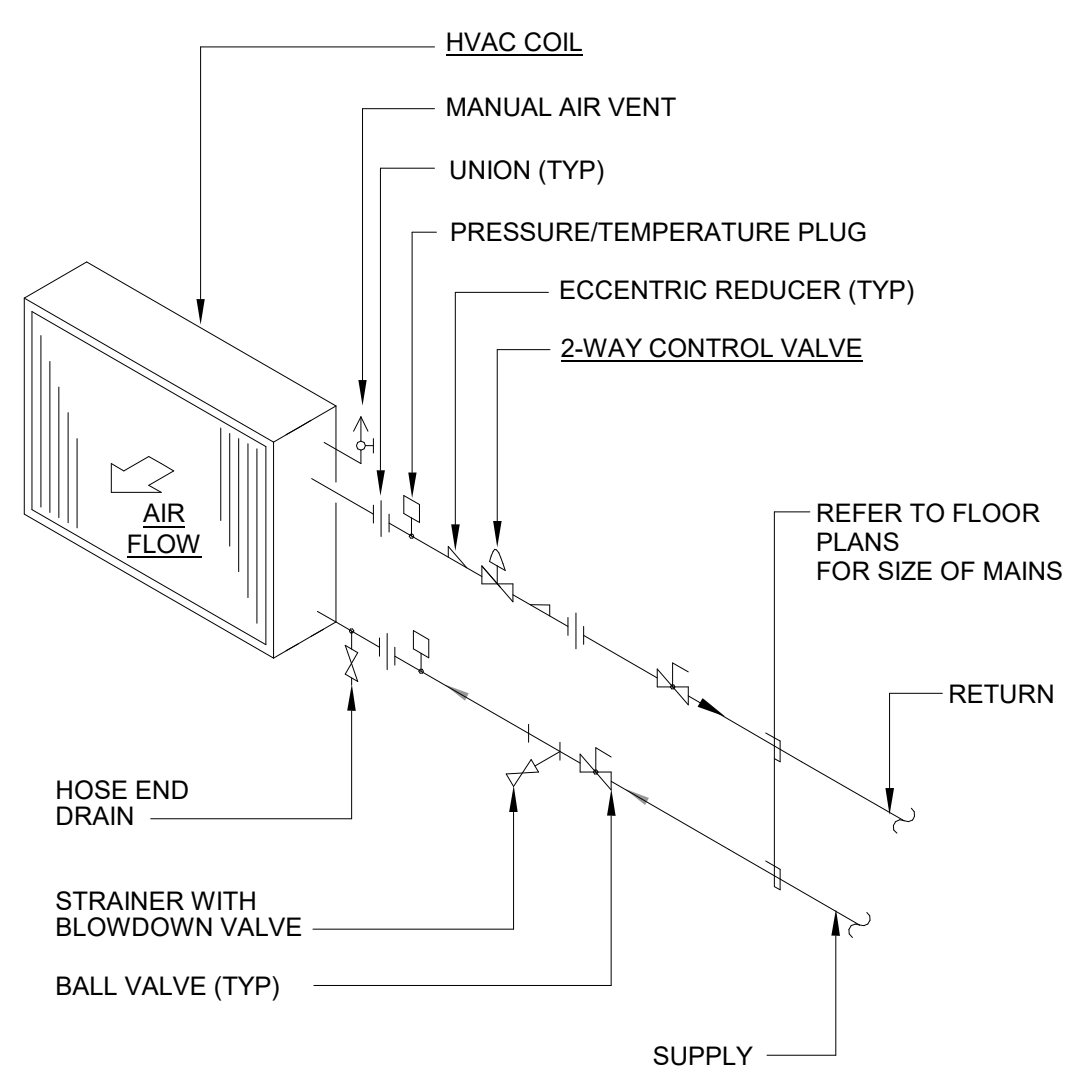
4 RECTANGULAR DUCT FITTING DETAILS



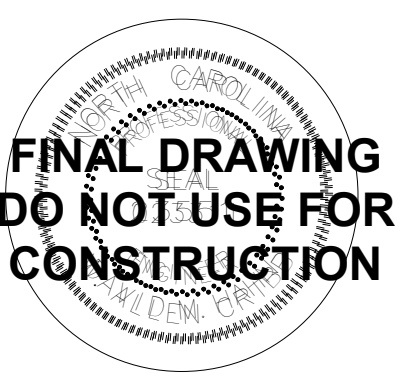
5 ROUND DUCT FITTING DETAILS



6 ROUND/RECT. DUCT TAKE-OFF FITTING DETAILS



7 HVAC COIL (2-WAY VALVE)
DETAIL
NO SCALE



PROJECT TITLE

NORTH
BRUNSWICK
HIGH SCHOOL
CAFETERIA
ADDITION

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LELAND, NC 28451

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DPI SCHOOL # : 1165

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HVAC DETAILS

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DATE:	10.14.201

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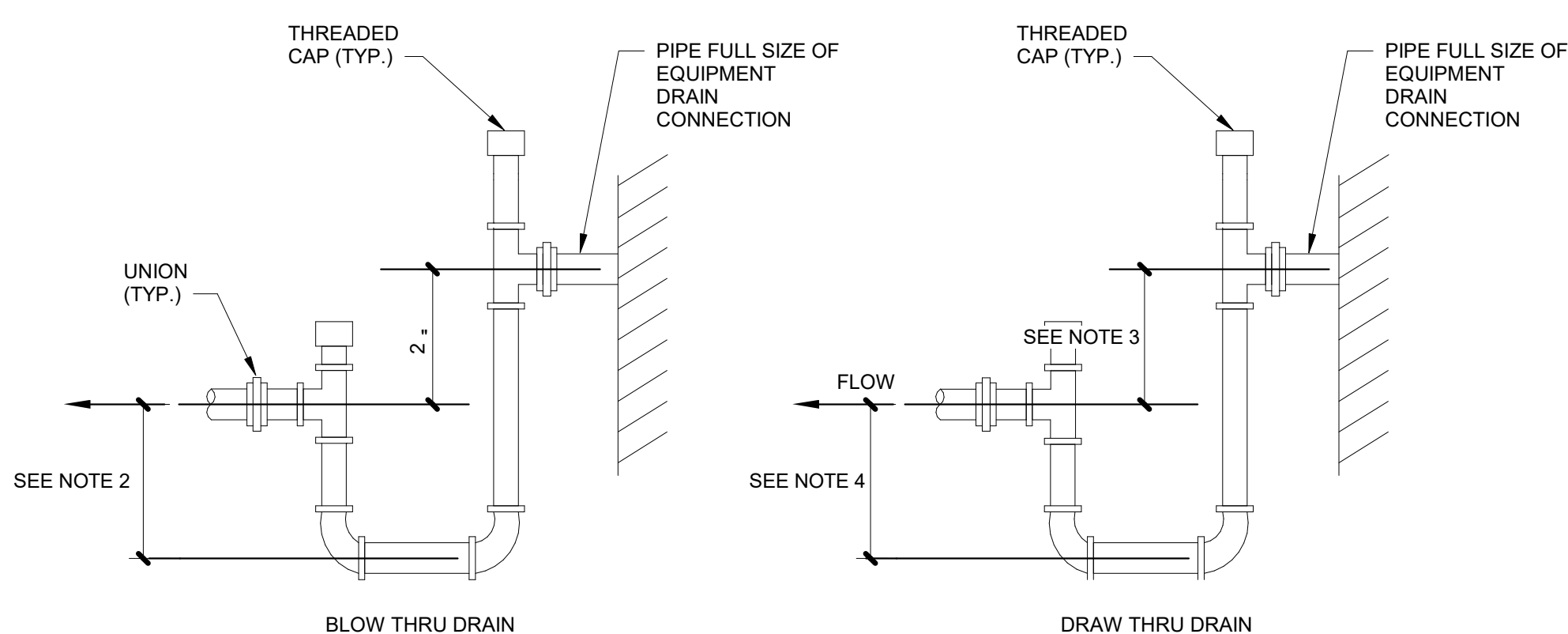
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M501

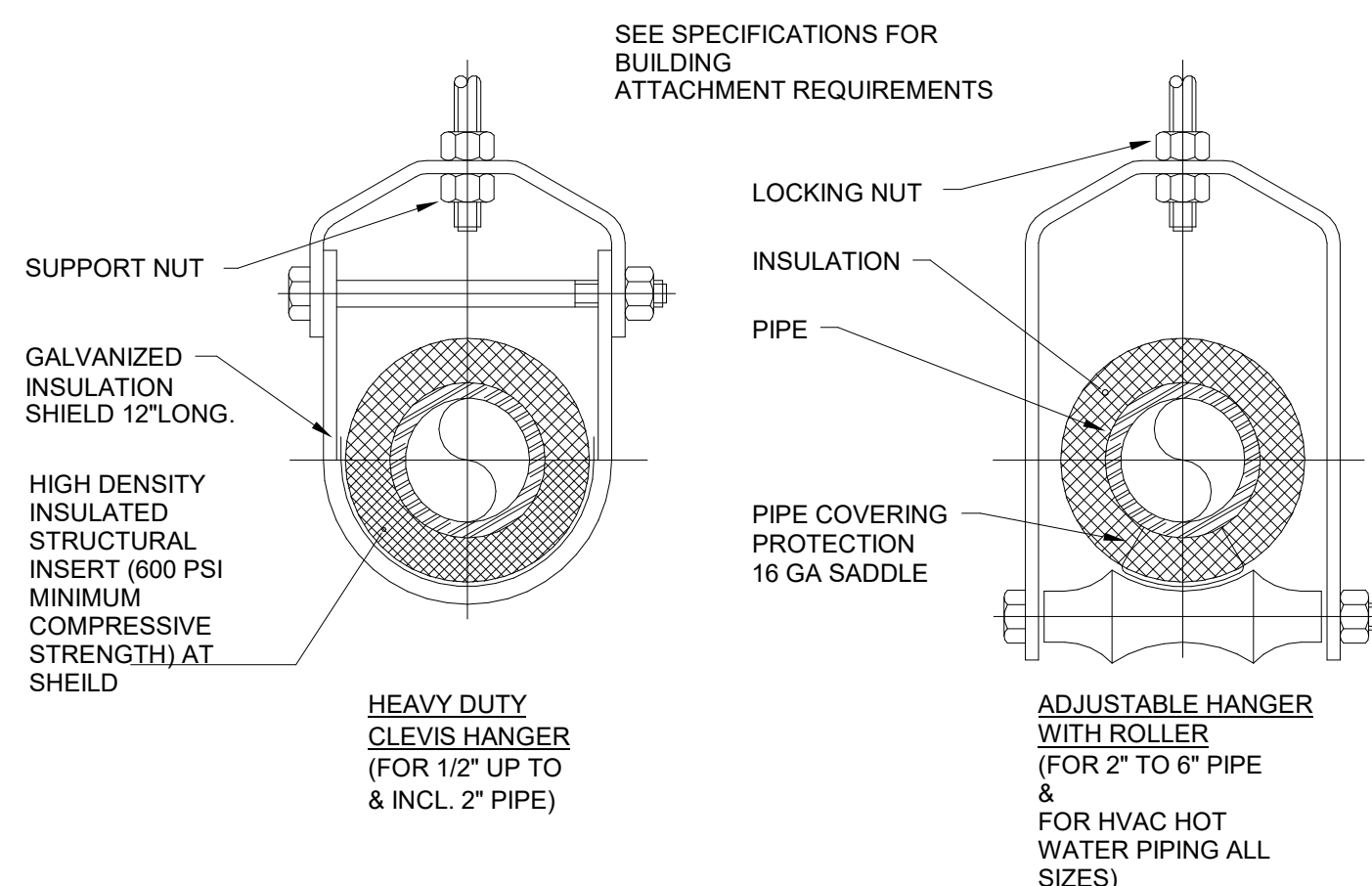
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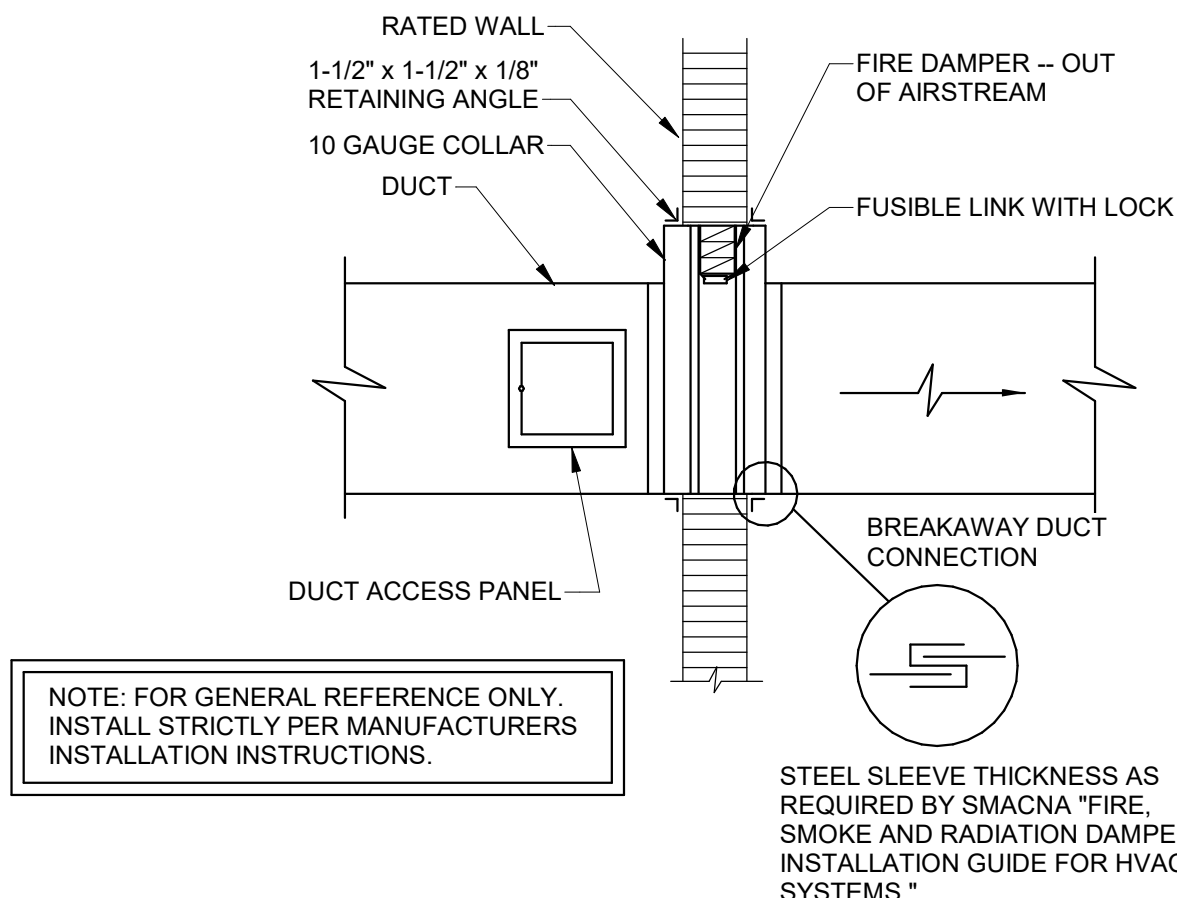
1. LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.
2. HEIGHT SHALL BE EQUAL TO UNIT MAXIMUM TOTAL STATIC PRESSURE PLUS 1/2".
3. HEIGHT SHALL BE EQUAL TO UNIT MAXIMUM NEGATIVE STATIC PRESSURE PLUS 1".
4. HEIGHT SHALL BE 1/2" OF HEIGHT INSTALLED ON NOTE 3.
5. PIPE TO NEAREST DRAIN.
6. TRAP SHALL NOT BLOCK ACCESS TO EQUIPMENT.
7. PROVIDE UNIONS AT INLET AND OUTLET OF TRAP.



1 TYPICAL EQUIPMENT CONDENSATE DRAIN DETAIL



LOAD SCHEDULE		
PIPE SIZE	MAXIMUM SPACING	ROD SIZE
1/2" - 2"	8'	1/2"Ø
2 1/2"	10'	5/8"Ø
3"	10'	5/8"Ø
4"	14'	5/8"Ø
5"	14'	5/8"Ø



3 FIRE DAMPER
NO SCALE

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ADDITION

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LELAND, NC 28451

DSP #: 100
DPI SCHOOL #: 1165

SHEET TITLE

HVAC DETAILS

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DPI SCHOOL # : 1165

SHEET TITLE

LEVEL 1 OVERALL
ELECTRICAL
DEMOLITION PLAN

ISSUE BLOCK

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DATE: 10.14.2019

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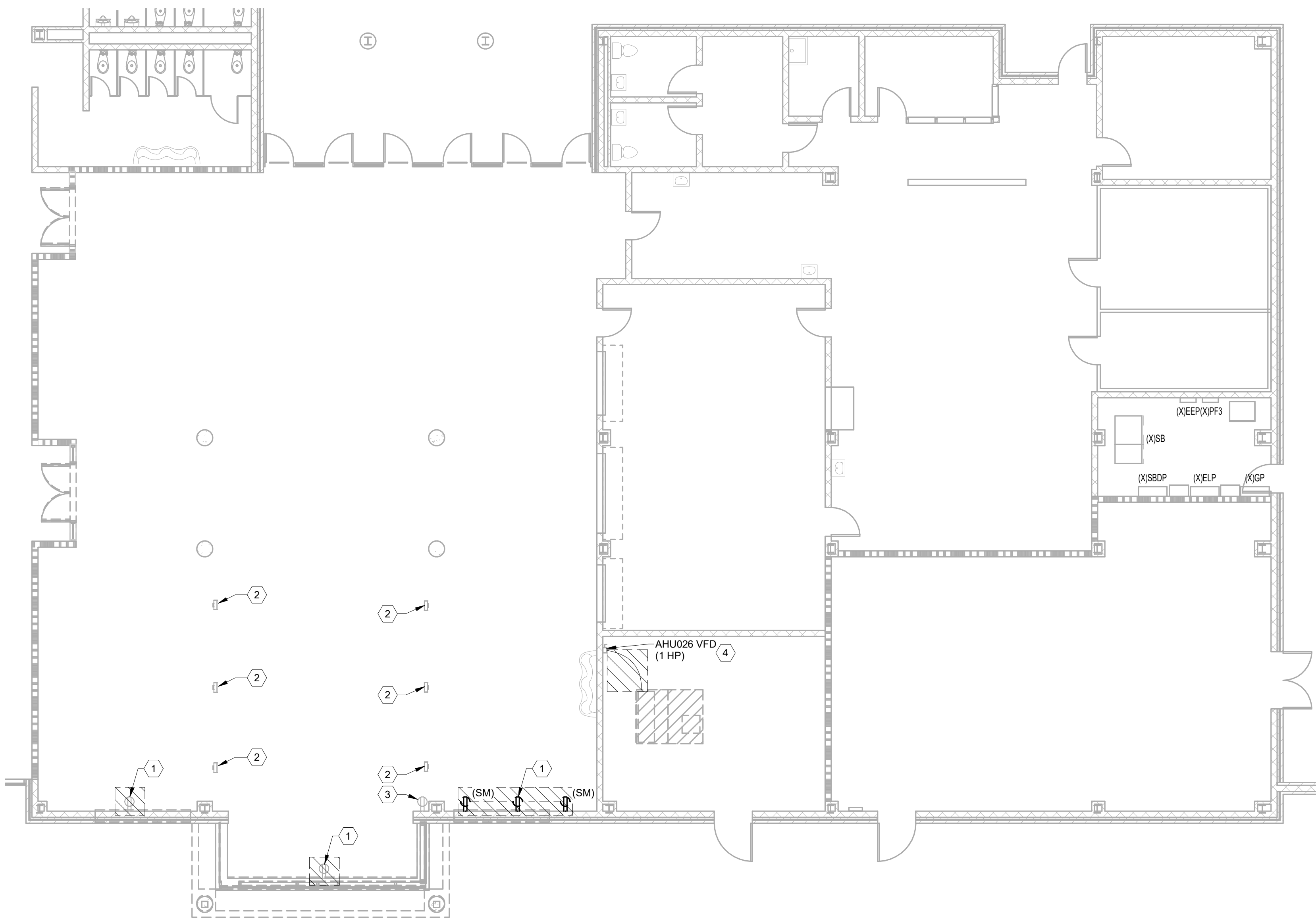
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ED101

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DEMOLITION KEYED NOTES

- | | |
|---|---|
| 1 | DUPLEX RECEPTACLE: REMOVE RECEPTACLE AND COVERPLATE. REMOVE CONDUCTORS TO NEAREST POINT OF USE. ALL UPSTREAM AND DOWN STREAM DEVICES ON THIS CIRCUIT MUST REMAIN OPERATIONAL AFTER DEMOLITION IS COMPLETE UNLESS SPECIFICALLY INDICATED TO BE DEMOLISHED. |
| 2 | INDIRECT LIGHT: PROTECT IN PLACE DURING DEMOLITION. |
| 3 | DUPLEX RECEPTACLE: REMOVE RECEPTACLE AND COVERPLATE, PROTECTOR CONDUCTORS FOR CONNECTION OF RECEPTACLE |
| 4 | AHU026 D.S. DISCONNECT CONDUIT AND CONDUCTORS COMPLETE FROM MECHANICAL UNIT TO D.S., D.S. MUST REMAIN PROTECTED IN PLACE FOR RECONNECTION. |



CAFETERIA ADDITION FLOOR
PLAN - POWER

2 SCALE: 1/8" = 1'-0"

Branch Panel: (X)SBDP																			
Location:				Volts: 480Y/277				A.I.C. Rating: 14,000 AMPS SYMMETRICAL											
Supply From:				Volts: 3				Main Type: MAIN CB											
Mounting: SURFACE				Wires: 4				Mains Rating: 600.0 A											
Enclosure: NEMA 1				MCB Rating: 600.0 A															
Notes:																			
CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT									
1		30.0 A	3	3591... 0 VA						2									
3	RTU26 VDF (NOTE 1)				3591... 0 VA		3	30.0 A	(X)AHU #27	4									
5						3591... 0 VA				6									
7				0 VA	0 VA		1	20.0 A	(X)LTG - CORRIDOR F456	8									
9	(X)PANEL EPP TRANSFORMER	100.0 A	3		0 VA 0 VA			30.0 A	(X)PHASE MONITOR	10									
11										12									
13	(X)LTG EXIT AREA F	20.0 A	1	0 VA	0 VA		3	20.0 A	(X)EXT. LTG AREA F	14									
15	(X)LTG DINING F482	20.0 A	1		890 VA 0 VA		1	20.0 A	(X)EXT. LTG AREA E	16									
17	(X)ELECT F466	20.0 A	1			0 VA 0 VA	1	20.0 A	(X)PHASE MONITOR	18									
				Total Load:	3591 VA	4121 VA													
				Total Amps:	13.0 A	14.9 A	13.0 A												
Legend:																			
Load Classification				Connected Load	Demand Factor	Estimated Demand	Panel Totals												
HVAC				10773 VA	100.00%	10773 VA													
Lighting				762 VA	100.00%	762 VA													
LTS				459 VA	125.00%	574 VA													

Branch Panel: (X)PF3

Location:

Supply From:

Mounting: SURFACE

Enclosure: NEMA 1

Volts: 208Y/120

Phases: 3

Wires: 4

A.I.C. Rating: 14,000 AMPS SYMMETRICAL

Mains Type: MAIN CB

Mains Rating: 600.0 A

MCB Rating: 150.0 A

Notes:

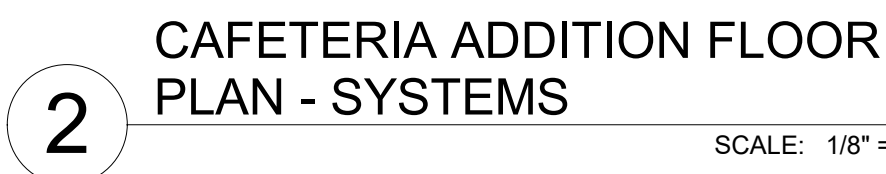
CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	SPARE	20.0 A	1	0 VA	0 VA		1	20.0 A	SPARE	2	
3	(X)FUEL MONITOR	20.0 A	1		0 VA	0 VA		1	20.0 A	SPARE	4
5											6
7	SPARE	20.0 A	2	0 VA	0 VA	0 VA	0 VA	1	20.0 A	SPARE	8
9	SPARE	20.0 A	1		0 VA	0 VA		1	20.0 A	SPARE	10
11	SPARE	20.0 A	1					2	20.0 A	SPARE	12
13	SPARE	20.0 A	1	0 VA	0 VA			1	20.0 A	(X)CHILLER #1	14
15	RCPTS. DINING (NOTE 1)	20.0 A	1		540 VA	0 VA		1	20.0 A	(X)CHILLER HEAT	16
17	RCPTS. DINING (NOTE 1)	20.0 A	1			360 VA	0 VA	1	20.0 A	(X)CHILLER #2 HEATER	18
19	EMERGENCY COMMUNICATIONS SYSTEM	20.0 A	1	180 VA	0 VA			--	--	SPACE	20
21	EMERGENCY COMMUNICATIONS SYSTEM	20.0 A	1		180 VA	0 VA		--	--	SPACE	22
23	SPACE	--	--			0 VA	0 VA	--	--	SPACE	24
25	SPACE	--	--	0 VA	0 VA			--	--	SPACE	26
27	SPACE	--	--		0 VA	0 VA		--	--	SPACE	28
29	SPACE	--	--			0 VA	0 VA	--	--	SPACE	30
31	SPACE	--	--	0 VA	0 VA			--	--	SPACE	32
33	SPACE	--	--		0 VA	0 VA		--	--	SPACE	34
35	SPACE	--	--			0 VA	0 VA	--	--	SPACE	36
37				0 VA	0 VA			--	--	UNUSABLE SPACE	38
39	(X)PANEL KP2	150.0 A	3		0 VA	0 VA		--	--	UNUSABLE SPACE	40
41						0 VA	0 VA	--	--	UNUSABLE SPACE	42
		Total Load:		180 VA	706 VA	360 VA					
		Total Amps:		1.5 A	6.1 A	3.2 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Power	360 VA	100.00%	360 VA	Total Conn. Load: 1234 VA
RCPT	900 VA	100.00%	900 VA	Total Est. Demand: 1234 VA
				Total Conn.: 3.4 A
				Total Est. Demand: 3.4 A

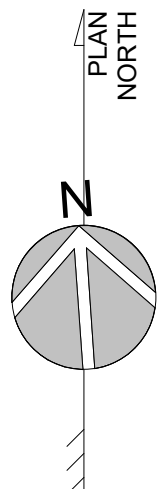
Notes:

1. PROVIDE BREAKER INDICATED. BREAKER AIC MUST MATCH PANEL AIC RATING.

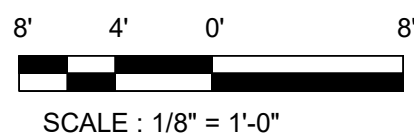


GENERAL NOTES:

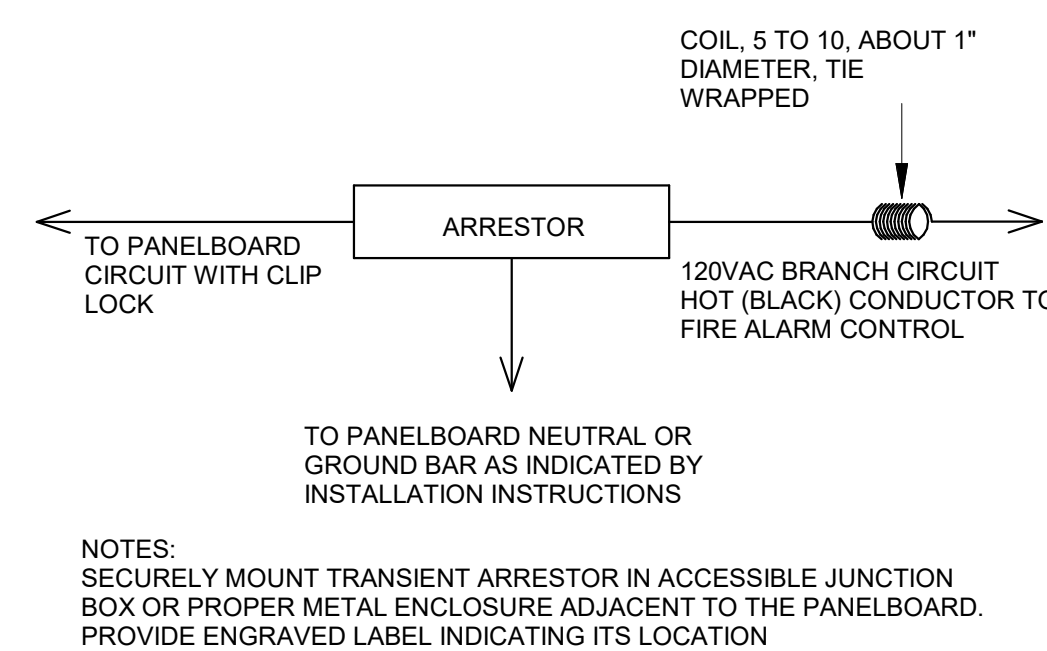
- A. THE CONTRACTOR SHALL VERIFY THE LEAD TIME OF ALL PRODUCTS SPECIFIED IN THIS SCHEDULE AT THE TIME OF PACKAGE QUOTE.
- B. DURING THE BID PROCESS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DELIVERY/SCHEDULING ISSUES.
- C. NO SUBSTITUTIONS WILL BE ALLOWED DUE TO THE LACK OF COORDINATION OF DELIVERY DATES AND CONSTRUCTION SCHEDULE AFTER BID.
- D. ALL EXPEDITED EXPENSES SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS.
- E. FIXTURES TO BE INSTALLED IN CEILINGS. INDICATE ON THE ARCHITECTURAL PLANS AS HAVING INSULATION IN CONTACT WITH THE CEILING SURFACE. HENCE BE IC RATED BY MANUFACTURER.
- F. ALL LIGHT FIXTURES SHALL MEET THE AESTHETICS, DESCRIPTION AND SPECIFICATIONS. SUBSTITUTIONS SHALL INCLUDE PT BY PT CALCULATION.
- G. LIGHTING FIXTURES, AS SPECIFIED, HAVE BEEN SO SELECTED TO ACHIEVE REQUIRED/DESIRED FOOT CANDLE LEVELS IN THEIR SPECIFIED AREA. HENCE SPECIFIC FIXTURE CHARACTERISTICS WHICH MAY CREATE PARTICULAR ILLUMINATION RESULTS ARE ESSENTIAL. ANY DEVIATIONS FROM SPECIFIED FIXTURES SHALL DEEM THE SUBMITTING AGENT AND CONTRACTORS RESPONSIBLE IN PROVIDING/SUCH DEVIATION FOR THE ARCHITECT/ENGINEER AND OWNER TO MAKE AN INFORMED DECISION.
- H. SUBSTITUTIONS APPROVED BY THE ENGINEER PREVIOUS TO BID ARE ACCEPTABLE. ANY OTHER SUBSTITUTIONS SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND OWNER TO MAKE AN INFORMED DECISION. THIS INCLUDES LED LIGHTS, ELECTRIC COLOMOTRICS, HOUSING MATERIALS, ETC. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER WITH CUT SHEETS FOR APPROVAL.
- I. LISTED SEPARATELY SO THE ARCHITECT, ENGINEER AND OWNER CAN MAKE AN INFORMED DECISION. SUBSTITUTE FIXTURES SHALL BE PRICED WITH THE SPECIFIED FIXTURE AND ALL 4' LED LAMPS SHALL BE 3500 K. OTHER LAMPS SHALL AS BE SCHEDULED.
- J. ANY FIXTURE WITH THE TEXT "N/A" ADJACENT TO IT SHALL INDICATE THAT THAT FIXTURE IS A NIGHT LIGHT (24HR LIGHT). THE FIXTURE SHALL BE CONNECTED TO THE UNWITTING HOT LEG OF THE INDICATED CIRCUIT.
- K. ACRYLIC PRISMATIC LENSES SHALL BE 0.15" NOMINAL MINIMUM THICKNESS.
- L. ALL EXIT AND EMERGENCY FIXTURES SHALL COMPLY WITH NCSB STANDARDS AND HAVE AUTOMATIC TEST DEVICES.
- M. LED EMERGENCY BATTERY SHALL PROVIDE 1400 MINIMUM LUMENS OUTPUT FROM 1 LAMP FOR 90 MINUTES MINIMUM.
- N. LED MODULES SHALL BE REPLACEABLE.
- O. PROVIDE MANUFACTURER INSTALLED NEC NEC 2100 ARTICLE 410.130 (G) COMPLIANT DISCONNECTING MEANS FOR ALL APPLICABLE FIXTURES.
- P. SEE SPECIFICATIONS SECTIONS 265100 AND 265200 FOR ADDITIONAL REQUIREMENTS.
- Q. ELECTRICAL CONTRACTOR SHALL RECEIVE APPROVAL FOR ALL LIGHTING FIXTURES FROM ARCHITECT/OWNER PRIOR TO PURCHASE AND ROUGH-IN.




SCALE: 1/8" = 1'-0"



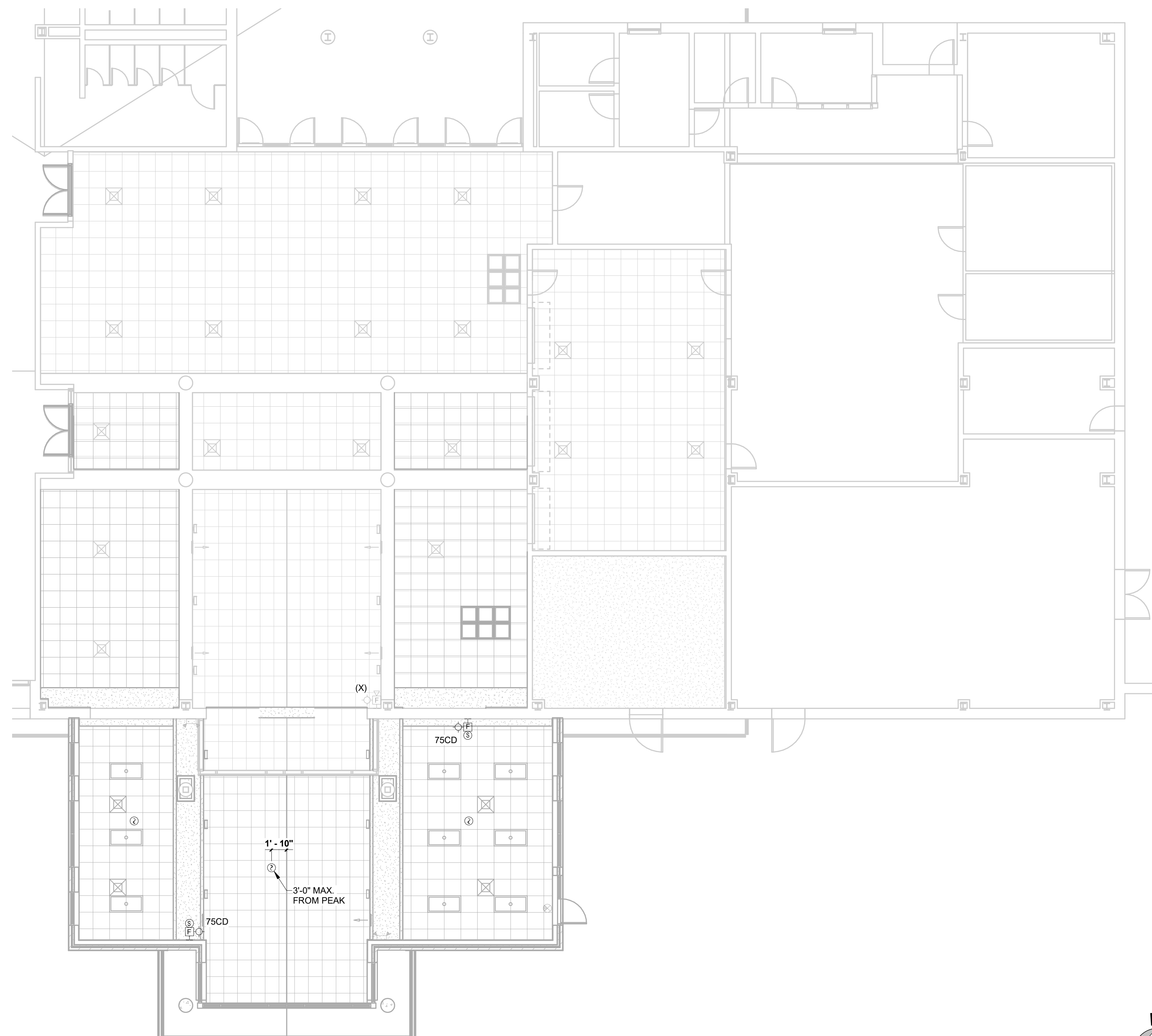
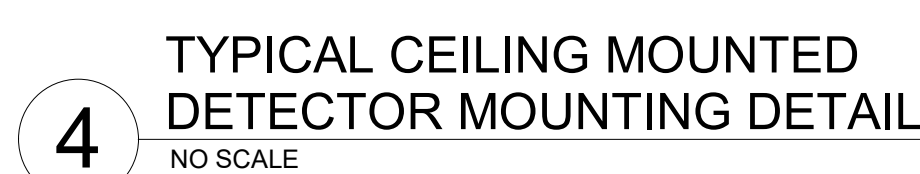
1. AS A MINIMUM THE FIRE ALARM SYSTEM SHALL INCLUDE DETECTORS, PULL STATIONS, HORNSTROBES AND STROBES WITH FIRE RATED CABLE. THE FIRE ALARM SYSTEM SHALL MEET NFPA REQUIREMENTS, THE NATIONAL ELECTRICAL CODE, THE STATE CODES, AND THE LOCAL BUILDING CODES.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CABLE, MATERIALS AND EQUIPMENT AS SHOWN ON THE DRAWINGS/OR HEREIN SPECIFIED. ALL SYSTEM COMPONENTS SPECIFIED HEREIN, AS WELL AS THEIR INSTALLATION, SHALL COMPLY WITH APPLICABLE STANDARDS OF THE NATIONAL ELECTRICAL CODE, NATIONAL FIRE PROTECTION ASSOCIATION, AND LOCAL CODES HAVING AUTHORITY. ALL EQUIPMENT SHALL BE UL LISTED FOR FIRE ALARM SYSTEM USE.
3. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE INSTALLED AND CONNECTED UNDER THE DIRECTION AND SUPERVISION OF A MANUFACTURER'S REPRESENTATIVE. UPON COMPLETION OF INSTALLATION, THE MANUFACTURER'S REPRESENTATIVE SHALL PERFORM ALL OPERATIONAL TESTS AND ADJUSTMENTS AND CERTIFY IN WRITING THAT THE SYSTEM IS PROPERLY INSTALLED AND FUNCTIONS AS SPECIFIED.
4. ALL WIRING SHALL BE SYSTEM OR UL LISTED FIRE RATED CABLE AND COLOR CODED TO ALLOW EASE OF IDENTIFICATION OF THE DIFFERENT CIRCUITRY REQUIRED FOR THE SYSTEM. NO CIRCUIT SHALL CHANGE COLOR AT ANY POINT ENO TO END.
5. THE MANUFACTURER'S AUTHORIZED REPRESENTATIVE SHALL PROVIDE SUPERVISION OF FINAL SYSTEM PANEL CONNECTIONS, PERFORM A COMPLETE FUNCTIONAL TEST OF THE SYSTEM, AND A WRITTEN REPORT TO THE CONTRACTOR ATTESTING THE PROPER OPERATION OF THE COMPLETED SYSTEM.
6. ALL DEVICES SHALL BE COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.
7. ALL WIRING SHALL BE INSTALLED IN COMPLIANCE WITH N.E.C., NFPA 72, ALL STATE AND LOCAL REQUIREMENTS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
8. SLEEVE AND SEAL ALL PENETRATIONS THROUGH FIRE WALLS.
9. WIRING SHALL BE A MINIMUM OF NO. 14 AWG UNLESS OTHERWISE NOTED.
10. THE SMOKE DUCT DETECTOR SHALL BE FURNISHED AND TERMINATED BY THE FIRE ALARM CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR.
11. SHOP DRAWINGS MUST BE SUBMITTED BY THE FIRE ALARM CONTRACTOR COMPLYING WITH THE FIRE ALARM PLAN REVIEW REQUIREMENTS POLICY - THESE DRAWINGS DO NOT CONSTITUTE APPROVAL AND MAY CHANGE AFTER A FULL REVIEW BY THE FIRE DEPT. HAVING JURISDICTION. A SEPARATE PERMIT MUST BE OBTAINED PRIOR TO INSTALLATION.
12. IN CORRIDORS WHERE MORE THAN TWO VISIBLE NOTIFICATION APPLIANCES ARE IN ANY FIELD OF VIEW, THEY SHALL FLASH IN SYNCHRONIZATION.
13. FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR MODULES TO SHUTDOWN HVAC EQUIPMENT DURING ALARM CONDITION.
14. ALL FIRE ALARM WORK AND DEVICES SHALL BE INSTALLED AND TERMINATED BY A NICET LEVEL 2 FIRE ALARM TECHNICIAN.
15. IN THE EVENT OF AN ALARM THERE SHALL BE A "GLOBAL" SHUT DOWN OF ALL AIR HANDLING EQUIPMENT.



FIRE ALARM SYMBOL LEGEND	
SYMBOL	DESCRIPTION
(XFACP) □	EXISTING FIRE ALARM CONTROL PANEL
□	EXISTING FIRE ALARM REMOTE ANNUNCIATOR
	FIRE ALARM HORN/STROBE DEVICE, 80" AFF, 150db INDICATES CANDELA RATING
②	SMOKE DETECTOR, CEILING MOUNTED
⑤ —	EXISTING DUCT SMOKE DETECTOR
(HF)	FIRE ALARM MANUAL STATION, 48" AFF
(F.A.)	F.A. INDIVIDUAL ADDRESSABLE ISOLATION MODULE
(X)	INDICATES EXISTING EQUIPMENT
①	KEYED NOTE (SEE SCHEDULE)

3 TRANSIENT ARRESTOR INSTALLATION DETAIL

SYSTEM INPUTS	SYSTEM OUTPUTS											
	ACTIVATE COMMON ALARM SIGNAL INDICATOR	ACTIVATE NOTIFICATION APPLIANCES	ACTIVATE COMMON TROUBLE SIGNAL INDICATOR	ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR	ALARM SIGNAL TO MONITORING SERVICE	SUPERVISORY SIGNAL TO MONITORING SERVICE	TROUBLE SIGNAL TO MONITORING SERVICE	DISPLAY/PRINT CHANGE OF STATUS	TRANSMIT ALARM SIGNAL TO CENTRAL STATION	RELEASE MAGNETICALLY HELD DOORS	SIGNAL HVAC CONTROL SYSTEM	SHUNT TRIP ELEVATOR FEEDER CIRCUIT BREAKER
SMOKE DETECTORS	X	X		X				X	X	X	X	
HEAT DETECTORS		X	X	X				X	X	X	X	
DUCT MOUNTED SMOKE DETECTORS	X	X	X					X	X	X	X	
MANUAL PULL STATIONS	X	X		X				X	X	X	X	
SYSTEM TROUBLE CONDITION			X					X				
LOSS OF FACU AC POWER (NOTE 1)			X					X				
GROUND FAULT			X					X				
SHORT CIRCUIT								X				
OPEN CIRCUIT			X					X				
NOTES:												
1. ONLY AFTER LOSS OF POWER FOR > 8 HOURS.												
2. ELEVATOR INPUTS AND OUTPUTS ARE TYPICAL FOR EACH ELEVATOR.												
3. REFER TO FIRE PROTECTION DRAWINGS FOR SPRINKLER DEVICE LOCATIONS.												
4. REFER TO MECHANICAL DRAWINGS FOR DUCT MOUNTED SMOKE DETECTOR LOCATIONS.												
5. TYPICAL QUANTITIES OF DEVICES ARE NOT SHOWN. SEE FIRE PROTECTION DRAWINGS FOR QUANTITIES AND LOCATIONS.												



1 CAFETERIA ADDITION FLOOR
PLAN - FIRE ALARM

