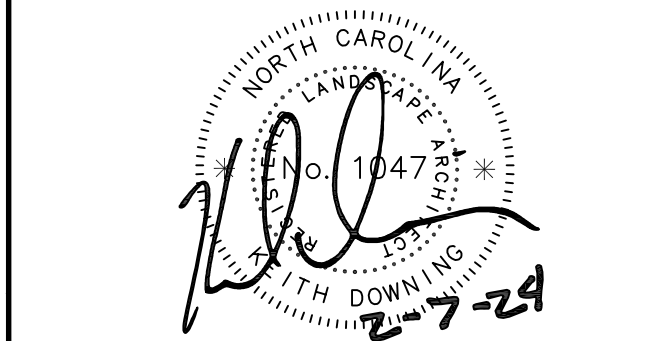


## COOPER ACADEMY A & R

PROJECT TITLE  
"CLIENT'S PROJECT" # - XXX



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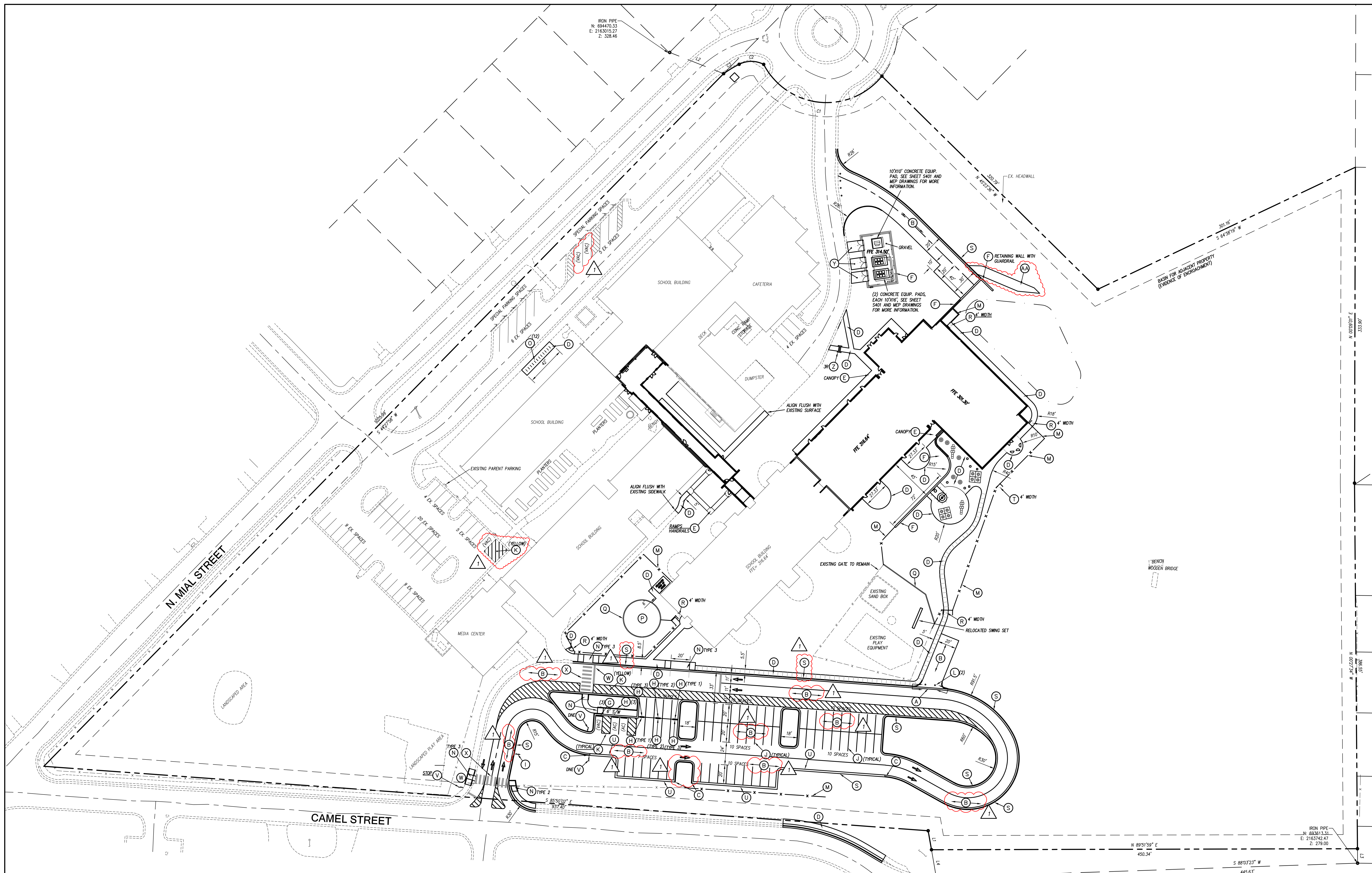
NO.	DATE	DESCRIPTION
1	2/20/24	ADDENDUM #1

**BID DOCUMENTS**  
PROJECT PHASE  
**2307**  
BOOMERANG DESIGN PROJECT NUMBER  
**02.07.24**  
DRAWING RELEASE DATE

**STAKING AND  
PAVEMENT MARKING  
PLAN**  
SHEET TITLE

**C201**

SHEET



### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF CLAYTON AND NCDOT STANDARDS AND SPECIFICATIONS. ALL TOWN OF CLAYTON UTILITY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH TOWN OF CLAYTON STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT TIME OF UTILITY PERMITTING.
- ALL DIMENSIONS SHOWN ARE TO FACE OF CURB AND FACE OF BUILDING WALL, UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS SHOWN AND CONTACT THE ARCHITECT IF ANY DISCREPANCIES OCCUR.
- CONSTRUCTION STAKE OUT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL PAVEMENT MARKINGS AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- ALL FACE OF RADII ARE 4 FT UNLESS OTHERWISE SHOWN.
- PARKING SPACES SHALL BE 9' WIDE X 20' DEEP MIN. PER TOWN OF CLAYTON CODE OF ORDINANCES.
- (VAC) DENOTES VAN ACCESSIBLE PARKING SPACE.
- (VAC) DENOTES VAN ACCESSIBLE PARKING SPACE.
- ANY AND ALL LANDSCAPING, EXISTING TREES OR SHRUBS TO REMAIN WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR UTILIZING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL SUBMIT SCALED PLANS OF ALL SCORING/JOINTS FOR APPROVAL BY ARCHITECT 30 DAYS MINIMUM PRIOR TO INSTALLATION.
- THE CROSS-SLOPE ON ALL SIDEWALKS SHALL BE A MAXIMUM OF 2.0%.
- NO WORK SHALL BE PERFORMED ON RIGHT-OF-WAYS OR ADJACENT PROPERTIES UNTIL THE OWNER NOTIFIES CONTRACTOR IN WRITING OF PROSECUTION OF APPROPRIATE PERMITS, EASEMENTS, AGREEMENTS, OR RIGHTS-OF-WAY.

### TYP. PARKING DIMENSIONS

- NOTES:
- ALL DIMENSIONS ARE FROM FACE OF CURB.
  - ALL PARALLEL PARKING SPACES ARE MINIMUM OF 9' WIDE AND 22' LONG.
  - ALL VAN ACCESSIBLE AND ACCESSIBLE PARKING SPACES SHALL BE 9' WIDE BY 20' DEEP WITH A 9' ASIDE.
  - ALL 90 DEGREE PARKING SPACES ARE 9' WIDE X 20' LONG.
  - ALL RADII 4' UNLESS DIMENSIONED OTHERWISE.

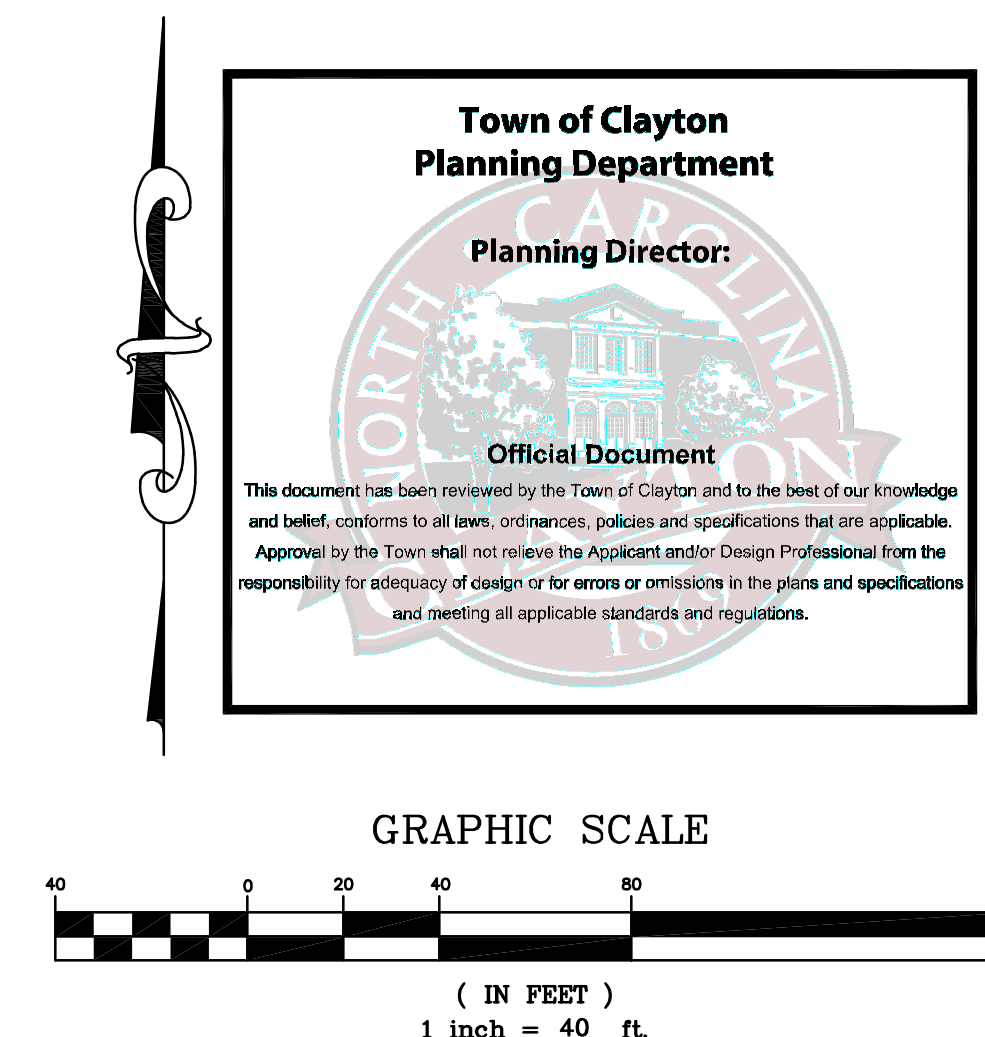
### TRAFFIC CONTROL NOTES

- ALL SITE SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
- ALL SIGNS SHALL BE MOUNTED WITH 7-FIT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 3-LB. GALV. STEEL U-CORNER POST SET IN 3-FIT DEEP X 12-IN DIA. CONCRETE FOOTING.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE LINES WHICH SHALL BE ALUMINOUS THERMOPLASTIC TYPE.
- ALL SIGNAGE SHALL BE FIELD STAKED AND THE LOCATIONS APPROVED BY CLH DESIGN PRIOR TO SIGN INSTALLATION.
- CONTROL ALL DIRECTIONAL ARROWS WITHIN TRAVEL LANE.
- COORDINATE FIRE LANE MARKINGS WITH TOWN OF CLAYTON FIRE MARSHAL.
- ALL SIGNS SHALL USE PRISMATIC SHEETING THAT MEETS MINIMUM REFLECTIVITY STANDARDS FOUND IN THE LATEST EDITION OF THE MUTCD.

### KEY NOTES

- ROLL CURB, SEE DETAIL SHEET C704.
- STANDARD ASPHALT, SEE DETAIL SHEET C705.
- STANDARD METHOD OF ENDING CURB AND GUTTER, SEE DETAIL SHEET C704.
- CONCRETE SIDEWALK, SEE DETAIL SHEET C704.
- SEE ARCHITECTURAL PLANS.
- CONCRETE RETAINING WALL WITH FENCING, SEE STRUCTURAL DRAWINGS.
- PRECAST CONCRETE WHEELSTOP, SEE DETAIL SHEET C705.
- ACCESSIBLE SIGNAGE, SEE DETAIL SHEET C705.
- SCHOOL DIRECTIONAL SIGNAGE, SEE DETAIL SHEET C704.
- PARKING SPACE STRIPING, SEE TRAFFIC CONTROL NOTES THIS SHEET.
- DIAGONAL STRIPING, SEE TRAFFIC CONTROL NOTES THIS SHEET.
- COLLAPSABLE BOLLARD, SEE SPECIFICATIONS SEE DETAIL SHEET C704.
- 4" HT. CHAINLINK FENCING, BLACK VINYL COATED, SEE DETAIL SHEET C704.
- ACCESSIBLE CURB CUT, SEE DETAIL SHEET C703.
- BICYCLE RACKS, SEE SPECIFICATIONS SEE DETAIL SHEET C705.
- PRE-X PLAY EQUIPMENT WITH POURED-IN-PLACE SURFACING, EXISTING EQUIPMENT RE-INSTALLED.
- CONCRETE EDGING FOR PLAY AREA, SEE DETAIL SHEET C704.
- 4" HT. ORNAMENTAL GATE WITH PANE HARDWARE, SEE DETAIL SHEET C704.
- 24" CURB AND GUTTER, SEE DETAIL SHEET C704.
- CONCRETE BENCHES BY MAUSLAI, SEE SPECIFICATIONS AND PLANS FOR MODEL #.
- CONCRETE BAND FLUSH WITH ASPHALT, SEE DETAIL SHEET C704.
- TRAFFIC CONTROL SIGNAGE, SEE NOTES THIS SHEET.

- (W) STOP BAR, SEE NOTES THIS SHEET.
- (X) HI-VIS CROSSWALK, SEE NOTES THIS SHEET.
- (Y) HEAVY DUTY CONCRETE, SEE DETAIL SHEET C704.
- (Z) CONCRETE STAIR WITH CHEEK WALLS, SEE DETAIL SHEET C705.
- (AA) 6" ABC GRAVEL ACCESS DRIVE.





**COOPER ACADEMY**  
**A & R**


PROJECT TITLE

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"CLIENT'S PROJECT" # - XXX



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REVISIONS 		
NO.	DATE	DESCRIPTION
1	2/20/24	ADDENDUM #1

## BID DOCUMENTS

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**2307**  
BOOMERANG DESIGN PROJECT NUMBER  
**02.07.24**  
DRAWING RELEASE DATE

# GRADING PLAN

**C301**



DRAINAGE FACILITY SCHEDULE										
STRUCTURE NO.	PIPE DIA	PIPE SLOPE	PIPE LENGTH (N)	PIPE MATRL	UPPER INV. (N)	LOWER INV. (N)	TOP ELEV. (FT)	UPSTREAM DEPTH (FT)	STRUCTURE DATA	NOTES
UP STRM	DN STRM									
A1	A2	0.62%	18	RCP	296.50	296.35	301.50	5.00	CS	(1)
A2	A3	2.88%	75	RCP	296.25	294.25	301.50	5.25	CS	(1)
B1	B2	4.12%	5	RCP	316.80	317.40	323.20	4.40	DI	(1)
B2	B3	6.18%	34	RCP	317.30	315.20	321.75	4.45	DI	
B3	B4	2.04%	15	RCP	316.10	314.00	319.50	4.40	MH	
B5	B6	0.55%	73	RCP	311.20	310.10	317.00	5.70	DI	
B5	B6	1.02%	54	RCP	316.80	313.00	315.90	5.10	DI	
B6	B7	7.00%	15	RCP	312.20	303.20	310.00	5.60	DI	
B7	B8	3.85%	30	RCP	303.10	301.95	308.00	4.90	DI	
B8	B9	5.71%	35	RCP	300.00	298.00	306.50	6.50	DI	(1)
B10	B5	0.59%	17	RCP	311.50	311.40	315.90	4.40	DI	
B11	B8	0.62%	15	RCP	300.30	300.30	305.50	4.60	CS	(1)
C1	C2	0.61%	31	RCP	296.10	295.85	300.50	5.40	DI	
C2	C3	0.54%	102	RCP	295.75	295.20	301.00	5.25	MH	
C3	C4	0.56%	27	RCP	295.10	294.95	300.50	5.40	MH	
D1	D2	2.13%	94	RCP	295.00	293.00	300.50	5.00	DI	(1)
E1	E2	9.57%	115	RCP	307.00	296.00	312.00	5.00	DI	

**LEGEND**

**MH** MANHOLE SEE DETAIL SHEET C708

**DI** DROP INLET SEE DETAIL SHEET C708

**CS** OPEN-THROAT CATCH BASIN SEE DETAIL SHEET C708

**PC** CATCH PLANNED ON SECTION

**PC** STRUCTURE IN NUMBERS

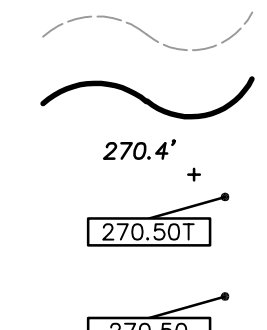
**NOTES**

- TOP ELEVATION IS TOP OF RIM FOR MANHOLES, TOP OF GRADE FOR DROP INLETS, TOP OF GUTTER FOR CATCH BASINS, AND FINISH GRADE FOR CLEAREAYS
- ALL PIPE INLETS & OUTLETS SHALL BE 3" MIN.
- GUTTER SHALL BE 6" DEEP & BEING A TOTAL OF 6" FROM THE TOP OF CATCH BASIN

## GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF CLAYTON AND NCDOT STANDARDS AND SPECIFICATIONS.
2. ALL SPOT ELEVATIONS INDICATED AT CURB AND GUTTER AND ARE DEVOTED TO TOP OF CURB, UNLESS OTHERWISE SHOWN.
3. TOTAL DERIVED AREA = 1.4 AC
4. CONTRACTOR SHALL ADJUST ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, CLEAVNOTES, ETC. AS NEEDED TO MATCH FINISH GRADE.
5. ALL BACKFILL, COMPACTION, SOLTS TESTING, ETC. SHALL BE PERFORMED BY THE OWNERS INDEPENDENT TESTING LABORATORY. (SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION).
6. ALL STORM DRAIN PIPES SHALL BE PROTECTED WITH STONE FILTER PROTECTION AFTER STORAGE OF WORK EACH DAY.
7. EXISTING VEGETATION SHALL REMAIN UNDISTURBED UNLESS NOTED OTHERWISE.
8. ANY AND ALL LANDSCAPING AND EXISTING TREES & SHRUBS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR UTILIZING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
9. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE CODES IN OBSERVING EROSION CONTROL MEASURES AND ALL OF THE OFF-SITE.
10. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY STATE AUTHORITIES OR THE ARCHITECT.
11. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING CONSTRUCTION AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
12. THE CROSS-SLOPE ON ALL SIDEWALKS SHALL BE A MAXIMUM OF 2:08.
13. CONTRACTOR SHALL VERIFY ALL EXISTING ELEVATIONS WHERE NEW CONSTRUCTION JOIN OR CONNECT TO EXISTING PAVEMENT, CURB AND OTHER RIGID STRUCTURES. NOTIFY ARCHITECT IF DISCREPANCIES OCCUR.

### GRADING LEGEND



270.4' +  
[270.50T]  
[270.50]  
[270.50TW]  
[270.50BW]  
A4

EXISTING CONTOURS

FINAL CONTOURS

EXISTING SURVEY SPOT ELEVATION

PROPOSED TOP OF CURB SPOT ELEVATION

PROPOSED GROUND/PAVEMENT ELEVATION

PROPOSED FINISHED GRADE AT TOP OF WALL ELEVATION

PROPOSED FINISHED GRADE AT BOTTOM OF WALL ELEVATION

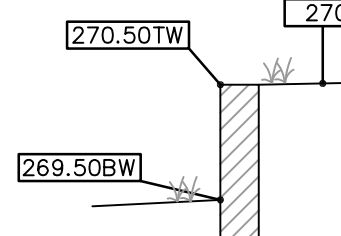
STORM STRUCTURE NUMBER

EXISTING STORM DRAIN PIPE

PROPOSED STORM DRAIN PIPE

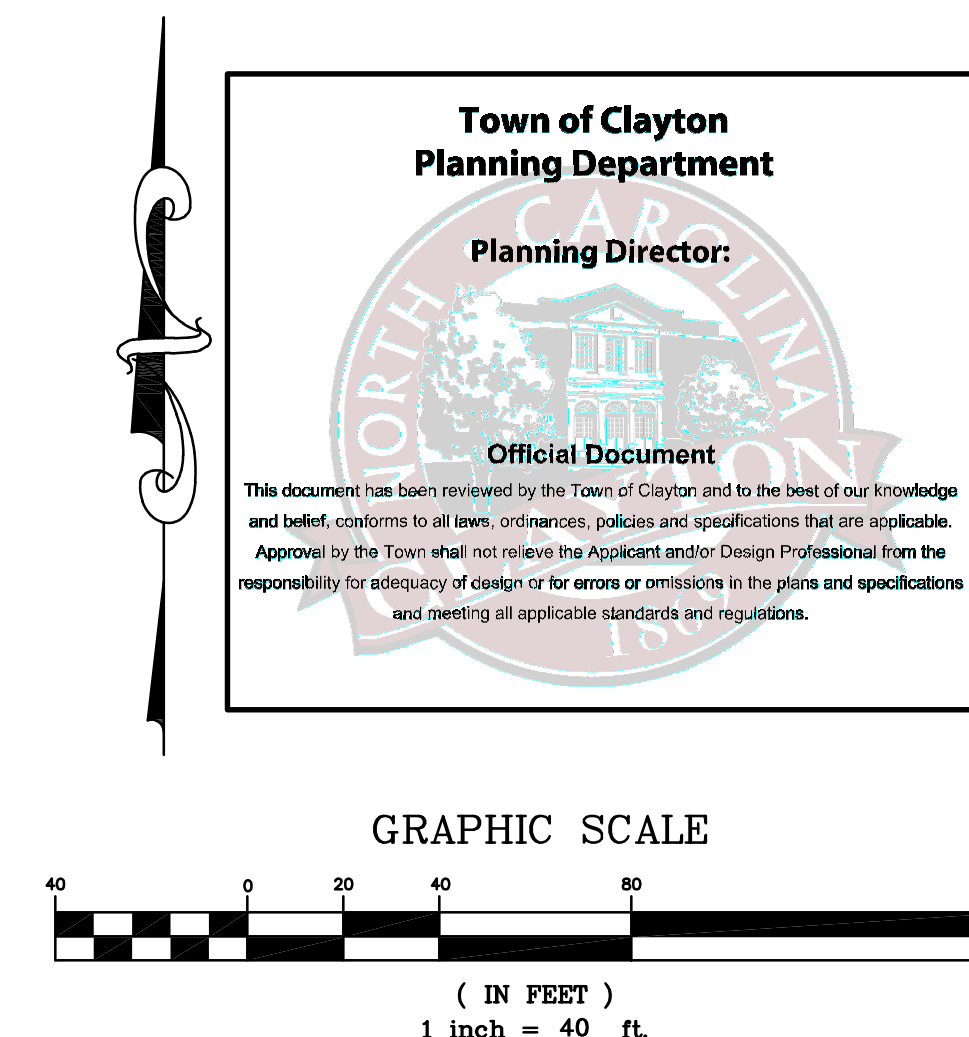
FD  
RD

**TYP. GRADE DESIGNATIONS AT SITE WALLS**

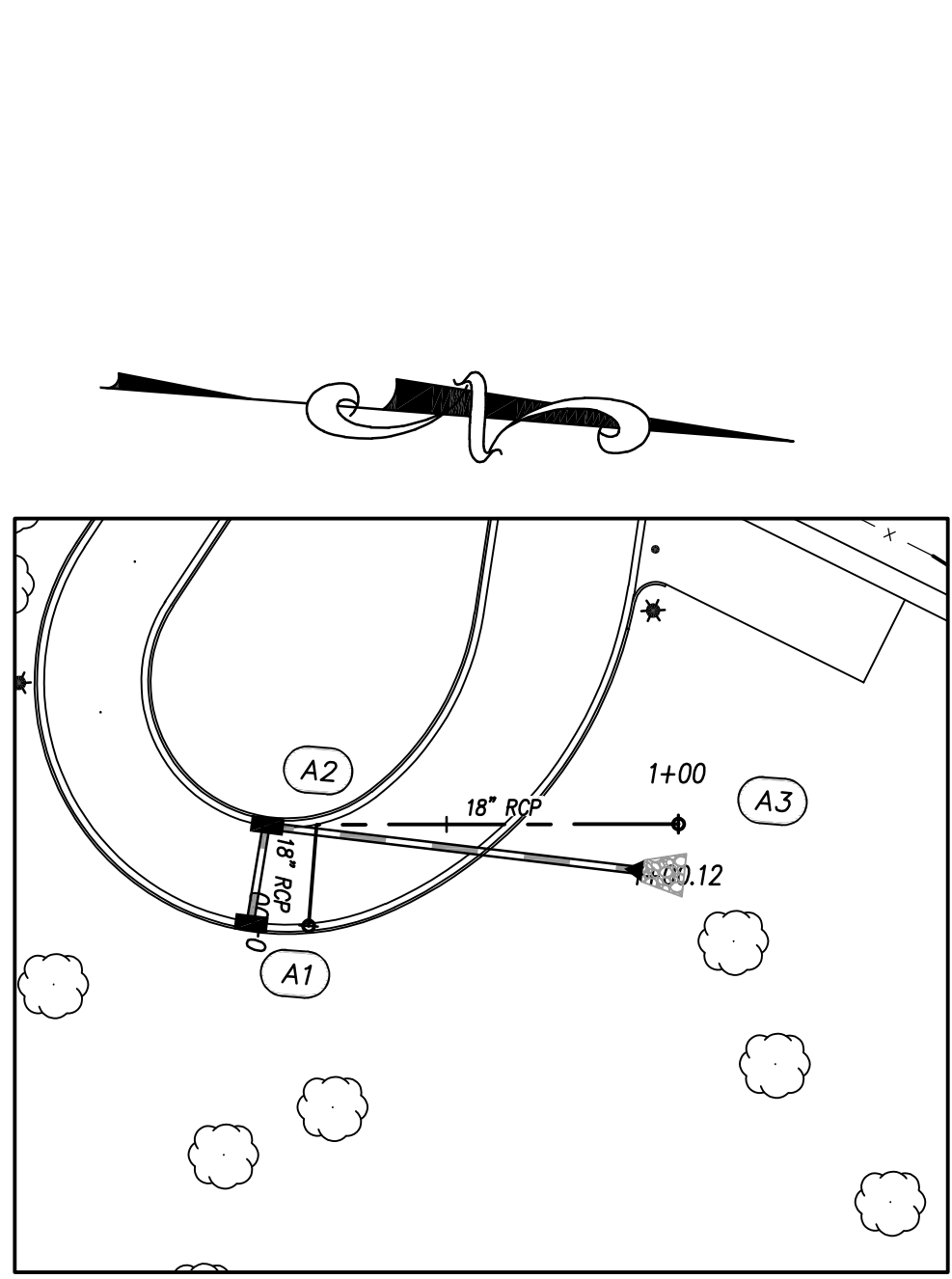


The diagram shows a cross-section of a wall. On the left side, there are two horizontal lines representing the ground and pavement, labeled '270.50TW' and '270.50BW' respectively. On the right side, there are two horizontal lines representing the finished grade at the top and bottom of the wall, labeled '270.55' and '270.50' respectively. A vertical line represents the wall itself.

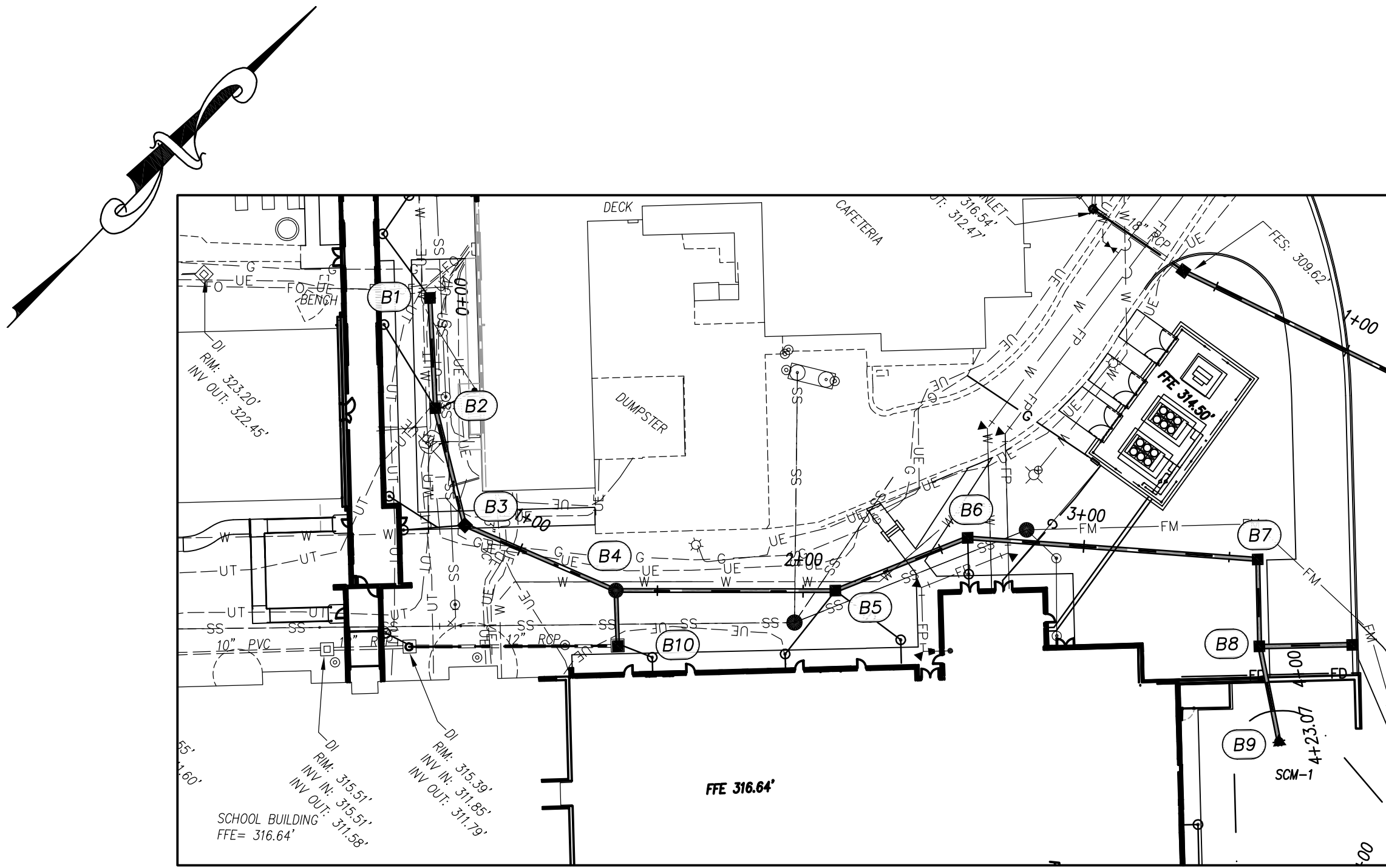
LOCATIONS ALONG BUILDING WALLS.



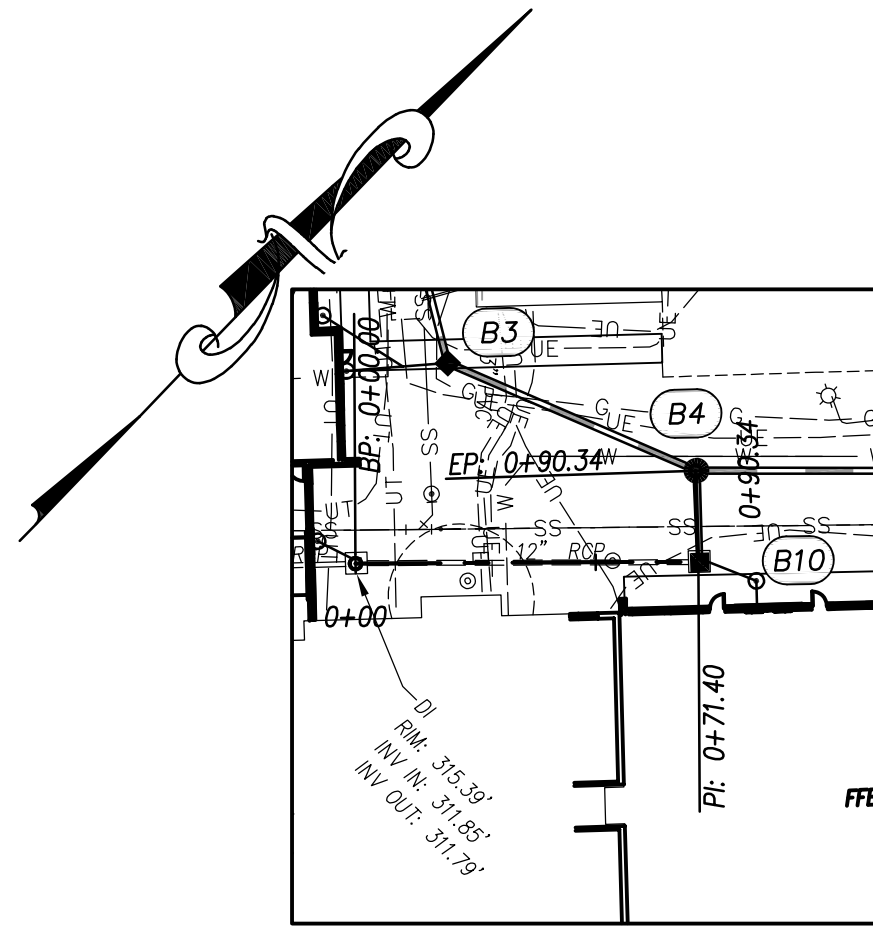




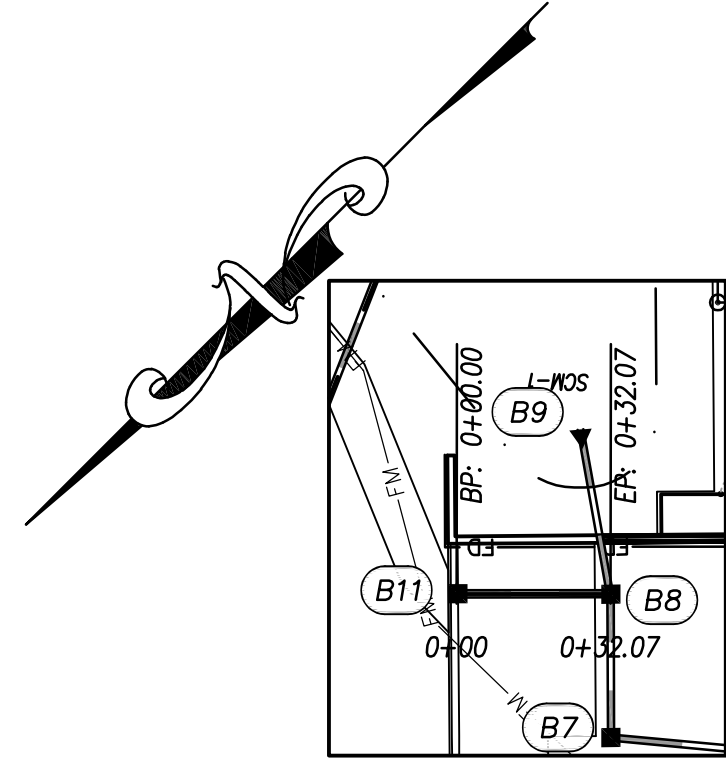
**STORMWATER SYSTEM A  
PLAN**  
SCALE: 1"=40'  
SEE SHEET C301  
FOR OVERALL GRADING



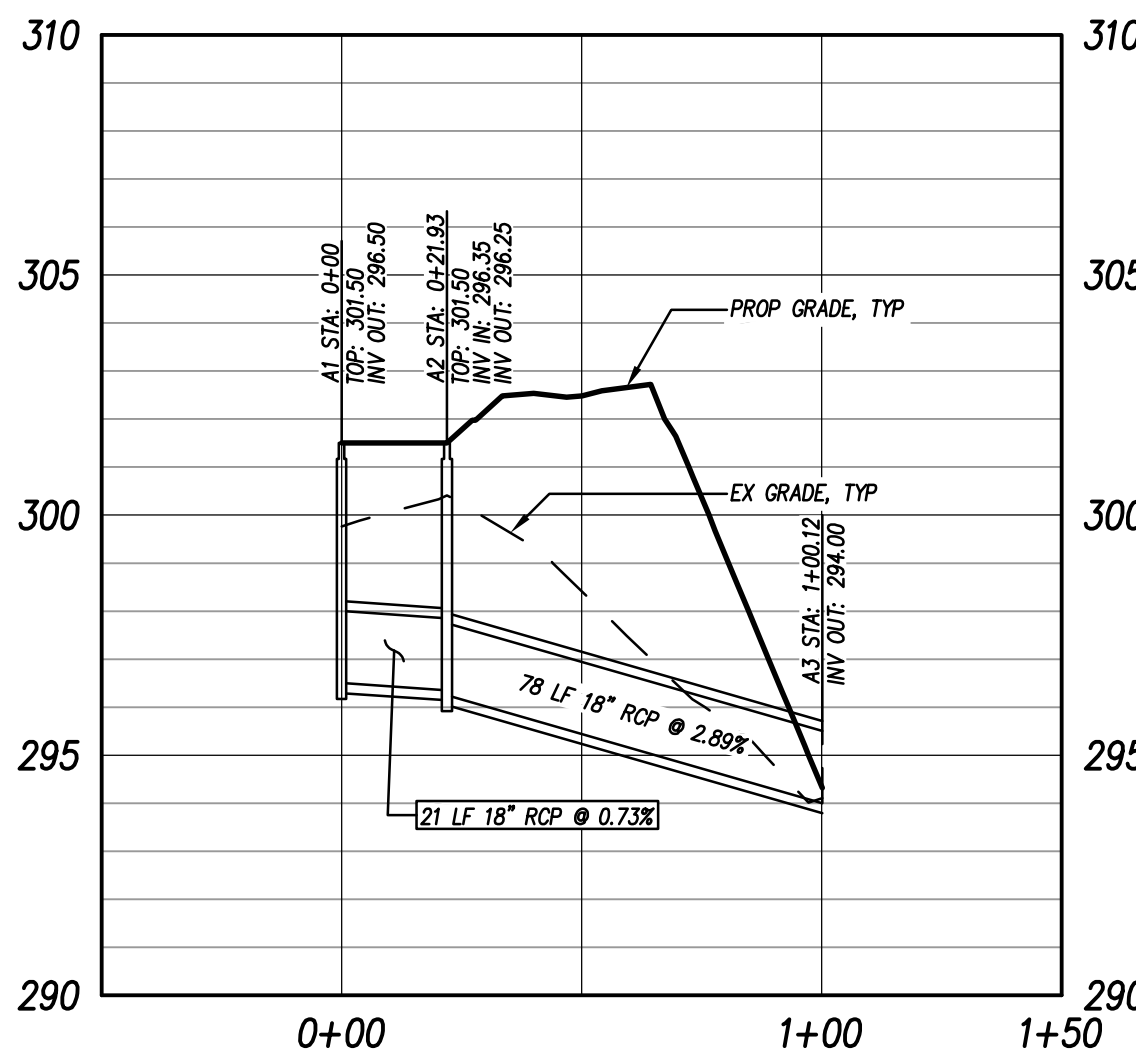
**STORMWATER SYSTEM B  
MAIN LINE PLAN**  
SCALE: 1"=40'  
SEE SHEET C301  
FOR OVERALL GRADING



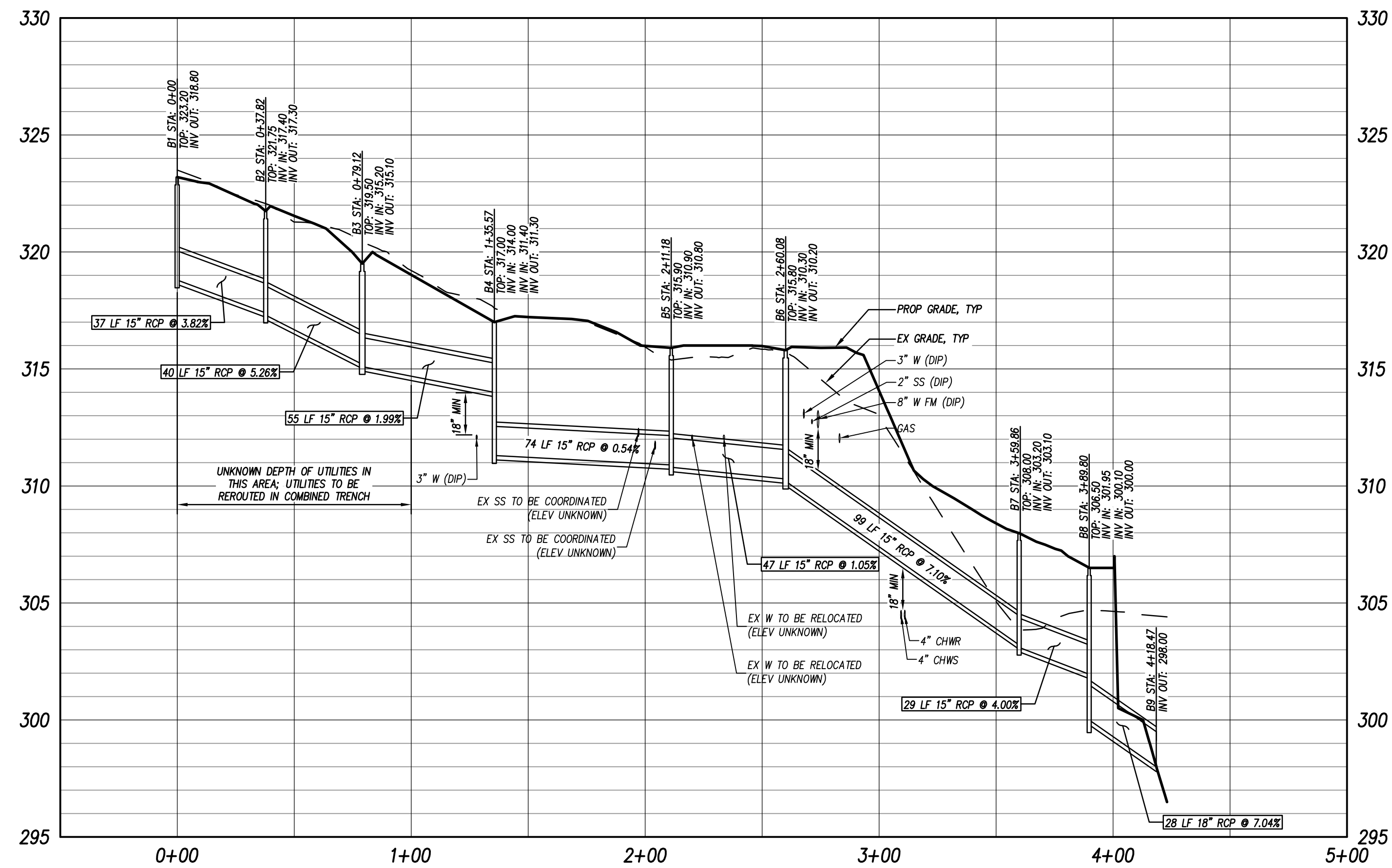
**STORMWATER SYSTEM B  
BRANCH 1 PLAN**  
SCALE: 1"=40'  
SEE SHEET C301  
FOR OVERALL GRADING



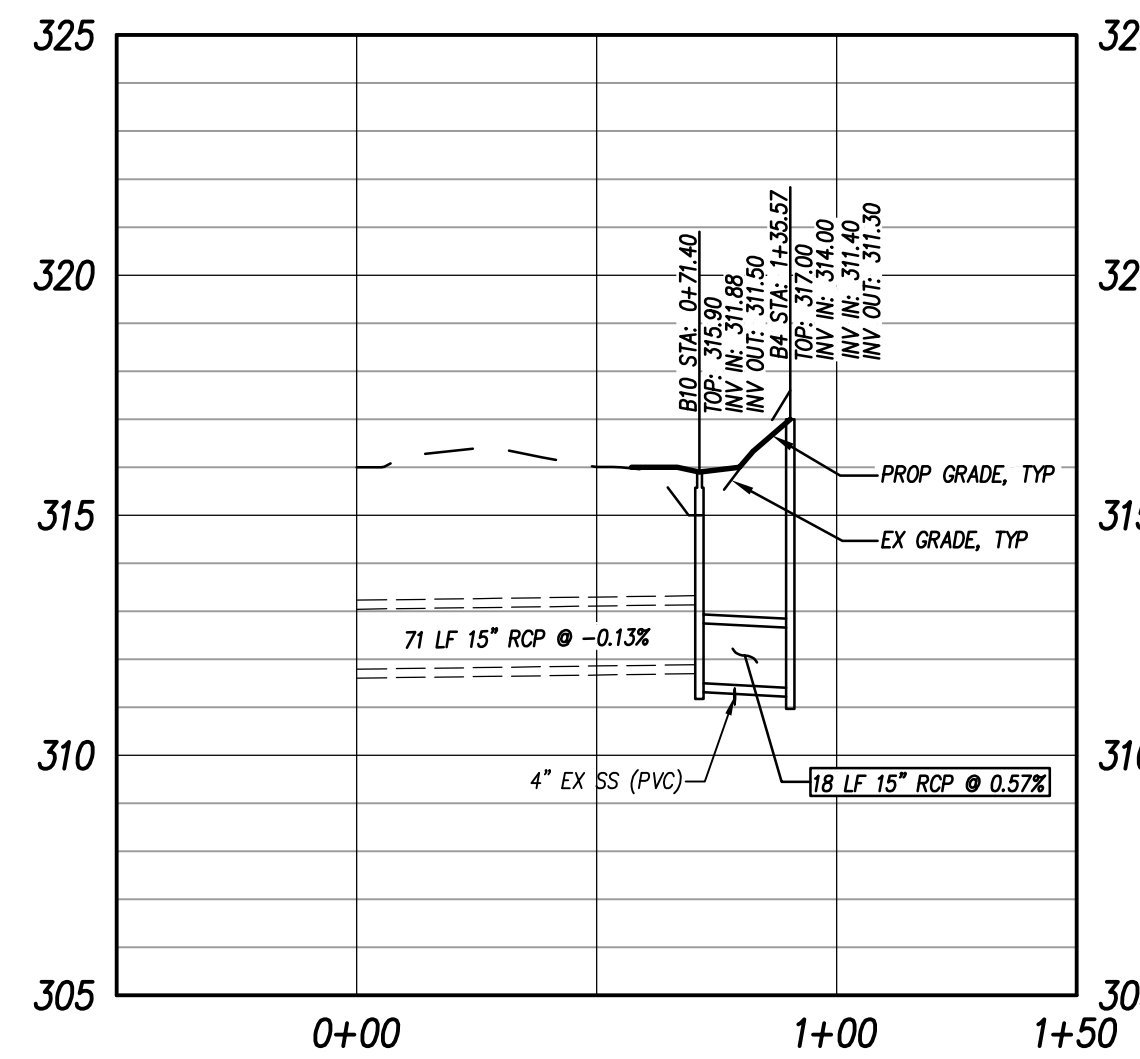
**STORMWATER SYSTEM B  
BRANCH 2 PLAN**  
SCALE: 1"=40'  
SEE SHEET C301  
FOR OVERALL GRADING



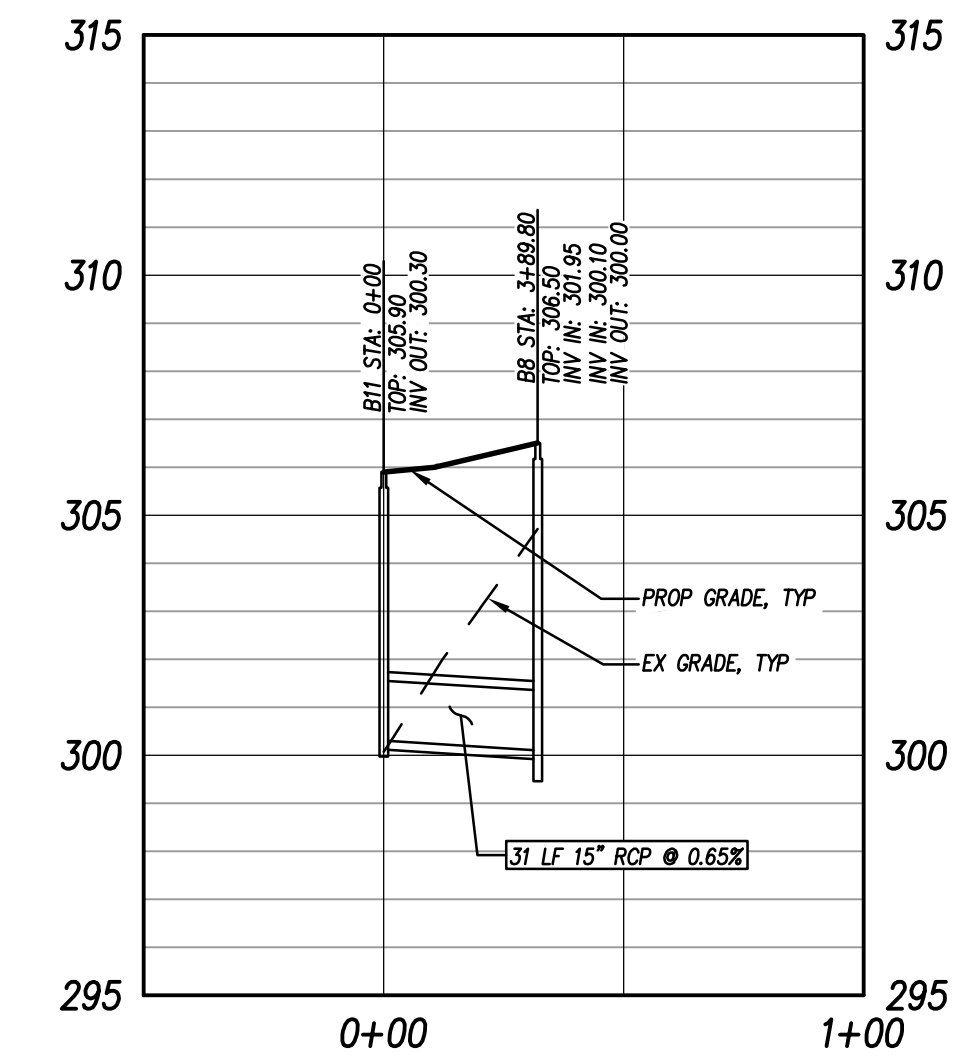
**STORMWATER SYSTEM A  
PROFILE**  
HORIZONTAL SCALE: 1"=40'  
VERTICAL SCALE: 1"=4'



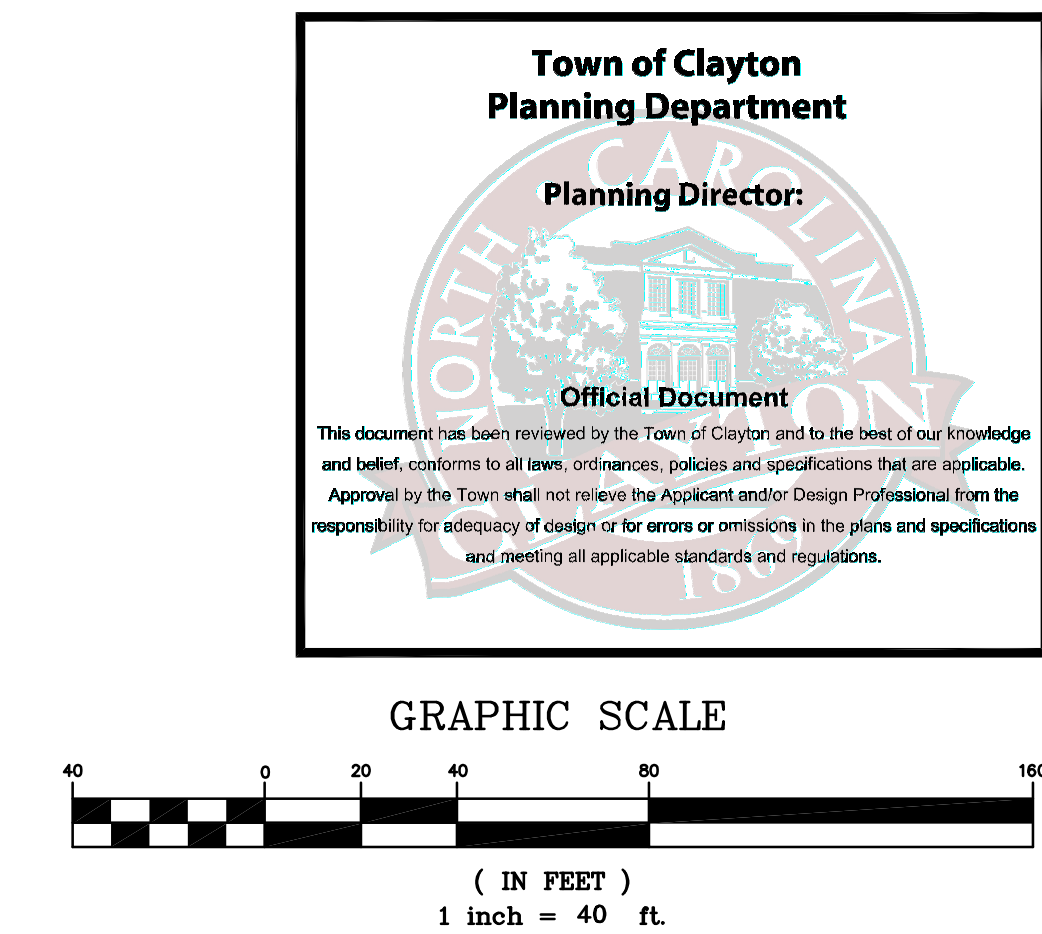
**STORMWATER SYSTEM B  
MAIN LINE PROFILE**  
HORIZONTAL SCALE: 1"=40'  
VERTICAL SCALE: 1"=4'



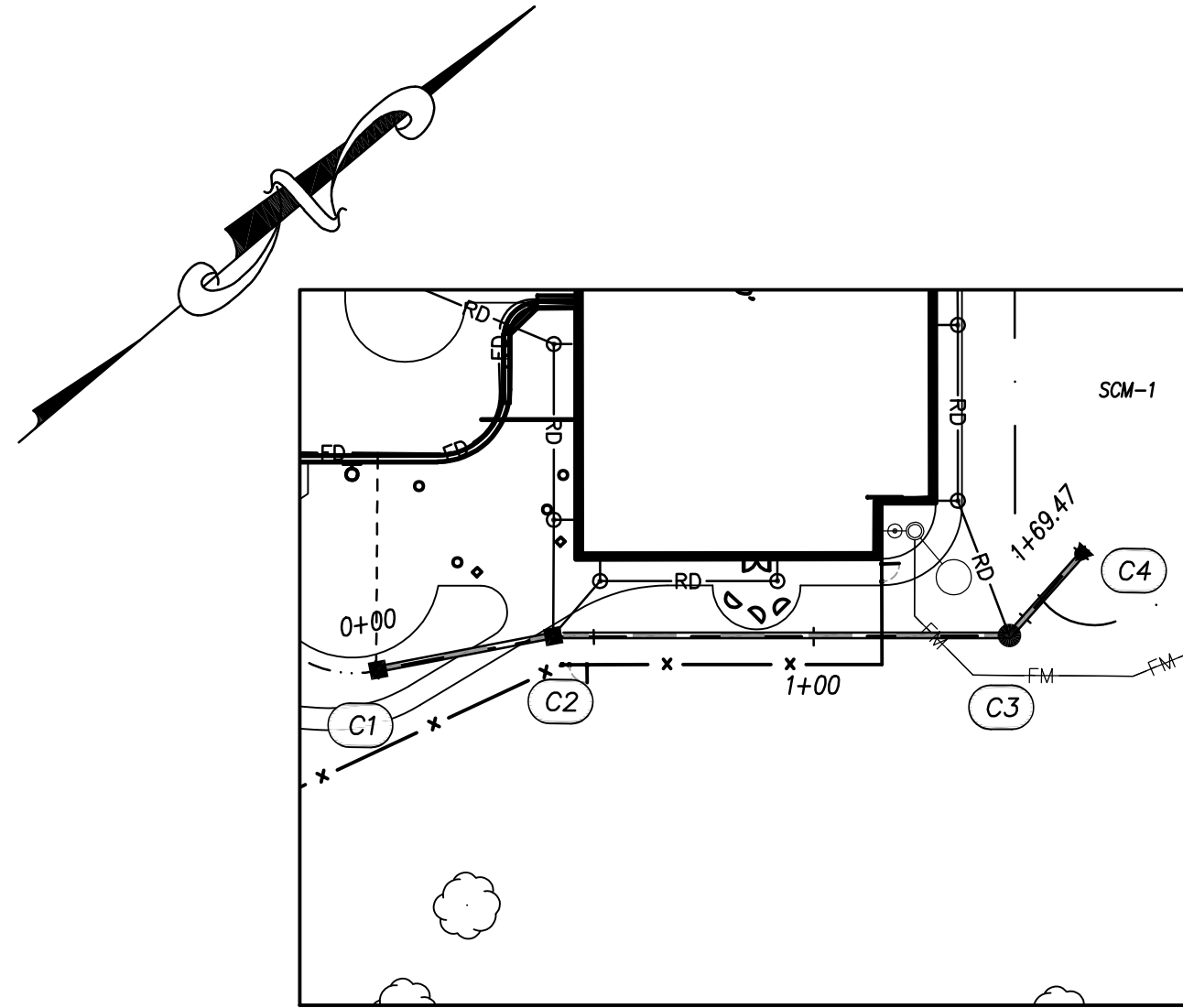
**STORMWATER SYSTEM B  
BRANCH 1 PROFILE**  
HORIZONTAL SCALE: 1"=40'  
VERTICAL SCALE: 1"=4'



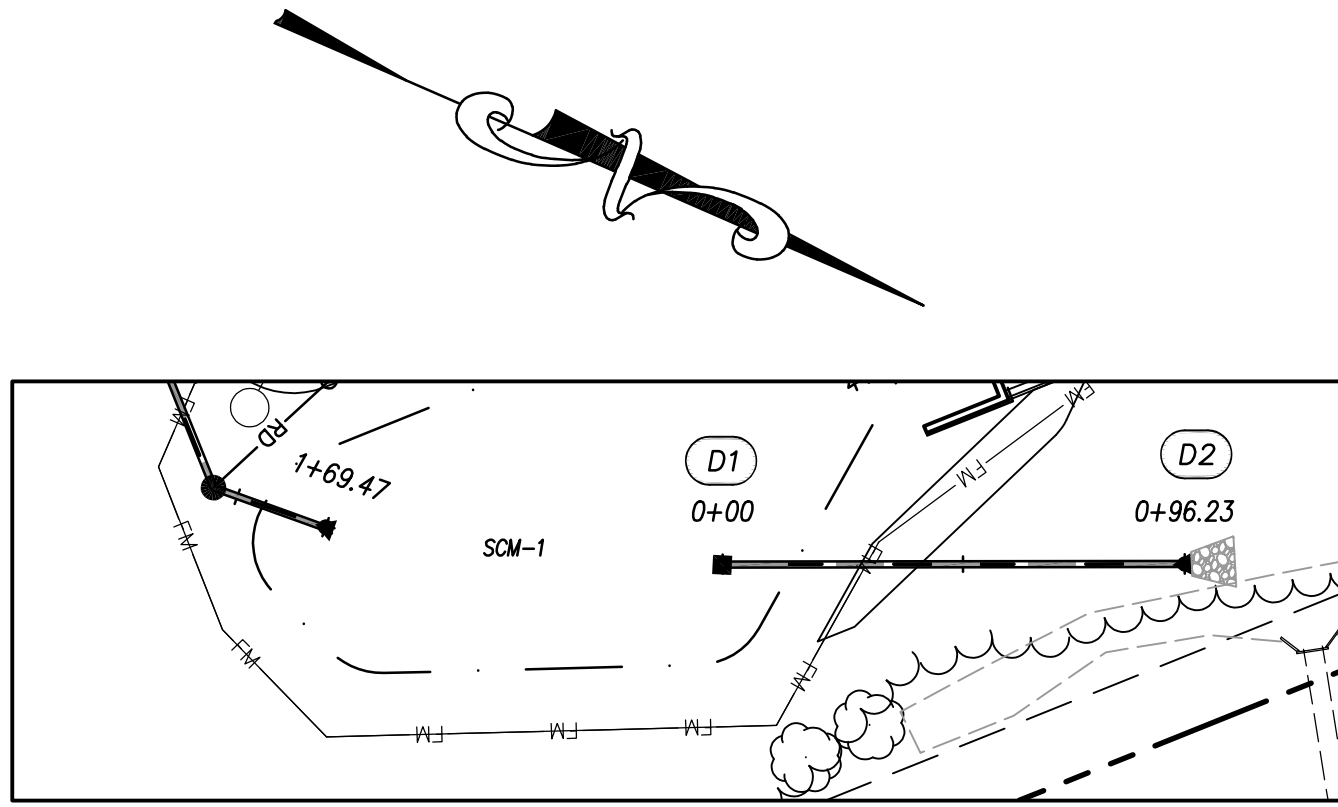
**STORMWATER SYSTEM B  
BRANCH 2 PROFILE**  
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VERTICAL SCALE: 1"=4'



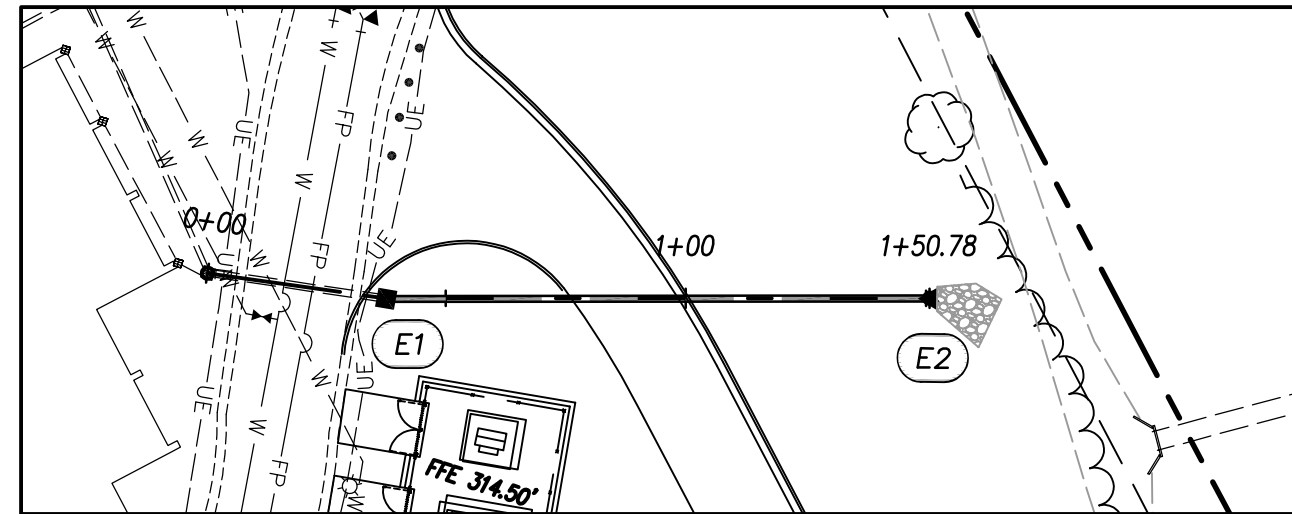




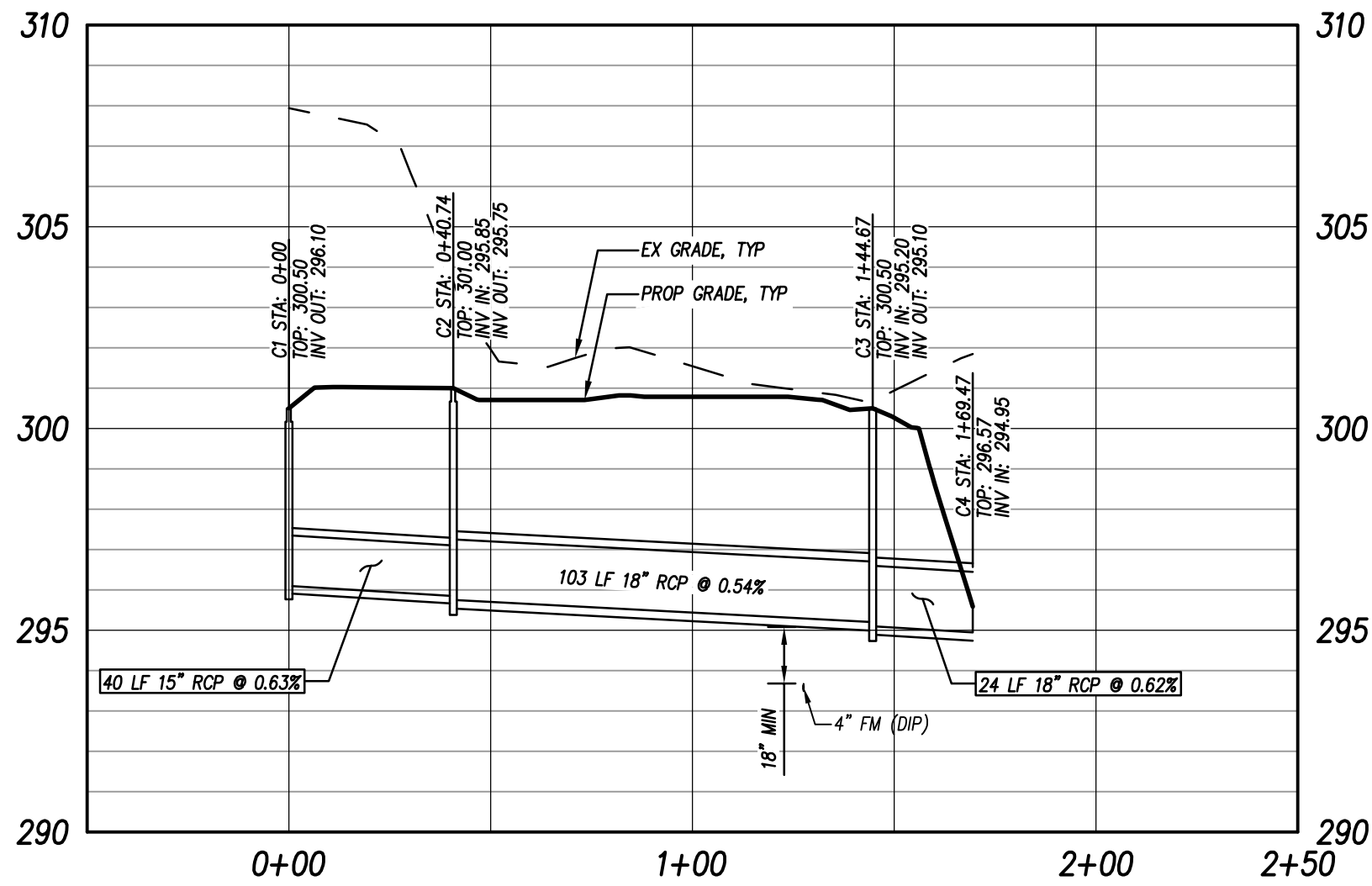
STORMWATER SYSTEM C  
PLAN  
SCALE: 1"=40'  
SEE SHEET C301  
FOR OVERALL GRADING



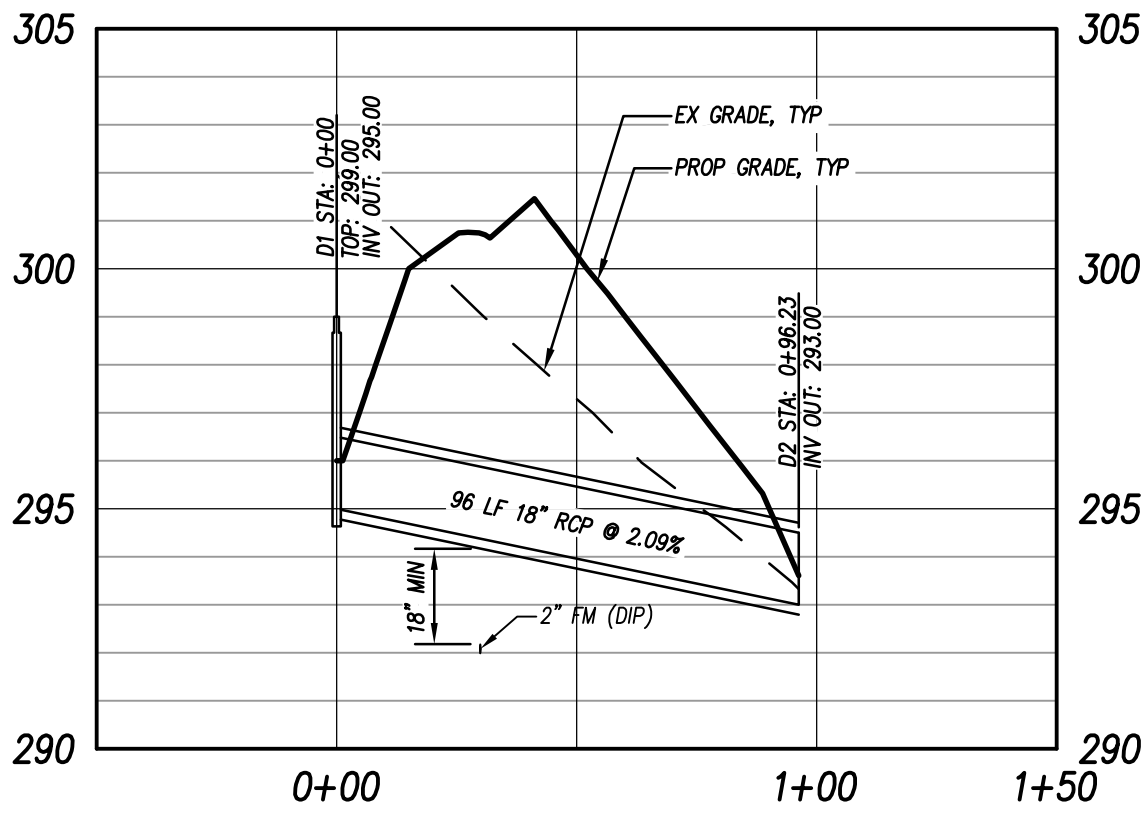
STORMWATER SYSTEM D  
PLAN  
SCALE: 1"=40'  
SEE SHEET C301  
FOR OVERALL GRADING



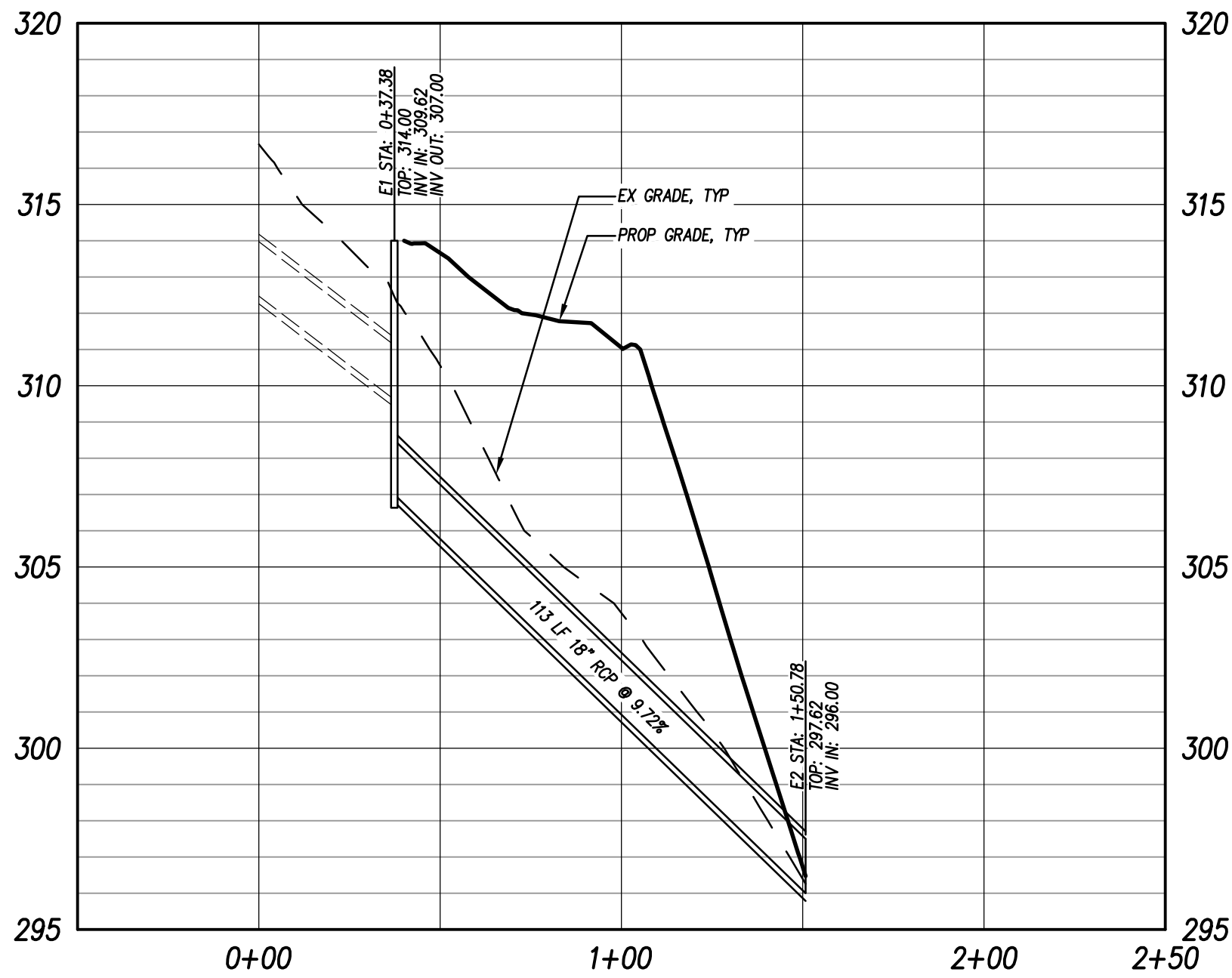
STORMWATER SYSTEM E  
PLAN  
SCALE: 1"=40'  
SEE SHEET C301  
FOR OVERALL GRADING



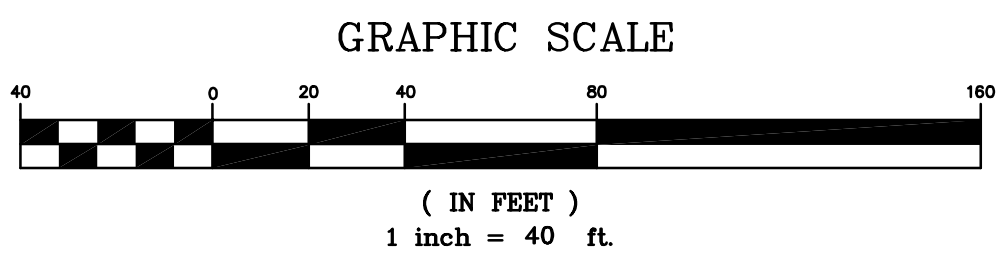
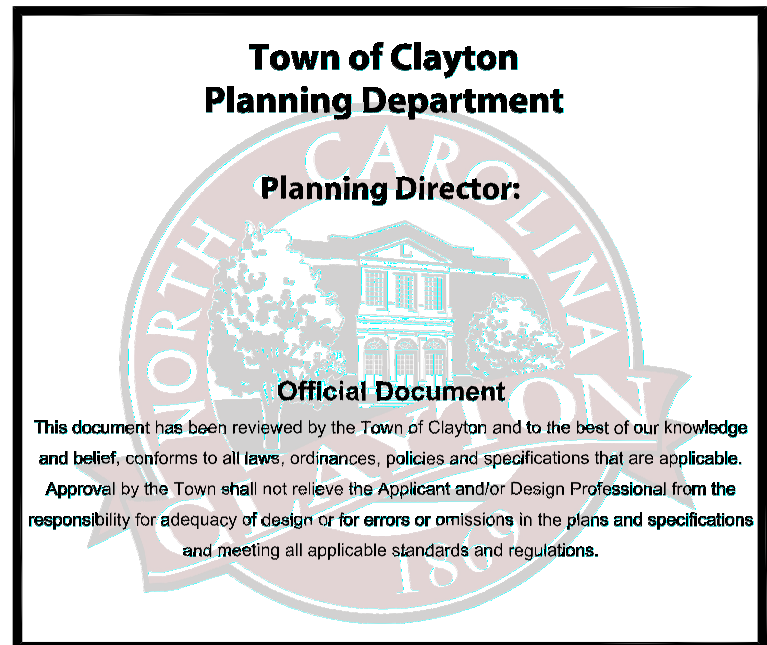
STORMWATER SYSTEM C  
PROFILE  
HORIZONTAL SCALE: 1"=40'  
VERTICAL SCALE: 1"=4'



STORMWATER SYSTEM D  
PROFILE  
HORIZONTAL SCALE: 1"=40'  
VERTICAL SCALE: 1"=4'

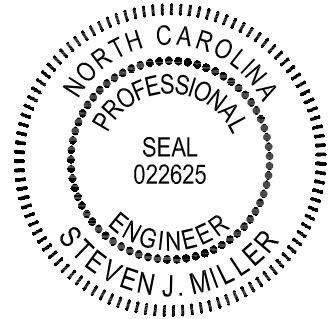


STORMWATER SYSTEM E  
PROFILE  
HORIZONTAL SCALE: 1"=40'  
VERTICAL SCALE: 1"=4'



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PROJECT TITLE  
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1	2/20/24	ADDENDUM #1

## BID DOCUMENTS

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BOOMERANG DESIGN PROJECT NUMBER  
**02.07.24**  
DRAWING RELEASE DATE

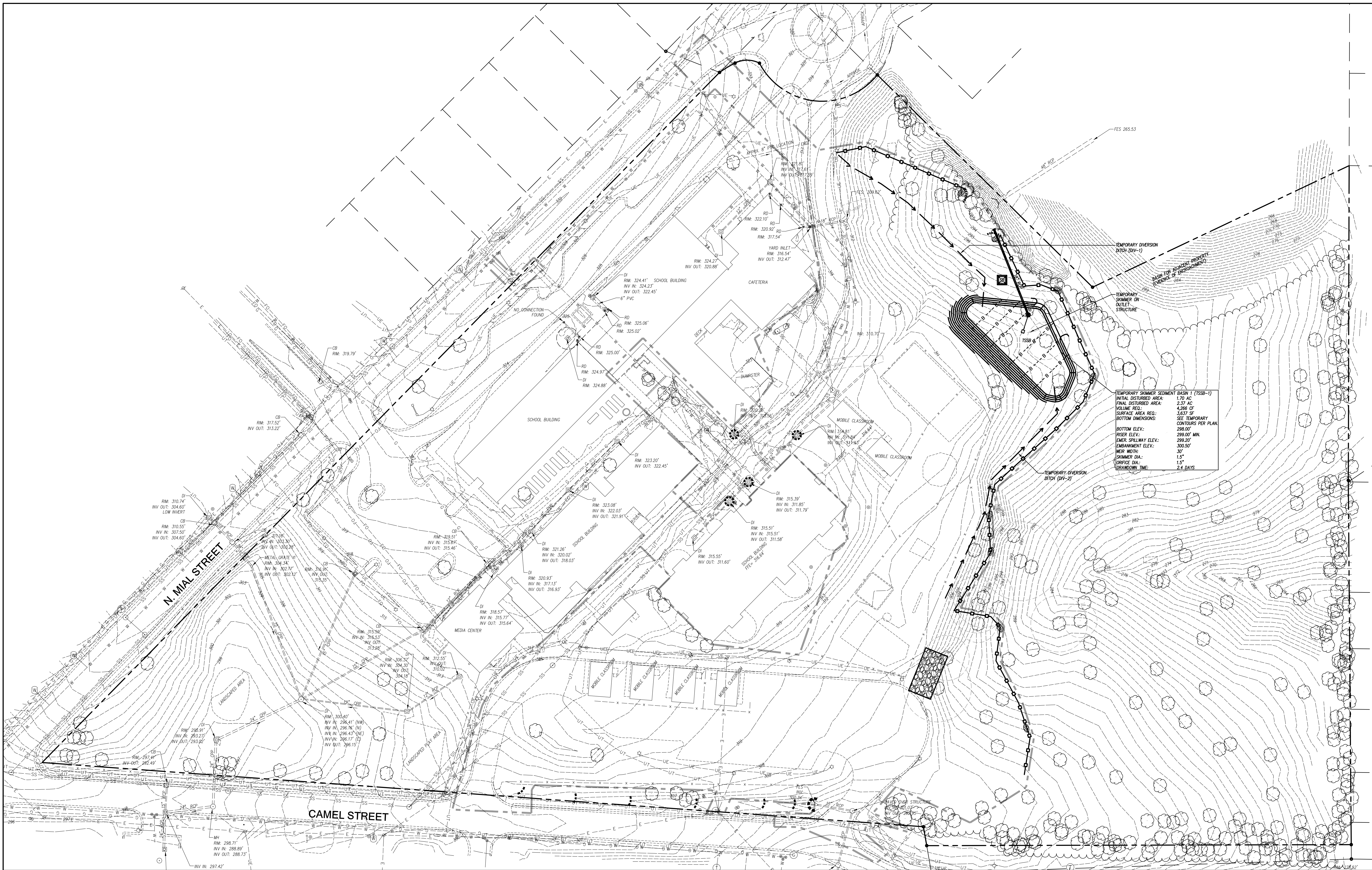
## STORM SYSTEM PROFILES - SHEET 2

SHEET TITLE

**C303**

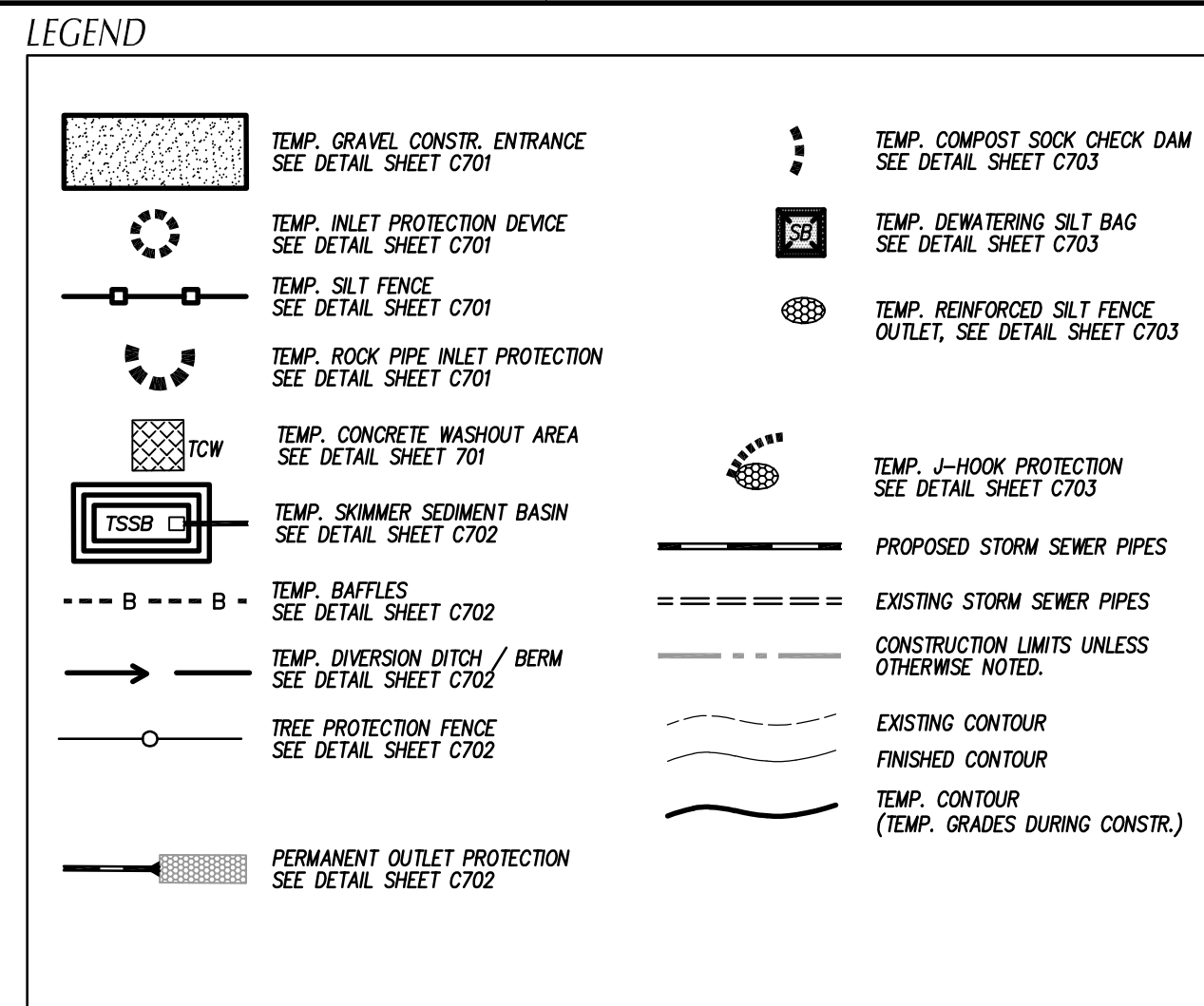
SHEET





**GENERAL NOTES**

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF CLAYTON, NCDCO, AND NCDCOT STANDARDS, SPECIFICATIONS AND DETAILS.
2. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF SITE. ALL OFF-SITE SOIL BORROW AND WASTE SITES SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITIES. CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION OF SEDIMENT & EROSION CONTROL PERMIT FOR ANY OFF-SITE SITES TO OWNER PRIOR TO RELOCATING ANY STOCKPILE MATERIALS.
3. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR ARCHITECT.
4. TOTAL DISTURBED AREA: 3.51 C701. ALL STORM DRAINAGE PIPES SHALL BE THOROUGHLY FLUSHED OF ALL SEDIMENT FOLLOWING SITE STABILIZATION. INTERIOR FLUSHING OF SYSTEM SHALL BE PERFORMED AS NEEDED TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM. CLEANING SHALL BE PERFORMED IN A MANNER WHICH PREVENTS SEDIMENT FROM BEING FLUSHED THROUGH PIPES TO THE EXISTING DRAINAGE SYSTEM.
5. THE INDICATED STAGING AREA IS INTENDED FOR VEHICLES AND NON-EROSIBLE MATERIALS ONLY. NO SOIL, SAND OR OTHER EROSION-PRONE GRAINED MATERIAL SHALL BE STORED OUTSIDE OF THE LIMITS OF DISTURBANCE.
6. SOIL AND OTHER MATERIALS SHALL ONLY BE TEMPORARILY STOCKPILED WITHIN THE CONSTRUCTION LIMITS AND PROTECTED BY SEDIMENT AND EROSION CONTROL DEVICES AND MEASURES AT ALL TIMES. STOCKPILES SHALL BE STABILIZED AS REQUIRED, AS INDICATED IN THE SLOPE & SURFACE STABILIZATION NOTES ON THIS PLAN.
7. TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION IS SCHEDULED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY (CO).
8. ALL TREE PROTECTION FENCING SHALL BE REMOVED IMMEDIATELY PRIOR TO THE FINAL SITE INSPECTION.
9. TREE PROTECTION FENCING SHALL NOT BE MOVED, AND THERE SHALL BE NO ENCROACHMENT INTO SUCH PROTECTED AREAS WITHOUT WRITTEN AUTHORIZATION OF THE COUNTY ZONING COMPLIANCE STAFF. ANY ACTIVITY (LANDSCAPING, FENCING, OR UTILITY INSTALLATION) SHOWN ON THE APPROVED PLANS IN A TREE PROTECTION AREA SHALL ALSO NOT OCCUR WITHOUT WRITTEN AUTHORIZATION FROM THE COUNTY ZONING COMPLIANCE STAFF. ANY UNAUTHORIZED ENCROACHMENT OR DISTURBANCE WITHIN THE BOUNDARIES OF A TREE PROTECTION AREA SHALL AUTOMATICALLY RESULT IN FINES AND THE REPLACEMENT OF ANY DAMAGED VEGETATION IN ACCORDANCE WITH THE LAND DEVELOPMENT ORDINANCE.
10. ROADSIDE DITCHES AND CHANNELS SHALL BE STABILIZED DAILY UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
11. INSTALL TEMPORARY MATTING TO TOP OF ALL SIDE SLOPES ON CHANNELS, DIVERSION DITCHES AND TEMPORARY SEDIMENT BASINS. SEE DETAILS ON SHEET C702 (PERMANENT CHANNEL, TEMPORARY DIVERSION DITCH) FOR TYPE OF MATTING TO USE.
12. ANY DEWATERING OF SEDIMENT CONTAINMENT DEVICES FOR MAINTENANCE, REMOVAL OR CONVERSION PURPOSES IS TO BE DONE THROUGH A SILT BAG.
13. ANY DEWATERING OF STORM/UTILITY TRENCHES IS TO BE DONE THROUGH A SILT BAG. SEE DETAIL ON SHEET C703.
14. GROUND COVER IS TO BE APPLIED PER CONDITIONS OF THE PROPOSED PERMIT OR AT THE END OF THE DAY IN CRITICAL AREAS.
15. CONTRACTOR SHALL USE TREE WASH STATION TO PREVENT SEDIMENT FROM TRACKING ONTO THE ROAD IF CONSTRUCTION ENTRANCE IS FOUND INSUFFICIENT AT NO ADDITIONAL COST TO OWNER. SEE DETAIL ON SHEET C701.



**MAINTENANCE PLAN**

1. DURING ALL PHASES OF CONSTRUCTION, GROUND COVER ON EXPOSED SLOPES SHALL BE PROVIDED ACCORDING TO GROUND STABILIZATION TABLE (SHEET C701) FOLLOWING COMPLETION OF ANY PHASE OF GRADING.
2. FINAL PERMANENT GROUND COVER FOR ALL DISTURBED AREAS SHALL BE PROVIDED ON ALL DISTURBED AREAS ACCORDING TO GROUND STABILIZATION TABLE (SHEET C701) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
3. THE ABOVE REQUIREMENTS ARE THE MINIMUM NECESSARY TO MEET EROSION AND SEDIMENT CONTROL REGULATIONS. THE CONTRACT DOCUMENTS INCLUDE ADDITIONAL SEEDING AND STABILIZATION REQUIREMENTS AND SCHEDULES WHICH MAY EXCEED THOSE ABOVE.
4. SLOPE EROSION CONTROL MATTING SHALL BE INSTALLED FOR TEMPORARY STABILIZATION DURING THE ESTABLISHMENT OF VEGETATIVE COVER ON ALL STEEP SLOPES (6:1 OR STEEPER). REFER TO MATERIAL SPECIFICATIONS. INSTALL MATTING PER MANUFACTURER'S INSTRUCTIONS.
5. ALL OTHER SEEDER AREAS SHALL BE MULCHED WITH STRAW AND TACKED WITH ASPHALT.

**SELF-INSPECTION RULES**

SEE SHEET C701 FOR SELF-INSPECTION REQUIREMENTS.

THE FINANCIALLY RESPONSIBLE PERSON AND/OR HIS AGENT WILL BE PERFORM SELF INSPECTIONS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES USING NCDCO'S SELF INSPECTION REPORT (WORKSHEET) AND THIS WILL BE KEPT ON-SITE.

**SLOPE & SURFACE STABILIZATION**

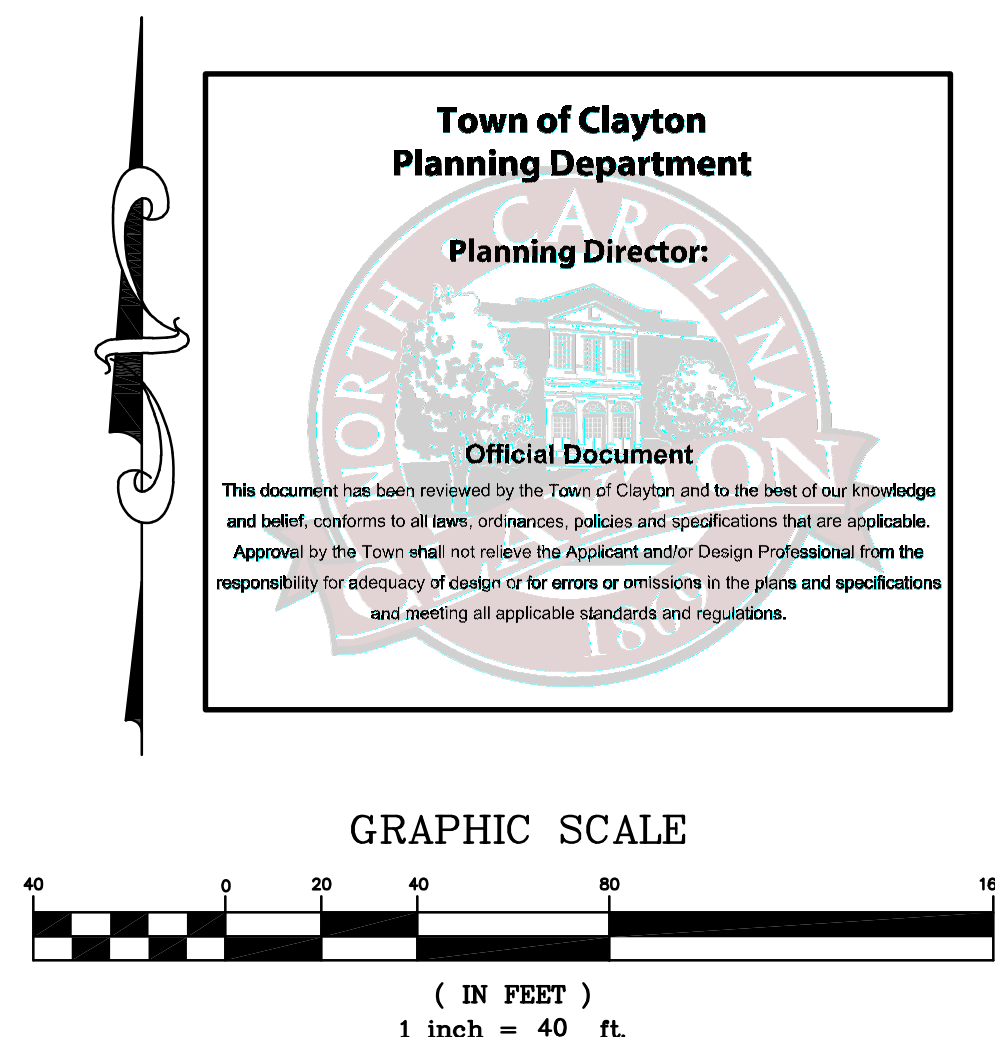
GROUND STABILIZATION SHALL BE PROVIDED ON ALL DISTURBED AREAS ACCORDING TO GROUND STABILIZATION NOTES. SEE SHEET C701.

EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE (SECTION 1B(2) (b)).

THE REQUIREMENTS ON SHEET C701 ARE THE MINIMUM NECESSARY TO MEET EROSION AND SEDIMENT CONTROL REGULATIONS. THE CONTRACT DOCUMENTS INCLUDE ADDITIONAL SEEDING AND STABILIZATION REQUIREMENTS AND SCHEDULES WHICH MAY EXCEED MINIMUM REQUIREMENTS.

INSTALL TEMPORARY EXCELSDOR MATTING FOR STABILIZATION DURING THE ESTABLISHMENT OF VEGETATIVE COVER ON ALL STEEP SLOPES (6:1 OR STEEPER) AND AREAS OF CONCENTRATED FLOW (CHANNELS, DITCHES, SWALES, ETC.). UTILIZE TEMPORARY COCONUT MAT IN AREAS IDENTIFIED ON PLAN. REFER TO SPECIFICATION SECTION 312000 FOR MATERIAL SPECIFICATIONS. INSTALL MATTING PER MANUFACTURER'S INSTRUCTIONS.

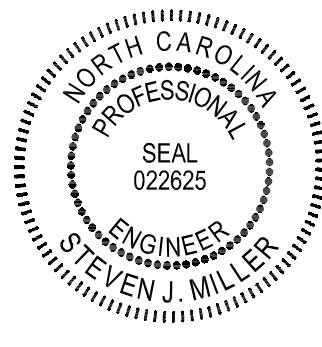
SEE SHEET C703 EROSION CONTROL CONSTRUCTION SEQUENCE.



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"CLIENT'S PROJECT" # - XXX



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3. DO NOT SCALE OFF DIMENSIONS.

REVISIONS	NO.	DATE	DESCRIPTION
	1	2/20/24	ADDENDUM #1

**BID DOCUMENTS**

PROJECT PHASE

**2307**

BOOMERANG DESIGN PROJECT NUMBER

**02.07.24**

DRAWING RELEASE DATE

**EROSION & SEDIMENT  
CONTROL INITIAL  
INSTALLATION PLAN**

SHEET TITLE

**C401**

SHEET



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REVISIONS	NO.	DATE	DESCRIPTION
	1	2/20/24	ADDENDUM #1

## BID DOCUMENTS

PROJECT PHASE

2307  
BOOMERANG DESIGN PROJECT NUMBER

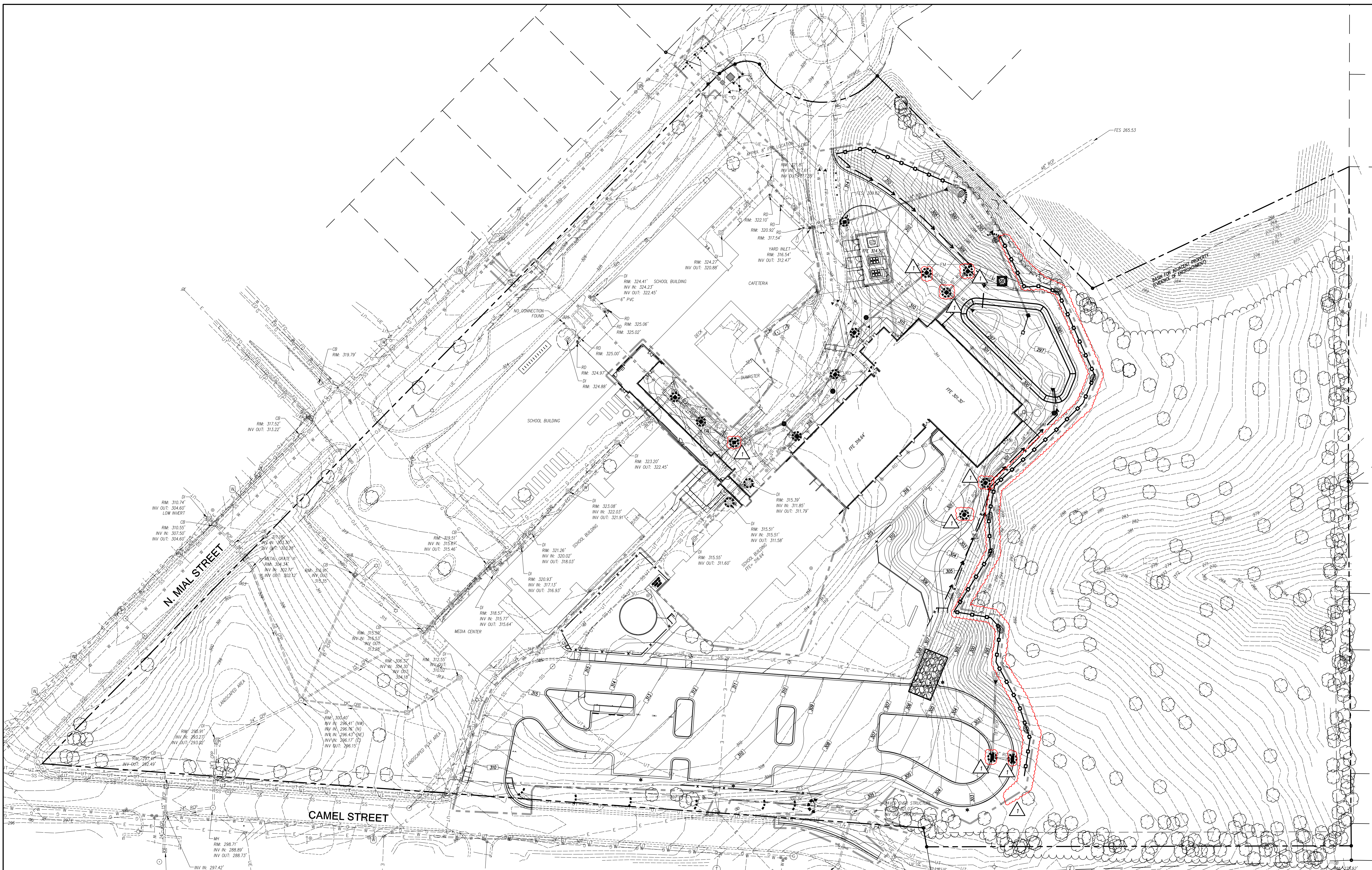
02.07.24  
DRAWING RELEASE DATE

## EROSION & SEDIMENT CONTROL PLAN

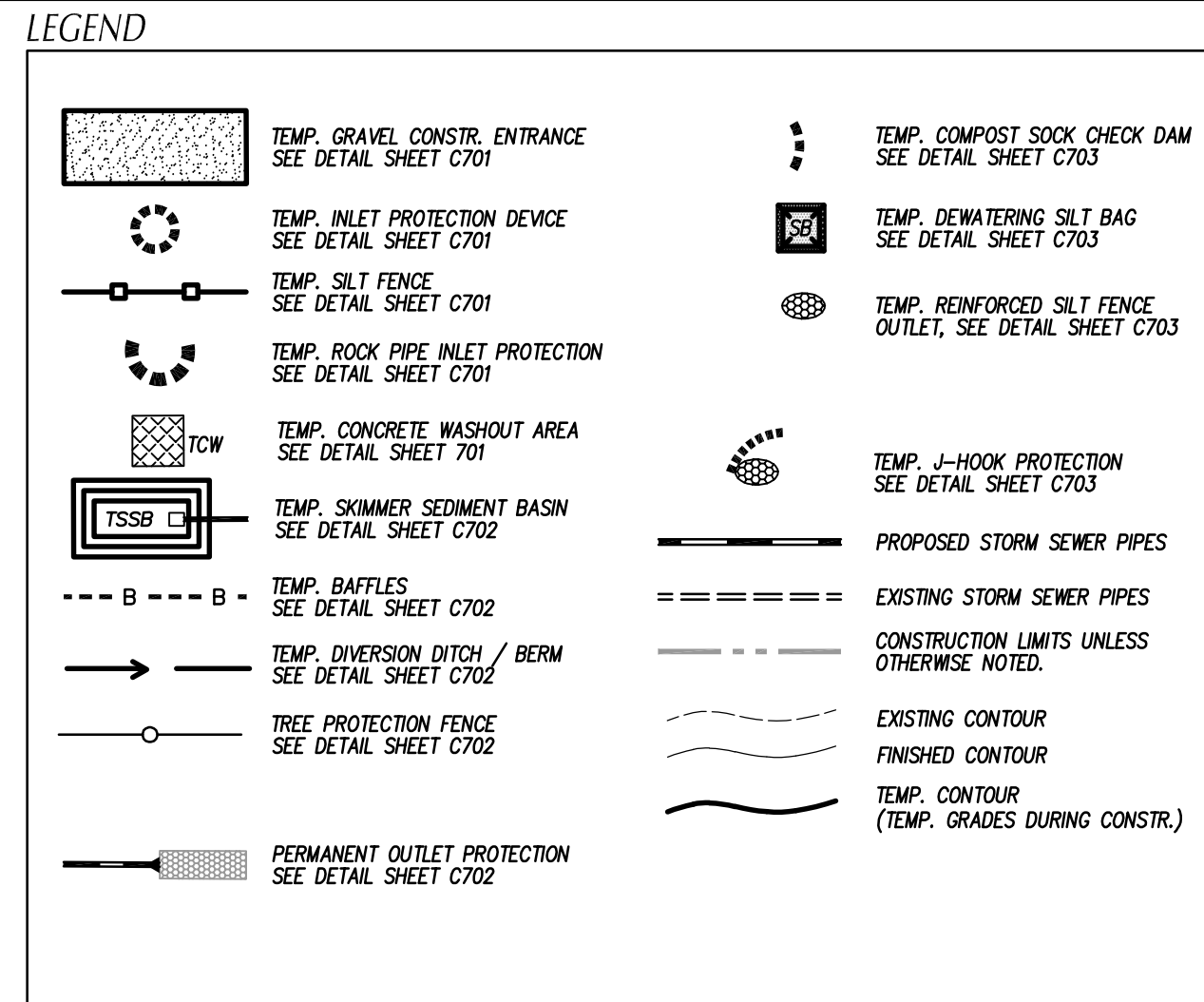
SHEET TITLE

C402

SHEET



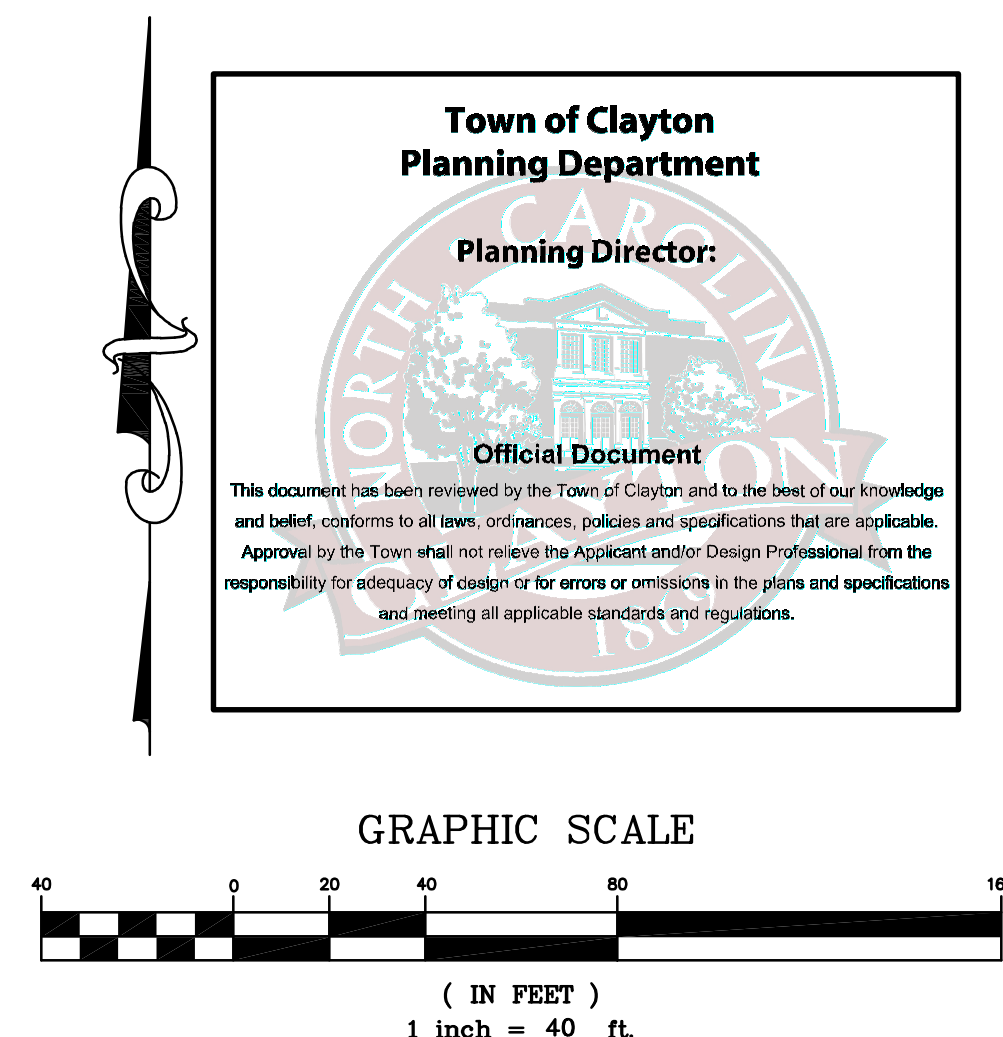
- ### GENERAL NOTES
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF CLAYTON, NCDCO, AND NCDCOT STANDARDS, SPECIFICATIONS AND DETAILS.
  - THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF SITE. ALL OFF-SITE SOIL BORROW AND WASTE SITES SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITIES. CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION OF SEDIMENT & EROSION CONTROL PERMIT FOR ANY OFF-SITE SITES TO OWNER PRIOR TO RELOCATING ANY STOCKPILE MATERIALS.
  - THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR ARCHITECT.
  - TOTAL DISTURBED AREA: 3.51 C701. ALL STORM DRAINAGE PIPES SHALL BE THOROUGHLY FLUSHED OF ALL SEDIMENT FOLLOWING SITE STABILIZATION. INTERIOR FLUSHING OF SYSTEM SHALL BE PERFORMED AS NEEDED TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM. CLEANING SHALL BE PERFORMED IN A MANNER WHICH PREVENTS SEDIMENT FROM BEING FLUSHED THROUGH PIPES TO THE EXISTING DRAINAGE SYSTEM.
  - THE INDICATED STAGING AREA IS INTENDED FOR VEHICLES AND NON-EROSIBLE MATERIALS ONLY. NO SOIL, SAND OR OTHER EROSION-PRONE MATERIAL SHALL BE STORED OUTSIDE OF THE LIMITS OF DISTURBANCE.
  - SOIL AND OTHER MATERIALS SHALL ONLY BE TEMPORARILY STOCKPILED WITHIN THE CONSTRUCTION LIMITS AND PROTECTED BY SEDIMENT AND EROSION CONTROL DEVICES AND MEASURES AT ALL TIMES. STOCKPILES SHALL BE STABILIZED AS REQUIRED, AS INDICATED IN THE SLOPE & SURFACE STABILIZATION NOTES ON THIS PLAN.
  - TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION IS SCHEDULED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY (CO). ALL TREE PROTECTION FENCING SHALL BE REMOVED IMMEDIATELY PRIOR TO THE FINAL SITE INSPECTION.
  - PROTECTED AREAS SHALL NOT BE MOVED, AND THERE SHALL BE NO ENCROACHMENT INTO SUCH PROTECTED AREAS WITHOUT WRITTEN AUTHORIZATION OF THE COUNTY ZONING COMPLIANCE STAFF. ANY ACTIVITY (LANDSCAPING, FENCING, OR UTILITY INSTALLATION) SHOWN ON THE APPROVED PLANS IN A TREE PROTECTION AREA SHALL ALSO NOT OCCUR WITHOUT WRITTEN AUTHORIZATION FROM THE COUNTY ZONING COMPLIANCE STAFF. ANY UNAUTHORIZED ENCROACHMENT OR DISTURBANCE WITHIN THE BOUNDARIES OF A TREE PROTECTION AREA SHALL AUTOMATICALLY RESULT IN FINES AND THE REPLACEMENT OF ANY DAMAGED VEGETATION IN ACCORDANCE WITH THE LAND DEVELOPMENT ORDINANCE.
  - ROADSIDE DITCHES AND CHANNELS SHALL BE STABILIZED DAILY UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
  - INSTALL TEMPORARY MATTING TO TOP OF ALL SIDE SLOPES ON CHANNELS, DIVERSION DITCHES AND TEMPORARY SEDIMENT BASINS. SEE DETAILS ON SHEET C702 (PERMANENT CHANNEL, TEMPORARY DIVERSION DITCH) FOR TYPE OF MATTING TO USE.
  - ANY DEWATERING OF SEDIMENT CONTAINMENT DEVICES FOR MAINTENANCE, REMOVAL OR CONVERSION PURPOSES IS TO BE DONE THROUGH A SILT BAG.
  - ANY DEWATERING OF STORM/UTILITY TRENCHES IS TO BE DONE THROUGH A SILT BAG. SEE DETAIL ON SHEET C703.
  - GROUND COVER IS TO BE APPLIED PER CONDITIONS OF THE PIPES PERMIT OR AT THE END OF THE DAY IN CRITICAL AREAS.
  - CONTRACTOR SHALL USE TREE WASH STATION TO PREVENT SEDIMENT FROM TRACKING ONTO THE ROAD IF CONSTRUCTION ENTRANCE IS FOUND INSUFFICIENT AT NO ADDITIONAL COST TO OWNER. SEE DETAIL ON SHEET C701.



- ### MAINTENANCE PLAN
- DURING ALL PHASES OF CONSTRUCTION, GROUND COVER ON EXPOSED SLOPES SHALL BE PROVIDED ACCORDING TO GROUND STABILIZATION TABLE (SHEET C701) FOLLOWING COMPLETION OF ANY PHASE OF GRADING.
  - FINAL PERMANENT GROUND COVER FOR ALL DISTURBED AREAS SHALL BE PROVIDED ON ALL DISTURBED AREAS ACCORDING TO GROUND STABILIZATION TABLE (SHEET C701) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
  - THE ABOVE REQUIREMENTS ARE THE MINIMUM NECESSARY TO MEET EROSION AND SEDIMENT CONTROL REGULATIONS. THE CONTRACT DOCUMENTS INCLUDE ADDITIONAL SEEDING AND STABILIZATION REQUIREMENTS AND SCHEDULES WHICH MAY EXCEED THOSE ABOVE.
  - SLOPE EROSION CONTROL MATTING SHALL BE INSTALLED FOR TEMPORARY STABILIZATION DURING THE ESTABLISHMENT OF VEGETATIVE COVER ON ALL STEEP SLOPES (6:1 OR STEEPER). REFER TO MATERIAL SPECIFICATIONS. INSTALL MATTING PER MANUFACTURER'S INSTRUCTIONS.
  - ALL OTHER SEEDER AREAS SHALL BE MULCHED WITH STRAW AND TACKED WITH ASPHALT.

- ### SELF-INSPECTION RULES
- SEE SHEET C701 FOR SELF-INSPECTION REQUIREMENTS.
- THE FINANCIALLY RESPONSIBLE PERSON AND/OR HIS AGENT WILL BE PERFORM SELF INSPECTIONS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES USING NCDCO'S SELF INSPECTION REPORT (WORKSHEET) AND THIS WILL BE KEPT ON-SITE.

- ### SLOPE & SURFACE STABILIZATION
- GROUND STABILIZATION SHALL BE PROVIDED ON ALL DISTURBED AREAS ACCORDING TO GROUND STABILIZATION NOTES. SEE SHEET C701.
- EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE (SECTION 18B(2) (b)).
- THE REQUIREMENTS ON SHEET C701 ARE THE MINIMUM NECESSARY TO MEET EROSION AND SEDIMENT CONTROL REGULATIONS. THE CONTRACT DOCUMENTS INCLUDE ADDITIONAL SEEDING AND STABILIZATION REQUIREMENTS AND SCHEDULES WHICH MAY EXCEED MINIMUM REQUIREMENTS.
- INSTALL TEMPORARY EXCELOR MATTING FOR STABILIZATION DURING THE ESTABLISHMENT OF VEGETATIVE COVER ON ALL STEEP SLOPES (6:1 OR STEEPER) AND AREAS OF CONCENTRATED FLOW (CHANNELS, DITCHES, SWALES, ETC.). UTILIZE TEMPORARY COCONUT MAT IN AREAS IDENTIFIED ON PLAN. REFER TO SPECIFICATION SECTION 312000 FOR MATERIAL SPECIFICATIONS. INSTALL MATTING PER MANUFACTURER'S INSTRUCTIONS.
- SEE SHEET C703 EROSION CONTROL CONSTRUCTION SEQUENCE.





## COOPER ACADEMY A & R

PROJECT TITLE

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NO.	DATE	DESCRIPTION
1	2/20/24	ADDENDUM #1

## BID DOCUMENTS

PROJECT PHASE

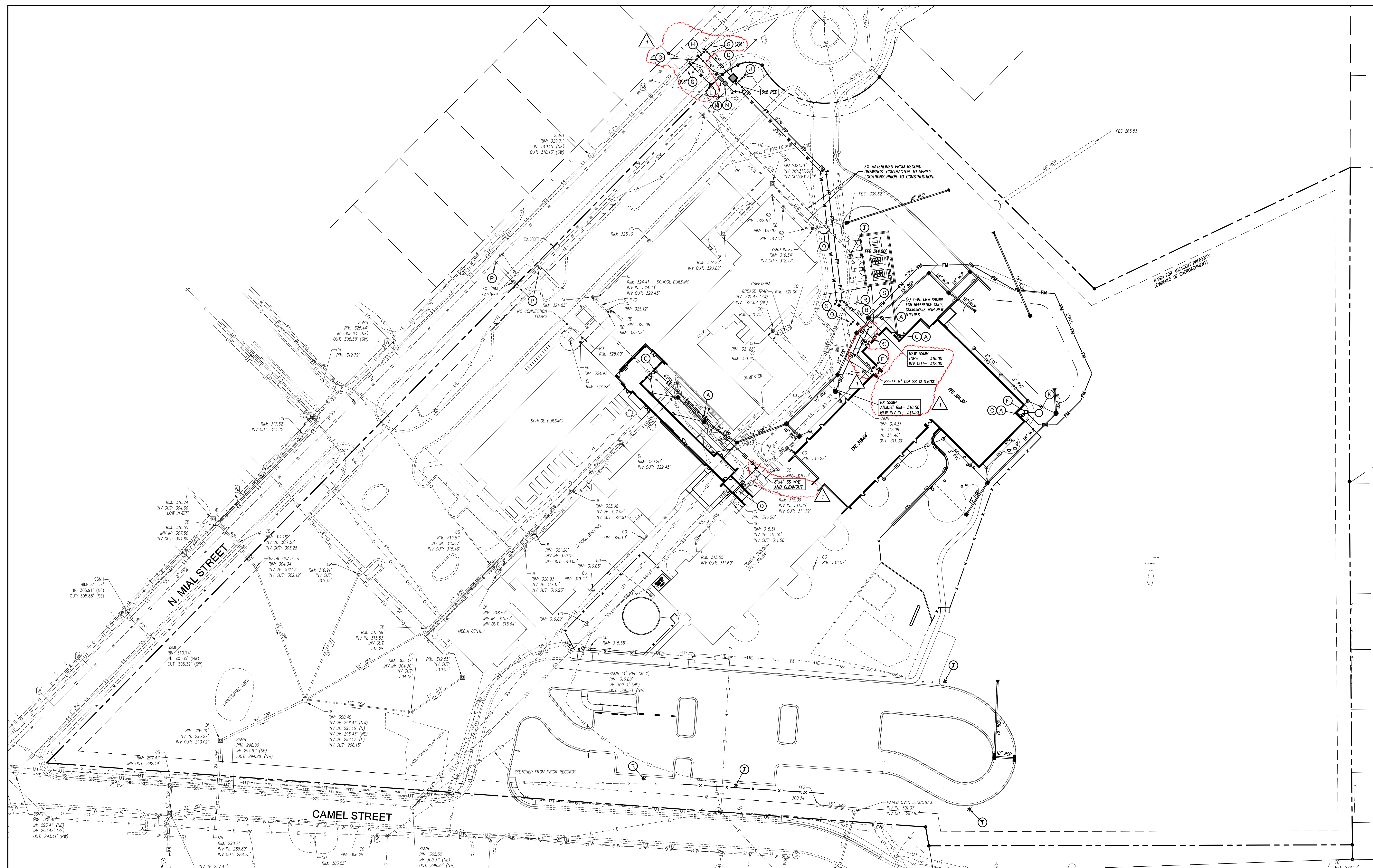
**2307**  
BOOMERANG DESIGN PROJECT NUMBER

**02.07.24**  
DRAWING RELEASE DATE

## UTILITY PLAN SHEET TITLE

**C501**

SHEET



### GENERAL NOTES-UTILITY

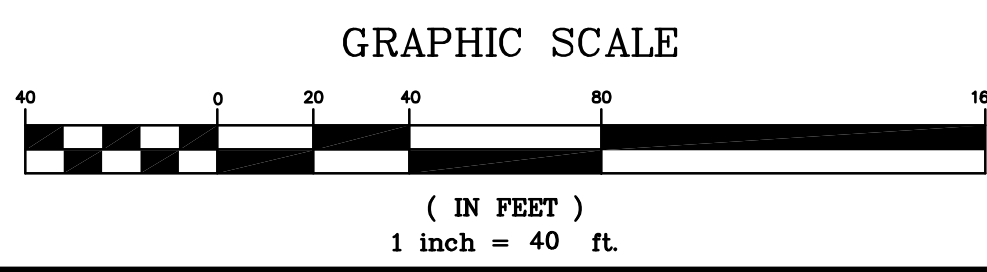
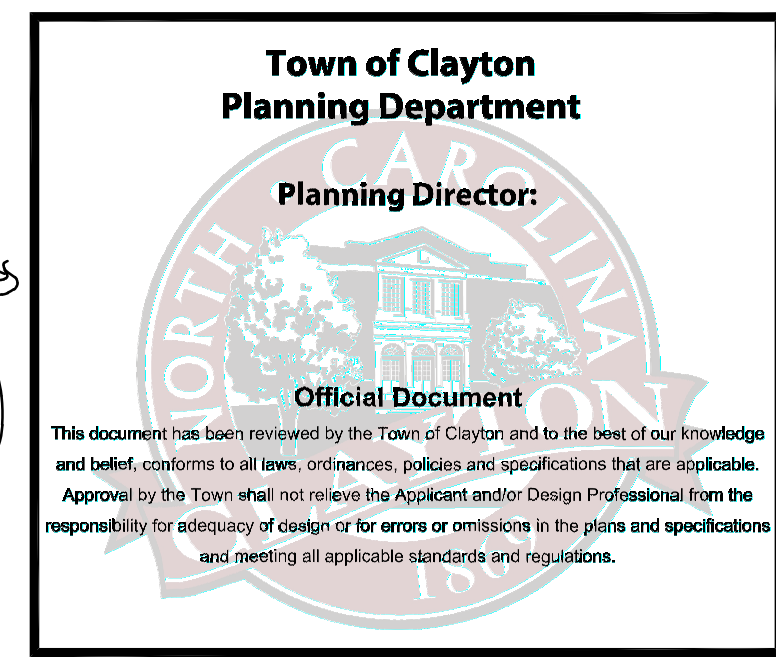
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF CLAYTON AND NC DOT STANDARDS, SPECIFICATIONS AND DETAILS.
- INSTALL WATERMANS WITH A COVER OF NO LESS THAN 3'-FT. TO FINISH GRADE IN NON-TRAFFIC AREAS, 4'-FT. TO FINISH GRADE IN TRAFFIC AREAS.
- INSTALL ALL UTILITIES TO PROVIDE REQUIRED CLEARANCES AS INDICATED IN THE SPECIFICATIONS.
- WATERLINES AND SEWER MAINS SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL CLEARANCE OF 10'-FT.
- SEWER MAINS SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEARANCE OF 24-IN TO STORM DRAINAGE PIPES.
- COORDINATE AND SCHEDULE INSTALLATION OF ALL UTILITIES WITH OTHER PRIME CONTRACTORS, UTILITY COMPANIES AND OTHER TRADES INCLUDING BUT NOT LIMITED TO: NATURAL GAS, ELECTRICITY, TELEPHONE AND CATV.
- VERIFY EXISTING CONDITIONS AND CONNECTIONS TO EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT IF ANY DISCREPANCIES ARE DISCOVERED.
- CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES DURING CONSTRUCTION AND SHALL MAKE REPAIRS AT NO EXPENSE TO THE OWNER.
- ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE NCSDS AND OSHA REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY OF ALL UTILITY AND STORM DRAINAGE IMPROVEMENTS FOLLOWING CONSTRUCTION.
- CONTRACTOR SHALL PHASE DEMOLITION AND NEW CONSTRUCTION TO ENSURE UNINTERRUPTED ACCESS AND UTILITY SERVICE TO ADJACENT FACILITIES. COORDINATE SHORT-TERM, OFF-HOUR, TEMPORARY SHUT-DOWNS WITH THE OWNER.
- SEE GENERAL NOTES ON EXISTING CONDITIONS AND DEMOLITION PLAN FOR REQUIREMENTS FOR REMOVAL AND PATCHING OF PAVEMENT FOR UTILITY INSTALLATION.
- ALL ROOF DRAINS SHALL BE 8" PVC (SCH 40) @ 1/4" MIN. SLOPE UNLESS INDICATED OTHERWISE. USE DUCTILE IRON WHEN COVER IS LESS THAN 24-IN.
- ALL SANITARY SEWER SERVICES SHALL BE 4" PVC (SCH 40) @ 1/4" MIN. SLOPE UNLESS INDICATED OTHERWISE. USE DUCTILE IRON WHEN COVER IS LESS THAN 24-IN.
- ALL CONDENSATE LINES SHALL BE CONNECTED TO STORM DRAINAGE SYSTEM.
- NO WORK SHALL BE PERFORMED ON RIGHT-OF-WAYS OR ADJACENT PROPERTIES UNTIL THE OWNER NOTICES CONTRACTOR IN WRITING OF PROCEDURE OF APPROPRIATE PERMITS, EASEMENTS, AGREEMENTS, OR RIGHTS-OF-WAY.

### UTILITY LEGEND

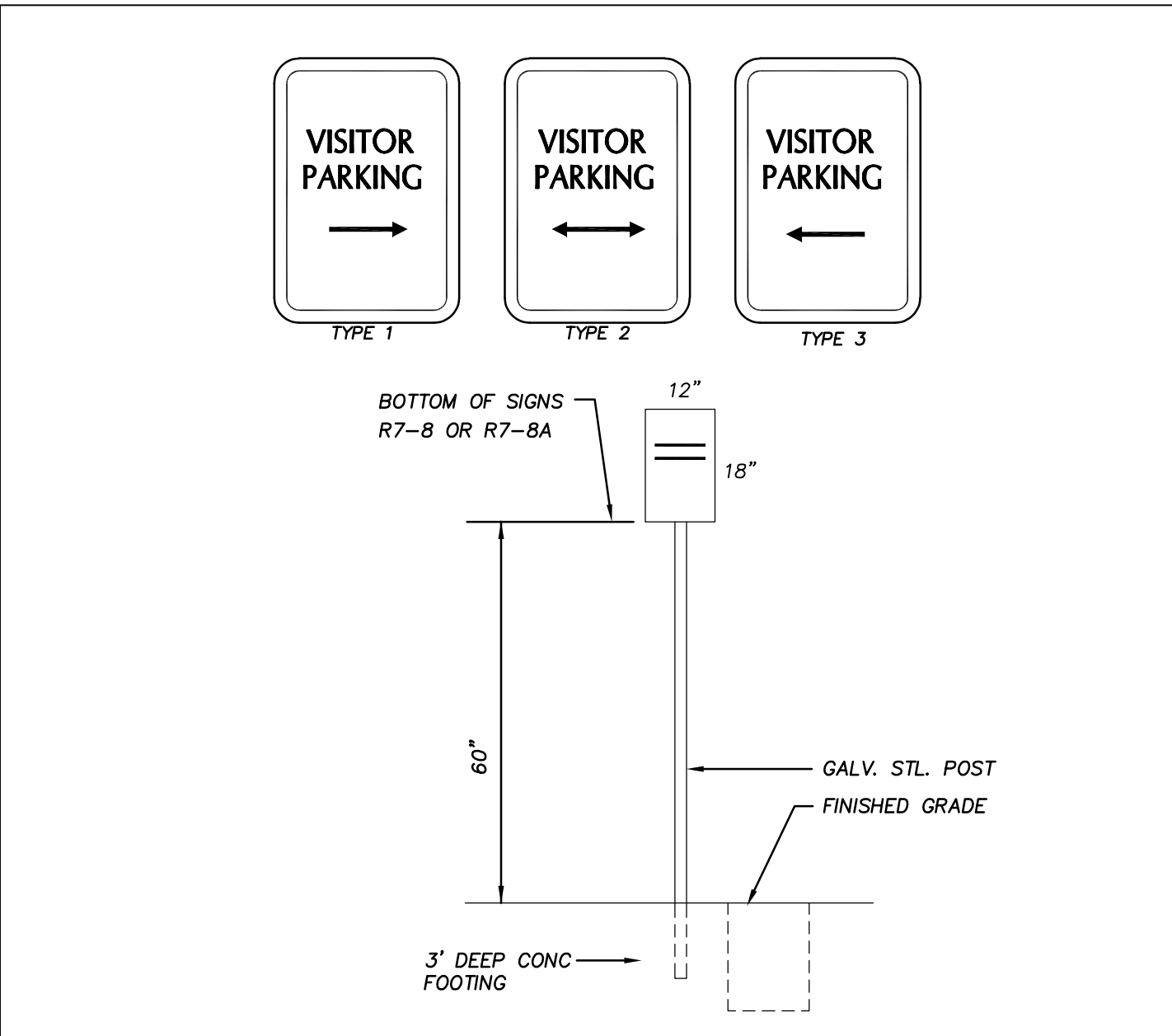
EXISTING	PROPOSED	EXISTING	PROPOSED
CHILLED WATER	---	CW	---
ELECTRICAL (OVERHEAD)	---	E	---
ELECTRICAL (UNDERGROUND)	---	UE	---
FOUNDATION DRAIN	---	FD	---
GAS	---	G	---
SANITARY SEWER	---	SS	---
TELEPHONE (OVERHEAD)	---	T	---
TELEPHONE (UNDERGROUND)	---	UT	---
WATER	---	W	---
ROOF DRAIN	---	RD	---
FIRE PROTECTION	---	FP	---
STORM DRAIN	---	SD	---
SEE EROSION CONTROL PLANS	---		---

### KEY NOTES

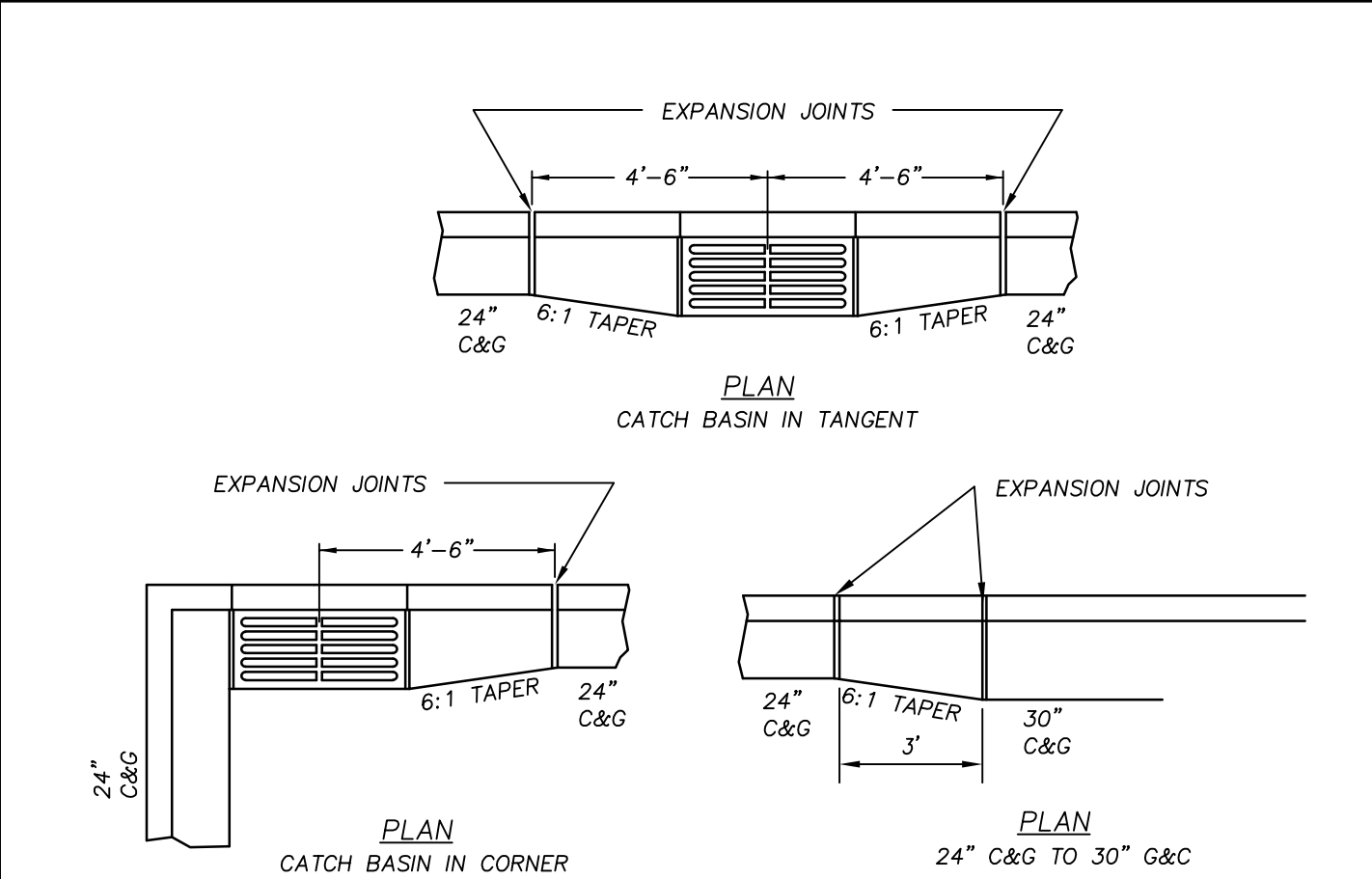
- SANITARY SEWER CLEANKUT, TYP. SEE DETAIL SHEET C711.
- SANITARY SEWER MANHOLE, SEE DETAIL SHEET C711.
- EXTEND UTILITY TO WITHIN 5'-0" OF BUILDING WALL OR AS INDICATED ON PLUMBING PLANS. REFER TO PLUMBING PLANS FOR LOCATION AND INVERTS.
- 6-IN REDUCED PRESSURE DETECTOR BACKFLOW ASSEMBLY (RPDA) WITHIN HEATED ENCLOSURE, SEE DETAIL SHEET C710.
- EXTEND WATERLINE TO 12-IN ABOVE FINISH FLOOR FOR FIRE PROTECTION CONNECTION, SEE DETAIL SHEET C710. INSTALL 8" 16" REINFORCED PRIOR TO ENTERING BLDG. REFER TO FIRE PROTECTION PLANS FOR EXACT LOCATION.
- PRIVATE SEWER PUMP STATION, SEE DETAIL SHEET C711.
- GATE VALVE AND VALVE BOX, SEE DETAIL SHEET C709.
- REMOVE AND REPLACE 245'-L.F. OF EX. 6-IN WATERMAIN WITH NEW 6" 16" WATERMAIN, TEE FITTINGS AND VALVES. COORDINATE TEMP. MAIN SHUT-DOWN WITH TOWN OF CLAYTON WATER RESOURCES AND ENGINEERING DEPARTMENT PRIOR TO COMMENCEMENT OF WORK.
- PRECAST SANITARY SEWER STORAGE VAULT, SEE DETAIL SHEET C711.
- FIRE HYDRANT, SEE DETAIL SHEET C710.
- 3-IN DOMESTIC METER IN VAULT.
- 3-IN REDUCED PRESSURE ASSEMBLY WITHIN HEATED ENCLOSURE, SEE DETAIL SHEET C710.
- CONNECT NEW WATER SERVICE TO EXISTING 2.5" WATER SERVICE WITH 3" GATE VALVE.
- REMOVE EX. 2-IN BACKFLOW PREVENTER AND 2-IN METER. DISCONNECT EX. SERVICE LINE AT PUBLIC MAIN AND CAP EX. LINE NEAR SERVICE BRANCH TO EX. BUILDING. SCHEDULE DISCONNECTION FOLLOWING INSTALLATION OF AND CONNECTION OF NEW WATER SERVICE.
- TOWN OF CLAYTON NOTE: ABANDONMENT OF EXISTING SERVICE SHALL BE COORDINATED WITH TOWN OF CLAYTON WATER RESOURCES AND ENGINEERING DEPARTMENT PRIOR TO COMMENCEMENT OF WORK.
- REMOVE AND REPLACE 450'-L.F. OF EX. VCP SS PIPE WITH NEW 8" DIP. PROVIDE 450'-L.F. SECTION OF 16" STEEL ENCASUREMENT WHERE LINE PASSES UNDER BLDG. SEE DETAIL SHEET C711. COORDINATE TEMP. MAIN SHUT-DOWN WITH TOWN OF CLAYTON WATER RESOURCES AND ENGINEERING DEPARTMENT PRIOR TO COMMENCEMENT OF WORK.
- APPROXIMATE LOCATION AND SIZE OF NEW GAS METER. COORDINATE WITH MEP AND LOCAL UTILITY COMPANY.
- APPROXIMATE LOCATION OF NEW GAS SERVICE. COORDINATE WITH MEP AND LOCAL UTILITY COMPANY FOR LOCATION AND SIZE.
- APPROXIMATE LOCATION OF LIGHTPOLE. SEE ELECTRICAL DRAWINGS.



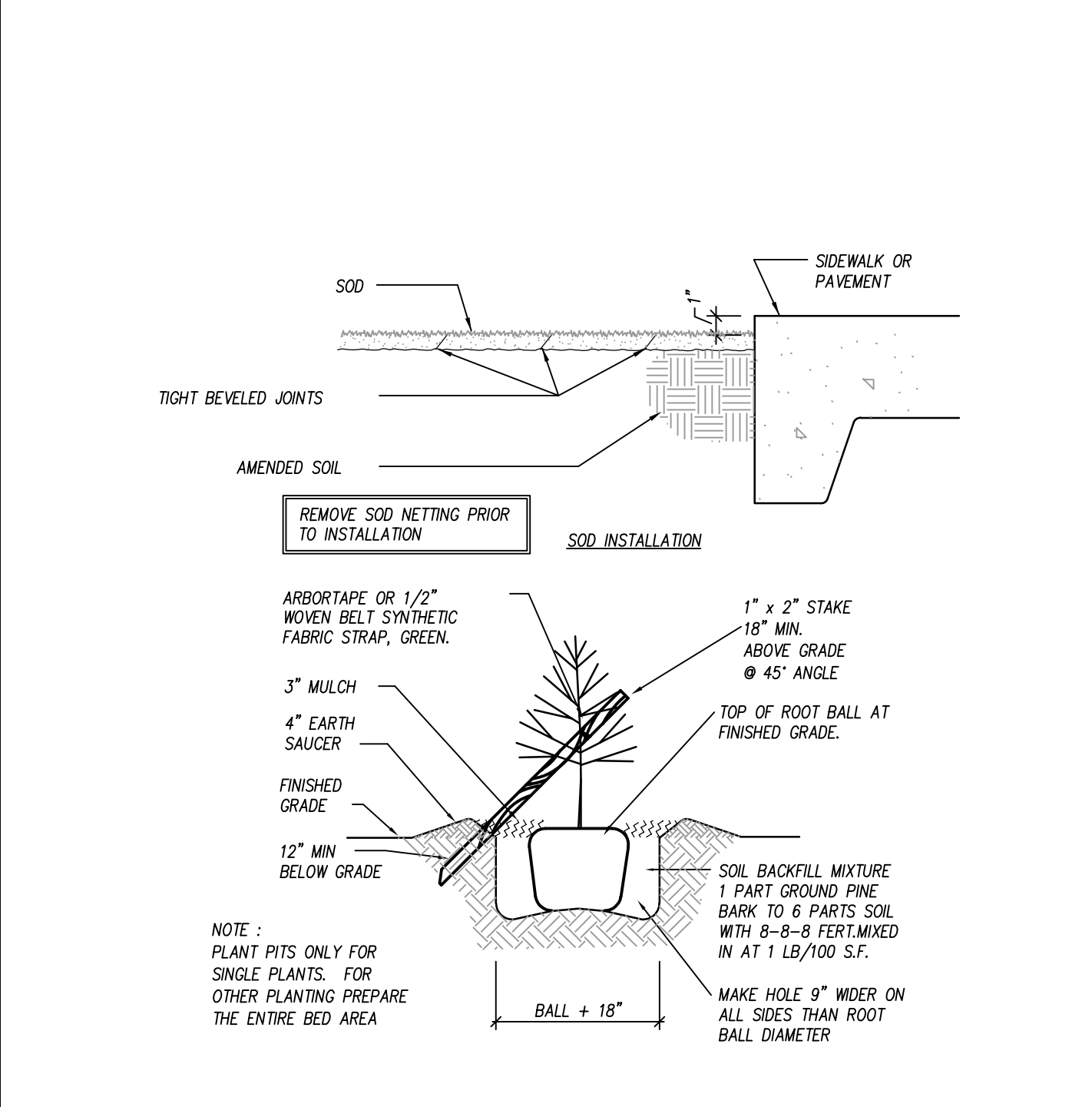
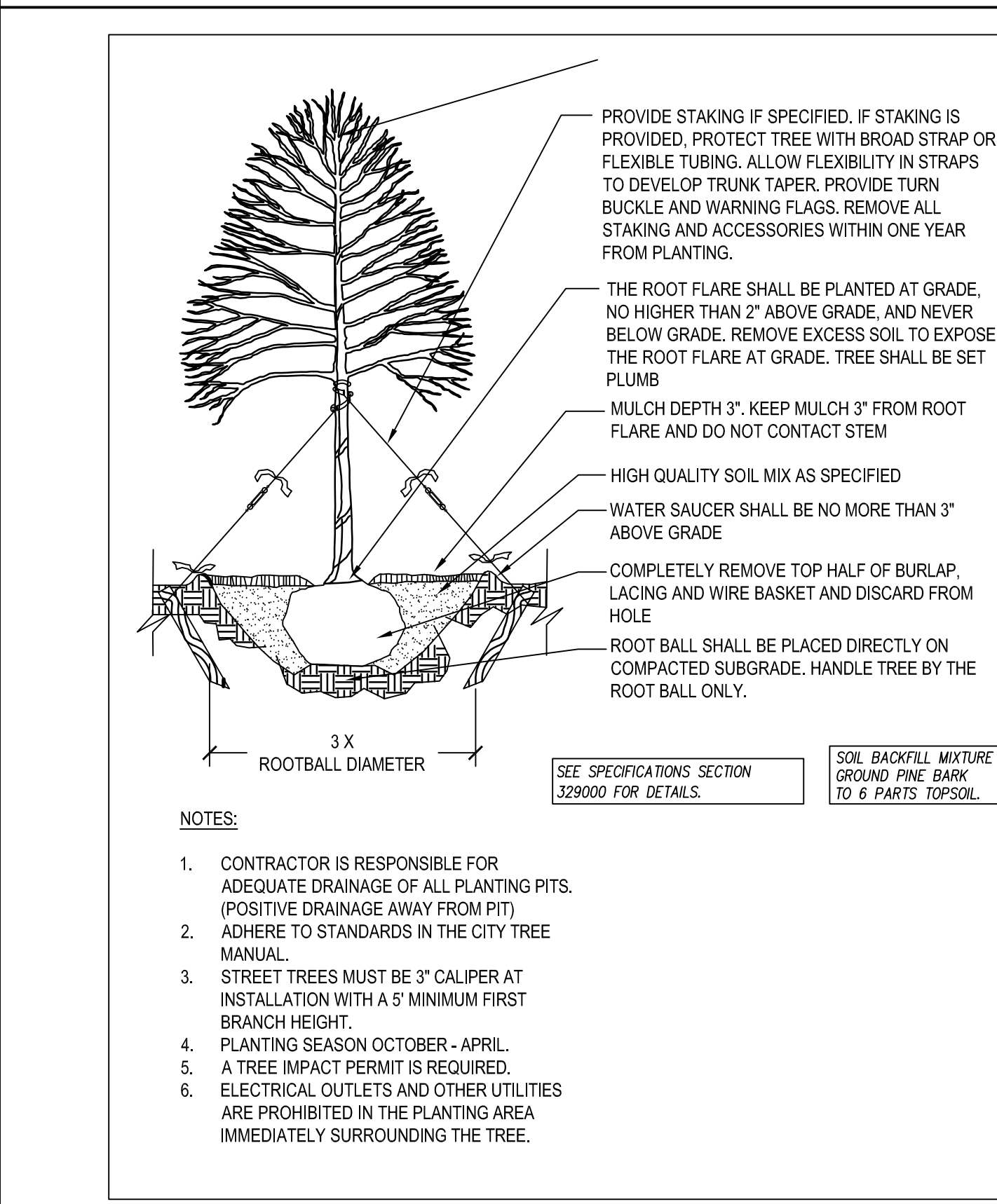




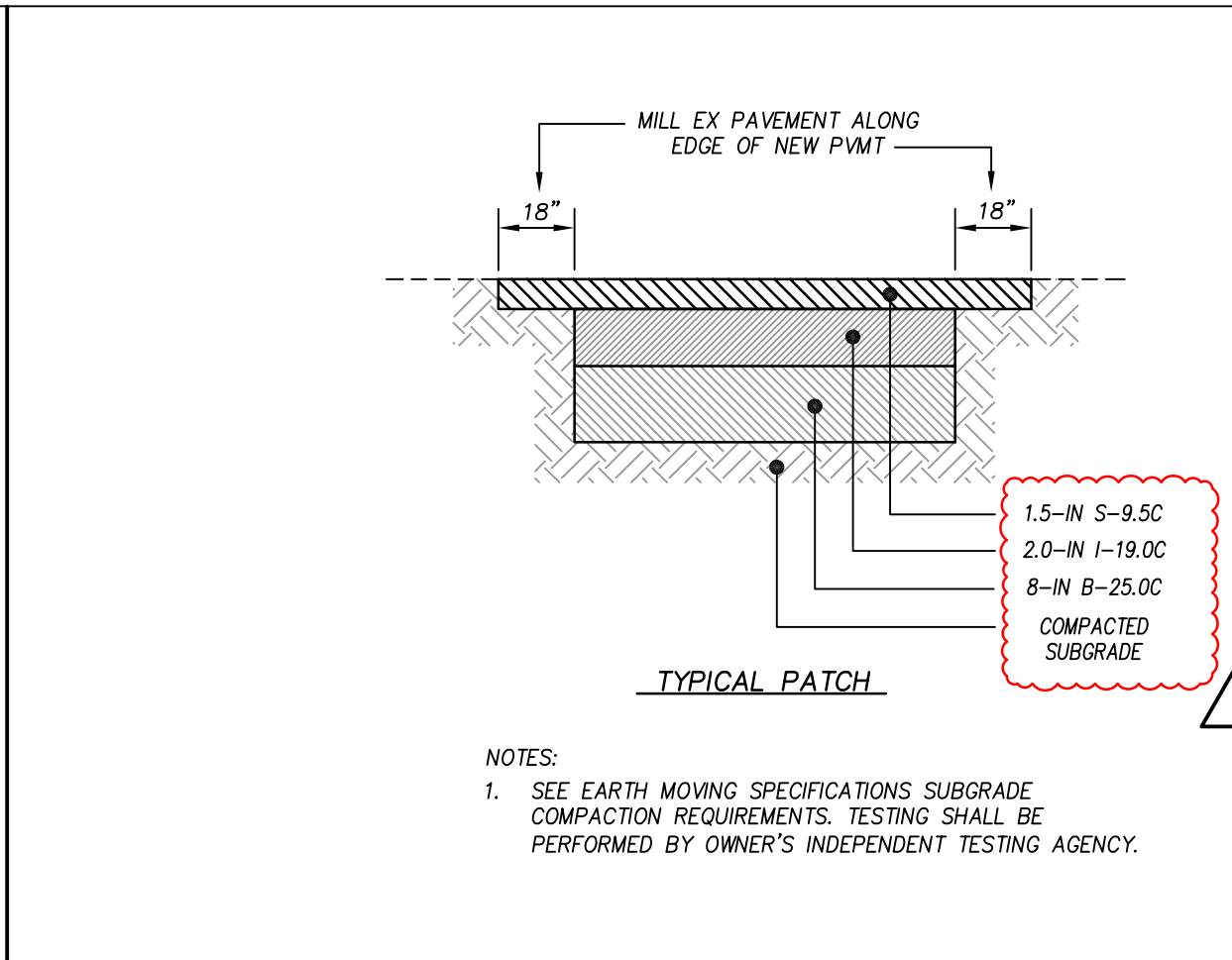
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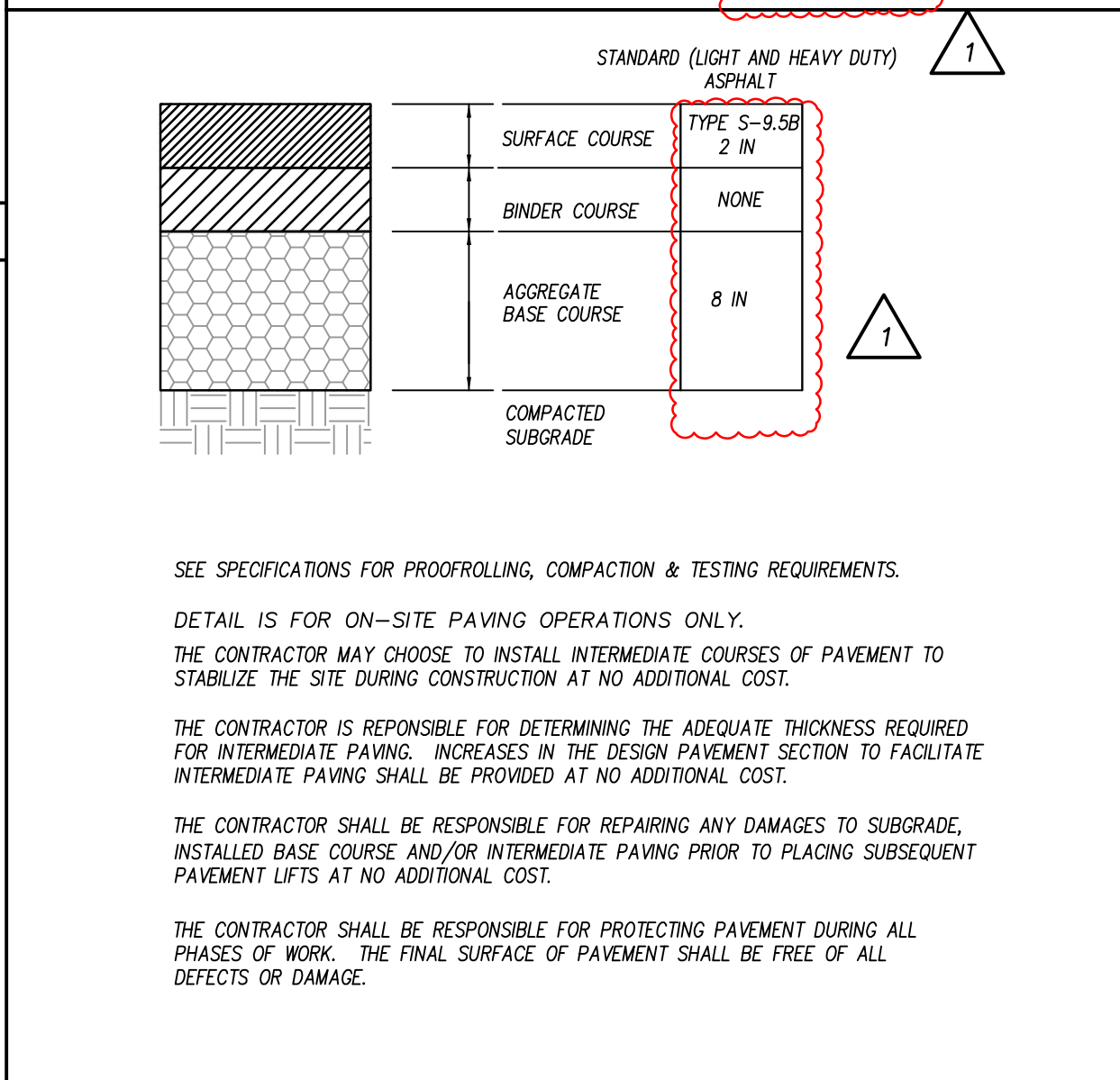
CURB AND GUTTER TAPERS



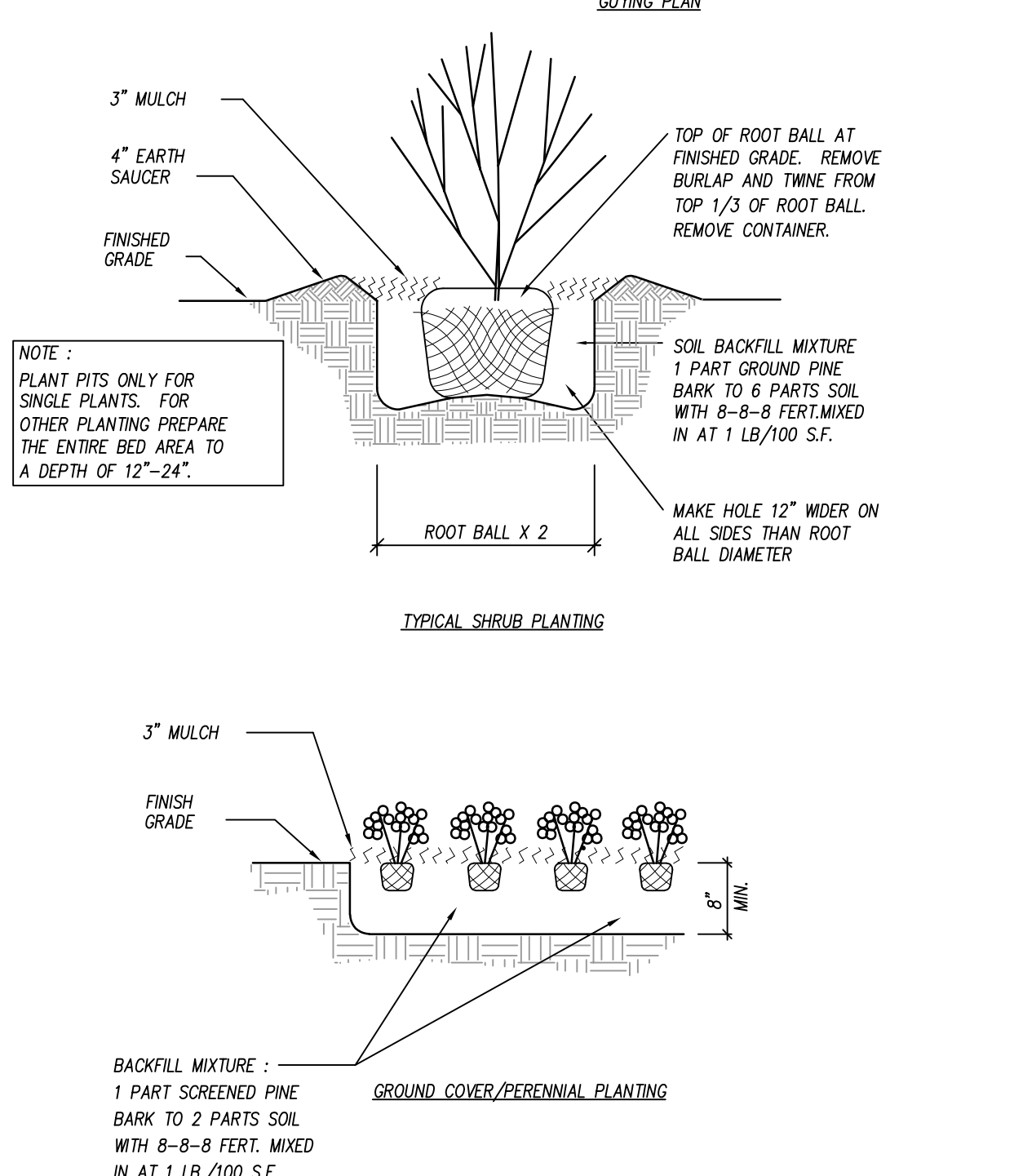
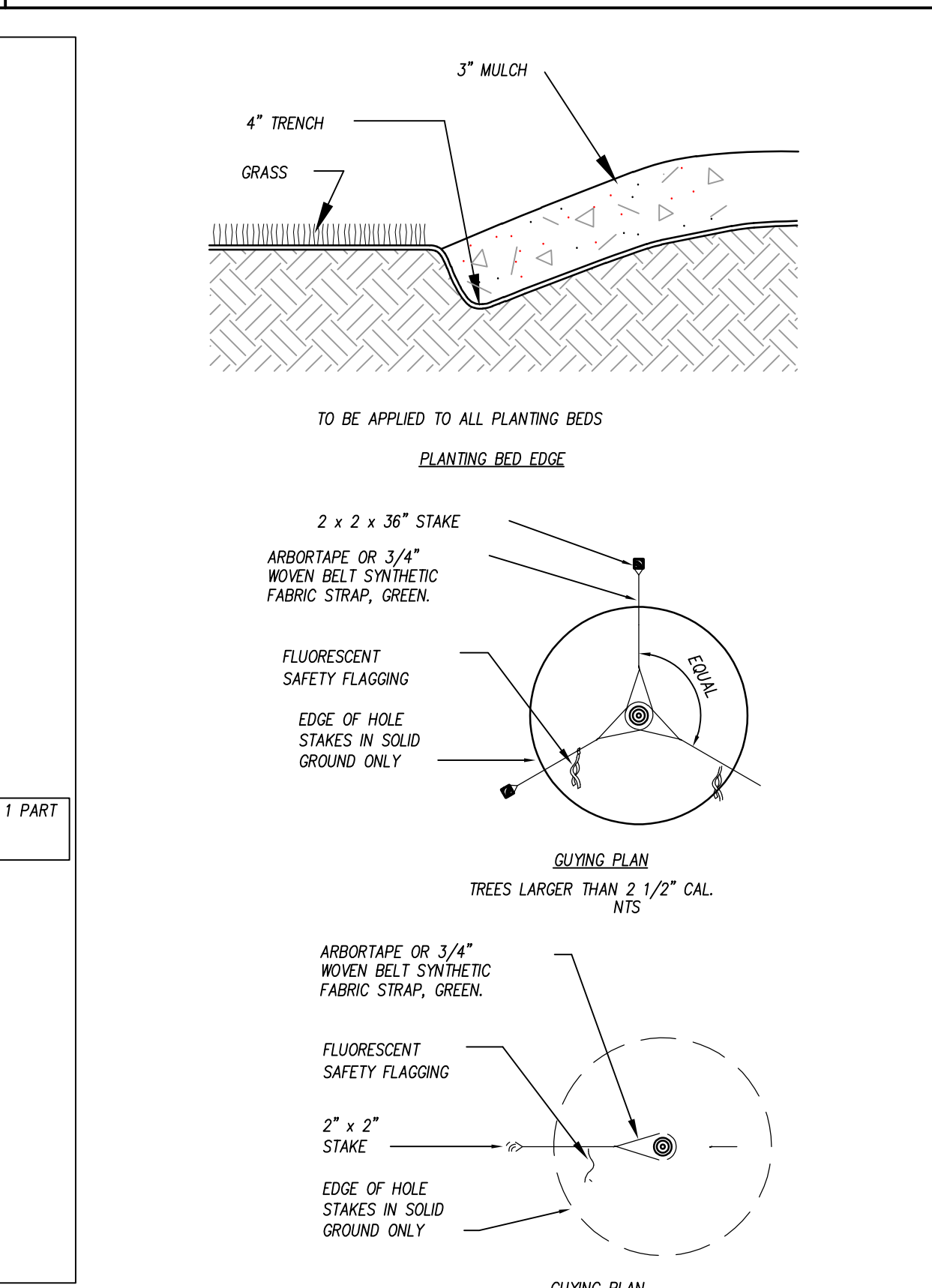
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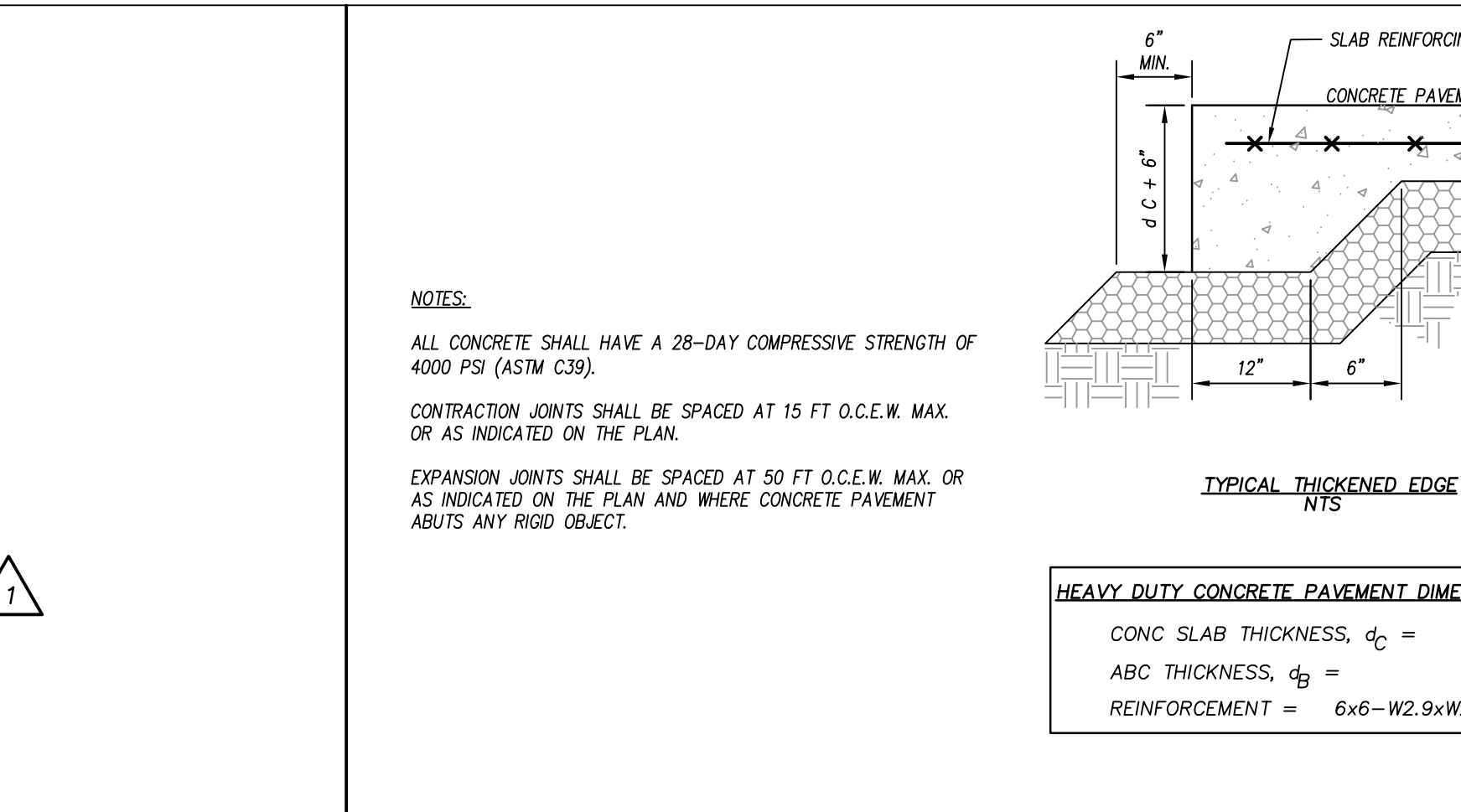
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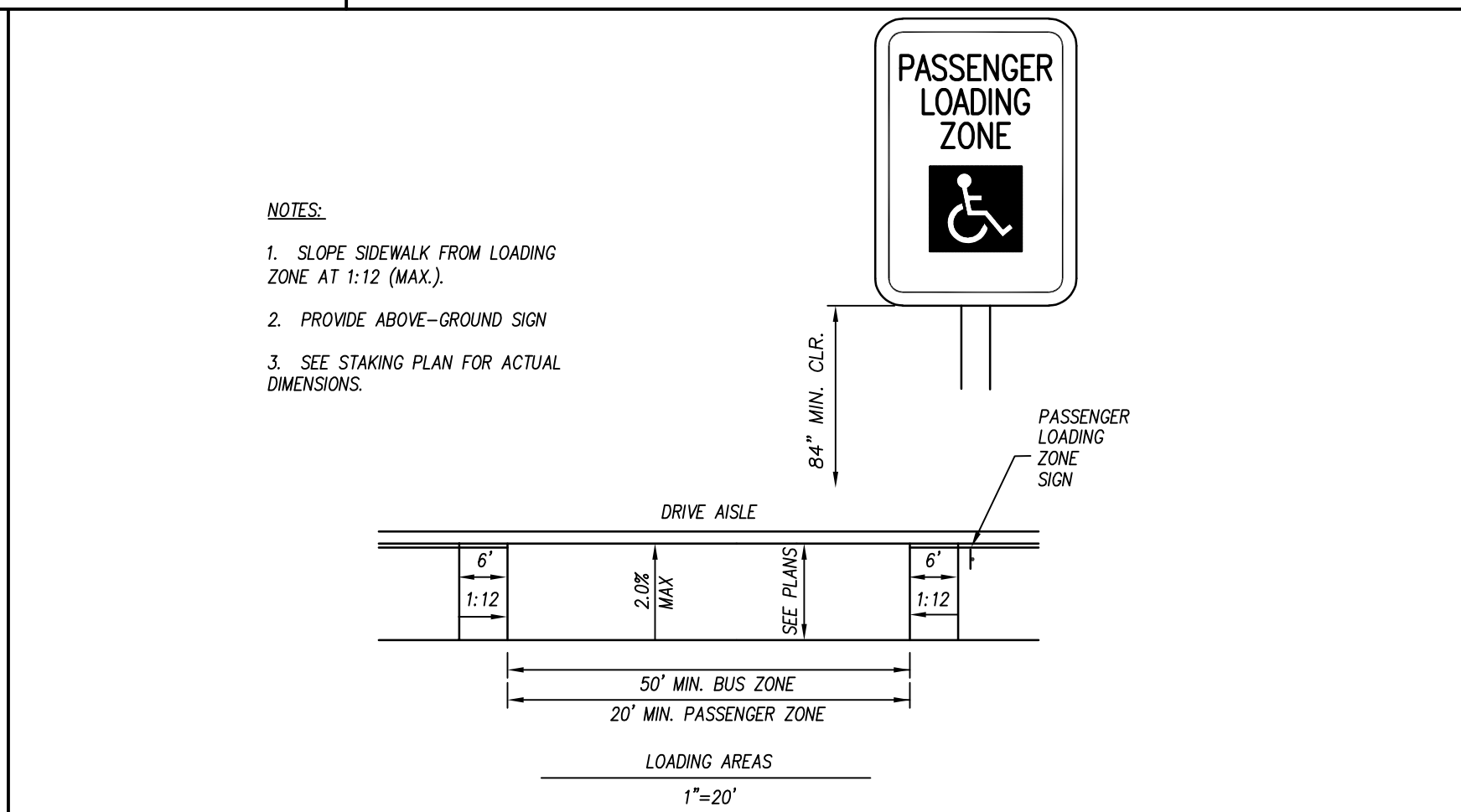
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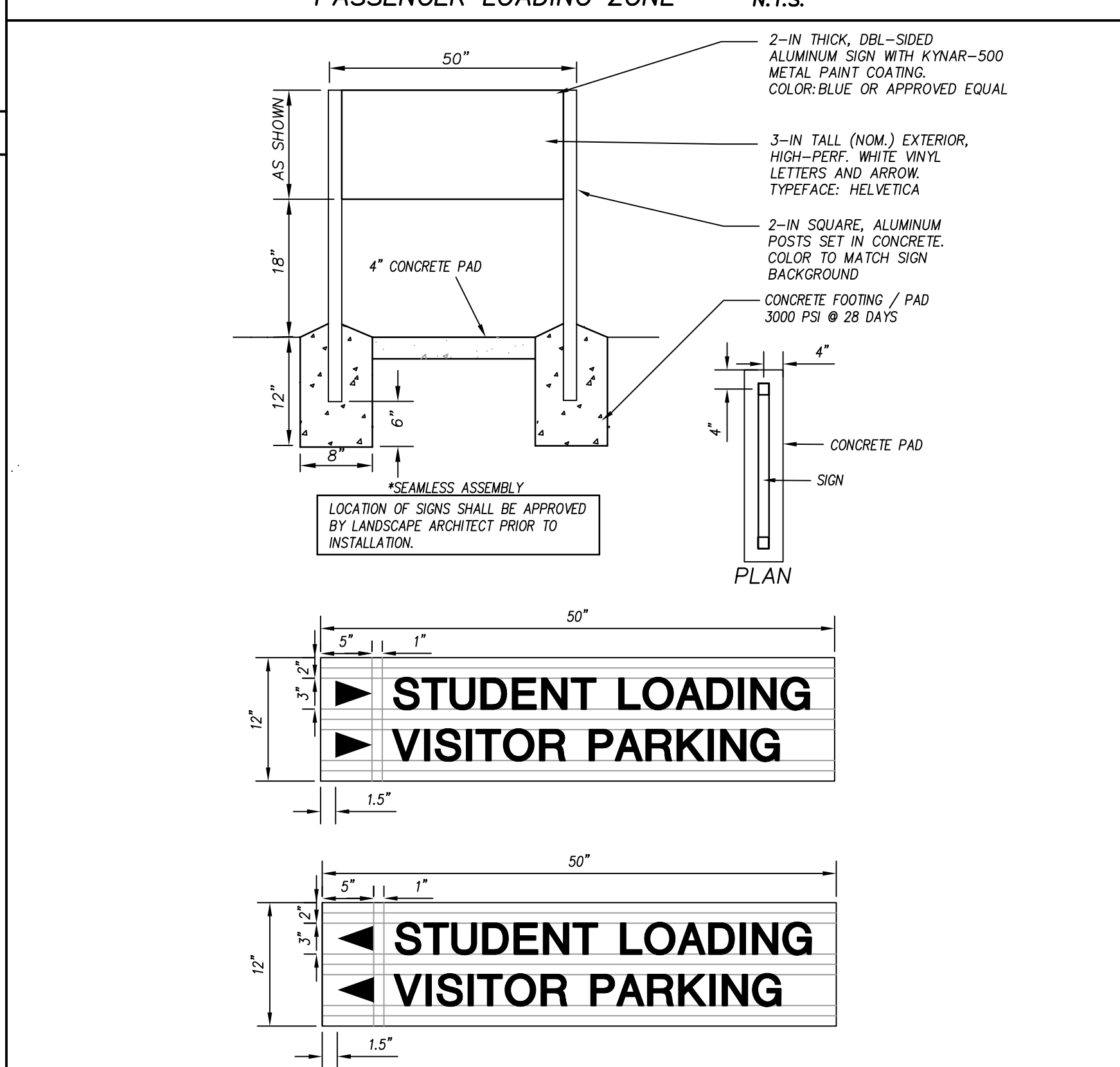
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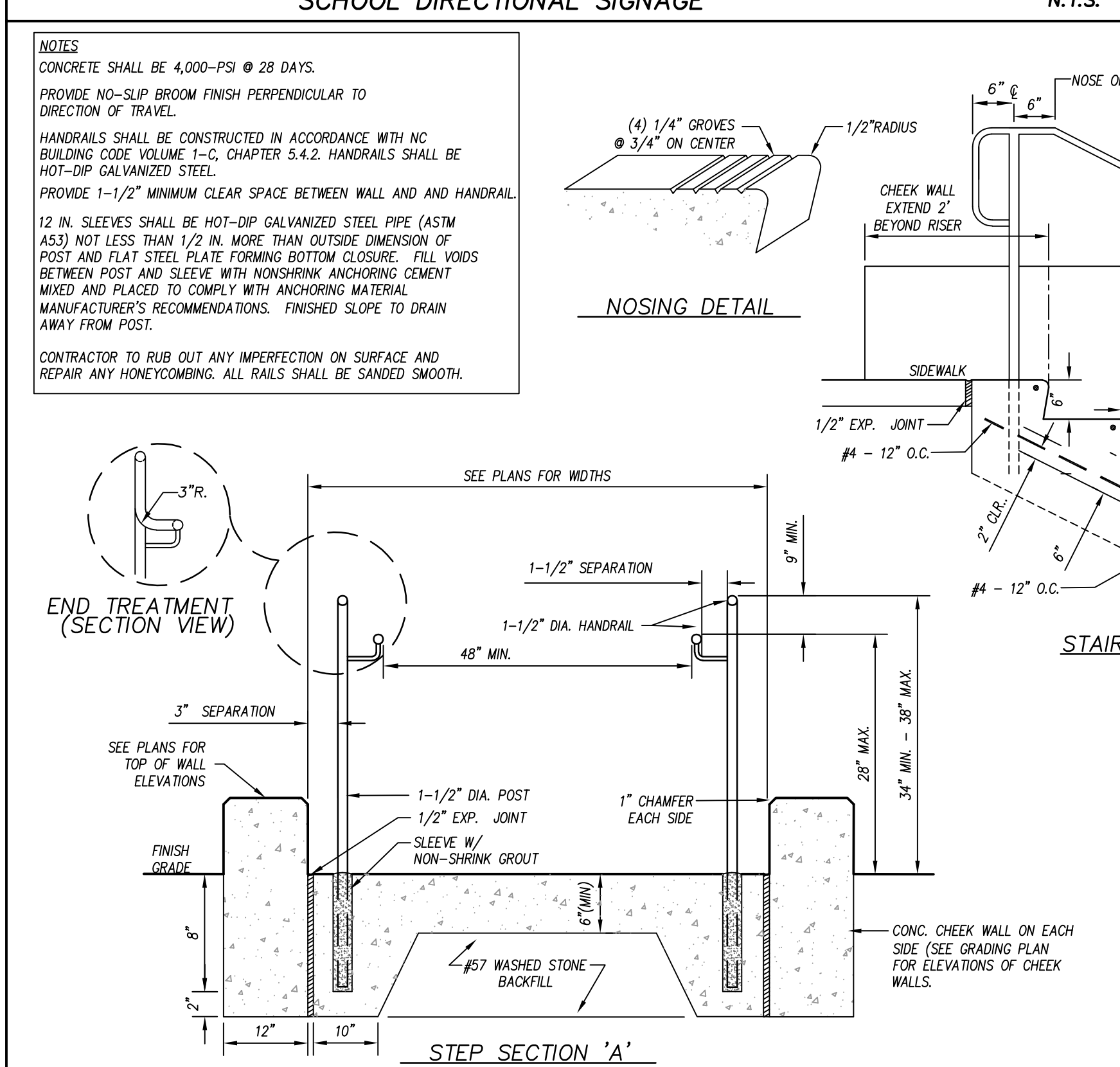
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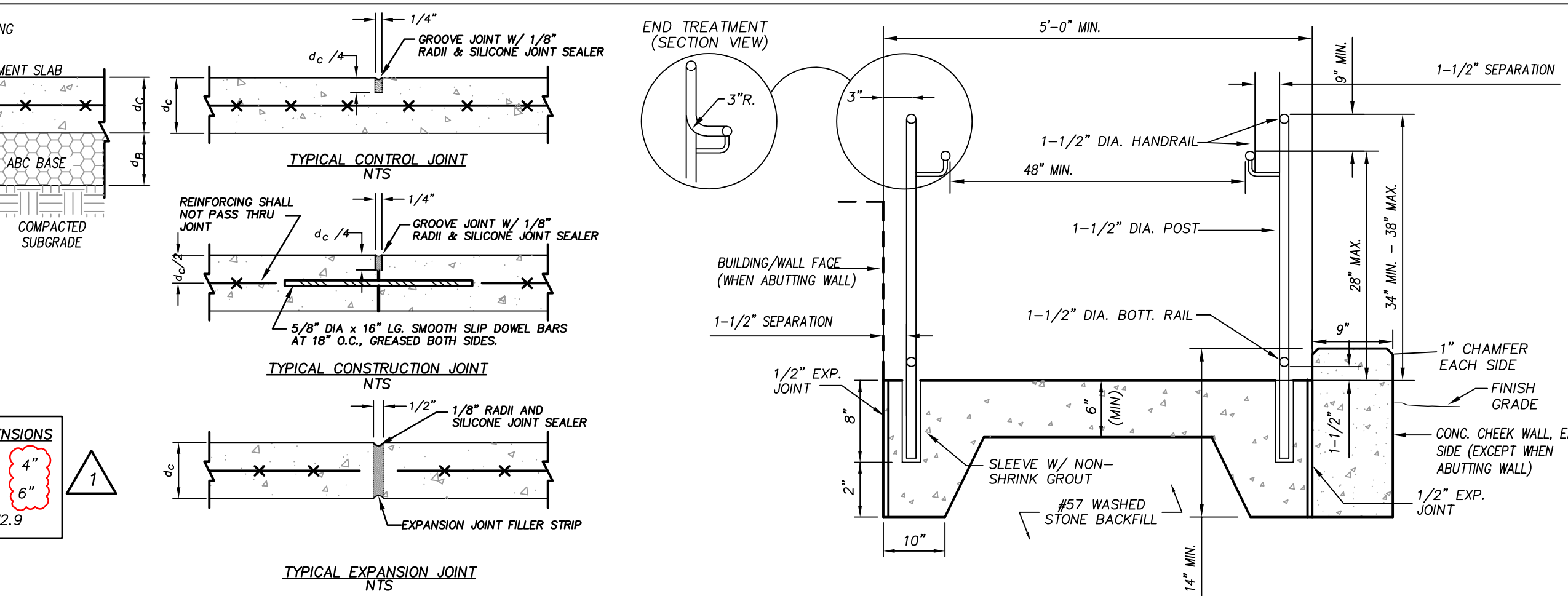
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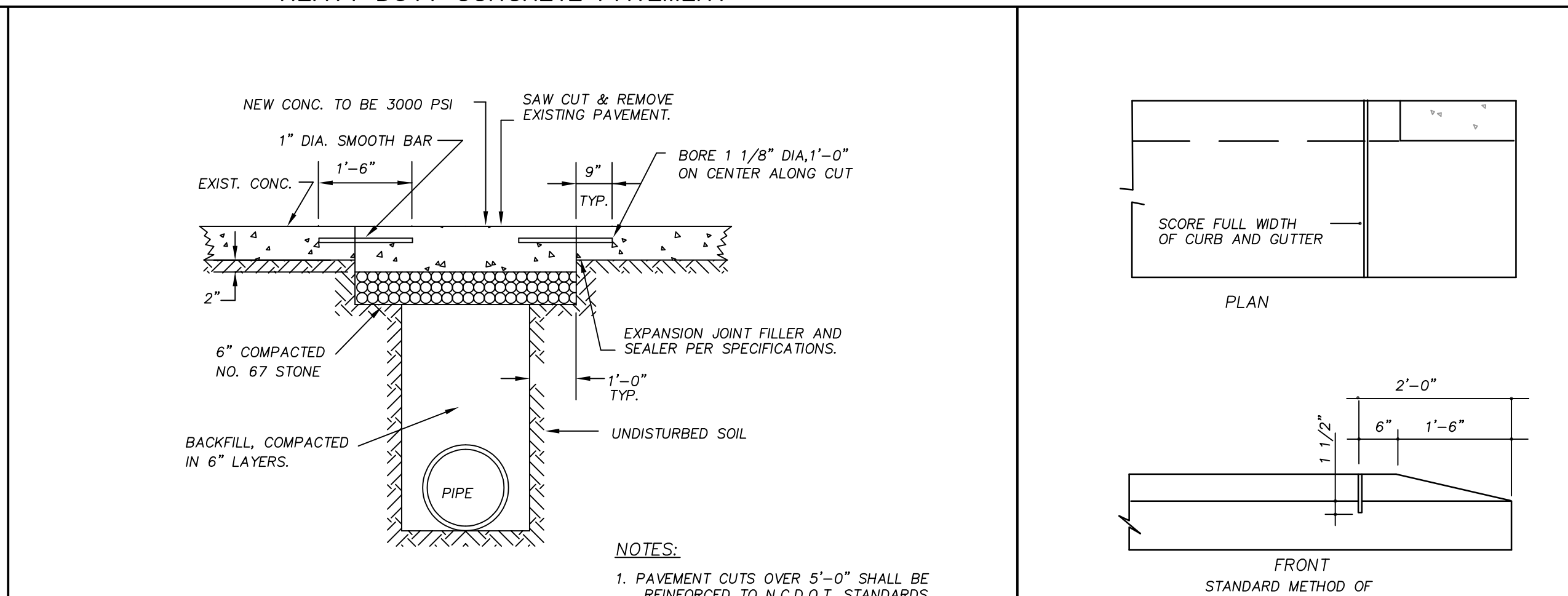
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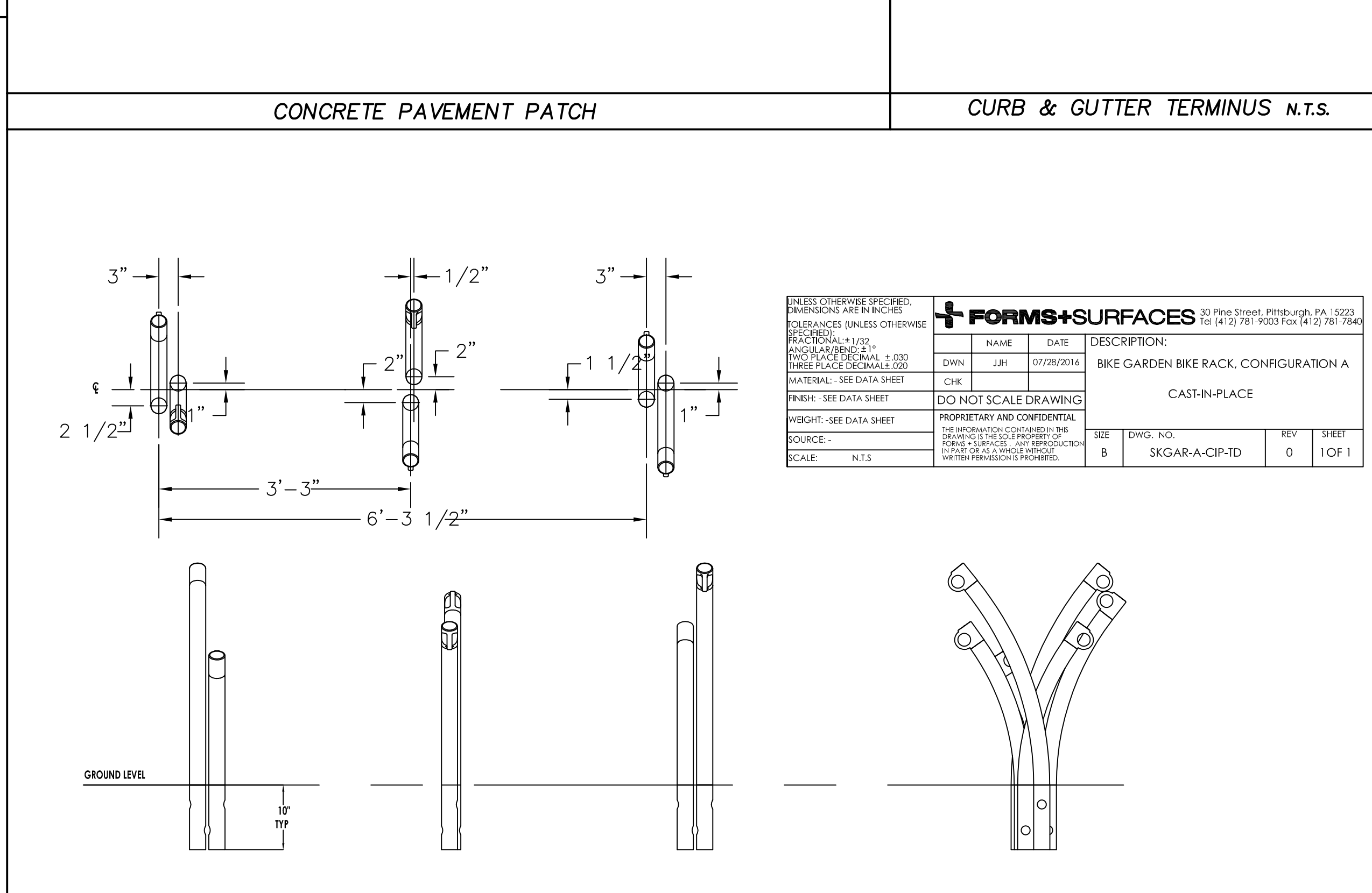
CONCRETE STAIR WITH CHEEKWALL AND HANDRAIL



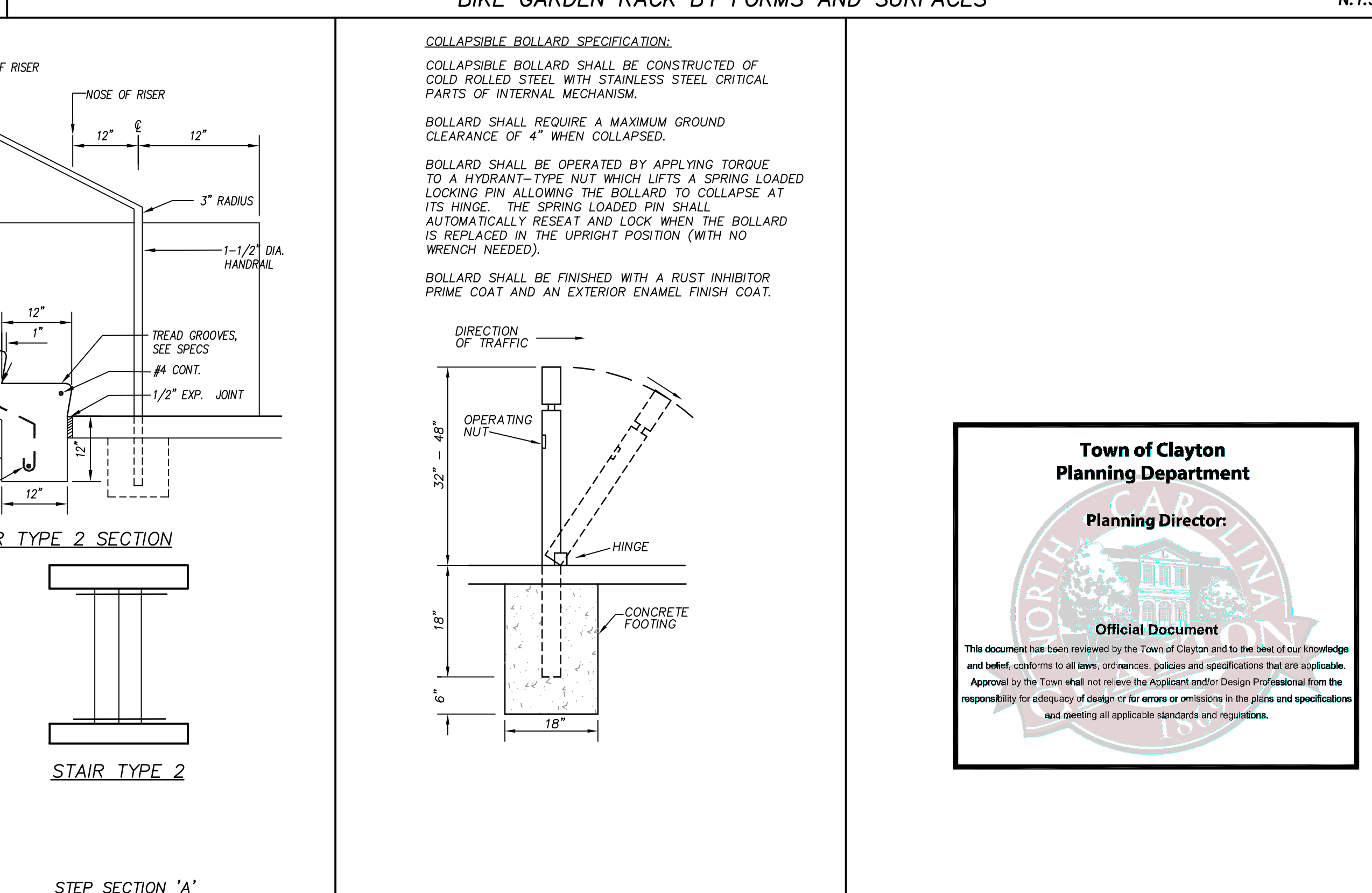
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CONCRETE PAVEMENT PATCH



BIKE GARDEN RACK BY FORMS AND SURFACES



COLLAPSIBLE BOLLARD

boomerang  
DESIGN  
rethink, repurpose, results

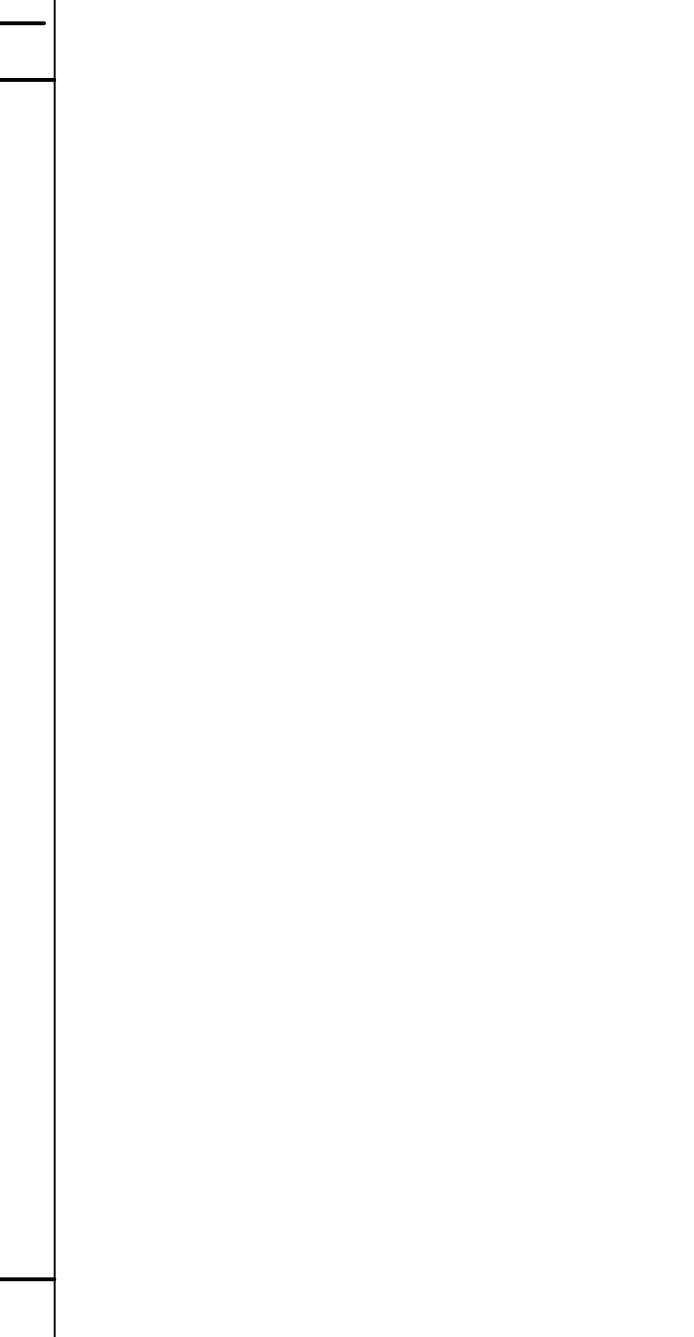
SHELBY  
207 S. Trade Street  
Shelby, NC 28150  
704/711-7000

CHARLOTTE  
1230 W. Morehead St., Suite 244  
Charlotte, NC 28208  
704/711-7000

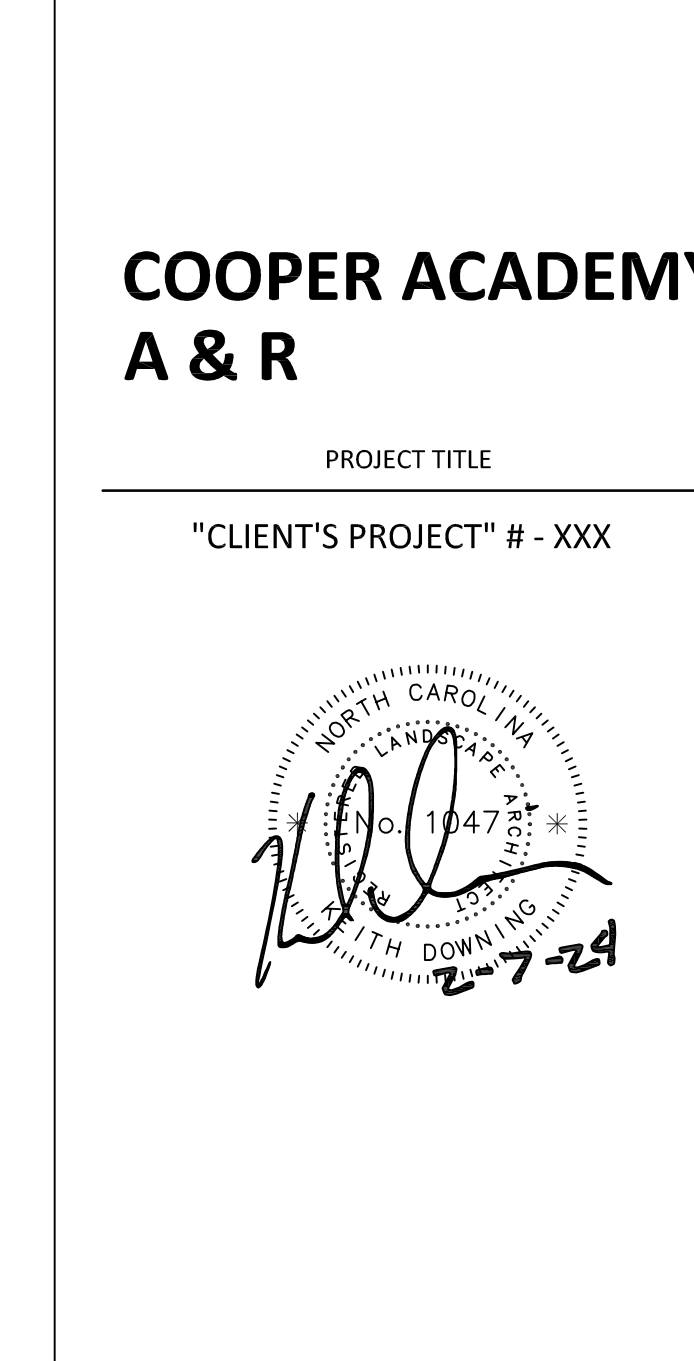
RALEIGH  
6431 Falls of Neuse Rd., Suite 204  
Raleigh, NC 27609  
919/771-6600

LEWINGTON  
1070 S. Lake Dr., Suite J  
Lewington, NC 28759  
919/751-0507

CLH DESIGN, P.A.  
400 Regency Forest Drive  
Suite 150  
Cary, North Carolina 27518  
Phone: (919)919-8718  
Fax: (919)919-7518  
LA: C-106, PE: C-1595



CURB & GUTTER TERMINUS



BIKE GARDEN RACK BY FORMS AND SURFACES

COOPER ACADEMY  
A & R

PROJECT TITLE

"CLIENT'S PROJECT" # - XXX

NORTH CAROLINA  
1776-1789  
2-7-24

NO.	DATE	DESCRIPTION
1	2/20/24	ADDENDUM #1

BID DOCUMENTS

PROJECT PHASE

2307

BOOMERANG DESIGN PROJECT NUMBER

02.07.24

DRAWING RELEASE DATE

DETAILS

SHEET TITLE

C705

SHEET





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NO.	DATE	DESCRIPTION
1	2/20/24	ADDENDUM #1

BID DOCUMENTS

PROJECT PHASE

2307

BOOMERANG DESIGN PROJECT NUMBER

02.07.24

DRAWING RELEASE DATE

DETAILS

SHEET TITLE

C706

SHEET

AS-BUILT SURVEY REQUIREMENTS

- CONTRACTOR SHALL PROVIDE AS-BUILT TOPOGRAPHIC SURVEY PERFORMED BY A PROFESSIONAL LAND SURVEYOR CERTIFYING WETLAND AREA DIMENSIONS AND ELEVATIONS OF THE FOLLOWING:
  - OUTLET STRUCTURE TOPS AND INVERTS, ORIFICE DIAMETERS, BARREL PIPE SIZES AND INVERTS AND STRUCTURE DIMENSIONS.
  - EMERGENCY SPILLWAY ELEVATION AND DIMENSIONS.
  - TOPOGRAPHY THAT EXTENDS 20 FEET OUTSIDE LIMITS OF POND WATER SURFACE AND EMBANKMENT.

CLAY LINER

- CONTRACTOR SHALL FURNISH AND INSTALL A 6-IN THICK LAYER OF COMPACTED CLAY BENEATH THE WETLAND TOPSOIL IF DEEMED NECESSARY BY THE OWNER.
- SUBGRADE OF WETLAND MUST BE OVER-EXCAVATED TO ACCOMMODATE CLAY LAYER.
- COMPACTED CLAY SHALL BE TESTED IN PLACE AND SHALL HAVE A PERMEABILITY NO GREATER THAN  $1.0 \times 10^{-10}$  IN/IN.

TEMPORARY SEDIMENT BASIN NOTES:

- THE AREA OF THE NEW CONSTRUCTED WETLAND WILL BE UTILIZED AS A TEMP SEDIMENT BASIN DURING CONSTRUCTION.
- A TEMP. SKIMMER SHALL BE ATTACHED TO THE OUTLET RISER DRAIN. THE BASIN SHALL BE GRADED TO TEMP. CONTOURS SHOWN ON THE EROSION CONTROL PLAN. TEMP. Baffles INSTALLED.
- INSPECT DEVICE AFTER EACH RAINFALL. REMOVE SEDIMENT WHEN SEDIMENT REACHES A DEPTH OF NO MORE THAN ONE-HALF THE HEIGHT OF THE RISER. REPAIR Baffles IF DAMAGED.
- PULL SKIMMER TO SIDE OF BASIN WITH ROPE AND INSPECT REGULARLY. KEEP SKIMMER HEAD ORIFICE AND PIPE FREE OF DEBRIS. REMOVE SEDIMENT FROM BENEATH SKIMMER AND ENSURE VEGETATION DOES NOT INTERFERE WITH SKIMMER OPERATION.
- PROVIDE PAINT MARK ON RISER AT 12" HEIGHT. CLEAN AND REPAIR ONCE SEDIMENT REACHES MARK.
- INSTALL ALL COMPONENTS OF POND EMBANKMENT, OUTLET STRUCTURE, SKIMMER, EMERGENCY SPILLWAY, ETC. (UNLESS NOTED) PRIOR TO BEGINNING CLEARING OPERATIONS.
- SEE SHEET C-07.05 FOR TEMPORARY BATTLE INSTALLATION.
- PROVIDE GROUND COVER/TEMPORARY SEEDING ON BOTTOM OF TEMPORARY BASINS. SEE SEEDING SCHEDULE.
- CHECK FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY.

CONSTRUCTION SEQUENCE

- THE STORMWATER WETLAND SHALL BE UTILIZED AS A TEMPORARY SEDIMENT BASIN DURING CONSTRUCTION.
- SCHEDULE THE FOLLOWING WORK TO COINCIDE WITH AN EXTENDED FORECAST OF NO PRECIPITATION SUCH THAT ALL WORK CAN BE COMPLETED DURING A PERIOD OF DRY WEATHER.
- INSTALL WETLAND BARREL, OUTLET STRUCTURE, KEY TRENCH. THEN THE EMBANKMENT, EMERGENCY SPILLWAY AND OTHER WETLAND COMPONENTS.
- CALL FOR SITE INSPECTION PRIOR TO BACKFILLING WETLAND BARREL.
- INSTALL TEMPORARY SKIMMER ON WETLAND DRAIN. DRAIN VALVE TO REMAIN OPEN.
- EXCAVATE WETLAND TO TEMPORARY SKIMMER BASIN DIMENSIONS. SEE EROSION CONTROL PLAN.
- INSTALL Baffles AND OTHER TEMPORARY SKIMMER BASIN COMPONENTS. SEE TEMPORARY SKIMMER BASIN DETAIL.
- SEED ALL DISTURBED AREAS.
- FOLLOWING COMPLETION OF CONSTRUCTION AND STABILIZATION OF POND DRAINAGE BASIN, PERFORM THE FOLLOWING:
  - SCHEDULE THE FOLLOWING WORK TO COINCIDE WITH AN EXTENDED FORECAST OF NO PRECIPITATION SUCH THAT ALL WORK CAN BE COMPLETED DURING A PERIOD OF DRY WEATHER.
  - REMOVE TEMPORARY Baffles.
  - REMOVE ALL ACCUMULATED SEDIMENT. GRADE WETLAND INTERIOR TO SUBGRADE ELEVATIONS.
  - INSTALL CLAY LINER AND ARMORED SECTIONS OF FOREBAY WEIRS.
  - IF ADDITIONAL DE-WATERING IS NEEDED BELOW DRAIN/SKIMMER ELEVATION, UTILIZE A MUD PUMP WITH FLOATING SUCTION INLET AND DISCHARGE. REMAINING WATER THROUGH A SEDIMENT FILTER BAG LOCATED OUTSIDE OF THE BASIN. MONITOR PUMPING TO ENSURE FLOW DOES NOT EXCEED THE CAPACITY OF FILTER BAG.
  - INSTALL AND FINE GRADE TOPSOIL TO FINISH GRADES.
  - INSTALL TEMPORARY SLOPE LININGS.
  - REMOVE TEMPORARY CAP/BLOCKING FROM PRIMARY SPILLWAY.
  - INSTALL WETLAND PLANTINGS.
  - PERFORM DETAILED TOPOGRAPHIC SURVEY.
  - FOLLOWING APPROVAL OF SURVEY, REMOVE TEMPORARY SKIMMER AND CLOSE DRAIN VALVE.

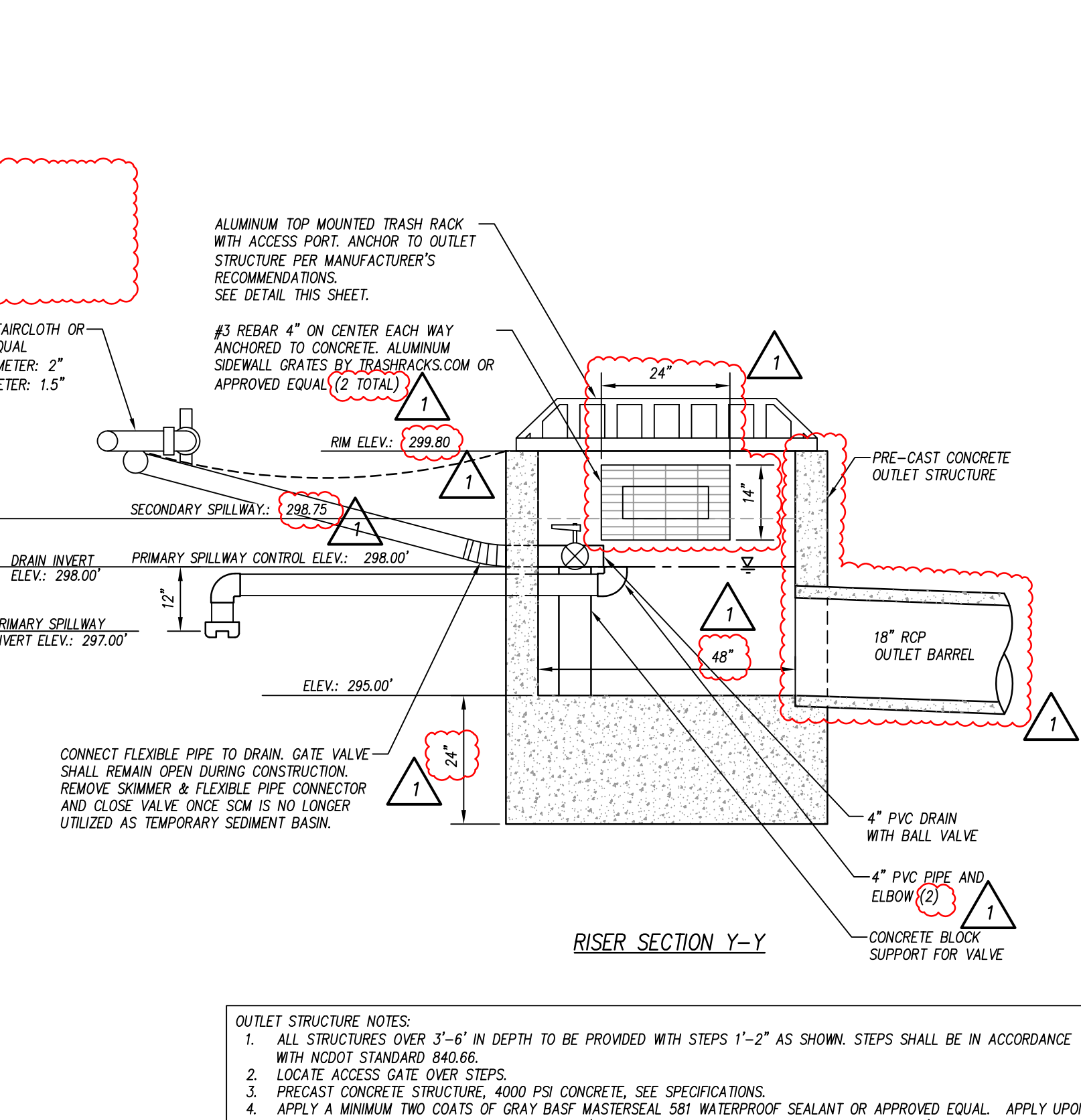
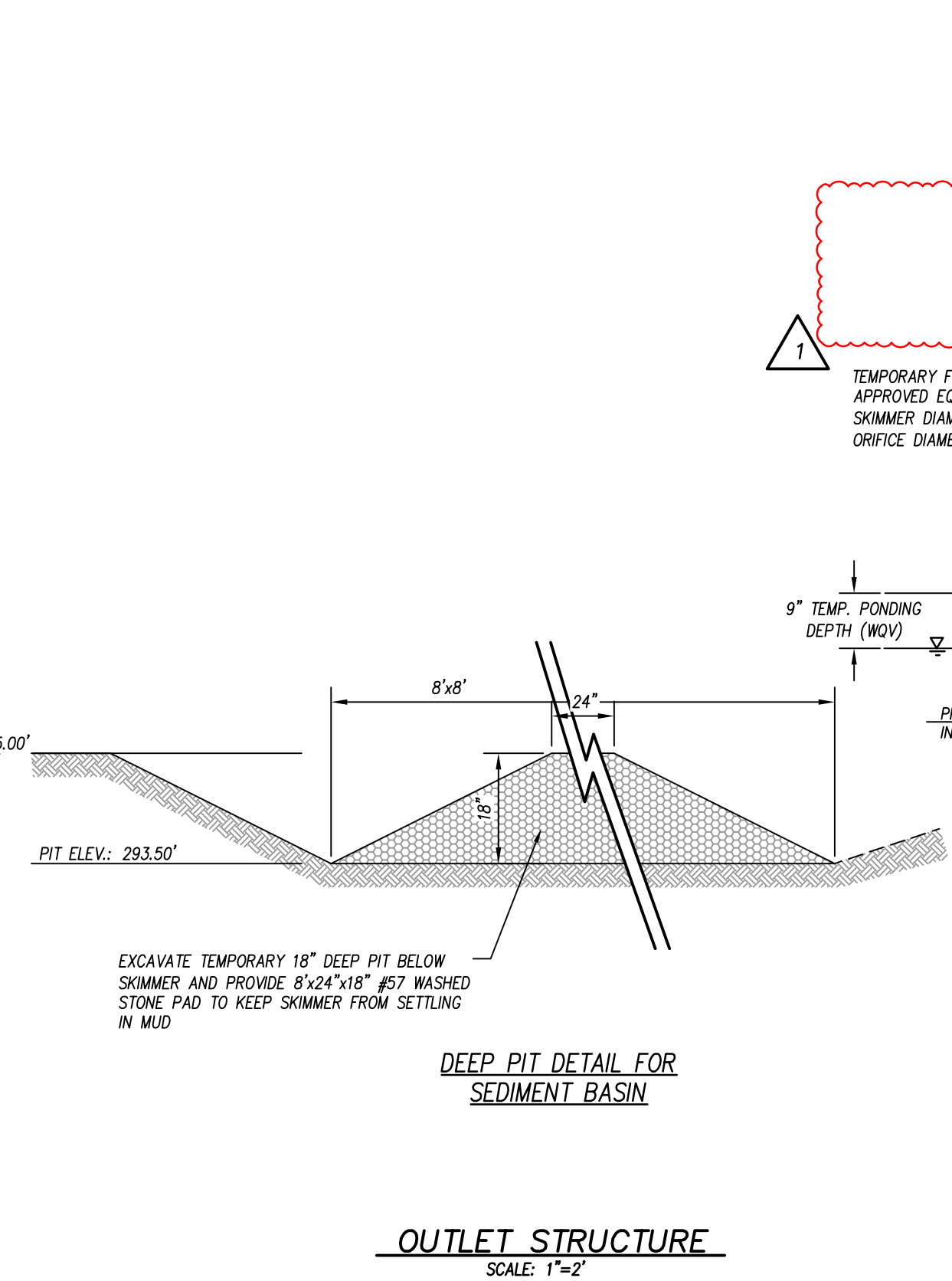
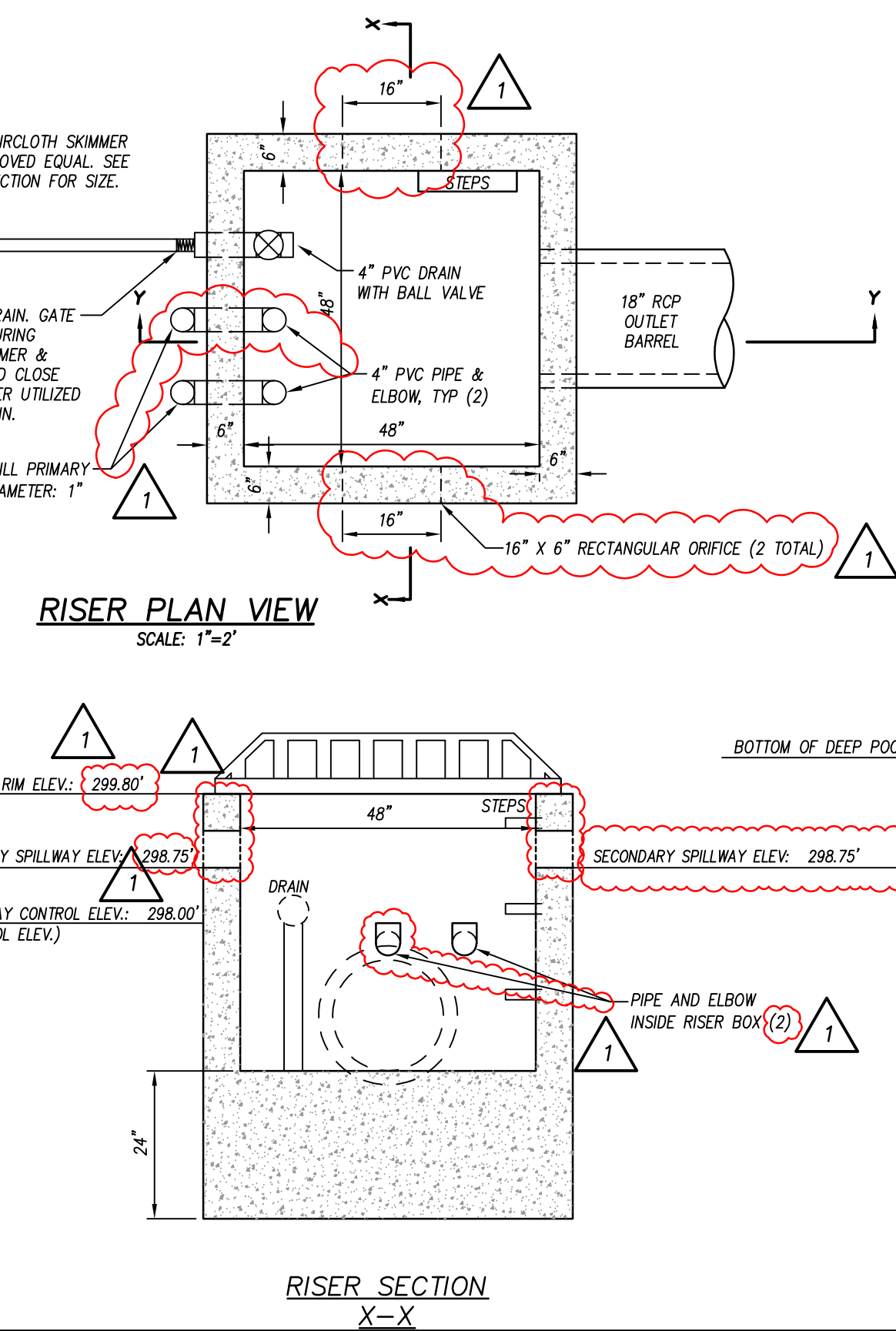
WETLAND MAINTENANCE SCHEDULE			
DESCRIPTION	METHOD	FREQUENCY	SEASON
EMBANKMENT			
INSPECT AND REPAIR EROSION / ANIMAL NESTINGS	VISUAL	ANNUALLY	ALL
OUTLET STRUCTURE			
DEBRIS / OBSTRUCTIONS	BY HAND	WHENEVER NEEDED	ALL
FOREBAY / DEEP POOL			
SEDIMENT / DEBRIS	BY HAND	ONCE PER 6 MONTHS OR WHEN 1/2 FULL OF SEDIMENT	ALL
PLANTS			
REPLACE ANY DEAD OR DISEASED VEGETATION CONSIDERED BEYOND TREATMENT	SEE PLANTING SPECIFICATIONS	TWICE PER YEAR	MAR 15 - APR 30 OCT 1 - NOV 30
TREAT ALL DISEASED PLANTS NOT TO BE REMOVED	MECHANICAL OR BY HAND	WHENEVER NEEDED	ALL
WATER PLANT MATERIAL AND END OF EACH DAY FOR 14 CONSECUTIVE DAYS AFTER PLANTING	BY HAND	IMMEDIATELY AFTER COMPLETION OF PROJECT	N/A
REPLACE SUPPORT STAKES	BY HAND	ONCE PER YEAR	SPRING
REPLACE DEFICIENT STAKES OR WIRES	BY HAND	WHENEVER NEEDED	ALL

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE UNTIL CERTIFICATION BY ENGINEER AT WHICH TIME OWNER WILL ASSUME MAINTENANCE RESPONSIBILITY.

LANDSCAPE WARRANTIES SHALL APPLY TO STORMWATER WETLAND PLANTINGS.

EMBANKMENT NOTES:

- EMBANKMENT SHALL BE CONSTRUCTED OF CLEAN STRUCTURAL IMPERVIOUS SOIL. FREE OF ROOTS, VEGETATION, ROCKS & OTHER OBJECTIONABLE MATERIAL. SCARIFY SURFACES BEFORE PLACING FILL. PLACE FILL IN 6-8 INCH LOOSE LIFTS. COMPACT TO AT LEAST 90% OF THE STANDARD PROCTOR DENSITY.
- ON EMBANKMENT STRUCTURE AND PERIMETER FILL SLOPES, NON-CUMULATING TURF GRASS SHALL BE PROVIDED, AND TREES AND WOODY SHRUBS SHALL NOT BE PERMITTED.
- INSTALL SLOPE MATTING ON ALL SLOPES STEEPER THAN 6:1.

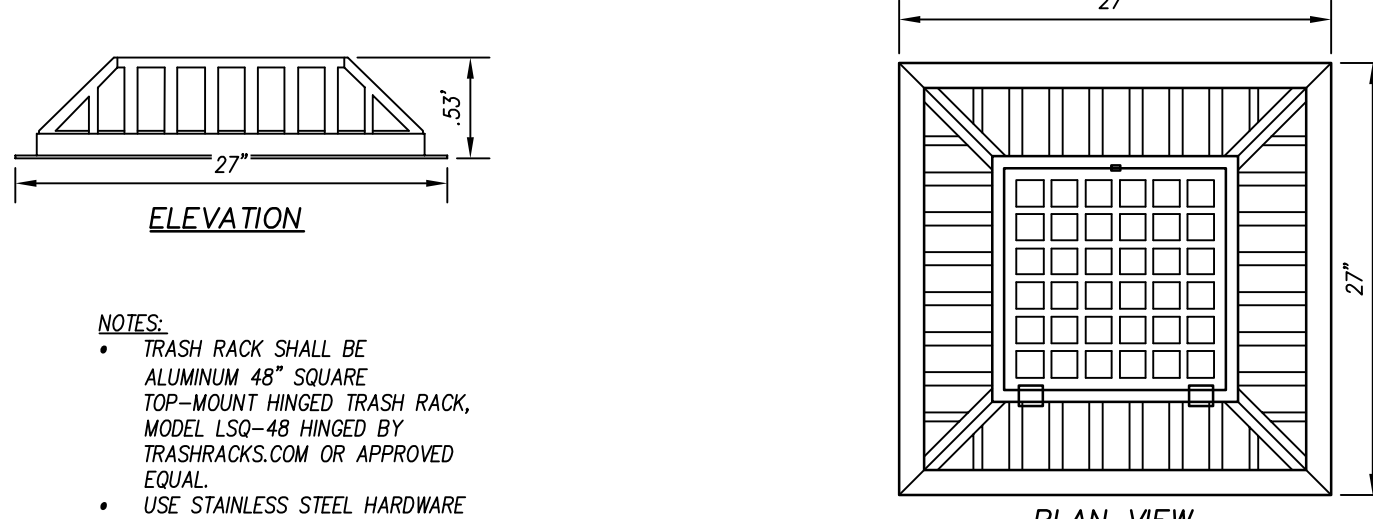


SCM-1: CONSTRUCTED WETLAND

1" = 10'-0"

TRASH RACK DETAIL

SCALE: 1"=2'

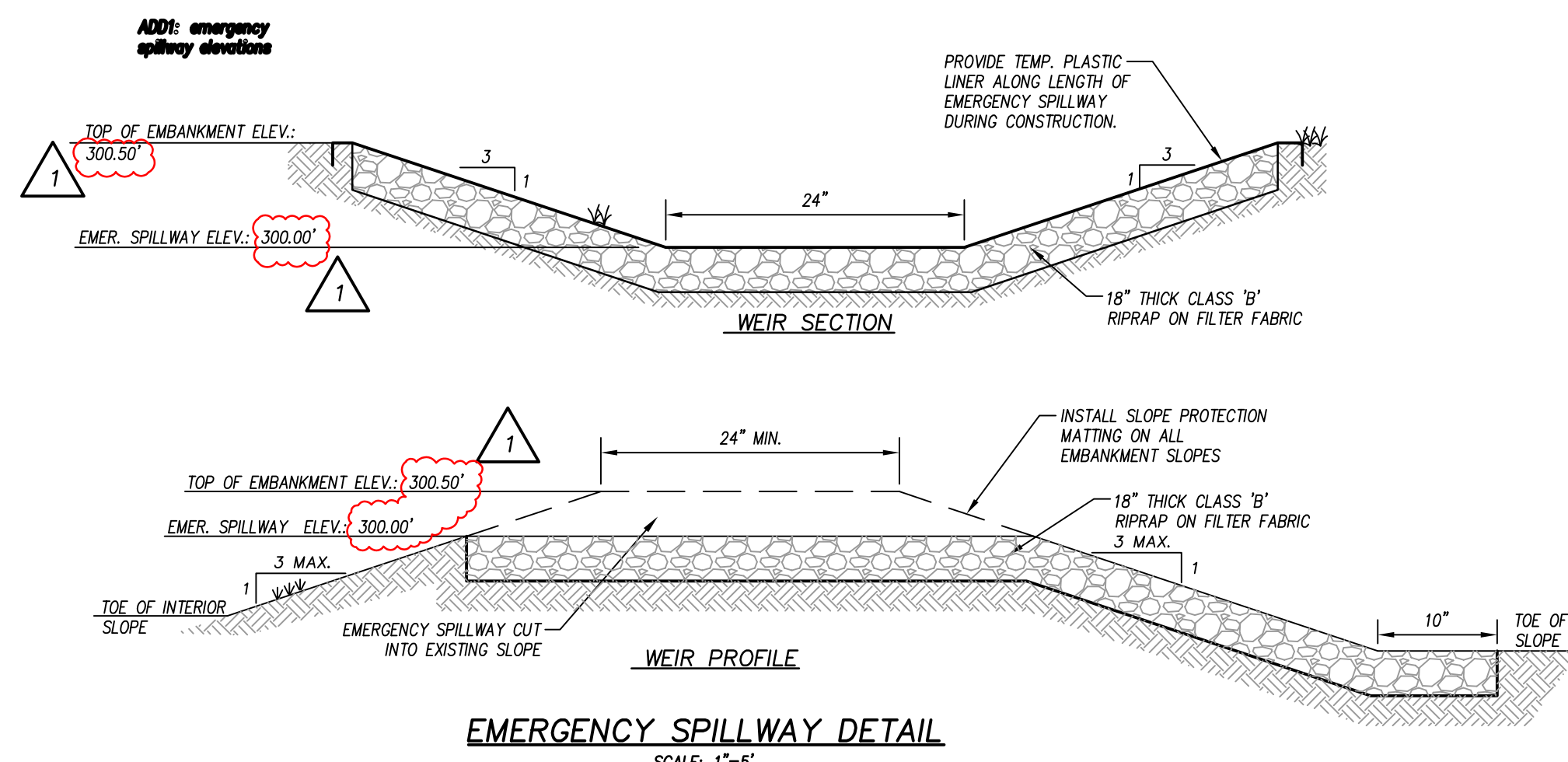


NOTES:

- TRASH RACK SHALL BE ALUMINUM 48" SQUARE TOP-MOUNT HINGED TRASH RACK, MODEL LSD-48 HINGED BY TRASHRACKS.COM OR APPROVED EQUAL.
- USE STAINLESS STEEL HARDWARE TO MOUNT TRASH RACK.

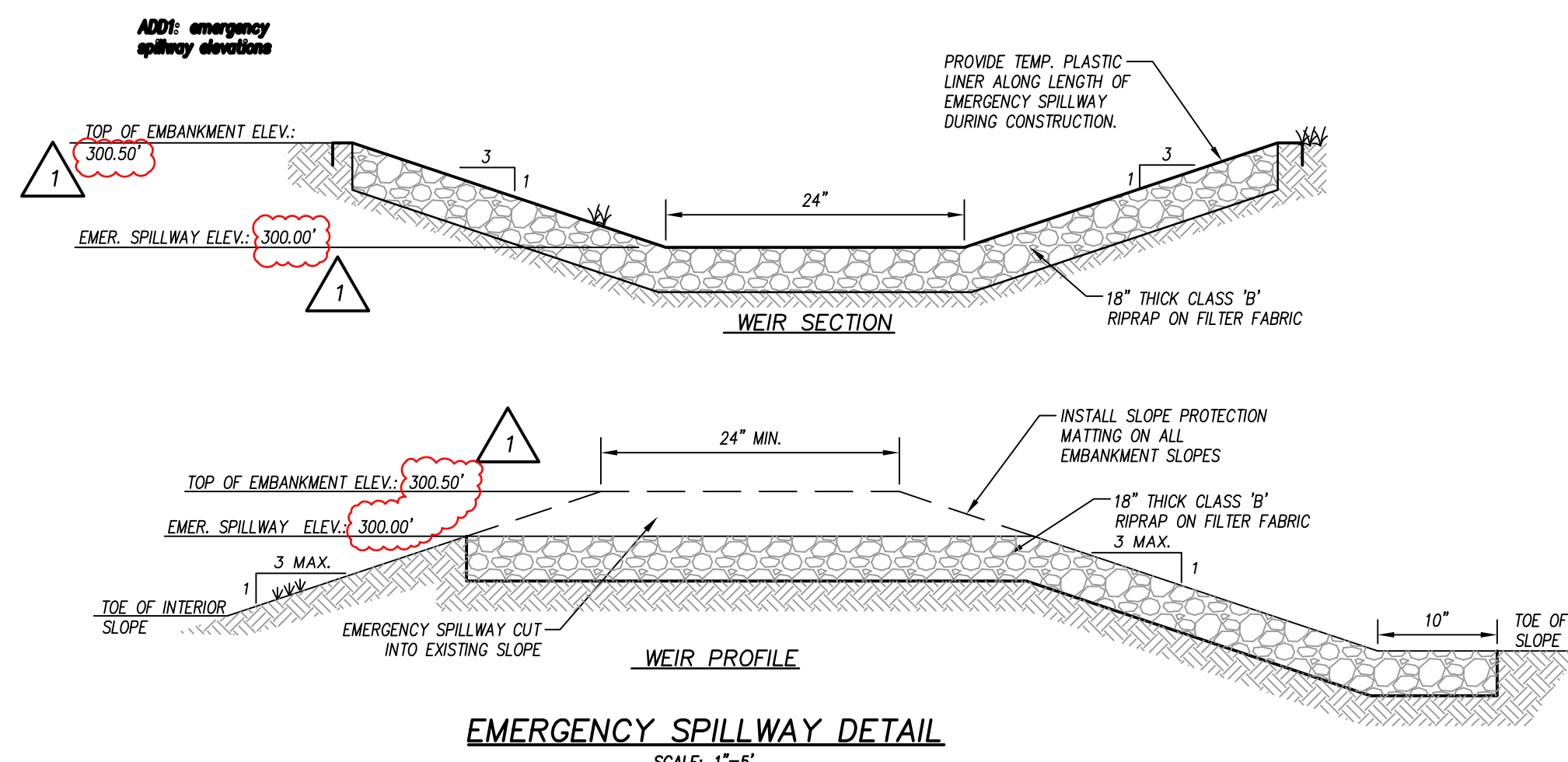
WEIR SECTION

SCALE: 1"=5'



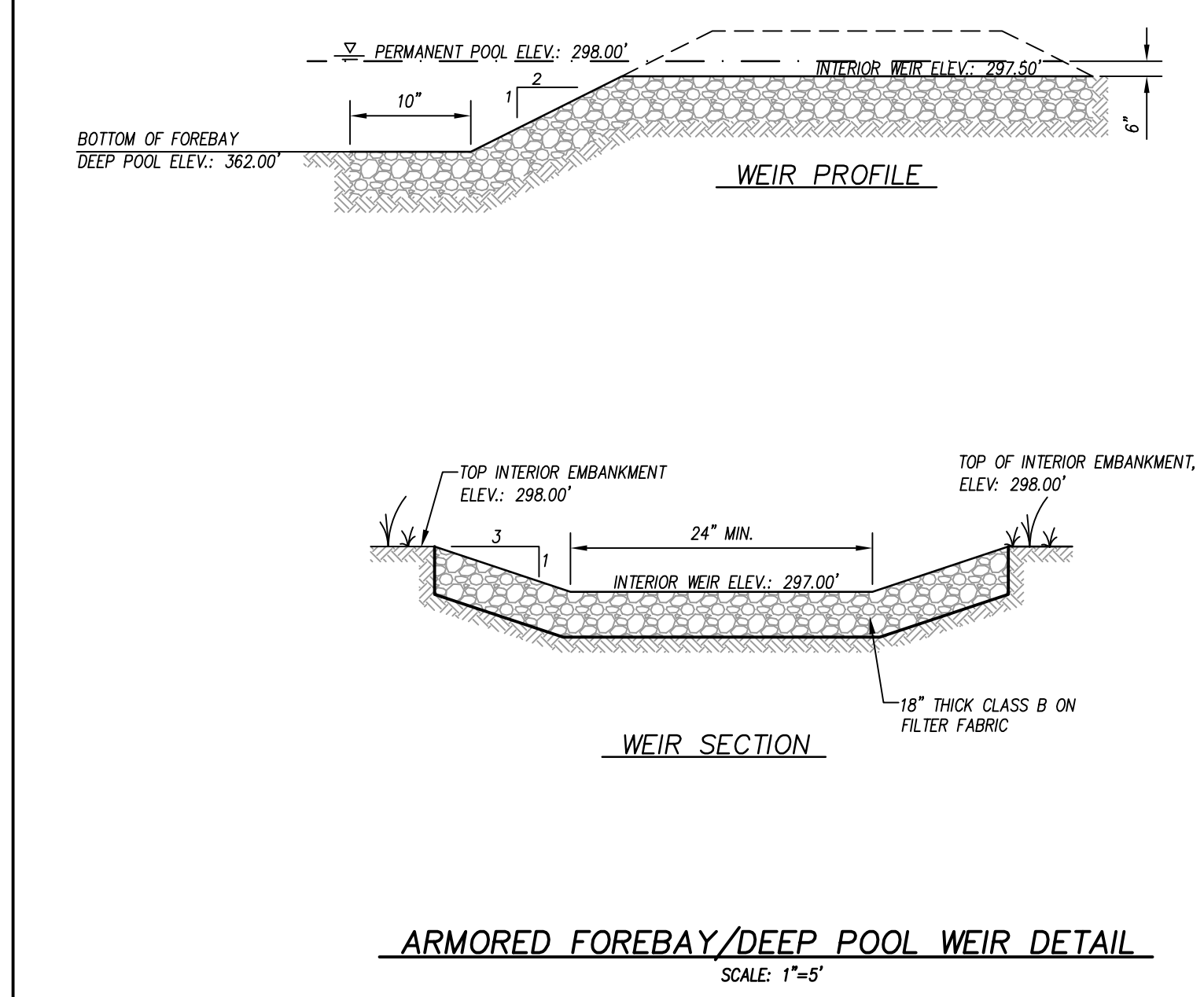
EMERGENCY SPILLWAY DETAIL

SCALE: 1"=5'



ARMORED FOREBAY/DEEP POOL WEIR DETAIL

SCALE: 1"=5'

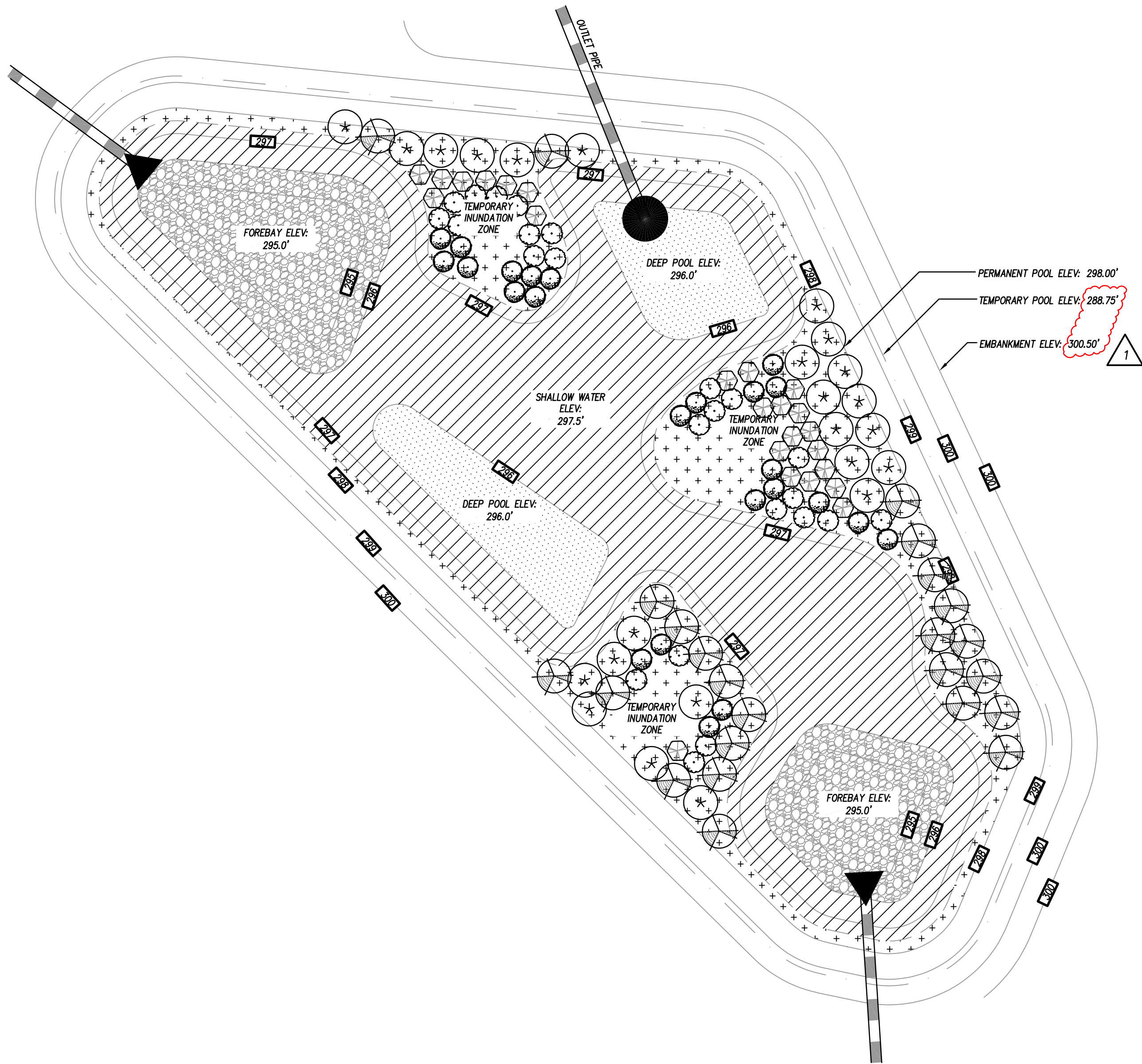


SCM-1 DESIGN

DRAINAGE AREA: 107,140 SF  
SURFACE AREA OF SCM: 6,870 SF  
LAND USE AREAS: 51,180 SF  
IMPERVIOUS: 53,050 SF  
OPEN SPACE: 0 SF  
WOODED: 0 SF

SCM DESIGN PARAMETERS				
	Q1	Q2	Q10	Q25
DESIGN STORM FLOWS (CFS)	0.34	1.32	4.84	8.24
DESIGN MSE (FT)	298.85	299.02	299.64	300.00
FREEBOARD (FT)	1.65	1.48	0.86	0.50





#### NOTES

1. WETLAND AREA SHALL BE DRAINED ONE DAY PRIOR TO PLANTING.
2. LANDSCAPE ARCHITECT TO APPROVE ALL LOCATIONS IN FIELD.
3. PLACE PLANTINGS IN DESIGNATED AREA BY SPECIES IN GROUPINGS OF 40 PLANTS OR MORE.
4. SODDED AREA SHALL NOT BE MOWED AT SIDE SLOPES.
5. SEE PLANTING SPECIFICATIONS SECTION 32.80.00 FOR WARRANTY PERIODS.
6. ALL AREAS INDICATED AS LAWN ON LANDSCAPE PLAN TO BE PERMANENTLY STABILIZED AND ESTABLISHED AS IN SPECIFICATIONS PRIOR TO ACCEPTANCE OF THE WETLANDS, INCLUDING THE EMBANKMENT, ACCESS AND MAINTENANCE EASEMENT, AND ASSOCIATED SLOPES.

#### WETLAND SOIL MIX

ADD 12" OF TOPSOIL THROUGHOUT STORMWATER WETLAND AREA. TOPSOIL SHALL BE PLACED WITHIN THE SHALLOW LAND, SHALLOW WATER AND DEEP POOL AREAS AND ADHERE TO THE FOLLOWING REQUIREMENTS:

1. THE SOIL MUST BE UNIFORM AND FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR MATERIAL GREATER THAN 2 INCHES.
2. SOIL TEXTURE SHALL BE A LOAMY SAND, WITH NO MORE THAN 10% CLAY (USDA SOIL TEXTURAL CLASSIFICATION).
3. A MINIMUM ORGANIC CONTENT OF 10% BY DRY WEIGHT.
4. THE PH SHALL BE BETWEEN 5.5 AND 7.0.

#### SCM "2" WETLAND PLANT LIST

TEMPORARY INUNDATION ZONE - SHRUBS				
KEY	KEY	QTY	PLANT NAME	SIZE
	CO	24	CEPHALANTHUS OCCIDENTALIS - BUTTONBUSH	3-GAL. CONT.
	SC	24	SAMBUCUS CANADENSIS - ELDERBERRY	PLANT 5' O.C.
	CA	24	CLETHRA ALNIFOLIA - SWEET PEPPERBUSH	
	IT	24	ITEA VIRGINICA 'HENRY'S GARNET' - SWEETSPIRE	
	AA	24	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' - CHOKEBERRY	
TEMPORARY INUNDATION ZONE - HERBACEOUS				
++	AS	187	ASCLEPIAS INCARNATA - SWAMP MILKWEED	LARGE PLUGS (MIN. 6 CUBIC INCHES)
++	IV	187	IRIS VIRGINICA - BLUE FLAG IRIS	SPACE 2' O.C.
++	HM	187	HIBISCUS MOSCHEutos - MARSH HIBISCUS	2,945 SF
SHALLOW WATER ZONE - HERBACEOUS				
	PV	120	PELTANDRA VIRGINIANA - ARROW ARUM	LARGE PLUGS (MIN. 6 CUBIC INCHES)
	PC	120	PONTEDERIA COREATA - PICKEREL WEED	SPACE 2' O.C.
	AB	120	ACORUS SUBCORDATUM - SWEETFLAG	
	SC	120	SAURURUS CERNUUS - LIZARD'S TAIL	
	JE	120	JUNCUS EFFUSUS - SOFT RUSH	2,640 SF
DEEP POOL AND MICRO POOL				
	SD	50	SAGITTARIA LATIFOLIA - BROADLEAF ARROWHEAD	LARGE PLUGS (MIN. 6 CUBIC INCHES)
	SD	50	NUPHAR LUTEA - SPATTERDOCK / YELLOW POND-LILY	
	SD	50	NYMPHAEA COORATA - WATERLILY	
	SD	50	NELUMBO LUTEA - AMERICAN LOTUS	456 SF
	SD		TURF BERMUDA	

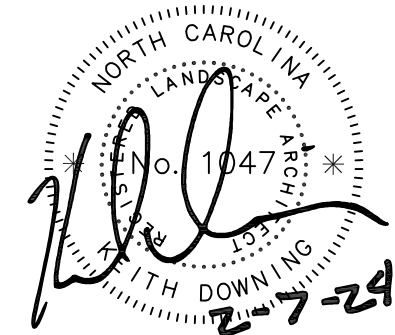
SCM-1: CONSTRUCTED WETLAND

1" = 10'-0"

## COOPER ACADEMY A & R

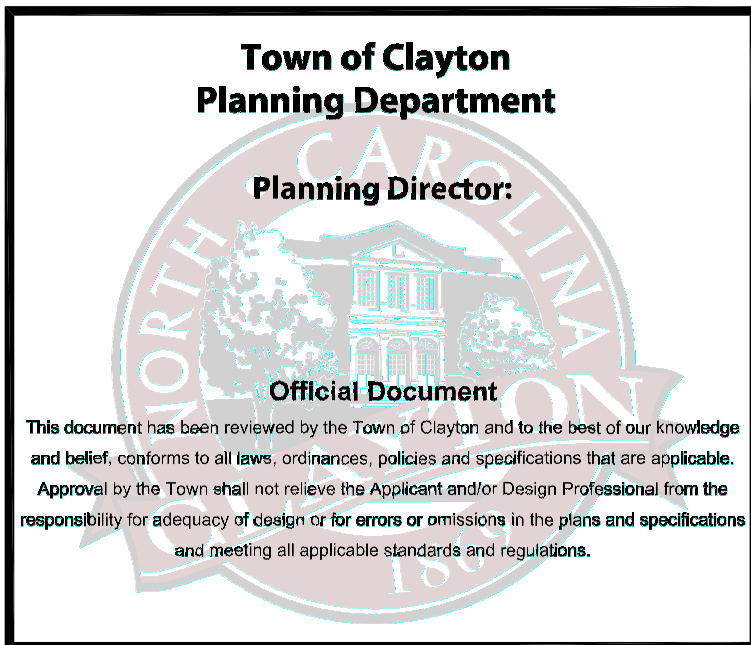
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## BID DOCUMENTS

PROJECT PHASE

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BOOMERANG DESIGN PROJECT NUMBER

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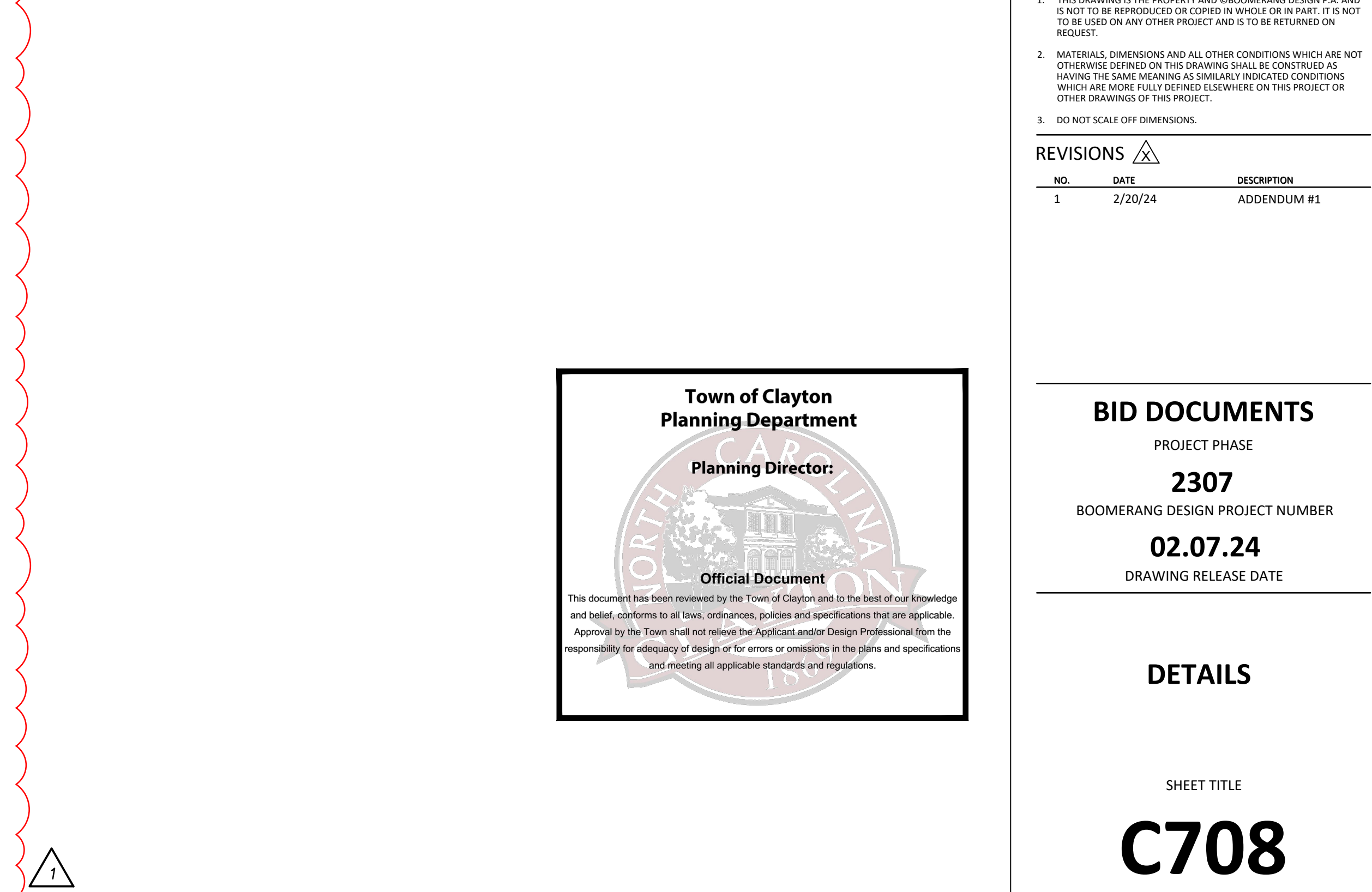
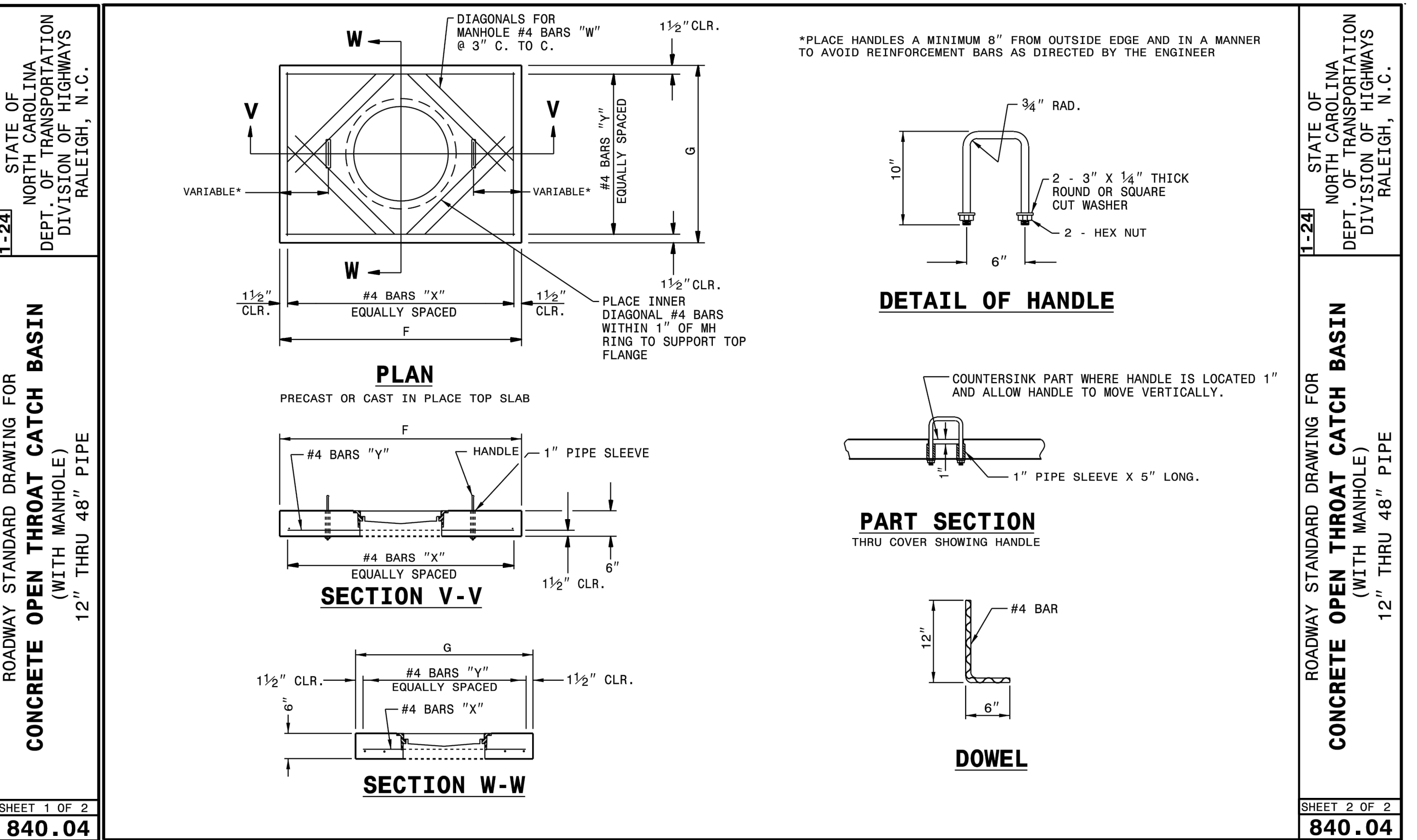
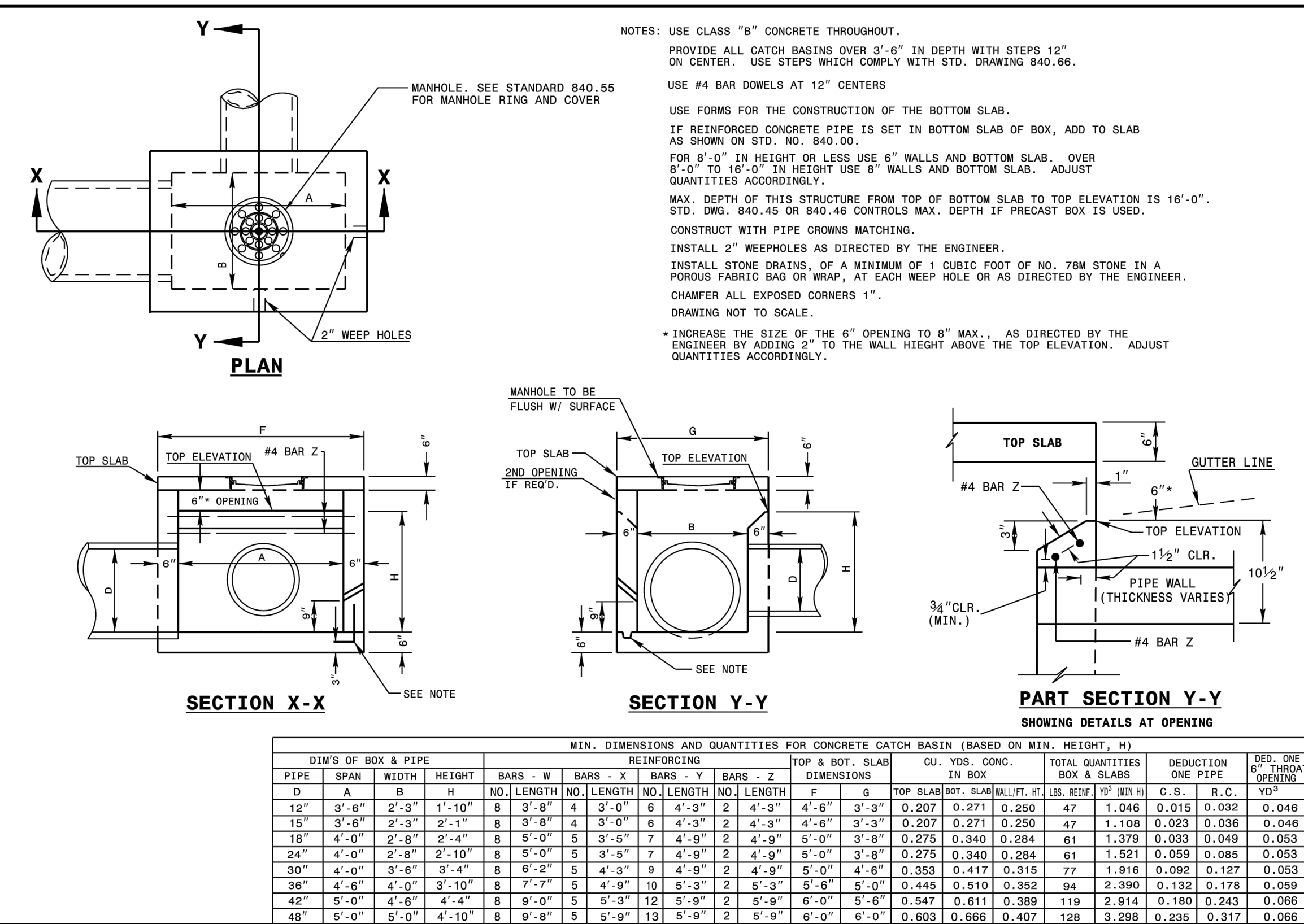
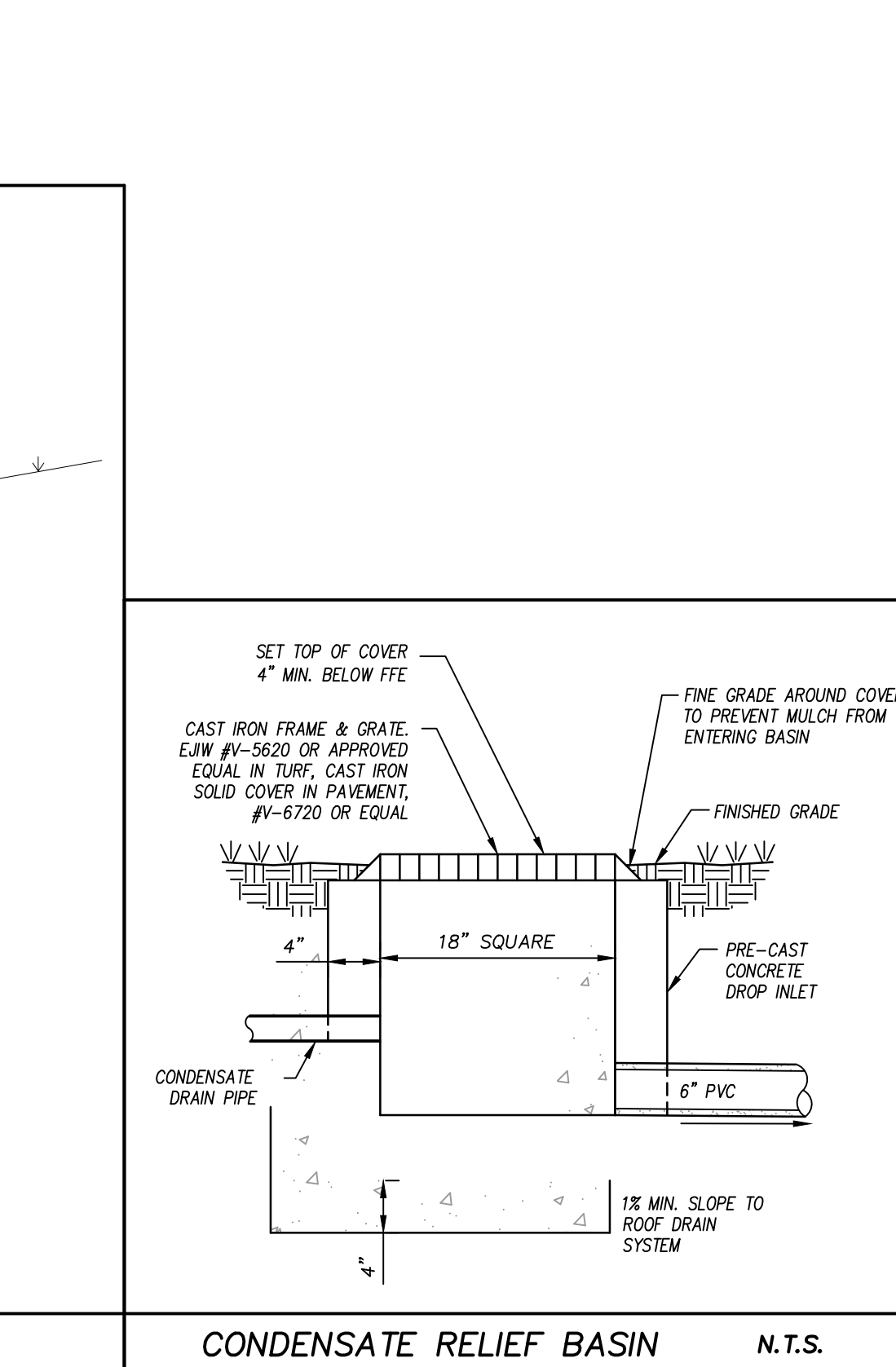
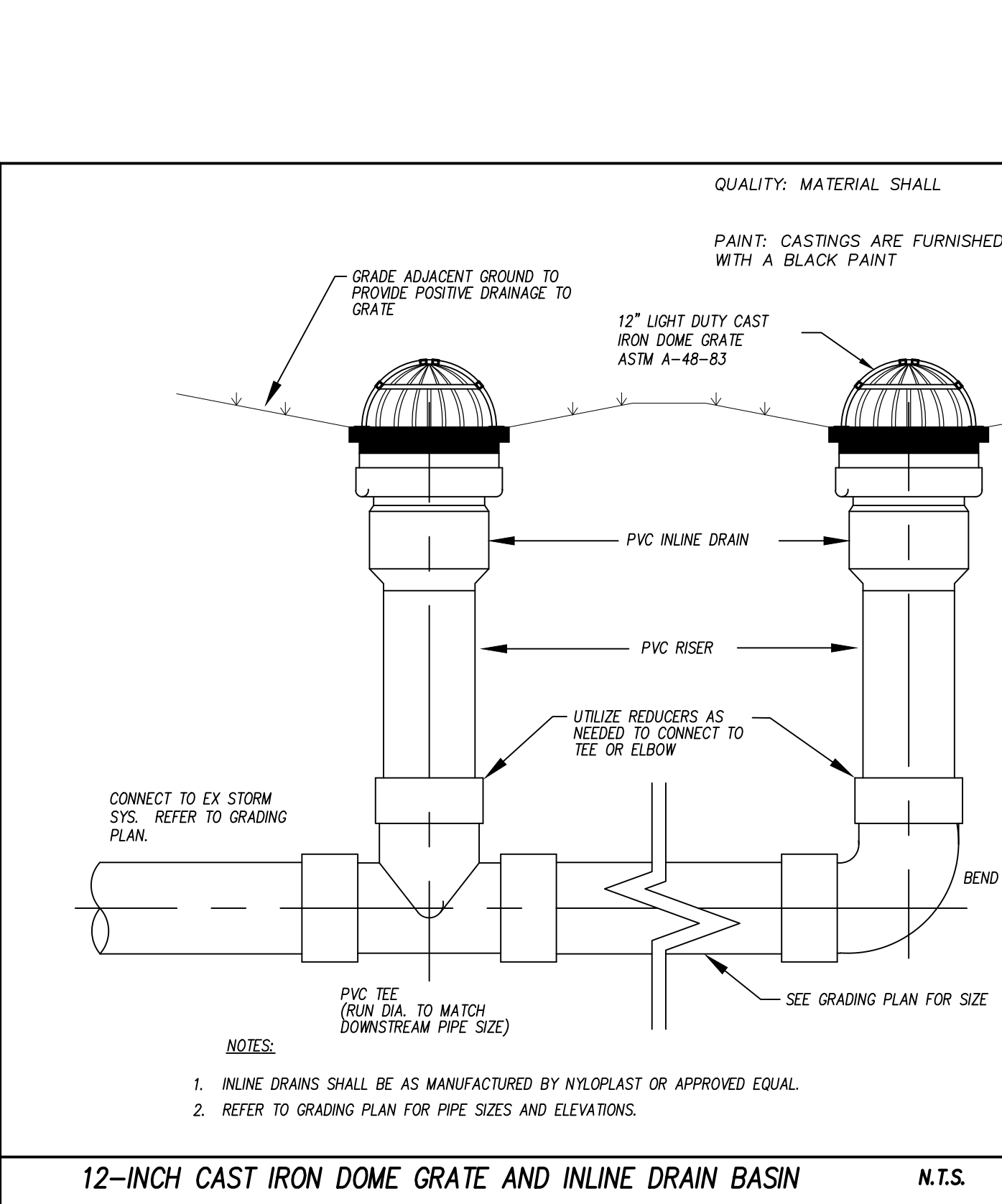
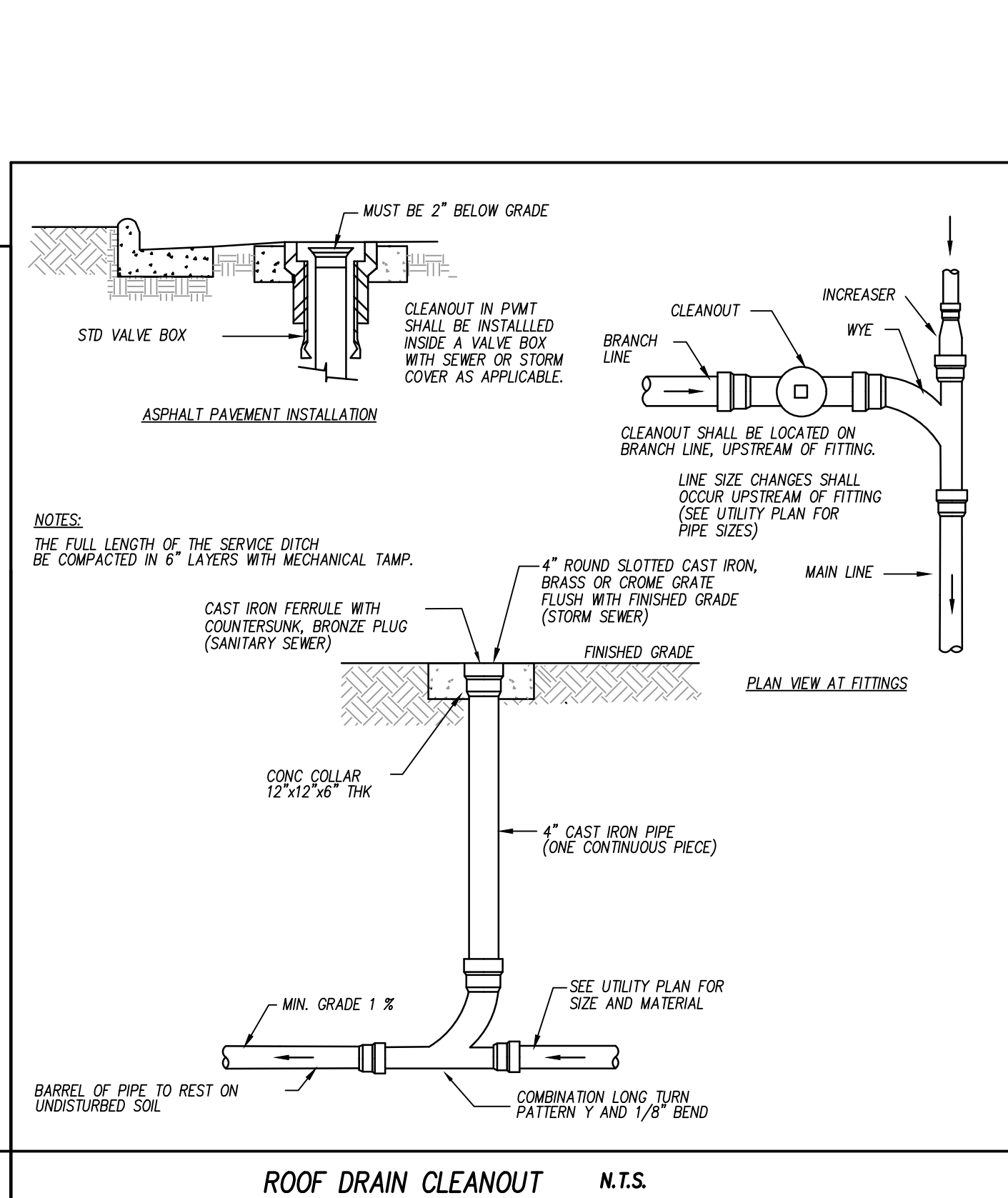
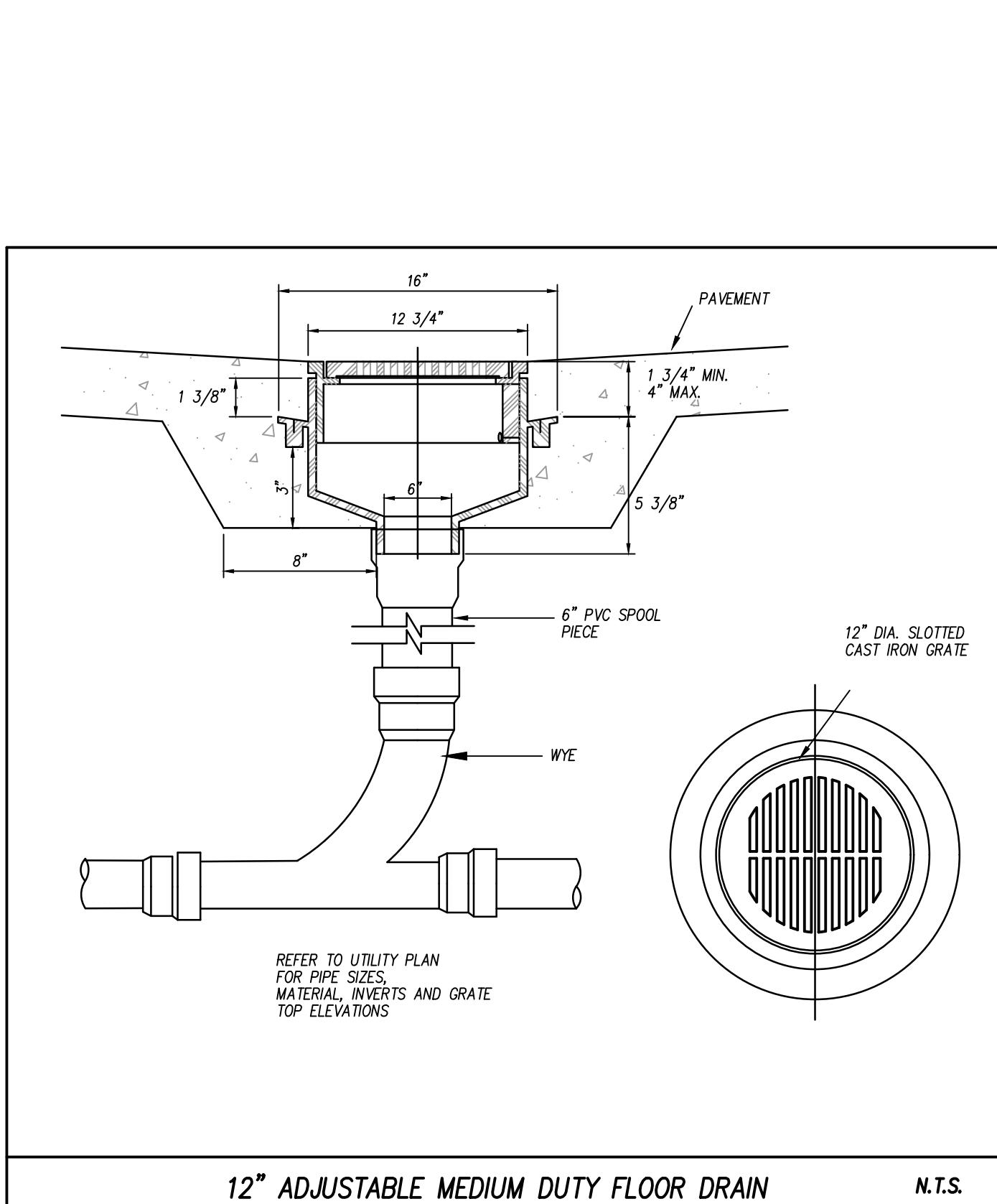
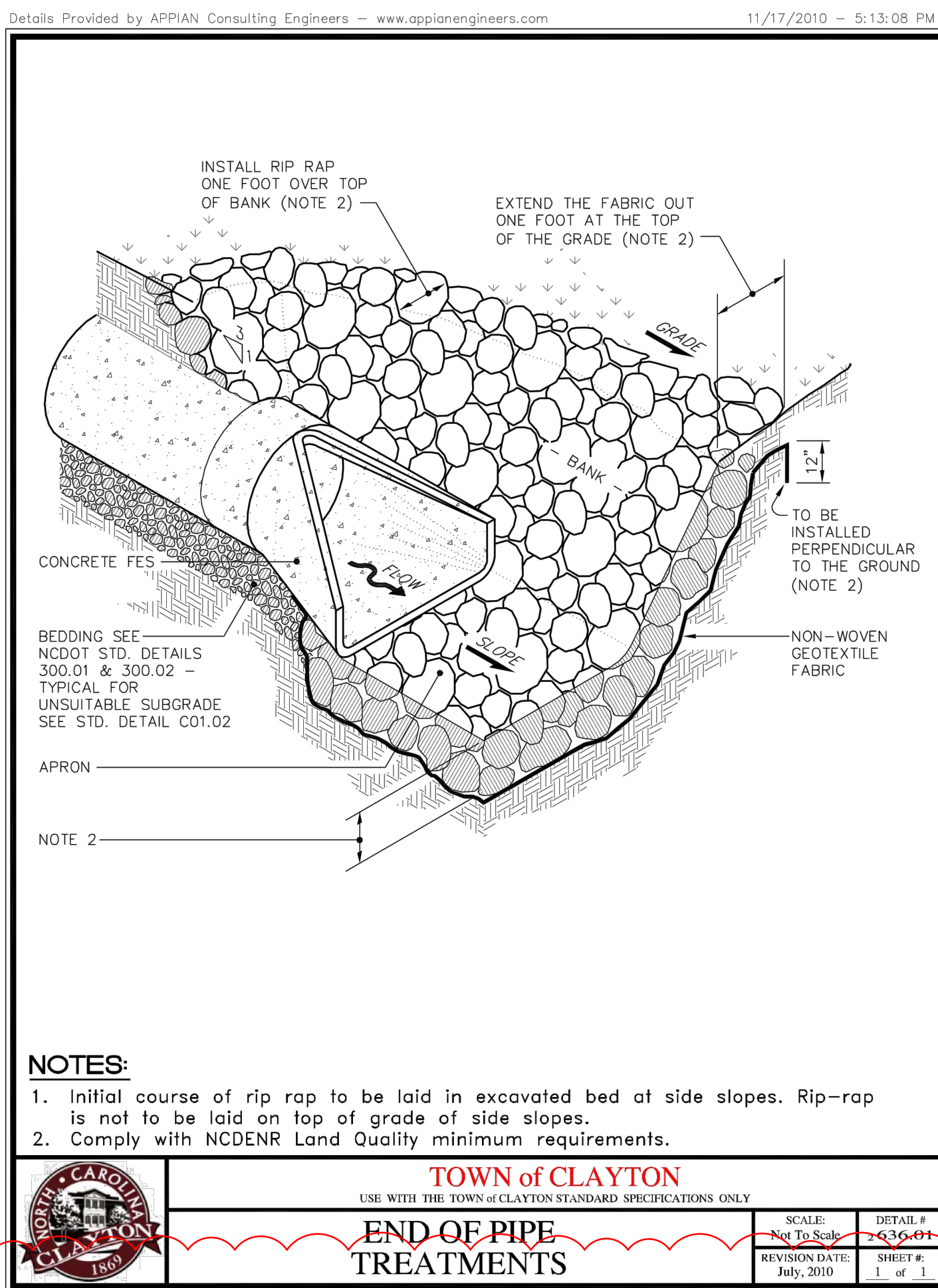
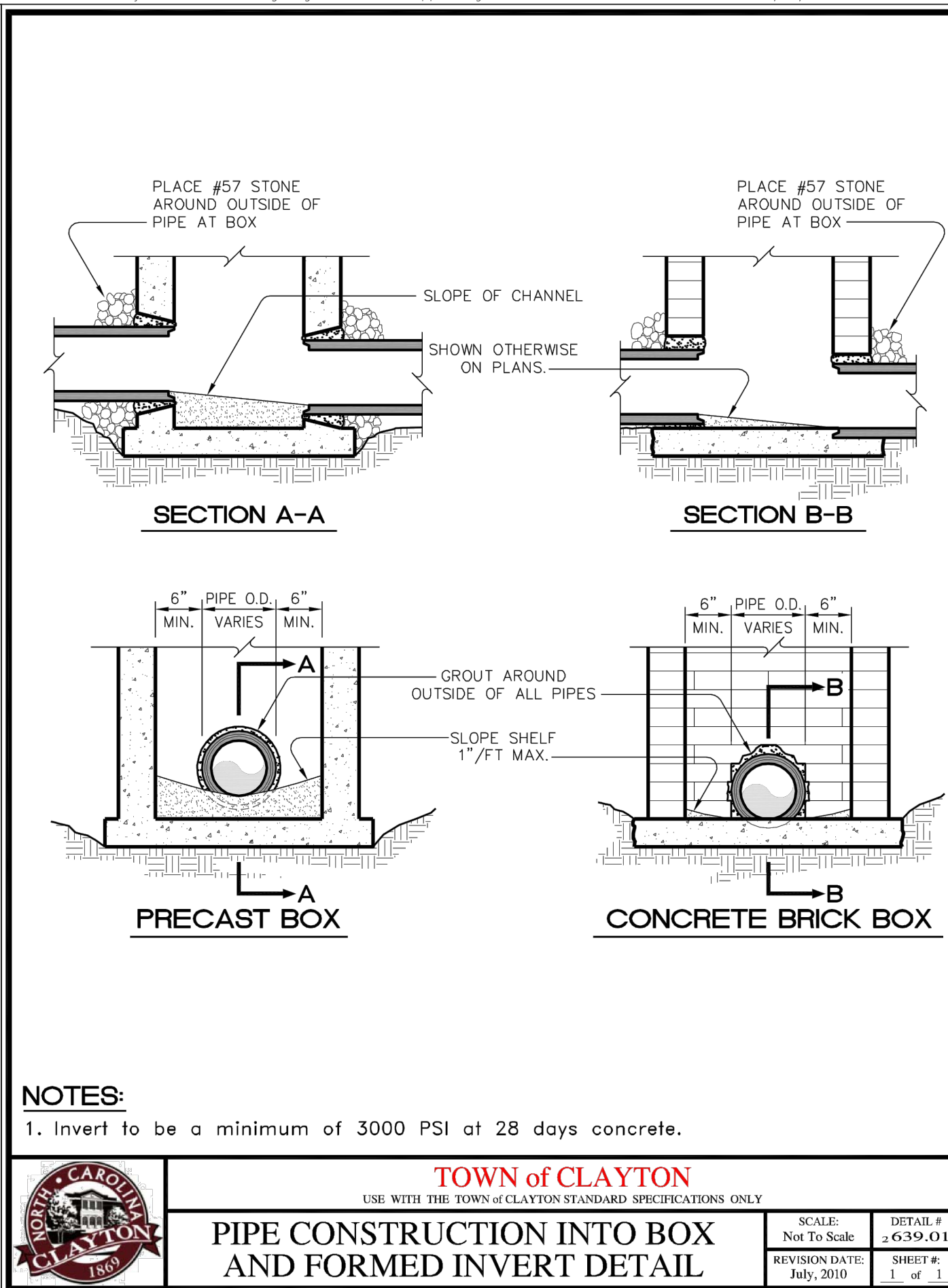
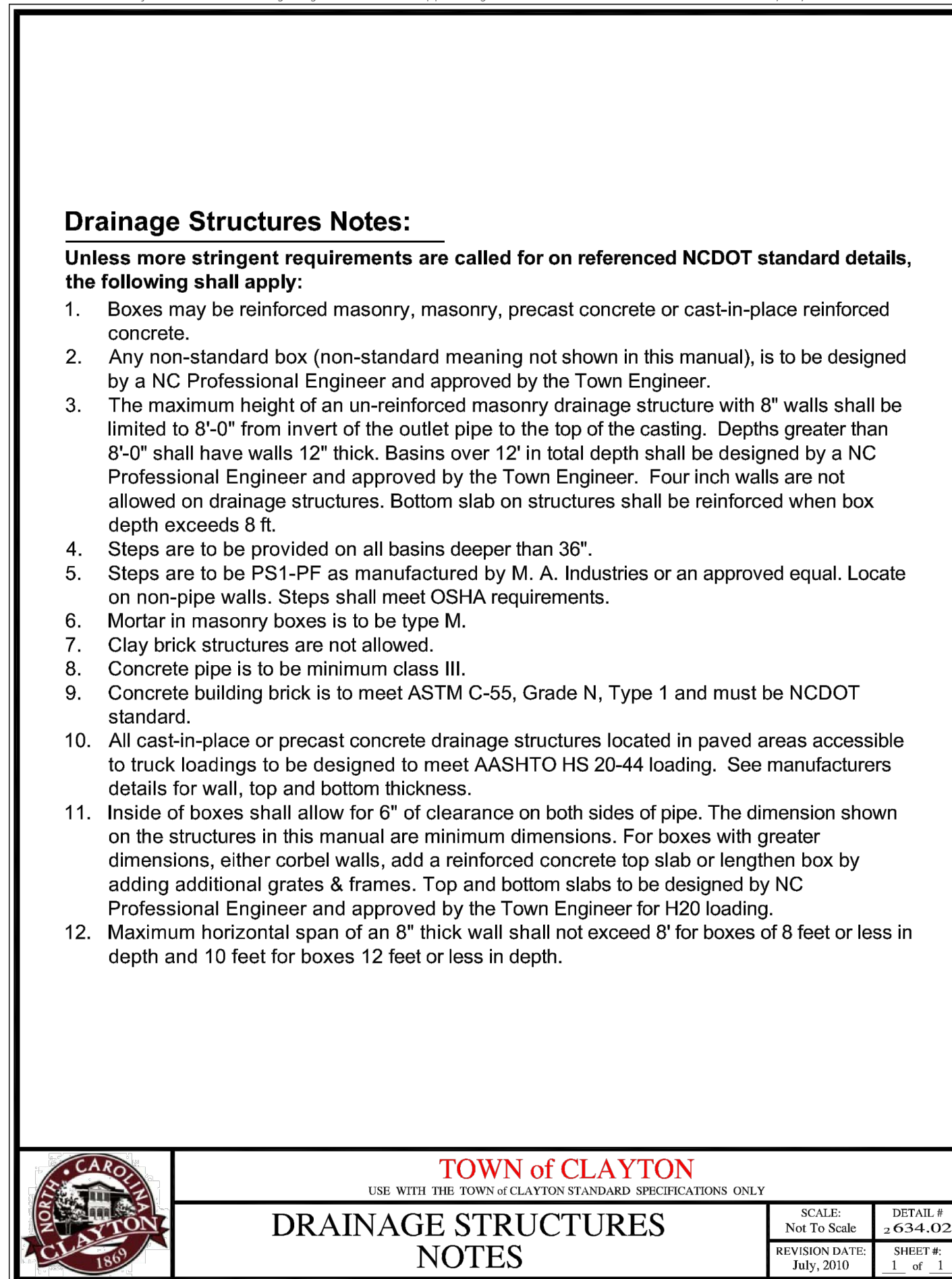
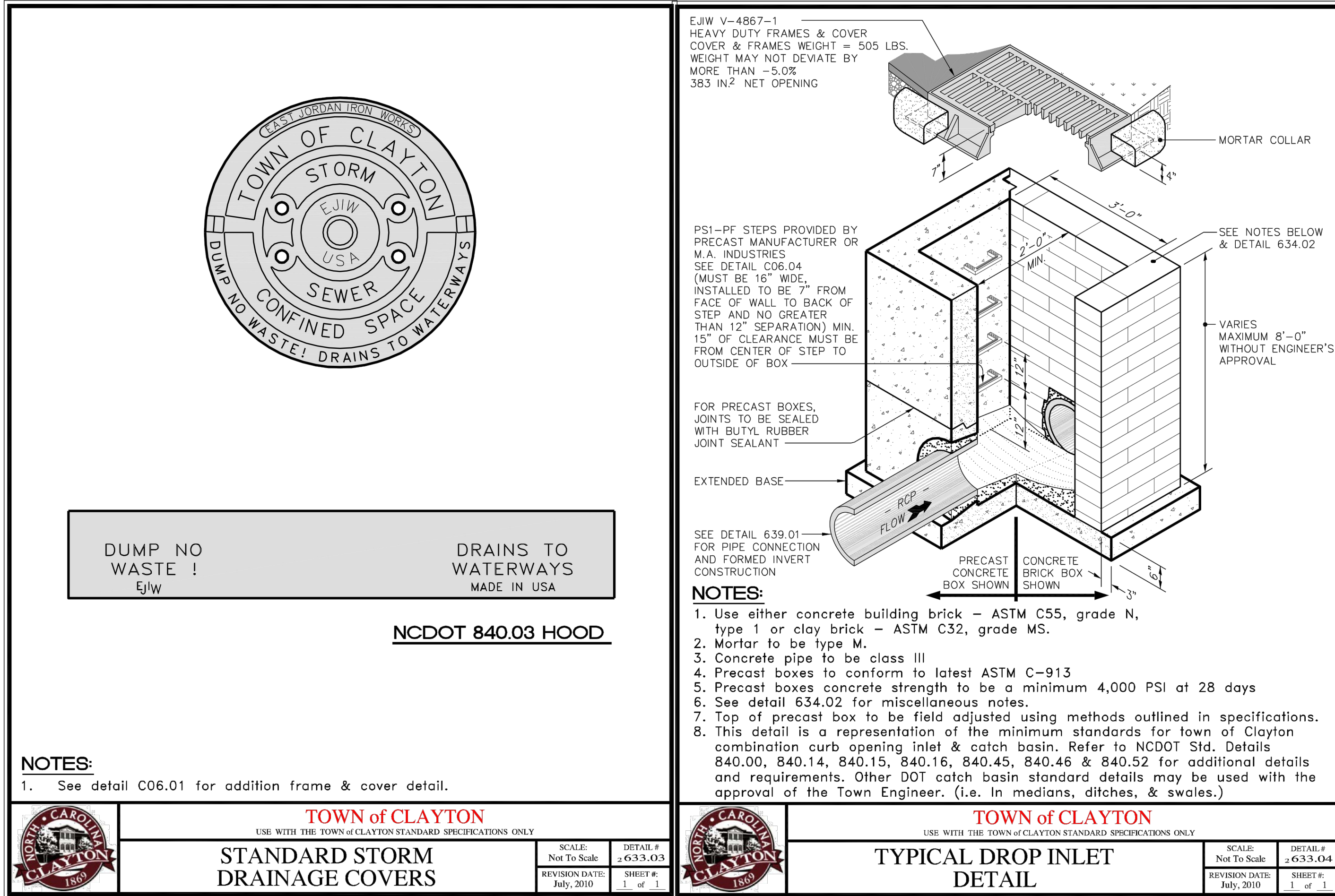
## DETAILS

SHEET TITLE

C707

SHEET







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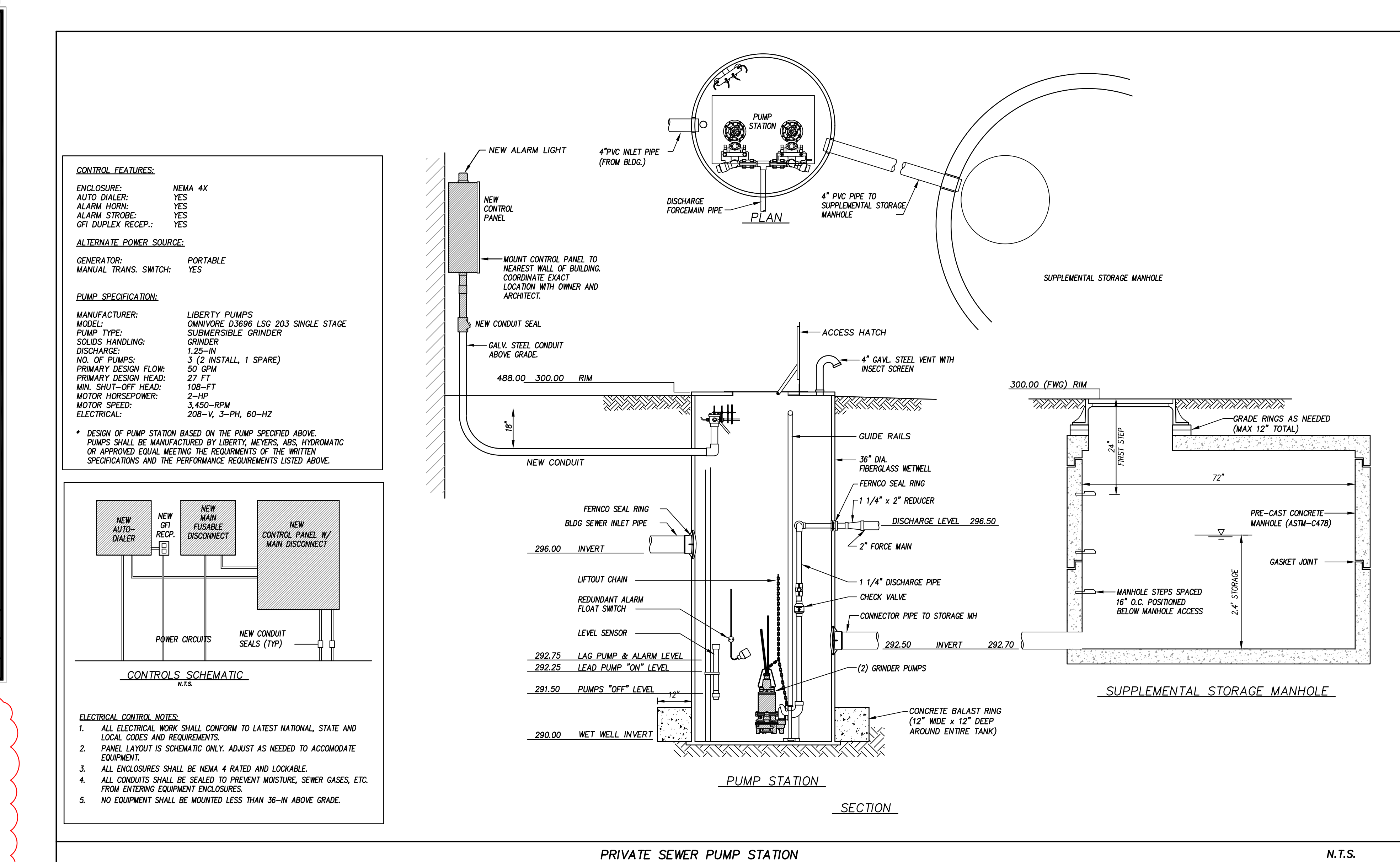
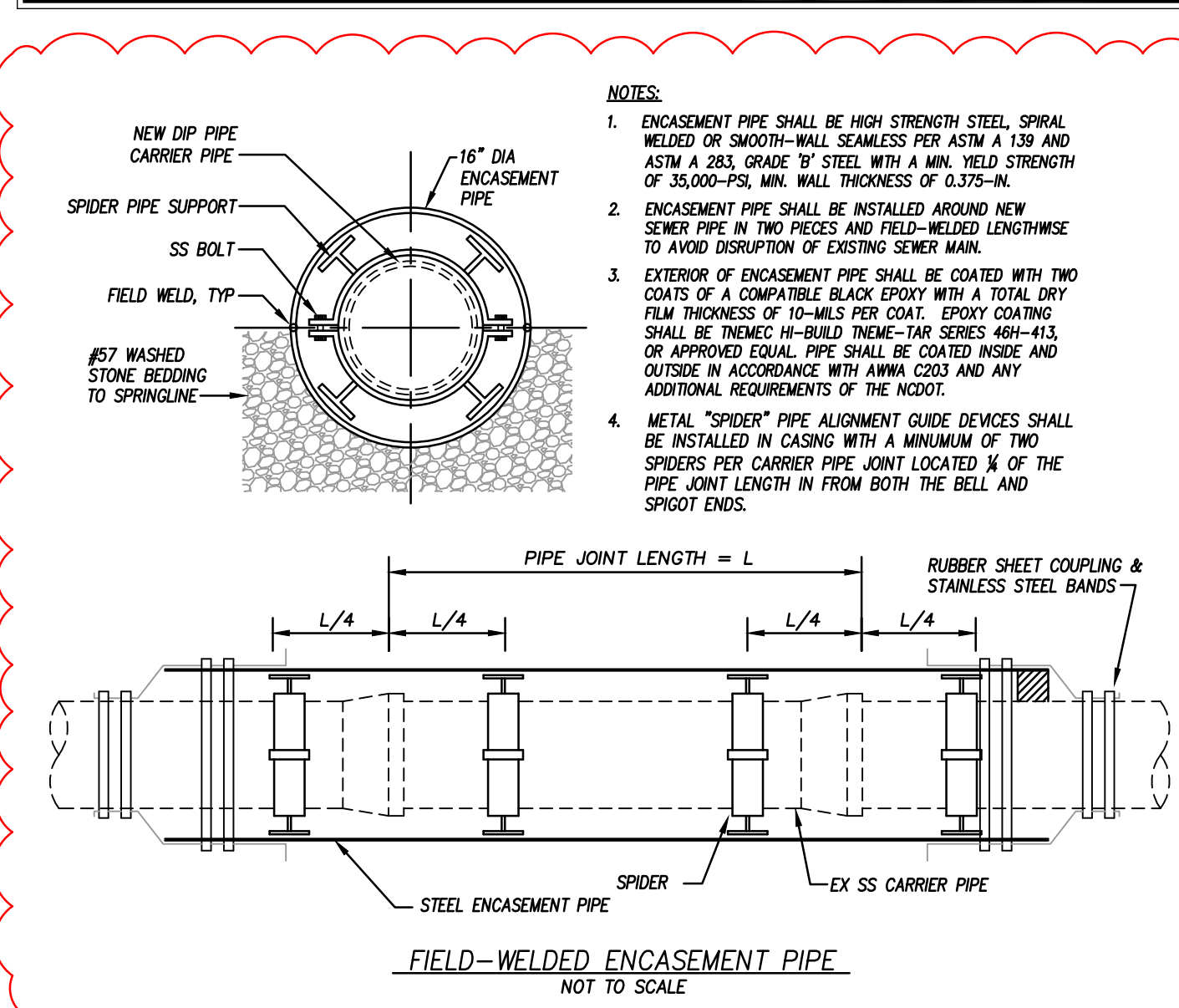
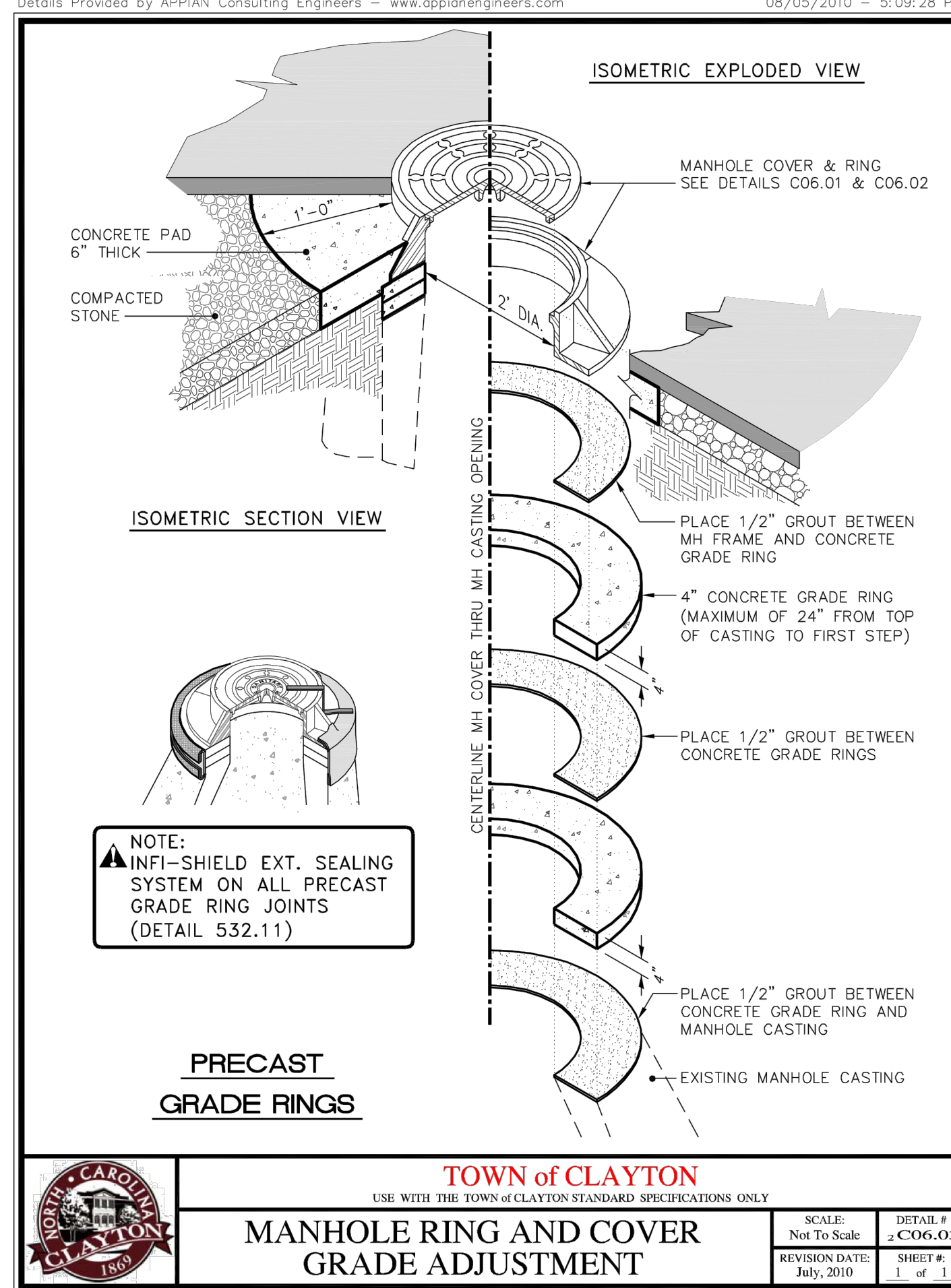
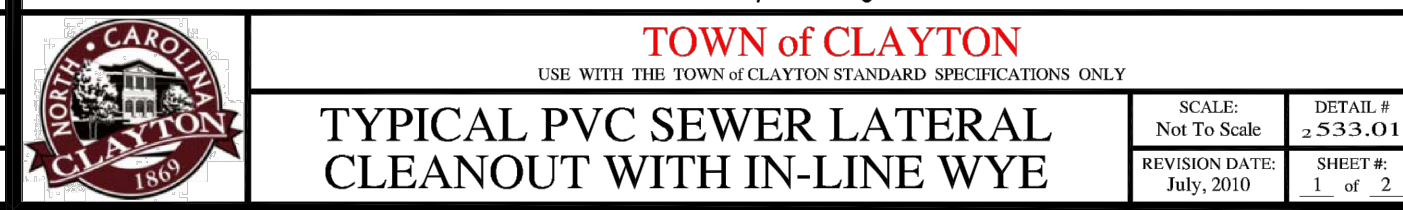
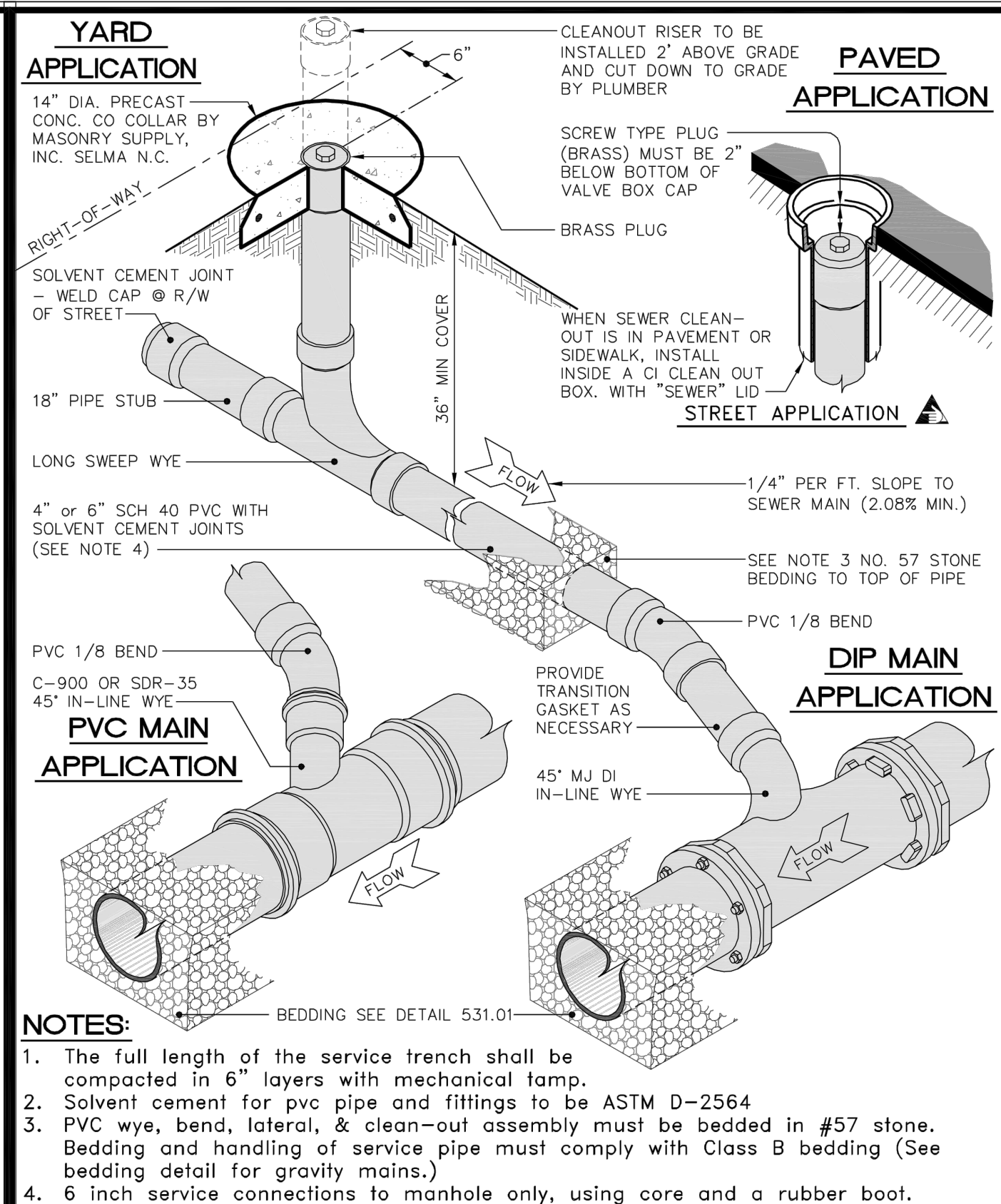
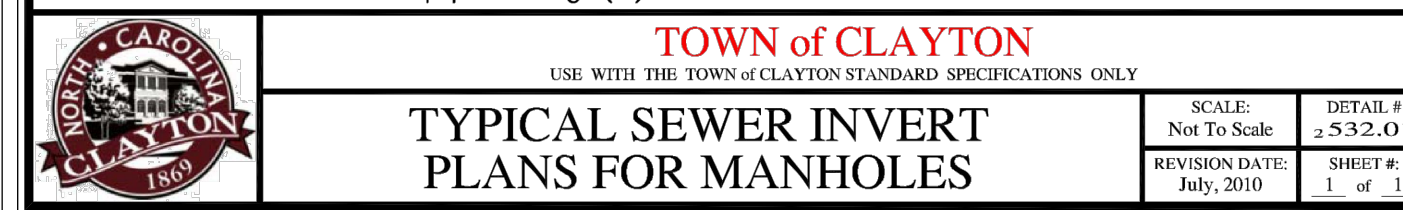
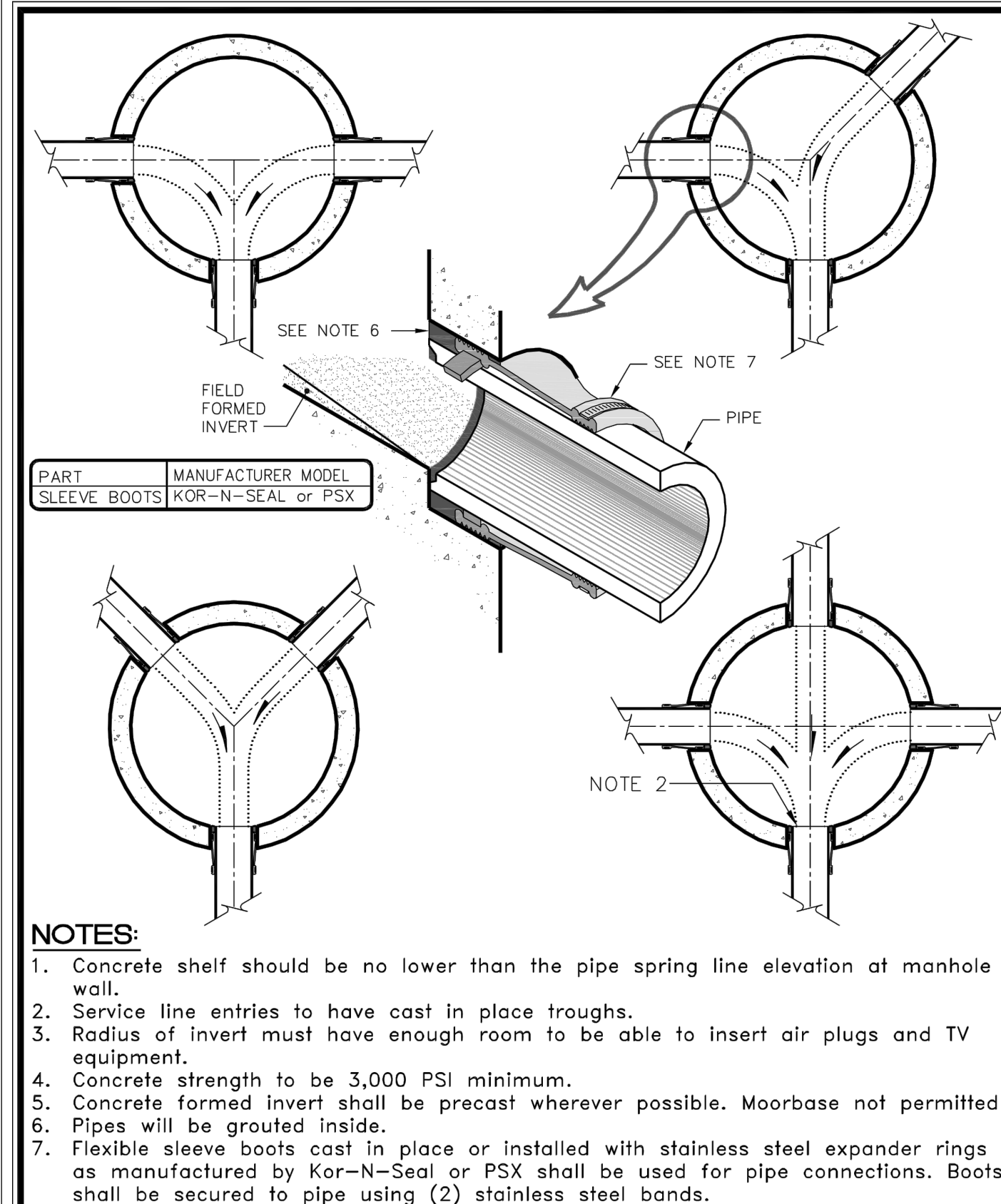
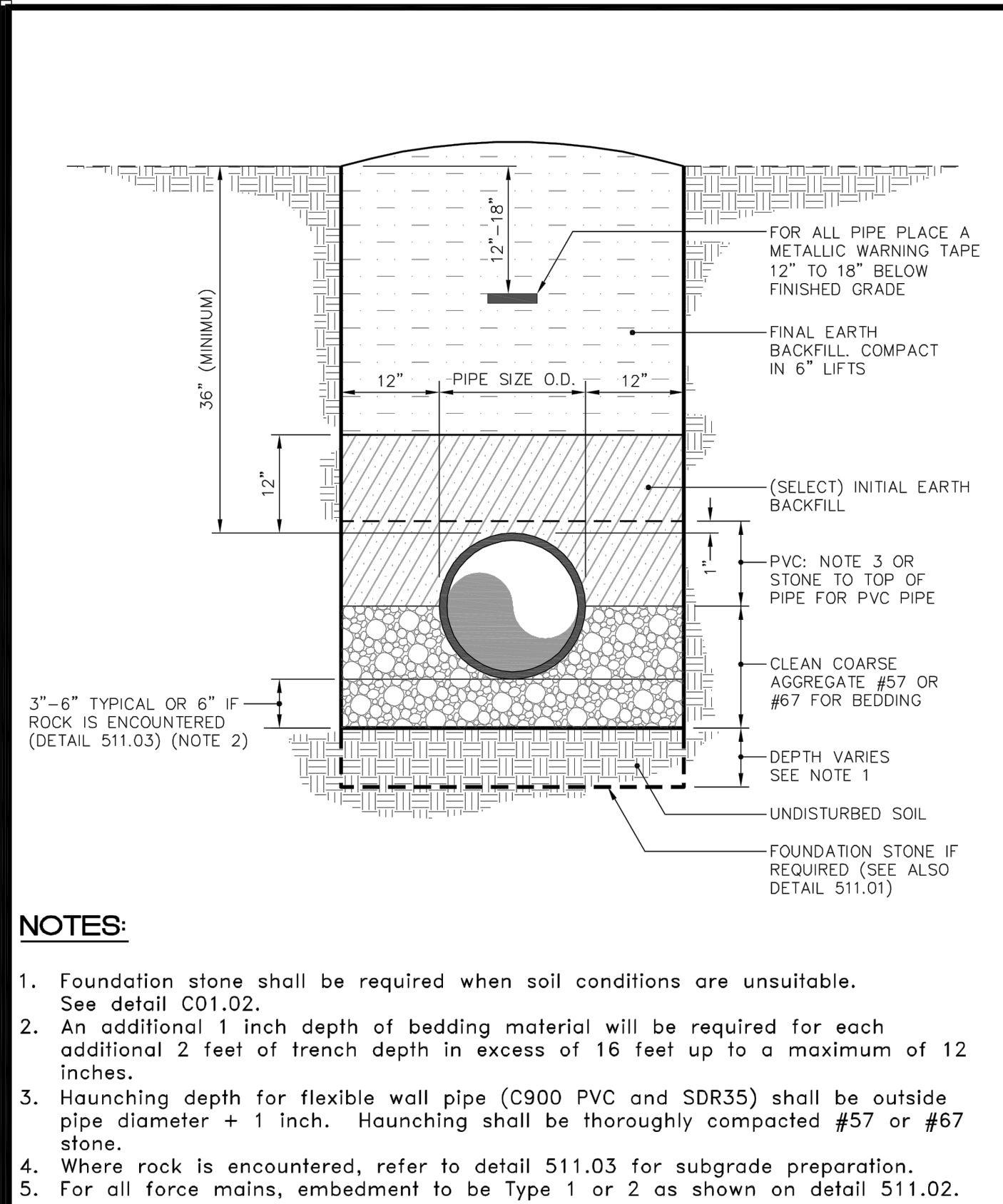
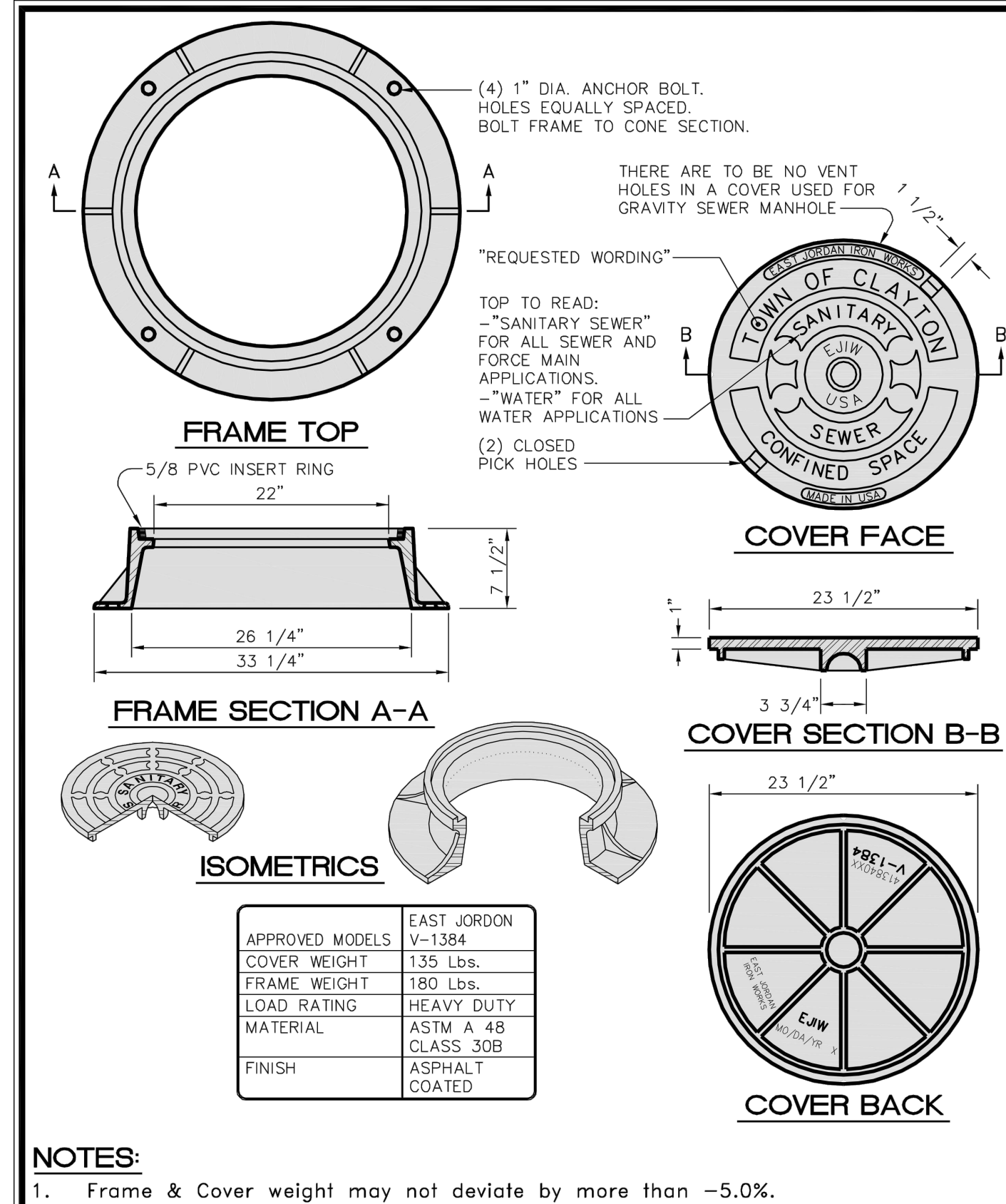
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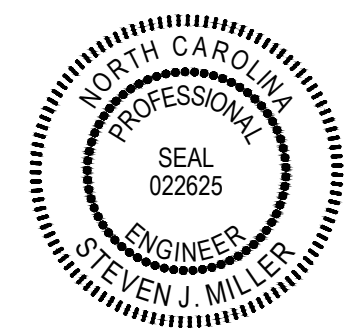
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PROJECT TITLE

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## BID DOCUMENTS

PROJECT PHASE

2307

BOOMERANG DESIGN PROJECT NUMBER

02.07.24

DRAWING RELEASE DATE

## DETAILS

SHEET TITLE

**C711**

SHEET



## ABBREVIATIONS

ABBREV.	DEFINITION
AMPS	AMPERE, AMPERAGE
AC	ADVANCE OF ALL REQUIRED SHUTDOWNS ELECTRICAL
EC	ABOVE COUNTER
A/C	ALTERNATING CURRENT
ADA	AMERICANS WITH DISABILITIES ACT
AFB	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CURRENT
AL	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
ATSC	AUTOMATIC TRANSFER SWITCH CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO/VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BFC	BELOW FINISHED CEILING
C	CONDUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CT	CURRENT TRANSFORMER
CU	COPPER
DD	DIMMING OR DIMMER
DDC	DIGITAL CONTROLS
DB	DISTRIBUTION BOARD
DC	DIRECT CURRENT
DL	DAY-LIGHTING
DISC	DISCONNECT SWITCH
ECB	ENCLOSED CIRCUIT BREAKER
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FUT	FUTURE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
FDR	FEEDER
GAA	GENERATOR ALARM ANNUNCIATOR
GAP	GENERATOR ALARM PANEL
GEN	GENERATOR
GEQ	GROUND ELECTRODE CONDUCTOR
GFI	GROUND FAULT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT EQUIPMENT PROTECTION
GFP	GROUND FAULT PROTECTION
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HH	HAND HOLE
HOA	HAND-OFF AUTOMATIC
HP	HORSEPOWER
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
IG	ISOLATED GROUND
KMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPS
KW	KILOWATT
KWH	KILOWATT HOURS
LC	LIGHTING CONTRACTOR
LSIG	LOUD SPEAKER
	LONG TIME, SHORT TIME, INSTANTANEOUS
	AND GROUND FAULT PROTECTION
	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MIN	MINIMUM
MH	MAN HOLE
MLO	MAIN LUGS ONLY
MTS	MANUAL TRANSFER SWITCH
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
	NEUTRAL
N or NEUT	NATIONAL FIRE PROTECTION ASSOCIATION
NFP	NOT IN CONTRACT
NO	NORMALLY OPEN
OH	OVER HEAD
P	POLE
PA	PUBLIC ADDRESS
PB	PULL BOX
PC	PHOTOCELL
PH	PHASE POTENTIAL
PT	POTENTIAL TRANSFORMER
RC	RECEPTACLE CONTACTOR
RSC	RIGID STEEL CONDUIT
SEC	SECURITY
SPD	SURGE PROTECTIVE DEVICE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TIME CLOCK
TEMP	TEMPERATURE
TGB	TECHNOLOGY GROUND BAR
TGMB	TECHNOLOGY MAIN GROUND BAR
TIS	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TYP.	TYPICAL
UC	UNDER COUNTER
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UL	UNDERWRITERS' LABORATORIES
UNON	UNLESS OTHERWISE NOTED
	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS, VOLTAGE
VFD	VARIABLE FREQUENCY DRIVE
WG	WIRE GUARD
WP	WEATHERPROOF
XFER	TRANSFER
XFMR	TRANSFORMER

## DEMOLITION GENERAL NOTES:

- A. NOTIFY THE OWNER, IN WRITING, AT LEAST 7 DAYS IN ADVANCE OF ALL REQUIRED SHUTDOWNS ELECTRICAL UTILITIES. UPON WRITTEN RECEIPT OF APPROVAL FROM THE OWNER, SHUTDOWNS SHALL BE PERFORMED AS DIRECTED BY THE OWNER AND SHALL BE CONDUCTED AT NO ADDITIONAL CONTRACT COST. AT THE COMPLETION OF EACH SHUT DOWN, ALL SERVICES SHALL BE RESTORED SO THAT NORMAL OPERATION OF ALL UTILITIES CAN RESUME.
- B. WHEN WORKING IN AND AROUND THE EXISTING BUILDING, EXTREME CARE SHALL BE EXERCISED IN REGARDS TO PROTECTION OF THE EXISTING STRUCTURE, MECHANICAL AND ELECTRICAL SERVICES WHICH WILL REMAIN. REPAIR, REPLACE OR RESTORE TO THE SATISFACTION OF THE OWNER/ARCHITECT/ENGINEER ALL EXISTING WORK DAMAGED IN THE PERFORMANCE OF DEMOLITION AND/OR NEW WORK.
- C. ALL EXISTING WIRING, EQUIPMENT, CONDUITS AND MATERIALS NOT REQUIRED FOR RE-USE OR RE-INSTALLATION (SHOWN OR OTHERWISE) SHALL BE REMOVED. ALL EXISTING MATERIALS AND EQUIPMENT WHICH ARE REMOVED AND DESIRED BY THE OWNER, OR ARE INDICATED TO REMAIN AS THE PROPERTY OF THE OWNER, SHALL BE DELIVERED TO THE OWNER ON THE PREMISES BY THE CONTRACTOR WHERE DIRECTED BY THE ARCHITECT. ALL OTHER MATERIALS AND EQUIPMENT WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY THE CONTRACTOR FROM THE PREMISES.
- D. EXISTING CONDITIONS (PRESENCE AND LOCATION OF PANELBOARDS, LIGHTING FIXTURES, RECEPTABLES, EQUIPMENT, MATERIALS AND CIRCUITING) INDICATED ARE BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD SURVEYS AND ARE NOT WARRANTED TO BE COMPLETE OR CORRECT. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF ALL CONDUITS, EQUIPMENT AND MATERIALS IN THE FIELD PRIOR TO STARTING ANY WORK.
- E. EXISTING EQUIPMENT SIZES NOTED ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND ARE NOT WARRANTED TO BE CORRECT. CONTRACTOR SHALL VERIFY ALL SIZES IN THE FIELD IF EQUIPMENT IS IN PROJECT SCOPE.
- F. WHEN EXISTING MECHANICAL AND ELECTRICAL WORK IS REMOVED, ALL CONDUITS, WIRING AND MATERIALS SHALL BE REMOVED TO A POINT BELOW FINISHED FLOORS OR BEHIND FINISHED WALLS AND CAPPED, SUCH POINTS SHALL BE FAR ENOUGH BEHIND FINISHED SURFACES TO ALLOW FOR THE INSTALLATION OF THE NORMAL THICKNESS OF FINISHED MATERIAL.
- G. EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT, CONDUIT, WIRING, DEVICES, AND MATERIALS AFFECTED BY DEMOLITION OR NEW WORK INSTALLATION AND REQUIRED TO REMAIN IN SERVICE SHALL BE REINSTALLED OR SUPPORTED AS REQUIRED IN ACCORDANCE WITH NEW WORK SPECIFICATIONS. ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE OWNER.
- H. IN GENERAL, ON DEMOLITION DRAWINGS, ALL EQUIPMENT AND MATERIALS SHOWN "LIGHT" ARE EXISTING TO REMAIN AND ALL EQUIPMENT AND MATERIALS SHOWN AS "HEAVY AND DASHED" ARE EXISTING TO BE DEMOLISHED.
- I. ENSURE THAT ALL ELECTRICAL WORK IS DONE DE-ENERGIZED. SPECIFICALLY WHERE ELECTRICAL EQUIPMENT IS OPENED EXPOSING LIVE PARTS, BREAKERS ARE REMOVED OR INSTALLED OR WHERE ELECTRICAL CONNECTIONS ARE MODIFIED. ALL POWER AT THE PANEL OR ENCLOSURE SHALL BE DE-ENERGIZED AT ITS SOURCE, PRIOR TO WORK BEING DONE.
- J. ALL TESTING, TROUBLESHOOTING AND VERIFICATION OF DEENERGIZATION IS TO BE DONE IN ACCORDANCE WITH NFPA 70E INCLUDING ESTABLISHING, ISOLATING IF REQUIRED, SHOCK PROTECTIVE AND ARC FLASH PROTECTIVE APPROACH BOUNDARIES AND WEARING PERSONAL PROTECTIVE EQUIPMENT APPROPRIATE FOR THE HAZARD.
- K. PRIOR TO THE REMOVAL OF A CIRCUIT FROM A PANELBOARD, THE CONTRACTOR SHALL VERIFY THAT NO EXISTING LOADS REMAIN ON THAT CIRCUIT. IF UNEXPECTED LOADS REMAIN ON THE CIRCUIT, NOTIFY EOR FOR DIRECTIONS TO PROCEED. ONCE CIRCUITS HAVE BEEN VERIFIED TO BE UNDER NO LOAD, BREAKERS IN THE CORRESPONDING PANELBOARD SHALL BE FLIPPED TO THE "OFF" POSITION AND MARKED AS SPARE AND READY FOR FUTURE WORK. ALL CONDUIT AND WIRING SHALL BE REMOVED BACK TO SOURCE.
- L. UPDATE PANEL SCHEDULES TO REFLECT NEW AND CHANGED LOAD. ALL PANEL SCHEDULES SHALL BE COMPUTER GENERATED.
- M. EXISTING FIRE ALARM SYSTEM SHALL BE MAINTAINED AND OPERABLE DURING DEMOLITION. CONTRACTOR SHALL TEMP EXISTING DEVICES TO ALLOW DEMOLITION OF EXISTING CONDUIT AND WIRING.

## GENERAL NOTES

1. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR FLOOR PLAN DIMENSIONS. DO NOT SCALE THESE DRAWINGS.
2. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ANY AND ALL WORK WITH OTHER TRADES INVOLVED IN THE PROJECT. PRIOR TO THE INSTALLATION OF HIS EQUIPMENT SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM MAINTENANCE AND WORKING SPACE.
3. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING SYSTEM. REFER TO THE SPECIFICATIONS FOR MORE DETAILED INFORMATION.
4. USE OF THE CONDUIT SYSTEM FOR EQUIPMENT GROUNDING SHALL NOT BE ACCEPTABLE. A SEPARATE GREEN GROUND WIRE SHALL RUN WITH THE CIRCUIT CONDUCTORS IN EACH CIRCUIT.
5. IN ALL AREAS WHERE FIRE RATED WALLS, FLOORS AND CEILINGS ARE INSTALLED, ALL PENETRATIONS OF ELECTRICAL CONDUITS OR OTHER RELATED ELECTRICAL MATERIAL SHALL BE PROPERLY SEALED WITH APPROVED FIRE RATED MATERIALS TO MAINTAIN THE RATINGS OF THE BUILDING CONSTRUCTION.
6. ALL FUSES, DISCONNECT SWITCHES, AND BREAKER SIZES SHOWN FOR MECHANICAL/PLUMBING/FIRE PROTECTION SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR THE CORRECTNESS OF THE PROVIDED INFORMATION. NOTE: ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL DISCONNECTS AND LINE SIDE CONDUIT/WIRING FOR LINE SIDE CONNECTIONS AND FINAL CONNECTIONS SHALL BE BY PLUMBING, MECHANICAL OR FIRE PROTECTION CONTRACTOR AS APPLICABLE.
7. ALL WORK AND MATERIAL SHALL BE PROVIDED IN ACCORDANCE WITH STATE, LOCAL AND NATIONAL CODES AND ORDINANCES.
8. THE NEW FIRE ALARM EQUIPMENT SHOWN SHALL BE PROVIDED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. PROVIDE ALL WIRING AS REQUIRED FOR A COMPLETE SYSTEM.
9. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL CEILING TYPES AND FINISHES BEFORE PURCHASE OF ANY LIGHT FIXTURES SO THAT THE PROPER TRIM WILL BE PROVIDED FOR THE CEILING TO BE INSTALLED, ANY DIFFERENCES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
10. EACH CONTRACTOR SHALL PROVIDE HIS OWN SUPPORT OF ALL DEVICES AND EQUIPMENT PROVIDED BY HIM AND SHALL SUPPORT SUCH EQUIPMENT PER APPROVED GOVERNING CODES OR PER APPROVAL OF THE ENGINEER. UNACCEPTABLE WORKMANSHIP OR MATERIALS SHALL BE REPLACED AT THE REQUEST OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
11. ALL JUNCTION BOXES AND CONDUIT RUNS (WITH OR WITHOUT WIRES) SHALL BE COLOR CODED WITH PAINT, IN ACCORDANCE WITH SPECIFICATION 260553.
12. THE MOUNTING HEIGHTS AND LOCATIONS OF ALL WALL MOUNTED OUTLETS AND JUNCTION BOXES SHALL BE COORDINATED WITH THE ARCHITECT AND OWNER PRIOR TO INSTALLATION. FOR USE WITH THE ACTUAL EQUIPMENT, CASEWORK AND MILLWORK TO BE FURNISHED.
13. ALL WIRE AND CONDUIT SIZES ARE BASED ON 75°C THIN OR THIN WIRE UNLESS OTHERWISE NOTED.
14. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE UTILITY POWER COMPANY THE WORK REQUIRED FOR CONNECTION TO THE UTILITY'S NEW TRANSFORMER METERING, ETC.
15. WHERE MULTIPLE SWITCHES ARE SHOWN IN THE SAME LOCATION (EXCEPT CLASSROOM), THEY SHALL BE GANGED TOGETHER IN ONE MULTIPLE GANG BOX WITH MATCHING COVER AND PARTITION (IF REQUIRED). THE ELECTRICAL CONTRACTOR SHALL LOOK AT BOTH POWER AND LIGHTING PLAN TO DETERMINE WHICH SWITCH IS APPLICABLE.
16. THE LOCATION OF ALL WALL MOUNTED DEVICES, INCLUDING MOUNTING HEIGHTS, SHALL BE FIELD VERIFIED WITH THE ARCHITECT PRIOR TO INSTALLATION.
17. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE TELEPHONE AND CABLE TV COMPANIES THE LOCATION AND ROUTING OF THE UNDERGROUND INCOMING SERVICE. THE ELECTRICAL CONTRACTOR SHALL PAY FOR ALL NECESSARY CHARGES FOR INSTALLATION OF UNDERGROUND SERVICE, AS SHOWN ON THE PLANS.
18. WHERE ELECTRICAL RACEWAY PENETRATES EXTERIOR WALLS OR THE ROOF, THEY SHALL BE PROPERLY SEALED WITH METHODS APPROVED BY THE ENGINEER. SUBMIT DETAIL OF PROPOSED SEALING METHODS.
19. ALL EXTERIOR BUILDING LIGHTS AND EMERGENCY LIGHTING SHALL BE WIRED WITH #10 AWG, UNLESS OTHERWISE NOTED.
20. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CHAIN HUNG FIXTURES LOCATED IN MECHANICAL OR CONTROL SPACES WITH OTHER TRADES, SO AS NOT TO CONFLICT WITH OTHER EQUIPMENT.
21. ALL EMERGENCY LIGHTING, EXT SIGNS AND EMERGENCY NIGHT LIGHTS SHALL BE WIRED AHEAD OF ANY SWITCH AND/OR BUILDING AUTOMATION SYSTEM.
22. WHERE CONDUIT OR OUTLET BOXES CANNOT BE INSTALLED IN EXISTING WALLS FOR NEW DEVICES, THEN PROVIDE AND INSTALL SURFACE MOUNTED WIREMOLD RACEWAYS. CONFIRM ALL WIREMOLD WITH ARCHITECT PRIOR TO INSTALLATION.
23. OUTLET BOXES ON OPPOSITE SIDES OF THE FIRE RESISTANT WALL OR SHORT ENCLOSURE RATED TWO HOURS OR LESS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24".
24. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ACCESS PANELS AS REQUIRED FOR ELECTRICAL CODE COMPLIANCE AND TO ACCESS ANY INSTALLATION THAT WILL REQUIRE FUTURE MAINTENANCE. THESE DOORS SHALL BE 20" X 20". EACH ROOM WITH A DRYWALL CEILING SHALL HAVE A MINIMUM OF ONE ACCESS DOOR PROVIDED BY THE ELECTRICAL CONTRACTOR. THE DRYWALL SUBCONTRACTOR WILL PROVIDE THE REQUIRED FRAMED OPENING AND INSTALL THE ACCESS DOORS.
25. PROVIDE FIVE (5)-3/4" SPARE CONDUITS IN RECESSED ELECTRICAL PANELS FOR FUTURE ACCESS.
26. ALL UNDERGROUND CONDUITS SHALL BE IDENTIFIED ON ASBUILT PLANS WITH DIMENSIONS LOCATING THE CONDUITS AND THEIR RESPECTIVE BURIAL DEPTHS.
27. CONDUCTORS FOR BRANCH CIRCUITS SHALL BE SIZED TO PREVENT VOLTAGE DROP EXCEEDING 3% AT THE FARTHEST OUTLET OF POWER, HEATING AND LIGHTING LOADS, OR ANY COMBINATION OF SUCH LOADS. THE MAXIMUM TOTAL VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST OUTLET SHALL NOT EXCEED 5%.
- A. WHERE THE BRANCH CIRCUIT CONDUCTOR LENGTH FROM THE PANEL TO THE FIRST OUTLET ON A 277V CIRCUIT EXCEEDS 125'-0", THE BRANCH CIRCUIT CONDUCTORS FROM THE PANEL TO THE FIRST OUTLET SHALL NOT BE SMALLER THAN #10AWG. INCREASE THE BRANCH CIRCUIT CONDUCTOR SIZE AN ADDITIONAL WIRE SIZE FOR EACH ADDITIONAL 125' FOR THE ENTIRE CIRCUIT. THE GROUND CONDUCTOR SIZE SHALL BE INCREASED PROPORTIONALLY TO THE INCREASED PHASE CONDUCTORS AS PER NEC 2020 250 122 (B).
- B. WHERE THE CONDUCTOR LENGTH FROM THE PANEL TO THE FIRST OUTLET ON A 120V CIRCUIT EXCEEDS 50'-0", THE BRANCH CIRCUIT CONDUCTORS FROM THE PANEL TO THE FIRST OUTLET SHALL NOT BE SMALLER THAN #10AWG. INCREASE THE BRANCH CIRCUIT CONDUCTOR SIZE AN ADDITIONAL WIRE SIZE FOR EACH ADDITIONAL 125' FOR THE ENTIRE CIRCUIT. THE GROUND CONDUCTOR SIZE SHALL BE INCREASED PROPORTIONALLY TO THE INCREASED PHASE CONDUCTORS AS PER NEC 2020 250 122 (B).
28. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.
29. ALL CONDUIT SHALL BE MINIMUM 3/4".
30. REFER TO DETAIL FOR LIGHTING INTEGRATION WITH BUILDING AUTOMATION SYSTEM.
31. EXCEPT WHERE SHOWN ON PLANS OR ABSOLUTELY NECESSARY (MUST BE APPROVED BY DESIGN TEAM), ALL CONDUITS AND PIPING SHALL BE CONCEALED IN BULKHEADS AND ABOVE CEILINGS AND NOT ROUTED THROUGH OPEN CEILINGS. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR THE LOCATION OF OPEN CEILINGS. WHEN CONDUITS ARE REQUIRED TO BE RUN EXPOSED, THEY ARE TO RUN TIGHT TO STRUCTURE AND BE PAINTED TO MATCH THE STRUCTURE.

## SYMBOL LEGEND (CONTINUED)

SYMBOL	DESCRIPTION	REMARKS
	8"x4"x1/4" FIRE RETARDANT PLYWOOD BACK BOARD FOR MDF AND IDF CLOSETS	REFER TO SPECIFICATIONS
	NAPCO X255 SECURITY PANEL - SEE RISER ON E00.05/5.	REFER TO SPECIFICATION
	CLASCOM CEILING MOUNTED MOTION DETECTOR	REFER TO SPECIFICATION
	MOTION SENSOR - WALL MOUNTED WA = WIDE ANGLE, LR = LONG RANGE	REFER TO SPECIFICATION
	NUMERICAL REMOTE SECURITY KEYPAD, LOCATE AT +60" AFF.	REFER TO SPECIFICATION
	EXTERNAL DOOR SECURITY CARD READER, +48" TO TOP OF BOX REFER TO DETAILS E00.07/5, 6 AND 7.	REFER TO SPECIFICATION
	SECURITY CARD ACCESS CONTROL SYSTEM	REFER TO SPECIFICATION
	VIDEO SURVEILLANCE CAMERA - "CAM #1" INDICATES CAMERA NUMBER. PROVIDE CAT-5 WIRING TO CAMERA LOCATION. REFER TO DETAILS E00.07/3 AND E00.05/8.	REFER TO SPECIFICATION
	DIGITAL TIME SWITCH/BACKLIT LED TIMER COUNTDOWN WITH ADJUSTMENTS FROM 5 MINUTES TO 12 HOURS.	WATTSTOPPER TS-400 OR EQUAL
	120/208 VOLT PANELBOARD WITH NEUTRAL AND GROUND BUS ACCESSORIES.	REFER TO SPECIFICATION
	277/480 VOLT PANELBOARD WITH NEUTRAL AND GROUND BUS ACCESSORIES.	REFER TO SPECIFICATION
	SURGE PROTECTIVE DEVICE	REFER TO SPECIFICATION
	DRY TYPE STEP DOWN TRANSFORMER 480-120/208V 3 PHASE	REFER TO SPECIFICATION
	DISCONNECT SWITCH, HEAVY DUTY.	REFER TO SPECIFICATION
	WIRING AND CONDUIT INSTALLED CONCEALED IN WALL SPACE OR ABOVE FINISHED CEILING	REFER TO SPECIFICATION
	UNSWITCHED WIRING AND CONDUIT LEG ON LIGHTING PLANS. UNDER FLOOR WIRING AND CONDUIT ON POWER PLANS. UNDER GROUND WIRING AND CONDUIT ON SITE PLANS.	REFER TO SPECIFICATION
	HOME RUN CIRCUIT TO PANELBOARD	REFER TO SPECIFICATIONS
	CONDUIT SLEEVES - SIZE AND QUANTITY AS SHOWN ON PLANS	
	JUNCTION BOX WITH REMOVABLE COVER - SIZE PER NATIONAL ELECTRICAL CODE	

## ELECTRICAL SYSTEM AND EQUIPMENT

## METHOD OF COMPLIANCE:

ENERGY CODE:      PRESCRIPTIVE ☒ PERFORMANCE \_\_\_\_\_  
ASHRAE 90.1:      PRESCRIPTIVE \_\_\_\_\_ PERFORMANCE \_\_\_\_\_

## LIGHTING SCHEDULE

Lamp type required in future - See Fixture Schedule.  
Number of lamps in future - See Fixture Schedule.  
Ballast type used in the future - See Specifications.  
Number of ballasts in future - See Specifications.  
Total wattage per fixture - Varies - See Fixture Schedule  
Total interior wattage specified versus allowed:    16,831 watts versus 34,163 watts (whole building)  
Total exterior wattage specified versus allowed:    569 watts versus 1920 watts

## ADDITIONAL PRESCRIPTIVE COMPLIANCE

- ☒ 406.2 More Efficient HVAC Performance  
☒ 406.3 Reduced Lighting Power Density  
406.4 Enhanced Lighting Controls  
406.5 On-Site Supply of Renewable Energy  
406.6 Provision of Dedicated Outdoor HVAC Air System  
406.7 High Efficiency Service Water Heating

## DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of the 2018 North Carolina State Building Code, Energy Conservation Code.

## SYMBOL LEGEND

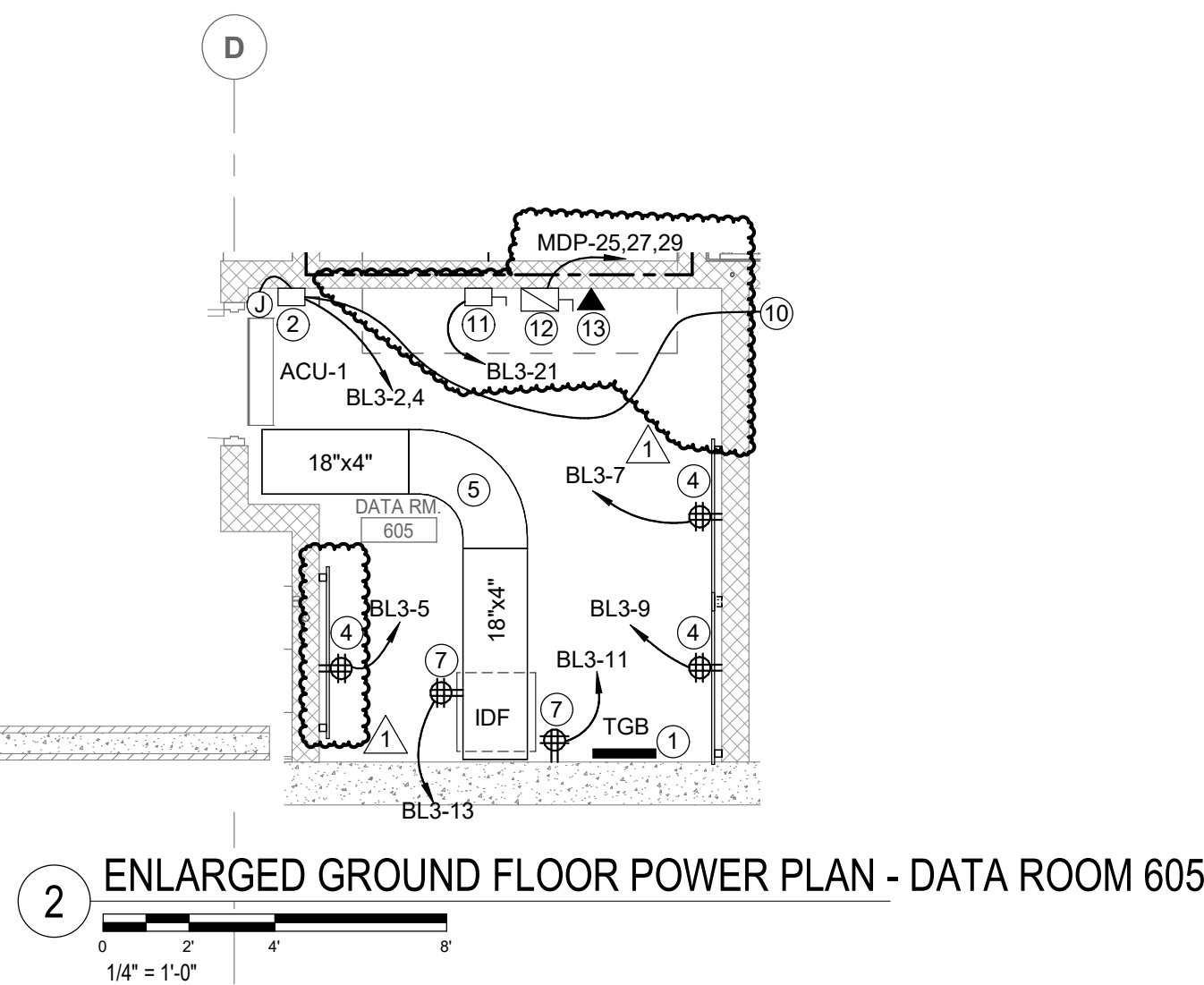
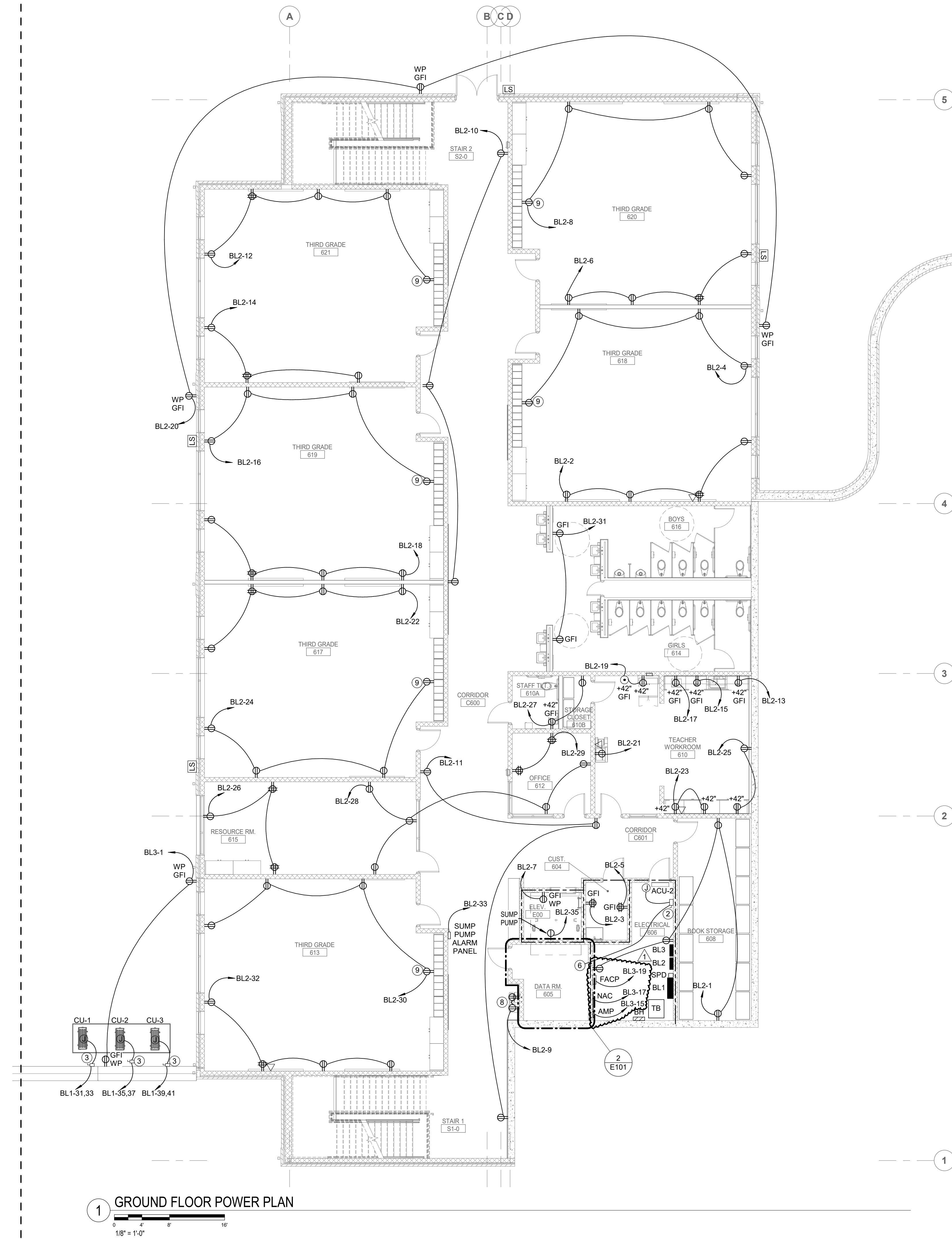
SYMBOL	DESCRIPTION	REMARKS
	LED LIGHT FIXTURE - LETTER DESIGNATES TYPE	SEE FIXTURE SCHEDULE
	NIGHT LIGHT LED LIGHT FIXTURE - LETTER DESIGNATES TYPE	SEE FIXTURE SCHEDULE
	LED LIGHT FIXTURE - LETTER DESIGNATES TYPE	SEE FIXTURE SCHEDULE
	LED EMERGENCY LIGHT FIXTURE - LETTER DESIGNATES TYPE	SEE FIXTURE SCHEDULE
	LINEAR LIGHTING FIXTURE	SEE FIXTURE SCHEDULE
	BATTERY POWERED EMERGENCY FIXTURE - WALL MOUNTED	SEE FIXTURE SCHEDULE
	EXIT LIGHT - ARROW INDICATES DIRECTION & SHADING INDICATES ILLUMINATED FACE(S).	SEE FIXTURE SCHEDULE
	SINGLE POLE TOGGLE SWITCH - +48" ABOVE FINISHED FLOOR TO TOP OF OUTLET, UNLESS OTHERWISE NOTED.	HUBBELL 12214 WITH 97071 COVER EQUALS BY LEVITON OR P&S
	3-WAY SWITCH - INSTALL AT +48" ABOVE FINISHED FLOOR TO TOP OF OUTLET	HUBBELL 12234 WITH 97071 COVER EQUALS BY LEVITON OR P&S
	4-WAY SWITCH - INSTALL AT +48" ABOVE FINISHED FLOOR TO TOP OF OUTLET	HUBBELL 12244 WITH 97071 COVER EQUALS BY LEVITON OR P&S
	SINGLE POLE KEY SWITCH - INSTALL AT +48" ABOVE FINISHED FLOOR TO TOP OF OUTLET, UNLESS OTHERWISE NOTED.	HUBBELL LEVITON OR P&S STAINLESS STEEL COVER AND 2 KEYS PER SWITCH
	MECHANICALLY HELD LIGHTING CONTACTOR. # INDICATES CONTACTOR NUMBER. PROVIDE NUMBER OF CONTACTS AS REQUIRED. PROVIDE # CONTACTS AS NEEDED OR EQUAL BY SIEMENS OR Eaton	SQUARE D CLXXXXX PROVIDE # CONTACTS AS NEEDED OR EQUAL BY SIEMENS OR Eaton
	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR WITH ISOLATED RELAY AND WIDE ANGLE LENS. TIME DELAYS OF NO LESS THAN 15 MINUTES. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.	SEE DETAILS AND SPECIFICATION 260923
	CORNER MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR WITH ISOLATED RELAY AND WIDE ANGLE LENS. TIME DELAYS OF NO LESS THAN 15 MINUTES. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.	SEE DETAILS AND SPECIFICATION 260923
	PASSIVE INFRARED WALL SWITCH SENSOR - COVERAGE: MAJOR MOTION 35X30; MINOR MOTION 20X15. TIME DELAYS OF NO LESS THAN 15 MINUTES. MOUNT AT +48" TO TOP OF OUTLET BOX. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.	SEE DETAILS AND SPECIFICATION 260923
	120/277 VOLT LINE VOLTAGE @ 10V (1500VA) SLIDE DIMMER SWITCH WITH ON/OFF - COMPATIBLE WITH LED FIXTURE - MOUNT AT +48" TO TOP OF OUTLET BOX	LEVITON ILLUMATECH SERIES #P710L-F-Z OR EQUAL BY Eaton OR LUTRON
	120 VOLT, 20 AMP, MOTOR RATED TOGGLE DISCONNECT SWITCH WITH JUNCTION BOX	HUBBELL LEVITON OR P&S
	DUPLEX TAMPER RESISTANT GROUNDING TYPE RECEPTACLE - AT +10" ABOVE FINISHED FLOOR TO BOTTOM OF OUTLET, UNON	HUBBELL 5262XTR W/ 97071 COVER EQUALS: LEVITON, P&S
	TWO DUPLEX TAMPER RESISTANT GROUNDING TYPE RECEPTABLES IN A DOUBLE GANG ENCLOSURE MOUNT AT +10" AFF TO BOTTOM OF OUTLET. PROVIDE WITH STAINLESS STEEL COVER UNON	HUBBELL 5262XTR W/ 97071 COVER EQUALS: LEVITON, P&S
	TAMPER RESISTANT GFCI DUPLEX RECEPTACLE -GROUND FAULT INTERRUPTION TYPE INSTALL AT +10" ABOVE FINISHED FLOOR TO BOTTOM OF OUTLET, UNON	HUBBELL GFRS262XTR WITH 5526 COVER
	TAMPER RESISTANT DUPLEX GROUNDING TYPE RECEPTACLE WITH WEATHERPROOF, IN-HUSE COVER MOUNTED AT +10" ABOVE GRADE TO BOTTOM OF OUTLET BOX, UNLESS OTHERWISE NOTED, WITH HEAVY DUTY GRAY IN-HUSE COVER (RAYMAY OR EQUAL)	HUBBELL GFRS262XTR WITH HEAVY DUTY IN USE COVER COVER EQUALS: P&S, LEVITON
	DATA OUTLET - REFER TO E03 SERIES PLANS AND DATA SCHEDULES FOR QUANTITY OF CAT-6 DROPS AT EACH OUTLET.	SINGLE GANG BOX WITH 3/4" CONDUIT STUBBED ABOVE CEILING
	120 VOLT, 20 AMP FACELESS GFI DEVICE	
	WIRELESS ACCESS POINT, WITH CAT-6A DATA DROP. REFER TO PLANS FOR LOCATIONS.	SEE SPECIFICATION
	EXISTING BOGEN MULTI-TOM 200M INTERCOM HEAD-END UNIT	
	WALL MOUNTED LOUDSPEAKER. EXACT MOUNTING HEIGHT FOR OUTDOOR SPEAKERS TO BE COORDINATED WITH ARCHITECT. WP/WEA THERPROOF. MOUNT ON INTERIOR AT +88" AFF.	SEE SPECIFICATION
	RECESSED CEILING SPEAKER, WITH BACK BOX AND ACCESSORIES - MATCH EXISTING BOGEN SPEAKERS	SEE SPECIFICATION
	HVAC CONTROL PANEL PROVIDED BY HVAC CONTRACTOR	
	FIRE ALARM SYSTEM AMPLIFIER CABINET	REFER TO SPECIFICATIONS
	FIRE ALARM SYSTEM NOTIFICATION APPLIANCE BOOSTER CABINET	REFER TO SPECIFICATIONS
	VARIABLE FREQUENCY DRIVE FURNISHED BY HVAC CONTROLS CONTRACTOR AND INSTALLED WIRED BY THE ELECTRICAL CONTRACTOR	REFER TO SPECIFICATIONS
	IDF DATA RACK PROVIDED BY CONTRACTOR	REFER TO SPECIFICATIONS
	IDF ROOM GROUND BAR, REFER TO SPECIFICATIONS AND REFERS TO DETAILS E502/8 AND E505/5	REFER TO SPECIFICATIONS
	CONDUITS SLEEVES TURN DOWN TO CEILING CAVITY BELOW.	
	SINGLE GANG VOICE OUTLET WITH 1" CONDUIT STUBBED ABOVE NEAREST LAY-IN CEILING FOR: ELEVATOR, FIRE ALARM OR SECURITY INTRUSION SYSTEM. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH SYSTEM PROVIDED. SEE DETAIL E00.08/3.	
	LIGHTING OVERRIDE SWITCH - PROVIDED AND WIRED BY MECHANICAL CONTROLS CONTRACTOR	REFER TO SPECIFICATIONS AND MECHANICAL DRAWINGS FOR SEQUENCE OF OPERATIONS
	EXTERNAL DOOR SECURITY CARD READER. LOCATE 48" TO TOP OF BOX.	SEE SPECIFICATIONS
	SECURITY DOOR CONTACT	SEE SPECIFICATIONS
	REQUEST TO EXIT MOTION	SEE SPECIFICATIONS
	SIMPLEX RECEPTACLE FOR ELEVATOR SUMP PUMP	HUBBELL LEVITON OR P&S
	FIRE ALARM SIGNAL/SPEAKER - AUDIO/VISUAL, WALL MOUNTED AT +84" ABOVE FINISHED FLOOR. "WP" INDICATES WEATHERPROOF # CD INDICATES CANDELLA RATING OF STROBE.	REFER TO SPECIFICATION
	FIRE ALARM SIGNAL - VISUAL, WALL MOUNTED AT +84" ABOVE FINISHED FLOOR. "WP" INDICATES WEATHERPROOF # CD INDICATES CANDELLA RATING OF STROBE.	REFER TO SPECIFICATION
	CEILING MOUNTED FIRE ALARM STROBE - # CD INDICATES CANDELLA RATINGS OF STROBE	REFER TO SPECIFICATION
	MANUAL FIRE ALARM PULL STATION - INSTALL AT +48" ABOVE FINISHED FLOOR TO TOP OF BOX (DOUBLE ACTION). PROVIDE LEXAN STOPPER II COVERS ON ALL PULL STATIONS.	REFER TO SPECIFICATIONS PROVIDE WITH LEXAN PROTECTIVE COVER
	FIRE ALARM SPEAKER - AUDIO ONLY, WALL MOUNTED AT +84" ABOVE FINISHED FLOOR. "WP" INDICATES WEATHERPROOF	REFER TO SPECIFICATION
	PHOTOELECTRIC TYPE SMOKE DETECTOR - CEILING MOUNTED	REFER TO SPECIFICATION
	DUCT TYPE PHOTOELECTRIC SMOKE DETECTOR INSTALLED IN MECHANICAL DUCTWORK, FURNISHED BY ELECTRICAL CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR WITH FINAL CONNECTION BY ELECTRICAL CONTRACTOR.	REFER TO SPECIFICATION
	RECESSED CEILING MOUNTED FIRE ALARM SPEAKER	REFER TO SPECIFICATION
	SPRINKLER BELL	
	REMOTE ALARM ANNUNCIATORS FOR DUCT DETECTORS. MOUNT AT +88" AFF UNLESS OTHERWISE NOTED. MUST BE KEY-OPERATED. "N" DENOTES AIR HANDLING UNIT NUMBER TO BE IDENTIFIED ON FACEPLATE.	REFER TO SPECIFICATION
	MAGNETIC DOOR HOLDER, WALL MOUNTED/FLOOR MOUNTED, TO BE COORDINATED WITH GENERAL CONTRACTOR/ARCHITECT.	REFER TO SPECIFICATION
	HEAT DETECTOR - FIXED TEMPERATURE (200°F @ KILN ROOM) (135°F @ MECHANICAL ROOMS)	REFER TO SPECIFICATION
	CEILING MOUNTED FIRE ALARM SPEAKER/STROBE - # CD INDICATES CANDELLA RATING OF STROBE	REFER TO SPECIFICATION
	ADDRESSABLE VOICE-EVAC FIRE ALARM PANEL, EQUALS BY: NOTIFIER OR APPROVED EQUAL	REFER TO SPECIFICATION
	REMOTE FIRE ALARM ADDRESSABLE CONTROL PANEL BY NOTIFIER OR APPROVED EQUAL. INSTALL IN RISER ROOM.	REFER TO SPECIFICATION
	TAMPER SWITCH/FLOW SWITCH - BY SPRINKLER SYSTEM CONTRACTOR ELECTRICAL CONTRACTOR SHALL CONNECT TO FIRE ALARM SYSTEM.	REFER TO SPECIFICATION
	SHUTDOWN RELAY FOR AHUS	REFER TO SPECIFICATION
	CARBON MONOXIDE DETECTOR WITH 85db SOUNDER BASE, TEMPORAL 4	COMPATIBLE WITH FA SYSTEM
	TEMPERATURE SENSOR AT FIRELINE HOT BOX	POTTER OR EQUAL
	FIRE ALARM SYSTEM MONITOR MODULE	REFER TO SPECIFICATION
	CABLE TRAY AND/OR RUNWAY	
	HAND HOLE	REFER TO ELECTRICAL SITE PLAN

## SHEET INDEX - ELECTRICAL

Sheet Number	Sheet Name	Current Revision	Current Revision Date
E101A	ENLARGED POWER PLAN - MECHANICAL YARD PLAN		
E103	EQUIPMENT PLATFORM POWER PLAN	1	02/20/2024
E201	GROUND FLOOR LIGHTING PLAN		
E202	FIRST FLOOR LIGHTING PLAN	1	02/20/2024
E203	EQUIPMENT PLATFORM LIGHTING PLAN		
E301	GROUND FLOOR TECHNOLOGY/SECURITY PLAN	1	02/20/2024
E302	FIRST FLOOR TECHNOLOGY/SECURITY PLAN	1	02/20/2024
E401	GROUND FLOOR FIRE ALARM PLAN	1	02/20/2024
E402	FIRST FLOOR FIRE ALARM PLAN	1	02/20/2024
E403	EQUIPMENT PLATFORM FIRE ALARM PLAN		
E502	DETAILS		
E503	NEW FIRE ALARM RISER/MATRIX, DETAILS	1	02/20/2024
E504	EXISTING BUILDING FIRE ALARM RISER		
E505	DETAILS	1	02/20/2024
E506	DAT/IT RISER DIAGRAM		
E700	ALT. 2 CONNECTOR & ALT. 3 CORRIDOR RENOVATION - ELECTRICAL DEMO	1	02/20/2024
E701	ALT. 2 CONNECTOR & ALT. 3 CORRIDOR RENOVATION - POWER PLAN	1	02/20/2024
E702	ALT. 2 CONNECTOR & ALT. 3 CORRIDOR RENOVATION - LIGHTING PLAN		
E703	ALT. 2 CONNECTOR & ALT. 3 CORRIDOR RENOVATION - TECHNOLOGY PLAN		
E704	ALT. 2 CONNECTOR & ALT. 3 CORRIDOR RENOVATION - FIRE ALARM PLAN	1	02/20/2024
E804	PANEL SCHEDULES		
E900	DEMOLITION SITE PLAN		
E901	NEW WORK SITE PLAN		
E001	ELECTRICAL LEAD SHEET	1	02/20/2



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#### GENERAL NOTES:

- REFER TO ELECTRICAL LEAD SHEET E001 FOR SYMBOLS, ABBREVIATIONS AND NOTES.
- ALL WORK IN TELECOM ROOMS SHALL BE COORDINATED BETWEEN DIVISION 27, 28 AND ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.
- REFER TO E300 SERIES FOR TECHNOLOGY/SECURITY AND E400 SERIES FOR FIRE ALARM WORK IN THIS AREA.
- REFER TO DRAWINGS E300 SERIES FOR CABLE TRAY AND CONDUIT SLEEVES.
- ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
- THE ELEVATOR DESIGN BASIS IS SCHINDLER 3100MRL. ALL DISCONNECTS, CONDUITS, WIRING, LIGHTING, CONTROLS, SHUNT TRIP, BATTERY LOWERING, RECEPTACLES, RELAYS AND FIRE ALARM DEVICES SHALL BE PROVIDED FOR A COMPLETE AND FUNCTIONAL SYSTEM. IF SCHINDLER ELEVATOR IS NOT PROVIDED, AND ANOTHER MANUFACTURER IS PROVIDED, THE CONTRACTORS SHALL PROVIDE A COMPLETE SYSTEM AT NO ADDITIONAL COST TO THE PROJECT.

#### KEYNOTES:

- TELECOMMUNICATIONS GROUND BAR - REFER TO DETAILS E502/6 AND E505/5.
- PROVIDE 240 VOLT, 30 AMP, 2 POLE, NEMA-1, FUSIBLE DISCONNECT SWITCH. FUSE PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- PROVIDE 240 VOLT, 30 AMP, 2 POLE, NEMA-3R, FUSIBLE DISCONNECT SWITCH. FUSE PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- 4'x8'x3/4" FIRE RETARDANT PLYWOOD BACK BOARD.
- 18" x 4" LADDER RUNWAY TRAY.
- CONTINUE TO ACU-1.
- COORDINATE PLACEMENT OF RACK RECEPTACLES WITH OWNER'S IT DEPARTMENT PRIOR TO ROUGH-IN.
- COORDINATE LOCATION OF RECEPTACLE FOR WATER COOLER WITH PLUMBING CONTRACTOR SO CORD DOES NOT SHOW. PROVIDE GFCI CIRCUIT BREAKER FOR WATER COOLER.
- REFER TO DETAIL E505/4 FOR MOUNTING RECEPTACLE HORIZONTALLY BELOW CUBBIES.
- CONTINUE TO ACU-2.
- PROVIDE 240 VOLT, 30 AMP, 2 POLE, NEMA-1 FUSIBLE DISCONNECT SWITCH FOR ELEVATOR LIGHTS/CONTROLS.
- BASIS OF DESIGN ELEVATOR IS SCHINDLER 3100MRL. PROVIDE 600 VOLT, 100 AMP, 3 POLE, NEMA-1 FUSIBLE DISCONNECT SWITCH WITH AUXILIARY DRY CONTACTS. REFER TO ELEVATOR DISCONNECT DETAIL E505/3.
- PROVIDE TELEPHONE CIRCUITS FOR ELEVATOR.

FIRE RATED WALLS

1 HR RATED



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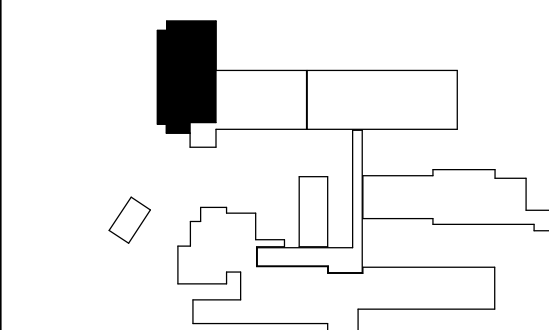
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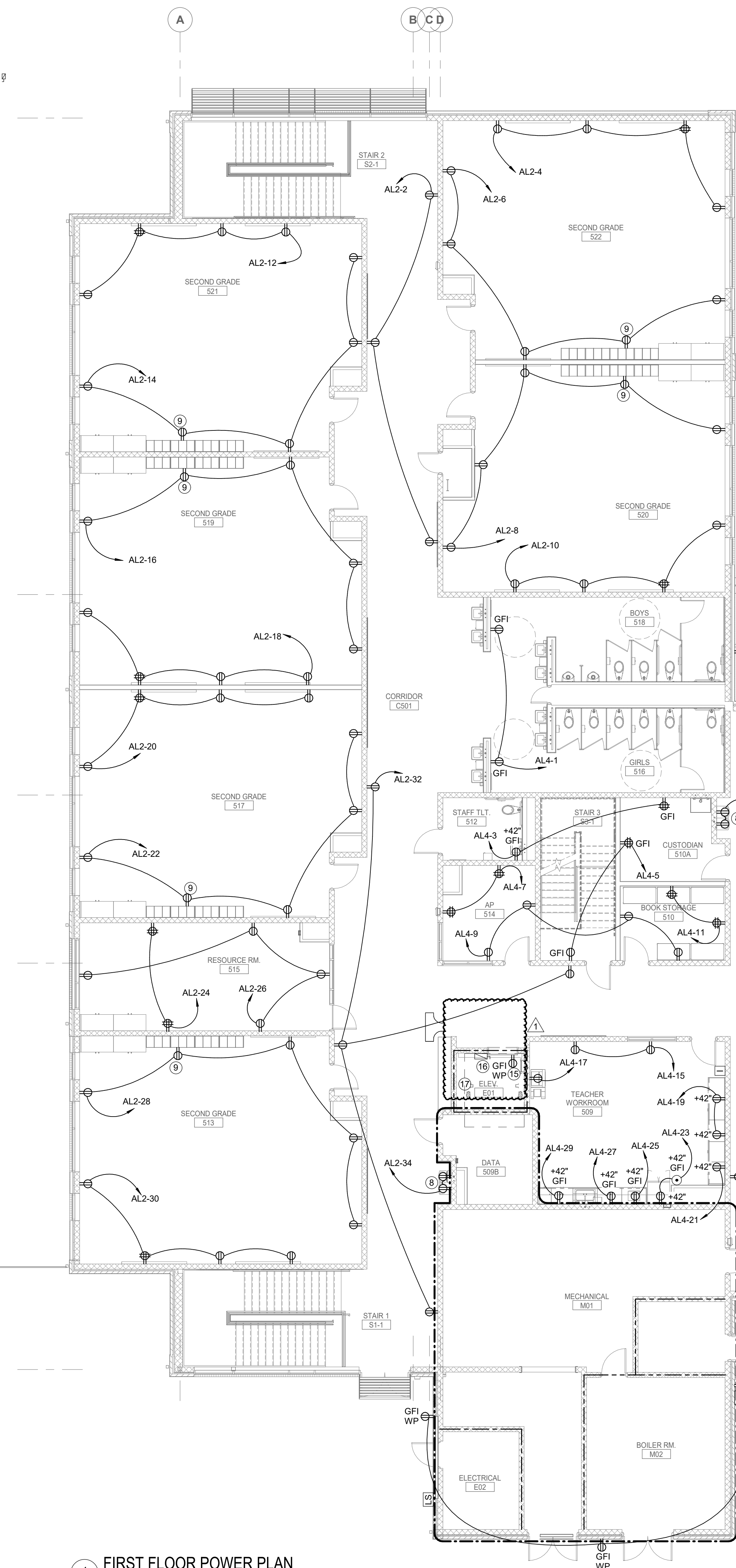
#### GROUND FLOOR POWER PLAN SHEET TITLE

# E101

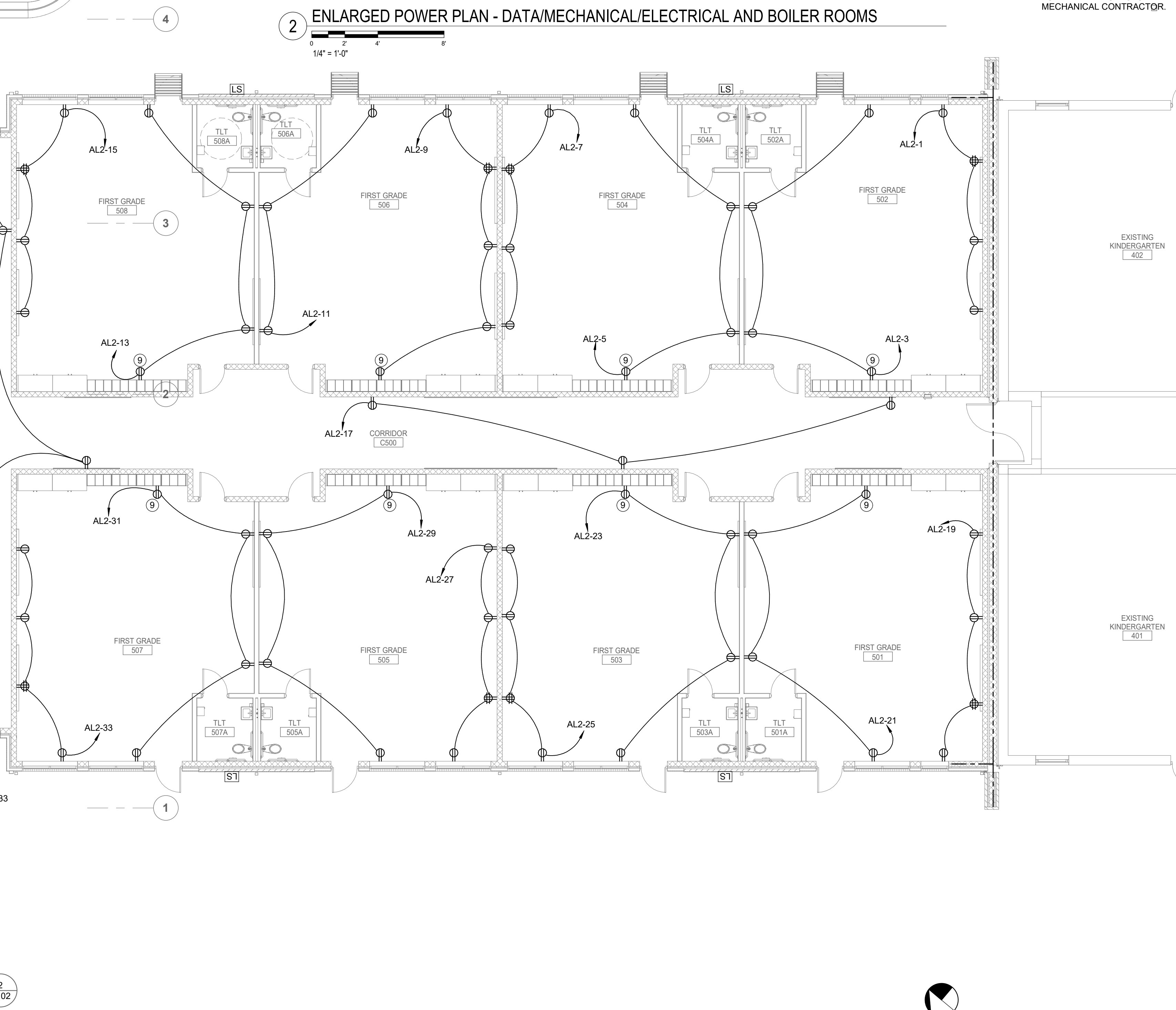
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1 FIRST FLOOR POWER PLAN



2 ENLARGED POWER PLAN - DATA/MECHANICAL/ELECTRICAL AND BOILER ROOMS

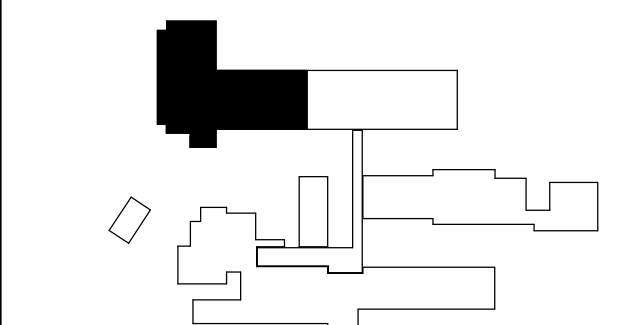
FIRE RATED WALLS  
1 HR RATED

#### GENERAL NOTES:

- REFER TO ELECTRICAL LEAD SHEET E001 FOR SYMBOLS, ABBREVIATIONS AND NOTES.
- ALL WORK IN TELECOM ROOMS SHALL BE COORDINATED BETWEEN DIVISION 27, 28 AND ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.
- REFER TO E300 SERIES FOR TECHNOLOGY/SECURITY AND E400 SERIES FOR FIRE ALARM WORK IN THIS AREA.
- ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
- ONLY ITEMS THAT PERTAIN TO THE OPERATION OF THE ELEVATOR ARE ALLOWED IN THE ELEVATOR HOISTWAY.
- WHERE ELEVATORS ARE EQUIPPED WITH "BATTERY LOWERING" CAPABILITY, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A CONTACT IN THE MAIN ELEVATOR POWER DISCONNECT THAT WILL DISABLE THE "BATTERY LOWERING" FEATURE OF THE ELEVATOR WHEN THE MAIN POWER DISCONNECT FOR THE ELEVATOR IS THROWN. THIS DISABLING CONTACT IS INTENDED TO BE USED FOR SERVICING THE ELEVATOR. ("BATTERY LOWERING" IS A FUNCTION OF THE ELEVATOR WHEREBY, UPON LOSS OF AC POWER, THE ELEVATOR, OPERATING UNDER BATTERY POWER, RETURNS TO THE LOWEST LANDING AND OPENS DOORS TO LET ANYONE TRAPPED IN THE ELEVATOR SAFE EXIT).

#### KEYNOTES:

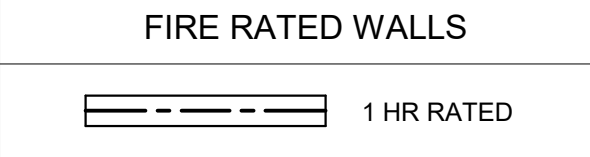
- TELECOMMUNICATIONS GROUND BAR - REFER TO DETAILS E5026 AND E505/5.
- PROVIDE 240 VOLT, 30 AMP, 2 POLE, NEMA-1, FUSIBLE DISCONNECT SWITCH FUSE PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- 120VAC POWER FOR CHEMICAL FEED. COORDINATE REQUIREMENTS AND LOCATION WITH MECHANICAL CONTRACTOR.
- 4"x8"x3/4" FIRE RETARDANT PLYWOOD BACK BOARD.
- 18" x 4" LADDER RUNWAY TRAY.
- 120 VOLT, 15 AMP, 14, MOTOR RATED TOGGLE DISCONNECT SWITCH FOR MECHANICAL EQUIPMENT. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- COORDINATE PLACEMENT OF RACK RECEPTACLES WITH OWNERS' DEPARTMENT PRIOR TO ROUGH-IN.
- COORDINATE LOCATION OF RECEPTACLE FOR WATER COOLER WITH PLUMBING CONTRACTOR SO CORD DOES NOT SHOW. PROVIDE GFCI CIRCUIT BREAKER FOR WATER COOLER.
- REFER TO DETAIL E505/4 FOR MOUNTING RECEPTACLE HORIZONTALLY BELOW CUBBIES.
- VARIABLE FREQUENCY DRIVE (VFD) FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED/WIRED BY THE ELECTRICAL CONTRACTOR. COORDINATE CLOSELY.
- 120 VOLT, 20 AMP, MOTOR RATED TOGGLE DISCONNECT SWITCH FOR MECHANICAL EQUIPMENT. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- 120 VOLT, 20 AMP, MOTOR RATED TOGGLE DISCONNECT SWITCH FOR PLUMBING EQUIPMENT. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- 4"x8"x3/4" FIRE RETARDANT PLYWOOD BACK BOARD FOR BDA EQUIPMENT. REFER TO DETAIL E501/7.
- 277 VOLT, 15 AMP, 14, MOTOR RATED TOGGLE DISCONNECT SWITCH WITH NEMA-3R JUNCTION BOX FOR MECHANICAL EQUIPMENT. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- PROVIDE GFCI CONVENIENCE RECEPTACLE AT ELEVATOR OVERHEAD CONTROL ROOM LOCATION.
- 600 VOLT, 100 AMP, 3 POLE, NON-FUSED DISCONNECT SWITCH AT ELEVATOR OVERHEAD CONTROL ROOM AREA.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL CONDUIT, WIRING, SHUNT TRIP, DISCONNECTS, RELAYS, ETC. AS PER ELEVATOR MANUFACTURER'S REQUIREMENTS FOR A COMPLETE SYSTEM.
- PROVIDE 240 VOLT, 30 AMP, 3 POLE, NEMA-1 FUSIBLE DISCONNECT SWITCH FOR PUMP. FUSE PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.



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**LEXINGTON**  
1070 S. Lake Dr., Suite J  
Lexington, SC 29073  
803/356-0507

GENERAL NOTES:

- A. REFER TO ELECTRICAL LEAD SHEET E001 FOR SYMBOLS, ABBREVIATIONS AND NOTES.
- B. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK PRIOR TO INSTALLATION OF THE NEW EQUIPMENT, SO AS TO AVOID CONFLICTS.
- C. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR SUPPORTING HIS OWN EQUIPMENT. COORDINATE CLOSELY TO AVOID INTERFERENCES. MAINTAIN CLEARANCES AND DEDICATED SPACE AS REQUIRED.
- D. ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
- E. ELECTRICAL CONTRACTOR SHALL PAINT FLOOR IN FRONT OF ELECTRICAL PANELS INDICATING CLEARANCES TO COMPLY WITH NEC 110.26(A)(1).

KEYNOTES:

1. 277 VOLT, 15 AMP, 1Ø MOTOR RATED TOGGLE DISCONNECT SWITCH WITH NEMA-1 JUNCTION BOX FOR MECHANICAL EQUIPMENT. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
2. PROVIDE 600 VOLT, 30 AMP, 3 POLE, NEMA-1, FUSIBLE DISCONNECT SWITCH FOR HVAC UNIT. FUSE PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.

pdc

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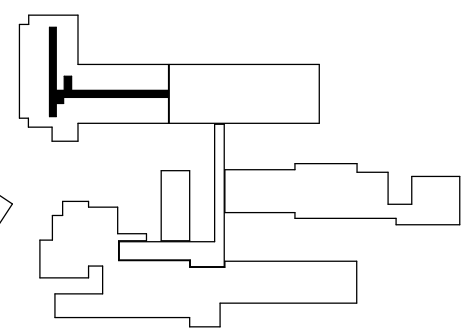
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# EQUIPMENT PLATFORM POWER PLAN

SHEET TITLE

# E103

EET

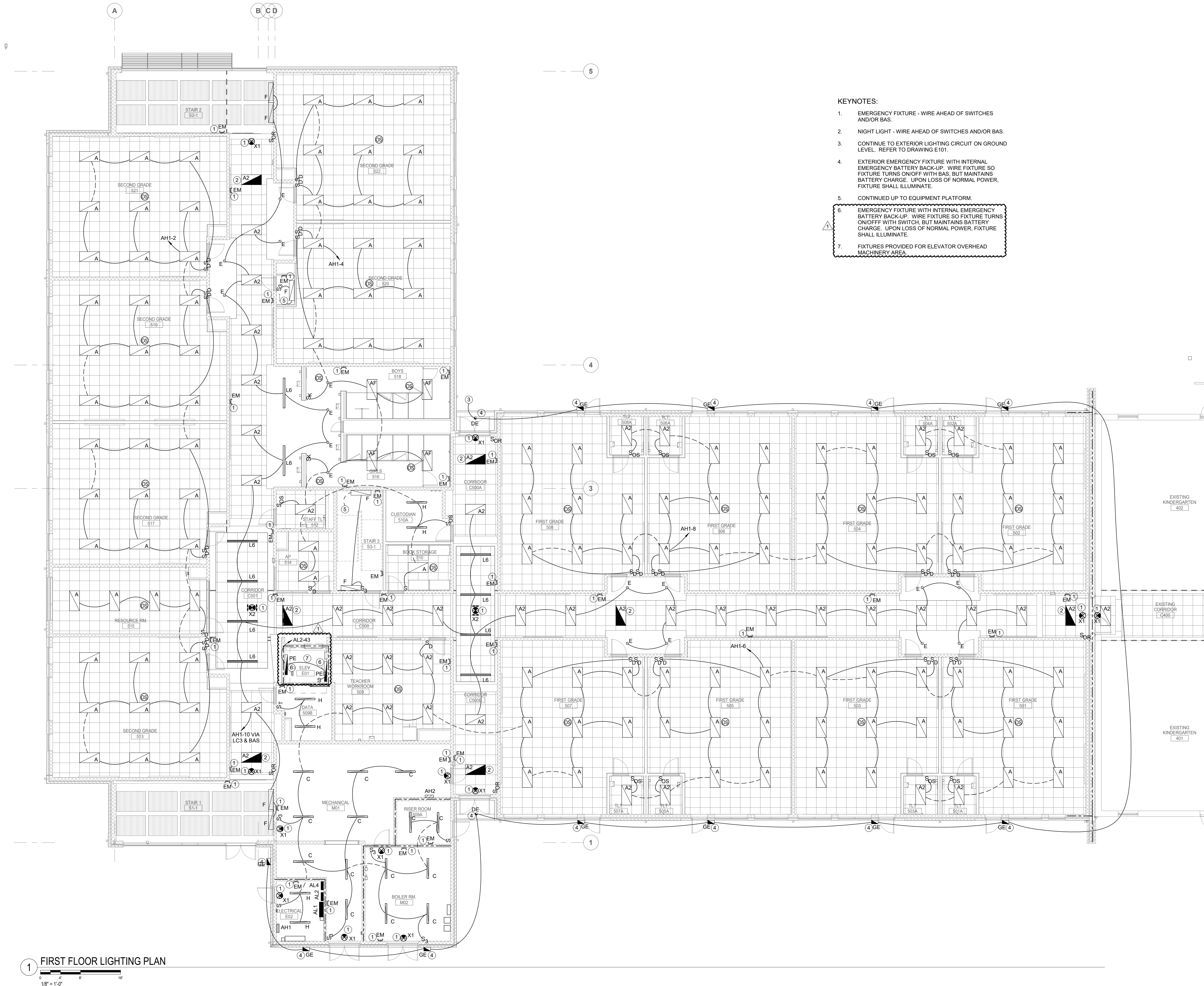
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## 1 EQUIPMENT PLATFORM POWER PLAN

Figure 1 shows a horizontal bar chart with the x-axis labeled 'n' (ranging from 0 to 16) and the y-axis labeled 'N' (ranging from 1 to 20). The bars represent the number of species for each number of genera. The distribution is skewed to the right, with the highest frequency at n=16.



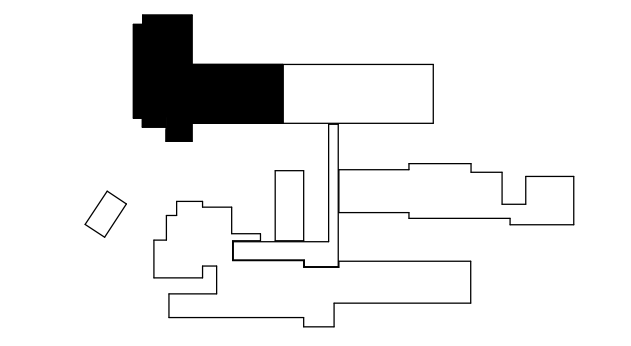
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1 FIRST FLOOR LIGHTING PLAN  
1/8" = 1'-0"

FIRE RATED WALLS  
1 HR RATED

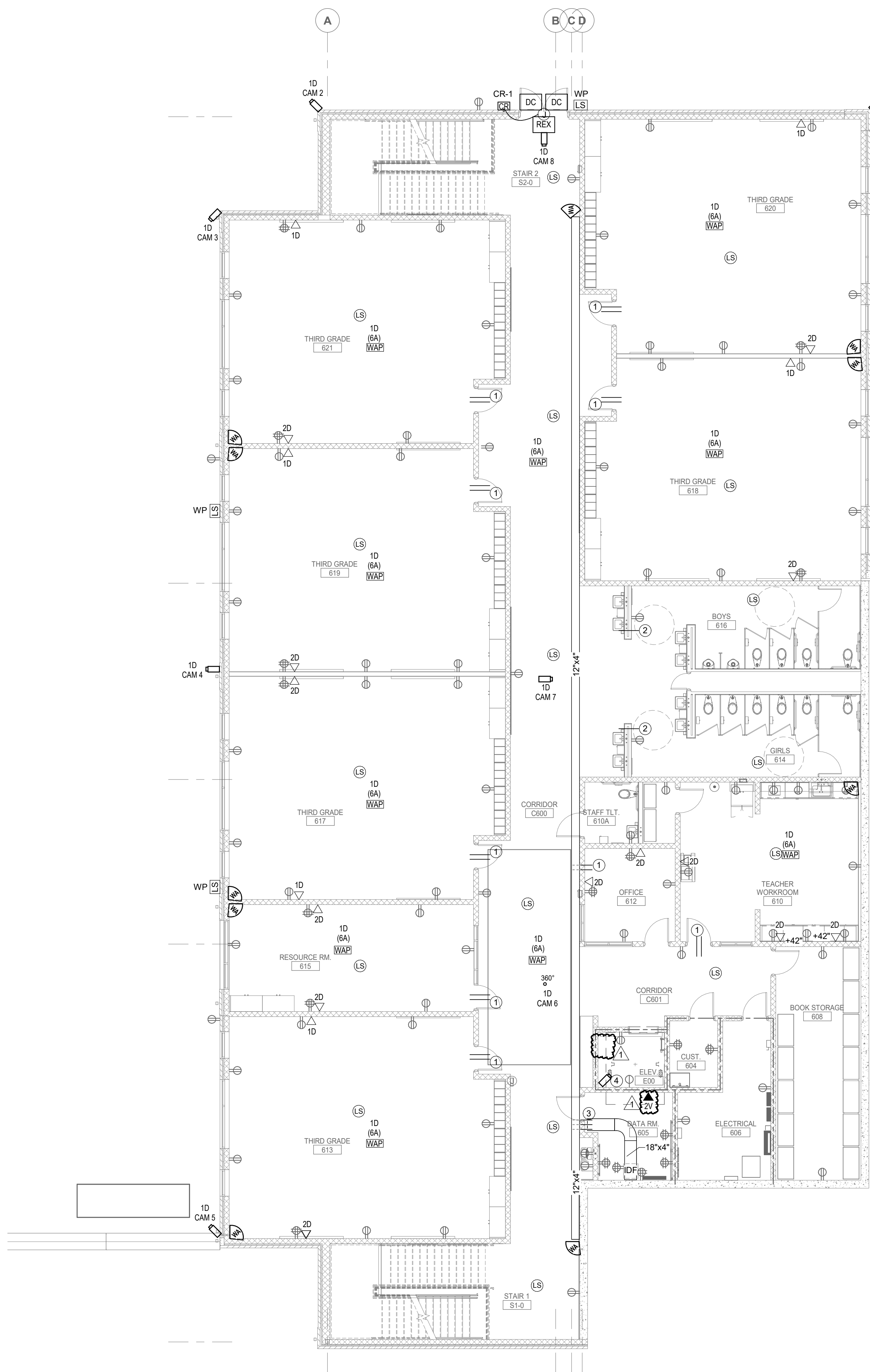
- KEYNOTES:
- EMERGENCY FIXTURE - WIRE AHEAD OF SWITCHES AND/OR BAS.
  - NIGHT LIGHT - WIRE AHEAD OF SWITCHES AND/OR BAS.
  - CONTINUE TO EXTERIOR LIGHTING CIRCUIT ON GROUND LEVEL. REFER TO DRAWING E101.
  - EXTERIOR EMERGENCY FIXTURE WITH INTERNAL EMERGENCY BATTERY BACK-UP. WIRE FIXTURE SO FIXTURE TURNS ON/OFF WITH BAS, BUT MAINTAINS BATTERY CHARGE. UPON LOSS OF NORMAL POWER, FIXTURE SHALL ILLUMINATE.
  - CONTINUED UP TO EQUIPMENT PLATFORM.
  - EMERGENCY FIXTURE WITH INTERNAL EMERGENCY BATTERY BACK-UP. WIRE FIXTURE SO FIXTURE TURNS ON/OFF WITH SWITCH, BUT MAINTAINS BATTERY CHARGE. UPON LOSS OF NORMAL POWER, FIXTURE SHALL ILLUMINATE.
  - FIXTURES PROVIDED FOR ELEVATOR OVERHEAD MACHINERY AREA.



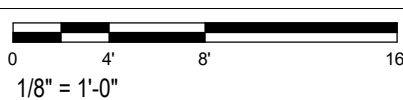
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1 GROUND FLOOR TECHNOLOGY PLAN



CAT. 6 PLENUM CABLE SCHEDULE		
ROOM #	QUANTITY	TERMINATION
620	3	IDF-605
621	3	IDF-605
618	3	IDF-605
619	3	IDF-605
617	3	IDF-605
615	4	IDF-605
613	3	IDF-605
612	4	IDF-605
610	6	IDF-605
E00	2 (ELEV VOICE)	IDF-605
EXTERIOR	5 (CAM5)	IDF-605
600	5 (3 CAM)	IDF-605
DATA TOTAL: 44		

CAT. 6A PLENUM CABLE SCHEDULE		
ROOM #	QUANTITY	TERMINATION
620	1	IDF-605
621	1	IDF-605
618	1	IDF-605
619	1	IDF-605
617	1	IDF-605
615	1	IDF-605
613	1	IDF-605
610	1	IDF-605
600	2	IDF-605
DATA TOTAL: 10		

- GENERAL NOTES:
- A. ALL WIRELESS ACCESS POINTS SHALL UTILIZE CAT-6A CABLE. ALL OTHER DATA DROPS SHALL BE CAT-6.
- B. TRAY IN CORRIDORS SHALL BE BASKET TRAY. TRAY IN NETWORK CLOSET SHALL BE CABLE RUNWAY.

- KEYNOTES:
1. (2)-2" CONDUIT SLEEVES WITH INSULATED BUSHINGS ON BOTH ENDS. LOCATE ABOVE ACCESSIBLE LAY-IN CEILING.
2. (1)-2" CONDUIT SLEEVE WITH INSULATED BUSHINGS ON BOTH ENDS. LOCATE ABOVE ACCESSIBLE LAY-IN CEILING.
3. (3)-3" CONDUIT SLEEVES WITH INSULATED BUSHINGS ON BOTH ENDS. LOCATE ABOVE ACCESSIBLE LAY-IN CEILING.
4. CAMERA IN ELEVATOR AS PER NCDDOL REQUIREMENTS. COORDINATE FINAL TERMINATION OF CAT-6 CABLE WITH OWNER AND ELEVATOR PROVIDER.

FIRE RATED WALLS	
	1 HR RATED



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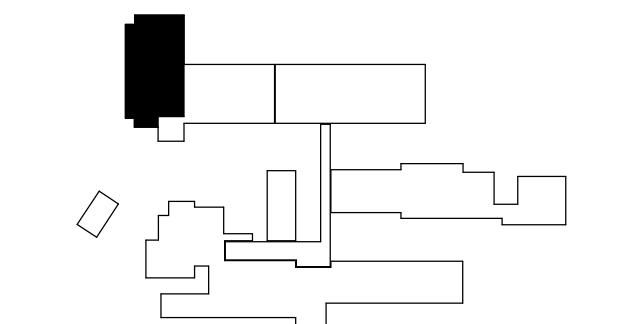
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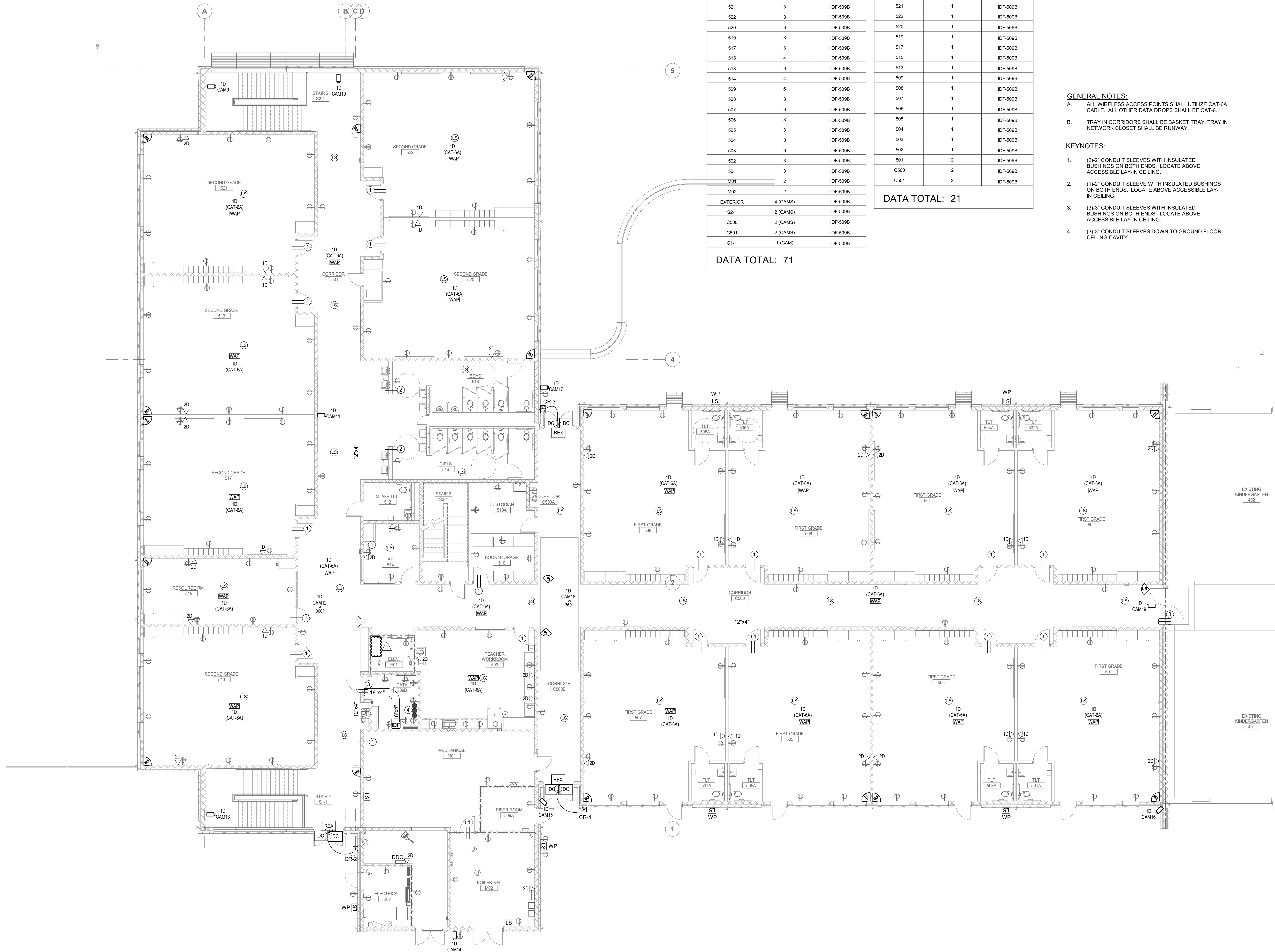
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**GROUND FLOOR TECHNOLOGY/SECURITY PLAN**  
SHEET TITLE  
**E301**  
SHEET






1 FIRST FLOOR TECHNOLOGY PLAN

CAT. 6 PLENUM CABLE SCHEDULE		
ROOM #	QUANTITY	TERMINATION
S21	3	IDF-509B
S22	3	IDF-509B
S20	3	IDF-509B
S19	3	IDF-509B
S17	3	IDF-509B
S15	4	IDF-509B
S13	3	IDF-509B
S14	4	IDF-509B
S09	6	IDF-509B
S08	3	IDF-509B
S07	3	IDF-509B
S06	3	IDF-509B
S05	3	IDF-509B
S04	3	IDF-509B
S03	3	IDF-509B
S02	3	IDF-509B
S01	3	IDF-509B
M01	2	IDF-509B
M02	2	IDF-509B
EXTERIOR	4 (CAMS)	IDF-509B
S2-1	2 (CAMS)	IDF-509B
C500	2 (CAMS)	IDF-509B
C501	2 (CAMS)	IDF-509B
S1-1	1 (CAM)	IDF-509B
DATA TOTAL: 71		

CAT. 6A PLENUM CABLE SCHEDULE		
ROOM #	QUANTITY	TERMINATION
S21	1	IDF-509B
S22	1	IDF-509B
S20	1	IDF-509B
S19	1	IDF-509B
S17	1	IDF-509B
S15	1	IDF-509B
S13	1	IDF-509B
S09	1	IDF-509B
S08	1	IDF-509B
S07	1	IDF-509B
S06	1	IDF-509B
S05	1	IDF-509B
S04	1	IDF-509B
S03	1	IDF-509B
S02	1	IDF-509B
S01	2	IDF-509B
C500	2	IDF-509B
C501	2	IDF-509B
DATA TOTAL: 21		

- GENERAL NOTES:**
- A. ALL WIRELESS ACCESS POINTS SHALL UTILIZE CAT-6A CABLE. ALL OTHER DATA DROPS SHALL BE CAT-6.
- B. TRAY IN CORRIDORS SHALL BE BASKET TRAY, TRAY IN NETWORK CLOSET SHALL BE RUNWAY.
- KEYNOTES:**
- (2)-2" CONDUIT SLEEVES WITH INSULATED BUSHINGS ON BOTH ENDS. LOCATE ABOVE ACCESSIBLE LAY-IN CEILING.
  - (1)-2" CONDUIT SLEEVE WITH INSULATED BUSHINGS ON BOTH ENDS. LOCATE ABOVE ACCESSIBLE LAY-IN CEILING.
  - (3)-3" CONDUIT SLEEVES WITH INSULATED BUSHINGS ON BOTH ENDS. LOCATE ABOVE ACCESSIBLE LAY-IN CEILING.
  - (3)-3" CONDUIT SLEEVES DOWN TO GROUND FLOOR CEILING CAVITY.

FIRE RATED WALLS  
1 HR RATED



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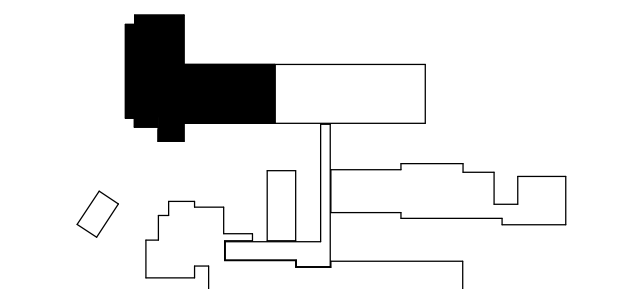
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3. DO NOT SCALE OFF DIMENSIONS.

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**BID SET**  
PROJECT PHASE

**2307**  
BOOMERANG DESIGN PROJECT NUMBER

**02.07.2024**  
DRAWING RELEASE DATE

**FIRST FLOOR**  
**TECHNOLOGY/SECURITY**  
**PLAN**  
SHEET TITLE

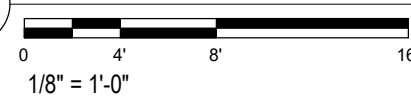
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1 GROUND FLOOR FIRE ALARM PLAN



GENERAL NOTES:

- ALL FIRE ALARM WIRING SHALL BE IN MINIMUM 3/4" CONDUIT.
- LOCATIONS OF NOTIFICATION APPLIANCE CABINETS (NAC) AND AMPLIFIER CABINETS (AMP) SHALL BE COORDINATED CLOSELY FOR PROPER CLEARANCES AND ACCESSIBILITY.
- ALL 120V POWER FOR NAC PANELS AND AMPLIFIER CABINETS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR FROM THE NEAREST AVAILABLE 120/208 VOLT PANEL. BREAKERS FOR THOSE CIRCUITS SHALL HAVE RED BREAKER LOCKS.
- FOR FIRE PROTECTION DEVICES (I.E. TAMPER SWITCHES, FLOW SWITCHES, FIRE PUMP, ETC.) REFER TO FP-SERIES FIRE PROTECTION DRAWINGS AND FIRE PROTECTION CONTRACTOR SHOP SUBMITTAL DRAWINGS PRIOR TO ANY ROUGH-IN.
- EXCEPT WHERE SHOWN ON PLANS OR ABSOLUTELY NECESSARY (MUST BE APPROVED BY DESIGN TEAM), ALL CONDUITS AND PIPING SHALL BE CONCEALED IN BULKHEADS AND ABOVE CEILINGS AND NOT ROUTED THROUGH OPEN CEILINGS. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR THE LOCATION OF OPEN CEILINGS. WHEN CONDUITS ARE REQUIRED TO BE RUN EXPOSED, THEY ARE TO RUN TIGHT TO STRUCTURE AND BE PAINTED TO MATCH THE STRUCTURE.
- ONLY ITEMS ASSOCIATED WITH THE ELEVATOR SHALL BE PERMITTED IN THE ELEVATOR HOISTWAY OR ELEVATOR MACHINE ROOM.

KEYNOTES:

- FIRE PROTECTION FLOOR CONTROL VALVE ASSEMBLY - COORDINATE WITH FIRE PROTECTION CONTRACTOR.
- SMOKE DETECTORS ARE REQUIRED IN EACH ELEVATOR LOBBY, MACHINE ROOM AND EACH SPRINKLER HEAD LOCATION IN HOISTWAY. ONLY THESE DETECTORS, WHEN ACTIVATED, SHALL PUT THE ELEVATOR IN FIREMAN'S RECALL OPERATION.
- THESE HEAT DETECTORS SIGNAL THE SHUNT TRIP BREAKER TO TRIP, REMOVING POWER FROM THE ELEVATOR. THE ACTIVATION OF SMOKE DETECTORS REFERRED TO IN NOTE 2 CAPTURES THE ELEVATOR PRIOR TO THE ACTIVATION OF THE HEAT DETECTORS SO THAT MAIN LINE POWER IS REMOVED. HEAT DETECTORS SHALL BE INSTALLED AT EACH SPRINKLER LOCATION.

FIRE RATED WALLS	
	1 HR RATED



<b>SHELBY</b> 201 S. Washington St., Suite 200 Shelby, NC 28150 704/956-6000	<b>CHARLOTTE</b> 1230 W. Morehead St., Suite 214 Charlotte, NC 28208 704/731-7000
<b>RALEIGH</b> 6131 Falls of Neuse Rd., Suite 204 Raleigh, NC 27609 919/775-6400	<b>LEWINGTON</b> 1070 S. Lake Dr., Suite J Lewington, NC 28753 803/754-0507



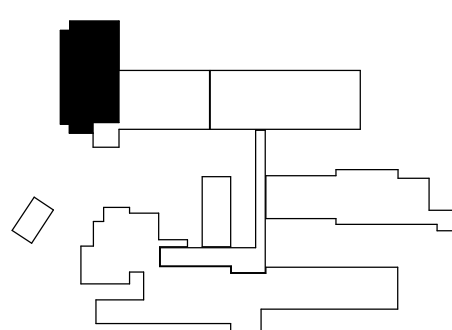
**Progressive Design Collaborative, Ltd.**  
3101 Poplarwood Court, Suite 320  
Raleigh, North Carolina 27604  
919-790-9989  
License# C-0183  
PROJECT #23015

**COOPER ACADEMY  
A & R**  
PROJECT TITLE

"CLIENT'S PROJECT" # - XXX



02/19/2024  
T.BUTKOVICH@PDCENGINEERS.COM



- THESE DRAWINGS ARE THE SOLE PROPERTY OF THE STATE OF NORTH CAROLINA. THE USE OF THESE DRAWINGS MUST COMPLY WITH GOOD STATE OF NORTH CAROLINA STANDARD FORM OF AGREEMENT BETWEEN OWNER AND DESIGNER.
- MATERIALS, DIMENSIONS AND ALL OTHER CONDITIONS WHICH ARE NOT OTHERWISE SPECIFIED ON THIS DRAWING SHALL BE CONTROLLED AS HAVING THE SAME MEANING AS SIMILARLY INDICATED CONDITIONS WHICH ARE MORE FULLY DEFINED ELSEWHERE ON THIS PROJECT OR OTHER DRAWINGS OF THIS PROJECT.
- DO NOT SCALE OFF DIMENSIONS.

REVISIONS		
NO.	DATE	DESCRIPTION
1	02/28/2024	ADDENDUM 01

**BID SET**  
PROJECT PHASE

**2307**

BOOMERANG DESIGN PROJECT NUMBER

**02.07.2024**

DRAWING RELEASE DATE

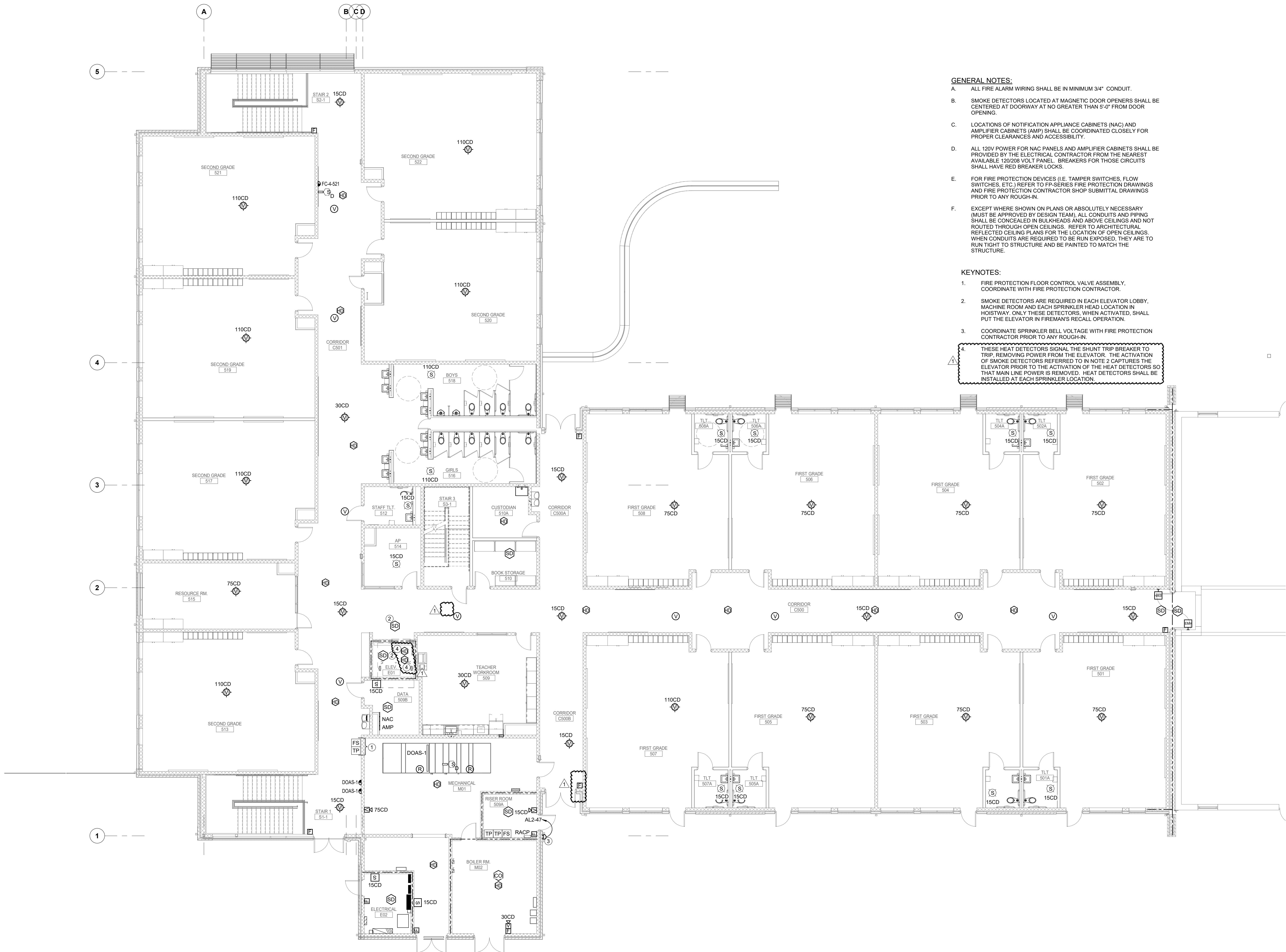
**GROUND FLOOR FIRE  
ALARM PLAN**  
SHEET TITLE

**E401**

SHEET



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GENERAL NOTES:

- ALL FIRE ALARM WIRING SHALL BE IN MINIMUM 3/4" CONDUIT.
- SMOKE DETECTORS LOCATED AT MAGNETIC DOOR OPENERS SHALL BE CENTERED AT DOORWAY AT NO GREATER THAN 5'-0" FROM DOOR OPENING.
- LOCATIONS OF NOTIFICATION APPLIANCE CABINETS (NAC) AND AMPLIFIER CABINETS (AMP) SHALL BE COORDINATED CLOSELY FOR PROPER CLEARANCES AND ACCESSIBILITY.
- ALL 120V POWER FOR NAC PANELS AND AMPLIFIER CABINETS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR FROM THE NEAREST AVAILABLE 120/208 VOLT PANEL. BREAKERS FOR THOSE CIRCUITS SHALL HAVE RED BREAKER LOCKS.
- FOR FIRE PROTECTION DEVICES (I.E. TAMPER SWITCHES, FLOW SWITCHES, ETC.) REFER TO FP-SERIES FIRE PROTECTION DRAWINGS AND FIRE PROTECTION CONTRACTOR SHOP SUBMITTAL DRAWINGS PRIOR TO ANY ROUGH-IN.
- EXCEPT WHERE SHOWN ON PLANS OR ABSOLUTELY NECESSARY (MUST BE APPROVED BY DESIGN TEAM), ALL CONDUITS AND PIPING SHALL BE CONCEALED IN BULKHEADS AND ABOVE CEILINGS AND NOT ROUTED THROUGH OPEN CEILINGS. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR THE LOCATION OF OPEN CEILINGS. WHEN CONDUITS ARE REQUIRED TO BE RUN EXPOSED, THEY ARE TO RUN TIGHT TO STRUCTURE AND BE PAINTED TO MATCH THE STRUCTURE.

KEYNOTES:

- FIRE PROTECTION FLOOR CONTROL VALVE ASSEMBLY. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
- SMOKE DETECTORS ARE REQUIRED IN EACH ELEVATOR LOBBY, MACHINE ROOM AND EACH SPRINKLER HEAD LOCATION IN HOISTWAY. ONLY THESE DETECTORS, WHEN ACTIVATED, SHALL PUT THE ELEVATOR IN FIREMAN'S RECALL OPERATION.
- COORDINATE SPRINKLER BELL VOLTAGE WITH FIRE PROTECTION CONTRACTOR PRIOR TO ANY ROUGH-IN.

THESE HEAT DETECTORS SIGNAL THE SHUNT TRIP BREAKER TO TRIP, REMOVING POWER FROM THE ELEVATOR. THE ACTIVATION OF SMOKE DETECTORS REFERRED TO IN NOTE 2 CAPTURES THE ELEVATOR PRIOR TO THE ACTIVATION OF THE HEAT DETECTORS SO THAT MAIN LINE POWER IS REMOVED. HEAT DETECTORS SHALL BE INSTALLED AT EACH SPRINKLER LOCATION.

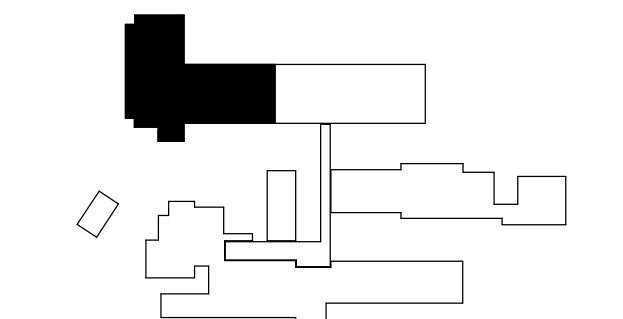
1 FIRST FLOOR FIRE ALARM PLAN

0 4 8 16'  
1/8" = 1'-0"

FIRE RATED WALLS  
1 HR RATED

**COOPER ACADEMY  
A & R**  
PROJECT TITLE

"CLIENT'S PROJECT" # - XXX



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- DO NOT SCALE OFF DIMENSIONS.

REVISIONS		
NO.	DATE	DESCRIPTION
1	02/28/2024	ADDENDUM 01

**BID SET**  
PROJECT PHASE  
**2307**  
BOOMERANG DESIGN PROJECT NUMBER  
**02.07.2024**  
DRAWING RELEASE DATE

**FIRST FLOOR FIRE  
ALARM PLAN**  
SHEET TITLE  
**E402**  
SHEET



A. VERIFY OPERATION WITH LOCAL AHJ PRIOR TO PROGRAMMING

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	
1 MANUEL PULL STATIONS GROUND FLOOR	o	o					o	o																	1
2 MANUEL PULL STATIONS FIRST FLOOR	o	o					o	o																	2
3 MANUEL PULL STATIONS MECHANICAL PLATFORM	o	o					o	o																	3
4 SMOKE DETECTORS GROUND FLOOR	o	o					o	o																	4
5 SMOKE DETECTORS FIRST FLOOR	o	o					o	o																	5
6 SMOKE DETECTORS MECHANICAL PLATFORM	o	o					o	o																	6
7 HEAT DETECTORS GROUND FLOOR	o	o					o	o																	7
8 HEAT DETECTORS FIRST FLOOR	o	o					o	o																	8
9 HEAT DETECTORS MECHANICAL PLATFORM	o	o					o	o																	9
10 DUCT DETECTORS	o	o					o	o																	10
11 AHJ OVERRIDE SWITCH				o	o						o	o													11
12 TAMPER SWITCH @ PIV				o	o						o	o													12
13 TAMPER SWITCHES AT SPRINKLER RISERS				o	o						o	o													13
14 FLOW SWITCH AT SPRINKLER RISERS		o	o					o	o																14
15 FIRE ALARM SYSTEM AC POWER FAILURE						o	o	o			o	o													15
16 FIRE ALARM SYSTEM LOW BATTERY						o	o	o			o	o													16
17 NAC PANELS LOW BATTERY						o	o	o			o	o													17
18 OPEN CIRCUIT						o	o	o			o	o													18
19 GROUND FAULT						o	o	o			o	o													19
20 NOTIFICATION APPLIANCE SHORT CIRCUIT						o	o	o			o	o													20
21 TEMPERATURE SENSOR @ FIRELINE BACKFLOW PREVENTER						o	o	o			o	o													21
22 CARBON MONOXIDE DETECTOR						o	o	o			o	o				o	o								22
23 BDA - LOSS OF NORMAL AC POWER											o	o													23
24 BDA - SYSTEM BATTERY CHARGER FAILURE											o	o													24
25 BDA - MALFUNCTION OF DONOR ANTENNAS											o	o													25
26 BDA - FAILURE OF ACTIVE RF EMITTING DEVICES											o	o													26
27 BDA - LOW BATTERY CAPACITY AT 70% REDUCTION OF OPERATING CAPACITY											o	o													27
28 BDA - FAILURE OF CRITICAL EQUIPMENT COMPONENTS											o	o													28
29 BDA - OSCILLATION OF ACTIVE RF EMITTING DEVICES											o	o													29
30 BDA - COMMUNICATION LINE BETWEEN FIRE ALARM SYSTEM AND THE IN BUILDING TWO-WAY EMERGENCY RESPONDER COMMUNICATIONS COVERAGE SYSTEM						o	o				o	o					</								

NOT TO SCALE

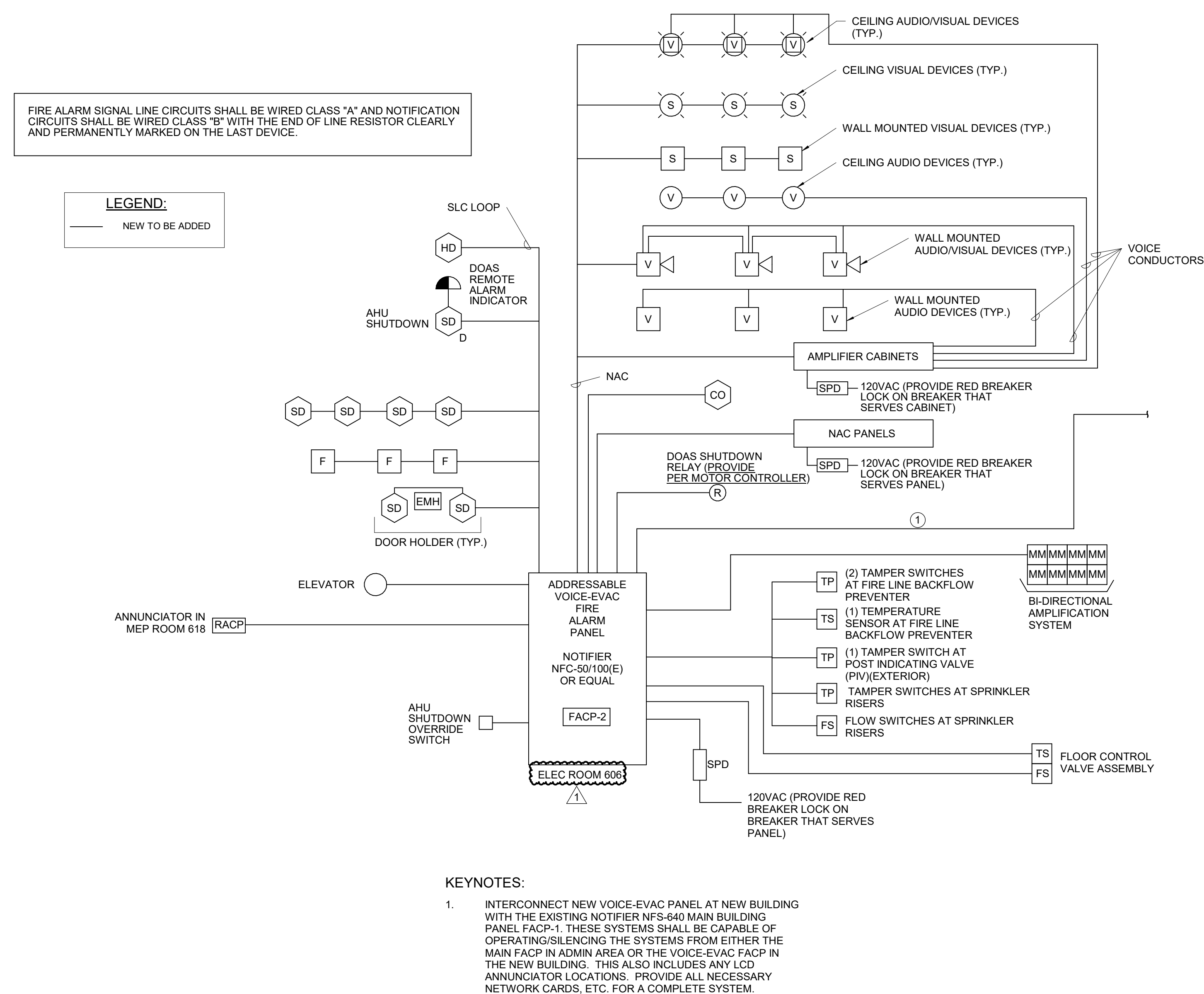
2 FIRE AL  
NOT TO SCALE

1. REFER TO ARCHITECT'S SPECIFICATIONS 012300 FOR OWNER'S PREFERRED MANUFACTURER, NOTIFIER, FOR FIRE ALARM SYSTEM.
2. SEE PLANS FOR LOCATIONS AND QUANTITIES OF ALL DEVICES.
3. ALL WIRING SHALL BE IN MINIMUM 3/4" CONDUIT.
4. BATTERY CALCULATIONS ARE REQUIRED WITH ALL SUBMITTALS.
5. TEST RESULTS ARE REQUIRED FOR ALL DEVICES.
6. PROVIDE SHUT-DOWN DEVICES FOR NEW AIR HANDLERS, FAN COIL UNITS AND SUPPLY FANS OF ALL MECHANICAL EQUIPMENT.
7. VERIFY ROOM NUMBERS WITH ARCHITECT PRIOR TO PROGRAMMING SYSTEM.
8. RAAP SHALL BE SEMI-RECESSED WITH INTEGRAL PUSH-TO-TALK MICROPHONE AND ZONE SELECTION SWITCHES.
9. A SMOKE DETECTOR SHALL BE MOUNTED WITHIN 15'-0" OF FACP, RACP, AMP AND NAC PANELS.
10. IF ANY ARCHITECTURAL CHANGES ARE MADE THAT SHALL AFFECT ANY DEVICE PLACEMENT, THIS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO INSTALLATION.
11. THE MANUFACTURER'S AUTHORIZED REPRESENTATIVE SHALL BE NICET LEVEL 3 CERTIFIED AND HAVE AT LEAST 2 YEARS OF EXPERIENCE INSTALLING FIRE ALARM SYSTEMS. NOTE: PROJECT MANAGER SHALL BE NICET LEVEL 4 CERTIFIED AND HAVE AT LEAST 5 YEARS EXPERIENCE INSTALLING FIRE ALARM SYSTEMS.
12. THE SHOP DRAWINGS SUBMITTALS FOR DEVICE LOCATIONS SHALL BE SUBMITTED TO ENGINEER AND LOCAL (AHJ) FIRE MARSHALL PRIOR TO ANY INSTALLATION/ROUGH-IN FOR FIRE ALARM DEVICES.
13. WIRING DIAGRAMS, LOCATION DRAWINGS, DEVICE OUT SHEETS AND VOLTAGE DROP CALCULATIONS ARE REQUIRED WITH ALL SUBMITTALS.
14. THE FIRE ALARM SYSTEM PROVIDER SHALL PROVIDE ALL DOCUMENTATION AS SPECIFIED IN THE INTERNATIONAL FIRE CODE SECTION 907 REQUIREMENTS AS PART OF HIS SHOP DRAWING SUBMITTALS.

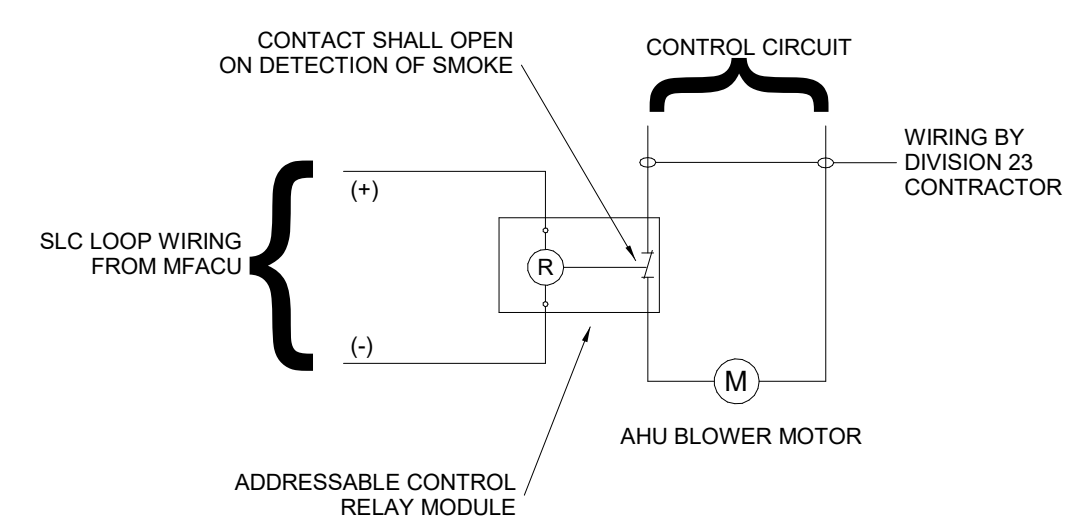
THIS INCLUDES:

- A. LOCATION DRAWINGS OF ALARM INITIATING AND NOTIFICATION DEVICES.
- B. WIRING DIAGRAMS WITH CONDUCTOR TYPE AND SIZES.
- C. LOCATIONS OF ALARM CONTROL AND TROUBLE SIGNALLING EQUIPMENT.
- D. VOLTAGE DROP CONNECTION DEVICES AND WIRING SCHEMATIC.
- E. BATTERY CALCULATIONS.
- F. VOLTAGE DROP CALCULATIONS.
- G. MANUFACTURER'S MODEL NUMBERS, LISTING INFORMATION FOR EQUIPMENT, DEVICES AND MATERIALS.
- H. THE INTERFACE OF FIRE SAFETY CONTROL FUNCTIONS.

15. REFER TO SPECIFICATION.
16. FIRE ALARM SIGNAL LINE CIRCUITS SHALL BE WIRED CLASS "A" AND NOTIFICATION CIRCUITS SHALL BE WIRED CLASS "B" WITH THE END OF LINE RESISTOR CLEARLY AND PERMANENTLY MARKED ON THE LAST DEVICE.
17. PROVIDE SPARE PARTS AS DEFINED IN SPECIFICATION.
18. ALL FIRE ALARM SYSTEM WORK SHALL BE APPROVED BY THE JOHNSTON COUNTY FIRE MARSHALL PRIOR TO COMMENCING ANY FIRE ALARM WORK.
19. FIRE ALARM SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 72, 2013.
20. COORDINATE WITH THE FIRE PROTECTION CONTRACTOR FOR VOLTAGE, RELAY, ETC. FOR CONNECTIONS OF SPRINKLER BELL, ALL WIRING, CONDUIT, RELAY, AND INTERCONNECTIONS SHALL BE BY THE ELECTRICAL CONTRACTOR.
21. SPEAKER AMPLIFIER CABINETS SHALL BE ADDED AS NEEDED. ALL 120VAC POWER FOR CABINET SHALL BE PROVIDED FROM THE NEAREST 120V PANEL. BREAKER HAPPS SHALL BE PROVIDED ON BREAKER SERVING CABINET.
22. ELECTRICAL CONTRACTOR SHALL COORDINATE CLOSELY WITH FIRE ALARM SUB-CONTRACTOR FOR ALL 120VAC WORK REQUIRED FOR THIS SYSTEM. IF ANY ADDITIONAL CIRCUITS ARE REQUIRED THAT ARE NOT IDENTIFIED ON PLANS, THE ELECTRICAL CONTRACTOR SHALL PROVIDE THAT CIRCUIT FROM THE NEAREST 120V PANEL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLED CONNECTION. THIS SHALL BE DONE AT NO ADDITIONAL COST TO THE PROJECT.
23. THE NEW VOICE/EVAC FIRE ALARM PANEL IN THE NEW BUILDING SHALL BE INTERCONNECTED WITH THE EXISTING MAIN FACP AT THE MAIN BUILDING. DIAL-OUT SHALL BE EXISTING DIAL-OUT AT THAT MAIN PANEL. COORDINATE ALL WORK PRIOR TO POUGH-KEE.
24. ELECTRICAL CONTRACTOR'S FIRE ALARM SUB-CONTRACTOR SHALL COORDINATE CLOSELY WITH THE HVAC CONTROLS CONTRACTOR.
25. LOCAL CARBON MONOXIDE ALARM CANNOT BE SILENCED. RE-VERIFY WITH FIRE MARSHALL.
26. "CO" DETECTOR SHALL BE PROVIDED WITH TEMPORAL 4 SOUNDER BASE FOR DISTINCT SOUND IN AREA OF ALARM. COORDINATE WITH OWNER TO ESTABLISH WRITTEN EMERGENCY RESPONSE PLAN IN THE EVENT OF CARBON MONOXIDE ALARM.
27. THE FIRE ALARM SYSTEM SHALL BE INTERCONNECTED WITH ALL SOUND SYSTEMS, INCLUDING BUILDING PAGING SYSTEM SO THAT UPON GENERAL ALARM CONDITION THE SOUND SYSTEM SHALL BE USED TO ANNOUNCE THE EMERGENCY.



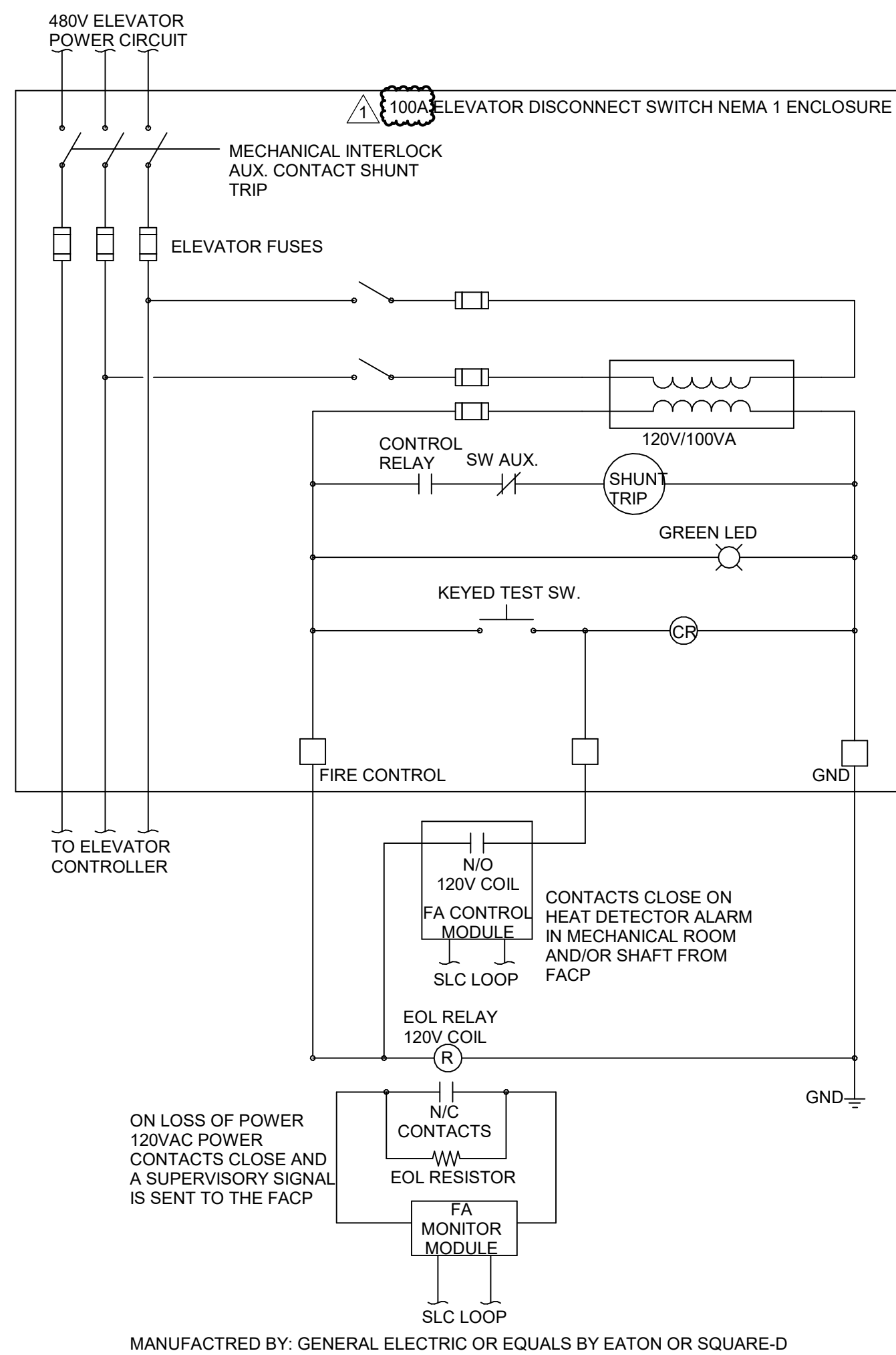
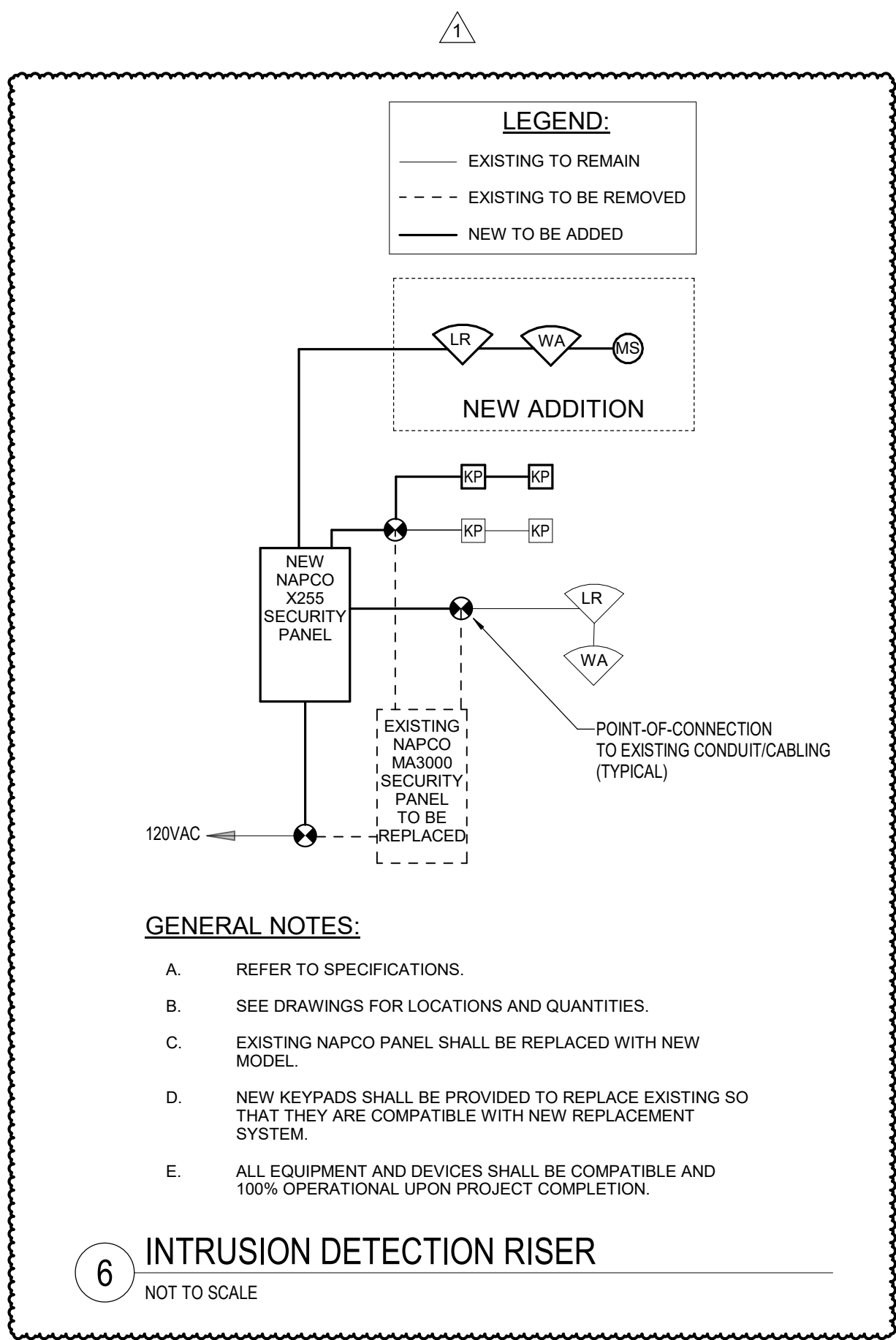
1 FIRE AL  
NOT TO SCALE



FOR AHU RETURN FANS, THE SCOPE SHALL BE THE SAME AS FOR THE SUPPLY FANS. RETURN FANS DO NOT REQUIRE AN AUXILIARY CONTACT OR BAS MONITORING OF FA SHUTDOWN STATUS.

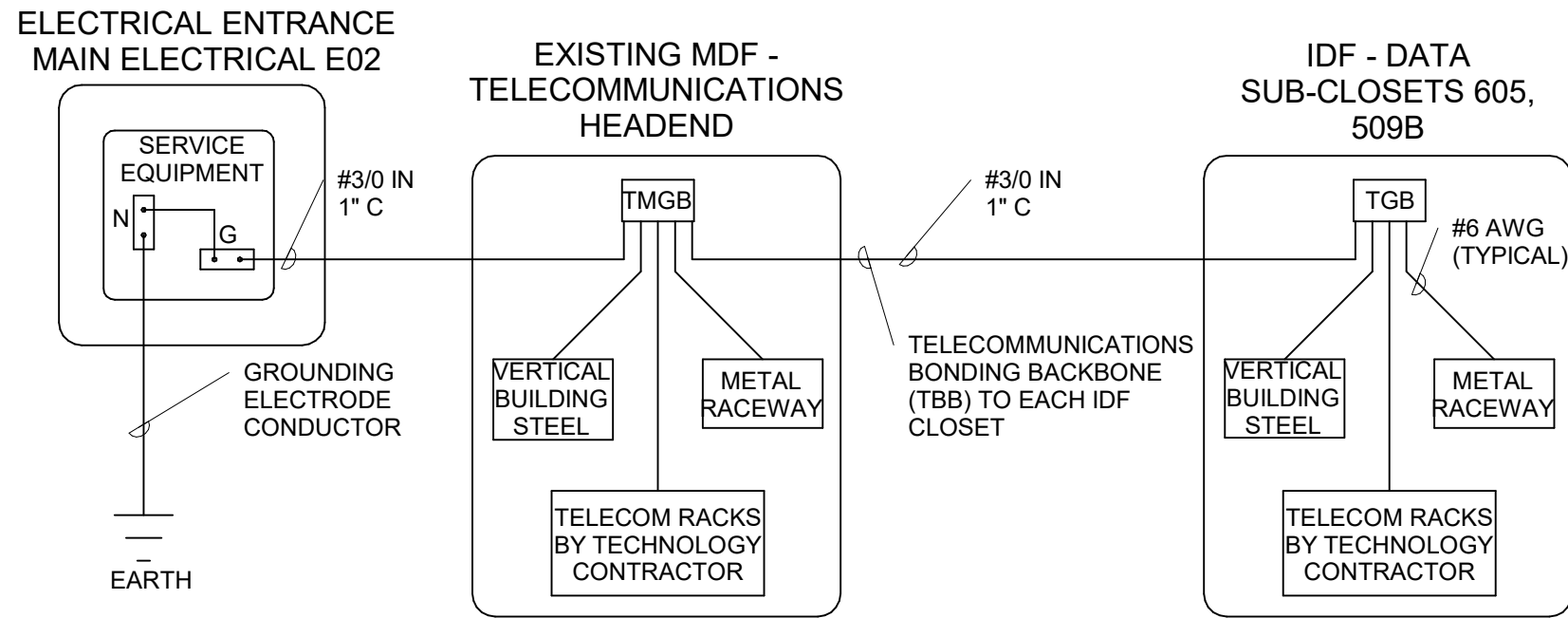
4 DOAS S  
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3 ELEVATOR DISCONNECT SWITCH

NOT TO SCALE

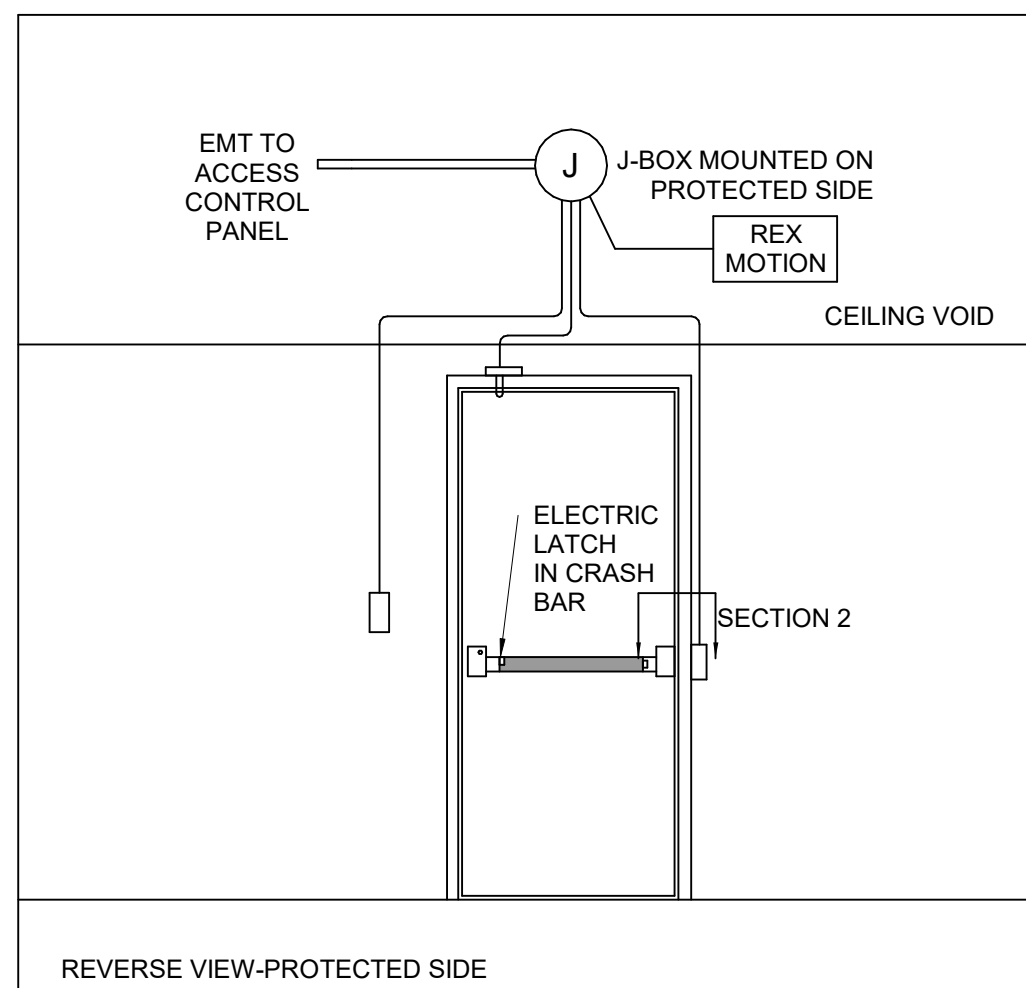
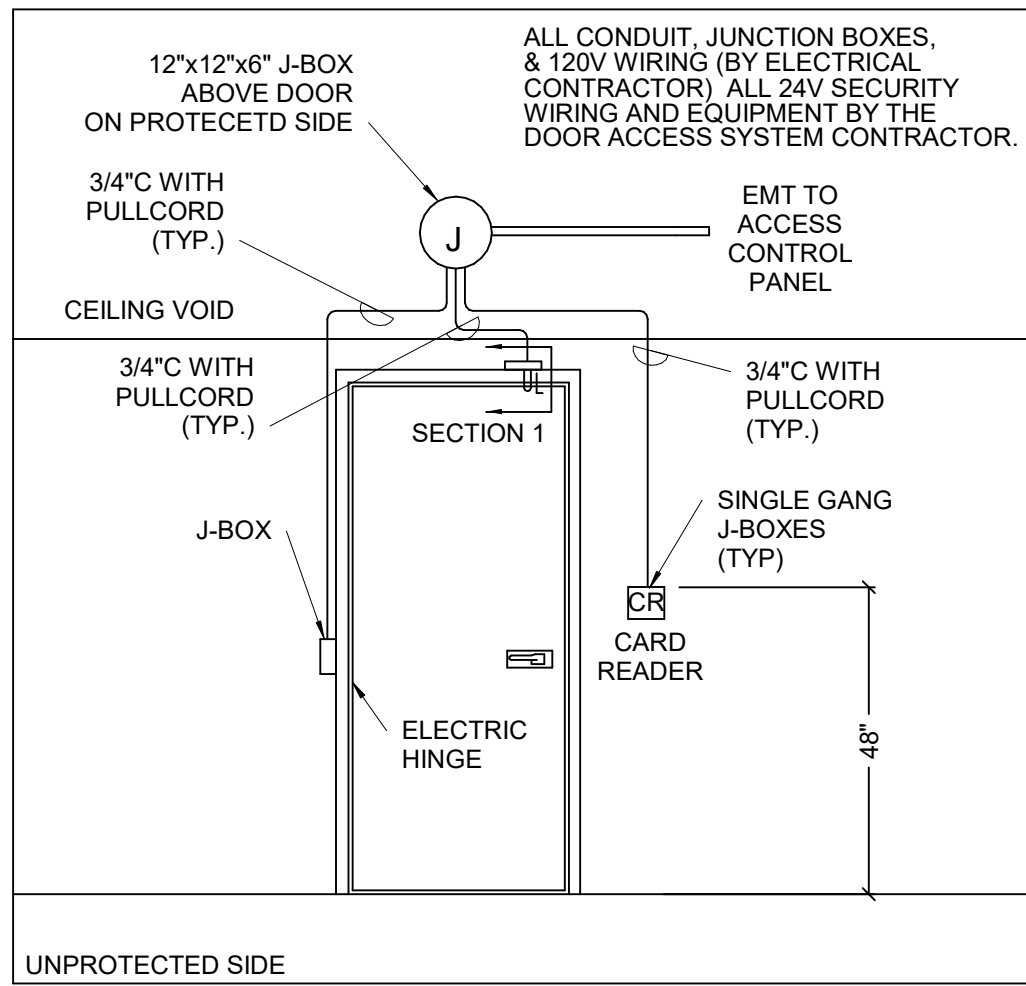
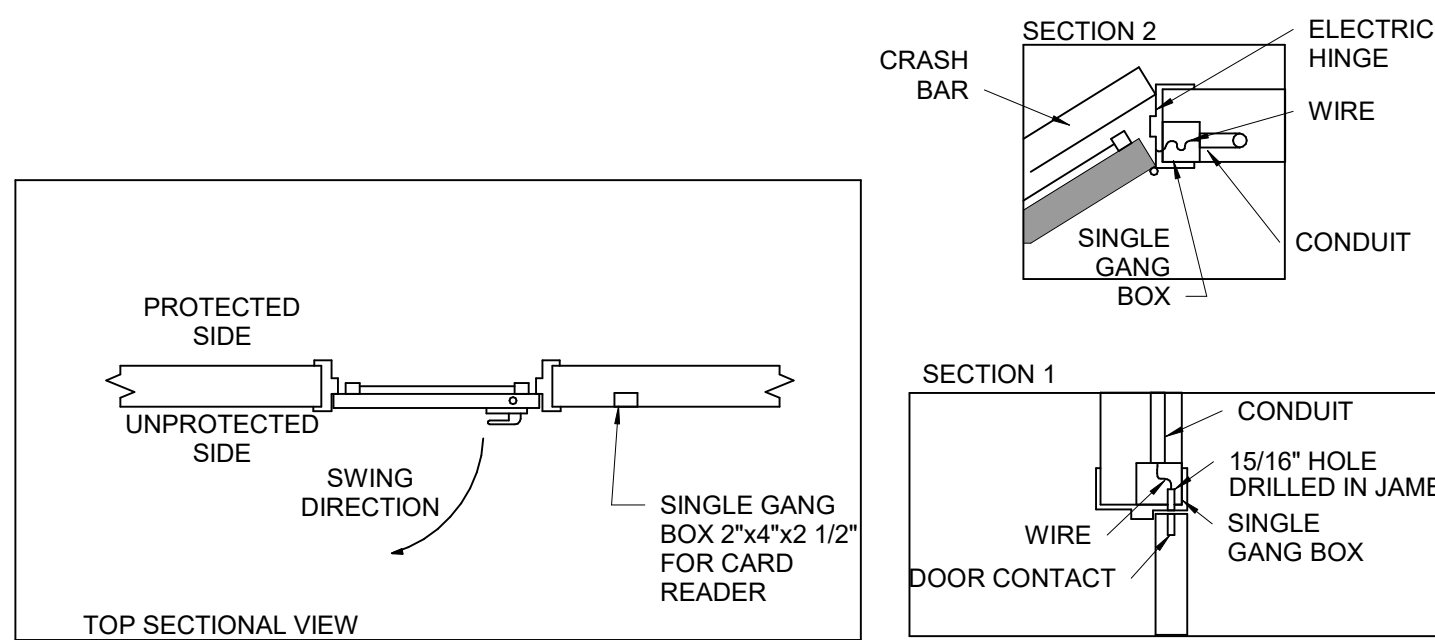


- NOTES:
- IT IS THE INTENT FOR THE TELECOMMUNICATION GROUNDING SYSTEM TO UTILIZE THE "GROUND ELECTRODE CONDUCTOR (GEC)" ASSOCIATED WITH THE ELECTRICAL SERVICE ENTRANCE TO THE PROJECT SITE.
  - FROM THE GEC, THE ELECTRICAL CONTRACTOR SHALL INSTALL A BONDING CONDUCTOR WHICH WILL CONNECT THE GEC TO A TELECOMMUNICATIONS MAIN GROUNDING BUS BAR (TMGB) LOCATED IN THE EXISTING MDF. THE BONDING CONDUCTOR SHALL BE BONDED TO THE GEC AND THE TMGB. ADDITIONALLY, THE TMGB SHALL BE BONDED TO THE CLOSEST VERTICAL BUILDING OR STEEL CONDUIT RACEWAY OR CABLE TRAY DESIGNATED FOR TELECOMMUNICATIONS USE.
  - A BONDING CONDUCTOR (THE TELECOMMUNICATIONS BONDING BACKBONE) SHALL CONNECT THE TMGB TO ALL TELECOMMUNICATION CLOSETS (IDFs) WITHIN THE FACILITY. SPECIFICALLY TO A TELECOMMUNICATIONS GROUNDING BUSBAR (TGB) LOCATED IN EACH IDF. ADDITIONALLY, THE TGB WILL BE BONDED TO THE CLOSEST AVAILABLE VERTICAL BUILDING STEEL AND STEEL CONDUIT RACEWAY OR CABLE TRAY DESIGNATED FOR TELECOMMUNICATIONS USE.
  - COMPONENTS CRITERIA:
    - BUSBARS:
      - PREDRILLED ELECTROTIN PLATED COPPER BUSBAR PROVIDED WITH STANDARD NEMA BOLT HOLE SIZING AND SPACING FOR TWO HOLE COMPRESSION CONNECTORS OR EXOTHERMIC TYPE WELDED CONNECTORS.
      - REFER TO DETAIL E00.03-2 FOR TELECOM BUSBAR REQUIREMENTS.
      - THE BUSBAR SHALL BE INSULATED FROM ITS SUPPORT. MINIMUM 50mm SEPARATION IS RECOMMENDED.
    - BONDING CONDUCTOR:
      - TELECOMMUNICATIONS BONDING BACKBONE SHALL BE A MINIMUM OF 6AWG STRANDED AND INSULATED CONDUCTOR IN 3/4" EMT.
      - THE CONDUCTOR SHALL BE CONTINUOUS AND ROUTED IN THE SHORTEST POSSIBLE STRAIGHT LINE PATH FROM THE MDF TO IDFS.

TELECOMMUNICATIONS GROUNDING SYSTEM TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR

5 DETAIL - TELECOMMUNICATIONS SYSTEM GROUNDING

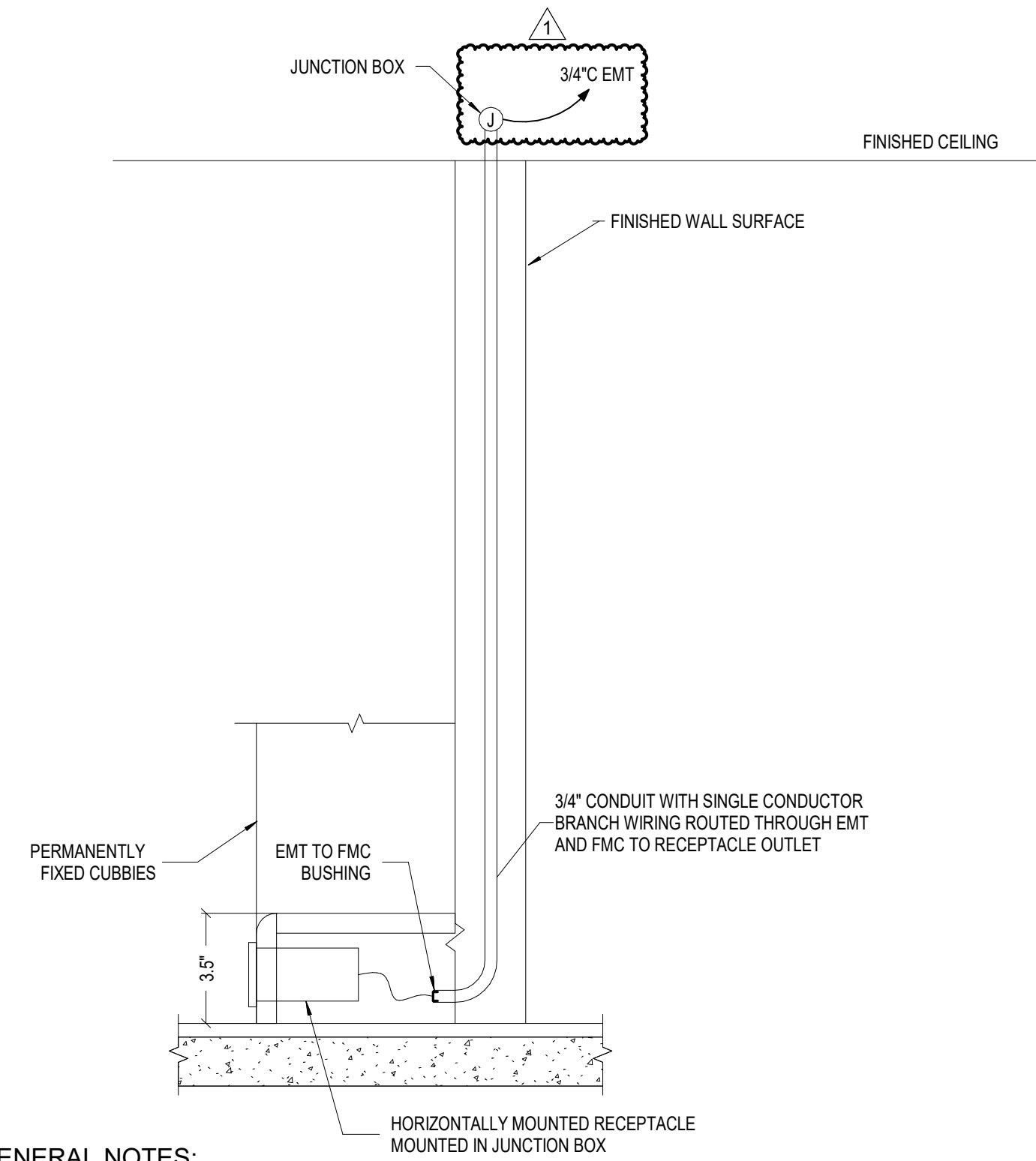
NOT TO SCALE



- GENERAL NOTES:
- REFER TO DOOR HARDWARE SPECIFICATION FOR DOOR HARDWARE.
  - THE INSTALLATION OF ALL CONDUIT, WIRING, JUNCTION BOXES, TERMINATIONS, CARD READERS AND DEVICES SHALL BE COORDINATED BETWEEN THE ELECTRICAL, SECURITY AND DOOR HARDWARE CONTRACTORS PRIOR TO INSTALLATION.
  - POWER SUPPLIES SHALL BE LOCATED IN READILY ACCESSIBLE LOCATION AT NEAREST NETWORK CLOSET, NOT ABOVE CEILINGS.

2 DETAIL - EXTERIOR SINGLE DOORS W/CRASH BAR

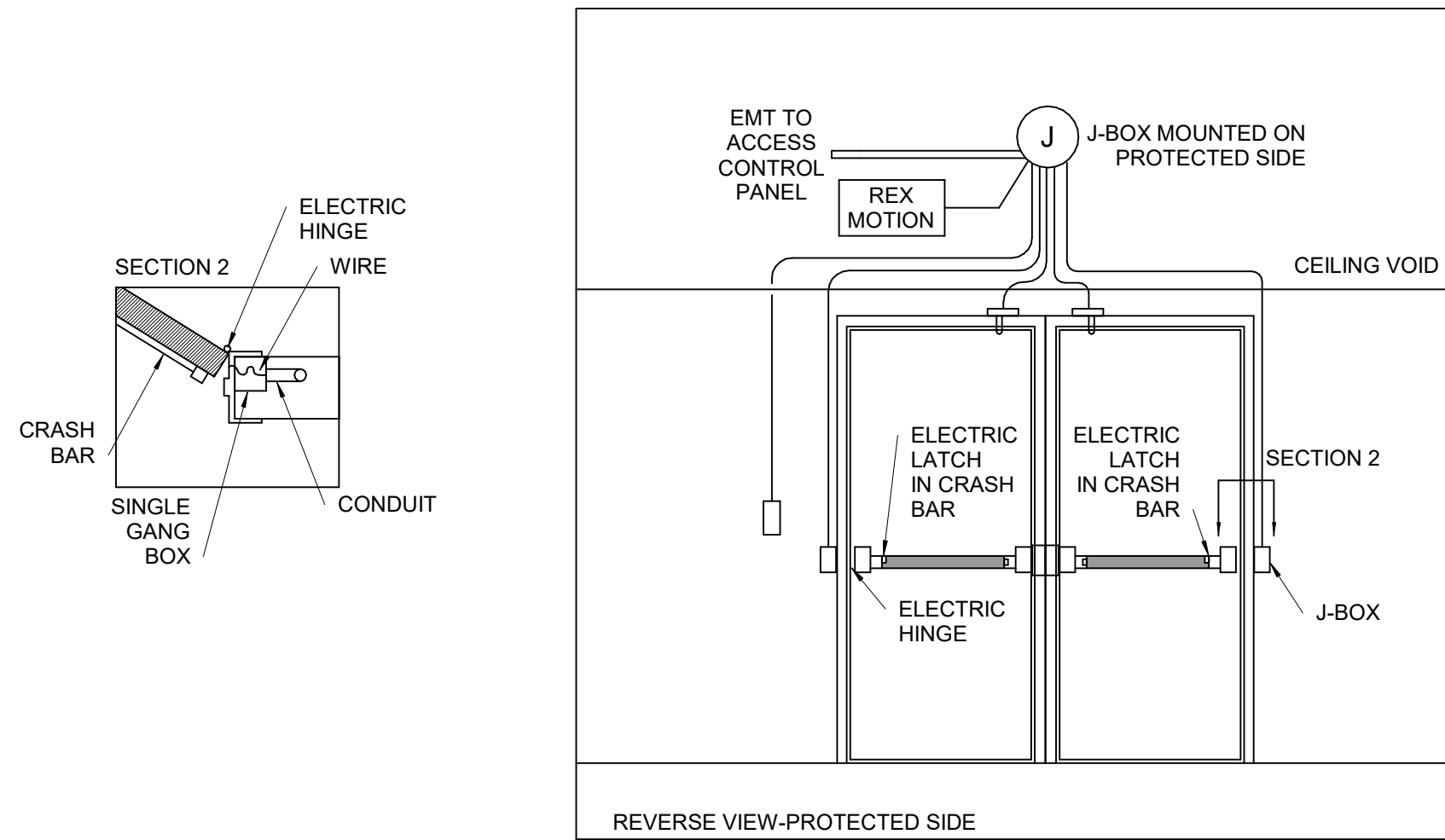
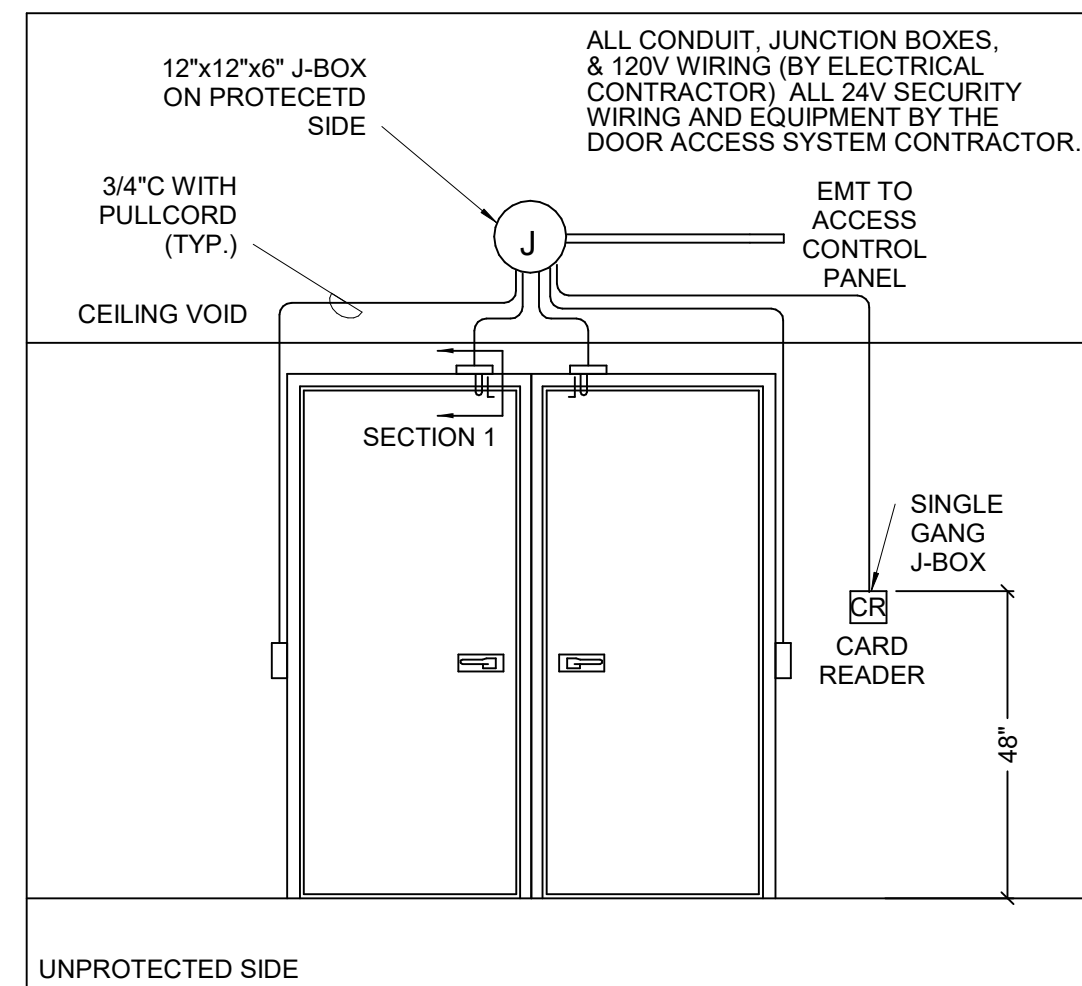
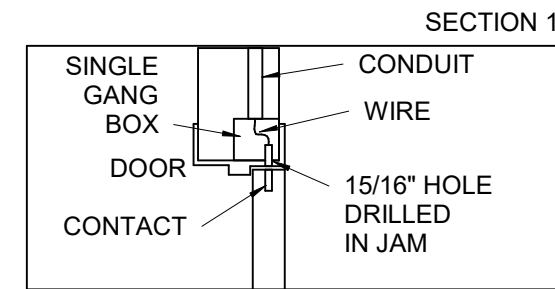
NOT TO SCALE



- GENERAL NOTES:
- ALL RECEPTACLES SHOWN MOUNTED IN BOOKCASES SHALL BE MOUNTED HORIZONTAL IN THE SPACE. COORDINATE WITH GENERAL CONTRACTOR
  - ALL BOXES SHALL BE GROUNDED.

4 HORIZONTAL MOUNTING

NOT TO SCALE



- GENERAL NOTES:
- REFER TO DOOR HARDWARE SPECIFICATION FOR DOOR HARDWARE.
  - THE INSTALLATION OF ALL CONDUIT, WIRING, JUNCTION BOXES, TERMINATIONS, CARD READERS AND DEVICES SHALL BE COORDINATED BETWEEN THE ELECTRICAL, SECURITY AND DOOR HARDWARE CONTRACTORS PRIOR TO INSTALLATION.
  - POWER SUPPLIES SHALL BE LOCATED IN READILY ACCESSIBLE LOCATION AT NEAREST NETWORK CLOSET, NOT ABOVE CEILINGS.
  - THIS DOOR DETAIL IS A GENERAL DETAIL AND DOES NOT REFLECT THE ACTUAL DOOR PROVIDED. THE CONTRACTORS SHALL COORDINATE WITH ALL APPLICABLE TRADES.

1 DETAIL - EXTERIOR DOUBLE DOORS W/CRASH BARS

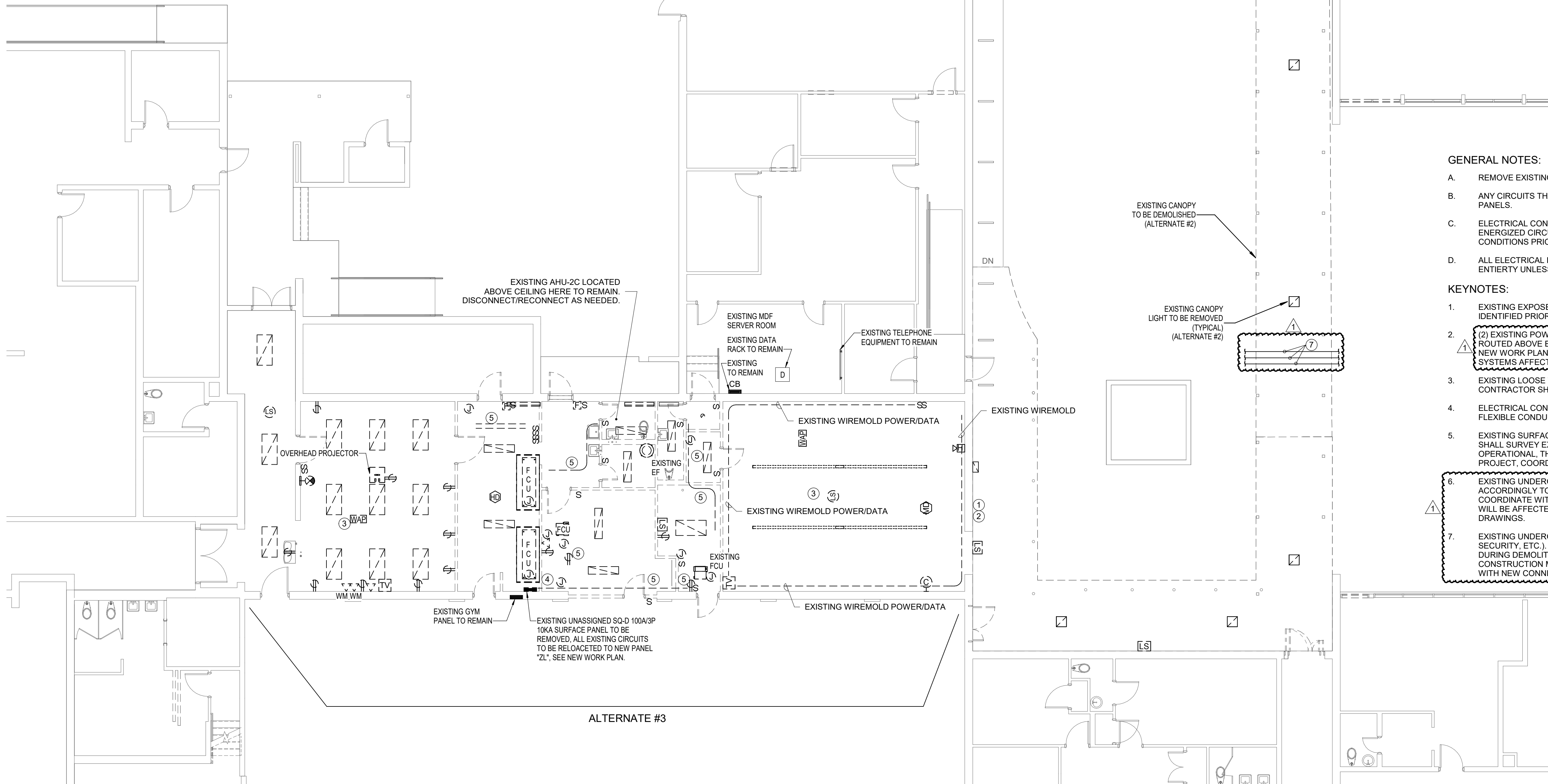
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NO.	DATE	DESCRIPTION
1	02/28/2024	ADDENDUM 01

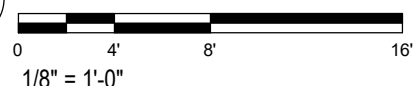


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SYMBOL	DESCRIPTION
	LIGHT FIXTURE TO BE REMOVED
	LIGHT FIXTURE TO BE REMOVED
	LIGHT FIXTURE TO BE REMOVED
	LIGHT FIXTURE TO BE REMOVED
	CANOPY LIGHT FIXTURE TO BE REMOVED
	EXIT LIGHT FIXTURE TO BE REMOVED
	LIGHT SWITCH TO BE REMOVED
	CONDUIT/WIRING TO BE REMOVED
	WIREMOLD TO BE REMOVED
	RECEPTACLE TO BE REMOVED
	WIRELESS ACCESS POINT TO BE REMOVED
	LOUD SPEAKER TO BE REMOVED
	LOUD SPEAKER TO BE REMOVED
	TELEVISION OUTLET TO BE REMOVED
	PANEL BOARD TO BE REMOVED
	FIRE ALARM PULL STATION TO BE REMOVED
	FIRE ALARM HEAT DETECTOR TO BE REMOVED
	OVERHEAD PROJECTOR OUTLETS TO BE REMOVED
	JUNCTION BOX TO BE REMOVED



1 ALT. 2 CONNECTOR ADDITION & ALT. 3 CORRIDOR RENOVATION - DEMOLITION



ALTERNATE #3

EXISTING TOWN OF CLAYTON UTILITY TRANSFORMER TO REMAIN

EXISTING CANOPY TO BE DEMOLISHED (ALTERNATE #2)

EXISTING CANOPY LIGHT TO BE REMOVED (TYPICAL) (ALTERNATE #2)

#### GENERAL NOTES:

- REMOVE EXISTING WIREMOLD IN AREAS AFFECTED BY RENOVATION.
- ANY CIRCUITS THAT BECOME UNUSED SHALL BE IDENTIFIED AS SPARE AT PANELS.
- ELECTRICAL CONTRACTOR SHALL TAKE CAUTION WHEN WORKING ON ENERGIZED CIRCUITS. CONTRACTOR SHALL SURVEY EXISTING CONDITIONS PRIOR TO PERFORMING.
- ALL ELECTRICAL ITEMS SHOWN AS DASHED SHALL BE REMOVED IN THEIR ENTIRETY UNLESS OTHERWISE NOTED.

#### KEYNOTES:

- EXISTING EXPOSED WIRING ON TOP OF EXISTING CANOPY SHALL BE IDENTIFIED PRIOR TO REMOVAL/RELOCATION. REFER TO NEW WORK PLAN.
- (2) EXISTING POWER CONDUITS AND (6) EXISTING COMMUNICATION CABLES ROUTED ABOVE EXISTING CANOPY. RELOCATE AND RESUPPORT. REFER TO NEW WORK PLAN. CONTRACTOR SHALL FIELD VERIFY CIRCUITS AND SYSTEMS AFFECTED PRIOR TO COMMENCING ANY WORK.
- EXISTING LOOSE WIRING ABOVE CEILING SHALL BE RESUPPORTED. CONTRACTOR SHALL SURVEY PRIOR TO BID.
- ELECTRICAL CONTRACTOR SHALL RESUPPORT UNSUPPORTED EXISTING FLEXIBLE CONDUIT.
- EXISTING SURFACE MOUNTED CONDUITS ON CEILING/WALLS. CONTRACTOR SHALL SURVEY EXISTING CONDITION. IF CONDUITS AND WIRING ARE OPERATIONAL, THEN CONTRACTOR SHALL REROUTE CONCEALED AS PART OF PROJECT. COORDINATE CLOSELY WITH ARCHITECT.
- EXISTING UNDERGROUND FEEDERS SHALL BE FIELD VERIFIED AND IDENTIFIED ACCORDINGLY TO AVOID DURING DEMOLITION. CONTRACTOR SHALL COORDINATE WITH CONSTRUCTION MANAGER IN DETERMINING IF CONDUIT WILL BE AFFECTED WITH NEW CONNECTOR FOOTINGS. REFER TO CIVIL DRAWINGS.
- EXISTING UNDERGROUND COMMUNICATIONS CONDUITS (i.e. FIBER, PAGING, SECURITY, ETC.). FIELD VERIFY AND IDENTIFY CONDUITS/CABLING TO AVOID DURING DEMOLITION. CONTRACTOR SHALL COORDINATE WITH CONSTRUCTION MANAGER IN DETERMINING IF CONDUITS WILL BE AFFECTED WITH NEW CONNECTOR FOOTINGS. REFER TO CIVIL DRAWINGS.

## COOPER ACADEMY A & R

PROJECT TITLE

"CLIENT'S PROJECT" # - XXX



02/19/2024  
TBUKOVICH@PDCENGINEERS.COM



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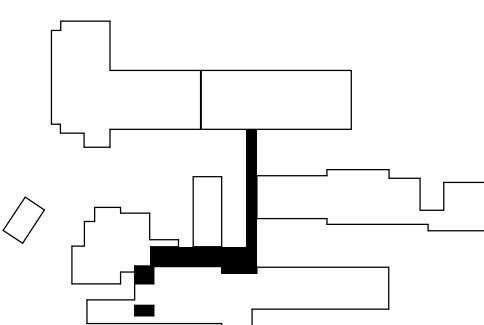
NO.	DATE	DESCRIPTION
1	02/20/2024	ADDENDUM 01

**BID SET**  
PROJECT PHASE  
**2307**  
BOOMERANG DESIGN PROJECT NUMBER  
**02.07.2024**  
DRAWING RELEASE DATE

**ALT. 2 CONNECTOR &  
ALT. 3 CORRIDOR  
RENOVATION -  
ELECTRICAL DEMO**  
SHEET TITLE

**E700**  
SHEET





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REVISIONS		
NO.	DATE	DESCRIPTION
1	02/28/2024	ADDENDUM 01

BID SET  
PROJECT PHASE

2307

BOOMERANG DESIGN PROJECT NUMBER

02.07.2024

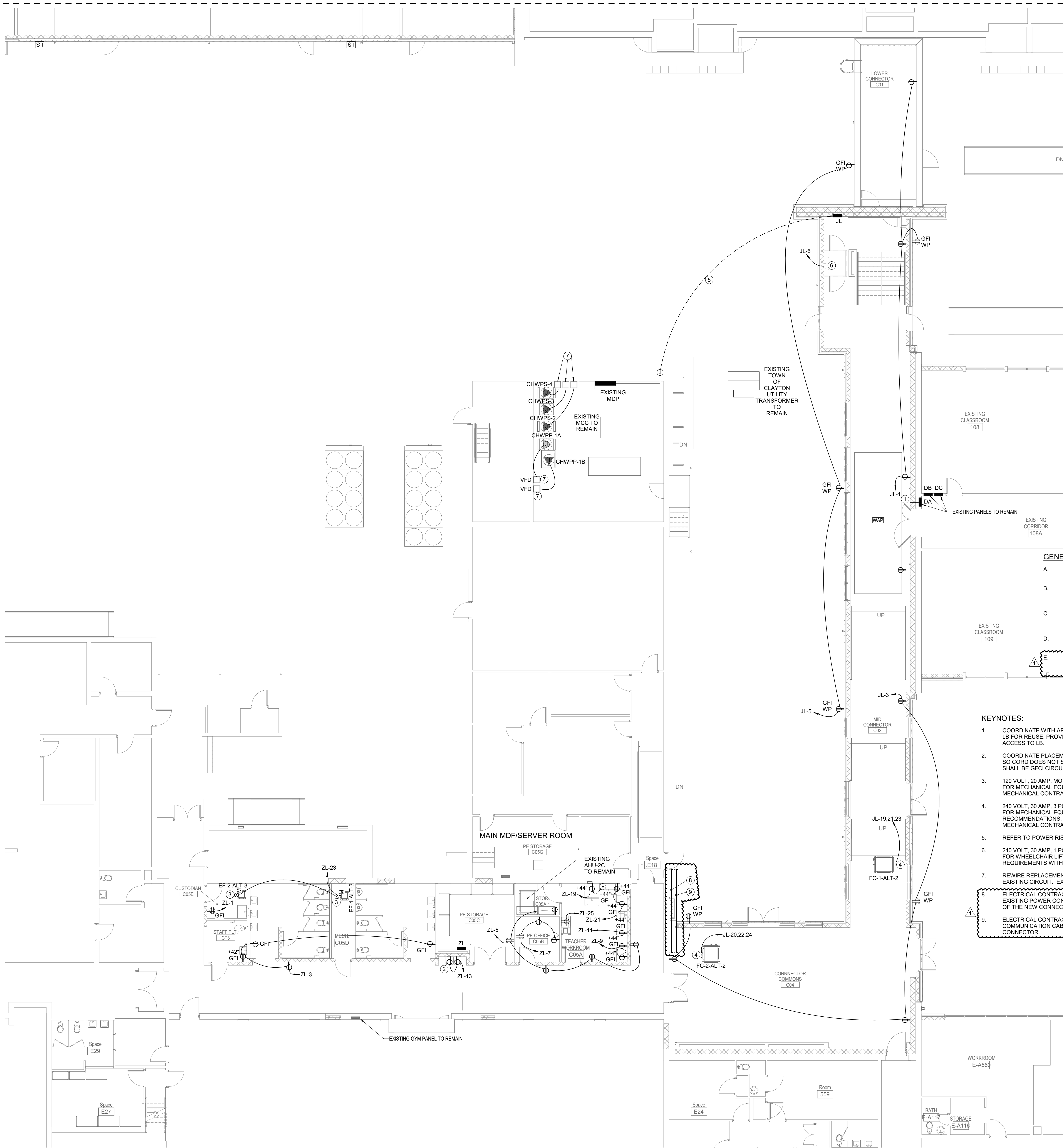
DRAWING RELEASE DATE

ALT. 2 CONNECTOR &  
ALT. 3 CORRIDOR  
RENOVATION -  
POWER PLAN

SHEET TITLE

E701

SHEET



GENERAL NOTES:

- REFER TO ELECTRICAL LEAD SHEET E001 FOR SYMBOLS, ABBREVIATIONS AND NOTES.
- ALL WORK IN TELECOM ROOMS SHALL BE COORDINATED BETWEEN DIVISION 27, 28 AND ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.
- REFER TO E300 SERIES FOR TECHNOLOGY/SECURITY AND E400 SERIES FOR FIRE ALARM WORK IN THIS AREA.
- ALL RECEPTACLES SHALL BE TAMPER RESISTANT.
- ELECTRICAL CONTRACTOR SHALL PAINT FLOOR IN FRONT OF ELECTRICAL PANELS INDICATING CLEARANCES TO COMPLY WITH NEC 110.26(A)(1).

KEYNOTES:

- COORDINATE WITH ARCHITECT, PROTECT EXISTING CONDUIT AND LB FOR REUSE. PROVIDE ACCESS PANEL IN NEW WALL TO GAIN ACCESS TO LB.
- COORDINATE PLACEMENT OF RECEPTACLES FOR WATER COOLER, SO CORD DOES NOT SHOW. CIRCUIT THAT SERVES WATER COOLER SHALL BE GFI/CIRCUIT BREAKER.
- 120 VOLT, 20 AMP, MOTOR RATED TOGGLE DISCONNECT SWITCH FOR MECHANICAL EQUIPMENT. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
- 240 VOLT, 30 AMP, 3 POLE, NEMA-1, FUSIBLE DISCONNECT SWITCH FOR MECHANICAL EQUIPMENT. FUSE PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- REFER TO POWER RISER FOR CONDUIT AND WIRE SIZE.
- 240 VOLT, 30 AMP, 1 POLE, NEMA-1 FUSIBLE DISCONNECT SWITCH FOR WHEEL CHAIR LIFT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER/LIFT PROVIDER.
- REWIRE REPLACEMENT PUMPS. CONNECT TO NEW VFD USING EXISTING CIRCUIT. EXTEND WIRING/CONDUIT AS NEEDED.
- ELECTRICAL CONTRACTOR SHALL REROUTE AND RESUPPORT (2) EXISTING POWER CONDUITS SO THAT THEY ARE OUT OF THE WAY OF THE NEW CONNECTOR.
- ELECTRICAL CONTRACTOR SHALL REROUTE/RESUPPORT (6) COMMUNICATION CABLES OUT OF THE WAY OF THE NEW CONNECTOR.

1 ALT. 2 CONNECTOR ADDITION & ALT. 3 CORRIDOR RENOVATION - POWER

1/8" = 1'-0"

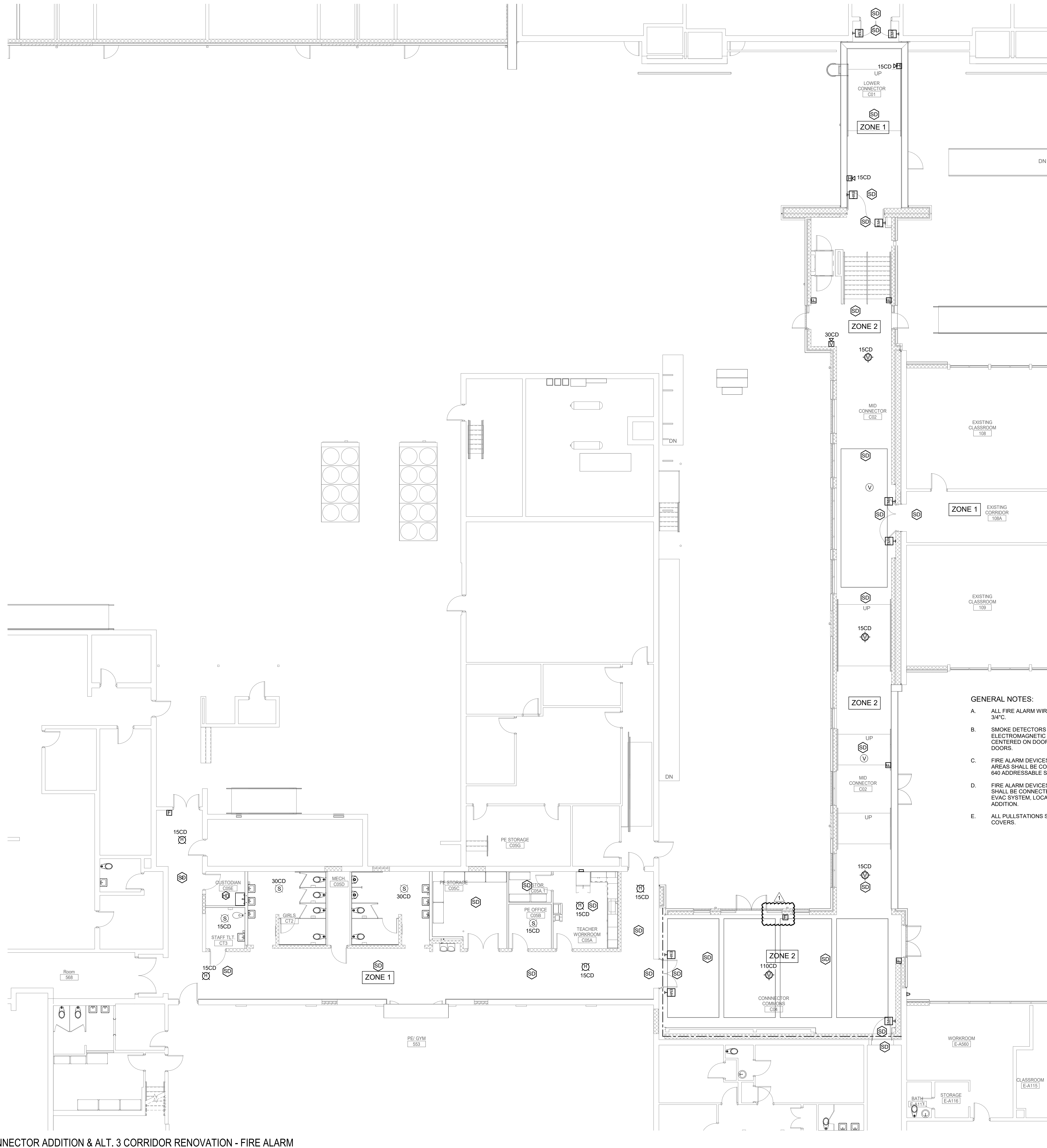
PE/ GYM  
559



2/19/2024 3:35:15 PM

1 ALT. 2 CONNECTOR ADDITION & ALT. 3 CORRIDOR RENOVATION - FIRE ALARM

18" = 1'-0"



GENERAL NOTES:

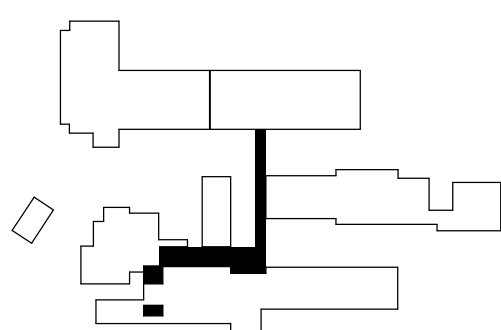
- ALL FIRE ALARM WIRING SHALL BE IN MINIMUM 3/4" C.
- SMOKE DETECTORS AT DOORS WITH ELECTROMAGNETIC HOLDERS SHALL BE CENTERED ON DOORS AND WITHIN 6" OF DOORS.
- FIRE ALARM DEVICES LOCATED IN ZONE 1 AREAS SHALL BE CONNECTED TO NOTIFIER NFS 640 ADDRESSABLE SYSTEM.
- FIRE ALARM DEVICES LOCATED IN ZONE 2 AREA SHALL BE CONNECTED TO NOTIFIER VOICE-EVAC SYSTEM, LOCATED IN NEW CLASSROOM ADDITION.
- ALL PULLSTATIONS SHALL HAVE LEXAN COVERS.

**COOPER ACADEMY**  
**A & R**  
PROJECT TITLE

"CLIENT'S PROJECT" # - XXX



02/19/2024  
TBTUKOVICH@PDCENGINEERS.COM



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NO.	DATE	DESCRIPTION
1	02/28/2024	ADDENDUM 01

**BID SET**  
PROJECT PHASE  
**2307**  
BOOMERANG DESIGN PROJECT NUMBER  
**02.07.2024**  
DRAWING RELEASE DATE

**ALT. 2 CONNECTOR &  
ALT. 3 CORRIDOR  
RENOVATION - FIRE  
ALARM PLAN**  
SHEET TITLE

**E704**

SHEET



PANEL AL2																												
CKT	LOAD TYPE	LOAD KVA	DESCRIPTION	C	PH	N	G	CB	PHASE			CB	PH	N	G	C	DESCRIPTION	LOAD KVA	LOAD TYPE	CKT								
									A	B	C																	
1	R	0.900	RECEPT - 502	3/4"	10	10	10	20	1.440			20	10	10	10	3/4"	RECEPT - C501	0.540	R	2								
3	R	0.720	RECEPT - 502	3/4"	10	10	10	20	1.620			20	10	10	10	3/4"	RECEPT - 522	0.900	R	4								
5	R	0.720	RECEPT - 504	3/4"	10	10	10	20		1.620		20	10	10	10	3/4"	RECEPT - 522	0.900	R	6								
7	R	0.900	RECEPT - 504	3/4"	10	10	10	20	1.800			20	10	10	10	3/4"	RECEPT - 520	0.900	R	8								
9	R	0.900	RECEPT - 506	3/4"	10	10	10	20		1.800		20	10	10	10	3/4"	RECEPT - 520	0.900	R	10								
11	R	0.720	RECEPT - 506	3/4"	10	10	10	20			1.620	20	10	10	10	3/4"	RECEPT - 521	0.900	R	12								
13	R	0.720	RECEPT - 508	3/4"	10	10	10	20	1.620			20	10	10	10	3/4"	RECEPT - 521	0.900	R	14								
15	R	0.900	RECEPT - 508	3/4"	12	12	12	20		1.800		20	10	10	10	3/4"	RECEPT - 519	0.900	R	16								
17	R	0.540	RECEPT - C500	3/4"	10	10	10	20			1.440	20	10	10	10	3/4"	RECEPT - 519	0.900	R	18								
19	R	0.900	RECEPT - 501	3/4"	10	10	10	20	1.800			20	10	10	10	3/4"	RECEPT - 517	0.900	R	20								
21	R	0.720	RECEPT - 501	3/4"	10	10	10	20		1.620		20	10	10	10	3/4"	RECEPT - 517	0.900	R	22								
23	R	0.720	RECEPT - 503	3/4"	10	10	10	20			1.440	20	10	10	10	3/4"	RECEPT - 515	0.720	R	24								
25	R	0.900	RECEPT - 503	3/4"	10	10	10	20	1.620			20	10	10	10	3/4"	RECEPT - 515	0.720	R	26								
27	R	0.900	RECEPT - 505	3/4"	10	10	10	20		1.800		20	12	12	12	3/4"	RECEPT - 513	0.900	R	28								
29	R	0.720	RECEPT - 505	3/4"	10	10	10	20			1.620	20	12	12	12	3/4"	RECEPT - 513	0.900	R	30								
31	R	0.900	RECEPT - 507	3/4"	12	12	12	20	1.440			20	10	10	10	3/4"	RECEPT - C501	0.540	R	32								
33	R	0.720	RECEPT - 507	3/4"	12	12	12	20		1.680		20	12	12	12	3/4"	EWG - C501 (NOTE 2)	0.960	O	34								
35	O	0.600	NAC PANEL - 509B (NOTE 1)	3/4"	12	12	12	20			1.140	20	10	10	10	3/4"	RECEPT - EXTERIOR	0.540	R	36								
37	O	0.800	AMPLIFIER/CABINET - 509B (NOTE 1)	3/4"	12	12	12	20	1.400			20	12	12	12	3/4"	RECEPT - 509B	0.600	R	38								
39	O	1.000	NETWORK RACK - 509B	3/4"	12	12	12	20		1.600		20	12	12	12	3/4"	RECEPT - 509B	0.600	R	40								
41	O	1.000	NETWORK RACK - 509B	3/4"	12	12	12	20			2.000	20	12	12	12	3/4"	BDA EQUIPMENT - 509B	1.000	O	42								
43	L	0.840	LTS - ELEVATOR OVERHEAD (NOTE 3)	3/4"	10	10	10	20	0.840			20					SPARE			44								
45	O	0.000	BATTERY OVERLOADS	3/4"	12	12	12	20			0.900	20					SPARE			46								
47	O	0.400	SPRINKLER BELL	3/4"	12	12	12	20			0.400	20					SPARE			48								
49	O		SPARE							0.000		20					SPARE			50								
51	O		SPARE							0.000		20					SPARE			52								
53	O		SPARE								0.000	20					SPARE			54								
55	R		SPARE							0.000		20					SPACE			56								
57	R		SPARE								0.000	20					SPACE			58								
59	R		SPARE								0.000	20					SPACE			60								
LOAD TOTAL:									11.96	12.82	11.28																	
208Y/120 V									LOAD TYPE			CONNECTED			DEMAND			FED FROM:										
MAINS: MLO									3 PHASE			4 WIRE			(R) RECEPTACLES			PANEL AL1										
22000 AIC									225 A BUS			(M) MOTOR			0.00 100% 0.00			MOUNT: SURFACE										
									SE LABEL			(H) HVAC			0.00 100% 0.00			NEMA: 1										
												(L) LIGHTING			0.84 125% 1.05													
												(O) OTHER			6.66 100% 6.66													
												(K) KITCHEN EQUIP			0.00 100% 0.00													
									TOTAL			36.06			75% 26.99													
NOTES:																												
1. PROVIDE RED BREAKER LOCK FOR FIRE ALARM CIRCUITS.																												
2. PROVIDE GFC BREAKER FOR WATER COOLER.																												
3. CIRCUIT FEEDS EMERGENCY LIGHTS.																												
4. CIRCUIT FEEDS EMERGENCY LIGHTS.																												
ELECTRICAL E02																												











PANEL AL3																					
CKT	LOAD TYPE	LOAD KVA	DESCRIPTION	C	PH	N	G	CB	PHASE			CB	PH	N	G	C	DESCRIPTION	LOAD KVA	LOAD TYPE	CKT	
									A	B	C										
1	O	0.600	CHILLER CH-1 CONTROLS	3/4"	10	10	10	20	1.200			20	10	10	10	3/4"	CHILLER CH-2 CONTROLS	0.600	O	2	
3	O	1.000	CH-1 HEAT TRACE (NOTE 1)	3/4"	10	10	10	20		2.000		20	10	10	10	3/4"	CH-2 HEAT TRACE (NOTE 1)	1.000	O	4	
5	O	1.000	CH-1 PIPING HEAT TRACE (NOTE 1)	3/4"	10	10	10	20			2.000	20	10	10	10	3/4"	CH-2 PIPING HEAT TRACE (NOTE 1)	1.000	O	6	
7	M	1.320							2.640												
9	M	1.320	PUMP PCHWP-1 [3HP]	3/4"	12	N/A	12	20		2.640		20	12	N/A	12	3/4"	PUMP PCHWP-2 [3HP]	1.320	M	10	
11	M	1.320								2.640								1.320	M	12	
13	R	0.540	RECEPT - EXTERIOR	3/4"	10	10	10	20	0.540			20					SPARE		O	14	
15	O		SPARE							0.000		20					SPARE		O	16	
17	O		SPARE								0.000	20					SPARE		O	18	
19	O		SPARE						0.000								SPARE		O	20	
21	O		SPARE							0.000							SPARE		O	22	
23	O		SPARE								0.000						SPARE		O	24	
25	O		SPARE						0.000								SPARE		O	26	
27	O		SPARE							0.000							SPARE		O	28	
29	O		SPARE								0.000						SPARE		O	30	
LOAD TOTAL									4.38	4.64	4.64										
LOAD TYPE									CONNECTED			DEMAND									
(R) RECEPTACLES									0.94			100% 0.94									
(M) MOTOR									7.92			100% 7.92									
(H) HVAC									0.00			100% 0.00									
(L) LIGHTING									0.00			125% 0.00									
(O) OTHER									5.20			100% 5.20									
(K) KITCHEN EQUIP									0.00			100% 0.00									
TOTAL									13.66			100% 13.66									
FED FROM: PANEL AL1																					
MOUNT: SURFACE																					
NEMA: 3R																					
PROVIDE DOOR WITH LOCK AND HINGED TRIM. PROVIDE COPPER BUSS BARS AND BOLT ON BREAKERS.																					



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[illegible]

# PANEL JL (ALTERNATE #2)

CKT	LOAD TYPE	LOAD KVA	DESCRIPTION	C	PH	N	G	CB	PHASE				CB	PH	N	G	C		DESCRIPTION	LOAD KVA	LOAD TYPE	CKT	
1	R	0.540	RECEPT - C01, C02	3/4"	10	10	10	20	0.815				20	12	12	12	3/4"		LTS - EXTERIOR (NOTE 1)	0.275	L		
3	R	0.900	RECEPT - C02, C04	3/4"	10	10	10	20		1.961			20	12	12	12	3/4"		LTS - C01-C04 (NOTE 1)	1.961	L		
5	O	0.540	RECEPT-EXTERIOR	3/4"	10	10	10	20				2.460	20	10	10	10	3/4"		WHEELCHAIR LIFT	1.920	O	6	
7	O		S-PARE					20	0.000				20						S-PARE		O	8	
9	O		S-PARE					20	0.000				20						S-PARE		O	10	
11	O		S-PARE					20				0.000	20						S-PARE		O	12	
13	O		S-PARE					20	0.000										S-PACE		O	14	
15	O		S-PARE					20		0.000									S-PAGE		O	16	
17	O		S-PARE					20				0.000							S-PACE		O	18	
19	H	0.828	FC-1-ALT-2	3/4"	10	N/A	10	15	1.404					15	10	N/A	10	3/4"	FC-2-ALT-2	0.576	H	20	
21	H	0.828							1.404												0.576	H	22
23	H	0.828							1.404												0.576	H	24
LOAD TOTAL:									2.22	3.37	3.50												
LOAD TYPE									CONNECTED				DEMAND										
(R) RECEPTACLES									1.98				1.98										
(H) MOTOR									0.00				100% 0.00										
(H) HVAC									4.21				100% 4.21										
(L) LIGHTING									1.34				125% 1.67										
(O) OTHER									1.92				100% 1.92										
(K) KITCHEN EQUIP.									0.00				100% 0.00										
TOTAL									9.45				104% 9.78										

208Y/120 V	3 PHASE	4 WIRE	(R) RECEPTACLES	1.98	100% 1.98	FED FROM:	EXISTING MDP
MAINS: 400 A MCB			(H) MOTOR	0.00	100% 0.00	MOUNT:	FLUSH
22000 A/C	SE LABEL		(H) HVAC	4.21	100% 4.21	NEMA:	1
			(L) LIGHTING	1.34	125% 1.67		
			(O) OTHER	1.92	100% 1.92		
			(K) KITCHEN EQUIP.	0.00	100% 0.00		
			TOTAL	9.45	104% 9.78		

CONNECTOR PROVIDE DUE WITH LOCK AND HINGED TRIM. PROVIDE COPPER BUSS BARS AND BOLT ON BREAKERS.

NOTES  
  
 1.  
 2.  
 3.  
 4.

PANEL TOTALS		
PHASE A	2.287 KVA	19.1 AMP
PHASE B	3.484 KVA	29.0 AMP
PHASE C	4.001 KVA	33.3 AMP

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PANEL BL1																								
CKT	LOAD TYPE	LOAD KVA	DESCRIPTION	C	PH	N	G	B	PHASE			CB	PH	N	G	C	DESCRIPTION	LOAD KVA	LOAD TYPE	CKT				
								A	B	C														
1	S	8.500	PANEL BL2	SEE POWER RISER	125			10.734			125	SEE POWER RISER					PANEL BL3	2.234	S	2				
3	S	9.920							12.274										2.354	S	4			
5	S	9.807																12.207	2.400	S	6			
7	O																							
9	O		SPARE		100			0.000			30	10	10	10	3/4"		SPD		O	8				
11	O								0.000															
13	O									0.000														
15	O		SPARE		100			0.000									SPACE		O	12				
17	O									0.000														
19	O									0.000														
21	O		SPARE				20	0.000									SPACE	O	16					
23	O		SPARE				20		0.000								SPACE	O	20					
25	O		SPARE				20	0.000									SPACE	O	22					
27	O		SPARE				20		0.000								SPACE	O	24					
29	O		SPARE				20			0.000							SPACE	O	26					
31	H	0.728	CU-1	3/4"	10	N/A	10	0.728			20						SPACE		O	28				
33	H	0.728							0.728															
35	H	0.728							0.728															
37	H	0.728	CU-2	3/4"	10	N/A	10	0.728			20						SPACE		O	30				
39	H	0.728							0.728															
41	H	0.728	CU-3	3/4"	10	N/A	10			0.728	20						SPACE	O	32					
																			O	34				
																			O	36				
																			O	38				
																			O	40				
																			O	42				
LOAD TOTAL:									12.19	13.73	13.86													
LOAD TYPE									CONNECTED	DEMAND														
(R) RECEPTACLES									23.96	72%	16.53	FED FROM: TRANSFORMER TB												
(M) MOTOR									0.00	100%	0.00	MOUNT: SURFACE												
(H) HVAC									4.84	100%	4.84	NEMA: 1												
(L) LIGHTING									1.80	125%	2.25													
(O) OTHER									9.89	100%	9.89													
(K) KITCHEN EQUIP									0.00	100%	0.00													
TOTAL									39.58	85%	33.50													
NOTES:																								
1. 10.318 KVA 88.0 AMP																								
2. 11.621 KVA 96.8 AMP																								
3. 11.564 KVA 96.4 AMP																								
4.																								

PANEL TOTALS		
PHASE A	10.318 KVA	88.0 AMP
PHASE B	11.621 KVA	96.8 AMP
PHASE C	11.564 KVA	96.4 AMP

CKT

LOAD TYPE

LOAD KVA

DESCRIPTION

C

PH

N

G

CB

PHASE

CB

PH

N

G

C

DESCRIPTION

LOAD KVA

LOAD TYPE

CKT

A

B

C

1

R

0.720

RECEPT - 606, 608

3/4"

12

12

12

20

1,620

20

10

10

10

3/4"

RECEPT - 618

0.900

R

2

4

R

0.360

RECEPT - 604

3/4"

12

12

12

20

1,260

20

10

10

10

3/4"

RECEPT - 616

0.900

R

4

5

R

0.360

RECEPT - 604

3/4"

12

12

12

20

1,260

20

10

10

10

3/4"

RECEPT - 620

0.900

R

6

7

R

0.180

RECEPT - E00

3/4"

12

12

12

20

1,080

20

10

10

10

3/4"

RECEPT - 620

0.900

R

8

9

R

0.960

EWIC - C600 (NOTE 1)

3/4"

12

12

12

20

1,500

20

10

10

10

3/4"

RECEPT - C600

0.540

R

10

11

R

0.540

RECEPT - C600, C601

3/4"

12

12

12

20

1,440

20

10

10

10

3/4"

RECEPT - 621

0.900

R

12

13

R

0.300

RECEPT - 610

3/4"

12

12

12

20

1,200

20

10

10

10

3/4"

RECEPT - 621

0.900

R

14

15

R

0.300

RECEPT - 610

3/4"

12

12

12

20

1,200

20

10

10

10

3/4"

RECEPT - 619

0.900

R

16

17

O

1.500

MICROWAVE - 610

3/4"

12

12

12

20

2,400

20

10

10

10

3/4"

RECEPT - 619

0.900

R

18

19

O

1.200

REFRIGERATOR - 610

3/4"

12

12

12

20

1,800

20

10

10

10

3/4"

RECEPT - EXTERIOR

0.600

R

20

21

O

1.200

COPIER - 610

3/4"

12

12

12

20

2,100

20

10

10

10

3/4"

RECEPT - 617

0.900

R

22

23

R

0.600

RECEPT - 610

3/4"

12

12

12

20

1,500

20

10

10

10

3/4"

RECEPT - 617

0.900

R

24

25

R

0.600

RECEPT - 610

3/4"

12

12

12

20

1,500

20

12

12

12

3/4"

RECEPT - 615

0.900

R

26

27

R

0.360

RECEPT - 610A, 610B

3/4"

12

12

12

20

1,260

20

12

12

12

3/4"

RECEPT - 612, 615

0.900

R

28

29

R

0.720

RECEPT - 612

3/4"

12

12

12

20

1,620

20

12

12

12

3/4"

RECEPT - 613

0.900

R

30

31

R

0.400

RECEPT - 614, 616

3/4"

12

12

12

20

1,300

20

12

12

12

3/4"

RECEPT - 613

0.900

R

32

33

O

0.800

SUMP PUMP ALARM PANEL

3/4"

12

12

12

20

2,600

20

12

12

12

3/4"

LTS - ELEVATOR E00 (NOTE 2)

0.800

L

34

35

O

1.587

SUMP PUMP [3/4HP]

3/4"

10

10

10

25

1,587

20

SPARE

O

36

37

O

SPARE

20

0.000

SPARE

O

38

39

O

SPARE

20

0.000

SPARE

O

40

41

O

SPARE

20

0.000

SPARE

O

42

LOAD TOTAL:

8.50

9.92

9.81

LOAD TYPE

CONNECTED

DEMAND

(R) RECEPTACLES

20.14

75%

15.07

(M) MOTOR

0.00

100%

0.00

(H) HVAC

0.00

100%

0.00

(L) LIGHTING

1.80

125%

2.25

(O) OTHER

6.29

100%

6.29

(K) KITCHEN EQUIP

0.00

100%

0.00

TOTAL

28.23

64%

23.61

209Y120 V

3 PHASE

4 WIRE

MAINS: MLO

125 A BUS

22000 AIC

SE LABEL

ELECTRICAL 606

NOTES:

1. PROVIDE GFCI CIRCUIT BREAKER FOR WATER COOLER

2. CIRCUIT FEEDS EMERGENCY LIGHTS

3.

4.

FED FROM: BL1

MOUNT: SURFACE

NEMA: 1

PROVIDE DOOR WITH LOCK AND HINGED TRIM PROVIDE COPPER BUS BARS AND BOLT ON BREAKERS.

PANEL TOTALS

7.109 KVA

59.2 AMP

8.226 KVA

69.1 AMP

8.202 KVA

68.3 AMP

[illegible]

**Progressive Design Collaborative, Ltd.**  
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Raleigh, North Carolina 27604  
919-790-9989  
License# C-0183  
PROJECT #23015

**COOPER ACADEMY**  
**A & R**

"CLIENT'S PROJECT" # - XX)




02/19/2024  
TBUTKOVICH@PDCENGINEERS.COM

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REVISIONS 		
NO.	DATE	DESCRIPTION
1	02/20/2024	ADDENDUM 01

**BID SET**  
PROJECT PHASE

**2307**  
BOOMERANG DESIGN PROJECT NUMBER

**02.07.2024**  
DRAWING RELEASE DATE

**PANEL SCHEDULES**  
SHEET TITLE

# E803

SHEE



<

**COOPER ACADEMY**  
**A & R**  
PROJECT TITLE

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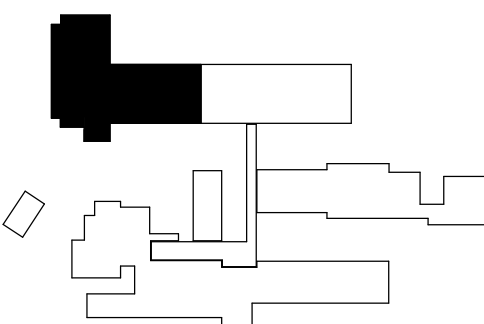
**PANEL SCHEDULES**

SHEET TITLE

**E804**

SHEET





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BID SET

PROJECT PHASE

2307

BOOMERANG DESIGN PROJECT NUMBER

02.07.2024

DRAWING RELEASE DATE

FIRST FLOOR FIRE  
PROTECTION PLAN

SHEET TITLE

FP102

SHEET

FIRE RATED WALLS

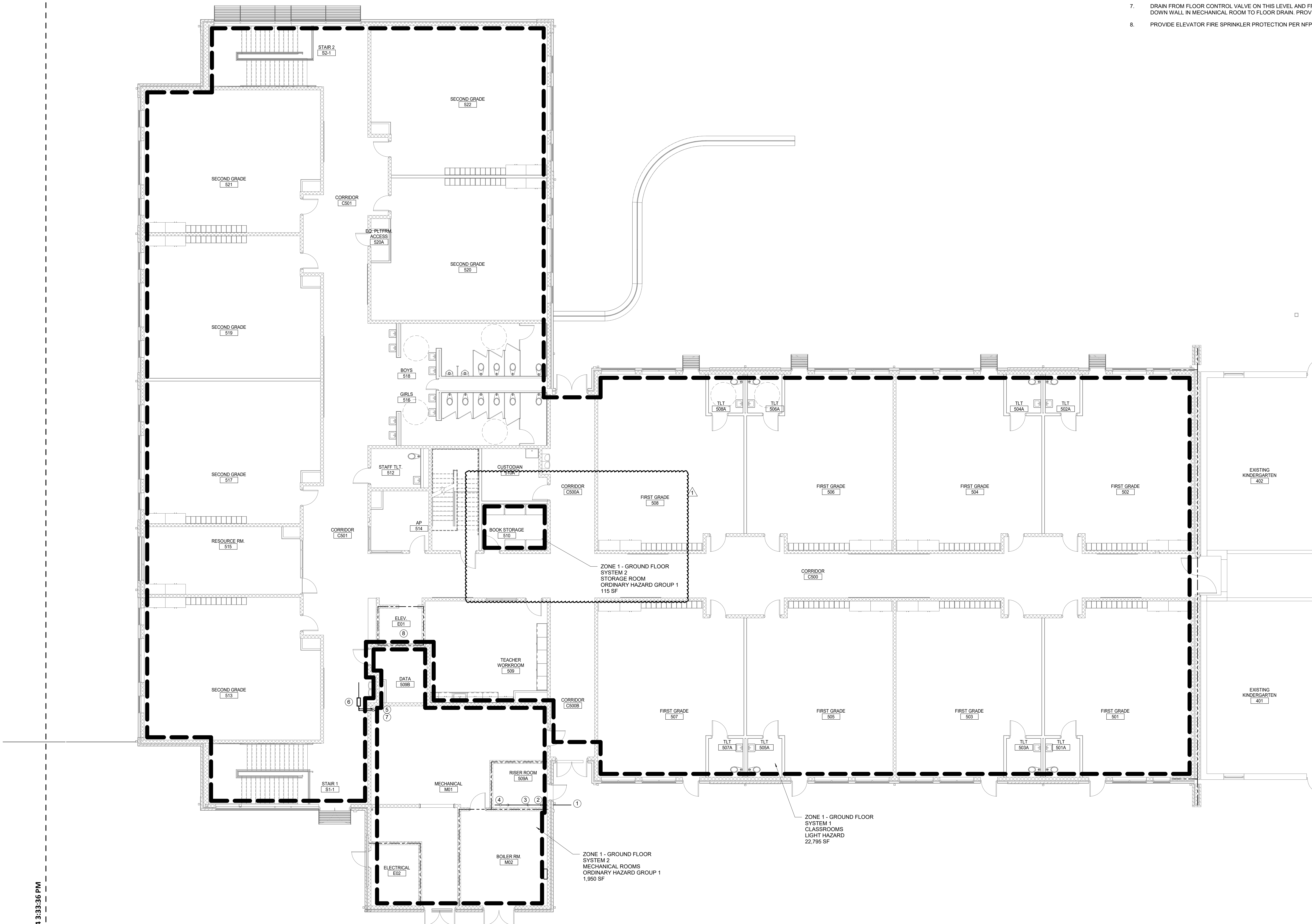
1 HR RATED

GENERAL NOTES:

- ANY FIRE PROTECTION DEVICES SHOWN ARE LOCATED IN COODINATION WITH THE CEILING GRID, LIGHTING, DIFFUSERS, ETC. ALL DEVICE LOCATIONS SHALL BE FIELD VERIFIED WITH THE ACTUAL INSTALLED CEILING GRID LAYOUT, AND FIELD ADJUSTMENTS MADE ACCORDINGLY. ALL INSTALLATIONS SHALL COMPLY WITH NFPA 13, NORTH CAROLINA STATE BUILDING CODE REQUIREMENTS AND ANY OTHER STATE OR LOCAL AUTHORITY HAVING JURISDICTION.
- PROVIDE COMPLETE FIRE SPRINKLER SYSTEM FOR THE ENTIRE PROJECT AREA AS PER NFPA 13.
- ALL SPRINKLER HEADS IN THIS PROJECT SHALL BE NEW. REFER TO SHEET FP001 FOR REQUIREMENTS
- REFER TO ARCHITECTURAL PLANS FOR ALL WALL RATINGS.

KEYNOTES:

- INCOMING 6" FIRE PROTECTION WATER SUPPLY PIPING - LEAD IN LOCATION. PROVIDE MATERIALS AND MAKE CONNECTIONS TO FIRE LINE PIPING PROVIDED BY SITE UTILITIES CONTRACTOR.
- FIRE SPRINKLER RISER MANIFOLD WITH ZONE/FLOW CONTROL, TAMPER SWITCH, AND TEST STATION PER RISE. REFER TO RISER ROOM DETAIL ???/FP002.
- SPACE RESERVED FOR FUTURE FIRE PUMP. PROVIDE PUMP BYPASS FOR FUTURE USE.
- TO WET ZONE SYSTEMS 1 AND 2 FIRST AND SECOND FLOOR AND EQUIPMENT PLATFORM. REFER TO EQUIPMENT PLATFORM PLAN ON FP103 FOR CONTINUATION.
- FIRE SPRINKLER MAIN FROM ABOVE TO FLOOR CONTROL VALVE ON THIS LEVEL.
- FIRE PROTECTION SPRINKLER FLOOR CONTROL VALVE.
- DRAIN FROM FLOOR CONTROL VALVE ON THIS LEVEL AND FROM ABOVE DOWN WALL IN MECHANICAL ROOM TO FLOOR DRAIN. PROVIDE 6" AIR GAP.
- PROVIDE ELEVATOR FIRE SPRINKLER PROTECTION PER NFPA 13.

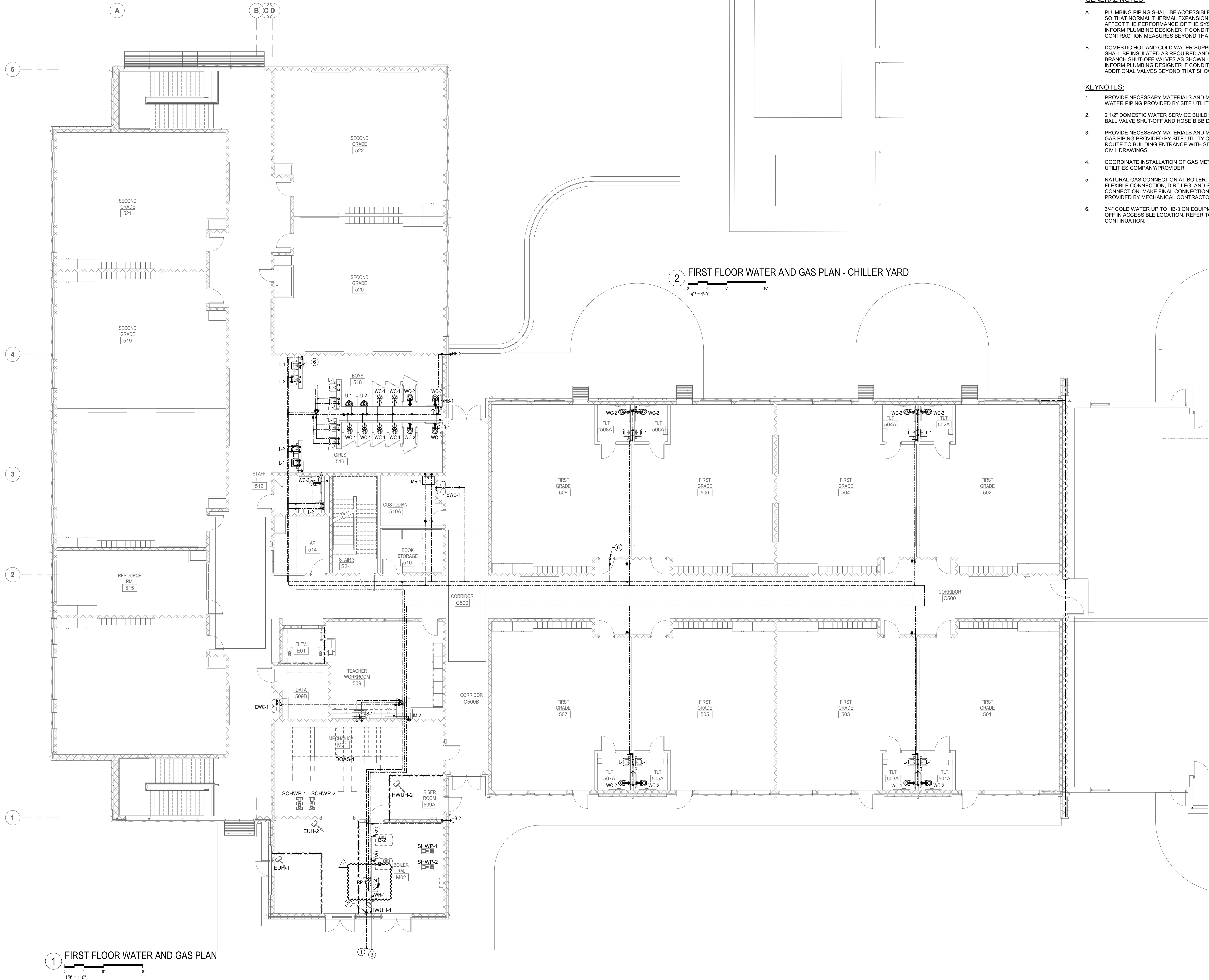


1 FIRST FLOOR FIRE PROTECTION PLAN

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1 FIRST FLOOR WATER AND GAS PLAN

2 FIRST FLOOR WATER AND GAS PLAN - CHILLER YARD

FIRE RATED WALLS  
1 HR RATED

- GENERAL NOTES:**
- PLUMBING PIPING SHALL BE ACCESSIBLE WHERE POSSIBLE AND INSTALLED SO THAT NORMAL THERMAL EXPANSION OR CONTRACTION DOES NOT AFFECT THE PERFORMANCE OF THE SYSTEM. PLUMBING CONTRACTOR TO INFORM PLUMBING DESIGNER IF CONDITIONS REQUIRE EXPANSION OR CONTRACTION MEASURES BEYOND THAT SHOWN IN THESE DRAWINGS.
  - DOMESTIC HOT AND COLD WATER SUPPLY AND/OR RETURN/RECIRC. PIPING SHALL BE INSULATED AS REQUIRED AND AS SPECIFIED AND SHALL INCLUDE BRANCH SHUT-OFF VALVES AS SHOWN. PLUMBING CONTRACTOR TO INFORM PLUMBING DESIGNER IF CONDITIONS CREATE THE NEED FOR ADDITIONAL VALVES BEYOND THAT SHOWN IN THESE DRAWINGS.
- KEYNOTES:**
- PROVIDE NECESSARY MATERIALS AND MAKE CONNECTION TO DOMESTIC WATER PIPING PROVIDED BY SITE UTILITY CONTRACTOR.
  - 2 1/2" DOMESTIC WATER SERVICE BUILDING ENTRY. PROVIDE FULL-PORT BALL VALVE SHUT-OFF AND HOSE BIBB DRAIN IN VERTICAL RISE.
  - PROVIDE NECESSARY MATERIALS AND MAKE CONNECTION TO NATURAL GAS PIPING PROVIDED BY SITE UTILITY CONTRACTOR. COORDINATE PIPE ROUTE TO BUILDING ENTRANCE WITH SITE UTILITIES CONTRACTOR AND CIVIL DRAWINGS.
  - COORDINATE INSTALLATION OF GAS METER/SUB METER WITH GAS UTILITIES COMPANY/PROVIDER.
  - NATURAL GAS CONNECTION AT BOILER. PROVIDE UL AND FM LISTED FLEXIBLE CONNECTION, DIRT LEG, AND SHUTOFF - PROVIDE 1 1/2" CONNECTION. MAKE FINAL CONNECTION TO PRESSURE REGULATOR PROVIDED BY MECHANICAL CONTRACTOR.
  - 3/4" COLD WATER UP TO HW-3 ON EQUIPMENT PLATFORM. PROVIDE SHUT-OFF IN ACCESSIBLE LOCATION. REFER TO EQUIPMENT PLATFORM PLAN FOR CONTINUATION.

**boomerang**  
DESIGN  
*rethink, repurpose, results*

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PROJECT #23015

**COOPER ACADEMY  
A & R**  
PROJECT TITLE

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02/19/2024  
SCAMPBELL@PDCENGINEERS.COM

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1	02/28/2024	ADDENDUM 01

**BID SET**  
PROJECT PHASE  
**2307**  
BOOMERANG DESIGN PROJECT NUMBER  
**02.07.2024**  
DRAWING RELEASE DATE

**FIRST FLOOR WATER  
AND GAS PLAN**  
SHEET TITLE  
**P202**  
SHEET





TABLE 402.4(5)  
SCHEDULE 40 METALLIC PIPE

Gas	Natural
Inlet Pressure	2.0 psi
Pressure Drop	1.0 psi
Specific Gravity	0.60

2 FIRST FLOOR WATER AND GAS RISER  
NOT TO SCALE



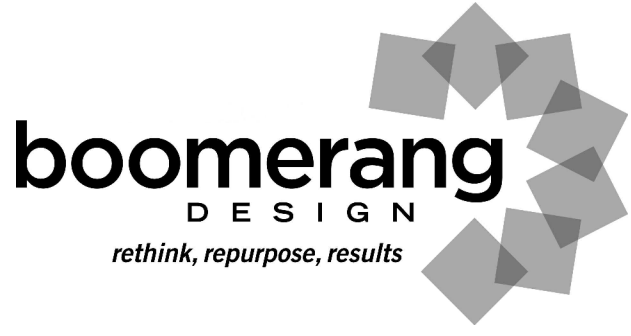






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PLUMBING FIXTURE SCHEDULE1		
MARK	DESCRIPTION	REMARKS
CO-1	CLEANOUT (FLOOR) ZURN MODEL NO. ZN1400-BP WITH NICKEL BRONZE TOP AND BRONZE PLUG. PROVIDE -CM CARPET CLEANOUT MARKER WHERE IN CARPET	
CO-2	CLEANOUT (WALL) ZURN MODEL NO. Z1441-BP-VP WALL CLEANOUT OR Z1446-BP-VP WALL CLEANOUT TEE TO SUIT APPLICATION. VANDAL PROOF SECURED TOP, SMOOTH ST STL ROUND ACCESS COVER	
CO-3	CLEANOUT (GRADE) ZURN MODEL NO. Z1449-BP CLEANOUT FERRULE WITH BRONZE PLUG AT GRADE. WHERE IN PAVING PROVIDE WITH ZURN MODEL NO. ZN1474-G-VP HEAVY DUTY CLEANOUT HOUSING WITH INTEGRAL ANCHOR FLANGE, SECURED SCORiated NICKEL BRONZE COVER WITH LIFTING DEVICE AND VANDAL-PROOF SCREW	
DN	DOWNSPOUT NOZZLE ZURN MODEL Z-199 CAST BRONZE BODY AND FLANGE	MOUNT 12" ABOVE GRADE AND PROVIDE SPLASH BLOCK
EM-1	EMERGENCY SHOWER/EYEWASH BRADLEY S193148F SHOWER HEAD SHALL BE 10" ABS PLASTIC IN YELLOW. PULL DOWN SHALL BE RIGID STAINLESS STEEL PULL ROD WITH TRIANGULAR HANDLE LOCATED ABOVE FLOOR. EYEWASH SHALL INCLUDE A STAINLESS STEEL BOWL WITH TWIN ABS EYEWASH HEADS WITH POP-OFF COVERS AND SHALL BE OPERATED BY A PUSH HANDLE. OPERATING VALVES SHALL BE INSTANT ACTION BALL TYPE THAT REMAIN OPEN UNTIL MANUALLY CLOSED. PROVIDE MODEL S19-866 20 GPM NICKEL-PLATED BRASS FLOW CONTROL VALVE. PROVIDE A WALL BRACE MOUNTED AS CLOSE TO SHOWER HEAD AS POSSIBLE FOR RIGIDITY. UNIT SHALL MEET ANSI Z358.1 AND O.S.H.A. STANDARDS	
EWC-1	OWNER PROVIDED - ELECTRIC WATER COOLER (BI-LEVEL ACCESSIBLE) ELKAY MODEL NO. LZSTL8WSLP BARRIER-FREE BI-LEVEL WATER COOLER ***** WITH BOTTLE FILLER ***** SELF-CLOSING EASY-TOUCH CONTROLS ON FRONT AND BOTH SIDES. FLEXIBLE GUARD BUBBLERS, STAINLESS STEEL ANTI-SPLASH TOP DESIGN, STANDARD LIGHT GRAY POWDERCOAT OVER GALVANIZED STEEL FINISH CABINET PROVIDE ELKAY CARRIER MODEL NO. MLP200 FOR FIXTURE SUPPORT PROVIDE MCGUIRE NO. 8912C P-TRAP AND BALL VALVE ON COLD WATER LINE WITHIN CABINET. PROVIDE CANE DETECTION APRON LKAPREZL AT UPPER UNIT WHEN COOLER NOT LOCATED WITHIN ACCESSIBLE ALCOVE	30" AFF TO UPPER SPOUT 26" AFF TO LOWER SPOUT
FD-1	FLOOR DRAIN ZURN MODEL NO. ZN415B DURA-COATED CAST IRON DRAIN WITH BOTTOM OUTLET, COMBINATION INVERTABLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS, "TYPE B" POLISHED NICKEL BRONZE LIGHT-DUTY STRAINER, TRAP PRIMER	
FD-2	FLOOR DRAIN WITH RAISED FLANGE STRAINER - RECESSED ZURN MODEL NO. ZN415I DURA-COATED CAST IRON DRAIN WITH BOTTOM OUTLET, COMBINATION INVERTABLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS, "TYPE I" POLISHED NICKEL BRONZE STRAINER WITH RAISED FLANGE - SET FOR USE AS RECESSED DRAIN WITH TOP OF FLANGE SET FLUSH WITH FINISH FLOOR, TRAP PRIMER	
FD-2A	PVC HUB DRAIN FOR AHU CONDENSATE 4 X 2, 4 X 3, OR 6 X 4 SCHED. 40 SOLID WALL PVC REDUCING COUPLING SET AS HUB DRAIN ABOVE FINISH FLOOR - COORDINATE HEIGHT WITH AHU CONDENSATE PIPING IN FIELD - CONFIRM CONDENSATE DRAIN PIPE SIZES AT PLAN TO DETERMINE COUPLING SIZES NEEDED	
HB-1	WALL HYDRANTS - INTERIOR/ENCASED ZURN Z1350 ENCASED MODERATE CLIMATE WALL HYDRANT FOR FLUSH INSTALLATION IN NARROW WALL. BRONZE BODY. ALL BRONZE INTERNAL PARTS. REPLACEABLE SEAT WASHER. SCREWDRIVER OPERATED STOP VALVE IN SUPPLY KEY OPERATED CONTROL VALVE. 3/4" IP FEMALE INLET, 3/4" MALE HOSE CONNECTION. ADJUSTABLE ST STL BOX AND HINGED COVER WITH CYLINDER LOCK AND "WATER" STAMPED ONTO COVER	MOUNT 12" AFF
HB-2	FREEZELESS WALL HYDRANT EXTERIOR/ENCASED ZURN Z1300 ENCASED ECOCLOTROL ANTI-SIPHON AUTOMATIC DRAINING WALL HYDRANT FOR FLUSH INSTALLATION. NON-FREEZE INTEGRAL BACKFLOW PREVENTER, BRONZE CASING, ALL BRONZE INTERNAL PARTS. NON-TURNING OPERATING RODS WITH FREEZE-PROTECTING COMPRESSION CLOSURE VALVES. REPLACEABLE BRONZE SEAT AND SEAT WASHER, AND COMBINATION 3/4" FEMALE OR 1" MALE STRAIGHT IP INLET, NICKEL BRONZE BOX AND HINGED COVER WITH OPERATING KEY LOCK AND "WATER" CAST ONTO COVER	MOUNT 24" AFG
HB-3	WALL HYDRANTS - INTERIOR/FACILITIES WOODFORD MODEL NO. 24 HYDRANT/HOSE BIBB, CHROME PLATED BRASS, VACUUM BREAKER, 3/4" HOSE THREAD OUTLET, WALL FLANGE, AND OPTIONAL METAL WHEEL HANDLE	MOUNT 12" AFF
IM-2	ICE MAKER BOX OATEY MODEL NO. 38152, WITH QUARTER-TURN BALL VALVE AND WATER HAMMER. PROVIDE WATTS 98D DUAL-CHECK VACUUM BREAKER, COORDINATE MOUNTING HEIGHT WITH REFRIGERATOR OR OTHER EQUIPMENT SUPPLIED IN GENERAL CONTRACT. MAKE FINAL CONNECTIONS	MOUNT 48" AFF AT COUNTERTOP EQUIPMENT UNO
L-1	LAVATORY (STANDARD) AMERICAN STANDARD REGALYN MODEL NO. 4867.004 ENAMELED CAST IRON, WALL HUNG, 4" CENTERS, 19" x 17" LAVATORY WITH CHICAGO FAUCETS MODEL NO. 3300-ABCP HOT AND COLD WATER METERING MIXING FAUCET, 4" CENTERS, 0.5 GPM VANDAL PROOF NON-AERATING SPRAY, ADJUSTABLE AUTO-TIMED METERING CARTRIDGE. CHROME PLATED SOLID CAST BRASS FAUCET MEETING LOW-LEAD REQUIREMENTS PROVIDE MCGUIRE NO. L1701KC LOOSE KEY SUPPLIES WITH ESCUTCHEONS. MCGUIRE NO. 155A DRAIN AND TAILPIECE WITH PERFORATED STRAINER, AND MCGUIRE NO. 8902C P-TRAP. PROVIDE ZURN CARRIER MODEL NO. Z1224 TO FIT INSTALLATION REQUIREMENTS. TAILPIECE ON SUPPLIES SHALL BE COMPATIBLE WITH TAILPIECE ON FAUCET.	27" AFF TO RIM
L-2	LAVATORY (ACCESSIBLE) SAME AS L-1 EXCEPT FOR MOUNTING HEIGHT. PROVIDE MCGUIRE PROWRAP ON SUPPLIES AND TRAP	30" AFF TO RIM
L-3	LAVATORY (ACCESSIBLE) - FACULTY AMERICAN STANDARD REGALYN MODEL NO. 4867.001 ENAMELED CAST IRON, WALL HUNG, SINGLE HOLE, 19" x 17" LAVATORY WITH CHICAGO FAUCETS MODEL 2200-E280SABCP CHROME PLATED CAST BRASS SINGLE LEVER, SINGLE HOLE MOUNTED FAUCET WITH CERAMIC CARTRIDGE, TEMPERATURE LIMIT STOP, AND VANDAL RESISTANT 5 GPM AERATOR. PROVIDE MCGUIRE NO. L1701KC LOOSE KEY SUPPLIES WITH ESCUTCHEONS. MCGUIRE NO. 155A DRAIN AND TAILPIECE WITH PERFORATED STRAINER, AND MCGUIRE NO. 8902C P-TRAP. PROVIDE ZURN CARRIER MODEL NO. Z1224 TO FIT INSTALLATION REQUIREMENTS. PROVIDE MCGUIRE PROWRAP ON SUPPLIES AND TRAP. TAILPIECE ON SUPPLIES SHALL BE COMPATIBLE WITH TAILPIECE ON FAUCET.	34" AFF TO RIM
MR-1	MOP RECEPTOR FLORESTONE MODEL 80 24" x 24" x 12" ONE-PIECE PRECAST TERRAZZO WITH CAST INTEGRAL ST STL PROTECTIVE CAPS ON ALL SIDES. DRAIN BODY SHALL BE BRASS. CAST INTEGRAL WITH A NON-ADJULGED CONNECTION NOT LESS THAN 1" DEEP TO A 3" PIPE AND 1/8 GAUGE ST STL STRAINER. FLORESTONE NO. MR-371 SERVICE SINK FAUCET WITH INTEGRAL STOPS, VACUUM BREAKER, SPOUT, AND PAIL HOOK WALL BRACE, AND FLORESTONE NO. MR-370 5'-LONG HOSE AND HOSE BRACKET.	
OFD	OVERFLOW ROOF DRAIN JAY R. SMITH MODEL NO. 1020-CID-C-R, DUCO CAST IRON BODY WITH CAST IRON DOME, UNDER-DECK CLAMP, ROOF SUMP RECEIVER, AND COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD	SIZE(S) PER PLAN(S)
RD	ROOF DRAIN JAY R. SMITH MODEL NO. 1310-CID-C-R, DUCO CAST IRON BODY WITH CAST IRON DOME, UNDER-DECK CLAMP, ROOF SUMP RECEIVER, AND COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD	SIZE(S) PER PLAN(S)
S-1	SINGLE SINK (ACCESSIBLE) - WORK/BREAK JUST, MODEL NO. SL-1921-A-G-R, 18 GAUGE TYPE 304 STAINLESS STEEL SINK, 21" x 19" WITH ONE 14" x 18" x 7 1/2" DEEP BOWL, 3 HOLE PUNCHED, 4" CENTERS, SELF RIMMING, SOUND DEADENED SATIN FINISHED. PROVIDE WITH MOEN MODEL NO. 8789 CHROME-PLATED BRASS FAUCET WITH WRIST BLADE HANDLES AND MOEN MODEL NO. S0002 RIGID GOOSENECK SPOUT WITH NO. 52602 VANDAL-RESISTANT 5 GPM AERATOR, MCGUIRE NO. 170 SUPPLIES WITH ESCUTCHEONS, MCGUIRE NO. 151 CRUMB CUP STRAINER WITH 6" TAILPIECE, AND MCGUIRE 8912 CAST BRASS P-TRAP. SUPPLIES SHALL BE COMPATIBLE WITH TAILPIECE ON FAUCET.	SEE ARCHITECTURE DRAWINGS FOR COUNTER HEIGHT PROVIDE FAUCET FITTING TO RESTRICT SWING TO 180°
SP-1	SUMP PUMP LIBERTY PUMPS MODEL ELV-290 SUBMERSIBLE 3/4 HP CAST IRON EFFLUENT PUMP CAPABLE OF 60 GPM AT 25 FEET OF HEAD, 115V/1/60, UL APPROVED PROVIDE WITH LIBERTY PUMPS MODEL ALM-ZW, 115V INDOOR/OUTDOOR ALARM WITH AUXILIARY CONTACTS FOR CONNECTION TO BUILDING AUTOMATION SYSTEM PROVIDE FLOATS AND SWITCHES AS REQUIRED FOR PUMP ON, PUMP OFF, AND HIGH WATER ALARMS/ACTIVATION PROVIDE ADEQUATE CHORD AND CONNECTOR LENGTHS AS NEEDED TO PROVIDE FULLY FUNCTIONING SYSTEM AS ILLUSTRATED IN PLUMBING PLANS AND DETAILS COORDINATE ALL CONDUIT ROUTING AND CONNECTIONS WITH ELECTRICAL CONTRACTOR AND MECHANICAL/CONTROLS CONTRACTOR RESPONSIBLE FOR BAS/BMS. INSTALLATION SHALL COMPLY WITH ASME A17.1 AND NCCOL REQUIREMENTS	
U-1	URINAL (STANDARD) AMERICAN STANDARD WASHBROOK MODEL NO. 6590.001 VITREOUS CHINA UNIVERSAL TOP SPUD URINAL, PINT FLUSH, 125 GPF, 3/4" TOP SPUD, FLUSHING ELONGATED RIM, WITH SLOAN SOLIS 6186-0.15-OR EXPOSED FLUSH VALVE 0.25 GPF FLUSHMETER, PROVIDE ZURN CARRIER MODEL 1221 OR 1222 TO FIT INSTALLATION REQUIREMENTS	17" AFF TO RIM
U-2	URINAL (ACCESSIBLE) - K-5 STUDENTS SAME AS U-1 EXCEPT MOUNTING HEIGHT	14" AFF TO RIM
WC-1	WATER CLOSET (STANDARD) AMERICAN STANDARD MADERA MODEL NO. 2858.016 FLOOR MOUNTED, BOTTOM OUTLET, 1-1/2" TOP SPUD, VITREOUS CHINA, HIGH EFFICIENCY TOILET WITH ELONGATED BOWL, 1.1 - 1.6 GAL/FLUSH SIPHON JET OPERATION, AND BOLTS AND CAPS - PROVIDE WITH SLOAN ECOS MODEL NO. 8111-1.6 DUAL FLUSH SENSOR FLUSHMETER. PROVIDE WITH CHURCH PRODUCTS NO. 9500SSCT, EXTRA HEAVY DUTY SOLID PLASTIC, OPEN FRONT, ELONGATED SEAT WITH STAINLESS STEEL POSTS, STAINLESS STEEL SELF-SUSTAINING CHECK HINGES, AND STA-TITE FASTENING NUTS	14" AFF TO RIM COORD. VALVE HANDLE HEIGHT WITH GRAB BARS WHERE APPLIES
WC-2	WATER CLOSET (ACCESSIBLE) AMERICAN STANDARD MODEL NO. 3461.001 MADERA FLOOR MOUNTED, BOTTOM OUTLET, 1-1/2" TOP SPUD, VITREOUS CHINA, ELONGATED BOWL, 1.6 GAL/FLUSH, SIPHON JET OPERATION. PROVIDE SLOAN ECOS MODEL NO. 8111-1.6 DUAL FLUSH SENSOR FLUSHMETER. PROVIDE WITH CHURCH PRODUCTS NO. 9500SSCT WITH BOLTS AND CAPS. EXTRA HEAVY DUTY SOLID PLASTIC, OPEN FRONT, ELONGATED SEAT WITH STAINLESS STEEL POSTS, STAINLESS STEEL SELF-SUSTAINING CHECK HINGES, AND STA-TITE FASTENING NUTS.	10" AFF TO RIM COORD. VALVE HANDLE HEIGHT WITH GRAB BARS WHERE APPLIES
WC-3	WATER CLOSET (ACCESSIBLE) - FACULTY/STAFF AMERICAN STANDARD MADERA MODEL NO. 3043.001 FLOOR MOUNTED, BOTTOM OUTLET, 1-1/2" TOP SPUD, VITREOUS CHINA, HIGH EFFICIENCY TOILET WITH ELONGATED BOWL, 1.25 GAL/FLUSH SIPHON JET OPERATION, AND BOLTS AND CAPS, WITH SLOAN REGAL MODEL NO. 111-1.25 FLUSH VALVE. PROVIDE WITH CHURCH PRODUCTS NO. 9500SSCT, EXTRA HEAVY DUTY SOLID PLASTIC, OPEN FRONT, ELONGATED SEAT WITH STAINLESS STEEL POSTS, STAINLESS STEEL SELF-SUSTAINING CHECK HINGES, AND STA-TITE FASTENING NUTS	17" AFF TO RIM COORD. VALVE HANDLE HEIGHT WITH GRAB BARS WHERE APPLIES
WH-1	WATER HEATER - NATURAL GAS AO SMITH, CYCLONE MKG-BTH199, 100 GALLON STORAGE CAPACITY NAT GAS WATER HEATER, POWER DIRECT VENT WITH SEALED COMBUSTION, RATED AT 199,000 BTU NATURAL GAS WITH A RECOVERY RATE OF 233 GALLONS PER HOUR AT 100°F RISE. HEATER STANDARD TANK WITH ASBESTOS TANK AND TEMPERATURE AND PRESSURE RELIEF VALVE, RATED FOR 160 PSI WORKING PRESSURE. 97% THERMAL EFFICIENCY FROM 40°F TO 140°F, CONDENSING DESIGN. PROVIDE CONCENTRIC VENTING KIT BY SAME MANUFACTURER WITH SEPARATE INTAKE AND FLUE. HEATER TO BE SET AT 110°F. PROVIDE STATE #ETC-10X EXPANSION TANK, BUTYL LINED. PROVIDE AMTROL MODEL NO. THERMA-X-TROL ST-5 EXPANSION TANK WITH 150 PSI MAXIMUM WORKING PRESSURE AND FACTORY PRE-CHARGED TO 40 PSIG. RECIRCULATING PUMP (RP-1) - SEE DETAIL FOR QUANTITY. 8&G SERIES 100, 7 GPM, 8 FEET HEAD, 120/1/60, 1/2 HP, ALL BRONZE CONSTRUCTION AND FLANGE CONNECTION. MAKE CONNECTION TO BUILDING AUTOMATION SYSTEM CONNECTION POINT PROVIDED BY MECHANICAL CONTRACTOR (IF APPLICABLE).	



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PROJECT #23015

## COOPER ACADEMY

### A & R

PROJECT TITLE

"CLIENT'S PROJECT" # - XXX



02/19/2024  
SCAMPBELL@PDCENGINEERS.COM

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3. DO NOT SCALE OFF DIMENSIONS.

REVISIONS		
NO.	DATE	DESCRIPTION
1	02/28/2024	ADDENDUM 01

**BID SET**  
PROJECT PHASE

**2307**  
BOOMERANG DESIGN PROJECT NUMBER

**02.07.2024**  
DRAWING RELEASE DATE

**SCHEDULE**  
SHEET TITLE

# P601

SHEET